

## **Chapter 108-16 Outdoor Lighting**

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### **Sec 108-16-1 Purpose And Intent**

The purpose and intent of this chapter is to promote the community character of the Ogden Valley, as provided for in the Ogden Valley general plan, and other areas of the City and may be applicable, by providing regulations and encouragement for the preservation of a dark sky. This chapter is also intended to promote the health, safety, and general welfare of Ogden Valley City residents and visitors by:

- Reducing, eliminating, or preventing light trespass;
- Reducing, eliminating, or preventing unnecessary or inappropriate outdoor lighting;
- Reducing, eliminating, or preventing the effects of outdoor lighting on wildlife;
- Preventing unsightly and unsafe glare;
- Promoting energy conservation;
- Maintaining nighttime safety, utility, and security;
- Encouraging a minimal light footprint of land uses in order to reduce light pollution; and
- Promoting and supporting astrotourism and recreation, including the pursuit or retention of accreditation of local parks by the International Dark-Sky Association.

### **Sec 108-16-2 Applicability**

In Ogden Valley City as may be provided in this Land Use Code, the following apply:

*New outdoor lighting.* All outdoor lighting installed after August 1, 2017, shall conform to the requirements established by this chapter.

*Existing outdoor lighting.* Except as provided in subsection (c) below, all existing outdoor lighting that does not meet the requirements of this chapter and is not exempted by this chapter shall be considered a nonconforming use and as such shall be phased out as outlined in section 108-16-7 of this chapter.

*Lighting for residential use.* Except as may be provided in section 108-16-7, the lighting standards of this chapter are not mandatory for a single-family, two-family, or three-family dwelling in existence or approved on or before August 1, 2017. The city shall employ educational methods and incentives to encourage voluntary compliance for these residential uses.

*Conflict.* Should this chapter be found to be in conflict with other sections of this code, the more restrictive shall apply.

### **Sec 108-16-3 Definitions**

**ARCHITECTURAL LIGHTING:** Lighting designed to reveal architectural beauty, shape and/or form and for which lighting for any other purpose is incidental.

**BULB:** A generic term for a source of light often called a “lamp” or “tube.” Examples include incandescent, fluorescent, high-intensity discharge (HID) lamps, and low pressure sodium (LPS) lamps, as well as light-emitting diode (LED) modules and arrays.

**CORRELATED COLOR TEMPERATURE (CCT):** A measure in degrees Kelvin (°K) of light’s warmth or coolness. Lamps with a CCT of less than 3,200 °K are pinkish and considered warm. Lamps with a CCT greater than 4,000 °K are bluish–white and considered cool.

**DIRECT ILLUMINATION:** Direct line of sight of a bulb when viewed off property.

**DROP LENS:** Any glass or diffuser surrounding the bottom or any part of a fixture that allows light to be emitted from the top or sides of the fixture.

**FIXTURE:** The complete lighting unit consisting of a bulb, or bulbs and ballast(s) (when applicable), together with the parts designed to distribute the light (reflector, lens, diffuser), to position and protect the lamps, and to connect the lamps to the power supply.

**FLOODLIGHT:** A fixture and/or bulb designed to “flood” a well-defined area with light.  
**FOOTCANDLE:** One lumen per square foot.

**FULLY SHIELDED FIXTURE:** A fixture constructed and installed so that no direct illumination occurs above the horizontal plane of the light fixture.

**KELVIN:** A scale of temperature used to measure the color temperature of light. Each kelvin represents the equivalent of one degree Celsius.

**LED:** Light emitting diode.

**LIGHT TRESPASS:** The term "light trespass" means the projection of any light from a direct artificial light outside the lot or parcel boundary or street right-of-way where the artificial light source is located, unless the projection outside the lot or parcel boundary or street right-of-way is intended, wanted, and lawfully permitted. See also [Section 108-16-11](#) for a graphic depiction.

