TEST REPORT

For

P.Q.L., Inc.

2285 Ward Avenue / Simi Valley, CA 93065

Model Number:	LA28P805CU[K,W]-2700K LA28P805CU[K,W]-3000K LA28P805CU[K,W]-3500K LA28P805CU[K,W]-4000K LA28P805CU[K,W]-5000K	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Technical Requirements for LED Lighting SSL V6.0	
Standards:	ANSI/IES LM-79-19: Approved Method: Optical and Electrical Measurements 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:	Allen Pan	Allen Pan
Report Number:	RKSB260312006-10	
Sample Size:	One sample was received on 2026-03-12 and used for testing.	
Test Date:	2026-03-24 to 2026-03-31	
Report Date:	2026-04-07	
Reviewed By:	Seven Xia/ EE Engineer	Seven Xia
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:	Direct Linear Ambient Luminaires
Voltage and Frequency:	120-277VAC, 60Hz
LED Source Manufacturer:	Seoul Semiconductor Co., LTD
LED Source Model:	STW8A2PD-D1-RNP
Driver Model:	SIL80-I1800 120-277 W D1 M
Luminaire length:	8ft
Auxiliary Ballast Model:	NA
Auxiliary Housing Model:	NA
Field Adjustable Color Temperature:	Yes
Field-Adjustable Light Output:	Yes

Family Declaration

Test Model	Covered Models	Variations	Detail
LA28P805CUW-2700K	LA28P805CUK-2700K	Lamp Color	"W" mean "White", "K" means "Black" Except for the different color of the lamp, LA28P805CUW-2700K and LA28P805CUK-2700K are identical in every other way

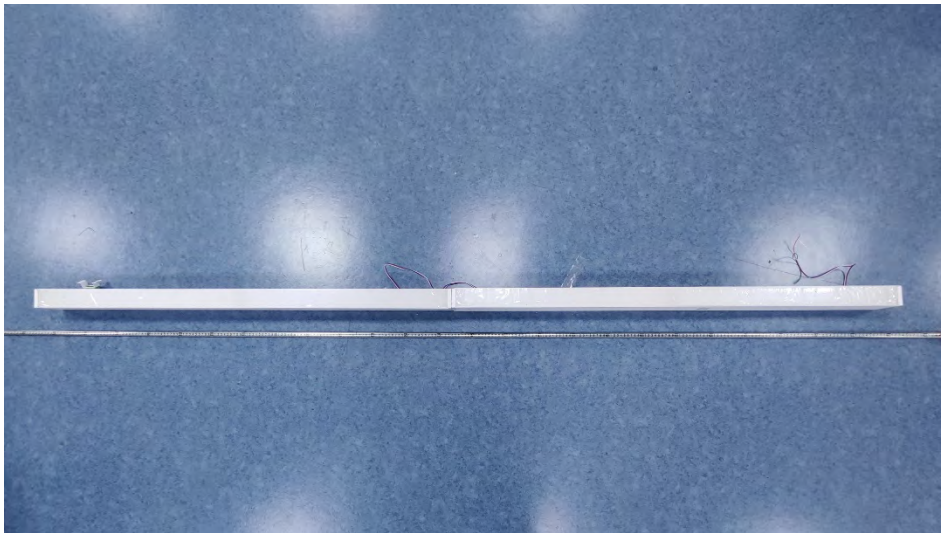
2. Product Rated Values#

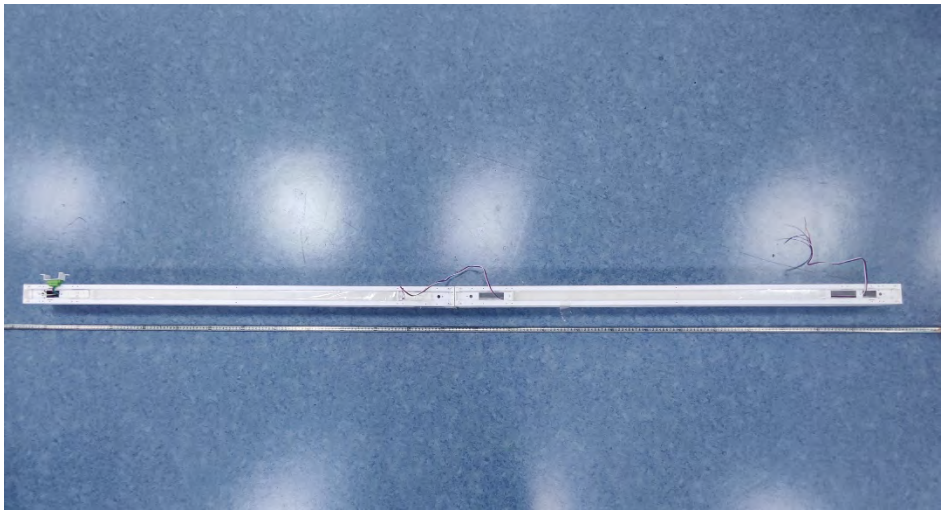
Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminous Efficacy (lm/W)
LA28P805CUW-2700K	2700	10000	80	125
		8320	64	130
		6480	48	135
		5600	40	140
LA28P805CUW-2700K	3000	10400	80	130
		8640	64	135
		6720	48	140
		5800	40	145
LA28P805CUW-2700K	3500	10400	80	130
		8640	64	135
		6720	48	140
		5800	40	145
LA28P805CUW-2700K	4000	10400	80	130
		8640	64	135
		6720	48	140
		5800	40	145
LA28P805CUW-2700K	5000	10400	80	130
		8640	64	135
		6720	48	140
		5800	40	145

3. Test List

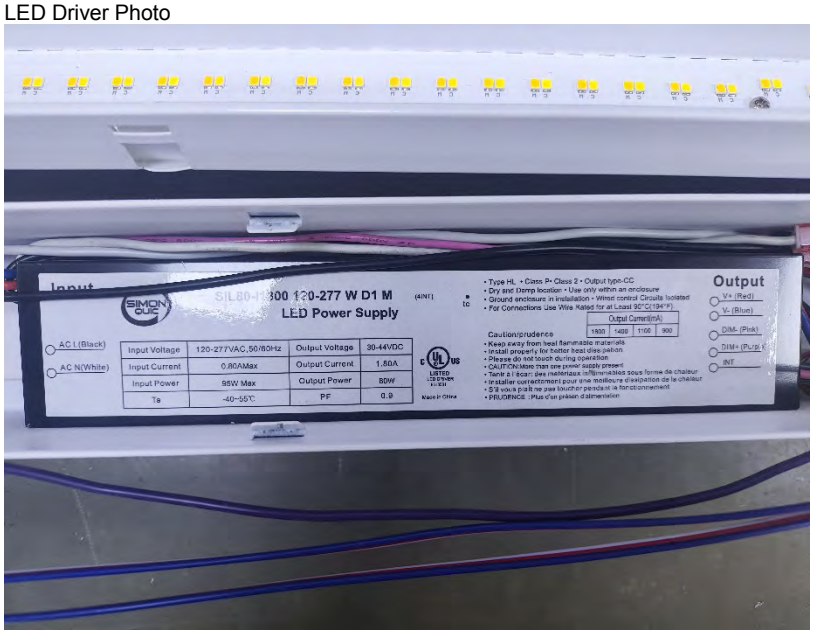
Test Model	Total Power(W)	Control Setting		Test Item			
		CCT(K)	Power(W)	Goniophotometer Test	Integrating Sphere Test	THDi and PF Test	In-Situ Temperature Measurement Test
LA28P805CUW-2700K	80	2700	100% down light	Yes	Yes	Yes	Yes
			50% up light+50% down light	Yes	Yes	Yes	NA
			30% up light+70% down light	Yes	Yes	Yes	NA
	64		50% up light+50% down light	NA	Yes	Yes	NA
	48		50% up light+50% down light	NA	Yes	Yes	NA
	40		50% up light+50% down light	NA	Yes	Yes	NA
LA28P805CUW-2700K	80	3500	100% down light	NA	Yes	Yes	NA
			50% up light+50% down light	NA	Yes	Yes	NA
			30% up light+70% down light	NA	Yes	Yes	NA
LA28P805CUW-2700K	80	5000	100% down light	NA	Yes	Yes	NA
			50% up light+50% down light	NA	Yes	Yes	NA
			30% up light+70% down light	NA	Yes	Yes	NA

4. Product Photo





LED Driver Photo



5. Test Result

Test Model: LA28P805CUW-2700K & 80W 100% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10832.1	≥3000	≥2700	Pass
Power(W)	80.43	None.	None.	N/A
Total Efficacy(lm/W)	134.67	≥125	≥121.25	Pass
CCT(K)	2588	2580~2870	No tolerances	Pass
Duv	-0.00128	-0.006~0.006	No tolerances	Pass
IES R_f	84	70	69	Pass
IES R_g	99	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R_a	84	≥80	≥79	
R9	20	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10835.22	≥3000	≥2700	Pass
Power(W)	80.43	None.	None.	N/A
Total Efficacy(lm/W)	134.72	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	79.77%	0-60°≥40%	0-60°≥37%	Pass

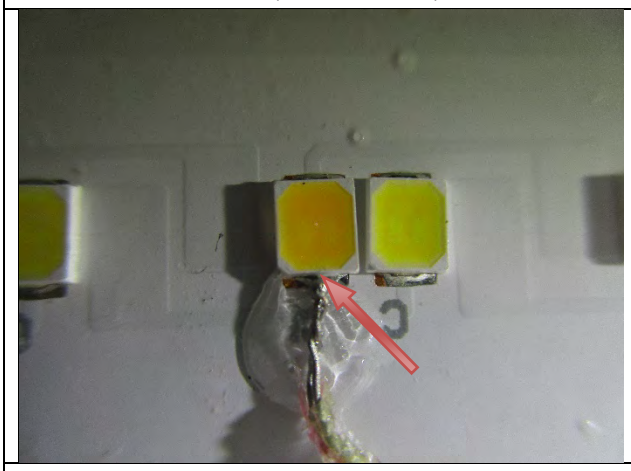
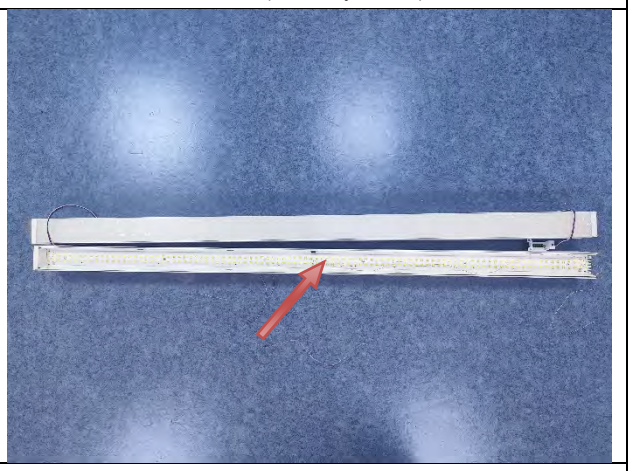
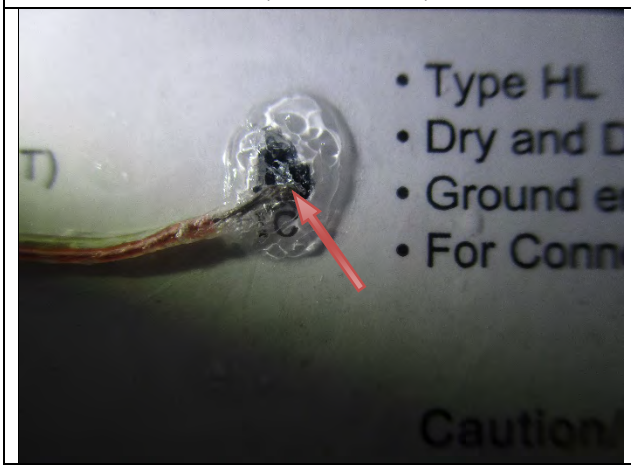
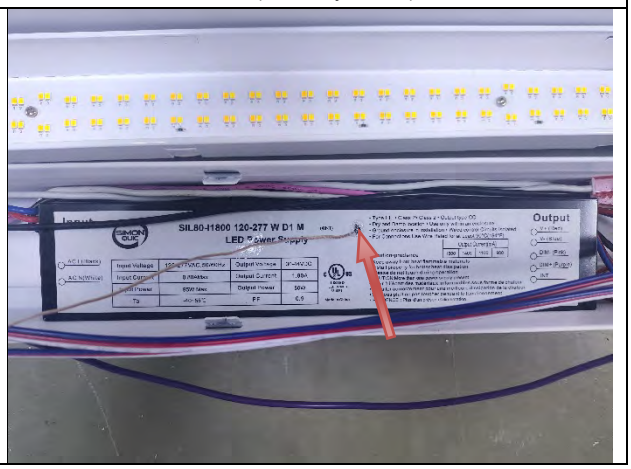
Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9954	≥0.9	⩾0.87	Pass
120	THDi	3.96%	≤20%	⩽25%	Pass
277	Power Factor	0.9545	≥0.9	⩾0.87	Pass
277	THDi	6.63%	≤20%	⩽25%	Pass

In-Situ Temperature Measurement Test: Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
TMP_{LED}(°C)	56.6	≤105	With tolerance of ⩽ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
TMP_c(°C)	59.8	≤90	With tolerance of ⩽ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
Drive Current/Individual LED source(mA)	57.8	≤100	With +5% tolerance	Pass
L_{70} Lumen Maintenance Life (Hours)	>78000	⩾50000	None.	Pass
Color Maintenance	0.0014	≤0.004	≤0.0044	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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.

TMP_{LED}(Zoomed-in View)	TMP_{LED}(Bird's-eye View)
	
TMP_c(Zoomed-in View)	TMP_c(Bird's-eye View)
	

Test Data

[Integrating Sphere System]

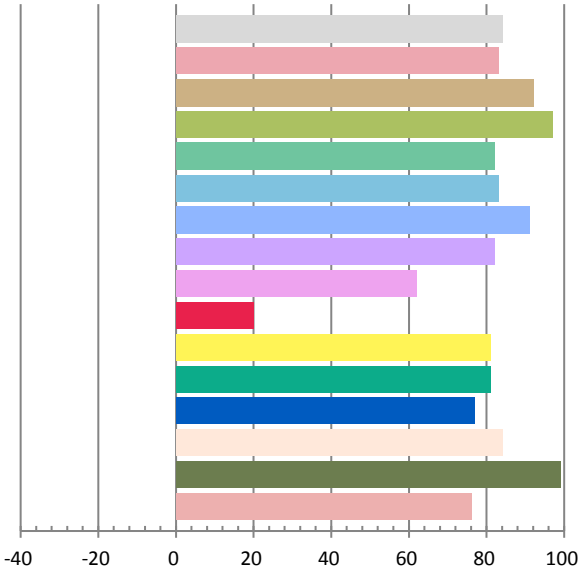
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6733	80.43	0.9954	10832.1	134.67

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
31.150	2588	-0.00128	0.4669	0.4085	0.2680	0.5276

Color Rendering Index

Ra			
84.0			
R1	R2	R3	R4
83	92	97	82
R5	R6	R7	R8
83	91	82	62
R9	R10	R11	R12
20	81	81	77
R13	R14	R15	
84	99	76	



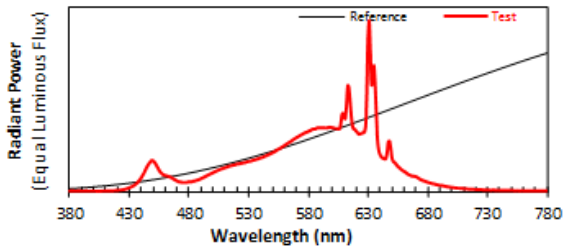
ANSI/IES TM-30-18 Color Rendition Report

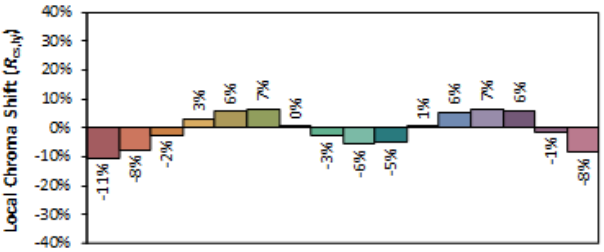
Source: User SPD

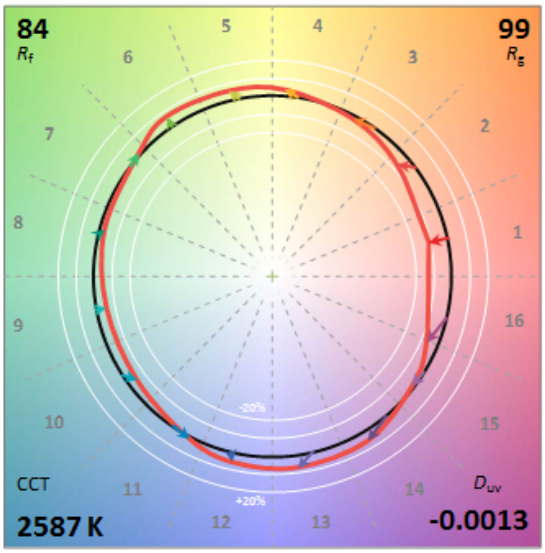
Manufacturer: P.Q.L., Inc.

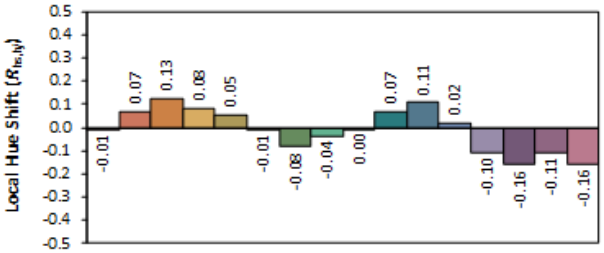
Date: 2026/3/24

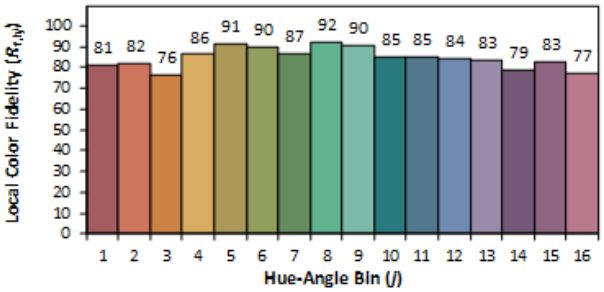
Model: LA28P805CUW-2700K

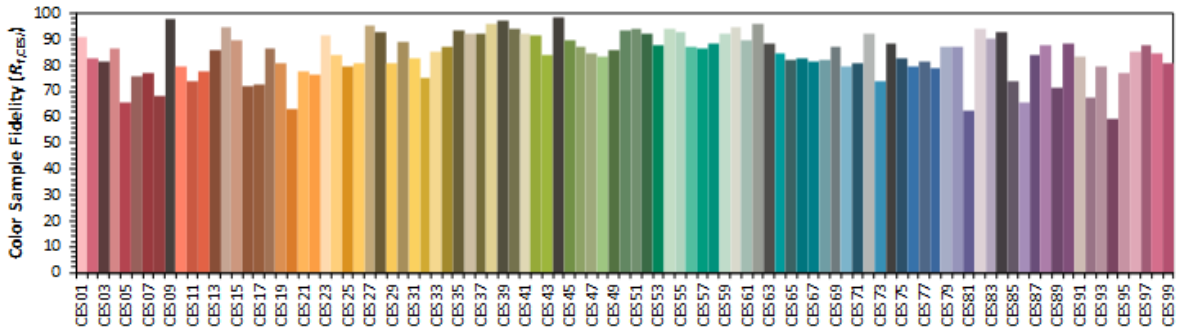












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

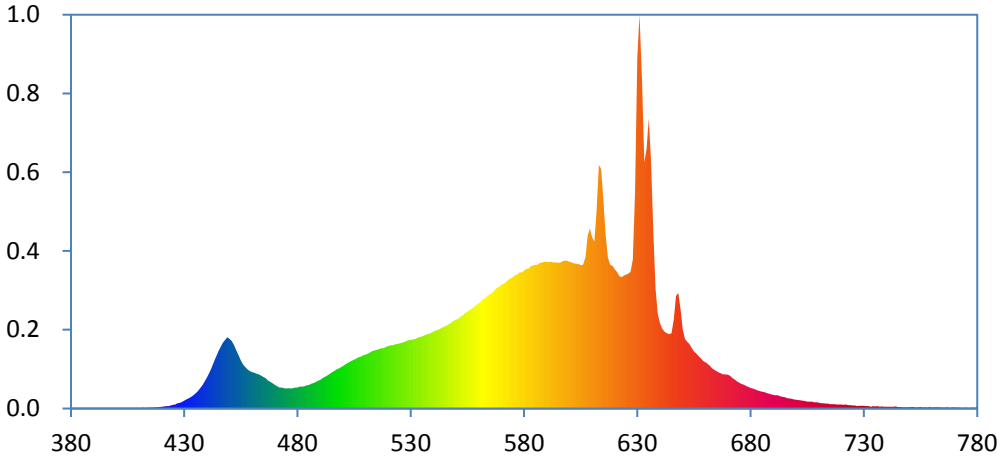
x	0.4670
y	0.4085
u'	0.2681
v'	0.5276

CIE 13.3-1995 (CRI)

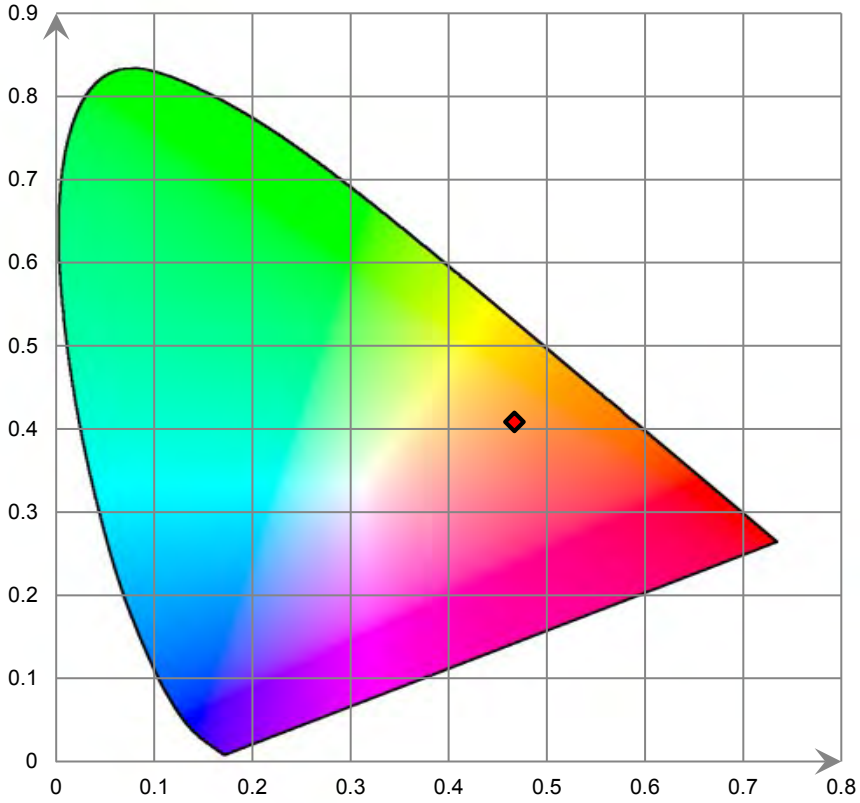
R_a	84
R_9	20

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

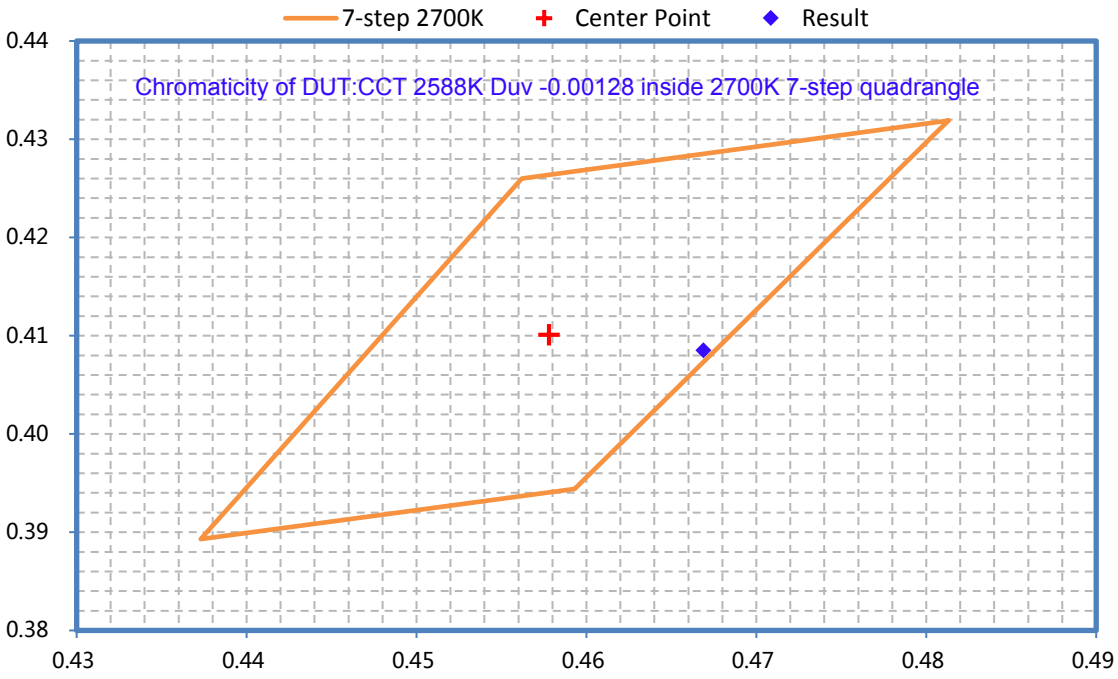
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

Electrical Measurement

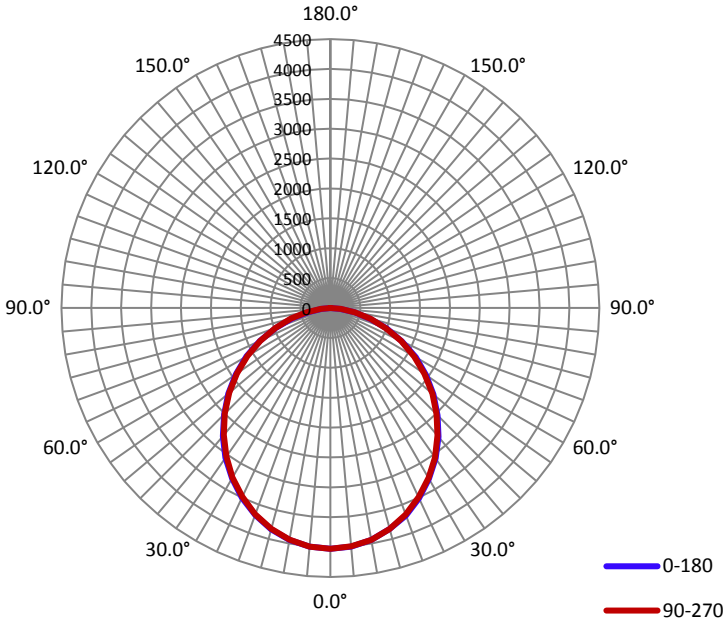
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.673	80.43	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
10835.22	134.72	4031.8	1.22	1.21

