SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ENERGY EFFICIENT LIGHTING PRODUCTS NVLAP LAB CODE 200899-0

Lamps

Color Measurements

Code	*Designation*	*Description*
22/C02	IES LM-58:1994	Spectroradiometric Measurements
22/C02a	IES LM-58:2013	Spectroradiometric Measurements
22/C02b	ANSI/IES LM-58:2020	Spectroradiometric Measurement Methods for Light Sources
22/C03	CIE Pub. 13.3:1995	Method of Measuring and Specifying Color Rendering of Light Sources
22/C04	CIE Pub. 13.2:1974	Method of Measuring and Specifying Color Rendering of Light Sources
22/C05	CIE Pub. 15:2004	Colorimetry
22/C06	ANSI C78.376:2001	Electric Lamps - Specification for the Chromaticity of Fluorescent Lamps

Electrical Measurements

Code	*Designation*	*Description*
22/E11	IES LM-9:1999	Fluorescent Lamps - Electrical Measurements
22/E11a	IES LM-9:2009	Fluorescent Lamps - Electrical Measurements

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22/E11b	ANSI/IES LM-9:2020	Electrical and Photometric Measurement of Fluorescent Lamps - Electrical Methods
22/E13	IES LM-45:2000	Incandescent Lamps - Electrical Measurements
22/E13a	IES LM-45:2009	Incandescent Lamps - Electrical Measurements
22/E13c	ANSI/IES LM-45:2020	Electrical and Photometric Measurement of General Service Incandescent Filament Lamps - Electrical Measurements
22/E14	IES LM-51:2000	High Intensity Discharge (HID) Lamps - Electrical Measurements
22/E14a	IES LM-51:2013	High Intensity Discharge (HID) Lamps - Electrical Measurements
22/E14b	ANSI/IES LM-51:2020	Electrical and Photometric Measurement of High Intensity Discharge Lamps - Electrical Measurements
22/E15	IES LM-66:1991	Single-Ended Compact Fluorescent Lamps - Electrical Measurements
22/E16	IES LM-66:2000	Single-Ended Compact Fluorescent Lamps - Electrical Measurements
22/E16a	IES LM-66:2011	Single-Ended Compact Fluorescent Lamps - Electrical Measurements
22/E16c	ANSI/IES LM-66:2020	Electrical and Photometric Measurements of Single-Based Fluorescent Lamps - Electrical Measurements
22/E18	ANSI C78.375:1997	Fluorescent Lamps - Electrical Measurements
22/E19	ANSI C78.386:1989	Mercury Lamps - Measurement of Characteristics
22/E20	ANSI C78.387:1987	Metal-Halide Lamps - Measurement of Characteristics
22/E21	ANSI C78.388:1990	High Pressure Sodium Lamps - Measurement of Characteristics
22/E22	ANSI C78.389:2004	High Intensity Discharge Lamps - Methods of Measuring Characteristics
22/E23	ANSI C78.5:1997	Compact Fluorescent Lamps - Run-Up and Start-Up Times
22/E24	ANSI C78.5:2003	Compact Fluorescent Lamps - Run-Up and Start-Up Times
22/E26	ANSI C82.2:2002	Ballast for Fluorescent Lamps - Methods of Measurement
22/E27	ANSI C82.6:2005	Ballast for High Intensity Discharge Lamps - Methods of Measurement

Life Tests

Code	***Designation***	***Description***
22/L05	IES LM-40:1987	Fluorescent Lamps - Life Test Performance

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22/L06	IES LM-40:2001	Fluorescent Lamps - Life Test Performance
22/L06a	IES LM-40:2010	Fluorescent Lamps - Life Test Performance
22/L06b	ANSI/IES LM-40:2020	Life Testing of Fluorescent Lamps
22/L07	IES LM-47:2001	High Intensity Discharge Lamps - Life Test Performance
22/L07a	IES LM-47:2012	High Intensity Discharge Lamps - Life Test Performance
22/L07b	ANSI/IES LM-47:2020	Life Testing of High Intensity Discharge (HID) Lamps
22/L08	IES LM-49:2001	Incandescent Filament Lamps - Life Test Performance
22/L08a	IES LM-49:2012	Incandescent Filament Lamps - Life Test Performance
22/L08b	ANSI/IES LM-49:2020	Life Testing of Incandescent Filament Lamps
22/L09	IES LM-65:1991	Single-Ended Compact Fluorescent Lamps - Life Test Performance
22/L10	IES LM-65:2001	Single-Ended Compact Fluorescent Lamps - Life Test Performance
22/L10a	IES LM-65:2010	Single-Ended Compact Fluorescent Lamps - LifeTest Performance
22/L10c	ANSI/IES LM-65:2020	Life Testing of Single-Based Fluorescent Lamps
22/L11	EPA CFL v. 4.2 (Appendix B)	ENERGY STAR® Reflector CFL Elevated Temperature Test Procedure
22/L11a	EPA CFL v. 4.3 (Annex A)	ENERGY STAR® Reflector CFL Elevated Temperature Test Procedure
22/L12	EPA Lamps v. 1.0	Ambient Temperature Life Testing
22/L13	EPA Lamps v. 1.0	Elevated Temperature Life Testing
22/L13a	ENERGY STAR® Elevated Temperature Life: September 2015	Elevated Temperature Life Test Method

