

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: P834246

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834246
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1HI-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

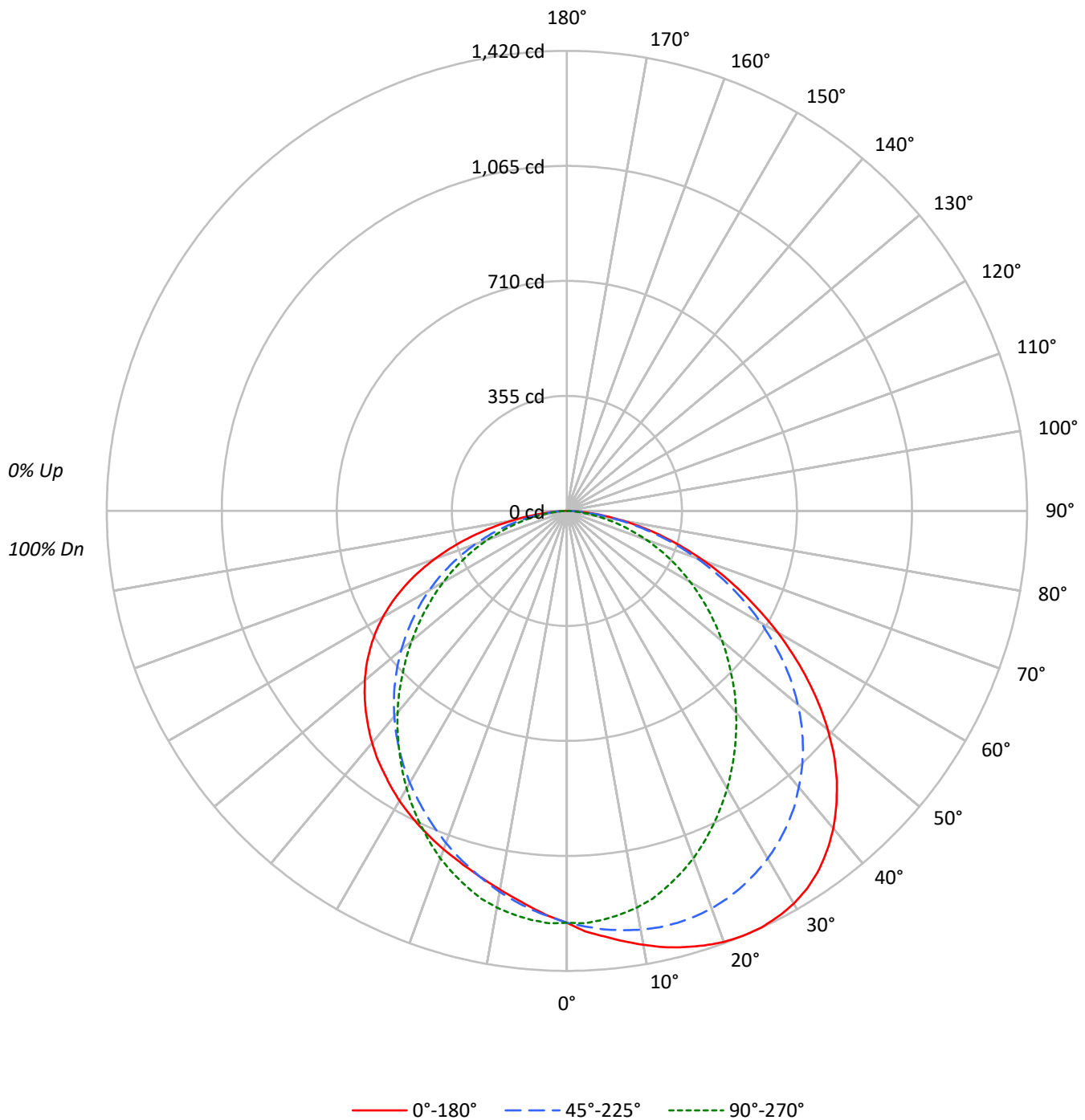
Lumens per Lamp: N/A
Luminaire Lumens: 3739.1 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3421	3421	3421
5°	3561	3422	3321
10°	3717	3397	3244
15°	3884	3342	3198
20°	4054	3269	3184
25°	4213	3174	3189
30°	4350	3074	3210
35°	4450	2964	3236
40°	4495	2855	3284
45°	4482	2734	3338
50°	4402	2619	3407
55°	4252	2499	3478
60°	4045	2370	3531
65°	3798	2225	3526
70°	3535	2053	3421
75°	3210	1803	3154
80°	2755	1481	2661
85°	2103	1013	1828

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.6	3.2
10°-20°	348.2	9.3
20°-30°	533.4	14.3
30°-40°	650.9	17.4
40°-50°	680.7	18.2
50°-60°	616.1	16.5
60°-70°	466.6	12.5
70°-80°	260.0	7.0
80°-90°	62.7	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°	1002.1	26.8
0°-40°	1653.0	44.2
0°-60°	2949.8	78.9
0°-90°	3739.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3739.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1271	1271	1271	1271	1271	
5°	1318	1296	1267	1236	1230	127
15°	1394	1317	1200	1144	1148	395
25°	1419	1280	1069	1031	1074	655
35°	1354	1185	902	901	985	846
45°	1178	1030	718	750	877	906
55°	906	818	533	580	741	809
65°	596	561	350	397	554	592
75°	309	292	173	207	303	327
85°	68	60	33	44	59	82
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°	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1
2.5°	1299.2	1293.1	1288.1	1290.0	1291.2	1287.3	1283.9	1284.5	1281.1	1287.5	1272.5
5°	1318.4	1312.8	1307.0	1309.2	1307.0	1301.2	1296.4	1295.0	1286.2	1289.8	1274.5
7.5°	1339.8	1333.7	1325.0	1327.6	1322.8	1312.0	1305.9	1302.3	1288.7	1288.9	1272.0
10°	1360.3	1355.1	1343.4	1345.1	1336.4	1322.0	1312.3	1307.3	1288.1	1285.3	1267.8
12.5°	1379.5	1372.3	1359.8	1360.6	1348.1	1328.9	1316.4	1309.2	1284.2	1275.9	1258.6
