

## 26 50 00 Lighting

Revision 01/04/2019

### **Purpose:**

The Architect and/or Engineer shall incorporate the Rice specific requirements indicated in this standard's section into their design. The Architect and/or Engineer shall further produce project specifications in line with industry standards that are updated to reflect these Rice specific requirements.

### **1. General Requirements**

- a. Rice University promotes a *Dark Skies Initiative*; new construction and renovations are to minimize up shine.
- b. LED light fixtures are the general basis of design.
- c. LED fixtures to have a minimum L70 rating of 50,000 hours.
- d. Ballasts/Drivers shall be electronic type with maximum THD of <10% and a sound class A or better.

### **2. Exterior Lighting:**

- a. Photometrics shall be calculated using software to ensure lighting levels meet the design parameters for intensity, uniformity, and light trespass. These calculations shall be submitted with the 100% Design Development review documents.
- b. In ground mounted building façade lighting and tree mounted lighting is not permitted.
- c. Control of exterior lighting to be based on a photocell sending a signal to a controller with "ON/OFF/AUTO" control at the controller (Maintenance, Override off, Automatic photocell operation). Photocell control at individual lighting fixtures will not be allowed.
- d. Where exterior lighting is being designed (parking lot lighting, street lighting, walkway lighting) provide a stub-out from the appropriate pole bases for future extension and provide spare capacity in circuitry for similar additional future lighting fixtures. Discuss appropriate pole bases for stub-outs with Rice Project Manager.
- e. When existing street lights are removed, turn fixtures and poles over to the University at a location directed by the Rice Project Manager.
- f. Walkway and Street Lights:
  - i. Pole spacing shall be similar to adjoining areas and shall be coordinated with the landscape to minimize tree interference.
  - ii. Standard fixture is Lithonia DSX0
  - iii. The desire is to minimize the variety of configurations, however alternate light output, light distribution, and control features may be considered on a per project basis as approved by the Rice Project Manager. The standard configuration is as follows:
    1. 20C: 20 LED light engine
    2. 530: 530mA drive current,
    3. 30K: 3000K color temp,

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4. T5M: Type 5 medium light distribution
  5. MVOLT: Multi-volt driver (120-277)
  6. BL50: 50% step dimming using two switch legs
  7. RPA: Round pole mount
  8. DDBXD: Smooth Dark Bronze finish
- iv. Poles shall be 14ft straight 4 ½" round aluminum pole Lithonia RSA 14 4-5C DM19AS FBC. Finish is to match fixture.
  - v. Standard lighting control is Tork LC-200. Or Rice approved equal.

### **3. Interior Lighting:**

- a. Interior lighting fixtures are to be by major lighting fixture manufacturer
- b. Where acrylic lenses are specified, minimum lens thickness to be 0.125.
- c. Lighting color temperature shall be 3500K to 4100K. A single color temperature shall be used for all interior fixtures throughout the project. Coordinate exact color temperature with Architect and Rice Project Manager prior to selection.
- d. If an exception (see deviations in section 01 00 00) to LED is issued for the use of fluorescent fixtures then:
  - i. Fluorescent fixtures shall be designed for T8, T5, or T5HO lamps.
  - ii. Electronic ballasts – no magnetic ballasts. Ballast to come with 5 year warranty.
- e. Exit signs to be Light Emitting Diode (LED) type. Color of LEDs may be red or green. Exit signs shall be on a separate circuit from other loads and shall be powered from the emergency system.
- f. Fixtures used for emergency egress shall be controlled with normal lighting. Egress corridors are permitted to be un-switched if desired for night lighting.