

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: P835288

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835288
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-4LO-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

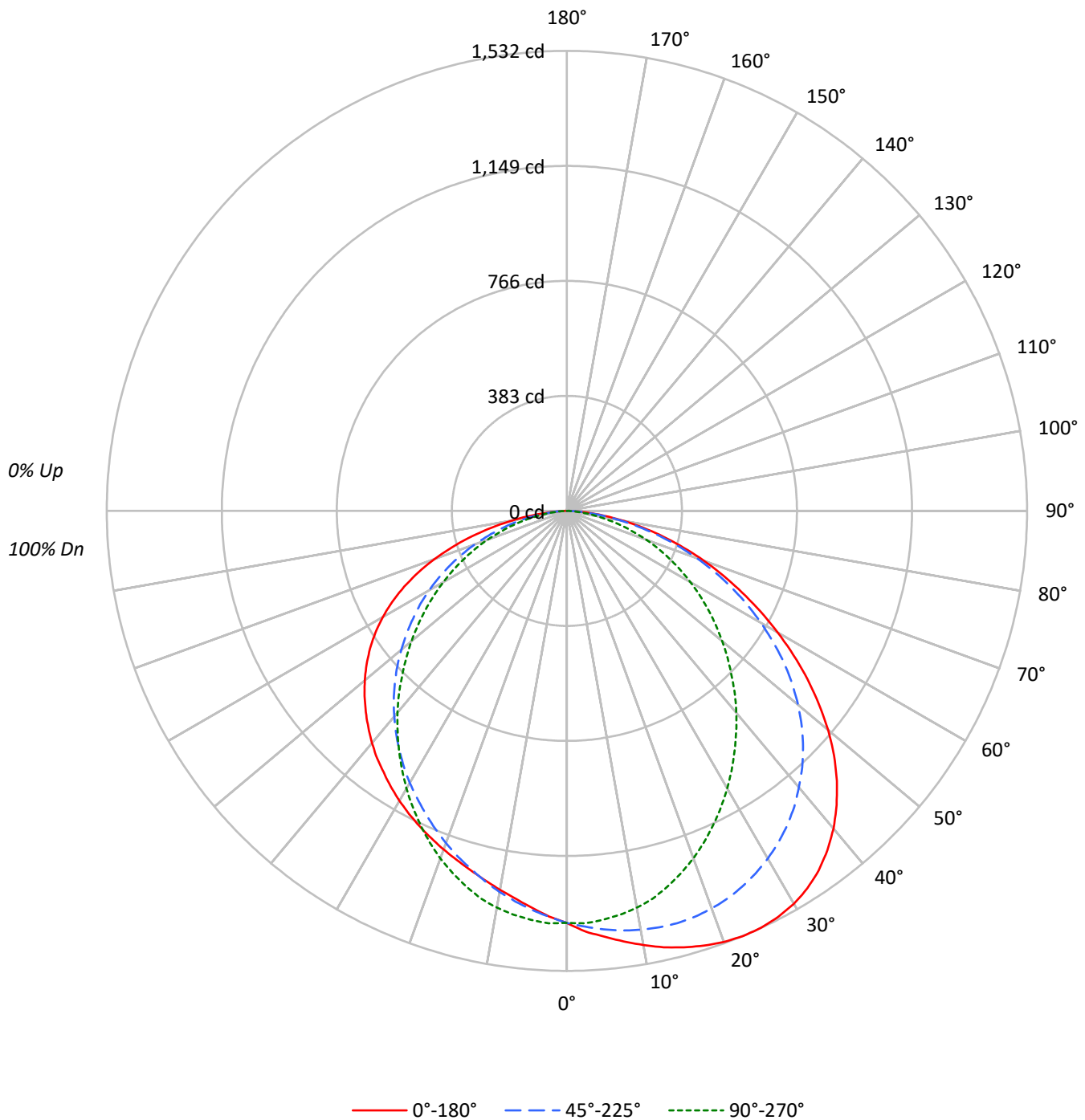
Lumens per Lamp: N/A
Luminaire Lumens: 4035.4 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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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
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3692	3692	3692
5°	3844	3694	3584
10°	4012	3666	3501
15°	4192	3607	3451
20°	4375	3527	3437
25°	4547	3425	3442
30°	4695	3318	3464
35°	4802	3200	3493
40°	4851	3081	3544
45°	4837	2951	3603
50°	4752	2827	3677
55°	4589	2697	3753
60°	4365	2558	3810
65°	4099	2402	3805
70°	3815	2216	3692
75°	3463	1945	3405
80°	2974	1599	2872
85°	2269	1093	1973

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.2
10°-20°	375.7	9.3
20°-30°	575.6	14.3
30°-40°	702.5	17.4
40°-50°	734.7	18.2
50°-60°	664.9	16.5
60°-70°	503.6	12.5
70°-80°	280.6	7.0
80°-90°	67.7	1.7
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°	1081.5	26.8
0°-40°	1784.0	44.2
0°-60°	3183.5	78.9
0°-90°	4035.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4035.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1372	1372	1372	1372	1372	
5°	1423	1399	1367	1334	1327	137
15°	1505	1421	1295	1234	1239	427
25°	1531	1381	1154	1113	1159	706
35°	1462	1279	974	973	1063	913
45°	1271	1112	775	810	947	978
55°	978	883	575	626	800	873
65°	644	605	377	429	598	639
75°	333	315	187	223	328	353
85°	74	65	35	47	64	88
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9
2.5°	1402.2	1395.6	1390.2	1392.3	1393.5	1389.3	1385.7	1386.3	1382.7	1389.6	1373.4
5°	1422.9	1416.9	1410.6	1413.0	1410.6	1404.3	1399.2	1397.7	1388.1	1392.0	1375.5
7.5°	1445.9	1439.3	1430.1	1432.8	1427.7	1416.0	1409.4	1405.5	1390.8	1391.1	1372.8
10°	1468.1	1462.4	1449.8	1451.6	1442.3	1426.8	1416.3	1410.9	1390.2	1387.2	1368.3
