

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: P835177

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835177
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-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

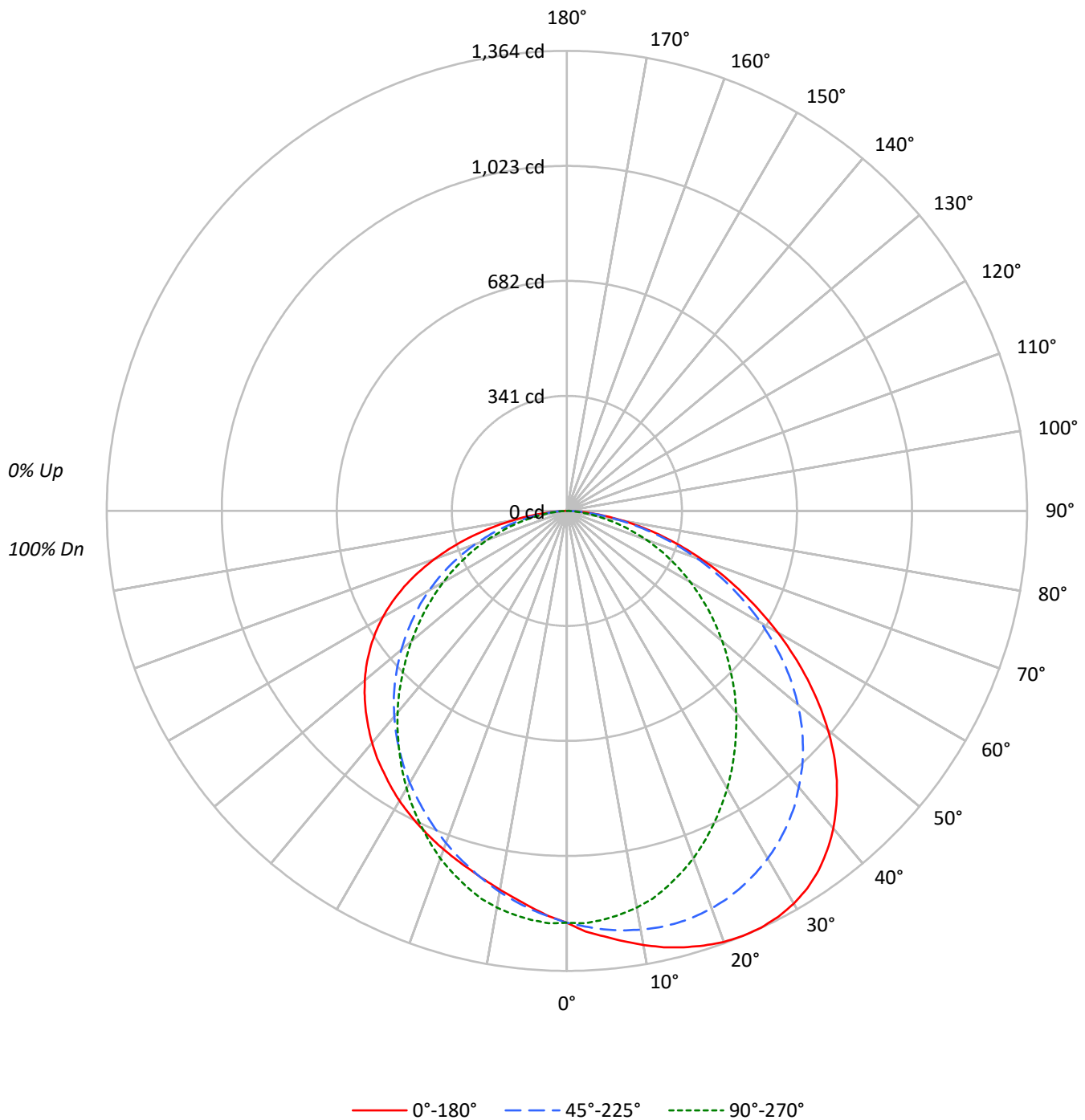
Lumens per Lamp: N/A
Luminaire Lumens: 3591.9 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

