

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: P834281

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-50-120-EDD-90**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834281
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-LD4-1STD-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

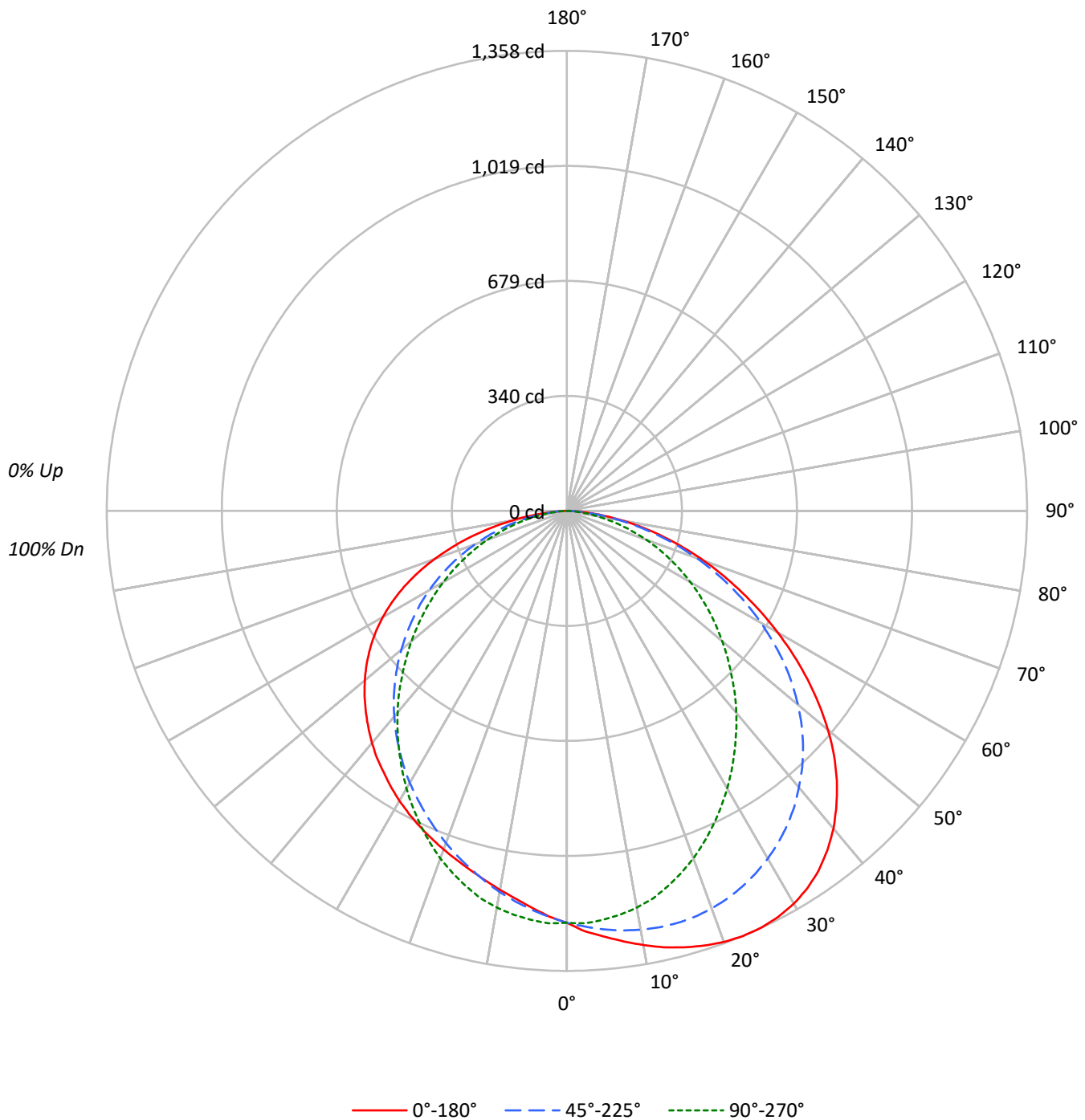
Lumens per Lamp: N/A
Luminaire Lumens: 3576.9 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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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°	3272	3272	3272
5°	3407	3274	3177
10°	3556	3249	3103
15°	3716	3197	3059
20°	3878	3127	3046
25°	4030	3036	3051
30°	4162	2941	3071
35°	4256	2836	3096
40°	4300	2731	3142
45°	4288	2616	3193
50°	4212	2506	3259
55°	4068	2390	3327
60°	3870	2267	3377
65°	3634	2129	3373
70°	3382	1964	3273
75°	3070	1725	3017
80°	2636	1416	2546
85°	2010	969	1748

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.3	3.2
10°-20°	333.0	9.3
20°-30°	510.2	14.3
30°-40°	622.7	17.4
40°-50°	651.2	18.2
50°-60°	589.4	16.5
60°-70°	446.3	12.5
70°-80°	248.7	7.0
80°-90°	60.0	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°	958.6	26.8
0°-40°	1581.3	44.2
0°-60°	2821.8	78.9
0°-90°	3576.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3576.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1216	1216	1216	1216	1216	
5°	1261	1240	1212	1182	1176	122
15°	1334	1260	1148	1094	1098	378
25°	1357	1224	1022	986	1028	626
35°	1296	1133	863	862	942	809
45°	1127	986	687	718	839	867
55°	867	783	510	554	709	774
65°	571	537	334	380	530	566
75°	295	279	166	198	290	313
85°	65	57	31	42	57	78
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°	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0
2.5°	1242.8	1237.0	1232.2	1234.1	1235.1	1231.4	1228.2	1228.8	1225.6	1231.7	1217.3
5°	1261.2	1255.9	1250.3	1252.4	1250.3	1244.7	1240.2	1238.9	1230.3	1233.8	1219.2
7.5°	1281.6	1275.8	1267.6	1270.0	1265.4	1255.1	1249.2	1245.8	1232.7	1233.0	1216.8
