

Program for the Evaluation and Analysis of Residential Lighting

PEARL

2007 Project Update

Responding to complaints about the performance of certain ENERGY STAR® lighting products, a group of utilities, energy efficiency advocates, and market transformation organizations that focus on residential lighting products and are part of the ENERGY STAR program created PEARL in 2000. These organizations were also concerned about the lack of a self-policing mechanism within the lighting industry to ensure product reliability and compliance with ENERGY STAR specifications.

The LRC administers PEARL and operates its testing laboratory. PEARL purchases and tests products that are available to the consumer in the marketplace. It provides the test results to its sponsors, the U.S. Environmental Protection Agency, the U.S. Department of Energy, and manufacturers whose products were tested.

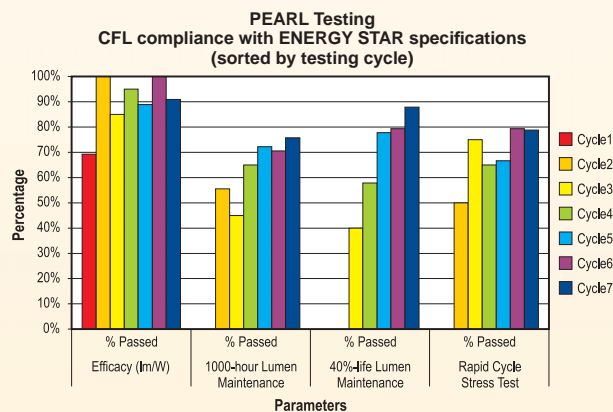
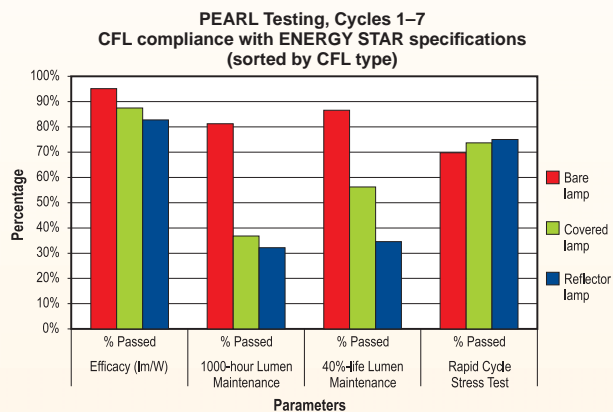


PEARL Sponsors

- Bonneville Power Administration
- Midwest Energy Efficiency Alliance
- Natural Resources Canada
- New York State Energy Research and Development Authority
- Northeast Energy Efficiency Partnerships:
 - Cape Light; Efficiency Vermont; Key Span Energy; Maine PVC; National Grid; Northeast Utilities; NStar; United Illuminating; Unitol
- Northwest Energy Efficiency Alliance
- Pacific Gas & Electric
- Sacramento Municipal Utility District
- San Diego Gas & Electric
- Southern California Edison
- Wisconsin Energy Conservation Corporation

Test Results

In seven test cycles, performed from 2000 to 2007, PEARL tested 156 compact fluorescent lamp (CFL) models from 29 manufacturers. These tests included four parameters: efficacy; 1000-hr lumen maintenance; 40% life lumen maintenance; and rapid cycle stress. PEARL also tested 52 light fixture (luminaire) models from 20 manufacturers for compliance. Test results for the CFLs are summarized in the graphs below.



In Progress

PEARL is conducting Cycle 8 of these tests, which are expected to be completed in 2008.



View LRC Solid-State Lighting Projects at www.lrc.rpi.edu/programs/solidstate

Lighting Research Center