

265113S01 INTERIOR LIGHTING

GENERAL REQUIREMENTS FOR LIGHTING AND LIGHTING CONTROLS

All new construction and renovation shall comply with 2012 IECC and/or ASHRAE / IES 9.1 – 2010 or with the codes currently adopted by the State of Kentucky

1. INDOOR LIGHTING

*Note: This standard is a design guideline for all new buildings and renovations. LEED certified new building designs and on renovations designed to meet LEED-EB requirements, design exceptions may be taken to this standard if those are required for LEED compliance.

- 1.1. All general area lighting shall be LED. Lamp Kelvin temperature shall be 4100 degrees and Color Rendering Index shall be 85 or higher.
- 1.2. All new and replacement lighted "EXIT" signs shall be UL-924 approved, LED type, 2 watts or less, with green letters. For renovations with existing red letters, match existing.
- 1.3. Computer Labs, Libraries, and similar areas to have indirect lighting to minimize glare and subsequently eye fatigue.

2. LIGHTING BY AREA TYPE

Light levels to be as follows and consistent with IES recommendations:

2.1. General Areas

Type area	Average Foot-candles (Maintained ¹)
Corridors	20
Stairs	20
Offices	50 ^{2,3,4}
Mech. Rooms	50
Computer Labs	100
Libraries	100

NOTES

1. Foot-candle levels calculations must have, associated with them, a spherical coordinate system or polar coordinate system.
2. Provide two (2) levels of illumination when possible in offices. Provide dimmers when required.
3. Occupancy detectors used where required.
4. Foot-candle illumination levels in office areas shall be measured at workstation surface with occupant in place. Task lighting may be used to provide illumination levels at work surface height supplementing overhead lighting system.

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2.2. Classrooms

Type area	Average Foot-candles (Maintained ¹)
Art Rooms	50
Drafting Rooms	50
Home Economics Room, Sewing	50
Home Economics Room, Cooking & Ironing	50
Home Economics Room, Sink Activities, Note Taking Areas	50
Laboratories	100
Lecture Rooms, Audience Area	50
Lecture Rooms, Demonstration Area	50
Music Rooms, Simple Scores	30
Music Rooms, Advanced Scores	50
Recreation Areas	30
Shops	100
Sight Saving Rooms	50
Study Halls	50
Typing	50

2.3. Lighting by Task in Area

School Task:	Average Foot-candles (Maintained ¹)
Reading	50
Spirit Duplicated Material	100
Drafting, Bench work	75
Lip Reading, Chalkboards, Sewing	50

3. INDOOR SPECIALTY LIGHTING

Review with owner in design phase of project and provide as designed.

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4. GENERAL REQUIREMENTS FOR ALL LIGHTING

- 4.1. Standard color temperature for LED lighting design shall be 4100 degree Kelvin. Other color temperatures may be provided if the standard deviation is clearly noted in the design documents and acknowledged by the UK Representative.
- 4.2. All outdoor/exterior LED drivers to have minimum expected life of 100,000 hours at 25 degrees C.
- 4.3. All indoor LED drivers to deliver IES LM-80-08 performance for a minimum expected life of 50,000 hours.
- 4.4. All indoor and outdoor lighting fixtures shall have power factor greater than .9, EMI shall comply with FCC Part 18, Subpart C and design shall specify the fixture lumen efficacy and shall specify the minimum IEC/PAS photometric code xxx.xxx.
- 4.5. All LED luminaires/fixtures shall have transient surge protection per ANSI C62.41.
- 4.6. All lighting lenses shall be of high quality and securely affixed to the fixture.
- 4.7. Unless specified otherwise, lighting is to be industrial quality.
- 4.8. All lighting is to be installed in accordance with UK Standards Division 26.
- 4.9. Do not provide radioactive lighting of any kind on University projects.
- 4.10. Exterior fixture lens to be tempered Glass, no polycarbonate, acrylic or other plastics.
- 4.11. Bollard lighting is not to be used as area, grounds, street, parking, or walkway lighting. Bollard lighting may only be used with written exception by UK representative and then only as accent lighting. Other fixtures in the area must be used and must be mounted a minimum of fourteen feet high and provide light levels as specified in this section, independent of the bollard light contribution.
- 4.12. Low mounted wall floods or step lights will be considered accent lighting only. Other fixtures in the area must be used and must provide light levels as specified in this section above the wall floods or step lights.
- 4.13. No direct buried posts. Lighting shall be set on concrete pier with bolts.
- 4.14. All lighting poles less than 41 feet shall be aluminum.