

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: P835195

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835195
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-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

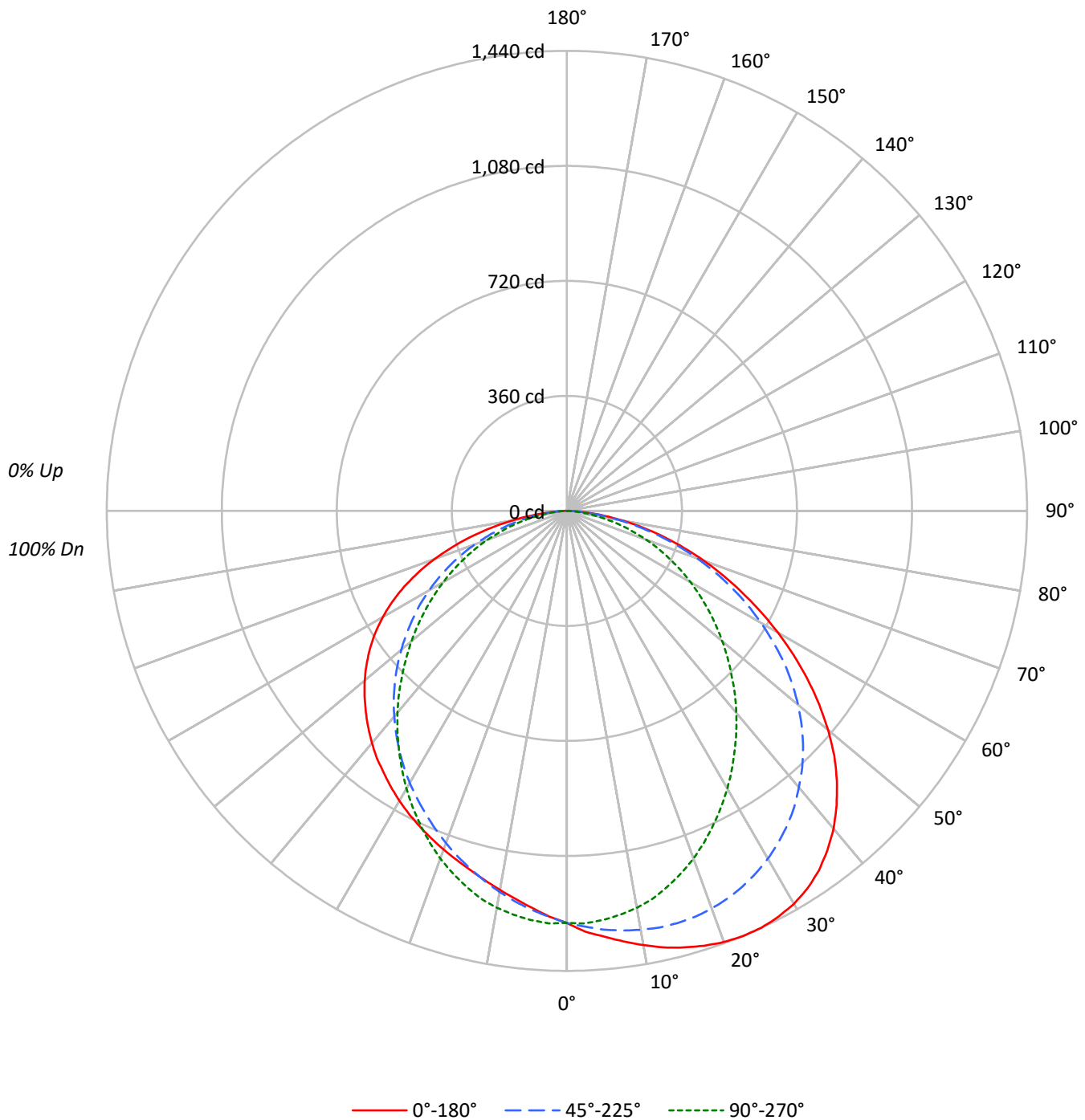
Lumens per Lamp: N/A
Luminaire Lumens: 3793.7 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	3471	3471	3471
5°	3613	3472	3370
10°	3771	3446	3292
15°	3941	3391	3244
20°	4113	3316	3231
25°	4275	3220	3236
30°	4414	3119	3257
35°	4515	3008	3284
40°	4560	2897	3332
45°	4548	2774	3387
50°	4467	2658	3457
55°	4314	2535	3529
60°	4104	2405	3582
65°	3854	2258	3577
70°	3586	2083	3471
75°	3256	1829	3200
80°	2796	1503	2700
85°	2133	1028	1853

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	3.2
10°-20°	353.2	9.3
20°-30°	541.2	14.3
30°-40°	660.4	17.4
40°-50°	690.7	18.2
50°-60°	625.1	16.5
60°-70°	473.4	12.5
70°-80°	263.8	7.0
80°-90°	63.6	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°	1016.7	26.8
0°-40°	1677.1	44.2
0°-60°	2992.9	78.9
0°-90°	3793.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3793.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1290	1290	1290	1290	1290	
5°	1338	1315	1286	1254	1247	129
15°	1415	1336	1217	1161	1164	401
25°	1440	1298	1084	1046	1090	664
35°	1374	1202	916	914	1000	858
45°	1195	1045	729	761	890	919
55°	920	830	540	588	752	821
65°	605	569	355	403	562	600
75°	313	296	176	210	308	332
85°	69	61	33	44	60	83
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°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7
2.5°	1318.2	1312.0	1306.9	1308.9	1310.0	1306.1	1302.7	1303.2	1299.9	1306.3	1291.1
5°	1337.6	1332.0	1326.1	1328.3	1326.1	1320.2	1315.4	1314.0	1304.9	1308.6	1293.1
7.5°	1359.3	1353.1	1344.4	1346.9	1342.1	1331.2	1325.0	1321.3	1307.5	1307.8	1290.6
10°	1380.2	1374.8	1363.0	1364.7	1356.0	1341.3	1331.4	1326.4	1306.9	1304.1	1286.3
12.5°	1399.7	1392.3	1379.6	1380.5	1367.8	1348.4	1335.7	1328.3	1303.0	1294.5	1277.0
