

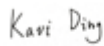
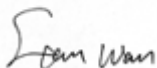


# TEST REPORT

No. ETA22070003P-001 for

## LED One Corporation

12437 Bellegrave Ave. Eastvale, CA 91752

<b>Service</b>	Performance Tests according to IESNA LM-79 standard	
<b>Product Name</b>	Outdoor – Parking Garage Luminaires	
<b>Model Number</b>	LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV	
<b>Trade Mark</b>	N/A	
<b>Date of Issue</b>	July 4, 2022	
<b>Date of Tests</b>	April 6, 2022 through April 12, 2022	
<b>Test Laboratory</b>	ETA Testing Technology Co., Ltd.	
<b>Address</b>	Floor 8, Building A, The Western Science Park, Yuhang District, Hangzhou 311121, China	
<b>Test Location</b>	ETA Testing Technology Co., Ltd.	
<b>Prepared By</b>	Kavi Ding	
<b>Reviewer</b>	Sean Wan	



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### REMARKS

<b>Accreditation Scope*</b>	Operating Frequency, Dimming and Audible Noise test are not in NVLAP accreditation scope.
<b>General Disclaimer</b>	The test results presented in this report relate only to the object tested.
<b>TBD</b>	To Be Determined, test case will be conducted.
<b>N/A</b>	Test case does not apply to the test object.
<b>Pass</b>	Test item does meet the requirement.

### REFERENCE STANDARD

<b>Designation</b>	<b>Description</b>
ANSI C82.77-10-2014	American National Standard for Lighting Equipment -Harmonic Emission Limits—Related Power Quality Requirements
CIE Pub. No. 13.3-1995	Method of Measuring and Specifying Color Rendering of Light Sources
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products (Goniophotometer)
ANSI C78.377-2015	Specifications for the Chromaticity of Solid State Lighting Products

The above standards or test methods were used in part or totally to test.

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## EQUIPMENT LIST

<b>Equipment Used</b>	<b>Model Number</b>	<b>Control Number</b>	<b>Calibration data</b>	<b>Due date</b>
Everfine – Goniophotometer	GO-R5000	ETA1013	---	---
AC power source for Goniophotometer System	DPS1010	ETA1006	2021/12/6	2022/12/6
Power Analyzer for Goniophotometer	WT310	ETA1005	2021/12/6	2022/12/6
Two meter integrating sphere unit	Everfine – 2M	ETA1014	---	---
AC power source for Integrating Sphere System	DPS1010	ETA1002	2021/12/6	2022/12/6
Power Analyzer for Integrating Sphere System	WT310	ETA1001	2021/12/6	2022/12/6
Spectroradiometer	HAAS 2000	ETA1003	---	---
DC Linear Power Source	WY12010	ETA1004	2021/12/6	2022/12/6
AC power source for Integrating Sphere System	DPS1010	ETA1006	2021/12/6	2022/12/6
Power Analyzer for Integrating Sphere System	WT310	ETA1001	2021/12/6	2022/12/6
Illumination Photometer	Z-10	ETA1007	2021/12/6	2022/12/6
Luminous intensity Standard lamp For Goniophotometer	---	ETA1008	2022/3/21	2023/3/21
Standard lamp	D204	ETA1009	2022/3/21	2023/3/21
Digital thermometer	TES-1311A	ETA1141	2021/12/6	2022/12/6
Tektronix Oscilloscope	DPO2012B	ETA1187	2022/4/30	2023/4/30

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## TEST METHOD

### Photometric, Chromaticity and Electrical Measurements

No seasoning was performed in accordance with IESNA LM-79

Photometric and chromaticity were measured using a 2 meters integrating sphere spectral lamp measurement system. Maintain the ambient temperature at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer (bandwidth: 5nm) attached to the detector port of the integrating sphere. Each fixture was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to NIST. Lamp efficacy (lumens per watt) for each fixture model was then computed based on the luminous flux result.

