

Light the NIGHT

New lighting options can reduce carbon footprint and increase lighting efficiencies — as well as offer energy savings and peace of mind to customers and employees.

BY KEVIN BRALEY



Retail parking lots can be inviting to crime because of the vast — often unsecured and unattended — space that remains vacant and often poorly lit overnight.

A simple Internet search of “parking lot attacks” yields horrifying news accounts of beatings, robberies, hate crimes and murders. In Ohio, a teenager recently was sentenced for putting a noose around a boy’s neck and dragging him through a parking lot. In Seattle, an already convicted sex offender was sentenced last year after attempting to kidnap a woman in a parking lot, and in Sacramento, California, a woman was left for dead in early 2008 after being brutally attacked in a retail parking lot.

Retail parking lots nationwide are quickly becoming a common place for crime because of the vast — often unsecured and unattended — space that remains vacant and often poorly lit overnight, providing opportunities for delinquents to commit crimes under cover of darkness.

But sufficient, bright outdoor parking lot lights can curb crime and help keep your customers and employees safe at night. The lighting you choose can help them determine their level of confidence and security outside your business.

Unfortunately, in these tough economic times, retail facility managers have to consider factors other than customer and employee welfare when mulling over lighting retrofits.

Company decision-makers have to ask questions like: How much does adequate parking lot lighting cost? How long will it last? And, maybe most important, how much light do I need to provide for my customers and employees to ensure their safety after dark?

Luckily for businesses, new lighting technology is designed not only to provide adequate light levels to help improve security, but are designed for maximum efficiencies, meaning businesses can slash their light-related energy costs and reduce their carbon footprint.

The major, outdoor lighting technologies available include fluorescent, induction and LED lighting, each of which offer significant advantages when compared to the high-intensity discharge lights you likely have in your parking lot right now. HIDs have been commonly used since the 1960s despite being inefficient and providing inadequate light levels.

When compared to new technology, HIDs also have a significantly shorter life span of approximately 15,000 to 30,000 hours, which means additional costs are incurred as maintenance employees have to change lamps



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more often.

In comparison, fluorescent technology lasts about 40,000 hours. LED, a relatively new technology, lasts up to 50,000 hours, but because of its infancy, costs from \$500 to \$1,000 per fixture.

Fluorescent fixtures, which are new to the outdoor market but use a proven technology, cost about \$250 to \$400 each, while providing more light than their LED counterpart. LEDs, or light-emitting diodes, produce 60 to 65 lumens per watt, whereas fluorescent technology provides 80 to 85 lumens per watt. A lumen is a measurement of light flow through a unit.

And while fluorescent technology produces more light, it's often the other technologies that produce glare and an abnormal light color that can cause strain on eyes against the dark, night sky.

Colors are measured by temperature in Kelvin — a measurement where absolute zero is 0 kelvin. Using a Fahrenheit scale, absolute zero is minus 459.6 degrees. Induction and LED lighting measures approximately 5,000 kelvin, a color temperature that mimics sunlight, which can be perceived as too bright at night. Fluorescent lighting, however, produces a color temperature of about 3,000 kelvin — creating a more pleasing color, and one that's easier for eyes to adjust to.

Moreover, fluorescent technology is proven to maintain its light levels longer than induction and LED fixtures. LED lamps have a lumen depreciation — the reduction of light

output over time — of 30% to 40% during their lifespan. Fluorescent technology, on the other hand, loses approximately 5% to 7% of its output in the lamp's lifespan.

Lights levels that quickly depreciate can be a safety hazard, as the lights won't provide necessary light levels to thwart criminals or provide sufficient light levels for drivers.

The new technologies also offer energy-saving opportunities. In a test project for the city of Pittsburgh, Orion's fluorescent technology decreased energy consumption 65% and increased light levels under the technology by approximately 300% in comparison to the high-pressure sodium HIDs the city is seeking to replace.

The dramatic reduction in energy consumption means the city could save taxpayers significantly — savings you could take advantage of in your own parking lot.

New lighting for your company's parking lot can provide a wealth of benefits, from better security to energy and maintenance savings, to reducing your carbon footprint. While choosing new lighting might appear like a daunting decision, be sure to consider all technology, including fluorescents, before making a decision. **RFB**

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