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	107.6	106.7	106.8	106.9	107.0
Field Angle (10% I_{max}):	159.4	159.5	160.4	159.8	159.8

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9
5.0°	4006.7	4010.6	4004.9	4003.5	4001.9	4003.5	4010.2	4003.1
10.0°	3940.8	3942.0	3936.6	3938.6	3940.4	3933.3	3947.5	3949.3
15.0°	3829.8	3843.0	3826.8	3831.9	3830.0	3834.1	3832.1	3848.2
20.0°	3692.8	3712.8	3673.2	3679.2	3679.6	3684.1	3685.5	3704.3
25.0°	3511.7	3519.7	3509.0	3496.3	3489.8	3500.7	3494.9	3525.4
30.0°	3298.2	3310.3	3282.4	3279.8	3281.4	3289.7	3289.3	3318.8
35.0°	3068.0	3073.8	3041.3	3043.7	3054.6	3050.2	3059.7	3082.9
40.0°	2813.9	2818.5	2783.7	2785.8	2787.0	2791.6	2795.9	2820.3
45.0°	2537.5	2545.6	2499.9	2504.0	2515.7	2516.1	2526.2	2548.4
50.0°	2248.1	2259.6	2216.1	2218.3	2225.2	2217.5	2235.9	2263.6
55.0°	1954.7	1970.1	1914.1	1913.1	1921.0	1927.0	1929.7	1959.0
60.0°	1649.5	1656.8	1606.0	1602.0	1617.8	1613.7	1631.5	1652.5
65.0°	1324.7	1329.5	1292.5	1294.1	1303.6	1306.7	1312.3	1327.5
70.0°	1001.6	1001.8	977.0	989.7	992.1	990.5	997.2	1001.6
75.0°	688.7	695.4	673.7	682.0	695.4	691.1	688.9	690.9
80.0°	402.3	407.5	398.4	404.9	418.8	406.5	406.9	402.1
85.0°	162.9	166.4	168.0	172.6	176.9	171.8	171.8	166.0
90.0°	3.4	6.3	9.7	10.3	9.7	9.7	8.7	5.7
95.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9	4027.9
5.0°	4005.1	4010.0	4009.5	4006.7	4006.9	3997.0	3998.0	4001.3
10.0°	3938.2	3947.1	3944.3	3938.8	3935.6	3932.3	3929.5	3936.6
15.0°	3830.6	3840.8	3831.5	3833.9	3823.8	3817.3	3816.9	3830.6
20.0°	3683.3	3701.3	3687.7	3678.0	3674.2	3666.3	3666.3	3692.8
25.0°	3503.4	3523.2	3498.9	3491.6	3485.0	3481.3	3485.0	3499.5
30.0°	3291.7	3307.1	3285.1	3281.8	3273.5	3265.2	3266.3	3286.7
35.0°	3058.7	3075.0	3040.7	3037.8	3033.0	3028.1	3022.5	3047.3
40.0°	2799.1	2812.8	2782.5	2778.5	2774.4	2762.3	2763.7	2790.4
45.0°	2516.7	2532.3	2507.2	2502.4	2497.5	2486.0	2492.7	2518.5
50.0°	2228.4	2248.3	2216.1	2202.6	2206.2	2194.3	2202.0	2226.4
55.0°	1930.7	1951.1	1907.2	1900.6	1908.7	1899.4	1910.1	1928.1
60.0°	1617.6	1630.3	1598.4	1594.3	1602.8	1587.6	1597.1	1615.7
65.0°	1298.2	1309.9	1281.8	1276.5	1294.3	1275.1	1282.4	1298.0
70.0°	972.9	984.4	965.0	967.1	980.4	959.2	966.7	979.0
75.0°	657.4	669.1	659.2	663.6	682.0	658.2	659.6	663.8
80.0°	373.0	380.0	379.0	387.5	407.1	382.5	386.5	382.3
85.0°	143.1	149.2	147.6	153.4	163.7	158.1	152.8	150.6
90.0°	1.4	4.2	4.6	4.8	3.6	4.6	4.6	4.4
95.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Test Model: LA28P805CUW-2700K & 80W 50% Up Light + 50% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10851.9	≥3000	≥2700	Pass
Power(W)	82.67	None.	None.	N/A
Total Efficacy(lm/W)	131.27	≥125	≥121.25	Pass
CCT(K)	2600	2580~2870	No tolerances	Pass
Duv	-0.00086	-0.006~0.006	No tolerances	Pass
IES R_f	84	70	69	Pass
IES R_g	99	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R_a	83.5	≥80	≥79	
R_9	17	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10859.05	≥3000	≥2700	Pass
Power(W)	82.67	None.	None.	N/A
Total Efficacy(lm/W)	131.35	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	40.40%	0-60°≥40%	0-60°≥37%	Pass

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9955	≥0.9	⩾0.87	Pass
120	THDi	4.02%	≤20%	⩽25%	Pass
277	Power Factor	0.9561	≥0.9	⩾0.87	Pass
277	THDi	6.25%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

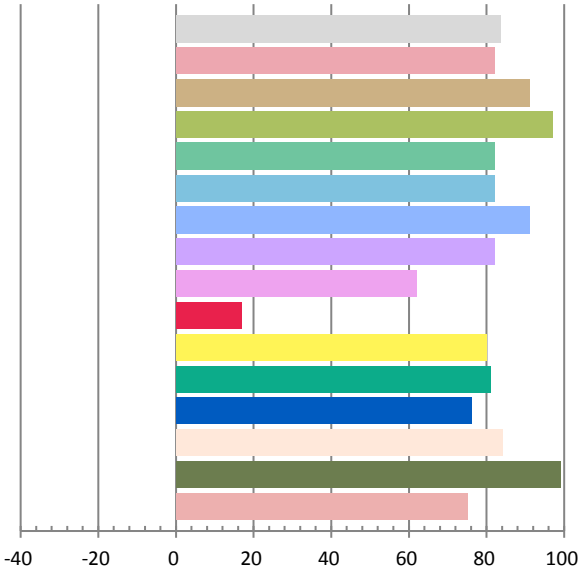
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.692	82.67	0.9955	10851.9	131.27

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
31.018	2600	-0.00086	0.4667	0.4096	0.2674	0.5280

Color Rendering Index

Ra			
83.5			
R1	R2	R3	R4
82	91	97	82
R5	R6	R7	R8
82	91	82	62
R9	R10	R11	R12
17	80	81	76
R13	R14	R15	
84	99	75	



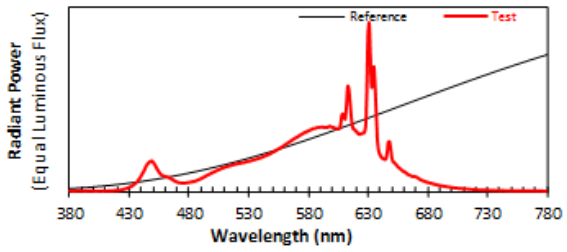
ANSI/IES TM-30-18 Color Rendition Report

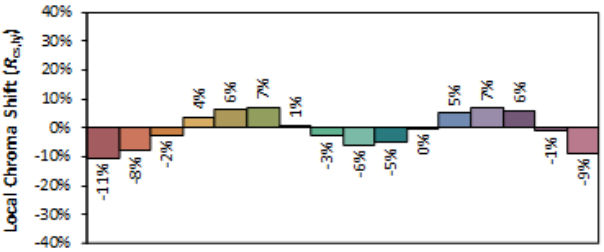
Source: User SPD

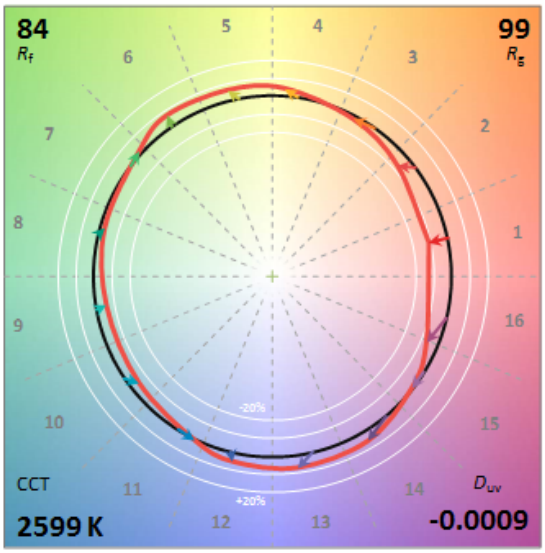
Manufacturer: P.Q.L., Inc.

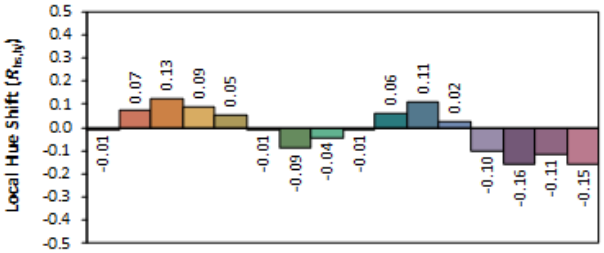
Date: 2026/3/24

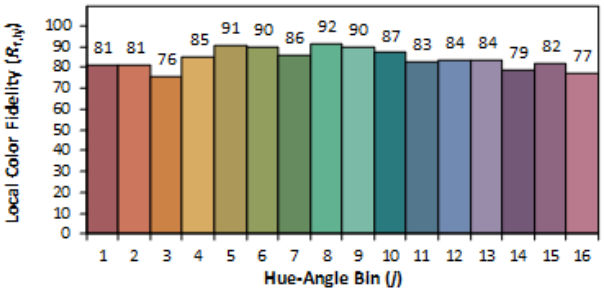
Model: LA28P805CUW-2700K

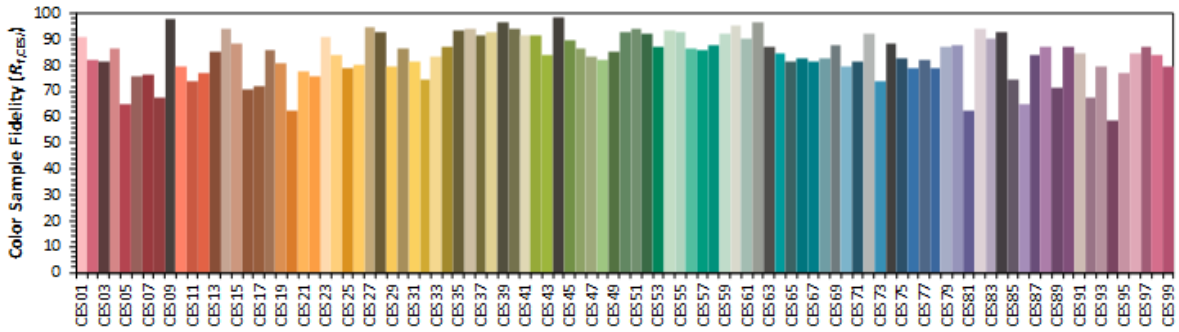












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

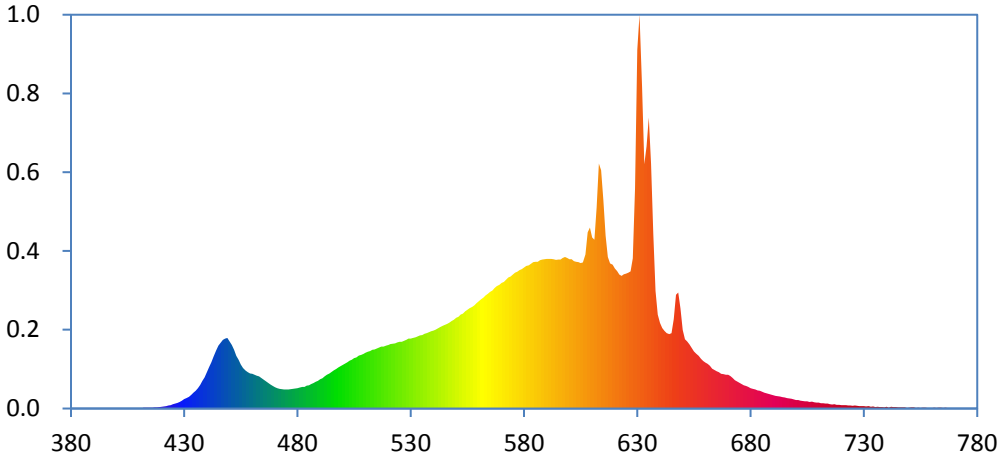
x	0.4668
y	0.4096
u'	0.2674
v'	0.5280

CIE 13.3-1995 (CRI)

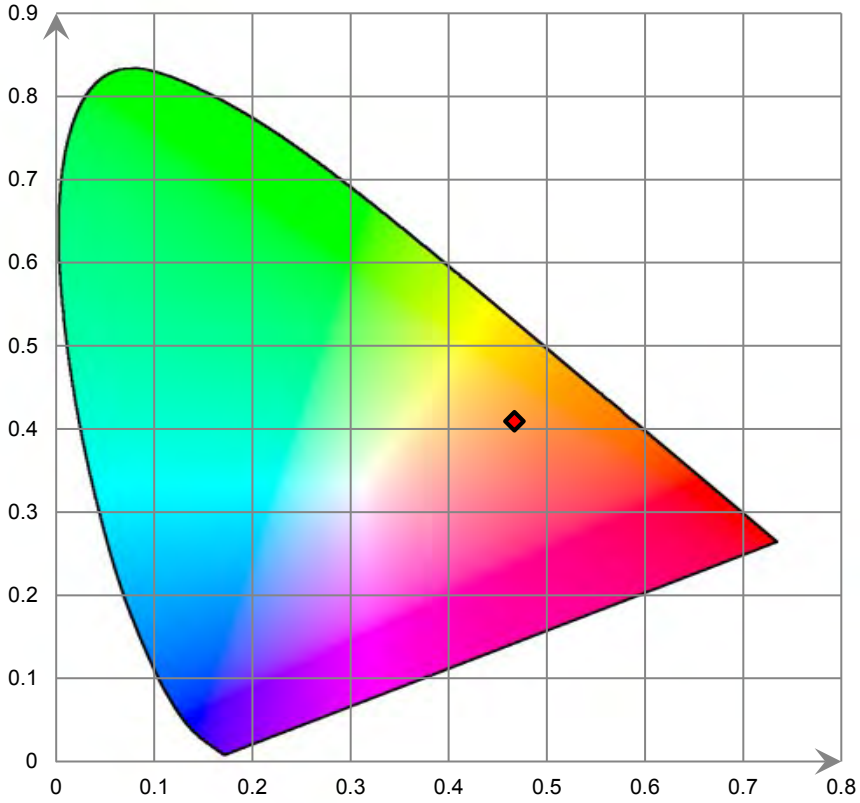
R_a	84
R_9	18

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

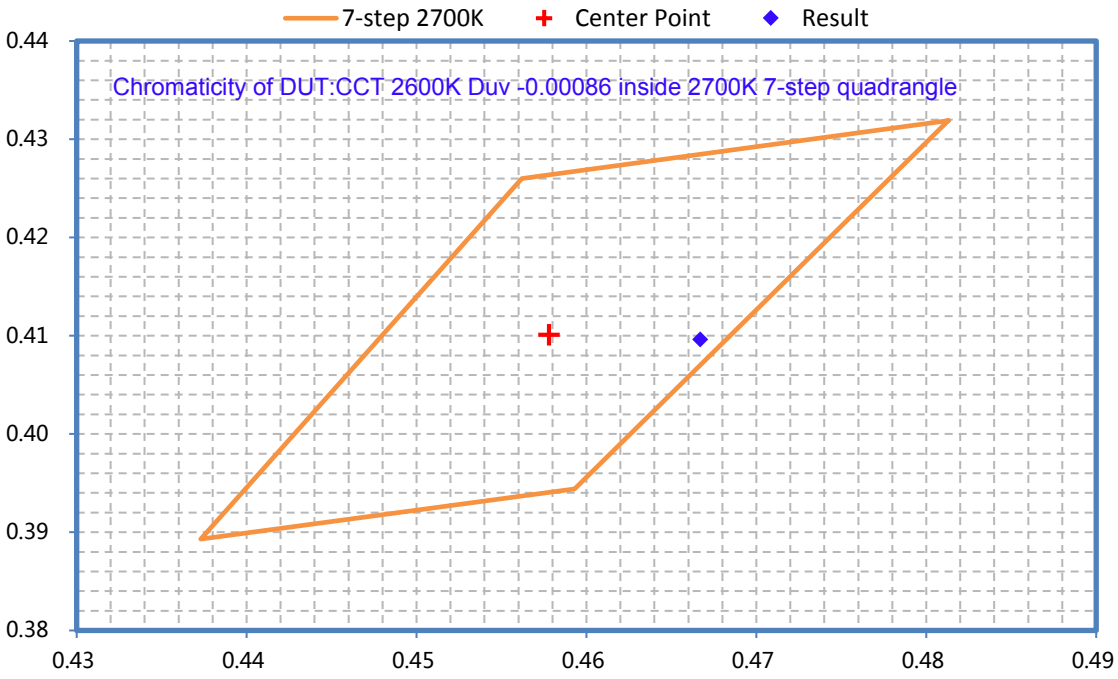
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

Electrical Measurement

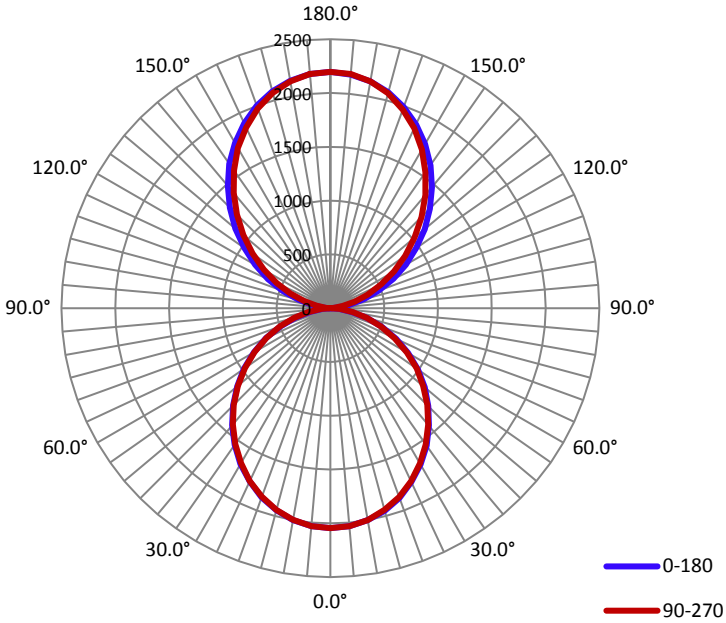
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.692	82.67	0.996

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
10859.05	131.35	2197.5	1.22	1.22

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	203.7	182.5	183.6	182.8	188.2
Field Angle (10% I_{max}):	203.7	182.5	183.6	182.8	188.2

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2
5.0°	2034.5	2032.5	2032.7	2033.5	2034.5	2034.1	2033.7	2034.3
10.0°	2000.4	2001.8	1997.6	1999.8	1998.6	2000.8	1999.0	2003.8
15.0°	1948.7	1947.1	1941.0	1942.8	1941.8	1945.5	1942.0	1952.5
20.0°	1876.6	1885.1	1864.3	1867.1	1867.1	1870.5	1867.3	1879.2
25.0°	1782.3	1784.7	1782.5	1773.2	1774.6	1776.8	1774.6	1788.6
30.0°	1678.1	1682.1	1667.0	1666.6	1665.4	1670.6	1670.2	1685.4
35.0°	1558.5	1559.2	1544.6	1545.2	1546.4	1549.9	1550.1	1564.0
40.0°	1425.3	1427.9	1410.9	1414.6	1414.0	1418.6	1419.6	1433.3
45.0°	1286.9	1291.6	1270.4	1270.6	1272.8	1277.3	1276.4	1291.8
50.0°	1144.4	1147.2	1123.8	1125.4	1127.0	1128.8	1134.9	1148.6
55.0°	993.9	998.2	970.9	972.1	978.2	977.2	981.6	994.1
60.0°	835.4	838.6	814.6	813.4	819.3	820.1	823.3	836.0
65.0°	674.9	676.9	654.9	655.3	659.3	661.9	662.8	673.9
70.0°	509.1	512.3	496.4	499.0	500.2	502.8	501.8	508.5
75.0°	349.4	350.4	342.7	345.1	350.8	350.2	347.7	349.6
80.0°	203.3	206.0	203.8	207.4	212.2	206.6	205.2	204.2
85.0°	81.4	83.2	84.2	85.0	89.5	86.0	83.8	82.6
90.0°	0.0	3.2	5.0	5.3	4.4	4.2	4.0	2.4
95.0°	55.9	51.1	44.0	33.3	30.9	31.9	39.2	47.7
100.0°	174.1	161.5	131.3	117.9	115.9	117.5	127.2	158.5
105.0°	321.1	303.3	261.9	233.2	229.6	230.0	256.9	301.7
110.0°	479.0	459.2	412.8	371.8	366.5	370.4	408.5	459.6
115.0°	646.2	623.4	576.3	528.7	519.6	530.1	573.9	626.0
120.0°	808.6	791.6	737.1	688.2	682.3	690.0	738.5	797.9
125.0°	974.1	961.2	906.3	855.6	849.3	861.5	911.5	970.9
130.0°	1143.4	1127.8	1073.3	1026.4	1021.2	1032.5	1086.2	1142.2
135.0°	1306.9	1296.2	1243.7	1200.7	1196.9	1206.6	1260.1	1311.6
140.0°	1468.3	1461.6	1412.5	1373.6	1374.0	1381.9	1427.1	1479.4
145.0°	1620.5	1616.7	1572.7	1548.4	1541.6	1556.3	1593.1	1633.9
150.0°	1759.9	1755.8	1726.6	1706.6	1702.3	1715.0	1742.5	1777.4
155.0°	1882.7	1882.7	1860.0	1844.9	1846.3	1853.4	1874.8	1903.1
160.0°	1990.3	1991.9	1977.2	1966.9	1966.5	1974.5	1990.5	2008.5
165.0°	2076.5	2078.1	2070.1	2063.4	2068.2	2070.5	2081.8	2091.3
170.0°	2141.5	2144.8	2140.7	2136.7	2139.7	2141.7	2148.0	2153.5
175.0°	2179.5	2182.1	2182.7	2182.7	2184.1	2184.6	2185.6	2187.2
180.0°	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2	2044.2
5.0°	2034.1	2032.9	2031.9	2033.7	2032.7	2032.7	2030.5	2030.3
10.0°	2001.0	2001.4	2000.8	1999.0	1998.2	1997.6	1994.7	1997.4
15.0°	1944.0	1948.5	1947.1	1943.8	1941.0	1939.8	1938.2	1943.8
20.0°	1871.3	1874.8	1871.6	1867.3	1864.3	1863.5	1861.7	1875.0
25.0°	1776.6	1784.7	1775.4	1770.8	1773.0	1768.0	1769.6	1775.6
30.0°	1674.1	1679.5	1667.2	1667.0	1663.2	1660.9	1658.9	1672.4
35.0°	1552.5	1559.2	1543.6	1543.0	1543.0	1539.4	1534.1	1548.0
40.0°	1421.6	1425.9	1412.5	1411.9	1410.7	1406.9	1402.7	1415.8
45.0°	1278.1	1285.1	1272.2	1270.4	1269.8	1263.9	1266.3	1279.3
50.0°	1131.9	1140.7	1124.4	1118.7	1123.4	1117.1	1119.9	1134.1
55.0°	980.8	988.3	968.5	966.5	971.3	966.9	968.7	979.0
60.0°	822.1	829.8	811.2	810.0	815.2	811.2	810.4	820.7
65.0°	658.9	666.6	651.7	648.8	657.9	652.5	651.4	659.1
70.0°	493.1	499.4	490.1	491.9	499.0	488.5	491.3	497.8
75.0°	333.8	338.0	334.6	338.0	348.3	336.0	338.0	340.5
80.0°	188.8	194.3	193.3	197.7	208.8	197.7	196.9	194.5
85.0°	71.9	75.1	74.1	79.2	84.6	80.8	78.2	76.1
90.0°	0.0	0.0	2.0	2.2	2.6	2.2	1.6	2.2
95.0°	43.8	46.6	45.6	40.6	39.2	40.4	46.8	49.5
100.0°	159.3	160.1	137.7	126.2	130.0	126.6	136.5	157.9
105.0°	309.0	303.7	274.2	248.8	251.2	245.6	266.6	296.2
110.0°	471.1	461.8	429.3	395.0	394.6	389.9	418.6	451.3
115.0°	638.9	633.1	595.1	552.7	551.5	545.6	581.2	615.1
120.0°	808.1	803.5	762.1	720.9	716.3	709.4	744.9	780.5
125.0°	978.4	975.4	932.3	889.3	884.1	873.8	910.7	946.7
130.0°	1152.9	1145.8	1102.2	1064.6	1058.1	1046.0	1079.2	1114.7
135.0°	1321.7	1315.6	1271.0	1236.9	1230.0	1216.9	1247.8	1280.3
140.0°	1482.6	1484.6	1441.6	1410.3	1399.8	1385.9	1416.8	1446.7
145.0°	1637.1	1639.5	1599.7	1572.9	1563.4	1551.1	1574.9	1600.1
150.0°	1772.8	1780.7	1745.5	1725.8	1719.7	1708.6	1722.1	1742.3
155.0°	1896.6	1903.1	1882.3	1861.7	1854.6	1843.5	1858.2	1872.2
160.0°	2002.6	2009.3	1994.3	1980.0	1975.5	1968.3	1974.3	1981.8
165.0°	2086.6	2090.7	2082.6	2074.9	2070.3	2064.8	2067.6	2071.9
170.0°	2148.2	2150.4	2148.2	2143.6	2141.1	2136.7	2139.3	2138.3
175.0°	2184.8	2186.4	2187.0	2185.6	2183.7	2181.3	2182.7	2178.3
180.0°	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1	2196.1

Test Model: LA28P805CUW-2700K & 80W 30% Up Light + 70% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10893.5	≥3000	≥2700	Pass
Power(W)	81.88	None.	None.	N/A
Total Efficacy(lm/W)	133.04	≥125	≥121.25	Pass
CCT(K)	2588	2580~2870	No tolerances	Pass
Duv	-0.00093	-0.006~0.006	No tolerances	Pass
IES R_f	84	70	69	Pass
IES R_g	99	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R_a	83.6	≥80	≥79	
R_9	18	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	10896.93	≥3000	≥2700	Pass
Power(W)	81.88	None.	None.	N/A
Total Efficacy(lm/W)	133.08	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	56.83%	0-60°≥40%	0-60°≥37%	Pass

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9954	≥0.9	⩾0.87	Pass
120	THDi	4.09%	≤20%	⩽25%	Pass
277	Power Factor	0.9555	≥0.9	⩾0.87	Pass
277	THDi	6.28%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

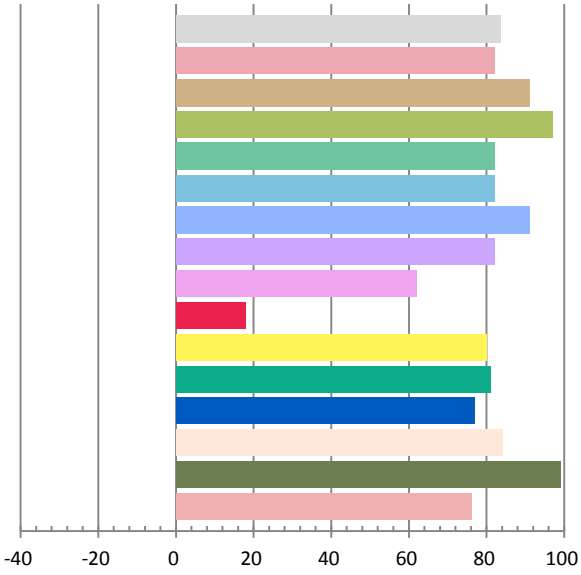
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6855	81.88	0.9954	10893.5	133.04

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
31.197	2588	-0.00093	0.4676	0.4096	0.2680	0.5281

Color Rendering Index

Ra			
83.6			
R1	R2	R3	R4
82	91	97	82
R5	R6	R7	R8
82	91	82	62
R9	R10	R11	R12
18	80	81	77
R13	R14	R15	
84	99	76	



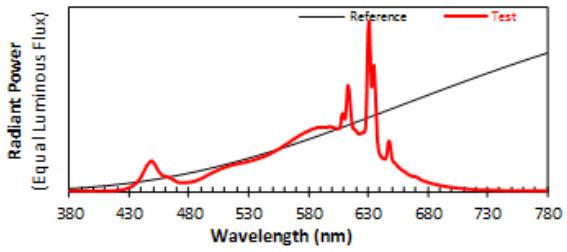
ANSI/IES TM-30-18 Color Rendition Report

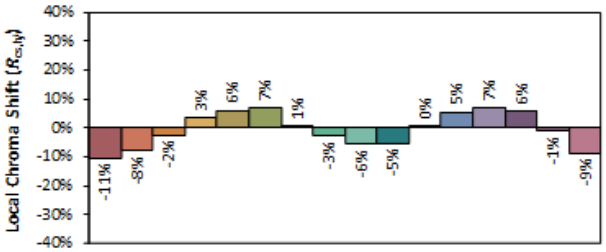
Source: User SPD

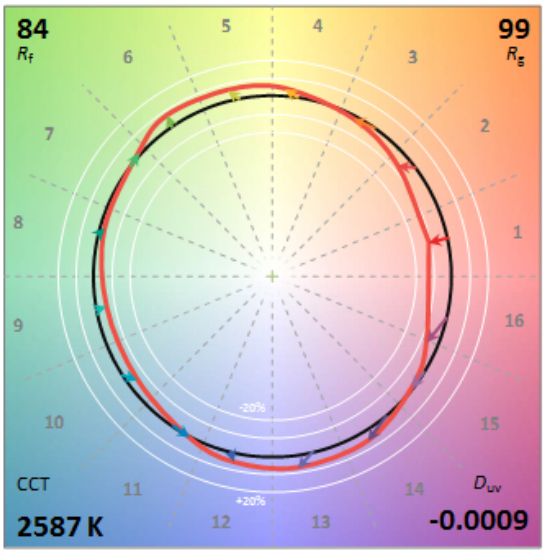
Manufacturer: P.Q.L., Inc.

