

**Newmarket School District
186A Main Street
Newmarket, NH 03857
603-659-5020**

**Request for Proposals
Design-Build Lighting Control Upgrade**

Proposal Due Date: June 11, 2021, 3:00 pm

**Mandatory Contractor Conference:
June 1, 2021 at 3:00 PM at
Newmarket Junior Senior High School
213 South Main St. Newmarket, NH 03857**

Sealed proposals marked “Sealed Design-Build Lighting Control Upgrade Proposal” must be submitted no later than Friday, June 11, 2021 at 3:00 pm to Janna Mellon, Business Administrator, Newmarket School District, 186A Main Street, Newmarket, NH 03857.

The Newmarket School District reserves the right to accept or reject any and all bids or proposals received or any parts thereof for any reason whatsoever, to waive any informalities in any bid or proposal or in any provision in the request for bids or proposals, to negotiate with any or all proposers, to require a modification of the RFP at any time, and to select the proposer whom, the District, in its sole discretion determines is in the best interests of the District even though the proposer may not submit the lowest bid or proposal. Under no circumstances will the District be responsible for the cost of preparing any bid or proposal.

All bids are governmental records subject to public disclosure under the Right-to-Know Law. The District will not accept bids marked confidential in whole or in part.

Proposals will be publicly opened at the School Administration Office located at 186A Main Street, Newmarket, New Hampshire. The contents of all proposals will be open to inspection by interested parties at the time of opening or by appointment thereafter.

GENERAL

1. Project Description: In general, the work consists of upgrading the electrical lighting controls and selected light fixtures in selected areas of the school building. The work includes removing and disposing of existing controls, wiring, devices, and light fixtures as indicated on the attached drawings and specified.
2. The purpose of this outline specification is to obtain competitive design-build quotations from contractors. General program items are listed. The Contractor shall provide all items as required to meet code and District requirements for the scope of work described. The Contractor shall assume full responsibility for the concept, design, and construction of their proposed system. All concepts, designs, as-builts, and instruments of service shall become the property of the District and shall hereafter be used in the District's sole discretion.
3. The Contractor shall produce design drawings stamped by a State of New Hampshire licensed Professional Engineer.
4. Type of Contract: The project will be constructed under a single lump sum contract in a form acceptable to the District incorporating the requirements of this RFP. If a contract cannot be reached to the District's satisfaction, the District reserves the right to terminate negotiations with no obligation to the apparently selected Contractor and to enter into a contract with any other Contractor of its choosing.
5. Direct questions to Devin Lockley, Facilities Director - email: lockleyd@newmarket.k12.nh.us. Questions shall be submitted in writing by 3:00 PM on June 8, 2021. Verbal answers are not binding on any party.
6. A Mandatory Pre-bid conference will be conducted at the site on Tuesday, June 1, 2021 at 3:00 PM. In the event that a vendor wished to bid, but cannot make that time or date, an alternate time can be arranged by contacting Devin Lockley at lockleyd@newmarket.k12.nh.us.
7. Bids shall be submitted no later than 3:00 PM on June 11, 2021. Bids shall remain open to acceptance and shall be irrevocable for a period of thirty (30) days after the bid closing date.
8. Contract Time: The work shall be completed by June 1, 2022.
9. The work shall be coordinated with the District's use of the facility and shall be scheduled such that the school schedule and activities are not affected by the work of this project. Work shall be performed nights, weekends, and school vacations as required to meet this requirement. Lighting and controls shall be fully operational at all times the building is open for District activities.
10. Existing Drawings: As-Built electrical drawings for recent renovations to the building are included in Appendix A for reference. These drawings are provided for informational

purposes only and do not necessarily reflect actual dimensions or modifications to the building since its original construction. The Contractor shall be responsible to field verify existing conditions and actual dimensions.

- a. References to room names and numbers in this document refer to room names and numbers as indicated on the attached drawings and may not reflect room names and numbers currently used in the building.
 - b. Any references to “North,” “South,” “East” and “West” in this document are relative to “Plan North” as marked on the attached drawings, not true north.
11. Existing Product Data and Shop Drawings: Product data sheets and shop drawings for existing lighting fixtures and lighting controls from recent renovations to the building are included in Appendix B for reference. These are provided for informational purposes only. The Contractor shall be responsible to field verify existing conditions.
 12. The Contractor shall visit the site, study and get fully acquainted with existing conditions at the project site and the requirements of this document prior to submitting a bid. The Contractor shall execute all alterations, additions, removals, relocations etc., as required to provide a complete installation. Contact Devin Lockley, Facilities Director by email at lockleyd@newmarket.k12.nh.us to schedule site visits.
 13. All work shall be performed in accordance with applicable local, state and federal codes.
 14. The Contractor shall install equipment and materials to provide required access for servicing and maintenance. Equipment manufacturers’ minimum service clearances shall be observed.
 15. The Contractor shall provide a complete one-year warranty of all work from the date of final completion. The one-year warranty shall be renewed and extended for an additional year from the date of correction of any defective or nonconforming work.
 16. The Contractor shall install all equipment in accordance with manufacturer’s recommendations and the standards specified.

CONTRACT REQUIREMENTS

1. To the maximum extent permitted by law, the Contractor shall, at its own expense, defend, indemnify and hold harmless the Newmarket School District, School Board, SAU and their respective officials, agents, employees, and volunteers from any and all claims, including but not limited to, any and claims for personal injury, debt and property damage which may, in any way, arise from or out of the operations of the Contractor pursuant to the terms of the Agreement, whether such operations be performed by the Contractor itself, or anyone directly or indirectly employed by it or any other person or company retained in any way by it to carry on all or a portion of the operations necessary to abide by the terms of the Agreement. The indemnification provision shall survive termination or expiration of the Agreement.

2. Certificates of insurance and policy endorsements shall be filed with the SAU #31 Office prior to the effective date of the Agreement and shall be subject to approval by SAU #31 and its insurance carrier for adequacy of protection. The Contractor shall file updated insurance certificates as coverage becomes effective. Insurance shall not be cancelable without thirty (30) days prior written notice to the District. The District is to be named as an additional insured. The Contractor agrees to maintain insurance in the following **minimum** amounts:

Workman's Comp Insurance - As required by law

Liability Insurance-

General Liability (Contractor's) \$1,000,000 Occurrence/ 3,000,000 General Aggregate

Umbrella Liability (Contractor's) \$2,000,000 Occurrence/ 2,000,000 General Aggregate

Certification of insurance acceptable to the District shall be prior to the commencement of work and not later than fifteen (15) calendar days from notice of contract award. Insurance shall remain enforce during the full term of the contract.

During the term of the Agreement, the Contractor agrees to maintain Workmen's Compensation insurance on all employees engaged in the performance of the Agreement.

3. The Contractor shall provide builders risk insurance.
4. If the contract amount is \$125,000 or more, the Contractor must provide a payment and performance bond.
5. The terms, conditions, representations, and warranties contained in the Agreement shall survive the termination or expiration of the Agreement.
6. Neither party may assign or subcontract any of its rights or obligations under the Agreement in whole or in part. Any attempted assignment under the Agreement shall be void and of no effect.
7. The District reserves the right, at any time during the term of the Agreement, and after consultation with the Contractor, to cancel said Agreement when the terms of the Agreement have been violated. The District shall have the right to declare the Contractor in default if (a) the Contractor becomes insolvent; (b) the Contractor makes an assignment for the benefit of creditors; (c) a voluntary or involuntary petition of bankruptcy is filed by or against the Contractor; or (d) the Contractor is unable to provide evidence of required insurance coverage as set forth below. If the Contractor is declared in default for any reason, the District shall have the right to terminate the Agreement. In the event of a contractual termination, the District reserves the right to employ another Contractor to complete the term of the Agreement. The original Contractor shall be responsible for any extra or additional expense or damages suffered by the District. In that event, the Contractor will be required to indemnify the District for any loss that may be sustained.

8. The District also reserves the right to terminate the Agreement for its convenience by providing Contractor thirty (30) days written notice.
9. Any termination of the Agreement by the District shall be without cost or penalty to the District. The District shall be liable to pay the Contractor only such amounts as are due of the date of termination. The District shall not be responsible for lost profits, compensatory or other consequential damages.
10. The Agreement, and all matter or issued collateral to it, shall be governed by, and construed in accordance with the law of the State of New Hampshire. If any provision of the Agreement, as applied to either party or to any circumstance, shall be adjudged by a court to be void or unenforceable, the same shall in no way affect any other provision of the Agreement or the validity or enforceability of the Agreement.

SUBMITTAL REQUIREMENTS

1. Description of business including number of years in operation.
2. Describe the Contractor's design team including experience in similar projects and the individual who will be stamping completed drawings. All personnel shall have the appropriate licenses from the State of New Hampshire.
3. At least five (5) business references.
4. Provide a list of all hourly charges and reimbursable expenses.
5. Detail any litigation, mediations or arbitrations for the past five (5) years including the other party, attorneys involved (if any), and disposition.

SCOPE OF WORK DIVISION 26

See attached Section 261000 Basic Electrical Requirements Specification for further information.

26 - Basic Methods and Materials

1. Work under this Section shall include furnishing of all material, labor, equipment and supplies and performance of all operations in connection with all electrical work required.
2. Electrical work shall comply fully with following codes and standards:
 - a. American Society for Testing and materials (ASTM).
 - b. Underwriters' Laboratories, Inc. (UL)
 - c. National Electrical Manufacturers Association (NEMA).
 - d. Institute of Electrical and Electronic Engineers (IEEE).
 - e. American National Standards Institute (ANSI).
 - f. National Fire Protection Association (NFPA).
 - g. National Electrical Code (NEC) with State Amendments.

- h. New Hampshire State Building Code.
 - i. Occupational Safety and Health Act (Public) (OSHA).
 - j. Local Inspection Department.
 - k. Local Fire Department.
3. Material shall be new and shall conform to all national and local ordinances.
Workmanship to be in full accordance with modern electrical construction methods.
 4. Electrical Systems installed and work performed under shall include but not necessarily be limited to the following:
 - a. Removals. Where existing items are to be removed, their associated wiring and raceways shall be removed back to the source. Nothing shall be abandoned in place. Where wiring or raceways cannot be removed due to being embedded within existing construction, the inaccessible portion shall be tagged and terminated in accordance with code requirements.
 - b. Building interior lighting and controls
 - c. Shop drawings, coordination and record drawings
 - d. Wiring Devices
 - e. Device plates
 - f. Equipment Grounding
 - g. Raceways and boxes
 - h. Wire and cable
 - i. Access panels
 - j. Fees and permits

26 – Wiring, Raceways and Boxes

1. Wiring shall be concealed in walls and above ceilings wherever possible. Exposed wiring in surface metal raceway shall be permitted on existing walls and in areas with inaccessible or ceilings or exposed structural ceilings.
2. Surface mounted boxes in areas occupied by students shall not have removable knockouts.
3. Existing metal raceways and boxes shall be permitted to be reused where they are sized appropriately and where permitted by current code for the new work.
4. Provide blank cover plates for existing recessed boxes that become unused as a result of this project.

26 - Temporary Lighting

1. Temporary Lighting: Provide lighting of intensity and quality sufficient for proper and safe performance of the work and for access thereto and security thereof. (Consult OSHA requirements.)

26 - Grounding

1. See attached Section 261000 Basic Electrical Requirements Specification.

26 – Lighting and Lighting Controls

1. Except as specified otherwise, existing lighting fixtures shall remain and shall be connected to controls provided under this project.

2. The existing lighting fixtures in the Gymnasium shall be removed and dimmable LED high-bay luminaires shall be provided under the work of this Section.
 - a. There are twenty-four existing fluorescent high-bay luminaires in the Gymnasium. The intent is to provide fixtures located in the same locations as existing luminaires to be removed.
 - b. The basis-of-design luminaire to be provided is SpecGrade LED series HBF-150-35K- 120-V01-WH-PM2-VDIM-UL-FL-WG or approved equal.
 - c. Existing branch circuits shall be permitted to be re-used where they comply with current code and these specifications. Connected lighting load on 20-amp branch circuits shall not exceed 12 amps. Lighting branch circuits shall be provided as required to meet this requirement.
3. Provide lighting control devices and room-based lighting control systems as indicated on the attached Lighting Control Plans and as specified for each area.

26 – Emergency and Exit Lighting

1. Existing emergency lighting and exit signs shall remain. Remove existing emergency lighting bypass relays and provide emergency lighting bypass relays suitable for dimmed loads as indicated and as required by code.

SECTION 261000 - BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

- A. Furnish all materials, equipment, labor, and supplies and perform all operations necessary to complete the electrical work in accordance with the intent of the drawings and these specifications.

1.3 QUALITY ASSURANCE

- A. All wiring shall be in accordance with the latest issue of the National Electrical Code.
- B. The Contractor shall show evidence, upon request, of having successfully completed at least five similar projects. Installation of each system shall be under the supervision of a factory-authorized organization.
- C. The Contractor shall show evidence, upon request, that it maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system.

The Contractor must have a service contract program for the maintenance of the system after the guarantee period.

- D. All electrical equipment shall be approved by Underwriters Laboratories, Inc. Each system shall be products of a single manufacturer of established reputation and experience. The Contractor shall have supplied similar apparatus to comparable installations rendering satisfactory service for at least three years.
- E. Prior to submission for review of any item of equipment, determine whether or not it will fit in the space provided. Any changes in the size or location of the material or equipment supplied, which may be necessary in order to meet field conditions or in order to avoid conflicts between trades, shall be brought to the immediate attention of the Engineer and approval received before such alterations are made.

1.4 SUBMITTALS

- A. In accordance with Division 01, furnish the following:
 - 1. Manufacturer's descriptive literature: For each type of product indicated.
 - 2. Submit shop drawings which include engineering drawings of the system with specification sheets covering all component parts of the system and interconnection diagrams.
 - 3. Certification:
 - a. Prior to final inspection, deliver to the District's Representative four (4) copies of certification that the material is in accordance with the specifications and has been properly installed.
 - b. Submit certification of system operating test.
 - 4. Manuals: Submit copies of complete set of operating instructions including circuit diagrams and other information of system components. Supply six complete sets of each.

1.5 PROJECT CONDITIONS

- A. Regulatory Requirements:
 - 1. Conform to the requirements of all laws and regulations applicable to the work.
 - 2. Cooperate with all authorities having jurisdiction.
 - 3. Compliance with laws and regulations governing the work on this project does not relieve the Contractor from compliance with more restrictive requirements contained in these specifications.
 - 4. If the Contract Documents are found to be at variance with any law or regulation, the Contractor shall notify the Architect/Engineer promptly in writing. The Contractor shall assume full responsibility for any work contrary to law or regulation, and shall bear all costs for the corrections thereof.

5. Minimum Requirements: The National Electrical Code (NEC), Underwriters Laboratories, Inc. (UL), the National Fire Codes, and National Fire Protection Association (NFPA) are a minimum requirement for work under this section. Design drawings and other specification sections shall govern in those instances where requirements are greater than those required by code.

B. Permits, Fees, and Inspections:

1. Secure and pay for all permits, fees, licenses, inspections, etc., required for the work under Division 26.
2. Schedule and pay for all legally required inspections and cooperate with inspecting officers.
3. Provide Certificates of Inspection and Approval from all regulatory authorities having jurisdiction over the work in Division 26.

1.6 WARRANTY

- A. The Contractor shall guarantee all equipment and wiring free from inherent mechanical or electrical defects for one year from date of acceptance.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Switchbox type occupancy sensors with dimming: Adaptive-technology type, 120/277 V, adjustable time delay up to 20 minutes, 180-degree field of view, with a minimum coverage area of 900 sq. ft and with manual 0-10V dimming control. Configure for manual-on/automatic-off operation.

B. Room-Based Lighting Control Systems

1. Basis-of-Design Product: Subject to compliance with requirements, provide Eaton Greengate Room Controller series or comparable product by one of the following:
 - a. Hubbell Building Automation
 - b. Acuity Brands.
 - c. Philips.
2. If a manufacturer other than Eaton is provided, existing controls in areas that have existing dimming shall be replaced as indicated on the drawings.

C. Ceiling mounted occupancy sensors

1. Product: Basis of design is Eaton OAC-DT-2000R for ceiling sensors and OAWC-DT- 120W-R for wall/corner sensors
2. Provide all necessary mounting hardware and instructions.

3. Sensors shall be Class 2 devices.
4. Connect to Room Controller via Click & Go cable to eliminate wiring errors.
 - a. Room Controller accessory is used to allow any standard occupancy/vacancy sensor to utilize Click & Go cable connections.
 - b. Two RJ45 connection ports for connection to Room Controller.
 - c. Occupancy Sensor and Daylight sensor shall be capable of a daisy chain connection to the Room Controller.
5. Device calibration and features:
 - a. Sensitivity – 0-100% in 10% increments.
 - 1) When the sensor is specified to be auto on/auto off, set the ultrasonic sensitivity at 10% and the PIR sensitivity at 100%.
 - 2) When the sensor is specified to be manual on/auto off, set the sensitivity at 100% for both the ultrasonic and PIR sensitivity.
 - b. Time delay – adjustable 1-30 minutes. Set at 30 minutes.
 - c. Test mode – Fifteen second time delay.
 - d. Detection technology – Dual Technology
6. Device Status LEDs including:
 - a. PIR Detection
 - b. Ultrasonic detection
7. Occupancy sensors are pre-defined to specific loads within the room without wiring or special tools for maximum energy savings.
8. Manual override of controlled loads.
9. Multiple occupancy sensors may be installed in a room by simply daisy-chaining them together to the Room Controller via Click & Go cable. No additional configuration will be required.
10. Existing sensors shall be permitted to be re-used where they are fully compatible and listed for use with the controller to be provided.
11. Where existing sensors are removed and replaced by sensors provided under this project, provide at least the same quantity of sensors in each space.

D. Room Controller wall stations:

1. Low voltage momentary pushbutton switches in 2- to 6- button configuration. Color shall match wiring devices and plates shall be stainless steel type 302 as specified in Section 262726 "Wiring Devices". Wall stations shall include the following features:
 - a. Removable buttons for field replacement with engraved buttons and/or alternate color buttons. Button replacement may be completed without removing the switch

from the wall.

- b. Button labeling shall match application and load controls.
 2. Two RJ-45 ports for connection to the Room Controller local network.
 3. Multiple digital wall stations may be installed in a room by simply connecting them to the Room Controller local network. No additional configuration will be required to achieve multi-way switching.
 4. Room Controller digital wall station functions shall include raise, lower, and manual on/off functions.
 5. Provide wall stations at each entrance to each space.
- E. Provide wire guards for all sensors in gyms, corridors, locker rooms, exterior wall/ceiling sensors, and as indicated on drawings.
- F. Plates shall be 302 stainless steel.
- G. Finish color for wiring devices shall match existing.
- H. Boxes shall be steel minimum 2-1/2" deep or 1-1/2" plus plaster ring with depth to set face of box flush with face of wall finish.
- I. Wiring Materials:
1. Wiring shall be enclosed in electrical rigid galvanized steel, intermediate metal conduit, or electrical metallic tubing sized in accordance with code requirements for the conductors. Type MC cable may be used where concealed in walls or ceilings and allowed by code.
 - a. Conduit fittings shall be steel, set screw or compression type.
 - b. Terminations for all conduit shall have insulated bushings or insulated throat connectors in accordance with code requirements.
 - c. All conduits shall be substantially supported with approved clips or hangers spaced not to exceed ten feet on center. Minimum conduit size shall be 1/2".
 2. Branch-circuit Wiring shall be type THW, XHHW, or THWN, UL labeled, copper conductors with 600-volt insulation, except as otherwise noted. Minimum size wire shall be No. 12 AWG.
 3. Type MC Cable shall have minimum No. 12 AWG type THWN or XHHW insulated copper conductors with an internal bare or insulated copper ground wire.
 4. Minimum conductor size for Low-voltage control wiring shall be 18 AWG or as recommended by lighting controls manufacturer, whichever is larger. Low-voltage cables shall be plenum rated. Low-voltage control cables shall be permitted to be installed above accessible ceilings without raceways where the cables are supported in accordance with code requirements.
- J. Fire-Stop Material:

1. Fire-stopping material shall maintain its dimension and integrity while preventing the passage of flame, smoke, and gases under conditions of installation and use when exposed to the ASTM E 119 time-temperature curve for a time period equivalent to the rating of the assembly penetrated. Cotton waste shall not ignite when placed in contact with the non-fire side during the test. Fire-stopping material shall be noncombustible as defined by ASTM E 136; and in addition for insulation materials, melt point shall be a minimum of 1700°F for one-hour protection and 1850°F for two-hour protection.

2. Seals for floor, exterior wall, and roof shall also be watertight.

K. Circuit breakers to be added to existing panels shall match existing circuit breakers.

L. Grounding Conductors:

1. Grounding conductors shall be soft-drawn bare copper.
2. Insulated grounding wires shall be UL and NEC approved types, copper, with THWN or XHHW insulation color identified green, except where otherwise shown on the drawings or specified.
3. Wire shall not be less than shown on the drawings and not less than required by the NEC.

M. Equipment Grounding Connections: Connections shall be of the compression type solderless connectors.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General:

1. All work shall be in accordance with the National Electrical Code's requirements as amended to date, with the local electric utility company's rules, the Fire Underwriter's requirements, and all local, state and federal laws and regulations.
2. Conduits shall be of sizes required by the National Electrical Code. Exposed conduits shall be installed with runs parallel or perpendicular to walls and ceiling, with right-angle turns consisting of bends, fittings, or outlet boxes. No wire shall be installed until work that might cause damage to wires or conduits has been completed. Conduits shall be thoroughly cleaned of water or other foreign matter before wire is installed.
3. Where conduits, wireways and other electrical raceways pass through fire partitions, fire walls, or floor, install a fire-stop that provides an effective barrier against the spread of fire, smoke and gases. Fire-stop material shall be packed tight and completely fill clearances between raceways and openings. Floor, exterior wall, and roof seals shall also be made watertight.
4. Surface metal raceways shall be sized as required by the National Electrical code and as

recommended by the manufacturer. Surface metal raceways shall be installed with runs parallel or perpendicular to walls and ceiling. Changes in direction shall only be made at device box locations or with fittings designed for the particular application. Installation shall be as visually unobtrusive as possible:

- a. Surface metal raceways shall be painted to match wall finishes.
5. All splices shall be mechanically and electrically perfect, using crimp type wire connectors.
6. Revise existing panelboard directories to reflect the work of this project. Furnish new cards as needed. Directories shall be typewritten or printed using a computer.
7. In general, conductors shall be the same size from the last protective device to the load and shall have an ampacity the same as or greater than the ampacity of the protective device where the wire size is not shown on the drawings. Use the 60°C ampacity rating for wire sizes No. 14 through No. 1. For 120V circuits, home runs longer than 100 feet shall be minimum No. 10 AWG, longer than 200 feet shall be minimum No. 8 AWG.

B. Grounding:

1. The entire electrical system shall be permanently and effectively grounded in accordance with Code requirements.
2. Connections to junction boxes, equipment frames, etc., shall be bolted.
3. Conduit Systems:
 - a. Ground all metallic conduit systems.
 - b. Conduit systems shall contain a grounding conductor sized per NEC Table 250-122 or as shown on the drawings. Increase conduit size where necessary to accommodate the grounding conductor.
4. Feeders and Branch Circuits: Install green grounding conductors with all feeders and branch circuits.
5. Lighting Fixtures: Conduits shall not be used for grounding fixtures. Green equipment grounding conductor must be bonded to all fixtures.

C. Identification: Provide tags on each end of all pulled wires giving location of other end. Provide phenolic nameplates for all panelboards, motor starters, disconnect switches (except switches located at motors), and duct smoke detector remote test/alarm-indicating stations.

D. Record Drawings: The Contractor shall keep on the job a set of prints showing any changes to the installation. These shall be Submitted to the District at the completion of the work.

E. Testing and Adjusting:

1. The entire installation shall be free from short-circuits and improper grounds.

2. Each system shall be completely tested and shall be adjusted for proper operation.

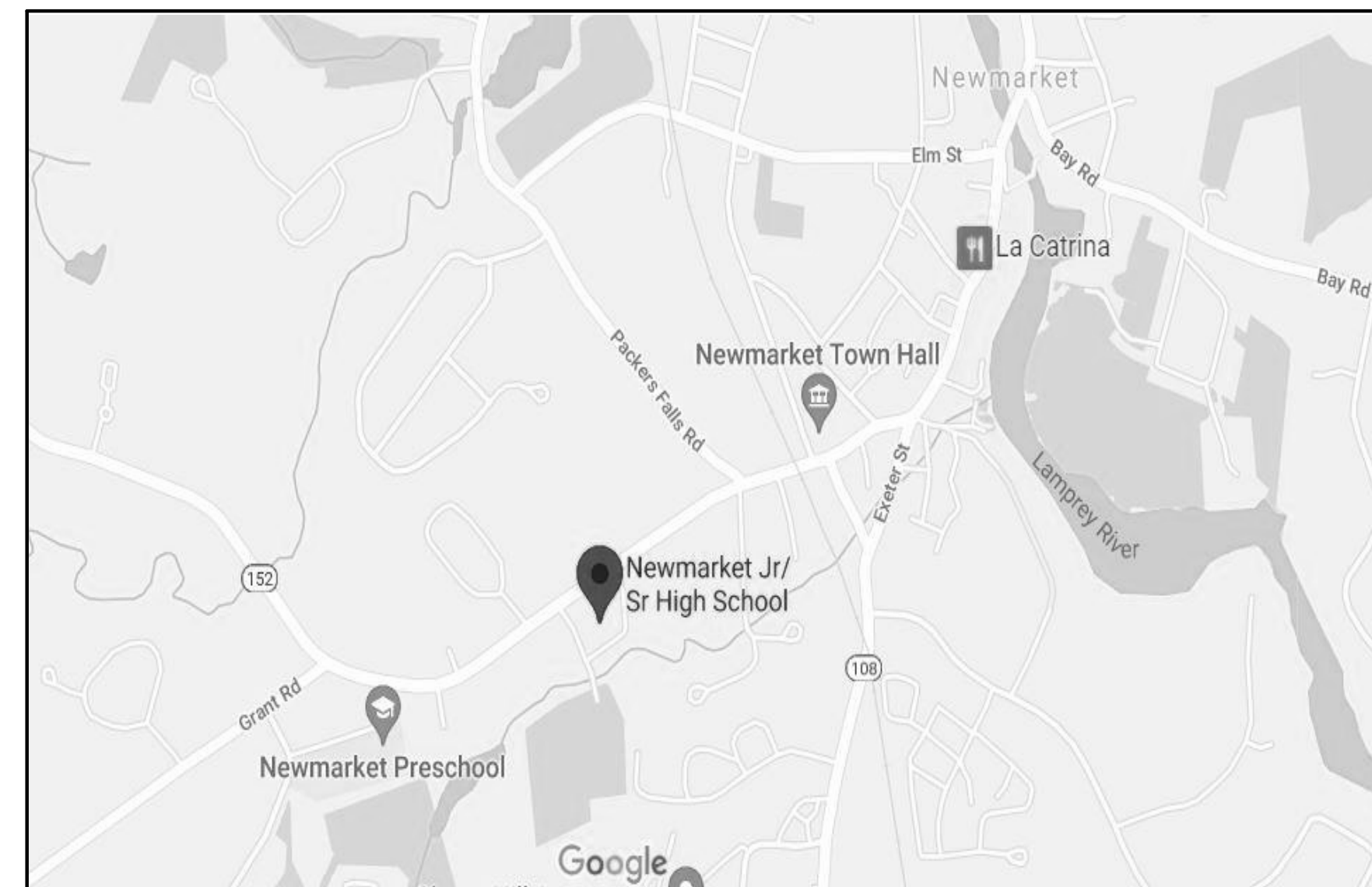
Lighting Control Drawings

LIGHTING CONTROL UPGRADES NEWMARKET JUNIOR/SENIOR HIGH SCHOOL

Newmarket School District NH SAU 31

213 S Main Street
Newmarket, NH 03857

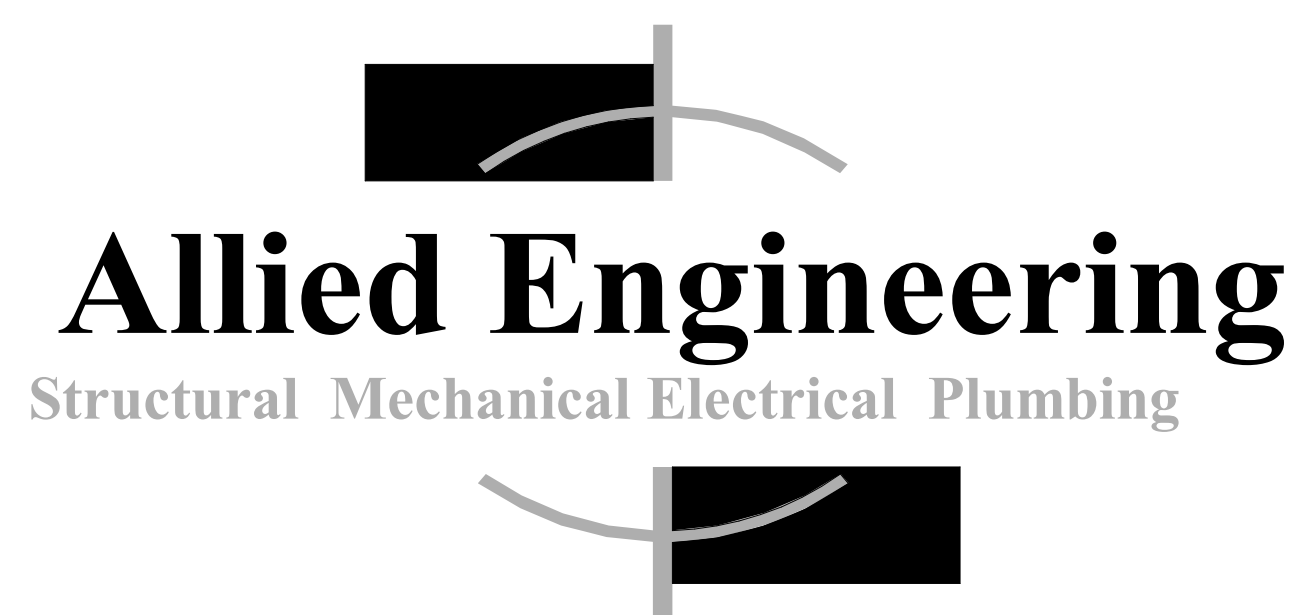
ALLIED PROJECT #21051



LOCATION MAP

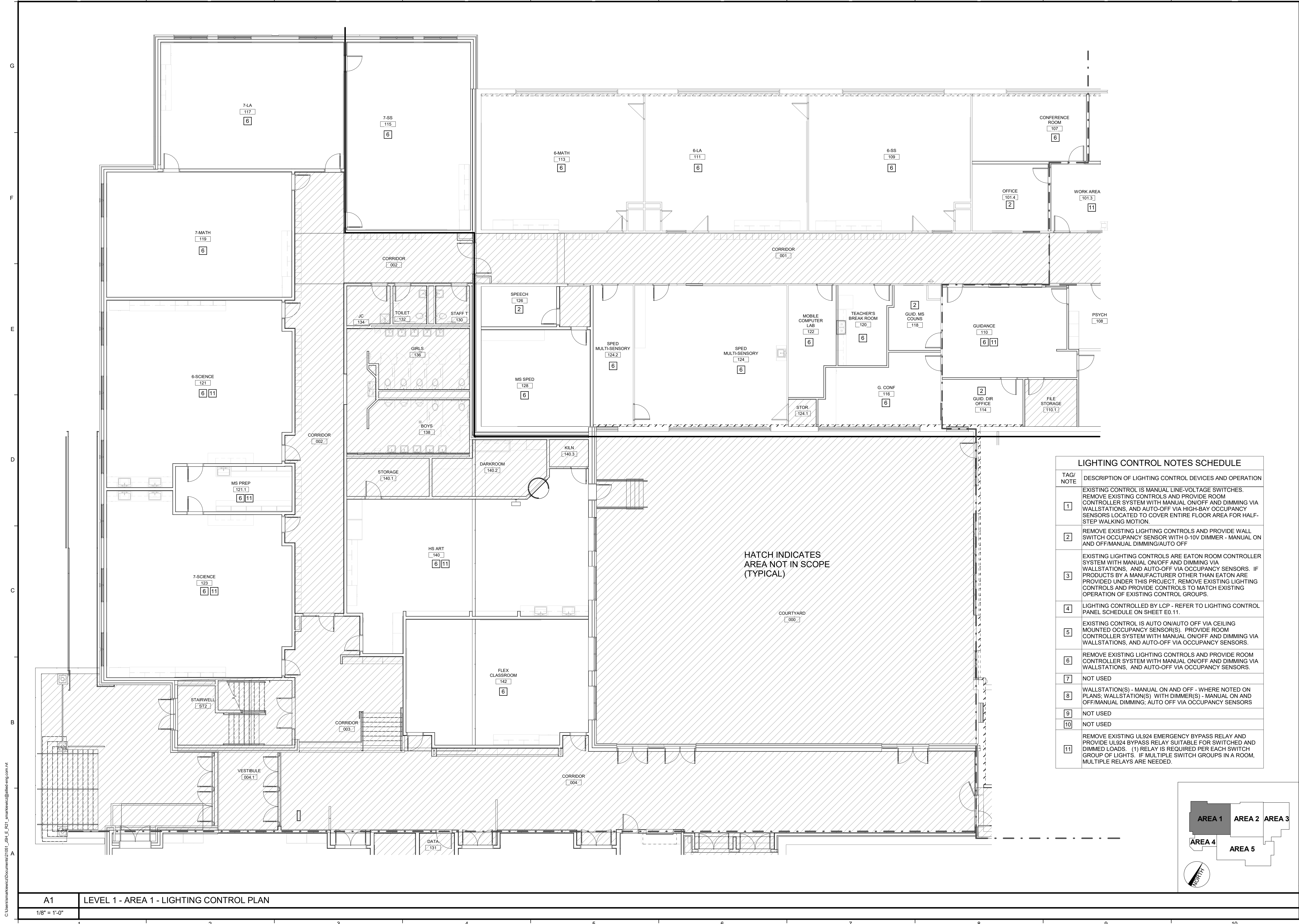
05/25/2021

DRAWING STATUS LIST		ISSUE		DATE	
		DESCRIPTION	FOR REVIEW	FOR BID	05/24/2021
DRAWINGS					
SHEET No.	SHEET TITLE				
EL111	LEVEL 1 - AREA 1 LIGHTING CONTROL PLAN	•	•		
EL112	LEVEL 1 - AREA 2 LIGHTING CONTROL PLAN	•	•		
EL113	LEVEL 1 - AREA 3 LIGHTING CONTROL PLAN	•	•		
EL114	LEVEL 1 - AREA 4 CONTROL LIGHTING PLAN	•	•		
EL115	LEVEL 1 - AREA 5 LIGHTING CONTROL PLAN	•	•		
EL121	LEVEL 2 - AREA 1 LIGHTING CONTROL PLAN	•	•		
EL122	LEVEL 2 - AREA 2 LIGHTING CONTROL PLAN	•	•		
EL123	LEVEL 2 - AREA 3 LIGHTING CONTROL PLAN	•	•		

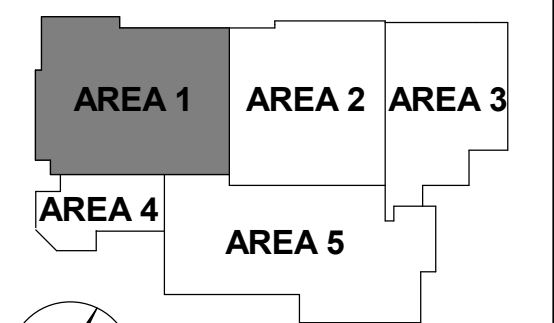


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Portland, Maine 04103
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LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
1	EXISTING CONTROL IS MANUAL LINE-VOLTAGE SWITCHES. REMOVE EXISTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA HIGH-BAY OCCUPANCY SENSORS LOCATED TO COVER ENTIRE FLOOR AREA FOR HALF-STEP WALKING MOTION.
2	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE WALL SWITCH OCCUPANCY SENSOR WITH 0-10V DIMMER - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF
3	EXISTING LIGHTING CONTROLS ARE EATON ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS. IF PRODUCTS BY A MANUFACTURER OTHER THAN EATON ARE PROVIDED UNDER THIS PROJECT, REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE CONTROLS TO MATCH EXISTING OPERATION OF EXISTING CONTROL GROUPS.
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.
5	EXISTING CONTROL IS AUTO ON/AUTO OFF VIA CEILING MOUNTED OCCUPANCY SENSOR(S). PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
6	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
7	NOT USED
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS
9	NOT USED
10	NOT USED
11	REMOVE EXISTING UL924 EMERGENCY BYPASS RELAY AND PROVIDE UL924 BYPASS RELAY SUITABLE FOR SWITCHED AND DIMMED LOADS. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.



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Web: www.allied-eng.com

Allied Engineering
Structural Mechanical Electrical Plumbing

REVISIONS

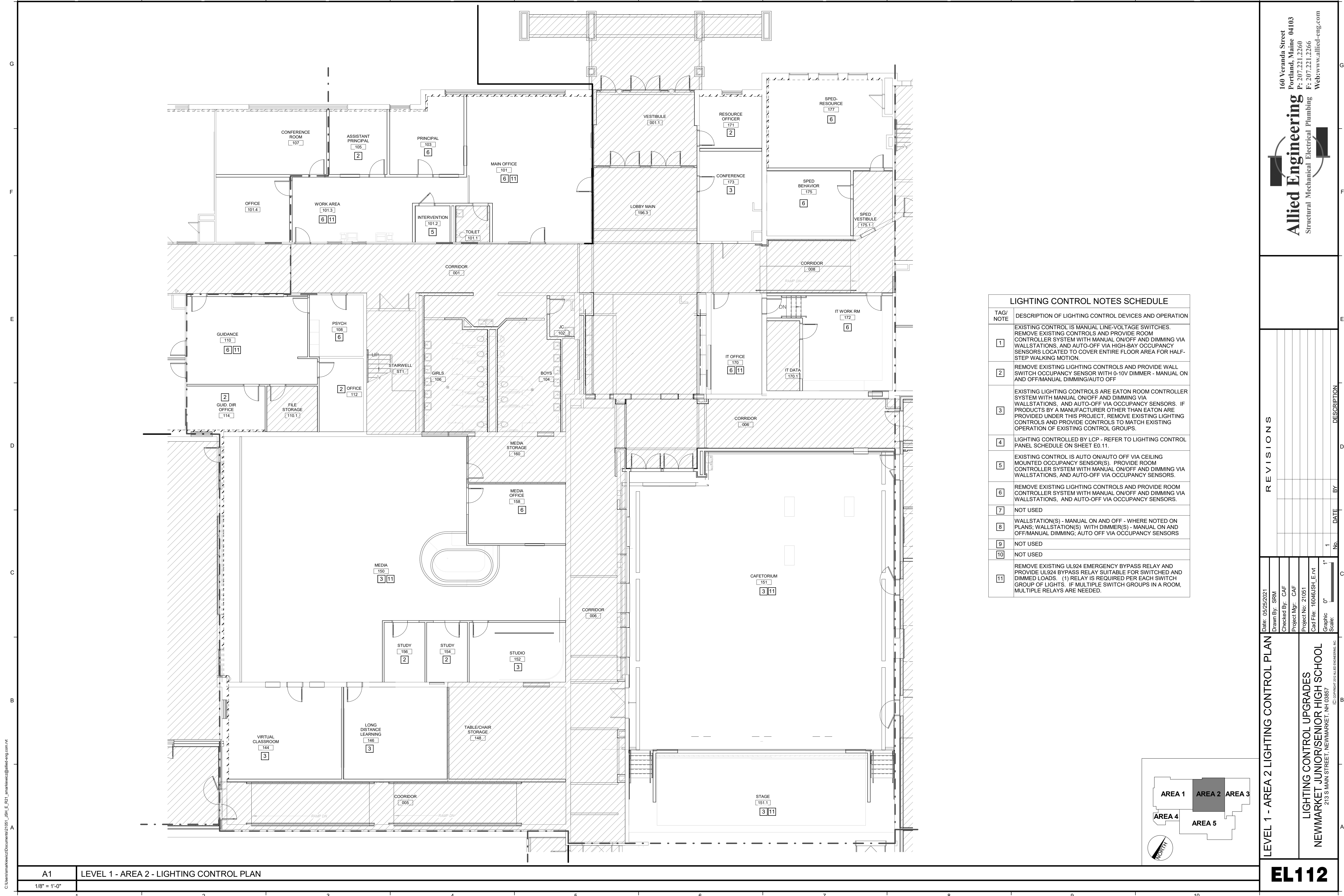
No.	DATE	BY	DESCRIPTION
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Date: 05/25/2021
Drawn By: SRM
Checked By: CAF
Project Mgr: CAF
Cad File: 1604605H-E.rvt
Graphic Scale: 1" = 1'-0"

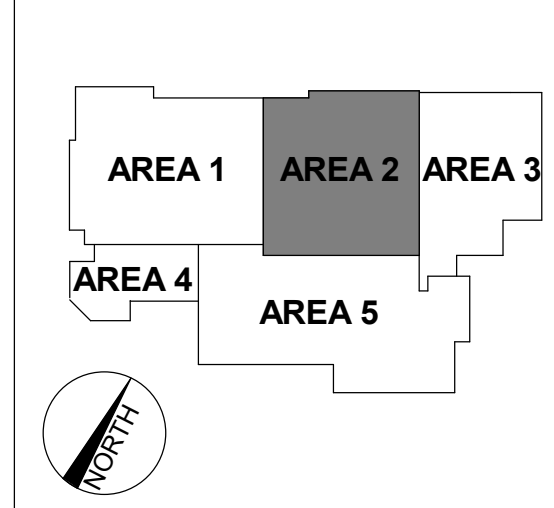
LEVEL 1 - AREA 1 LIGHTING CONTROL PLAN

LIGHTING CONTROL UPGRADES
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET, NEWMARKET, NH 03857

EL111



LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
1	EXISTING CONTROL IS MANUAL LINE-VOLTAGE SWITCHES. REMOVE EXISTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA HIGH-BAY OCCUPANCY SENSORS LOCATED TO COVER ENTIRE FLOOR AREA FOR HALF-STEP WALKING MOTION.
2	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE WALL SWITCH OCCUPANCY SENSOR WITH 0-10V DIMMER - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF
3	EXISTING LIGHTING CONTROLS ARE EATON ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS. IF PRODUCTS BY A MANUFACTURER OTHER THAN EATON ARE PROVIDED UNDER THIS PROJECT, REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE CONTROLS TO MATCH EXISTING OPERATION OF EXISTING CONTROL GROUPS.
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.
5	EXISTING CONTROL IS AUTO ON/AUTO OFF VIA CEILING MOUNTED OCCUPANCY SENSOR(S). PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
6	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
7	NOT USED
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS
9	NOT USED
10	NOT USED
11	REMOVE EXISTING UL924 EMERGENCY BYPASS RELAY AND PROVIDE UL924 BYPASS RELAY SUITABLE FOR SWITCHED AND DIMMED LOADS. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.



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Allied Engineering
 Structural Mechanical Electrical Plumbing

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1			

Date: 05/25/2021
 Drawn By: SRM
 Checked By: CAF
 Project Mgr: CAF
 Project No: 21051
 Cad File: 16046.BH.E.rvt
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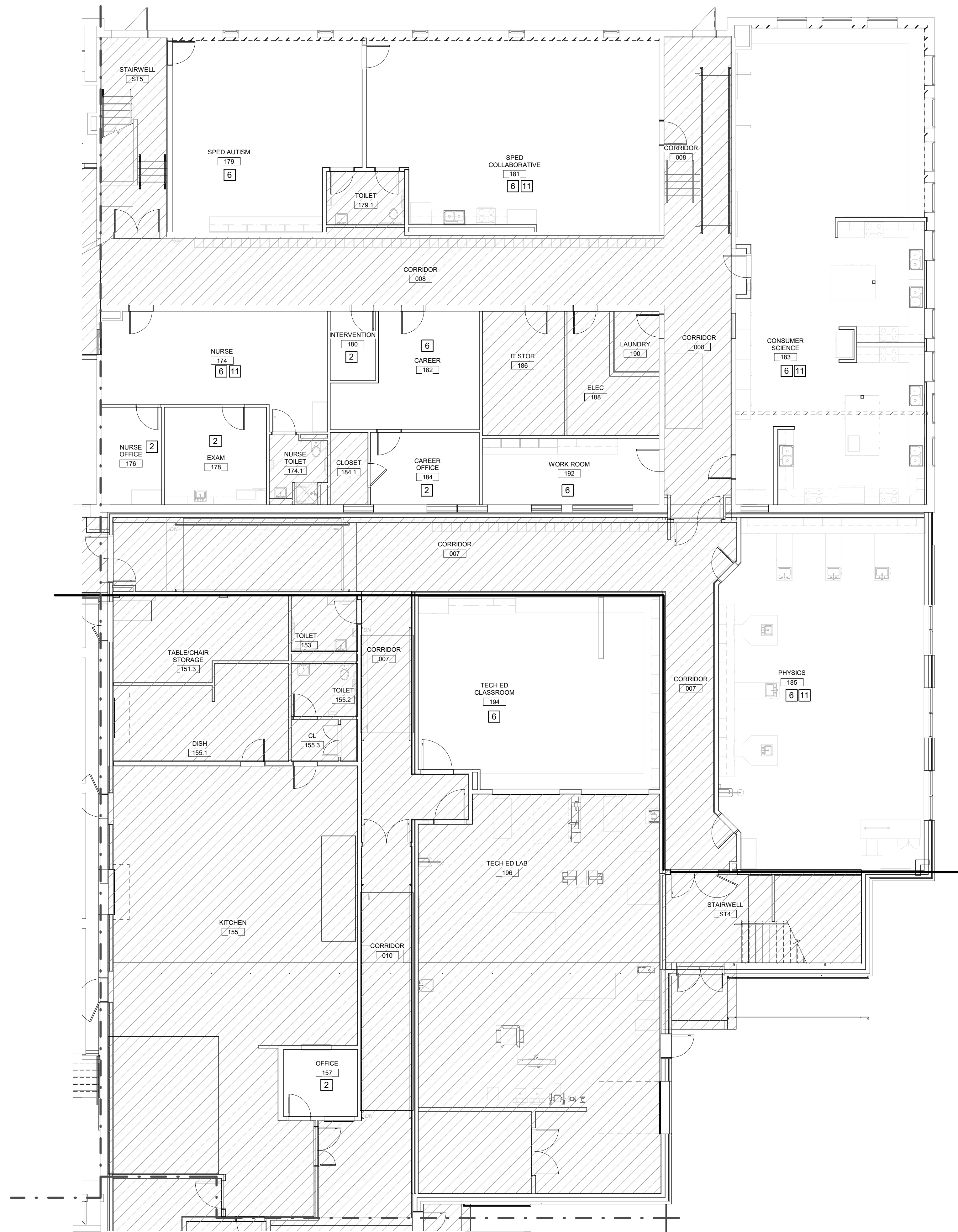
LEVEL 1 - AREA 2 LIGHTING CONTROL PLAN

LIGHTING CONTROL UPGRADES
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET, NEWMARKET, NH 03857

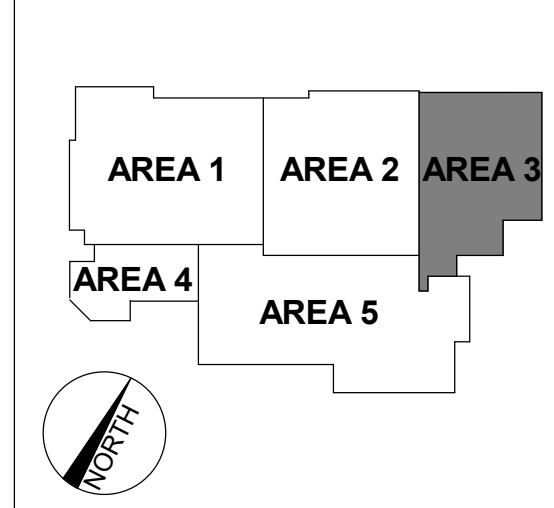
EL112

A1
 1/8" = 1'-0"

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LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
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4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.
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6	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
7	NOT USED
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING, AUTO OFF VIA OCCUPANCY SENSORS
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Date: 05/25/2021
 Drawn By: DLL

Checked By: SRM
 Project Mgr: SRM/DLL
 Project No: 21051
 Cad File: 160466.JSH-E.rvt
 Graphic Scale: 1" = 0'

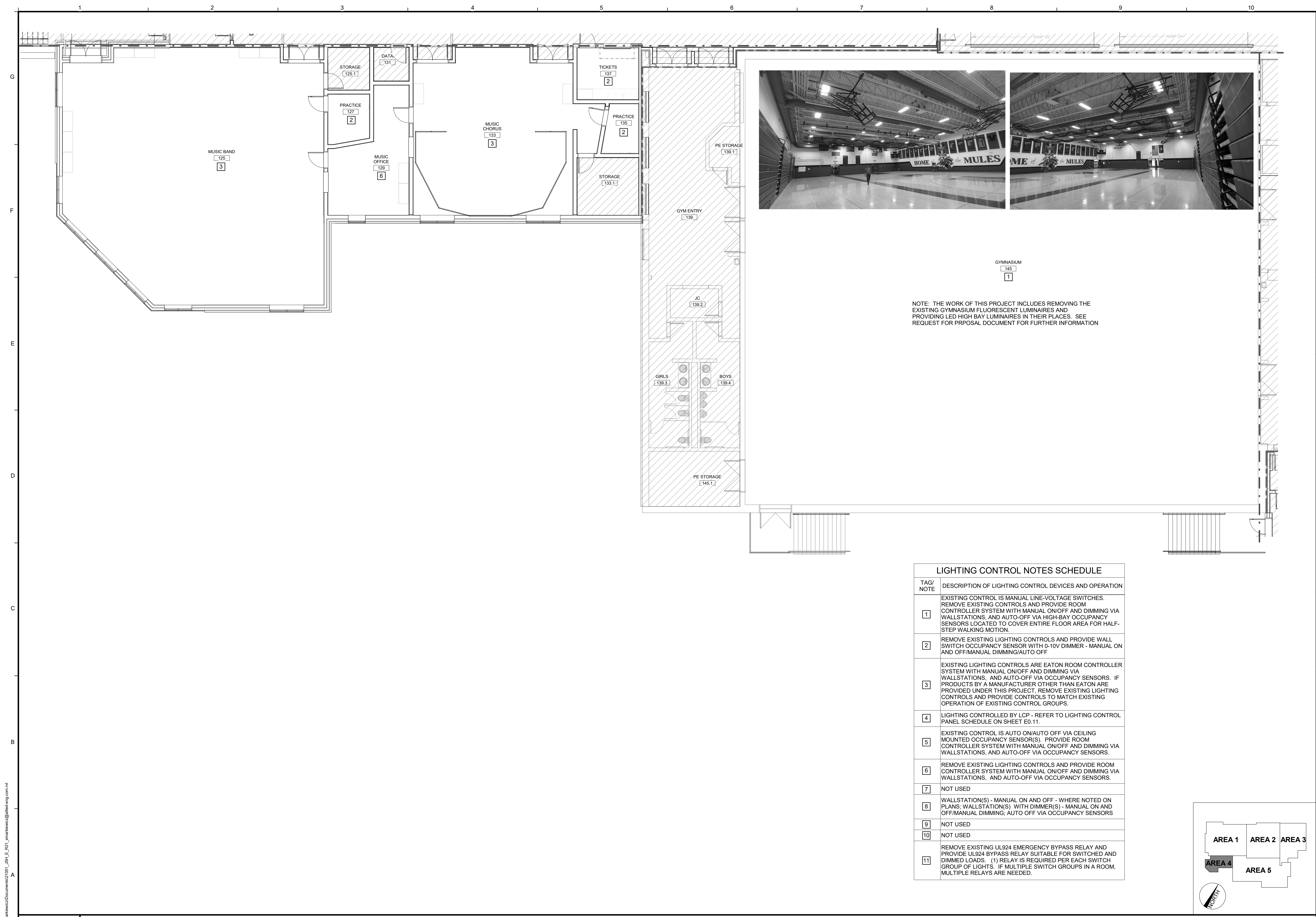
LEVEL 1 - AREA 3 LIGHTING CONTROL PLAN

LIGHTING CONTROL UPGRADES
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET, NEWMARKET, NH 03857
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EL113

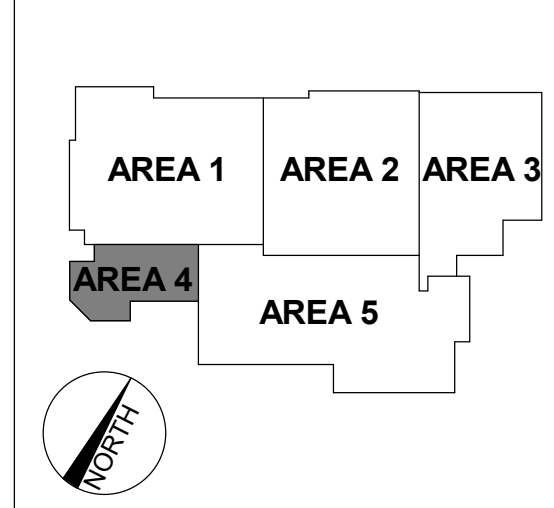
A8 LEVEL 1 - AREA 3 - LIGHTING CONTROL PLAN

1/8" = 1'-0"



NOTE: THE WORK OF THIS PROJECT INCLUDES REMOVING THE EXISTING GYMNASIUM FLUORESCENT LUMINAIRES AND PROVIDING LED HIGH BAY LUMINAIRES IN THEIR PLACES. SEE REQUEST FOR PROPOSAL DOCUMENT FOR FURTHER INFORMATION

LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
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 Project Mgr: CAF
 Project No: 21051
 Cad File: 160466.BH.E.rvt
 Graphic Scale: 1" = 0'

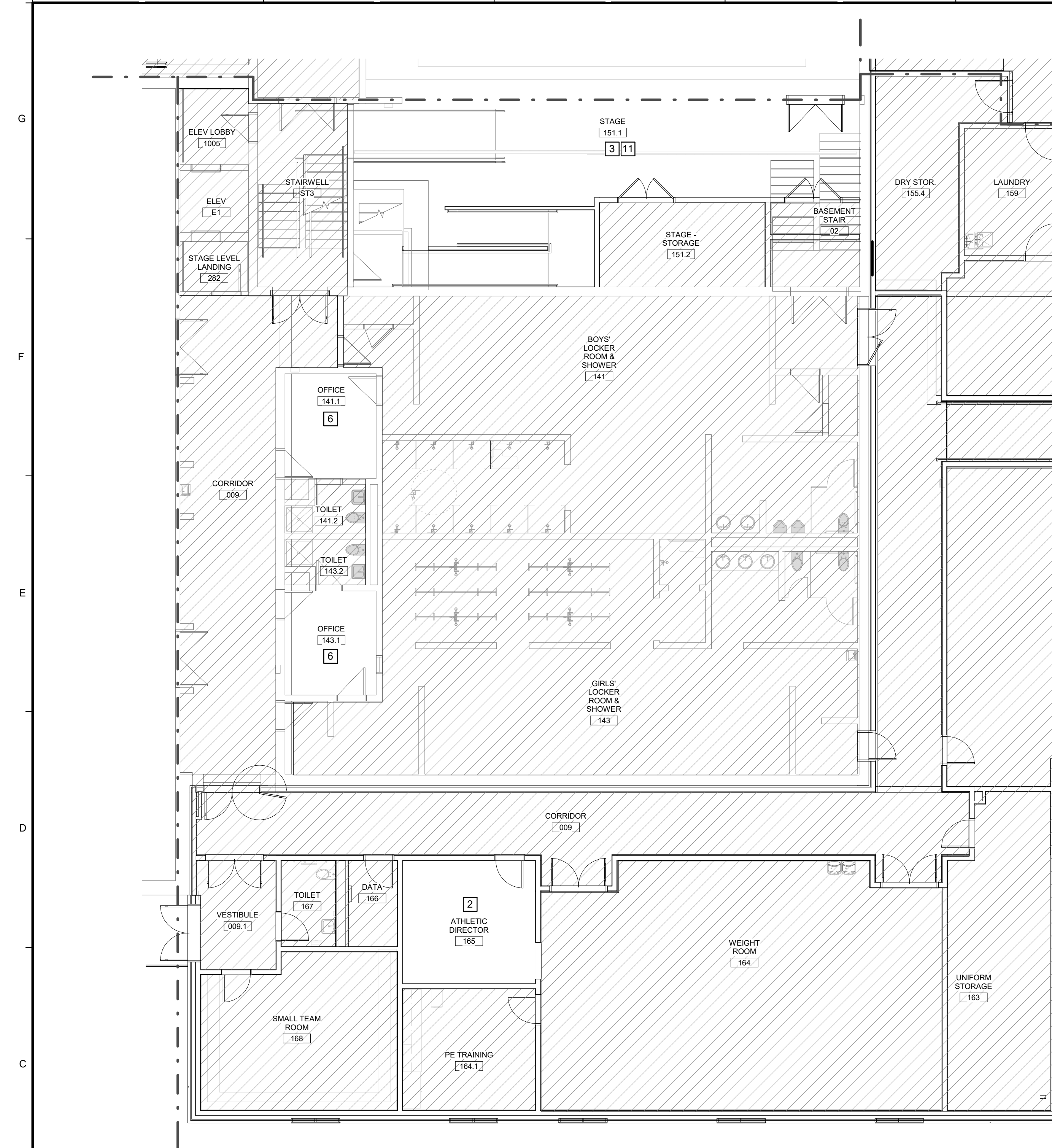
LEVEL 1 - AREA 4 CONTROL LIGHTING PLAN

LIGHTING CONTROL UPGRADES
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET, NEWMARKET, NH 03857
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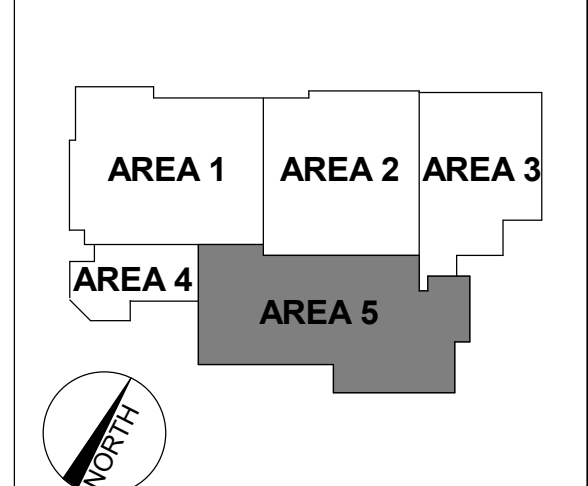
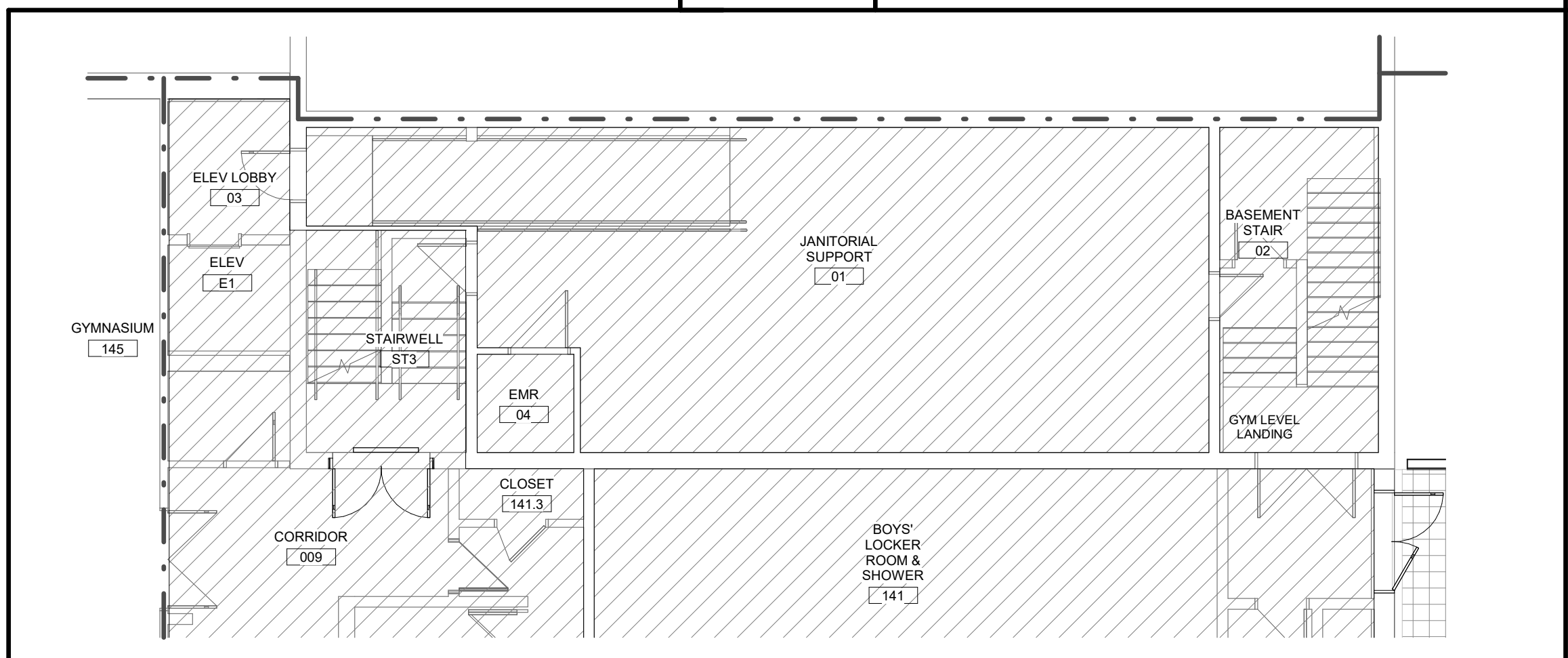
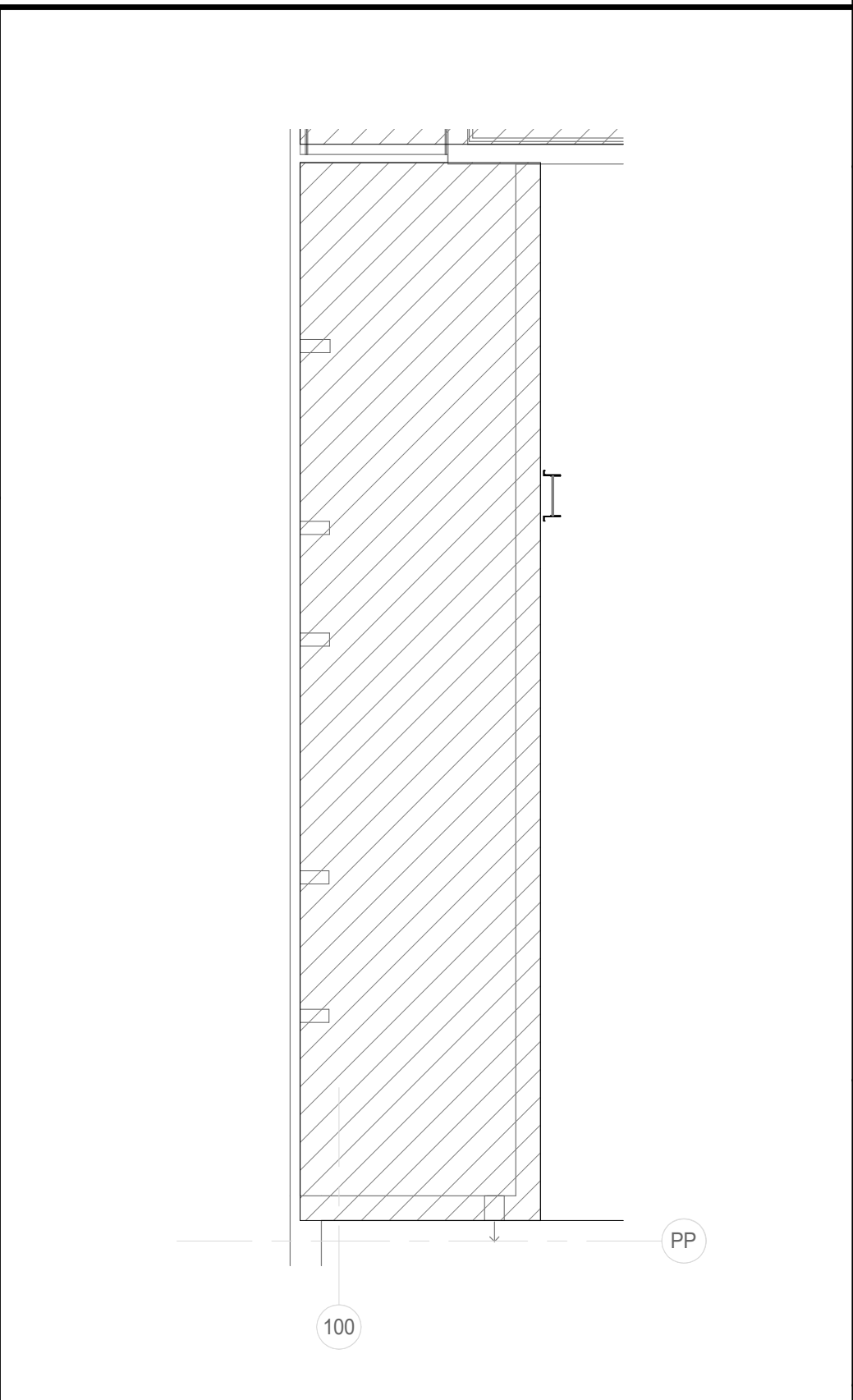
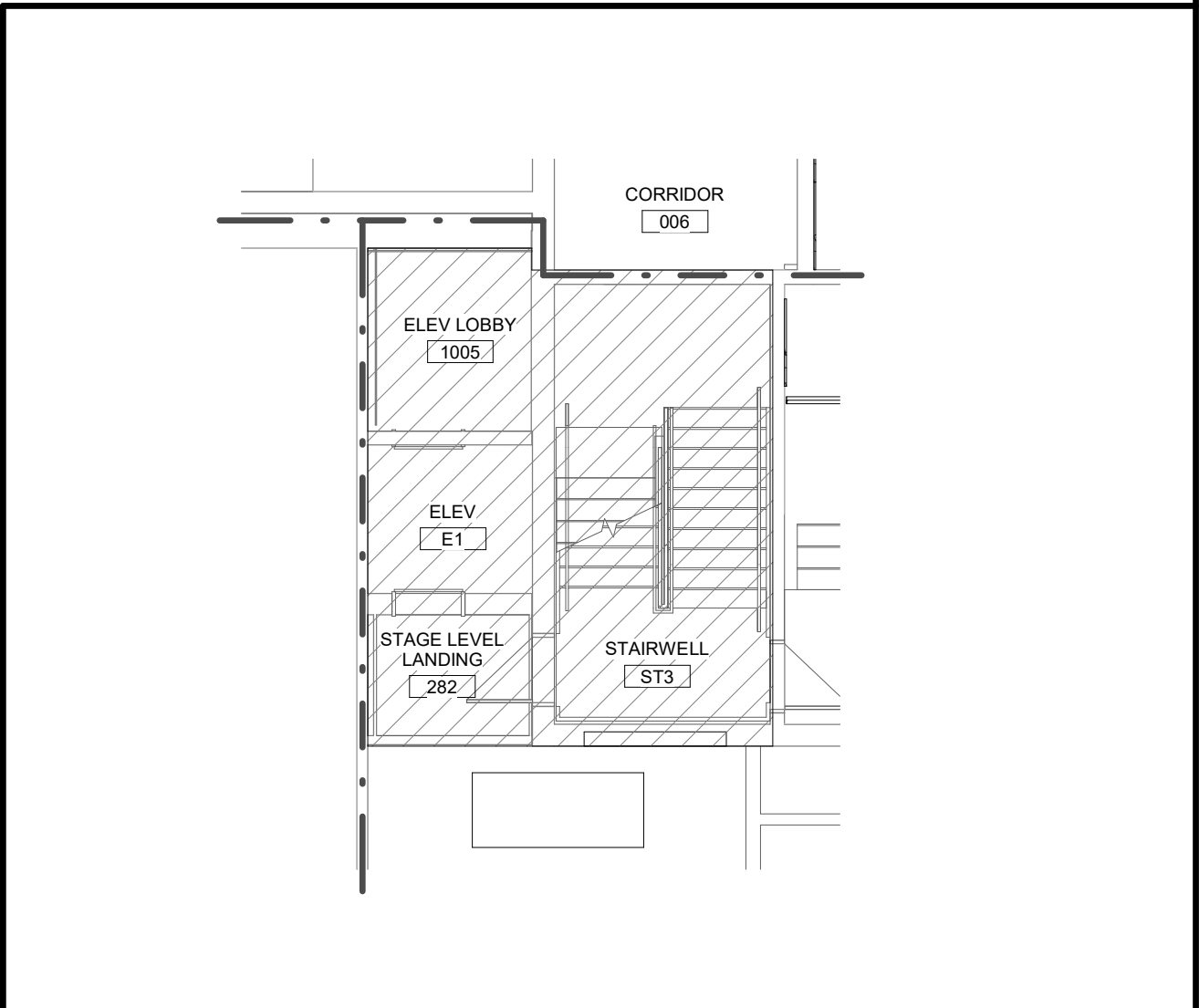
EL114

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A1 LEVEL 1 - AREA 4 - LIGHTING CONTROL PLAN
 1/8" = 1'-0"



LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
1	EXISTING CONTROL IS MANUAL LINE-VOLTAGE SWITCHES. REMOVE EXISTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA HIGH-BAY OCCUPANCY SENSORS LOCATED TO COVER ENTIRE FLOOR AREA FOR HALF-STEP WALKING MOTION.
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6	REMOVE EXISTING LIGHTING CONTROLS AND PROVIDE ROOM CONTROLLER SYSTEM WITH MANUAL ON/OFF AND DIMMING VIA WALLSTATIONS, AND AUTO-OFF VIA OCCUPANCY SENSORS.
7	NOT USED
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS
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1			

LEVEL 1 - AREA 5 LIGHTING CONTROL PLAN

DATE: 05/25/2021
DRAWN BY: SRM
CHECKED BY: CAF
PROJECT MGR: CAF
PROJECT NO: 21051
CAD FILE: 160466.BH.E.rvt
GRAPHIC SCALE: 1" = 1'-0"

LIGHTING CONTROL UPGRADES
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET, NEWMARKET, NH 03857

EL115

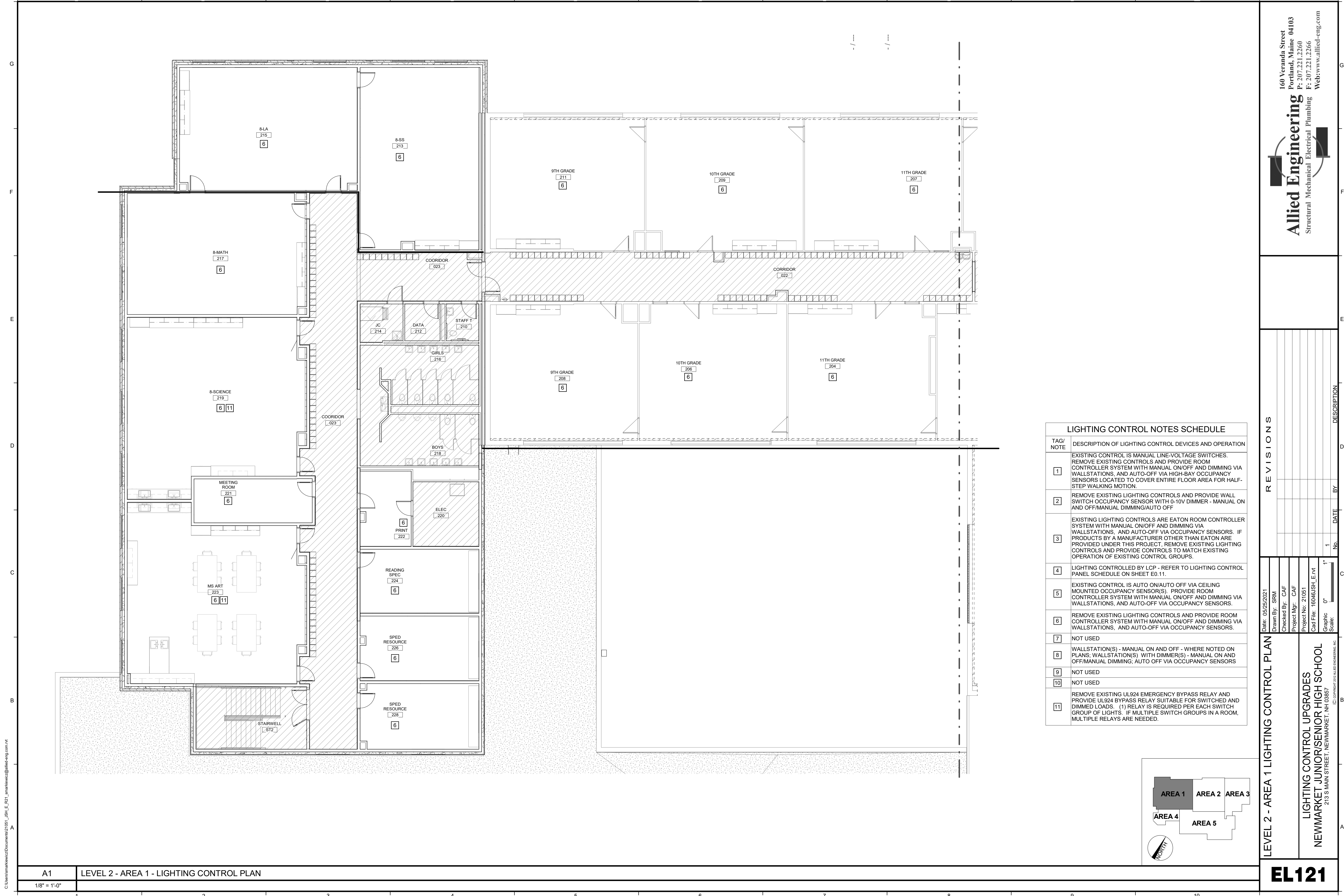
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1/8" = 1'-0"

A5 BASEMENT LEVEL LIGHTING
1/8" = 1'-0"

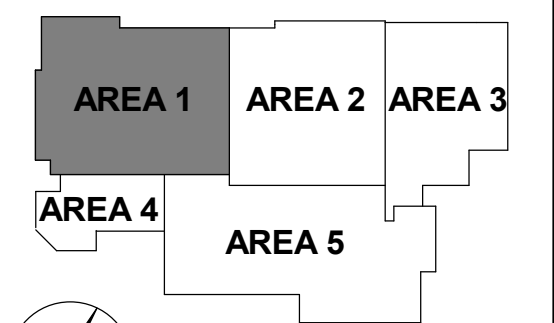
B7 STAGE LEVEL LANDING
1/8" = 1'-0"

B9 MECHANICAL MEZZANINE PLAN
1/8" = 1'-0"

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LIGHTING CONTROL NOTES SCHEDULE	
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION
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LEVEL 2 - AREA 1 LIGHTING CONTROL PLAN

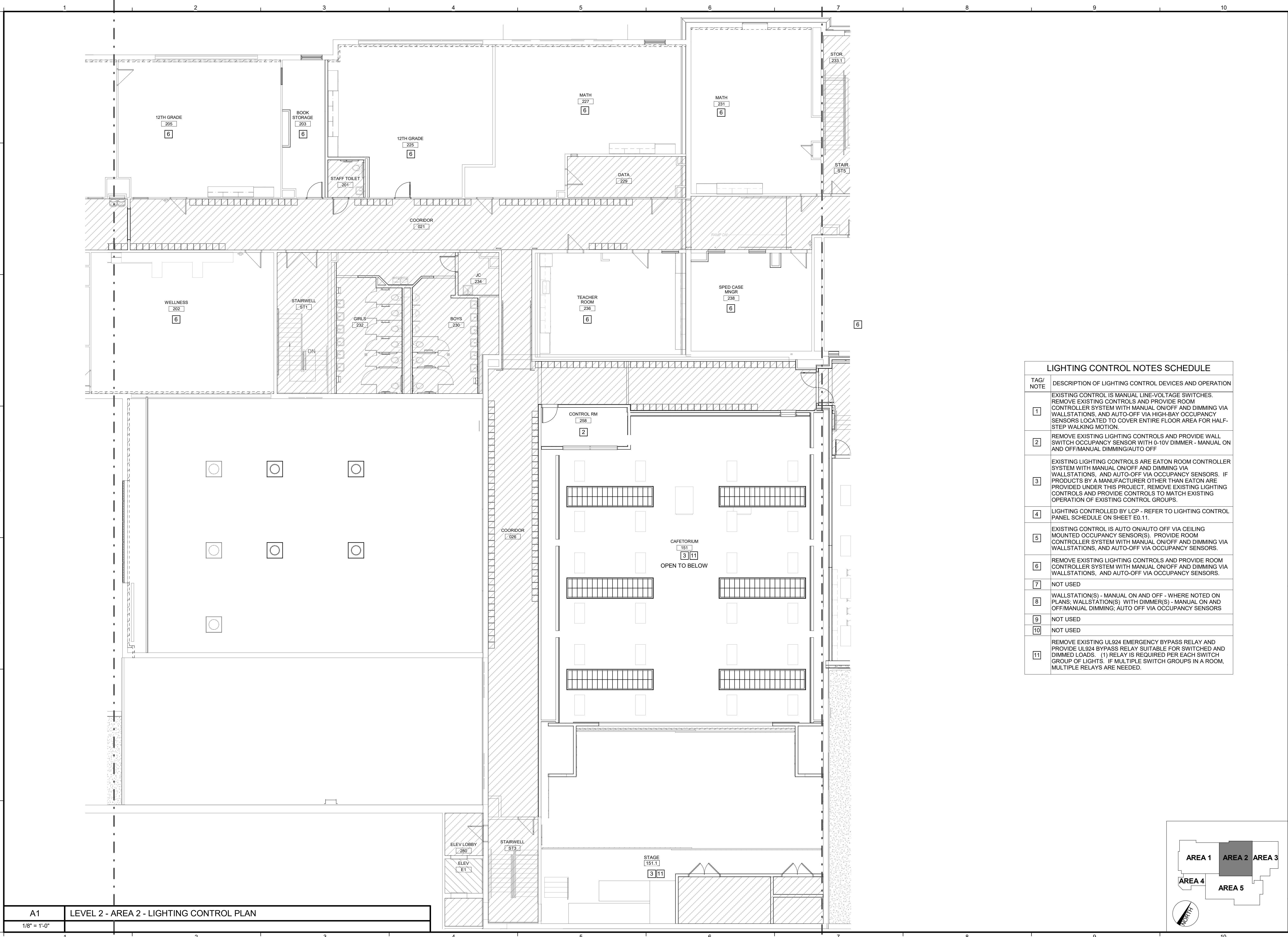
LIGHTING CONTROL UPGRADES
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET, NEWMARKET, NH 03857

EL121

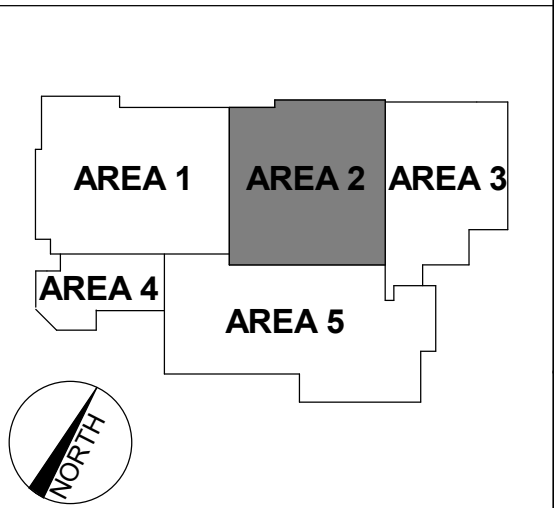
A1 LEVEL 2 - AREA 1 - LIGHTING CONTROL PLAN
 1/8" = 1'-0"

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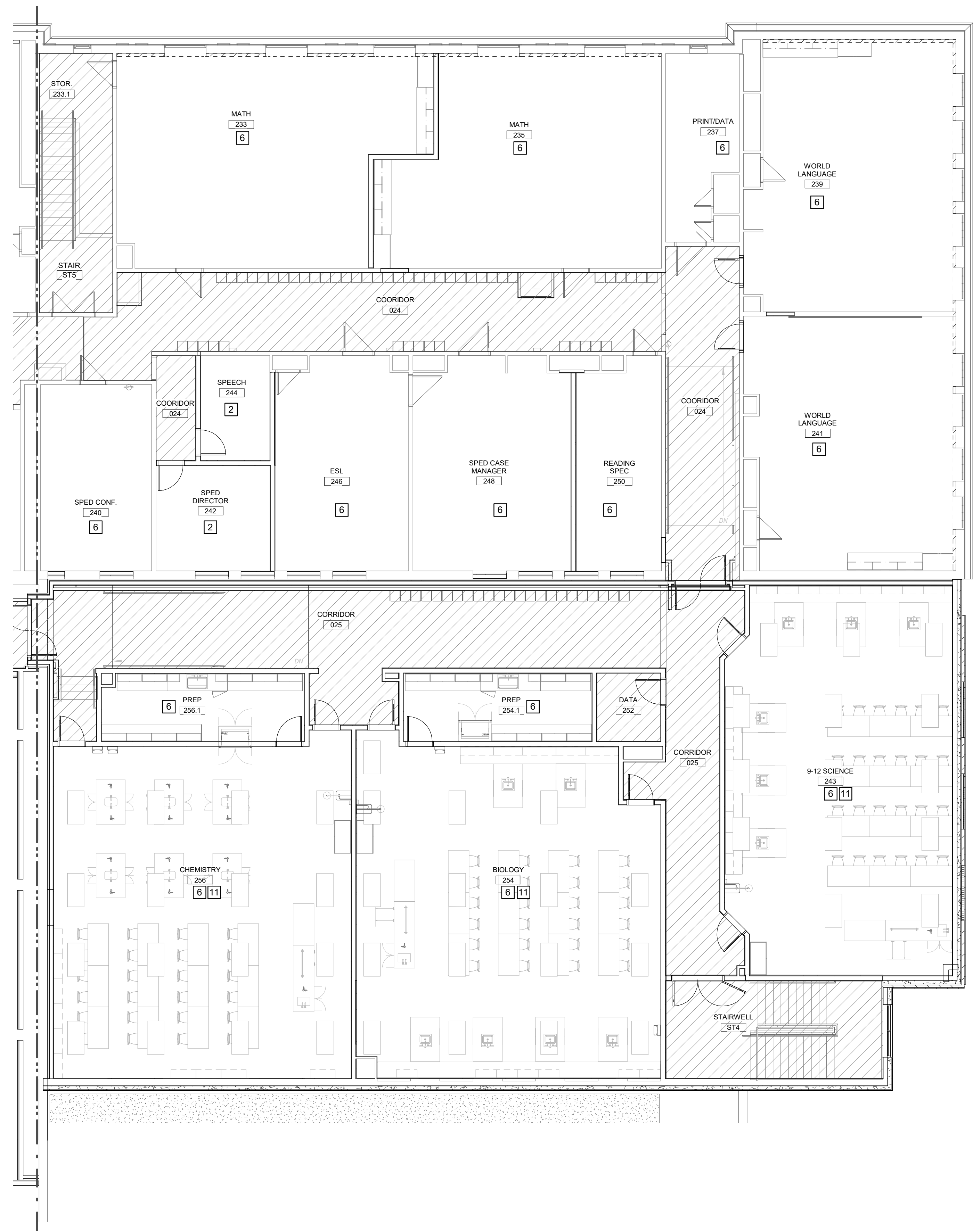
LEVEL 2 - AREA 2 LIGHTING CONTROL PLAN

LIGHTING CONTROL UPGRADES
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET, NEWMARKET, NH 03857

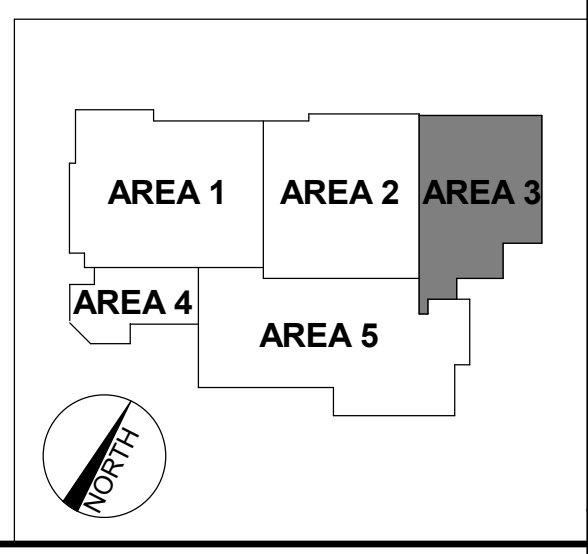
EL122

A1 LEVEL 2 - AREA 2 - LIGHTING CONTROL PLAN
1/8" = 1'-0"

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LIGHTING CONTROL NOTES SCHEDULE	
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 Graphic Scale: 1" = 0'

LEVEL 2 - AREA 3 LIGHTING CONTROL PLAN

LIGHTING CONTROL UPGRADES
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET, NEWMARKET, NH 03857

Appendix A
Existing As-Built Electrical Drawings

LIGHTING SWITCHES

- \$a LIGHT SWITCH, 20A, 125/277V
- \$3 THREE-WAY LIGHT SWITCH
- \$4 FOUR-WAY LIGHT SWITCH
- \$2 TWO-POLE SWITCH
- \$K KEY OPERATED SWITCH
- \$M MOTOR RATED SWITCH
- \$P SINGLE POLE SWITCH WITH RED PILOT LIGHT ~ RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED
- \$a MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING
- \$b
- \$os OCCUPANCY SENSOR SWITCH, WALL MOUNTED
- \$os2 2-BUTTON OCCUPANCY SENSOR SWITCH
- \$os3 OCCUPANCY SENSOR SWITCH WIRED FOR 3-WAY OPERATION
- \$osd OCCUPANCY SENSOR SWITCH WITH DIMMING ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED
- OS OCCUPANCY SENSOR, CEILING MOUNTED
- OS- OCCUPANCY SENSOR, WALL MOUNTED
- \$d DIMMER SWITCH ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED
- \$F HANDICAP SWITCHES FOR HOOD LIGHT AND FAN
- \$L
- \$T TIMER SWITCH
- \$Lv LOW VOLTAGE LIGHT SWITCH, MOMENTARY CONTACT
- \$Lvab LOW VOLTAGE LIGHT SWITCH CONTROLLING MULTIPLE LIGHTING GROUPS
- \$efab WALL STATION ~ REFER TO DETAIL J10/E0.11 - LOWER CASE LETTERS INDICATE SWITCHING, MULTIPLE LOWER CASE LETTERS INDICATE MANUAL CONTROL OF MULTIPLE SWITCH GROUPS

- LTC LIGHTING TIME CLOCK
- LC LIGHTING CONTACTOR
- LCP LIGHTING CONTROL PANEL
- PC OUTDOOR PHOTOELECTRIC SWITCH
- DS DAYLIGHT HARVESTING SENSOR
- DS DAYLIGHT HARVESTING SENSOR MOUNTED IN SOLATUBE

- NOTES:
- MOUNT LIGHT SWITCHES WITH CENTERLINE 48" AFF, UNO
 - LOWER CASE LETTER AT SWITCH INDICATES SWITCHING

EMERGENCY LIGHTING

- EM HATCHING INDICATES FIXTURE WITH EMERGENCY BALLAST "EM" INDICATES EMERGENCY WHERE SYMBOL HATCHING IS UNCLEAR
- BPF EMER BATTERY UNIT WITH NO HEADS, MT 7'-6" AFF BPF INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6" AFF BPF INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- BPF SINGLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF BPF INDICATES BATTERY UNIT CONNECTED TO
- BPF DOUBLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6" AFF BPF INDICATES BATTERY UNIT CONNECTED TO
- BPF DOUBLE REMOTE EMERGENCY LIGHT HEAD, CEILING MOUNTED BPF INDICATES BATTERY UNIT CONNECTED TO
- EXIT SIGN, CEILING MOUNTED, SHADING INDICATES FACE(S) ARROWHEAD INDICATES CHEVRON(S) REQUIRED, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- EXIT SIGN, WALL MOUNTED, SHADING INDICATES FACE(S) MOUNT AT 7'-6" AFF OR OVER DOOR, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- INV CENTRAL LIGHTING INVERTER

REFER TO LUMINAIRE SCHEDULE FOR FIXTURE LEGEND

TYPICAL FOR ALL FIXTURE TYPES :

- INDICATES LUMINAIRE TYPE ON SCHEDULE
- R1 LOWER CASE LETTER INDICATES SWITCH GROUP

NOTE:
WHERE INDICATED ON PLANS, FIXTURE EQUIPPED WITH EMERGENCY BATTERY DRIVER, CONNECT TO BOTH SWITCHED AND UNSWITCHED PORTION OF LIGHTING CIRCUIT IN ACCORDANCE WITH EMERGENCY BATTERY DRIVER MANUFACTURER'S INSTRUCTIONS.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER - SEE NOTE 1,2	MOUNTING	VOLTS	LAMP			KEY NOTES
						WATTS	DELIVERED LUMENS	TYPE:	
C1	8' LENSED STRIP, IMPACT RESISTANT FROSTED LENS	STARTEK	SP-N-8L-CA-IC	CEILING, OR PENDANT	UNV	32.9	4375	LED ARRAY 3500K	
C1A	4' LENSED STRIP, IMPACT RESISTANT FROSTED LENS	STARTEK	SP-N-4L-CA-IC	CEILING, OR PENDANT	UNV	16.8	2086	LED ARRAY 3500K	
C2	6" ROUND SURFACE DOWNLIGHT	HALO	SMD6R-WH	CEILING SURFACE	120	9.6	740	LED ARRAY 3500K	
P1	LENSED STRIP, IMPACT RESISTANT FROSTED LENS	STARTEK	SP-N-("SEE NOTE) L-CA-IC	CEILING, OR PENDANT	UNV	32.9	4375	LED ARRAY 3500K	7
P2	17" ROUND HIGHBAY LIGHTING-FLAT FROSTED LENS	SPECGRADE	HBF 90 (BEAM 120)- WITH UPLIGHT-WHITE HOUSING	STEM MOUNT PENDANT	277	90 DOWN/ 9 UP	12,021	LED ARRAY 3500K	
P3	PENDANT	DELRAY LIGHTING	IL7702	11'-4" AFF	277	53	3299	LED ARRAY 3500K	
P4	PENDANT	AMERICAN GLASS LIGHTING	363P48-5830WM	PENDANT	277	75	5830	LED ARRAY 3500K	
P5	PENDANT DOWNLIGHT	ALPHABET LIGHTING	608R 6XTM19-83 CRI-60 DEGREE REFLECTOR- MATTE SILVER FINISH	PENDANT	277	25	1700	LED ARRAY 3500K	4
P6	LINEAR PENDANT DIRECT/INDIRECT, 60% UPLIGHT/40% DOWNLIGHT	AXIS	BBDLED WITH SO LENS AND WHITE HOUSING	PENDANT	277V	8.87W/ FT	640 UP PER FT/ 400 DN PER FT	LED ARRAY 3500K	
R1	2X2 HIGH PERFORMANCE TROFFER, SMOOTH LENS	METALUX	22CZ-LD5-24	RECESSED	277	19.6	2510	LED ARRAY 3500K	
R1A	2X4 HIGH PERFORMANCE TROFFER, SMOOTH LENS	METALUX	24CZ-LD5-30	RECESSED	277	21.6	3070	LED ARRAY 3500K	
R1B	2X4 HIGH PERFORMANCE TROFFER, SMOOTH LENS	METALUX	24CZ-LD5-40	RECESSED	277	29	4043	LED ARRAY 3500K	
R3	2X2 FLAT LENS	METALUX	22FP235C	RECESSED	277	29.4	3417	LED ARRAY 3500K	
R3A	2X4 FLAT LENS	METALUX	24FP4735C	RECESSED	277	40.4	4990	LED ARRAY 3500K	
R3B	2X2 SECURITY TROFFER	FAILSAFE	FMRS-84	RECESSED	277	39.3	2715	LED ARRAY 3500K	
R4	3" WIDE CONTINUOUS	AXIS	BMRLD- FL- WHITE	RECESSED	277	3.7W/FT	400L/FT	LED ARRAY 3500K	7
R4W	3" WIDE CONTINUOUS WALLWASH	AXIS	BMRLD3MF WITH ASO-WHITE	RECESSED	277	5.5W/FT	500L/FT	LED ARRAY 3500K	7
R5	6" ROUND DOWNLIGHT	ALPHABET LIGHTING	NU6RD/XTM19/83CRI/SPECULAR CLEAR 55 DEGREE REFLECTOR/NO LENS, MATTE CHROME TRIM AND BEZEL	RECESSED	277	16.5	1110	LED ARRAY 3500K	
R6	6" LENSED ROUND DOWNLIGHT	ALPHABET LIGHTING	NU6RD/XTM19/83CRI/SPECULAR CLEAR 55 DEGREE REFLECTOR/NO LENS, MATTE CHROME TRIM AND BEZEL, WET LOCATION USE	RECESSED	277	16.5	1110	LED ARRAY 3500K	
R8	6" ADJUSTABLE ROUND DOWNLIGHT	ALPHABET LIGHTING	NU6RA/XTM19/83CRI/SPECULAR CLEAR 60 DEGREE REFLECTOR, MATTE CHROME TRIM AND BEZEL	RECESSED	277	16.4	1110	LED ARRAY 3500K	
S1A	SITE LIGHT AND POLE	INVUE	VXM-E03-SL4	20" STEEL POLE	UNV	75.2	8862	LED ARRAY 4000K	8
S1B	SITE LIGHT AND POLE	INVUE	VXM-E03-SWQ	20" STEEL POLE	UNV	75.2	9551		
S1C	SITE LIGHT AND POLE	INVUE	VXM-E03-SL2	20" STEEL POLE	UNV	75.2	9165	LED ARRAY 4000K	8
S1D	TWO SITE LIGHTS BACK TO BACK ON POLE	INVUE	(2) VXM-E03-SWQ	20" STEEL POLE	UNV	150.4	19102	LED ARRAY 4000K	8
B1	42" SITE BOLLARD	LUMIERE	303-B1-LEDB2-T2	CONCRETE BASE	UNV	15.5	1433	LED ARRAY 4000K	8
TK	TRACK LIGHTING WITH 8 TRACK HEADS- LENGTH AS SHOWN ON PLANS	HALO	SURFACE TRACK WITH (8) HEADS- 808-15-NF-90- WHITE HOUSING AND TRACK	SURFACE/TRACK	120	21	1500	LED ARRAY 3000K	
WC1A	WALL MOUNTED VERSION OF C1A			WALL OVER MIRROR					
W1A	WALL MOUNT AREA LIGHT	INVUE	VXS-E03-SL4-MA1200	WALL 20'-0" AFG UNO	277	75.2	8862	LED ARRAY 4000K	8
W1B	WALL MOUNT AREA LIGHT	INVUE	VXS-E02-SL4-MA1200	WALL	277	52.1	5908	LED ARRAY 4000K	8, 9
W1C	WALL MOUNT AREA LIGHT	INVUE	VXS-E03-SL2-MA1200	WALL 20'-0" AFG UNO	277	75.2	9165	LED ARRAY 4000K	8
W2	WALL DIRECT/INDIRECT	NEORAY	S122-DDJW- WITH UP LENS AND DOWN LENS- LENSES SHALL BE SATIN WHITE, FIXTURE HOUSING WHITE	WALL	277	10W/ FT	437 L/FT UP 587 L/FT DOWN	LED ARRAY 3500	7
W3	FRONT ENTRY WALL SCNCE	SHAPER	67431WP-L3835-ALP	WALL	277	20	1300	LED ARRAY 3500K	
W5	WALL MOUNTED LAMPHOLDER WITH RED BULB- DARK ROOM				277	30		LED	10
W6	WALL SCNCE CAFETERIA	AMERICAN GLASS LIGHTING	821927-S-LED	WALL	277	20	1370	LED	
EXIT	EXIT LIGHT	SURE-LITES	LPX SERIES WITH WHITE FACE AND RED LETTERS	NOTE 3	277 VAC 12 VDC	1.04		LED ARRAY	3
NO TAG	IN USE LIGHT	SURE-LITES	SLX SERIES WITH WHITE FACE AND GREEN LETTERS - 'IN USE' ON FACE		277 VAC	104		LED ARRAY	

NOTES

- NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.
- CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.
- PROVIDE WALL, CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
- PROVIDE 4" SQUARE JBOX FOR MOUNTING DIMMER DRIVER
- VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
- NOT USED
- PROVIDE CONTINUOUS FIXTURE WITH LENGTHS AS SHOWN ON PLANS
- COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.
- MOUNTING HEIGHTS SHALL BE AS NOTED ON PLANS.
- BULB COLOR/TYPE SHALL BE SELECTED BY OWNER

RFI 95

1. CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.

2. FIELD DIMENSION WALL COVE, WALL VALENCE AND WALL SLOT LIGHTING PRIOR TO ORDERING TO ENSURE PROPER FIXTURE LENGTHS. NOTIFY ARCHITECT OF ANY DISCREPANCIES IN LENGTHS SHOWN ON DRAWINGS AND ACTUAL FIELD DIMENSIONS. ADJUST LENGTHS OF ANY SPECIFIED FIXTURE AS DIRECTED BY ARCHITECT.

3. EXCEPT AS INDICATED OTHERWISE ON FIXTURE SCHEDULE, SUSPENDED LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH STEEL STEM SETS, AND PIECES AND ALIGNERS WITH ALIGNER TYPE CANOPIES AS MANUFACTURED BY RESPECTIVE FIXTURE MANUFACTURER.

4. PENDANT MOUNTING HEIGHTS ARE TO BOTTOM OF FIXTURE. VERIFY EXACT MOUNTING HEIGHTS OF PENDANT FIXTURES WITH ARCHITECT PRIOR TO ROUGHING.

5. WALL MOUNT FIXTURE HEIGHTS ARE TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT MOUNTING HEIGHTS AND LOCATIONS OF WALL MOUNTED LIGHTING WITH ARCHITECT PRIOR TO ROUGHING.

6. REFER TO REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING MOUNTED LIGHTING AND DEVICES.

7. PROVIDE TRIM AND MOUNTING ACCESSORIES FOR RECESSED LIGHTING FIXTURES WHICH ARE COMPATIBLE WITH THE TYPE OF CEILING CONSTRUCTION IN WHICH THEY ARE TO BE MOUNTED. REFER TO REFLECTED CEILING PLANS AND ROOM FINISH SCHEDULES.

8. LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS AND ELECTRIC ROOMS ARE APPROXIMATE. INSTALL LIGHTING TO AVOID DUCTWORK, PIPING AND ELECTRICAL ITEMS.

9. PENDANT LINEAR FIXTURES SHALL SATISFY LENGTHS SHOWN ON DRAWINGS.

10. PROVIDE WIRE GUARDS WHERE INDICATED ON FLOOR PLANS.

GRIPPIN ELECTRIC
118 Hopping Brook Road Holliston, Massachusetts 01746
508/429-8929 Fax: 508/429-7929
ELECTRICAL AS-BUILT DRAWING
April 17, 2020

REVISIONS	DATE

banwell ARCHITECTS
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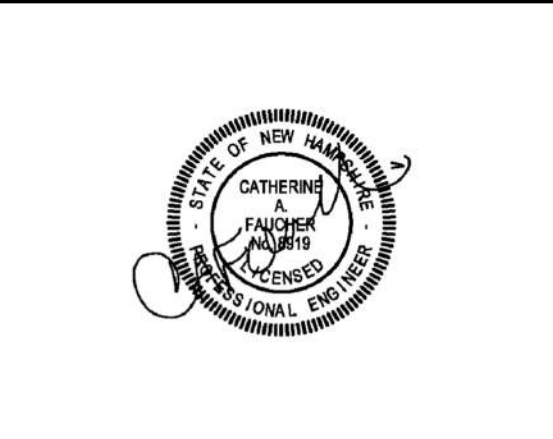
CONSULTANTS / DESIGN TEAM:
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AEI PROJECT NO: 16046

REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



REVISION	DATE	COMMENTS

KEY PLAN:

PROJECT: NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET, NEWMARKET, NH 03857

ISSUED: BIDDING DOCUMENTS

DRAWING TITLE: LUMINAIRE SCHEDULE AND LEGEND

PROJECT NO: 15-340 **DATE:** 01/12/18

SHEET NUMBER: E001H

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REVISION	DATE	COMMENTS

REVISION	DATE	COMMENTS

KEY PLAN:

PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
POWER RISER DIAGRAM

PROJECT NO: 15-340 DATE: 01/12/18

SHEET NUMBER:

E502H

NOTE:
REFER TO PANEL SCHEDULES FOR
CIRCUIT BREAKER SIZES AND QUANTITIES
IN EACH PANELBOARD AND SWITCHBOARD

TAG	DESCRIPTION	CONDUCTORS (NOTE 1)	CONDUIT (NOTE 2)
1A	125 AMP PRIMARY/FEEDER	(3) #1, (1) #6 G	1 1/4"
1B	100 AMP SECONDARY/FEEDER	(4) #2, (1) #8 G	1 1/4"
2A	225 AMP PRIMARY/FEEDER	(3) #4/0, (1) #4 G	2"
2B	225 AMP SECONDARY/FEEDER	(4) #4/0, (1) #4 G	2 1/2"
4A	400 AMP PRIMARY/FEEDER	(3) 500, (1) #3 G	3"
4B	400 AMP SECONDARY/FEEDER	(4) 500, (1) #3 G	3"
A	300 AMP SECONDARY/FEEDER	(4) 300 KCML, (1) #4G	3"
B	175 AMP PRIMARY/FEEDER	(3) #2/0, (1) #6G	3"
C	80 AMP SECONDARY FEEDER	(4) #4, (1) #8 G	1 1/2"
D	1600 AMP SERVICE ENTRANCE FEEDER - UNDERGROUND	(4) 500 KCML	IN EACH OF (5) 4"
F	800 AMP SECONDARY/FEEDER	(4) 500 KCML, (1) #1/0 G	IN EACH OF (2) 3"
G	350 AMP PRIMARY/FEEDER	(3) 400 KCML, (1) #3G	3"
H	150 AMP SECONDARY/FEEDER	(4) #1/0, (1) #6 G	2"
I	600 AMP SECONDARY/FEEDER	(4) 300, (1) #1 G	IN EACH OF (2) 3"
J	EMPTY CONDUIT WITH PULL STRING	NONE	(2) 3"
K	400 AMP SECONDARY/FEEDER UPSIZED FOR VOLTAGE DROP	(4) 250 KCML, (1) #2G	IN EACH OF (2) 3"

FEEDER SCHEDULE NOTES:
1. WIRING BASED ON COPPER THWN/THHN
2. CONDUIT SIZE BASED ON EMT

TAG	DESCRIPTION	NOTES
1	225 KVA	
2	112 1/2 KVA	
3	150 KVA	

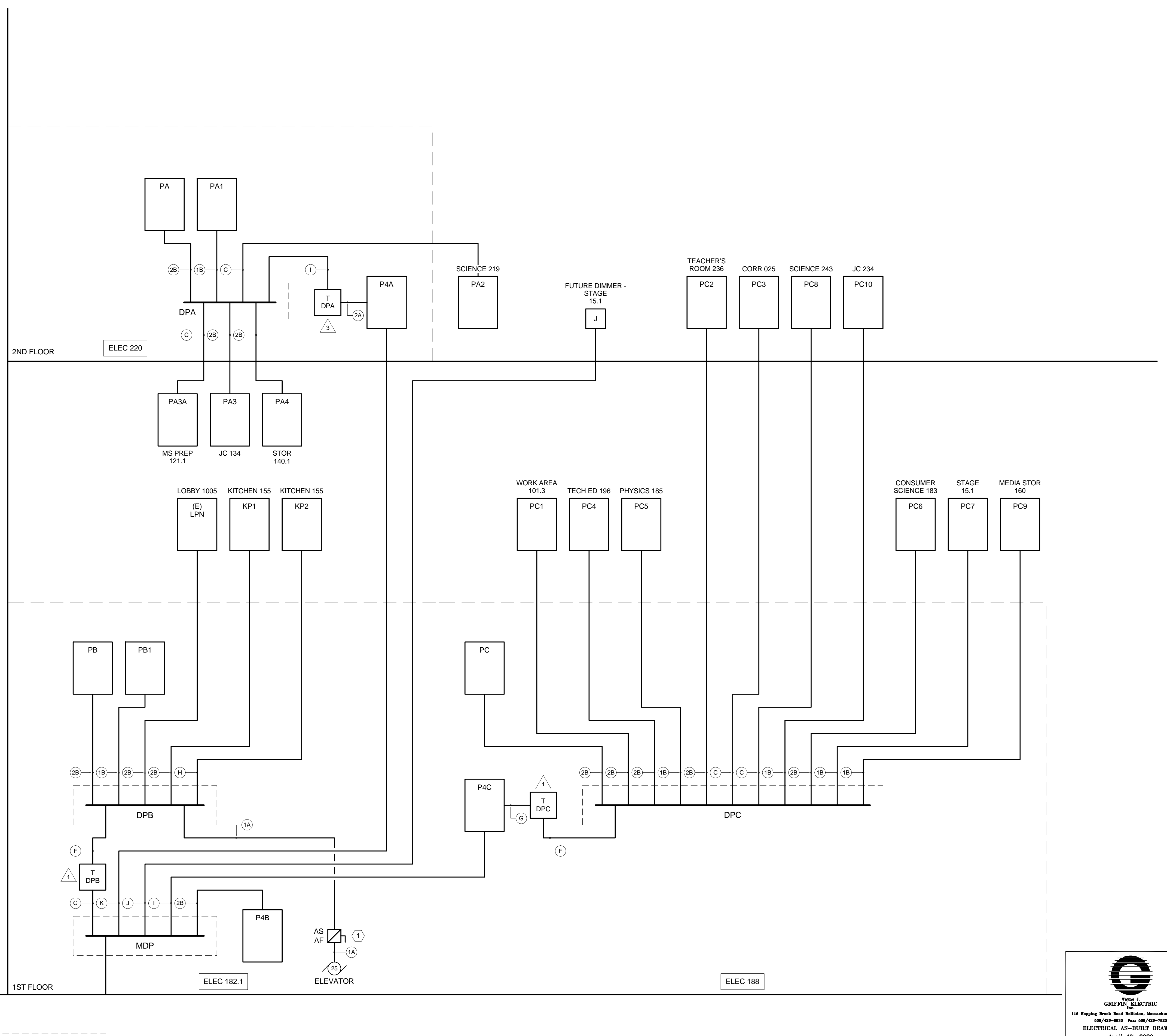
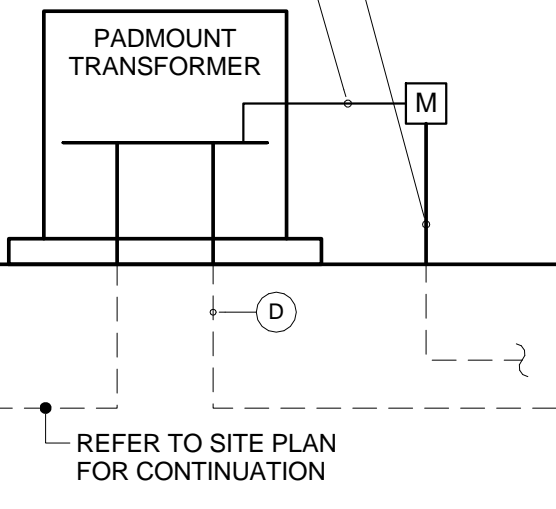
TRANSFORMER SCHEDULE NOTES:
ALL TRANSFORMERS ARE RATED:
480 VOLT, 3 PHASE, 3 WIRE PRIMARY AND 208Y/120VOLT, 3 PHASE, 4 WIRE SECONDARY U.N.O.

KEYNOTES:

1 240V, 200A, 3-POLE DISCONNECT SWITCH FUSED AT 125A - NEMA 1. PROVIDE AUXILIARY SWITCH.

PROVIDE (1) CATEGORY 6 CABLE IN 1" CONDUIT TO TELEPHONE DEMARC

PROVIDE 1 1/4" C WITH PULLSTRING FOR UTILITY USE



GRIFPIN ELECTRIC
116 Hopping Brook Road, Holliston, Massachusetts 01746
508/428-8820 Fax: 508/428-7855
ELECTRICAL AS-BUILT DRAWING
April 17, 2020

REVISIONS	DATE



WAYNE J. GRIFFIN ELECTRIC INC.

116 HOPPING BROOK ROAD, HOLLISTON, MA 01746 (508) 429-8830 FAX (508) 429-7825

Table with 4 columns: LINE, SOURCE PANEL, DPA, VOLTAGE. Panel name: PA1. Source panel: DPA. Size: 54. Voltage: 208/120V. Lines include HVAC controls, receptacles, and hand dryers.



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Table with 4 columns: LINE, SOURCE PANEL, DPA, VOLTAGE. Panel name: DPC. Source panel: PAC. Size: 54. Voltage: 208/120V. Lines include panel PC, PC1 through PC10.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: PC10. Source panel: DPC. Size: 42. Voltage: 208/120V. Lines include return fan, roof recept, condensing units, and mezzanine.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: PC9. Source panel: DPC. Size: 42. Voltage: 208/120V. Lines include LTG, spare, and roof recept.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: PC6. Source panel: DPC. Size: 42. Voltage: 208/120V. Lines include refriger, spare, stove, and microwave.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: KP2. Source panel: DPB. Size: 42. Voltage: 208/120V. Lines include spare, tag, and kitchen exhaust.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: PB1. Source panel: DPB. Size: 42. Voltage: 208/120V. Lines include boiler, AHU, condensing unit, and pumps.



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Table with 4 columns: LINE, SOURCE PANEL, DPA, VOLTAGE. Panel name: PA4. Source panel: DPA. Size: 42. Voltage: 208/120V. Lines include vented cabinet, pottery wheel, and exhaust fans.



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Table with 4 columns: LINE, SOURCE PANEL, DPA, VOLTAGE. Panel name: PA. Source panel: DPA. Size: 42. Voltage: 208/120V. Lines include recept, charging area, and equipment.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: DPB. Source panel: MDP. Size: 42. Voltage: 208/120V. Lines include panel PB, PB1, KP2, and spare.



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Table with 4 columns: LINE, SOURCE PANEL, DPC, VOLTAGE. Panel name: DPA. Source panel: PA4. Size: 42. Voltage: 208/120V. Lines include panel PA, PA1, PA2, PA3, PA4, and RTU.



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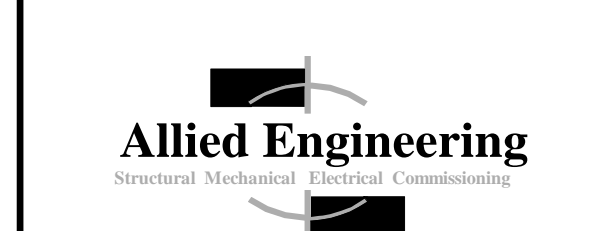
Table with 4 columns: LINE, SOURCE PANEL, MDP, VOLTAGE. Panel name: P4C. Source panel: MDP. Size: 42. Voltage: 480/277V. Lines include exhaust fan, energy recover, and LTG levels.



THE CARRIAGE HOUSE 6 SOUTH PARK STREET LEBANON, NH 03766 T: 603 448 3778 F: 603 443 5555

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ARCHITECT: BANWELL ARCHITECTS 6 SOUTH PARK STREET LEBANON, NH 03766 T: (603) 448-3778 F: (603) 443-5555



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AEI PROJECT NO: 16046

Table with 3 columns: REVISION, DATE, COMMENTS. Multiple empty rows for revisions.

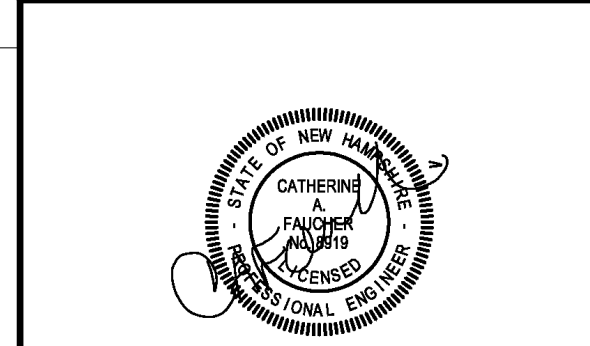


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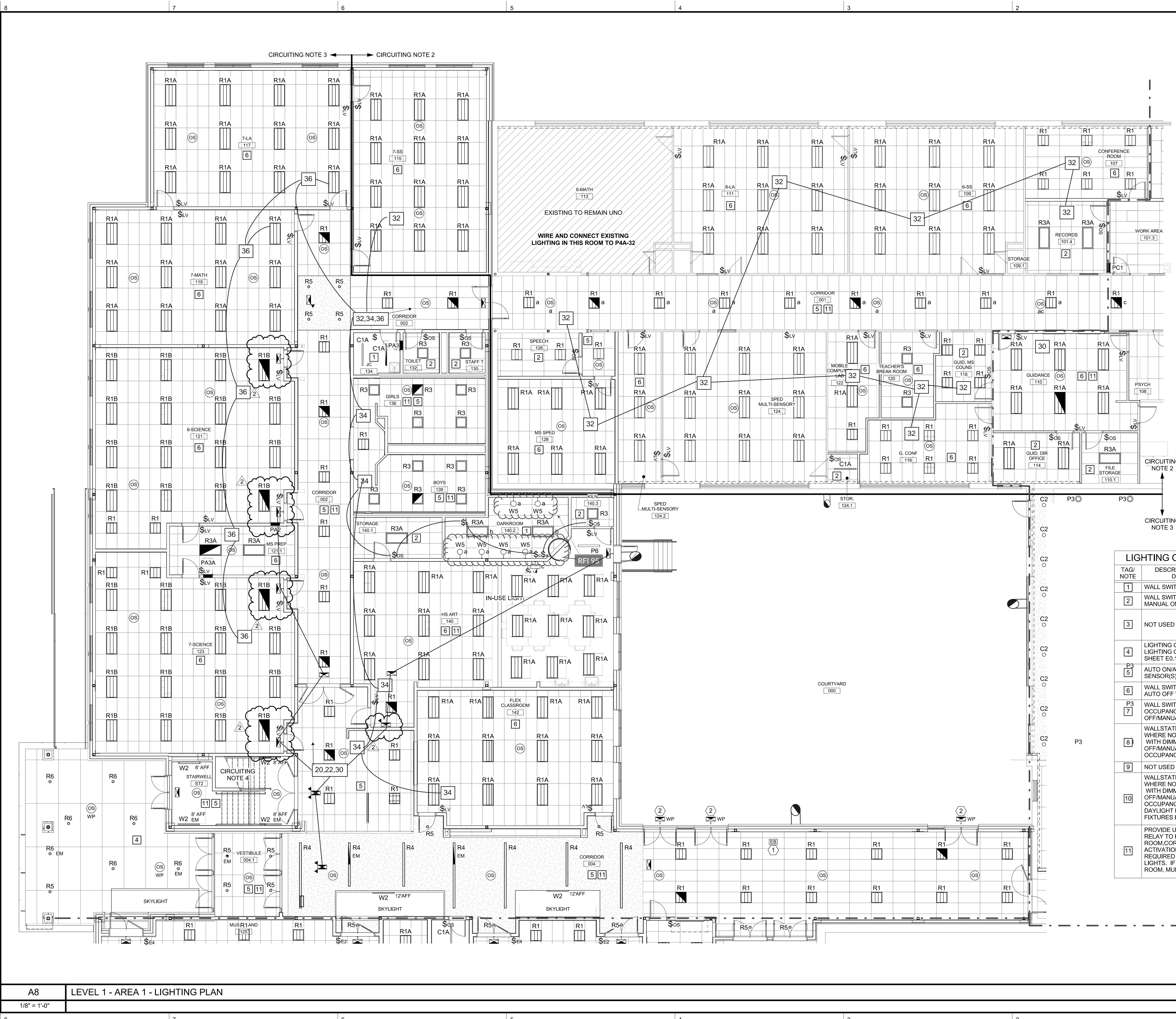
KEY PLAN: PROJECT: NEWMARKET JUNIOR/SENIOR HIGH SCHOOL 213 S MAIN STREET, NEWMARKET, NH 03857

ISSUED: BIDDING DOCUMENTS DRAWING TITLE: ELECTRICAL SCHEDULES

PROJECT NO: 15-340 DATE: 01/12/18 SHEET NUMBER:

Wayne J. Griffin Electric logo and company information. 116 Hopping Brook Road Holliston, Massachusetts 01746. ELECTRICAL AS-BUILT DRAWING April 17, 2020. Large drawing number: E601H

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1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING IN THIS AREA TO P4A-32.
3. CIRCUIT LIGHTING IN THIS AREA TO P4A-34 UNLESS NOTED OTHERWISE BELOW.
4. CIRCUIT LIGHTING IN ROOMS 117, 119, 121, 121.1, 123 TO P4A-36.
5. CIRCUIT LIGHTING IN STAIR ST2 TO P4A-30.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

- 1 PROVIDE REMOTE POWER EMERGENCY BATTERY UNIT ABOVE CEILING - WIRE AND CONNECT EXTERIOR EXIT SIGNS.
- 2 WIRE AND CONNECT TO EMERGENCY BATTERY UNIT

E1	KEY NOTES
----	-----------

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
P3	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
P3	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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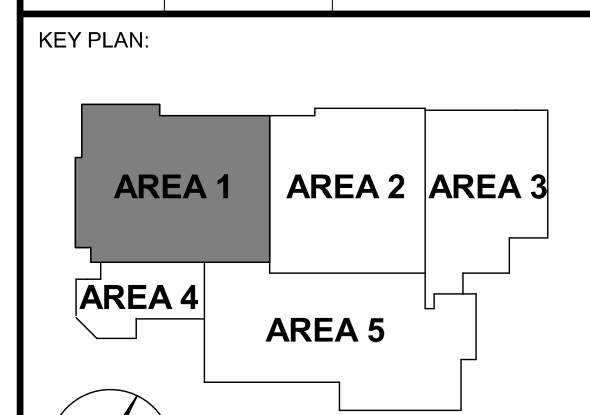
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H
2	5/10/18	Bulletin 2H



PROJECT:
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
CONSTRUCTION DOCUMENTS INCLUDING ADDENDA

DRAWING TITLE:
LEVEL 1 - AREA 1 - LIGHTING PLAN

PROJECT NO: 15-340 DATE: 03/16/18
SHEET NUMBER:

EL111H

N:\Projects\2016\16046 - Newmarket Elementary and Jr. Sr. High school\1. Design Phase\2 DRAWINGS - REVIT 2017\Junior - Senior High School\16046SH_Ext
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1. CIRCUIT EXIT SIGNS TO P4C-31.
 2. CIRCUIT LIGHTING IN THIS AREA TO P4C-36.
 3. CIRCUIT LIGHTING IN THIS AREA TO P4C-28.
 4. CIRCUIT LIGHTING IN STAIR ST1 TO P4A-24.
 5. CIRCUIT LIGHTING TO P4C-30.
 6. CIRCUIT TK IN ROOM 152 AND C2s IN ROOM150 TO PC9-2.
- LIGHTING CIRCUITING NOTES**
THIS SHEET ONLY

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(IES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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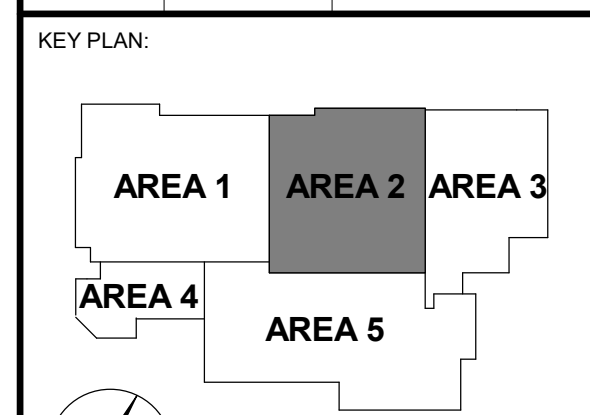
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



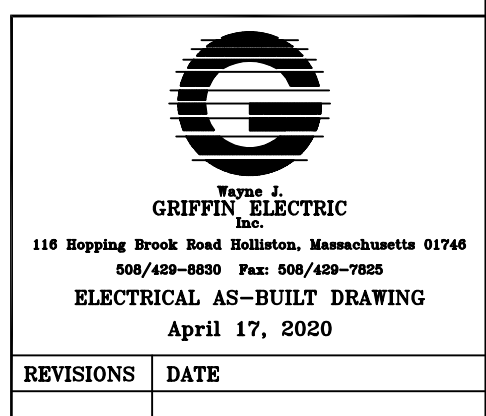
PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
LEVEL 1 - AREA 2 - LIGHTING
PLAN

PROJECT NO: 15-340 DATE: 01/12/18
SHEET NUMBER:

EL112H



REVISIONS	DATE
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A8 LEVEL 1 - AREA 2 - LIGHTING PLAN
1/8" = 1'-0"



1. CIRCUIT EXIT SIGNS TO P4C-31.
 2. CIRCUIT LIGHTING IN THIS AREA TO P4C-37.
 3. CIRCUIT LIGHTING IN THIS AREA TO P4C-39.
 4. CIRCUIT LIGHTING IN STAIR ST5 TO P4C-33.
 5. CIRCUIT LIGHTING IN STAIR ST4 TO P4C-35.
- LIGHTING CIRCUITING NOTES**
THIS SHEET ONLY

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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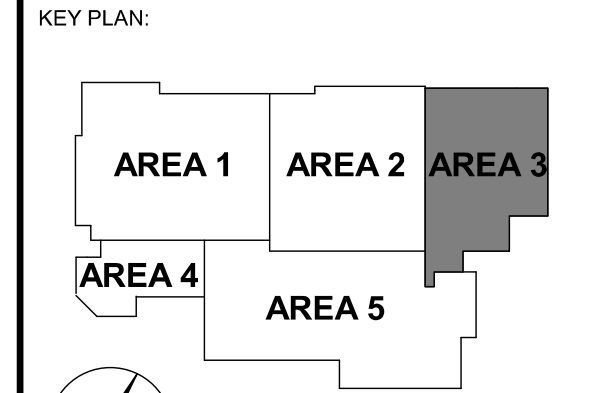
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H
2	5/10/18	Bulletin 2H



PROJECT:
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
CONSTRUCTION DOCUMENTS INCLUDING ADDENDA

DRAWING TITLE:
LEVEL 1 - AREA 3 - LIGHTING PLAN

PROJECT NO: 15-340 DATE: 03/16/18
SHEET NUMBER:

EL113H

GRIFFITH ELECTRIC
116 Shopping Brook Road, Holliston, Massachusetts 01746
508/429-8830 Fax: 508/429-7825
ELECTRICAL AS-BUILT DRAWING
April 17, 2020

REVISIONS	DATE

5/11/2018 9:33:39 AM
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A8 LEVEL 1 - AREA 3 - LIGHTING PLAN
1/8" = 1'-0"

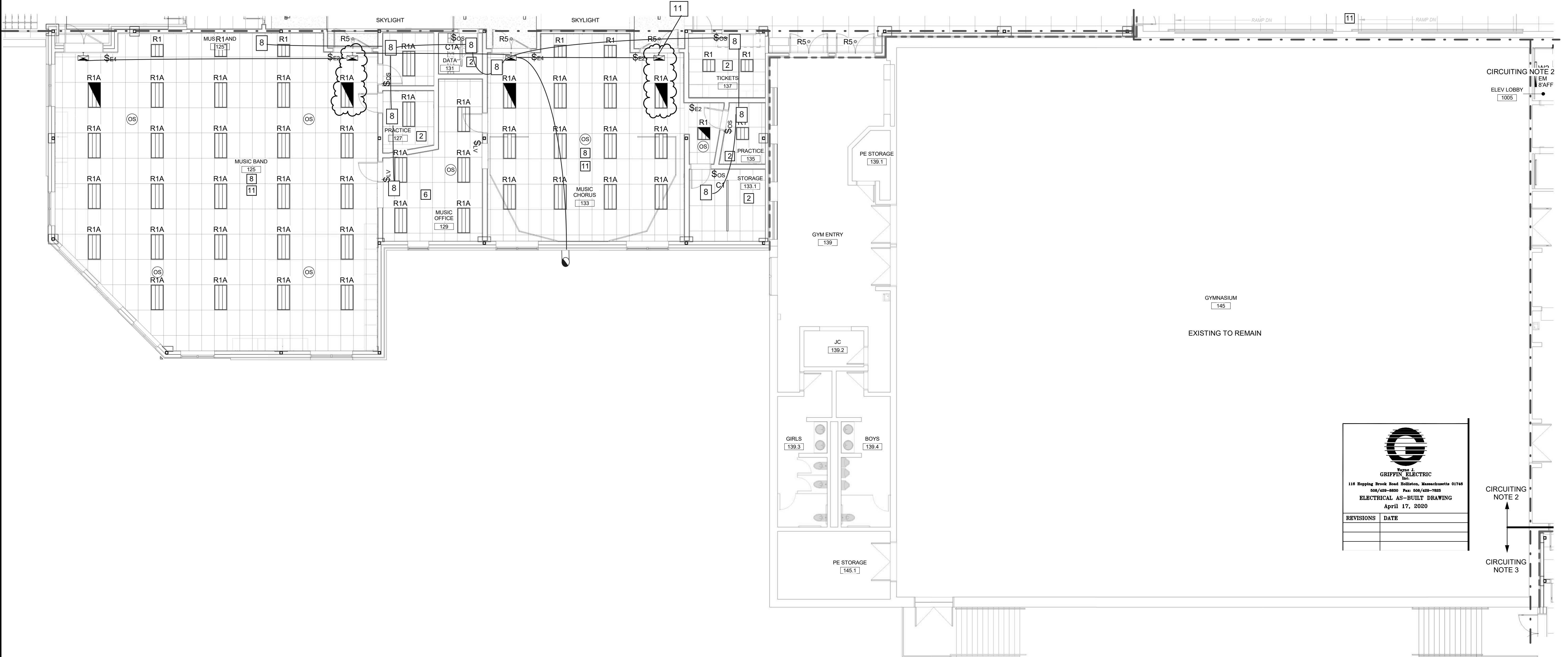
LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING IN THIS AREA TO P4A-20.

LIGHTING CIRCUITING NOTES

THIS SHEET ONLY



GRiffin ELECTRIC
 110 Hopping Brook Road Holliston, Massachusetts 01746
 508/429-8830 Fax: 508/429-7888
 April 17, 2020

REVISIONS	DATE

banwell ARCHITECTS
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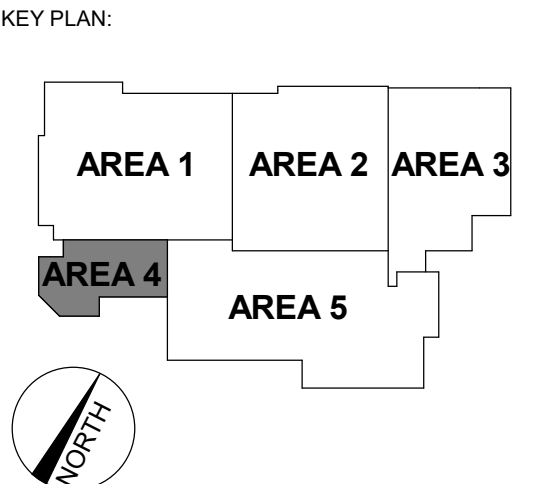
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 BIDDING DOCUMENTS

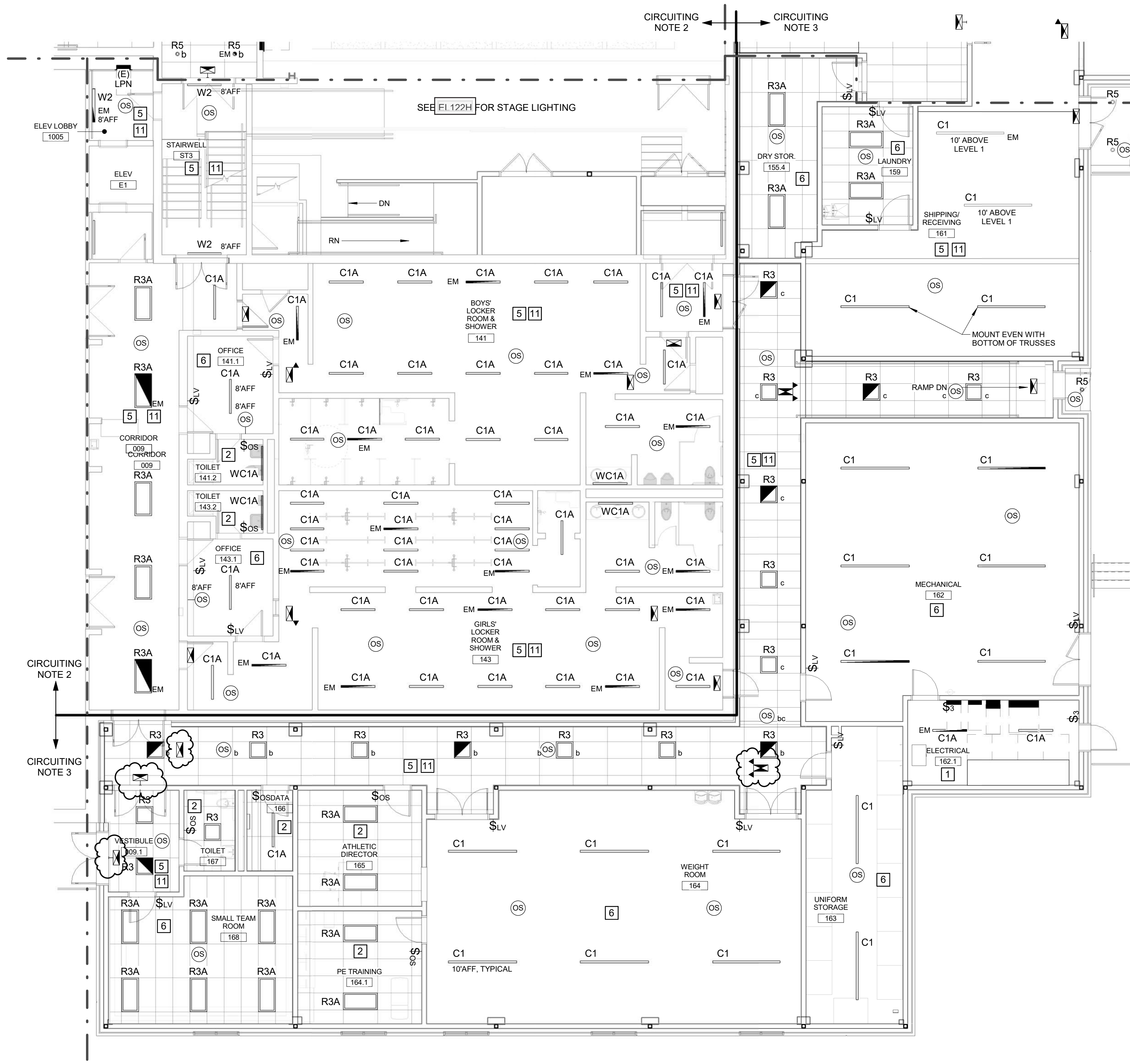
DRAWING TITLE:
 LEVEL 1 - AREA 4 - LIGHTING
 PLAN

PROJECT NO: 15-340 DATE: 01/12/18
 SHEET NUMBER:

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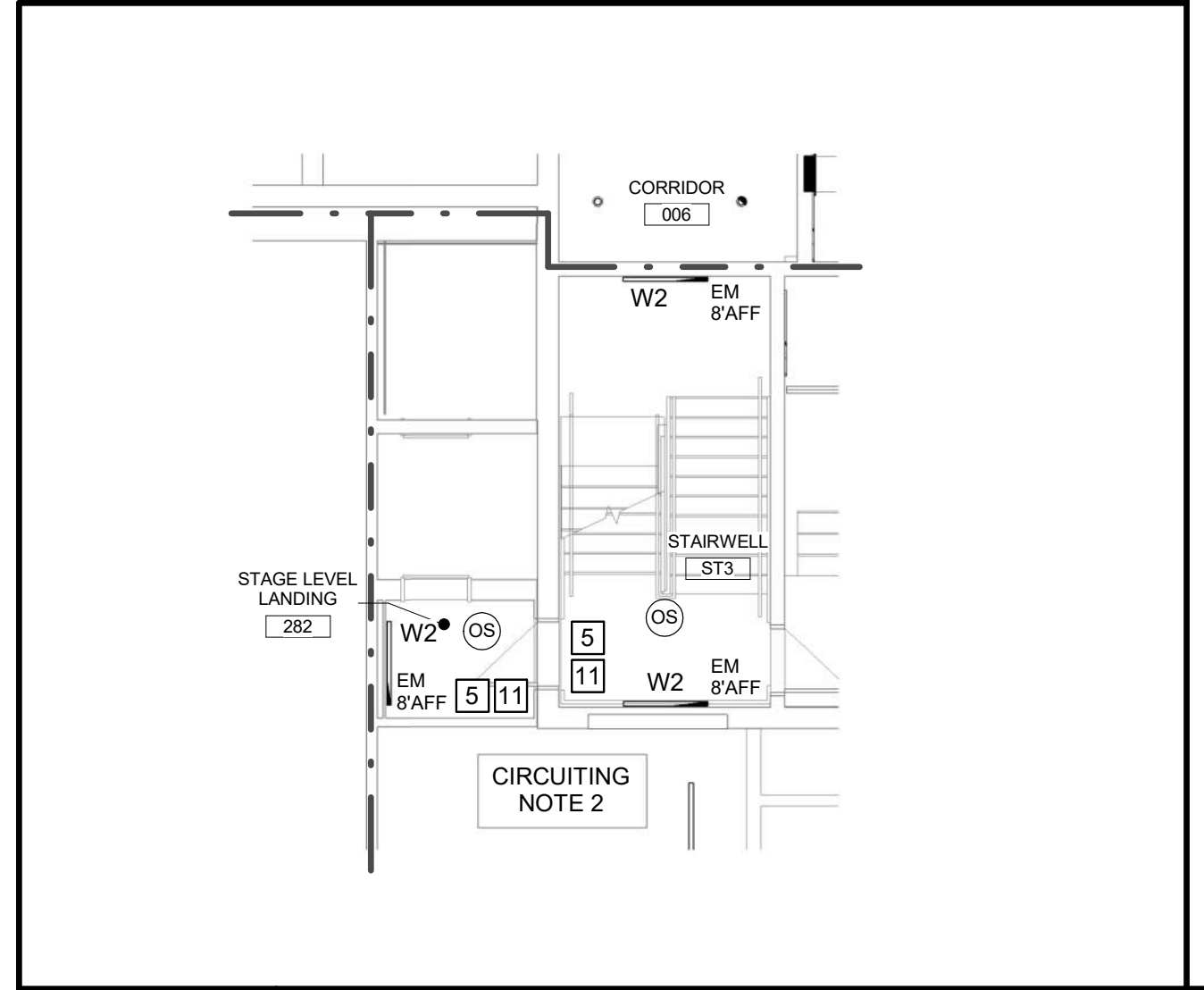
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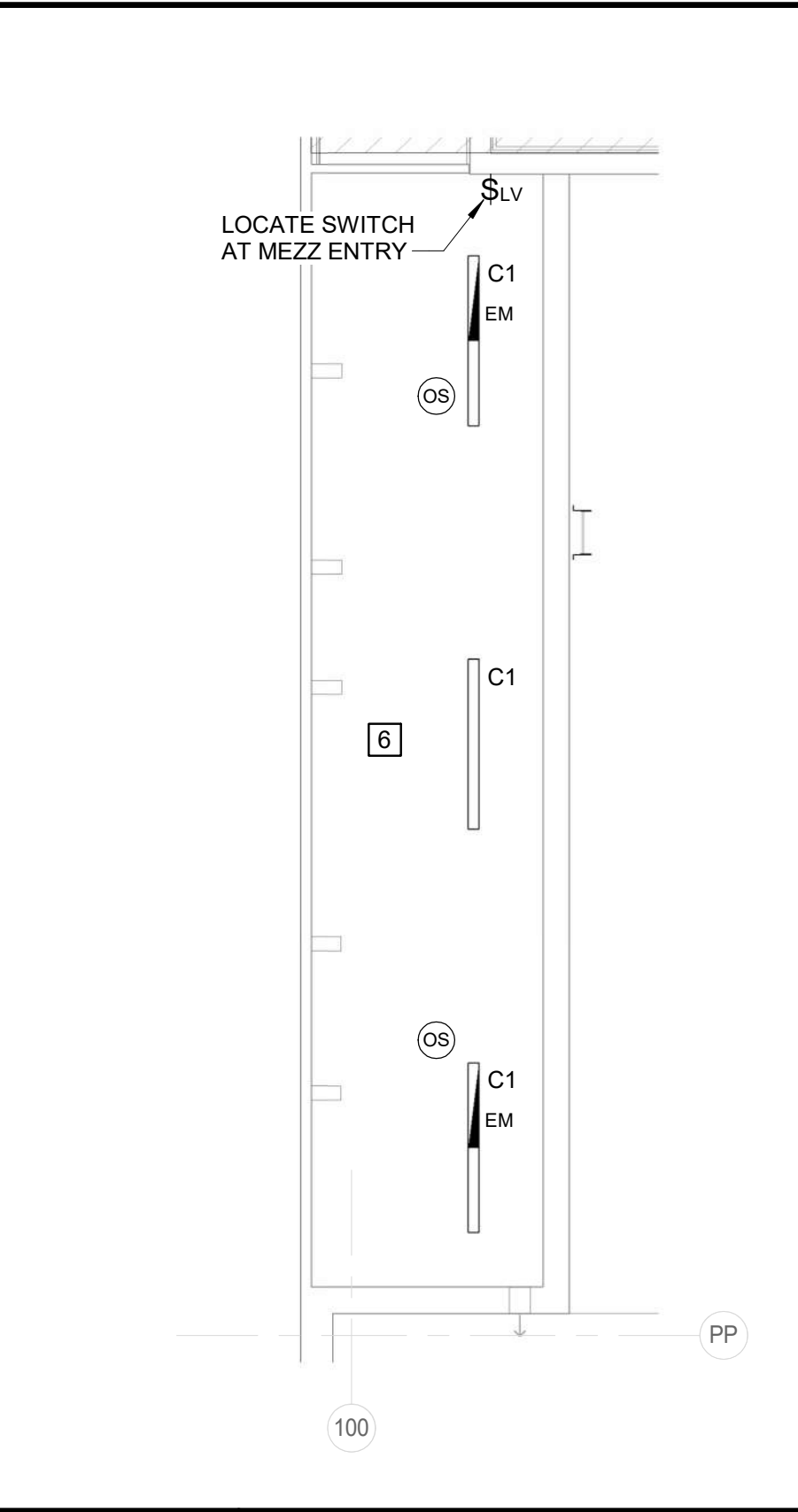
LIGHTING CONTROL NOTES SCHEDULE		
TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(IES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

- CIRCUIT EXIT SIGNS TO P4B-35.
- CIRCUIT LIGHTING IN THIS AREA TO P4B-37.
- CIRCUIT LIGHTING IN THIS AREA TO P4B-39.
- CIRCUIT LIGHTING TO P4B-32.
- CIRCUIT LIGHTING TO P4B-34.

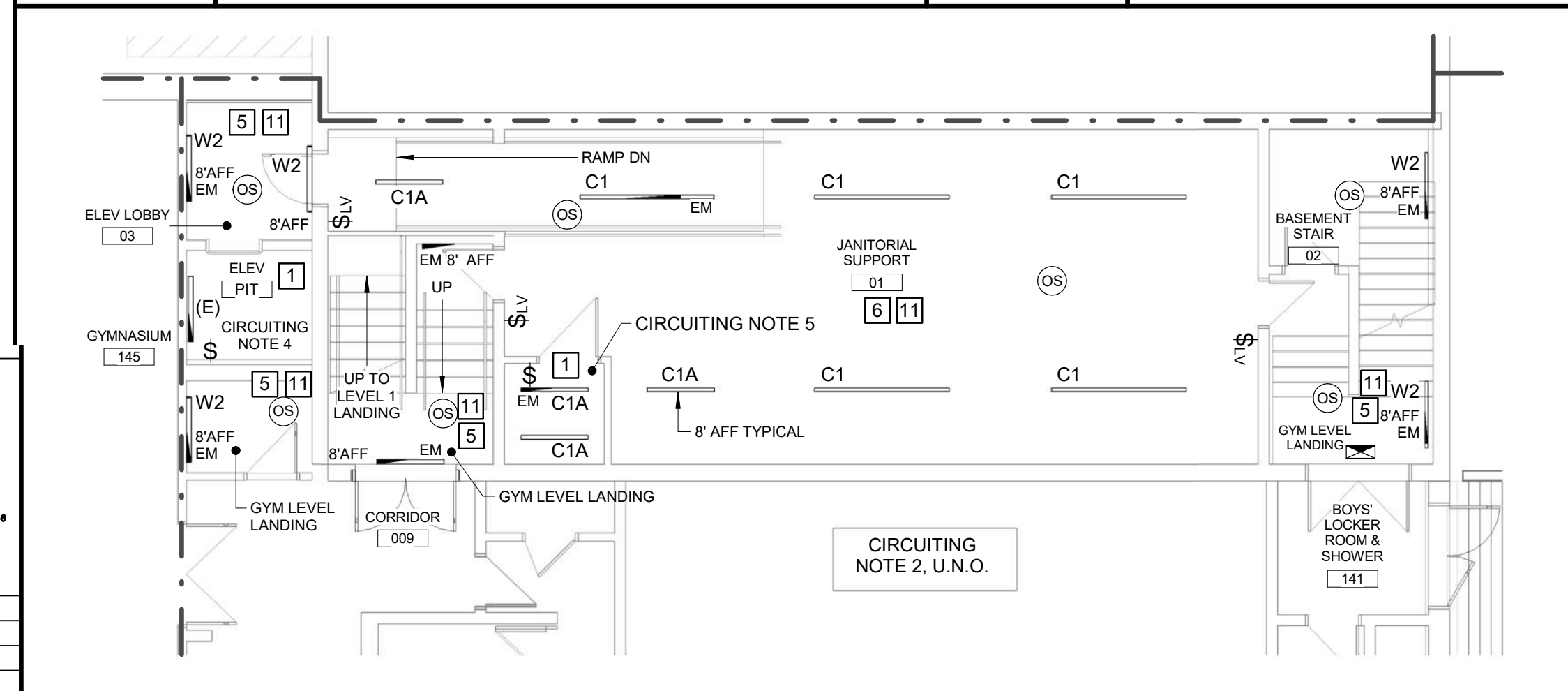
LIGHTING CIRCUITING NOTES
THIS SHEET ONLY




B3 STAGE LEVEL LANDING LIGHTING
1/8" = 1'-0"



B1 MECHANICAL MEZZ LIGHTING
1/8" = 1'-0"



A3 BASEMENT LEVEL LIGHTING
1/8" = 1'-0"
LOCATED UNDER STAGE


GRIFFIN ELECTRIC
 110 Hopping Brook Road Bolton, Massachusetts 01760
 508/420-8830 Fax: 508/420-7820
 ELECTRICAL AS-BUILT DRAWING
 April 17, 2020

REVISIONS	DATE


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MEP:

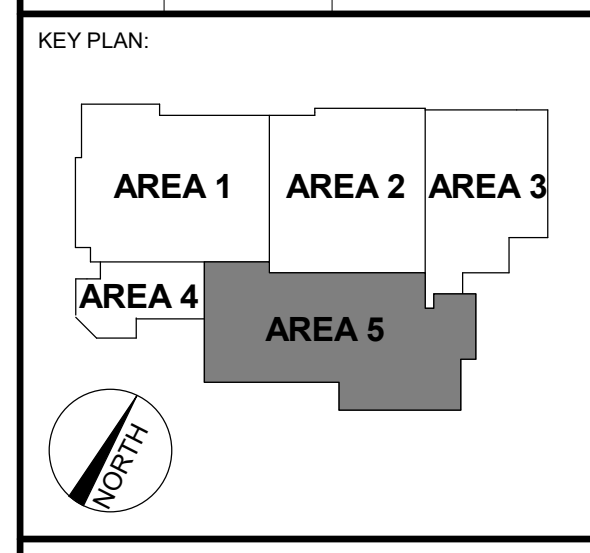
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 Web: www.allied-eng.com

AEI PROJECT NO: 16046





REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 BIDDING DOCUMENTS

DRAWING TITLE:
 LEVEL 1 - AREA 5 - LIGHTING
 PLAN

PROJECT NO: 15-340 DATE: 01/12/18
 SHEET NUMBER:

EL115H

1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING IN THIS AREA TO P4A-28.
3. CIRCUIT LIGHTING IN THIS AREA TO P4A-30.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY



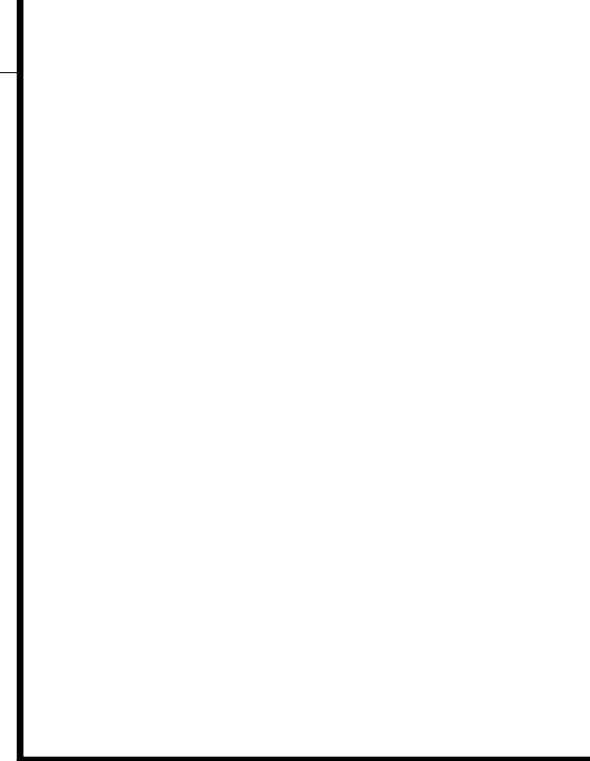
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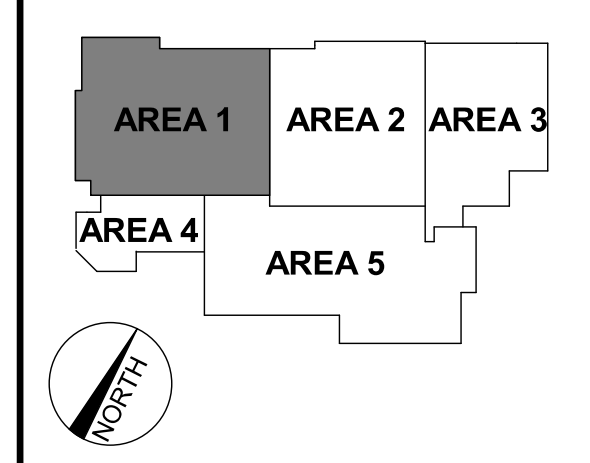
AEI PROJECT NO: 16046



LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

KEY PLAN:



PROJECT:
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

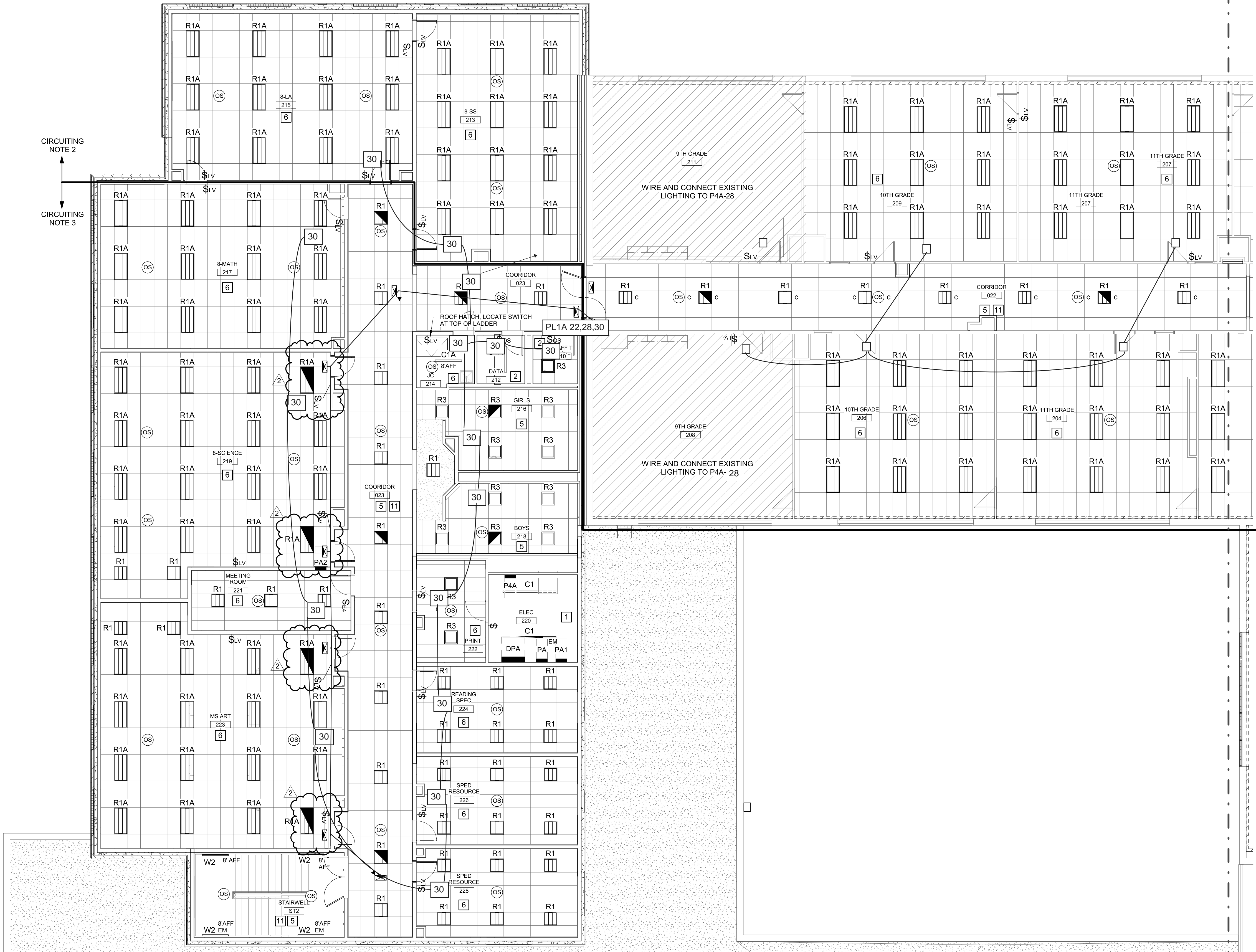
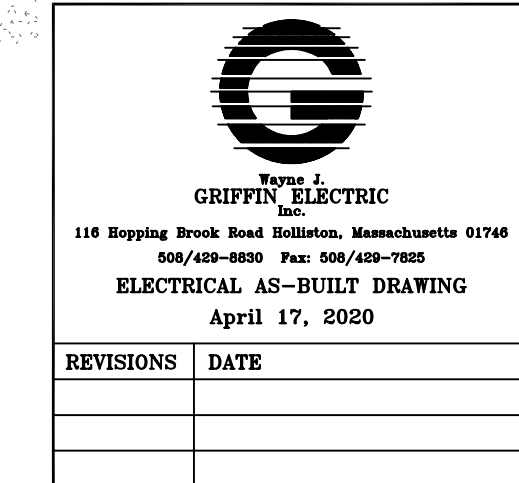
ISSUED:
CONSTRUCTION DOCUMENTS INCLUDING ADDENDA

DRAWING TITLE:
LEVEL 2 - AREA 1 - LIGHTING PLAN

PROJECT NO: 15-340 DATE: 03/16/18

SHEET NUMBER:

EL121H

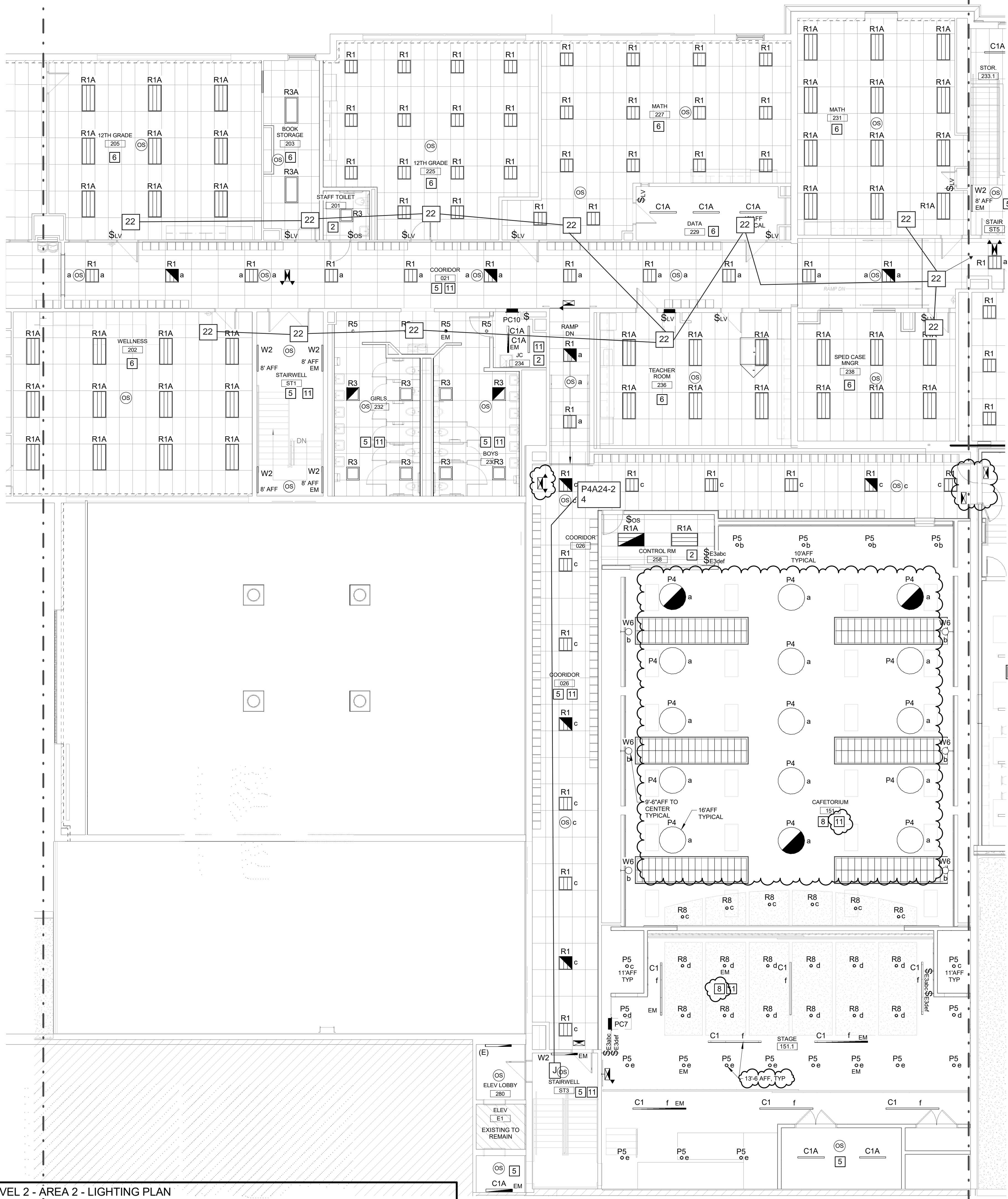


CIRCUITING NOTE 2
CIRCUITING NOTE 3

CIRCUITING NOTE 2
CIRCUITING NOTE 3

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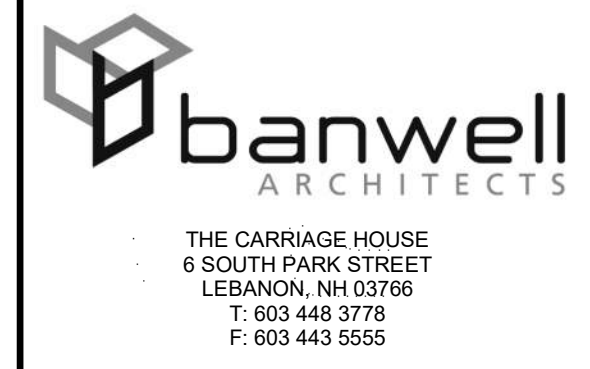
- CIRCUIT EXIT SIGNS TO P4A-22.
 - CIRCUIT LIGHTING NOT LISTED BELOW TO P4A-24.
 - CIRCUIT LIGHTING FOR CAFETERIA 151 AND STAGE 151.1 TO P4A-26.
- LIGHTING CIRCUITING NOTES**
- THIS SHEET ONLY

Newmarket High School GMP Clarifications - 03.02.2018.pdf

Clarification 24.01 - Performance lighting at the Cafetorium is assumed to be an Owner furnished item.

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF, AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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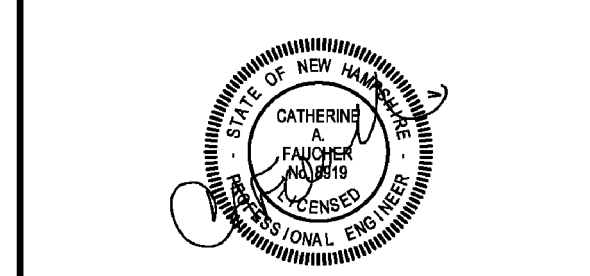
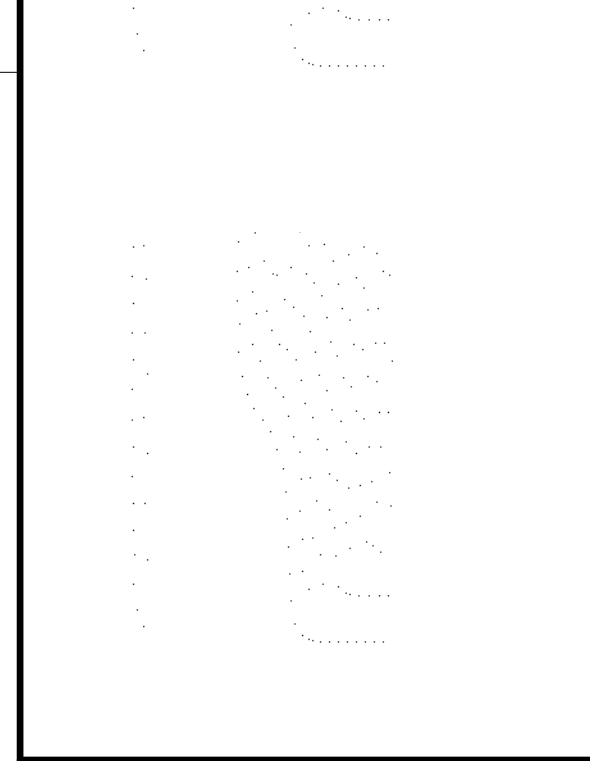
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ARCHITECT:
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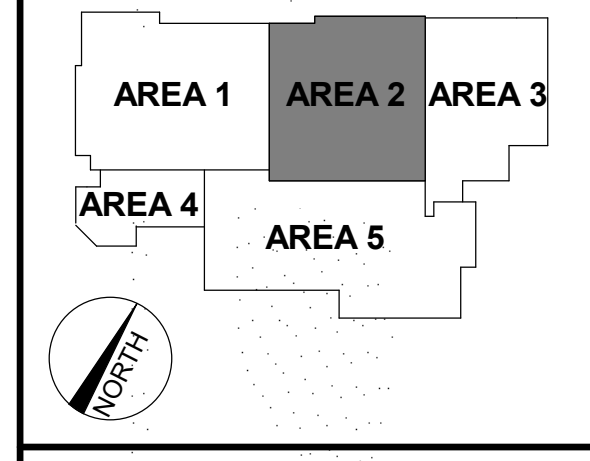


AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H

KEY PLAN:



PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

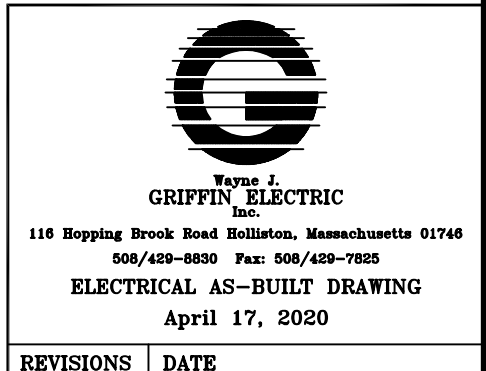
ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
LEVEL 2 - AREA 2 - LIGHTING
PLAN

PROJECT NO: 15-340 DATE: 01/12/18

SHEET NUMBER:

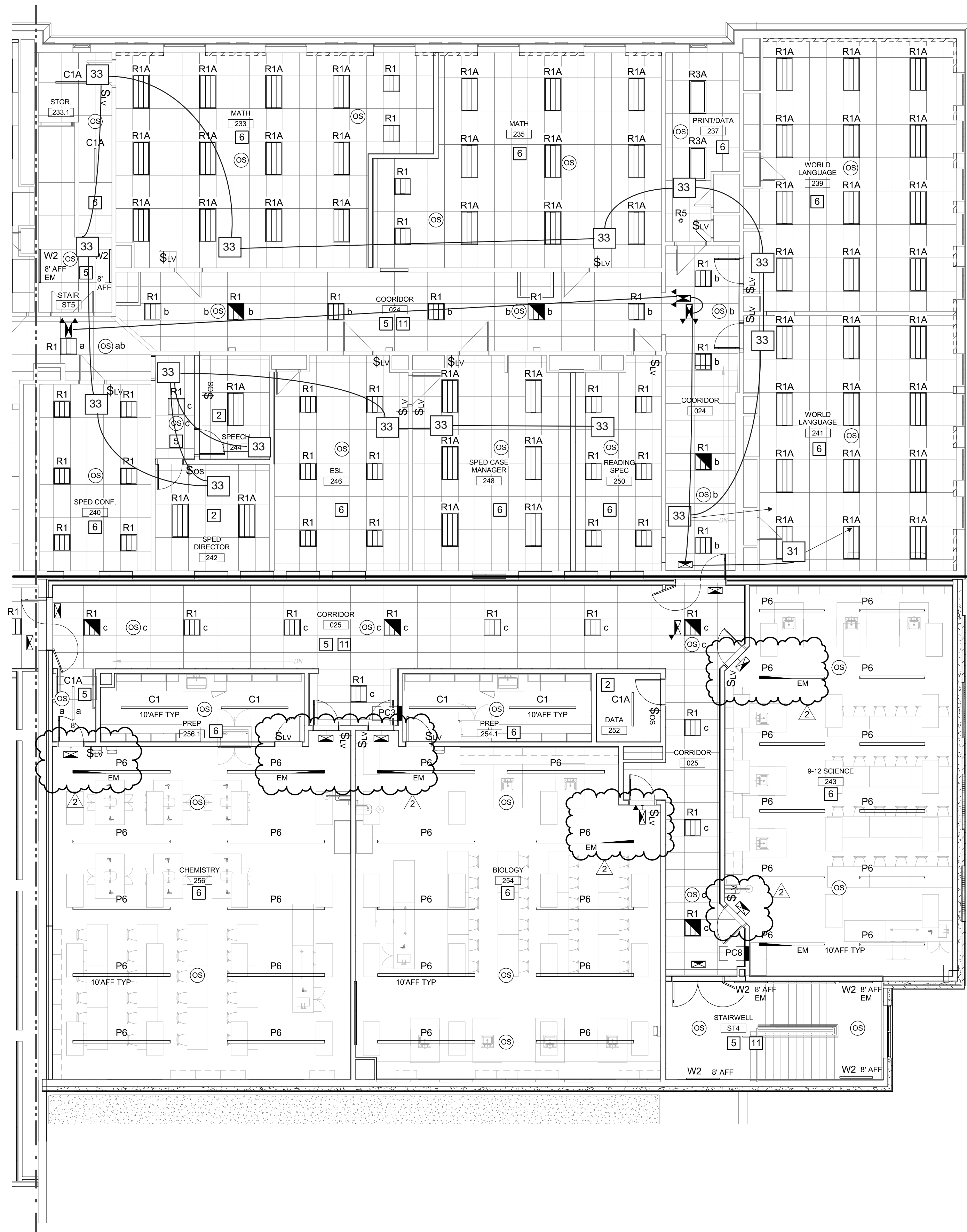
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REVISIONS	DATE
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 Phase\2 DRAWINGS - REVIT 2017\Junior - Senior High School\16046SH_Lrv
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A8 LEVEL 2 - AREA 2 - LIGHTING PLAN
1/8" = 1'-0"



1. CIRCUIT EXIT SIGNS TO P4C-31.
2. CIRCUIT LIGHTING IN THIS AREA TO P4C-33.
3. CIRCUIT LIGHTING IN THIS AREA TO P4C-35.

LIGHTING CIRCUITING NOTES

THIS SHEET ONLY

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL 924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

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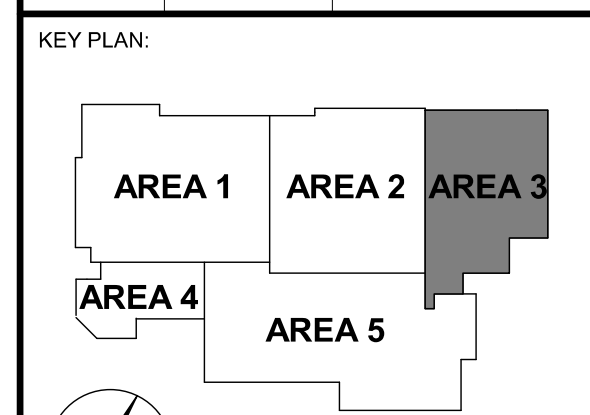
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H
2	5/10/18	Bulletin 2H



PROJECT:
 NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 CONSTRUCTION DOCUMENTS INCLUDING ADDENDA

DRAWING TITLE:
 LEVEL 2 - AREA 3 - LIGHTING PLAN

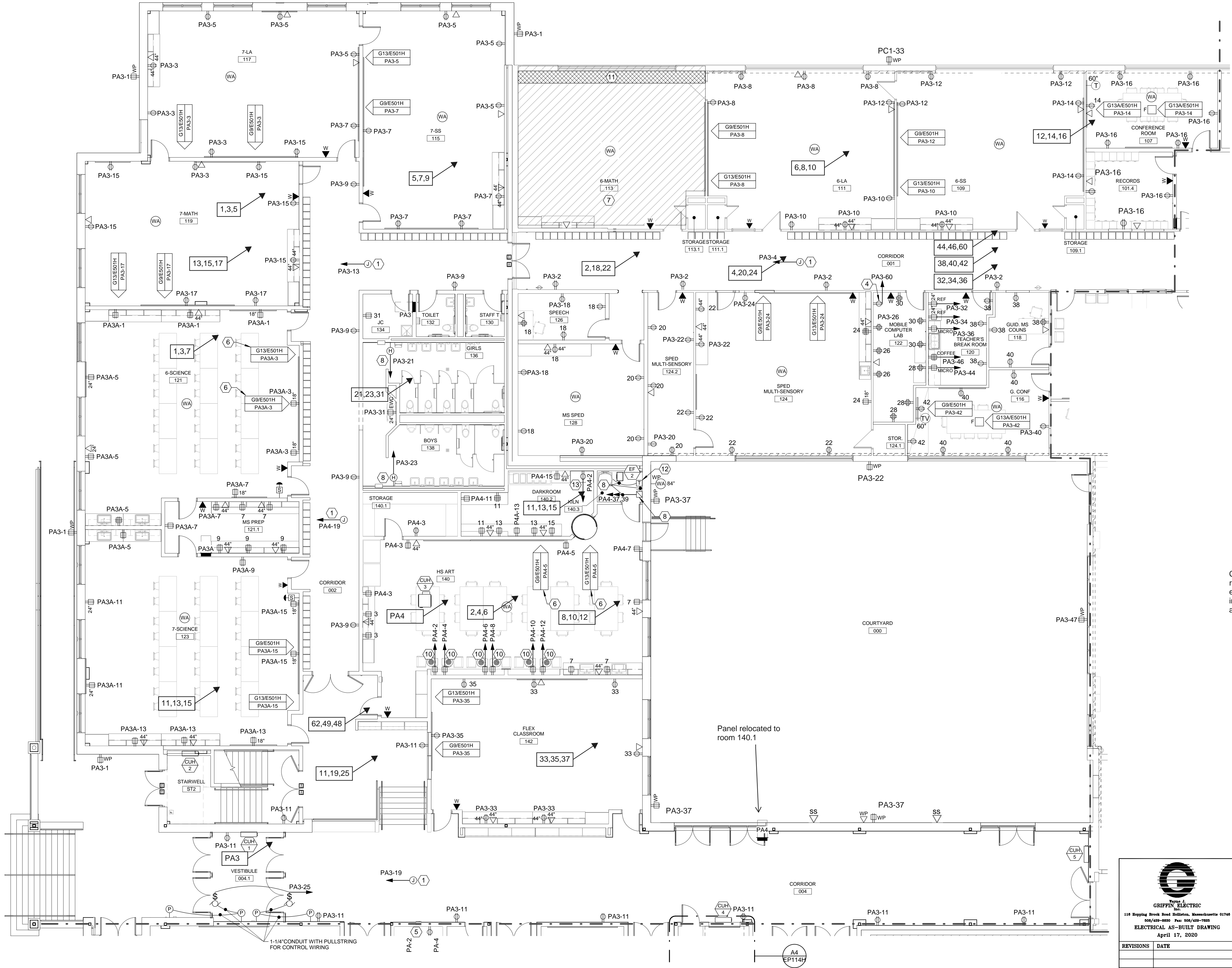
PROJECT NO: 15-340 DATE: 03/16/18

SHEET NUMBER:
EL123H

GRIPPIN ELECTRIC
 110 Hopping Brook Road, Holliston, Massachusetts 01746
 508/426-8920 Fax: 508/426-7922
 ELECTRICAL AS-BUILT DRAWING
 April 17, 2020

REVISIONS	DATE

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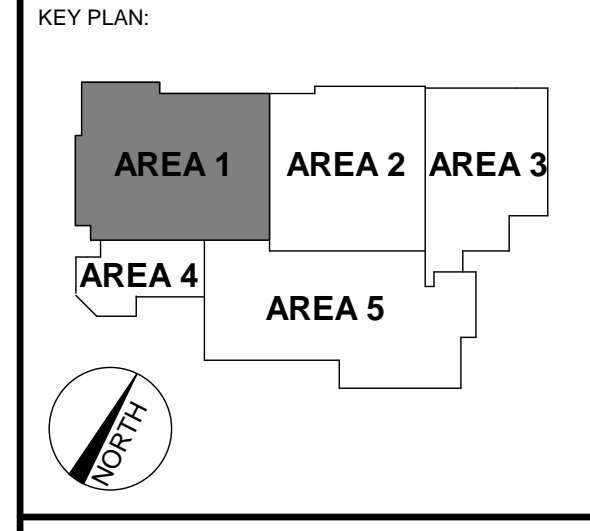
Clarification 26.03: Where new wiring in renovated areas cannot be concealed in existing finished construction, exposed wiring in surface-mounted metal raceway has been assumed.

- 1 PROVIDE JUNCTION BOX AND CIRCUIT FOR MECHANICAL CONTROL. PROVIDE ABOVE CEILING, IN AREAS WITHOUT CEILINGS PROVIDE AT UNDERSIDE OF DECK
- 2 3/4" 4x8 FIRE RETARDANT PLYWOOD BACKBOARD, PAINT BOTH SIDES WITH 2 COATS OF BLACK SATIN LATEX PAINT
- 3 MOUNT DISHWASHER RECEPTACLE IN LEFT SIDE FRONT OF SINK BASE CABINET
- 4 LAPTOP CHARGING CART- VERIFY LOCATION PRIOR TO ROUGH IN
- 5 NOT USED
- 6 FOR THIS ROOM, RECEPTACLES SHOWN IN DETAIL G9 AND G13, SHALL BE GFI.
- 7 WIRE AND CONNECT EXISTING DEVICES TO PA3-6
- 8 DISC SWITCH- 100A, 2P, 3W- FUSED AT 80A, NEMA1 ENCL. PROVIDE 2#4, 1#6G, 1 1/2" CONDUIT
- 9 HAND DRYERS ARE ALTERNATE ES-E1
- 10 POTTERY WHEEL
- 11 ALTERNATE: EXISTING DEVICES ON OUTSIDE WALL SHALL BE RELOCATED TO NEW WALL FACE AFTER WALL IS FURRED OUT
- 12 PROVIDE 208V SINGLE PHASE PRIMARY, 240V SINGLE PHASE SECONDARY BUCK BOOST TRANSFORMER (WALL MOUNT) - MINIMUM OF 70 AMPS OUTPUT AT 240V
- 13 VENTED CABINET

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116 Shilling Brook Road, Holliston, Massachusetts 01746
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April 17, 2020

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REVISION	DATE	COMMENTS



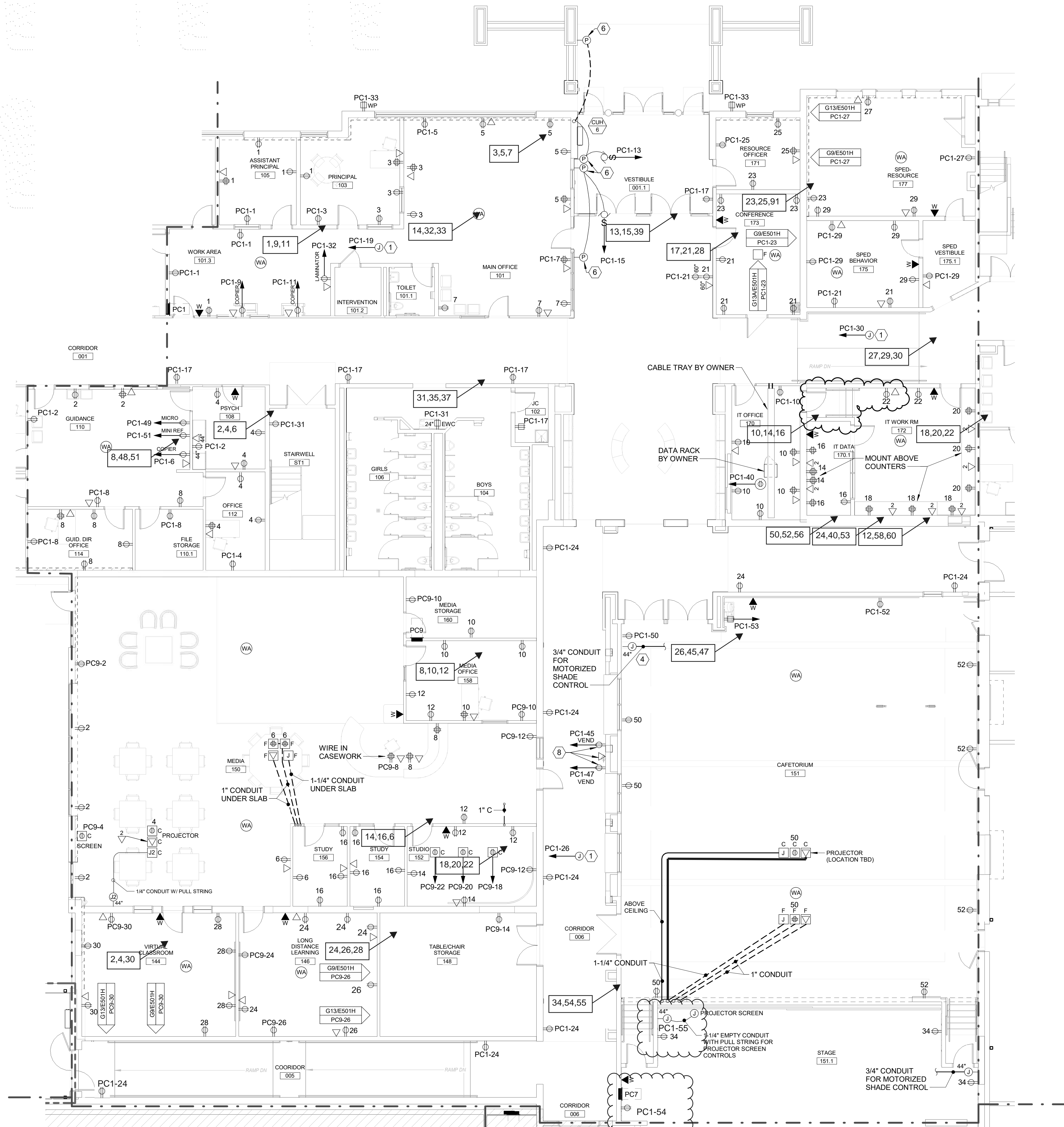
PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
LEVEL 1 - AREA 1 - POWER
PLAN

PROJECT NO: 15-340 DATE: 01/12/18
SHEET NUMBER:

EP111H



- 1 PROVIDE JUNCTION BOX AND CIRCUIT FOR MECHANICAL CONTROL. PROVIDE ABOVE CEILING EXCEPT FOR AREAS WITHOUT CEILINGS PROVIDE AT UNDERSIDE OF DECK.
- 2 3/4" x 8 FIRE RETARDANT PLYWOOD BACKBOARD, PAINT BOTH SIDES WITH 2 COATS OF BLACK SATIN LATEX PAINT
- 3 MOUNT DISHWASHER RECEPTACLE IN LEFT SIDE FRONT OF SINK BASE CABINET
- 4 MOTORIZED SHADES ALTERNATE. PROVIDE 120V POWER. PROVIDE 3/4" CONDUIT WITH PULL STRING TO CONTROLS LOCATION. WIRING AND CONTROLS BY OTHERS.
- 5 INTERLOCK WITH FIRE ALARM
- 6 PROVIDE J-BOX AND 3/4" CONDUIT W/PULL STRING TO MOTOR CONTROLS. CONTROLS BY OTHERS.
- 7 HAND DRYERS ARE ALTERNATE HS-E1
- 8 VENDING - CONFIRM LOCATION PRIOR TO ROUGH-IN.

GRIFPIN ELECTRIC
110 Whipple Brook Road Holliston, Massachusetts 01746
 508/429-8800 Fax 508/429-9822

ELECTRICAL AS-BUILT DRAWING
 April 17, 2020

REVISIONS	DATE

CONSULTANTS / DESIGN TEAM:
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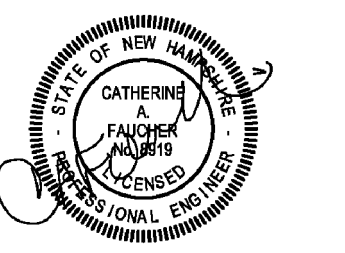
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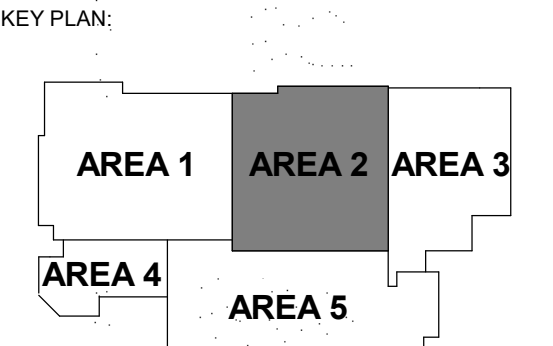
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 Web: www.allied-eng.com

AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 BIDDING DOCUMENTS

DRAWING TITLE:
 LEVEL 1 - AREA 2 - POWER
 PLAN

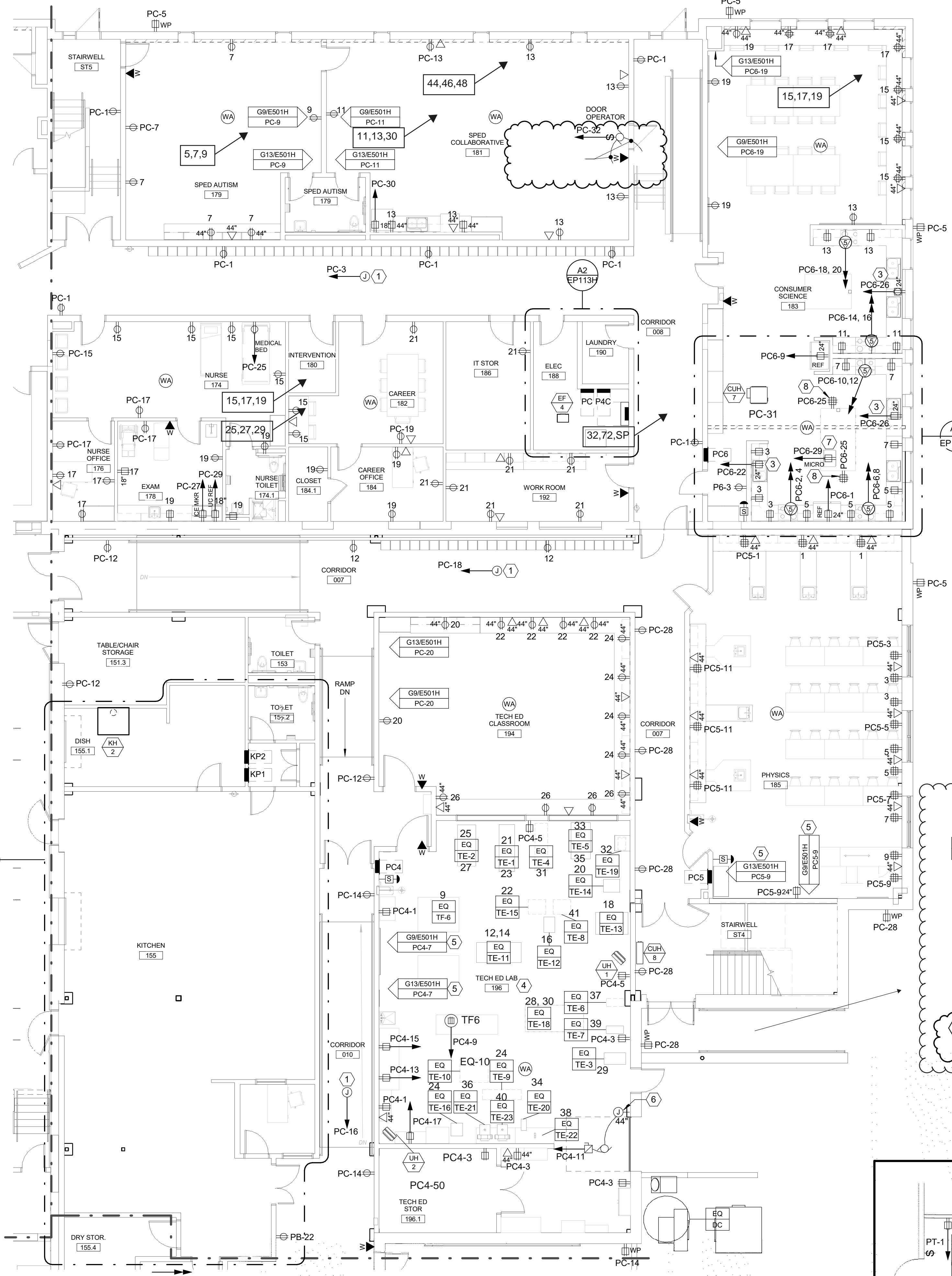
PROJECT NO: 15-340 DATE: 01/12/18
 SHEET NUMBER:

EP112H

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A8 LEVEL 1 - AREA 2 - POWER PLAN
 1/8" = 1'-0"

A1 KEY NOTES



ELECTRICAL SCHEDULE FOR TECH ED EQUIPMENT

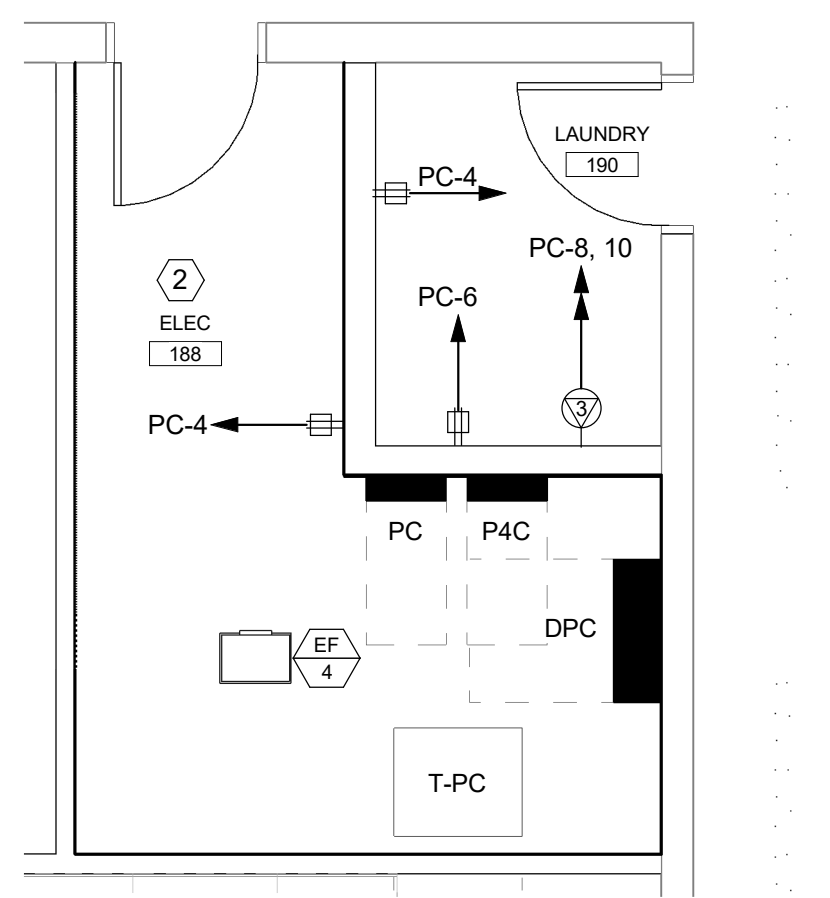
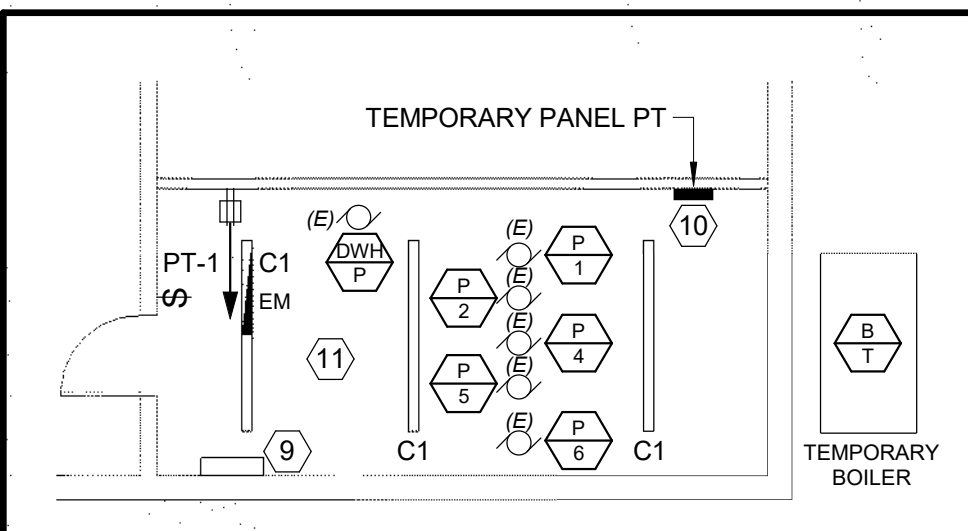
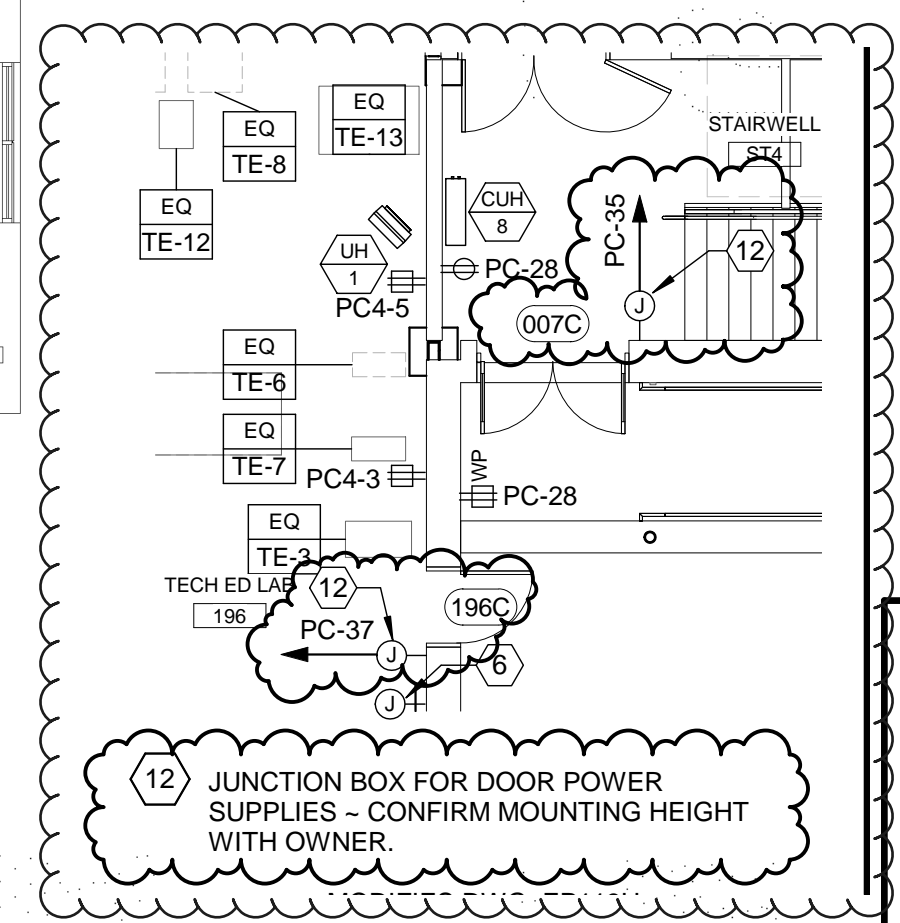
TAG	DESCRIPTION	CATALOG NUMBER	VOLTS	PH	FLA	DEDICATED SINGLE GFI RECEPT OR DISC SWITCH	MOUNTING	PANEL	WIRING IN CONDUIT (2#12,1#12G,UNO)	NOTES
EQ/TE-1	LATHE		120	1	5	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-2	LATHE		120	1	5	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-3	SCROLL SAW	DEWALT	120	1	3	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-4	LATHE	POWERMATIC 45	120	1	7.5	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-5	LATHE	RIKON	120	1	6	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-6	DRILL PRESS/SHARPENER	JET	120	1	9	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-7	DRILL PRESS	JET	120	1	9	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-8	BANDSAW	LAGUNA	120	1	14	NEMA 5-20R	CORD DROP	PC4		
EQ/TE-9	JOINTER	POWERMATIC 60B	230	1	12	NEMA 6-20R	CORD DROP	PC4		
EQ/TE-10	PLANER	POWERMATIC 209B	230	3	11	MATCH RECEPTACLE TO EXISTING CORD	CORD DROP	PC4	3#10, 1#10G	
EQ/TE-11	TABLE SAW	SAWSTOP	230	1	17	NEMA 6-30R	CORD DROP	PC4	2#10, 1#10G	2
EQ/TE-12	SANDER	POWERMATIC	120	1	14	NEMA 5-20R	CORD DROP	PC4		
EQ/TE-13	RADIAL ARM SAW		120	1	13	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-14	CHOP SAW	HITACHI	120	1	12	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-15	BANDSAW	LAGUNA	120	1	14	NEMA 5-20R	CORD DROP	PC4		
EQ/TE-16	TABLE ROUTER	DELTA	120	1	9	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-17	MORTISER	DELTA	120	1	6	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-18	TABLE SAW	DELTA	230	1	12	NEMA 6-20R	CORD DROP	PC4		
EQ/TE-19	BALDOR GRINDER		120	1	4	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-20	DRUM SANDER	SANDRITE	120	1	11	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-21	DISC/BELT SANDER		120	1	5	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-22	BELT SANDER/BUFFER		120	1	6	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-23	DISC/BELT SANDER		120	1	6	NEMA 5-20R	WALL 44"	PC4		
EQ/TE-24	PAINT BOOTH-ALTERNATE HS-A5		120	1		30 AMP 2P DISC SWITCH FUSED AT 20 AMPS-NEMA 1 ENCL	WALL 44"	PC4		

EQ/DC DUST COLLECTOR (BLOWER AND SHAKER) 480 3 34 100 AMP 3P DISC SWITCH FUSED AT 70 AMPS-NEMA 3R ENCL WALL 44" P4C 3#6, 1#8 G

EQ/TF-6 CORD DROP OVER BENCH 120 1 36 NEMA 5-20R CORD DROP PC4

EQ/TF-6 CORD DROP OVER BENCH 120 1 36 NEMA 5-20R CORD DROP PC4

- NOTES:
- 1 WIRE AND CONNECT TO FACP
 - 2 PROVIDE CORD AND PLUG
 - 3 PLUGS INTO WALL RECEPTACLES ON PLANS
 - 4 DIV 26 SHALL WIRE BLOWER, SHAKER, DISCONNECT SWITCH, AND CONTROLLER PANEL. ALL POWER AND CONTROL WIRING SHALL BE PROVIDED BY DIV 26. REFER TO MANUF. WIRING DIAGRAMS



- 1 PROVIDE JUNCTION BOX AND CIRCUIT FOR MECHANICAL CONTROL. PROVIDE ABOVE CEILING. IN AREAS WITHOUT CEILING PROVIDE AT UNDERSIDE OF DECK.
- 2 3/4" x 8" FIRE RETARDANT PLYWOOD BACKBOARD, PAINT BOTH SIDES WITH 2 COATS OF BLACK SATIN LATEX PAINT
- 3 MOUNT DISHWASHER RECEPTACLE IN SIDE FRONT OF SINK BASE CABINET 24" AFF
- 4 REFER TO TECH ED EQUIPMENT SCHEDULE PLANS FOR ADDITIONAL EQUIPMENT POWER REQUIREMENTS.
- 5 FOR THIS ROOM ALL RECEPTACLES SHOWN IN DETAIL G9 AND G13 SHALL BE GFI.
- 6 PROVIDE J-BOX AND 3/4" CONDUIT W/PULL STRING TO DOOR MOTOR FOR CONTROLS
- 7 MICROWAVE - WIRE THRU COLUMN AND MOUNT RECEPTACLE IN CABINET
- 8 WIRING FOR RECEPTACLE SHALL BE FED THRU COLUMN
- 9 RELOCATED DISCONNECT SWITCHES AND STARTERS FOR PUMPS P-1, P-2, P-4, P-5, P-6
- 10 PROVIDE TEMPORARY PANEL PT, 120/208V, 3 PHASE, 100A, MLO, NEMA-1, 22 AIC. FEED FROM EXISTING PANEL DP. PROVIDE 60A, 3P CIRCUIT BREAKER IN EXISTING PANEL AND FEEDER SHALL BE REMOVED AFTER TEMPORARY BOILER ROOM IS REMOVED.
- 11 TEMPORARY LIGHTING SHALL BE REMOVED AFTER TEMPORARY BOILER ROOM IS REMOVED.

