

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: P835273

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835273
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-LD4-5LO-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

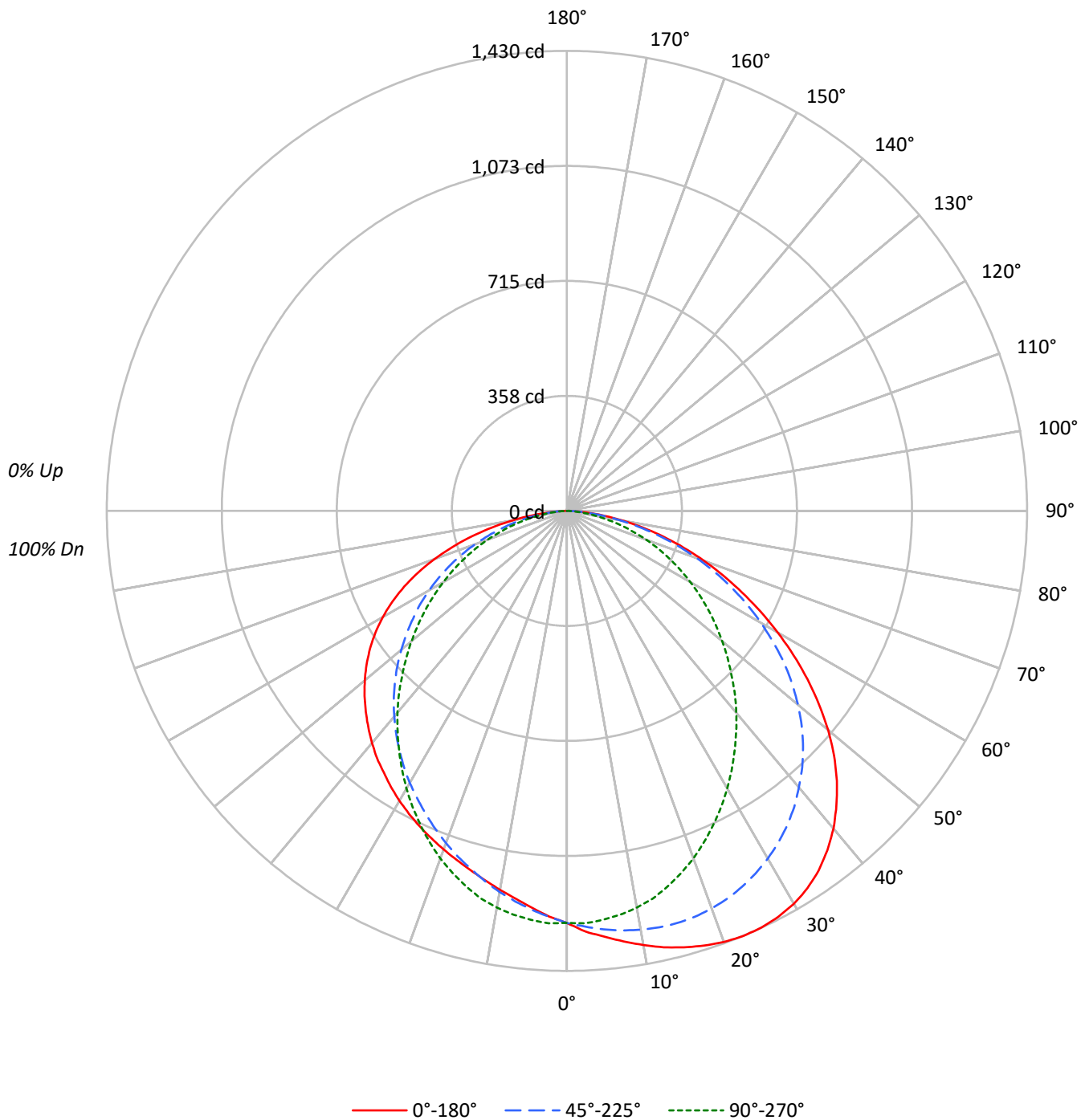
Lumens per Lamp: N/A
Luminaire Lumens: 3766.7 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	88		90
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	73	61	53	47	59	52	46		57	51	46		55
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	46	38	32	59	46	38	32	44	37	32		43	36	31		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3446	3446	3446
5°	3588	3448	3346
10°	3745	3422	3268
15°	3913	3367	3221
20°	4084	3293	3208
25°	4244	3197	3213
30°	4383	3097	3233
35°	4482	2986	3260
40°	4528	2876	3308
45°	4515	2755	3363
50°	4435	2639	3432
55°	4283	2518	3504
60°	4075	2387	3556
65°	3826	2242	3552
70°	3561	2068	3446
75°	3234	1816	3177
80°	2775	1492	2681
85°	2118	1019	1840

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.4	3.2
10°-20°	350.7	9.3
20°-30°	537.3	14.3
30°-40°	655.7	17.4
40°-50°	685.7	18.2
50°-60°	620.6	16.5
60°-70°	470.0	12.5
70°-80°	261.9	7.0
80°-90°	63.2	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°	1009.5	26.8
0°-40°	1665.2	44.2
0°-60°	2971.5	78.9
0°-90°	3766.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3766.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1280	1280	1280	1280	1280	
5°	1328	1306	1276	1245	1238	128
15°	1404	1326	1209	1152	1156	398
25°	1429	1289	1077	1039	1082	659
35°	1364	1194	909	908	992	852
45°	1186	1038	724	756	884	913
55°	913	824	537	584	747	815
65°	601	565	352	400	558	596
75°	311	294	175	208	306	330
85°	69	60	33	44	60	83
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°	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5