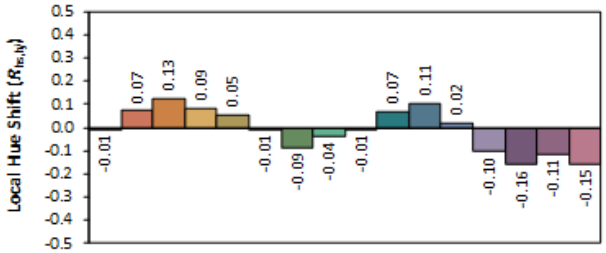
Date: 2026/3/24

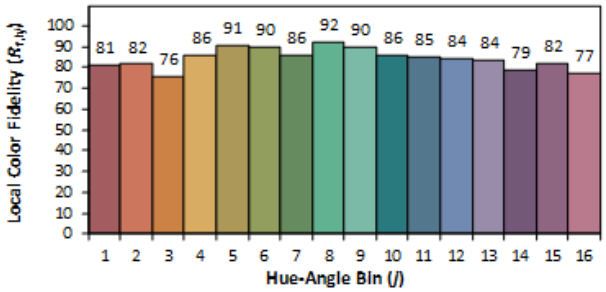
Model: LA28P805CUW-2700K

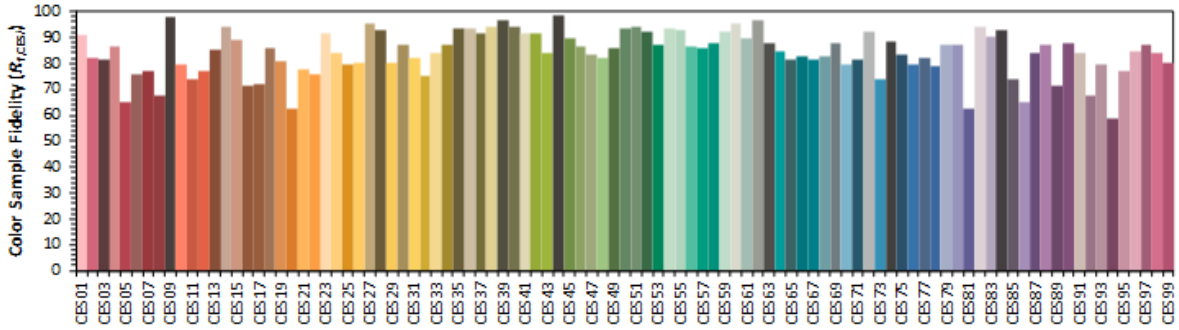












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

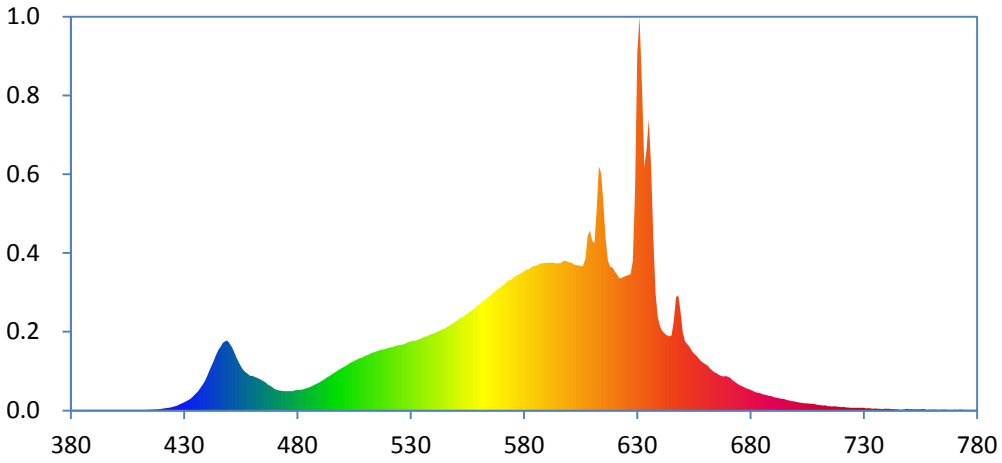
x	**0.4677**
y	**0.4096**
u'	**0.2680**
v'	**0.5281**

CIE 13.3-1995 (CRI)

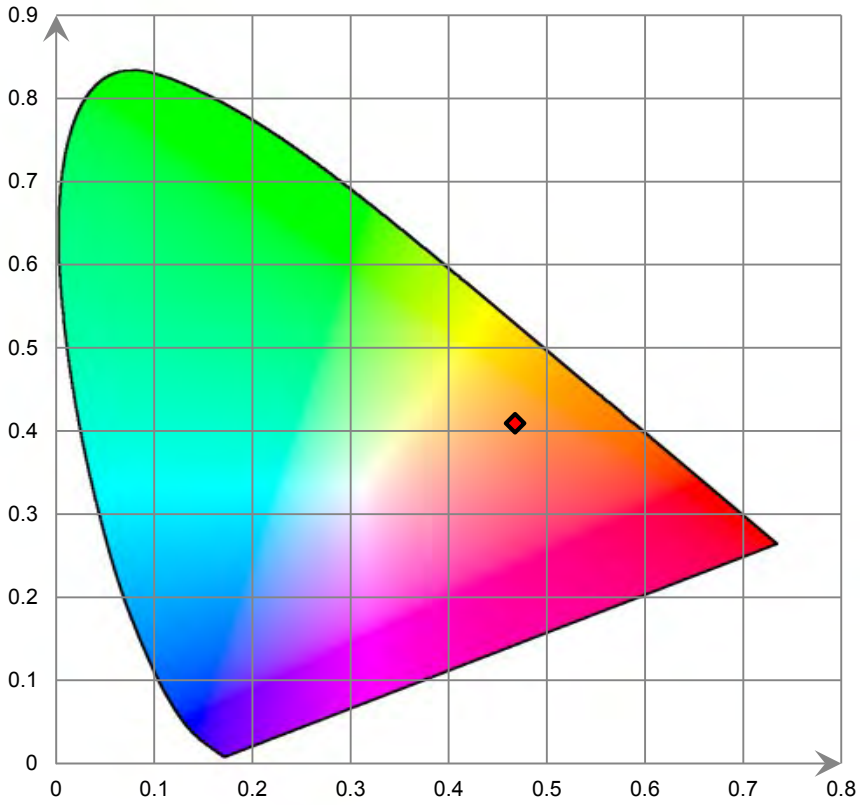
R_a	84
R_9	18

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

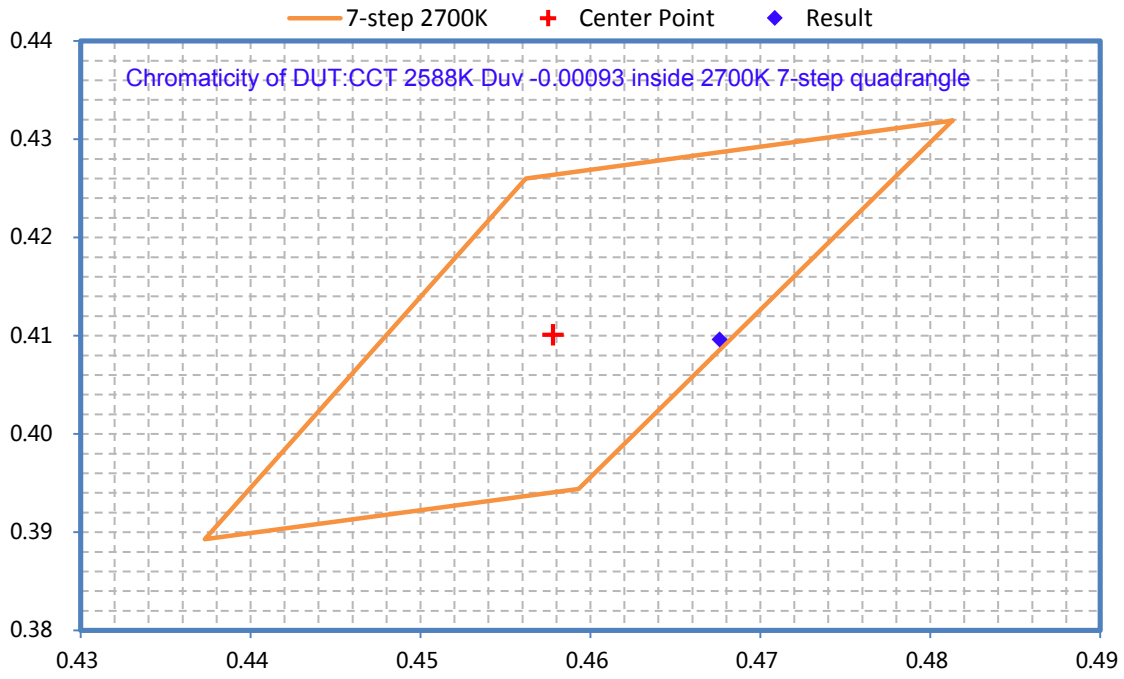
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

Electrical Measurement

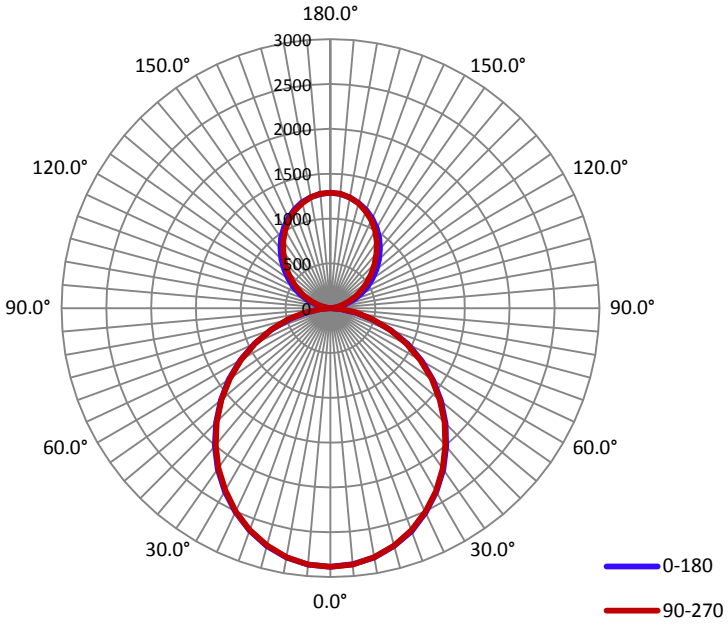
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.686	81.88	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	Imax (cd)	S/MH (C0/180)	S/MH (C90/270)
10896.93	133.08	2886.4	1.22	1.21

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	107.6	106.7	106.9	107.0	107.1
Field Angle (10% I_{max}):	221.2	192.1	227.4	225.0	216.4

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7
5.0°	2868.4	2868.6	2868.6	2869.2	2869.6	2870.0	2871.2	2875.6
10.0°	2822.9	2823.3	2820.1	2821.5	2821.1	2821.7	2822.9	2830.8
15.0°	2745.9	2747.6	2742.1	2745.1	2742.9	2744.7	2744.3	2756.6
20.0°	2647.5	2659.1	2633.8	2636.8	2638.0	2640.3	2637.8	2654.6
25.0°	2512.4	2522.9	2517.6	2504.9	2504.1	2511.4	2508.3	2527.3
30.0°	2364.5	2371.6	2354.4	2353.6	2356.6	2360.2	2355.2	2377.2
35.0°	2196.0	2202.2	2180.0	2181.2	2183.9	2191.7	2188.5	2208.3
40.0°	2011.3	2018.0	1991.7	1999.2	1994.7	2002.6	2006.1	2024.7
45.0°	1816.5	1823.2	1792.5	1793.5	1800.8	1807.1	1808.1	1826.2
50.0°	1612.9	1620.2	1588.2	1589.1	1593.3	1596.3	1601.2	1620.4
55.0°	1400.1	1411.3	1373.9	1376.7	1379.3	1380.3	1388.2	1407.2
60.0°	1179.7	1183.8	1152.8	1151.2	1159.5	1157.5	1165.0	1181.1
65.0°	951.0	955.7	929.6	931.8	934.0	935.2	939.5	952.2
70.0°	717.2	720.3	702.7	706.3	709.4	712.2	711.8	719.1
75.0°	492.4	496.2	484.7	489.5	496.2	497.2	491.2	496.4
80.0°	285.7	292.2	288.9	294.0	299.8	293.2	293.4	290.7
85.0°	116.8	118.6	123.2	125.7	129.1	124.1	123.4	118.0
90.0°	1.4	4.6	6.5	8.3	7.1	7.5	6.9	5.3
95.0°	31.7	29.7	25.7	20.2	18.6	18.0	22.2	27.5
100.0°	100.8	93.7	77.0	69.3	67.9	67.5	74.6	91.3
105.0°	186.1	177.0	153.5	136.2	134.4	135.8	150.7	175.8
110.0°	279.0	267.3	242.4	217.8	215.2	217.4	239.4	267.9
115.0°	376.2	363.5	334.6	308.3	304.9	308.3	332.4	367.3
120.0°	472.8	463.1	430.5	401.3	398.0	403.5	430.5	466.7
125.0°	571.4	561.5	527.9	498.2	494.8	501.7	531.6	567.1
130.0°	668.6	659.9	626.3	598.0	596.4	600.5	631.4	666.5
135.0°	766.1	758.3	726.7	700.7	698.1	703.1	733.8	769.8
140.0°	859.5	854.6	825.7	803.9	799.5	808.2	834.2	864.3
145.0°	950.2	945.5	920.3	902.5	900.9	907.4	929.0	957.9
150.0°	1031.0	1028.6	1009.0	995.5	997.7	1001.1	1017.7	1039.9
155.0°	1102.7	1101.1	1088.0	1078.3	1081.1	1085.4	1097.1	1113.2
160.0°	1165.2	1167.2	1155.5	1151.0	1151.6	1156.1	1163.8	1174.9
165.0°	1216.1	1218.3	1211.2	1209.2	1212.2	1213.1	1217.7	1224.8
170.0°	1254.1	1255.9	1252.9	1250.2	1254.7	1254.5	1256.1	1258.7
175.0°	1277.3	1278.3	1278.7	1278.5	1280.7	1277.7	1279.3	1280.9
180.0°	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7	2885.7
5.0°	2869.0	2868.4	2870.2	2869.0	2869.4	2867.6	2865.1	2869.8
10.0°	2822.7	2823.5	2823.5	2819.9	2819.3	2817.1	2815.2	2819.5
15.0°	2745.3	2750.2	2746.9	2741.9	2738.9	2735.4	2733.6	2744.9
20.0°	2638.0	2647.9	2640.7	2636.2	2633.0	2629.2	2627.1	2646.7
25.0°	2507.1	2520.1	2507.5	2500.9	2499.6	2496.4	2494.2	2506.9
30.0°	2356.4	2368.5	2351.4	2350.9	2345.5	2342.1	2337.2	2357.2
35.0°	2188.5	2197.6	2177.0	2176.8	2175.6	2170.5	2164.5	2182.8
40.0°	2003.6	2010.9	1992.3	1990.1	1989.9	1983.0	1980.4	2001.2
45.0°	1801.8	1811.7	1794.1	1789.9	1792.5	1780.2	1785.2	1800.8
50.0°	1596.3	1609.1	1586.4	1582.2	1583.0	1575.5	1576.3	1596.5
55.0°	1381.2	1394.9	1370.4	1362.8	1368.4	1362.8	1362.6	1381.8
60.0°	1160.3	1171.0	1144.8	1141.1	1149.8	1143.3	1143.3	1158.5
65.0°	929.6	940.1	916.5	914.8	927.4	919.1	918.7	930.4
70.0°	695.0	702.9	690.4	692.8	702.7	688.8	693.2	698.3
75.0°	470.3	477.2	471.8	475.8	490.4	472.6	473.6	475.4
80.0°	265.9	274.4	271.1	278.2	292.8	279.6	278.2	274.0
85.0°	101.2	105.1	108.7	110.9	119.4	114.4	111.3	107.7
90.0°	0.0	2.4	3.4	3.6	3.4	4.0	4.4	4.0
95.0°	24.4	27.5	27.3	23.4	23.0	23.8	26.9	29.3
100.0°	93.3	92.9	79.2	73.7	76.2	75.0	78.8	90.7
105.0°	179.6	178.6	160.2	144.1	146.1	143.2	154.4	172.7
110.0°	273.8	270.9	251.5	228.9	229.3	226.3	244.1	265.1
115.0°	374.2	368.1	344.9	322.5	323.3	317.0	337.0	358.2
120.0°	473.2	468.5	443.3	418.2	418.0	412.4	433.0	455.2
125.0°	573.2	570.2	543.9	517.2	516.2	511.2	529.1	552.0
130.0°	673.2	671.4	644.1	619.5	616.4	609.8	630.6	652.4
135.0°	771.8	770.8	740.9	720.5	717.6	708.8	728.2	748.6
140.0°	869.6	868.8	840.1	822.3	818.7	810.2	824.5	843.9
145.0°	958.1	959.1	934.0	917.7	915.2	906.8	918.3	935.7
150.0°	1038.5	1043.5	1021.9	1006.2	1004.7	995.7	1006.0	1021.7
155.0°	1111.2	1114.7	1100.1	1086.8	1086.4	1079.9	1086.2	1094.5
160.0°	1172.4	1176.5	1166.6	1155.9	1156.7	1150.2	1153.5	1161.5
165.0°	1222.3	1225.0	1218.1	1214.3	1212.8	1207.8	1209.0	1212.4
170.0°	1257.3	1259.1	1259.3	1256.1	1255.9	1250.4	1250.4	1252.4
175.0°	1279.9	1280.9	1281.3	1278.5	1281.5	1277.9	1277.3	1275.7
180.0°	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2	1286.2

Test Model: LA28P805CUW-2700K & 64W 50% Up Light + 50% Down Light

Test Data

[Integrating Sphere System]

Photometric and Electrical Measurement Result

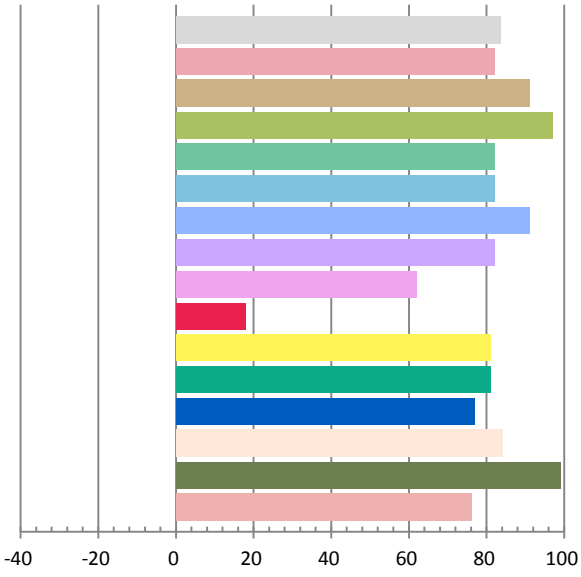
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.5184	61.85	0.9946	8400.5	135.81

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
24.115	2595	-0.00111	0.4667	0.4089	0.2677	0.5278

Test Voltage(V)	Power Factor	THDi
120	0.9946	3.20%
277	0.9338	8.06%

Color Rendering Index

Ra			
83.7			
R1	R2	R3	R4
82	91	97	82
R5	R6	R7	R8
82	91	82	62
R9	R10	R11	R12
18	81	81	77
R13	R14	R15	
84	99	76	



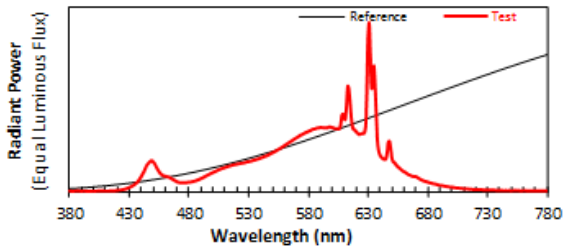
ANSI/IES TM-30-18 Color Rendition Report

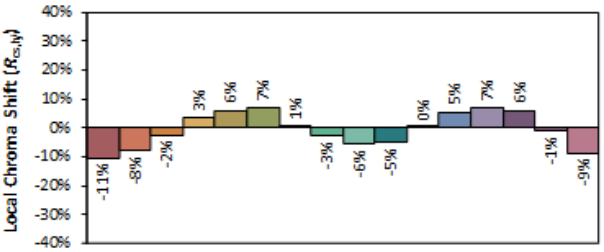
Source: User SPD

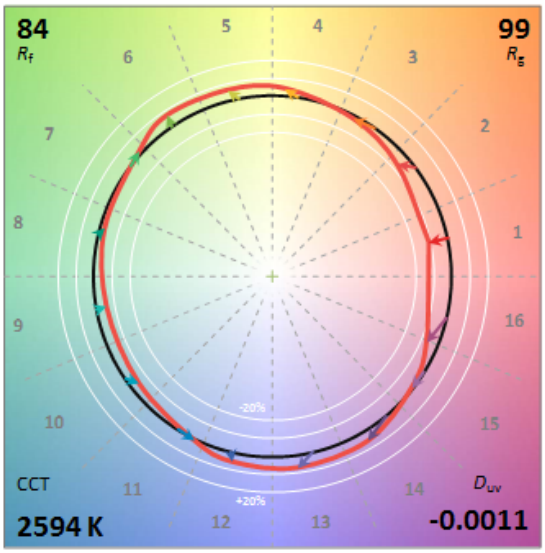
Manufacturer: P.Q.L., Inc.