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ELECTRICAL AS-BUILT DRAWING
 April 17, 2020

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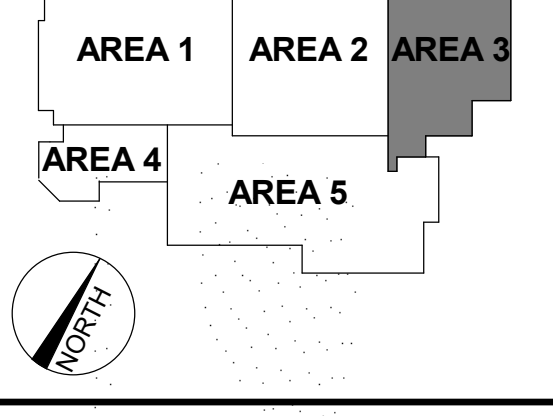
AEI PROJECT NO: 16046

REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



REVISION	DATE	COMMENTS

KEY PLAN:



PROJECT:
 NEWMARKET JUNIOR/SENIOR
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 213 S MAIN STREET,
 NEWMARKET, NH 03857

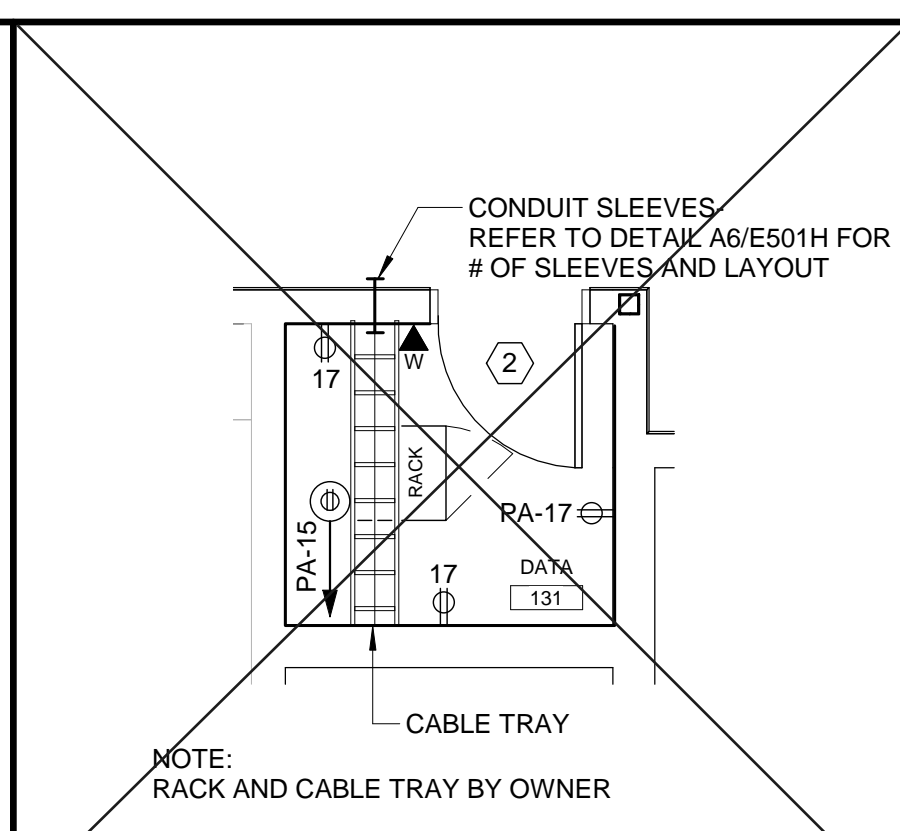
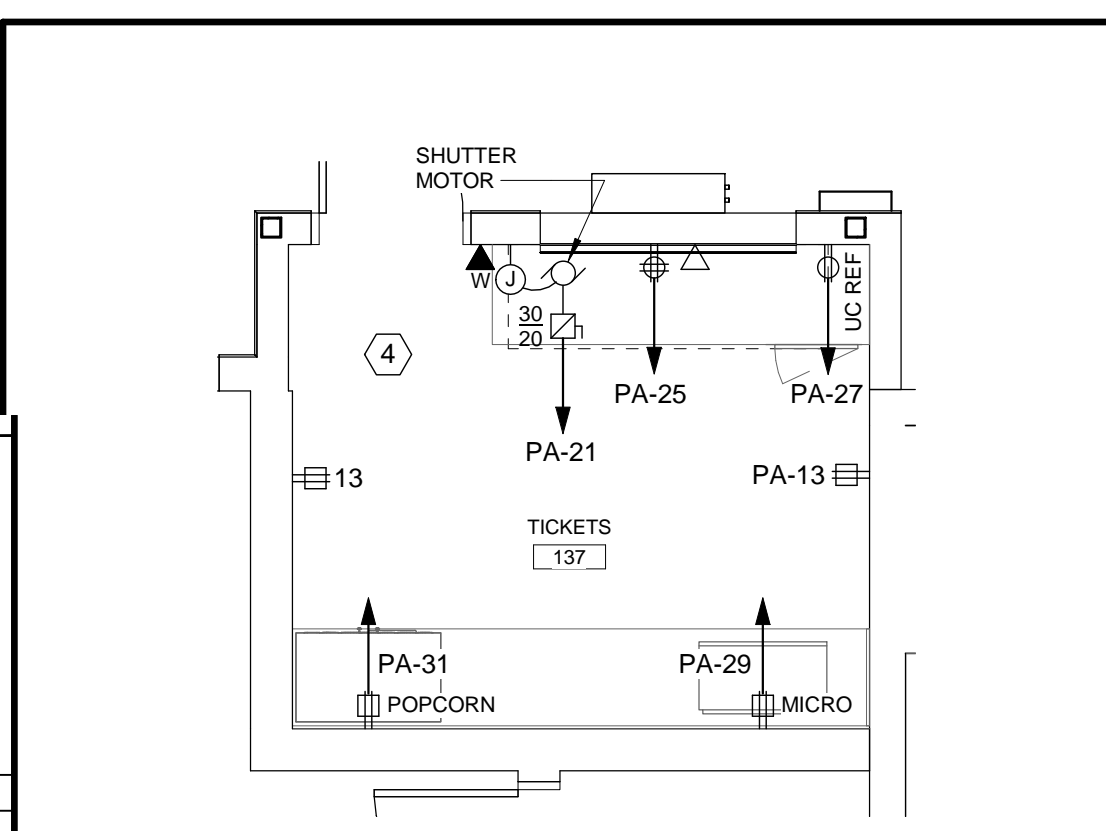
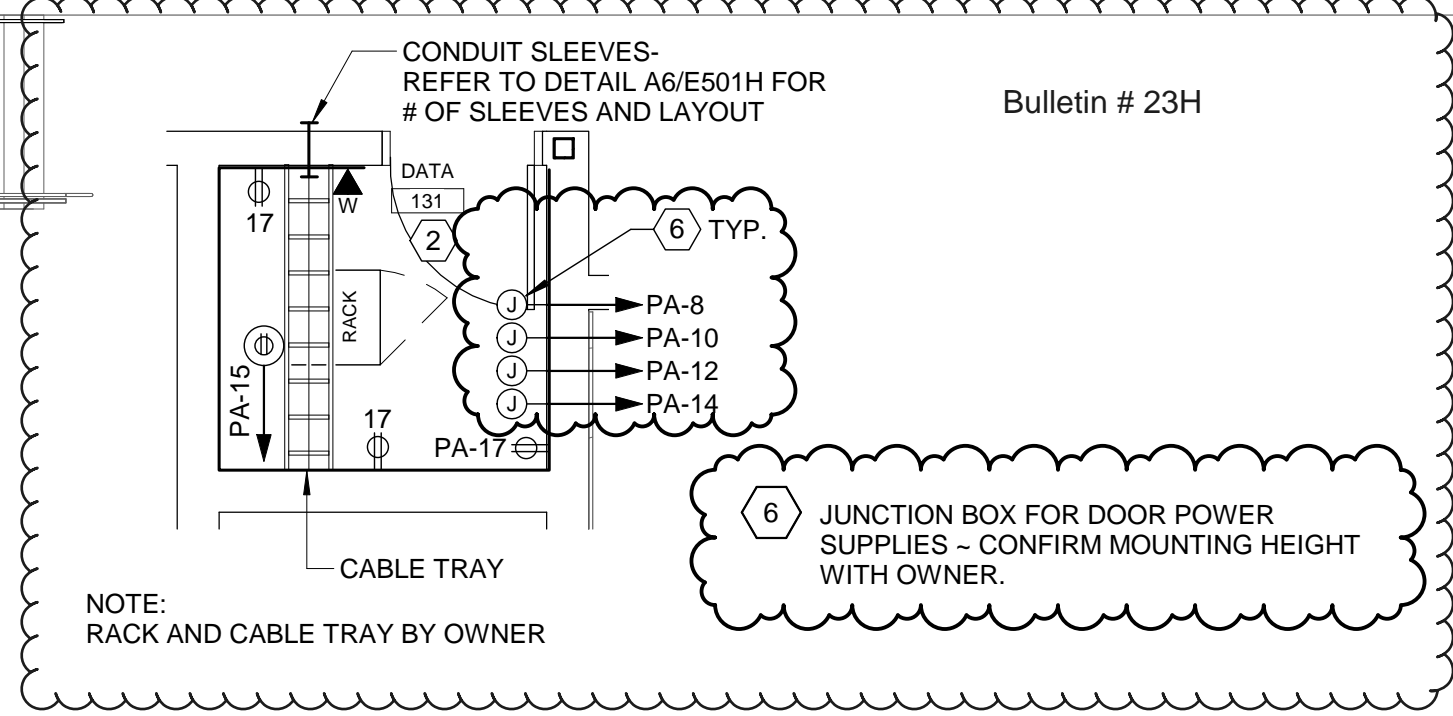
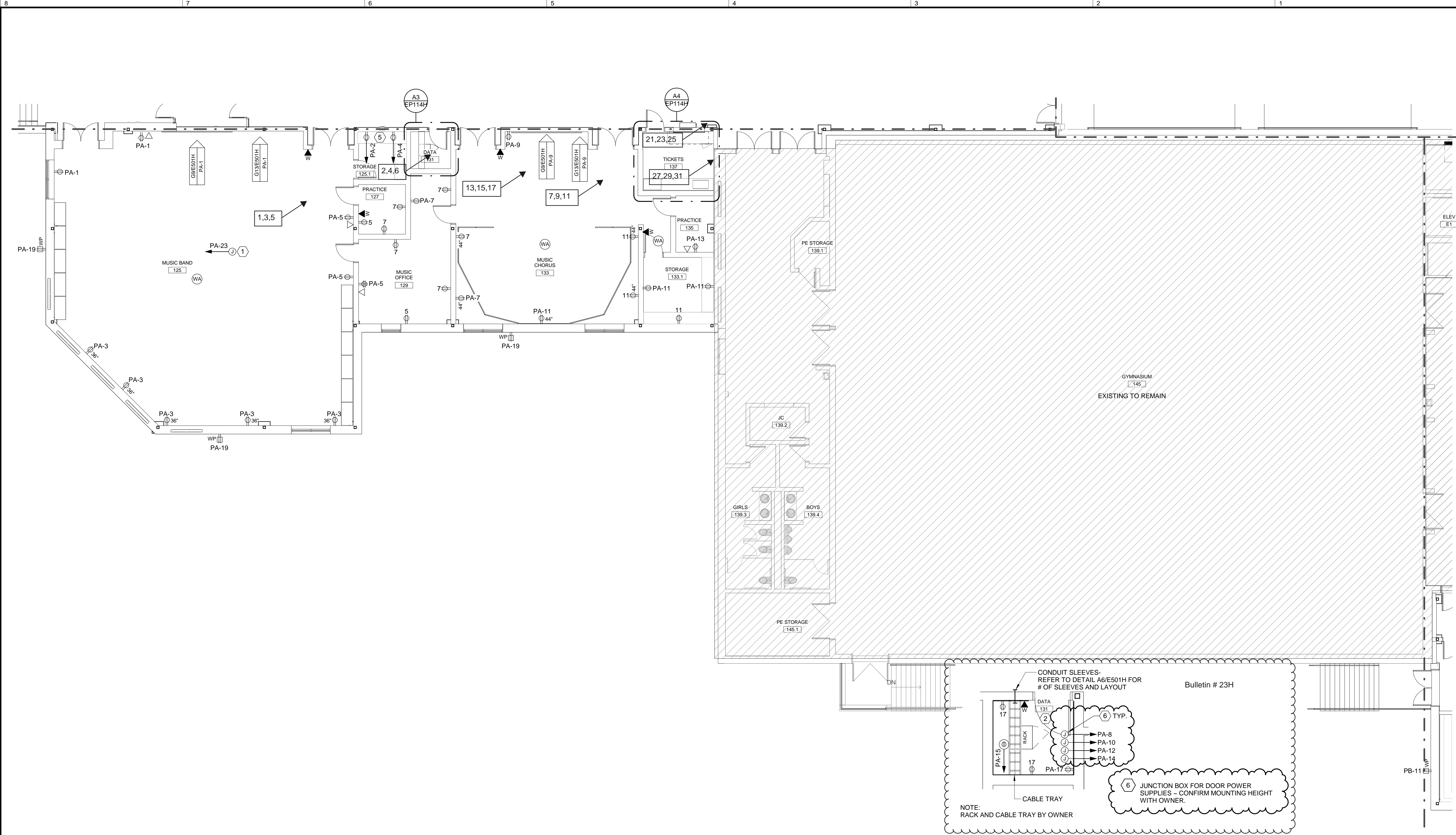
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DRAWING TITLE:
 LEVEL 1 - AREA 3 - POWER
 PLAN

PROJECT NO: 15-340 DATE: 01/12/18
 SHEET NUMBER:

EP113H

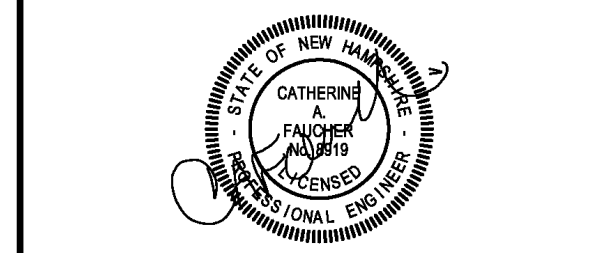
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 Phase 2 Drawings - REVIT 2017\Junior - Senior High School\16046SH_Ext.rvt
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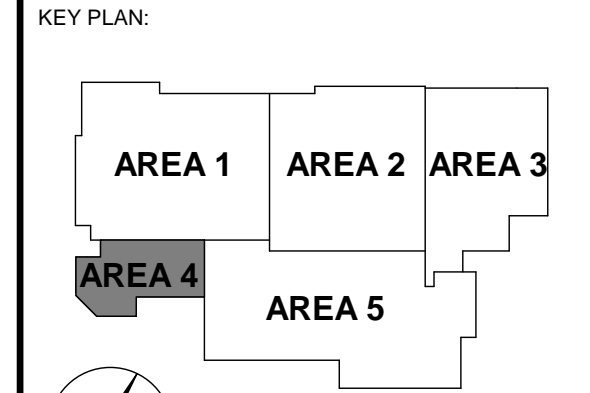
- 1 PROVIDE JUNCTION BOX AND CIRCUIT FOR MECHANICAL CONTROL. PROVIDE ABOVE CEILING. IN AREAS WITHOUT CEILINGS PROVIDE AT HEIGHT NOTED.
- 2 3/4" 4x8 FIRE RETARDANT PLYWOOD BACKBOARD. PAINT BOTH SIDES WITH 2 COATS OF BLACK SATIN LATEX PAINT
- 3 MOUNT DISHWASHER RECEPTACLE IN LEFT SIDE FRONT OF SINK BASE CABINET
- 4 PROVIDE EMPTY RECESSED J-BOX AT 44" AND EMPTY 1" CONDUIT WITH PULL STRING TO MOTOR FOR CONTROLS. CONTROLS AND WIRING BY OTHERS.
- 5 KEYBOARD CHARGING AREA

GRiffin ELECTRIC
INC.
116 Baying Brook Road Billerica, Massachusetts 01710
508/429-8800 Fax: 508/429-7985
ELECTRICAL AS-BUILT DRAWING
April 17, 2020

REVISIONS	DATE



REVISION	DATE	COMMENTS



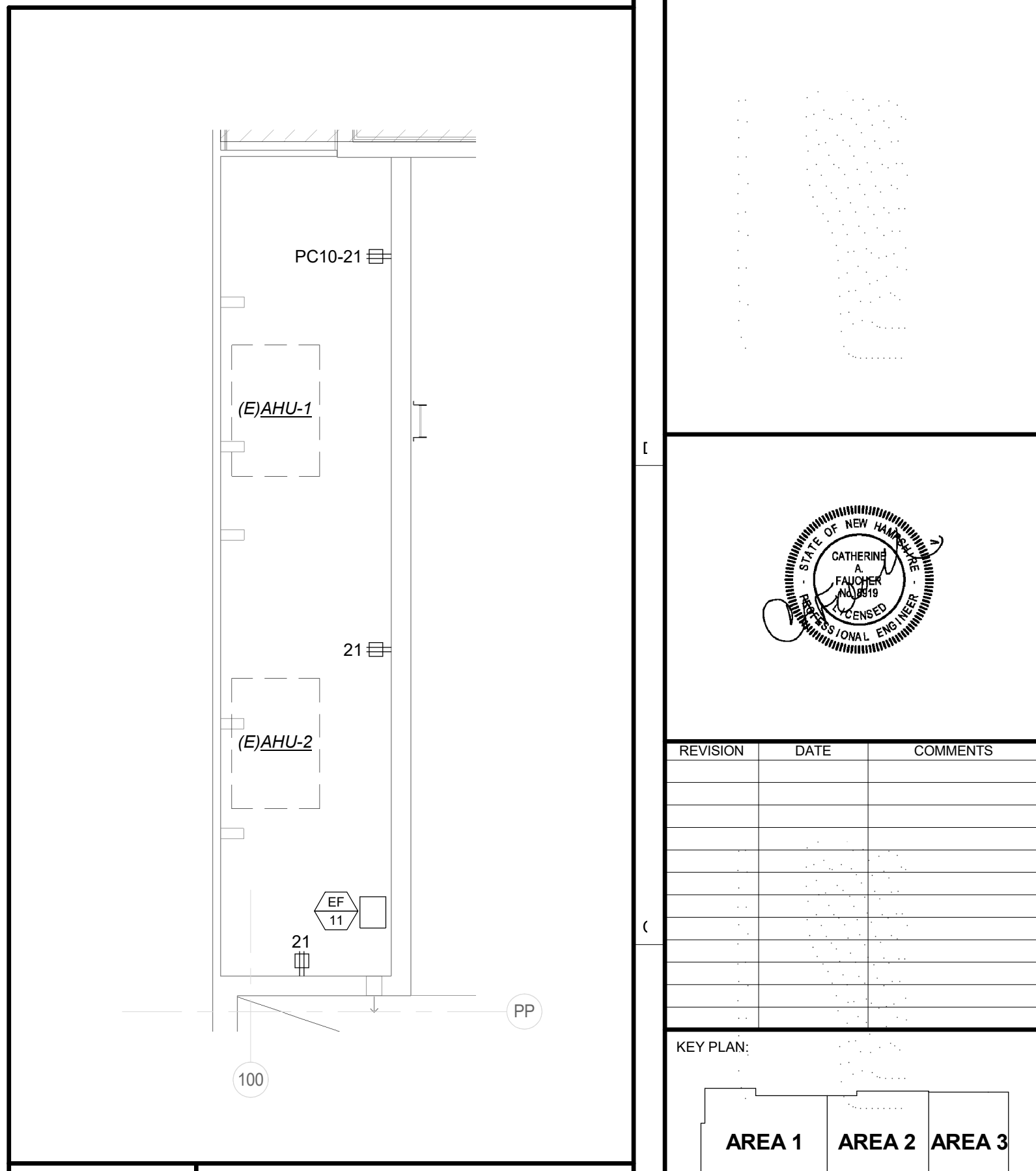
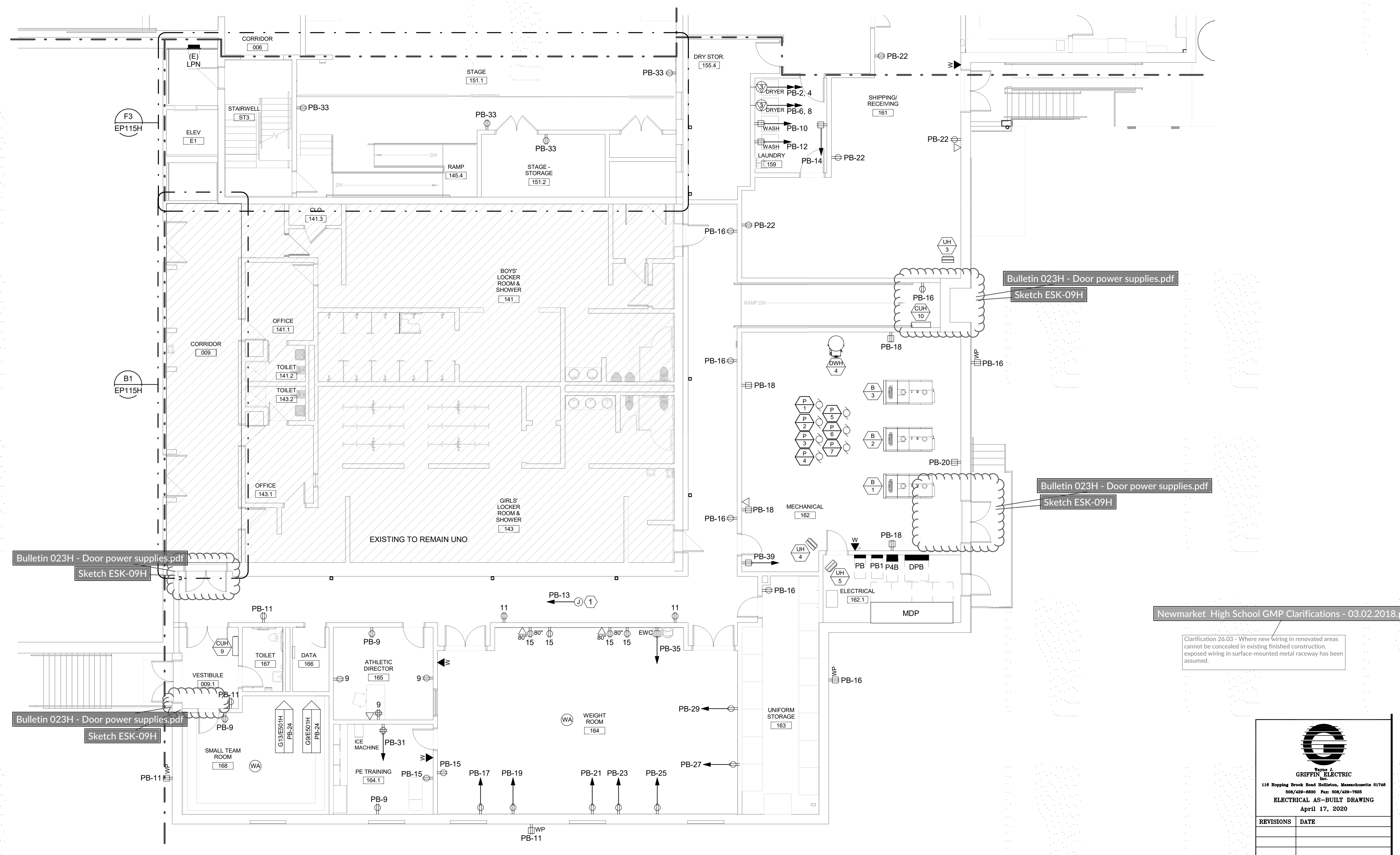
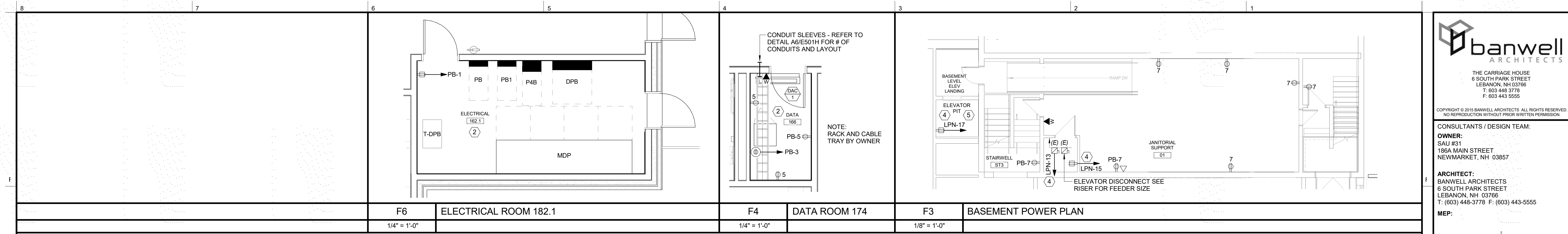
PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
LEVEL 1 - AREA 4 - POWER
PLAN

PROJECT NO: 15-340 DATE: 01/12/18
SHEET NUMBER:

EP114H



REVISION	DATE	COMMENTS

KEY PLAN:

AREA 1 AREA 2 AREA 3
AREA 4 AREA 5

PROJECT:
NEWMARKET JUNIOR/SENIOR HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
BIDDING DOCUMENTS

DRAWING TITLE:
LEVEL 1 - AREA 5 - POWER PLAN

PROJECT NO. 15-340 DATE: 01/12/18
SHEET NUMBER:

GRIFFIN ELECTRIC
118 Hopping Brook Road Billerica, Massachusetts 01740
508/459-8829 Fax: 508/459-7988
ELECTRICAL AS-BUILT DRAWING
April 17, 2020

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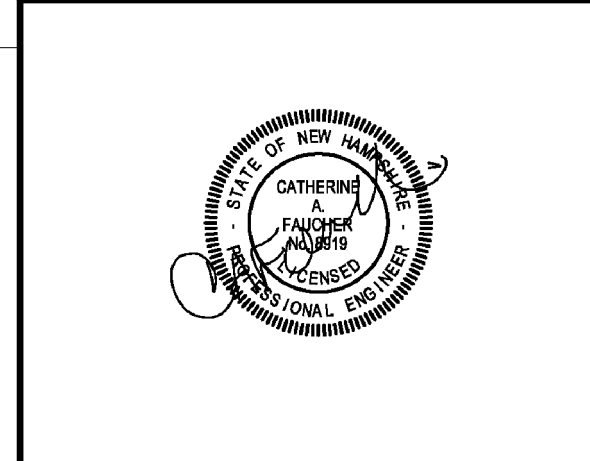
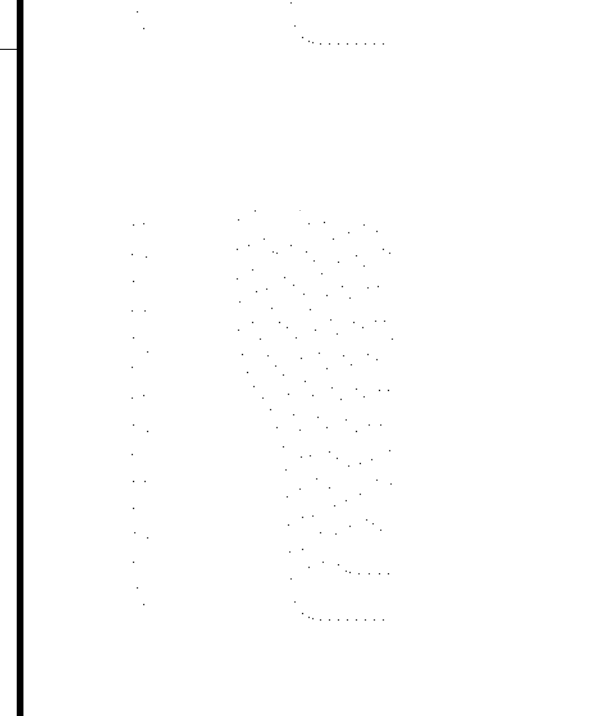
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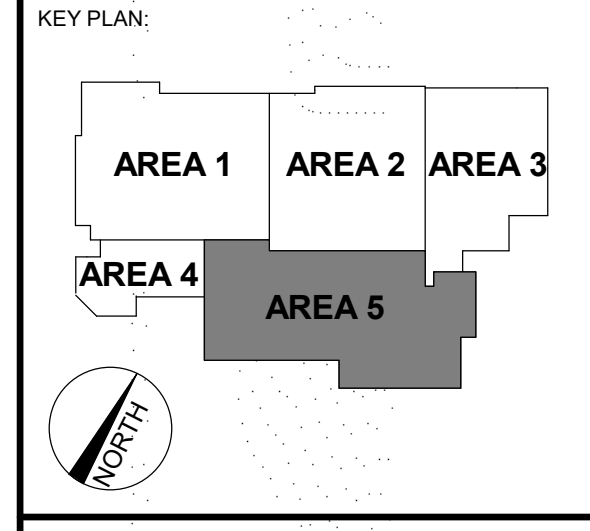
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160 Veranda Street
Portland, Maine 04103
T: 207.221.2268
F: 207.221.2266
Web: www.allied-eng.com

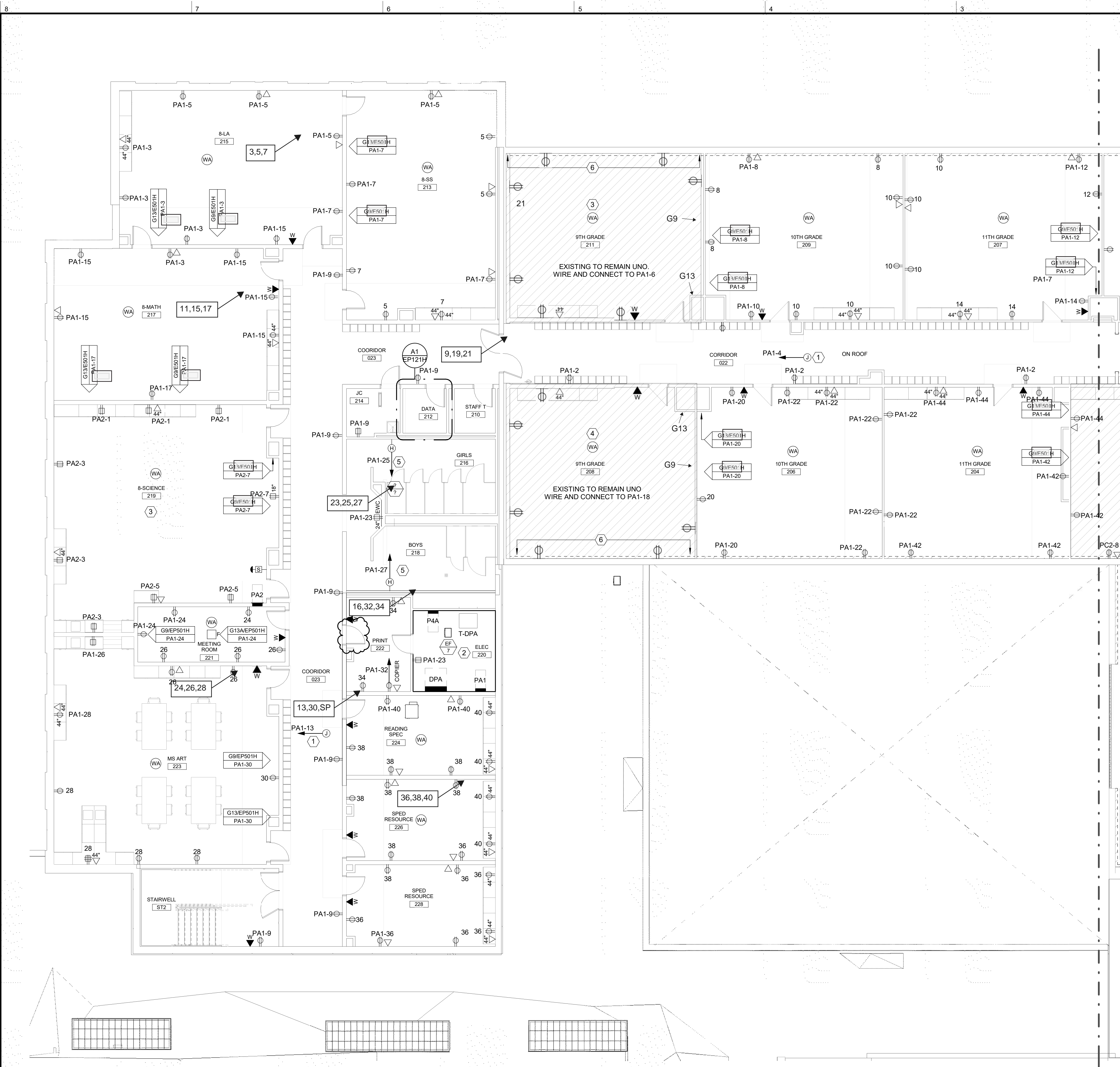
AEI PROJECT NO: 16046



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EP115H



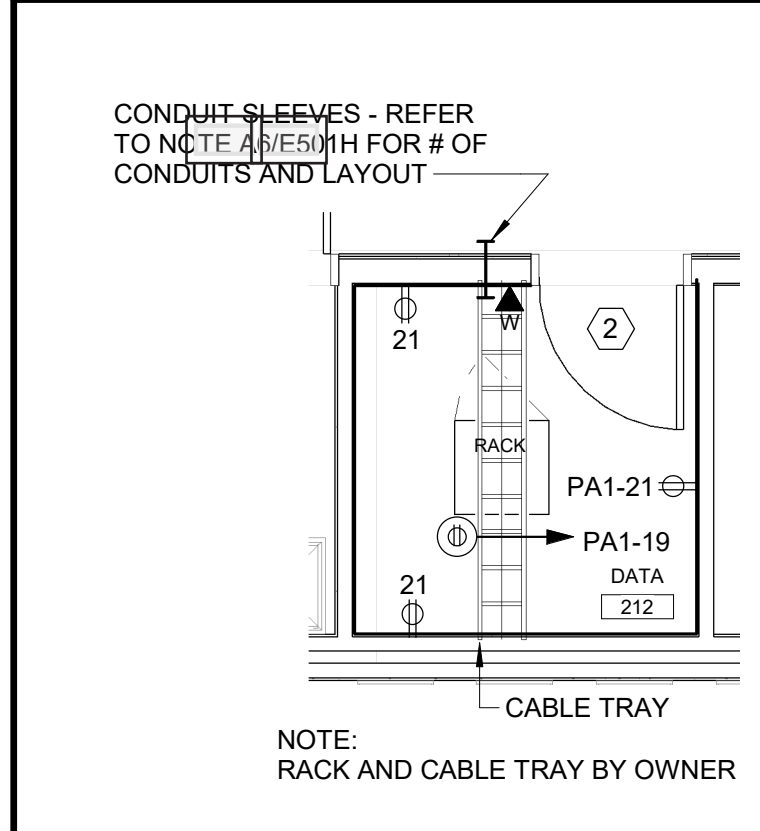
- 1 PROVIDE JUNCTION BOX AND CIRCUIT FOR MECHANICAL CONTROL. PROVIDE ABOVE CEILING, IN AREAS WITHOUT CEILINGS PROVIDE AT HEIGHT NOTED.
- 2 3/4" x 48 FIRE RETARDANT PLYWOOD BACKBOARD, PAINT BOTH SIDES WITH 2 COATS OF BLACK SATIN LATEX PAINT
- 3 WIRE AND CONNECT ALL EXISTING DEVICES IN THIS ROOM TO PA1-6
- 4 WIRE AND CONNECT ALL EXISTING DEVICES IN THIS ROOM TO PA1-18
- 5 HAND DRYERS ARE ALTERNATE HS-E1
- 6 ALTERNATE: EXISTING DEVICES ON OUTSIDE WALL SHALL BE RELOCATED TO NEW WALL FACE AFTER WALL IS FURRED OUT

E1	KEY NOTES
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Newmarket High School GMP Clarifications - 03.02.2018.pdf

Clarification 26.03 - Where new wiring in renovated areas cannot be concealed in existing finished construction, exposed wiring in surface-mounted metal raceway has been assumed.

GRIFIN ELECTRIC
 118 Hopping Brook Road, South Duxbury, Massachusetts 01948
 508/428-8830 Fax: 508/428-7825
 April 17, 2020



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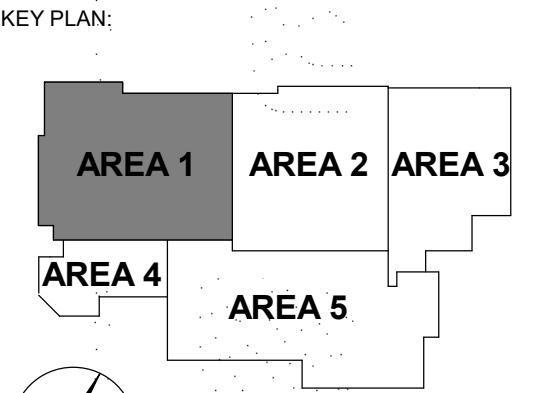
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PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

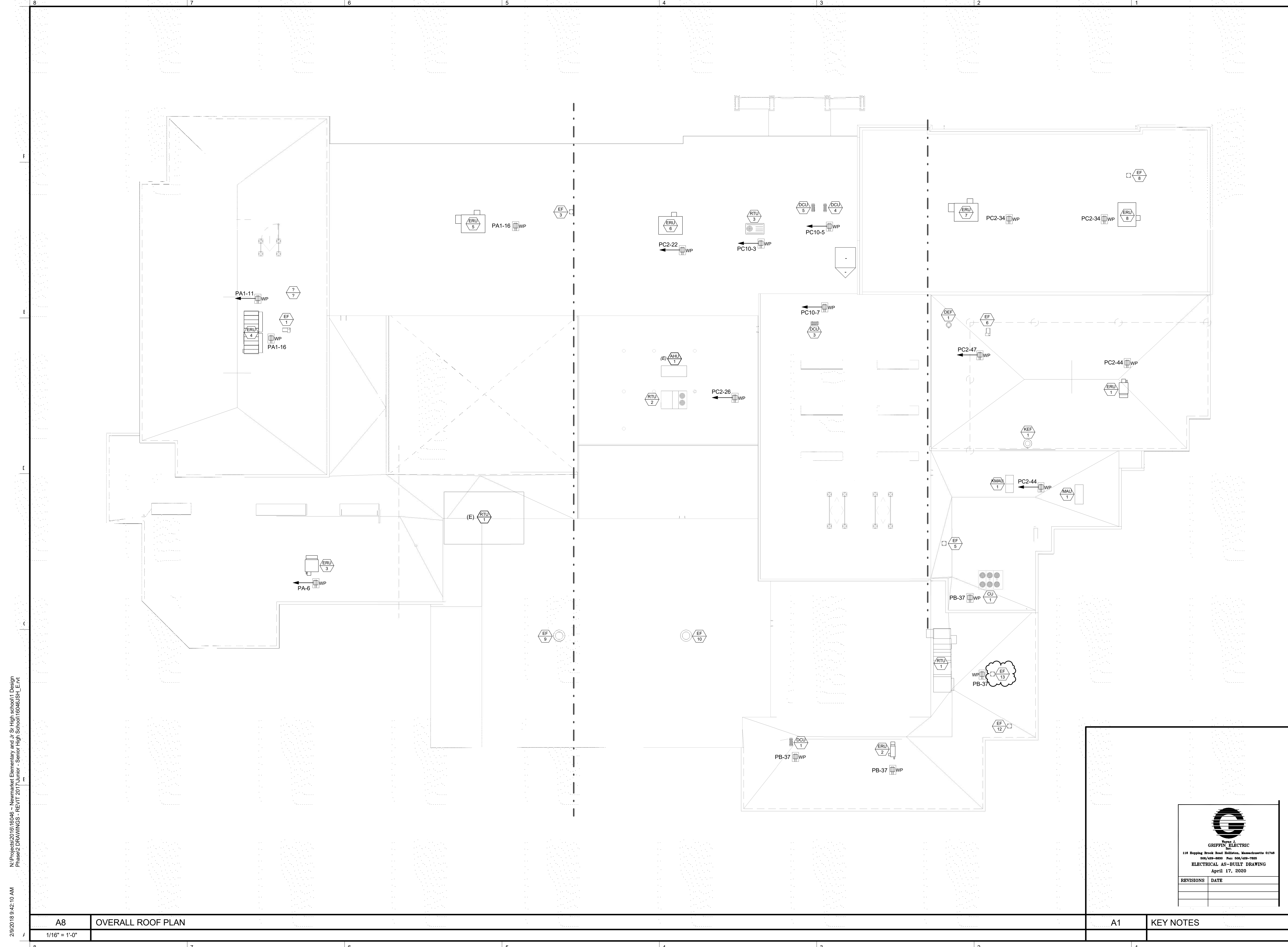
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 LEVEL 2 - AREA 1 - POWER
 PLAN

PROJECT NO: 15-340 DATE: 01/12/18
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EP121H

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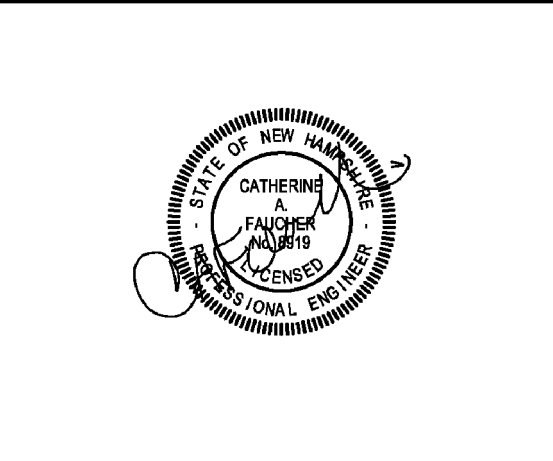
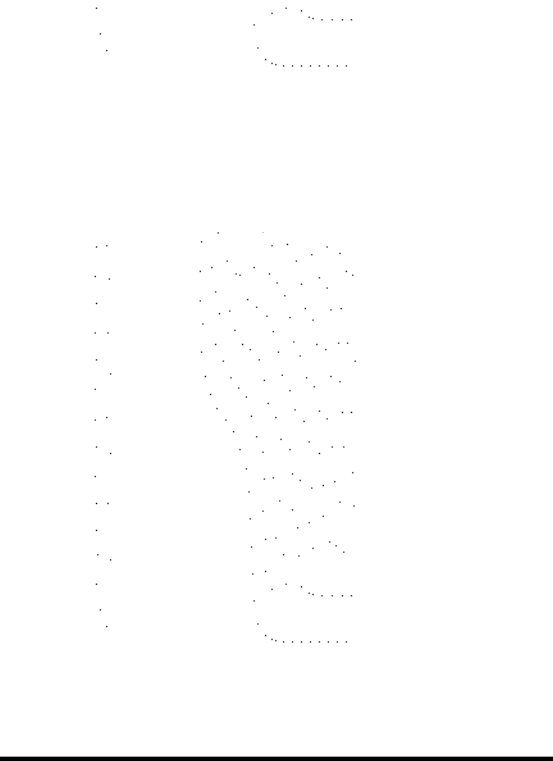
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KEY PLAN:

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 NEWMARKET, NH 03857

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 ELECTRICAL ROOF PLAN

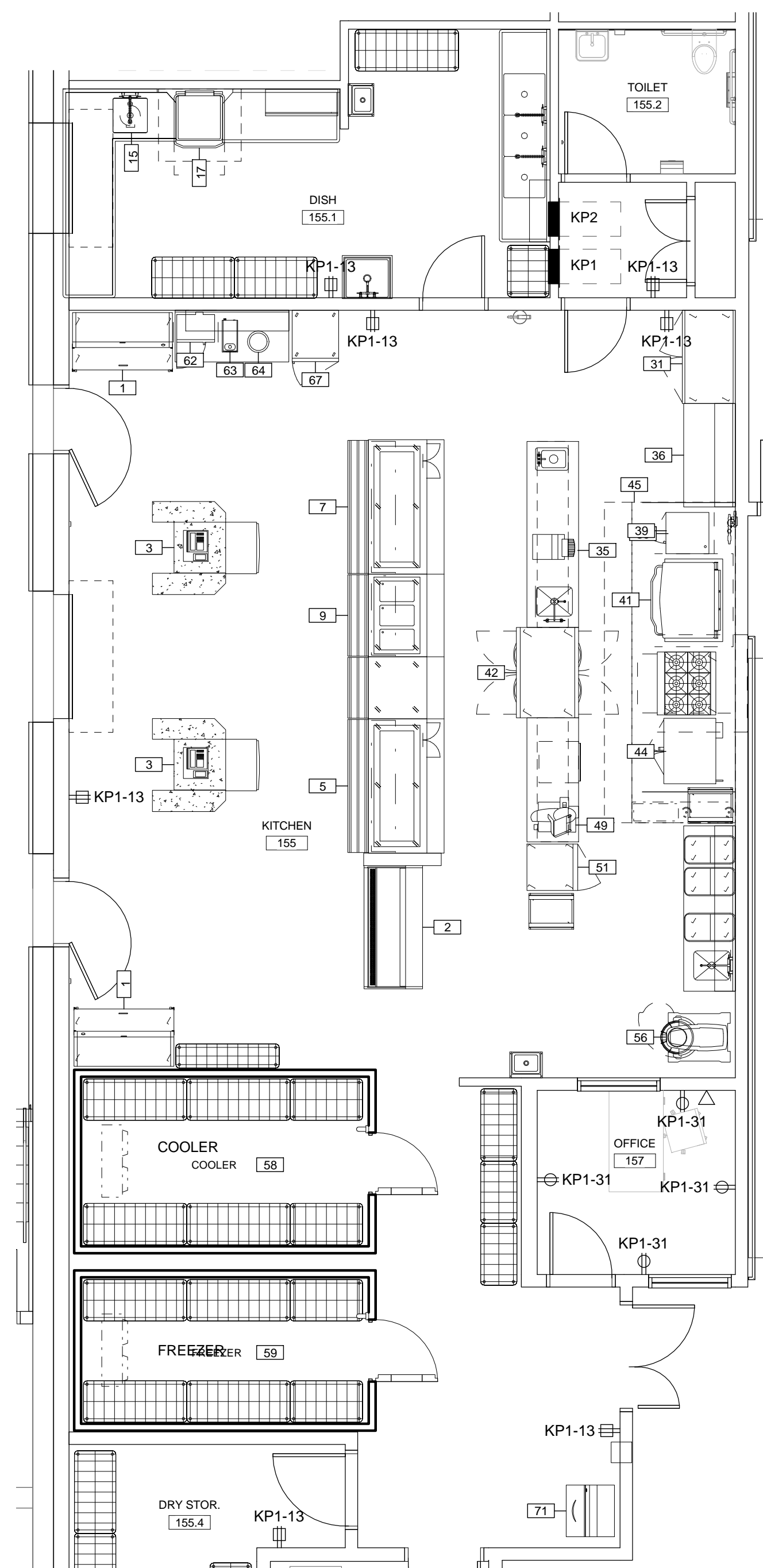
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114 Hopping Brook Road, Rolliston, Massachusetts 01766
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ELECTRICAL SCHEDULE OF KITCHEN EQUIPMENT- NOTE 8

TAG #	DESCRIPTION	QTY	VOLTS	PH	AMPS	MOCp	HP	WALL MOUNT GFI DUPLEX RECEPT OR J-BOX UNO (NOTE 4)	DISCONNECT SWITCH					WIRING IN CONDUIT (2#12,1#12G,UNO)	NOTES
									FRAME	POLES	FUSE	NEMA ENCL	FBD		
1	MILK COOLER	2	120	1	2.7	-	1/5	5-20R	-	-	-	-	-		
2	OPEN MERCHANDISER	1	120	1	11.5	-	3/4	5-20R	-	-	-	-	-		
3	CASHIER STATION	2	120	1	.36	-	-	(2) 5-20R	-	-	-	-	-		3
5	COLD FOOD COUNTER	1	120	1	10.7	-	1/2	5-20R	-	-	-	-	-		
	SNEEZE GUARD WITH LIGHTS	1	120	1	.18	-	-	5-20R	-	-	-	-	-		
7	COLD FOOD COUNTER	1	120	1	10.7	-	1/2	5-20R	-	-	-	-	-		6
	SNEEZE GUARD WITH LIGHTS	1	120	1	.18	-	-	5-20R	-	-	-	-	-		6
9	HOT FOOD COUNTER	1	208	1	14.4	-	-	L6-20R	-	-	-	-	-		6
	SNEEZE GUARD WITH LIGHTS	1	120	1	.18	-	-	5-20R	-	-	-	-	-		6
15	DISPOSER	1	208	1	3.3	-	2	NEMA 4X J BOX	-	-	-	-	-	3 #12, 1#12G	5
17	DISHWASHER W/ ELECTRIC HEAT	1	208	3	24.9	30	-	-	30	3	30	4X	26	3#10, 1#10 G	
	BOOSTER HEATER	1	208	3	20.4	30	-	-	30	3	30	4X	26	3#10, 1#10 G	
31	REACH IN REFRIGERATOR	1	120	1	5.4	-	-	5-20R	-	-	-	-	-		
35	TOASTER	1	120	1	15.9	-	-	5-20R	-	-	-	-	-		7
36	WORK TABLE WITH PREP SINK	1	120	1	3	-	-	5-20R	-	-	-	-	-		
39	STEAMER	2	208	3	41.6	-	-	JBOX	-	-	-	-	-	3 #6, 1 #10G	1
41	TILTING SKILLET- 40 AND 60 QT	2	120	1	4	-	-	5-20R	-	-	-	-	-		1
42	PASS THRU HEATED CABINET	1	208	3	14.42	-	-	JBOX	-	-	-	-	-	3 #10, 1#10G	
44	CONVECTION OVEN	1	120	1	7.9	-	-	5-20R	-	-	-	-	-		1
	HOOD- LTG AND CONTROLS	1	120	1	.8	-	-	-	-	-	-	-	-		1
45	FIRE SUPPRESSION	1	120	1	2	-	-	-	-	-	-	-	-		1
	GAS VALVE	1	120	1	.5	-	-	-	-	-	-	-	-		1
49	SLICER	1	120	1	7	-	-	5-20R	-	-	-	-	-		7
51	REACH IN REFRIGERATOR	1	120	1	5.4	-	-	5-20R	-	-	-	-	-		7
56	60 QT MIXER	1	208	3	6.5	-	-	JBOX	-	-	-	-	-	3 #12, 1#12G	
	COOLER EVAPORATOR	1	120	1	1.4	-	-	NEMA 4X J BOX	-	-	-	-	-		
58	COOLER CONDENSING UNIT	1	208	3	8.3	-	-	-	30	3	15	3R	26	3 #12, 1#12G	
	COOLER LTG/CONTROLS	1	120	1	5	-	-	NEMA 4X J BOX	-	-	-	-	-		
	FREEZER EVAPORATOR	1	208	1	8.2	-	-	NEMA 4X J BOX	-	-	-	-	-		
59	FREEZER CONDENSING UNIT	1	208	3	13.7	-	-	-	30	3	20	3R	26	3#10, 1#10 G	
	FREEZER DRAIN HEAT TAPE	1	120	1	3	-	-	NEMA 4X J BOX	-	-	-	-	-		
	FREEZER LTG/CONTROLS/DEFROST	1	120	1	5	-	-	NEMA 4X J BOX	-	-	-	-	-		
62	MICROWAVE	1	120	1	13	-	-	5-20R	-	-	-	-	-		
63	COFFEE BREWER	1	120	1	11.4	-	-	5-20R	-	-	-	-	-		
64	SOUP WARMER	1	120	1	5.8	-	-	5-20R	-	-	-	-	-		
67	REFRIGERATED MERCHANDISER	1	120	1	5.4	-	-	5-20R	-	-	-	-	-		
71	ICE CUBER	1	120	1	7.6	-	-	5-20R	-	-	-	-	-		

NOTES:

- INTERLOCK TO DISCONNECT POWER FROM ITEMS UNDER THE HOODS, HOOD LIGHTS, HOOD EXHAUST FANS, AND THE GAS VALVES VIA OPERATION OF THE SHUNT TRIP CIRCUIT BREAKER UPON FIRE ALARM AND WHEN THE EMERGENCY SHUT OFF IS MANUALLY OPERATED. WIRE FIRE SUPPRESSION SYSTEM PANELS TO FIRE ALARM PANEL. PROVIDE WIRING AND CONDUIT CONNECTIONS FOR MANUAL WALL SHUT OFF SWITCH. FIRE SUPPRESSION PANEL SHALL REMAIN ENERGIZED UPON FIRE ALARM AND SHUNT TRIP OPERATION.
- PROVIDE CORD AND PLUG
- PROVIDE CATEGORY 6 DATA OUTLET AND CATEGORY 6 CABLING
- MOUNTING HEIGHT SHALL BE DETERMINED IN THE FIELD PRIOR TO ROUGH IN
- PROVIDE WIRING IN CONDUIT AND CONNECT BETWEEN DISPOSER AND CONTROL PANEL. PROVIDE WIRING IN CONDUIT AND CONNECT BETWEEN THE CONTROLLER AND THE SOLENOID VALVE.
- EQUIPMENT SHALL BE FED VIA MINIMUM 1" UNDERSLAB CONDUIT. STUB UP AT UNIT AND INSTALL BOX 24" AFF.
- PROVIDE CORD DROP RECEPTACLE
- REFER TO KP1 AND KP2 PANEL SCHEDULES FOR CIRCUIT NUMBERS FOR KITCHEN EQUIPMENT

GRIFFIN ELECTRIC
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AEI PROJECT NO: 16046

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 PROFESSIONAL ENGINEER
 STATE OF NEW HAMPSHIRE
 LICENSE NO. 10000

REVISION	DATE	COMMENTS

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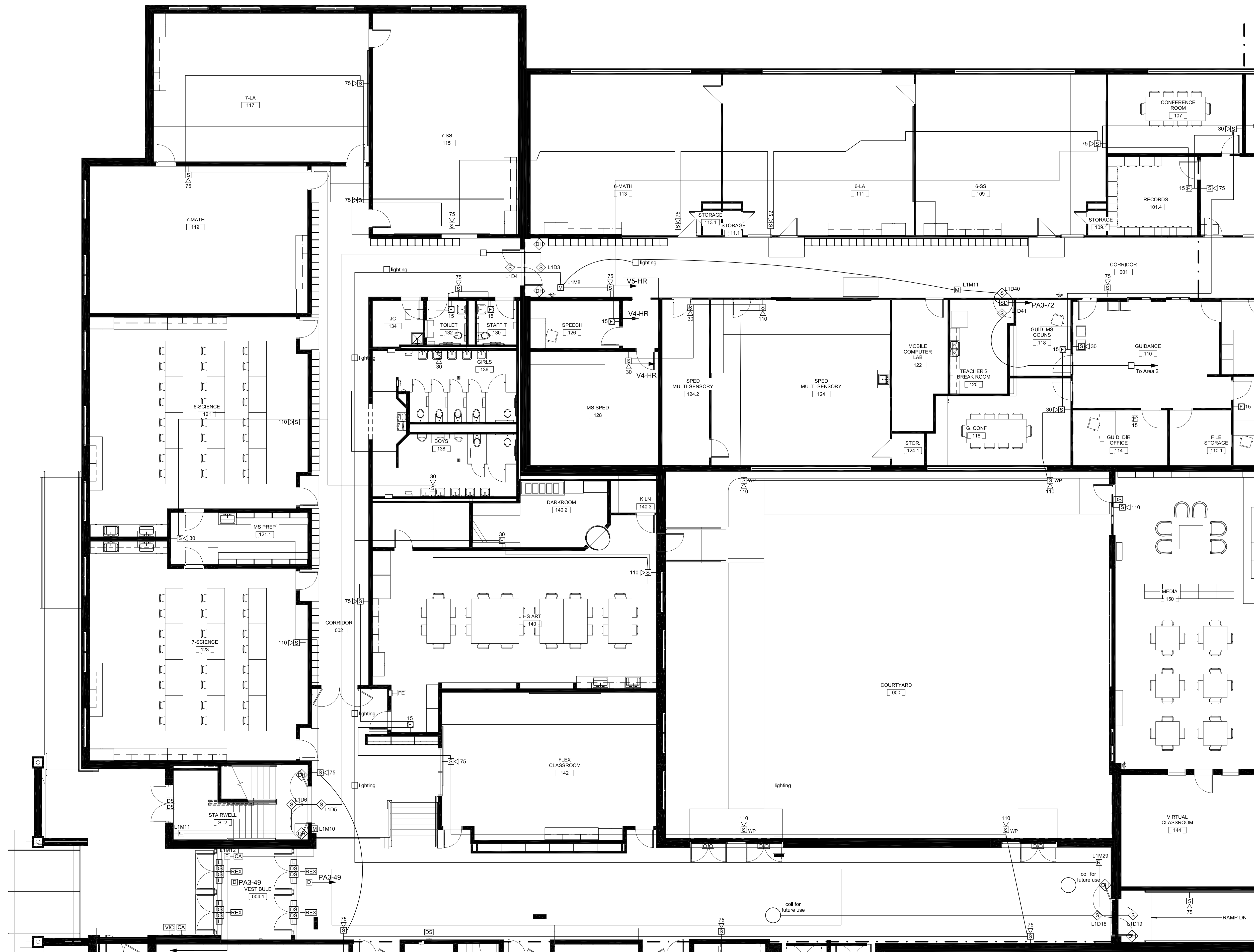
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 KITCHEN PLAN

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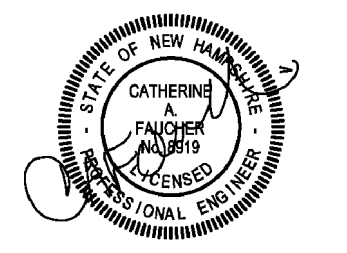
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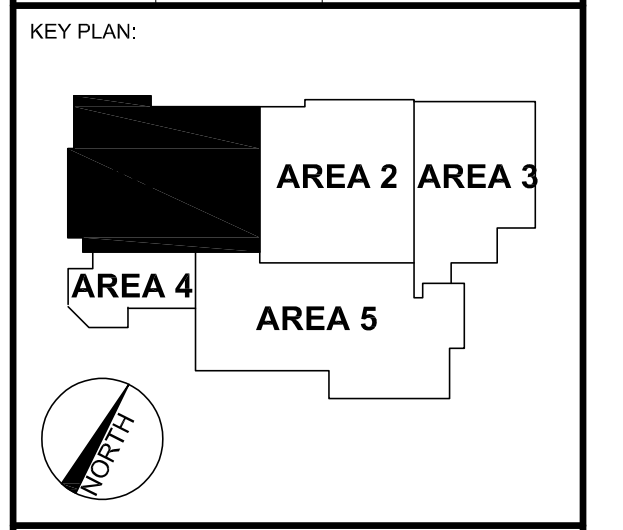
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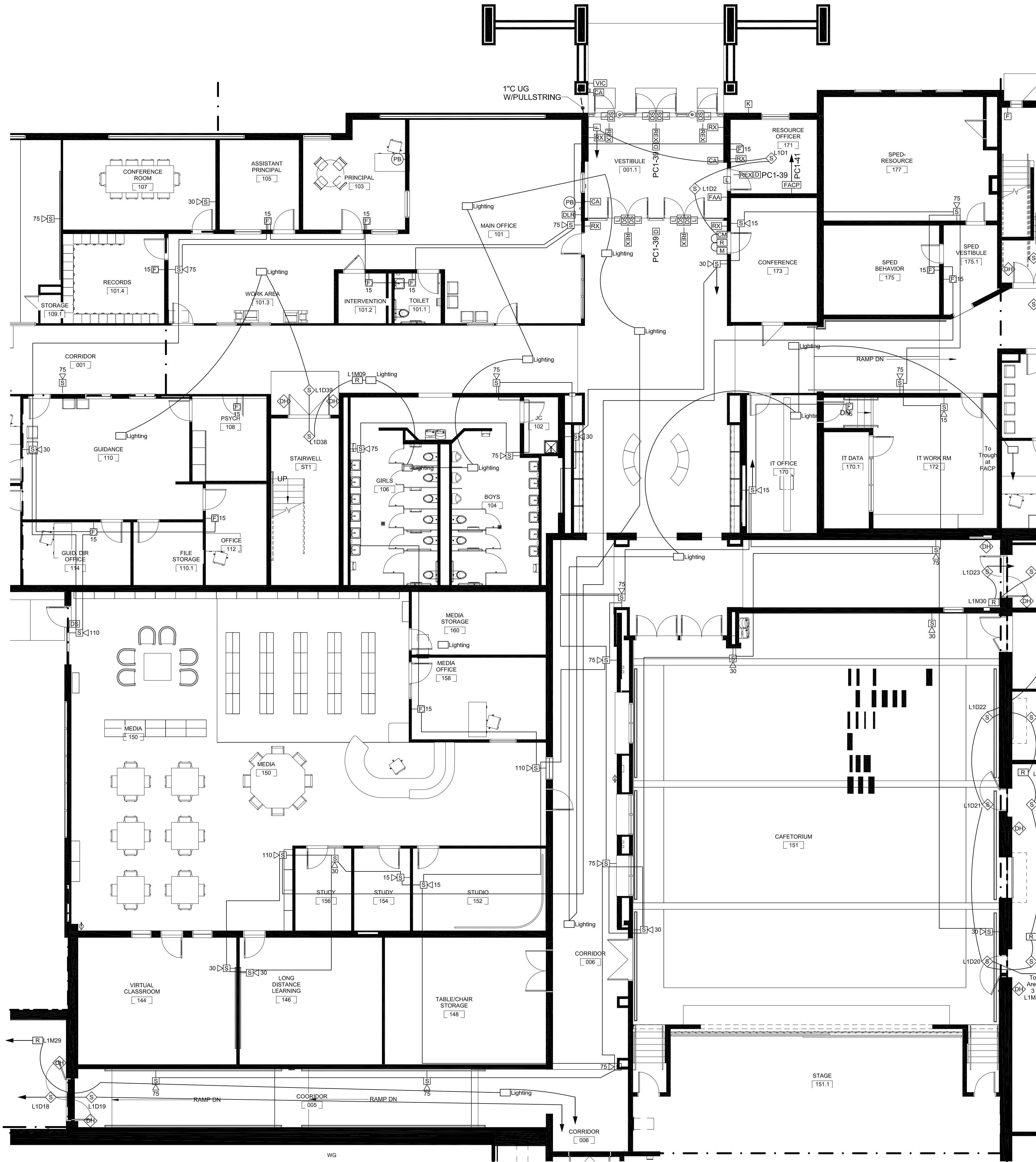
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 LEVEL 1 - AREA 1 - SYSTEMS
 PLAN

PROJECT NO: 15-340 DATE: 03/16/18
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Walter J. Griffin Electric Inc.
 116 Hopkinton Road
 Hopkinton, Massachusetts 01748
 603-438-8800 Fax: 603-438-7822
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 APRIL 17, 2020

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A8 LEVEL 1 - AREA 1 - SYSTEMS PLAN
 1/8" = 1'-0"



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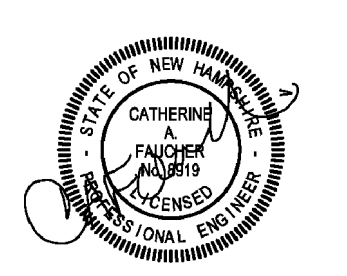
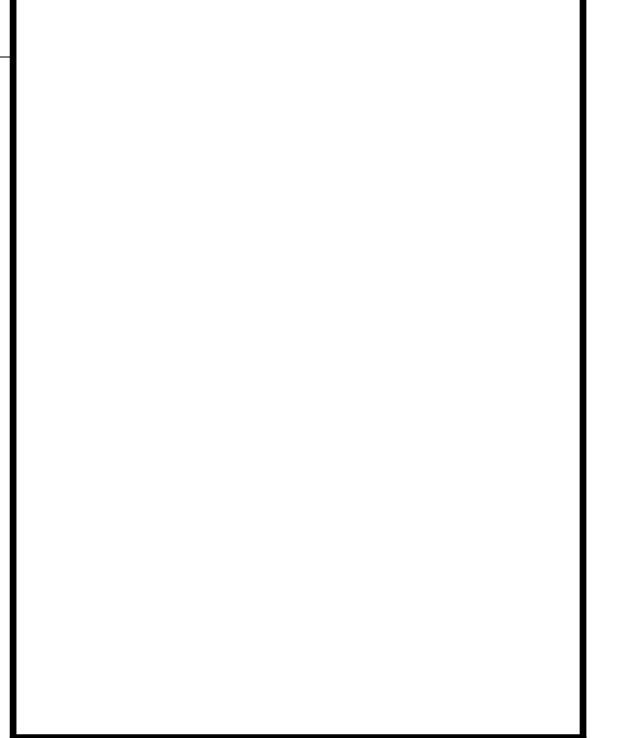
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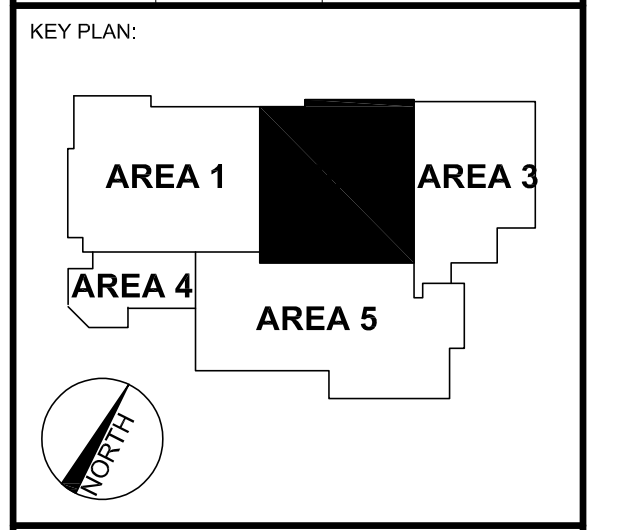
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LEVEL 1 - AREA 2 - SYSTEMS
PLAN

PROJECT NO: 15-340 DATE: 03/16/18
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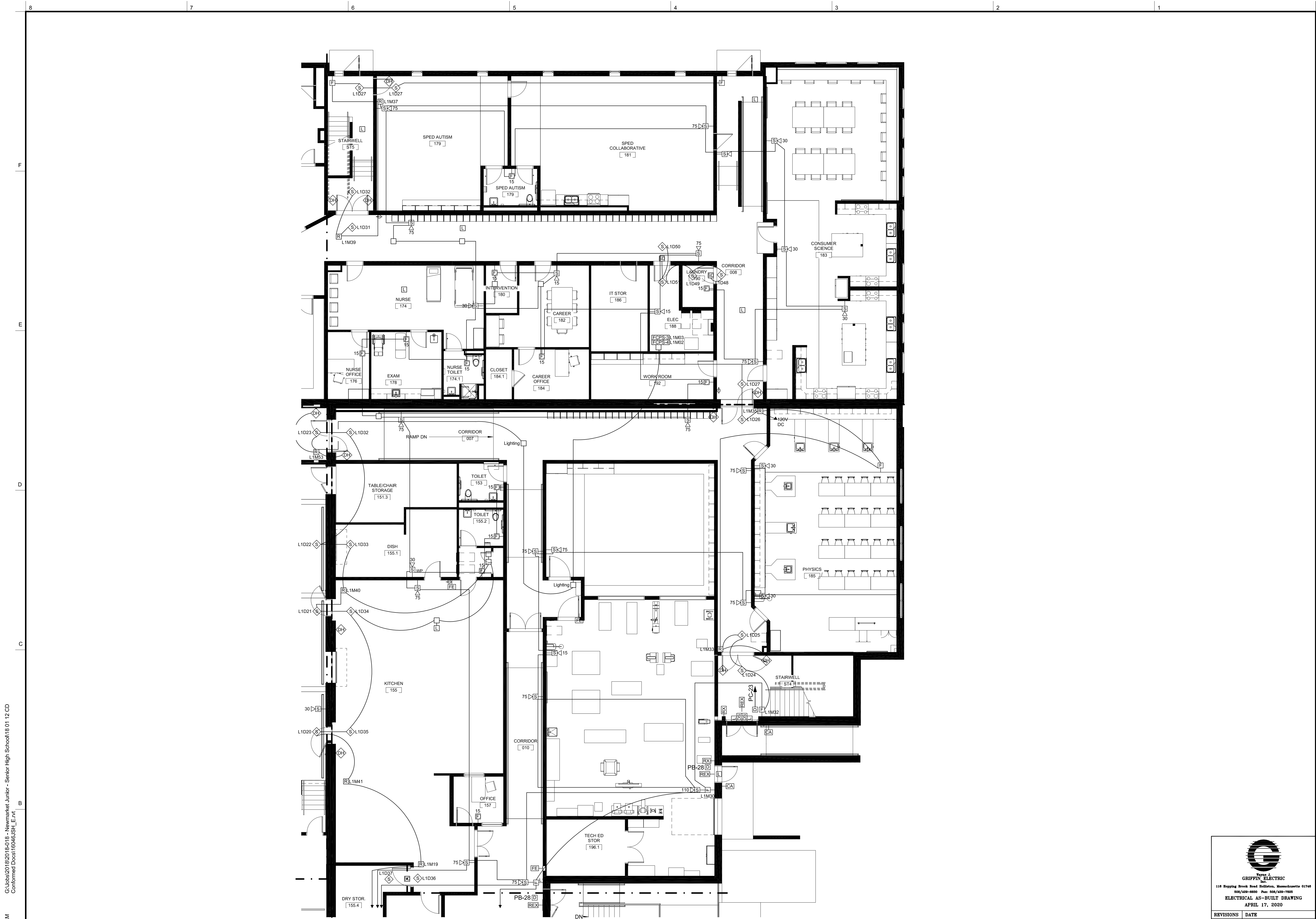
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A8 LEVEL 1 - AREA 2 - SYSTEMS PLAN
1/8" = 1'-0"



A8 LEVEL 1 - AREA 3 - SYSTEMS PLAN
 1/8" = 1'-0"

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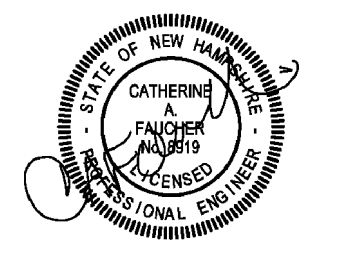
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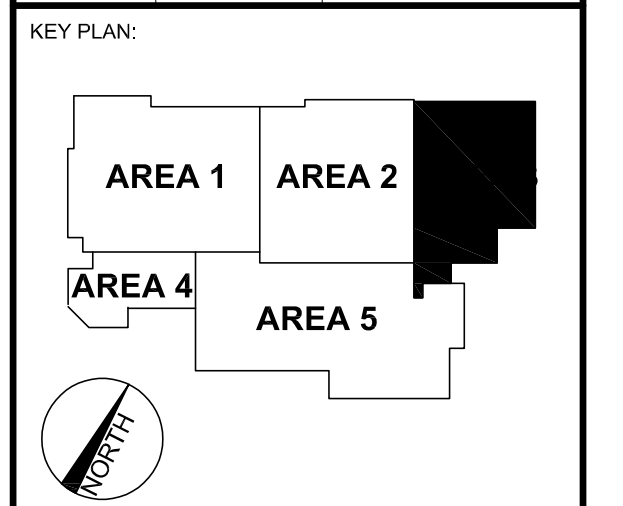
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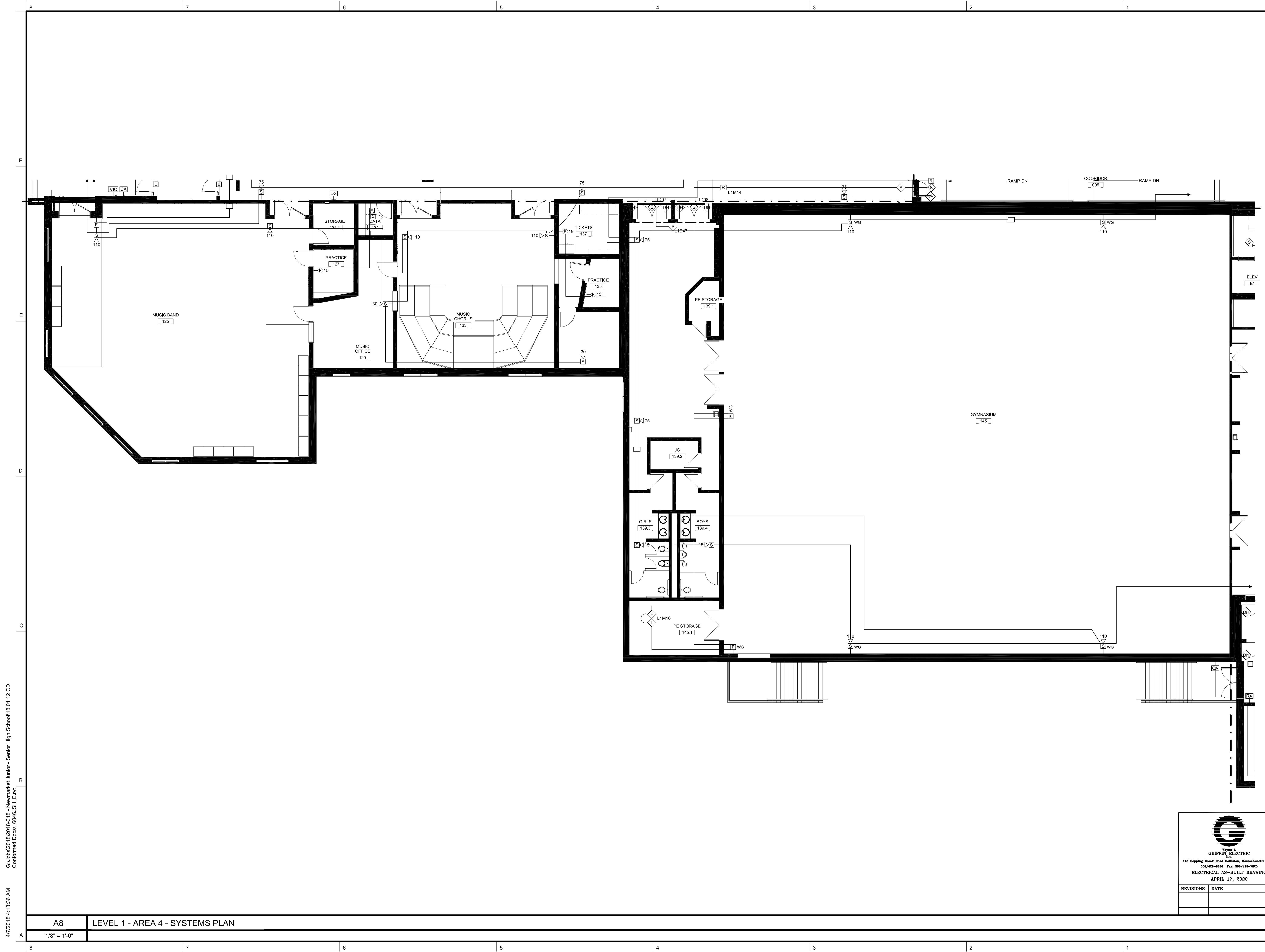
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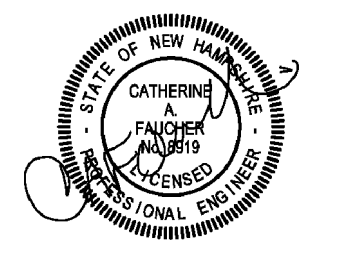
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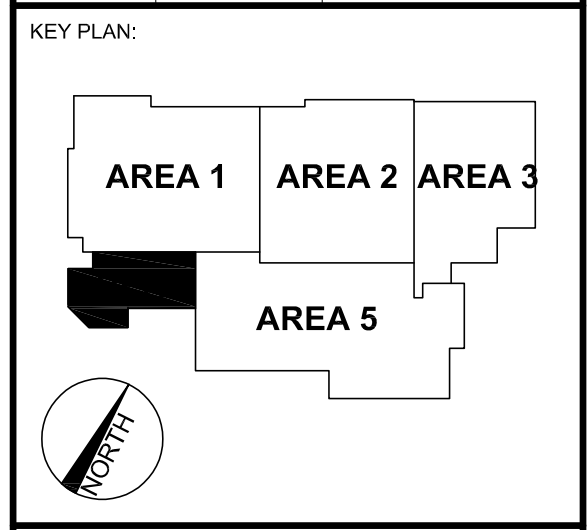
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Portland, Maine 04103
T: 207.221.2268
F: 207.221.2266
Web: www.allied-eng.com

AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

ISSUED:
CONSTRUCTION DOCUMENTS
INCLUDING ADDENDA

DRAWING TITLE:
LEVEL 1 - AREA 4 - SYSTEMS
PLAN

PROJECT NO: 15-340 DATE: 03/16/18

SHEET NUMBER:
EY114H

Wayne J. GRIFFIN ELECTRIC
INC.

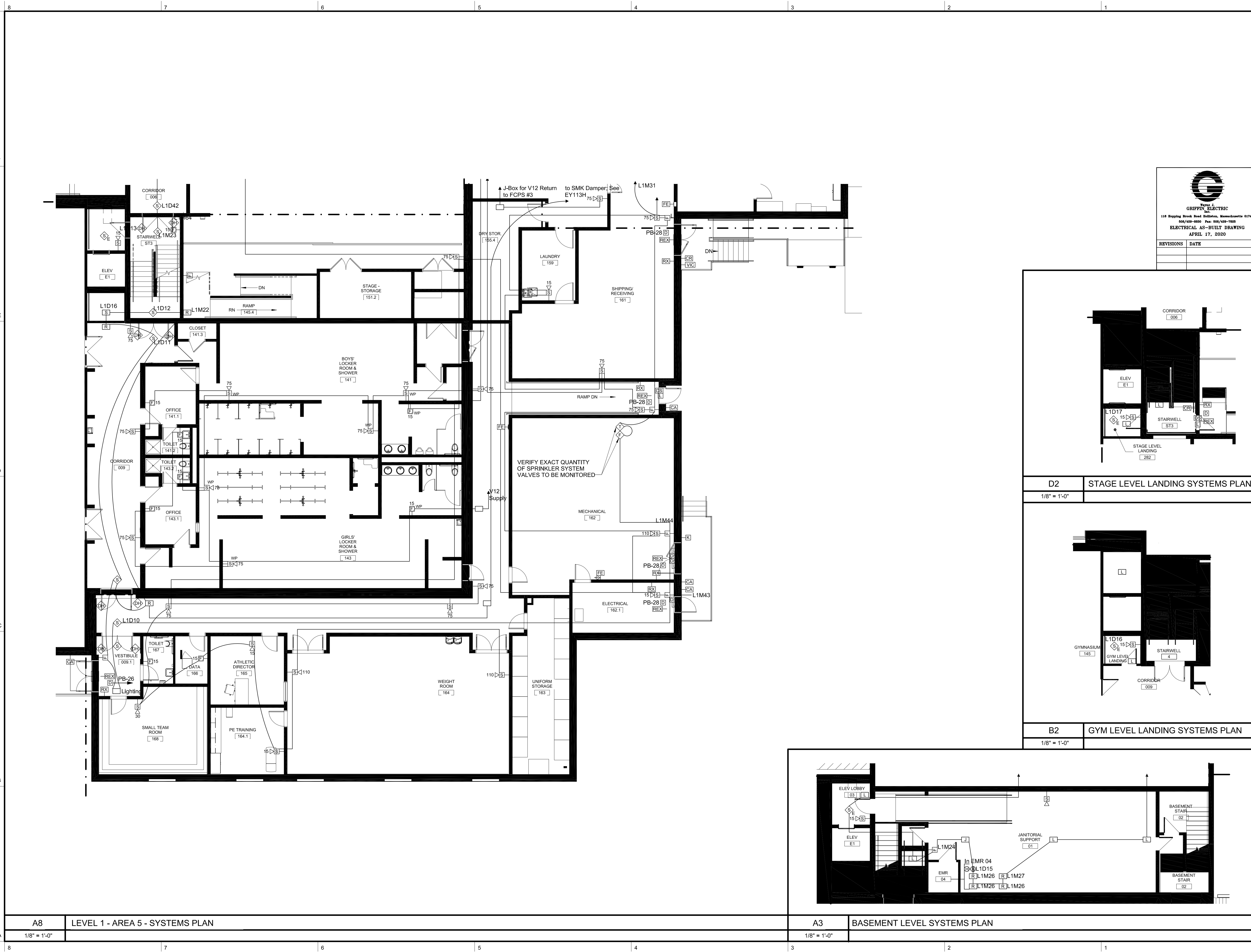
116 Hopkirk Brook Road Holliston, Massachusetts 01746
603/438-9800 Fax: 603/438-7800

ELECTRICAL AS-BUILT DRAWING
APRIL 17, 2020

REVISIONS	DATE

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Confirmed Docs\16046\SH_EF.v1

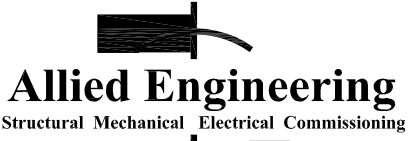
A8 LEVEL 1 - AREA 4 - SYSTEMS PLAN
1/8" = 1'-0"




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CONSULTANTS / DESIGN TEAM:
OWNER:
SAU #31
186A MAIN STREET
NEWMARKET, NH 03857

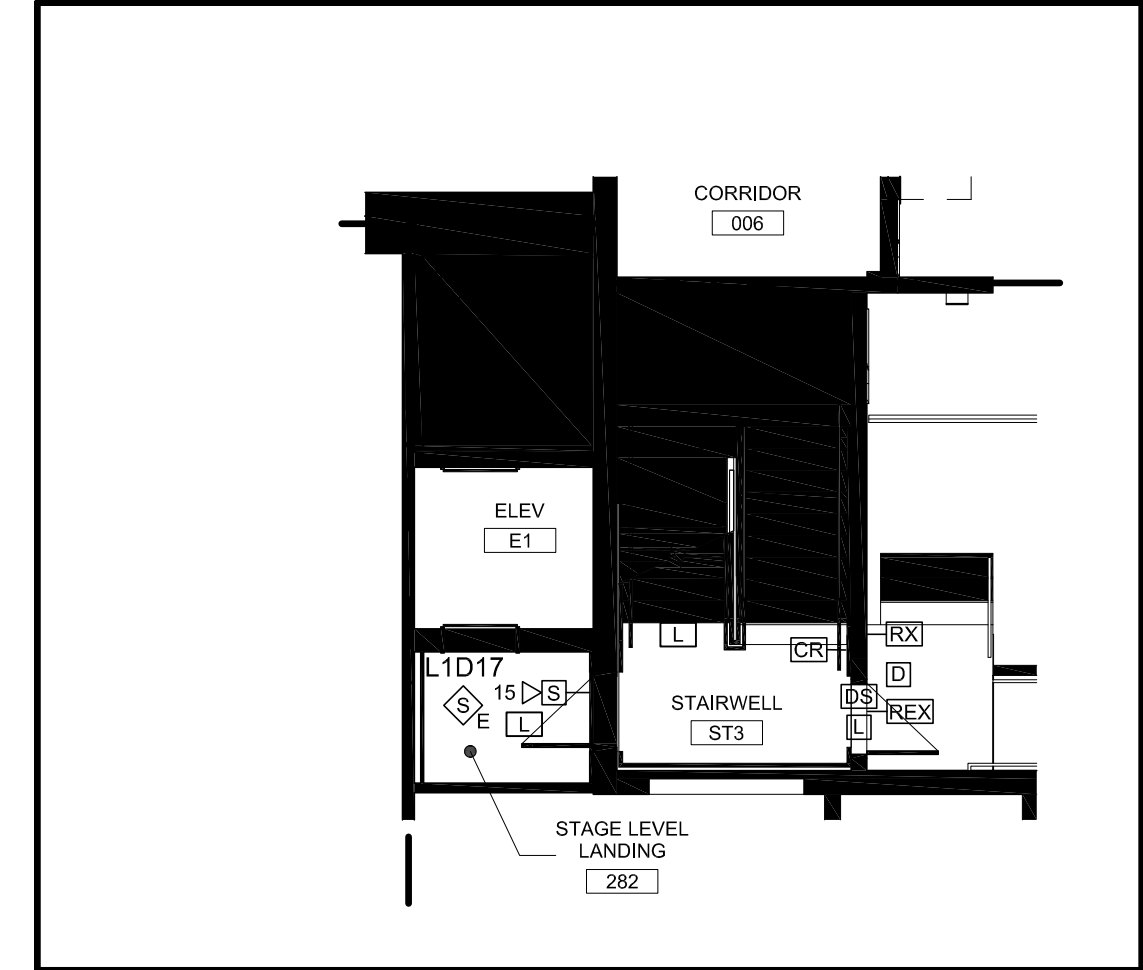
ARCHITECT:
BANWELL ARCHITECTS
6 SOUTH PARK STREET
LEBANON, NH 03766
T: (603) 448-3778 F: (603) 443-5555

MEP:

Allied Engineering
Structural Mechanical Electrical Commissioning

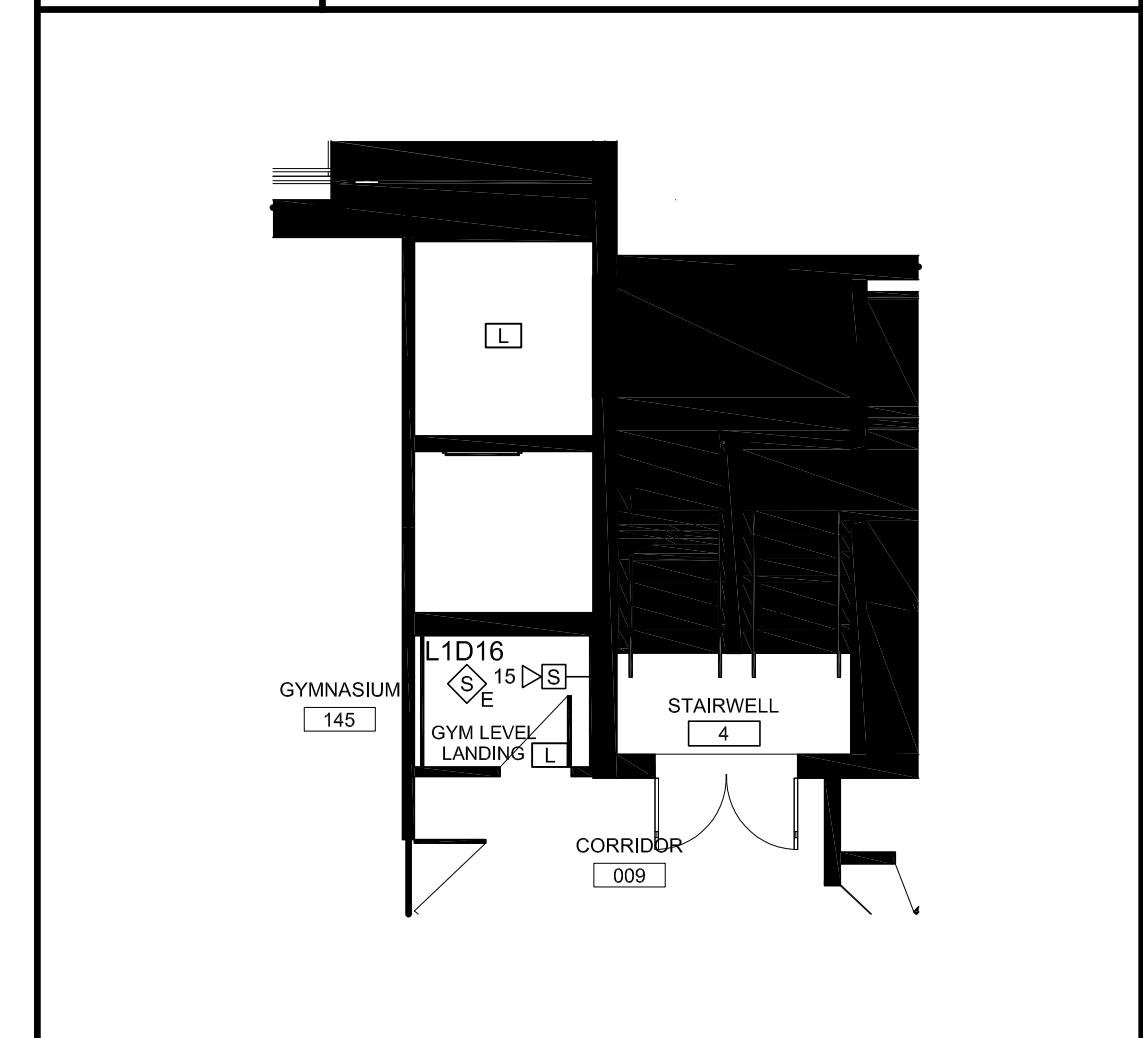
160 Veranda Street
Portland, Maine 04103
T: 207.221.2268
F: 207.221.2266
Web: www.allied-eng.com


GRIFFIN ELECTRIC
110 Bayview Drive, West Hill Station, Massachusetts 01108
508/488-8880 Fax: 508/488-7885
ELECTRICAL AS-BUILT DRAWING
APRIL 17, 2020

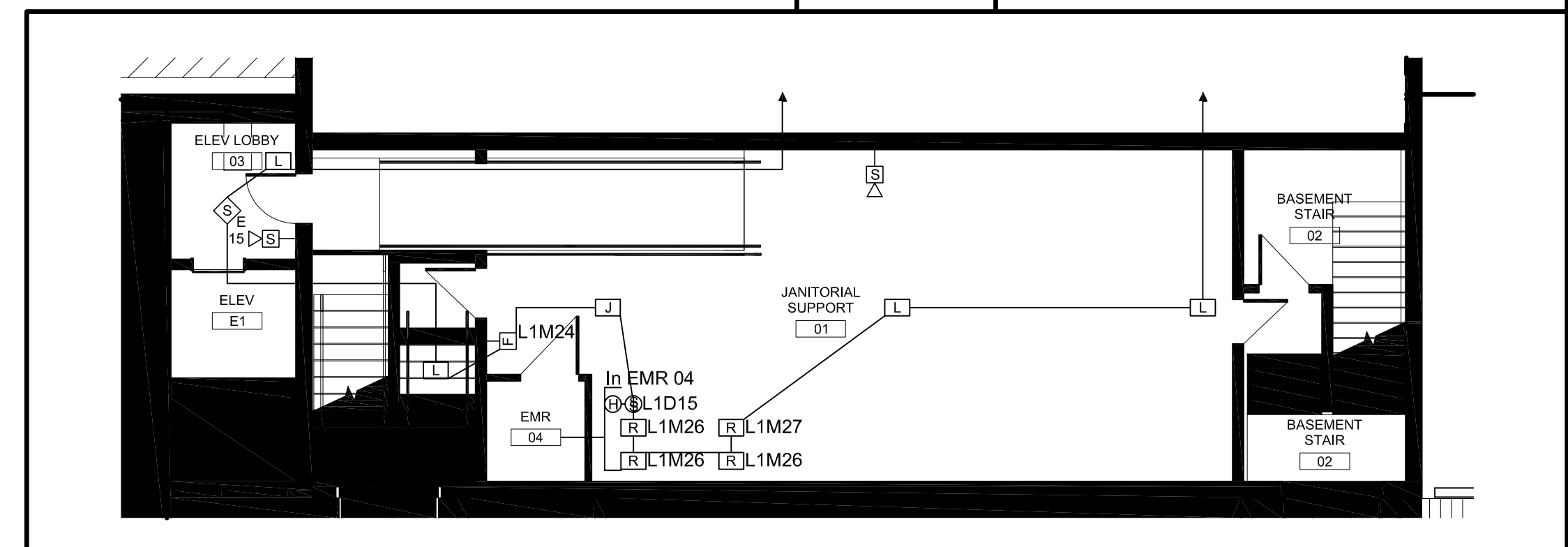
REVISIONS	DATE



D2 STAGE LEVEL LANDING SYSTEMS PLAN
1/8" = 1'-0"

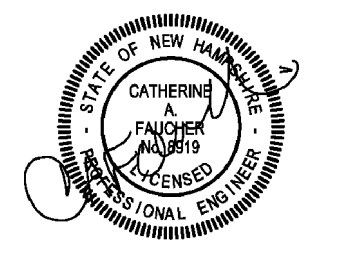


B2 GYM LEVEL LANDING SYSTEMS PLAN
1/8" = 1'-0"

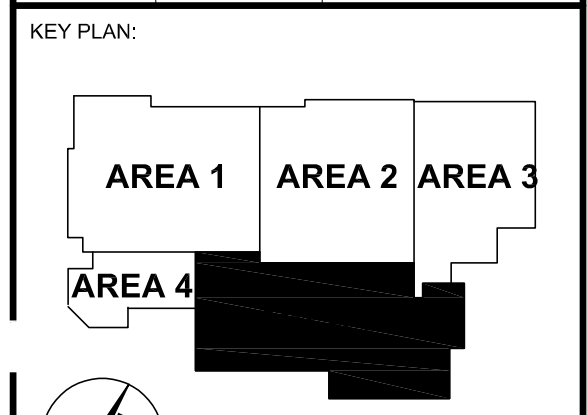


A3 BASEMENT LEVEL SYSTEMS PLAN
1/8" = 1'-0"

A8 LEVEL 1 - AREA 5 - SYSTEMS PLAN
1/8" = 1'-0"



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H



PROJECT:
NEWMARKET JUNIOR/SENIOR
HIGH SCHOOL
213 S MAIN STREET,
NEWMARKET, NH 03857

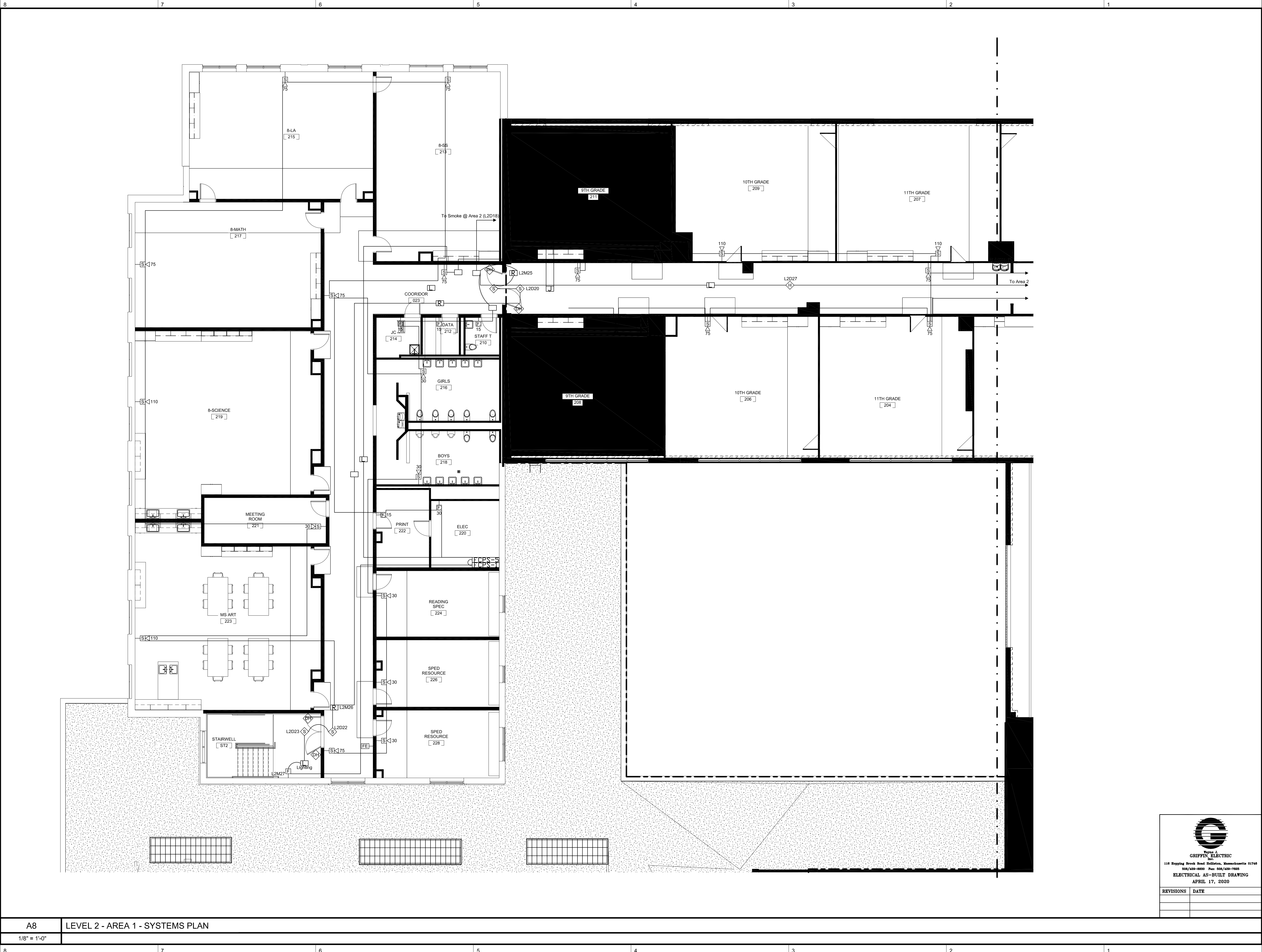
ISSUED:
CONSTRUCTION DOCUMENTS
INCLUDING ADDENDA

DRAWING TITLE:
LEVEL 1 - AREA 5 - SYSTEMS
PLAN

PROJECT NO: 15-340 DATE: 03/16/18

SHEET NUMBER:
EY115H

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Confirmed Docs\160464SH_EF.v1



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 Confirmed Docs\16046\SH_E.rvt



THE CARRIAGE HOUSE
 6 SOUTH PARK STREET
 LEBANON, NH 03766
 T: 603 448 3778
 F: 603 443 5555

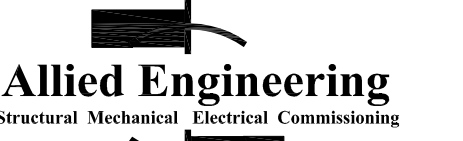
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 NEWMARKET, NH 03857

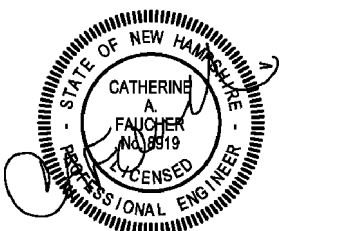
ARCHITECT:
 BANWELL ARCHITECTS
 6 SOUTH PARK STREET
 LEBANON, NH 03766
 T: (603) 448-3778 F: (603) 443-5555

MEP:

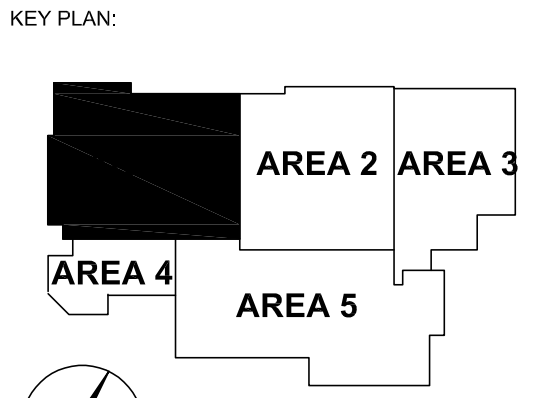


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 F: 207.221.2266
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AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS

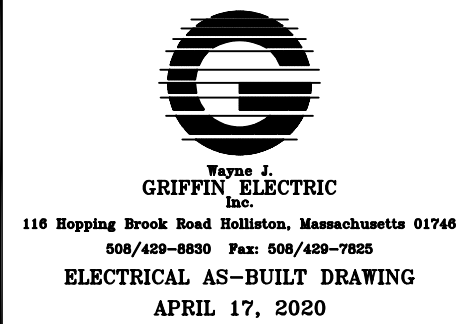


PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 CONSTRUCTION DOCUMENTS
 INCLUDING ADDENDA

DRAWING TITLE:
 LEVEL 2 - AREA 1 - SYSTEMS
 PLAN

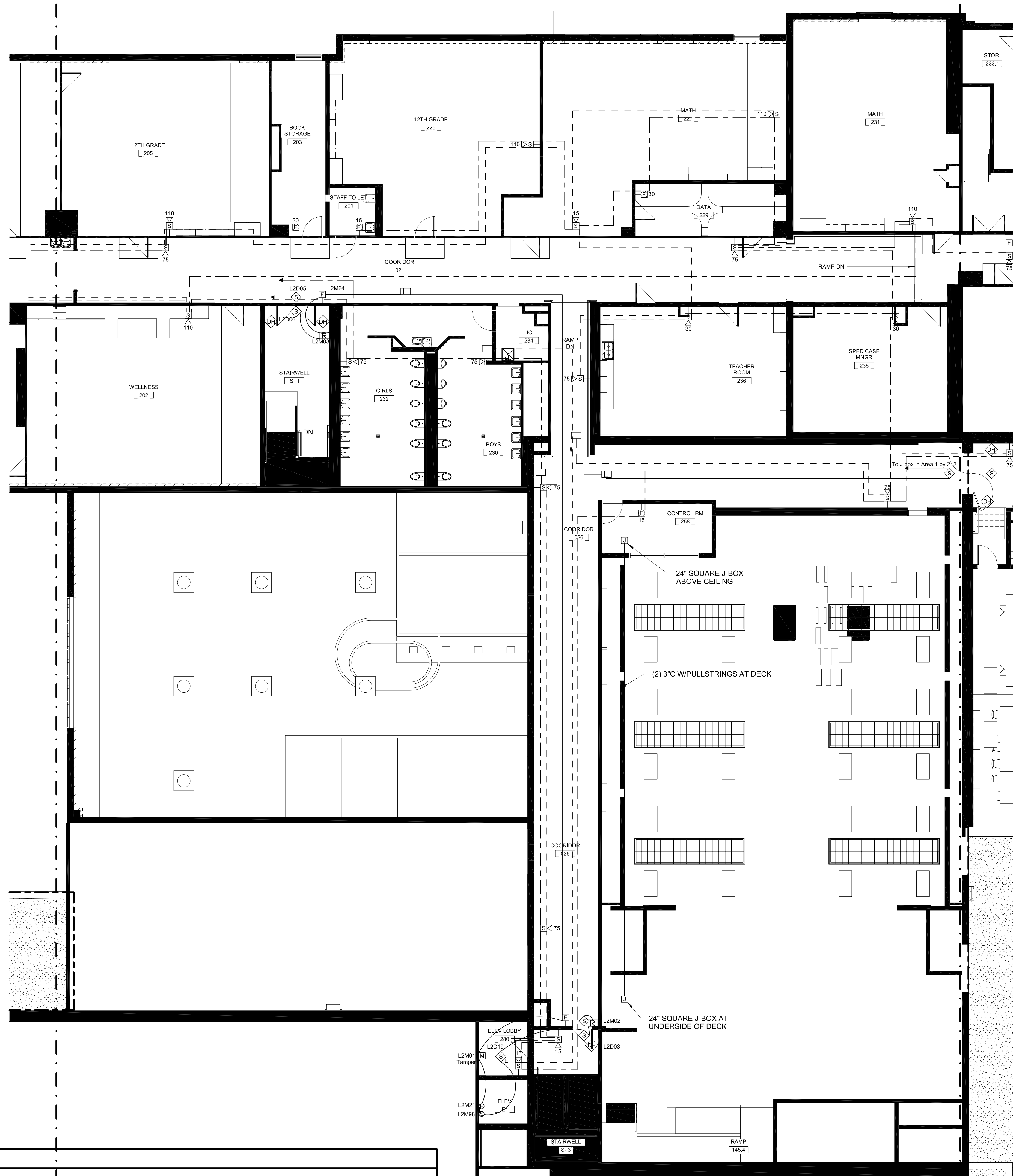
PROJECT NO: 15-340 DATE: 03/16/18
 SHEET NUMBER:



116 Hopping Brook Road Holliston, Massachusetts 01746
 603-468-8800 Fax: 603-426-7850
ELECTRICAL AS-BUILT DRAWING
 APRIL 17, 2020

REVISIONS	DATE

EY121H



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 G:\chba\2018\2018-018 - Newmarket Junior - Senior High School\18 01 12 CD
 Confirmed Docs\16046\SH_E.rvt

A8
 LEVEL 2 - AREA 2 - SYSTEMS PLAN
 1/8" = 1'-0"

Wayne J. GRIFFIN ELECTRIC
 Inc.
 116 Hopkinton Brook Road Holliston, Massachusetts 01746
 603/438-0800 Fax 603/426-7822
ELECTRICAL AS-BUILT DRAWING
 APRIL 17, 2020

REVISIONS	DATE

THE CARRIAGE HOUSE
 6 SOUTH PARK STREET
 LEBANON, NH 03766
 T: 603 448 3778
 F: 603 443 5555

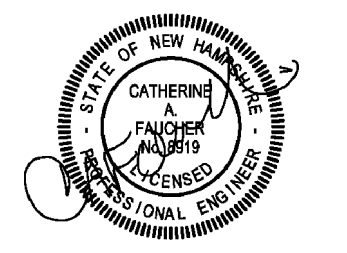
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 NEWMARKET, NH 03857

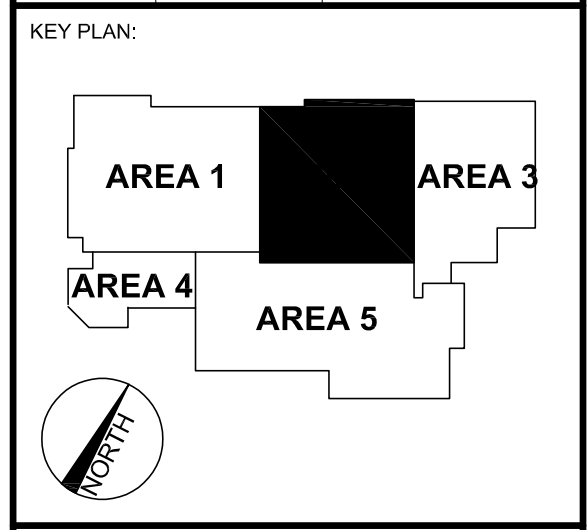
ARCHITECT:
 BANWELL ARCHITECTS
 6 SOUTH PARK STREET
 LEBANON, NH 03766
 T: (603) 448-3778 F: (603) 443-5555
MEP:

Allied Engineering
 Structural Mechanical Electrical Commissioning
 160 Veranda Street
 Portland, Maine 04103
 T: 207.221.2266
 F: 207.221.2266
 Web: www.allied-eng.com

AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS



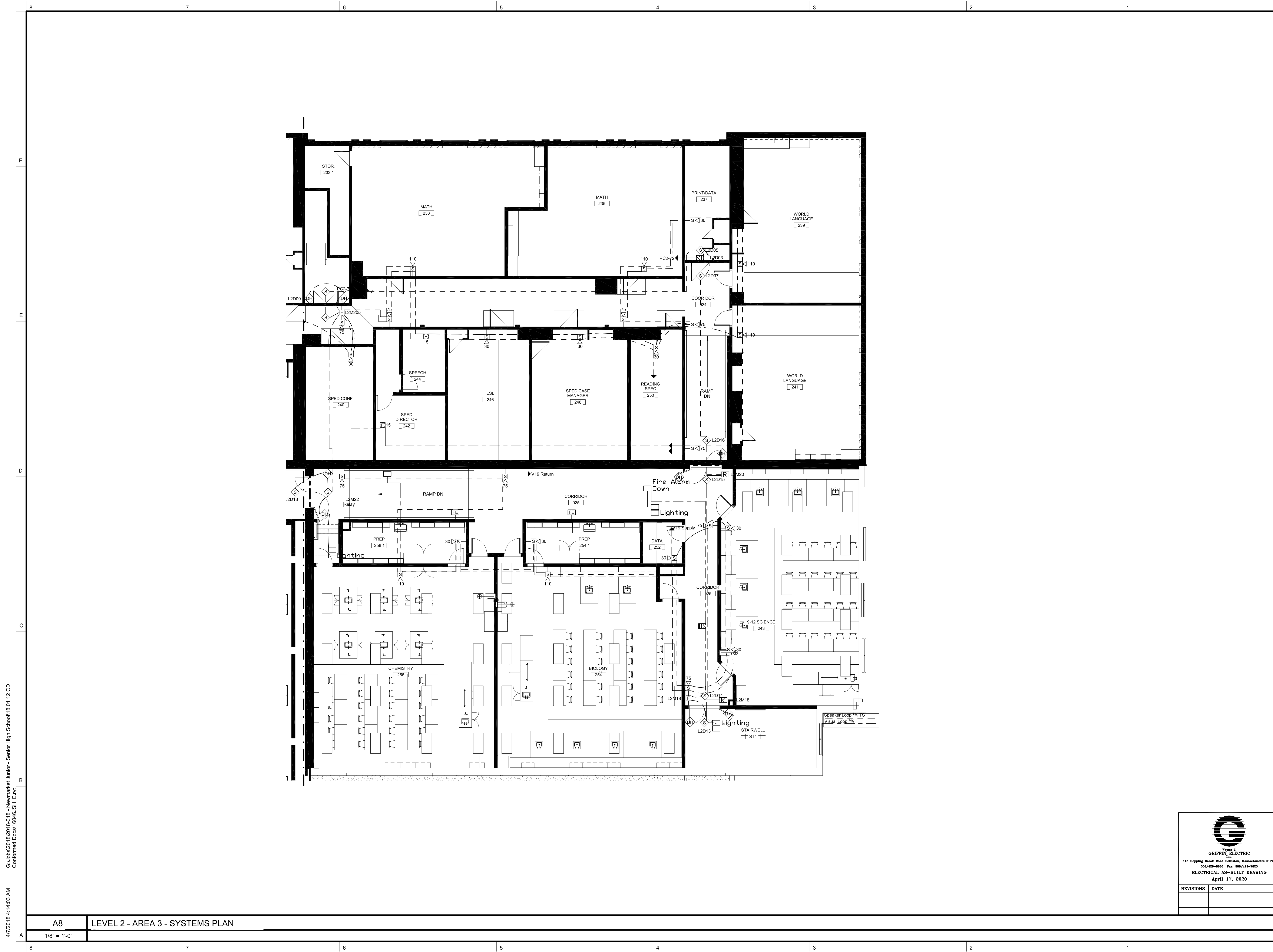
PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 CONSTRUCTION DOCUMENTS
 INCLUDING ADDENDA

DRAWING TITLE:
 LEVEL 2 - AREA 2 - SYSTEMS
 PLAN

PROJECT NO: 15-340 DATE: 03/16/18
 SHEET NUMBER:

EY122H



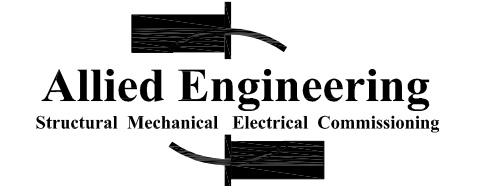
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 Confirmed Docs\16046\SH_E.rvt



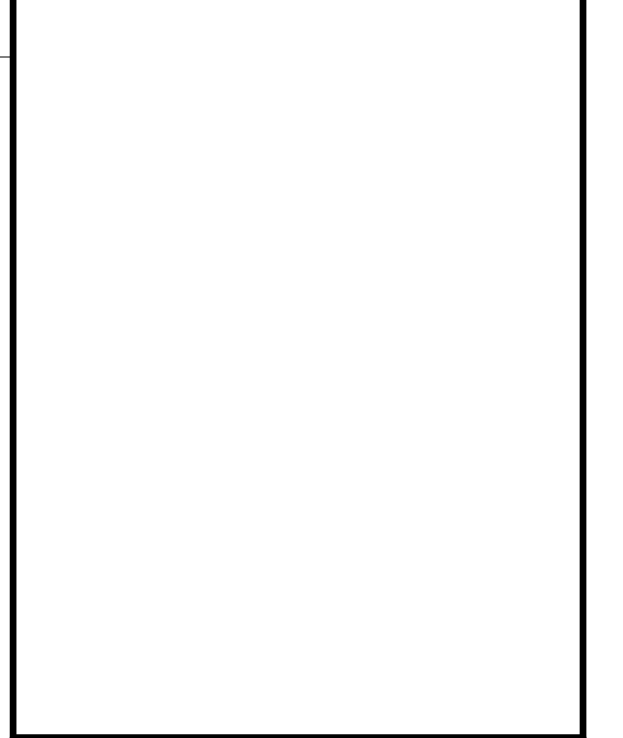
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CONSULTANTS / DESIGN TEAM:
OWNER:
 SAU #31
 186A MAIN STREET
 NEWMARKET, NH 03857

ARCHITECT:
 BANWELL ARCHITECTS
 6 SOUTH PARK STREET
 LEBANON, NH 03766
 T: (603) 448-3778 F: (603) 443-5555

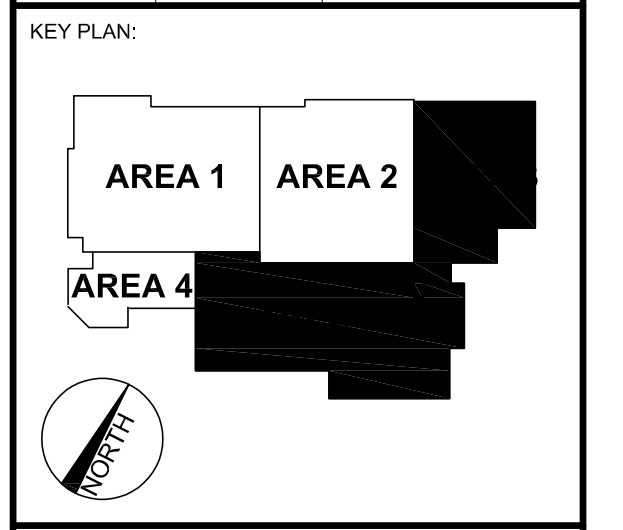
MEP:

Allied Engineering
 Structural Mechanical Electrical Commissioning
 160 Veranda Street
 Portland, Maine 04103
 T: 207.221.2266
 F: 207.221.2266
 Web: www.allied-eng.com

AEI PROJECT NO: 16046



REVISION	DATE	COMMENTS
1	2/9/18	Addendum 3H

REVISION	DATE	COMMENTS




PROJECT:
 NEWMARKET JUNIOR/SENIOR
 HIGH SCHOOL
 213 S MAIN STREET,
 NEWMARKET, NH 03857

ISSUED:
 CONSTRUCTION DOCUMENTS
 INCLUDING ADDENDA
DRAWING TITLE:
 LEVEL 2 - AREA 3 - SYSTEMS
 PLAN

PROJECT NO: 15-340 DATE: 03/16/18
 SHEET NUMBER:

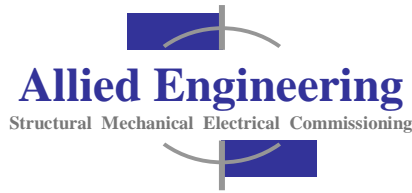
EY123H


Griffin Electric
 116 Hopkirk Brook Road Holliston, Massachusetts 01746
 603-486-6800 Fax: 603-429-7653
 ELECTRICAL AS-BUILT DRAWING
 April 17, 2020

REVISIONS	DATE

A8
 LEVEL 2 - AREA 3 - SYSTEMS PLAN
 1/8" = 1'-0"

Appendix B
Existing Lighting and Controls Product Data and Shop Drawings



SHOP DRAWING REVIEW COVER SHEET

Project Name, Project #: Newmarket Junior/Senior High School: 16046

Date Received: 5/17/18

Date Due: 5/31/18

AEI Shop Drawing #: 16

Contractor Shop Drawing #: 265119-1

AEI Project Manager: Catherine Faucher

Contractor: Eckamn Construction

Item Description: Led Interior Lighting

Spec. Section Number(s): 265119

email : Date Returned 5/31/18

\\AEFile\cad\Projects\2016\16046 ~ Newmarket Elementary and Jr Sr High school\3 Construction\2 Shops\HS\Electronic Submittals from contractor\16 Led Interior Lighting\16 Led Interior Lighting Review Letter.doc

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR QUANTITIES; DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE; INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESS FOR TECHNIQUES OF CONSTRUCTION; COORDINATION OF THE WORK OF ALL TRADES; AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER. THIS REVIEW DOES NOT MODIFY CONTRACTOR'S DUTY TO COMPLY WITH THE CONTRACT DOCUMENTS.

REVIEWED

REVIEWED W/NOTES, *No Resubmission* Required

REVIEWED W/NOTES, *Resubmission Required*

NOT ACCEPTABLE

NOTES:

Reviewed: All items not listed below.

Reviewed with notes – no resub: Fixture type R4- Provide 3.7 w/ft and 400 lumens/ft fixtures.

Reviewed with notes- resub: Fixture P4 – Provide point by point photometric layout, average lumens, and max/min.

Reviewed by: Allied Engineering, Inc.

Reviewer: C.A. Faucher

WAYNE J. GRIFFIN ELECTRIC, INC.

116 Hopping Brook Road
HOLLISTON, MASSACHUSETTS, 01746
PHONE (508) 429-8830
FAX (508) 429-7825

LETTER OF TRANSMITTAL

DATE	5/10/2018	JOB NO:	2380
ATTENTION	John Deloia		
RE:	Newmarket JR/SR High School		
DeloiaJ@eckmanconstruction.com			

TO Eckman Construction Company, Inc.
213 S. Main Street
Newmarket, NH 03857
(603) 623-1713

WE ARE SENDING YOU Attached Under Separate Cover Via _____ the following items:

- Shop Drawings Prints Plans Samples Specifications
- Copy of Letter Change Order Submittals

COPIES	DATE	NO.	DESCRIPTION
	5/10/2018		Section 265119 LED Interior Lighting

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
- For your use Approved as noted Submit _____ copies for distribution
- As requested Returned for corrections Return _____ corrected prints
- For review and comment _____
- FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO Micah Blum, Michael Brennan, Peter Donahue, Stephen Hannagan

SIGNED: Louise Hebb
Submittals Administrator

Licenses:
MA A8999 VT EM3303 NH 4223M ME MC60017598 CT ELC.0123697-E1
AL 16318 RI AC003520 GA EN213065 NC 16529U SC- M3477

If enclosures are not as noted, kindly notify us at once.



**WAYNE J.
GRIFFIN ELECTRIC
INC.**

May 10, 2018

PROJECT: Newmarket JR/SR High School
213 S. Main Street
Newmarket, NH 03857

OWNER: SAU #31 Newmarket School District
186 S. Main Street
Newmarket, NH 03857

GENERAL CONTRACTOR: Eckman Construction Company, MA
84 Palomino Lane
Bedford, NH 03110

ARCHITECT: Banwell Architects
6 South Park Street
Lebanon, NH 03766

ELECTRICAL ENGINEER: Allied Engineering
160 Veranda Street
Portland, ME 04103

ELECTRICAL CONTRACTOR: Wayne J. Griffin Electric, Inc.
116 Hopping Brook Road
Holliston, MA 01746

We herein submit the following electrical equipment for the Newmarket JR/SR High School project for your approval:

Section 265119 LED Interior Lighting

PROJECT: Newmarket JR/SR High School
Newmarket, NH

SUBMITTAL: Section 265119 LED Interior Lighting

WAYNE J. GRIFFIN ELECTRIC, INC.
116 Hopping Brook Road
Holliston, MA 01746

Reviewed by: *Micah Blum* *lmh*

Date: May 10, 2018



LIGHTING SUBMITTAL

PROJECT: NEWMARKET JR/SR HIGH SCHOOL

CONTRACTOR: WAYNE J GRIFFIN ELECTRIC

DATE: MAY 8, 2018

DISTRIBUTOR: NORTHEAST ELECTRICAL DISTRIBUTORS
560 OAK STREET
BROCKTON, MA 02301



NEWMARKET JUNIOR/SENIOR HS
5/8/2018

TABLE OF CONTENTS

TYPE	MFG	DESCRIPTION
C1-8'	STAR	SP-N1-8L-35K-CA-FCE-PMGC05--NS-ND-U-PN
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
C1-8'	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C1-8'	STAR	SPARE LENS FOR TYPE C1-8'
C1-8'EM	STAR	SP-N1-8L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B10A
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
C1-8'EM	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C1-16'	STAR	SP-N1-16L-35K-CA-LSC/LSE-FCE-PMGC05-NS-ND-U-PN
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
C1-16'	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C1-16'	STAR	SPARE LENS FOR TYPE C1-16'
C1-16'EM	STAR	SP-N1-16L-35K-CA-LSC/LSE-FCE-PMGC05-NS-ND-U-PN
	STAR	SP-N1-16L-35K-CA-LSC/LSE-FCE-PMGC05-NS-ND-U-PN
C1-16'EM	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C1A-4'	STAR	SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
C1A-4'	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C1A-4'	STAR	SPARE LENS FOR TYPE C1A
C1A-EM	STAR	SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B10A
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
C1A-EM	STAR	CANOPY KITS W/5' CABLES AND GRIPPERS
C2	COOP	SMD6R6935WH
P3	DELR	IL7702-1050-W35-2 (PROVIDED WITH 72" AIRCRAFT
	DELR	CABLES; CONFIRM ALL HANG HEIGHTS)
P3-EM	DELR	IL7702-1050-W35-2-EM (PROVIDED WITH 72" AIRCRAFT
	DELR	CABLES; CONFIRM ALL HANG HEIGHTS)
P4	CAM	P1003-42-LN(59W/5830LM PROX)-35K-CLV-MV(277V)-
	CAM	MW-PAL-ST
P4-EM	CAM	P1003-42-LN(59W/5830LM PROX)-35K-CLV-MV(277V)-
	CAM	MW-PAL-ST-IEM
P5	ALBT	608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"
	ALBT	(CXX = CONFIRM STANDARD FINISHES; 48" PENDANT;
	ALBT	CONFIRM OVERALL HANG HEIGHTS [CEILING TO THE



NEWMARKET JUNIOR/SENIOR HS
5/8/2018

TABLE OF CONTENTS

TYPE	MFG	DESCRIPTION
	ALBT	BOTTOM OF THE FIXTURE])
P5-EM	ALBT	608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"
	ALBT	(CXX = CONFIRM STANDARD FINISHES; 48" PENDANT;
	ALBT	CONFIRM OVERALL HANG HEIGHTS [CEILING TO THE
	ALBT	BOTTOM OF THE FIXTURE]; EMB REMOTE MOUNTED)
P5-EM	BODI	ELI-S-100-277 (ONE INVERTER FOR TWO FIXTURES)
P6-4'	AXLI	BBDILED-640-400-80-35-SO-04'-W-UNV-DP-1-CA**
	AXLI	(** = CONFIRM CEILING TYPES FOR ALL MOUNTING
	AXLI	OPTIONS)
P6-4'	AXLI	SPARE LENS FOR TYPE P6-4'
P6-8'	AXLI	BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA**
	AXLI	(** = CONFIRM CEILING TYPES FOR ALL MOUNTING
	AXLI	OPTIONS)
P6-8'	AXLI	SPARE LENS FOR TYPE P6-8'
P6-EM-8'	AXLI	BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA**-B1
	AXLI	(** = CONFIRM CEILING TYPES FOR ALL MOUNTING
	AXLI	OPTIONS)
P6-12'	AXLI	BBDILED-640-400-80-35-SO-12'-W-UNV-DP-1-CA**
	AXLI	(** = CONFIRM CEILING TYPES FOR ALL MOUNTING
	AXLI	OPTIONS)
P6-12'	AXLI	SPARE LENS FOR TYPE P6-12'
P6-16'	AXLI	BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA**
	AXLI	(** = CONFIRM CEILING TYPES FOR ALL MOUNTING
	AXLI	OPTIONS)
P6-16'	AXLI	SPARE LENS FOR TYPE P6-16'
P6-EM-16'	AXLI	BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-
	AXLI	CA**-B1 (** = CONFIRM CEILING TYPES FOR ALL
	AXLI	MOUNTING OPTIONS)
R1	COOP	PDR77911-22CZ-LD5-24-UNV-L835-CD1-U-PAL
R1	COOP	PDR77920-720822-RF PK
R1-EM	COOP	PDR77912-22CZ-LD5-24-UNV-EL14W-L835-CD1-U-PAL
R1A	COOP	PDR77913-24CZ-LD5-30-UNV-L835-CD1-U-34PAL
R1A	COOP	PDR77921-720824-RF-PK-34PAL
R1A-EM	COOP	PDR77914-24CZ-LD5-30-UNV-EL14W-L835-CD1-U-34PAL



NEWMARKET JUNIOR/SENIOR HS
5/8/2018

TABLE OF CONTENTS

TYPE	MFG	DESCRIPTION
R1B	COOP	PDR77915-24CZ-LD5-40-UNV-L835-CD1-U-34PAL
R1B	COOP	PDR77921-720824-RF-PK-34PAL
R1B-EM	COOP	PDR77916-24CZ-LD5-40-UNV-EL14W-L835-CD1-U-34PAL
R3	COOP	22FP3235C
R3-EM	COOP	22FP3235C (PROVIDED WITH FIELD INSTALLED
	COOP	EMERGENCY BATTERY PACK)
R3-EM	COOP	EBPLED14W (FEILD INSTALLED BY E.C.)
R3A	COOP	24FP4735C
R3A-EM	COOP	24FP4735C (PROVIDED WITH FIELD INSTALLED
	COOP	EMERGENCY BATTERY PACK)
R3A-EM	COOP	EBPLED14W (FEILD INSTALLED BY E.C.)
R3B	COOP	FMRS-24-2-LD4-3-LO-35-UNV-80/84-EDD-1 (CONFIRM
	COOP	CEILING TYPE FOR MOUNTNG OPTIONS)
R3B	COOP	LNS-FMRS-80/84-2FT
R4-6'	AXLI	BMRLD-400-80-35-FL-06'-W-UNV-DP-1-*** (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS)
R4-6'	AXLI	SPARE LENS FOR TYPE R4-6'
R4-8'	AXLI	BMRLD-400-80-35-FL-08'-W-UNV-DP-1-*** (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS)
R4-8'	AXLI	SPARE LENS FOR TYPE R4-8'
R4-EM-8'	AXLI	BMRLD-400-80-35-FL-08'-W-UNV-DP-1-***-B1 (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS)
R4-12'	AXLI	BMRLD-400-80-35-FL-12'-W-UNV-DP-1-*** (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS)
R4-12'	AXLI	SPARE LENS FOR TYPE R4-12'
R4-EM-12'	AXLI	BMRLD-400-80-35-FL-12'-W-UNV-DP-1-***-B1 (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING
	AXLI	OPTIONS)
R4-16'	AXLI	BMRLD-400-80-35-FL-16'-W-UNV-DP-1-*** (***) =
	AXLI	CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS)
R4-16'	AXLI	SPARE LENS FOR TYPE R4-16'
R4W	AXLI	NO QUOTE; NONE REQUIRED
R5	ALBT	NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM10-NC-MC-
	ALBT	MC-MC



NEWMARKET JUNIOR/SENIOR HS
5/8/2018

TABLE OF CONTENTS

TYPE	MFG	DESCRIPTION
R5E	ALBT	NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM10-NC-
	ALBT	MC-EM7
R6	ALBT	NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-NC-MC-MC
R6-EM	ALBT	NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-NC-MC-
	ALBT	MC-EM7
R8	ALBT	NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-NC-MC-
R8-EM	ALBT	NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-NC-MC-
	ALBT	MC-EM7
B1	LUMI	303-B1-LEDB2-UNV-T2-DIM10-CXX-42 (CXX =
	LUMI	CONFIRM STANDARD PAINTED FINISHES)
TK	COOP	L80815NF9030P
TK	COOP	L653P
TK	COOP	L900P
TK	COOP	L901P
WC1A	STAR	SP-N1-4L-35K-CA-FCE-WM-NS-ND-U-PN-WALL MOUNT
	STAR	(CONFIRM MOUNTING FOR ALL OPTIONS)
WC1A	STAR	SPARE LENS FOR TYPE WC1A
WL1A	MISC	NO QUOTE; NOTHING LISTED ON THE LIGHTING FIXTURE
	MISC	SCHEDULE; ADVISE WHAT IS SPECIFIED
W2-4'	NEOO	S122-DIW-ULO-1-35-0048-1-D-U-DD-1-5-W
W2-4'	NEOO	06Y503581
W2-4'EM	NEOO	S122-DIW-ULO-1-35-0048-1-DB-U-DD-1-5-W
W3	SHAP	674-31-WP-L3/835-277V-ALP
W5	P&S	280WH6
W5	SATCO	S4984
W6	AGL	821927-S-LED
EXIT	COOP	LPX7 (SELF-CONTAINED; ADVISE IF OTHER REQUIRED)
INUSE	COOP	SLX7G5
EX-WP	COOP	LPXW71RSD
EBU	COOP	LEM2
WPRMT	COOP	LEMWR2
L/C	GGAT	GMDS-W
L/C	GGAT	OAC-DT-2000-R
L/C	GGAT	OAC-DT-1000-R



NEWMARKET JUNIOR/SENIOR HS
5/8/2018

TABLE OF CONTENTS

TYPE	MFG	DESCRIPTION
L/C	GGAT	OAWC-DT-120W-R
L/C	GGAT	ONW-D-1001-MV-W
L/C	GGAT	OSP20-RDH
L/C	GGAT	OXC-P-1500-R
L/C	GGAT	RC-2TLB-OS4-W
L/C	GGAT	RC3D-PL
L/C	GGAT	RC-3TLB-Z1D-W
L/C	GGAT	SP20-MV
L/C	GGAT	RC3DE-PL
L/C	GGAT	CEPC-1
L/C	GGAT	RC-6TSB-ZAD-W
L/C	GGAT	OCC-RJ45
L/C	GGAT	OAC-U-2000-R
LCP	GGAT	LK16-120/277-S0-L2-M0-T0-HVB0
LCP	GGAT	LK-LB
PHOTO	GGAT	PPS-5
L/C	GGAT	PREWIRE VISIT
L/C	GGAT	OCCUPANCY ADJUSTMENT VISIT
L/C	GGAT	CERTIFIED FACTORY STARTUP
L/C	GGAT	CC-DWGSERVICES 1
		NOTE: SITE LIGHTING PREVIOUSLY SUBMITTED

Submitting Agency:



Description: **SP-N1-8L-35K-CA-FCE-PMGC05-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
C1-8'



DATE	
PROJECT	
TYPE	

FEATURES

- Extruded aluminum housing
- Three standard lumen packages
- 4' and 8' individual units
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Standard anodize finishes: clear or black
- Custom colors available upon request
- Approved for dry and damp locations
- 5 year warranty
- Made in the USA



SPECIFICATIONS

PERFORMANCE (LOW OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4L-30K	2,029	16.8	120.9
SP-N1-4L-35K	2,058	16.8	122.7
SP-N1-4L-40K	2,086	16.8	124.5
SP-N1-4L-50K	2,143	16.7	128.0
SP-N1-8L-30K	4,307	33.0	130.5
SP-N1-8L-35K	4,375	33.0	132.7
SP-N1-8L-40K	4,443	32.9	135.0
SP-N1-8L-50K	4,578	32.8	139.5

PERFORMANCE (STANDARD OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4S-30K	3,424	26.5	129.3
SP-N1-4S-35K	3,483	26.5	131.3
SP-N1-4S-40K	3,541	26.6	133.4
SP-N1-4S-50K	3,658	26.6	137.5
SP-N1-8S-30K	7,204	52.9	136.1
SP-N1-8S-35K	7,329	52.9	138.5
SP-N1-8S-40K	7,453	52.9	140.8
SP-N1-8S-50K	7,702	52.9	145.6

PERFORMANCE (HIGH OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4H-30K	5,805	47.2	123.1
SP-N1-4H-35K	5,882	47.1	124.9
SP-N1-4H-40K	5,960	47.0	126.7
SP-N1-4H-50K	6,114	46.9	130.4
SP-N1-8H-30K	11,776	93.0	126.6
SP-N1-8H-35K	11,917	93.2	127.9
SP-N1-8H-40K	12,137	93.2	130.2
SP-N1-8H-50K	12,578	93.2	135.0

*Bold indicates DLC Premium 4.2 Listed

ORDERING INFORMATION

- - - - - -

SERIES	MODEL	LENGTH	OUTPUT	COLOR TEMP.	FINISH
SP	N1 = Narrow	4 = 4' 8 = 8'	L = Low S = Standard H = High	30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K	CA = Clear Anodize BA = Black Anodize PO = Powder Coat Other

- - - - - -

WIRING OPTIONS	MOUNTING ACC.	OPTIONS	DIMMING OPTIONS	VOLTAGE	PLUG
ECEW05 = Cord, End Exit, White 5' ECEW10 = Cord, End Exit, White 10' ECEB05 = Cord, End Exit, Black 5' ECEB10 = Cord, End Exit, Black 10' FCE = Feed Conduit (Through Wire), End Exit	PMGC05 = Pendant Mount w/ Grippers and 5' Cables w/ Loops PMGC10 = Pendant Mount w/ Grippers and 10' Cables w/ Loops PMCK05 = Pendant Mount w/ 5' Canopy Kit PMCK10 = Pendant Mount w/ 10' Canopy Kit SM = Surface Mount RM = Rotational Mount	NS = No Sensor DM = Daylight/Motion Sensor MS = Motion Sensor B06A = Battery Backup 6 Watt w/ Unswitched Line B10A = Battery Backup 10 Watt w/ Unswitched Line B06B = Battery Backup 6 Watt w/ Night Light Option B10B = Battery Backup 10 Watt w/ Night Light Option NL = Night Light Without Battery Backup	ND = No Dimming AD = 0-10V Dimming	U = 120-277 C = 347	PN = No Plug P1 = L5-15p P2 = L6-15p P3 = L7-15p

Example: **SP-N1-8S-35K-CA-ECEW05-PMGC05-NS-ND-U-PN**
 See website for accessories page.



5 YEAR WARRANTY



Made in USA



Submitting Agency:



Description: **SP-N1-8L-35K-CA-FCE-PMGC05-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
C1-8'



StarPower™

CONSTRUCTION

DIMENSIONS

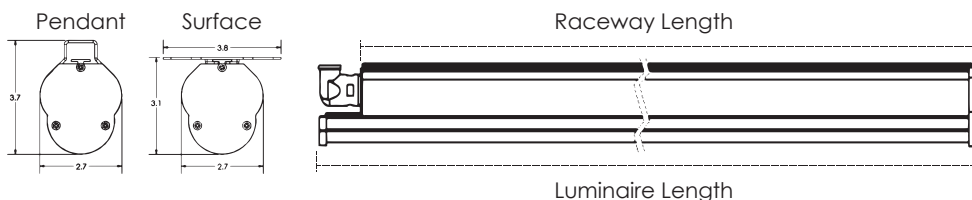
Model	Nominal Length	Luminaire Length	Raceway Length	Weight
SP-N1-4	4 ft.	48.0" (1,219mm)	46.15" (1,172mm)	7 lbs. max (3.2kg)
SP-N1-8	8 ft.	96.0" (2,348mm)	94.15" (2,391mm)	14 lbs. max (6.4kg)

MATERIALS

Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

ELECTRICAL

Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S/8L/4H-x-U: .56-.24A SP-N1-4S/4L-x-U: .29-.13A SP-N1-8H-x-C: .27A SP-N1-8S/8L/4H-x-C: .185A SP-N1-4S/4L-x-C: .11
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

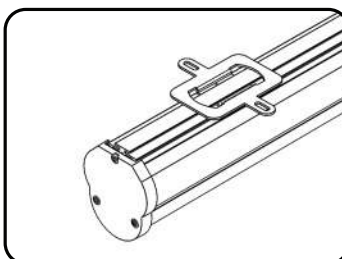


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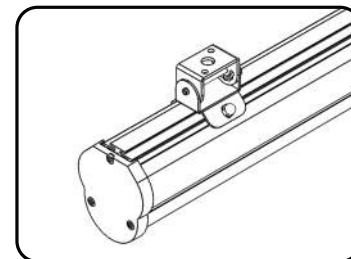
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Surface



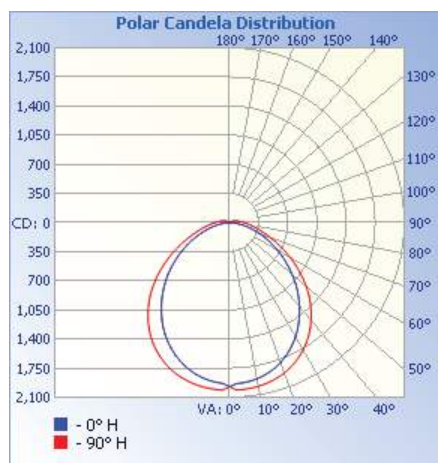
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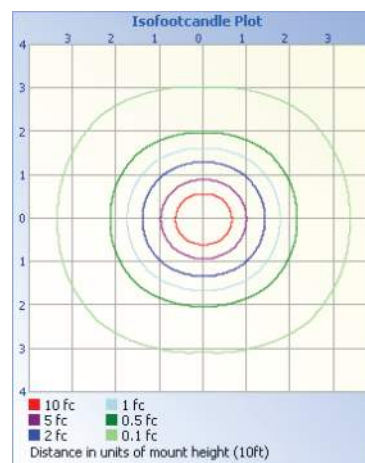
*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N-4H-50K

POLAR CANDELA DISTRIBUTION



ISOFOOTCANDLE PLOT



Submitting Agency:



Description: **SP-N1-8L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B1**
0A
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
C1-8'EM



DATE	
PROJECT	
TYPE	

FEATURES

- Extruded aluminum housing
- Three standard lumen packages
- 4' and 8' individual units
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Standard anodize finishes: clear or black
- Custom colors available upon request
- Approved for dry and damp locations
- 5 year warranty
- Made in the USA



SPECIFICATIONS

PERFORMANCE (LOW OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4L-30K	2,029	16.8	120.9
SP-N1-4L-35K	2,058	16.8	122.7
SP-N1-4L-40K	2,086	16.8	124.5
SP-N1-4L-50K	2,143	16.7	128.0
SP-N1-8L-30K	4,307	33.0	130.5
SP-N1-8L-35K	4,375	33.0	132.7
SP-N1-8L-40K	4,443	32.9	135.0
SP-N1-8L-50K	4,578	32.8	139.5

PERFORMANCE (STANDARD OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4S-30K	3,424	26.5	129.3
SP-N1-4S-35K	3,483	26.5	131.3
SP-N1-4S-40K	3,541	26.6	133.4
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SP-N1-8S-30K	7,204	52.9	136.1
SP-N1-8S-35K	7,329	52.9	138.5
SP-N1-8S-40K	7,453	52.9	140.8
SP-N1-8S-50K	7,702	52.9	145.6

PERFORMANCE (HIGH OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4H-30K	5,805	47.2	123.1
SP-N1-4H-35K	5,882	47.1	124.9
SP-N1-4H-40K	5,960	47.0	126.7
SP-N1-4H-50K	6,114	46.9	130.4
SP-N1-8H-30K	11,776	93.0	126.6
SP-N1-8H-35K	11,917	93.2	127.9
SP-N1-8H-40K	12,137	93.2	130.2
SP-N1-8H-50K	12,578	93.2	135.0

*Bold indicates DLC Premium 4.2 Listed

ORDERING INFORMATION

SERIES	MODEL	LENGTH	OUTPUT	COLOR TEMP.	FINISH
SP	N1 = Narrow	4 = 4' 8 = 8'	L = Low S = Standard H = High	30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K	CA = Clear Anodize BA = Black Anodize PO = Powder Coat Other

WIRING OPTIONS	MOUNTING ACC.	OPTIONS	DIMMING OPTIONS	VOLTAGE	PLUG
ECEW05 = Cord, End Exit, White 5' ECEW10 = Cord, End Exit, White 10' ECEB05 = Cord, End Exit, Black 5' ECEB10 = Cord, End Exit, Black 10' FCE = Feed Conduit (Through Wire), End Exit	PMGC05 = Pendant Mount w/ Grippers and 5' Cables w/ Loops PMGC10 = Pendant Mount w/ Grippers and 10' Cables w/ Loops PMCK05 = Pendant Mount w/ 5' Canopy Kit PMCK10 = Pendant Mount w/ 10' Canopy Kit SM = Surface Mount RM = Rotational Mount	NS = No Sensor DM = Daylight/Motion Sensor MS = Motion Sensor B06A = Battery Backup 6 Watt w/ Unswitched Line B10A = Battery Backup 10 Watt w/ Unswitched Line B06B = Battery Backup 6 Watt w/ Night Light Option B10B = Battery Backup 10 Watt w/ Night Light Option NL = Night Light Without Battery Backup	ND = No Dimming AD = 0-10V Dimming	U = 120-277 C = 347	PN = No Plug P1 = L5-15p P2 = L6-15p P3 = L7-15p

Example: **SP-N1-8S-35K-CA-ECEW05-PMGC05-NS-ND-U-PN**
 See website for accessories page.



5 YEAR WARRANTY



Made In USA



Submitting Agency:



Description: **SP-N1-8L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B1
0A**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type: **C1-8'EM**



StarPower™

CONSTRUCTION

DIMENSIONS

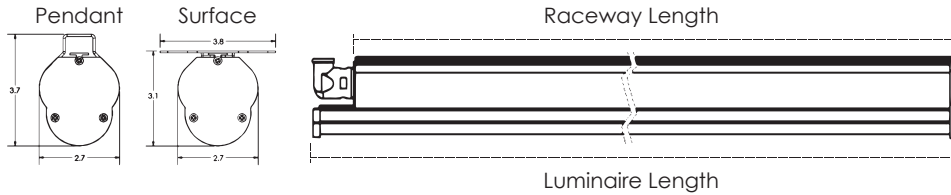
Model	Nominal Length	Luminaire Length	Raceway Length	Weight
SP-N1-4	4 ft.	48.0" (1,219mm)	46.15" (1,172mm)	7 lbs. max (3.2kg)
SP-N1-8	8 ft.	96.0" (2,348mm)	94.15" (2,391mm)	14 lbs. max (6.4kg)

MATERIALS

Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

ELECTRICAL

Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S/8L/4H-x-U: .56-.24A SP-N1-4S/4L-x-U: .29-.13A SP-N1-8H-x-C: .27A SP-N1-8S/8L/4H-x-C: .185A SP-N1-4S/4L-x-C: .11
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

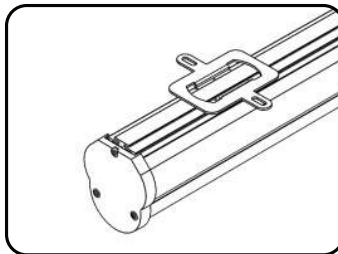


MOUNTING

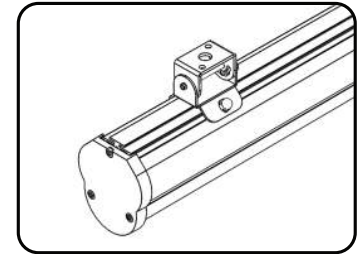
Pendant



Surface



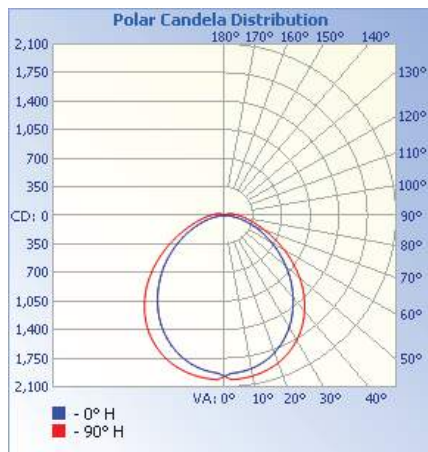
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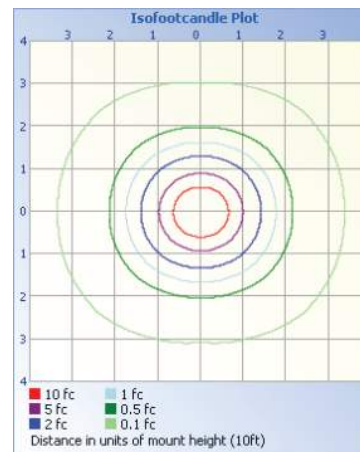
*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N-4H-50K

POLAR CANDELA DISTRIBUTION



ISOFOOTCANDLE PLOT



Submitting Agency:



Description: **SP-N1-16L-35K-CA-LSC/LSE-FCE-PMGC05-NS-N**
D-U-PN-B10A
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **C1-16'E**
M



DATE	
PROJECT	
TYPE	

FEATURES

- Proprietary linking design for straight rows
- Plug-and-play installation
- Single power drop for up to 410' at 277V
- Three standard lumen packages
- 4' and 8' extruded sections
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Clear or Black Anodize
- Made in the USA



SPECIFICATIONS

PERFORMANCE (LOW OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4L-30K	2,029	16.8	120.9
SP-N1-4L-35K	2,058	16.8	122.7
SP-N1-4L-40K	2,086	16.8	124.5
SP-N1-4L-50K	2,143	16.7	128.0
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SP-N1-8L-35K	4,375	33.0	132.7
SP-N1-8L-40K	4,443	32.9	135.0
SP-N1-8L-50K	4,578	32.8	139.5

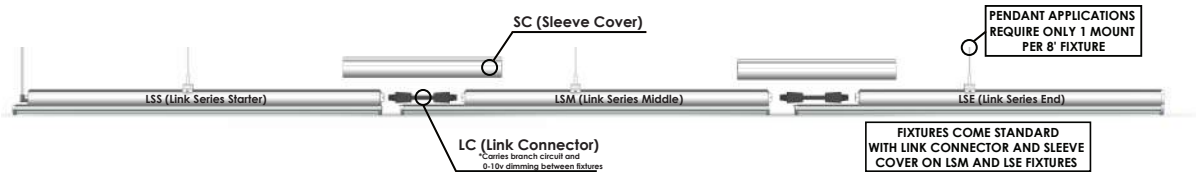
PERFORMANCE (STANDARD OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4S-30K	3,424	26.5	129.3
SP-N1-4S-35K	3,483	26.5	131.3
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SP-N1-8S-30K	7,204	52.9	136.1
SP-N1-8S-35K	7,329	52.9	138.5
SP-N1-8S-40K	7,453	52.9	140.8
SP-N1-8S-50K	7,702	52.9	145.6

PERFORMANCE (HIGH OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4H-30K	5,805	47.2	123.1
SP-N1-4H-35K	5,882	47.1	124.9
SP-N1-4H-40K	5,960	47.0	126.7
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SP-N1-8H-30K	11,776	93.0	126.6
SP-N1-8H-35K	11,917	93.2	127.9
SP-N1-8H-40K	12,137	93.2	130.2
SP-N1-8H-50K	12,578	93.2	135.0

*Bold indicates DLC Premium 4.2 Listed

SYSTEM OVERVIEW

MAX LENGTH PER RUN		
Voltage	Std/Low Output	High Output
120 - 276	177 Ft	102 Ft
277	410 Ft	238 Ft



ORDERING INFORMATION

<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>
SERIES	MODEL	LENGTH	OUTPUT	COLOR TEMP.	FINISH					
SP	N1 = Narrow	4 = 4' 8 = 8' 16 = 16'	L = Low S = Standard H = High	30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K	CA = Clear Anodize BA = Black Anodize PO = Powder Coat Other					

WIRING OPTIONS	MOUNTING ACC.	OPTIONS	DIMMING OPTIONS	VOLTAGE	PLUG
LSS = Link Series Starter LSM = Link Series Middle LSE = Link Series End	PMGC05 = Pendant Mount w/ Grippers and 5' Cables w/ Loops PMGC10 = Pendant Mount w/ Grippers and 10' Cables w/ Loops PMCK05 = Pendant Mount w/ 5' Canopy Kit PMCK10 = Pendant Mount w/ 10' Canopy Kit RM = Rotational Mount SM = Surface Mount	NS = No Sensor DM = Daylight/Motion Sensor MS = Motion Sensor B06A = Battery Backup 6 Watt w/ Unswitched Line B10A = Battery Backup 10 Watt w/ Unswitched Line B06B = Battery Backup 6 Watt w/ Night Light Option B10B = Battery Backup 10 Watt w/ Night Light Option NL = Night Light Without Battery Backup	AD = 0-10V Dimming	U = 120-277 C = 347	PN = No Plug

ACCESSORIES
 L1 = Link Connector 1'
 L2 = Link Connector 2'
 L5 = Link Connector 5'
 PF = Power Feed*
 *Not needed if bringing conduit to initial fixture

Example: **SP-N1-8S-35K-CA-LSM-SM-NS-AD-U-PN**
 See website for accessories page.



Submitting Agency:



Description: **SP-N1-16L-35K-CA-LSC/LSE-FCE-PMGC05-NS-N**
D-U-PN-B10A
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **C1-16'E**
M



StarPower™ Link Series

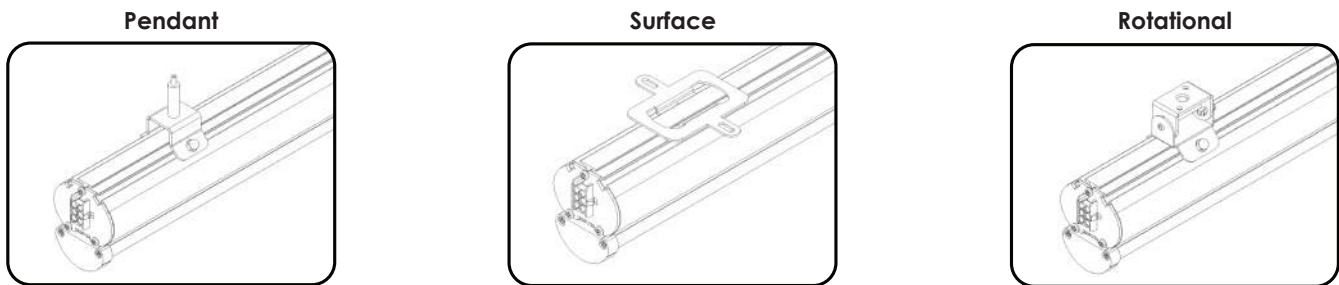
CONSTRUCTION

DIMENSIONS				
Model	Nominal Length	Luminaire Length	Racway Length	Weight
SP-N1-4	4 ft.	48.0" (1,219mm)	39.9" (1,013mm)	8 lbs. max (3.6kg)
SP-N1-8	8 ft.	96.0" (2,348mm)	87.9" (2,233mm)	14 lbs. max (6.4kg)

MATERIALS	
Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

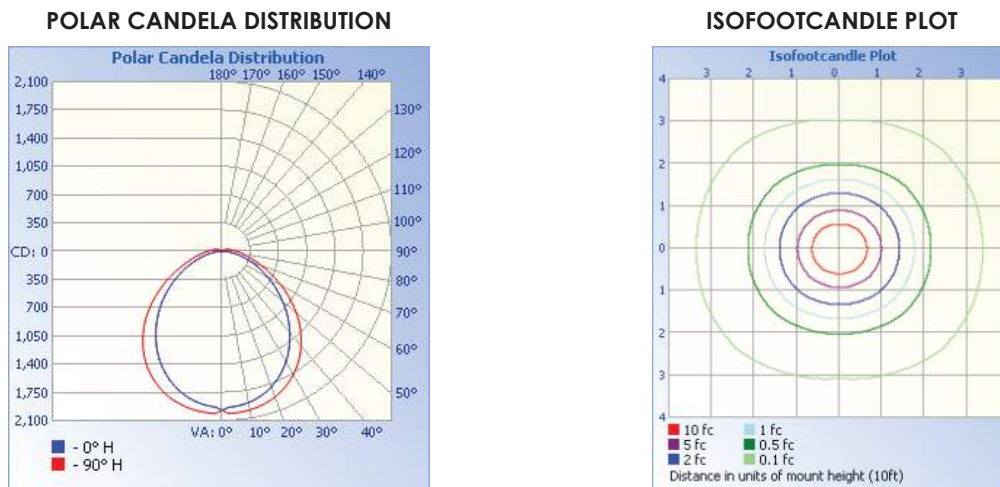
ELECTRICAL	
Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S-x-U: .56 - .24A SP-N1-8L-x-U: .56 - .24A SP-N1-4H-x-U: .56 - .24A SP-N1-4S-x-U: .29 - .13A SP-N1-4L-x-U: .29 - .13A
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

MOUNTING



*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N1-4H-50K



Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **C1A-4'**



DATE	
PROJECT	
TYPE	

FEATURES

- Extruded aluminum housing
- Three standard lumen packages
- 4' and 8' individual units
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Standard anodize finishes: clear or black
- Custom colors available upon request
- Approved for dry and damp locations
- 5 year warranty
- Made in the USA



SPECIFICATIONS

PERFORMANCE (LOW OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4L-30K	2,029	16.8	120.9
SP-N1-4L-35K	2,058	16.8	122.7
SP-N1-4L-40K	2,086	16.8	124.5
SP-N1-4L-50K	2,143	16.7	128.0
SP-N1-8L-30K	4,307	33.0	130.5
SP-N1-8L-35K	4,375	33.0	132.7
SP-N1-8L-40K	4,443	32.9	135.0
SP-N1-8L-50K	4,578	32.8	139.5

PERFORMANCE (STANDARD OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4S-30K	3,424	26.5	129.3
SP-N1-4S-35K	3,483	26.5	131.3
SP-N1-4S-40K	3,541	26.6	133.4
SP-N1-4S-50K	3,658	26.6	137.5
SP-N1-8S-30K	7,204	52.9	136.1
SP-N1-8S-35K	7,329	52.9	138.5
SP-N1-8S-40K	7,453	52.9	140.8
SP-N1-8S-50K	7,702	52.9	145.6

PERFORMANCE (HIGH OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4H-30K	5,805	47.2	123.1
SP-N1-4H-35K	5,882	47.1	124.9
SP-N1-4H-40K	5,960	47.0	126.7
SP-N1-4H-50K	6,114	46.9	130.4
SP-N1-8H-30K	11,776	93.0	126.6
SP-N1-8H-35K	11,917	93.2	127.9
SP-N1-8H-40K	12,137	93.2	130.2
SP-N1-8H-50K	12,578	93.2	135.0

*Bold indicates DLC Premium 4.2 Listed

ORDERING INFORMATION

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SERIES	MODEL	LENGTH	OUTPUT	COLOR TEMP.	FINISH			
SP	NI = Narrow	4 = 4' 8 = 8'	L = Low S = Standard H = High	30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K	CA = Clear Anodize BA = Black Anodize PO = Powder Coat Other			
<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>
WIRING OPTIONS	MOUNTING ACC.	OPTIONS	DIMMING OPTIONS	VOLTAGE	PLUG			
ECEW05 = Cord, End Exit, White 5' ECEW10 = Cord, End Exit, White 10' ECEB05 = Cord, End Exit, Black 5' ECEB10 = Cord, End Exit, Black 10' FCE = Feed Conduit (Through Wire), End Exit	PMGC05 = Pendant Mount w/ Grippers and 5' Cables w/ Loops PMGC10 = Pendant Mount w/ Grippers and 10' Cables w/ Loops PMCK05 = Pendant Mount w/ 5' Canopy Kit PMCK10 = Pendant Mount w/ 10' Canopy Kit SM = Surface Mount RM = Rotational Mount	NS = No Sensor DM = Daylight/Motion Sensor MS = Motion Sensor B06A = Battery Backup 6 Watt w/ Unswitched Line B10A = Battery Backup 10 Watt w/ Unswitched Line B06B = Battery Backup 6 Watt w/ Night Light Option B10B = Battery Backup 10 Watt w/ Night Light Option NL = Night Light Without Battery Backup	ND = No Dimming AD = 0-10V Dimming	U = 120-277 C = 347	PN = No Plug P1 = L5-15p P2 = L6-15p P3 = L7-15p			

Example: **SP-N1-8S-35K-CA-ECEW05-PMGC05-NS-ND-U-PN**
 See website for accessories page.



Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
C1A-4'



StarPower™

CONSTRUCTION

DIMENSIONS

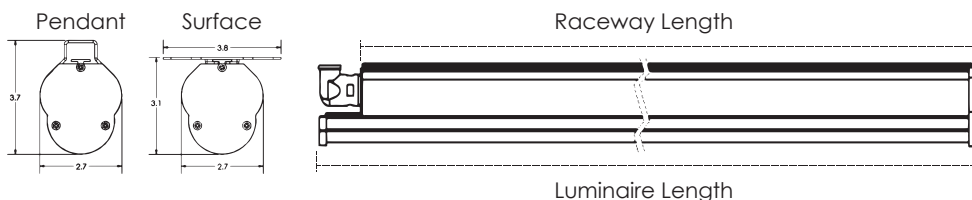
Model	Nominal Length	Luminaire Length	Raceway Length	Weight
SP-N1-4	4 ft.	48.0" (1,219mm)	46.15" (1,172mm)	7 lbs. max (3.2kg)
SP-N1-8	8 ft.	96.0" (2,348mm)	94.15" (2,391mm)	14 lbs. max (6.4kg)

MATERIALS

Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

ELECTRICAL

Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S/8L/4H-x-U: .56-.24A SP-N1-4S/4L-x-U: .29-.13A SP-N1-8H-x-C: .27A SP-N1-8S/8L/4H-x-C: .185A SP-N1-4S/4L-x-C: .11
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

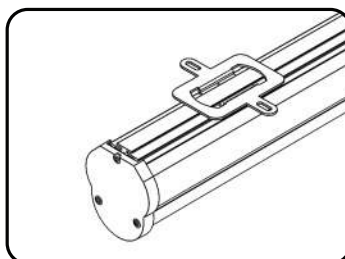


MOUNTING

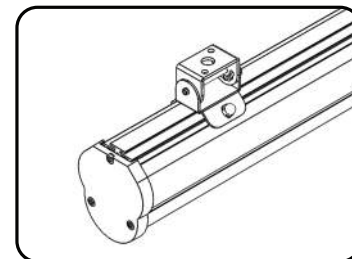
Pendant



Surface



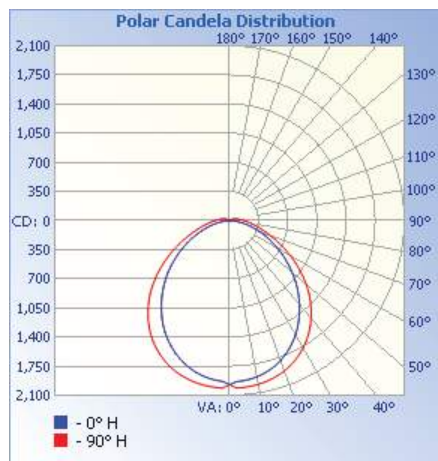
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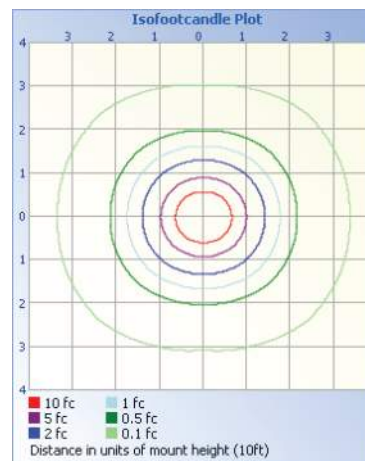
*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N-4H-50K

POLAR CANDELA DISTRIBUTION



ISOFOOTCANDLE PLOT



Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B1**
0A
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **C1A-EM**



DATE	
PROJECT	
TYPE	

FEATURES

- Extruded aluminum housing
- Three standard lumen packages
- 4' and 8' individual units
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Standard anodize finishes: clear or black
- Custom colors available upon request
- Approved for dry and damp locations
- 5 year warranty
- Made in the USA



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ORDERING INFORMATION

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Example: SP-N1-8S-35K-CA-ECEW05-PMGC05-NS-ND-U-PN
 See website for accessories page.



5 YEAR WARRANTY



Made In USA



Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-PMGC05-NS-ND-U-PN-B1
0A**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
C1A-EM



StarPower™

CONSTRUCTION

DIMENSIONS

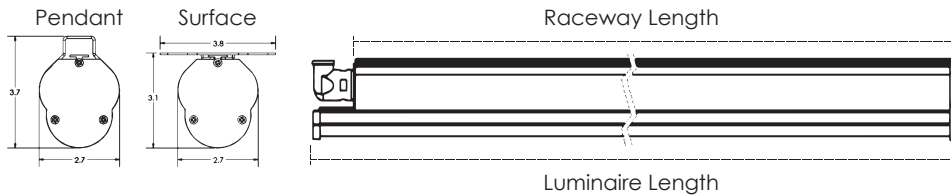
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SP-N1-8	8 ft.	96.0" (2,348mm)	94.15" (2,391mm)	14 lbs. max (6.4kg)

MATERIALS

Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

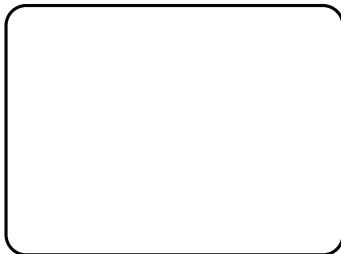
ELECTRICAL

Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S/8L/4H-x-U: .56-.24A SP-N1-4S/4L-x-U: .29-.13A SP-N1-8H-x-C: .27A SP-N1-8S/8L/4H-x-C: .185A SP-N1-4S/4L-x-C: .11
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

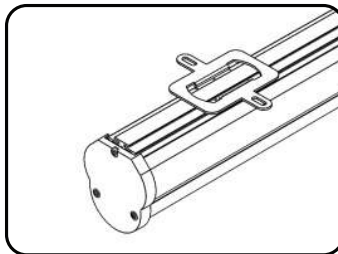


MOUNTING

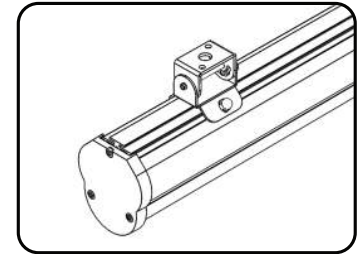
Pendant



Surface



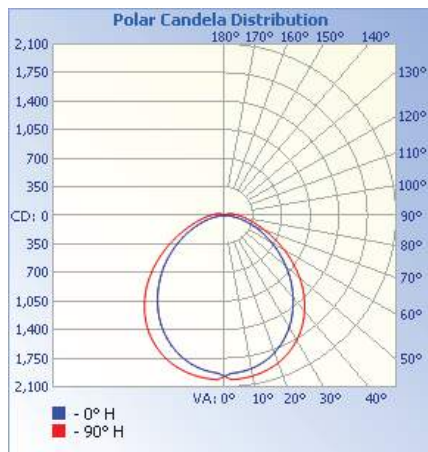
Rotational



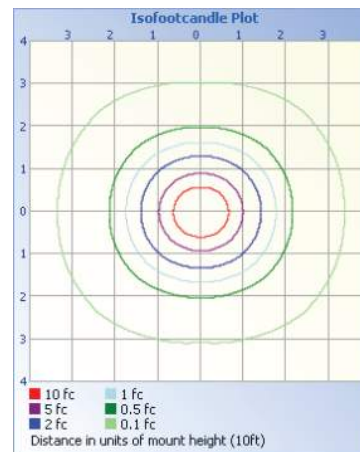
*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N-4H-50K

POLAR CANDELA DISTRIBUTION



ISOFOOTCANDLE PLOT





HALO

DESCRIPTION

The Halo Surface Mount LED Downlight (SMD) is an low profile surface mounting luminaire with a modern look and high performance. SMD6 (6") is designed for installation in many 3-1/2" and 4" square, octagon, or round junction boxes. Supply wire adapter with LED quick wiring connector included. The SLD6 may also retrofit in 5" and 6" aperture IC and Non-IC recessed housings.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

HOUSING

- Non-electrically conductive polycarbonate frame.
- High impact diffuse polystyrene lens provides shielding to the light guide with no pixilation
- Stamped aluminum housing provides thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications

GASKETS

- Closed cell gasket achieves restrictive airflow and wet location requirements without additional caulking

OPTICS

- Precision acrylic light guide organizes source flux into wide distribution with 1.2 – 1.4 spacing criteria useful for general area illumination

LED

- Mid power led array provide a uniform source with high efficiency and long life.
- Available in 90 CRI minimum, R9 greater than 50 and color accuracy within 3 SDCM provide color accuracy and uniformity

DRIVER

- Integral 120V 50/60Hz constant current driver provides noise free operation.
- Continuous, flicker-free dimming from 100% to 5% with select leading or trailing edge 120V phase cut dimmers.
- Dimming to 5% is best assured using dimmers with low end trim adjustment. Consult dimmer manufacturer for compatibility and conditions of use. (Note some dimmers require a neutral in the wallbox.)
- Inline electrical quick connect and E26 adapter (provided) provides mains connections.

MOUNTING/RETENTION

- Adjustable spider plate allows for quick installation into both junction boxes and recessed housings.
- Torsion springs or friction blades included

ELECTRICAL JUNCTION BOX MOUNTING

- The SMD may be used in compatible electrical junction boxes in direct contact with insulation including spray foam insulation.
- Suitable for installation in many 3-1/2" and 4" square, octagon, and round electrical junction boxes.
- Surface mounting in a fire-rated ceiling using an appropriate fire rated electrical box .
Note: Fire-rating is per the rating of the ceiling and applicable junction box, not the SMD.
- Installer must ensure compatibility of fit, wiring and proper mounting in the electrical junction box. This includes all applicable national and local electrical and building coded

RECESSED HOUSING MOUNTING

- May be installed in IC recessed housings in direct contact with insulation
Note: Not for use in recessed housing in direct contact with spray foam insulation. Refer to NEMA LSD 57-2013.
- **Torsion Spring 5" & 6"**
- Precision formed torsion spring bracket kit included
- The torsion springs adjust on the mounting plate to fit 5" or 6" compatible housings
- **Friction Blade 5" & 6"**
- Precision formed friction blades included
- For retrofit in 5" and 6" housings without torsion springs mounting tabs.
- Friction blade design allows the SMD to be installed in any position within the housing aperture (360 degrees)

DESIGNER SKINS (SOLD SEPARATELY)

- SMD skins are accessory rings in both round and square. These skins attach to the SMD for a permanent finish. Refer to the SMD accessories specification sheet for details.
- Matte White (Paintable)
- Satin Nickel
- Tuscan Bronze

WARRANTY

- Five year limited warranty, consult website for details. www.eaton.com/lighting/legal

COMPLIANCE

- cULus listed / certified for use with Halo housings, classified for use with other's housings, see instruction sheet for conditions of acceptability.
- Wet and Damp Location listed, airtight per ASTM-E283
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements.
- EMI/RFI emissions per FCC 47CFR Part 15B
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.
- Can be used for State of California Title 24 high efficacy luminaire compliance, reference the California Energy Commission Title 20 Appliance Efficiency Database for current listings.
- Can be used for International Energy Conservation Coe (IECC) and Washington State Energy Code high efficiency luminaire compliance



SMD6 Series

6 inch Round and Square

SMD6R SMD6S

6" Surface Mount Downlight

Suitable for ceiling or wall electrical junction boxes

Suitable for 5" and 6" recessed housing retrofit

ENERGY DATA

	Round	Square
Lumens (5000K models)	788	815
Input Power	9.6 W	9.9 W
Input Current	0.0811 A	0.085 A
Efficiency	82 lm/W	82 lm/W
THD	13.9	14.7
Input Voltage	120V	
Frequency	50/60 Hz	
CRI	90 CRI	
Power Factor	0.99	
T Ambient	-30 - +40°C	
Sound Rating	Class A	



Refer to ENERGY STAR® Qualified Products List.
 Can be used to comply with California Title 24 High Efficacy requirements.
 Certified to California Appliance Efficiency Database under JAB.

Submitting Agency:



Description: **SMD6R6935WH**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

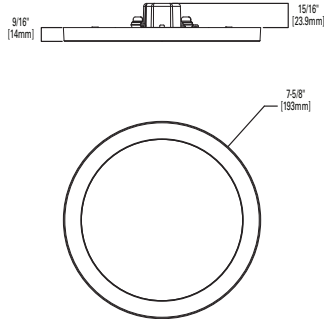
C2

HALO

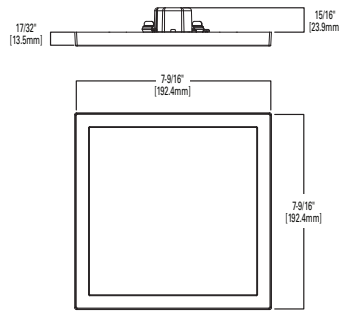
SMD6R69xxWH
SMD6S69xxWH

DIMENSIONS

SMD6RXXWH



SMD6SXXWH



ORDERING INFORMATION

SAMPLE NUMBER: SMD6R6930WH=6" Round Surface Mount Downlight, 90CRI, 3000K
Junction Box Installation: Order junction box separately, as supplied by others, to complete installation.
Recessed Installation: Order Halo recessed housing separately to complete installation.

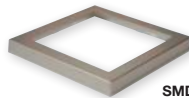
Models	Lumens	CRI / CCT	Finish	Accessories
SMD6R = 6" Round Surface Mount Downlight, 120V SMD6S = 6" Square Surface Mount Downlight, 120V	6 =600 lumen series	927 =90CRI, 2700K 930 =90CRI, 3000K 935 =90CRI, 3500K 940 =90CRI, 4000K 950 =90CRI, 5000K	WH = Matte White	Designer Trims SMD6RTRMSN =6" Round SMD Satin Nickel SMD6RTRMTBZ =6" Round SMD Tuscan Bronze SMD6RTRMWH =6" Round SMD White (paintable) SMD6STRMSN =6" Square SMD Satin Nickel SMD6STRMTBZ =6" Square SMD Tuscan Bronze SMD6STRMWH =6" Square SMD White (paintable)

ACCESSORIES

Designer Trims



SMD6STRMWH
square, white (paintable)



SMD6STRMSN
square, satin nickel



SMD6STRMTBZ
square, tuscan bronze



SMD6RTRMWH
round, white (paintable)



SMD6RTRMSN
round, satin nickel



SMD6RTRMTBZ
round, tuscan bronze



HALO

SMD6R69xxWH
SMD6S69xxWH

HOUSING COMPATIBILITY

The SMD6 is UL Listed in Halo recessed housings, and is UL Classified for use with **any** 5 or 6 inch diameter recessed housing constructed of steel or aluminum with an internal volume that exceeds 107.9 in3 in addition to those noted below. **Note:** Some other's housings require installation with included friction clips.

Compatible Halo LED Housings with LED luminaire connector (high-efficacy compliant)

HALO LED	Recessed Can Size	Catalog Number
	5"	H550ICAT, H550RICAT
	6"	H750ICAT, H750RICAT, H750T, H750RINTD010, H750TCP, H2750ICAT, H2750RICAT

Halo LED Retrofit Enclosures

HALO	6"	ML7BXRFK, ML7E26RFK
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Compatible Halo Incandescent E26 Screwbase Housings

HALO	5"	H51CAT, H5RICAT, H51CATNB, H5T, H5RT, H251CAT, H251CATNB, E5TAT, E5RTAT, H5TNB, E5TATNB, E51CAT, E5RICAT, E51CATNB
	6"	H71CAT, H7RICAT, H71CT, H7RICT, H71CATNB, H71CTNB, H7T, H7RT, H7TNB, H7TCP, H7UICAT, H7UICAT, H271CAT, H27RICAT, H27T, H27RT, E71CAT, E7RICAT, E271CAT, E27RICAT, E71CATNB, E7TAT, E7RTAT, E7TATNB, E27TAT, E27RTAT

Compatible All-Pro Incandescent E26 Screwbase Housings

ALL-PRO	5"	E1500AT, E1500RAT, ET500, ET500R
	6"	E1700AT, E1700RAT, E1700, E1700R, E1700ATNB, E1700NB, E1700U, E1700UAT, ET700, ET700R, E12700AT, E12700, E12700R, ET2700, ET2700R

COMPATIBLE WITH EATON'S CROUSE-HINDS JUNCTION BOXES



TP316
 for non-metallic cable
 4" x 4" x 2-1/8"
 (102mm x 102mm x 54mm)



TP317
 for metal clad cable
 4" x 4" x 2-1/8"
 (102mm x 102mm x 54mm)

- **TP316** - for non-metallic cable
- **TP317** - for metal clad cable
- UL Listed
- Suitable for two-hour fire-rated ANSI/UL 263 when properly installed in a fire-rated ceiling or wall
- Refer to www.crouse-hinds.com

COMPATIBLE WITH MANY OTHER JUNCTION BOXES*



4" octagon light fixture/fan steel box
 4" x 4" x 2-1/8"
 (102mm x 102mm x 54mm)



4" octagon steel box
 4" x 4" x 1-1/2"
 (102mm x 102mm x 38mm)



4" square deep steel box
 4" x 4" x 2-1/8"
 (102mm x 102mm x 54mm)



4" square standard steel box
 4" x 4" x 1-1/2"
 (102mm x 102mm x 38mm)



4" round new work non-metallic light fixture/fan box
 4" diameter x 2-3/16"
 (102mm x 56mm)



3-1/2" round new work non-metallic ceiling box
 3-1/2" diameter x 2-3/4"
 (89mm x 70mm)



3-1/2" round old work non-metallic box
 4-1/4" O.D. flange, 3-1/2" I.D. x 2-5/8"
 (108mm O.D., 89mm I.D. x 67mm)



4" round surface mount box
 4" diameter x 1-1/2"
 (102mm x 38mm)
 Requires SLD6RAD adapter



4" round new work non-metallic box with hanger bar assembly
 4" diameter x 2-3/16" (102mm x 56mm)

Surface mounting in a fire-rated ceiling using an appropriate electrical box offers a cost-effective alternative to fire-rated recessed housings.

Note: Fire-rating is per the rating of the ceiling and applicable junction box, not the SMD.

*This is a representative list of compatible junction boxes only. Information contained in this literature about other manufacturers' products is from published information made available by the manufacturer and is deemed to be reliable, but has not been verified. Eaton makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied. Installer must determine that site conditions are suitable to allow proper installation of the mounting bracket in the box.



HALO

SMD6R69xxWH
 SMD6S69xxWH

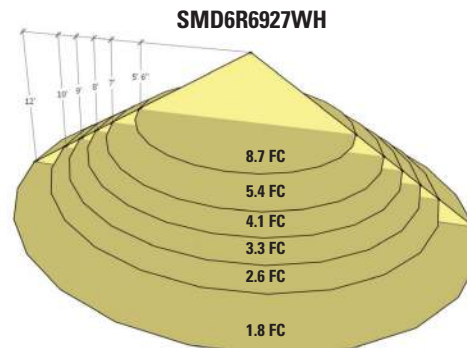
PHOTOMETRIC DATA

SMD6R6927WH		
Luminaire lumens	750	
Input watts	9.4	
LER (LPW)	80	
Spacing Criteria	0-180	1.26
	90-270	1.26
	Diagonal	1.38
Beam angle (degrees)	112	
Field angle (degrees)	162	
Max. Candela	264	
Zonal lumen	Lumens	% Lumens
0-30	204	27.2%
0-40	334	44.5%
0-60	590	78.6%
0-90	750	100.00%

SMD6S6927WH		
Luminaire lumens	750	
Input watts	10.0	
LER (LPW)	75	
Spacing Criteria	0-180	1.24
	90-270	1.24
	Diagonal	1.36
Beam angle (degrees)	112	
Field angle (degrees)	162	
Max. Candela	271	
Zonal lumen	Lumens	% Lumens
0-30	207	27.6%
0-40	337	44.9%
0-60	590	78.6%
0-90	750	100.00%

Cat. No.	CRI	CCT	Lumens	Power (W)	LPW
SMD6R6927WH	93	2700	754	9.6	78.5
SMD6R6930WH	92	3000	758	9.6	78.7
SMD6R6935WH	95	3500	740	9.6	77.0
SMD6R6940WH	94	4000	792	9.8	80.5
SMD6R6950WH	92	5000	788	9.6	81.9
SMD6S6927WH	92	2700	750	10.0	75.0
SMD6S6930WH	92	3000	790	9.9	79.8
SMD6S6935WH	93	3500	740	10.0	74.0
SMD6S6940WH	92	4000	760	10.3	73.8
SMD6S6950WH	90	5000	815	9.9	82.3

Foot-candle Values at Nadir 0 degree Aiming Angle			
DD (FT)	SMD6R6927WH (FC)	SMD6S6927WH (FC)	DIA (FT)
5.5	8.7	9.0	16.3
7	5.4	5.5	20.9
8	4.1	4.2	23.8
9	3.3	3.3	26.8
10	2.6	2.7	29.7
12	1.8	1.9	35.7



DD = distance down to illuminated work plane
 FC = initial foot-candles at nadir
 DIA = diameter

Multiplier Table					
CCT Option	2700K	3000K	3500K	4000K	5000K
CCT Multiplier	1.00	1.014	1.042	1.083	1.083



SONAR I LED FROSTED LENS LOWBAY WITH UPLIGHT



TYPE:

PROJECT:

ORDER NUMBER:

Model#	Milliamps	LEDs	Voltage	Options
IL7702	1,050	W30	1 -120V	EM -Emergency Battery Pack
	750	W35	2 -277V	D9A -Lutron dimming driver*
	500	W40		XP -extra pendant length**

*See back page for details.
 **Specify extra pendant length (in inches): _____

CONSTRUCTION

- Spun matte anodized .063 aluminum housing.
- Canopy mounts to standard J-boxes, suspends from aircraft cables with push button gliders.
- Standard mount is 6 ft. adjustable aircraft cable and power cord. Order **XP** for extra pendant length.

LENS

- Frosted 3/16" tempered, soda lime glass with 2" ventilation opening, silkscreen logo. Secured with a rubber gasket, the lens is held in place by three positive-locking clamps.

LED DRIVERS

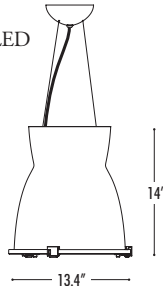
- Constant current, 0-10V dimming, universal voltage driver.
- Standard and dimming drivers mounted inside fixture.
- cU.L. listed for dry locations only.
- **EM**-emergency battery pack, which ignites LED array to 650 lumens for 90 minutes. Voltage *must* be specified.

LEDs

- Nichia Corp. chips, available in three white color temperatures: **W30** (3000° K), **W35** (3500° K), and **W40** (4000° K).
- 40W LED panel split, 35W down, 10W up.
- Separate switching not available.

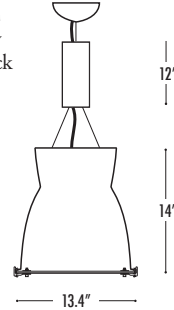
IL7702

30, 40, 50W LED



IL7702/EM

Emergency Battery Pack



Specify LED color:

- W30**-White (3000° K)
- W35**-White (3500° K)
- W40**-White (4000° K)

DELRAY LIGHTING INCORPORATED

IL7702

BURBANK,
 CALIFORNIA,
 91505
 WWW.
 DELRAY
 LIGHTING.
 COM



LENSED LOWBAY

IL7702-LED

DIMMING

IL7702.W35



These LED luminaires that provide conventional footcandle levels at less than or equal to 1.4W/FT².

Featuring Nichia Corp. chips, available in three white color temperatures: **W30** (3000° K), **W35** (3500° K), and **W40** (4000° K); matching the traditional CCT of existing incandescent, fluorescent, and metal halide lamps.

cUL rated for dry locations only.

STANDARD

- Constant current, 0–10V universal voltage, 10%.

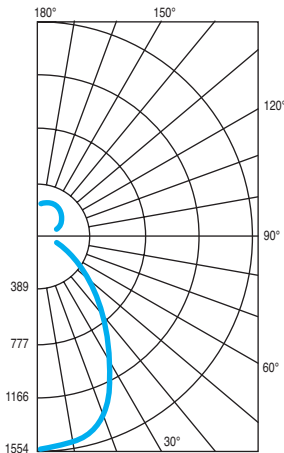
LUTRON DRIVER OPTION

D9A – Lutron Hi-Lume A-Series LED Driver (1%).

- EcoSystem (3-wire) control.
- 40–53W, universal voltage (120–277V).
- Constant current (1.05A) driver, with pulse width modulation (PWM) dimming.

CP DISTRIBUTION

LM-79 TEST SUMMARY - 7702.W35



Driver:	Philips Advance
Total Lumens:	3400
Input Power (W):	53.06
Efficacy:	62
Color Rendering Index (CRI):	86

CAUTION

Aircraft cable suspension is not recommended for outdoor use, where fixture will be exposed to water, or subject to wind oscillation. Avoid use near HVAC vents and in environments with corrosive chemical vapors, such as swimming pools.

COEFFICIENTS

% CEILING 80 (20% FLOOR)

% WALL	70	50	30
0	116	116	116
1	108	104	100
2	99	92	86
3	92	82	75
4	85	74	66
5	78	67	59
6	73	61	53
7	68	56	48
8	64	51	43
9	60	47	40
10	58	44	37

NOTES

IL7702.W35
 50W 3500K LEDs
 Total lumens: 3,299
 Spacing criteria: 1.08

Watts	Lumens	mA
50	3,558	1,050
35	2,490	750
23	1,680	500



SONAR I LED FROSTED LENS LOWBAY WITH UPLIGHT



TYPE:

PROJECT:

ORDER NUMBER:

Model#	Milliamps	LEDs	Voltage	Options
IL7702	1,050	W30	1 -120V	EM -Emergency Battery Pack
	750	W35	2 -277V	D9A -Lutron dimming driver*
	500	W40		XP -extra pendant length**

*See back page for details.
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LED DRIVERS

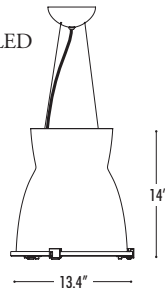
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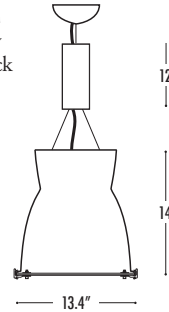
IL7702

30, 40, 50W LED



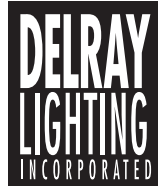
IL7702/EM

Emergency Battery Pack



Specify LED color:

- W30**-White (3000° K)
- W35**-White (3500° K)
- W40**-White (4000° K)



IL7702

BURBANK,
 CALIFORNIA,
 91505
 WWW.
 DELRAY
 LIGHTING.
 COM



LENSED LOWBAY

IL7702.W35



IL7702-LED

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cUL rated for dry locations only.

DIMMING

STANDARD

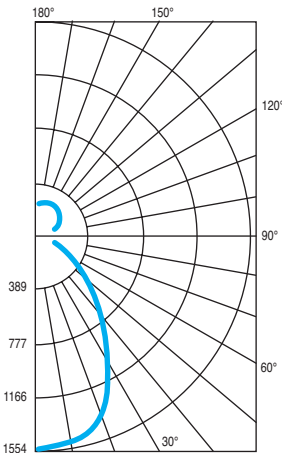
- Constant current, 0–10V universal voltage, 10%.

LUTRON DRIVER OPTION

D9A – Lutron Hi-Lume A-Series LED Driver (1%).

- EcoSystem (3-wire) control.
- 40–53W, universal voltage (120–277V).
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CP DISTRIBUTION



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% CEILING 80 (20% FLOOR)			
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5	78	67	59
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8	64	51	43
9	60	47	40
10	58	44	37

NOTES

IL7702.W35

50W 3500K LEDs
 Total lumens: 3,299
 Spacing criteria: 1.08

Watts	Lumens	mA
50	3,558	1,050
35	2,490	750
23	1,680	500

Submitting Agency:



Description: P1003-42-LN(59W/5,830LM PROX)-35K-CLV-MV(277V)-MW-PAL-ST SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Project:
Notes:

Type:
P4

Fixture #	
Style	
Project	
Qty	



P1003 | Heinz

- Metal Side Walls
- Flat White Acrylic Bottom Lens
- Center Stem & (4) Aircraft Cables to Canopy
- Additional Hanging Options Available
- **Camman Express** Available (All Sizes)

Dimensions and Lamping:

- 18: 18" A x 18" B x 5" C: 11 lbs.
- LN LED: Nominal 50W, 3050 Delivered Lumens
- LH LED: Nominal 70W, 4000 Delivered Lumens
- 24: 24" A x 24" B x 5" C: 15 lbs.
- LN LED: Nominal 80W, 5500 Delivered Lumens
- LH LED: Nominal 105W, 7300 Delivered Lumens
- 30: 30" A x 30" B x 5" C: 24 lbs.
- LN LED: Nominal 115W, 8800 Delivered Lumens
- LH LED: Nominal 155W, 11750 Delivered Lumens
- 36: 36" A x 36" B x 5" C: 31 lbs.
- LN LED: Nominal 170W, 13700 Delivered Lumens
- LH LED: Nominal 235W, 18250 Delivered Lumens
- 42: 42" A x 42" B x 5" C: 39 lbs.
- LN LED: Nominal 59W, 5830 Delivered Lumens
- LH LED: Nominal 310W, 26250 Delivered Lumens

LED Color Temperature:

- 35K 3500K -30K 3000K -40K 4000K

LED Control Options :

- CLV Integral Power Supply, 0-10V Dimming to 1%

Voltage Options:

- 1 120V -2 277V -MV Multi-Volt

Diffusers:

- WA Gloss White Acrylic (WA)
- WM Matte White Acrylic (WM)
- FA Beige Alabaster Acrylic (FA)
- WS White Alabaster Acrylic (WS)
- GR Gray Alabaster Acrylic (GR)

Standard Finishes:

- PAL Aluminum (PAL)
- PNL Nickel (PNL)
- PBR Bronze (PBR)
- PLB Light Bronze (PLB)
- PMB Medium Bronze (PMB)
- PDB Dark Bronze (PDB)
- PRB Oil Rubbed Bronze (PRB)
- PMW Matte White (PMW)
- PWW White Wrinkle (PWW)
- PSB Satin Black (PSB)
- PBW Black Wrinkle (PBW)
- PBB Brushed Brass (PBB)
- PAB Antique Brass (PAB)
- PHB Hammered Bronze (PHB)
- PHC Hammered Copper (PHC)
- PHS Hammered Silver (PHS)
- PSG Satin Gold (PSG)
- PPA Patina (PPA)
- PRD Traffic Red (RAL 3020) (PRD)
- POR Pure Orange (RAL 2004) (POR)
- PYL Traffic Yellow (RAL 1023) (PYL)
- PGR Emerald Green (RAL 6001) (PGR)
- PBL Signal Blue (RAL 5005) (PBL)
- STBD To Be Determined

Premium Finishes:

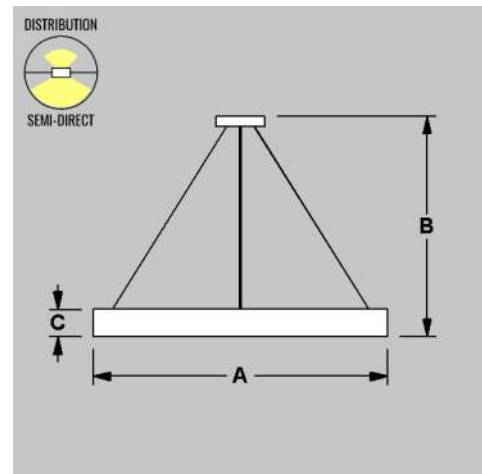
- BA Brushed Aluminum (BA)
- SN Satin Nickel (SN)
- PC Polished Chrome (PC)
- BB Brushed Brass (BB)
- PB Polished Brass (PB)
- AB Antique Brass (AB)
- PTBD To Be Determined

Hanging Options:

- ST Stem & (4) Aircraft Cables to Canopy
- AC (4) Aircraft Cables with Power Cord

Other Options:

- IEM Integral Emergency Power Supply
- MAL Matte Finish on Alabaster Acrylic



Custom sizes and finishes available upon request. Fluorescent and/or incandescent lamps not included. Camman reserves the right to make design changes without prior notice. Unless otherwise specified, mounting is to a 4 inch octagonal junction box. Structural mounting is required for fixtures over 50 pounds. Please contact the factory for specific mounting instructions. Photometric information available at cammanlighting.com

Submitting Agency:



Description: P1003-42-LN(59W/5,830LM PROX)-35K-CLV-MV(277V)-MW-PAL-ST-IEM
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes:

Type:
P4-EM

Fixture #	
Style	
Project	
Qty	



P1003 | Heinz

- Metal Side Walls
- Flat White Acrylic Bottom Lens
- Center Stem & (4) Aircraft Cables to Canopy
- Additional Hanging Options Available
- **Camman Express** Available (All Sizes)

Dimensions and Lamping:

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LED Color Temperature:

- 35K 3500K -30K 3000K -40K 4000K

LED Control Options :

- CLV Integral Power Supply, 0-10V Dimming to 1%

Voltage Options:

- 1 120V -2 277V -MV Multi-Volt

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- WM Matte White Acrylic (WM)
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Standard Finishes:

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- PRB Oil Rubbed Bronze (PRB)
- PMW Matte White (PMW)
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- PBW Black Wrinkle (PBW)
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Premium Finishes:

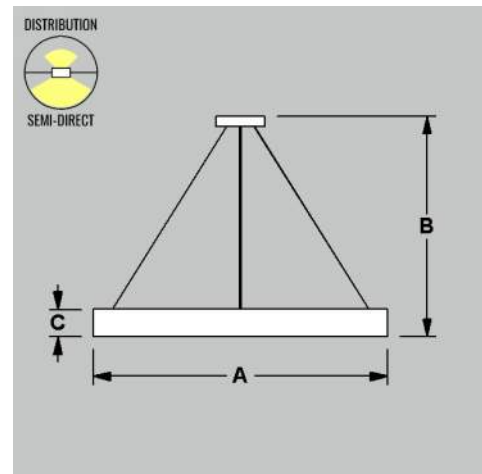
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- AC (4) Aircraft Cables with Power Cord

Other Options:

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Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type:

P5



Alphabet By Ledra Brands | 15774 Gateway Circle | PH: 714.259.9959
 Tustin, CA 92780 | FAX: 714.259.9969 | www.alphabetlighting.com

Job Name:

Contact:

Ordering Code:

Fixture Type:



S



W



RP

BETA6

Description

The BETA6 provides energy efficient light using the latest technology on the market including industry best color consistency allowing for a SDCM of 1x2. Multiple reflector beam spreads, finishes and LiteOptics allow for creative lighting solutions to illuminate architectural spaces. Easy installation with quick connect and bayonet mounting. BETA6 carries a 5 year NO COLOR SHIFT AND FIXTURE WARRANTY.

