

Lighting the Way Forward: The End of the T12 Era

Over time, efficiency mandates from the federal government have strategically worked to remove technologies considered to be the lowest performing in an effort to improve minimum standards. The fluorescent T12 lamp/ballast mandate story has been confusing to some. This ALG Connections piece highlights a timely article from Electrical Contractor Magazine about the systematic phase-out of the fluorescent T12 lamp. A link to the full article is provided at the end of this article.

By now, the electrical industry is well aware that national energy standards have eliminated the manufacture and import of fluorescent magnetic ballasts for 4- and 8-foot standard and energy-saving T12 lamps, with few exceptions. On July 14, 2012, Department of Energy (DOE) rules regulating general-service fluorescent lamps will go into effect, eliminating many popular models.

About 30 percent of linear fluorescent lamps sold each year are T12s, servicing an estimated 35–40 percent of fluorescent sockets in industrial/commercial applications as well as 70 percent of fluorescent sockets in residential applications. The T12 phase-out will dramatically accelerate a shift in demand to T8 and T5 lamp/ballast systems.

As distributors wind down their inventories of noncompliant lamps and ballasts, removing the lowest cost and least-efficient products from the market, owners of T12 lighting systems

will be forced to make a change and will be looking for help from experts knowledgeable about their options. The first key decision to be made by the building owner is the selection of a lamp-ballast solution that will comply with the regulations. Next, they must decide which vehicle is most appropriate to deliver the light—keep the existing lighting fixtures or replace them with new fixtures.

Building owners should begin exploring higher efficacy options now. The new standard is the T8 lamp, already the market preference with a market share of about 60 percent of all linear fluorescent lamp sales. In the past 10 years, T8 lighting has become the lighting workhorse in commercial buildings, notably the 4-foot 32W linear lamp operated by a compatible standard electronic ballast.



More than half of the 67 stores operated by Discount Drug Mart Inc. have completed lighting retrofits that the retailer expects will deliver combined energy and maintenance costs savings equal to the margin earned on \$14.2 million in sales over the life of the new lamps.

Credit: Photo courtesy of GE Lighting.

ABOUT ALG Connections

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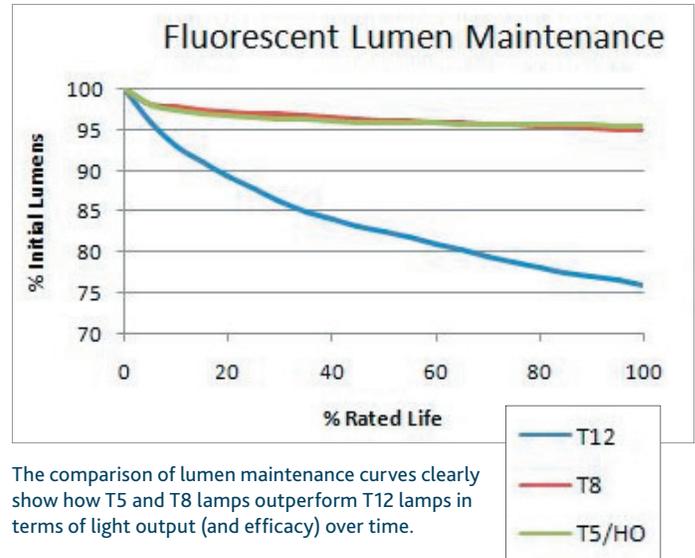
T8 is not only more efficient than T12 lighting, it offers other benefits such as lower mercury, long service life, high lumen maintenance and ease of retrofit of existing T12 luminaires. Options include 23W, 25W, 28W, 30W, standard- or high-light-output 32W T8 lamps, and extended-life T8 lamps operate on basic-grade and NEMA Premium high-efficiency electronic ballasts. Replacing an existing four-lamp 34W magnetic T12 system with 32W T8 lamps on an electronic ballast, for example, can generate about 38 percent energy savings, which can be increased up to about 45-plus percent by using 25–30W lamps.

Adding a sense of urgency to converting existing T12 lighting systems is the fact that time may be running out for incentives that can significantly reduce the payback period for a conversion investment. As regulation eliminates the majority of T12 lamps and ballasts from the market, existing rebates targeting T12 lighting will no longer need to exist.

For more details on the elimination of T12 lamps, T12 conversion incentives and retrofit considerations, read the full article written by ALG author Craig DiLouie, published January 2012 in the Electrical Contractor Magazine.

www.ecmag.com/?fa=article&articleID=13386

UPDATE: After the Electrical Contractor article was written, lamp manufacturers received an exemption on the mandate for standard 700 series T8 lamps, so they will still be available on the market for the next two years.



The comparison of lumen maintenance curves clearly show how T5 and T8 lamps outperform T12 lamps in terms of light output (and efficacy) over time.