

## Lighting Technologies – Part V

### Brown Bag Visuals & Links

03/05/08

- 1) Dark Sky Initiative/Light Pollution:  
<http://www.lrc.rpi.edu/programs/nlpip/lightinganswers/lightpollution/abstract.asp>  
[http://www.rabweb.com/major\\_Group\\_Detail.php?group=hidflood](http://www.rabweb.com/major_Group_Detail.php?group=hidflood)
- 2) LED Street Lights vs. Induction [www.leotek.com](http://www.leotek.com) [www.phoenixlightingwa.com](http://www.phoenixlightingwa.com)
- 3) 100,000 hour T5HO (See 2 PDF files associated with this Brown Bag)
- 4) CFL end-of-life burn-out issues. Below is an e-response from the Energy Star CFL Program regarding this issue:

On 2/1/08 11:03 AM, "CFL" <cfl@drintl.com> wrote:

Thank you for sending us your information on your experience with a defective ENERGY STAR qualified CFL. We apologize for your unsatisfactory experience with an ENERGY STAR qualified product, unfortunately these things do happen. We are committed to continue to do our best to document and attempt to resolve these issues with manufacturers to reduce instances of defects in the future.

Unfortunately, there have been some instances of CFLs smoking or smoldering. While this usually occurs when the product is defective, or installed improperly it is nonetheless a concern to consumers, EPA and DOE. Currently, the Department of Energy (DOE) is working with industry to make sure this phenomenon is eliminated by requiring all ENERGY STAR qualified CFLs to incorporate end-of-life requirements and higher safety standards. Most CFLs are designed to meet UL 935, which requires the CFL materials to be self-extinguishing. So, although the base or glass tubing may darken, it should never catch on fire.

CFL manufacturers recommend that you install and remove the CFLs by grasping the plastic portions of the base only. If the CFL is screwed into a light socket by twisting the tube rather than the plastic base, it can cause the vacuum seal or glass tubing in the CFL to break. Once certain parts are exposed to oxygen, they are more liable to become defective and/or overheat.

What you may not know. In some cases, when a fluorescent tube reaches the end of useful life, the arc contained in the tube may elevate the temperature of the housing plastic near one end of the tube. This elevated temperature, although it is short lived, may produce some limited smoke and odor. In some cases a flashing arc internal to the fluorescent tube or ballast may occur and in some extreme cases, a deformation, significant distortion, or small breach of the plastic material may happen. Again, the materials and evaluation tests are designed to prevent subsequent safety hazard. However, it is understandable that you may be concerned and disappointed that the bulb did not perform to your expectations.

Manufacturers producing ENERGY STAR qualified CFLs are required to offer at least a 2 year limited warranty (covering manufacturer defects) for residential applications. In some cases, the manufacturer may request the failed product to be shipped to them so they can determine why the smoking happened, so make sure to keep the product until you speak to

the manufacturer. The manufacturer will most likely provide a replacement product or a refund. But it sounds like you got a long life out of that bulb, judging by your estimates of 16 hours per day for 1-2 years it lasted about 10,000 hours.

Thank you for providing all the information we ask for. Unfortunately we cannot give you a guarantee on any product, as circumstances can affect products in unique ways, we can only assure you that they are made and tested by UL to be self extinguishing.

We hope your experience with the other ENERGY STAR qualified CFLs you are currently using is a positive one. Any time you are using a CFL over an incandescent, you are saving energy. So, even though some of the products you used failed prematurely, you were saving energy and money every time you used them.

For the most up-to-date information on CFL care and disposal go to [www.energystar.gov/CFLsandMercury](http://www.energystar.gov/CFLsandMercury). This document also provides the EPA's new website [www.epa.gov/bulbrecycling](http://www.epa.gov/bulbrecycling) with local recycling options and as you may be aware more and more retailers and interested parties are working on developing easier solutions to the issue. IKEA also collects CFLs for recycling. Or you can visit [www.recycleabulb.com](http://www.recycleabulb.com) to see if other recycling options are available near you.

Thank you for contacting us regarding this instance, and thank you for your interest in ENERGY STAR.

Best,  
Taylor  
On behalf of the ENERGY STAR CFL program  
Y STAR CFL program