

ARTICLE H – OUTDOOR LIGHTING

Section 156.H.001, Purpose and Applicability

- A. **Purpose.** The purpose of this Article is to provide regulations for outdoor lighting that will:
1. *Minimum Levels.* Permit the use of outdoor lighting that does not exceed the minimum levels specified for nighttime safety, utility, security, productivity, enjoyment, and commerce;
 2. *Off-Site Impacts.* Minimize adverse off-site impacts of lighting such as light trespass, and obtrusive light;
 3. *Light Pollution.* Curtail light pollution, reduce skyglow and improve the nighttime environment for astronomy;
 4. *Night Lighting.* Help protect the natural environment from the adverse effects of night lighting from gas or electric sources; and
 5. *Energy Conservation.* Conserve energy and resources to the greatest extent possible.
 6. *UL Listed.* All lighting, Luminaires as the 2020 NEC calls them, shall be UL listed for the purpose they are intended for, shall not be modified in any way and shall conform to Article 410 of the 2020 NEC, NFPA 70.
- B. **Applicability.** The standards of this Article apply to the following development activities:
1. *New Development.* New residential, nonresidential, or mixed-use development or change in use from residential to nonresidential or mixed-use;
 2. *Increase in Intensity.* Increase in apartment units, manufactured home pads, gross floor area, or impervious surface by 20 percent or more, cumulatively over a five-year period; or
 3. *Change in Use.* Change in use requiring additional parking spaces.
- C. **Exemptions.** The following are not regulated as by this Article:
1. *Right-of-Way.* Lighting within the public right-of-way for the principal purpose of illuminating streets or roads;
 2. *Emergency Services.* Temporary lighting used by law enforcement, fire, and other emergency services;
 3. *Monuments, Art, and Statutes.* Lighting for public monuments, art, and statuary;
 4. *Repairs.* Repairs to existing luminaires not exceeding 25 percent of total installed luminaires;
 5. *Signs.* Lighting solely for signs, which is regulated by [Article G, Signs](#); and
 6. *Underwater.* Underwater lighting in swimming pools and other water features.

Section 156.H.002, General Requirements

- A. **Generally.** Outdoor lighting installed after the effective date of this Zoning Ordinance shall not exceed the footcandle (fc) values in Table 156.H.002-1, *Illumination Standards*, and Table 156.H.002-2, *Parking Lot Lighting*.

Table 156.H.002-1 Illumination Standards				
Zoning Districts	Maximum Footcandle adjacent a Residential Property Line ¹	Maximum Footcandle Adjacent to a Nonresidential Property Line ¹	Maximum Footcandle Adjacent a Public Right of Way ¹	Average Permitted Horizontal Footcandles ¹
All values are stated in footcandles (fc)				
AG, RR, RL, RM, RH	0.2	0.2	0.5	0.2
MU, UC, GC, PI, REC	0.5	2.0	1.0	5.0
GI	0.5	1.0	1.0	2.0
Table Notes:				
1. Horizontal footcandles are measured horizontal from the surface of the property by holding a light meter parallel to the ground approximately one foot off the surface.				

- B. **Nuisance Prohibited.** Outdoor lighting shall be deflected, shaded, and focused away from abutting properties and shall not be a nuisance to such abutting properties.
- C. **Parking Lot Lighting.** Parking facilities, including structured and open parking lots, spaces, drive aisles, entrances, and stairways must meet the illumination standards set out in Table 156.H.002-2, *Parking Lot Lighting*. Light fixtures must be designed and installed to prevent glare from being cast outside of any parking structure or parking lot, and shall not exceed the limits stated in Table 156.H.002-1, *Illumination Standards*.

