

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: P843301

Luminaire Tested: 24CGSB-35-L840

Issue Date: 5/31/2024

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-2019  
 Report Number: P843301  
 Test Lab: INNOVATION CENTER  
 Issue Date: 5/31/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: METALUX  
 Catalog Number: 24CGSB-35-L840  
 Description: 2x4 CGSB AT 3500LM 4000K 80CRI  
 Light Source: -  
 Ballast/Driver: -

**Summary**

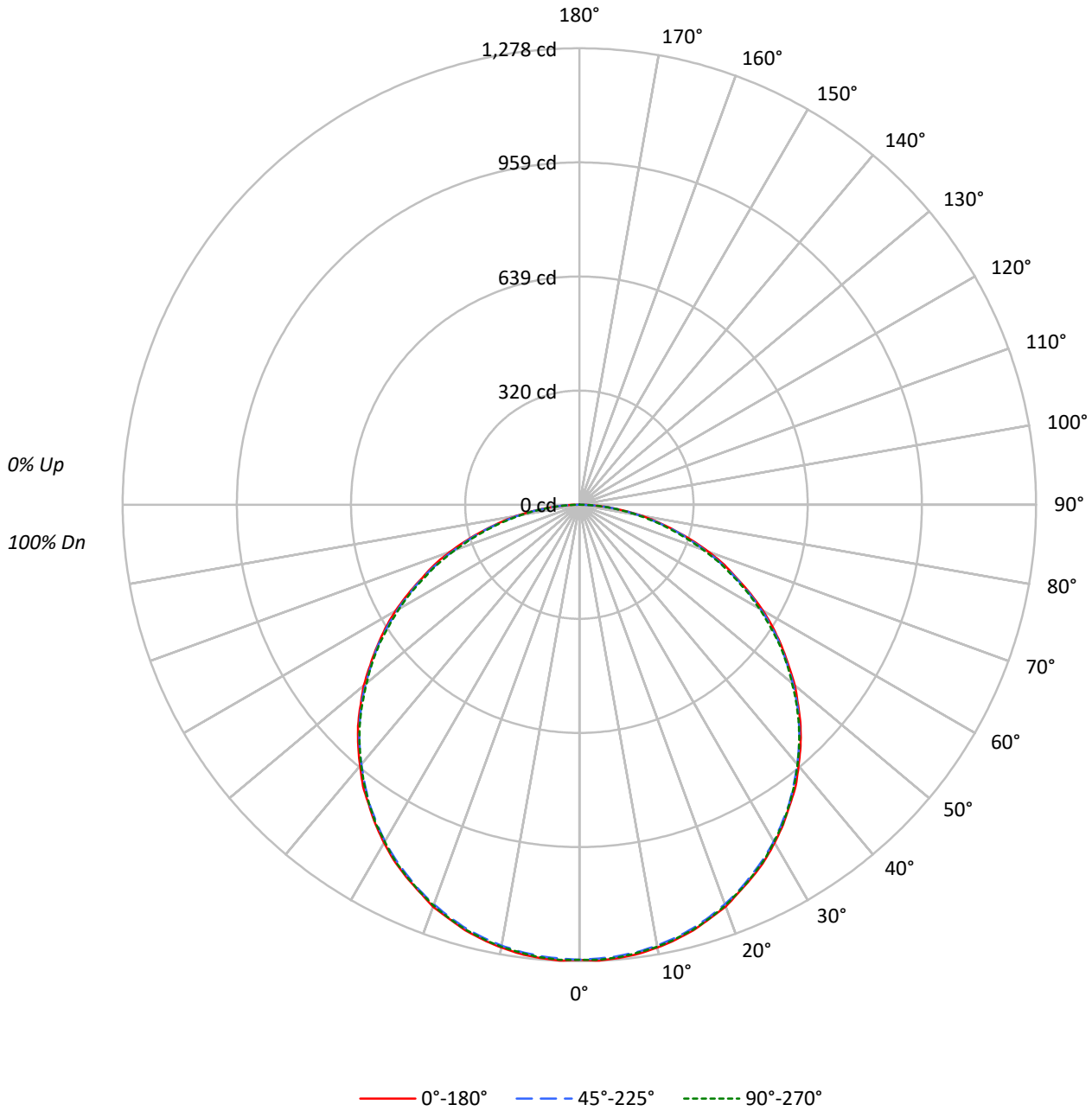
Lumens per Lamp: N/A  
 Luminaire Lumens: 3769.4 lumens  
 Efficiency: N/A  
 Efficacy: 137.1 lumens/watt  
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39  
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
 CIE Type: Direct

