

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: P843347

Luminaire Tested: 24CGSB-70-L830

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843347  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-70-L830  
 Description: 2x4 CGSB AT 7000LM 3000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

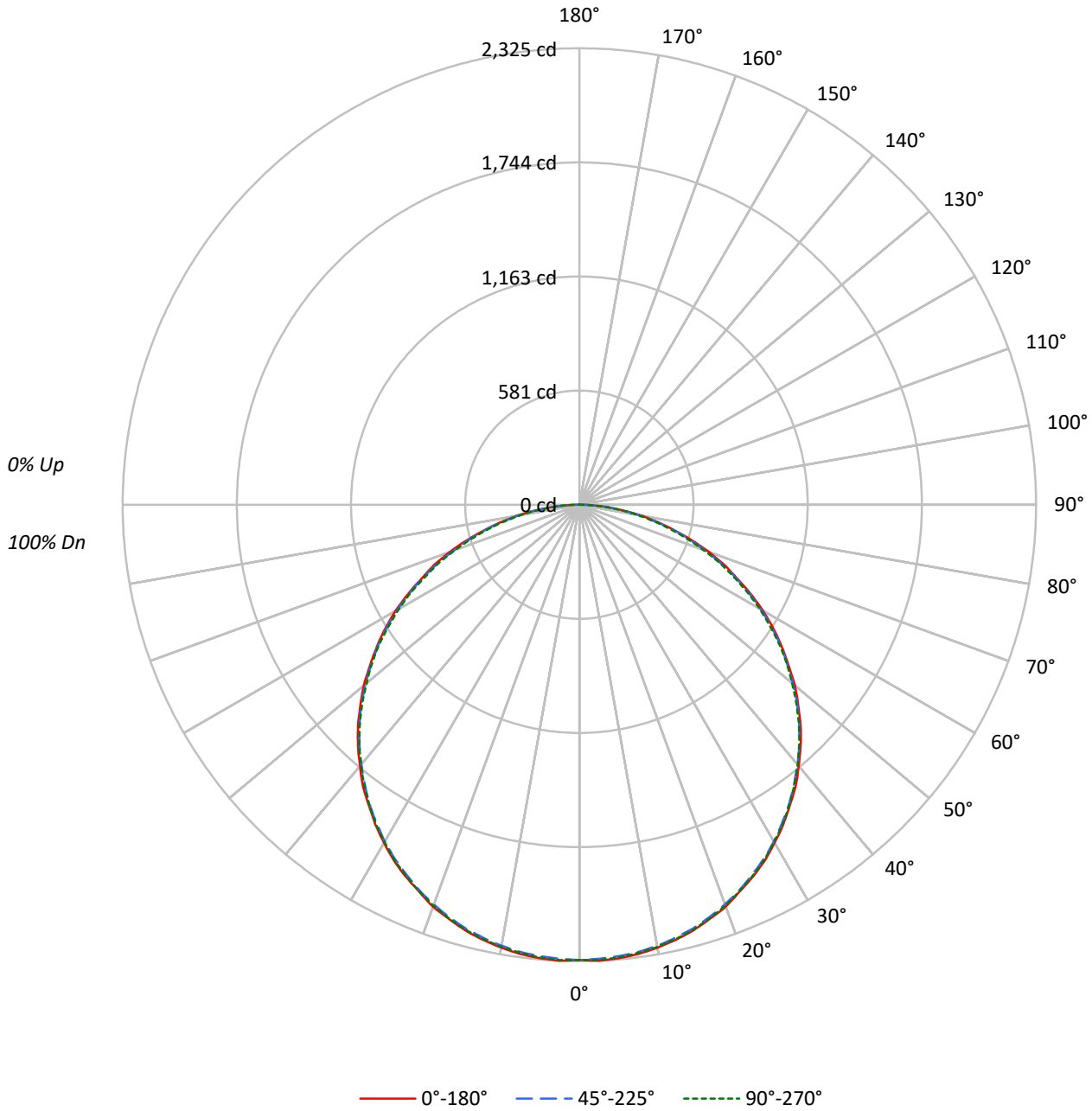
Lumens per Lamp: N/A  
 Luminaire Lumens: 6860.5 lumens  
 Efficiency: N/A  
 Efficacy: 126.3 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 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°	3120	3120	3120
5°	3132	3118	3126
10°	3130	3116	3125
15°	3127	3112	3121
20°	3120	3102	3111
25°	3104	3088	3097
30°	3090	3077	3080
35°	3069	3059	3062
40°	3052	3033	3037
45°	3033	3013	3009
50°	3000	2973	2960
55°	2950	2936	2921
60°	2907	2873	2850
65°	2813	2793	2752
70°	2753	2677	2636
75°	2604	2571	2483
80°	2490	2407	2309
85°	2218	2186	2024