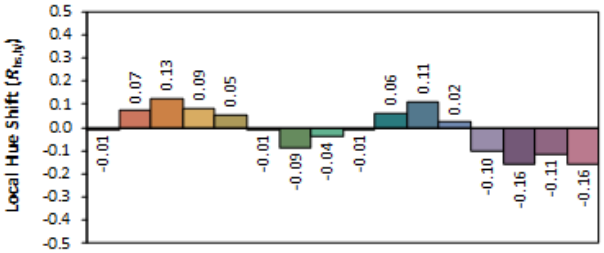
Date: 2026/3/24

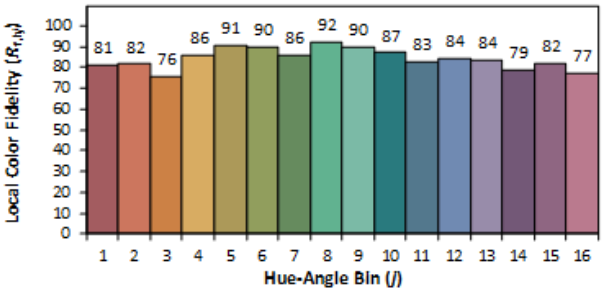
Model: LA28P805CUW-2700K

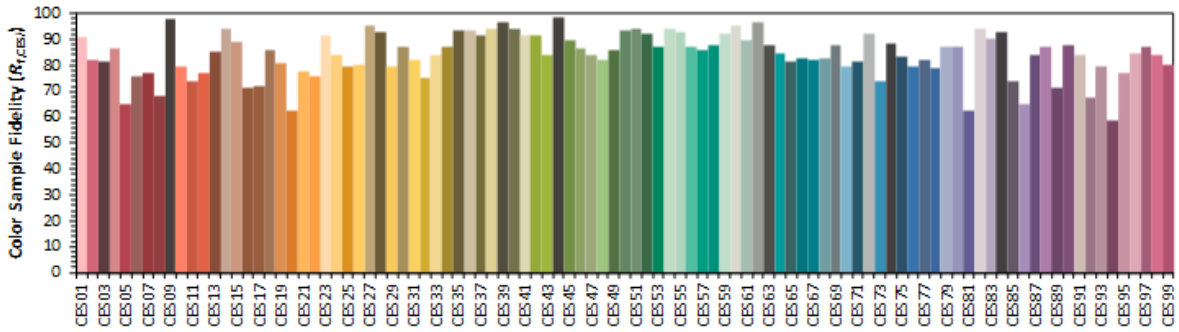












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

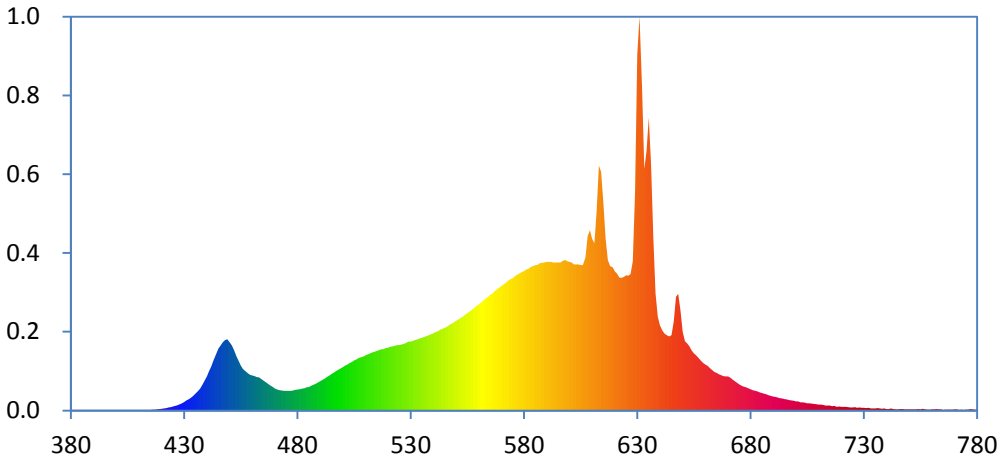
x	0.4668
y	0.4089
u'	0.2677
v'	0.5277

CIE 13.3-1995 (CRI)

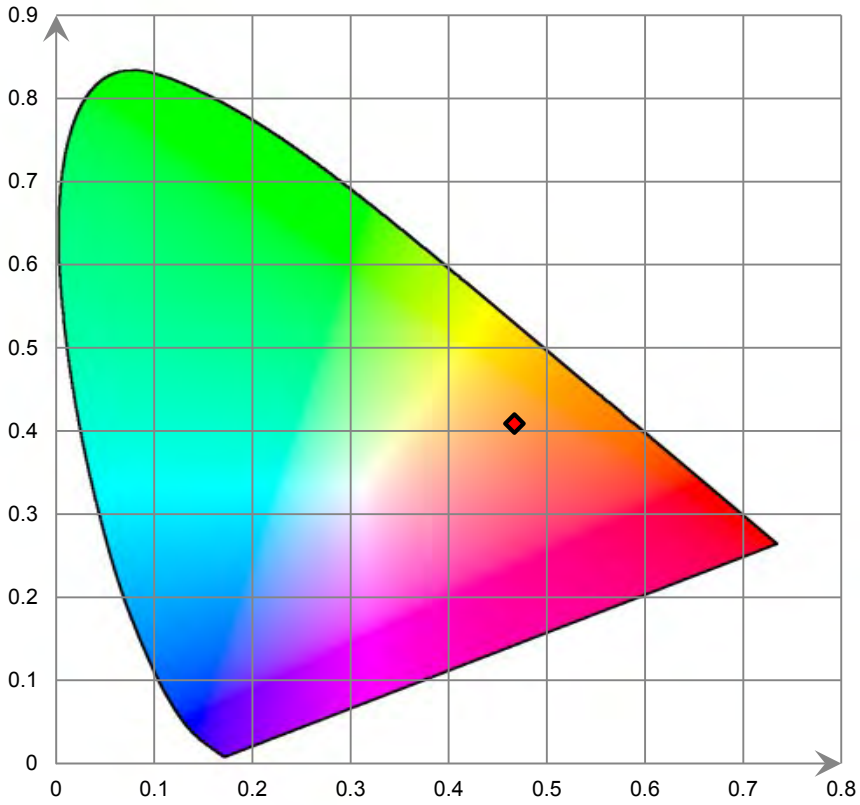
R_a	84
R_9	19

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

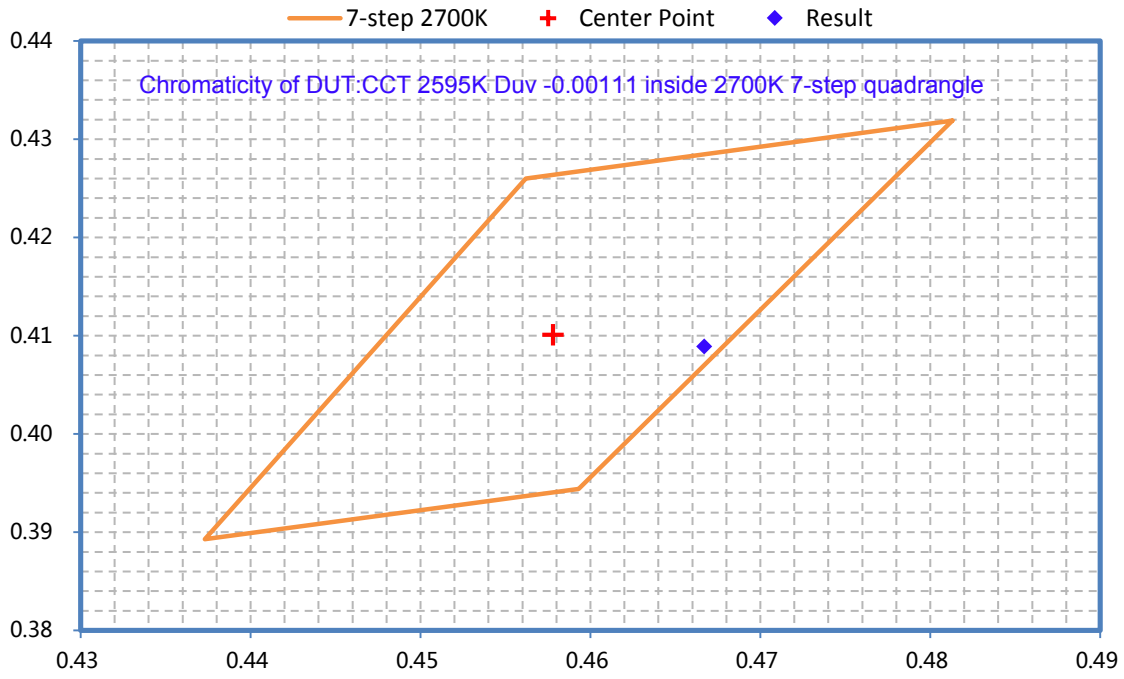
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-2700K & 48W 50% Up Light + 50% Down Light

Test Data

[Integrating Sphere System]

Photometric and Electrical Measurement Result

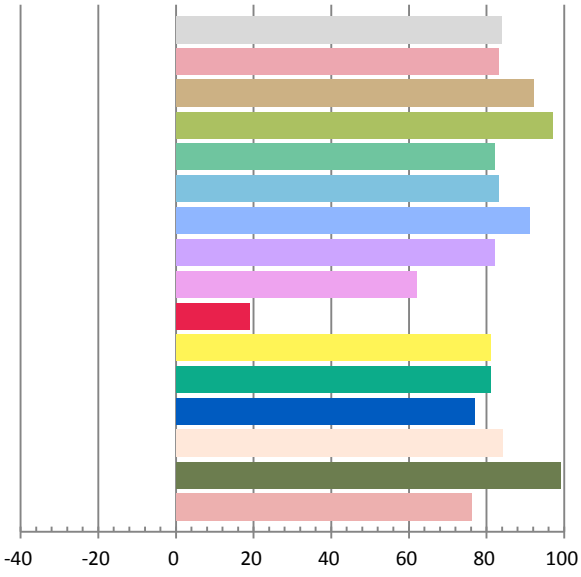
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.3817	45.46	0.9921	6333.7	139.32

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
18.165	2588	-0.00111	0.4673	0.4091	0.2680	0.5279

Test Voltage(V)	Power Factor	THDi
120	0.9921	3.35%
277	0.8972	11.41%

Color Rendering Index

Ra			
83.8			
R1	R2	R3	R4
83	92	97	82
R5	R6	R7	R8
83	91	82	62
R9	R10	R11	R12
19	81	81	77
R13	R14	R15	
84	99	76	



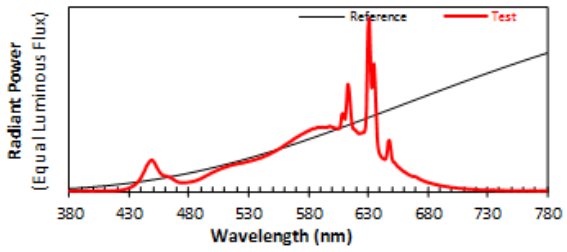
ANSI/IES TM-30-18 Color Rendition Report

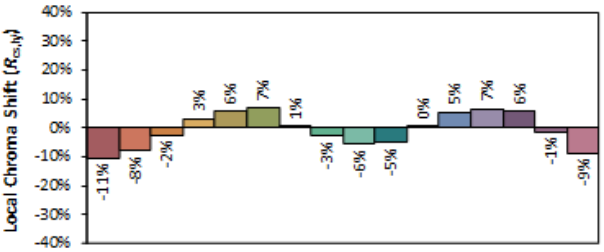
Source: User SPD

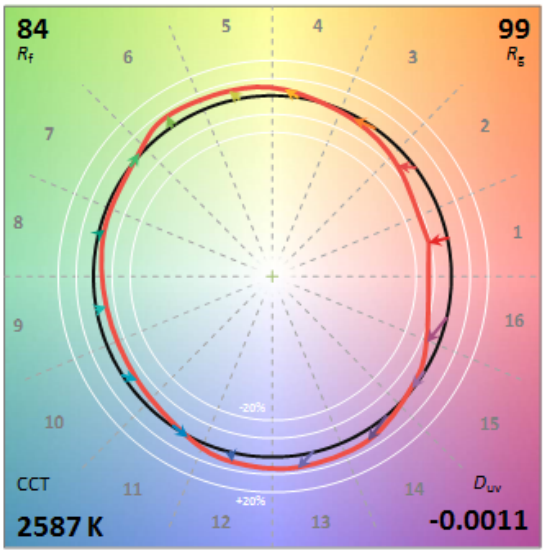
Manufacturer: P.Q.L., Inc.

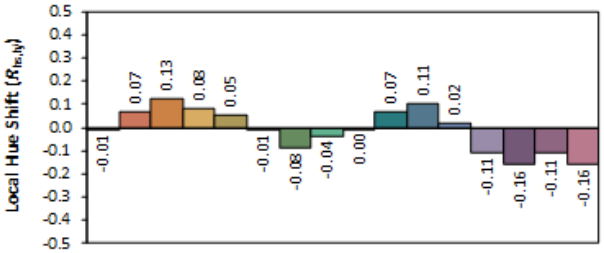
Date: 2026/3/24

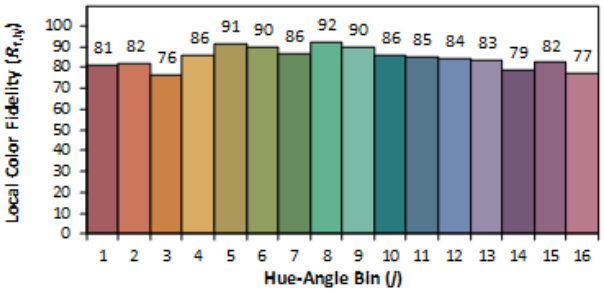
Model: LA28P805CUW-2700K

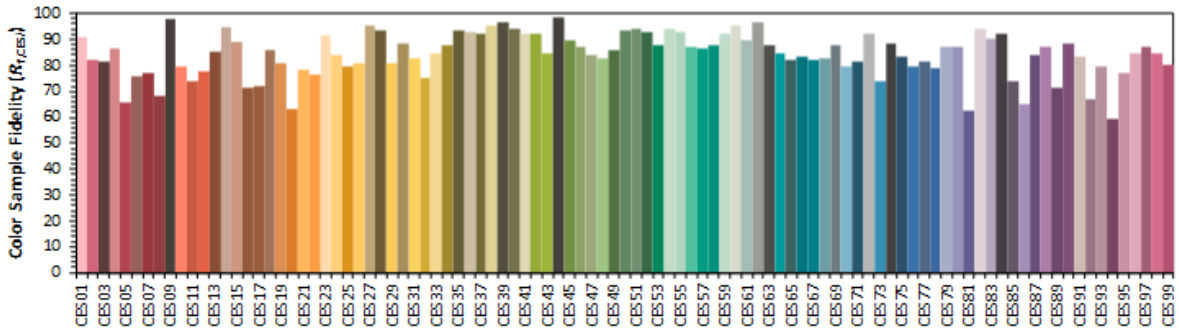












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

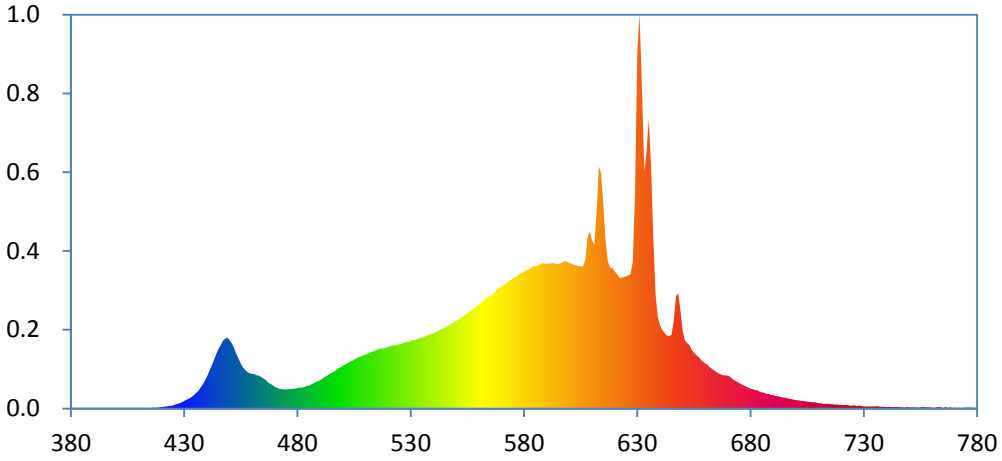
x	0.4673
y	0.4090
u'	0.2681
v'	0.5279

CIE 13.3-1995 (CRI)

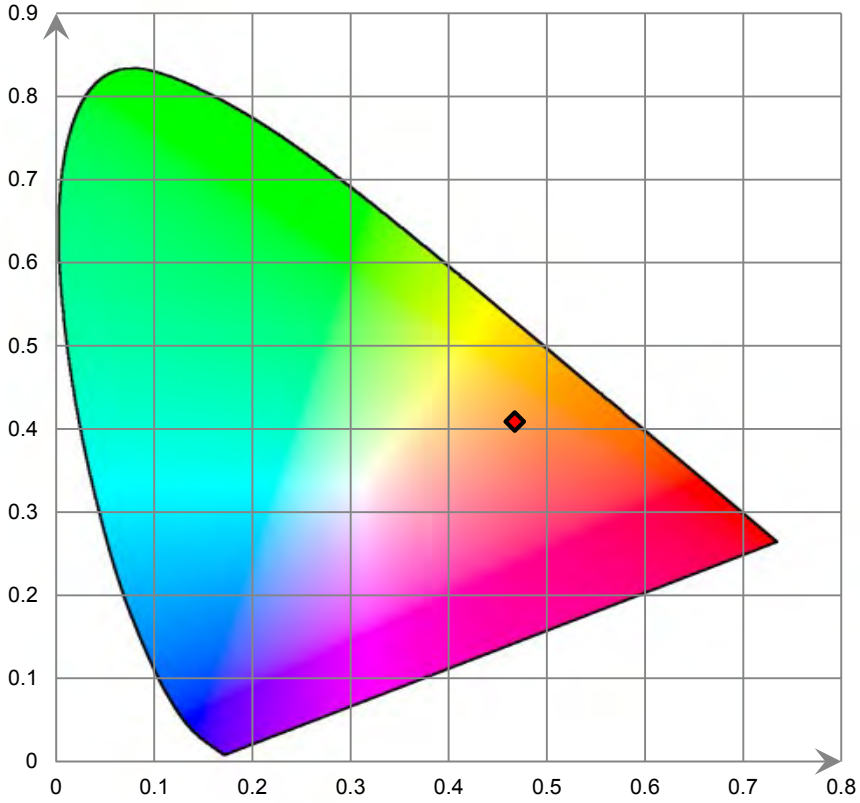
R_a	84
R_9	19

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

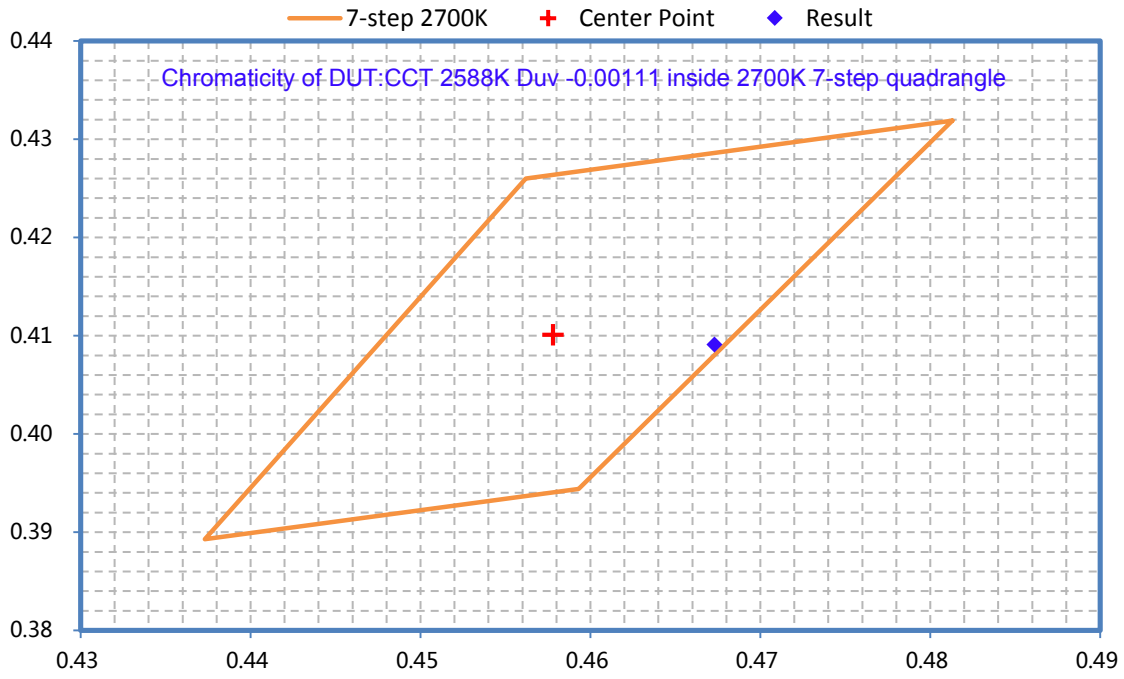
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-2700K & 40W 50% Up Light + 50% Down Light

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	0.3203	38.05	0.9902	5351.2	140.62

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
15.343	2585	-0.00109	0.4675	0.4092	0.2681	0.5280

Test Voltage(V)	Power Factor	THDi
120	0.9902	3.11%
277	0.8712	13.91%

Color Rendering Index

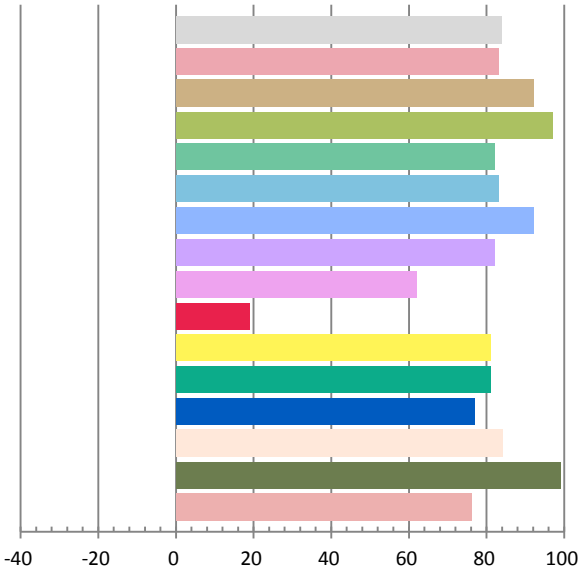
Ra
83.8

R1	R2	R3	R4
83	92	97	82

R5	R6	R7	R8
83	92	82	62

R9	R10	R11	R12
19	81	81	77

R13	R14	R15
84	99	76



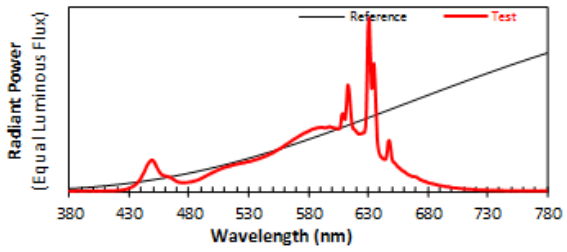
ANSI/IES TM-30-18 Color Rendition Report

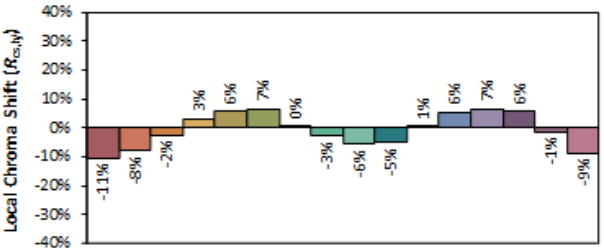
Source: User SPD

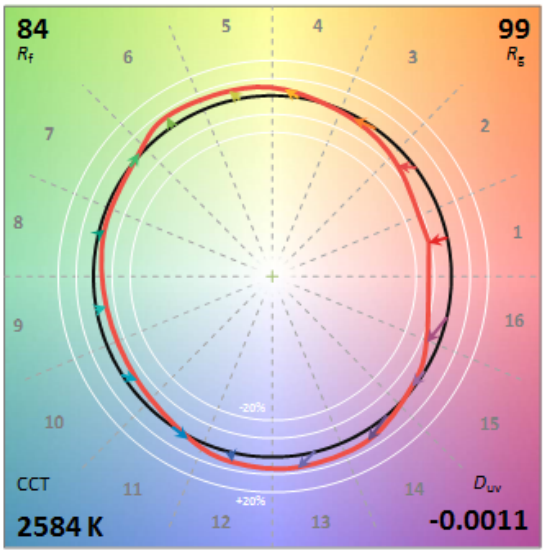
Manufacturer: P.Q.L., Inc.

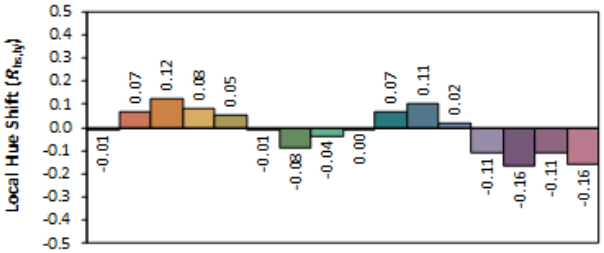
Date: 2026/3/24

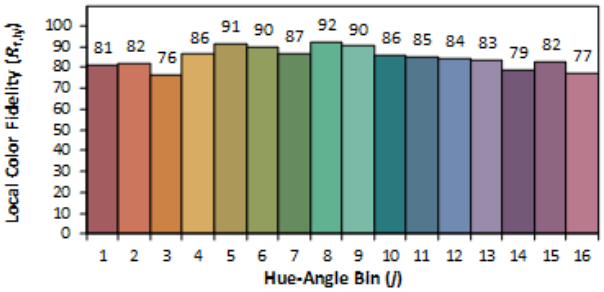
Model: LA28P805CUW-2700K

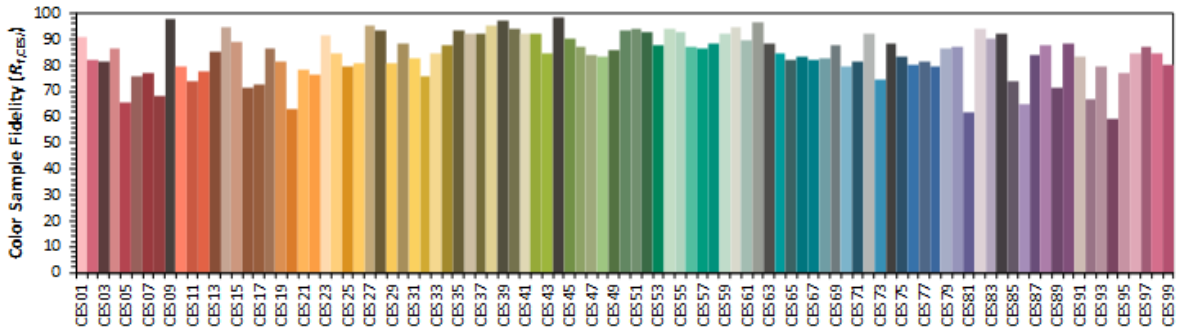












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

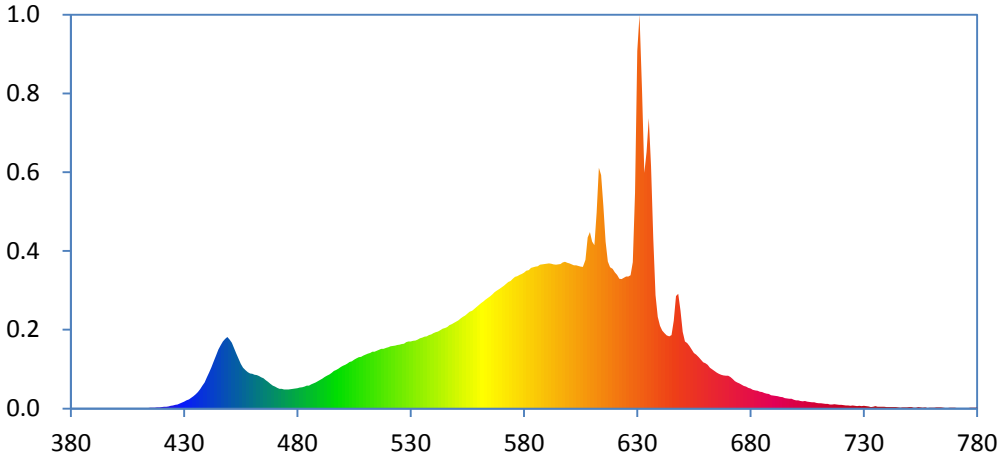
x	0.4676
y	0.4091
u'	0.2682
v'	0.5279

CIE 13.3-1995 (CRI)

