

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: P843354

Luminaire Tested: 24CGSB-70-L950

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843354  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-70-L950  
 Description: 2x4 CGSB AT 7000LM 5000K 90CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

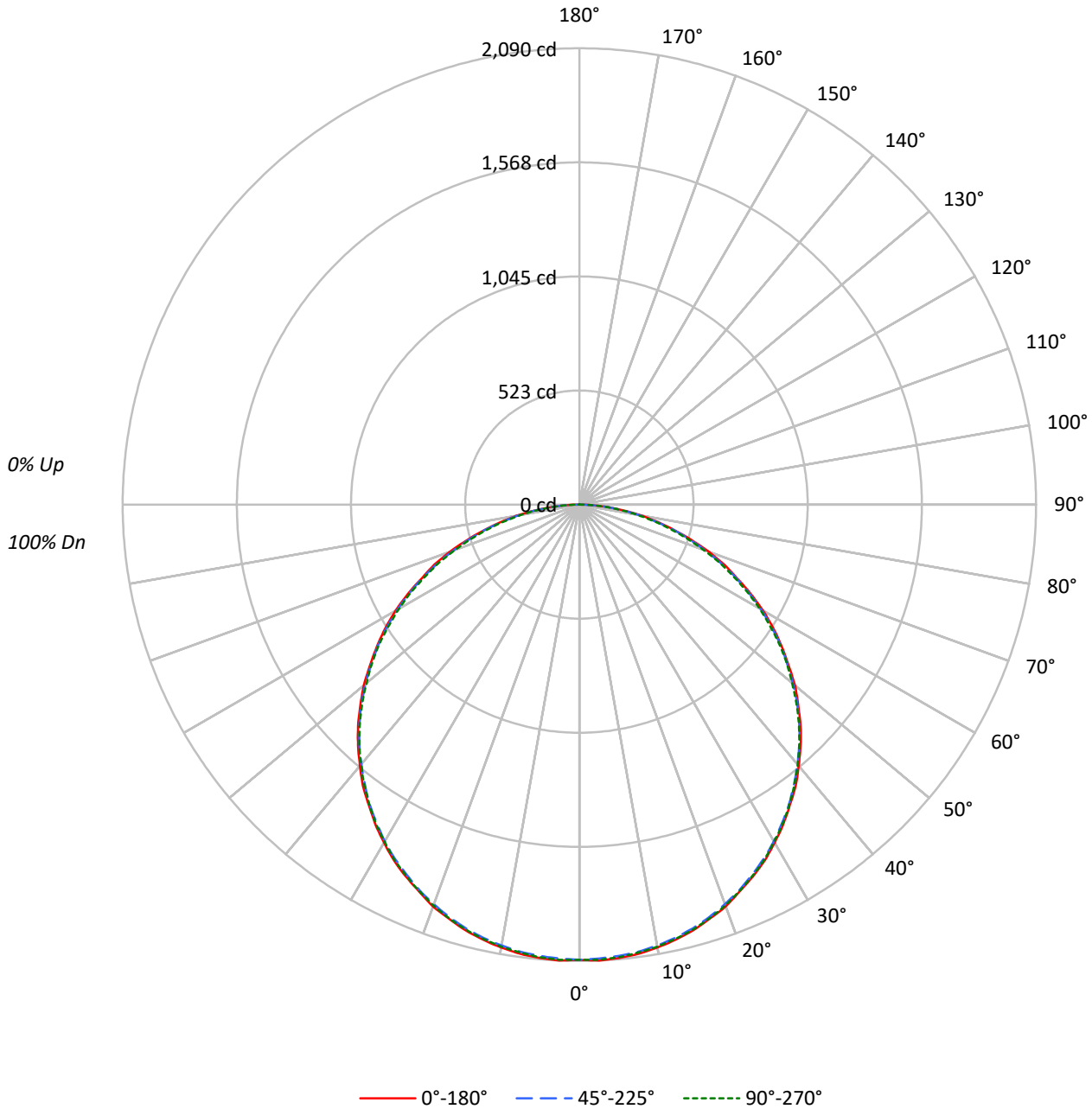
Lumens per Lamp: N/A  
 Luminaire Lumens: 6167.5 lumens  
 Efficiency: N/A  
 Efficacy: 113.6 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 54.3  
 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°	2805	2805	2805
5°	2816	2803	2810
10°	2814	2801	2809
15°	2811	2798	2806
20°	2805	2789	2797
25°	2790	2776	2784
30°	2778	2766	2769
35°	2759	2750	2753
40°	2744	2727	2730
45°	2726	2708	2705
50°	2697	2673	2661
55°	2652	2639	2626
60°	2613	2582	2562
65°	2529	2511	2474
70°	2474	2407	2370
75°	2341	2312	2233
80°	2238	2164	2076
85°	1995	1965	1819

