

# An Industrial Lighting Demonstration Center / ILDC is available in Belleville MI

## Press Release

### Introduction

Illuminart, a professional lighting design firm in Ypsilanti MI has partnered with Fantasee Lighting in Belleville MI to create a facility that will be used to demonstrate the benefits of efficient, sustainable lighting for warehouses, industrial and retail spaces.

Illuminart has been receiving inquiries from industrial space owners about lighting techniques for energy upgrades. Conversations begin with a review of basic electric lighting systems options but then lead to daylight integration, control systems and the benefits of a more holistic approach to lighting solutions, to further reduced operations costs and to benefit the users and owner, long term.

The best way to demonstrate holistic lighting benefits is for someone to see them in a real life setting Illuminart has specified and had installed an integrated lighting system in the warehouse and offices near Detroit Metro Airport in Belleville Michigan to be used as a demonstration center. The facility will be made available by appointment to; architects, engineers, owners, facility managers and DTE customers to come and see a wide variety of industrial lighting systems with their features and benefits first hand

The life cycle cost analysis of the electric lighting reveals a conservative 1.06 year payback on the initial investment to replace the old T12 fluorescent lighting with new, efficient high performance T8 and T5 lighting. When adding in the costs for new skylights and dimmable ballasts with photo cells, the payback for the daylighting cost is about 2.5 years. The real benefit to the natural lighting however is the human factor. People working in the space love the daylighting! Research has proven the cost impact of improved productivity to company's bottom line. The ROI information for the ILDC is found on the Illuminart website at [www.illuminart.net](http://www.illuminart.net) on the 'Resources' page.

The ILDC will be open for industry professionals and building owners representatives to see by appointment only. Contact Illuminart for more information.

### The ILDC technical features:

T8, T5, LED and Induction lighting systems from dozens of manufacturers. The fixtures will feature a variety of accessories (louvers, lenses, wire guards) and optical systems.

3 lamp color areas are set up featuring 3500K 4000K and 5000K lamps

Illuminance levels from 15fc up to 150fc (from daylight)

Skylights, top lighting and side lighting (windows) of various sizes and different features and be observed from various manufacturers

Daylight integration with all electric lighting through dimmable ballasts and photo cells

Zone control options from digitally addressed ballasts

Occupancy sensors

An energy monitor to see the energy savings benefits in real time and projected over time

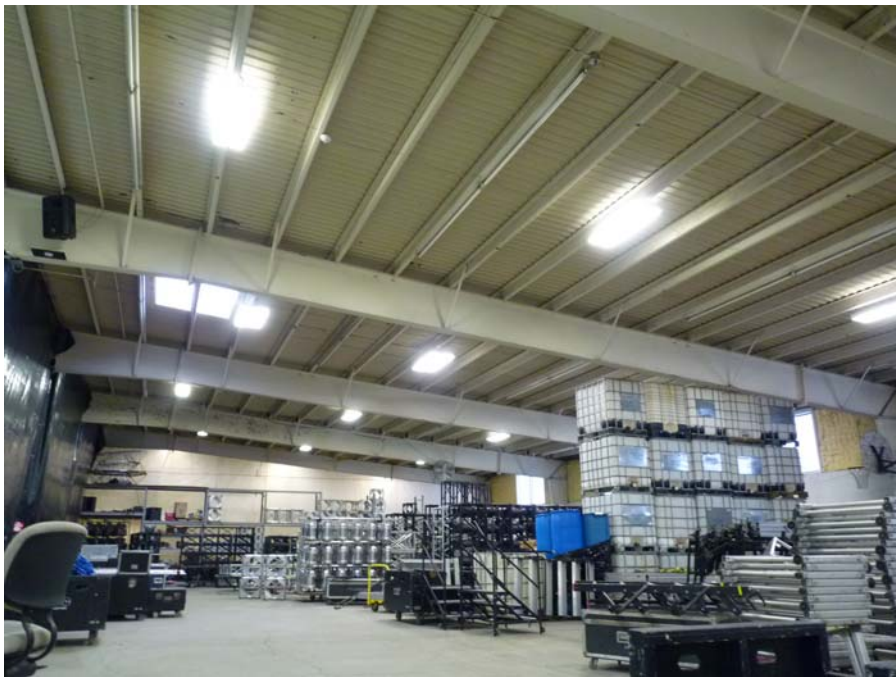
Life cycle cost analysis and ROI benefits of various system options  
Information from the manufacturers providing the equipment installed will be available

Lighting equipment is installed using cord and plugs so we are able to change out the fixtures as needed to represent different manufacturers or new technologies

