

CERTIFICATE OF ACCREDITATION

This is to attest that

INTERTEK TESTING SERVICES NA, INC.

545 EAST ALGONQUIN ROAD, SUITE F ARLINGTON HEIGHTS, ILLINOIS 60005, U.S.A.

Testing Laboratory TL-401

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories* as well as the *FDA ASCA* specifications and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the* competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date November 24, 2023



President

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

INTERTEK TESTING SERVICES NA, INC.

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Contact Name Scott Blue

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Accredited to ISO/IEC 17025:2017

Effective Date November 24, 2023

FDA ASCA Program

FDA ASCA Program Scope

Basic Safety and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems and Laboratory Medical Equipment	
IEC 61010-1 Edition 3.1 2017-01 CONSOLIDATED VERSION [19-34]	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

Regular Scope

Electrical	
16 CFR 1505	Requirements for electrically operated toys or other electrically operated articles intended for use by children
ANSI CP-01	Control panel standard – features for false alarm reduction
ANSI/UL 38	Standard for manual signaling boxes for fire alarm systems
ANSI/UL 73	Standard for motor-operated appliances
ANSI/UL 197	Standard for commercial electric cooking appliances
ANSI/UL 217	Standard for smoke alarms
ANSI/UL 268	Smoke detectors for fire alarm systems
ANSI/UL 268A	Standard for smoke detectors for duct application
ANSI/UL 294	Standard for access control system units
ANSI/UL 325	Standard for door, drapery, gate, louver, and window operators and systems
ANSI/UL 365	Standard for police station connected burglar alarm units and systems
ANSI/UL 464	Audible signaling devices for fire alarm and signaling systems, including accessories
ANSI/UL 508	Standard for industrial control equipment
ANSI/UL 521	Standard for heat detectors for fire protective signaling systems
ANSI/UL 603	Standard for power supplies for use with burglar-alarm systems
ANSI/UL 609	Standard for local burglar alarm units and systems





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ANSI/UL 636	Standard for holdup alarm units and systems
ANSI/UL 639	Standard for intrusion-detection units
ANSI/UL 681	Standard for installation and classification of burglar and holdup alarm systems
ANSI/UL 696	Standard for electric toys
ANSI/UL 763	Standard for motor-operated commercial food preparing machines
ANSI/UL 864	Standard for Control Units and Accessories for Fire Alarm Systems
ANSI/UL 982	Standard for motor-operated household food preparing machines
ANSI/UL 985	Standard for household fire warning system units
ANSI/UL 1023	Standard for household burglar-alarm system units
ANSI/UL 1026	Standard for household electric cooking and food serving appliances
ANSI/UL 1037	Standard for antitheft alarms and devices
ANSI/UL 1069	Standard for hospital signaling and nurse call equipment
ANSI/UL 1076	Standard for proprietary burglar alarm units and systems
ANSI/UL 1286	Standard for office furnishings
ANSI/UL 1310	Standard for class 2 power units
ANSI/UL 1480	Speakers for fire alarm and signaling systems, including accessories
ANSI/UL 1481	Standard for power supplies for fire-protective signaling systems
ANSI/UL 1484	Standard for residential gas detectors
ANSI/UL 1610	Standard for central-station burglar-alarm units
ANSI/UL 1635	Standard for digital alarm communicator system units
ANSI/UL 1637	Standard for template for home health care signaling equipment
ANSI/UL 1638	Visible signaling devices for fire alarm and signaling systems, including accessories
ANSI/UL 1647	Standard for motor-operated massage and exercise machines
ANSI/UL 1730	Standard for smoke detector monitors and accessories for individual living units of multifamily residences and hotel/motel rooms
ANSI/UL 2017	Standard for general-purpose signaling devices and systems
ANSI/UL 2034	Standard for single and multiple station carbon monoxide alarms
ANSI/UL 2075	Standard for gas and vapor detectors and sensors
ANSI/UL 2111	Standard for overheating protection for motors
ANSI/CAN/UL 2524	Standard for In-building 2-Way Emergency Radio Communication Enhancement Systems
ANSI/UL 2525	Standard for Two-Way Emergency Communications Systems for Rescue Assistance