2.5°	1308.8	1302.6	1297.6	1299.6	1300.7	1296.8	1293.4	1294.0	1290.6	1297.0	1281.9
5°	1328.1	1322.5	1316.6	1318.9	1316.6	1310.7	1306.0	1304.6	1295.6	1299.3	1283.9
7.5°	1349.7	1343.5	1334.8	1337.3	1332.6	1321.7	1315.5	1311.9	1298.2	1298.4	1281.4
10°	1370.4	1365.0	1353.3	1355.0	1346.3	1331.7	1321.9	1316.9	1297.6	1294.8	1277.2
12.5°	1389.7	1382.4	1369.8	1370.6	1358.0	1338.7	1326.1	1318.9	1293.7	1285.3	1267.9
15°	1404.5	1397.5	1382.4	1382.1	1365.9	1340.7	1326.4	1316.3	1284.4	1271.3	1253.1
17.5°	1417.1	1410.7	1391.9	1391.4	1371.8	1339.9	1322.8	1310.2	1271.0	1254.8	1234.6
20°	1426.1	1419.6	1398.6	1396.7	1373.2	1335.7	1315.2	1299.3	1253.4	1234.1	1211.7
22.5°	1430.3	1423.8	1400.0	1397.2	1369.8	1327.3	1304.3	1285.6	1233.2	1208.0	1184.8
25°	1429.4	1423.3	1396.4	1393.6	1363.4	1314.7	1288.9	1267.4	1207.7	1178.1	1155.1
27.5°	1422.4	1417.7	1389.4	1385.8	1351.6	1297.6	1270.2	1246.4	1179.5	1146.4	1121.5
30°	1410.4	1406.8	1376.8	1373.4	1337.1	1278.8	1248.3	1220.9	1149.0	1111.7	1086.6
32.5°	1391.1	1387.7	1357.5	1354.4	1317.5	1254.8	1222.9	1194.6	1115.7	1074.5	1049.3
35°	1364.5	1362.5	1333.1	1329.8	1292.3	1227.3	1193.5	1162.4	1081.0	1034.5	1010.4
37.5°	1329.5	1329.5	1301.2	1297.6	1260.9	1193.8	1160.4	1127.4	1041.8	992.5	968.7
40°	1288.9	1292.6	1263.7	1260.1	1224.5	1157.6	1121.3	1086.6	999.5	948.3	925.1
42.5°	1240.2	1243.6	1219.5	1216.1	1182.8	1115.9	1082.1	1044.3	955.3	903.2	879.1
45°	1186.5	1191.0	1169.4	1166.9	1135.8	1070.3	1037.8	999.5	909.1	856.2	832.7
47.5°	1126.6	1132.5	1113.7	1112.3	1083.5	1023.6	989.7	950.8	860.7	807.2	785.1
50°	1059.4	1067.8	1052.4	1052.4	1026.7	967.0	937.6	898.7	810.3	756.8	735.0
52.5°	987.5	998.1	986.6	986.9	965.9	912.5	881.9	843.9	757.7	705.1	684.9
55°	913.0	923.4	916.1	917.2	900.7	852.0	824.3	786.5	703.9	652.7	633.7
