

ORDINANCE NO. 2021-1

AN ORDINANCE of the City of Balmorhea, Texas relating to outdoor lighting on public and private property; revising Chapter 15.34 to the City of Balmorhea Municipal Code; amending Section 1.26.010; and replacing Section 16.08.080 of the City of Balmorhea Municipal Code.

WHEREAS, the City has determined that the provisions contained in this ordinance will protect the historical legacy of the night sky, provide enjoyment of the night sky in the City for future generations, and promote tourism; and

WHEREAS, the City has determined that the provisions contained in this Ordinance are intended to encourage through the regulation of the types, kinds, construction installation and uses of outdoor electrically powered illuminating devices, lighting practices, and lighting systems that reduce costs and conserve energy and resources, and help protect natural resources; and

WHEREAS, the City wishes to maintain safety, health, security, and productivity, while enhancing nighttime enjoyment of property within its jurisdiction; and

WHEREAS, the City has determined that the provisions contained in this Ordinance will encourage awareness by improving access to the City's lighting codes, through code coordination and consolidation into one Ordinance; now therefore,

THE CITY COUNCIL OF THE CITY OF BALMORHEA TEXAS, DO ORDAIN AS FOLLOWS:

Section 1. Revision of Chapter 15.34 is added to the City of Balmorhea Municipal Code as follows:

Chapter 15.34

OUTDOOR LIGHTING ON PUBLIC AND PRIVATE PROPERTY

- 15.34.010 Purpose
- 15.34.020 Definitions
- 15.34.030 Applicability
- 15.34.040 Exemptions - Decision Criteria
- 15.34.050 General Standards
- 15.34.060 Further Restrictions
- 15.34.070 Submittals
- 15.34.080 Penalties for Violations
- 15.34.090 Severability
- 14.34.100 Exhibits

15.34.010 Purpose. The purpose of this Chapter is to provide regulations that preserve and enhance the view of the dark sky; promote health, safety, security, productivity, tourism; and help protect natural resources. The provisions of this Chapter are intended to control glare and

light trespass. It is the intent of this Chapter to provide standards for appropriate lighting practices and systems that will enable people to see essential detail in order that they may undertake their activities at night, facilitate safety and security of persons and property, and curtail the degradation of the nighttime visual environment.

15.34.020 Definitions. The following terms have the following definitions for purposes of this Chapter:

"Adaptive controls" mean mechanical or electronic devices, when used in the context of outdoor lighting systems, intended to actively regulate the switching, duration, and/or intensity of light emitted by the outdoor lighting system. Examples of adaptive controls include timers, dimmers and motion-sensing switches.

"Correlated Color Temperature (CCT)" means a measure of the color properties of light emitted by lamps, being equal to the temperature, expressed in Kelvins (K). CCT values are typically provided on lighting manufacturer packaging or data sheets (see Exhibit 5).

"Landscape or decorative lighting" means any luminaire that emphasizes a particular object or draws attention to a particular area for aesthetic purposes.

"Electronic Message Display" means any illuminated sign of an informative or advertising nature, whether on-or off-premise, and operable at night, whose content is made visible to the viewer by means of luminous elements under active electronic control and therefore subject to alteration in order to vary the content of the message. Electronic displays may be either static or dynamic in terms of light color and intensity.

"Light source" means a light emitting portion of the luminaire and any diffusing elements and surfaces intended to reflect or refract light emitted from the lamp individually or collectively, for example, a lamp, bulb, lens, highly reflective surface, or frosted glass.

"Light pollution" means general sky glow caused by the scattering of artificial light into atmosphere and resulting in decreased ability to see the natural night sky.

"Light trespass" means light emitted from fixtures designed or installed in a manner that unreasonably causes light to fall on a property other than the one where the light is installed, in a motor vehicle drivers' eyes, or upwards toward the sky. If the light source is visible from another property or the public roadway, the light is creating light trespass. It is expected that the illumination produced by a light source may be viewed from other properties but the light source itself should not be visible from other properties (see Exhibit 6).

"Luminaire" means a complete lighting assembly or lighting fixture, consisting of a lamp, housing, optic(s), and other structural elements, but not including any mounting pole or surface (see Exhibit 2).

"Nit" means the standard unit of measure of luminance used for internally illuminated signs, digital signs, or electronic message displays.

"Fully Shielded" means an outdoor luminaire constructed so that in its installed position, all of the light emitted from the light fixture is projected below the horizontal plane passing through the lowest light-emitting part of the fixture (see Exhibit 4).