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ANSI/UL 2560	Standard for emergency call systems for assisted living and independent living facilities
ANSI/UL 2572	Standard for mass notification systems
ANSI/UL 2610	Standard for Commercial Premises Security Alarm Units and Systems
ANSI/UL 5085-1	Low voltage transformers – part 1: General requirements
ANSI/UL 5085-2	Low voltage transformers – part 2: General purpose transformers
ANSI/UL 5085-3	Low voltage transformers – part 3: Class 2 and class 3 transformers
ANSI/UL 60335-1	Safety of household and similar appliances, part 1: General requirements
ANSI/UL 60335-2-24	Safety requirements for household and similar electrical appliances, part 2: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
ANSI/UL 60950-1	Information technology equipment – safety – part 1: General requirements
ANSI/UL 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use – part 1: General requirements (except 6.3.2 DV/D2 modification)
ASME A17.1	Safety code for elevators and escalators
ASME A17.5	Elevator and escalator electrical equipment
ASTM F963-11	Standard consumer safety specification for toy safety (section 4.25 battery operated toys)
CAN/CSA C22.2 No. 60950-1-07	Information technology equipment – safety – part 1: General requirements (binational standard, with UL 60950-1)
CAN/CSA C22.2 No. 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use – part 1: General requirements (except 6.3.2 DV/D2 modification)
CSA 6.19	Residential Carbon Monoxide Alarming Devices
CSA C22.2 No. 66.2-06	Low voltage transformers – part 2: General purpose transformers (bi-national standard, with UL 5085-2)
CSA C22.2 No. 66.3-06	Low voltage transformers – part 3: Class 2 and class 3 transformers (bi-national standard, with UL 5085-3)
CSA C22.2 No. 205	Signal Equipment
CSA C22.2 No. 60335-1	Safety of household and similar appliances – part 1: general requirements (trinational standard, with NMX-J-521/1-ANCE and UL 60335-1)
CSA C22.2 NO. 60335-2-8	Household and similar electrical appliances – safety - part 2-8: Particular requirements for shavers, hair clippers and similar appliances
CSA C22.2 No. 60335-2- 24	Household and similar electrical appliances – safety – part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
CSA C22.2 No. 60335-2- 89	Household and similar electrical appliances – safety – part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor





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CSA C22.2 No. 62368-1	Audio/video, information and communication technology equipment - Part 1: Safety requirements
CSA E60335-2-5	Household and similar electrical appliances – safety – Part 2-5: particular requirements for dishwashers
CSA E60335-2-6	Safety of household and similar electrical appliances – safety – part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances
CSA E60335-2-7	Household and similar electrical appliances – safety – part 2-7: Particular requirements for washing machines
CSA E60335-2-11	Household and similar electrical appliances – safety – part 2-11: Particular requirements for tumble dryers
CSA E60335-2-36	Household and similar electrical appliances – safety – part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements
CSA E60335-2-42	Safety of household and similar electrical appliances – part 2-42: Particular Requirements for Commercial Electric Forced Convection Ovens, Steam Cookers and Steam-Convection Ovens
CSA E60335-2-48	Safety of household and similar electrical appliances – part 2-48: Particular requirements for commercial electric grillers and toasters
CSA E60335-2-64	Household and similar electrical appliances – safety – part 2-64: Particular requirements for commercial electric kitchen machines
EN 54-5	Fire detection and fire alarm systems – part 5: Heat detectors – point detectors
EN 54-7	Fire detection and fire alarm systems – part 7: Smoke detectors - point detectors using scattered light, transmitted light or ionization
EN 14604	Smoke alarm devices
EN 50130-5	Alarm systems - Part 5: Environmental test methods
EN 50131-1	Alarm systems - intrusion and hold-up systems - part 1: system requirements
EN 50131-2-1	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Common requirements
EN 50131-2-2	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors- Passive Infrared detectors
EN 50131-2-3	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Microwave detectors
EN 50131-2-4	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-combined PIR/Microwave detectors
EN 50131-2-5	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Ultrasonic detectors
EN 50131-2-6	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Opening contacts
EN 50131-2-7-1	Alarm systems - intrusion and hold-up systems - part 2-7-1: intrusion detectors – glass break detectors (acoustic)
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EN 50131-2-7-2	Alarm systems - intrusion and hold-up systems - part 2-7-2: intrusion detectors – glass break detectors (passive)
EN 50131-2-7-3	Alarm systems - intrusion and hold-up systems - part 2-7-3: intrusion detectors – glass break detectors (active)
EN 50131-2-8	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Shock detectors
EN 50131-2-9	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Active Infrared detectors
EN 50131-2-10	Alarm Systems. Intrusion and hold-up systems. Intrusion Detectors-Proximity detectors
EN 50131-3	Alarm Systems. Intrusion and Hold-up systems. Control and Indicating equipment
EN 50131-4	Alarm Systems. Intrusion and Hold-up systems. Warning Devices
EN 50131-5-3	Alarm Systems. Intrusion systems. Requirements for interconnections equipment using frequency technologies
EN 50131-6	Alarm Systems. Intrusion systems. Power supplies
EN 50131-9	Alarm Systems. Intrusion and hold-up systems. Part 9: Alarm verification. Methods and principles
EN 50131-10	Alarm Systems. Intrusion and hold-up systems. Application specific requirements for supervised premises Transceiver (SPT)
EN 50133-1	Alarm systems - access control systems for use in security applications - part 1: system requirements
EN 50133-2-1	Alarm systems - access control systems for use in security applications – part 2-1: general requirements for components
EN 50134-1	Alarm systems - social alarm systems - part 1: system requirements
EN 50134-2	Alarm systems - social alarm systems - part 2: trigger devices
EN 50134-3	Alarm systems - social alarm systems - part 3: local unit and controller
EN 50134-5	Alarm systems - social alarm systems - part 5: interconnections and communications
EN 50134-7	Alarm systems - social alarm systems - part 7: Application guidelines
EN 50136-1	Alarm Systems. Alarm Transmission systems and equipment. General requirements for alarm transmission systems
EN 50136-2	Alarm Systems. Alarm Transmission systems and equipment. Requirements for supervised premises transceiver (SPT)
EN 50291-1	Gas detectors – Electrical apparatus for the detection of carbon monoxide in domestic premises Part 1: Test methods and performance requirements
EN/IEC 60335-2-9	Household and similar electrical appliances - safety - part 2-9: particular requirements for grills, toasters and similar portable cooking appliances
EN/IEC 60335-2-14	Household and similar electrical appliances - safety - part 2-14: particular requirements for kitchen machines





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EN/IEC 60335-2-16	Household and similar electrical appliances - safety - part 2-16: particular requirements for food waste disposers
EN/IEC 60335-2-48	Household and similar electrical appliances - safety - part 2-48: particular requirements for commercial electric grillers and toasters
EN/IEC 61010-2-010	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-010: Particular requirements for laboratory equipment for the heating of materials
EN/IEC 61010-2-051	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-051: Particular requirements for laboratory equipment for mixing and stirring
IEC 60204-1	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
IEC 60335-1	Household and similar electrical appliances – safety – part 1: General requirements
IEC 60335-2-5	Household and similar electrical appliances – safety – part 2-5: Particular requirements for dishwashers
IEC 60335-2-6	Household and similar electrical appliances – safety – part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances
IEC 60335-2-7	Household and similar electrical appliances – safety – part 2-7: Particular requirements for washing machines
IEC 60335-2-8	Household and similar electrical appliances – safety – part 2-8: Particular requirements for shavers, hair clippers and similar appliances
IEC 60335-2-11	Household and similar electrical appliances – safety – part 2-11: Particular requirements for tumble dryers
IEC 60335-2-24	Household and similar electrical appliances – safety – part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers
IEC 60335-2-36	Household and similar electrical appliances – safety – part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements
IEC 60335-2-42	Household and similar electrical appliances – safety – part 2-42: Particular requirements for commercial electric forced convection ovens, steam cookers and steam-convection ovens
IEC 60335-2-49	Household and similar electrical appliances – safety – part 2-49: Particular requirements for commercial electric appliances for keeping food and crockery warm
IEC 60335-2-64	Household and similar electrical appliances – safety – part 2-64: Particular requirements for commercial electric kitchen machines
IEC 60335-2-75	Household and similar electrical appliances – safety – part 2-75: Particular requirements for commercial dispensing appliances and vending machines
IEC 60335-2-80	Household and similar electrical appliances – safety – part 2-80: Particular requirements for fans



