

# Current's Daintree™ Solution Helps Mack Technologies Realize Greater Savings and a Lasting and Sustainable Impact

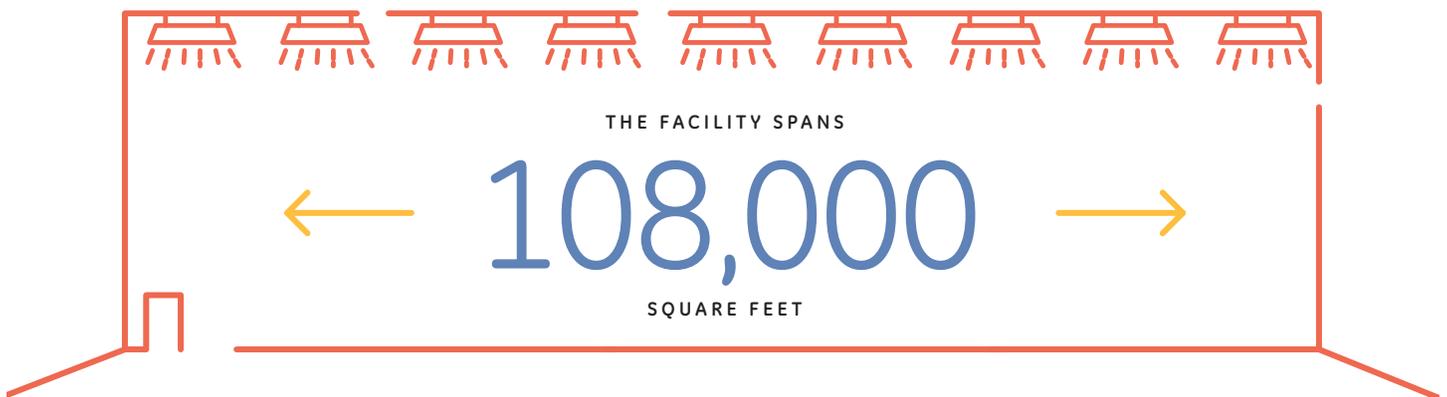
## The Opportunity

Mack Technologies, a leading provider of complex electronic manufacturing services, makes electronic circuit boards for the defense, telecom, and industrial sections in its facility in Westford, Massachusetts.

Mack Technologies researched efficient commercial lighting solutions to meet aggressive operational cost reduction goals, but concerns about the initial cost of replacing several thousand fluorescent bulbs made the manufacturer cautious about conversion. Mack Technologies also wanted to be a leader in corporate social responsibility. To do that, the company needed to significantly reduce its energy consumption and enhance employee working conditions while minimizing the cost of investment.

## The Solution

Mack Technologies believed that the key to achieving energy efficiency was to leverage transformative technologies. Knowing that LED lighting, along with Daintree intelligent lighting controls, represent a significant innovation in energy efficiency, Mack Technologies sought to retrofit its 108,000-square-foot manufacturing facility in Westford.



To make this goal a reality, the firm brought in Bluestone Energy Services to develop and execute the comprehensive LED lighting and intelligent control project. Realizing the value of Daintree, Mack raised the bar in LED conversion by integrating controls to dramatically improve efficiency and flexibility.

## The Results

The Daintree solution from Current, powered by GE, provides a wireless control solution for smart buildings, allowing Mack to transform LED conversion into a greater energy- and cost-savings investment. Daintree controls the new lighting fixtures through a standards-compliant ZigBee mesh network, enabling the driver in each lighting fixture to provide maximum flexibility to lighting control strategies.



**T-8 FLUORESCENTS  
REPLACED WITH  
LED FIXTURES**



**MAN HOURS INVESTED  
FOR INSTALLATION**



**HOURS OR FIVE YEAR  
WARRANTY**

Between October and December of 2012, Mack replaced 2,600 T-8 fluorescents with LED fixtures—investing over 3,000 man hours for the installation. The LED fixtures are warranted for five years or 50,000 hours and will not require frequent replacement like the fluorescent lighting fixtures they replaced.

**FROM A STANDARD WEB BROWSER, MACK CAN NOW LOG INTO  
THE DAINTREE CONTROLSCOPE MANAGER TO DYNAMICALLY:**



- + Control the new lighting luminaires
- + Monitor power usage in real time
- + Improve efficiency to reap greater savings

At Mack, each fixture is individually programmed through ControlScope Manager to achieve maximum savings. Mack decreased the lighting intensity in one area from its normal level in 1-percent increments to better understand what levels were

important for the tasks being performed. Not until the level reached 50 percent of spec standard did occupants perceive the lighting to be noticeably dimmer. So, while Mack is already saving significant money on its energy bill, it has opportunities to extract more savings from Daintree as the users gain experience with actual usage requirements.

***"We were blown away by the information we came across in terms of the energy savings and the positive impact to the environment that we could realize."***

**—John Kovach**

Former President of Mack Technologies

Through ControlScope Manager, Mack Technologies has access to reports that show its energy usage based on its settings. This information enables Mack to discover and implement opportunities to improve the facility's energy usage, boosting the business profitability. Mack can also use this information to define and refine zones of lighting to be controlled as a group on a schedule, on demand, or on sensor-based occupancy as they see fit.



Want to see how you can  
make your environment intelligent?

Contact us to get the conversation started.

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