Input Watts (W): 27.5  
 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°	1714	1714	1714
5°	1721	1713	1718
10°	1720	1712	1717
15°	1718	1710	1715
20°	1714	1704	1709
25°	1705	1697	1702
30°	1698	1691	1693
35°	1686	1681	1682
40°	1677	1666	1669
45°	1666	1655	1653
50°	1648	1634	1626
55°	1621	1613	1605
60°	1597	1578	1566
65°	1546	1535	1512
70°	1512	1471	1448
75°	1431	1413	1365
80°	1368	1323	1269
85°	1220	1201	1112

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1666 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.7	3.2
10°-20°	346.9	9.2
20°-30°	527.8	14.0
30°-40°	640.7	17.0
40°-50°	671.0	17.8
50°-60°	613.1	16.3
60°-70°	476.5	12.6
70°-80°	285.8	7.6
80°-90°	86.9	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°	995.4	26.4
0°-40°	1636.1	43.4
0°-60°	2920.2	77.5
0°-90°	3769.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3769.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1274	1270	1268	1268	1272	121
15°	1233	1229	1228	1228	1231	348
25°	1149	1144	1143	1144	1146	530
35°	1027	1024	1023	1023	1024	643
45°	876	871	870	869	869	675
55°	691	689	688	682	684	618
65°	486	484	482	476	475	483
75°	275	274	272	267	262	293
85°	79	78	78	76	72	89
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1274.0	1274.0	1274.0	1274.0	1274.0
2.5°	1277.5	1272.9	1271.7	1271.7	1275.2
5°	1274.0	1270.5	1268.2	1268.2	1271.7
7.5°	1268.2	1263.6	1262.4	1262.4	1264.7
10°	1258.9	1255.4	1253.1	1253.1	1256.6
12.5°	1247.3	1242.7	1241.5	1242.7	1245.0
15°	1233.4	1228.7	1227.6	1227.6	1231.1
17.5°	1214.8	1211.3	1210.1	1210.1	1213.6
20°	1197.4	1191.6	1190.4	1191.6	1193.9
22.5°	1171.8	1169.5	1168.3	1169.5	1170.7
25°	1148.6	1143.9	1142.8	1143.9	1146.3
27.5°	1123.0	1118.4	1117.2	1117.2	1120.7
30°	1092.8	1089.4	1088.2	1088.2	1089.4
32.5°	1061.5	1059.2	1055.7	1056.8	1059.2
35°	1026.7	1024.3	1023.2	1023.2	1024.3
37.5°	994.1	989.5	986.0	986.0	988.3
40°	954.6	952.3	948.8	950.0	950.0
42.5°	916.3	912.8	910.5	909.4	910.5
45°	875.7	871.0	869.9	868.7	868.7
47.5°	830.4	830.4	826.9	824.6	823.4
50°	787.4	782.8	780.4	777.0	777.0
52.5°	737.5	736.3	732.8	731.7	731.7
55°	691.0	688.7	687.5	681.7	684.0
57.5°	643.4	638.8	637.6	634.1	631.8
60°	593.5	591.1	586.5	581.8	581.8
62.5°	540.0	538.9	534.2	530.7	529.6
65°	485.5	484.3	482.0	476.2	475.0
67.5°	439.0	434.4	428.5	423.9	423.9
70°	384.4	378.6	374.0	369.3	368.2
72.5°	328.7	325.2	322.9	318.2	314.7
75°	275.2	274.1	271.8	267.1	262.5
77.5°	225.3	224.1	218.3	214.9	211.4
80°	176.5	171.9	170.7	166.1	163.8
82.5°	124.3	126.6	120.8	119.6	118.5
85°	79.0	77.8	77.8	75.5	72.0
87.5°	34.8	36.0	36.0	36.0	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)