10°	1301.3	1296.3	1285.1	1286.7	1278.5	1264.6	1255.3	1250.5	1232.2	1229.6	1212.8
12.5°	1319.7	1312.7	1300.8	1301.6	1289.6	1271.3	1259.3	1252.4	1228.5	1220.5	1204.0
15°	1333.7	1327.1	1312.7	1312.5	1297.1	1273.1	1259.6	1250.0	1219.7	1207.2	1189.9
17.5°	1345.7	1339.6	1321.8	1321.3	1302.6	1272.3	1256.1	1244.2	1207.0	1191.5	1172.4
20°	1354.2	1348.1	1328.2	1326.3	1304.0	1268.4	1249.0	1233.8	1190.2	1171.9	1150.6
22.5°	1358.2	1352.1	1329.5	1326.8	1300.8	1260.4	1238.6	1220.8	1171.1	1147.2	1125.1
25°	1357.4	1351.6	1326.0	1323.4	1294.7	1248.4	1224.0	1203.5	1146.9	1118.7	1096.9
27.5°	1350.8	1346.2	1319.4	1315.9	1283.5	1232.2	1206.2	1183.6	1120.0	1088.7	1065.0
30°	1339.3	1335.9	1307.4	1304.2	1269.7	1214.4	1185.4	1159.4	1091.1	1055.7	1031.8
32.5°	1321.0	1317.8	1289.1	1286.2	1251.1	1191.5	1161.2	1134.4	1059.4	1020.4	996.5
35°	1295.7	1293.9	1266.0	1262.8	1227.2	1165.5	1133.3	1103.8	1026.5	982.4	959.5
37.5°	1262.5	1262.5	1235.7	1232.2	1197.4	1133.6	1102.0	1070.6	989.3	942.5	919.9
40°	1224.0	1227.4	1200.0	1196.6	1162.8	1099.3	1064.8	1031.8	949.1	900.5	878.4
42.5°	1177.7	1180.9	1158.1	1154.9	1123.2	1059.7	1027.6	991.7	907.1	857.7	834.9
45°	1126.7	1130.9	1110.5	1108.1	1078.6	1016.4	985.6	949.1	863.3	813.1	790.7
47.5°	1069.8	1075.4	1057.6	1056.3	1028.9	972.0	939.8	902.9	817.3	766.5	745.5
50°	1006.0	1014.0	999.4	999.4	974.9	918.3	890.4	853.5	769.5	718.7	698.0
52.5°	937.7	947.8	936.9	937.2	917.2	866.5	837.5	801.4	719.5	669.5	650.4
55°	867.0	876.8	869.9	871.0	855.3	809.1	782.8	746.9	668.5	619.8	601.8
57.5°	793.1	803.8	799.2	801.4	790.5	749.0	721.6	690.3	615.8	567.7	552.3
60°	719.0	729.1	726.7	729.6	722.7	686.8	661.8	629.4	562.9	516.7	503.1
62.5°	644.0	653.3	652.8	656.0	652.3	622.5	600.2	572.5	508.2	465.7	453.2
65°	570.7	578.6	578.1	581.6	580.8	556.8	536.6	511.4	453.4	414.4	403.5
67.5°	499.4	506.1	504.2	508.2	509.3	490.1	472.6	450.0	401.3	363.3	354.0
70°	429.8	434.3	431.9	434.6	437.0	422.6	407.7	387.8	345.8	312.3	304.6
72.5°	361.5	364.7	360.9	363.6	365.7	355.4	343.1	325.9	291.0	262.1	255.7
