



# Albeo Technologies

Industrial Strength LED Lighting

## White Paper: Albeo and Independent Third-Party Testing

All Albeo product lines are either CSA or UL listed. Three major third-party certification agencies in the United States are CSA, UL, and ETL. All "listed" luminaires are tested to the same standard, regardless of whether they are tested and certified by, and carry either a UL, CSA or ETL mark. Therefore, Albeo's UL and CSA marks are interchangeable and are equally accepted.

Albeo's choice of independent testing laboratories depends on which mark allows us to bring products to market quickest and most cost-effectively. Because CSA and UL marks are virtually interchangeable, Albeo enjoys the freedom of listing product lines with either a CSA or UL mark.



*Typical Independent Third-Party Laboratory Certification Marks - See next page for explanation.*

### Independent Third-Party Testing Protects Consumer Interests

Product certification marks are the result of an independent, third-party testing and certification process. As such, they provide credible evidence that products bearing them comply with applicable standards for safety and/or performance.

Product certification marks provide clear evidence that a product has undergone independent, third-party testing and certification performed by an accredited testing and certification organization. Product certification marks must appear on products and may be included on product packaging. Display of certification marks is not at the discretion of the product manufacturer. These marks may only be used on qualified products under license from the agency that tested the product and confirmed that it conforms to applicable national, international or other standards for safety and/or performance.

To qualify for certification marks, manufacturers submit samples of their products to a testing laboratory. The laboratory evaluates these products under controlled conditions to determine if they meet applicable standards. Only product designs that successfully pass all required tests are entitled to bear the laboratory's certification mark.

### Standards Developers and Interchangeability

Many certification marks are interchangeable and equally accepted because they are based on the same standards. Standards developers are distinct from testing laboratories. Standards developers define, set, and publish standards to which products are tested against.

In some cases, standards developers are a separate division of the same organization involved in testing. When an organization is involved in both standards publishing and product certification testing, these activities are performed independently and separately to avoid conflicts of interest. In other cases, standards developers include representatives from industry organizations, for example ANSI and NSF.

A testing laboratory must be recognized or accredited to test a particular product and issue certification. In the US, OSHA recognizes laboratories as qualified to test electrical products and to certify that they meet US standards. OSHA-recognized facilities are known as Nationally Recognized Testing Laboratories (NRTLs). CSA International and UL are two examples of OSHA NRTLs. Both of these organizations are considered equally qualified to perform testing of products covered by their OSHA recognitions.

### What do the Certification Marks Mean?



The CSA mark indicates that a product meets applicable Canadian standards including those from CSA.



The CSA US mark indicates that a product meets applicable U.S. standards, including those from ANSI, ASME, ASSE, ASTM, NSF, CSA America and UL.



The CSA C/US mark signifies that the product meets applicable U.S. and Canadian standards, including those from CSA, CSA America, ANSI, ASME, ASSE, ASTM, NSF and UL.



The UL mark indicates that a product meets applicable US standards only.



The C-UL mark indicates that a product meets applicable Canadian standards only.



The C-UL-US mark indicates that a product meets both applicable US and Canadian standards.

### Albeo's Certification Marks

All Albeo products are either CSA C/US or C-UL-US listed. This means that applicable US and Canadian standards are met with both CSA and UL testing laboratories.

### Standards

CSA C22.2 No. 250.0-08 / ANSI / UL Standard 1598—Luminaires

ANSI / UL Standard 8750, First Edition— Light Emitting Diode (LED) Equipment for use in lighting products

### Albeo's Product Family Summary

<u>Product Family</u>	<u>Certification Mark</u>	
Atmosphere/Brilliance	C-UL-US	
C-Series	C-UL-US	
C3-Series	C-UL-US	
H-Series	CSA C/US	
Surface Mount	CSA C/US	
S-Series (Sealed LED)	CSA C/US	
T8LED Troffer	C-UL-US	
Talea/Agito	C-UL-US	