



# TEST REPORT

For

## LED ONE CORPORATION

12437 Bellegrave Ave Eastvale CA US 91752

<b>Model Number:</b>	LOC-2FTFLHB-MW(145/160/175)35KD LOC-2FTFLHB-MW(145/160/175)40KD LOC-2FTFLHB-MW(145/160/175)50KD	
<b>Report Type:</b>	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V5.1	
<b>Standards:</b>	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	
<b>Project Engineer:</b>	Bay Wang	
<b>Report Number:</b>	PKS230814101-10	
<b>Sample Size:</b>	One sample was received on 2023-04-24 and used for testing.	
<b>Test Date:</b>	2023-08-01	
<b>Report Date:</b>	2023-08-15	
<b>Reviewed By:</b>	Seven Xia/ EE Engineer	
<b>Prepared By:</b>	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<sup>#</sup>

Product Primary Use:	High-Bay Luminaires for Commercial and Industrial Buildings
Voltage and Frequency:	120-277VAC, 50/60Hz
LED Source Manufacturer:	Lumileds Holding B.V.
LED Source Model:	L128-xx80RA35000Q1
Driver Model:	SDU180CS175X2V48DL7A
Auxiliary Ballast Model:	NA
Auxiliary Housing Model:	NA
White Tunable:	No
Field-Adjustable Light Output:	Yes

**Note:**

1. The applicant *LED ONE CORPORATION* declared that their products are the same to the product in report# RKS230424001-10-5 and is authorized by original applicant to use their test data.
2. All the data in previous report (RKS230424001-10-5) is shared in report.

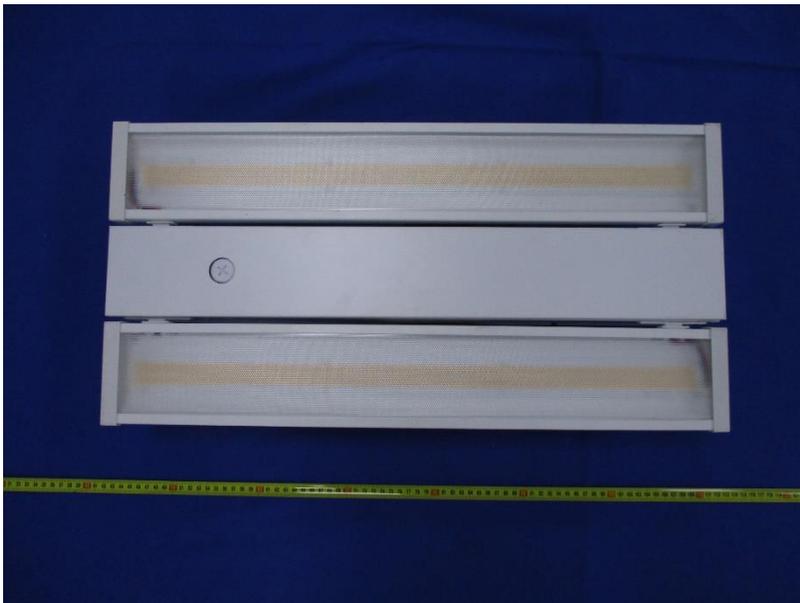
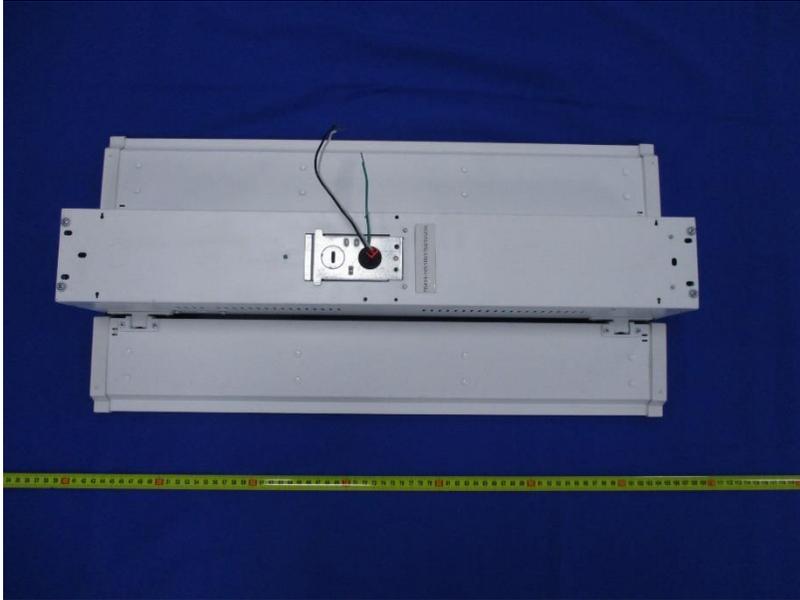
### 2. Product Rated Values<sup>#</sup>

Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminous Efficacy (lm/W)
LOC-2FTFLHB-MW(145/160/175)35KD	3500	22040	145	152
		24160	160	151
		26268	175	150.1
LOC-2FTFLHB-MW(145/160/175)40KD	4000	22185	145	153
		24320	160	152
		26425	175	151
LOC-2FTFLHB-MW(145/160/175)50KD	5000	22330	145	154
		24480	160	153
		26600	175	152

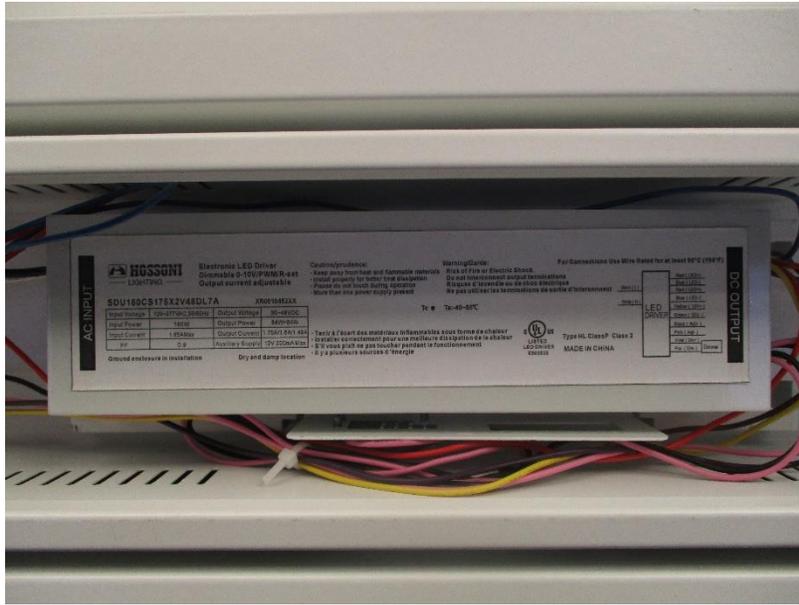
### 3. Test List

Test Model	Power(W)	Test Item			
		Goniophotometer Test	Integrating Sphere Test	THDi and PF Test	In-Situ Temperature Measurement Test
LOC-2FTFLHB-MW(145/160/175)35KD	175	Yes	Yes	Yes	NA

#### 4. Product Photo



LED Driver Photo



## 5. Test Result

**Test Model: LOC-2FTFLHB-MW(145/160/175)35KD**

**Control Setting: 175W**

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	26081.3	≥10000	≥9000	Pass
Power(W)	169.4	None.	None.	N/A
Total Efficacy(lm/W)	153.96	≥135	≥130.95	Pass
CCT(K)	3381	3220~3710	No tolerances	Pass
Duv	-0.00124	-0.0055~0.0065	No tolerances	Pass
IES R <sub>f</sub>	82	70	69	Pass
IES R <sub>g</sub>	97	89	88	
IES Rcs,h1	-12%	-18%~23%	-19%~24%	
R <sub>a</sub>	81.1	≥70	≥69	
R <sub>9</sub>	5	≥-40	≥-41	

