

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: P843310

Luminaire Tested: 24CGSB-40-L850

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843310
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-40-L850
 Description: 2x4 CGSB AT 4000LM 5000K 80CRI
 Light Source: -
 Ballast/Driver: -

Summary

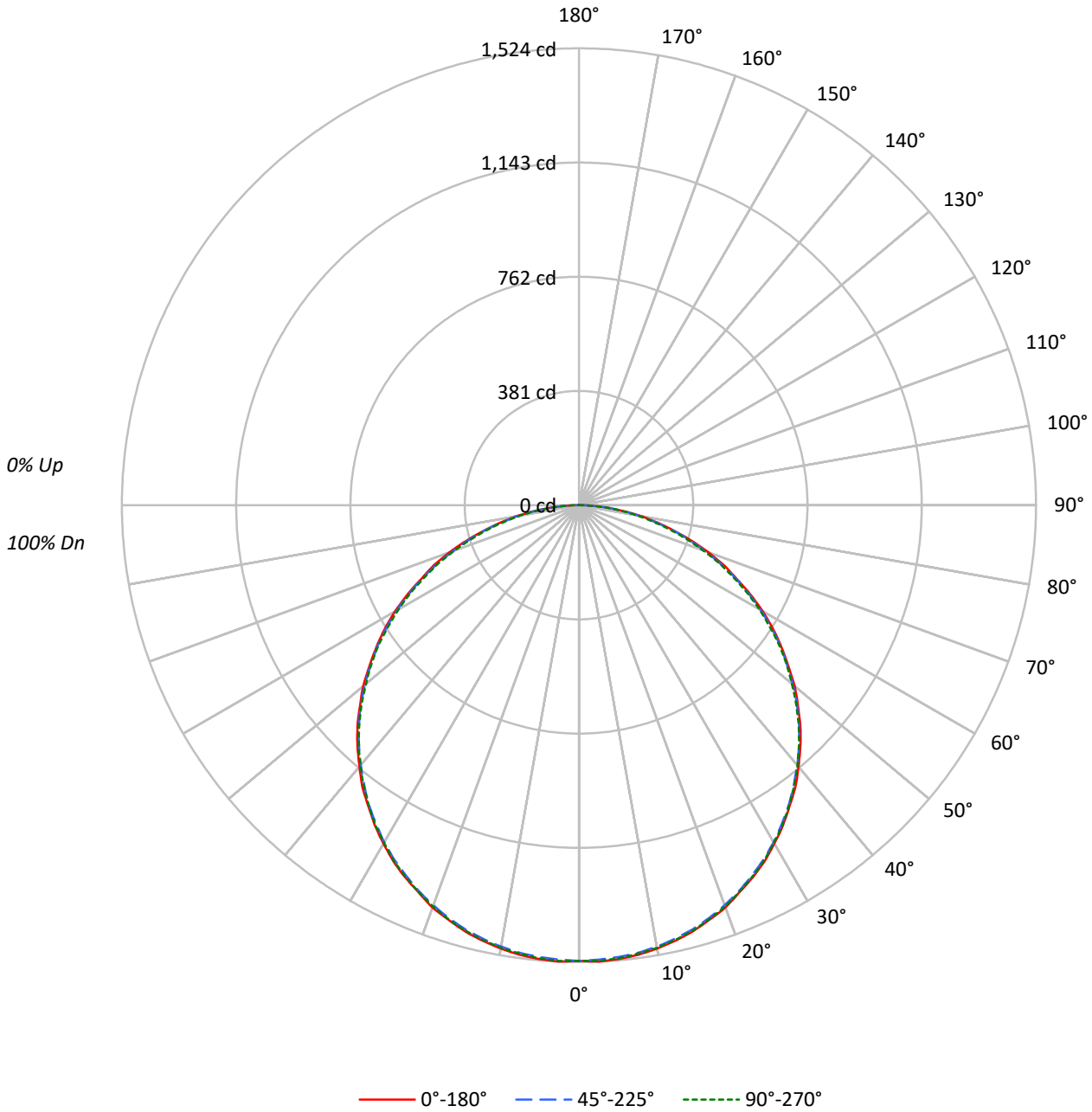
Lumens per Lamp: N/A
 Luminaire Lumens: 4496.9 lumens
 Efficiency: N/A
 Efficacy: 140.1 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

