

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P520465

Luminaire Tested: **4WSLA-100-L840-UNV-U**

Issue Date: 5/3/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P520465
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-689-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4WSLA-100-L840-UNV-U
Description: 4 FOOT, 1000 LUMEN PER FOOT, WSLA LED LUMINAIRE WITH 4000K, 80 CRI
LEDS WITH NO UPLIGHT
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

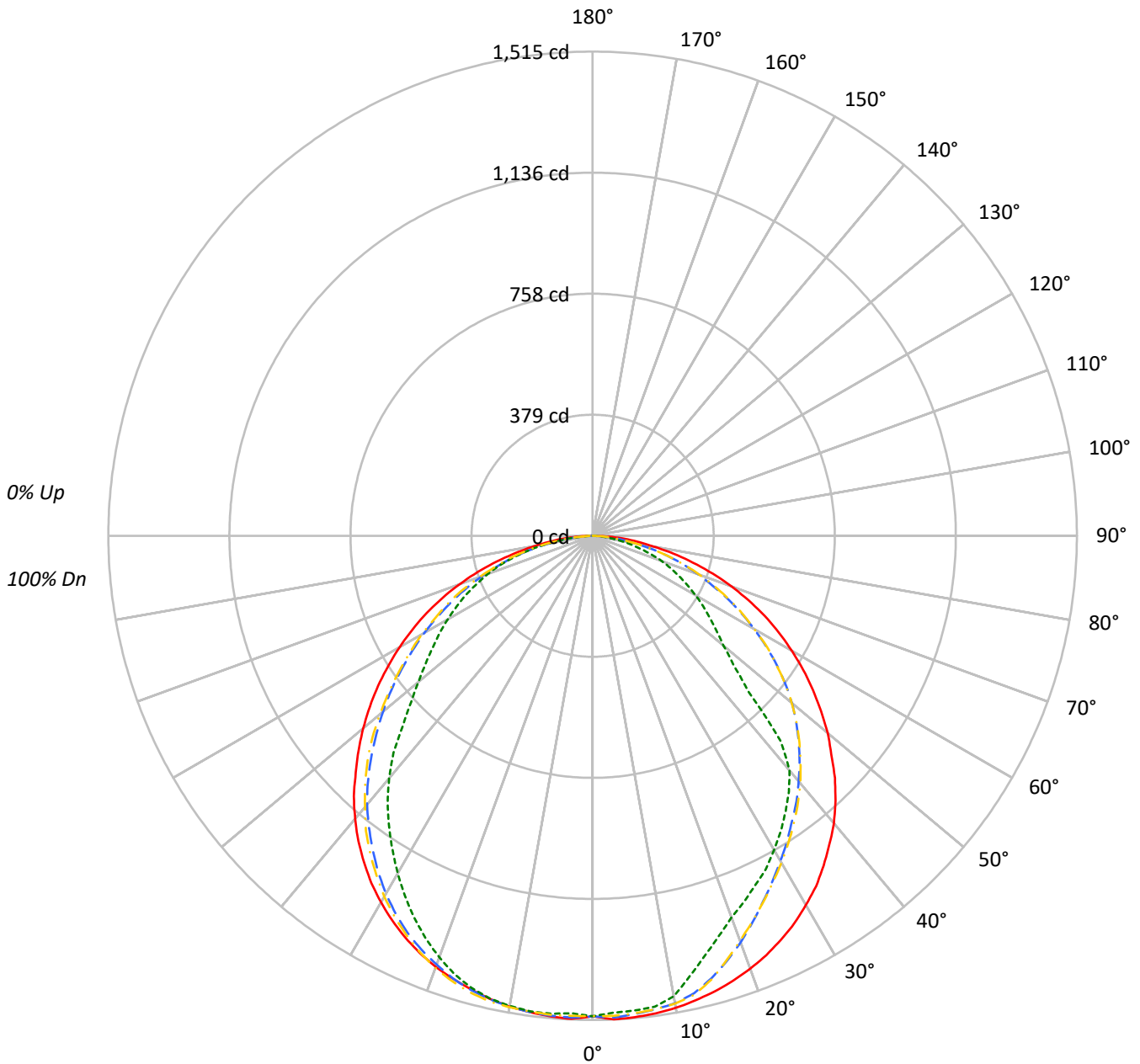
Lumens per Lamp: N/A
Luminaire Lumens: 4033.0 lumens
Efficiency: N/A
Efficacy: 127.6 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.17 / 1.33
Luminous Opening: Rectangular (W 0.5' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.6
Input Voltage (V): NR
Input Current (A_{in}): 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: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																			
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51																			
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44																			
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39																			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																			
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31																			
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28																			
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8091	8091	8091	8091
5°	8170	8057	8157	8109
10°	8198	7995	8176	8163
15°	8223	7572	8188	8161
20°	8255	7275	8222	8038
25°	8281	7156	8238	7836
30°	8290	7052	8230	7579
35°	8277	6915	8192	7297
40°	8250	6732	8120	6958
45°	8158	5230	7974	6384
50°	8036	4477	7840	5956
55°	7893	4192	7689	5728
60°	7744	4002	7509	5634
65°	7559	3790	7302	5566
70°	7259	3605	6955	5482
75°	6758	3169	6440	5215
80°	6000	2650	5625	4426
85°	5675	1890	4983	2538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.8	3.5
10°-20°	407.4	10.1
20°-30°	608.8	15.1
30°-40°	724.7	18.0
40°-50°	724.4	18.0
50°-60°	623.3	15.5
60°-70°	469.1	11.6
70°-80°	267.3	6.6
80°-90°	65.1	1.6
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°	1159.1	28.7
0°-40°	1883.8	46.7
0°-60°	3231.5	80.1
0°-90°	4033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4033.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1503	1503	1503	1503	1503	
