

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: P843323

Luminaire Tested: 24CGSB-50-L830

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843323  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-50-L830  
 Description: 2x4 CGSB AT 5000LM 3000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

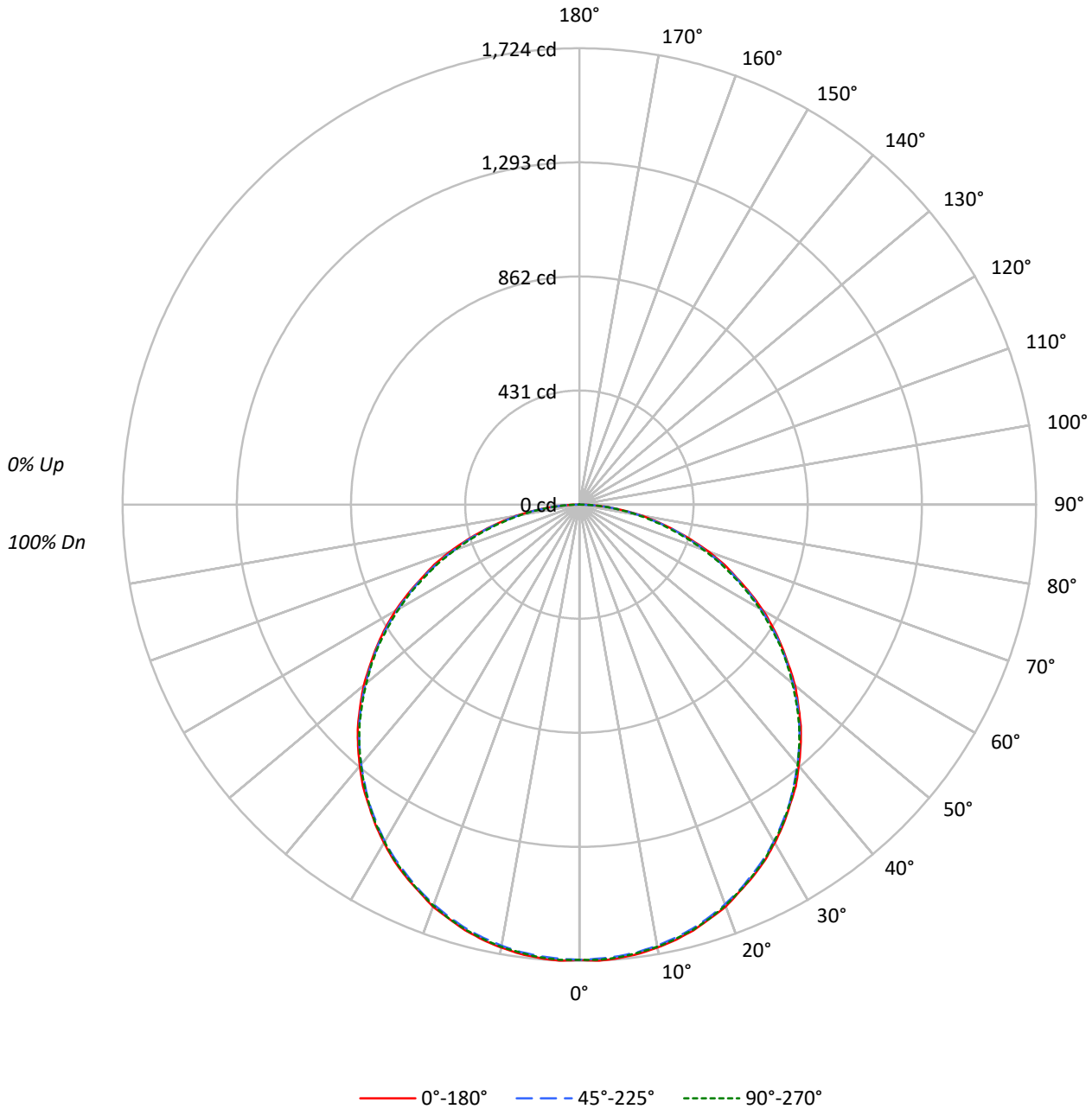
Lumens per Lamp: N/A  
 Luminaire Lumens: 5088.3 lumens  
 Efficiency: N/A  
 Efficacy: 127.5 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 39.9  
 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°	2314	2314	2314
5°	2323	2312	2319
10°	2322	2311	2318
15°	2319	2308	2315
20°	2314	2301	2308
25°	2302	2290	2297
30°	2292	2282	2285
35°	2276	2269	2271
40°	2263	2250	2252
45°	2249	2234	2231
50°	2225	2205	2195
55°	2188	2177	2166
60°	2156	2130	2113
65°	2086	2071	2041
70°	2041	1986	1955
75°	1932	1907	1842
80°	1846	1786	1713
85°	1646	1621	1501

