



# ENERGY STAR® Program Requirements for Residential Light Fixtures

## Eligibility Criteria – Version 4.1

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- JJ. Recessed Downlight Retrofit Kit: A non-linear lighting unit consisting of lamp(s), ballasting, optics, trim, and power supply connection designed to convert an incandescent or halogen type Insulated Ceiling (IC) or non-IC recessed downlight into an air-tight fixture that uses an energy-efficient light source.
- KK. Run-up Time: The time needed after switching on the electrical supply for the lamp to reach 80.0% of its stabilized luminous flux.
- LL. Standardized Color Ellipse: An elliptical region of chromaticity coordinates that is defined using a centroid, a tilt angle relative to a horizontal axis, and a defined level of variance. Such a region defines what chromaticity coordinates can be acceptably associated with a target Correlated Color Temperature. For this specification, standardized color ellipses are defined using centroids based upon objective chromaticities (x,y) and tilt angles (è) specified in Table 1 and 2 of ANSI C78.376-2001, and a defined variance of seven steps.
- MM. Trim: Trim is the part of the downlight that covers the ragged edge of the ceiling cut-out. The trim may be a separate ring, or trim ring, or it may be integrated with the optics (i.e., a self-flanged reflector). Airtight or non-airtight.
- NN. UL: Underwriters Laboratories.

- 2) Qualifying Products: The ENERGY STAR Residential Light Fixture specification covers the requirements for indoor and outdoor light fixtures, recessed downlight retrofit kits and replacement GU-24 base integrated lamps intended primarily for residential type applications. For the purposes of this ENERGY STAR specification, residential applications include single-family and multi-family dwellings (such as houses and apartments), dormitories, public or military housing, assisted-living facilities, motels and hotels, and some light commercial applications.

**Exclusion of magnetic ballasts:** Indoor fluorescent fixtures that use magnetic ballasts cannot be ENERGY STAR qualified under this Version 4.1 specification. Only outdoor fixtures that use high intensity discharge (HID) lamps, such as metal halide and high pressure sodium, may continue to use magnetic ballasts.

**Inclusion of decorative LEDs:** EPA encourages the use of innovative light source technologies such as LEDs. LEDs used as decorative lighting elements in residential lighting fixtures and ceiling fan light kits are allowed as long as the total wattage of the LEDs does not exceed five (5) watts, the average LED system (LED and driver) efficacy is at least 20 lumens per watt, and the LED is used to supplement a primary light source that meets all of the applicable performance characteristics outlined in the Eligibility Criteria. This requirement applies to LED “hybrid” fixtures. For documentation requirements, please send an email request to [RLF@icfi.com](mailto:RLF@icfi.com).

- 3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet the criteria provided in Annex A may qualify as ENERGY STAR. Specifications for qualifying **indoor fixtures** can be found in Table 1. Additional specifications for qualifying recessed downlight retrofit kits can be found in Table 1A. Specifications for qualifying **outdoor fixtures** can be found in either Table 2A – Outdoor Fixtures: Compliance Through Efficient Light Source or Table 2B – Outdoor Fixtures: Compliance Through Reduced Operating Time. Specifications for **GU-24 based integrated lamps** used in ENERGY STAR fixtures can be found in Table 3.
- 4) Qualification Process, Acceptable Sources of Documentation, Reference Standards & Required Documentation<sup>1</sup>:

<sup>1</sup> EPA may on occasion modify submittal procedures and format. Partners will be notified at the time of these modifications. For the most current instructions on submitting fixtures to ENERGY STAR, reference the Residential Light Fixtures Partner Resources page on the ENERGY STAR Web site.











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