

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: P835356

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835356
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-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

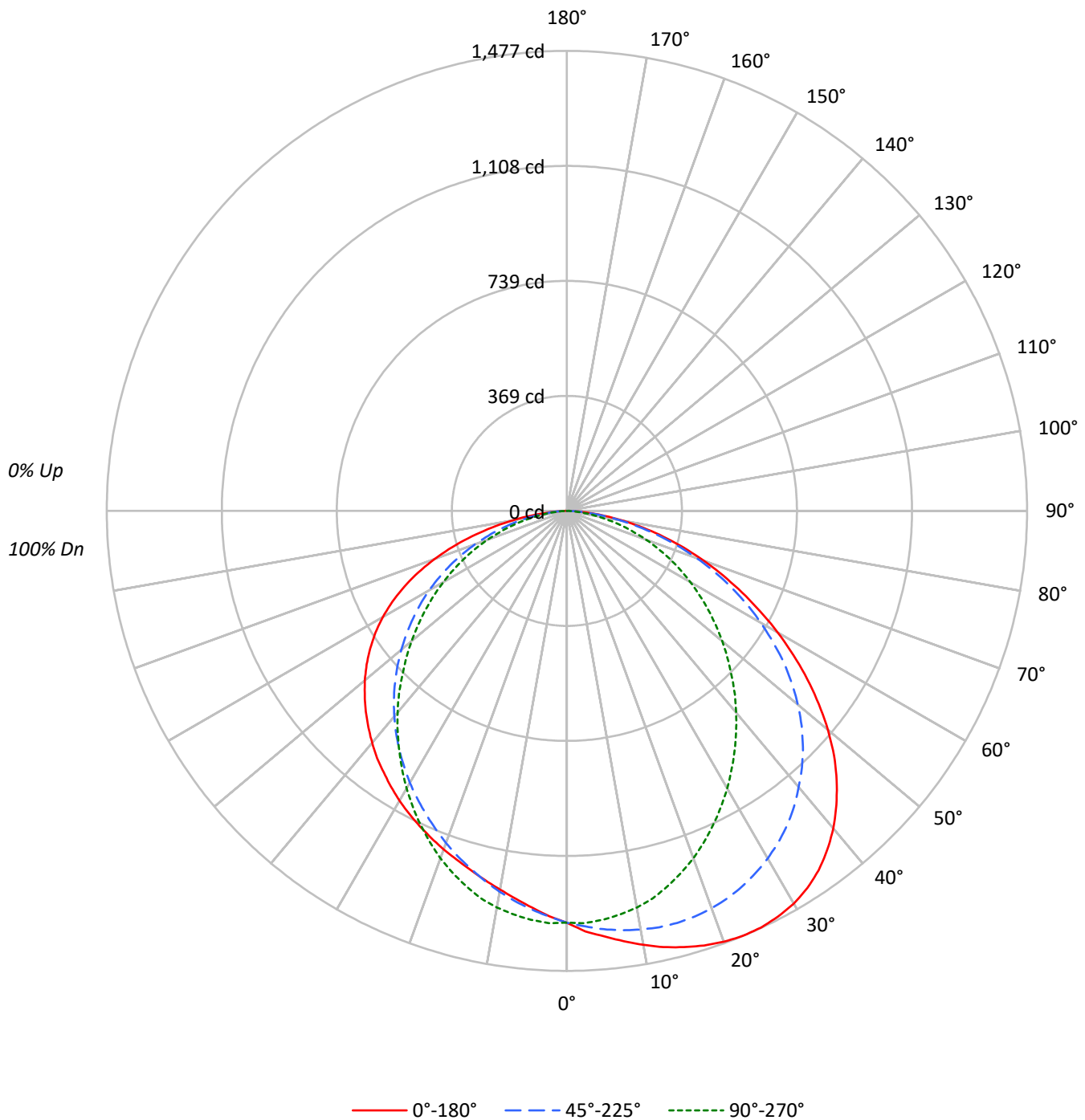
Lumens per Lamp: N/A
Luminaire Lumens: 3888.7 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3557	3557	3557
5°	3704	3559	3454
10°	3866	3533	3374
15°	4040	3476	3326
20°	4216	3399	3312
25°	4382	3301	3317
30°	4525	3197	3338
35°	4628	3083	3366
40°	4675	2969	3416
45°	4662	2844	3471
50°	4579	2724	3543
55°	4422	2599	3617
60°	4207	2465	3672
65°	3950	2315	3667
70°	3676	2135	3558
75°	3337	1875	3280
80°	2865	1540	2768
85°	2186	1053	1899

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.4	3.2
10°-20°	362.1	9.3
20°-30°	554.7	14.3
30°-40°	676.9	17.4
40°-50°	707.9	18.2
50°-60°	640.7	16.5
60°-70°	485.3	12.5
70°-80°	270.4	7.0
80°-90°	65.2	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°	1042.2	26.8
0°-40°	1719.1	44.2
0°-60°	3067.8	78.9
0°-90°	3888.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3888.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1322	1322	1322	1322	1322	
5°	1371	1348	1318	1285	1279	132
15°	1450	1369	1248	1190	1194	411
25°	1476	1331	1112	1072	1117	681
35°	1409	1232	938	937	1025	880
45°	1225	1072	747	780	912	942
55°	943	851	554	603	771	841
65°	620	583	364	413	576	615
75°	321	303	180	215	316	340
85°	71	62	34	46	62	85
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°	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0
2.5°	1351.2	1344.8	1339.6	1341.6	1342.8	1338.7	1335.3	1335.9	1332.4	1339.0	1323.4
5°	1371.1	1365.3	1359.3	1361.6	1359.3	1353.2	1348.3	1346.8	1337.6	1341.3	1325.5
7.5°	1393.4	1387.0	1378.0	1380.6	1375.7	1364.5	1358.1	1354.4	1340.2	1340.5	1322.9
10°	1414.7	1409.3	1397.1	1398.9	1389.9	1374.9	1364.8	1359.6	1339.6	1336.7	1318.5
12.5°	1434.7	1427.2	1414.2	1415.0	1402.0	1382.1	1369.1	1361.6	1335.6	1326.9	1309.0
