

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: P835176

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835176
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-LD4-2HI-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

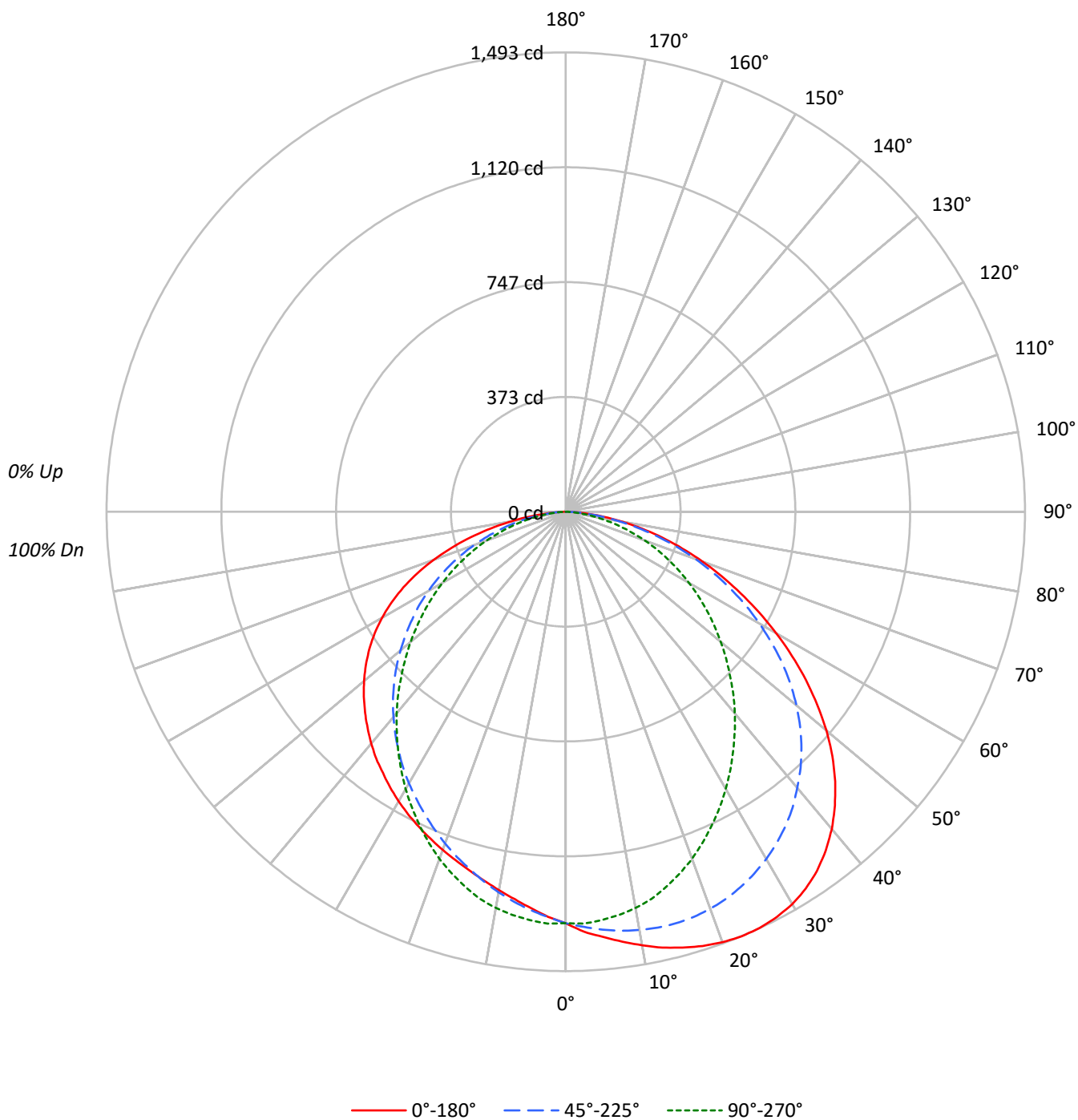
Lumens per Lamp: N/A
Luminaire Lumens: 3932.9 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3598	3598	3598
5°	3746	3600	3493
10°	3910	3573	3412
15°	4086	3516	3363
20°	4264	3438	3349
25°	4431	3338	3355
30°	4576	3234	3376
35°	4680	3118	3404
40°	4728	3003	3455
45°	4714	2876	3511
50°	4631	2755	3584
55°	4472	2628	3658
60°	4254	2493	3714
65°	3995	2341	3708
70°	3718	2159	3599
75°	3376	1896	3318
80°	2898	1557	2799
85°	2211	1065	1920

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.8	3.2
10°-20°	366.2	9.3
20°-30°	561.0	14.3
30°-40°	684.6	17.4
40°-50°	716.0	18.2
50°-60°	648.0	16.5
60°-70°	490.8	12.5
70°-80°	273.5	7.0
80°-90°	66.0	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°	1054.0	26.8
0°-40°	1738.6	44.2
0°-60°	3102.6	78.9
0°-90°	3932.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3932.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1337	1337	1337	1337	1337	
5°	1387	1364	1333	1300	1293	134
15°	1466	1385	1262	1203	1207	416
25°	1492	1346	1124	1084	1130	689
35°	1425	1246	949	948	1036	890
45°	1239	1084	756	789	923	953
55°	953	861	560	610	780	851
65°	627	590	368	418	582	622
75°	325	307	182	218	319	344
85°	72	63	34	46	62	86
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°	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0
2.5°	1366.5	1360.1	1354.8	1356.9	1358.1	1354.0	1350.5	1351.0	1347.5	1354.3	1338.5
5°	1386.7	1380.8	1374.7	1377.0	1374.7	1368.6	1363.6	1362.1	1352.8	1356.6	1340.5
7.5°	1409.2	1402.8	1393.7	1396.3	1391.4	1380.0	1373.5	1369.7	1355.4	1355.7	1337.9
10°	1430.8	1425.3	1413.0	1414.7	1405.7	1390.5	1380.3	1375.0	1354.8	1351.9	1333.5
12.5°	1451.0	1443.4	1430.2	1431.1	1418.0	1397.8	1384.6	1377.0	1350.7	1342.0	1323.9
