

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number: P843345

Luminaire Tested: 24CGSB-60-L940

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843345  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-60-L940  
 Description: 2x4 CGSB AT 6000LM 4000K 90CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

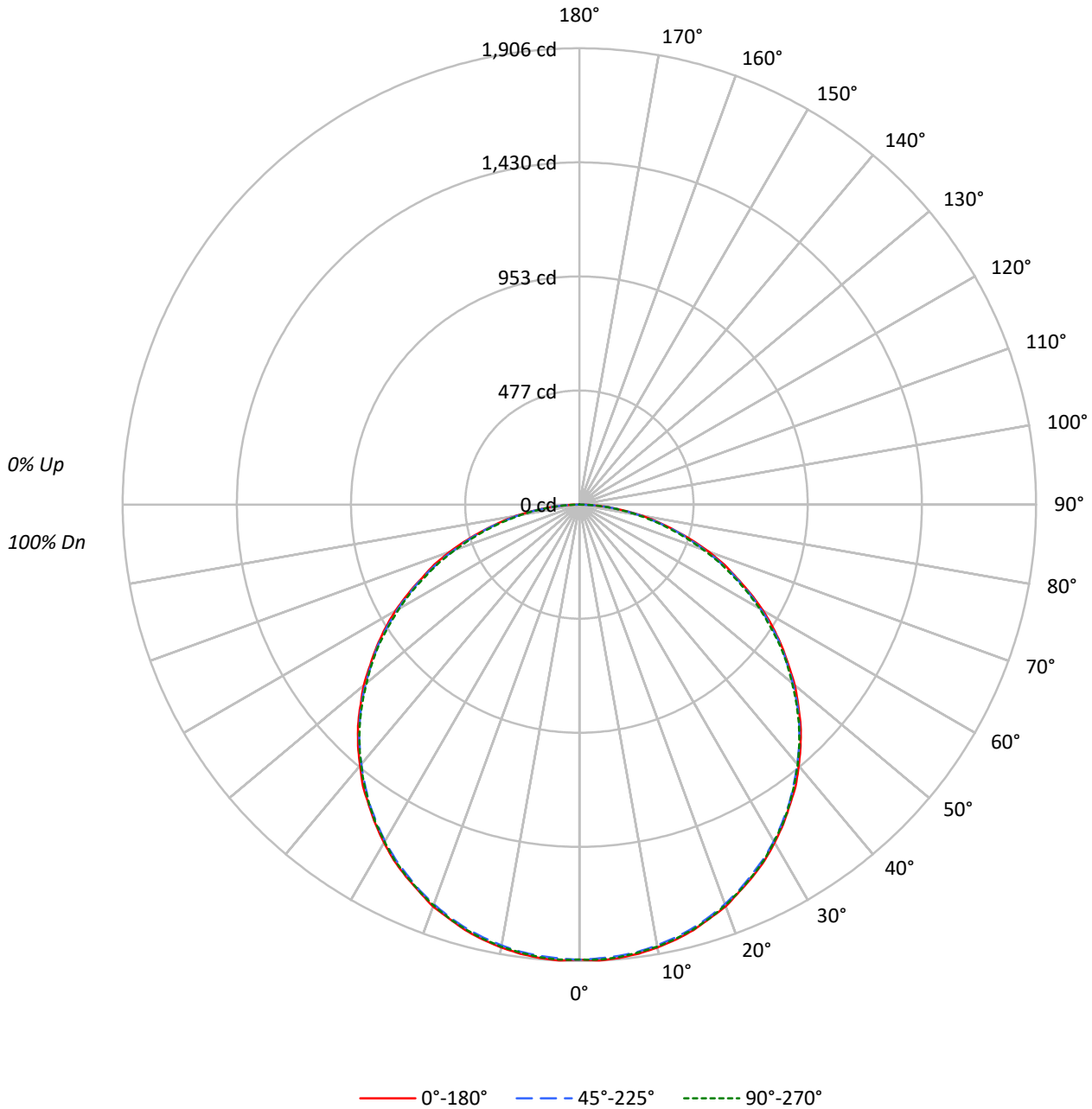
Lumens per Lamp: N/A  
 Luminaire Lumens: 5623.0 lumens  
 Efficiency: N/A  
 Efficacy: 110.3 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 51  
 Input Voltage (V): 120  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 24 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	94	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2557	2557	2557
5°	2567	2555	2562
10°	2566	2554	2561
15°	2563	2551	2558
20°	2558	2543	2550
25°	2544	2531	2539
30°	2533	2522	2525
35°	2516	2507	2510
40°	2501	2486	2489
45°	2486	2469	2466
50°	2459	2437	2426
55°	2418	2406	2394
60°	2382	2354	2336
65°	2306	2289	2256
70°	2256	2195	2161
75°	2135	2108	2035
80°	2040	1974	1893
85°	1819	1792	1658

