

LM-79-08 Test Report

For

L-TECH CORPORATION**(Brand Name: L-TECH CORP)**SHAOGANGTOU DISTRICT.QIAOTOU TOWN.DONGGUAN
CITY.GUANGDONG PROVINCE,CHINA**LED Luminaires**

Model name(s): ULD4-40

Model Different: N/A

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Mar.24,2017

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

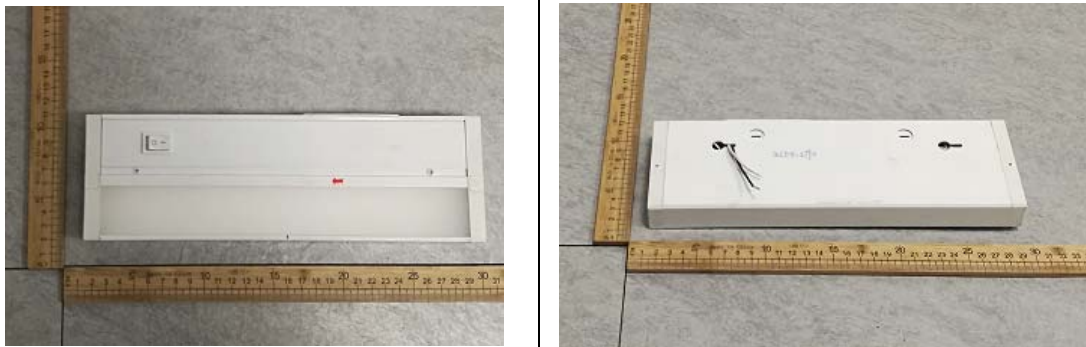
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1.1 Product Information:

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	ULD4-40	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaires	
Rated Voltage / Frequency	120Vac, 60 Hz	
Nominal Power	6.5W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K	
LED Manufacturer	EVERLIGHT ELECTRONICS CO., LTD	
LED Model	67-21S Series	
Sample Number	GZE170330-H-B3	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Photo		
		

1.2 Test Specifications:

Date of Receipt	Mar.10,2017
Date of Test	Mar.21,2017
Test item	<ol style="list-style-type: none">1. Total Luminous Flux2. Luminous Efficacy3. Correlated Color Temperature4. Color Rendering Index5. Chromaticity Coordinate6. Electrical Parameters
Reference Standard	<ol style="list-style-type: none">1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources4. CIE 15-2004 Technical Report Colorimetry5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

1.3 Test Methods**1) Chromaticity Measurement – Sphere-Spectroradiometer Method:**

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

2) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

2.1 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction QD25)*

Test date	2017-03-21	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	ULD4-40		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE170330-H-B3	120.0	60	0.4658	55.09	0.9856

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	91	R9	54
Frequency (Hz)	60	R2	94	R10	85
CCT (K)	3853	R3	96	R11	91
Duv	0.0009	R4	91	R12	74
Chromaticity (x, y)	x=0.3879 y=0.3832	R5	90	R13	91
Chromaticity (u', v')	u'=0.2274 v'=0.5055	R6	91	R14	98
Color Rendering Index (CRI)	91.1	R7	93	R15	87
R9	54	R8	82	--	--
Total Luminous (lm)	324.3				
Luminous Efficacy (lm/W)	55.09				

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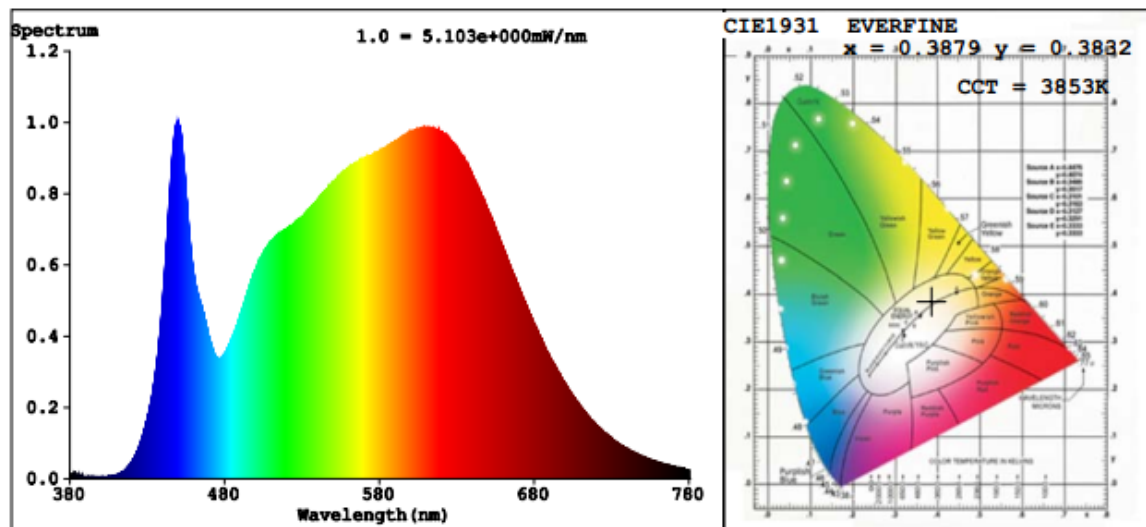
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Spectral Power Distribution & Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K			

******* END OF REPORT *******

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