

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: P835338

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835338
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-LD4-2HI-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

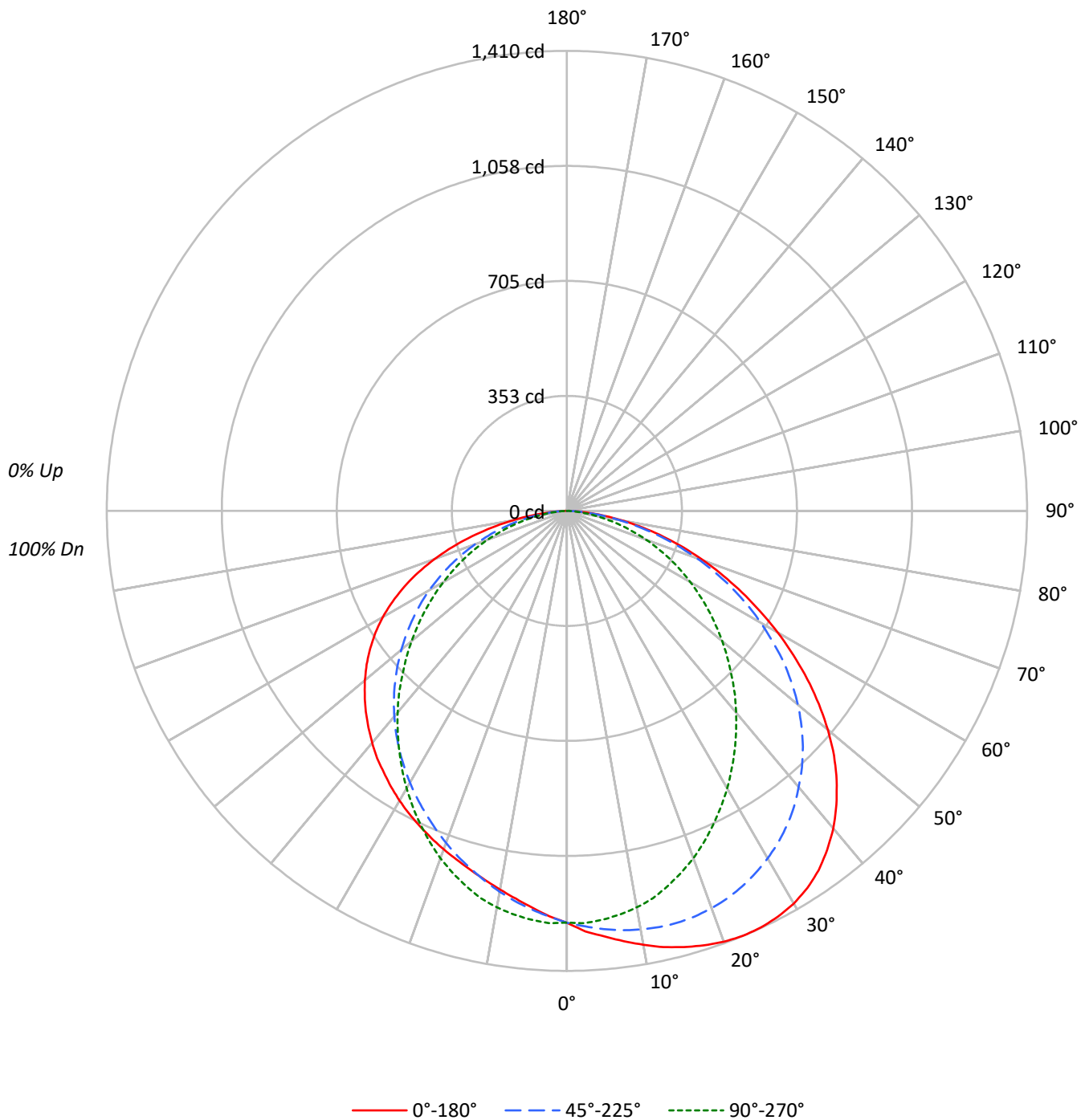
Lumens per Lamp: N/A
Luminaire Lumens: 3711.9 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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	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°	3396	3396	3396
5°	3535	3398	3297
10°	3690	3372	3221
15°	3856	3318	3174
20°	4024	3245	3161
25°	4182	3151	3166
30°	4319	3052	3187
35°	4417	2943	3213
40°	4462	2834	3260
45°	4450	2715	3314
50°	4371	2601	3382
55°	4221	2481	3453
60°	4015	2353	3505
65°	3771	2209	3500
70°	3509	2038	3397
75°	3186	1789	3132
80°	2735	1471	2642
85°	2087	1003	1815

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	3.2
10°-20°	345.6	9.3
20°-30°	529.5	14.3
30°-40°	646.2	17.4
40°-50°	675.8	18.2
50°-60°	611.6	16.5
60°-70°	463.2	12.5
70°-80°	258.1	7.0
80°-90°	62.3	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°	994.8	26.8
0°-40°	1641.0	44.2
0°-60°	2928.3	78.9
0°-90°	3711.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3711.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1262	1262	1262	1262	1262	
5°	1309	1287	1258	1227	1220	126
15°	1384	1307	1191	1136	1139	393
25°	1409	1270	1061	1024	1066	650
35°	1345	1176	896	895	978	840
45°	1169	1023	713	745	871	900
55°	900	812	529	575	736	803
65°	592	557	347	394	550	587
75°	306	289	172	206	301	325
85°	68	60	32	44	59	81
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°	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9
2.5°	1289.8	1283.7	1278.7	1280.7	1281.8	1277.9	1274.6	1275.1	1271.8	1278.2	1263.3
5°	1308.8	1303.3	1297.5	1299.7	1297.5	1291.7	1287.0	1285.6	1276.8	1280.4	1265.2
7.5°	1330.0	1324.0	1315.4	1317.9	1313.2	1302.4	1296.4	1292.8	1279.3	1279.6	1262.7
10°	1350.4	1345.2	1333.6	1335.3	1326.7	1312.4	1302.7	1297.8	1278.7	1276.0	1258.6