**LOW VOLTAGE: Landscape lighting powered at less than 15 volts and limited to fixtures having a rated initial fixture lumen output of 525 lumens or less.**

**LUMEN: The unit of measure used to quantify the brightness of light produced by a bulb or emitted from a fixture (as distinct from “watt,” a measure of power consumption).**

**OUTDOOR LIGHTING: means the illumination of an outdoor area or object by any outdoor artificial lighting equipment installed within the property line and outside the building envelopes, whether attached to poles, building structures, the earth, or any other location; and any associated lighting control equipment.**

**PATHWAY (WALKWAY) LIGHT: low voltage or solar lights provided the lights are installed along a pathway or walkway, no more than eighteen inches (18") above the adjacent ground level, and have caps that direct the light downward.**

**SKYGLOW: The brightening of the nighttime sky that results from scattering and reflection of artificial light by moisture and dust particles in the atmosphere. Skyglow is caused by light directed or reflected upwards or sideways and reduces one's ability to view the night sky. SPOTLIGHT: A fixture and/or bulb designed to light only a small, well-defined area.**

**WATTAGE: A measure of the amount of power used by a device.**

#### **Sec 108-16-4 General Standards**

*Light shielding and direction.* Unless specifically exempted in section 108-16-6, all outdoor lighting shall be fully shielded and downward directed in compliance with the following, examples of which are graphically depicted in section 108-16-11:

No artificial light source shall project direct artificial light into the nighttime sky.

No artificial light source shall be placed at a location, angle, or height that creates a light trespass, as defined in section 101-2 and graphically depicted in section 108-16-12.

The shielding shall be made of completely opaque material such that light escapes only through the bottom. Shielding that is translucent, transparent, has perforations or slits of any kind, or allows light to escape through it in any other manner is not permitted.

Shielding may be attained by light fixture design, building design, or other site design features such as fencing, walls, landscaping, or other screening, provided it is in strict compliance with subsections (a)(1) through (3) of this section.

To ensure light does not trespass on neighboring property, light fixtures that comply with the shielding provisions of this section may also require additional or extended shielding elements to further mitigate its angle of light travel to ensure the direct artificial light source does not trespass on neighboring property. This concept is graphically depicted in section 108-16-11.

*Light color.* Unless otherwise specified in this chapter, the color of any outdoor artificial light source shall be equal to or less than 3000K, in accordance with the standard Kelvin temperature chart, as graphically depicted in section 108-16-13.

In certain cases (such as, but not limited to, properties on or near ridgelines or hillsides or second story lighting), additional shielding may be required to mitigate glare or light trespass on downslope properties. The need for additional shielding will be considered as part of the review process performed by the Building Permit Agent prior to approval of any business or residence.

Minimum Necessary: Outdoor lighting shall be the minimum necessary to provide for safety and functionality. The lowest lumen light source necessary for a lighting application shall be used.

outdoor lighting not necessary for security or emergency access shall be turned off when not in use and shall not be left on between 10:00 PM and 6:00 AM.All

Maximum lumens are limited to

Max lumens per fully shielded bulb -1000 lumens.

Max lumens per fully shielded directional floodlight or spotlight bulb-1260.

Indoor lighting shall not be constructed or used in such a fashion that creates direct illumination that falls outside the property boundaries.

Allowable Applications: Outdoor lighting shall only be allowed in the following applications:

To illuminate the entrances to buildings (including garage and barn entrances).

To illuminate pathways and walkways.

To illuminate parking areas.

- The overall height of any light post plus fixture used for illumination in residential parking areas shall not exceed six feet ( 6').

To illuminate outdoor areas, such as patios, pool and hot tub areas, outdoor dining areas, barn yards and recreation areas provided they are turned off when not in use and not left on overnight. The output from low-lumen, low-voltage string lights shall not exceed two (2) percent of the total outdoor light output allowed for the property and shall be included in the maximum lumens calculation provided they are turned off when not in use and not left on overnight.

Insect control devices that use visible light shall also comply with the outdoor lighting restrictions in this Ordinance.