Housing

Extruded aluminum housing with Black, White or Matte Silver finish

Mounting

Easy bayonet mounting system over a 3-1/2" to 4" recessed round or octagonal j-box. Surface mount or canopy mount with 4 foot field cuttable rigid stem. The RP mounting option can be mounted on ≤ 45° sloped ceiling (fixture is a self-contained operating unit, wiring through stem by others). Consult factory for custom pendant lengths.

Electrical / LED Driver

Electronic multi-voltage 120-277V driver, 50/60Hz. Replaceable LED module with quick disconnects.

Listings

- Energy Star versions available see page 4
- ETLus Listed to UL1598 (suitable for dry and damp locations)
- cETL Listed to CSA C22.2 #250.0
- Made in the USA - meets the requirements of the Buy American provision within the ARRA.

Ordering Codes

Follow the steps to specify your fixture, example: **608R-6-XTM19-20LM-35K-98-DA60-UNV-10V-MC-W**

Part Number	Aperture	LED	Delivered Lumen	CCT	CRI	Reflector	Voltage
608R	6 6"	XTM19 BIOS ⁶	13LM 1105 lm (small only)	27K 2700K	83 83 CRI	DA40 diffuse, 40°	UNV 120V-277V
			20LM 1700 lm (small only)	30K 3000K		98' 98 CRI	
			30LM 2550 lm (large only)	V30K 3000K Vibrant		SA20 specular, 20°	
			40LM ^{3,4} 3400 lm (large only)	35K 3500K		SA40 specular, 40°	
			50LM ^{3,4} 4250 lm (large only)	40K 4000K		SA60 specular, 60°	
				B27K ² 2700K Beauty			

Dimming

DIM10	Standard Driver with Flicker Free 0-10V dimming to 1%
DIM10Z	Flicker Free 0-10V dimming to 0%
DALI	Flicker Free DALI dimming to 1%
DALIZ	Flicker Free DALI dimming to 0%
DMXZ	Flicker Free DMX dimming to 0%
LUDA	Lutron EcoSystem dimming to 1%

Finish

BK	black
MC	matte silver
WH	white

Mounting Options

S	Surface Mount
P	Pendant
RP	Rigid Pendant
W	Wall

Notes

- 98 CRI not available for 40LM and 50LM.
- B27K Beauty Series choose 98 CRI (actual 93). Available for 13LM and 20LM only.
- DIM10Z, DALI, DALIZ, DMXZ and LUDA not available for 40LM and 50LM
- DIM10 in 40LM and 50LM uses ACElectronic 1% 0-10V dimming driver
- For Energy Star ordering code see page 4
- For BIOS consult factory.



LM-79



Submitting Agency:



Description: 608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes: CXX = CONFIRM STANDARD FINISH

Type:

P5



Alphabet By Ledra Brands | 15774 Gateway Circle | PH: 714.259.9959
 Tustin, CA 92780 | FAX: 714.259.9969 | www.alphabetlighting.com

Job Name:

Contact:

Ordering Code:

Fixture Type:

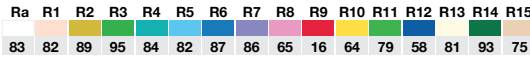
Xicato Series LED Performance

SDCM 1 x 2 MacAdam Ellipse
DUV +/- 0.001
Life L80 50,000 hrs
Warranty 5 year "no color shift" warranty
 5 year fixture warranty

Standard Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Standard Series
CCT 2700k, 3000k, 3500k, 4000k
CRI Ra 83 typical
GAI_{bb} 97

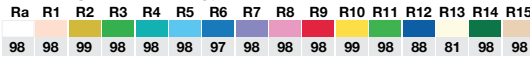
Color Rendering Index (3000K Typical)



Artist Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Artist Series
CCT 2700k, 3000k, 3500k, 4000k
CRI Ra 98 typical
GAI_{bb} 109

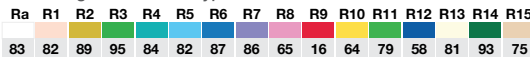
Color Rendering Index (3000K Typical)



Vibrant Series (V80)

LED Patented Cold Remote Phosphor, Xicato® XTM19 Vibrant Series (V80)
CCT 3000k
CRI Ra 83 typical
GAI_{bb} 111

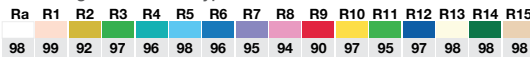
Color Rendering Index (3000K Typical)



Vibrant Series (V95)

LED Patented Cold Remote Phosphor, Xicato® XTM19 Vibrant Series (V95)
CCT 3000k
CRI Ra 98 typical
GAI_{bb} 120

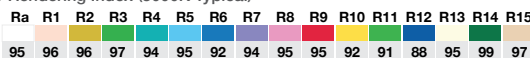
Color Rendering Index (3000K Typical)



Beauty Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Beauty Series
CCT 2700k
CRI Ra 95 typical
GAI_{bb} 133

Color Rendering Index (3000K Typical)



Notes

Values presented are average. Due to installation location and environment, end use performance may vary. Refer to IES file for specific values.

Delivered Lumen / Wattage Chart

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	16 W
2000 lm	1700 lm	25 W
3000 lm	2550 lm	37 W
4000 lm	3400 lm	49 W
5000 lm	4250 lm	56 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W
3000 lm	2550 lm	42 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	16 W
2000 lm	1700 lm	25 W
3000 lm	2550 lm	37 W
4000 lm	3400 lm	49 W
5000 lm	4250 lm	56 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W
3000 lm	2550 lm	42 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W

Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type:

P5



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Job Name:

Contact:

Ordering Code:

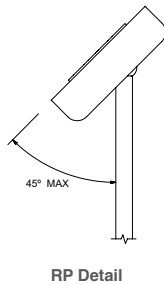
Fixture Type:

Mounting and LiteOptics

Follow the steps to specify your fixture, example:
 608R-6-XTM19-20LM-35K-98-DA60-UNV-10V-MC-RP-CRO

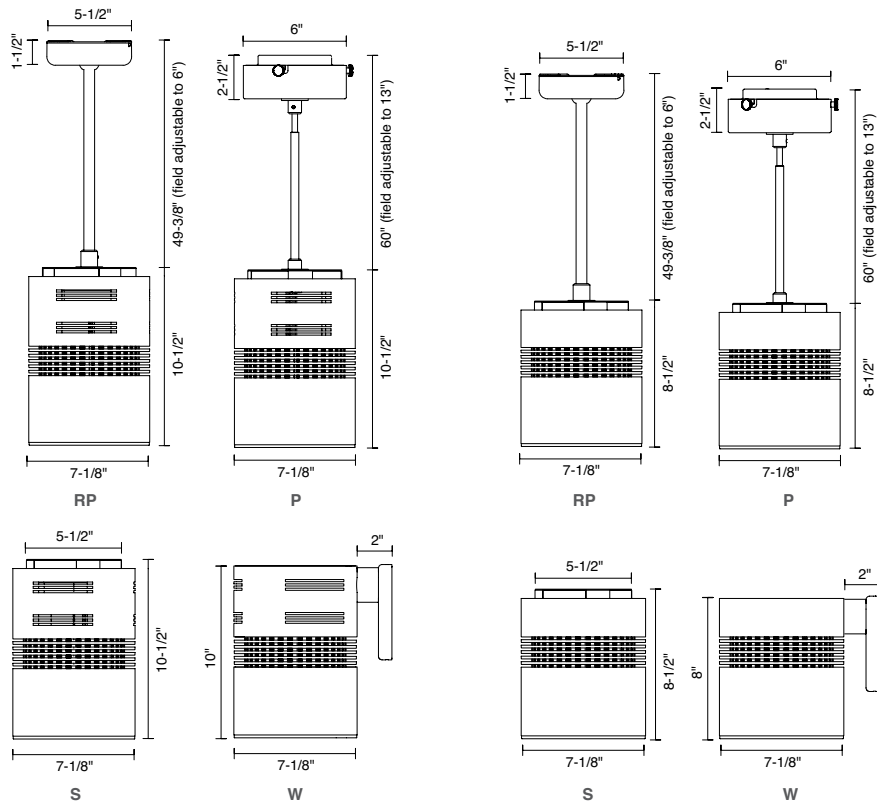
Mounting Options

- S Surface Mount
- P Pendant
- RP Rigid Pendant (w/ ball-stem)
- W Wall



Large

Small



LiteOptics

- CFS central etched float acrylic - 6"
- CFP central etched float acrylic perforated - 6"
- CGS clear screen acrylic - 6"
- CRO corona ring - 6"
- POP pupil optic perforated - 6"
- POB pupil optic blue - 6"
- DFS diffusing screen - 6"
- POW pupil optic white - 6"



CFS
6"
H: 1-1/2"



CFP
6"
H: 1-1/2"



CGS
6"
H: 1/2"



CRO
6"
H: 3/4"



POP
6"
H: 1/2"



POB
6"
H: 1/2"



DFS
6"
H: 1/2"



POW
6"
H: 1/2"

Submitting Agency:



Description: 608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes: CXX = CONFIRM STANDARD FINISH

Type:

P5



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Job Name:

Contact:

Ordering Code:

Fixture Type:

Ordering Codes - Energy Star

Follow the steps to specify your energy star fixture, example: 608R-6-XTM19-40LM-35K-83-DA60-UNV-DIM10-MC-W

Part Number	Aperture	LED	Delivered Lumen	CCT	CRI	Reflector	Voltage
608R	6 6"	XTM19	40LM 3075 lm (large only)	27K 2700K	83 83 CRI	DA20 diffuse, 20° (narrow beam)	UNV 120V-277V
			45LM 3500 lm (large only)	30K 3000K		DA40 diffuse, 60° (wide beam)	
			50LM 4250 lm (large only)	35K 3500K		DA60 diffuse, 60° (wide beam)	
				40K 4000K		SA20 specular, 20° (medium beam)	
						SA40 specular, 40° (medium beam)	
						SA60 specular, 60° (wide beam)	

Dimming

DIM10 Standard Driver with Flicker Free 0-10V dimming to 1%

Finish

BK black
 MC matte silver
 WH white

Mounting Options

S Surface Mount
 P Pendant
 RP Rigid Pendant
 W Wall

Zonal Lumen Summary

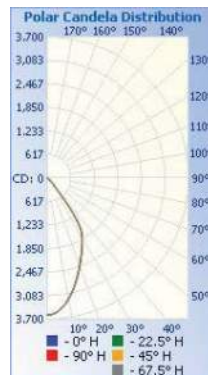
Zone	Lumens	%Lamp	%Fixt
0-20	1922.75	N.A.	46.80
0-30	3402.97	N.A.	82.80
0-40	4080.82	N.A.	99.30
0-60	4103.16	N.A.	99.80
0-80	4106.19	N.A.	99.90
0-90	4108.26	N.A.	100.00
10-90	3563.43	N.A.	86.70
20-40	2158.06	N.A.	52.50
20-50	2179.19	N.A.	53.00
40-70	23.63	N.A.	0.60
60-80	3.03	N.A.	0.10
70-80	1.74	N.A.	0.00
80-90	2.06	N.A.	0.10
90-110	1.11	N.A.	0.00
90-120	1.12	N.A.	0.00
90-130	1.12	N.A.	0.00
90-150	1.12	N.A.	0.00
90-180	1.12	N.A.	0.00
110-180	0.01	N.A.	0.00
0-180	4109.38	N.A.	100.00

Zonal Lumen Summary

Zone	Lumens
0-10	544.82
10-20	1377.93
20-30	1480.21
30-40	677.85
40-50	21.13
50-60	1.22
60-70	1.29
70-80	1.74
80-90	2.06
90-100	0.78
100-110	0.33
110-120	0.01
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

Luminance Data (cd/sq.m)

Angle Degrees	In Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	324	229
55	0	58	41
65	0	49	34
75	0	56	40
85	0	76	54



608R-6-XTM19-50LM-30K-83-SA60-UNV-DIM10-MC-S

Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type: **P5-EM**



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Job Name:

Contact:

Ordering Code:

Fixture Type:



S



W



RP

BETA6

Description

The BETA6 provides energy efficient light using the latest technology on the market including industry best color consistency allowing for a SDCM of 1x2. Multiple reflector beam spreads, finishes and LiteOptics allow for creative lighting solutions to illuminate architectural spaces. Easy installation with quick connect and bayonet mounting. BETA6 carries a 5 year NO COLOR SHIFT AND FIXTURE WARRANTY.

Housing

Extruded aluminum housing with Black, White or Matte Silver finish

Mounting

Easy bayonet mounting system over a 3-1/2" to 4" recessed round or octagonal j-box. Surface mount or canopy mount with 4 foot field cuttable rigid stem. The RP mounting option can be mounted on ≤ 45° sloped ceiling (fixture is a self-contained operating unit, wiring through stem by others). Consult factory for custom pendant lengths.

Electrical / LED Driver

Electronic multi-voltage 120-277V driver, 50/60Hz. Replaceable LED module with quick disconnects.

Listings

- Energy Star versions available see page 4
- ETLus Listed to UL1598 (suitable for dry and damp locations)
- cETL Listed to CSA C22.2 #250.0
- Made in the USA - meets the requirements of the Buy American provision within the ARRA.

Ordering Codes

Follow the steps to specify your fixture, example: **608R-6-XTM19-20LM-35K-98-DA60-UNV-10V-MC-W**

Part Number	Aperture	LED	Delivered Lumen	CCT	CRI	Reflector	Voltage
608R	6 6"	XTM19 BIOS ⁶	13LM 1105 lm (small only)	27K 2700K	83 83 CRI	DA40 diffuse, 40°	UNV 120V-277V
			20LM 1700 lm (small only)	30K 3000K		98' 98 CRI	
			30LM 2550 lm (large only)	V30K 3000K Vibrant		SA20 specular, 20°	
			40LM ^{3,4} 3400 lm (large only)	35K 3500K		SA40 specular, 40°	
			50LM ^{3,4} 4250 lm (large only)	40K 4000K		SA60 specular, 60°	
				B27K ² 2700K Beauty			

Dimming

DIM10	Standard Driver with Flicker Free 0-10V dimming to 1%
DIM10Z	Flicker Free 0-10V dimming to 0%
DALI	Flicker Free DALI dimming to 1%
DALIZ	Flicker Free DALI dimming to 0%
DMXZ	Flicker Free DMX dimming to 0%
LUDA	Lutron EcoSystem dimming to 1%

Finish

BK	black
MC	matte silver
WH	white

Mounting Options

S	Surface Mount
P	Pendant
RP	Rigid Pendant
W	Wall

Notes

- 98 CRI not available for 40LM and 50LM.
- B27K Beauty Series choose 98 CRI (actual 93). Available for 13LM and 20LM only.
- DIM10Z, DALI, DALIZ, DMXZ and LUDA not available for 40LM and 50LM
- DIM10 in 40LM and 50LM uses ACElectronic 1% 0-10V dimming driver
- For Energy Star ordering code see page 4
- For BIOS consult factory.



LM-79



Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type: **P5-EM**



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Job Name:

Contact:

Ordering Code:

Fixture Type:

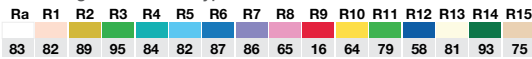
Xicato Series LED Performance

SDCM 1 x 2 MacAdam Ellipse
DUV +/- 0.001
Life L80 50,000 hrs
Warranty 5 year "no color shift" warranty
 5 year fixture warranty

Standard Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Standard Series
CCT 2700k, 3000k, 3500k, 4000k
CRI Ra 83 typical
GAI_{bb} 97

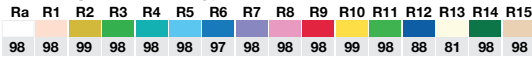
Color Rendering Index (3000K Typical)



Artist Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Artist Series
CCT 2700k, 3000k, 3500k, 4000k
CRI Ra 98 typical
GAI_{bb} 109

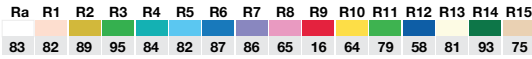
Color Rendering Index (3000K Typical)



Vibrant Series (V80)

LED Patented Cold Remote Phosphor, Xicato® XTM19 Vibrant Series (V80)
CCT 3000k
CRI Ra 83 typical
GAI_{bb} 111

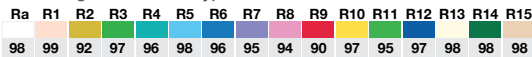
Color Rendering Index (3000K Typical)



Vibrant Series (V95)

LED Patented Cold Remote Phosphor, Xicato® XTM19 Vibrant Series (V95)
CCT 3000k
CRI Ra 98 typical
GAI_{bb} 120

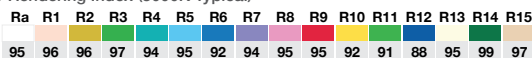
Color Rendering Index (3000K Typical)



Beauty Series

LED Patented Cold Remote Phosphor, Xicato® XTM19 Beauty Series
CCT 2700k
CRI Ra 95 typical
GAI_{bb} 133

Color Rendering Index (3000K Typical)



Notes

Values presented are average. Due to installation location and environment, end use performance may vary. Refer to IES file for specific values.

Delivered Lumen / Wattage Chart

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	16 W
2000 lm	1700 lm	25 W
3000 lm	2550 lm	37 W
4000 lm	3400 lm	49 W
5000 lm	4250 lm	56 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W
3000 lm	2550 lm	42 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	16 W
2000 lm	1700 lm	25 W
3000 lm	2550 lm	37 W
4000 lm	3400 lm	49 W
5000 lm	4250 lm	56 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W
3000 lm	2550 lm	42 W

Source Lumens	Delivered Lumens	Fixture Wattage
1300 lm	1105 lm	21 W
2000 lm	1700 lm	33 W

Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type: **P5-EM**



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Job Name:

Contact:

Ordering Code:

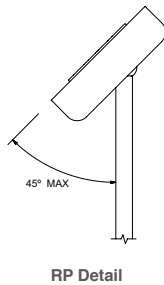
Fixture Type:

Mounting and LiteOptics

Follow the steps to specify your fixture, example:
 608R-6-XTM19-20LM-35K-98-DA60-UNV-10V-MC-RP-CRO

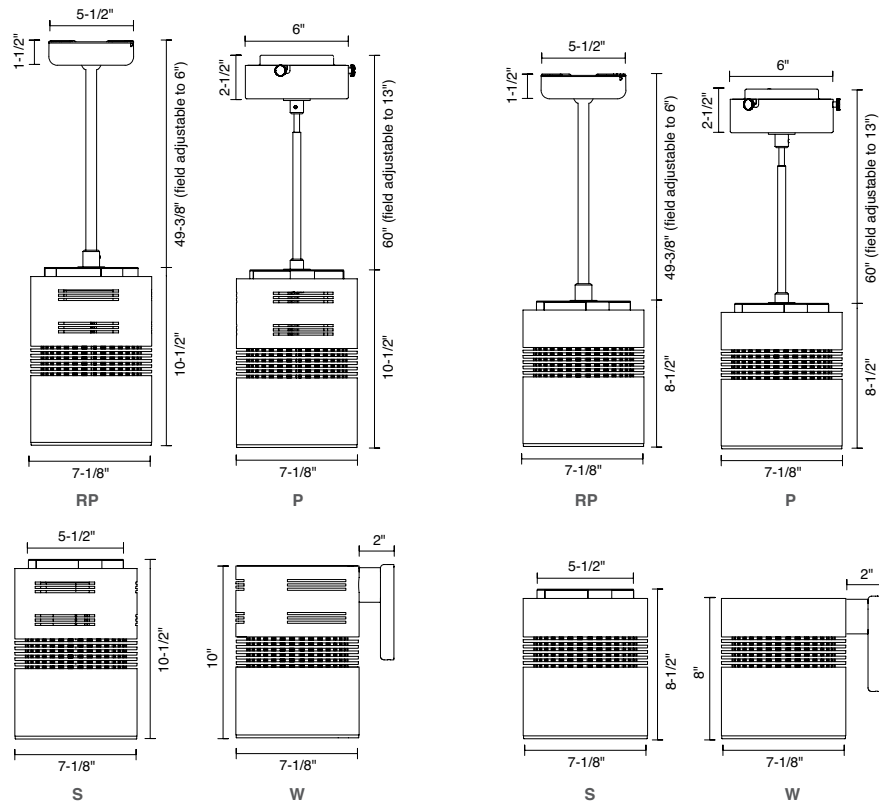
Mounting Options

- S Surface Mount
- P Pendant
- RP Rigid Pendant (w/ ball-stem)
- W Wall



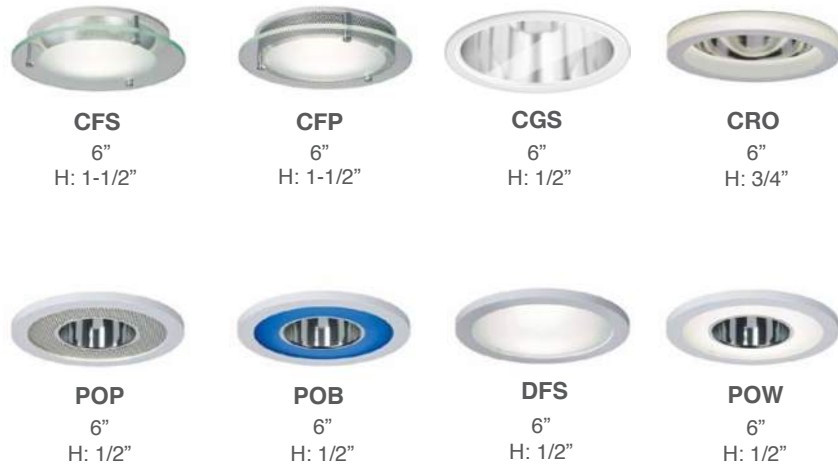
Large

Small



LiteOptics

- CFS central etched float acrylic - 6"
- CFP central etched float acrylic perforated - 6"
- CGS clear screen acrylic - 6"
- CRO corona ring - 6"
- POP pupil optic perforated - 6"
- POB pupil optic blue - 6"
- DFS diffusing screen - 6"
- POW pupil optic white - 6"



Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48"**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **CXX = CONFIRM STANDARD FINISH**

Type: **P5-EM**



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Job Name:	Contact:
Ordering Code:	Fixture Type:

Ordering Codes - Energy Star

Follow the steps to specify your energy star fixture, example: 608R-6-XTM19-40LM-35K-83-DA60-UNV-DIM10-MC-W

Part Number	Aperture	LED	Delivered Lumen	CCT	CRI	Reflector	Voltage
608R	6 6"	XTM19	40LM 3075 lm (large only)	27K 2700K	83 83 CRI	DA20 diffuse, 20° (narrow beam)	UNV 120V-277V
			45LM 3500 lm (large only)	30K 3000K		DA40 diffuse, 60° (wide beam)	
			50LM 4250 lm (large only)	35K 3500K		DA60 diffuse, 60° (wide beam)	
				40K 4000K		SA20 specular, 20° (medium beam)	
						SA40 specular, 40° (medium beam)	
						SA60 specular, 60° (wide beam)	

Dimming

DIM10 Standard Driver with Flicker Free 0-10V dimming to 1%

Finish

- BK black
- MC matte silver
- WH white

Mounting Options

- S Surface Mount
- P Pendant
- RP Rigid Pendant
- W Wall

Zonal Lumen Summary

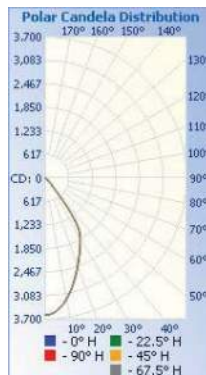
Zone	Lumens	%Lamp	%Fixt
0-20	1922.75	N.A.	46.80
0-30	3402.97	N.A.	82.80
0-40	4080.82	N.A.	99.30
0-60	4103.16	N.A.	99.80
0-80	4106.19	N.A.	99.90
0-90	4108.26	N.A.	100.00
10-90	3563.43	N.A.	86.70
20-40	2158.06	N.A.	52.50
20-50	2179.19	N.A.	53.00
40-70	23.63	N.A.	0.60
60-80	3.03	N.A.	0.10
70-80	1.74	N.A.	0.00
80-90	2.06	N.A.	0.10
90-110	1.11	N.A.	0.00
90-120	1.12	N.A.	0.00
90-130	1.12	N.A.	0.00
90-150	1.12	N.A.	0.00
90-180	1.12	N.A.	0.00
110-180	0.01	N.A.	0.00
0-180	4109.38	N.A.	100.00

Zonal Lumen Summary

Zone	Lumens
0-10	544.82
10-20	1377.93
20-30	1480.21
30-40	677.85
40-50	21.13
50-60	1.22
60-70	1.29
70-80	1.74
80-90	2.06
90-100	0.78
100-110	0.33
110-120	0.01
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

Luminance Data (cd/sq.m)

Angle Degrees	In Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	324	229
55	0	58	41
65	0	49	34
75	0	56	40
85	0	76	54



608R-6-XTM19-50LM-30K-83-SA60-UNV-DIM10-MC-S

Submitting Agency:



Description: **608R-6-XTM19-20LM-35K-83-DA60-UNV-DIM10-CXX-P48" / ELI-S-100-277**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes: **CXX = CONFIRM STANDARD FINISH**

Type: **P5-EM**



Project: _____
Type: _____
Model.No: _____ Qty: _____
Date: _____
Notes: _____

Sinusoidal (Sine Wave) Output
Dimming Output Voltage
100 Watts Power Maximum

Product order number ELIS100120 (120V model)
ELIS100277 (277V model)

Specifications

UL Listed for US and Canada
Listed to UL924 and tested to CSA 22.2 No. 141
Field or Factory Installation (Indoor and Damp)
Output Class 2 Compliant

Maximum Emergency Load Power
(including AC ballast/driver)
100 W

Warranty
5 Years Full Coverage (not including battery)
3 Year Battery warranty, plus 7 years
additional pro-rating

Illumination Time
90 Minutes

ELI-S-100-120V	ELI-S-100-277V
AC Input Voltage	AC Input Voltage
120 VAC, 60 Hz	277 VAC, 60 Hz
AC Input Current	AC Input Current
370 mA Max Charging	160 mA Max Charging

Output Voltage	Output Voltage
120 VAC, 60 Hz	277 VAC, 60 Hz

ELI-S-100-120V / ELI-S-100-277V

AC Input Power Rating
45 W Max Charging

Charging Indicator Light/Test Switch
Integrated LED/test switch

Battery
Maintenance-Free Sealed Lead Acid Battery

Recharge Time
24 Hours

Temperature Rating (Ambient)
32° F to 104° F (0° C to 40° C)

Dimensions
12.562" x 9.812" x 4.675"
(319 mm x 249 mm x 119 mm)

Weight
25 lbs. With Batteries installed

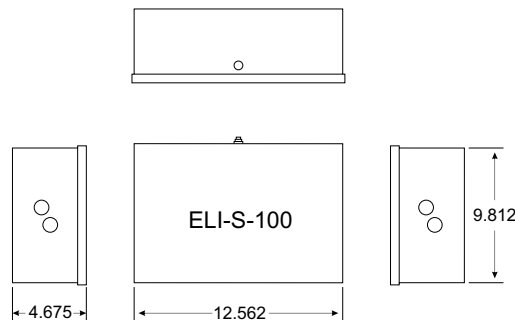
Special Features
Fused Output Load Connections

Benefits:

- Sine wave output
- Dimming output voltage
- Fused output load connections
- Works with LED and fluorescent fixtures
- Ideal for (but not limited to) screw-base LED lamps
- Compatible with AC (line voltage) driven TLED lamps
- Remote-mounting up to 250 feet maximum

Dimensions

12.6" x 9.8" x 4.7" (319 mm x 249 mm x 119 mm)





ELI-S-100

Backup Inverter - 100W sinusoidal output with dimming capability

APPLICATION

The Philips Bodine ELI-S-100 Emergency Lighting Inverter works in conjunction with a fluorescent or LED fixture to create an emergency lighting system. The ELI-S-100 operates a maximum load of 100 W at unity power factor. It allows the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. Each unit consists of two sealed lead acid batteries, charger and electronic circuitry in one steel case. The ELI-S-100 provides power to the input side of the fixture, including AC ballast/driver, and can be used with indoor or outdoor emergency fixture applications. The ELI-S-100 is not suitable for use with HID sources.

OPERATION

Upon failure of normal power, the ELI-S-100 instantly begins providing emergency power to the connected lighting load for a minimum of 90 minutes. A solid-state low voltage disconnect circuit protects the inverter battery from severe damage by deep discharge during prolonged power failures. When normal power is restored, the ELI-S-100 automatically returns to charge mode. The battery capacity is fully restored in 24 hours. Isolated dry-contact relays (2 each) are also provided to override local dimming controls used in normal mode, when luminaires are driven from AC power mains.

DIMMING

The ELI-S-100 features a dimming control output of 0-10 volts. This dimming capability allows a higher power fixture to operate at a dimmed 100 W maximum emergency-mode lighting level - or, alternately, it allows a string of multiple fixtures to be driven in emergency mode at a combined 100 W maximum. For example, four 100W LED fixtures may be connected to one ELI-S-100 and dimmed for emergency operation to 20% of normal power, with each LED fixture supplying 20W of output power (20W x 4 = 80W).* The emergency mode output dimming voltage is field settable in 5 steps to provide nominally 20%, 40%, 60%, 80%, or 100% light output. The installer will set the dimming level by operating the dip switches which are located at the lower center section of the circuit board. See illustrations.

**Note: Dimming drivers are less efficient at reduced power. This inefficiency must be accounted for in the design.*

INSTALLATION

The ELI-S-100 does not affect normal fixture operation and may be used with a switched or unswitched fixture. It can be installed in close proximity to the fixture or remote from the fixture (up to 250 feet).

EMERGENCY ILLUMINATION

The ELI-S-100 supports emergency illumination for a minimum of 90 minutes. At a maximum of 100 W the ELI-S-100 will provide input power to ballasted lamp supporting 100% of the AC rated output throughout the 90-minute emergency illumination period.

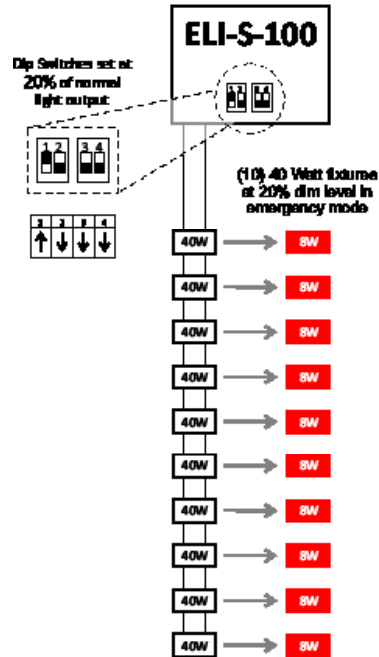
SPECIFICATION

Emergency lighting shall be provided by using a standard fixture equipped with a Philips Bodine ELI-S-100. Each unit consists of two maintenance free sealed lead acid batteries, charger and electronic circuitry contained in one 12.562" x 9.812" x 4.675" metal case. The ELI-S-100 unit shall be capable of powering any fluorescent or LED lighting fixture rated at a maximum of 100 W at 0°C to 40°C for a minimum 90 minutes regardless of local switch position. The ELI-S-100 shall allow the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. The ELI-S-100 unit shall exceed emergency standards set forth by the current NEC and CEC. It shall be UL Listed (Pending) for factory or field installation.

WARRANTY

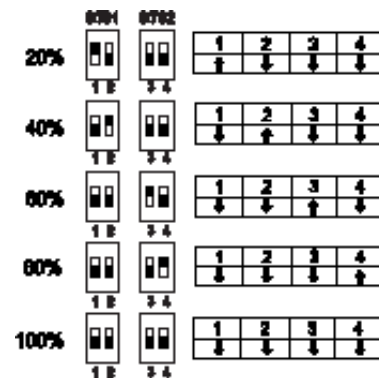
The ELI-S-100 is warranted for five (5) years from the date of manufacture. This warranty excludes the batteries, which have a warranty of three (3) years with an additional seven (7) year pro-rated warranty. This warranty covers only properly installed Philips Bodine ELI-S-100 emergency units used under normal conditions. For the warranty period, Philips Emergency Lighting will, at its option, repair or replace without charge a defective inverter provided it is returned to the factory transportation prepaid on inspection will be conducted to determine if the unit is defective under the terms of the warranty. Repair or replacement, as stated above, shall constitute the purchaser's exclusive warranty, which does not extend to transportation, installation, labor or any other charges; nor does it apply to any equipment of another manufacturer used in conjunction with the inverter.

General example of dimming operation:



Note: dimming drivers are less efficient at reduced power. This inefficiency must be accounted for in the design.

Dimming level switch settings:



Submitting Agency:

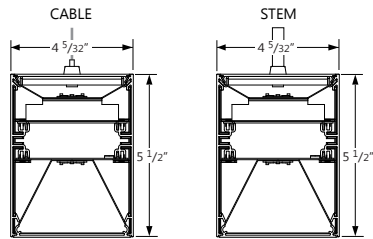
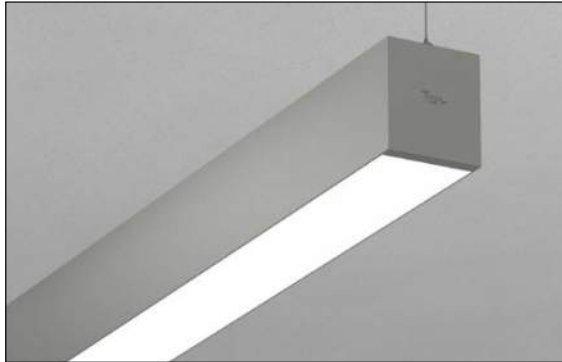


Description: **BBDILED-640-400-80-35-SO-04'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-4'



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED	640	SO				
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN	CRI	COLOR TEMP.	SHIELDING	LENGTH
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	SO spotless lens	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.		Applies to both UP & DOWN.		Applies to both UP & DOWN. Colour temperature is both for direct and indirect.		

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	AP aluminum paint W white BLK black C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit ⁽⁷⁾ 2 2 circuits ⁽⁸⁾ +E(#) emergency circuit ⁽⁹⁾ +NL(#) night light circuit ⁽⁹⁾ +GTD(#) generator transfer device ⁽⁹⁾ +M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Control UP & DOWN lights together ⁽⁸⁾ Control UP & DOWN lights separately ⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG15/16+cable length (36" std.) CTS(#) ST+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) +SM seismic option	B# battery pack 4' sections	F fuse ⁽¹⁰⁾ D dust cover	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor EN# Enlighted integral ⁽¹¹⁾ ENR# Enlighted remote ⁽¹¹⁾	C custom
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

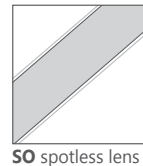
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



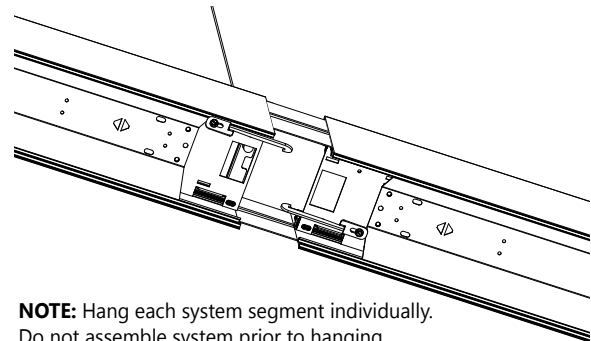
50 spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

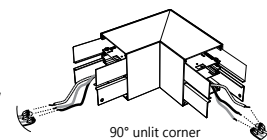
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



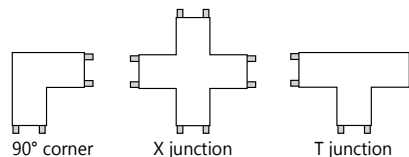
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

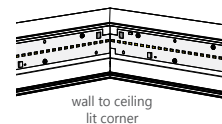


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

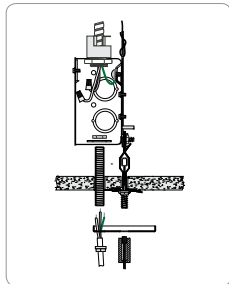


BEAM4 LED

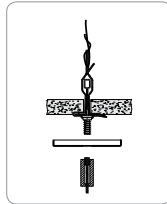
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

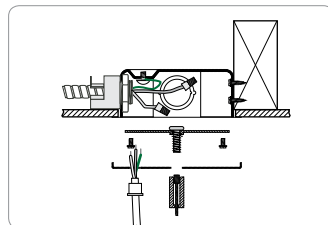


Power feed

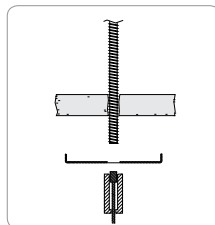


Non power feed

CA DRYWALL CEILING

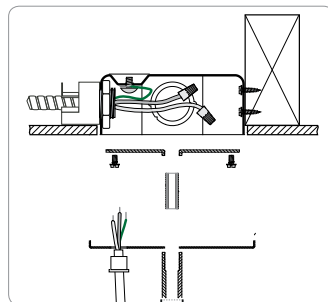


Power feed

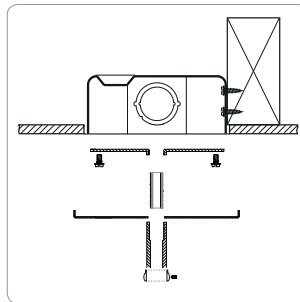


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



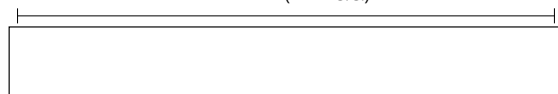
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

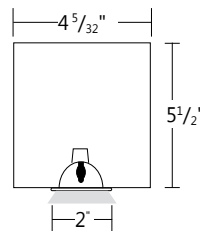
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

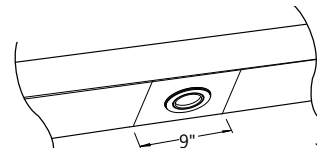
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

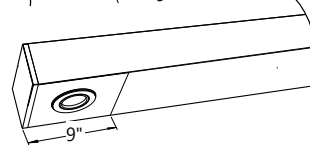
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



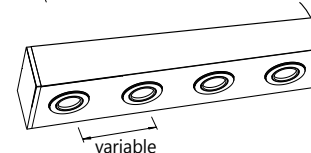
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



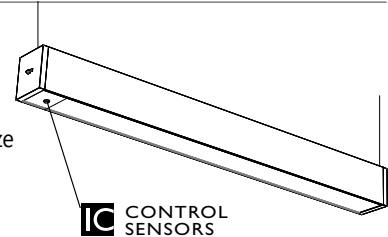
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

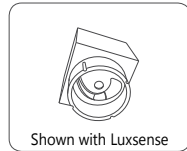
- Consult factory for other options.



The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

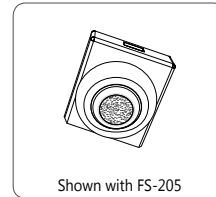
With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

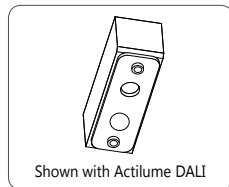
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

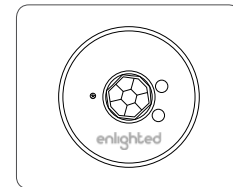
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

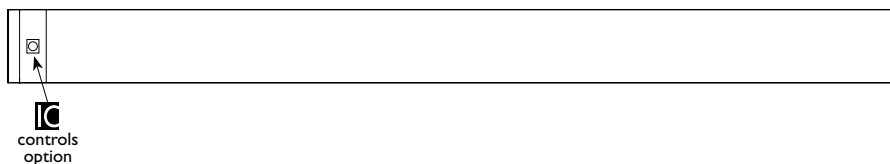
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-04'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-4'



PENDANT MOUNT - DIRECT/INDIRECT

● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-04'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

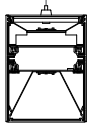
Type:
P6-4'



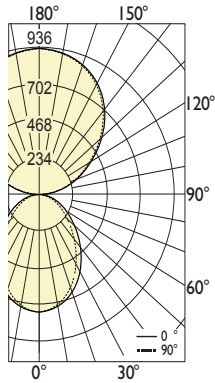
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	70
0-10	194
10-20	273
20-30	298
30-40	277
40-50	225
50-60	157
60-70	84
70-80	22
80-90	13
90	127
90-100	305
100-110	431
110-120	487
120-130	470
130-140	386
140-150	253
150-160	88
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

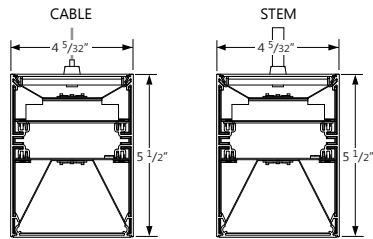
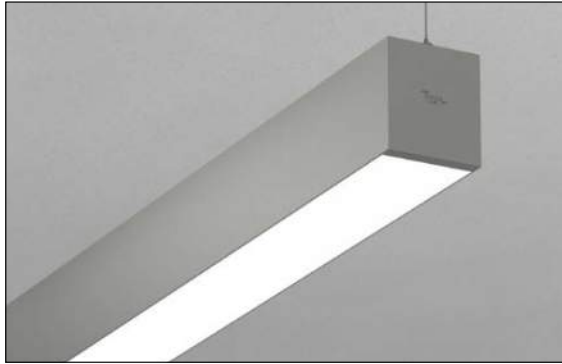


Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-8'



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED	640	SO	CRI		COLOR TEMP.	SHIELDING	LENGTH
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN					
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 80 CRI	90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	SO spotless lens	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.			Applies to both UP & DOWN.		Applies to both UP & DOWN. Colour temperature is both for direct and indirect.		

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	AP aluminum paint W white BLK black C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit ⁽⁷⁾ 2 2 circuits ⁽⁸⁾ +E(#) emergency circuit ⁽⁹⁾ +NL(#) night light circuit ⁽⁹⁾ +GTD(#) generator transfer device ⁽⁹⁾ +M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Control UP & DOWN lights together ⁽⁸⁾ Control UP & DOWN lights separately ⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG15/16+cable length (36" std.) CTS(#) ST+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) +SM seismic option	B# battery pack 4' sections	F fuse ⁽¹⁰⁾ D dust cover	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor EN# Enlighted integral ⁽¹¹⁾ ENR# Enlighted remote ⁽¹¹⁾	C custom
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

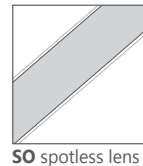
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



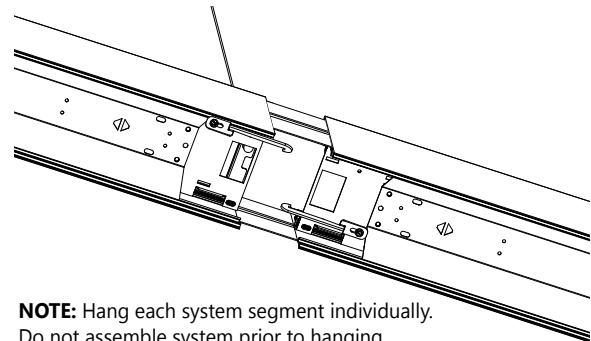
50 spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

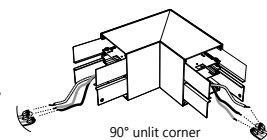
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



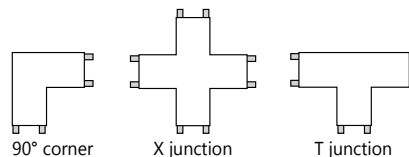
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

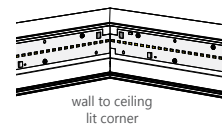


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

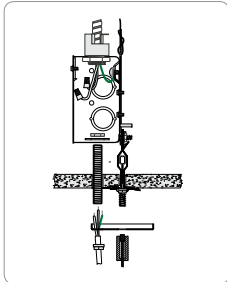


BEAM4 LED

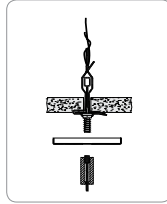
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

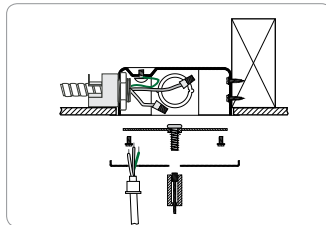


Power feed

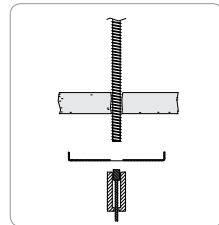


Non power feed

CA DRYWALL CEILING

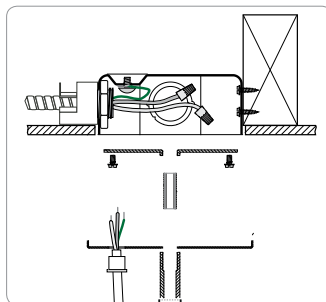


Power feed

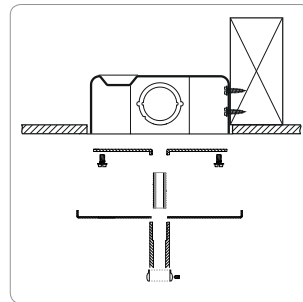


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



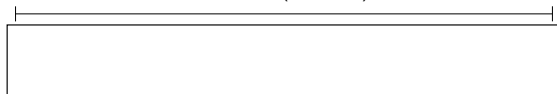
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

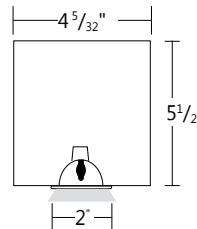
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

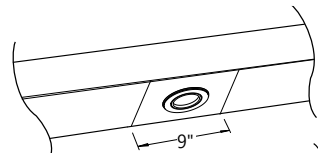
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

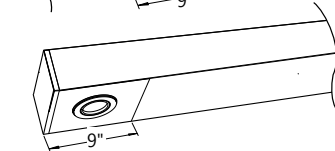
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



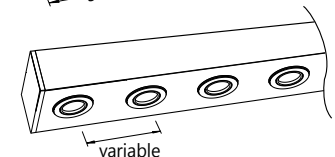
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



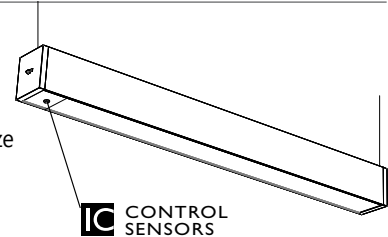
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

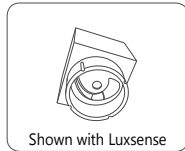
- Consult factory for other options.



The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

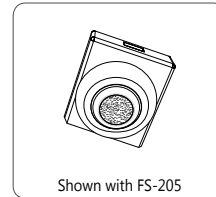
With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

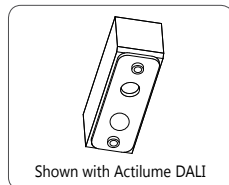
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

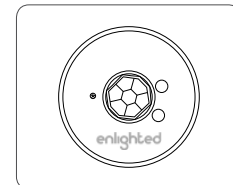
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

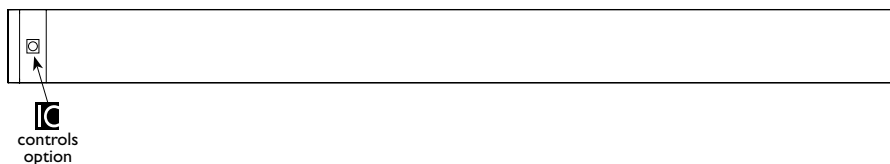
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-8'



PENDANT MOUNT - DIRECT/INDIRECT

● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

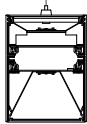
Type:
P6-8'



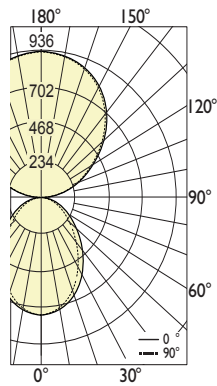
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

i All IES files are available for download at: www.axislighting.com

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	
0-10	70
10-20	194
20-30	273
30-40	298
40-50	277
50-60	225
60-70	157
70-80	84
80-90	22
90	13
90-100	127
100-110	305
110-120	431
120-130	487
130-140	470
140-150	386
150-160	253
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

Submitting Agency:

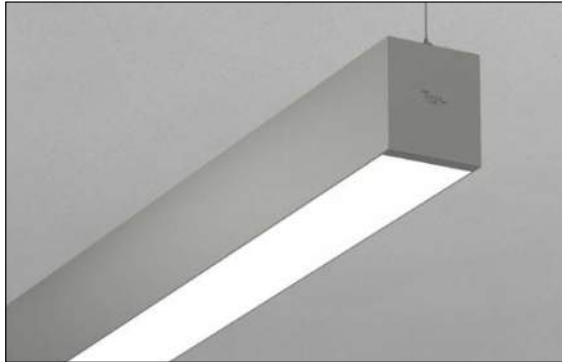


Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

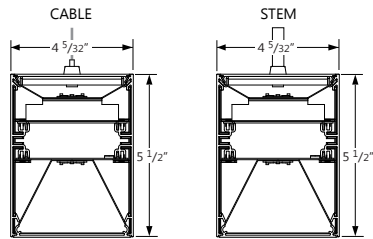
Type: **P6-EM-8**



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____



PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED	640	SO				
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN	CRI	COLOR TEMP.	SHIELDING	LENGTH
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	SO spotless lens	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.		Applies to both UP & DOWN.		Applies to both UP & DOWN. Colour temperature is both for direct and indirect.		

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	AP aluminum paint W white BLK black C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit ⁽⁷⁾ 2 2 circuits ⁽⁸⁾ +E(#) emergency circuit ⁽⁹⁾ +NL(#) night light circuit ⁽⁹⁾ +GTD(#) generator transfer device ⁽⁹⁾ +M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Control UP & DOWN lights together ⁽⁸⁾ Control UP & DOWN lights separately ⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG15/16+cable length (36" std.) CTS(#) ST+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) +SM seismic option	B# battery pack 4' sections	F fuse ⁽¹⁰⁾ D dust cover	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor EN# Enlighted integral ⁽¹¹⁾ ENR# Enlighted remote ⁽¹¹⁾	C custom
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

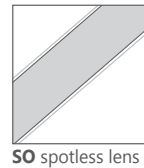
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



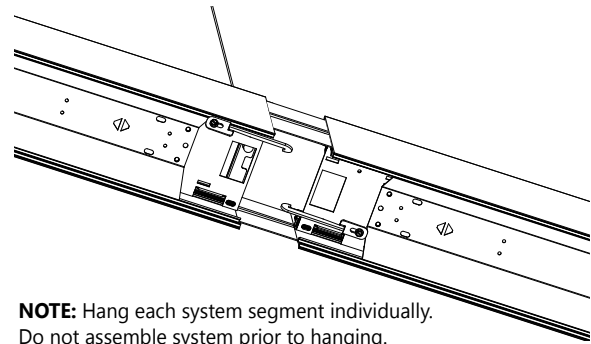
SO spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

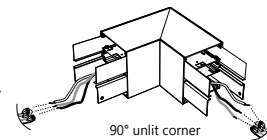
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



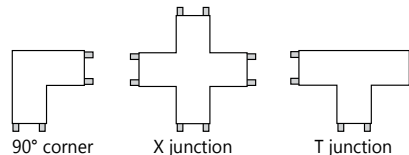
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

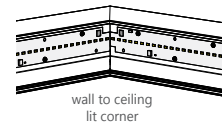


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

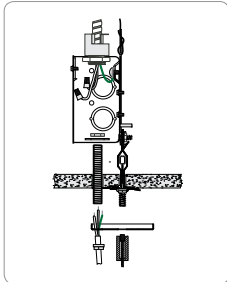


BEAM4 LED

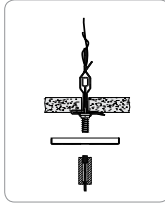
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

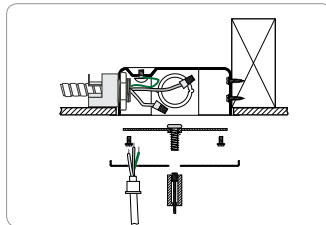


Power feed

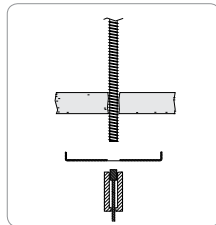


Non power feed

CA DRYWALL CEILING

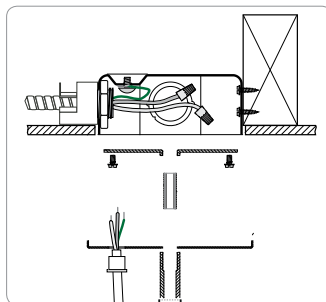


Power feed

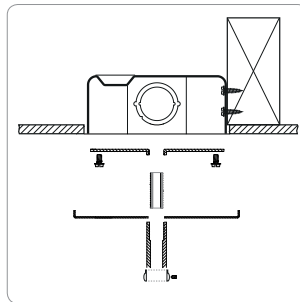


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



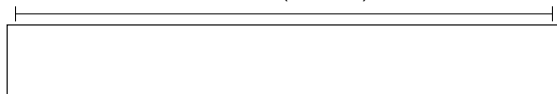
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

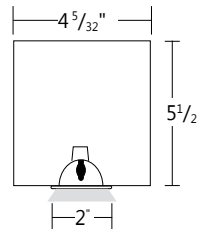
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

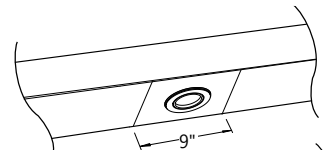
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

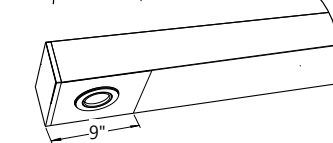
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



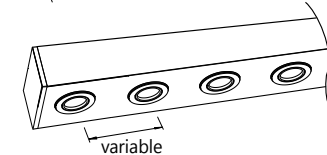
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



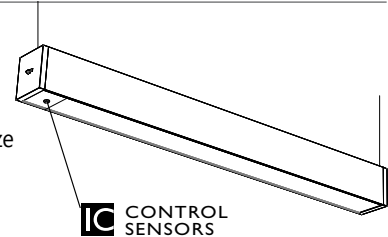
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

- Consult factory for other options.

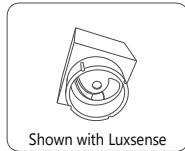


IC CONTROL SENSORS

The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

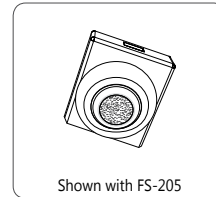
With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

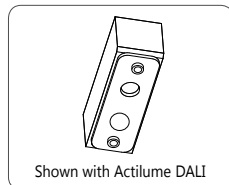
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

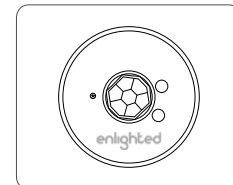
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

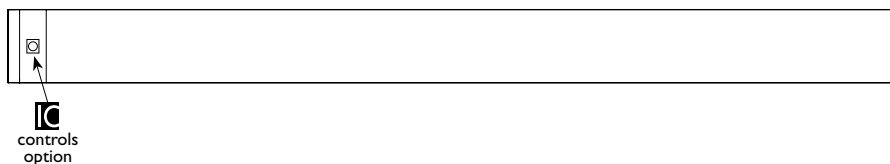
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



IC controls option

* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **P6-EM-8**



PENDANT MOUNT - DIRECT/INDIRECT

● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-08'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
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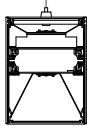
Type: **P6-EM-8**



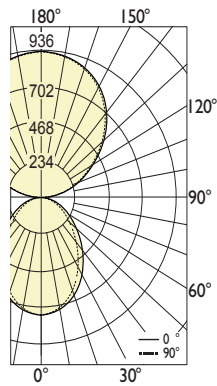
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	70
0-10	194
10-20	273
20-30	298
30-40	277
40-50	225
50-60	157
60-70	84
70-80	22
80-90	13
90	127
90-100	305
100-110	431
110-120	487
120-130	470
130-140	386
140-150	253
150-160	88
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

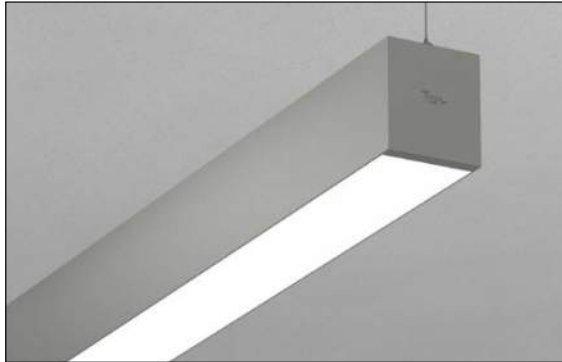


Description: **BBDILED-640-400-80-35-SO-12'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

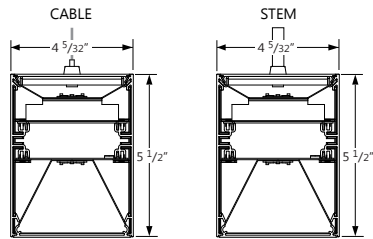
Type:
P6-12'



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____



PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED		640		SO		LENGTH	
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN	CRI	COLOR TEMP.	SHIELDING		
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	SO spotless lens	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12'	S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.		Applies to both UP & DOWN.		Applies to both UP & DOWN. Colour temperature is both for direct and indirect.			

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	AP aluminum paint W white BLK black C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit ⁽⁷⁾ 2 2 circuits ⁽⁸⁾ +E(#) emergency circuit ⁽⁹⁾ +NL(#) night light circuit ⁽⁹⁾ +GTD(#) generator transfer device ⁽⁹⁾ +M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Control UP & DOWN lights together ⁽⁸⁾ Control UP & DOWN lights separately ⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG15/16+cable length (36" std.) CTS(#) ST+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) +SM seismic option	B# battery pack 4' sections	F fuse ⁽¹⁰⁾ D dust cover	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor EN# Enlighted integral ⁽¹¹⁾ ENR# Enlighted remote ⁽¹¹⁾	C custom
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

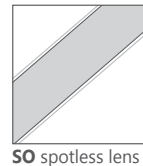
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



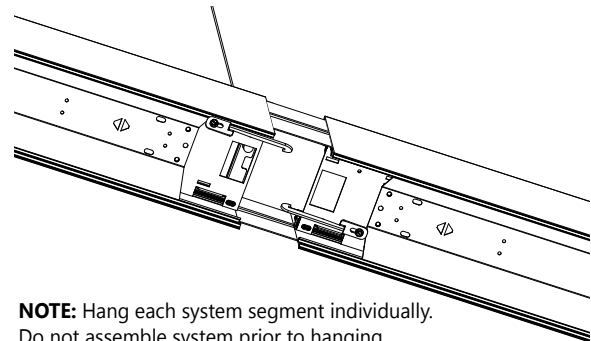
50 spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

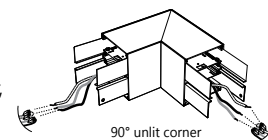
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



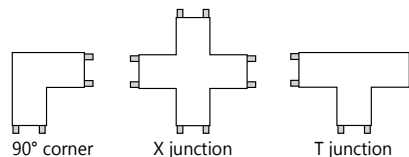
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

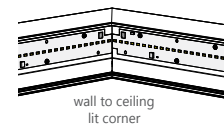


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling
lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

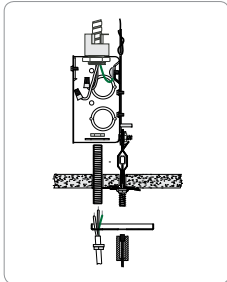


BEAM4 LED

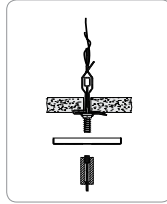
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

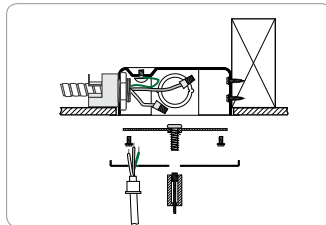


Power feed

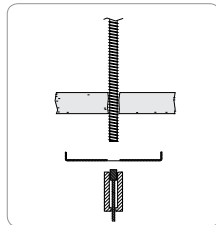


Non power feed

CA DRYWALL CEILING

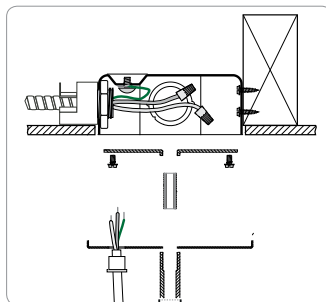


Power feed

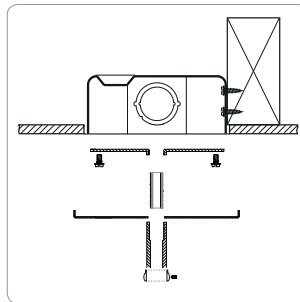


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



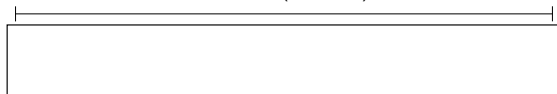
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

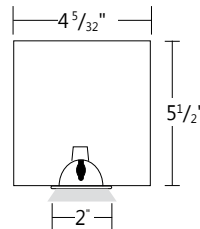
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

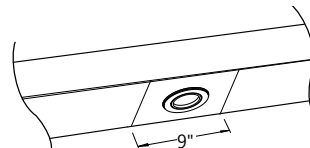
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

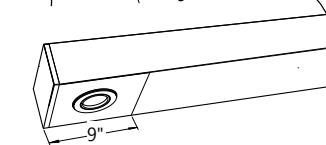
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



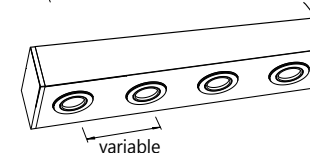
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



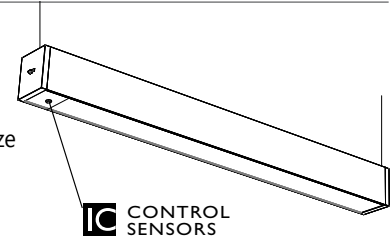
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

- Consult factory for other options.

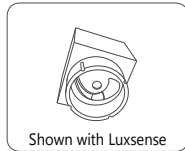


IC CONTROL SENSORS

The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

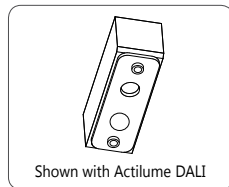
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

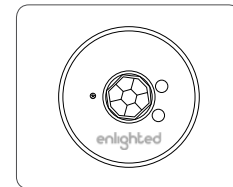
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

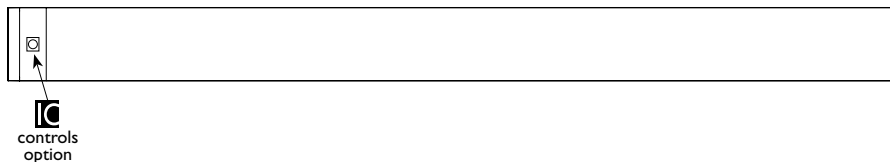
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



IC controls option

* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

**PENDANT MOUNT - DIRECT/INDIRECT**● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-12'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

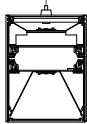
Type:
P6-12'



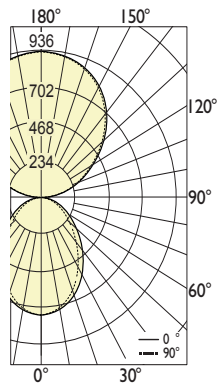
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	
0-10	70
10-20	194
20-30	273
30-40	298
40-50	277
50-60	225
60-70	157
70-80	84
80-90	22
90	13
90-100	127
100-110	305
110-120	431
120-130	487
130-140	470
140-150	386
150-160	253
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

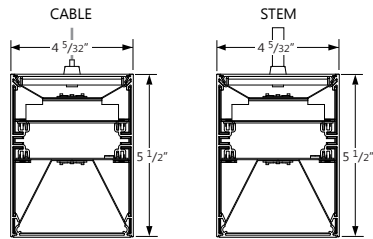
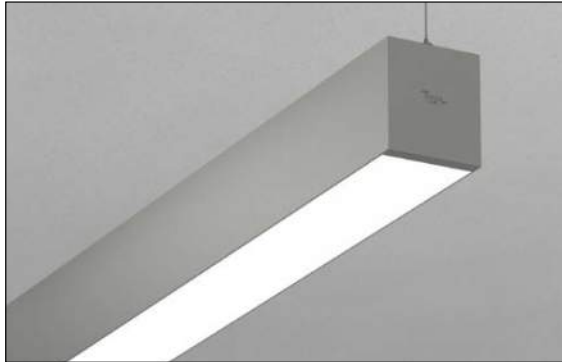


Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-16'



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED	640	SO	CRI		COLOR TEMP.	SHIELDING	LENGTH
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN	80	90	27	SO	
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 CRI	90 CRI	27 2700 K	SO spotless lens	2 2'
					30 3000 K		3 3'
					35 3500 K		4 4'
					40 4000 K		5 5'
							6 6'
							8 8'
							12 12'
							S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.			Applies to both UP & DOWN.		Applies to both UP & DOWN. Colour temperature is both for direct and indirect.		

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾	AP aluminum paint	120 120 V	DP dimming (0-10V) 1%	1 1 circuit ⁽⁷⁾
M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾	W white	277 277 V	D dimming (0-10V) 5% 347V standard ⁽⁴⁾	2 2 circuits ⁽⁸⁾
M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	BLK black	347 347 V ⁽³⁾	LT Lutron ⁽⁵⁾	+E(#) emergency circuit ⁽⁹⁾
	C custom	UNV universal	BI bi-level dimming	+NL(#) night light circuit ⁽⁹⁾
			O other ⁽⁶⁾	+GTD(#) generator transfer device ⁽⁹⁾
				+M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only	⁽⁷⁾ Control UP & DOWN lights together
⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only			⁽⁵⁾ Specify system	⁽⁸⁾ Control UP & DOWN lights separately
			⁽⁶⁾ Please consult factory; see page 2	⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.)	B# battery pack 4' sections	F fuse ⁽¹⁰⁾	DS# daylight sensor	C custom
CT9(#) TB/TG 9/16+cable length (36" std.)		D dust cover	OS# occupancy sensor	
CT15(#) TB/TG15/16+cable length (36" std.)			DOS# daylight & occupancy sensor	
CTS(#) ST+cable length (36" std.)			EN# Enlighted integral ⁽¹¹⁾	
SA(#) drywall+stem length >48" (18" std.)			ENR# Enlighted remote ⁽¹¹⁾	
+SM seismic option				
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

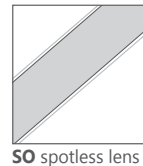
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



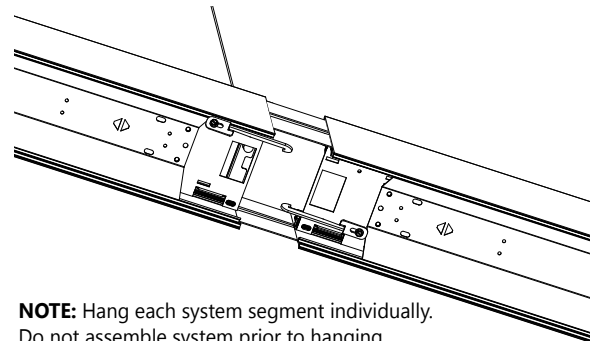
50 spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

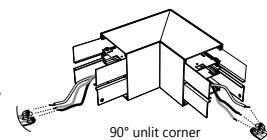
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



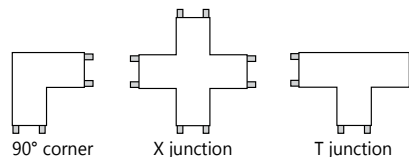
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

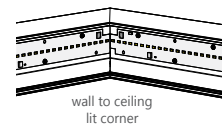


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

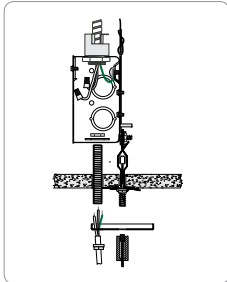


BEAM4 LED

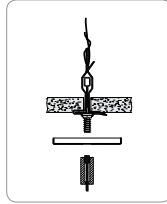
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

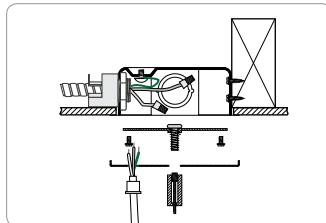


Power feed

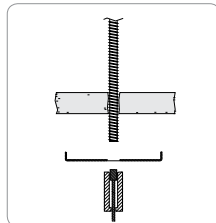


Non power feed

CA DRYWALL CEILING

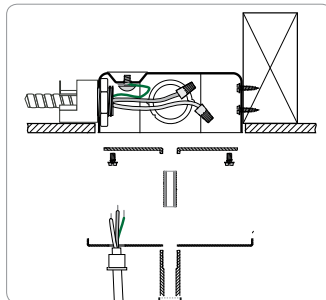


Power feed

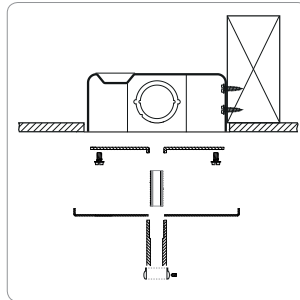


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



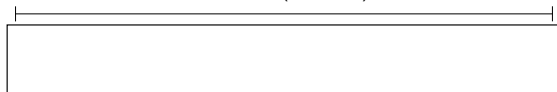
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

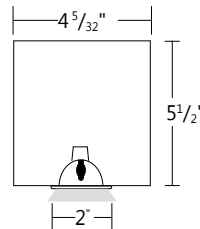
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

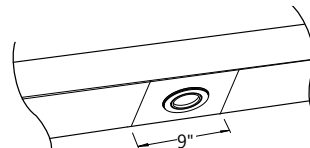
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

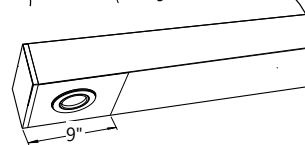
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



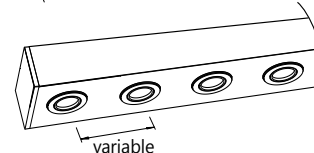
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



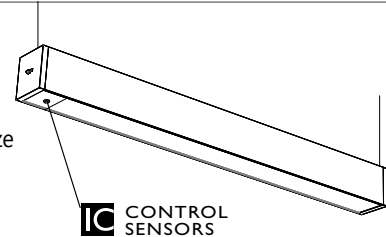
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

- Consult factory for other options.

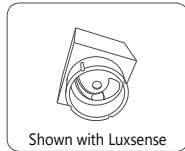


IC CONTROL SENSORS

The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

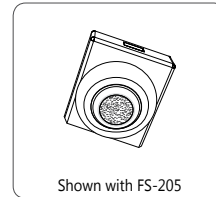
With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

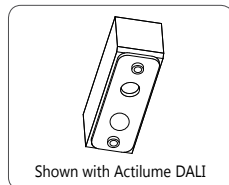
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

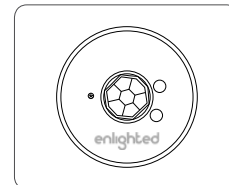
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

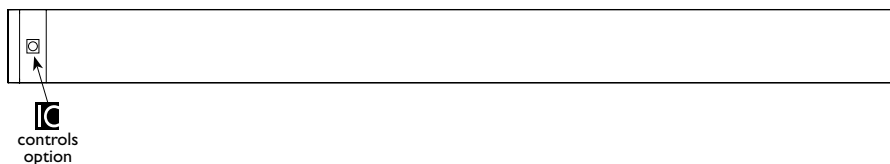
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



IC controls option

* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-16'



PENDANT MOUNT - DIRECT/INDIRECT

● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

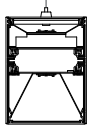
Type:
P6-16'



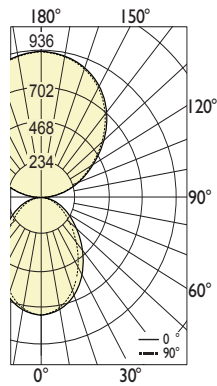
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	
0-10	70
10-20	194
20-30	273
30-40	298
40-50	277
50-60	225
60-70	157
70-80	84
80-90	22
90	13
90-100	127
100-110	305
110-120	431
120-130	487
130-140	470
140-150	386
150-160	253
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

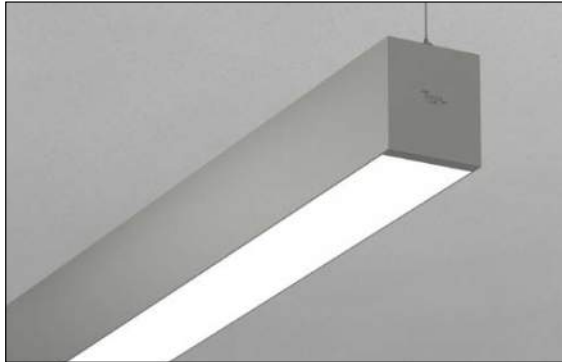


Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

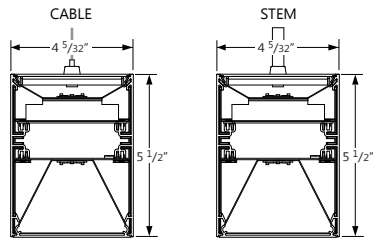
Type: **P6-EM-1**
6'



PENDANT MOUNT - DIRECT/INDIRECT



Project _____
 Type _____
 Notes _____



PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
UPLIGHT	DOWNLIGHT		
640 lm/ft	400 lm/ft	8.87 W/ft	117 lm/W

Please consult factory for custom lumen output and wattage.



Ordering Guide

BBDILED	640	SO				
PRODUCT ID	NOM. LUMENS/FT UP	NOM. LUMENS/FT DOWN	CRI	COLOR TEMP.	SHIELDING	LENGTH
BBDILED Pendant Direct/Indirect LED	640 640 lm/ft uplight	400 400 lm/ft downlight	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	SO spotless lens	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.			Applies to both UP & DOWN.	Applies to both UP & DOWN. Colour temperature is both for direct and indirect.		

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR16 halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	AP aluminum paint W white BLK black C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit ⁽⁷⁾ 2 2 circuits ⁽⁸⁾ +E(#) emergency circuit ⁽⁹⁾ +NL(#) night light circuit ⁽⁹⁾ +GTD(#) generator transfer device ⁽⁹⁾ +M MR
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 3 for more details. MR16 constant current for 0-10V & DALI only		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Control UP & DOWN lights together ⁽⁸⁾ Control UP & DOWN lights separately ⁽⁹⁾ Specify quantity

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG15/16+cable length (36" std.) CTS(#) ST+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) +SM seismic option	B# battery pack 4' sections	F fuse ⁽¹⁰⁾ D dust cover	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor EN# Enlighted integral ⁽¹¹⁾ ENR# Enlighted remote ⁽¹¹⁾	C custom
	Requires 120V or 277V Please consult factory	⁽¹⁰⁾ Requires 120V or 277V	Applies to both UP & DOWN. ⁽¹¹⁾ Please consult factory Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify



BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Sheet steel (18 gauge)
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless frosted acrylic lens
Hanger	Die formed sheet steel (16 gauge)
Suspension	Aircraft cable or Ø 1/2" stem
Cable Grips	Quick connecting / release

● ELECTRICAL


Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

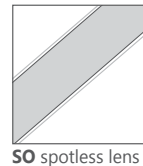
● APPROVALS

Certified to UL and CUL standards 
 Meets NYC requirements
 Suitable for damp locations.

● SYSTEM (S#)

BEAM4 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM4 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM4 LED installation sheets available for download at www.axislighting.com.

● OPTICS



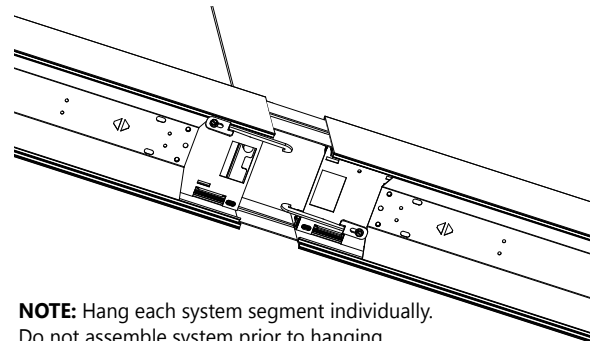
SO spotless lens

SPOTLESS LENS

Frosted acrylic snap-in lens with micro lens

● JOINERS

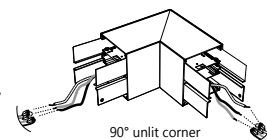
In order to allow very long runs of BEAM4 LED luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each BEAM option.



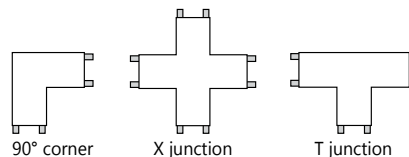
NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● CORNERS

Unlit Corners - BEAM4 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



90° unlit corner

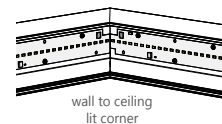


90° corner

X junction

T junction

Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



wall to ceiling lit corner

i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

● WEIGHT

Direct/Indirect 4 ft	14.5 lbs / 6.6 kg
Direct/Indirect 8 ft	29.0 lbs / 13.2 kg
Direct/Indirect 12 ft	43.5 lbs / 19.7 kg

● FINISH

Powder coated and custom finishes are also available.

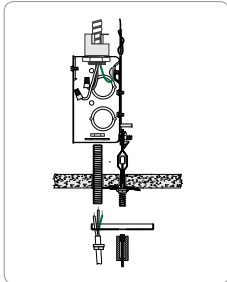


BEAM4 LED

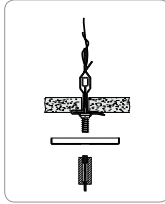
PENDANT MOUNT - DIRECT/INDIRECT

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

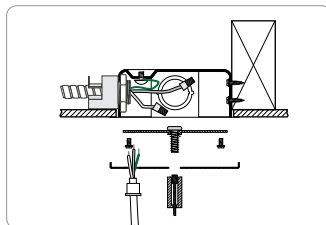


Power feed

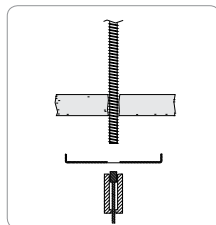


Non power feed

CA DRYWALL CEILING

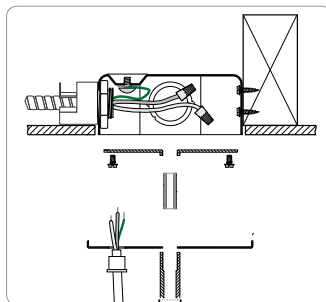


Power feed

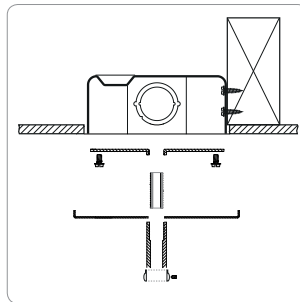


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



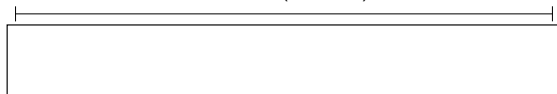
Power feed



Non power feed

● MOUNTING SPACING END TO END

- BEAM4 LED 4' (48" C.C.)
- BEAM4 LED 8' (96" C.C.)
- BEAM4 LED 12' (144" C.C.)



i Row configuration and mounting spacing file is available for download at: www.axislighting.com

● OTHER MOUNTING OPTIONS

BEAM4 LED is also available with recessed, surface, wall and recessed vertical mounted options.

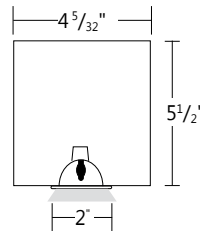
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at: www.axislighting.com

● MR16 LED LAMPS

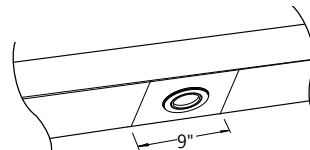
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided) - **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided) - **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

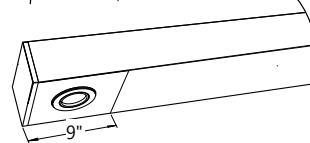
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



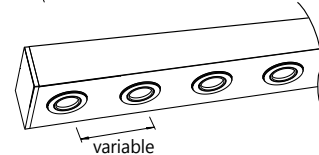
Between sections



At luminaire ends



Several in a long blank section



- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K

i More options are available upon request. Please consult factory.



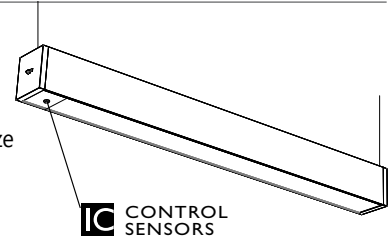
BEAM4 LED

PENDANT MOUNT - DIRECT/INDIRECT

● INTEGRATED CONTROL OPTIONS

BEAM4 LED luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

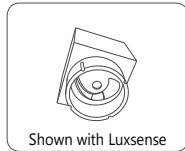
- Consult factory for other options.



The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

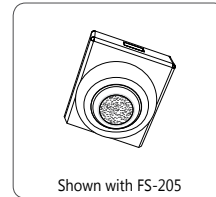
With Daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
 EC-DIR-WH, FD-301
 Luxsense, Micro Luxsense

● OCCUPANCY (OS):

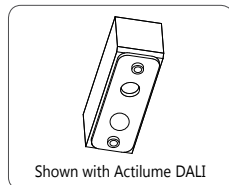
When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



Shown with FS-205
 FS-205, FS-355,
 FS-155 - Line Voltage
 FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

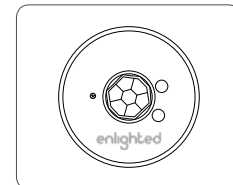
ACTILUME, a combination of Daylight & Occupancy sensor from Philips, along with a 0-10V or DALI driver can be used in one form factor.



Shown with Actilume DALI
 Actilume 1-10V
 Actilume DALI

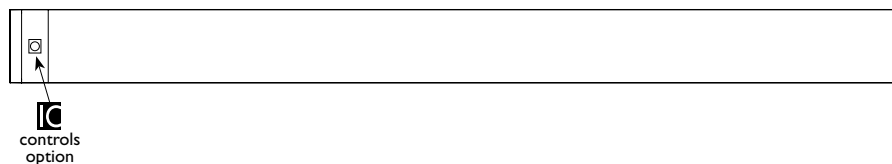
● ENLIGHTED INTEGRAL (EN) / ENLIGHTED REMOTE (ENR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



* Incorporating IC controls may affect the length of the luminaire. Please contact factory for more details.

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
P6-EM-1
6'



PENDANT MOUNT - DIRECT/INDIRECT

● **INTEGRATED CONTROL OPTIONS**

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense, LR1220/00	Daylight
	Philips	Micro Luxsense	Daylight
	Wattstopper	LS-102	Light Saver (Ambient light level)
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-355 (need lenses)	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
	Wattstopper	FM-105	High Frequency Occupancy (Wet)
	Lutron TriPak Wireless	LRF2-OCR2B-P-WH	PIR Occupancy
	Lutron	LOS-CDT	Ultrasonic Occupancy + PIR
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
	Wattstopper	FS-305 (need Lenses)	PIR Occupancy
	Wattstopper	FS-305 RC	PIR Occupancy & Ambient light level
	Creston	GLS Series	Daylight and/or PIR Occupancy
	Echoflex	MOS Series	Daylight and/or PIR Occupancy
Enlighted sensor (EN, ENR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & Temperature

Submitting Agency:



Description: **BBDILED-640-400-80-35-SO-16'-W-UNV-DP-1-CA**-B1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: **** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

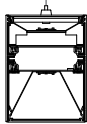
Type: **P6-EM-1**
6'



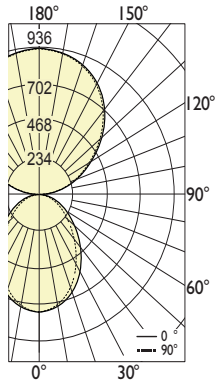
PENDANT MOUNT - DIRECT/INDIRECT

PHOTOMETRIC DATA

Uplight 60%
640 lm/ft
 Downlight 40%
400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: **640 lm/ft up**
400 lm/ft down

Input Watts: **8.87 W/ft**
 Efficacy: **117 lm/W**

IES FILE: BBDILED-640-400-80-35-SO.IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	751	751	751	751	751
5	743	745	741	744	746
15	699	699	690	683	682
25	618	612	594	577	572
35	511	501	475	452	443
45	395	385	357	334	324
55	282	273	251	230	222
65	178	172	157	144	138
75	88	85	78	72	69
85	20	19	19	18	17
90	0	0	0	0	0
95	11	5	2	1	1
105	138	133	124	94	94
115	322	315	307	301	307
125	495	493	480	474	477
135	643	639	630	625	625
145	758	754	749	749	746
155	840	840	836	836	833
165	896	897	897	897	897
175	927	933	931	929	928
180	934	934	934	934	934

ZONAL LUMENS

Zone	Lumens
0	
0-10	70
10-20	194
20-30	273
30-40	298
40-50	277
50-60	225
60-70	157
70-80	84
80-90	22
90	13
90-100	127
100-110	305
110-120	431
120-130	487
130-140	470
140-150	386
150-160	253
160-170	88
170-180	88
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4912	4447	4035
55	4324	3850	3408
65	3713	3264	2874
75	3007	2640	2347
85	2032	1887	1742

i All IES files are available for download at: www.axislighting.com

Submitting Agency:



Description: **22CZ-LD5-24-UNV-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R1

Metalux

DESCRIPTION

Cruze LED is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 79% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Sheilding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



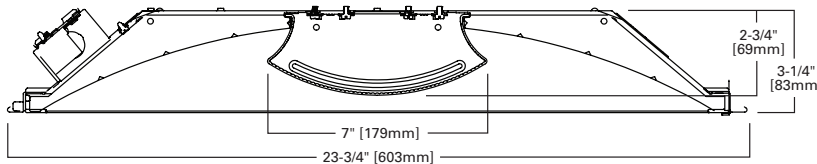
22CZ
LED

2' X 2' TROFFER LED
MODULE

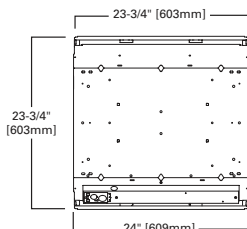
Specification Grade Troffer



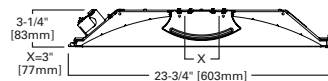
Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G	G	G	Ceiling Type	Trim Type
Grid/Lay-in Standard	Concealed T	Slot Grid	Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in Ordering Information Section

LINEAR DISCONNECT

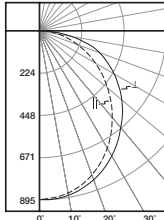
Safe and convenient means of disconnecting power



PS519141EN
 1-22-2018



PHOTOMETRICS

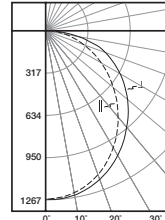


22CZ-LD5-24-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.17 x mounting
 height, (L) 1.25 x
 mounting height
 Lumens: 2470
 Input Watts: 19.6W
 Efficacy: 126.0 lm/W
 Test Report:
 22CZ-LD5-24-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	893	893	893
5	884	890	892
10	866	875	879
15	838	849	857
20	799	815	829
25	753	774	793
30	701	725	750
35	641	670	703
40	577	611	651
45	511	551	602
50	445	492	548
55	379	432	490
60	313	372	434
65	249	311	374
70	186	251	315
75	126	193	231
80	74	122	140
85	30	47	46
90	0	0	0



22CZ-LD5-34-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.17 x mounting
 height, (L) 1.25 x
 mounting height
 Lumens: 3497
 Input Watts: 29.4W
 Efficacy: 118.9 lm/W
 Test Report:
 22CZ-LD5-34-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1264	1264	1264
5	1252	1260	1263
10	1226	1239	1246
15	1186	1202	1215
20	1133	1154	1173
25	1066	1095	1122
30	991	1026	1061
35	906	949	995
40	816	866	922
45	726	782	851
50	630	697	776
55	537	612	696
60	443	527	614
65	351	439	529
70	262	356	445
75	178	273	322
80	102	170	198
85	42	67	64
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%				70%				50%				30%					
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%				70%				50%				30%					
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	680	27.5
0-40	1099	44.5
0-60	1915	77.5
0-90	2470	100.0
0-180	2470	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2314	2495	2726
55	2116	2412	2736
65	1887	2357	2834
75	1559	2388	2858
85	1102	1727	1690

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	962	27.5
0-40	1557	44.5
0-60	2711	77.5
0-90	3497	100.0
0-180	3497	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3288	3542	3854
55	2998	3417	3886
65	2660	3327	4009
75	2202	3378	3984
85	1543	2462	2352

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 79%	> 178,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

22CZ-LD5-34-UNV-L935-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,497 lm x 0.861 = 3,010 lm

Efficacy = $\frac{3,010 \text{ lm}}{29.4 \text{ W}}$ = 102.3 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

22CZ LED

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20-UNV-L830-CD1-U	1964	16.4	120
MTO	22CZ-LD5-20-UNV-L835-CD1-U	2086	16.4	127
MTO	22CZ-LD5-20-UNV-L840-CD1-U	2128	16.4	130
MTO	22CZ-LD5-20-UNV-L850-CD1-U	2302	16.4	141
MTO	22CZ-LD5-24-UNV-L830-CD1-U	2325	19.6	119
Stock	22CZ-LD5-24-UNV-L835-CD1-U	2470	19.6	126
Stock	22CZ-LD5-24-UNV-L840-CD1-U	2519	19.6	128
MTO	22CZ-LD5-24-UNV-L850-CD1-U	2725	19.6	139
MTO	22CZ-LD5-29-UNV-L830-CD1-U	2729	23.5	116
MTO	22CZ-LD5-29-UNV-L835-CD1-U	2899	23.5	123
MTO	22CZ-LD5-29-UNV-L840-CD1-U	2957	23.5	126
MTO	22CZ-LD5-29-UNV-L850-CD1-U	3199	23.5	136
MTO	22CZ-LD5-34-UNV-L830-CD1-U	3292	29.4	112
Stock	22CZ-LD5-34-UNV-L835-CD1-U	3497	29.4	119
Stock	22CZ-LD5-34-UNV-L840-CD1-U	3567	29.4	121
MTO	22CZ-LD5-34-UNV-L850-CD1-U	3858	29.4	131
MTO	22CZ-LD5-39-UNV-L830-CD1-U	3701	36.4	102
MTO	22CZ-LD5-39-UNV-L835-CD1-U	3932	36.4	108
MTO	22CZ-LD5-39-UNV-L840-CD1-U	4011	36.4	110
MTO	22CZ-LD5-39-UNV-L850-CD1-U	4338	36.4	119
MTO	22CZ-LD5-44-UNV-L830-CD1-U	4173	41.8	100
MTO	22CZ-LD5-44-UNV-L835-CD1-U	4433	41.8	106
MTO	22CZ-LD5-44-UNV-L840-CD1-U	4522	41.8	108
MTO	22CZ-LD5-44-UNV-L850-CD1-U	4891	41.8	117

*Made to order (MTO) requires a typical three week lead time.

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20-S-UNV-L830-CD1-U	2003	16.4	122
MTO	22CZ-LD5-20-S-UNV-L835-CD1-U	2128	16.4	130
MTO	22CZ-LD5-20-S-UNV-L840-CD1-U	2170	16.4	132
MTO	22CZ-LD5-20-S-UNV-L850-CD1-U	2348	16.4	143
MTO	22CZ-LD5-24-S-UNV-L830-CD1-U	2372	19.6	121
MTO	22CZ-LD5-24-S-UNV-L835-CD1-U	2519	19.6	128
MTO	22CZ-LD5-24-S-UNV-L840-CD1-U	2570	19.6	131
MTO	22CZ-LD5-24-S-UNV-L850-CD1-U	2780	19.6	142
MTO	22CZ-LD5-29-S-UNV-L830-CD1-U	2784	23.5	118
MTO	22CZ-LD5-29-S-UNV-L835-CD1-U	2957	23.5	126
MTO	22CZ-LD5-29-S-UNV-L840-CD1-U	3016	23.5	128
MTO	22CZ-LD5-29-S-UNV-L850-CD1-U	3263	23.5	139
MTO	22CZ-LD5-34-S-UNV-L830-CD1-U	3358	29.4	114
MTO	22CZ-LD5-34-S-UNV-L835-CD1-U	3567	29.4	121
MTO	22CZ-LD5-34-S-UNV-L840-CD1-U	3638	29.4	124
MTO	22CZ-LD5-34-S-UNV-L850-CD1-U	3936	29.4	134
MTO	22CZ-LD5-39-S-UNV-L830-CD1-U	3775	36.4	104
MTO	22CZ-LD5-39-S-UNV-L835-CD1-U	4011	36.4	110
MTO	22CZ-LD5-39-S-UNV-L840-CD1-U	4091	36.4	112
MTO	22CZ-LD5-39-S-UNV-L850-CD1-U	4425	36.4	122
MTO	22CZ-LD5-44-S-UNV-L830-CD1-U	4256	41.8	102
MTO	22CZ-LD5-44-S-UNV-L835-CD1-U	4522	41.8	108
MTO	22CZ-LD5-44-S-UNV-L840-CD1-U	4612	41.8	110
MTO	22CZ-LD5-44-S-UNV-L850-CD1-U	4989	41.8	119

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20SE-UNV-L830-CD1-U	1948	17.2	113
STOCK	22CZ-LD5-20SE-UNV-L835-CD1-U	2069	17.2	120
STOCK	22CZ-LD5-20SE-UNV-L840-CD1-U	2110	17.2	123
MTO	22CZ-LD5-20SE-UNV-L850-CD1-U	2283	17.2	133
MTO	22CZ-LD5-24SE-UNV-L830-CD1-U	2322	21.1	110
STOCK	22CZ-LD5-24SE-UNV-L835-CD1-U	2467	21.1	117
STOCK	22CZ-LD5-24SE-UNV-L840-CD1-U	2516	21.1	119
MTO	22CZ-LD5-24SE-UNV-L850-CD1-U	2722	21.1	129
MTO	22CZ-LD5-32SE-UNV-L830-CD1-U	3015	30.5	99
STOCK	22CZ-LD5-32SE-UNV-L835-CD1-U	3203	30.5	105
STOCK	22CZ-LD5-32SE-UNV-L840-CD1-U	3267	30.5	107
MTO	22CZ-LD5-32SE-UNV-L850-CD1-U	3534	30.5	116
MTO	22CZ-LD5-39SE-UNV-L830-CD1-U	3728	34.9	107
STOCK	22CZ-LD5-39SE-UNV-L835-CD1-U	3960	34.9	114
STOCK	22CZ-LD5-39SE-UNV-L840-CD1-U	4039	34.9	116
MTO	22CZ-LD5-39SE-UNV-L850-CD1-U	4369	34.9	125
MTO	22CZ-LD5-44SE-UNV-L830-CD1-U	4118	40.0	103
STOCK	22CZ-LD5-44SE-UNV-L835-CD1-U	4375	40.0	109
STOCK	22CZ-LD5-44SE-UNV-L840-CD1-U	4463	40.0	112
MTO	22CZ-LD5-44SE-UNV-L850-CD1-U	4827	40.0	121

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20SE-S-UNV-L830-CD1-U	1987	17.2	115
MTO	22CZ-LD5-20SE-S-UNV-L835-CD1-U	2110	17.2	123
MTO	22CZ-LD5-20SE-S-UNV-L840-CD1-U	2153	17.2	125
MTO	22CZ-LD5-20SE-S-UNV-L850-CD1-U	2328	17.2	135
MTO	22CZ-LD5-24SE-S-UNV-L830-CD1-U	2369	21.1	112
MTO	22CZ-LD5-24SE-S-UNV-L835-CD1-U	2516	21.1	119
MTO	22CZ-LD5-24SE-S-UNV-L840-CD1-U	2567	21.1	122
MTO	22CZ-LD5-24SE-S-UNV-L850-CD1-U	2776	21.1	132
MTO	22CZ-LD5-32SE-S-UNV-L830-CD1-U	3075	30.5	101
MTO	22CZ-LD5-32SE-S-UNV-L835-CD1-U	3267	30.5	107
MTO	22CZ-LD5-32SE-S-UNV-L840-CD1-U	3332	30.5	109
MTO	22CZ-LD5-32SE-S-UNV-L850-CD1-U	3605	30.5	118
MTO	22CZ-LD5-39SE-S-UNV-L830-CD1-U	3802	34.9	109
MTO	22CZ-LD5-39SE-S-UNV-L835-CD1-U	4039	34.9	116
MTO	22CZ-LD5-39SE-S-UNV-L840-CD1-U	4120	34.9	118
MTO	22CZ-LD5-39SE-S-UNV-L850-CD1-U	4457	34.9	128
MTO	22CZ-LD5-44SE-S-UNV-L830-CD1-U	4201	40.0	105
MTO	22CZ-LD5-44SE-S-UNV-L835-CD1-U	4463	40.0	112
MTO	22CZ-LD5-44SE-S-UNV-L840-CD1-U	4552	40.0	114
MTO	22CZ-LD5-44SE-S-UNV-L850-CD1-U	4924	40.0	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: 22CZ-LD5-24-UNV-L835-CD1-U
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes:

Type:
R1

22CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 22CZ-LD5-34-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Series⁽⁸⁾ 22CZ=2x2 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 20=2000 Lumens 24=2400 Lumens 29=2900 Lumens 34=3400 Lumens 39=3900 Lumens 44=4400 Lumens</p> <p>Standard Efficacy Lumen Output 20SE=2000 Lumens 24SE=2400 Lumens 32SE=3200 Lumens 39SE=3900 Lumens 44SE=4400 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage⁽²⁾ 347V=347 Volt⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2)⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed⁽³⁾ EL14W=14-watt 120V-277V emergency battery pack installed⁽³⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed⁽²⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed⁽²⁾ GTD2=Bodine Generator Transfer Device⁽⁷⁾ ETS2=OTA Emergency Transfer Switch⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming)⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming)⁽⁸⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming)⁽⁸⁾ LV1=DLVP Dimming Driver (0%-100% Dimming)⁽²⁾ SD=Step Dimming Driver (50% or 100% Dimming)⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming⁽⁹⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver⁽⁹⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver⁽⁹⁾</p>	<p>Number of Drivers 1=1 Driver</p>
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Integrated Sensing Systems
 SWPD1=WaveLinX Wireless Integrated Sensor⁽⁴⁾
 LWIPD1=LumaWatt Pro Wireless Integrated Sensor⁽⁸⁾
 LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor⁽⁸⁾
 SLVPD1=DLVP Low-voltage Integrated Sensor⁽²⁾
 SVPD1=0-10V Stand-alone Integrated Sensor⁽²⁾

Sensor Accessories
 DV=Dual Band⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job
 Pack, in carton

ACCESSORIES
 EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹⁾
 DF-22-W=2' x 2' Drywall Frame Kit
 SK-22-WS=2' x 2' Shallow Surface Mount Kit
 SK-22-WT=2' x 2' Tall Surface Mount Kit
 DF10P-C=Decorator Dimmer, 0-10V (CD and HCD drivers only)
 SF10P-C=Decorator Slide Dimmer, 0-10V (CD and HCD drivers only)
 ISHH-01=Programming Remote for Integrated Sensor⁽²⁾
 ISHH-02=Personal Control Remote for Integrated Sensor⁽²⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 2000, 2400, 2900 and 3400 lumen packages and 2000SE, 2400SE and 3200SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium[®] Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Integrated Sensing and Control System Options
NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ⁽⁴⁾Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾Consult LumaWatt Pro system pages for additional details and compatibility. ⁽²⁾Consult DLVP system pages for additional details and compatibility. ⁽⁹⁾Consult SVPD series system pages for additional details and compatibility. ⁽³⁾Consult Fifth Light system pages for additional details and compatibility. ⁽⁹⁾Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options
 Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.
A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556, NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements. UL Classified 1, 2, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
22CZ-LD5-27	12.5 lbs.
22CZ-LD5-36	12.5 lbs.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519141EN
 1-22-2018



INTEGRATED SENSOR

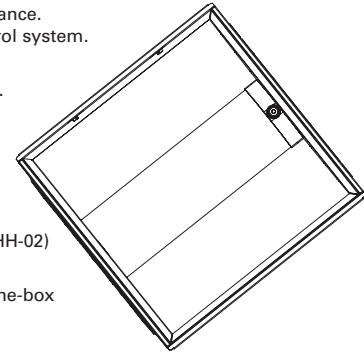
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

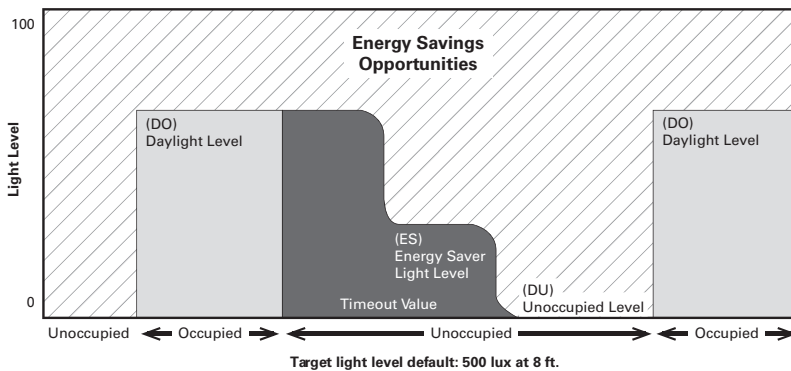
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

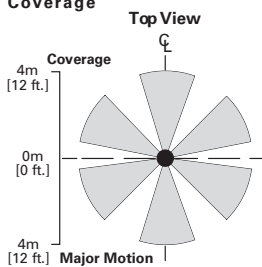


How it works:

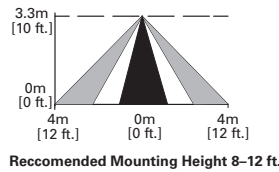
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote



Metalux

DESCRIPTION

Cruze LED is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 79% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Catalog #		Type
Project		
Comments		Date
Prepared by		

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Sheilding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



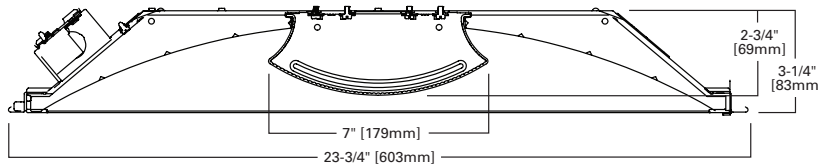
22CZ LED

2' X 2' TROFFER LED MODULE

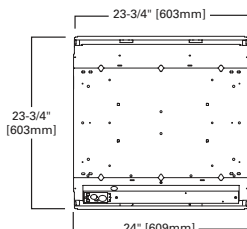
Specification Grade Troffer



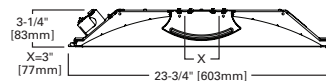
Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	Ceiling Type	Trim Type
			Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium® Qualified
 NOM Compliant

*See Drywall Frame Kit Accessory in Ordering Information Section

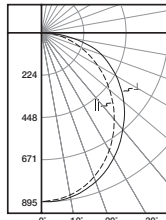
LINEAR DISCONNECT

Safe and convenient means of disconnecting power





PHOTOMETRICS

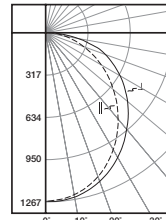


22CZ-LD5-24-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.17 x mounting height, (L) 1.25 x mounting height
 Lumens: 2470
 Input Watts: 19.6W
 Efficacy: 126.0 lm/W
 Test Report:
 22CZ-LD5-24-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across L
0	893	893	893
5	884	890	892
10	866	875	879
15	838	849	857
20	799	815	829
25	753	774	793
30	701	725	750
35	641	670	703
40	577	611	651
45	511	551	602
50	445	492	548
55	379	432	490
60	313	372	434
65	249	311	374
70	186	251	315
75	126	193	231
80	74	122	140
85	30	47	46
90	0	0	0



22CZ-LD5-34-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.17 x mounting height, (L) 1.25 x mounting height
 Lumens: 3497
 Input Watts: 29.4W
 Efficacy: 118.9 lm/W
 Test Report:
 22CZ-LD5-34-UNV-L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across L
0	1264	1264	1264
5	1252	1260	1263
10	1226	1239	1246
15	1186	1202	1215
20	1133	1154	1173
25	1066	1095	1122
30	991	1026	1061
35	906	949	995
40	816	866	922
45	726	782	851
50	630	697	776
55	537	612	696
60	443	527	614
65	351	439	529
70	262	356	445
75	178	273	322
80	102	170	198
85	42	67	64
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				20%													
rw	70	50	30	10	70	50	30	10										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				20%													
rw	70	50	30	10	70	50	30	10										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	680	27.5
0-40	1099	44.5
0-60	1915	77.5
0-90	2470	100.0
0-180	2470	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2314	2495	2726
55	2116	2412	2736
65	1887	2357	2834
75	1559	2388	2858
85	1102	1727	1690

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	962	27.5
0-40	1557	44.5
0-60	2711	77.5
0-90	3497	100.0
0-180	3497	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3288	3542	3854
55	2998	3417	3886
65	2660	3327	4009
75	2202	3378	3984
85	1543	2462	2352

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 79%	> 178,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

22CZ-LD5-34-UNV-L935-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,497 lm x 0.861 = 3,010 lm

Efficacy = $\frac{3,010 \text{ lm}}{29.4 \text{ W}}$ = 102.3 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

22CZ LED

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20-UNV-L830-CD1-U	1964	16.4	120
MTO	22CZ-LD5-20-UNV-L835-CD1-U	2086	16.4	127
MTO	22CZ-LD5-20-UNV-L840-CD1-U	2128	16.4	130
MTO	22CZ-LD5-20-UNV-L850-CD1-U	2302	16.4	141
MTO	22CZ-LD5-24-UNV-L830-CD1-U	2325	19.6	119
Stock	22CZ-LD5-24-UNV-L835-CD1-U	2470	19.6	126
Stock	22CZ-LD5-24-UNV-L840-CD1-U	2519	19.6	128
MTO	22CZ-LD5-24-UNV-L850-CD1-U	2725	19.6	139
MTO	22CZ-LD5-29-UNV-L830-CD1-U	2729	23.5	116
MTO	22CZ-LD5-29-UNV-L835-CD1-U	2899	23.5	123
MTO	22CZ-LD5-29-UNV-L840-CD1-U	2957	23.5	126
MTO	22CZ-LD5-29-UNV-L850-CD1-U	3199	23.5	136
MTO	22CZ-LD5-34-UNV-L830-CD1-U	3292	29.4	112
Stock	22CZ-LD5-34-UNV-L835-CD1-U	3497	29.4	119
Stock	22CZ-LD5-34-UNV-L840-CD1-U	3567	29.4	121
MTO	22CZ-LD5-34-UNV-L850-CD1-U	3858	29.4	131
MTO	22CZ-LD5-39-UNV-L830-CD1-U	3701	36.4	102
MTO	22CZ-LD5-39-UNV-L835-CD1-U	3932	36.4	108
MTO	22CZ-LD5-39-UNV-L840-CD1-U	4011	36.4	110
MTO	22CZ-LD5-39-UNV-L850-CD1-U	4338	36.4	119
MTO	22CZ-LD5-44-UNV-L830-CD1-U	4173	41.8	100
MTO	22CZ-LD5-44-UNV-L835-CD1-U	4433	41.8	106
MTO	22CZ-LD5-44-UNV-L840-CD1-U	4522	41.8	108
MTO	22CZ-LD5-44-UNV-L850-CD1-U	4891	41.8	117

*Made to order (MTO) requires a typical three week lead time.

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20-S-UNV-L830-CD1-U	2003	16.4	122
MTO	22CZ-LD5-20-S-UNV-L835-CD1-U	2128	16.4	130
MTO	22CZ-LD5-20-S-UNV-L840-CD1-U	2170	16.4	132
MTO	22CZ-LD5-20-S-UNV-L850-CD1-U	2348	16.4	143
MTO	22CZ-LD5-24-S-UNV-L830-CD1-U	2372	19.6	121
MTO	22CZ-LD5-24-S-UNV-L835-CD1-U	2519	19.6	128
MTO	22CZ-LD5-24-S-UNV-L840-CD1-U	2570	19.6	131
MTO	22CZ-LD5-24-S-UNV-L850-CD1-U	2780	19.6	142
MTO	22CZ-LD5-29-S-UNV-L830-CD1-U	2784	23.5	118
MTO	22CZ-LD5-29-S-UNV-L835-CD1-U	2957	23.5	126
MTO	22CZ-LD5-29-S-UNV-L840-CD1-U	3016	23.5	128
MTO	22CZ-LD5-29-S-UNV-L850-CD1-U	3263	23.5	139
MTO	22CZ-LD5-34-S-UNV-L830-CD1-U	3358	29.4	114
MTO	22CZ-LD5-34-S-UNV-L835-CD1-U	3567	29.4	121
MTO	22CZ-LD5-34-S-UNV-L840-CD1-U	3638	29.4	124
MTO	22CZ-LD5-34-S-UNV-L850-CD1-U	3936	29.4	134
MTO	22CZ-LD5-39-S-UNV-L830-CD1-U	3775	36.4	104
MTO	22CZ-LD5-39-S-UNV-L835-CD1-U	4011	36.4	110
MTO	22CZ-LD5-39-S-UNV-L840-CD1-U	4091	36.4	112
MTO	22CZ-LD5-39-S-UNV-L850-CD1-U	4425	36.4	122
MTO	22CZ-LD5-44-S-UNV-L830-CD1-U	4256	41.8	102
MTO	22CZ-LD5-44-S-UNV-L835-CD1-U	4522	41.8	108
MTO	22CZ-LD5-44-S-UNV-L840-CD1-U	4612	41.8	110
MTO	22CZ-LD5-44-S-UNV-L850-CD1-U	4989	41.8	119

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20SE-UNV-L830-CD1-U	1948	17.2	113
STOCK	22CZ-LD5-20SE-UNV-L835-CD1-U	2069	17.2	120
STOCK	22CZ-LD5-20SE-UNV-L840-CD1-U	2110	17.2	123
MTO	22CZ-LD5-20SE-UNV-L850-CD1-U	2283	17.2	133
MTO	22CZ-LD5-24SE-UNV-L830-CD1-U	2322	21.1	110
STOCK	22CZ-LD5-24SE-UNV-L835-CD1-U	2467	21.1	117
STOCK	22CZ-LD5-24SE-UNV-L840-CD1-U	2516	21.1	119
MTO	22CZ-LD5-24SE-UNV-L850-CD1-U	2722	21.1	129
MTO	22CZ-LD5-32SE-UNV-L830-CD1-U	3015	30.5	99
STOCK	22CZ-LD5-32SE-UNV-L835-CD1-U	3203	30.5	105
STOCK	22CZ-LD5-32SE-UNV-L840-CD1-U	3267	30.5	107
MTO	22CZ-LD5-32SE-UNV-L850-CD1-U	3534	30.5	116
MTO	22CZ-LD5-39SE-UNV-L830-CD1-U	3728	34.9	107
STOCK	22CZ-LD5-39SE-UNV-L835-CD1-U	3960	34.9	114
STOCK	22CZ-LD5-39SE-UNV-L840-CD1-U	4039	34.9	116
MTO	22CZ-LD5-39SE-UNV-L850-CD1-U	4369	34.9	125
MTO	22CZ-LD5-44SE-UNV-L830-CD1-U	4118	40.0	103
STOCK	22CZ-LD5-44SE-UNV-L835-CD1-U	4375	40.0	109
STOCK	22CZ-LD5-44SE-UNV-L840-CD1-U	4463	40.0	112
MTO	22CZ-LD5-44SE-UNV-L850-CD1-U	4827	40.0	121

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD5-20SE-S-UNV-L830-CD1-U	1987	17.2	115
MTO	22CZ-LD5-20SE-S-UNV-L835-CD1-U	2110	17.2	123
MTO	22CZ-LD5-20SE-S-UNV-L840-CD1-U	2153	17.2	125
MTO	22CZ-LD5-20SE-S-UNV-L850-CD1-U	2328	17.2	135
MTO	22CZ-LD5-24SE-S-UNV-L830-CD1-U	2369	21.1	112
MTO	22CZ-LD5-24SE-S-UNV-L835-CD1-U	2516	21.1	119
MTO	22CZ-LD5-24SE-S-UNV-L840-CD1-U	2567	21.1	122
MTO	22CZ-LD5-24SE-S-UNV-L850-CD1-U	2776	21.1	132
MTO	22CZ-LD5-32SE-S-UNV-L830-CD1-U	3075	30.5	101
MTO	22CZ-LD5-32SE-S-UNV-L835-CD1-U	3267	30.5	107
MTO	22CZ-LD5-32SE-S-UNV-L840-CD1-U	3332	30.5	109
MTO	22CZ-LD5-32SE-S-UNV-L850-CD1-U	3605	30.5	118
MTO	22CZ-LD5-39SE-S-UNV-L830-CD1-U	3802	34.9	109
MTO	22CZ-LD5-39SE-S-UNV-L835-CD1-U	4039	34.9	116
MTO	22CZ-LD5-39SE-S-UNV-L840-CD1-U	4120	34.9	118
MTO	22CZ-LD5-39SE-S-UNV-L850-CD1-U	4457	34.9	128
MTO	22CZ-LD5-44SE-S-UNV-L830-CD1-U	4201	40.0	105
MTO	22CZ-LD5-44SE-S-UNV-L835-CD1-U	4463	40.0	112
MTO	22CZ-LD5-44SE-S-UNV-L840-CD1-U	4552	40.0	114
MTO	22CZ-LD5-44SE-S-UNV-L850-CD1-U	4924	40.0	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: 22CZ-LD5-24-UNV-EL14W-L835-CD1-U
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes:

Type:
R1-EM

22CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 22CZ-LD5-34-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Series⁽⁸⁾ 22CZ=2x2 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 20=2000 Lumens 24=2400 Lumens 29=2900 Lumens 34=3400 Lumens 39=3900 Lumens 44=4400 Lumens</p> <p>Standard Efficacy Lumen Output 20SE=2000 Lumens 24SE=2400 Lumens 32SE=3200 Lumens 39SE=3900 Lumens 44SE=4400 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage⁽²⁾ 347V=347 Volt⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2)⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed⁽³⁾ EL14W=14-watt 120V-277V emergency battery pack installed⁽³⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed⁽³⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed⁽³⁾ GTD2=Bodine Generator Transfer Device⁽⁷⁾ ETS2=OTA Emergency Transfer Switch⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming)⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming)⁽⁸⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming)⁽⁸⁾ LV1=DLVP Dimming Driver (0%-100% Dimming)⁽³⁾ SD=Step Dimming Driver (50% or 100% Dimming)⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming⁽⁹⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver⁽⁹⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver⁽⁹⁾</p>	<p>Number of Drivers 1=1 Driver</p>
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Integrated Sensing Systems
SWPD1=WaveLinX Wireless Integrated Sensor⁽⁴⁾
LWIPD1=LumaWatt Pro Wireless Integrated Sensor⁽⁸⁾
LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor⁽⁸⁾
SLVPD1=DLVP Low-voltage Integrated Sensor⁽³⁾
SVPD1=0-10V Stand-alone Integrated Sensor⁽¹⁰⁾

Sensor Accessories
DV=Dual Band⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job
 Pack, in carton

- ACCESSORIES**
- EQ-CLIP-U**=T-BAR Safety Earthquake Clips⁽¹⁾
 - DF-22-W**=2' x 2' Drywall Frame Kit
 - SK-22-WS**=2' x 2' Shallow Surface Mount Kit
 - SK-22-WT**=2' x 2' Tall Surface Mount Kit
 - DF10P-C**=Decorator Dimmer, 0-10V (CD and HCD drivers only)
 - SF10P-C**=Decorator Slide Dimmer, 0-10V (CD and HCD drivers only)
 - ISHH-01**=Programming Remote for Integrated Sensor⁽¹⁰⁾
 - ISHH-02**=Personal Control Remote for Integrated Sensor⁽¹⁰⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 2000, 2400, 2900 and 3400 lumen packages and 2000SE, 2400SE and 3200SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium[®] Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Integrated Sensing and Control System Options
NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ⁽⁴⁾Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾Consult LumaWatt Pro system pages for additional details and compatibility. ⁽³⁾Consult DLVP system pages for additional details and compatibility. ⁽⁹⁾Consult SVPD series system pages for additional details and compatibility. ⁽¹⁰⁾Consult Fifth Light system pages for additional details and compatibility. ⁽⁹⁾Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options
 Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.
A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556, NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements. UL Classified 1, 2, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
22CZ-LD5-27	12.5 lbs.
22CZ-LD5-36	12.5 lbs.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519141EN
 1-22-2018



22CZ LED

INTEGRATED SENSOR

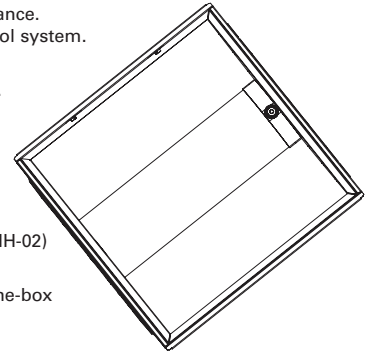
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

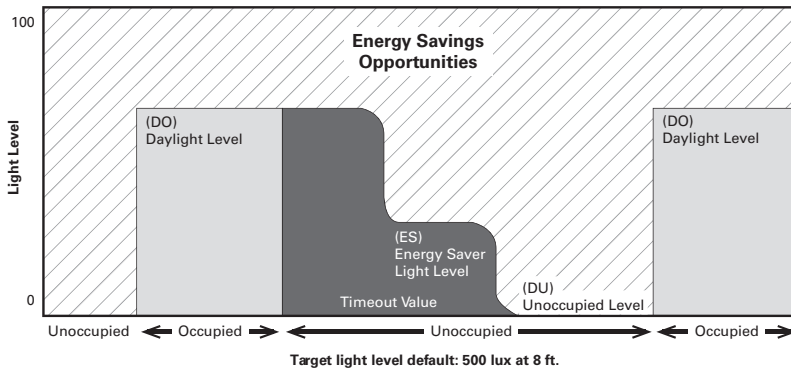
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

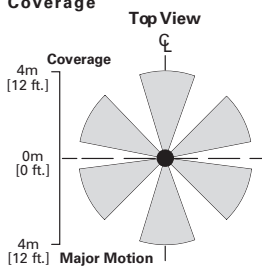


How it works:

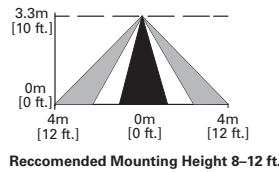
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls





Metalux

DESCRIPTION

Cruze LED is a specification lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



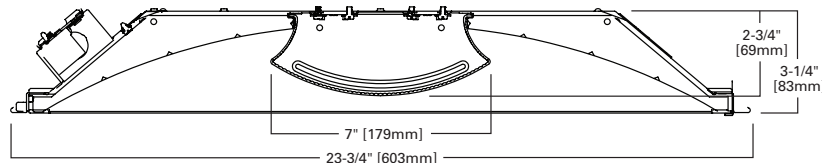
24CZ
LED

2' X 4' TROFFER LED
MODULE

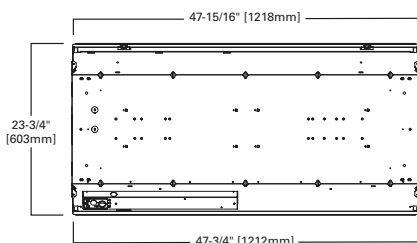
Specification Grade Troffer



Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	Ceiling Type	Trim Type
			Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*



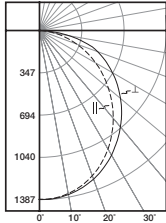
LINEAR DISCONNECT

Safe and convenient means of disconnecting power



24CZ LED

PHOTOMETRICS



24CZ-LD5-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3964
 Input Watts: 29W
 Efficacy: 136.7 lm/W
 Test Report:
 24CZ-LD5-40-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1385	1385	1385
5	1379	1375	1383
10	1355	1354	1364
15	1316	1322	1334
20	1261	1273	1292
25	1193	1213	1237
30	1115	1144	1174
35	1024	1064	1101
40	930	978	1023
45	830	889	943
50	726	797	857
55	623	704	770
60	519	608	679
65	415	512	590
70	309	417	497
75	211	326	375
80	116	219	234
85	45	87	81
90	0	0	0

Coefficients of Utilization

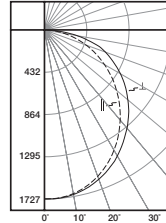
rc rw RCR	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	55	42	34	28	41	33	28	40	33	28	39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1065	26.9
0-40	1731	43.7
0-60	3043	76.8
0-90	3964	100.0
0-180	3964	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1798	1926	2043
55	1664	1880	2056
65	1504	1856	2138
75	1249	1929	2219
85	791	1529	1423



24CZ-LD5-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 4988
 Input Watts: 40.6W
 Efficacy: 122.9 lm/W
 Test Report:
 24CZ-LD5-50-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1726	1726	1726
5	1718	1712	1722
10	1689	1686	1699
15	1639	1644	1661
20	1572	1586	1607
25	1490	1512	1541
30	1392	1426	1463
35	1285	1330	1374
40	1170	1225	1284
45	1048	1116	1186
50	921	1005	1079
55	793	891	974
60	664	774	860
65	536	654	740
70	404	533	626
75	278	412	469
80	156	272	294
85	61	112	101
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	76	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1326	26.6
0-40	2159	43.3
0-60	3815	76.5
0-90	4988	100.0
0-180	4988	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2270	2417	2569
55	2118	2379	2601
65	1943	2370	2682
75	1645	2438	2775
85	1072	1968	1775

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 80%	> 186,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L835-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,964 lm x 0.861 = 3,413 lm

Efficacy = $\frac{3,413 \text{ lm}}{29 \text{ W}}$ = 117.6 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-UNV-L830-CD1-U	2833	21.6	131
MTO	24CZ-LD5-30-UNV-L835-CD1-U	3010	21.6	139
MTO	24CZ-LD5-30-UNV-L840-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-UNV-L850-CD1-U	3321	21.6	154
MTO	24CZ-LD5-35-UNV-L830-CD1-U	3289	25.3	130
MTO	24CZ-LD5-35-UNV-L835-CD1-U	3494	25.3	138
MTO	24CZ-LD5-35-UNV-L840-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-UNV-L850-CD1-U	3855	25.3	152
MTO	24CZ-LD5-40-UNV-L830-CD1-U	3731	29.0	128
STOCK	24CZ-LD5-40-UNV-L835-CD1-U	3964	29.0	137
STOCK	24CZ-LD5-40-UNV-L840-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-UNV-L850-CD1-U	4374	29.0	151
MTO	24CZ-LD5-45-UNV-L830-CD1-U	4207	35.7	118
MTO	24CZ-LD5-45-UNV-L835-CD1-U	4469	35.7	125
MTO	24CZ-LD5-45-UNV-L840-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-UNV-L850-CD1-U	4931	35.7	138
MTO	24CZ-LD5-50-UNV-L830-CD1-U	4695	40.7	115
STOCK	24CZ-LD5-50-UNV-L835-CD1-U	4988	40.7	123
STOCK	24CZ-LD5-50-UNV-L840-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-UNV-L850-CD1-U	5503	40.7	135
MTO	24CZ-LD5-55-UNV-L830-CD1-U	5181	45.8	113
MTO	24CZ-LD5-55-UNV-L835-CD1-U	5504	45.8	120
MTO	24CZ-LD5-55-UNV-L840-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-UNV-L850-CD1-U	6073	45.8	133
MTO	24CZ-LD5-60-UNV-L830-CD1-U	5741	52.2	110
MTO	24CZ-LD5-60-UNV-L835-CD1-U	6099	52.2	117
MTO	24CZ-LD5-60-UNV-L840-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-UNV-L850-CD1-U	6729	52.2	129
MTO	24CZ-LD5-65-UNV-L830-CD1-U	6193	57.6	107
MTO	24CZ-LD5-65-UNV-L835-CD1-U	6579	57.6	114
MTO	24CZ-LD5-65-UNV-L840-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-UNV-L850-CD1-U	7259	57.6	126
MTO	24CZ-LD5-70-UNV-L830-CD1-U	6668	64.2	104
MTO	24CZ-LD5-70-UNV-L835-CD1-U	7084	64.2	110
MTO	24CZ-LD5-70-UNV-L840-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-UNV-L850-CD1-U	7816	64.2	122
MTO	24CZ-LD5-75-UNV-L830-CD1-U	7052	69.1	102
MTO	24CZ-LD5-75-UNV-L835-CD1-U	7491	69.1	108
MTO	24CZ-LD5-75-UNV-L840-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-UNV-L850-CD1-U	8265	69.1	120

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-UNV-L830-CD1-U	2878	23.5	122
STOCK	24CZ-LD5-30SE-UNV-L835-CD1-U	3057	23.5	130
STOCK	24CZ-LD5-30SE-UNV-L840-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-UNV-L850-CD1-U	3373	23.5	144
MTO	24CZ-LD5-35SE-UNV-L830-CD1-U	3324	28.6	116
STOCK	24CZ-LD5-35SE-UNV-L835-CD1-U	3531	28.6	124
STOCK	24CZ-LD5-35SE-UNV-L840-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-UNV-L850-CD1-U	3896	28.6	136
MTO	24CZ-LD5-40SE-UNV-L830-CD1-U	3783	32.6	116
STOCK	24CZ-LD5-40SE-UNV-L835-CD1-U	4019	32.6	123
STOCK	24CZ-LD5-40SE-UNV-L840-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-UNV-L850-CD1-U	4434	32.6	136
MTO	24CZ-LD5-45SE-UNV-L830-CD1-U	4304	39.9	108
STOCK	24CZ-LD5-45SE-UNV-L835-CD1-U	4572	39.9	115
STOCK	24CZ-LD5-45SE-UNV-L840-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-UNV-L850-CD1-U	5044	39.9	126
MTO	24CZ-LD5-50SE-UNV-L830-CD1-U	4788	46.6	103
STOCK	24CZ-LD5-50SE-UNV-L835-CD1-U	5086	46.6	109
STOCK	24CZ-LD5-50SE-UNV-L840-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-UNV-L850-CD1-U	5612	46.6	121
MTO	24CZ-LD5-55SE-UNV-L830-CD1-U	5216	54.7	95
MTO	24CZ-LD5-55SE-UNV-L835-CD1-U	5541	54.7	101
MTO	24CZ-LD5-55SE-UNV-L840-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-UNV-L850-CD1-U	6114	54.7	112
MTO	24CZ-LD5-60SE-UNV-L830-CD1-U	5611	60.0	94
MTO	24CZ-LD5-60SE-UNV-L835-CD1-U	5961	60.0	99
MTO	24CZ-LD5-60SE-UNV-L840-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-UNV-L850-CD1-U	6577	60.0	110
MTO	24CZ-LD5-65SE-UNV-L830-CD1-U	6154	59.6	103
MTO	24CZ-LD5-65SE-UNV-L835-CD1-U	6537	59.6	110
MTO	24CZ-LD5-65SE-UNV-L840-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-UNV-L850-CD1-U	7213	59.6	121

*Made to order (MTO) requires a typical three week lead time.



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-S-UNV-L830-CD1-U	2890	21.6	134
MTO	24CZ-LD5-30-S-UNV-L835-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-S-UNV-L840-CD1-U	3132	21.6	145
MTO	24CZ-LD5-30-S-UNV-L850-CD1-U	3387	21.6	157
MTO	24CZ-LD5-35-S-UNV-L830-CD1-U	3355	25.3	132
MTO	24CZ-LD5-35-S-UNV-L835-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-S-UNV-L840-CD1-U	3635	25.3	144
MTO	24CZ-LD5-35-S-UNV-L850-CD1-U	3932	25.3	155
MTO	24CZ-LD5-40-S-UNV-L830-CD1-U	3806	29.0	131
MTO	24CZ-LD5-40-S-UNV-L835-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-S-UNV-L840-CD1-U	4124	29.0	142
MTO	24CZ-LD5-40-S-UNV-L850-CD1-U	4461	29.0	154
MTO	24CZ-LD5-45-S-UNV-L830-CD1-U	4291	35.7	120
MTO	24CZ-LD5-45-S-UNV-L835-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-S-UNV-L840-CD1-U	4650	35.7	130
MTO	24CZ-LD5-45-S-UNV-L850-CD1-U	5029	35.7	141
MTO	24CZ-LD5-50-S-UNV-L830-CD1-U	4789	40.7	118
MTO	24CZ-LD5-50-S-UNV-L835-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-S-UNV-L840-CD1-U	5190	40.7	128
MTO	24CZ-LD5-50-S-UNV-L850-CD1-U	5614	40.7	138
MTO	24CZ-LD5-55-S-UNV-L830-CD1-U	5285	45.8	115
MTO	24CZ-LD5-55-S-UNV-L835-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-S-UNV-L840-CD1-U	5726	45.8	125
MTO	24CZ-LD5-55-S-UNV-L850-CD1-U	6194	45.8	135
MTO	24CZ-LD5-60-S-UNV-L830-CD1-U	5856	52.2	112
MTO	24CZ-LD5-60-S-UNV-L835-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-S-UNV-L840-CD1-U	6345	52.2	122
MTO	24CZ-LD5-60-S-UNV-L850-CD1-U	6864	52.2	132
MTO	24CZ-LD5-65-S-UNV-L830-CD1-U	6317	57.6	110
MTO	24CZ-LD5-65-S-UNV-L835-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-S-UNV-L840-CD1-U	6845	57.6	119
MTO	24CZ-LD5-65-S-UNV-L850-CD1-U	7404	57.6	128
MTO	24CZ-LD5-70-S-UNV-L830-CD1-U	6802	64.2	106
MTO	24CZ-LD5-70-S-UNV-L835-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-S-UNV-L840-CD1-U	7370	64.2	115
MTO	24CZ-LD5-70-S-UNV-L850-CD1-U	7972	64.2	124
MTO	24CZ-LD5-75-S-UNV-L830-CD1-U	7193	69.1	104
MTO	24CZ-LD5-75-S-UNV-L835-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-S-UNV-L840-CD1-U	7794	69.1	113
MTO	24CZ-LD5-75-S-UNV-L850-CD1-U	8430	69.1	122

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-S-UNV-L830-CD1-U	2935	23.5	125
MTO	24CZ-LD5-30SE-S-UNV-L835-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-S-UNV-L840-CD1-U	3181	23.5	135
MTO	24CZ-LD5-30SE-S-UNV-L850-CD1-U	3440	23.5	146
MTO	24CZ-LD5-35SE-S-UNV-L830-CD1-U	3390	28.6	119
MTO	24CZ-LD5-35SE-S-UNV-L835-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-S-UNV-L840-CD1-U	3674	28.6	129
MTO	24CZ-LD5-35SE-S-UNV-L850-CD1-U	3974	28.6	139
MTO	24CZ-LD5-40SE-S-UNV-L830-CD1-U	3859	32.6	119
MTO	24CZ-LD5-40SE-S-UNV-L835-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-S-UNV-L840-CD1-U	4181	32.6	128
MTO	24CZ-LD5-40SE-S-UNV-L850-CD1-U	4523	32.6	139
MTO	24CZ-LD5-45SE-S-UNV-L830-CD1-U	4390	39.9	110
MTO	24CZ-LD5-45SE-S-UNV-L835-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-S-UNV-L840-CD1-U	4757	39.9	119
MTO	24CZ-LD5-45SE-S-UNV-L850-CD1-U	5145	39.9	129
MTO	24CZ-LD5-50SE-S-UNV-L830-CD1-U	4883	46.6	105
MTO	24CZ-LD5-50SE-S-UNV-L835-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-S-UNV-L840-CD1-U	5291	46.6	114
MTO	24CZ-LD5-50SE-S-UNV-L850-CD1-U	5724	46.6	123
MTO	24CZ-LD5-55SE-S-UNV-L830-CD1-U	5320	54.7	97
MTO	24CZ-LD5-55SE-S-UNV-L835-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-S-UNV-L840-CD1-U	5765	54.7	105
MTO	24CZ-LD5-55SE-S-UNV-L850-CD1-U	6236	54.7	114
MTO	24CZ-LD5-60SE-S-UNV-L830-CD1-U	5724	60.0	95
MTO	24CZ-LD5-60SE-S-UNV-L835-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-S-UNV-L840-CD1-U	6202	60.0	103
MTO	24CZ-LD5-60SE-S-UNV-L850-CD1-U	6709	60.0	112
MTO	24CZ-LD5-65SE-S-UNV-L830-CD1-U	6277	59.6	105
MTO	24CZ-LD5-65SE-S-UNV-L835-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-S-UNV-L840-CD1-U	6801	59.6	114
MTO	24CZ-LD5-65SE-S-UNV-L850-CD1-U	7357	59.6	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-30-UNV-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1A**

24CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 24CZ-LD5-45-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Series ⁽⁸⁾ 24CZ=2x4 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 30=3000 Lumens 35=3500 Lumens 40=4000 Lumens 45=4500 Lumens 50=5000 Lumens 55=5500 Lumens 60=6000 Lumens 65=6500 Lumens 70=7000 Lumens 75=7500 Lumens</p> <p>Standard Efficacy Lumen Output 30SE=3000 Lumens 35SE=3500 Lumens 40SE=4000 Lumens 45SE=4500 Lumens 50SE=5000 Lumens 55SE=5500 Lumens</p> <p>MTO Lumen Output ⁽⁹⁾ 60SE=6000 Lumens 65SE=6500 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage ⁽²⁾ 347V=347 Volt ⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2) ⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽³⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽³⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed ⁽³⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed ⁽³⁾ GT2=Bodine Generator Transfer Device ⁽⁷⁾ ETS2=IOTA Emergency Transfer Switch ⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) ⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming) ⁽³⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming) ⁽³⁾ LV1=DLVP Dimming Driver (0%-100% Dimming) ⁽³⁾ SD=Step Dimming Driver (50% or 100% Dimming) ⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁶⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver ⁽⁶⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver ⁽⁶⁾</p>	<p>Number of Drivers 1=1 Driver 2=2 Drivers</p>
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Integrated Sensing Systems
SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
LWIPD1=LumaWatt Pro Wireless Integrated Sensor ⁽⁸⁾
LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ⁽⁸⁾
SLVPD1=DLVP Low-voltage Integrated Sensor ⁽²⁾
SVPD1=0-10V Stand-alone Integrated Sensor ⁽²⁾

Sensor Accessories
DV=Dual Band ⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job
 Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
DF-24-W=2' x 4' Drywall Frame Kit
SK-24-WS=2' x 4' Shallow Surface Mount Kit
SK-24-WT=2' x 4' Tall Surface Mount Kit
DF10P-C=Decorator Dimmer, 0-10V
SF10P-=Decorator Slide Dimmer, 0-10V
ISHH-01=Programming Remote for Integrated Sensor ⁽²⁾
ISHH-02=Personal Control Remote for Integrated Sensor ⁽²⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 3000, 3500, 4000, 7000 and 7500 lumen packages and 3000SE, 3500SE, 6000SE and 6500SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. 347V driver option requires two drivers with 7000 and 7500 lumen packages. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽⁹⁾Made-to-order (MTO) requires a typical three week leadtime.

Integrated Sensing and Control System Options

NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ^(A) Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾ Consult LumaWatt Pro system pages for additional details and compatibility. ⁽²⁾ Consult DLVP system pages for additional details and compatibility. ⁽³⁾ Consult SVPD series system pages for additional details and compatibility. ⁽⁶⁾ Consult Fifth Light system pages for additional details and compatibility. ⁽⁶⁾ Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options

Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.

A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556, NEC® 250, 118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements, UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24CZ-LD5-45	20.5 lbs.
24CZ-LD5-55	20.5 lbs.

PS519142EN
 4-18-2018



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and
 dimensions subject to
 change without notice.



INTEGRATED SENSOR

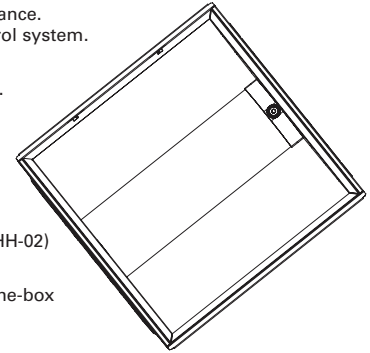
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

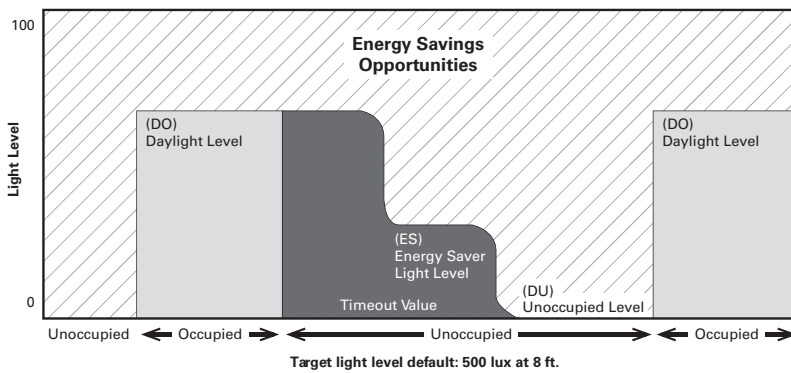
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

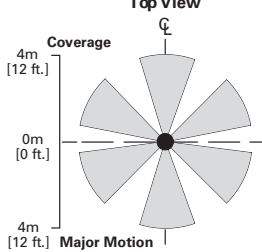


How it works:

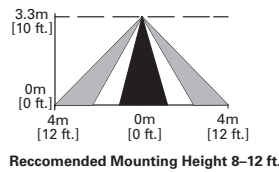
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote

Submitting Agency:



Description: **24CZ-LD5-30-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1A-EM**

Metalux

DESCRIPTION

Cruze LED is a specification lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



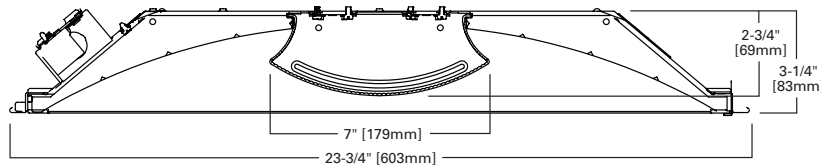
24CZ
LED

2' X 4' TROFFER LED
MODULE

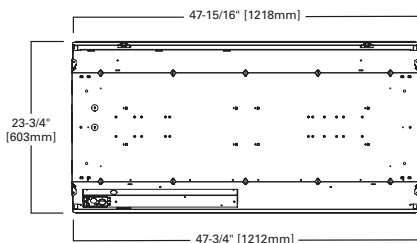
Specification Grade Troffer



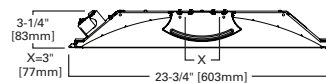
Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	Ceiling Type	Trim Type
			Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*



LINEAR DISCONNECT

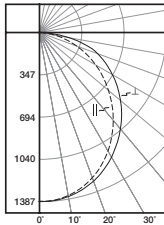
Safe and convenient means of disconnecting power

PS519142EN
4-18-2018



24CZ LED

PHOTOMETRICS



24CZ-LD5-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3964
 Input Watts: 29W
 Efficacy: 136.7 lm/W
 Test Report:
 24CZ-LD5-40-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1385	1385	1385
5	1379	1375	1383
10	1355	1354	1364
15	1316	1322	1334
20	1261	1273	1292
25	1193	1213	1237
30	1115	1144	1174
35	1024	1064	1101
40	930	978	1023
45	830	889	943
50	726	797	857
55	623	704	770
60	519	608	679
65	415	512	590
70	309	417	497
75	211	326	375
80	116	219	234
85	45	87	81
90	0	0	0

Coefficients of Utilization

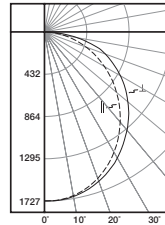
rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	55	42	34	28	41	33	28	40	33	28	39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1065	26.9
0-40	1731	43.7
0-60	3043	76.8
0-90	3964	100.0
0-180	3964	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1798	1926	2043
55	1664	1880	2056
65	1504	1856	2138
75	1249	1929	2219
85	791	1529	1423



24CZ-LD5-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 4988
 Input Watts: 40.6W
 Efficacy: 122.9 lm/W
 Test Report:
 24CZ-LD5-50-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1726	1726	1726
5	1718	1712	1722
10	1689	1686	1699
15	1639	1644	1661
20	1572	1586	1607
25	1490	1512	1541
30	1392	1426	1463
35	1285	1330	1374
40	1170	1225	1284
45	1048	1116	1186
50	921	1005	1079
55	793	891	974
60	664	774	860
65	536	654	740
70	404	533	626
75	278	412	469
80	156	272	294
85	61	112	101
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	76	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1326	26.6
0-40	2159	43.3
0-60	3815	76.5
0-90	4988	100.0
0-180	4988	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2270	2417	2569
55	2118	2379	2601
65	1943	2370	2682
75	1645	2438	2775
85	1072	1968	1775

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 80%	> 186,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L835-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,964 lm x 0.861 = 3,413 lm

Efficacy = $\frac{3,413 \text{ lm}}{29 \text{ W}}$ = 117.6 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-UNV-L830-CD1-U	2833	21.6	131
MTO	24CZ-LD5-30-UNV-L835-CD1-U	3010	21.6	139
MTO	24CZ-LD5-30-UNV-L840-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-UNV-L850-CD1-U	3321	21.6	154
MTO	24CZ-LD5-35-UNV-L830-CD1-U	3289	25.3	130
MTO	24CZ-LD5-35-UNV-L835-CD1-U	3494	25.3	138
MTO	24CZ-LD5-35-UNV-L840-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-UNV-L850-CD1-U	3855	25.3	152
MTO	24CZ-LD5-40-UNV-L830-CD1-U	3731	29.0	128
STOCK	24CZ-LD5-40-UNV-L835-CD1-U	3964	29.0	137
STOCK	24CZ-LD5-40-UNV-L840-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-UNV-L850-CD1-U	4374	29.0	151
MTO	24CZ-LD5-45-UNV-L830-CD1-U	4207	35.7	118
MTO	24CZ-LD5-45-UNV-L835-CD1-U	4469	35.7	125
MTO	24CZ-LD5-45-UNV-L840-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-UNV-L850-CD1-U	4931	35.7	138
MTO	24CZ-LD5-50-UNV-L830-CD1-U	4695	40.7	115
STOCK	24CZ-LD5-50-UNV-L835-CD1-U	4988	40.7	123
STOCK	24CZ-LD5-50-UNV-L840-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-UNV-L850-CD1-U	5503	40.7	135
MTO	24CZ-LD5-55-UNV-L830-CD1-U	5181	45.8	113
MTO	24CZ-LD5-55-UNV-L835-CD1-U	5504	45.8	120
MTO	24CZ-LD5-55-UNV-L840-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-UNV-L850-CD1-U	6073	45.8	133
MTO	24CZ-LD5-60-UNV-L830-CD1-U	5741	52.2	110
MTO	24CZ-LD5-60-UNV-L835-CD1-U	6099	52.2	117
MTO	24CZ-LD5-60-UNV-L840-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-UNV-L850-CD1-U	6729	52.2	129
MTO	24CZ-LD5-65-UNV-L830-CD1-U	6193	57.6	107
MTO	24CZ-LD5-65-UNV-L835-CD1-U	6579	57.6	114
MTO	24CZ-LD5-65-UNV-L840-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-UNV-L850-CD1-U	7259	57.6	126
MTO	24CZ-LD5-70-UNV-L830-CD1-U	6668	64.2	104
MTO	24CZ-LD5-70-UNV-L835-CD1-U	7084	64.2	110
MTO	24CZ-LD5-70-UNV-L840-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-UNV-L850-CD1-U	7816	64.2	122
MTO	24CZ-LD5-75-UNV-L830-CD1-U	7052	69.1	102
MTO	24CZ-LD5-75-UNV-L835-CD1-U	7491	69.1	108
MTO	24CZ-LD5-75-UNV-L840-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-UNV-L850-CD1-U	8265	69.1	120

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-UNV-L830-CD1-U	2878	23.5	122
STOCK	24CZ-LD5-30SE-UNV-L835-CD1-U	3057	23.5	130
STOCK	24CZ-LD5-30SE-UNV-L840-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-UNV-L850-CD1-U	3373	23.5	144
MTO	24CZ-LD5-35SE-UNV-L830-CD1-U	3324	28.6	116
STOCK	24CZ-LD5-35SE-UNV-L835-CD1-U	3531	28.6	124
STOCK	24CZ-LD5-35SE-UNV-L840-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-UNV-L850-CD1-U	3896	28.6	136
MTO	24CZ-LD5-40SE-UNV-L830-CD1-U	3783	32.6	116
STOCK	24CZ-LD5-40SE-UNV-L835-CD1-U	4019	32.6	123
STOCK	24CZ-LD5-40SE-UNV-L840-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-UNV-L850-CD1-U	4434	32.6	136
MTO	24CZ-LD5-45SE-UNV-L830-CD1-U	4304	39.9	108
STOCK	24CZ-LD5-45SE-UNV-L835-CD1-U	4572	39.9	115
STOCK	24CZ-LD5-45SE-UNV-L840-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-UNV-L850-CD1-U	5044	39.9	126
MTO	24CZ-LD5-50SE-UNV-L830-CD1-U	4788	46.6	103
STOCK	24CZ-LD5-50SE-UNV-L835-CD1-U	5086	46.6	109
STOCK	24CZ-LD5-50SE-UNV-L840-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-UNV-L850-CD1-U	5612	46.6	121
MTO	24CZ-LD5-55SE-UNV-L830-CD1-U	5216	54.7	95
MTO	24CZ-LD5-55SE-UNV-L835-CD1-U	5541	54.7	101
MTO	24CZ-LD5-55SE-UNV-L840-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-UNV-L850-CD1-U	6114	54.7	112
MTO	24CZ-LD5-60SE-UNV-L830-CD1-U	5611	60.0	94
MTO	24CZ-LD5-60SE-UNV-L835-CD1-U	5961	60.0	99
MTO	24CZ-LD5-60SE-UNV-L840-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-UNV-L850-CD1-U	6577	60.0	110
MTO	24CZ-LD5-65SE-UNV-L830-CD1-U	6154	59.6	103
MTO	24CZ-LD5-65SE-UNV-L835-CD1-U	6537	59.6	110
MTO	24CZ-LD5-65SE-UNV-L840-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-UNV-L850-CD1-U	7213	59.6	121

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-30-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1A-EM**

24CZ LED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-S-UNV-L830-CD1-U	2890	21.6	134
MTO	24CZ-LD5-30-S-UNV-L835-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-S-UNV-L840-CD1-U	3132	21.6	145
MTO	24CZ-LD5-30-S-UNV-L850-CD1-U	3387	21.6	157
MTO	24CZ-LD5-35-S-UNV-L830-CD1-U	3355	25.3	132
MTO	24CZ-LD5-35-S-UNV-L835-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-S-UNV-L840-CD1-U	3635	25.3	144
MTO	24CZ-LD5-35-S-UNV-L850-CD1-U	3932	25.3	155
MTO	24CZ-LD5-40-S-UNV-L830-CD1-U	3806	29.0	131
MTO	24CZ-LD5-40-S-UNV-L835-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-S-UNV-L840-CD1-U	4124	29.0	142
MTO	24CZ-LD5-40-S-UNV-L850-CD1-U	4461	29.0	154
MTO	24CZ-LD5-45-S-UNV-L830-CD1-U	4291	35.7	120
MTO	24CZ-LD5-45-S-UNV-L835-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-S-UNV-L840-CD1-U	4650	35.7	130
MTO	24CZ-LD5-45-S-UNV-L850-CD1-U	5029	35.7	141
MTO	24CZ-LD5-50-S-UNV-L830-CD1-U	4789	40.7	118
MTO	24CZ-LD5-50-S-UNV-L835-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-S-UNV-L840-CD1-U	5190	40.7	128
MTO	24CZ-LD5-50-S-UNV-L850-CD1-U	5614	40.7	138
MTO	24CZ-LD5-55-S-UNV-L830-CD1-U	5285	45.8	115
MTO	24CZ-LD5-55-S-UNV-L835-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-S-UNV-L840-CD1-U	5726	45.8	125
MTO	24CZ-LD5-55-S-UNV-L850-CD1-U	6194	45.8	135
MTO	24CZ-LD5-60-S-UNV-L830-CD1-U	5856	52.2	112
MTO	24CZ-LD5-60-S-UNV-L835-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-S-UNV-L840-CD1-U	6345	52.2	122
MTO	24CZ-LD5-60-S-UNV-L850-CD1-U	6864	52.2	132
MTO	24CZ-LD5-65-S-UNV-L830-CD1-U	6317	57.6	110
MTO	24CZ-LD5-65-S-UNV-L835-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-S-UNV-L840-CD1-U	6845	57.6	119
MTO	24CZ-LD5-65-S-UNV-L850-CD1-U	7404	57.6	128
MTO	24CZ-LD5-70-S-UNV-L830-CD1-U	6802	64.2	106
MTO	24CZ-LD5-70-S-UNV-L835-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-S-UNV-L840-CD1-U	7370	64.2	115
MTO	24CZ-LD5-70-S-UNV-L850-CD1-U	7972	64.2	124
MTO	24CZ-LD5-75-S-UNV-L830-CD1-U	7193	69.1	104
MTO	24CZ-LD5-75-S-UNV-L835-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-S-UNV-L840-CD1-U	7794	69.1	113
MTO	24CZ-LD5-75-S-UNV-L850-CD1-U	8430	69.1	122

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-S-UNV-L830-CD1-U	2935	23.5	125
MTO	24CZ-LD5-30SE-S-UNV-L835-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-S-UNV-L840-CD1-U	3181	23.5	135
MTO	24CZ-LD5-30SE-S-UNV-L850-CD1-U	3440	23.5	146
MTO	24CZ-LD5-35SE-S-UNV-L830-CD1-U	3390	28.6	119
MTO	24CZ-LD5-35SE-S-UNV-L835-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-S-UNV-L840-CD1-U	3674	28.6	129
MTO	24CZ-LD5-35SE-S-UNV-L850-CD1-U	3974	28.6	139
MTO	24CZ-LD5-40SE-S-UNV-L830-CD1-U	3859	32.6	119
MTO	24CZ-LD5-40SE-S-UNV-L835-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-S-UNV-L840-CD1-U	4181	32.6	128
MTO	24CZ-LD5-40SE-S-UNV-L850-CD1-U	4523	32.6	139
MTO	24CZ-LD5-45SE-S-UNV-L830-CD1-U	4390	39.9	110
MTO	24CZ-LD5-45SE-S-UNV-L835-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-S-UNV-L840-CD1-U	4757	39.9	119
MTO	24CZ-LD5-45SE-S-UNV-L850-CD1-U	5145	39.9	129
MTO	24CZ-LD5-50SE-S-UNV-L830-CD1-U	4883	46.6	105
MTO	24CZ-LD5-50SE-S-UNV-L835-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-S-UNV-L840-CD1-U	5291	46.6	114
MTO	24CZ-LD5-50SE-S-UNV-L850-CD1-U	5724	46.6	123
MTO	24CZ-LD5-55SE-S-UNV-L830-CD1-U	5320	54.7	97
MTO	24CZ-LD5-55SE-S-UNV-L835-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-S-UNV-L840-CD1-U	5765	54.7	105
MTO	24CZ-LD5-55SE-S-UNV-L850-CD1-U	6236	54.7	114
MTO	24CZ-LD5-60SE-S-UNV-L830-CD1-U	5724	60.0	95
MTO	24CZ-LD5-60SE-S-UNV-L835-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-S-UNV-L840-CD1-U	6202	60.0	103
MTO	24CZ-LD5-60SE-S-UNV-L850-CD1-U	6709	60.0	112
MTO	24CZ-LD5-65SE-S-UNV-L830-CD1-U	6277	59.6	105
MTO	24CZ-LD5-65SE-S-UNV-L835-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-S-UNV-L840-CD1-U	6801	59.6	114
MTO	24CZ-LD5-65SE-S-UNV-L850-CD1-U	7357	59.6	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-30-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1A-EM**

24CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 24CZ-LD5-45-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Series ⁽⁸⁾ 24CZ=2x4 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 30=3000 Lumens 35=3500 Lumens 40=4000 Lumens 45=4500 Lumens 50=5000 Lumens 55=5500 Lumens 60=6000 Lumens 65=6500 Lumens 70=7000 Lumens 75=7500 Lumens</p> <p>Standard Efficacy Lumen Output 30SE=3000 Lumens 35SE=3500 Lumens 40SE=4000 Lumens 45SE=4500 Lumens 50SE=5000 Lumens 55SE=5500 Lumens</p> <p>MTO Lumen Output ⁽⁹⁾ 60SE=6000 Lumens 65SE=6500 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage ⁽²⁾ 347V=347 Volt ⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2) ⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁸⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁸⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed ⁽²⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed ⁽²⁾ GTD2=Bodine Generator Transfer Device ⁽⁷⁾ ETS2=IOTA Emergency Transfer Switch ⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) ⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming) ⁽²⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming) ⁽²⁾ LV1=DLVP Dimming Driver (0%-100% Dimming) ⁽²⁾ SD=Step Dimming Driver (50% or 100% Dimming) ⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁹⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver ⁽⁹⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver ⁽⁹⁾</p>	<p>Number of Drivers 1=1 Driver 2=2 Drivers</p>
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Integrated Sensing Systems
SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
LWIPD1=LumaWatt Pro Wireless Integrated Sensor ⁽⁸⁾
LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ⁽⁸⁾
SLVPD1=DLVP Low-voltage Integrated Sensor ⁽²⁾
SVPD1=0-10V Stand-alone Integrated Sensor ⁽²⁾

Sensor Accessories
DV=Dual Band ⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job
 Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
DF-24-W=2' x 4' Drywall Frame Kit
SK-24-WS=2' x 4' Shallow Surface Mount Kit
SK-24-WT=2' x 4' Tall Surface Mount Kit
DF10P-C=Decorator Dimmer, 0-10V
SF10P-=Decorator Slide Dimmer, 0-10V
ISHH-01=Programming Remote for Integrated Sensor ⁽²⁾
ISHH-02=Personal Control Remote for Integrated Sensor ⁽²⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 3000, 3500, 4000, 7000 and 7500 lumen packages and 3000SE, 3500SE, 6000SE and 6500SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. 347V driver option requires two drivers with 7000 and 7500 lumen packages. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽⁹⁾Made-to-order (MTO) requires a typical three week leadtime.

Integrated Sensing and Control System Options

NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ^(A) Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾ Consult LumaWatt Pro system pages for additional details and compatibility. ⁽²⁾ Consult DLVP system pages for additional details and compatibility. ⁽⁹⁾ Consult SVPD series system pages for additional details and compatibility. ⁽³⁾ Consult Fifth Light system pages for additional details and compatibility. ⁽⁴⁾ Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options

Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.
A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556, NEC® 250, 118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements, UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24CZ-LD5-45	20.5 lbs.
24CZ-LD5-55	20.5 lbs.

PS519142EN
 4-18-2018



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and
 dimensions subject to
 change without notice.



INTEGRATED SENSOR

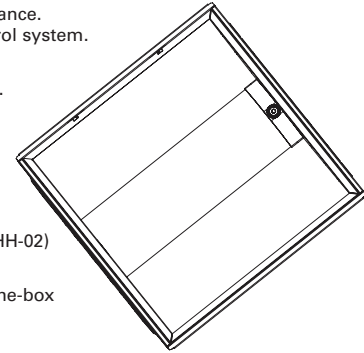
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

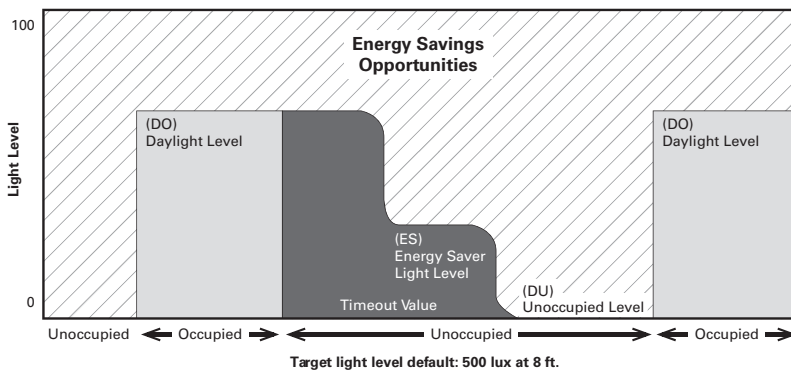
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

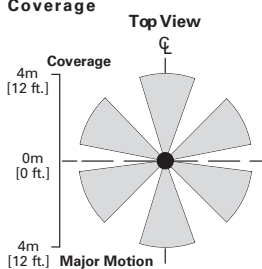


How it works:

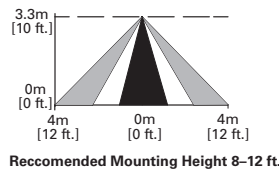
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote



Metalux

DESCRIPTION

Cruze LED is a specification lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			



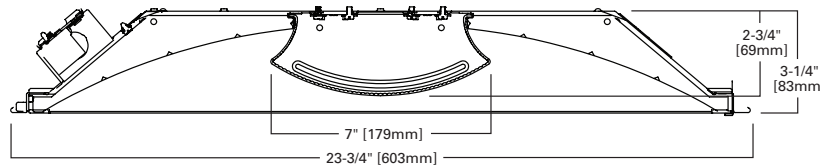
24CZ
LED

2' X 4' TROFFER LED
MODULE

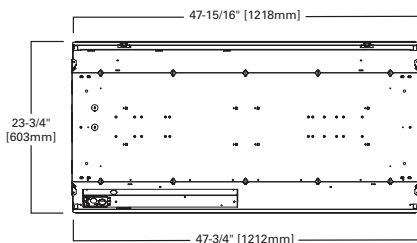
Specification Grade Troffer



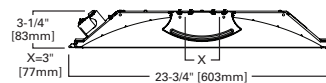
Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	Ceiling Type	Trim Type
			Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*



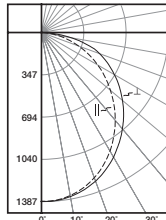
LINEAR DISCONNECT

Safe and convenient means of disconnecting power



24CZ LED

PHOTOMETRICS



24CZ-LD5-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3964
 Input Watts: 29W
 Efficacy: 136.7 lm/W
 Test Report:
 24CZ-LD5-40-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1385	1385	1385
5	1379	1375	1383
10	1355	1354	1364
15	1316	1322	1334
20	1261	1273	1292
25	1193	1213	1237
30	1115	1144	1174
35	1024	1064	1101
40	930	978	1023
45	830	889	943
50	726	797	857
55	623	704	770
60	519	608	679
65	415	512	590
70	309	417	497
75	211	326	375
80	116	219	234
85	45	87	81
90	0	0	0

Coefficients of Utilization

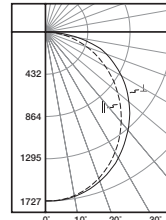
rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	55	42	34	28	41	33	28	40	33	28	39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1065	26.9
0-40	1731	43.7
0-60	3043	76.8
0-90	3964	100.0
0-180	3964	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1798	1926	2043
55	1664	1880	2056
65	1504	1856	2138
75	1249	1929	2219
85	791	1529	1423



24CZ-LD5-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 4988
 Input Watts: 40.6W
 Efficacy: 122.9 lm/W
 Test Report:
 24CZ-LD5-50-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1726	1726	1726
5	1718	1712	1722
10	1689	1686	1699
15	1639	1644	1661
20	1572	1586	1607
25	1490	1512	1541
30	1392	1426	1463
35	1285	1330	1374
40	1170	1225	1284
45	1048	1116	1186
50	921	1005	1079
55	793	891	974
60	664	774	860
65	536	654	740
70	404	533	626
75	278	412	469
80	156	272	294
85	61	112	101
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	76	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1326	26.6
0-40	2159	43.3
0-60	3815	76.5
0-90	4988	100.0
0-180	4988	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2270	2417	2569
55	2118	2379	2601
65	1943	2370	2682
75	1645	2438	2775
85	1072	1968	1775

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 80%	> 186,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L835-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,964 lm x 0.861 = 3,413 lm

Efficacy = $\frac{3,413 \text{ lm}}{29 \text{ W}}$ = 117.6 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-UNV-L830-CD1-U	2833	21.6	131
MTO	24CZ-LD5-30-UNV-L835-CD1-U	3010	21.6	139
MTO	24CZ-LD5-30-UNV-L840-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-UNV-L850-CD1-U	3321	21.6	154
MTO	24CZ-LD5-35-UNV-L830-CD1-U	3289	25.3	130
MTO	24CZ-LD5-35-UNV-L835-CD1-U	3494	25.3	138
MTO	24CZ-LD5-35-UNV-L840-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-UNV-L850-CD1-U	3855	25.3	152
MTO	24CZ-LD5-40-UNV-L830-CD1-U	3731	29.0	128
STOCK	24CZ-LD5-40-UNV-L835-CD1-U	3964	29.0	137
STOCK	24CZ-LD5-40-UNV-L840-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-UNV-L850-CD1-U	4374	29.0	151
MTO	24CZ-LD5-45-UNV-L830-CD1-U	4207	35.7	118
MTO	24CZ-LD5-45-UNV-L835-CD1-U	4469	35.7	125
MTO	24CZ-LD5-45-UNV-L840-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-UNV-L850-CD1-U	4931	35.7	138
MTO	24CZ-LD5-50-UNV-L830-CD1-U	4695	40.7	115
STOCK	24CZ-LD5-50-UNV-L835-CD1-U	4988	40.7	123
STOCK	24CZ-LD5-50-UNV-L840-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-UNV-L850-CD1-U	5503	40.7	135
MTO	24CZ-LD5-55-UNV-L830-CD1-U	5181	45.8	113
MTO	24CZ-LD5-55-UNV-L835-CD1-U	5504	45.8	120
MTO	24CZ-LD5-55-UNV-L840-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-UNV-L850-CD1-U	6073	45.8	133
MTO	24CZ-LD5-60-UNV-L830-CD1-U	5741	52.2	110
MTO	24CZ-LD5-60-UNV-L835-CD1-U	6099	52.2	117
MTO	24CZ-LD5-60-UNV-L840-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-UNV-L850-CD1-U	6729	52.2	129
MTO	24CZ-LD5-65-UNV-L830-CD1-U	6193	57.6	107
MTO	24CZ-LD5-65-UNV-L835-CD1-U	6579	57.6	114
MTO	24CZ-LD5-65-UNV-L840-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-UNV-L850-CD1-U	7259	57.6	126
MTO	24CZ-LD5-70-UNV-L830-CD1-U	6668	64.2	104
MTO	24CZ-LD5-70-UNV-L835-CD1-U	7084	64.2	110
MTO	24CZ-LD5-70-UNV-L840-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-UNV-L850-CD1-U	7816	64.2	122
MTO	24CZ-LD5-75-UNV-L830-CD1-U	7052	69.1	102
MTO	24CZ-LD5-75-UNV-L835-CD1-U	7491	69.1	108
MTO	24CZ-LD5-75-UNV-L840-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-UNV-L850-CD1-U	8265	69.1	120

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-UNV-L830-CD1-U	2878	23.5	122
STOCK	24CZ-LD5-30SE-UNV-L835-CD1-U	3057	23.5	130
STOCK	24CZ-LD5-30SE-UNV-L840-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-UNV-L850-CD1-U	3373	23.5	144
MTO	24CZ-LD5-35SE-UNV-L830-CD1-U	3324	28.6	116
STOCK	24CZ-LD5-35SE-UNV-L835-CD1-U	3531	28.6	124
STOCK	24CZ-LD5-35SE-UNV-L840-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-UNV-L850-CD1-U	3896	28.6	136
MTO	24CZ-LD5-40SE-UNV-L830-CD1-U	3783	32.6	116
STOCK	24CZ-LD5-40SE-UNV-L835-CD1-U	4019	32.6	123
STOCK	24CZ-LD5-40SE-UNV-L840-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-UNV-L850-CD1-U	4434	32.6	136
MTO	24CZ-LD5-45SE-UNV-L830-CD1-U	4304	39.9	108
STOCK	24CZ-LD5-45SE-UNV-L835-CD1-U	4572	39.9	115
STOCK	24CZ-LD5-45SE-UNV-L840-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-UNV-L850-CD1-U	5044	39.9	126
MTO	24CZ-LD5-50SE-UNV-L830-CD1-U	4788	46.6	103
STOCK	24CZ-LD5-50SE-UNV-L835-CD1-U	5086	46.6	109
STOCK	24CZ-LD5-50SE-UNV-L840-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-UNV-L850-CD1-U	5612	46.6	121
MTO	24CZ-LD5-55SE-UNV-L830-CD1-U	5216	54.7	95
MTO	24CZ-LD5-55SE-UNV-L835-CD1-U	5541	54.7	101
MTO	24CZ-LD5-55SE-UNV-L840-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-UNV-L850-CD1-U	6114	54.7	112
MTO	24CZ-LD5-60SE-UNV-L830-CD1-U	5611	60.0	94
MTO	24CZ-LD5-60SE-UNV-L835-CD1-U	5961	60.0	99
MTO	24CZ-LD5-60SE-UNV-L840-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-UNV-L850-CD1-U	6577	60.0	110
MTO	24CZ-LD5-65SE-UNV-L830-CD1-U	6154	59.6	103
MTO	24CZ-LD5-65SE-UNV-L835-CD1-U	6537	59.6	110
MTO	24CZ-LD5-65SE-UNV-L840-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-UNV-L850-CD1-U	7213	59.6	121

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-40-UNV-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1B**

24CZ LED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-S-UNV-L830-CD1-U	2890	21.6	134
MTO	24CZ-LD5-30-S-UNV-L835-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-S-UNV-L840-CD1-U	3132	21.6	145
MTO	24CZ-LD5-30-S-UNV-L850-CD1-U	3387	21.6	157
MTO	24CZ-LD5-35-S-UNV-L830-CD1-U	3355	25.3	132
MTO	24CZ-LD5-35-S-UNV-L835-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-S-UNV-L840-CD1-U	3635	25.3	144
MTO	24CZ-LD5-35-S-UNV-L850-CD1-U	3932	25.3	155
MTO	24CZ-LD5-40-S-UNV-L830-CD1-U	3806	29.0	131
MTO	24CZ-LD5-40-S-UNV-L835-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-S-UNV-L840-CD1-U	4124	29.0	142
MTO	24CZ-LD5-40-S-UNV-L850-CD1-U	4461	29.0	154
MTO	24CZ-LD5-45-S-UNV-L830-CD1-U	4291	35.7	120
MTO	24CZ-LD5-45-S-UNV-L835-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-S-UNV-L840-CD1-U	4650	35.7	130
MTO	24CZ-LD5-45-S-UNV-L850-CD1-U	5029	35.7	141
MTO	24CZ-LD5-50-S-UNV-L830-CD1-U	4789	40.7	118
MTO	24CZ-LD5-50-S-UNV-L835-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-S-UNV-L840-CD1-U	5190	40.7	128
MTO	24CZ-LD5-50-S-UNV-L850-CD1-U	5614	40.7	138
MTO	24CZ-LD5-55-S-UNV-L830-CD1-U	5285	45.8	115
MTO	24CZ-LD5-55-S-UNV-L835-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-S-UNV-L840-CD1-U	5726	45.8	125
MTO	24CZ-LD5-55-S-UNV-L850-CD1-U	6194	45.8	135
MTO	24CZ-LD5-60-S-UNV-L830-CD1-U	5856	52.2	112
MTO	24CZ-LD5-60-S-UNV-L835-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-S-UNV-L840-CD1-U	6345	52.2	122
MTO	24CZ-LD5-60-S-UNV-L850-CD1-U	6864	52.2	132
MTO	24CZ-LD5-65-S-UNV-L830-CD1-U	6317	57.6	110
MTO	24CZ-LD5-65-S-UNV-L835-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-S-UNV-L840-CD1-U	6845	57.6	119
MTO	24CZ-LD5-65-S-UNV-L850-CD1-U	7404	57.6	128
MTO	24CZ-LD5-70-S-UNV-L830-CD1-U	6802	64.2	106
MTO	24CZ-LD5-70-S-UNV-L835-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-S-UNV-L840-CD1-U	7370	64.2	115
MTO	24CZ-LD5-70-S-UNV-L850-CD1-U	7972	64.2	124
MTO	24CZ-LD5-75-S-UNV-L830-CD1-U	7193	69.1	104
MTO	24CZ-LD5-75-S-UNV-L835-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-S-UNV-L840-CD1-U	7794	69.1	113
MTO	24CZ-LD5-75-S-UNV-L850-CD1-U	8430	69.1	122

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-S-UNV-L830-CD1-U	2935	23.5	125
MTO	24CZ-LD5-30SE-S-UNV-L835-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-S-UNV-L840-CD1-U	3181	23.5	135
MTO	24CZ-LD5-30SE-S-UNV-L850-CD1-U	3440	23.5	146
MTO	24CZ-LD5-35SE-S-UNV-L830-CD1-U	3390	28.6	119
MTO	24CZ-LD5-35SE-S-UNV-L835-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-S-UNV-L840-CD1-U	3674	28.6	129
MTO	24CZ-LD5-35SE-S-UNV-L850-CD1-U	3974	28.6	139
MTO	24CZ-LD5-40SE-S-UNV-L830-CD1-U	3859	32.6	119
MTO	24CZ-LD5-40SE-S-UNV-L835-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-S-UNV-L840-CD1-U	4181	32.6	128
MTO	24CZ-LD5-40SE-S-UNV-L850-CD1-U	4523	32.6	139
MTO	24CZ-LD5-45SE-S-UNV-L830-CD1-U	4390	39.9	110
MTO	24CZ-LD5-45SE-S-UNV-L835-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-S-UNV-L840-CD1-U	4757	39.9	119
MTO	24CZ-LD5-45SE-S-UNV-L850-CD1-U	5145	39.9	129
MTO	24CZ-LD5-50SE-S-UNV-L830-CD1-U	4883	46.6	105
MTO	24CZ-LD5-50SE-S-UNV-L835-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-S-UNV-L840-CD1-U	5291	46.6	114
MTO	24CZ-LD5-50SE-S-UNV-L850-CD1-U	5724	46.6	123
MTO	24CZ-LD5-55SE-S-UNV-L830-CD1-U	5320	54.7	97
MTO	24CZ-LD5-55SE-S-UNV-L835-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-S-UNV-L840-CD1-U	5765	54.7	105
MTO	24CZ-LD5-55SE-S-UNV-L850-CD1-U	6236	54.7	114
MTO	24CZ-LD5-60SE-S-UNV-L830-CD1-U	5724	60.0	95
MTO	24CZ-LD5-60SE-S-UNV-L835-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-S-UNV-L840-CD1-U	6202	60.0	103
MTO	24CZ-LD5-60SE-S-UNV-L850-CD1-U	6709	60.0	112
MTO	24CZ-LD5-65SE-S-UNV-L830-CD1-U	6277	59.6	105
MTO	24CZ-LD5-65SE-S-UNV-L835-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-S-UNV-L840-CD1-U	6801	59.6	114
MTO	24CZ-LD5-65SE-S-UNV-L850-CD1-U	7357	59.6	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-40-UNV-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1B**

24CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 24CZ-LD5-45-UNV-L835-CD1-U

<p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> <p>Series ⁽⁸⁾ 24CZ=2x4 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 30=3000 Lumens 35=3500 Lumens 40=4000 Lumens 45=4500 Lumens 50=5000 Lumens 55=5500 Lumens 60=6000 Lumens 65=6500 Lumens 70=7000 Lumens 75=7500 Lumens</p> <p>Standard Efficacy Lumen Output 30SE=3000 Lumens 35SE=3500 Lumens 40SE=4000 Lumens 45SE=4500 Lumens 50SE=5000 Lumens 55SE=5500 Lumens</p> <p>MTO Lumen Output ⁽⁹⁾ 60SE=6000 Lumens 65SE=6500 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage ⁽²⁾ 347V=347 Volt ⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2) ⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽³⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽³⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed ⁽³⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed ⁽³⁾ GTD2=Bodine Generator Transfer Device ⁽⁷⁾ ETS2=IOTA Emergency Transfer Switch ⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) ⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming) ⁽³⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming) ⁽³⁾ LV1=DLVP Dimming Driver (0%-100% Dimming) ⁽³⁾ SD=Step Dimming Driver (50% or 100% Dimming) ⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁶⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver ⁽⁶⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver ⁽⁶⁾</p>	<p>Number of Drivers 1=1 Driver 2=2 Drivers</p>
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Integrated Sensing Systems
 SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
 LWIPD1=LumaWatt Pro Wireless Integrated Sensor ⁽⁸⁾
 LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ⁽⁸⁾
 SLVPD1=DLVP Low-voltage Integrated Sensor ⁽²⁾
 SVPD1=0-10V Stand-alone Integrated Sensor ⁽²⁾

Sensor Accessories
 DV=Dual Band ⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job
 Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
 DF-24-W=2' x 4' Drywall Frame Kit
 SK-24-WS=2' x 4' Shallow Surface Mount Kit
 SK-24-WT=2' x 4' Tall Surface Mount Kit
 DF10P-C=Decorator Dimmer, 0-10V
 SF10P- =Decorator Slide Dimmer, 0-10V
 ISHH-01=Programming Remote for Integrated Sensor ⁽²⁾
 ISHH-02=Personal Control Remote for Integrated Sensor ⁽²⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 3000, 3500, 4000, 7000 and 7500 lumen packages and 3000SE, 3500SE, 6000SE and 6500SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. 347V driver option requires two drivers with 7000 and 7500 lumen packages. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽⁹⁾Made-to-order (MTO) requires a typical three week leadtime.

Integrated Sensing and Control System Options

NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ^(A) Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾ Consult LumaWatt Pro system pages for additional details and compatibility. ⁽²⁾ Consult DLVP system pages for additional details and compatibility. ⁽³⁾ Consult SVPD series system pages for additional details and compatibility. ⁽⁶⁾ Consult Fifth Light system pages for additional details and compatibility. ⁽⁶⁾ Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options

Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.

A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556, NEC® 250, 118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements, UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24CZ-LD5-45	20.5 lbs.
24CZ-LD5-55	20.5 lbs.

PS519142EN
 4-18-2018



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and
 dimensions subject to
 change without notice.



INTEGRATED SENSOR

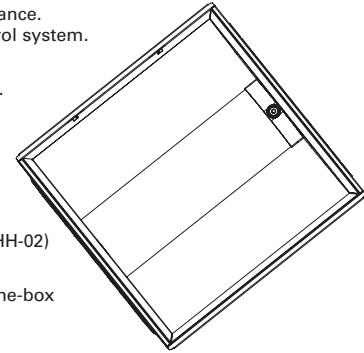
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

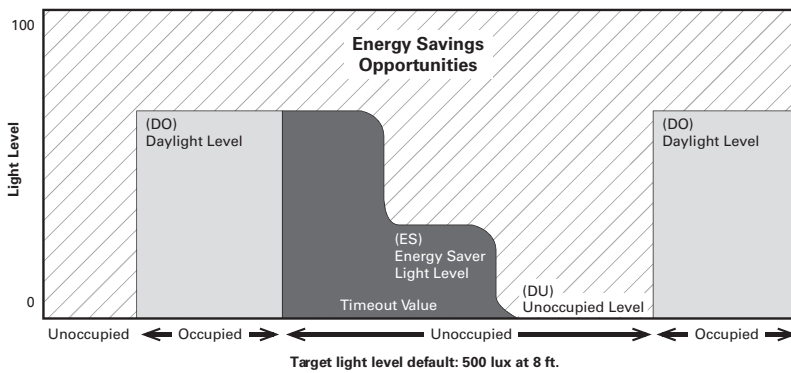
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

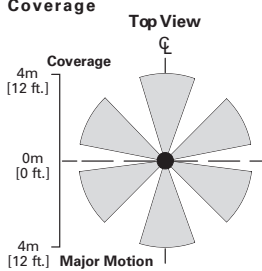


How it works:

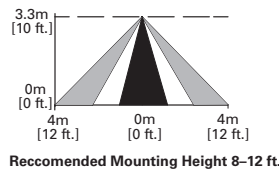
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote

Submitting Agency:



Description: **24CZ-LD5-40-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

R1B-EM

Metalux

DESCRIPTION

Cruze LED is a specification lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's Connected Lighting Systems:

- WaveLinX sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include step-dimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 60,000 hours at 80% lumen output. cULus listed. Electronic drivers are available for 120-277V and 347V applications.

Emergency Battery Pack Option

Optional 120v-277v integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

Warranty

Five year warranty.



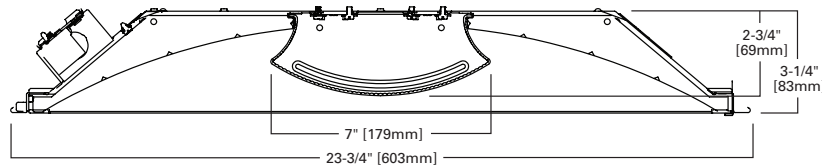
24CZ
LED

2' X 4' TROFFER LED
MODULE

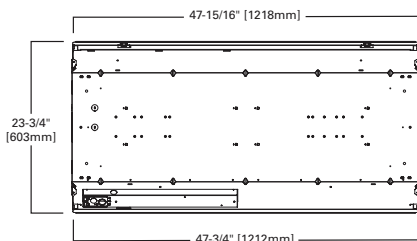
Specification Grade Troffer



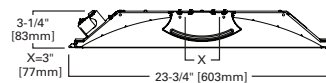
Connected Systems
[CLICK HERE](#)



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	Ceiling Type	Trim Type
			Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*



LINEAR DISCONNECT

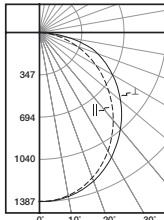
Safe and convenient means of disconnecting power

PS519142EN
4-18-2018



24CZ LED

PHOTOMETRICS



24CZ-LD5-40-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3964
 Input Watts: 29W
 Efficacy: 136.7 lm/W
 Test Report:
 24CZ-LD5-40-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1385	1385	1385
5	1379	1375	1383
10	1355	1354	1364
15	1316	1322	1334
20	1261	1273	1292
25	1193	1213	1237
30	1115	1144	1174
35	1024	1064	1101
40	930	978	1023
45	830	889	943
50	726	797	857
55	623	704	770
60	519	608	679
65	415	512	590
70	309	417	497
75	211	326	375
80	116	219	234
85	45	87	81
90	0	0	0

Coefficients of Utilization

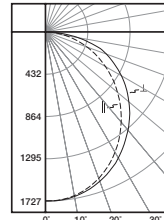
rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	55	42	34	28	41	33	28	40	33	28	39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1065	26.9
0-40	1731	43.7
0-60	3043	76.8
0-90	3964	100.0
0-180	3964	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	1798	1926	2043
55	1664	1880	2056
65	1504	1856	2138
75	1249	1929	2219
85	791	1529	1423



24CZ-LD5-50-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 4988
 Input Watts: 40.6W
 Efficacy: 122.9 lm/W
 Test Report:
 24CZ-LD5-50-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1726	1726	1726
5	1718	1712	1722
10	1689	1686	1699
15	1639	1644	1661
20	1572	1586	1607
25	1490	1512	1541
30	1392	1426	1463
35	1285	1330	1374
40	1170	1225	1284
45	1048	1116	1186
50	921	1005	1079
55	793	891	974
60	664	774	860
65	536	654	740
70	404	533	626
75	278	412	469
80	156	272	294
85	61	112	101
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	0		
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	82	76	95	88	81	76	84	79	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1326	26.6
0-40	2159	43.3
0-60	3815	76.5
0-90	4988	100.0
0-180	4988	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2270	2417	2569
55	2118	2379	2601
65	1943	2370	2682
75	1645	2438	2775
85	1072	1968	1775

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 80%	> 186,000

90 CRI

Lumen Adjustment Factors 80->90 CRI	
3000K	0.88
3500K	0.861
4000K	0.865
5000K	0.87

Example of Lumen Adjustment Calculation

24CZ-LD5-40-UNV-L835-CD1-U
 at 90CRI at 3500K

Lumen Adjustment Factor = 0.861

Total Light Output =
 3,964 lm x 0.861 = 3,413 lm

Efficacy = $\frac{3,413 \text{ lm}}{29 \text{ W}}$ = 117.6 lm/W



ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-UNV-L830-CD1-U	2833	21.6	131
MTO	24CZ-LD5-30-UNV-L835-CD1-U	3010	21.6	139
MTO	24CZ-LD5-30-UNV-L840-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-UNV-L850-CD1-U	3321	21.6	154
MTO	24CZ-LD5-35-UNV-L830-CD1-U	3289	25.3	130
MTO	24CZ-LD5-35-UNV-L835-CD1-U	3494	25.3	138
MTO	24CZ-LD5-35-UNV-L840-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-UNV-L850-CD1-U	3855	25.3	152
MTO	24CZ-LD5-40-UNV-L830-CD1-U	3731	29.0	128
STOCK	24CZ-LD5-40-UNV-L835-CD1-U	3964	29.0	137
STOCK	24CZ-LD5-40-UNV-L840-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-UNV-L850-CD1-U	4374	29.0	151
MTO	24CZ-LD5-45-UNV-L830-CD1-U	4207	35.7	118
MTO	24CZ-LD5-45-UNV-L835-CD1-U	4469	35.7	125
MTO	24CZ-LD5-45-UNV-L840-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-UNV-L850-CD1-U	4931	35.7	138
MTO	24CZ-LD5-50-UNV-L830-CD1-U	4695	40.7	115
STOCK	24CZ-LD5-50-UNV-L835-CD1-U	4988	40.7	123
STOCK	24CZ-LD5-50-UNV-L840-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-UNV-L850-CD1-U	5503	40.7	135
MTO	24CZ-LD5-55-UNV-L830-CD1-U	5181	45.8	113
MTO	24CZ-LD5-55-UNV-L835-CD1-U	5504	45.8	120
MTO	24CZ-LD5-55-UNV-L840-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-UNV-L850-CD1-U	6073	45.8	133
MTO	24CZ-LD5-60-UNV-L830-CD1-U	5741	52.2	110
MTO	24CZ-LD5-60-UNV-L835-CD1-U	6099	52.2	117
MTO	24CZ-LD5-60-UNV-L840-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-UNV-L850-CD1-U	6729	52.2	129
MTO	24CZ-LD5-65-UNV-L830-CD1-U	6193	57.6	107
MTO	24CZ-LD5-65-UNV-L835-CD1-U	6579	57.6	114
MTO	24CZ-LD5-65-UNV-L840-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-UNV-L850-CD1-U	7259	57.6	126
MTO	24CZ-LD5-70-UNV-L830-CD1-U	6668	64.2	104
MTO	24CZ-LD5-70-UNV-L835-CD1-U	7084	64.2	110
MTO	24CZ-LD5-70-UNV-L840-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-UNV-L850-CD1-U	7816	64.2	122
MTO	24CZ-LD5-75-UNV-L830-CD1-U	7052	69.1	102
MTO	24CZ-LD5-75-UNV-L835-CD1-U	7491	69.1	108
MTO	24CZ-LD5-75-UNV-L840-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-UNV-L850-CD1-U	8265	69.1	120

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-UNV-L830-CD1-U	2878	23.5	122
STOCK	24CZ-LD5-30SE-UNV-L835-CD1-U	3057	23.5	130
STOCK	24CZ-LD5-30SE-UNV-L840-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-UNV-L850-CD1-U	3373	23.5	144
MTO	24CZ-LD5-35SE-UNV-L830-CD1-U	3324	28.6	116
STOCK	24CZ-LD5-35SE-UNV-L835-CD1-U	3531	28.6	124
STOCK	24CZ-LD5-35SE-UNV-L840-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-UNV-L850-CD1-U	3896	28.6	136
MTO	24CZ-LD5-40SE-UNV-L830-CD1-U	3783	32.6	116
STOCK	24CZ-LD5-40SE-UNV-L835-CD1-U	4019	32.6	123
STOCK	24CZ-LD5-40SE-UNV-L840-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-UNV-L850-CD1-U	4434	32.6	136
MTO	24CZ-LD5-45SE-UNV-L830-CD1-U	4304	39.9	108
STOCK	24CZ-LD5-45SE-UNV-L835-CD1-U	4572	39.9	115
STOCK	24CZ-LD5-45SE-UNV-L840-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-UNV-L850-CD1-U	5044	39.9	126
MTO	24CZ-LD5-50SE-UNV-L830-CD1-U	4788	46.6	103
STOCK	24CZ-LD5-50SE-UNV-L835-CD1-U	5086	46.6	109
STOCK	24CZ-LD5-50SE-UNV-L840-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-UNV-L850-CD1-U	5612	46.6	121
MTO	24CZ-LD5-55SE-UNV-L830-CD1-U	5216	54.7	95
MTO	24CZ-LD5-55SE-UNV-L835-CD1-U	5541	54.7	101
MTO	24CZ-LD5-55SE-UNV-L840-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-UNV-L850-CD1-U	6114	54.7	112
MTO	24CZ-LD5-60SE-UNV-L830-CD1-U	5611	60.0	94
MTO	24CZ-LD5-60SE-UNV-L835-CD1-U	5961	60.0	99
MTO	24CZ-LD5-60SE-UNV-L840-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-UNV-L850-CD1-U	6577	60.0	110
MTO	24CZ-LD5-65SE-UNV-L830-CD1-U	6154	59.6	103
MTO	24CZ-LD5-65SE-UNV-L835-CD1-U	6537	59.6	110
MTO	24CZ-LD5-65SE-UNV-L840-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-UNV-L850-CD1-U	7213	59.6	121

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-40-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

R1B-EM

24CZ LED

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30-S-UNV-L830-CD1-U	2890	21.6	134
MTO	24CZ-LD5-30-S-UNV-L835-CD1-U	3070	21.6	142
MTO	24CZ-LD5-30-S-UNV-L840-CD1-U	3132	21.6	145
MTO	24CZ-LD5-30-S-UNV-L850-CD1-U	3387	21.6	157
MTO	24CZ-LD5-35-S-UNV-L830-CD1-U	3355	25.3	132
MTO	24CZ-LD5-35-S-UNV-L835-CD1-U	3564	25.3	141
MTO	24CZ-LD5-35-S-UNV-L840-CD1-U	3635	25.3	144
MTO	24CZ-LD5-35-S-UNV-L850-CD1-U	3932	25.3	155
MTO	24CZ-LD5-40-S-UNV-L830-CD1-U	3806	29.0	131
MTO	24CZ-LD5-40-S-UNV-L835-CD1-U	4043	29.0	139
MTO	24CZ-LD5-40-S-UNV-L840-CD1-U	4124	29.0	142
MTO	24CZ-LD5-40-S-UNV-L850-CD1-U	4461	29.0	154
MTO	24CZ-LD5-45-S-UNV-L830-CD1-U	4291	35.7	120
MTO	24CZ-LD5-45-S-UNV-L835-CD1-U	4558	35.7	128
MTO	24CZ-LD5-45-S-UNV-L840-CD1-U	4650	35.7	130
MTO	24CZ-LD5-45-S-UNV-L850-CD1-U	5029	35.7	141
MTO	24CZ-LD5-50-S-UNV-L830-CD1-U	4789	40.7	118
MTO	24CZ-LD5-50-S-UNV-L835-CD1-U	5088	40.7	125
MTO	24CZ-LD5-50-S-UNV-L840-CD1-U	5190	40.7	128
MTO	24CZ-LD5-50-S-UNV-L850-CD1-U	5614	40.7	138
MTO	24CZ-LD5-55-S-UNV-L830-CD1-U	5285	45.8	115
MTO	24CZ-LD5-55-S-UNV-L835-CD1-U	5614	45.8	123
MTO	24CZ-LD5-55-S-UNV-L840-CD1-U	5726	45.8	125
MTO	24CZ-LD5-55-S-UNV-L850-CD1-U	6194	45.8	135
MTO	24CZ-LD5-60-S-UNV-L830-CD1-U	5856	52.2	112
MTO	24CZ-LD5-60-S-UNV-L835-CD1-U	6221	52.2	119
MTO	24CZ-LD5-60-S-UNV-L840-CD1-U	6345	52.2	122
MTO	24CZ-LD5-60-S-UNV-L850-CD1-U	6864	52.2	132
MTO	24CZ-LD5-65-S-UNV-L830-CD1-U	6317	57.6	110
MTO	24CZ-LD5-65-S-UNV-L835-CD1-U	6711	57.6	116
MTO	24CZ-LD5-65-S-UNV-L840-CD1-U	6845	57.6	119
MTO	24CZ-LD5-65-S-UNV-L850-CD1-U	7404	57.6	128
MTO	24CZ-LD5-70-S-UNV-L830-CD1-U	6802	64.2	106
MTO	24CZ-LD5-70-S-UNV-L835-CD1-U	7226	64.2	113
MTO	24CZ-LD5-70-S-UNV-L840-CD1-U	7370	64.2	115
MTO	24CZ-LD5-70-S-UNV-L850-CD1-U	7972	64.2	124
MTO	24CZ-LD5-75-S-UNV-L830-CD1-U	7193	69.1	104
MTO	24CZ-LD5-75-S-UNV-L835-CD1-U	7641	69.1	111
MTO	24CZ-LD5-75-S-UNV-L840-CD1-U	7794	69.1	113
MTO	24CZ-LD5-75-S-UNV-L850-CD1-U	8430	69.1	122

*Made to order (MTO) requires a typical three week lead time.

