

Chapter 14, Environmental Protection and Public Health

Section 6. Exterior Residential Dwelling Lighting - (Amended 9/11/2017)

A. Purpose

The need for exterior lighting is widely recognized. Used properly it increases safety, helps provide security, and can enhance the Town's nighttime character. New technologies have produced extremely powerful lights. Unless used properly, they can produce excessive glare and light trespass. Glare is a safety issue. Light trespass is a privacy issue. Exposure to artificial blue light is a health, safety and environmental issue. Regulating exterior lighting will benefit the ability of Rockport citizens and visitors to better view the nighttime sky.

B. Definitions

Color temperature (of a light source): The temperature at which an opaque and non-reflective object will radiate light of a color comparable to that of the light source. Color temperature is expressed in degrees Kelvin (°K). Light sources with higher color temperatures contain more blue light than light sources with lower color temperatures, and appear brighter to the human eye, all other conditions being equal.

Direct Light: The light emitted directly from the light source, off the reflector or reflector diffuser, or through the refractor or diffuser lens of a luminaire.

Floodlight: A broad-beamed high-intensity luminaire.

Foot-candle (FC): A measurement of the luminance reaching an object. One foot-candle equals one lumen per square foot.

Full-cutoff (fully shielded): A luminaire that is constructed, and installed so that no light is emitted at any angle above a horizontal plane passing through the lowest light emitting part (including refractors, reflectors or other devices) of said luminaire to a point five (5) feet above grade at the property line as might be viewed at that height by an observer standing at that place.

Glare: A visual sensation caused by excessive and uncontrolled brightness. Glare is a function of the color temperature of the light source.

Illuminance: A measure of how much incident light strikes a surface, measured in foot-candles.

Light source (also referred to as a "bulb" or "lamp"): The component of a luminaire which produces light.

Light pollution: An unwanted consequence of outdoor lighting. It includes such effects as sky glow, light trespass, and glare.

Light trespass: Illumination from a luminaire being cast where it is neither wanted nor needed, going beyond the lot lines of the lot on which the luminaire is located, at a level greater than the ambient illumination level as measured at the lot line in a horizontal and vertical plane.

Lumen: The measurement of the direct light emitted by its source. For the purposes of this section, the lumen output of a luminaire shall be the initial lumen rating listed by the light source data sheet when operated at its rated conditions.

Luminaire: A complete lighting unit, consisting of light sources, ballast (when applicable), and any part designed to distribute the light, position the unit, protect the light sources (housing), and connect to the power supply.

Luminance: The amount of light that passes through, is emitted from, or reflected from a particular area, and is thus an indicator of how bright a surface or light source will appear.

Motion detector (also referred to as a “motion sensor”): Any electronic device capable of detecting physical motion within the environment being monitored. For the purposes of this Bylaw, said motion detector shall be used to trigger one or more luminaires into operation and to maintain it or them in the illuminated state for a preset time interval, after which said illumination shall be extinguished.

Residential dwelling: A structure or part of a structure that is used as a home or residence by one or more persons who maintain a household, whether single family, multifamily, or mixed use.

Spotlight: A high-intensity luminaire projecting a sharply-focused beam of light.

C. Exterior Residential Lighting Regulations

- 1) Temporary holiday lighting is exempt from these regulations.
- 2) Luminaires shall emit a steady and constant light while powered on.
- 3) Existing full-cutoff-designed luminaire light sources shall not exceed 3,000 °K color temperature.
- 4) Other existing luminaire light sources shall not exceed 2,750 °K color temperature.
- 5) Existing floodlights or spotlights shall be of full-cutoff design.
- 6) New luminaires and replacement luminaires must be of full-cutoff design and their light sources shall not exceed 2,750 K color temperature.
- 7) Luminaires shall be oriented such that light trespass will not occur beyond all adjacent property lines.

D. Compliance

1. These regulations set forth in subsection C shall apply to all exterior residential luminaires.
2. Existing luminaires which are not in compliance with subsection C as of its effective date shall nevertheless be considered in compliance so long as said:
 - a. floodlight and spotlight luminaires are fully shielded, and
 - b. other exterior luminaires conform with either of the following alternative requirements:
 - i. Remains extinguished between the hours of 11:00 P.M. and 5:00 A.M.
 - ii. Only operate for five (5) minutes maximum and only when triggered by a motion detector.
3. All new luminaires and replacement luminaires and light sources must comply with subsection C.”