15°	1414.6	1407.6	1392.3	1392.0	1375.7	1350.3	1335.9	1325.8	1293.7	1280.4	1262.1
17.5°	1427.3	1420.8	1401.9	1401.3	1381.6	1349.5	1332.3	1319.6	1280.1	1263.8	1243.5
20°	1436.3	1429.8	1408.7	1406.7	1383.0	1345.2	1324.7	1308.6	1262.4	1242.9	1220.4
22.5°	1440.5	1434.0	1410.1	1407.3	1379.6	1336.8	1313.7	1294.8	1242.1	1216.7	1193.3
25°	1439.7	1433.5	1406.4	1403.6	1373.2	1324.1	1298.2	1276.5	1216.4	1186.5	1163.4
27.5°	1432.6	1427.8	1399.4	1395.7	1361.3	1306.9	1279.3	1255.3	1187.9	1154.7	1129.6
30°	1420.5	1416.9	1386.7	1383.3	1346.7	1288.0	1257.3	1229.7	1157.2	1119.7	1094.4
32.5°	1401.1	1397.7	1367.2	1364.1	1326.9	1263.8	1231.6	1203.2	1123.7	1082.2	1056.9
35°	1374.3	1372.3	1342.7	1339.3	1301.6	1236.2	1202.0	1170.8	1088.7	1041.9	1017.7
37.5°	1339.0	1339.0	1310.6	1306.9	1270.0	1202.3	1168.8	1135.5	1049.2	999.6	975.7
40°	1298.2	1301.8	1272.8	1269.1	1233.3	1166.0	1129.3	1094.4	1006.7	955.1	931.7
42.5°	1249.1	1252.5	1228.3	1224.9	1191.3	1124.0	1089.8	1051.8	962.1	909.7	885.5
45°	1195.0	1199.5	1177.8	1175.3	1144.0	1078.0	1045.3	1006.7	915.6	862.3	838.7
47.5°	1134.7	1140.6	1121.7	1120.3	1091.3	1030.9	996.8	957.6	866.9	813.0	790.7
50°	1067.0	1075.5	1060.0	1060.0	1034.0	974.0	944.4	905.2	816.1	762.3	740.3
52.5°	994.6	1005.3	993.7	994.0	972.9	919.0	888.3	849.9	763.1	710.1	689.8
55°	919.6	930.0	922.7	923.8	907.2	858.1	830.2	792.2	709.0	657.4	638.2
57.5°	841.2	852.5	847.7	849.9	838.4	794.4	765.4	732.1	653.2	602.1	585.8
60°	762.6	773.3	770.7	773.8	766.5	728.4	701.9	667.6	597.1	548.0	533.6
62.5°	683.1	692.9	692.4	695.7	691.8	660.2	636.5	607.2	539.0	493.9	480.6
65°	605.2	613.7	613.1	616.8	616.0	590.6	569.2	542.4	480.9	439.5	427.9
67.5°	529.7	536.7	534.8	539.0	540.1	519.8	501.2	477.3	425.7	385.4	375.5
70°	455.8	460.6	458.1	460.9	463.5	448.2	432.4	411.3	366.8	331.2	323.1
72.5°	383.4	386.8	382.8	385.6	387.9	376.9	363.9	345.6	308.7	278.0	271.2
75°	313.2	318.0	309.8	312.6	314.3	303.3	295.7	280.8	248.9	225.2	220.7
77.5°	245.3	248.1	243.6	242.4	243.6	235.7	229.8	218.2	194.2	174.8	172.0