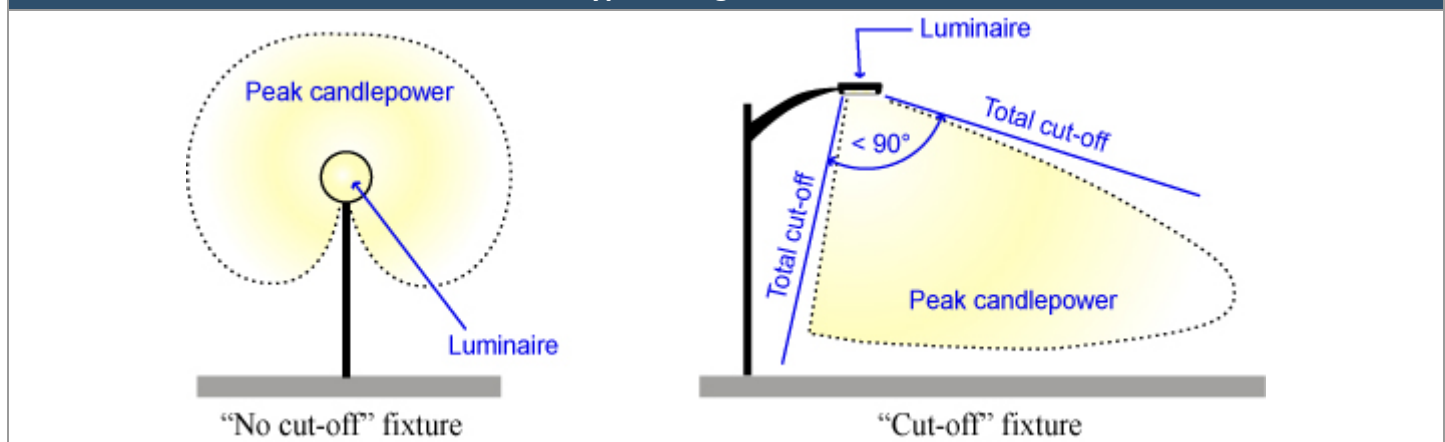
Table 156.H.002-2 Parking Lot Lighting	
Standard	Footcandle Requirement ¹
Minimum Horizontal Illuminance ¹	0.2 fc
Average Horizontal Illuminance ¹	2.0 fc
Uniformity Ratios (Horizontal Illumination) Average to Minimum	4:1
Maximum to Minimum Ratio	20:1
Table Notes: 1. Measured on the parking surface, without any shadowing effect from parked cars or trees.	

- C. **Canopy Lighting.** Canopy lighting for uses that have sheltered outside work or service areas, such as vehicle gas and fueling stations, must recess all luminaries into the canopy so that they cannot be viewed off-site from an eye height of four feet (to protect automobile drivers from glare).
- D. **Wall Pack Lighting.** Any project that proposes the use of wall pack lighting on the perimeter of the property shall be required to prepare an exterior lighting plan for review and approval by the Zoning Administrator.
- E. **Outdoor Recreation Facilities.**
- Average Permitted Horizontal Footcandle Exemption.* Illumination levels for sports facilities may exceed the maximum permitted horizontal footcandle requirements and shall be:
 - Designed to be no higher than recommended for the appropriate class of play, as defined by the current version of the Illuminating Engineering Society of North America (IESNA) publication IES RP-6-15; and
 - Comply with the maximum footcandles adjacent to residential and nonresidential property lines standards established in Table 156.H.002-1, *Illumination Standards*.
 - Shielding.* Fixtures used for non-aerial sports shall be fully-shielded. Fixtures used for aerial sports, such as baseball and softball shall be shielded to the full extent possible while also allowing the minimum of vertical illuminance needed to track the ball.
 - Certification.* Lighting systems for outdoor recreational facilities shall be designed and certified by an engineer registered in the state as conforming to all applicable restrictions of this Zoning Ordinance before construction commences.
- F. **Prohibitions.** The following are prohibited:
- Vehicular Safety.* Any fixed light not designed for roadway illumination that produces incident or reflected light that could impair the operator of a motor vehicle;
 - Searchlights.* The installation, use, or maintenance of beacons or searchlights;
 - Building Facade Lights.* Lights that are mounted on the ground or poles for the purpose of illuminating a building facade; and
 - Building Outline Lighting.* Exposed strip lighting or neon tubing used to illuminate building facades or outline buildings or windows or flickering or flashing lights installed in like fashion, except for temporary decorative lighting.

