

A26.4 Site Lighting Standards

GENERAL

Designers shall verify that all applicable portions of these standards are incorporated into the project's design, drawings, specifications and final construction. Requests for variances from these standards shall be submitted in writing to the FPD Project Manager, using the KU Standards Variance Request Form found in [Appendix A1.1](#), for review and written approval or rejection as indicated on the form.

OBJECTIVE OF STANDARD

- ☐ To acquaint Designers and others with the University's site lighting standards.
- ☐ To insure consistent design, drawings, specifications and installation of site lighting systems on the main campus.

BACKGROUND

A Campus Lighting Study was conducted in 1985 to establish a plan for phased improvement of exterior lighting on the Lawrence Campus. At that time, metal halide was chosen as the light source (based on color rendering) with 175W lamps on 20 ft. poles (for pedestrian sidewalks) and 400W lamps on 30 ft. poles (for parking lots and roadways).

Two "shoe box" fixtures were standardized for use by the University -- a small housing Moldcast Module III (for 175W), and a large housing Moldcast Module III (for 400W).

In 1999, Moldcast discontinued the Module III housing and the KIM Matrix was chosen as the successor for the campus standard, utilizing one single housing for both 175W and 400W applications.

In 2011, the University evaluated several LED fixtures that would provide more uniform light distribution while reducing life cycle cost and energy use. The McGraw-Edison LED fixtures incorporating Cooper Lighting's LightBAR technology were selected.

These light bar models are no longer a current campus standard. The Current standard exterior light fixture is outlined in this section.

GENERAL

Site lighting systems shall be designed to provide the illumination levels indicated in the chart at the end of this section, using University-standard poles and luminaires.

Pedestrian Walkways/Plazas, Bicycle Paths & Bike Racks: 20' poles with LED luminaires.

Roadways & Parking Lots: 30' poles with LED luminaires.

- ☐ 20' poles at tighter spacings may be used along roadways or in parking areas when required to provide uniform lighting below the mature spread of street trees, such as

along Jayhawk Boulevard; locations to be approved by FPD and University Architect.

Light Pole Bases: Provide cast-in-place concrete light pole bases, per KU's standard details in [Appendix A26.5](#), Light Pole Base Detail. Designers shall include these details in the construction documents for all projects that include site lighting.

- ☐ Note that pole bases are NOT to be less than 30" diameter, nor less than 6' embedded depth for 20' high poles, nor less than 8' embedded depth for 30' high poles.
- ☐ Exceptions will only be allowed if structural engineering calculations are provided to the FPD Project Manager which confirm that lesser dimensions will meet all required wind, snow and ice loading conditions for the applicable soil conditions.

Wall-Mounted Site Lighting: Designers may NOT use "wall packs" or wall-mounted luminaires for general site lighting, as they are a source of glare and uneven lighting.

Lighting Bollards: Designers are discouraged from using lighting bollards, which have proven to be more difficult to maintain.

Non-Standard Lighting Systems: Non-standard luminaires, light fixtures or poles will not be approved in lieu of KU's standard site lighting systems for roads, parking lots, sidewalks and outdoor gathering spaces. If considered, they will only be approved as accent lighting, for aesthetic purposes only, and they must not compromise or alter the uniform lighting and color rendition of those areas by the KU standard lighting systems.

Building Accent Lighting: It is KU policy to not illuminate the exterior of buildings. Any deviations from that standard must be submitted, with appropriate justification for why it may be appropriate on the building in question, to FPD and the University Architect for review and approval.

SPECIFICATIONS

All exterior site lighting fixtures shall use Light Emitting Diodes (LED) as the lighting source, the color temperature shall be 4000K, and the finish on light poles, support arms and luminaires shall be Dark Bronze.

Light Poles: Round tapered aluminum poles with cast aluminum tenons, as manufactured by Valmont Structures, a division of Valmont Industries, Inc.

- ☐ Provide banner arms on light poles where directed by FPD and KU Public Affairs. Each project including them shall provide not less than 10% of the total number of banner arms (not including the mounting brackets) as replacement stock, to be delivered to FS Central Store upon project completion.

LED Luminaires for Parking Lots, Pedestrian Walkways, Bike Paths & Racks:

- ☐ "GLEON" or "Galleon" series incorporating 4 LED light squares and an arm mount, as manufactured by McGraw Edison, a division of Cooper Lighting.

LED Luminaires for Roadways:

- ☐ "GLEON" or "Galleon" series incorporating 5 LED light squares and an arm mount, as manufactured by McGraw Edison, a division of Cooper Lighting.

ILLUMINATION LEVELS

<u>Location</u>	<u>Min. Footcandle Level</u>	<u>Ave. Footcandle Level</u>
Pedestrian Walkways	1.0	--
Bicycle Paths	1.0	--
Bike Racks	1.0	--
Roadways	0.25	1.0 to 1.5
Parking Lots	0.40	1.5 to 2.0
Building Entrances	5.0	1.5 times floodlighting design levels, if the building has floodlighting

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