

Street lighting field dynamic measurements

UL Solutions offers a new service to measure street light performance in the field.

Explore UL Solutions innovative approach to measuring installed street lighting performance in the field, making the data collection practical in real time.

Public light quality

The desire to save energy and potential for improved quality challenge municipalities to retrofit their conventional street lighting to LED. The final goal of an upgrade is to maintain lux levels at ground level, providing good visibility and a sense of safety in public areas while increasing the performance level.

However, not all LED fixtures are created equal, and these goals are not always met. On top of performance tests conducted at UL Solutions laboratories, UL Solutions now offers a new service to measure light performance directly in the field on installed products.

Our experts developed a smart solution to run measurements dynamically in the field by employing sophisticated sensor equipment mounted on a car, able to:

- Geo-coordinate light points on a street map.
- Determine fixture mounting height above ground.
- Measure lux distribution levels mapped to illustrate uniformity of existing and new lighting retrofits.



Beyond safety testing, performance and energy efficiency, street lighting measurements are increasingly critical for municipalities all over the world.



The UL Solutions Streetlight Field Audit solves several issues inherent in existing approaches.

Today, required parameters are collected manually, taking considerable time. In addition, this can cause traffic flow problems, such as traffic deviation and road closures. In some cases, this has made field measurements impractical.

The new UL Solutions Street Light Field Audit approach helps:

- Lighting designers: Prior to conducting a re-lamping project, the actual illumination levels are needed to evaluate and identify the best possible solution. UL Solutions can help reduce measurement time by providing accurate illumination parameters throughout the project area, whether it's hundreds or tens of thousands of fixtures.
- Energy service companies (ESCOs): Monitoring performance year over year is a key element to understanding if the installed product performs as expected. UL Solutions can help provide the illumination parameters needed to make an analysis in order to determine if maintenance is needed in the field.
- Governments/infrastructure authorities: UL Solutions offers the same support to the infrastructure authority who owns the public illumination infrastructure.

What it solves

Illumination levels need to be measured year over year as required by different standards, such as:

- The EN 13201 series is applicable to fixed lighting installations intended to provide good visibility to users of outdoor public traffic areas at evening hours to support traffic safety, traffic flow and public security.
- RP 8-18 provides recommended practices for designing new lighting systems for roadways, producing quick, accurate and comfortable visibility at night.

For more information, visit [UL.com/lighting](https://www.ul.com/lighting) or contact your local team:

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