

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: P843341

Luminaire Tested: 24CGSB-60-L840

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843341  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-60-L840  
 Description: 2x4 CGSB AT 6000LM 4000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

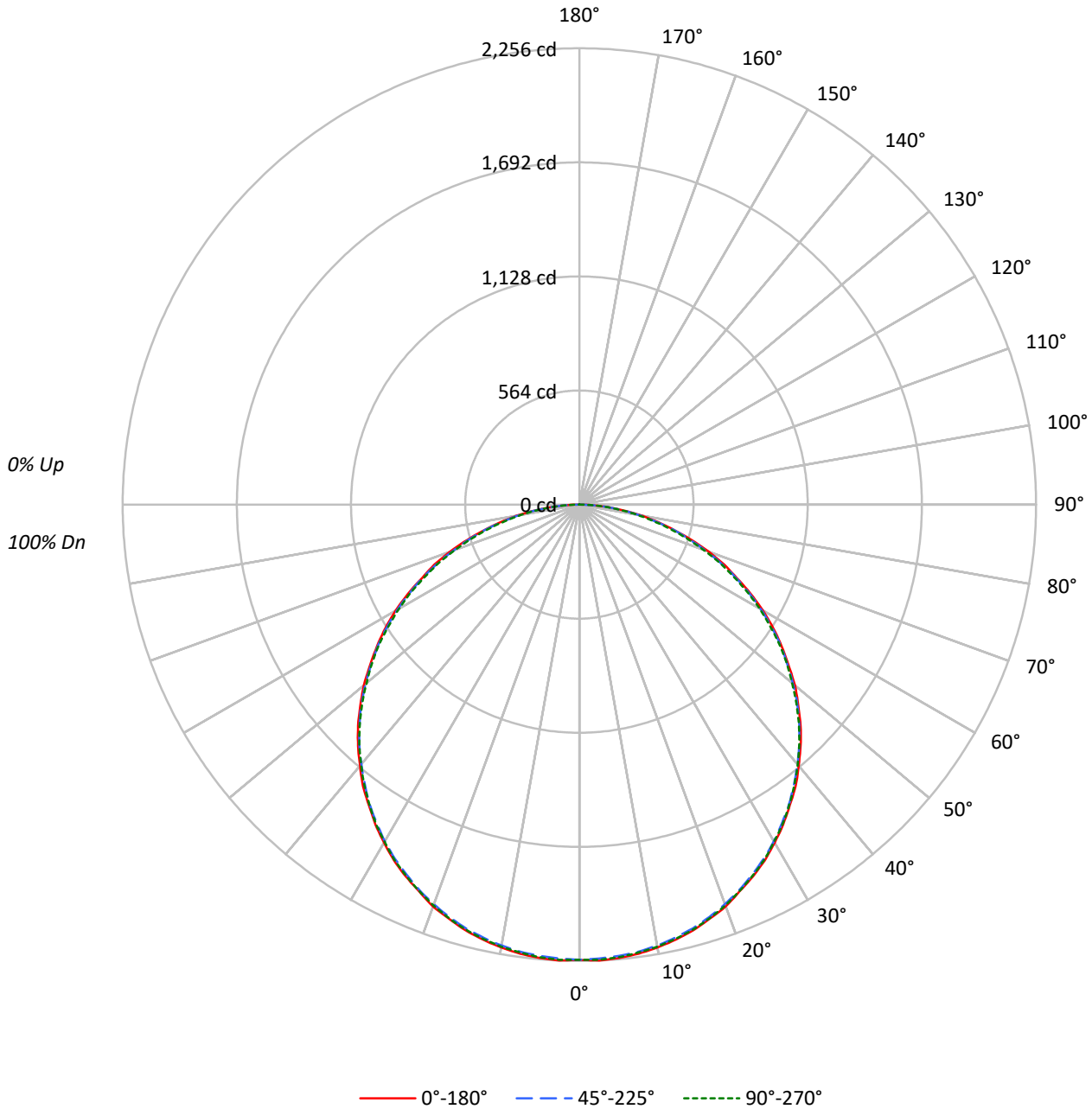
Lumens per Lamp: N/A  
 Luminaire Lumens: 6657.2 lumens  
 Efficiency: N/A  
 Efficacy: 130.5 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

