

**CALIFORNIA BUILDING STANDARDS COMMISSION  
2016 INTERVENING CYCLE  
GREEN BUILDING FOCUS GROUP  
WORKSHOP #2  
November 18, 2016 - Agenda Item 4b**

**DRAFT EXPRESS TERMS for the 2016  
CALIFORNIA GREEN BUILDING STANDARDS CODE,  
(CALGreen), PART 11,  
CALIFORNIA BUILDING STANDARDS CODE,  
TITLE 24, CALIFORNIA CODE OF REGULATIONS**

**Proposed code language for the 2016 Intervening Code Adoption Cycle**

**LEGEND FOR DRAFT EXPRESS TERMS**

1. New California amendments: All such language appears underlined.
2. Repealed text: All such language appears in ~~strikeout~~.  
*[Information for the reader is bracketed and in red italics]*

**5.106.8 Light Pollution Reduction**

**Statement of specific purpose, problem, rationale and benefits:**

- Item 1: CBSC is proposing to clarify the language addressing Light Pollution Reduction by referencing the lighting zones tables found in the *California Energy Code* Part 6 (which now include lighting zone 0) and the specific code section found in Part 6.
- Item 2: CBSC is proposing to make changes to the IES requirement by clarifying that the use of the IES standard only applies to Backlight, and not to Uplight and Glare. This amendment is needed since the *California Energy Code* establishes the required values for Uplight and Glare. For ease of the code user, BSC is providing tables for the IES Backlight values in Chapter 8 of this code.
- Item 3: CBSC is proposing to add a new item to reference the *California Energy Code* Backlight and Glare tables which will be added to Chapter 8 of this code.
- Item 4: Existing item is renumbered from 3 to 4 and an [N] was added to the table reference, to match the title for Table 5.106.8 [N].
- TABLE 5.106.8 was amended to include a lighting zone zero column and an acronym LZ (lighting zone) was added to align with the *California Energy Code* tables. Additionally, footnote 1 was amended to repeal lighting zone 5 which does not appear in the *California Energy Code* and/or Chapter 10 of the *California Administrative Code*.
- A note has been added to reference Chapter 8 for the IES and Energy code lighting level ratings tables referenced in this code.

These proposed code amendments will provide clarity and convenience for the code user by clarifying the applicability of the lighting level requirements and by providing the *California Administrative Code* and/or *California Energy Code* lighting level tables in Chapter 8 of the *CALGreen* code.

**SECTION 5.106  
SITE DEVELOPMENT**

...

**5.106.8 Light pollution reduction. [N]** 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 01–4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
  2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11 (shown in TABLE A-1 in chapter 8);
  3. Uplight and Glare ratings as defined in *California Energy Code* (shown in TABLES 130.2-A and 130.2B in chapter 8) and
  4. Allowable BUG ratings not exceeding those shown in Table 5.106.8 [N], or
- Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

**Exceptions: [N]**

1. Luminaires that qualify as exceptions in Section 140.7 of the *California Energy Code*.  
Emergency lighting.
2. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
3. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction

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

**TABLE 5.106.8 [N]  
MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS<sup>1,2</sup>**

ALLOWABLE RATING	LIGHTING ZONE LZ0	LIGHTING ZONE LZ1	LIGHTING ZONE LZ2	LIGHTING ZONE LZ3	LIGHTING ZONE LZ4
	<b>Maximum Allowable Backlight Rating<sup>3</sup> (B)</b>				
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1 – 2 MH from property line	N/A	B2	B3	B4	B4
Luminaire back hemisphere is 0.5 – 1 MH from property line	N/A	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	B0	B1	B2
<b>Maximum Allowable Uplight Rating (U)</b>					
For area lighting <sup>4</sup>	N/A	U0	U0	U0	U0
For all other outdoor lighting, including decorative luminaires	N/A	U1	U2	U3	U4
<b>Maximum Allowable Glare Rating<sup>5</sup> (G)</b>					
Luminaire greater than 2 MH from property line	N/A	G1	G2	G3	G4
Luminaire front hemisphere is 1 – 2 MH from property line	N/A	G0	G1	G1	G2
Luminaire front hemisphere is 0.5 – 1 MH from property line	N/A	G0	G0	G1	G1
Luminaire back-front hemisphere is less than 0.5 MH from property line	N/A	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the

*California Energy Code and Chapter 10 of the California Administrative Code.*

- 2. ...
- 3. ...
- 4. ...
- 5. ...

**Note:** Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, *California Energy Code Tables 130.2-A and 130.2-B.*

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