

UL Marketing Claim Verification for differentiating circadian measurements in luminaires

Circadian entrainment and its impact on health

For decades, researchers have studied the negative impacts of poor sleep and extended time away from natural light; the future of designing indoor lighting ties closely to building occupants' health. When we don't get enough bright light during the day and less light at night, our circadian rhythm tends to wander a little bit each day, and our sleep patterns suffer.

Choosing luminaires and systems for health and to promote healthy buildings has come into focus, with the need to assess how much light is needed, how best to deliver it, and how to validate the implementation. As interest in healthy buildings and working spaces that support circadian-effective lighting during the day grows, lighting designers face the challenge of choosing and comparing products that will help meet their goals. Building owners, lighting designers and consumers alike need a way to differentiate among lighting options that could serve circadian-effective spaces (spaces with optimal lighting conditions to support circadian rhythm) based on consistent, measurable data.



What is UL marketing claim verification?

We developed the UL Marketing Claim Verification program to provide manufacturers a way to confirm the accuracy of specific claims that can help differentiate their products in the marketplace. Verification is based on an objective, science-based assessment that confirms the accuracy of marketing and performance claims. We can issue a Marketing Claim Verification Mark after successfully verifying a marketing claim through testing, auditing or inspection.

Verification Mark use authorization expires one year after the original Mark issuance date with the option to renew annually.

Lighting specifiers looking for specific performance characteristics can search the [UL Verify database](#) for products and manufacturers with verified claims.

Claim module
Customizable claim language highlights performance



Basic Verification Mark
Indicates that UL Solutions has assessed and verified the claim

Unique identifier
Enables users to look up more information about your specific claim on the UL Verify site: [Verify.UL.com](https://www.verify.ul.com)

Circadian-effective luminaire performance verification

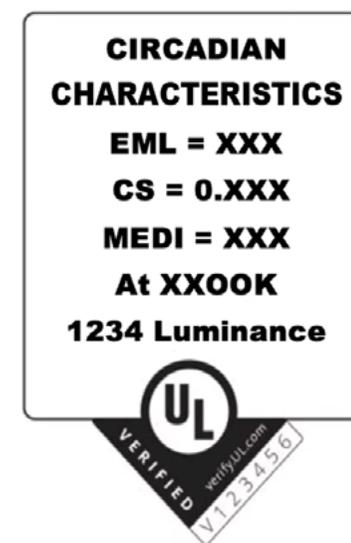
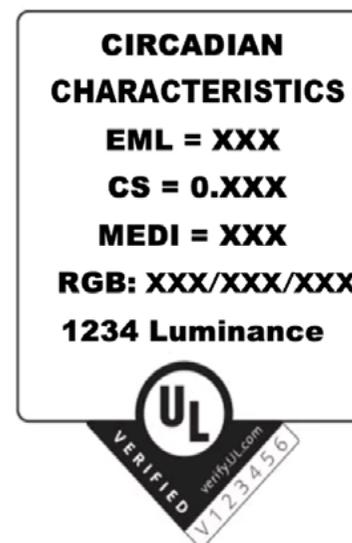
This UL Marketing Claim Verification program measures photometric characteristics for luminaire categories such as recessed troffers, pendants, wall washers, wall sconces, downlights and desk lamps. Luminaires with both fixed and tunable correlated color temperature (CCT) can be measured.

To take these measurements, we have created a customized laboratory space to measure the spectral power distribution (SPD) at the vertical plane of the observer's retina. Product samples sent to our laboratory will be measured in this space with attention to eye levels of the observer. We will also incorporate into the claim factors like tunability of the lighting controls and systems, depending on the request.

To convert each luminaire's measurements into meaningful data, we apply the methodologies from any or all of the three published models that address circadian lighting:

- International WELL Building Institute: Equivalent Melanopic LUX (EML)
- UL Solutions DG 24480, Design Guideline for Promoting Circadian Entrainment with Light for Day-Active People, covering circadian stimulus (CS)
- DIN/TS 67600, covering melanopic equivalent daylight illuminance

Manufacturers building a catalog of luminaires with verified circadian measurement will benefit from inclusion in the [UL Verify database](#) of verified claims and its searchable functionality.



Sample Marketing Claim Verification Marks based on the EML, MEDI and CS units of luminance



Start the conversation about your UL Marketing Claim Verification project or visit us online at [UL.com/circadian](https://www.ul.com/circadian) for more human-centric resources. Connect with local experts in your region today.

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