

# IES LM-79-08

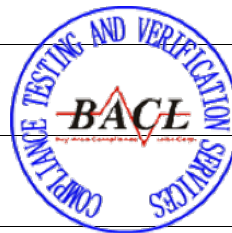
## MEASUREMENT AND TEST REPORT For

### Premium Quality Lighting, Inc.

2285 Ward Avenue / Simi Valley, CA 93065

**Test Model: 83222**

<b>Report Type:</b>	Electrical and Photometric tests including: Input Current, Power, Power Factor, Luminous Flux, Luminous Efficacy, CRI, CCT, Chromaticity Coordinate, Spectral Power Distribution
<b>Test Engineer:</b>	Daniel Duan <i>Daniel Duan</i>
<b>Report Number:</b>	RSZ150403504-10
<b>Test Date:</b>	2015-04-10
<b>Report Date:</b>	2015-04-15
<b>Reviewed By:</b>	Jeanne Han/Safety Manager <i>Jeanne Han</i>
<b>Prepared By:</b>	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008
<b>Test Facility:</b>	Test facility was located at Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China.
<b>Accreditation:</b>	The NVLAP Lab Code is 200707-0.



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## 1. Product Description

### General Information:

One sample was received on 2015-04-03 and used for testing. Sample No.: RSZ150403504-S01

Model Tested: 83222  
 Manufacturer: Premium Quality Lighting, Inc.  
 Brand Name: Superior Life®  
 Product Designation: Outdoor Wall-Mounted Area Luminaires  
 Burning Time Before Test: 0 hour(For New Products)

### Rated Values:

Rated Voltage/Frequency: 100-277V AC 60Hz  
 Rated Power: 70W  
 Nominal CCT: 5000K

## 2. Standards Used

IESNA LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products  
 ANSI C82.77-2002: Harmonic Emission Limits – Related Power Quality Requirements for Lighting

## 3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
Integrating Sphere	SENSING	SPR-600	S09008	1.5 meter	2015-03-16	2016-03-16
Spectral photometer	SENSING	SPR3000	90902027	380nm~800nm	2015-03-16	2016-03-16
Power Meter	YOKOGAWA	WT-210	91j926132	15/30/60/150/300/600 V	2015-03-05	2016-03-05
AC Power Supply	ALL Power	APW-105N	970613	0V-300V 50-400Hz	2015-03-05	2016-03-05
Standard Light Source	EVERFINE	D204	LSD090808	N/A	2014-08-05	2015-08-05
Thermal Meter	SENSING	N/A	N/A	25 ,45 ,55	2015-03-05	2016-03-05
DC Power Supply	ITECH	IT6154	0061 0417 6471 0010 19	0~60V	2015-03-05	2016-03-05

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

## 4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at  $25^{\circ}\text{C}\pm 1^{\circ}\text{C}$  during measurement. And relative humidity is less than 65%.

### **Integrating Sphere System**

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards.

$4\pi$  geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the light output (luminous flux) measurements is  $U=1.64\%$  ( $K=2$ ), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is  $U=21\text{K}$  ( $K=2$ ), at the 95% confidence level. The uncertainty of the CRI is  $U=1.6$  ( $K=2$ ), at the 95% confidence level.

F I N A L

## 5. Test Result

### [Integrating Sphere System]

Total operating time for integrating sphere test: **1.5 hours**

Test orientation: **Downward**

#### Electrical Measurement

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.07	60.0	0.5862	70.155	0.997

#### Photometric Measurement

Luminous Flux (lm)	Radiant Flux (W)	Efficacy (lm/W)	CCT (K)	Duv
6032.709	13.119	85.991	4993	1.53E-03