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2486 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.1	3.2
10°-20°	517.4	9.2
20°-30°	787.4	14.0
30°-40°	955.7	17.0
40°-50°	1000.9	17.8
50°-60°	914.6	16.3
60°-70°	710.8	12.6
70°-80°	426.3	7.6
80°-90°	129.6	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1485.0	26.4
0°-40°	2440.7	43.4
0°-60°	4356.2	77.5
0°-90°	5623.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5623.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1900	1900	1900	1900	1900	
5°	1900	1895	1892	1892	1897	181
15°	1840	1833	1831	1831	1836	519
25°	1713	1706	1705	1706	1710	790
35°	1532	1528	1526	1526	1528	959
45°	1306	1299	1298	1296	1296	1006
55°	1031	1027	1026	1017	1020	922
65°	724	722	719	710	709	721
75°	411	409	405	398	392	437
85°	118	116	116	113	107	132
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1900.5	1900.5	1900.5	1900.5	1900.5
2.5°	1905.7	1898.8	1897.1	1897.1	1902.3
5°	1900.5	1895.3	1891.9	1891.9	1897.1
7.5°	1891.9	1884.9	1883.2	1883.2	1886.7
10°	1878.0	1872.8	1869.4	1869.4	1874.6
12.5°	1860.7	1853.8	1852.0	1853.8	1857.2
15°	1839.9	1833.0	1831.2	1831.2	1836.4
17.5°	1812.2	1807.0	1805.3	1805.3	1810.5
20°	1786.2	1777.5	1775.8	1777.5	1781.0
22.5°	1748.1	1744.6	1742.9	1744.6	1746.4
25°	1713.4	1706.5	1704.8	1706.5	1710.0
27.5°	1675.3	1668.4	1666.7	1666.7	1671.9
30°	1630.3	1625.1	1623.3	1623.3	1625.1
32.5°	1583.5	1580.0	1574.8	1576.6	1580.0
35°	1531.5	1528.1	1526.3	1526.3	1528.1
37.5°	1483.0	1476.1	1470.9	1470.9	1474.3
40°	1424.1	1420.6	1415.4	1417.2	1417.2
42.5°	1366.9	1361.7	1358.3	1356.5	1358.3
45°	1306.3	1299.4	1297.6	1295.9	1295.9
47.5°	1238.7	1238.7	1233.5	1230.1	1228.3
50°	1174.6	1167.7	1164.2	1159.0	1159.0
52.5°	1100.1	1098.4	1093.2	1091.5	1091.5
55°	1030.8	1027.4	1025.6	1017.0	1020.4
57.5°	959.8	952.9	951.1	945.9	942.5
60°	885.3	881.8	874.9	868.0	868.0
62.5°	805.6	803.9	796.9	791.7	790.0
65°	724.2	722.4	719.0	710.3	708.6
67.5°	654.9	648.0	639.3	632.4	632.4
70°	573.5	564.8	557.9	550.9	549.2
72.5°	490.3	485.1	481.6	474.7	469.5
75°	410.6	408.9	405.4	398.5	391.5
77.5°	336.1	334.4	325.7	320.5	315.3
80°	263.3	256.4	254.7	247.7	244.3
82.5°	185.4	188.8	180.2	178.4	176.7
85°	117.8	116.1	116.1	112.6	107.4
87.5°	52.0	53.7	53.7	53.7	53.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)