



TEST REPORT

For

LED ONE CORPORATION

12437 Bellegrave Ave Eastvale CA US 91752

Model Number:	LOC-4FTWA-MW(22/28/34/44)MCCT(35/40/50)D-MS	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V5.1	
Standards:	<p>IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products</p> <p>ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting</p> <p>ANSI/UL 1598-2008: Standard for Safety of Luminaires</p> <p>CIE 190:2010 Calculation and presentation of unified glare rating tables for indoor lighting luminaires</p> <p>IES TM-30-18: IES Method for Evaluating Light Source Color Rendition</p>	
Project Engineer:	Bay Wang	
Report Number:	PKS210911188-10	
Sample Size:	One sample was received on 2020-12-16 and used for testing.	
Test Date:	2020-12-22 to 2020-12-30	
Report Date:	2021-09-12	
Reviewed By:	Seven Xia/ EE Engineer	
Prepared By:	<p>Bay Area Compliance Laboratories Corp. (Kunshan). No. 248 Chenghu Road, Kunshan, Jiangsu Province, People's Republic of China Tel: +86-0512-86175000 Fax: +86-0512-88934268</p>	

1. Product Information and Description[#]

Product Primary Use:	Low Bay Luminaires (Commercial and Industrial)
Voltage And Frequency:	120-277VAC, 50/60Hz
LED Source Manufacturer:	Lumileds Holding B.V.
LED Source Model:	L128-xx80RA35000Q1
Driver Model:	SDU42CS100V42DN3B
Auxiliary Ballast Model:	NA
Auxiliary Housing Model:	NA
White Tunable:	Yes

Note:

1. The applicant *LED ONE CORPORATION* declared that their products are the same to the product in report# RKSB201216004-10-1 and is authorized by original applicant to use their test data.
2. All the data in previous report (RKSB201216004-10-1) is shared in report.

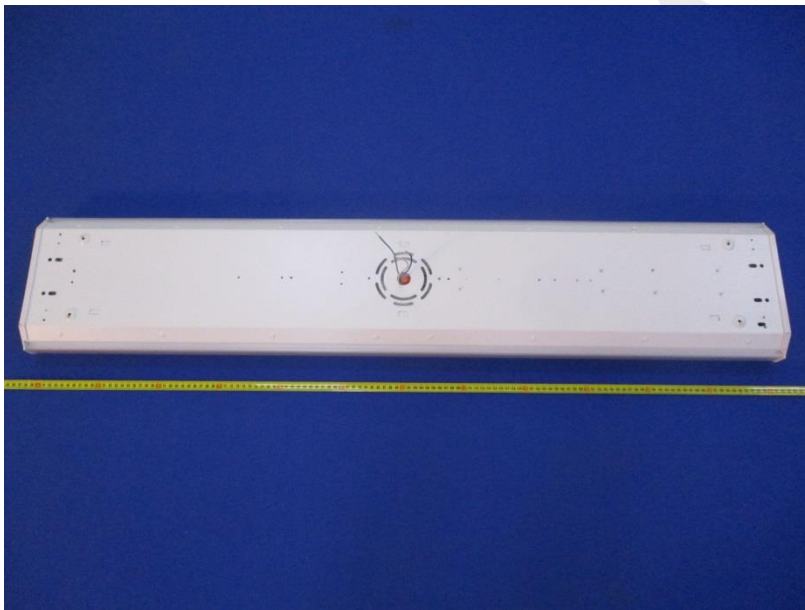
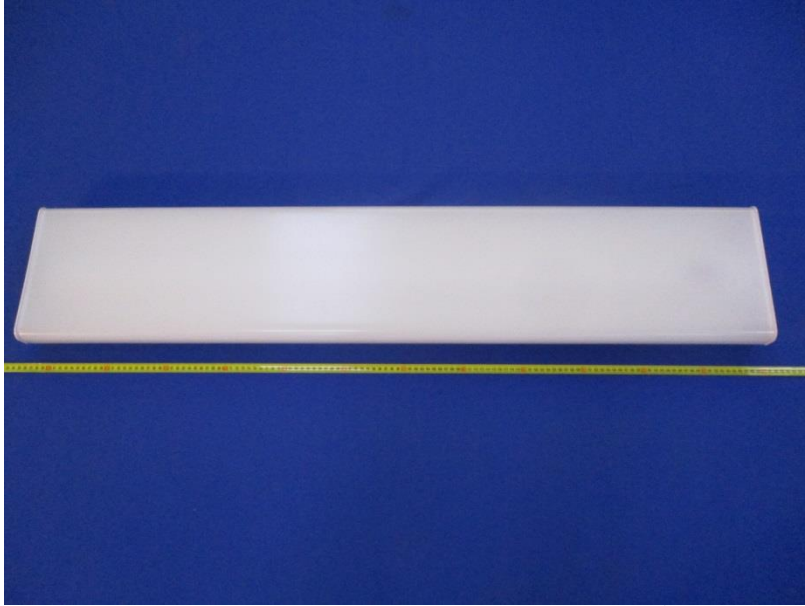
2. Product Rated Values[#]

Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminous Efficacy (lm/W)
LOC-4FTWA-MW(22/28/34/44)MCCT(35/40/50)D-MS	3500	6063.2	44	137.8
		4726	34	139
		3920	28	140
		3102	22	141
	4000	6380	44	145
		4964	34	146
		4116	28	147
		3256	22	148
	5000	6160	44	140
		4828	34	142
		4032	28	144
		3212	22	146

3. Test List

Test Model	Power(W)	CCT(K)	Test Item			
			Goniophotometer Test	Integrating Sphere Test	THDi and PF Test	In-Situ Temperature Measurement Test
LOC-4FTWA-MW(22/28/34/44)MCCT(35/40/50)D-MS	44	3500	Yes	Yes	Yes	Yes
		4000	NA	Yes	Yes	NA
		5000	NA	Yes	Yes	NA

4. Product Photo



5. Test Result

Control setting: 44W 3500K

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	6063.2	≥5000	4500≤Light output≤11000	Pass
Power(W)	43.99	None.	None.	N/A
Total Efficacy(lm/W)	137.84	≥130	≥126.1	Pass
CCT(K)	3404	None ⁱ	None.	N/A
Duv	-0.0000257	None ⁱ	None.	N/A
IES R _f	86	70	69	Pass
IES R _g	97	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R _a	84.4	≥80	≥79	
R ₉	14	≥0	≥-1	

Note:

- i. White-tunable products are not required to meet the chromaticity requirements in DLC V5.1.

