

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: P843315

Luminaire Tested: 24CGSB-45-L830

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843315
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-45-L830
 Description: 2x4 CGSB AT 4500LM 3000K 80CRI
 Light Source: -
 Ballast/Driver: -

Summary

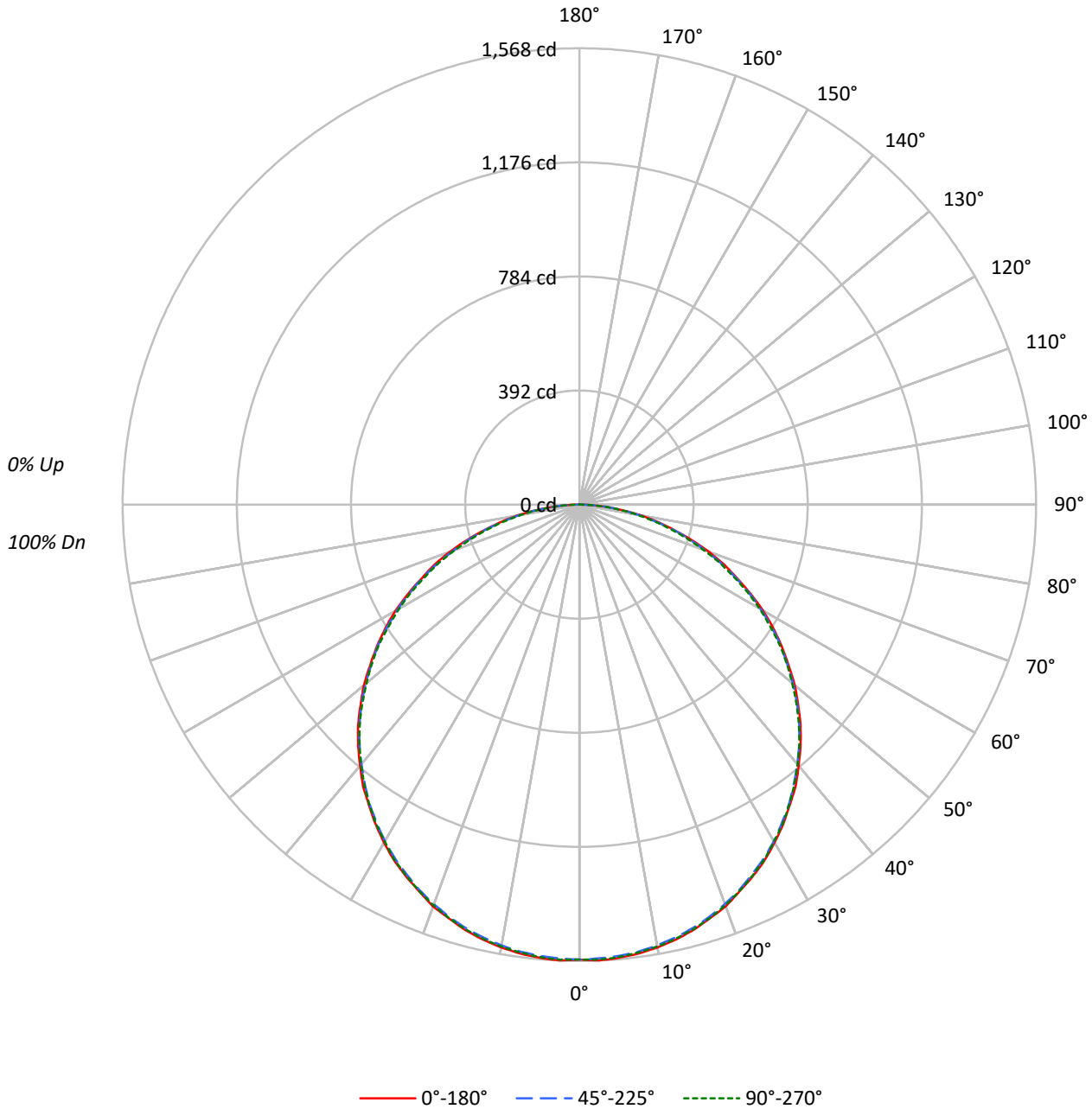
Lumens per Lamp: N/A
 Luminaire Lumens: 4625.4 lumens
 Efficiency: N/A
 Efficacy: 130.7 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