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

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances only)	Conclusion
Light Output(lm)	26082.7	≥10000	≥9000	Pass
Power(W)	169.44	None.	None.	N/A
Total Efficacy(lm/W)	153.98	≥135	≥130.95	Pass
Zonal Lumen Distribution(20-50°)	57.28%	20-50°≥30%	20-50°≥20%	Pass
UGR crosswise view	27.9	<28	No tolerances	Pass
UGR endwise view	26.6	<28	No tolerances	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	0.9962	≥0.9	≥0.87	Pass
120	THDi	5.12%	≤20%	≤25%	Pass
277	Power Factor	0.9726	≥0.9	≥0.87	Pass
277	THDi	4.49%	≤20%	≤25%	Pass

Note:

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

**Test Data**

**[Integrating Sphere System]**

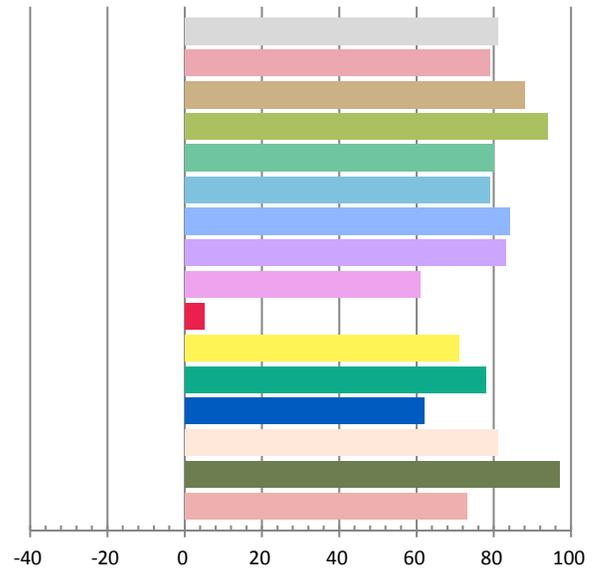
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	1.4171	169.4	0.9962	26081.3	153.96

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
78.085	3381	-0.00124	0.4108	0.3905	0.2394	0.5120

