

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: P835247

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835247
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-LD4-2STD-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

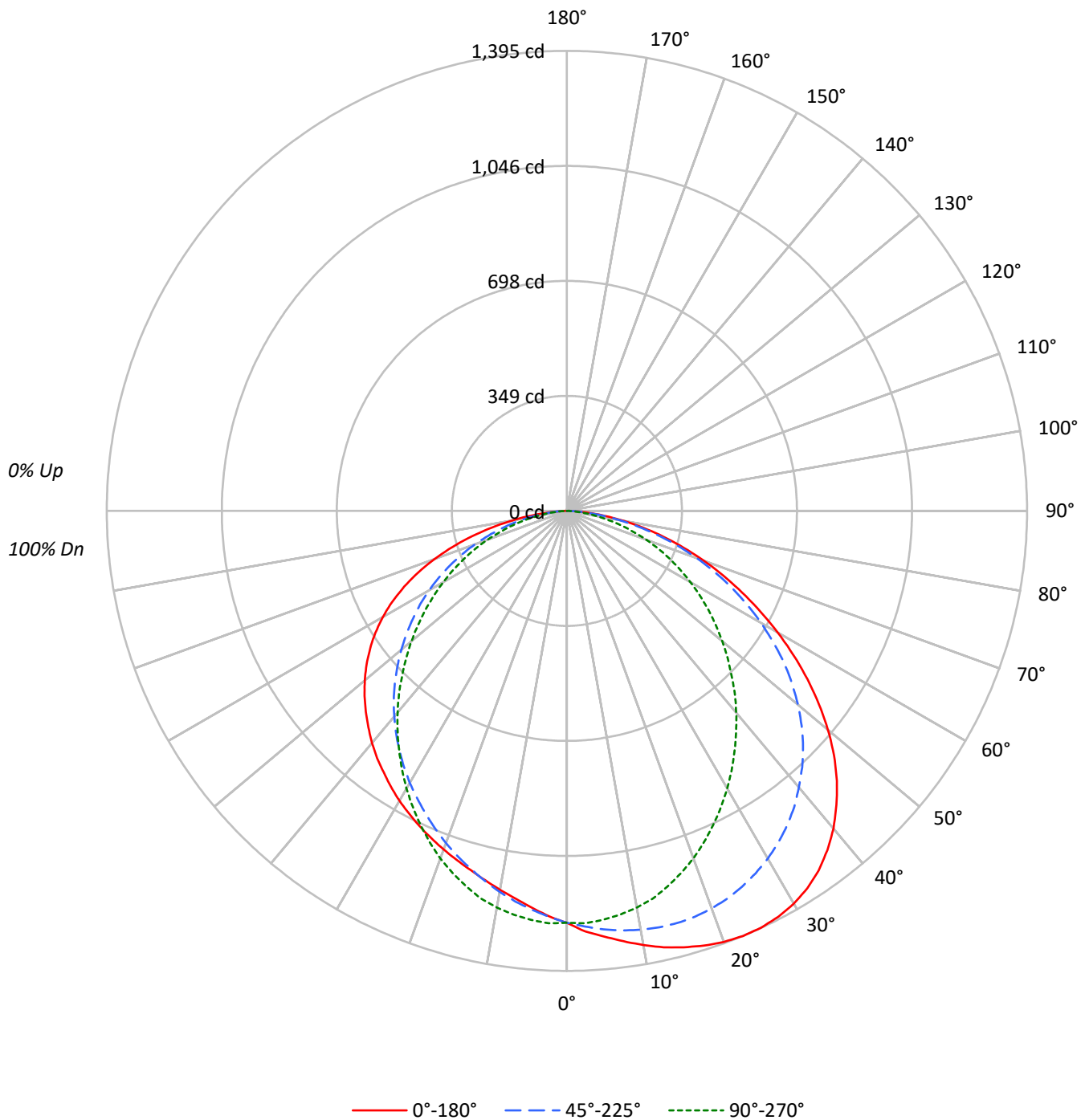
Lumens per Lamp: N/A
Luminaire Lumens: 3673.9 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3361	3361	3361
5°	3499	3363	3263
10°	3652	3337	3187
15°	3816	3284	3142
20°	3983	3212	3129
25°	4140	3118	3134
30°	4275	3021	3154
35°	4372	2913	3180
40°	4416	2805	3227
45°	4404	2687	3280
50°	4326	2574	3347
55°	4178	2455	3417
60°	3975	2329	3469
65°	3732	2187	3465
70°	3473	2017	3362
75°	3153	1772	3099
80°	2707	1455	2614
85°	2066	994	1794



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.5	3.2
10°-20°	342.1	9.3
20°-30°	524.1	14.3
30°-40°	639.6	17.4
40°-50°	668.8	18.2
50°-60°	605.3	16.5
60°-70°	458.5	12.5
70°-80°	255.5	7.0
80°-90°	61.6	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°	984.6	26.8
0°-40°	1624.2	44.2
0°-60°	2898.4	78.9
0°-90°	3673.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3673.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1249	1249	1249	1249	1249	
5°	1295	1274	1245	1214	1208	125
15°	1370	1294	1179	1124	1128	389
25°	1394	1257	1050	1013	1055	643
35°	1331	1164	887	886	968	831
45°	1157	1012	706	737	862	890
55°	890	804	523	570	728	795
65°	586	551	343	390	544	581
75°	303	286	170	203	298	322
85°	67	59	32	43	58	80
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°	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0
2.5°	1276.6	1270.6	1265.6	1267.6	1268.6	1264.8	1261.6	1262.1	1258.8	1265.1	1250.4
5°	1295.4	1289.9	1284.2	1286.4	1284.2	1278.5	1273.8	1272.5	1263.7	1267.3	1252.3
7.5°	1316.4	1310.4	1302.0	1304.4	1299.8	1289.1	1283.1	1279.6	1266.2	1266.5	1249.8
10°	1336.6	1331.4	1320.0	1321.6	1313.1	1299.0	1289.4	1284.5	1265.6	1262.9	1245.7
12.5°	1355.5	1348.4	1336.1	1336.9	1324.6	1305.8	1293.5	1286.4	1261.8	1253.6	1236.7
