



THIRD PARTY CERTIFICATION IMPLEMENTATION

ENERGY STAR® PRODUCTS

SUBJECT: ENERGY STAR Downlights Verification Testing Requirements and Test Failure Determination

DIRECTIVE NO. 2023-01

Date: 11/16/2023

Performance Criteria

Verification of ENERGY STAR certified downlights and downlight retrofit kits is based on the following core performance requirements as applicable to the specific model. Verification testing is to be conducted for these performance requirements using the same methods and conditions used for initial certification (e.g., driver case temperature).

1. Input Power (Watts)
2. Luminous Flux (lumens)
3. Luminous Flux Maintenance¹
4. Correlated Color Temperature
5. Color Rendering
6. Color Maintenance¹
7. Maximum Measured Driver Case Temperature
8. Power Factor

For downlights and recessed downlight retrofit kits with integral motion sensors, occupancy sensors or photosensors and/or connected functionality, verification includes Standby Power Consumption.

Reporting to EPA

Consistent with procedures for other ENERGY STAR product categories, CBs are required to report testing failures on any of the performance requirements to enforcement@energystar.gov within two days of determining a testing failure and include with this submission all relevant test reports. EPA will then notify the Partner per the [ENERGY STAR Disqualification Procedures](#).

¹ The LED packages/modules/arrays should be visually inspected and, to the extent practical, verified to ensure they are the same make(s) and model(s) as those included in the certification. The *in-situ* temperature should be measured in the same manner as originally tested, and a new TM-21 calculation should be made using the corresponding LM-80 data to determine if the product meets the relevant ENERGY STAR requirements. For color maintenance, the measured *in situ* temperature must be less than or equal to the case temperature in the originally referenced LM-80 report.