**Color Rendering Index**

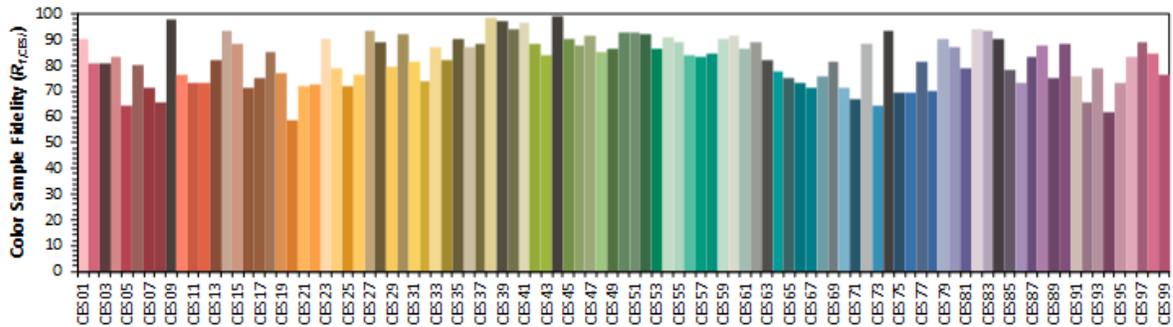
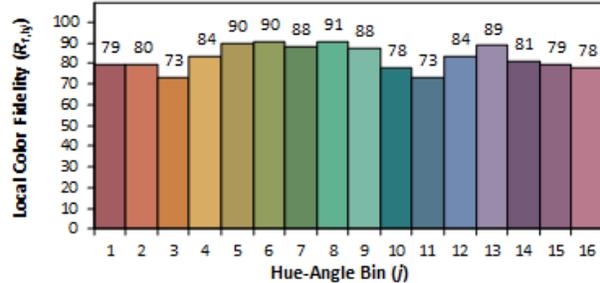
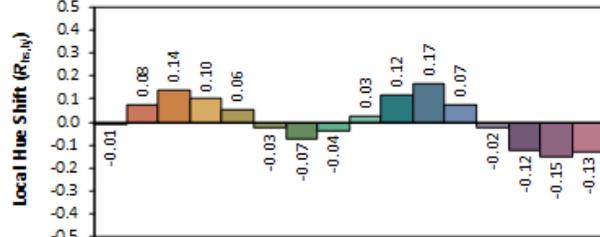
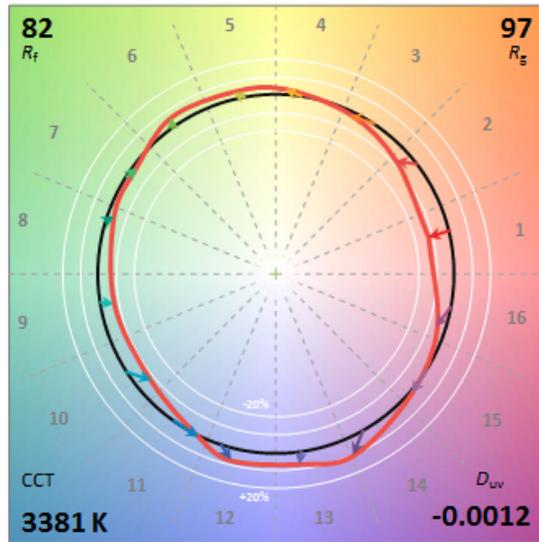
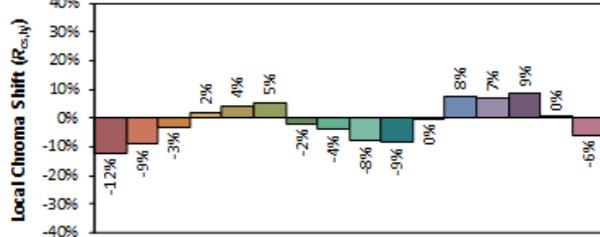
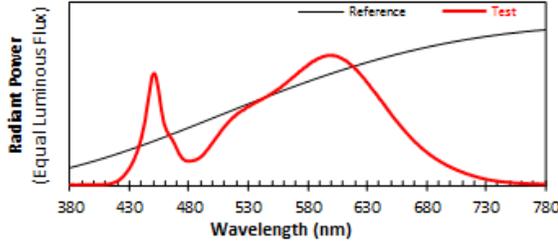
Ra			
81.1			
R1	R2	R3	R4
79	88	94	80
R5	R6	R7	R8
79	84	83	61
R9	R10	R11	R12
5	71	78	62
R13	R14	R15	
81	97	73	



### ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD  
Date: 2023/8/1

Manufacturer: LED ONE CORPORATION  
Model: LOC-2FTFLHB-MW(145/160/175) 35KD



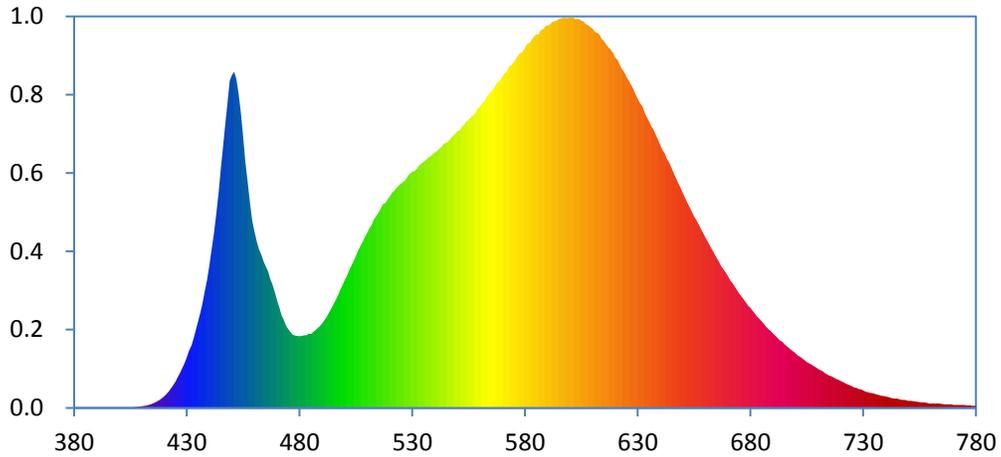
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