5°	1512	1491	1510	1501	1512	144
15°	1476	1359	1470	1465	1476	417
25°	1394	1205	1387	1320	1394	643
35°	1260	1052	1247	1111	1260	788
45°	1072	687	1048	839	1072	825
55°	841	447	819	610	841	752
65°	594	298	573	437	594	586
75°	325	152	310	251	325	344
85°	92	31	81	41	92	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4
2.5°	1514.7	1500.9	1509.0	1506.6	1493.7	1498.5	1503.4	1498.5	1513.0	1500.1	1509.0
5°	1512.2	1497.7	1502.6	1497.7	1491.3	1492.9	1500.1	1495.3	1509.8	1496.1	1507.4
7.5°	1507.4	1489.7	1494.5	1492.1	1486.4	1487.2	1494.5	1490.5	1503.4	1490.5	1503.4
10°	1500.1	1481.6	1485.6	1475.1	1463.0	1471.9	1486.4	1482.4	1496.1	1481.6	1496.1
12.5°	1488.9	1470.3	1466.3	1431.6	1409.8	1426.7	1471.1	1471.1	1484.0	1470.3	1485.6
15°	1475.9	1455.8	1434.0	1381.6	1359.0	1375.9	1437.2	1458.2	1469.5	1455.8	1471.1
17.5°	1460.6	1437.2	1395.3	1334.0	1313.0	1330.0	1392.9	1438.8	1453.4	1438.8	1452.6
20°	1441.3	1413.8	1354.2	1284.0	1270.3	1285.6	1348.5	1415.5	1435.6	1417.9	1427.6
22.5°	1420.3	1387.2	1308.2	1245.3	1238.8	1248.5	1305.8	1386.4	1413.0	1394.5	1400.9
25°	1394.5	1355.8	1262.2	1209.8	1205.0	1210.6	1263.8	1352.5	1387.2	1367.9	1370.3
27.5°	1367.1	1325.1	1218.7	1180.0	1175.1	1177.5	1221.9	1314.6	1357.4	1338.0	1334.0
30°	1334.0	1288.8	1175.1	1139.6	1134.8	1143.7	1181.6	1275.9	1324.3	1305.0	1292.9
32.5°	1300.9	1249.3	1132.4	1104.9	1095.3	1103.3	1139.6	1235.6	1288.0	1267.9	1247.7
35°	1259.8	1207.4	1088.0	1060.6	1052.5	1061.4	1097.7	1193.7	1246.9	1226.7	1199.3
37.5°	1217.1	1163.0	1047.7	1022.7	1008.2	1018.6	1054.9	1150.1	1204.1	1183.2	1149.3
40°	1174.3	1116.2	1002.5	976.7	958.2	973.5	1010.6	1104.1	1155.8	1136.4	1097.7
42.5°	1124.3	1069.5	958.2	921.9	869.4	918.6	963.0	1058.2	1105.8	1087.2	1040.4
45°	1071.9	1019.5	911.4	823.5	687.2	831.5	914.6	1009.8	1047.7	1029.9	979.1
47.5°	1012.2	967.8	863.8	729.9	597.6	738.0	865.4	963.8	992.8	973.5	917.0
50°	959.8	916.2	813.8	650.9	534.7	659.7	813.0	912.2	936.4	918.6	855.7
52.5°	900.1	862.2	759.7	580.7	487.9	589.6	758.1	859.0	878.3	857.3	794.4
55°	841.2	807.3	702.5	518.6	446.8	526.7	700.9	804.1	819.4	795.2	729.9
57.5°	781.5	750.9	643.6	462.9	408.9	471.8	647.6	747.7	758.1	727.5	667.8
60°	719.4	693.6	583.9	413.7	371.8	421.0	582.3	691.2	697.6	664.6	607.3
62.5°	657.3	633.9	524.2	368.6	333.9	373.4	528.3	631.5	635.5	604.1	545.2
65°	593.6	571.8	466.2	321.0	297.6	329.1	470.2	569.4	573.4	538.0	484.7