## Fantasee Warehouse Belleville MI



## Electric lighting / new T5, T8, LED and induction lighting systems

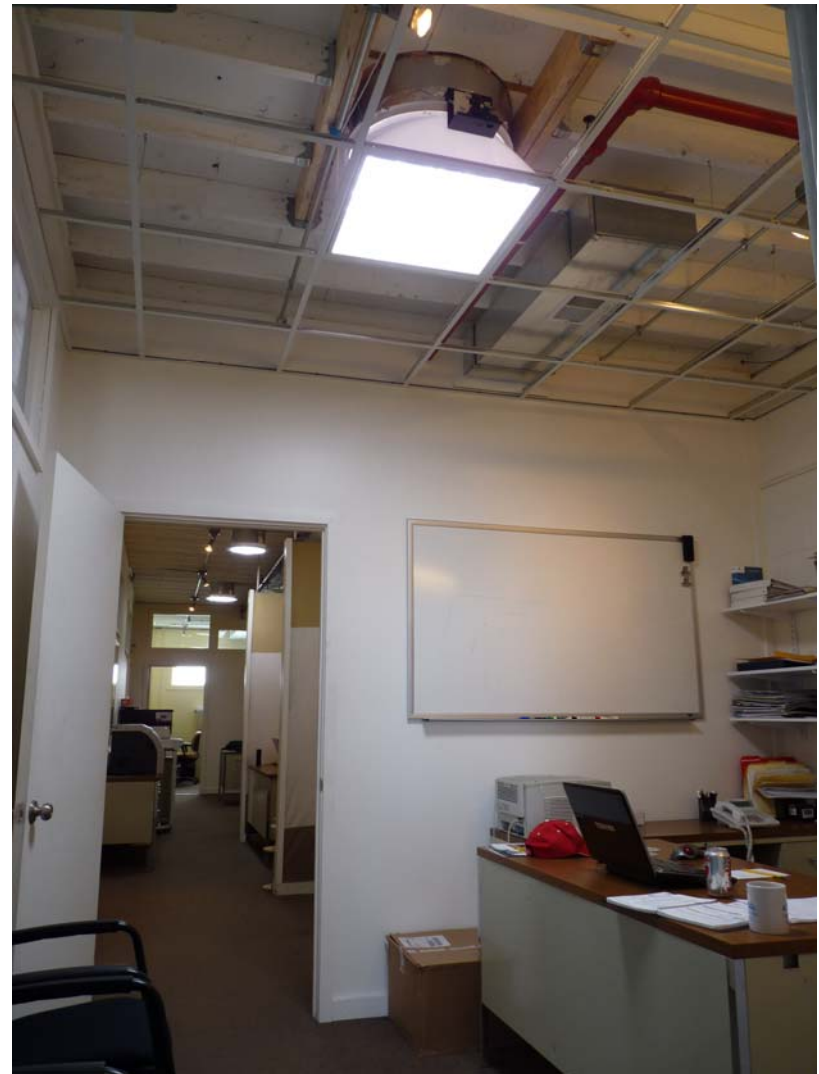


Daylight harvesting



Skylights in warehouse

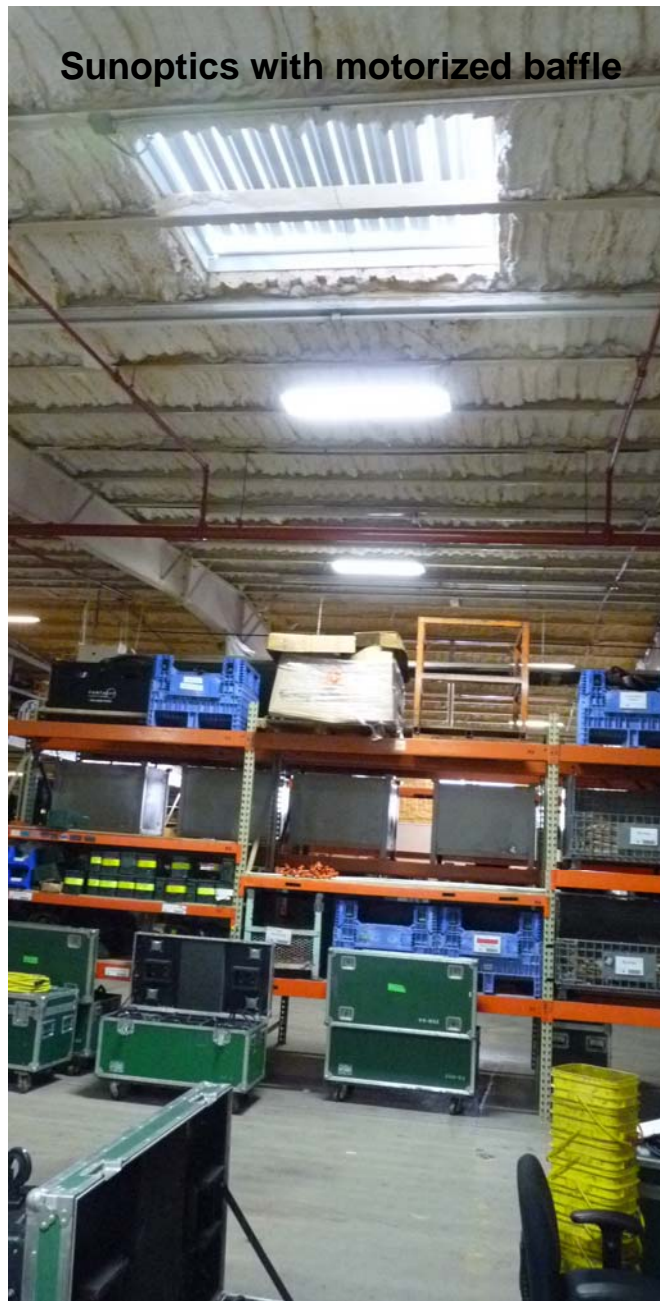
Light tubes in offices



**Solatube with motorized baffle**



**Sunoptics with motorized baffle**



**1x4 T5 Fluorescent 3500k**

# Operations Cost Benefit and Return on Investment

This life cycle cost analysis of the ILDC project is provided by an independent 3rd party; Strategic Energy Solutions in Berkley MI.

It reveals the return on the initial investment of savings in energy and maintenance by replacing the old T12 lighting systems with:

- #1) the new electric lighting and
- #2) the new electric lighting with the costs of skylights, light tubes, dimmable ballasts, photo sensors and the control systems added into the unit fixture cost.

The return on initial investment of System #1 is quite astounding at 1.06 years! The return when adding the daylighting components is also quite good at 2.54 years.

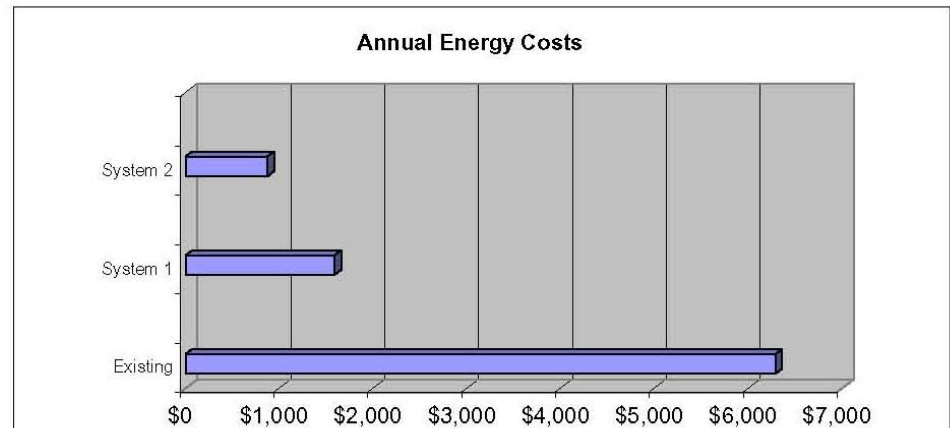
The complete Cost Analysis data may be viewed and downloaded on the Illuminart website on the ILDC page.