15°	1466.5	1459.2	1443.4	1443.1	1426.1	1399.8	1384.9	1374.4	1341.1	1327.4	1308.4
17.5°	1479.6	1472.9	1453.3	1452.7	1432.3	1399.0	1381.1	1368.0	1327.1	1310.1	1289.1
20°	1489.0	1482.3	1460.3	1458.3	1433.7	1394.6	1373.2	1356.6	1308.7	1288.5	1265.1
22.5°	1493.4	1486.6	1461.8	1458.9	1430.2	1385.8	1361.9	1342.3	1287.6	1261.3	1237.1
25°	1492.5	1486.1	1458.0	1455.1	1423.5	1372.7	1345.8	1323.3	1261.0	1230.0	1206.1
27.5°	1485.2	1480.2	1450.7	1446.9	1411.2	1354.8	1326.2	1301.4	1231.5	1197.0	1171.0
30°	1472.6	1468.8	1437.5	1434.0	1396.0	1335.3	1303.4	1274.8	1199.7	1160.8	1134.5
32.5°	1452.4	1448.9	1417.4	1414.2	1375.6	1310.1	1276.8	1247.3	1164.9	1121.9	1095.6
35°	1424.7	1422.6	1392.0	1388.4	1349.3	1281.5	1246.1	1213.7	1128.6	1080.1	1055.0
37.5°	1388.2	1388.2	1358.6	1354.8	1316.6	1246.4	1211.6	1177.2	1087.7	1036.3	1011.5
40°	1345.8	1349.6	1319.5	1315.7	1278.6	1208.7	1170.7	1134.5	1043.6	990.1	965.9
42.5°	1294.9	1298.4	1273.3	1269.8	1235.0	1165.2	1129.8	1090.4	997.4	943.1	917.9
45°	1238.8	1243.5	1221.0	1218.4	1185.9	1117.5	1083.6	1043.6	949.2	894.0	869.4
47.5°	1176.3	1182.4	1162.8	1161.4	1131.3	1068.7	1033.4	992.7	898.6	842.8	819.7
50°	1106.1	1114.9	1098.8	1098.8	1071.9	1009.7	979.0	938.4	846.0	790.2	767.4
52.5°	1031.0	1042.1	1030.2	1030.4	1008.5	952.7	920.9	881.1	791.1	736.2	715.1
55°	953.3	964.1	956.5	957.7	940.4	889.6	860.7	821.2	735.0	681.5	661.6
57.5°	872.1	883.7	878.8	881.1	869.1	823.5	793.4	759.0	677.1	624.2	607.3
60°	790.5	801.6	799.0	802.2	794.6	755.2	727.7	692.0	619.0	568.1	553.2
62.5°	708.1	718.3	717.7	721.3	717.2	684.4	659.9	629.5	558.8	512.0	498.3
65°	627.4	636.2	635.6	639.4	638.6	612.2	590.0	562.3	498.6	455.6	443.6
67.5°	549.1	556.4	554.4	558.8	559.9	538.9	519.6	494.8	441.3	399.5	389.3
70°	472.6	477.5	474.9	477.8	480.4	464.7	448.3	426.4	380.2	343.4	334.9
72.5°	397.5	401.0	396.9	399.8	402.1	390.7	377.3	358.3	320.0	288.2	281.1
75°	324.7	329.6	321.2	324.1	325.9	314.5	306.6	291.1	258.1	233.5	228.8
77.5°	254.3	257.2	252.5	251.3	252.5	244.3	238.2	226.2	201.4	181.2	178.3