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	6083.6	≥5000	4500≤Light output≤11000	Pass
Power(W)	44.02	None.	None.	N/A
Total Efficacy(lm/W)	138.25	≥130	≥126.1	Pass
Zonal Lumen Distribution(20-50°)	47.54%	20-50°≥30%	20-50°≥20%	Pass
UGR crosswise view	19.8	<25	No tolerances	Pass
UGR endwise view	21.9	<25	No tolerances	Pass

Goniophotometer THDi, PF Test; Orientation: Downward:

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9997	≥0.9	≥0.87	Pass
120	THDi	3.98%	≤20%	≤25%	Pass
277	Power Factor	0.9823	≥0.9	≥0.87	Pass
277	THDi	13.11%	≤20%	≤25%	Pass

Integrating Sphere THDi, PF Test; Orientation: Downward:

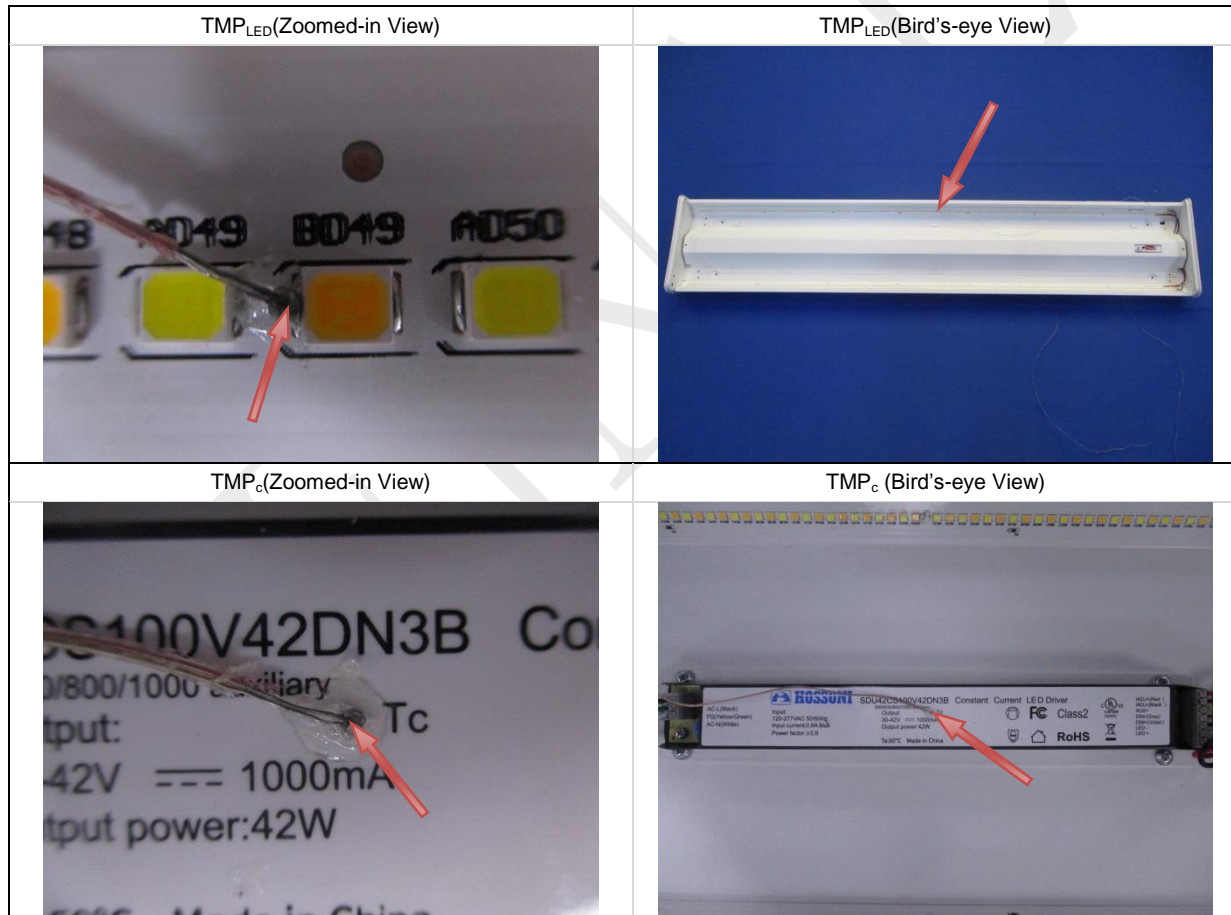
Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9975	≥0.9	≥0.87	Pass
120	THDi	4.07%	≤20%	≤25%	Pass
277	Power Factor	0.9807	≥0.9	≥0.87	Pass
277	THDi	13.24%	≤20%	≤25%	Pass

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)	32.6	≤115	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
TMP _c (°C)	72.2	≤75	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
Drive Current/Individual LED source(mA)	69.8	≤150	With +5% tolerance	Pass
L ₉₀ Lumen Maintenance Life (Hours)	51000	≥36000	None.	Pass
Color Maintenance	0.002	≤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 V5.1.
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]

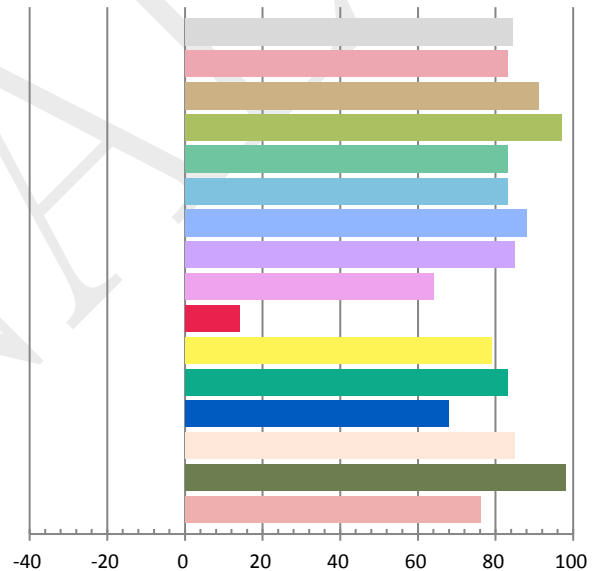
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
119.9	60	0.3677	43.99	0.9975	6063.2	137.84

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
18.432	3404	-0.0000257	0.4108	0.3933	0.2382	0.5132

Color Rendering Index

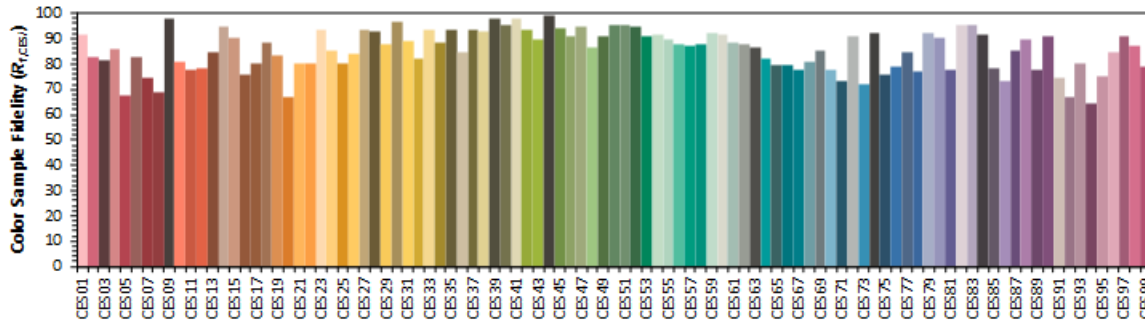
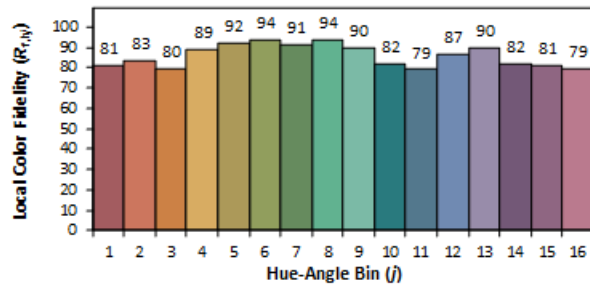
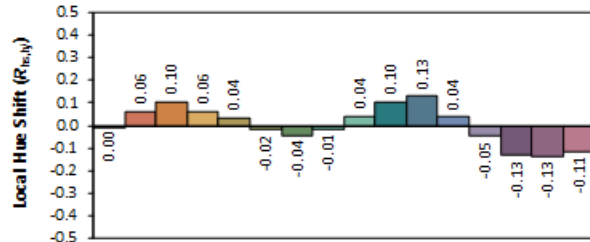
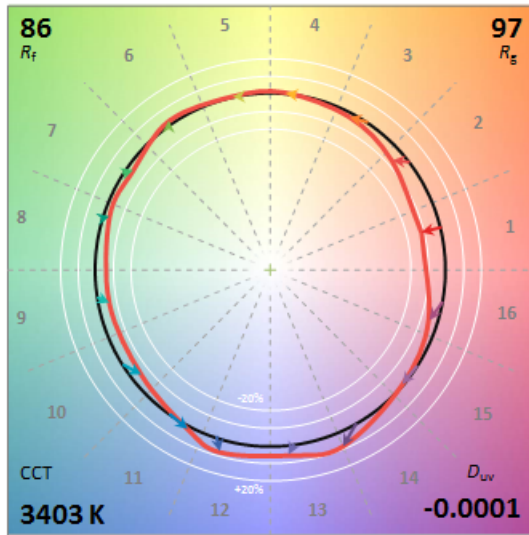
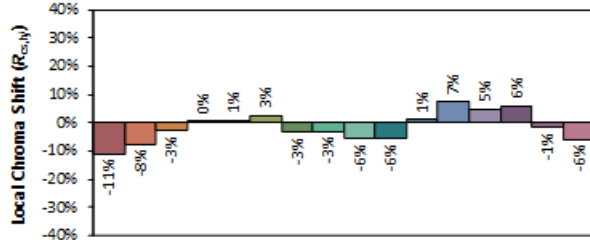
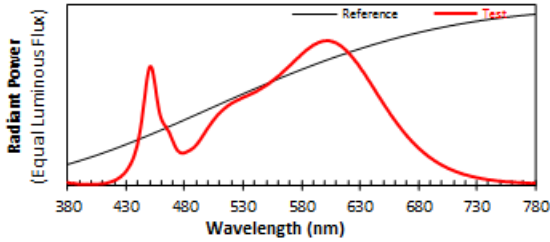
Ra			
84.4			
R1	R2	R3	R4
83	91	97	83
R5	R6	R7	R8
83	88	85	64
R9	R10	R11	R12
14	79	83	68
R13	R14	R15	
85	98	76	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2020/12/23