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	24CZ-LD5-30SE-S-UNV-L830-CD1-U	2935	23.5	125
MTO	24CZ-LD5-30SE-S-UNV-L835-CD1-U	3118	23.5	133
MTO	24CZ-LD5-30SE-S-UNV-L840-CD1-U	3181	23.5	135
MTO	24CZ-LD5-30SE-S-UNV-L850-CD1-U	3440	23.5	146
MTO	24CZ-LD5-35SE-S-UNV-L830-CD1-U	3390	28.6	119
MTO	24CZ-LD5-35SE-S-UNV-L835-CD1-U	3602	28.6	126
MTO	24CZ-LD5-35SE-S-UNV-L840-CD1-U	3674	28.6	129
MTO	24CZ-LD5-35SE-S-UNV-L850-CD1-U	3974	28.6	139
MTO	24CZ-LD5-40SE-S-UNV-L830-CD1-U	3859	32.6	119
MTO	24CZ-LD5-40SE-S-UNV-L835-CD1-U	4099	32.6	126
MTO	24CZ-LD5-40SE-S-UNV-L840-CD1-U	4181	32.6	128
MTO	24CZ-LD5-40SE-S-UNV-L850-CD1-U	4523	32.6	139
MTO	24CZ-LD5-45SE-S-UNV-L830-CD1-U	4390	39.9	110
MTO	24CZ-LD5-45SE-S-UNV-L835-CD1-U	4663	39.9	117
MTO	24CZ-LD5-45SE-S-UNV-L840-CD1-U	4757	39.9	119
MTO	24CZ-LD5-45SE-S-UNV-L850-CD1-U	5145	39.9	129
MTO	24CZ-LD5-50SE-S-UNV-L830-CD1-U	4883	46.6	105
MTO	24CZ-LD5-50SE-S-UNV-L835-CD1-U	5188	46.6	111
MTO	24CZ-LD5-50SE-S-UNV-L840-CD1-U	5291	46.6	114
MTO	24CZ-LD5-50SE-S-UNV-L850-CD1-U	5724	46.6	123
MTO	24CZ-LD5-55SE-S-UNV-L830-CD1-U	5320	54.7	97
MTO	24CZ-LD5-55SE-S-UNV-L835-CD1-U	5652	54.7	103
MTO	24CZ-LD5-55SE-S-UNV-L840-CD1-U	5765	54.7	105
MTO	24CZ-LD5-55SE-S-UNV-L850-CD1-U	6236	54.7	114
MTO	24CZ-LD5-60SE-S-UNV-L830-CD1-U	5724	60.0	95
MTO	24CZ-LD5-60SE-S-UNV-L835-CD1-U	6080	60.0	101
MTO	24CZ-LD5-60SE-S-UNV-L840-CD1-U	6202	60.0	103
MTO	24CZ-LD5-60SE-S-UNV-L850-CD1-U	6709	60.0	112
MTO	24CZ-LD5-65SE-S-UNV-L830-CD1-U	6277	59.6	105
MTO	24CZ-LD5-65SE-S-UNV-L835-CD1-U	6668	59.6	112
MTO	24CZ-LD5-65SE-S-UNV-L840-CD1-U	6801	59.6	114
MTO	24CZ-LD5-65SE-S-UNV-L850-CD1-U	7357	59.6	123

*Made to order (MTO) requires a typical three week lead time.

Submitting Agency:



Description: **24CZ-LD5-40-UNV-EL14W-L835-CD1-U**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R1B-EM**

24CZ LED

ORDERING INFORMATION

SAMPLE NUMBER: 24CZ-LD5-45-UNV-L835-CD1-U

<p>Rating Blank=Standard ATW-SW4=Chicago Rated</p> <p>Series ⁽⁸⁾ 24CZ=2x4 Cruze Series</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank)</p>	<p>Lamp Type LD5=LED 5.0</p> <p>Cruze Lumen Output 30=3000 Lumens 35=3500 Lumens 40=4000 Lumens 45=4500 Lumens 50=5000 Lumens 55=5500 Lumens 60=6000 Lumens 65=6500 Lumens 70=7000 Lumens 75=7500 Lumens</p> <p>Standard Efficacy Lumen Output 30SE=3000 Lumens 35SE=3500 Lumens 40SE=4000 Lumens 45SE=4500 Lumens 50SE=5000 Lumens 55SE=5500 Lumens</p> <p>MTO Lumen Output ⁽⁹⁾ 60SE=6000 Lumens 65SE=6500 Lumens</p> <p>Shielding Blank=Ribbed Frosted Acrylic Lens (standard) S=Smooth Frosted Acrylic Lens SQP=Smooth Lens with Square Pattern Insert RDP=Smooth Lens with Round Pattern Insert</p>	<p>Voltage ⁽²⁾ 347V=347 Volt ⁽⁸⁾ UNV=Universal Voltage 120-277 48V=48 Volt Low-voltage (Class 2) ⁽²⁾</p> <p>Options Emergency EL7W=7-watt, 120V-277V emergency battery pack installed ⁽⁸⁾ EL14W=14-watt 120V-277V emergency battery pack installed ⁽⁸⁾ ELV7W=7-watt, DLVP-compatible low voltage emergency battery pack installed ⁽²⁾ ELV14W=14-watt DLVP-compatible low voltage emergency battery pack installed ⁽²⁾ GTD2=Bodine Generator Transfer Device ⁽⁷⁾ ETS2=IOTA Emergency Transfer Switch ⁽⁷⁾</p> <p>CCT L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K</p> <p>Flex A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details.</p>	<p>Driver Type CD=0-10V Dimming Driver (1%-100% Dimming) SR=Sensor-ready Dimming Driver for LWIPD1 option (1%-100% Dimming) ⁽⁸⁾ 5LTD=Fifth Light DALI Driver (10%-100% Dimming) ⁽²⁾ 5LTHD=Fifth Light Dimming Driver (1%-100% Dimming) ⁽²⁾ LV1=DLVP Dimming Driver (0%-100% Dimming) ⁽²⁾ SD=Step Dimming Driver (50% or 100% Dimming) ⁽⁴⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁹⁾ L5=Lutron 5 Series (LDE5-Series) 5%-100% EcoSystem Driver ⁽⁹⁾ LU=Lutron HiLume (L3D series) 1%-100% EcoSystem/3-wire Driver ⁽⁹⁾</p>	<p>Number of Drivers 1=1 Driver 2=2 Drivers</p>
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Integrated Sensing Systems
 SWPD1=WaveLinX Wireless Integrated Sensor ^(A)
 LWIPD1=LumaWatt Pro Wireless Integrated Sensor ⁽⁸⁾
 LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor ⁽⁸⁾
 SLVPD1=DLVP Low-voltage Integrated Sensor ⁽²⁾
 SVPD1=0-10V Stand-alone Integrated Sensor ⁽²⁾

Sensor Accessories
 DV=Dual Band ⁽⁵⁾



Packaging
U=Unit Pack
PALC=Job Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
 DF-24-W=2' x 4' Drywall Frame Kit
 SK-24-WS=2' x 4' Shallow Surface Mount Kit
 SK-24-WT=2' x 4' Tall Surface Mount Kit
 DF10P-C=Decorator Dimmer, 0-10V
 SF10P-C=Decorator Slide Dimmer, 0-10V
 ISHH-01=Programming Remote for Integrated Sensor ⁽²⁾
 ISHH-02=Personal Control Remote for Integrated Sensor ⁽²⁾

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. ⁽⁴⁾Step dim driver option is not available with 3000, 3500, 4000, 7000 and 7500 lumen packages and 3000SE, 3500SE, 6000SE and 6500SE versions. ⁽⁵⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽⁶⁾347V versions are not available with emergency options. 347V driver option requires two drivers with 7000 and 7500 lumen packages. SD, 5LTD, and SR drivers with 347V are available but not DLC qualified. ⁽⁷⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽⁸⁾DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽⁹⁾Made-to-order (MTO) requires a typical three week leadtime.

Integrated Sensing and Control System Options

NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: ^(A) Consult WaveLinX system pages for additional details and compatibility. ⁽⁸⁾ Consult LumaWatt Pro system pages for additional details and compatibility. ⁽²⁾ Consult DLVP system pages for additional details and compatibility. ⁽⁹⁾ Consult SVPD series system pages for additional details and compatibility. ⁽³⁾ Consult Fifth Light system pages for additional details and compatibility. ⁽⁴⁾ Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options

Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type.

A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556. NEC® 250.118, 300.22(C), 392.396, 330, 501.502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (formerly J-C-30B); all applicable OSHA and HUD Requirements. UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
24CZ-LD5-45	20.5 lbs.
24CZ-LD5-55	20.5 lbs.

PS519142EN
 4-18-2018



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.



INTEGRATED SENSOR

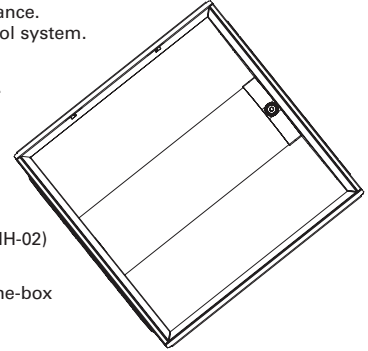
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

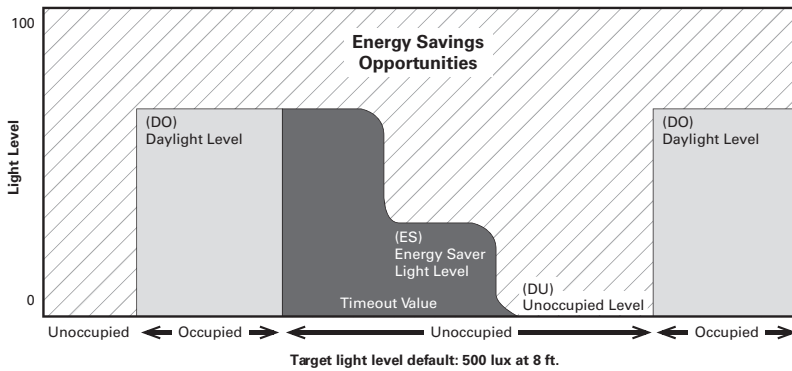
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Cruze with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

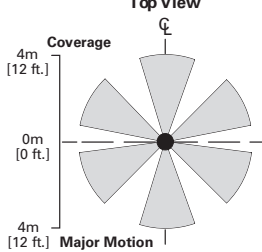


How it works:

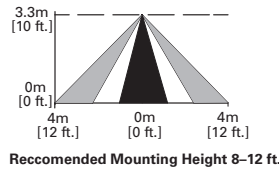
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote

Submitting Agency:



Description: **22FP3235C**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

R3

Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings but may be surface or suspension mounted. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction and to replace fluorescent troffers. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless with a narrow flange to provide a refined finish and maximize the light emitting surface. Integral grid locking clips and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface or suspension mounted using the optional kits.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinX or LumaWatt Pro.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs meet critical life-safety lighting requirements and are sold separately for field installation and remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance

Constructed of UL recognized components these indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



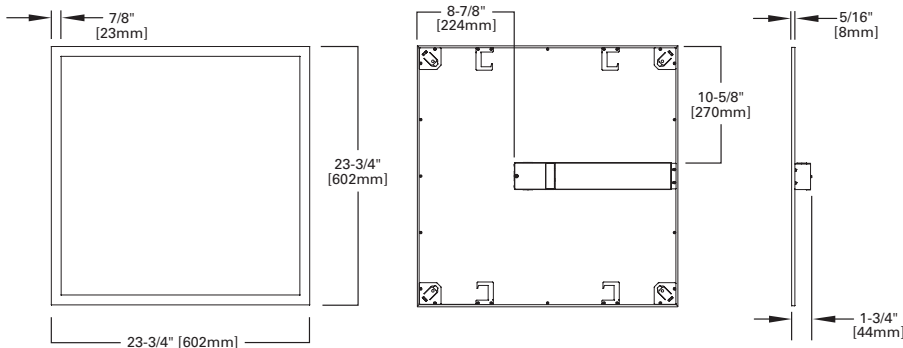
**22FP
LED**

2' X 2' LED PANEL

General Recessed LED Panel for use in Insulated Ceilings or Suspended/Surface Mount



DIMENSIONS

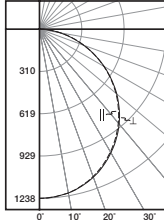


LOAD DATA

Thd	14%
Power Factor	0.96
Weight	9.4 lbs.
Low Temp. Start	-20°C



PHOTOMETRICS



22FP3240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (II) 1.25 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3560.1
 Input Watts: 30.1W
 Efficacy: 118.3 lm/W
 Test Report:
 22FP3240C.IES

Angle	Along II	45°	Across ⊥
0	1238	1238	1238
5	1233	1230	1232
10	1217	1214	1218
15	1187	1187	1190
20	1148	1148	1153
25	1097	1097	1104
30	1038	1039	1045
35	971	973	980
40	898	900	907
45	816	821	826
50	731	735	739
55	639	644	644
60	544	547	548
65	446	448	446
70	348	349	346
75	348	349	346
80	161	156	154
85	75	71	70
90	0	0	0

Coefficients of Utilization

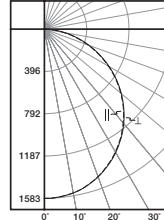
rc	Effective floor cavity reflectance																										
	80%				70%				50%				30%				10%				0%						
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100									
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83									
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69									
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58									
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	52	49									
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43									
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37									
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33									
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29									
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26									
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24									

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	958.3	26.9
0-40	1567.3	44.0
0-60	2773.3	77.9
0-90	3560.1	100.0
0-180	3560.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3105	3124	3143
55	2998	3021	3021
65	2840	2853	2840
75	2620	2610	2589
85	2316	2192	2161



22FP4240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (II) 1.25 x mounting
 height, (L) 1.25 x
 mounting height
 Lumens: 4567.1
 Input Watts: 39.3W
 Efficacy: 116.2 lm/W
 Test Report:
 22FP4240C.IES

Angle	Along II	45°	Across ⊥
0	1582	1582	1582
5	1576	1576	1576
10	1556	1556	1556
15	1520	1521	1521
20	1469	1472	1472
25	1403	1408	1408
30	1329	1333	1336
35	1245	1250	1251
40	1149	1155	1157
45	1048	1053	1054
50	936	943	944
55	819	826	826
60	695	703	703
65	568	575	577
70	440	448	450
75	314	323	326
80	194	200	205
85	88	93	94
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																										
	80%				70%				50%				30%				10%				0%						
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100									
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83									
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69									
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58									
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49									
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43									
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37									
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33									
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29									
9	56	43	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26									
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24									

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1226.4	26.9
0-40	2007.1	43.9
0-60	3555.3	77.8
0-90	4567.1	100.0
0-180	4567.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3988	4007	4011
55	3842	3875	3875
65	3617	3661	3674
75	3265	3358	3389
85	2717	2871	2902



22FP LED

ORDERING INFORMATION/PERFORMANCE

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
22FP4235C	080083801565	3500K	80	4641	38.9	119	.34	.15
22FP4240C	080083801688	4000K	80	4567	39.3	116		
22FP4250C	080083801701	5000K	80	4704	39.3	120		
22FP3235C	080083801749	3500K	80	3417	29.4	116	.26	.11
22FP3240C	080083801725	4000K	80	3560	30.0	119		
22FP3250C**	080083801862	5000K	80	3667	29.5	124	.34	.15
22FP3830C9*	080083801848	3000K	90	3654	39.1	93		
22FP2830C9*	080083801886	3000K	90	2734	29.5	93	.26	.11

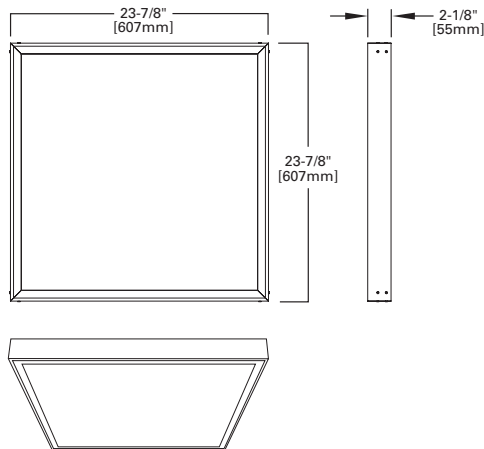
*May have extended lead-times.

**Stock available October/November 2017. Check FLASH for availability.

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT**

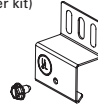
Catalog	UPC
FPSURF22	080083802722



CEILING RETENTION**

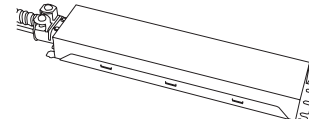
Catalog	UPC
FPEQ	080083802685

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



EMERGENCY BATTERY

Catalog	UPC	Watts
EBPLED7W	080083832265	7
EBPLED14W	080083832272	14



DRYWALL FRAME KIT

Catalog	UPC
DF-22W-U	662401232963

SUSPENSION KIT

Catalog	UPC
FPSUS2	080083802784

Mounting height from ceiling
 Min.=7-1/4" [184mm]
 Max.=27" [286mm]



SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 2'	12 lbs.	34



Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings but may be surface or suspension mounted. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction and to replace fluorescent troffers. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless with a narrow flange to provide a refined finish and maximize the light emitting surface. Integral grid locking clips and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface or suspension mounted using the optional kits.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinX or LumaWatt Pro.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs meet critical life-safety lighting requirements and are sold separately for field installation and remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance

Constructed of UL recognized components these indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



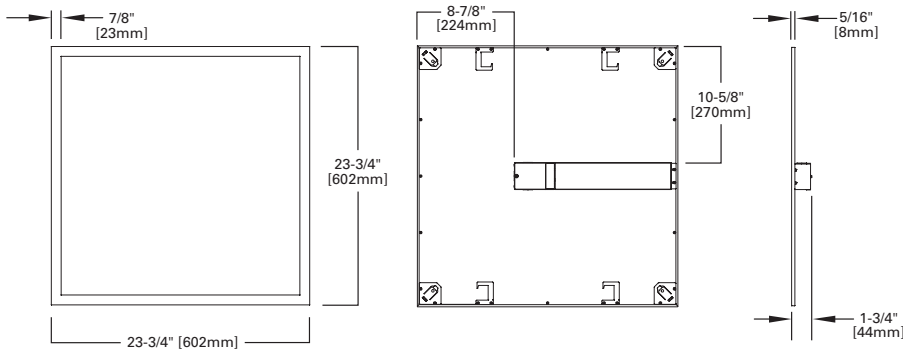
**22FP
LED**

2' X 2' LED PANEL

General Recessed LED Panel for use in Insulated Ceilings or Suspended/Surface Mount



DIMENSIONS

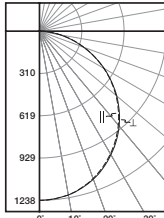


LOAD DATA

Thd	14%
Power Factor	0.96
Weight	9.4 lbs.
Low Temp. Start	-20°C



PHOTOMETRICS



22FP3240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (H) 1.25 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 3560.1
 Input Watts: 30.1W
 Efficacy: 118.3 lm/W
 Test Report:
 22FP3240C.IES

Candlepower			
Angle	Along H	45°	Across L
0	1238	1238	1238
5	1233	1230	1232
10	1217	1214	1218
15	1187	1187	1190
20	1148	1148	1153
25	1097	1097	1104
30	1038	1039	1045
35	971	973	980
40	898	900	907
45	816	821	826
50	731	735	739
55	639	644	644
60	544	547	548
65	446	448	446
70	348	349	346
75	348	349	346
80	161	156	154
85	75	71	70
90	0	0	0

Coefficients of Utilization

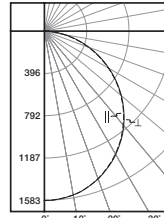
rc	Effective floor cavity reflectance										20%																		
	80%					70%					50%					30%					10%					0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																													
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100											
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83											
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69											
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58											
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	52	49											
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43											
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37											
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33											
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29											
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26											
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24											

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	958.3	26.9
0-40	1567.3	44.0
0-60	2773.3	77.9
0-90	3560.1	100.0
0-180	3560.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3105	3124	3143
55	2998	3021	3021
65	2840	2853	2840
75	2620	2610	2589
85	2316	2192	2161



22FP4240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (H) 1.25 x mounting
 height, (L) 1.25 x
 mounting height
 Lumens: 4567.1
 Input Watts: 39.3W
 Efficacy: 116.2 lm/W
 Test Report:
 22FP4240C.IES

Candlepower			
Angle	Along H	45°	Across L
0	1582	1582	1582
5	1576	1576	1576
10	1556	1556	1556
15	1520	1521	1521
20	1469	1472	1472
25	1403	1408	1408
30	1329	1333	1336
35	1245	1250	1251
40	1149	1155	1157
45	1048	1053	1054
50	936	943	944
55	819	826	826
60	695	703	703
65	568	575	577
70	440	448	450
75	314	323	326
80	194	200	205
85	88	93	94
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance										20%																		
	80%					70%					50%					30%					10%					0%			
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																													
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100											
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83											
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69											
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58											
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49											
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43											
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37											
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33											
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29											
9	56	43	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26											
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24											

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1226.4	26.9
0-40	2007.1	43.9
0-60	3555.3	77.8
0-90	4567.1	100.0
0-180	4567.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3988	4007	4011
55	3842	3875	3875
65	3617	3661	3674
75	3265	3358	3389
85	2717	2871	2902

Submitting Agency:



Description: **22FP3235C**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R3-EM**

22FP LED

ORDERING INFORMATION/PERFORMANCE

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
22FP4235C	080083801565	3500K	80	4641	38.9	119	.34	.15
22FP4240C	080083801688	4000K	80	4567	39.3	116		
22FP4250C	080083801701	5000K	80	4704	39.3	120		
22FP3235C	080083801749	3500K	80	3417	29.4	116	.26	.11
22FP3240C	080083801725	4000K	80	3560	30.0	119		
22FP3250C**	080083801862	5000K	80	3667	29.5	124	.34	.15
22FP3830C9*	080083801848	3000K	90	3654	39.1	93		
22FP2830C9*	080083801886	3000K	90	2734	29.5	93	.26	.11

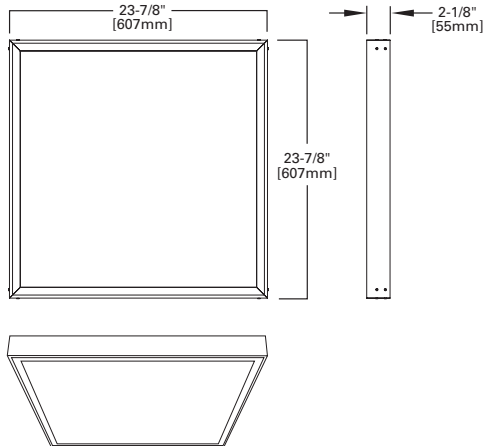
*May have extended lead-times.

**Stock available October/November 2017. Check FLASH for availability.

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT**

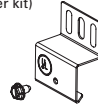
Catalog	UPC
FPSURF22	080083802722



CEILING RETENTION**

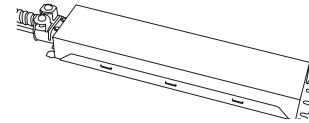
Catalog	UPC
FPEQ	080083802685

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



EMERGENCY BATTERY

Catalog	UPC	Watts
EBPLED7W	080083832265	7
EBPLED14W	080083832272	14



DRYWALL FRAME KIT

Catalog	UPC
DF-22W-U	662401232963

SUSPENSION KIT

Catalog	UPC
FPSUS2	080083802784

Mounting height from ceiling
 Min.=7-1/4" [184mm]
 Max.=27" [286mm]



SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 2'	12 lbs.	34



Sure-Lites

DESCRIPTION

When AC power fails, the Sure-Lites Emergency Battery Pack LED (EBP) automatically switches to emergency mode. The EBP maintains illumination of an LED fixture for a minimum of 90 minutes. The product line is UL924 classified for field retrofit installation and has guaranteed compatibility with Eaton LED fixtures with accessible LED drivers. The constant power feature ensures consistent light output of the fixture for 90 minutes minimum. The EZ Key and laser test features simplify maintenance and installation. These products are not for use with sealed and gasketed fixtures.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

ELECTRONIC

- Universal voltage input 120 through 277 VAC, 50/60Hz
- Constant power output of 7 Watts or 14 Watts depending on model
- Automatically senses voltage required within these ranges: EBPLED7W from 8 V to 55 V EBPLED7W-3H from 16 V to 55 V EBPLED14W from 16 V to 55 V
- Low-voltage disconnect to protect battery life
- Test Button/Indicator Light/laser test/external battery disconnect
- 0°C to 55°C operation

CONSTRUCTION

- Steel housing
- EBPLED7W = 10.06 inches
- EBPLED14W = 14.56 inches
- Plenum rated test button cable
- Lead wires and 24" flexible metallic conduit provided

- 90 minute run time EBPLED7W/ EBPLED14W
- 180 minute run time EBPLED7W-3H

WARRANTY

- Five-year warranty

CODE COMPLIANCE

- UL 924 Classified
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- California Energy Code

BATTERY

- Sealed Nickel Cadmium
- Maintenance-free, Long-life
- Full Recharge Time, 24 hours (max.)

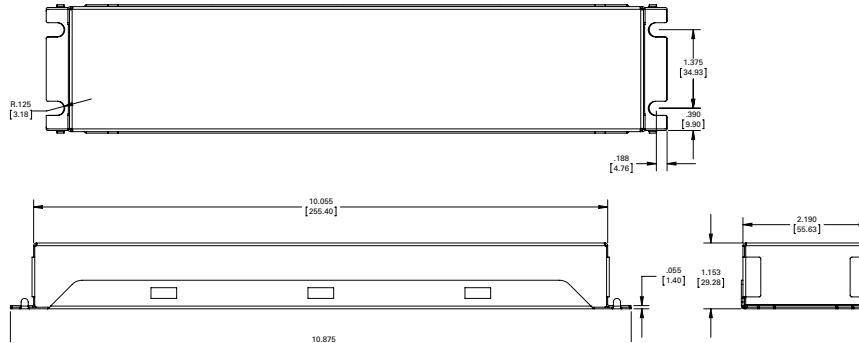
T20 Certified to California Title 20 Appliance Database

HOW TO SPECIFY

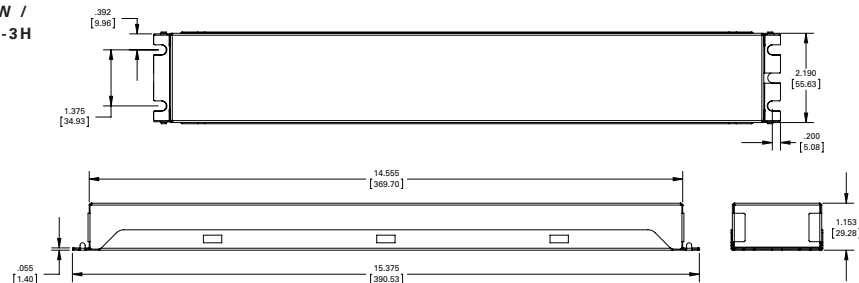
Sure-Lites LED field installable emergency battery back with automatic voltage sensing, constant wattage output, external battery disconnect, laser test capability and nickel cadmium battery.

DIMENSIONS

EBPLED7W



EBPLED14W / EBPLED7W-3H



ORDERING INFORMATION

SAMPLE NUMBER: EBPLED7W

Series	Output	Run time
EBPLED - LED Emergency Battery Pack	7W =7 Watt	_ =90 minute -3H =180 minute
	14W =14 Watt	_ =90 minute



EBPLED7W



EBPLED14W



EBPLED7W-3H

**EBPLED
Emergency Battery
Packs
LED**



Sure-Lites

EBPLED Series

TECHNICAL DATA

Universal Voltage Charger

Unit is supplied with a constant current, switch mode charging circuit which automatically detects the voltage level of the AC input (120V through 277V) and adjusts accordingly. This simplifies and mistake proof's the wiring.

Automatic Switching

The switching circuitry is designed to detect an absence of AC power and automatically switch into emergency operation. Upon restoration of AC power the lamps will automatically switch back to operating from the AC ballast.

Automatic detection of LED load forward voltage

Unit detects the LED forward voltage required (from 8V to 55V for 7W unit, 16V to 55V for 14W unit) and adjusts output current to provide constant wattage to the fixture, ensuring compatibility with a wide range of LED fixtures.

Constant Wattage Output

Unit provides constant power which ensures a consistent illumination while in emergency mode. Fixture lumen output is easily calculated by multiplying the unit wattage by the fixture efficacy (ie lumens/watt) from DLC data.

www.designlights.org

Example:

- EBPLED = 14W
- DLC EFF = 100 lumens/watt
- EM Lumens = 14W x 100 lumens/watt = 1400 lumens

Test Button/Indicator Light

Simulates interruption of AC power and illuminates LED fixture. LED charge indicator light indicates battery charger operation.

Laser Test

Enables remote testing by utilizing a laser pointer to simulate AC power loss and engagement of emergency operation. Can be mechanically activated by pushing the button or by optically activating with a laser tester.

EZ Key External Battery Disconnect

Prevents the battery from cycling during the construction phase and ensures a full battery charge for C.O. inspection.

Battery

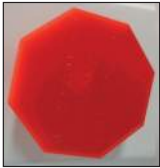
High temperature nickel cadmium battery pack is standard.

Warranty

All Sure-Lites EBP products are backed by a firm five-year warranty against defects in material and workmanship.

FEMA Requirement

EBP7W-3H provides a 3 hour run time to meet and exceed the FEMA tornado safe room requirement of two hours of operation.



EZ key



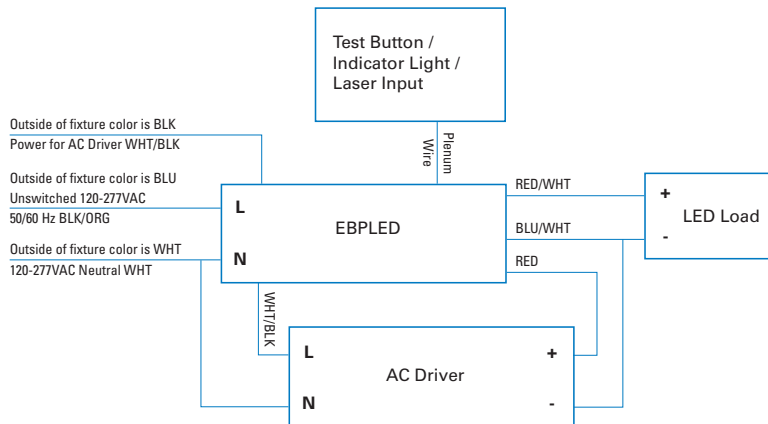
Test button



Laser tester

Part Number = LASER
(sold separately)

WIRING DIAGRAM



Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Product availability, specifications, and compliances are subject to change without notice



Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings or surface mounting. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction and to replace fluorescent troffers. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless with a narrow flange to provide a refined finish and maximize the light emitting surface. Integral grid locking clips and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface mounted using the optional kit.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinx or LumaWatt Pro.

separately for field installation and remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs meet critical life-safety lighting requirements and are sold

Compliance

Constructed of UL recognized components these indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



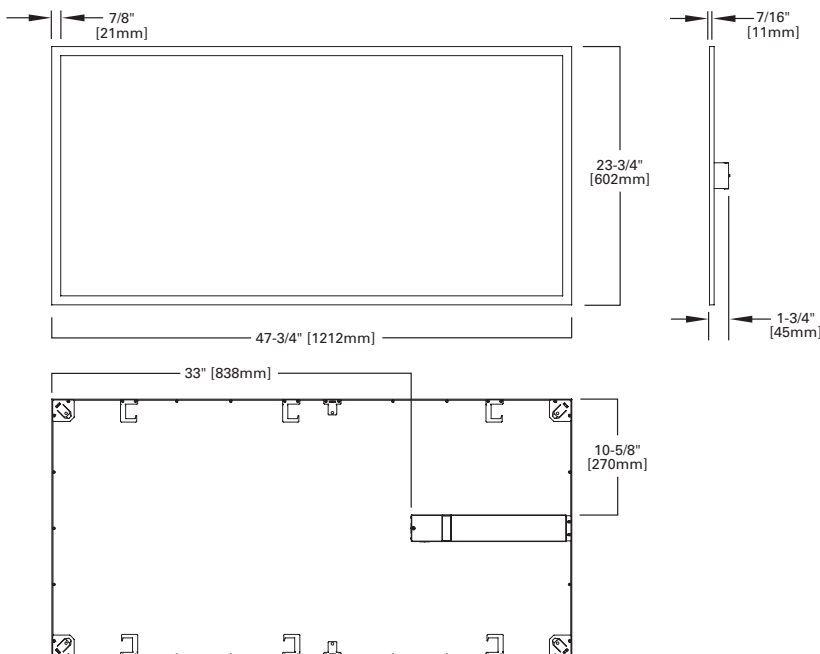
**24FP
LED**

2' X 4' LED PANEL

General LED Panel.
 Recessed in Insulated
 Ceilings or Surface Mount



DIMENSIONS



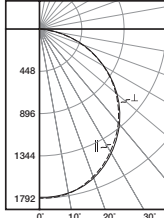
LOAD DATA

Thd	13%
Power Factor	0.96
Weight	18.5
Low Temp. Start	-20°C





PHOTOMETRICS

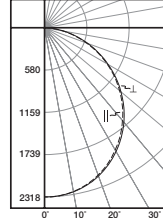


24FP4735C

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.24 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 5073
 Input Watts: 40W
 Efficacy: 126 lm/W
 Test Report:
 24FP4735C.IES

Candlepower

Angle	Along II	45°	Across L
0	1785	1785	1785
5	1786	1774	1785
10	1761	1751	1764
15	1718	1711	1726
20	1657	1655	1670
25	1582	1582	1598
30	1495	1497	1516
35	1396	1400	1418
40	1284	1290	1311
45	1167	1173	1191
50	1040	1046	1060
55	906	912	926
60	768	772	784
65	626	628	637
70	481	483	491
75	340	340	348
80	206	206	212
85	92	90	94
90	0	0	0



24FP6440C

Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (II) 1.25 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 6611.3
 Input Watts: 59.4W
 Efficacy: 111.3 lm/W
 Test Report:
 24FP6440C.IES

Candlepower

Angle	Along II	45°	Across L
0	2316	2316	2316
5	2312	2309	2308
10	2279	2279	2282
15	2225	2229	2233
20	2150	2156	2163
25	2056	2062	2072
30	1939	1951	1963
35	1814	1824	1838
40	1668	1683	1698
45	1516	1530	1544
50	1351	1364	1376
55	1182	1191	1202
60	998	1007	1014
65	812	820	827
70	622	629	642
75	438	445	456
80	266	274	282
85	116	121	126
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																									
	80%				70%				50%				30%				10%				0%					
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	88	86	83								
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69								
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58								
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50								
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43								
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38								
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33								
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30								
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27								
10	53	39	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24								

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1384	27.3
0-40	2261	44.6
0-60	3983	78.5
0-90	5073	100.0
0-180	5073	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2221	2232	2266
55	2125	2139	2172
65	1993	1999	2028
75	1768	1768	1809
85	1420	1389	1451

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																									
	80%				70%				50%				30%				10%				0%					
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	86	83								
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69								
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	60	58								
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50								
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	56	50	45	43								
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37								
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33								
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30								
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27								
10	53	39	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24								

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1798.9	27.2
0-40	2940.9	44.5
0-60	5186.4	78.4
0-90	6611.3	100.0
0-180	6611.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2885	2911	2938
55	2773	2794	2820
65	2585	2611	2633
75	2277	2313	2371
85	1791	1868	1945

Submitting Agency:



Description: **24FP4735C**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R3A

24FP LED

ORDERING INFORMATION/PERFORMANCE

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
24FP4735C	080083801466	3500K	80	4990	40.4	124	.36	.15
24FP4740C	080083801480	4000K	80	4858	40.3	121		
24FP4750C	080083801503	5000K	80	5005	40.3	124		
24FP6435C	080083801527	3500K	80	6602	58.8	112	.51	.22
24FP6440C	080083801541	4000K	80	6611	59.4	111		
24FP6450C**	080083800704	5000K	80	6746	59.4	114	.36	.15
24FP3830C9*	080083801909	3000K	90	3886	40.3	96		
24FP5830C9*	080083801923	3000K	90	5282	58.2	91		

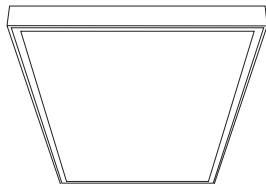
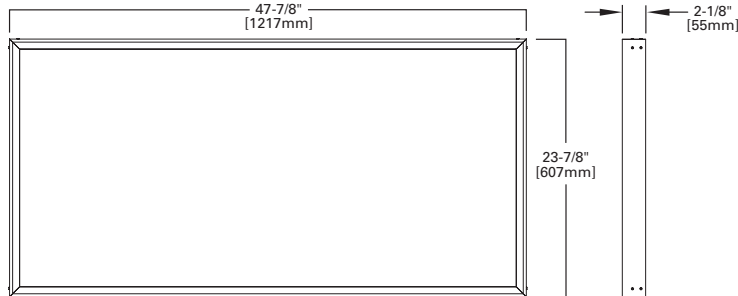
*May have extended lead-times.

**Stock available October/November 2017. Check FLASH for availability.

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT**

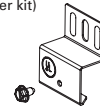
Catalog	UPC
FPSURF24	080083802746



CEILING RETENTION**

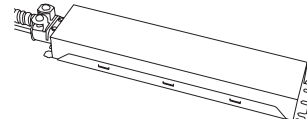
Catalog	UPC
FPEQ	080083802685

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



EMERGENCY BATTERY

Catalog	UPC	Watts
EBPLED7W	080083832265	7
EBPLED14W	080083832272	14



DRYWALL FRAME KIT

Catalog	UPC
DF-24W-U	662401232970

SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 4'	22 lbs.	17



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519169EN
 9-26-2017

Submitting Agency:



Description: **24FP4735C**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R3A-EM**

Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings or surface mounting. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction and to replace fluorescent troffers. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless with a narrow flange to provide a refined finish and maximize the light emitting surface. Integral grid locking clips and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface mounted using the optional kit.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinx or LumaWatt Pro.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs meet critical life-safety lighting requirements and are sold

separately for field installation and remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance

Constructed of UL recognized components these indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.



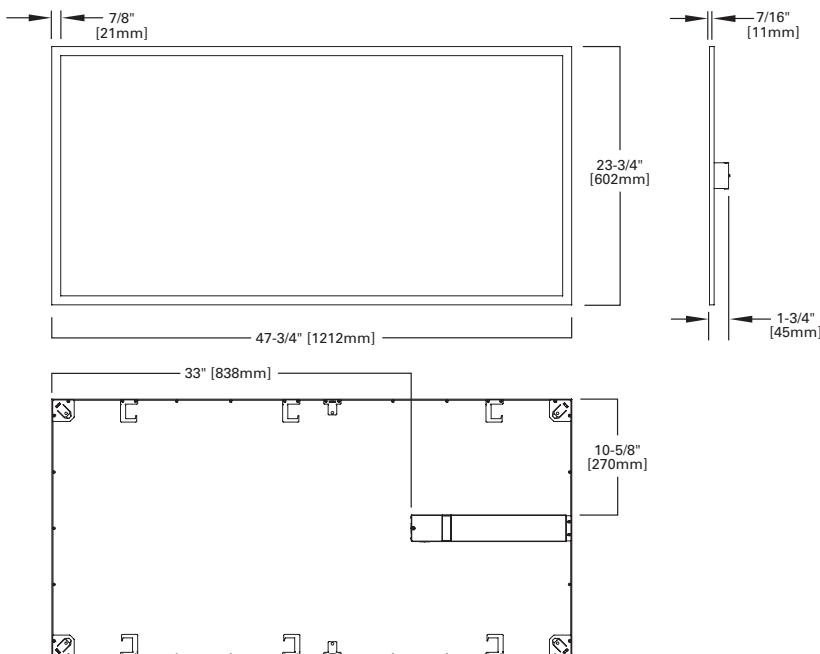
**24FP
LED**

2' X 4' LED PANEL

General LED Panel.
 Recessed in Insulated
 Ceilings or Surface Mount



DIMENSIONS

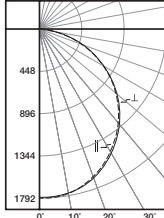


LOAD DATA

Thd	13%
Power Factor	0.96
Weight	18.5
Low Temp. Start	-20°C



PHOTOMETRICS



24FP4735C
 Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.24 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 5073
 Input Watts: 40W
 Efficacy: 126 lm/W
 Test Report:
 24FP4735C.IES

Angle	Along II	45°	Across L
0	1785	1785	1785
5	1786	1774	1785
10	1761	1751	1764
15	1718	1711	1726
20	1657	1655	1670
25	1582	1582	1598
30	1495	1497	1516
35	1396	1400	1418
40	1284	1290	1311
45	1167	1173	1191
50	1040	1046	1060
55	906	912	926
60	768	772	784
65	626	628	637
70	481	483	491
75	340	340	348
80	206	206	212
85	92	90	94
90	0	0	0

Coefficients of Utilization

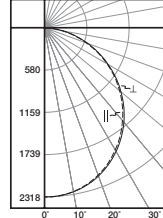
rc	Effective floor cavity reflectance																	
	80%				70%				20%									
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1384	27.3
0-40	2261	44.6
0-60	3983	78.5
0-90	5073	100.0
0-180	5073	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
30	2221	2232	2266
45	2125	2139	2172
65	1993	1999	2028
75	1768	1768	1809
85	1420	1389	1451



24FP6440C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (II) 1.25 x mounting
 height, (L) 1.26 x
 mounting height
 Lumens: 6611.3
 Input Watts: 59.4W
 Efficacy: 111.3 lm/W
 Test Report:
 24FP6440C.IES

Angle	Along II	45°	Across L
0	2316	2316	2316
5	2312	2309	2308
10	2279	2279	2282
15	2225	2229	2233
20	2150	2156	2163
25	2056	2062	2072
30	1939	1951	1963
35	1814	1824	1838
40	1668	1683	1698
45	1516	1530	1544
50	1351	1364	1376
55	1182	1191	1202
60	998	1007	1014
65	812	820	827
70	622	629	642
75	438	445	456
80	266	274	282
85	116	121	126
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				70%				20%									
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	86	83
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	65	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1798.9	27.2
0-40	2940.9	44.5
0-60	5186.4	78.4
0-90	6611.3	100.0
0-180	6611.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
30	2885	2911	2938
45	2773	2794	2820
65	2585	2611	2633
75	2277	2313	2371
85	1791	1868	1945

Submitting Agency:



Description: **24FP4735C**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R3A-EM**

24FP LED

ORDERING INFORMATION/PERFORMANCE

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
24FP4735C	080083801466	3500K	80	4990	40.4	124	.36	.15
24FP4740C	080083801480	4000K	80	4858	40.3	121		
24FP4750C	080083801503	5000K	80	5005	40.3	124		
24FP6435C	080083801527	3500K	80	6602	58.8	112	.51	.22
24FP6440C	080083801541	4000K	80	6611	59.4	111		
24FP6450C**	080083800704	5000K	80	6746	59.4	114	.36	.15
24FP3830C9*	080083801909	3000K	90	3886	40.3	96		
24FP5830C9*	080083801923	3000K	90	5282	58.2	91		

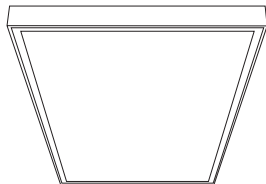
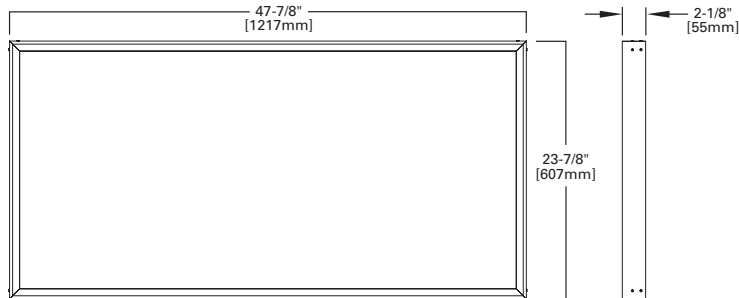
*May have extended lead-times.

**Stock available October/November 2017. Check FLASH for availability.

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT**

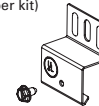
Catalog	UPC
FPSURF24	080083802746



CEILING RETENTION**

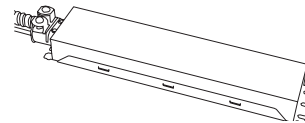
Catalog	UPC
FPEQ	080083802685

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



EMERGENCY BATTERY

Catalog	UPC	Watts
EBPLED7W	080083832265	7
EBPLED14W	080083832272	14



DRYWALL FRAME KIT

Catalog	UPC
DF-24W-U	662401232970

SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 4'	22 lbs.	17



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519169EN
 9-26-2017



Sure-Lites

DESCRIPTION

When AC power fails, the Sure-Lites Emergency Battery Pack LED (EBP) automatically switches to emergency mode. The EBP maintains illumination of an LED fixture for a minimum of 90 minutes. The product line is UL924 classified for field retrofit installation and has guaranteed compatibility with Eaton LED fixtures with accessible LED drivers. The constant power feature ensures consistent light output of the fixture for 90 minutes minimum. The EZ Key and laser test features simplify maintenance and installation. These products are not for use with sealed and gasketed fixtures.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

ELECTRONIC

- Universal voltage input 120 through 277 VAC, 50/60Hz
- Constant power output of 7 Watts or 14 Watts depending on model
- Automatically senses voltage required within these ranges: EBPLED7W from 8 V to 55 V EBPLED7W-3H from 16 V to 55 V EBPLED14W from 16 V to 55 V
- Low-voltage disconnect to protect battery life
- Test Button/Indicator Light/laser test/external battery disconnect
- 0°C to 55°C operation

CONSTRUCTION

- Steel housing
- EBPLED7W = 10.06 inches
- EBPLED14W = 14.56 inches
- Plenum rated test button cable
- Lead wires and 24" flexible metallic conduit provided

- 90 minute run time EBPLED7W/ EBPLED14W
- 180 minute run time EBPLED7W-3H

WARRANTY

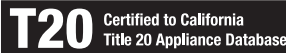
- Five-year warranty

CODE COMPLIANCE

- UL 924 Classified
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- California Energy Code

BATTERY

- Sealed Nickel Cadmium
- Maintenance-free, Long-life
- Full Recharge Time, 24 hours (max.)

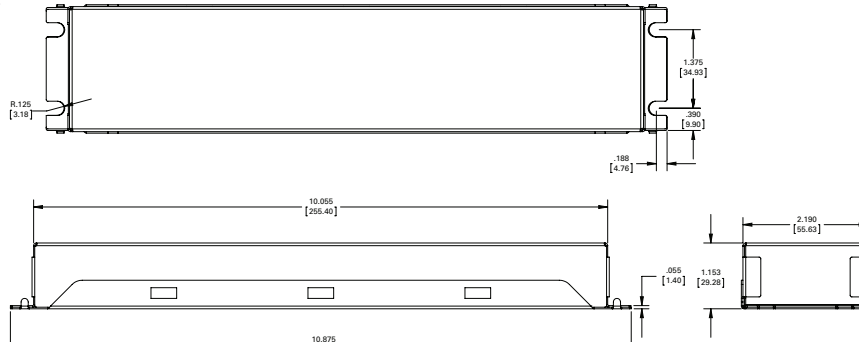


HOW TO SPECIFY

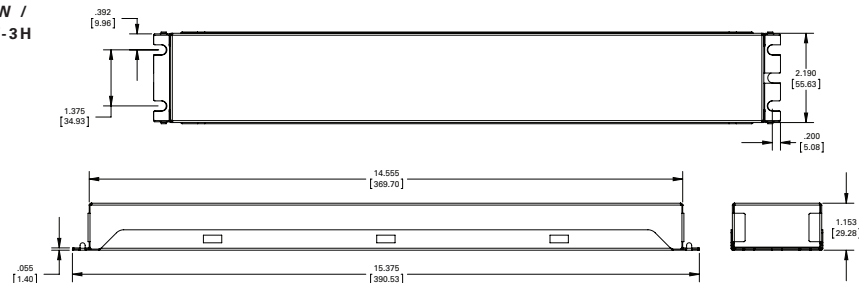
Sure-Lites LED field installable emergency battery back with automatic voltage sensing, constant wattage output, external battery disconnect, laser test capability and nickel cadmium battery.

DIMENSIONS

EBPLED7W



EBPLED14W / EBPLED7W-3H



ORDERING INFORMATION

SAMPLE NUMBER: EBPLED7W

Series	Output	Run time
EBPLED - LED Emergency Battery Pack	7W =7 Watt	_ =90 minute -3H =180 minute
	14W =14 Watt	_ =90 minute



EBPLED7W



EBPLED14W



EBPLED7W-3H

**EBPLED
Emergency Battery
Packs
LED**



Sure-Lites

EBPLED Series

TECHNICAL DATA

Universal Voltage Charger

Unit is supplied with a constant current, switch mode charging circuit which automatically detects the voltage level of the AC input (120V through 277V) and adjusts accordingly. This simplifies and mistake proof's the wiring.

Automatic Switching

The switching circuitry is designed to detect an absence of AC power and automatically switch into emergency operation. Upon restoration of AC power the lamps will automatically switch back to operating from the AC ballast.

Automatic detection of LED load forward voltage

Unit detects the LED forward voltage required (from 8V to 55V for 7W unit, 16V to 55V for 14W unit) and adjusts output current to provide constant wattage to the fixture, ensuring compatibility with a wide range of LED fixtures.

Constant Wattage Output

Unit provides constant power which ensures a consistent illumination while in emergency mode. Fixture lumen output is easily calculated by multiplying the unit wattage by the fixture efficacy (ie lumens/watt) from DLC data.

www.designlights.org

Example:

- EBPLED = 14W
- DLC EFF = 100 lumens/watt
- EM Lumens = 14W x 100 lumens/watt = 1400 lumens

Test Button/Indicator Light

Simulates interruption of AC power and illuminates LED fixture. LED charge indicator light indicates battery charger operation.

Laser Test

Enables remote testing by utilizing a laser pointer to simulate AC power loss and engagement of emergency operation. Can be mechanically activated by pushing the button or by optically activating with a laser tester.

EZ Key External Battery Disconnect

Prevents the battery from cycling during the construction phase and ensures a full battery charge for C.O. inspection.

Battery

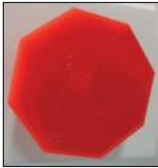
High temperature nickel cadmium battery pack is standard.

Warranty

All Sure-Lites EBP products are backed by a firm five-year warranty against defects in material and workmanship.

FEMA Requirement

EBP7W-3H provides a 3 hour run time to meet and exceed the FEMA tornado safe room requirement of two hours of operation.



EZ key



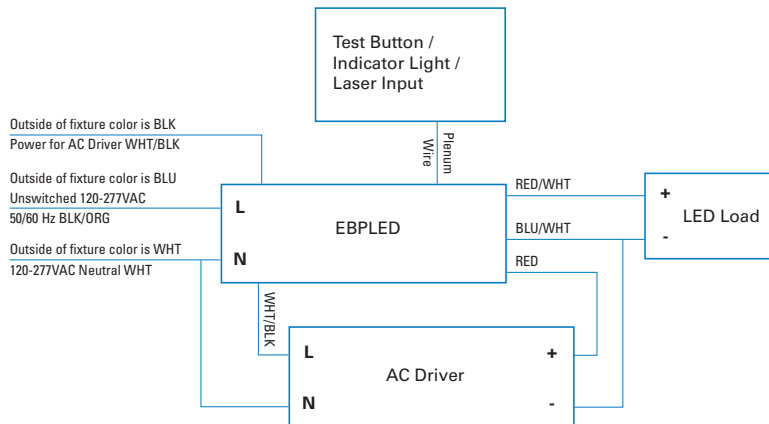
Test button



Laser tester

Part Number = LASER
(sold separately)

WIRING DIAGRAM





Fail-Safe

DESCRIPTION

The Fail-Safe FMR LED combines maximum security construction features with energy saving technology. This recessed luminaire utilizes a one-piece overlapping door frame, security lensing and tamper-resistant fasteners to maximize impact-resistance and prevent contraband concealment and unauthorized fixture penetration. ETL listed for damp locations. The FMR LED is ideal for confinement/security applications. Suitable for use in inmate cells, psychiatric wards, secure corridors and general population areas.

Catalog #	Type	
Project		
Comments	Date	
Prepared by		

SPECIFICATION FEATURES

Fasteners

Stainless steel tamper-resistant T20 TORX® screws with center pin reject standard. Allen-head screws with center pin reject optional (SF3).

Housing

Die-formed CRS body with welded corners to form a one-piece housing which prevents contraband concealment and unauthorized fixture penetration. 16GA housing standard and 14GA housing is optional.

Finish

High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

Hinge

Fixture provided with (2) stainless steel aircraft cables to attach door to housing. Concealed piano hinge optional.

Door

One-piece, CRS door frame (12, 14, 16 or 18 ga.) with die-formed edges and tightly closed corners increases rigidity. Aircraft cable secures door to housing.

Light Mask

Gasketing surrounds door frame and prevents light leaks.

Mounting

Specify optional Yoke Mounting Frame (YMF) or Swing-Out Brackets (SWBR). Eye-bolt kit for 4-point attachment to rigid structure above, included standard.

Mounting Yoke Assembly

16 ga., galvanized steel plaster frame assembly (see Accessories).

Lens

Choice of prismatic acrylic, prismatic polycarbonate or prismatic tempered glass on fixture side, clear polycarbonate or clear tempered glass on environmental side.

LEDs

LEDs available in 3500k, 4000k, 5000k with CRI > 85. Projected life is 50,000 hours at 70% lumen maintenance.

Lens Retention

Lens secured by thru-studs and vertically adjustable internal CRS hold-downs.

Transformer/Driver

Electronic driver 120-277V. 0-10V dimming standard.

Labels

ETL listed for damp locations. Wet location under covered ceiling optional.



FMR LED LD4 LED

1' Width
2' Width
Confinement/Correctional

SECURITY

Recessed Flange

NOMINAL INPUT WATTS/DELIVERED LUMENS (80/86 SHIELDING)

Fixture Size	# Modules	Level	(80/86 shielding)		Fixture Size	# Modules	Level	(80/86 shielding)	
			Nominal Input Watts	Nominal Delivered Lumens				Nominal Input Watts	Nominal Delivered Lumens
1' x 1'	1	STD	12.3	800	1' x 4'	1	LO	26.2	1808
	2	STD	24.6	1600		1	STD	36.6	2488
1' x 2'	1	LO	13.1	904	2' x 4'	1	HI	47.2	3166
	1	STD	18.3	1245		2	LO	52.4	3595
	1	HI	23.6	1583		2	STD	73.2	4980
	2	LO	26.2	1810					
2' x 2'	2	STD	36.6	2490	2' x 4'	3	LO	78.6	5430
	3	LO	39.3	2715		3	STD	109.8	7495
	3	STD	54.9	4325		3	HI	141.8	9577
	4	LO	52.4	3620		4	LO	104.8	7215
	4	STD	73.2	4980		4	STD	146.4	9960

Nominal input wattage values include LED voltage, drive current, and typical driver efficiency. Refer to LM79 data/photometric files for exact delivered lumen values and input wattage. Values in table are nominal values only.



FMR LED

ORDERING INFORMATION

SAMPLE NUMBER: FMR-X24-4-LD4-4STD-40-80/86-EDC1 or FMR-S12-2-LD4-2LO-50-82/87-EDD1

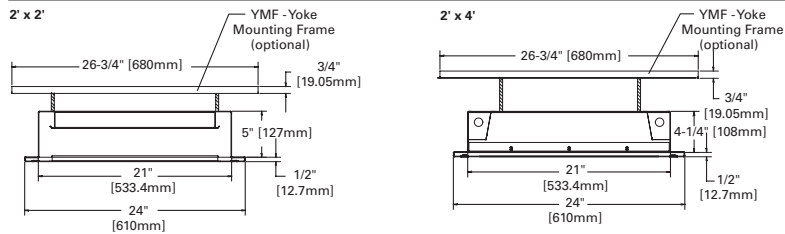
Product Family	Door	Width	Length	LED	No. of LED	Illumination Level	Color Temp.	Voltage	Inner/Outer Lens	Driver	No. of Circuits	Options	Accessories
FMR				LD4					/				
FMR								UNV =120-277V		Driver EDC=Electronic Driver, Non-dimming EDD=Electronic Driver, 0-10V Dimming 10% ED1D=Electronic Driver, 0-10V Dimming 1%		EL7W =7W Emergency Battery Pack 3, 4 EL10W =10W Emergency Battery Pack 3, 4 EL14W =14W Emergency Battery Pack 3, 4 LLNL =Linear LED Night Light, Dimmable GLR =Fuse and Holder 14G =14 Guage Housing CPHF =Continuous Piano Hinge, Full Length WL =Wet Location Under Covered Ceiling AM =Anti-microbial matte white finish	9306 =Allen-Head Wrench PF24-2FT =Plaster Frame and Yoke Assembly PF24-4FT =Plaster Frame and Yoke Assembly VRSD =T20 Center Pin Tamperproof TORX® - head screwdriver
S =12 ga. X =14 ga. D =16 ga. N =18 ga.													
24 =24" Wide 12 =12" Wide													
1=1' Length (1' x 1' only) 2=2' Length 4=4' Length													
LD4 =LED													
1=(1) LED Module 2=(2) LED Modules 3=(3) LED Modules (24" width only) 4=(4) LED Modules (24" width only)													
STD =Standard LO =Low HI =High 5													
35 =3500K 40 =4000K 50 =5000K													
<p>Lens Type Inner Layer (optional) 90=0.005 UV Absorbing Overlay Fixture Side 80=0.125 Prismatic Acrylic 81=0.156 Prismatic Polycarbonate 82=0.187 Prismatic Polycarbonate 93=0.156 Prismatic Tempered Glass Environmental Side 84=0.125 Clear Polycarbonate 85=0.187 Clear Polycarbonate 86=0.250 Clear Polycarbonate 87=0.375 Clear Polycarbonate 88=0.500 Clear Polycarbonate 94=0.187 Clear Tempered Glass 96=0.250 Clear Tempered Glass 97=0.375 Clear Tempered Glass</p>													
<p>Circuits 1=1 Circuit 2=2 Circuits 3=3 Circuits</p>													
<p>Mounting Options SWBR=Swing-out Brackets (4) YMF=Yoke Mounting Frame (2)</p>													
<p>Stainless Steel Door SSN=Natural Brushed Finish SSP=Polyester Powder Coat Finish</p>													
<p>Fasteners SF3=Allen-Head (center)</p>													

Default fixture includes eye-bolt kit. Does not include SWBR or YMF Mounting hardware found in "Mounting Options". Specify "SWBR" or "YMF" if necessary.

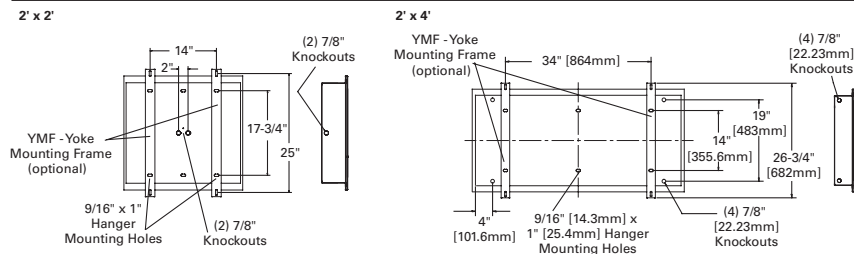
Notes:

- See Lens Guide for additional lens choices.
- YMF consists of (2) C-channel frames, with (4) 3-1/2" bolts and nuts to attach YMF to fixture housing. YMF's attach to rigid structure above.
- EM not available in "LO" or "STD" illumination levels.
- EM only available in "LO" or "STD" illumination levels.
- 24" width fixture, 4HI not available. 12" width fixture, 2HI not available.
- LLNL not available on 1x1.

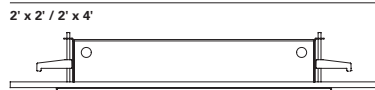
2' WIDTH CROSS-SECTION DIMENSIONS / SHOWN WITH OPTIONAL YOKE MOUNTING FRAME - YMF



2' WIDTH TYPICAL MOUNTING DETAIL / SHOWN WITH OPTIONAL YOKE MOUNTING FRAME - YMF



2' WIDTH OPTIONAL SWING-OUT BRACKET (SWBR)

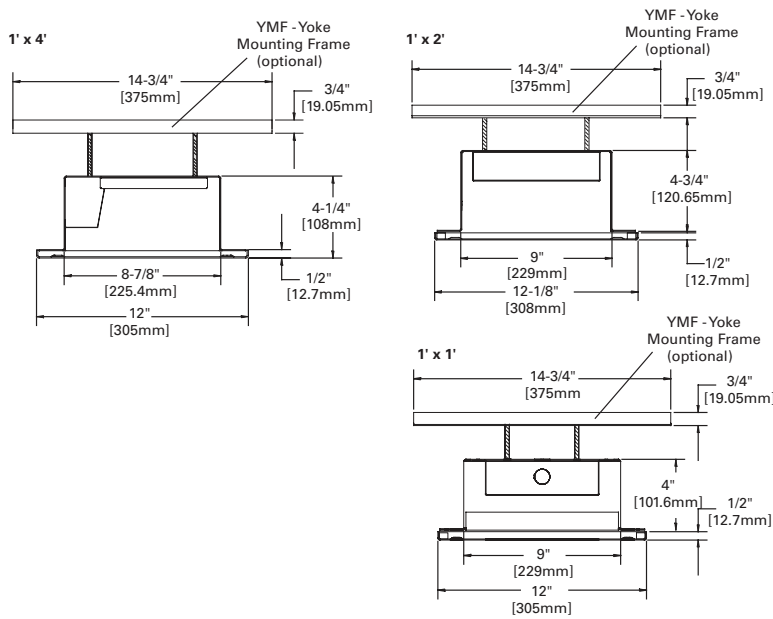


2' WIDTH CEILING CUTOUT DIMENSIONS

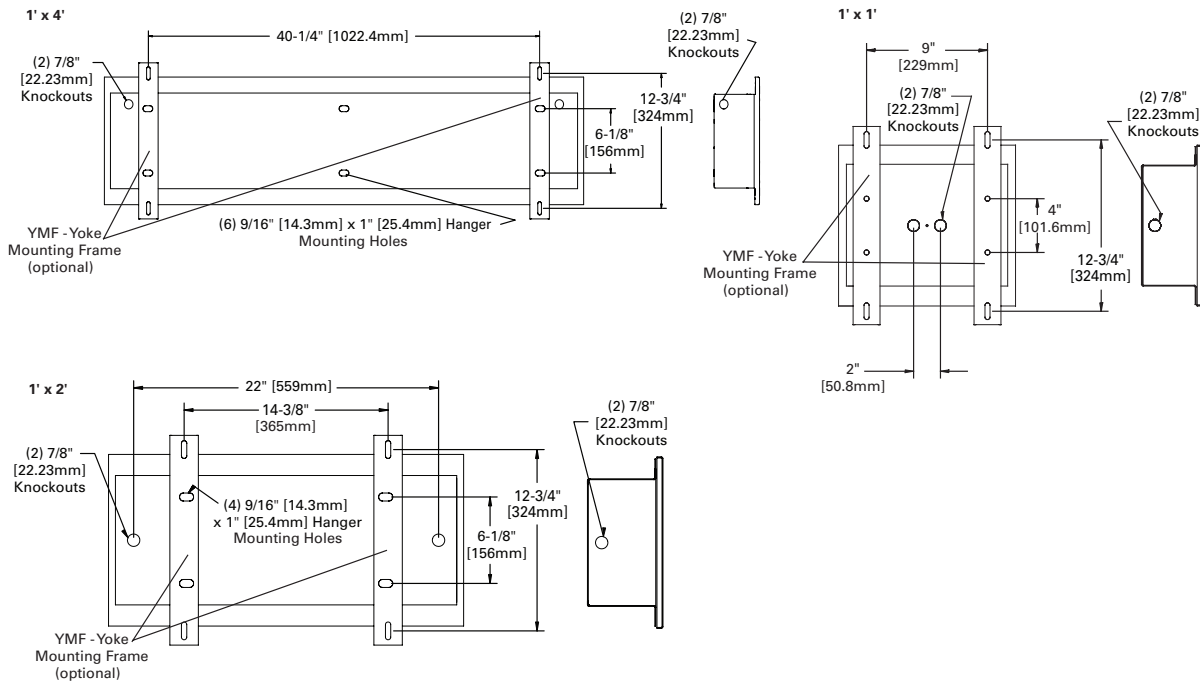
Ceiling Cutout	Width	Length
2' x 2'	23-1/4"	24-1/4"
2' x 4'	23-1/4"	48-1/4"



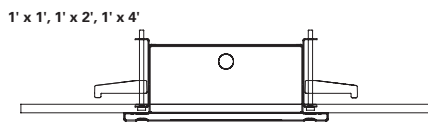
1' WIDTH CROSS-SECTION DIMENSIONS / SHOWN WITH OPTIONAL YOKE MOUNTING FRAME - YMF



1' WIDTH TYPICAL MOUNTING DETAIL / SHOWN WITH OPTIONAL YOKE MOUNTING FRAME - YMF



1' WIDTH OPTIONAL SWING-OUT BRACKET (SWBR)



1' WIDTH CEILING CUTOUT DIMENSIONS

Ceiling Cutout	Width	Length
1' x 1'	10-1/2"	12-1/2"
1' x 2'	10-1/2"	24-1/2"
1' x 4'	10-1/2"	48-1/2"

Submitting Agency:



Description: **BMRLED-400-80-35-FL-06'-W-UNV-DP-1-*****

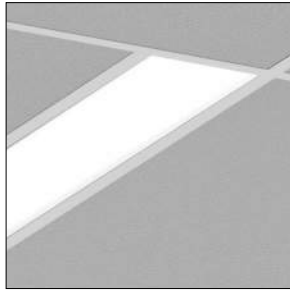
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **R4-6'**



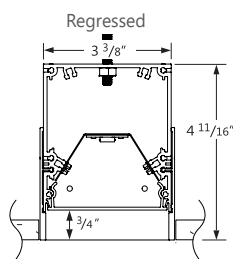
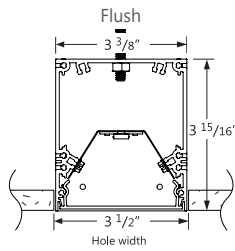
RECESSED - WITH StepLens OPTION



Flush shielding option



StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

BMRLED						
PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH	
BMRLED Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run	
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.					All lens options use spotless lens See page 3 for more details	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K.		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

ELECTRICAL

Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

APPROVALS

Certified to UL and CSA standards
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

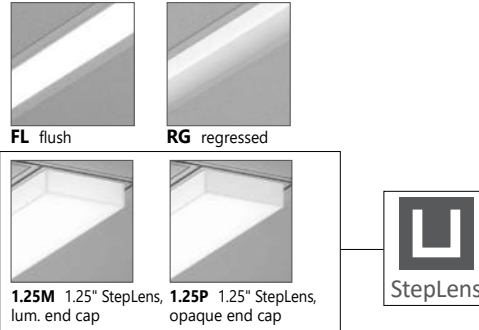
DLC Approved Options



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.

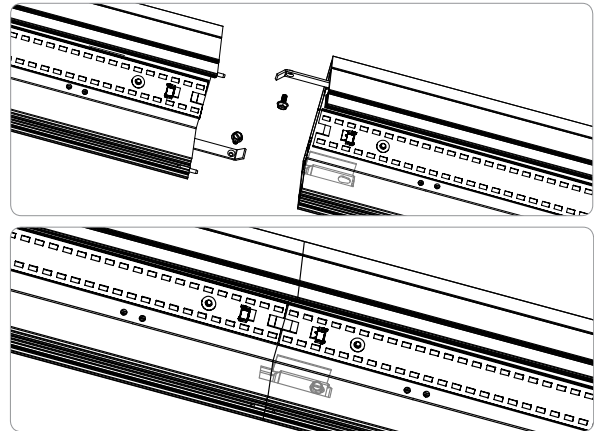
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

SHIELDING - Frosted acrylic Spotless lens



JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

WEIGHT

Recessed LED 4 ft	12.3 lbs / 5.0 kg
Recessed LED 8 ft	24.6 lbs / 10.1 kg
Recessed LED 12 ft	36.9 lbs / 15.1 kg

FINISHES

Powder coated and custom finishes are also available.

LED SYSTEM

CRI Minimum 80 or 90 color rendering index
CCT Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).

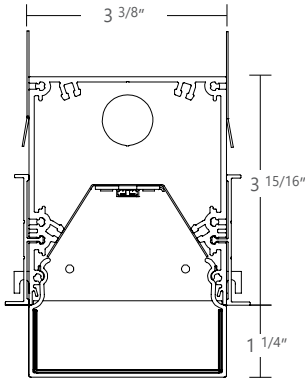
LED life Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

Thermal management Aluminium housing acting as the heat sink to maximize life.



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



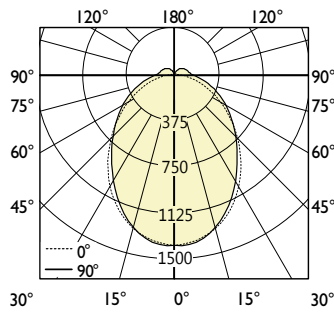
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft Im with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLED-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
0			
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

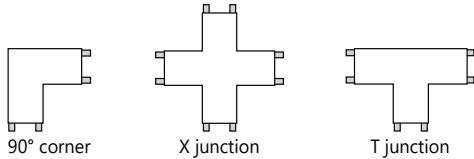
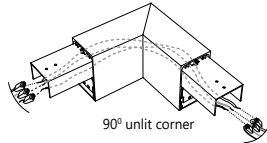


BEAM3 LED

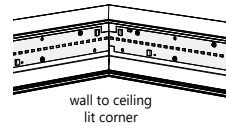
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

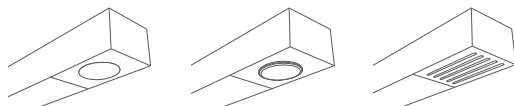
OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

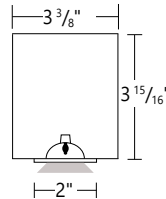
Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.



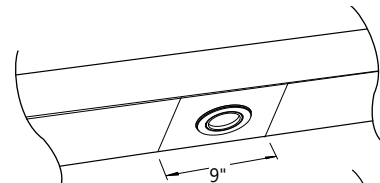
SPK SPEAKER SR SPRINKLER AR AIR RETURN

MR16 LED LAMPS

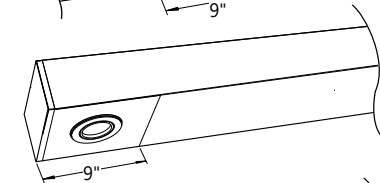
Blank	Extruded aluminum (0.075" nominal)
MR16 Halogens	Adjustable halogen lamp 35W / 50W (by others) - Line voltage dimming only
MR16 LED	Adjustable LED lamp (provided)- Line voltage dimming only
MR16 LEDB	Constant current LED lamp (provided)- Dimmable by control system for 0-10V DALI only
Quantity	For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.
Spacing	Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



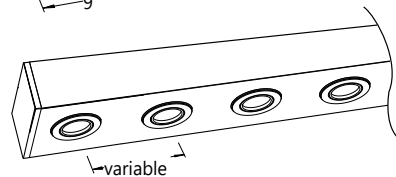
Between sections



At luminaire ends



Several in a long blank section



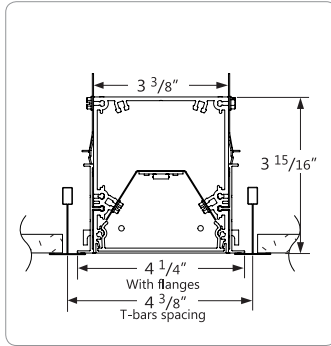
Base Type	GU 5.3
Beam Angle	40 nominal degrees
Input Watts	6W
Nominal Lumens	300 lumens
Efficacy	50 lumens per watt
Color Rendering Index (CRI)	85
Center Beam Candle Power (CBCP)	584 candelas
Life	25,000 hours at L ₇₀
Correlated color temperature (CCT)	2700K, 3000K

i More options are available upon request. Please consult factory.

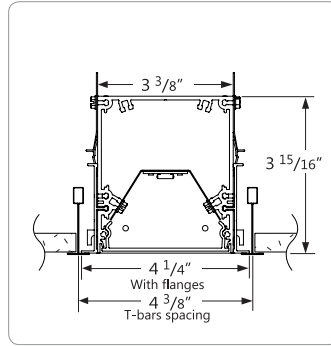


RECESSED - WITH StepLens OPTION

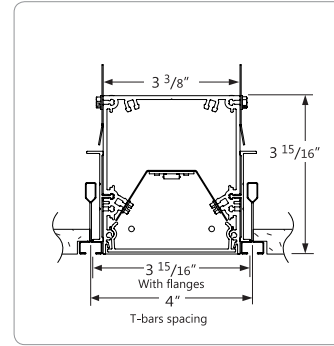
● **TB CEILING MOUNTING OPTIONS**



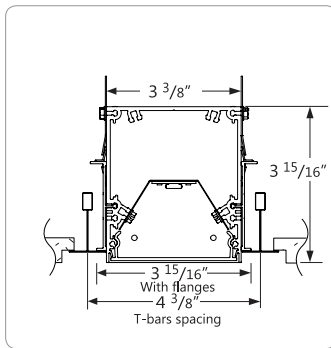
TB15 15/16" T-BAR



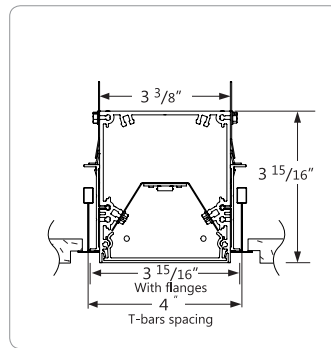
TB9 9/16" T-BAR



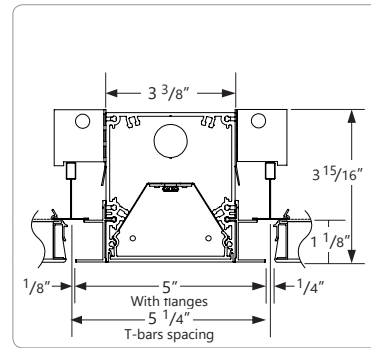
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

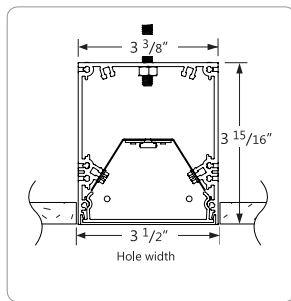


TG9 9/16" T-TEGULAR

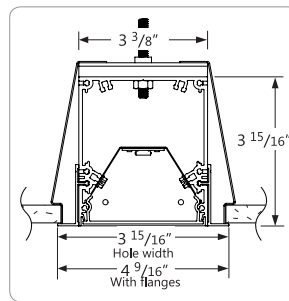


TX TX HUNTER DOUGLAS TECHSTYLE

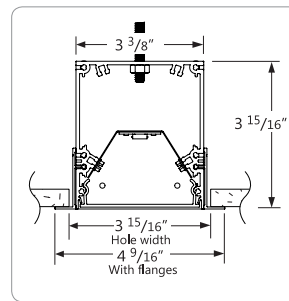
● **DRYWALL CEILING MOUNTING OPTIONS**



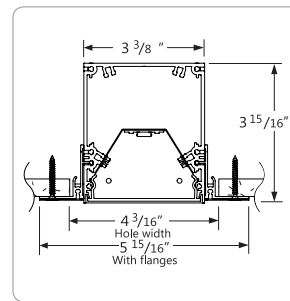
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

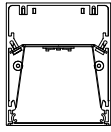
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com



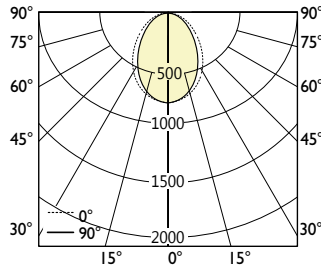
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

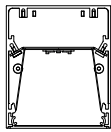
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

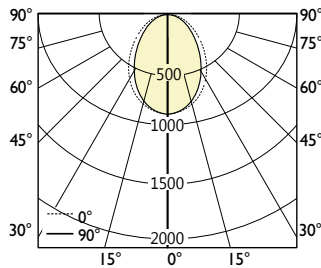
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

LED lighting facts
 A Program of the U.S. DOE

Light Output (Lumens) 1951
 Watts 23.22
 Lumens per Watt (Efficacy) 84.1

Color Accuracy
 Color Rendering Index (CRI) 82

Light Color
 Correlated Color Temperature (CCT) 3056 (Bright White)

Warm White 2700K | Bright White 3000K | Daylight 4500K | 6500K

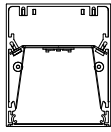
i All IES files are available for download at: www.axislighting.com



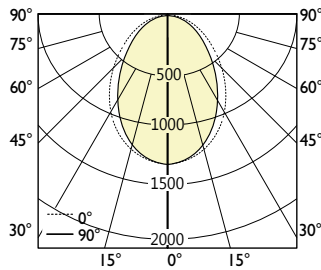
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

ZONAL LUMENS

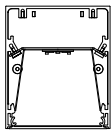
Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

LUMINANCE DATA (cd/m²)

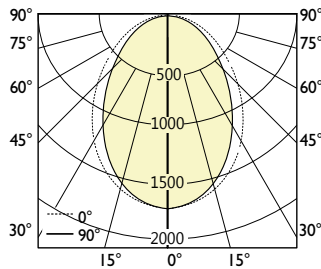
Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765



1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

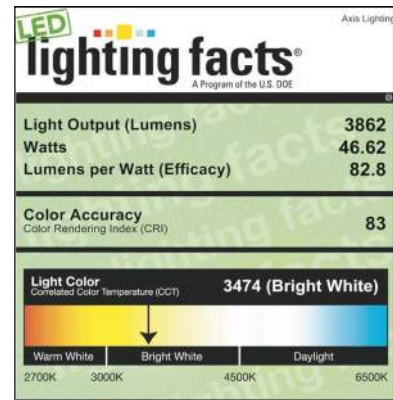
Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019



i All IES files are available for download at: www.axislighting.com

Submitting Agency:

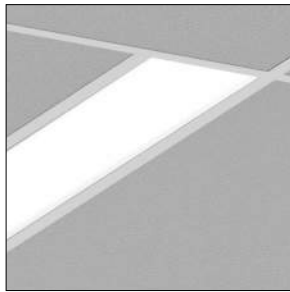


Description: **BMRLED-400-80-35-FL-08'-W-UNV-DP-1-*****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **R4-8'**

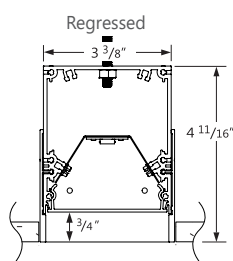
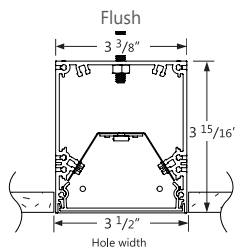


RECESSED - WITH StepLens OPTION



Flush shielding option

StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
 Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

BMRLED					
PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH
BMRLED Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.				All lens options use spotless lens See page 3 for more details	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K.		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

● ELECTRICAL


Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

● APPROVALS

Certified to UL and CSA standards 
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

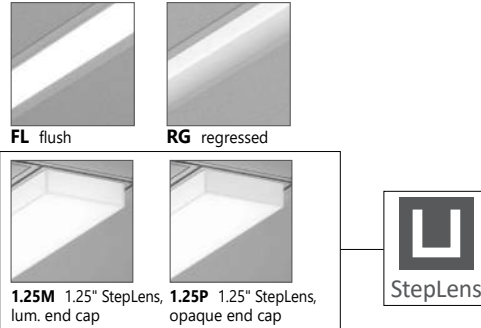
● DLC Approved Options



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.

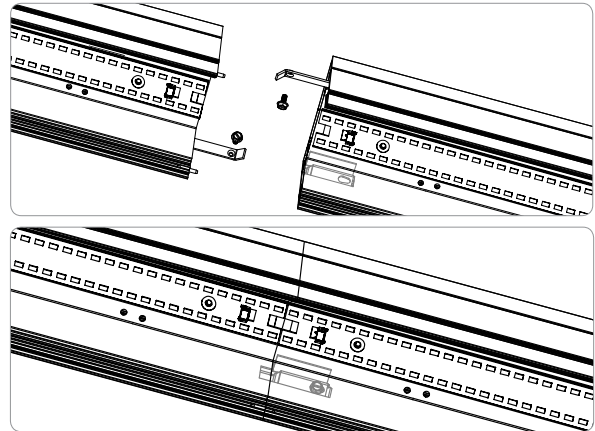
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

● SHIELDING - Frosted acrylic Spotless lens



● JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● WEIGHT

Recessed LED 4 ft	12.3 lbs / 5.0 kg
Recessed LED 8 ft	24.6 lbs / 10.1 kg
Recessed LED 12 ft	36.9 lbs / 15.1 kg

● FINISHES

Powder coated and custom finishes are also available.

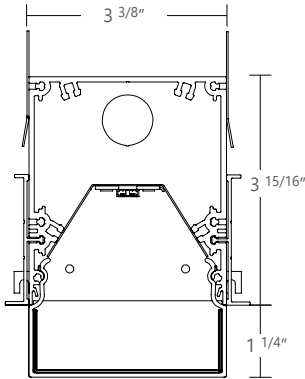
● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal management	Aluminium housing acting as the heat sink to maximize life.



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



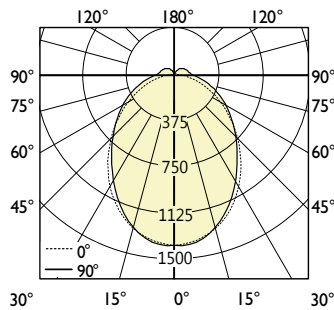
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft Im with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLED-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
0			
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

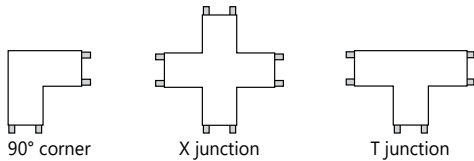
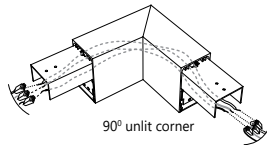


BEAM3 LED

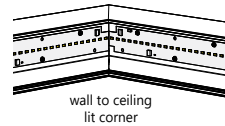
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

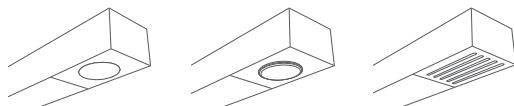
OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.



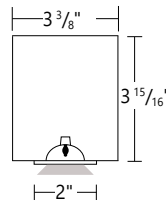
SPK SPEAKER

SR SPRINKLER

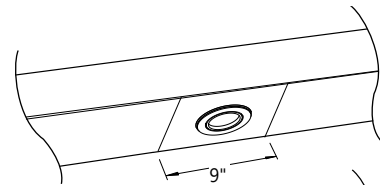
AR AIR RETURN

MR16 LED LAMPS

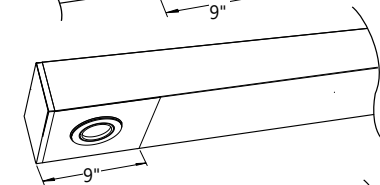
Blank	Extruded aluminum (0.075" nominal)
MR16 Halogens	Adjustable halogen lamp 35W / 50W (by others) - Line voltage dimming only
MR16 LED	Adjustable LED lamp (provided)- Line voltage dimming only
MR16 LEDB	Constant current LED lamp (provided)- Dimmable by control system for 0-10V DALI only
Quantity	For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.
Spacing	Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



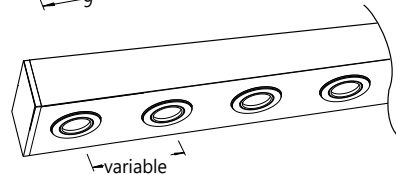
Between sections



At luminaire ends



Several in a long blank section



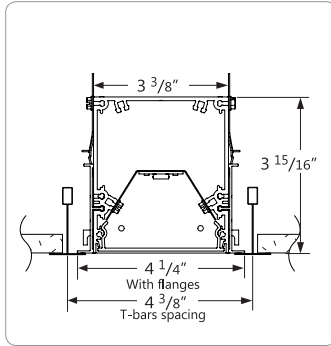
Base Type	GU 5.3
Beam Angle	40 nominal degrees
Input Watts	6W
Nominal Lumens	300 lumens
Efficacy	50 lumens per watt
Color Rendering Index (CRI)	85
Center Beam Candle Power (CBCP)	584 candelas
Life	25,000 hours at L ₇₀
Correlated color temperature (CCT)	2700K, 3000K

i More options are available upon request. Please consult factory.

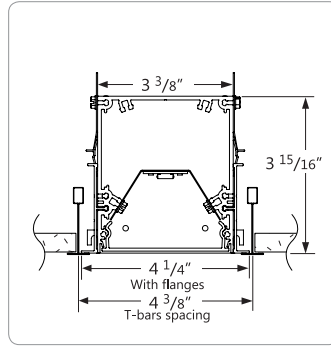


RECESSED - WITH StepLens OPTION

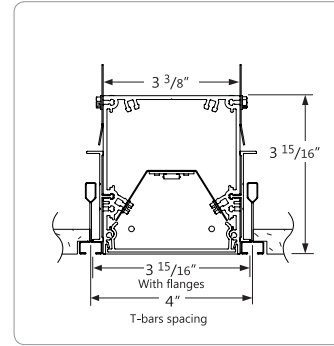
● **TB CEILING MOUNTING OPTIONS**



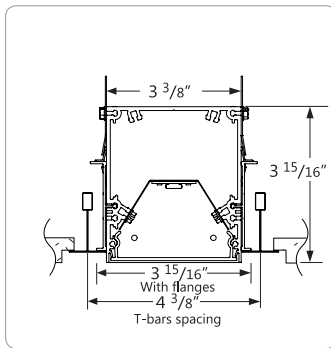
TB15 15/16" T-BAR



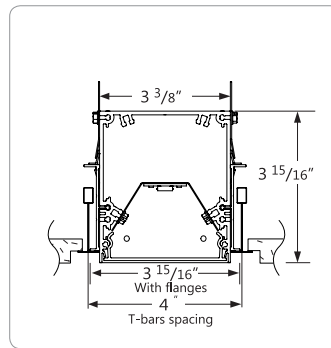
TB9 9/16" T-BAR



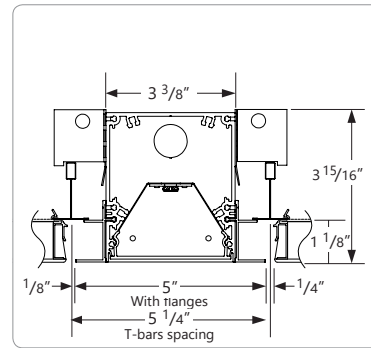
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

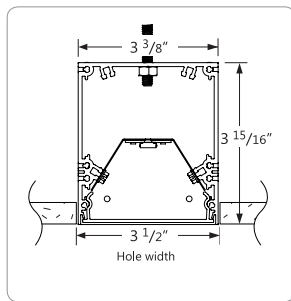


TG9 9/16" T-TEGULAR

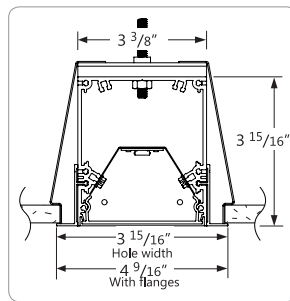


TX TX HUNTER DOUGLAS TECHSTYLE

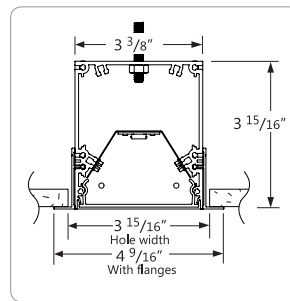
● **DRYWALL CEILING MOUNTING OPTIONS**



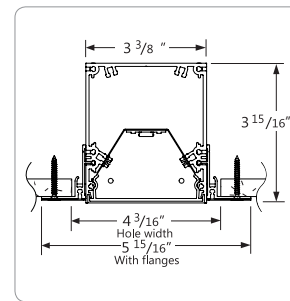
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

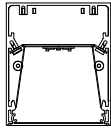
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com



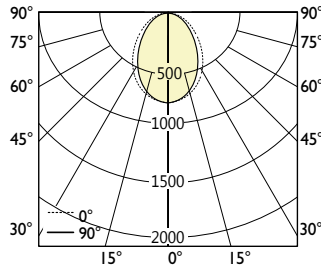
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

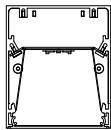
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

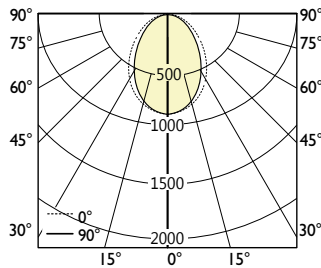
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

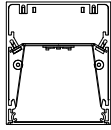
i All IES files are available for download at: www.axislighting.com



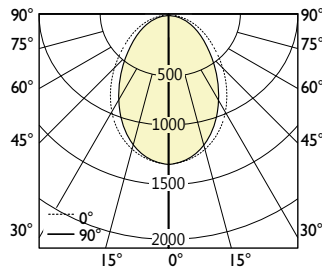
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

ZONAL LUMENS

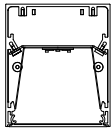
Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

LUMINANCE DATA (cd/m²)

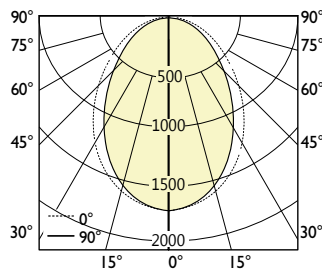
Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765



1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

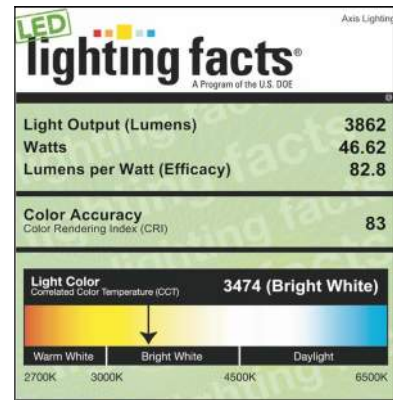
Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019



i All IES files are available for download at: www.axislighting.com

Submitting Agency:

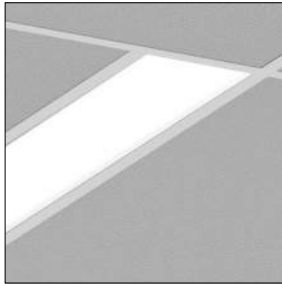


Description: **BMRLD-400-80-35-FL-08'-W-UNV-DP-1-***-B**
 Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **R4-EM-8**



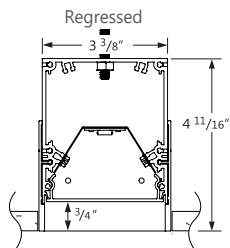
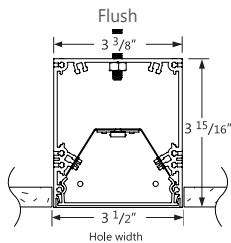
RECESSED - WITH StepLens OPTION



Flush shielding option



StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
 Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH
BMRLD Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.				All lens options use spotless lens. See page 3 for more details.	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K;		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V. Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory. Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

● ELECTRICAL

Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

● APPROVALS

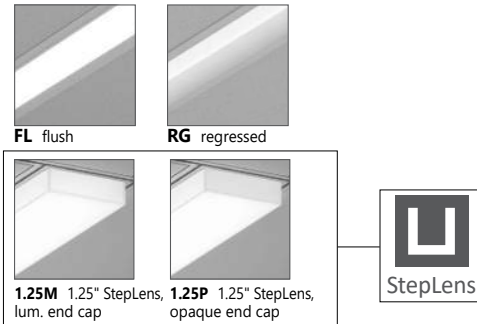
Certified to UL and CSA standards
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

● DLC Approved Options



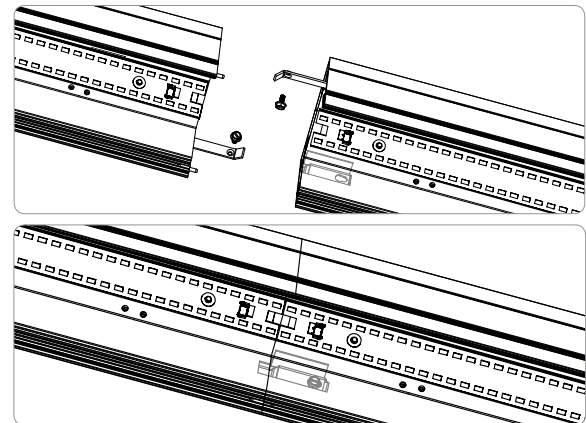
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

● SHIELDING - Frosted acrylic Spotless lens



● JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● WEIGHT

Recessed LED 4 ft	12.3 lbs / 5.0 kg
Recessed LED 8 ft	24.6 lbs / 10.1 kg
Recessed LED 12 ft	36.9 lbs / 15.1 kg

● FINISHES

Powder coated and custom finishes are also available.

● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal management	Aluminium housing acting as the heat sink to maximize life.

Submitting Agency:



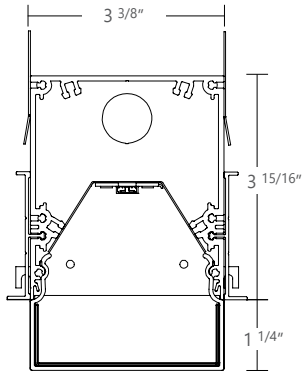
Description: **BMRLD-400-80-35-FL-08'-W-UNV-DP-1-***-B**
 Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **R4-EM-8**



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



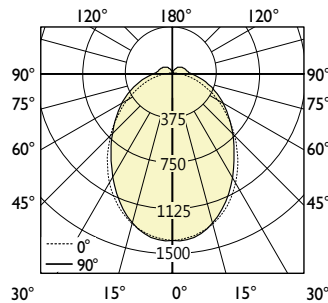
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft lm with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLD-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

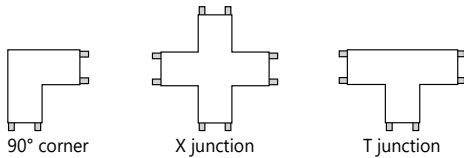
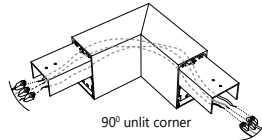


BEAM3 LED

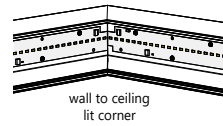
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.

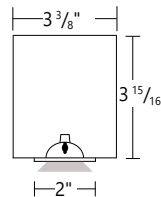


MR16 LED LAMPS

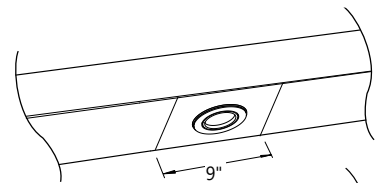
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided)- **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided)- **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

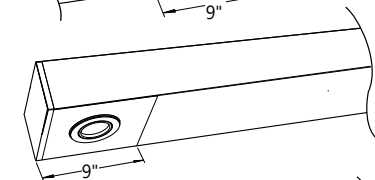
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



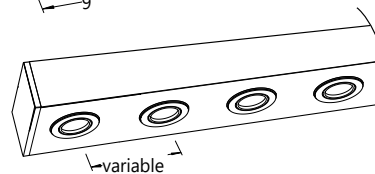
Between sections



At luminaire ends



Several in a long blank section



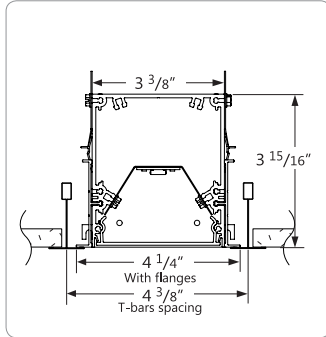
- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K, 3000K

i More options are available upon request. Please consult factory.

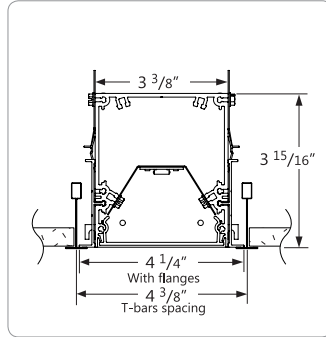


RECESSED - WITH StepLens OPTION

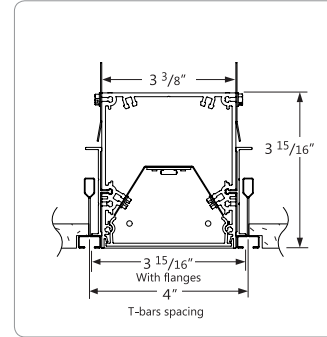
● **TB CEILING MOUNTING OPTIONS**



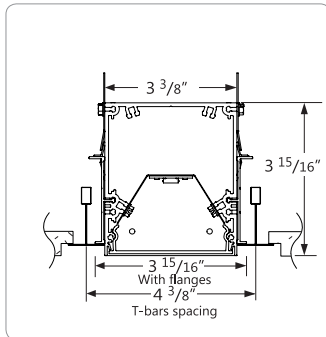
TB15 15/16" T-BAR



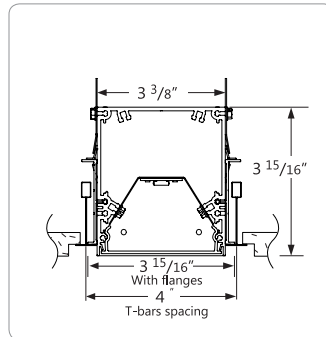
TB9 9/16" T-BAR



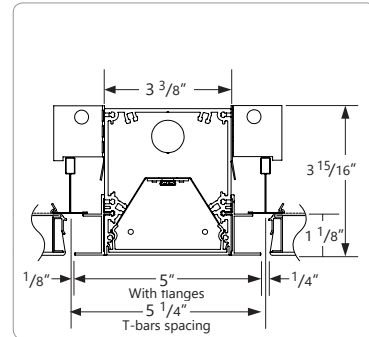
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

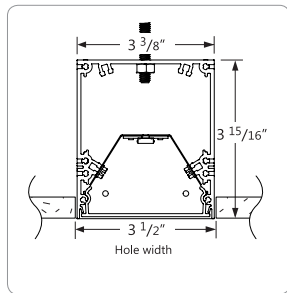


TG9 9/16" T-TEGULAR

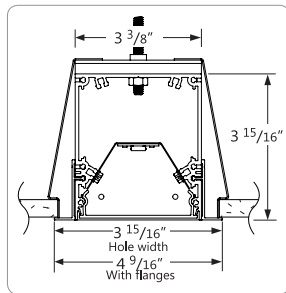


TX HUNTER DOUGLAS TECHSTYLE

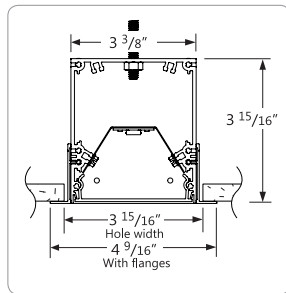
● **DRYWALL CEILING MOUNTING OPTIONS**



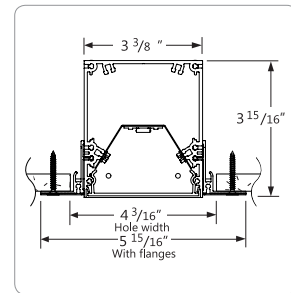
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com

Submitting Agency:



Description: **BMRLD-400-80-35-FL-08'-W-UNV-DP-1-***-B**

Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

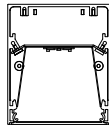
Type: **R4-EM-8**



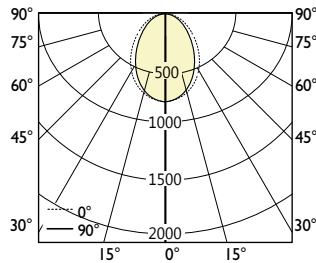
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

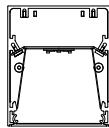
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

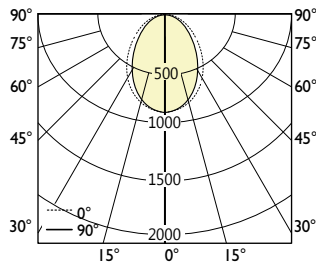
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

i All IES files are available for download at: www.axislighting.com

Submitting Agency:



Description: **BMRLD-400-80-35-FL-08'-W-UNV-DP-1-***-B**
 Project: **1**
SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

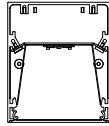
Type:
R4-EM-8



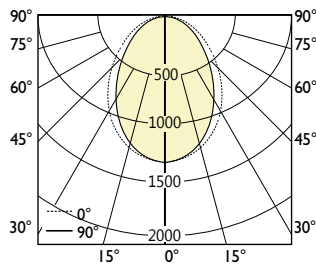
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

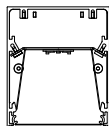
ZONAL LUMENS

Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

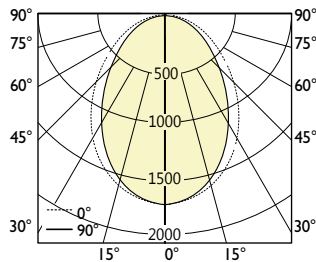
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765

1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

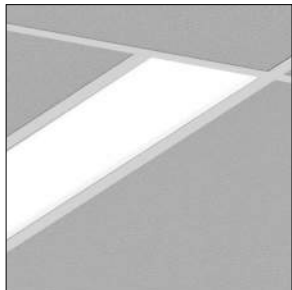


Description: **BMRLED-400-80-35-FL-12'-W-UNV-DP-1-*****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
R4-12'

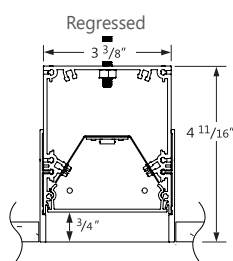
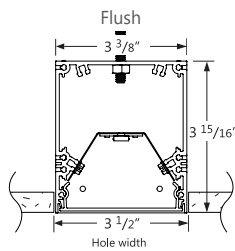


RECESSED - WITH StepLens OPTION



Flush shielding option

StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
 Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

BMRLED					
PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH
BMRLED Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.				All lens options use spotless lens See page 3 for more details	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K.		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

● ELECTRICAL

Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
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Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
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Emergency Integral emergency battery pack or emergency circuit optional.


Input Voltage 120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

● APPROVALS

Certified to UL and CSA standards 
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

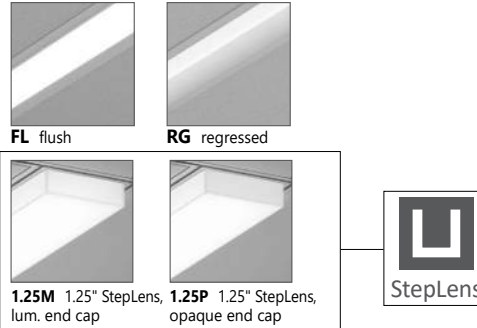
● DLC Approved Options



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.

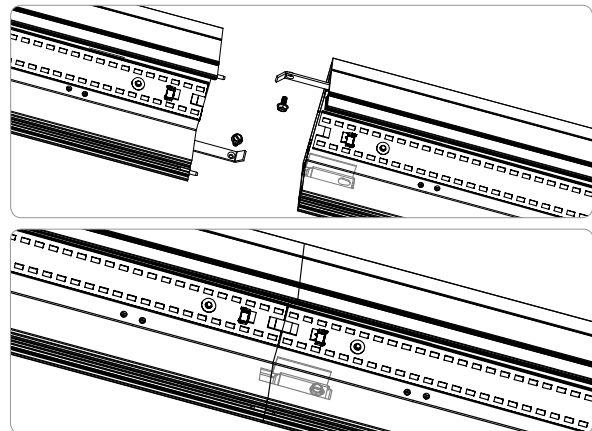
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

● SHIELDING - Frosted acrylic Spotless lens



● JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● WEIGHT

Recessed LED 4 ft	12.3 lbs / 5.0 kg
Recessed LED 8 ft	24.6 lbs / 10.1 kg
Recessed LED 12 ft	36.9 lbs / 15.1 kg

● FINISHES

Powder coated and custom finishes are also available.

● LED SYSTEM

CRI Minimum 80 or 90 color rendering index
CCT Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).

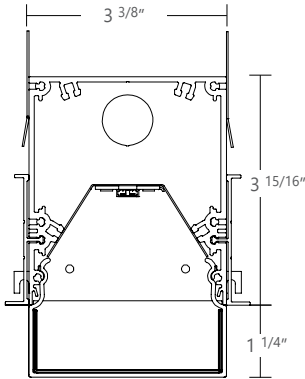
LED life Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.

Thermal management Aluminium housing acting as the heat sink to maximize life.



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



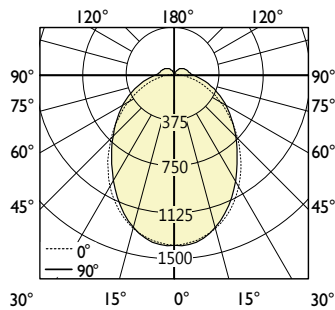
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft Im with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLED-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
0			
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

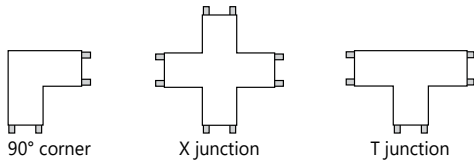
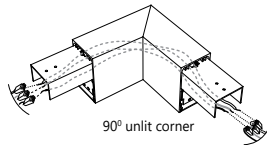


BEAM3 LED

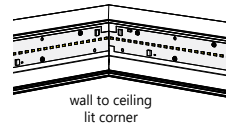
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

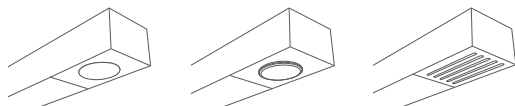
OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

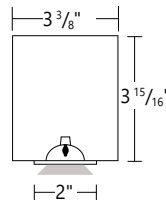
Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.



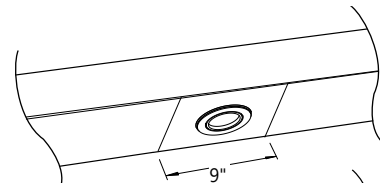
SPK SPEAKER **SR SPRINKLER** **AR AIR RETURN**

MR16 LED LAMPS

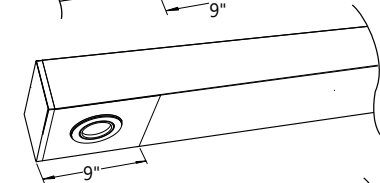
Blank	Extruded aluminum (0.075" nominal)
MR16 Halogens	Adjustable halogen lamp 35W / 50W (by others) - Line voltage dimming only
MR16 LED	Adjustable LED lamp (provided)- Line voltage dimming only
MR16 LEDB	Constant current LED lamp (provided)- Dimmable by control system for 0-10V DALI only
Quantity	For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.
Spacing	Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



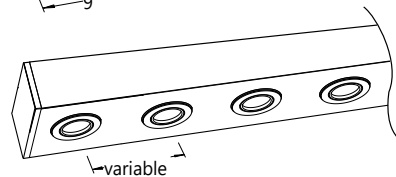
Between sections



At luminaire ends



Several in a long blank section



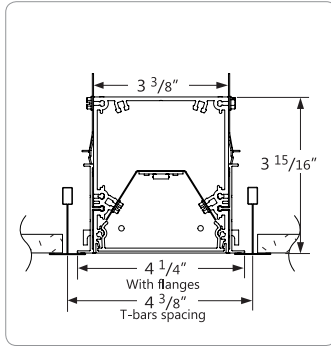
Base Type	GU 5.3
Beam Angle	40 nominal degrees
Input Watts	6W
Nominal Lumens	300 lumens
Efficacy	50 lumens per watt
Color Rendering Index (CRI)	85
Center Beam Candle Power (CBCP)	584 candelas
Life	25,000 hours at L ₇₀
Correlated color temperature (CCT)	2700K, 3000K

i More options are available upon request. Please consult factory.

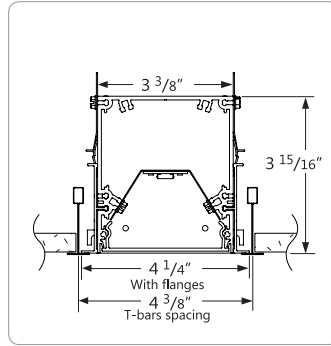


RECESSED - WITH StepLens OPTION

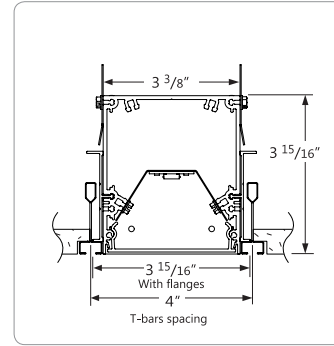
● **TB CEILING MOUNTING OPTIONS**



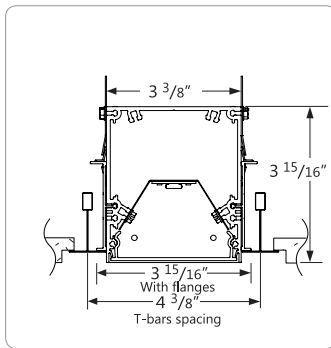
TB15 15/16" T-BAR



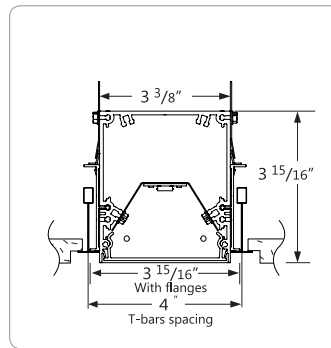
TB9 9/16" T-BAR



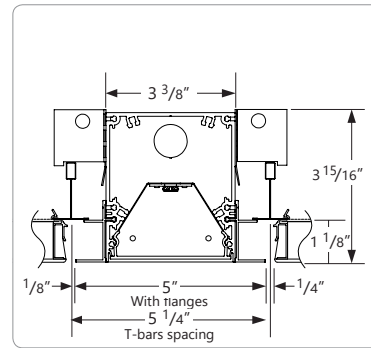
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

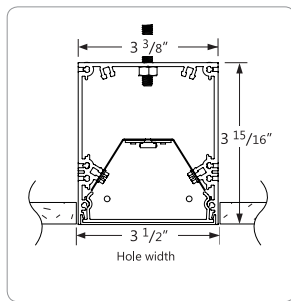


TG9 9/16" T-TEGULAR

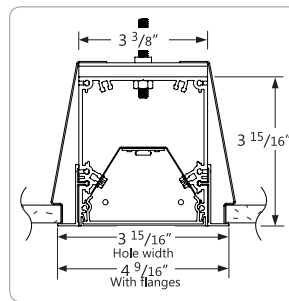


TX TX HUNTER DOUGLAS TECHSTYLE

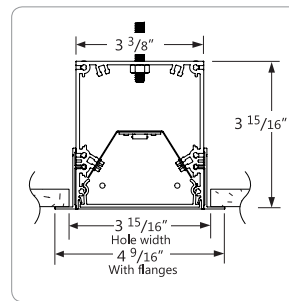
● **DRYWALL CEILING MOUNTING OPTIONS**



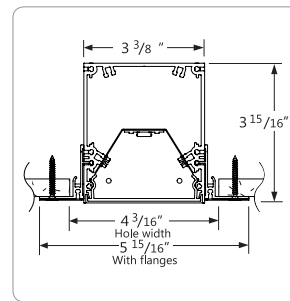
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

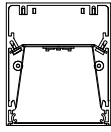
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com



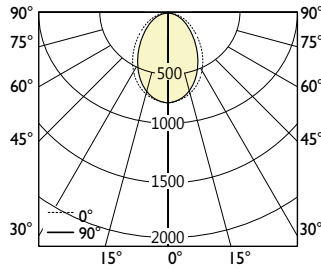
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

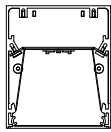
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

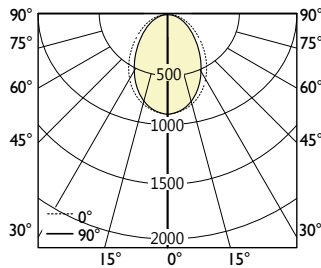
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

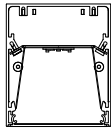
i All IES files are available for download at: www.axislighting.com



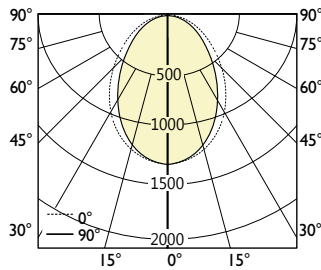
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

ZONAL LUMENS

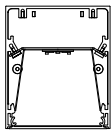
Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

LUMINANCE DATA (cd/m²)

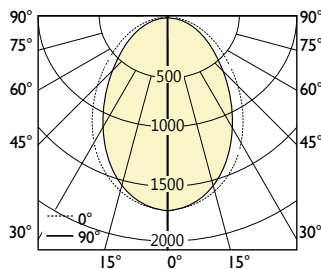
Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765



1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019



i All IES files are available for download at: www.axislighting.com

Submitting Agency:

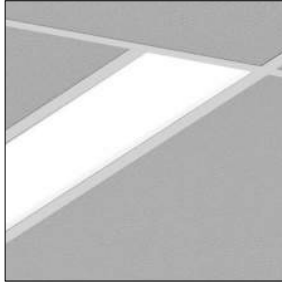


Description: **BMRLD-400-80-35-FL-12'-W-UNV-DP-1-***-B**
 Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type: **R4-EM-1**
2'



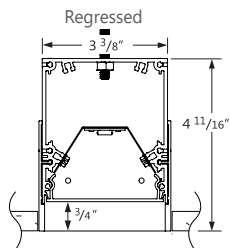
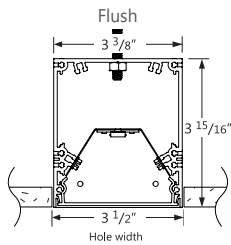
RECESSED - WITH StepLens OPTION



Flush shielding option



StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
 Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH
BMRLD Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.				All lens options use spotless lens. See page 3 for more details.	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K;		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V. Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory. Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

● ELECTRICAL

Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

● APPROVALS

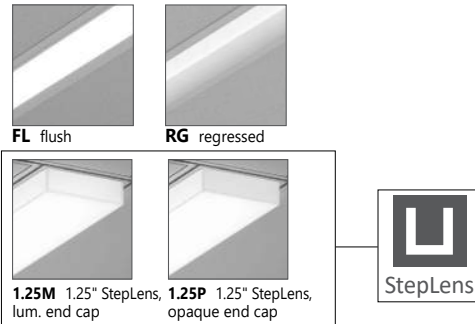
Certified to UL and CSA standards
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

● DLC Approved Options



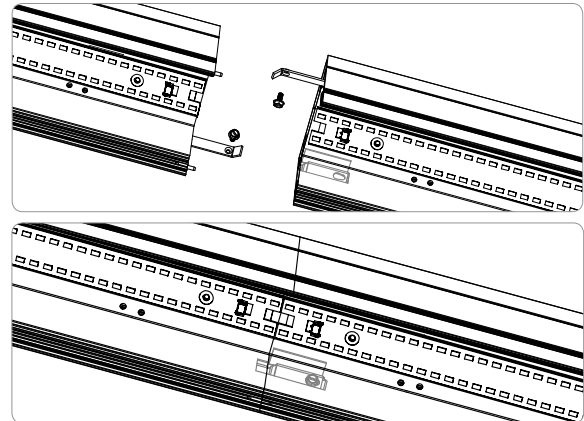
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

● SHIELDING - Frosted acrylic Spotless lens



● JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● WEIGHT

Recessed LED 4ft	12.3 lbs / 5.0 kg
Recessed LED 8ft	24.6 lbs / 10.1 kg
Recessed LED 12ft	36.9 lbs / 15.1 kg

● FINISHES

Powder coated and custom finishes are also available.

● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal management	Aluminium housing acting as the heat sink to maximize life.

Submitting Agency:



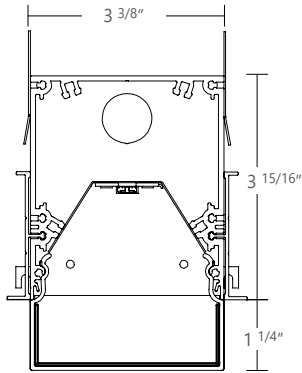
Description: **BMRLD-400-80-35-FL-12'-W-UNV-DP-1-***-B**
 Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
R4-EM-1
2'



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



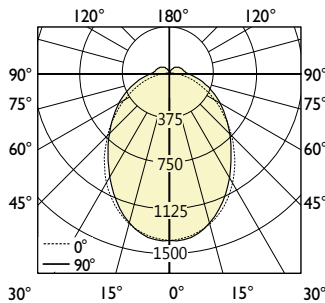
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft lm with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLD-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

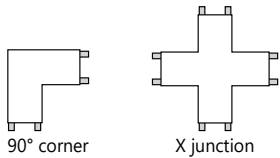
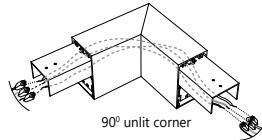


BEAM3 LED

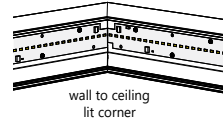
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

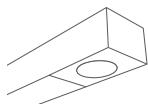
OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

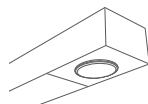
i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

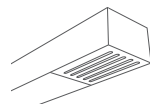
Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.



SPK SPEAKER



SR SPRINKLER



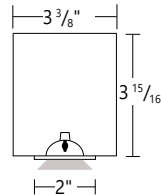
AR AIR RETURN

MR16 LED LAMPS

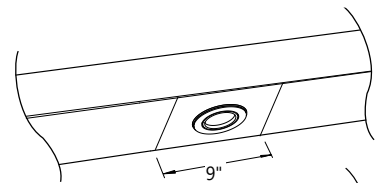
- Blank** Extruded aluminum (0.075" nominal)
- MR16 Halogens** Adjustable halogen lamp 35W / 50W (by others) - **Line voltage dimming only**
- MR16 LED** Adjustable LED lamp (provided)- **Line voltage dimming only**
- MR16 LEDB** Constant current LED lamp (provided)- **Dimmable by control system for 0-10V DALI only**

Quantity For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.

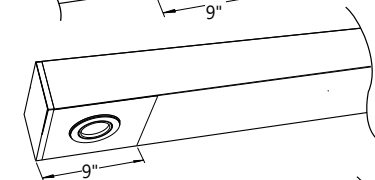
Spacing Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



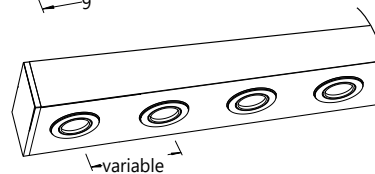
Between sections



At luminaire ends



Several in a long blank section



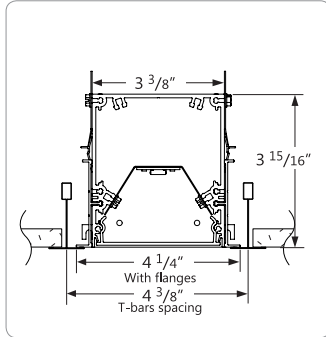
- Base Type** GU 5.3
- Beam Angle** 40 nominal degrees
- Input Watts** 6W
- Nominal Lumens** 300 lumens
- Efficacy** 50 lumens per watt
- Color Rendering Index (CRI)** 85
- Center Beam Candle Power (CBCP)** 584 candelas
- Life** 25,000 hours at L₇₀
- Correlated color temperature (CCT)** 2700K, 3000K

i More options are available upon request. Please consult factory.

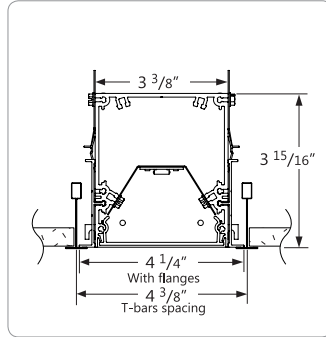


RECESSED - WITH StepLens OPTION

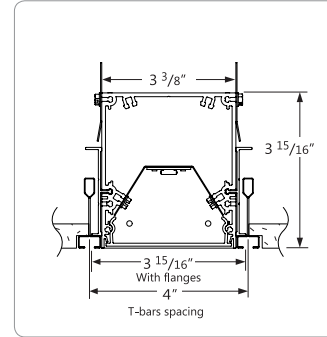
● **TB CEILING MOUNTING OPTIONS**



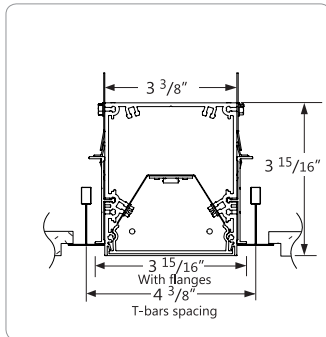
TB15 15/16" T-BAR



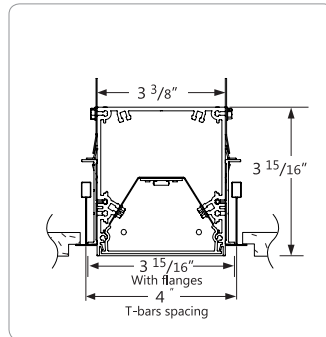
TB9 9/16" T-BAR



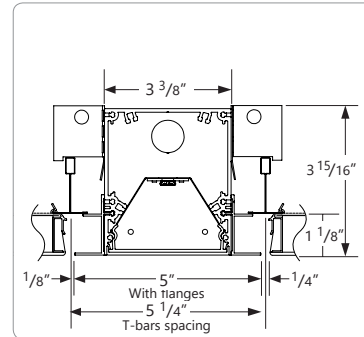
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

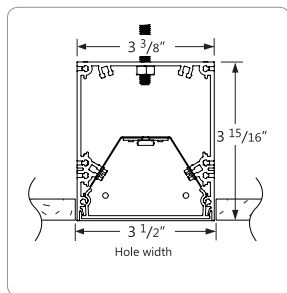


TG9 9/16" T-TEGULAR

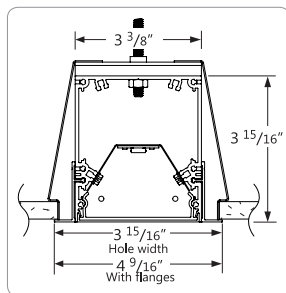


TX HUNTER DOUGLAS TECHSTYLE

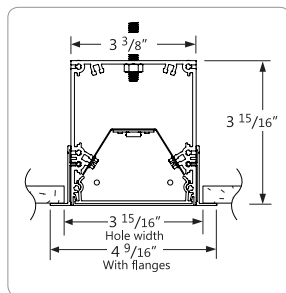
● **DRYWALL CEILING MOUNTING OPTIONS**



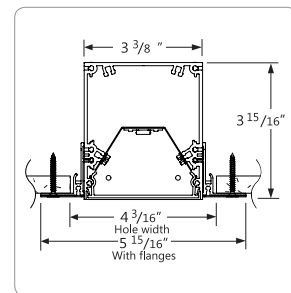
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com

Submitting Agency:



Description: **BMRLD-400-80-35-FL-12'-W-UNV-DP-1-***-B**
 Project: **1 SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

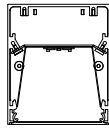
Type: **R4-EM-1**
2'



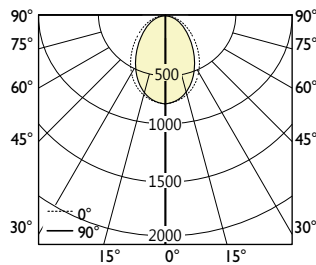
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

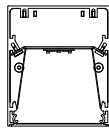
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

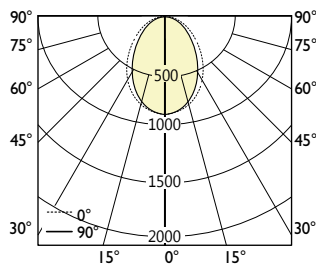
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FL-IES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

i All IES files are available for download at: www.axislighting.com

Submitting Agency:



Description: **BMRLD-400-80-35-FL-12'-W-UNV-DP-1-***-B**
 Project: **1**
SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

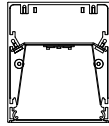
Type:
R4-EM-1
2'



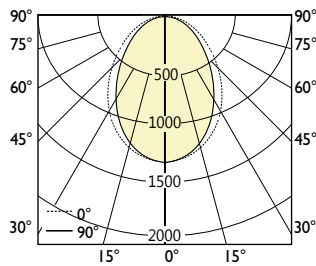
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765

Lighting facts
 A Program of the U.S. DOE

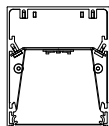
Light Output (Lumens) 2616
 Watts 31.67
 Lumens per Watt (Efficacy) 82.6

Color Accuracy
 Color Rendering Index (CRI) 82

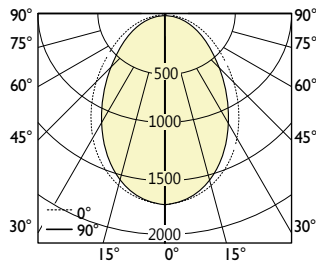
Light Color
 Correlated Color Temperature (CCT) 3057 (Bright White)

2700K 3000K 4500K 6500K

1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019

Lighting facts
 A Program of the U.S. DOE

Light Output (Lumens) 3862
 Watts 46.62
 Lumens per Watt (Efficacy) 82.8

Color Accuracy
 Color Rendering Index (CRI) 83

Light Color
 Correlated Color Temperature (CCT) 3474 (Bright White)

2700K 3000K 4500K 6500K

i All IES files are available for download at: www.axislighting.com

Submitting Agency:

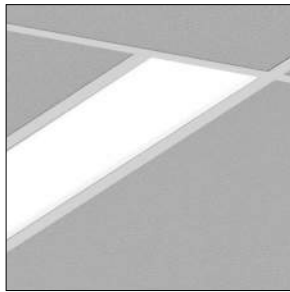


Description: **BMRLED-400-80-35-FL-16'-W-UNV-DP-1-*****
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes: ***** = CONFIRM ALL CEILING TYPES FOR MOUNTING OPTIONS**

Type:
R4-16'

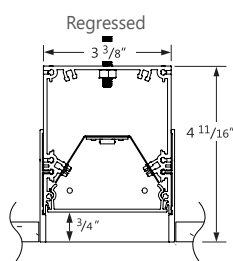
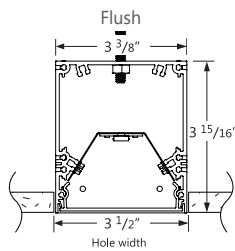


RECESSED - WITH StepLens OPTION



Flush shielding option

StepLens option



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
400 lm/ft	3.7 W/ft	109 lm/W
500 lm/ft	4.6 W/ft	108 lm/W
750 lm/ft	7.1 W/ft	105 lm/W
1000 lm/ft	9.7 W/ft	103 lm/W

* Based on a 4 foot luminaire using one driver
 Please consult factory for custom lumen output and wattage.



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified. See page 2 for DLC Approved Options



Ordering Guide

BMRLED					
PRODUCT ID	NOM. LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	LENGTH
BMRLED Recessed LED	400 400 lm/ft - Minimum 1000 1000 lm/ft - Maximum	80 80 CRI 90 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	FL flush RG regressed 1.25M 1.25" StepLens, lum. end cap 1.25P 1.25" StepLens, opaque end cap	2 2' 3 3' 4 4' 5 5' 6 6' 8 8' 12 12' S# system run
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.				All lens options use spotless lens See page 3 for more details	

MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER	CIRCUITS
M16(#) MR halogen lamp - Line voltage (by other) ⁽¹⁾ M16LED(#) MR16 LED lamp - Line voltage (by other) ⁽¹⁾ M16LEDB(#) MR16 LED lamp - Dimmable (provided) ⁽²⁾	W white C custom	120 120 V 277 277 V 347 347 V ⁽³⁾ UNV universal	DP dimming (0-10V) 1% D dimming (0-10V) 5% 347V standard ⁽⁴⁾ LT Lutron ⁽⁵⁾ BI bi-level dimming O other ⁽⁶⁾	1 1 circuit 2 2 circuits +E(#) emergency circuit ⁽⁷⁾ +NL(#) night light circuit ⁽⁷⁾ +GTD(#) generator transfer device ⁽⁷⁾ +LDI LED downlight insert
⁽¹⁾ Specify quantity; Line wattage only; Separate circuits included ⁽²⁾ Consult factory; See page 4 for more details; M16 constant current for 0-10V & DALI only. Available in 2700K or 3000K.		⁽³⁾ D dimming (0-10V) 5% standard	⁽⁴⁾ For 347V only ⁽⁵⁾ Specify system ⁽⁶⁾ Please consult factory; see page 2	⁽⁷⁾ Specify quantity

MOUNTING	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange D drywall flangeless DB slip-through bracket DS drywall spackle flange TX tx Hunter Douglas techstyle ⁽⁸⁾	B# battery pack 4' sections	F fuse ⁽⁹⁾ EF end feed FW(#) flex whip (6' std) CP Chicago plenum HD hold-down clip ⁽¹⁰⁾ AR air return plate ⁽¹¹⁾ SR sprinkler plate ⁽¹¹⁾ SPK speaker plate ⁽¹¹⁾	DS# Daylight sensor OS# occupancy sensor DOS# Daylight & occupancy sensor EN# Enlighted integral ⁽¹²⁾ ENR# Enlighted remote ⁽¹³⁾ WC# wireless control dimming	C custom
⁽⁸⁾ TX available with flush lens only	Requires 120V or 277V Please consult factory	⁽⁹⁾ Requires 120V or 277V ⁽¹⁰⁾ Only available for t-bar mounting ⁽¹¹⁾ Please consult factory	⁽¹²⁾ For flush and regressed option only; Please consult factory ⁽¹³⁾ Please consult factory Specify quantity. Requires 8" blank. See integrated controls guide for more details.	Please specify



BEAM3 LED

RECESSED - WITH StepLens OPTION

● SPECIFICATIONS

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
Interior Brackets	Die formed sheet steel (18 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Blank	Extruded aluminum (0.075" nominal)
Lens	Spotless acrylic lens
T-Bar Bracket	Die formed sheet steel (16 gauge)
Screw Slot T-Bar Bracket	Die formed sheet steel (16 gauge)
Slip-Through Bracket	Die formed sheet steel (18 gauge)
Spackle Flange	Die formed perforated sheet steel (20 gauge)
Flange	Extruded aluminum (0.075" nominal) Visible flange width: 9/16"

● ELECTRICAL


Lutron driver	LDE1 - Hi-Lume 1% SOFTB L3DAE - Hi-Lume 1% ECO L3DA3W - Hi-Lume 1% 3 wire LTEA - Hi-Lume 1% 2 wire Forward Phase LDE5 - 5 Series 5% ECO
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● SYSTEM (S#)

BEAM 3 LED linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 3 LED that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining, please refer to the BEAM 3 LED installation sheets available for download at www.axislighting.com.

● APPROVALS

Certified to UL and CSA standards 
 Meets NYC requirements
 Meets CCEC requirements (Chicago plenum)
 Suitable for damp locations
 IC Rated (Insulated ceiling)

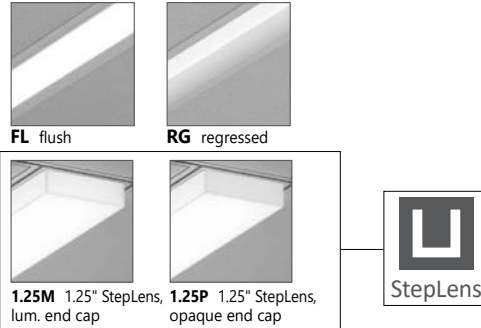
● DLC Approved Options



*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.

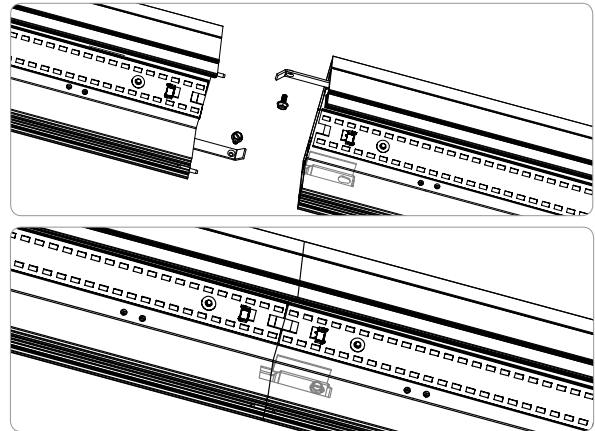
OUTPUT	CRI	LUMENS	SHIELDING	LENGTH	FINISH	VOLTAGE	DRIVER
500 lm/ft	80	3000 K	FL	2'	white	universal	DP
750 lm/ft		3500 K	1.25M	3'			
1000 lm/ft		4000 K		4'			
				5'			
				6'			
				8'			
				12'			

● SHIELDING - Frosted acrylic Spotless lens



● JOINERS

In order to allow very long runs of BEAM 3 LED luminaires, Axis has developed a number of different joining systems. Special care has been taken to maximize the performance of the joiner for each BEAM 3 LED option.



JOINER SYSTEM

NOTE: Hang each system segment individually. Do not assemble system prior to hanging.

● WEIGHT

Recessed LED 4 ft	12.3 lbs / 5.0 kg
Recessed LED 8 ft	24.6 lbs / 10.1 kg
Recessed LED 12 ft	36.9 lbs / 15.1 kg

● FINISHES

Powder coated and custom finishes are also available.

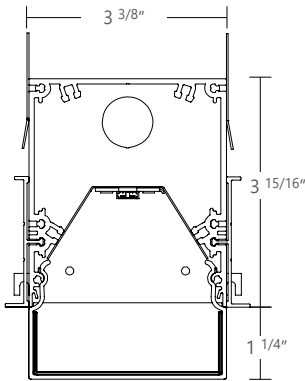
● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.5-step MacAdam ellipse).
LED life	Minimum 50,000h with 70% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal management	Aluminium housing acting as the heat sink to maximize life.



RECESSED - WITH StepLens OPTION

● **STEP LENS OPTION**



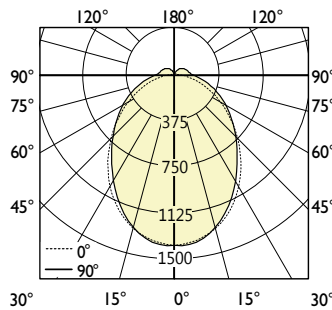
PERFORMANCE

LUMENS	WATTS	EFFICACY
950 lm/ft	8.73 W/ft	110 lm/W

950 lm/ft Im with 1.25" StepLens



PHOTOMETRIC CURVE



Total Lumens: 3783 lm (for 4ft)
Input Watts: 33.9 W
Efficacy: 112 lm/W

IES FILE: BMRLED-950-80-35-1.25M-4-W

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1405	1405	1405	1405	1405
5	1391	1396	1393	1400	1405
15	1310	1321	1310	1303	1305
25	1159	1163	1142	1120	1116
35	955	960	932	907	899
45	734	746	730	718	713
55	524	547	552	554	555
65	336	370	397	412	414
75	177	222	264	285	287
85	59	109	159	180	183
90	21	72	120	142	143
95	17	66	110	129	130
105	12	56	94	111	113
115	9	43	80	96	99
125	6	32	65	81	85
135	4	22	46	64	68
145	2	11	30	41	45
155	1	3	14	24	27
165	0	0	2	6	9
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	368
20-30	524
30-40	583
40-50	564
50-60	491
60-70	386
70-80	266
80-90	157
90-100	104
100-110	86
110-120	68
120-130	50
130-140	32
140-150	17
150-160	6
160-170	1
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
0			
45	9528	7701	7057
55	8297	6593	6102
65	7096	5662	5300
75	5880	4856	4564
85	4939	4301	3999

i All IES files are available for download at: www.axislighting.com

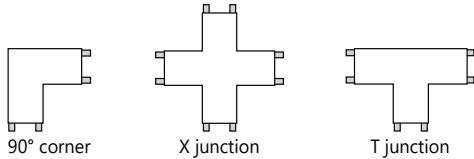
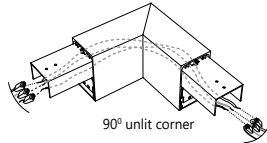


BEAM3 LED

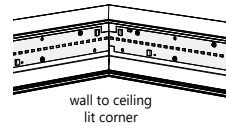
RECESSED - WITH StepLens OPTION

CORNERS

Unlit Corners - BEAM 3 LED features a multitude of layout patterns with the use of a number of corners, 90° corner, T or X junctions.



Lit Corners - Axis also offers lit 90° corners including ceiling to ceiling, wall to ceiling and ceiling to wall.



i For custom corner angles, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com

*For StepLens please consult factory.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

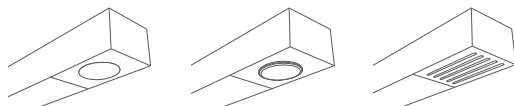
OTHER MOUNTING OPTIONS

BEAM 3 LED is also available with pendant, surface, wall, wall vertical, recessed asymmetric and recessed vertical mounted options.

i Specification sheets and installation sheets for all mounting for BEAM 3 LED luminaires are available for download at: www.axislighting.com

TECHZONE™ AND LOGIX™

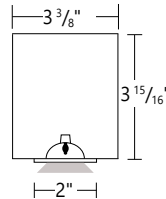
Integrated contiguous modules for PA speakers, Air Returns and Sprinkler Heads are available for our recessed Beam products to add a consistent linear system to complete the illuminated portion.



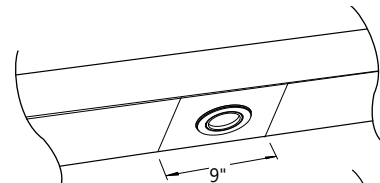
SPK SPEAKER SR SPRINKLER AR AIR RETURN

MR16 LED LAMPS

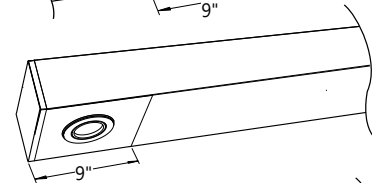
Blank	Extruded aluminum (0.075" nominal)
MR16 Halogens	Adjustable halogen lamp 35W / 50W (by others) - Line voltage dimming only
MR16 LED	Adjustable LED lamp (provided)- Line voltage dimming only
MR16 LEDB	Constant current LED lamp (provided)- Dimmable by control system for 0-10V DALI only
Quantity	For every 4' section, there may be up to a maximum of 4 x MR16 LED lamps.
Spacing	Each MR16 LED lamp is placed centered on a blank section 9" in length. For a series of MR16's within a given section length, they will be spaced evenly on a longer blank section. The directed light of MR16 LED lamps are fixed downward. Custom spacing may be available on special request.



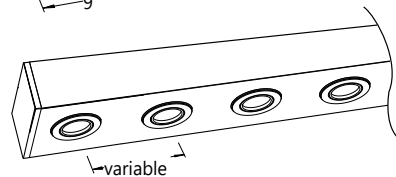
Between sections



At luminaire ends



Several in a long blank section



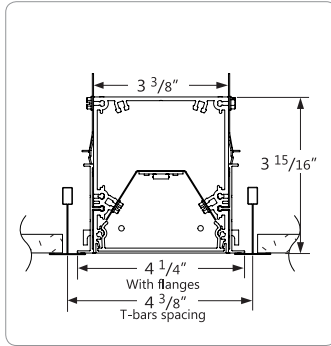
Base Type	GU 5.3
Beam Angle	40 nominal degrees
Input Watts	6W
Nominal Lumens	300 lumens
Efficacy	50 lumens per watt
Color Rendering Index (CRI)	85
Center Beam Candle Power (CBCP)	584 candelas
Life	25,000 hours at L ₇₀
Correlated color temperature (CCT)	2700K, 3000K

i More options are available upon request. Please consult factory.

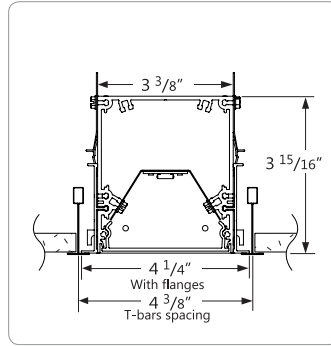


RECESSED - WITH StepLens OPTION

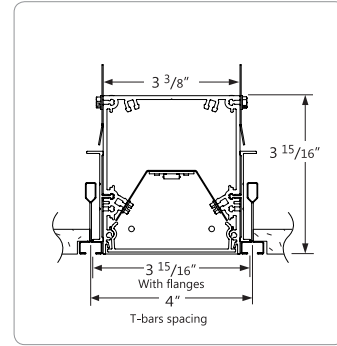
● **TB CEILING MOUNTING OPTIONS**



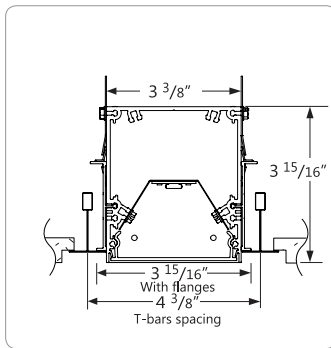
TB15 15/16" T-BAR



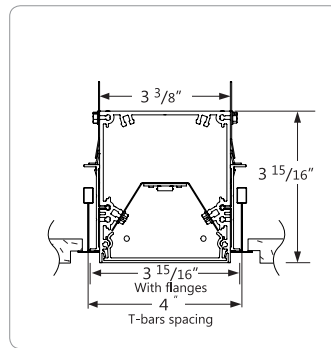
TB9 9/16" T-BAR



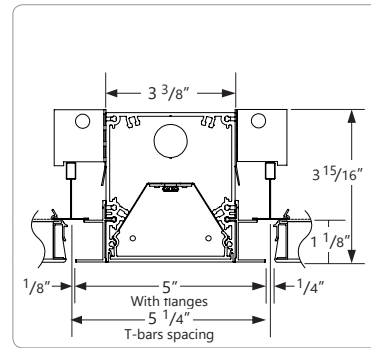
ST SCREW SLOT T-BAR



TG15 15/16" TEGULAR

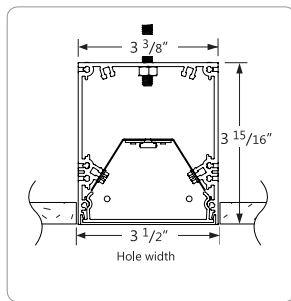


TG9 9/16" T-TEGULAR

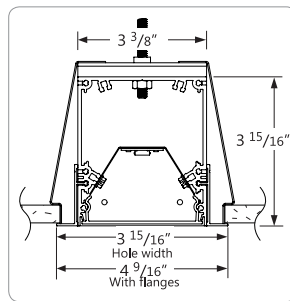


TX TX HUNTER DOUGLAS TECHSTYLE

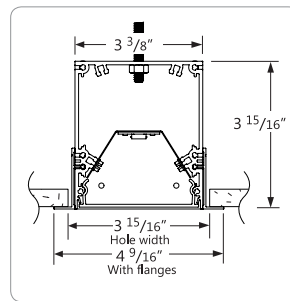
● **DRYWALL CEILING MOUNTING OPTIONS**



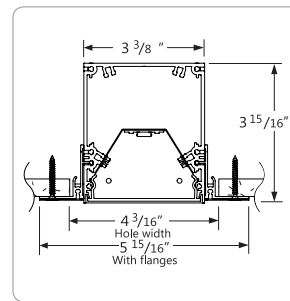
D FLANGELESS WITH 1/4-20 STUD MOUNTING



DB VISIBLE FLANGES WITH SLIP-THROUGH BRACKET



DF VISIBLE FLANGES WITH 1/4-20 STUD MOUNTING



DS SPACKLE FLANGES

● **OTHER MOUNTING OPTIONS**

BEAM3 LED is also available with pendant, surface, wall and recessed wall mounted options.

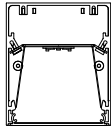
i Specification sheets and installation sheets for all mounting for BEAM luminaires are available for download at www.axislighting.com



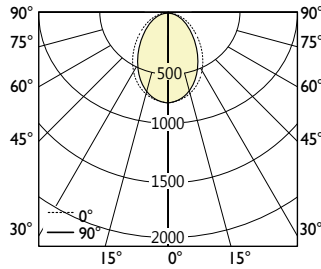
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

400 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 400 lm/ft
Input Watts: 3.6 W/ft
Efficacy: 109 lm/W

IES FILE: BMRLED-400-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008.

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	724	724	724	724	724
5	716	719	716	720	723
15	677	679	672	668	670
25	603	600	586	574	572
35	501	496	477	457	449
45	389	383	362	340	331
55	279	274	255	235	228
65	177	174	160	148	143
75	88	88	82	75	73
85	22	21	19	18	17
90	0	0	0	0	0

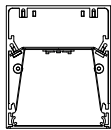
ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	189
20-30	270
30-40	298
40-50	279
50-60	228
60-70	159
70-80	87
80-90	23
90	

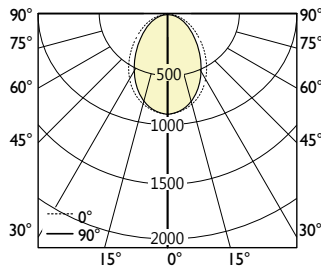
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5750	5347	4891
55	5074	4640	4159
65	4369	3966	3530
75	3558	3292	2936
85	2589	2325	2008

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 4.6 W/ft
Efficacy: 108 lm/W

IES FILE: BMRLED-500-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	905	905	905	905	905
5	894	898	896	900	903
15	846	849	840	835	837
25	753	750	733	718	715
35	627	619	596	572	562
45	487	478	452	425	414
55	348	342	319	294	285
65	221	217	201	185	179
75	110	110	102	94	91
85	27	26	24	23	21
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	85
10-20	237
20-30	337
30-40	372
40-50	348
50-60	285
60-70	199
70-80	108
80-90	28
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7188	6683	6114
55	6343	5801	5198
65	5462	4958	4413
75	4448	4114	3670
85	3236	2906	2510

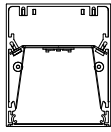
i All IES files are available for download at: www.axislighting.com



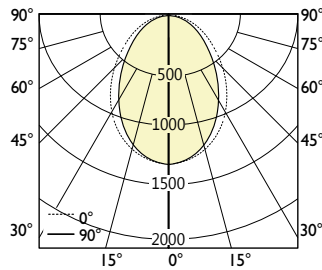
RECESSED - WITH StepLens OPTION

PHOTOMETRIC DATA

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 7.1 W/ft
Efficacy: 105 lm/W

IES FILE: BMRLED-750-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1357	1357	1357	1357	1357
5	1342	1347	1343	1350	1355
15	1269	1274	1261	1252	1256
25	1130	1124	1099	1077	1073
35	940	929	894	857	842
45	730	718	679	637	621
55	522	513	478	441	428
65	331	326	301	278	268
75	165	165	153	141	136
85	41	40	36	34	31
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	128
10-20	355
20-30	506
30-40	558
40-50	523
50-60	427
60-70	299
70-80	162
80-90	43
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	10782	10025	9170
55	9514	8701	7798
65	8193	7437	6619
75	6672	6172	5504
85	4854	4359	3765

LED lighting facts
 A Program of the U.S. DOE

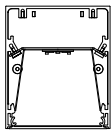
Light Output (Lumens) **2616**
 Watts **31.67**
 Lumens per Watt (Efficacy) **82.6**

Color Accuracy
 Color Rendering Index (CRI) **82**

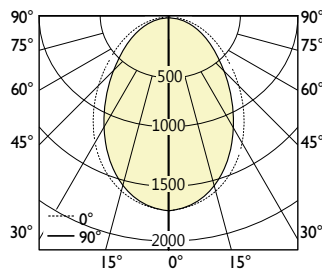
Light Color
 Correlated Color Temperature (CCT) **3057 (Bright White)**

2700K 3000K 4500K 6500K

1000 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 1000 lm/ft
Input Watts: 9.7 W/ft
Efficacy: 103 lm/W

IES FILE: BMRLED-1000-80-35-FLIES
 TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1810	1810	1810	1810	1810
5	1789	1797	1791	1800	1807
15	1692	1699	1681	1670	1674
25	1507	1499	1466	1436	1431
35	1253	1239	1192	1143	1123
45	973	957	905	850	828
55	697	684	637	589	571
65	442	434	401	370	357
75	220	219	204	188	182
85	54	53	48	45	42
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	170
10-20	473
20-30	674
30-40	744
40-50	697
50-60	570
60-70	399
70-80	217
80-90	57
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14376	13367	12227
55	12685	11601	10397
65	10924	9916	8826
75	8896	8229	7339
85	6472	5812	5019

LED lighting facts
 A Program of the U.S. DOE

Light Output (Lumens) **3862**
 Watts **46.62**
 Lumens per Watt (Efficacy) **82.8**

Color Accuracy
 Color Rendering Index (CRI) **83**

Light Color
 Correlated Color Temperature (CCT) **3474 (Bright White)**

2700K 3000K 4500K 6500K

i All IES files are available for download at: www.axislighting.com

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1**
0-NC-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R5



Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959 | 15774 Gateway Circle | Tustin, CA 92780 | FAX: 714.259.9969 | AlphabetLighting.com

JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RD



DESCRIPTION

The NU6RD 6" recessed downlight by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V and 347V. A minimalistic look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. Optional high efficiency BrightView diffused lens for smooth light distribution and obscured LED image. Several beam angles and LITEOPTICS available.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. Wet location rated is offered standard. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 2" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed nails, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for wet locations, IP65
- Non-conductive, Lexan™ dead-front construction
- Made in the USA – meets the requirements of the Buy American provision within the ARRA
- Energy Star Pending. See Page 4 for details

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	
DELIVERED LUMENS	07LM	600 lm
	10LM	860 lm
	13LM	1110 lm
	20LM	1710 lm
	30LM	2560 lm
	40LM ^{1,4} 50LM ^{1,3,4}	3410 lm 4260 lm
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K 40K	3500K 4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)
	D65 WH80	65° diffused with clear lens (0.88) 80° brilliant white with clear lens (0.94)
NO LENS OPTION	NL⁵	no lens
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁷	standard driver with flicker free 0-10V dimming to 1%
	DIM10Z ⁷	flicker free 0-10V dimming to 0%
	DALI ⁷	flicker free dali dimming to 1%
	DALI2 ⁷	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA ³ ELV ⁹	lutron ecosystem dimming to 1% leading & trailing edge dimming (Triac/ELV)
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ⁴	insulation contact housing
	ICAT ⁴	insulation contact / airtight housing
	CP ⁴ RET	chicago plenum housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁸	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ^{5,8}	emergency battery backup, 90 minutes at 12 watts to LED
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
600	9.5	10.2	11.4	12.1
860	12.4	13.1	15.4	16.1
1110	16.5	17.2	20.9	21.6
1710	25.9	26.5	32.9	33.2
2560	36.5	36.8	42.9	43.2
3410	48.8	49.1	N/A	N/A
4260	56.5	56.8	N/A	N/A

NOTES

- 1 98 CRI not available for 40LM or 50LM.
- 2 B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- 3 LUDA not available for 50LM.
- 4 IC/ICAT/CP not available for 40LM or 50LM.
- 5 EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- 6 No lens option available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- 7 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- 8 For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
- 9 Triac/ELV dimming available for 83/98cri in 10LM, 13LM, 20LM, & 83cri only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1
0-NC-MC-MC**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
R5



Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959
Tustin, CA 92780 | FAX: 714.259.9969 | AlphabetLighting.com

SPECIALTY ORDERING CODE

SERIES	BIOS ORDERING CODE		XIM19 ORDERING CODE		LUMENETIX ORDERING CODE	
	NU6		NU6		NU6	
TYPE	RD	round downlight	RD	round downlight	RD	round downlight
LED	BIOS	BIOS	XIM19	XTM19	LMX	LMX
DELIVERED LUMEN	08LM	710 lm	13LM	1110 lm	12LM	1000 lm
	11LM	920 lm	20LM	1710 lm	15LM	1250 lm
	16LM ¹	1400 lm	30LM ^{1,2}	2560 lm	20LM	1670 lm
	21LM ¹	1810 lm			30LM	2500 lm
CCT & LM MULTIPLIER	30K	3000K (0.95)	27K	2700K	TC	tunable color, 8000K - 1650k
	35K	3500K (0.97)	30K	3000K	30KWD	warm dimming 3050k @ 100% to 1800K @1%
	40K	4000K (1.00)	V30K	3000K vibrant		
	50K	5000K (1.02)	35K	3500K		
	40K	4000K	40K	4000K		
CRI	85	85CRI	83	83CRI	90	90CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL ²	no lens	NL ³	no lens	NL ¹	no lens
VOLTAGE	120	120V	UNV	120V-277V	120	120V
	277	277V			277	277V
DIMMING	DIM10 ³	standard driver / flicker free 0-10V dimming to 1%	DIM10Z	flicker free 0-10V dimming to 0%	DIM10	0-10V control, dimmable to 1%, + bluetooth control/flicker free dimx dimming to 1%
	DIM10Z ³	flicker free 0-10V dimming to 0%	DALIZ	flicker free dali dimming to 0%	DMX	dmx control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DIM10ZBL	flicker free 0-10V dimming to 0% + bluetooth control & beacon technology	LUD	lutron ecosystem control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DALIZBL	flicker free dali dimming to 0% + bluetooth control & beacon technology		
	DMXZ	flicker free dimx dimming to 0%				
LUDA	lutron ecosystem dimming to 1%					
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate
	IC ¹	insulation contact housing	IC ²	insulation contact housing	IC	insulation contact housing
	ICAT ¹	insulation contact / airtight housing	ICAT ²	insulation contact / airtight housing	ICAT	insulation contact / airtight housing
	CP ¹	chicago plenum housing	CP ²	chicago plenum housing	CP	chicago plenum housing
	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
BEZEL COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁴	emergency battery backup, 90 minutes at 7 watts to LED	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489				

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XIM19 - 20LM - 30K - 83 - HE60 - UNV - DALIZ - NC - MC - MC - EMIN

DELIVERED LM	POWER	
	W (85CRI)	VA (85CRI)
720	15.8	16.3
930	20.5	21.2
1420	32.7	33.3
1810	45.2	45.4

DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
1110	16.4	17.3	20.3	21.2
1790	25.4	26.2	33.4	34.1
25600	37.1	37.7	N/A	N/A

DELIVERED LM	POWER	
	W (90CRI)	VA (90CRI)
1000	24	25
1250	31	32
1670	39	40
2500	65	66

BIOS NOTES

- IC/ICAT/CP not available for 16LM or 21LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.

XIM19 NOTES

- 98CRI not available for 30LM.
- IC/ICAT/CP not available for 30LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

LMX NOTES

- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1
0-NC-MC-MC**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

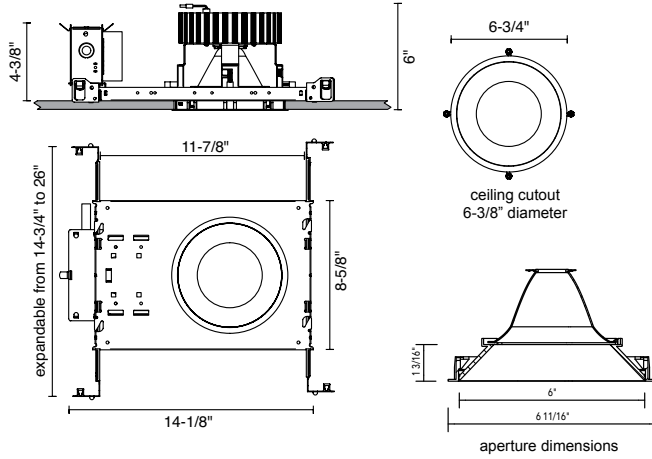
Type:
R5



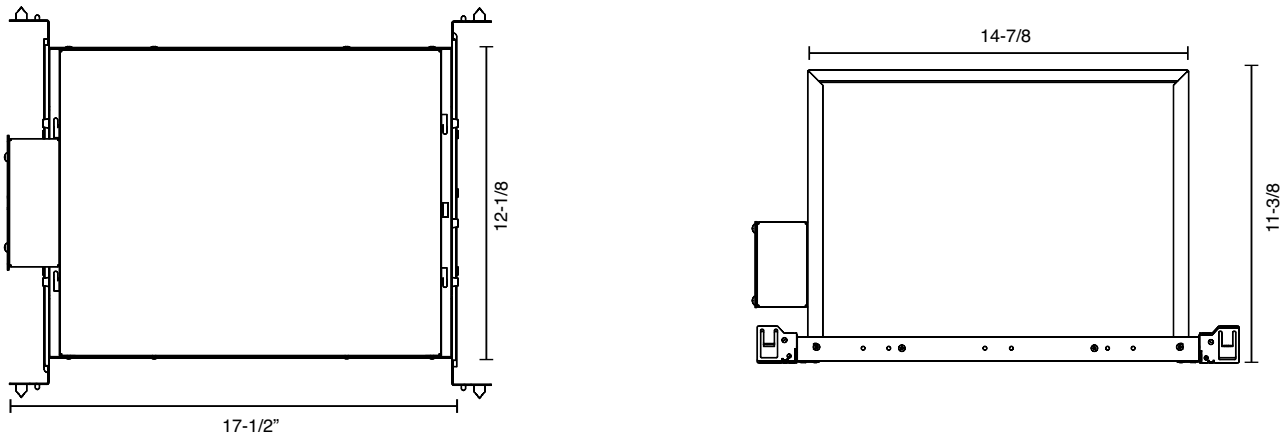
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MOUNTING

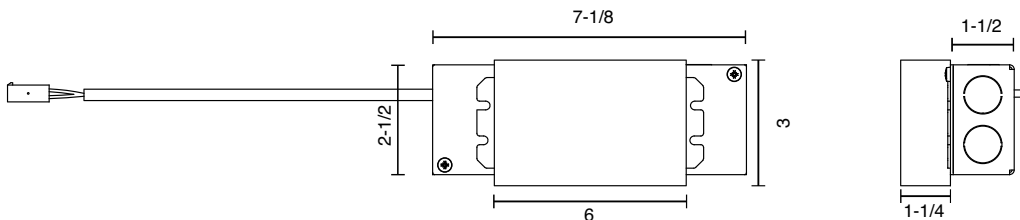
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1
0-NC-MC-MC**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
R5



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	XTM19
DELIVERED LUMEN	10LM 13LM	860 lm 1110 lm
CCT	27K 30K 35K 40K	2700K 3000K 3500K 4000K
CRI	83 90	83CRI 90CRI
REFLECTOR & LM MULTIPLIER	HE40 HE60 HE80 S20 S35 S55 WH80	40° high efficiency diffused lens (0.97) 60° high efficiency diffused lens (0.97) 80° high efficiency diffused lens (0.90) 20° specular with clear lens (1.00) 35° specular with clear lens (0.99) 55° specular with clear lens (0.98) 80° brilliant white with clear lens (0.94)
VOLTAGE	120 277	120V 277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC IC ICAT RET	new construction with ceiling fitting plate insulation contact housing insulation contact / airtight housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE _____

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	686.20	N.A.	66.00
0-30	912.16	N.A.	87.70
0-40	1024.3	N.A.	98.50
0-60	1034.67	N.A.	99.50
0-80	1037.64	N.A.	99.80
0-90	1038.34	N.A.	99.80
10-90	697.73	N.A.	67.10
20-40	338.10	N.A.	32.50
20-50	345.55	N.A.	33.20
40-70	12.46	N.A.	1.20
60-80	2.97	N.A.	0.30
70-80	0.88	N.A.	0.10
80-90	0.69	N.A.	0.10
90-110	0.73	N.A.	0.10
90-120	1.01	N.A.	0.10
90-130	1.24	N.A.	0.10
90-150	1.54	N.A.	0.10
90-180	1.72	N.A.	0.20
110-180	0.99	N.A.	0.10
0-180	1040.05	N.A.	100.00

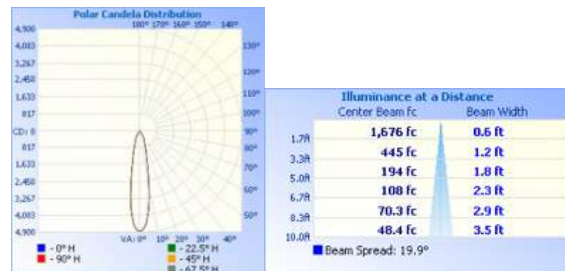
Zonal Lumen Summary

Zone	Lumens
0-10	340.61
10-20	345.59
20-30	225.96
30-40	112.14
40-50	7.45
50-60	2.92
60-70	2.09
70-80	0.88
80-90	0.69
90-100	0.39
100-110	0.34
110-120	0.28
120-130	0.22
130-140	0.17
140-150	0.13
150-160	0.10
160-170	0.06
170-180	0.02

Total Luminaire Efficiency = N.A.%

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	455	455	455
55	298	298	298
65	242	242	242
75	186	186	186
85	390	390	390



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1**
0-NC-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

R5E



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JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RD



DESCRIPTION

The NU6RD 6" recessed downlight by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V and 347V. A minimalistic look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. Optional high efficiency BrightView diffused lens for smooth light distribution and obscured LED image. Several beam angles and LITEOPTICS available.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. Wet location rated is offered standard. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 2" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed nails, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for wet locations, IP65
- Non-conductive, Lexan™ dead-front construction
- Made in the USA – meets the requirements of the Buy American provision within the ARRA
- Energy Star Pending. See Page 4 for details

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	
DELIVERED LUMENS	07LM	600 lm
	10LM	860 lm
	13LM	1110 lm
	20LM	1710 lm
	30LM	2560 lm
	40LM ^{1,4} 50LM ^{1,3,4}	3410 lm 4260 lm
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K	3500K
	40K	4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL⁵	no lens
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁷	standard driver with flicker free 0-10V dimming to 1%
	DIM10Z ⁷	flicker free 0-10V dimming to 0%
	DALI ⁷	flicker free dali dimming to 1%
	DALI2 ⁷	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA ³ ELV ⁹	lutron ecosystem dimming to 1% leading & trailing edge dimming (Triac/ELV)
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ⁴	insulation contact housing
	ICAT ⁴	insulation contact / airtight housing
	CP ⁴	chicago plenum housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7⁸	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ^{5,8}	emergency battery backup, 90 minutes at 12 watts to LED
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
600	9.5	10.2	11.4	12.1
860	12.4	13.1	15.4	16.1
1110	16.5	17.2	20.9	21.6
1710	25.9	26.5	32.9	33.2
2560	36.5	36.8	42.9	43.2
3410	48.8	49.1	N/A	N/A
4260	56.5	56.8	N/A	N/A

NOTES

- 1 98 CRI not available for 40LM or 50LM.
- 2 B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- 3 LUDA not available for 50LM.
- 4 IC/ICAT/CP not available for 40LM or 50LM.
- 5 EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- 6 No lens option available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- 7 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- 8 For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
- 9 Triac/ELV dimming available for 83/98cri in 10LM, 13LM, 20LM, & 83cri only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1 0-NC-MC-MC-EM7**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

R5E



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SPECIALTY ORDERING CODE

SERIES	BIOS ORDERING CODE		XIM19 ORDERING CODE		LUMENETIX ORDERING CODE	
	NU6		NU6		NU6	
TYPE	RD	round downlight	RD	round downlight	RD	round downlight
LED	BIOS	BIOS	XIM19	XTM19	LMX	LMX
DELIVERED LUMEN	08LM	710 lm	13LM	1110 lm	12LM	1000 lm
	11LM	920 lm	20LM	1710 lm	15LM	1250 lm
	16LM ¹	1400 lm	30LM ^{1,2}	2560 lm	20LM	1670 lm
	21LM ¹	1810 lm			30LM	2500 lm
CCT & LM MULTIPLIER	30K	3000K (0.95)	27K	2700K	TC	tunable color, 8000K - 1650k
	35K	3500K (0.97)	30K	3000K	30KWD	warm dimming 3050k @ 100% to 1800K @1%
	40K	4000K (1.00)	V30K	3000K vibrant		
	50K	5000K (1.02)	35K	3500K		
	40K	4000K	40K	4000K		
CRI	85	85CRI	83	83CRI	90	90CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL ²	no lens	NL ³	no lens	NL ¹	no lens
VOLTAGE	120	120V	UNV	120V-277V	120	120V
	277	277V			277	277V
DIMMING	DIM10 ³	standard driver / flicker free 0-10V dimming to 1%	DIM10Z	flicker free 0-10V dimming to 0%	DIM10	0-10V control, dimmable to 1%, + bluetooth
	DIM10Z ³	flicker free 0-10V dimming to 0%	DALIZ	flicker free dali dimming to 0%	DMX	dmx control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DIM10ZBL	flicker free 0-10V dimming to 0% + bluetooth control & beacon technology	LUD	lutron ecosystem control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DALIZBL	flicker free dali dimming to 0% + bluetooth control & beacon technology		
	DMXZ	flicker free dmx dimming to 0%				
LUDA	lutron ecosystem dimming to 1%					
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate
	IC ¹	insulation contact housing	IC ²	insulation contact housing	IC	insulation contact housing
	ICAT ¹	insulation contact / airtight housing	ICAT ²	insulation contact / airtight housing	ICAT	insulation contact / airtight housing
	CP ¹	chicago plenum housing	CP ²	chicago plenum housing	CP	chicago plenum housing
	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
BEZEL COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁴	emergency battery backup, 90 minutes at 7 watts to LED	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489				

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XIM19 - 20LM - 30K - 83 - HE60 - UNV - DALIZ - NC - MC - MC - EMIN

DELIVERED LM	POWER	
	W (85CRI)	VA (85CRI)
720	15.8	16.3
930	20.5	21.2
1420	32.7	33.3
1810	45.2	45.4

DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
1110	16.4	17.3	20.3	21.2
1790	25.4	26.2	33.4	34.1
25600	37.1	37.7	N/A	N/A

DELIVERED LM	POWER	
	W (90CRI)	VA (90CRI)
1000	24	25
1250	31	32
1670	39	40
2500	65	66

BIOS NOTES

- IC/ICAT/CP not available for 16LM or 21LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.

XIM19 NOTES

- 98CRI not available for 30LM.
- IC/ICAT/CP not available for 30LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

LMX NOTES

- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1
0-NC-MC-MC-EM7**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:

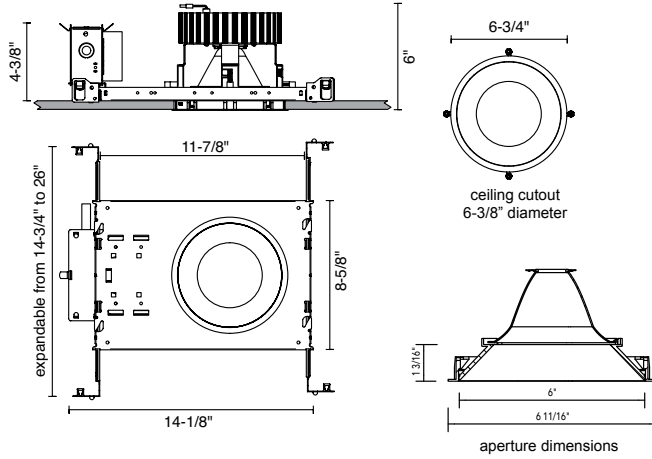
R5E



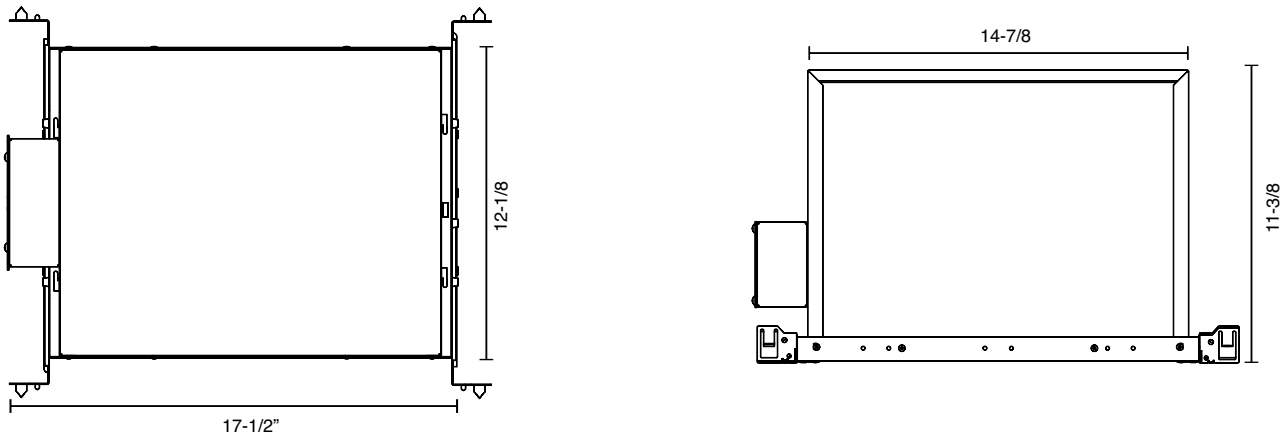
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MOUNTING

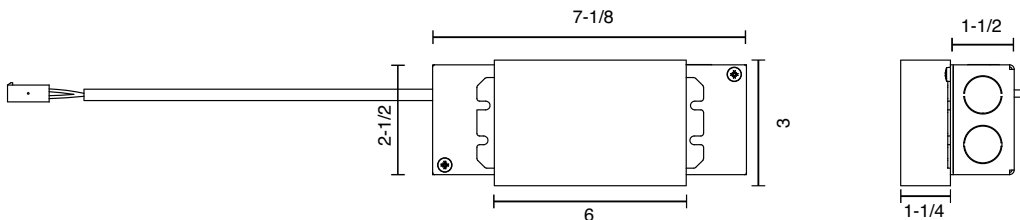
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-NL-277V-DIM1**
0-NC-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

R5E



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	XTM19
DELIVERED LUMEN	10LM	860 lm
	13LM	1110 lm
CCT	27K	2700K
	30K	3000K
	35K	3500K
	40K	4000K
CRI	83	83CRI
	90	90CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)
WH80	80° brilliant white with clear lens (0.94)	
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC	insulation contact housing
	ICAT	insulation contact / airtight housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE _____

Follow the steps to specify your fixture, example:
 NU6 - RD - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	686.20	N.A.	66.00
0-30	912.16	N.A.	87.70
0-40	1024.3	N.A.	98.50
0-60	1034.67	N.A.	99.50
0-80	1037.64	N.A.	99.80
0-90	1038.34	N.A.	99.80
10-90	697.73	N.A.	67.10
20-40	338.10	N.A.	32.50
20-50	345.55	N.A.	33.20
40-70	12.46	N.A.	1.20
60-80	2.97	N.A.	0.30
70-80	0.88	N.A.	0.10
80-90	0.69	N.A.	0.10
90-110	0.73	N.A.	0.10
90-120	1.01	N.A.	0.10
90-130	1.24	N.A.	0.10
90-150	1.54	N.A.	0.10
90-180	1.72	N.A.	0.20
110-180	0.99	N.A.	0.10
0-180	1040.05	N.A.	100.00

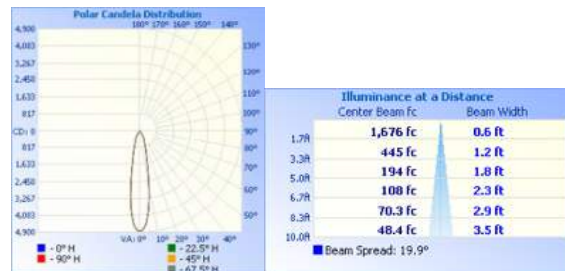
Zonal Lumen Summary

Zone	Lumens
0-10	340.61
10-20	345.59
20-30	225.96
30-40	112.14
40-50	7.45
50-60	2.92
60-70	2.09
70-80	0.88
80-90	0.69
90-100	0.39
100-110	0.34
110-120	0.28
120-130	0.22
130-140	0.17
140-150	0.13
150-160	0.10
160-170	0.06
170-180	0.02

Total Luminaire Efficiency = N.A. %

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	455	455	455
55	298	298	298
65	242	242	242
75	186	186	186
85	390	390	390



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R6



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JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RD



DESCRIPTION

The NU6RD 6" recessed downlight by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V and 347V. A minimalistic look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. Optional high efficiency BrightView diffused lens for smooth light distribution and obscured LED image. Several beam angles and LITEOPTICS available.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. Wet location rated is offered standard. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 2" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed holes, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for wet locations, IP65
- Non-conductive, Lexan™ dead-front construction
- Made in the USA – meets the requirements of the Buy American provision within the ARRA
- Energy Star Pending. See Page 4 for details

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	
DELIVERED LUMENS	07LM	600 lm
	10LM	860 lm
	13LM	1110 lm
	20LM	1710 lm
	30LM	2560 lm
	40LM ^{1,4} 50LM ^{1,3,4}	3410 lm 4260 lm
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K	3500K
	40K	4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL⁵	no lens
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁶	standard driver with flicker free 0-10V dimming to 1%
	DIM10Z ⁷	flicker free 0-10V dimming to 0%
	DALI ⁷	flicker free dali dimming to 1%
	DALI2 ⁷	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA ³ ELV ⁹	lutron ecosystem dimming to 1% leading & trailing edge dimming (Triac/ELV)
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ⁴	insulation contact housing
	ICAT ⁴	insulation contact / airtight housing
	CP ⁴ RET	chicago plenum housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁸ EM12 ^{5,8} FOR 347V OPTION	emergency battery backup, 90 minutes at 7 watts to LED emergency battery backup, 90 minutes at 12 watts to LED order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
600	9.5	10.2	11.4	12.1
860	12.4	13.1	15.4	16.1
1110	16.5	17.2	20.9	21.6
1710	25.9	26.5	32.9	33.2
2560	36.5	36.8	42.9	43.2
3410	48.8	49.1	N/A	N/A
4260	56.5	56.8	N/A	N/A

NOTES

- 1 98 CRI not available for 40LM or 50LM.
- 2 B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- 3 LUDA not available for 50LM.
- 4 IC/ICAT/CP not available for 40LM or 50LM.
- 5 EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- 6 No lens option available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- 7 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- 8 For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
- 9 Triac/ELV dimming available for 83/98cri in 10LM, 13LM, 20LM, & 83cri only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R6



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SPECIALTY ORDERING CODE

SERIES	BIOS ORDERING CODE		XIM19 ORDERING CODE		LUMENETIX ORDERING CODE	
	NU6		NU6		NU6	
TYPE	RD	round downlight	RD	round downlight	RD	round downlight
LED	BIOS	BIOS	XIM19	XTM19	LMX	LMX
DELIVERED LUMEN	08LM	710 lm	13LM	1110 lm	12LM	1000 lm
	11LM	920 lm	20LM	1710 lm	15LM	1250 lm
	16LM ¹	1400 lm	30LM ^{1,2}	2560 lm	20LM	1670 lm
	21LM ¹	1810 lm			30LM	2500 lm
CCT & LM MULTIPLIER	30K	3000K (0.95)	27K	2700K	TC	tunable color, 8000K - 1650k
	35K	3500K (0.97)	30K	3000K	30KWD	warm dimming 3050k @ 100% to 1800K @1%
	40K	4000K (1.00)	V30K	3000K vibrant		
	50K	5000K (1.02)	35K	3500K		
	40K	4000K	40K	4000K		
CRI	85	85CRI	83	83CRI	90	90CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL ²	no lens	NL ³	no lens	NL ¹	no lens
VOLTAGE	120	120V	UNV	120V-277V	120	120V
	277	277V			277	277V
DIMMING	DIM10 ³	standard driver / flicker free 0-10V dimming to 1%	DIM10Z	flicker free 0-10V dimming to 0%	DIM10	0-10V control, dimmable to 1%, + bluetooth
	DIM10Z ³	flicker free 0-10V dimming to 0%	DALIZ	flicker free dali dimming to 0%	DMX	dmx control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DIM10ZBL	flicker free 0-10V dimming to 0% + bluetooth control & beacon technology	LUD	lutron ecosystem control, dimmable to 1%, + bluetooth control
	DALIZ ³	flicker free dali dimming to 0%	DALIZBL	flicker free dali dimming to 0% + bluetooth control & beacon technology		
	DMXZ	flicker free dmx dimming to 0%				
LUDA	lutron ecosystem dimming to 1%					
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate
	IC ¹	insulation contact housing	IC ²	insulation contact housing	IC	insulation contact housing
	ICAT ¹	insulation contact / airtight housing	ICAT ²	insulation contact / airtight housing	ICAT	insulation contact / airtight housing
	CP ¹	chicago plenum housing	CP ²	chicago plenum housing	CP	chicago plenum housing
	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
BEZEL COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁴	emergency battery backup, 90 minutes at 7 watts to LED	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489				

ORDERING CODE

Follow the steps to specify your fixture, example:
 NU6 - RD - XIM19 - 20LM - 30K - 83 - HE60 - UNV - DALIZ - NC - MC - MC - EMIN

DELIVERED LM	POWER	
	W (85CRI)	VA (85CRI)
720	15.8	16.3
930	20.5	21.2
1420	32.7	33.3
1810	45.2	45.4

DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
1110	16.4	17.3	20.3	21.2
1790	25.4	26.2	33.4	34.1
25600	37.1	37.7	N/A	N/A

DELIVERED LM	POWER	
	W (90CRI)	VA (90CRI)
1000	24	25
1250	31	32
1670	39	40
2500	65	66

BIOS NOTES

- IC/ICAT/CP not available for 16LM or 21LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.

XIM19 NOTES

- 98CRI not available for 30LM.
- IC/ICAT/CP not available for 30LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

LMX NOTES

- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

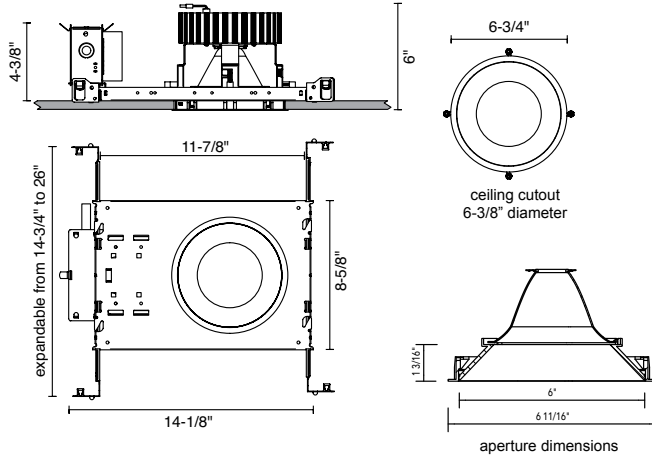
Type:
R6



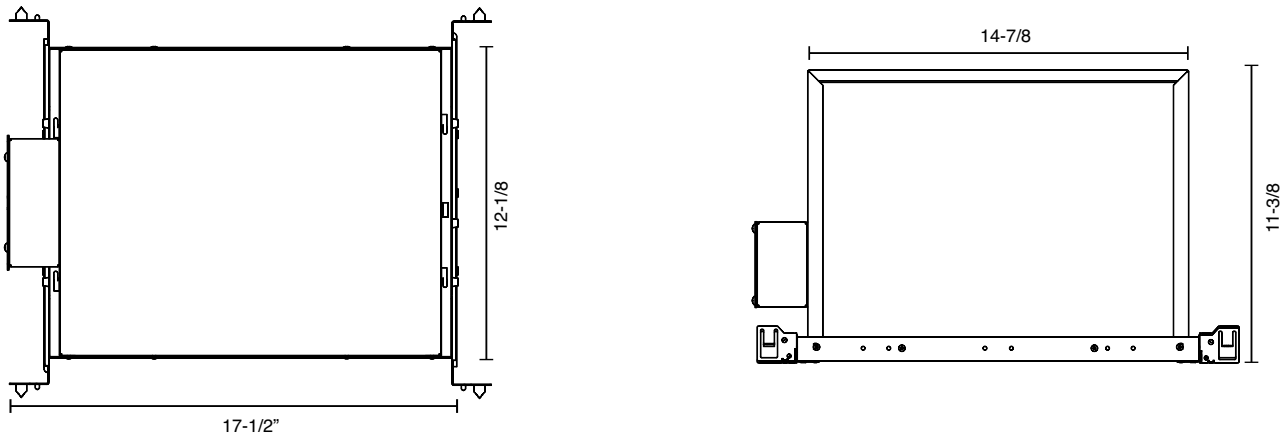
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MOUNTING

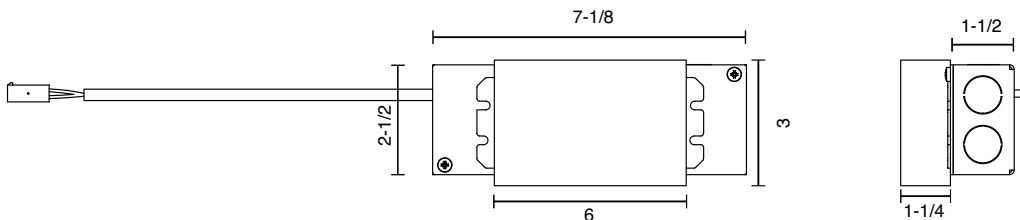
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R6



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	XTM19
DELIVERED LUMEN	10LM 13LM	860 lm 1110 lm
CCT	27K 30K 35K 40K	2700K 3000K 3500K 4000K
CRI	83 90	83CRI 90CRI
REFLECTOR & LM MULTIPLIER	HE40 HE60 HE80 S20 S35 S55 WH80	40° high efficiency diffused lens (0.97) 60° high efficiency diffused lens (0.97) 80° high efficiency diffused lens (0.90) 20° specular with clear lens (1.00) 35° specular with clear lens (0.99) 55° specular with clear lens (0.98) 80° brilliant white with clear lens (0.94)
VOLTAGE	120 277	120V 277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC IC ICAT RET	new construction with ceiling fitting plate insulation contact housing insulation contact / airtight housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE _____

Follow the steps to specify your fixture, example:
 NU6 - RD - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	686.20	N.A.	66.00
0-30	912.16	N.A.	87.70
0-40	1024.3	N.A.	98.50
0-60	1034.67	N.A.	99.50
0-80	1037.64	N.A.	99.80
0-90	1038.34	N.A.	99.80
10-90	697.73	N.A.	67.10
20-40	338.10	N.A.	32.50
20-50	345.55	N.A.	33.20
40-70	12.46	N.A.	1.20
60-80	2.97	N.A.	0.30
70-80	0.88	N.A.	0.10
80-90	0.69	N.A.	0.10
90-110	0.73	N.A.	0.10
90-120	1.01	N.A.	0.10
90-130	1.24	N.A.	0.10
90-150	1.54	N.A.	0.10
90-180	1.72	N.A.	0.20
110-180	0.99	N.A.	0.10
0-180	1040.05	N.A.	100.00

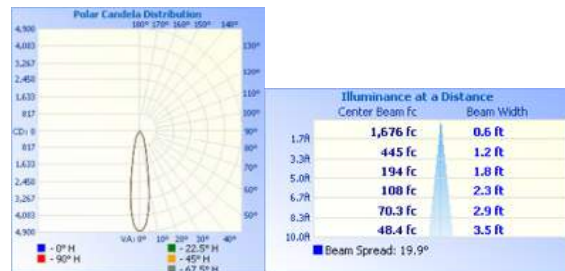
Zonal Lumen Summary

Zone	Lumens
0-10	340.61
10-20	345.59
20-30	225.96
30-40	112.14
40-50	7.45
50-60	2.92
60-70	2.09
70-80	0.88
80-90	0.69
90-100	0.39
100-110	0.34
110-120	0.28
120-130	0.22
130-140	0.17
140-150	0.13
150-160	0.10
160-170	0.06
170-180	0.02

Total Luminaire Efficiency = N.A. %

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	455	455	455
55	298	298	298
65	242	242	242
75	186	186	186
85	390	390	390



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R6-EM**



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JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RD



DESCRIPTION

The NU6RD 6" recessed downlight by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V and 347V. A minimalistic look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. Optional high efficiency BrightView diffused lens for smooth light distribution and obscured LED image. Several beam angles and LITEOPTICS available.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. Wet location rated is offered standard. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 2" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed nails, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for wet locations, IP65
- Non-conductive, Lexan™ dead-front construction
- Made in the USA – meets the requirements of the Buy American provision within the ARRA
- Energy Star Pending. See Page 4 for details

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	
DELIVERED LUMENS	07LM	600 lm
	10LM	860 lm
	13LM	1110 lm
	20LM	1710 lm
	30LM	2560 lm
	40LM ^{1,4}	3410 lm
50LM ^{1,3,4}	4260 lm	
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K	3500K
	40K	4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)
	HE60	60° high efficiency diffused lens (0.97)
	HE80	80° high efficiency diffused lens (0.90)
	S20	20° specular with clear lens (1.00)
	S35	35° specular with clear lens (0.99)
	S55	55° specular with clear lens (0.98)
	D35	35° diffused with clear lens (0.93)
	D50	50° diffused with clear lens (0.89)
	D65	65° diffused with clear lens (0.88)
WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL⁵	no lens
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁷	standard driver with flicker free 0-10V dimming to 1%
	DIM10Z ⁷	flicker free 0-10V dimming to 0%
	DALI ⁷	flicker free dali dimming to 1%
	DALI2 ⁷	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA ³	lutron ecosystem dimming to 1%
ELV ⁹	leading & trailing edge dimming (Triac/ELV)	
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ⁴	insulation contact housing
	ICAT ⁴	insulation contact / airtight housing
	CP ⁴	chicago plenum housing
RET	retrofit, no ceiling fitting plate	
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7⁸	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ^{5,8}	emergency battery backup, 90 minutes at 12 watts to LED
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
600	9.5	10.2	11.4	12.1
860	12.4	13.1	15.4	16.1
1110	16.5	17.2	20.9	21.6
1710	25.9	26.5	32.9	33.2
2560	36.5	36.8	42.9	43.2
3410	48.8	49.1	N/A	N/A
4260	56.5	56.8	N/A	N/A

NOTES

- 98 CRI not available for 40LM or 50LM.
- B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- LUDA not available for 50LM.
- IC/ICAT/CP not available for 40LM or 50LM.
- EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- No lens option available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
- Triac/ELV dimming available for 83/98cri in 10LM, 13LM, 20LM, & 83cri only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N**
C-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R6-EM



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SPECIALTY ORDERING CODE

SERIES	BIOS ORDERING CODE			XIM19 ORDERING CODE			LUMENETIX ORDERING CODE		
	NU6			NU6			NU6		
TYPE	RD	round	downlight	RD	round	downlight	RD	round	downlight
LED	BIOS	BIOS		XIM19	XTM19		LMX	LMX	
DELIVERED LUMEN	08LM	710 lm		13LM	1110 lm		12LM	1000 lm	
	11LM	920 lm		20LM	1710 lm		15LM	1250 lm	
	16LM ¹	1400 lm		30LM ^{1,2}	2560 lm		20LM	1670 lm	
	21LM ¹	1810 lm					30LM	2500 lm	
CCT & LM MULTIPLIER	30K	3000K (0.95)		27K	2700K		TC	tunable color, 8000K - 1650k	
	35K	3500K (0.97)		30K	3000K		30KWD	warm dimming 3050k @ 100% to 1800K @1%	
	40K	4000K (1.00)		V30K	3000K vibrant				
	50K	5000K (1.02)		35K	3500K				
	40K			40K	4000K				
CRI	85	85CRI		83	83CRI		90	90CRI	
REFLECTOR & LM MULTIPLIER	HE40	40° high efficiency diffused lens (0.97)		HE40	40° high efficiency diffused lens (0.97)		HE40	40° high efficiency diffused lens (0.97)	
	HE60	60° high efficiency diffused lens (0.97)		HE60	60° high efficiency diffused lens (0.97)		HE60	60° high efficiency diffused lens (0.97)	
	HE80	80° high efficiency diffused lens (0.90)		HE80	80° high efficiency diffused lens (0.90)		HE80	80° high efficiency diffused lens (0.90)	
	S20	20° specular with clear lens (1.00)		S20	20° specular with clear lens (1.00)		S20	20° specular with clear lens (1.00)	
	S35	35° specular with clear lens (0.99)		S35	35° specular with clear lens (0.99)		S35	35° specular with clear lens (0.99)	
	S55	55° specular with clear lens (0.98)		S55	55° specular with clear lens (0.98)		S55	55° specular with clear lens (0.98)	
	D35	35° diffused with clear lens (0.93)		D35	35° diffused with clear lens (0.93)		D35	35° diffused with clear lens (0.93)	
	D50	50° diffused with clear lens (0.89)		D50	50° diffused with clear lens (0.89)		D50	50° diffused with clear lens (0.89)	
	D65	65° diffused with clear lens (0.88)		D65	65° diffused with clear lens (0.88)		D65	65° diffused with clear lens (0.88)	
	WH80	80° brilliant white with clear lens (0.94)		WH80	80° brilliant white with clear lens (0.94)		WH80	80° brilliant white with clear lens (0.94)	
NO LENS OPTION	NL ²	no lens		NL ³	no lens		NL ¹	no lens	
VOLTAGE	120	120V		UNV	120V-277V		120	120V	
	277	277V					277	277V	
DIMMING	DIM10 ³	standard driver / flicker free 0-10V dimming to 1%		DIM10Z	flicker free 0-10V dimming to 0%		DIM10	0-10V control, dimmable to 1%, + bluetooth	
	DIM10Z ³	flicker free 0-10V dimming to 0%		DALIZ	flicker free dali dimming to 0%		DMX	dmx control, dimmable to 1%, + bluetooth control	
	DALIZ ³	flicker free dali dimming to 0%		DIM10ZBL	flicker free 0-10V dimming to 0% + bluetooth control & beacon technology		LUD	lutron ecosystem control, dimmable to 1%, + bluetooth control	
	DALIZ ³	flicker free dali dimming to 0%		DALIZBL	flicker free dali dimming to 0% + bluetooth control & beacon technology				
	DMXZ	flicker free dmx dimming to 0%							
	LUDA	lutron ecosystem dimming to 1%							
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate		NC	new construction with ceiling fitting plate		NC	new construction with ceiling fitting plate	
	IC ¹	insulation contact housing		IC ²	insulation contact housing		IC	insulation contact housing	
	ICAT ¹	insulation contact / airtight housing		ICAT ²	insulation contact / airtight housing		ICAT	insulation contact / airtight housing	
	CP ¹	chicago plenum housing		CP ²	chicago plenum housing		CP	chicago plenum housing	
	RET	retrofit, no ceiling fitting plate		RET	retrofit, no ceiling fitting plate		RET	retrofit, no ceiling fitting plate	
TRIM COLOR	WH	white		WH	white		WH	white	
	MC	matte chrome		MC	matte chrome		MC	matte chrome	
	BK	black		BK	black		BK	black	
	BZ	bronze		BZ	bronze		BZ	bronze	
	WT	wheat		WT	wheat		WT	wheat	
BEZEL COLOR	WH	white		WH	white		WH	white	
	MC	matte chrome		MC	matte chrome		MC	matte chrome	
	BK	black		BK	black		BK	black	
	BZ	bronze		BZ	bronze		BZ	bronze	
	WT	wheat		WT	wheat		WT	wheat	
ELECTRICAL OPTIONS	EM7 ⁴	emergency battery backup, 90 minutes at 7 watts to LED		EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W		EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED		FOR 347V	order separate "347V to 277V" step down transformer p/n: P70489		FOR 347V	order separate "347V to 277V" step down transformer p/n: P70489	
	OPTION	order separate "347V to 277V" step down transformer p/n: P70489		OPTION	transformer p/n: P70489		OPTION	transformer p/n: P70489	

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RD - XIM19 - 20LM - 30K - 83 - HE60 - UNV - DALIZ - NC - MC - MC - EMIN

DELIVERED LM	POWER	
	W (85CRI)	VA (85CRI)
720	15.8	16.3
930	20.5	21.2
1420	32.7	33.3
1810	45.2	45.4

DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
1110	16.4	17.3	20.3	21.2
1790	25.4	26.2	33.4	34.1
25600	37.1	37.7	N/A	N/A

DELIVERED LM	POWER	
	W (90CRI)	VA (90CRI)
1000	24	25
1250	31	32
1670	39	40
2500	65	66

BIOS NOTES

- IC/ICAT/CP not available for 16LM or 21LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.

