

## Energy Efficient Lighting:

### Immediate Savings Opportunity with **WhiteOptics®** Retrofit Kits

*When trying to reduce your energy spending, look to lighting first.*

#### Challenge

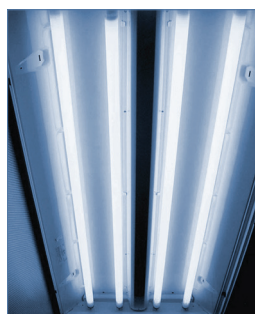
- ▶ Significantly reduce lighting energy consumption, typically 25% of a commercial building's total energy usage
- ▶ Maintain light levels and improve lighting aesthetics
- ▶ Leverage attractive utility rebates/tax incentives to offset upfront costs

#### Solution

- ▶ Install **WhiteOptics®** Reflector Retrofit kits to existing fluorescent fixtures
- ▶ De-lamp fixtures to reduce energy consumption
- ▶ 3 or 4 T12 or T8 lamps can be replaced with 2 T5 or T8 lamps

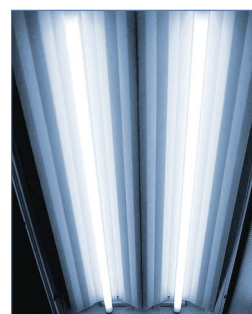
#### Results

- ▶ 50 - 67% reduction in energy consumption for lighting
- ▶ Eliminate hot spots or lamp stripes; minimize glare
- ▶ Payback period generally 0-18 months depending on utility incentives



4 LAMPS

50% reduction in  
energy use while  
maintaining light levels



2 LAMPS

#### Why & How It Works

**WhiteOptics®** high performance retrofit kits contain patented **White97** reflectors. They deliver superior results because of both the degree of reflectance and the degree of diffusion.

- ▶ **WhiteOptics®** Reflectors are **high diffuse**—scattering light in multiple directions simultaneously to reduce glare, eliminate hot spots, and better distribute light
- ▶ Our **97% reflectance** maximizes the exiting light

#### Implementation

- ▶ Easy to install in under 15 minutes per fixture
- ▶ Kits include detailed instructions, reflector, brackets and screws
- ▶ To order: please call us at **302.476.2055 ext. 808** or email us at **retrofit@whiteoptics.com**

# Maximize your financial returns and environmental benefits by retrofitting with WhiteOptics® Reflectors

Our patented technology enhances light output—even while de-lamping—to deliver the best return on your retrofitting investment.

## Financial illustration of a typical lighting retrofit project

### Lighting Retrofit for Cost and Energy Savings: Open Office Space

<b>Number of Fixtures</b>	3,000
<b>Area cover per fixture (sq ft)</b>	80
<b>Office space (sq ft)</b>	240,000
<b>Operating hours/year</b>	4,200
<b>Fixture life span (years)</b>	15
<b>Electricity cost (\$/Kwh)</b>	\$0.12

### Replace 4-lamp 32W T8 troffers with 2-lamp 32W T8 WhiteOptics® Retrofit kits

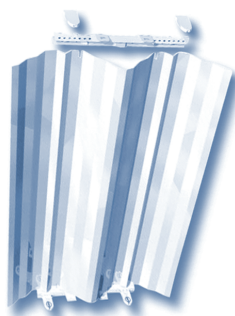
	Per Fixture	Building
<b>Up-front Investment</b>		
<b>Hardware</b>	\$20	\$60,000
<b>Labor</b>	\$20	\$60,000
<b>Total</b>	\$40	\$120,000

### Return on Investment

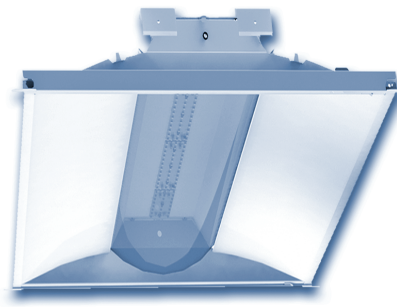
<b>Annual Electricity Savings</b>	\$28.39	\$85,170
<b>Simple payback, months (pre-incentives)</b>	17	
<b>Seven year net profit (pre-incentives)</b>	\$158.73	\$476,190
<b>Project IRR</b>	244%	
<b>Utility Rebate available in many markets</b>	\$20	\$60,000
<b>Simple payback, months (with rebate)</b>	8.5	
<b>Net Year One Gain</b>	\$8.39	\$25,170
<b>Seven year net profit</b>	\$173.73	\$521,190

EPAAct tax reduction incentives of \$25-\$48 per fixture may also be applicable.

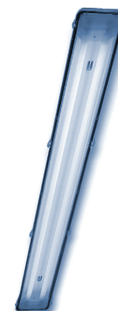
## High Efficiency Solutions with WhiteOptics®



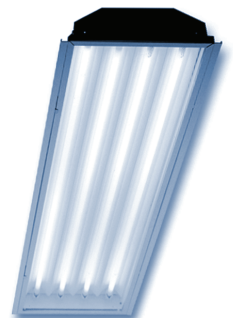
Retrofit kit



Advanced Retrofit



Enclosure



Highbay