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2726 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.6	3.2
10°-20°	567.5	9.2
20°-30°	863.7	14.0
30°-40°	1048.3	17.0
40°-50°	1097.9	17.8
50°-60°	1003.2	16.3
60°-70°	779.7	12.6
70°-80°	467.6	7.6
80°-90°	142.2	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°	1628.8	26.4
0°-40°	2677.1	43.4
0°-60°	4778.1	77.5
0°-90°	6167.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6167.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2085	2085	2085	2085	2085	
5°	2085	2079	2075	2075	2081	198
15°	2018	2010	2009	2009	2014	569
25°	1879	1872	1870	1872	1876	867
35°	1680	1676	1674	1674	1676	1052
45°	1433	1425	1423	1421	1421	1104
55°	1131	1127	1125	1116	1119	1011
65°	794	792	789	779	777	791
75°	450	448	445	437	430	479
85°	129	127	127	124	118	145
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2084.6	2084.6	2084.6	2084.6	2084.6
2.5°	2090.3	2082.7	2080.8	2080.8	2086.5
5°	2084.6	2078.9	2075.1	2075.1	2080.8
7.5°	2075.1	2067.5	2065.6	2065.6	2069.4
10°	2059.9	2054.2	2050.4	2050.4	2056.1
12.5°	2040.9	2033.3	2031.4	2033.3	2037.1
15°	2018.1	2010.5	2008.6	2008.6	2014.3
17.5°	1987.7	1982.0	1980.1	1980.1	1985.8
20°	1959.2	1949.7	1947.8	1949.7	1953.5
22.5°	1917.4	1913.6	1911.7	1913.6	1915.5
25°	1879.4	1871.8	1869.9	1871.8	1875.6
27.5°	1837.6	1830.0	1828.1	1828.1	1833.8
30°	1788.1	1782.4	1780.5	1780.5	1782.4
32.5°	1736.8	1733.0	1727.3	1729.2	1733.0
35°	1679.8	1676.0	1674.1	1674.1	1676.0
37.5°	1626.6	1619.0	1613.3	1613.3	1617.1
40°	1562.0	1558.2	1552.5	1554.4	1554.4
42.5°	1499.3	1493.6	1489.8	1487.9	1489.8
45°	1432.8	1425.2	1423.3	1421.4	1421.4
47.5°	1358.7	1358.7	1353.0	1349.2	1347.3
50°	1288.4	1280.8	1277.0	1271.3	1271.3
52.5°	1206.7	1204.8	1199.1	1197.2	1197.2
55°	1130.7	1126.9	1125.0	1115.5	1119.3
57.5°	1052.7	1045.1	1043.2	1037.5	1033.7
60°	971.0	967.2	959.6	952.0	952.0
62.5°	883.6	881.7	874.1	868.4	866.5
65°	794.3	792.4	788.6	779.1	777.2
67.5°	718.3	710.7	701.2	693.6	693.6
70°	629.0	619.5	611.9	604.3	602.4
72.5°	537.8	532.1	528.3	520.7	515.0
75°	450.4	448.5	444.7	437.1	429.5
77.5°	368.7	366.8	357.2	351.5	345.8
80°	288.8	281.2	279.3	271.7	267.9
82.5°	203.3	207.1	197.6	195.7	193.8
85°	129.2	127.3	127.3	123.5	117.8
87.5°	57.0	58.9	58.9	58.9	58.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)