

Project Profile

TYCO INTERNATIONAL



Before



After

Tyco International (NYSE: TYC) designs, sells, installs, and services security systems in the global commercial, industrial, retail, institutional, and government sectors. These systems detect intrusion, control access, and react to movement, fire, smoke, flooding, environmental conditions, industrial processes, and other hazards. An environmentally conscious enterprise, Tyco has established the vision of achieving Zero Harm to People and the Environment.

Facility Type:

Industrial with Office Space

Square Footage:

79,000 SF

Products:

LED lighting technology and occupancy sensors

Savings:

\$45,132 Annually

Situation

In 2014 Tyco was interested in identifying the benefits associated with LED lighting technology for reduced energy consumption and improved quality of light within the Fire Protection division manufacturing facility in Madison, AL. Tyco was assessing the viability of deploying LED lighting technology as a new standard for all its manufacturing facilities. This facility was selected to pilot the approach and render proof of concept for both the cost savings and lighting quality objectives associated with the lighting system upgrade.

Solution

A total of 500 fixtures were upgraded to LED technology across the production, office and exterior work areas of this facility. This included installation of new LED high bay fixtures in the production area, LED retrofit kits for existing ceiling troffers in the office and LED wall pack and pole lights across the exterior areas of the facility. Occupancy controls were deployed across the work areas to reduce the operating hours of fixtures during non-occupied periods.

Both the design/audit and implementation phases were conducted by Eco Engineering.

Results

The project met objectives in terms of both energy savings and overall lighting quality.

- **Annual Demand Reductions**
Estimated 605.76 kW per year
- **Annual Consumption Savings**
Estimated 312,828 kWh per year
- **Lighting Quality and Longevity**
The estimated life of the new LED system will equal 16 years in the production facility and 22 years in the office areas. The average light levels in the production areas increased from 21 foot candles to 32.7 foot candles following the upgrade. Tyco also will benefit from a full product warranty of 7 years on fixtures and 10 years on LED lamps.
- **Reduced Billings**
The project will deliver total energy savings of more than \$45,000 for the first year following the upgrade. The lighting portion of the utility bill will be reduced by 62% per year. The project is expected to reach full payback in 3.6 years, well under Tyco's payback time threshold for projects of this nature.