(Ord. No. 2017-24, Exh. B, 6-27-2017)

## HISTORY

*Amended by Ord. [2020-8](#) on 6/16/2020*

### **Sec 108-16-5 Specific Standards**

In addition to the general standards of section 108-16-4, the following are specific standards that apply to all commercial, industrial, manufacturing, public and quasi-public, institutional, recreation, and resort uses, and multiple-family dwellings as defined in Section 101-1-7:

*Light curfew.* Unless exempt in section 108-16-5, outdoor lighting shall be turned off by 10:00 p.m., or, if applicable, within one hour after the close of business, whichever is later, except the following, so long as they are activated by a motion sensor controller that is set to extinguish the

light source within two minutes after the last detection of motion:

Lighting to illuminate the building's point of entry only;  
Safety lighting of parking lots and pedestrian areas;  
Limited lighting that is absolutely necessary for after-hours business.

*Canopy lighting.* All direct artificial light sources shall be sufficiently recessed so as not to project direct light greater than five feet from the outside perimeter of the canopy, and shall not produce more than a ratio of eight lumens per square foot of canopy area. This ratio shall be calculated by combining the total lumen output of each artificial light source and dividing by the square footage of the canopy. See section 108-16-13 for a graphic depiction.

*Parking lot lighting.* All artificial light sources in open-air parking lots shall not exceed a ratio of two lumens per square foot of parking lot area. This ratio shall be calculated by combining the total lumen output of each artificial light source divided by the square footage of the parking lot area. See section 108-16-14 for a graphic depiction.

*Recreation facility lighting.* Recreation facility lighting, as defined in section 101-1-7, shall comply with the following:

The lighting for the recreation activity area shall only be directed onto the area where the recreation activities are occurring. It shall not be allowed to illuminate surfaces that are not essential to the function of the recreation activity.

The lighting shall not exceed a ratio of 10 lumens per square foot of recreation activity area. This ratio shall be calculated by combining the total lumen output of each artificial light source divided by the square footage of the recreation activity area. See section 108-16-15 for a graphic depiction.

The recreation activity area shall be lit only when it is in use.

The light color standard of 108-16-3 does not apply to lighting for the recreation activity area.

*Sign lighting.* Sign lighting shall comply with the requirements of 110-2-12.

*Prohibited lighting:*

### **Sec 108-16-6 Exemptions**

The following artificial light sources are exempt from the requirements of this chapter:

*Agricultural lighting.* Lighting for agricultural uses;

*Federal and state flag lighting.* The outdoor lighting of a United States or State of Utah official flag, provided it is in compliance with the following:

The light shall be downward directed from the top of the flag pole;

The light shall be as narrow a beam as possible and aimed and shielded to illuminate, to the best effort practicable, only the area which the flag occupies in all wind conditions; and

The light level shall be minimized to create the least amount of impact on the dark sky, while still offering noticeable illumination of the flag;

*Federal and state facilities lighting.* Federal and state facilities are exempt from the requirements of this chapter. However, they are encouraged to cooperate and to coordinate with the city during the construction of their facilities to be in compliance with this chapter;

*Holiday or festive lighting.* Holiday or festive outdoor lighting for residential uses, provided it is in compliance with the following:

That the lighting shall not create a hazard or glare nuisance; and

That the lighting shall be temporary in nature, limited to the timeframe of November 15-January 15.

***Low output light source.*** An artificial light source having an output equal to or less than 105 lumens, provided that the cumulative lumen output of all low output light sources shall not exceed a ratio of one and one-half lumens per square foot of cumulative area intended to be illuminated. This ratio shall be calculated by combining the total lumen output of each low output light source divided by the square footage of the area intended to be illuminated. The low output light sources shall be distributed across the area intended to be illuminated and not organized in a focused location. Low output light sources are exempt from the requirements of this chapter so long as they comply with the definition and use outlined in this section, except that a low output light source may not be integrated into a new or replacement outdoor light fixture that is either:

rated to produce a lighting output that exceeds 105 lumens; or

does not conform to the shielding requirements of section 108-16-3(a);

*Mobile lighting.* Temporary Lighting affixed to a vehicle, provided the lighting is not intended for the stationary illumination of an area

