



DEPARTMENT OF ADMINISTRATIVE SERVICES

PROPOSED CHANGE OF THE CONNECTICUT STATE  
BUILDING CODE AND FIRE SAFETY CODE

DATE SUBMITTED: April 2, 2024

**CODE INFORMATION**

Proposed change to: ☒ Building Code ☐ Fire Safety Code

Code section(s): **INTERNATIONAL BUILDING CODE - CHAPTER 27 – ELECTRICAL -  
SECTION 2703 LIGHT POLLUTION CONTROLS - Change to Exception 1**

**PROPONENT INFORMATION**

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*Town*

*State*

*Zip Code*

**PROPOSAL INFORMATION**

Description of change and reason for change (attach additional information as needed):

**Change Exception 1 by reducing exception from output of 2,600 lumen to output of 1000 lumen -**

Proposed text change, addition or deletion (attach additional information as needed):

~~Delete:~~ Luminaires with an output of ~~2,600~~ lumens or less

~~Insert:~~ Luminaires with an output of ~~1000~~ lumens or less

Supporting data and documents (attach additional information as needed)

**See Attached**

☒ **This Proposal is original material.** (Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought or research and, to the best of his/her knowledge, is not copied from another source.)

☐ **This Comment is not original material, its source (if known) is as follows:** (such as material / code development proposal from a prior development cycle or proposal submitted to model code committee etc.)

☒ **I would like to make an in-person presentation of my proposal.**

**Release**

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Proponent's Signature

Joyce Leiz, Executive Director

Printed Name

PLEASE EMAIL (PREFERRED) TO [DAS.CodesStandards@CT.GOV](mailto:DAS.CodesStandards@CT.GOV) OR MAIL OR FAX (SEE BELOW)

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Hartford, CT 06103  
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Affirmative Action/Equal Opportunity Employer*

12/29/16

## **Proposed Change, Addition or Deletion to 2021 INTERNATIONAL BUILDING CODE -**

### **CHAPTER 27 – ELECTRICAL - Section 2703.1 - Light Pollution Controls**

**Current language:** The first exception to Section 2703.1 states “*1. Luminaires with an output of 2,600 lumens or less.*”

**Proposed Code Change:** Reduce 2600 lumens or less to a lower threshold of 1000 lumens or less

**Proposed Deletion:** Delete **2600 lumens or less**

**Proposed Addition:** Replace with: **1000 lumens or less**

#### **REASON FOR CHANGE**

In 2004, when the Light Pollution Control amendment to the Connecticut State Building Code was first adopted, LED technology was not generally available in the commercial market. In 2004, the 2,600 lumen threshold represented the low lumen output of parking lot & general area luminaires. By 2024, outdoor lights are available at 1000 lumen output, with many lights marketed with lumen output now at 750 lumen.

Code change proposal will not impose any undue compliance burden on either contractors or commercial property owners because there is no price differential in the market for fully shielded versus unshielded luminaires.

Light pollution negatively impacts wildlife. Many animals rely on darkness as part of their habitat and behavior, and artificial light at night (ALAN) can disrupt their natural cycles. Excessively bright exterior lights that emit over 1,000 lumens create nighttime conditions that can adversely impact nocturnal animals and insects. Artificial light has several general effects on wildlife: It attracts some animals such as moths, frogs, and sea turtles, diverting them from their normal behaviors and resulting in them not being where they should be; concentrating them as a food source to be preyed on; or resulting in a light trap that can exhaust and kill them. Light pollution is among many factors driving a potentially catastrophic decline in some of the world's insect populations. That threat is obvious to anyone who has witnessed moths and other nocturnal insects swarming around bright outdoor lights. A lighting strategy that recognizes the place of

wildlife in a healthy ecosystem helps to stabilize wildlife populations and biodiversity levels, while decreasing energy use and associated greenhouse gas emissions that contribute to climate change.