Manufacturer: LED ONE CORPORATION
Model: LOC-4FTWA-MW (22/28/34/44) MCCT (35/40/50) D-MS



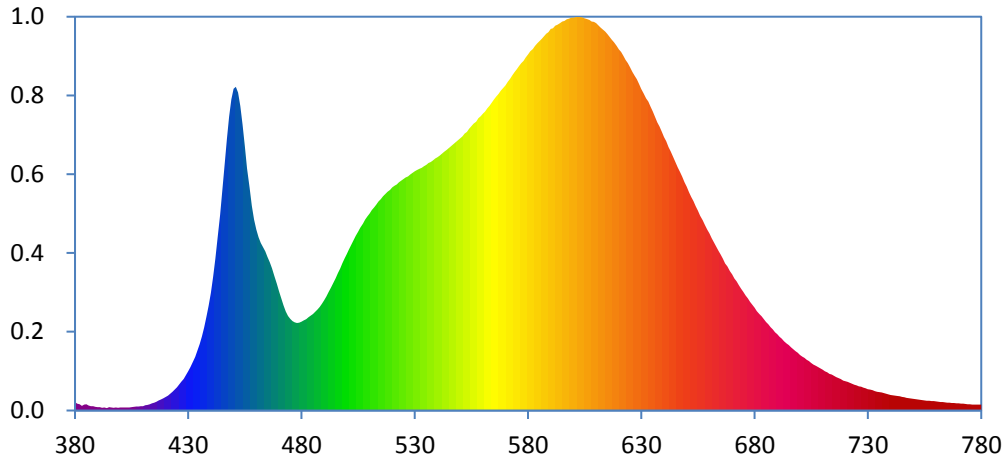
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4108
 y 0.3932
 u' 0.2382
 v' 0.5131

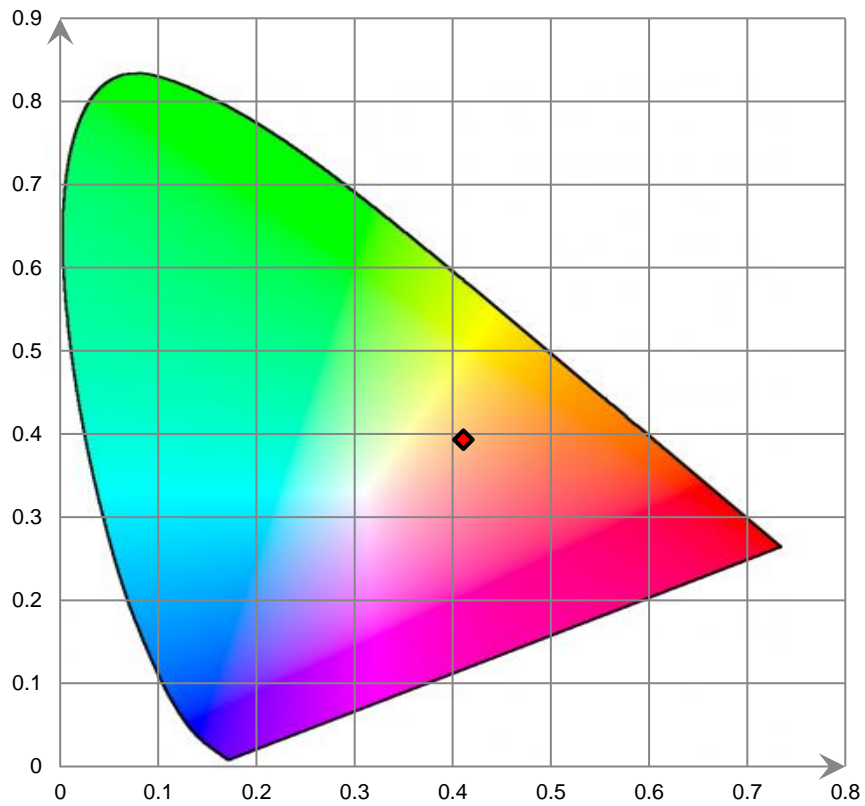
CIE 13.3-1995 (CRI)
 R_a 84
 R_9 14

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

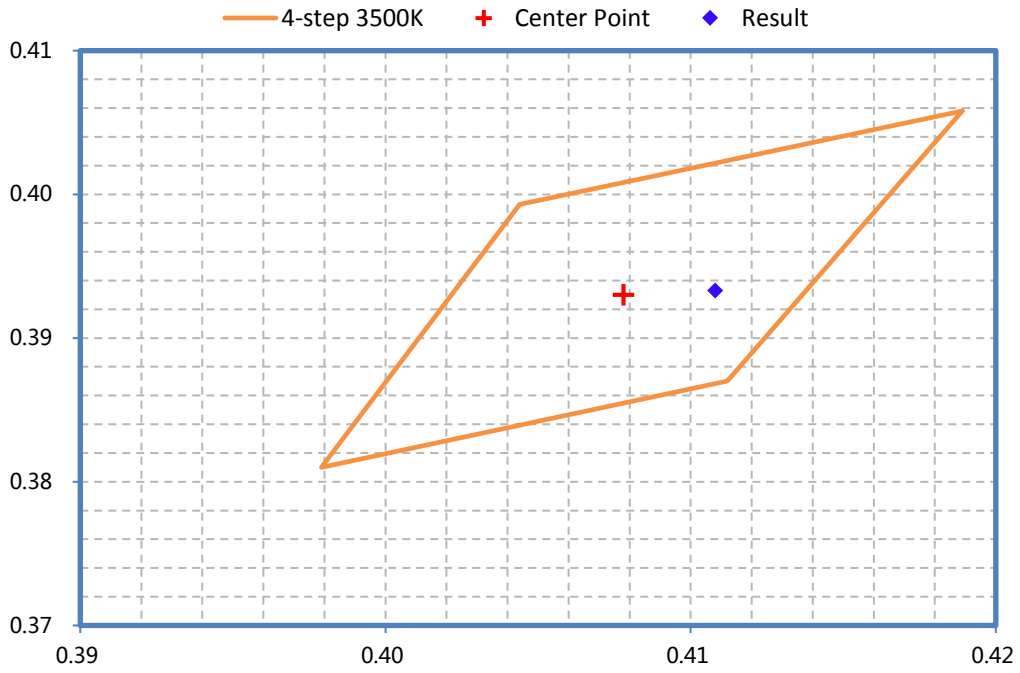
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



