

Facilities Standards & Guidelines

C.27 Lighting Fixtures

Revision 1

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Section 1 – Summary

- 1.1** The purpose of the BAE Systems lighting fixture standard is to formalize our preferred lighting fixtures and requirements across facilities’ varied spaces and applications. Fixtures not specifically listed can be submitted to facilities engineering for approval if lead time or cost are an issue. This standard is to be followed across BAE Systems facilities on all new projects and retrofits.

Light fixtures and any occupancy, daylight, or timed sensors need to meet local IECC energy requirements which dictates wattage/efficiency limits and required lighting controls. Interior lighting power allowance is generally determined by the space-by-space method using the space most closely related from the table.

1.1.1. Lux, Lumens, and Foot Candles

1.1.1.1 A lighting study should be done prior to work in any redesign space to ensure proper lighting quantities.

1.1.1.1.1 Manufacturing space shall be 100 FC

1.1.1.1.2 Machine shops shall be 100FC

1.1.1.1.3 Cleanroom space shall be 100FC

1.1.1.1.4 High Bay General use or Corridor 70FC

1.1.1.1.5 Open Office, Closed Office and Conference Rooms 50FC

1.1.1.1.6 Corridors not in high bay don’t have a foot candle requirement and Should be designed per IECC.

1.1.2 Temperature and Color Corrected Temperature

1.1.2.1 Match existing temperature when a space is partially being replaced or retrofit.

For typical spaces the color temperature shall be 4000k and a minimum of 80 CRI is used. Specialty spaces and color sensitive spaces should be designed per the space working requirements.

1.1.3 Installation Specifications

1.1.3.1 Voltage

1.1.3.1.1 Preferred lighting voltage is 120V unless otherwise stated.

1.1.3.1.2 277V is acceptable for highbay lighting when used with a lighting control panel.

1.1.3.2 Reloc

1.1.3.1. It is preferred that no new reloc connections be installed.

1.1.3.2. If an existing reloc network is in the space consult BAE for direction

1.1.3.3 SCIFS

1.1.4.1 Make sure lighting fixtures do not include wireless or Bluetooth technology.

1.1.3.4 Emergency Lighting

1.1.5.1 When emergency lighting is required, tie into the hardwired emergency.

Power distribution. If emergency power distribution is unavailable, consult BAE on alternatives.

1.1.3.5 Lighting Controls

1.1.6.1. Occupancy sensors are required per IECC.

1.1.6.2 Lighting control panels can use as dictated by the space and usage.

Consult with BAE on system details and programming.

Section 2 – Lighting Fixtures by Area

2.1 By Area

The fixture listed should be used as a starting point, and alternative manufactures or product lines can be approved and added.

2.1.1 Office

2.1.1.1 For new fixture installations or fixture replacement the following are acceptable:

2.1.1.1.1 Lithonia BLT Series

2.1.1.1.2 Lithonia CPX

2.1.1.2 For spaces using strip lights the following fixtures are acceptable:

2.1.1.2.1 Lithonia CLX Series

2.1.1.2.2 Lithonia CSS Series

2.1.1.3 For retrofits of existing fixtures, they should be evaluated on a project-by-project basis.

Retrofit kits like Lithonia’s BLTR or LBR Series can be used, depending on what existing infrastructure can remain.

2.1.2 Cleanrooms

2.1.2.1 Cleanroom should be designed to 100FC

2.1.2.2 For cleanroom spaces the following fixtures are acceptable:

- 2.1.2.2.1 Lithonia WRTL Series
- 2.1.2.2.2 Lumination LPL Series

2.1.2.3 For cleanrooms with high bay ceiling the following fixtures are acceptable:

- 2.1.2.3.1 Copper Fail-Safe CLM Series

2.1.3 High Bay

2.1.3.1 For high bay spaces the following fixture are acceptable:

- 2.1.3.1.1 Lithonia IGB Series
- 2.1.3.1.2 Albeo ABV4

2.1.3.2 Any additional crane lighting should match the space lighting.

2.1.4 Hallways and Entryways

- 2.1.4.1.1 LBR6 Can Light
- 2.1.4.1.2 BLWP Low Profile strip lights

Supplemental Document Information

The following resource documents should be referenced for execution of the standards and guidelines described above.

Document Number	Document Title

Revision Log

Revision	Release Date	Description of Changes
0	02/06/2024	Initial Release
1	04/18/2024	Revision to BAE standard