

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: P843344

Luminaire Tested: 24CGSB-60-L935

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843344  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-60-L935  
 Description: 2x4 CGSB AT 6000LM 3500K 90CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

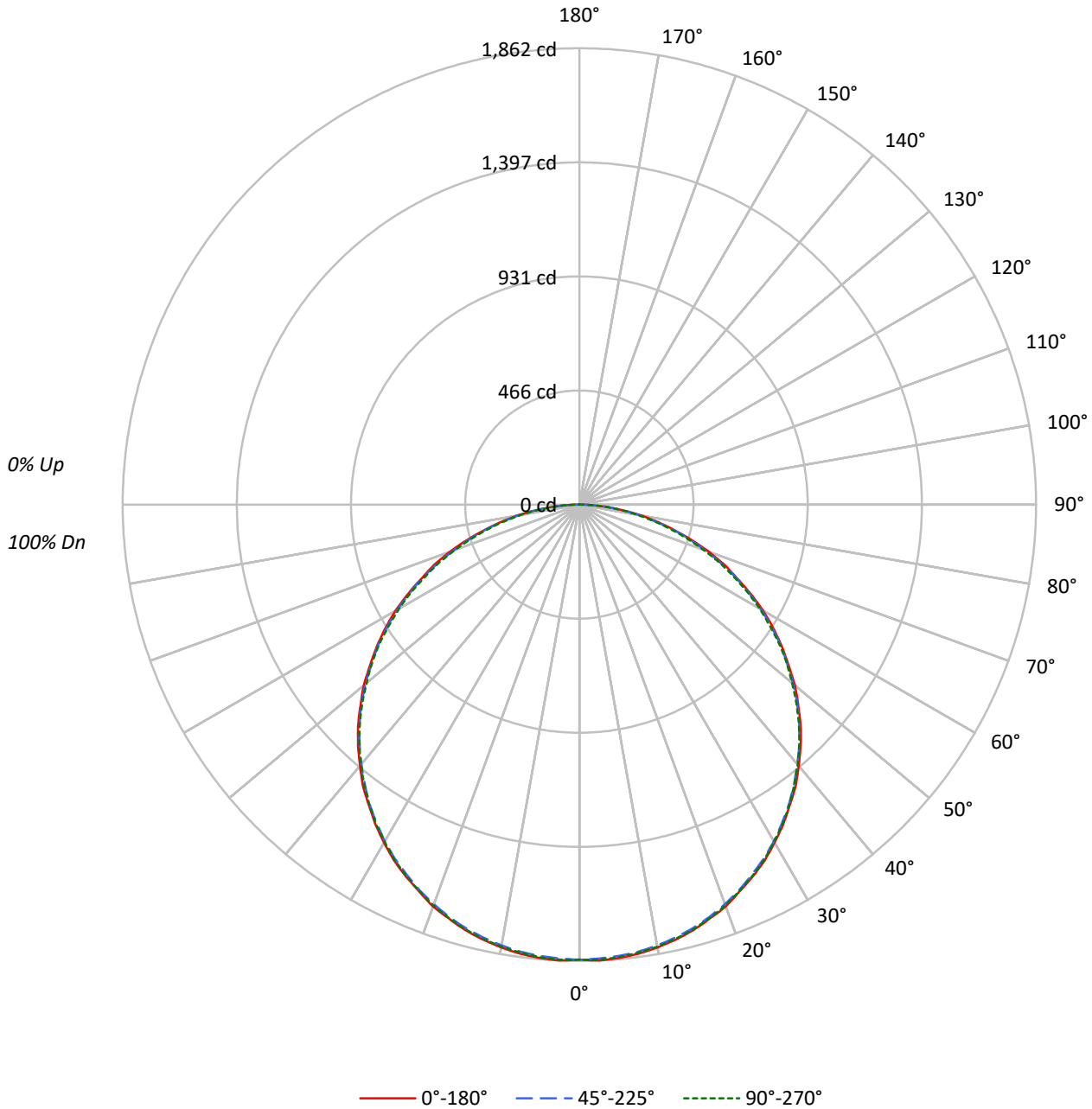
Lumens per Lamp: N/A  
 Luminaire Lumens: 5493.8 lumens  
 Efficiency: N/A  
 Efficacy: 107.7 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