15°	1450.0	1442.8	1427.2	1426.9	1410.1	1384.1	1369.4	1359.0	1326.0	1312.5	1293.7
17.5°	1463.0	1456.4	1437.0	1436.4	1416.2	1383.2	1365.6	1352.6	1312.2	1295.4	1274.6
20°	1472.2	1465.6	1443.9	1441.9	1417.6	1378.9	1357.8	1341.3	1294.0	1274.0	1250.9
22.5°	1476.6	1469.9	1445.4	1442.5	1414.2	1370.2	1346.5	1327.2	1273.2	1247.1	1223.2
25°	1475.7	1469.4	1441.6	1438.7	1407.5	1357.2	1330.7	1308.4	1246.9	1216.2	1192.5
27.5°	1468.5	1463.6	1434.4	1430.6	1395.4	1339.6	1311.3	1286.7	1217.7	1183.6	1157.9
30°	1456.1	1452.3	1421.4	1417.9	1380.4	1320.3	1288.8	1260.4	1186.2	1147.7	1121.7
32.5°	1436.1	1432.7	1401.5	1398.3	1360.1	1295.4	1262.5	1233.3	1151.8	1109.3	1083.3
35°	1408.7	1406.7	1376.3	1372.8	1334.1	1267.1	1232.1	1200.0	1116.0	1068.0	1043.1
37.5°	1372.6	1372.6	1343.4	1339.6	1301.8	1232.4	1198.0	1163.9	1075.5	1024.6	1000.1
40°	1330.7	1334.4	1304.7	1300.9	1264.2	1195.1	1157.6	1121.7	1031.9	979.0	955.0
42.5°	1280.4	1283.8	1259.0	1255.5	1221.1	1152.1	1117.1	1078.1	986.2	932.5	907.6
45°	1224.9	1229.5	1207.3	1204.7	1172.6	1105.0	1071.5	1031.9	938.5	883.9	859.7
47.5°	1163.1	1169.1	1149.8	1148.3	1118.6	1056.7	1021.8	981.6	888.5	833.4	810.5
50°	1093.7	1102.4	1086.5	1086.5	1059.9	998.4	968.0	927.8	836.5	781.3	758.8
52.5°	1019.4	1030.4	1018.6	1018.9	997.2	942.0	910.5	871.2	782.2	727.9	707.1
55°	942.6	953.3	945.8	946.9	929.9	879.6	851.0	812.0	726.7	673.9	654.2
57.5°	862.3	873.8	868.9	871.2	859.4	814.3	784.5	750.4	669.5	617.2	600.5
60°	781.6	792.6	790.0	793.2	785.7	746.7	719.5	684.3	612.0	561.7	547.0
62.5°	700.1	710.3	709.7	713.2	709.1	676.7	652.5	622.4	552.5	506.3	492.7
65°	620.4	629.1	628.5	632.2	631.4	605.4	583.4	556.0	493.0	450.5	438.6
67.5°	543.0	550.2	548.2	552.5	553.6	532.8	513.8	489.2	436.3	395.0	384.9
70°	467.2	472.2	469.6	472.4	475.0	459.4	443.3	421.6	375.9	339.5	331.1
72.5°	393.0	396.5	392.4	395.3	397.6	386.3	373.0	354.3	316.4	284.9	278.0
75°	321.0	325.9	317.6	320.5	322.2	310.9	303.1	287.8	255.2	230.9	226.3