Section 156.H.003, Light Sources

- B. **Generally.** All lighting shall be shielded so the source of illumination (bulb or direct lamp image) is not visible from the property line. This reduces glare and interference with boundary streets and adjacent properties. No lamp shall extend past the housing of a light fixture.
- C. **Light Fixture Type.**
1. Light fixtures shall be:
 - a. "Full cut-off" fixtures that limit lighting that is visible or measurable at the property line;
 - b. Of constant intensity;
 - c. Reflected or shielded so as not to:
 - i. Be of excessive brightness;
 - ii. Cause glare hazardous to pedestrians or drivers;
 - iii. Create any public or private nuisance; or
 - iv. Unreasonably interfere with an adjacent property owner's right to enjoy their property.
 2. "No cut-off" fixtures, may be used only for decorative purposes, provided:
 - a. They have light fixtures that produce no more than 1,500 lumens (approximately equal to a 100-watt incandescent bulb);
 - b. They use energy-efficient bulbs, such as light-emitting diode (LED) or compact fluorescent (CFL).

Figure 156.H.003-1
Types of Light Fixtures



- D. **Cut-Off Requirements.** (See Figure 156.H.003-1, *Types of Light Fixtures*.)
1. **Full Cut-Off.** Except as otherwise allowed, all lighting (including, but not limited to vehicle use areas, canopies, security, walkway, landscaping, signs, outdoor display areas, and building) shall have 100 percent of its output below 90 degrees from a vertical line through the fixture.
 2. **Adjacent to Residential Use or District.** All lighting fixtures that are mounted on a building wall facing a property line adjacent to a residential property line or public right-of-way boundary shall be fitted with a "house side shielding" reflector on the side facing the residential property line or public right-of-way.
 3. **Flags and Statues.** Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.

Section 156.H.004, Lighting Placement and Height

A. Standards for Specific Uses and Site Features.

1. **Awnings.** Awnings or canopies used for building accents over doors and windows shall not be internally illuminated (i.e., from underneath or behind the awning) unless the awning material is entirely opaque.

2. *Canopies.* Areas under a canopy shall be designed so as not to create glare off-site. Acceptable methods include one or both of the following:
 - a. A recessed fixture incorporating a lens cover that is either recessed or flush with the bottom surface (ceiling) of the canopy that provides a full cutoff or fully-shielded light distribution; or
 - b. A surface-mounted fixture incorporating a flat glass that provides a full cutoff or fully-shielded light distribution.
 3. *Sports and Performance Venues.* Lighting fixtures for outdoor sports areas, athletic fields, and performance areas shall be equipped with an existing glare control package (e.g., louvers, shields, or similar devices) and aimed so that their beams are directed and fall within the primary playing or performance area.
 4. *Wall Pack Lights.*
 - a. Wall packs on the exterior of the building shall be fully shielded (e.g., true cut-off type bulb or light source not visible from off-site) to direct the light vertically downward and be of low wattage (100 watts or lower).
 - b. Wall pack light sources visible from any location off-site are prohibited.
- B. Maximum Fixture Height.**
1. *Freestanding Fixtures.* No freestanding light fixture shall be greater than 25 feet in height, except as set out in [Section 156.H.002.E, Outdoor Recreation Lighting](#).
 2. *Fixtures Mounted on Residential Buildings and Accessory Structures.* Fixtures that are mounted on residential buildings or accessory structures shall not be located higher than 16 feet or above the lowest point of the roof eave, whichever is lower.
 3. *Fixtures Mounted on Nonresidential Buildings.* Fixtures that are mounted on nonresidential buildings shall not be located above the highest point of the roofline of any building.
 4. *Full Cut-Off Fixtures.* Full cut-off fixtures shall have a maximum height of 30 feet.
 5. *No Cut-off Fixtures.* No cut-off fixtures:
 - a. Shall have a maximum height of 20 feet; and
 - b. Are not permitted on any side of a building that faces or abuts a residential property line.