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Sunoptics is part of Acuity Brands, Inc., North American market leader and one of the world's leading providers of lighting solutions for both indoor and outdoor applications. With a portfolio of 13 indoor lighting and outdoor lighting brands cover every imaginable solution across commercial, institutional, industrial, infrastructure and residential applications. Acuity Brands products fully integrate with each other for one complete lighting solution of daylighting, electric lighting and controls.

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# Daylighting in Codes and Standards

## ▶ A Simple Overview



- 1. ASHRAE 100-2013** (not yet published)
  - a. Daylight harvesting is called out as an energy opportunity in Sections 6.2.1, 7.1.5, and 7.2.5 of informative Annex AA.
- 2. ASHRAE 189.1-2011**
  - a. Automatically controlled shading devices and dynamic glazing are called out as ways to mitigate the permanent project requirements for vertical fenestration in Section 7.4.2.5.
  - b. Controls to automatically turn off sign lighting during daylight hours are called out in Section 7.4.6.5.2.
  - c. A minimum amount of toplighting in certain spaces is called out in Section 8.3.4.
  - d. A minimum amount of sidelighting in certain spaces is called out in Section 8.4.1.
  - e. A minimum amount of daylighting in certain spaces is called out in Section 8.5.1.
  - f. Acceptance testing of daylighting controls is called out in section 10.3.1.1.3(b).
  - g. Credit for daylighting controls is discussed in Table D1.1.
  - h. 189.1 calls out certain Sections from 90.1.
- 3. ASHRAE 90.1-2010**
  - a. Minimum skylight fenestration in certain spaces is called out in Section 5.5.4.2.3.
  - b. Daylight controls are called out in Section 5.5.4.4.2(c) as a way to mitigate the SHGC requirements.
  - c. Controls for daylight transition zone lighting in parking garages is called out in Section 9.4.1.3(c).
  - d. Daylight controls for perimeter lighting in parking garages is called out in Section 9.4.1.3(d).
  - e. Daylight harvesting is called out in sections 9.4.1.4 (sidelighting) and 9.4.1.5 (toplighting).
  - f. Section 9.4.1.7(a) calls for control of exterior lighting when daylight is available.
  - g. Functional testing of photosensor controls is required in Section 9.4.4(c).
  - h. LPD credit is permitted for certain non-mandatory daylight controls in Table 9.6.2.
  - i. Daylighting parameters are discussed in Sections C3.4, C5.4, C6.4, C6.6, and C6.8.1 in normative Appendix C.
  - j. Credit for daylighting controls is discussed in Table G3.1.
- 4. CA Title 20-2012**
  - a. Parametric requirements for automatic daylight controls are called out in Section 1605.3(l)(d).
- 5. CA Title 24-2013**
  - a. Parametric requirements for daylighting controls are called out in Section 110.9(b)2.
  - b. Automatic daylighting controls is given as an option in Section 130.1(b)3D.
  - c. Daylight harvesting is required in Section 130.1(d).
  - d. Section 130.2(c)1 calls for control of exterior lighting when daylight is available.
  - e. Sign lighting and daylight are discussed in Section 130.3(a)2B.
  - f. Certification of automatic daylight controls is discussed in Section 130.4(a)3.
  - g. Minimum skylight fenestration in certain spaces is called out in Section 140.3(c).
  - h. Automatic daylighting controls in secondary daylit zones is called for in Section 140.6(d).
- 6. Green Globes**
  - a. Daylighting is part of getting credits in Sections G.2 & G.3.
- 7. IECC-2012**
  - a. Daylighting controls allow more fenestration in section C402.3.1.
  - b. Minimum skylight fenestration in certain spaces is called out in Section C402.3.2.
  - c. Use of automated daylight controls in Section C4402.3.3.3 allows for a different SHGC.
  - d. Use of automated daylight controls in Section C4402.3.3.4 allows for a different U-factor.
  - e. Daylight spaces may get an exemption from light reduction controls in Section C405.2.1.2.
  - f. Daylight controls are called out in section C405.2.2.3.
  - g. Functional testing of daylighting controls is called for in Section C408.3.1.
- 8. IgCC-2012**
  - a. Daylighting controls are used in Section 605.1.1.1 to mitigate permanent shading requirements.
  - b. Daylight controls are called out in Section 608.5.
  - c. Commissioning of daylight controls is called out in Section 611.3.3.2.
  - d. Daylighting is specified in Section 808.
  - e. Documentation wrt daylighting is called out in Section 904.3-4.4.5.
  - f. IgCC calls out certain Sections from IECC.
- 9. LEED-2009**
  - a. Commissioning of daylight controls is called for in EA p1.
  - b. Daylighting is prescribed in EQc8.