

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: P835269

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3HI-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835269
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-LD4-3HI-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

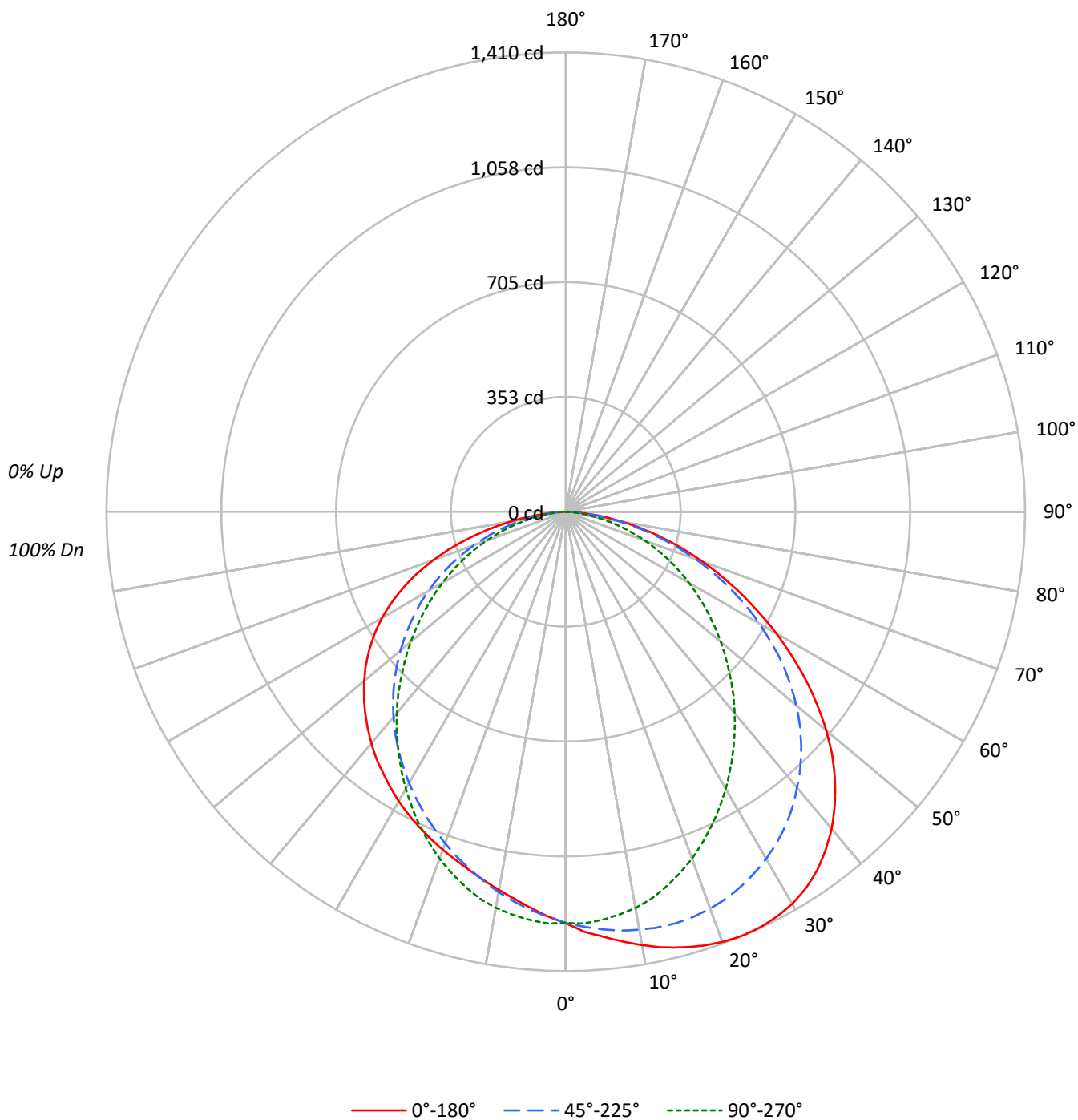
Lumens per Lamp: N/A
Luminaire Lumens: 3712.1 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66
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°	3536	3398	3297
10°	3690	3372	3221
15°	3856	3318	3175
20°	4025	3245	3161
25°	4183	3151	3166
30°	4319	3052	3187
35°	4417	2943	3213
40°	4462	2834	3261
45°	4450	2715	3314
50°	4371	2601	3382
55°	4221	2481	3453
60°	4015	2353	3505
65°	3771	2209	3501
70°	3509	2038	3397
75°	3187	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°	1641.1	44.2
0°-60°	2928.5	78.9
0°-90°	3712.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3712.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1262	1262	1262	1262	1262	
5°	1309	1287	1258	1227	1221	126
15°	1384	1307	1191	1136	1140	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°	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0
2.5°	1289.8	1283.8	1278.8	1280.7	1281.8	1278.0	1274.7	1275.2	1271.9	1278.2	1263.4
5°	1308.9	1303.3	1297.6	1299.8	1297.6	1291.8	1287.1	1285.7	1276.9	1280.5	1265.3
7.5°	1330.1	1324.0	1315.5	1318.0	1313.3	1302.5	1296.5	1292.9	1279.4	1279.6	1262.8
10°	1350.5	1345.3	1333.7	1335.3	1326.8	1312.5	1302.8	1297.8	1278.8	1276.0	1258.7
12.5°	1369.6	1362.4	1350.0	1350.8	1338.4	1319.3	1306.9	1299.8	1274.9	1266.7	1249.6
15°	1384.2	1377.3	1362.4	1362.1	1346.1	1321.3	1307.2	1297.3	1265.8	1252.9	1234.9
17.5°	1396.6	1390.2	1371.8	1371.2	1351.9	1320.5	1303.6	1291.2	1252.6	1236.6	1216.7
20°	1405.4	1399.1	1378.4	1376.4	1353.3	1316.3	1296.2	1280.5	1235.2	1216.2	1194.1
22.5°	1409.5	1403.2	1379.8	1377.0	1350.0	1308.0	1285.4	1266.9	1215.4	1190.5	1167.6
25°	1408.7	1402.7	1376.2	1373.4	1343.6	1295.6	1270.2	1249.0	1190.3	1161.0	1138.4
27.5°	1401.8	1397.1	1369.3	1365.7	1332.0	1278.8	1251.8	1228.3	1162.4	1129.8	1105.3
30°	1390.0	1386.4	1356.9	1353.6	1317.7	1260.3	1230.3	1203.2	1132.3	1095.6	1070.8
32.5°	1370.9	1367.6	1337.8	1334.8	1298.4	1236.6	1205.1	1177.3	1099.5	1059.0	1034.1
