



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Welcome!

EPA estimates that, if all downlights and downlight retrofit kits sold in the United States were ENERGY STAR certified to the proposed specification:

- Energy cost savings would grow to more than **\$1.6 billion** each year, and
- More than **20.7 billion pounds** of greenhouse gas emissions would be prevented, equivalent to the emissions from more than **2 million vehicles.**





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

ENERGY STAR[®] Recessed Downlights Version 1.0 Draft 2 Webinar

July 12, 2023

Taylor Jantz-Sell (she/her)
EPA
Product Manager
Jantz-Sell.Taylor@epa.gov

Daniel Rogers, LC (he/him)
ICF
Managing Consultant
Daniel.Rogers@icf.com





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Today's Agenda

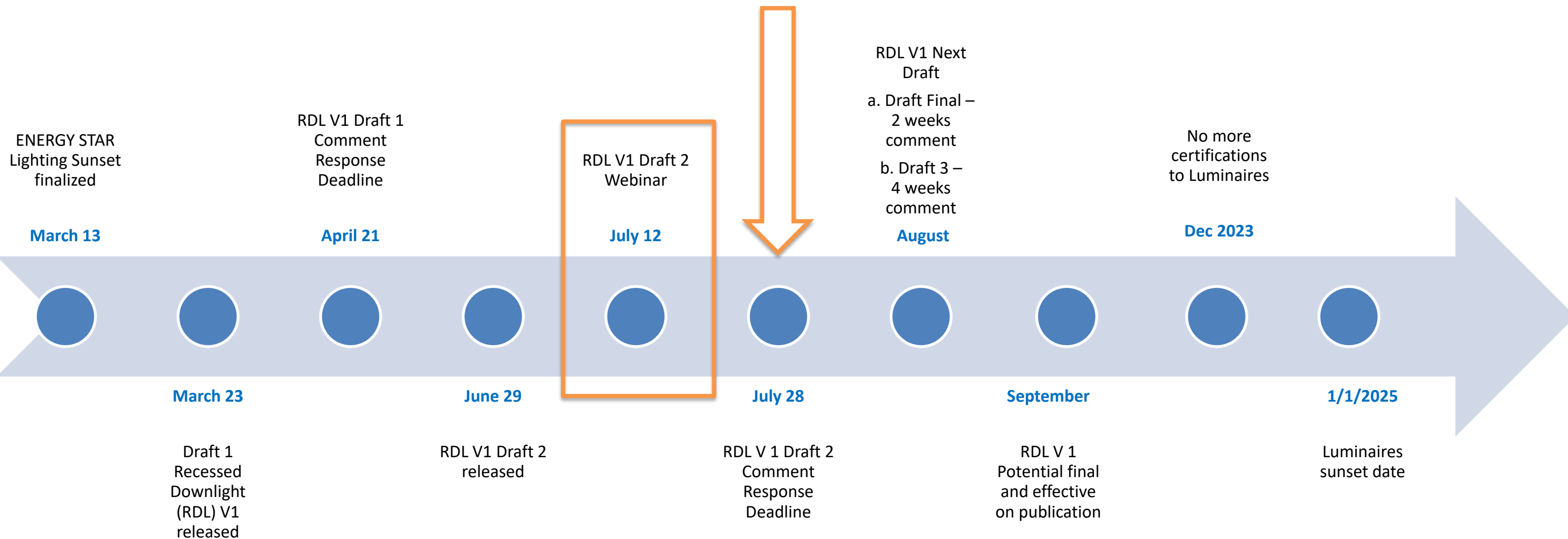
- Timeline
- Document Availability
- Draft 2 Proposed Revisions
- Q&A





SAVE TODAY. SAVE TOMORROW.
 SAVE FOR GOOD.

Timeline





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Document Availability

All documents related to the development of this specification are posted at

www.energystar.gov/luminaires



ABOUT FOR PARTNERS

SEARCH



[Find Products](#)

[Save At Home](#)

[New Homes](#)

[Commercial Buildings](#)

[Industrial Plants](#)

[Home](#) » [Energy Efficient Products](#) » [Recessed Downlights Version 1.0](#)

Recessed Downlights Version 1.0

Recessed Downlights V1.0 Draft 2 Webinar – July 12, 2023

[Register Here](#) [EXIT](#)

Recessed Downlights V1.0 Draft 2 – June 29, 2023

[ENERGY STAR Recessed Downlights V1.0 Draft 2 Cover Letter \(PDF, 156 KB\)](#)

[Recessed Downlights V1.0 Draft 2 Specification \(PDF, 475 KB\)](#)

[ENERGY STAR Recessed Downlighting V1.0 Draft 1 Comment Summary and Response \(PDF, 76 KB\)](#)

Recessed Downlights V1.0 Draft 1 Comments

[Cordelia Lighting Comments \(PDF, 223 KB\)](#)

[Intertek Comments \(PDF, 61 KB\)](#)

[NEMA/ALA Comments \(PDF, 401 KB\)](#)

[TUV Rheinland Comments \(PDF, 155 KB\)](#)