*Motion sensor controlled light source with an integrated camera system.* A motion controlled artificial light source with an integrated camera system, provided it is in compliance with the following:

The light output is equal to or less than 1,800 lumens;

The color temperature of the light source does not exceed 3,000 degrees kelvin;

The motion sensor is set to turn the artificial light source off two minutes after the last detection of motion;

Lighting shall not be triggered by any activity outside the property boundary; and

The artificial light source is directed at a forty-five degree (45°) angle or less (where the zero angle is pointing straight down) such that no bulb can be seen by direct line of sight outside the property boundaries and sufficiently shielded in a manner that prevents light trespass;

*Safety or security lighting.* For the sole purpose of mitigating legitimate and verifiable safety or security hazards, the land use authority may exempt an artificial light source if it is shown to be necessary. The land use authority may apply reasonable conditions to ensure optimal compliance with the purpose and intent of this chapter. Evidence demonstrating that it is necessary shall be one or both of the following:

Submitted proof of lighting requirements from a property insurance company that demonstrates that compliance with this chapter will render the property uninsurable. The minimum amount of lighting required by the property insurance company shall be considered the maximum for the purposes of this chapter; or

Submitted reasonable research findings, from a qualified professional, as defined by section 101-1-7, that offer a compelling argument for the need for the exemption. However, if the land use authority is aware of other research findings that refute what is submitted,

then the land use authority must determine which research findings are more persuasive under the circumstances. If the land use authority grants the exemption, then the minimum amount of lighting necessary to ensure appropriate safety or security, as recommended by the qualified professional, shall be considered the maximum for the purposes of this chapter;

*Occasional event lighting.* Outdoor lighting intended for an occasional event, such as a wedding, party, social gathering, or other similar event that occurs on an occasional basis, provided it is in compliance with the following:

Occasional event lighting shall be turned off by 10:30 p.m. and any remaining lighting shall comply with this chapter; and

Occasional events shall not occur more than twice per month;

*Underwater lighting.* Underwater lighting in a swimming pool or other water feature provided it is not intended to illuminate features above water;

*Temporary public agency lighting.* Temporary outdoor lighting in use by law enforcement or a government agency or at their direction;

*Tower lighting.* Tower lighting required by the FAA or the FCC, provided that it shall not exceed the minimum requirements of those agencies. Collision markers shall have a dual mode for day and night to minimize impact to the night sky and migrating birds; and

*Traffic control devices.* Traffic control devices and signals.

### **Sec 108-16-7 Procedures For Compliance**

*Applications.* Any application for a permit or approval required by this Land Use Code shall contain evidence that the proposed work complies with this chapter.

*Contents of application or submittal.*

In addition to the specific application requirements elsewhere in this Land Use Code, the application submittal shall contain the following:

Plans indicating the location of all artificial light sources on the premises, including their height above the ground.

Description of each artificial light source device and supporting structure. This description may include, but is not limited to, device specifications from the manufacturer, drawings, details, and cross sections, when available.

The required plans and descriptions set forth in subsection (b)(1) of this section shall be complete and shall be presented in a manner that clearly demonstrates compliance with this chapter. The land use authority may require the applicant to submit photometric schematics and attestation from a qualified professional that the submittal complies with this chapter.

### **Sec 108-16-8 Required Replacement Of Nonconforming Outdoor Lighting**

After the effect of this chapter, all outdoor lighting that does not comply with the requirements of this chapter shall be considered nonconforming outdoor lighting after August 1, 2027. All nonconforming outdoor lighting shall be phased out in accordance with the following schedule:

*Lighting conversion.* Except for outdoor lighting for a single-family, two-family, or three-family dwelling in existence or approved on or before August 1, 2027, any nonconforming outdoor artificial light source shall be terminated, replaced, or retrofitted to conform to the requirements of this chapter within ten years after the effect of this chapter. The city shall provide periodic public notice of the effect, of this chapter. The City shall employ educational methods and incentives to encourage voluntary compliance prior to this 10-year period and to assist the public in understanding and complying with this chapter;

*Lighting replacement.* The replacement of any nonconforming outdoor artificial light source shall comply with the requirements of this chapter;

*Building exterior modification.* When the replacement of a building's exterior materials exceeds 25 percent of the building's exterior area, excluding roof area, whether by a single modification project or by an accumulation of separate modification projects, all nonconforming outdoor lighting on the premises on or within 25 feet of the building shall be brought into compliance with the requirements of this chapter. This shall not include repainting or re-roofing.