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°	2103	2103	2103
5°	2111	2102	2108
10°	2111	2101	2107
15°	2108	2098	2104
20°	2104	2091	2098
25°	2092	2082	2088
30°	2083	2075	2077
35°	2069	2062	2065
40°	2057	2045	2047
45°	2045	2031	2028
50°	2022	2005	1996
55°	1989	1979	1969
60°	1960	1937	1921
65°	1897	1883	1856
70°	1856	1805	1777
75°	1756	1734	1674
80°	1678	1623	1557
85°	1496	1474	1365

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2045 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	3.2
10°-20°	425.6	9.2
20°-30°	647.7	14.0
30°-40°	786.2	17.0
40°-50°	823.4	17.8
50°-60°	752.3	16.3
60°-70°	584.7	12.6
70°-80°	350.7	7.6
80°-90°	106.7	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°	1221.5	26.4
0°-40°	2007.7	43.4
0°-60°	3583.3	77.5
0°-90°	4625.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4625.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1563	1563	1563	1563	1563	
5°	1563	1559	1556	1556	1560	149
15°	1514	1508	1506	1506	1511	427
25°	1409	1404	1402	1404	1407	650
35°	1260	1257	1256	1256	1257	789
45°	1074	1069	1067	1066	1066	828
55°	848	845	844	836	839	758
65°	596	594	591	584	583	593
75°	338	336	334	328	322	359
85°	97	96	96	93	88	109
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1563.3	1563.3	1563.3	1563.3	1563.3
2.5°	1567.6	1561.9	1560.5	1560.5	1564.8
5°	1563.3	1559.1	1556.2	1556.2	1560.5
7.5°	1556.2	1550.5	1549.1	1549.1	1551.9
10°	1544.8	1540.5	1537.7	1537.7	1542.0
12.5°	1530.6	1524.9	1523.4	1524.9	1527.7
15°	1513.5	1507.8	1506.3	1506.3	1510.6
17.5°	1490.7	1486.4	1485.0	1485.0	1489.2
20°	1469.3	1462.2	1460.7	1462.2	1465.0
22.5°	1437.9	1435.1	1433.7	1435.1	1436.5
25°	1409.4	1403.7	1402.3	1403.7	1406.6
27.5°	1378.1	1372.4	1370.9	1370.9	1375.2
30°	1341.0	1336.7	1335.3	1335.3	1336.7
32.5°	1302.5	1299.7	1295.4	1296.8	1299.7
35°	1259.8	1256.9	1255.5	1255.5	1256.9
37.5°	1219.9	1214.2	1209.9	1209.9	1212.8
40°	1171.4	1168.6	1164.3	1165.7	1165.7
42.5°	1124.4	1120.1	1117.3	1115.9	1117.3
45°	1074.5	1068.8	1067.4	1066.0	1066.0
47.5°	1018.9	1018.9	1014.7	1011.8	1010.4
50°	966.2	960.5	957.7	953.4	953.4
52.5°	904.9	903.5	899.2	897.8	897.8
55°	847.9	845.1	843.7	836.5	839.4
57.5°	789.5	783.8	782.4	778.1	775.3
60°	728.2	725.4	719.7	714.0	714.0
62.5°	662.7	661.2	655.5	651.3	649.8
65°	595.7	594.3	591.4	584.3	582.9
67.5°	538.7	533.0	525.9	520.2	520.2
70°	471.7	464.6	458.9	453.2	451.8
72.5°	403.3	399.0	396.2	390.5	386.2
75°	337.7	336.3	333.5	327.8	322.1
77.5°	276.5	275.0	267.9	263.6	259.4
80°	216.6	210.9	209.5	203.8	200.9
82.5°	152.5	155.3	148.2	146.8	145.4
85°	96.9	95.5	95.5	92.6	88.4
87.5°	42.8	44.2	44.2	44.2	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)