

SHOWCASE PROJECT: BEST BUY: SKYLIGHTS AND DIMMABLE FLUORESCENT LIGHTING

SOLUTION OVERVIEW

Before skylights, dimmable lighting, and the Enterprise Energy Management system, Best Buy had 400 watt metal halides and no immediate way of knowing if the lighting or heating/cooling systems were working as designed.

With its high solar insolation and energy conservation potential, Best Buy selected this Las Vegas store to receive a multi-faceted energy upgrade.

SECTOR TYPE

Commercial

LOCATION

Las Vegas, Nevada

PROJECT SIZE

41,000 square feet

SOLUTIONS

Best Buy installed skylights and a dimmable fluorescent lighting system to harvest daylight. Adding skylights allowed Best Buy to vary lamp output from 5% to 100%. On average the daylight harvesting system reduced lighting energy use by 45% in the store. Best Buy also installed sub-metering for lighting in the store, which allowed the creation of alarms and energy models to ensure proper lighting schedules during unoccupied hours, employee-only hours, and store hours.

The skylights installed by Best Buy were Sunoptics, Prismatic Skylights, and the size used varied based on structural design. Complementing the lighting and skylights additions, a corporate energy management system deployed at the store employs automated fault detection and diagnostics, to alert energy management staff if equipment is not running according to schedule or there are significant problems detected in critical equipment.

OTHER BENEFITS

Allowing more natural light to come into the store enhances the overall customer and employee experience, especially on a sunny day. The enterprise energy management system creates alerts

when critical equipment is in alarm which allows Best Buy to be proactive and ensure that issues are fixed before the customer and/or the employee experience is compromised. Other benefits include reductions in carbon footprint and reduced repair and maintenance expense at the store.

Annual Energy Use



Energy Savings
18%

Annual Energy Cost



Cost Savings
25%



Outside the Las Vegas store



Skylights with dimmable fluorescent lighting



Skylights with dimmable fluorescent lighting