Customer Information		Site Information	
Project:	Industrial Lighting Demonstration	Area (sq.ft):	21576
Contact:	Strategic Energy Solutions	Cost per kWh (\$):	\$0.15000
		Annual Operating Hours:	3120

System Based Information	Existing	System 1	System 2
Brief Luminaire Description:	2-Lamp T12	Fluor. High Bay	High Bay w/ Controls
Cost per Luminaire (\$):		\$155.00	\$483.00
Rebate/Incentive per Luminaire (\$):		\$79.12	\$132.96
Lot Price for Labor, Disposal, etc. (\$):		\$2,578.65	\$2,578.65
Input Watts per Luminaire:	210	106	106
Total Quantity of Luminaires:	64	32	32
Quantity of Luminaires w/ Controls:	0	0	32
% Reduction in Annual Operating Hours:	0.0%	0.0%	45.0%
Net Investment:		\$5,006.81	\$13,779.93

Energy Information	Existing	System 1	System 2
System Load (kW):	13.44	3.392	3.392
Annual Energy Use (kWh):	41932.8	10583.04	5820.672
Annual Energy Costs (\$):	\$6,289.92	\$1,587.46	\$873.10
Annual Energy Savings (\$):		\$4,702.46	\$5,416.82
LPD (watts/sq.ft):	0.62	0.16	0.16

Payback Analysis	System 1	System 2
Simple Payback (years):	1.06	2.54
IRR (%):	93.92%	39.31%



NOTE: These are estimated savings only subject to a variety of variables and changes that may occur over time. Actual savings may be higher or lower.