"Spotlight" means any lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

15.34.030 Applicability.

A. All outdoor lighting fixtures installed on private and public property shall comply with this Chapter except as otherwise specified.

B. Existing noncompliant outdoor light fixtures already installed at the time this ordinance is enacted must be brought into compliance with five (5) years from the date of this ordinance.

C. The City's Department of Planning and Community Development shall administer and enforce this chapter.

D. In the event of a conflict between the requirements of this Chapter and any other requirement of the City of Balmorhea Municipal Code the more restrictive requirement shall apply.

15.43.040 Exemptions.

A. The following are exempt from the provisions of this Chapter:

1. Traffic control signals and devices.
2. Streetlights installed prior to the effective date of this Chapter, provided that when a street light fixture becomes inoperable any replacement street light fixture shall be subject to the provisions of this Chapter.
3. Temporary emergency lighting (i.e. fire, police, repair workers) or warning lights.
4. Moving vehicle lights.
5. Tower Lighting:

No lighting of towers and associated facilities is allowed, except as required by the Federal Aviation Administration or other federal or state agency. Towers requiring white strobe lights during the day will transition to the lowest allowed intensity pulsating red lights at night.

6. Holiday Lighting:

Decorative holiday lighting from November 15 through the next January 15.

7. Outdoor lighting approved by the Director for temporary or periodic events (e.g. fairs, nighttime construction).

15.34.050 General Standards. The following general standards shall apply to all non-exempt outdoor lighting:

A. Shielding:

All Outdoor Lighting fixtures installed, replaced, or repaired after the effective date of this Order shall be fully shielded except as otherwise specified in this Order (see Exhibit 4).

B. Light trespass:

All light trespass is prohibited. No luminaire, except governmental streetlights, shall create conditions of light trespass. Governmental street lights may only create light trespass below it within four (4) times its mounting height (see Exhibit 6).

C. Color Temperature:

The correlated color temperature (CCT) of luminaires shall not exceed 2700 Kelvins (see Exhibit 5).

D. Lumen Caps:

The lumen per net acre values are an upper limit and not a design goal; design goals should be the lowest levels that meet the requirement of the task. Lumen per net acre values exclude governmental owned street lights used for illumination of public rights-of-way and outdoor recreation facilities.

(1) Nonresidential Property: Total outdoor light output installed on any nonresidential property shall not exceed 50,000 lumens per net acre in any contiguous illuminated area;

(2) Residential Property: Total outdoor light output installed on any residential property shall not exceed 25,000 lumens per net acre in any contiguous illuminated area.

E. Adaptive Controls:

All outdoor lighting is encouraged to be turned off when no one is present to use the light. Adaptive controls such as timers, motion sensors, and half night photocells can assist in this effort.

F. Externally Illuminated Signs:

Externally illuminated signs shall be lit only from the top of the sign, with fully shielded luminaires designed and installed to prevent light from spilling beyond the physical edges of the sign.

All illuminated signs shall be extinguished at 11:00 p.m. or within one (1) hour of the end of normal business hours, whichever occurs later. All sign illumination must comply with the correlated color temperature (CCT) requirements of this article.

G. Internally Illuminated Signs:

Outdoor internally illuminated signs (whether free standing or building mounted) shall be subject to all the following requirements:

(1) The sign must be constructed with an opaque background and translucent letters and symbols or with a colored background and lighter letters and symbols. (See Exhibit 5 for examples).

(2) The internally illuminated portion of the sign cannot be white, cream, off-white, light tan, yellow or any light color unless it is part of a registered logo that does not have an alternate version with dark tones. Light tone colors such as white, cream, off-white, light tan, yellow or any light color are permitted in the logo only, provided that such colors in the logo shall represent not more than 33% of the total sign area permitted.

(3) The internal illumination, between sunset and sunrise, is to be the lowest intensity needed to allow the sign to be visible for up to 1/2 mile from its installation and shall not exceed 50 nits.

(4) Size limit. The luminous surface area of an individual sign shall not exceed 50 square feet.

(5) Electronic message displays are discouraged and shall comply with outdoor lighting curfews stipulated in this ordinance. Messages appearing on electronic displays shall not be displayed for less than (30) seconds and shall require no longer than 0.25 seconds to transition from one message to another. Moving and/or flashing text or images are prohibited (See Exhibit 7).