Peachtree City, GA 30269



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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°	3286	3286	3286
5°	3421	3288	3190
10°	3571	3263	3116
15°	3731	3211	3072
20°	3894	3140	3059
25°	4047	3049	3064
30°	4179	2953	3084
35°	4275	2848	3109
40°	4318	2742	3155
45°	4306	2627	3207
50°	4230	2516	3273
55°	4085	2401	3341
60°	3886	2277	3392
65°	3649	2138	3387
70°	3396	1972	3286
75°	3083	1732	3031
80°	2647	1423	2557
85°	2019	973	1757

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.8	3.2
10°-20°	334.4	9.3
20°-30°	512.4	14.3
30°-40°	625.3	17.4
40°-50°	653.9	18.2
50°-60°	591.8	16.5
60°-70°	448.2	12.5
70°-80°	249.8	7.0
80°-90°	60.3	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°	962.6	26.8
0°-40°	1587.9	44.2
0°-60°	2833.7	78.9
0°-90°	3591.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3591.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1221	1221	1221	1221	1221	
5°	1266	1245	1217	1187	1181	122
15°	1339	1265	1152	1099	1103	380
25°	1363	1229	1027	990	1032	629
35°	1301	1138	867	866	946	812
45°	1131	990	690	721	843	871
55°	871	786	512	557	712	777
65°	573	539	336	382	532	568
75°	296	280	167	199	292	314
85°	65	58	32	42	57	79
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°	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1
2.5°	1248.1	1242.2	1237.4	1239.3	1240.3	1236.6	1233.4	1233.9	1230.7	1236.9	1222.4
5°	1266.5	1261.1	1255.5	1257.7	1255.5	1249.9	1245.4	1244.1	1235.5	1239.0	1224.3
7.5°	1287.0	1281.2	1272.9	1275.3	1270.8	1260.3	1254.5	1251.0	1237.9	1238.2	1221.9
10°	1306.8	1301.7	1290.5	1292.1	1283.8	1270.0	1260.6	1255.8	1237.4	1234.7	1217.9
12.5°	1325.2	1318.3	1306.3	1307.1	1295.0	1276.6	1264.6	1257.7	1233.7	1225.7	1209.1
15°	1339.4	1332.7	1318.3	1318.0	1302.5	1278.5	1264.9	1255.3	1224.8	1212.3	1195.0
17.5°	1351.4	1345.2	1327.3	1326.8	1308.1	1277.7	1261.4	1249.4	1212.0	1196.6	1177.3
20°	1359.9	1353.8	1333.7	1331.9	1309.5	1273.7	1254.2	1239.0	1195.2	1176.8	1155.5
22.5°	1363.9	1357.8	1335.1	1332.4	1306.3	1265.7	1243.8	1225.9	1176.0	1152.0	1129.8
25°	1363.1	1357.2	1331.6	1328.9	1300.1	1253.7	1229.1	1208.6	1151.7	1123.4	1101.5
27.5°	1356.4	1351.9	1324.9	1321.5	1288.9	1237.4	1211.2	1188.5	1124.8	1093.3	1069.5
30°	1345.0	1341.5	1312.9	1309.7	1275.0	1219.5	1190.4	1164.3	1095.7	1060.2	1036.1
32.5°	1326.5	1323.3	1294.5	1291.6	1256.3	1196.6	1166.1	1139.2	1063.9	1024.7	1000.6
35°	1301.2	1299.3	1271.3	1268.1	1232.3	1170.4	1138.1	1108.5	1030.8	986.5	963.5
37.5°	1267.8	1267.8	1240.9	1237.4	1202.4	1138.4	1106.6	1075.1	993.4	946.5	923.8