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°	2498	2498	2498
5°	2508	2497	2503
10°	2507	2495	2502
15°	2504	2492	2499
20°	2499	2484	2492
25°	2485	2473	2480
30°	2475	2464	2467
35°	2458	2449	2452
40°	2444	2429	2432
45°	2429	2412	2409
50°	2402	2381	2370
55°	2362	2351	2339
60°	2328	2300	2282
65°	2252	2237	2204
70°	2204	2144	2111
75°	2086	2059	1988
80°	1994	1928	1850
85°	1777	1751	1619

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2429 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.0	3.2
10°-20°	505.5	9.2
20°-30°	769.3	14.0
30°-40°	933.8	17.0
40°-50°	977.9	17.8
50°-60°	893.6	16.3
60°-70°	694.5	12.6
70°-80°	416.5	7.6
80°-90°	126.7	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°	1450.8	26.4
0°-40°	2384.6	43.4
0°-60°	4256.1	77.5
0°-90°	5493.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5493.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1857	1857	1857	1857	1857	
5°	1857	1852	1848	1848	1854	177
15°	1798	1791	1789	1789	1794	507
25°	1674	1667	1666	1667	1671	772
35°	1496	1493	1491	1491	1493	937
45°	1276	1270	1268	1266	1266	983
55°	1007	1004	1002	994	997	901
65°	708	706	702	694	692	705
75°	401	400	396	389	382	427
85°	115	113	113	110	105	129
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1856.9	1856.9	1856.9	1856.9	1856.9
2.5°	1861.9	1855.2	1853.5	1853.5	1858.5
5°	1856.9	1851.8	1848.4	1848.4	1853.5
7.5°	1848.4	1841.6	1839.9	1839.9	1843.3
10°	1834.8	1829.8	1826.4	1826.4	1831.5
12.5°	1817.9	1811.1	1809.5	1811.1	1814.5
15°	1797.6	1790.8	1789.1	1789.1	1794.2
17.5°	1770.5	1765.4	1763.8	1763.8	1768.8
20°	1745.1	1736.7	1735.0	1736.7	1740.1
22.5°	1707.9	1704.5	1702.8	1704.5	1706.2
25°	1674.0	1667.3	1665.6	1667.3	1670.7
27.5°	1636.8	1630.0	1628.3	1628.3	1633.4
30°	1592.8	1587.7	1586.0	1586.0	1587.7
32.5°	1547.1	1543.7	1538.6	1540.3	1543.7
35°	1496.3	1492.9	1491.2	1491.2	1492.9
37.5°	1448.9	1442.1	1437.1	1437.1	1440.5
40°	1391.4	1388.0	1382.9	1384.6	1384.6
42.5°	1335.5	1330.4	1327.0	1325.4	1327.0
45°	1276.3	1269.5	1267.8	1266.1	1266.1
47.5°	1210.3	1210.3	1205.2	1201.8	1200.1
50°	1147.6	1140.9	1137.5	1132.4	1132.4
52.5°	1074.8	1073.1	1068.1	1066.4	1066.4
55°	1007.1	1003.7	1002.1	993.6	997.0
57.5°	937.7	931.0	929.3	924.2	920.8
60°	865.0	861.6	854.8	848.0	848.0
62.5°	787.1	785.4	778.6	773.5	771.9
65°	707.5	705.8	702.5	694.0	692.3
67.5°	639.8	633.1	624.6	617.8	617.8
70°	560.3	551.8	545.0	538.3	536.6
72.5°	479.0	473.9	470.6	463.8	458.7
75°	401.2	399.5	396.1	389.3	382.5
77.5°	328.4	326.7	318.2	313.1	308.1
80°	257.3	250.5	248.8	242.1	238.7
82.5°	181.1	184.5	176.0	174.3	172.7
85°	115.1	113.4	113.4	110.0	104.9
87.5°	50.8	52.5	52.5	52.5	52.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)