$x$  0.4108  
 $y$  0.3905  
 $u'$  0.2394  
 $v'$  0.5120

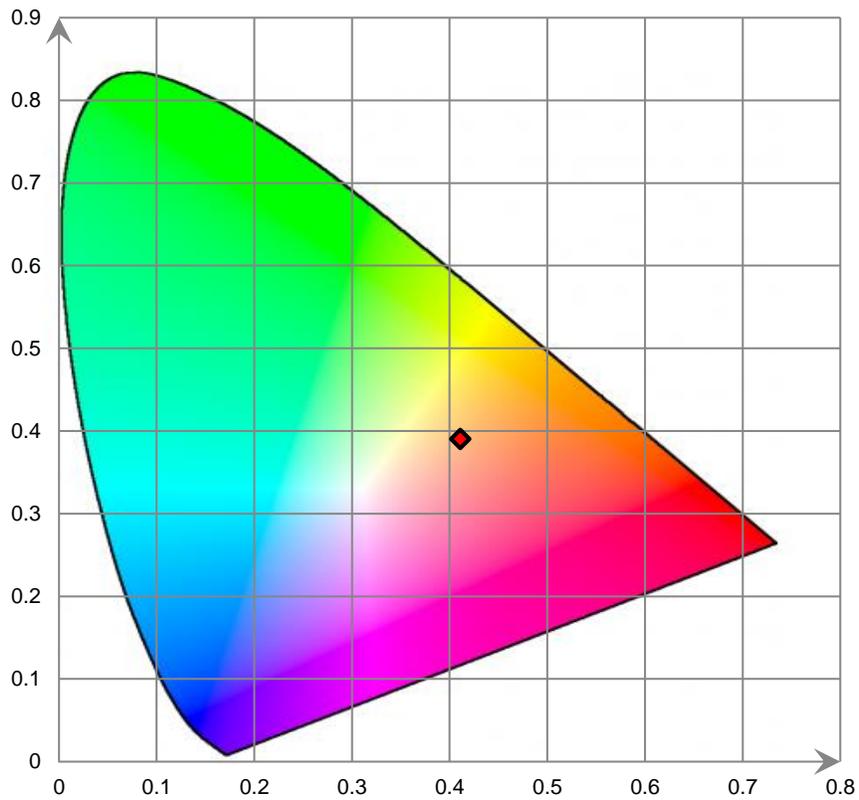
CIE 13.3-1995 (CRI)  
 $R_a$  81  
 $R_g$  5

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

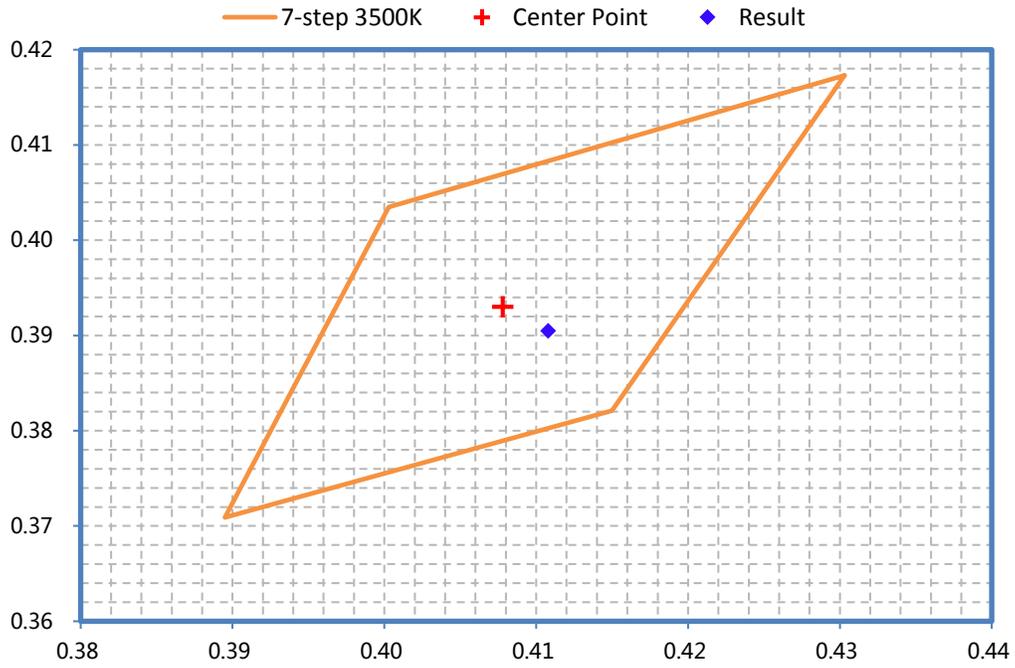
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