Input Watts (W): 32.1
 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°	2045	2045	2045
5°	2053	2044	2049
10°	2052	2043	2048
15°	2050	2040	2046
20°	2045	2033	2039
25°	2034	2024	2030
30°	2026	2017	2019
35°	2012	2005	2007
40°	2000	1988	1991
45°	1988	1975	1972
50°	1966	1949	1940
55°	1934	1924	1914
60°	1905	1883	1868
65°	1844	1831	1804
70°	1804	1755	1728
75°	1707	1685	1628
80°	1632	1578	1514
85°	1454	1433	1326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1988 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.0	3.2
10°-20°	413.8	9.2
20°-30°	629.7	14.0
30°-40°	764.3	17.0
40°-50°	800.5	17.8
50°-60°	731.4	16.3
60°-70°	568.5	12.6
70°-80°	340.9	7.6
80°-90°	103.7	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°	1187.6	26.4
0°-40°	1951.9	43.4
0°-60°	3483.8	77.5
0°-90°	4496.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4496.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1520	1520	1520	1520	1520	
5°	1520	1516	1513	1513	1517	145
15°	1471	1466	1464	1464	1469	415
25°	1370	1365	1363	1365	1368	632
35°	1225	1222	1221	1221	1222	767
45°	1045	1039	1038	1036	1036	805
55°	824	822	820	813	816	737
65°	579	578	575	568	567	577
75°	328	327	324	319	313	349
85°	94	93	93	90	86	106
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1519.9	1519.9	1519.9	1519.9	1519.9
2.5°	1524.1	1518.5	1517.1	1517.1	1521.3
5°	1519.9	1515.8	1513.0	1513.0	1517.1
7.5°	1513.0	1507.4	1506.1	1506.1	1508.8
10°	1501.9	1497.7	1495.0	1495.0	1499.1
12.5°	1488.0	1482.5	1481.1	1482.5	1485.3
15°	1471.4	1465.9	1464.5	1464.5	1468.6
17.5°	1449.3	1445.1	1443.7	1443.7	1447.9
20°	1428.5	1421.5	1420.2	1421.5	1424.3
22.5°	1398.0	1395.2	1393.8	1395.2	1396.6
25°	1370.3	1364.7	1363.3	1364.7	1367.5
27.5°	1339.8	1334.3	1332.9	1332.9	1337.0
30°	1303.8	1299.6	1298.2	1298.2	1299.6
32.5°	1266.4	1263.6	1259.4	1260.8	1263.6
35°	1224.8	1222.0	1220.6	1220.6	1222.0
37.5°	1186.0	1180.5	1176.3	1176.3	1179.1
40°	1138.9	1136.1	1132.0	1133.4	1133.4
42.5°	1093.2	1089.0	1086.2	1084.9	1086.2
45°	1044.7	1039.1	1037.8	1036.4	1036.4
47.5°	990.6	990.6	986.5	983.7	982.3
50°	939.4	933.8	931.1	926.9	926.9
52.5°	879.8	878.4	874.3	872.9	872.9
55°	824.4	821.6	820.2	813.3	816.1
57.5°	767.6	762.0	760.6	756.5	753.7
60°	708.0	705.2	699.7	694.1	694.1
62.5°	644.3	642.9	637.3	633.2	631.8
65°	579.1	577.8	575.0	568.1	566.7
67.5°	523.7	518.2	511.3	505.7	505.7
70°	458.6	451.7	446.1	440.6	439.2
72.5°	392.1	387.9	385.2	379.6	375.5
75°	328.4	327.0	324.2	318.7	313.1
77.5°	268.8	267.4	260.5	256.3	252.2
80°	210.6	205.1	203.7	198.1	195.4
82.5°	148.3	151.0	144.1	142.7	141.3
85°	94.2	92.8	92.8	90.1	85.9
87.5°	41.6	43.0	43.0	43.0	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)