67.5°	527.5	509.7	404.1	284.7	262.9	287.1	412.1	506.5	508.9	474.2	425.8
70°	461.3	446.0	349.2	245.2	229.1	246.0	354.9	437.1	442.0	404.9	366.2
72.5°	393.6	381.5	296.0	204.1	189.5	204.1	299.2	373.4	376.6	346.0	308.1
75°	325.0	316.2	242.0	163.7	152.4	162.9	243.6	309.7	309.7	280.7	250.8
77.5°	258.9	252.4	185.5	125.8	117.8	124.2	186.3	245.2	243.6	221.0	197.6
80°	193.6	188.7	133.1	91.1	85.5	88.7	133.1	181.5	181.5	165.3	137.1
82.5°	138.7	133.1	87.9	59.7	56.5	58.1	86.3	126.6	129.0	116.9	92.8
85°	91.9	79.0	47.6	33.1	30.6	31.5	45.2	73.4	80.7	67.7	48.4
87.5°	40.3	26.6	12.1	4.8	2.4	3.2	9.7	23.4	30.6	20.2	6.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1503.4	1503.4	1503.4	1503.4	1503.4	1503.4
2.5°	1508.2	1495.3	1500.1	1503.4	1500.1	1514.7
5°	1506.6	1500.9	1500.1	1504.2	1497.7	1512.2
7.5°	1504.2	1500.9	1500.1	1501.8	1493.7	1507.4
10°	1498.5	1493.7	1495.3	1497.7	1487.2	1500.1
12.5°	1488.0	1483.2	1484.0	1492.1	1477.6	1488.9
15°	1470.3	1464.7	1470.3	1479.2	1466.3	1475.9
17.5°	1446.9	1438.0	1447.7	1461.4	1451.8	1460.6
20°	1417.1	1403.4	1413.8	1438.8	1430.0	1441.3
22.5°	1380.8	1363.8	1374.3	1410.6	1408.2	1420.3
25°	1339.6	1319.5	1334.0	1378.4	1383.2	1394.5
27.5°	1293.7	1271.1	1290.4	1342.9	1354.2	1367.1
30°	1243.7	1219.5	1242.1	1303.4	1320.3	1334.0
32.5°	1192.0	1165.4	1191.2	1259.0	1283.2	1300.9
35°	1138.0	1110.6	1139.6	1213.0	1242.1	1259.8
37.5°	1079.9	1053.3	1084.8	1164.6	1199.3	1217.1
40°	1020.3	990.4	1025.9	1107.4	1153.3	1174.3
42.5°	959.0	921.9	965.4	1053.3	1103.3	1124.3
45°	890.4	838.8	897.7	996.1	1048.5	1071.9
47.5°	821.9	770.2	829.9	934.8	991.2	1012.2
50°	755.7	711.4	758.9	867.8	933.2	959.8
52.5°	695.2	658.9	699.3	802.5	873.5	900.1
55°	638.8	610.5	643.6	738.0	810.6	841.2
57.5°	585.5	567.8	590.4	676.7	752.5	781.5
60°	535.5	523.4	539.6	616.2	683.9	719.4
62.5°	486.3	479.9	492.0	552.5	620.2	657.3
65°	438.8	437.1	443.6	496.8	553.3	593.6
67.5°	391.2	390.4	394.4	437.9	487.9	527.5
70°	343.6	348.4	346.0	374.2	422.6	461.3
72.5°	295.2	302.4	298.4	316.2	362.9	393.6
75°	241.2	250.8	242.8	262.9	292.0	325.0
77.5°	185.5	196.0	186.3	204.1	235.5	258.9
80°	133.1	142.8	134.7	148.4	175.8	193.6
82.5°	83.9	91.1	84.7	98.4	125.8	138.7
85°	37.1	41.1	42.7	53.2	77.4	91.9
87.5°	1.6	0.8	1.6	10.5	27.4	40.3
90°	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°









(END OF REPORT)