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T12 to T8 Lamp & Ballast Retrofits

For a quick return on your investment, replacing T12 lamps and ballasts with high efficiency electronic ballasts and T8 lamps is the smart choice. In many cases, this is the easiest upgrade since the T8 lamps and ballasts fit into the same fixture.

Lighting retrofits can provide energy savings greater than 40% while improving the quality of the lighting. These quality improvements include quiet operation, improved color rendering, and a reduction in HVAC costs due to less heat being generated by the lighting system.

Example:

Existing System:

4-Lamp F34T12 Lamps and magnetic ballast

Power consumption: 148 Watts

Replacement System:

4-Lamp F32T8 Lamp with High Efficiency ballast

Power consumption: 96 Watts - 52 Watt savings (35% reduction)

Light Level: Increase by 3% to 12% depending on lamp used

Alternate Retrofit Options:

4-Lamp F28T8 Energy Saving Lamp with High Efficiency ballast

Power consumption: 84 Watts - 64 Watt savings (43% reduction)

Light Level: Decreases by 3% - Improved color quality may provide better perceived lighting.

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 64
Conversion from W to KW	÷ 1,000
Annual Cost savings per fixture	\$30.72

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 T12 to T8 retrofit, keeping the number of lamps the same:

Lamp Quantity	Existing System F34T12 Lamps		High Efficiency Electronic System		
	Power (Watts)		F32T8 Lamps	F28T8 Lamps	
		Power (Watts)	Energy Savings	Power (Watts)	Energy Savings
1	44	25	19	21	23
2	74	48	26	43	31
3	118	73	45	65	53
4	148	96	52	84	64