Prior to measurement, stabilize the fixture as specified in section 5.0 of IES LM-79-08 Calculate the stabilization variation as [(maximum—minimum)/minimum] of at least three readings of the input power and lumen output over a period of 30 minutes, taken 15 minutes apart.

Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter, model WT310.

A goniophotometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniophotometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the power analyzer YOKOGAWA - Digital Power Meter, model WT310.

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### PRODUCT INFORMATION

Manufacturer	N/A
Address	N/A
Trade Mark	N/A
Sample Quantity	1 pcs
Sample Number	1220406-02-001
Model Number	LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV
Nominal Operate Voltage (V; Hz)	AC 120-347V, 50/60Hz
Nominal Power	45W; 55W; 65W; 75W
Nominal Lumen Output	6075lm; 7425lm; 8775lm; 10125lm
Nominal CCT	3000K; 4000K; 5000K
Nominal CRI(Ra)	≥70
Nominal Life	50000hours
Lighting Source Model Number	LUXEON 3030 2D
Lighting Source Manufacturer	Lumileds

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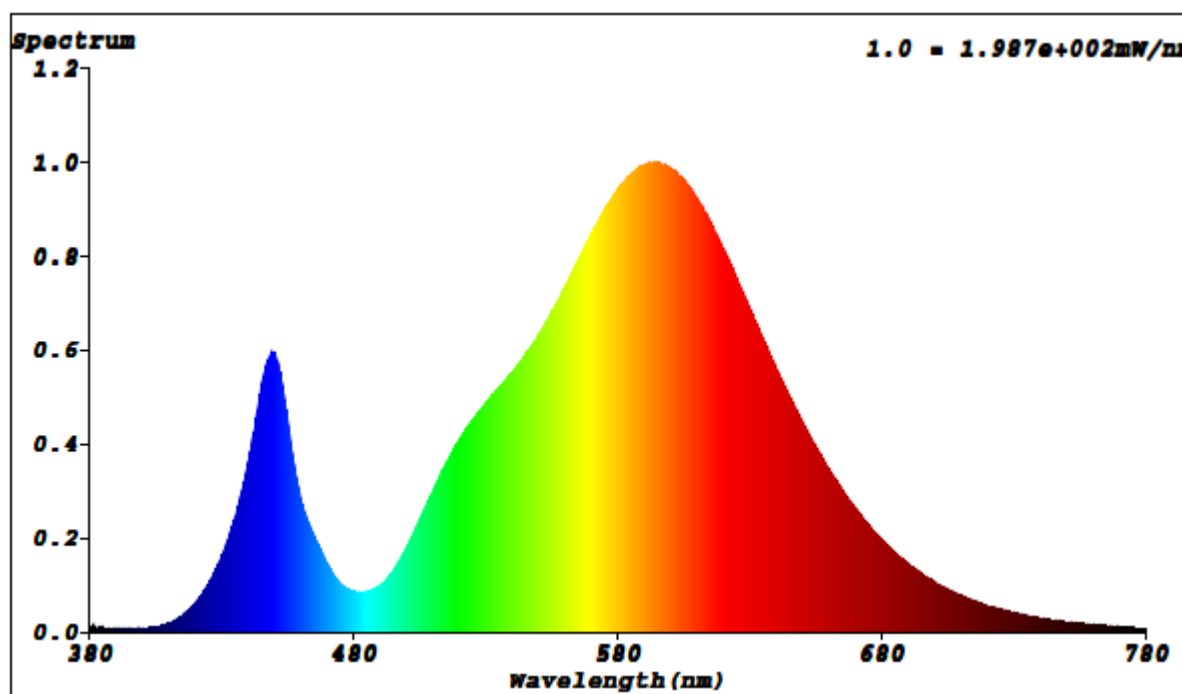
## TEST SUMMARY

Test Model No: LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV at 3000K

### Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	ITHD	Input Current (A)	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	14.0%	0.605	70.80	0.976	9536.75	134.70
CCT (K)	CRI Ra	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv
3037	71.0	-35	0.4335	0.4016	0.2495	0.5199	-0.0005

