

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: P834686

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-40-120-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: P834686
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1STD-40-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

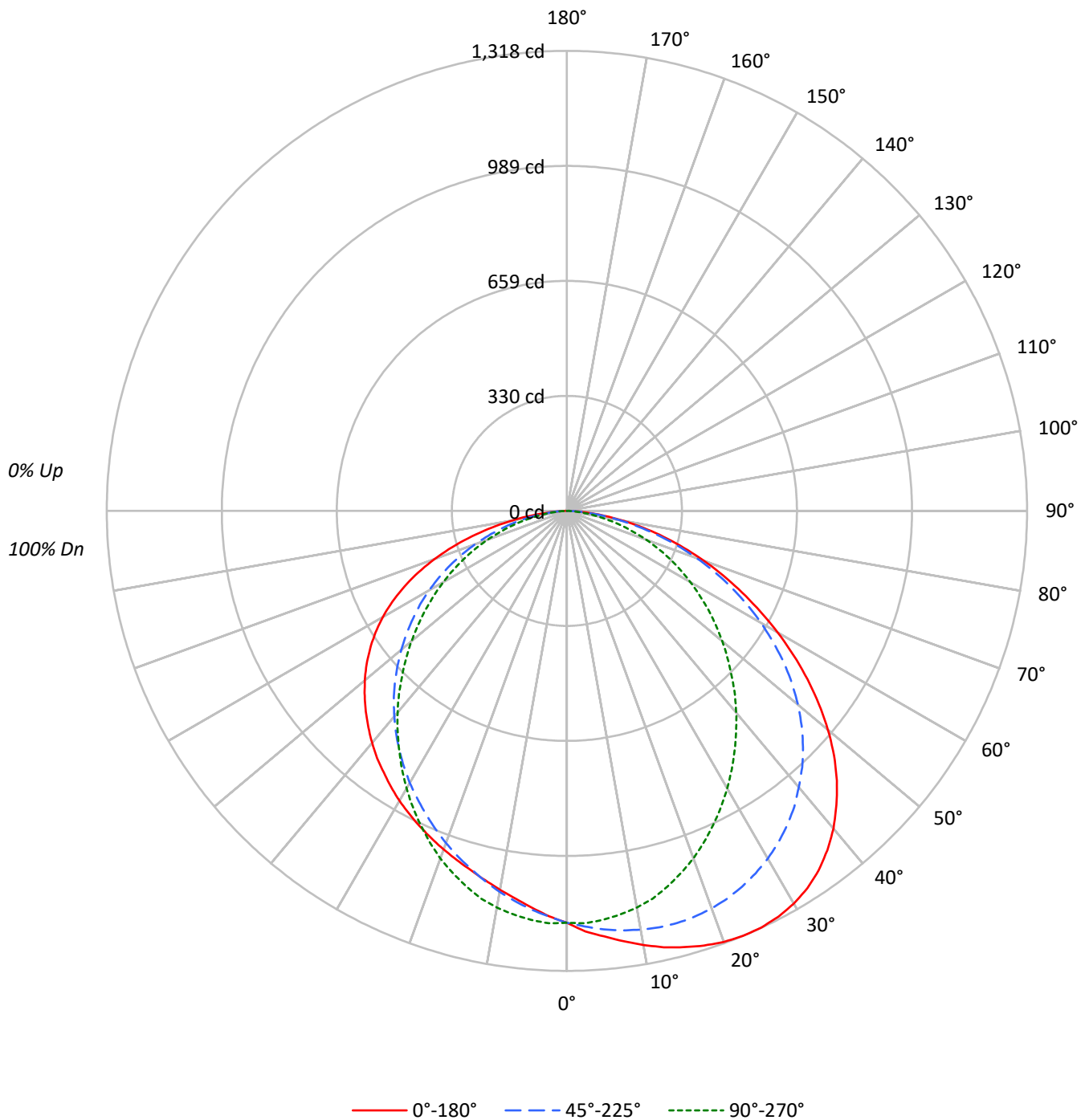
Lumens per Lamp: N/A
Luminaire Lumens: 3470.8 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	1588	1588	1588
5°	1653	1588	1541
10°	1725	1577	1506
15°	1803	1551	1484
20°	1881	1517	1478
25°	1955	1473	1480
30°	2019	1427	1490
35°	2065	1376	1502
40°	2086	1325	1524
45°	2080	1269	1549
50°	2043	1216	1581
55°	1974	1160	1614
60°	1877	1100	1639
65°	1763	1033	1636
70°	1640	953	1588
75°	1489	836	1464
80°	1279	687	1235
85°	976	469	848

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	3.2
10°-20°	323.2	9.3
20°-30°	495.1	14.3
30°-40°	604.2	17.4
40°-50°	631.9	18.2
50°-60°	571.9	16.5
60°-70°	433.1	12.5
70°-80°	241.4	7.0
80°-90°	58.2	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°	930.2	26.8
0°-40°	1534.4	44.2
0°-60°	2738.1	78.9
0°-90°	3470.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3470.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1180	1180	1180	1180	1180	
5°	1224	1203	1176	1147	1141	118
15°	1294	1222	1114	1062	1065	367
25°	1317	1188	992	957	997	608
35°	1257	1100	838	837	914	785
45°	1093	956	667	696	814	841
55°	841	760	494	538	688	751
65°	554	521	324	369	514	549
75°	286	270	161	192	282	304
85°	63	56	30	41	55	76
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°	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9
2.5°	1206.0	1200.3	1195.7	1197.5	1198.5	1194.9	1191.8	1192.3	1189.2	1195.2	1181.2
5°	1223.8	1218.6	1213.2	1215.3	1213.2	1207.8	1203.4	1202.1	1193.9	1197.2	1183.0
7.5°	1243.6	1238.0	1230.0	1232.3	1227.9	1217.8	1212.2	1208.8	1196.2	1196.4	1180.7
10°	1262.7	1257.8	1247.0	1248.5	1240.5	1227.1	1218.1	1213.5	1195.7	1193.1	1176.8
