

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: P835231

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835231
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-LD4-3LO-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

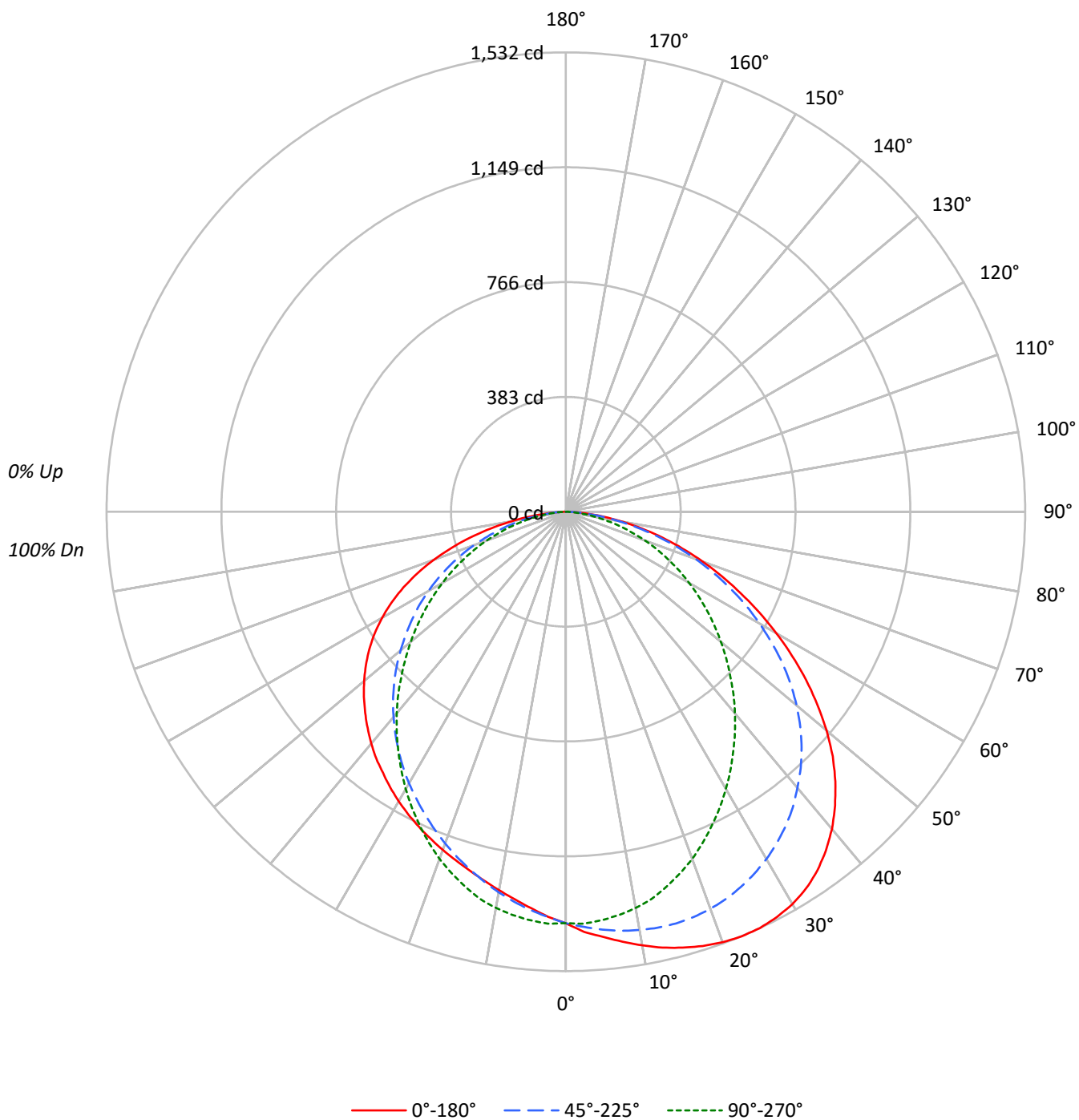
Lumens per Lamp: N/A
Luminaire Lumens: 4035.9 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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: 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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	88		90
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	73	61	53	47	59	52	46		57	51	46		55
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	46	38	32	59	46	38	32	44	37	32		43	36	31		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3692	3692	3692
5°	3844	3694	3585
10°	4012	3666	3502
15°	4193	3608	3451
20°	4376	3528	3437
25°	4548	3426	3442
30°	4696	3318	3465
35°	4803	3200	3493
40°	4851	3081	3545
45°	4838	2951	3603
50°	4752	2828	3677
55°	4590	2697	3754
60°	4366	2558	3811
65°	4100	2402	3806
70°	3815	2216	3692
75°	3464	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°	375.8	9.3
20°-30°	575.7	14.3
30°-40°	702.6	17.4
40°-50°	734.7	18.2
50°-60°	665.0	16.5
60°-70°	503.6	12.5
70°-80°	280.7	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°	1081.6	26.8
0°-40°	1784.2	44.2
0°-60°	3183.9	78.9
0°-90°	4035.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4035.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1372	1372	1372	1372	1372	
5°	1423	1399	1368	1334	1327	137
15°	1505	1421	1295	1235	1239	427
25°	1532	1381	1154	1113	1159	707
35°	1462	1279	974	973	1063	913
45°	1271	1112	776	810	947	978
55°	978	883	575	626	800	873
65°	644	606	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°	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0
2.5°	1402.3	1395.7	1390.3	1392.4	1393.6	1389.4	1385.8	1386.4	1382.8	1389.7	1373.5
5°	1423.0	1417.0	1410.7	1413.1	1410.7	1404.4	1399.3	1397.8	1388.2	1392.1	1375.6
7.5°	1446.1	1439.5	1430.2	1432.9	1427.8	1416.1	1409.5	1405.6	1390.9	1391.2	1372.9
10°	1468.3	1462.6	1450.0	1451.8	1442.5	1426.9	1416.4	1411.0	1390.3	1387.3	1368.4
12.5°	1489.0	1481.2	1467.7	1468.6	1455.1	1434.4	1420.9	1413.1	1386.1	1377.1	1358.5
15°	1504.9	1497.4	1481.2	1480.9	1463.5	1436.5	1421.2	1410.4	1376.2	1362.1	1342.6
17.5°	1518.4	1511.5	1491.4	1490.8	1469.8	1435.6	1417.3	1403.8	1361.8	1344.4	1322.9
20°	1528.0	1521.1	1498.6	1496.5	1471.3	1431.1	1409.2	1392.1	1342.9	1322.3	1298.3
22.5°	1532.5	1525.6	1500.1	1497.1	1467.7	1422.1	1397.5	1377.4	1321.4	1294.4	1269.5