XIM19 NOTES

- 98CRI not available for 30LM.
- IC/ICAT/CP not available for 30LM.
- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

LMX NOTES

- No lens options available for S20, S35, S55, D35, D50, D65, or WH80 and is damp location rated.

Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N
C-MC-MC-EM7**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

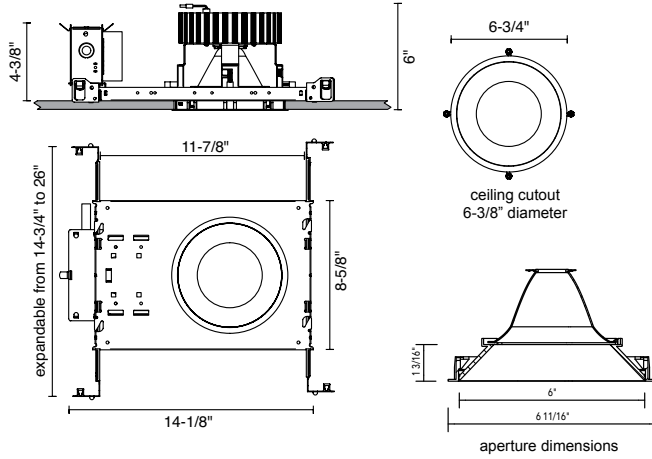
Type:
R6-EM



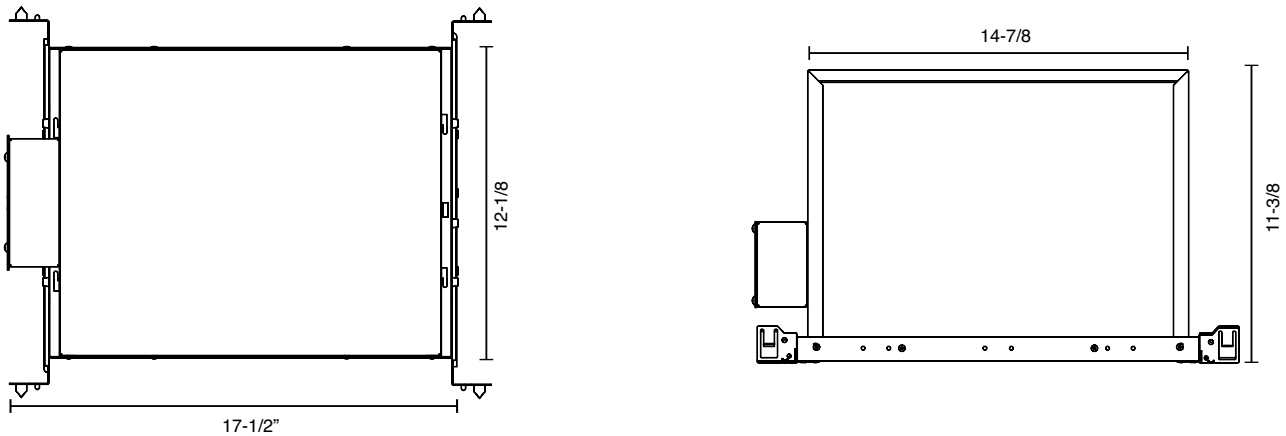
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MOUNTING

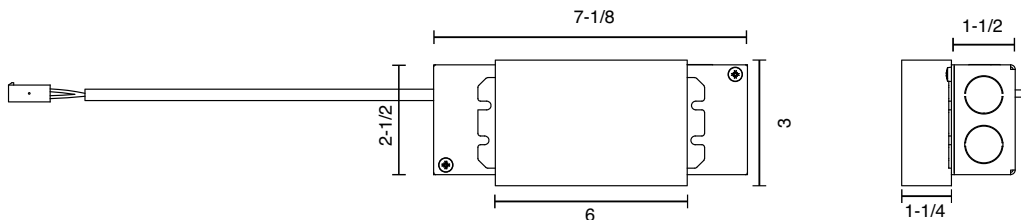
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RD-XTM19-13LM-35K-83-S55-277V-DIM10-N
C-MC-MC-EM7**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type: **R6-EM**



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RD	round downlight
LED	XTM19	XTM19
DELIVERED LUMEN	10LM 13LM	860 lm 1110 lm
CCT	27K 30K 35K 40K	2700K 3000K 3500K 4000K
CRI	83 90	83CRI 90CRI
REFLECTOR & LM MULTIPLIER	HE40 HE60 HE80 S20 S35 S55 WH80	40° high efficiency diffused lens (0.97) 60° high efficiency diffused lens (0.97) 80° high efficiency diffused lens (0.90) 20° specular with clear lens (1.00) 35° specular with clear lens (0.99) 55° specular with clear lens (0.98) 80° brilliant white with clear lens (0.94)
VOLTAGE	120 277	120V 277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC IC ICAT RET	new construction with ceiling fitting plate insulation contact housing insulation contact / airtight housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE _____

Follow the steps to specify your fixture, example:
NU6 - RD - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	686.20	N.A.	66.00
0-30	912.16	N.A.	87.70
0-40	1024.3	N.A.	98.50
0-60	1034.67	N.A.	99.50
0-80	1037.64	N.A.	99.80
0-90	1038.34	N.A.	99.80
10-90	697.73	N.A.	67.10
20-40	338.10	N.A.	32.50
20-50	345.55	N.A.	33.20
40-70	12.46	N.A.	1.20
60-80	2.97	N.A.	0.30
70-80	0.88	N.A.	0.10
80-90	0.69	N.A.	0.10
90-110	0.73	N.A.	0.10
90-120	1.01	N.A.	0.10
90-130	1.24	N.A.	0.10
90-150	1.54	N.A.	0.10
90-180	1.72	N.A.	0.20
110-180	0.99	N.A.	0.10
0-180	1040.05	N.A.	100.00

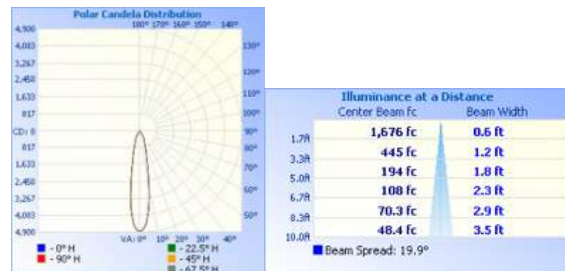
Zonal Lumen Summary

Zone	Lumens
0-10	340.61
10-20	345.59
20-30	225.96
30-40	112.14
40-50	7.45
50-60	2.92
60-70	2.09
70-80	0.88
80-90	0.69
90-100	0.39
100-110	0.34
110-120	0.28
120-130	0.22
130-140	0.17
140-150	0.13
150-160	0.10
160-170	0.06
170-180	0.02

Total Luminaire Efficiency = N.A. %

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	455	455	455
55	298	298	298
65	242	242	242
75	186	186	186
85	390	390	390



Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R8



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JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RA



DESCRIPTION

The NU6RA 6" recessed adjustable by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V, and 347V. A minimalist look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. An adjustable Hot Aiming System allows tilt adjustments from 0° to 40° with 360° degree rotation. The aiming adjustments and locking mechanisms are accessible from below the ceiling while the reflector is installed, allowing for hot aiming. A complex tilting mechanism positions the tilting axis for the maximum optical performance at all angles.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 1-5/8" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed nails, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for damp locations
- Made in the USA – meets the requirements of the Buy American provision within the ARRA

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RA	round adjustable
LED	XTM19	XTM19
DELIVERED LUMENS	07LM	630 lm
	10LM	890 lm
	13LM	1160 lm
	20LM	1780 lm
	30LM ³	2670 lm
	40LM ^{1,3}	3560 lm
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K	3500K
	40K	4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	S20	20° specular (1.00)
	S30	30° specular (0.99)
	S60	60° specular (0.95)
	D40	40° diffused (0.88)
	D50	50° diffused (0.89)
	D60	60° diffused (0.90)
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁵	standard driver with flicker free 0-10V dimming to 1% flicker free 0-10V dimming to 0%
	DIM10Z ⁵	flicker free dali dimming to 0%
	DALI ⁵	flicker free dali dimming to 0%
	DALIZ ⁵	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA	lutron ecosystem dimming to 1%
	ELV ⁶	leading & trailing edge dimming (Triac/ELV)
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ³	insulation contact housing
	ICAT ³	insulation contact / airtight housing
	CP ³	chicago plenum housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:

NU6 - RA - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
630	9.5	10.2	11.4	12.1
890	12.4	13.1	15.4	16.1
1160	16.5	17.2	20.9	21.6
1780	25.9	26.5	32.9	33.2
2670	28.8	29.5	42.9	42.6
3560	36.5	36.8	N/A	N/A

NOTES

- 1 98 CRI not available for 40LM.
- 2 B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- 3 IC/ICAT/CP not available for 98CRI in 30LM or 83/98CRI in 40LM.
- 4 EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- 5 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- 6 Triac/ELV dimming available for 83/98CRI in 10LM, 13LM, 20LM, & 83CRI only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R8



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SPECIALTY LED ORDERING CODE

SERIES	BIOS ORDERING CODE		XIM19 ORDERING CODE		LUMENETIX ORDERING CODE	
	NU6		NU6		NU6	
TYPE	RA	round adjustable	RA	round adjustable	RA	round adjustable
LED	BIOS	Bios	XIM19	XIM19	LMX	LMX
DELIVERED LUMENS	08LM	740 lm	13LM	1160 lm	12LM	1050 lm
	11LM	960 lm	20LM	1780 lm	15LM	1310 lm
	16LM ¹	1460 lm	30LM ^{1,2}	2670 lm	20LM	1740 lm
	21LM	1890 lm				
CCT & LM MULTIPLIER	30K	3000K (0.95)	27K	2700K	TC 30KWD	tunable color, 8000K - 1650k warm dimming 3050k @ 100% to 1800K @1%
	35K	3500K (0.97)	30K	3000K		
	40K	4000K (1.00)	V30K	3000K vibrant		
	50K	5000K (1.02)	35K	3500K		
			40K	4000K		
CRI	85	85CRI	83 98	83CRI 98CRI	90	90CRI
REFLECTOR & LM MULTIPLIER	S20	20° specular (1.00)	S20	20° specular (1.00)	S20	20° specular (1.00)
	S30	30° specular (0.99)	S30	30° specular (0.99)	S30	30° specular (0.99)
	S60	60° specular (0.95)	S60	60° specular (0.95)	S60	60° specular (0.95)
	D40	40° diffused (0.88)	D40	40° diffused (0.88)	D40	40° diffused (0.88)
	D50	50° diffused (0.89)	D50	50° diffused (0.89)	D50	50° diffused (0.89)
	D60	60° diffused (0.90)	D60	60° diffused (0.90)	D60	60° diffused (0.90)
VOLTAGE	120 277	120V 277V	UNV	120V-277V	120 277	120V 277V
DIMMING	DIM10 ²	standard driver / flicker free 0-10V dimming to 1%	DIM10Z DALIZ DIM10ZBL DALIZBL	flicker free 0-10V dimming to 0% flicker free dali dimming to 0% flicker free 0-10V dimming to 0% + bluetooth control & beacon technology flicker free dali dimming to 0% + bluetooth control & beacon technology	DIM10	0-10V control, dimmable to 1%, + bluetooth control dmx control, dimmable to 1%, + bluetooth control lutron ecosystem control, dimmable to 1%, + bluetooth control
	DIM10Z ²	flicker free 0-10V dimming to 0%				
	DALI ²	flicker free dali dimming to 1%				
	DALIZ ²	flicker free dali dimming to 0%				
	DMXZ	flicker free dmx dimming to 0%				
	LUZDA	lutron ecosystem dimming to 1%				
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate
	IC ¹	insulation contact housing	IC ²	insulation contact housing	IC	insulation contact housing
	ICAT ¹	insulation contact / airtight housing	ICAT ²	insulation contact / airtight housing	ICAT	insulation contact / airtight housing
	CP ¹	chicago plenum housing	CP ²	chicago plenum housing	CP	chicago plenum housing
	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
BEZEL COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
ELECTRICAL OPTIONS	EM7	emergency battery backup, 90 minutes at 7 watts to LED	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W
	EM12	emergency battery backup, 90 minutes at 12 watts to LED				
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489				

ORDERING CODE

Follow the steps to specify your fixture, example:
 NU6 - RA - XIM19 - 20LM - 30K - 83 - S30 - UNV - DALIZ - NC - MC - MC - EMIN

BIOS®	POWER	
	W (85CRI)	VA (85CRI)
DELIVERED LM		
740	15.8	16.3
960	20.5	21.2
1460	32.7	33.3
1890	45.2	45.4

XIM19	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
DELIVERED LM				
1160	16.4	17.3	20.3	21.2
1780	25.4	26.2	33.4	34.1
2670	37.1	37.7	N/A	N/A

LMX	POWER	
	W (90CRI)	VA (90CRI)
DELIVERED LM		
1050	24	25
1310	31	32
1740	39	40

BIOS NOTES

- 1 IC/ICAT/CP not available for 16LM.
- 2 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.

XIM19 NOTES

- 1 98CRI not available for 30LM.
- 2 IC/ICAT/CP not available for 30LM.

Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

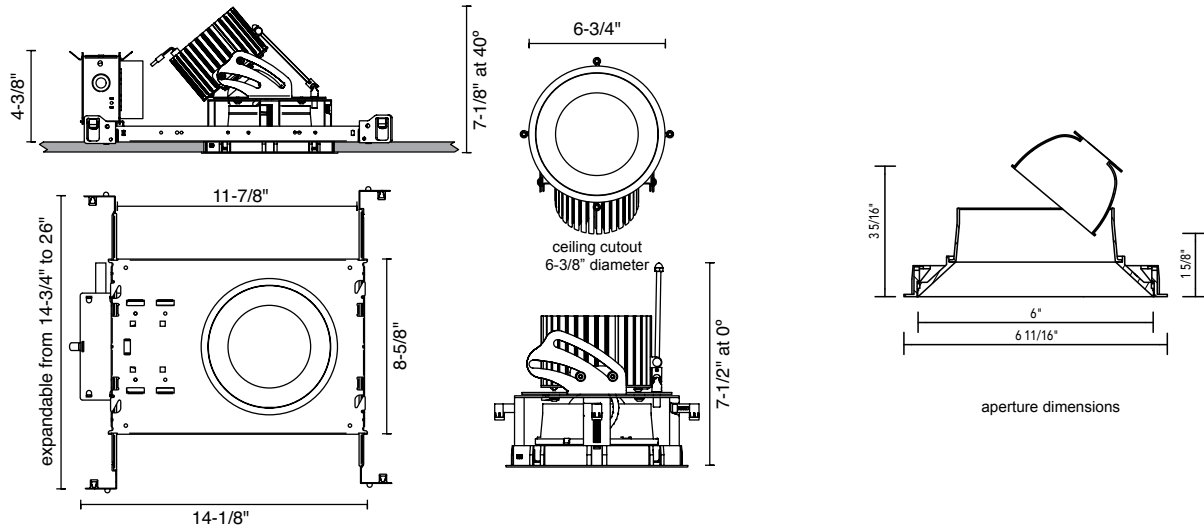
Type:
R8



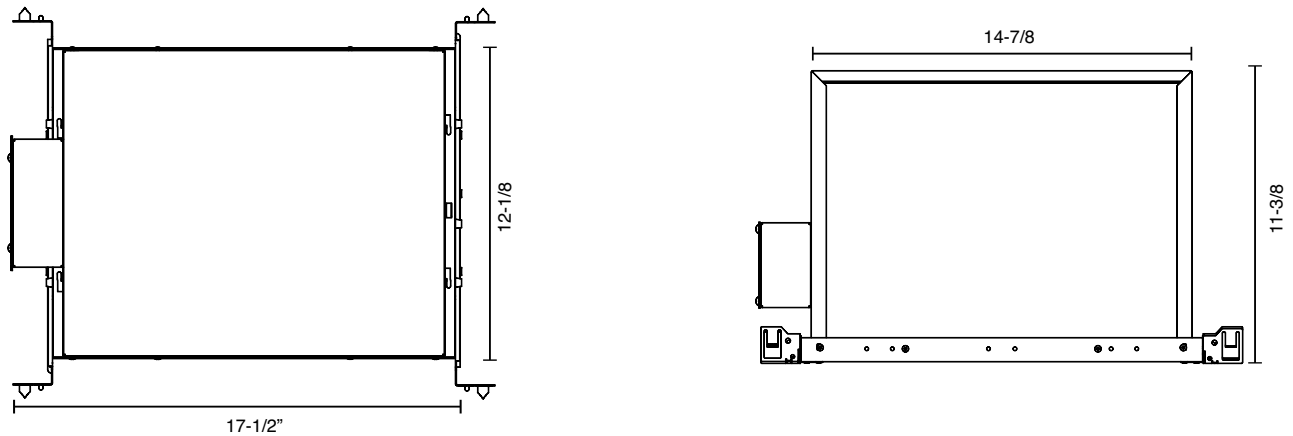
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MOUNTING

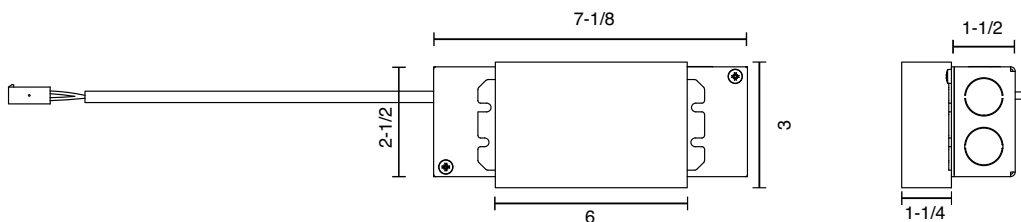
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R8



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RA	round adjustable
LED	XTM19 XTM19	
DELIVERED LUMEN	10LM 13LM	890 lm 1160 lm
CCT	27K 30K 35K 40K	2700K 3000K 3500K 4000K
CRI	83 90	83CRI 90CRI
REFLECTOR & LM MULTIPLIER	S20 S30 S60	20° specular with clear lens (1.00) 35° specular with clear lens (0.99) 60° specular with clear lens (0.95)
VOLTAGE	120 277	120V 277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC IC ICAT RET	new construction with ceiling fitting plate insulation contact housing insulation contact / airtight housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE

Follow the steps to specify your fixture, example:
 NU6 - RA - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	778.79	N.A.	40.70
0-30	1547.54	N.A.	80.90
0-40	1881.21	N.A.	98.30
0-60	1905.18	N.A.	99.60
0-80	1907.94	N.A.	99.70
0-90	1909.05	N.A.	99.80
10-90	1698.41	N.A.	88.70
20-40	1102.42	N.A.	57.60
20-50	1124.68	N.A.	58.80
40-70	25.46	N.A.	1.30
60-80	2.76	N.A.	0.10
70-80	1.27	N.A.	0.10
80-90	1.11	N.A.	0.10
90-110	1.62	N.A.	0.10
90-120	2.37	N.A.	0.10
90-130	3.04	N.A.	0.20
90-150	4.10	N.A.	0.20
90-180	4.73	N.A.	0.20
110-180	3.11	N.A.	0.20
0-180	1913.78	N.A.	100.00

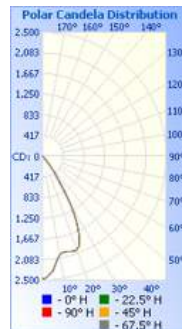
Zonal Lumen Summary

Zone	Lumens
0-10	210.64
10-20	568.15
20-30	768.75
30-40	333.67
40-50	22.26
50-60	1.71
60-70	1.49
70-80	1.27
80-90	1.11
90-100	0.82
100-110	0.80
110-120	0.75
120-130	0.68
130-140	0.58
140-150	0.47
150-160	0.35
160-170	0.21
170-180	0.07

Total Luminaire Efficiency = N.A. %

Luminaire Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0



Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **R8-EM**



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JOB NAME _____
 CONTACT _____
 ORDERING CODE _____



LM-79

NU6RA



DESCRIPTION

The NU6RA 6" recessed adjustable by ALPHABET offers multiple cutting edge LED technologies, premium performance, thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V, and 347V. A minimalistic look is achieved with an ultra thin 1/16" trim that is only 5/16" wide. Color choices of both Trim and Bezel for a customized look. An adjustable Hot Aiming System allows tilt adjustments from 0° to 40° with 360° degree rotation. The aiming adjustments and locking mechanisms are accessible from below the ceiling while the reflector is installed, allowing for hot aiming. A complex tilting mechanism positions the tilting axis for the maximum optical performance at all angles.

HOUSING

Electrocoated 16 gauge cold rolled steel provides enhanced structural reinforcement and rust prevention. Superior flame retardant UL certified injection molded commercial grade Lexan™ (PC) is used for the Frame and Regressed Bezel Trim. Lexan™ provides unmatched durability/ impact resistance, 250°F thermal resistance, and is UL tested for UV resistance and water exposure in outdoor applications. Thermally advanced anodized heat sink using 6063 alloy. 90min constant power IOTA emergency battery backup available in several power options.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and Driver serviceability from below the ceiling. The LED assembly uses four die cast aluminum Mounting Clamp Grips (MCG) that swing out to tighten onto variable ceiling thicknesses ranging from 1/8" to 1-5/8" thick. Integrated rubber feet on each MCG provide a non-slip vibration resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in Lens/Bezel Assembly with either the included suction cup or a screwdriver blade. Integrated Bar Hangers feature integral toothed nails, T-bar mounting slots with locking holes, Tabs for joist positioning, and extendibility from 14-3/4" to 26". Retrofit mounting option allows for installation from below ceiling by use of compact driver box. Ceiling cutout size is 6-3/8" diameter.

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- Type Non-IC, IC, CP, Airtight ASTM Standard E283
- Suitable for damp locations
- Made in the USA – meets the requirements of the Buy American provision within the ARRA

LED INFO

- SDCM = 1X2 MacAdam Ellipse, DUV +/- 0.001

ORDERING CODE

SERIES	NU6	
TYPE	RA	round adjustable
LED	XTM19	XTM19
DELIVERED LUMENS	07LM	630 lm
	10LM	890 lm
	13LM	1160 lm
	20LM	1780 lm
	30LM ³	2670 lm
	40LM ^{1,3}	3560 lm
CCT	27K	2700K
	B27K ²	2700K beauty
	30K	3000K
	V30K	3000K vibrant
	35K	3500K
	40K	4000K
CRI	83	83CRI
	98	98CRI
REFLECTOR & LM MULTIPLIER	S20	20° specular (1.00)
	S30	30° specular (0.99)
	S60	60° specular (0.95)
	D40	40° diffused (0.88)
	D50	50° diffused (0.89)
	D60	60° diffused (0.90)
VOLTAGE	120	120V
	277	277V
DIMMING	DIM10⁵	standard driver with flicker free 0-10V dimming to 1% flicker free 0-10V dimming to 0%
	DIM10Z ⁵	flicker free dali dimming to 0%
	DALI ⁵	flicker free dali dimming to 1%
	DALIZ ⁵	flicker free dali dimming to 0%
	DMXZ	flicker free dmx dimming to 0%
	LUDA	lutron ecosystem dimming to 1%
	ELV ⁶	leading & trailing edge dimming (Triac/ELV)
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ³	insulation contact housing
	ICAT ³	insulation contact / airtight housing
	CP ³	chicago plenum housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
BEZEL COLOR	WH	white
	MC	matte chrome
	BK	black
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RA - XTM19 - 13LM - 35K - 98 - D50 - 120 - DIM10 - NC - WH - WH - EM7

XTM19 DELIVERED LM	POWER				
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)	
630	9.5	10.2	11.4	12.1	
890	12.4	13.1	15.4	16.1	
1160	16.5	17.2	20.9	21.6	
1780	25.9	26.5	32.9	33.2	
2670	28.8	29.5	42.9	42.6	
3560	36.5	36.8	N/A	N/A	

NOTES

- 1 98 CRI not available for 40LM.
- 2 B27K Beauty Series choose 98 CRI (actual 93). Available for 07LM, 10LM, 13LM, and 20LM only.
- 3 IC/ICAT/CP not available for 98CRI in 30LM or 83/98CRI in 40LM.
- 4 EM12 not available for 83CRI in 07LM, 10LM or 13LM.
- 5 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- 6 Triac/ELV dimming available for 83/98cri in 10LM, 13LM, 20LM, & 83cri only in 30LM. Dimmable to < 10% in 10LM, 13LM. Dimmable to < 1% in 20LM, 30LM.

Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N**
C-MC-MC-EM7
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
R8-EM



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SPECIALTY LED ORDERING CODE

	BIOS ORDERING CODE		XIM19 ORDERING CODE		LUMENETIX ORDERING CODE	
SERIES	NU6		NU6		NU6	
TYPE	RA	round adjustable	RA	round adjustable	RA	round adjustable
LED	BIOS	Bios	XIM19	XIM19	LMX	LMX
DELIVERED LUMENS	08LM	740 lm	13LM	1160 lm	12LM	1050 lm
	11LM	960 lm	20LM	1780 lm	15LM	1310 lm
	16LM ¹	1460 lm	30LM ^{1,2}	2670 lm	20LM	1740 lm
	21LM	1890 lm				
CCT & LM MULTIPLIER	30K	3000K (0.95)	27K	2700K	TC	tunable color, 8000K - 1650k
	35K	3500K (0.97)	30K	3000K	30KWD	warm dimming 3050k @ 100% to 1800K @1%
	40K	4000K (1.00)	V30K	3000K vibrant		
	50K	5000K (1.02)	35K	3500K		
			40K	4000K		
CRI	85	85CRI	83	83CRI	90	90CRI
			98	98CRI		
REFLECTOR & LM MULTIPLIER	S20	20° specular (1.00)	S20	20° specular (1.00)	S20	20° specular (1.00)
	S30	30° specular (0.99)	S30	30° specular (0.99)	S30	30° specular (0.99)
	S60	60° specular (0.95)	S60	60° specular (0.95)	S60	60° specular (0.95)
	D40	40° diffused (0.88)	D40	40° diffused (0.88)	D40	40° diffused (0.88)
	D50	50° diffused (0.89)	D50	50° diffused (0.89)	D50	50° diffused (0.89)
	D60	60° diffused (0.90)	D60	60° diffused (0.90)	D60	60° diffused (0.90)
VOLTAGE	120	120V	UNV	120V-277V	120	120V
	277	277V			277	277V
DIMMING	DIM10 ²	standard driver / flicker free 0-10V dimming to 1%	DIM10Z	flicker free 0-10V dimming to 0%	DIM10	0-10V control, dimmable to 1%, + bluetooth control
	DIM10Z ²	flicker free 0-10V dimming to 0%	DALIZ	flicker free dali dimming to 0%	DMX	dmx control, dimmable to 1%, + bluetooth control
	DALI ²	flicker free dali dimming to 1%	DIM10ZBL	flicker free 0-10V dimming to 0% + bluetooth control & beacon technology	LUD	lutron ecosystem control, dimmable to 1%, + bluetooth control
	DALIZ ²	flicker free dali dimming to 0%	DALIZBL	flicker free dali dimming to 0% + bluetooth control & beacon technology		
	DMXZ	flicker free dmx dimming to 0%				
	LUDA	lutron ecosystem dimming to 1%				
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate	NC	new construction with ceiling fitting plate
	IC ¹	insulation contact housing	IC ²	insulation contact housing	IC	insulation contact housing
	ICAT ¹	insulation contact / airtight housing	ICAT ²	insulation contact / airtight housing	ICAT	insulation contact / airtight housing
	CP ¹	chicago plenum housing	CP ²	chicago plenum housing	CP	chicago plenum housing
	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate	RET	retrofit, no ceiling fitting plate
TRIM COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
BEZEL COLOR	WH	white	WH	white	WH	white
	MC	matte chrome	MC	matte chrome	MC	matte chrome
	BK	black	BK	black	BK	black
	BZ	bronze	BZ	bronze	BZ	bronze
	WT	wheat	WT	wheat	WT	wheat
ELECTRICAL OPTIONS	EM7	emergency battery backup, 90 minutes at 7 watts to LED	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W	EMIN	order separate emergency battery backup inverter, 90 minutes at full power p/n: P70490-50W
	EM12	emergency battery backup, 90 minutes at 12 watts to LED	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489
	FOR 347V OPTION	order separate "347V to 277V" step down transformer p/n: P70489				

ORDERING CODE

Follow the steps to specify your fixture, example:
 NU6 - RA - XIM19 - 20LM - 30K - 83 - S30 - UNV - DALIZ - NC - MC - MC - EMIN

BIOS®	POWER	
	W (85CRI)	VA (85CRI)
DELIVERED LM		
740	15.8	16.3
960	20.5	21.2
1460	32.7	33.3
1890	45.2	45.4

XIM19	POWER			
	W (83CRI)	VA (83CRI)	W (98CRI)	VA (98CRI)
DELIVERED LM				
1160	16.4	17.3	20.3	21.2
1780	25.4	26.2	33.4	34.1
2670	37.1	37.7	N/A	N/A

LMX	POWER	
	W (90CRI)	VA (90CRI)
DELIVERED LM		
1050	24	25
1310	31	32
1740	39	40

BIOS NOTES

- 1 IC/ICAT/CP not available for 16LM.
- 2 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.

XIM19 NOTES

- 1 98CRI not available for 30LM.
- 2 IC/ICAT/CP not available for 30LM.

Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N
C-MC-MC-EM7**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

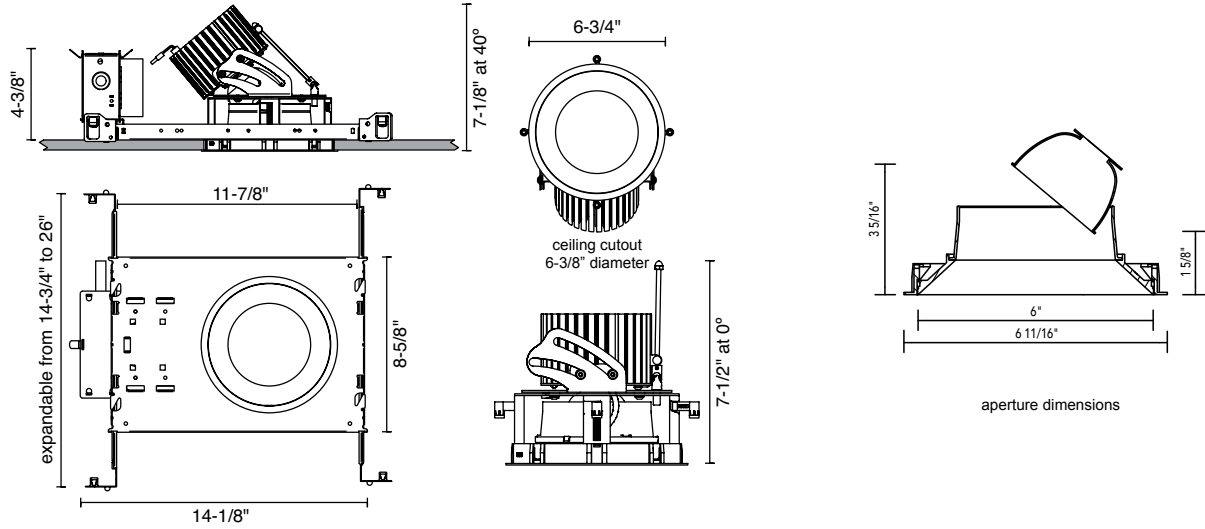
Type: **R8-EM**



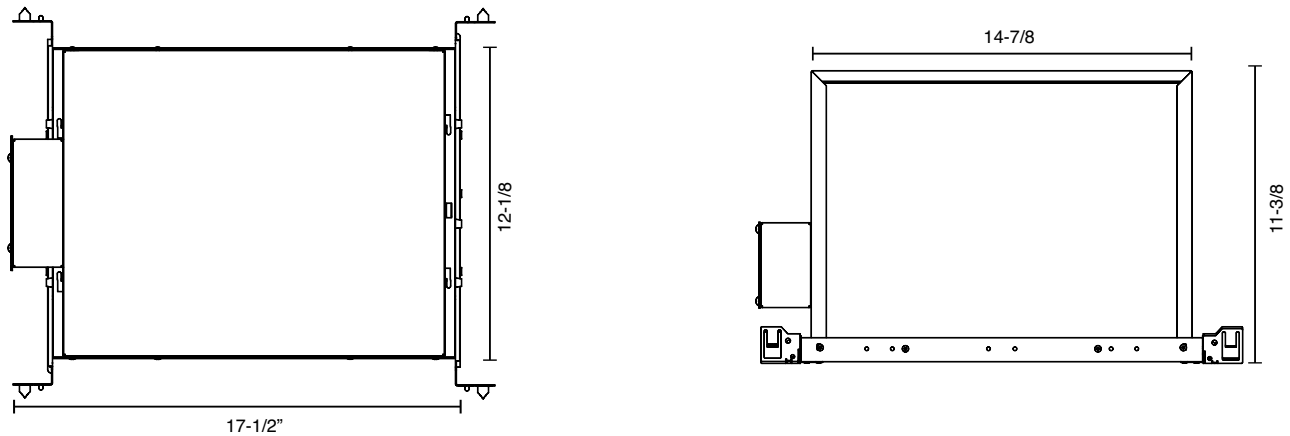
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MOUNTING

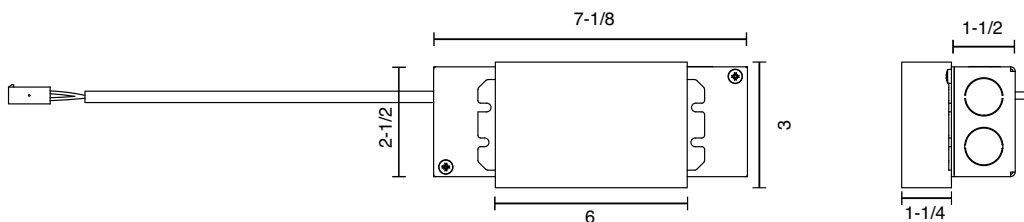
NC - NEW CONSTRUCTION



- IC - INSULATION CONTACT HOUSING
- CP - CHICAGO PLENUM
- ICAT - INSULATION CONTACT / AIR TIGHT



RET - RETROFIT



Submitting Agency:



Description: **NU6RA-XTM19-13LM-35K-83-S60-277V-DIM10-N
C-MC-MC-EM7**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type: **R8-EM**



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ORDERING CODE - ENERGY STAR

SERIES	NU6	
TYPE	RA	round adjustable
LED	XTM19 XTM19	
DELIVERED LUMEN	10LM 13LM	890 lm 1160 lm
CCT	27K 30K 35K 40K	2700K 3000K 3500K 4000K
CRI	83 90	83CRI 90CRI
REFLECTOR & LM MULTIPLIER	S20 S30 S60	20° specular with clear lens (1.00) 35° specular with clear lens (0.99) 60° specular with clear lens (0.95)
VOLTAGE	120 277	120V 277V
DIMMING	DIM10	standard driver with flicker free 0-10V dimming to 1%
MOUNTING OPTIONS	NC IC ICAT RET	new construction with ceiling fitting plate insulation contact housing insulation contact / airtight housing retrofit, no ceiling fitting plate
TRIM COLOR	WH	white
BEZEL COLOR	WH	white

ORDERING CODE

Follow the steps to specify your fixture, example:
NU6 - RA - XTM19 - 13LM - 27K - 90 - S20 - 120 - DIM10 - IC - WH - WH

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt
0-20	778.79	N.A.	40.70
0-30	1547.54	N.A.	80.90
0-40	1881.21	N.A.	98.30
0-60	1905.18	N.A.	99.60
0-80	1907.94	N.A.	99.70
0-90	1909.05	N.A.	99.80
10-90	1698.41	N.A.	88.70
20-40	1102.42	N.A.	57.60
20-50	1124.68	N.A.	58.80
40-70	25.46	N.A.	1.30
60-80	2.76	N.A.	0.10
70-80	1.27	N.A.	0.10
80-90	1.11	N.A.	0.10
90-110	1.62	N.A.	0.10
90-120	2.37	N.A.	0.10
90-130	3.04	N.A.	0.20
90-150	4.10	N.A.	0.20
90-180	4.73	N.A.	0.20
110-180	3.11	N.A.	0.20
0-180	1913.78	N.A.	100.00

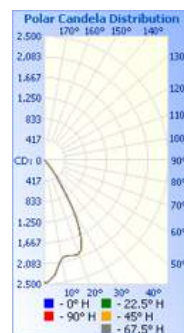
Zonal Lumen Summary

Zone	Lumens
0-10	210.64
10-20	568.15
20-30	768.75
30-40	333.67
40-50	22.26
50-60	1.71
60-70	1.49
70-80	1.27
80-90	1.11
90-100	0.82
100-110	0.80
110-120	0.75
120-130	0.68
130-140	0.58
140-150	0.47
150-160	0.35
160-170	0.21
170-180	0.07

Total Luminaire Efficiency = N.A. %

Luminaire Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0





Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

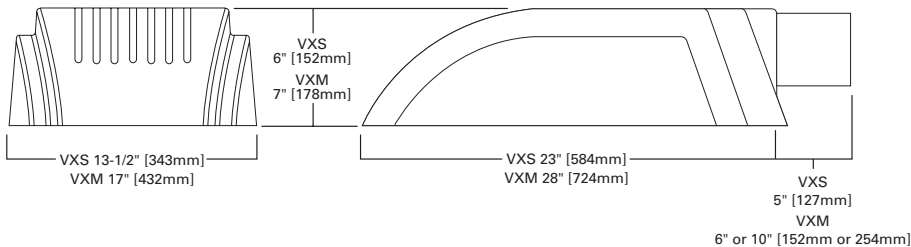
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs	E01	E02	E03	E04	E05	E06	
Drive Current	350mA Drive Current						
Power (Watts)	25W	52W	75W	97W	127W	150W	
Current @ 120V (A)	0.22	0.44	0.63	0.82	1.07	1.26	
Current @ 277V (A)	0.10	0.20	0.28	0.36	0.48	0.56	
Power (Watts)	31W	58W	82W	99W	132W	159W	
Current @ 347V (A)	0.11	0.19	0.28	0.29	0.39	0.48	
Current @ 480V (A)	0.09	0.15	0.20	0.21	0.30	0.36	
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

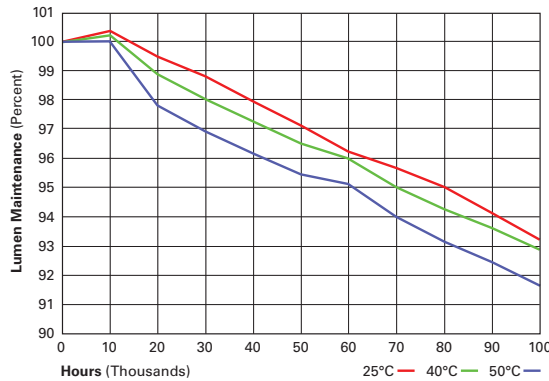
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

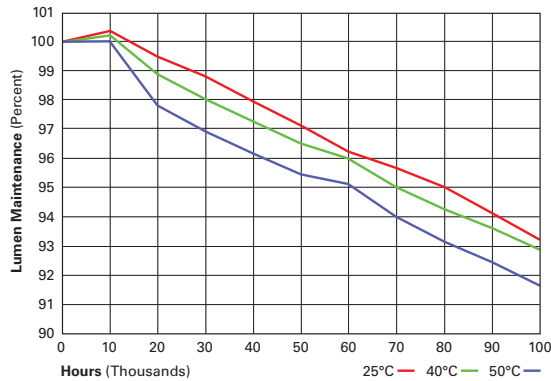
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

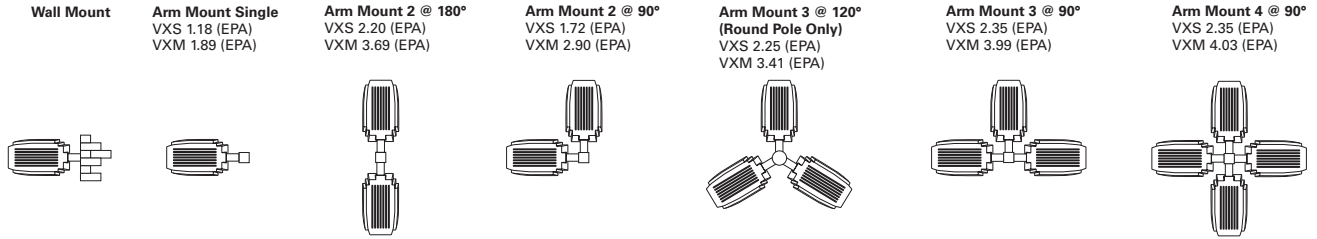
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

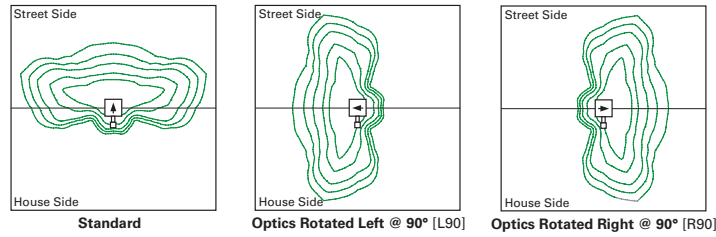




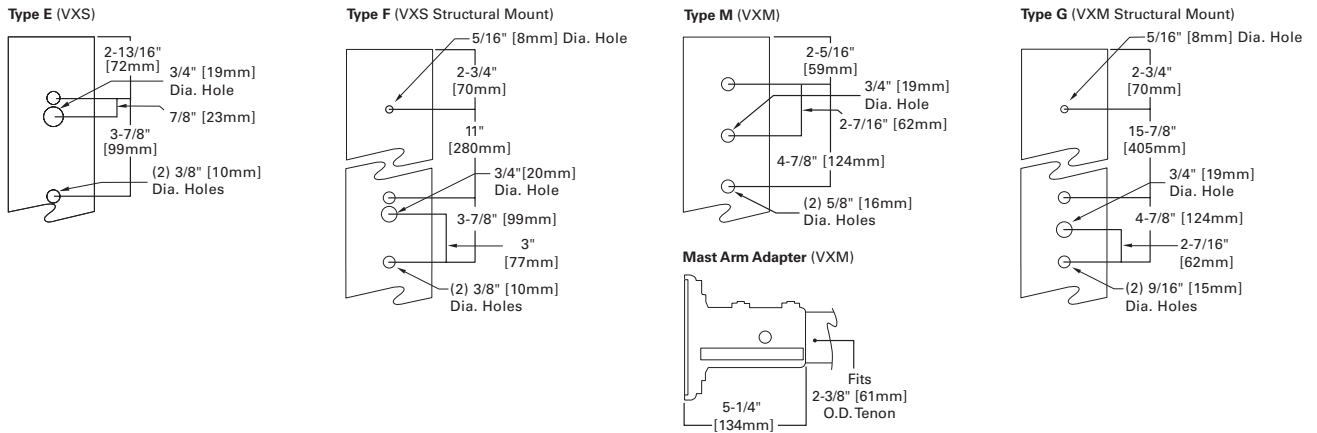
MOUNTING VARIATIONS AND EPAS



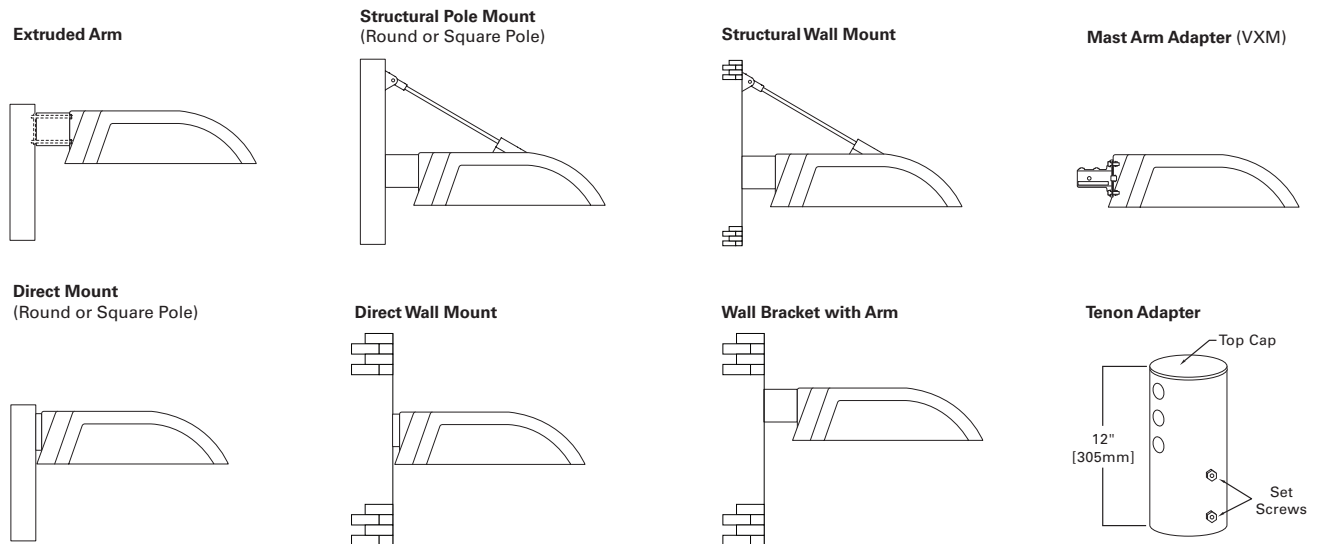
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

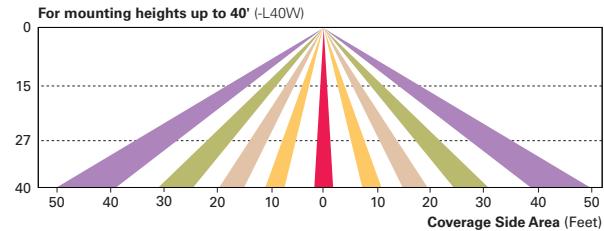
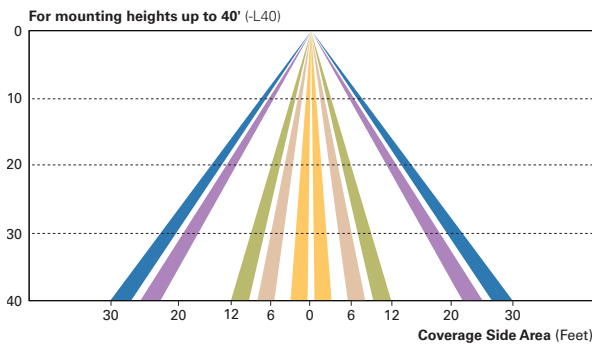
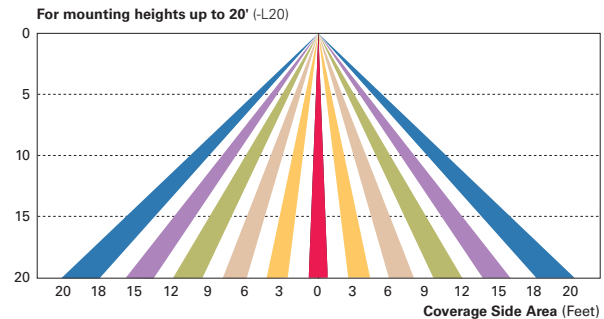
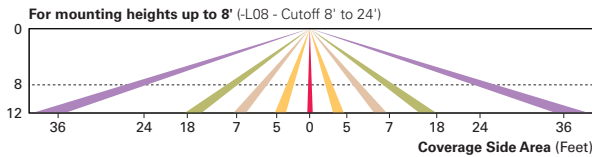
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

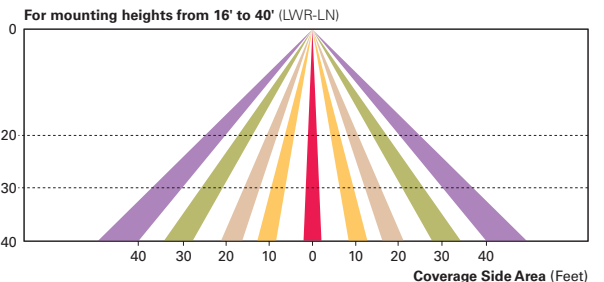
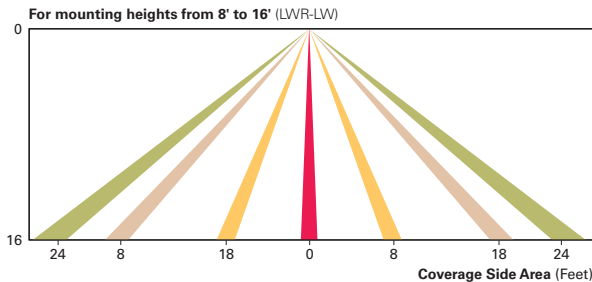
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-SL4-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1A

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5X0=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting
 Specifications and dimensions subject to change without notice.

TD500001EN
 2018-01-22 11:21:18

Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1A

COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

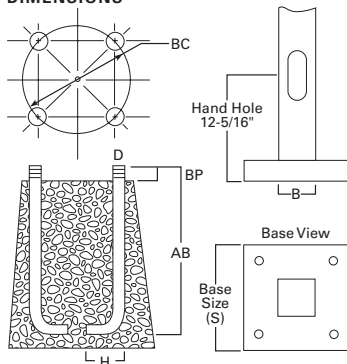
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS =Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S =Square Steel Base	F =Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long)	1 =Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.



SSS SQUARE STRAIGHT STEEL

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained from Eaton's Cooper Lighting business.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

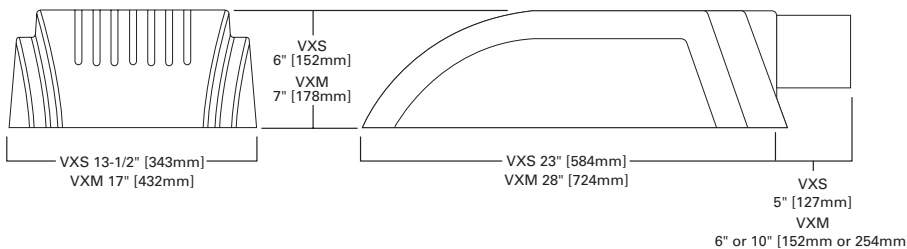
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E01	E02	E03	E04	E05	E06
Drive Current		350mA Drive Current					
Power (Watts)		25W	52W	75W	97W	127W	150W
Current @ 120V (A)		0.22	0.44	0.63	0.82	1.07	1.26
Current @ 277V (A)		0.10	0.20	0.28	0.36	0.48	0.56
Power (Watts)		31W	58W	82W	99W	132W	159W
Current @ 347V (A)		0.11	0.19	0.28	0.29	0.39	0.48
Current @ 480V (A)		0.09	0.15	0.20	0.21	0.30	0.36
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

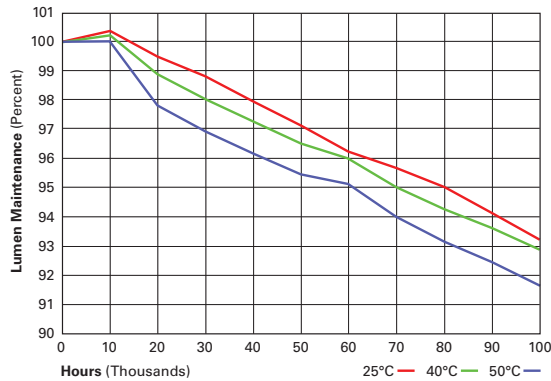
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

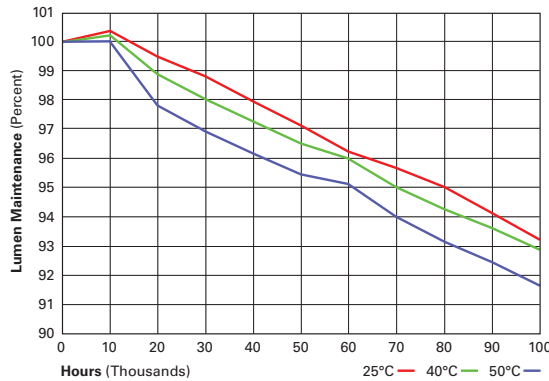
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

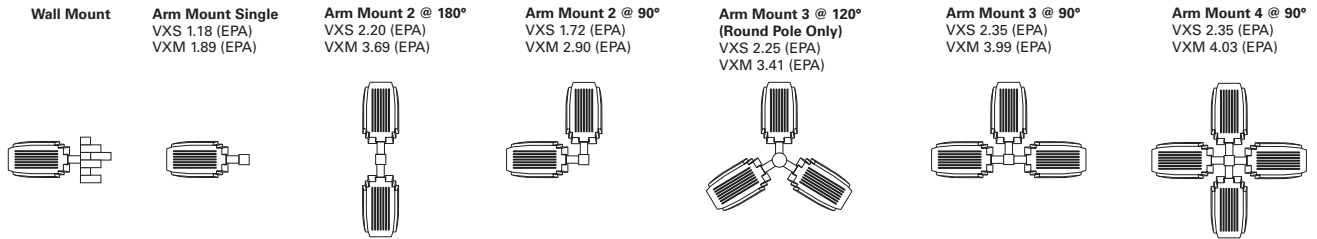
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



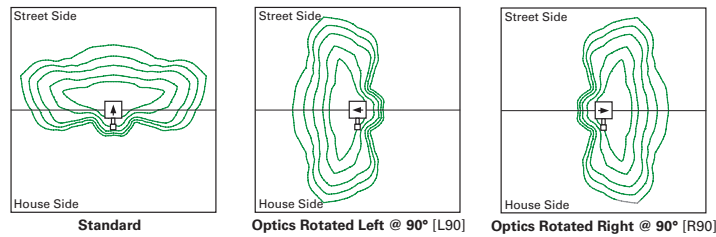


VXS/VXM VISION SITE LED

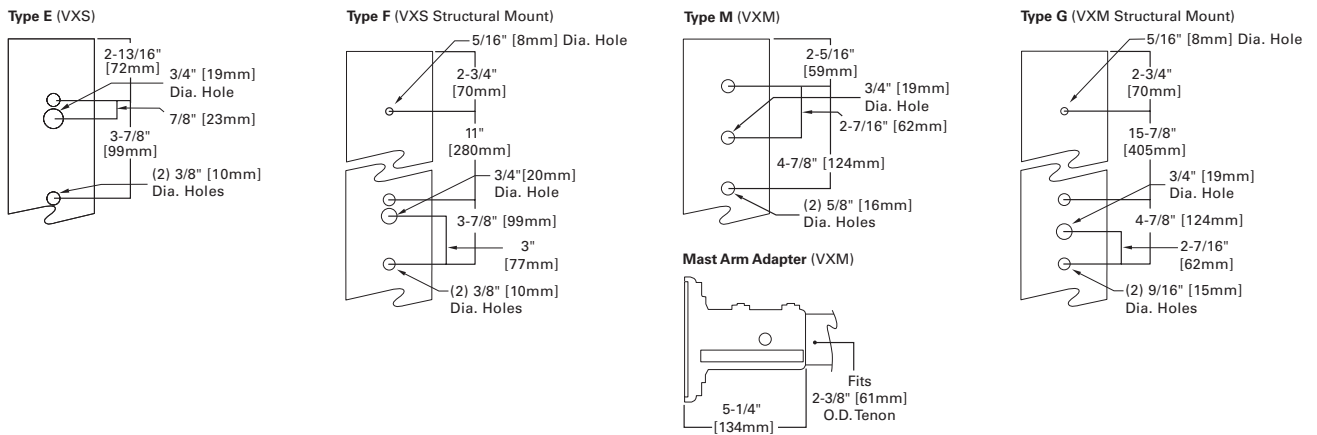
MOUNTING VARIATIONS AND EPAS



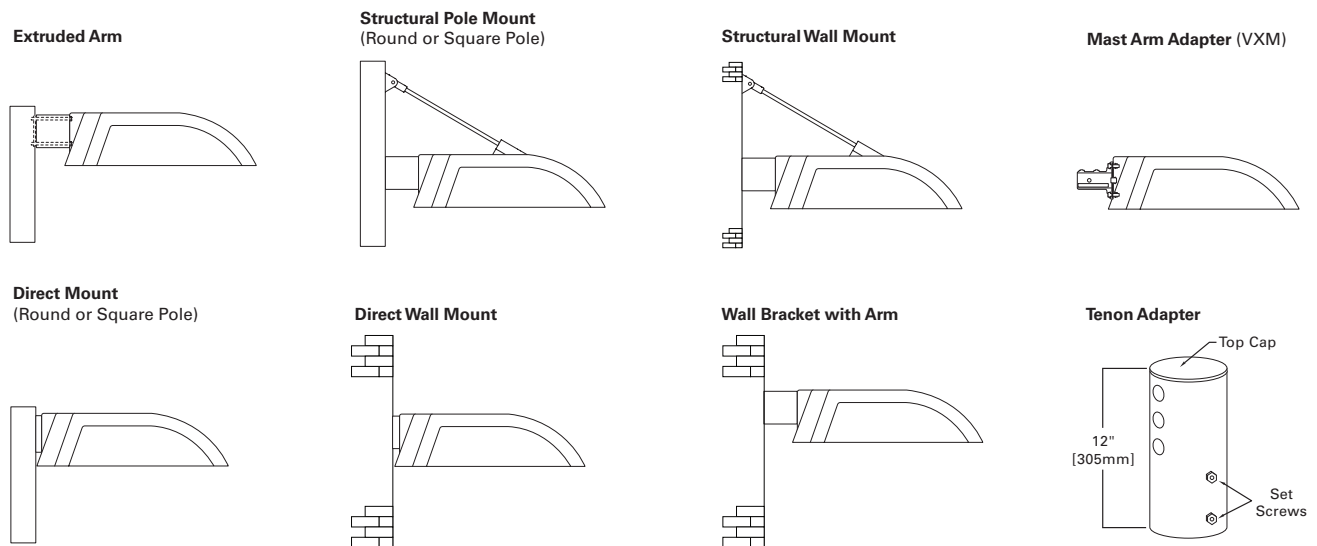
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

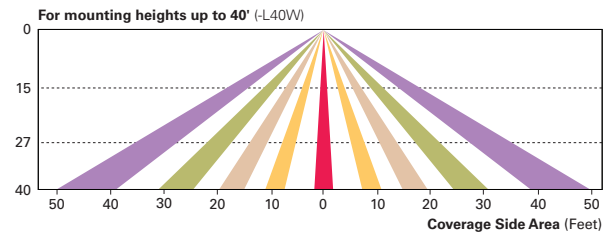
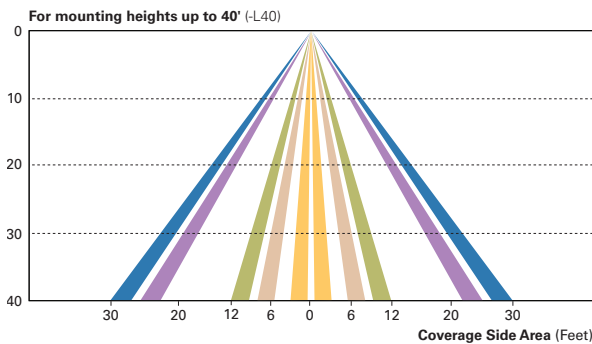
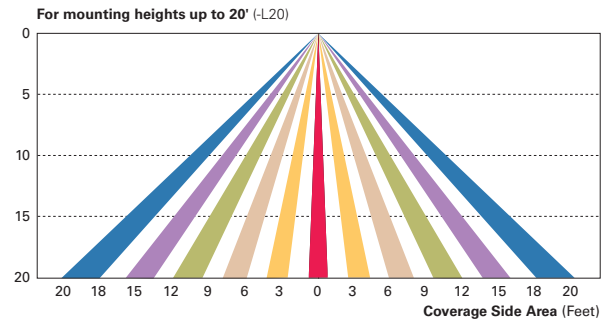
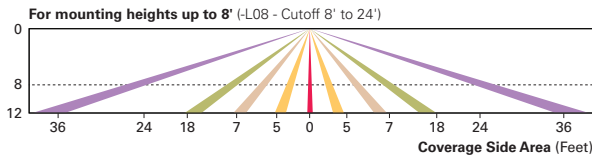
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

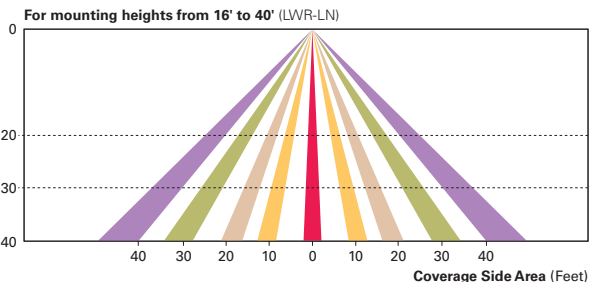
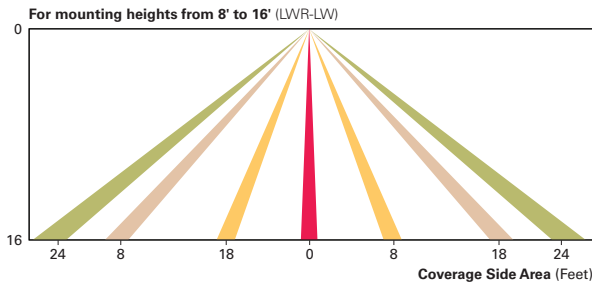
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-SL4-BZ-ICB**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **S1A-EM**

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5X0=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting
 Specifications and dimensions subject to change without notice.

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Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **S1A-EM**

COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

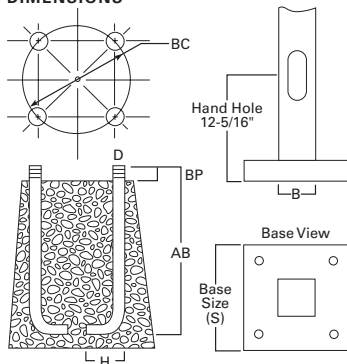
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS =Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S =Square Steel Base	F =Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M =Type M Drilling R=Type R Drilling Z=Type Z Drilling	1 =Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.

Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **S1A-EM**

SSS SQUARE STRAIGHT STEEL

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained from Eaton's Cooper Lighting business.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

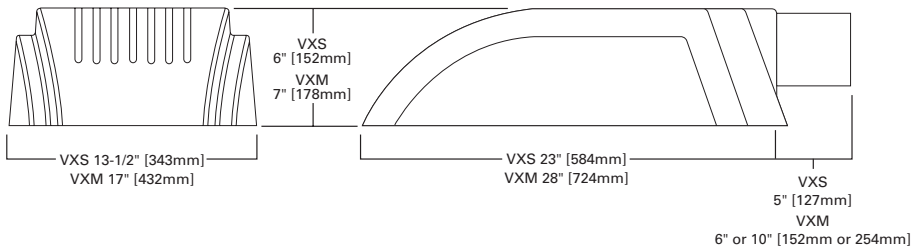
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs	E01	E02	E03	E04	E05	E06	
Drive Current	350mA Drive Current						
Power (Watts)	25W	52W	75W	97W	127W	150W	
Current @ 120V (A)	0.22	0.44	0.63	0.82	1.07	1.26	
Current @ 277V (A)	0.10	0.20	0.28	0.36	0.48	0.56	
Power (Watts)	31W	58W	82W	99W	132W	159W	
Current @ 347V (A)	0.11	0.19	0.28	0.29	0.39	0.48	
Current @ 480V (A)	0.09	0.15	0.20	0.21	0.30	0.36	
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

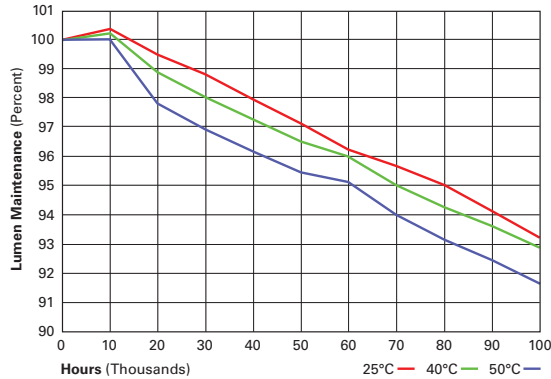
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

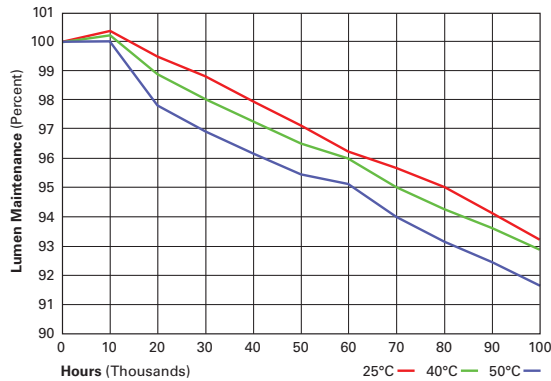
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

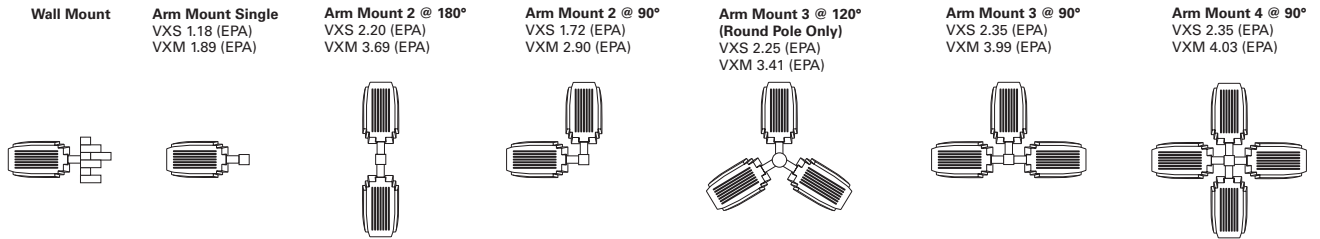
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



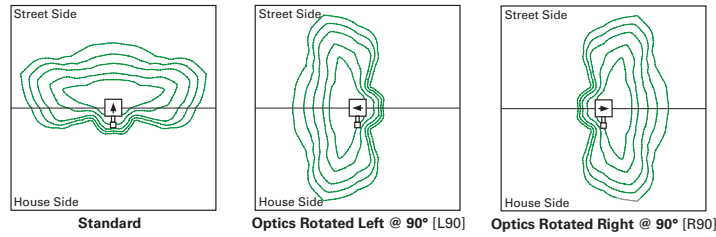


VXS/VXM VISION SITE LED

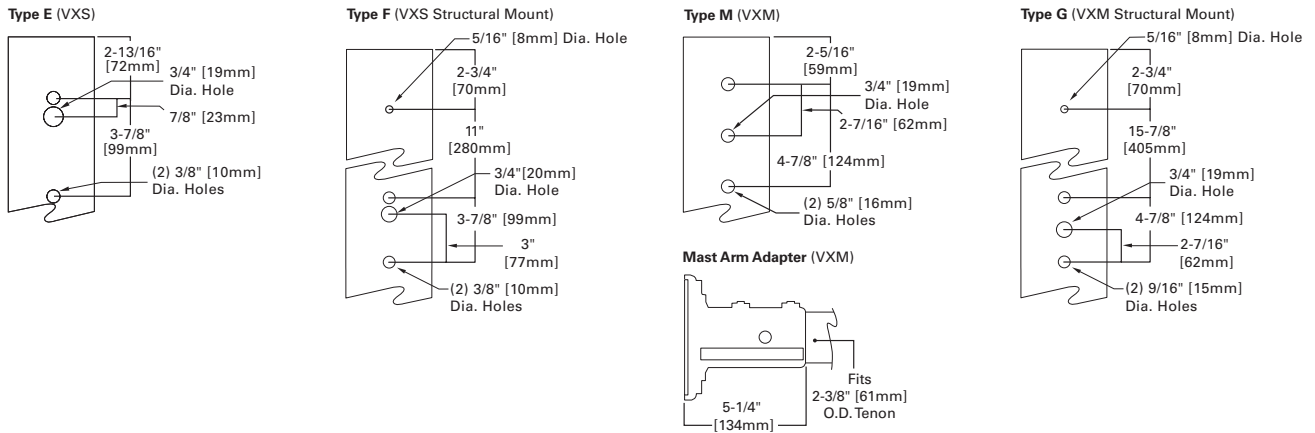
MOUNTING VARIATIONS AND EPAS



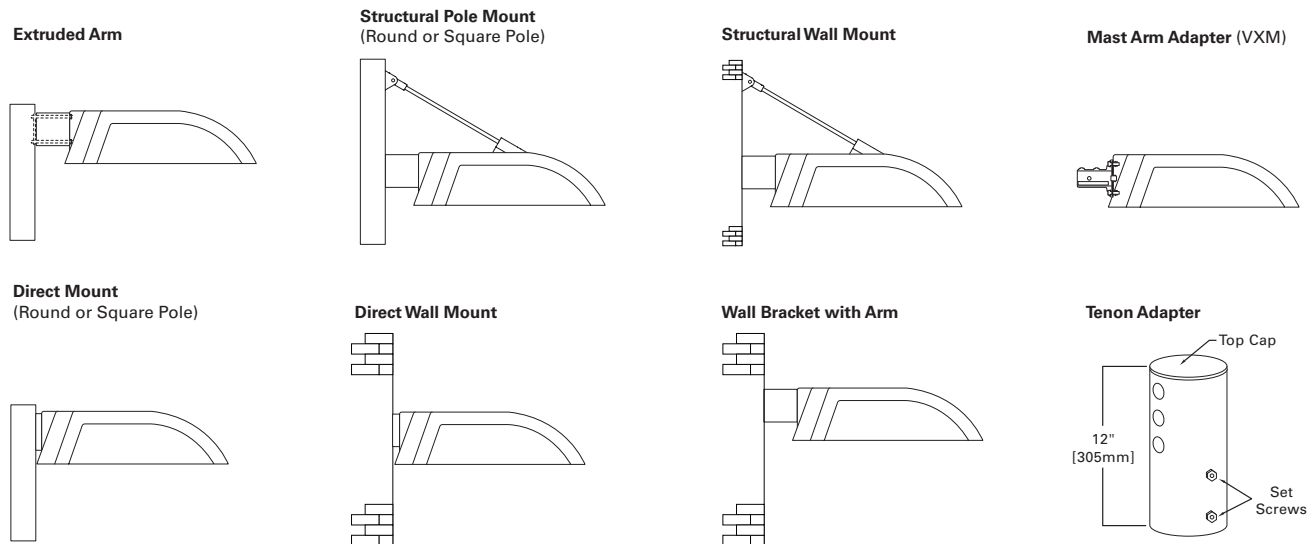
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

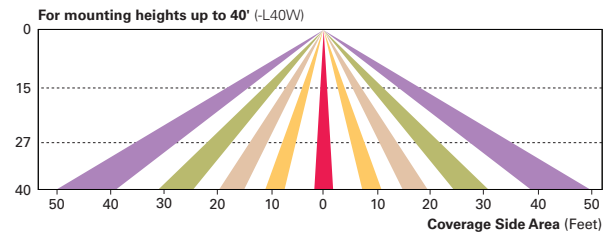
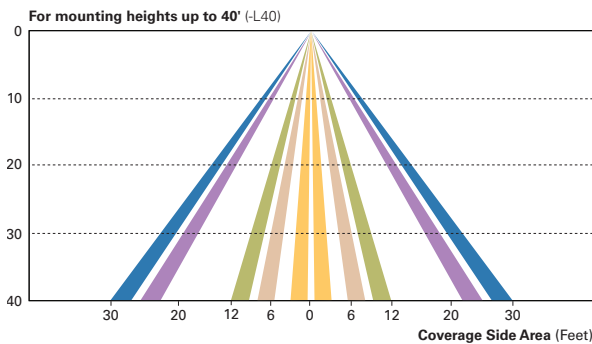
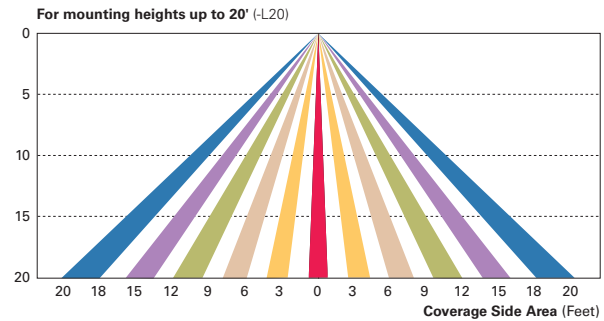
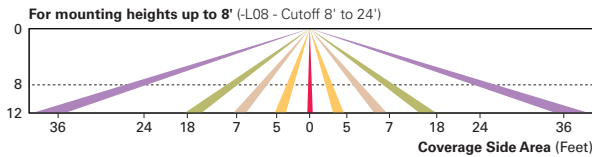
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

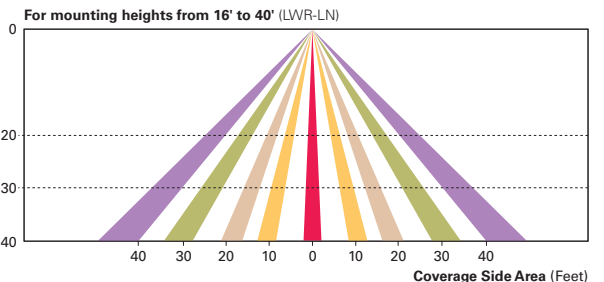
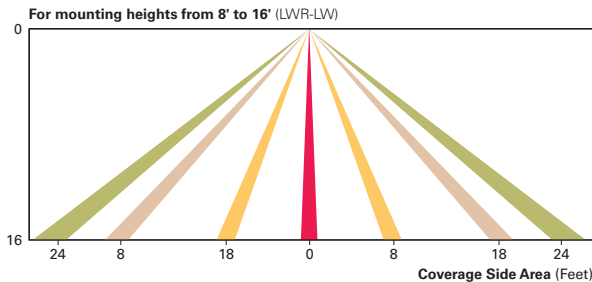
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-5WQ-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1B

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCC=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting
 Specifications and dimensions subject to change without notice.

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Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1B

COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

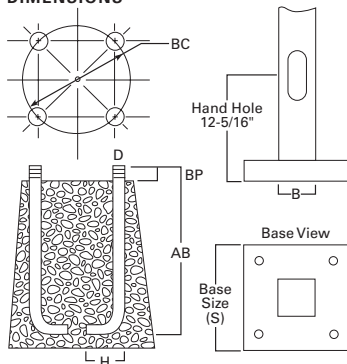
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS =Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S =Square Steel Base	F =Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M =Type M Drilling R=Type R Drilling Z=Type Z Drilling	1 =Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.



SSS SQUARE STRAIGHT STEEL

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained from Eaton's Cooper Lighting business.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
Solid State LED

ARCHITECTURAL
AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

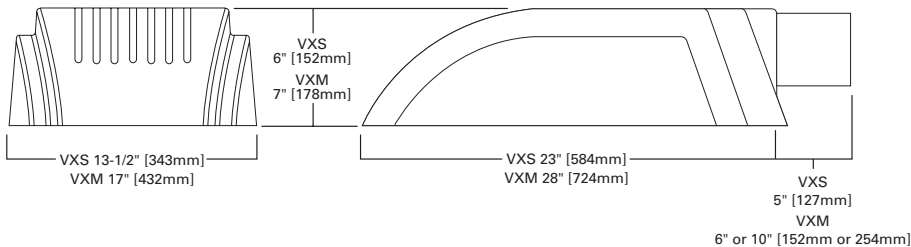
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs	E01	E02	E03	E04	E05	E06	
Drive Current	350mA Drive Current						
Power (Watts)	25W	52W	75W	97W	127W	150W	
Current @ 120V (A)	0.22	0.44	0.63	0.82	1.07	1.26	
Current @ 277V (A)	0.10	0.20	0.28	0.36	0.48	0.56	
Power (Watts)	31W	58W	82W	99W	132W	159W	
Current @ 347V (A)	0.11	0.19	0.28	0.29	0.39	0.48	
Current @ 480V (A)	0.09	0.15	0.20	0.21	0.30	0.36	
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

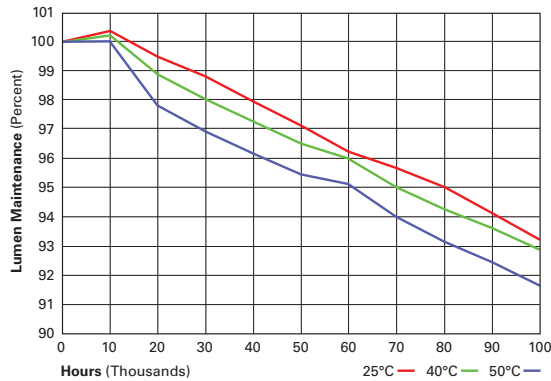
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

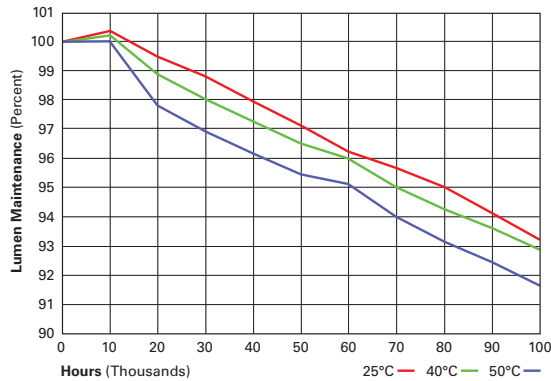
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

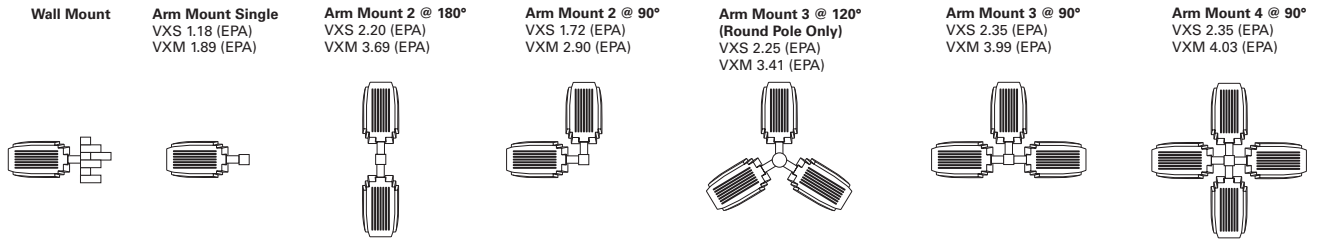
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10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



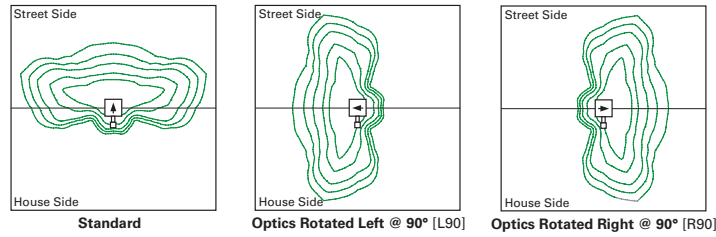


VXS/VXM VISION SITE LED

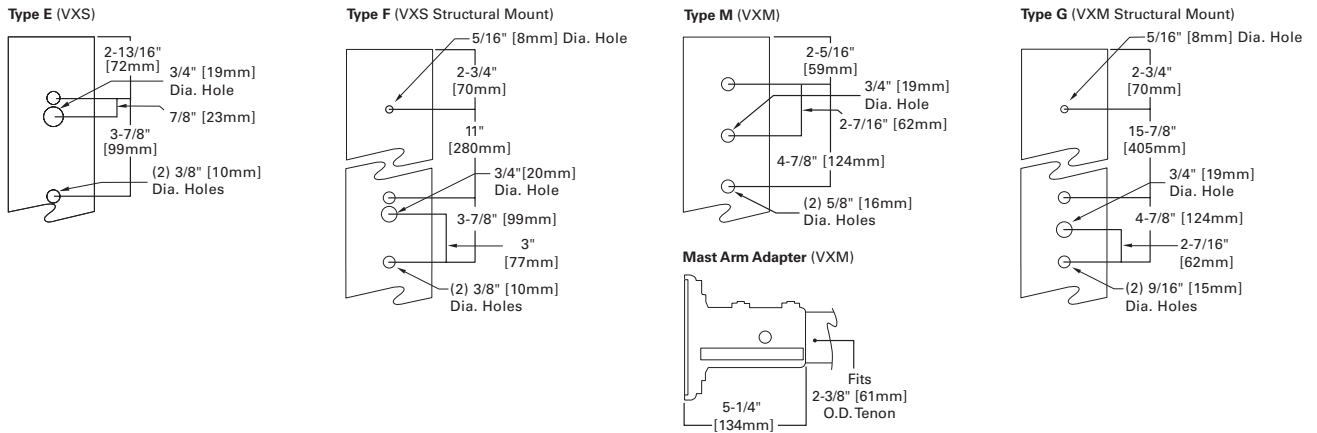
MOUNTING VARIATIONS AND EPAS



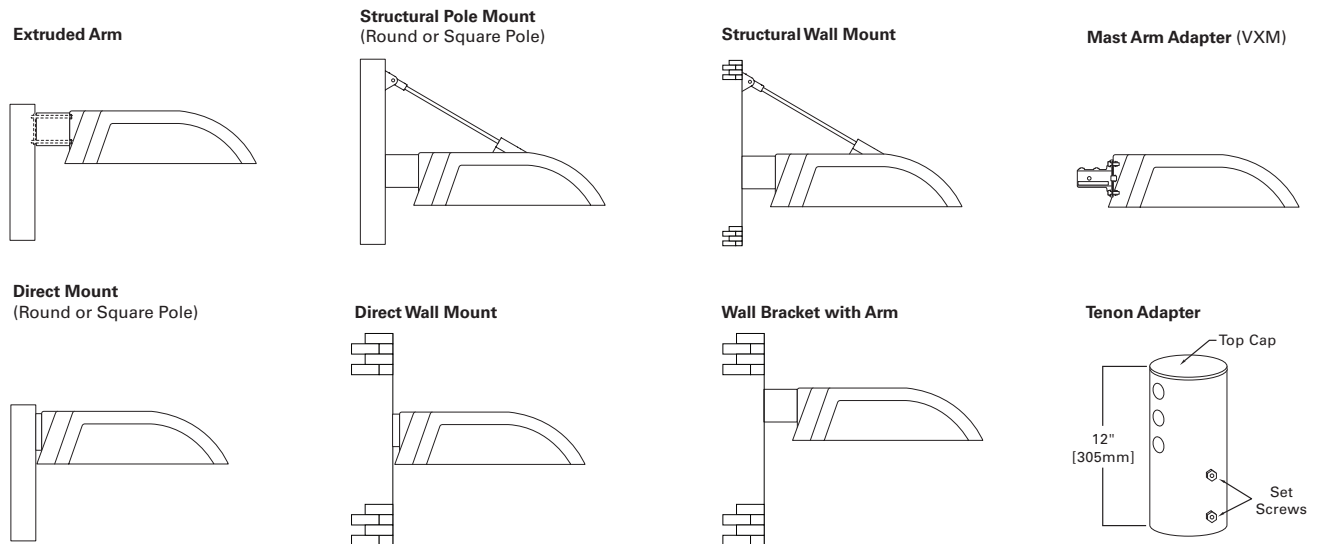
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

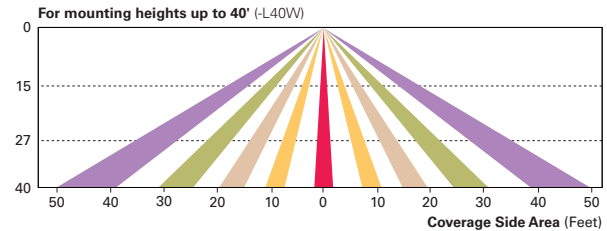
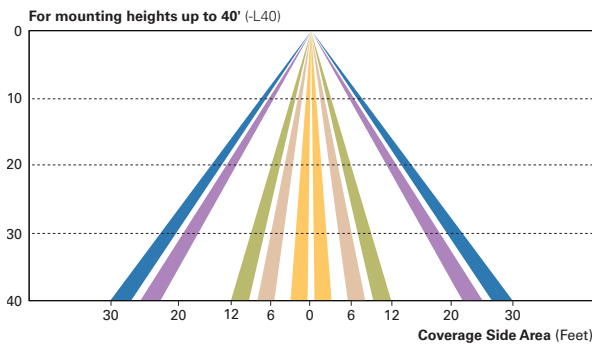
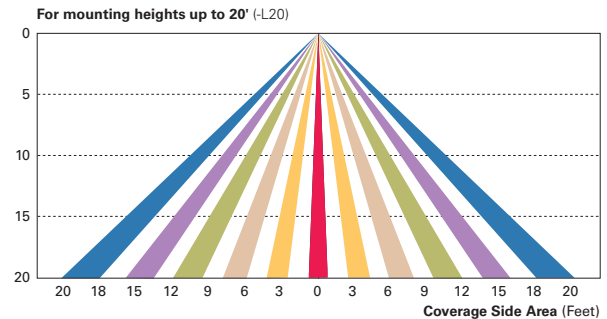
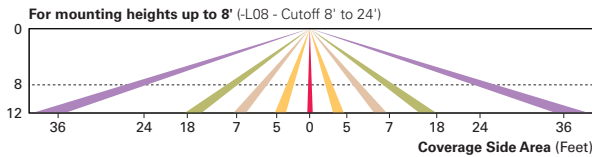
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

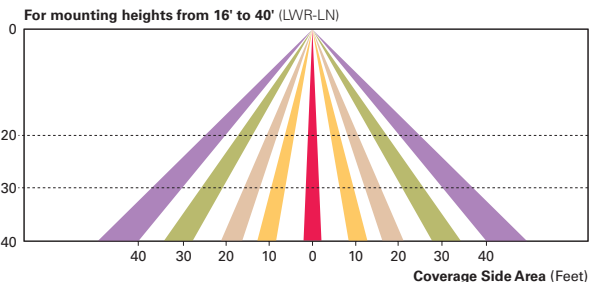
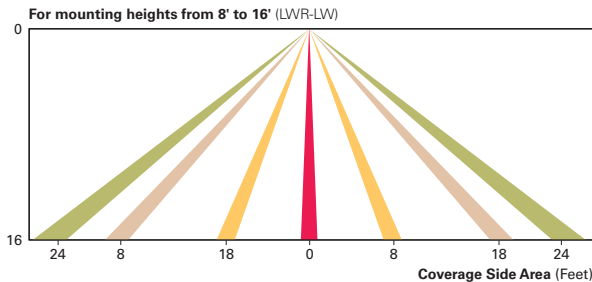
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-SL2-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1C

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁶
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1C

COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

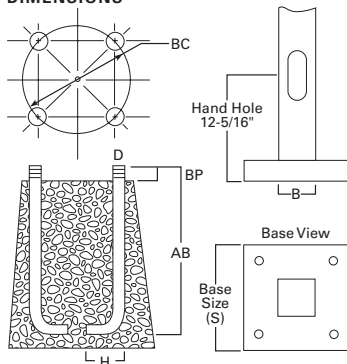
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS =Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S =Square Steel Base	F =Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M =Type M Drilling R=Type R Drilling Z=Type Z Drilling	1 =Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.



SSS SQUARE STRAIGHT STEEL

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained from Eaton's Cooper Lighting business.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

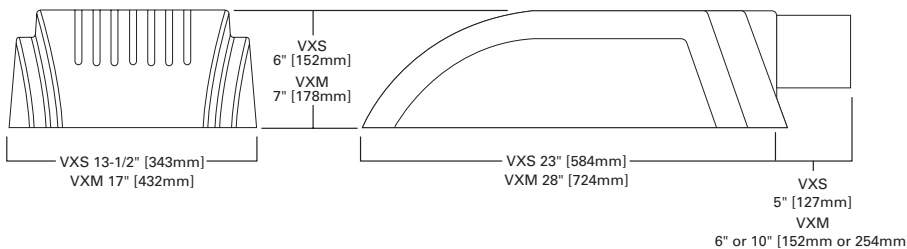
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs	E01	E02	E03	E04	E05	E06	
Drive Current	350mA Drive Current						
Power (Watts)	25W	52W	75W	97W	127W	150W	
Current @ 120V (A)	0.22	0.44	0.63	0.82	1.07	1.26	
Current @ 277V (A)	0.10	0.20	0.28	0.36	0.48	0.56	
Power (Watts)	31W	58W	82W	99W	132W	159W	
Current @ 347V (A)	0.11	0.19	0.28	0.29	0.39	0.48	
Current @ 480V (A)	0.09	0.15	0.20	0.21	0.30	0.36	
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

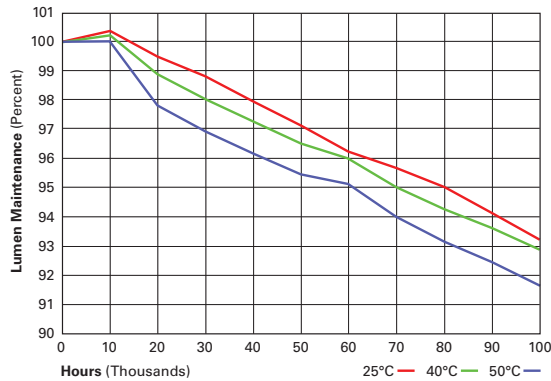
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



Submitting Agency:



Description: **VXM-E03-LED-E1-5WQ-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1D

VXS/VXM VISION SITE LED

POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

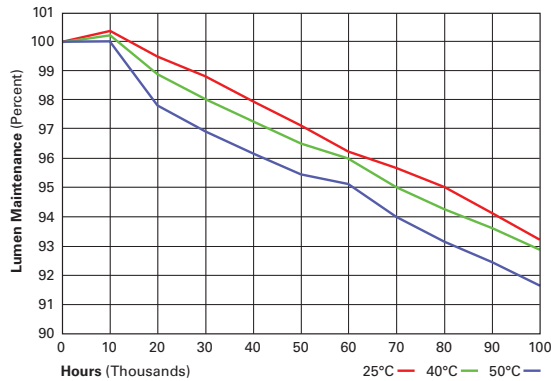
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



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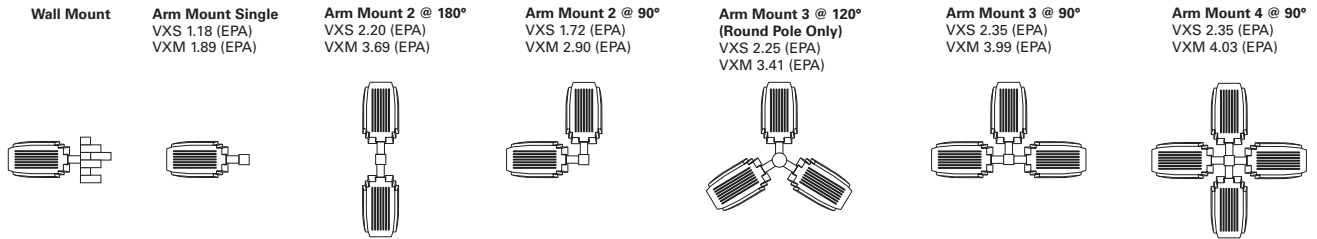
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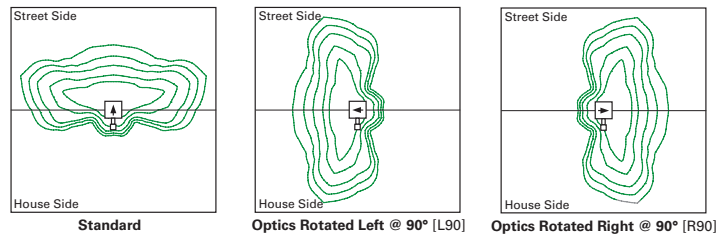


VXS/VXM VISION SITE LED

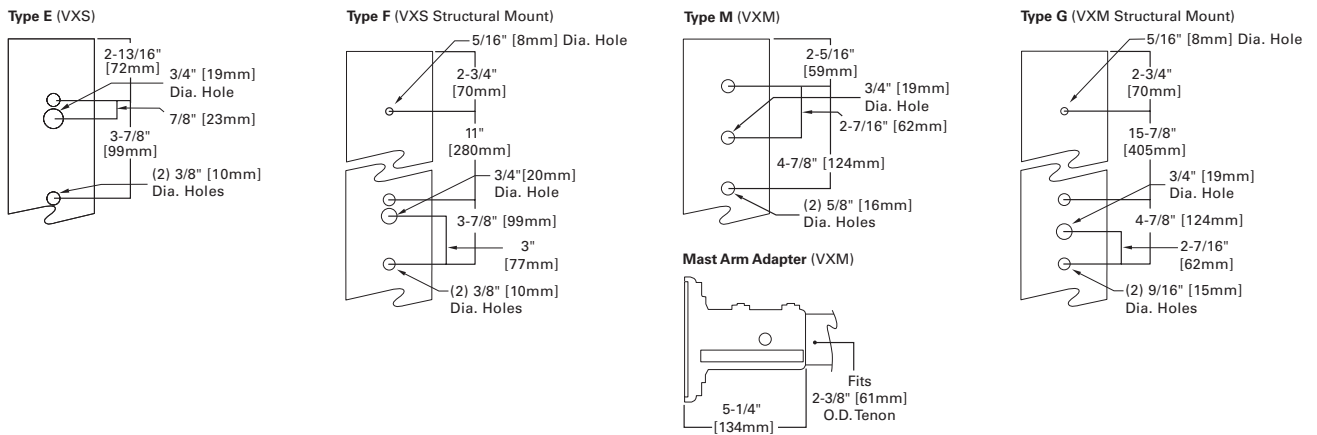
MOUNTING VARIATIONS AND EPAS



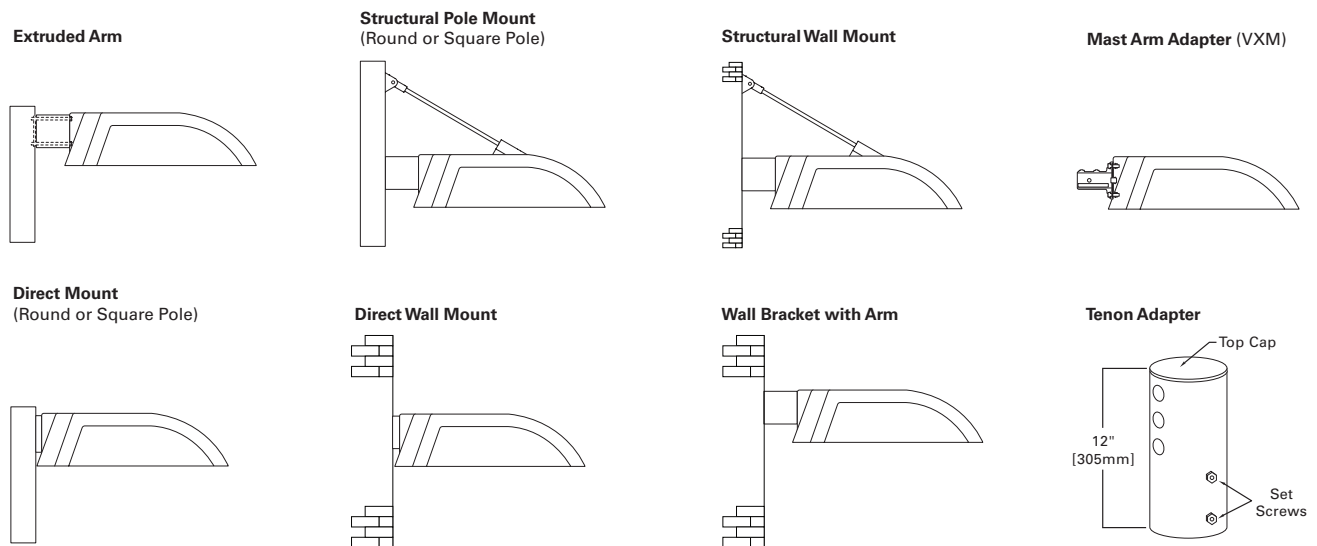
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

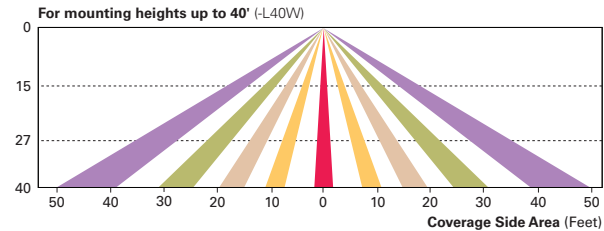
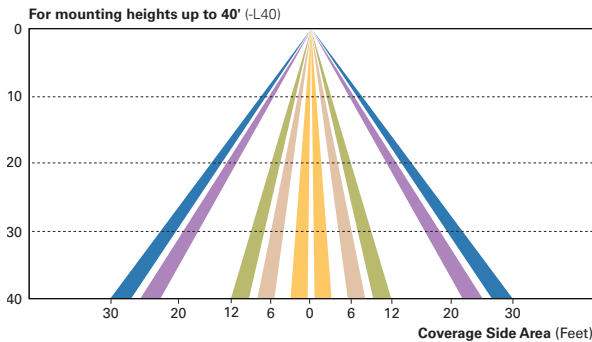
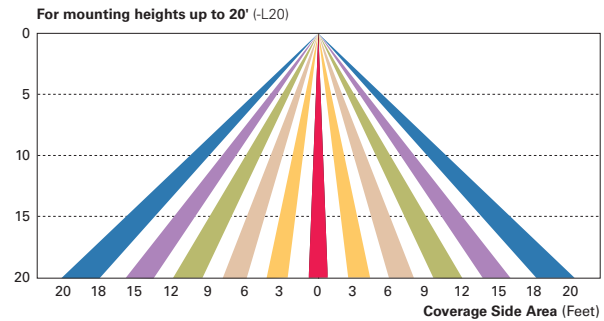
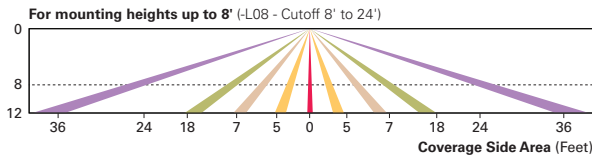
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

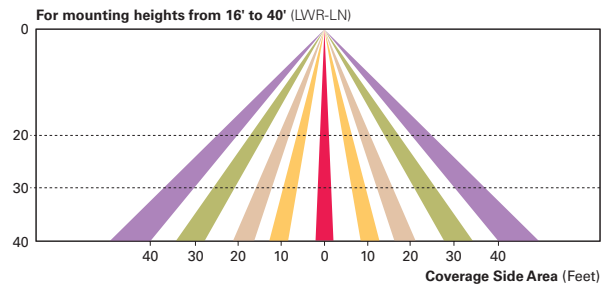
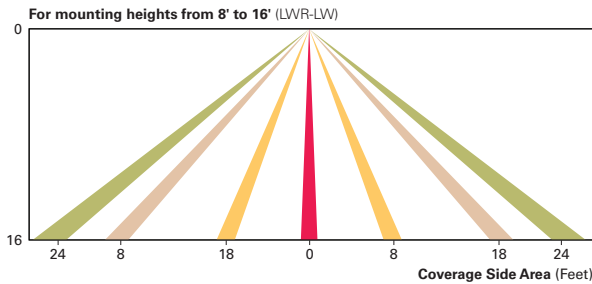
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-5WQ-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1D

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁶
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCC=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



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 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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Submitting Agency:



Description: **SSS4A20SFM1**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
S1D

COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

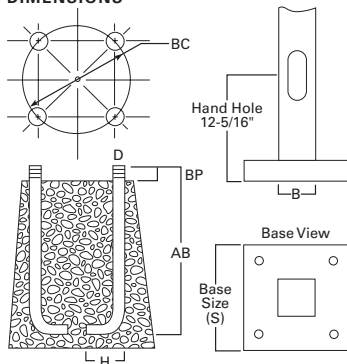
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS =Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S =Square Steel Base	F =Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M =Type M Drilling R=Type R Drilling Z=Type Z Drilling	1 =Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4" above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty from Eaton's Cooper Lighting business and may result in pole failure causing serious injury or property damage. Upon request, Eaton's Cooper Lighting business will supply information regarding total loading capacity. The pole warranty from Eaton's Cooper Lighting business is void unless poles are used and installed as a complete pole/luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative or visit www.cooperlighting.com for available options, accessories and ordering information.



SSS SQUARE STRAIGHT STEEL

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
									80 mph	90 mph	100 mph	110 mph	
MH			S	BC	BP	B	D x AB x H						
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained from Eaton's Cooper Lighting business.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Lumière

DESCRIPTION

Eon 303-B1-LEDB2 is a compact, low profile, dimmable, LED bollard that provides downlight only via a fixed head. 303-B1-LEDB2 has a single head on one side of the luminaire. The bollard comes standard with universal input LED drivers (120-277V, 50/60 Hz). Dimming is achieved with a standard ELV, reverse phase dimming driver or an optional 0-10V dimming driver. Eon fixtures may be used indoors or outdoors and carry an IP66 rating. The patented LumaLevel™ leveling system provides quick installation, easy adjustment, secure mounting and protection from vibration.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

The head of the 303-B1-LEDB2 is precision machined from corrosion-resistant 6061-T6 aluminum. Body is extruded aluminum and adjustable mounting base is cast from corrosion resistant aluminum alloy. Stainless steel hardware is included. Four (4) 3/8" x 12" galvanized anchor bolts and a galvanized steel anchor bolt template are standard. Specify option -LAB and order the anchor bolt/template kit separately (Catalog: 7581-01PK).

Optical

LightBAR™ and optical assembly are sealed by a clear, impact resistant tempered glass lens. The optical assembly is available in three distributions: T2 (lateral throw), T4 (forward throw) and T5X (Flood). Available in several color temperatures: 2700K, 3000K, 3500K,

4000K and TSAM (Amber). Both color temperature and distribution must be specified when ordering – see catalog logic for details. An edge-lit option is available.

Electrical

The bollard is standard with an ELV trailing edge phase dimmable driver that accepts a universal input (120-277, 50/60Hz). The standard driver is ELV trailing edge phase dimmable. An optional 0-10V dimming driver is also available. Both driver options incorporate surge protection. The receptacle option incorporates a specification grade, 120V, 15A tamper proof and weather resistant duplex GFCI. The photocell option comes in either a 120V or 277V. Please see Option section for more detail.

Finish

Luminaire and mounting base are double protected by a RoHS compliant chemical film undercoating and polyester powdercoat paint finish. The mounting base is painted black. The luminaire housing and head are available in a variety of standard colors. RAL and custom color matches are available upon request. As an option, the Eon bollards are also available in colors to match other outdoor Eaton product lines, such as Invue. See the Finish section in the ordering detail for more detail. The LightBAR™ cover plates are standard white.

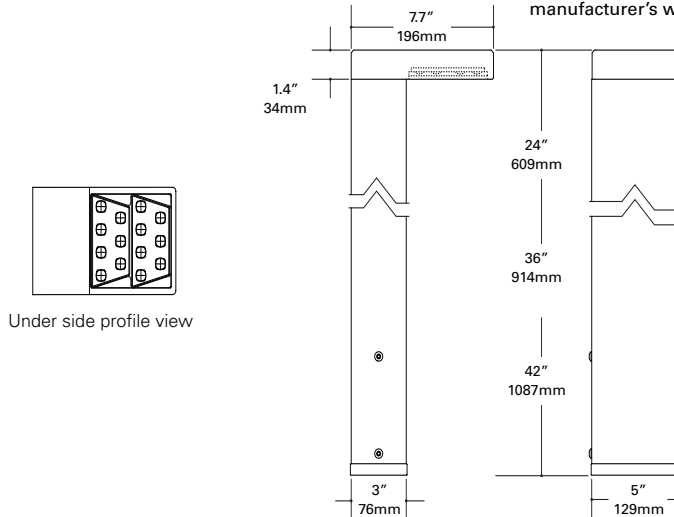
Warranty

Lumiere warrants the EON series of fixtures against defects in material and workmanship for five (5) years. Auxiliary equipment such as LED drivers carries the original manufacturer's warranty.



303-B1-LEDB2
 EON LED

APPLICATIONS:
 BOLLARD



CERTIFICATION DATA
 UL and cUL Wet Location Listed
 LM79 / LM80 Compliant
 ROHS Compliant
 IP66 Ingressed Protection Rated

TECHNICAL DATA
 50°C Maximum Temperature Rating
 External Supply Wiring 90°C Minimum



ORDERING INFORMATION

Sample Number: 303-B1-LEDB2-2700-120-T2-DIM10-BK-42-EDGE-PC1-RFL-LAB

Series ¹	Color Temperature	Input Voltage	Optics	Dimming	Finish ³	Height ⁴	Options ⁵
303-B1-LEDB2 Head contains two (2) Mini LightBAR™	2700=2700K 3000=3000K 3500=3500K 4000= 4000K TSAM=Turtle Safe Amber (585-595nm)	UNV=120-277V ¹ 120=120V 277=277V ²	T2 =Type II, Lateral Throw T4 =Type IV, Forward Throw T5X =Type V, Extra Wide Flood	DIMELV=Trailing Edge Phase Dimming Driver DIM10=0-10V Dimming Driver	Painted BK=Black BZ=Bronze CS=City Silver WT=White Premium Paint AP=Grey DP=Dark Platinum GM=Graphite Metallic	24=24" 36=36" 42=42"	EDGE=Edge lit glass lens PC1=Photocontrol 120V ⁶ PC2=Photocontrol 208-277V ⁶ RIU=Receptacle - In Use (120V Only) ⁶ RFL=Receptacle - Flip-Lid (120V Only) ⁶ LAB=Less Anchor Bolts & Template ⁷

NOTES: **1** Universal Voltage (UNV) is standard unless specifying Photocontrol or Receptacle (RIU or RFL - 120V) options; **2** Specify for PC2 option only; **3** Custom and RAL color matching available upon request. Consult factory for further information; **4** Bollard heights are nominal (shown in inches); **5** Add suffix in the order shown; **6** Must specify voltage when ordering; **7** When specifying LAB option the anchor bolts and template need to be ordered separately 7581-01PK; **8** DesignLights Consortium™ Qualified and classified for DLC Standard. Refer to www.designlights.org for details on exact qualified EON 303-B1-LEDB2 product as not all configurations are DLC classified.



LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	TM-21 Reported L70(10k) (Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 60,000	365,000
40°C			
50°C			

CURRENT DRAW

Model	Line Voltage	Current Draw
303-B1-LEDB2	120-277V, 50/60Hz	0.13A

MAX LOAD RATING

Options	Line Voltage	Max Load Rating
PC1	120V, 50/60Hz	1000VA, 8.3A
PC2	208-277V, 50/60Hz	
RIU or RFL	120V, 50/60Hz	1800VA, 15A

LUMENS - CRI/CCT TABLE

Optic Type	Distribution	Watts	Delivered Lumens	LPW	CCT (K) / Color	CRI nom. / Wavelength	B-U-G Rating
T2 (Lateral Throw)		15.5	783	51	2700	95	B1-U0-G1
			1300	84	3000	75	
			909	59	3500	85	
			1433	93	4000	75	
			12.1	398	31	TSAM (Amber)	
T4 (Forward Throw)		15.5	747	48	2700	95	B0-U0-G0
			1241	80	3000	75	
			868	56	3500	85	
			1368	88	4000	75	
			12.1	380	29	TSAM (Amber)	
T5X (Extra Wide Flood)		15.5	682	44	2700	95	B1-U0-G0
			1132	73	3000	75	
			792	51	3500	85	
			1248	81	4000	75	
			12.1	347	27	TSAM (Amber)	

OPTIONS

Receptacle Options (120V Only)

RIU - Receptacle In-Use

Rugged UV-resistant polycarbonate clear cover and gray body protects GFCI without cracking or breaking and is non-corrosive. Note: Cover is weatherproof with the cord plugged in and the receptacle is not required to be attended while in use. The receptacle incorporates a specification grade, 120V, 15A tamper proof and weather resistant duplex GFCI. Available on 24", 36" and 42" heights.

RFL - Receptacle Flip Lid

Cover is constructed of a durable, die-cast zinc-alloy and is painted to match fixture. Cover is only weatherproof without the cord plugged in and the cover closed. The receptacle will need to be attended while in use. The receptacle incorporates a specification grade, 120V, 15A tamper proof and weather resistant duplex GFCI. Available on 24", 36" and 42" heights.

Photocontrol

PC1 (120V) or PC2 (277V)

Photocontrol cover is precision machined from corrosion-resistant 6061-T6 aluminum and is secured to bollard head with tamper resistant stainless steel hardware. The photocontrol option is available in dedicated 120V or 208-277V. When specifying a photocontrol option make sure to designate the appropriate voltage within the catalog logic.

Edge

When specifying with the EDGE option, the diffused glass becomes thicker adding a visible line of light around the edge accentuating the luminaires' aesthetics and styling.

TECHNICAL NOTES:

- Adjustable mounting base - Cast aluminum mounting base is equipped with the patented LumaLevel™ leveling system that includes mounting base, 70 shore neoprene base, stainless steel hardware and a slot to accommodate two inbound and outbound 3/4" conduits. It provides quick installation, easy adjustment, secure mounting and protection from vibration.



HALO

DESCRIPTION

High efficacy low profile track fixture ideal for accent and display lighting applications. Featuring die cast construction with a simple low profile design. These lampholders are perfect for those applications where performance is required from a discreet source.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Quick Lock Adapter*

Attaches electrically and mechanically anywhere along the track. Includes discrete locking tab that locks the luminaire on the track and allows for easy removal and repositioning.

Heat Sink

Aluminum die-cast heat sink provides exceptional thermal management to yield 70% lumen maintenance after 50,000 hours of operation.

LED Light Engine

Chip on board LED provides a uniform source with high efficiency and no pixilation. Available in 90 CRI minimum, R9 greater than 50 and color accuracy within 3 SDCM provide color accuracy and uniformity.

Optics

Configurable optics allow for the reflectors to be changed in the field to adjust to the current lighting need. Available in spot, flood and narrow flood distributions.

Media

Precision designed trim ring contains unique teeth locking mechanism, and can accept up to 2 pieces of standard media. The 3" diameter fixture accepts PAR 20 standard media. The 4" diameter fixture accepts PAR 30 standard media.

Luminaire Arm

Arm allows the lamp housing tilt to adjust ±180° vertically and ±350° horizontally. This enables a clean look while providing full aiming capabilities.

Dimming

TRIAC, ELV or Phasecut

- Designed for continuous dimming capability to nominally 5% with many 120V Leading Edge (LE) and Trailing Edge (TE) Phase Control Dimmers. (Dimmers with low end trim adjustment offer greater assurance of achieving 5% level.)
- Consult dimmer manufacturer for compatibility and conditions of use.

Warranty

Five year limited warranty, consult website for details.
www.eaton.com/lighting/legal.

Drivers

3" fixtures (12W and 21W) contain integral 120V, 50/60 Hz constant current driver that provides noise free operation. 4" fixtures (35W) contain 120V 50/60Hz constant current driver that provides noise free operation.

Compliance

cULus listed / certified for use with Halo Single Circuit Power-Trac, LazerTrack, and Global [See Footnote #1 below Ordering Information.]TEK/HTEK track. NSF non-food zone compliant. EMI/RFI emissions per FCC 47CFR Part 15 Class B consumer limits. Contains no mercury or lead and RoHS compliant. Photometric testing in accordance with IES LM-79-08. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.



L808

**LED Track Head
 3-Inch and 4-Inch
 Flat Back Cylinder**

90 CRI

850lm package - 12W	CBCP
Spot 14"	8,544
Narrow Flood 21"	5,207
Flood 41"	1,610

Lighting Data - 3000K Spot	
Lumens	1007
Lumens per watt:	84.6

Energy Data	
Input Power:	11.89W
Power Factor:	≥.99
Input Current:	.113A



1500lm package - 21W	CBCP
Spot 14"	11,474
Narrow Flood 21"	7,778
Flood 41"	2,864

Lighting Data - 3000K Spot	
Lumens	1506
Lumens per watt:	72.7

Energy Data	
Input Power:	20.66W
Power Factor:	≥.99
Input Current:	.174A

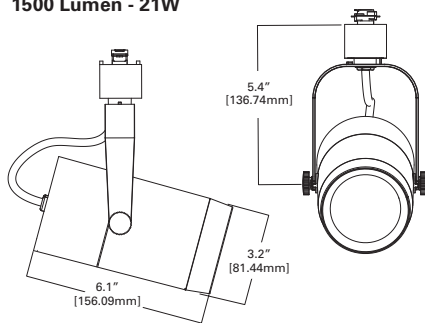
2500lm package - 35W	CBCP
Spot 12"	29,149
Narrow Flood 24"	9,865
Flood 33"	6,485

Lighting Data - 3000K Spot	
Lumens	2404
Lumens per watt:	68.9

Energy Data	
Input Power:	34.86W
Power Factor:	≥.99
Input Current:	.29A

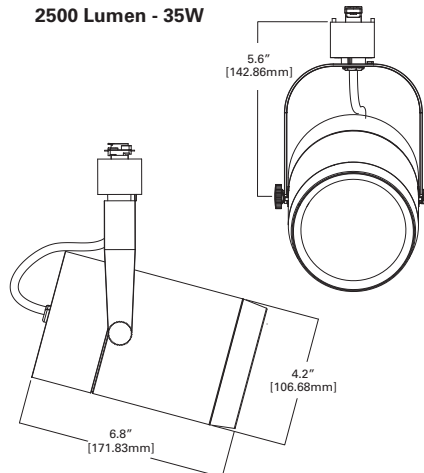
3-Inch Fixture

850 Lumen - 12W
 1500 Lumen - 21W



4-Inch Fixture

2500 Lumen - 35W



*Note: Fixture to only be attached to horizontally installed track systems.

Submitting Agency:



Description: **L80815NF9030P**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
TK

L808

ORDERING INFORMATION

SAMPLE NUMBER: L80815SP9030AH (Halo or Lazer Track connector, 1500 lumen, Spot Distribution, 90 CRI, 3000K, with Aluminum Haze Finish)

Track	LED	Series	Lumen Package	Distribution	CRI	CCT	Finish
L=Halo and Lazer Power-Trac (Single Circuit) LJ=Juno® Track¹ LL=Lightolier® Track² L2G=Global® TEK or HTEK³	8=LED	08=Cylinder	08=850 lm 15=1500 lm 25=2500 lm	SP=Spot NF=Narrow Flood FL=Flood	90=90	27=2700K 30=3000K 35=3500K 40=4000K	AH=Aluminum Haze MB=Black P=White

Accessories (order separately)

Reflectors

- SREF-808302-PK= Spot Reflector 3"
- FREF-808302-PK=Flood Reflector 3"
- NFREF-808302-PK=Narrow Flood Reflector 3"
- SREF-808402-PK= Spot Reflector 4"
- FREF-808402-PK=Flood Reflector 4"
- NFREF-808402-PK=Narrow Flood Reflector 4"

Media - 3"

Color Filters

- F22-20=Red
- F33-20=Blue
- F44-20=Green
- F55-20=Yellow
- F66-20=Mercury

Dichronic Filters

- F71-20=Peach
- F72-20=Amber
- F73-20=Green
- F74-20=Medium Blue
- F75-20=Yellow
- F76-20=Red
- F77-20=Dark Blue
- F78-20=Light Blue
- F79-20=Neutral Density
- F80-20=Magenta

Beam-Modifying Lenses

- DIF-20=Diffused Lens
- OSL-20=Overall Spread Lens
- LSL-20=Linear Spread Lens

Louvers

- LVR-20=Hex Cell Louver

Media - 4"

Color Filters

- LND-RED=Red Color Filter
- LND-BLU=Blue Color Filter

Dichronic Filters

- LND-CLR=Clear Protective Glass Lens
- LND-AMB=Amber Color Filter
- LND-PCH=Cosmetic Peach Filter
- LND-MWL=Milk White Lens

Beam-Modifying Lenses

- LND-UVF=Optivex™ UN Filter
- LND-DSL=Diffusion Spread Lens
- LND-LSL=Linear Spread Lens
- LND-PSL=Prismatic Spread Lens

Louvers

- LND-LVR=Hex Cell Louver

NOTES: 1. Juno® T single circuit and 2-circuit track contact. Juno® is a registered trademark of Juno® Lighting. 2. Lightolier® Lytespan 6000 single circuit and 2 circuit track contact. Lightolier® is a registered trademark of Philips Lighting. 3. Global® is a registered trademark of Nordic Aluminum.

Select models are DesignLights™ Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.

Summary based 90 CRI 3000K White finish. Full data available in IES files online.

PHOTOMETRICS

12W

Color Temp = 3000K
 4000K Multiplier = 1.25

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
Spot: 14°	5'	341.9	1.2	1.2	5'	225.5	1.5	1.2	2.9	3'	136	2.5	1.2	5.2	3'	626.3	0.8	0.8	1.7
CBCP: 8544	7.5'	152	1.8	1.8	7.5'	100.2	2.3	2	4.3	4'	76.5	3.5	1.8	6.9	4'	352.3	1.1	1	2.3
Lumens: 1007	10'	85.5	2.4	2.4	10'	56.4	3.1	2.6	5.8	5'	49	4.3	2.2	8.7	5'	225.5	1.5	1.2	2.9
LpW: 84.6	12.5'	54.7	3	3	12.5'	36.1	3.9	3.4	7.2	6'	34	5.2	2.6	10.4	6'	156.6	1.8	1.6	3.5
	15'	38	3.6	3.6	15'	25.1	4.7	4	8.7										
Narrow Flood: 21°	5'	208.3	1.8	1.8	5'	140.5	2.3	2	2.9	3'	97.2	3.2	1.8	5.2	3'	390.4	1.3	1.2	1.7
CBCP: 5207	7.5'	92.6	2.6	2.6	7.5'	62.5	3.4	3	4.3	4'	54.7	4.3	2.4	6.9	4'	219.6	1.8	1.6	2.3
Lumens: 994	10'	52.1	3.6	3.6	10'	35.1	4.6	4	5.8	5'	35	5.4	3	8.7	5'	140.5	2.3	2	2.9
LpW: 83.5	12.5'	33.3	4.4	4.4	12.5'	22.5	5.7	5	7.2	6'	24.3	6.5	3.6	10.4	6'	97.6	2.6	2.4	3.5
	15'	23.1	5.4	5.4	15'	15.6	6.9	6	8.7										
Flood: 41°	5'	77.4	3.4	3.4	5'	58.8	3.6	3.6	2.9	3'	58.6	2.8	2.8	5.2	3'	163.3	2.1	2.2	1.7
CBCP: 1610	7.5'	34.4	5.2	5.2	7.5'	26.1	5.4	5.6	4.3	4'	32.9	3.8	3.8	6.9	4'	91.9	2.8	2.8	2.3
Lumens: 945	10'	19.4	7	7	10'	14.7	7.3	7.4	5.8	5'	21.1	4.8	4.6	8.7	5'	58.8	3.6	3.6	2.9
LpW: 79.4	12.5'	12.4	8.6	8.6	12.5'	9.4	9.1	9.2	7.2	6'	14.6	5.7	5.6	10.4	6'	40.8	4.3	4.4	3.5
	15'	8.6	10.4	10.4	15'	6.5	10.9	11.2	8.7										



PHOTOMETRICS

21W

Color Temp = 3000K
 4000K Multiplier = 1.25

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
Spot: 14°	5'	511.3	1.2	1.2	5'	337.2	1.5	1.2	2.9	3'	203.5	2.5	1.2	5.2	3'	936.8	0.8	0.8	1.7
CBCP: 11474	7.5'	227.3	1.8	1.8	7.5'	149.9	2.3	2	4.3	4'	114.5	3.5	1.8	6.9	4'	526.9	1.1	1	2.3
Lumens: 1506	10'	127.8	2.4	2.4	10'	84.3	3.1	2.6	5.8	5'	73.2	4.3	2.2	8.7	5'	337.2	1.5	1.2	2.9
LpW: 72.7	12.5'	81.8	3	3	12.5'	54	3.9	3.4	7.2	6'	50.9	5.2	2.6	10.4	6'	234.2	1.8	1.6	3.5
	15'	56.8	3.6	3.6	15'	37.5	4.7	4	8.7										

Narrow Flood: 21°
 CBCP: 7778
 Lumens: 1512
 LpW: 73

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
	5'	317	1.8	1.8	5'	213.9	2.3	2	2.9	3'	148	3.2	1.8	5.2	3'	594.1	1.3	1.2	1.7
	7.5'	140.9	2.6	2.6	7.5'	95.1	3.4	3	4.3	4'	83.3	4.3	2.4	6.9	4'	334.2	1.8	1.6	2.3
	10'	79.2	3.6	3.6	10'	53.5	4.6	4	5.8	5'	53.3	5.4	3	8.7	5'	213.9	2.3	2	2.9
	12.5'	50.7	4.4	4.4	12.5'	34.2	5.7	5	7.2	6'	37	6.5	3.6	10.4	6'	148.5	2.6	2.4	3.5
	15'	35.2	5.4	5.4	15'	23.8	6.9	6	8.7										

Flood: 41°
 CBCP: 2864
 Lumens: 1439
 LpW: 6935

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
	5'	117.8	3.4	3.4	5'	89.5	3.6	3.6	2.9	3'	89.1	2.8	2.8	5.2	3'	248.6	2.1	2.2	1.7
	7.5'	52.4	5.2	5.2	7.5'	39.8	5.4	5.6	4.3	4'	50.1	3.8	3.8	6.9	4'	139.8	2.8	2.8	2.3
	10'	29.5	7	7	10'	22.4	7.3	7.4	5.8	5'	32.1	4.8	4.6	8.7	5'	89.5	3.6	3.6	2.9
	12.5'	18.8	8.6	8.6	12.5'	14.3	9.1	9.2	7.2	6'	22.3	5.7	5.6	10.4	6'	62.1	4.3	4.4	3.5
	15'	13.1	10.4	10.4	15'	9.9	10.9	11.2	8.7										

35W

Color Temp = 3000K
 4000K Multiplier = 1.25

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
Spot: 12°	5'	1170.1	1	1	5'	767.4	1.3	1	2.9	3'	449.5	2.1	1	5.2	3'	2131.7	0.7	0.6	1.7
CBCP: 29149	7.5'	520	1.4	1.4	7.5'	341.1	1.9	1.6	4.3	4'	252.8	2.8	1.4	6.9	4'	1199.1	1	0.8	2.3
Lumens: 2404	10'	292.5	2	2	10'	191.9	2.6	2.2	5.8	5'	161.8	3.5	1.8	8.7	5'	767.4	1.3	1	2.9
LpW: 68.9	12.5'	187.2	2.4	2.4	12.5'	122.8	3.2	2.8	7.2	6'	112.4	4.3	2.2	10.4	6'	532.9	1.5	1.2	3.5
	15'	130	3	3	15'	85.3	3.9	3.4	8.7										

Narrow Flood: 24°
 CBCP: 9865
 Lumens: 2272
 LpW: 65.1

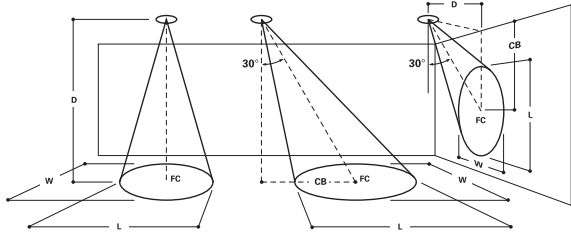
	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
	5'	397.1	2	2	5'	274.9	2.5	2.2	2.9	3'	199.7	3.3	2	5.2	3'	763.5	1.4	1.2	1.7
	7.5'	176.5	3	3	7.5'	122.2	3.8	3.2	4.3	4'	112.4	4.5	2.6	6.9	4'	429.5	2	1.8	2.3
	10'	99.3	4	4	10'	68.7	5.1	4.4	5.8	5'	71.9	5.7	3.2	8.7	5'	274.9	2.5	2.2	2.9
	12.5'	63.5	5	5	12.5'	44	6.4	5.6	7.2	6'	49.9	6.8	4	10.4	6'	190.9	3	2.6	3.5
	15'	44.1	6	6	15'	30.5	7.7	6.6	8.7										

Flood: 33°
 CBCP: 6485
 Lumens: 2293
 LpW: 65.7

	0 deg Aiming Angle Horizontal Footcandles				30 deg Aiming Angle Horizontal Footcandles					30 deg Aiming Angle Vertical Footcandles on Wall					60 deg Aiming Angle Vertical Footcandles on Wall				
	MH	FC	L	W	MH	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
	5'	261.2	2.6	2.6	5'	185.6	3.2	2.8	2.9	3'	150.8	3.4	2.4	5.2	3'	515.5	1.9	1.6	1.7
	7.5'	116.1	4	4	7.5'	82.5	4.9	4.4	4.3	4'	84.8	4.5	3.4	6.9	4'	290	2.6	2.2	2.3
	10'	65.3	5.2	5.2	10'	46.4	6.5	5.8	5.8	5'	54.3	5.6	4.2	8.7	5'	185.6	3.2	2.8	2.9
	12.5'	41.8	6.6	6.6	12.5'	29.7	8.2	7.2	7.2	6'	37.7	6.8	5	10.4	6'	128.9	3.9	3.4	3.5
	15'	29	8	8	15'	20.6	9.9	8.8	8.7										

Notes and Definitions:

Beam spread is to 50% center beam candlepower (CBCP).
 D=Distance in feet to floor or wall.
 FC=Footcandles on floor or wall at center beam aiming location.
 L=Effective Visual Beam length in feet (50% of maximum footcandle level).
 W=Effective Visual Beam width in feet (50% of maximum footcandle level).
 CB=Distance in feet across or down to center beam location.



Submitting Agency:



Description: **L653P / L900P / L901P**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
TK

HALO

DESCRIPTION

Miniature size, decorator finishes, push-in connectors, economy, all combine to make single-circuit MiniatureTrac perfect for residential or commercial use. Polarized connectors and end caps are molded polycarbonate. Halo MiniatureTrac accepts both Halo and Lazer-by-Halo lampholders.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A. Structural

- Extruded aluminum .060" [1.5mm] nominal wall thickness

B. Line Conductor

- Solid copper bus bars [cross section equivalent to #12 AWG wire].

C. Insulating Liner

- Extruded polyvinyl insulator.

D. Ground Conductor

- Exclusive independent grounding bus conductor. Maintains an independent positive ground #12 AWG path between lampholder, Trac channel and building's ground system.

E. Neutral Conductor

- Cross section equivalent of #12 AWG wire.

F. Polarity Indicator (Neutral)

- Visual polarity groove indicates proper electrical installation of lampholder adapter.

Listings

- cULus listed for use with Halo and Lazer-by-Halo lampholders.

Mounting

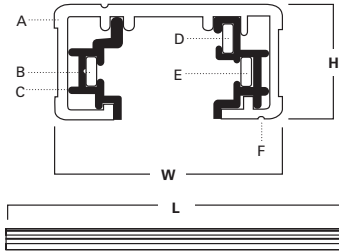
- Track system is recommended for ceiling mount only. For alternate mounting methods consult factory.



**L650, L651
L652, L653**

**MINIATURE
SINGLE CIRCUIT
TRAC SYSTEM**

Power -Trac



	L	W	H
L650 2' Nominal	20-1/8" [511mm]	1-3/8" [35mm]	11/16" [18mm]
L651 4' Nominal	44-1/8" [1121mm]	1-3/8" [35mm]	11/16" [18mm]
L652 8' Nominal	92-1/8" [2340mm]	1-3/8" [35mm]	11/16" [18mm]
L653 12' Nominal	140-1/8" [3559mm]	1-3/8" [35mm]	11/16" [18mm]

ORDERING INFORMATION

SAMPLE NUMBER: L651MB

Track	Finishes	Connectors (Order Separately)	Accessories (Order Separately)	Current Limiters (Order Separately)
L650= 2' L651= 4' L652= 8' L653= 12'	P=White MB=Black	L900=Outlet Box Cover L901=Live End Connector L902=Flexible Connector L903=Straight Connector L904=L Connector L905=T Connector L906=X Connector L907=Outlet Box for use with T-Bar ceiling L908=Mini Joiner L909=Floating Canopy and Connector L950=Cord and Plug Connector L979=Conduit Continuation Kit L980=Live End Conduit Adapter DE600=Dead End Finishes P=White MB=Black	L951=Wire Way Cover for Pendant Assembly Kit L983=T-Bar Attachment Clip L992=Pendant Kit Assembly L48=48" Steel Stem L994=Pendant Adapter Finishes P=White MB=Black	Current Limiter - End Feed LC901CB120=120W (1A @ 120V) LC901CB300=300W (2.5A @ 120V) LC901CB600=600W (5A @ 120V) LC901CB960=960W (8A @ 120V) LC901CB1200=1200W (10A @ 120V) Current Limiter - Center Feed LC903CB120=120W (1A @ 120V) LC903CB300=300W (2.5A @ 120V) LC903CB600=600W (5A @ 120V) LC903CB960=960W (8A @ 120V) LC903CB1200=1200W (10A @ 120V) Finishes P=White MB=Black

Submitting Agency:



Description: L653P / L900P / L901P
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes:

Type:
TK

L650, L651, L652, L653

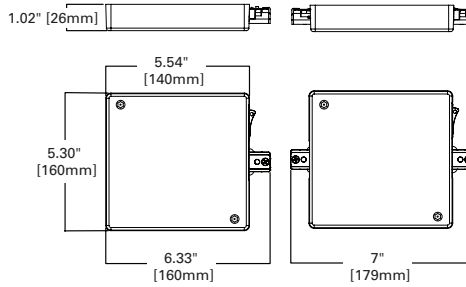
LC901, LC903 Current Limiter - End and Center Feeds

End-feed and Center-feed capable:
 Five breaker sizes are available. Consult factory if other sizes are required. Can be utilized on hard or grid ceilings. Can be used with pendant suspended track. Breaker can be used as an on-off switch. Breaker features a "tripped" condition indicator. cULus Listed.

ORDERING INFORMATION

SAMPLE NUMBER: LC901CB120P

Feed Type	Circuit 1 Breaker	Finish
LC901= Halo Power-Trac 1-Circuit End Feed	CB120=120W (1A @120V)	P=White MB=Black
LC903= Halo Power-Trac 1-Circuit Center Feed	CB300=300W (2.5A @120V) CB600=600W (5A @120V) CB960=960W (8A @120V) CB1200=1200W (10A @120V)	



Sample catalog number: LC901CB120P
 Consult factory for Single Circuit Center-feed requiring two circuit breakers.



**LC901
 LC903**



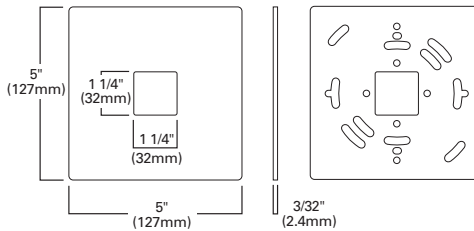
L900 - Outlet Box Cover

Can be used at any electrical feed connection point (Live, Straight, L, T or X). Drill guides on back for virtually all standard outlet boxes. Size: 5" sq. Screws included.
Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L900P

Connector	Finish
L900= Outlet Box Cover	P=White MB=Black



L900

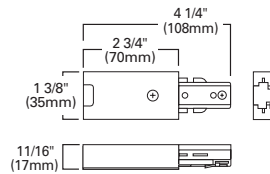
L901 - Live End Connector

To start a run.
Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L901P

Connector	Finish
L901= Live End Connector	P=White MB=Black



L901

L902 - Flexible Connector

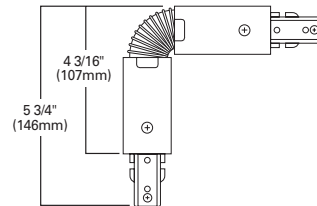
To connect two track sections at any angle up to 90° in either plane or wall to ceiling or pitched ceiling applications.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L902P

Connector	Finish
L902= Flexible Connector	P=White MB=Black



L902



L650, L651, L652, L653

L903 - Straight Connector

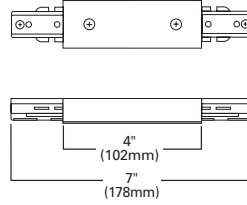
To connect two track sections end-to-end. L903 differs from mini connector L908 in that it provides a center feed option and is longer. May be used as feed point.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L903P

Connector	Finish
L903= Straight Connector	P=White MB=Black



L903

L904 - L Connector

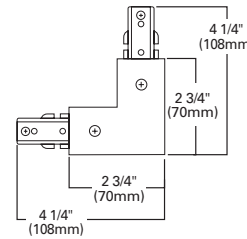
To connect two track sections at a right angle. Field adjustable for either right hand or left hand application. May be used as feed point.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L904P

Connector	Finish
L904= L Connector	P=White MB=Black



L904

L905 - T Connector

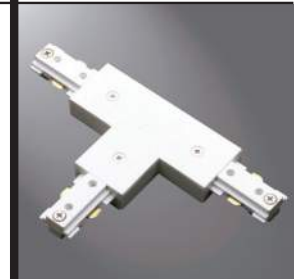
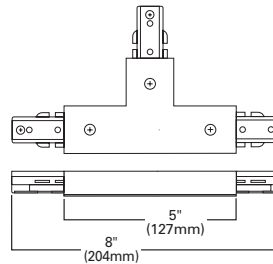
To connect three track sections into a T configuration. Field adjustable for either right hand or left hand application. May be used as feed point.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L905P

Connector	Finish
L905= T Connector	P=White MB=Black



L905

L906 - X Connector

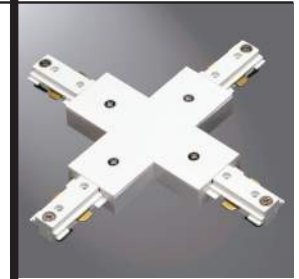
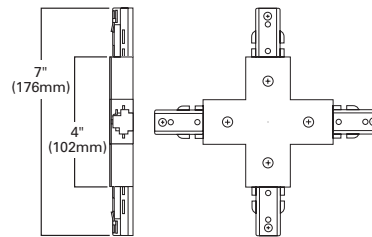
To connect four track sections into a cross configuration. May be used as feed point.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L906P

Connector	Finish
L906= X Connector	P=White MB=Black



L906

L907 - Outlet Box for use with T-Bar Ceiling

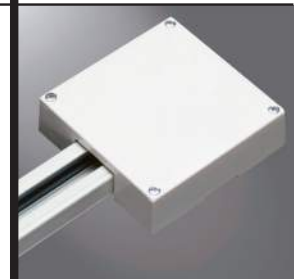
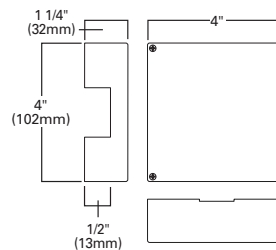
L901, L903, L904, L905 or L906 connector also required. 4" x 4" x 1 1/8".

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L907P

Connector	Finish
L907= Outlet Box for use with T-Bar Ceiling	P=White MB=Black



L907

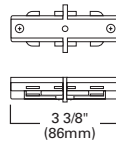


L650, L651, L652, L653

L908 - Mini Joiner

A low profile connector to cleanly and crisply join two straight track sections end-to-end. (Note: The L908 is not a feed point).

Color codes: P (White), MB (Black)



L908

ORDERING INFORMATION

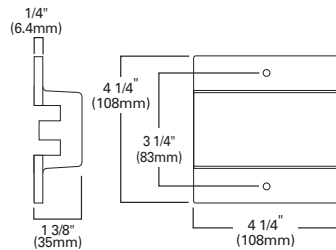
SAMPLE NUMBER: L908P

Connector	Finish
L908= Mini Joiner	P=White MB=Black

L909 - Floating Canopy and Connector

Track can be connected to existing outlet box located anywhere along the track. Comes with canopy cover, connector, dead-end and mounting hardware.
 4 1/8" x 4 1/4" x 1 3/8"

Color codes: P (White), MB (Black)



L909

ORDERING INFORMATION

SAMPLE NUMBER: L909P

Connector	Finish
L909= Floating Canopy and Connector	P=White MB=Black

L950 - Cord and Plug Connector

12' three-wire cord with grounded plug. Maximum capacity 10 AMP.

Color codes: P (White), MB (Black)



L950

ORDERING INFORMATION

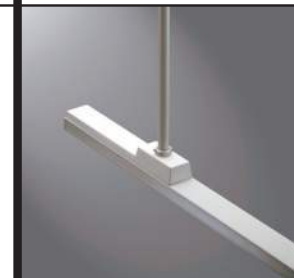
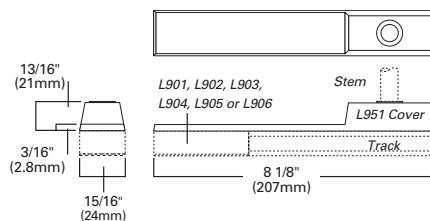
SAMPLE NUMBER: L950P

Connector	Finish
L950= Cord and Plug Connector	P=White MB=Black

L951 - Wire Way Cover for Pendant Assembly Kit

For track to be wired through stem (order one for each feed point used). For use with line connectors (L901, L902, L903, L904, L905 or L906) and pendant stem kit (L992)-order separately.

Color codes: P (White), MB (Black)



L951

ORDERING INFORMATION

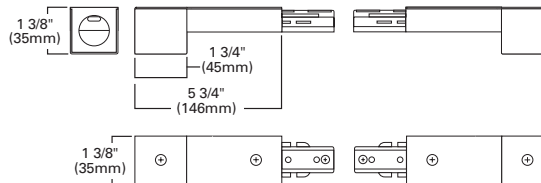
SAMPLE NUMBER: L951P

Connector	Finish
L951= Wire Way Cover for Pendant Assembly Kit	P=White MB=Black

L979 - Conduit Continuation Kit

Consisting of one left feed and one right feed. To continue a run around obstructions. Designed to accept 1/2" trade size conduit fitting (not included).

Color codes: P (White), MB (Black)



L979

ORDERING INFORMATION

SAMPLE NUMBER: L979P

Connector	Finish
L979= Conduit Continuation Kit	P=White MB=Black

Submitting Agency:



Description: **L653P / L900P / L901P**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
TK

L650, L651, L652, L653

L980 - Live End Conduit Adapter

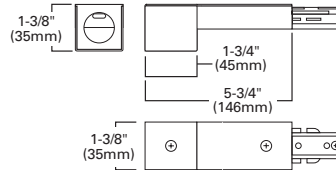
Designed to accept standard 1/2" trade size conduit fitting (not supplied). Use when feeding to track through surface conduit system.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L980P

Connector	Finish
L980= Live End Conduit Adapter	P=White MB=Black



L980

L983 - T-Bar Attachment Clip

Allows track to be attached to inverted tee ceiling. Order as follows: 2 kits for 2' Trac; 2 kits for 4' Trac; 3 kits for 8' Trac and 4 kits for 12' Trac.

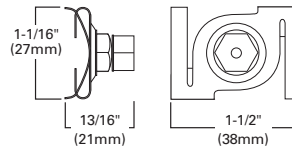
L986 Mini-T Bar Clip

For mounting Trac on suspended ceilings with mini-grid (9/16" wide) system.

ORDERING INFORMATION

SAMPLE NUMBER: L983P

Connector	Finish
L983= T-Bar Attachment Clip L986= Mini T-Bar Clip	P=White MB=Black



L983

L992 - Pendant Kit Assembly

Order 2 kits for 2' Trac; 2 kits for 4' Trac; 3 kits for 8' Trac; and 4 kits for 12' Trac. Includes one 18" threaded steel stem, canopy and mounting hardware.

L48 48" Steel Stem

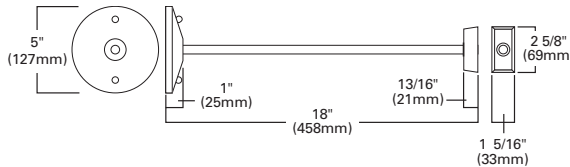
For additional length with L992. Can be field cut.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L992P

Connector	Finish
L992= Pendant Kit Assembly	P=White MB=Black



L992

L994 - Pendant Adapter

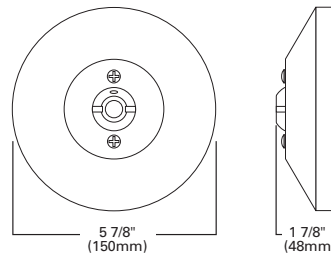
For installing pendant mounted Power-Trac on sloped ceiling. For use with L992.

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: L994P

Connector	Finish
L994= Pendant Adapter	P=White MB=Black



L994

DE600 - Dead End

Color codes: P (White), MB (Black)

ORDERING INFORMATION

SAMPLE NUMBER: DE600P

Connector	Finish
DE600= Dead End	P=White MB=Black



DE600



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-WM-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

WC1A



DATE	
PROJECT	
TYPE	

FEATURES

- Extruded aluminum housing
- Three standard lumen packages
- 4' and 8' individual units
- Up to 145 LPW
- 2.5 MacAdam ellipse binning
- Soft diffused lighting
- Standard anodize finishes: clear or black
- Custom colors available upon request
- Approved for dry and damp locations
- 5 year warranty
- Made in the USA



SPECIFICATIONS

PERFORMANCE (LOW OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4L-30K	2,029	16.8	120.9
SP-N1-4L-35K	2,058	16.8	122.7
SP-N1-4L-40K	2,086	16.8	124.5
SP-N1-4L-50K	2,143	16.7	128.0
SP-N1-8L-30K	4,307	33.0	130.5
SP-N1-8L-35K	4,375	33.0	132.7
SP-N1-8L-40K	4,443	32.9	135.0
SP-N1-8L-50K	4,578	32.8	139.5

PERFORMANCE (STANDARD OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4S-30K	3,424	26.5	129.3
SP-N1-4S-35K	3,483	26.5	131.3
SP-N1-4S-40K	3,541	26.6	133.4
SP-N1-4S-50K	3,658	26.6	137.5
SP-N1-8S-30K	7,204	52.9	136.1
SP-N1-8S-35K	7,329	52.9	138.5
SP-N1-8S-40K	7,453	52.9	140.8
SP-N1-8S-50K	7,702	52.9	145.6

PERFORMANCE (HIGH OUTPUT, CRI 80+)			
Model	Lumens	Watts	LPW
SP-N1-4H-30K	5,805	47.2	123.1
SP-N1-4H-35K	5,882	47.1	124.9
SP-N1-4H-40K	5,960	47.0	126.7
SP-N1-4H-50K	6,114	46.9	130.4
SP-N1-8H-30K	11,776	93.0	126.6
SP-N1-8H-35K	11,917	93.2	127.9
SP-N1-8H-40K	12,137	93.2	130.2
SP-N1-8H-50K	12,578	93.2	135.0

*Bold indicates DLC Premium 4.2 Listed

ORDERING INFORMATION

<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>
SERIES	MODEL	LENGTH	OUTPUT	COLOR TEMP.	FINISH			
SP	NI = Narrow	4 = 4' 8 = 8'	L = Low S = Standard H = High	30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K	CA = Clear Anodize BA = Black Anodize PO = Powder Coat Other			
<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	<input type="checkbox"/>
WIRING OPTIONS	MOUNTING ACC.	OPTIONS		DIMMING OPTIONS	VOLTAGE	PLUG		
ECEW05 = Cord, End Exit, White 5' ECEW10 = Cord, End Exit, White 10' ECEB05 = Cord, End Exit, Black 5' ECEB10 = Cord, End Exit, Black 10' FCE = Feed Conduit (Through Wire), End Exit	PMGC05 = Pendant Mount w/ Grippers and 5' Cables w/ Loops PMGC10 = Pendant Mount w/ Grippers and 10' Cables w/ Loops PMCK05 = Pendant Mount w/ 5' Canopy Kit PMCK10 = Pendant Mount w/ 10' Canopy Kit SM = Surface Mount RM = Rotational Mount WM = WALL MOUNT	NS = No Sensor DM = Daylight/Motion Sensor MS = Motion Sensor B06A = Battery Backup 6 Watt w/ Unswitched Line B10A = Battery Backup 10 Watt w/ Unswitched Line B06B = Battery Backup 6 Watt w/ Night Light Option B10B = Battery Backup 10 Watt w/ Night Light Option NL = Night Light Without Battery Backup		ND = No Dimming AD = 0-10V Dimming	U = 120-277 C = 347	PN = No Plug P1 = L5-15p P2 = L6-15p P3 = L7-15p		

Example: SP-N1-8S-35K-CA-ECEW05-PMGC05-NS-ND-U-PN
 See website for accessories page.



5 YEAR WARRANTY



Made in USA



Submitting Agency:



Description: **SP-N1-4L-35K-CA-FCE-WM-NS-ND-U-PN**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

WC1A



StarPower™

CONSTRUCTION

DIMENSIONS

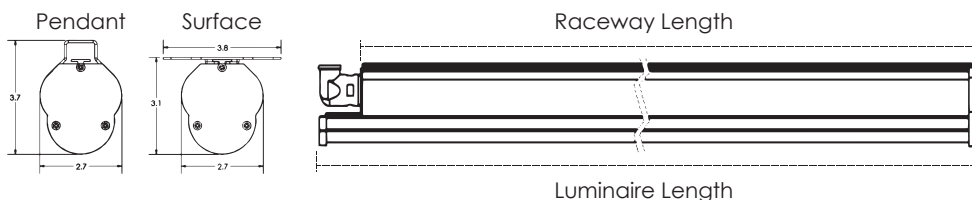
Model	Nominal Length	Luminaire Length	Raceway Length	Weight
SP-N1-4	4 ft.	48.0" (1,219mm)	46.15" (1,172mm)	7 lbs. max (3.2kg)
SP-N1-8	8 ft.	96.0" (2,348mm)	94.15" (2,391mm)	14 lbs. max (6.4kg)

MATERIALS

Housing	Aluminum Extrusion
Finish	Clear Anodize, Black Anodize, Various Powder Coat
Lens Cover	Frosted Acrylic (Impact Resistant)

ELECTRICAL

Input Voltage	U: 120-277 Vac C: 347 Vac
Hertz	50/60
Input Current	SP-N1-8H-x-U: .77 - .33A SP-N1-8S/8L/4H-x-U: .56-.24A SP-N1-4S/4L-x-U: .29-.13A SP-N1-8H-x-C: .27A SP-N1-8S/8L/4H-x-C: .185A SP-N1-4S/4L-x-C: .11
Operating Temp.	-40°C to +50°C -40°F to +122°F
Power Factor	> 0.93
THD	< 12%

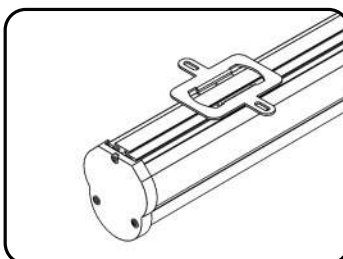


MOUNTING

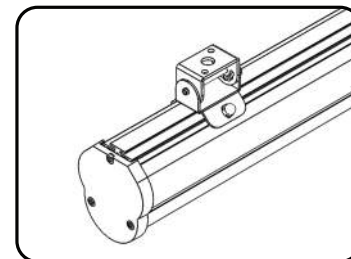
Pendant



Surface



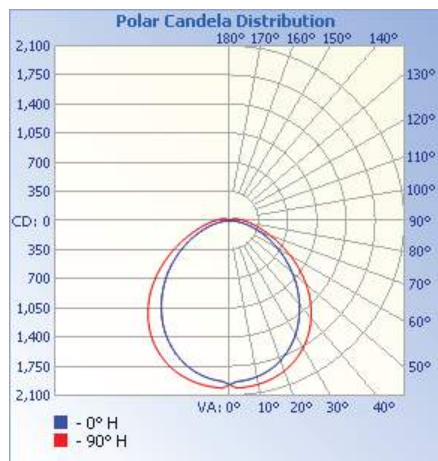
Rotational



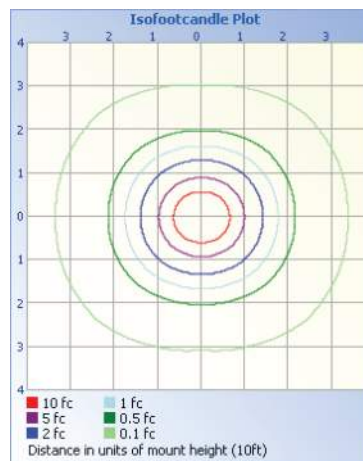
*Pendant mount comes with gripper to accept cable and optional canopies.

PHOTOMETRICS: SP-N-4H-50K

POLAR CANDELA DISTRIBUTION



ISOFOOTCANDLE PLOT





Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
Solid State LED

ARCHITECTURAL
AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

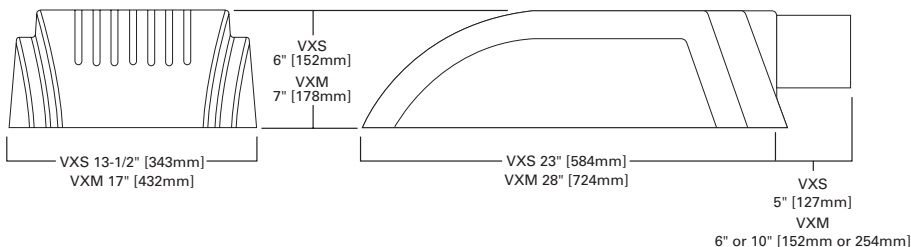
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E01	E02	E03	E04	E05	E06
Drive Current		350mA Drive Current					
Power (Watts)		25W	52W	75W	97W	127W	150W
Current @ 120V (A)		0.22	0.44	0.63	0.82	1.07	1.26
Current @ 277V (A)		0.10	0.20	0.28	0.36	0.48	0.56
Power (Watts)		31W	58W	82W	99W	132W	159W
Current @ 347V (A)		0.11	0.19	0.28	0.29	0.39	0.48
Current @ 480V (A)		0.09	0.15	0.20	0.21	0.30	0.36
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

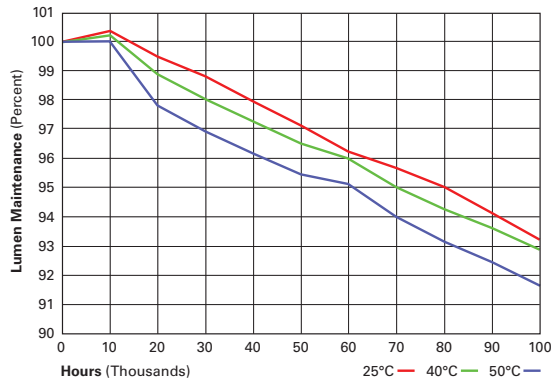
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

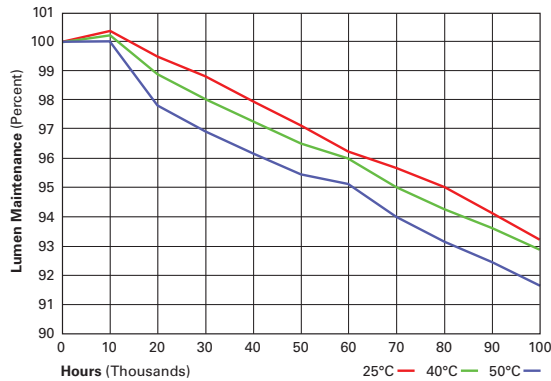
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

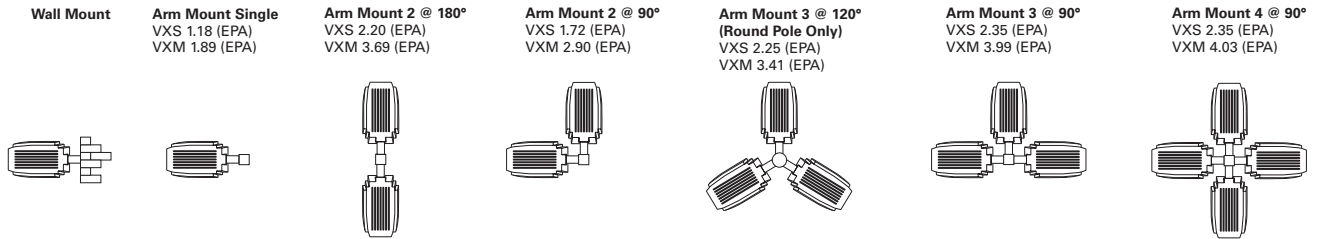
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



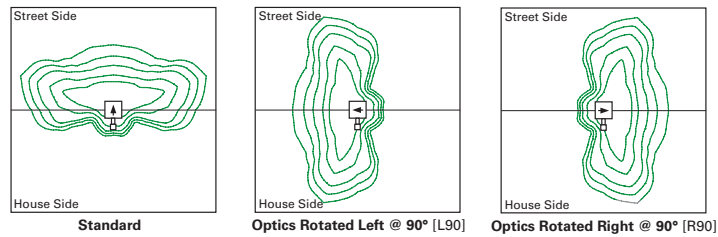


VXS/VXM VISION SITE LED

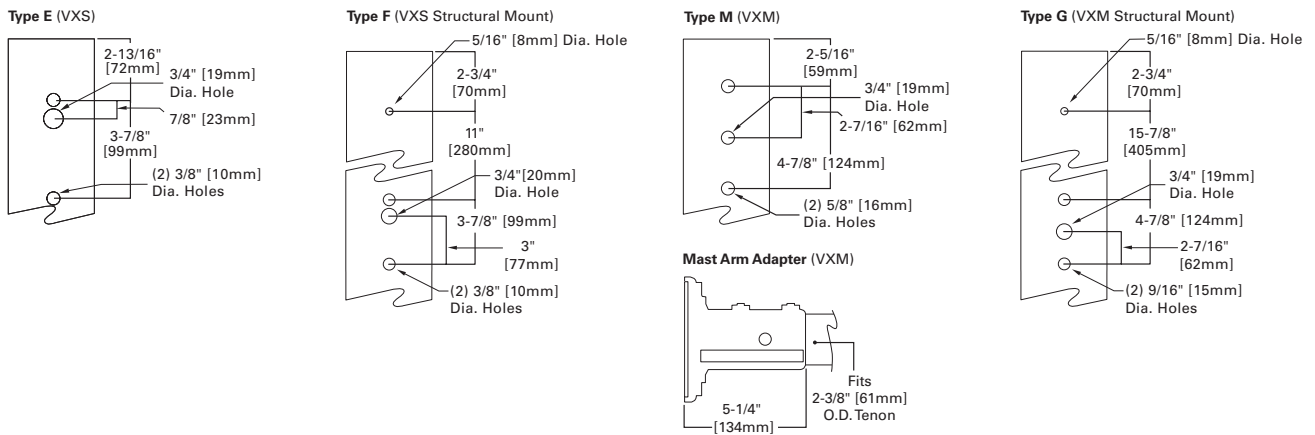
MOUNTING VARIATIONS AND EPAS



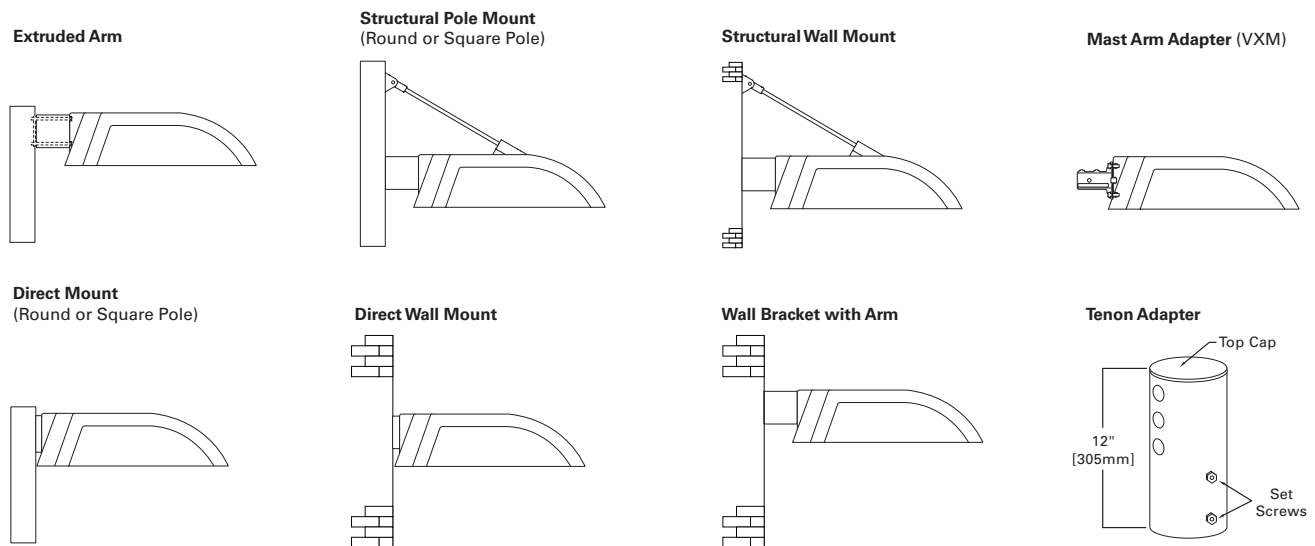
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

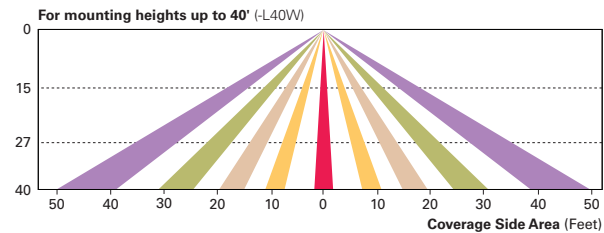
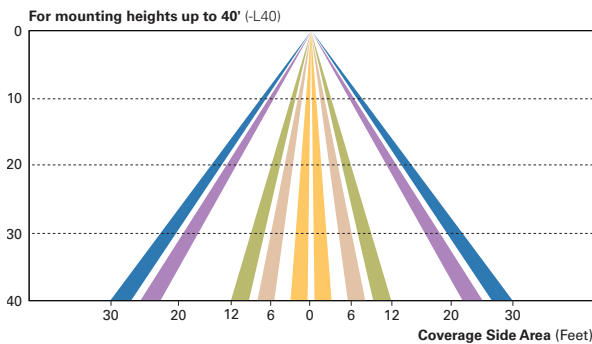
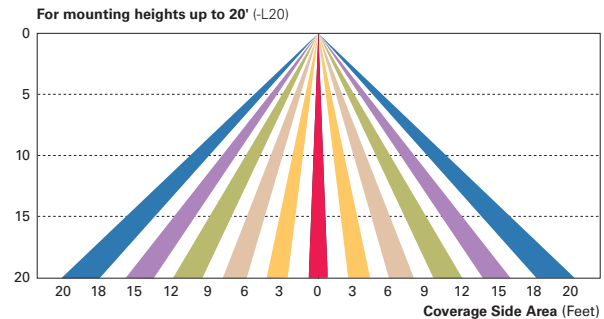
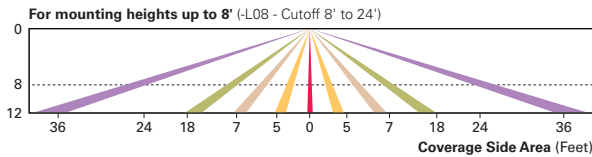
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

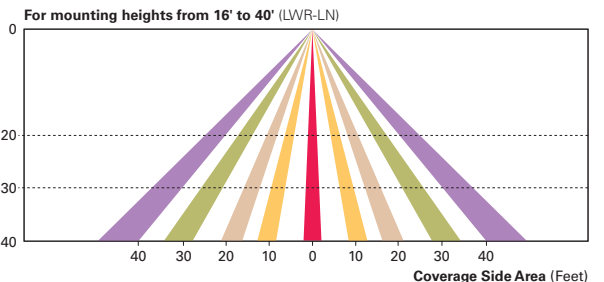
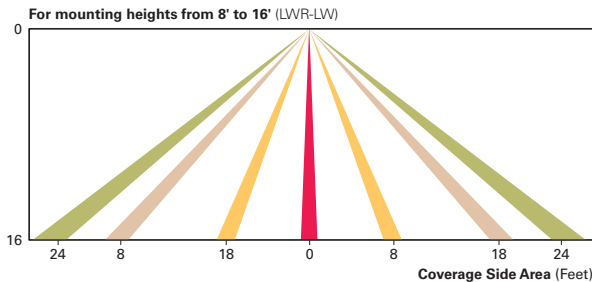
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-SL4-BZ / MA1200-BZ**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
W1A

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
Solid State LED

ARCHITECTURAL
AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

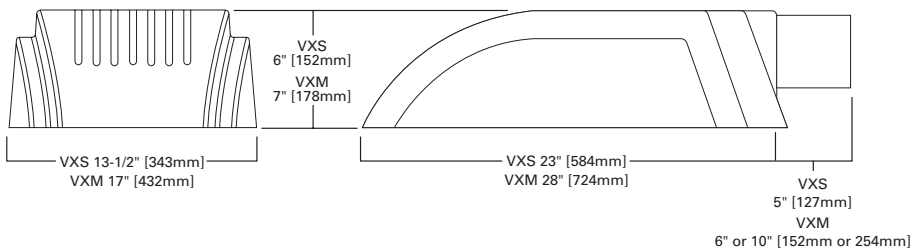
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E01	E02	E03	E04	E05	E06
Drive Current		350mA Drive Current					
Power (Watts)		25W	52W	75W	97W	127W	150W
Current @ 120V (A)		0.22	0.44	0.63	0.82	1.07	1.26
Current @ 277V (A)		0.10	0.20	0.28	0.36	0.48	0.56
Power (Watts)		31W	58W	82W	99W	132W	159W
Current @ 347V (A)		0.11	0.19	0.28	0.29	0.39	0.48
Current @ 480V (A)		0.09	0.15	0.20	0.21	0.30	0.36
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

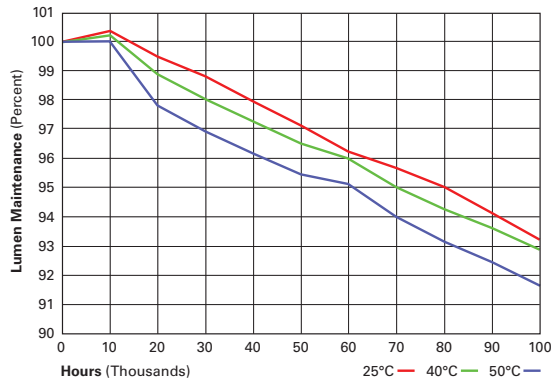
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



Submitting Agency:



Description: **VXM-E03-LED-E1-SL4-BZ-ICB / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **W1A-EM**

VXS/VXM VISION SITE LED

POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

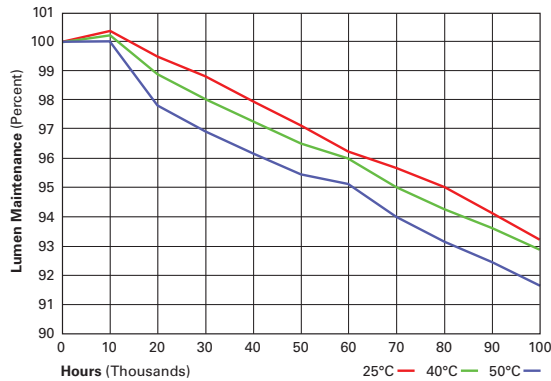
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

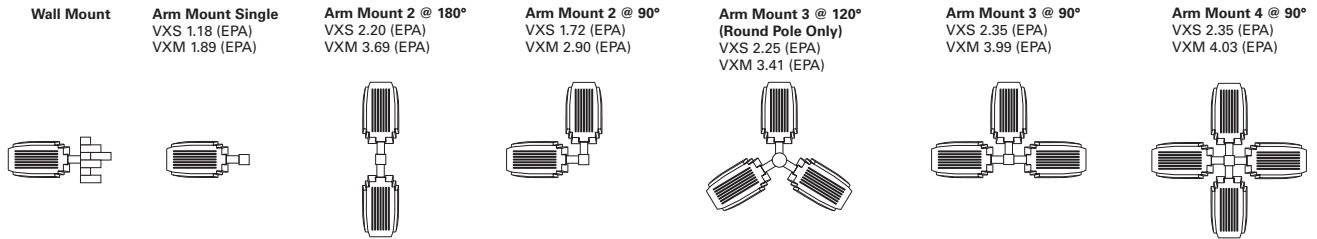
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



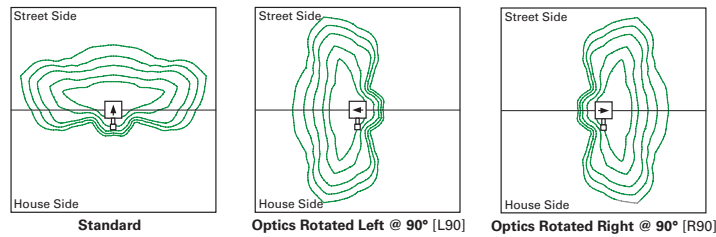


VXS/VXM VISION SITE LED

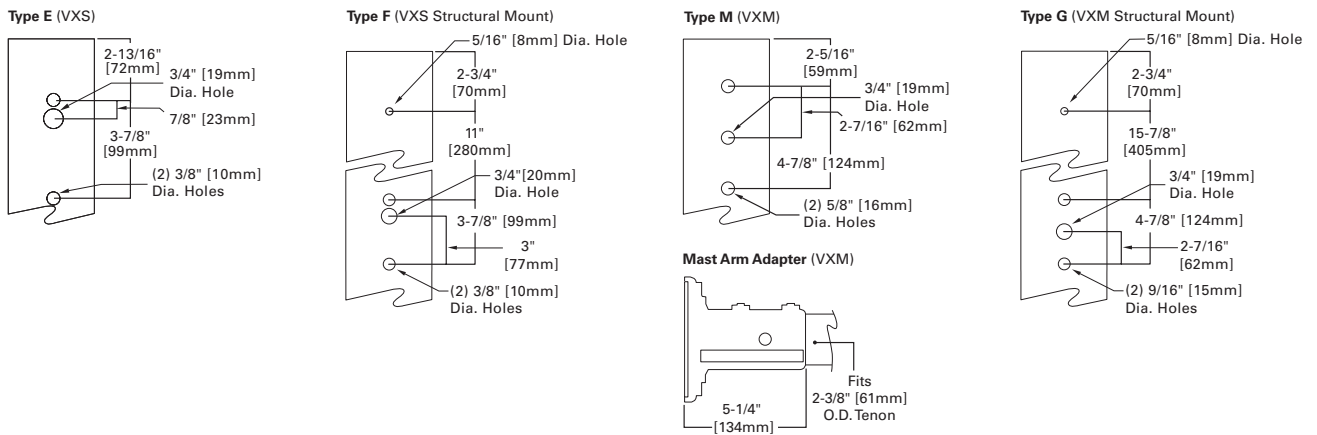
MOUNTING VARIATIONS AND EPAS



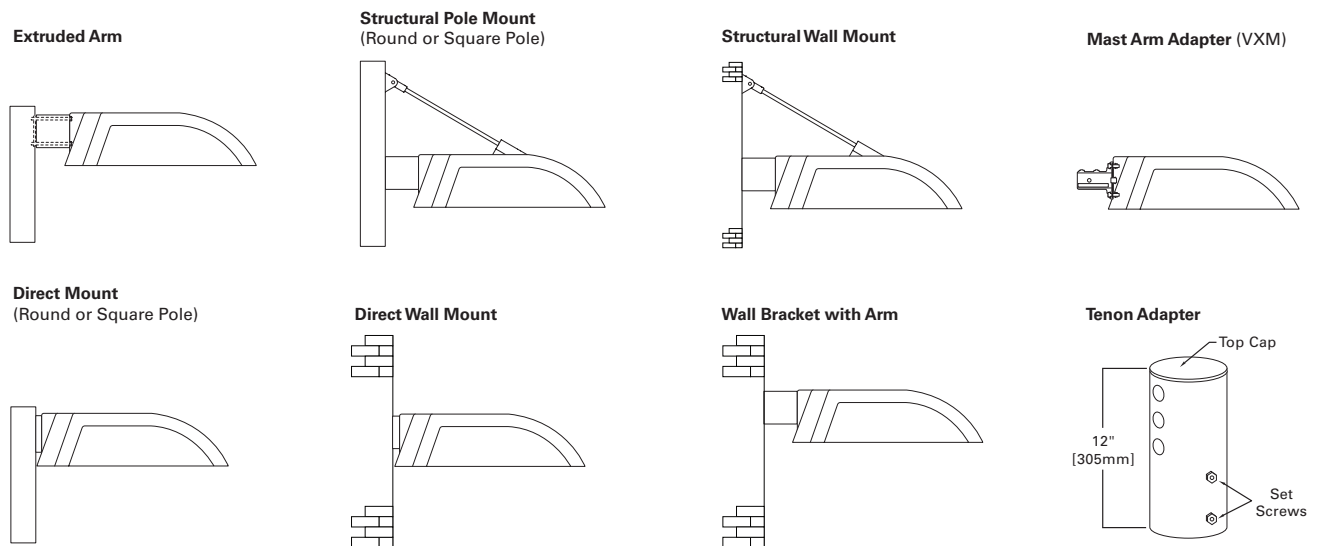
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

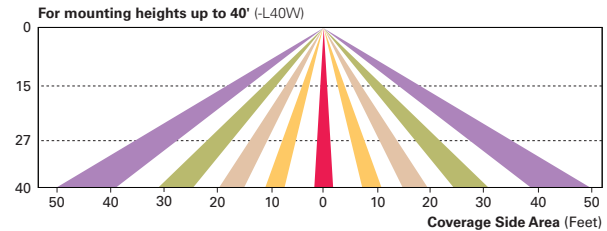
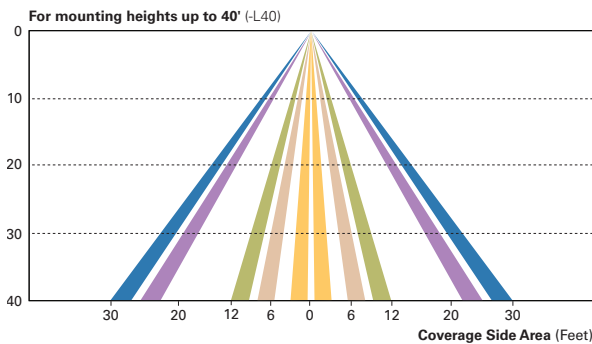
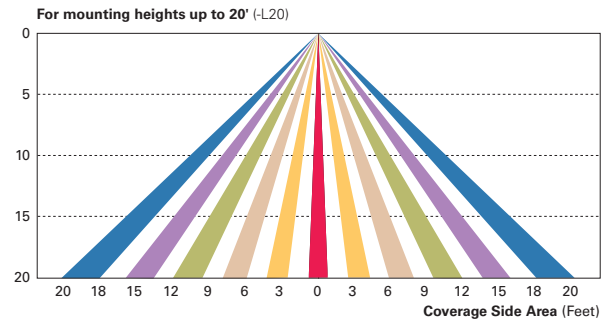
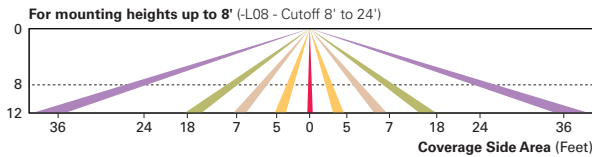
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

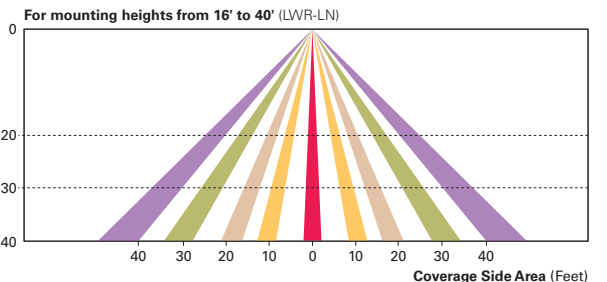
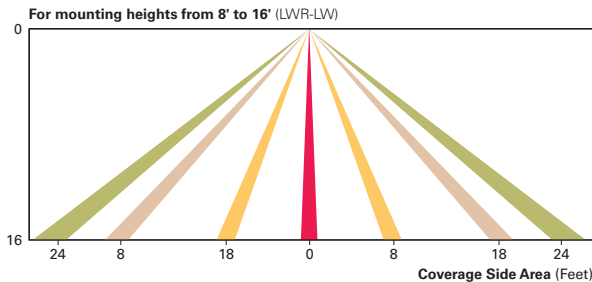
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E03-LED-E1-SL4-BZ-ICB / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
W1A-EM

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5X0=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting
 Specifications and dimensions subject to change without notice.

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Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

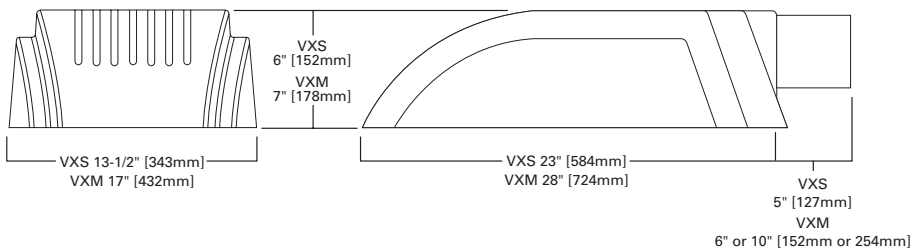
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E01	E02	E03	E04	E05	E06
Drive Current		350mA Drive Current					
Power (Watts)		25W	52W	75W	97W	127W	150W
Current @ 120V (A)		0.22	0.44	0.63	0.82	1.07	1.26
Current @ 277V (A)		0.10	0.20	0.28	0.36	0.48	0.56
Power (Watts)		31W	58W	82W	99W	132W	159W
Current @ 347V (A)		0.11	0.19	0.28	0.29	0.39	0.48
Current @ 480V (A)		0.09	0.15	0.20	0.21	0.30	0.36
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

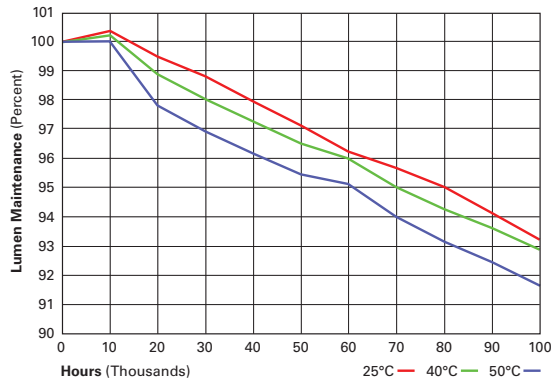
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

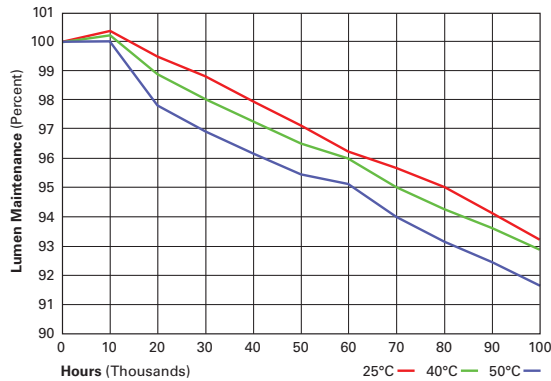
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

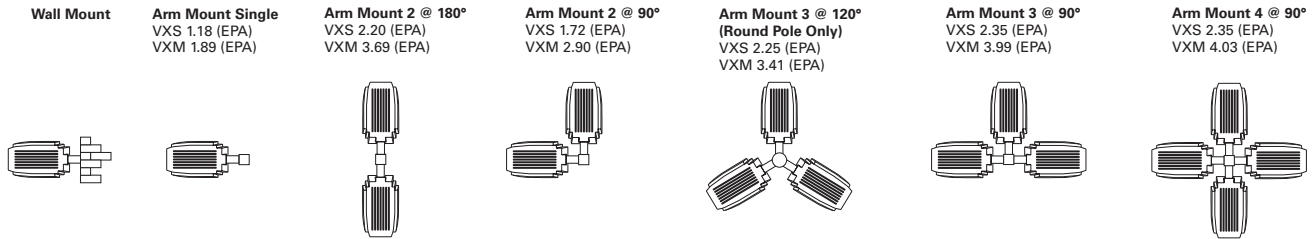
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

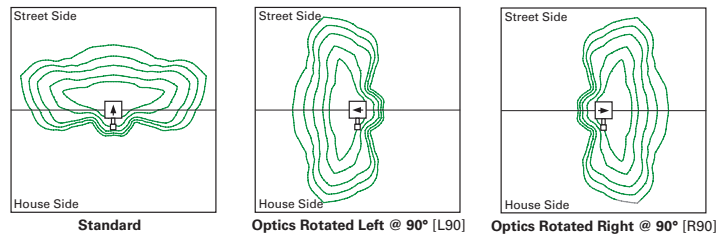




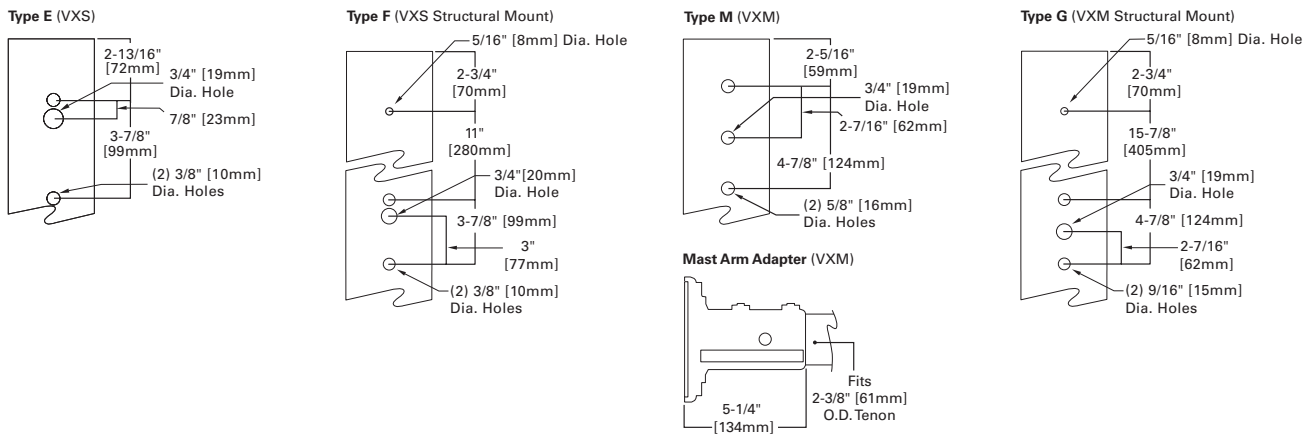
MOUNTING VARIATIONS AND EPAS



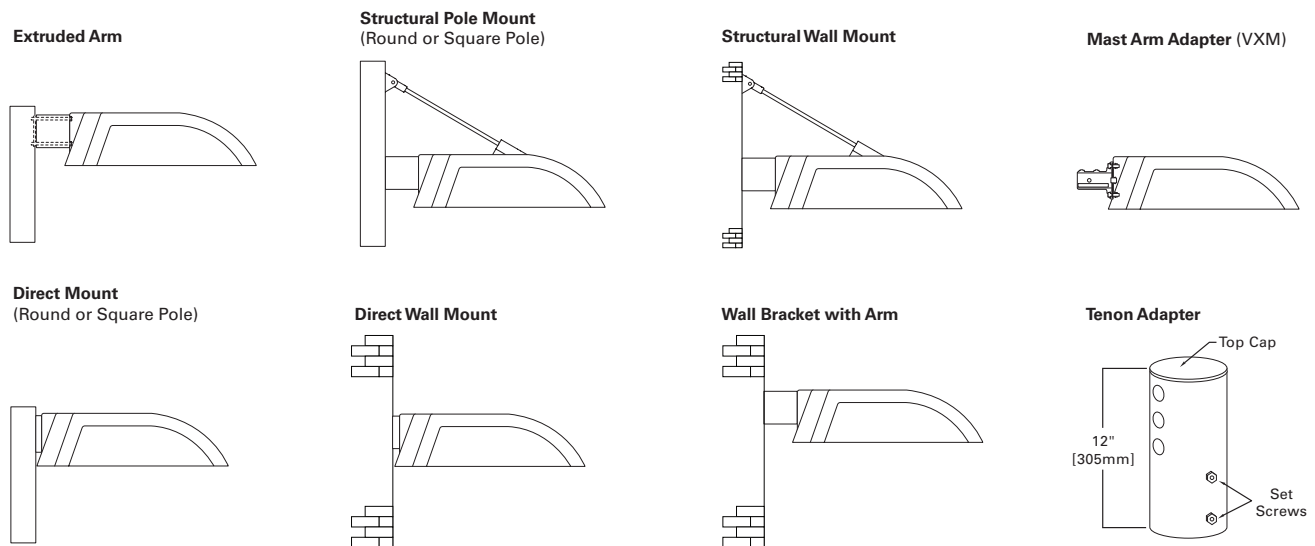
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

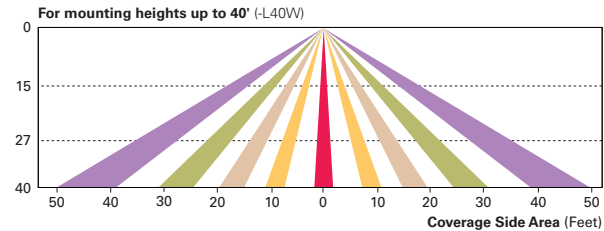
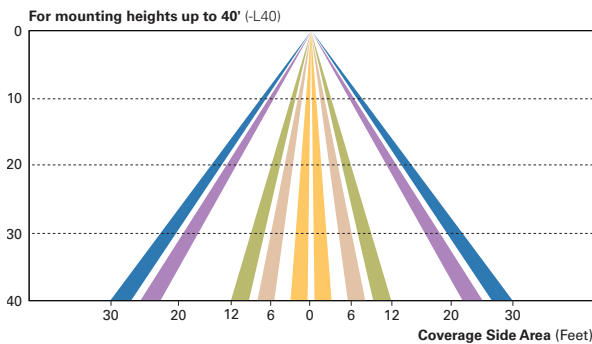
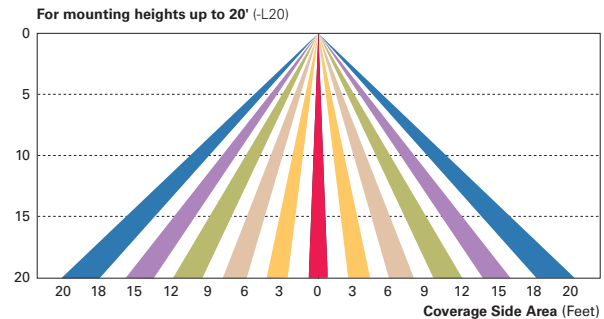
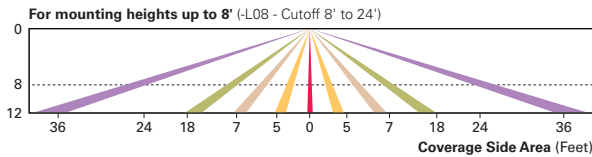
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

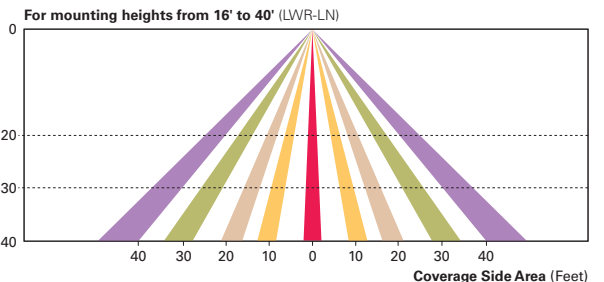
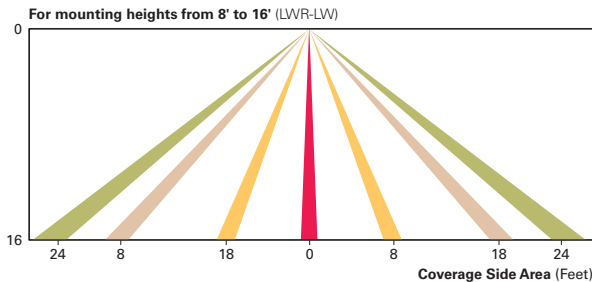
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E02-LED-E1-SL4-BZ / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:

W1B

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁶
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5X0=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCC=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-POE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guides allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
Solid State LED

ARCHITECTURAL
AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
ISO 9001
IP66 LightBARs
LM79 / LM80 Compliant
1.5G Vibration Tested
DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

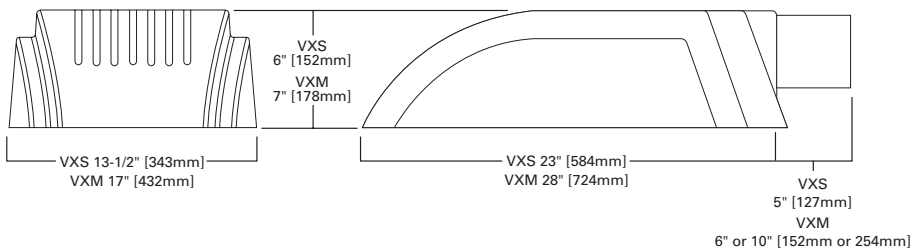
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E01	E02	E03	E04	E05	E06
Drive Current		350mA Drive Current					
Power (Watts)		25W	52W	75W	97W	127W	150W
Current @ 120V (A)		0.22	0.44	0.63	0.82	1.07	1.26
Current @ 277V (A)		0.10	0.20	0.28	0.36	0.48	0.56
Power (Watts)		31W	58W	82W	99W	132W	159W
Current @ 347V (A)		0.11	0.19	0.28	0.29	0.39	0.48
Current @ 480V (A)		0.09	0.15	0.20	0.21	0.30	0.36
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

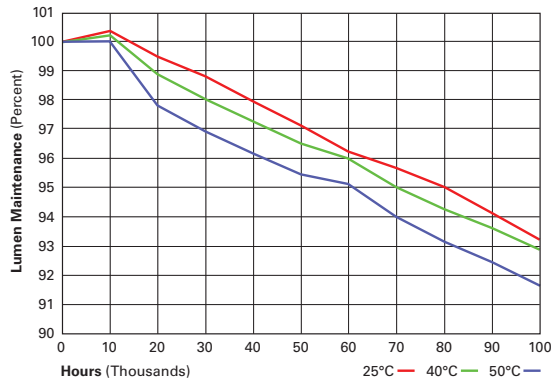
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



Submitting Agency:



Description: **VXM-E02-LED-E1-SL4-BZ-ICB / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **W1B-EM**

VXS/VXM VISION SITE LED

POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

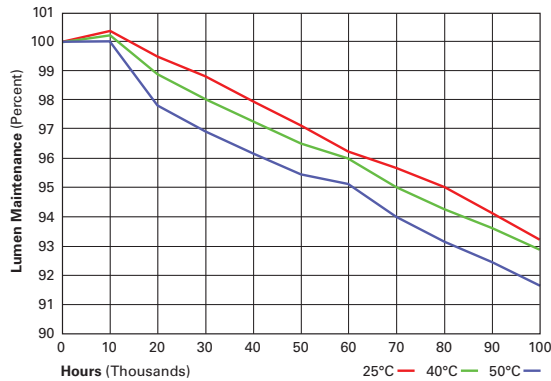
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



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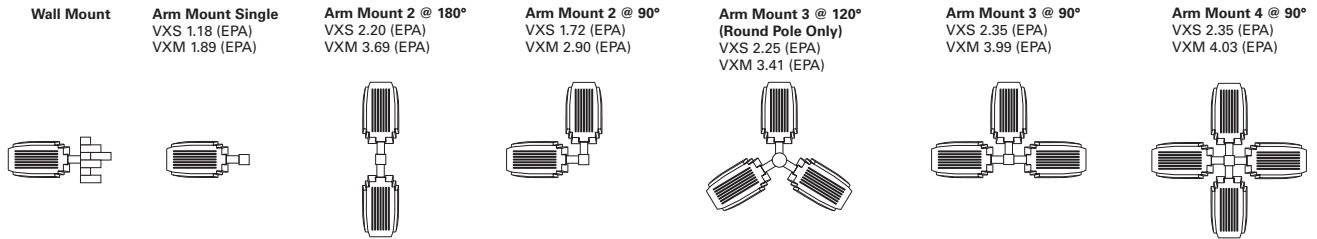
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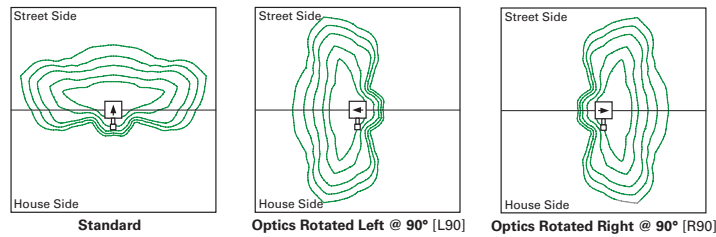


VXS/VXM VISION SITE LED

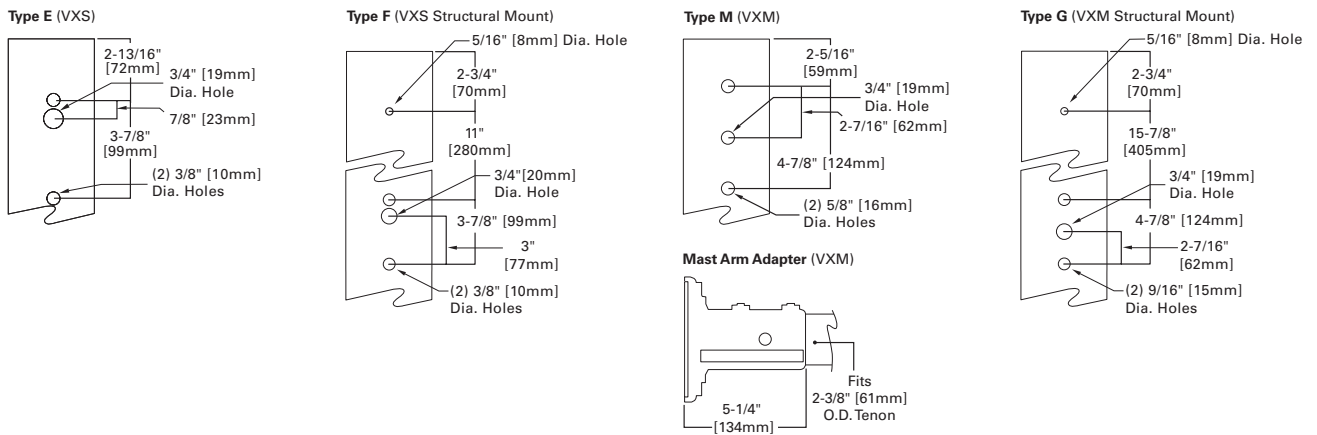
MOUNTING VARIATIONS AND EPAS



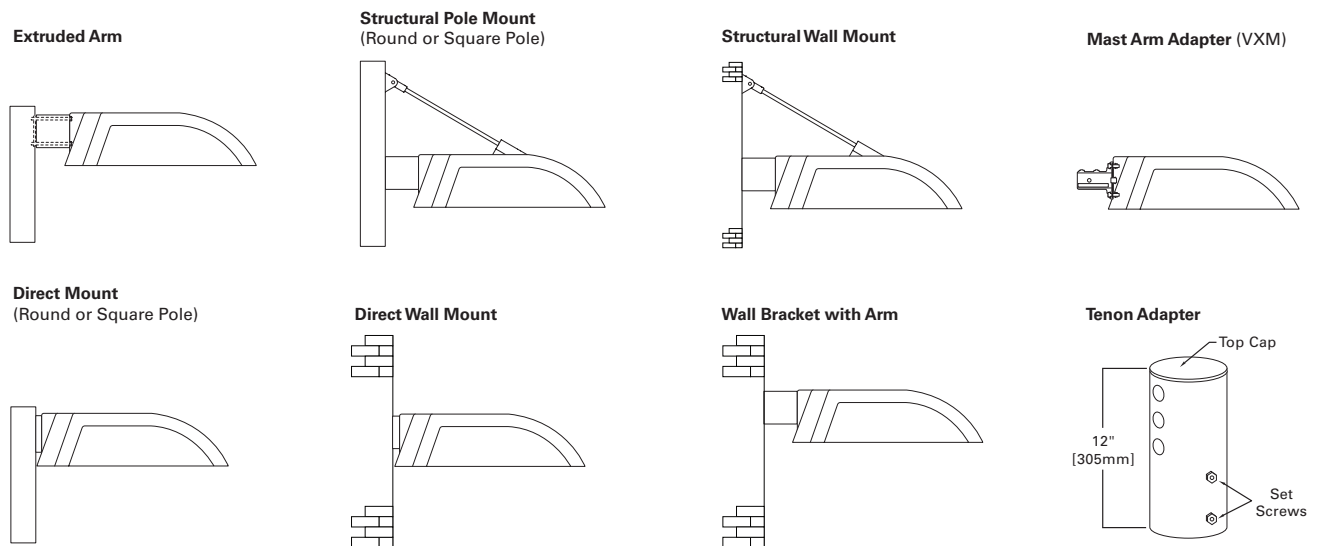
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

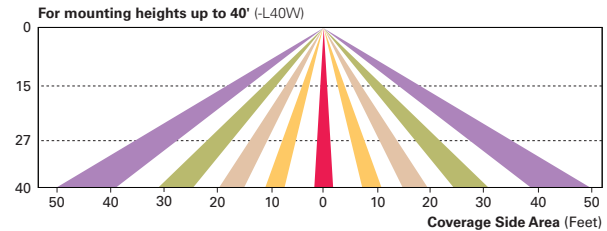
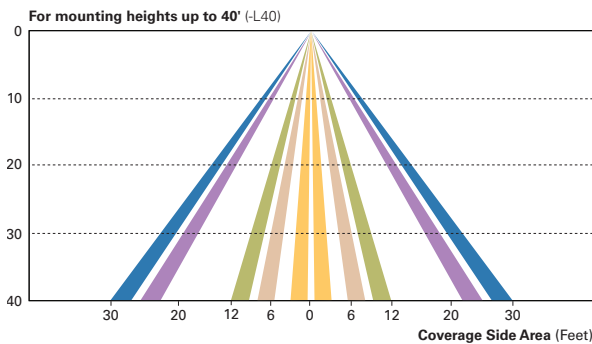
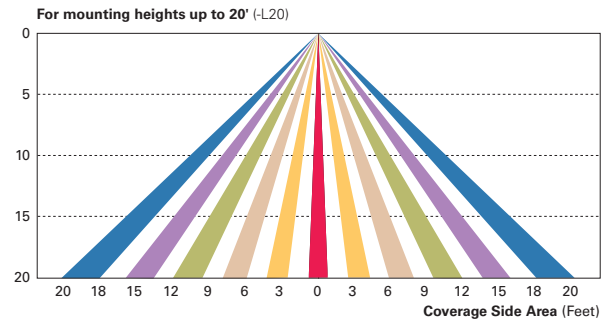
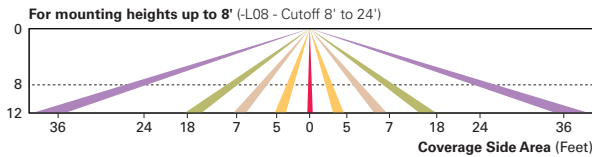
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

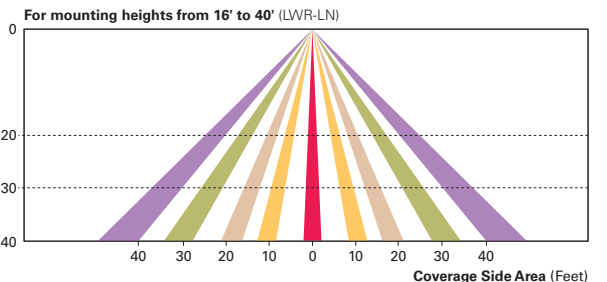
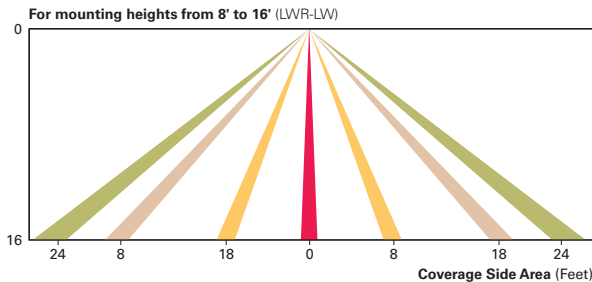
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXM-E02-LED-E1-SL4-BZ-ICB / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **W1B-EM**

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5M0=Type V Square Medium 5W0=Type V Square Wide 5X0=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



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Invue

DESCRIPTION

The classic lines and sophisticated construction of Vision Site LED luminaire makes it an ideal complement to site design. Offering LED technology across the VXS and VXM, the Vision Site luminaire provides true family scaling in both physical form and lumen capability for architectural site lighting applications. UL/cUL listed for use in wet locations.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

HOUSING: Heavy-wall one-piece, die-cast aluminum housing has precise tolerance control and repeatability in manufacturing. Housing features a partition wall that isolates driver components for cooler operation. Integral aluminum heat sink provides superior thermal heat transfer in +40°C ambient environments. **DOOR:** One-piece, die-cast aluminum construction with tool-less release latch. Door swings down and is retained on two catch hinges. **GASKET:** Continuous gasket provided to seal housing to optic tray. **LENS:** Downlight lens is LED board integrated acrylic over-optics, each individually sealed for IP66 rating. **HARDWARE:** Tool-less release door latch is stainless steel/aluminum construction, painted to match housing and allows access to internal housing and electrical components.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional

3000K CCT and 5000K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

ARM: One-piece extruded aluminum arm available in standard 5" lengths (VXS) and 6" and 10" (VXM). Internal bolts guide allow easy positioning of fixture during installation to pole or wall surface. **STRUCTURAL**

MOUNT: Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with dedicated accessory arms (order separately). Invue poles are provided pre-drilled when structural mount option drill pattern is specified. See Invue poles section for complete selection. Additional mounting accessories available.