### Spectral Plots

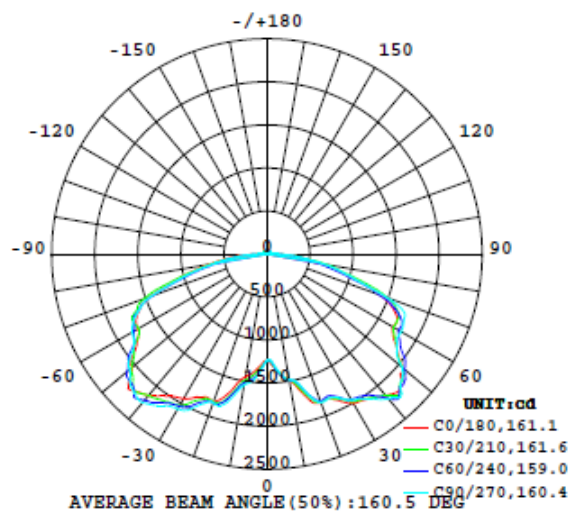


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**Luminous Intensity Distribution Test Plots**

Angle	0	22.5	45	67.5	90
0	1234.8	1234.8	1234.8	1234.8	1234.8
5	1373.0	1361.3	1356.6	1353.9	1349.6
10	1490.8	1483.2	1492.5	1482.8	1476.8
15	1699.2	1667.7	1646.4	1613.7	1619.0
20	1831.8	1829.1	1813.5	1811.4	1832.6
25	1865.2	1847.5	1825.5	1827.3	1836.2
30	2004.7	1972.9	1961.4	1983.5	1958.0
35	2054.2	2020.7	2016.0	2043.5	2046.9
40	2147.6	2127.5	2156.2	2181.7	2189.1
45	2189.1	2179.7	2201.9	2147.5	2192.5
50	2061.4	2112.4	2056.7	2048.9	2049.5
55	1823.5	1870.8	1868.1	1854.9	1833.7
60	1690.5	1734.0	1765.4	1717.5	1800.7
65	1651.7	1725.2	1693.5	1717.4	1761.0
70	1404.3	1471.1	1406.2	1475.4	1494.9
75	989.5	993.3	924.6	992.1	1001.7
80	630.4	605.1	627.5	639.4	657.3
85	336.3	319.4	324.2	322.3	354.1
90	139.9	128.7	128.5	120.8	140.9
95	92.5	86.0	90.9	86.2	97.9
100	70.3	61.3	68.8	64.8	58.4
105	59.1	53.7	60.2	58.2	56.3
110	55.3	50.0	55.3	50.1	51.6
115	46.7	45.2	47.6	39.4	46.6
120	50.3	44.8	46.0	36.6	50.1
125	48.4	47.6	45.9	42.9	47.3
130	34.5	33.8	31.0	30.5	32.8
135	24.1	23.5	22.2	23.1	23.3
140	17.2	16.5	15.5	14.9	15.2
145	11.9	11.6	10.8	10.1	10.0
150	6.1	6.1	5.8	5.5	5.3
155	3.1	3.2	3.2	3.2	3.1
160	1.5	1.6	1.7	1.7	1.6
165	0.6	0.6	0.7	0.7	0.7
170	0.4	0.4	0.4	0.4	0.4
175	0.4	0.3	0.3	0.4	0.4
180	0.3	0.3	0.3	0.3	0.3