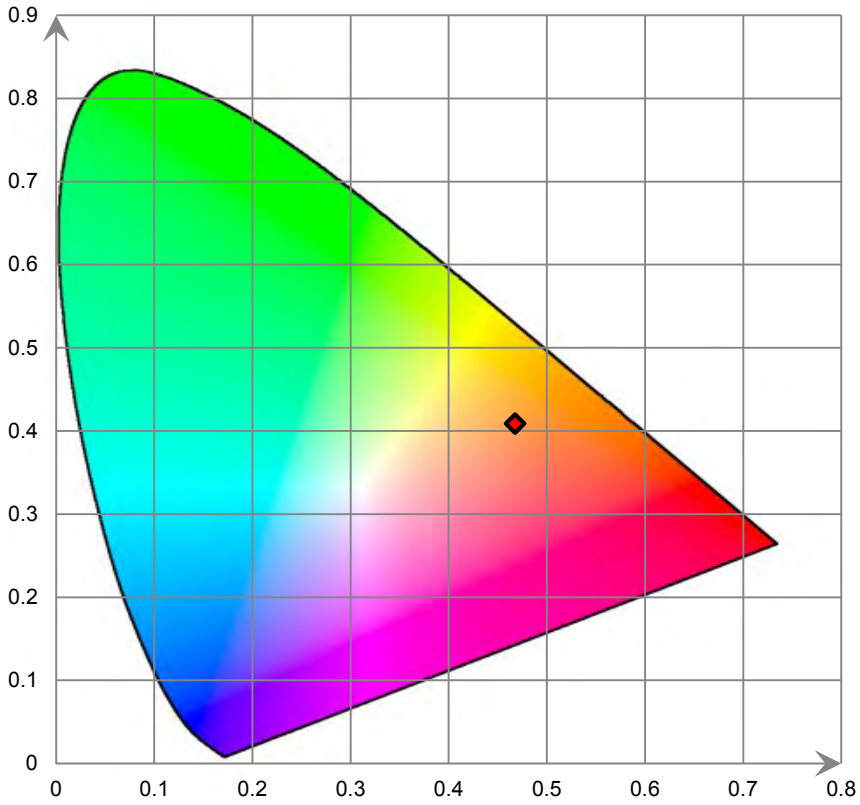
R_a	84
R_9	19

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

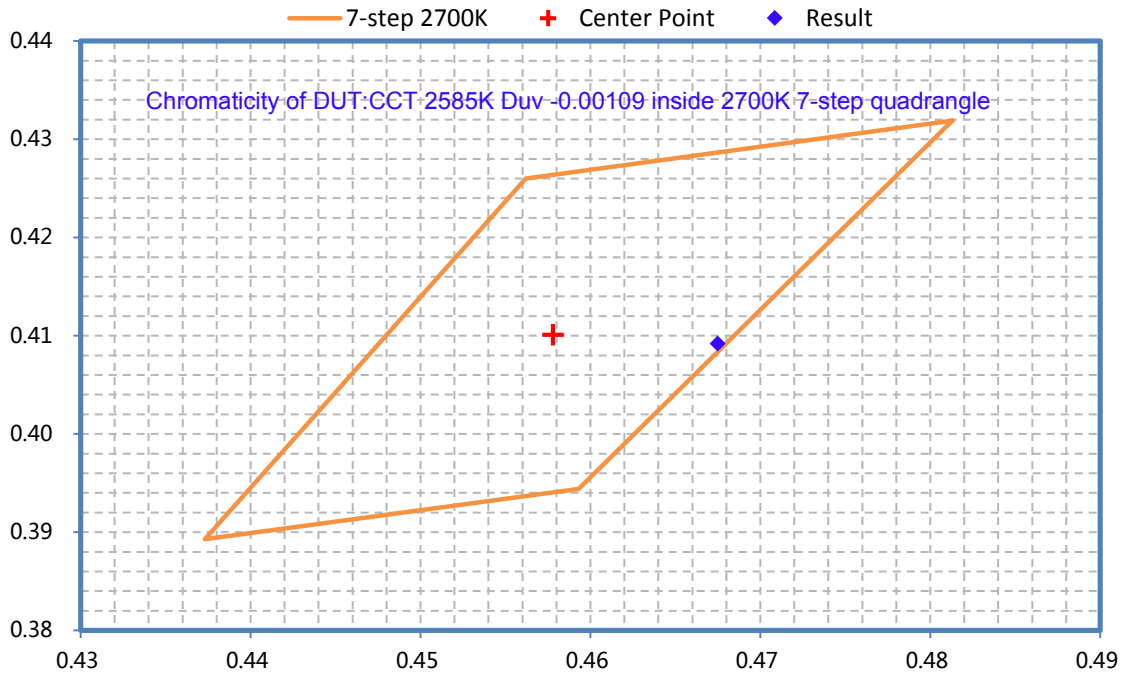
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-3500K & 80W 100% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11234.2	≥3000	≥2700	Pass
Power(W)	80.41	None.	None.	N/A
Total Efficacy(lm/W)	139.71	≥125	≥121.25	Pass
CCT(K)	3574	3220~3710	No tolerances	Pass
Duv	-0.0036	-0.0055~0.0065	No tolerances	Pass
IES R_f	86	70	69	Pass
IES R_g	98	89	88	
IES Rcs,h1	-10%	-12%~23%	-13%~24%	
R_a	86.8	≥80	≥79	
R_9	31	≥0	≥-1	

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9954	≥0.9	⩾0.87	Pass
120	THDi	3.99%	≤20%	⩽25%	Pass
277	Power Factor	0.9544	≥0.9	⩾0.87	Pass
277	THDi	6.50%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

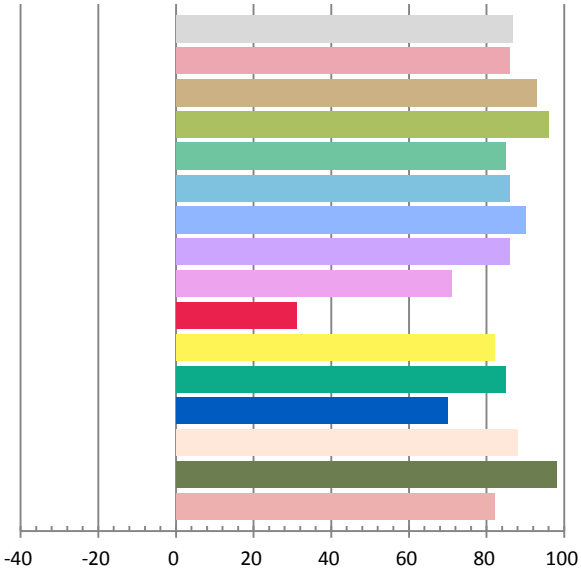
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6732	80.41	0.9954	11234.2	139.71

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
33.117	3574	-0.0036	0.3978	0.3789	0.2357	0.5051

Color Rendering Index

Ra			
86.8			
R1	R2	R3	R4
86	93	96	85
R5	R6	R7	R8
86	90	86	71
R9	R10	R11	R12
31	82	85	70
R13	R14	R15	
88	98	82	



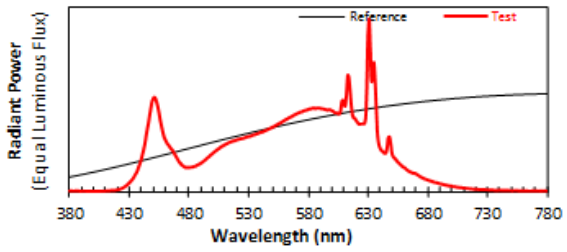
ANSI/IES TM-30-18 Color Rendition Report

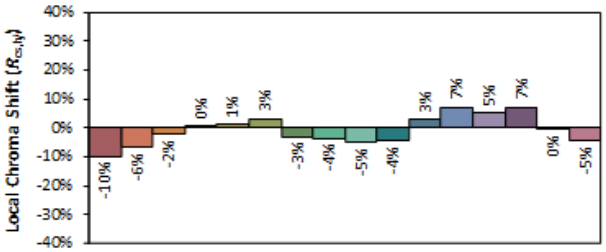
Source: User SPD

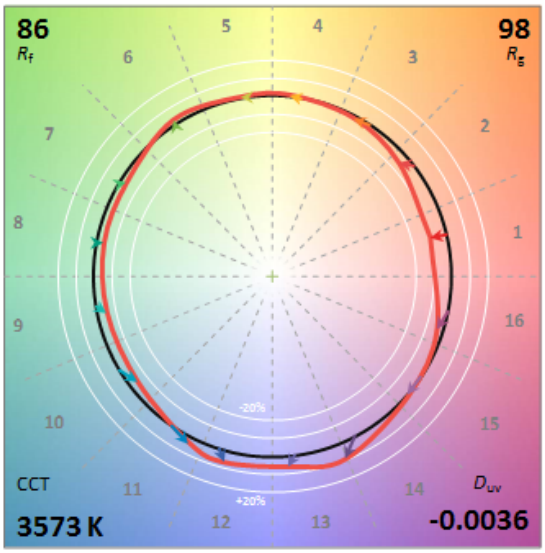
Manufacturer: P.Q.L., Inc.

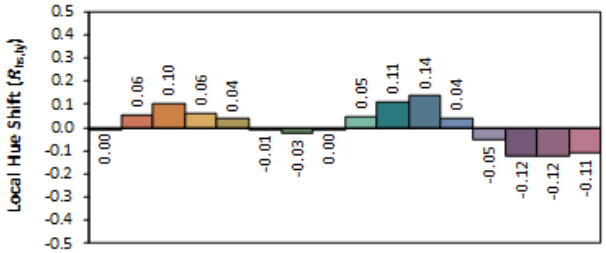
Date: 2026/3/24

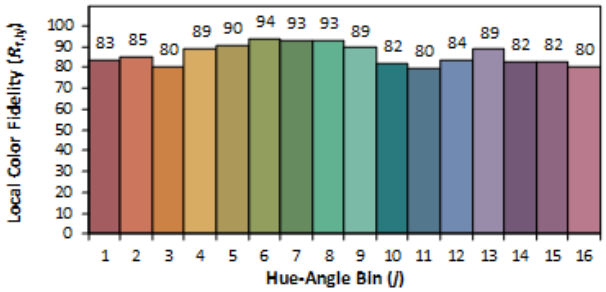
Model: LA28P805CUW-3500K

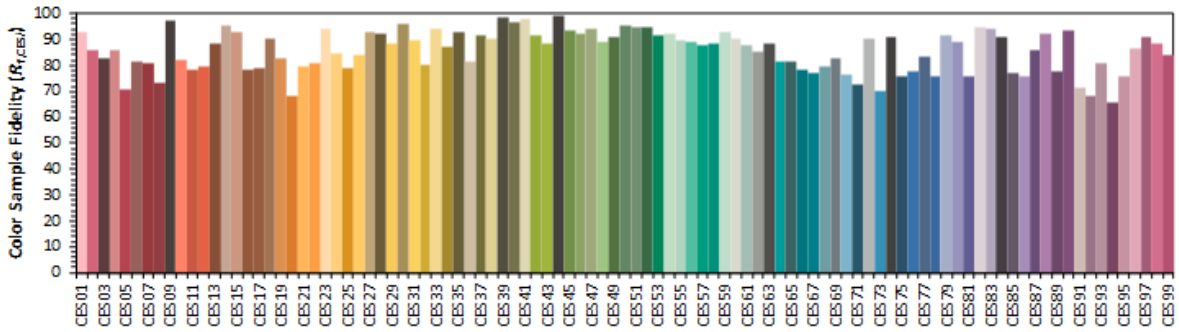












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

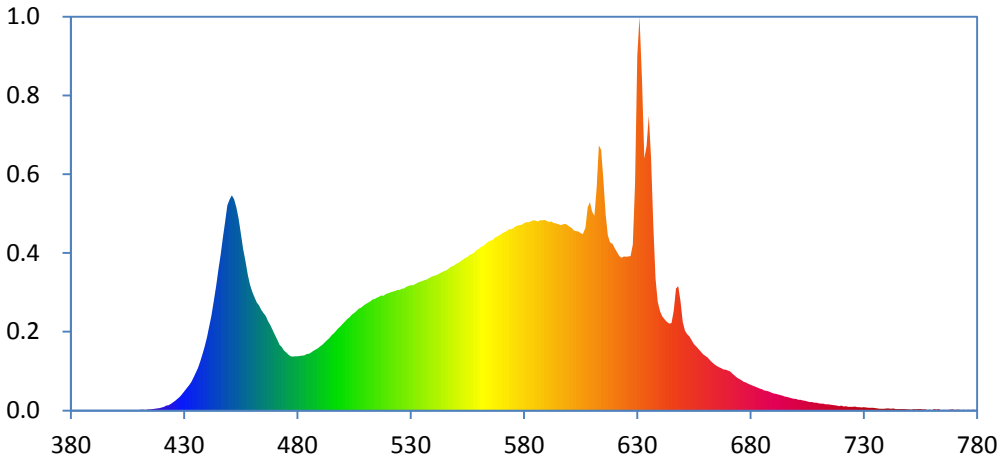
x	**0.3978**
y	**0.3788**
u'	**0.2357**
v'	**0.5051**

CIE 13.3-1995 (CRI)

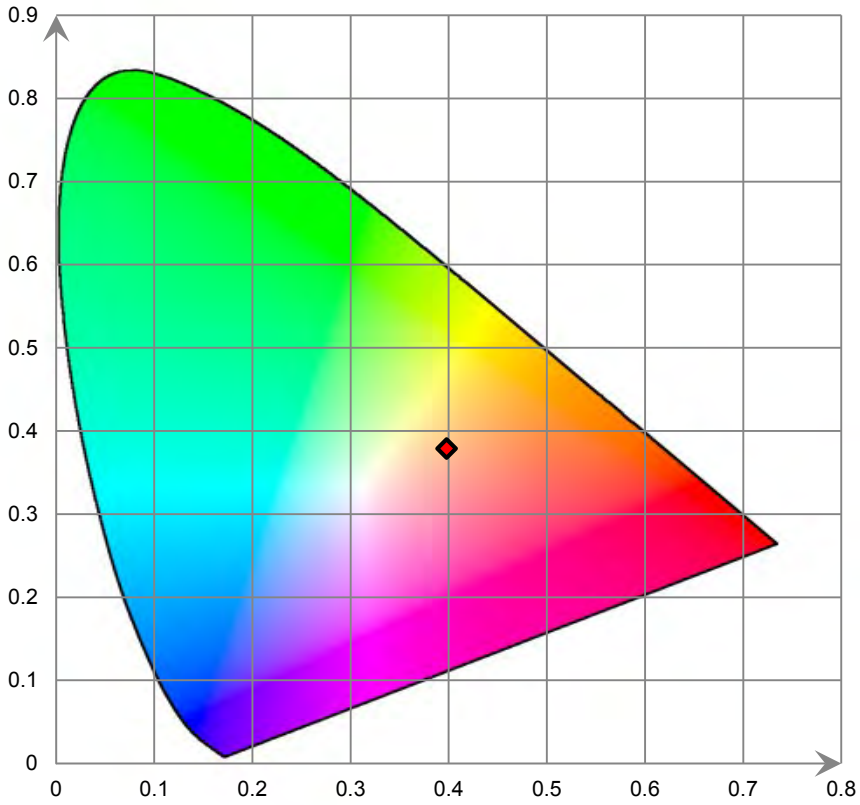
R_a	87
R_9	32

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

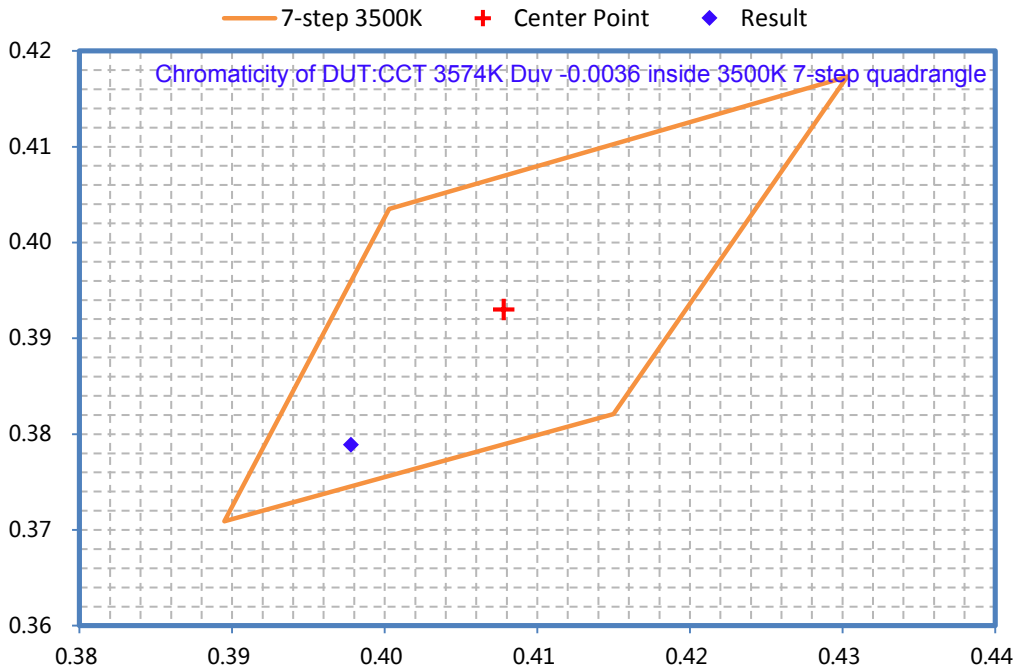
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-3500K & 80W 50% Up Light + 50% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11120.7	≥3000	≥2700	Pass
Power(W)	82.95	None.	None.	N/A
Total Efficacy(lm/W)	134.06	≥125	≥121.25	Pass
CCT(K)	3595	3220~3710	No tolerances	Pass
Duv	-0.00332	-0.0055~0.0065	No tolerances	Pass
IES R_f	86	70	69	Pass
IES R_g	98	89	88	
IES Rcs,h1	-10%	-12%~23%	-13%~24%	
R_a	86.4	≥80	≥79	
R_9	29	≥0	≥-1	

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9954	≥0.9	⩾0.87	Pass
120	THDi	3.98%	≤20%	⩽25%	Pass
277	Power Factor	0.9565	≥0.9	⩾0.87	Pass
277	THDi	6.14%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

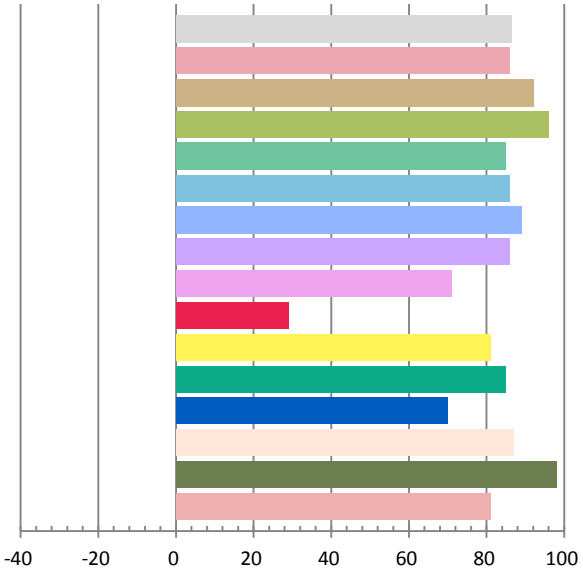
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6947	82.95	0.9954	11120.7	134.06

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
32.727	3595	-0.00332	0.3969	0.3791	0.2351	0.5050

Color Rendering Index

Ra			
86.4			
R1	R2	R3	R4
86	92	96	85
R5	R6	R7	R8
86	89	86	71
R9	R10	R11	R12
29	81	85	70
R13	R14	R15	
87	98	81	



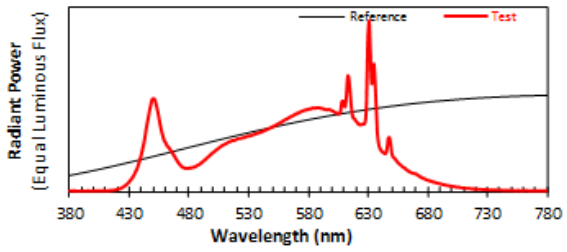
ANSI/IES TM-30-18 Color Rendition Report

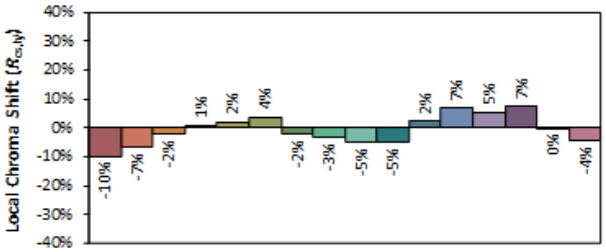
Source: User SPD

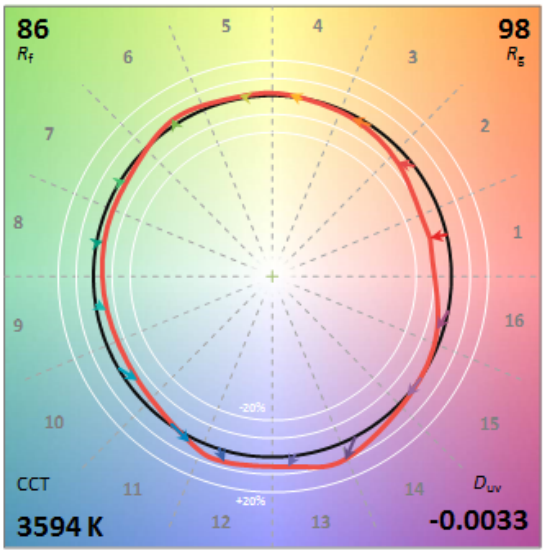
Manufacturer: P.Q.L., Inc.

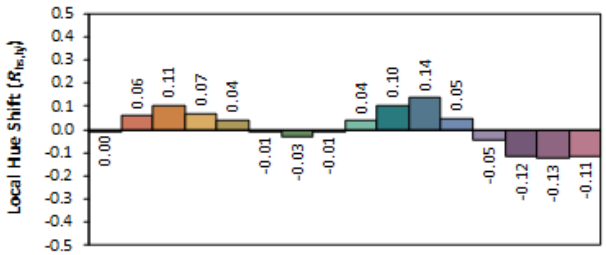
Date: 2026/3/24

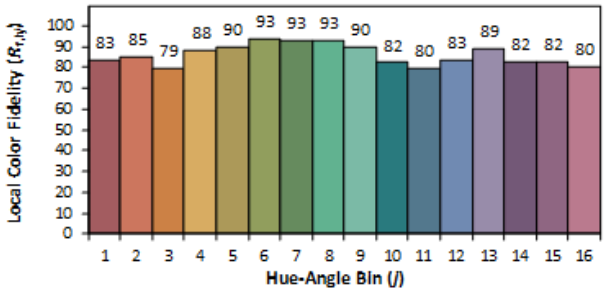
Model: LA28P805CUW-3500K

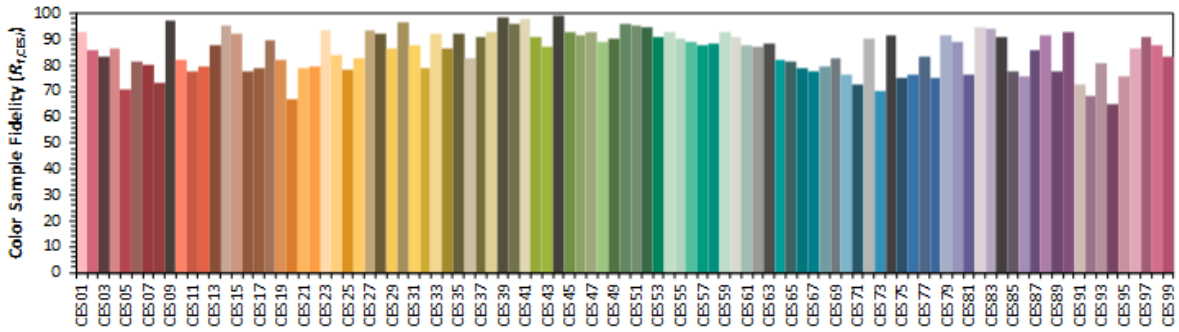












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

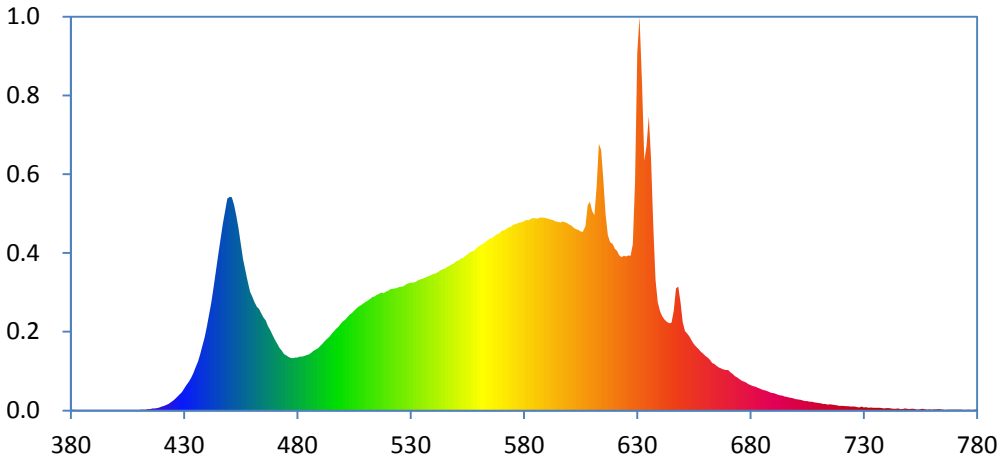
x	**0.3970**
y	**0.3790**
u'	**0.2351**
v'	**0.5050**

CIE 13.3-1995 (CRI)