Finish

Housing is finished in five-stage super premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.



VXS/VXM VISION SITE LED

1 - 6 LightBARs
 Solid State LED

ARCHITECTURAL
 AREA/SITE LUMINAIRE



CERTIFICATION DATA

UL/cUL Listed
 ISO 9001
 IP66 LightBARs
 LM79 / LM80 Compliant
 1.5G Vibration Tested
 DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277V/50 & 60Hz, 347V/60Hz,
 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

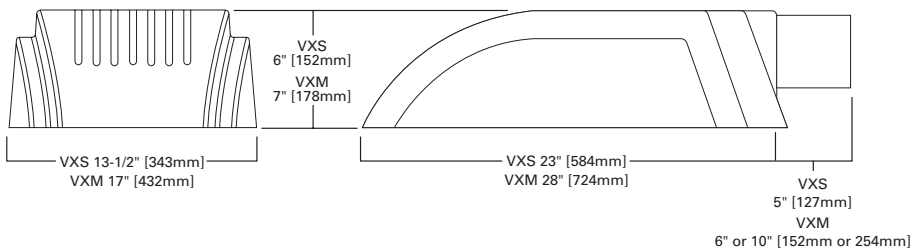
EPA

Effective Projected Area: (Sq. Ft.)
VXS Single: 1.18 w/Arm
VXS Single Structural: 1.27 w/Arm
VXM Single: 1.89 w/Arm
VXM Single Structural: 2.09 w/Arm

SHIPPING DATA

Approximate Net Weight:
VXS: 35 lbs. (15.91 kgs.)
VXM: 51 lbs. (23.18 kgs.)

DIMENSIONS





POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs	E01	E02	E03	E04	E05	E06	
Drive Current	350mA Drive Current						
Power (Watts)	25W	52W	75W	97W	127W	150W	
Current @ 120V (A)	0.22	0.44	0.63	0.82	1.07	1.26	
Current @ 277V (A)	0.10	0.20	0.28	0.36	0.48	0.56	
Power (Watts)	31W	58W	82W	99W	132W	159W	
Current @ 347V (A)	0.11	0.19	0.28	0.29	0.39	0.48	
Current @ 480V (A)	0.09	0.15	0.20	0.21	0.30	0.36	
T2	Lumens	3,064	6,128	9,192	12,255	15,319	18,383
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,084	6,168	9,252	12,336	15,420	18,504
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	3,022	6,044	9,066	12,088	15,110	18,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
5MQ	Lumens	3,224	6,448	9,672	12,896	16,120	19,344
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,184	6,368	9,551	12,735	15,919	19,103
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
5XQ	Lumens	3,181	6,361	9,542	12,722	15,903	19,083
	BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G4	B4-U0-G4
SL2	Lumens	3,055	6,110	9,165	12,220	15,275	18,331
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
SL3	Lumens	3,036	6,072	9,108	12,145	15,181	18,217
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
SL4	Lumens	2,954	5,908	8,862	11,816	14,771	17,725
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
RW	Lumens	3,124	6,248	9,372	12,496	15,620	18,744
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,782	5,565	8,347	11,130	13,912	16,695
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4

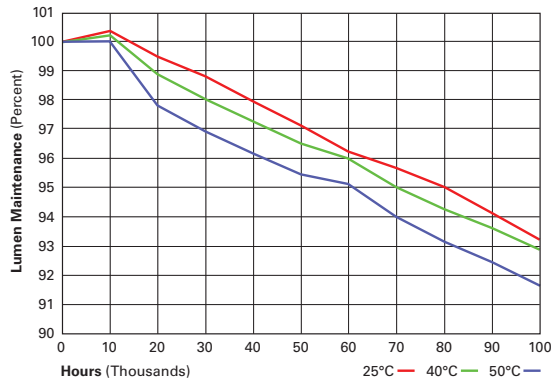
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99





POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F01	F02	F03	F04	F05	F06
Drive Current		1A Drive Current					
Power (Watts)		26W	55W	78W	102W	133W	157W
Current @ 120V (A)		0.22	0.46	0.66	0.86	1.12	1.31
Current @ 277V (A)		0.10	0.21	0.29	0.37	0.50	0.58
Power (Watts)		32W	60W	85W	105W	137W	164W
Current @ 347V (A)		0.11	0.19	0.28	0.30	0.41	0.49
Current @ 480V (A)		0.09	0.15	0.21	0.22	0.31	0.37
T2	Lumens	2,529	5,059	7,588	10,117	12,646	15,176
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	2,546	5,092	7,638	10,183	12,729	15,275
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T4	Lumens	2,495	4,990	7,484	9,979	12,474	14,969
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
5MQ	Lumens	2,662	5,323	7,985	10,646	13,308	15,969
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	2,628	5,257	7,885	10,513	13,142	15,770
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5XQ	Lumens	2,626	5,251	7,877	10,502	13,128	15,754
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4
SL2	Lumens	2,522	5,044	7,566	10,088	12,610	15,132
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
SL3	Lumens	2,506	5,013	7,519	10,026	12,532	15,039
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
SL4	Lumens	2,439	4,877	7,316	9,755	12,193	14,632
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
RW	Lumens	2,579	5,158	7,737	10,316	12,894	15,473
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
SLL/SLR	Lumens	2,297	4,594	6,891	9,188	11,485	13,782
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3

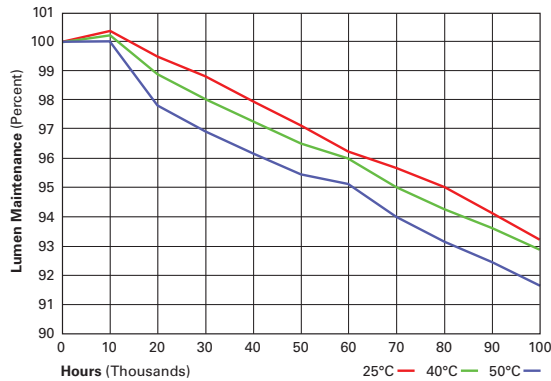
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.

LUMEN MULTIPLIER

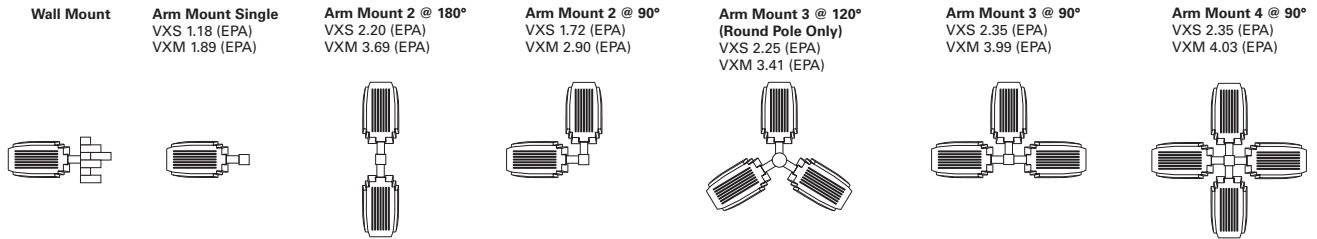
Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



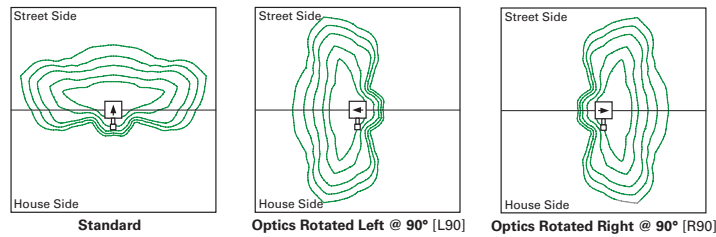


VXS/VXM VISION SITE LED

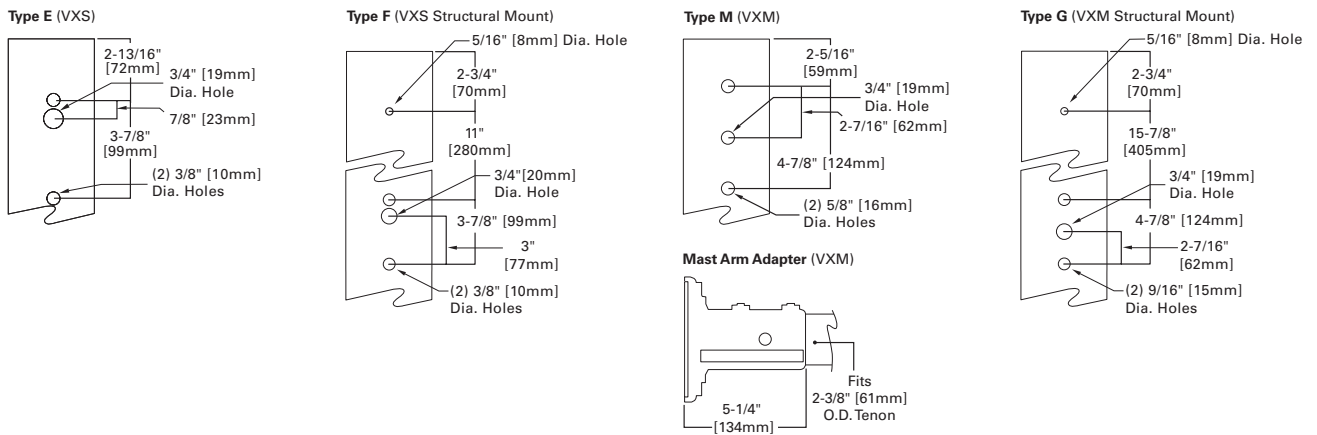
MOUNTING VARIATIONS AND EPAS



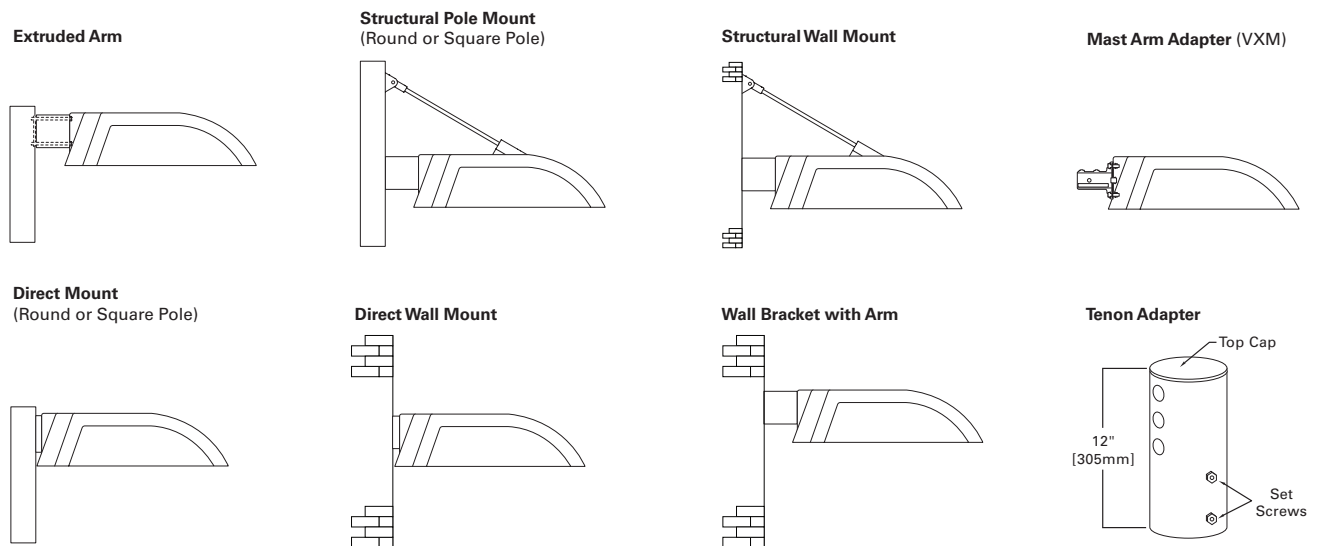
OPTIC ORIENTATION



POLE DRILLING PATTERNS AND MOUNTING OPTIONS



MOUNTING OPTIONS AND ACCESSORIES





CONTROL OPTIONS

0-10V (DIM)

The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PC, PER and PER7)

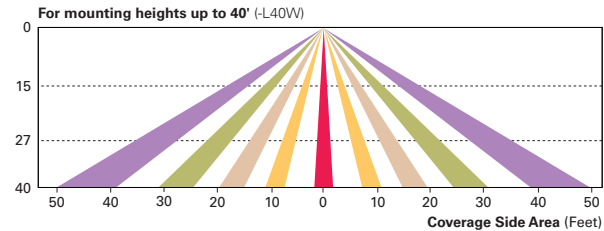
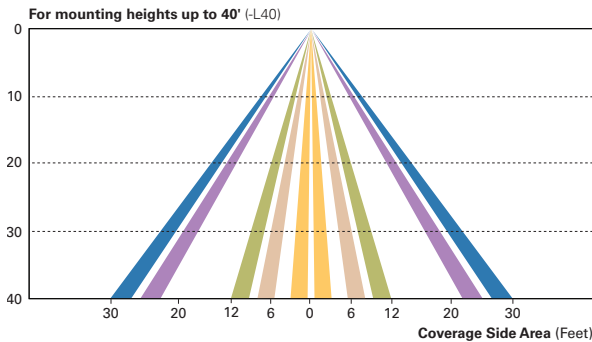
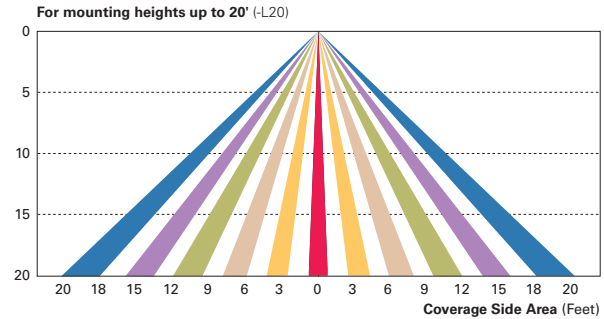
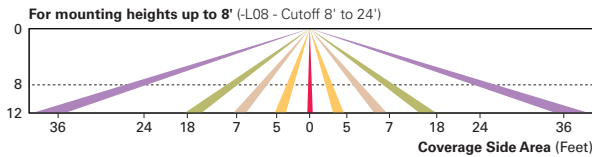
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

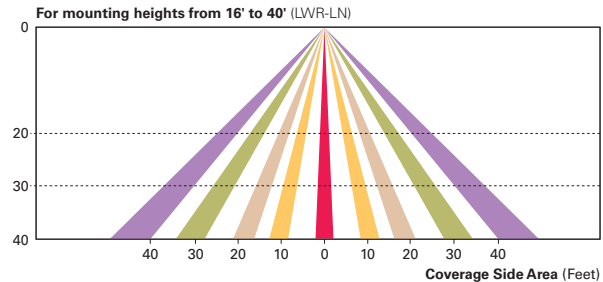
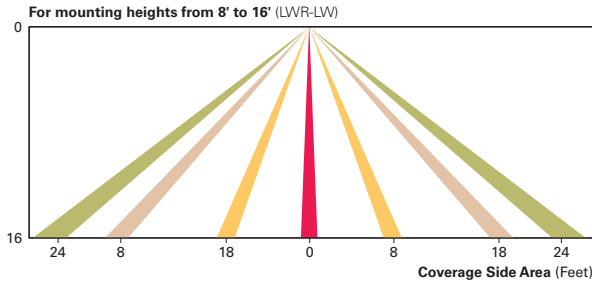
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.



LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



Submitting Agency:



Description: **VXS-E03-LED-E1-SL2-BZ / MA1200-BZ**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
W1C

VXS/VXM VISION SITE LED

ORDERING INFORMATION

Sample Number: VXS-E04-LED-E-T3-GM

Product Family ^{1,2,2}	Number of LightBARs ^{4,5}	Lamp Type	Voltage	Distribution	Color ⁸
VXS=Vision Site Small VXM=Vision Site Medium	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs ⁶ E06=(6) 21 LED LightBARs ⁶ F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs ⁶ F06=(6) 7 LED LightBARs ⁶	LED=Solid State Light Emitting Diode	E1=Universal (120-277V) 347=347V 480=480V ⁷	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide RW=Rectangular Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Structural Options ^{3,9}		Options (Add as Suffix)			
Pole Mount PRCP=Strut Rod and Clevis Set for Square Pole (Painted to match fixture. Does not include arm) ¹⁰ PRCCS=Stainless Strut Rod and Clevis Set for Square Pole (Clevis painted to match fixture. Does not include arm) ¹⁰ PRCPR=Strut Rod and Clevis Set for Round Pole (Painted to match fixture. Does not include arm) ¹¹ PRCCR=Stainless Strut Rod and Clevis Set for Round Pole (Clevis painted to match fixture. Does not include arm) ¹¹ Wall Mount WRCP=Strut Rod and Clevis Set (Painted to match fixture. Does not include arm) ¹² WRCS=Stainless Steel Strut Rod and Clevis Set (Clevis painted to match fixture. Does not include arm) ¹²		PC=Button Type Photocontrol (Specify Voltage) R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle 2L=Two Circuits ¹³ LCF=LightBAR Cover Plate Matches Housing Finish 7030=70 CRI / 3000K CCT ¹⁴ 7050=70 CRI / 5000K CCT ¹⁴ 8030=80 CRI / 3000K CCT ¹⁴ L90=Optics Rotated Left 90° R90=Optics Rotated Right 90° ICB=Integral Cold Weather Battery Pack (Specify 120 or 277V) ¹⁵ LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ¹⁶ LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ¹⁶ HSS=Factory Installed House Side Shield ¹⁷ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{18, 19, 20, 21, 22} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{18, 19, 20, 21, 23} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{18, 19, 20, 21, 24} MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) ^{18, 19, 20, 21, 25}			
Accessories (Order Separately) ²⁶					
OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LS/HSS=Field Installed House Side Shield ²⁷ VXS Mounting Accessories (Order Separately) MA1071-XX=5" Arm for Square Pole MA1073-XX=Direct Mount for Square Pole MA1074-XX=5" Arm for Round Pole MA1076-XX=Direct Mount for Round Pole MA1077-XX=Wall Bracket with 5" Arm MA1200-XX=Direct Wall Mount Kit MA1101-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1102-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1103-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1104-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1105-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1106-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1107-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon		MA1108-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1109-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1110-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1111-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1112-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1113-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1114-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon VXM Mounting Accessories (Order Separately) MA1050-XX=6" Arm for Square Pole MA1051-XX=10" Arm for Square Pole ²⁸ MA1052-XX=6" Arm for Round Pole MA1053-XX=10" Arm for Round Pole ²⁸ MA1054-XX=Wall Bracket with 6" Arm ²⁹ MA1056-XX=Direct Mount for Square Pole MA1057-XX=Direct Mount for Round Pole MA1201-XX=Direct Wall Mount Kit ²⁹ MA1207-XX=Mast Arm Adapter MA1231-XX=Structural Mount Wall Mount Arm ³⁰		MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1019-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1045-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1048-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1115-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1116-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1012-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1013-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1014-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1015-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1016-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon	

NOTES:

- Customer is responsible for engineering pole analysis to confirm pole and fixture compatibility for all applications. Refer to our pole white paper WP513001EN for additional support information.
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
- Arm not included. Order separately.
- Standard 4000K CCT and greater than 70 CRI.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Available with VXM only.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Custom and RAL color matching available upon request. Consult your customer service representative for more information.
- Add as suffix in the order shown.
- Compatible with 5" MA1071 arm only (VXS). Compatible with 10" MA1051 arm only (VXM).
- Compatible with 5" MA1074 arm only (VXS). Compatible with 10" MA1053 arm only (VXM).
- Wall mount structural options do not include arm assembly (See accessories). Compatible with 5" MA1071 arm only (VXS). Compatible with MA2131 arm only (VXM).
- Low-level output varies by bar count. Consult factory. Requires two or more light bars.
- Extended lead times apply. See website for IES files.
- Available with E01-E02 and F01-F02 configurations only (VXS). Available with E01-E04 and F01-F04 configurations only (VXM). Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4F (-20°C). Operates one light bar for 90-minutes. Not available in all configurations, consult factory. Rated for use in 25°C ambient.
- LumaWatt wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1, and LWP-PE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Consult factory for more information.
- Utilizes internal step-down transformer when 347V or 480V is selected.
- The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Not available with HA option.
- Approximately 22' detection diameter at 8' mounting height.
- Approximately 40' detection diameter at 20' mounting height.
- Approximately 60' detection diameter at 40' mounting height.
- Approximately 100' detection diameter at 40' mounting height.
- Replace XX with color designation.
- One required for each LightBAR. Not available with L90 or R90 options.
- Use when mounting fixture head at 90° increments.
- For use in downlighting applications only.
- Includes arm only. Must specify WRCP or WRCS in fixture ordering logic. Downlighting applications only.



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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NEO-RAY

DESCRIPTION

The Define series by Neo-Ray characterizes the ultimate in minimalist simplicity by providing clean, uniform lines of illumination in virtually any architectural environment. Powered by Eaton's most advanced linear LED technology, the Define series delivers outstanding efficacy in a variety of profile widths. 2", 3", 4" and 5" luminaire widths are all specifiable to the nearest foot as standard product and can be fitted with flush, regress and drop lensing. Custom corners and transitions are also available. Robust construction and adaptable, modular components make installation simple and ensure laser straight runs.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Housing extruded from 6063 aluminum. Nominal 2' -12' illuminated sections. Used in run configuration and/or individual fixtures. All components are RoHs compliant.

Lens

Snap in lens available in flush and drop lens profiles. Snap in end clips eliminate light leak and prevent moisture and insect ingress.

Finish

Fixture housings are high reflectance white using electrostatically applied polyester powder coat paint.

Electrical

Long-life LED system coupled with electrical driver to deliver optimal performance. LED's are available in 2700K, 3000K, 3500K or 4000K with a typical CRI ≤ 85. Projected life is 153,000 hours at >79% lumen output. Electronic drivers are available for 120-277V applications. Fixtures and electrical components certified to UL and CUL standards. Fixtures are damp location listed.

Controls

Equipped standard with a 0-10V continuous dimming driver compatible with most standard dimming devices (refer to website for specific compatibility reference).

Combine with FifthLight DALI and other energy saving products like sensors, daylighting controls and building management systems to maximize energy savings.

Mounting

Wall.

Pendant with single aircraft cable and circular canopy. Standard length of canopy is 48"

Warranty

Five year warranty.



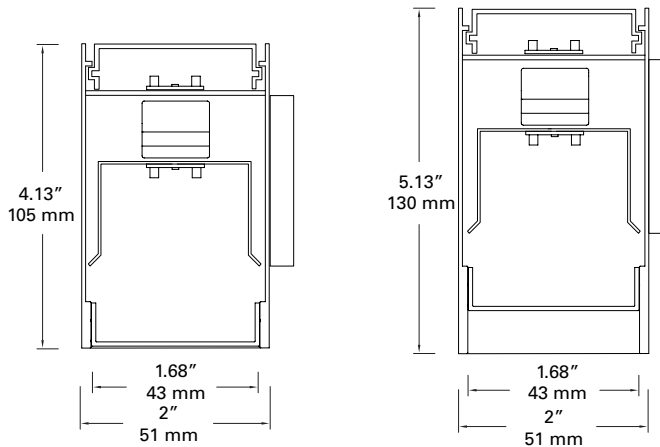
Define 2

Wall

LED

Direct/Indirect

CERTIFICATION DATA
 cULus - 1598
 Damp Location Listed
 LM79/LM80 Compliant
 RoHS Compliant
 Lumawatt Pro Wireless



ORDERING INFORMATION

Sample Number: S122DIW-ULO-235-0048-1D-UDD-1-NA-W

SERIES	LIGHT DISTRIBUTION	LIGHT LEVEL UP ¹	LIGHT LEVEL DOWN ¹	COLOR TEMP	LENGTH ³	CIRCUITING »
S122 = Define 2	DIW = Direct / Indirect Wall RDIW = Regressed Direct / Indirect Wall	-ULO = Light Level ULO 437 Lm/Ft* -U1 = Light Level U1 851 Lm/Ft* -U2 = Light Level U2 1225 Lm/Ft* <small>See page 2 for lumen output *Tested with no lens up</small>	-LO = Light Level LO 299 Lm/Ft* -1 = Light Level 1 582 Lm/Ft* -2 = Light Level 2 838 Lm/Ft* <small>See page 2 for lumen output *Tested with satin lens down</small>	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	-0048 = 4' Individual -0096 = 8' Individual -0144 = 12' Individual -XXXX = Configurable Run ⁵	-1 = Single Circuit -2 = Dual Circuit
CIRCUIT TYPE	VOLTAGE	LED DRIVER	SHIELDING DOWN	SHIELDING UP	COLOR	OPTIONS ⁹
D = Dimming (std) C = Non-Dimming B = Battery Pack ⁸ E = Emergency G = Bodine GTD	-1 = 120V -2 = 277V -U = Universal 120V-277V -3 = 347V ⁶	ED = Non-Dimming DD = 0-10V Dimming (std) HCD = 1% 0-10V Dimming 5L = DALI Dimming ⁷	-1 = Satin White Diffuser -3 = Asymmetric Flush -4 = Satin Drop Diffuser	-NA = No Lens (std) -5 = Satin White Diffuser	-W = Matte White -S = Silver -B = Black -C = Custom Color	SVPD1 = Integrated Sensor ¹³ LWIPD1 = Lumawatt Pro Wireless Integral Sensor ¹³ -90 = 90-CRI (Lower Lumens) -R = GLR Fast Fusing -F = GMR Slow Fusing

Submitting Agency:

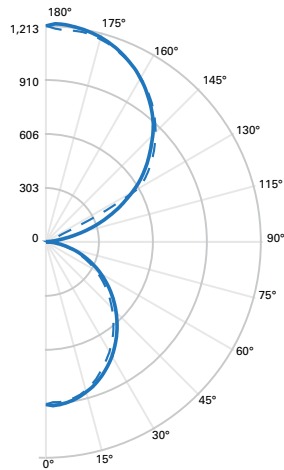


Description: **S122-DIW-ULO-1-35-0048-1-D-U-DD-1-5-W**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
W2-4'

NEO-RAY

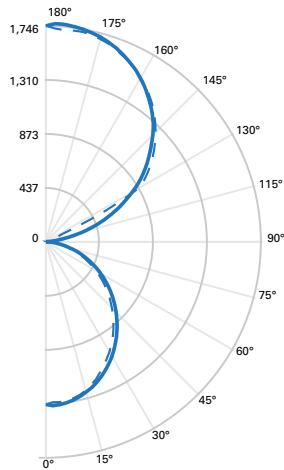
Photometric Data - All data certified to LM-79 standards in a NAVLAB approved testing facility



Filename: S122DIP-U1-135-SC48-SR0048-1D-UDD-1-NA-W
 Test Number: P189501
 Lumens: 5731.6 Lms
 Watts: 52 W
 LPW: 110.2 Lm/W
 CCT: 3500K

ZONAL LUMEN STUDY		
Zone	Lumens	% Fixture
0-30	684	11.9
0-40	1100	19.2
0-60	1880	32.8
0-90	2330	40.6
90-180	3402	59.4

LUMINANCE DATA (cd / sq.m)			
Angle	0-Deg	45-Deg	90-Deg
45	12336	3863	12226
55	11529	2767	11377
65	10528	1804	10269
75	8830	923	8574
85	5807	211	5553



Filename: S122DIP-U2-235-SC48-SR0048-1D-UDD-1-NA-W
 Test Number: P27986
 Lumens: 8252 Lms
 Watts: 80.3 W
 LPW: 102.8 Lm/W
 CCT: 3500K

ZONAL LUMEN STUDY		
Zone	Lumens	% Fixture
0-30	985	11.9
0-40	1583	19.2
0-60	2706	32.8
0-90	3354	40.6
90-180	4898	59.4

LUMINANCE DATA (cd / sq.m)			
Angle	0-Deg	45-Deg	90-Deg
45	17760	5562	17603
55	16600	3983	16380
65	15157	2597	14783
75	12711	1328	12344
85	8348	304	7985

Submitting Agency:



Description: **S122-DIW-ULO-1-35-0048-1-D-U-DD-1-5-W**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
W2-4'

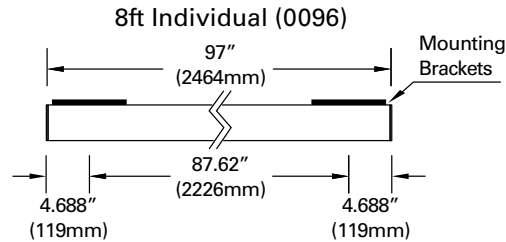
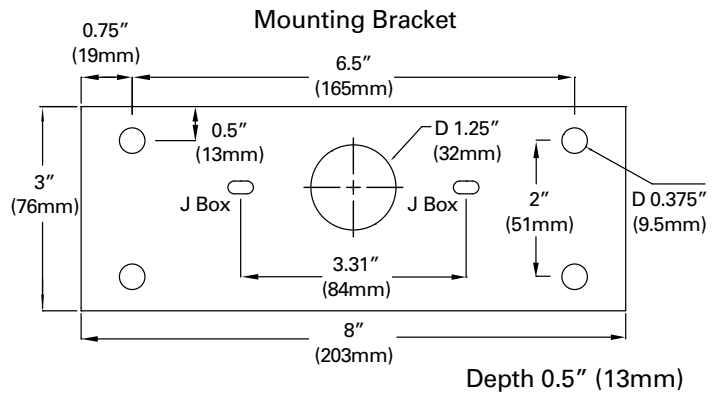
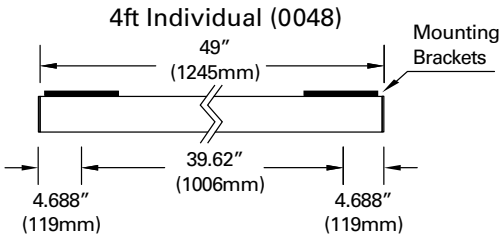
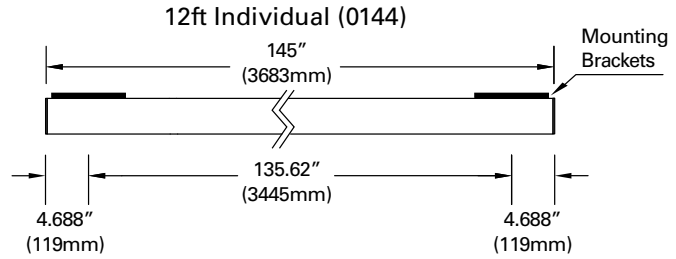
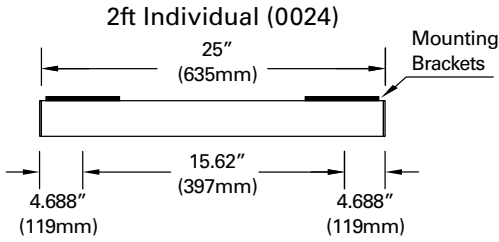
NEO-RAY

LIGHT OUTPUT, 3500K, ≤85CRI Typical

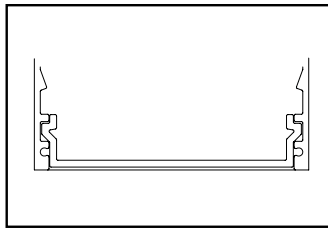
Light Level Up: U0							Light Level Up: U1							Light Level Up: U2						
Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts	Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts	Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts
0	2495	40.6%	59.4%	299	437	26.9	0	4600	26.0%	74.0%	299	851	38.8	0	6097	19.6%	80.4%	299	1225	52.2
1	4076	57.1%	42.9%	582	437	40.1	1	5732	40.6%	59.4%	582	851	52.0	1	7229	32.2%	67.8%	582	1225	65.5
2	5100	65.7%	34.3%	838	437	55.2	2	6755	49.6%	50.4%	838	851	67.0	2	8252	40.6%	59.4%	838	1225	80.5

Correlation based on 4' luminaire S122DIP-U2-235-SC48-ST0048-1D-UDD-1-NA-W, Report: P27986

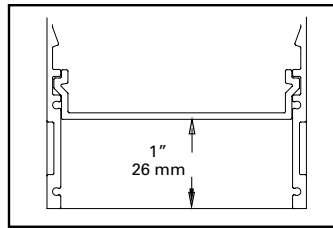
Mounting Information - Refer to installation instructions for detailed mounting information



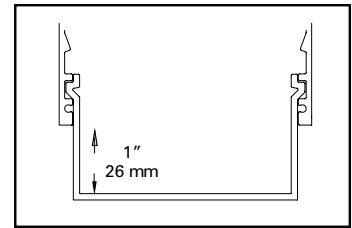
Lens Information - Direct (Downward) Lens Details



1 - Flush Satin Lens

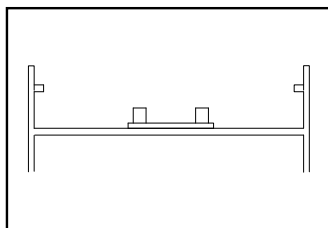


Regressed Satin Lens

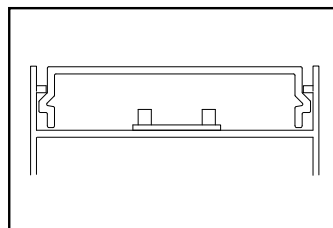


4 - Satin Drop Down Lens

Lens Information - Indirect (Upward) Lens Details



NA - No Lens (standard)



5 - Flush Satin Lens

Submitting Agency:



Description: **S122-DIW-ULO-1-35-0048-1-D-U-DD-1-5-W**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

W2-4'

NEO-RAY

INTEGRATED SENSOR DETAILS AND PLACEMENT¹³

	Sensor Series	Occupancy Technology		Sensing Technology		Coverage Pattern	
		P	Passive Infrared	D	Dimming Daylight Harvesting (Closed Loop)	1	~144 ft ²
4ft Individual	SV Integrated Sensor for Local Control						
8ft Individual	LWI Lumawatt Pro Wireless Integral						
12ft Individual							

NOTES

- Additional lower light levels available. Please consult factory for specific details.
- Not all ceiling types are shown; consult factory for specific ceiling types not listed.
- All lengths are nominal. Refer to submittal drawings for actual sizes.
- Not all dimming options available for every length; please consult factory for specific details.
- For configurable runs specify length to nearest foot. Standard runs ship in 12ft increments. Ensure to specify 8ft increments if 12ft are too large to receive. Additional charges may apply; please consult factory for details.
- 347V is achieved using remote transformer.
- FifthLight DALI is achieved using digital analog converter.
- Battery pack options are not available in every length; please consult factory for specific details. Battery pack is remote installation only.
- For all options; consult factory for specific requirements.
- Not available with 347V circuit.
- Asymmetric lens is not available as standard product on regressed housing RDR.
- Standard product is configured with snap-in lens end caps at the beginning and end of a run or individual fixture. End caps are provided for ease of installation and removal of the lens and eliminate light leak from the end of the fixture when flush satin lens is selected. Please contact factory if lens end-caps are not desired as alternate configurations are available.
- Integrated LumaWatt Pro Sensor available as a PDR in 4ft, 8ft, and 12ft configurations. Continuous runs and alternate lengths are also available. Please consult factory for details. One sensor for every 8ft of fixture length. Standard configurations include Universal voltage, single circuit and 'DD' driver selection. Not available with regressed housing or emergency options. Coverage pattern limited by proximity to wall.



NEO-RAY

DESCRIPTION

The Define series by Neo-Ray characterizes the ultimate in minimalist simplicity by providing clean, uniform lines of illumination in virtually any architectural environment. Powered by Eaton's most advanced linear LED technology, the Define series delivers outstanding efficacy in a variety of profile widths. 2", 3", 4" and 5" luminaire widths are all specifiable to the nearest foot as standard product and can be fitted with flush, regress and drop lensing. Custom corners and transitions are also available. Robust construction and adaptable, modular components make installation simple and ensure laser straight runs.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Housing extruded from 6063 aluminum. Nominal 2' -12' illuminated sections. Used in run configuration and/or individual fixtures. All components are RoHs compliant.

Lens

Snap in lens available in flush and drop lens profiles. Snap in end clips eliminate light leak and prevent moisture and insect ingress.

Finish

Fixture housings are high reflectance white using electrostatically applied polyester powder coat paint.

Electrical

Long-life LED system coupled with electrical driver to deliver optimal performance. LED's are available in 2700K, 3000K, 3500K or 4000K with a typical CRI ≤ 85. Projected life is 153,000 hours at >79% lumen output. Electronic drivers are available for 120-277V applications. Fixtures and electrical components certified to UL and CUL standards. Fixtures are damp location listed.

Controls

Equipped standard with a 0-10V continuous dimming driver compatible with most standard dimming devices (refer to website for specific compatibility reference).

Combine with FifthLight DALI and other energy saving products like sensors, daylighting controls and building management systems to maximize energy savings.

Mounting

Wall.

Pendant with single aircraft cable and circular canopy. Standard length of canopy is 48"

Warranty

Five year warranty.



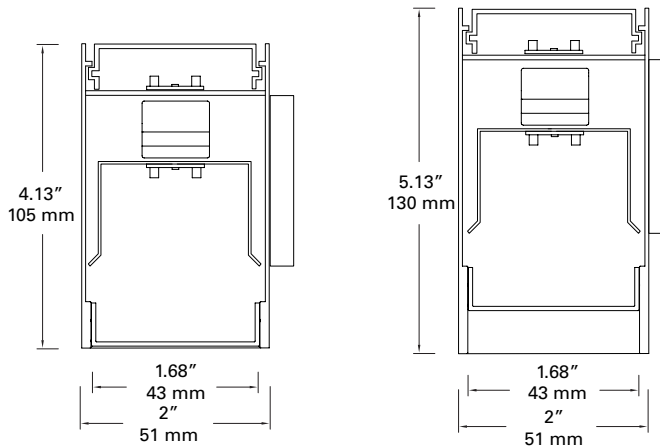
Define 2

Wall

LED

Direct/Indirect

CERTIFICATION DATA
 cULus - 1598
 Damp Location Listed
 LM79/LM80 Compliant
 RoHS Compliant
 Lumawatt Pro Wireless



ORDERING INFORMATION

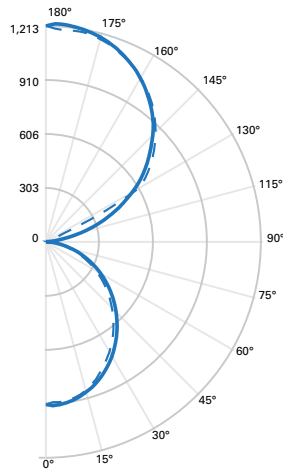
Sample Number: S122DIW-ULO-235-0048-1D-UDD-1-NA-W

SERIES	LIGHT DISTRIBUTION	LIGHT LEVEL UP ¹	LIGHT LEVEL DOWN ¹	COLOR TEMP	LENGTH ³	CIRCUITING >>
S122 = Define 2	DIW = Direct / Indirect Wall RDIW = Regressed Direct / Indirect Wall	-ULO = Light Level ULO 437 Lm/Ft* -U1 = Light Level U1 851 Lm/Ft* -U2 = Light Level U2 1225 Lm/Ft* <small>See page 2 for lumen output *Tested with no lens up</small>	-LO = Light Level LO 299 Lm/Ft* -1 = Light Level 1 582 Lm/Ft* -2 = Light Level 2 838 Lm/Ft* <small>See page 2 for lumen output *Tested with satin lens down</small>	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K	-0048 = 4' Individual -0096 = 8' Individual -0144 = 12' Individual -XXXX = Configurable Run ⁵	-1 = Single Circuit -2 = Dual Circuit
CIRCUIT TYPE	VOLTAGE	LED DRIVER	SHIELDING DOWN	SHIELDING UP	COLOR	OPTIONS ⁹
D = Dimming (std) C = Non-Dimming B = Battery Pack ⁸ E = Emergency G = Bodine GTD	-1 = 120V -2 = 277V -U = Universal 120V-277V -3 = 347V ⁶	ED = Non-Dimming DD = 0-10V Dimming (std) HCD = 1% 0-10V Dimming 5L = DALI Dimming ⁷	-1 = Satin White Diffuser -3 = Asymmetric Flush -4 = Satin Drop Diffuser	-NA = No Lens (std) -5 = Satin White Diffuser	-W = Matte White -S = Silver -B = Black -C = Custom Color	SVPD1 = Integrated Sensor ¹³ LWIPD1 = Lumawatt Pro Wireless Integral Sensor ¹³ -90 = 90-CRI (Lower Lumens) -R = GLR Fast Fusing -F = GMR Slow Fusing



NEO-RAY

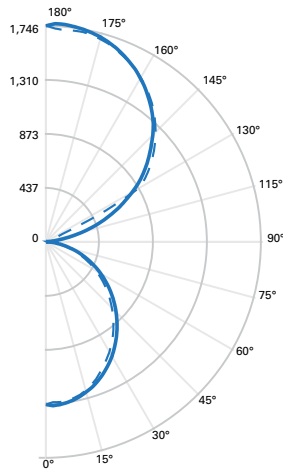
Photometric Data - All data certified to LM-79 standards in a NAVLAB approved testing facility



Filename: S122DIP-U1-135-SC48-SR0048-1D-UDD-1-NA-W
 Test Number: P189501
 Lumens: 5731.6 Lms
 Watts: 52 W
 LPW: 110.2 Lm/W
 CCT: 3500K

ZONAL LUMEN STUDY		
Zone	Lumens	% Fixture
0-30	684	11.9
0-40	1100	19.2
0-60	1880	32.8
0-90	2330	40.6
90-180	3402	59.4

LUMINANCE DATA (cd / sq.m)			
Angle	0-Deg	45-Deg	90-Deg
45	12336	3863	12226
55	11529	2767	11377
65	10528	1804	10269
75	8830	923	8574
85	5807	211	5553



Filename: S122DIP-U2-235-SC48-SR0048-1D-UDD-1-NA-W
 Test Number: P27986
 Lumens: 8252 Lms
 Watts: 80.3 W
 LPW: 102.8 Lm/W
 CCT: 3500K

ZONAL LUMEN STUDY		
Zone	Lumens	% Fixture
0-30	985	11.9
0-40	1583	19.2
0-60	2706	32.8
0-90	3354	40.6
90-180	4898	59.4

LUMINANCE DATA (cd / sq.m)			
Angle	0-Deg	45-Deg	90-Deg
45	17760	5562	17603
55	16600	3983	16380
65	15157	2597	14783
75	12711	1328	12344
85	8348	304	7985

Submitting Agency:



Description: **S122-DIW-ULO-1-35-0048-1-DB-U-DD-1-5-W**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
W2-4'EM

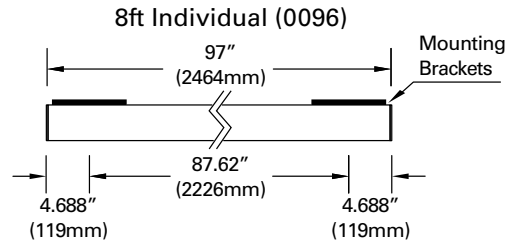
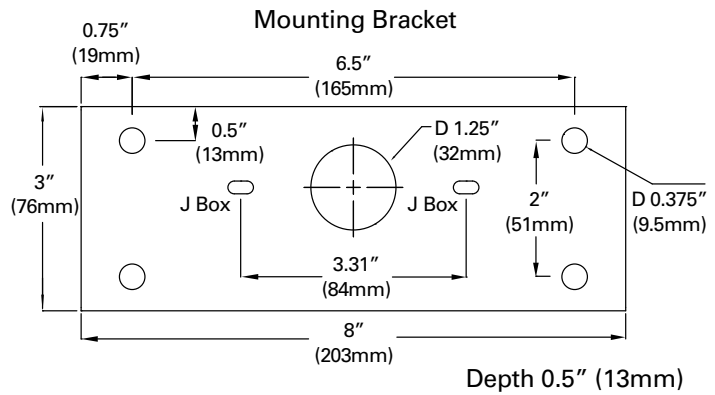
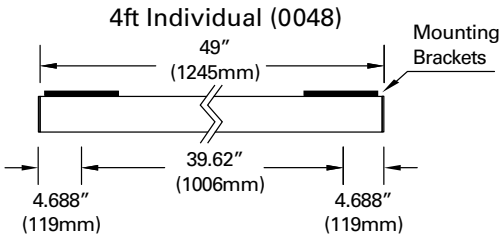
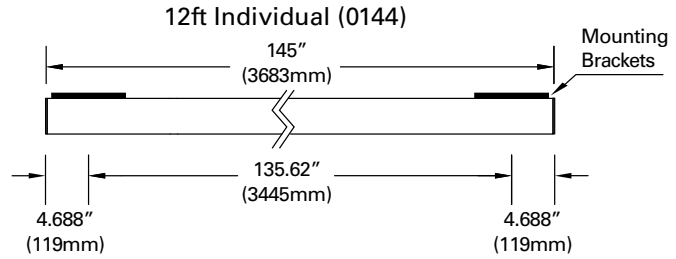
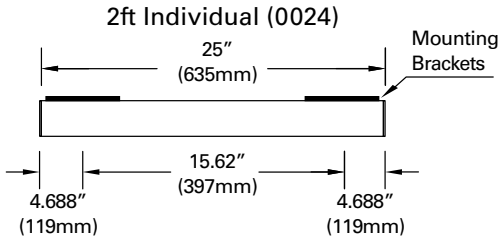
NEO-RAY

LIGHT OUTPUT, 3500K, ≤85CRI Typical

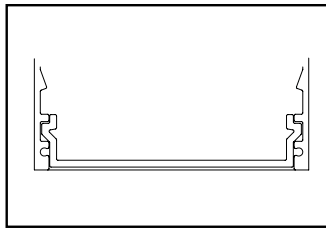
Light Level Up: U0							Light Level Up: U1							Light Level Up: U2						
Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts	Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts	Light Level	Lm Total	% Dn	% Up	Lm/ft Down	Lm/ft Up	Total Watts
0	2495	40.6%	59.4%	299	437	26.9	0	4600	26.0%	74.0%	299	851	38.8	0	6097	19.6%	80.4%	299	1225	52.2
1	4076	57.1%	42.9%	582	437	40.1	1	5732	40.6%	59.4%	582	851	52.0	1	7229	32.2%	67.8%	582	1225	65.5
2	5100	65.7%	34.3%	838	437	55.2	2	6755	49.6%	50.4%	838	851	67.0	2	8252	40.6%	59.4%	838	1225	80.5

Correlation based on 4' luminaire S122DIP-U2-235-SC48-ST0048-1D-UDD-1-NA-W, Report: P27986

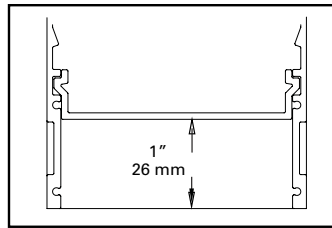
Mounting Information - Refer to installation instructions for detailed mounting information



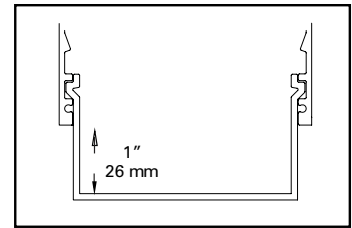
Lens Information - Direct (Downward) Lens Details



1 - Flush Satin Lens

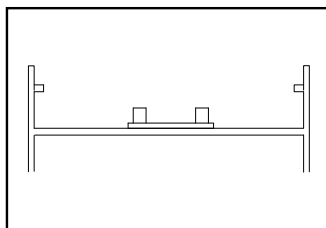


Regressed Satin Lens

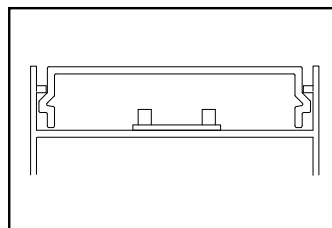


4 - Satin Drop Down Lens

Lens Information - Indirect (Upward) Lens Details



NA - No Lens (standard)



5 - Flush Satin Lens

Submitting Agency:



Description: **S122-DIW-ULO-1-35-0048-1-DB-U-DD-1-5-W**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

W2-4'EM

NEO-RAY

INTEGRATED SENSOR DETAILS AND PLACEMENT¹³

		Sensor Series		Occupancy Technology		Sensing Technology		Coverage Pattern	
		SV	Integrated Sensor for Local Control	P	Passive Infrared	D	Dimming Daylight Harvesting (Closed Loop)	1	~144 ft ²
4ft Individual	<input type="radio"/>								
8ft Individual	<input type="radio"/>	LWI	Lumawatt Pro Wireless Integral						
12ft Individual	<input type="radio"/>								<input type="radio"/>

NOTES

- Additional lower light levels available. Please consult factory for specific details.
- Not all ceiling types are shown; consult factory for specific ceiling types not listed.
- All lengths are nominal. Refer to submittal drawings for actual sizes.
- Not all dimming options available for every length; please consult factory for specific details.
- For configurable runs specify length to nearest foot. Standard runs ship in 12ft increments. Ensure to specify 8ft increments if 12ft are too large to receive. Additional charges may apply; please consult factory for details.
- 347V is achieved using remote transformer.
- FifthLight DALI is achieved using digital analog converter.
- Battery pack options are not available in every length; please consult factory for specific details. Battery pack is remote installation only.**
- For all options; consult factory for specific requirements.
- Not available with 347V circuit.
- Asymmetric lens is not available as standard product on regressed housing RDR.
- Standard product is configured with snap-in lens end caps at the beginning and end of a run or individual fixture. End caps are provided for ease of installation and removal of the lens and eliminate light leak from the end of the fixture when flush satin lens is selected. Please contact factory if lens end-caps are not desired as alternate configurations are available.
- Integrated LumaWatt Pro Sensor available as a PDR in 4ft, 8ft, and 12ft configurations. Continuous runs and alternate lengths are also available. Please consult factory for details. One sensor for every 8ft of fixture length. Standard configurations include Universal voltage, single circuit and 'DD' driver selection. Not available with regressed housing or emergency options. Coverage pattern limited by proximity to wall.



Shaper

DESCRIPTION

674 Luminous Wall Sconce features horizontal trim bars with a vertical fin detail and is ADA compliant.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Material

Painted, solid aluminum with a 1/8" matte white acrylic panel. Open top and bottom with a regressed aluminum perf shield.

Finishes:

- ALP (Aluminum Paint)
- MW (Matte White)
- MB (Matte Black)
- GRM (Graphite Metallic)
- DP (Dark Platinum)
- BM (Bronze Metallic)
- CC (Custom Color – Specify)

For Custom Color contact factory for quotation.

LED

- 31" L3:2000 nominal lumens at max 19W
- 43" L4:3000 nominal lumens at max 29W
- 55" L5:4000 nominal lumens at max 38W

Driver

LED system coupled with electronic driver to deliver optimal performance. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (Standard) on all models.

Installation

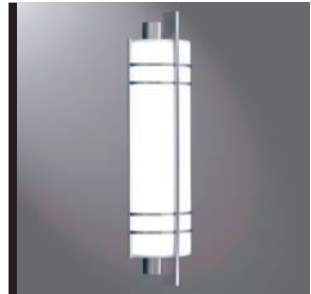
Supplied with a universal circular strap for a standard 4" J-box or plaster ring. Shaper luminaires are designed for interior installations only.

Options

RBP-Remote Emergency Battery Pack (5' Max Distance).

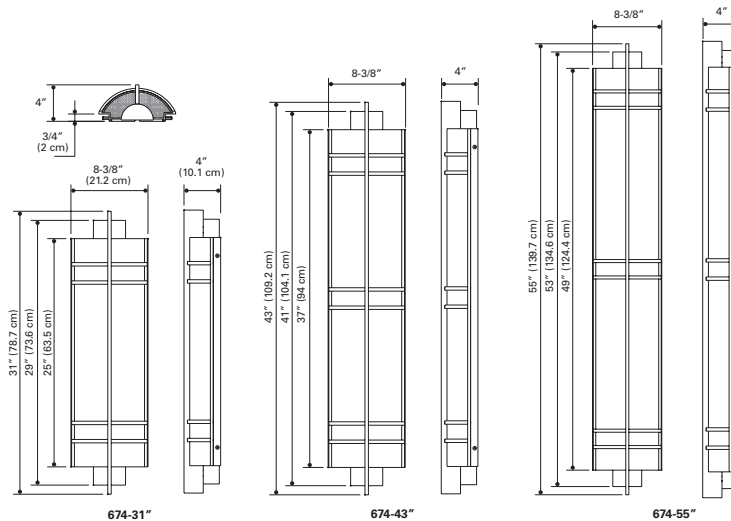
Compliance

U.L. and C.U.L approved for indoor and damp location. See options for damp location finishing requirements. Shaper's DL option is for interior applications (only) that have more than average moisture (i.e. bathroom, laundry room, etc.) but are not UL listed for pool, sauna, shower, whirlpool and any exterior applications (i.e. covered garage or building entrance) with exposure to weather elements such as rain, wind, etc. ADA compliant.



674 SERIES

DIMENSIONS



- 31"**
- Lumen Output Source Lumens: L3:2000 nominal lumens
 - Wattage: 20W
 - Color Rendering: CRI 83+
 - Correlated Color Temperature: 4000K, 3500K, 3000K, 2700K
 - Rated Life of Lamp (hrs): 50,000
 - Dimming: 0-10V
 - Warranty: Warranty: 5 year limited
- 43"**
- Lumen Output Source Lumens: L4:3000 nominal lumens
 - Wattage: 29W
 - Color Rendering: CRI 83+
 - Correlated Color Temperature: 4000K, 3500K, 3000K, 2700K
 - Rated Life of Lamp (hrs): 50,000
 - Dimming: 0-10V
 - Warranty: Warranty: 5 year limited
- 55"**
- Lumen Output Source Lumens: L5:4000 nominal lumens
 - Wattage: 38W
 - Color Rendering: CRI 83+
 - Correlated Color Temperature: 4000K, 3500K, 3000K, 2700K
 - Rated Life of Lamp (hrs): 50,000
 - Dimming: 0-10V
 - Warranty: Warranty: 5 year limited

ORDERING INFORMATION

Sample Number: 674-55-W-L5/827-UNV-MW-RBP

Series	Size	Mounting Type	LED Lamp			LED Voltage	Finish	Options
674= Interior Luminous Wall Sconce	31=31"	W=Interior Wall	31"	43"	55"	UNV (120-277V)	ALP=Aluminum Paint MW=Matte White MB=Matte Black DP=Dark Platinum GRM=Graphite Metallic BM=Bronze Metallic CC=Custom Color - Contact factory for quotation	RBP= Remote Battery Pack (5' Max Distance)
	43=43"		L3/827	L4/827	L5/827			
	55=55"		L3/830	L4/830	L5/830			
			L3/835	L4/835	L5/835			
			L3/840	L4/840	L5/840			

TYPE W5

< Incandescent

MEDIUM BASE LAMPHOLDER

280WH6 | Pass & Seymour

★★★★★ (0 Reviews)



Find a Store

Zip Code



Share this product



SPECIFICATIONS



FEATURES & BENEFITS



TYPE W5
BULB



S4984

60A/R
60 watt A19 Incandescent; Ceramic Red; 2000 average rated hours; Medium base; 130 volts

Features

- General Service Incandescent
- Household or Commercial use
- Long Life
- 130 volt



S4984

Item Number	UPC	Watts	Lamp Shape	Base	ANSI Base	Lamp Code	Voltage
S4984	045923049842	60	A19	Medium	E26	60A/R	130
Finish	MOL In Inches	MOD In Inches	Filament	Average Rated Hours	Pack	Package Type	Dimmable/Non-Dimmable
Ceramic Red	4 1/8"	2.38"	C-9	2000	24	Sleeve	Dimmable
RoHS Compliant							
Yes							

Type: **W6**

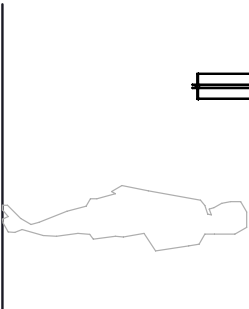
Description: **821927-S-LED**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Submitting Agency:



JESSIE

Satin Aluminum and
 Matte Metallic Silver
 White Sandblasted Glass



MADE IN **USA**
 SINCE 1981

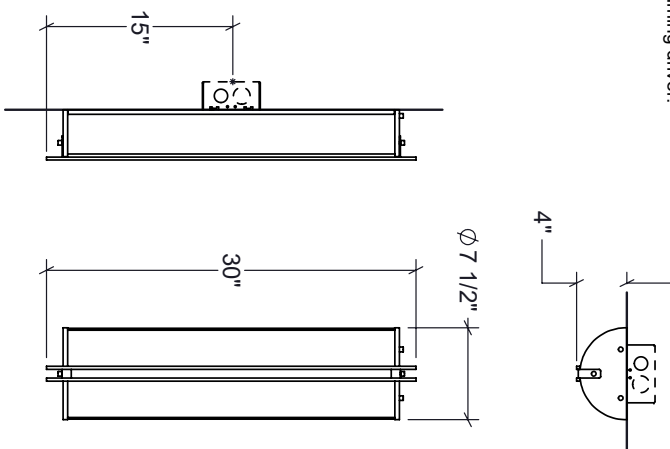
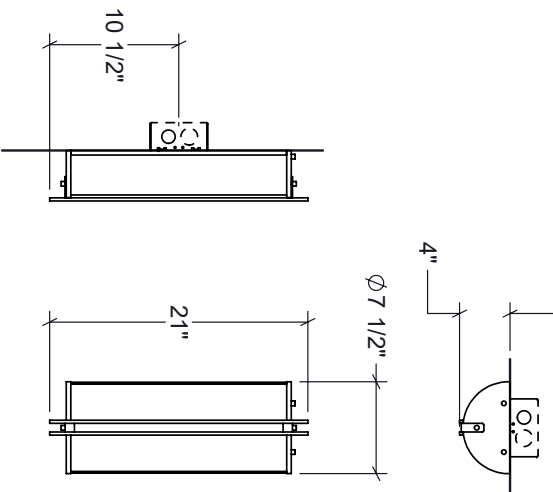
DESIGNED AND MANUFACTURED IN NEW YORK, EVERY DAY SINCE 1981
 for modifications and customization
 INQUIRE@AMERICANGLASSLIGHT.COM

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 All rights reserved.
 We reserve the right to change specifications at anytime.

American Glass Light is a certified WBE company

*NOTE: Electrician to supply and install: 4" or 4 1/16" **SQUARE** J-Box to accommodate standard dimming driver.
 By special order, to fit 4" octagon box, non dimming 120/277 volt option is available.

*NOTE: Electrician to supply and install: 4" or 4 1/16" **SQUARE** J-Box to accommodate standard dimming driver.



JESSIE
 HALF CYLINDER SHORT SCONCE
821918-S-LED

JESSIE
 HALF CYLINDER LONG SCONCE
821927-S-LED

ADA 4" Projection
 LED

ADA 4" Projection
 LED

12 Watt, 850 Source Lumens
 Field Replaceable LED Module
 2700K Standard Color Temperature, 90+ CRI
 Alternate Color Temperatures
 By Special Order
 Lumens will vary from Standard.
 *120/277 Input Voltage
 0-10V Dimming Standard

20 Watt, 1370 Source Lumens
 Field Replaceable LED Module
 3000K Standard Color Temperature, 90+ CRI
 Alternate Color Temperatures
 By Special Order
 Lumens will vary from Standard.
 *120/277 Input Voltage
 0-10V Dimming Standard



DESCRIPTION

LPX Series LED Exit is a polycarbonate unit suitable for general purpose applications. With the new advanced standard features and industry leading innovations, they are now the most universal, energy friendly, easiest to stock and install, and safest Exits in their class.

Sure-Lites

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Electrical

- **General Features**
- Field selected red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts).
- Dual Voltage Input 120/277 VAC, 60Hz
- **Voltage Input**
- 120/277 VAC, 60 Hz
- 240 VAC, 60 Hz with 48 hour recharge
- **AC Only**
- Optional 2C (Two circuit, FTBR) available in 120/277 VAC in standard and emergency operation
- **Self Powered**
- Sure-Lites EZ Key patented external battery disconnect feature – prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Eagle Eye™ Self-Diagnostic feature available as option

Housing Construction

- All components are injection molded, color stable, high impact UL 94-5VA rated polycarbonate material
- White or black textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength
- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Knockout provided on housing for surface attachment
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

Code Compliance

- UL 924 Listed
- UL Damp Location (0-40° C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- Suitable for Floor Proximity Installation
- UL Listed for 2C (FTBR)
- Patent Numbers 5,735,498 and 5,678,336

Warranty

- Exit: 5-Year
- Battery: 7-year pro-rata



LPX SERIES

POLYCARBONATE EXIT
 SURFACE MOUNT
 LED LAMPS
 EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

AC Only, 120V - Red

Amps: 0.07
 Watts: 0.98
 Power Factor: 0.12

AC Only, 120V - Green

Amps: 0.07
 Watts: 1.02
 Power Factor: 0.13

AC Only, 277V - Red

Amps: 0.07
 Watts: 1.04
 Power Factor: 0.06

AC Only, 277V - Green

Amps: 0.07
 Watts: 1.12
 Power Factor: 0.06

Self Powered, 120V - Red

Amps: 0.07
 Watts: 0.98
 Power Factor: 0.12

Self Powered, 120V - Green

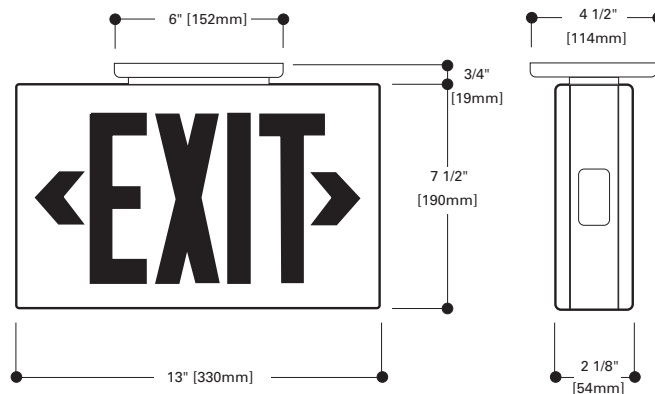
Amps: 0.07
 Watts: 1.00
 Power Factor: 0.13

Self Powered, 277V - Red

Amps: 0.07
 Watts: 1.03
 Power Factor: 0.06

Self Powered, 277V - Green

Amps: 0.07
 Watts: 1.09
 Power Factor: 0.05





ORDERING INFORMATION

Sample Number: LPX7, LPX7SD90, LPX6SG8, LPX7SD23050

Available Accessories (Order Separately)

Family LPX = Polycarbonate Exit, LED				Options Blank = No additional options 2C = Two Circuit Option (LPX6 only) SD = Self Diagnostics Option (LPX7 only) SD90 = Self Diagnostics with Fire Alarm Interface Capability (LPX7 Only)	Protection Devices WG10 = Wall mount wire guard WGS11 = Ceiling or End VS1 = Polycarbonate Vandal Shield VS1WP = Polycarbonate Vandal Shield, Weather Proof Pendant Kit LPX18PKWH = 18" Pendant Kit, White LPX18PKHTWH = 18" Hang True Pendant Kit, White LPX18PKBK = 18" Pendant Kit, Black LPX18PKHTBK = 18" Hang True Pendant Kit, Black
Series ¹ 6 = AC Only 7 = Self Powered					
Face Options Blank = Single and Double					
Housing Finish Blank = White BK = Black					

¹ Also available in stock LPX6 and LPX7 units with the initial setup as Green with the capability to convert to Red in the field. To order these units, please use the catalog number LPX6-G or LPX7-G.

TECHNICAL DATA

Lamps

LPX Series Exits use energy efficient, long life LED's to provide uniform diffuse illumination of the exit face. These red and green LEDs require no maintenance and consume less than one watt, on average.

Housing Construction

Rugged, durable, injection molded polycarbonate materials are used throughout the LPX Series Exits. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners - to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the LPX Series Exits enables universal exits to be configured as single face or double face in the field. All LPX Series Exits can be wall, ceiling, or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications.

Lens

Lenses for the LPX Series Exits are made from durable, impact resistant polycarbonate. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes. Units come with red lenses installed and green lenses included for field selectable red or green signs.

Sure-Lites EZ Key External Battery Disconnect (Self Powered Only)

Patented technology that allows installers to externally control the battery connection. Better than line latching, allows installers to choose when the battery is connected so that it stays fresh longer. Allows battery to be disconnected after installation but before building is occupied, enabling emergency circuit to be shut down for power savings.

Brownout Circuit (Self Powered Only)

The brownout circuit on Sure-Lites' exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer (Self Powered Only)

The LPX Series Exit incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect (Self Powered Only)

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light (Self Powered Only)

A test switch located on the side of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery (Self Powered Only)

Sure-Lites sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures, from 0-40° C. The specially designed re-sealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

"2C" (AC Only)

The "2C" Option enables the Exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation-UL Category FTBR-Emergency Lighting and Power Equipment). The "2C" Option is a factory assembly change which alters the standard Exit such that it complies with and is UL Listed under the FTBR Category. This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits. Both circuits have universal 120/277 VAC standard.

Eagle Eye™ Self Diagnostics Option (Self Powered Only)

The self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every 12 months. A 30 second battery power simulation test will occur every 30 days.

Warranty

All Sure-Lites' products are backed by a firm five-year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed nickel cadmium batteries carry a seven-year pro-rata warranty.



Sure-Lites

DESCRIPTION

SLX Series LED exit is a steel unit suitable for commercial, institutional, and multi-housing applications. With the new advanced standard features and industry leading innovations, they are now the most universal, energy friendly, easiest to stock and install, and safest Exits in their class.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- **General Features**
- Field selected red and green sign capability standard on all units (units shipped red, field convert to green with supplied parts)
- Dual Voltage Input 120/277 VAC, 60Hz
- **AC Only**
- Optional 2C (Two circuit, FTBR) available in 120/277 VAC in standard and emergency operation
- **Self Powered**
- Sure-Lites EZ Key patented external battery disconnect feature
- prevents unnecessary battery drainage, saves on installation time
- Solid-state Voltage Limited Charger
- Brownout Circuit
- Low-Voltage Disconnect
- Test Switch/Power Indicator Light
- Standard 24 hour recharge time (max)
- Eagle Eye™ Self-Diagnostic Standard

Housing Construction

- 20-gauge steel housing
- Universal pattern knockouts on rear for direct mounting to junction box
- Knockouts for chevron directional indicators
- Canopy allows ceiling or end Mounting
- Universal styles offer complete installation flexibility with canopy, backplate, and two stencil faces

Warranty

- Exit – 1 year
- Battery: 5-Year pro-rata

Lamp Data

- AC LED: Red and green LED lamps provide uniform diffused illumination
- DC: Red and green LED DC lamps (Brighter in emergency mode)

Battery (Self Powered Only)

- Sealed Nickel Cadmium
- Maintenance-Free, Long-Life
- Full Recharge Time, 24 hrs. (max)

Code Compliance

- UL 924 Listed
- UL Damp Location (0-40C)
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- NOM Certified
- UL Listed for 2C (FTBR)



SLX SERIES

- STEEL EXIT
- SURFACE MOUNT
- LED LAMPS
- EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

AC Only, 120V - Red

- Amps: 0.07
- Watts: 0.98
- Power Factor: 0.12

AC Only, 120V - Green

- Amps: 0.07
- Watts: 1.02
- Power Factor: 0.13

AC Only, 277V - Red

- Amps: 0.07
- Watts: 1.04
- Power Factor: 0.06

AC Only, 277V - Green

- Amps: 0.07
- Watts: 1.12
- Power Factor: 0.06

Self Powered, 120V - Red

- Amps: 0.07
- Watts: 0.98
- Power Factor: 0.12

Self Powered, 120V - Green

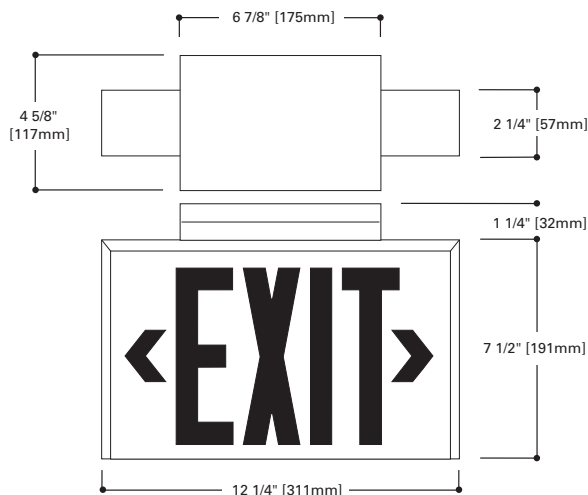
- Amps: 0.07
- Watts: 1.00
- Power Factor: 0.13

Self Powered, 277V - Red

- Amps: 0.07
- Watts: 1.03
- Power Factor: 0.06

Self Powered, 277V - Green

- Amps: 0.07
- Watts: 1.09
- Power Factor: 0.05





AP SERIES EXITS WITH SQUARE HEADS COMBO

ORDERING INFORMATION

Sample Number: SLX7, SLX7SD90, SLX6SR2, SLX7SD23050

<p>Family SLX=Steel Exit, LED</p> <p>Series 6=AC Only 7=Self Powered</p>	<p>Face Options Blank=Single and Double S=Open Face for Signage (single face, White housing only)</p> <p>Housing Finish Blank=White BK=Black</p>	<p>Features Blank=No additional options 2C=Two Circuit Option (SLX6 only) SD=Self Diagnostics Standard (SLX7 only) SD90=Self Diagnostics with Fire Alarm Interface Capability (SLX7 Only)</p>	<p>[Options for non-EXIT signs]</p> <p>Signage Options (Color) Blank=EXIT sign R=Red letter, Red LED G=Green letter, Green LED B=Blue letter, White LED</p> <p>Signage Options (Common Signs) Blank=EXIT sign 1="AREA OF RESCUE" 2="SALIDA" 3="STAIRS" 4="AREA OF REFUGE" 5="IN USE" 6="NOT AN EXIT" 7=(WHEEL CHAIR SYMBOL) 8="X-RAY ON" 9="LASER IN USE" 10="DO NOT ENTER"</p>
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Available Accessories (Order Separately)

<p>Protection Devices WG10=Wall mount wire guard WGS11=Ceiling or End mount wire guard VS1=Polycarbonate Vandal Shield VS1WP=Polycarbonate Vandal Shield, Weather Proof</p>	<p>Pendant Kit PK18PKWH=18" Pendant Kit, White PK18PKHTWH=18" Hang True Pendant Kit, White PK18PKBK=18" Pendant Kit, Black PK18PKHTBK=18" Hang True Pendant Kit, Black</p>
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Notes:

- Consult factory for additional custom signage options.
- Blue Letters, White LED does not have the "SD" option.
- Units ordered with "Salida" signage (e.g., SLX6SR2) will use a steel stencil that outlines the word "Salida", while all other signage options will be open-face.

TECHNICAL DATA

Lamps

SLX Series Exits use energy efficient, long life LED's to provide uniform diffuse illumination of the exit face. These red and green LEDs require no maintenance and consume less than one watt, on average.

Housing Construction

Exit housing is constructed of durable 20-gauge cold rolled steel with corrosion resistant polyester powder coat paint finish. All exits can be mounted and wired through knockouts located on the top and side. Surface mount back panel has knockouts for direct mounting to junction box. The mounting canopy is made of impact resistant thermoplastic with complementary finish. Stencil face exits are supplied with knockout chevron directional indicators for easy conversion to directional exits. Exit stencil and backplate install in channels in the exit housing to eliminate light leaks.

Lens

Lenses for the SLX Series Exits are made from durable, impact resistant polycarbonate. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes. Units come with red lenses installed and green lenses included for field selectable red or green signs.

Sure-Lites EZ Key External Battery Disconnect (Self Powered Only)

Patented technology that allows installers to externally control the battery connection. Better than line latching, allows installers to choose when the battery is connected so that it stays fresh longer. Allows battery to be disconnected after installation but before building is occupied, enabling emergency circuit to be shut down for power savings.

Brownout Circuit (Self Powered Only)

The brownout circuit on Sure-Lites' exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer (Self Powered Only)

The SLX Series Exit incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect (Self Powered Only)

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light (Self Powered Only)

A test switch located on the side of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery (Self Powered Only)

Sure-Lites sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable

performance over a wide range of temperatures, from 0-40° C. The specially designed re-sealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

"2C" (AC Only)

The "2C" Option enables the Exits to operate per the requirements of UL 924 when connected simultaneously to both normal and emergency power circuits (two circuit operation-UL Category FTBR-Emergency Lighting and Power Equipment). The "2C" Option is a factory assembly change which alters the standard Exit such that it complies with and is UL Listed under the FTBR Category. This option should only be used for exits which are intended to be connected simultaneously to normal and emergency power circuits. Both circuits have universal 120/277 VAC standard.

Eagle Eye™ Self Diagnostics Standard on SLX7

The self-diagnostic unit will automatically perform all tests required by UL924, and NFPA 101. The system indicates the status of the exit at all times using the LED indicator near the test switch on the side of the unit. A 90 minute battery power (emergency mode) simulation test will occur randomly once every 12 months. A 30 second battery power simulation test will occur every 30 days.

Warranty

All Sure-Lites' products are backed by a firm one-year warranty against defects in material and workmanship. Maintenance-free, long-life, sealed nickel cadmium batteries carry a fifteenyear pro-rata warranty.

Submitting Agency:



Description: **LPXW71RSD**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **EX-WP**

Sure-Lites

DESCRIPTION

The LPXW series provides a code compliant solution for outdoor exit requirements. The fixture is wet UL924 location listed with a temperature rating of (- 20 C to 50 C). The UV stabilized polycarbonate housing is available in white, grey or black with red or green Exit letters. Labor savings self diagnostics that perform required monthly and yearly testing are standard for the self powered exits.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

ELECTRICAL

- Voltage Input 120/277 VAC
- AC only or self powered (battery back up) versions
- 90 minute run time for self powered
- 3.6 volt long life nickel cadmium battery
- Test switch / power Indicator Light
- Battery fully recharges in 24 Hours
- Self Diagnostics standard for self powered

HOUSING CONSTRUCTION

- 5 VA flame retardant, UV stabilized polycarbonate housing, available in white, black or grey
- High-impact resistant, UV stabilized polycarbonate lens
- Polycarbonate mounting canopy included for top or end mount
- Universal knock out pattern on back plate for wall mount
- Top and side mount knock outs included for conduit feed applications
- NFPA 101 compliant field configurable chevrons

LAMP DATA

- Long life LED lamps provides uniform light output
- Red or green lettering

WARRANTY

- Five-year fixture warranty
- Prorated 7-year battery warranty

CODE COMPLIANCE

- UL924, Wet Location Listed (suitable for wet or damp locations)
- Temperature rated for (-20 C to 50 C)
- Life Safety NFPA 10, NEC, OSHA
- Most State and Local Codes



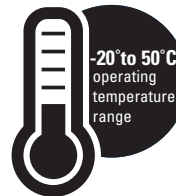
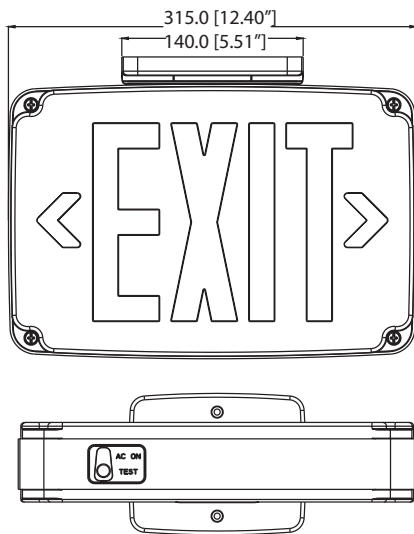
LPXW Series

Outdoor Exit UL924 Wet Location

LED Source

Exit Lighting

DIMENSIONS



ORDERING INFORMATION

Series	Power	Faces	Letters	Color	SD
LPXW	6 = AC only	1 = single 2 = double	R = red G = green	_ = silver WH = white BK = black	_ = no SD (AC only)

Series	Power	Faces	Letters	Color	SD
LPXW	7 = with battery	1 = single 2 = double	R = red G = green	_ = silver WH = white BK = black	SD = self diagnostics, standard

ENERGY INFORMATION

	LPXW6	LPXW7
Input Watts		
120V	2.7W	3.3W
277V	2.7W	3.4W
Input Amps		
120V	0.025A	0.03A
277V	0.011A	0.014A



SURE-LITES

DESCRIPTION

PathLinx LED emergency light is aesthetically designed and offers features to reduce egress system cost. The thin profile emergency light unit blends into the environment with expanded egress light spacing between units, which provides a cost effective and unobtrusive emergency egress system. The expanded remote capability with wide coverage pattern and RJ45 connectors allows installers to reduce their cost of equipment, materials, and labor. The external battery disconnect and easy connection features make the PathLinx LED emergency light uncomplicated and efficient throughout installation.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- Dual Voltage Input 120/277 VAC, 60Hz
- External Battery Disconnect
- Brownout circuit
- Low voltage disconnect
- Overload / Short Circuit protection
- 4.8V Battery back-up
- 1.4W AccuLED optics

Housing Construction

- Components injection molded, color stable, high impact thermoplastic
- White or black textured finish
- Snap-fit construction to facilitate fast installation
- Suitable for wall mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots
- Aesthetically designed with thin profile

Battery

- Sealed Nickel Cadmium
- Sealed Nickel Metal Hydride (LEM4 Only)
- Full Recharge Time, 24 hours (max.)
- 0° to 40°C (32° to 104°F) operating temperature range

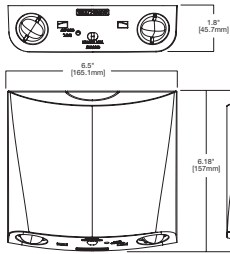
Warranty

- Five-year warranty

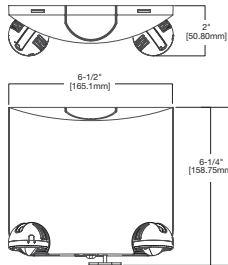
Code Compliance

- UL924 Listed
- Damp Location
- Life Safety NFPA 101
- NEC/OSHA
- Most State & Local Codes
- 0° to 40°C (32° to 104°F) operating temperature range
- LEMZ rated for 3 hour run time with no remotes

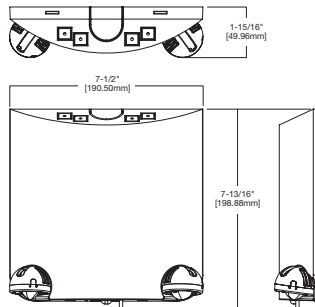
LEMRO



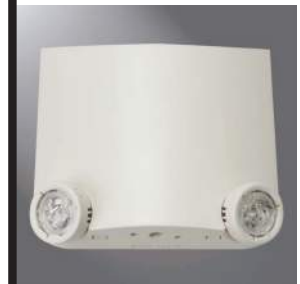
LEM



LEM2 / LEM4



LEMRO



LEM



LEM2 / LEM4

ORDERING INFORMATION

SAMPLE NUMBER: LEM4SD

Emergency Light	Color	Self Diagnostics
LEM=Two head unit; No remote capability	[Blank]=White BK=Black	SD=Eagle Eye Self Diagnostic*
LEM2=Two head unit; Two head remote capability	[Blank]=White BK=Black	
Emergency Light	Color	Self Standards
LEM4=Two head unit; Four head remote capability	[Blank]=White BK=Black	SD=Eagle Eye Self Standard

SAMPLE NUMBER: LEMRO

Emergency Light	Color
LEMRO=Two head unit; No remote capability	[Blank]=White

* Self Diagnostic option unit comes with Time Delay capability by following installation instructions.

PathLinx LED Emergency Light LEM

- LED Emergency Light
- AccuLED Optic
- EZ Click - RJ45 connection
- Eagle Eye Self Diagnostics

Submitting Agency:



Description: **LEM2**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type: **EBU**

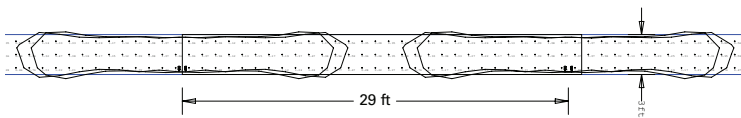
PathLinx LED Emergency Light
LEMRO
LEM
LEM2/LEM4

ELECTRICAL DATA

Model	120V			277V		
	Power (W)	Current (A)	PF	Power (W)	Current (A)	PF
LEM	0.52	0.069	0.06	0.64	0.07	0.03
LEM4SD	0.534	0.067	0.07	0.67	0.069	0.04
LEM2	0.92	0.146	0.05	1.02	0.138	0.03
LEM2SD	1.12	0.145	0.06	1.19	0.137	0.03
LEM4SD	1.96	0.25	0.07	1.81	0.21	0.03
LEMRO	.58	.076	.064	.79	.077	.037

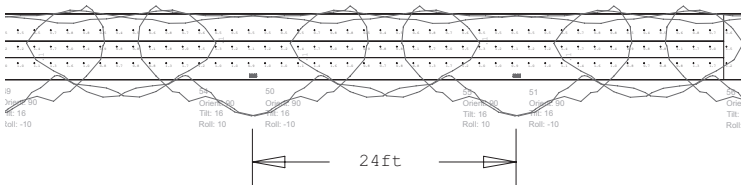
PHOTOMETRY

LEM/LEM2/LEM4



X	Y	Z	Orient	Tilt	Roll
-0.25	0.5	7.5	90	7	1
0.25	0.5	7.5	90	7	-1
28.75	0.5	7.5	90	7	1
29.25	0.5	7.5	90	7	-1
57.75	0.5	7.5	90	7	1
58.25	0.5	7.5	90	7	-1
-29.25	0.5	7.5	90	7	1
-28.75	0.5	7.5	90	7	-1

LEMRO



X	Y	Z
0	0.33	7.5
0.33	0.33	7.5
24.33	0.324	7.5
48.33	0.317	7.5
72.33	0.311	7.5
96.33	0.305	7.5
24	0.323	7.5
48	0.316	7.5
72	0.309	7.5
96	0.302	7.5

***The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet. Cooper Lighting assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

Submitting Agency:



Description: **LEM2**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
EBU

PathLinx LED Emergency Light
LEMRO
LEM
LEM2/LEM4

TECHNICAL DATA

AccuLED Optics

The AccuLED precision engineered optics display sharp cutoffs and oval light pattern, which provide a clear path of egress per UL924 standards. The efficient optical design increases spacing distance between units, while providing evenly diffused light pattern throughout the egress path for both 1 foot candle average and 0.1 ft candle minimum. The lens swivel feature within the AccuLED optic provides the opportunity of forward-throw of egress lighting. The LED emergency head rotates 348° and tilts 104° and the AccuLED optic has a full 360° of rotation to provide optimal flexibility.

Mechanical Housing

All components are injection molded with a color stable, high impact thermoplastic resin. The surface is textured to improve aesthetic appearance. The housing construction is designed with snap-fit components and reinforcement ribs to provide maximum strength at minimum installation effort. The mounting hole pattern is universal to junction box requirements and is suitable for both wall and ceiling mount applications.

EZ - Click - Ethernet Connection

The EZ Click Ethernet connection provides an opportunity to reduce the cost of labor and materials by utilizing an internal power connection. The EZ Click allows low voltage DC to be run to remotes and provides an opportunity to avoid the labor and expense associated with conduit and junction box infrastructure. The PathLinx line of remotes can be connected in series via low voltage DC.

EZ Key - External Power Disconnect

The EZ Key is an external power disconnect. The patent-pending EZ Key technology allows installers to externally control the battery connection, which is better than line-latching because it allows installers to choose when the battery is connected to avoid battery damage during a construction cycle.

EZ Hang - Mounting Feature

The hands-free EZ Hang feature allows the installer to hang the emergency light face from the back plate in order to easily and efficiently make the power connections.

Eagle Eye™ Self Diagnostics

The Eagle Eye self-diagnostic software will automatically perform all tests required by UL924, and NFPA101. The system indicates the status of the emergency light at all times using the LED indicator. A 90 minute battery power (emergency mode) simulation test will occur once every 12 months. A 30 second battery power simulation test will occur every 30 days.

The Solid-State microprocessor based system has the ability to accurately detect and warn of system failures, plus it incorporates all of the standard electronic features that sets Sure-Lites apart from its competition. Eagle Eye self diagnostic software automatically performs all testing required by the NFPA 101 Life Safety Code and systematically calibrates itself in the field, reducing installation labor and eliminating manual calibration errors.

Expanded Remote Capability

The PathLinx product line has expanded remote capability up to four additional LED Emergency Light heads. The expanded remote capability reduces the overall cost of installation. A dual head remote emergency light can cost up to 60% less than a corresponding dual head emergency light with battery back-up.

The PathLinx product line utilizes efficient long-life AccuLED optics that exceed the lumen output of the traditional 5.4 watt incandescent heads, while meeting the UL924 standards for egress lighting. Low power consumption means expanded remote capability and significant cost savings.

Low Voltage Disconnect

When the battery's terminal voltage falls, the low-voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored preventing deep battery discharge.

Brownout Circuit

The brownout circuit on the PathLinx emergency light monitors the flow of AC current to the unit and activates the emergency light heads when a predetermined reduction of AC power occurs.

Warranty

PathLinx units are backed by a five-year warranty on the fixtures and a fifteen-year pro-rata warranty on the NiCad batteries.

Submitting Agency:

Description: LEM2
Project: SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL
Notes:

Type:**EBU**

PathLinx LED Emergency Light
 LEMRO
 LEM
 LEM2/LEM4

SELF DIAGNOSTIC TESTING OPERATIONS

The Sure-Lites Eagle Eye Self Diagnostics is continuously monitoring your emergency fixture, and will signal any failure through the 3 color indicator LED.

Initial Operation:

When the unit is first powered up, it will go into a 24 hour fast charge, indicated by the indicator LED pulsing green. Once the unit has fully charged, it will perform a self calibration, after which the LED will change to steady green, indicating the unit is fully charged and float charging the battery to maintain readiness.

Automatic Testing:

The unit will perform a battery capacity, lamp/LED, and charge circuit test every 30 days for 30 seconds. During this time, the indicator LED will change to a steady yellow. It will perform a full battery capacity (90 minute) test once per year. During this time, the indicator LED will change to a blinking yellow.

Manual Testing:

- 10 Second "Installation" test – Press and release the test button once during fast charge (blinking green) to initiate a 10 second quick test. The sign will switch to emergency mode for 10 seconds allowing the installer to verify proper installation of the unit, and the LED indicator will turn solid yellow.
- 30 Second Test - Press and release the test button once during float charge (steady green). The indicator LED will turn steady yellow to indicate the unit is performing a 30 second test of the batteries and lamps/LEDs.
- 90 Minute Test - Press and release the test button a second time during a 30 second test (steady yellow) to change to a 90 minute test. During this test, the LED indicator will change to blinking yellow, and the circuit will perform a full battery capacity, charge circuit, and LED test.
- Canceling Test – Press and release the test button during the 90 minute test (flashing yellow) to return the fixture to its original state (fast charge or float charge)

Laser Test:

The LEM SD products are equipped with a Laser Test function, that allows the unit to be manually tested without the need to physically press the test button. Shining a laser pointer in the hole marked "LASER TEST" on the bottom of the unit has the same effect as a press and release of the test button.

Clearing Failure Codes:


- A battery failure (LED two blink red) can be cleared by replacing the battery. Disconnecting the battery and AC power, or performing a full 90 minute discharge, will reset the error code, however, it will return if the battery is faulty
- Charge Circuit (LED three blink red) and lamp/LED failure (LED four blink red) will clear when the unit successfully passes a manual or automatic 30 second test.

Indicators:

- LED Off - No power to unit, emergency mode.
- LED Steady Green - Unit is fully charged and is float charging the battery to maintain readiness.
- LED Green Pulse - Unit is in a 24 hour fast charge of the battery.
- LED Two Blink Red - Battery has failed a capacity test, or the battery is disconnected. See "Clearing Failure Codes" above.
- LED Three Blink Red - Battery charge circuit has failed. See "Clearing Failure Codes" above.
- LED Four Blink Red - Lamps have burned out, or on an EXIT/Combo, 50% or more of the LEDs have failed. See "Clearing Failure Codes" above.
- LED Steady Yellow - 30 second test or 10 second quick test (Fast Charge only).
- LED Blinking Yellow - 90 minute test.

Maintenance:

None required. Replace the batteries as needed according to ambient conditions. However, we recommend that the equipment be tested regularly in accordance with local codes.



<ul style="list-style-type: none"> ○ OFF - EMERGENCY MODE / POWER OFF ● STEADY BLINK GREEN - FAST CHARGE ● STEADY GREEN - FULL / FLOAT CHARGE ● STEADY YELLOW - QUICK TEST 	<ul style="list-style-type: none"> ● STEADY BLINK YELLOW - 90 MINUTE TEST ●● 2 BLINK RED - BATTERY FAILURE ●●● 3 BLINK RED - CHARGE CIRCUIT FAILURE ●●●● 4 BLINK RED - LAMP/LED FAILURE
--	---



DESCRIPTION

PathLinx LED emergency light remotes are aesthetically designed and offer features to reduce egress system cost. The inconspicuous round design blends into the environment while providing expanded egress light spacing between remote units. The expanded remote capability from the LEM2 or LEM4 base unit in conjunction with wide coverage pattern enable installers to reduce their cost of equipment, materials, and labor. The easy RJ45 connection features make the PathLinx LED emergency light remote units uncomplicated and efficient throughout installation.

Sure-Lites

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Electrical

- 4.8V DC input voltage, with optional 6V DC input voltage products.
- 1.4W AccuLED optics (1.8W per 6V input)

Housing Construction

- Components injection molded, color stable, high impact thermoplastic
- White or black textured finish

- Snap-fit construction to facilitate fast installation
- Suitable for wall or ceiling mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots
- Aesthetically designed with thin profile

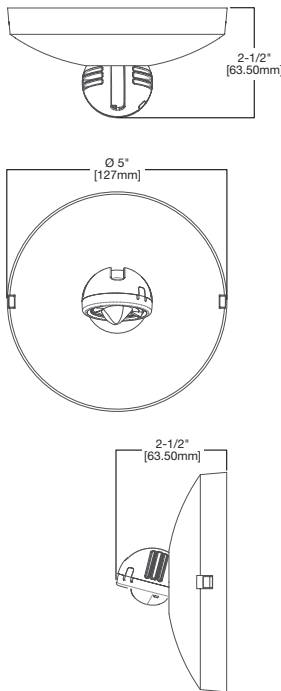
Code Compliance

- UL924 Listed
- UL Damp Location
- Wet Location Listed (LEMWR)
- Life Safety NFPA 101
- NEC/OSHA
- Most State & Local Codes
- -30°C to 50°C (-22°F to 122°F) operating temperature range

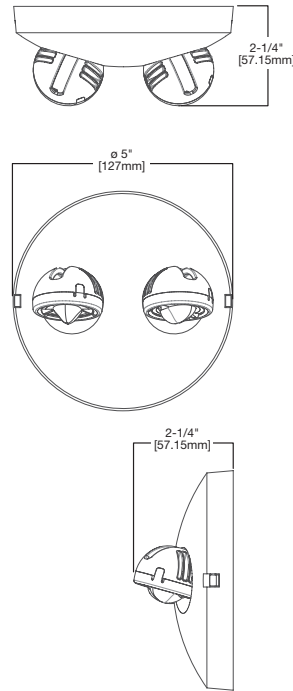
Warranty

- Five-year warranty

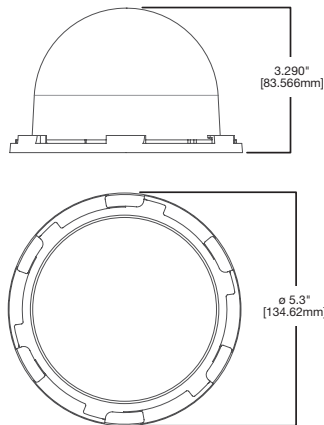
Single Head Remote



Double Head Remote



Wet Location Remote



LEM R1



LEM R2



LEMWR1



LEMWR2

ORDERING INFORMATION

SAMPLE NUMBER: LEMR2

Emergency Light	Color
LEM R1=Single Head; Damp Location	[Blank]=White
LEM R2=Double Head; Damp Location	BK=Black
LEMWR1=Single Head; Wet Location	
LEMWR2=Double Head; Wet Location	
6LEM85=6V; Single Head; Damp Location; No Ethernet	
6LEM85D=6V; Double Head; Damp Location; No Ethernet	
6LEM85W=6V; Single Head; Wet Location; No Ethernet	
6LEM85DW=6V; Double Head; Wet Location; No Ethernet	

**PATHLINX LED
 EMERGENCY
 LIGHT
 LEM REMOTES**

LED EMERGENCY LIGHT

ACCUCLED OPTIC

EZ CLICK
 RJ45 CONNECTION



Submitting Agency:



Description: **LEMWR2**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

WPRMT

PATHLINX LED EMERGENCY LIGHT
LEM REMOTES

TECHNICAL DATA

AccuLED Optics

The AccuLED precision engineered optics display sharp cutoffs and highly directional light pattern, which provide a clear path of egress per UL924 standards. The efficient optical design increases spacing distance between units, while providing evenly diffused light pattern throughout the egress path for both 1 foot candle average and 0.1 ft candle minimum. The lens swivel feature within the AccuLED optic provides the opportunity of forward-throw of egress lighting. The LED emergency head rotates 348° and tilts 104° and the AccuLED optic has a full 360° of rotation to provide optimal flexibility.

Mechanical Housing

All components are injection molded with a color stable, high impact thermoplastic resin. The surface is textured to improve aesthetic appearance. The housing construction is designed with snap-fit components to provide maximum strength at minimum installation effort. The mounting hole pattern is universal to junction box requirements and is suitable for both wall and ceiling mount applications.

EZ Click - Ethernet Connection

The EZ Click Ethernet connection provides an opportunity to reduce the cost of labor and materials by utilizing an internal power connection. The PathLinx line of remotes can be connected in series via low voltage DC an internal power connection. The EZ Click allows low voltage DC to be run to remotes and provides an opportunity to avoid the labor and expense associated with conduit and junction box infrastructure. The PathLinx line of remotes can be connected in series via low voltage DC.

Expanded Remote Capability

The PathLinx product line has expanded remote capability up to four additional LED Emergency Light heads. The expanded remote capability reduces the overall cost of installation. A dual head remote emergency light can cost up to 60% less than a corresponding dual head emergency light with battery back-up. The PathLinx product line utilizes efficient long-life AccuLED optics that exceed the lumen output of the traditional 5.4 watt incandescent heads, while meeting the UL924 standards for egress lighting. Low power consumption means expanded remote capability and significant cost savings.

Warranty

PathLinx units are backed by a five-year warranty.



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

Submitting Agency:



Description: **GMDS-W**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

L/C



Greengate

Technical Data

Effective October 22, 2014

GMDS – Momentary Decorator Switch

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Momentary Decorator Switch is a system accessory for the Greengate Lighting Control System. This switch is recommended for most low voltage switching applications and fits a standard decorator wallplate.

Features

- When pressed, momentary contact establishes circuit contact in the closed position. When not pressed, the switch is in the (open) position.
- Thermoplastic rocker, top, and backbody are virtually unbreakable to deliver years of durable performance
- Tri-combo screw heads offer greater installation flexibility



EATON

Powering Business Worldwide



Technical Data
October 2014

GMDS – Momentary Decorator Switch

Specifications

Switch Type	Momentary Contact
Standards	UL Listed

RoHS

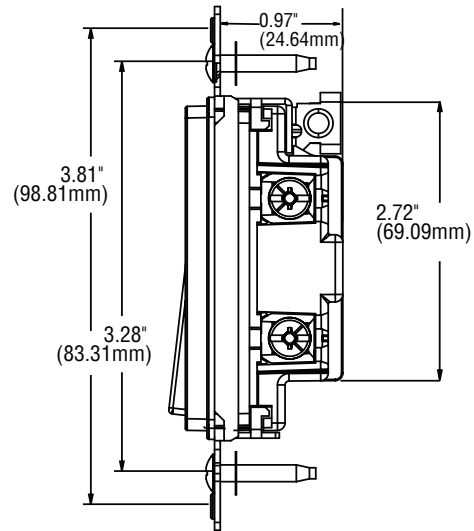
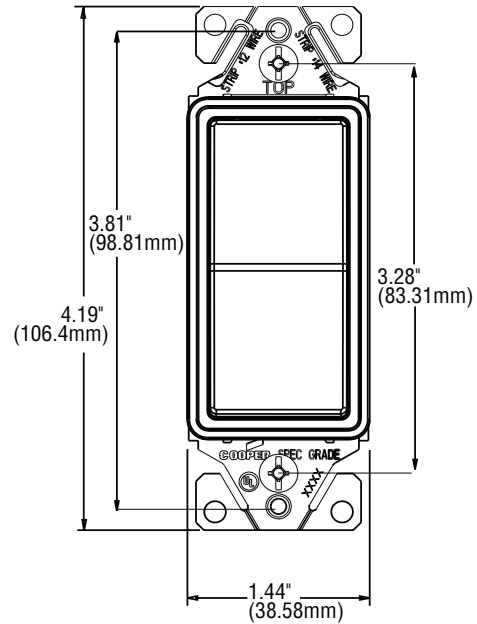
Description/Operation

The Momentary Decorator Switch is a line voltage switch used as a low voltage contact closure device used with Greengate Lighting Control Panels and Occupancy Sensors. When toggled, the switch momentarily makes a contact closure to the lighting control panel or occupancy sensor, sending an "ON" signal. When not pressed, the switch is in the (open) position.

Installation

This system accessory will require wall mounting and wiring at the site.

Dimensions





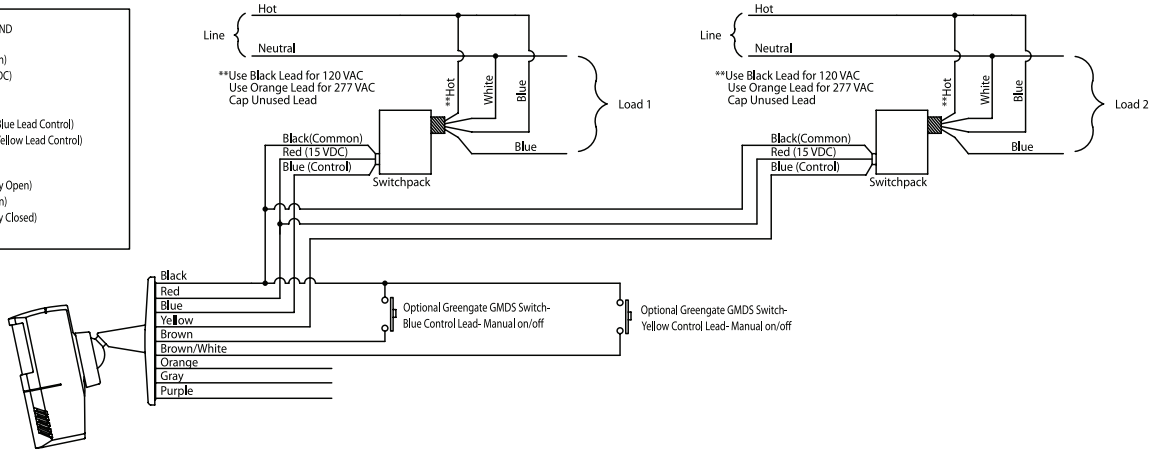
Technical Data
October 2014

GMDS – Momentary Decorator Switch

Wiring Diagram

Bi-level Switching

SENSOR WIRE LEAD LEGEND	
Black	(Common)
Red	(10-30 VDC)
Blue	(Control)
Yellow	(Control)
Brown	(Switch-Blue Lead Control)
Brown/White	(Switch-Yellow Lead Control)
Sensor's Isolated Relay	
Orange	(Normally Open)
Gray	(Common)
Purple	(Normally Closed)



Ordering

*Wallplate Not Included

This is an accessory for the Greengate Lighting Control System. It is not an integral part of the system. There is no factory assembly needed.

Catalog #	Description	Color
GMDS-W	Momentary Decorator Switch	White

*Refer to Screwless Wallplate spec sheet for ordering information at coopercontrol.com

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October 22, 2014

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OAC-DT – MicroSet Dual Tech Low Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. MicroSet self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Features

- MicroSet self-adjusting Time Delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control

PIR
ActivatedUltrasonic
ActivatedMicroSet
Self-Adjusting

EATON

Powering Business Worldwide



Technical Data
November 2014

OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks BAS with Isolated Form C Relay in (-R) model Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft.
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90%, non-condensing For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant



Description/Operation

The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies in the event that if a continuous Doppler shift occurs, such as those created by airflow from an air duct, the sensor will identify the noise as continuous and then block it out of view at a select sub-frequency. It will continue to monitor other sub-frequencies for human motion. This avoids false-activation, while still maintaining the high level of sensitivity that is necessary for sensing minor motion in a changing environment. Separate concurrent time delays for both Passive Infrared and Ultrasonic technologies avoid false activations or deactivations. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Office Spaces
- Common Areas
- Computer Rooms
- Break Rooms
- Hallways
- Other Indoor Office Spaces



OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

Technical Data
 November 2014

Wiring Diagrams

OAC-DT-2000-R Model

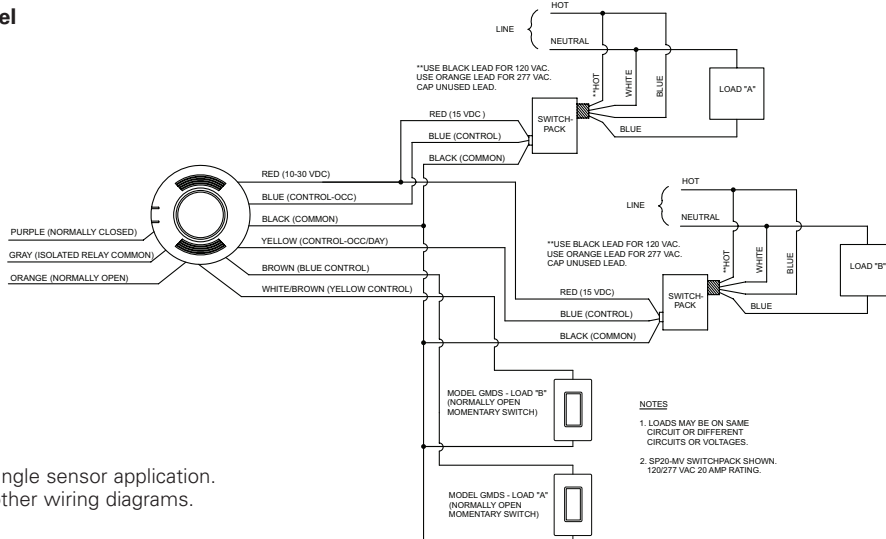
OAC AND VAC MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

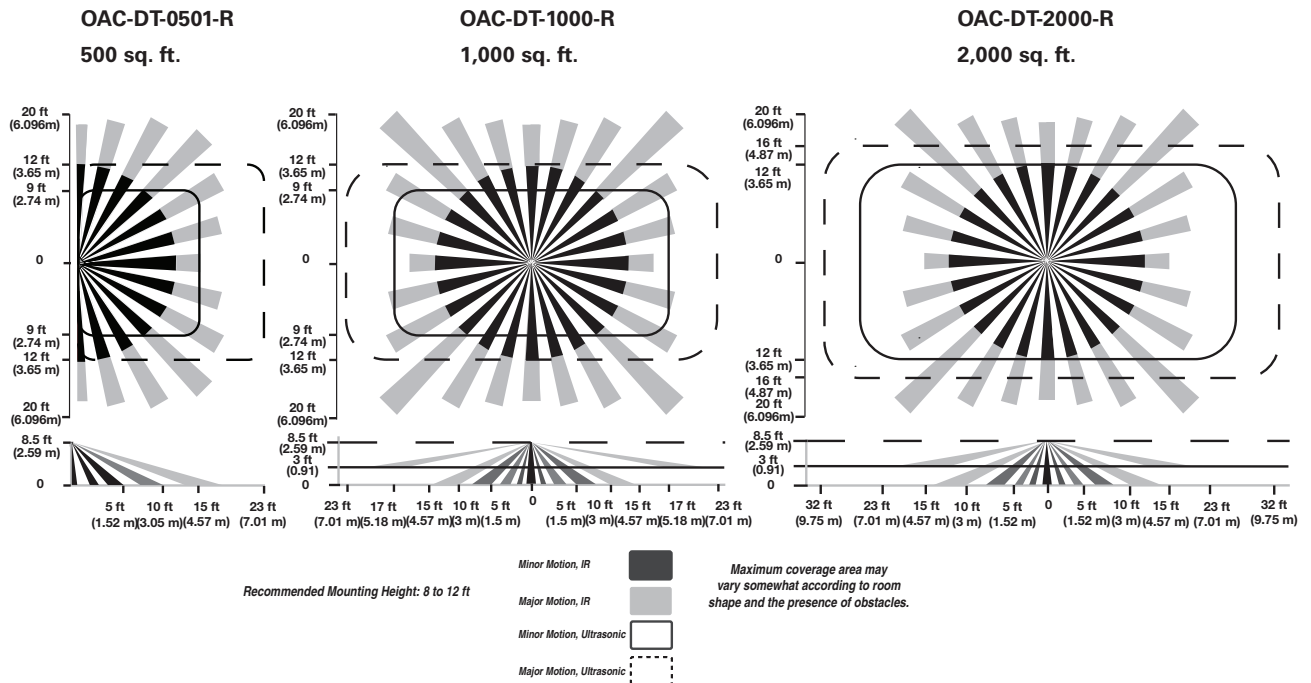
- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
 18-3 AWG STRANDED WIRE SHIELDED OR NON-SHIELDED



*Wiring diagram for single sensor application.
 Visit our website for other wiring diagrams.

Coverage





Technical Data

OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

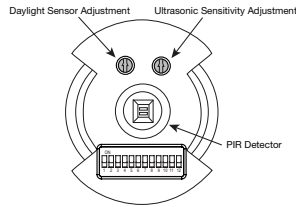
Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Normal ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Swap ▲	Enable ▲	Enable ▲
15 Minutes	▲	▲	(-R model only)		(-R model only)				(-R model only)		(-R model only)	
30 Minutes	▲	▲										

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Maximum Room Size	Field of View	Frequency	Features
OAC-DT-2000-R	2,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-2000	2,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-0501	500 sq. ft.	One Way (180°)	40 kHz	

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 1000 Eaton Boulevard
 Cleveland, OH 44122
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 Eaton.com

Eaton's Cooper Controls Business
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 coopercontrol.com

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 November 5, 2014

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OAC-DT – MicroSet Dual Tech Low Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. MicroSet self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Features

- MicroSet self-adjusting Time Delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control

PIR
ActivatedUltrasonic
ActivatedMicroSet
Self-Adjusting



Technical Data
November 2014

OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks BAS with Isolated Form C Relay in (-R) model Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft.
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90%, non-condensing For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant



Description/Operation

The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies in the event that if a continuous Doppler shift occurs, such as those created by airflow from an air duct, the sensor will identify the noise as continuous and then block it out of view at a select sub-frequency. It will continue to monitor other sub-frequencies for human motion. This avoids false-activation, while still maintaining the high level of sensitivity that is necessary for sensing minor motion in a changing environment. Separate concurrent time delays for both Passive Infrared and Ultrasonic technologies avoid false activations or deactivations. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Office Spaces
- Common Areas
- Computer Rooms
- Break Rooms
- Hallways
- Other Indoor Office Spaces



OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

Technical Data
 November 2014

Wiring Diagrams

OAC-DT-2000-R Model

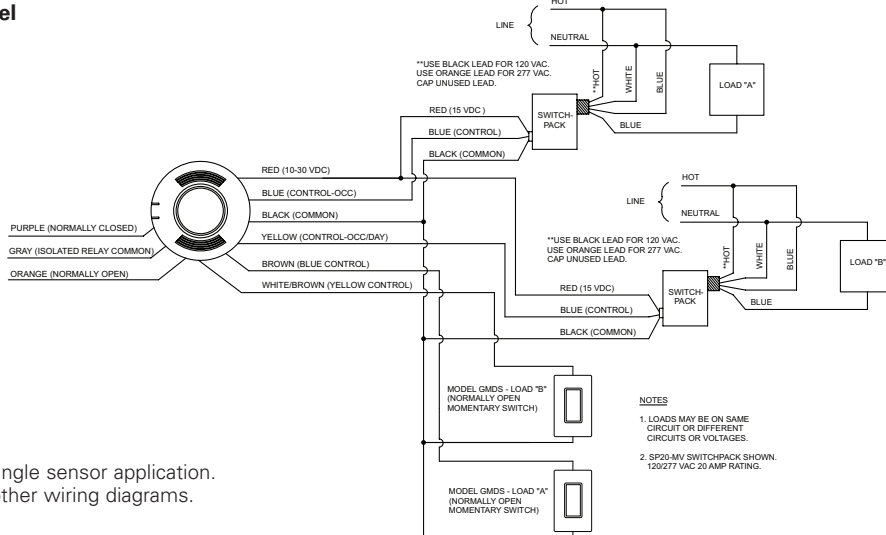
OAC AND VAC MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

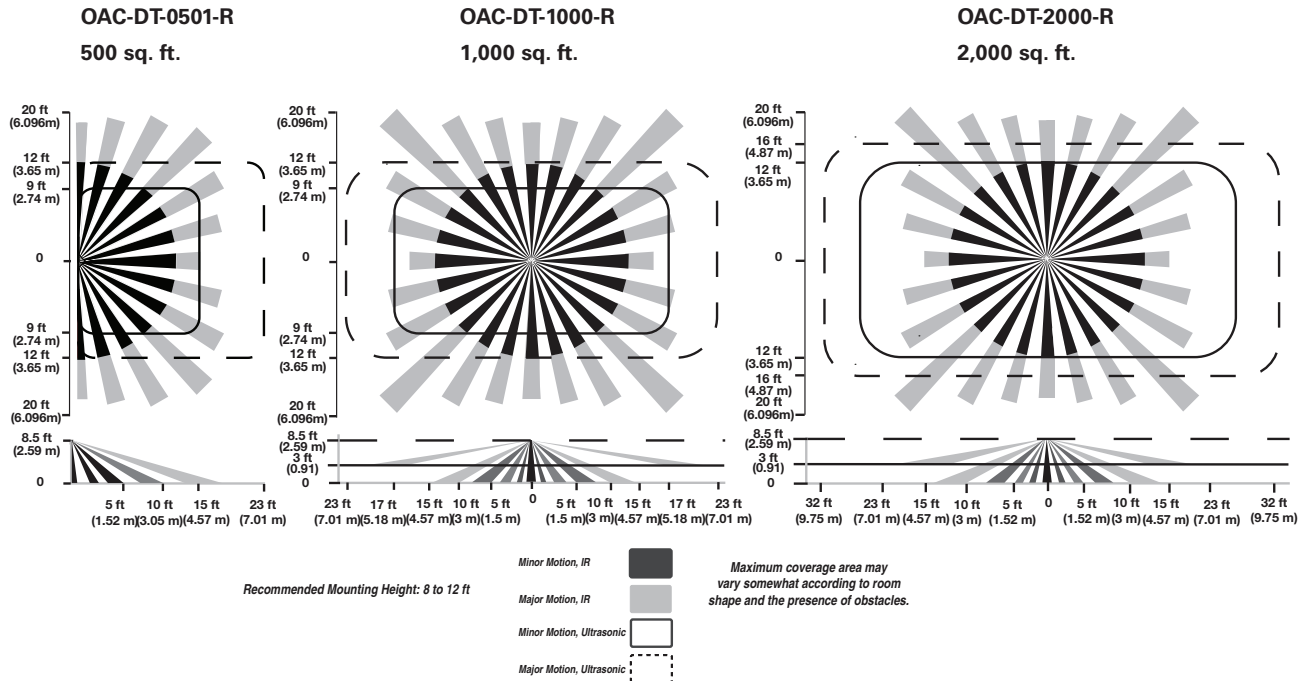
- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
 18-3 AWG STRANDED WIRE SHIELDED OR NON/SHIELDED



*Wiring diagram for single sensor application.
 Visit our website for other wiring diagrams.

Coverage



Submitting Agency:



Description: **OAC-DT-1000-R**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
L/C

Technical Data

OAC-DT – MicroSet DualTech Low Voltage Ceiling Sensor

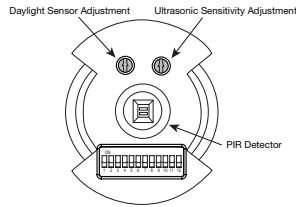
Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Normal ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Swap ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼	(-R model only)		(-R model only)				(-R model only)		(-R model only)	
30 Minutes	▲	▲										

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Maximum Room Size	Field of View	Frequency	Features
OAC-DT-2000-R	2,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-2000	2,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-0501	500 sq. ft.	One Way (180°)	40 kHz	

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 November 5, 2014

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OAWC-DT – Dual Technology Wall/Corner Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. Self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Features

- MicroSet self-adjusting time delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- NEMA WD7 Guide robotic method utilized to verify coverage patterns
- Manual On feature for use with 1 or 2 momentary switches controlling 1 or more Switchpacks
- Selectable Walk-Through Mode

PIR
ActivatedUltrasonic
Activated


Self-Adjusting



Technical Data
November 2014

OAWC-DT – DualTechnology Wall/Corner Sensor

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	Input 0-30 VDC from Greengate Switchpack or Greengate System Maximum current needed is 25 mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks Isolated Form C Relay in (-R models) Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-Adjusting, 15 seconds/test, 5, 10, 15, 30 minutes
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90% Non-condensing For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	4.4"H x 3.4"W x 2"D (112mm x 86.4mm x 50.8mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant  RoHS

Description/Operation

The OAWC-DT combines Ultrasonic (US) and Passive Infrared (PIR) sensor technologies to monitor a room for occupancy to deliver maximum energy savings and ensure the greatest sensitivity and coverage for tough application without the threat of false triggers. PIR is used to turn the lights ON and then either or both technologies are used to keep the lights ON. The sensor includes MicroSet self-adaptive technology that continuously self-adjusts sensitivity and time delay in real-time, maximizing the potential energy savings that are available in particular application. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual-On Mode, the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When used with 2 level lighting (-R model only), Bi-level Automatic On can be achieved which allows Zone 1 to come on automatically upon occupancy. Zone 2 does not come on unless the occupant presses the optional momentary switch. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Large Offices
- Common Areas
- Computer Rooms
- Break Rooms



OAWC-DT – DualTechnology Wall/Corner Sensor

Technical Data
 November 2014

Wiring Diagrams

OAWC-DT-120W-R Model

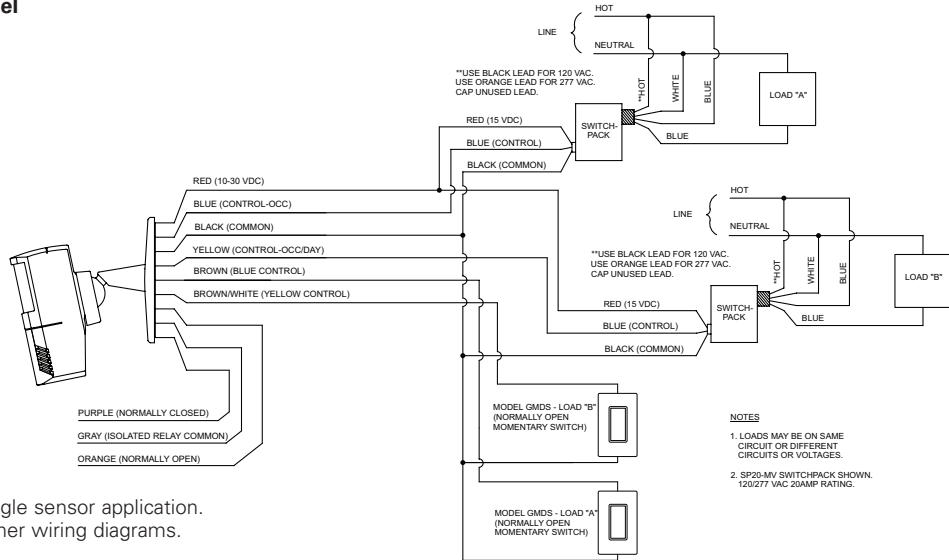
MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.

AUTOMATIC MODE OPERATION:

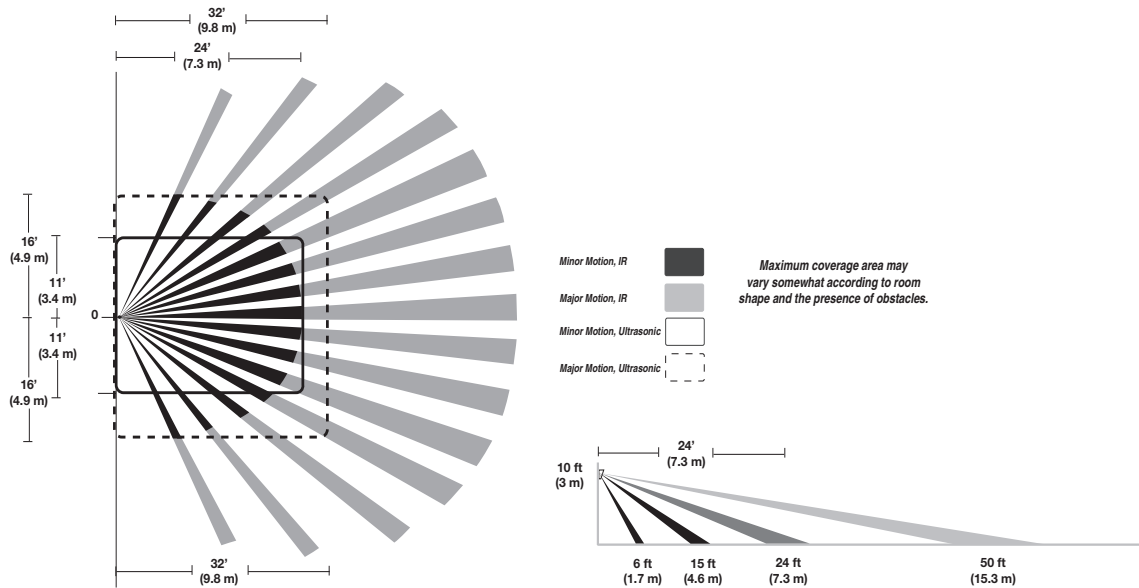
- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LIGHTS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
 18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED



*Wiring diagram for single sensor application.
 Visit our website for other wiring diagrams.

Coverage



Submitting Agency:



Description: **OAWC-DT-120W-R**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
L/C

Technical Data

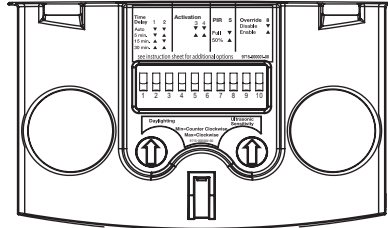
OAWC-DT – DualTechnology Wall/Corner Sensor

Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode		LEDs	Override		Lighting Sweep	Daylighting Mode
	1	2	Power Pack One	Power Pack Two		3	4		5	6		
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Enable ▼	Disable ▼	Disable ▼	Half ▼	▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Enable ▲	Full ▲	▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										

*Self-Adjusts to 10 min. user mode
 Default =



Ordering

Catalog #	Coverage	Field of View	Features
OAWC-DT-120W-R	1,200 sq. ft.	Wide Angle, 120°	w/ BAS Relay and Daylight Sensor
OAWC-DT-120W	1,200 sq. ft.	Wide Angle, 120°	

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Submitting Agency:



Description: **ONW-D-1001-MV-W**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

L/C



Greengate

Technical Data

Effective November 4, 2014

ONW-D – NeoSwitch Dual Tech/Single Level Wall Switch Sensor (Ground Required)

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology Single Level Occupancy Sensing Wall Switch is a motion sensing lighting control and conventional wall switch all-in-one that is used to for energy savings and convenience. It does not require a neutral wire for installation making it ideal for retrofit applications.

Features

- Air-gap switch ensures no leakage current to load
- Selectable built-in light level sensor
- NEMA WD7 Guide robotic method utilized to verify coverage patterns



PIR
Activated



Ultrasonic
Activated



Self-Adjusting




California
Title 20
Compliant

EATON

Powering Business Worldwide


 Technical Data **ONW-D – NeoSwitch Dual Tech/Single Level Wall Switch Sensor (Ground Required)**
 November 2014
Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Electrical Ratings	120 VAC: Incandescent/Tungsten – Max. load: 6.7 amps, 800W, 50/60 Hz Fluorescent/Ballast – Max. load: 10 amps, 1200W, 50/60 Hz <hr/> Motor Load: ¼ HP @ 125 VAC <hr/> 277 VAC: Fluorescent/Ballast – Max. load: 9.8 amps, 2700W, 50/60 Hz <hr/> 347 VAC: Fluorescent/Ballast – Max. load: 4.3 amps, 1500W, 50/60 Hz
Ballast Compatibility	Compatible with magnetic and electronic ballasts
Time Delays	Self-Adjusting, 15 seconds/test (10 min. Auto), Selectable 5, 15, 30 minutes
Coverage	Major motion - 36' x 30' Minor motion - 20' x 16'
Light Level Sensing	0 to 200 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90% non-condensing For indoor use only
Housing	Durable, injection molded housing. ABS resin complies with UL 94V-0
Size	Mounting Plate/Strap Dimensions: 4.195"H x 1.732"W (106.55mm x 44mm) <hr/> Mounting Plate/Strap Dimensions: ONW-D-1001-347: 4.35"H x 1.732"W (110.49mm x 44mm) <hr/> Product Housing Dimensions: 2.618"H x 1.752"W x 1.9"D (66.5mm x 44.5mm x 48.26mm)
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant  RoHS

Operation

The ONW-D-1001-MV combines Ultrasonic (US) and Passive Infrared (PIR) sensor technologies to monitor a room for occupancy to deliver maximum energy savings and ensure the greatest sensitivity and coverage for tough applications without the threat of false triggers. PIR is used to turn the lights ON and then either or both technologies are used to keep the lights ON. In Automatic On Mode, the lights turn ON automatically when a person enters the room. In Manual On Mode, the lights are turned ON by pressing the universally recognized light icon pushbutton. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and time delay in real-time, maximizing the potential energy savings that are available in the particular application.

Applications

- Private Offices
- Small Conference Rooms
- Lunch/Break Rooms
- Small Classrooms
- Small Restrooms (1-2 Stalls)
- Small Lounges
- Small Waiting Rooms
- Small Closets
- Small Storage Areas

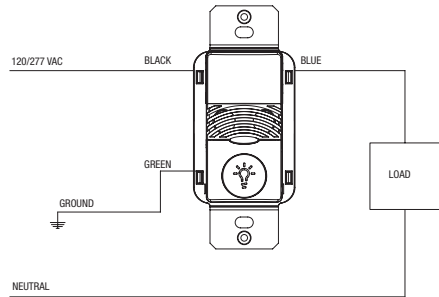


ONW-D – NeoSwitch Dual Tech/Single Level Wall Switch Sensor (Ground Required)

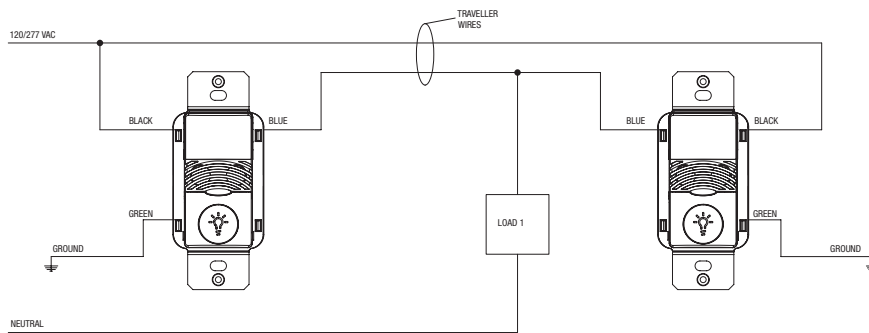
Technical Data
November 2014

Wiring Diagrams

Single Level Switching – Single Circuit

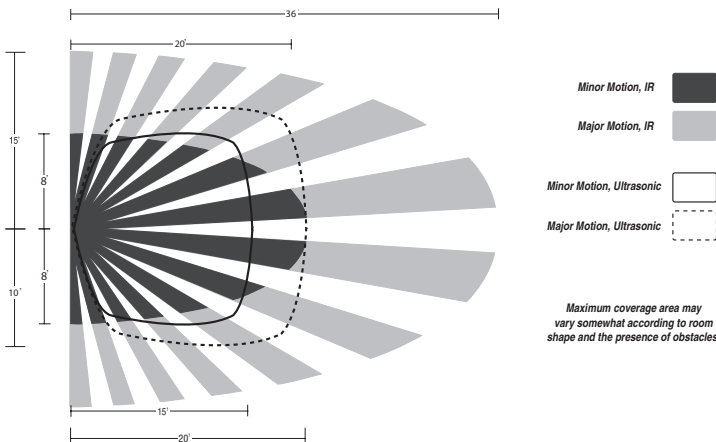


Three-way wiring diagram: Lights will turn OFF automatically when sensor that detected motion last, times out.



*For 347 VAC wiring diagrams refer to Installation Instructions

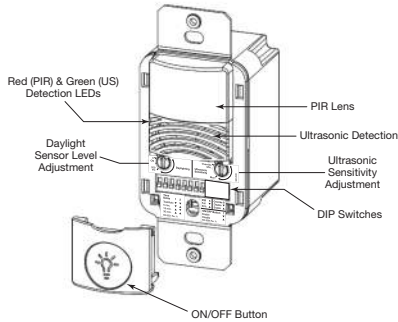
Coverage





Technical Data **ONW-D – NeoSwitch Dual Tech/Single Level Wall Switch Sensor (Ground Required)**
 November 2014

Controls

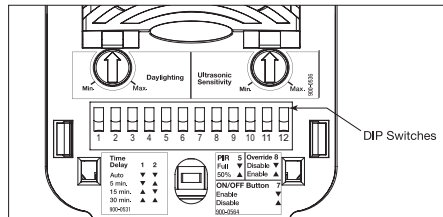


DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode		ON/OFF Button		Override	Not Used	Maintain Lights On	Not Used	
	1	2	Relay 1	Not Used		3	4	5	6				7	8
15 Sec Test/Auto*	▼	▼	Auto	▼	Full	▼	Disable	▼	Enable	▼	Disable	▼	Either	▼
5 Minutes	▼	▲	Manual	▲	50%	▲	Enable	▲	Disable	▲	Enable	▲	Both	▲
15 Minutes	▲	▼												
30 Minutes	▲	▲												

*Self-Adjusts to 10 min. user mode

Default =



Ordering

*One single gang wallplate included. Wallplate not included with 347 VAC Model

Catalog #	Ratings	Coverage	Voltage
ONW-D-1001-MV-* (* - W, V, LA, G, B)	Incandescent: 0-800W @ 120V Fluorescent: 0-1200W @ 120V Fluorescent: 0-2700W @ 277V Max Load/Relay	180°; 1000 sq. ft.	120/277 VAC, 50/60 Hz
ONW-D-1001-347-*	Incandescent: 0-1500W @ 347V Fluorescent: 0-1500W @ 347V Max Load/Relay	180°; 1000 sq. ft.	347 VAC, 50/60 Hz

* White, Ivory, Light Almond, Gray, Black

Note: Not all colors are available in stock and some color options may have extended lead times.

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 November 4, 2014

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PRODUCT BULLETIN


Leviton's **OSP20-RDH/RNH** Super Duty Power Pack

Combines transformer relay functions, occupancy sensor control, and manual/automatic operation into a single high performance unit



DEFINITION

The OSP20-RDH/RNH is the latest in the Leviton power pack family, providing a wide array of switching solutions into a single unit. Exclusive Leviton High Inrush Stability (H.I.S.™) circuitry is specifically designed to handle today's high inrush electronic ballast loads and offer unmatched durability and service.

APPLICATIONS

Use a Leviton Power Pack with Leviton Occupancy Sensors in the following applications:

- Bi-level lighting applications
- Classrooms
- Conference Rooms
- Offices
- Load Shed/Interface Hold OFF Applications
- Retail Hold ON/Bypass Applications
- Anywhere optimal lighting and energy savings are desired

FEATURES

- Extreme durability: exceeds WS-8g6 Federal Specification duty cycle requirements for specification grade toggle switches.
- Exclusive H.I.S. (High Inrush Stability) circuit designed to handle high inrush electronic ballast loads, including the latest T5HO and T4 ballasts.
- Zero crossing design for reliability and extended life.
- Mechanical latching relay for dependability and robust for all load types
- Return-to-on design provides fail safe operation in the event of power loss or malfunction.
- Transformer Relay Function: OSP20-RDH/RNH replaces traditional transformer relays and provides occupancy sensors control. Ideal for use where code requirements/jurisdictions prohibit the use of 277V switch legs.
- Manual-ON or Automatic-ON functionality for use in bi-level lighting control per CEC Title 24 requirements.
- UL 2043 Plenum Rated
- Endurance tested to over 1,000,000 cycles at full load.
- Integrates with low voltage momentary and maintained switches to control occupancy sensors.
- Conduit adaptor included for low voltage connections.
- Patent pending

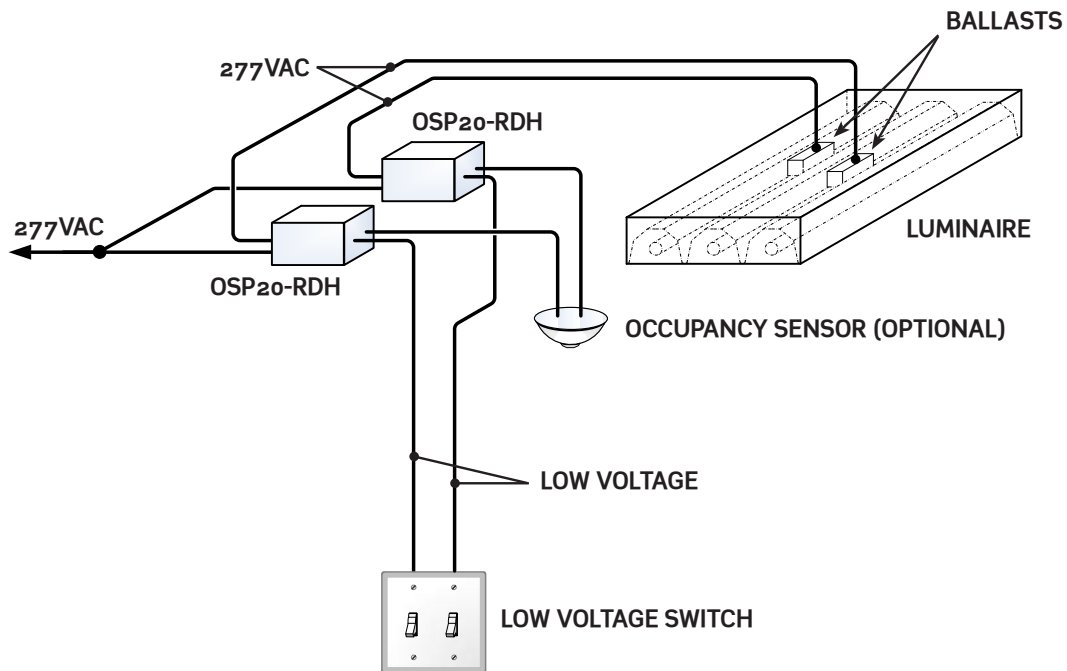
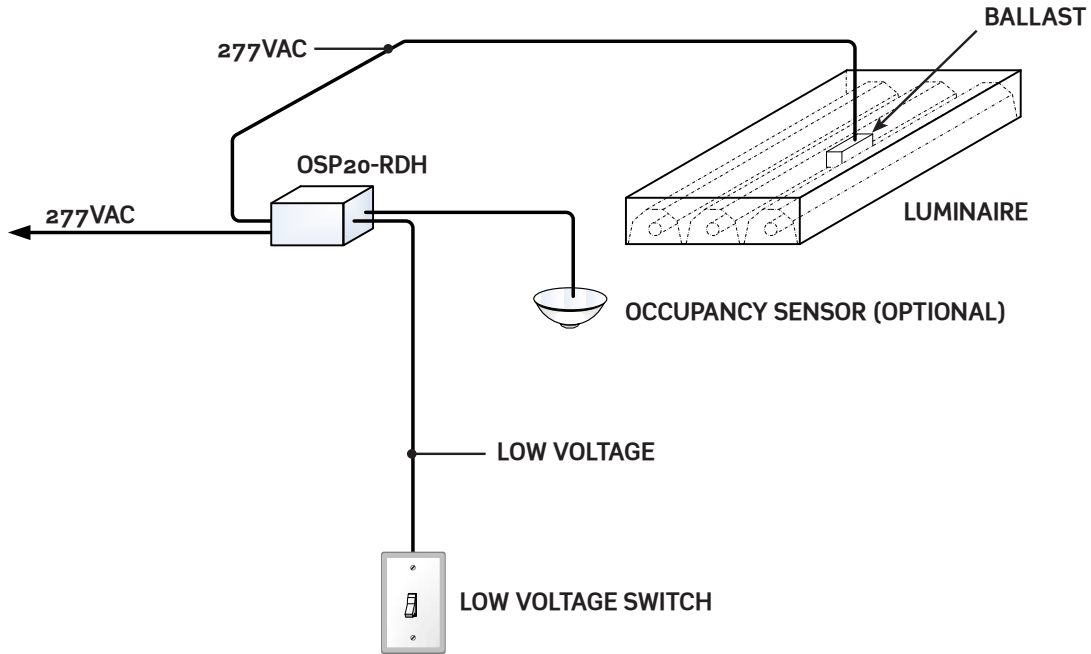
Leviton Mfg. Co., Inc. Lighting Management Systems

20497 SW Teton Avenue, Tualatin, OR 97062 1-800-736-6682 Tech Line: 1-800-959-6004 Fax: 503-404-5594 www.leviton.com/lms
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PRODUCT BULLETIN

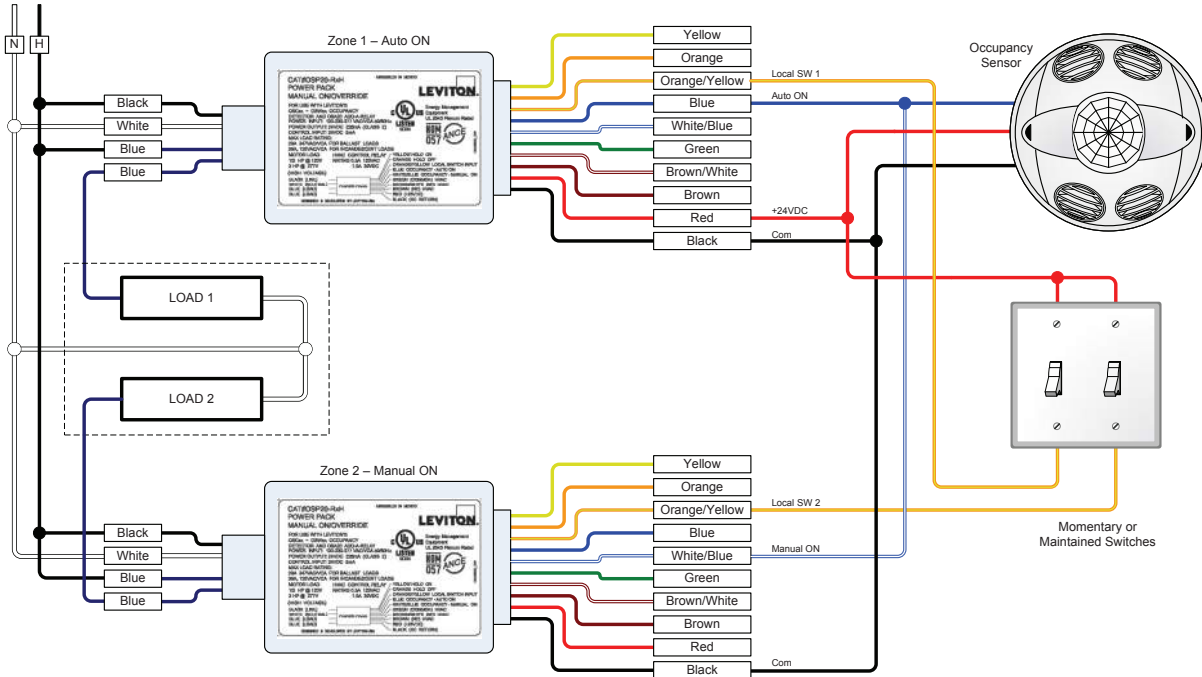
TRANSFORMER RELAY APPLICATION DIAGRAM



OSP20-RDH • OSP20-RNH



BI-LEVEL SWITCHING DIAGRAM



OSP20-RDH • OSP20-RNH

Submitting Agency:



Description: **OSP20-RDH**
 Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
 Notes:

Type:
L/C

PRODUCT BULLETIN



ORDERING INFORMATION

DESCRIPTION	CAT. NO.	POWER INPUT	RELAY RATING	CONTROL INPUT	POWER SUPPLY OUTPUT
Power Pack	OSP20-oDo (OSP20-ND0 NAFTA)	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 230-277V; 1HP @ 120V, 2HP @ 240V	5mA, 24VDC	150mA, 24VDC
Power Pack with Dry Contact	OSP20-RDo (OSP20-NHo NAFTA)	120-230-277VAC, 50/60 Hz	20A fluorescent/incandescent @ 120V, 20A fluorescent @ 277V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	150mA, 24VDC
Power Pack with Dry Contact	OSP15-R30	347VAC, 60 Hz	15A fluorescent @ 347V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	120mA, 24VDC
Add-A-Relay Unit with Dry Contact	OSA20-R00 (OSA20-RN0 NAFTA)	—	15A incandescent @ 120V, 20A fluorescent @ 120V, 20A fluorescent @ 277V, 15A fluorescent @ 347V; HVAC: 0.5A @ 120VAC, 1A @ 30VDC	5mA, 24VDC	—
Power Pack with Dry Contact Relay and Override Inputs for Occupancy Sensors	OSP20-RDH (OSP20-RNH NAFTA)	120-230-277VAC, 50/60Hz	20A fluorescent/incandescent @ 120V; 20A fluorescent @ 277V; 1HP @ 120V, 2HP @ 240V; HVAC: 0.5A @ 120VAC, 1A @ 20VDC and 15A fluorescent @ 347V; 1HP @ 120V; 2HP @ 240; HVAC: 0.5A @ 120V, 1A @ 30VDC	5mA, 24VDC	225mA, 24VDC

Made in US models available

POWER PACK CAPACITY FORMULA

Leviton power packs can be used to provide power to one or more occupancy sensors. Since current consumptions of occupancy sensors may vary, the best way to ensure you order the correct number of power packs and add-a-relays is by using this formula:

$$\begin{array}{|c|} \hline \# \text{ of sensor Model As} \\ \hline \times \\ \hline \text{Sensor A current consumption} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \# \text{ of sensor Model Bs} \\ \hline \times \\ \hline \text{Sensor B current consumption} \\ \hline \end{array}
 +
 \begin{array}{|c|} \hline \# \text{ of Add a Relays} \\ \hline \times \\ \hline 50\text{mA} \\ \hline \end{array}
 < \text{ Power supply output per above chart}$$



DESCRIPTION	CURRENT CONSUMPTION
OSCo4-I, OSC15-I	10mA
OSWHB-I, OSWLR-I, OSWWV-I	15mA
OSW12-M	25mA
OSCo20-M, OSC20-U	30mA
OSCo5-U, OSC05-M	32mA
OSC10-U, OSC10-M	40mA
OSA20-R Add-a-Relay	50mA

OSP20-RDH • OSP20-RNH

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B-1361B/k10-cb



Greengate

Technical Data Effective November 5, 2014

OXC-P – Extreme Temperature Sensors

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Passive Infrared Extreme Temperature sensor provides consistent, stable coverage where extreme heat, cold or humidity must be accommodated and where there are wide fluctuations in temperature. Temperature compensating circuitry stabilizes sensitivity at temperatures -40°F to 125°F (-40°C to 52°C).

Immune to RFI, EMI and voltage fluctuations

Passive Infrared (PIR) sensor technology



Segmented Fresnel lens provides optimum sensitivity and performance

Built-in photocell optimizes savings

Stable sensitivity at temperatures from -40°F to 125°F (-40°C to 52°C)

Plastic housing complies with UL 94V-0

BAS Compatible

Features

- UL Listed for damp locations
- OXC-P-2MH0-R works at heights up to 25 ft.
- Ambient light control circuit to avoid False ON/OFF from brief changes in background light
- Temperature-compensating circuitry avoids false activation in extreme conditions
- Lighting sweep function with selectable DIP Switch prevents unnecessary "lights ON" following power sweeps in facilities with computer control systems
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard



PIR Activated



Extreme Temperature




Powering Business Worldwide


 Technical Data
 November 2014

OXC-P – Extreme Temperature Sensors

Specifications

Technology	Passive Infrared (PIR)
Power Requirements	Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Adjustable delay of 15 seconds (for testing) to 30 minutes
Ambient Light Level Features	Adjustable down to approximately 3 LUX
Operating Environment	Temperature: -40°F to 125°F (-40°C to 52°C) Relative humidity: less than 95%, non-condensing Indoor or outdoor (refer applications section)
Housing	Medium impact injection molded housing, ABS resin complies with UL 94V0. Paintable off-white
Size	1-5/8"H x 4-1/2"W x 3-1/8"D (41.3mm x 114.3mm x 79.4mm)
LED Indicators	Red LED for PIR detection
Standards	UL Listed 

Description/Operation

OXC-P sensors control lighting in applications where extreme temperature/humidity must be tolerated with unique temperature compensating circuitry. Human and automobile motion activates a Greengate Switchpack to turn lights ON within a coverage area and illumination is maintained until no motion is detected within preset time period. Once no motion is detected, lights are turned OFF and energy is saved. A built-in photocell optimizes savings by monitoring ambient light level (set at a predetermined threshold). If ambient light is sufficient, sensor will detect motion but not turn ON lights. If ambient light is not sufficient, lights will be activated when motion is detected. The Ambient Lights Control Circuit includes a deadband and time delay which ignores brief changes in light levels such as headlights of a passing car. To ensure the proper start-up of HID lighting, lamps are forced into "high" mode for the first 20 minutes. After the 20 minute warm up, if motion is still detected, the sensor will keep lights ON at full brightness. When connected to a Building Automation System (BAS), the OXC-P-1500-R and OXC-P-2MH0-R offer the most versatile connection possibilities available including an open collector output (with or without the pullup feature) and a direct BAS connection.

Applications

- Parking Structures
- Warehouses – (OXC-P-2MH0-R)
- High Ceilings
- Walk-in Freezers – (OXC-P-1500-R)
- Cold Storage

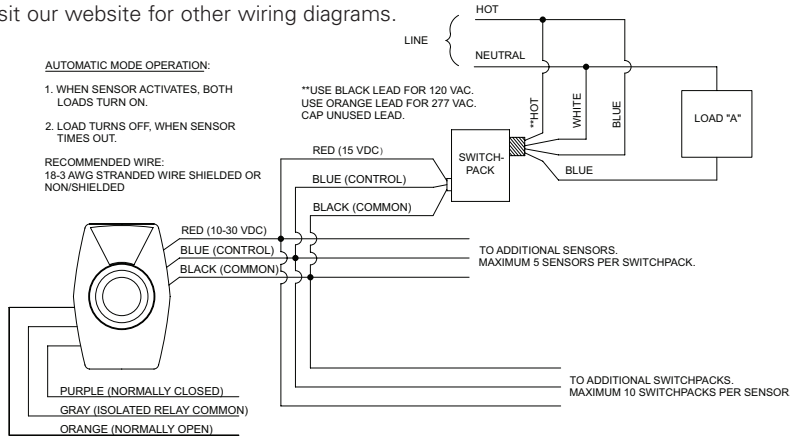


OXC-P – Extreme Temperature Sensors

Technical Data
 November 2014

Wiring Diagrams

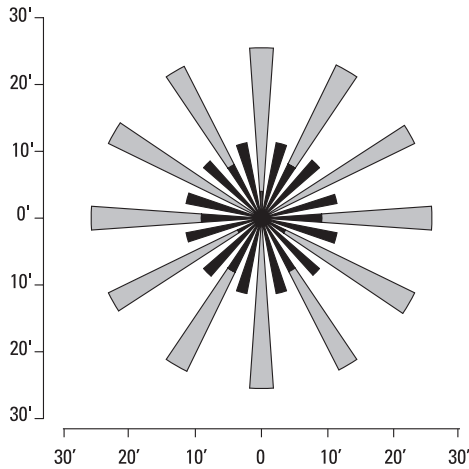
*Wiring diagram for single sensor application.
 Visit our website for other wiring diagrams.



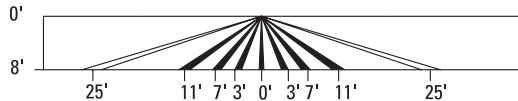
Coverage

OXC-P-1500-R

TOP VIEW

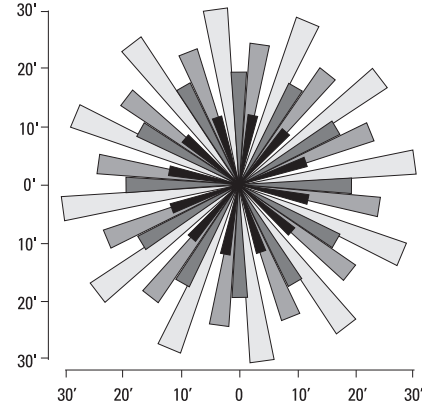


SIDE VIEW

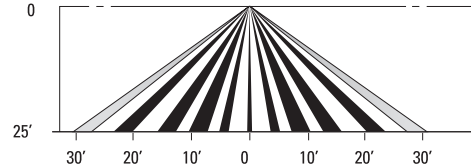


OXC-P-2MH0-R

TOP VIEW



SIDE VIEW

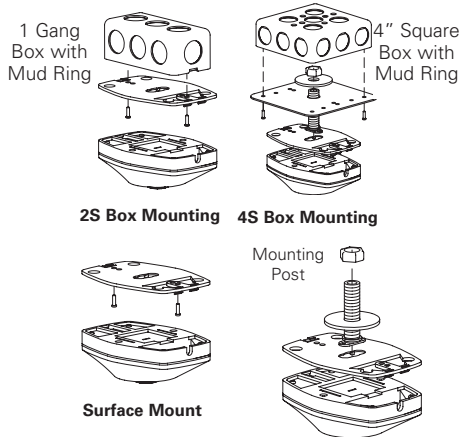




Technical Data

OXC-P – Extreme Temperature Sensors

Mounting



SENSOR: The sensor mounts to normal ceiling tile through a 3/4" hole. The threaded mounting post may be cut down if it is too long to fit into the junction box. The sensor may also be surface mounted or mounted to a standard NEMA 2S or 4S junction box.

CAUTION: Finger-tighten the nut to avoid stripping the mounting post. Do not apply pressure to Fresnel lens.

BACKPLATE: The sensor can be easily snapped onto or pulled away from the backplate without disturbing the mounting hardware. To pull the sensor away from the backplate, place your fingers on the door on the front of the sensor and slide your fingers up onto the back end of the sensor, with your fingers resting below the edge of the backplate. As you press against the sensor, use your other hand to grip the opposite end of the sensor and pull it away from the backplate.

To snap the sensor back onto the backplate, place the end of the sensor without a door against the backplate first, hooking the edge of the sensor on the two small prongs that extend from the backplate. Press the other end of the sensor against the backplate until it snaps into place.

SWITCHPACK: Designed to be mounted externally to any junction box. When mounted, the line connections are inside the box and the Class 2 wiring exits the rear of the Switchpack housing. In areas where Class 2 wiring is not permitted, the Switchpack can be mounted internally to any standard electrical box.

Ordering

Catalog #	Coverage	Field of View	Features
OXC-P-1500-R	Up to 1,500 sq. ft.	Two Way (360°)	w/BAS Relay & Daylight Sensor
OXC-P-2MH0-R	When mounted @ 25 ft., up to 25 ft. in all directions or 50 linear ft. for warehouse aisles	Two Way (360°)	w/BAS Relay & Daylight Sensor

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 November 5, 2014

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Technical Data

Effective September 1, 2016

Zone Wallstation

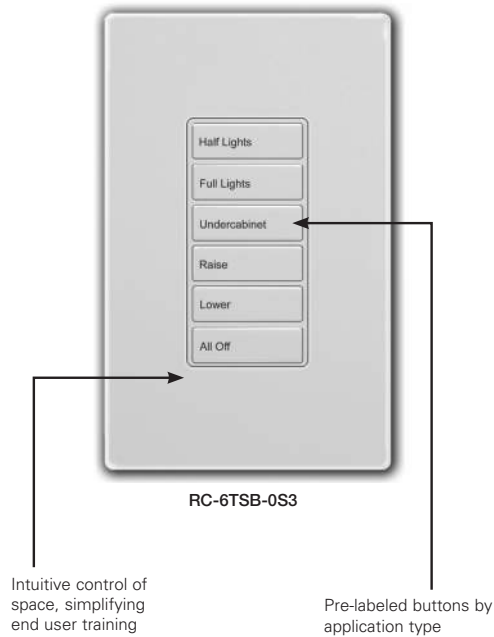
Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The zone wallstations are pre-engraved low-voltage switches that operate on 24 VDC power supplied by the Room Controller or DLVP power module. Each wallstation is designed to fit in a standard decorator opening and has two RJ45 ports for local network connections to eliminate wiring errors.

Features

- Low-voltage control for ON/OFF and dimming loads
- Pre-terminated control cable ready with RJ45 ports eliminate wiring errors
- Available in 2, 3, 4, 5, 6 button models designed to fit in decorator wallplates (included)
- Wallstations can be used for multi-way control
- Custom engraving options available - buttons may be replaced in the field



Powering Business Worldwide



Zone Wallstation

September 2016

Specifications

Voltage	24 VDC supplied from Room Controller
Electrical	Class 2, LPS
Connection Ports	Two RJ45 ports
Button Configurations	Large buttons: 2 or 3 Small buttons: 2, 4, 5, 6
Installation	Standard decorator opening
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) Relative humidity: Less than 95%, non-condensing For indoor use only
Size	4.75"H x 3.25"W (121mm x 83mm)
Standards	UL 508 Listed

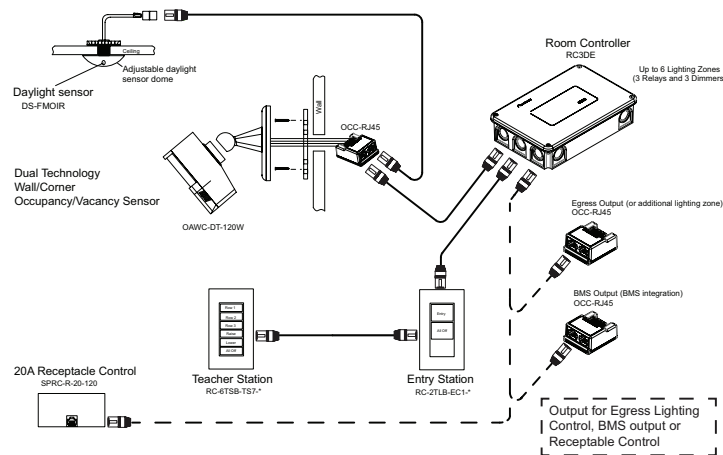
Description/Operation

The zone wallstations are pre-terminated control cable (ordered separately) ready and work immediately upon power up. Zone wallstations for office, classroom, patient room, conference room and general areas are available and are fully functional out-of-the-box removing the need for field programming and reducing installation time.

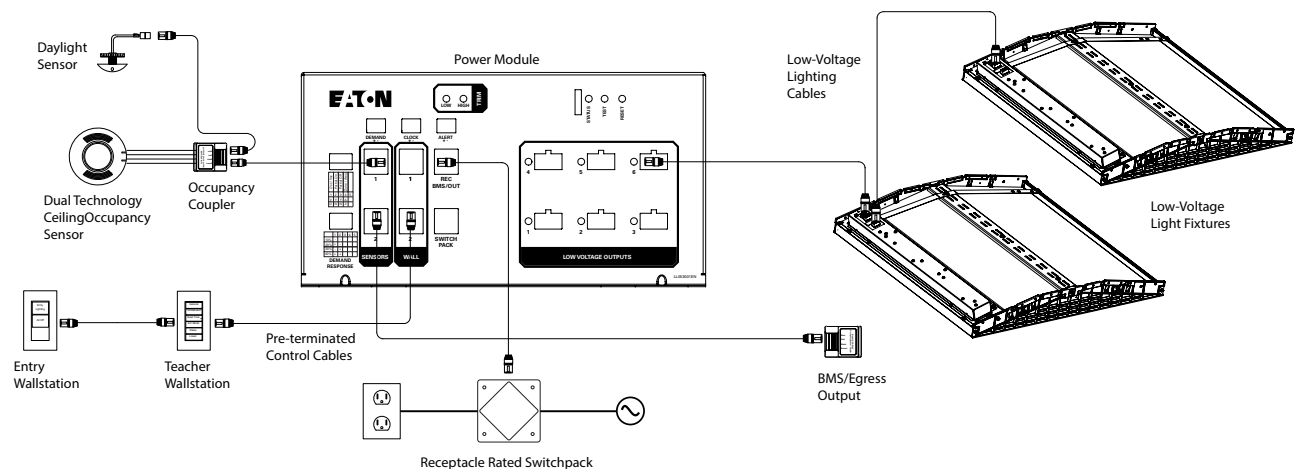
Installation

Low-voltage devices are connected using provided pre-terminated control cables (ordered separately).

Sample Room Controller System Topology



DLVP System Topology



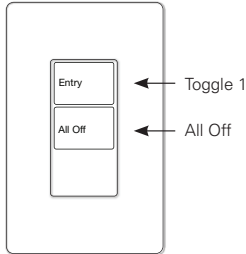


Zone Wallstation

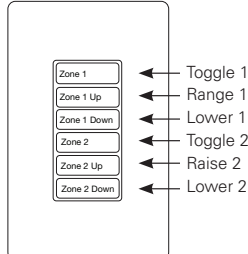
September 2016

Sample Wallstations

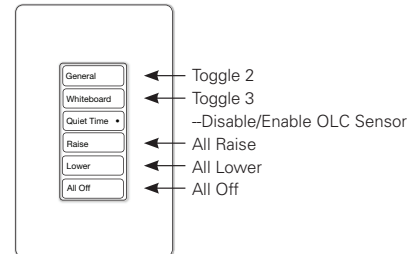
*Not All Configurations Shown



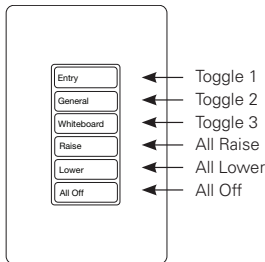
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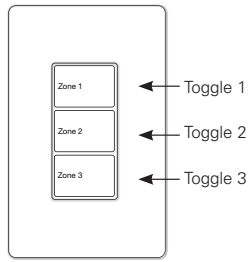
RC-6TSB-623



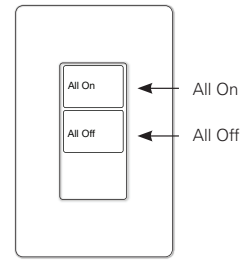
RC-6TSB-TS2



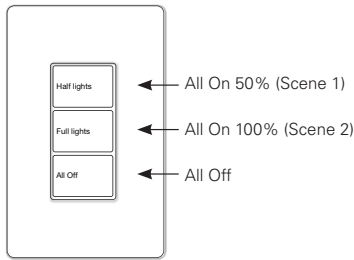
RC-6TSB-TS6



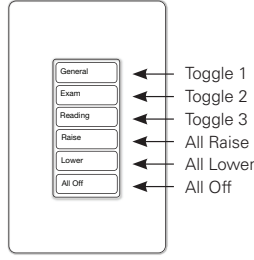
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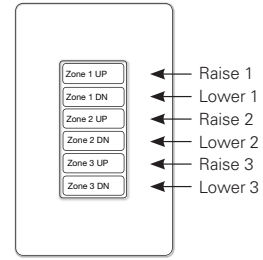
RC-2TLB-OS4



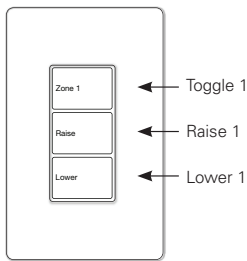
RC-3TLB-OS1



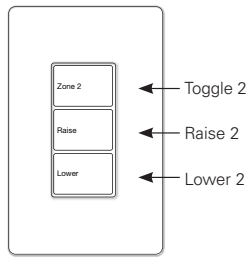
RC-6TSB-HC2



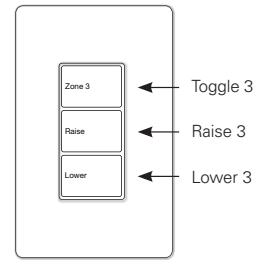
RC-6TSB-ZAD



RC-3TLB-Z1D



RC-3TLB-Z2D



RC-3TLB-Z3D

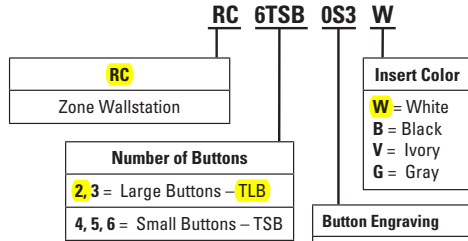


Zone Wallstation

September 2016

Ordering

One single gang wallplate included



Button Engraving	Command Reference Table
101 = Zone 1(1 TLB)	101 = 1
102 = Zone 2 (1 TLB)	102 = 2
103 = Zone 3 (1 TLB)	103 = 11
221 = Zone 1, Zone 2 (2TLB)	221 = 1, 2
321 = Zone 1, Zone 2, All Off (3TLB)	321 = 1, 2, 8
331 = Zone 1, Zone 2, Zone 3 (3TLB)	331 = 1, 2, 11
531 = Zone 1, Zone 2, Zone 3, Raise, Lower (5TSB)	531 = 1, 2, 11, 6, 7
621 = All On, Raise 1, Lower 1, Raise 2, Lower 2, All Off (6TSB)	621 = 16, 8, 17, 18, 19, 20
623 = Zone 1, Raise 1, Lower 1, Zone 2, Raise 2, Lower 2 (6TSB)	623 = 1, 17, 18, 2, 19, 20
631 = Zone 1, Zone 2, Zone 3, Raise, Lower, All Off (6TSB)	631 = 1, 2, 11, 6, 7, 8
ES1 = Entry, All OFF (2TLB)	ES1 = 1, 8
TS1 = General, Whiteboard, Quiet Time, A/V Mode, Raise, Lower (6TSB)	TS1 = 2, 3, 5, 4, 6, 7
TS2 = General, Whiteboard, Quiet Time, Raise, Lower All OFF (6TSB)	TS2 = 2, 3, 5, 6, 7, 8
TS3 = General, Whiteboard, Quiet Time, A/V Mode, All OFF (5TSB)	TS3 = 2, 3, 5, 4, 8
TS4 = General, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS4 = 2, 3, 4, 6, 7, 8
TS5 = Entry, General, Whiteboard, All OFF (4TSB)	TS5 = 1, 2, 3, 8
TS6 = Entry, General, Whiteboard, Raise, Lower, All OFF (6TSB)	TS6 = 1, 2, 3, 6, 7, 8
TS7 = Row 1, Row 2, Row 3, Raise, Lower, All OFF (6TSB)	TS7 = 1, 2, 3, 6, 7, 8
TS8 = Uplights, Downlights, Accent, Raise, Lower, All OFF (6TSB)	TS8 = 1, 2, 3, 6, 7, 8
TS9 = Entry, General, Quiet Time, Whiteboard, A/V Mode, All OFF (6TSB)	TS9 = 1, 2, 5, 3, 4, 8
TS10 = Main, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS10 = 1, 3, 4, 6, 7, 8
HC1 = General, Exam, Reading, All OFF (4TSB)	HC1 = 1, 2, 3, 8
HC2 = General, Exam, Reading, Raise, Lower, All OFF (6TSB)	HC2 = 1, 2, 3, 6, 7, 8
OS1 = Half Lights, Full Lights, All OFF (3TLB)	OS1 = 12,13, 8
OS2 = Half Lights, Full Lights, Raise, Lower, All OFF (5TSB)	OS2 = 12,13, 6, 7, 8
OS3 = Half Lights, Full Lights, Undercabinet, Raise, Lower, All OFF (6TSB)	OS3 = 12, 13, 11, 6, 7, 8
OS4 = All ON, All OFF (2 TLB)	OS4 = 10, 8
ZAD = Zone 1 UP, Zone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 UP, Zone 3 DN (6TSB)	ZAD = 17, 18, 19, 20, 21, 22
Z1D = Zone 1, Raise, Lower (3TLB)	Z1D = 1, 17, 18
Z2D = Zone 2, Raise, Lower (3TLB)	Z2D = 2, 19, 20
Z3D = Zone 3, Raise, Lower (3TLB)	Z3D = 3, 21, 22

Note: For custom configurations or custom engraving, see Zone Wallstation. Custom Text form found on www.eaton.com/lightingsolutions

*For reference only. Commands will not be engraved onto station.

*For reference only. Please see custom engraving form for full command actions.

Command #	Action
1	Toggle Load/Zone 1 (Also influences Receptacle Switchpack, Solatube, and Emergency)
2	Toggle Load/Zone 2 (Also influences Receptacle Switchpack)
3	Toggle Load/Zone 3
4	Toggle A/V mode B Scene 5
5	Disable/Re-enable Occupancy Sensor (After being disabled 60 minutes, the sensor automatically re-enables)
6	Raise all
7	Lower all
8	All Loads/Zones OFF
9	All Dimmers 50%, Relay 1 ON, Relay 2 OFF, Relay 3 unaffected DLVP-Zone 1=50%, Zone 2=OFF, Zone 3=unaffected
10	All Loads/Zones to 100% (Solatube closed)
11	Toggle Load/Zone 3 (influences Receptacle Switchpack)

Command #	Action
12	Go to Scene 1
13	Go to Scene 2
14	Go to Scene 3
15	Go to Scene 4
16	All Loads/Zones ON
17	Raise Zone 1
18	Lower Zone 1
19	Raise Zone 2
20	Lower Zone 2
21	Raise Zone 3
22	Lower Zone 3

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Technical Data **Greengate**

Room Controller

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Room Controller includes three relays and up to three 0-10 VDC dimming outputs to control compatible dimmable ballasts. The switching relays and 0-10 VDC outputs are controlled separately, allowing flexibility in wiring and control. The Room Controller is shipped preconfigured to work out-of-the-box when connected to Room Controller devices, allowing quick and easy daylighting controls, occupancy/vacancy sensing and manual switching.

Features

- Click & Go ready, RJ45 connections
- Preconfigured for automatic functionality upon power-up
- Manual or Automatic On, bi-level, tri-level and dimming control strategies
- Integral Demand Response input with four levels of preconfigured energy reduction
- Built in tubular lighting control with preconfigured wallstation controls
- Integral pillow speaker connections for GPCS (RC3DEHC)
- Integral Solatube® connection for classrooms
- Guaranteed compatibility with Cooper Lighting LED and 0-10V fluorescent fixtures
- Ladderless UL 924 Emergency Mode testing (RC3DE & RC3DEHC)



Model RC3D-PL Shown



Inside View



Room Controller

July 2015

Specifications

Size	11 1/2"H x 7 1/2"W x 2 1/4"D
Input/Output Voltage	120/277 VAC, 60Hz Maximum 20A combined load per Room Controller Ballast load: 20A @ 120/277 VAC Incandescent load: 15A @ 120 VAC Motor load: 1HP @ 120 VAC
Emergency Output (RC3DE/RC3DEHC only) UL 924	Ballast or Incandescent load: 3A
Class 2 Dimming Output	0-10 VDC, sinks up to 100mA per (40 µA max per circuit leakage to line) Each 0-10V output supports up to 50 ballasts/drivers that draw the standard 2mA each
LED Drivers	Requires isolated LED drivers for optimal performance
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) For indoor use
Standards	UL Approved UL 508 Listed UL 924 Listed



Description/Operation

The Room Controllers are connected to a 120 VAC or 277 VAC 20 Amp circuit to provide unit power and input power to the individual relays. The wallstations, occupancy/vacancy sensors, daylight sensors and receptacle control devices connect via QuickConnect cables (ordered separately) providing a Class 2 connection. Upon power up the pre-engraved wallstation automatically controls the On/Off relays adjust the dimming outputs. The daylight sensor will immediately adjust the lighting levels based on natural light.

Installation

The line voltage section of the Room Controller provides the installing contractor space to make all line voltage connections and direct conduit access, reducing the need for additional junction boxes, while providing easy access to line voltage circuits. Low voltage devices are connected using Cat5 cables (ordered separately).

UL 924 relay is provided on some units for automatic emergency lighting control. The UL 924 relay automatically tracks with output 1 and can be connected to any of the three 0-10V dimmers. The UL 924 relay automatically closes and disconnects the 0-10V control open loss of normal power providing adequate egress lighting control. Ladderless maintenance testing of the UL 924 relay can be achieved by pressing the ALL OFF button four times.



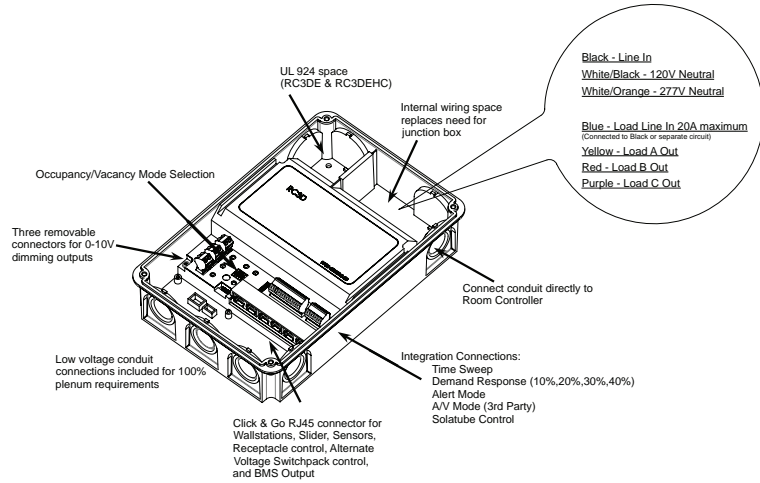
Room Controller

July 2015

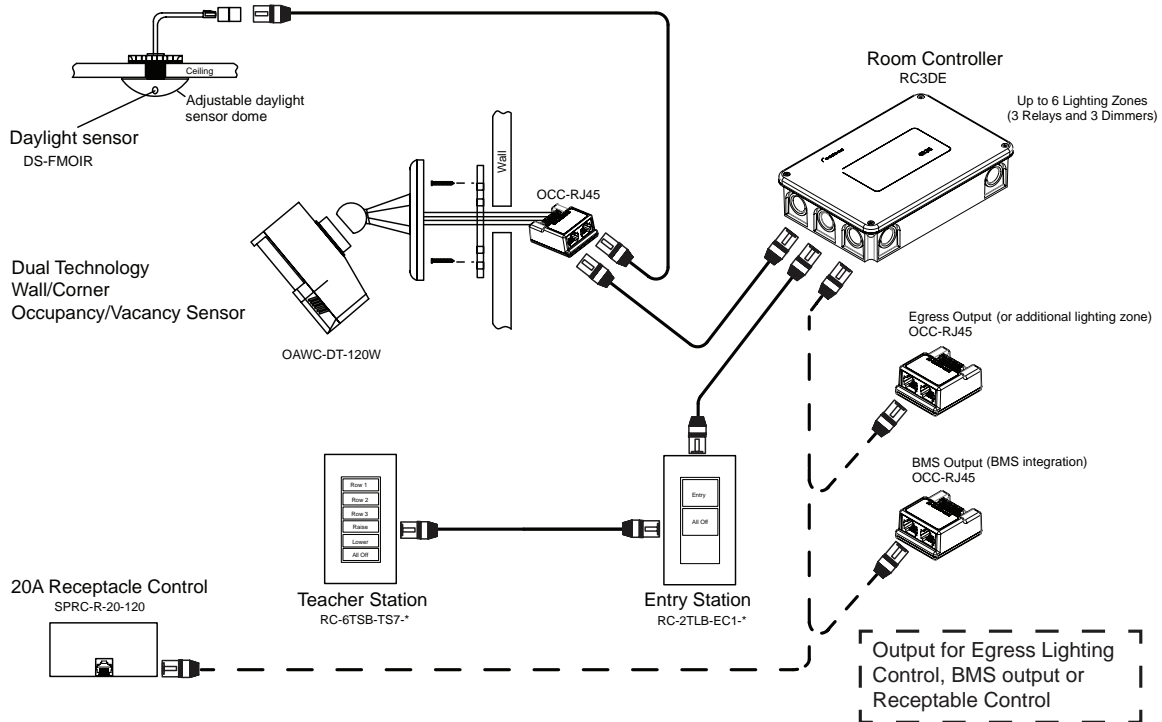
Wiring Diagram

Room Controller Feature Comparison Chart

Product Feature	RC3	RC3D	RC3DE	RC3DEHC
Number of Relays	3	3	3	3
Number of Dimmers	0	3	3	3
Number of Integral UL 924 Relays	0	0	1-3 Amp	1-3 Amp
Number of Wallstations	4	4	4	4
Number of Sliders	0	1	1	1
Number of Powered Sensors	2-Occ	2-Occ 1-DS	2-Occ 1-DS	2-Occ 1-DS
Number of Receptacle Controls	5	5	5	5
Integral Demand Response	No	Yes	Yes	No
BMS/Egress Output	Yes	Yes	Yes	Yes
Integral Solatube	No	No	Yes	Yes
Integral Alert Mode	Yes	Yes	Yes	No
Integral After Hours Input	Yes	Yes	Yes	No
Integral Pillow Speaker Connection	No	No	No	Yes



Room Connections





Room Controller

July 2015

Ordering

Catalog #	Description	Voltage	Ballast/Incandescent
RC3	3 Relays	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D	3 relays, 3 0-10V dimming	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE	3 relays, 3 0-10V dimming, UL 924	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC	3 relays, 3 0-10V dimming, UL 924 for healthcare	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3-PL	3 Relays, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL	3 relays, 3 0-10V dimming, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL	3 relays, 3 0-10V dimming, UL 924, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL	3 relays, 3 0-10V dimming, UL 924 for healthcare, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A

Additional Options

Catalog #	Description
GGRC-COUPLER	RJ45 Coupler
GGRC-SPLITTER	RJ45 Splitter
GGRJ45-006-G	RJ45 cables 6 inches
GGRJ45-03-G	RJ45 cables 3 feet
GGRJ45-10-G	RJ45 cables 10 feet
GGRJ45-25-G	RJ45 cables 25 feet
GGRJ45-50-G	RJ45 cables 50 feet
GGRJ45-100-G	RJ45 cables 100 feet
GGRJ45-10P-G	RJ45 cables 10 feet plenum rated
GGRJ45-25P-G	RJ45 cables 25 feet plenum rated
GGRJ45-50P-G	RJ45 cables 50 feet plenum rated
GGRJ45-100P-G	RJ45 cables 100 feet plenum rated

Note: Please refer to the Room Controller page on our website for more information

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Technical Data

Effective September 1, 2016

Zone Wallstation

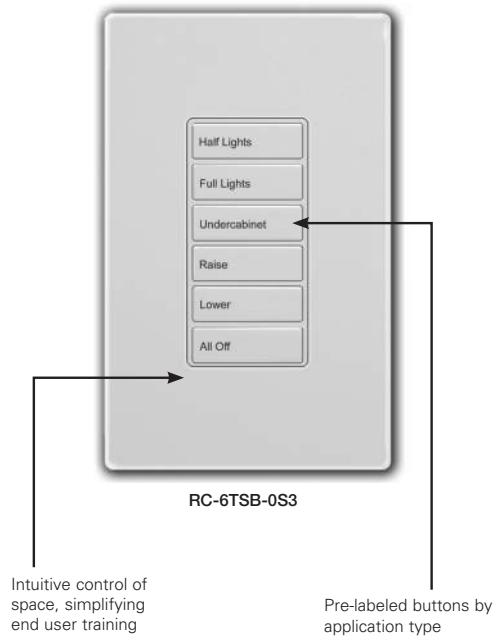
Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The zone wallstations are pre-engraved low-voltage switches that operate on 24 VDC power supplied by the Room Controller or DLVP power module. Each wallstation is designed to fit in a standard decorator opening and has two RJ45 ports for local network connections to eliminate wiring errors.

Features

- Low-voltage control for ON/OFF and dimming loads
- Pre-terminated control cable ready with RJ45 ports eliminate wiring errors
- Available in 2, 3, 4, 5, 6 button models designed to fit in decorator wallplates (included)
- Wallstations can be used for multi-way control
- Custom engraving options available - buttons may be replaced in the field



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Powering Business Worldwide



Zone Wallstation

September 2016

Specifications

Voltage	24 VDC supplied from Room Controller
Electrical	Class 2, LPS
Connection Ports	Two RJ45 ports
Button Configurations	Large buttons: 2 or 3 Small buttons: 2, 4, 5, 6
Installation	Standard decorator opening
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) Relative humidity: Less than 95%, non-condensing For indoor use only
Size	4.75"H x 3.25"W (121mm x 83mm)
Standards	UL 508 Listed

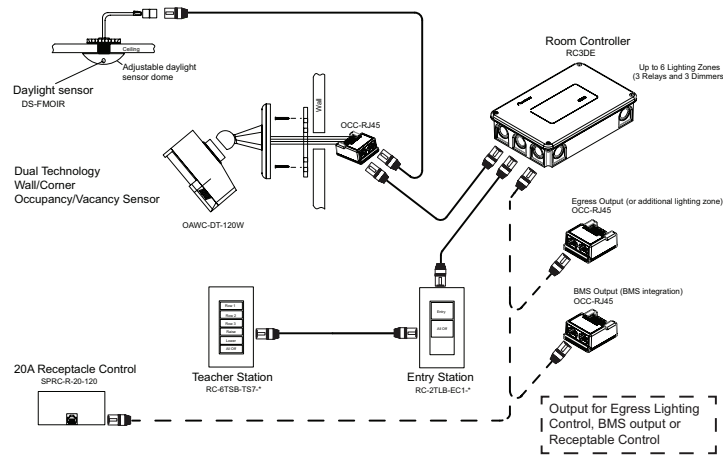
Description/Operation

The zone wallstations are pre-terminated control cable (ordered separately) ready and work immediately upon power up. Zone wallstations for office, classroom, patient room, conference room and general areas are available and are fully functional out-of-the-box removing the need for field programming and reducing installation time.

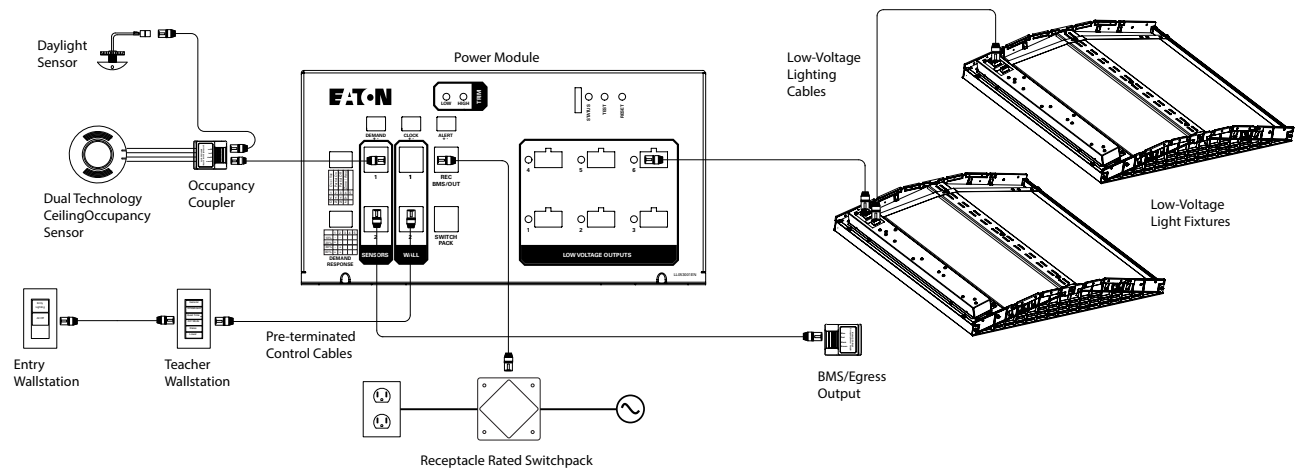
Installation

Low-voltage devices are connected using provided pre-terminated control cables (ordered separately).

Sample Room Controller System Topology



DLVP System Topology



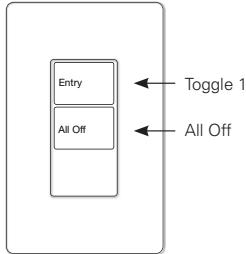


Zone Wallstation

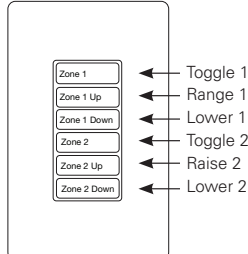
September 2016

Sample Wallstations

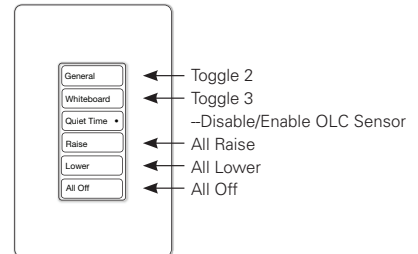
*Not All Configurations Shown



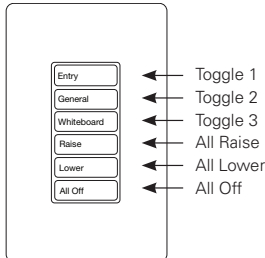
RC-2TLB-ES1



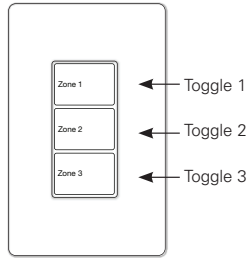
RC-6TSB-623



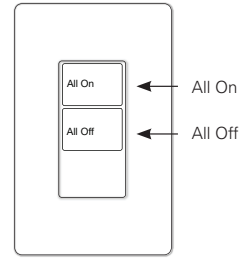
RC-6TSB-TS2



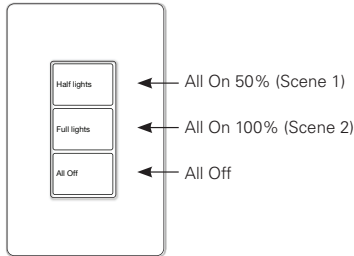
RC-6TSB-TS6



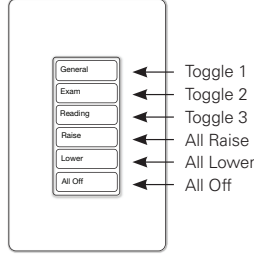
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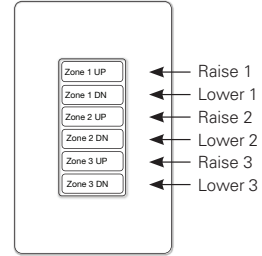
RC-2TLB-OS4



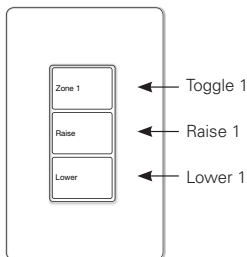
RC-3TLB-OS1



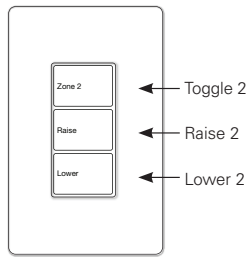
RC-6TSB-HC2



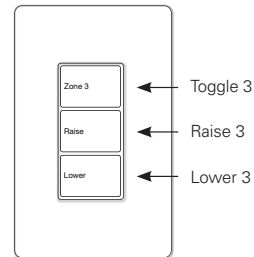
RC-6TSB-ZAD



RC-3TLB-Z1D



RC-3TLB-Z2D



RC-3TLB-Z3D

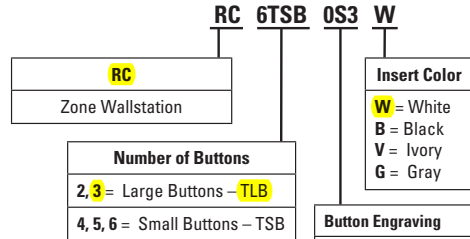


Zone Wallstation

September 2016

Ordering

One single gang wallplate included



Button Engraving	Command Reference Table
101 = Zone 1(1 TLB)	101 = 1
102 = Zone 2 (1 TLB)	102 = 2
103 = Zone 3 (1 TLB)	103 = 11
221 = Zone 1, Zone 2 (2TLB)	221 = 1, 2
321 = Zone 1, Zone 2, All Off (3TLB)	321 = 1, 2, 8
331 = Zone 1, Zone 2, Zone 3 (3TLB)	331 = 1, 2, 11
531 = Zone 1, Zone 2, Zone 3, Raise, Lower (5TSB)	531 = 1, 2, 11, 6, 7
621 = All On, Raise 1, Lower 1, Raise 2, Lower 2, All Off (6TSB)	621 = 16, 8, 17, 18, 19, 20
623 = Zone 1, Raise 1, Lower 1, Zone 2, Raise 2, Lower 2 (6TSB)	623 = 1, 17, 18, 2, 19, 20
631 = Zone 1, Zone 2, Zone 3, Raise, Lower, All Off (6TSB)	631 = 1, 2, 11, 6, 7, 8
ES1 = Entry, All OFF (2TLB)	ES1 = 1, 8
TS1 = General, Whiteboard, Quiet Time, A/V Mode, Raise, Lower (6TSB)	TS1 = 2, 3, 5, 4, 6, 7
TS2 = General, Whiteboard, Quiet Time, Raise, Lower All OFF (6TSB)	TS2 = 2, 3, 5, 6, 7, 8
TS3 = General, Whiteboard, Quiet Time, A/V Mode, All OFF (5TSB)	TS3 = 2, 3, 5, 4, 8
TS4 = General, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS4 = 2, 3, 4, 6, 7, 8
TS5 = Entry, General, Whiteboard, All OFF (4TSB)	TS5 = 1, 2, 3, 8
TS6 = Entry, General, Whiteboard, Raise, Lower, All OFF (6TSB)	TS6 = 1, 2, 3, 6, 7, 8
TS7 = Row 1, Row 2, Row 3, Raise, Lower, All OFF (6TSB)	TS7 = 1, 2, 3, 6, 7, 8
TS8 = Uplights, Downlights, Accent, Raise, Lower, All OFF (6TSB)	TS8 = 1, 2, 3, 6, 7, 8
TS9 = Entry, General, Quiet Time, Whiteboard, A/V Mode, All OFF (6TSB)	TS9 = 1, 2, 5, 3, 4, 8
TS10 = Main, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS10 = 1, 3, 4, 6, 7, 8
HC1 = General, Exam, Reading, All OFF (4TSB)	HC1 = 1, 2, 3, 8
HC2 = General, Exam, Reading, Raise, Lower, All OFF (6TSB)	HC2 = 1, 2, 3, 6, 7, 8
OS1 = Half Lights, Full Lights, All OFF (3TLB)	OS1 = 12,13, 8
OS2 = Half Lights, Full Lights, Raise, Lower, All OFF (5TSB)	OS2 = 12,13, 6, 7, 8
OS3 = Half Lights, Full Lights, Undercabinet, Raise, Lower, All OFF (6TSB)	OS3 = 12, 13, 11, 6, 7, 8
OS4 = All ON, All OFF (2 TLB)	OS4 = 10, 8
ZAD = Zone 1 UP, Zone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 UP, Zone 3 DN (6TSB)	ZAD = 17, 18, 19, 20, 21, 22
Z1D = Zone 1, Raise, Lower (3TLB)	Z1D = 1, 17, 18
Z2D = Zone 2, Raise, Lower (3TLB)	Z2D = 2, 19, 20
Z3D = Zone 3, Raise, Lower (3TLB)	Z3D = 3, 21, 22

Note: For custom configurations or custom engraving, see Zone Wallstation. Custom Text form found on www.eaton.com/lightingsolutions

*For reference only. Commands will not be engraved onto station.

*For reference only. Please see custom engraving form for full command actions.

Command #	Action
1	Toggle Load/Zone 1 (Also influences Receptacle Switchpack, Solatube, and Emergency)
2	Toggle Load/Zone 2 (Also influences Receptacle Switchpack)
3	Toggle Load/Zone 3
4	Toggle A/V mode B Scene 5
5	Disable/Re-enable Occupancy Sensor (After being disabled 60 minutes, the sensor automatically re-enables)
6	Raise all
7	Lower all
8	All Loads/Zones OFF
9	All Dimmers 50%, Relay 1 ON, Relay 2 OFF, Relay 3 unaffected DLVP-Zone 1=50%, Zone 2=OFF, Zone 3=unaffected
10	All Loads/Zones to 100% (Solatube closed)
11	Toggle Load/Zone 3 (influences Receptacle Switchpack)

Command #	Action
12	Go to Scene 1
13	Go to Scene 2
14	Go to Scene 3
15	Go to Scene 4
16	All Loads/Zones ON
17	Raise Zone 1
18	Lower Zone 1
19	Raise Zone 2
20	Lower Zone 2
21	Raise Zone 3
22	Lower Zone 3

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 September 28, 2016



SP15 & SP20 – Heavy Duty Switchpacks

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

Switchpacks provide 15 VDC operating voltage to all low voltage, 15 VDC occupancy sensors and daylighting controllers. A single switchpack can provide power for up to five sensors. Up to ten switchpacks can be connected to one sensor for control of multiple circuits. Isolated contacts may also be used to control HVAC, contactors, motors, etc.