80°	180.4	182.1	177.6	176.5	177.3	171.7	167.2	158.7	141.8	127.1	126.0
82.5°	120.9	121.8	117.8	116.7	117.3	115.6	110.2	104.3	96.4	84.0	83.7
85°	69.1	69.1	66.2	65.1	65.7	62.9	60.9	57.8	54.7	46.2	46.8
87.5°	25.4	25.4	24.0	23.7	26.5	23.4	22.6	21.1	22.0	17.5	18.6
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°	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7	1289.7
2.5°	1295.4	1292.5	1290.0	1281.3	1284.9	1275.9	1275.3	1272.0	1269.4	1264.6	1270.8
5°	1291.1	1285.5	1278.2	1267.7	1270.8	1260.1	1257.9	1253.9	1250.5	1244.3	1249.1
7.5°	1284.4	1275.1	1263.5	1250.2	1254.5	1241.2	1237.8	1233.6	1230.8	1223.5	1227.7
10°	1274.5	1261.2	1247.7	1231.6	1234.7	1220.4	1216.1	1211.6	1209.1	1202.6	1206.8
12.5°	1259.3	1243.2	1224.9	1207.4	1210.8	1197.2	1191.6	1186.8	1186.0	1180.6	1185.7
15°	1239.5	1217.3	1198.4	1179.8	1183.7	1167.9	1165.4	1160.6	1162.0	1158.3	1164.5
17.5°	1214.4	1188.8	1168.2	1148.2	1152.1	1138.9	1136.9	1134.7	1136.1	1135.5	1142.3
20°	1186.3	1158.1	1134.4	1114.7	1116.9	1106.5	1107.3	1106.8	1109.6	1112.7	1122.0
22.5°	1154.4	1122.5	1097.7	1077.4	1080.8	1071.8	1075.7	1076.9	1081.7	1088.7	1100.6
25°	1118.6	1084.5	1058.6	1039.4	1042.5	1036.6	1043.3	1046.1	1053.8	1065.6	1077.7
27.5°	1081.1	1045.0	1017.4	999.1	1005.0	999.1	1009.2	1014.9	1026.4	1039.4	1054.3
30°	1041.4	1003.9	975.4	959.0	964.7	959.3	975.7	983.3	994.8	1012.6	1030.4
32.5°	999.6	960.2	932.3	919.6	923.5	922.7	941.0	949.5	965.0	985.3	1004.1
35°	956.8	915.6	887.4	876.7	881.5	882.6	904.6	914.5	931.4	955.9	976.2
37.5°	912.5	870.5	842.9	834.2	838.4	842.6	868.3	878.1	897.3	924.1	946.4
40°	866.6	824.6	797.5	790.5	794.7	799.2	827.1	840.6	861.5	890.5	914.8
42.5°	820.1	778.1	751.8	746.8	751.0	759.7	789.3	802.0	824.0	856.1	882.9
45°	772.7	729.0	706.2	702.2	706.7	716.9	745.9	761.1	784.5	819.8	848.5
47.5°	724.8	682.2	660.5	658.0	662.5	673.8	705.9	719.7	744.5	782.0	813.0
50°	676.3	634.8	614.0	613.1	617.4	629.5	660.2	676.6	702.2	744.2	776.1