**[Goniophotometer System]**

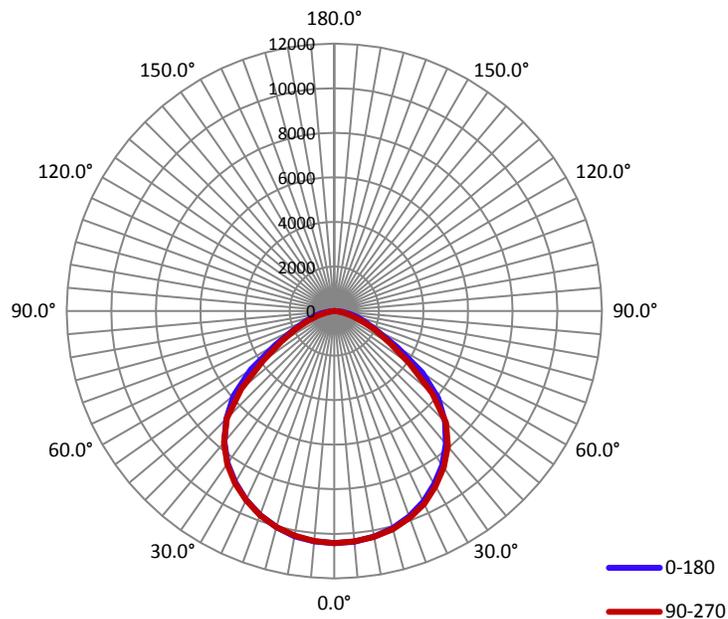
**Electrical Measurement**

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	1.414	169.44	0.998

**Photometric Measurement**

Luminous Flux (lm)	Efficacy (lm/W)	I <sub>max</sub> (cd)	S/MH (C0/180)	S/MH (C90/270)
26082.7	153.98	10421.6	1.27	1.28

**Luminous Intensity Distribution**



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I <sub>max</sub> ):	106.6	105.2	102.4	105.1	104.8
Field Angle (10% I <sub>max</sub> ):	149.4	147.0	144.5	148.8	147.4

**Luminous Intensity (cd) Distribution Data**

$\begin{matrix} C \\ \backslash \\ Y \end{matrix}$	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8
5.0°	10389.5	10373.9	10391.8	10384.9	10379.6	10371.1	10376.1	10387.4
10.0°	10281.1	10262.8	10280.8	10278.7	10294.3	10272.5	10274.8	10260.0
15.0°	10086.2	10072.9	10097.2	10092.4	10135.6	10093.2	10085.1	10068.8
20.0°	9811.5	9806.1	9832.1	9831.6	9874.9	9817.7	9812.3	9787.6
25.0°	9439.9	9445.5	9490.3	9468.6	9541.1	9473.1	9457.7	9429.0
30.0°	8969.5	8988.8	9031.0	9053.2	9088.0	9047.1	8993.1	8967.2
35.0°	8443.6	8452.0	8507.9	8538.7	8553.6	8537.6	8453.3	8408.4
40.0°	7783.7	7778.6	7856.1	7925.6	7926.0	7894.1	7811.5	7745.4
45.0°	7020.2	7021.0	7077.2	7111.1	7091.3	7074.4	7017.0	6977.2
50.0°	6068.2	6095.7	6068.5	5902.8	5745.7	5855.1	5977.8	6008.9
55.0°	4823.8	4893.3	4578.2	4256.6	4122.0	4218.8	4526.7	4782.0
60.0°	3286.2	3520.2	3118.7	2825.3	2899.6	2781.0	3113.3	3467.3
65.0°	2179.4	2553.0	2081.2	1884.3	2025.0	1864.1	2194.9	2505.1
70.0°	1498.0	1762.3	1427.6	1308.0	1317.6	1319.9	1544.5	1696.6
75.0°	1059.7	1115.1	950.5	883.9	818.0	880.9	1020.8	1038.7
80.0°	691.6	640.0	563.8	545.1	404.7	538.3	601.1	580.0
85.0°	308.1	298.9	233.9	225.8	140.6	203.4	242.7	266.8
90.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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.)**