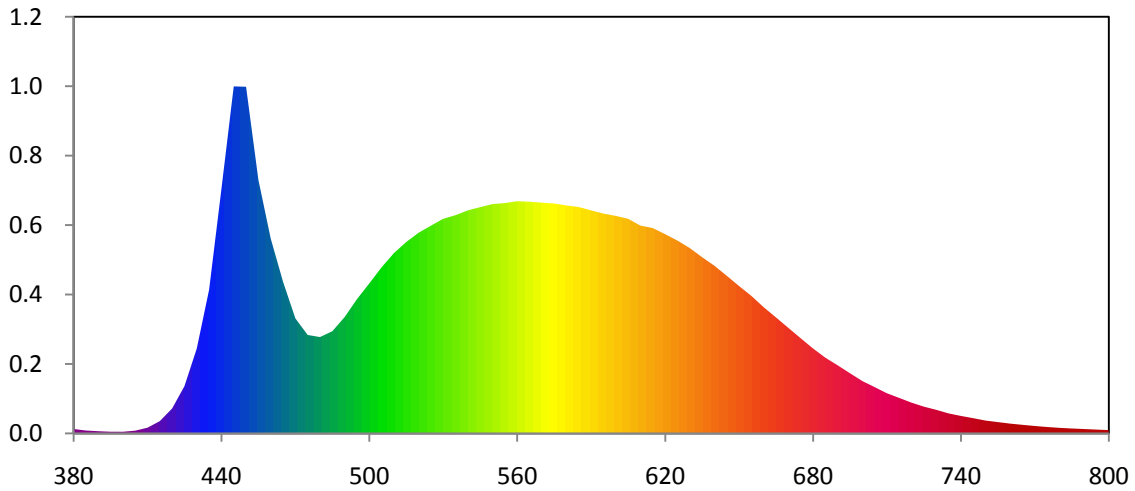
#### Chromaticity Coordinate

x	y	u	v	u'	v'
0.3456	0.3551	0.2104	0.3243	0.2104	0.4864

#### Color Rendering Index

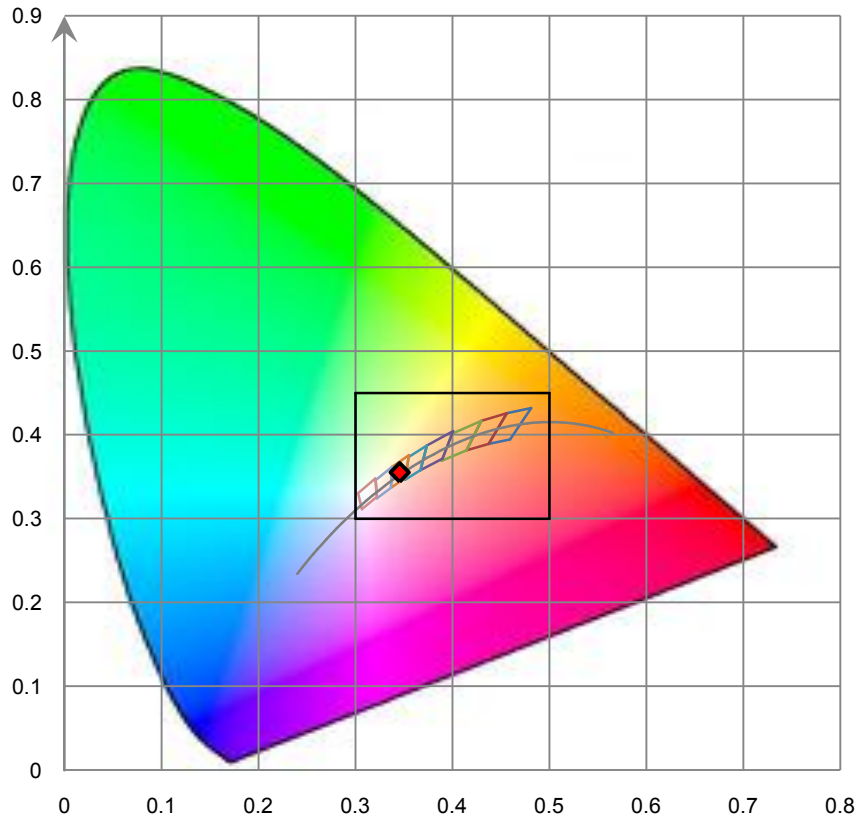
<b>Ra</b>			
86.0			
R1	R2	R3	R4
85	88	90	87
R5	R6	R7	R8
85	83	91	79
R9	R10	R11	R12
39	72	85	63
R13	R14	R15	
86	94	83	

