

**CHAPTER 1167
Lighting Regulations**

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1167.01 INTENT.

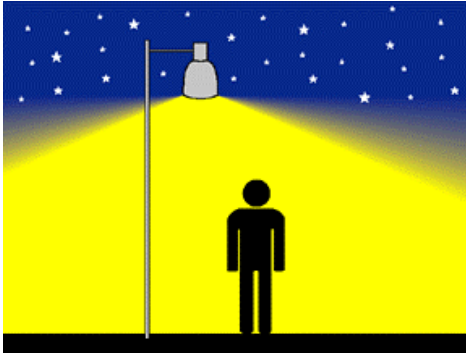
This chapter is intended to control the installation of exterior lighting fixtures to prevent light pollution in the forms of light trespass and glare and to preserve, protect and enhance the character of the City and the lawful nighttime use and enjoyment of property located within the City. Appropriate site lighting, including lights for signs, buildings and streets, shall be arranged so as to provide safety, utility and security; control light trespass and glare on adjacent properties and public roadways.

1167.02 DEFINITIONS.

Terms related to the required exterior lighting standards contained in this Chapter shall have the following meanings:

- (a) Foot-candle. A unit of illumination produced on a surface, all points of which are one (1) foot from a uniform point source of one (1) candle.
 - (1) Foot-candle, Horizontal. The measurement of foot-candles utilizing a direct reading, portable light meter mounted in the horizontal position.
 - (2) Foot-candle, Vertical. The measurement of foot-candles utilizing a direct reading, portable light meter mounted in the vertical position.
- (b) Full-Shielded or Full-Cutoff Type Fixture. An outdoor lighting fixture that is shielded or constructed so that all light emitted is projected below a horizontal plane running through the lowest light-emitting part of the fixture.

Full-Cutoff Fixture

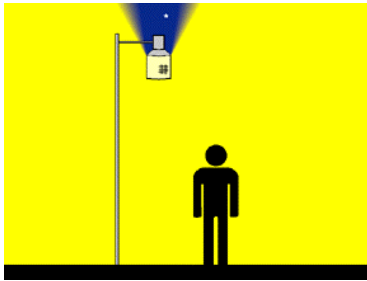


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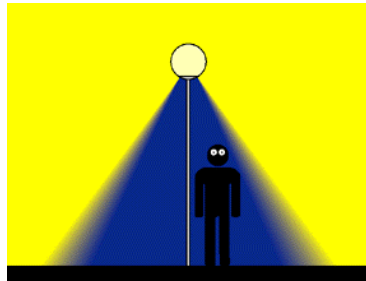
- Full-cutoff lighting directs light down and to the sides as needed.

- (c) Glare. Direct light that causes annoyance, discomfort or loss in visual performance and visibility.
- (d) Illuminance. The quantity of light arriving at a surface divided by the area of that surface, measured in foot-candles.
- (e) Light Pollution. Any measurable exterior artificial illumination that strays beyond a property line both horizontally at grade and vertically to the building height limitation.
- (f) Light Trespass. Light in sufficient quantity that crosses over property boundaries, impacts surfaces, and produces a negative response in persons owning or using the violated space.
- (g) Luminaire. A complete lighting unit consisting of a light source and all necessary mechanical, electrical and decorative parts.
- (h) Recessed Ceiling Fixture. An outdoor lighting fixture recessed into a canopy ceiling so that the bottom of the fixture is flush with the ceiling.
- (i) Light Uniformity Ratios. The uniformity ratio is expressed as either the maximum or average illuminance divided by the minimum illuminance. For example, if the average to minimum ratio is 3:1 and an average illuminance of six (6) foot-candles is desired, the minimum illuminance at any one point must be two (2) foot-candles.
- (j) Uplighting. Any light source that distributes illumination above a ninety (90)-degree horizontal plane.

Uplighting



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- Uplighting wastes energy into the sky.
- Causes glare, light trespass and harsh illumination.

1167.03 EXTERIOR LIGHTING PLAN.

A lighting plan is required for all uses that are required to file a development plan and shall be approved according to the procedures set forth in Chapter 1107. All existing uses on which exterior lighting is installed or changed shall conform to these standards. The lighting plan shall demonstrate compliance with the exterior lighting standards of this chapter, and shall include the following items:

- (a) A site plan showing location of all exterior light fixtures, controllers and transformers.
- (b) Property boundaries, building location(s), parking lot layout, pedestrian paths, adjacent rights-of-way, north arrow and scale.
- (c) Specifications and drawings or photographs for all exterior light fixture types, poles, conduit and appurtenant construction.
- (d) Lamp wattage of all proposed luminaires.
- (e) Information that indicates a minimum light level of one-half (0.5) foot-candles at grade in all vehicular use areas and connecting pedestrian paths.
- (f) Cut sheets for all proposed exterior light fixtures and poles.
- (g) Any other information and data reasonably necessary to evaluate the required lighting plan.

