



Silescent's  
Circle-Lit™ LED Troffer  
40 watts/fixture



*Sample Retrofit Installation*

# Silescent® 2 x 2 LED Troffer Product Comparison 1B

*2x4 x 3-tube fluorescent  
fixture replacement with  
Silescent 40 watt  
2 x 2 LED Troffer  
in a 24 x 7 x 365  
use environment*

## **Applications:**

Public Use Areas such as  
Hospital Hallways,  
Hotel Lobbies,  
Airports, etc...

## *Comparative Objectives...*

Replace existing 2x4 Troffer with 3-tube x 32 watt fluorescent T5 lamp fixtures with the specific goals of:

- Reducing energy consumption;
- Improve lighting quality and distribution - overall;
- Reduce maintenance costs of ongoing re-lamping, cleaning and fixture replacements.

Silescent® combines LED technology with patent protected thermal management, electromechanical assembly and the industry's most advanced drive circuitry.

## Relative Performance...

**Total Savings achieved \$154.09/fixture/year**

## Evaluation Scope...

### **EXISTING 3-Tube, 2x4 Troffer Fixtures**

Fixtures .....Fluorescent 2x4 Troffer fixtures, 120VACin  
Lamp .....32 watt tubes x 3 = 96 watts/fixture  
Ballast (Factor) .....10% (10 watts/fixture)  
Operating Use:.....24 hrs/day x 7 days/week x 52 weeks/year

### **REPLACEMENT Silescent Fixtures**

Replacement Fixture .....Silescent 40 watt 2 x 2 LED Troffer  
Wattage .....40 watts/fixture



*(Detailed analysis on reverse side)*



## Summary of Savings...

**Energy Savings:** Considering equal usage

**Considering Equal Usage:**

Energy Savings:  $(106\text{w} - 40\text{w}) \times 24 \text{ hrs/day} \times 364 \text{ days/yr} \times \$ .15/1,000\text{watts} = \dots\dots\dots \$86.49/\text{year/fixture}$

**Added Savings from HVAC Cost Reductions:**

Energy Savings: 30% savings (est.) of energy used to be realized from A/C =  $\dots\dots\dots \$25.95/\text{year/fixture}$

**TOTAL Energy Savings:**  $\$86.49/\text{year/fixture} + \$25.95/\text{year/fixture} = \dots\dots\dots \underline{\underline{\$112.44/\text{year/fixture}}}$

**Maintenance Savings\*:** *Bulb/Ballast/Lens part replacements + Labor to replace these items.*

One Bulb replacement/year/fixture @ \$13.50/bulb =  $\dots\dots\dots \$13.50/\text{year/fixture}$

*Bulb replacement Labor:* 15 min./bulb at \$30/hr (est.) x 1 bulb/year/fixture =  $\dots\dots\dots \$7.50 \text{ /year/fixture}$

Each Ballast requires replacement every 3 years @ \$18/Ballast x 1/3 fixtures =  $\dots\dots\dots \$5.40/\text{year/fixture}$

*Ballast replacement Labor:* 15 minutes/ballast at \$30/hr (est.) x 1/3 fixtures/yr =  $\dots\dots\dots \$2.50/\text{year/fixture}$

Each Lens replaced on average every 2yrs @ \$18/Lens x 1/2 fixtures/yr =  $\dots\dots\dots \$9.00/\text{year/fixture}$

*Lens replacement Labor:* 15 min./Lens at \$30/hr (est.) x 1/2 fixtures/yr =  $\dots\dots\dots \$3.75/\text{year/fixture}$

\*All replacement parts, labor costs and operating assumptions provided by qualified facilities manager

**TOTAL SAVINGS:**  $\$112.44 \text{ (energy)} + \$27.90 \text{ (parts)} + \$13.75 \text{ (Labor)} \approx \underline{\underline{\$154.09/\text{year/fixture}}}$

## Additional Benefits...

- Full spectrum array based LED - improves visual acuity;
- Wide dispersion beam spread – provides even illumination with no dark shadows;
- Sanitary design allowing it to be easily cleaned;
- Extra-long 100,000 hour life rating – maintenance free operation.



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