

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: P843313

Luminaire Tested: 24CGSB-40-L940

Issue Date: 5/31/2024

Tested By:

Approved By:



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Test Information

Test Method: LM-79-2019
 Report Number: P843313
 Test Lab: INNOVATION CENTER
 Issue Date: 5/31/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: 24CGSB-40-L940
 Description: 2x4 CGSB AT 4000LM 4000K 90CRI
 Light Source: -
 Ballast/Driver: -

Summary

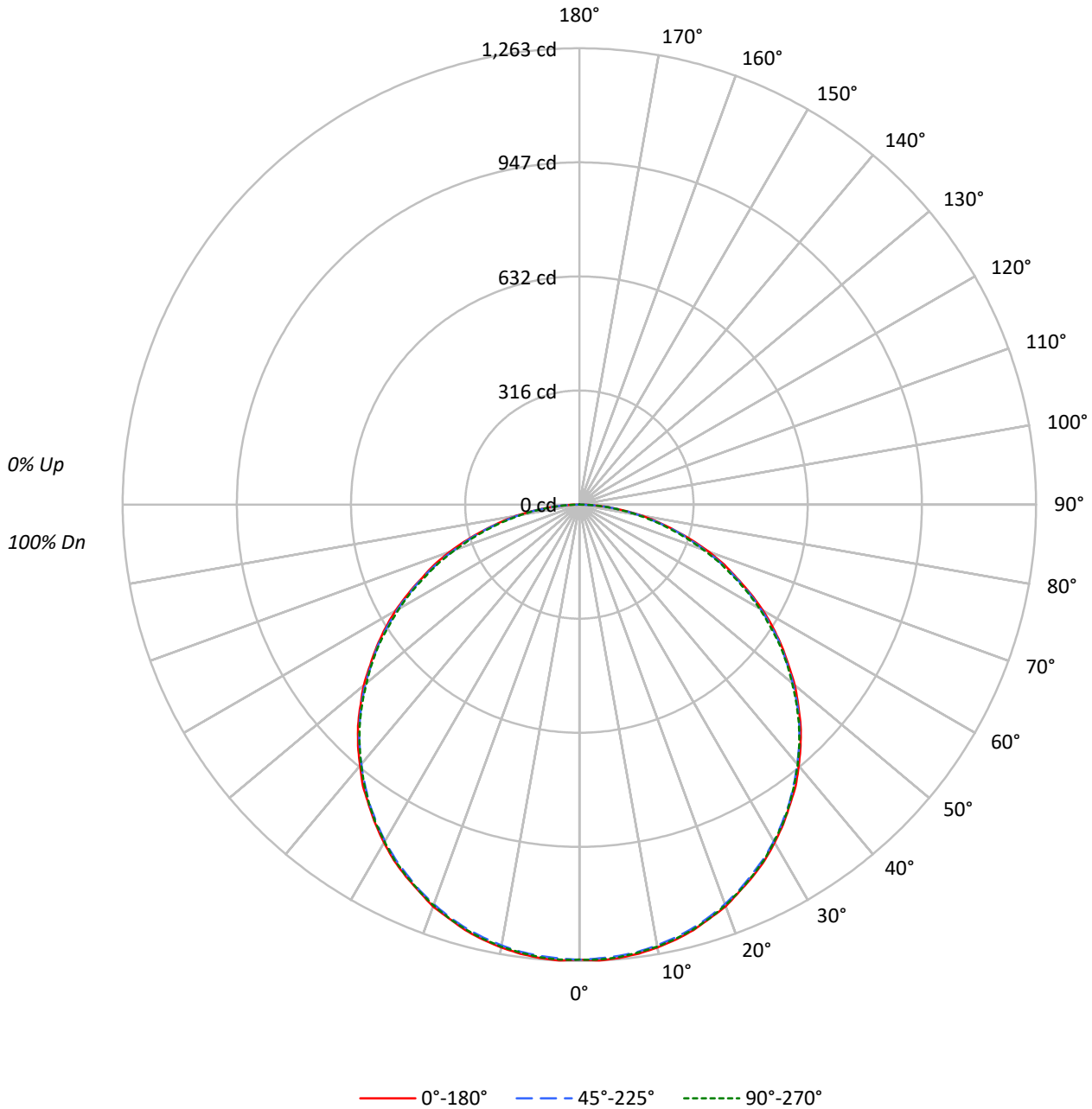
Lumens per Lamp: N/A
 Luminaire Lumens: 3726.0 lumens
 Efficiency: N/A
 Efficacy: 116.1 lumens/watt
 Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
 Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
 CIE Type: Direct