FENYU

[Goniophotometer System]

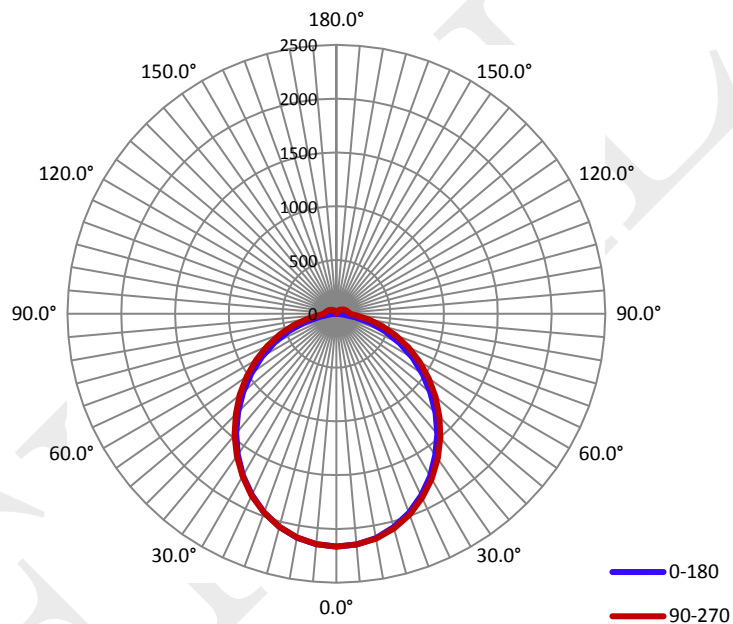
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.367	44.02	1

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I _{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
6083.6	138.25	2164.0	1.20	1.21

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I _{max}):	103.3	105.5	106.9	105.3	105.3
Field Angle (10% I _{max}):	156.8	162.8	166.9	162.7	162.3

Luminous Intensity (cd) Distribution Data

$\frac{C}{Y}$	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0
5.0°	2152.7	2151.1	2153.6	2154.9	2153.8	2155.1	2153.2	2155.4
10.0°	2115.4	2114.9	2118.3	2121.1	2121.9	2122.9	2120.5	2121.4
15.0°	2055.0	2055.0	2059.8	2064.2	2065.5	2066.5	2062.0	2063.5
20.0°	1969.3	1971.5	1978.8	1983.5	1988.0	1988.5	1981.8	1980.8
25.0°	1864.2	1868.1	1875.3	1883.5	1887.9	1890.9	1880.7	1878.6
30.0°	1742.8	1747.5	1758.3	1768.0	1773.2	1773.3	1761.4	1757.5
35.0°	1604.2	1613.9	1625.6	1635.3	1640.6	1642.9	1630.8	1622.4
40.0°	1459.2	1467.5	1481.8	1497.0	1503.0	1503.3	1487.3	1474.1
45.0°	1301.5	1316.1	1332.2	1347.8	1354.5	1357.6	1337.2	1321.1
50.0°	1142.1	1158.0	1177.3	1196.6	1203.8	1203.4	1183.0	1164.4
55.0°	981.4	999.3	1020.7	1043.1	1049.9	1049.3	1026.6	1003.5
60.0°	816.8	836.8	860.3	890.5	892.9	890.7	866.0	840.0
65.0°	648.9	675.6	703.2	732.0	742.1	738.2	708.4	674.2
70.0°	486.0	512.4	548.7	579.4	587.7	581.6	552.7	513.5
75.0°	325.9	357.8	396.8	432.9	441.5	431.8	400.9	357.7
80.0°	178.6	215.3	259.3	293.2	306.3	294.2	260.5	213.5
85.0°	56.5	97.1	143.5	180.9	192.8	177.9	143.2	94.1
90.0°	0.0	35.7	81.3	115.8	127.4	113.7	79.2	32.5
95.0°	0.0	29.5	73.3	106.1	117.7	104.8	70.2	26.8
100.0°	0.0	26.7	68.4	98.6	110.0	97.3	64.7	23.8
105.0°	0.0	24.0	62.6	92.0	101.8	90.1	59.0	21.1
110.0°	0.0	20.5	58.6	84.7	94.6	83.1	54.2	18.1
115.0°	1.3	19.9	51.6	77.8	87.3	76.2	48.3	16.8
120.0°	3.0	18.1	44.4	70.8	80.1	68.9	42.4	16.2
125.0°	4.0	17.7	41.9	61.4	69.1	59.5	40.3	15.5
130.0°	5.8	16.9	39.4	56.4	62.3	54.6	36.6	16.5
135.0°	6.6	18.3	34.5	50.8	56.3	49.1	31.5	16.5
140.0°	7.7	18.5	31.8	44.0	49.4	41.1	28.2	15.9
145.0°	8.7	19.2	29.3	38.8	41.7	35.9	25.9	14.7
150.0°	10.2	19.0	28.8	34.0	35.9	31.1	23.3	14.7
155.0°	11.7	19.4	28.1	31.5	31.3	28.1	18.8	14.1
160.0°	13.0	19.3	25.1	28.5	27.7	21.9	16.2	13.0
165.0°	13.6	17.4	22.2	23.6	22.1	17.6	13.9	13.6
170.0°	14.2	15.8	18.0	17.8	18.0	15.7	14.4	13.8
175.0°	14.3	15.0	15.6	13.5	15.6	15.0	14.6	14.3
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Luminous Intensity (cd) Distribution Data (cont.)