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IEC 60335-2-89	Household and similar electrical appliances – safety – part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor
IEC 60950-1	Information technology equipment – safety – part 1: General requirements
IEC 60950-22	Information technology equipment – safety – Part 22: equipment to be installed outdoors
IEC 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use – part 1: General requirements
IEC 61010-1 Edition 3.1 2017-01	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements
IEC 61010-2-030	Safety requirements for electrical equipment for measurement, control, and laboratory use – part 2-030: Particular requirements for testing and measuring circuits (except 6.3.2 DV/D2 modification)
IEC 62368-1	Audio/video, information, and communication technology equipment - Part 1: Safety requirements
NFPA 72	National fire alarm and signaling code
UL 65	Standard for wired cabinets
UL 508A	Standard for industrial control panels
UL 962	Standard for household and commercial furnishings
UL 1004-1	Standard for rotating electric machines – general requirements
UL 1480A	Standard for Safety Speakers for Commercial and Professional Use
UL 1598C	Standard for Light-Emitting Diode (Led) retrofit conversion kits
UL 2524A	Outline of Investigation for In-Building Auxiliary Radio Communication Systems
UL 60335-1	Household and similar electrical appliances – safety – part 1: General requirements
UL 60335-2-8	Household and similar electrical appliances – safety – part 2-8: Particular requirements for shavers, hair clippers and similar appliances
UL 60335-2-24	Household and similar electrical appliances – safety – part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers
UL 60335-2-89	Household and similar electrical appliances – safety – part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor
UL 62368-1	Standard for Audio/video, information and communication technology equipment - Part 1: Safety requirements
ULC C1023	Household burglar alarm system units
ULC S304	Standard for Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems
ULC S306	Intrusion Detection Units
ULC S319	Electronic access control systems
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ULC S527	Standard for control units for fire alarm systems
ULC S545	Standard for Residential Fire Warning System Control Units
ULC S576	Mass Notification System Equipment and Accessories
ULC 60839-11-1	Alarm and Electronic Security Systems – Part 11-1: Electronic Access Control Systems - System and Components Requirements
Energy Efficiency	
EPA (ENERGY STAR®) Program	Requirements for Lighting: Lamps Version 2.1, Lamps: CFL Directional; CFL Omnidirectional and Decorative; LED (SSL) Directional; LED (SSL) Omnidirectional and Decorative;
EPA (ENERGY STAR®) Program	Requirements for Lighting: Luminaires Version 2.2, Luminaires: Fluorescent Directional; Fluorescent Non-Directional; CSD-Fluorescent Ballasts; CSD-Fluorescent Lamps; Halogen Directional Outdoor; Halogen Non-Directional Outdoor; HID Directional; HID Non-Directional; CSD-HID Ballasts; CSD-HID Lamps; Solid State (SSL) Directional; Solid State (SSL) Non-Directional and Subcomponents
Ambient temperature life te version 2.1: ambient tempe	est: ENERGY STAR® program requirements product specification for lamps erature life testing
Elevated temperature life to version 2.1: elevated temperature	est: ENERGY STAR [®] program requirements product specification for lamps erature life testing
	output ratio: ENERGY STAR® program requirements product specification for d temperature light output ratio
Start time test: ENERGY S	TAR® program requirements product specification for lamps version 2.1: start time
Run up time: ENERGY ST	AR® program requirements product specification for lamps version 2.1: run-up
ANSI C62.41.2-2002	IEEE recommended practice on characterization of surges in low voltage (1000V and less) AC power circuits
ANSI C78.389-2004 (R2009)	High-intensity discharge (HID) – methods of measuring characteristics
ANSI C82.2-2002	Method of measurement of fluorescent lamp ballasts
ANSI C82.6-2005	Ballast for high intensity discharge lamps – methods of measurement
ANSI C82.11-2011	Lamp ballasts – high frequency fluorescent lamp ballasts
ANSI C82.77-2002	Harmonic emission limits – related power quality requirements for lighting equipment
ANSI C82.77-10:2014	Harmonic emission limits – related power quality requirements
ANSI/IES LM-79-19	Optical and electrical measurements of solid-state lighting products
CIE 018	The basis of physical photometry
CIE Pub. No. 15:2004	Colorimetry
CIE Pub. No. 13.3-1995	Method of measuring and specifying color rendering of light sources
CIE S 025	Test method for LED Lamps, LED Luminaires and LED modules





