

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: P835320

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835320
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

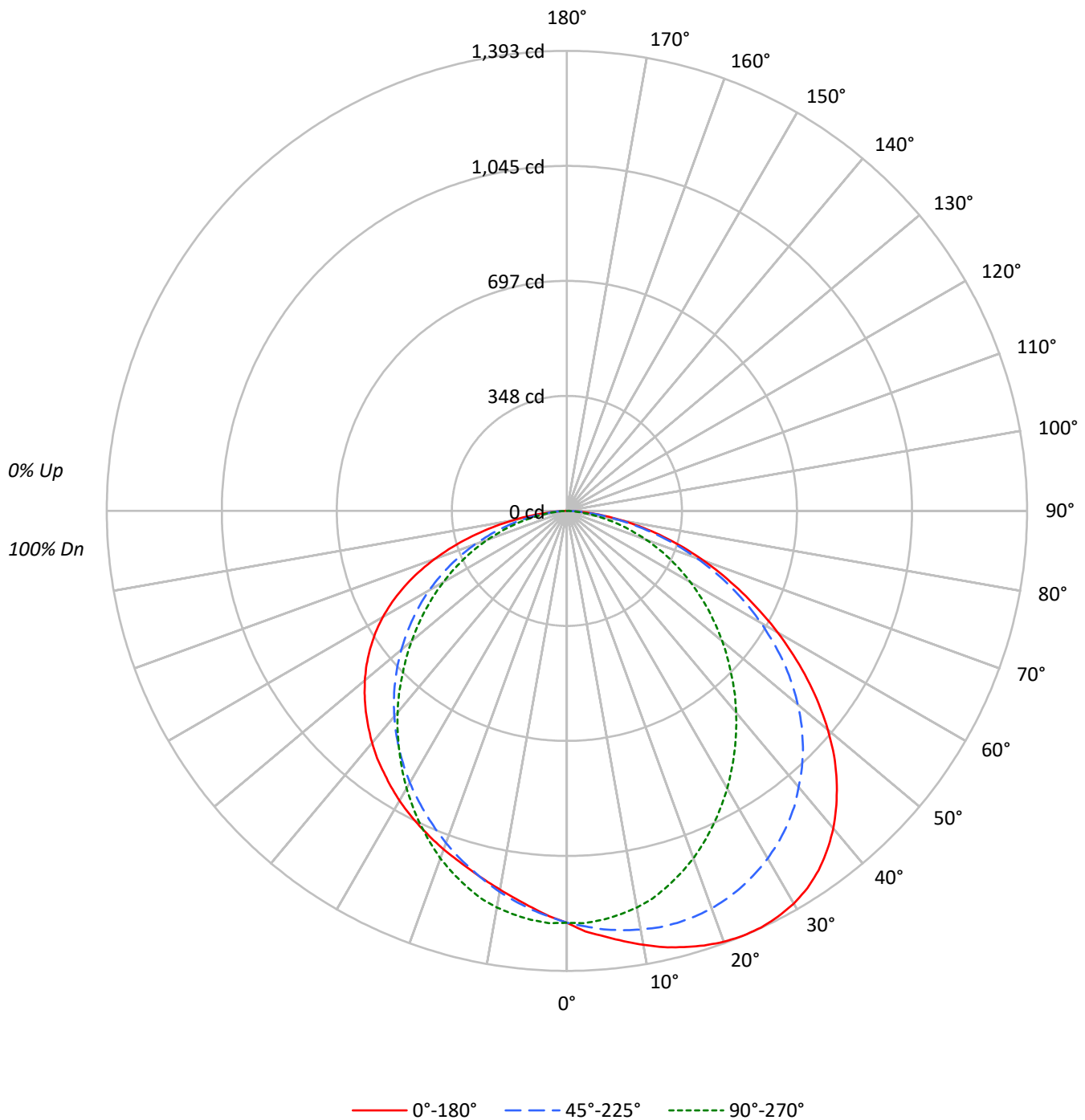
Lumens per Lamp: N/A
Luminaire Lumens: 3667.7 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	3355	3355	3355
5°	3493	3357	3258
10°	3646	3332	3182
15°	3810	3278	3137
20°	3977	3206	3123
25°	4133	3113	3128
30°	4267	3016	3149
35°	4365	2908	3175
40°	4409	2800	3222
45°	4397	2682	3274
50°	4319	2570	3342
55°	4171	2451	3411
60°	3968	2325	3463
65°	3726	2183	3459
70°	3467	2013	3356
75°	3148	1769	3094
80°	2703	1454	2610
85°	2062	994	1794

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	3.2
10°-20°	341.5	9.3
20°-30°	523.2	14.3
30°-40°	638.5	17.4
40°-50°	667.7	18.2
50°-60°	604.3	16.5
60°-70°	457.7	12.5
70°-80°	255.1	7.0
80°-90°	61.5	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°	982.9	26.8
0°-40°	1621.4	44.2
0°-60°	2893.5	78.9
0°-90°	3667.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3667.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1247	1247	1247	1247	1247	
5°	1293	1272	1243	1212	1206	125
15°	1368	1292	1177	1122	1126	388
25°	1392	1255	1048	1011	1054	642
35°	1329	1162	885	884	966	830
45°	1155	1011	705	736	860	889
55°	889	803	522	568	727	793
65°	585	550	343	390	543	580
75°	303	286	170	203	298	321
85°	67	59	32	43	58	80
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°	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9
2.5°	1274.4	1268.4	1263.5	1265.4	1266.5	1262.7	1259.4	1260.0	1256.7	1263.0	1248.2
5°	1293.2	1287.8	1282.0	1284.2	1282.0	1276.3	1271.7	1270.3	1261.6	1265.1	1250.1
7.5°	1314.2	1308.2	1299.7	1302.2	1297.6	1286.9	1280.9	1277.4	1264.0	1264.3	1247.7
10°	1334.4	1329.2	1317.7	1319.4	1310.9	1296.7	1287.2	1282.3	1263.5	1260.8	1243.6
12.5°	1353.2	1346.1	1333.8	1334.6	1322.4	1303.6	1291.3	1284.2	1259.7	1251.5	1234.6
15°	1367.6	1360.8	1346.1	1345.8	1330.0	1305.5	1291.6	1281.8	1250.7	1237.9	1220.2