*Building expansion.* When a building's expansion exceeds the threshold established in this subsection, whether by a single expansion project or by an accumulation of separate expansion projects, all nonconforming outdoor lighting on the premises on or within 25 feet of the building shall be brought into compliance with the requirements of this chapter. The established threshold of expansion shall be the smaller of the following:

Twenty-five percent of the total area of the building as it exists on August 1, 2017; or

Two thousand five hundred square feet; and

*Site improvements.* When a site improvement which requires a land use permit, conditional use permit, or design review approval, modifies an area that exceeds the threshold established in this subsection, whether by a single modification project or by an accumulation of separate modification projects, all nonconforming outdoor lighting on the premises shall be brought into compliance with the requirements of this chapter. The established threshold of modification shall be the smaller of the following:

Twenty-five percent of the site area; or

Twenty thousand square feet.

### **Sec 108-16-9 Violations, Enforcement, And Implementation**

*Violations.* The following constitute violations of this chapter:

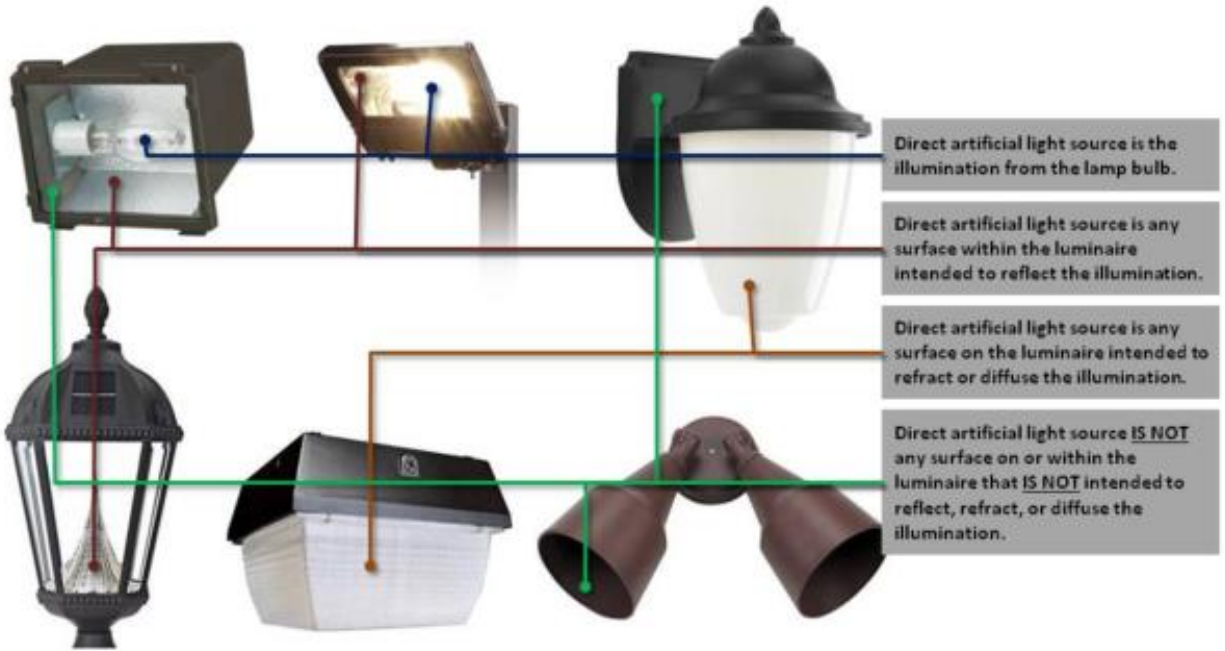
The installation, maintenance, or operation of any outdoor artificial light source not in compliance with the provisions of this chapter.