75°	295.3	299.8	292.1	294.8	296.4	286.0	278.8	264.7	234.7	212.4	208.1
77.5°	231.2	233.9	229.6	228.6	229.6	222.2	216.6	205.7	183.1	164.8	162.1
80°	170.1	171.7	167.4	166.4	167.2	161.9	157.6	149.6	133.7	119.9	118.8
82.5°	114.0	114.8	111.1	110.0	110.6	109.0	103.9	98.3	90.9	79.2	78.9
85°	65.1	65.1	62.5	61.4	61.9	59.3	57.4	54.5	51.6	43.6	44.1
87.5°	23.9	23.9	22.6	22.3	25.0	22.1	21.3	19.9	20.7	16.5	17.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0	1216.0
2.5°	1221.3	1218.7	1216.3	1208.0	1211.5	1203.0	1202.4	1199.3	1196.9	1192.3	1198.2
5°	1217.3	1212.0	1205.1	1195.3	1198.2	1188.1	1186.0	1182.2	1179.1	1173.2	1177.7
7.5°	1210.9	1202.2	1191.3	1178.8	1182.8	1170.3	1167.1	1163.1	1160.4	1153.5	1157.5
10°	1201.6	1189.2	1176.4	1161.2	1164.2	1150.6	1146.6	1142.4	1140.0	1133.9	1137.9
12.5°	1187.3	1172.1	1154.9	1138.4	1141.6	1128.8	1123.5	1119.0	1118.2	1113.1	1117.9
15°	1168.7	1147.7	1129.9	1112.3	1116.1	1101.2	1098.8	1094.3	1095.6	1092.1	1098.0
17.5°	1145.0	1120.8	1101.4	1082.6	1086.3	1073.8	1071.9	1069.8	1071.1	1070.6	1077.0
20°	1118.5	1091.9	1069.5	1050.9	1053.1	1043.2	1044.0	1043.5	1046.2	1049.1	1057.9
22.5°	1088.4	1058.4	1035.0	1015.9	1019.0	1010.5	1014.3	1015.3	1019.8	1026.5	1037.7
25°	1054.7	1022.5	998.0	980.0	982.9	977.3	983.7	986.4	993.5	1004.7	1016.1
27.5°	1019.3	985.3	959.2	942.0	947.5	942.0	951.5	956.8	967.7	980.0	994.1
30°	981.8	946.5	919.6	904.2	909.5	904.5	919.9	927.1	938.0	954.7	971.5
32.5°	942.5	905.3	879.0	867.0	870.7	869.9	887.2	895.2	909.8	928.9	946.7
35°	902.1	863.3	836.7	826.6	831.1	832.2	852.9	862.2	878.2	901.3	920.4
37.5°	860.4	820.8	794.7	786.5	790.5	794.5	818.6	827.9	846.0	871.3	892.3
40°	817.0	777.4	751.9	745.3	749.3	753.5	779.8	792.6	812.3	839.6	862.5
42.5°	773.2	733.6	708.9	704.1	708.1	716.3	744.2	756.2	776.9	807.2	832.5
45°	728.5	687.3	665.8	662.1	666.3	675.9	703.3	717.6	739.7	772.9	800.0
47.5°	683.4	643.2	622.7	620.4	624.6	635.2	665.5	678.6	702.0	737.3	766.5
50°	637.6	598.6	578.9	578.1	582.1	593.5	622.5	637.9	662.1	701.7	731.7