17.5°	1379.9	1373.6	1355.3	1354.8	1335.7	1304.7	1288.0	1275.8	1237.6	1221.8	1202.2
20°	1388.6	1382.3	1361.9	1360.0	1337.1	1300.6	1280.7	1265.1	1220.4	1201.6	1179.8
22.5°	1392.7	1386.4	1363.2	1360.5	1333.8	1292.4	1270.0	1251.8	1200.8	1176.3	1153.7
25°	1391.9	1385.9	1359.7	1357.0	1327.5	1280.1	1255.1	1234.1	1176.0	1147.1	1124.8
27.5°	1385.1	1380.4	1352.9	1349.4	1316.1	1263.5	1236.8	1213.6	1148.5	1116.3	1092.1
30°	1373.3	1369.8	1340.6	1337.4	1301.9	1245.2	1215.5	1188.8	1118.8	1082.5	1058.0
32.5°	1354.5	1351.3	1321.8	1318.8	1282.9	1221.8	1190.7	1163.2	1086.3	1046.3	1021.8
35°	1328.6	1326.7	1298.1	1294.8	1258.3	1195.1	1162.1	1131.9	1052.6	1007.3	983.9
37.5°	1294.6	1294.6	1267.0	1263.5	1227.8	1162.4	1130.0	1097.8	1014.4	966.4	943.3
40°	1255.1	1258.6	1230.5	1227.0	1192.4	1127.2	1091.8	1058.0	973.2	923.4	900.7
42.5°	1207.6	1210.9	1187.5	1184.2	1151.8	1086.6	1053.6	1016.9	930.2	879.5	856.1
45°	1155.3	1159.7	1138.7	1136.2	1106.0	1042.2	1010.6	973.2	885.2	833.7	810.8
47.5°	1097.0	1102.7	1084.4	1083.1	1055.0	996.7	963.7	925.8	838.1	786.0	764.5
50°	1031.6	1039.7	1024.8	1024.8	999.7	941.6	913.0	875.1	789.0	737.0	715.7
52.5°	961.5	971.9	960.7	961.0	940.5	888.5	858.8	821.7	737.8	686.5	666.9
55°	889.0	899.1	892.0	893.1	877.0	829.6	802.6	765.8	685.4	635.6	617.0
57.5°	813.3	824.2	819.5	821.7	810.5	768.0	739.9	707.8	631.5	582.1	566.3
60°	737.2	747.6	745.1	748.1	741.0	704.2	678.6	645.4	577.2	529.8	515.9
62.5°	660.4	669.9	669.4	672.6	668.8	638.3	615.4	587.1	521.1	477.5	464.7
65°	585.1	593.3	592.8	596.3	595.5	571.0	550.3	524.4	465.0	424.9	413.7
67.5°	512.1	518.9	517.0	521.1	522.2	502.6	484.6	461.4	411.5	372.6	363.0
70°	440.7	445.3	442.9	445.6	448.1	433.3	418.1	397.6	354.6	320.2	312.3
72.5°	370.7	373.9	370.1	372.8	375.0	364.4	351.9	334.1	298.4	268.7	262.2
75°	302.8	307.4	299.5	302.2	303.9	293.3	285.9	271.5	240.7	217.8	213.4
77.5°	237.1	239.8	235.5	234.4	235.5	227.8	222.1	210.9	187.8	169.0	166.2