15°	1369.9	1363.1	1348.4	1348.1	1332.3	1307.7	1293.8	1283.9	1252.8	1240.0	1222.2
17.5°	1382.2	1375.9	1357.6	1357.1	1338.0	1306.9	1290.2	1277.9	1239.7	1223.9	1204.2
20°	1391.0	1384.7	1364.2	1362.3	1339.4	1302.8	1282.8	1267.3	1222.5	1203.7	1181.8
22.5°	1395.1	1388.8	1365.6	1362.8	1336.1	1294.6	1272.2	1253.9	1202.9	1178.3	1155.6
25°	1394.2	1388.2	1362.0	1359.3	1329.8	1282.3	1257.2	1236.2	1178.0	1149.1	1126.7
27.5°	1387.4	1382.8	1355.2	1351.6	1318.3	1265.6	1238.9	1215.7	1150.4	1118.2	1093.9
30°	1375.7	1372.1	1342.9	1339.6	1304.1	1247.4	1217.6	1190.8	1120.7	1084.4	1059.8
32.5°	1356.8	1353.6	1324.1	1321.1	1285.0	1223.9	1192.8	1165.2	1088.2	1048.1	1023.5
35°	1330.9	1329.0	1300.3	1297.0	1260.5	1197.1	1164.1	1133.8	1054.3	1009.0	985.5
37.5°	1296.8	1296.8	1269.2	1265.6	1229.9	1164.4	1131.9	1099.7	1016.1	968.1	944.9
40°	1257.2	1260.7	1232.6	1229.1	1194.4	1129.1	1093.7	1059.8	974.9	924.9	902.3
42.5°	1209.7	1213.0	1189.5	1186.2	1153.7	1088.5	1055.4	1018.6	931.8	881.0	857.5
45°	1157.3	1161.6	1140.6	1138.2	1107.9	1044.0	1012.3	974.9	886.7	835.1	812.2
47.5°	1098.8	1104.6	1086.3	1084.9	1056.8	998.4	965.3	927.4	839.5	787.3	765.8
50°	1033.3	1041.5	1026.5	1026.5	1001.4	943.2	914.6	876.6	790.3	738.2	716.9
52.5°	963.2	973.5	962.3	962.6	942.1	890.0	860.2	823.1	739.0	687.7	668.0
55°	890.5	900.6	893.5	894.6	878.5	831.0	804.0	767.1	686.6	636.6	618.1
57.5°	814.6	825.6	820.9	823.1	811.9	769.3	741.2	709.0	632.6	583.1	567.3
60°	738.5	748.8	746.4	749.4	742.3	705.4	679.8	646.5	578.2	530.7	516.8
62.5°	661.5	671.0	670.5	673.8	670.0	639.4	616.4	588.1	522.0	478.3	465.5
65°	586.1	594.3	593.8	597.3	596.5	571.9	551.2	525.3	465.7	425.6	414.4
67.5°	513.0	519.8	517.9	522.0	523.1	503.4	485.4	462.2	412.2	373.2	363.6
70°	441.4	446.1	443.6	446.4	448.8	434.1	418.8	398.3	355.2	320.8	312.9
72.5°	371.3	374.6	370.7	373.5	375.7	365.0	352.4	334.7	298.9	269.2	262.6
75°	303.3	307.9	300.0	302.8	304.4	293.8	286.4	271.9	241.1	218.1	213.8