Photometric Measurements

Code	***Designation***	***Description***
22/P07a	IES LM-9:1999	Fluorescent Lamps - Total Flux Measurements
22/P07b	IES LM-9:1999	Fluorescent Lamps - Intensity Measurements
22/P07c	IES LM-9:2009	Fluorescent Lamps - Total Flux Measurements

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22/P07d	IES LM-9:2009	Fluorescent Lamps - Intensity Measurements
22/P07e	ANSI/IES LM-9:2020	Electrical and Photometric Measurement of Fluorescent Lamps - Total Flux Measurements
22/P07f	ANSI/IES LM-9:2020	Electrical and Photometric Measurement of Fluorescent Lamps - Intensity Measurements
22/P08a	IES LM-20:1994	Reflector Type Lamps -Total Flux Measurements
22/P08b	IES LM-20:1994	Reflector Type Lamps - Intensity Measurements
22/P08c	IES LM-20:2013	Reflector Type Lamps -Total Flux Measurements
22/P08d	IES LM-20:2013	Reflector Type Lamps - Intensity Measurements
22/P08e	ANSI/IES LM-20:2020	Photometry of Reflector Type Lamps - Total Flux Measurement
22/P08f	ANSI/IES LM-20:2020	Photometry of Reflector Type Lamps - Intensity Measurement
22/P09a	IES LM-45:1991	Incandescent Lamps - Total Flux Measurements
22/P10b	IES LM-45:2000	Incandescent Lamps - Intensity Measurements
22/P10c	IES LM-45:2009	Incandescent Lamps - Total Flux Measurements
22/P10d	IES LM-45:2009	Incandescent Lamps - Intensity Measurements
22/P10g	ANSI/IES LM-45:2020	Electrical and Photometric Measurement of General Service Incandescent Filament Lamps - Total Flux Measurements
22/P10h	ANSI/IES LM-45:2020	Electrical and Photometric Measurement of General Service Incandescent Filament Lamps - Intensity Measurements
22/P11a	IES LM-51:2000	High-Intensity Discharge Lamps -Total Flux Measurements
22/P11b	IES LM-51:2000	High-Intensity Discharge Lamps - Intensity Measurements
22/P11c	IES LM-51:2013	High-Intensity Discharge Lamps -Total Flux Measurements
22/P11d	IES LM-51:2013	High-Intensity Discharge Lamps - Intensity Measurements
22/P11e	ANSI/IES LM-51:2020	Electrical and Photometric Measurement of High Intensity Discharge Lamps - Total Flux Measurement
22/P11f	ANSI/IES LM-51:2020	Electrical and Photometric Measurement of High Intensity Discharge Lamps - Intensity Measurement
22/P12a	IES LM-66:1991	Single-Ended Compact Fluorescent Lamps - Total Flux Measurements

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22/P12b	IES LM-66:1991	Single-Ended Compact Fluorescent Lamps - Intensity Measurements
22/P13a	IES LM-66:2000	Single-Ended Compact Fluorescent Lamps - Total Flux Measurements
22/P13b	IES LM-66:2000	Single-Ended Compact Fluorescent Lamps - Intensity Measurements
22/P13c	IES LM-66:2011	Single-Ended Compact Fluorescent Lamps - Total Flux Measurements
22/P13d	IES LM-66:2011	Single-Ended Compact Fluorescent Lamps - Intensity Measurements
22/P13g	ANSI/IES LM-66:2020	Electrical and Photometric Measurements of Single-Based Fluorescent Lamps - Total Flux Measurements
22/P13h	ANSI/IES LM-66:2020	Electrical and Photometric Measurements of Single-Based Fluorescent Lamps - Intensity Measurements
22/P15	EPA Lamps v. 1.0	Elevated Temperature Light Output Ratio
22/P15a	ENERGY STAR® Elevated Temperature Light Output Ratio: September 2015	Elevated Temperature Light Output Ratio Test Method
22/P16	EPA Lamps v. 1.0	Start Time
22/P16a	ENERGY STAR® Start Time: September 2015	Start Time Test Method
22/P17	EPA Lamps v. 1.0	Run-Up Time
22/P17a	ENERGY STAR® Run-Up Time: September 2015	Run-Up Time Test Method