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EN 13032-4	Light and lighting. Measurement and presentation of photometric data of lamps and luminaires: LED lamps, modules and luminaires
IEC 62504	General lighting - light emitting diode (LED) products and related equipment – terms and definitions
IEC 62707-1	LED-binning – Part 1: General requirements and white colour grid intended for automotive applications intended for automotive applications
IES LM-9-09	Electrical and photometric measurements of fluorescent lamps (commercial ballast test only)
IES LM-10-96	Photometric testing of outdoor fluorescent luminaires
IES LM-16-93	Ppractical guide to colorimetry of light sources
IES LM-20-13	Photometric testing of reflector-type lamps
IES LM-20-94	Photometric testing of reflector-type lamps
IES LM-31-13	Photometric testing of roadway luminaires using incandescent filament and hid lamps
IES LM-31-95	Photometric testing of roadway luminaires using incandescent filament and HID lamps
IES LM-35-02	Photometric testing of floodlights using high intensity discharge or incandescent filament lamps
IES LM-40-01	Life testing of fluorescent lamps
IES LM-40-10	Life testing of fluorescent lamps
IES LM-41-13	Approved method for photometric testing of indoor fluorescent luminaries
IES LM-41-14	Approved method for photometric testing of indoor fluorescent luminaries
IES LM-41-98	Approved method for photometric testing of indoor fluorescent luminaries
IES LM-46-04	Photometric testing of indoor luminaires using high intensity discharge or incandescent filament lamps
IES LM-47-01	Life testing of high intensity discharge (HID) lamps
IES LM-47-12	Life testing of high intensity discharge (HID) lamps
IES LM-49-01	Approved method for life testing of filament lamps
IES LM-49-12	Approved method for life testing of filament lamps
IES LM-51-00	Electrical and photometric measurements of high intensity discharge lamps (commercial ballast test only)
IES LM-51-13	Electrical and photometric measurements of high intensity discharge lamps (commercial ballast test only)
IES LM-54-12	Guide to lamp seasoning
IES LM-58-13	Guide to spectroradiometric measurements
IES LM-58-1994	Guide to spectroradiometric measurements
IES LM-65-01	Life testing of compact fluorescent lamps



