



# Introducing UL 8802, the Standard for Ultraviolet (UV) Germicidal Equipment and Systems

*Advancements in product design and scientific developments continue to drive interest in ultraviolet (UV) solutions for germicidal systems in commercial, professional and medical settings. Work that was started during the pandemic continues with the first edition of ANSI/CAN/UL 8802, published on Nov. 16, 2023, as a consensus-based national Standard for safety of UV germicidal equipment and systems in Canada and the United States.*

The ANSI/CAN/UL 8802 Standard replaces the UL 8802 Outline of Investigation (OOI) fifth edition, which has now been retired. The development and adaptation of the OOI over the years took into consideration technological advancements and new use cases, demonstrating our adaptability to industry needs. Our experienced engineers have the expertise to evaluate your products and help you understand safety risks associated with UV germicidal equipment and systems.

ANSI/CAN/UL 8802 has requirements for the safety of UV germicidal equipment and systems with specific criteria to address the risk of personal injury to persons due to UV overexposure.

The Standard is intended to be used in conjunction with one of the safety Standards noted below to address the risk of electric shock, fire and personal injury due to factors other than UV overexposure.

- CSA C22.2 No. 250.0/UL 1598, the Standard for Luminaires
- CSA C22.2 No. 250.2/UL 2108, the Standard for Low Voltage Lighting Systems
- CAN C22.2 No. 250.4/UL 153, the Standard for Portable Electric Luminaires

UL 8802 is organized into different parts, where various safeguards to mitigate UV overexposure are specified based on product type as follows:

- Part 1 – UV Germicidal Equipment
- Part 2 – UV Emitter Assemblies
- Part 3 – UV Germicidal Systems
- Part 4 – UV Germicidal Retrofit Kits
- Part 5 – Contained UV Germicidal Equipment



## Photobiological assessment under UL 8802

UL 8802 offers optional photobiological assessment using criteria from IES RP-27.1, Recommended Practice for Photobiological Safety for Lamps and Lamp Systems – General Requirements. This is significant, particularly for products utilizing Far UV sources, because RP-27.1 specifies revised spectral weighing factors that may allow for higher exposure times and/or shorter exposure distances in some cases. Photobiological assessment using criteria from IEC 62471, Photobiological Safety of Lamps and Lamp Systems, also continues to be an option for testing.

There are several notable updates for evaluation of UV germicidal equipment within UL 8802:

- The height of the two-dimensional test plane has been reduced to 1.9m (from 2.1 m) above the finished floor.
- Informative Annex F has been added to offer best practices for installation of UV germicidal equipment to recognize that actual field conditions will vary from those used during the photobiological assessment, and that a site assessment of potential UV hazards conducted by competent persons is critical to minimize the likelihood of UV overexposure in the occupied space.

UL 8802 is applicable to multiple segments in and related to the lighting industry, including manufacturers, building managers and companies investing in germicidal equipment, its installation and staff training.

**Contact us for a quote or to learn more about how UL Solutions can help your UV germicidal plans at [UL.com/uvlighting](https://www.ul.com/uvlighting).**

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