12.5°	1488.8	1481.0	1467.5	1468.4	1454.9	1434.2	1420.8	1413.0	1386.0	1377.0	1358.4
15°	1504.7	1497.2	1481.0	1480.7	1463.3	1436.3	1421.1	1410.3	1376.1	1362.0	1342.5
17.5°	1518.2	1511.3	1491.2	1490.6	1469.6	1435.4	1417.2	1403.7	1361.7	1344.3	1322.7
20°	1527.8	1520.9	1498.4	1496.3	1471.1	1431.0	1409.1	1392.0	1342.8	1322.1	1298.1
22.5°	1532.3	1525.4	1499.9	1496.9	1467.5	1422.0	1397.4	1377.3	1321.2	1294.2	1269.3
25°	1531.4	1524.8	1496.0	1493.0	1460.6	1408.5	1380.9	1357.8	1293.9	1262.1	1237.5
27.5°	1523.9	1518.8	1488.5	1484.6	1448.0	1390.2	1360.8	1335.3	1263.6	1228.2	1201.6
30°	1511.0	1507.1	1475.0	1471.4	1432.5	1370.1	1337.4	1308.0	1230.9	1191.1	1164.1
32.5°	1490.3	1486.7	1454.3	1451.0	1411.5	1344.3	1310.1	1279.8	1195.3	1151.2	1124.2
35°	1461.8	1459.7	1428.3	1424.7	1384.5	1314.9	1278.6	1245.3	1158.1	1108.3	1082.5
37.5°	1424.4	1424.4	1394.1	1390.2	1350.9	1278.9	1243.2	1207.9	1116.1	1063.3	1037.8
40°	1380.9	1384.8	1353.9	1350.0	1311.9	1240.2	1201.3	1164.1	1070.8	1015.9	991.1
42.5°	1328.7	1332.3	1306.5	1302.9	1267.2	1195.6	1159.3	1118.8	1023.4	967.7	941.9
45°	1271.1	1275.9	1252.8	1250.1	1216.8	1146.7	1111.9	1070.8	974.0	917.3	892.1
47.5°	1207.0	1213.2	1193.2	1191.7	1160.8	1096.6	1060.3	1018.6	922.1	864.8	841.1
50°	1135.0	1144.0	1127.5	1127.5	1099.9	1036.0	1004.5	962.9	868.1	810.8	787.4
52.5°	1057.9	1069.3	1057.0	1057.3	1034.8	977.6	944.9	904.1	811.7	755.4	733.8
55°	978.2	989.3	981.5	982.7	965.0	912.8	883.1	842.6	754.2	699.3	678.9
57.5°	894.8	906.8	901.7	904.1	891.8	845.0	814.1	778.7	694.8	640.5	623.1
60°	811.1	822.5	819.8	823.1	815.3	774.8	746.7	710.1	635.1	582.9	567.6
62.5°	726.6	737.1	736.5	740.1	735.9	702.3	677.1	645.9	573.3	525.4	511.3
65°	643.8	652.8	652.2	656.1	655.2	628.2	605.4	576.9	511.6	467.5	455.2
67.5°	563.4	570.9	568.8	573.3	574.5	552.9	533.2	507.7	452.8	409.9	399.4
70°	484.9	490.0	487.3	490.3	493.0	476.8	460.0	437.5	390.1	352.3	343.6
72.5°	407.8	411.4	407.2	410.2	412.6	400.9	387.1	367.6	328.4	295.7	288.5
75°	333.1	338.2	329.6	332.5	334.3	322.7	314.6	298.7	264.8	239.6	234.8