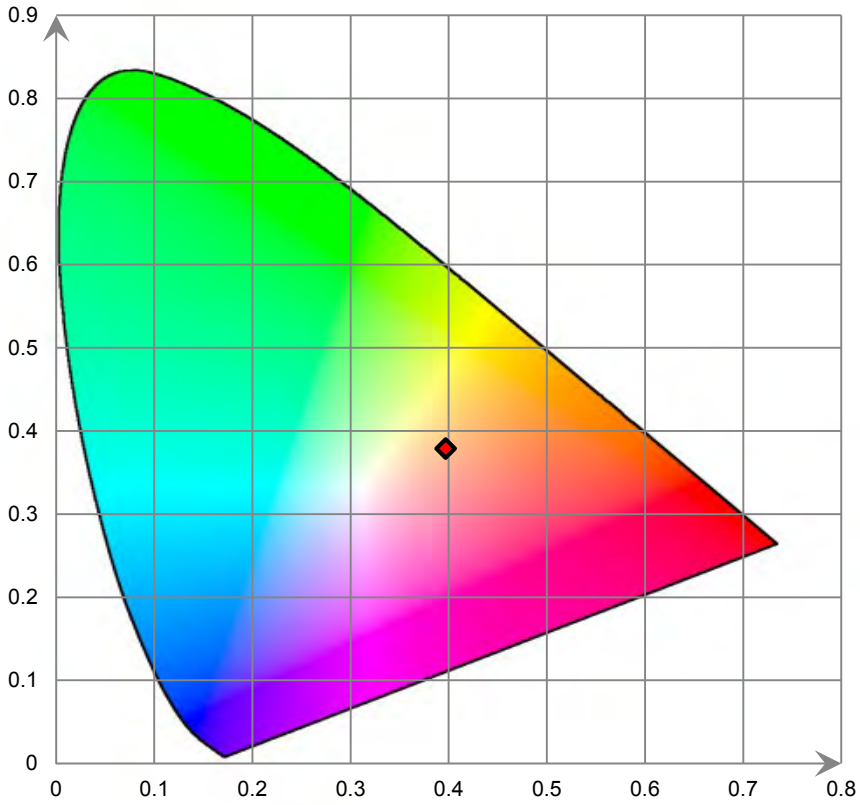
R_a	87
R_9	30

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

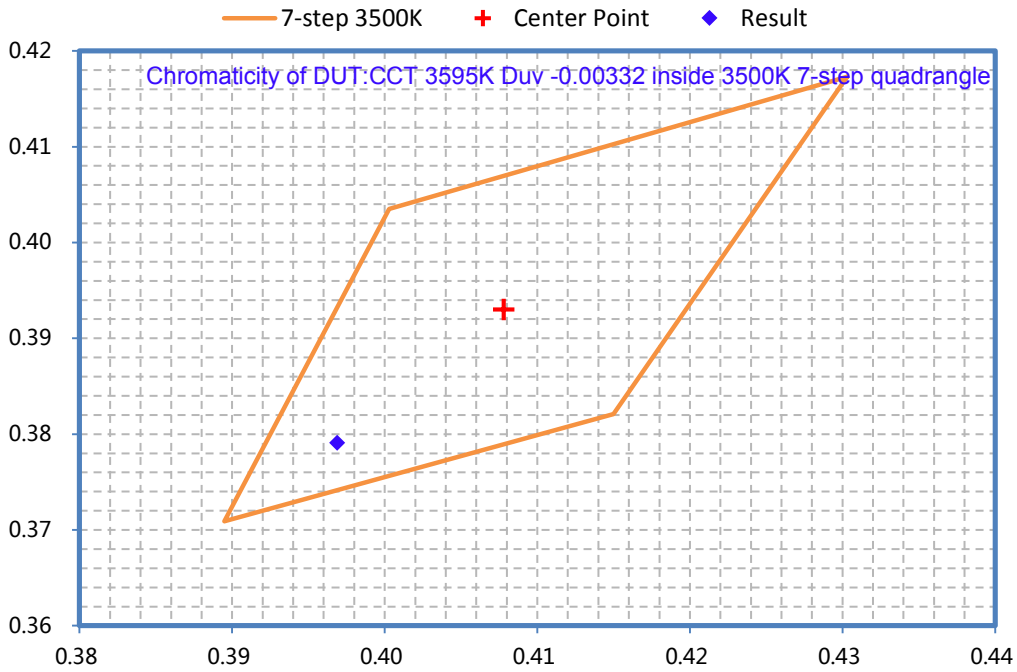
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-3500K & 80W 30% Up Light + 70% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11210.6	≥3000	≥2700	Pass
Power(W)	82.03	None.	None.	N/A
Total Efficacy(lm/W)	136.66	≥125	≥121.25	Pass
CCT(K)	3581	3220~3710	No tolerances	Pass
Duv	-0.00332	-0.0055~0.0065	No tolerances	Pass
IES R_f	86	70	69	Pass
IES R_g	98	89	88	
IES Rcs,h1	-10%	-12%~23%	-13%~24%	
R_a	86.6	≥80	≥79	
R_9	30	≥0	≥-1	

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9953	≥0.9	⩾0.87	Pass
120	THDi	4.06%	≤20%	⩽25%	Pass
277	Power Factor	0.9557	≥0.9	⩾0.87	Pass
277	THDi	6.30%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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	0.687	82.03	0.9953	11210.6	136.66

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
33.014	3581	-0.00332	0.3977	0.3794	0.2354	0.5053

Color Rendering Index

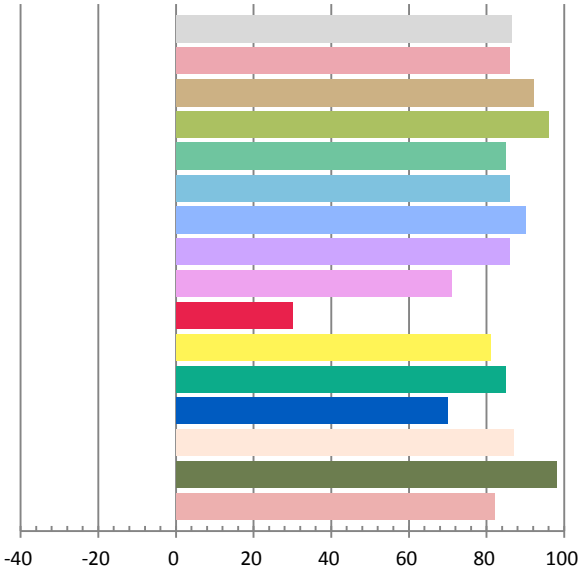
Ra	
86.6	

R1	R2	R3	R4
86	92	96	85

R5	R6	R7	R8
86	90	86	71

R9	R10	R11	R12
30	81	85	70

R13	R14	R15
87	98	82



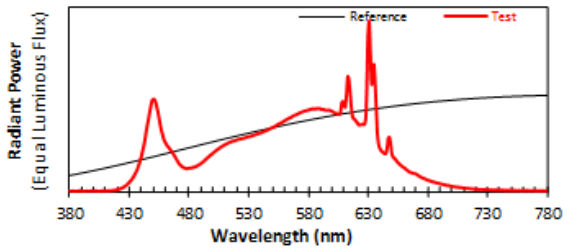
ANSI/IES TM-30-18 Color Rendition Report

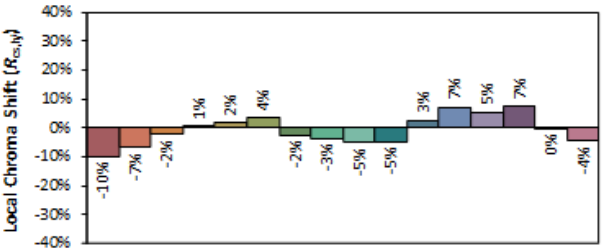
Source: User SPD

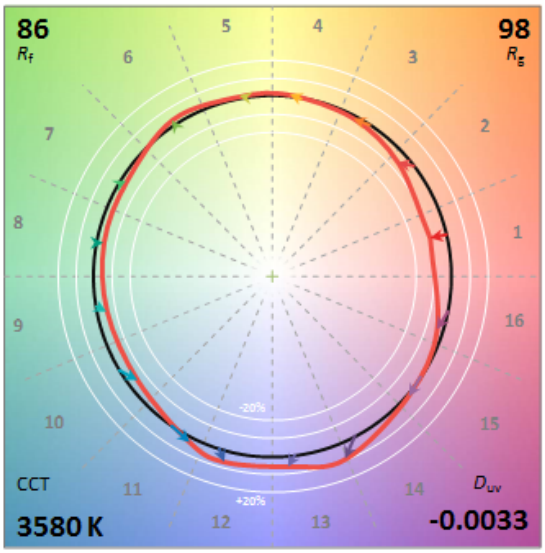
Manufacturer: P.Q.L., Inc.

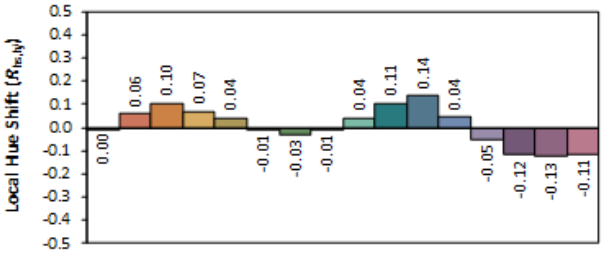
Date: 2026/3/24

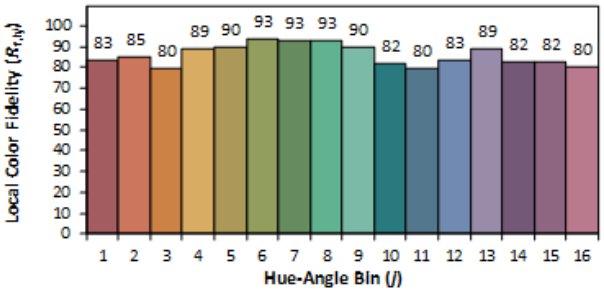
Model: LA28P805CUW-3500K

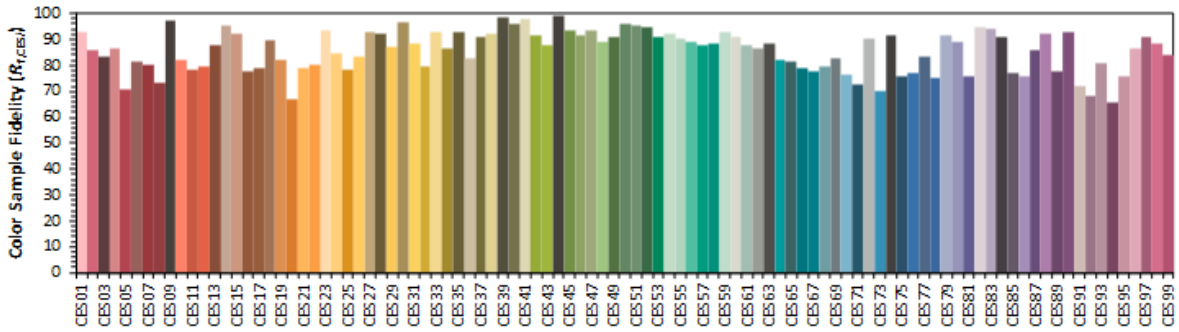












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

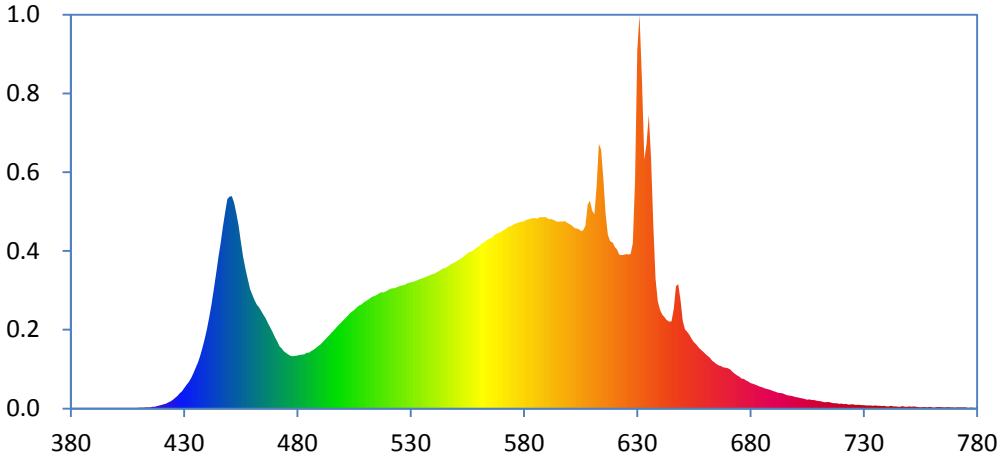
x	0.3977
y	0.3794
u'	0.2354
v'	0.5053

CIE 13.3-1995 (CRI)

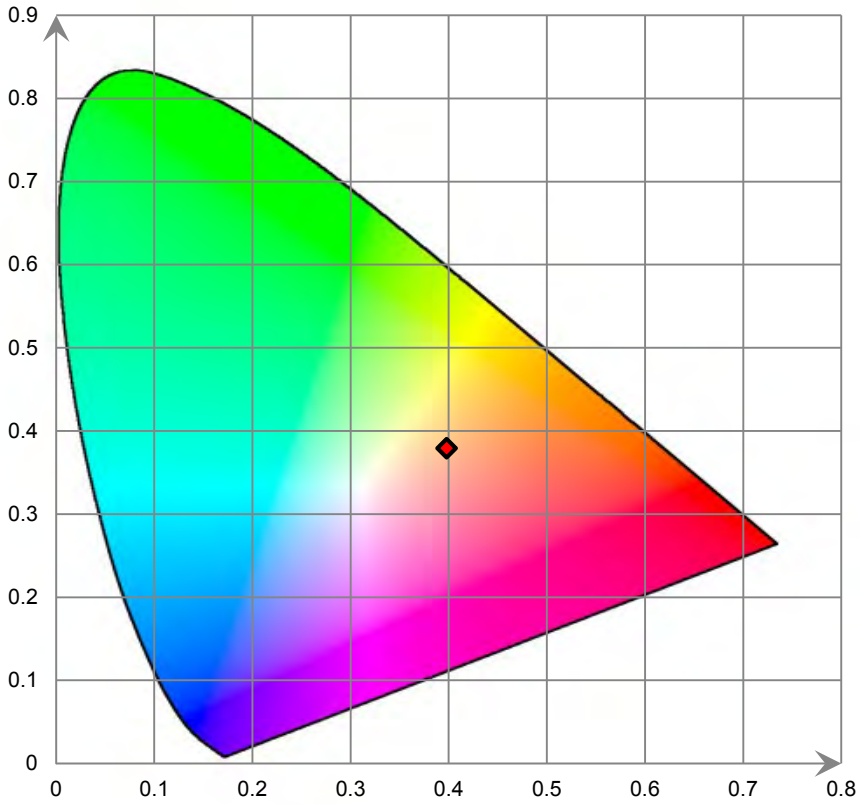
R_a	87
R_9	30

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

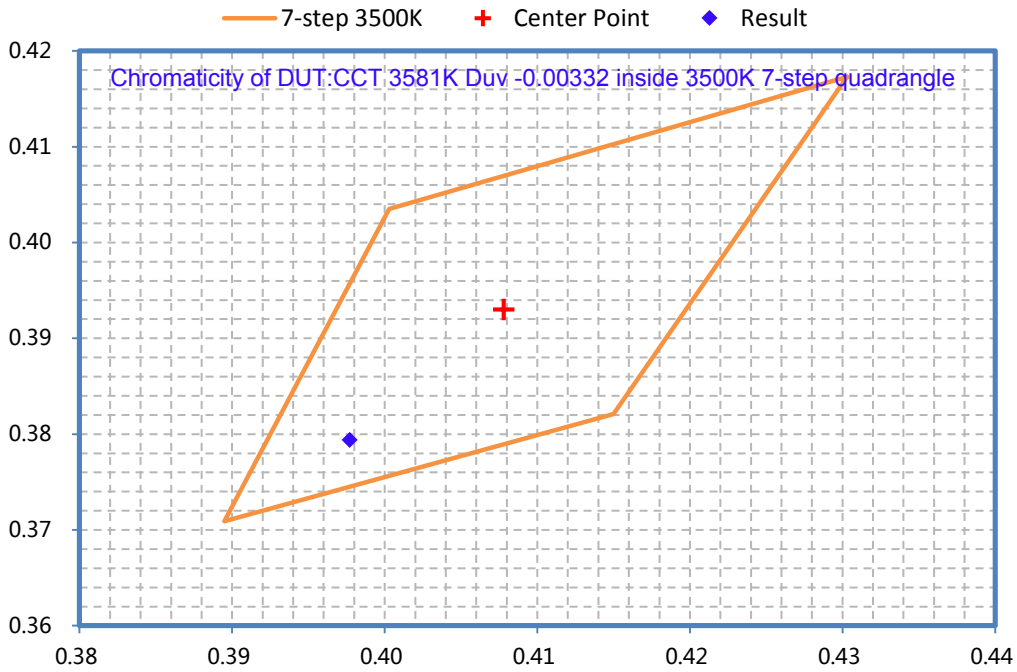
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test Model: LA28P805CUW-5000K & 80W 100% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11408.1	≥3000	≥2700	Pass
Power(W)	80	None.	None.	N/A
Total Efficacy(lm/W)	142.6	≥125	≥121.25	Pass
CCT(K)	4861	4746~5312	No tolerances	Pass
Duv	0.00115	-0.004~0.008	No tolerances	Pass
IES R_f	85	70	69	Pass
IES R_g	96	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R_a	85	≥80	≥79	
R9	21	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11410.11	≥3000	≥2700	Pass
Power(W)	80	None.	None.	N/A
Total Efficacy(lm/W)	142.63	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	79.77%	0-60°≥40%	0-60°≥37%	Pass

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9954	≥0.9	⩾0.87	Pass
120	THDi	3.93%	≤20%	⩽25%	Pass
277	Power Factor	0.9542	≥0.9	⩾0.87	Pass
277	THDi	6.47%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

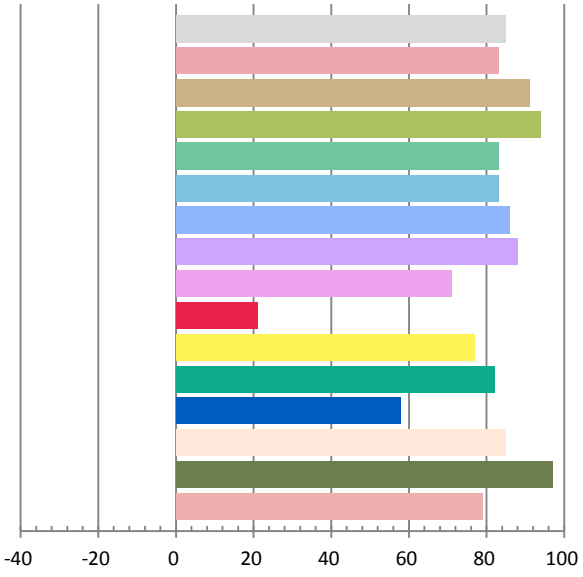
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6698	80	0.9954	11408.1	142.6

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
34.442	4861	0.00115	0.3494	0.3573	0.2121	0.4881

Color Rendering Index

Ra			
85.0			
R1	R2	R3	R4
83	91	94	83
R5	R6	R7	R8
83	86	88	71
R9	R10	R11	R12
21	77	82	58
R13	R14	R15	
85	97	79	



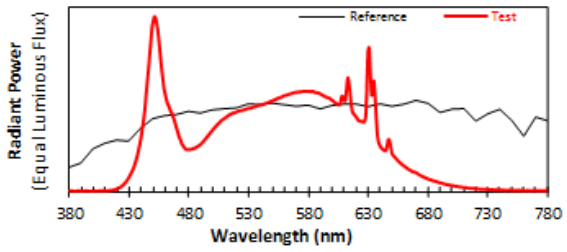
ANSI/IES TM-30-18 Color Rendition Report

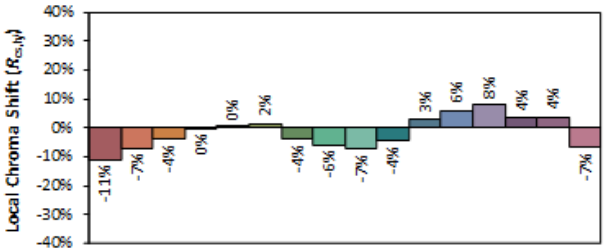
Source: User SPD

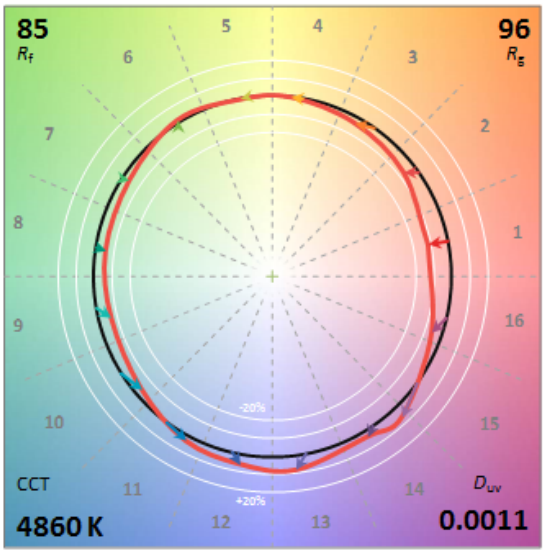
Manufacturer: P.Q.L., Inc.

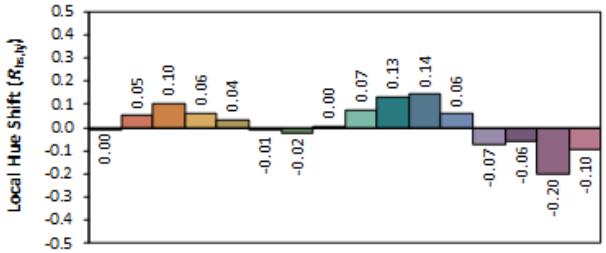
Date: 2026/3/24

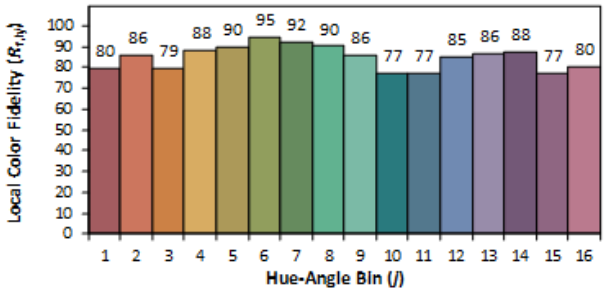
Model: LA28P805CUW-5000K

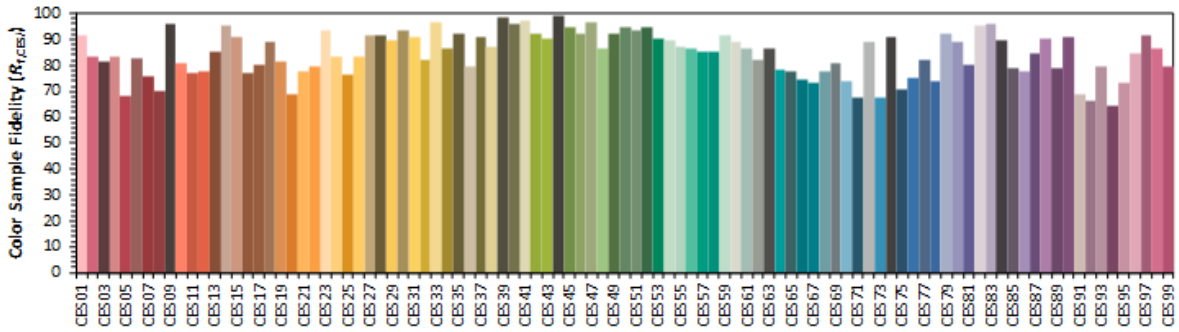












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

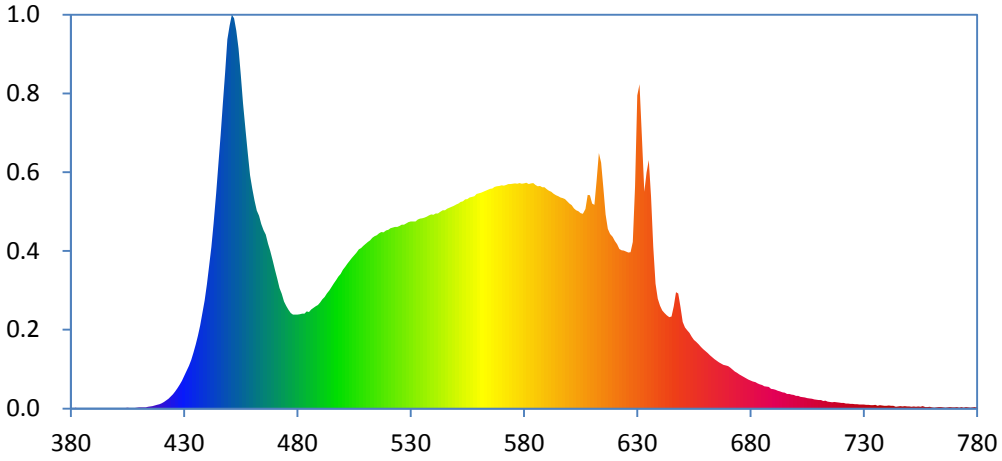
x	**0.3494**
y	**0.3573**
u'	**0.2121**
v'	**0.4881**

CIE 13.3-1995 (CRI)

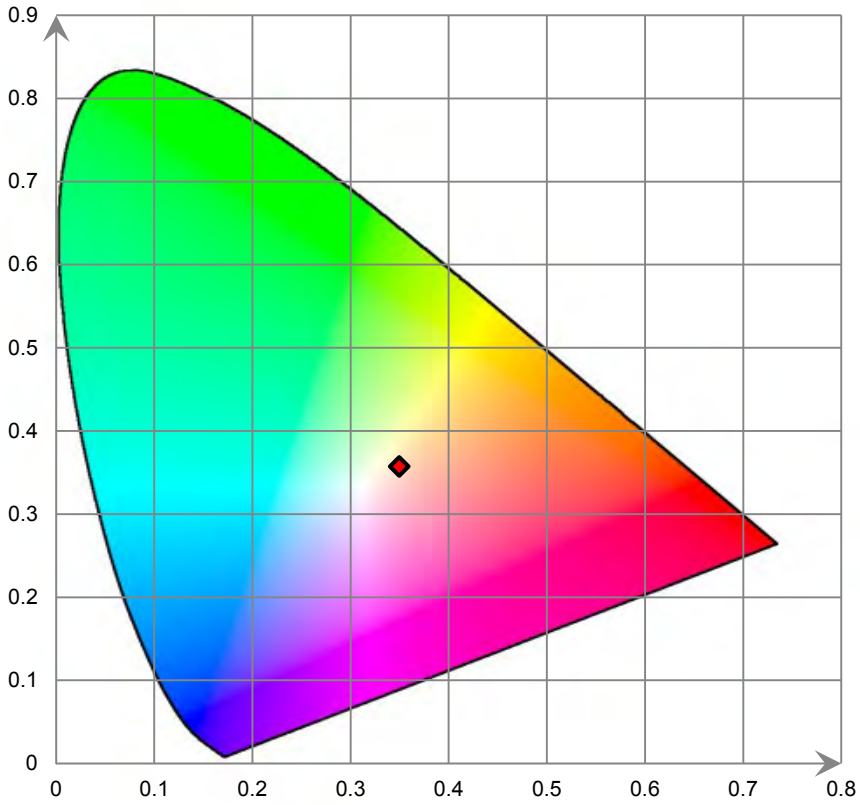
R_a	85
R_9	19

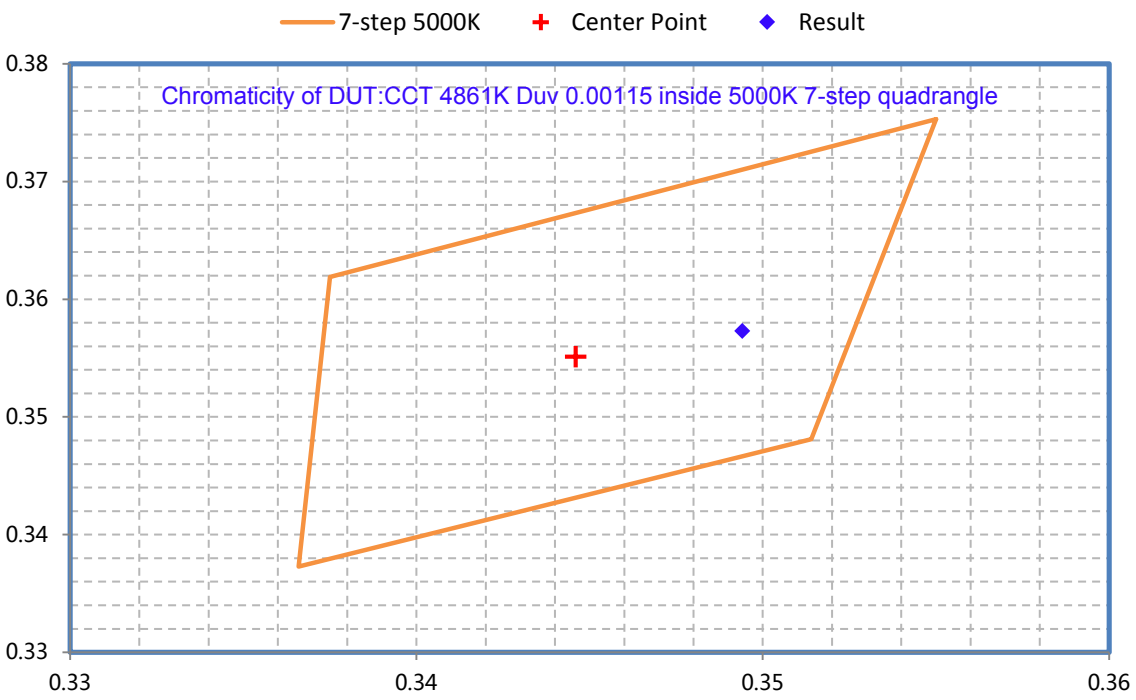
Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram




ANSI C78.377-2017 Chromaticity Quadrangles
7-step 5000K
Center Point
Result
Chromaticity of DUT:CCT 4861K Duv 0.00115 inside 5000K 7-step quadrangle
0.38
0.37
0.36
0.35
0.34
0.33
0.33
0.34
0.35
0.36

[Goniophotometer System]

Electrical Measurement

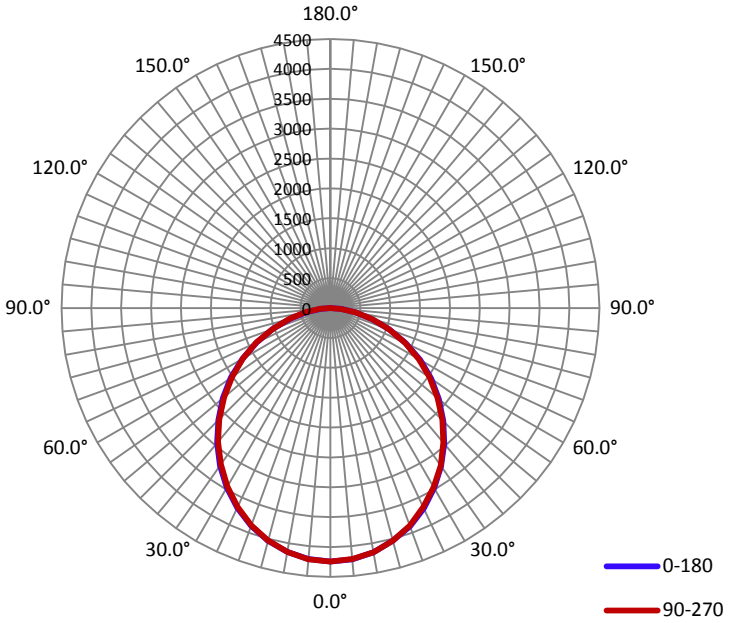
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.67	80	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
11410.11	142.63	4245.7	1.22	1.21

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	107.6	106.7	106.8	106.9	107.0
Field Angle (10% I_{max}):	159.4	159.5	160.4	159.8	159.8

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6
5.0°	4219.3	4223.4	4217.4	4215.9	4214.3	4215.9	4223.0	4215.5
10.0°	4149.9	4151.1	4145.5	4147.6	4149.5	4142.0	4157.0	4158.8
15.0°	4033.0	4046.9	4029.8	4035.2	4033.2	4037.5	4035.5	4052.3
20.0°	3888.7	3909.8	3868.1	3874.4	3874.8	3879.6	3881.0	3900.8
25.0°	3698.1	3706.4	3695.1	3681.8	3674.9	3686.4	3680.3	3712.4
30.0°	3473.2	3485.9	3456.5	3453.8	3455.5	3464.2	3463.8	3494.9
35.0°	3230.8	3236.9	3202.7	3205.2	3216.7	3212.1	3222.1	3246.5
40.0°	2963.2	2968.0	2931.4	2933.6	2934.9	2939.7	2944.3	2969.9
45.0°	2672.1	2680.6	2632.5	2636.9	2649.2	2649.6	2660.2	2683.6
50.0°	2367.4	2379.5	2333.7	2336.0	2343.3	2335.1	2354.5	2383.7
55.0°	2058.4	2074.6	2015.6	2014.6	2022.9	2029.2	2032.1	2063.0
60.0°	1737.0	1744.7	1691.2	1687.0	1703.7	1699.3	1718.1	1740.1
65.0°	1395.0	1400.0	1361.1	1362.7	1372.7	1376.1	1381.9	1397.9
70.0°	1054.7	1054.9	1028.9	1042.2	1044.7	1043.0	1050.1	1054.7
75.0°	725.2	732.3	709.4	718.1	732.3	727.7	725.4	727.5
80.0°	423.7	429.1	419.5	426.4	441.0	428.1	428.5	423.5
85.0°	171.5	175.3	176.9	181.7	186.3	180.9	180.9	174.8
90.0°	3.5	6.7	10.2	10.8	10.2	10.2	9.2	6.0
95.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6	4241.6
5.0°	4217.6	4222.8	4222.2	4219.3	4219.5	4209.1	4210.1	4213.6
10.0°	4147.2	4156.5	4153.6	4147.8	4144.5	4140.9	4138.0	4145.5
15.0°	4033.8	4044.6	4034.8	4037.3	4026.7	4019.8	4019.4	4033.8
20.0°	3878.7	3897.7	3883.3	3873.1	3869.2	3860.8	3860.8	3888.7
25.0°	3689.3	3710.1	3684.5	3676.8	3669.9	3666.0	3669.9	3685.1
30.0°	3466.3	3482.6	3459.4	3455.9	3447.1	3438.4	3439.6	3461.1
35.0°	3221.0	3238.1	3202.1	3198.9	3193.9	3188.7	3182.9	3208.9
40.0°	2947.6	2962.0	2930.1	2925.9	2921.6	2908.8	2910.3	2938.4
45.0°	2650.2	2666.7	2640.2	2635.2	2630.0	2617.9	2625.0	2652.1
50.0°	2346.6	2367.6	2333.7	2319.5	2323.2	2310.7	2318.9	2344.5
55.0°	2033.2	2054.6	2008.4	2001.5	2010.0	2000.2	2011.5	2030.4
60.0°	1703.5	1716.8	1683.2	1678.9	1687.8	1671.8	1681.8	1701.4
65.0°	1367.1	1379.4	1349.8	1344.2	1362.9	1342.7	1350.4	1366.9
70.0°	1024.5	1036.6	1016.2	1018.5	1032.4	1010.1	1018.0	1031.0
75.0°	692.3	704.6	694.2	698.8	718.1	693.1	694.6	699.0
80.0°	392.8	400.1	399.1	408.0	428.7	402.8	407.0	402.6
85.0°	150.7	157.1	155.5	161.5	172.3	166.5	160.9	158.6
90.0°	1.5	4.4	4.8	5.0	3.8	4.8	4.8	4.6
95.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Test Model: LA28P805CUW-5000K & 80W 50% Up Light + 50% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11309.2	≥3000	≥2700	Pass
Power(W)	82.17	None.	None.	N/A
Total Efficacy(lm/W)	137.63	≥125	≥121.25	Pass
CCT(K)	4782	4746~5312	No tolerances	Pass
Duv	0.00143	-0.004~0.008	No tolerances	Pass
IES R_f	84	70	69	Pass
IES R_g	96	89	88	
IES Rcs,h1	-12%	-12%~23%	-13%~24%	
R_a	84.2	≥80	≥79	
R9	17	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11314.02	≥3000	≥2700	Pass
Power(W)	82.17	None.	None.	N/A
Total Efficacy(lm/W)	137.69	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	40.40%	0-60°≥40%	0-60°≥37%	Pass

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9953	≥0.9	⩾0.87	Pass
120	THDi	4.01%	≤20%	⩽25%	Pass
277	Power Factor	0.9558	≥0.9	⩾0.87	Pass
277	THDi	6.26%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

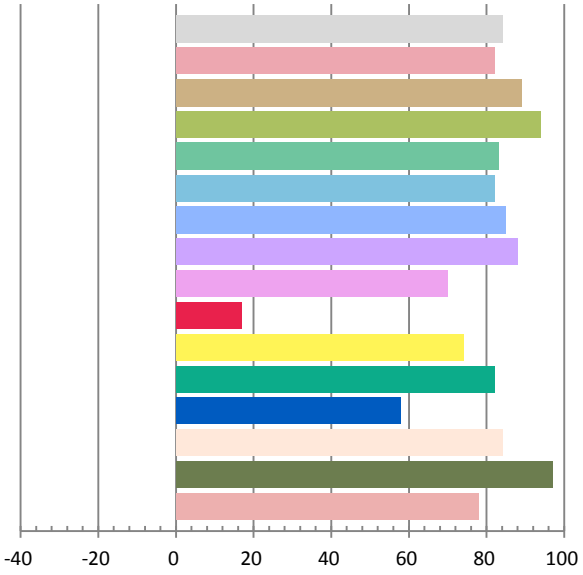
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6882	82.17	0.9953	11309.2	137.63

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
33.886	4782	0.00143	0.3519	0.3599	0.2128	0.4896

Color Rendering Index

Ra			
84.2			
R1	R2	R3	R4
82	89	94	83
R5	R6	R7	R8
82	85	88	70
R9	R10	R11	R12
17	74	82	58
R13	R14	R15	
84	97	78	



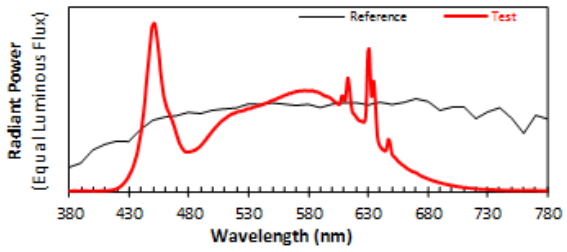
ANSI/IES TM-30-18 Color Rendition Report

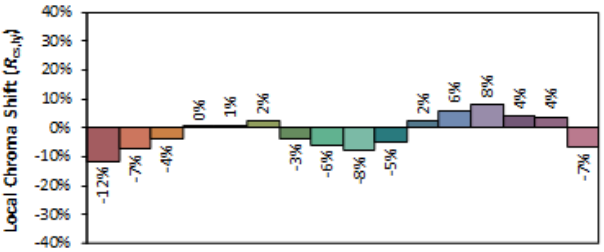
Source: User SPD

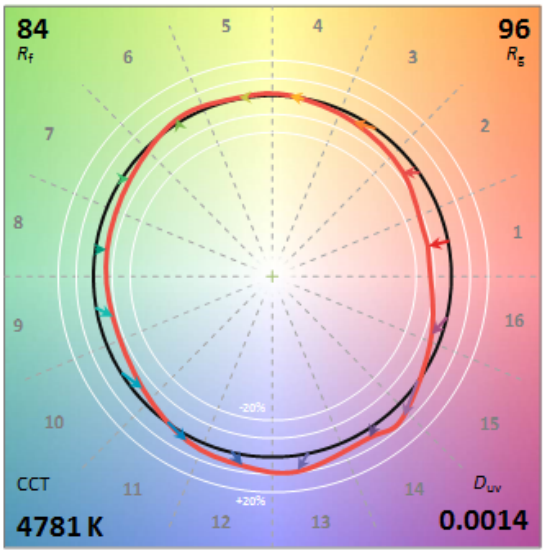
Manufacturer: P.Q.L., Inc.

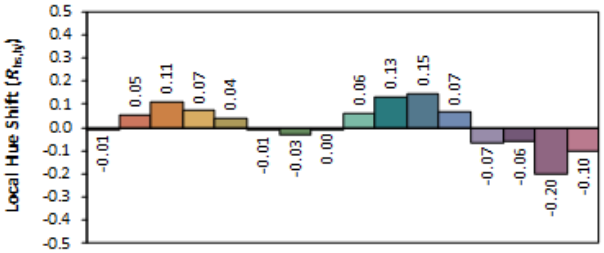
Date: 2026/3/24

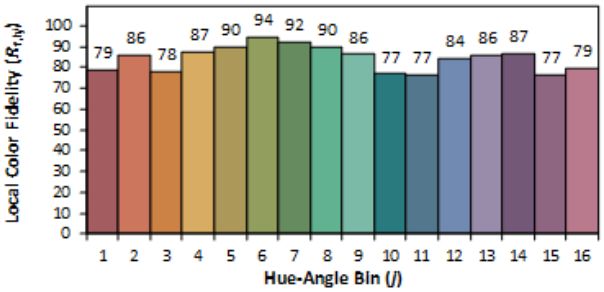
Model: LA28P805CUW-5000K

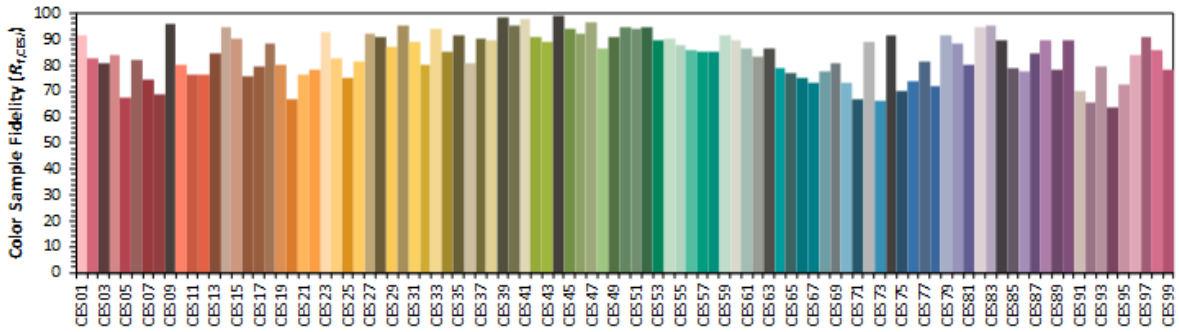












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

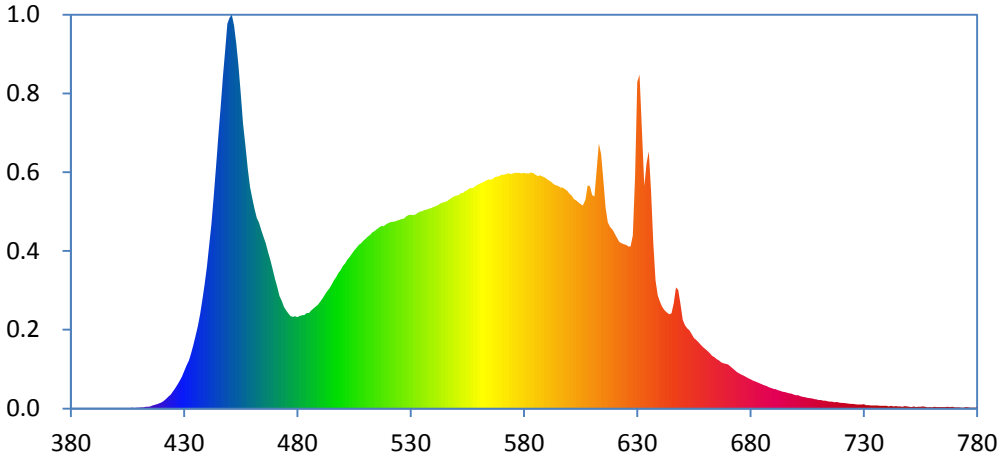
x	0.3520
y	0.3598
u'	0.2128
v'	0.4896

CIE 13.3-1995 (CRI)

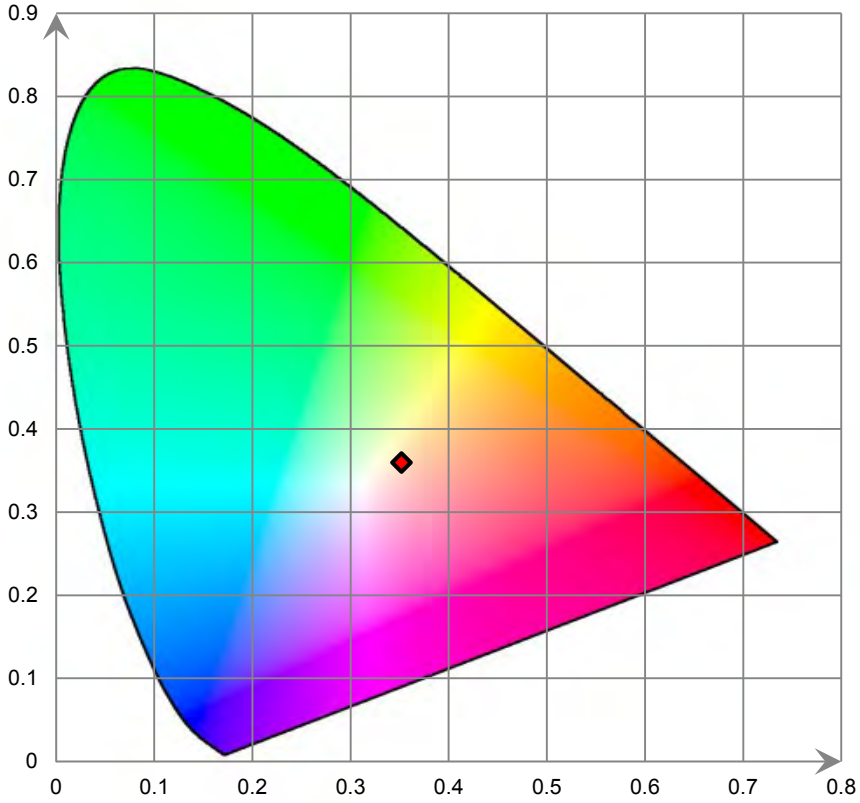
R_a	84
R_9	15

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

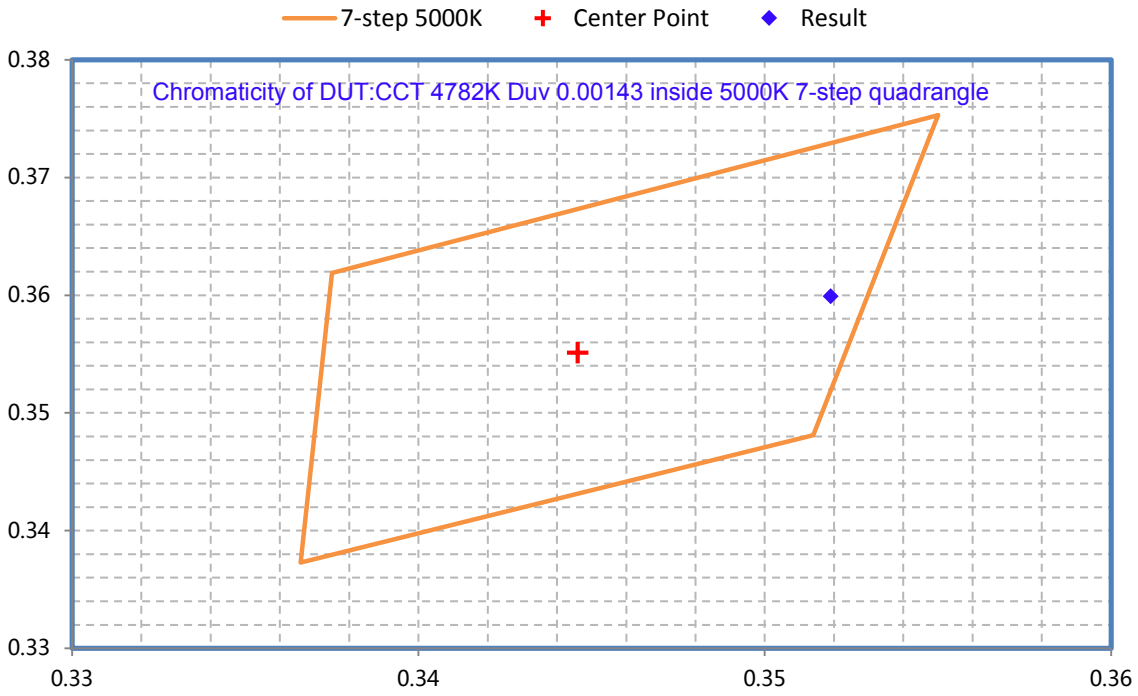
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

Electrical Measurement

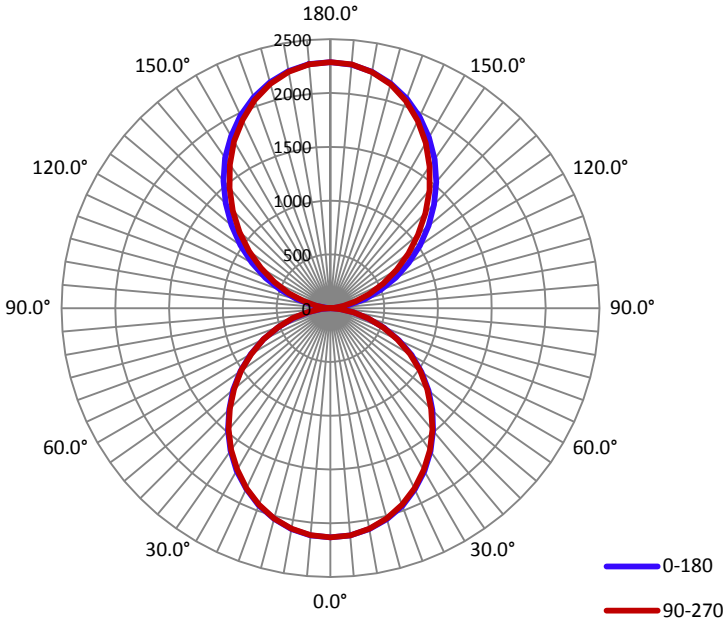
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.688	82.17	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
11314.02	137.69	2289.6	1.22	1.22

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	180.0	180.7	263.4	181.7	201.5
Field Angle (10% I_{max}):	203.7	182.5	183.6	182.8	188.2

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
5.0°	2119.7	2117.7	2117.9	2118.7	2119.7	2119.3	2118.9	2119.5
10.0°	2084.2	2085.7	2081.3	2083.6	2082.4	2084.6	2082.8	2087.7
15.0°	2030.4	2028.7	2022.3	2024.2	2023.1	2027.1	2023.3	2034.3
20.0°	1955.2	1964.1	1942.4	1945.3	1945.3	1948.8	1945.5	1957.9
25.0°	1857.0	1859.5	1857.2	1847.5	1848.9	1851.2	1848.9	1863.6
30.0°	1748.4	1752.5	1736.9	1736.4	1735.2	1740.6	1740.2	1756.1
35.0°	1623.7	1624.6	1609.3	1609.9	1611.2	1614.9	1615.1	1629.5
40.0°	1485.0	1487.7	1470.0	1473.9	1473.3	1478.0	1479.1	1493.3
45.0°	1340.8	1345.7	1323.6	1323.9	1326.1	1330.9	1329.8	1345.9
50.0°	1192.4	1195.3	1170.9	1172.6	1174.2	1176.1	1182.5	1196.7
55.0°	1035.5	1040.1	1011.6	1012.8	1019.2	1018.2	1022.7	1035.7
60.0°	870.4	873.7	848.7	847.5	853.7	854.5	857.8	871.0
65.0°	703.2	705.3	682.4	682.8	686.9	689.6	690.6	702.2
70.0°	530.4	533.8	517.2	519.9	521.2	523.8	522.8	529.8
75.0°	364.1	365.1	357.1	359.5	365.5	364.9	362.2	364.3
80.0°	211.8	214.7	212.4	216.1	221.1	215.3	213.8	212.8
85.0°	84.8	86.7	87.7	88.5	93.3	89.6	87.3	86.1
90.0°	0.0	3.3	5.2	5.6	4.5	4.3	4.1	2.5
95.0°	58.2	53.3	45.8	34.7	32.2	33.2	40.9	49.7
100.0°	181.4	168.2	136.8	122.8	120.7	122.4	132.5	165.1
105.0°	334.6	316.0	272.9	242.9	239.2	239.6	267.7	314.3
110.0°	499.1	478.4	430.1	387.4	381.8	386.0	425.6	478.8
115.0°	673.3	649.5	600.4	550.9	541.4	552.3	597.9	652.2
120.0°	842.5	824.8	768.0	717.0	710.8	718.9	769.5	831.4
125.0°	1014.9	1001.5	944.3	891.4	884.8	897.6	949.6	1011.6
130.0°	1191.3	1175.0	1118.3	1069.4	1064.0	1075.8	1131.7	1190.1
135.0°	1361.6	1350.5	1295.8	1251.0	1247.1	1257.2	1312.9	1366.6
140.0°	1529.8	1522.8	1471.6	1431.2	1431.6	1439.8	1486.9	1541.4
145.0°	1688.4	1684.4	1638.6	1613.2	1606.2	1621.5	1659.9	1702.4
150.0°	1833.7	1829.3	1799.0	1778.1	1773.6	1786.8	1815.5	1851.8
155.0°	1961.6	1961.6	1937.9	1922.2	1923.6	1931.1	1953.4	1982.9
160.0°	2073.7	2075.4	2060.1	2049.3	2048.9	2057.2	2073.9	2092.7
165.0°	2163.5	2165.1	2156.9	2149.9	2154.8	2157.3	2169.1	2179.0
170.0°	2231.2	2234.7	2230.4	2226.2	2229.3	2231.4	2238.0	2243.8
175.0°	2270.8	2273.5	2274.1	2274.1	2275.6	2276.2	2277.2	2278.9
180.0°	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
5.0°	2119.3	2118.1	2117.0	2118.9	2117.9	2117.9	2115.6	2115.4
10.0°	2084.8	2085.3	2084.6	2082.8	2082.0	2081.3	2078.2	2081.1
15.0°	2025.4	2030.2	2028.7	2025.2	2022.3	2021.1	2019.4	2025.2
20.0°	1949.7	1953.4	1950.1	1945.5	1942.4	1941.6	1939.7	1953.6
25.0°	1851.0	1859.5	1849.8	1845.0	1847.3	1842.1	1843.8	1850.0
30.0°	1744.3	1749.9	1737.1	1736.9	1732.9	1730.5	1728.4	1742.4
35.0°	1617.6	1624.6	1608.3	1607.7	1607.7	1603.9	1598.4	1612.8
40.0°	1481.1	1485.7	1471.6	1471.0	1469.8	1465.9	1461.5	1475.1
45.0°	1331.7	1338.9	1325.5	1323.6	1323.0	1316.8	1319.3	1332.9
50.0°	1179.4	1188.5	1171.5	1165.5	1170.5	1163.9	1166.8	1181.6
55.0°	1021.9	1029.7	1009.1	1007.0	1012.0	1007.4	1009.3	1020.0
60.0°	856.6	864.6	845.2	844.0	849.3	845.2	844.4	855.1
65.0°	686.5	694.5	679.1	676.0	685.5	679.9	678.6	686.7
70.0°	513.7	520.3	510.6	512.5	519.9	509.0	511.9	518.7
75.0°	347.8	352.1	348.6	352.1	362.9	350.1	352.1	354.8
80.0°	196.7	202.5	201.4	206.0	217.5	206.0	205.2	202.7
85.0°	74.9	78.2	77.2	82.6	88.1	84.2	81.5	79.3
90.0°	0.0	0.0	2.1	2.3	2.7	2.3	1.7	2.3
95.0°	45.6	48.5	47.5	42.3	40.9	42.1	48.7	51.6
100.0°	165.9	166.8	143.4	131.5	135.4	131.9	142.2	164.5
105.0°	322.0	316.4	285.7	259.2	261.7	255.9	277.8	308.6
110.0°	490.8	481.1	447.3	411.6	411.1	406.2	436.1	470.2
115.0°	665.6	659.7	620.0	575.9	574.6	568.4	605.6	640.9
120.0°	841.9	837.2	794.0	751.1	746.3	739.1	776.1	813.2
125.0°	1019.4	1016.3	971.3	926.5	921.2	910.4	948.8	986.4
130.0°	1201.2	1193.8	1148.4	1109.2	1102.4	1089.8	1124.5	1161.4
135.0°	1377.1	1370.7	1324.3	1288.8	1281.5	1267.9	1300.1	1334.0
140.0°	1544.7	1546.8	1502.0	1469.4	1458.4	1444.0	1476.2	1507.3
145.0°	1705.7	1708.2	1666.7	1638.8	1628.9	1616.1	1640.9	1667.1
150.0°	1847.1	1855.3	1818.6	1798.2	1791.8	1780.2	1794.2	1815.3
155.0°	1976.1	1982.9	1961.2	1939.7	1932.3	1920.8	1936.0	1950.7
160.0°	2086.5	2093.5	2077.8	2063.0	2058.2	2050.8	2057.0	2064.8
165.0°	2174.0	2178.3	2169.9	2161.8	2157.1	2151.3	2154.2	2158.7
170.0°	2238.2	2240.5	2238.2	2233.5	2230.8	2226.2	2228.9	2227.9
175.0°	2276.4	2278.0	2278.7	2277.2	2275.1	2272.7	2274.1	2269.6
180.0°	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2