$\begin{matrix} C \\ \backslash \\ \gamma \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0	2164.0
5.0°	2150.1	2151.1	2151.0	2150.3	2148.7	2150.3	2147.2	2148.4
10.0°	2112.8	2114.2	2114.3	2112.8	2111.3	2110.5	2107.3	2109.5
15.0°	2051.0	2052.3	2052.3	2051.4	2048.9	2049.0	2043.3	2046.2
20.0°	1965.0	1968.6	1969.4	1968.8	1964.1	1965.3	1957.4	1960.5
25.0°	1858.4	1865.0	1866.3	1864.8	1863.1	1862.3	1851.2	1852.5
30.0°	1735.0	1742.2	1747.6	1747.2	1745.0	1743.2	1732.8	1728.2
35.0°	1598.8	1605.3	1611.5	1614.2	1613.2	1612.1	1596.8	1590.3
40.0°	1449.5	1458.6	1467.0	1472.8	1472.6	1471.0	1452.0	1443.9
45.0°	1290.0	1302.4	1315.4	1325.7	1322.2	1321.1	1301.6	1290.2
50.0°	1130.1	1145.8	1159.9	1173.1	1171.1	1169.7	1147.9	1130.7
55.0°	967.0	984.9	1001.3	1018.3	1017.5	1015.9	991.3	969.9
60.0°	801.0	821.9	839.6	861.6	863.1	861.4	832.4	808.7
65.0°	634.5	658.3	681.3	706.5	709.8	705.6	676.0	647.8
70.0°	467.6	494.9	526.3	554.4	556.4	550.6	522.5	486.3
75.0°	307.9	339.9	376.8	406.5	412.3	403.5	373.2	333.2
80.0°	161.7	197.8	236.7	270.2	281.0	269.3	234.0	192.8
85.0°	44.3	82.8	127.7	159.7	171.9	158.2	124.6	79.2
90.0°	0.0	30.9	73.0	103.9	115.5	102.8	70.2	28.8
95.0°	0.0	26.7	66.6	96.1	107.2	95.6	64.2	24.2
100.0°	0.0	23.7	61.1	91.2	100.4	89.3	59.0	21.3
105.0°	0.0	21.5	56.5	85.0	93.7	83.1	54.5	20.0
110.0°	0.0	18.4	52.1	78.6	87.0	76.9	50.2	17.1
115.0°	1.2	16.9	44.8	72.0	80.0	70.4	43.5	16.1
120.0°	2.4	16.4	40.6	64.1	73.7	62.5	39.5	15.3
125.0°	3.5	15.6	37.8	55.7	63.5	54.8	37.6	15.0
130.0°	4.4	16.0	34.8	50.6	57.9	50.1	34.6	15.8
135.0°	5.5	16.1	30.3	45.2	51.9	45.2	30.2	15.8
140.0°	6.9	15.3	27.9	38.9	45.3	38.8	27.6	15.8
145.0°	7.6	14.3	24.9	34.3	38.1	34.8	25.6	15.8
150.0°	8.9	14.4	24.2	29.9	33.0	30.5	25.4	16.1
155.0°	10.4	13.9	21.1	28.0	30.5	29.2	23.5	15.7
160.0°	11.0	13.9	18.5	23.9	26.8	25.8	21.3	15.4
165.0°	11.8	13.9	17.6	20.6	22.6	22.5	19.0	15.2
170.0°	12.8	14.1	15.6	17.4	17.9	19.2	16.8	15.2
175.0°	13.5	14.2	15.0	15.1	15.4	15.8	15.6	14.7
180.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Control setting: 44W 4000K

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	6380.5	≥5000	4500≤Light output≤11000	Pass
Power(W)	43.92	None.	None.	N/A
Total Efficacy(lm/W)	145.29	≥130	≥126.1	Pass
CCT(K)	4062	None ⁱ	None.	N/A
Duv	-0.001	None ⁱ	None.	N/A
IES R _f	85	70	69	Pass
IES R _g	96	89	88	
IES Rcs,h1	-11%	-12%~23%	-13%~24%	
R _a	85.4	≥80	≥79	
R ₉	20	≥0	≥-1	

Note:

- i. White-tunable products are not required to meet the chromaticity requirements in DLC V5.1.

THDi, PF Test; Orientation: Downward:

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9982	≥0.9	≥0.87	Pass
120	THDi	4.03%	≤20%	≤25%	Pass
277	Power Factor	0.9817	≥0.9	≥0.87	Pass
277	THDi	13.27%	≤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 V5.1.
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]

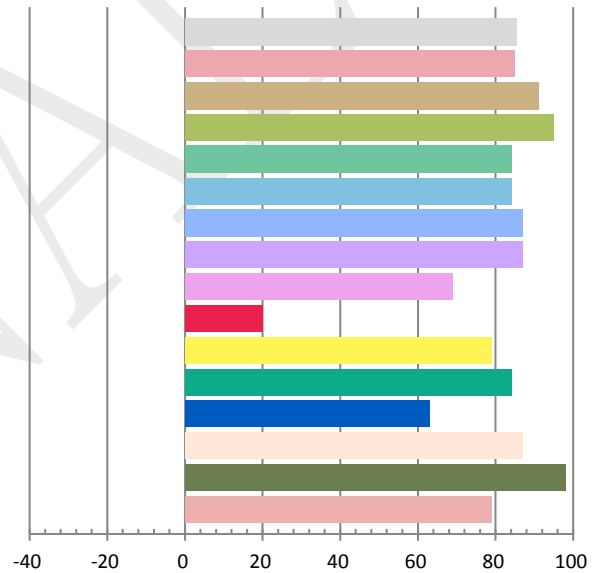
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
119.9	60	0.3668	43.92	0.9982	6380.5	145.29

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
19.740	4062	-0.001	0.3771	0.3726	0.2246	0.4992

Color Rendering Index

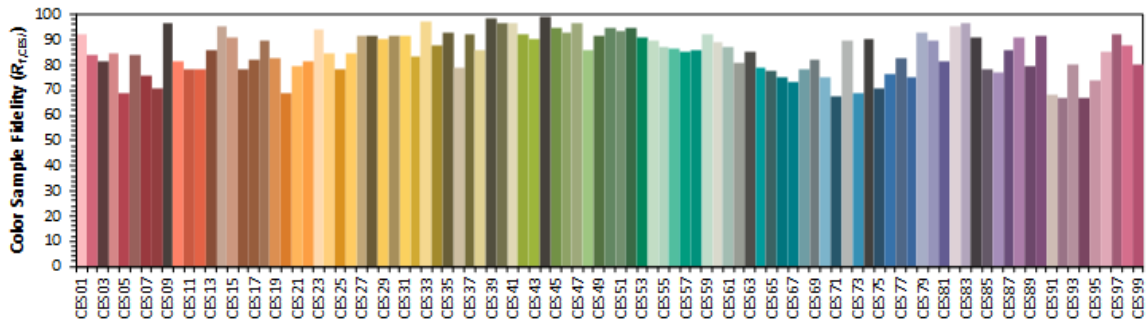
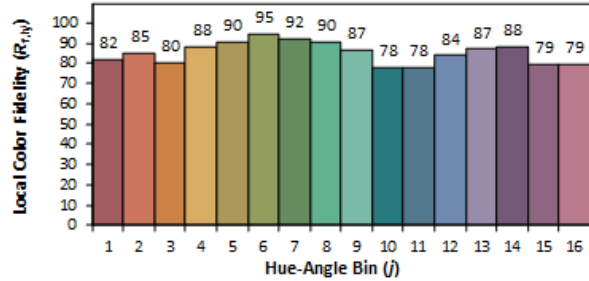
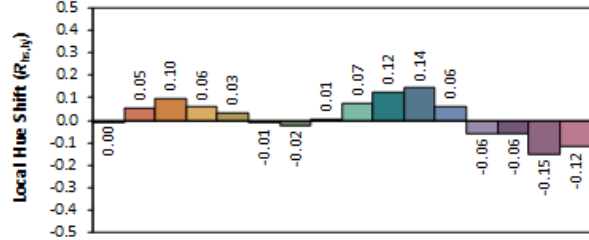
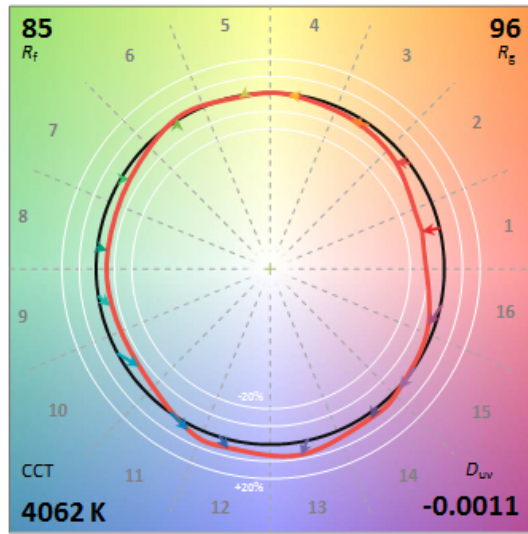
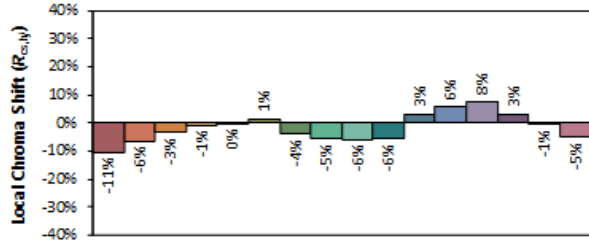
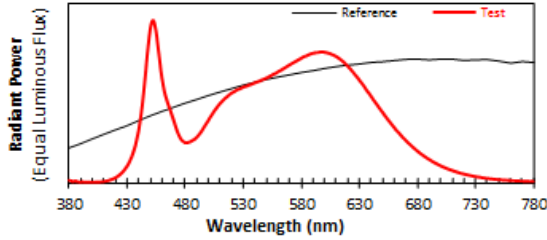
Ra			
85.4			
R1	R2	R3	R4
85	91	95	84
R5	R6	R7	R8
84	87	87	69
R9	R10	R11	R12
20	79	84	63
R13	R14	R15	
87	98	79	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2020/12/23

