

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: P843320

Luminaire Tested: 24CGSB-45-L935

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843320
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-45-L935
 Description: 2x4 CGSB AT 4500LM 3500K 90CRI
 Light Source: -
 Ballast/Driver: -

Summary

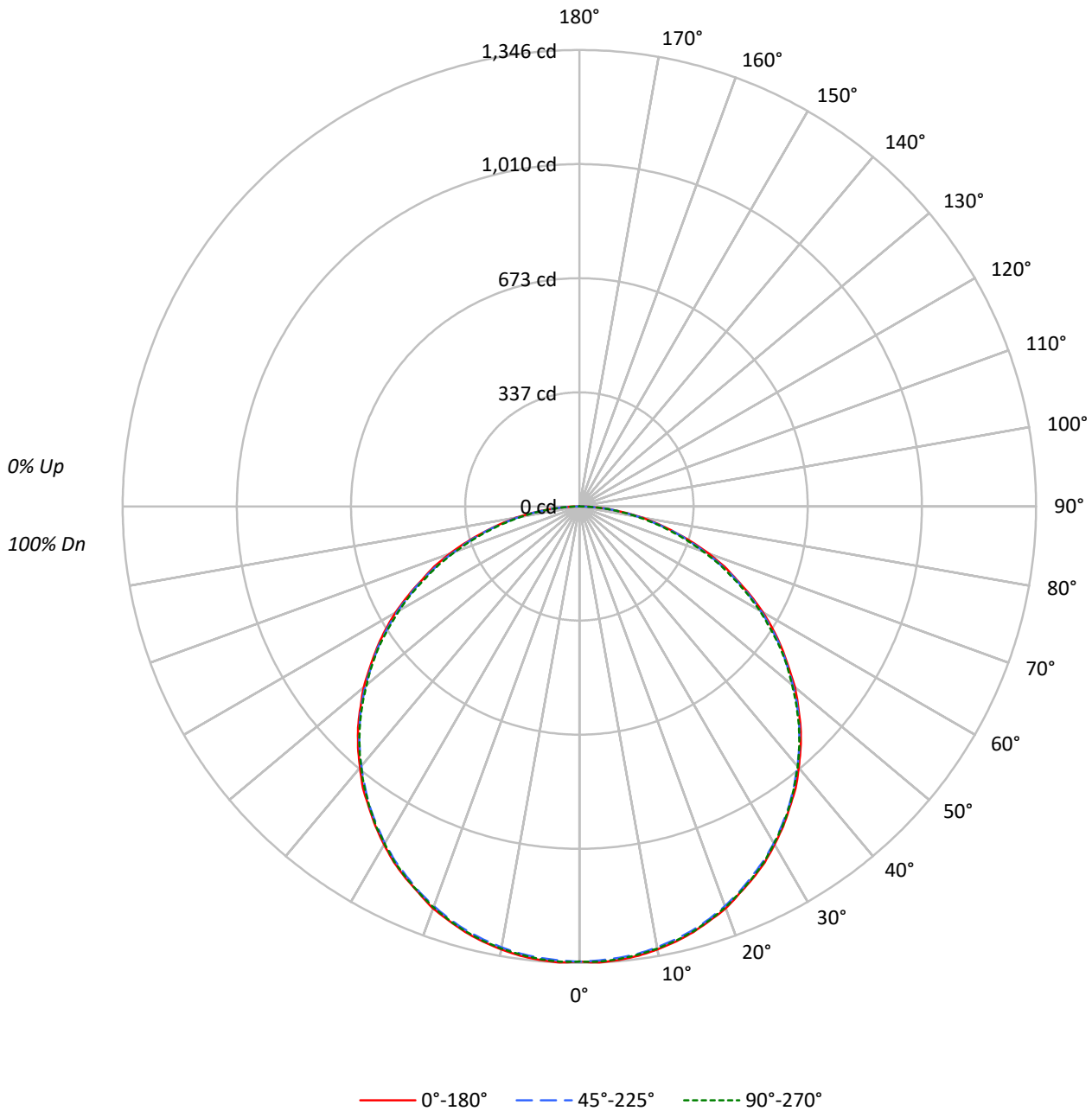
Lumens per Lamp: N/A
 Luminaire Lumens: 3971.3 lumens
 Efficiency: N/A
 Efficacy: 112.2 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

