



# Measuring circadian-effective lighting in the field

## Advancements in connecting light and health

Over the past several decades, the link between the lighting we are exposed to each day and its effect on our circadian rhythm has been a topic of interest in our industry. As building owners, lighting designers and consumers have become increasingly interested in measuring circadian-effective lighting, the need for consistent, measurable data and tools to assess in-field results have increased. The ability to report on circadian effectiveness for a space could be an important differentiator as more healthy benefits to effective lighting are published.

## UL Circadian-Effective Field Measurement Service

The recently launched UL Circadian-Effective Field Measurement Service involves gathering field measurements in an indoor space and reporting the results on a circadian heat map.

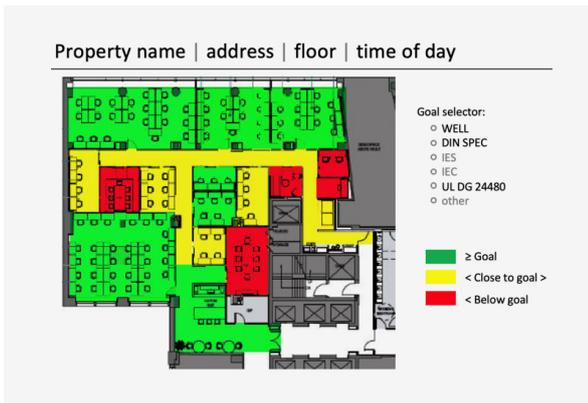
This includes measuring the actual light that hits the eyes of building occupants inclusive of reflectance off the ceiling, walls, floor and furniture.

The field measurement part of the process uses state-of-the-art, patent-pending robotic automation to gather large amounts of data throughout the building.

The data is then run through an algorithm that uses criteria and methodology set in the three published models of the International WELL Building Institute, UL DG 24480, the Design Guideline for Promoting Circadian Entrainment with Light for Day-Active People, and DIN TS 67600.

The resultant test report can help building owners, designers and specifiers with analysis of existing lighting conditions, or as a planning tool for retrofits and construction by evaluating light quality in a given space and correlating it to its circadian effectiveness.





Sample circadian heat map

## Key industry drivers

Through feedback from the industry, UL has identified that lighting designers needed a solution to map the circadian health of a space quickly and efficiently.

- Outlining how to conduct the measurements was not enough
- Manual gathering of measurements was unrealistic at scale

By automating the process and creating the framework for analysis, UL's field measurement service provides a path to adoption and a way to differentiate spaces as circadian-effective.

## Why UL for circadian-effective lighting?

Since its inception, UL has been at the forefront of technological advancement that benefits society. The growing industry need for differentiation and substantiate of claims around circadian-effective lighting is being met by our continued innovation.

Through cooperative efforts with circadian research experts, UL's publication of UL DG 24480, the Design Guideline for Promoting Circadian Entrainment with Light for Day-Active People and the recent launch of UL's performance measurement services demonstrates our commitment to this industry need.

**In addition to on-site field measurement of indoor spaces, we offer UL Circadian-Effective Luminaire Performance Certification. Learn more [online](#) or connect with our experts in your region.**

- In the Americas: [LightingInfo@UL.com](mailto:LightingInfo@UL.com)
- In Europe: [AppliancesLighting.EU@UL.com](mailto:AppliancesLighting.EU@UL.com)
- In China: [GC.LightingSales@UL.com](mailto:GC.LightingSales@UL.com)
- In Australia and New Zealand (ANZ): [CustomerService.ANZ@UL.com](mailto:CustomerService.ANZ@UL.com)
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