$\gamma$ \ C	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8	10415.8
5.0°	10377.6	10361.9	10367.5	10377.3	10356.1	10363.2	10370.9	10382.0
10.0°	10258.0	10234.5	10228.1	10239.8	10232.5	10244.0	10243.9	10252.9
15.0°	10032.3	10030.3	10036.3	10049.8	10039.4	10048.5	10043.4	10049.6
20.0°	9739.2	9734.2	9744.4	9776.2	9744.9	9768.2	9767.5	9762.7
25.0°	9346.9	9343.6	9374.9	9389.6	9359.9	9396.5	9400.5	9379.5
30.0°	8872.1	8869.9	8900.5	8934.2	8915.3	8955.0	8929.5	8907.4
35.0°	8330.4	8311.6	8361.0	8398.5	8376.8	8436.9	8379.4	8364.3
40.0°	7664.4	7642.3	7684.5	7740.0	7693.3	7767.4	7715.0	7690.4
45.0°	6855.6	6825.7	6897.4	6896.0	6797.1	6927.4	6914.3	6892.5
50.0°	5895.7	5865.3	5834.9	5571.1	5448.1	5641.8	5851.1	5926.9
55.0°	4574.9	4613.5	4310.7	3953.9	3902.6	4022.0	4354.2	4693.2
60.0°	3035.0	3301.4	2865.5	2611.9	2736.9	2629.2	3009.6	3409.2
65.0°	2000.8	2379.5	1904.1	1738.6	1908.3	1782.0	2105.2	2452.8
70.0°	1399.5	1602.8	1326.6	1212.8	1230.9	1244.0	1467.1	1653.5
75.0°	976.9	991.1	871.0	804.5	744.3	832.4	961.9	1009.0
80.0°	628.9	558.2	496.0	477.7	365.5	501.6	551.5	574.2
85.0°	240.3	233.1	168.2	154.0	105.5	156.3	189.3	245.9
90.0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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

## 6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
Integrating Sphere	INVENTFINE	Dia 1.5m	JWWCV090112	2023-05-19	2024-05-18
Power Meter	INVENTFINE	WT500	GSJWQ20009	2022-11-03	2023-11-02
Spectral photometer	INVENTFINE	CMS-3S	GSGSE100017	2023-05-19	2024-05-18
AC Power Supply	INVENTFINE	CHP500	JWJSD010071	2023-05-19	2024-05-18
Standard Light Source	Osram	24V/50W	JWWCR020104	2021-09-15	2023-09-14
Thermal Meter	ANYMETRE	TH-20E	N/A	2022-11-11	2023-11-10
DC Power Supply	INVENTFINE	WL3005	JWWCP020069	2023-05-19	2024-05-18
AC Power Supply	INVENTFINE	CHP-5KVA	900511765	2023-05-22	2024-05-21
DC Power Supply	INVENTFINE	WL3010	JWDMP030001	2023-05-22	2024-05-21
Power Meter	INVENTFINE	WT500	GSDSQ200007	2022-11-03	2023-11-02
Goniophotometer	INVENTFINE	GPM-1900	YWGCF120001	2022-11-14	2023-11-13
Wireless Weather Station	ZHONGXING	KG218	N/A	2023-05-22	2024-05-21
Standard Light Source	INVENTFINE	N/A	JWBYR040008	2021-12-23	2023-12-22

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  $25^{\circ}\text{C}\pm 1^{\circ}\text{C}$  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.  $4\pi$  geometry was used during measurement.

### Goniophotometer System

Type C goniophotometer was used for measuring luminous intensity distribution. The vertical angle ( $\gamma$ ) 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.

## Directions

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