80°	187.0	188.8	184.1	182.9	183.8	178.0	173.3	164.5	147.0	131.8	130.6
82.5°	125.4	126.2	122.2	121.0	121.6	119.8	114.3	108.1	99.9	87.1	86.8
85°	71.6	71.6	68.7	67.5	68.1	65.2	63.1	59.9	56.7	47.9	48.5
87.5°	26.3	26.3	24.8	24.5	27.5	24.3	23.4	21.9	22.8	18.1	19.3
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°	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0	1337.0
2.5°	1342.9	1339.9	1337.3	1328.2	1332.0	1322.7	1322.1	1318.6	1316.0	1311.0	1317.4
5°	1338.5	1332.6	1325.0	1314.2	1317.4	1306.3	1304.0	1299.9	1296.4	1290.0	1294.9
7.5°	1331.5	1321.8	1309.8	1296.1	1300.5	1286.7	1283.2	1278.9	1275.9	1268.3	1272.7
10°	1321.2	1307.5	1293.5	1276.8	1280.0	1265.1	1260.7	1256.1	1253.4	1246.7	1251.1
12.5°	1305.4	1288.8	1269.8	1251.7	1255.2	1241.2	1235.3	1230.3	1229.5	1223.9	1229.2
15°	1285.0	1261.9	1242.3	1223.0	1227.1	1210.8	1208.1	1203.2	1204.6	1200.8	1207.3
17.5°	1259.0	1232.4	1211.1	1190.3	1194.4	1180.7	1178.6	1176.3	1177.7	1177.2	1184.2
20°	1229.8	1200.5	1176.0	1155.5	1157.9	1147.1	1147.9	1147.3	1150.3	1153.5	1163.1
22.5°	1196.7	1163.7	1138.0	1117.0	1120.5	1111.1	1115.2	1116.4	1121.3	1128.6	1140.9
25°	1159.6	1124.3	1097.4	1077.5	1080.7	1074.6	1081.6	1084.5	1092.4	1104.7	1117.2
27.5°	1120.8	1083.3	1054.7	1035.7	1041.8	1035.7	1046.2	1052.1	1064.1	1077.5	1093.0
30°	1079.5	1040.7	1011.2	994.2	1000.1	994.5	1011.5	1019.3	1031.3	1049.7	1068.1
32.5°	1036.3	995.4	966.4	953.3	957.4	956.5	975.5	984.3	1000.3	1021.4	1041.0
35°	991.9	949.2	920.0	908.9	913.8	915.0	937.8	948.0	965.6	991.0	1012.0
37.5°	946.0	902.4	873.8	864.7	869.1	873.5	900.1	910.3	930.2	958.0	981.1
40°	898.4	854.8	826.8	819.4	823.8	828.5	857.4	871.5	893.1	923.2	948.3
42.5°	850.1	806.6	779.4	774.2	778.5	787.6	818.3	831.4	854.2	887.5	915.3
45°	801.0	755.7	732.1	728.0	732.7	743.2	773.3	789.1	813.3	849.8	879.7
47.5°	751.4	707.2	684.7	682.1	686.8	698.5	731.8	746.1	771.8	810.7	842.8
50°	701.1	658.1	636.5	635.6	640.0	652.6	684.4	701.4	728.0	771.5	804.5
