



TEST REPORT

For

P Q L INC

2285 WARD AVE SIMI VALLEY, CA 93065 United States

Model Number:	55780 LED 2X2 selectable CENTER BASKET TROFFER, 0-10V dimming, 19-24-32-39W selectable, CCT 3500K-4000K-5000K selectable, 120-277V input	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V5.1	
Standards:	IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting ANSI/UL 1598-2008: Standard for Safety of Luminaires CIE 190:2010 Calculation and presentation of unified glare rating tables for indoor lighting luminaires IES TM-30-18: IES Method for Evaluating Light Source Color Rendition	
Project Engineer:	Sherry Gu	
Report Number:	PKS231023102-10-1	
Sample Size:	One sample was received on 2021-12-24 and used for testing.	
Test Date:	2022-01-04	
Report Date:	2023-10-24	
Reviewed By:	Seven Xia/ EE Engineer	
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan). No. 248 Chenghu Road, Kunshan, Jiangsu, People’s Republic of China Tel: +86-0512-86175000 Fax: +86-0512-88934268	

1. Product Information and Description[#]

Product Primary Use: 2x2 Luminaires for Ambient Lighting of Interior Commercial Spaces
 Voltage and Frequency: 120-277VAC, 50/60Hz
 LED Source Manufacturer: Lumileds Holding B.V.
 LED Source Model: L128-xx80RA35000Q1
 Auxiliary Ballast Model: NA
 Auxiliary Housing Model: NA
 White Tunable: Yes
 Field-Adjustable Light Output: Yes

Note:

1. The applicant *P Q L INC* declared that their products are the same to the product in report# RKS211224021-10 and is authorized by original applicant to use their test data.
2. All the data in previous report (RKS211224021-10) is shared in report.

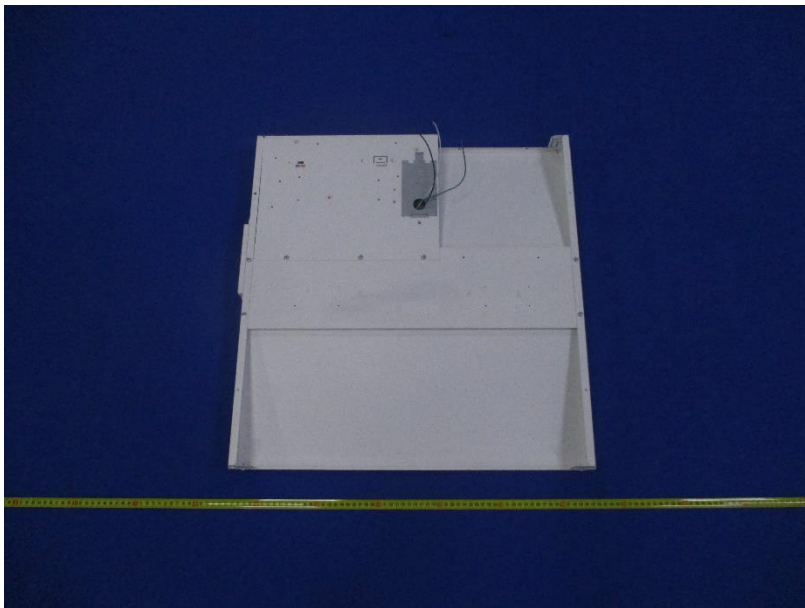
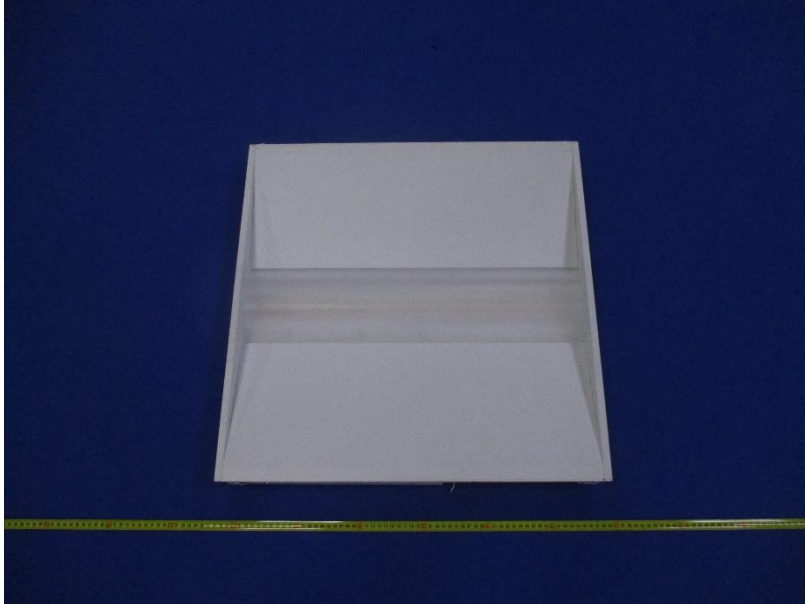
2. Product Rated Values[#]

Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminous Efficacy (lm/W)
55780 LED 2X2 selectable CENTER BASKET TROFFER, 0-10V dimming, 19-24-32-39W selectable, CCT 3500K-4000K-5000K selectable, 120-277V input	3500	2499	19	132
		3108	24	130
		4080	32	128
		4894.5	39	125.5
	4000	2642	19	139
		3289	24	137
		4321	32	135
		5188	39	133
	5000	2546	19	134
		3168	24	132
		4160	32	130
		4992	39	128

3. Test List

Test Model	CCT(K)	Power(W)	Test Item			
			Goniophotometer Test	Integrating Sphere Test	THDi and PF Test	In-Situ Temperature Measurement Test
55780 LED 2X2 selectable CENTER BASKET TROFFER, 0-10V dimming, 19-24-32-39W selectable, CCT 3500K-4000K-5000K selectable, 120-277V input	3500	29	NA	Yes	Yes	NA

4. Product Photo



5. Test Result

<u>Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz:</u>				
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	4763.5	≥2000	≥1800	Pass
Power(W)	38.03	None.	None.	N/A
Total Efficacy(lm/W)	125.26	≥110	≥106.7	Pass
CCT(K)	3346	3220~3710	No tolerances	Pass
Duv	-0.000179	-0.0055~0.0065	No tolerances	Pass
IES R _f	84	70	69	Pass
IES R _g	98	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R _a	82.5	≥80	≥79	
R ₉	11	≥0	≥-1	

<u>Integrating Sphere THDi、PF Test; Orientation: Downward;</u>					
Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9958	≥0.9	≥0.87	Pass
120	THDi	7.91%	≤20%	≤25%	Pass
277	Power Factor	0.9713	≥0.9	≥0.87	Pass
277	THDi	9.88%	≤20%	≤25%	Pass

Note:

- The test results were measured directly from the test equipment.
- The DLC requirements were listed according to DLC Technical Requirements V5.1.
- The conclusion is for reference only. Test report that indicate product performance meets DLC Technical Requirements do not represent official DLC product qualification. All decisions regarding product qualification are made by the DLC.

Test Data

[Integrating Sphere System]

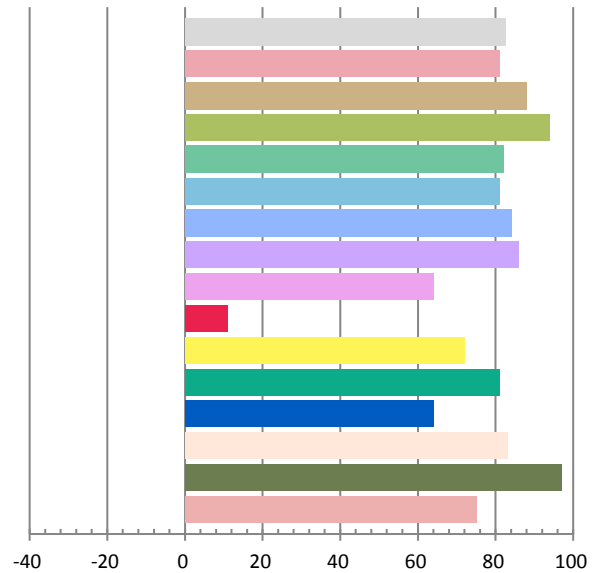
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.3182	38.03	0.9958	4763.5	125.26