Several at-risk species in Connecticut are sensitive to light pollution. Dozens of animals that appear on the list of Connecticut Endangered and Threatened Species depend on regular periods of darkness for feeding, reproduction, and safety. These species include the Least Shrew, Blue-Spotted Salamander, Long-Eared Owl, and Short-Eared Owl.

Light pollution contributes to higher rates of bird building collisions. Several bird species protected under federal and state laws, including species of concern and endangered species such as the Northern Parula and Bicknell's Thrush, may seek shelter or foraging sites on the grounds of commercial properties during periods of peak bird migration. Light pollution can lure migratory birds into unsafe urban/suburban areas. It is estimated that every year nearly one billion birds are killed in building collisions in the United States, a problem that is exacerbated by excessive artificial lighting. Dozens of species of North American migratory songbirds are in steep decline, experiencing significant population loss linked with loss of habitat, building collisions, and light pollution.

Light pollution can harm and degrade some flora species. Artificial lighting can extend the perceived "day length" for flora species, changing their leafing and flowering patterns. In many areas, artificial light in the night-time environment is sufficiently bright to induce a physiological response in plants, affecting their metabolic cycles, growth, and resource allocation. For normal growth and development, trees and other plants depend on the quality of light (wavelength or color), its intensity (brightness), and the duration of light over a 24-hour cycle (photoperiod). Light pollution does not just affect plants and their metabolic cycles directly, it also affects them indirectly by interfering with the lifecycles of the pollinators and other animals that interact with them. As artificial lights disrupt how nocturnal pollinators interact with plants, their pollen output can be affected, which may, in turn, impact how well bees and other diurnal pollinators can fertilize them during the daytime.

## Lumen Output

Dozens of floodlights are available online with rated lumen output of 2600 to 700 Lumen Output - Small sample below

770  
Lumens



Nuvo Lighting Single Light 11" High Integrated LED Outdoor Wall Sconce with 5000K Direct Sun LED Lamping

Model:65/062

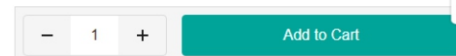
★★★★☆ 5 Reviews

**\$122.99**

Finish: Bronze - 244 In Stock

**Free Shipping!**

Leaves the Warehouse in 2 to 4 business days - Shipping to 02909



[Return & Shipping Details](#)

Available as  
low as 572  
lumen output  
from CREE



**THE EDGE® Square Series  
Area**

Lumen Output: 572 - 33,208 L

Wattage: 19 - 263 W

Available as  
low as 1700  
lumen output  
from CREE



**Traveyo® Series  
Area**

Lumen Output: 1,700 - 32,600 L

Wattage: 17 - 219 W

Intelligent Control: **N7**

2150  
to  
2600  
lumens

Lithonia Lighting 150-Watt EQ Hardwired LED Dark Bronze 2-Head Dusk-to-Dawn Flood Light 2600-Lumen

Item #3722944 Model #HGXLED2RHALOSWW2PIRD

Shop Lithonia Lighting ★★★★★ 119



\$74.98

\$71.23 when you choose 5% savings on eligible purchases every day. [Learn how](#)

3 monthly installments of \$25.00 with Lowe's Pay [Learn How](#)

- DESIGN: Easy to install and experience, the HGX floodlight family is the best choice for contractors and DIY customers with its broad feature set.
- ENERGY SAVINGS: Energy-efficient LEDs with adjustable lumen output of 2,150 or 2,600 lumen options.
- DIMMING: Photocell (dusk-to-dawn), Adjustable Lumen Output (ALO), Switchable Color Temperature (CCT) and Motion Sensor

Manufacturer Color/Finish: Dark bronze

<https://www.lowes.com/pd/Juno-150-Watt-EQ-Bronze-LED-Dusk-to-Dawn-Floodlight/5002179381>

1500  
lumens



Cree Lighting PAR38  
Weatherproof Outdoor Flood  
150W Equivalent LED Bulb, 40  
Degree Flood, 1500 lumens,...