52.5°	650.2	609.0	589.5	589.5	593.5	606.4	638.6	656.1	683.6	729.4	766.0
55°	599.4	560.2	541.5	543.0	548.8	559.9	591.2	609.6	637.4	685.0	723.6
57.5°	548.5	511.4	494.5	496.5	502.1	513.2	543.9	564.6	589.7	639.1	678.6
60°	498.3	463.2	448.3	450.6	455.6	466.7	498.6	516.4	541.5	591.8	631.2
62.5°	447.4	415.6	401.5	404.5	408.8	420.0	450.1	467.3	492.1	541.5	581.3
65°	397.2	367.6	355.7	358.6	362.7	372.9	401.2	417.9	441.6	489.8	527.8
67.5°	347.5	320.6	310.7	313.6	316.8	326.4	349.8	367.9	390.1	436.0	472.0
70°	298.4	274.4	265.6	268.6	271.5	280.3	300.7	317.4	337.8	379.9	413.2
72.5°	249.9	226.5	222.1	224.7	227.1	234.7	254.3	267.4	285.2	322.6	351.3
75°	202.5	182.4	179.4	182.1	184.1	190.0	206.3	217.7	232.6	265.1	288.4
77.5°	156.9	140.0	138.8	140.9	142.9	147.0	159.9	171.8	183.5	207.5	228.2
80°	114.3	100.5	100.5	102.6	102.0	107.0	116.0	125.7	134.1	151.4	166.6
82.5°	75.4	64.6	66.0	67.5	68.4	70.4	76.0	83.3	88.5	99.1	109.0
85°	41.8	34.5	35.9	37.1	36.5	38.9	41.8	46.2	48.8	53.8	59.0
87.5°	15.5	12.9	13.2	14.0	14.6	15.8	15.8	18.4	18.7	19.3	20.5
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):

	160°	170°	180°
0°	1337.0	1337.0	1337.0
2.5°	1305.2	1312.2	1317.4
5°	1282.7	1288.5	1293.2
7.5°	1260.7	1266.0	1270.1
10°	1240.0	1245.8	1248.8
12.5°	1218.7	1225.4	1227.7
15°	1197.6	1204.3	1207.3
17.5°	1176.0	1184.8	1188.0
20°	1155.8	1166.9	1169.6
22.5°	1135.4	1146.8	1150.0
25°	1113.2	1126.6	1129.8
27.5°	1089.5	1105.6	1108.8
30°	1065.8	1083.3	1086.6
32.5°	1040.4	1059.4	1062.3
35°	1013.8	1032.8	1036.3
37.5°	984.3	1005.0	1012.0
40°	953.6	976.1	983.4
42.5°	921.4	946.0	953.6
45°	887.0	913.8	922.6
47.5°	852.2	882.6	890.2
50°	814.5	846.9	856.0
52.5°	775.0	810.4	819.4
55°	734.1	769.8	779.7
57.5°	689.7	726.5	737.0
60°	643.2	680.0	690.0
62.5°	595.6	628.9	638.6
65°	542.4	573.7	582.4
67.5°	486.0	514.6	521.9
70°	426.1	450.9	457.4
72.5°	363.5	380.8	389.3
75°	299.0	312.7	319.1
77.5°	234.1	243.7	249.0
80°	170.7	176.2	180.6
82.5°	111.6	114.0	117.2
85°	60.2	60.2	62.2
87.5°	20.5	19.6	20.5
90°	0.0	0.0	0.0

(END OF REPORT)