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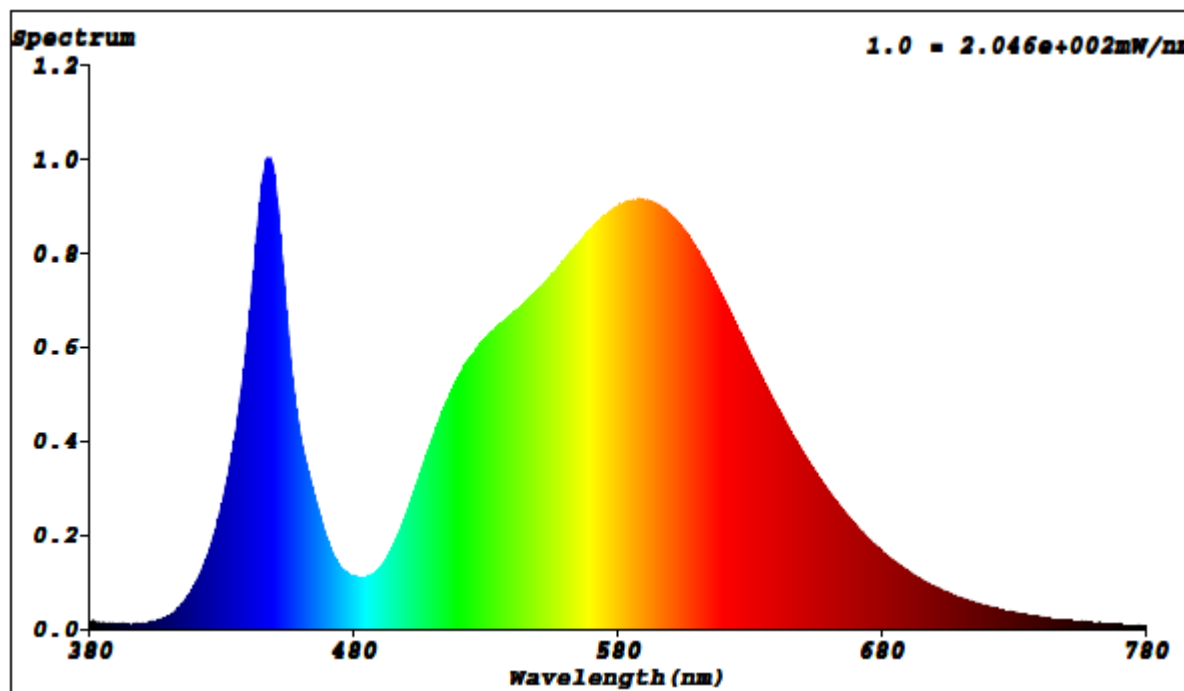


**Test Model No: LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV at 4000K**

**Photometric and Electrical Test Data**

Input Voltage (V)	Frequency (Hz)	ITHD	Input Current (A)	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	14.4%	0.581	67.99	0.975	10228.37	150.44
CCT (K)	CRI Ra	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv
3850	73.2	-26	0.3867	0.3789	0.2284	0.5034	-0.0008

**Spectral Plots**

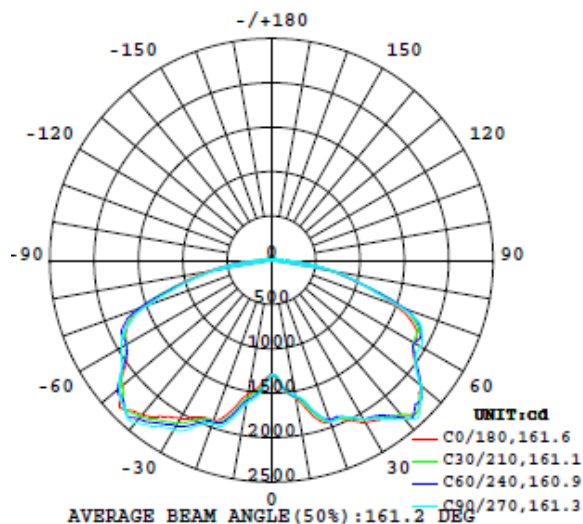


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**Luminous Intensity Distribution Test Plots**