15°	1394.2	1387.3	1372.3	1372.0	1355.9	1330.9	1316.7	1306.7	1275.0	1262.0	1243.9
17.5°	1406.7	1400.3	1381.7	1381.2	1361.7	1330.1	1313.1	1300.6	1261.7	1245.6	1225.6
20°	1415.6	1409.2	1388.4	1386.5	1363.1	1325.9	1305.6	1289.8	1244.2	1225.0	1202.8
22.5°	1419.8	1413.4	1389.8	1387.0	1359.8	1317.5	1294.8	1276.1	1224.2	1199.2	1176.1
25°	1419.0	1412.8	1386.2	1383.4	1353.4	1305.0	1279.5	1258.1	1198.9	1169.5	1146.7
27.5°	1412.0	1407.3	1379.2	1375.6	1341.7	1288.1	1260.9	1237.3	1170.8	1138.1	1113.3
30°	1400.1	1396.5	1366.7	1363.4	1327.3	1269.5	1239.2	1212.0	1140.6	1103.6	1078.6
32.5°	1380.9	1377.6	1347.6	1344.5	1307.8	1245.6	1213.9	1185.8	1107.5	1066.7	1041.6
35°	1354.5	1352.6	1323.4	1320.0	1282.8	1218.4	1184.7	1153.9	1073.0	1026.9	1003.0
37.5°	1319.8	1319.8	1291.7	1288.1	1251.7	1185.0	1152.0	1119.2	1034.1	985.2	961.6
40°	1279.5	1283.1	1254.5	1250.9	1215.6	1149.2	1113.1	1078.6	992.2	941.3	918.3
42.5°	1231.1	1234.5	1210.6	1207.2	1174.2	1107.8	1074.2	1036.6	948.3	896.6	872.7
45°	1177.8	1182.2	1160.8	1158.3	1127.5	1062.5	1030.3	992.2	902.4	849.9	826.6
47.5°	1118.3	1124.2	1105.6	1104.2	1075.5	1016.1	982.5	943.8	854.4	801.3	779.4
50°	1051.6	1060.0	1044.7	1044.7	1019.1	960.0	930.8	892.2	804.4	751.3	729.6
52.5°	980.2	990.8	979.4	979.7	958.8	905.8	875.5	837.7	752.1	699.9	679.9
55°	906.3	916.6	909.4	910.5	894.1	845.8	818.3	780.7	698.8	647.9	629.0
57.5°	829.1	840.2	835.5	837.7	826.3	783.0	754.4	721.6	643.8	593.5	577.4
60°	751.6	762.1	759.6	762.7	755.5	718.0	691.8	657.9	588.5	540.1	526.0
62.5°	673.2	682.9	682.4	685.7	681.8	650.7	627.4	598.5	531.2	486.8	473.7
65°	596.5	604.9	604.3	607.9	607.1	582.1	561.0	534.6	474.0	433.2	421.8
67.5°	522.1	529.0	527.1	531.2	532.4	512.3	494.0	470.4	419.5	379.8	370.1
70°	449.3	454.0	451.5	454.3	456.8	441.8	426.2	405.4	361.5	326.5	318.4
72.5°	377.9	381.2	377.3	380.1	382.3	371.5	358.7	340.6	304.2	274.0	267.3
75°	308.7	313.4	305.4	308.1	309.8	299.0	291.5	276.7	245.3	222.0	217.6
77.5°	241.7	244.5	240.1	238.9	240.1	232.3	226.4	215.1	191.4	172.3	169.5