Manufacturer: LED ONE CORPORATION
Model: LOC-4FTWA-MW (22/28/34/44) MCCT (35/40/50) D-MS



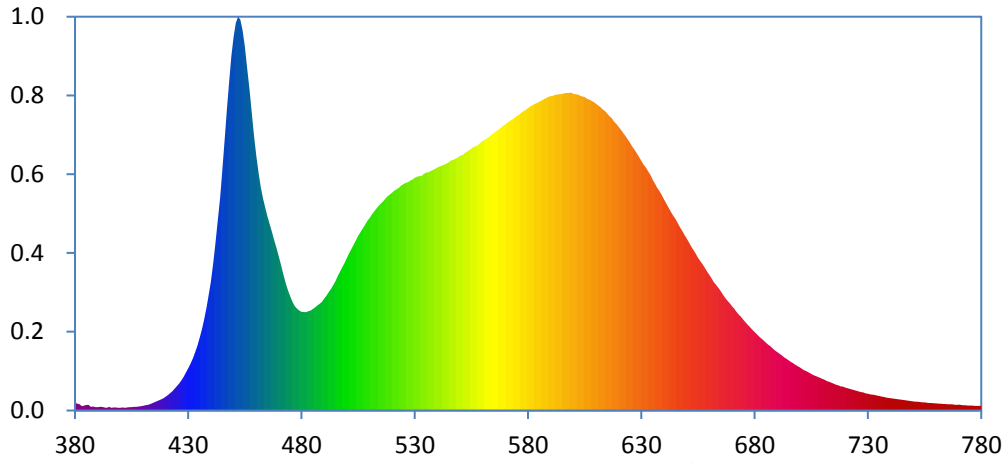
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x **0.3771**
 y **0.3724**
 u' **0.2246**
 v' **0.4991**

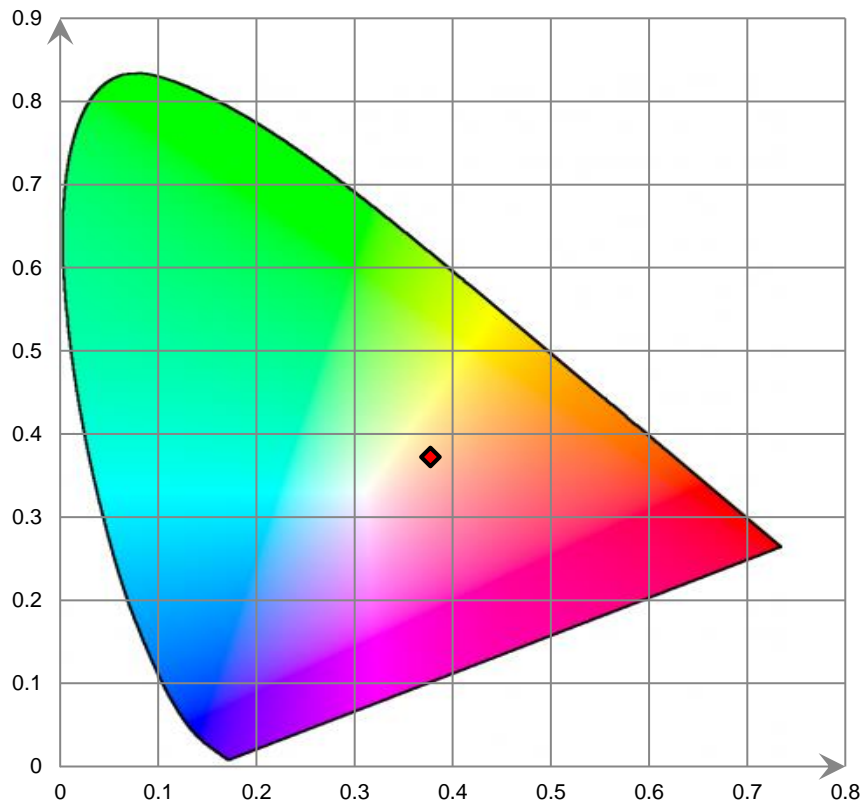
CIE 13.3-1995 (CRI)	
R_a	85
R_9	20

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

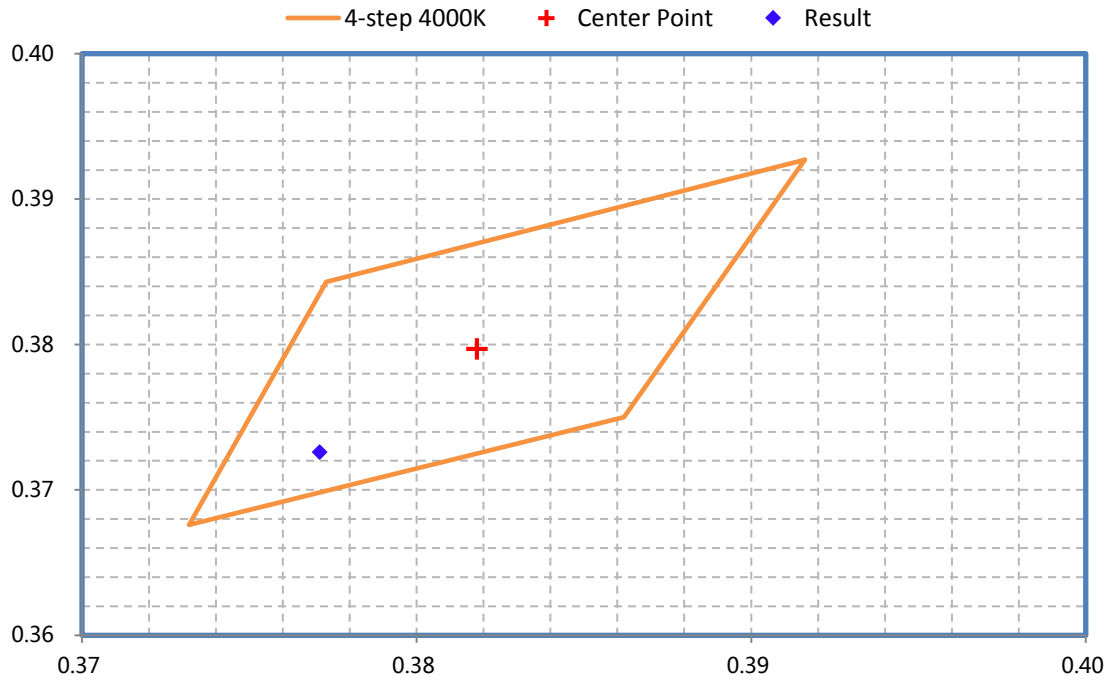
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



FENYU

Control setting: 44W 5000K

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	6161.4	≥5000	4500≤Light output≤11000	Pass
Power(W)	43.99	None.	None.	N/A
Total Efficacy(lm/W)	140.08	≥130	≥126.1	Pass
CCT(K)	4989	None ⁱ	None.	N/A
Duv	0.0014	None ⁱ	None.	N/A
IES R _f	84	70	69	Pass
IES R _g	97	89	88	
IES Rcs,h1	-12%	-12%~23%	-13%~24%	
R _a	83.4	≥80	≥79	
R ₉	13	≥0	≥-1	

Note:

- i. White-tunable products are not required to meet the chromaticity requirements in DLC V5.1.