25°	1531.6	1525.0	1496.2	1493.2	1460.8	1408.6	1381.0	1357.9	1294.1	1262.3	1237.7
27.5°	1524.1	1519.0	1488.7	1484.8	1448.2	1390.3	1360.9	1335.4	1263.8	1228.4	1201.7
30°	1511.2	1507.3	1475.2	1471.6	1432.6	1370.2	1337.5	1308.2	1231.1	1191.2	1164.2
32.5°	1490.5	1486.9	1454.5	1451.2	1411.6	1344.4	1310.3	1280.0	1195.4	1151.3	1124.3
35°	1462.0	1459.9	1428.4	1424.8	1384.6	1315.1	1278.8	1245.5	1158.2	1108.4	1082.6
37.5°	1424.5	1424.5	1394.2	1390.3	1351.0	1279.1	1243.4	1208.0	1116.2	1063.4	1037.9
40°	1381.0	1384.9	1354.0	1350.1	1312.1	1240.4	1201.4	1164.2	1070.9	1016.1	991.2
42.5°	1328.9	1332.5	1306.7	1303.1	1267.4	1195.7	1159.4	1118.9	1023.6	967.8	942.0
45°	1271.3	1276.1	1253.0	1250.3	1217.0	1146.8	1112.0	1070.9	974.1	917.4	892.2
47.5°	1207.1	1213.4	1193.3	1191.8	1160.9	1096.7	1060.4	1018.8	922.2	864.9	841.2
50°	1135.1	1144.1	1127.6	1127.6	1100.0	1036.2	1004.7	963.0	868.2	810.9	787.5
52.5°	1058.0	1069.4	1057.1	1057.4	1035.0	977.7	945.0	904.2	811.8	755.4	733.9
55°	978.3	989.4	981.6	982.8	965.1	912.9	883.2	842.7	754.2	699.4	679.0
57.5°	894.9	906.9	901.8	904.2	891.9	845.1	814.2	778.8	694.9	640.6	623.2
60°	811.2	822.6	819.9	823.2	815.4	774.9	746.7	710.2	635.2	583.0	567.7
62.5°	726.7	737.2	736.6	740.2	736.0	702.4	677.2	646.0	573.4	525.4	511.3
65°	643.9	652.9	652.3	656.2	655.3	628.3	605.5	577.0	511.6	467.5	455.2
67.5°	563.5	571.0	568.9	573.4	574.6	553.0	533.2	507.7	452.8	410.0	399.5
70°	484.9	490.0	487.3	490.3	493.0	476.8	460.0	437.6	390.2	352.4	343.7
72.5°	407.9	411.5	407.3	410.3	412.7	401.0	387.2	367.7	328.4	295.7	288.5
75°	333.2	338.3	329.6	332.6	334.4	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	135.3	134.1
82.5°	128.7	129.6	125.4	124.2	124.8	123.0	117.3	111.0	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°	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0	1372.0
2.5°	1378.0	1375.0	1372.3	1363.0	1366.9	1357.3	1356.7	1353.1	1350.4	1345.3	1351.9
5°	1373.5	1367.5	1359.7	1348.6	1351.9	1340.5	1338.1	1333.9	1330.4	1323.8	1328.9
7.5°	1366.3	1356.4	1344.1	1330.1	1334.5	1320.5	1316.9	1312.4	1309.4	1301.6	1306.1
10°	1355.8	1341.7	1327.4	1310.3	1313.6	1298.3	1293.8	1289.0	1286.3	1279.4	1283.9
12.5°	1339.6	1322.6	1303.1	1284.5	1288.1	1273.7	1267.7	1262.6	1261.7	1256.0	1261.4
15°	1318.7	1295.0	1274.9	1255.1	1259.3	1242.5	1239.8	1234.7	1236.2	1232.3	1238.9
17.5°	1292.0	1264.7	1242.8	1221.5	1225.7	1211.6	1209.5	1207.1	1208.6	1208.0	1215.2
20°	1262.0	1232.0	1206.8	1185.8	1188.2	1177.1	1178.0	1177.4	1180.4	1183.7	1193.6
22.5°	1228.1	1194.2	1167.8	1146.2	1149.8	1140.2	1144.4	1145.6	1150.7	1158.2	1170.8
25°	1190.0	1153.7	1126.1	1105.7	1109.0	1102.7	1109.9	1112.9	1121.0	1133.6	1146.5