★★★★★ ~ 431  
\$10<sup>96</sup> List: \$12.99  
prime One-Day



Roll over image to zoom in

Brand: Groz  
Material: Aluminum  
Style: Modern  
Light fixture form: Floodlight  
Power Source: Corded Electric

About this item

- Aluminum Die Cast housing with stainless steel bracket
- 15 LED's or 2300 Lumen Light output
- Ideal for construction equipment, tractors, farm machinery, emergency vehicles, service vans
- IP65 Water & Dust Proof Rating
- Comes complete with 20' (DC) power cord

2300 lumens

<https://www.amazon.com/Groz-55029-LED-45W-Floodlight/dp/B079RSMJPH>



20-Watt LED Flood Light

1600 Lumen LED flood light for commercial and industrial security lighting with IP65 rating & UL Listed

PART #: LS-FL-20W-XX-XX \$91.28  
\$82.98

1600 lumens



30-Watt LED Flood Light

2300 Lumen LED flood light for commercial and industrial security lighting with IP65 rating & UL Listed

PART #: LS-FL-30W-XX-XX \$124.28  
\$112.98

2300 lumens





**Good Earth**  
Lighting

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Home > 180-Degree 2-Head 700 Lumen Battery-Operated LED Motion-Activated Flood Light with Timer - White

**700  
lumens**



## 180-Degree 2-Head 700 Lumen Battery- Operated LED Motion- Activated Flood Light with Timer - White

**Model** SE1294-WHG-02LF7

- This security light has 700 lumens, a bright light output for a battery-operated light.
- IP65 rated, this product is water- and dust-proof and can be used safely outdoors.
- This fixture illuminates outdoor spaces without the need of wiring. Requires four D alkaline cell batteries (not included).

<https://www.amazon.com/LB1870QBZ-Battery-Operated-Security-L-Bracket/dp/B07K4KL4J3>



## LB1870QBZ 700 Lumen Battery Operated LED Motion Security Light, Twin Head (Includes L- Bracket for Ea

**Brand:** FLI Products

4.4 ★★★★★ 125  
ratings

| 14 answered questions

**\$27<sup>99</sup>**

Eligible for Return, Refund or  
Replacement within 30 days of  
receipt ▾

**Brand:** FLI Products

**Color:** Bronze

**Material:** Plastic

**Style:** Modern

**700  
lumens**



Roll over image to zoom in

**700  
lumens**



700 Lumen BR40 LED

Limited stock – call for stock check

10 watt BR40 replaces 65 watt incandescent floodlight

Dimmable down to 5%

Provides 700 lumens

25,000 hour rated life

Energy Star rated

2700K soft white, 80+ CRI

<https://www.earthtronics.com/product/10-watt-br40-earthbulb-led/>



April 12, 2024

**Proposed change to the Connecticut State Building and Fire Code**

International Building Code Chapter 27, Electrical, Section 2703 Light Pollution Controls

The Connecticut Audubon Society supports changes to the Connecticut State Building and Fire Code to require dimmer outdoor lighting to help protect migratory birds.

Bird populations in North America have declined by about 30% over the last half century. Building crashes are among the many causes. Recently revised estimates are that each year, between 1.3 billion and 5 billion birds are killed annually when they crash into buildings. Most birds migrate at night, and many of those building crashes occur when birds are drawn to buildings by bright outdoor lights.

As a member of the Lights Out Connecticut coalition, Connecticut Audubon is working with other organizations to raise awareness of the issue and to advocate for better regulations and laws. We believe that the proposed code changes would be an important step towards reducing the number of birds killed in building crashes, and we urge you to make this simple but effective change.

*About the Connecticut Audubon Society*

*The Connecticut Audubon Society protects Connecticut's birds, other wildlife, and their habitats through conservation, education, and advocacy.*

*We envision that our efforts will lead to a future where all can share and experience the joys of nature and understand the importance of environmental preservation.*

*Founded in 1898, the Connecticut Audubon Society operates nature facilities in Fairfield, Milford, Pomfret, Hampton, Sherman, and Old Lyme, and an EcoTravel office in Essex.*