52.5°	591.4	553.9	536.1	536.1	539.8	551.5	580.8	596.7	621.7	663.4	696.6
55°	545.1	509.5	492.5	493.8	499.2	509.3	537.7	554.4	579.7	623.0	658.1
57.5°	498.9	465.1	449.7	451.6	456.6	466.7	494.6	513.5	536.4	581.3	617.2
60°	453.2	421.3	407.7	409.9	414.4	424.5	453.4	469.7	492.5	538.2	574.1
62.5°	406.9	378.0	365.2	367.9	371.8	381.9	409.3	425.0	447.6	492.5	528.7
65°	361.2	334.4	323.5	326.1	329.8	339.2	364.9	380.1	401.6	445.5	480.0
67.5°	316.0	291.6	282.5	285.2	288.1	296.9	318.2	334.6	354.8	396.6	429.3
70°	271.4	249.6	241.6	244.3	246.9	254.9	273.5	288.6	307.3	345.5	375.8
72.5°	227.3	206.0	202.0	204.4	206.5	213.4	231.2	243.2	259.4	293.4	319.5
75°	184.2	165.9	163.2	165.6	167.4	172.8	187.6	198.0	211.6	241.1	262.3
77.5°	142.7	127.3	126.3	128.1	130.0	133.7	145.4	156.3	166.9	188.7	207.6
80°	103.9	91.4	91.4	93.3	92.8	97.3	105.5	114.3	122.0	137.7	151.5
82.5°	68.6	58.7	60.1	61.4	62.2	64.1	69.1	75.8	80.5	90.1	99.1
85°	38.0	31.4	32.7	33.8	33.2	35.4	38.0	42.0	44.4	48.9	53.7
87.5°	14.1	11.7	12.0	12.8	13.3	14.4	14.4	16.7	17.0	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):

	160°	170°	180°
0°	1216.0	1216.0	1216.0
2.5°	1187.0	1193.4	1198.2
5°	1166.6	1171.9	1176.1
7.5°	1146.6	1151.4	1155.1
10°	1127.8	1133.1	1135.7
12.5°	1108.4	1114.5	1116.6
15°	1089.2	1095.3	1098.0
17.5°	1069.5	1077.5	1080.4
20°	1051.2	1061.3	1063.7
22.5°	1032.6	1043.0	1045.9
25°	1012.4	1024.6	1027.6
27.5°	990.9	1005.5	1008.4
30°	969.3	985.3	988.2
32.5°	946.2	963.5	966.2
35°	922.0	939.3	942.5
37.5°	895.2	914.1	920.4
40°	867.3	887.7	894.4
42.5°	838.0	860.4	867.3
45°	806.7	831.1	839.1
47.5°	775.0	802.7	809.6
50°	740.8	770.3	778.5
52.5°	704.9	737.0	745.3
55°	667.7	700.1	709.1
57.5°	627.3	660.8	670.3
60°	585.0	618.5	627.5
62.5°	541.7	572.0	580.8
65°	493.3	521.7	529.7
67.5°	442.0	468.1	474.7
70°	387.5	410.1	416.0
72.5°	330.6	346.3	354.0
75°	271.9	284.4	290.2
77.5°	212.9	221.7	226.5
80°	155.2	160.3	164.3
82.5°	101.5	103.7	106.6
85°	54.8	54.8	56.6
87.5°	18.6	17.8	18.6
90°	0.0	0.0	0.0

(END OF REPORT)