1167.04 GENERAL REQUIREMENTS.

- (a) All outdoor lighting fixtures regulated according to this Chapter, including but not limited to those used for parking areas, buildings, building overhangs, canopies, signs, displays and landscaping, shall be full-cutoff type fixtures, unless exempt per Section 1167.05, Exemptions.

- (1) Full-cutoff fixtures shall be installed and maintained so that the shielding is effective as described in Section 1167.02(b) above.
 - (2) Automobile-oriented uses such as gasoline stations, service stations and drive-through facilities shall install recessed ceiling fixtures in any canopy.
 - (3) Signs that are wholly illuminated from within and freestanding signs that are externally illuminated with an exposed incandescent lamp not exceeding twenty-five (25) watts shall not require shielding.
- (b) All on-site lighting of buildings, lawns, parking areas and signs shall be designed so as not to shine onto any adjacent residential property or building, or to cause glare onto any public street or vehicle thereon.
- (c) Measurement.
- (1) Light levels shall be measured in foot-candles with a direct reading, portable light meter. Readings shall be taken only after the cell has been exposed long enough to take a constant reading.
 - (2) Measurements shall be taken at the property line, along a horizontal plane at a height of three-and-one-half (3.5) feet above the ground.
- (d) For all conditional uses in Single-Family Residential Districts, all non-essential outdoor lighting fixtures, including parking, sign, display and aesthetic lighting, shall be turned off after business hours. Only that lighting needed for safety or security may remain lit after close of business, in which case the lighting shall be reduced to the minimum level necessary.
- (e) Maximum Height of Light Poles. The total height of exterior lighting poles shall not exceed the following height regulations. Height shall be measured from the average grade surrounding each light pole:

<u>Districts:</u>	<u>Maximum Height</u>
R-T, R-1, R-2, R-3, R-4, R-5	20 feet
CF, CPRO, C-1, C-2, C-3, C-4, C-5, M-1, M-3	25 feet
M-2, M-4	28 feet
PDOD	To be determined during plan review.

1167.05 EXEMPTIONS.

- (a) Decorative outdoor lighting fixtures with bulbs of less than twenty-five (25) watts, installed seasonally, are exempt from the requirements of this Chapter.
- (b) Upward-directed architectural, landscaping, and decorative lighting shall be exempt from the requirements of this Chapter, provided direct light emissions are not intended to be visible above the building line roof.
- (c) Light fixtures used to illuminate flags, statutes, and any other objects mounted on a pole, pedestal, or platform shall be exempt from the requirements of this Chapter, provided these objects are illuminated using a narrow cone beam or light fixtures designed to minimize light spillage beyond the illuminated object.
- (d) Exemption for Outdoor Recreational Uses. Because of their unique requirements for nighttime visibility and their limited hours of operation, ball diamonds, playing fields, tennis courts and other similar outdoor recreational uses are exempt from the exterior lighting standards set forth in this Chapter and shall only be required to meet the following standards set forth in this Section.
 - (1) Limits on Cutoff Angle. Cutoff from a lighting source that illuminates an outdoor recreational use may exceed an angle of ninety (90) degrees from the pole, provided that the luminaries are shielded to prevent light and glare to spill over to adjacent residential properties.
 - (2) Maximum Permitted Illumination at the Property Line. Two (2) foot-candles.
 - (3) Limits on Hours of Illumination. Exterior lighting for an outdoor recreational use shall be extinguished no later than 11:00 p.m.
- (e) Temporary construction or emergency lighting is exempt from the requirements of this Chapter. Such lighting shall be discontinued immediately upon completion of the construction work or abatement of the emergency necessitating such lighting.
- (f) All outdoor lighting fixtures existing and legally installed prior to **June 21, 2007**, shall be exempt from the requirements of this Chapter. When existing lighting fixtures become inoperative, their replacements shall be subject to the provisions of this Chapter.
- (g) Nothing in this Chapter shall apply to lighting required by the FAA or any other federal regulatory authority.