[UL Comments \(PDF, 451 KB\)](#)

Recessed Downlights V1.0 Draft 1 - March 23, 2023

[Recessed Downlights V1.0 Draft 1 Cover Letter \(PDF, 95 KB\)](#)

[Recessed Downlights V1.0 Draft 1 Specification \(PDF, 455 KB\)](#)

[Recessed Downlights V1.0 Draft 1 Specification Data & Analysis Package \(OFFICEDOCUMENT, 1.7 MB\)](#)

Luminaires Specification Version 2.2



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Sections with changes from Draft 1

- ❖ Scope
- ❖ Definitions
- ❖ Test Criteria
- ❖ Product Families
- ❖ Methods of measurement
- ❖ Lumen maintenance
- ❖ Light Source life
- ❖ Serviceability
- ❖ Labeling & Packaging



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

1 Scope

- Recessed downlights with integrated light source(s) and aperture ≤ 10 inches
- Recessed downlight retrofit kits with integrated light source(s) and aperture ≤ 10 inches
- **Alternate mounting configurations** for products that are otherwise identical to the included recessed downlights or recessed downlight retrofit kits include:
 - Cable Mounting
 - Pendant Mounting
 - Semi-recessed Mounting
 - Surface Mounting
 - Wall Mounting





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

4 Definitions

- **Accent Light (Adjustable Accent Light)**: A **small direct-lighting unit with adjustable/aimable optics designed to** emphasize a particular object or surface feature, or to draw attention to a part of the field of view. (Adapted from ANSI/IES LS-1-22: “Accent Lighting”)
- **Down Light or Downlight**: A small direct-lighting unit that directs the light downward and can be recessed, surface mounted, or suspended (ANSI/IES LS-1-22). See definition of Direct Lighting for additional information. For purposes of this specification, this definition includes downlight retrofit kits, **accent lights, and models offering wallwash distribution.**
- **Downlight Retrofit**: A **small direct-lighting unit** intended to install into an existing downlight, replacing the existing light source and related electrical components, typically employing an ANSI standard lamp base, either integral or connected to the downlight retrofit by wire leads, and is a retrofit kit classified or certified to UL 1598C. This category does not include self-ballasted lamps, or products that utilize an existing ballast or transformer.
- **Wallwash Distribution**: **Optics designed to deliver an even, overall light on an adjacent wall or vertical surface.** (Adapted from ANSI/IES LS-1-22: “Wash”)



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

5 Test Criteria

- “Partners must ensure that all configurations certified as ENERGY STAR continue to meet the certification criteria through subsequent firmware, software, or other changes to the certified product.”

5.1 Testing Color Tunable and Multi-Output Downlights

- When testing color tunable or multi-output downlights, all tests **and evaluations** must be performed at the most consumptive white light setting (i.e., the white light setting that results in the highest measured input power) covered by this specification



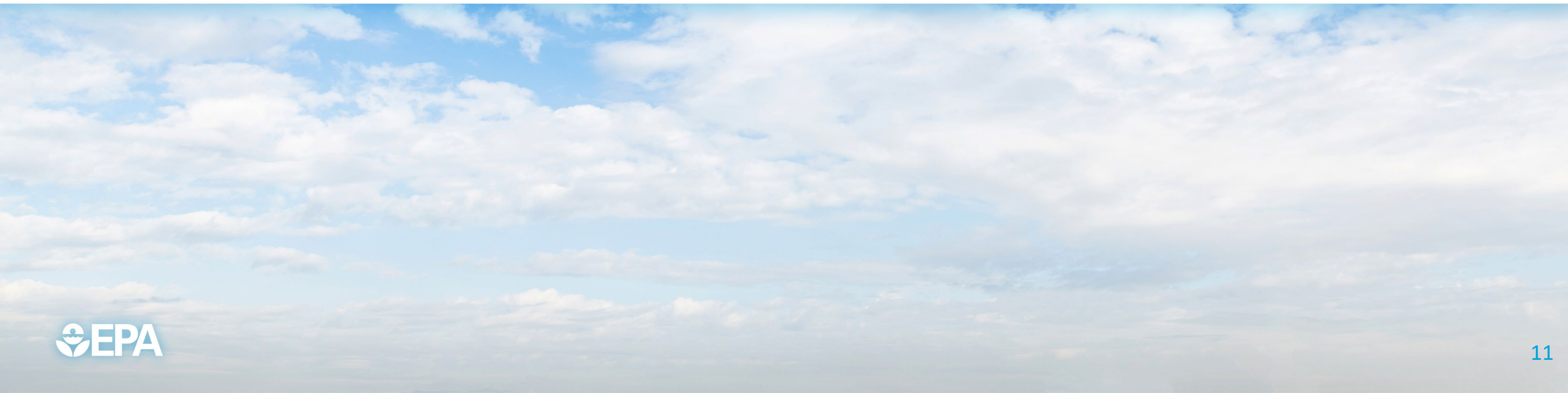
SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