H. Sports Lighting:

(1) At public and private outdoor sports facilities, including but not limited to playing fields, arenas, tracks, and swimming pools, will be shielded to the greatest practical extent to reduce glare, safety hazards, light trespass, and light pollution;

(2) Will provide levels of illuminance that are adjustable according to task, allowing for illuminating levels not to exceed nationally recognized Illuminating Engineering Society of North America (IESNA) standards according to the appropriate class of play, as well as for lower output during other times, such as when field maintenance is being actively performed; and

(3) Shall be provided exclusively for illumination of the surface of play and adjacent viewing stands, and not for any other application, such as lighting a parking lot; and

(4) Must be extinguished by 11:00 p.m. or within one (1) hour of the end of active play. The outdoorsports facility lighting shall be fitted with mechanical or electronic timers to prevent lights from being left on accidentally overnight.

(5) Outdoor sports facility lighting will be exempted from the other regulations of this article if its design and installation, as certified by a professional engineer (PE) licensed in the state of Texas, adheres to the version of the International Dark-Sky Association's Criteria for Community-Friendly Outdoor Sports Lighting operative at the time when the construction permit is submitted to the City for review.

I. Service Station Canopies:

All luminaires mounted on or recessed into the lower surface of service station canopies shall be fully shielded and utilize only flat lenses or windows.

J. Landscape Lighting:

The unshielded outdoor illumination of any building or landscaping, or sign is prohibited. Spotlights less than or equal to 500 lumens may be used, provided such fixtures are shielded and aimed to prevent light from being emitted away from the target of illumination.

K. String or Rope Lighting:

String, rope, festoon, bistro, and similar lighting, provided that the emission of no individual lamp exceeds fifty (50) lumens, and no installation of such lighting exceeds, in the aggregate, six thousand (6,000) lumens. These lights must be rated at or below 2700 Kelvin.

L. Flagpole Lighting:

Property owners are encouraged to not illuminate flagpoles at night, but rather to hoist flags after dawn and lower flags before sunset.

(1) Flagpoles with a height greater than 20 feet above ground level shall be illuminated only from above.

(2) Flagpoles with a height equal to or less than twenty (20) feet above ground level may be illuminated from below. If ground-level illumination is used, flagpoles may be illuminated with spotlight type luminaires, utilizing shields to reduce glare, whose maximum combined lumen output is 75 lumens per linear foot of pole height, measured from the level of the luminaire above grade to the top of the flagpole. Luminaires are to be mounted so that their lenses are perpendicular to the flagpole and the light output points directly toward the flag(s).

15.34.60 Prohibited

A. The following fixtures (luminaires) are prohibited:

1. Searchlights for any other purpose other than temporary emergency lighting.
2. Laser lights or any similar high-intensity light for outdoor use or entertainment, when projected above the horizontal plane.
3. Quartz lamps
4. Mercury vapor lamps

B. The City reserves the right to further restrict outdoor lighting including, but not limited to, pole height, and level off illumination, when it is deemed to be in the best public interest consistent with the purpose of this Chapter.

15.34.070 Submittals.

All building permit applications including the installation of outdoor lighting fixtures shall provide evidence of compliance with the requirements of this Chapter on a form provided by the Department of Planning and community Development.

15.34.080 Penalties for violation. Any violation of the provisions of this Chapter shall constitute a civil infraction, enforceable pursuant to CBMC 1.26, Code Enforcement.

15.34.909 Severability. If any clause, sentence, paragraph, section or part of this Chapter or the application thereof to any person or circumstances shall be adjudged by any court of competent jurisdiction to be invalid, such order or judgement shall be confined in its operation to the controversy in which it was rendered and shall not affect or invalidate the remainder of any part thereof to any other person or circumstances.

Section 2. Section 1.26.010 of the City of Balmorhea Municipal Code is amended to read as follows:

