



Light Pollution

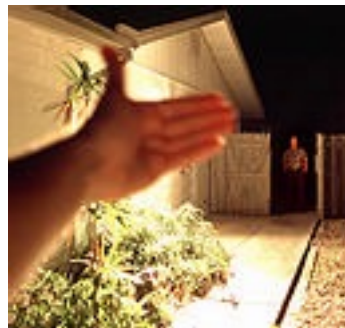
Light pollution is light that is generated by poorly designed lighting such as streetlights, security lights, and even those in automobiles. Poorly designed lights and fixtures send large amounts of light into the sky. This reduces the number of stars that can be seen by an observer in that area and it costs people in the United States **billions of dollars a year**—two good reasons to reduce light pollution. Today the beauty of a truly dark starry sky is lost to many people around the world.

Light that shines up into the sky is lost. Such lost light does not help us see, it does not deter crime, it merely cost us money (all artificial light cost money to create), and it steals the night sky from all of us. There are several things to consider when installing lighting.

Glare Bright lights at night can sometimes make it harder to see, due to glare. Look at the following two pictures and see how the light's glare obscures the view of the man near the fence. Block out the glare with your hand and the man is clear to see. Glare doesn't make you any more safe, instead it can provide a place for criminals to hide. And considering how hard it is to see this man, imagine what glare does with faint stars—it essentially erases them from view!



Glare hides man

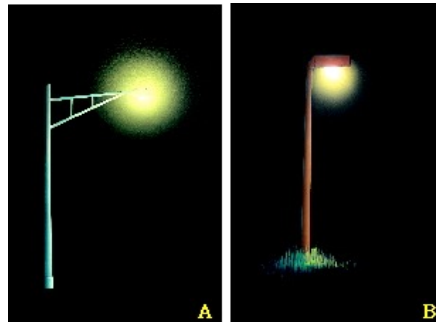


Blocked glare man appears

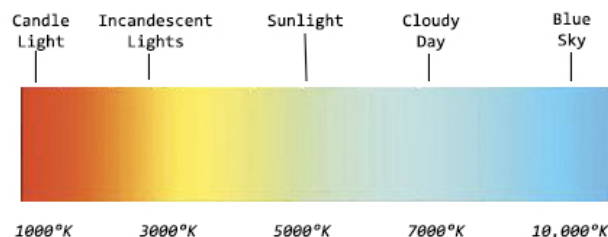
A better and safer alternative would be motion-activated lights that only come on when someone comes near. That startles a criminal and gives you instant light when you arrive home after dark.



Streetlight Shielding Not all streetlights are created equal. Which light (A or B) do you think is more efficient and sending all its light downward? Which one pollutes the skies more? Look around your town and take notice of the different styles of streetlights. Are most of your town's streetlights light polluters or not?

