



## White Paper: Understanding c-CSA-us Listed versus UL Listed

### The U.S. Product Safety Certification System

In the United States the safe installation of electrical products is assured through conformance to NFPA 70, the *National Electrical Code* (NEC). Although the NEC itself is not a mandatory standard, it is adopted as law in almost every state or locality in the U.S. (see Appendix A for details regarding your state or locality). The enforcement of the NEC is delegated to the local “Authority Having Jurisdiction”, or AHJ. Since it is unreasonable to expect any AHJ to be knowledgeable on the safe operation of the myriad of potential electrical products in any installation, Sections 90.7 and 110.3 of the NEC define the parameters for independent testing labs to judge the suitability of electrical equipment to the appropriate American National Standards for the equipment. The complete text of the appropriate NEC references is included in Appendix B, including the definition for “Listed” equipment.

There are several sections of the NEC that require certain types of electrical equipment to be listed, including Section 410.6 which states that all luminaires must be listed. There are no sections of the NEC requiring products to be UL listed. The NEC has intentionally left the definition for “Listed” generic to allow for competition between third-party certification bodies and to prevent monopolization of the product safety certification market.

### Standards Development Organizations versus Certification Bodies

Standards Development Organizations (SDOs) are responsible for creating the standards by which products are evaluated. In the U.S., the authority for publishing the American National Standards for electrical products has been granted by the American National Standards Institute (ANSI) to Underwriters Laboratories (UL). The American National Standard for evaluating the safety of luminaires is UL 1598 (plus UL 8750 when the light source is LED).

Certification Bodies, or Testing Laboratories, are independent organizations that can evaluate products to the appropriate American National Standards. In the U.S, the Occupational Safety and Health Administration (OSHA) has accredited several Certification Bodies as Nationally Recognized Testing Laboratories (NRTLs) for electrical products (see <http://www.osha.gov/dts/otpc/nrtl/index.html> for further information). Both UL and CSA International are accredited by OSHA as NRTLs for evaluating electrical products to the American National Standards.

Although UL acts as both an SDO and as a Certification Body, there is no requirement for the certification (listing) of a product to be performed by the SDO who is responsible for overseeing the development of the standard. Any accredited NRTL can be used by a manufacturer to evaluate the product. Likewise, in Canada the Standards Council of Canada has granted SDO status to CSA for the development of the Canadian National Standards for electrical product safety; but they also recognize UL as an accredited Certification Body who can test and list product to the Canadian standards.

## The Marks

The presence of the UL Listing mark on a product indicates that UL, as a Certification Body, has tested and evaluated the product for compliance to the appropriate American National Standard. As an example, a UL Listing mark on an LED Luminaire indicates that the luminaire has been tested and evaluated to both UL 1598 and UL 8750. The presence of a CSA Listing Mark with a “US” subscript indicates that CSA, as a Certification Body, has tested and evaluated the product for compliance to the appropriate American National Standard. In the previous example, an LED luminaire, the CSA mark with a “US” subscript would indicate that the product has been tested and evaluated to the same standards that UL would use, UL 1598 and UL 8750. The UL Listing mark and the CSA Listing mark with a “US” subscript are equivalent. See Appendix C for further information on SDOs, Certification Bodies, and CSA marks.

## Acuity Brands Lighting’s use of Certification Bodies

Acuity Brands Lighting (ABL) has a long history with both Underwriters Laboratories and CSA International. ABL manufactures thousands of products, including LED luminaires, that use the UL listing mark. Traditionally this was the only listing mark used by ABL on luminaires manufactured for the U.S. market; however, as a single source UL could not always meet our desired product introduction timeline. By adding a second source for product certification testing and listing, ABL is better able to evaluate current service levels and choose an NRTL that can complete our listing within our scheduled timeframe. ABL will continue to evaluate the service levels of both UL and CSA and will use the certification body that will allow us to meet our new product introduction timeline.

### Attachments:

Appendix A – NEMA NEC Adoption Map

Appendix B – 2011 NEC Reference Sections (Enforcement, Product Safety, Listing, and Labeling Requirements)

Appendix C – CSA White Paper (This paper is geared toward retailers who sell electrical products but also explains the relationship between SDOs and Certification Bodies)

Appendix D- Example CSA Certificate of Compliance (showing that a c-CSA-us marked product has been tested and evaluated to the appropriate American National Standard (UL standard))

Appendix E- CSA letter to Acuity Brands (explains acceptance of the c-CSA-us listing mark)

Appendix F-CSA Certification Mark info (from CSA website)



Appendix A-NEC  
Adoption Map.pdf



Appendix B-2011  
NEC Reference Sectic



Appendix C-CSA  
White Paper.pdf



Appendix D-Example  
CSA Certificate of Co



Appendix E-CSA



Appedix F-CSA  
Certificaiton Mark infc