Relative Spectral Power Distribution

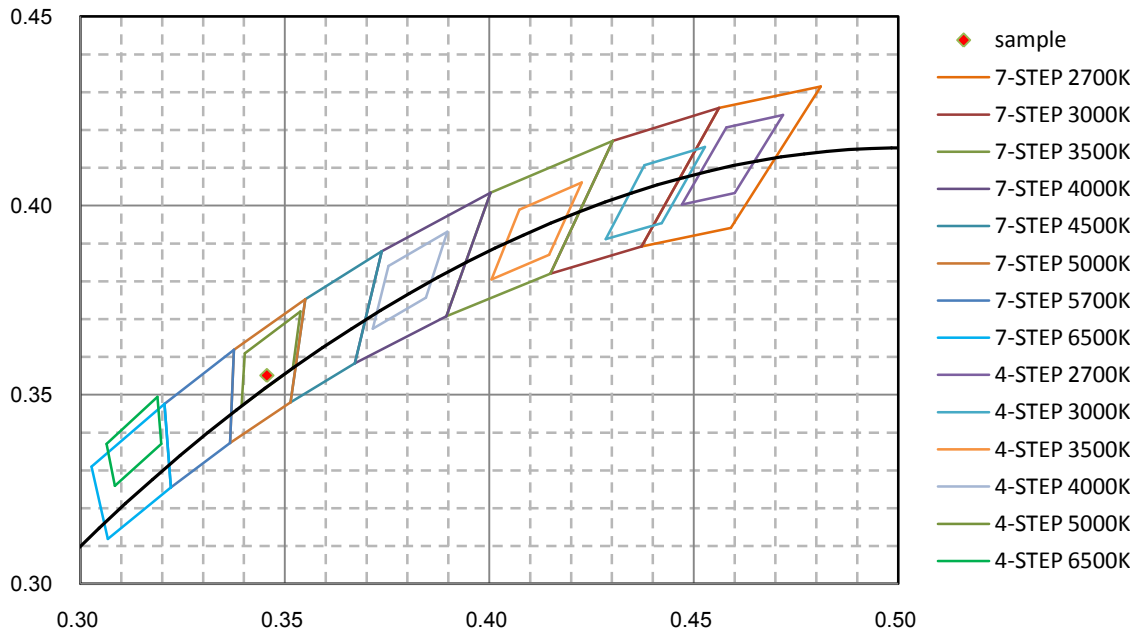


nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	5.796E-03	465	1.966E-01	550	2.972E-01	635	2.284E-01	720	3.990E-02
385	3.793E-03	470	1.491E-01	555	2.985E-01	640	2.173E-01	725	3.471E-02
390	2.901E-03	475	1.276E-01	560	3.008E-01	645	2.043E-01	730	3.060E-02
395	2.229E-03	480	1.249E-01	565	3.002E-01	650	1.910E-01	735	2.598E-02
400	2.192E-03	485	1.324E-01	570	2.990E-01	655	1.782E-01	740	2.267E-02
405	3.591E-03	490	1.508E-01	575	2.979E-01	660	1.635E-01	745	1.979E-02
410	7.448E-03	495	1.740E-01	580	2.953E-01	665	1.503E-01	750	1.671E-02
415	1.596E-02	500	1.943E-01	585	2.933E-01	670	1.368E-01	755	1.472E-02
420	3.232E-02	505	2.153E-01	590	2.889E-01	675	1.234E-01	760	1.272E-02
425	6.125E-02	510	2.337E-01	595	2.849E-01	680	1.101E-01	765	1.116E-02
430	1.099E-01	515	2.481E-01	600	2.818E-01	685	9.821E-02	770	9.656E-03
435	1.862E-01	520	2.600E-01	605	2.781E-01	690	8.829E-02	775	8.360E-03
440	3.166E-01	525	2.692E-01	610	2.693E-01	695	7.804E-02	780	7.250E-03
445	4.496E-01	530	2.780E-01	615	2.661E-01	700	6.795E-02	785	6.407E-03
450	4.491E-01	535	2.828E-01	620	2.582E-01	705	6.005E-02	790	5.723E-03
455	3.287E-01	540	2.890E-01	625	2.499E-01	710	5.207E-02	795	5.009E-03
460	2.526E-01	545	2.932E-01	630	2.402E-01	715	4.605E-02	800	4.389E-03

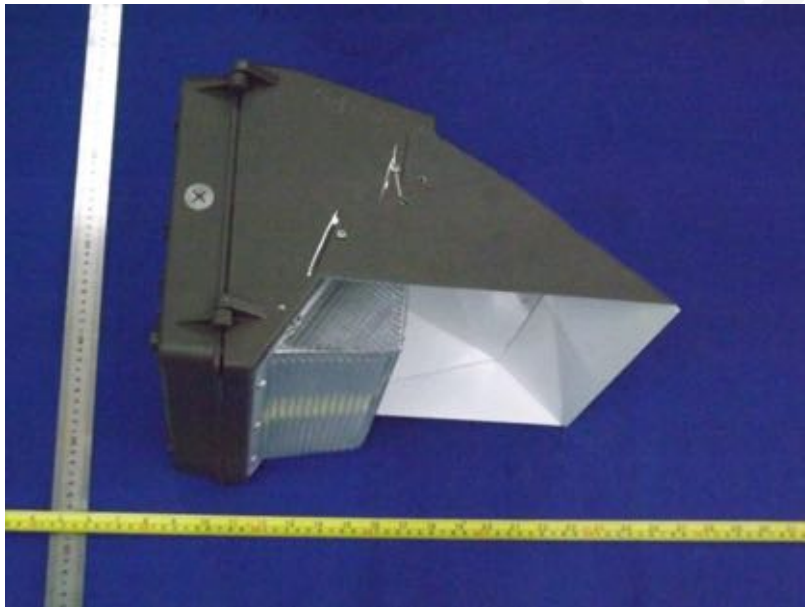
**CIE 1931 x y Chromaticity Diagram**



**7-Step & 4-Step Chromaticity Quadrangles**



6. Product Photo



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