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3033 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.8	3.2
10°-20°	631.3	9.2
20°-30°	960.7	14.0
30°-40°	1166.1	17.0
40°-50°	1221.2	17.8
50°-60°	1115.9	16.3
60°-70°	867.3	12.6
70°-80°	520.1	7.6
80°-90°	158.2	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°	1811.8	26.4
0°-40°	2977.9	43.4
0°-60°	5315.0	77.5
0°-90°	6860.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6860.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2319	2319	2319	2319	2319	
5°	2319	2312	2308	2308	2315	220
15°	2245	2236	2234	2234	2241	633
25°	2090	2082	2080	2082	2086	964
35°	1869	1864	1862	1862	1864	1171
45°	1594	1585	1583	1581	1581	1228
55°	1258	1254	1251	1241	1245	1125
65°	884	881	877	867	864	880
75°	501	499	495	486	478	533
85°	144	142	142	137	131	162
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2318.8	2318.8	2318.8	2318.8	2318.8
2.5°	2325.2	2316.7	2314.6	2314.6	2320.9
5°	2318.8	2312.5	2308.2	2308.2	2314.6
7.5°	2308.2	2299.8	2297.7	2297.7	2301.9
10°	2291.3	2285.0	2280.8	2280.8	2287.1
12.5°	2270.2	2261.7	2259.6	2261.7	2266.0
15°	2244.8	2236.4	2234.3	2234.3	2240.6
17.5°	2211.0	2204.7	2202.6	2202.6	2208.9
20°	2179.3	2168.7	2166.6	2168.7	2173.0
22.5°	2132.8	2128.6	2126.5	2128.6	2130.7
25°	2090.5	2082.1	2080.0	2082.1	2086.3
27.5°	2044.0	2035.6	2033.5	2033.5	2039.8
30°	1989.1	1982.7	1980.6	1980.6	1982.7
32.5°	1932.0	1927.8	1921.4	1923.5	1927.8
35°	1868.6	1864.4	1862.2	1862.2	1864.4
37.5°	1809.4	1800.9	1794.6	1794.6	1798.8
40°	1737.5	1733.3	1727.0	1729.1	1729.1
42.5°	1667.8	1661.4	1657.2	1655.1	1657.2
45°	1593.8	1585.3	1583.2	1581.1	1581.1
47.5°	1511.4	1511.4	1505.0	1500.8	1498.7
50°	1433.1	1424.7	1420.5	1414.1	1414.1
52.5°	1342.2	1340.1	1333.8	1331.7	1331.7
55°	1257.7	1253.5	1251.4	1240.8	1245.0
57.5°	1171.0	1162.6	1160.5	1154.1	1149.9
60°	1080.1	1075.9	1067.5	1059.0	1059.0
62.5°	982.9	980.8	972.3	966.0	963.9
65°	883.6	881.4	877.2	866.6	864.5
67.5°	799.0	790.6	780.0	771.5	771.5
70°	699.7	689.1	680.6	672.2	670.1
72.5°	598.2	591.9	587.6	579.2	572.8
75°	501.0	498.9	494.6	486.2	477.7
77.5°	410.1	408.0	397.4	391.0	384.7
80°	321.3	312.8	310.7	302.3	298.0
82.5°	226.2	230.4	219.8	217.7	215.6
85°	143.7	141.6	141.6	137.4	131.1
87.5°	63.4	65.5	65.5	65.5	65.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)