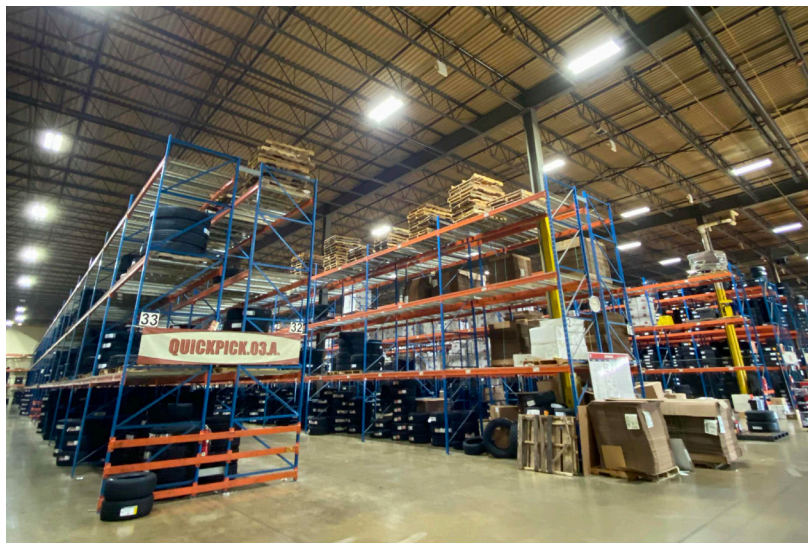


LED Case Study



American Tire Distributors

La Grange Highlands, IL



Background

American Tire Distributors is one of the largest independent suppliers of tires for the replacement tire market. It operates more than 130 distribution centers, including 24 distribution centers in Canada, serving approximately 80,000 customers across the U.S. and Canada.

ATD was looking for a lighting upgrade to replace the multi-lamp T5HO system at its La Grange Highlands DC which would improve lighting levels, eliminate the fluorescent maintenance issues, improve sensor responsiveness, and provide a rapid return on investment.

Industrial Energy Savings completed an audit of the existing system and developed an LED lighting solution to meet the ATD requirements while improving overall visual factors within the facility.



By The Numbers

Facility Size- 95,000 FT²

Year Installed- 2021

Existing Fixture Data

WAREHOUSE

364 - 6 lamp T5HO High Bay
w/motion sensor

OFFICES

52- 2 lamp T8 2x4 Acrylic lens Troffers
12- 3 lamp T8 2x4 Parabolic Troffers

LED Solutions

WAREHOUSE

324 - 112W 16,000 Lumen LED Highbay
& programmable motion sensor
40 - 112W 16,000 Lumen LED Highbay
& Programmable motion sensor
w/ battery backup

OFFICES

64 - 47W 2x4 LED Center Basket
Style Retrofit

Energy Summary

91.58 kW Reduction

256,873 kwh Reduction

Reduction In CO₂

581,561 lbs.

Economic Analysis

Utility Rebate: COMED \$41,759.00

Annual Energy Savings: 26,457.94

Payback: 2.07 years

Lighting Performance Summary

Warehouse Aisle Pre Lighting Levels: 10-17 fc

Warehouse Aisle Post Lighting Levels: 20-25 fc

Warehouse Dock Pre Lighting Levels: 17-28 fc

Warehouse Dock Post Lighting Levels: 30-38 fc

Office Pre Lighting Levels: 28-40 fc

Office Post Lighting Levels: 35-47 fc

The New Lighting Design

ATD was looking for a comprehensive LED lighting solution which would address their needs across the facility while upgrading all lighting to long-lasting high performance LED equipment.

The IES solution consisted of replacing all existing T5HO highbays with new Illumadyne LED highbays having onboard programmable motion sensors. The solution also included battery backup units to provide code level egress lighting. Each EM luminaire features easily recognizable orange end-caps. ATD offices received an Illumadyne center-basket troffer retrofit kit for improved aesthetics, lighting quality, and energy savings.

Coupled with a 7-Year Equipment Warranty, ATD will experience substantial maintenance savings and the fast paced work environment won't be hampered by slow sensor response (due to the program rapid start pre-heat cycle on T5HO system).

Economic Results

The new LED lighting system is expected to generate over \$34,202.00 in annual energy and maintenance savings while providing a simple payback in just 2.07 years. IES successfully worked with COMED to capture a \$41,759.00 utility incentive for this project.

LED Highbay Specification:

- 16,000 Lumens
- 112 System Watts
- 5,0000K
- 82 CRI
- L70= 140,000 HRS (50C)
- 7-Year Limited Warranty



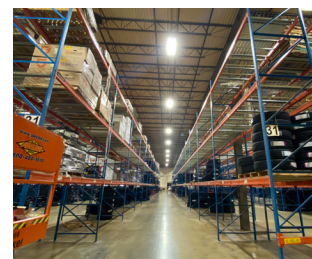
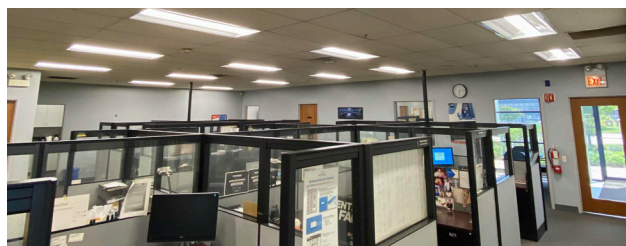
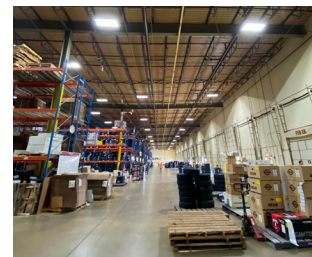
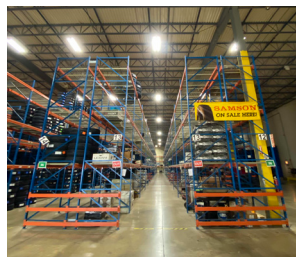
Controls Strategy

The lighting controls strategy leverages on-board programmable PIR sensors combined with an Illumasource 0-10 volt dimming driver. High-end trim was set to provide an average of 20+ fc in the main aisles and 25+ in the dock areas. The sensor system can be adjusted for future requirements using the hand-held infrared remote control.

Customer Comments

"Quote Goes Here."

- Facility Maintenance Operations Manager



BEFORE

AFTER