77.5°	251.4	254.3	249.7	248.5	249.7	241.6	235.5	223.7	199.1	179.2	176.3
80°	184.9	186.7	182.0	180.9	181.8	176.0	171.4	162.7	145.3	130.3	129.2
82.5°	124.0	124.8	120.8	119.6	120.2	118.5	113.0	106.9	98.8	86.1	85.8
85°	70.8	70.8	67.9	66.7	67.3	64.4	62.4	59.2	56.1	47.4	48.0
87.5°	26.0	26.0	24.6	24.3	27.2	24.0	23.1	21.7	22.5	17.9	19.1
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0	1322.0
2.5°	1327.8	1324.9	1322.3	1313.3	1317.1	1307.8	1307.3	1303.8	1301.2	1296.3	1302.6
5°	1323.4	1317.7	1310.1	1299.4	1302.6	1291.6	1289.3	1285.3	1281.8	1275.5	1280.4
7.5°	1316.5	1307.0	1295.1	1281.5	1285.9	1272.3	1268.8	1264.5	1261.6	1254.1	1258.4
10°	1306.4	1292.8	1278.9	1262.5	1265.6	1250.9	1246.6	1241.9	1239.3	1232.7	1237.0
12.5°	1290.8	1274.3	1255.5	1237.6	1241.1	1227.2	1221.4	1216.5	1215.7	1210.2	1215.4
15°	1270.6	1247.7	1228.4	1209.3	1213.3	1197.2	1194.6	1189.6	1191.1	1187.3	1193.7
17.5°	1244.8	1218.5	1197.4	1176.9	1181.0	1167.4	1165.4	1163.1	1164.5	1163.9	1170.9
20°	1215.9	1187.0	1162.8	1142.5	1144.9	1134.2	1135.0	1134.5	1137.3	1140.5	1150.1
22.5°	1183.3	1150.6	1125.2	1104.4	1107.9	1098.6	1102.7	1103.8	1108.7	1116.0	1128.1
25°	1146.6	1111.6	1085.0	1065.4	1068.6	1062.5	1069.4	1072.3	1080.1	1092.3	1104.7
27.5°	1108.2	1071.2	1042.9	1024.1	1030.1	1024.1	1034.5	1040.3	1052.1	1065.4	1080.7
30°	1067.4	1029.0	999.8	983.0	988.8	983.3	1000.1	1007.9	1019.7	1037.9	1056.1
32.5°	1024.6	984.2	955.6	942.6	946.6	945.8	964.5	973.2	989.1	1009.9	1029.3
35°	980.7	938.5	909.6	898.7	903.6	904.7	927.3	937.4	954.7	979.9	1000.7
37.5°	935.4	892.3	864.0	855.0	859.4	863.7	890.0	900.1	919.8	947.2	970.0
40°	888.3	845.2	817.5	810.2	814.6	819.2	847.8	861.7	883.1	912.8	937.7
42.5°	840.6	797.5	770.7	765.5	769.8	778.7	809.1	822.1	844.6	877.6	905.0
45°	792.0	747.2	723.8	719.8	724.4	734.8	764.6	780.2	804.2	840.3	869.8
47.5°	742.9	699.3	677.0	674.4	679.1	690.6	723.6	737.7	763.1	801.6	833.4
50°	693.2	650.7	629.4	628.5	632.8	645.2	676.7	693.5	719.8	762.9	795.5
52.5°	642.9	602.2	582.8	582.8	586.9	599.6	631.4	648.7	675.9	721.2	757.4
