

LIGHTING

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 26 05 01 Common Work Results - Electrical.
- .2 Section 26 99 99 – Commissioning.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI):
 - .1 ANSI C82.1-04, Lamp Ballasts-Line Frequency Fluorescent Lamp Ballast.
- .2 American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE):
 - .1 ANSI/IEEE C62.41-1991, Recommended Practice for Surge Voltages in Low-Voltage AC Power Circuits.
- .3 ASTM International Inc.:
 - .1 ASTM F1137-00(2006), Standard Specification for Phosphate/Oil and Phosphate/Organic Corrosion Protective Coatings for Fasteners.
- .4 Canadian Standards Association (CSA International).
- .5 ICES-005-07, Radio Frequency Lighting Devices.
- .6 Underwriters' Laboratories of Canada (ULC).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 26 05 01 Common Work Results - Electrical.
- .2 Product Data:
 - .1 For all luminaries, provide manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Provide complete photometric data prepared by independent testing laboratory for luminaires where specified, for review by Departmental Representative.
- .3 Quality assurance submittals: provide following in accordance with Section 01 45 00 - Quality Control.
 - .1 Manufacturer's instructions: provide manufacturer's written installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.

LIGHTING

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.
- .2 Packaging Waste Management: remove for reuse pallets, crates, padding and packaging materials in accordance with Section 01 74 21 – Construction Demolition Waste Management.
- .3 Divert unused metal materials from landfill to metal recycling facility.

Part 2 Products

2.1 LED

- .1 Refer to Luminaire Schedules on the drawing.
- .2 LED's shall be CEE listed.
- .3 The lamp colour and CRI index as indicated on the drawings.

2.2 LED FIXTURE DRIVER

- .1 Integral to the fixture and from the same manufacturer.
- .2 Refer to Luminaire Schedule on the drawing.

2.3 FINISHES

- .1 Light fixture finish and construction to meet ULC listings and CSA certifications related to intended installation.

2.4 OPTICAL CONTROL DEVICES

- .1 As indicated in luminaire schedule.

2.5 LUMINAIRES

- .1 As indicated in luminaire schedule.

Part 3 Execution

3.1 INSTALLATION

- .1 Locate and install luminaires as indicated.
- .2 The Contractor shall hang all the light fixtures under this Contract in such a manner that their attachment to the ceiling shall be secure in all respects. Where there is any danger that the weight of the fixtures might distort hung ceilings (where such occur), approved type independent

LIGHTING

supports shall be provided by the Contractor to the satisfaction of the Departmental Representative.

- .3 Fixtures shall not be hung directly from plasterboard ceilings, but shall derive their support from channels independently mounted in the ceiling space.
- .4 Any supporting angles, channels, etc., required to adequately secure and support the fixtures shall be provided and installed by the Contractor.
- .5 All LED's shall be new and burning at the time of takeover. All fixtures shall be clean and in like new condition, at the time of takeover.

3.2 WIRING

- .1 Connect luminaires to lighting circuits:
 - .1 Install flexible or rigid conduit for luminaires as indicated.

3.3 LUMINAIRE ALIGNMENT

- .1 Align luminaires mounted in continuous rows to form straight uninterrupted line.
- .2 Align luminaires mounted individually parallel or perpendicular to building grid lines.

3.4 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 – Construction Demolition Waste Management.

END OF SECTION