77.5°	237.5	240.2	235.9	234.8	235.9	228.2	222.5	211.3	188.1	169.3	166.5
80°	174.7	176.4	172.0	170.9	171.7	166.3	161.9	153.7	137.3	123.1	122.0
82.5°	117.1	117.9	114.1	113.0	113.6	111.9	106.7	101.0	93.4	81.4	81.1
85°	66.9	66.9	64.2	63.1	63.6	60.9	59.0	56.0	53.0	44.8	45.3
87.5°	24.6	24.6	23.2	22.9	25.7	22.7	21.8	20.5	21.3	16.9	18.0
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0	1249.0
2.5°	1254.5	1251.7	1249.3	1240.8	1244.4	1235.6	1235.1	1231.8	1229.3	1224.7	1230.7
5°	1250.4	1244.9	1237.8	1227.7	1230.7	1220.3	1218.1	1214.3	1211.0	1205.0	1209.7
7.5°	1243.8	1234.8	1223.6	1210.8	1214.9	1202.0	1198.8	1194.7	1191.9	1184.8	1188.9
10°	1234.3	1221.4	1208.3	1192.8	1195.8	1181.8	1177.7	1173.4	1170.9	1164.6	1168.7
12.5°	1219.5	1203.9	1186.2	1169.3	1172.6	1159.4	1154.0	1149.3	1148.5	1143.3	1148.3
15°	1200.4	1178.8	1160.5	1142.5	1146.3	1131.1	1128.6	1124.0	1125.3	1121.8	1127.8
17.5°	1176.1	1151.3	1131.3	1111.9	1115.8	1102.9	1101.0	1098.8	1100.2	1099.7	1106.2
20°	1148.8	1121.5	1098.6	1079.5	1081.6	1071.5	1072.4	1071.8	1074.5	1077.5	1086.6
22.5°	1118.0	1087.1	1063.1	1043.4	1046.7	1038.0	1041.8	1042.9	1047.5	1054.3	1065.8
25°	1083.3	1050.2	1025.1	1006.6	1009.6	1003.8	1010.4	1013.1	1020.5	1032.0	1043.7
27.5°	1047.0	1012.0	985.3	967.5	973.3	967.5	977.4	982.8	994.0	1006.6	1021.0
30°	1008.5	972.2	944.6	928.8	934.2	929.0	944.9	952.2	963.4	980.6	997.8
32.5°	968.1	929.9	902.8	890.5	894.4	893.5	911.3	919.5	934.5	954.1	972.4
35°	926.6	886.7	859.4	849.0	853.7	854.8	876.1	885.6	902.0	925.8	945.4
37.5°	883.7	843.0	816.3	807.8	811.9	816.0	840.9	850.4	869.0	894.9	916.5
40°	839.2	798.5	772.3	765.5	769.6	774.0	801.0	814.1	834.3	862.4	885.9
42.5°	794.2	753.5	728.1	723.2	727.3	735.7	764.4	776.7	798.0	829.1	855.0
45°	748.3	706.0	683.9	680.1	684.4	694.2	722.4	737.1	759.8	793.9	821.7
47.5°	701.9	660.7	639.6	637.2	641.6	652.5	683.6	697.0	721.0	757.3	787.3
50°	654.9	614.8	594.6	593.8	597.9	609.6	639.4	655.2	680.1	720.7	751.6