35°	1344.7	1342.8	1313.8	1310.5	1273.6	1209.6	1176.2	1145.6	1065.3	1019.5	995.8
37.5°	1310.2	1310.2	1282.4	1278.8	1242.7	1176.5	1143.6	1111.1	1026.7	978.1	954.7
40°	1270.2	1273.8	1245.4	1241.8	1206.8	1140.9	1105.0	1070.8	985.0	934.5	911.7
42.5°	1222.3	1225.6	1201.8	1198.5	1165.7	1099.8	1066.4	1029.2	941.4	890.1	866.4
45°	1169.3	1173.7	1152.5	1150.0	1119.4	1054.8	1022.8	985.0	895.9	843.8	820.6
47.5°	1110.3	1116.1	1097.6	1096.2	1067.8	1008.8	975.4	937.0	848.2	795.5	773.7
50°	1044.1	1052.3	1037.2	1037.2	1011.8	953.0	924.1	885.7	798.6	745.9	724.4
52.5°	973.2	983.6	972.3	972.6	951.9	899.2	869.2	831.7	746.7	694.8	675.0
55°	899.8	910.0	902.8	903.9	887.7	839.7	812.4	775.1	693.7	643.3	624.5
57.5°	823.1	834.1	829.5	831.7	820.4	777.3	748.9	716.4	639.1	589.2	573.2
60°	746.1	756.6	754.1	757.2	750.0	712.8	686.8	653.2	584.2	536.2	522.2
62.5°	668.4	678.0	677.5	680.8	676.9	646.0	622.8	594.2	527.4	483.3	470.3
65°	592.2	600.5	600.0	603.5	602.7	577.9	556.9	530.7	470.6	430.0	418.7
67.5°	518.3	525.2	523.3	527.4	528.5	508.7	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	402.5	358.9	324.1	316.1
72.5°	375.1	378.5	374.6	377.4	379.6	368.8	356.1	338.2	302.0	272.0	265.4
75°	306.5	311.1	303.1	305.9	307.6	296.8	289.4	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	190.1	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	107.9	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°	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0	1262.0
2.5°	1267.5	1264.7	1262.2	1253.7	1257.3	1248.5	1247.9	1244.6	1242.1	1237.4	1243.5
5°	1263.4	1257.8	1250.7	1240.5	1243.5	1233.0	1230.8	1226.9	1223.6	1217.6	1222.3
7.5°	1256.7	1247.6	1236.3	1223.4	1227.5	1214.5	1211.2	1207.1	1204.3	1197.1	1201.3
10°	1247.1	1234.1	1220.9	1205.1	1208.2	1194.1	1190.0	1185.6	1183.1	1176.7	1180.9
12.5°	1232.2	1216.5	1198.5	1181.4	1184.7	1171.5	1166.0	1161.3	1160.5	1155.2	1160.2
15°	1212.9	1191.1	1172.6	1154.4	1158.3	1142.8	1140.3	1135.6	1137.0	1133.4	1139.5
17.5°	1188.3	1163.2	1143.1	1123.5	1127.4	1114.4	1112.5	1110.3	1111.6	1111.1	1117.7
20°	1160.7	1133.2	1110.0	1090.7	1092.9	1082.7	1083.5	1083.0	1085.7	1088.7	1097.8
22.5°	1129.6	1098.4	1074.1	1054.3	1057.6	1048.7	1052.6	1053.7	1058.4	1065.3	1076.9
25°	1094.5	1061.2	1035.8	1017.0	1020.1	1014.3	1020.9	1023.6	1031.1	1042.7	1054.5
27.5°	1057.9	1022.5	995.5	977.6	983.4	977.6	987.5	993.0	1004.3	1017.0	1031.6
