

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: P843317

Luminaire Tested: 24CGSB-45-L840

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843317
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-45-L840
 Description: 2x4 CGSB AT 4500LM 4000K 80CRI
 Light Source: -
 Ballast/Driver: -

Summary

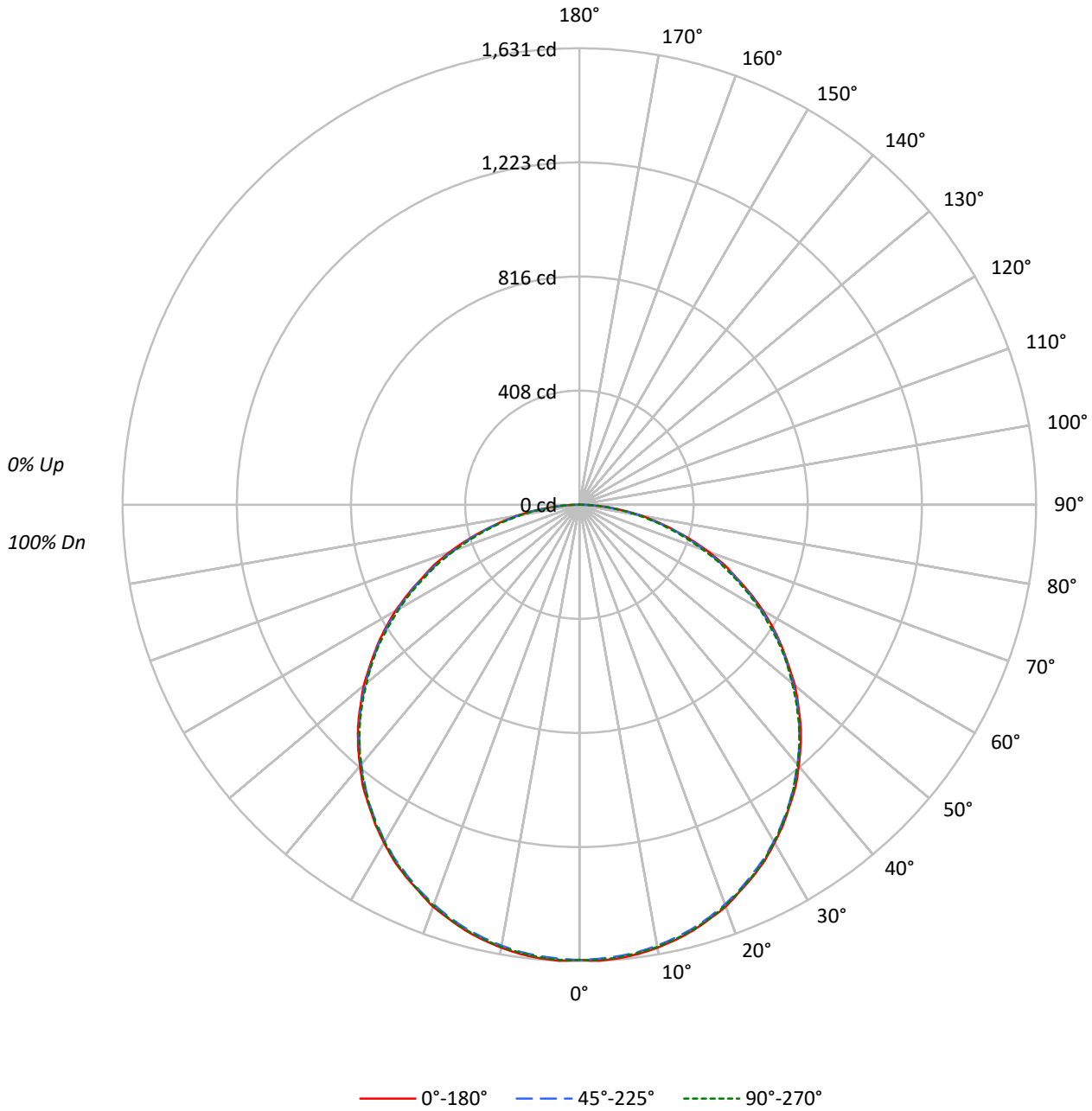
Lumens per Lamp: N/A
 Luminaire Lumens: 4812.2 lumens
 Efficiency: N/A
 Efficacy: 135.9 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