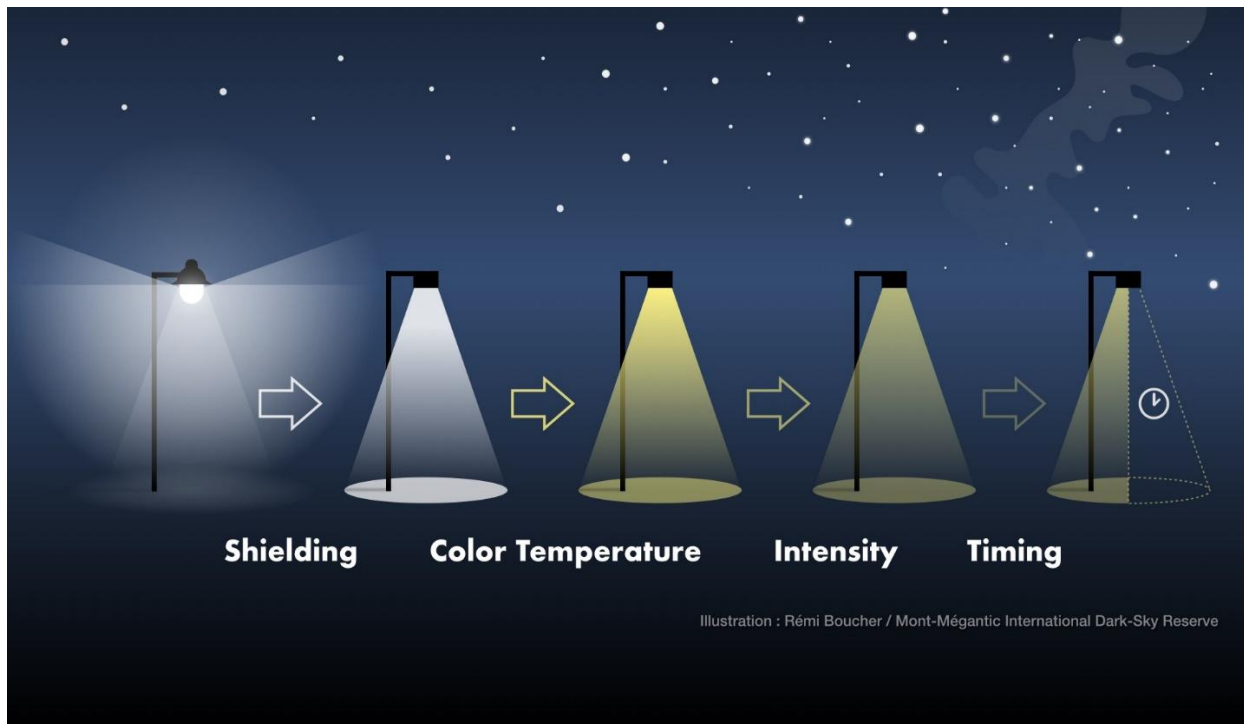
1.26.010 Applicability of chapter. The provisions of this chapter shall apply to enforcement of Title 18 and Chapters 16.20, 16.22, 15.34 and 15.04 of this code, with the exception of Sections 15.04.090 and 15.04.110 and the Uniform Fire Code adopted by reference in section 15.04.020. For purposes of this chapter, such titles and chapters shall be referred to as "the applicable chapters and titles of this code."

Section 3. This ordinance shall be effective on April 12, 2021.

Passed by the City Council this 112th day of April, 2021.

14.34.100 Exhibits.

Exhibit 1. An illustration of best outdoor lighting practices.



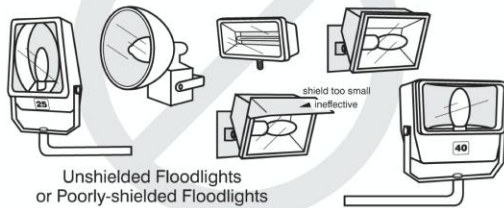
- (1) Use shielding to reclaim wasted light and direct it to the area to be lit.
- (2) Lower the correlated color temperature (CCT) from “cool” white light to “warm” white ($\leq 2700\text{K}$).
- (3) Lower the intensity to provide as much light as needed for the application, but no more.
- (4) Use adaptive controls, e.g., timers, half-night photocells, motion sensors, etc., to limit the hours the light is in use.

Exhibit 2, Examples

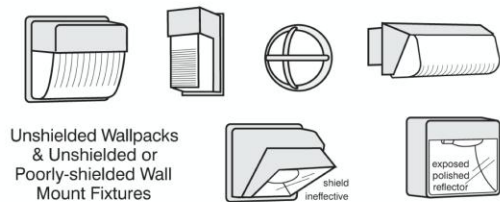
Examples of Acceptable / Unacceptable Lighting Fixtures

Unacceptable / Discouraged

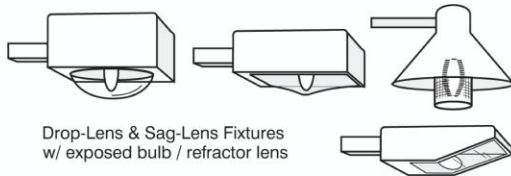
Fixtures that produce glare and light trespass