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
14.493	3346	-0.000179	0.4141	0.3945	0.2398	0.5141

Color Rendering Index

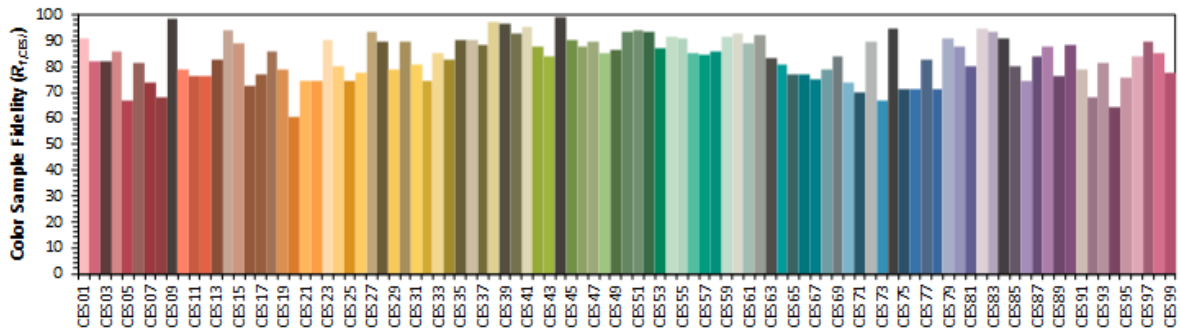
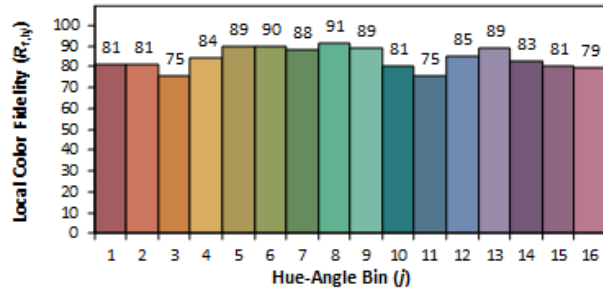
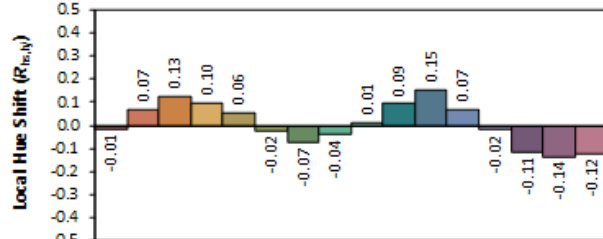
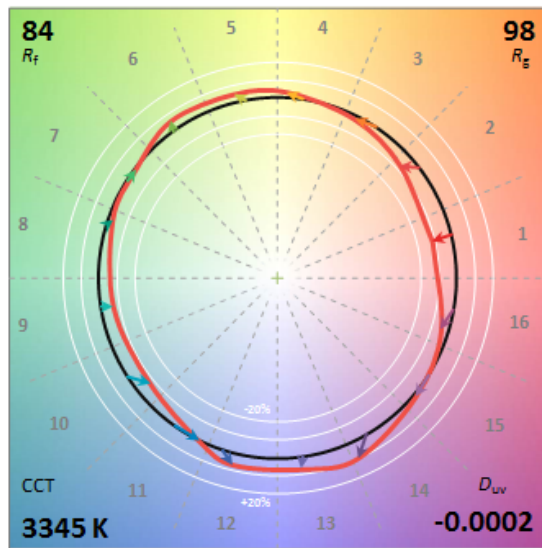
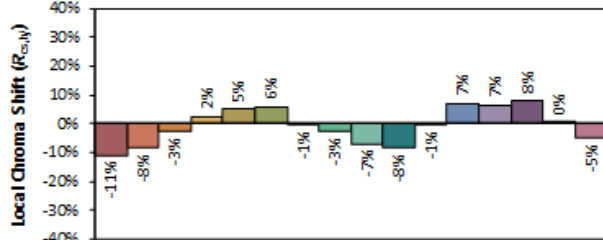
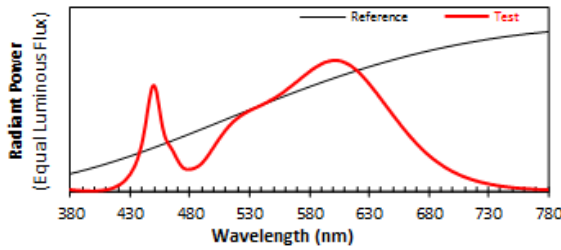
Ra			
82.5			
R1	R2	R3	R4
81	88	94	82
R5	R6	R7	R8
81	84	86	64
R9	R10	R11	R12
11	72	81	64
R13	R14	R15	
83	97	75	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2022/1/4

