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Shining a Light on LEDs

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Three reasons restaurant owners are rethinking conventional lighting technology

It's essential for restaurant operators to always consider ways to create appeal while cutting costs. Today, many are looking to lighting design as a way to make easy adjustments that improve both the dining experience and their bottom line.

A large number of lighting projects are taking place in restaurants across the country, and light-emitting diode (LED) technology is leading the charge thanks to its efficiency, aesthetics and appeal.

Increasing Efficiency

LED is more efficient than conventional lighting technologies— these lamps and fixtures typically have longer lifespans and use less energy. This is crucial for restaurants, which use five to seven times more energy per square foot than other commercial buildings, including offices and retail stores, according to ENERGY STAR®. In fact, high-volume quick-service restaurants (QSRs) may even use up to 10 times more energy per square foot than other commercial buildings.

While ovens, refrigerators and other essential appliances are the obvious culprits of this added consumption, it can be expensive, not to mention inconvenient, to refurnish a kitchen with the latest energy-efficient equipment. Lighting, however, is often the fourth leading source of energy use in restaurants after food preparation, heating and cooling, and sanitation. Plus, lighting is relatively simple and affordable to upgrade compared to making capital investments in HVAC infrastructure. Simply put, lighting is the place to start for any restaurant intent on chopping energy and maintenance costs.

Saving Inside and Out

Indoor lighting is where most restaurant owners focus their design efforts, and many are finding that LED offerings are a great way to save while beautifying a space. These lamps and fixtures can provide clean, evenly distributed white light that is ideal for accentuating any area. Particularly in QSRs, outdoor LED lighting, whether in parking lots, signs or canopies, can also serve up quick cost savings while helping properties stand out. No matter where they're installed, LED lighting solutions yield a fast ROI following a retrofit.

Added Control Over Costs

Another way restaurant operators are augmenting their savings is with control systems that ensure lights are only on when they need to be. This trend is prevalent among QSRs, though intelligent lighting systems are increasingly found throughout casual establishments as well. If you're considering this type of controls, take care to ensure all lighting systems are compatible post-retrofit, since infrastructure may have changed over time, and systems designed for one lighting technology may not work properly with another.

As part of one recent lighting project, Sparkling Hill Resort—a British Columbia resort and wellness center celebrated for its creative use of Swarovski Crystal elements— upgraded to LED lamps throughout its facility, including in dining venues, guest suites and meeting rooms.

Following the installation of 2,200 GE PAR20 LED and 300 PAR30 LED replacement lamps, Sparkling Hill reduced its annual electricity use by 828,000 kilowatt hours (kWh)—a nearly $66,300 hotel lighting cost savings based on an $0.08 kWh rate and 24 hours of operation a day. Maintenance expense also fell at the resort, where staff had replaced 2,500 halogen bulbs a year on average. Including purchase, labor and disposal costs, Sparkling Hill is now saving $68,000 in annual upkeep thanks to longer-lived lighting technology.

Additionally, Sparkling Hill qualified for local utility company rebates that helped pay for the new hotel lighting. Although project payback periods can vary based on the size and scope of the lighting upgrade, Sparkling Hill Resort's project payback was achieved after only three months when factoring in the purchase price of the new LED replacement lamps.

Aesthetic Appeal

Lighting is one of the most impactful yet underrated elements of great visual design. It can account for a space's ambiance, but it makes up just a small percentage of the design cost. This means it's important for restaurant operators to also find the right lighting option—not necessarily the one that will save the most or cost the least.

One of the most important metrics by which lighting sources are measured is their ability to accurately render colors. Color rendering quality and consistency are crucial to food appearance—no one wants their chicken to look green—as well as dining room aesthetics. The right lighting options can truly make colors "pop," but those with poor color rendering can quite negatively affect visual appeal—and appetites.

Incandescent lighting technology has typically offered great color rendering but poor energy efficiency, whereas fluorescent can offer poor color rendering while operating much more efficiently. Now that LED lighting technology has advanced, however, restaurant operators have compelling new lighting options that offer a great balance of visual appeal and energy efficiency.

Owners typically want very warm colors when setting a relaxing mood within a restaurant, and requests are often for color temperatures in the 2,200K to 2,400K range. In the past, LEDs were only capable of producing light with cooler color temperatures, but now technology has improved to the point that the warm temperatures that owners desire are attainable.

Color temperature also plays heavily into dimming, a capability that many restaurant operators desire, especially in the casual dining space. Dimming allows the altering of aesthetics within a space throughout the day. Today, there is a trend toward "dynamic dimming," or the ability to dim light levels while increasing the warmth of the color temperature.

In the past, LEDs had difficulty meeting these demands—as dimming works differently with the semiconductors that create LED light versus the gases that are agitated to create fluorescent light— but now some LED light can be bent to create a warmer temperature as lights dim.

Contrast Captivates

Many establishments are also seeking more visual contrast in lighting, steering away from unilateral, office-like illumination. To achieve this, restaurant owners are adding LED spotlights, directional lamps, suspended fixtures and even accent lighting. QSRs craving a more casual feel are especially embracing lighting-created contrast as they invest in attracting ever more discerning diners. A professional lighting audit can help ensure the right lighting products will be deployed to create the desired effect.

Because of their ability to evenly distribute light or highlight areas of interest, LEDs offer the sort of appeal that can contribute to a "halo effect" within a space. As a space looks more appealing, the compelling aesthetics contribute to more positive overall perceptions of the restaurant. Since LED replacement lamps are more afford- able than ever, elevating visual interest, especially in dining rooms, has become a popular industry trend.

Mass Appeal

Shifts in the way patrons conduct themselves are also shaping lighting design considerations. For example, foodies who flood social networks with photos are giving restaurateurs a good reason to invest in great lighting. Also, back-of-house and dining room lighting aren't exclusive any longer; many restaurants allow patrons a peek at food preparation, and LED technology can work well here, too, offering longevity and efficiency to compete with fluorescents in the kitchen. Fashionable LED fixtures that look as good as the light they produce can also play on the perceptions of Millennials—who are more likely to visit full-service restaurants on a monthly basis than Gen X and Boomers, according to American Express—as they seek trendy, hip establishments.

Environmental performance is also a major concern for many corporate-owned restaurants with Corporate Social Responsibility goals, and improving lighting design to include more efficient technology, such as LEDs, can be beneficial in meeting industry standards and customer expectations. Whether aiming for Certified Green Restaurant® status or LEED certification— which has been achieved by some QSRs, too—lighting plays a pivotal role.

Efficient and evocative LED lighting options are being embraced throughout the industry. Many restaurant owners are finding that a simple re-lamping can work wonders, while others are optimizing around LED for new construction. In either case, a lighting audit by a certified, knowledgeable professional is a sure way to start. No matter the case, one thing is clear: Lighting's power to transform any dining space should not be underestimated.

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