52.5°	627.2	587.5	568.6	568.6	572.5	585.0	616.0	632.9	659.4	703.6	738.9
55°	578.2	540.4	522.4	523.8	529.4	540.1	570.3	588.1	614.8	660.8	698.0
57.5°	529.1	493.3	477.0	479.0	484.3	495.0	524.6	544.6	568.9	616.5	654.6
60°	480.6	446.8	432.4	434.7	439.5	450.2	480.9	498.1	522.4	570.9	608.9
62.5°	431.6	400.9	387.3	390.2	394.4	405.1	434.1	450.8	474.7	522.4	560.7
65°	383.1	354.6	343.1	345.9	349.8	359.7	387.1	403.1	426.0	472.5	509.1
67.5°	335.2	309.2	299.7	302.5	305.6	314.9	337.4	354.9	376.3	420.6	455.3
70°	287.8	264.7	256.3	259.1	261.9	270.3	290.1	306.1	325.9	366.5	398.6
72.5°	241.0	218.5	214.2	216.8	219.0	226.4	245.3	257.9	275.1	311.2	338.8
75°	195.4	175.9	173.1	175.6	177.6	183.2	199.0	210.0	224.4	255.7	278.2
77.5°	151.4	135.0	133.9	135.9	137.9	141.8	154.2	165.8	177.0	200.2	220.2
80°	110.2	97.0	97.0	98.9	98.4	103.2	111.9	121.2	129.4	146.0	160.7
82.5°	72.7	62.3	63.7	65.1	66.0	67.9	73.3	80.3	85.4	95.6	105.2
85°	40.3	33.3	34.7	35.8	35.2	37.5	40.3	44.5	47.1	51.9	56.9
87.5°	14.9	12.4	12.7	13.5	14.1	15.2	15.2	17.8	18.0	18.6	19.7
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°	1289.7	1289.7	1289.7
2.5°	1259.0	1265.8	1270.8
5°	1237.3	1242.9	1247.4
7.5°	1216.1	1221.2	1225.2
10°	1196.1	1201.8	1204.6
12.5°	1175.5	1182.0	1184.3
15°	1155.2	1161.7	1164.5
17.5°	1134.4	1142.8	1145.9
20°	1114.9	1125.6	1128.2
22.5°	1095.2	1106.2	1109.3
25°	1073.8	1086.7	1089.8
27.5°	1050.9	1066.4	1069.5
30°	1028.1	1045.0	1048.1
32.5°	1003.6	1021.9	1024.7
35°	977.9	996.3	999.6
37.5°	949.5	969.5	976.2
40°	919.9	941.6	948.6
42.5°	888.8	912.5	919.9
45°	855.6	881.5	890.0
47.5°	822.0	851.4	858.7
50°	785.7	817.0	825.7
52.5°	747.6	781.7	790.5
55°	708.1	742.5	752.1
57.5°	665.3	700.8	711.0
60°	620.5	656.0	665.6
62.5°	574.5	606.7	616.0
65°	523.2	553.4	561.8
67.5°	468.8	496.4	503.5
70°	411.0	435.0	441.2
72.5°	350.7	367.3	375.5
75°	288.4	301.6	307.8
77.5°	225.8	235.1	240.2
80°	164.6	170.0	174.2
82.5°	107.7	109.9	113.0
85°	58.1	58.1	60.0
87.5°	19.7	18.9	19.7
90°	0.0	0.0	0.0

(END OF REPORT)