Manufacturer: P Q L INC
Model: 55780
LED 2X2 selectable CENTER BASKET TROFFER,
0-10V dimming, 19-24-32-39W selectable, CCT
3500K-4000K-5000K selectable, 120-277V
input



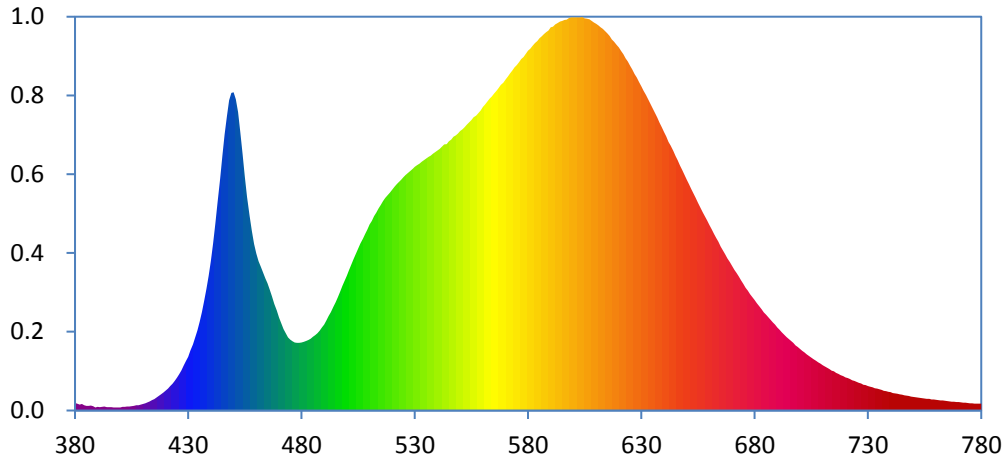
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4141
 y 0.3944
 u' 0.2399
 v' 0.5141