Test Model: LA28P805CUW-5000K & 80W 30% Up Light + 70% Down Light

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11402.7	≥3000	≥2700	Pass
Power(W)	81.46	None.	None.	N/A
Total Efficacy(lm/W)	139.97	≥125	≥121.25	Pass
CCT(K)	4757	4746~5312	No tolerances	Pass
Duv	0.00144	-0.004~0.008	No tolerances	Pass
IES R_f	84	70	69	Pass
IES R_g	96	89	88	
IES Rcs,h1	-12%	-12%~23%	-13%~24%	
R_a	84.3	≥80	≥79	
R_9	17	≥0	≥-1	

Goniophotometer Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	11408.76	≥3000	≥2700	Pass
Power(W)	81.46	None.	None.	N/A
Total Efficacy(lm/W)	140.05	≥125	≥121.25	Pass
Zonal Lumen Distribution(0-60°)	56.83%	0-60°≥40%	0-60°≥37%	Pass

Integrating Sphere THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9953	≥0.9	⩾0.87	Pass
120	THDi	4.08%	≤20%	⩽25%	Pass
277	Power Factor	0.9552	≥0.9	⩾0.87	Pass
277	THDi	6.49%	≤20%	⩽25%	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V6.0.
3. 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]

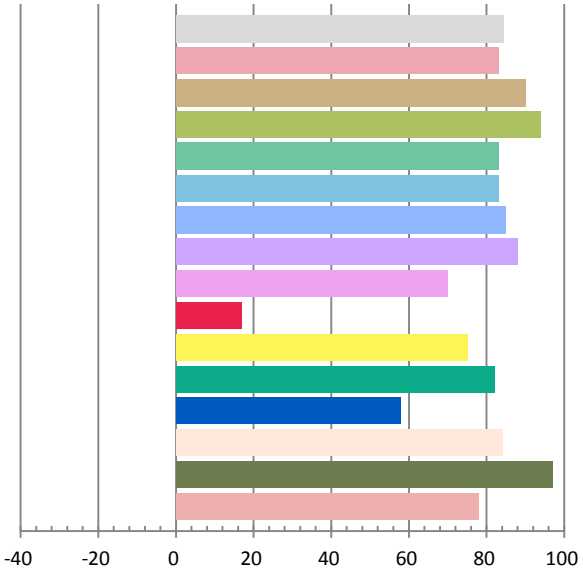
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.6822	81.46	0.9953	11402.7	139.97

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
34.125	4757	0.00144	0.3527	0.3605	0.2131	0.4901

Color Rendering Index

Ra			
84.3			
R1	R2	R3	R4
83	90	94	83
R5	R6	R7	R8
83	85	88	70
R9	R10	R11	R12
17	75	82	58
R13	R14	R15	
84	97	78	



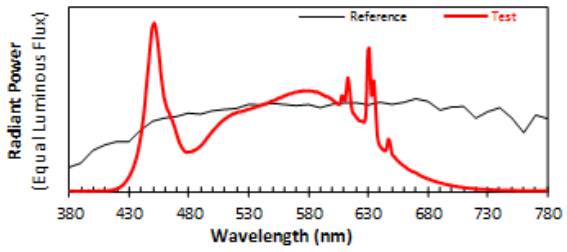
ANSI/IES TM-30-18 Color Rendition Report

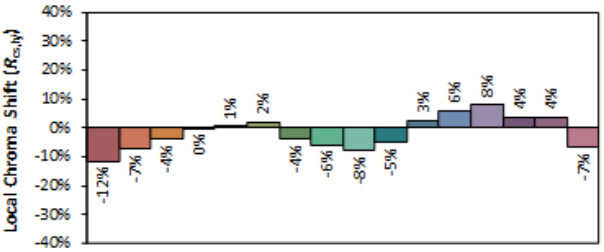
Source: User SPD

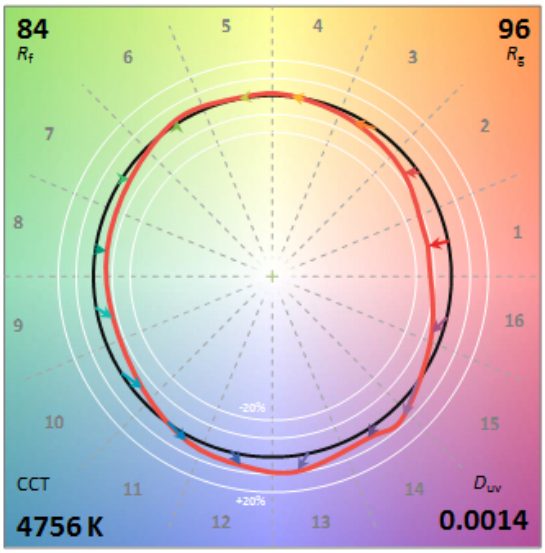
Manufacturer: P.Q.L., Inc.

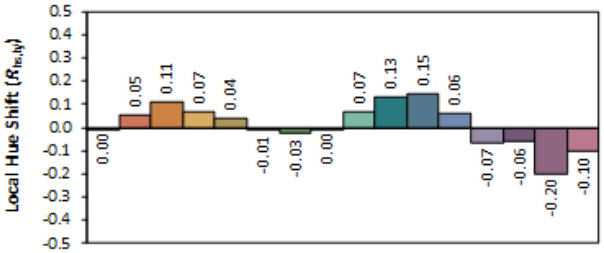
Date: 2026/3/24

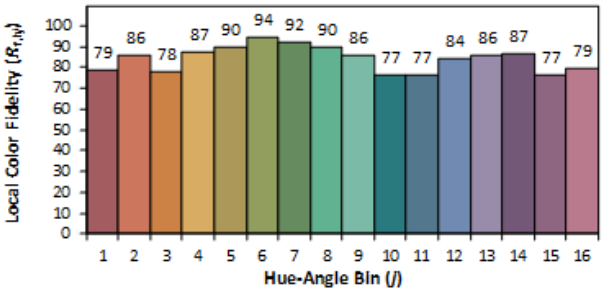
Model: LA28P805CUW-5000K

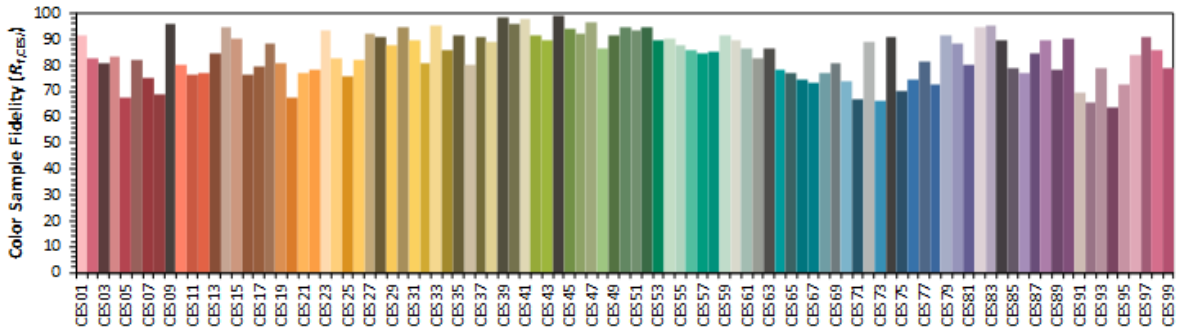












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

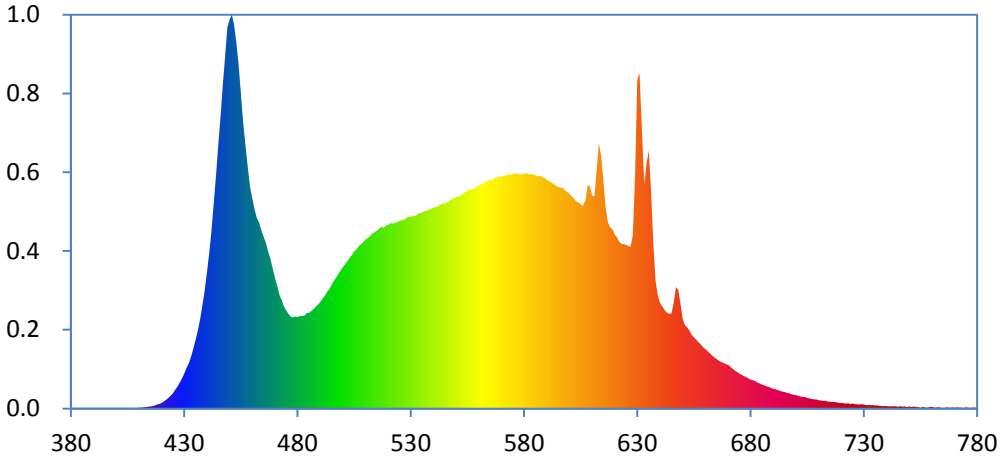
x	**0.3528**
y	**0.3605**
u'	**0.2131**
v'	**0.4901**

CIE 13.3-1995 (CRI)

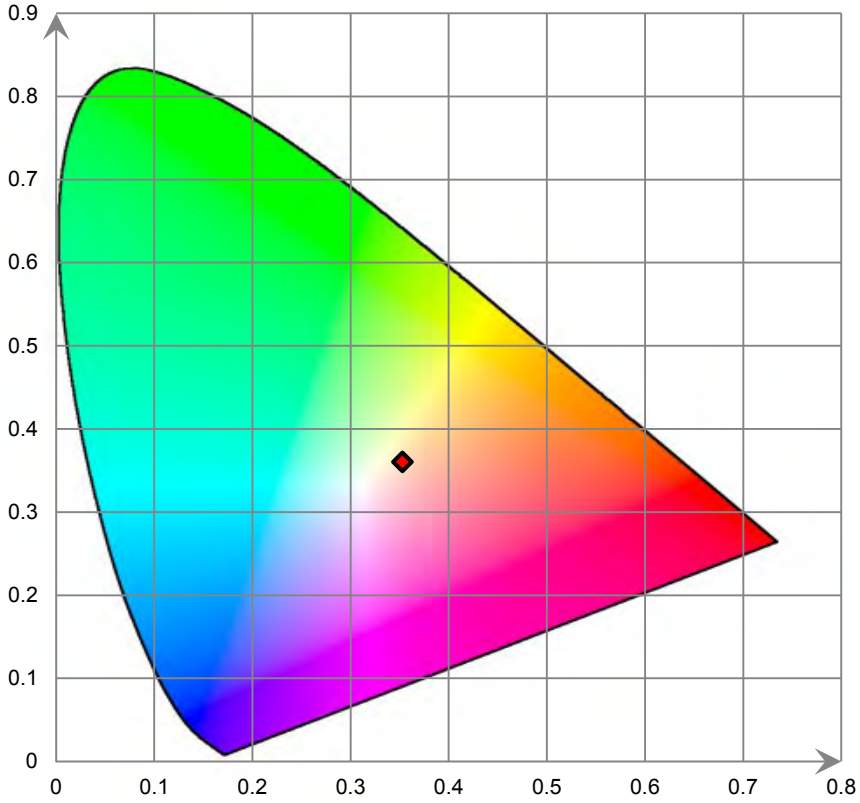
R_a	84
R_9	15

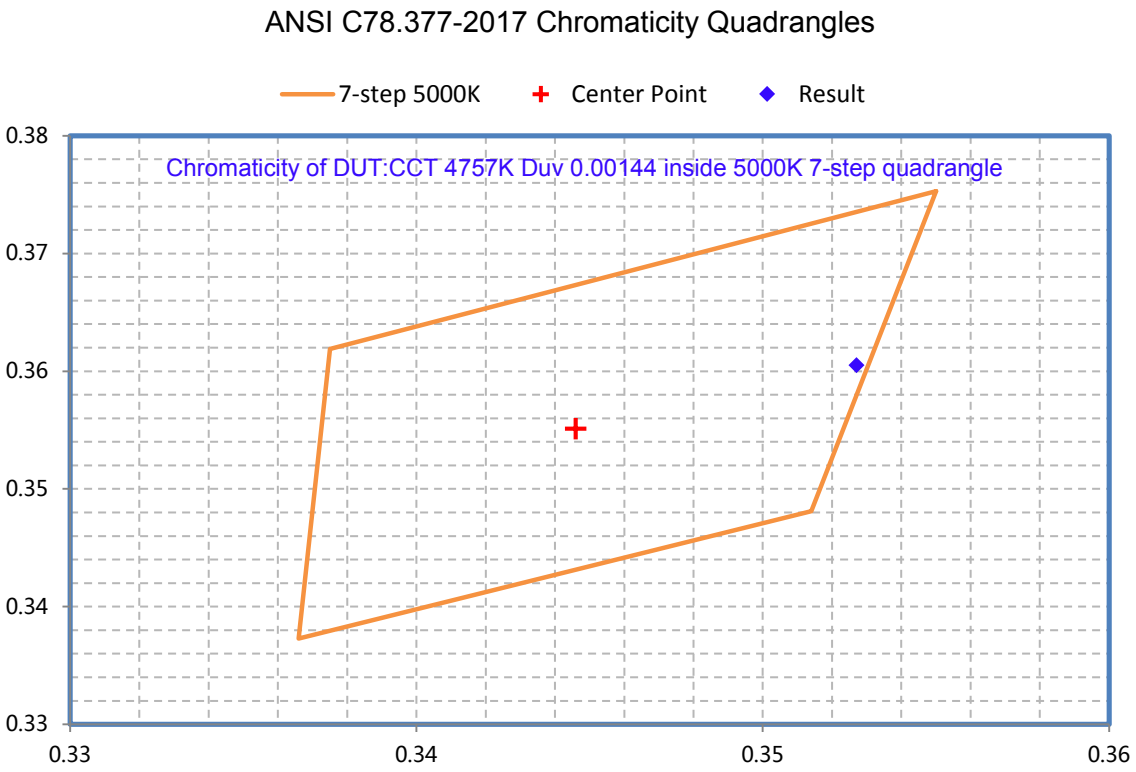
Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram




ANSI C78.377-2017 Chromaticity Quadrangles
7-step 5000K
Center Point
Result
Chromaticity of DUT:CCT 4757K Duv 0.00144 inside 5000K 7-step quadrangle
0.38
0.37
0.36
0.35
0.34
0.33
0.33
0.34
0.35
0.36

[Goniophotometer System]

Electrical Measurement

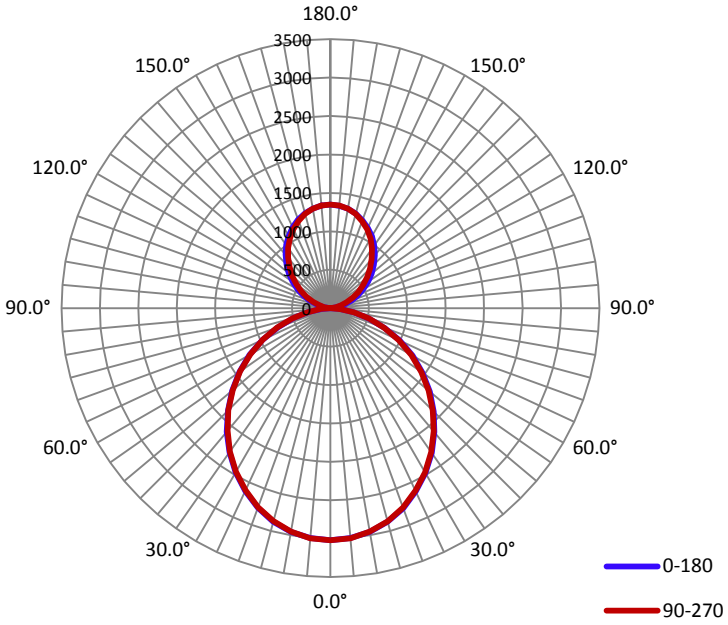
Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.682	81.46	0.995

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
11408.76	140.05	3022.0	1.22	1.21

Note: The electrical characteristics come from Integrating Sphere test result, Luminous intensity distribution derived from the goniophotometer testing of 4FT product in Report: RKSB260312005-10.

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	107.6	106.7	106.9	107.0	107.1
Field Angle (10% I_{max}):	221.2	192.1	227.4	225.0	216.4

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2
5.0°	3003.2	3003.4	3003.4	3004.0	3004.4	3004.8	3006.1	3010.6
10.0°	2955.5	2955.9	2952.6	2954.0	2953.6	2954.2	2955.5	2963.8
15.0°	2874.8	2876.7	2870.9	2874.0	2871.7	2873.6	2873.2	2886.0
20.0°	2771.8	2784.0	2757.5	2760.6	2761.9	2764.3	2761.7	2779.3
25.0°	2630.4	2641.4	2635.8	2622.6	2621.7	2629.4	2626.1	2646.0
30.0°	2475.6	2483.0	2465.0	2464.2	2467.3	2471.0	2465.8	2488.8
35.0°	2299.2	2305.6	2282.4	2283.6	2286.5	2294.6	2291.3	2312.0
40.0°	2105.8	2112.8	2085.2	2093.1	2088.3	2096.6	2100.4	2119.9
45.0°	1901.8	1908.8	1876.7	1877.7	1885.4	1892.0	1893.1	1911.9
50.0°	1688.7	1696.3	1662.8	1663.8	1668.1	1671.3	1676.4	1696.5
55.0°	1465.8	1477.6	1438.5	1441.4	1444.1	1445.1	1453.4	1473.3
60.0°	1235.1	1239.4	1206.9	1205.2	1213.9	1211.9	1219.8	1236.5
65.0°	995.7	1000.6	973.3	975.6	977.8	979.1	983.6	996.9
70.0°	750.8	754.2	735.7	739.4	742.8	745.7	745.2	752.9
75.0°	515.6	519.5	507.5	512.4	519.5	520.5	514.3	519.7
80.0°	299.1	306.0	302.5	307.8	313.9	307.0	307.2	304.3
85.0°	122.3	124.2	128.9	131.6	135.2	130.0	129.1	123.6
90.0°	1.5	4.8	6.8	8.7	7.5	7.9	7.3	5.6
95.0°	33.2	31.1	26.9	21.1	19.5	18.9	23.2	28.8
100.0°	105.5	98.1	80.6	72.6	71.1	70.7	78.2	95.6
105.0°	194.9	185.3	160.7	142.6	140.8	142.2	157.8	184.1
110.0°	292.1	279.9	253.7	228.0	225.3	227.6	250.6	280.5
115.0°	393.9	380.6	350.3	322.8	319.2	322.8	348.1	384.5
120.0°	495.0	484.9	450.7	420.2	416.7	422.5	450.7	488.6
125.0°	598.3	587.9	552.7	521.6	518.0	525.3	556.6	593.7
130.0°	700.1	690.9	655.7	626.0	624.4	628.7	661.1	697.8
135.0°	802.0	794.0	760.8	733.6	730.9	736.1	768.3	806.0
140.0°	899.9	894.7	864.4	841.6	837.1	846.2	873.4	904.9
145.0°	994.8	989.9	963.5	944.9	943.2	950.1	972.7	1002.9
150.0°	1079.4	1076.9	1056.4	1042.3	1044.6	1048.1	1065.5	1088.7
155.0°	1154.5	1152.8	1139.1	1129.0	1131.9	1136.4	1148.6	1165.4
160.0°	1220.0	1222.0	1209.8	1205.0	1205.7	1210.4	1218.5	1230.1
165.0°	1273.2	1275.5	1268.1	1266.0	1269.1	1270.1	1274.9	1282.4
170.0°	1313.0	1314.9	1311.8	1308.9	1313.7	1313.5	1315.1	1317.8
175.0°	1337.3	1338.3	1338.7	1338.5	1340.8	1337.7	1339.4	1341.0
180.0°	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2	3021.2
5.0°	3003.8	3003.2	3005.0	3003.8	3004.2	3002.3	2999.6	3004.6
10.0°	2955.3	2956.1	2956.1	2952.4	2951.7	2949.5	2947.4	2952.0
15.0°	2874.2	2879.4	2875.9	2870.7	2867.6	2863.8	2862.0	2873.8
20.0°	2761.9	2772.2	2764.8	2760.0	2756.7	2752.7	2750.5	2771.0
25.0°	2624.8	2638.5	2625.2	2618.4	2617.0	2613.6	2611.4	2624.6
30.0°	2467.1	2479.7	2461.9	2461.3	2455.7	2452.2	2447.0	2467.9
35.0°	2291.3	2300.8	2279.3	2279.1	2277.8	2272.4	2266.2	2285.3
40.0°	2097.7	2105.3	2085.9	2083.6	2083.4	2076.1	2073.4	2095.2
45.0°	1886.4	1896.8	1878.3	1874.0	1876.7	1863.8	1869.0	1885.4
50.0°	1671.3	1684.7	1660.9	1656.5	1657.4	1649.5	1650.3	1671.5
55.0°	1446.1	1460.4	1434.7	1426.8	1432.7	1426.8	1426.6	1446.7
60.0°	1214.8	1226.0	1198.6	1194.7	1203.8	1197.0	1197.0	1212.9
65.0°	973.3	984.3	959.6	957.7	971.0	962.3	961.9	974.1
70.0°	727.6	735.9	722.9	725.3	735.7	721.2	725.8	731.1
75.0°	492.3	499.6	494.0	498.1	513.5	494.8	495.9	497.7
80.0°	278.4	287.3	283.8	291.3	306.6	292.7	291.3	286.9
85.0°	105.9	110.1	113.8	116.1	125.0	119.8	116.5	112.8
90.0°	0.0	2.5	3.5	3.7	3.5	4.1	4.6	4.1
95.0°	25.5	28.8	28.6	24.5	24.0	24.9	28.2	30.7
100.0°	97.6	97.2	82.9	77.1	79.8	78.6	82.5	94.9
105.0°	188.0	187.0	167.7	150.9	153.0	149.9	161.7	180.8
110.0°	286.7	283.6	263.3	239.6	240.1	236.9	255.6	277.6
115.0°	391.8	385.4	361.1	337.7	338.5	331.9	352.8	375.0
120.0°	495.4	490.5	464.1	437.8	437.6	431.8	453.4	476.6
125.0°	600.1	597.0	569.5	541.5	540.4	535.2	553.9	578.0
130.0°	704.8	703.0	674.3	648.6	645.3	638.5	660.3	683.1
135.0°	808.1	807.0	775.7	754.4	751.3	742.1	762.4	783.8
140.0°	910.5	909.6	879.6	860.9	857.2	848.3	863.2	883.5
145.0°	1003.1	1004.2	977.8	960.8	958.1	949.4	961.5	979.7
150.0°	1087.3	1092.5	1069.9	1053.5	1051.8	1042.5	1053.3	1069.7
155.0°	1163.4	1167.1	1151.8	1137.9	1137.5	1130.6	1137.2	1146.0
160.0°	1227.4	1231.8	1221.4	1210.2	1211.0	1204.2	1207.7	1216.0
165.0°	1279.7	1282.6	1275.3	1271.4	1269.7	1264.5	1265.8	1269.3
170.0°	1316.4	1318.2	1318.4	1315.1	1314.9	1309.1	1309.1	1311.2
175.0°	1340.0	1341.0	1341.4	1338.5	1341.6	1337.9	1337.3	1335.6
180.0°	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6	1346.6

6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
Integrating Sphere	INVENTFINE	Dia 1.5m	JWWCV090112	2025-06-18	2026-06-17
Power Meter	INVENTFINE	WT500	GSJWQ20009	2025-04-10	2026-04-09
Spectral photometer	INVENTFINE	CMS-3S	GSGSE100017	2025-06-18	2026-06-17
AC Power Supply	INVENTFINE	CHP500	JWJSD010071	2025-04-10	2026-04-09
Standard Light Source	Osram	24V/50W	JWWCR020105	2025-07-10	2027-07-09
Thermal Meter	ANYMETRE	TH-20E	N/A	2025-06-10	2026-06-09
DC Power Supply	INVENTFINE	WL3005	JWWCP020069	2025-04-10	2026-04-09
AC Power Supply	INVENTFINE	CHP-5KVA	900511765	2025-04-10	2026-04-09
DC Power Supply	INVENTFINE	WL3010	JWDMP030001	2025-04-10	2026-04-09
Power Meter	INVENTFINE	WT500	GSDSQ200007	2025-04-10	2026-04-09
Goniophotometer	INVENTFINE	GPM-1900	YWGCF120001	2025-06-03	2026-06-02
Wireless Weather Station	ZHONGXING	KG218	N/A	2025-04-08	2026-04-07
Standard Light Source	INVENTFINE	N/A	JWBYR040008	2025-11-02	2027-11-01
Digital Multimeter	FLUKE	115C	37840512WS	2025-04-10	2026-04-09
Hybrid Recorder	YOKOGAWA	DR230	47JH0903	2025-04-10	2026-04-09
Power Supply	SC	SC/BP-11003	1608110030553	2025-04-10	2026-04-09

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-79-19. 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.

Goniophotometer System
Type C goniophotometer was used for measuring luminous intensity distribution. The vertical angle (γ) test intervals were set no more than 1 degree while data for 5 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

ISTMT Test
The LED which has the highest temperature was measured at the location of LED case which is specified by LED source manufacturer and detailed by LM-80 report. The drive current of LED package/module/ array was calculated as the total output current of the driver measured by multimeter, divided by the number of branches in parallel of LEDs.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with "#".
2. The test data was only valid for the test sample(s). This report must not be duplicated or used in part without prior written consent from the laboratory.
3. This report may contain data that are not covered by the accreditation scope and marked with "★".
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.
6. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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