



HID to High Lumen Fluorescent Upgrades

Replacing HID lighting fixtures with high lumen fluorescent systems is the energysaving solution that improves the lighting quality and system flexibility of an installation. While traditional HID systems are inefficient, noisy, and lack the ability for controls due to long re-strike times, high lumen fluorescent systems address these problems with fantastic results.

Today's fluorescent ballast technologies with T8 or T5HO lamps provide excellent solutions for high bay lighting systems. A fixture retrofit can provide energy savings up to 50% while improving the quality of the lighting. These quality improvements include quiet operation, improved color rendering, and the ability to incorporate controls such as occupancy sensors, which saves even more energy.

Example:

Existing System:

400 Watt Metal Halide Lamp and magnetic ballast

Power consumption: 458 Watts

Replacement System #1:

4-Lamp F54T5HO Lamp with High Efficiency ballast

Power consumption: 229 Watts - 229 Watt savings (50% reduction)

Light Level: Decreases by 9% but will provide higher light levels during the second half of its life. Improved color quality may provide better perceived illumination.

Replacement System #2:

6-Lamp F32T8 Lamp with High Efficiency ballast

Power consumption: 216 Watts - 242 Watt savings (53% reduction)

Light Level: Decreases by 8% but will provide higher light levels during the second half of its life. Improved color quality may provide better perceived illumination.

Replacement System #2:

6-Lamp F54T5HO Lamp with High Efficiency ballast

Power consumption: 346 Watts - 112 Watt savings (24% reduction)

Light Level: Increases by 36%

Energy Savings Equals Dollars

Based upon the annual operating hours, and utility rate, the energy savings can be used to calculate the operating cost savings:

Annual Operating Hours	4,000
Utility rate (\$/Kwh)	x \$0.12
Energy Savings per fixture (Watts)	x 229
Conversion from W to KW	÷ 1,000
Annual Cost savings per fixture	\$109.92

Multiply this value by the number of fixtures in the facility to determine the total cost savings.

The chart below identifies some of the savings potential with HID to Fluorescent light upgrades. Careful selection should be made when choosing between T8 and T5HO lamp systems due to operating temperature environments. T5HO lamps provide maximum light output at 95° F while this temperature is 77° F for T8 lamps. New Amalgam T5HO lamps are now available that allow for operation over a wider range of temperatures.

System Type	Existing System	High Efficiency Electronic System		
	400 Watt Metal Halide	(4) F54T5HO	(6) F32T8	(6) F54T5HO
Input Power (Watts)	458	229	214	346
Energy Savings (Watts)	-	229	244	112