77.5°	260.9	263.9	259.1	257.9	259.1	250.7	244.4	232.1	206.6	185.9	182.9
80°	191.9	193.7	188.9	187.7	188.6	182.6	177.8	168.8	150.8	135.2	134.0
82.5°	128.6	129.5	125.3	124.1	124.7	122.9	117.2	110.9	102.6	89.4	89.1
85°	73.5	73.5	70.5	69.3	69.9	66.9	64.8	61.5	58.2	49.2	49.8
87.5°	27.0	27.0	25.5	25.2	28.2	24.9	24.0	22.5	23.4	18.6	19.8
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9	1371.9
2.5°	1377.9	1374.9	1372.2	1362.9	1366.8	1357.2	1356.6	1353.0	1350.3	1345.2	1351.8
5°	1373.4	1367.4	1359.6	1348.5	1351.8	1340.4	1338.0	1333.8	1330.2	1323.6	1328.7
7.5°	1366.2	1356.3	1344.0	1329.9	1334.4	1320.3	1316.7	1312.2	1309.2	1301.4	1305.9
10°	1355.7	1341.6	1327.2	1310.1	1313.4	1298.1	1293.6	1288.8	1286.1	1279.2	1283.7
12.5°	1339.5	1322.4	1302.9	1284.3	1287.9	1273.5	1267.5	1262.4	1261.5	1255.8	1261.2
15°	1318.5	1294.8	1274.7	1254.9	1259.1	1242.3	1239.6	1234.5	1236.0	1232.1	1238.7
17.5°	1291.8	1264.5	1242.6	1221.3	1225.5	1211.5	1209.4	1207.0	1208.5	1207.9	1215.0
20°	1261.8	1231.8	1206.7	1185.7	1188.1	1177.0	1177.9	1177.3	1180.3	1183.6	1193.5
22.5°	1227.9	1194.1	1167.7	1146.1	1149.7	1140.1	1144.3	1145.5	1150.6	1158.1	1170.7
25°	1189.9	1153.6	1126.0	1105.6	1108.9	1102.6	1109.8	1112.8	1120.9	1133.5	1146.4
27.5°	1150.0	1111.6	1082.2	1062.7	1069.0	1062.7	1073.5	1079.5	1091.8	1105.6	1121.5
30°	1107.7	1067.8	1037.5	1020.1	1026.1	1020.4	1037.8	1045.9	1058.2	1077.1	1096.0
32.5°	1063.3	1021.3	991.7	978.2	982.4	981.5	1000.9	1009.9	1026.4	1048.0	1068.1
35°	1017.7	974.0	944.0	932.6	937.7	938.9	962.3	972.8	990.8	1016.8	1038.4
37.5°	970.7	926.0	896.6	887.3	891.8	896.3	923.6	934.1	954.5	983.0	1006.6
40°	921.8	877.1	848.3	840.8	845.3	850.1	879.8	894.2	916.4	947.3	973.1
42.5°	872.3	827.6	799.7	794.3	798.8	808.1	839.6	853.1	876.5	910.7	939.2
45°	821.9	775.4	751.2	747.0	751.8	762.6	793.4	809.6	834.5	872.0	902.6
47.5°	771.0	725.7	702.6	699.9	704.7	716.7	750.9	765.6	791.9	831.8	864.8
50°	719.4	675.3	653.1	652.2	656.7	669.6	702.3	719.7	747.0	791.6	825.5