Input Watts (W): 35.4
 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°	2188	2188	2188
5°	2197	2187	2193
10°	2196	2186	2192
15°	2193	2183	2189
20°	2189	2176	2182
25°	2177	2166	2173
30°	2168	2158	2161
35°	2153	2145	2148
40°	2141	2128	2130
45°	2127	2113	2110
50°	2104	2086	2076
55°	2069	2059	2049
60°	2039	2015	1999
65°	1973	1959	1931
70°	1931	1878	1849
75°	1827	1803	1742
80°	1746	1689	1620
85°	1556	1533	1419

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2127 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.1	3.2
10°-20°	442.8	9.2
20°-30°	673.9	14.0
30°-40°	817.9	17.0
40°-50°	856.6	17.8
50°-60°	782.7	16.3
60°-70°	608.3	12.6
70°-80°	364.8	7.6
80°-90°	111.0	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°	1270.9	26.4
0°-40°	2088.8	43.4
0°-60°	3728.1	77.5
0°-90°	4812.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4812.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1626	1626	1626	1626	1626	
5°	1626	1622	1619	1619	1624	155
15°	1575	1569	1567	1567	1572	444
25°	1466	1460	1459	1460	1463	676
35°	1311	1308	1306	1306	1308	821
45°	1118	1112	1110	1109	1109	861
55°	882	879	878	870	873	789
65°	620	618	615	608	606	617
75°	351	350	347	341	335	374
85°	101	99	99	96	92	113
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1626.5	1626.5	1626.5	1626.5	1626.5
2.5°	1631.0	1625.0	1623.5	1623.5	1628.0
5°	1626.5	1622.1	1619.1	1619.1	1623.5
7.5°	1619.1	1613.2	1611.7	1611.7	1614.6
10°	1607.2	1602.8	1599.8	1599.8	1604.3
12.5°	1592.4	1586.5	1585.0	1586.5	1589.4
15°	1574.6	1568.7	1567.2	1567.2	1571.6
17.5°	1550.9	1546.4	1545.0	1545.0	1549.4
20°	1528.6	1521.2	1519.7	1521.2	1524.2
22.5°	1496.0	1493.1	1491.6	1493.1	1494.5
25°	1466.4	1460.4	1459.0	1460.4	1463.4
27.5°	1433.8	1427.8	1426.3	1426.3	1430.8
30°	1395.2	1390.8	1389.3	1389.3	1390.8
32.5°	1355.2	1352.2	1347.8	1349.2	1352.2
35°	1310.7	1307.7	1306.2	1306.2	1307.7
37.5°	1269.2	1263.2	1258.8	1258.8	1261.8
40°	1218.8	1215.8	1211.4	1212.8	1212.8
42.5°	1169.8	1165.4	1162.4	1160.9	1162.4
45°	1117.9	1112.0	1110.5	1109.0	1109.0
47.5°	1060.1	1060.1	1055.7	1052.7	1051.2
50°	1005.3	999.3	996.4	991.9	991.9
52.5°	941.5	940.0	935.6	934.1	934.1
55°	882.2	879.2	877.7	870.3	873.3
57.5°	821.4	815.5	814.0	809.5	806.6
60°	757.7	754.7	748.8	742.8	742.8
62.5°	689.4	688.0	682.0	677.6	676.1
65°	619.8	618.3	615.3	607.9	606.4
67.5°	560.5	554.5	547.1	541.2	541.2
70°	490.8	483.4	477.4	471.5	470.0
72.5°	419.6	415.2	412.2	406.3	401.8
75°	351.4	349.9	346.9	341.0	335.1
77.5°	287.6	286.2	278.7	274.3	269.8
80°	225.4	219.4	218.0	212.0	209.1
82.5°	158.6	161.6	154.2	152.7	151.2
85°	100.8	99.3	99.3	96.4	91.9
87.5°	44.5	46.0	46.0	46.0	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)