12.5°	1369.5	1362.3	1349.9	1350.7	1338.3	1319.3	1306.9	1299.7	1274.9	1266.6	1249.5
15°	1384.1	1377.2	1362.3	1362.0	1346.0	1321.2	1307.1	1297.2	1265.8	1252.8	1234.9
17.5°	1396.5	1390.2	1371.7	1371.1	1351.8	1320.4	1303.5	1291.1	1252.5	1236.5	1216.7
20°	1405.3	1399.0	1378.3	1376.4	1353.2	1316.2	1296.1	1280.4	1235.1	1216.1	1194.0
22.5°	1409.5	1403.1	1379.7	1376.9	1349.9	1308.0	1285.3	1266.9	1215.3	1190.5	1167.6
25°	1408.6	1402.6	1376.1	1373.3	1343.5	1295.5	1270.2	1248.9	1190.2	1160.9	1138.3
27.5°	1401.7	1397.1	1369.2	1365.6	1332.0	1278.7	1251.7	1228.2	1162.3	1129.8	1105.2
30°	1389.9	1386.3	1356.8	1353.5	1317.6	1260.2	1230.2	1203.1	1132.3	1095.6	1070.8
32.5°	1370.8	1367.5	1337.7	1334.7	1298.3	1236.5	1205.1	1177.2	1099.4	1058.9	1034.1
35°	1344.6	1342.7	1313.8	1310.4	1273.5	1209.5	1176.1	1145.5	1065.2	1019.4	995.7
37.5°	1310.2	1310.2	1282.3	1278.7	1242.6	1176.4	1143.6	1111.0	1026.6	978.1	954.6
40°	1270.2	1273.8	1245.3	1241.8	1206.7	1140.8	1105.0	1070.8	985.0	934.5	911.6
42.5°	1222.2	1225.5	1201.8	1198.5	1165.6	1099.7	1066.3	1029.1	941.4	890.1	866.4
45°	1169.2	1173.6	1152.4	1149.9	1119.3	1054.8	1022.8	985.0	895.9	843.7	820.6
47.5°	1110.2	1116.0	1097.5	1096.1	1067.7	1008.7	975.3	937.0	848.2	795.5	773.7
50°	1044.0	1052.3	1037.1	1037.1	1011.7	953.0	924.0	885.7	798.5	745.8	724.3
52.5°	973.1	983.6	972.3	972.6	951.9	899.2	869.1	831.6	746.7	694.8	674.9
55°	899.7	909.9	902.8	903.9	887.6	839.6	812.3	775.1	693.7	643.2	624.5
57.5°	823.1	834.1	829.4	831.6	820.3	777.3	748.9	716.3	639.1	589.2	573.2
60°	746.1	756.6	754.1	757.1	750.0	712.7	686.8	653.2	584.2	536.2	522.1
62.5°	668.3	678.0	677.4	680.7	676.9	646.0	622.8	594.1	527.4	483.2	470.3
65°	592.2	600.5	599.9	603.5	602.7	577.9	556.9	530.7	470.6	430.0	418.7
67.5°	518.3	525.2	523.2	527.4	528.5	508.6	490.4	467.0	416.5	377.1	367.4
70°	446.0	450.7	448.2	451.0	453.5	438.6	423.1	402.4	358.8	324.1	316.1
72.5°	375.1	378.4	374.6	377.3	379.5	368.8	356.1	338.2	302.0	272.0	265.3
75°	306.4	311.1	303.1	305.9	307.5	296.8	289.3	274.7	243.6	220.4	216.0
