GE LED leads with LEED®

GE's LED technology helps Walmart achieve LEED® Silver certification in South Euclid, Ohio, Supercenter location

Walmart’s first all LED-lit U.S. Supercenter helps further retailer's goal to reduce energy use in its buildings globally 20% by 2020

THE SITUATION

Walmart has long been committed to creating a positive impact in the neighborhoods in which it operates. As a result, the company seeks to design its new stores according to leading sustainable building practices, conserving resources and creating occupant-friendly indoor environments, helping to further the retailer’s goal to reduce the kilowatt hour (kWh) per square foot of energy required to power its buildings globally 20% by 2020.

It was with this goal in mind that in planning and building the South Euclid, Ohio, Walmart Supercenter, a decision was made to target both Leadership in Energy and Environmental Design (LEED®) certification from the U.S. Green Building Council® and something entirely new for Walmart—an all LED-lit Supercenter.

“We had to rely heavily on GE, which was only possible because of the powerful relationship our companies have. The experience of working with GE was very positive, and it was clear to us from the start that GE was willing to expend substantial effort to ensure we were successful in our endeavor.”

- Don A. Moseley, P.E., Senior Manager, Walmart

THE SOLUTION

Lighting a Walmart Supercenter is no small matter, but GE had an LED fixture portfolio that was up to the task. The project required several different types of energy-efficient, visually appealing LED lighting products, including broad implementation of LED across ceilings, sales floor space, refrigerated cases and outdoors. While many factors influenced the company’s ability to garner the credits necessary to achieve LEED Silver certification in its South Euclid location, a close collaboration with GE Lighting to deploy LED lighting across the store played a key role.

imagination at work
"If Walmart is going to be one of the nation’s most prominent sellers of energy-efficient lighting technologies, it only makes sense that our company should also invest in the same types of energy-efficient technologies."

- Ralph O. Williams, P.E., Walmart

GE's Lumination IS Series fixtures will be rolled out to more than 200 new Walmart stores over the next two years, which is expected to produce more than $34,000 in savings per year in each store.

THE SOLUTION CONTINUED...

- **Refrigerated display lighting**: 80% more efficient than equivalent fluorescent lights used in refrigerated display cases with doors, GE Immersion™ RV40 LED refrigerated display lighting systems yield an estimated energy savings of more than 59,000 kWh per year for an average Walmart grocery section—enough to power five single-family homes.

Given the size of the store, the LED lighting used in refrigerated display cases at the South Euclid location generated an added energy savings of more than 45,000 kWh per year over a typical Walmart store.

- **Sales floor lighting**: Use of GE Lumination™ LED lighting for the sales floor in lieu of fluorescent alternatives is expected to save Walmart almost 80,000 kWh of energy usage per year compared to a similar building.

- **Parking lot lighting**: Walmart has found that GE Evolve™ LED Area Lights provide a noticeable reduction in both on- and off-site glare, as well as improvements in trespass control, light uniformity, vertical illuminance and visual clarity. They are also projected to consume at least 50% less energy when compared to traditional metal halide fixtures. Walmart also deployed Evolve™ LED Wall Pack & Egress Lights to illuminate areas around exterior walls.

- **Total building lighting**: GE's Lumination™ IP Series LED Luminaires were chosen for the South Euclid Walmart Supercenter project. The total projected energy savings over fluorescent lighting in the building, as a result, is in excess of 100,000 kWh per year. With projected lifespans at least six years longer than alternative fluorescent fixtures that must be relamped every three years, LEDs are also projected to offer significant savings on maintenance costs.

At the same time, the South Euclid Walmart Supercenter installation gave GE valuable data for use in developing its next-generation LED products, including the Lumination™ IS Series LED Luminaire, which is estimated to be capable of saving approximately 300,000 kWh per year in a standard Walmart Supercenter location.

In fact, the successful launch of Walmart’s all-LED store paved the way for Walmart’s use of GE’s energy-efficient, dimmable IS Series fixture as the new LED prototype ceiling fixture for all new Supercenters and Supercenter remodels and takeovers.

For more information on the latest LED lighting solutions for retail environments, visit gelighting.com/retail.