Luminaires

Code	***Designation***	***Description***
22/F06	IES LM-10:1996	Photometric Testing of Outdoor Fluorescent Luminaires
22/F06a	ANSI/IES LM-10:2020	Photometric Testing of Roadway and Area Lighting Fluorescent Luminaires
22/F07	IES LM-31:1995	Photometric Testing of Roadway Luminaires
22/F07a	ANSI/IES LM-31:2020	Photometric Testing for Roadway and Area Lighting Luminaires Using Incandescent or High Intensity Discharge Lamps
22/F08	IES LM-35:2002	Photometric Testing of Floodlights Using Incandescent Filament or Discharge Lamps

22/F08a	ANSI/IES LM-35:2020	Photometric Testing of Floodlights Using High Intensity Discharge or Incandescent Lamps
22/F09	IES LM-41:1998	Photometric Testing of Indoor Fluorescent Luminaires
22/F09b	ANSI/IES LM-41:2020	Photometric Testing of Indoor Fluorescent Luminaires
22/F10	IES LM-46:2004	Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps
22/F10a	ANSI/IES LM-46:2020	Photometric Testing of Indoor Luminaires Using High Intensity Discharge or Incandescent Filament Lamps

Solid State Lighting

SSL Color Measurements

Code	*Designation*	*Description*
22/S01	IES LM-58:1994	Spectroradiometric Measurements
22/S01a	IES LM-58:2013	Spectroradiometric Measurements
22/S02	CIE Pub. 13.3:1995	Method of Measuring and Specifying Color Rendering of Light Sources
22/S03	IES LM-79:2008 (Sec. 12)	Solid State Lighting Luminaires - Color Characteristic Measurements
22/S03a	ANSI/IES LM-79:2019 (Sec. 9)	Optical and Electrical Measurements of Solid-State Lighting Products - Chromaticity Uniformity Measurements
22/S04	IES LM-16:1993	Practical Guide to Colorimetry of Light Sources
22/S05	CIE Pub. 15:2004	Colorimetry
22/S23	ANSI C78.377:2011	Specifications for the Chromaticity of Solid State Lighting Products
22/S23b	ANSI C78.377:2017	Specifications for the Chromaticity of Solid State Lighting Products

SSL Electrical Measurements

Code	*Designation*	*Description*
22/S06	ANSI C82.2:2002	Ballast for Fluorescent Lamps - Methods of Measurement
22/S07	ANSI C82.77:2002	Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment
22/S07c	ANSI C82.77-10:2021	Lighting Equipment - Harmonic Emission Limits - Related Power Quality Requirements - Solid State

22/S38	ANSI/IES LM-79:2019 (Sec. 5)	Optical and Electrical Measurements of Solid-State Lighting Products - Electrical Test Conditions

SSL Life Tests

Code	Designation	Description
22/S18	EPA Lamps v. 1.0	Ambient Temperature Life Testing
22/S18a	ENERGY STAR® Ambient Temperature Life: September 2015	Ambient Temperature Life Test Method
22/S19	EPA Lamps v. 1.0	Elevated Temperature Life Testing
22/S19a	ENERGY STAR® Elevated Temperature Life: September 2015	Elevated Temperature Life Test Method

SSL Photometric Measurements

Code	Designation	Description
22/S09	IES LM-79:2008 (Sec. 9)	Solid State Lighting Luminaires - Total Flux Measurements (Luminous Efficacy)
22/S09a	ANSI/IES LM-79:2019 (Sec. 7)	Optical and Electrical Measurements of Solid-State Lighting Products - Total Luminous Flux and Integrated Optical Measurements
22/S10	IES LM-79:2008 (Sec. 10)	Solid State Lighting Luminaires - Luminous Intensity Measurements
22/S10a	ANSI/IES LM-79:2019 (Sec. 8)	Optical and Electrical Measurements of Solid-State Lighting Products - Luminous Intensity or Optical Angular Distribution Measurement
22/S13	IES LM-82-12	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature
22/S13a	ANSI/IES LM-82:2020	Characterization of Optical and Electrical Properties of Solid-State Lighting Products as a Function of Temperature
22/S20	EPA Lamps v. 1.0	Elevated Temperature Light Output Ratio
22/S20a	ENERGY STAR® Elevated Temperature Light Output Ratio: September 2015	Elevated Temperature Light Output Ratio Test Method
22/S21	EPA Lamps v. 1.0	Start Time
22/S21a	ENERGY STAR® Start Time: September 2015	Start Time Test Method

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SSL Temperature Measurement

Code	*Designation*	*Description*
22/S15	ANSI/UL 153:2002 (Secs. 124-128A)	Standard for Portable Electric Luminaires
22/S16	ANSI/UL 1574:2004 (Sec. 54)	Standard for Track Lighting Systems
22/S17	ANSI/UL 1598:2008 (Secs. 19.7, 19.10-16)	Luminaires

Also section 19.1