30°	1019.0	982.3	954.4	938.4	943.9	938.7	954.7	962.1	973.4	990.8	1008.2
32.5°	978.1	939.5	912.2	899.8	903.7	902.8	920.8	929.0	944.2	964.1	982.5
35°	936.2	895.9	868.3	857.9	862.6	863.7	885.2	894.8	911.4	935.4	955.2
37.5°	892.9	851.8	824.8	816.2	820.4	824.5	849.6	859.2	878.0	904.2	926.0
40°	847.9	806.8	780.4	773.5	777.6	782.0	809.3	822.6	843.0	871.4	895.1
42.5°	802.4	761.3	735.7	730.7	734.8	743.4	772.4	784.8	806.3	837.7	863.9
45°	756.1	713.3	691.0	687.1	691.5	701.5	729.9	744.8	767.7	802.1	830.3
47.5°	709.2	667.5	646.3	643.8	648.2	659.3	690.7	704.2	728.5	765.2	795.5
50°	661.7	621.2	600.8	600.0	604.1	616.0	646.0	662.0	687.1	728.2	759.4
52.5°	613.7	574.9	556.4	556.4	560.2	572.4	602.7	619.3	645.2	688.5	723.0
55°	565.7	528.8	511.1	512.5	518.0	528.5	558.0	575.4	601.6	646.6	683.0
57.5°	517.8	482.7	466.7	468.7	473.9	484.4	513.3	532.9	556.6	603.3	640.5
60°	470.3	437.2	423.1	425.3	430.0	440.5	470.6	487.4	511.1	558.6	595.8
62.5°	422.3	392.2	379.0	381.8	385.9	396.4	424.8	441.1	464.5	511.1	548.6
65°	374.9	347.0	335.7	338.5	342.3	352.0	378.7	394.5	416.8	462.3	498.2
67.5°	328.0	302.6	293.2	296.0	299.0	308.1	330.2	347.3	368.2	411.6	445.5
70°	281.6	259.0	250.7	253.5	256.3	264.5	283.8	299.6	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	331.6
75°	191.2	172.1	169.4	171.8	173.8	179.3	194.7	205.5	219.6	250.2	272.3
77.5°	148.1	132.1	131.0	133.0	134.9	138.7	150.9	162.2	173.2	195.8	215.4
80°	107.9	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°	1262.0	1262.0	1262.0
2.5°	1231.9	1238.5	1243.5
5°	1210.7	1216.2	1220.6
7.5°	1190.0	1194.9	1198.8
10°	1170.4	1175.9	1178.7
12.5°	1150.3	1156.6	1158.8
15°	1130.4	1136.7	1139.5
17.5°	1110.0	1118.3	1121.3
20°	1091.0	1101.4	1103.9
22.5°	1071.6	1082.4	1085.4
25°	1050.7	1063.4	1066.4
27.5°	1028.3	1043.5	1046.5
30°	1006.0	1022.5	1025.6
32.5°	982.0	999.9	1002.7
35°	956.9	974.8	978.1
37.5°	929.0	948.6	955.2
40°	900.1	921.3	928.2
42.5°	869.7	892.9	900.1
45°	837.2	862.6	870.8
47.5°	804.4	833.0	840.2
50°	768.8	799.4	807.9
52.5°	731.5	764.9	773.5
55°	692.9	726.6	735.9
57.5°	651.0	685.7	695.7
60°	607.1	641.9	651.3
62.5°	562.2	593.6	602.7
65°	512.0	541.5	549.8
67.5°	458.7	485.8	492.7
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	230.1	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)