THDi、PF Test; Orientation: Downward:

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9978	≥0.9	≥0.87	Pass
120	THDi	4.17%	≤20%	≤25%	Pass
277	Power Factor	0.9815	≥0.9	≥0.87	Pass
277	THDi	13.19%	≤20%	≤25%	Pass

Note:

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

Test Data

[Integrating Sphere System]

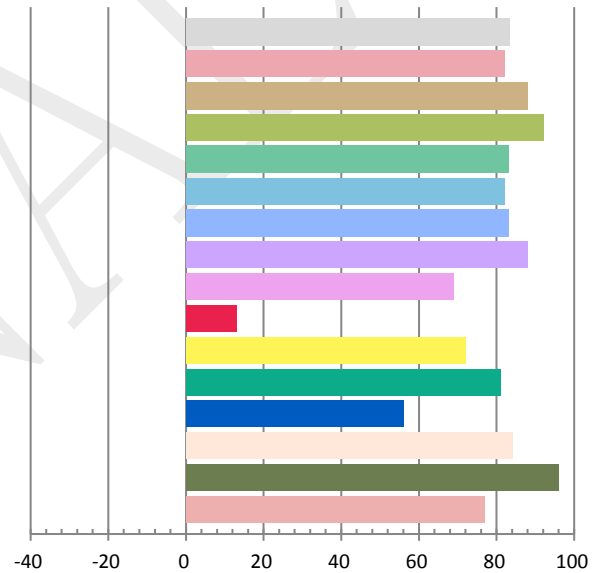
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
119.9	60	0.3675	43.99	0.9978	6161.4	140.08

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
19.256	4989	0.0014	0.3457	0.3548	0.2105	0.4863

Color Rendering Index

Ra			
83.4			
R1	R2	R3	R4
82	88	92	83
R5	R6	R7	R8
82	83	88	69
R9	R10	R11	R12
13	72	81	56
R13	R14	R15	
84	96	77	



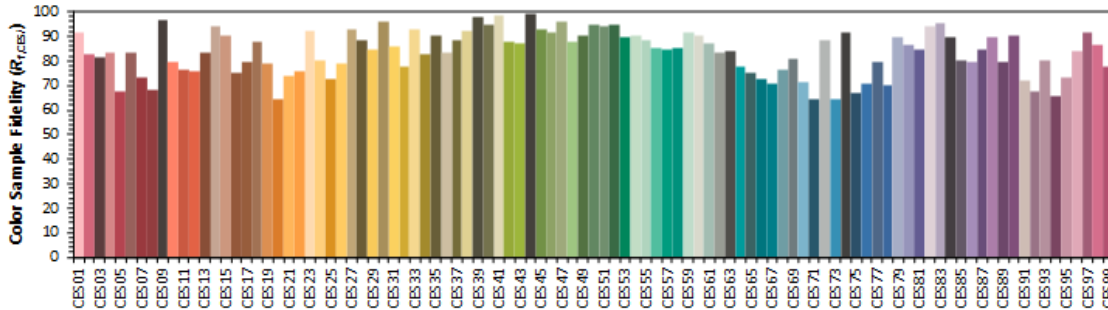
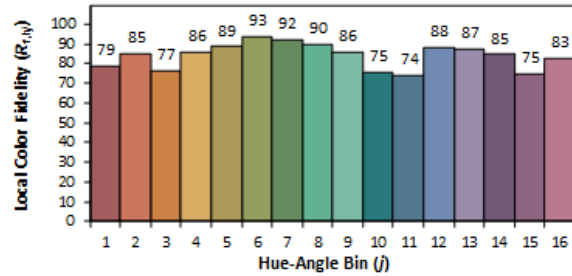
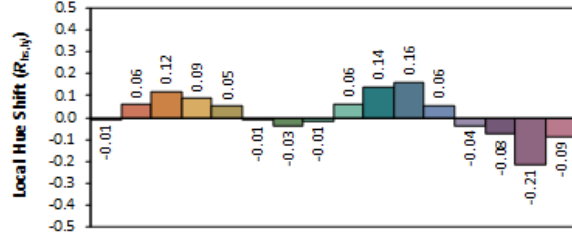
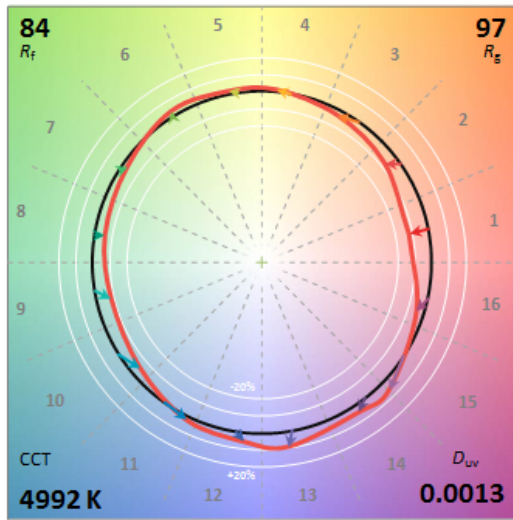
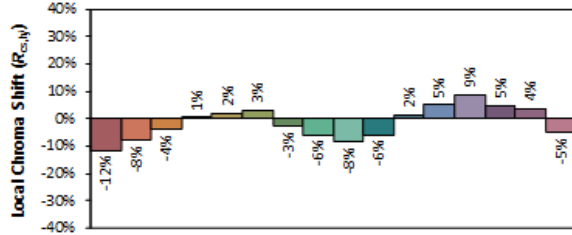
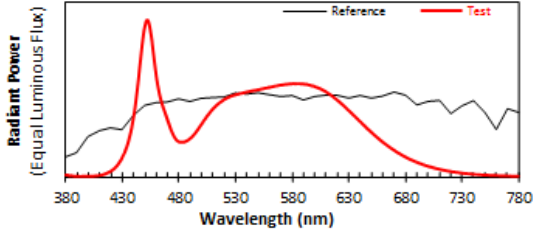
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: LED ONE CORPORATION

