

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: P843353

Luminaire Tested: 24CGSB-70-L940

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843353  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-70-L940  
 Description: 2x4 CGSB AT 7000LM 4000K 90CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

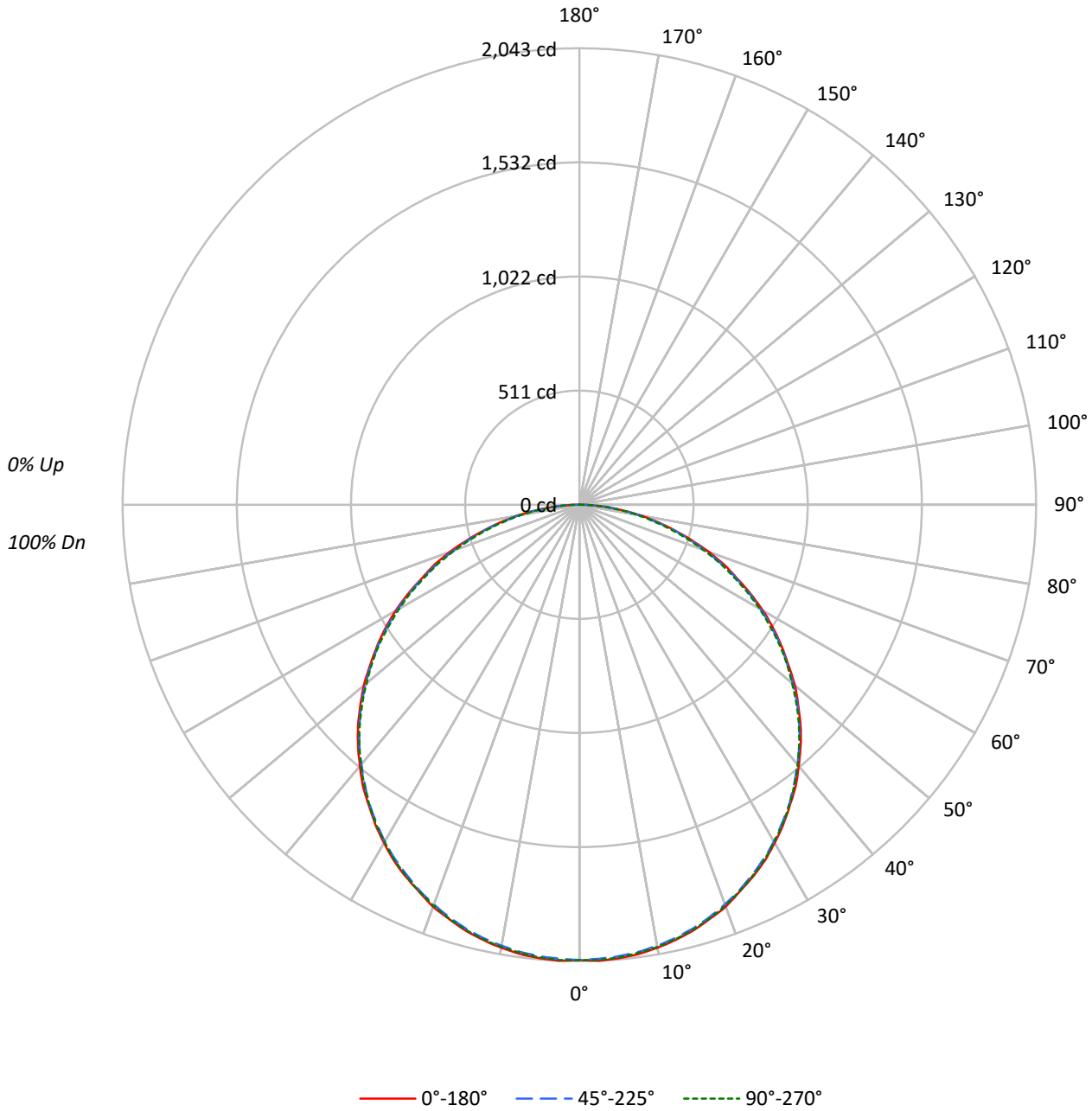
Lumens per Lamp: N/A  
 Luminaire Lumens: 6029.0 lumens  
 Efficiency: N/A  
 Efficacy: 111.0 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

