

Don't Be LED Astray

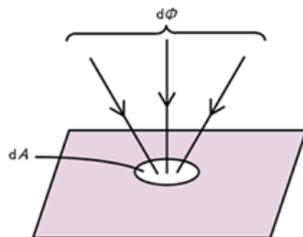


LED is an energy-efficient and cost-effective lighting technology that is developing at a rapid pace. However, not all LED lighting is created equal. Before you buy an LED luminaire, it's important to learn how to separate the good from the bad.

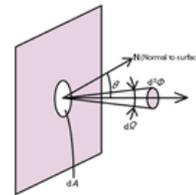
Luminescence

Lumens (lm) are the measurement of brightness for LED lights. Before buying an LED light, figure out the brightness you need in lumens. Remember that Watts do not indicate the brightness of LED lights.

ILLUMINANCE VS. LUMINANCE



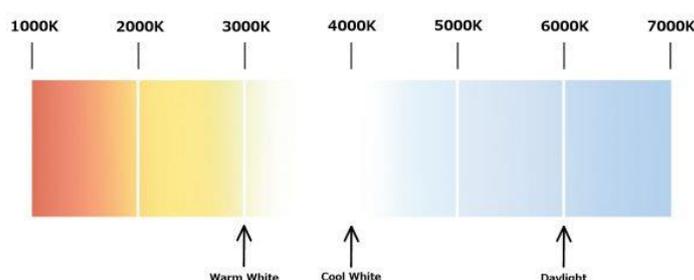
ILLUMINANCE



LUMINANCE

Colours

LED lights come in a variety of colours. The LED colour temperature refers to the amount of red, yellow, blue and pure white light given off by the light. Lower colour temperature LEDs have more yellow colours whereas higher colour temperatures emit a white colour shifted more to the blue spectrum. For a “Daylight White” colour temperature, look for LEDs with a colour temperature of 5000K. If you are looking for a “Commercial/Soft White” light colour, you will need LEDs with a colour temperature between 3500-4000K. Another important consideration is the light’s colour rendering index (CRI). If an LED light has a higher CRI it will reveal colours more realistically. Look for the CRI on the manufacturer’s website if needed.



Price

Although LED lights cost less than they used to, they are still more expensive than their predecessors. If you find very cheap LED lights, be careful and ensure that the quality of the LED is not compromised. Some companies sell LED lights at a low price because they use a low-quality chip. A low-quality LED light may have trouble maintaining its brightness and colour temperature, provide uneven light, or continue to use power even when it is turned off. Although the upfront cost of good quality LED lights can be high, the investment will be worth it. The more lights you replace, the bigger your savings can be. According to the U.S. Department of Energy, LEDs last 25 times longer and use 75% less energy, compared to many of their predecessors.

Power Consumption:

You can measure the efficiency of an LED light using its lumens number and its wattage value. Looking at the Lumens per Watt can help you determine if your LED light is energy-efficient. If the Lumens per Watt number is high, it means that the LED light is producing more light for less power. If it is lower, it means that the LED light is less efficient.

Full Cut-off

The term [“full cut-off”](#) is used to describe streetlights that do not emit light at or above a horizontal position. Keep in mind that full cut-off lights reduce environmental light pollution, which can benefit astronomers as well as nocturnal animals, plants and even people. Full cut-off lighting can also increase the effectiveness of the lighting system through increased uniformity and diminished glare. Lastly, full cut-off lighting can increase your savings since no light is wasted on areas that do not require illumination.