

SDERC Lighting Display

Office Lighting: Philips 25-Watt F32T8/ADV850/XEW/ALTO lamps

Location: ERC Classroom

Technology Description: Each direct/indirect basket troffer in SDREO's classroom has two 25W Philips F32T8/ADV850/XEW/ALTO lamps and instant start ballast (0.87 BF Advance Standard Electronic IS VEL-2P32-SC). The 5000K lamps provide scotopically enhanced light levels. Photopic light level readings taken before and after the installation of the 25W lamps are summarized in the table below. Note that light levels increased but there is a noticeable 5 minute warm up period at cold start.

Lamp	Foot Candle Readings				
	Cold Start	5 min	10 min	25 min	30 min
32W T8/741	31.5	33.9	33.9	33.9	33.9
25W T8/850	31	38	38	39.3	40.8

Applications: Offices, schools, retail spaces. Not recommended with dimming ballasts, occupancy sensors, or where ambient temperatures fall below 60°F.

Energy Savings: Each 25W T8 lamp saves 5.1W over a standard 32W T8 (using a 0.87 BF). Classroom wattage was reduced from 696W to 574W. Lighting density dropped to 0.66 W/sq ft while increasing light levels. Replacing two 32W T8 lamps with two 25W T8 lamps saves 20.4 kWh per fixture, or \$3 per year (assuming 2,000 hrs/yr and \$0.15/kWh).

Costs: Each 25W lamp costs approximately \$3.00 - \$3.50 (when purchasing more than 500 lamps). Using the information above, replacing 32W T8 lamps with 25W T8 lamps will payback in about 3.3 yrs.

Donated Product: SDREO would like to formally thank Virginia Wilken of Philips Lighting Company for donating the lamps. For more information please contact Virginia Wilken at 760-634-5380 or virginia.wilken@philips.com.

Discussion: It is interesting comparing this 25W F32T8 retrofit with delamping the same type of fixture in the office area with one high lumen 32W F32T8. Which saves more wattage? Which will have lower maintenance costs? Not only do the 25W F32T8s cost significantly more, but they are rated for 4,000 fewer hours. With the upcoming 0.6 BF ballasts, the 32W F32T8s will use about the same wattage as the 25W F32T8s with 0.77 or 0.87 BF ballasts in fixtures that should not be delamped. Plus if you have a facility that has both interior and exterior fixtures, dimming and nondimming ballasts, occupancy sensors in some areas, etc. is your maintenance department going to be able to keep straight where the 25W lamps go and where the 32W lamps go?