



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Gamma Scientific Inc.
 9925 Carroll Canyon Road
 San Diego, CA 92131
 Frank Vachlin
 Phone: 858-279-8034
 Email: fvachlin@gamma-sci.com
 http://www.gamma-sci.com

**ENERGY EFFICIENT LIGHTING
PRODUCTS**

NVLAP LAB CODE 200823-0

Lamps

Color Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/C02	IES LM-58:1994	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

Electrical Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
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
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

For the National Voluntary Laboratory Accreditation Program

ENERGY EFFICIENT LIGHTING PRODUCTS
NVLAP LAB CODE 200823-0

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/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

Life Tests

<u>Code</u>	<u>Designation</u>	<u>Description</u>
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/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 - Life Test Performance
22/L11a	EPA CFL v. 4.3 (Annex A)	ENERGY STAR® Reflector CFL Elevated Temperature Test Procedure

Photometric Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/P06a	IES LM-9:1988	Fluorescent Lamps - Total Flux Measurements
22/P06b	IES LM-9:1988	Fluorescent Lamps - Intensity Measurements
22/P07a	IES LM-9:1999	Fluorescent Lamps - Total Flux Measurements
22/P07b	IES LM-9:1999	Fluorescent Lamps - Intensity Measurements

ENERGY EFFICIENT LIGHTING PRODUCTS

NVLAP LAB CODE 200823-0

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/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/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/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/P14	EN/IEC 60969, Ed. 1.2: 2001	Self-Ballasted Lamps for General Lighting Services - Performance Requirements

Luminaires

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/F07	IES LM-31:1995	Photometric Testing of Roadway Luminaires
22/F09	IES LM-41:1998	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

SSL Color Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/S01	IES LM-58:1994	Spectroradiometric Measurements
22/S02	CIE Pub. 13.3:1995	Method of Measuring and Specifying Color Rendering of Light Sources

ENERGY EFFICIENT LIGHTING PRODUCTS

NVLAP LAB CODE 200823-0

22/S03	IES LM-79:2008 (Sec. 12)	Solid State Lighting Luminaires - Color Characteristic Measurements
22/S04	IES LM-16:1993	Practical Guide to Colorimetry of Light Sources
22/S05	CIE Pub. 15:2004	Colorimetry

SSL Electrical Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/S07	ANSI C82.77:2002	Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment

SSL Life Tests

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/S08	IES LM-80:2008	Solid State Lighting Luminaires - Lumen Maintenance

SSL Photometric Measurements

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/S09	IES LM-79:2008 (Sec. 9)	Solid State Lighting Luminaires - Total Flux Measurements (Luminous Efficacy)
22/S10	IES LM-79:2008 (Sec. 10)	Solid State Lighting Luminaires - Luminous Intensity Measurements
22/S13	IES LM-82-12	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature

SSL Temperature Measurement

<u>Code</u>	<u>Designation</u>	<u>Description</u>
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

Decorative Light Strings

<u>Code</u>	<u>Designation</u>	<u>Description</u>
22/D02	CIE Pub. 84:1989	Measurement of Luminous Flux