77.5°	240.0	242.7	238.3	237.2	238.3	230.6	224.8	213.5	190.0	171.0	168.3
80°	176.5	178.2	173.8	172.7	173.5	168.0	163.6	155.3	138.7	124.4	123.3
82.5°	118.3	119.2	115.3	114.2	114.7	113.1	107.8	102.1	94.3	82.2	81.9
85°	67.6	67.6	64.8	63.7	64.3	61.5	59.6	56.5	53.5	45.2	45.8
87.5°	24.8	24.8	23.4	23.2	25.9	22.9	22.1	20.7	21.5	17.1	18.2
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°	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9	1261.9
2.5°	1267.4	1264.7	1262.2	1253.6	1257.2	1248.4	1247.8	1244.5	1242.0	1237.3	1243.4
5°	1263.3	1257.8	1250.6	1240.4	1243.4	1232.9	1230.7	1226.9	1223.6	1217.5	1222.2
7.5°	1256.7	1247.6	1236.2	1223.3	1227.4	1214.5	1211.1	1207.0	1204.3	1197.1	1201.2
10°	1247.0	1234.0	1220.8	1205.1	1208.1	1194.0	1189.9	1185.5	1183.0	1176.7	1180.8
12.5°	1232.1	1216.4	1198.5	1181.4	1184.7	1171.4	1165.9	1161.2	1160.4	1155.2	1160.1
15°	1212.8	1191.0	1172.5	1154.3	1158.2	1142.7	1140.3	1135.6	1136.9	1133.4	1139.4
17.5°	1188.3	1163.2	1143.0	1123.4	1127.3	1114.3	1112.4	1110.2	1111.6	1111.0	1117.6
20°	1160.7	1133.1	1109.9	1090.6	1092.8	1082.6	1083.4	1082.9	1085.6	1088.7	1097.8
22.5°	1129.5	1098.3	1074.1	1054.2	1057.5	1048.7	1052.5	1053.6	1058.3	1065.2	1076.8
25°	1094.5	1061.1	1035.7	1017.0	1020.0	1014.2	1020.8	1023.6	1031.0	1042.6	1054.5
27.5°	1057.8	1022.5	995.5	977.5	983.3	977.5	987.5	993.0	1004.3	1017.0	1031.6
30°	1018.9	982.2	954.4	938.4	943.9	938.6	954.6	962.1	973.4	990.8	1008.1
32.5°	978.1	939.5	912.2	899.7	903.6	902.8	920.7	929.0	944.1	964.0	982.5
35°	936.1	895.9	868.3	857.8	862.5	863.6	885.1	894.8	911.3	935.3	955.2
37.5°	892.8	851.7	824.7	816.2	820.3	824.4	849.5	859.2	877.9	904.2	925.9
40°	847.9	806.8	780.3	773.4	777.5	782.0	809.3	822.5	842.9	871.3	895.1
42.5°	802.4	761.3	735.6	730.7	734.8	743.3	772.3	784.7	806.2	837.7	863.9
45°	756.0	713.3	690.9	687.1	691.5	701.4	729.8	744.7	767.6	802.1	830.2
47.5°	709.1	667.5	646.3	643.8	648.2	659.2	690.7	704.2	728.5	765.1	795.5
50°	661.7	621.2	600.7	599.9	604.1	615.9	646.0	662.0	687.1	728.2	759.3
