

## LOOX REFERENCE GUIDE - COMPLIANCE WITH ELECTRICAL CODES

Häfele is committed to producing, marketing and selling products that meet or exceed all relevant safety standards for the industry.

Loox lighting products are designed and manufactured to achieve the most relevant standard in the United States, as defined by Underwriters Laboratory (UL), UL2108 (Standard for Safety Low Voltage Lighting Systems). All Häfele branded Loox low voltage lighting products are UL listed to the 2108 standard as components and together as a system.

- UL2108 applies to low voltage lighting systems and components intended for permanent installation and use in locations following the National Electrical Code (NEC), NFPA 70, Article 411 (Lighting Systems Operating at 30 Volts or Less and Lighting Equipment Connected to Class 2 Power Sources)
- The UL2108 listing of Loox low voltage lighting products is also relevant when our customers want to comply with other standards such as UL962 for residential and commercial furnishings, UL970 for commercial display cases and UL1286 for office furnishings. These standards are only referenced as examples and are not meant to be an exhaustive list of potential requirements to consider in applying low voltage lighting systems.
- Compliance with relevant standards and codes is the responsibility of our customers when using the Häfele Loox low voltage lighting systems, and it is the installer's responsibility to ensure the lighting is applied correctly, safely and in compliance with all applicable codes.
- Many local electrical code interpretations exist in the United States, and it is advisable to proactively understand these nuances before installing low voltage lighting in construction or furniture products.
- In jurisdictions where the NEC Article 410 (Luminaires, Lampholders and Lamps) applies, care must be taken in selecting the correct placement and/or luminaire. Consider the following points in particular when using luminaires in a clothes closet:
  - All Häfele Loox luminaires are suitable for use in the clothes closet spaces, provided installation satisfies the required location constraints of NEC Article 410.16C (Luminaires in Clothes Closets-Location).
  - LED strip lights must always be installed within a linear profile with a lens and endcaps to ensure that the LED light source is enclosed and cannot be contacted.
  - If luminaires are to be installed in a location that may place them in direct contact with items stored in the closet or storage space, they are required to pass an additional test under the standard UL1598 (Standard for Safety- Luminaires). This is an additional requirement contained in the UL2108 listing, which as previously outlined, is the general certification making the luminaires suitable for installation in the storage area of a clothes closet.
  - The Häfele Loox low voltage lighting system has the following families of product that meet the additional UL1598 test standard for more flexible use within closet or storage space:

Linear luminaire models	Puck style luminaire models
Model 2060	Model 2020
Model 2061	Model 2022
Model 2065	Model 2023
Model 2068	Model 2040
Model 2070	Model 2050
Model 2077	Model 2051
Model 3040	Model 2090
Model 3041	Model 3023
Model 3042	Model 3025
Model 3044	Model 3035
Model 3045	Model 3036
Model 3047	Model 3090
Model 3048	Model 3094
Model 3049	
Model 3050	
Model 3051	

- The Häfele Loox Adjustable Shelf Light System is UL listed under the UL2108 standard. Per NEC 411.6C (Low-Voltage Lighting Systems, Secondary Circuits, Bare Conductors), our bare low voltage conductor (bus bar) is specifically listed for installation in locations lower than the code required 7-foot height.

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