12.5°	1280.5	1273.8	1262.2	1263.0	1251.4	1233.6	1222.0	1215.3	1192.1	1184.3	1168.3
15°	1294.2	1287.7	1273.8	1273.6	1258.6	1235.4	1222.2	1212.9	1183.5	1171.4	1154.7
17.5°	1305.8	1299.9	1282.6	1282.1	1264.0	1234.6	1218.9	1207.3	1171.2	1156.2	1137.6
20°	1314.0	1308.1	1288.8	1287.0	1265.3	1230.7	1211.9	1197.2	1154.9	1137.1	1116.5
22.5°	1317.9	1312.0	1290.1	1287.5	1262.2	1223.0	1201.9	1184.6	1136.3	1113.1	1091.7
25°	1317.1	1311.5	1286.7	1284.1	1256.3	1211.4	1187.7	1167.8	1112.9	1085.5	1064.4
27.5°	1310.7	1306.3	1280.3	1276.9	1245.4	1195.7	1170.4	1148.5	1086.8	1056.4	1033.4
30°	1299.6	1296.3	1268.7	1265.6	1232.0	1178.4	1150.3	1125.0	1058.7	1024.4	1001.2
32.5°	1281.8	1278.7	1250.9	1248.0	1214.0	1156.2	1126.8	1100.8	1028.0	990.1	966.9
35°	1257.3	1255.5	1228.4	1225.3	1190.8	1130.9	1099.7	1071.1	996.0	953.2	931.1
37.5°	1225.1	1225.1	1199.0	1195.7	1161.9	1100.0	1069.3	1038.9	959.9	914.5	892.6
40°	1187.7	1191.0	1164.5	1161.1	1128.4	1066.7	1033.2	1001.2	921.0	873.8	852.4
42.5°	1142.8	1145.9	1123.7	1120.6	1089.9	1028.3	997.1	962.3	880.2	832.3	810.1
45°	1093.3	1097.4	1077.5	1075.2	1046.6	986.2	956.3	921.0	837.7	788.9	767.3
47.5°	1038.1	1043.5	1026.2	1024.9	998.4	943.2	912.0	876.1	793.1	743.8	723.4
50°	976.2	983.9	969.7	969.7	946.0	891.1	864.0	828.1	746.6	697.4	677.3
52.5°	909.9	919.7	909.1	909.4	890.0	840.8	812.7	777.6	698.2	649.7	631.1
55°	841.3	850.8	844.1	845.2	830.0	785.1	759.5	724.7	648.6	601.4	583.9
57.5°	769.6	779.9	775.5	777.6	767.0	726.8	700.2	669.8	597.6	550.9	535.9
60°	697.6	707.4	705.1	708.0	701.3	666.4	642.2	610.7	546.3	501.4	488.2
62.5°	624.9	633.9	633.4	636.5	632.9	604.0	582.4	555.5	493.1	451.9	439.7
65°	553.7	561.5	561.0	564.3	563.5	540.3	520.7	496.2	440.0	402.1	391.5
67.5°	484.6	491.1	489.3	493.1	494.2	475.6	458.6	436.6	389.4	352.6	343.5
70°	417.0	421.4	419.1	421.7	424.0	410.1	395.6	376.3	335.5	303.0	295.6
72.5°	350.8	353.9	350.2	352.8	354.9	344.8	333.0	316.2	282.4	254.3	248.1
75°	286.5	290.9	283.4	286.0	287.6	277.5	270.5	256.9	227.7	206.1	201.9