The alteration of any outdoor artificial light source after outdoor lighting plan approval without the review and approval of the land use authority when such alteration does not conform to the provisions of this chapter.

Failure to shield, correct, or remove lighting that is installed, operated, maintained or altered in a manner that does not comply with this chapter.

*Enforcement.* Violations of this chapter are subject to enforcement and penalties as outlined in Section 102-4-4.

*Creation of dark sky committee.* Ogden ValleyCity will create an Ogden Valley dark sky committee.**Sec 108-16-10 Examples Of Direct Artificial Light**



**Sec 108-16-11 Examples Of Unshielded And Shielded Light Sources**





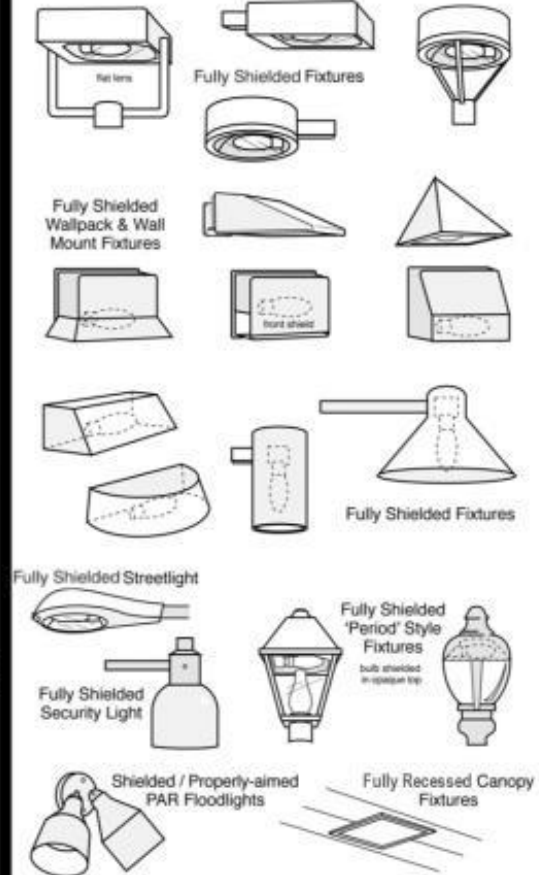
## Unshielded

Fixtures that produce glare and light trespass

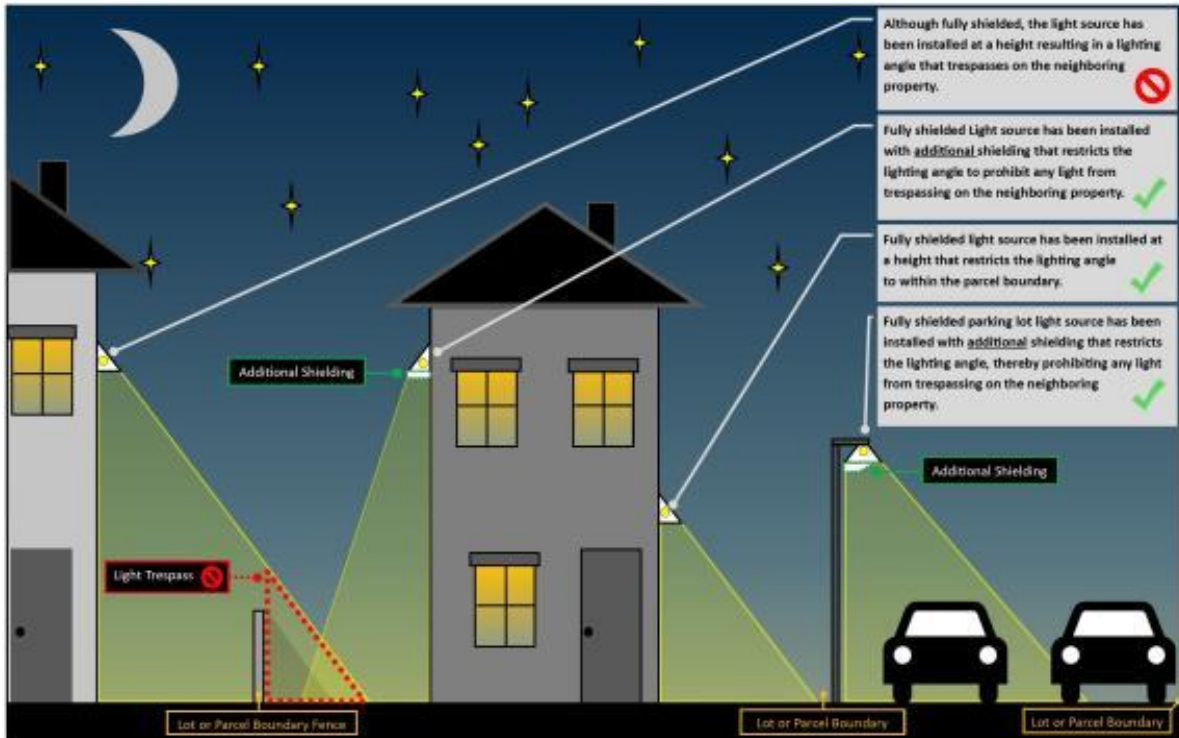
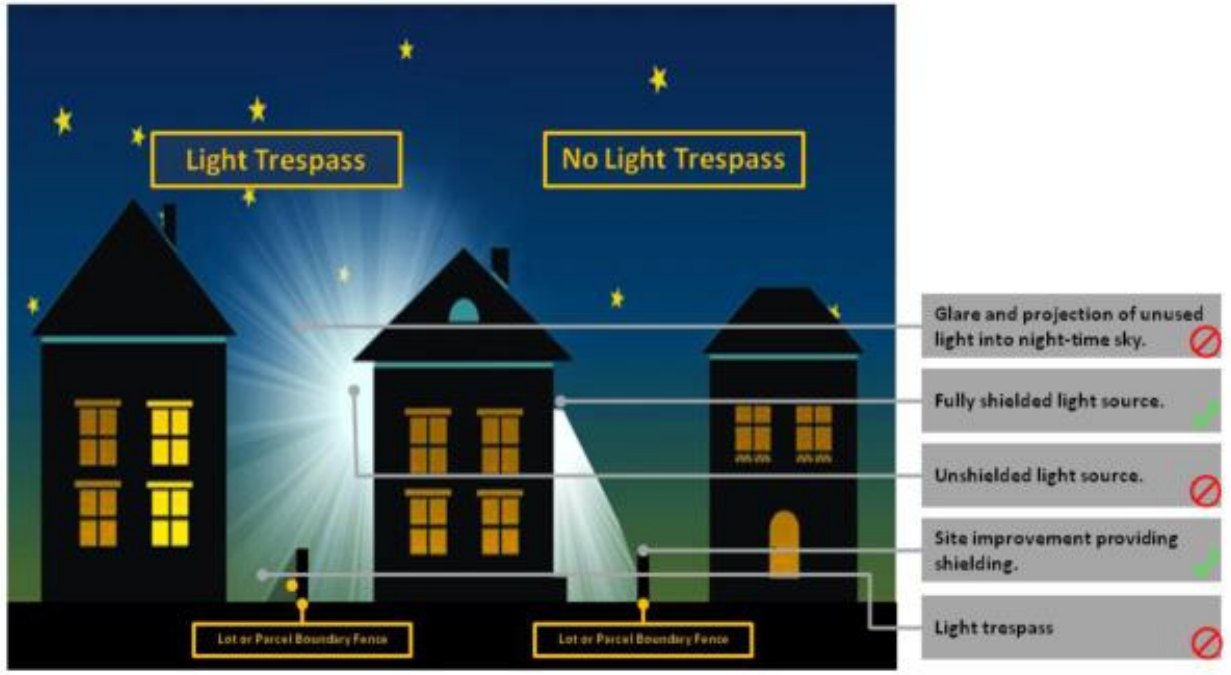