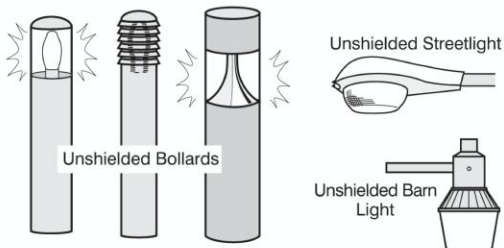
Unshielded Floodlights
or Poorly-shielded Floodlights



Unshielded Wallpacks
& Unshielded or
Poorly-shielded Wall
Mount Fixtures



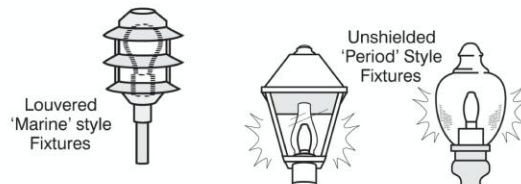
Drop-Lens & Sag-Lens Fixtures
w/ exposed bulb / refractor lens



Unshielded Streetlight

Unshielded Bollards

Unshielded Barn
Light

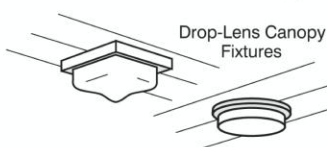


Louvered
'Marine' style
Fixtures

Unshielded
'Period' Style
Fixtures



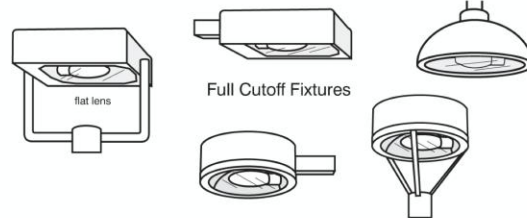
Unshielded PAR
Floodlights



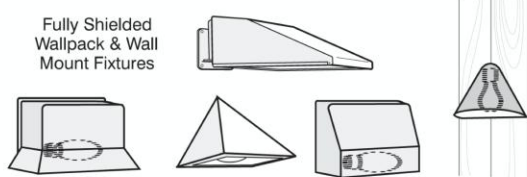
Drop-Lens Canopy
Fixtures

Acceptable

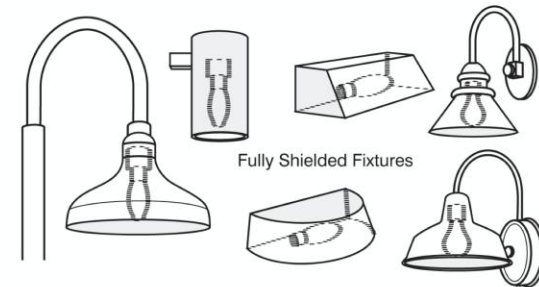
Fixtures that shield the light source to minimize glare and light trespass
and to facilitate better vision at night



