

SECTION 16510

INTERIOR LUMINARIES

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Interior Luminaries and Accessories.
- B. Emergency Lighting Units.
- C. Exit Signs.
- D. Ballasts.
- E. Fluorescent Lamp Emergency Power Supply.
- F. Lamps.
- G. Well Lights.

1.2 RELATED SECTIONS

- A. Section 16130 - Boxes.

1.3 REFERENCES

- A. ANSI C78.379 - Electric Lamps - Incandescent and High-Intensity Discharge Reflector Lamps - Classification of Beam Patterns.
- B. ANSI C82.1 - Ballasts for Fluorescent Lamps - Specifications.
- C. ANSI C82.4 - Ballasts for High-Intensity Discharge and Low Pressure Sodium Lamps (Multiple Supply Type).
- D. ANSI/NFPA 70 - National Electrical Code.
- E. ANSI/NFPA 101 - Life Safety Code.
- F. NEMA WD 6 - Wiring Devices - Dimensional Requirements.

1.4 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700 – Contract Closeout.
- B. Accurately record actual locations of each luminaire.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit under provisions of Section 01700 – Contract Closeout.
- B. Maintenance Data: Include replacement parts list.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years experience.

1.7 EXTRA MATERIALS

- A. Furnish under provisions of Section 01700 – Contract Closeout.
- B. Provide two of each plastic lens.
- C. Provide 10 percent replacement lamps (minimum of 2 each) for each lamp type installed.
- D. Provide two of each ballast type, including emergency ballast.

2. PART 2 PRODUCTS

2.1 LUMINARIES

- A. Manufacturer: Metalux UT2 248DR 120EB22 EL4WL.
- B. Substitutions: Under provisions of Section 01600 – Materials and Equipment.
- C. Install ballasts, lamps, and specified accessories at factory.

2.2 EXIT SIGNS

- A. Manufacturer: Sure-lite.
- B. Description: Exit sign fixture.
- C. Face: Red letters on brushed aluminum background.
- D. Directional Arrows: Universal type for field adjustment.
- E. Mounting: Universal, for field selection.
- F. Battery: 1.5 hour minimum capacity.
- G. Battery Charger: Dual-rate type, with sufficient capacity to recharge discharged battery to full charge within 12 hours.
- H. Lamps: LED.
- I. Input Voltage: 120 volts.

2.3 BALLASTS

- A. Fluorescent Ballast:
 - 1. Description: ANSI C82.1, high power factor type electronic ballast designed for T8 type lamp.
 - 2. Provide ballast suitable for lamps specified.
 - 3. Voltage: 120 volts.
 - 4. Source Quality Control: Certify ballast design and construction by Certified Ballast Manufacturers, Inc.

- 2.4 FLUORESCENT LAMP EMERGENCY POWER SUPPLY
 - A. All fluorescent fixtures will be EL4 (emergency lighting self-contained) type.
- 2.5 LAMPS
 - A. Provide lamp type specified for luminaire. All lamps shall be T8 type.
 - B. Reflector Lamp Beam Patterns: ANSI C78.379.
- 2.6 WELL LIGHTS
 - A. Well lights shall be mounted below floor of structure to illuminate the well of the structure for maintenance procedures and inspections.
 - B. Lights and adjoining conduit shall be waterproof.
 - C. Lamps shall be quartz or incandescent.
- 3. PART 3 EXECUTION
 - 3.1 EXAMINATION
 - A. Examine substrate and supporting grids for luminaries.
 - B. Examine each luminaire to determine suitability for lamps specified.
 - 3.2 INSTALLATION
 - A. Install in accordance with manufacturer's instructions.
 - B. Locate recessed ceiling luminaries as indicated on plans.
 - C. Install surface mounted luminaries and exit signs plumb and adjust to align with building lines and with each other. Secure to prohibit movement.
 - D. Install recessed luminaries to permit removal from below.
 - E. Install recessed luminaries using accessories and firestopping materials to meet regulatory requirements for fire rating.
 - F. Install clips to secure recessed grid-supported luminaries in place.
 - G. Install wall mounted luminaries and exit signs at height as indicated on plans.
 - H. Install accessories furnished with each luminaire.
 - I. Connect luminaries and exit signs to branch circuit outlets provided under Section 16130 – Boxes, as indicated.
 - J. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.

- K. Bond products and metal accessories to branch circuit equipment grounding conductor.
- L. Install specified lamps in each luminaire, emergency lighting unit and exit sign.

3.3 FIELD QUALITY CONTROL

- A. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

3.4 ADJUSTING

- A. Adjust Work under provisions of Section 01700 – Contract Closeout.
- B. Aim and adjust luminaries as directed.
- C. Adjust exit sign directional arrows as needed.
- D. Relamp luminaries that have failed lamps at Substantial Completion.

3.5 CLEANING

- A. Clean Work under provisions of Section 01700 – Contract Closeout.
- B. Clean electrical parts to remove conductive and deleterious materials.
- C. Remove dirt and debris from enclosure.
- D. Clean photometric control surfaces as recommended by manufacturer.
- E. Clean finishes and touch up damage.

3.6 DEMONSTRATION

- A. Provide demonstration of luminaire operation.

END OF SECTION