Features

- Replaces separate transformers and relays
- Zero-crossing circuit provides increased durability, especially with today's high inrush loads
- Capable of switching up to 20 Amps
- Suitable for Plenum use
- Rated for Ballast, Tungsten and Motor Loads

Can be easily mounted on or in a 4"sq. junction box, via 1/2" in nipple



Available for 120, 220, 240, 277 & 347 VAC operation



Powering Business Worldwide



Technical Data

November 2014

SP15 & SP20 – Heavy Duty Switchpacks

Specifications

Power Requirements	Input: (120/277 VAC-SP20-MV), (347 VAC-SP15-347), (220-240 VAC-SP20-240), 50/60 Hz operation. Contacts are isolated and may be used to control low voltage circuits
	Output: 15 VDC 125mA to operate up to five Greengate sensors
Control	Connecting the 22 AWG red and blue control leads to each other will close the relay contacts
Ballast Compatibility	Compatible with magnetic and electronic ballasts
NOTE	The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with the CFL and ballast manu- facturer to determine effects of cycling
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C)
	Relative humidity: Less than 95%, non-condensing For indoor use only
Housing	Medium impact injection molded housing. ABS resin complies with UL 94V-0. Plenum rated for external junction box mounting, with Teflon coated leads
Motor Load	1 HP 120-240 VAC; 2 HP 250 VAC
Size	2 15/16" x 2 7/16" x 1 11/16"
Mounting	Mounts to the side of a 4" square box via 1/2" knockout
Standards	UL, CSA Listed

Description/Operation

The switchpack has two main components: a transformer and one high current relay. The transformer has a primary line voltage input and a secondary low voltage output. The low voltage output, 15 VDC, provides operating power to connected low voltage Greengate occupancy sensors. When an occupancy sensor detects motion, it electrically closes an internal circuit, pulling up the control signal between the sensor and the switchpack. This signals the switchpack to close its high current relay, turning the connected load on.

Applications

The switchpack is designed to work with low voltage sensors which require switchpacks. It cannot be used with sensors designed for use with any other low voltage relay systems. Consult sensor spec sheets for other sensor relay combinations.

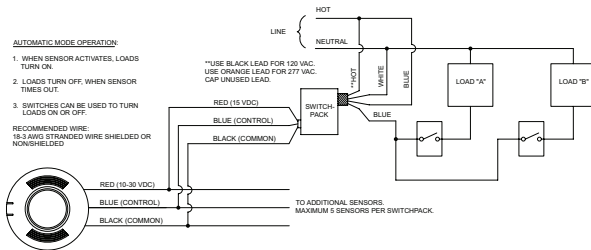


SP15 & SP20 – Heavy Duty Switchpacks

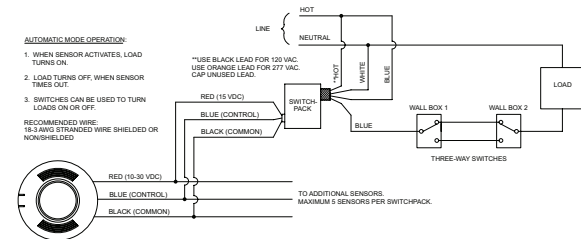
Technical Data
 November 2014

Wiring Diagrams

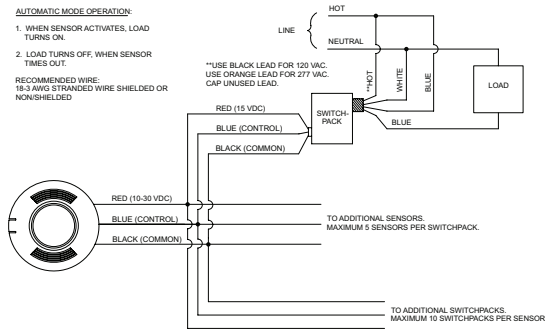
A/B Switching



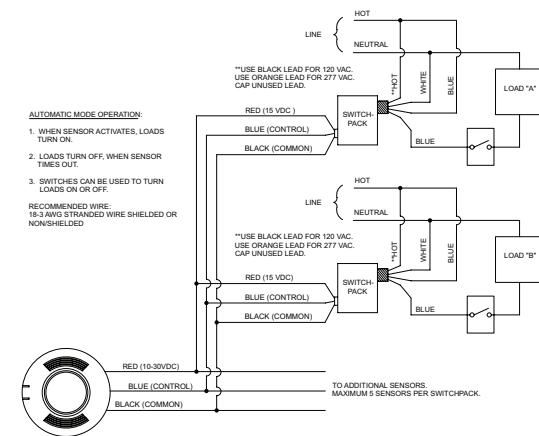
Three Way Switching



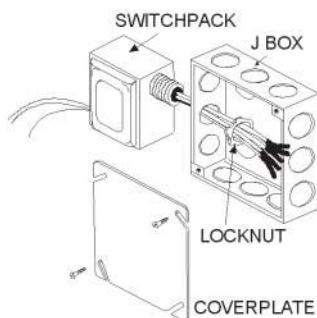
Standard Configuration



2 Circuits, 1 Sensor



Mounting



All connections are made via pigtails with twist-on wire connectors.

Note: Connect either the orange or black supply lead to the power source, depending upon the power requirements. Cap the unused lead.

Submitting Agency:



Description: **SP20-MV**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

L/C

Technical Data
November 2014

SP15 & SP20 – Heavy Duty Switchpacks

Ordering

Catalog #	Ratings	Ballast	Tungsten	Motor (HP)	Output
SP20-MV	120/277 VAC, 50/60 Hz	20A	15A, 120V	1HP-120V, 2HP-250V	15 VDC, 125mA
SP15-347	347 VAC, 50/60 Hz	15A	NR	NR	15 VDC, 125mA
SP20-240	220-240 VAC, 50/60 Hz	20A	NR	NR	15 VDC, 125mA

Eaton

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Technical Data
Greengate

Room Controller

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Room Controller includes three relays and up to three 0-10 VDC dimming outputs to control compatible dimmable ballasts. The switching relays and 0-10 VDC outputs are controlled separately, allowing flexibility in wiring and control. The Room Controller is shipped preconfigured to work out-of-the-box when connected to Room Controller devices, allowing quick and easy daylighting controls, occupancy/vacancy sensing and manual switching.

Features

- Click & Go ready, RJ45 connections
- Preconfigured for automatic functionality upon power-up
- Manual or Automatic On, bi-level, tri-level and dimming control strategies
- Integral Demand Response input with four levels of preconfigured energy reduction
- Built in tubular lighting control with preconfigured wallstation controls
- Integral pillow speaker connections for GPCS (RC3DEHC)
- Integral Solatube® connection for classrooms
- Guaranteed compatibility with Cooper Lighting LED and 0-10V fluorescent fixtures
- Ladderless UL 924 Emergency Mode testing (RC3DE & RC3DEHC)



Model RC3D-PL Shown



Inside View

EATON
Powering Business Worldwide



Room Controller

July 2015

Specifications

Size	11 1/2"H x 7 1/2"W x 2 1/4"D
Input/Output Voltage	120/277 VAC, 60Hz Maximum 20A combined load per Room Controller Ballast load: 20A @ 120/277 VAC Incandescent load: 15A @ 120 VAC Motor load: 1HP @ 120 VAC
Emergency Output (RC3DE/RC3DEHC only) UL 924	Ballast or Incandescent load: 3A
Class 2 Dimming Output	0-10 VDC, sinks up to 100mA per (40 µA max per circuit leakage to line) Each 0-10V output supports up to 50 ballasts/drivers that draw the standard 2mA each
LED Drivers	Requires isolated LED drivers for optimal performance
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) For indoor use
Standards	UL Approved UL 508 Listed UL 924 Listed

**Description/Operation**

The Room Controllers are connected to a 120 VAC or 277 VAC 20 Amp circuit to provide unit power and input power to the individual relays. The wallstations, occupancy/vacancy sensors, daylight sensors and receptacle control devices connect via QuickConnect cables (ordered separately) providing a Class 2 connection. Upon power up the pre-engraved wallstation automatically controls the On/Off relays adjust the dimming outputs. The daylight sensor will immediately adjust the lighting levels based on natural light.

Installation

The line voltage section of the Room Controller provides the installing contractor space to make all line voltage connections and direct conduit access, reducing the need for additional junction boxes, while providing easy access to line voltage circuits. Low voltage devices are connected using Cat5 cables (ordered separately).

UL 924 relay is provided on some units for automatic emergency lighting control. The UL 924 relay automatically tracks with output 1 and can be connected to any of the three 0-10V dimmers. The UL 924 relay automatically closes and disconnects the 0-10V control open loss of normal power providing adequate egress lighting control. Ladderless maintenance testing of the UL 924 relay can be achieved by pressing the ALL OFF button four times.



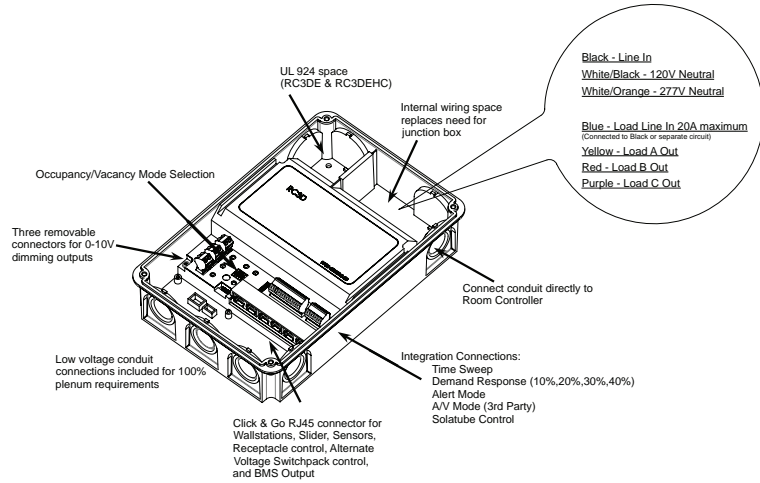
Room Controller

July 2015

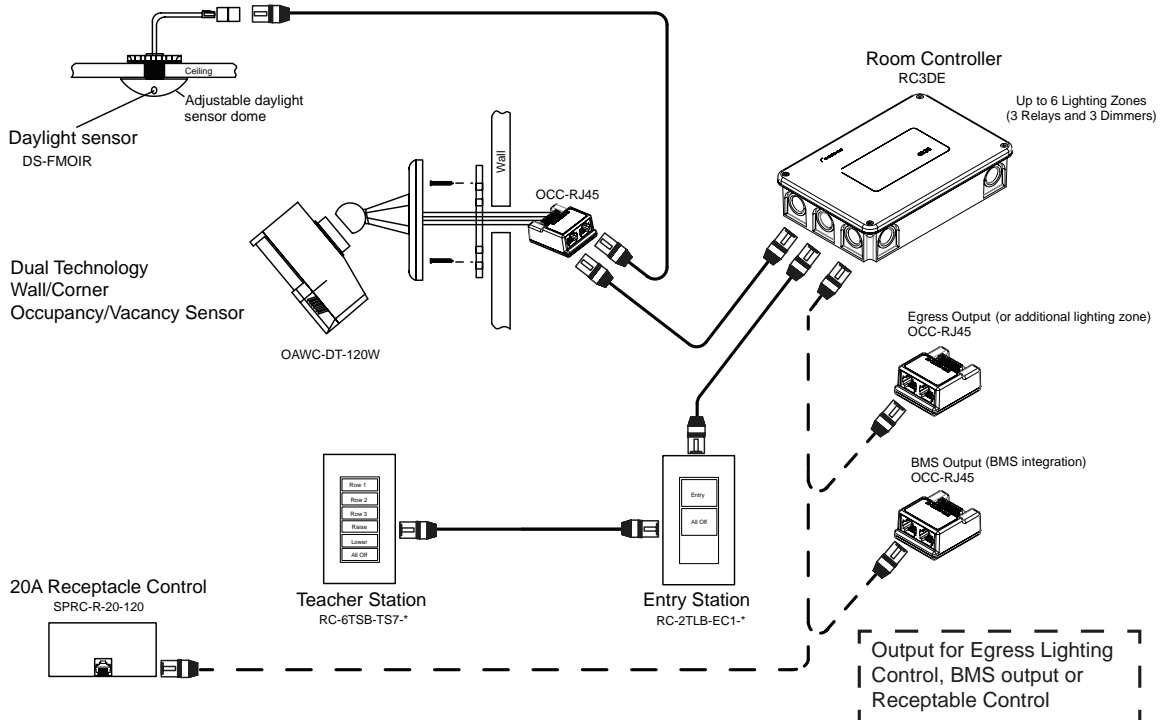
Wiring Diagram

Room Controller Feature Comparison Chart

Product Feature	RC3	RC3D	RC3DE	RC3DEHC
Number of Relays	3	3	3	3
Number of Dimmers	0	3	3	3
Number of Integral UL 924 Relays	0	0	1-3 Amp	1-3 Amp
Number of Wallstations	4	4	4	4
Number of Sliders	0	1	1	1
Number of Powered Sensors	2-Occ	2-Occ 1-DS	2-Occ 1-DS	2-Occ 1-DS
Number of Receptacle Controls	5	5	5	5
Integral Demand Response	No	Yes	Yes	No
BMS/Egress Output	Yes	Yes	Yes	Yes
Integral Solatube	No	No	Yes	Yes
Integral Alert Mode	Yes	Yes	Yes	No
Integral After Hours Input	Yes	Yes	Yes	No
Integral Pillow Speaker Connection	No	No	No	Yes



Room Connections





Room Controller

July 2015

Ordering

Catalog #	Description	Voltage	Ballast/Incandescent
RC3	3 Relays	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D	3 relays, 3 0-10V dimming	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE	3 relays, 3 0-10V dimming, UL 924	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC	3 relays, 3 0-10V dimming, UL 924 for healthcare	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3-PL	3 Relays, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL	3 relays, 3 0-10V dimming, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL	3 relays, 3 0-10V dimming, UL 924, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL	3 relays, 3 0-10V dimming, UL 924 for healthcare, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A

Additional Options

Catalog #	Description
GGRC-COUPLER	RJ45 Coupler
GGRC-SPLITTER	RJ45 Splitter
GGRJ45-006-G	RJ45 cables 6 inches
GGRJ45-03-G	RJ45 cables 3 feet
GGRJ45-10-G	RJ45 cables 10 feet
GGRJ45-25-G	RJ45 cables 25 feet
GGRJ45-50-G	RJ45 cables 50 feet
GGRJ45-100-G	RJ45 cables 100 feet
GGRJ45-10P-G	RJ45 cables 10 feet plenum rated
GGRJ45-25P-G	RJ45 cables 25 feet plenum rated
GGRJ45-50P-G	RJ45 cables 50 feet plenum rated
GGRJ45-100P-G	RJ45 cables 100 feet plenum rated

Note: Please refer to the Room Controller page on our website for more information

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Technical Data
Greengate

CEPC – Emergency Power Control

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Emergency Power Control (CEPC) device allows the control of emergency lighting by any Greengate lighting control panel or occupancy sensor.

Features

- Eliminates energy waste by allowing emergency lighting to be switched
- Fail safe operation
- Visible emergency power LED
- Visible regular power LED
- Integral test switch
- Automatic Diagnostic Test Feature – 2.5 second emergency test when load is turned off (CEPC-1 only)
- Senses local circuit power loss
- UL 924 listed, meets NEC, OSHA and NFPA safety codes




CEPC-1



CEPC – Emergency Power Control

April 2015

Specifications

Connections	Normal Power Sensing: 120V or 277V
	Emergency Power: 120V or 277V
	Normal Power Switching: 120V or 277V
Load Ratings	20A Ballast Load Rating
	1800W Incandescent Load Rating at 120V
	1500W Incandescent Load Rating at 277V (CEPC-1 only)
Size	Body Size: 2.875"H x 1.75"W x 1.75"D
	Flushmount Size: 4.75"H x 2.75"W x 0.25"D
Mounting	Mounts to a 4.688" junction box with single gang plater ring
	UL 94-5VA Rated Plastic
Color	White
Operating Environment	Temperature: 32°F - 140°F (0°C - 60°C)
	For indoor use only
Compatibility	CEPC-1: Greengate LiteKeeper, ControlKeeper Relay Panels and Occupancy Sensor
	CEPC-1-D: Greengate ControlKeeper 4A or Room Controller
Standards	UL Approved
	UL 924 Listed 

Description/Operation

The CEPC senses a local, single normal power circuit. As long as normal power is present, the CEPC permits normal and emergency switching of the lighting load from Greengate lighting control panels or occupancy sensors. If normal power is lost for any reason, the CEPC will force the connected emergency fixtures ON. The CEPC can be wired as either a control device along with a relay panel and occupancy sensor, or as a shunt to bypass line voltage devices when normal power fails. The CEPC-1-D is a universally compatible device that allows control of 4-wire emergency dimming loads. When normal power is lost, the CEPC-1-D will force the emergency fixtures to the full bright condition. Both CEPC models include a test switch feature for verifying proper functionality. In addition, the CEPC-1 model also provides an automatic test feature. Under normal operation, when the controlled load is turned OFF, the emergency lighting will remain ON an additional 2.5 seconds, providing safety and convenience while leaving the area and eliminating the need of special equipment to test the emergency control of the device.

Installation

The CEPC can be installed down line of a Greengate lighting control panel or occupancy sensor and switchpack. The CEPC should be located next to the emergency fixture it is controlling.

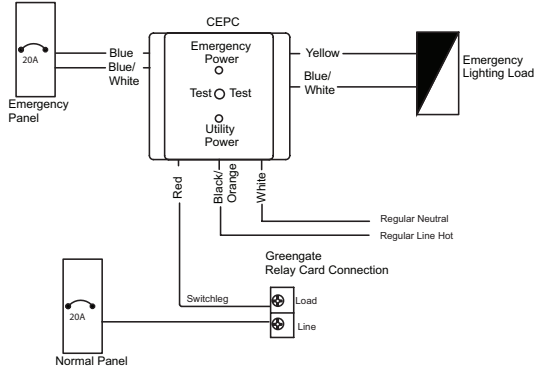


CEPC – Emergency Power Control

April 2015

Wiring Diagrams

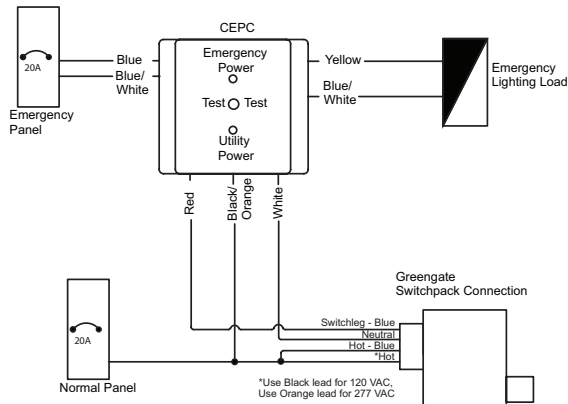
Wiring Diagram for 2-Wire Non-Dimming Loads (w/ Relay Panel)



2-Wire Non-Dimmed

CEPC Wire #	Description	iLumin Connection
Blue	Emergency Hot	
Yellow	Emergency Switchleg	
Blue/White	Emergency Neutral	
Black/Orange	Regular Hot (Sensing)	Transformer Power
Red	Switchleg	Relay Load Terminal Block
White	Regular Neutral	Transformer Neutral Wire

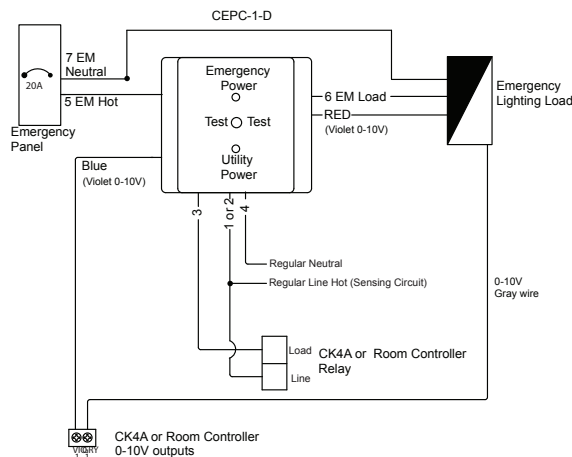
Wiring Diagram for 2-Wire Non-Dimming Loads (w/ Switchpack)



2-Wire Non-Dimmed

CEPC Wire #	Description	Greengate Switchpack Connection
Blue	Emergency Hot	
Yellow	Emergency Switchleg	
Blue/White	Emergency Neutral	
Black/Orange	Regular Hot (Sensing)	Regular Hot
Red	Switchleg	Switchpack Load Terminal Block
White	Regular Neutral	Regular Neutral

Wiring Diagram for 4-Wire Dimming Loads



4-Wire Dimming

CEPC-1-D Wire #	Color	Description	Greengate Connection
1	Black	Regular Hot (120V)	Constant Hot and Relay Line
2	Orange	Regular Hot (277V)	Constant Hot and Relay Line
3	Red	Switched Hot	Relay Load
4	White	Regular Neutral	
5	Blue	Emergency Hot	
6	Yellow	Emergency Load Hot	
7	White/Blue	Emergency Neutral	
	Blue	Dimmer Violet (0-10V +)	Panel Dimmer Output Violet
	Red	To Load Violet (0-10V +)	
	Black	Cap Off	

Submitting Agency:



Description: **CEPC-1**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

L/C

CEPC – Emergency Power Control

April 2015

Ordering

This is an accessory for Greengate Lighting Control Panels and Greengate Occupancy Sensors. When ordering, specify the CEPC as a separate accessory.

Model	Description	Rating
CEPC-1	Emergency Power Control	120V or 277V
CEPC-1-D	0-10V Load Emergency Power Control 120V	120V or 277V
CEPC-1-UM	Emergency Power Control (Made in USA)	120V or 277V
CEPC-1-CUL	Emergency Power Control for Canada	120V or 277V
CEPC-1-D-CUL	0-10V Load Emergency Power Control for Canada	120V or 277V

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Technical Data Effective September 1, 2016

Zone Wallstation

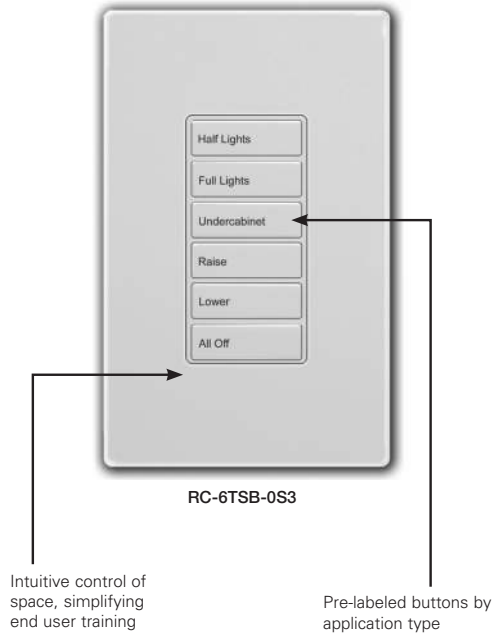
Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The zone wallstations are pre-engraved low-voltage switches that operate on 24 VDC power supplied by the Room Controller or DLVP power module. Each wallstation is designed to fit in a standard decorator opening and has two RJ45 ports for local network connections to eliminate wiring errors.

Features

- Low-voltage control for ON/OFF and dimming loads
- Pre-terminated control cable ready with RJ45 ports eliminate wiring errors
- Available in 2, 3, 4, 5, 6 button models designed to fit in decorator wallplates (included)
- Wallstations can be used for multi-way control
- Custom engraving options available - buttons may be replaced in the field





Zone Wallstation

September 2016

Specifications

Voltage	24 VDC supplied from Room Controller
Electrical	Class 2, LPS
Connection Ports	Two RJ45 ports
Button Configurations	Large buttons: 2 or 3 Small buttons: 2, 4, 5, 6
Installation	Standard decorator opening
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) Relative humidity: Less than 95%, non-condensing For indoor use only
Size	4.75"H x 3.25"W (121mm x 83mm)
Standards	UL 508 Listed

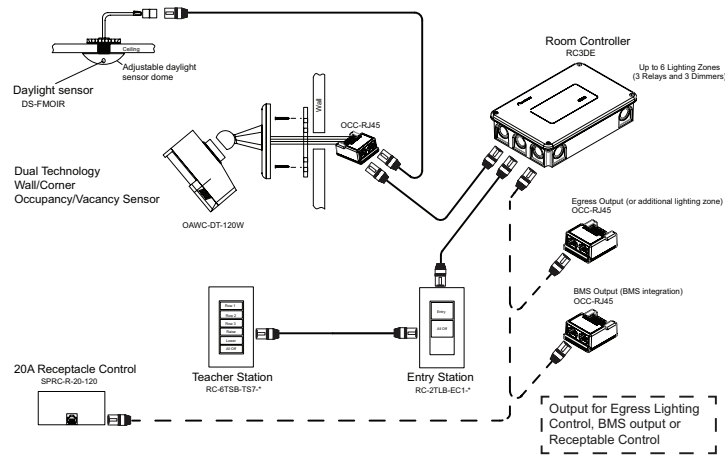
Description/Operation

The zone wallstations are pre-terminated control cable (ordered separately) ready and work immediately upon power up. Zone wallstations for office, classroom, patient room, conference room and general areas are available and are fully functional out-of-the-box removing the need for field programming and reducing installation time.

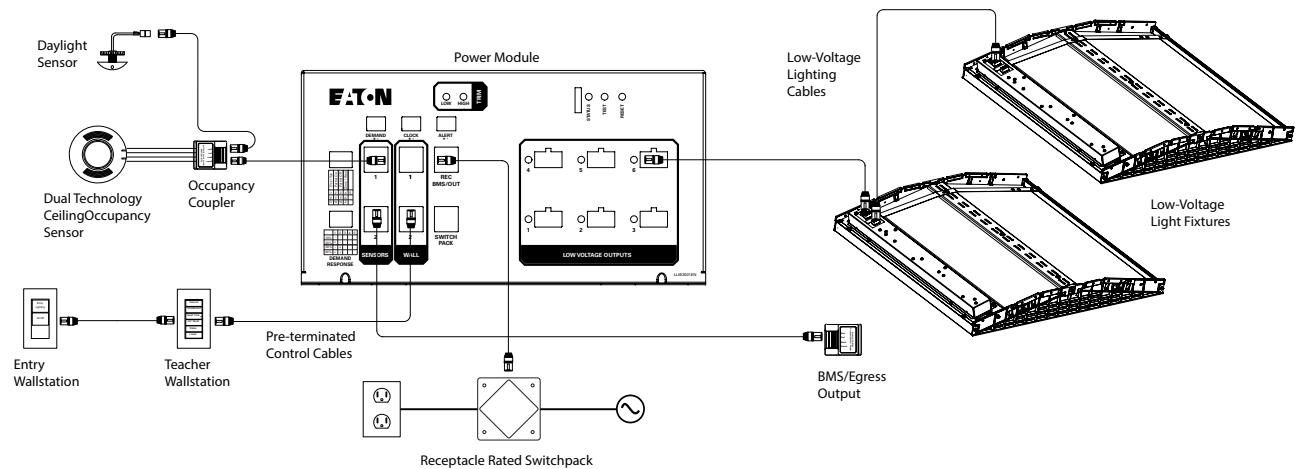
Installation

Low-voltage devices are connected using provided pre-terminated control cables (ordered separately).

Sample Room Controller System Topology



DLVP System Topology



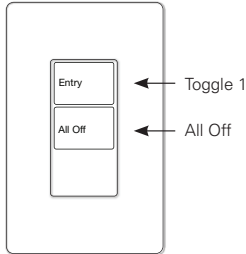


Zone Wallstation

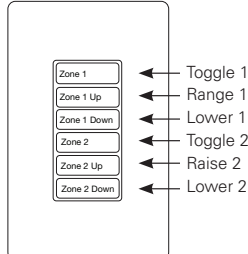
September 2016

Sample Wallstations

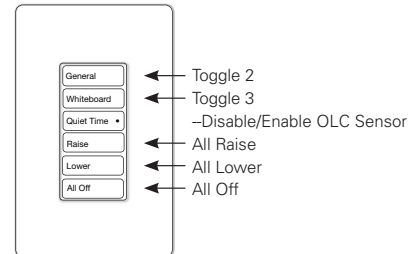
*Not All Configurations Shown



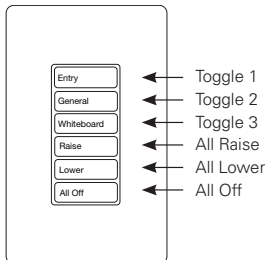
RC-2TLB-ES1



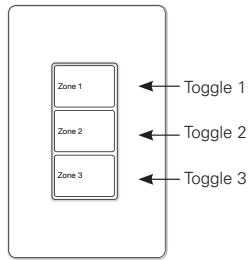
RC-6TSB-623



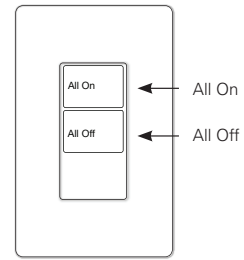
RC-6TSB-TS2



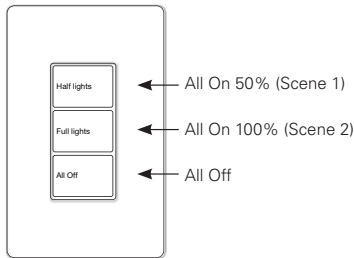
RC-6TSB-TS6



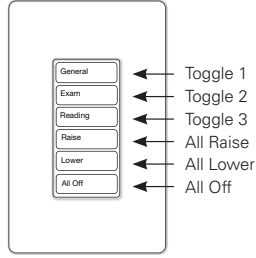
RC-3TLB-331



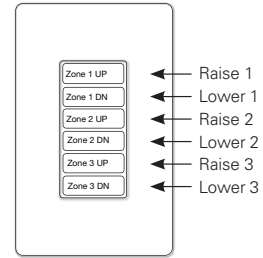
RC-2TLB-OS4



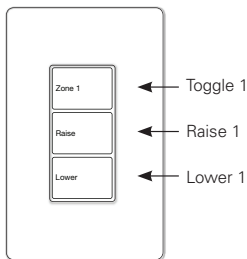
RC-3TLB-OS1



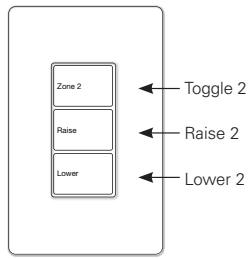
RC-6TSB-HC2



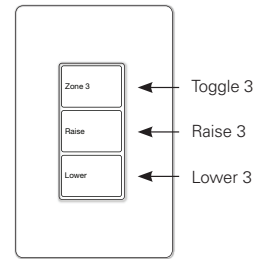
RC-6TSB-ZAD



RC-3TLB-Z1D



RC-3TLB-Z2D



RC-3TLB-Z3D

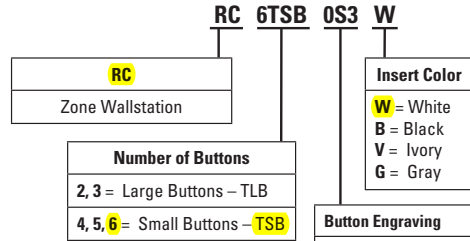


Zone Wallstation

September 2016

Ordering

One single gang wallplate included



Button Engraving	Command Reference Table
101 = Zone 1(1 TLB)	101 = 1
102 = Zone 2 (1 TLB)	102 = 2
103 = Zone 3 (1 TLB)	103 = 11
221 = Zone 1, Zone 2 (2TLB)	221 = 1, 2
321 = Zone 1, Zone 2, All Off (3TLB)	321 = 1, 2, 8
331 = Zone 1, Zone 2, Zone 3 (3TLB)	331 = 1, 2, 11
531 = Zone 1, Zone 2, Zone 3, Raise, Lower (5TSB)	531 = 1, 2, 11, 6, 7
621 = All On, Raise 1, Lower 1, Raise 2, Lower 2, All Off (6TSB)	621 = 16, 8, 17, 18, 19, 20
623 = Zone 1, Raise 1, Lower 1, Zone 2, Raise 2, Lower 2 (6TSB)	623 = 1, 17, 18, 2, 19, 20
631 = Zone 1, Zone 2, Zone 3, Raise, Lower, All Off (6TSB)	631 = 1, 2, 11, 6, 7, 8
ES1 = Entry, All OFF (2TLB)	ES1 = 1, 8
TS1 = General, Whiteboard, Quiet Time, A/V Mode, Raise, Lower (6TSB)	TS1 = 2, 3, 5, 4, 6, 7
TS2 = General, Whiteboard, Quiet Time, Raise, Lower All OFF (6TSB)	TS2 = 2, 3, 5, 6, 7, 8
TS3 = General, Whiteboard, Quiet Time, A/V Mode, All OFF (5TSB)	TS3 = 2, 3, 5, 4, 8
TS4 = General, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS4 = 2, 3, 4, 6, 7, 8
TS5 = Entry, General, Whiteboard, All OFF (4TSB)	TS5 = 1, 2, 3, 8
TS6 = Entry, General, Whiteboard, Raise, Lower, All OFF (6TSB)	TS6 = 1, 2, 3, 6, 7, 8
TS7 = Row 1, Row 2, Row 3, Raise, Lower, All OFF (6TSB)	TS7 = 1, 2, 3, 6, 7, 8
TS8 = Uplights, Downlights, Accent, Raise, Lower, All OFF (6TSB)	TS8 = 1, 2, 3, 6, 7, 8
TS9 = Entry, General, Quiet Time, Whiteboard, A/V Mode, All OFF (6TSB)	TS9 = 1, 2, 5, 3, 4, 8
TS10 = Main, Whiteboard, A/V Mode, Raise, Lower, All OFF (6TSB)	TS10 = 1, 3, 4, 6, 7, 8
HC1 = General, Exam, Reading, All OFF (4TSB)	HC1 = 1, 2, 3, 8
HC2 = General, Exam, Reading, Raise, Lower, All OFF (6TSB)	HC2 = 1, 2, 3, 6, 7, 8
OS1 = Half Lights, Full Lights, All OFF (3TLB)	OS1 = 12,13, 8
OS2 = Half Lights, Full Lights, Raise, Lower, All OFF (5TSB)	OS2 = 12,13, 6, 7, 8
OS3 = Half Lights, Full Lights, Undercabinet, Raise, Lower, All OFF (6TSB)	OS3 = 12, 13, 11, 6, 7, 8
OS4 = All ON, All OFF (2 TLB)	OS4 = 10, 8
ZAD = Zone 1 UP, Zone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 UP, Zone 3 DN (6TSB)	ZAD = 17, 18, 19, 20, 21, 22
Z1D = Zone 1, Raise, Lower (3TLB)	Z1D = 1, 17, 18
Z2D = Zone 2, Raise, Lower (3TLB)	Z2D = 2, 19, 20
Z3D = Zone 3, Raise, Lower (3TLB)	Z3D = 3, 21, 22

Note: For custom configurations or custom engraving, see Zone Wallstation. Custom Text form found on www.eaton.com/lightingsolutions

*For reference only. Commands will not be engraved onto station.

*For reference only. Please see custom engraving form for full command actions.

Command #	Action
1	Toggle Load/Zone 1 (Also influences Receptacle Switchpack, Solatube, and Emergency)
2	Toggle Load/Zone 2 (Also influences Receptacle Switchpack)
3	Toggle Load/Zone 3
4	Toggle A/V mode B Scene 5
5	Disable/Re-enable Occupancy Sensor (After being disabled 60 minutes, the sensor automatically re-enables)
6	Raise all
7	Lower all
8	All Loads/Zones OFF
9	All Dimmers 50%, Relay 1 ON, Relay 2 OFF, Relay 3 unaffected DLVP-Zone 1=50%, Zone 2=OFF, Zone 3=unaffected
10	All Loads/Zones to 100% (Solatube closed)
11	Toggle Load/Zone 3 (influences Receptacle Switchpack)

Command #	Action
12	Go to Scene 1
13	Go to Scene 2
14	Go to Scene 3
15	Go to Scene 4
16	All Loads/Zones ON
17	Raise Zone 1
18	Lower Zone 1
19	Raise Zone 2
20	Lower Zone 2
21	Raise Zone 3
22	Lower Zone 3

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 Publication No. TD503085EN
 September 28, 2016



Technical Data

Effective September 1, 2016

Input/Output Device

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Input/Output Device (OCC-RJ45) provides connection of any Greengate low voltage occupancy sensor, or other low voltage maintain closure, to the Room Controller or DLVP power module to define the occupancy state of the space. The OCC-RJ45 also can be used as an output to the HVAC system, third party systems or switchpacks based upon room occupancy status.

Features

- Input/Output integration
- Automatically provide Egress or HVAC integration based on room occupancy junction box
- Allows connection of standard switchpacks



Submitting Agency:



Description: **OCC-RJ45**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:


L/C

Technical Data

September 2016

Input/Output Device

Specifications

Electrical Rating	Class 2, LPS
Voltage	24 VDC supplied from Room Controller, DLVP power module or Switchpack
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) Less than 95%, non-condensing For indoor use only
Standards	UL 508 Listed 

Description/Operation

The Input/Output Device (OCC-RJ45) is ready and works immediately upon power up, providing Occupancy based inputs or outputs out-of-the-box, removing the need for field programming and reducing installation time.

Installation

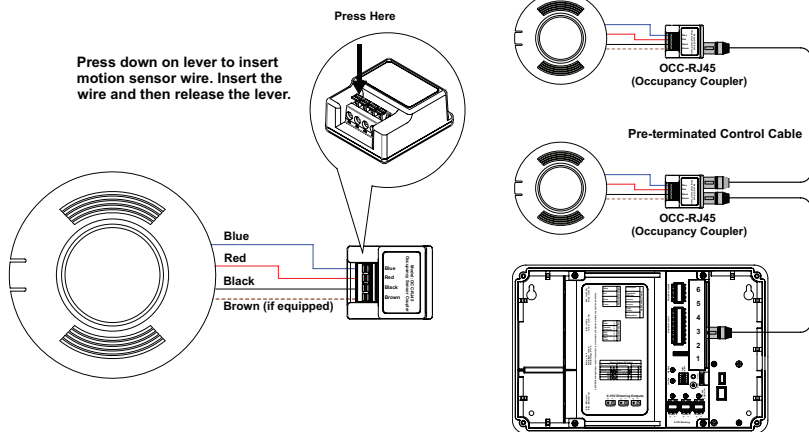
Low-voltage devices are connected using provided pre-terminated control cables (ordered separately).



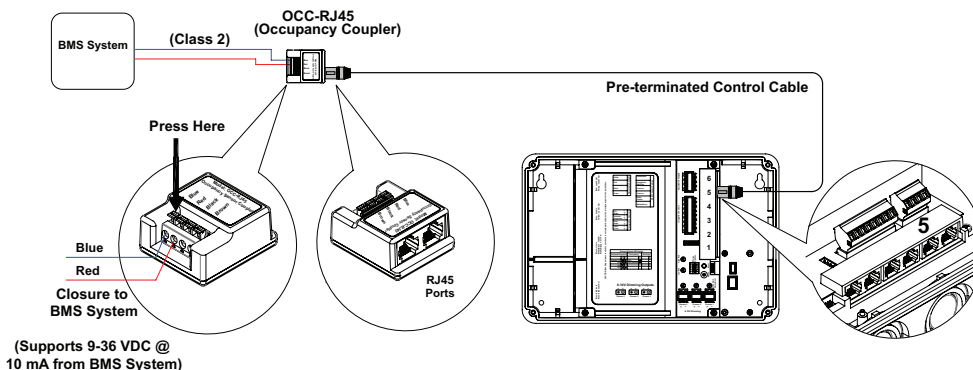
Input/Output Device

Technical Data
September 2016

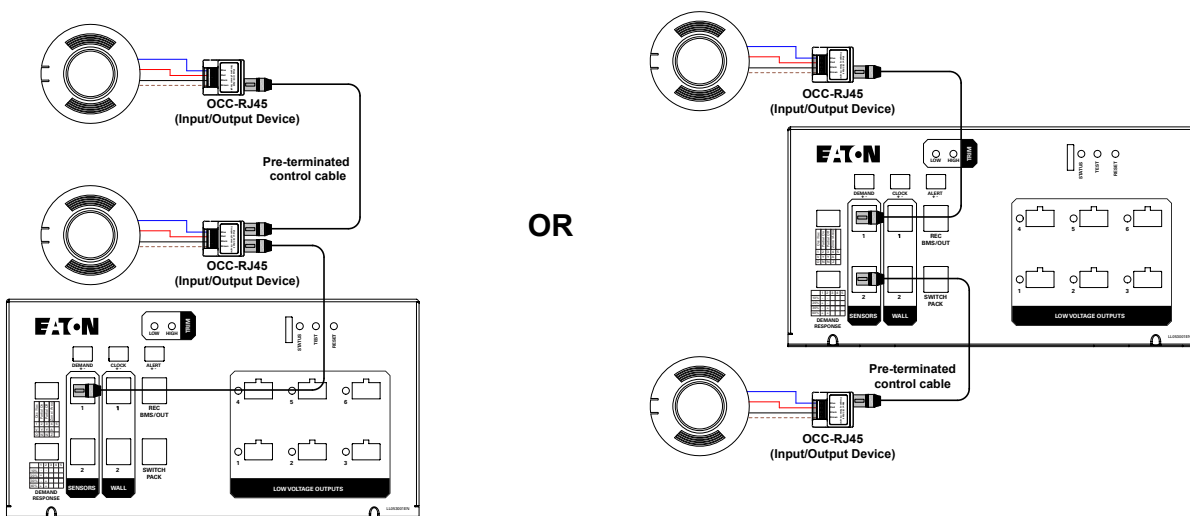
Room Controller Wiring Diagrams



Connect the OCC-RJ45 Coupler to the BMS system. Closure will be made across the Blue and Red wire locations. Connect a pre-terminated control cable between the Receptacle/BMS Out RJ45 port on the Room Controller (port 5) or DLVP power module and to one of the ports on the OCC-RJ45 ports.



DLVP Wiring Diagrams

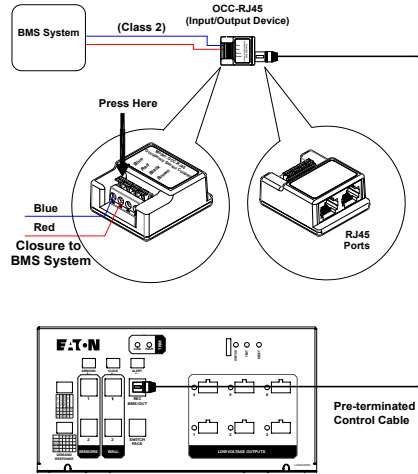




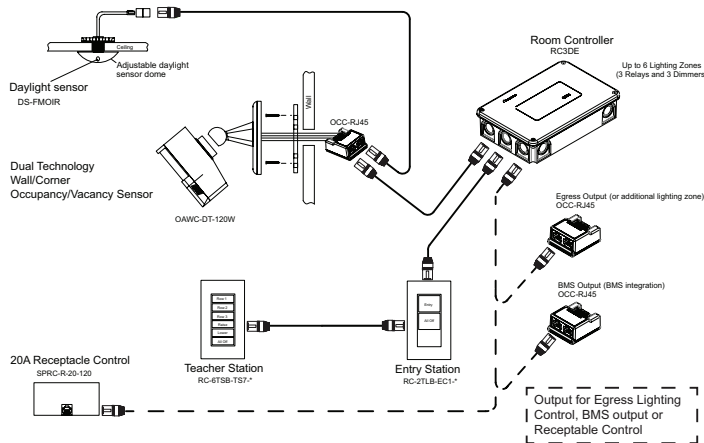
Technical Data
September 2016

Input/Output Device

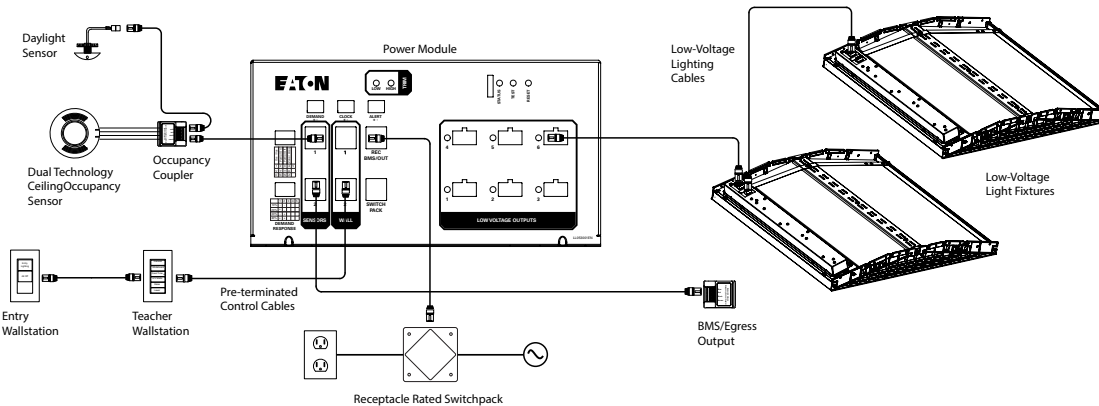
Connect the OCC-RJ45 Input/Output Device to the BMS system. Closure will be made across the Blue and Red wire locations. Connect a pre-terminated control cable between the REC/BMS/OUT RJ45 port on the Power Module and to one of the ports on the OCC-RJ45 ports.



Sample Room Controller System Topology



Sample DLVP System Topology



Submitting Agency:



Description: **OCC-RJ45**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

L/C

Technical Data

September 2016

Input/Output Device

Ordering

Catalog #	Description
OCC-RJ45	Input/Output Device

*One OCC-RJ45 is automatically included with each occupancy sensor when the Room Controller is ordered as a QuickKit.

**See Greengate low voltage occupancy sensor spec sheet for occupancy sensor information.

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September 27, 2016

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Specifications and dimensions subject to change without notice.



OAC-U – MicroSet Ultrasonic Low Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The MicroSet Ultrasonic Low Voltage Occupancy Sensing Ceiling Sensor is a motion sensing lighting control that is used for energy savings and convenience.

Features

- MicroSet self-adjusting time delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control



Ultrasonic Activated



MicroSet Self-Adjusting


 Technical Data
 November 2014

OAC-U – MicroSet Ultrasonic Low Voltage Ceiling Sensor
Specifications

Technology	Ultrasonic (US)
Power Requirements	Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks BAS with Isolated Form C Relay in (-R) model Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft. (56 ft. x 16 ft. corridor)
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90%, non-condensing For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant


Description/Operation

The ultrasonic sensor uses the Doppler principle. It produces a low intensity, inaudible sound and detects changes in sound waves caused by motion, such as walking into the room, reaching for the telephone, or turning in a chair. They are volumetric in nature and therefore not line-of-sight dependant. Since they fill the space with these sound waves, they are excellent in bathrooms with stalls, enclosed hallways, or other oddly shaped rooms. In addition, they are much more sensitive to smaller motions. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and Time Delay in real-time, maximizing the potential energy savings that are available in the particular application. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. The MicroSet Ultrasonic Low Voltage Ceiling Sensor has an ambient light level sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Conference Rooms
- Open Office Areas
- Restrooms (With Partitions)
- Restrooms (Non Partitioned)
- Hallways
- Other Indoor Office Spaces



OAC-U – MicroSet Ultrasonic Low Voltage Ceiling Sensor

Technical Data
 November 2014

Wiring Diagrams

OAC-U-2000-R, OAC-U-1000-R, OAC-U-0501-R Models

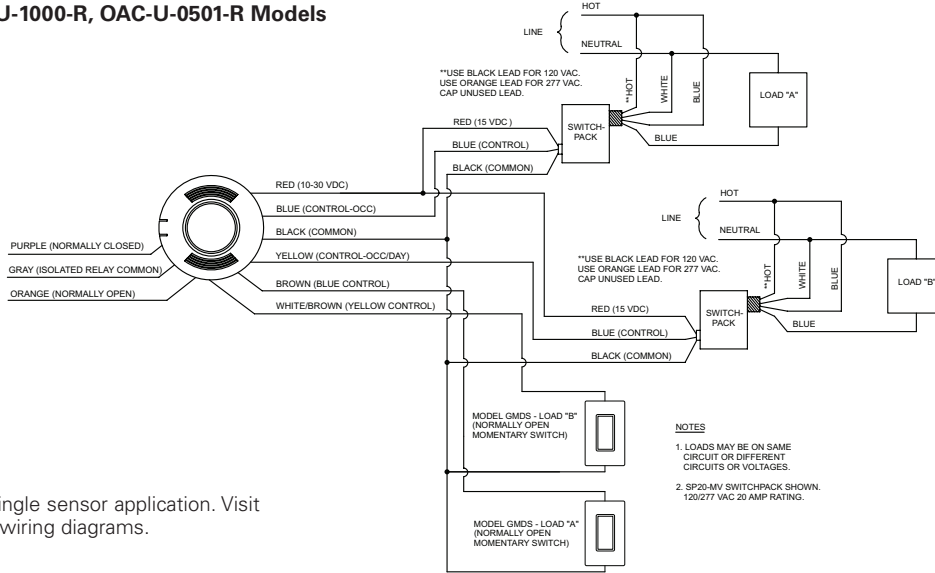
OAC AND VAC MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

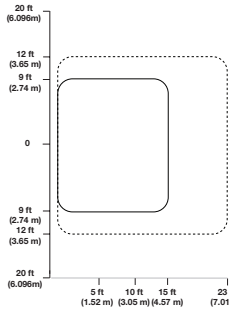
RECOMMENDED WIRE:
 18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED



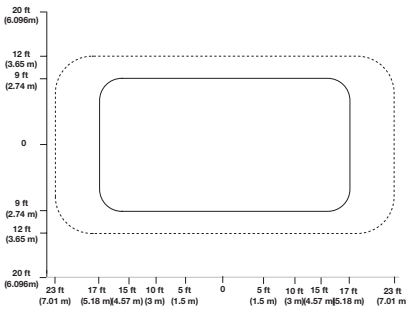
*Wiring diagram for single sensor application. Visit our website for other wiring diagrams.

Coverage

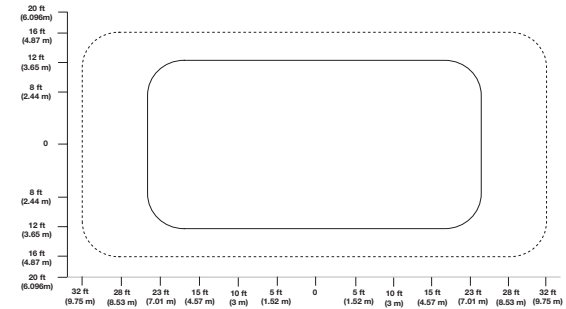
OAC-U-0501-R
 500 sq. ft.



OAC-U-1000-R
 1,000 sq. ft.



OAC-U-2000-R
 2,000 sq. ft.

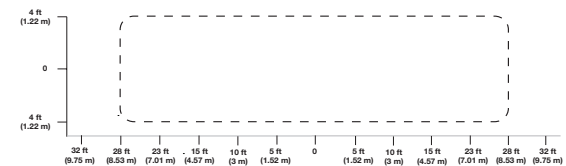


Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.

- Minor Motion, Ultrasonic
- Major Motion, Ultrasonic
- Corridor Coverage

Recommended Mounting Height 8 to 12 feet

OAC-U-2000-R and OAC-U-1000-R Hallway Coverage



* When creating a sensor coverage layout in a cubicle space, best practice is the use the minor motion coverage pattern as maximum coverage area. Results may vary based on cubicle height and ceiling height. (Cubicle wall height should not exceed 71 inches).



Technical Data
 January 2015

OAC-U – MicroSet Ultrasonic Low Voltage Ceiling Sensor

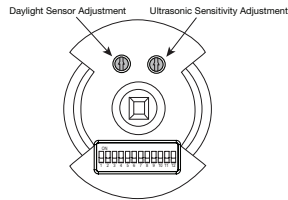
Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		Not Used	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	5	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Full ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲		Enable ▲	Disable ▲	Enable ▲	Enable ▲	Half ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼	(-R model only)							(-R model only)		
30 Minutes	▲	▲	(-R model only)							(-R model only)		

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Maximum Room Size	Field of View	Frequency	Features
OAC-U-2000-R	2,000 sq. ft. (56 ft x 16 ft corridor)	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-2000	2,000 sq. ft. (56 ft x 16 ft corridor)	Two Way (360°)	32 kHz	
OAC-U-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-U-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-0501	500 sq. ft.	One Way (180°)	40 kHz	

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 Publication No. ACC141058
 January 20, 2015

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Submitting Agency:



Description: **LK16-120/277-S0-L2-M0-T0-HVB0 / LK-LB**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:

LCP

Technical Data **Greengate**

LK16 & LK32 – LiteKeeper 16 & 32

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The LiteKeeper stand-alone lighting control panel is an all-inclusive premium grade system for applications that would traditionally use a timeclock in conjunction with contactors. Control up to 32 relays per panel. Several relay options and more standard features than any other stand-alone panel on the market combine to create a state of the art stand-alone lighting control system.

Features

- Capable of mixed load voltages (120/277/347 VAC) as well as mixed sources (i.e. normal and emergency power)
- Manual and programmable control of each relay via a simple keypad and 4 line LCD display
- Normally open, latched, and two pole parallel relays available
- Flush mount kit and voltage separation barrier available
- Capable of controlling receptacle loads
- LED ready



Powering Business Worldwide



LK16 & LK32 – LiteKeeper 16 & 32

August 2016

Specifications

Enclosure	NEMA 1 surface mount, lockable
Size	LK16: 18”H x 15”W x 6.25”D (up to 16 relays) LK32: 30”H x 15”W x 6.25”D (up to 32 relays)
Transformer Ratings	Multi-tapped 120/277 VAC internally fused standard Optional 347 VAC internally fused
Power Use Ratings	Fully loaded panel 75 watts
Operating Environment	Temperature: 32°F to 122°F (0°C to 50°C)
Master Override	ON/AUTO/OFF
Programming	Onboard keypad and LCD display Optional PC Software
Standard Relay Ratings	20A, 120/277VAC per relay 10A, 120/277VAC electronic Ballast, (LED) Normally open Max wire size: 10 AWG Mechanical operations: 10 million
Latching Relay Ratings	20A, 120/277 electronic ballast (LED) 15A, 347 VAC Maximum wire size: 6 AWG Mechanical operations: 10 million Provides a system SCCR rating of 10,000A
Two Pole Relay Ratings	20A, 208/240/480 VAC Normally open Maximum wire size: 6 AWG Mechanical operations: 10 million
Standards	UL 916 Listed UL 924 with RIM

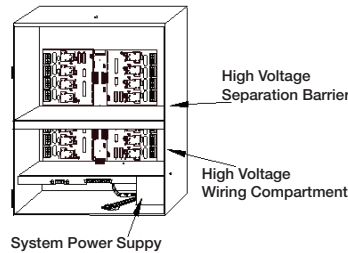
Accessories

- Keeper Enterprise Software
- Ethernet Interface Module
- Automation Interface Module
- Greengate Digital Switch (GDS)
- Dry Contact Switches
- Contact Input Photosensor
- Occupancy Sensor
- Voltage Separation Barrier
- Flush Mount Kit
- CEPC (UL 924 Accessory)
- RRU

Dimensions

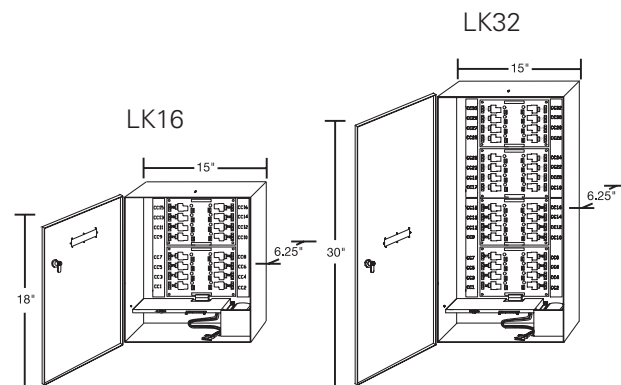
Enclosure

High Voltage Barrier and Dividers



System Includes

- UL listed – UL 916 standard
- NEMA 1 enclosure
- 32 low voltage input connections
- Digital Switch interface
- Time schedules with astronomic clock
- Prioritization and masking of switch inputs, time schedules and remotes
- Timed inputs
- Occupant warn-off and overrides
- Keypad and 4 line LCD display
- RS-232 port standard
- UL Listed - UL 924 with RIM
- Control receptacle loads with latching relay card



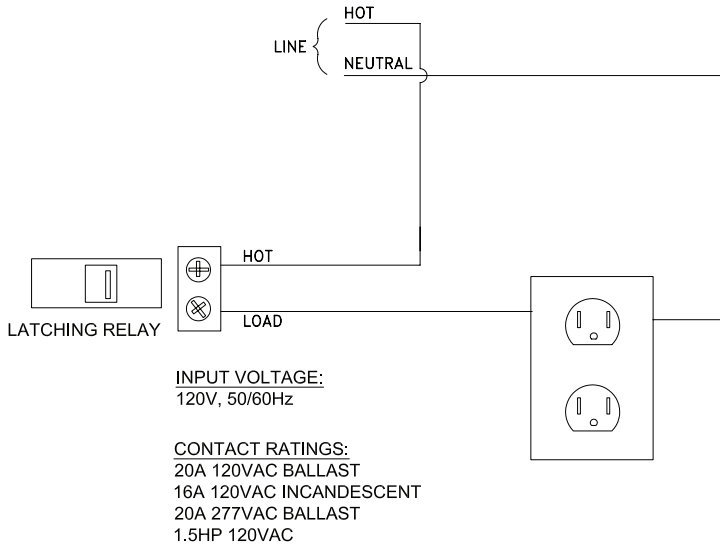


LK16 & LK32 – LiteKeeper 16 & 32

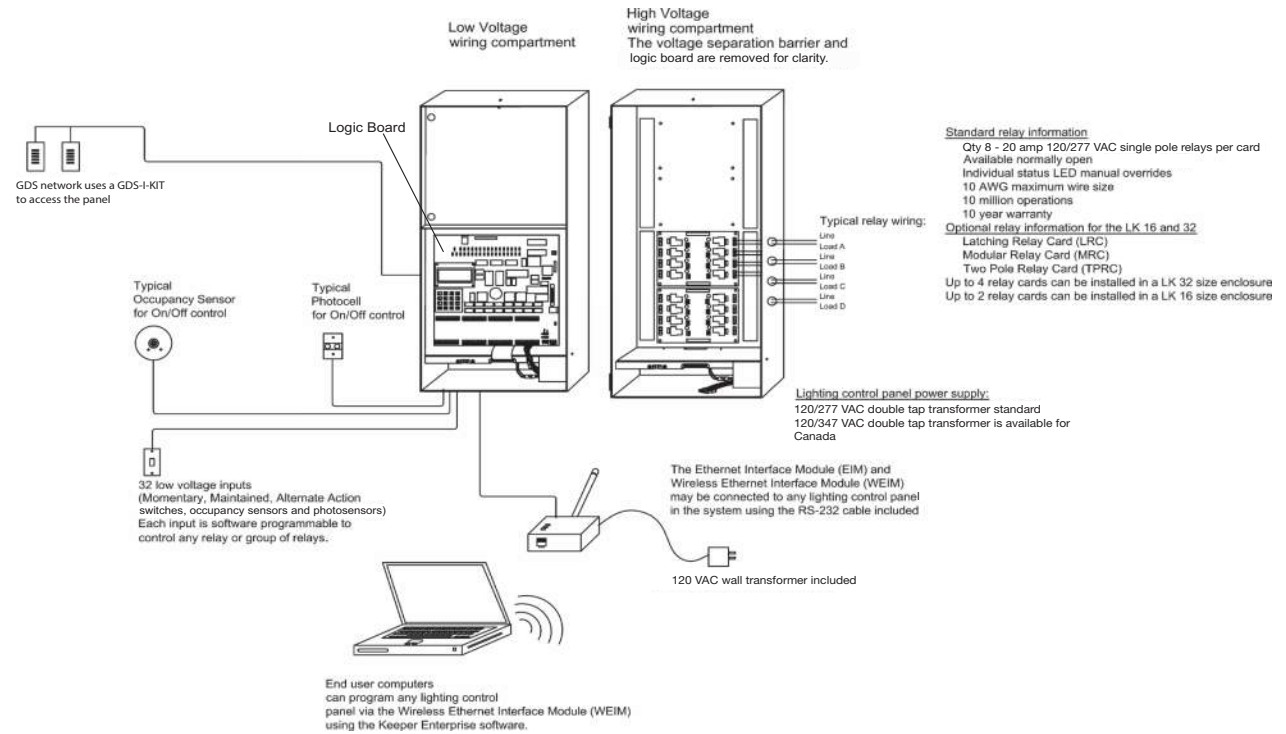
August 2016

Wiring Diagram

Latching Relay Receptacle Control



Sample One-Line



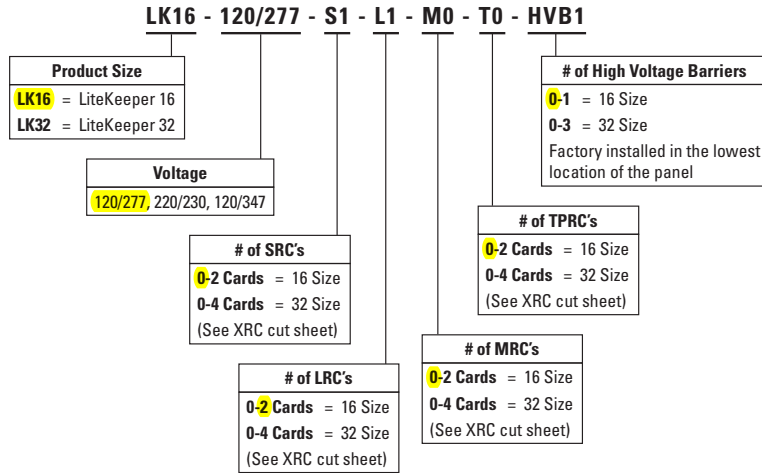


LK16 & LK32 – LiteKeeper 16 & 32

August 2016

Ordering

All LiteKeeper lighting control panels require a Logic Board (LK-LB). The logic board is shipped separately from the enclosure and is listed as a separate line item. When ordering any of the below models, you must also order the LK-LB.



Additional Options

Catalog #	Description
LK-LB	LiteKeeper Logic Board (required per enclosure)
LK 16 FK	LiteKeeper 16 size Flushmount Kit (option)
LK 32 FK	LiteKeeper 32 size Flushmount Kit (option)

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 August 18, 2016

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Submitting Agency:



Description: **PPS-5**
Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**
Notes:

Type:
PHOTO



Greengate

Technical Data

Effective October 22, 2014

PPS-5 – Outdoor Contact Input Photosensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Outdoor Contact Input Photosensor is a system accessory for Greengate Lighting Control Systems. It allows control of lighting levels based on how much natural light is present and is intended for outdoor use.

Features

- Outdoor light level sensor in weatherproof housing
- Provides contact closure input to lighting control panel when light level drops below threshold
- Extended temperature range for outdoor operation



Powering Business Worldwide



Technical Data
 October 2014

PPS-5 – Outdoor Contact Input Photosensor

Specifications

Operating Environment	Temperature: -40°F to 158°F (-40°C to 70°C) Suitable for outdoor use
Input Voltage	24 VDC
Output Signal	Maximum load 10A @ 24 VDC
Wiring	Moisture proof, color coded lead wire Wire length: 6"
Housing	Weatherproof Lexan®
Sensor Size	3.5"H x 1.25"W x 0.25"D
Threaded Stem	Stem adds 2" to overall height Swivel base provides 1/2", 14 thread end that fits 1/2" knock out.

Description/Operation

This system accessory is used in conjunction with a lighting control panel to switch circuits ON or OFF based on outdoor light levels. The Outdoor Contact Input Photosensor connects to the control panel low voltage switch inputs. The photosensor constantly monitors the level of sunlight and provides a signal to the lighting control panel when the light level crosses the switching threshold.

Installation

This system accessory will require mounting and wiring at the site.

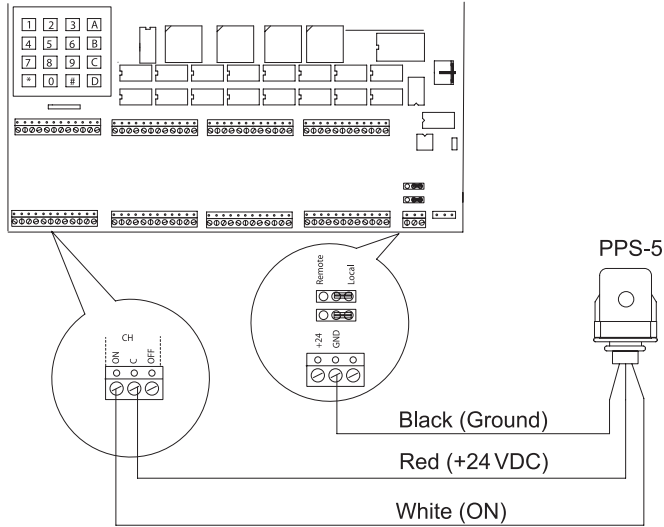


PPS-5 – Outdoor Contact Input Photosensor

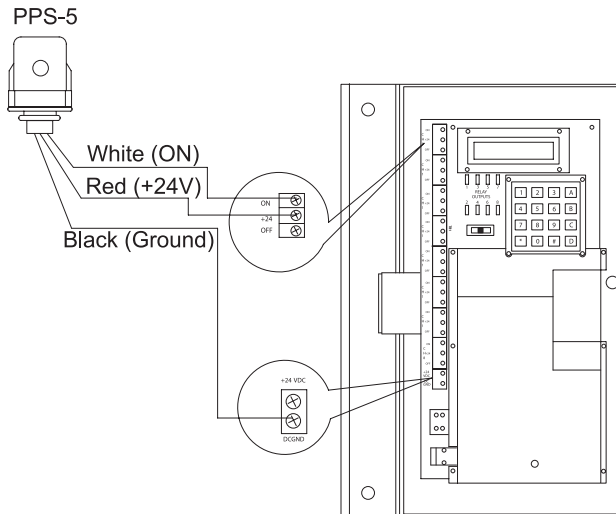
Technical Data
October 2014

Wiring Diagrams

LiteKeeper 16 & 32



LiteKeeper 8



Submitting Agency:



Description: **PPS-5**

Project: **SCHOOL (NEWMARKET) JUNIOR/SENIOR SCHOOL**

Notes:

Type:

PHOTO

Technical Data
October 2014

PPS-5 – Outdoor Contact Input Photosensor

Ordering

This is an accessory for Greengate Lighting Control Systems. It is not an integral part of the system. There is no factory assembly needed.

Cat #	Description
PPS-5	Outdoor Contact Input Photosensor

Eaton

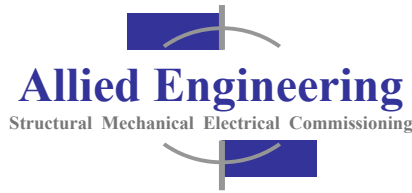
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coopercontrol.com

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October 22, 2014

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SHOP DRAWING REVIEW COVER SHEET

Project Name, Project #: Newmarket Junior/Senior High School: 16046

Date Received: 8-1-18

Date Due: 8-15-18

AEI Shop Drawing #: 53

Contractor Shop Drawing #: 260923-1

AEI Project Manager: Catherine Faucher

Contractor: Eckman Construction

Item Description: Lighting Control Devices

Spec. Section Number(s): 260923

email : Date Returned 8/15/18

\\AEFile\cad\Projects\2016\16046 ~ Newmarket Elementary and Jr Sr High school\3 Construction\2 Shops\HS\Electronic Submittals from contractor\53 Lighting Control Devices\53 Lighting Control Devices Review Letter.doc

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR QUANTITIES; DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE; INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESS FOR TECHNIQUES OF CONSTRUCTION; COORDINATION OF THE WORK OF ALL TRADES; AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER. THIS REVIEW DOES NOT MODIFY CONTRACTOR'S DUTY TO COMPLY WITH THE CONTRACT DOCUMENTS.

REVIEWED
 REVIEWED W/NOTES, *No Resubmission* Required
 REVIEWED W/NOTES, *Resubmission Required*
 NOT ACCEPTABLE

NOTES:

Reviewed by: Allied Engineering, Inc.

Reviewer: C.A. FAUCHER, P.E.



Submittal #26 09 23-1.0

26 09 23 - Lighting Control Devices

Eckman Construction
84 Palomino Lane
Bedford, New Hampshire 03110

Project: 397H - Newmarket Jr/Sr High School
South Main Street
Newmarket, New Hampshire 03857

Lighting Control Devices

SPEC SECTION:	26 09 23 - Lighting Control Devices	SUBMITTAL MANAGER:	Phil Boisvert (Eckman Construction Company, Inc.)
STATUS:	Open	DATE CREATED:	08/01/2018
ISSUE DATE:	08/01/2018	REVISION:	0
RESPONSIBLE CONTRACTOR:	Wayne J. Griffin Electric, Inc.	RECEIVED FROM:	Micah Blum
RECEIVED DATE:	//	SUBMIT BY:	08/01/2018
FINAL DUE DATE:	08/22/2018	LOCATION:	
TYPE:	Product Information	COST CODE:	
APPROVERS:	Jeremiah Goulet (Banwell Architects), Stephen Markiewicz (Allied Engineering, Inc.), Alan Hepner (Allied Engineering, Inc.), Cathy Faucher (Allied Engineering, Inc.)		
BALL IN COURT:	Cathy Faucher (Allied Engineering, Inc.), Alan Hepner (Allied Engineering, Inc.), Stephen Markiewicz (Allied Engineering, Inc.)		
DISTRIBUTION:	Jeremiah Goulet (Banwell Architects)		
DESCRIPTION:	Please see attached submittal for review.		
ATTACHMENTS:	260923 - Lighting Control Devices out 7-30-18.pdf		

SUBMITTAL WORKFLOW

#	NAME	SUBMITTER/ APPROVER	SENT DATE	DUE DATE	RETURNED DATE	RESPONSE	ATTACHMENTS	COMMENTS
1	Cathy Faucher	Approver		8/15/2018		Pending		
2	Alan Hepner	Approver		8/15/2018		Pending		
3	Stephen Markiewicz	Approver		8/15/2018		Pending		
4	Jeremiah Goulet	Approver		8/22/2018		Pending		



Submittal #26 09 23-1.0 26 09 23 - Lighting Control Devices



**ECKMAN CONSTRUCTION CO, INC.
SUBMITTAL STAMP**

Project Title: Newmarket Jr/Sr High School

Proj. # 397H

Submittal #: 26 09 23-1

Date: 8/1/2018

Approved By: BB

ECCI APPROVAL INDICATES CONFORMANCE WITH CONTRACT DOCUMENTS. THE SUBCONTRACTOR/VENDOR IS RESPONSIBLE FOR ALL DIMENSIONS, CORRECT FIT AND COORDINATION OF ALL ITEMS TO BE FURNISHED AND INSTALLED. THIS SUBMITTAL HAS BEEN APPROVED FOR SUBMISSION TO THE ARCH/ENG.

BY _____

DATE _____

COPIES TO _____

WAYNE J. GRIFFIN ELECTRIC, INC.

116 Hopping Brook Road
 HOLLISTON, MASSACHUSETTS, 01746
 PHONE (508) 429-8830
 FAX (508) 429-7825

LETTER OF TRANSMITTAL

DATE	7/30/2018	JOB NO:	2380
ATTENTION	Brian Barody, PM, Phil Boisvert APM		
RE:	Newmarket JR/SR High School		
BarodyB@eckmanconstruction.com			
BoisvertP@eckmanconstruction.com			

TO Eckman Construction Company, Inc.
213 S. Main Street
Newmarket, NH 03857
(603) 623-1713

WE ARE SENDING YOU Attached Under Separate Cover Via _____ the following items:

Shop Drawings Prints Plans Samples Specifications

Copy of Letter Change Order Submittals

COPIES	DATE	NO.	DESCRIPTION
	7/30/2018		Section 260923 - Lighting Control Devices

THESE ARE TRANSMITTED as checked below:

For approval Approved as submitted Resubmit _____ copies for approval

For your use Approved as noted Submit _____ copies for distribution

As requested Returned for corrections Return _____ corrected prints

For review and comment _____

FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO Micah Blum, Michael Brennan, Peter Donahue, Stephen Hannagan

SIGNED: *Louise Webb*
 Submittals Administrator

Licenses:
 MA A8999 VT EM3303 NH 4223M ME MC60017598 CT ELC.0123697-E1
 AL 16318 RI AC003520 GA EN213065 NC 16529U SC- M3477

If enclosures are not as noted, kindly notify us at once.



**WAYNE J.
GRIFFIN ELECTRIC
INC.**

July 30, 2018

PROJECT: Newmarket JR/SR High School
213 S. Main Street
Newmarket, NH 03857

OWNER: SAU #31 Newmarket School District
186 S. Main Street
Newmarket, NH 03857

GENERAL CONTRACTOR: Eckman Construction Company, MA
84 Palomino Lane
Bedford, NH 03110

ARCHITECT: Banwell Architects
6 South Park Street
Lebanon, NH 03766

ELECTRICAL ENGINEER: Allied Engineering
160 Veranda Street
Portland, ME 04103

ELECTRICAL CONTRACTOR: Wayne J. Griffin Electric, Inc.
116 Hopping Brook Road
Holliston, MA 01746

We herein submit the following electrical equipment for the Newmarket JR/SR High School project for your approval:

Section 260923 Lighting Control Devices

PROJECT: Newmarket JR/SR High School
Newmarket, NH

SUBMITTAL: Section 260923 Lighting Control Devices

WAYNE J. GRIFFIN ELECTRIC, INC.
116 Hopping Brook Road
Holliston, MA 01746

Reviewed by: *Micah Blum* *lmh*

Date: July 30, 2018



LIGHTING SUBMITTAL
FOR
APPROVAL

LIGHTING CONTROLS

PROJECT: NEWMARKET JUNIOR HIGH SCHOOL

CONTRACTOR: WAYNE J. GRIFFIN ELECTRIC

DATE: 5.29.18

DISTRIBUTOR: NORTHEAST ELECTRICAL
560 OAK ST.
BROCKTON, MA 02301



EATON

Powering Business Worldwide



Eaton
Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
tel: 800-942-0763

Submittal Transmittal

Date: May 22, 2018

Transmitted To:

Charron, Inc.

Transmitted By:

Eaton
Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269

Project: Newmarket Junior High School

Remarks

- 1 The below drawings have been added:
 - 1.1 *Device Wiring Diagrams*
 - 1.2 *System Riser/One Line Diagrams*
- 2 Contractor must install each device supplied by Eaton as per the "Device Wiring Diagrams" above.
- 3 Contractor to test and verify the operation of all lighting controls as per the "Testing and Startup Procedures" provided in this submittal.

Table of Contents

1. Cover Page
2. Transmittal Form
3. Table of Contents
4. Assumptions/Exceptions
5. Bill of Materials
6. Device Placement
7. Riser/One Line Diagrams
8. Wiring Diagrams
9. Spec Sheets
10. Warranty Information
11. Commissioning Information & Start-up



SUBMITTAL PACKAGE

Assumptions & Exceptions

Assumptions & Exceptions

- * Quote sensor counts provided per drawings that are not guaranteed with recommendation of sensor layout to be done to confirm quantity and coverage. An adder quote may be required for additional sensors to ensure coverage.
- * Bill of material does not include spare parts of adders.
- * The control system does not include BACnet or any additional integration software applications, but can be added later for additional fees.
- * Items not included on this quotation are not included in this price.
- * No specifications were provided at the time of quotation. Please request a revised quote if additional control intent is required that is not shown or provided.
- * Quote does not assume to meet Buy America/Buy American.
- * This quote assumes that no additional time or expenses are required for gaining access/clearance to the customer facility for purposes of commissioning or maintenance. If additional time or expenses are required, Eaton reserves the right to amend this quote accordingly.
- * It is the responsibility of the project's professional engineer to review and correct the control drawings for compliance with all state and local code regulations.
- * Quote based on drawings EL111H-EL115H & EL121H-EL123H dated 1.12.18 and updated drawings received 4.23.18.
- * Quote only includes devices as shown on the drawings; areas that do not show lighting controls are NOT included in this quote.
- * Devices quoted are standalone and will not support a networked system.
- * Receptacle control not included in this quote.
- * All dimming is assumed to be 0-10V only. Other means of dimming will require a re-quote.
- * Cables are not included in this quote.
- * One circuit per room controller (except for emergency room controllers).



SUBMITTAL PACKAGE

Bill of Materials

1701300 Newmarket Junior HS

Quantity	Type Mark	Brand	Catalog #/ Line Comments
157		Greengate Panels	GMDS-W Momentary Decorator Switch - White
214		Greengate Occupancy Sensors	OAC-DT-2000-R MicroSet Dual Technology 2000 sq ft ceiling sensor w/BAS Relay & Daylight Sensor
51		Greengate Occupancy Sensors	OAC-DT-1000-R MicroSet Dual Technology 1000 sq ft ceiling sensor w/BAS Relay & Daylight Sensor
2		Greengate Occupancy Sensors	OAWC-DT-120W-R OAWC-DT Dual Technology Wall/Corner Sensor 1200 sq ft w/BAS
51		Greengate Occupancy Sensors	ONW-D-1001-MV-W White Dual Technology Single Level Switch Sensor 120/277
2		Greengate Occupancy Sensors	OXC-P-1500-R Extreme Temperature Sensor
4		Room Controller	RC3D-PL 3 Relay + 3 Dimmers Room Controller 120/277VAC
146		Greengate Occupancy Sensors	SP20-MV Switchpack Heavy Duty, 120/277V
6		Room Controller	RC3DE-PL 3 Relay + 3 Dimmers + 1 Emergency Relay Room Controller 120/277VAC
1			PREWIRE PREWIRE VISIT SIMILAR TO VISIT REQUIRED FOR NEWMARKET ELEMENTARY SCHOOL
2			OCCUPANCY ADJUSTMENT VISIT AFTER HOURS OCCUPANCY ADJUSTMENT VISIT
67		Greengate Panels	CEPC-1 Emergency Power Control - 120/277VAC Single Circuit Emergency load bypass
9		Room Controller	OCC-RJ45 RJ45 to standard Greengate Low Voltage Occupancy Sensor also BMS and Egress output Device
6		Greengate Occupancy Sensors	OAC-U-2000-R

		MicroSet Ultrasonic Technology 2000 sq ft ceiling sensor w/BAS Relay & Daylight Sensor
1	Greengate Panels	PPS-5 Contact Input Outdoor Photosensor
1		LK-LB LiteKeeper Logic Board
27	Greengate Occupancy Sensors	SP20-RD4 SP20-RD4
12	Room Controller	PDR-RC-2TLB Custom 2 Large Button Station. Color and button definition per configuration form.
9	Room Controller	PDR-RC-3TLB Custom 3 Large Button Station. Color and button definition per configuration form.
6	Room Controller	PDR-RC-6TSB Custom 6 Small Button Station. Color and button definition per configuration form.
1	Greengate Occupancy Sensors	OAC-DT-0501-R MicroSet Dual Technology 500 sq ft ceiling sensor w/BAS Relay & Daylight Sensor
2 days,	Certified Factory Startup Scheduled Room Controller, Green Gate or Illumin Commissioning trip and training by Eaton Factory Representative.	

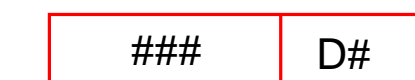
Standard Warranty
Standard product warranty based on date of product shipment. See product documentation for standard warranty information.



SUBMITTAL PACKAGE

Device Placement

Detail Identification
*one-line details are on the pages following the floor plans



Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING IN THIS AREA TO P4A-32.
3. CIRCUIT LIGHTING IN THIS AREA TO P4A-34 UNLESS NOTED OTHERWISE BELOW.
4. CIRCUIT LIGHTING IN ROOMS 117, 119, 121, 121.1, 123 TO P4A-36.
5. CIRCUIT LIGHTING IN STAIR ST2 TO P4A-30.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

Qty	Symbol	Description
11	(CEPC-1)	Emergency Power Control 120/277 Single Circuit
38	(SGMDS)	Momentary Decimator Switch, White
7	(OAC-DT-0615-R)	OAC-DT-0615-R Dual Tech 500 Sq Ft Occupancy Sensor
35	(OAC-DT-1004-R)	OAC-DT-1004-R Dual Tech 1000 Sq Ft Occupancy Sensor
2	(OAC-DT-2000-R)	OAC-DT-2000-R Dual Tech 2000 Sq Ft Occupancy Sensor
2	(OAC-DT-2000-R)	OAC-DT-2000-R Dual Tech 2000 Sq Ft Occupancy Sensor
10	(D1)	QMC-P-1500-R PIR 1500 Sq Ft Occupancy Sensor
25	(MV)	QMCV-DT-120W-R Dual Tech 1200 Sq Ft Occupancy Sensor
5	(SP20-MV)	SP20-MV Switchpack 120/277
	(SP20-RD)	SP20-RD Latching Switchpack 120/277
	(Room Controller 3 Relay/Dimmer)	Room Controller 3 Relay/Dimmer 120/277
	(Room Controller 3 Relay/Dimmer + 1 Emergency)	Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
	(OCC-RJ45 RJ45 to Occupancy Sensor Adapter)	OCC-RJ45 RJ45 to Occupancy Sensor Adapter
	(Custom 2 Button Room Controller Switch White)	Custom 2 Button Room Controller Switch White
	(Custom 3 Button Room Controller Switch White)	Custom 3 Button Room Controller Switch White
	(Custom 6 Button Room Controller Switch White)	Custom 6 Button Room Controller Switch White
	(LK19-120/277 Relay Panel)	LK19-120/277 Relay Panel

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
P3 5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
P3 7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL324 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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 1/8" = 1'-0"

PROJECT NAME:
 Newmarket Junior High School

AGENT NAME:
 Charron, Inc.

CHECKED BY:
 XX

DRAWN BY:
 WS

DRAWING #:
 EL111H

DATE:
 May 22, 2018

PROJECT #:
 1701300



1. CIRCUIT EXIT SIGNS TO P4C-31.
2. CIRCUIT LIGHTING IN THIS AREA TO P4C-36.
3. CIRCUIT LIGHTING IN THIS AREA TO P4C-28.
4. CIRCUIT LIGHTING IN STAIR ST1 TO P4A-24.
5. CIRCUIT LIGHTING TO P4C-30.
6. CIRCUIT TK IN ROOM 152 AND C2s IN ROOM150 TO PC9-2.

Detail Identification
*one-line details are on the pages following the floor plans



Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

Qty	Symbol	Description
14	(EPC-1)	Emergency Power Control 120/277 Single Circuit
20	(SMDS)	Momentary Decorator Switch, White
13	(D1)	OAC-DT-0501-R Dual Tech 500 Sq.Ft. Occupancy Sensor
27	(D2)	OAC-DT-1000-R Dual Tech 1000 Sq.Ft. Occupancy Sensor
2	(D3)	OAC-DT-2000-R Dual Tech 2000 Sq.Ft. Occupancy Sensor
9	(D4)	OAC-P-1500-R PR-1500 Sq.Ft. Occupancy Sensor
27	(D5)	QMW-DT-120W-R Dual Tech 1200 Sq.Ft. Occupancy Sensor
4	(RC3D-PL)	RC3D-PL
1	(D6)	SP20-MV Switchpack 120/277
5	(D7)	SP20-RD4 Latching Switchpack 120/277
9	(D8)	Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
1	(D9)	Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
5	(D10)	OCC-R46 RJ45 to Occupancy Sensor Adapter
9	(D11)	Custom 2 Button Room Controller Switch White
6	(D12)	Custom 3 Button Room Controller Switch White
6	(D13)	Custom 6 Button Room Controller Switch White
	(D14)	LK16-120/277 Relay Panel

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



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 2/9/2018 8:43:21 AM
 A8

A8 LEVEL 1 - AREA 2 - LIGHTING PLAN

1/8" = 1'-0"

PROJECT NAME:
 Newmarket Junior High School

AGENT NAME:
 Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL112H

DATE:
May 22, 2018

PROJECT #:
1701300

1. CIRCUIT EXIT SIGNS TO P4C-31.
2. CIRCUIT LIGHTING IN THIS AREA TO P4C-37.
3. CIRCUIT LIGHTING IN THIS AREA TO P4C-39.
4. CIRCUIT LIGHTING IN STAIR ST5 TO P4C-33.
5. CIRCUIT LIGHTING IN STAIR ST4 TO P4C-35.

Detail Identification
*one-line details are on the pages following the floor plans

D#

Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIRFLOW TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CIRCUITING NOTES

THIS SHEET ONLY

Qty	Symbol	Description
9		Emergency Power Control 120277 Single Circuit
23		Momentary Decorator Switch, White
		OAC-DT-600-R Dual Tech 500 Sq Ft. Occupancy Sensor
5		OAC-DT-1000-R Dual Tech 1000 Sq Ft. Occupancy Sensor
33		OAC-DT-2000-R Dual Tech 2000 Sq Ft. Occupancy Sensor
		OAC-DT-2000-R Ultrasonic 2000 Sq Ft. Occupancy Sensor
		OAC-P-1500-R PIR 1500 Sq Ft. Occupancy Sensor
		OAC-W-120W-R Dual Tech 1200 Sq Ft. Occupancy Sensor
13		GNW-D-1000-W Dual Tech Single Level Switch
16		SP20-MV Switchpack 120277
7		SP20-RD4 Latching Switchpack 120277
		Room Controller 3 Relay/Dimmer 120277
		Room Controller 3 Relay/Dimmer + 1 Emergency 120277
		OCC-RJ45 RJ45 to Occupancy Sensor Adapter
		Custom 2 Button Room Controller Switch White
		Custom 3 Button Room Controller Switch White
		Custom 6 Button Room Controller Switch White
		LK16-120277 Relay Panel

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(IES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Chartron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL113H

DATE:
May 22, 2018

PROJECT #:
1701300



- CIRCUIT EXIT SIGNS TO P4A-22.
- CIRCUIT LIGHTING IN THIS AREA TO P4A-20.

Detail Identification
*one-line details are on the pages following the floor plans

D#

Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

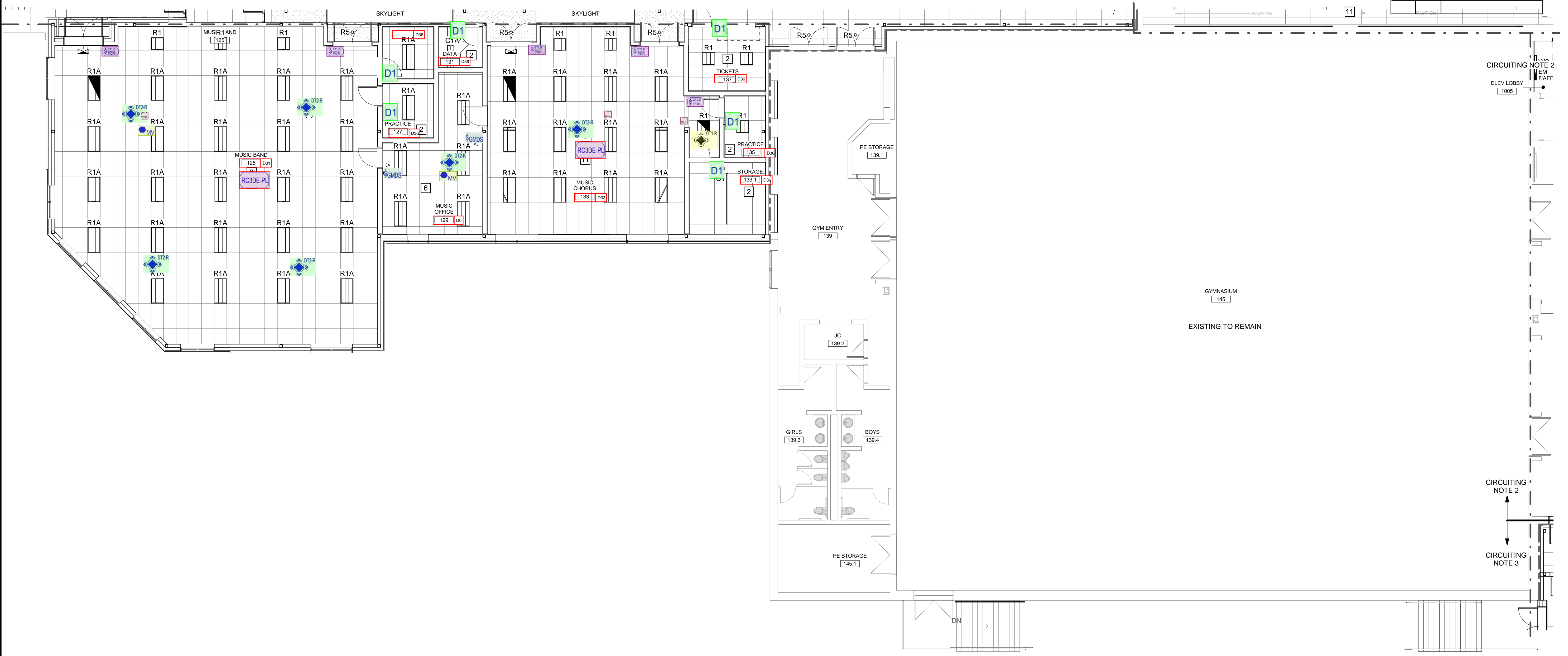
CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(IES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

Qty	Symbol	Description
		Emergency Power Control 120277 Single Circuit
2		Momentary Decorator Switch, White
		OAC-DT-0501-R Dual Tech 500 Sq Ft Occupancy Sensor
2		OAC-DT-1000-R Dual Tech 1000 Sq Ft Occupancy Sensor
6		OAC-DT-2000-R Dual Tech 2000 Sq Ft Occupancy Sensor
		OAC-U-2000-R Ultrasonic 2000 Sq Ft Occupancy Sensor
		OAC-P-1500-R PIR 1500 Sq Ft Occupancy Sensor
6		QAWC-DT-1200W-R Dual Tech 1200 Sq Ft Occupancy Sensor
2		QNW-D-1000-W Dual Tech Single Level Switch Sensor 120277
		SP20-MV Switchpack 120277
		SP20-RD4 Latching Switchpack 120277
2		Room Controller 3 Relay/Dimmer 120277
3		OCC-RJ45 RJ45 to Occupancy Sensor Adapter
2		Custom 3 Button Room Controller Switch White
		Custom 6 Button Room Controller Switch White
		LK16-120277 Relay Panel



CIRCUITING NOTE 2
ELEV LOBBY
1005

CIRCUITING NOTE 2

CIRCUITING NOTE 3

PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL114H

DATE:
May 22, 2018

PROJECT #:
1701300

A8 LEVEL 1 - AREA 4 - LIGHTING PLAN

1/8" = 1'-0"

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1. CIRCUIT EXIT SIGNS TO P4B-35.
2. CIRCUIT LIGHTING IN THIS AREA TO P4B-37.
3. CIRCUIT LIGHTING IN THIS AREA TO P4B-39.
4. CIRCUIT LIGHTING TO P4B-32.
5. CIRCUIT LIGHTING TO P4B-34.

Detail Identification
*one-line details are on the pages following the floor plans

D#

Room Number Detail Number

GENERAL NOTES:

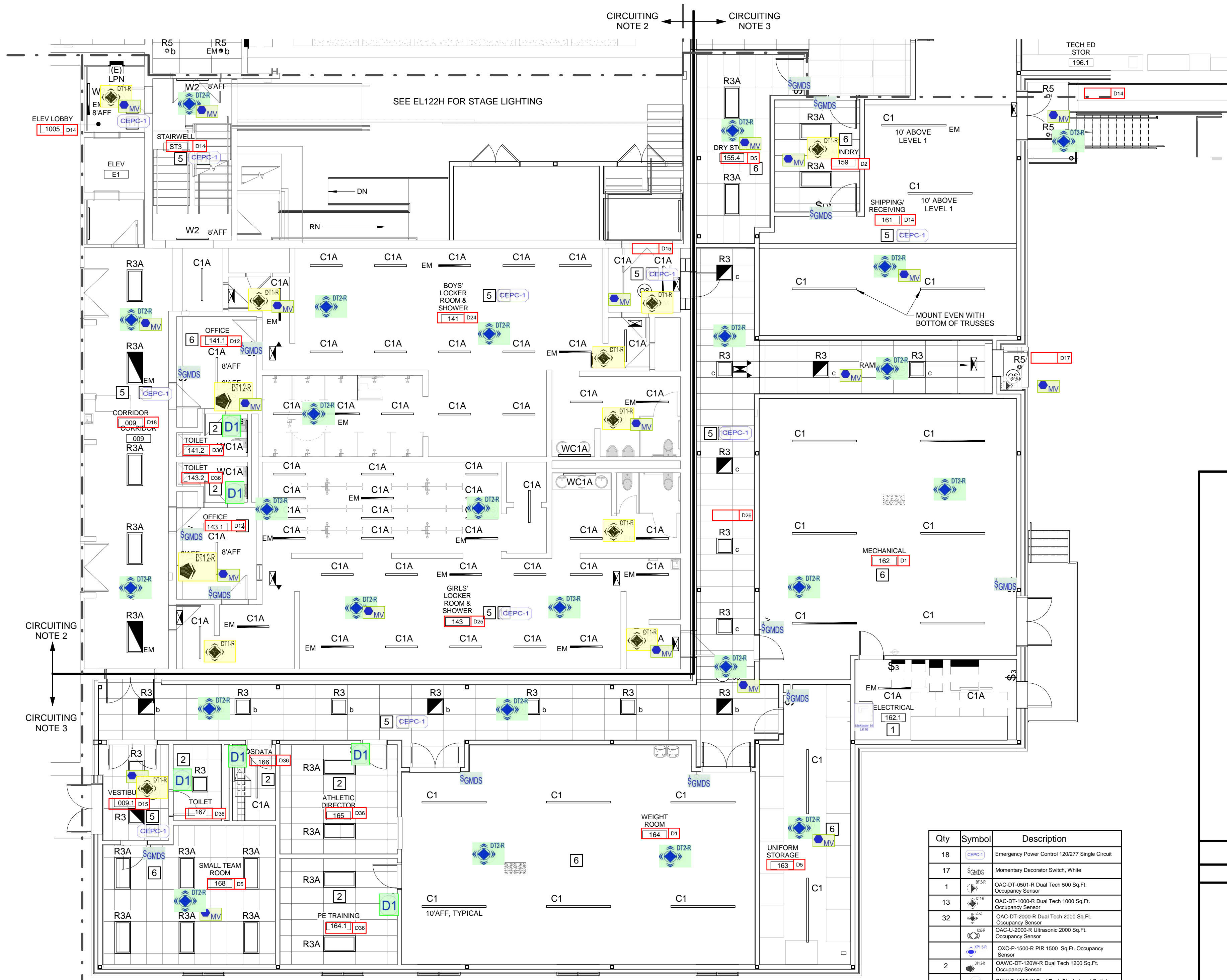
DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

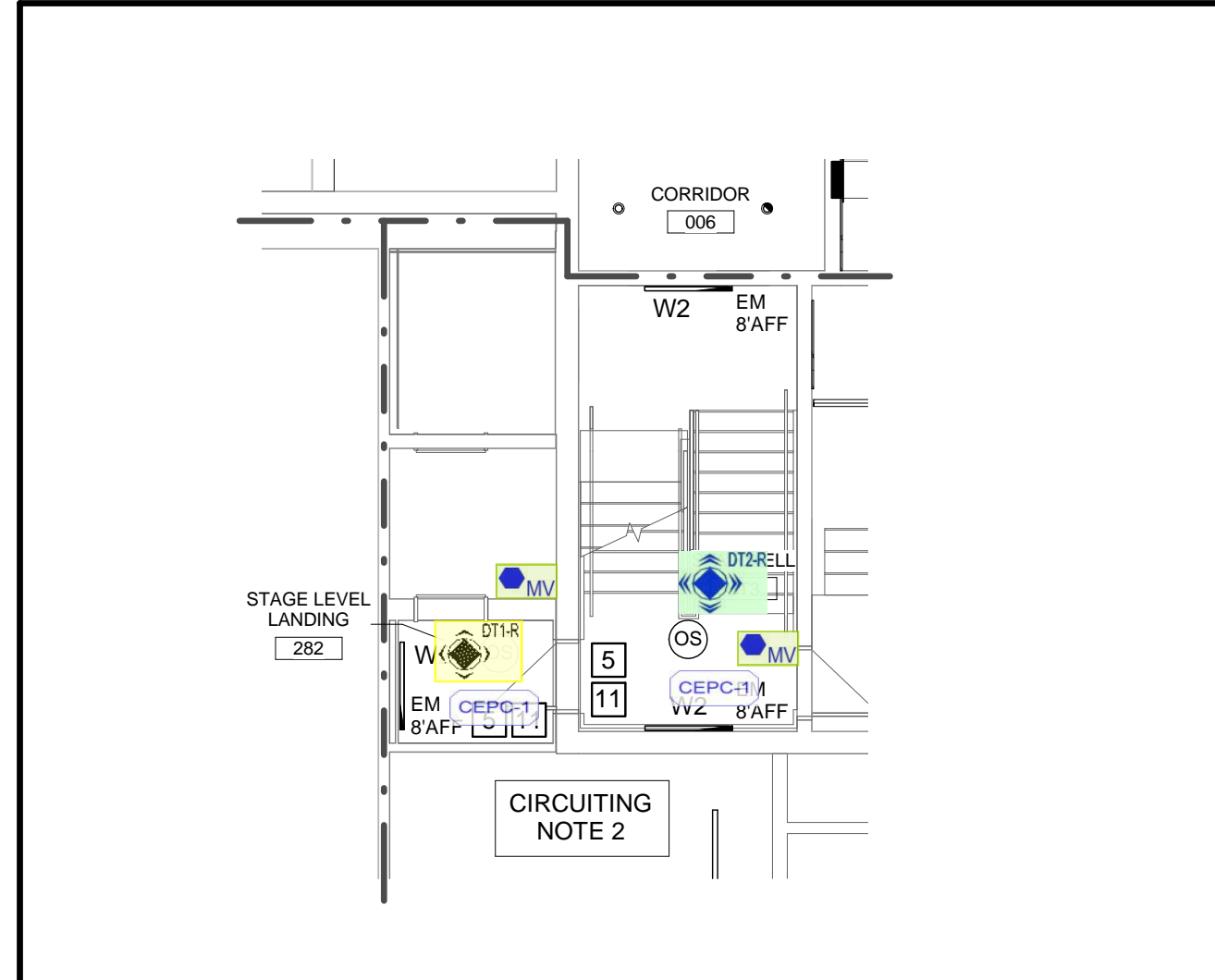
CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

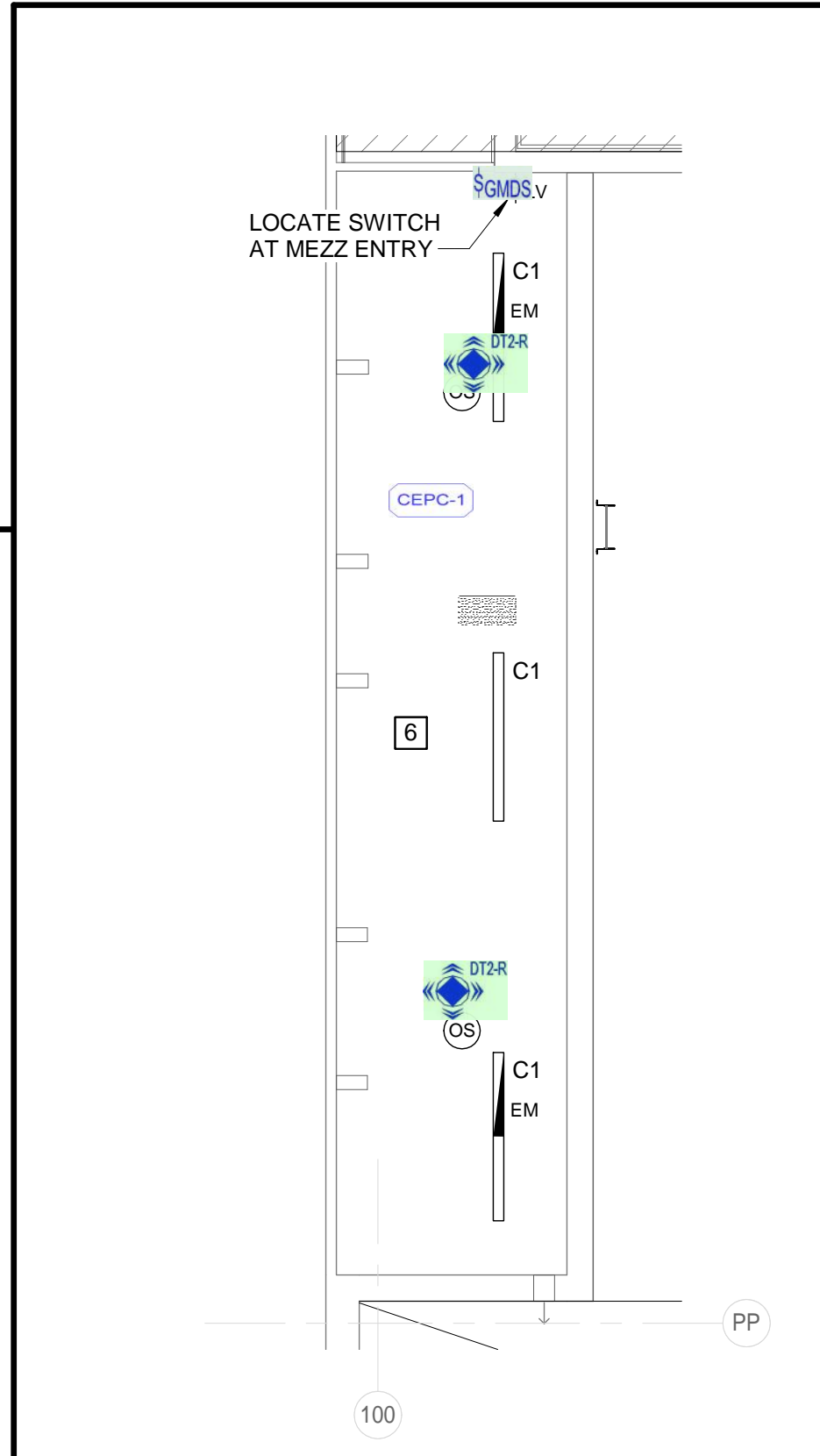
LIGHTING CIRCUITING NOTES
THIS SHEET ONLY



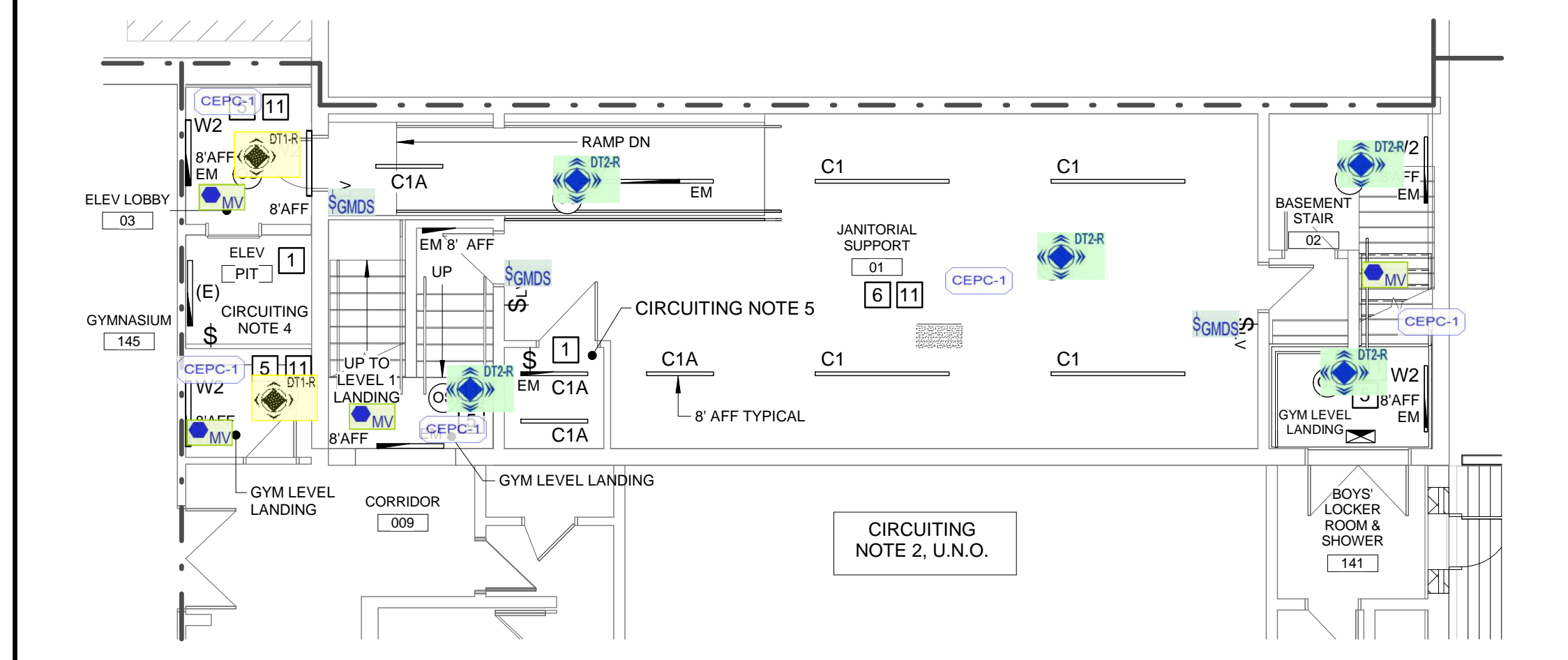
Qty	Symbol	Description
18	CEPC-1	Emergency Power Control 120/277 Single Circuit
17	SGMDS	Momentary Decorator Switch, White
1		OAC-DT-9901-R Dual Tech 500 Sq Ft. Occupancy Sensor
13		OAC-DT-1000-R Dual Tech 1000 Sq Ft. Occupancy Sensor
32		OAC-DT-2000-R Dual Tech 2000 Sq Ft. Occupancy Sensor
1		OAC-U-2000-R Ultrasonic 2000 Sq Ft. Occupancy Sensor
2		OXC-P-1500-R PIR 1500 Sq Ft. Occupancy Sensor
6	D1	QANFC-DT-1300H-R Dual Tech 1200 Sq Ft. Occupancy Sensor
26	MV	QNW-D-1000-W Dual Tech Single Level Switch Sensor 120/277
4		SP20-RM Latching Switchpack 120/277
		Room Controller 3 Relay/Dimmer 120/277
		OCC-RJ45 RJ45 to Occupancy Sensor Adapter
		Custom 2 Button Room Controller Switch White
		Custom 3 Button Room Controller Switch White
		Custom 4 Button Room Controller Switch White
1		LK16-120/277 Relay Panel



B3 STAGE LEVEL LANDING LIGHTING
1/8" = 1'-0"



B1 MECHANICAL MEZZ LIGHTING
1/8" = 1'-0"



A3 BASEMENT LEVEL LIGHTING
1/8" = 1'-0"
LOCATED UNDER STAGE

A8 LEVEL 1 - AREA 5 - LIGHTING PLAN
1/8" = 1'-0"

PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL115H

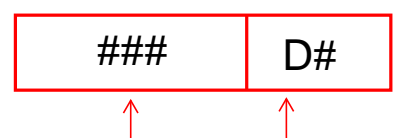
DATE:
May 22, 2018

PROJECT #:
1701300



1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING IN THIS AREA TO P4A-28.
3. CIRCUIT LIGHTING IN THIS AREA TO P4A-30.

Detail Identification
*one-line details are on the pages following the floor plans



Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

Qty	Symbol	Description
5	[Symbol]	Emergency Power Control 120/277 Single Circuit
26	[Symbol]	Momentary Decorator Switch, White
3	[Symbol]	QAC-DT-0501-R Dual Tech 500 Sq Ft. Occupancy Sensor
30	[Symbol]	QAC-DT-1000-R Dual Tech 1000 Sq Ft. Occupancy Sensor
	[Symbol]	QAC-DT-2000-R Dual Tech 2000 Sq Ft. Occupancy Sensor
	[Symbol]	QAC-LI-2000-R Ultrasonic 2000 Sq Ft. Occupancy Sensor
	[Symbol]	QAC-P-1500-R PIR 1500 Sq Ft. Occupancy Sensor
	[Symbol]	QAC-UC-1000-W Dual Tech 1000 Sq Ft. Occupancy Sensor
2	[Symbol]	QMW-D-1000-W Dual Tech Single Level Switch Sensor 120/277
15	[Symbol]	SP20-MV Switchpack 120/277
5	[Symbol]	SP20-RD4 Latching Switchpack 120/277
	[Symbol]	Room Controller 3 Relay/Dimmer 120/277
1	[Symbol]	Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
1	[Symbol]	OCC-RJ45 RJ45 to Occupancy Sensor Adapter
	[Symbol]	Custom 2 Button Room Controller Switch White
1	[Symbol]	Custom 3 Button Room Controller Switch White
	[Symbol]	Custom 6 Button Room Controller Switch White
	[Symbol]	LK16-120/277 Relay Panel

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(IES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



CIRCUITING NOTE 2
CIRCUITING NOTE 3

CIRCUITING NOTE 2
CIRCUITING NOTE 3

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A8 LEVEL 2 - AREA 1 - LIGHTING PLAN

1/8" = 1'-0"

PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL121H

DATE:
May 22, 2018

PROJECT #:
1701300



1. CIRCUIT EXIT SIGNS TO P4A-22.
2. CIRCUIT LIGHTING NOT LISTED BELOW TO P4A-24.
3. CIRCUIT LIGHTING FOR CAFETERIA 151 AND STAGE 151.1 TO P4A-26.

Detail Identification
*one-line details are on the pages following the floor plans

D#

Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CIRCUITING NOTES

THIS SHEET ONLY

Qty	Symbol	Description
7	CEPC-1	Emergency Power Control 120/277 Single Circuit
11	SGMDS	Momentary Decorator Switch, White
4	DT2R	OAC-DT-0501-R Dual Tech 500 Sq Ft. Occupancy Sensor
21	DT2R	OAC-DT-1000-R Dual Tech 1000 Sq Ft. Occupancy Sensor
2	DT2R	OAC-DT-2000-R Dual Tech 2000 Sq Ft. Occupancy Sensor
2	DT2R	OAC-U-2000-R Ultrasonic 2000 Sq Ft. Occupancy Sensor
2	DT2R	OAC-P-1500-R PIR 1500 Sq Ft. Occupancy Sensor
2	D1	DANC-DT-1200W-R Dual Tech Single Level Switch Sensor 120/277
18	MV	DNW-D-1000-W Dual Tech Single Level Switch Sensor 120/277
2	CEPC-1	SP20-MV Switchpack 120/277
2	CEPC-1	SP20-RD4 Latching Switchpack 120/277
2	CEPC-1	Room Controller 3 Relay/Dimmer 120/277
2	CEPC-1	Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
6	CEPC-1	OCC-RJ45 RJ45 to Occupancy Sensor Adapter
6	CEPC-1	Custom 2 Button Room Controller Switch White
6	CEPC-1	Custom 3 Button Room Controller Switch White
6	CEPC-1	Custom 6 Button Room Controller Switch White
6	CEPC-1	LK16-120/277 Relay Panel

LIGHTING CONTROL NOTES SCHEDULE

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF, AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL

PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL122H

DATE:
May 22, 2018

PROJECT #:
1701300



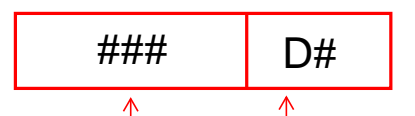
A8 LEVEL 2 - AREA 2 - LIGHTING PLAN

1/8" = 1'-0"



1. CIRCUIT EXIT SIGNS TO P4C-31.
2. CIRCUIT LIGHTING IN THIS AREA TO P4C-33.
3. CIRCUIT LIGHTING IN THIS AREA TO P4C-35.

Detail Identification
*one-line details are on the pages following the floor plans



Room Number Detail Number

GENERAL NOTES:

DEVICES SHOWN ARE FOR CONCEPT ONLY. REFER TO DEVICE INSTALLATION INSTRUCTIONS FOR EXACT DEVICE PLACEMENT.

TO PREVENT FALSE ACTIVATION, ULTRASONIC CEILING MOUNT SENSORS SHOULD BE MOUNTED AWAY FROM THE PATH OF STRONG AIR TURBULENCE. IN NORMAL AIRFLOW CONDITIONS, SENSORS SHOULD BE MOUNTED FOUR TO SIX FEET AWAY FROM THE SOURCE. FOR TYPICAL PLACEMENT, REFER TO LOCATION DIAGRAMS. IN LOCATIONS WITH STRONG AIR TURBULENCE A PIR CEILING SENSOR SHOULD BE CONSIDERED.

CONTRACTOR IS RESPONSIBLE FOR PROPER TIME DELAY AND SENSITIVITY ADJUSTMENTS WHEN APPLICABLE.

LIGHTING CIRCUITING NOTES
THIS SHEET ONLY

Qty	Symbol	Description
3		Emergency Power Control 120/277 Single Circuit
20		Momentary Decorator Switch, White
5		QAC-DT-0501-R Dual Tech 500 Sq Ft. Occupancy Sensor
30		QAC-DT-1000-R Dual Tech 1000 Sq Ft. Occupancy Sensor
		QAC-DT-2000-R Dual Tech 2000 Sq Ft. Occupancy Sensor
		QAC-U-2000-R Ultrasonic 2000 Sq Ft. Occupancy Sensor
		QAC-P-1500-R PIR 1500 Sq Ft. Occupancy Sensor
3		QAWC-DT-1200W-R Dual Tech 1200 Sq Ft. Occupancy Sensor
17		QNW-D-1000-W Dual Tech Single Level Switch Sensor 120/277
		SP20-MV Switchpack 120/277
		SP20-RD Latching Switchpack 120/277
		Room Controller 3 Relay/Dimmer 120/277
		Room Controller 3 Relay/Dimmer + 1 Emergency 120/277
		ODC-RJ45 RJ45 to Occupancy Sensor Adapter
		Custom 2 Button Room Controller Switch White
		Custom 3 Button Room Controller Switch White
		Custom 6 Button Room Controller Switch White
		LK16-120277 Relay Panel

TAG/NOTE	DESCRIPTION OF LIGHTING CONTROL DEVICES AND OPERATION	DETAIL NUMBER
1	WALL SWITCH - MANUAL ON/MANUAL OFF	NO DETAIL
2	WALL SWITCH WITH OCCUPANCY SENSOR - MANUAL ON AND OFF/AUTO OFF	NO DETAIL
3	NOT USED	J1/ E500H
4	LIGHTING CONTROLLED BY LCP - REFER TO LIGHTING CONTROL PANEL SCHEDULE ON SHEET E0.11.	NO DETAIL
5	AUTO ON/AUTO OFF VIA OCCUPANCY SENSOR(S)	B1/ E500H
6	WALL SWITCH(ES) - MANUAL ON AND OFF; AUTO OFF VIA OCCUPANCY SENSOR(S)	D1/ E500H
7	WALL SWITCH WITH DIMMER AND OCCUPANCY SENSOR - MANUAL ON AND OFF/MANUAL DIMMING/AUTO OFF	NO DETAIL
8	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS	J10/ E500H
9	NOT USED	
10	WALLSTATION(S) - MANUAL ON AND OFF - WHERE NOTED ON PLANS; WALLSTATION(S) WITH DIMMER(S) - MANUAL ON AND OFF/MANUAL DIMMING; AUTO OFF VIA OCCUPANCY SENSORS; DIMMING VIA DAYLIGHT HARVESTING SENSOR FOR FIXTURES INDICATED	J10/ E500H
11	PROVIDE UL924 EMERGENCY BYPASS RELAY TO FORCE LIGHTING ON FOR ENTIRE ROOM, CORRIDOR, OR ENTRY UPON ACTIVATION OF FIRE ALARM. (1) RELAY IS REQUIRED PER EACH SWITCH GROUP OF LIGHTS. IF MULTIPLE SWITCH GROUPS IN A ROOM, MULTIPLE RELAYS ARE NEEDED.	NO DETAIL



CIRCUITING NOTE 2
CIRCUITING NOTE 3

PROJECT NAME:
Newmarket Junior High School

AGENT NAME:
Charron, Inc.

CHECKED BY:
XX

DRAWN BY:
WS

DRAWING #:
EL123H

DATE:
May 22, 2018

PROJECT #:
1701300

N:\Projects\2016\16046 - Newmarket Elementary and Jr. Sr. High School\1. Design Phase\2 DRAWINGS - REVIT 2017\Junior - Senior High School\16046SH_E.rvt
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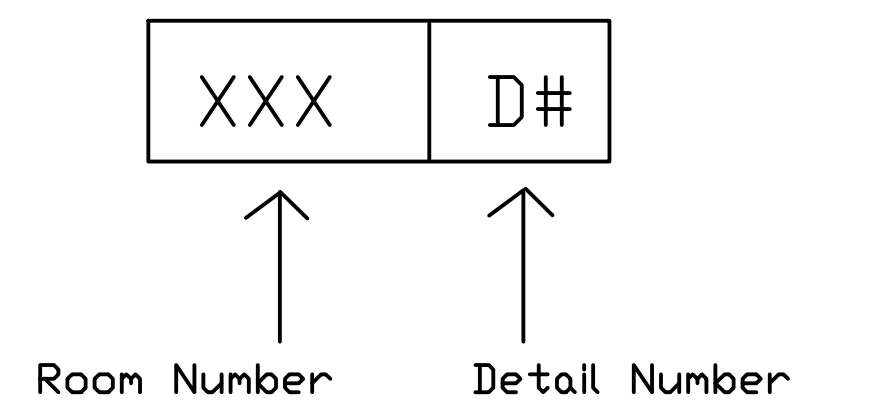


Powering Business Worldwide

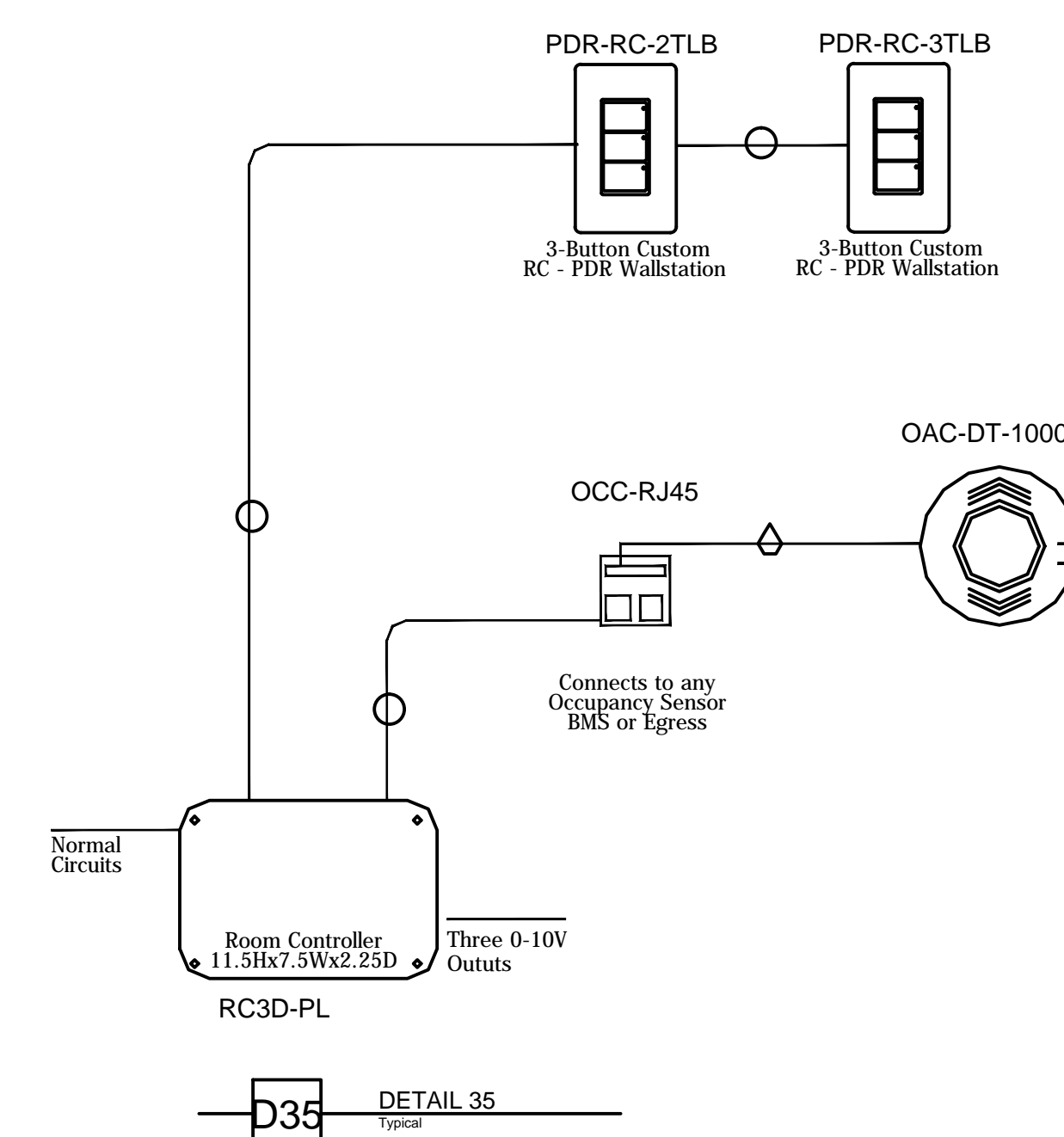
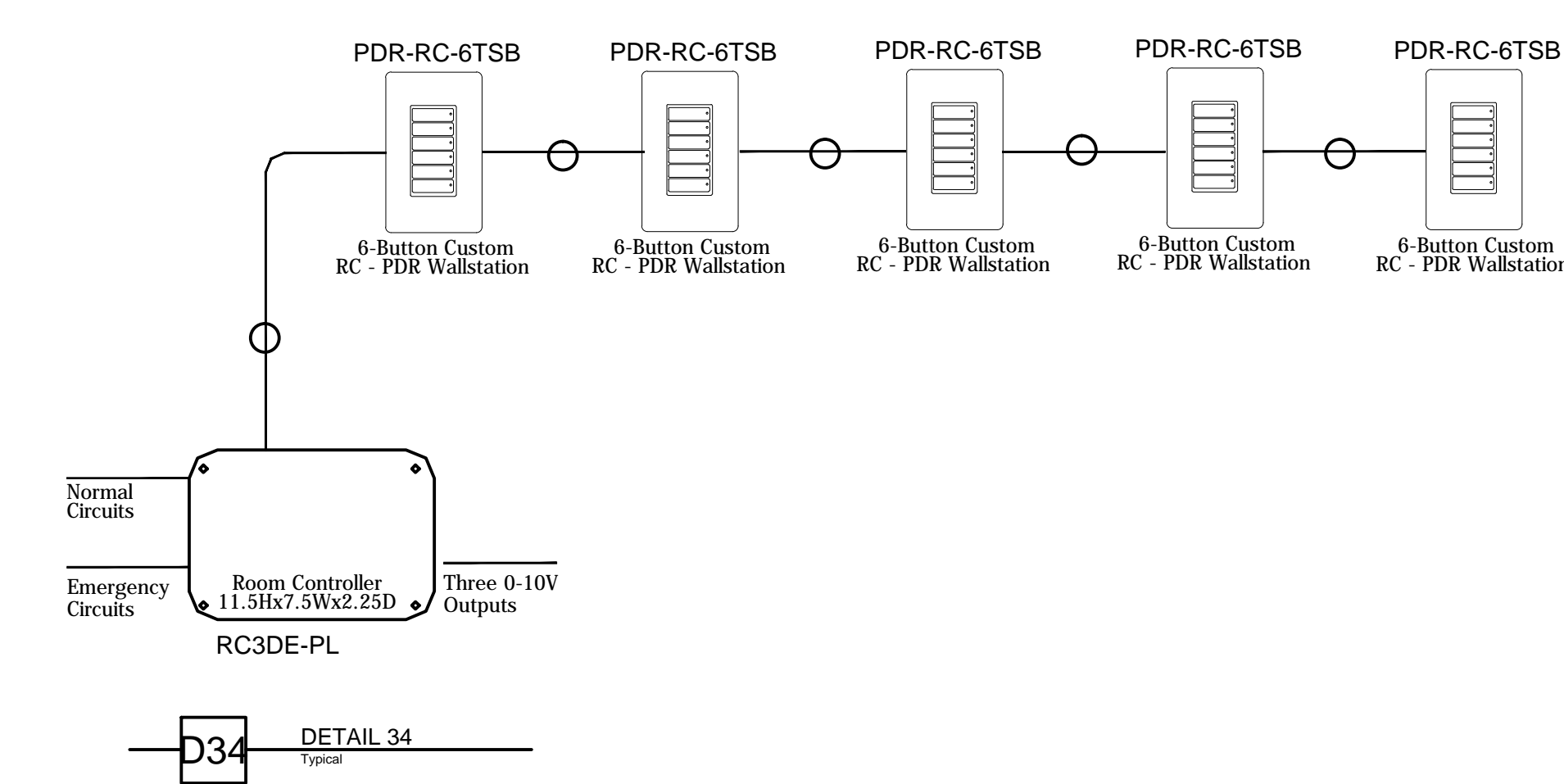
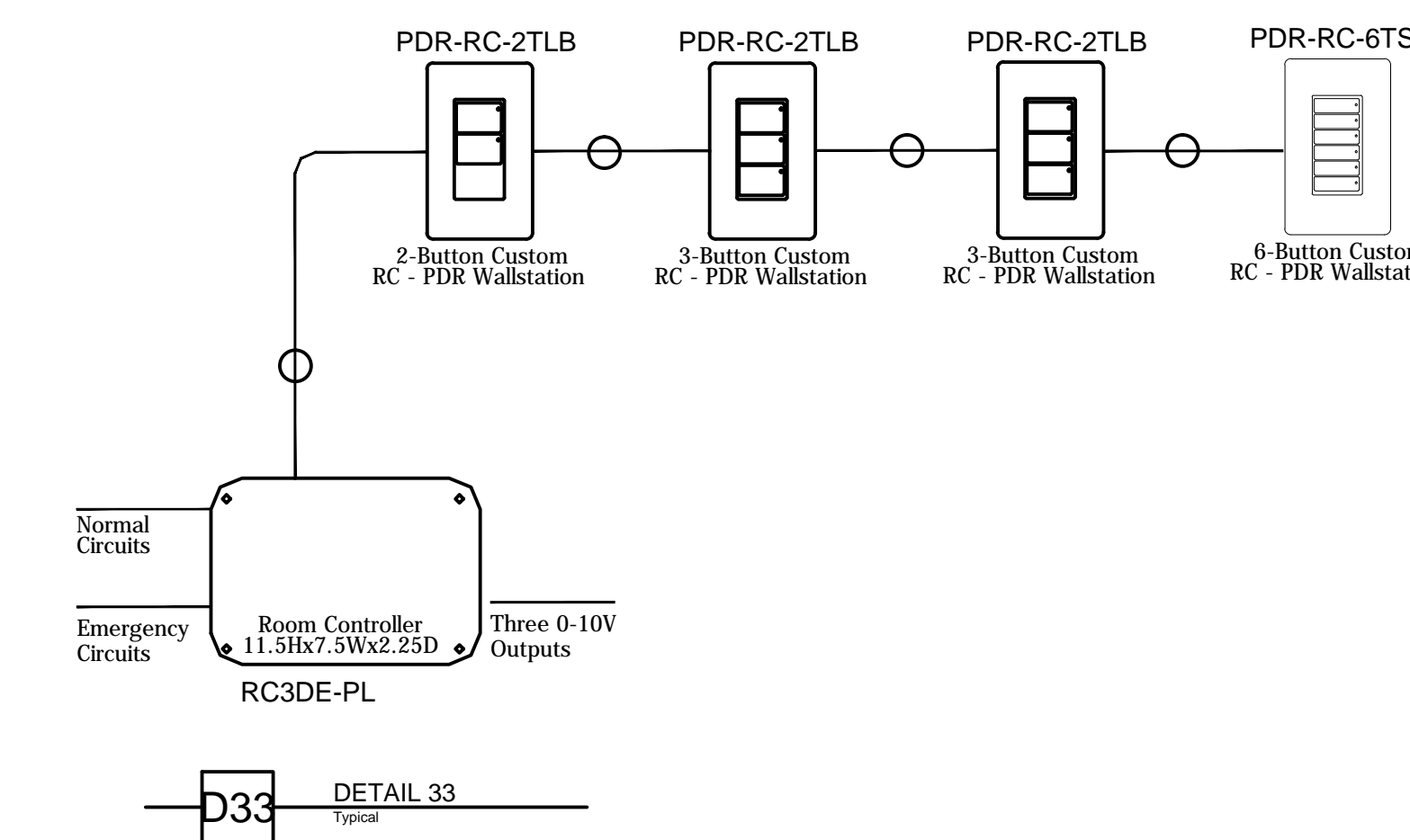
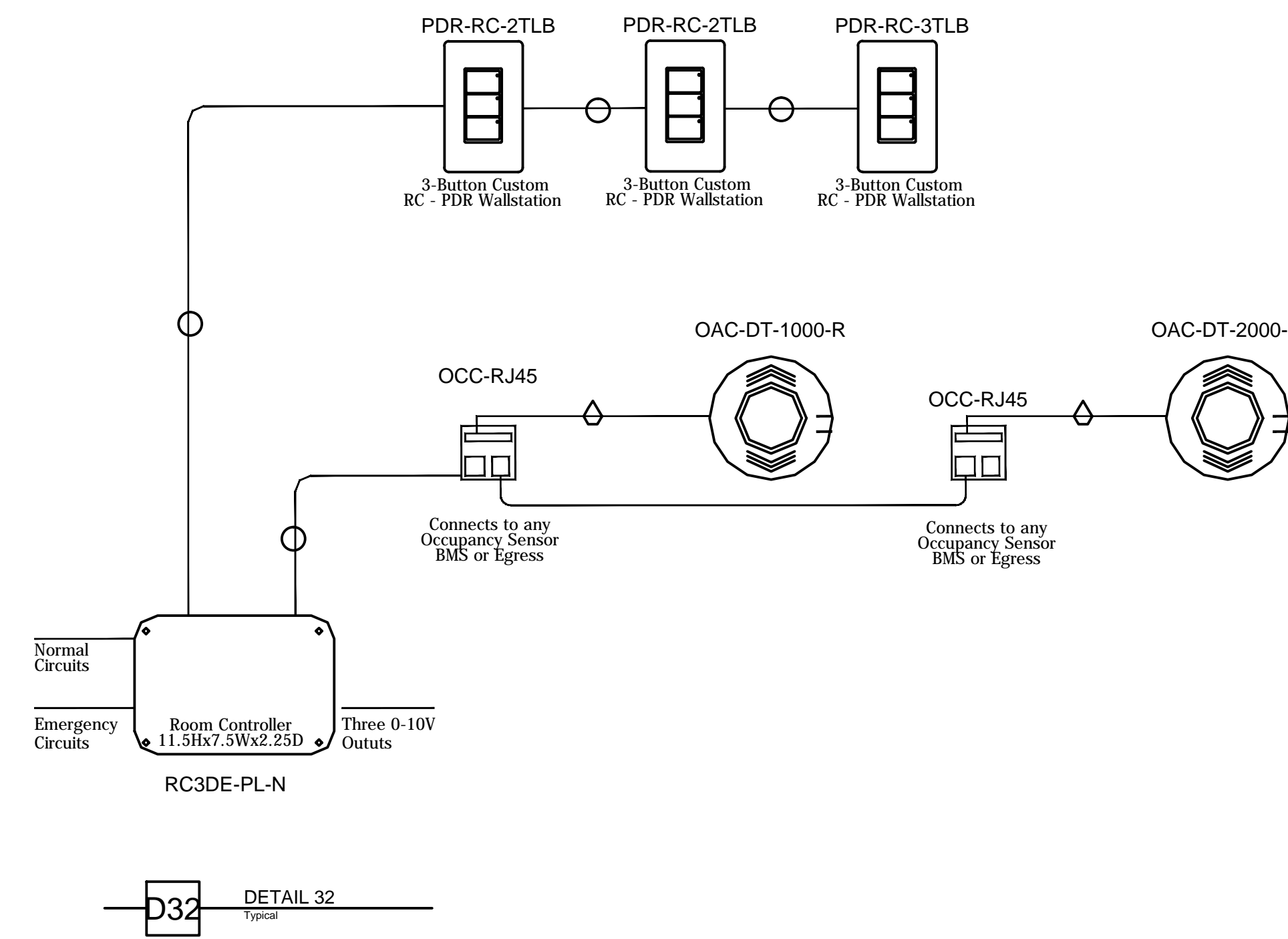
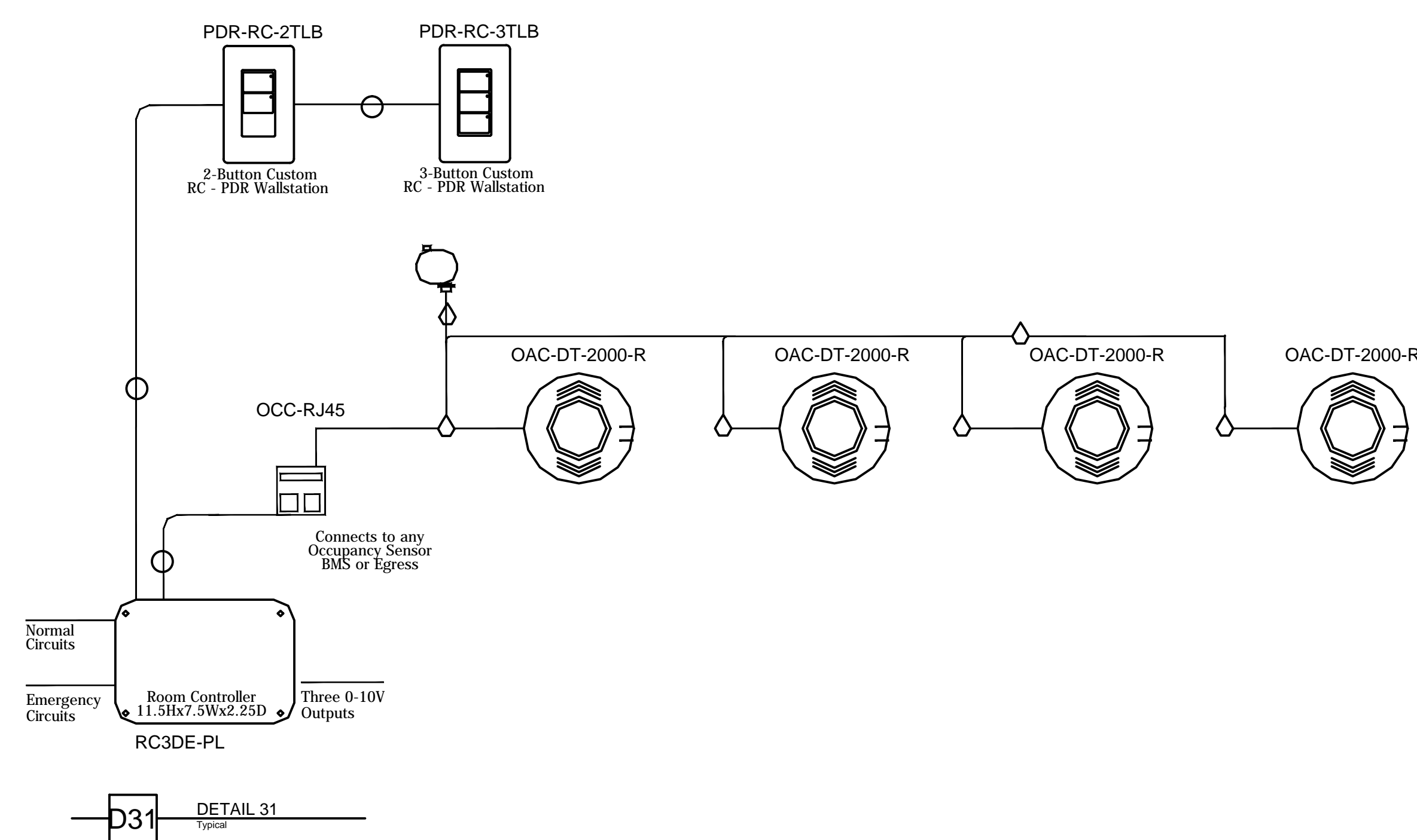
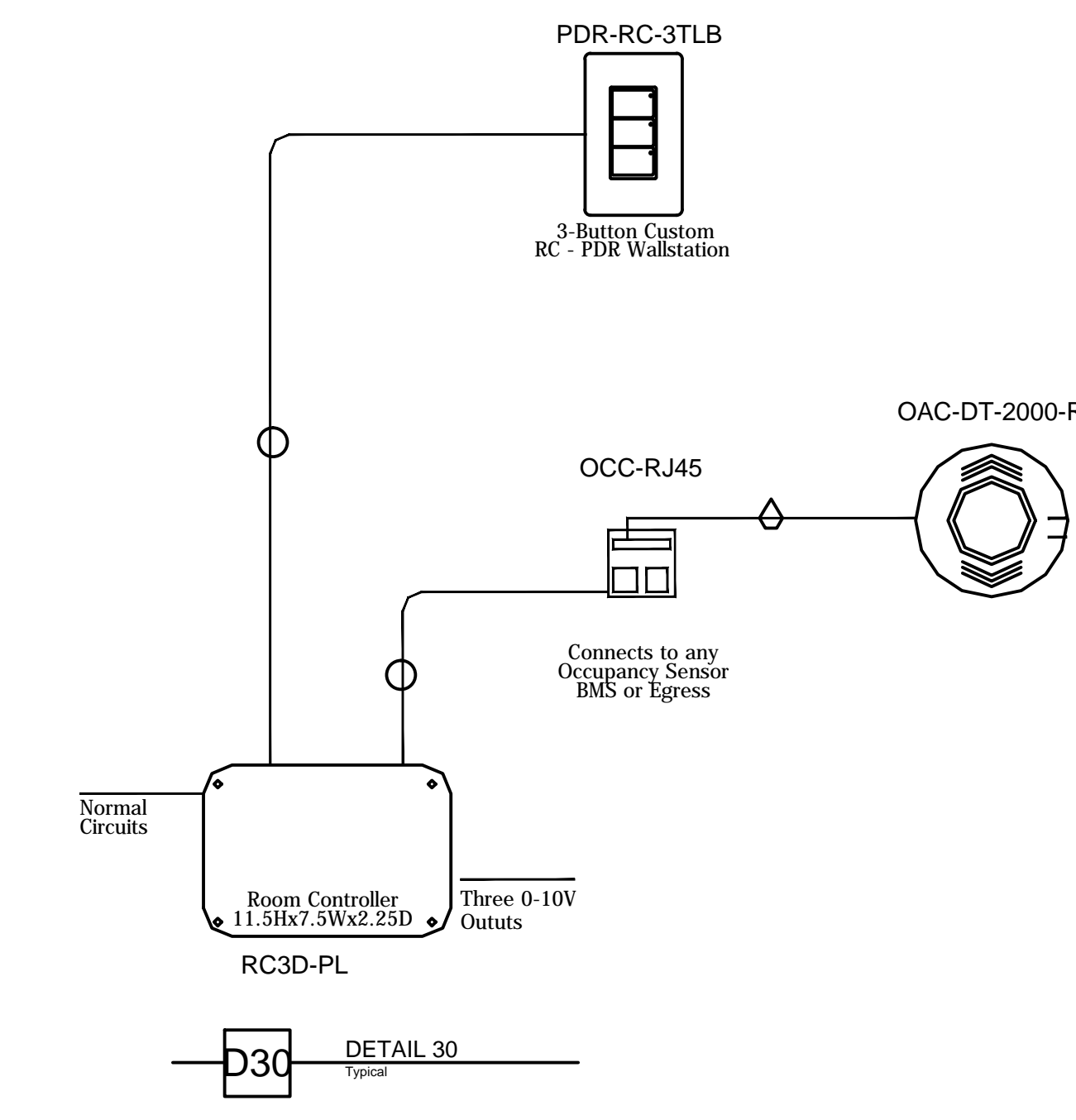
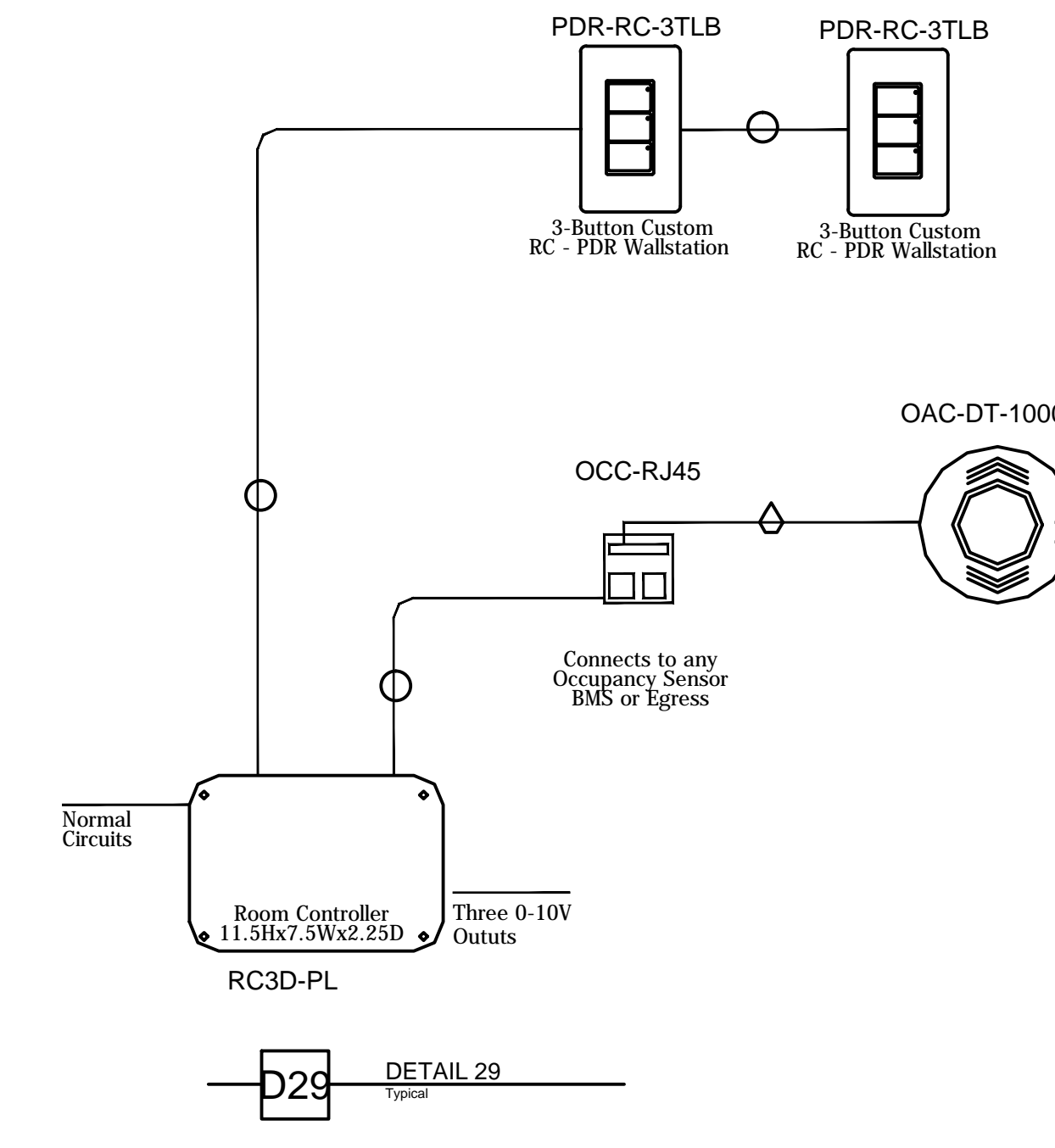
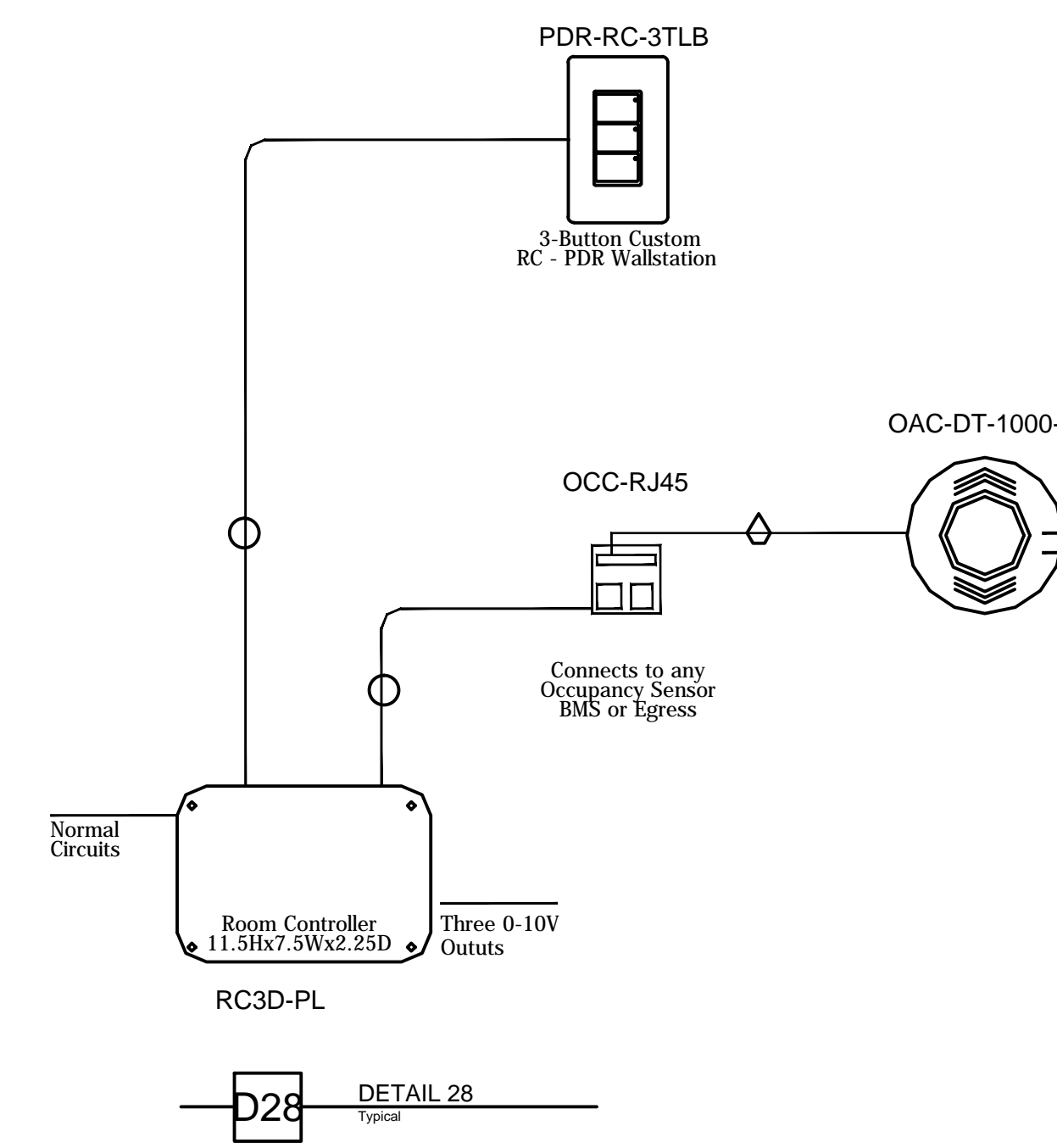
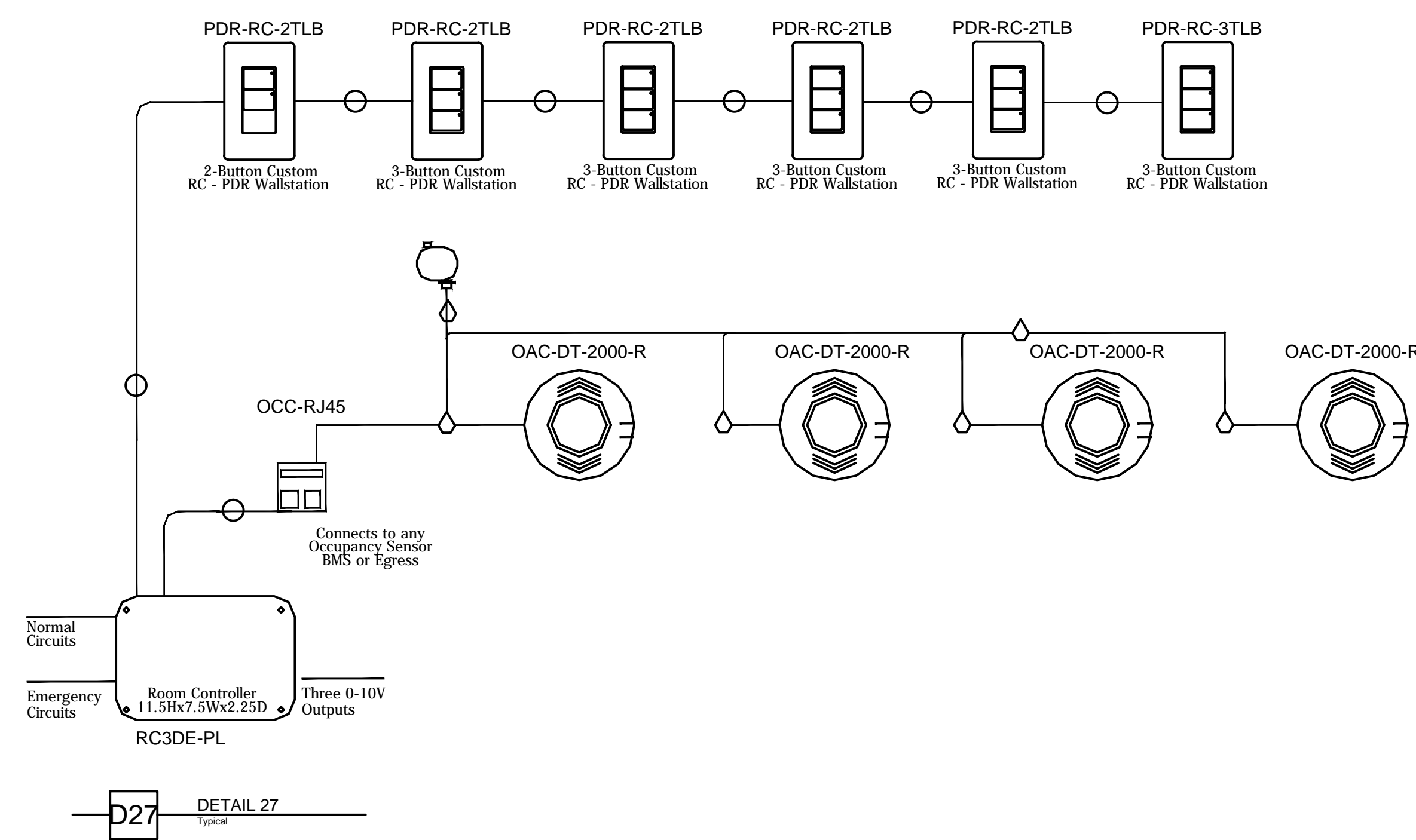
SUBMITTAL PACKAGE

Riser/One Line Diagrams

Detail Identification
 *one-line details are on the pages following the floor plans



Devices shown are for concept only. Refer to installation instructions for exact location requirements. A sensor layout should be completed for guaranteed coverage. To prevent false activation, ultrasonic ceiling mount sensors should be mounted away from the path of strong air turbulence. In normal air flow conditions, sensors should be mounted 4-6 feet away from the air supply and return vents. For typical placement, refer to location diagrams. In locations with strong air turbulence a PIR ceiling sensor should be considered.



Notes

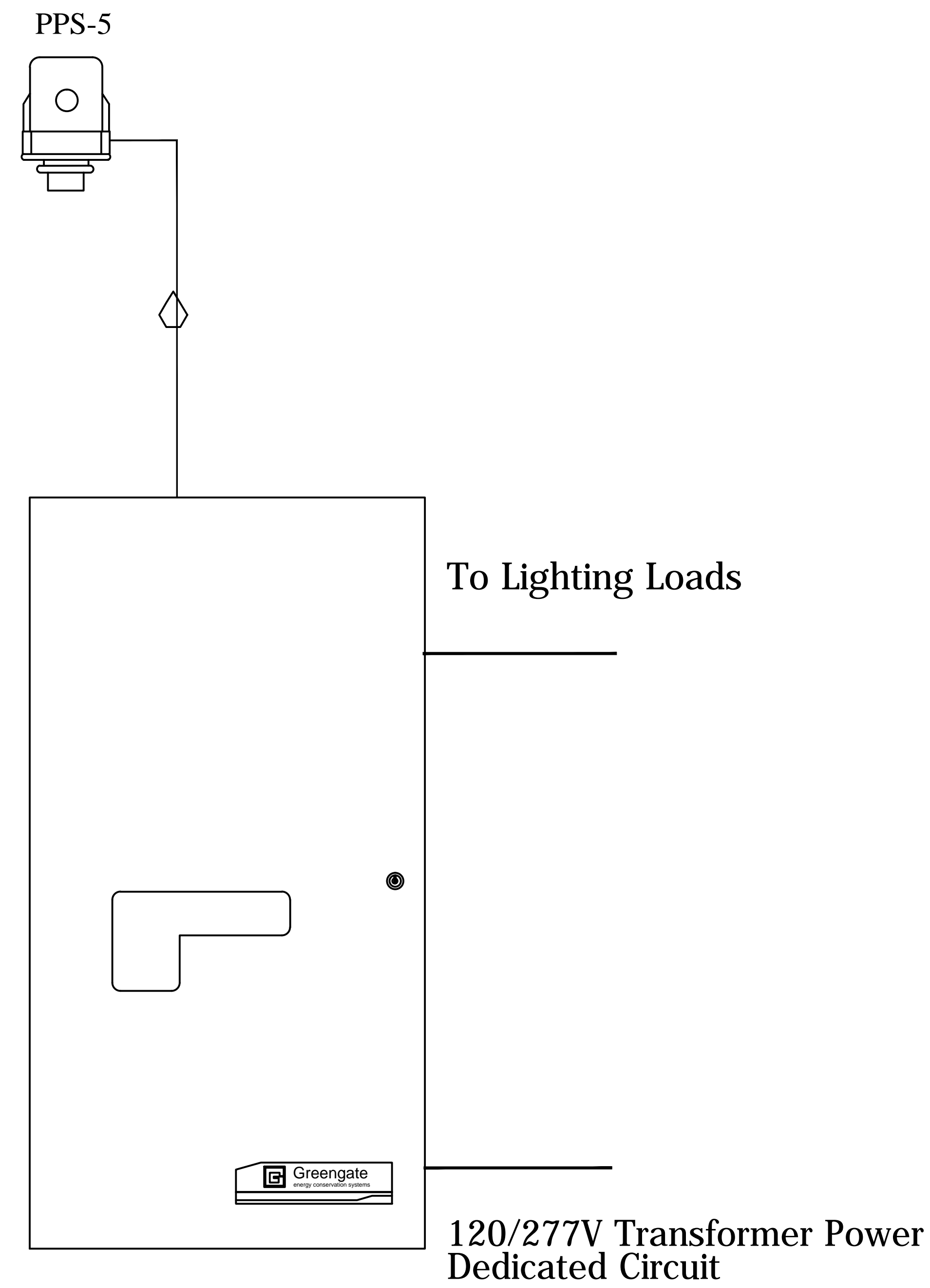
1	This one-line drawing is for concept only. Every wire is not shown. Wire according to the product installation / wiring instructions.
2	Refer to plans for locations, size and quantity.
3	Refer to all manufacturers installation instructions for correct wiring information.

Cables

○	LAN	Category 5 cable provided by others
△	LV3	Low Voltage Input wire - #18 AWG, 3 conductor wire

EATON GREENGATE NOTES:

1. THIS ONE-LINE DRAWING IS FOR CONCEPT ONLY. DO NOT WIRE THE SYSTEM PER THIS ONE-LINE.
2. REFER TO PLANS FOR LOCATIONS, SIZE AND QUANTITY.
3. REFER TO ALL MANUFACTURERS INSTALLATION INSTRUCTIONS FOR CORRECT WIRING INFORMATION.
4. REFER TO THE CONTROLKEEPER INSTALLATION INSTRUCTIONS FOR MOUNTING AND WIRING INFORMATION. REFER TO THE CONTROLKEEPER INSTALLATION INSTRUCTIONS FOR LOW VOLTAGE AND NETWORK WIRING. LOW VOLTAGE INPUTS ARE WIRED TO THE CONTROLKEEPER LOGIC BOARD (USING 18AWG WIRE FOR LV WIRING). RS-485 NETWORK WIRE BETWEEN PANELS IS NOT TO EXCEED 4000 FEET. (USE BELDEN #9841 FOR RS-485 NETWORK WIRING). FOR EMERGENCY (UL924) CONTROLLED LOADS USE THE RELAY INTERFACE MODULE(RIM) TO OVERRIDE THE ENTIRE CONTROLKEEPER PANEL. COOPER CONTROLS PROVIDES A 10 YEAR WARRANTY ON ALL GREENGATE RELAY CARDS. COOPER CONTROLS PROVIDES A 3 YEAR WARRANTY ON ALL GREENGATE LOGIC BOARDS. LIGHTING PANEL POWER SUPPLY INCLUDES A STANDARD DOUBLE TAP TRANSFORMER 120/277VAC WITH AN OPTIONAL DOUBLE TAP TRANSFORMER 120/347VAC FOR CANADA.
5. REFER TO THE CONTROLKEEPER INSTALLATION INSTRUCTIONS FOR MOUNTING AND WIRING INFORMATION. REFER TO THE CONTROLKEEPER INSTALLATION INSTRUCTIONS FOR LOW VOLTAGE AND NETWORK WIRING. LOW VOLTAGE INPUTS ARE WIRED TO THE CONTROLKEEPER LOGIC BOARD (USING 18AWG WIRE FOR LV WIRING). RS-485 NETWORK WIRE BETWEEN PANELS IS NOT TO EXCEED 4000 FEET. (USE BELDEN #9841 OR CAT 5 FOR RS-485 NETWORK WIRING). FOR EMERGENCY (UL924) CONTROLLED LOADS USE THE RELAY INTERFACE MODULE(RIM) TO OVERRIDE THE ENTIRE CONTROLKEEPER PANEL. COOPER CONTROLS PROVIDES A 10 YEAR WARRANTY ON ALL GREENGATE RELAY CARDS. COOPER CONTROLS PROVIDES A 3 YEAR WARRANTY ON ALL GREENGATE LOGIC BOARDS.



LK16-120/277-S0-L2-M0-T0-HVB0

Notes

1	This one-line drawing is for concept only. Every wire is not shown. Wire according to the product installation / wiring instructions.
2	Refer to plans for locations, size and quantity.
3	Refer to all manufacturers installation instructions for correct wiring information.

Cables

◇	LV3	Low Voltage Input wire - #18 AWG, 3 conductor wire
---	-----	--

Newmarket Junior High School
Greengate One-line Diagram

DRAWN BY:
WS

DATE:
May 22, 2018

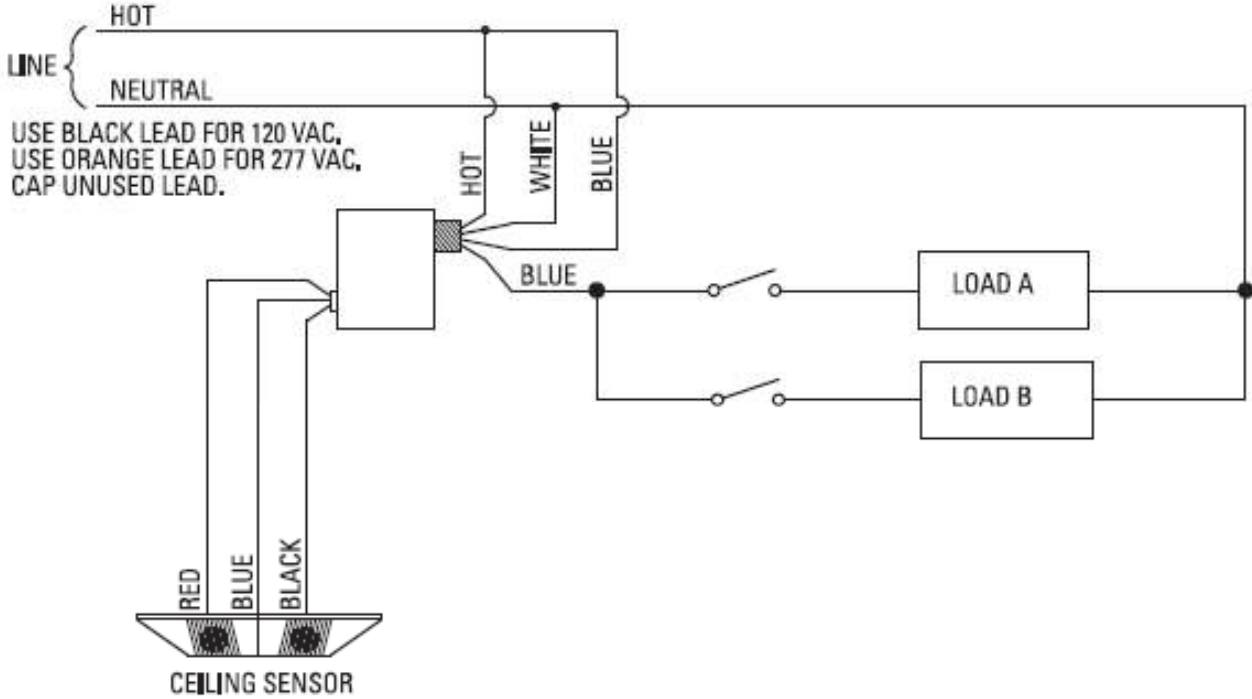
PROJECT #:
1701300



SUBMITTAL PACKAGE

Wiring Diagrams

A/B Switching



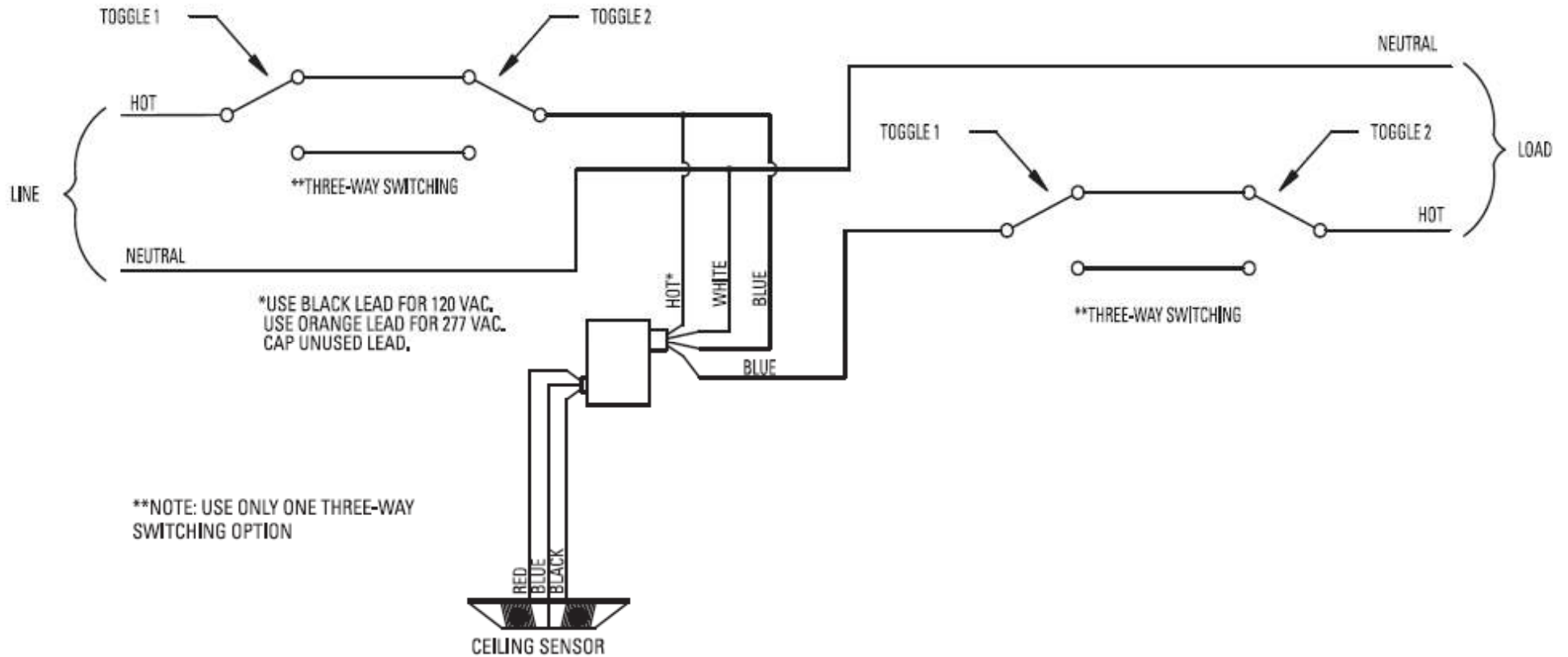
Title: Wiring Details
Product: (SP15 & SP20)
Heavy Duty Switchpack



Eaton
1121 Highway 74 South
Peachtree City, GA 30269

Date:
Project:

Three Way Switching



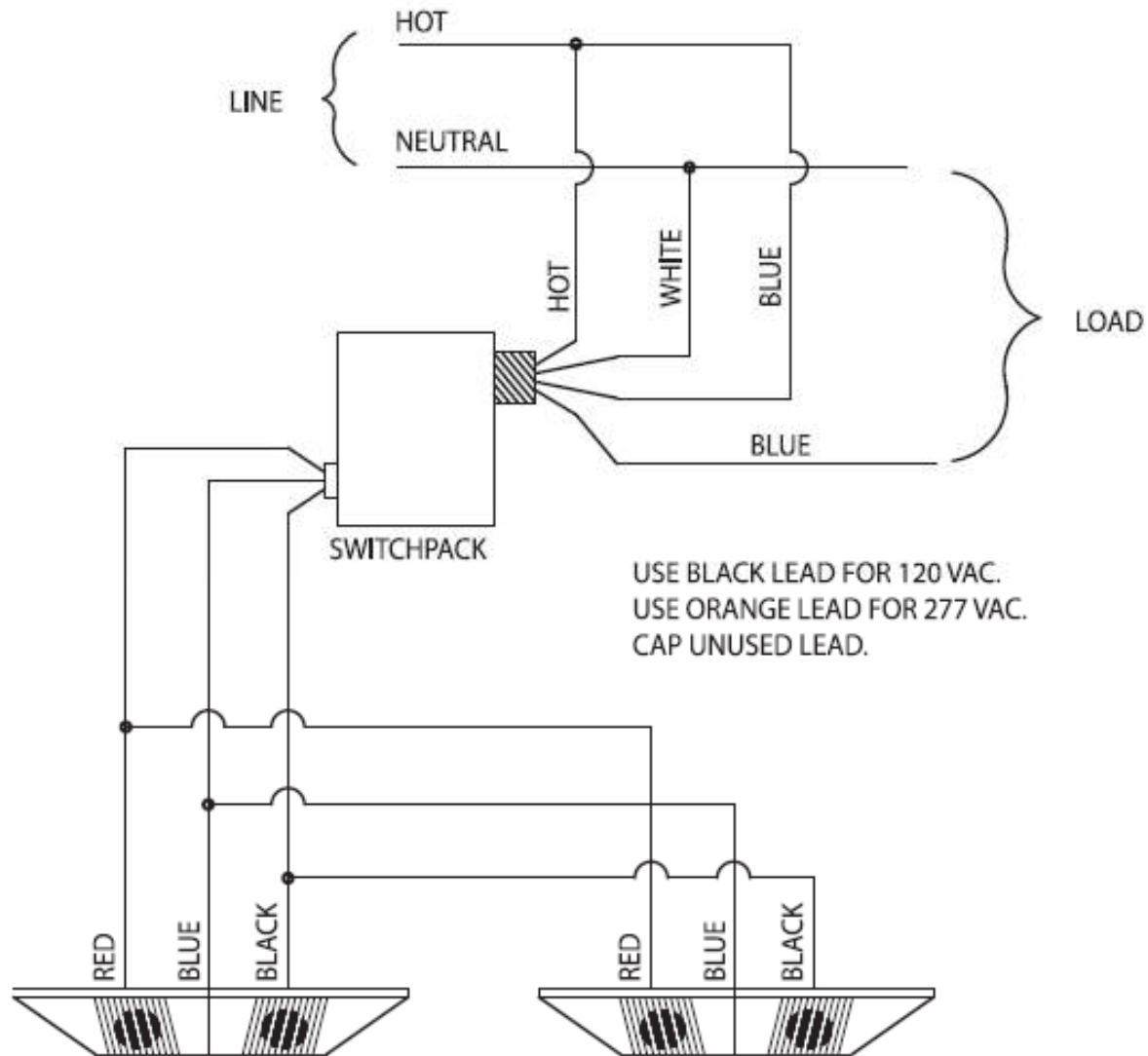
Title: Wiring Details
Product: (SP15 & SP20)
Heavy Duty Switchpack



Eaton
 1121 Highway 74 South
 Peachtree City, GA 30269

Date:
Project:

1 Circuit, 2 or more sensors



Title: Wiring Details
Product: (SP15 & SP20)
Heavy Duty Switchpack



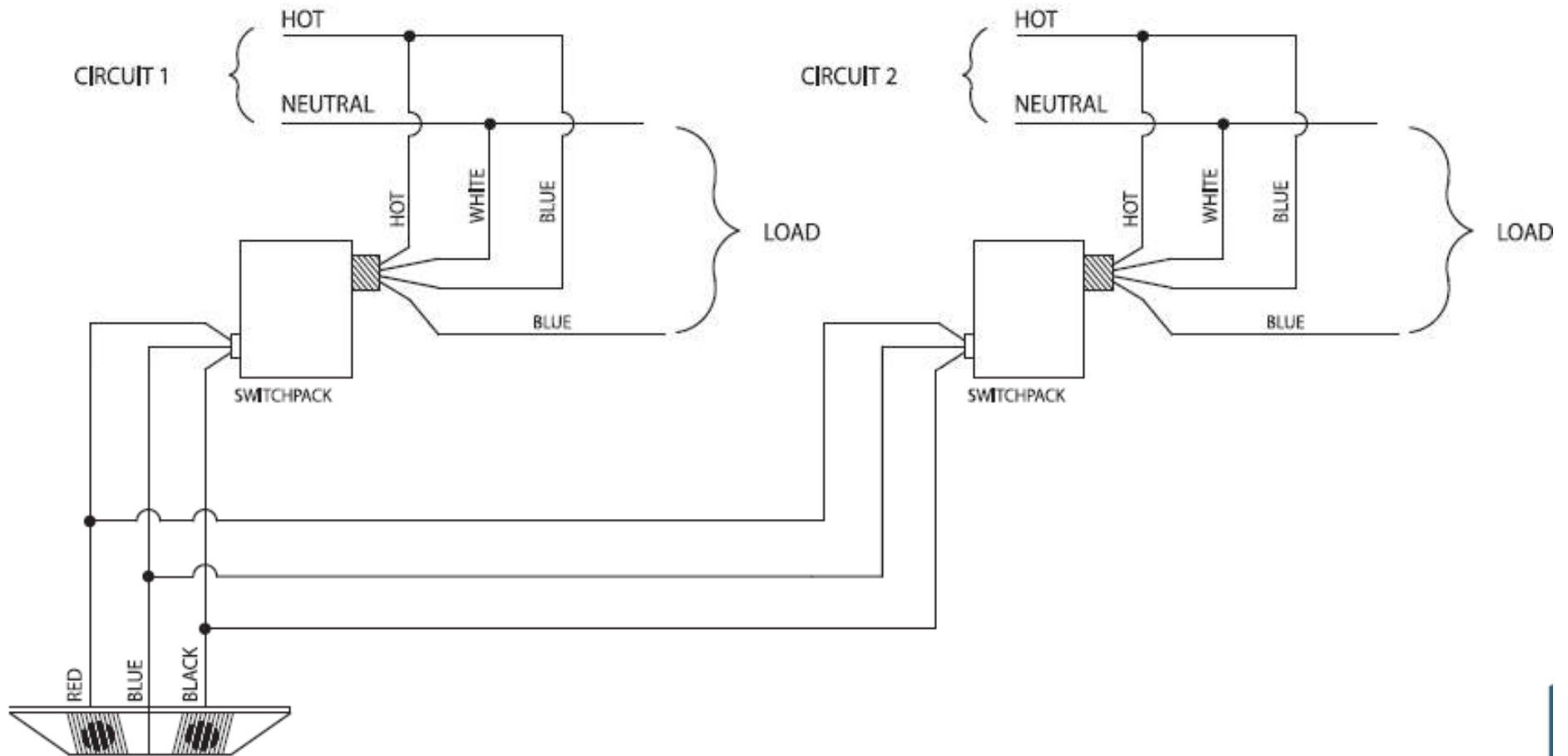
Eaton
1121 Highway 74 South
Peachtree City, GA 30269

Date:
Project:

2 Circuits, 1 Sensor

USE BLACK LEAD FOR 120 VAC.
USE ORANGE LEAD FOR 277 VAC.
CAP UNUSED LEAD.

USE BLACK LEAD FOR 120 VAC.
USE ORANGE LEAD FOR 277 VAC.
CAP UNUSED LEAD.

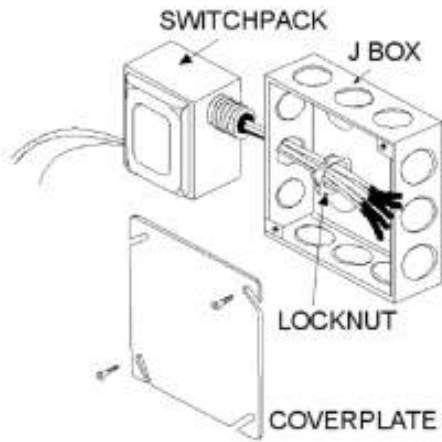


Title: Wiring Details
Product: (SP15 & SP20)
Heavy Duty Switchpack



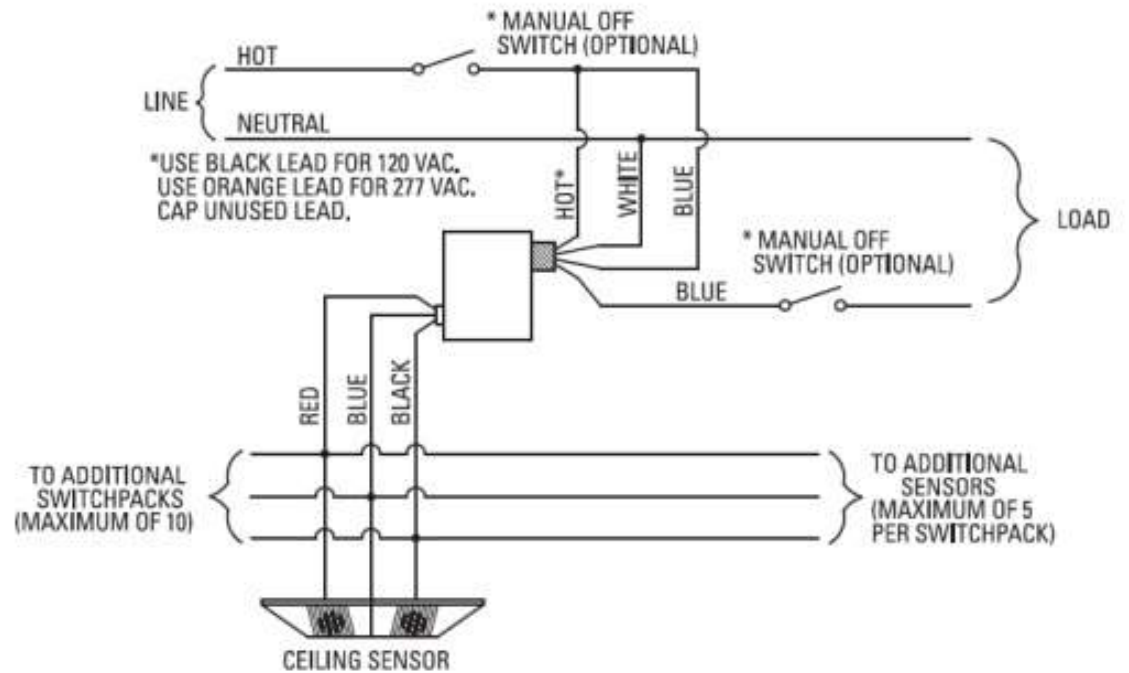
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Peachtree City, GA 30269

Date:
Project:



All connections are made via pigtails with twist-on wire connectors.
NOTE: Connect either the orange or black supply lead to the power source depending upon the power requirements. Cap the unused lead.

Standard Configuration



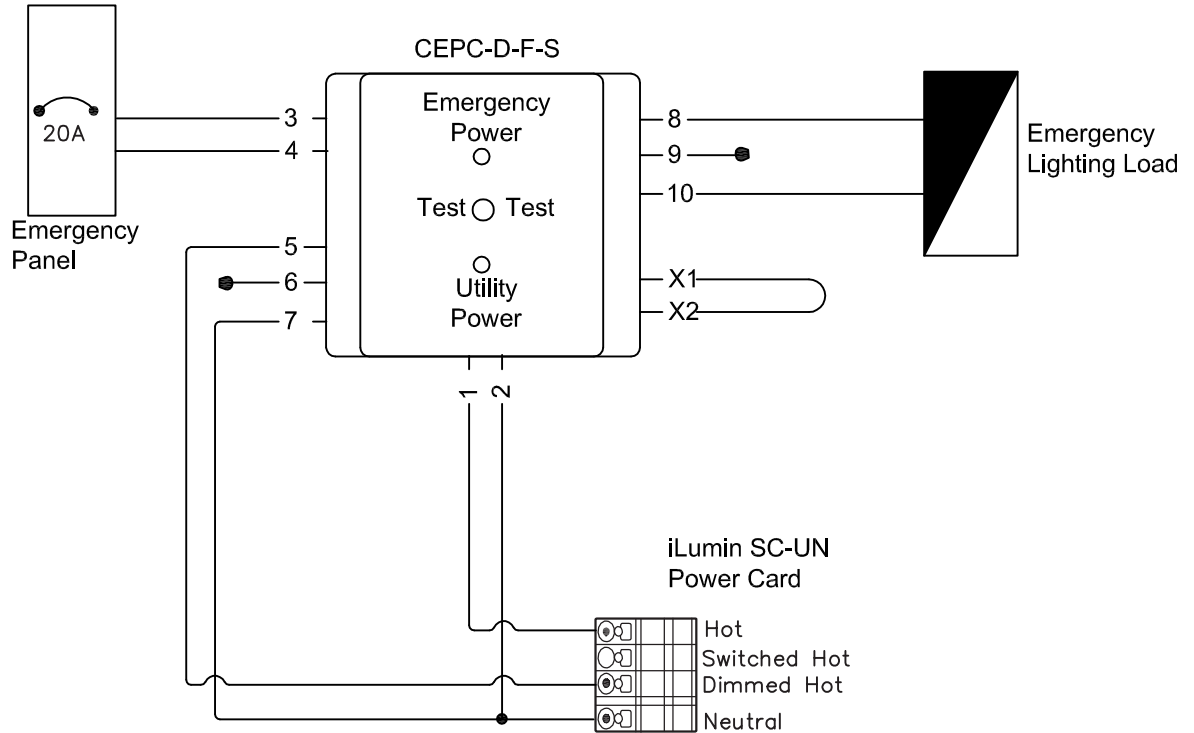
Title: Wiring Details
Product: (SP15 & SP20)
Heavy Duty Switchpack



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 Peachtree City, GA 30269

Date:
Project:

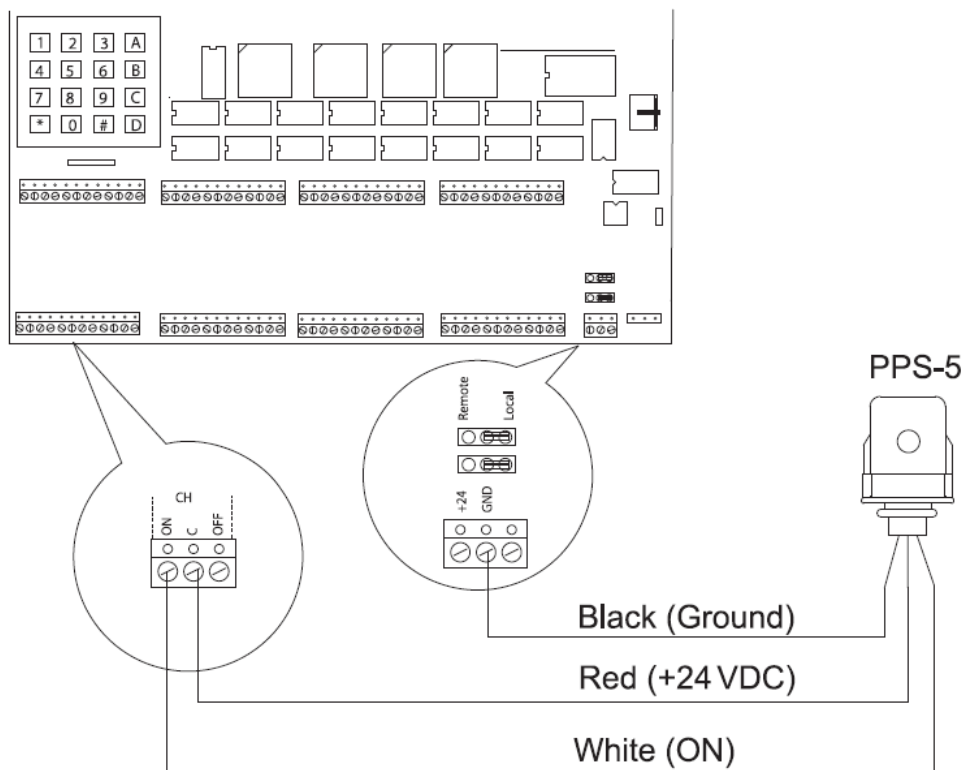
Wiring Diagram for 2-Wire Dimming Loads



2 - Wire Dimming		
CEPC-D-F-S Wire #	Description	iLumin Connection
1	Regular Hot	iLumin Power Card (L)
2	Regular Neutral	iLumin Power Card (N)
3	Emergency Hot	
4	Emergency Neutral	
5	Dimming Hot	iLumin Power Card (D)
6	Not Used	
7	Regular Neutral	iLumin Power Card (N)
8	To Load Hot	
9	Not Used	
10	To Load Neutral	
X1	Do Not Cut	
X2	Do Not Cut	

The Outdoor Contact Input Photosensor (PPS-5) can be used with any Greengate lighting controller. It is made with a weatherproof casing allowing outdoor application and can operate with temperatures from -40° to 158° F.

The photosensor is powered directly from the Greengate Lighting Controller 24VDC peripheral power terminal.



Title: General Information

Product: Contact Input Photocells

COOPER Controls

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 Peachtree City,
 GA 30269. USA

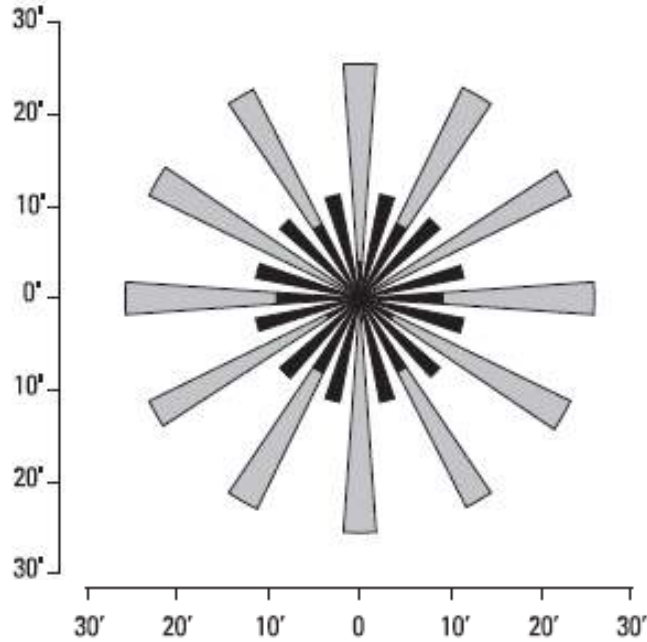
Tel: +1-800-553-3879
 Fax: +1-800-954-7016
 Email: controls@cooperindustries.com

Date:

Project:

OXC-P-1500-R

TOP VIEW

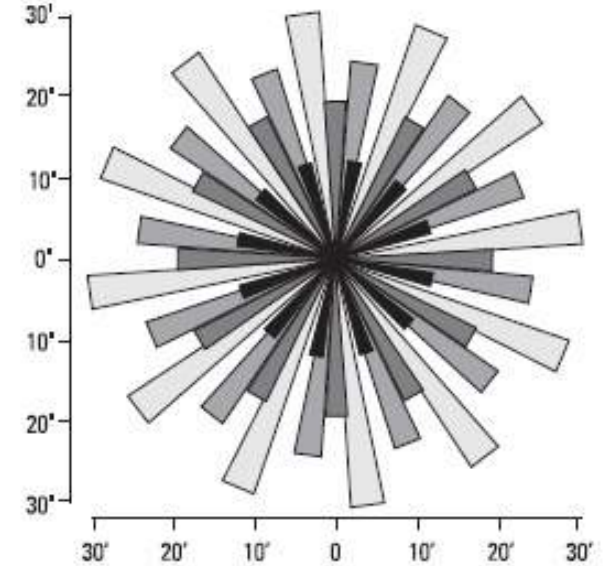


SIDE VIEW

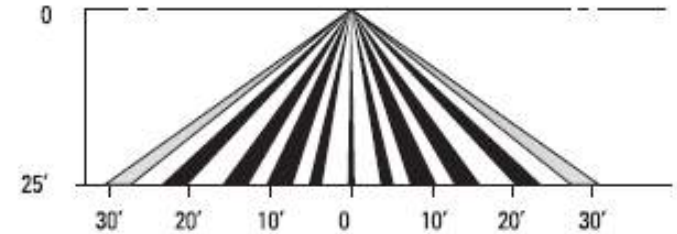


OXC-P-2MH0-R

TOP VIEW



SIDE VIEW



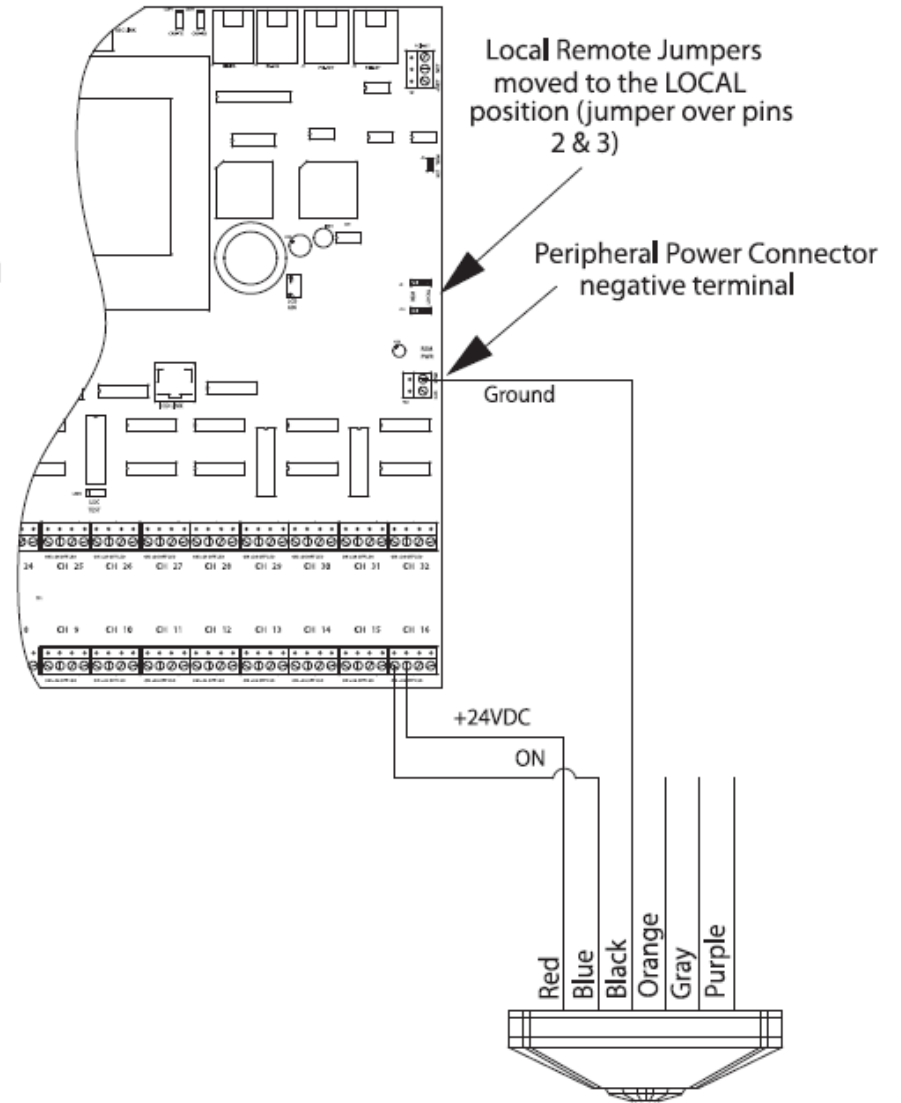
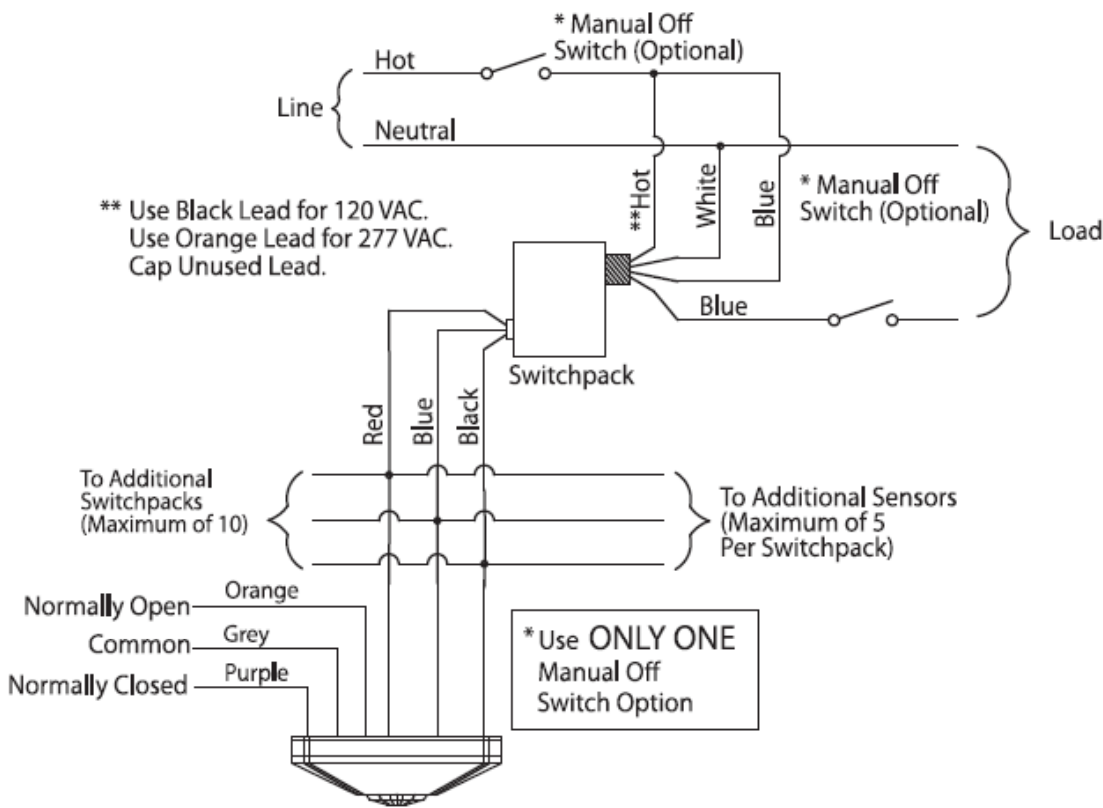
Title: Coverage Information
Product: (OXC-P)
Extreme Temperature Sensor

COOPER Controls

203 Cooper Circle
Peachtree City,
GA 30269, USA

Tel: +1-800-553-3879
Fax: +1-800-954-7016
Email: controls@cooperindustries.com

Date:
Project:

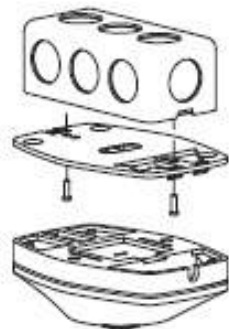


Title: Wiring Details
Product: (OXC-P)
Extreme Temperature Sensor

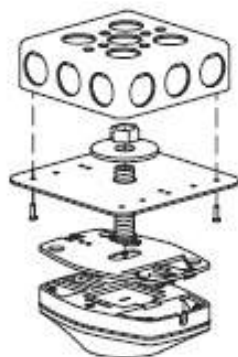
COOPER Controls

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 Peachtree City, GA 30269, USA Fax: +1-800-954-7016
 Email: controls@cooperindustries.com

Date:
Project:



2S Box Mounting

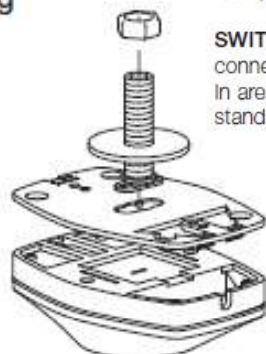


4S Box Mounting



Surface Mount

Mounting Post



SENSOR: The Sensor mounts to normal ceiling tile through a 3/4" hole. The threaded mounting post may be cut down if it is too long to fit into the junction box. The sensor may also be surface mounted or mounted to a standard NEMA 2S or 4S junction box.