77.5°	224.4	227.0	222.8	221.8	222.8	215.6	210.2	199.6	177.7	159.9	157.3
80°	165.1	166.6	162.5	161.5	162.2	157.1	152.9	145.2	129.7	116.3	115.3
82.5°	110.6	111.4	107.8	106.8	107.3	105.7	100.8	95.4	88.2	76.9	76.6
85°	63.2	63.2	60.6	59.6	60.1	57.5	55.7	52.9	50.0	42.3	42.8
87.5°	23.2	23.2	21.9	21.7	24.2	21.4	20.6	19.3	20.1	16.0	17.0
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°	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9	1179.9
2.5°	1185.1	1182.5	1180.2	1172.2	1175.6	1167.3	1166.8	1163.7	1161.4	1157.0	1162.7
5°	1181.2	1176.1	1169.4	1159.8	1162.7	1152.9	1150.8	1147.2	1144.1	1138.4	1142.8
7.5°	1175.0	1166.5	1155.9	1143.8	1147.7	1135.6	1132.5	1128.6	1126.0	1119.3	1123.2
10°	1166.0	1153.9	1141.5	1126.8	1129.6	1116.5	1112.6	1108.5	1106.2	1100.2	1104.1
12.5°	1152.1	1137.4	1120.6	1104.6	1107.7	1095.3	1090.2	1085.8	1085.0	1080.1	1084.8
15°	1134.0	1113.7	1096.4	1079.4	1083.0	1068.5	1066.2	1061.8	1063.1	1059.7	1065.4
17.5°	1111.1	1087.6	1068.8	1050.5	1054.1	1042.0	1040.1	1038.1	1039.4	1038.9	1045.0
20°	1085.3	1059.5	1037.8	1019.8	1021.8	1012.3	1013.1	1012.6	1015.1	1018.0	1026.5
22.5°	1056.1	1027.0	1004.3	985.7	988.8	980.6	984.2	985.2	989.6	996.0	1006.9
25°	1023.4	992.2	968.4	950.9	953.7	948.3	954.5	957.1	964.1	974.9	986.0
27.5°	989.1	956.1	930.8	914.0	919.4	914.0	923.3	928.5	939.0	950.9	964.6
30°	952.7	918.4	892.4	877.4	882.6	877.7	892.6	899.6	910.2	926.4	942.7
32.5°	914.5	878.4	852.9	841.3	844.9	844.1	860.9	868.6	882.8	901.4	918.7
35°	875.3	837.7	811.9	802.1	806.5	807.5	827.6	836.7	852.1	874.6	893.1
37.5°	834.9	796.4	771.1	763.2	767.0	770.9	794.4	803.4	820.9	845.4	865.8
40°	792.8	754.4	729.6	723.2	727.0	731.2	756.7	769.1	788.2	814.7	836.9
42.5°	750.3	711.8	687.8	683.2	687.1	695.1	722.1	733.8	753.9	783.3	807.8
45°	706.9	667.0	646.1	642.5	646.6	655.9	682.4	696.4	717.8	750.0	776.3
47.5°	663.1	624.1	604.3	602.0	606.1	616.4	645.8	658.4	681.1	715.4	743.8
50°	618.7	580.8	561.7	561.0	564.8	575.9	604.0	619.0	642.5	680.9	710.0