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	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	
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°	1806	1806	1806
5°	1813	1805	1810
10°	1812	1804	1809
15°	1810	1802	1807
20°	1806	1796	1801
25°	1796	1787	1793
30°	1789	1781	1783
35°	1777	1771	1773
40°	1767	1756	1758
45°	1756	1744	1741
50°	1737	1721	1714
55°	1708	1699	1691
60°	1682	1663	1650
65°	1628	1617	1593
70°	1593	1550	1526
75°	1508	1488	1437
80°	1441	1394	1337
85°	1284	1266	1172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1756 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.2	3.2
10°-20°	365.4	9.2
20°-30°	556.1	14.0
30°-40°	675.0	17.0
40°-50°	706.9	17.8
50°-60°	645.9	16.3
60°-70°	502.0	12.6
70°-80°	301.1	7.6
80°-90°	91.6	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°	1048.8	26.4
0°-40°	1723.8	43.4
0°-60°	3076.6	77.5
0°-90°	3971.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3971.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1339	1336	1336	1340	128
15°	1299	1294	1293	1293	1297	367
25°	1210	1205	1204	1205	1208	558
35°	1082	1079	1078	1078	1079	678
45°	923	918	916	915	915	711
55°	728	726	724	718	721	651
65°	512	510	508	502	500	509
75°	290	289	286	281	276	308
85°	83	82	82	80	76	94
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1342.3	1342.3	1342.3	1342.3	1342.3
2.5°	1345.9	1341.0	1339.8	1339.8	1343.5
5°	1342.3	1338.6	1336.1	1336.1	1339.8
7.5°	1336.1	1331.2	1330.0	1330.0	1332.5
10°	1326.4	1322.7	1320.2	1320.2	1323.9
12.5°	1314.1	1309.2	1308.0	1309.2	1311.7
15°	1299.4	1294.5	1293.3	1293.3	1297.0
17.5°	1279.9	1276.2	1275.0	1275.0	1278.6
20°	1261.5	1255.4	1254.2	1255.4	1257.8
22.5°	1234.6	1232.1	1230.9	1232.1	1233.4
25°	1210.1	1205.2	1204.0	1205.2	1207.7
27.5°	1183.2	1178.3	1177.1	1177.1	1180.7
30°	1151.4	1147.7	1146.5	1146.5	1147.7
32.5°	1118.3	1115.9	1112.2	1113.5	1115.9
35°	1081.6	1079.2	1078.0	1078.0	1079.2
37.5°	1047.4	1042.5	1038.8	1038.8	1041.3
40°	1005.8	1003.3	999.7	1000.9	1000.9
42.5°	965.4	961.7	959.3	958.1	959.3
45°	922.6	917.7	916.5	915.2	915.2
47.5°	874.9	874.9	871.2	868.7	867.5
50°	829.6	824.7	822.2	818.6	818.6
52.5°	777.0	775.7	772.1	770.9	770.9
55°	728.0	725.6	724.4	718.2	720.7
57.5°	677.9	673.0	671.7	668.1	665.6
60°	625.2	622.8	617.9	613.0	613.0
62.5°	569.0	567.7	562.8	559.2	557.9
65°	511.5	510.2	507.8	501.7	500.4
67.5°	462.5	457.6	451.5	446.6	446.6
70°	405.0	398.9	394.0	389.1	387.9
72.5°	346.3	342.6	340.2	335.3	331.6
75°	290.0	288.8	286.3	281.4	276.5
77.5°	237.4	236.1	230.0	226.4	222.7
80°	186.0	181.1	179.9	175.0	172.5
82.5°	130.9	133.4	127.3	126.0	124.8
85°	83.2	82.0	82.0	79.5	75.9
87.5°	36.7	37.9	37.9	37.9	37.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)