27.5°	1150.1	1111.7	1082.3	1062.8	1069.1	1062.8	1073.6	1079.6	1091.9	1105.7	1121.6
30°	1107.8	1067.9	1037.6	1020.3	1026.3	1020.6	1037.9	1046.0	1058.3	1077.2	1096.1
32.5°	1063.4	1021.5	991.8	978.3	982.5	981.6	1001.1	1010.1	1026.6	1048.1	1068.2
35°	1017.9	974.1	944.1	932.7	937.8	939.0	962.4	972.9	990.9	1017.0	1038.5
37.5°	970.8	926.1	896.7	887.4	891.9	896.4	923.7	934.2	954.6	983.1	1006.8
40°	921.9	877.2	848.4	840.9	845.4	850.2	879.9	894.3	916.5	947.4	973.2
42.5°	872.4	827.7	799.8	794.4	798.9	808.2	839.7	853.2	876.6	910.8	939.3
45°	822.0	775.5	751.2	747.0	751.8	762.6	793.5	809.7	834.6	872.1	902.7
47.5°	771.0	725.8	702.7	700.0	704.8	716.8	750.9	765.6	792.0	831.9	864.9
50°	719.5	675.4	653.2	652.3	656.8	669.7	702.4	719.8	747.0	791.7	825.6
52.5°	667.3	625.0	604.9	604.9	609.1	622.3	655.3	673.3	701.5	748.5	786.0
55°	615.1	574.9	555.7	557.2	563.2	574.6	606.7	625.6	654.1	703.0	742.5
57.5°	562.9	524.8	507.4	509.5	515.2	526.6	558.1	579.4	605.2	655.9	696.4
60°	511.3	475.3	460.0	462.4	467.5	478.9	511.6	529.9	555.7	607.3	647.8
62.5°	459.1	426.5	412.1	415.1	419.6	431.0	461.8	479.5	505.0	555.7	596.5
65°	407.6	377.3	365.0	368.0	372.2	382.7	411.8	428.9	453.1	502.6	541.6
67.5°	356.6	329.0	318.8	321.8	325.1	335.0	359.0	377.6	400.4	447.4	484.3
70°	306.2	281.6	272.6	275.6	278.6	287.6	308.6	325.7	346.7	389.9	424.1
72.5°	256.4	232.4	227.9	230.6	233.0	240.8	260.9	274.4	292.7	331.1	360.5
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	143.7	142.5	144.6	146.7	150.8	164.0	176.3	188.3	212.9	234.2
80°	117.3	103.2	103.2	105.3	104.7	109.8	119.1	129.0	137.7	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	111.9
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°	1372.0	1372.0	1372.0
2.5°	1339.3	1346.5	1351.9
5°	1316.3	1322.3	1327.1
7.5°	1293.8	1299.2	1303.4
10°	1272.5	1278.5	1281.5
12.5°	1250.6	1257.5	1259.9
15°	1229.0	1235.9	1238.9
17.5°	1206.8	1215.8	1219.1
20°	1186.1	1197.5	1200.2
22.5°	1165.1	1176.8	1180.1
25°	1142.3	1156.1	1159.4
27.5°	1118.0	1134.5	1137.8
30°	1093.7	1111.7	1115.0
32.5°	1067.6	1087.1	1090.1
35°	1040.3	1059.8	1063.4
37.5°	1010.1	1031.4	1038.5
40°	978.6	1001.7	1009.2
42.5°	945.6	970.8	978.6
45°	910.2	937.8	946.8
47.5°	874.5	905.7	913.5
50°	835.8	869.1	878.4
52.5°	795.3	831.6	840.9
55°	753.3	789.9	800.1
57.5°	707.8	745.5	756.3
60°	660.1	697.9	708.1
62.5°	611.2	645.4	655.3
65°	556.6	588.7	597.7
67.5°	498.7	528.1	535.6
70°	437.3	462.7	469.3
72.5°	373.1	390.8	399.5
75°	306.8	320.9	327.5
77.5°	240.2	250.1	255.5
80°	175.1	180.8	185.3
82.5°	114.6	117.0	120.3
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)