40°	1229.1	1232.6	1205.1	1201.6	1167.7	1103.9	1069.2	1036.1	953.1	904.3	882.1
42.5°	1182.7	1185.9	1162.9	1159.7	1128.0	1064.2	1031.9	995.8	911.0	861.3	838.4
45°	1131.4	1135.7	1115.1	1112.7	1083.1	1020.7	989.7	953.1	866.9	816.5	794.1
47.5°	1074.3	1079.9	1062.0	1060.7	1033.2	976.1	943.8	906.7	820.7	769.8	748.7
50°	1010.3	1018.3	1003.6	1003.6	979.0	922.2	894.1	857.0	772.7	721.7	700.9
52.5°	941.7	951.8	940.9	941.1	921.1	870.1	841.0	804.7	722.5	672.3	653.1
55°	870.7	880.5	873.6	874.7	858.9	812.5	786.0	750.0	671.3	622.4	604.3
57.5°	796.5	807.1	802.6	804.7	793.8	752.2	724.7	693.2	618.4	570.1	554.6
60°	722.0	732.1	729.7	732.7	725.7	689.7	664.6	632.0	565.3	518.9	505.3
62.5°	646.7	656.1	655.5	658.7	655.0	625.1	602.7	574.9	510.3	467.6	455.1
65°	573.1	581.1	580.5	584.0	583.2	559.2	538.9	513.5	455.3	416.1	405.2
67.5°	501.5	508.2	506.3	510.3	511.4	492.2	474.6	451.9	403.0	364.9	355.5
70°	431.6	436.1	433.7	436.4	438.8	424.4	409.4	389.4	347.2	313.6	305.9
72.5°	363.0	366.2	362.5	365.1	367.3	356.9	344.6	327.2	292.3	263.2	256.8
75°	296.5	301.1	293.3	296.0	297.6	287.2	280.0	265.8	235.7	213.3	209.0
77.5°	232.2	234.9	230.6	229.5	230.6	223.1	217.5	206.6	183.9	165.5	162.8
80°	170.8	172.4	168.2	167.1	167.9	162.5	158.3	150.3	134.3	120.4	119.3
82.5°	114.5	115.3	111.6	110.5	111.0	109.4	104.4	98.8	91.3	79.5	79.3
85°	65.4	65.4	62.7	61.7	62.2	59.5	57.7	54.7	51.8	43.8	44.3
87.5°	24.0	24.0	22.7	22.4	25.1	22.2	21.4	20.0	20.8	16.5	17.6
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°	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1	1221.1
2.5°	1226.5	1223.8	1221.4	1213.1	1216.6	1208.0	1207.5	1204.3	1201.9	1197.4	1203.2
5°	1222.4	1217.1	1210.2	1200.3	1203.2	1193.1	1191.0	1187.2	1184.0	1178.1	1182.7
7.5°	1216.0	1207.2	1196.3	1183.7	1187.7	1175.2	1172.0	1168.0	1165.3	1158.4	1162.4
10°	1206.7	1194.2	1181.3	1166.1	1169.1	1155.5	1151.4	1147.2	1144.8	1138.6	1142.6
12.5°	1192.3	1177.1	1159.7	1143.2	1146.4	1133.6	1128.2	1123.7	1122.9	1117.8	1122.6
15°	1173.6	1152.5	1134.6	1117.0	1120.8	1105.8	1103.4	1098.9	1100.2	1096.7	1102.6
17.5°	1149.8	1125.6	1106.1	1087.1	1090.9	1078.3	1076.4	1074.3	1075.6	1075.1	1081.5
20°	1123.2	1096.5	1074.0	1055.4	1057.5	1047.6	1048.4	1047.9	1050.6	1053.5	1062.3
22.5°	1093.0	1062.8	1039.3	1020.1	1023.3	1014.8	1018.5	1019.6	1024.1	1030.8	1042.0
25°	1059.1	1026.8	1002.2	984.1	987.0	981.4	987.8	990.5	997.7	1008.9	1020.4
27.5°	1023.6	989.4	963.3	945.9	951.5	945.9	955.5	960.9	971.8	984.1	998.2
30°	986.0	950.5	923.5	908.0	913.4	908.3	923.8	931.0	941.9	958.7	975.6