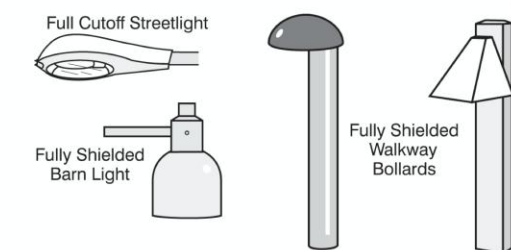
Full Cutoff Fixtures



Fully Shielded
Wallpack & Wall
Mount Fixtures



Fully Shielded Fixtures



Full Cutoff Streetlight

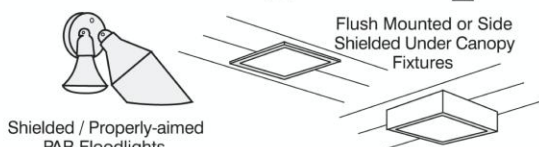
Fully Shielded
Barn Light

Fully Shielded
Walkway
Bollards



Fully Shielded
Decorative
Fixtures

Fully Shielded
'Period' Style
Fixtures

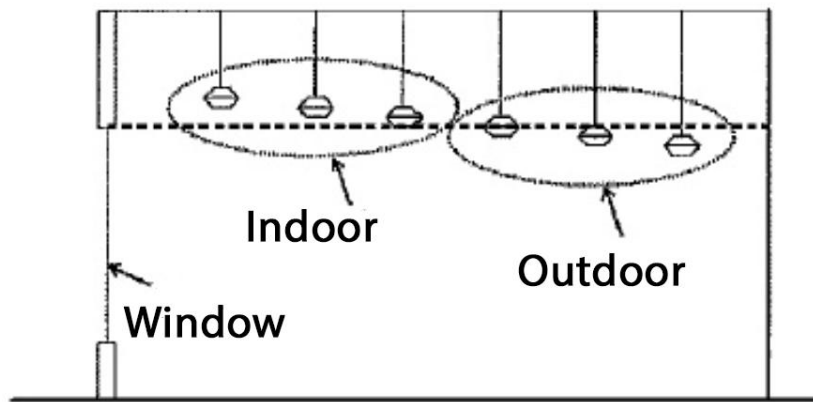


Shielded / Properly-aimed
PAR Floodlights

Flush Mounted or Side
Shielded Under Canopy
Fixtures

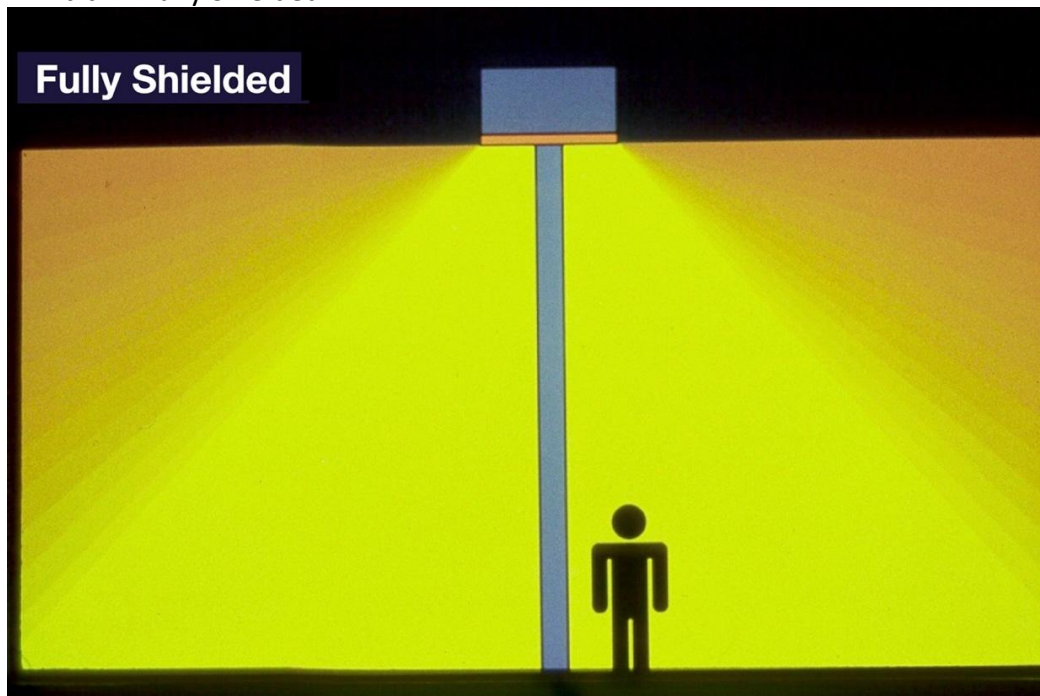
Illustrations by Bob Crelin © 2005. Rendered for the Town of Southampton, NY. Used with permission.

Exhibit 3. Indoor/outdoor lighting.



Elevation view showing an example of a nonresidential application of indoor lighting, labeled “Outdoor”, which will be subject to this article. The example presumes the structure in question is not elevated such that any of the luminaires labeled “Indoor” may be seen from any other property. If the structure is elevated such that the luminaires labeled “Indoor” are visible from another property then, they are actually “outdoor lighting” and subject to this article. All luminaires under skylights or other translucent roofing materials are subject to this article just as the fixtures behind the window in this example.

Exhibit 4. Fully Shielded.



“Fully Shielded” means an outdoor luminaire constructed so that in its installed position, all of the light emitted from the light fixture is projected below the horizontal plane passing through the lowest light-emitting part of the fixture.

Exhibit 5. Color Temperature.



Exhibit 6. Light Trespass.



Exhibit 7. Internally Illuminated Signs.

Light Background ☒	Colored Background ☒	Opaque Background ☒
		
		