CAUTION: Finger-tighten the nut to avoid stripping the mounting post. Do not apply pressure to Fresnel lens.

BACKPLATE: The sensor can be easily snapped onto or pulled away from the backplate without disturbing the mounting hardware. To pull the sensor away from the backplate, place your fingers on the door on the front of the sensor and slide your fingers up onto the back end of the sensor, with your fingers resting below the edge of the backplate. As you press against the sensor, use your other hand to grip the opposite end of the sensor and pull it away from the backplate.

To snap the sensor back onto the backplate, place the end of the sensor without a door against the backplate first, hooking the edge of the sensor on the two small prongs that extend from the backplate. Press the other end of the sensor against the backplate until it snaps into place.

SWITCHPACK: Designed to be mounted externally to any junction box. When mounted, the line connections are inside the box and the Class 2 wiring exits the rear of the Switchpack housing. In areas where Class 2 wiring is not permitted, the Switchpack can be mounted internally to any standard electrical box.

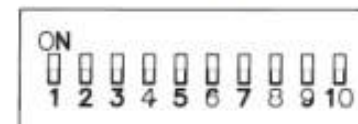
DIP SWITCH SETTINGS

Time Delay (Minutes)	Switch No. 1	Switch No. 2	Switch No. 3
0.25	↓	↓	↓
6	↓	↓	↑
10	↓	↑	↓
14	↓	↑	↑
18	↑	↓	↓
22	↑	↓	↑
26	↑	↑	↓
30	↑	↑	↑

- 1 - Time Delay
- 2 - Time Delay
- 3 - Time Delay
- 4 - Self Adjust Disable
- 5 - Ambient Lights
- 6 - Ambient Lights
- 7 - HID Interface
- 8 - Lighting Sweep
- 9 - N/A
- 10 - Manual Override

Light Level (FC)	Switch No. 5	Switch No. 6
OFF	↓	↓
3	↓	↑
5	↑	↓
10	↑	↑

Measured at 30" off the ground.



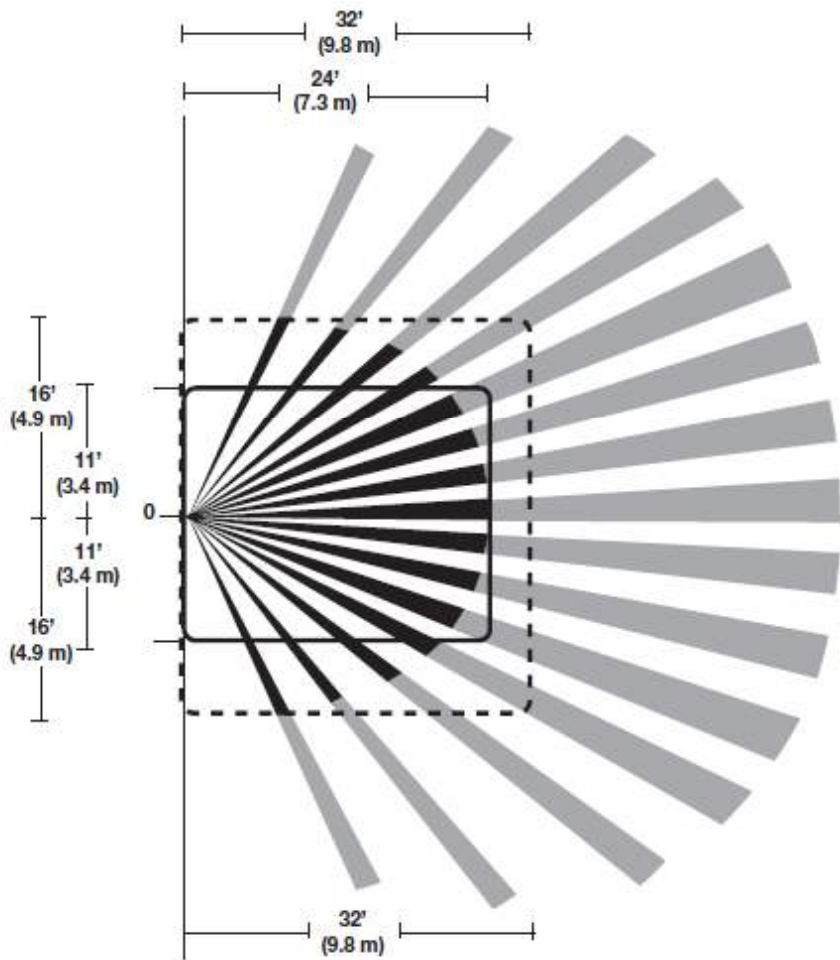
Title: Mounting & DIP Switches
 Product: (OXC-P)
 Extreme Temperature Sensor

COOPER Controls

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Tel: +1-800-553-3879
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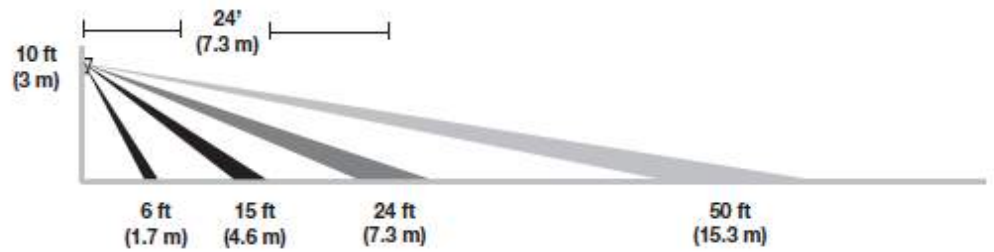
Date:
 Project:



- Minor Motion, IR
- Major Motion, IR
- Minor Motion, Ultrasonic
- Major Motion, Ultrasonic

Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.

The NEMA WD 7 Guide and robotic method were utilized to verify coverage patterns.



Title: General/Coverage Information
Product: (OAWC-DT)
Dual Tech Wall/Corner Mount

COOPER Controls

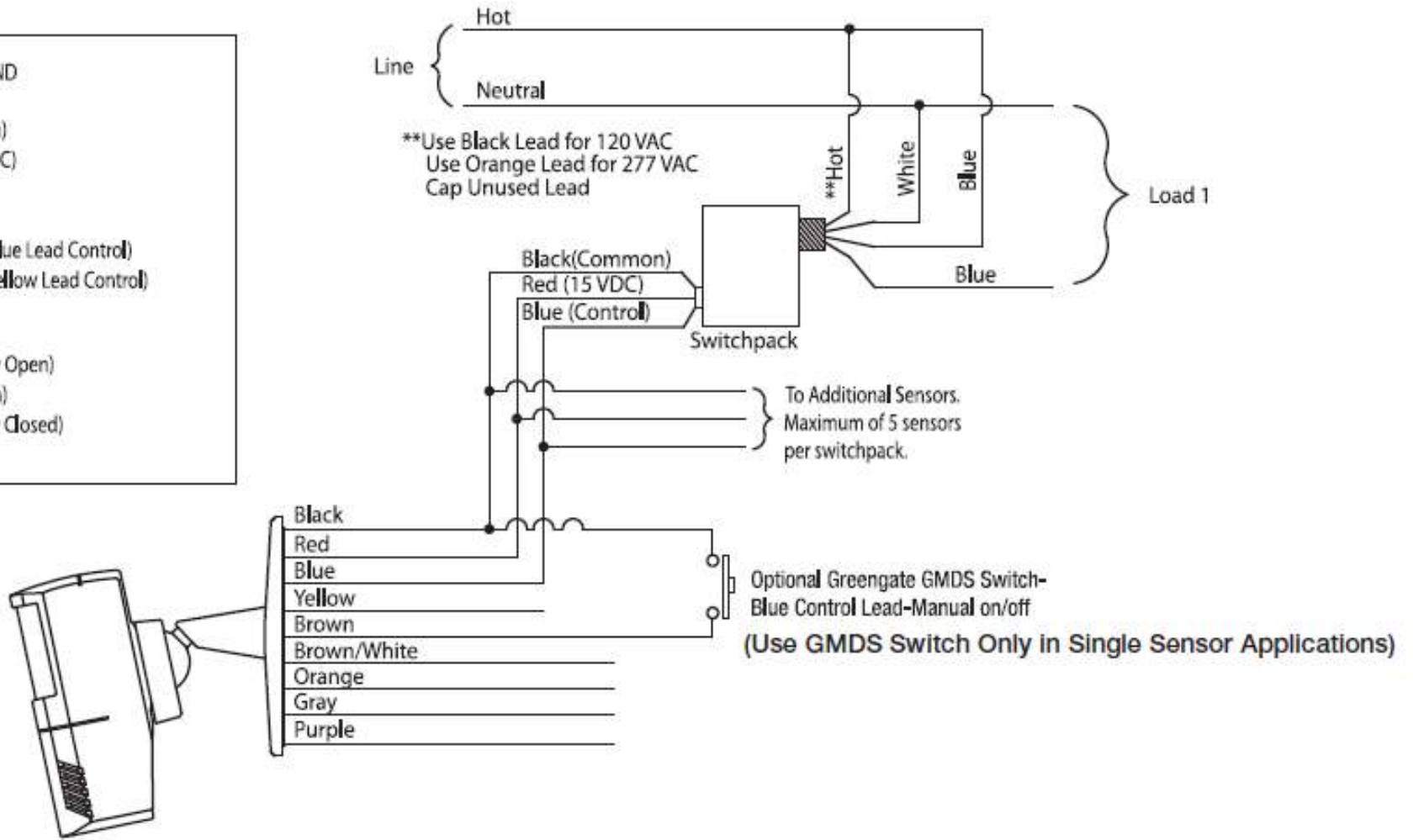
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 Peachtree City,
 GA 30269, USA

Tel: +1-800-553-3879
 Fax: +1-800-954-7016
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Date:
Project:

One Sensor, One Switchpack

SENSOR WIRE LEAD LEGEND	
Black	(Common)
Red	(10-30 VDC)
Blue	(Control)
Yellow	(Control)
Brown	(Switch-Blue Lead Control)
Brown/White	(Switch-Yellow Lead Control)
Sensor's Isolated Relay	
Orange	(Normally Open)
Gray	(Common)
Purple	(Normally Closed)



Recommended Wire: 18-3 AWG stranded non-shielded

Title: Wiring Details
Product: (OAWC-DT)
Dual Tech Wall/Corner Mount



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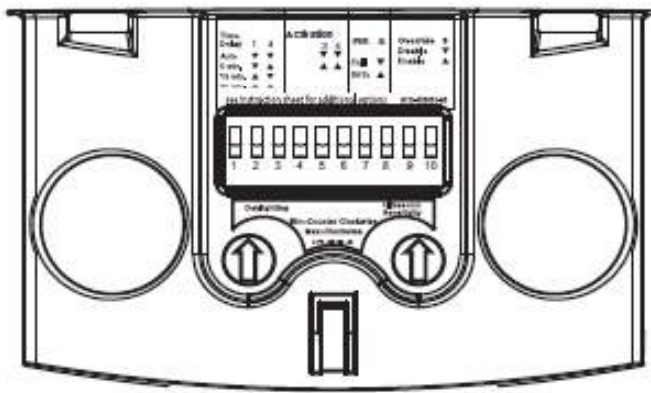
Date:
Project:

DIP Switch Legend

DIP Switch	Time Delay		Activation	Activation	PIR Sensitivity	Walk-Through Mode	LEDs	Override	Lighting Sweep	Daylighting Mode
	1	2	Power Pack One	Power Pack Two	5	6	7	8	9	10
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Half ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Full ▲
15 Minutes	▲	▼	(-R model only)				(-R model only)			
30 Minutes	▲	▲	(-R model only)				(-R model only)			

*Self-Adjusts to 10 min. user mode

Default =



Title: DIP Switch Information
Product: (OAWC-DT)
Dual Tech Wall/Corner Mount



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 Peachtree City, Fax: +1-800-954-7016
 GA 30269, USA Email: controls@cooperindustries.com

Date:
Project:

EMERGENCY NEUTRAL

YELLOW
Emergency Power OUT

Emergency Lighting Load
(Tracks with normal
lighting YELLOW load)

YELLOW

Lighting Load (1)

RED

Lighting Load (2)

PURPLE

Lighting Load (3)

Requires 0-10V
dimming ballasts

Violet - Dimmer 1

Gray - Dimmer 1

Violet - Dimmer 2

Gray - Dimmer 2

Violet - Dimmer 3

Gray - Dimmer 3

WHT/ORG or WHT/BLK
Neutral

BLACK - Hot
(120/277VAC)

BLUE - Relay In
(120/277VAC)

BLUE - Emergency Power In
(120/277VAC)

Emergency Note:

Emergency load tracks with normal lighting YELLOW load for On/OFF. If dimming it will be adjusted with the dimming zone it is connected to. Upon loss of normal power to the RC3DE, the emergency load will be forced On and full bright to 100%.

In room ladderless testing is done by pressing the "All Off" button four times, within 3 seconds.

The RC3DE is UL924 listed.

0-10V Dimming Zone Note:

The 0-10V dimming zones within the Room Controller can be wired and controlled independent of the connected loads. This allows a each load to have a dedicated 0-10V dimming zone or a single load to have up to three 0-10V dimming zones.

Quick connect cables are pre-terminated and included in the Room Controller QuickKit and measured to fit typical room layouts

Allows connection to any Greengate Occupancy/Vacancy Sensor (OCC-RJ45)

Adjustable daylight sensor dome

Daylight sensor (DSRC-FMOIR)

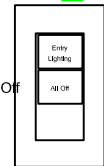
*Immediately provides multi-zone daylight dimming upon powerup

Dual Technology Ceiling Occupancy/Vacancy Sensor (OAC-DT-2000)

*Defaults to vacancy sensor mode
Manual On/Automatic Off (all loads)
for maximum energy savings

Button 1: Toggle Load (1)

Button 2: Load (1),(2),(3) Off



RC-2TLB-EC1*
Entry Station

Button 1: Toggle Load (2)

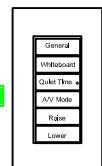
Button 2: Toggle Load (3)

Button 3: Disable Occupancy Sensor for 1hr.

Button 4: Go to 20% of current light level

Button 5: Press and hold Increase lighting 5%

Button 6: Press and hold decrease lighting 5%



RC-6TSB-TS1*
Teacher Station

Connect up to four wallstations per Room Controller

Room Controller and Smart Devices use Click & Go technology:

The RC3DE will automatically recognize any smart device connected with the quick connect cable (provided) and start working immediately upon power up with no programming required. The RC3DE defaults to Manual On/Automatic Off vacancy sensor mode for maximum energy savings. Entry wallstations will provide On/Off control of the Yellow load. Teacher stations provide On/Off control of the Red and Purple loads as well as manual Raise/Lower of all dimmers.

The daylight sensor will automatically on power up provide multi-zone daylight dimming in the space. (remote adjustments can be made later)

*Refer to Room Controller website for more information on other integral no programming required benefits like Demand Response, Solatube Control, Egress Control, BMS Output, Alert Mode, Emergency Lighting Control, and Slider Stations.

Cooper Controls

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Tel: +1-800-553-3879
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Website: www.coopercontrol.com

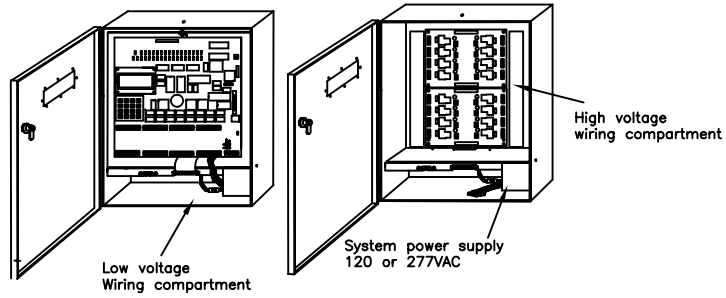
Room Controller - RC3DE

Three Relay + Three Dimmers Wiring Diagram + One Emergency Relay

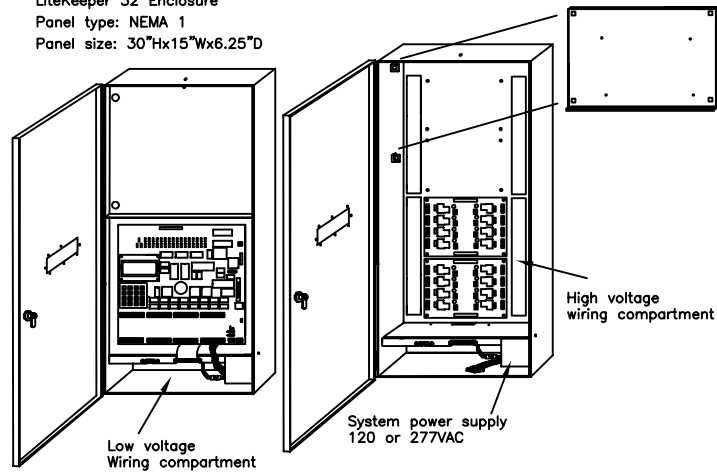
Drawing Name:
RC3DE-Classroom.dwg

Drawing Date:
1/10/2013

LiteKeeper 16 Enclosure
Panel type: NEMA 1
Panel size: 18"Hx15"Wx6.25"D



LiteKeeper 32 Enclosure
Panel type: NEMA 1
Panel size: 30"Hx15"Wx6.25"D

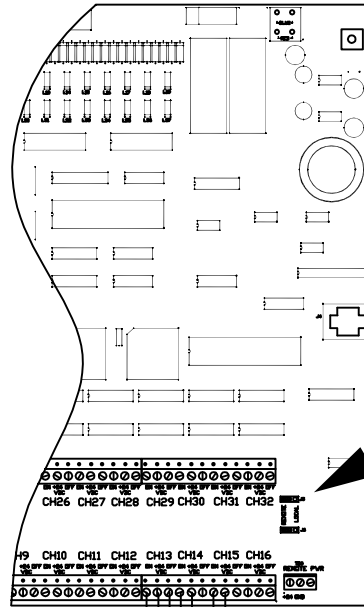


Title: Enclosure Diagram
Application: LiteKeeper

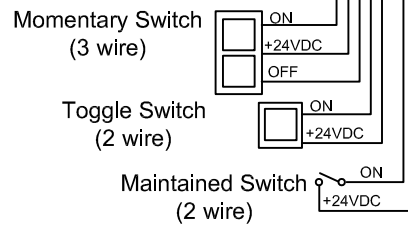


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1121 Highway 74 South
Peachtree City, GA 30269

Date:
Project:



Local Remote Jumpers moved to the LOCAL position (jumper over pins 2 & 3)

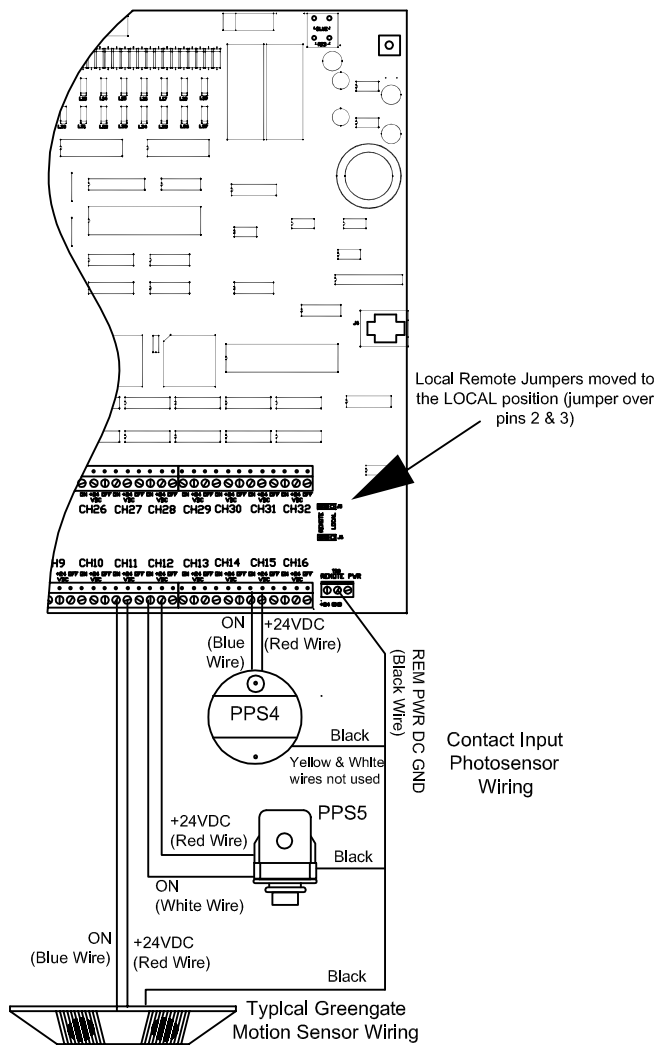


Title: Switch Input Wiring Diagram
 Application: LiteKeeper



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Date:
 Project:

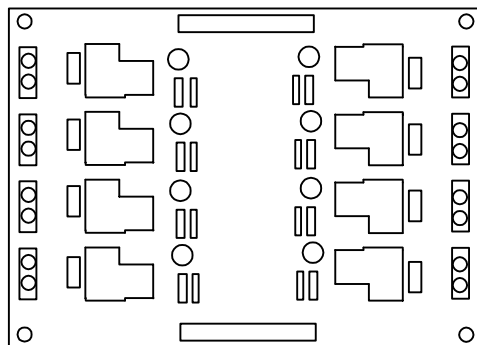
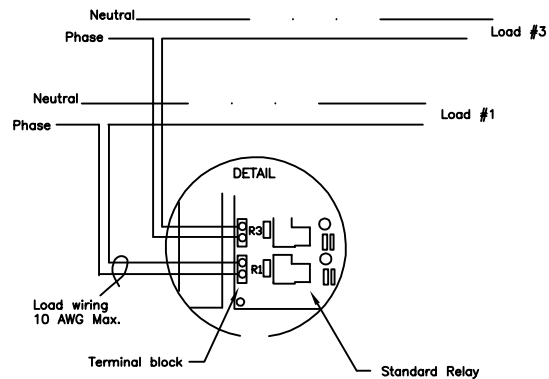


Title: Photocell Wiring Diagram
 Application: LiteKeeper



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 Peachtree City, GA 30269

Date:
 Project:

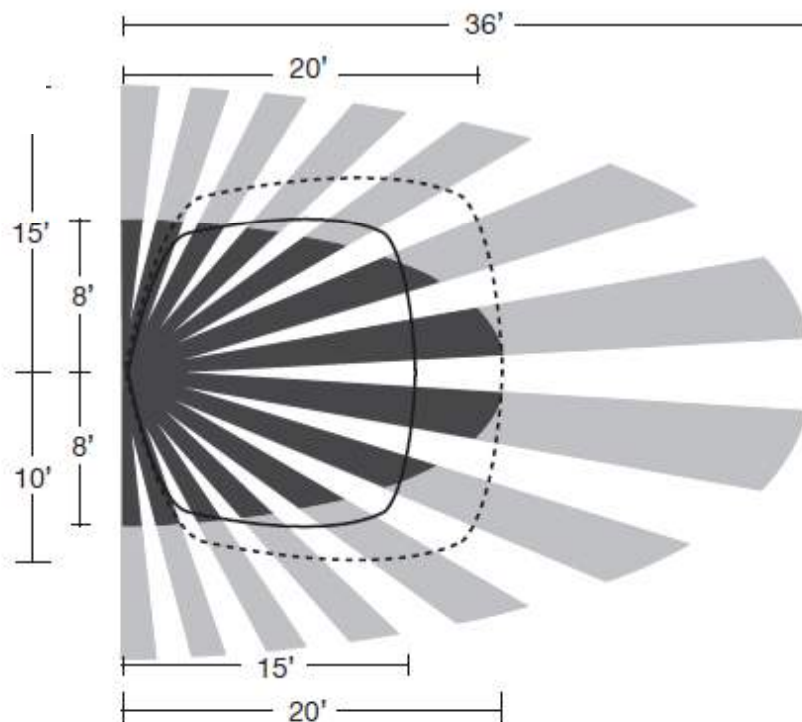
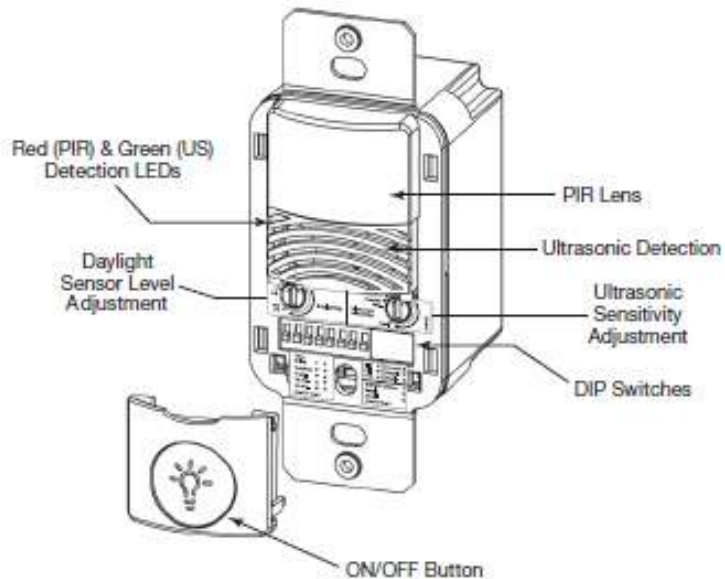


Title: Relay Wiring Diagram
 Application: LiteKeeper



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 Peachtree City, GA 30269

Date:
 Project:



- Minor Motion, IR
- Major Motion, IR
- Minor Motion, Ultrasonic
- Major Motion, Ultrasonic

Maximum coverage area may vary somewhat according to room shape and the presence of obstacles

The NEMA WD 7 Guide and robotic method were utilized to verify coverage patterns.

Title: General/Coverage Information
Product: NeoSwitch (ONW-D)
Dual Tech Single Level (Ground Required)

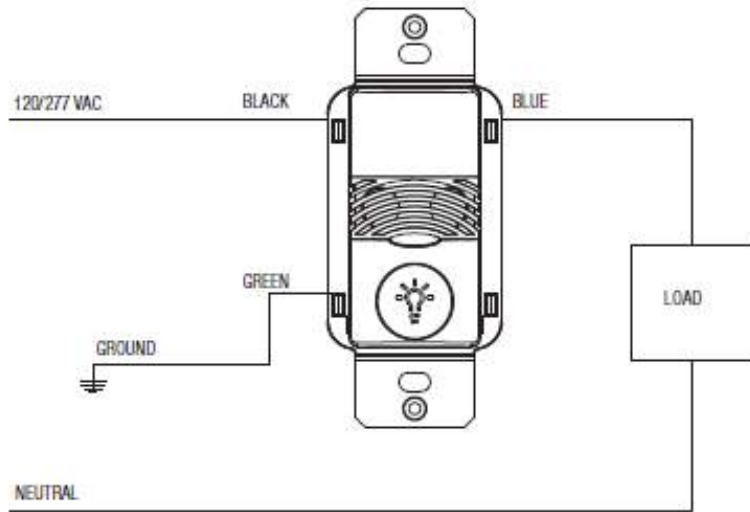


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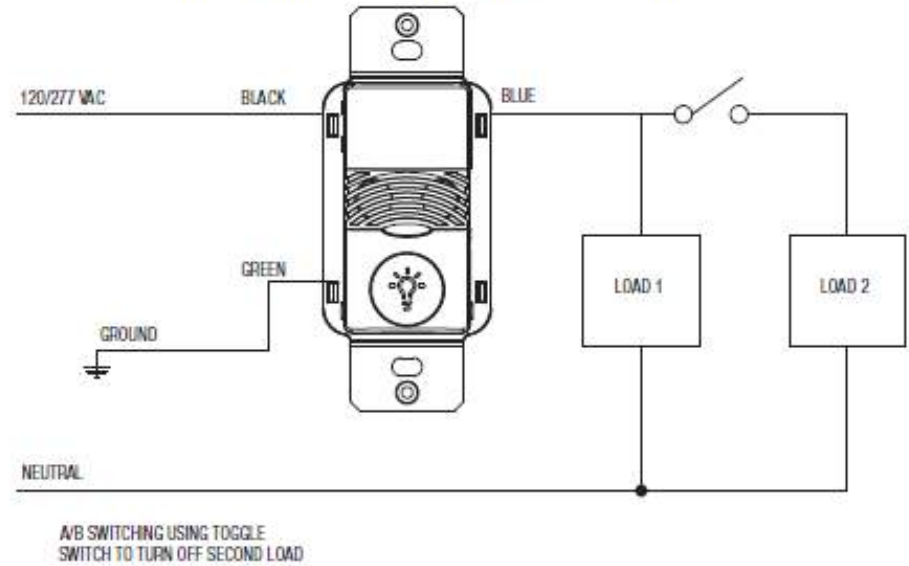
Tel: +1-800-553-3879
 Fax: +1-800-954-7016
 Email: controls@cooperindustries.com

Date:
Project:

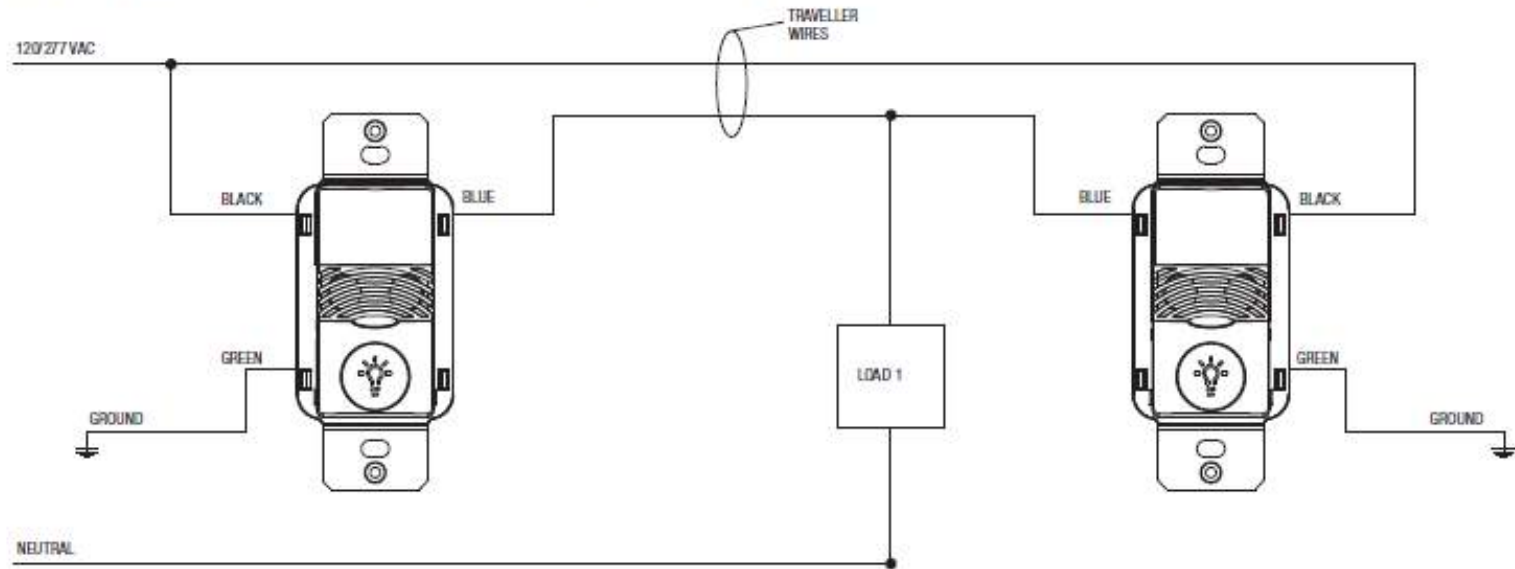
Single Level Switching—Single Circuit



Dual Level Switching—using additional toggle switch



Three-way wiring diagram: Lights will turn-off automatically when sensor that detected motion last, times out.



Title: Wiring Details
Product: NeoSwitch (ONW-D)
Dual Tech Single Level (Ground Required)



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 GA 30269, USA
 Tel: +1-800-553-3879
 Fax: +1-800-954-7016
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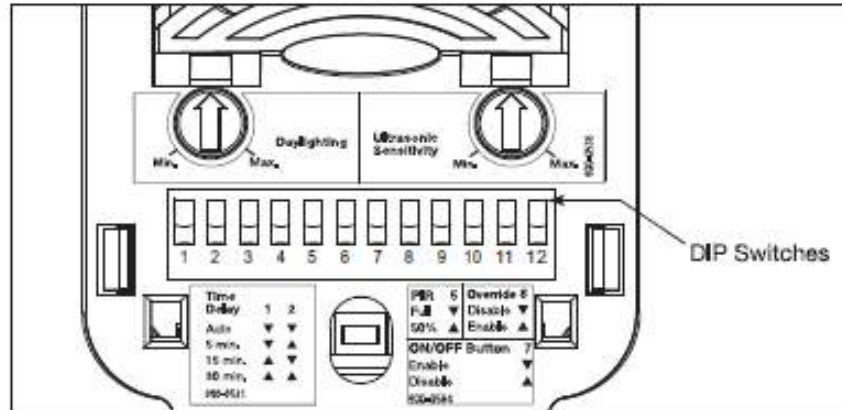
Date:
Project:

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	ON/OFF Button	Override	Not Used	Maintain Lights On	Not Used		
	1	2	Relay 1	Not Used							3	4	5
15 Sec. Test/Auto*	▼	▼	Auto ▼		Full ▼	Disable ▼	Enable ▼	Disable ▼		Either ▼			
5 Minutes	▼	▲	Manual ▲		50% ▲	Enable ▲	Disable ▲	Enable ▲		Both ▲			
15 Minutes	▲	▼											
30 Minutes	▲	▲											

*Self-Adjusts to 10 min. user mode

Default =

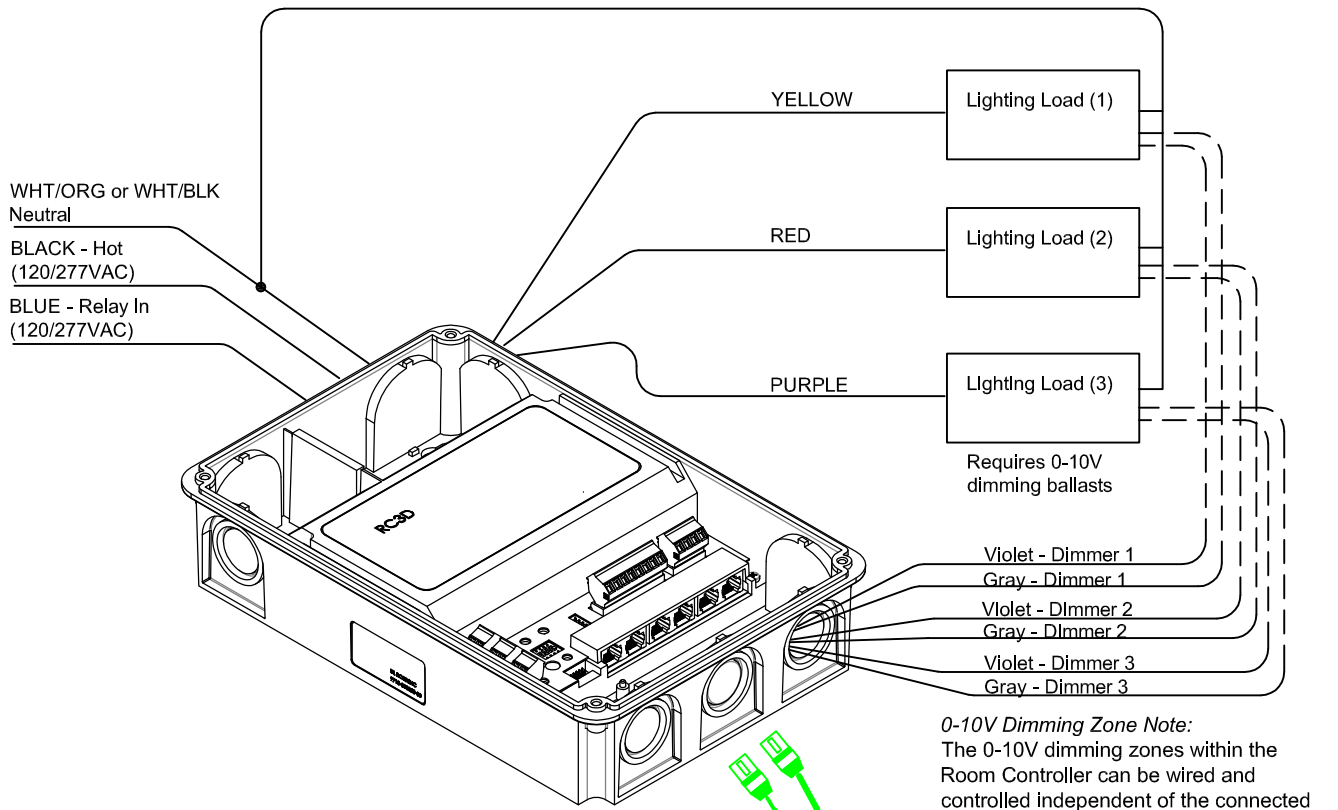


Title: DIP Switch Information
Product: NeoSwitch (ONW-D)
Dual Tech Single Level (Ground Required)



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 Peachtree City, Fax: +1-800-954-7016
 GA 30269, USA Email: controls@cooperindustries.com

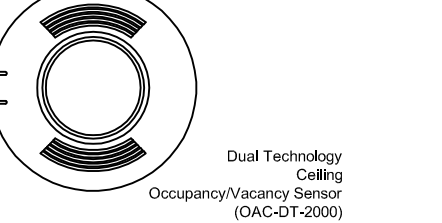
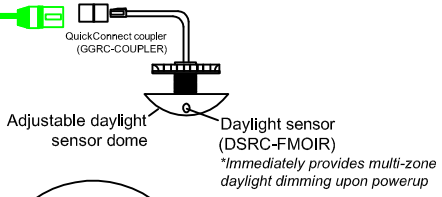
Date:
Project:



0-10V Dimming Zone Note:
 The 0-10V dimming zones within the Room Controller can be wired and controlled independent of the connected loads. This allows each load to have a dedicated 0-10V dimming zone or a single load to have up to three 0-10V dimming zones.

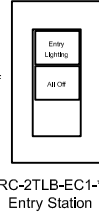
Quick connect cables are pre-terminated and included in the Room Controller QuickKit and measured to fit typical room layouts

Allows connection to any Greengate Occupancy/Vacancy Sensor (OCC-RJ45)



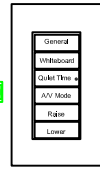
*Defaults to vacancy sensor mode Manual On/Automatic Off (all loads) for maximum energy savings

Button 1: Toggle Load (1)
 Button 2: Load (1),(2),(3) Off

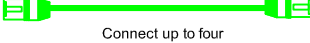


RC-2TLB-EC1-*
Entry Station

Button 1: Toggle Load (2)
 Button 2: Toggle Load (3)
 Button 3: Disable Occupancy Sensor for 1hr.
 Button 4: Go to 20% of current light level
 Button 5: Press and hold increase lighting 5%
 Button 6: Press and hold decrease lighting 5%



RC-6TSB-TS1-*
Teacher Station



Room Controller and Smart Devices use Click & Go technology:

The RC3D will automatically recognize any smart device connected with the quick connect cable (provided) and start working immediately upon power up with no programming required. The RC3D defaults to Manual On/Automatic Off vacancy sensor mode for maximum energy savings. Entry wallstations will provide On/Off control of the Yellow load. Teacher stations provide On/Off control of the Red and Purple loads as well as manual Raise/Lower of all dimmers.

The daylight sensor will automatically on power up provide multi-zone daylight dimming in the space. (remote adjustments can be made later)

*Refer to Room Controller website for more information on other integral no programming required benefits like Demand Response, Solatube Control, Egress Control, BMS Output, Alert Mode, Emergency Lighting Control, and Slider Stations.

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Room Controller - RC3D
 Three Relay + Three Dimmers Wiring Diagram
 Drawing Name: RC3D-BasicClassroom.dwg
 Drawing Date: 1/10/2013



SUBMITTAL PACKAGE

Spec Sheets

SP15 & SP20 – Heavy Duty Switchpacks

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

Switchpacks provide 15 VDC operating voltage to all low voltage, 15 VDC occupancy sensors and daylighting controllers. A single switchpack can provide power for up to five sensors. Up to ten switchpacks can be connected to one sensor for control of multiple circuits. Isolated contacts may also be used to control HVAC, contactors, motors, etc.

Can be easily mounted on or in a 4"sq. junction box, via ½" in nipple



Features

- Replaces separate transformers and relays
- Zero-crossing circuit provides increased durability, especially with today's high inrush loads
- Capable of switching up to 20 Amps
- Suitable for Plenum use
- Rated for Ballast, Tungsten and Motor Loads
- LED ready

Available for 120, 220, 240, 277 & 347 VAC operation



Powering Business Worldwide

Specifications

Power Requirements	<p>Input: (120/277 VAC-SP20-MV), (347 VAC-SP15-347), (220-240 VAC-SP20-240), 50/60 Hz operation. Contacts are isolated and may be used to control low voltage circuits</p> <hr/> <p>Output: 15 VDC 125mA to operate up to five Greengate sensors</p>
Control	Connecting the 22 AWG red and blue control leads to each other will close the relay contacts
Ballast Compatibility	Compatible with LED, magnetic and electronic ballasts
NOTE	The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with the CFL and ballast manufacturer to determine effects of cycling
Operating Environment	<p>Temperature: 32°F - 104°F (0°C - 40°C)</p> <p>Relative humidity: Less than 95%, non-condensing</p> <p>For indoor use only</p>
Housing	Medium impact injection molded housing. ABS resin complies with UL 94V-0. Plenum rated for external junction box mounting, with Teflon coated leads
Motor Load	1 HP 120-240 VAC; 2 HP 250 VAC
Size	2 15/16" x 2 7/16" x 1 11/16"
Mounting	Mounts to the side of a 4" square box via 1/2" knockout
Standards	UL, CSA Listed

Description/Operation

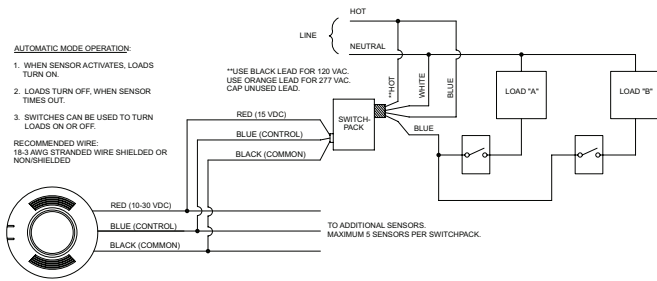
The switchpack has two main components: a transformer and one high current relay. The transformer has a primary line voltage input and a secondary low voltage output. The low voltage output, 15 VDC, provides operating power to connected low voltage Greengate occupancy sensors. When an occupancy sensor detects motion, it electrically closes an internal circuit, pulling up the control signal between the sensor and the switchpack. This signals the switchpack to close its high current relay, turning the connected load on.

Applications

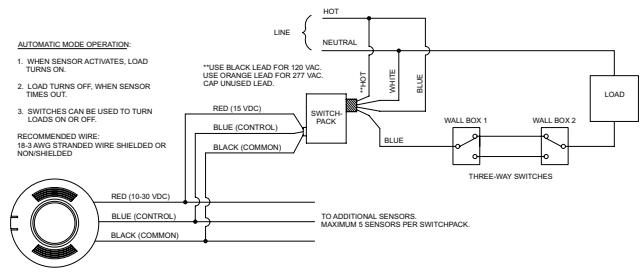
The switchpack is designed to work with low voltage sensors which require switchpacks. It cannot be used with sensors designed for use with any other low voltage relay systems. Consult sensor spec sheets for other sensor relay combinations.

Wiring Diagrams

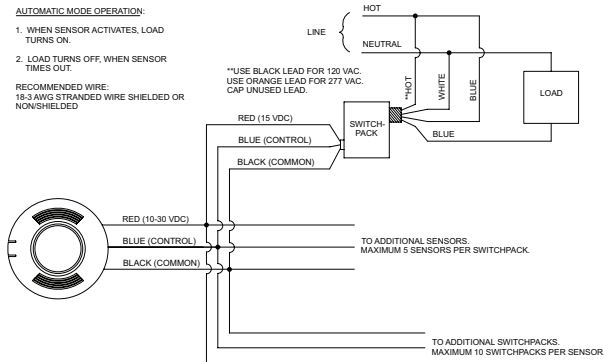
A/B Switching



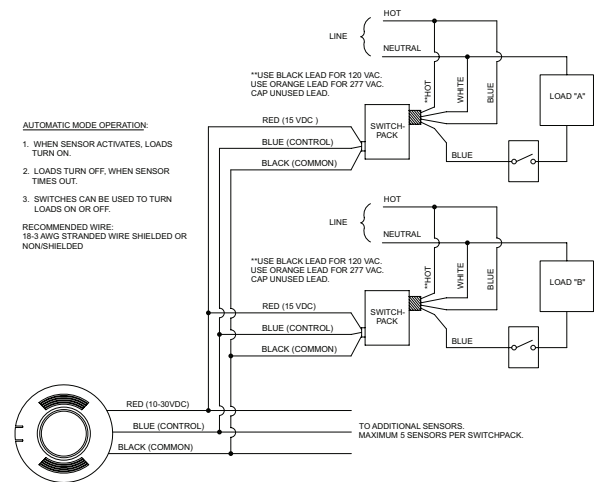
Three Way Switching



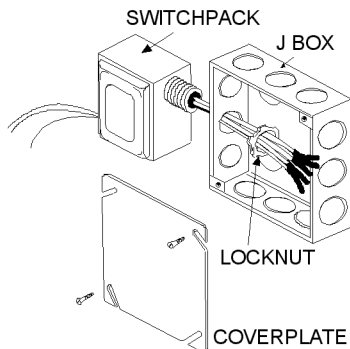
Standard Configuration



2 Circuits, 1 Sensor



Mounting



All connections are made via pigtails with twist-on wire connectors.

Note: Connect either the orange or black supply lead to the power source, depending upon the power requirements. Cap the unused lead.

Ordering

Catalog #	Ratings	(LED) Ballast	Tungsten	Motor (HP)	Output
SP20-MV	120/277 VAC, 50/60 Hz	20A	15A, 120V	1HP-120V, 2HP-250V	15 VDC, 125mA
SP15-347	347 VAC, 50/60 Hz	15A	NR	NR	15 VDC, 125mA
SP20-240	220-240 VAC, 50/60 Hz	20A	NR	NR	15 VDC, 125mA

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March 1, 2018

Specifications and
dimensions subject to
change without notice.

Zone Wallstation

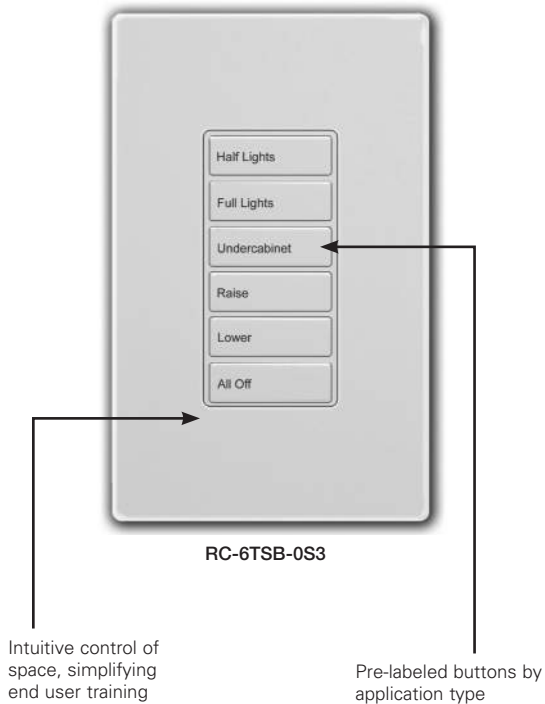
Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The zone wallstations are pre-engraved low-voltage switches that operate on 24 VDC power supplied by the Room Controller or DLVP power module. Each wallstation is designed to fit in a standard decorator opening and has two RJ45 ports for local network connections to eliminate wiring errors.

Features

- Low-voltage control for ON/OFF and dimming loads
- Pre-terminated control cable ready with RJ45 ports eliminate wiring errors
- Available in 2, 3, 4, 5, 6 button models designed to fit in decorator wallplates (included)
- Wallstations can be used for multi-way control
- Custom engraving options available - buttons may be replaced in the field



Powering Business Worldwide

Specifications

Voltage	24 VDC supplied from Room Controller
Electrical	Class 2, LPS
Connection Ports	Two RJ45 ports
Button Configurations	Large buttons: 2 or 3 Small buttons: 2, 4, 5, 6
Installation	Standard decorator opening
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) Relative humidity: Less than 95%, non-condensing For indoor use only
Size	4.75"H x 3.25"W (121mm x 83mm)

Standards
UL 508 Listed 

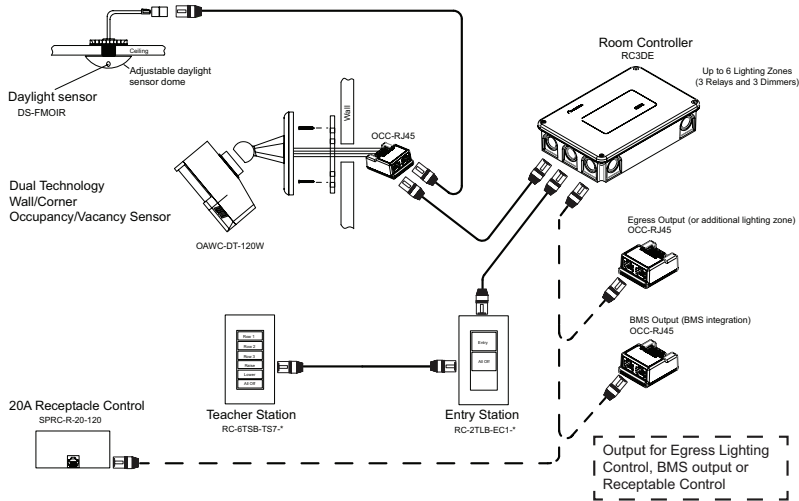
Description/Operation

The zone wallstations are pre-terminated control cable (ordered separately) ready and work immediately upon power up. Zone wallstations for office, classroom, patient room, conference room and general areas are available and are fully functional out-of-the-box removing the need for field programming and reducing installation time.

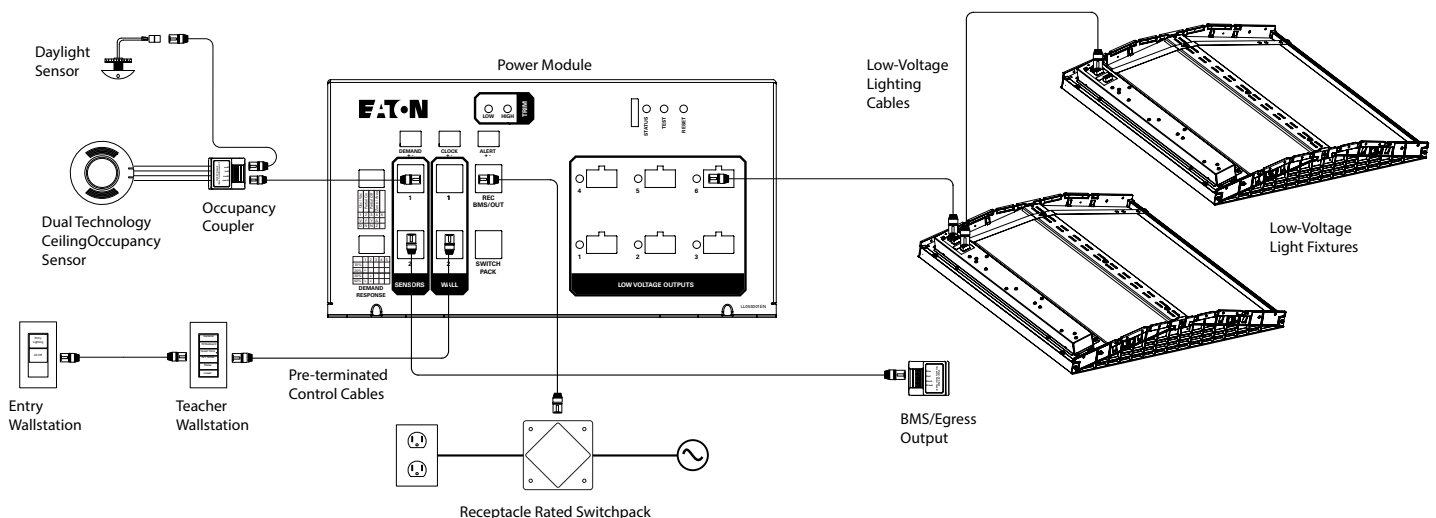
Installation

Low-voltage devices are connected using provided pre-terminated control cables (ordered separately).

Sample Room Controller System Topology

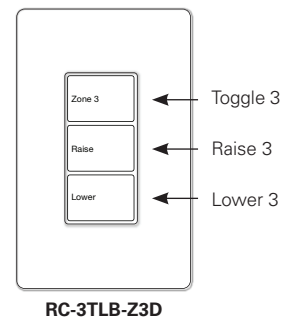
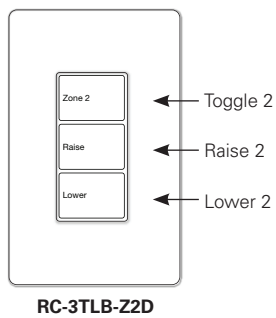
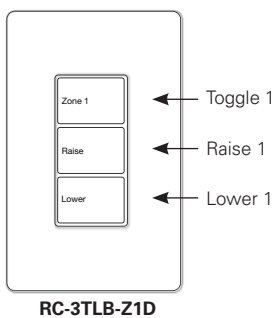
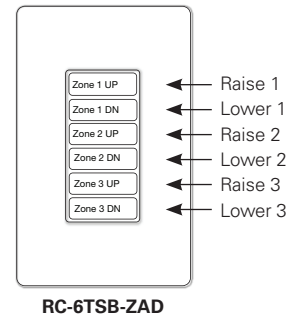
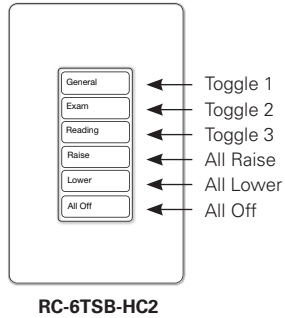
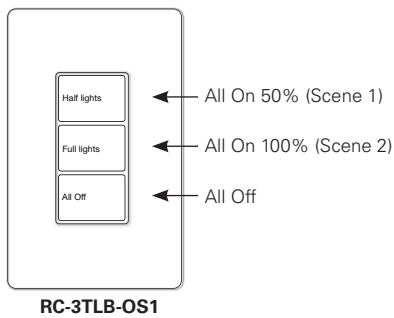
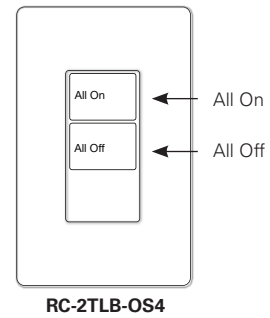
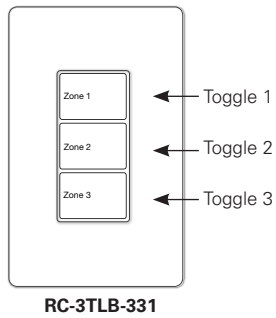
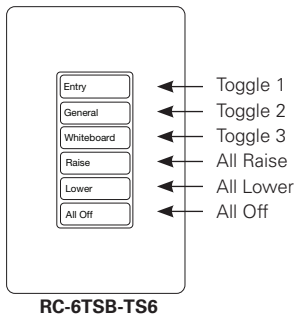
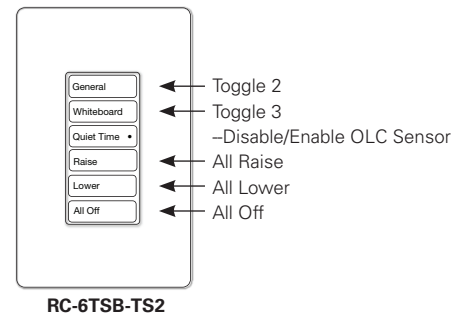
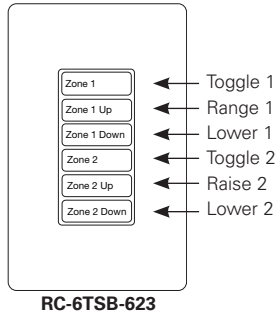
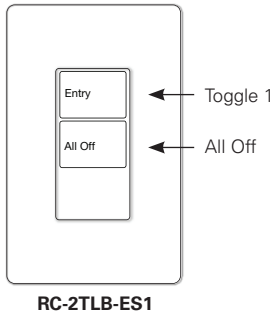


DLVP System Topology



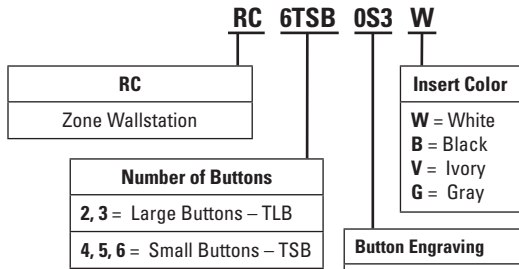
Sample Wallstations

*Not All Configurations Shown



Ordering

One single gang wallplate included



Button Engraving	Command Reference Table
101 = Zone 1 (1 TLB)	101 = 1
102 = Zone 2 (1 TLB)	102 = 2
103 = Zone 3 (1 TLB)	103 = 11
221 = Zone 1, Zone 2 (2TLB)	221 = 1, 2
321 = Zone 1, Zone 2, All Off (3TLB)	321 = 1, 2, 8
331 = Zone 1, Zone 2, Zone 3 (3TLB)	331 = 1, 2, 11
531 = Zone 1, Zone 2, Zone 3, Raise, Lower (5TSB)	531 = 1, 2, 11, 6, 7
621 = All On, Raise 1, Lower 1, Raise 2, Lower 2, All Off (6TSB)	621 = 16, 8, 17, 18, 19, 20
623 = Zone 1, Raise 1, Lower 1, Zone 2, Raise 2, Lower 2 (6TSB)	623 = 1, 17, 18, 2, 19, 20
631 = Zone 1, Zone 2, Zone 3, Raise, Lower, All Off (6TSB)	631 = 1, 2, 11, 6, 7, 8
ES1 = Entry, All Off (2TLB)	ES1 = 1, 8
TS1 = General, Whiteboard, Quiet Time, A/V Mode, Raise, Lower (6TSB)	TS1 = 2, 3, 5, 4, 6, 7
TS2 = General, Whiteboard, Quiet Time, Raise, Lower All Off (6TSB)	TS2 = 2, 3, 5, 6, 7, 8
TS3 = General, Whiteboard, Quiet Time, A/V Mode, All Off (5TSB)	TS3 = 2, 3, 5, 4, 8
TS4 = General, Whiteboard, A/V Mode, Raise, Lower, All Off (6TSB)	TS4 = 2, 3, 4, 6, 7, 8
TS5 = Entry, General, Whiteboard, All Off (4TSB)	TS5 = 1, 2, 3, 8
TS6 = Entry, General, Whiteboard, Raise, Lower, All Off (6TSB)	TS6 = 1, 2, 3, 6, 7, 8
TS7 = Row 1, Row 2, Row 3, Raise, Lower, All Off (6TSB)	TS7 = 1, 2, 3, 6, 7, 8
TS8 = Uplights, Downlights, Accent, Raise, Lower, All Off (6TSB)	TS8 = 1, 2, 3, 6, 7, 8
TS9 = Entry, General, Quiet Time, Whiteboard, A/V Mode, All Off (6TSB)	TS9 = 1, 2, 5, 3, 4, 8
TS10 = Main, Whiteboard, A/V Mode, Raise, Lower, All Off (6TSB)	TS10 = 1, 3, 4, 6, 7, 8
HC1 = General, Exam, Reading, All Off (4TSB)	HC1 = 1, 2, 3, 8
HC2 = General, Exam, Reading, Raise, Lower, All Off (6TSB)	HC2 = 1, 2, 3, 6, 7, 8
OS1 = Half Lights, Full Lights, All Off (3TLB)	OS1 = 12, 13, 8
OS2 = Half Lights, Full Lights, Raise, Lower, All Off (5TSB)	OS2 = 12, 13, 6, 7, 8
OS3 = Half Lights, Full Lights, Undercabinet, Raise, Lower, All Off (6TSB)	OS3 = 12, 13, 11, 6, 7, 8
OS4 = All ON, All Off (2 TLB)	OS4 = 10, 8
ZAD = Zone 1 UP, Zone 1 DN, Zone 2 UP, Zone 2 DN, Zone 3 UP, Zone 3 DN (6TSB)	ZAD = 17, 18, 19, 20, 21, 22
Z1D = Zone 1, Raise, Lower (3TLB)	Z1D = 1, 17, 18
Z2D = Zone 2, Raise, Lower (3TLB)	Z2D = 2, 19, 20
Z3D = Zone 3, Raise, Lower (3TLB)	Z3D = 3, 21, 22

Note: For custom configurations or custom engraving, see Zone Wallstation. Custom Text form found on www.eaton.com/lightingsolutions

*For reference only. Commands will not be engraved onto station.

*For reference only. Please see custom engraving form for full command actions.

Command #	Action
1	Toggle Load/Zone 1 (Also influences Receptacle Switchpack, Solatube, and Emergency)
2	Toggle Load/Zone 2 (Also influences Receptacle Switchpack)
3	Toggle Load/Zone 3
4	Toggle A/V mode B Scene 5
5	Disable/Re-enable Occupancy Sensor (After being disabled 60 minutes, the sensor automatically re-enables)
6	Raise all
7	Lower all
8	All Loads/Zones OFF
9	All Dimmers 50%, Relay 1 ON, Relay 2 OFF, Relay 3 unaffected
10	DLVP-Zone 1=50%, Zone 2=OFF, Zone 3=unaffected
10	All Loads/Zones to 100% (Solatube closed)
11	Toggle Load/Zone 3 (influences Receptacle Switchpack)

Command #	Action
12	Go to Scene 1
13	Go to Scene 2
14	Go to Scene 3
15	Go to Scene 4
16	All Loads/Zones ON
17	Raise Zone 1
18	Lower Zone 1
19	Raise Zone 2
20	Lower Zone 2
21	Raise Zone 3
22	Lower Zone 3

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CEPC – Emergency Power Control

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Emergency Power Control (CEPC) device allows the control of emergency lighting by any Greengate lighting control panel or occupancy sensor.

Features


- Eliminates energy waste by allowing emergency lighting to be switched
- Fail safe operation
- Visible emergency power LED
- Visible regular power LED
- Integral test switch
- Automatic Diagnostic Test Feature – 2.5 second emergency test when load is turned off (CEPC-1 only)
- Senses local circuit power loss
- UL 924 listed, meets NEC, OSHA and NFPA safety codes



CEPC-1

April 2015

Specifications

Connections	Normal Power Sensing: 120V or 277V Emergency Power: 120V or 277V Normal Power Switching: 120V or 277V
Load Ratings	20A Ballast Load Rating 1800W Incandescent Load Rating at 120V 1500W Incandescent Load Rating at 277V (CEPC-1 only)
Size	Body Size: 2.875"H x 1.75"W x 1.75"D Flushmount Size: 4.75"H x 2.75"W x 0.25"D
Mounting	Mounts to a 4.688" junction box with single gang plater ring UL 94-5VA Rated Plastic
Color	White
Operating Environment	Temperature: 32°F - 140°F (0°C - 60°C) For indoor use only
Compatibility	CEPC-1: Greengate LiteKeeper, ControlKeeper Relay Panels and Occupancy Sensor CEPC-1-D: Greengate ControlKeeper 4A or Room Controller
Standards	UL Approved UL 924 Listed  US

Description/Operation

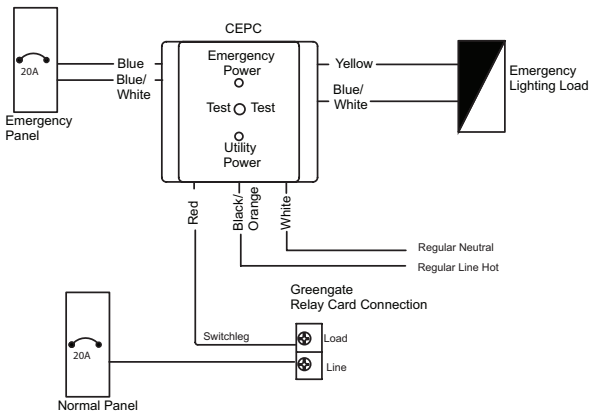
The CEPC senses a local, single normal power circuit. As long as normal power is present, the CEPC permits normal and emergency switching of the lighting load from Greengate lighting control panels or occupancy sensors. If normal power is lost for any reason, the CEPC will force the connected emergency fixtures ON. The CEPC can be wired as either a control device along with a relay panel and occupancy sensor, or as a shunt to bypass line voltage devices when normal power fails. The CEPC-1-D is a universally compatible device that allows control of 4-wire emergency dimming loads. When normal power is lost, the CEPC-1-D will force the emergency fixtures to the full bright condition. Both CEPC models include a test switch feature for verifying proper functionality. In addition, the CEPC-1 model also provides an automatic test feature. Under normal operation, when the controlled load is turned OFF, the emergency lighting will remain ON an additional 2.5 seconds, providing safety and convenience while leaving the area and eliminating the need of special equipment to test the emergency control of the device.

Installation

The CEPC can be installed down line of a Greengate lighting control panel or occupancy sensor and switchpack. The CEPC should be located next to the emergency fixture it is controlling.

Wiring Diagrams

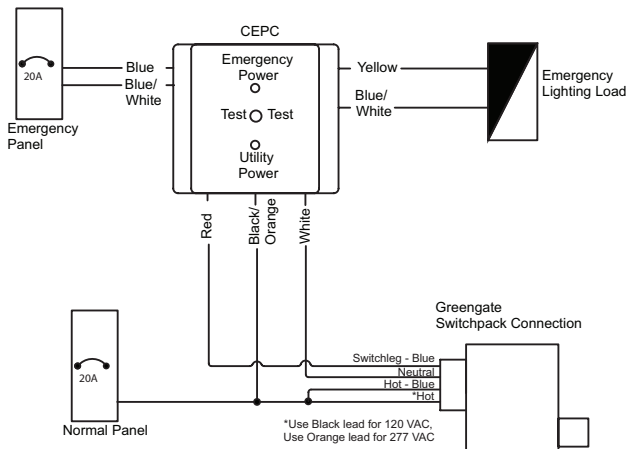
Wiring Diagram for 2-Wire Non-Dimming Loads (w/ Relay Panel)



2-Wire Non-Dimmed

CEPC Wire #	Description	iLumin Connection
Blue	Emergency Hot	
Yellow	Emergency Switchleg	
Blue/White	Emergency Neutral	
Black/Orange	Regular Hot (Sensing)	Transformer Power
Red	Switchleg	Relay Load Terminal Block
White	Regular Neutral	Transformer Neutral Wire

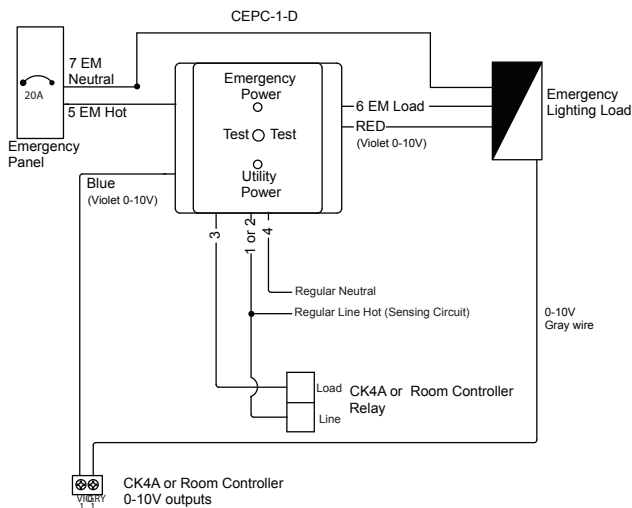
Wiring Diagram for 2-Wire Non-Dimming Loads (w/ Switchpack)



2-Wire Non-Dimmed

CEPC Wire #	Description	Greengate Switchpack Connection
Blue	Emergency Hot	
Yellow	Emergency Switchleg	
Blue/White	Emergency Neutral	
Black/Orange	Regular Hot (Sensing)	Regular Hot
Red	Switchleg	Switchpack Load Terminal Block
White	Regular Neutral	Regular Neutral

Wiring Diagram for 4-Wire Dimming Loads



4-Wire Dimming

CEPC-1-D Wire #	Color	Description	Greengate Connection
1	Black	Regular Hot (120V)	Constant Hot and Relay Line
2	Orange	Regular Hot (277V)	Constant Hot and Relay Line
3	Red	Switched Hot	Relay Load
4	White	Regular Neutral	
5	Blue	Emergency Hot	
6	Yellow	Emergency Load Hot	
7	White/Blue	Emergency Neutral	
	Blue	Dimmer Violet (0-10V +)	Panel Dimmer Output Violet
	Red	To Load Violet (0-10V +)	
	Black	Cap Off	

April 2015

Ordering

This is an accessory for Greengate Lighting Control Panels and Greengate Occupancy Sensors. When ordering, specify the CEPC as a separate accessory.

Model	Description	Rating
CEPC-1	Emergency Power Control	120V or 277V
CEPC-1-D	0-10V Load Emergency Power Control 120V	120V or 277V
CEPC-1-UM	Emergency Power Control (Made in USA)	120V or 277V
CEPC-1-CUL	Emergency Power Control for Canada	120V or 277V
CEPC-1-D-CUL	0-10V Load Emergency Power Control for Canada	120V or 277V

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OAC-DT – MicroSet Dual Tech Low Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. MicroSet self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Features

- MicroSet self-adjusting Time Delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control


 PIR
Activated

 Ultrasonic
Activated

 MicroSet
Self-Adjusting

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	Input
	10-30 VDC from Greengate Switchpack or Greengate system
	Maximum current needed is 25mA per sensor
	Output
	Open collector output to switch up to ten Greengate Switchpacks
	BAS with Isolated Form C Relay in (-R) model Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft.
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C)
	Relative humidity: 20% to 90%, non-condensing
	For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant



Description/Operation

The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies in the event that if a continuous Doppler shift occurs, such as those created by airflow from an air duct, the sensor will identify the noise as continuous and then block it out of view at a select sub-frequency. It will continue to monitor other sub-frequencies for human motion. This avoids false-activation, while still maintaining the high level of sensitivity that is necessary for sensing minor motion in a changing environment. Separate concurrent time delays for both Passive Infrared and Ultrasonic technologies avoid false activations or deactivations. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Office Spaces
- Common Areas
- Computer Rooms
- Break Rooms
- Hallways
- Other Indoor Office Spaces

Wiring Diagrams

OAC-DT-2000-R Model

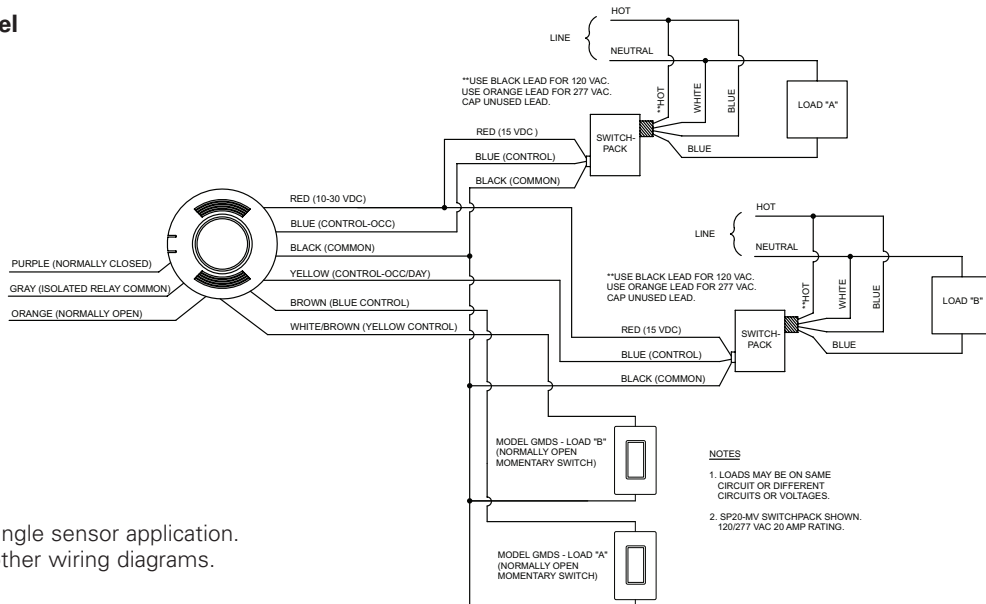
OAC AND VAC MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED

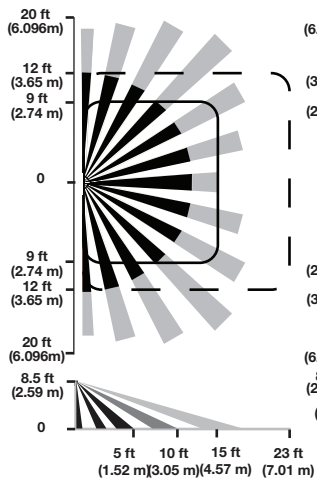


*Wiring diagram for single sensor application.
Visit our website for other wiring diagrams.

Coverage

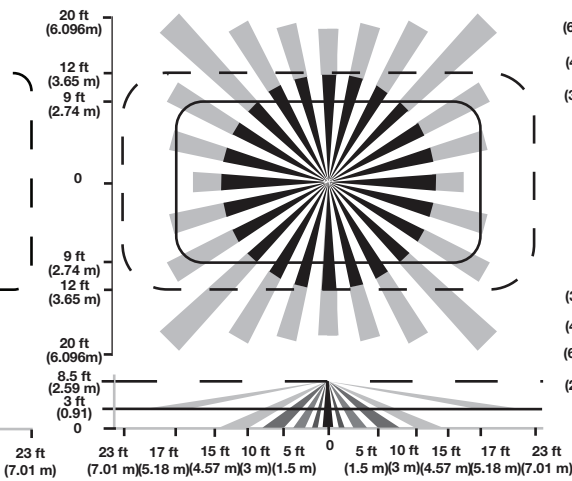
OAC-DT-0501-R

500 sq. ft.



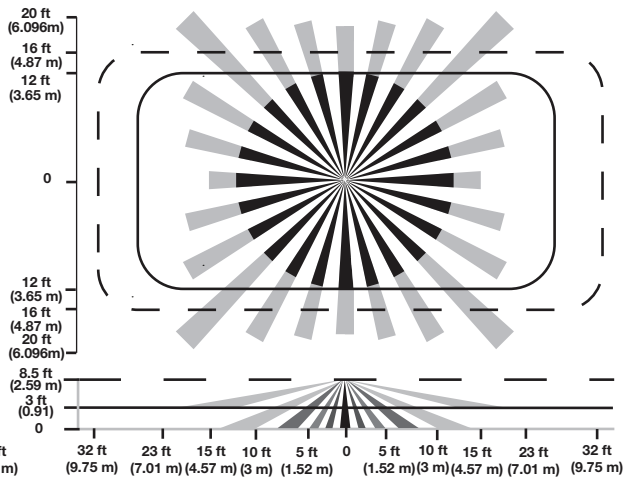
OAC-DT-1000-R

1,000 sq. ft.



OAC-DT-2000-R

2,000 sq. ft.



Recommended Mounting Height: 8 to 12 ft

Minor Motion, IR		<i>Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.</i>
Major Motion, IR		
Minor Motion, Ultrasonic		
Major Motion, Ultrasonic		

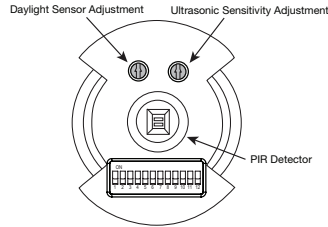
Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Normal ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Swap ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼	(-R model only)							(-R model only)		
30 Minutes	▲	▲	(-R model only)							(-R model only)		

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Maximum Room Size	Field of View	Frequency	Features
OAC-DT-2000-R	2,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-2000	2,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-0501	500 sq. ft.	One Way (180°)	40 kHz	

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PPS-5 – Outdoor Contact Input Photosensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Outdoor Contact Input Photosensor is a system accessory for Greengate Lighting Control Systems. It allows control of lighting levels based on how much natural light is present and is intended for outdoor use.

Features

- Outdoor light level sensor in weatherproof housing
- Provides contact closure input to lighting control panel when light level drops below threshold
- Extended temperature range for outdoor operation



Specifications

Operating Environment	Temperature: -40°F to 158°F (-40°C to 70°C) Suitable for outdoor use
Input Voltage	24 VDC
Output Signal	Maximum load 10A @ 24 VDC
Wiring	Moisture proof, color coded lead wire Wire length: 6"
Housing	Weatherproof Lexan®
Sensor Size	3.5"H x 1.25"W x 0.25"D
Threaded Stem	Stem adds 2" to overall height Swivel base provides 1/2", 14 thread end that fits 1/2" knock out.

Description/Operation

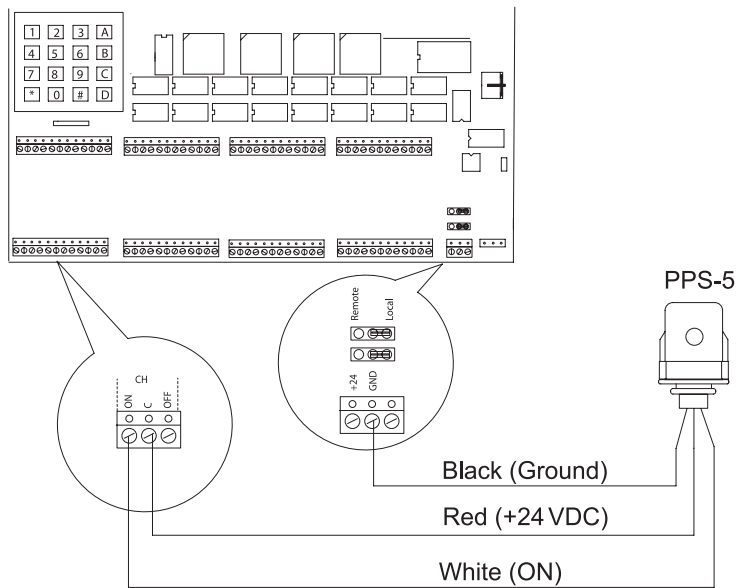
This system accessory is used in conjunction with a lighting control panel to switch circuits ON or OFF based on outdoor light levels. The Outdoor Contact Input Photosensor connects to the control panel low voltage switch inputs. The photosensor constantly monitors the level of sunlight and provides a signal to the lighting control panel when the light level crosses the switching threshold.

Installation

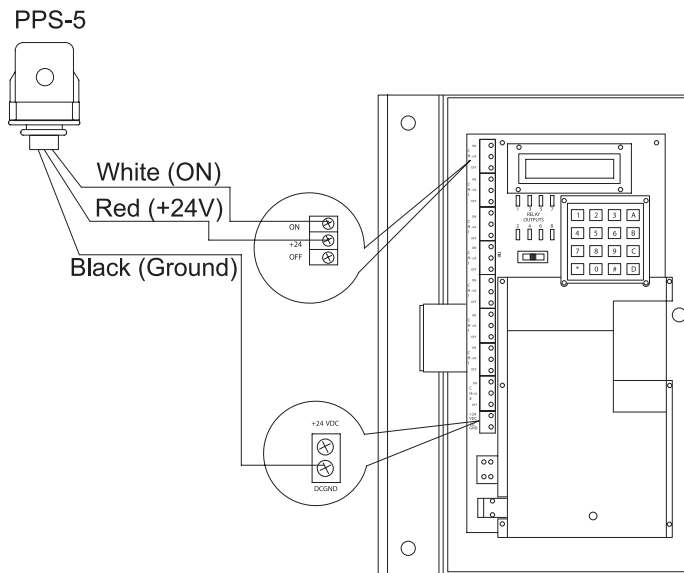
This system accessory will require mounting and wiring at the site.

Wiring Diagrams

LiteKeeper 16 & 32



LiteKeeper 8



Ordering

This is an accessory for Greengate Lighting Control Systems. It is not an integral part of the system. There is no factory assembly needed.

Cat #	Description
PPS-5	Outdoor Contact Input Photosensor

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October 22, 2014

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OXC-P – Extreme Temperature Sensors

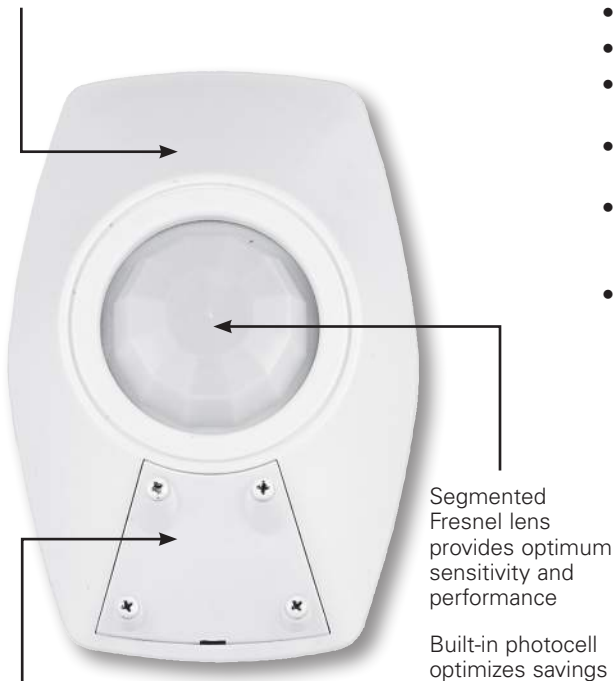
Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Passive Infrared Extreme Temperature sensor provides consistent, stable coverage where extreme heat, cold or humidity must be accommodated and where there are wide fluctuations in temperature. Temperature compensating circuitry stabilizes sensitivity at temperatures -40°F to 125°F (-40°C to 52°C).

Immune to RFI, EMI and voltage fluctuations

Passive Infrared (PIR) sensor technology



Segmented Fresnel lens provides optimum sensitivity and performance

Built-in photocell optimizes savings

Stable sensitivity at temperatures from -40°F to 125°F (-40°C to 52°C)

Plastic housing complies with UL 94V-0

BAS Compatible

Features

- UL Listed for damp locations
- OXC-P-2MH0-R works at heights up to 25 ft.
- Ambient light control circuit to avoid False ON/OFF from brief changes in background light
- Temperature-compensating circuitry avoids false activation in extreme conditions
- Lighting sweep function with selectable DIP Switch prevents unnecessary "lights ON" following power sweeps in facilities with computer control systems
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard



PIR
Activated




Extreme
Temperature

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Specifications

Technology	Passive Infrared (PIR)
Power Requirements	Input 10-30 VDC from Greengate Switchpack or Greengate system Maximum current needed is 25mA per sensor Output Open collector output to switch up to ten Greengate Switchpacks Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Adjustable delay of 15 seconds (for testing) to 30 minutes
Ambient Light Level Features	Adjustable down to approximately 3 LUX
Operating Environment	Temperature: -40°F to 125°F (-40°C to 52°C) Relative humidity: less than 95%, non-condensing Indoor or outdoor (refer applications section)
Housing	Medium impact injection molded housing. ABS resin complies with UL 94V0. Paintable off-white
Size	1-5/8" H x 4-1/2" W x 3-1/8" D (41.3mm x 114.3mm x 79.4mm)
LED Indicators	Red LED for PIR detection
Standards	UL Listed 

Description/Operation

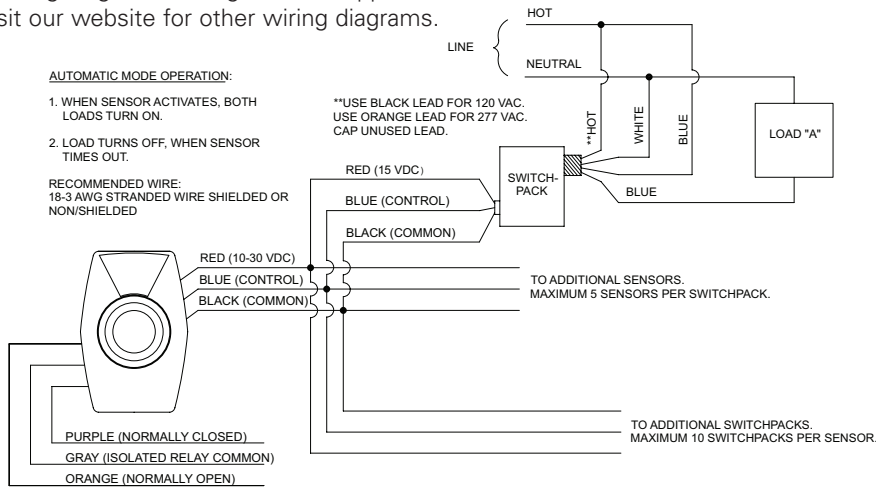
OXC-P sensors control lighting in applications where extreme temperature/humidity must be tolerated with unique temperature compensating circuitry. Human and automobile motion activates a Greengate Switchpack to turn lights ON within a coverage area and illumination is maintained until no motion is detected within preset time period. Once no motion is detected, lights are turned OFF and energy is saved. A built-in photocell optimizes savings by monitoring ambient light level (set at a predetermined threshold). If ambient light is sufficient, sensor will detect motion but not turn ON lights. If ambient light is not sufficient, lights will be activated when motion is detected. The Ambient Lights Control Circuit includes a deadband and time delay which ignores brief changes in light levels such as headlights of a passing car. To ensure the proper start-up of HID lighting, lamps are forced into "high" mode for the first 20 minutes. After the 20 minute warm up, if motion is still detected, the sensor will keep lights ON at full brightness. When connected to a Building Automation System (BAS), the OXC-P-1500-R and OXC-P-2MH0-R offer the most versatile connection possibilities available including an open collector output (with or without the pullup feature) and a direct BAS connection.

Applications

- Parking Structures
- Warehouses – (OXC-P-2MH0-R)
- High Ceilings
- Walk-in Freezers – (OXC-P-1500-R)
- Cold Storage

Wiring Diagrams

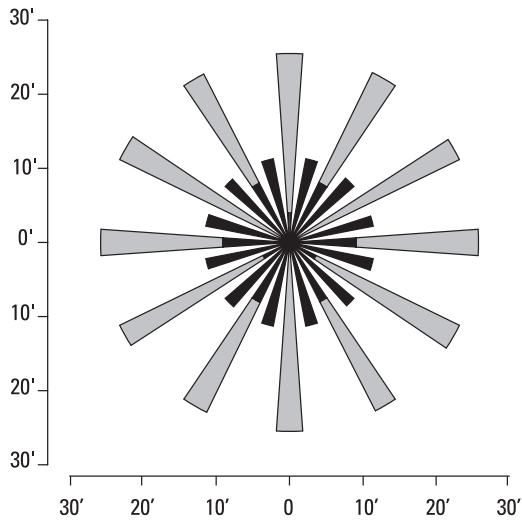
*Wiring diagram for single sensor application.
Visit our website for other wiring diagrams.



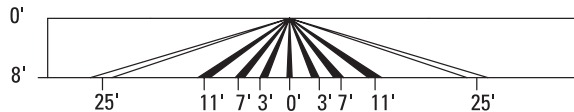
Coverage

OXC-P-1500-R

TOP VIEW

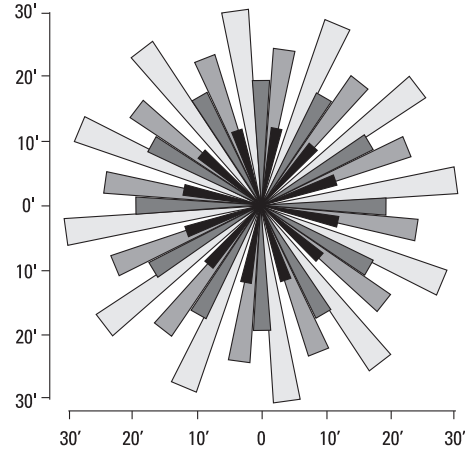


SIDE VIEW

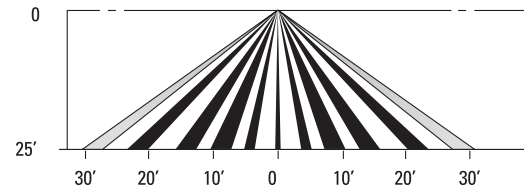


OXC-P-2MH0-R

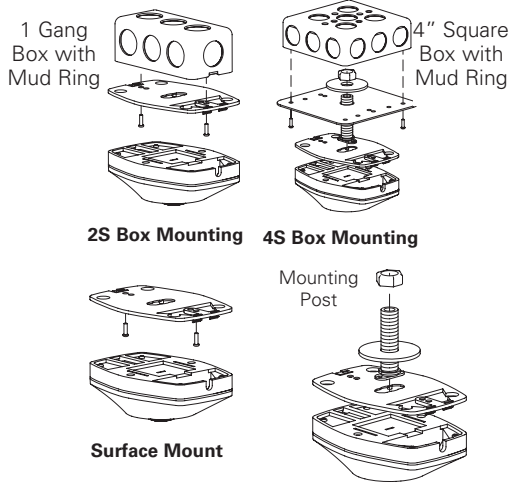
TOP VIEW



SIDE VIEW



Mounting



SENSOR: The sensor mounts to normal ceiling tile through a 3/4" hole. The threaded mounting post may be cut down if it is too long to fit into the junction box. The sensor may also be surface mounted or mounted to a standard NEMA 2S or 4S junction box.

CAUTION: Finger-tighten the nut to avoid stripping the mounting post. Do not apply pressure to Fresnel lens.

BACKPLATE: The sensor can be easily snapped onto or pulled away from the backplate without disturbing the mounting hardware. To pull the sensor away from the backplate, place your fingers on the door on the front of the sensor and slide your fingers up onto the back end of the sensor, with your fingers resting below the edge of the backplate. As you press against the sensor, use your other hand to grip the opposite end of the sensor and pull it away from the backplate.

To snap the sensor back onto the backplate, place the end of the sensor without a door against the backplate first, hooking the edge of the sensor on the two small prongs that extend from the backplate. Press the other end of the sensor against the backplate until it snaps into place.

SWITCHPACK: Designed to be mounted externally to any junction box. When mounted, the line connections are inside the box and the Class 2 wiring exits the rear of the Switchpack housing. In areas where Class 2 wiring is not permitted, the Switchpack can be mounted internally to any standard electrical box.

Ordering

Catalog #	Coverage	Field of View	Features
OXC-P-1500-R	Up to 1,500 sq. ft.	Two Way (360°)	w/BAS Relay & Daylight Sensor
OXC-P-2MH0-R	When mounted @ 25 ft., up to 25 ft. in all directions or 50 linear ft. for warehouse aisles	Two Way (360°)	w/BAS Relay & Daylight Sensor

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Input/Output Device

- Input/Output integration to Room Controller
- Automatically provide Egress or HVAC integration based on room occupancy junction box
- Allows connection of standard switchpacks

Specifications:

Electrical Ratings: Class 2, LPS

Voltage: 24 VDC supplied by Room Controller or Switchpack

Operating Environment:

- Temperature: 32°F to 104°F (0°C to 40°C)
- Relative humidity: less than 95%, non-condensing
- For indoor use only

Catalog #	Type
Project	
Comments	
Prepared by	Date



Overview

The Room Controller Input/Output Device (OCC-RJ45) provides connection of any Greengate low voltage occupancy sensor, or other low voltage maintain closure, to the Room Controller to define the occupancy state of the space. The OCC-RJ45 also can be used as an output to the HVAC system, third party systems or Switchpacks based upon room occupancy status.

Description/Operation

The Room Controller Input/Output Device (OCC-RJ45) is Click & GO ready and works immediately upon power up, providing Occupancy based inputs or outputs out-of-the-box, removing the need for field programming and reducing installation time.

Installation

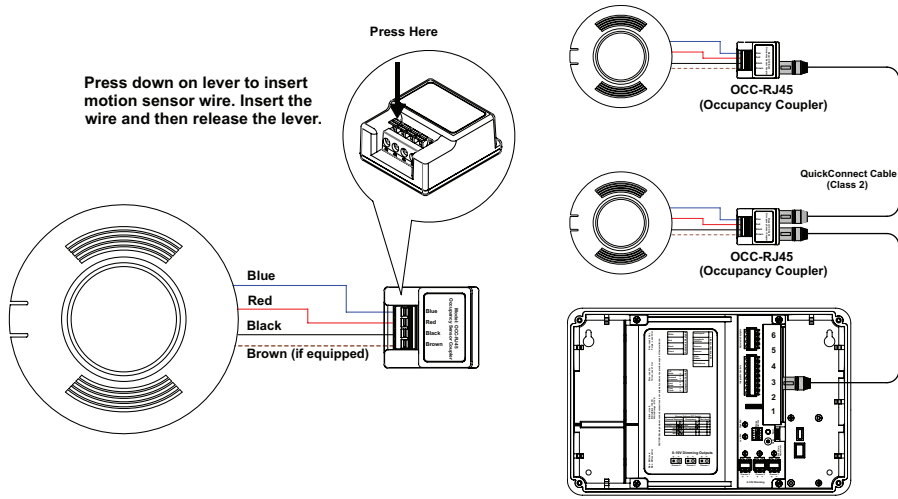
Low voltage devices are connected to the Room Controller using provided QuickConnect cables.

Ordering

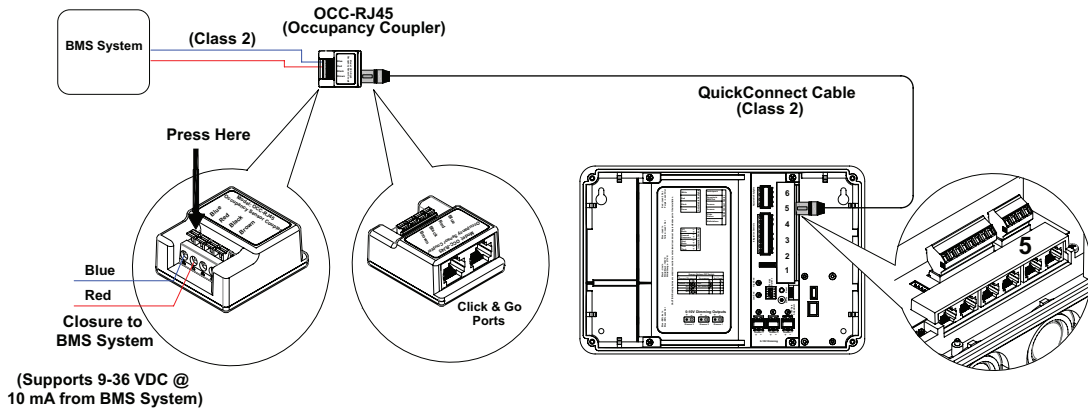
Catalog #	Description
OCC-RJ45	Room Controller Input/Output Device

*One OCC-RJ45 is automatically included with each occupancy sensor when the Room Controller is ordered as a QuickKit.

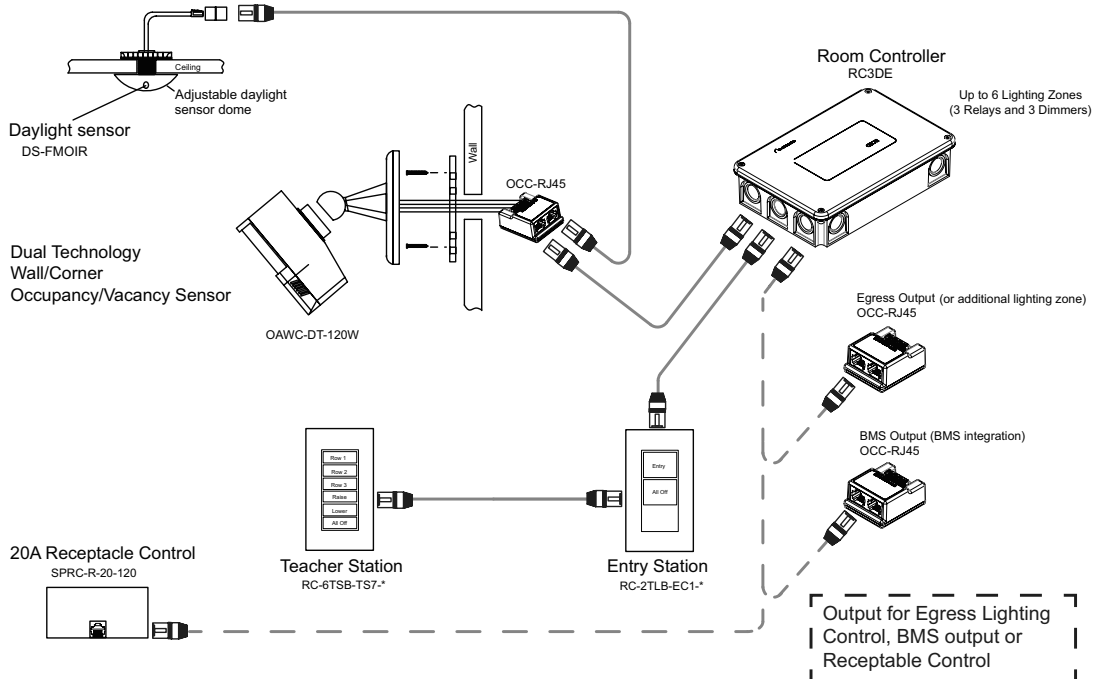
**See Greengate low voltage occupancy sensor spec sheet for occupancy sensor information.



Connect the OCC-RJ45 Coupler to the BMS system. Closure will be made across the Blue and Red wire locations. Connect a QuickConnect cable between the Receptacle/BMS Out Click & Go port on the Room Controller (port 5) and to one of the ports on the OCC-RJ45 ports.



Sample System Topology



OAWC-DT – Dual Technology Wall/Corner Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. Self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

Features

- MicroSet self-adjusting time delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- NEMA WD7 Guide robotic method utilized to verify coverage patterns
- Manual On feature for use with 1 or 2 momentary switches controlling 1 or more Switchpacks
- Selectable Walk-Through Mode


 PIR
Activated

 Ultrasonic
Activated


Self-Adjusting

EAT•N

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Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	Input
	0-30 VDC from Greengate Switchpack or Greengate System
	Maximum current needed is 25 mA per sensor
Output	Open collector output to switch up to ten Greengate Switchpacks
	Isolated Form C Relay in (-R models)
	Isolated Form C Relay Ratings: 1A 30 VDC/VAC
Time Delays	Self-Adjusting, 15 seconds/test, 5, 10, 15, 30 minutes
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C)
	Relative humidity: 20% to 90% Non-condensing
	For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	4.4" H x 3.4" W x 2" D (112mm x 86.4mm x 50.8mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant



Description/Operation

The OAWC-DT combines Ultrasonic (US) and Passive Infrared (PIR) sensor technologies to monitor a room for occupancy to deliver maximum energy savings and ensure the greatest sensitivity and coverage for tough application without the threat of false triggers. PIR is used to turn the lights ON and then either or both technologies are used to keep the lights ON. The sensor includes MicroSet self-adaptive technology that continuously self-adjusts sensitivity and time delay in real-time, maximizing the potential energy savings that are available in particular application. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual-On Mode, the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When used with 2 level lighting (-R model only), Bi-level Automatic On can be achieved which allows Zone 1 to come on automatically upon occupancy. Zone 2 does not come on unless the occupant presses the optional momentary switch. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Large Offices
- Common Areas
- Computer Rooms
- Break Rooms

Wiring Diagrams

OAWC-DT-120W-R Model

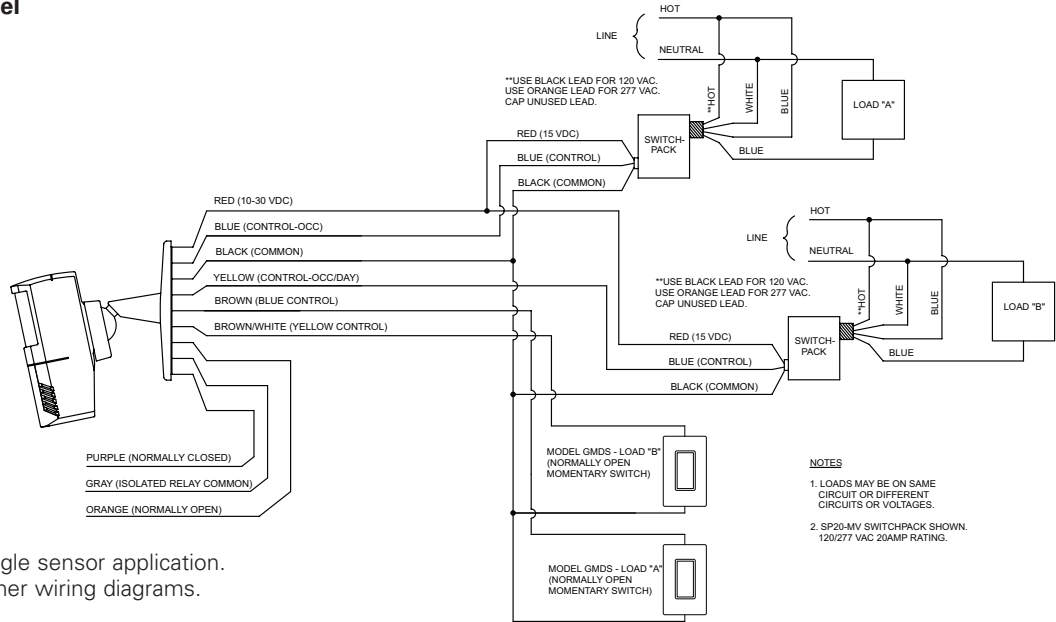
MANUAL MODE OPERATION:

1. SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
2. LOADS TURN OFF WHEN SENSOR TRIGGERS OUT OR WITH SWITCHES.

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
2. SWITCHES CAN BE USED TO TURN LIGHTS ON OR OFF.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

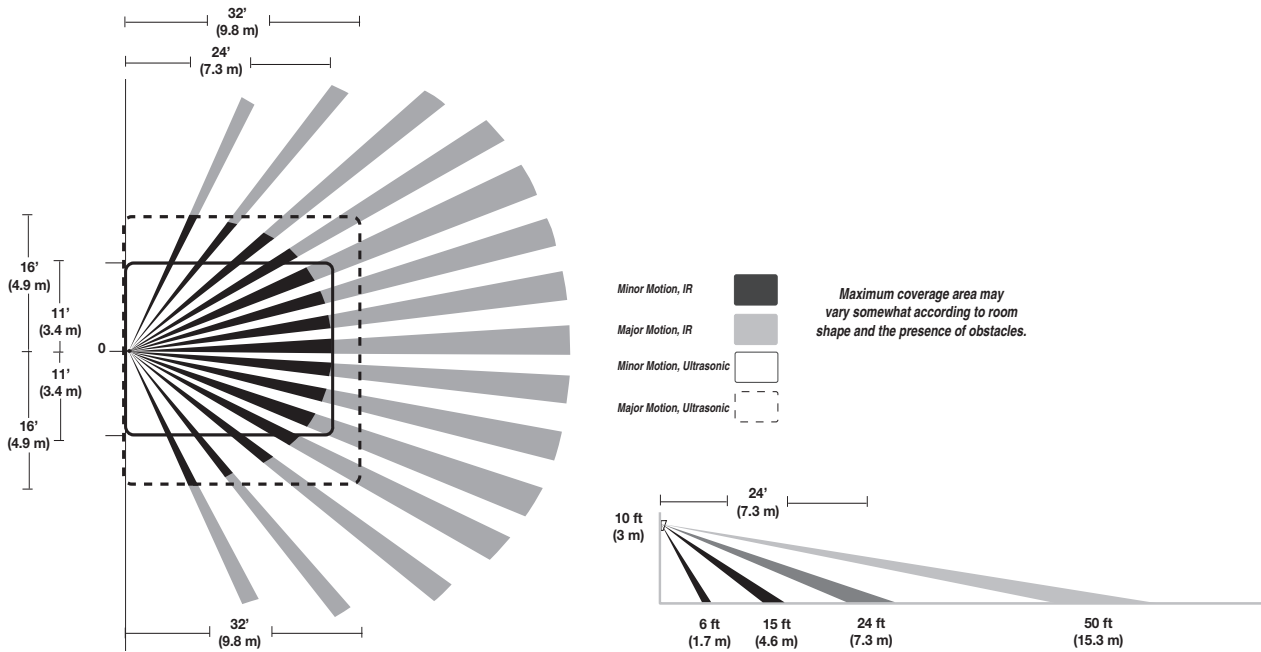
RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED



- NOTES**
1. LOADS MAY BE ON SAME CIRCUIT OR DIFFERENT CIRCUITS OR VOLTAGES.
 2. SP20-MV SWITCHPACK SHOWN. 120/277 VAC 20AMP RATING.

*Wiring diagram for single sensor application.
Visit our website for other wiring diagrams.

Coverage



Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.

Controls

DIP Switch Legend

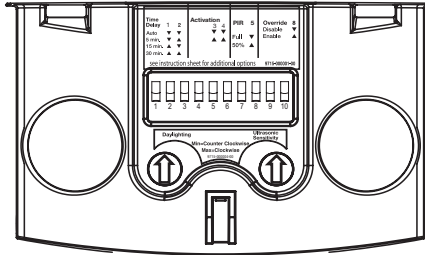
DIP Switch	Time Delay		Activation	Activation	PIR Sensitivity	Walk-Through Mode	LEDs	Override	Lighting Sweep	Daylighting Mode
	1	2	Power Pack One	Power Pack Two	5	6	7	8	9	10
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Half ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▲	Disable ▲	Enable ▲	Enable ▲	Full ▲
15 Minutes	▲	▼								
30 Minutes	▲	▲								

(-R model only)

(-R model only)

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Coverage	Field of View	Features
OAWC -DT-120W-R	1,200 sq. ft.	Wide Angle, 120°	w/ BAS Relay and Daylight Sensor
OAWC-DT-120W	1,200 sq. ft.	Wide Angle, 120°	

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 November 5, 2014

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GMDS – Momentary Decorator Switch

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Momentary Decorator Switch is a system accessory for the Greengate Lighting Control System. This switch is recommended for most low voltage switching applications and fits a standard decorator wallplate.

Features

- When pressed, momentary contact establishes circuit contact in the closed position. When not pressed, the switch is in the (open) position.
- Thermoplastic rocker, top, and backbody are virtually unbreakable to deliver years of durable performance
- Tri-combo screw heads offer greater installation flexibility



Specifications

Switch Type	Momentary Contact
Standards	UL Listed



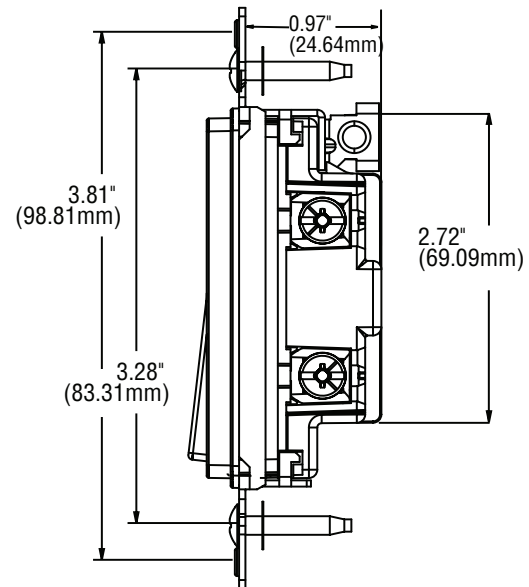
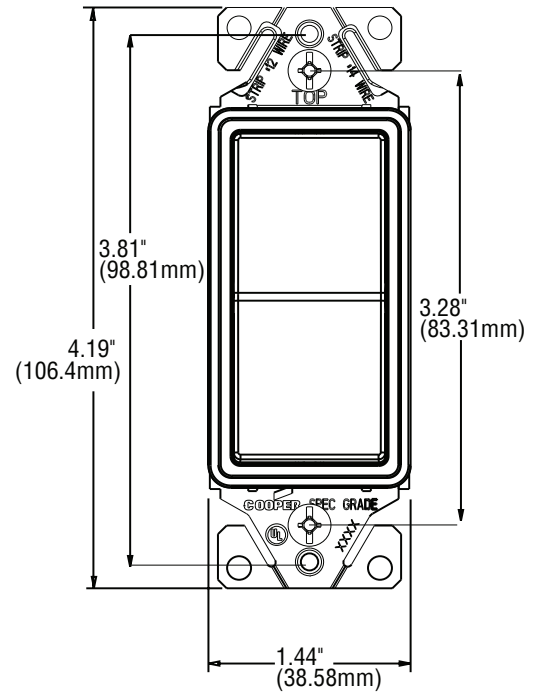
Description/Operation

The Momentary Decorator Switch is a line voltage switch used as a low voltage contact closure device used with Greengate Lighting Control Panels and Occupancy Sensors. When toggled, the switch momentarily makes a contact closure to the lighting control panel or occupancy sensor, sending an "ON" signal. When not pressed, the switch is in the (open) position.

Installation

This system accessory will require wall mounting and wiring at the site.

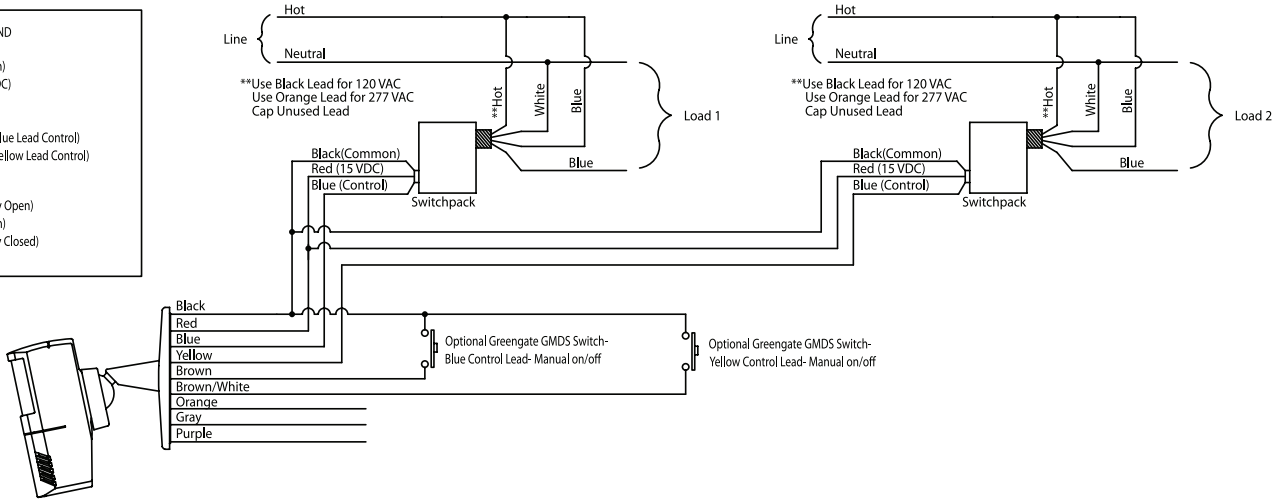
Dimensions



Wiring Diagram

Bi-level Switching

SENSOR WIRE LEAD LEGEND	
Black	(Common)
Red	(10-30 VDC)
Blue	(Control)
Yellow	(Control)
Brown	(Switch-Blue Lead Control)
Brown/White	(Switch-Yellow Lead Control)
Sensor's Isolated Relay	
Orange	(Normally Open)
Gray	(Common)
Purple	(Normally Closed)



Ordering

*Wallplate Not Included

This is an accessory for the Greengate Lighting Control System. It is not an integral part of the system. There is no factory assembly needed.

Catalog #	Description	Color
GMDS-W	Momentary Decorator Switch	White

*Refer to Screwless Wallplate spec sheet for ordering information at coopercontrol.com

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October 22, 2014

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Room Controller

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Room Controller includes three relays and up to three 0-10 VDC dimming outputs to control compatible dimmable ballasts. The switching relays and 0-10 VDC outputs are controlled separately, allowing flexibility in wiring and control. The Room Controller is shipped preconfigured to work out-of-the-box when connected to Room Controller devices, allowing quick and easy daylighting controls, occupancy/vacancy sensing and manual switching.

Features

- Click & Go ready, RJ45 connections
- Preconfigured for automatic functionality upon power-up
- Manual or Automatic On, bi-level, tri-level and dimming control strategies
- Integral Demand Response input with four levels of preconfigured energy reduction
- Built in tubular lighting control with preconfigured wallstation controls
- Integral pillow speaker connections for GPCS (RC3DEHC)
- Integral Solatube® connection for classrooms
- Guaranteed compatibility with Cooper Lighting LED and 0-10V fluorescent fixtures
- Ladderless UL 924 Emergency Mode testing (RC3DE & RC3DEHC)



Model RC3D-PL Shown



Inside View



Powering Business Worldwide

March 2018

Specifications

Size	11 1/2"H x 7 1/2"W x 2 1/4"D
Input/Output Voltage	120/277 VAC, 60Hz Maximum 20A combined load per Room Controller Ballast load: 20A @ 120/277 VAC (LED) Incandescent load: 15A @ 120 VAC Motor load: 1HP @ 120 VAC
Emergency Output (RC3DE/RC3DEHC only) UL 924	LED, Ballast or Incandescent Load: 3A
Class 2 Dimming Output	0-10 VDC, sinks up to 100mA per (40 μ A max per circuit leakage to line) Each 0-10V output supports up to 50 ballasts/drivers that draw the standard 2mA each
LED Drivers	Requires isolated LED drivers for optimal performance
Operating Environment	Temperature: 32°F to 104°F (0°C to 40°C) For indoor use
Standards	UL Approved UL 508 Listed UL 924 Listed



Description/Operation

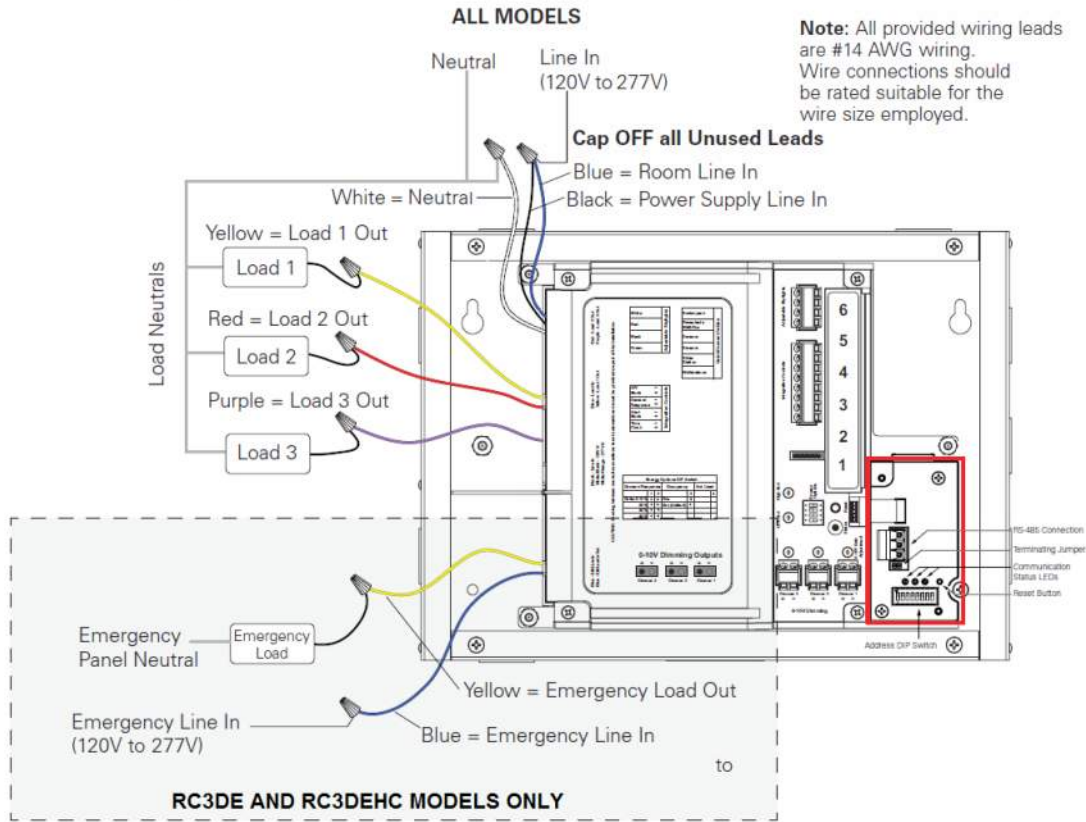
The Room Controllers are connected to a 120 VAC or 277 VAC 20 Amp circuit to provide unit power and input power to the individual relays. The wallstations, occupancy/vacancy sensors, daylight sensors and receptacle control devices connect via QuickConnect cables (ordered separately) providing a Class 2 connection. Upon power up the pre-engraved wallstation automatically controls the On/Off relays adjust the dimming outputs. The daylight sensor will immediately adjust the lighting levels based on natural light.

Installation

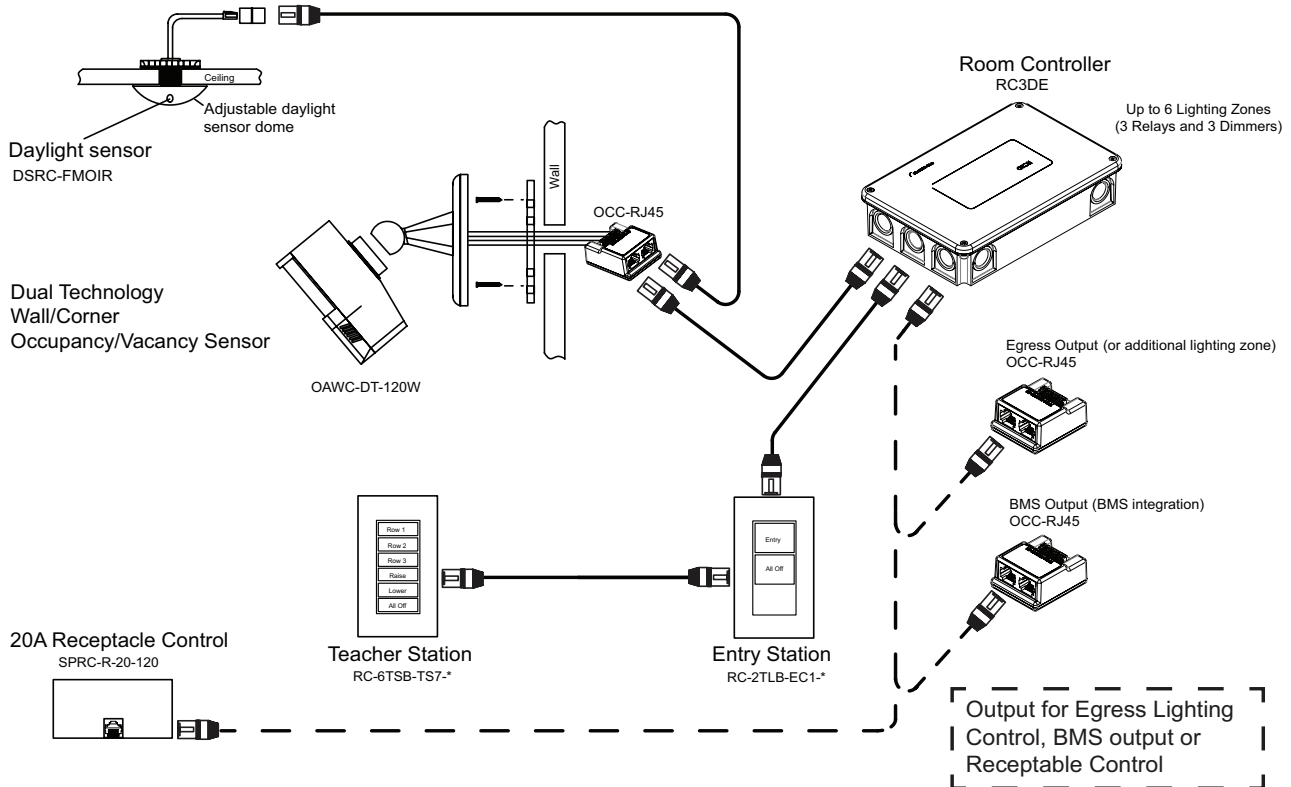
The line voltage section of the Room Controller provides the installing contractor space to make all line voltage connections and direct conduit access, reducing the need for additional junction boxes, while providing easy access to line voltage circuits. Low voltage devices are connected using Cat5 cables (ordered separately).

UL 924 relay is provided on some units for automatic emergency lighting control. The UL 924 relay automatically tracks with output 1 and can be connected to any of the three 0-10V dimmers. The UL 924 relay automatically closes and disconnects the 0-10V control open loss of normal power providing adequate egress lighting control. Ladderless maintenance testing of the UL 924 relay can be achieved by pressing the ALL OFF button four times.

Sample Wiring Diagram



Room Connections



March 2018

Ordering

Catalog #	Description	Voltage	Ballast/Incandescent
RC3-PL	3 Relays, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL	3 relays, 3 0-10V dimming, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL	3 relays, 3 0-10V dimming, UL 924, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL	3 relays, 3 0-10V dimming, UL 924 for healthcare, Plenum	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3D-PL-CP	3 relays, 3 0-10V dimming, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DE-PL-CP	3 relays, 3 0-10V dimming, UL924, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A
RC3DEHC-PL-CP	3 relays, 3 0-10V dimming, UL924 for healthcare, Chicago Plenum Network Room Controller	120/277 VAC, 60 Hz	Maximum Combined Load 20A

Additional Options

Catalog #	Description
GGRC-COUPLER	RJ45 Coupler
GGRC-SPLITTER	RJ45 Splitter
GGRJ45-006-G	RJ45 cables 6 inches
GGRJ45-03-G	RJ45 cables 3 feet
GGRJ45-10-G	RJ45 cables 10 feet
GGRJ45-25-G	RJ45 cables 25 feet
GGRJ45-50-G	RJ45 cables 50 feet
GGRJ45-100-G	RJ45 cables 100 feet
GGRJ45-10P-G	RJ45 cables 10 feet plenum rated
GGRJ45-25P-G	RJ45 cables 25 feet plenum rated
GGRJ45-50P-G	RJ45 cables 50 feet plenum rated
GGRJ45-100P-G	RJ45 cables 100 feet plenum rated

Note: Please refer to the Room Controller page on our website for more information

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Specifications and
 dimensions subject to
 change without notice.

OAC-U – MicroSet Ultrasonic Low Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The MicroSet Ultrasonic Low Voltage Occupancy Sensing Ceiling Sensor is a motion sensing lighting control that is used for energy savings and convenience.

Features

- MicroSet self-adjusting time delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control



 Ultrasonic
Activated

 MicroSet
Self-Adjusting

EATON

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Specifications

Technology	Ultrasonic (US)
Power Requirements	<p>Input</p> <p>10-30 VDC from Greengate Switchpack or Greengate system</p> <p>Maximum current needed is 25mA per sensor</p> <p>Output</p> <p>Open collector output to switch up to ten Greengate Switchpacks</p> <p>BAS with Isolated Form C Relay in (-R) model</p> <p>Isolated Form C Relay Ratings: 1A 30 VDC/VAC</p>
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000, and 2000 sq. ft. (56 ft. x 16 ft. corridor)
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	<p>Temperature: 32°F - 104°F (0°C - 40°C)</p> <p>Relative humidity: 20% to 90%, non-condensing</p> <p>For indoor use only</p>
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42" H x 4.5" W (36.068mm x 114.3mm)
Mounting	Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Green LED for Ultrasonic detection
Standards	<p>FCC Compliant cULus Listed RoHS Compliant</p> 

Description/Operation

The ultrasonic sensor uses the Doppler principle. It produces a low intensity, inaudible sound and detects changes in sound waves caused by motion, such as walking into the room, reaching for the telephone, or turning in a chair. They are volumetric in nature and therefore not line-of-sight dependant. Since they fill the space with these sound waves, they are excellent in bathrooms with stalls, enclosed hallways, or other oddly shaped rooms. In addition, they are much more sensitive to smaller motions. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and Time Delay in real-time, maximizing the potential energy savings that are available in the particular application. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. The MicroSet Ultrasonic Low Voltage Ceiling Sensor has an ambient light level sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Conference Rooms
- Open Office Areas
- Restrooms (With Partitions)
- Restrooms (Non Partitioned)
- Hallways
- Other Indoor Office Spaces

Wiring Diagrams

OAC-U-2000-R, OAC-U-1000-R, OAC-U-0501-R Models

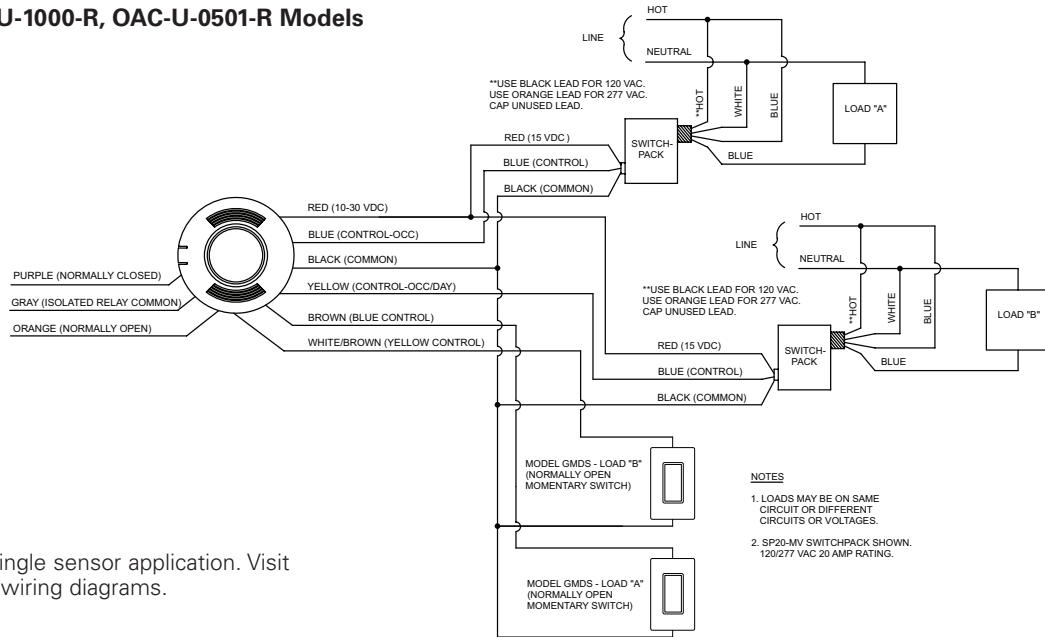
OAC AND VAC MANUAL MODE OPERATION:

1. SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
2. LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
2. SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

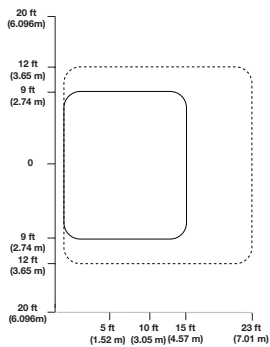
RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED



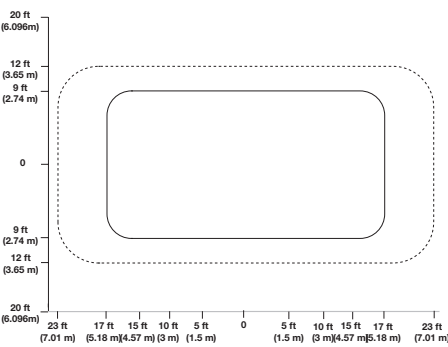
*Wiring diagram for single sensor application. Visit our website for other wiring diagrams.

Coverage

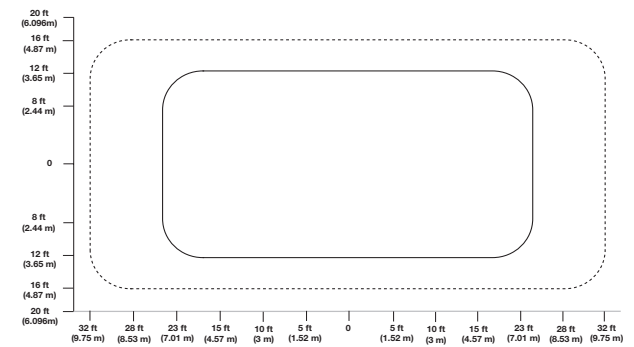
OAC-U-0501-R
500 sq. ft.



OAC-U-1000-R
1,000 sq. ft.



OAC-U-2000-R
2,000 sq. ft.

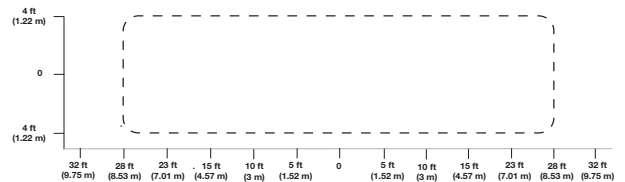


Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.

- Minor Motion, Ultrasonic
- Major Motion, Ultrasonic
- Corridor Coverage OAC-U-2000, OAC-U-2000-R models only

Recommended Mounting Height 8 to 12 feet

OAC-U-2000-R and OAC-U-1000-R Hallway Coverage



* When creating a sensor coverage layout in a cubicle space, best practice is the use the minor motion coverage pattern as maximum coverage area. Results may vary based on cubicle height and ceiling height. (Cubicle wall height should not exceed 71 inches).

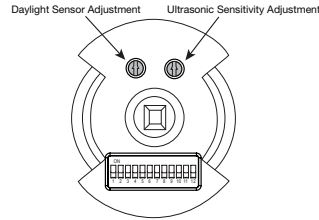
Controls

DIP Switch Legend

DIP Switch	Time Delay		Activation		Not Used	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	5	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Full ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲		Enable ▲	Disable ▲	Enable ▲	Enable ▲	Half ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										

*Self-Adjusts to 10 min. user mode

Default =



Ordering

Catalog #	Maximum Room Size	Field of View	Frequency	Features
OAC-U-2000-R	2,000 sq. ft. (56 ft x 16 ft corridor)	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-2000	2,000 sq. ft. (56 ft x 16 ft corridor)	Two Way (360°)	32 kHz	
OAC-U-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-U-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-U-0501	500 sq. ft.	One Way (180°)	40 kHz	

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LK16 & LK32 – LiteKeeper 16 & 32

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The LiteKeeper stand-alone lighting control panel is an all-inclusive premium grade system for applications that would traditionally use a timeclock in conjunction with contactors. Control up to 32 relays per panel. Several relay options and more standard features than any other stand-alone panel on the market combine to create a state of the art stand-alone lighting control system.


Features

- Capable of mixed load voltages (120/277/347 VAC) as well as mixed sources (i.e. normal and emergency power)
- Manual and programmable control of each relay via a simple keypad and 4 line LCD display
- Normally open, latched, and two pole parallel relays available
- Flush mount kit and voltage separation barrier available
- Capable of controlling receptacle loads
- LED ready



August 2016

Specifications

Enclosure	NEMA 1 surface mount, lockable
Size	LK16: 18"H x 15"W x 6.25"D (up to 16 relays) LK32: 30"H x 15"W x 6.25"D (up to 32 relays)
Transformer Ratings	Multi-tapped 120/277 VAC internally fused standard Optional 347 VAC internally fused
Power Use Ratings	Fully loaded panel 75 watts
Operating Environment	Temperature: 32°F to 122°F (0°C to 50°C)
Master Override	ON/AUTO/OFF
Programming	Onboard keypad and LCD display Optional PC Software
Standard Relay Ratings	20A, 120/277VAC per relay 10A, 120/277VAC electronic Ballast, (LED) Normally open Max wire size: 10 AWG Mechanical operations: 10 million
Latching Relay Ratings	20A, 120/277 electronic ballast (LED) 15A, 347 VAC Maximum wire size: 6 AWG Mechanical operations: 10 million Provides a system SCCR rating of 10,000A
Two Pole Relay Ratings	20A, 208/240/480 VAC Normally open Maximum wire size: 6 AWG Mechanical operations: 10 million
Standards	UL 916 Listed UL 924 with RIM 

System Includes

- UL listed – UL 916 standard
- NEMA 1 enclosure
- 32 low voltage input connections
- Digital Switch interface
- Time schedules with astronomic clock
- Prioritization and masking of switch inputs, time schedules and remotes
- Timed inputs
- Occupant warn-off and overrides
- Keypad and 4 line LCD display
- RS-232 port standard
- UL Listed - UL 924 with RIM
- Control receptacle loads with latching relay card

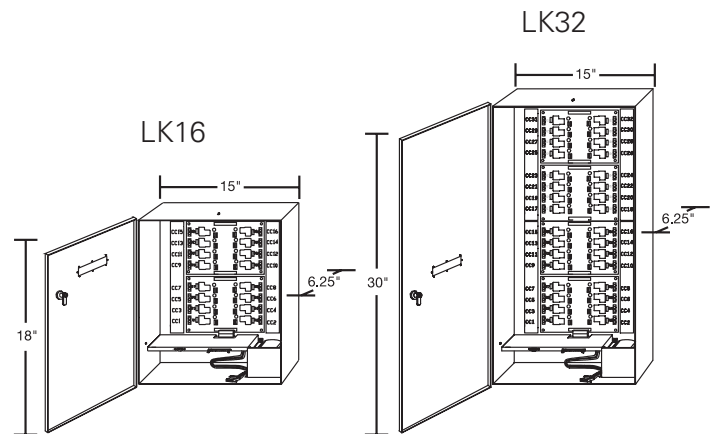
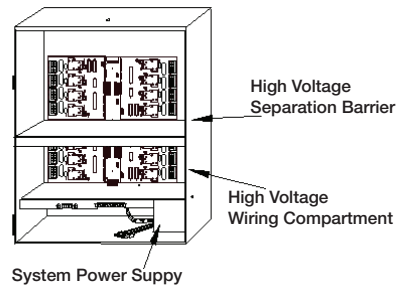
Accessories

- Keeper Enterprise Software
- Ethernet Interface Module
- Automation Interface Module
- Greengate Digital Switch (GDS)
- Dry Contact Switches
- Contact Input Photosensor
- Occupancy Sensor
- Voltage Separation Barrier
- Flush Mount Kit
- CEPC (UL 924 Accessory)
- RRU

Dimensions

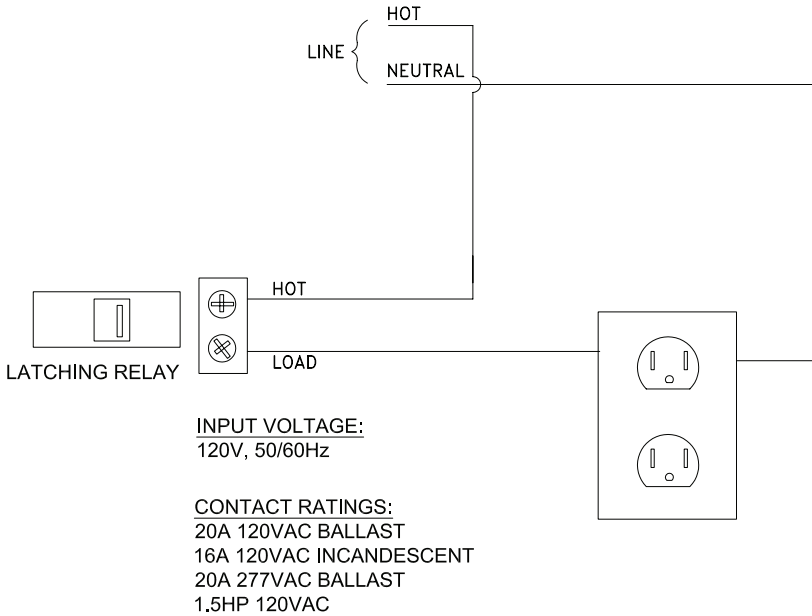
Enclosure

High Voltage Barrier and Dividers

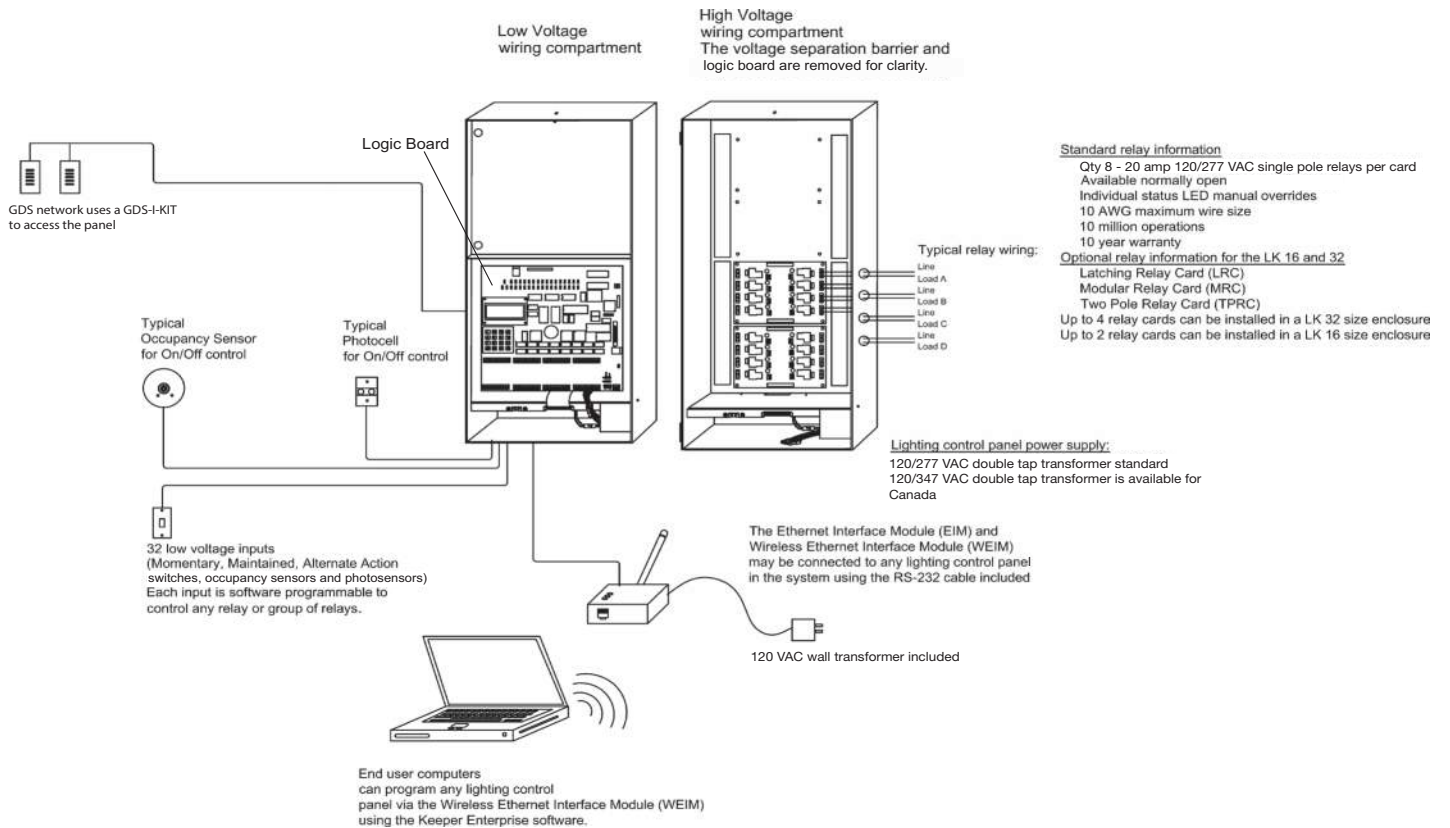


Wiring Diagram

Latching Relay Receptacle Control



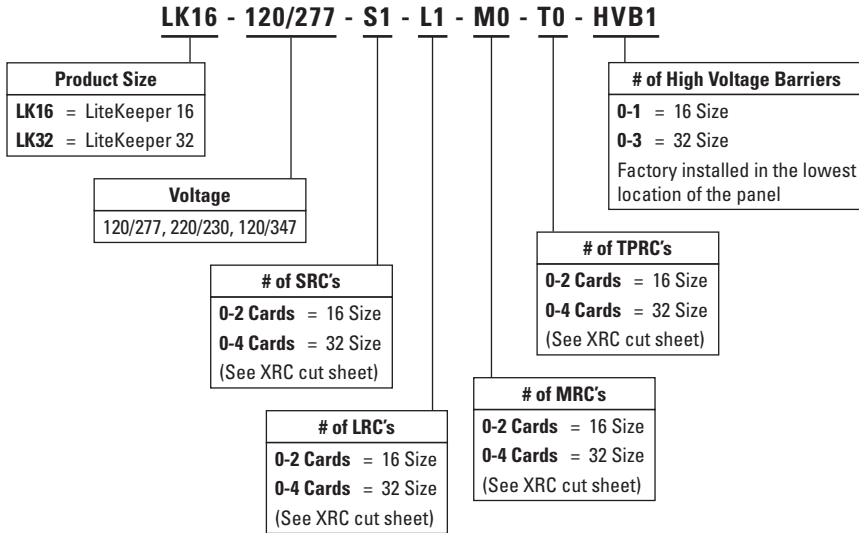
Sample One-Line



August 2016

Ordering

All LiteKeeper lighting control panels require a Logic Board (LK-LB). The logic board is shipped separately from the enclosure and is listed as a separate line item. When ordering any of the below models, you must also order the LK-LB.



Additional Options

Catalog #	Description
LK-LB	LiteKeeper Logic Board (required per enclosure)
LK 16 FK	LiteKeeper 16 size Flushmount Kit (option)
LK 32 FK	LiteKeeper 32 size Flushmount Kit (option)

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 August 18, 2016

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ONW-D – NeoSwitch Dual Tech/Single Level Wall Switch Sensor (Ground Required)

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

The Dual Technology Single Level Occupancy Sensing Wall Switch all-in-one that is used to for energy savings and convenience. It does not require a neutral wire for installation making it ideal for retrofit applications.

Features

- Air-gap switch ensures no leakage current to load
- Selectable built-in light level sensor
- NEMA WD7 Guide robotic method utilized to verify coverage patterns
- LED Rated



PIR
Activated



Ultrasonic
Activated



Self-Adjusting



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Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Electrical Ratings	<p>120 VAC: Incandescent/Tungsten – Max. load: 6.7 amps, 800W, 50/60 Hz Fluorescent/Ballast – Max. load: 10 amps, 1200W, 50/60 Hz Electronic Ballast (LED) 3A</p> <hr/> <p>Motor Load: ¼ HP @ 125 VAC</p> <hr/> <p>277 VAC: Fluorescent/Ballast – Max. load: 9.8 amps, 2700W, 50/60 Hz Electronic Ballast (LED) 3A</p> <hr/> <p>347 VAC: Fluorescent/Ballast – Max. load: 4.3 amps, 1500W, 50/60 Hz Electronic Ballast (LED) 3A</p>
Ballast Compatibility	Compatible with LED loads, magnetic and electronic ballasts
Time Delays	Self-Adjusting, 15 seconds/test (10 min. Auto), Selectable 5, 15, 30 minutes
Coverage	Major motion - 36' x 30' Minor motion - 20' x 16'
Light Level Sensing	0 to 200 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: 20% to 90% non-condensing For indoor use only
Housing	Durable, injection molded housing. ABS resin complies with UL 94V-0
Size	<p>Mounting Plate/Strap Dimensions: 4.195"H x 1.732"W (106.55mm x 44mm)</p> <hr/> <p>Mounting Plate/Strap Dimensions: ONW-D-1001-347: 4.35"H x 1.732"W (110.49mm x 44mm)</p> <hr/> <p>Product Housing Dimensions: 2.618"H x 1.752"W x 1.9"D (66.5mm x 44.5mm x 48.26mm)</p>
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant



Operation

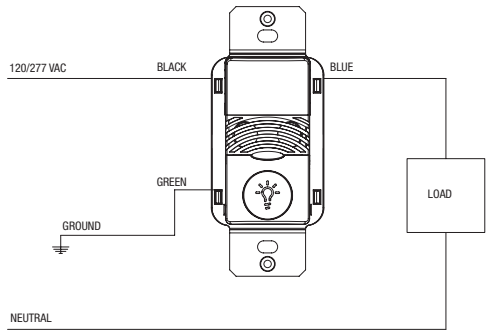
The ONW-D-1001-MV combines Ultrasonic (US) and Passive Infrared (PIR) sensor technologies to monitor a room for occupancy to deliver maximum energy savings and ensure the greatest sensitivity and coverage for tough applications without the threat of false triggers. PIR is used to turn the lights ON and then either or both technologies are used to keep the lights ON. In Automatic On Mode, the lights turn ON automatically when a person enters the room. In Manual On Mode, the lights are turned ON by pressing the universally recognized light icon pushbutton. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and time delay in real-time, maximizing the potential energy savings that are available in the particular application.

Applications

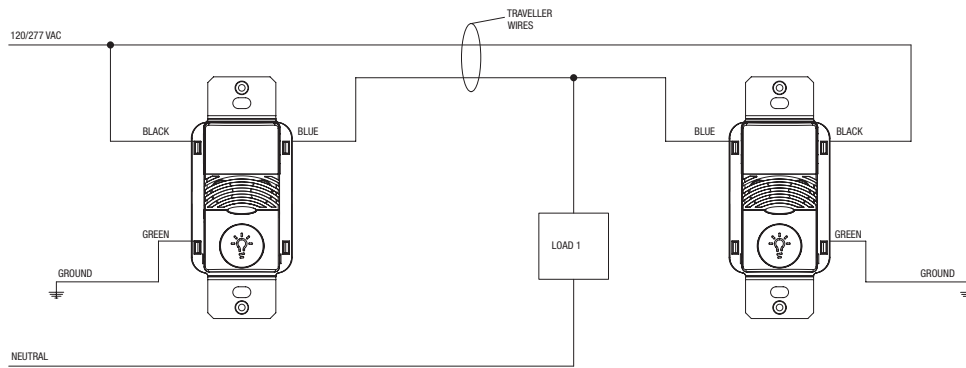
- Private Offices
- Small Conference Rooms
- Lunch/Break Rooms
- Small Classrooms
- Small Restrooms (1-2 Stalls)
- Small Lounges
- Small Waiting Rooms
- Small Closets
- Small Storage Areas

Wiring Diagrams

Single Level Switching – Single Circuit

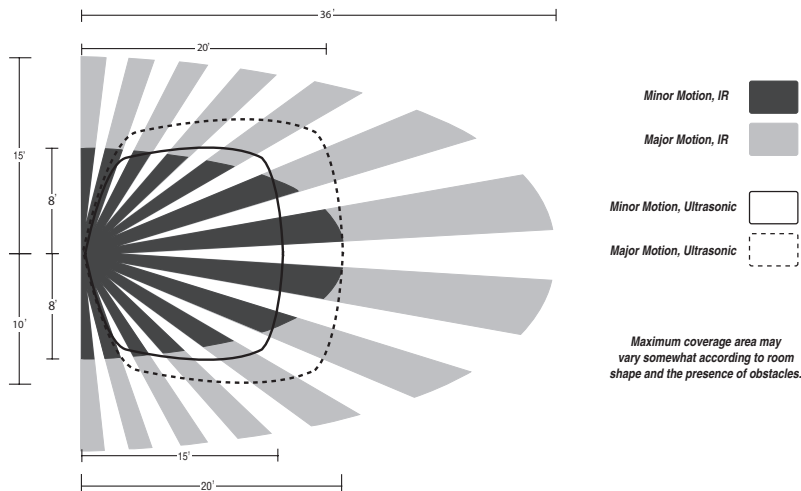


Three-way wiring diagram: Lights will turn OFF automatically when sensor that detected motion last, times out.

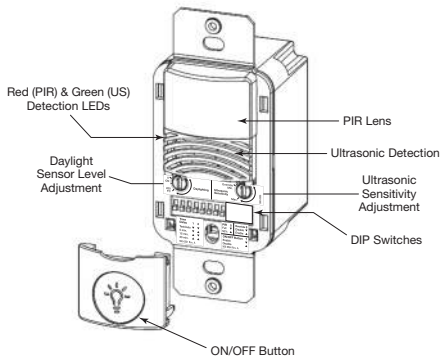


*For 347 VAC wiring diagrams refer to Installation Instructions

Coverage



Controls

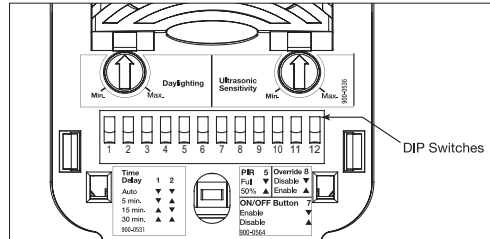


DIP Switch Legend

DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	ON/OFF Button	Override	Not Used	Maintain Lights On	Not Used
	1	2	Relay 1	Not Used							
15 Sec Test/Auto*	▼	▼	Auto	▼	Full	Disable	Enable	▼	Disable	▼	
5 Minutes	▼	▲	Manual	▲	50%	Enable	▲	Disable	▲	Enable	▲
15 Minutes	▲	▼									
30 Minutes	▲	▲									

*Self-Adjusts to 10 min. user mode

Default =



Ordering

*One single gang wallplate included. Wallplate not included with 347 VAC Model

Catalog #	Ratings	Coverage	Voltage
ONW-D-1001-MV- (* - W, V, LA, G, B)	Incandescent: 0-800W @ 120V Fluorescent: 0-1200W @ 120V Fluorescent: 0-2700W @ 277V Max Load/Relay	180°; 1000 sq. ft.	120/277 VAC, 50/60 Hz
ONW-D-1001-347- (* - W, V, LA, G, B)	Incandescent: 0-1500W @ 347V Fluorescent: 0-1500W @ 347V Max Load/Relay	180°; 1000 sq. ft.	347 VAC, 50/60 Hz

* White, Ivory, Light Almond, Gray, Black

Note: Not all colors are available in stock and some color options may have extended lead times.

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Specifications and dimensions subject to change without notice.

SP20-RD4 – Heavy Duty Switchpacks

Catalog#	Prepared by
Project	Date
Comments	Type

Overview

Switchpacks provide 24 VDC operating voltage to all low voltage, 24 VDC occupancy sensors and daylighting controllers. A single switchpack can provide power for up to five sensors. Up to ten switchpacks can be connected to one sensor for control of multiple circuits. Isolated contacts may also be used to control HVAC, contactors, motors, etc.

Features

- Auto ON or Manual On
- Photocell ready
- Fail-safe circuitry – in the event of failure, return-to-closed (ON) capability
- Zero-crossing circuit provides increased durability, especially with today's high inrush loads
- Voltage regulated to 24VDC, 225mA
- LED ready



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Specifications

Power Requirements	Input: 120-230-277VAC, 50/60 Hz
	Output: 20A, 2400W @ 120V – Resistive 20A, 2400W @ 120V – General Purpose 20A, 2400W @ 120V – Incandescent 20A, 2400W @ 120V – Fluorescent 16A, 1920VA @ 120V – Electronic Ballasts 16A, 1920W @ 120V – LED 20A, 5540W @ 277V – Resistive 20A, 5540W @ 277V – General Purpose 20A, 5540VA @ 277V – Fluorescent 16A, 4430VA @ 277V – Electronic Ballasts 16A, 4430W @ 277V – LED 1/2 HP @ 120V – Motor Load 2 HP @ 240/277V – Motor Load Suitable for general purpose plug load control - 20A, 2400W @120V
	Can be used to comply with NY LL48, IECC, ASHRAE 90.1 and Title 24, Part 6 daylight harvesting, demand response, bi-level switching and receptacle control requirements
Control	2mA, 24VDC
Ballast Compatibility	Compatible with LED, magnetic and electronic ballasts
Operating Environment	Temperature: 32°F - 122°F (0°C - 50°C)
	Relative humidity: 0-90%, non-condensing For indoor use only
Housing	Case: high impact, UL rated plastic Relay: 60A rated magnetic latching relay; silver alloy contacts Wire: 6" leads, 18AWG input; 14AWG load; LV connections: 8" leads 22AWG
	Medium impact injection molded housing. ABS resin complies with UL 94V-0. Plenum rated for external junction box mounting, with Teflon coated leads
Motor Load	1 HP 120-240 VAC; 2 HP 250 VAC
Size	2.40"H x 3.81"W x 1.43"D (60.96mm x 96.80mm x 36.37mm)
Standards	UL/cUL Listed, FCC Certified, NOM Certified, can be used to comply with NY LL48, IECC, ASHRAE 90.1 and Title 24, Part 6 daylight harvesting, demand response, bi-level switching and receptacle control requirements, RoHs Compliant

Description/Operation

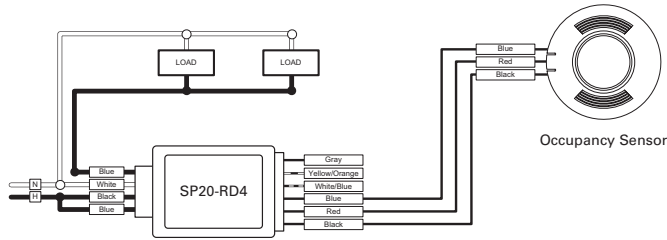
The SP20-RD4 is the latest addition to the Greengate Switchpacks family, delivering a wide array of switching solutions in a single unit. This robust switchpack is designed to deliver unmatched performance. The SP20-RD4 features robust and reliable mechanical latching relays, exclusive fail-safe circuitry, daylight harvesting, bi-level switching and is configurable for energy code requirements. The switchpack is specifically designed to handle high inrush electronic ballast loads and offer unmatched durability and service.

Applications

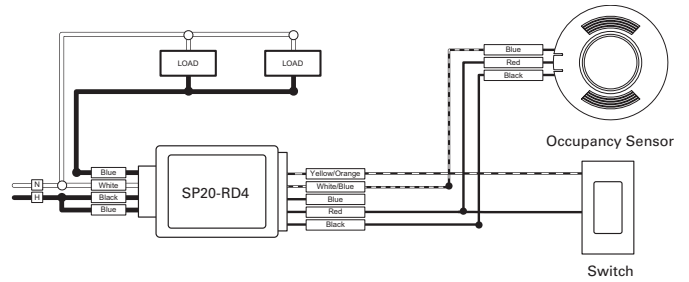
- Can be used to comply with NY LL48, IECC, ASHRAE 90.1 and Title 24, Part 6 daylight harvesting, demand response, bi-level switching and receptacle control requirements
- Auto-ON / Auto-OFF with local switch
- Manual-ON / Auto-OFF with local switch

Wiring Diagrams

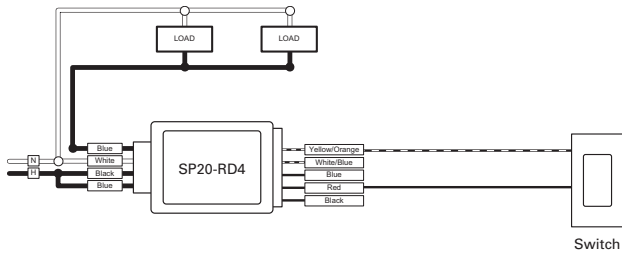
Auto ON/Auto OFF



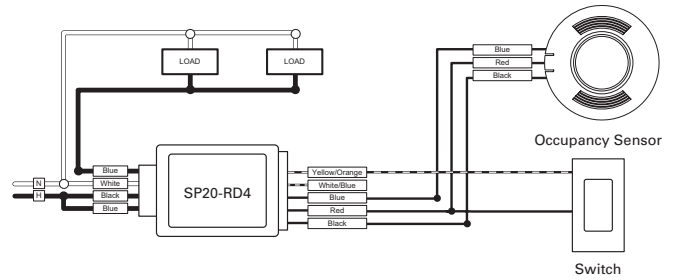
Manual ON/Auto OFF with Local Switch



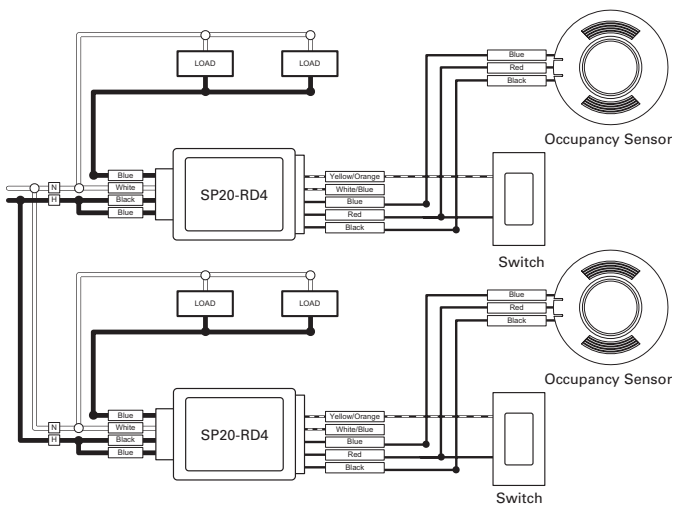
Local Switch ONLY



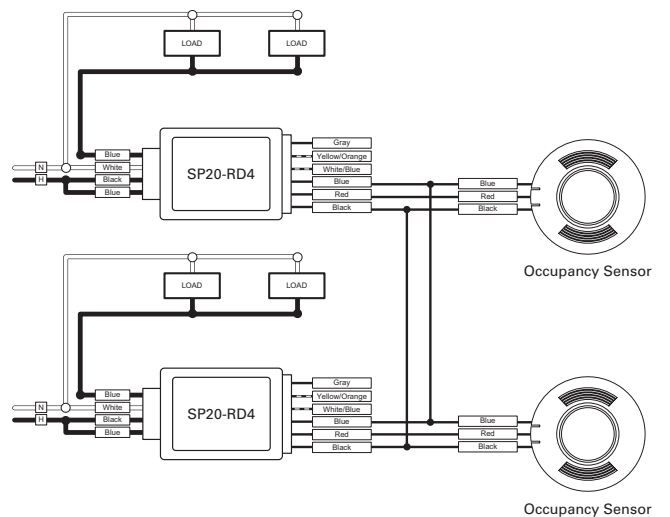
Auto ON/Auto OFF with Local Switch



Bi-Level Switching

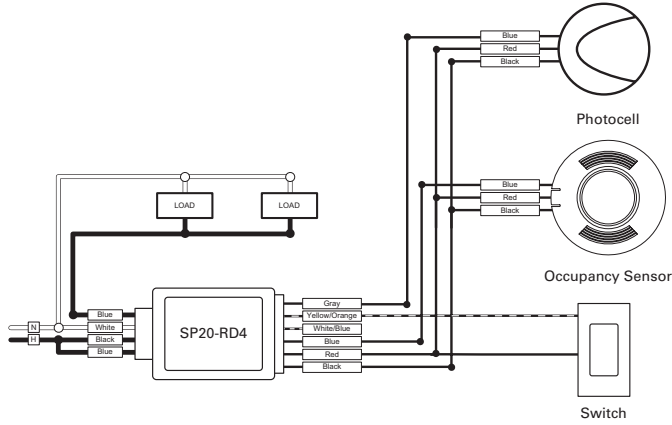


Multiple Occupancy Sensors Exceeding the Power Packs Rating



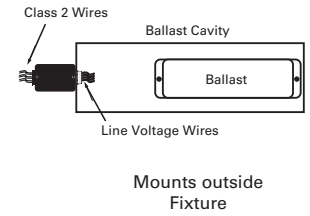
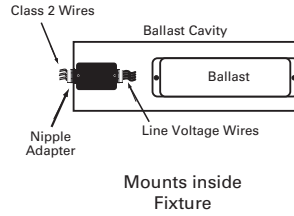
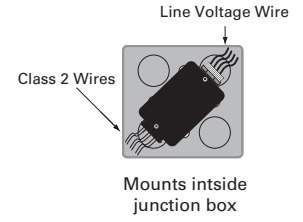
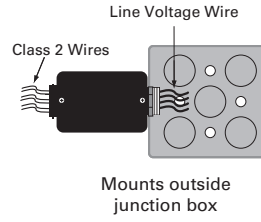
Note: Switchpack and the load switched by the switchpack MUST be fed from the same phase.

Photocell and Occupancy Sensor with Local Switch



Note: Switchpack and the load switched by the switchpack MUST be fed from the same phase.

Mounting



Ordering

Catalog #	Ratings	(LED) Ballast	General Purpose (Plug load)	Motor (HP)	Output
SP20-RD4	120-230-277VAC, 50/60 Hz	16A	20A	1/2HP-120V, 2HP-250V	24 VDC, 225mA

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lightingsystems
For service or technical assistance:
1-800-553-3879



Greengate

Room Controller Wallstation Custom Configuration Order Form

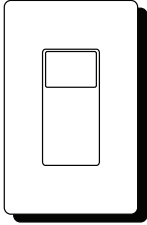
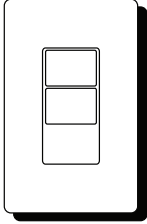
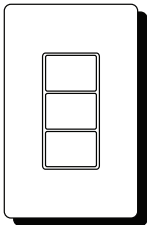
Sales Order #: _____ Line #: _____

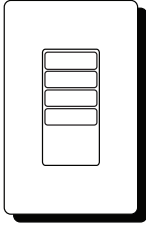
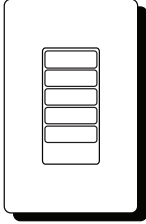
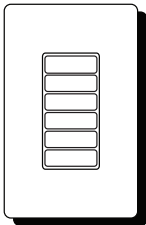
2—Select your button configuration: *(choose only one wallstation per form)*

Choose a button address from the Standard Toggle, Standard Presets or Programmable Scenes selection list (found on the back) for each button location.

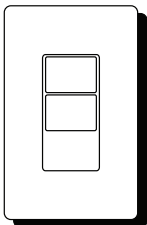
Enter the button address on the line for the desired button. Button addresses will be factory loaded and the wallstation will perform the default behavior shown on the back of this sheet when connected to the Room Controller.

Programmable Scene button behavior can be field modified using the Personal Remote (HHP-RC) and a connected daylight sensor (DSRC-FMOIR).

	PDR-RC-1TLB-* _____
	PDR-RC-2TLB-* _____ _____
	PDR-RC-3TLB-* _____ _____ _____

	PDR-RC-4TSB-* _____ _____ _____
	PDR-RC-5TSB-* _____ _____ _____
	PDR-RC-6TSB-* _____ _____ _____

Example:



PDR-RC-2TLB-*
_____ **16**
_____ **8**

This configuration provides an All ON / All OFF wallstation.

Blank buttons are not provided.

Room Controller Wallstations will be delivered:

- Pre-programmed
- Matching color wall plates

1—Select your color: *(choose only one)*

White (W)



Ivory (V)



Gray (G)



3—Select your desired engraving:

(choose only one, small or large button)

**First Letters Capitalized, Arial Font,
11 characters, 11pt font size (default)**

- Sample 1: Small Button (from 4 to 6 buttons)
LIMITED TO (1) LINE OF ENGRAVING PER BUTTON

Sample Text

- Sample 2: Large Button (3 button maximum)
LIMITED TO (2) LINES OF ENGRAVING PER BUTTON

Sample Text

Sample Text
On 2 Lines

Check the applicable box(es) on the left for blank button(s).

Blank

Button 1

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Blank

Button 2

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Blank

Button 3

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Blank

Button 4*

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Blank

Button 5*

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Blank

Button 6*

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

* Buttons 4, 5 & 6 only apply when using a small button arrangement.

- Allow 4-6 weeks for delivery from PO confirmation.
- Confirmation subject to approval.
- All wallstations ordered with custom text are non-returnable.

Please print your form then email to:
ControlsCustomerService@Eaton.com or
fax to 800-954-7016.

Contact Information

Project name: _____ Room: _____

Control Address: _____

P.O. #: _____ Page: _____ Quantity: _____

GG Order #: _____ GG Project #: _____



ACC141044

Standard Toggle Buttons			
Button Address	Default Behavior 1st Press	Default Behavior 2nd Press	Control Type
1	Load 1 (Yellow) ON Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay ON (RC3DE only)	Load 1 (Yellow) OFF Receptacle Switchpack no action Alternate Voltage Switchpack OFF Solatube Close (RC3DE only) Emergency Relay OFF (RC3DE only)	Toggle
2	"Load 2 (Red) ON Receptacle Switchpack ON"	"Load 2 (Red) OFF Receptacle Switchpack no action"	Toggle
3	Load 3 (Purple) ON	Load 3 (Purple) OFF	Toggle
5*	Disables Occupancy sensor for 60 minutes	Re-enables Occupancy sensor	Toggle
11	"Load 3 (Purple) ON Receptacle Switchpack ON"	"Load 3 (Purple) OFF Receptacle Switchpack no action"	Toggle

* This button must be in the second large or third small button location. Typical engraving is "Quiet Time."

Standard Preset Buttons			
Button Address	Default Behavior 1st Press	Default Behavior 2nd Press	Control Type
6	Raise all dimmers by 15%		Preset
7	Lower all dimmers by 15%		Preset
8	"Load 1, 2, 3 OFF Alternate Voltage Switchpack OFF Solatube Close (RC3DE only) Emergency Relay OFF (RC3DE only) "		Preset
9	"Load 1 (Yellow) On, Load 2 (Red) OFF All Dimmers to 50% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay ON (RC3DE only) "		Preset
10	"Load 1, 2, 3 On All Dimmers to 100% Receptacle Switchpack ON Alternate Voltage Switchpack ON Emergency Relay ON (RC3DE only) "		Preset
16	"Load 1, 2, 3 On All Dimmers to 100% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay ON (RC3DE only) "		Preset
17	Raise Dimmer 1 by 15%		Preset
18	Lower Dimmer 1 by 15%		Preset
19	Raise Dimmer 2 by 15%		Preset
20	Lower Dimmer 2 by 15%		Preset
21	Raise Dimmer 3 by 15%		Preset
22	Lower Dimmer 3 by 15%		Preset

Programmable Scene Buttons			
Button Address	Default Behavior 1st Press	Default Behavior 2nd Press	Control Type
4	Turns ON Load 1 if OFF All dimmers to 20%		Programmable Scene
12	"Load 1, 2, 3, ON Dimmer 1=100%, dimmer 2=80%, dimmer 3=80% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay OFF (RC3DE only) "		Programmable Scene
13	"Load 1, 2, 3, ON Dimmer 1=80%, dimmer 2=20%, dimmer 3=100% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay OFF (RC3DE only) "		Programmable Scene
14	"Load 1, 2, 3, ON Dimmer 1=50%, dimmer 2=100%, dimmer 3=50% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay OFF (RC3DE only) "		Programmable Scene
15	"Load 1, 2, 3, ON Dimmer 1=30%, dimmer 2=0%, dimmer 3=25% Receptacle Switchpack ON Alternate Voltage Switchpack ON Solatube Open (RC3DE only) Emergency Relay OFF (RC3DE only) "		Programmable Scene



Powering Business Worldwide

SUBMITTAL PACKAGE

Warranty Information

Terms and Conditions

1. Applicable Terms and Conditions

(a) These terms and conditions of sale establish the rights, obligations, and remedies of Buyer and Seller that apply to any order issued by Buyer for the purchase of Seller's products and/or services ("Products"). No additional or different terms or conditions, whether contained in Buyer's purchase order form or in any other document or communication pertaining to Buyer's order, will be binding on Seller unless accepted in writing by an authorized representative of Seller. Seller expressly objects to and rejects any additional or different terms and conditions, which shall be ineffective.

(b) If Seller's order acknowledgement, invoice, other document, or electronic transmittal including or attaching these terms and conditions is found to be an acceptance of an offer, acceptance is expressly made conditional upon Buyer's assent solely to these terms and conditions, and acceptance of any part of Products delivered by Seller shall be deemed to constitute such assent by Buyer. If the order acknowledgement, invoice, other document, or electronic transmittal including or attaching these terms and conditions constitutes an offer, Buyer's acceptance of the offer is hereby limited to the terms of the offer.

2. Price, Payment Terms, and Title

(a) All prices represent those in effect at the time of quotation and are subject to change without notice. Unless prices are bid or quoted as "firm," Seller reserves the right to invoice at prices in effect at the date of shipment, regardless of any prior bid and whether notice was received by Buyer. Prices are stated in United States dollars unless otherwise indicated, are exclusive of shipping, handling, shipping insurance, duties, and sales, use, excise or similar taxes. Export packaging or any other special handling requested by Buyer will be at Buyer's expense. A service charge of \$25 will be assessed for any order less than \$100.

(b) Buyer acknowledges that the pricing of the Products has been set based on the agreed allocation of risks contained in these terms and conditions. If, notwithstanding the provisions of these terms and conditions, a court of competent jurisdiction determines that Buyer's terms and conditions apply to an order, then Seller shall have the right to either (i) modify the prices (including retroactively) according to the additional level of risk and responsibility that Buyer's terms and conditions require Seller to undertake; or (ii) cancel the order any time after such a determination without liability for the termination other than for the Products already delivered on these terms and conditions.

(c) Unless different credit terms have been extended to Buyer in writing by Seller, payment terms are net 30 days after delivery or date of invoice, whichever first occurs, in the currency invoiced. Seller reserves the right to modify or withdraw credit terms at any time without notice. If Buyer fails to fulfill the terms of payment, Seller may defer further shipments to Buyer or, at its option, cancel the unshipped portions of Buyer's orders. Buyer agrees to pay interest on all past due invoices at the lesser of 18% per annum, compounded monthly, or the highest contractual rate allowable under the law.

(d) Until full payment of all obligations of the Buyer for an order, Seller reserves the title (but not the risk of loss) to all Products furnished under that order. If the Buyer defaults in payment or performance or becomes subject to insolvency, receivership or bankruptcy proceedings or makes an assignment for the benefit of creditors, or without the consent of Seller voluntarily or involuntarily sells, transfers, leases or permits any lien or attachment on the Products, Seller may treat all amounts then or thereafter owing by Buyer to be immediately due and payable and Seller at its election may repossess Products for which Buyer has not paid in full. In the event of repossession of Products under this section, Buyer agrees that Seller may enter the premises where the Products may be located and remove them without notice and without being liable to Buyer for such repossession. Buyer will not set off invoiced amounts or any portion thereof against sums that are due or may become due from Seller, its parents, affiliates, or subsidiaries. Buyer grants Seller a security interest in all Products for which title has passed (including all after-acquired Products) that Seller sells Buyer and all proceeds of Products (including but not limited to all products in which Products are incorporated and any funds and products that Buyer receives in exchange for Products). Buyer consents to Seller's execution of any documents to evidence and perfect this security interest, and agrees to execute the same if requested by Seller.

3. Delivery and Risk of Loss

(a) Unless otherwise agreed in writing, all deliveries of Products will be EXW (Incoterms 2000) Seller's facility. Products will be packed in Seller's standard commercial shipping packages. Charges for shipping may not reflect net transportation costs paid by Seller. Buyer shall reimburse Seller for all costs of storage and handling incurred by Seller after the date that Seller is prepared to make shipment.

(b) Delivery and shipping dates are approximate and represent Seller's best estimate of the time required to make delivery or shipment. Time is not of the essence with respect to the transactions covered by these terms and conditions, except with respect to Buyer's obligation to make all related payments. Seller's obligations under these terms and conditions will be dependent upon Seller's ability to obtain necessary raw materials and components. Seller shall have the right to make partial deliveries and to ship up to forty (40) days in advance of shipping date.

4. Acceptance

Acceptance shall occur, if not before, when Buyer fails to reject within ten (10) days after delivery of the Products. Buyer may rightfully reject only when a reasonable inspection shows that the Products fail to conform substantially to the specifications for the Products. Buyer waives any right to revoke acceptance. Buyer's remedies for any nonconformity detected after acceptance are limited to those expressly provided in these terms and conditions for breach of warranty.

5. Limited Warranty

(a) Seller warrants to each original Buyer of Products that Products are, at the time of delivery to the Buyer, in good working order and conform to Seller's official published specifications, provided that no warranty is made with respect to any Products, ballasts, lamps, component parts, or accessories manufactured by others but supplied by Seller.

(b) Seller's obligation under this warranty for any Product proved not to be as warranted within the applicable warranty period is limited to, at its option, replacing the Product, refunding the purchase price of the Product, or using reasonable efforts to repair the Product during normal business hours at any authorized service facility of Seller. All costs of transportation of any Product claimed not to be as warranted and of any repaired or replacement Product to or from such service facility shall be borne by Buyer.

(c) Seller may require the return of any Product claimed not to be as warranted to one of its facilities as designated by Seller, transportation prepaid by Buyer,

to establish a claim under this warranty. The cost of labor for removing a Product and for installing a repaired or replacement Product shall be borne by Buyer. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period of the Products in which they are installed to the same extent as if such parts were original components. Warranty services provided under these terms and conditions do not assure uninterrupted operations of Products; Seller shall not be liable for damages caused by any delays involving warranty service.

(d) The warranty period for Products is Five (5) years for all occupancy sensors, iLumin, Room Controllers, Lumawatt Pro, DLVP, WaveLinx and dimming ballasts ten (10) years for all relay cards and three (3) years for all other Greengate, Fifth Light and Zero 88 manufactured products unless otherwise stated.

(e) EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, SELLER PROVIDES PRODUCTS AS-IS AND MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PARTICULAR PURPOSE, THEIR MERCHANTABILITY, THEIR QUALITY, THEIR NON-INFRINGEMENT, OR OTHERWISE. IN NO EVENT SHALL SELLER BE LIABLE FOR THE COST OF PROCUREMENT OR INSTALLATION OF SUBSTITUTE GOODS.

6. LIMITATION OF LIABILITY

IN NO EVENT WILL SELLER BE LIABLE FOR ANY SPECIAL DAMAGES, CONSEQUENTIAL DAMAGES, INDIRECT DAMAGES, INCIDENTAL DAMAGES, STATUTORY DAMAGES, EXEMPLARY OR PUNITIVE DAMAGES, LOSS OF PROFITS, LOSS OF REVENUE, LIQUIDATED DAMAGES, OR LOSS OF USE, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. SELLER'S LIABILITY FOR DAMAGES ARISING OUT OF OR RELATED TO A PRODUCT SHALL IN NO CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT FROM WHICH THE CLAIM ARISES. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THESE LIMITATIONS AND EXCLUSIONS WILL APPLY WHETHER SELLER'S LIABILITY ARISES OR RESULTS FROM BREACH OF CONTRACT, BREACH OF WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE, GROSS NEGLIGENCE, MALICE, OR INTENTIONAL CONDUCT), STRICT LIABILITY, BY OPERATION OF LAW, OR OTHERWISE.

7. Cancellation and Return of Products

Orders shall not be subject to cancellation or modification either in whole or in part without Seller's written consent and then only with terms that will reimburse Seller for all applicable costs incurred by virtue of the sale, including costs of purchased materials, engineering costs and a reasonable allowance for profit. Seller's written consent must be given in advance of Buyer's return of Products for credit. Seller reserves the right to cancel any sale of Products without liability to Buyer (except for refund of monies already paid), if the manufacture or sale of the goods is or becomes technically or economically impractical.

8. Force Majeure

Seller shall not be liable for any failure to perform or delay in performing its obligations resulting directly or indirectly from or contributed to by any acts of God, acts of Buyer or those under Buyer's control, acts of government or other civil or military authorities, priorities, strikes, or other labor disputes, fires, accidents, floods, epidemics, war, riot, embargoes, delays in transportation, lack of or inability to obtain raw materials, components, labor, fuel or supplies, or other circumstances beyond Seller's reasonable control ("Force Majeure Event"). If Seller elects, the time for performance shall be extended by a period of time equal to the time lost because of any delays caused by reasons of a Force Majeure Event. Should Seller be prevented from completing Buyer's order or any part thereof because of any Force Majeure Event, then Buyer agrees promptly upon request and upon receipt of invoice therefore, to pay Seller for any Product or Products then completed.

9. Work Product

"Work Product" shall include, without limitation, all designs, discoveries, creations, works, devices, masks, models, work in progress, service deliverables, inventions, products, special tooling, computer programs, procedures, improvements, developments, drawings, notes, documents, business processes, information and materials made, conceived or developed by Seller alone or with others that result from or relate to the Products. All Work Product shall at all times be and remain the sole and exclusive property of Seller. Buyer hereby agrees to irrevocably assign and transfer to Seller and does hereby assign and transfer to Seller all of its worldwide right, title and interest in and to the Work Product including all associated intellectual property rights. Buyer hereby waives any and all moral and other rights in any Work Product or any other intellectual property created, developed or acquired in respect of the Products. Seller will have the sole right to determine the treatment of any Work Product, including the right to keep it as trade secret, execute and file patent applications on it, to use and disclose it without prior patent application, to file registrations for copyright or trademark in its own name or to follow any other procedure that Seller deems appropriate. All tools and equipment supplied by Buyer to Seller shall remain the sole property of Seller.

10. Confidentiality

(a) Buyer may acquire knowledge of Seller Confidential Information (as defined below) in connection with Products and/or its performance hereunder and agrees to keep Seller Confidential Information in confidence during and following termination or expiration of this Agreement. "Seller Confidential Information" includes but is not limited to all information, whether written or oral, in any form, including, without limitation, information relating to the research, development, products, methods of manufacture, trade secrets, business plans, customers, vendors, finances, personnel data, Work Product, and other material or information considered proprietary by Seller relating to the current or anticipated business or affairs of Seller that is disclosed directly or indirectly to Buyer. In addition, Seller Confidential Information means any third party's proprietary or confidential information disclosed to Buyer in the course of providing Products to Buyer.

(b) Buyer agrees not to copy, alter or directly or indirectly disclose any Seller Confidential Information. Additionally, Buyer agrees to limit its internal distribution of Seller Confidential Information to Buyer's employees who have a need to know, and to take steps to ensure that the dissemination is so limited. In no event will Buyer use less than the degree of care and means that it uses to protect its own information of like kind, but in any event not less than reasonable care to prevent the unauthorized use of Seller Confidential Information. Buyer may disclose Seller Confidential Information that is required to be disclosed pursuant to a requirement of a government agency or law but only after Buyer provides prompt notice to Seller of such requirement and gives Seller the opportunity to challenge or limit the scope of the disclosure.

(c) Buyer further agrees not to use Seller Confidential Information except in the course of performing hereunder and will not use such Seller Confidential Information for its own benefit or for the benefit of any third party. All Seller Confidential Information is and shall remain the property of Seller. Upon Seller's written request, Buyer shall return, transfer or assign to Seller all Seller Confidential Information, including all Work Product, and all copies containing Seller Confidential Information.

11. Patent Indemnity

In the event any Product is made in accordance with drawings, samples or manufacturing specifications designated by Buyer, Buyer agrees to indemnify, defend and hold Seller harmless from any and all damages, costs and expenses (including attorney's fees) relating to any claim arising from or relating to the design, distribution, manufacture, marketing, sale, or use of the Product or arising from or relating to a claim that such Product furnished to Buyer by Seller, or the use thereof, infringes any claim of any patent, foreign or domestic, and Buyer agrees at its own expense to undertake the defense of any suit against Seller brought upon such claim or claims.

12. Changes in Product Design or Manufacture

Seller shall have the right to change, discontinue or modify the design and construction of any of its products and to substitute material equal to or superior to that originally specified.

13. Software License

Software, if included with a Product, is hereby licensed and not sold. The license is nonexclusive, and is limited to use with the Product with which it is included. No other use is permitted and Seller retains for itself (or, if applicable, its suppliers) all title and ownership to any software delivered hereunder, all of which contains confidential and proprietary information and which ownership includes without limitation all rights in patents, copyrights, trademarks and trade secrets. Buyer shall not attempt any sale, transfer, sublicense, reverse compilation or disassembly (save to the extent expressly permitted by law) or redistribution of the software. Buyer shall not copy, disclose or display any such software, or otherwise make it available to others.

14. Compliance with Laws

Buyer shall comply with all laws and regulations applicable to Products, including but not limited to all applicable import and export laws and regulations. Buyer and Buyer's Agent shall provide all information requested by Seller relating to Seller's voluntary or mandatory compliance with any law or regulation, and Buyer shall indemnify Seller for any losses incurred by Seller arising from Buyer's or Buyer's Agent's failure to provide the information requested by Seller.

15. Waiver

No waiver of any provision of these terms and conditions (or any right or default hereunder) shall be effective unless in writing and signed by an authorized representative Seller. Any such waiver shall be effective only for the instance given, and shall not operate as a waiver with respect to any other rights or obligations under these terms and conditions or applicable law in connection with any other instances or circumstances.

16. Language

The parties have expressly required that these terms and conditions be prepared in the English language. Les parties aux présentes ont expressément exigé que les présents termes et les bons de commandes émis aux termes des présentes soient rédigés en langue Anglaise.

17. Choice of Law and Dispute Resolution

Except as set forth below, these terms and conditions shall be governed by and construed in accordance with the laws of the State of Texas, without reference to its choice of law rules. If both Seller and Buyer are incorporated under the laws of Canada or a province of Canada, these terms and conditions shall be governed by and construed in accordance with the laws of the Province of Ontario and the federal laws of Canada. If Buyer is incorporated in the United States, any claim or litigation arising out of or relating to Products shall be brought exclusively in a court of competent jurisdiction in Harris County, Texas. If Buyer is incorporated outside of the United States, any dispute will be resolved by arbitration in Houston, Texas, by three arbitrators and under the International Chamber of Commerce Rules of Arbitration. The language of the arbitration will be English. In all cases, Buyer and Seller expressly exclude from application the United Nations Convention on Contracts for the International Sale of Goods.

18. Assignment

Buyer may not assign, transfer or subcontract the performance of its services, or any of its rights and/or obligations hereunder, without Seller's prior written consent.

19. Severability

If any provision of these terms and conditions is determined to be illegal, invalid, or unenforceable, the validity and enforceability of the remaining provisions of these terms and conditions will not be affected and, in lieu of such illegal, invalid, or unenforceable provision, there will be added, as part of these terms and conditions, one or more provisions as similar in terms as may be legal, valid and enforceable under applicable law.



Powering Business Worldwide

SUBMITTAL PACKAGE

Commissioning Information & Startup

Eaton lighting services

Pre-Startup Checklist - Greengate

Please complete the items below and email to Eaton's Lighting Services team - LCServices@Eaton.com.

The pre-startup checklist must be transmitted with the panel schedules and startup request form in order to schedule a startup date. By providing a general overview of site preparedness in preparation for the field visit the risk of additional charges due to site readiness issues will be minimized. Should the site not be ready at time of commissioning, paperwork be inaccurate or incomplete or wiring incomplete additional charges for service beyond contract price will be the responsibility of the requesting party per the Lighting Services quote policy.

Greengate Controllers

- Network cable (Belden 9841 or equivalent) connected to the network terminal + and - on all controllers.
 - Shield should not be connected at any point to earth ground. Please leave this shield floating.
- All loads landed and circuits identified for programming.
- All contact closures to panel wired with 18/3 conductor.
- All contact closures identified.
- All GDS switches are wired back to GDSI module in panel with Belden 1502, and GDSI module is powered with 24VDC from panel.
 - If not, please complete panel schedule worksheets and send with this form to prevent any delays in the processing of the startup scheduling. Worksheet can be found [here](#).
- All analog inputs wired.
- Analog locations identified for each wire set.
- Controller logic board powered and status light blinking. (If status light is not blinking please contact tech support at 1-800-553-3879 or Controltechsupport@Eaton.com)
- Programming decisions finalized for each controller (lighting zones) and wall switch override control.
- Panel schedules form completed and sent to Eaton Lighting Control team with this completed form and startup request form. Includes GDSI inputs, contact closures, relays, and analog inputs.
 - If not, please complete panel schedule worksheets and send with this form to prevent any delays in the processing of the startup scheduling. Worksheet can be found [here](#).

BMS PRO

- BMS Pro mounted on wall in a location convenient for connection to the BMS system and Eaton's Control system per the provided installation instructions.
- BMS Pro has 24VDC supplied to it (power supply not included, see [instructions](#) for installation detail).
- BMS Pro worksheets have been completed and sent to Eaton's Lighting Services team.
 - If not, please complete BMS Pro worksheets and send with this form to prevent any delays in the processing of the startup scheduling. Worksheet can be found [here](#).
- EIM installed near a panel or 120VAC outlet.
- All wiring connections are terminated from BMS Pro and EIM (see [instructions](#) for additional detail).
 - Communication will be verified when Eaton is onsite, however BMS integrator is recommended to be onsite during start-up for third party testing.



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Computer and Ethernet Interface Module (EIM)

- PC is on site and operational.
 - Computer must be set up for ADMINISTRATOR privileges to install the software.
- PC has connection to the lighting control system.
 - Connection can be either directly through COM port connection to the nearest lighting panel or through an EIM.
- EIM worksheets have been completed.
 - If not, please send EIM information with this form to prevent any delays in the processing of the startup scheduling. Worksheet can be found [here](#).

Please email the completed form to Eaton's Lighting Services team at to LCServices@Eaton.com, a confirmation will be sent within 1-2 business days of receipt of forms.



Powering Business Worldwide

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1121 Highway 74 South
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Eaton lighting services

Start-up request form

Please complete the items below and email to Eaton's Lighting Services team - LCServices@Eaton.com.

The pre-startup checklist must be transmitted with the panel schedules and startup request form in order to schedule a startup date. By providing a general overview of site preparedness in preparation for the field visit the risk of additional charges due to site readiness issues will be minimized. Should the site not be ready at time of commissioning, paperwork be inaccurate or incomplete or wiring incomplete additional charges for service beyond contract price will be the responsibility of the requesting party per the Lighting Services quote policy.

FACTORY START-UP REQUIREMENTS

Start-up appears as a line item on the Bill of Material. If noted below the lighting control system for this project will be completely field-tested by a factory-based service person within the time as allotted.

Factory Start-up requires that this form and the documents per the table below are completed and transmitted to Eaton's Lighting Services team. The requested date of commissioning is contingent upon confirmation from Eaton's Lighting Services team and pending technician availability.

Please ensure that a representative from the electrical contractor will be available during commissioning hours. Failure to do so may result in additional trips and additional charges per the Eaton Lighting services rates.

Eaton's Lighting Services requires that a minimum of 15 business days' notice be provided.

	Pre Start-up Checklist Complete	Panel Schedule Completed	Switch Worksheets Completed
iLumen	[]	[]	[]
Greengate	[]	[]	[]

Requested Commissioning Date: _____ (Requested date subject to confirmation of technician availability)

If training is included on the project please ensure one of the following is available during the commissioning.

- Lighting Designer, architect or other personnel will be available for scene level direction.
- Site personnel will be available for training on the above requested date.
- Integrator is available to test integration of components if an SI-2 system integrator has been purchased. Please provide integrator information: _____

PO # associated with this order: _____

Eaton Sales Contact Information

Name:



Powering Business Worldwide

Agent Contact Information

Agent:	
Agent Contact:	
Agent Phone #:	

Site Information

Job Name:	
Job Address:	
City/State/Zip:	
Job PO Number:	

Contractor Contact Information

Contact Name:	
Company Name:	
Phone Number:	
E-mail Address:	
Site Contact Name:	
Site Contact Phone Number:	
Site Contact E-mail Address:	

Please email the completed form to Eaton's Lighting Control team at to LCServices@Eaton.com, a confirmation will be sent within 1-2 business days of receipt of forms.



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Eaton lighting services

Startup and cancellation policy

Startup policy

This job has been quoted with the understanding that the onsite work will be performed on straight time during normal business hours (weekdays, 7:00AM – 4:00PM). Should the job require a start outside of normal business hours a premium will be required per overtime rates for Eaton Services. Eaton reserves the right to charge a premium in addition to our standard startup rate if outside of the hours of 7:00AM - 4:00PM Monday through Friday, or if the visit is scheduled on an Eaton Corporate Holiday.

OVERTIME SITE VISITS: To facilitate job schedules that may require start times outside of 7:00AM-4:00PM Monday-Friday an overtime rate will apply. When scheduling on-site work outside of this window an overtime rate will apply for each day (up to 10 hours) of work.

Cancellation and late notice policy

Eaton understands that job schedule changes can and will occur and will strive to accommodate changes in our customer's schedule. However Eaton incurs additional travel related expenses whenever a project commissioning is canceled at the last minute. As such a revised or additional P.O. will be required for a late cancellation or late notice for scheduling of a job.

CANCELLATION POLICY: For scheduled and confirmed service projects, Eaton will require 5 business days advance notice for cancellation of startup visits. If cancellation notice is received less than 5 business days from the scheduled onsite date, Eaton will require a revised or new P.O. to complete the commissioning at a later date. Once the cancellation request is received by the Eaton team a confirmation email will be sent to the requestor with a re-schedule form for completion.

NOTE: Startup cannot be re-scheduled until a revised or new P.O. is received by Eaton.

LATE SCHEDULE NOTICE POLICY: Eaton understands that some jobs may require an expedited start-up timeframe. For startup on projects that require start-up with notice less than the standard 15 business day lead time, the customer can elect for a fast track fee to meet their project timeline requirements. This is strictly subject to availability and may not be possible based on current service demand, however Eaton will make every effort to accommodate these requests. Should both parties agree that the timeframe can be met, an expedite scheduling fee will be required prior to scheduling the on-site start-up.

For any quotes for an overtime onsite visit, cancellation rate, or late schedule notice please contact Eaton at LCServices@Eaton.com or call 1-800-553-3879 for additional information.



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