80°	174.4	176.1	171.7	170.6	171.4	166.0	161.6	153.4	137.1	122.9	121.8
82.5°	116.9	117.7	113.9	112.8	113.4	111.7	106.6	100.8	93.2	81.2	80.9
85°	66.8	66.8	64.0	63.0	63.5	60.8	58.9	55.9	52.9	44.7	45.2
87.5°	24.5	24.5	23.2	22.9	25.6	22.6	21.8	20.4	21.3	16.9	18.0
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°	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9	1246.9
2.5°	1252.3	1249.6	1247.1	1238.7	1242.2	1233.5	1233.0	1229.7	1227.3	1222.6	1228.6
5°	1248.2	1242.8	1235.7	1225.6	1228.6	1218.3	1216.1	1212.3	1209.0	1203.0	1207.6
7.5°	1241.7	1232.7	1221.5	1208.7	1212.8	1200.0	1196.7	1192.6	1189.9	1182.8	1186.9
10°	1232.2	1219.3	1206.3	1190.7	1193.7	1179.8	1175.7	1171.4	1168.9	1162.7	1166.7
12.5°	1217.4	1201.9	1184.2	1167.3	1170.6	1157.5	1152.0	1147.4	1146.6	1141.4	1146.3
15°	1198.4	1176.8	1158.6	1140.6	1144.4	1129.1	1126.7	1122.1	1123.4	1119.9	1125.9
17.5°	1174.1	1149.3	1129.4	1110.1	1113.9	1101.1	1099.2	1097.0	1098.3	1097.8	1104.3
20°	1146.9	1119.6	1096.7	1077.6	1079.8	1069.7	1070.5	1070.0	1072.7	1075.7	1084.7
22.5°	1116.1	1085.3	1061.3	1041.7	1044.9	1036.2	1040.0	1041.1	1045.7	1052.6	1064.0
25°	1081.4	1048.5	1023.4	1004.9	1007.9	1002.1	1008.7	1011.4	1018.8	1030.2	1041.9
27.5°	1045.2	1010.3	983.6	965.9	971.6	965.9	975.7	981.1	992.3	1004.9	1019.3
30°	1006.8	970.5	943.0	927.2	932.6	927.5	943.3	950.6	961.8	979.0	996.1
32.5°	966.4	928.3	901.3	889.0	892.8	892.0	909.7	917.9	932.9	952.5	970.8
35°	925.0	885.2	858.0	847.6	852.2	853.3	874.6	884.1	900.5	924.2	943.8
37.5°	882.2	841.6	814.9	806.4	810.5	814.6	839.4	849.0	867.5	893.4	914.9
40°	837.8	797.2	771.0	764.2	768.3	772.7	799.6	812.7	832.9	861.0	884.4
42.5°	792.8	752.2	726.9	722.0	726.0	734.5	763.1	775.4	796.6	827.7	853.6
45°	747.0	704.8	682.7	678.9	683.3	693.1	721.1	735.9	758.5	792.5	820.3
47.5°	700.7	659.5	638.6	636.1	640.5	651.4	682.4	695.8	719.8	756.0	786.0
50°	653.8	613.8	593.6	592.8	596.9	608.6	638.3	654.1	678.9	719.5	750.3
52.5°	606.4	568.0	549.7	549.7	553.5	565.5	595.5	611.9	637.5	680.3	714.3
