

# Lab Recognition by Lighting Category



- The purpose of this document is to clarify for laboratories, ABs, and CBs the test methods to which a laboratory must be accredited to gain EPA recognition for testing one or more lighting product types.
- The Application for EPA Recognition of a Laboratory allows laboratories to apply to be recognized to test one or more lighting product types. Recognized laboratories are listed by lighting product type on EPA's Recognized Laboratories webpage.
- Scopes of Accreditation: When creating Scopes of Accreditation for a laboratory seeking EPA recognition for lighting products, the AB must include the titles of the test methods enumerated in the tables that follow, depending on the product types the laboratory is seeking to test. This may be in addition to the title of the relevant ENERGY STAR specification(s). For Decorative Light Strings, the test method is the title of the specification, and should appear as such on the Scope of Accreditation.
- Electromagnetic Interference (EMI) testing: EPA is not requiring lighting laboratories to be accredited for EMI testing to be recognized. However, the CB must ensure the ENERGY STAR partner seeking to qualify a lighting product provides an EMI test report from a NVLAP- or A2LA-accredited or FCC laboratory. Electrical safety test reports must originate from an OSHA NRTL.

# Lab Recognition by Lighting Category



## Luminaire/Lamp Categories

- Solid State Lighting Luminaires
- Residential Light Fixtures, Outdoor
- Residential Light Fixtures, Indoor
- Compact Fluorescent Lamps
- GU 24 Lamps
- Integral LED Lamps, Omnidirectional/ Directional
- Integral LED Lamps, Decorative
- Decorative Light Strings

## Component Categories

- Fluorescent Ballasts
- Fluorescent Lamps
- LEDs (Package, Module or Array)

# Solid State Lighting Luminaires (SSL)



<b><i>Solid State Lighting Luminaires (SSL)</i></b>	
<b>Criteria</b>	<b>Test Method</b>
Luminaire Efficacy (Light Output, Input Power), Color Rendering Index (CRI), Chromaticity and Correlated Color Temperature (CCT)	IESNA LM-79-08 sections 9 and 12
Power Factor	ANSI C82.77-2002
Zonal Lumen Density (except Ceiling Mounted Luminaires with diffusers)	IESNA LM-79-08 section 10* (Goniophotometer)
Lumen Maintenance (L <sub>70</sub> )	IESNA LM-80-08**

\*Lab will be only partially recognized if lacking accreditation to LM-79-08 section 10. In this case, the CB will need a supplemental test report from an EPA-recognized lab accredited to LM-79-08 section 10.

\*\*Lab is not required to be accredited to LM-80-08 to be recognized to test SSL Luminaires. However, the CB will need a supplemental test report from an EPA-recognized lab accredited to LM-80-08.

# Residential Light Fixtures (RLF), Outdoor



<i>Residential Light Fixtures (RLF), Outdoor</i>	
Criteria Item	Test Method
System Efficacy	IESNA LM-9-1999 IESNA LM-66-00 (for single-ended CFLs) ANSI C82.2-2002
Lamp Life	IESNA LM-40-01 IESNA LM-65-01

# Residential Light Fixtures (RLF), Indoor



<b>Residential Light Fixtures (RLF), Indoor</b>	
<b>Criteria Item</b>	<b>Test Method</b>
System Efficacy	IESNA LM-9-1999 IESNA LM-66-00 (for single-ended CFLs) ANSI C82.2-2002
Lamp Requirements	IESNA LM-40-01 IESNA LM-65-01
Lumen Maintenance	IESNA LM-40-01 IESNA LM-9-1999 IESNA LM-65-01 IESNA LM-66-00 (for single-ended CFLs) ANSI C78.5-2003
Color Rendering Index (CRI)	CIE Publication No. 13.3 IESNA LM-58-94
Correlated Color Temperature (CCT)	IESNA LM-58-94 IESNA LM-16-93

# Compact Fluorescent Lamps (CFL)



<b>Compact Fluorescent Lamps (CFL)</b>	
<b>Criteria Item</b>	<b>Test Method</b>
Lamp Power (Watts) & Configuration	IESNA LM-9-1999 IESNA LM-66-00 (for single-ended CFLs)
Color Rendering Index (CRI)	CIE Publication No. 13.3
Power Factor	IESNA LM-9-1999 IESNA LM-66-00 (for single-ended CFLs)
Rapid Cycle Stress Test	IESNA LM-65-01 (for single-ended CFLs)
Lumen Maintenance	ENERGY STAR Elevated Temperature Test Procedure (Appendix B)
Run-up Time, Lumen Maintenance at 40% rated life	ANSI C78.5-2003