55°	592.7	553.9	535.4	536.9	542.7	553.6	584.6	602.8	630.2	677.3	715.5
57.5°	542.4	505.7	488.9	490.9	496.4	507.4	537.8	558.3	583.1	632.0	671.0
60°	492.7	458.0	443.3	445.6	450.5	461.5	493.0	510.6	535.4	585.1	624.2
62.5°	442.4	410.9	397.0	399.9	404.3	415.2	445.0	462.0	486.6	535.4	574.7
65°	392.7	363.5	351.7	354.6	358.6	368.7	396.7	413.2	436.6	484.3	521.9
67.5°	343.6	317.0	307.2	310.1	313.2	322.8	345.9	363.8	385.8	431.1	466.7
70°	295.0	271.3	262.7	265.6	268.4	277.1	297.3	313.8	334.0	375.6	408.6
72.5°	247.1	223.9	219.6	222.2	224.5	232.0	251.4	264.4	282.0	319.0	347.3
75°	200.2	180.3	177.4	180.0	182.0	187.8	204.0	215.3	230.0	262.1	285.2
77.5°	155.2	138.4	137.3	139.3	141.3	145.3	158.1	169.9	181.5	205.2	225.7
80°	113.0	99.4	99.4	101.4	100.8	105.8	114.7	124.3	132.6	149.7	164.7
82.5°	74.6	63.9	65.3	66.7	67.6	69.6	75.1	82.4	87.6	98.0	107.8
85°	41.3	34.1	35.5	36.7	36.1	38.4	41.3	45.7	48.3	53.2	58.4
87.5°	15.3	12.7	13.0	13.9	14.4	15.6	15.6	18.2	18.5	19.1	20.2
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):

	160°	170°	180°
0°	1322.0	1322.0	1322.0
2.5°	1290.5	1297.4	1302.6
5°	1268.2	1274.0	1278.6
7.5°	1246.6	1251.8	1255.8
10°	1226.1	1231.8	1234.7
12.5°	1205.0	1211.6	1213.9
15°	1184.2	1190.8	1193.7
17.5°	1162.8	1171.4	1174.6
20°	1142.8	1153.8	1156.4
22.5°	1122.6	1133.9	1137.1
25°	1100.6	1113.9	1117.1
27.5°	1077.2	1093.1	1096.3
30°	1053.8	1071.2	1074.3
32.5°	1028.7	1047.5	1050.4
35°	1002.4	1021.2	1024.6
37.5°	973.2	993.7	1000.7
40°	942.9	965.1	972.3
42.5°	911.1	935.4	942.9
45°	877.0	903.6	912.2
47.5°	842.6	872.7	880.2
50°	805.3	837.4	846.4
52.5°	766.3	801.3	810.2
55°	725.9	761.1	770.9
57.5°	681.9	718.4	728.8
60°	636.0	672.4	682.2
62.5°	588.9	621.8	631.4
65°	536.3	567.2	575.9
67.5°	480.5	508.9	516.1
70°	421.3	445.9	452.2
72.5°	359.5	376.5	384.9
75°	295.6	309.2	315.5
77.5°	231.5	241.0	246.2
80°	168.8	174.2	178.6
82.5°	110.4	112.7	115.9
85°	59.5	59.5	61.5
87.5°	20.2	19.4	20.2
90°	0.0	0.0	0.0

(END OF REPORT)