

## **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): ULD2-40

Model Different: N/A

Test & Report By:

Review By:

Engineer: Jack Luo

Manager: Tommy Liang

Date: May.18,2017

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	ULD2-40	
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	4.5W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K	
LED Manufacturer	EVERLIGHT ELECTRONICS CO., LTD	
LED Model	67-21S Series	
Sample Number	GZE170330-H-A3	
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	May.13,2017
Date of Test	May.15,2017
Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Efficacy</li> <li>3. Correlated Color Temperature</li> <li>4. Color Rendering Index</li> <li>5. Chromaticity Coordinate</li> <li>6. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> <li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li> </ol>
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)*

<b>Test date</b>	2017-05-15	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	ULD2-40		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE170330-H-A3	120.0	60	0.0401	4.718	0.9802

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	92	R9	52
Frequency (Hz)	60	R2	99	R10	96
CCT (K)	3771	R3	95	R11	90
Duv	0.0023	R4	88	R12	75
Chromaticity (x, y)	x=0.3931 y=0.3894	R5	91	R13	95
Chromaticity (u', v')	u'=0.2283 v'=0.5089	R6	97	R14	98
Color Rendering Index (CRI)	91.2	R7	89	R15	87
R9	52	R8	78	--	--
Total Luminous (lm)	245.5				
Luminous Efficacy (lm/W)	52.03				

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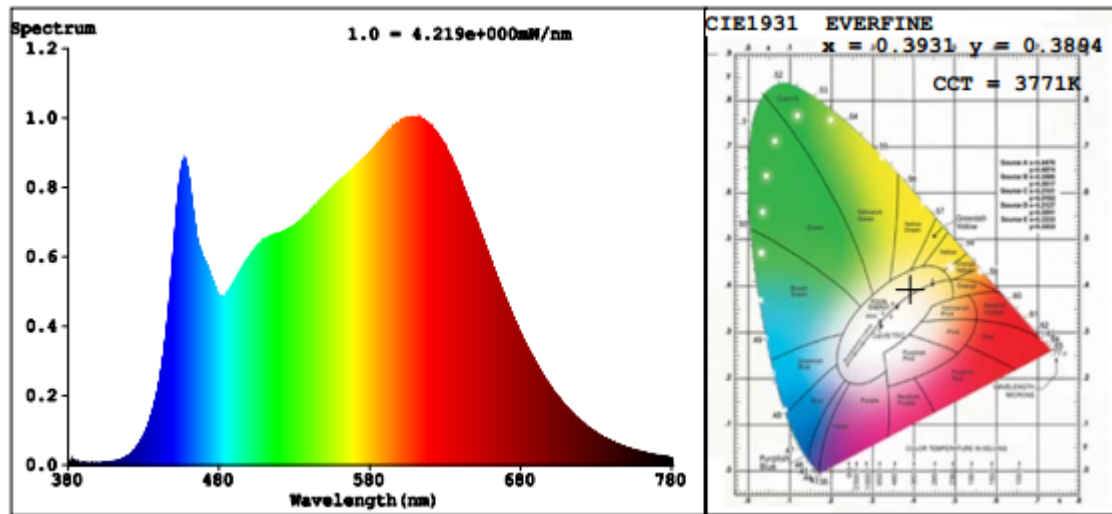
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## Spectral Power Distribution &amp; Chromaticity Diagram



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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 \*\*\*\*\***

DRAFT

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