Date: 2020/12/23

Model: LOC-4FTWA-MW (22/28/34/44) MCCT (35/40/50) D-MS



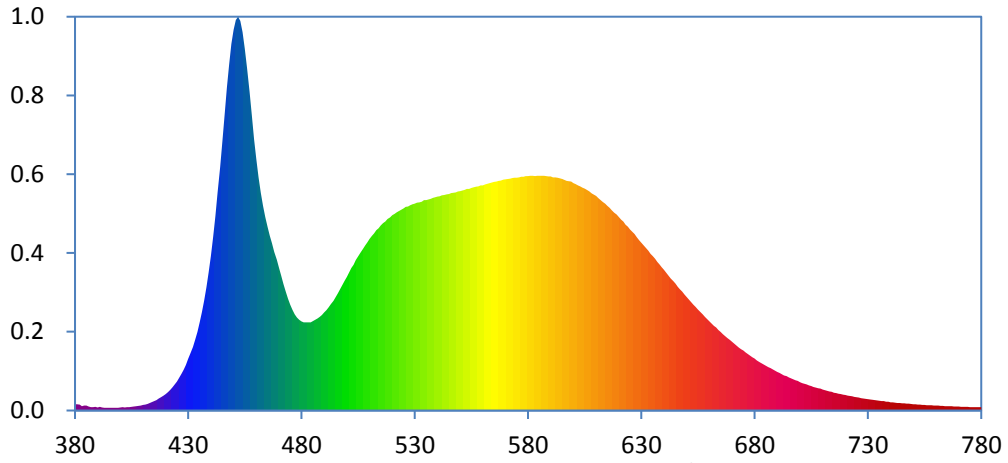
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3456
 y 0.3547
 u' 0.2106
 v' 0.4862

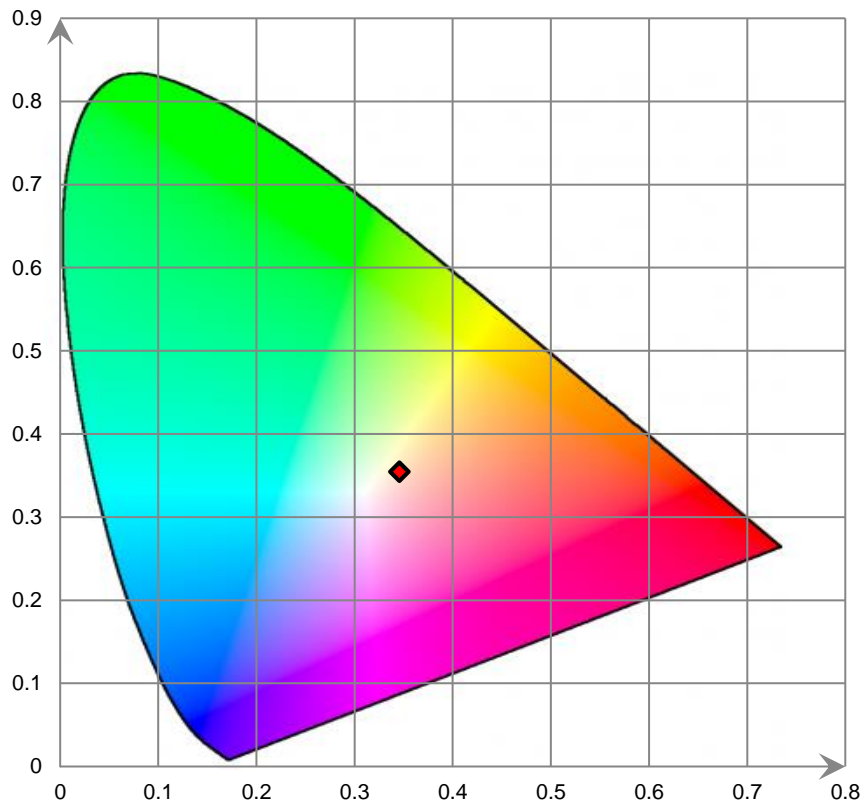
CIE 13.3-1995 (CRI)	
R_a	83
R_9	12

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

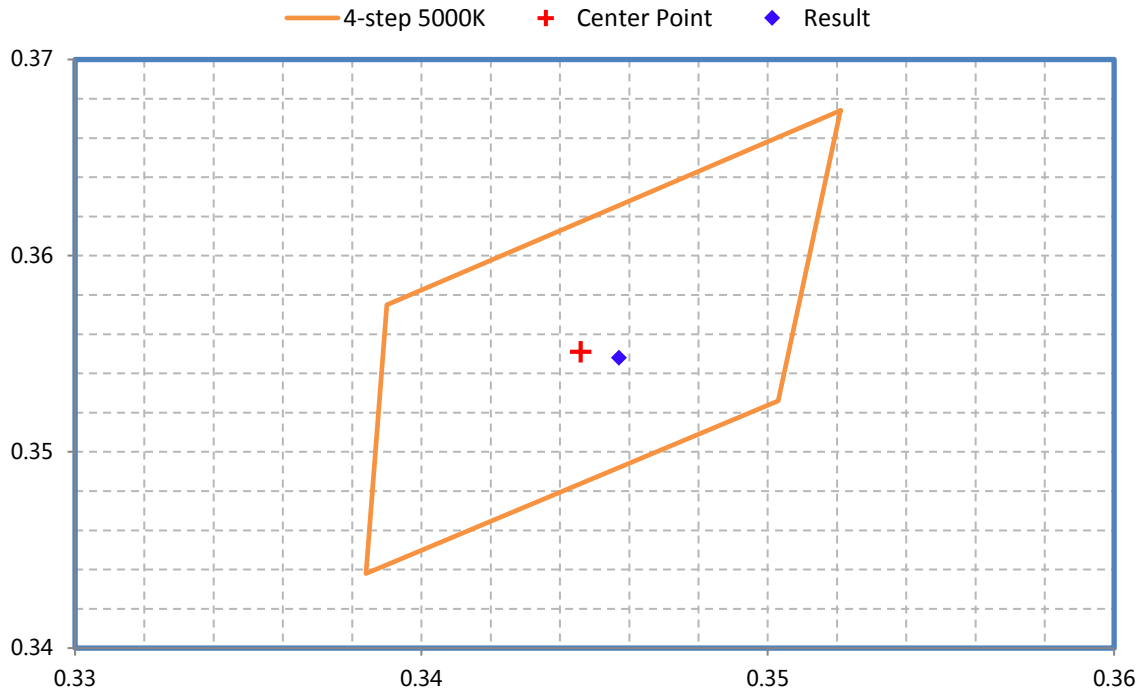
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



FENNY

6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	G121960CS1361154D	2020-12-24	2021-12-23
spectroradiometer	EVERFINE	HAAS-2000	M12048CS1361148	2020-12-24	2021-12-23
Digital CC&CV DC Power Supply	EVERFINE	WY305	G115986CN1361134	2020-12-20	2021-12-19
Thermal Meter	ANYMETRE	TH-20E	N/A	2020-12-24	2021-12-23
Standard Light Source	EVERFINE	D215S	G119786CS1361115	2020-10-20	2021-10-19
Digital Power Meter	YOKOGAWA	WT210	91KB35700	2020-04-02	2021-04-01
Intelligence ac power supply	EVERFINE	DPS1005	G119890CS1361121	2020-04-02	2021-04-01
AC Power Supply	INVENTFINE	CHP-5KVA	900511765	2020-04-02	2021-04-01
DC Power Supply	INVENTFINE	WL3010	JWDMP030001	2020-12-20	2021-12-19
Power Meter	INVENTFINE	WT500	GSDSQ200007	2020-04-02	2021-04-01
Goniophotometer	INVENTFINE	GPM-1900	YWGCF120001	2020-01-22	2021-01-21
Wireless Weather Station	ZHONGXING	KG218	N/A	2020-11-27	2021-11-26
Standard Light Source	INVENTFINE	N/A	JWBYR040008	2020-03-19	2021-03-18
Digital Multimeter	FLUKE	115C	37840512WS	2020-10-08	2021-10-07
Hybrid Recorder	YOKOGAWA	DR230	47JH0903	2020-04-02	2021-04-01
Power Supply	SC	SC/BP-11003	1608110030553	2020-11-25	2021-11-24

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

7. Test Method

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

Integrating Sphere System

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

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.

Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
3. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of the Company.
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*****END OF REPORT*****

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