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IES LM-65-10	Life testing of compact fluorescent lamps
IES LM-65-14	Life testing of compact fluorescent lamps
IES LM-66-01	Electrical and photometric measurements of single-ended compact fluorescent lamps
IES LM-66-11	Electrical and photometric measurements of single-ended compact fluorescent lamps
IES LM-66-14	Electrical and photometric measurements of single-ended compact fluorescent lamps
IES LM-79-08, LM-79-19	Electrical and photometric measurements of solid-state lighting products
IES LM-80-08, LM-80-15, LM 80-20	Measuring luminous flux and color maintenance of LED packages, arrays and modules
IES LM-82-12	Characterization of LED light engines and LED lamps for electrical and photometric properties as a function of temperature
IES LM-84-14	Measuring luminous flux and color maintenance of LED lamps, light engines, and luminaires
IES LM-85-14	Approved method: Electrical and photometric measurements of high-powered LEDs
IES TM-16-05	Technical memorandum on light emitting diode (LED) sources and systems
IES TM-21-11	Projected long-term lumen maintenance of LED light sources
IES TM-28-14	Projecting long-term luminous flux maintenance of LED lamps and luminaires
SASO 2870	Energy efficiency, functionality and labeling requirements for lighting products
SASO 2902	Energy efficiency, functionality and labeling requirements for lighting products – part 2
Lighting	
ANSI C78.375-1997	Fluorescent lamps – guide for electrical measurements
ANSI C78.376-2001	Specifications for the chromaticity of fluorescent lamps
ANSI C78.377-2008	Specifications for the chromaticity of solid-state lighting products
ANSI C81.61-2009	Electric lamp bases – specifications for bases (caps) for electric lamps
ANSI C82.11-2002	High-frequency fluorescent lamp ballasts
ANSI C82.16-2014	Light-emitting diode drivers – methods of measurement
ANSI C82.77-2014	Harmonic emission limits – related power quality requirements for lighting equipment
ANSI C136.41-2013, 2021	Roadway and Area Lighting Equipment—Dimming Control Between an External Locking Type Photocontrol and Ballast or Driver
ANSI/ASABE S642	Recommended methods for measurement and testing of LED products for plant growth and development
ANSI/UL 153	Standard for portable electric luminaires
ANSI/UL 542	Standard for fluorescent lamp starters





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ANSI/UL 924 ANSI/UL 935 Standard ANSI/UL 1029 ANSI/UL 1574 ANSI/UL 1598 Luminaire ANSI/UL 1598A Standard ANSI/UL 1598B Standard ANSI/UL 1598B Standard ANSI/UL 1598B Standard ANSI/UL 1838 ANSI/UL 2108 ANSI/UL 2108 ANSI/UL 2388 CIE 84-1989 Measurer CIE 127-1997 CSA C22.2 No. 43-08 CSA C22.2 No. 250.0 CSA C22.2 No. E60598-1 CSA C22.2 No. E60598-2- 3 CSA C22.2 No. E60598-2- 3 CSA C22.2 No. E60598-2- 4 CSA C22.2 No. E60598-2- 4 CSA C22.2 No. E60598-2- 4 CSA C22.2 No. E60598-2- 1 CSA C3	