80°	177.8	179.5	175.0	173.9	174.8	169.2	164.8	156.4	139.8	125.3	124.2
82.5°	119.2	120.0	116.1	115.0	115.6	113.9	108.6	102.8	95.0	82.8	82.5
85°	68.1	68.1	65.3	64.2	64.7	62.0	60.0	57.0	53.9	45.6	46.1
87.5°	25.0	25.0	23.6	23.3	26.1	23.1	22.2	20.8	21.7	17.2	18.3
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°	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1	1271.1
2.5°	1276.7	1273.9	1271.4	1262.8	1266.4	1257.5	1257.0	1253.6	1251.1	1246.4	1252.5
5°	1272.5	1267.0	1259.8	1249.5	1252.5	1242.0	1239.8	1235.9	1232.5	1226.4	1231.1
7.5°	1265.9	1256.7	1245.3	1232.2	1236.4	1223.4	1220.0	1215.9	1213.1	1205.9	1210.0
10°	1256.1	1243.1	1229.7	1213.9	1217.0	1202.8	1198.6	1194.2	1191.7	1185.3	1189.5
12.5°	1241.1	1225.3	1207.2	1190.0	1193.4	1180.0	1174.5	1169.7	1168.9	1163.6	1168.6
15°	1221.7	1199.7	1181.1	1162.8	1166.7	1151.1	1148.6	1143.9	1145.3	1141.7	1147.8
17.5°	1197.0	1171.7	1151.4	1131.7	1135.6	1122.5	1120.6	1118.3	1119.7	1119.2	1125.8
20°	1169.2	1141.4	1118.1	1098.6	1100.8	1090.5	1091.4	1090.8	1093.6	1096.7	1105.8
22.5°	1137.8	1106.4	1081.9	1061.9	1065.3	1056.4	1060.3	1061.4	1066.1	1073.0	1084.7
25°	1102.5	1068.9	1043.3	1024.4	1027.5	1021.6	1028.3	1031.1	1038.6	1050.3	1062.2
27.5°	1065.5	1030.0	1002.7	984.7	990.5	984.7	994.7	1000.2	1011.6	1024.4	1039.1
30°	1026.4	989.4	961.3	945.2	950.8	945.5	961.6	969.1	980.5	998.0	1015.5
32.5°	985.2	946.3	918.8	906.3	910.2	909.4	927.5	935.8	951.1	971.1	989.7
35°	943.0	902.4	874.7	864.1	868.8	869.9	891.6	901.3	918.0	942.2	962.2
37.5°	899.4	858.0	830.8	822.1	826.3	830.5	855.8	865.5	884.4	910.8	932.7
40°	854.1	812.7	786.0	779.1	783.2	787.7	815.2	828.5	849.1	877.7	901.6
42.5°	808.3	766.9	741.0	736.0	740.2	748.8	778.0	790.5	812.1	843.8	870.2
45°	761.6	718.5	696.0	692.1	696.6	706.6	735.2	750.2	773.2	808.0	836.3
47.5°	714.3	672.4	651.0	648.5	652.9	664.1	695.7	709.3	733.8	770.7	801.3
50°	666.6	625.7	605.1	604.3	608.5	620.4	650.7	666.8	692.1	733.5	764.9
