



Report No.: GZE160179-A2

LM-79-08 Test Report

For

Maxlite INC

(Brand Name: Maxlite)

12 York Ave., West Caldwell, NJ 07006

2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces

Model name(s): MLFP22EP40XX

Remark: The second suffix “XX” represent for LED color temperature, which could be “30”, “35”, “41” or “50” .

Representative (Tested) Model: MLFP22EP4050

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Peeta Cao

Engineer: Peeta Cao

Date: 2016-01-04

Review By:

Tommy Liang

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-A/2

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U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template

Laboratory Information:

Name of Test Laboratory	Standard-Tech Co. Ltd
Date of Test Report	January.04,2016
Test Report No.	GZE160179-A2
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	Maxlite INC	
Brand Name	Maxlite	
Model Number	MLFP22EP4050	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere

Goniophotometer

Electrical Measurements:

Output

Output

Input Wattage	39.96	--	W
Input Current	0.3374	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9871	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	4329	--	lm
Initial Lumen Efficacy	108.3	--	lm/w
Correlated color temperature / CCT	4772	--	K
Color rendering index / CRI	81.4	--	
R9 Value	3	--	
Duv	0.0050	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)			cd
Beam angle (if applicable)			°
Zonal lumens in the 0 °-60 ° zone			%
Zonal lumens in the 60 °-90 ° zone	-----	-----	%
Zonal lumens in the 90 °-120 ° zone			%
Zonal lumens in the 120 °-180 ° zone			%

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Test Specifications:	
Date of Receipt	: December.24,2015
Date of Test	: December.29,2015
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

Test Methods

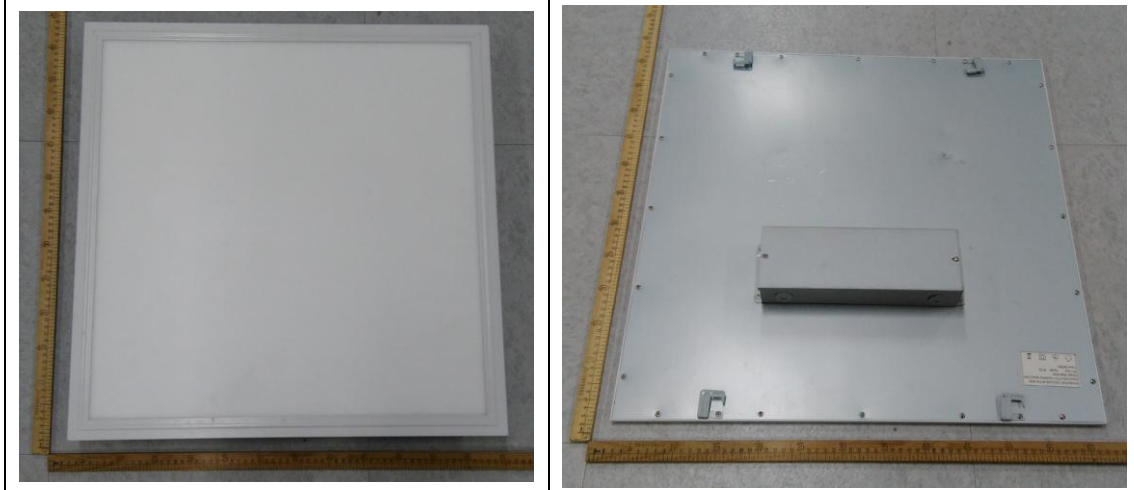
1. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

1. Product Information:

Brand Name	Maxlite
Model Number	MLFP22EP40XX
Luminaire Type	2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces
Rated Voltage / Frequency	100-277Vac, 50/60Hz
Nominal Power	40W
Rated Initial Lamp Lumen	--
Declared CCT	5000K
LED Manufacturer	Everlight Electronics Co., LTD.
LED Model	67-21S series
Sample Receipt Date	December.24,2015
Sample Number	GZE160179- A2(5000K)

Photo



2. Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2015-12-29	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	MLFP22EP4050		

Electrical Measurement:

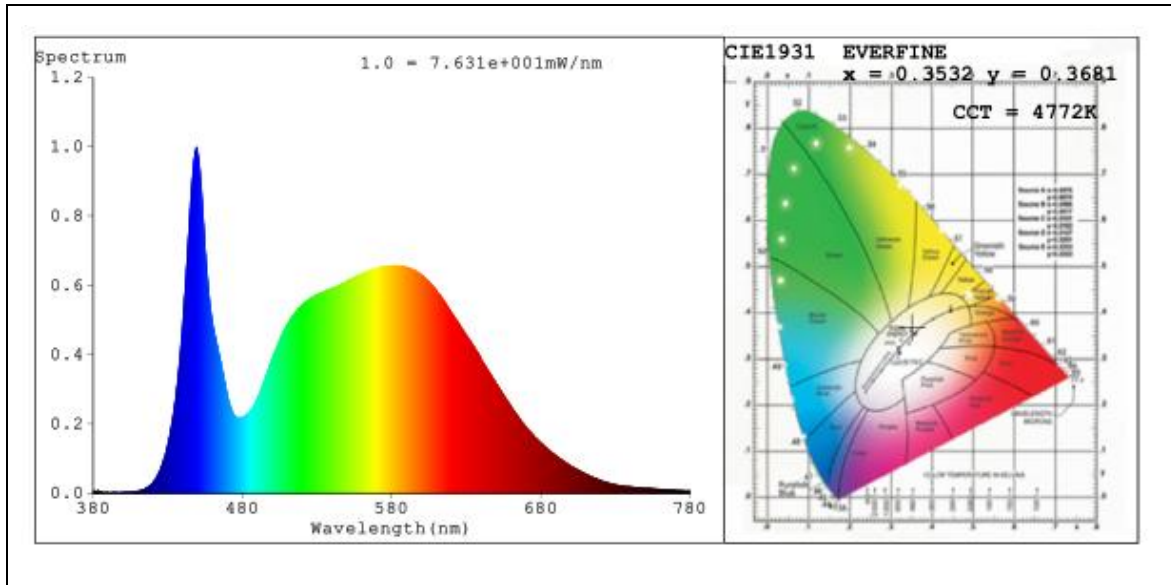
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160179	120.0	60	0.3374	39.96	0.9871	12.13
-A2	277.0	60	0.1551	40.07	0.9325	18.78

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	81.4
R9	3
CCT (K)	4772
Chromaticity (x, y)	x=0.3532 y=0.3681
Chromaticity (u', v')	u'=0.2105 v'=-0.4937
Duv	0.0050
Total Luminous (lm)	4329
Luminous Efficacy (lm/W)	108.3

Special Color Rendering Indices			
R1	79	R9	3
R2	86	R10	67
R3	92	R11	80
R4	81	R12	56
R5	79	R13	80
R6	81	R14	96
R7	88	R15	73
R8	66	--	--

Spectral Power Distribution & Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30
Uncertainty Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

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