ANSI/UL 1029 Standard ANSI/UL 1574 Standard ANSI/UL 1598 Luminaire ANSI/UL 1598A Standard ANSI/UL 1598B Standard ANSI/UL 1598B Standard ANSI/UL 1598B Standard ANSI/UL 1838 Standard ANSI/UL 2108 Standard ANSI/UL 2388 Standard CIE 84-1989 Measurer CIE 127-1997 Measurer CSA C22.2 No. 43-08 Lamphold CSA C22.2 No. 250.0 Luminaire CSA C22.2 No. E60598-1 Luminaire CSA C22.2 No. E60598-2- 3 Street ligh CSA C22.2 No. E60598-2- 4 CSA C22.2 No. E60598-2- CSA C22.2 No. E60598-2- Luminaire Lamp cor IEC 60061-1 Lamp cor IEC 60081 Double-c: IEC 60529 Degrees IEC 60570-1 Electrical	for seasonal and holiday decorative products
ANSI/UL 1029 ANSI/UL 1574 ANSI/UL 1598 ANSI/UL 1598A Standard vessels ANSI/UL 1598B Standard installation ANSI/UL 1838 ANSI/UL 2108 ANSI/UL 2388 CIE 84-1989 CIE 127-1997 CSA C22.2 No. 43-08 CSA C22.2 No. 250.0 CSA C22.2 No. E60598-1 CSA C22.2 No. E60598-2-3 CSA C22.2 No. E60598-2-3 CSA C22.2 No. E60598-2-4 CSA C22.2 No. E60598-2-4 CSA C22.2 No. E60598-2-5 CSA C22.2 No. E60598-2-1 Luminaire purpose I CSA C60598.2.5 CSA E61347.1 Lamp cordinates of the	for emergency lighting and power equipment (except Cl.41)
ANSI/UL 1598 Luminaire ANSI/UL 1598A Standard ANSI/UL 1598B Standard ANSI/UL 1598B Standard ANSI/UL 1838 Standard ANSI/UL 2108 Standard ANSI/UL 2388 Standard CIE 84-1989 Measurer CIE 127-1997 Measurer CSA C22.2 No. 250.0 Luminaire CSA C22.2 No. E60598.1 Luminaire CSA C22.2 No. E60598-2- 3 Street ligh CSA C22.2 No. E60598-2- 4 Luminaire CSA C22.2 No. E60598-2- 4 Duminaire CSA E60598.2.5 Luminaire CSA E60598.2.5	for fluorescent-lamp ballasts
ANSI/UL 1598A Standard vessels ANSI/UL 1598B Standard installation ANSI/UL 1838 ANSI/UL 2108 ANSI/UL 2388 CIE 84-1989 CIE 127-1997 CSA C22.2 No. 43-08 CSA C22.2 No. 250.0 CSA C22.2 No. E60598.1 CSA C22.2 No. E60598-2-3 CSA C22.2 No. E60598-2-3 CSA C22.2 No. E60598-2-4 CSA C22.2 No. E60598-2-4 CSA C22.2 No. E60598-2-4 CSA C22.2 No. E60598-2-5 ILuminaire street light capacitation of the purpose I capacitati	for high-intensity-discharge lamp ballasts
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IEC 60061-1 Lamp cap interchan IEC 60081 Double-cap IEC 60360 Standard IEC 60529 Degrees IEC 60570-1 Electrical	es – part 2: Particular requirements, section 5: Floodlights
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IEC 60360 Standard IEC 60529 Degrees IEC 60570-1 Electrical	os and holders together with gauges for the control of geability and safety – part 1: Lamp caps
IEC 60529 Degrees IEC 60570-1 Electrical	apped fluorescent lamps - performance specifications
IEC 60570-1 Electrical	method of measurement of lamp cap temperature rise
	of protection provided by enclosures (IP code)
	supply track systems for luminaires
IEC 60570-2-1 Electrical – classes	supply track systems for luminaires – Part 2-1: Mixed supply systems I and III
IEC 60598-1 Luminaire	es – part 1: General requirements and tests