Angle	0	22.5	45	67.5	90
0	1294.8	1294.8	1294.8	1294.8	1294.8
5	1440.9	1429.8	1422.5	1414.6	1408.0
10	1579.7	1568.4	1566.8	1551.7	1547.7
15	1813.8	1775.6	1752.2	1720.8	1726.1
20	1942.6	1931.7	1912.3	1909.5	1933.6
25	1984.7	1970.9	1944.3	1939.9	1953.4
30	2107.2	2079.4	2066.4	2077.6	2067.5
35	2188.7	2153.2	2147.5	2163.1	2178.3
40	2295.4	2273.4	2295.6	2327.4	2333.5
45	2362.0	2321.9	2328.6	2288.7	2360.0
50	2200.1	2227.5	2182.7	2181.3	2197.5
55	1968.2	1978.9	1962.9	1989.7	1980.1
60	1861.2	1824.5	1859.2	1875.8	1944.0
65	1787.6	1818.2	1817.7	1855.3	1867.2
70	1480.4	1584.9	1554.7	1597.6	1559.3
75	1041.0	1086.1	1058.2	1087.0	1062.4
80	676.3	677.1	714.2	707.5	721.4
85	352.3	349.3	366.9	352.5	365.2
90	144.1	142.9	145.1	132.0	141.8
95	96.6	92.1	100.9	92.7	104.0
100	74.4	65.6	74.5	68.8	63.7
105	62.8	57.9	64.9	61.8	60.1
110	58.9	54.2	59.5	54.1	55.3
115	49.0	48.2	52.4	42.7	49.3
120	53.3	50.4	48.8	39.9	51.1
125	50.2	51.3	51.1	43.6	50.0
130	34.3	36.0	36.0	33.0	34.1
135	24.2	25.0	25.5	25.2	24.6
140	17.2	17.7	17.5	16.6	16.4
145	12.0	12.4	12.1	11.4	11.1
150	6.4	6.6	6.7	6.2	6.0
155	3.4	3.5	3.6	3.5	3.4
160	1.6	1.7	1.8	1.8	1.8
165	0.6	0.7	0.7	0.8	0.7
170	0.5	0.5	0.5	0.5	0.5
175	0.4	0.4	0.4	0.4	0.4
180	0.3	0.3	0.3	0.3	0.3



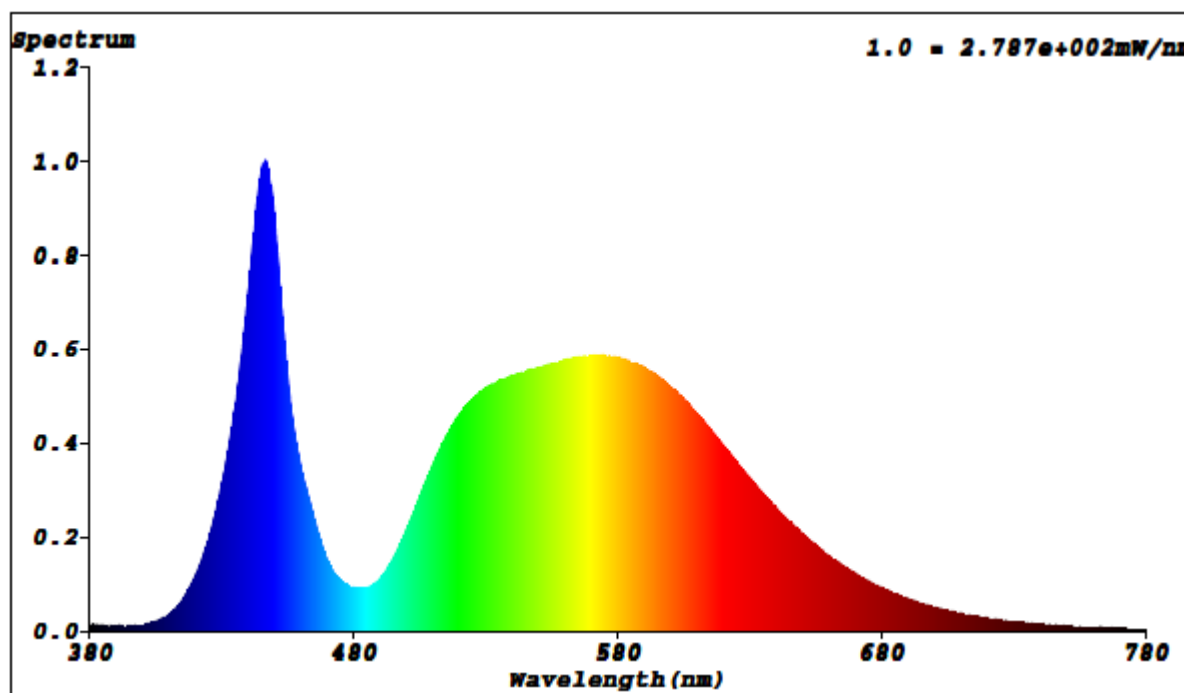
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**Test Model No: LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV at 5000K**