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°	1695	1695	1695
5°	1701	1693	1698
10°	1700	1692	1697
15°	1698	1690	1695
20°	1695	1685	1690
25°	1686	1677	1682
30°	1678	1671	1673
35°	1667	1661	1663
40°	1658	1647	1649
45°	1647	1636	1634
50°	1629	1615	1608
55°	1602	1594	1586
60°	1579	1560	1548
65°	1528	1517	1495
70°	1495	1454	1432
75°	1415	1396	1349
80°	1352	1308	1254
85°	1206	1187	1099

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1647 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.3	3.2
10°-20°	342.9	9.2
20°-30°	521.8	14.0
30°-40°	633.3	17.0
40°-50°	663.3	17.8
50°-60°	606.0	16.3
60°-70°	471.0	12.6
70°-80°	282.5	7.6
80°-90°	85.9	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°	984.0	26.4
0°-40°	1617.3	43.4
0°-60°	2886.6	77.5
0°-90°	3726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3726.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1259	1256	1254	1254	1257	120
15°	1219	1215	1213	1213	1217	344
25°	1135	1131	1130	1131	1133	523
35°	1015	1012	1011	1011	1012	636
45°	866	861	860	859	859	667
55°	683	681	680	674	676	611
65°	480	479	476	471	470	478
75°	272	271	269	264	259	289
85°	78	77	77	75	71	88
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1259.4	1259.4	1259.4	1259.4	1259.4
2.5°	1262.8	1258.2	1257.1	1257.1	1260.5
5°	1259.4	1255.9	1253.6	1253.6	1257.1
7.5°	1253.6	1249.0	1247.9	1247.9	1250.2
10°	1244.4	1241.0	1238.7	1238.7	1242.1
12.5°	1233.0	1228.4	1227.2	1228.4	1230.7
15°	1219.2	1214.6	1213.4	1213.4	1216.9
17.5°	1200.8	1197.4	1196.2	1196.2	1199.7
20°	1183.6	1177.8	1176.7	1177.8	1180.1
22.5°	1158.3	1156.0	1154.9	1156.0	1157.2
25°	1135.4	1130.8	1129.6	1130.8	1133.1
27.5°	1110.1	1105.5	1104.4	1104.4	1107.8
30°	1080.3	1076.8	1075.7	1075.7	1076.8
32.5°	1049.3	1047.0	1043.5	1044.7	1047.0
35°	1014.8	1012.5	1011.4	1011.4	1012.5
37.5°	982.7	978.1	974.7	974.7	976.9
40°	943.7	941.4	937.9	939.1	939.1
42.5°	905.8	902.3	900.0	898.9	900.0
45°	865.6	861.0	859.9	858.7	858.7
47.5°	820.8	820.8	817.4	815.1	813.9
50°	778.3	773.8	771.5	768.0	768.0
52.5°	729.0	727.8	724.4	723.2	723.2
55°	683.1	680.8	679.6	673.9	676.2
57.5°	636.0	631.4	630.3	626.8	624.5
60°	586.6	584.3	579.7	575.1	575.1
62.5°	533.8	532.7	528.1	524.6	523.5
65°	479.9	478.7	476.4	470.7	469.5
67.5°	433.9	429.4	423.6	419.0	419.0
70°	380.0	374.2	369.7	365.1	363.9
72.5°	324.9	321.4	319.1	314.6	311.1
75°	272.1	270.9	268.6	264.0	259.4
77.5°	222.7	221.6	215.8	212.4	208.9
80°	174.5	169.9	168.8	164.2	161.9
82.5°	122.8	125.1	119.4	118.2	117.1
85°	78.1	76.9	76.9	74.6	71.2
87.5°	34.4	35.6	35.6	35.6	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)