OVERVIEW

LED High Bay Retrofit Warehouse Lighting Project at Fast-Paced Top Five Hundred Internet Retailer, Titan Distributors.

CHALLENGE

To successfully install lighting in the fast-paced environment of an Internet Retailer.

Need 1: Improve Lighting Output

Need 2: Reduce Electricity Costs

Need 3: Reduce Maintenance Costs

Need 4: Improve employee safety through high-quality lighting

SCOPE OF PROJECT

In total 704 Fixtures were installed at this active 375,000 square foot warehouse facility, replacing 854 existing fixtures.

- Replaced 150 aging or defective 400W MH fixtures
- Replaced (213) 358W T5 High Bays with new 150W LED High Bay
- Replaced (45) 400W MH High Bays with new 150W LED High Bays
- Replaced (177) 220W T8 High Bays with new 90W LED High Bays
- Replaced 177) fluorescent troffers with 50W LED Flat Panel Kits
- Replaced (42) exterior mounted fixtures with high efficiency LED Lighting
- Replaced (17) 400W MH Cobra heads with new 180W LED Cobra Heads

Improvement of warehouse lighting average foot candles as follows. These improvements were achieved by reducing the fixture count prior to the retrofit from 854 fixtures to 704 after final installation.

Aisled Areas

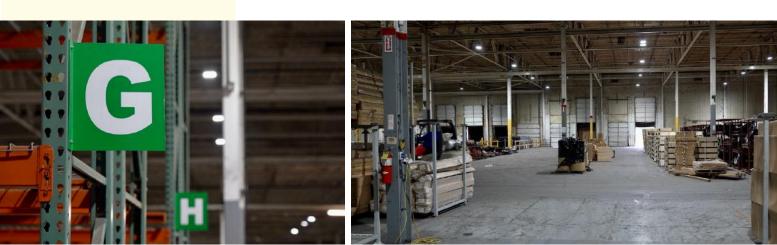
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Open Areas

- Before Retrofit: Average 15 Foot Candles
- After Retrofit: Average 50 Foot Candles
- After Retrofit: Average 46 Foot Candles

Before Retrofit: Average 6 Foot Candles



FIXTURE TYPE	FIXTURE DESCRIPTION	WATTAGE/EFFICIENCY	QUANTITY
LED High Bay Fixture	150 Watt LED High Bay Fixture, 120-277 Volts, 5,000 Kelvin CCT, 190 LPW	150 Watt 190 Lumen Per Watt Efficiency Fixture	258
LED High Bay Fixture	90 Watt LED High Bay Fixture, 120-277 Volts, 5,000 Kelvin CCT, 190 LPW	90 Watt 190 Lumen Per Watt Efficiency Fixture	177
2x4 LED Flat Panel	50 Watt LED 2x4 Flat Panel Fixture, 120-277 Volts, 4,000 Kelvin CCT, 140 LPW	50 Watt 140 Lumen Per Watt Efficiency Fixture	177

The Helios EnergyTM Impact

Enhanced safety and productivity, improved employee satisfaction and morale

10-year energy savings – **\$968,620**

1,834,801 pounds of CO2 saved annually! This is equivalent to removing **178** cars from the road, or not burning **18,218** gallons of gas each year!

Number of Fixtures

- Before Retrofit: 854
- After Retrofit: 704

Lighting System Energy Consumption (kW)

- Before Retrofit: 264
- After Retrofit: 70
- **2.8 years** payback period of time to reach break-even point
- Energy Reduction: 1,118,100 kWh Reduced
- Energy Savings: \$96,862

"Helios was great to work with. I score them an A Plus on this project. The improvement in lighting sets the tone and improves the efficiency and safety of our facility."

TESTIMONIALS

- TITAN DISTRIBUTORS, Mike Lawson, Continuous Improvement Manager

"Safety is our number one priority and the lighting improvement is dramatic and creates a safer environment with greater picking efficiency and therefore much better operational performance."

- TITAN DISTRIBUTORS, Luis Harvey, Forklift Operations

ABOUT OUR CLIENT

Titan Distributors, Inc. is a high–growth, fast-paced company. As a top 500 internet retailer, they are rapidly expanding in order to build the foundation for our continued success. They specialize in sales of commercial and farm attachments, ramps of all kinds, fitness equipment, and various outdoor items.

The company was started in a garage over 10 years ago with a clear, unique vision to provide quality products at an affordable price to consumers. The team has driven exponential growth each year and they expect to exceed \$150M in annual sales by 2020. At Titan, they offer an energetic, exciting workplace with a family environment. This culture is unique and caters to the cultivation of their continued growth.

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Titan Brands

Titan's Core Values









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