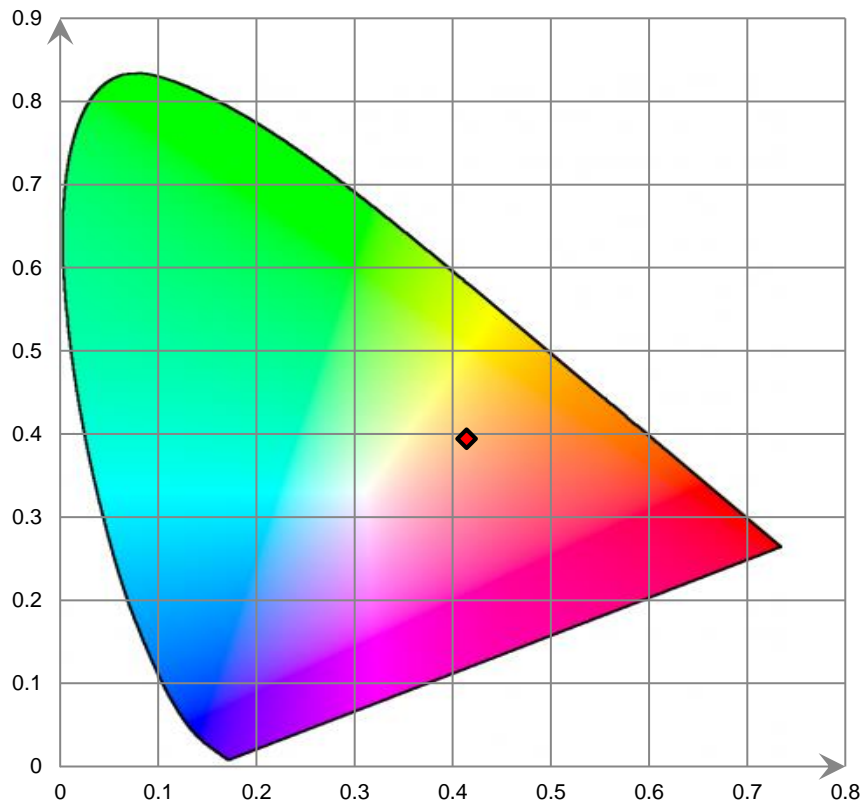
CIE 13.3-1995 (CRI)	
R_a	83
R_9	11

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

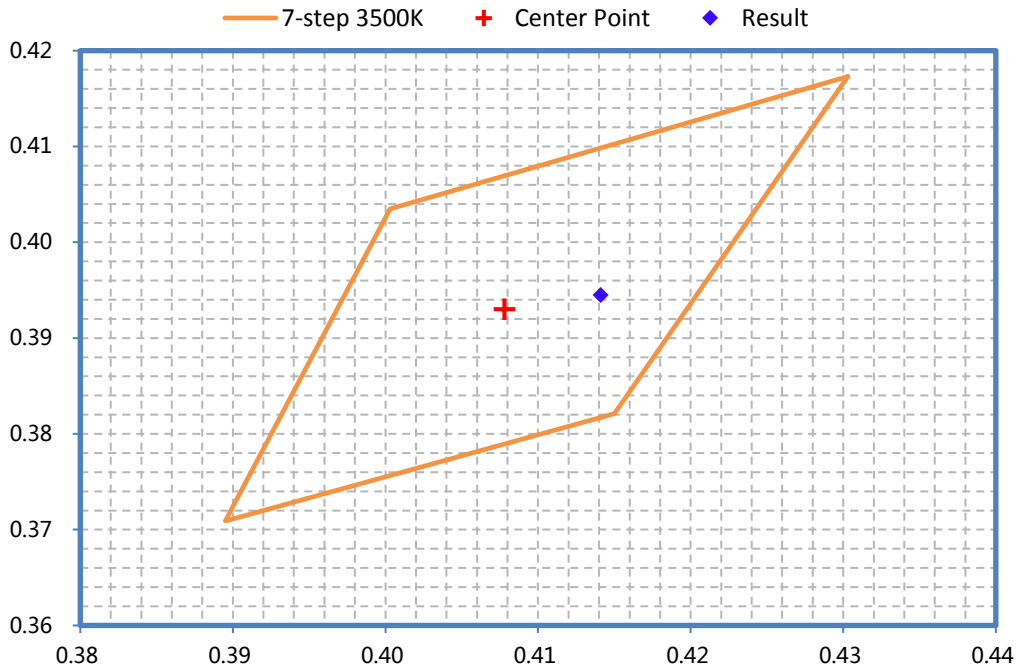
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	G121960CS1361154D	2021-11-02	2022-11-01
spectroradiometer	EVERFINE	HAAS-2000	M12048CS1361148	2021-11-02	2022-11-01
Digital CC&CV DC Power Supply	EVERFINE	WY305	G115986CN1361134	2021-11-02	2022-11-01
Thermal Meter	ANYMETRE	TH-20E	N/A	2021-12-01	2022-11-30
Standard Light Source	Osram	24V/50W	JWWCR020106	2021-09-15	2022-09-14
Digital Power Meter	YOKOGAWA	WT210	91KB35700	2021-11-13	2022-11-12
Intelligence ac power supply	EVERFINE	DPS1005	G119890CS1361121	2021-11-02	2022-11-01

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

7. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The ambient temperature of the sample was maintained at 25°C±1°C during measurement. And relative humidity is less than 65%. The product was operated in its intended orientation in application during all testing.

Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement. 4π geometry was used during measurement.

Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★"
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
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*****END OF REPORT*****