**Photometric and Electrical Test Data**

Input Voltage (V)	Frequency (Hz)	ITHD	Input Current (A)	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	13.9%	0.606	70.92	0.976	9910.10	139.74
CCT (K)	CRI Ra	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv
5096	71.5	-31	0.3428	0.3541	0.2089	0.4855	0.0022

**Spectrul Plots**

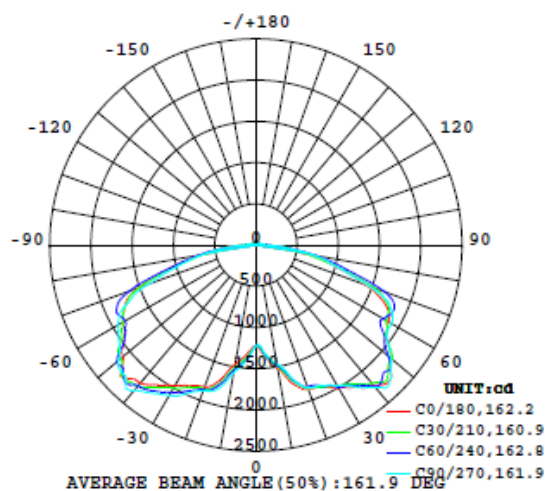


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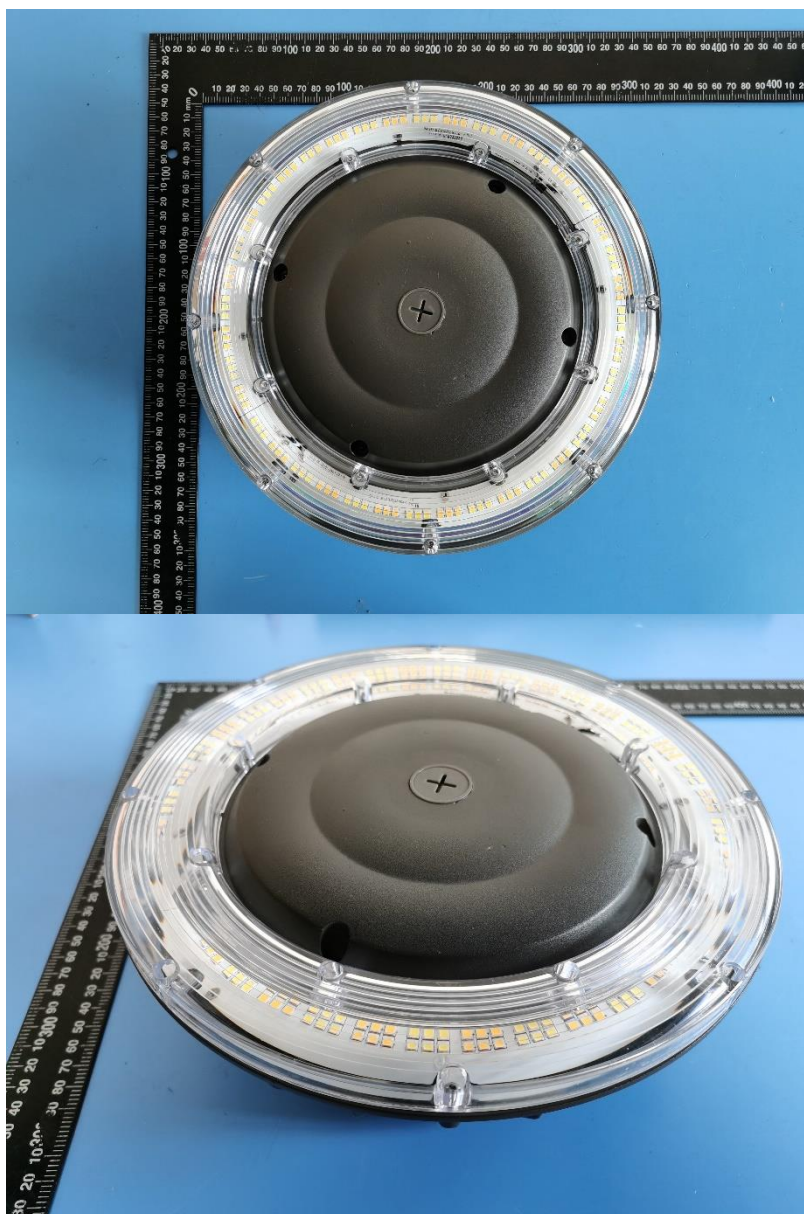
**Luminous Intensity Distribution Test Plots**