55°	559.0	522.5	505.0	506.4	511.8	522.2	551.4	568.5	594.4	638.8	674.8
57.5°	511.6	476.9	461.1	463.0	468.2	478.6	507.2	526.5	550.0	596.0	632.8
60°	464.7	432.0	418.1	420.3	424.9	435.2	465.0	481.6	505.0	551.9	588.7
62.5°	417.3	387.6	374.5	377.2	381.3	391.6	419.7	435.8	459.0	505.0	542.1
65°	370.4	342.9	331.7	334.4	338.2	347.8	374.2	389.7	411.8	456.8	492.2
67.5°	324.1	299.0	289.7	292.4	295.4	304.4	326.2	343.1	363.8	406.6	440.2
70°	278.3	255.9	247.7	250.5	253.2	261.4	280.4	296.0	315.1	354.3	385.4
72.5°	233.0	211.2	207.1	209.6	211.8	218.9	237.1	249.4	266.0	300.9	327.6
75°	188.9	170.1	167.3	169.8	171.7	177.2	192.4	203.0	216.9	247.2	269.0
77.5°	146.4	130.5	129.5	131.4	133.3	137.1	149.1	160.3	171.2	193.5	212.9
80°	106.6	93.8	93.8	95.7	95.1	99.7	108.2	117.2	125.1	141.2	155.3
82.5°	70.3	60.2	61.6	63.0	63.8	65.7	70.9	77.7	82.6	92.4	101.7
85°	39.0	32.2	33.5	34.6	34.1	36.2	39.0	43.1	45.5	50.1	55.1
87.5°	14.4	12.0	12.3	13.1	13.6	14.7	14.7	17.2	17.4	18.0	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):

	160°	170°	180°
0°	1246.9	1246.9	1246.9
2.5°	1217.2	1223.7	1228.6
5°	1196.2	1201.6	1206.0
7.5°	1175.7	1180.6	1184.5
10°	1156.4	1161.8	1164.6
12.5°	1136.5	1142.8	1144.9
15°	1116.9	1123.1	1125.9
17.5°	1096.7	1104.9	1107.9
20°	1077.9	1088.3	1090.7
22.5°	1058.8	1069.5	1072.4
25°	1038.1	1050.6	1053.6
27.5°	1016.0	1031.0	1034.0
30°	994.0	1010.3	1013.3
32.5°	970.2	988.0	990.7
35°	945.4	963.2	966.4
37.5°	917.9	937.3	943.8
40°	889.3	910.3	917.1
42.5°	859.3	882.2	889.3
45°	827.2	852.2	860.4
47.5°	794.7	823.1	830.2
50°	759.6	789.8	798.3
52.5°	722.8	755.8	764.2
55°	684.6	717.9	727.1
57.5°	643.2	677.5	687.3
60°	599.9	634.2	643.5
62.5°	555.4	586.5	595.5
65°	505.8	535.0	543.2
67.5°	453.2	479.9	486.8
70°	397.4	420.5	426.5
72.5°	339.0	355.1	363.0
75°	278.8	291.6	297.6
77.5°	218.3	227.3	232.2
80°	159.2	164.3	168.4
82.5°	104.1	106.3	109.3
85°	56.1	56.1	58.1
87.5°	19.1	18.3	19.1
90°	0.0	0.0	0.0

(END OF REPORT)