52.5°	667.2	624.9	604.8	604.8	609.0	622.2	655.2	673.2	701.4	748.5	785.9
55°	615.0	574.8	555.6	557.1	563.1	574.5	606.6	625.5	654.0	702.9	742.5
57.5°	562.8	524.8	507.4	509.5	515.2	526.6	558.0	579.3	605.1	655.8	696.3
60°	511.3	475.3	460.0	462.4	467.5	478.9	511.6	529.9	555.6	607.2	647.7
62.5°	459.1	426.4	412.0	415.0	419.5	430.9	461.8	479.5	505.0	555.6	596.4
65°	407.5	377.2	364.9	367.9	372.1	382.6	411.7	428.8	453.1	502.6	541.6
67.5°	356.5	329.0	318.8	321.8	325.1	334.9	358.9	377.5	400.3	447.4	484.3
70°	306.2	281.6	272.6	275.6	278.6	287.6	308.6	325.7	346.6	389.8	424.0
72.5°	256.4	232.4	227.9	230.6	233.0	240.8	260.9	274.4	292.7	331.0	360.4
75°	207.8	187.1	184.1	186.8	188.9	194.9	211.7	223.4	238.7	272.0	296.0
77.5°	161.0	143.6	142.4	144.5	146.6	150.8	164.0	176.3	188.3	212.9	234.2
80°	117.2	103.2	103.2	105.3	104.7	109.8	119.0	128.9	137.6	155.3	170.9
82.5°	77.4	66.3	67.8	69.3	70.2	72.3	78.0	85.5	90.9	101.7	111.8
85°	42.9	35.4	36.9	38.1	37.5	39.9	42.9	47.4	50.1	55.2	60.6
87.5°	15.9	13.2	13.5	14.4	15.0	16.2	16.2	18.9	19.2	19.8	21.0
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):

	160°	170°	180°
0°	1371.9	1371.9	1371.9
2.5°	1339.2	1346.4	1351.8
5°	1316.1	1322.1	1326.9
7.5°	1293.6	1299.0	1303.2
10°	1272.3	1278.3	1281.3
12.5°	1250.4	1257.3	1259.7
15°	1228.8	1235.7	1238.7
17.5°	1206.7	1215.6	1218.9
20°	1186.0	1197.4	1200.1
22.5°	1165.0	1176.7	1180.0
25°	1142.2	1156.0	1159.3
27.5°	1117.9	1134.4	1137.7
30°	1093.6	1111.6	1114.9
32.5°	1067.5	1087.0	1090.0
35°	1040.2	1059.7	1063.3
37.5°	1009.9	1031.2	1038.4
40°	978.5	1001.5	1009.0
42.5°	945.5	970.7	978.5
45°	910.1	937.7	946.7
47.5°	874.4	905.6	913.4
50°	835.7	869.0	878.3
52.5°	795.2	831.5	840.8
55°	753.3	789.8	800.0
57.5°	707.7	745.5	756.3
60°	660.0	697.8	708.0
62.5°	611.1	645.3	655.2
65°	556.5	588.6	597.6
67.5°	498.7	528.1	535.6
70°	437.2	462.7	469.3
72.5°	373.0	390.7	399.4
75°	306.8	320.9	327.5
77.5°	240.2	250.1	255.5
80°	175.1	180.8	185.3
82.5°	114.5	116.9	120.2
85°	61.8	61.8	63.9
87.5°	21.0	20.1	21.0
90°	0.0	0.0	0.0

(END OF REPORT)