52.5°	618.2	579.0	560.4	560.4	564.3	576.5	607.1	623.8	649.9	693.5	728.2
55°	569.9	532.6	514.8	516.2	521.8	532.4	562.1	579.6	606.0	651.3	687.9
57.5°	521.5	486.2	470.1	472.1	477.3	487.9	517.1	536.8	560.7	607.7	645.2
60°	473.7	440.4	426.2	428.4	433.2	443.7	474.0	491.0	514.8	562.6	600.1
62.5°	425.4	395.1	381.8	384.5	388.7	399.3	427.9	444.3	467.9	514.8	552.6
65°	377.6	349.5	338.1	340.9	344.8	354.5	381.5	397.3	419.8	465.7	501.8
67.5°	330.4	304.8	295.4	298.1	301.2	310.4	332.6	349.8	370.9	414.5	448.7
70°	283.7	260.9	252.6	255.3	258.1	266.5	285.9	301.7	321.2	361.2	392.9
72.5°	237.6	215.3	211.2	213.7	215.9	223.1	241.7	254.2	271.2	306.7	334.0
75°	192.5	173.4	170.6	173.1	175.0	180.6	196.2	207.0	221.2	252.0	274.2
77.5°	149.2	133.1	132.0	133.9	135.9	139.8	152.0	163.4	174.5	197.3	217.0
80°	108.6	95.6	95.6	97.5	97.0	101.7	110.3	119.5	127.5	143.9	158.4
82.5°	71.7	61.4	62.8	64.2	65.0	67.0	72.2	79.2	84.2	94.2	103.6
85°	39.7	32.8	34.2	35.3	34.7	37.0	39.7	43.9	46.4	51.1	56.1
87.5°	14.7	12.2	12.5	13.3	13.9	15.0	15.0	17.5	17.8	18.3	19.4
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°	1271.1	1271.1	1271.1
2.5°	1240.9	1247.5	1252.5
5°	1219.5	1225.0	1229.5
7.5°	1198.6	1203.6	1207.5
10°	1178.9	1184.5	1187.2
12.5°	1158.6	1165.0	1167.2
15°	1138.6	1145.0	1147.8
17.5°	1118.1	1126.4	1129.4
20°	1098.9	1109.4	1111.9
22.5°	1079.4	1090.3	1093.3
25°	1058.3	1071.1	1074.2
27.5°	1035.8	1051.1	1054.1
30°	1013.3	1030.0	1033.0
32.5°	989.1	1007.2	1010.0
35°	963.8	981.9	985.2
37.5°	935.8	955.5	962.2
40°	906.6	928.0	935.0
42.5°	876.0	899.4	906.6
45°	843.3	868.8	877.2
47.5°	810.2	839.1	846.3
50°	774.4	805.2	813.8
52.5°	736.8	770.5	779.1
55°	698.0	731.8	741.3
57.5°	655.7	690.7	700.7
60°	611.5	646.5	656.0
62.5°	566.3	597.9	607.1
65°	515.7	545.4	553.7
67.5°	462.1	489.3	496.2
70°	405.1	428.7	434.8
72.5°	345.6	362.0	370.1
75°	284.2	297.3	303.4
77.5°	222.6	231.7	236.7
80°	162.3	167.5	171.7
82.5°	106.1	108.4	111.4
85°	57.2	57.2	59.2
87.5°	19.4	18.6	19.4
90°	0.0	0.0	0.0

(END OF REPORT)