Angle	0	22.5	45	67.5	90
0	1223.3	1223.3	1223.3	1223.3	1223.3
5	1360.2	1352.4	1343.5	1336.9	1329.7
10	1513.1	1496.3	1489.1	1472.4	1461.7
15	1742.7	1710.0	1686.4	1663.4	1665.7
20	1865.9	1847.9	1829.6	1826.6	1846.7
25	1907.8	1900.7	1880.4	1869.8	1877.2
30	1999.1	1983.8	1976.0	1967.1	1974.1
35	2110.2	2072.8	2076.5	2078.2	2098.0
40	2222.1	2203.1	2218.1	2256.1	2249.6
45	2304.2	2247.5	2237.5	2222.9	2305.7
50	2133.2	2130.6	2105.1	2115.6	2135.0
55	1923.2	1897.6	1875.1	1942.1	1939.5
60	1851.8	1738.6	1776.3	1864.0	1901.6
65	1745.6	1741.5	1773.9	1823.9	1800.5
70	1415.1	1548.4	1565.4	1571.6	1466.8
75	993.4	1079.5	1099.5	1081.4	1015.3
80	656.3	686.9	737.1	710.0	708.6
85	336.2	349.7	381.9	358.4	352.1
90	135.7	139.7	148.8	131.5	128.5
95	91.9	89.5	101.2	90.3	99.4
100	71.2	63.6	72.8	65.9	62.6
105	60.7	56.6	63.3	59.3	57.8
110	56.9	53.1	57.8	53.0	53.5
115	46.5	46.7	52.2	42.1	46.7
120	50.8	50.4	46.6	39.1	46.7
125	47.0	49.8	51.3	39.8	47.4
130	30.7	34.7	37.8	32.4	31.9
135	21.9	24.0	26.5	24.9	23.6
140	15.8	17.1	18.0	16.7	16.1
145	11.0	12.1	12.4	11.6	11.0
150	6.1	6.4	6.9	6.3	6.1
155	3.3	3.5	3.8	3.4	3.4
160	1.6	1.7	1.9	1.7	1.8
165	0.6	0.7	0.7	0.7	0.7
170	0.4	0.4	0.4	0.4	0.5
175	0.4	0.4	0.4	0.4	0.4
180	0.3	0.3	0.3	0.3	0.3



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### PRODUCT PICTURES



LOC-RDCP-MW(40/50/60/75)MCCT(30/40/50)DLV

None Attachment

\*\*\*\*\* End of Report \*\*\*\*\*