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°	2742	2742	2742
5°	2752	2740	2747
10°	2751	2738	2746
15°	2748	2735	2743
20°	2742	2726	2734
25°	2727	2714	2722
30°	2716	2704	2707
35°	2697	2688	2691
40°	2682	2666	2669
45°	2665	2647	2644
50°	2636	2613	2601
55°	2593	2580	2567
60°	2554	2524	2504
65°	2472	2454	2419
70°	2419	2353	2316
75°	2288	2260	2182
80°	2187	2116	2029
85°	1950	1922	1778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2665 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	193.1	3.2
10°-20°	554.8	9.2
20°-30°	844.3	14.0
30°-40°	1024.7	17.0
40°-50°	1073.2	17.8
50°-60°	980.6	16.3
60°-70°	762.1	12.6
70°-80°	457.1	7.6
80°-90°	139.0	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°	1592.2	26.4
0°-40°	2616.9	43.4
0°-60°	4670.8	77.5
0°-90°	6029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6029.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2038	2038	2038	2038	2038	
5°	2038	2032	2028	2028	2034	194
15°	1973	1965	1963	1963	1969	557
25°	1837	1830	1828	1830	1833	847
35°	1642	1638	1636	1636	1638	1029
45°	1401	1393	1391	1390	1390	1079
55°	1105	1102	1100	1090	1094	988
65°	776	775	771	762	760	773
75°	440	438	435	427	420	468
85°	126	124	124	121	115	142
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2037.7	2037.7	2037.7	2037.7	2037.7
2.5°	2043.3	2035.9	2034.0	2034.0	2039.6
5°	2037.7	2032.2	2028.5	2028.5	2034.0
7.5°	2028.5	2021.0	2019.2	2019.2	2022.9
10°	2013.6	2008.0	2004.3	2004.3	2009.9
12.5°	1995.0	1987.6	1985.7	1987.6	1991.3
15°	1972.7	1965.3	1963.4	1963.4	1969.0
17.5°	1943.0	1937.4	1935.6	1935.6	1941.2
20°	1915.1	1905.9	1904.0	1905.9	1909.6
22.5°	1874.3	1870.6	1868.7	1870.6	1872.4
25°	1837.1	1829.7	1827.8	1829.7	1833.4
27.5°	1796.3	1788.8	1787.0	1787.0	1792.5
30°	1748.0	1742.4	1740.5	1740.5	1742.4
32.5°	1697.8	1694.1	1688.5	1690.4	1694.1
35°	1642.1	1638.4	1636.5	1636.5	1638.4
37.5°	1590.1	1582.6	1577.1	1577.1	1580.8
40°	1526.9	1523.2	1517.6	1519.5	1519.5
42.5°	1465.6	1460.0	1456.3	1454.5	1456.3
45°	1400.6	1393.2	1391.3	1389.5	1389.5
47.5°	1328.2	1328.2	1322.6	1318.9	1317.0
50°	1259.4	1252.0	1248.3	1242.7	1242.7
52.5°	1179.6	1177.7	1172.1	1170.3	1170.3
55°	1105.2	1101.5	1099.7	1090.4	1094.1
57.5°	1029.1	1021.7	1019.8	1014.2	1010.5
60°	949.2	945.5	938.1	930.6	930.6
62.5°	863.8	861.9	854.5	848.9	847.0
65°	776.5	774.6	770.9	761.6	759.7
67.5°	702.2	694.7	685.4	678.0	678.0
70°	614.9	605.6	598.1	590.7	588.8
72.5°	525.7	520.1	516.4	509.0	503.4
75°	440.2	438.4	434.7	427.2	419.8
77.5°	360.4	358.5	349.2	343.6	338.1
80°	282.3	274.9	273.1	265.6	261.9
82.5°	198.8	202.5	193.2	191.3	189.5
85°	126.3	124.5	124.5	120.7	115.2
87.5°	55.7	57.6	57.6	57.6	57.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)