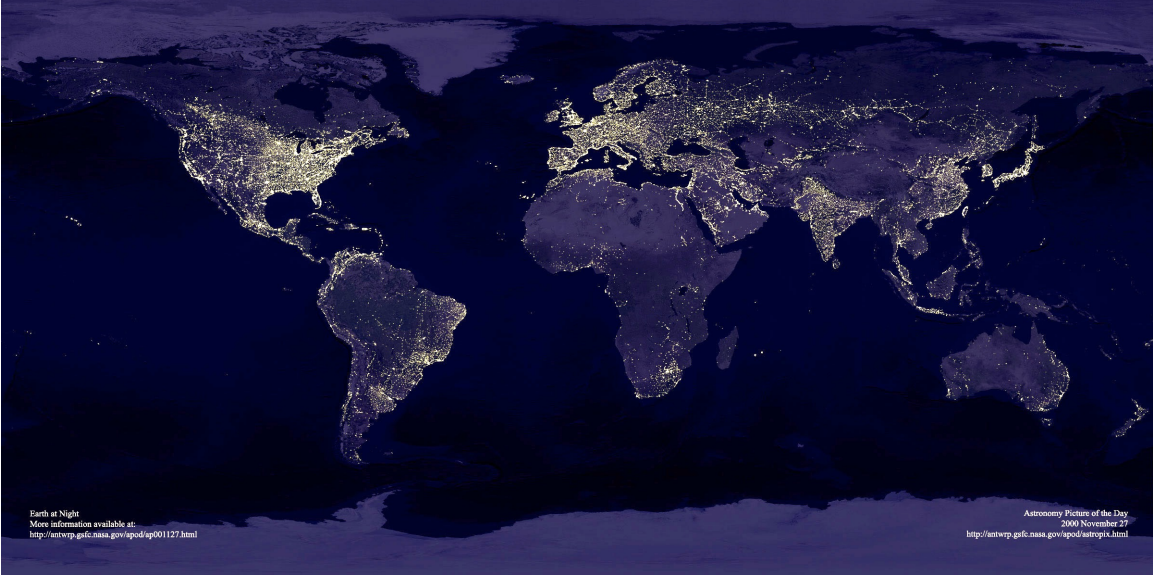


Light Temperature A second consideration with both public lighting and personal security lights is the *light temperature*. Light temperature is a way to measure the type of wavelengths of light that are produced by artificial-lights, it is measured in degrees Kelvin ($^{\circ}\text{K}$). Sunlight has a light temperature of 5000°K while the more yellowish incandescent lights in homes are around 3000°K , and candlelight is around 1000°K . No one is suggesting that we light our streets with candles, but a lower light temperature is less harsh on our eyes, creates less glare, and enables us to see the stars better. Well shielded streetlights with a light temperature of 3000°K provide a gentle full light without the harsh glare that the blue-white colored 5000°K lights will produce. A 5000°K streetlight outside your bedroom will make it hard to sleep as our brains associate that type of light with daytime and it subliminally works to keep you awake. This is true for wild and domestic animals as well. 5000°K light at night is actually detrimental to the health of people, pets and wildlife.

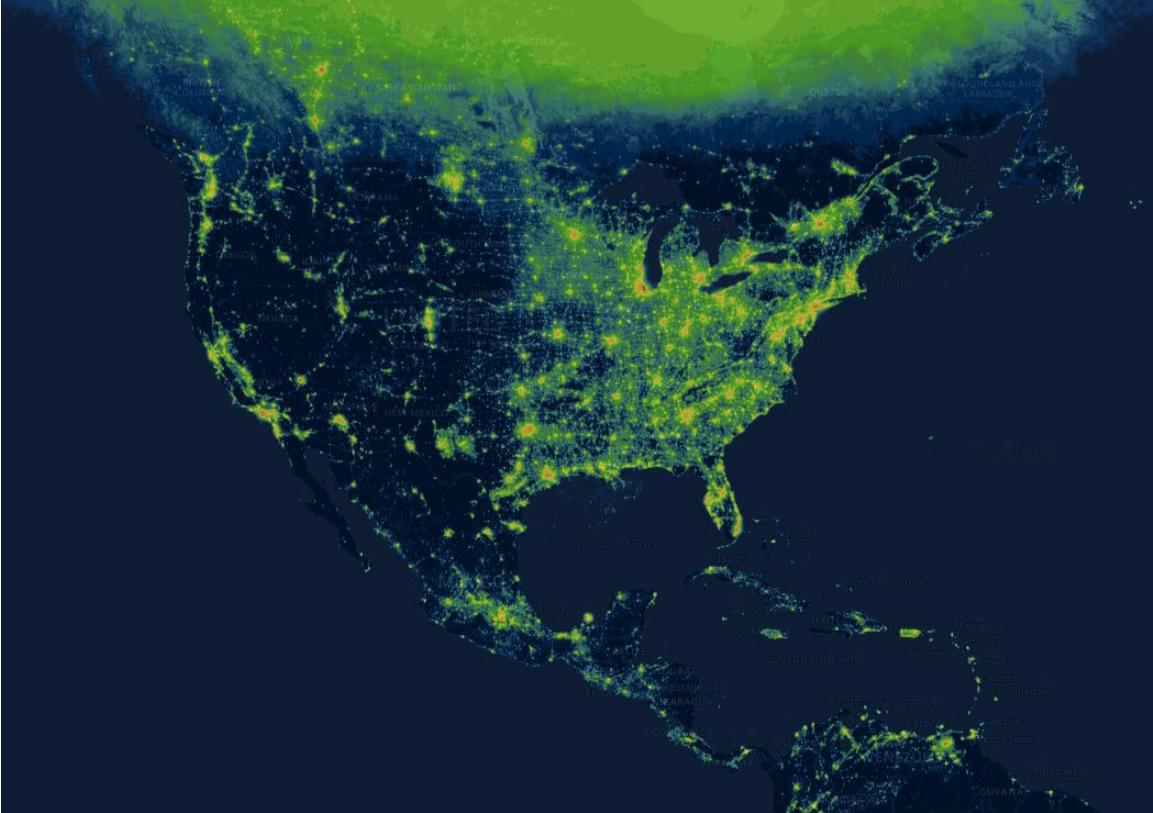




The World's Light Pollution



North America's light pollution





The Northeastern United States at Night



These three views of Earth, the United States, and the Northeast, all show how much light we're projecting into the night sky. Big cities and urban areas glow brightly, but if you look closely you can find small towns too. Can you find any towns near where you live? Maine has some of the darkest skies in the eastern United States, that's good news for us Mainers, we need to work hard to keep it that way.

For More Information Visit

- Dark Sky Maine www.darkskymaine.org
- International Dark-Sky Association www.darksky.org