

# Safe and Effective Outdoor Lighting in the Pioneer Valley

Dear Homeowner, Manager, or Business Owner,

Your property has a light or lights at \_\_\_\_\_ that are:

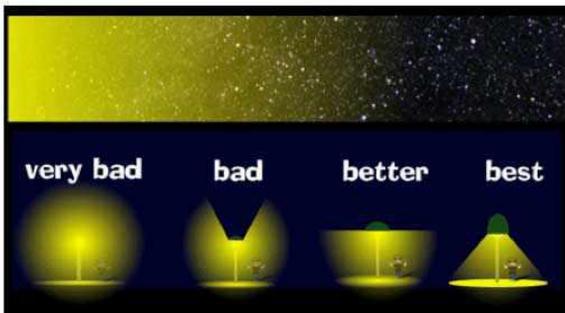
- unshielded  poorly aimed  excessively bright  excessively blue  \_\_\_\_\_

Not all outdoor lighting is the same. Good lighting should be (1) fully shielded, with the light going down only, not out or up; (2) not too blue; and (3) no brighter than necessary. Bad lighting causes glare and light pollution, wastes energy, is dangerous and unsightly, is linked to health effects ranging from sleep disruption to cancer, is responsible for millions of bird and mammal deaths yearly, and ruins the dark, starry sky.

Rule of thumb: *light bulbs should not be directly visible except from directly underneath the fixture.*

Would you please consider fixing the problem light(s)? Here are some suggested solutions:

- Re-aim floodlight so that it shines down only, and not beyond your property line
- Replace unshielded light bulb with shielded light bulb
- Sample shielded LED replacement light (CCT<3000K, <10 watts) provided free of charge\*
- Replace unshielded fixture with fully shielded fixture, or add shield to existing fixture
- Replace uplighting with downlighting
- Turn lights off when not needed, e.g. 1 hour after close of business, after midnight, etc.
- Other: \_\_\_\_\_



Aim fixtures to point straight down

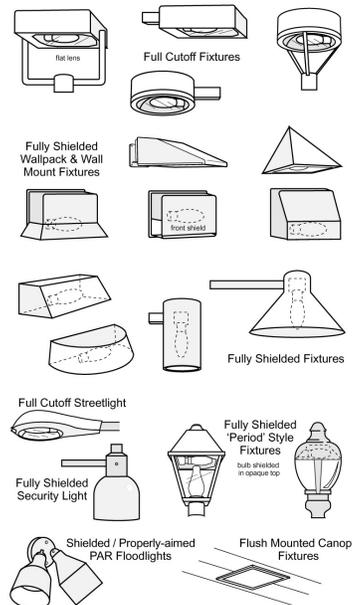
Wrong: wastes energy, causes glare, annoys neighbors, impairs visibility.

Right: shines on ground, not sky. Less glare, better visibility.

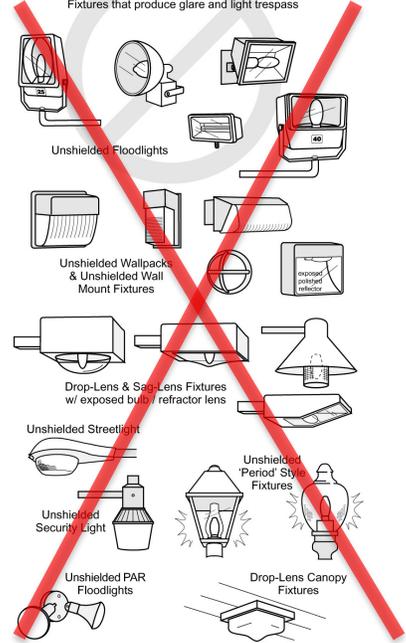


## Examples of Acceptable / Unacceptable Lighting Fixtures

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



**Unacceptable / Discouraged**  
Fixtures that produce glare and light trespass



BC 1002

\* If you don't like the free replacement bulb, just call us and we'll put the old one back.

This handout delivered by: \_\_\_\_\_

# Outdoor Lighting FAQ

## Can I still keep my outdoor lighting?

Of course! But please keep the light on your own property, not your neighbors'. Properly shielded lights provide *better* visibility. And please turn them off when not needed. Thank you!

## What's the big deal about glare?

Glare (unwanted light shining sideways) makes it harder to see the things you want to see. Glare is especially dangerous when it blinds drivers, bicyclists, and pedestrians. The elderly are especially sensitive to glare.

## What's especially bad about blue-rich white light?

Blue light disrupts sleep, ruins night vision and causes more glare in the human eye, making it harder to see what you want to see. Blue light also scatters more in the atmosphere: LED lights with correlated color temperature CCT = 5000K ("cool white") make *7 times more light pollution* than LEDs with CCT = 3000K ("warm white"). Most people prefer "warm white" to "cool white".

## Doesn't more lighting protect my property from criminals?

No. Scientific studies have found *no confirmed link* between outdoor lighting and reduced crime. In fact, bad lighting causes glare, which leads to high contrast and deep shadows that can hide intruders. Burglars use your lights to see where they're going too. Daytime and nighttime crime rates are the same regardless of lighting. *Safety is enhanced by better lighting, not more lighting.*

## Is outdoor lighting regulated by law?

Usually. For example, Northampton code Section 350-12.2 requires that all light fixtures shine downward only, with no light escaping above horizontal and no glare (unwanted, sideways-shining light) directed off the property, and specifies maximum permitted illumination levels.

## How much will it cost to fix?

Since bad lighting is wasted energy, most fixes that reduce glare and uplighting will *save* you money. There may be upfront costs for new bulbs or fixtures, but they will usually pay for themselves within a few years. Example: changing a 25W unshielded CFL to a 5W shielded LED (\$16) saves \$8/year, so it pays for itself in just 2 years (assumes 4000 hrs/yr, 10 cents/KWH).

## What are some good, low-glare porch light bulbs (for down-facing fixtures only)?

- Philips 471243 LED PAR20 Warm Glow 500Lm 2200-2700K 7W dimmable ([Amazon.com](http://www.amazon.com))
- GE 4.5w PAR16 LED Bulb Dimmable Narrow Flood 180Lm Soft White (try Foster Farrar)
- Satco S9400 2700K 7W 500 lumens dimmable (try <http://www.BulbAmerica.com>)
- Philips PAR20 dimmable LED 6W 2700K FL25 (try <http://www.BulbAmerica.com>)



## Where can I find good outdoor light fixtures?

Whether you're shopping online or in a store, look for the *Fixture Seal of Approval* by the International Dark Sky Association.

## Where can I find out more info?

International Dark Sky Association: <http://www.darksky.org>

Northampton City Lights: <https://northamptoncitylights.org>

Smith College Astronomy Dept.: <http://smith.edu/astronomy/>

Smart Outdoor Lighting Alliance (SOLA): <http://volt.org>