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IEC 60598-2-1	Luminaires – part 2: Particular requirements – section 1: Fixed general purpose luminaires
IEC 60598-2-2	Luminaires – part 2-2: Particular requirements – recessed luminaires
IEC 60598-2-3	Luminaires – part 2-3: Particular requirements – luminaires for road and street lighting
IEC 60598-2-4	Luminaires – part 2: Particular requirements – section 4: Portable general purpose luminaires
IEC 60598-2-5	Luminaires – part 2-5: Particular requirements – floodlights
IEC 60598-2-6	Luminaires – part 2: Particular requirements – section 6: Luminaires with built-in transformers for filament lamps
IEC 60598-2-7	Luminaires – part 2: Particular requirements – section 7: Portable luminaires for garden use
IEC 60598-2-8	Luminaires – part 2-8: Particular requirements – handlamps
IEC 60598-2-9	Luminaires – part 2: Particular requirements – section 9: Photo and film luminaires (non-professional)
IEC 60598-2-13	Luminaires – part 2-13: Particular requirements – ground recessed luminaires
IEC 60598-2-17	Luminaires – part 2: Particular requirements – section 17: Luminaires for stage lighting, television and film studios (outdoor and indoor)
IEC 60598-2-18	Luminaires – part 2: Particular requirements – section 18: Luminaires for swimming pools and similar applications
IEC 60598-2-19	Luminaires – part 2: Particular requirements – section 19: Air-handling luminaires (safety requirements)
IEC 60598-2-22	Luminaires – part 2-22: Particular requirements – luminaires for emergency lighting
IEC 60598-2-23	Luminaires – part 2: Particular requirements – section 23: Extra low voltage lighting systems for filament lamps
IEC 60598-2-24	Luminaires – part 2-24: Particular requirements – luminaires with limited surface temperatures
IEC 60598-2-25	Luminaires – part 2-25: Particular requirements – Luminaires for use in clinical areas of hospitals and health care buildings
IEC 60695-2-10	Fire hazard testing – part 2-10: Glowing/hot-wire based test methods – glow-wire apparatus and common test procedure
IEC 60695-2-11	Fire hazard testing – part 2-11: Glowing/hot-wire based test methods – glow-wire flammability test method for end-products (GWEPT)
IEC 60695-2-12	Fire hazard testing – part 2-12: Glowing/hot-wire based test methods – glow-wire flammability index (GWFI) test method for materials
IEC 60695-2-13	Fire hazard testing – part 2-13: Glowing/hot-wire based test methods – glow-wire ignition temperature (GWIT) test methods for materials
IEC 60838-1	Miscellaneous lampholders – part 1: General requirements and tests
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IEC 60838-2-2	Miscellaneous lampholders – part 2-2: Particular requirements – connectors for LED modules
IEC 60901	Single-capped fluorescent lamps – performance specifications
IEC 60968	Self-ballasted fluorescent lamps for general lighting services – safety requirements
IEC 61347-1	Lamp control gear – part 1: General and safety requirements
IEC 61347-2-2	Lamp control gear – part 2-2: Particular requirements for DC or AC supplied electronic step-down convertors for filament lamps
IEC 61347-2-3	Lamp control gear – part 2-3: Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps
IEC 61347-2-11	Lamp control gear – part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires
IEC 61347-2-12	Lamp control gear – part 2-12: Particular requirements for DC or AC supplied electronic ballasts for discharge lamps (excluding fluorescent lamps)
IEC 61347-2-13	Lamp control gear – part 2-13: Particular requirements for DC or AC supplied electronic controlgear for LED modules
IEC 61984	Connectors – safety requirements and tests
IEC 62301	Household electrical appliances – measurement of standby power
IEC 62384	DC or AC supplied electronic control gear for LED modules – Performance requirements
IEC 62560	Self-ballasted LED-lamps for general lighting services by voltage > 50 V – safety specifications
IEC 62612	Self-ballasted fluorescent lamps for general lighting services with supply voltages > 50V – performance requirements
IEC 62717	LED modules for general lighting – performance requirements
IEC 62722-1	Luminaire performance – Part 1: General requirements
IEC 62722-2-1	Luminaire performance – Part 2-1: Particular requirements for LED luminaires
IEC 62776	Double-capped LED lamps designed to retrofit linear fluorescent lamps – safety specifications
IEC 62868	Organic light emitting diode (OLED) panels for general lighting – safety requirements
INMETRO Ordinance 20	Technical quality regulation for fixtures for public road lighting
INMETRO Ordinance 144	Conformity assessment requirements for LED lamps with integrated base device
INMETRO Ordinance 389	Technical quality regulation for LED lamps with cap built-in control device
NEMA SSL7A	Phase-cut dimming for solid state lighting basic compatibility
UL 48	Standard for electric signs
UL 496	Lampholders





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UL 676	Standard for underwater luminaires and submersible junction boxes
UL 1433	Standard for safety control centers for changing message type electric signs
UL 1573	Standard for stage and studio luminaires and connector strips
UL 1993	Self-ballasted lamps and lamp adapters
UL 8750	Standard for light emitting diode (LED) equipment for use in lighting products

CIE: International Commission on Illumination

CSA: Canadian Standards Association

IEC: International Electrotechnical Commission

IES: Illuminating Engineering Society

INMETRO: National Institute of Metrology, Quality and Technology (Brazil)

NEMA: National Electrical Manufacturers Association

NFPA: National Fire Protection Association SASO: Saudi Arabia Standards Organization

UL: Underwriters Laboratories

ULC: Underwriters Laboratories of Canada