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2249 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.0	3.2
10°-20°	468.2	9.2
20°-30°	712.5	14.0
30°-40°	864.8	17.0
40°-50°	905.8	17.8
50°-60°	827.6	16.3
60°-70°	643.2	12.6
70°-80°	385.8	7.6
80°-90°	117.3	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°	1343.8	26.4
0°-40°	2208.6	43.4
0°-60°	3942.0	77.5
0°-90°	5088.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5088.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1720	1720	1720	1720	1720	
5°	1720	1715	1712	1712	1717	164
15°	1665	1659	1657	1657	1662	470
25°	1550	1544	1543	1544	1547	715
35°	1386	1383	1381	1381	1383	868
45°	1182	1176	1174	1173	1173	911
55°	933	930	928	920	923	834
65°	655	654	651	643	641	653
75°	372	370	367	361	354	395
85°	107	105	105	102	97	120
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1719.8	1719.8	1719.8	1719.8	1719.8
2.5°	1724.5	1718.2	1716.7	1716.7	1721.4
5°	1719.8	1715.1	1712.0	1712.0	1716.7
7.5°	1712.0	1705.7	1704.1	1704.1	1707.3
10°	1699.4	1694.7	1691.6	1691.6	1696.3
12.5°	1683.8	1677.5	1675.9	1677.5	1680.6
15°	1664.9	1658.7	1657.1	1657.1	1661.8
17.5°	1639.9	1635.2	1633.6	1633.6	1638.3
20°	1616.3	1608.5	1606.9	1608.5	1611.6
22.5°	1581.8	1578.7	1577.1	1578.7	1580.3
25°	1550.5	1544.2	1542.7	1544.2	1547.4
27.5°	1516.0	1509.7	1508.2	1508.2	1512.9
30°	1475.2	1470.5	1469.0	1469.0	1470.5
32.5°	1432.9	1429.8	1425.1	1426.6	1429.8
35°	1385.9	1382.7	1381.2	1381.2	1382.7
37.5°	1342.0	1335.7	1331.0	1331.0	1334.1
40°	1288.7	1285.5	1280.8	1282.4	1282.4
42.5°	1236.9	1232.2	1229.1	1227.5	1229.1
45°	1182.1	1175.8	1174.2	1172.7	1172.7
47.5°	1120.9	1120.9	1116.2	1113.1	1111.5
50°	1062.9	1056.7	1053.5	1048.8	1048.8
52.5°	995.5	993.9	989.2	987.7	987.7
55°	932.8	929.7	928.1	920.3	923.4
57.5°	868.5	862.3	860.7	856.0	852.8
60°	801.1	798.0	791.7	785.4	785.4
62.5°	729.0	727.4	721.2	716.5	714.9
65°	655.3	653.7	650.6	642.8	641.2
67.5°	592.6	586.3	578.5	572.2	572.2
70°	518.9	511.1	504.8	498.5	497.0
72.5°	443.7	439.0	435.8	429.6	424.9
75°	371.6	370.0	366.9	360.6	354.3
77.5°	304.1	302.6	294.7	290.0	285.3
80°	238.3	232.0	230.5	224.2	221.1
82.5°	167.7	170.9	163.0	161.5	159.9
85°	106.6	105.0	105.0	101.9	97.2
87.5°	47.0	48.6	48.6	48.6	48.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)