52.5°	573.8	537.5	520.2	520.2	523.8	535.2	563.5	579.0	603.2	643.7	676.0
55°	529.0	494.4	477.9	479.2	484.4	494.2	521.8	538.0	562.5	604.5	638.6
57.5°	484.1	451.3	436.4	438.2	443.1	452.9	480.0	498.3	520.5	564.0	598.9
60°	439.7	408.8	395.6	397.7	402.1	411.9	440.0	455.7	477.9	522.3	557.1
62.5°	394.9	366.7	354.4	356.9	360.8	370.6	397.2	412.4	434.3	477.9	513.0
65°	350.5	324.4	313.9	316.5	320.1	329.1	354.1	368.8	389.7	432.3	465.8
67.5°	306.7	282.9	274.2	276.7	279.6	288.1	308.7	324.7	344.3	384.8	416.5
70°	263.3	242.2	234.4	237.0	239.6	247.3	265.4	280.1	298.1	335.3	364.7
72.5°	220.5	199.9	196.0	198.3	200.4	207.1	224.4	236.0	251.7	284.7	310.0
75°	178.7	160.9	158.4	160.7	162.5	167.6	182.1	192.1	205.3	233.9	254.6
77.5°	138.5	123.5	122.5	124.3	126.1	129.7	141.1	151.7	162.0	183.1	201.4
80°	100.8	88.7	88.7	90.5	90.0	94.4	102.4	110.9	118.4	133.6	147.0
82.5°	66.5	57.0	58.3	59.6	60.4	62.2	67.1	73.5	78.1	87.4	96.2
85°	36.9	30.4	31.7	32.8	32.2	34.3	36.9	40.7	43.1	47.5	52.1
87.5°	13.7	11.3	11.6	12.4	12.9	13.9	13.9	16.2	16.5	17.0	18.1
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°	1179.9	1179.9	1179.9
2.5°	1151.8	1158.0	1162.7
5°	1132.0	1137.1	1141.2
7.5°	1112.6	1117.3	1120.9
10°	1094.3	1099.5	1102.0
12.5°	1075.5	1081.4	1083.5
15°	1056.9	1062.8	1065.4
17.5°	1037.8	1045.6	1048.4
20°	1020.0	1029.8	1032.2
22.5°	1002.0	1012.0	1014.9
25°	982.4	994.2	997.1
27.5°	961.5	975.7	978.5
30°	940.6	956.1	958.9
32.5°	918.2	934.9	937.5
35°	894.7	911.5	914.5
37.5°	868.6	886.9	893.1
40°	841.6	861.4	867.9
42.5°	813.2	834.9	841.6
45°	782.8	806.5	814.2
47.5°	752.1	778.9	785.6
50°	718.8	747.4	755.4
52.5°	684.0	715.2	723.2
55°	647.9	679.3	688.1
57.5°	608.7	641.2	650.4
60°	567.7	600.2	608.9
62.5°	525.6	555.0	563.5
65°	478.7	506.3	514.0
67.5°	428.9	454.2	460.6
70°	376.0	398.0	403.6
72.5°	320.8	336.1	343.5
75°	263.8	276.0	281.6
77.5°	206.6	215.1	219.7
80°	150.6	155.5	159.4
82.5°	98.5	100.6	103.4
85°	53.1	53.1	54.9
87.5°	18.1	17.3	18.1
90°	0.0	0.0	0.0

(END OF REPORT)