# GU 24 Lamps



<b>GU 24 Lamps</b>	
<b>Criteria Item</b>	<b>Test Method</b>
System Efficacy	ANSI C78.5: 2003 IESNA LM-66-00 (for single-ended CFLs)
Color Rendering Index (CRI)	IESNA LM-58 CIE Publication No. 13.3
Correlated Color Temperature (CCT)	IESNA LM-58 IESNA LM-16
General Ballast Requirement, Lamp Start Time, Run-up Time	ANSI C78.5-2003
Average Rated Lamp Life	IESNA LM-65-01 (for single-ended CFLs) ANSI C78.5-2003
1,000 hour Lumen Maintenance	IESNA LM-66-00 (for single-ended CFLs) IESNA LM-65-01 (for single-ended CFLs) ANSI C78.5-2003

# Integral LED Lamps, Omnidirectional/Directional



<b><i>Omnidirectional/Directional Lamps (Shapes: A, BR, BT, ER, K, MR, P, PAR, PS, R, S, T)</i></b>	
<b>Criteria Item</b>	<b>Test Method</b>
Correlated Color Temperature (CCT) and Duv, Color Rendering Index (CRI), Color Maintenance, Power Factor, Minimum Luminous Efficacy, Minimum Light Output, Color Spatial Uniformity (for directional lamps), Minimum Light Output (for BR, ER, K, and R lamps)	IESNA LM-79-08 sections 9 and 12
Luminous Intensity Distribution, Minimum Center Beam Intensity (for PAR and MR16 lamps)	IESNA LM-79-08 section 10 (Goniophotometer)
Lumen Maintenance	IESNA LM-79-08 section 9 Elevated Temperature Test per ENERGY STAR CFL Version 4.0 (40% rated life) IESNA LM-80-08*
Rapid Cycle Stress Test	IESNA LM-65-01

\* Lab is not required to be accredited to LM-80-08 to be recognized to test Integral LED Lamps. However, in the case of a partner pursuing the early initial qualification option (see ENERGY STAR Program Requirements for Integral LED Lamps, Section 8A), which requires accreditation to LM-80-08, the CB will need a supplemental test report from an EPA-recognized lab accredited to LM-80-08.



# Integral LED Lamps, Decorative



<b><i>Decorative Lamps (Shapes: B, BA, C, CA, DC, F, G)</i></b>	
<b>Criteria Item</b>	<b>Test Method</b>
Correlated Color Temperature (CCT) and Duv, Color Rendering Index (CRI), Color Maintenance, Power Factor, Minimum Luminous Efficacy, Minimum Light Output	IESNA LM-79-08 sections 9 and 12
Lumen Maintenance	IESNA LM-79-08 section 9 IESNA LM-80-08*
Rapid Cycle Stress Test	IESNA LM-65-01

\*Lab is not required to be accredited to LM-80-08 to be recognized to test Integral LED Lamps. However, in the case of a partner pursuing the early initial qualification option (see ENERGY STAR Program Requirements for Integral LED Lamps, Section 8A), which requires accreditation to LM-80-08, the CB will need a supplemental test report from an EPA-recognized lab accredited to LM-80-08.

# Decorative Light Strings (DLS)

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- Test method as outlined in ENERGY STAR DLS Eligibility Criteria Version 1.4

# Fluorescent Ballasts



<i>Fluorescent Ballasts</i>	
Criteria Item	Test Method
Ballast Performance	ANSI C82.11-2002 ANSI C82.2-2002

# Fluorescent Lamps



<i>Fluorescent Lamps</i>	
Criteria Item	Test Method
Electrical Measurements	IESNA LM-9-1999 ANSI C78.375-1997
Life Test Performance	IESNA LM-40-01
Color Rendering Index (CRI), Correlated Color Temperature (CCT)	CIE Publication No. 13.3 - 1995

# LEDs (Package, Module or Array)

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- IESNA LM-80-08