## Fully Shielded

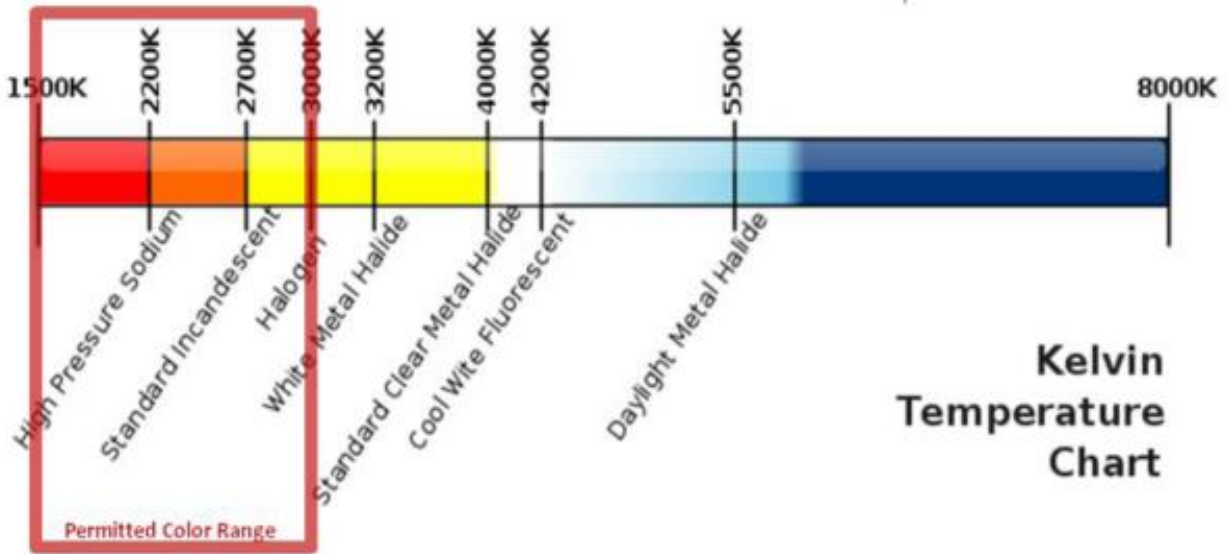
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



**Sec 108-16-12 Example Of Light Trespass**



**Sec 108-16-13 Standard Kelvin Temperature Chart**



**Sec 108-16-14 Example Of Canopy Lighting**

The photograph shows a parking lot canopy at night, illuminated by recessed lighting. A red line indicates a length of 80 ft. The lighting is fully shielded and recessed, with direct light projected no greater than five feet from the canopy perimeter.

Lumen per Square Foot Ratio	
(14) 2800 Lumen Bulbs	7.78 Lumens
3040 Square Feet of Canopy Area	= per Square Foot of Canopy Area

- Total combined lumens less than or equal to 8 lumens per square foot. ✓
- Fully shielded, recessed light source. Only incidental reflection. ✓
- Direct light projected no greater than five feet from canopy perimeter. ✓

**Sec 108-16-15 Example Of Parking Lot Lighting**

Lumen per Square Foot Ratio	
(60) 8000 Lumen Bulbs	= 1.92 Lumens per Square Foot of Parking Lot Area
250,000 Square Feet of Parking Lot Area	

- Total combined lumens less than or equal to 2 lumens per square foot. ✓
- Parking lot lighting spill-over shielded by wall. ✓
- Direct artificial light source only visible when on parking lot area. ✓
- No spill-over onto non-parking lot area. ✓

**Sec 108-16-16 Example Of Recreation Facility Lighting**

Lumen per Square Foot Ratio	
(162) 6000 Lumen Bulbs	= 9.72 Lumens per Square Foot of Field Area
100,000 Square Feet of Field Area	

- Total combined lumens less than or equal to 10 lumens per square foot. ✓
- Fully shielded light source. Only incidental reflection. ✓
- No spill-over onto non-recreation activity areas. ✓
- Direct artificial light source only visible when on recreation activity area. ✓