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°	3027	3027	3027
5°	3039	3025	3034
10°	3038	3024	3032
15°	3034	3020	3029
20°	3028	3010	3019
25°	3011	2996	3005
30°	2999	2986	2989
35°	2978	2968	2972
40°	2961	2943	2947
45°	2943	2923	2919
50°	2911	2885	2872
55°	2863	2848	2834
60°	2820	2787	2765
65°	2730	2710	2671
70°	2671	2598	2558
75°	2527	2495	2410
80°	2416	2336	2241
85°	2154	2121	1964

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2943 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.2	3.2
10°-20°	612.6	9.2
20°-30°	932.2	14.0
30°-40°	1131.5	17.0
40°-50°	1185.0	17.8
50°-60°	1082.8	16.3
60°-70°	841.6	12.6
70°-80°	504.7	7.6
80°-90°	153.5	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°	1758.1	26.4
0°-40°	2889.6	43.4
0°-60°	5157.4	77.5
0°-90°	6657.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6657.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2250	2250	2250	2250	2250	
5°	2250	2244	2240	2240	2246	214
15°	2178	2170	2168	2168	2174	615
25°	2028	2020	2018	2020	2024	935
35°	1813	1809	1807	1807	1809	1136
45°	1546	1538	1536	1534	1534	1191
55°	1220	1216	1214	1204	1208	1091
65°	857	855	851	841	839	854
75°	486	484	480	472	464	517
85°	140	137	137	133	127	157
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2250.1	2250.1	2250.1	2250.1	2250.1
2.5°	2256.2	2248.0	2246.0	2246.0	2252.1
5°	2250.1	2243.9	2239.8	2239.8	2246.0
7.5°	2239.8	2231.6	2229.6	2229.6	2233.7
10°	2223.4	2217.2	2213.1	2213.1	2219.3
12.5°	2202.9	2194.7	2192.6	2194.7	2198.8
15°	2178.3	2170.1	2168.0	2168.0	2174.2
17.5°	2145.5	2139.3	2137.3	2137.3	2143.4
20°	2114.7	2104.4	2102.4	2104.4	2108.5
22.5°	2069.6	2065.5	2063.4	2065.5	2067.5
25°	2028.5	2020.3	2018.3	2020.3	2024.4
27.5°	1983.4	1975.2	1973.2	1973.2	1979.3
30°	1930.1	1923.9	1921.9	1921.9	1923.9
32.5°	1874.7	1870.6	1864.5	1866.5	1870.6
35°	1813.2	1809.1	1807.0	1807.0	1809.1
37.5°	1755.7	1747.5	1741.4	1741.4	1745.5
40°	1686.0	1681.9	1675.8	1677.8	1677.8
42.5°	1618.3	1612.2	1608.1	1606.0	1608.1
45°	1546.5	1538.3	1536.3	1534.2	1534.2
47.5°	1466.5	1466.5	1460.4	1456.3	1454.2
50°	1390.7	1382.4	1378.3	1372.2	1372.2
52.5°	1302.5	1300.4	1294.3	1292.2	1292.2
55°	1220.4	1216.3	1214.3	1204.0	1208.1
57.5°	1136.3	1128.1	1126.1	1119.9	1115.8
60°	1048.1	1044.0	1035.8	1027.6	1027.6
62.5°	953.8	951.7	943.5	937.4	935.3
65°	857.4	855.3	851.2	841.0	838.9
67.5°	775.3	767.1	756.9	748.7	748.7
70°	678.9	668.7	660.5	652.3	650.2
72.5°	580.5	574.3	570.2	562.0	555.9
75°	486.1	484.1	480.0	471.8	463.6
77.5°	397.9	395.9	385.6	379.5	373.3
80°	311.8	303.6	301.5	293.3	289.2
82.5°	219.5	223.6	213.3	211.3	209.2
85°	139.5	137.4	137.4	133.3	127.2
87.5°	61.5	63.6	63.6	63.6	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)