6.1 Product Families – a NEW Approach

- **Focuses on the amount of energy used:**
 - Tested representative model for a product family would be the variation with:
 - Highest input power
 - Highest efficacy
 - Allowable variations that do not meet the efficacy requirement are okay so long as the applicable minimum initial light output requirement is met.
- **Trust but Verify:**
 - Partners demonstrate that variations can be covered by the tested representative model based on engineering rationale (or measurement)
 - Verification testing:
 - Instead of being evaluated against the efficacy level products will be evaluated **for input power (must be less than reported input power)** and **light output separately**
 - Must meet all VT criteria (e.g., CCT, driver case temp etc.) **other than efficacy**



Polls





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

7 Methods of Measurement

- EPA clarified that multiple versions of certain test methods are acceptable for the purposes of ENERGY STAR certification:
 - **ANSI/IES LM-79-19,**
 - **IES LM-79-08**

 - **ANSI/IES LM-80-21**
 - **ANSI/IES LM-80-15**
 - **IES LM-80-08 and its Addendum A**

 - **C82.77-10-2021**
 - **C82.77-10-2014**

- **LM-84** and **TM-28** no longer referenced.



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

9.1 Lumen Maintenance

- “Option 2” lumen maintenance compliance path removed
- ANSI/IES TM-21 Calculator officially released as of June 1, 2023
- 25,000-hour minimum lumen maintenance lifetime requirement for all products

9.2 Light Source Life

- 25,000-hour minimum requirement for all products
- Light source separability no longer a factor (all references to separable and inseparable have been removed).



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

TM-21 Calculator Comparison

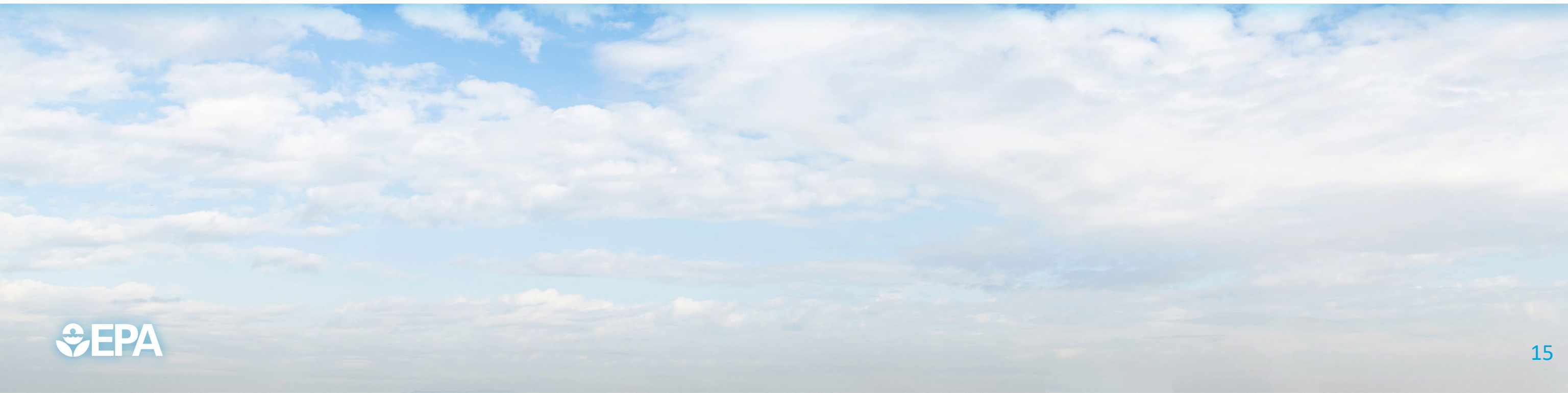
www.ies.org/standards/standards-toolbox/

	ENERGY STAR	ANSI/IES
L70 (hours)	> 61,000	> 60,500
Lumen Flux Maintenance at 25,000 hours	96.39%	95%





Polls





SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

11 Serviceability ~~Requirements~~ Recommendations

- When possible, models should allow for consumer replacement of the light source and/or driver without otherwise damaging the installed downlight



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

15.1 Labeling & Packaging

- Simplify requirements for models destined only for online sales
 - Purchase decision is made before the consumer ever sees the packaging
 - Partners document the requirements on a supplemental summary document (i.e., instead of on the packaging) that is:
 - Reviewed by the CB
 - Provided to online retailers to help ensure that online marketing claims are consistent with the model's certification
- Removing requirements related to insulation contact (Type IC) and airtight certification because safety standards already exist.
- Partner Commitments still apply
 - Comply with current ENERGY STAR Brand Book
 - Use the ENERGY STAR name and marks only in association with certified products
 - “The ENERGY STAR mark must be clearly displayed on the front or primary display panel of the product packaging...”



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Please submit comments on or before July 28th!

- Email to lighting@energystar.gov
- Subject: "ENERGY STAR Recessed Downlights V1 Draft 2 Comment"
- We are also available for one-on-one conversations if preferred



SAVE TODAY. SAVE TOMORROW.
SAVE FOR GOOD.

Q&A