52.5°	607.4	568.9	550.6	550.6	554.5	566.5	596.5	612.9	638.6	681.4	715.5
55°	559.9	523.3	505.9	507.2	512.7	523.1	552.3	569.5	595.4	639.9	676.0
57.5°	512.4	477.8	461.9	463.8	469.0	479.4	508.1	527.4	550.9	597.1	633.9
60°	465.5	432.7	418.8	421.0	425.6	436.0	465.7	482.4	505.9	552.8	589.7
62.5°	418.0	388.2	375.1	377.8	381.9	392.3	420.4	436.5	459.7	505.9	543.0
65°	371.0	343.4	332.2	335.0	338.8	348.4	374.8	390.4	412.5	457.6	493.0
67.5°	324.6	299.5	290.2	292.9	295.9	304.9	326.8	343.7	364.5	407.3	440.9
70°	278.7	256.4	248.2	250.9	253.6	261.8	280.9	296.5	315.6	354.9	386.0
72.5°	233.4	211.6	207.5	209.9	212.1	219.2	237.5	249.8	266.5	301.4	328.2
75°	189.2	170.4	167.6	170.1	172.0	177.5	192.7	203.4	217.3	247.6	269.5
77.5°	146.6	130.8	129.7	131.6	133.5	137.3	149.3	160.5	171.4	193.8	213.2
80°	106.7	93.9	93.9	95.8	95.3	99.9	108.4	117.4	125.3	141.4	155.6
82.5°	70.4	60.3	61.7	63.1	63.9	65.8	71.0	77.8	82.7	92.5	101.8
85°	39.0	32.2	33.6	34.7	34.1	36.3	39.0	43.1	45.6	50.2	55.1
87.5°	14.5	12.0	12.3	13.1	13.7	14.7	14.7	17.2	17.5	18.0	19.1
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°	1249.0	1249.0	1249.0
2.5°	1219.2	1225.8	1230.7
5°	1198.2	1203.7	1208.0
7.5°	1177.7	1182.7	1186.5
10°	1158.4	1163.8	1166.5
12.5°	1138.4	1144.7	1146.9
15°	1118.8	1125.0	1127.8
17.5°	1098.6	1106.8	1109.8
20°	1079.7	1090.1	1092.6
22.5°	1060.6	1071.3	1074.3
25°	1039.9	1052.4	1055.4
27.5°	1017.8	1032.8	1035.8
30°	995.6	1012.0	1015.0
32.5°	971.9	989.6	992.4
35°	947.1	964.8	968.1
37.5°	919.5	938.9	945.4
40°	890.8	911.8	918.7
42.5°	860.8	883.7	890.8
45°	828.6	853.7	861.9
47.5°	796.1	824.5	831.6
50°	760.9	791.2	799.6
52.5°	724.0	757.0	765.5
55°	685.8	719.1	728.4
57.5°	644.3	678.7	688.5
60°	600.9	635.3	644.6
62.5°	556.4	587.5	596.5
65°	506.7	535.9	544.1
67.5°	454.0	480.8	487.6
70°	398.0	421.2	427.3
72.5°	339.6	355.7	363.6
75°	279.3	292.1	298.1
77.5°	218.7	227.7	232.6
80°	159.4	164.6	168.7
82.5°	104.3	106.5	109.5
85°	56.2	56.2	58.1
87.5°	19.1	18.3	19.1
90°	0.0	0.0	0.0

(END OF REPORT)