SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ENERGY EFFICIENT LIGHTING PRODUCTS NVLAP LAB CODE 200925-0

Lamps

Color Measurements

Code	*Designation*	*Description*
22/C02	IES LM-58:1994	Spectroradiometric Measurements
22/C02a	IES LM-58:2013	Spectroradiometric Measurements
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
22/C06a	ANSI C78.376:2014	Electric Lamps - Specification for the Chromaticity of Fluorescent Lamps

Electrical Measurements

Code	*Designation*	*Description*
22/E10	IES LM-9:1988	Fluorescent Lamps - Electrical Measurements
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/E12	IES LM-45:1991	Incandescent Lamps - Electrical Measurements
22/E13	IES LM-45:2000	Incandescent Lamps - Electrical Measurements
22/E13a	IES LM-45:2009	Incandescent Lamps - Electrical Measurements
22/E13b	IES LM-45:2015	Incandescent 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/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/E16b	IES LM-66:2014	Single-Ended Compact Fluorescent Lamps - Electrical Measurements
22/E17	ANSI C78.375:1991	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/E25	ANSI C82.2:1984	Ballast for Fluorescent Lamps - Methods of Measurement
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
22/E32	ANSI C82.77-10:2014	Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Fluorescent
22/E34	IEC 62301:2011	Household Electrical Appliances - Measurement of Standby Power
22/E36	10 CFR 431.324	Uniform Test Method for the Measurement of Energy Efficiency and Standby Mode Energy Consumption of Metal Halide Lamp Ballasts

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Life Tests

Code	*Designation*	*Description*
22/L05	IES LM-40:1987	Fluorescent Lamps - Life Test Performance
22/L06	IES LM-40:2001	Fluorescent Lamps - Life Test Performance
22/L06a	IES LM-40:2010	Fluorescent Lamps - Life Test Performance
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/L08	IES LM-49:2001	Incandescent Filament Lamps - Life Test Performance
22/L08a	IES LM-49:2012	Incandescent Filament Lamps - Life Test Performance
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/L10b	IES LM-65:2014	Single-Ended Compact Fluorescent Lamps - LifeTest Performance
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/L12a	ENERGY STAR® Ambient Temperature Life: September 2015	Ambient Temperature Life Test Method
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/P06a	IES LM-9:1988	Fluorescent Lamps - Total Flux Measurements
22/P06b	IES LM-9:1988	Fluorescent Lamps - Intensity Measurements

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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
22/P07d	IES LM-9:2009	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/P09a	IES LM-45:1991	Incandescent Lamps - Total Flux Measurements
22/P09b	IES LM-45:1991	Incandescent Lamps - Intensity Measurements
22/P10a	IES LM-45:2000	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/P10e	IES LM-45:2015	Incandescent Lamps - Total Flux Measurements
22/P10f	IES LM-45:2015	Incandescent 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/P12a	IES LM-66:1991	Single-Ended Compact Fluorescent Lamps - Total Flux Measurements
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

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22/P13d	IES LM-66:2011	Single-Ended Compact Fluorescent Lamps - Intensity Measurements
22/P13e	IES LM-66:2014	Single-Ended Compact Fluorescent Lamps - Total Flux Measurements
22/P13f	IES LM-66:2014	Single-Ended Compact Fluorescent Lamps - Intensity Measurements
22/P14	EN/IEC 60969, Ed. 1.2: 2001	Self-Ballasted Lamps for General Lighting Services - Performance Requirements
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
22/P18	10 CFR 430 Appendix W to Subpart B	Energy Conservation Program for Consumer Products

Luminaires

Code	***Designation***	***Description***
22/F06	IES LM-10:1996	Photometric Testing of Outdoor Fluorescent Luminaires
22/F07	IES LM-31:1995	Photometric Testing of Roadway Luminaires
22/F08	IES LM-35:2002	Photometric Testing of Floodlights Using Incandescent Filament or Discharge Lamps
22/F09	IES LM-41:1998	Photometric Testing of Indoor Fluorescent Luminaires
22/F09a	IES LM-41:2014	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

Solid State Lighting

Code	***Designation***	***Description***

22/S30	10 CFR 430 Appendix BB to Subpart B	Uniform Test Method for Measuring the Input Power, Lumen Output, Lamp Efficacy, Correlated Color Temperature (CCT), Color Rendering Index (CRI), Power Factor, Time to Failure, and Standby Mode Power of Integrated Light-Emitting Diode (LED) Lamps

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	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/S11	ANSI C78.377-2008	Specifications for the Chromaticity of Solid State Lighting Products
22/S23	ANSI C78.377:2011	Specifications for the Chromaticity of Solid State Lighting Products
22/S23a	ANSI C78.377:2015	Specifications for the Chromaticity of Solid State Lighting Products

Testing also performed at 609 14th St. SW, Loveland, Co. 80537

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/S07a	ANSI C82.77-10:2014	Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Solid State
22/S28	IEC 62301:2011	Household Electrical Appliances - Measurement of Standby Power
22/S38	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/S14	EPA Integral LED Lamps v. 1.4 (Appendix E)	ENERGY STAR® Elevated Temperature Testing for Integral LED Lamps
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
22/S25	IES LM-84:2014	Approved Method for Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires

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	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	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/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

SSL Temperature Measurement

Code	***Designation***	***Description***

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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