52.5°	613.7	574.8	556.3	556.3	560.2	572.3	602.7	619.2	645.2	688.5	722.9
55°	565.7	528.8	511.1	512.5	518.0	528.5	558.0	575.4	601.6	646.5	682.9
57.5°	517.7	482.7	466.7	468.6	473.9	484.3	513.3	532.9	556.6	603.2	640.5
60°	470.3	437.2	423.1	425.3	430.0	440.5	470.6	487.4	511.1	558.5	595.8
62.5°	422.3	392.2	379.0	381.7	385.9	396.4	424.8	441.0	464.5	511.1	548.6
65°	374.8	347.0	335.7	338.4	342.3	352.0	378.7	394.4	416.8	462.3	498.1
67.5°	328.0	302.6	293.2	296.0	299.0	308.1	330.2	347.3	368.2	411.5	445.5
70°	281.6	259.0	250.7	253.5	256.2	264.5	283.8	299.5	318.9	358.6	390.0
72.5°	235.8	213.8	209.6	212.1	214.3	221.5	240.0	252.4	269.2	304.5	331.5
75°	191.1	172.1	169.4	171.8	173.8	179.3	194.7	205.5	219.6	250.2	272.2
77.5°	148.1	132.1	131.0	132.9	134.9	138.7	150.9	162.2	173.2	195.8	215.4
80°	107.8	94.9	94.9	96.8	96.3	101.0	109.5	118.6	126.6	142.9	157.2
82.5°	71.2	61.0	62.3	63.7	64.5	66.5	71.7	78.6	83.6	93.5	102.9
85°	39.4	32.5	33.9	35.0	34.5	36.7	39.4	43.6	46.1	50.8	55.7
87.5°	14.6	12.1	12.4	13.2	13.8	14.9	14.9	17.4	17.7	18.2	19.3
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):

	160°	170°	180°
0°	1261.9	1261.9	1261.9
2.5°	1231.8	1238.5	1243.4
5°	1210.6	1216.1	1220.5
7.5°	1189.9	1194.9	1198.7
10°	1170.3	1175.8	1178.6
12.5°	1150.2	1156.5	1158.7
15°	1130.3	1136.7	1139.4
17.5°	1109.9	1118.2	1121.2
20°	1090.9	1101.4	1103.9
22.5°	1071.6	1082.3	1085.4
25°	1050.6	1063.3	1066.3
27.5°	1028.3	1043.4	1046.5
30°	1005.9	1022.5	1025.5
32.5°	981.9	999.9	1002.6
35°	956.8	974.8	978.1
37.5°	929.0	948.6	955.2
40°	900.0	921.3	928.1
42.5°	869.7	892.8	900.0
45°	837.1	862.5	870.8
47.5°	804.3	833.0	840.2
50°	768.7	799.3	807.9
52.5°	731.5	764.9	773.4
55°	692.9	726.5	735.9
57.5°	650.9	685.7	695.6
60°	607.1	641.8	651.2
62.5°	562.1	593.6	602.7
65°	511.9	541.4	549.7
67.5°	458.7	485.7	492.6
70°	402.2	425.6	431.7
72.5°	343.1	359.4	367.4
75°	282.2	295.1	301.2
77.5°	220.9	230.0	235.0
80°	161.1	166.3	170.5
82.5°	105.4	107.6	110.6
85°	56.8	56.8	58.8
87.5°	19.3	18.5	19.3
90°	0.0	0.0	0.0

(END OF REPORT)