32.5°	946.5	909.1	882.7	870.7	874.4	873.6	890.9	899.0	913.6	932.9	950.7
35°	905.9	866.9	840.2	830.1	834.6	835.7	856.5	865.9	881.9	905.1	924.3
37.5°	864.0	824.2	798.1	789.8	793.8	797.8	822.1	831.4	849.6	874.9	896.0
40°	820.5	780.7	755.1	748.4	752.4	756.7	783.1	795.9	815.7	843.2	866.1
42.5°	776.4	736.7	711.8	707.0	711.0	719.3	747.3	759.4	780.2	810.6	836.0
45°	731.6	690.2	668.6	664.9	669.1	678.8	706.2	720.7	742.8	776.2	803.4
47.5°	686.2	645.9	625.4	623.0	627.2	637.9	668.3	681.4	704.9	740.4	769.8
50°	640.3	601.1	581.3	580.5	584.5	596.0	625.1	640.6	664.9	704.6	734.8
52.5°	593.9	556.2	538.4	538.4	542.1	553.8	583.2	599.2	624.3	666.2	699.6
55°	547.4	511.7	494.6	495.9	501.3	511.4	540.0	556.8	582.1	625.6	660.9
57.5°	501.0	467.1	451.6	453.5	458.6	468.7	496.7	515.7	538.6	583.7	619.8
60°	455.1	423.1	409.4	411.6	416.1	426.3	455.3	471.6	494.6	540.5	576.5
62.5°	408.6	379.5	366.7	369.4	373.4	383.5	411.0	426.8	449.5	494.6	530.9
65°	362.7	335.8	324.8	327.5	331.2	340.6	366.5	381.7	403.3	447.3	482.0
67.5°	317.4	292.8	283.7	286.4	289.3	298.1	319.5	336.0	356.3	398.2	431.1
70°	272.5	250.6	242.6	245.3	248.0	256.0	274.7	289.9	308.5	347.0	377.4
72.5°	228.2	206.9	202.9	205.3	207.4	214.3	232.2	244.2	260.5	294.7	320.8
75°	185.0	166.6	163.9	166.3	168.2	173.5	188.4	198.8	212.5	242.1	263.4
77.5°	143.3	127.8	126.8	128.7	130.5	134.3	146.0	156.9	167.6	189.5	208.5
80°	104.4	91.8	91.8	93.7	93.2	97.7	106.0	114.8	122.5	138.3	152.1
82.5°	68.9	59.0	60.3	61.7	62.5	64.3	69.4	76.1	80.9	90.5	99.6
85°	38.2	31.5	32.8	33.9	33.4	35.5	38.2	42.2	44.6	49.1	53.9
87.5°	14.1	11.7	12.0	12.8	13.3	14.4	14.4	16.8	17.1	17.6	18.7
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°	1221.1	1221.1	1221.1
2.5°	1192.0	1198.4	1203.2
5°	1171.5	1176.8	1181.1
7.5°	1151.4	1156.3	1160.0
10°	1132.5	1137.8	1140.5
12.5°	1113.0	1119.2	1121.3
15°	1093.8	1099.9	1102.6
17.5°	1074.0	1082.1	1085.0
20°	1055.6	1065.8	1068.2
22.5°	1036.9	1047.4	1050.3
25°	1016.7	1028.9	1031.9
27.5°	995.0	1009.7	1012.7
30°	973.4	989.4	992.4
32.5°	950.2	967.5	970.2
35°	925.9	943.3	946.5
37.5°	899.0	917.9	924.3
40°	870.9	891.5	898.2
42.5°	841.6	864.0	870.9
45°	810.1	834.6	842.6
47.5°	778.3	806.1	813.0
50°	743.9	773.5	781.8
52.5°	707.8	740.1	748.4
55°	670.5	703.0	712.1
57.5°	629.9	663.5	673.1
60°	587.5	621.1	630.2
62.5°	544.0	574.4	583.2
65°	495.4	523.9	532.0
67.5°	443.9	470.0	476.7
70°	389.2	411.8	417.7
72.5°	332.0	347.8	355.5
75°	273.0	285.6	291.5
77.5°	213.8	222.6	227.4
80°	155.9	160.9	165.0
82.5°	102.0	104.1	107.0
85°	55.0	55.0	56.9
87.5°	18.7	17.9	18.7
90°	0.0	0.0	0.0

(END OF REPORT)