

**SECTION A5.106
SITE DEVELOPMENT**

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A5.106.8 Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
2. Backlight, Uplight and Glare (BUG) ratings as defined in IESNA TM-15-11; and
3. Allowable BUG ratings not exceeding those shown in Table A5.106.8, or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions:

1. Luminaires that qualify as exceptions in the California Energy Code
2. Emergency lighting

Note: See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

TABLE A5.106.8
Maximum Allowable Backlight, Uplight and Glare (BUG) Ratings^{1, 5}

| Allowable Rating | Lighting Zone 1 | Lighting Zone 2 | Lighting Zone 3 | Lighting Zone 4 |
|--|--------------------|--------------------|--------------------|--------------------|
| Maximum Allowable Backlight (BUG) Rating² | | | | |
| <u>Luminaire greater than 2 mounting heights (MH) from property line</u> | No Limit | No Limit | No Limit | No Limit |
| <u>Luminaire back hemisphere is 1 – 2 MH from a property line</u> | B2 | B3 | B4 | B4 |
| <u>Luminaire back hemisphere is 0.5 – 1 MH from a property line</u> | B1 | B2 | B3 | B3 |
| <u>Luminaire back hemisphere is less than 0.5 MH from a property line</u> | B0 | B0 | B1 | B2 |
| Maximum Allowable Uplight (BUG) Rating | | | | |
| <u>For area lighting³</u> | U0 | U0 | U0 | U0 |
| <u>For all other outdoor lighting, including decorative luminaires</u> | U1 | U2 | U3 | U4 |
| Maximum Allowable Glare (BUG) Rating⁴ | | | | |
| <u>Luminaire greater than 2 MH from a property line</u> | G1 | G2 | G3 | G4 |
| <u>Luminaire front hemisphere is 1 – 2 MH from a property line</u> | G0 | G1 | G1 | G2 |
| <u>Luminaire front hemisphere is 0.5 – 1 MH from a property line</u> | G0 | G0 | G1 | G1 |
| <u>Luminaire front hemisphere is less than 0.5 MH from a property line</u> | G0 | G0 | G0 | G1 |

¹ For property lines that abut public walkways, bikeways, plazas, and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

² If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.

³ General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U value limits for "all other outdoor lighting".

⁴ If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

⁵ See the CAL Green Code Guideline for illustrative examples.

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