

ENERGY PROJECT CASE STUDY

LIGHTING IMPROVEMENT

Financials

- ◆ Total Turnkey Installed Cost: \$146,453
- ◆ Annual Energy Cost Savings: \$42,310
- ◆ Simple Capital Payback: 3.46 years
- ◆ Project IRR: 26%

Description of Facility

- ◆ Manufacturing facility, printing, 375,000 Sq. Ft.
- ◆ Multiple printing lines
- ◆ Multiple binding machines
- ◆ Multiple stitching machines



System Description

- ◆ 400 watt Metal Halide fixtures
- ◆ Eight foot 2 lamp fixtures with T12 lamps
- ◆ Four foot 2 and 4 lamp fixtures with T12 lamps

System Opportunities/Issues

- ◆ A detailed lighting audit was performed for the facility
- ◆ General facility lighting in production and warehouse areas were 400 watt metal halide fixtures
- ◆ Fluorescent lighting was used for task lighting in production areas
- ◆ Fluorescent lighting was used for lighting in office/maintenance/break areas

Project Description

- ◆ The 400 watt metal halide fixtures were replaced with 320 watt pulse start metal halide fixtures
- ◆ Fluorescent task lighting fixtures using T12 lamps and magnetic ballast were retrofitted with new T8 lamps and electronic ballast or the fixtures were replaced with new fixtures using T8 lamps and electronic ballast
- ◆ Fluorescent lighting fixtures in office/maintenance/break areas were retrofitted with T8 lamps and electronic ballast

Project Benefits

- ◆ New (more efficient) fixtures, lamps and ballasts for the metal halide fixtures
- ◆ New (more efficient) lamps and ballasts for the fluorescent fixtures
- ◆ Increased color rendition from the new lamps and ballasts
- ◆ Reduction in energy usage and costs
- ◆ Reduction in O&M costs