

# Bi-national Standards for Luminaires Now in Effect

**Q** What has happened to the UL 1570 series of standards covering lighting fixtures?

**A** A new, bi-national standard that combines safety requirements for both the United States and Canada went into effect on January 31, 2001. This bi-national Standard, UL 1598/CSA 250 (or UL 1598/CSA-C22.2, No. 250.0) Standard for Safety for Luminaires, replaces three of the UL 1570 series of Standards for Safety for lighting products, including Fluorescent Lighting Fixtures (UL 1570), Incandescent Lighting Fixtures (UL 1571), and High Intensity Discharge Fixtures (UL 1572), and the Canadian lighting products standard CSA-C22.2, No. 9.096, General Requirements for Luminaires or CSA Spec. 9.

“Luminaire” is the internationally accepted term used to describe lighting fixtures, such as those installed in recessed ceilings or mounted over doors, that are permanently connected to a power source.

The UL 1598/CSA 250 Bi-national Luminaire Standard defines luminaires “as a complete lighting unit designed to accommodate a lamp (i.e., bulb) and connect the lamp to a power source.”

UL 1598/CSA 250 applies to luminaires for use in non-hazardous locations that are intended for installation on branch circuits of 600 volts (600 V) nominal or less between conductors in accordance with the *Canadian Electrical Code (CEC)* for Canada and the *National Electrical Code (NEC)* for the U.S.

A proposal to change the term “fixture” to “luminaire” is also under consideration for the 2002 edition of the *National Electrical Code*, and has been accepted through the proposal and comment stages.

Luminaires designed to comply with the requirements of UL 1598/CSA 250 meet all of the safety requirements of both Canada and the United States.

The harmonized standard is expected to lower production costs and make it easier for manufacturers to sell products in both Canada and the United States.

Products certified by UL in accordance with UL 1598/CSA 250 will be permitted to bear a Listing Mark stating, “Luminaire.”

Markings indicating the type of luminaire such as “Incandescent Recess,” “High-Intensity Discharge,” or “Fluorescent,” may be included in combination or in a separate marking adjacent to the Listing Mark.

**Q** What is the type and number of luminaires that can be installed in a fire rated ceiling assembly based upon the Underwriters Laboratories Fire Resistance Directory?

**A** A hole cut in a fire rated assembly, such as for a recessed luminaire, may compromise the fire rating of the ceiling. Recessed luminaires may be installed in a fire rated ceiling only if the luminaire was Underwriters Laboratories Classified as part of the fire rated ceiling assembly.

Luminaires classified as part of a fire rated ceiling assembly are listed

in the Underwriters Laboratories (UL) Fire Resistance Directory, Volume 1, which covers all Underwriters Laboratories Classified Fire Resistive Wall, Partition and Ceiling Assemblies.

There are two ways recessed luminaires may be used in fire rated ceiling assemblies:

1. When the UL Classified ceiling assembly may incorporate ordinary Listed fluorescent or incandescent recessed luminaires as part of the design, the fire rated ceiling assembly specifies fire resistance protection to be provided for the luminaire, such as tenting or boxing and luminaire spacing limitations, to maintain the hourly fire rating of the ceiling.
2. Fluorescent and incandescent recessed luminaires that have been classified for use in UL Classified Fire Resistive Ceiling Designs have the fire resistance protection built into the luminaire to maintain the fire resistance rating of the floor/ceiling or roof/ceiling assemblies.

These luminaires are classified under the category of Luminaires Classified for Fire Resistance (IFDL), located in the Underwriters Laboratories (UL) Electrical Construction Equipment Directory (Green Book) and the Underwriters Laboratories General Information for Electrical Equipment Directory (White Book).

The category also appears under (CDHW) in Volume 1 of the Fire Resistance Directories.

The luminaires are marked with the Underwriters Laborato-

ries Classification Mark and the UL Fire Resistive Design Numbers that they were classified.

**Q** In some panels, factory wiring is bent sharply at 90-degree bends. Does this practice adversely affect the factory wiring?

**A** As long as the conductors are not damaged, the UL Standards do not prohibit 90-degree bends for factory installed conductors. All panelboards and switchboards are subject to a dielectric voltage withstand test at the time of manufacture to determine if there is any damage to the insulation of the conductors.

**Q** How can an inspector determine what components (e.g. circuit breakers, fuses, TVSS, and/or panelboards) were evaluated at the time of the listing of deadfront switchboard sections?

**A** A switchboard section or interior may also have provision for field installation of additional suitable equipment such as branch, splice or through busses, meter socket bases, circuit breakers, switches, panelboards, and terminal connectors. The switchboard section or interior is marked with the name or trademark of the manufacturer and the catalog number or equivalent of such equipment that is intended to be installed in the field.

A switchboard section or interior may also have provision for utility installed current transformers and metering equipment.

The switchboard section or interior may also have the provision for field installation of additional suitable equipment such as branch, splice or panelboards, TVSS and technical connectors.

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The special UL meetings for government inspectors provide us an excellent opportunity to ask questions of UL engineers and to clarify UL requirements. The "UL Question Corner" answers questions of general interest that are sent in from authorized governmental inspectors and we believe will have interest for many inspectors.

Please send us questions you may have that are of general interest and we will have UL engineers answer them in a future issue. If space does not permit answering all questions received, we'll see that you get an answer by letter. Send your questions to:

UL Question Corner - IAEI News  
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