

ELS FACT SHEET

5 Reasons Why Ballast-Compatible LED Tubes Are a Bad Idea



- 1. Most Ballasts Are Expensive and Prone to Failure.** The *most expensive* part of the lighting system is the ballasts. Ballast-compatible tubes replace the *least expensive* part of the fluorescent fixture: the tubes. Unless the ballasts are new, there is no way to predict the remaining lifetime of the ballasts, so your system will continue to have intermittent failures throughout your facility. For the savvy facility manager, this is not an ideal situation. In addition, not all ballast-compatible LED tubes will not work with all types of fluorescent ballasts; therefore, your investment in LEDs could be for nothing if you find places where the new LEDs won't work.
- 2. No Way to Predict Exact Energy Savings.** Ballasts come in a variety of power factors. Power factor (*pf*) is a measure of how "efficiently" a ballast uses its power. Typically, the ballast *pf* ranges between 0.85 and 1.15. Due to this range in power factors, your LED tubes will consume more or less electricity, depending upon the ballast *pf*. For example, if you install a ballast-compatible tube in a fixture that has a ballast with a *pf* of 0.85, your tube will use less electricity (and produce fewer lumens—see #3 below) than if you install it in a fixture with a ballast with a *pf* of 1.15. For facility managers who are attempting to reduce electricity consumption by a defined amount, using ballast-compatible LEDs will never provide you an exact prediction. After all, facilities that want to upgrade to LEDs are usually trying to upgrade an old system with failing ballasts in the first place. Not being able to predict power savings accurately should be a red flag.
- 3. No Way to Predict Exact Lumen Output.** Because of the varying power factors as described above in #2, the same things happens to lumen output. For example, if you have low *pf* ballasts in your facility, your new ballast-compatible LED tubes are going to produce fewer lumens than you might need. This could be a problem in certain areas of your facility.
- 4. They Were Designed for Lazy People.** As the only adage goes, "Necessity is the mother of invention." While a bit crude, there are lots of lazy people among us. They want the easiest way out of every situation. For facility managers who want LEDs but aren't willing to invest the time to do it right, the manufacturers came up with an easy solution: ballast-compatible tubes. Voila! A whole retrofit completed in a single day. While it was easy on the front end, there will be lots of problems in the long run because you aren't addressing the biggest problems with a fluorescent system.
- 5. They Are Perfect for Home Use.** In buildings with very few fluorescent fixtures where LEDs are desired, ballast-compatible tubes are a suitable solution. Why? Because they require no expertise for installation and no specification of lumen output. Simply swap your fluorescent tubes with the LEDs. You're done. You don't care about lumen output or energy consumption because you only have a few fixtures and they are only on a few hours a day at the most. This is the only scenario where they make sense.