57.5°	835.2	846.4	841.6	843.9	832.4	788.7	759.9	726.9	648.5	597.9	581.6
60°	757.1	767.8	765.2	768.3	761.0	723.2	696.9	662.8	592.8	544.1	529.8
62.5°	678.2	688.0	687.4	690.8	686.9	655.5	632.0	602.9	535.2	490.4	477.2
65°	600.9	609.3	608.8	612.4	611.6	586.4	565.1	538.5	477.5	436.4	424.9
67.5°	525.9	532.9	531.0	535.2	536.3	516.1	497.7	473.9	422.6	382.6	372.8
70°	452.6	457.3	454.8	457.6	460.1	445.0	429.4	408.4	364.1	328.9	320.8
72.5°	380.7	384.0	380.1	382.9	385.1	374.2	361.3	343.2	306.5	276.0	269.3
75°	311.0	315.7	307.6	310.4	312.1	301.2	293.6	278.8	247.1	223.6	219.2
77.5°	243.5	246.3	241.8	240.7	241.8	234.0	228.1	216.6	192.8	173.5	170.7
80°	179.1	180.8	176.3	175.2	176.1	170.5	166.0	157.6	140.8	126.2	125.1
82.5°	120.1	120.9	117.0	115.9	116.4	114.8	109.4	103.6	95.7	83.4	83.1
85°	68.6	68.6	65.8	64.7	65.2	62.4	60.5	57.4	54.3	45.9	46.5
87.5°	25.2	25.2	23.8	23.5	26.3	23.2	22.4	21.0	21.8	17.4	18.5
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°	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5	1280.5
2.5°	1286.1	1283.3	1280.8	1272.1	1275.8	1266.8	1266.2	1262.9	1260.4	1255.6	1261.8
5°	1281.9	1276.3	1269.0	1258.7	1261.8	1251.1	1248.9	1245.0	1241.6	1235.5	1240.2
7.5°	1275.2	1266.0	1254.5	1241.3	1245.5	1232.4	1229.0	1224.8	1222.0	1214.7	1218.9
10°	1265.4	1252.2	1238.8	1222.9	1225.9	1211.7	1207.5	1203.0	1200.5	1194.0	1198.2
12.5°	1250.3	1234.3	1216.1	1198.8	1202.1	1188.7	1183.1	1178.4	1177.5	1172.2	1177.2
15°	1230.7	1208.6	1189.8	1171.4	1175.3	1159.6	1157.1	1152.3	1153.7	1150.1	1156.2
17.5°	1205.8	1180.3	1159.9	1140.0	1143.9	1130.8	1128.8	1126.6	1128.0	1127.4	1134.1
20°	1177.8	1149.8	1126.3	1106.7	1108.9	1098.6	1099.4	1098.9	1101.7	1104.7	1114.0
22.5°	1146.2	1114.5	1089.9	1069.8	1073.1	1064.2	1068.1	1069.2	1074.0	1081.0	1092.7
25°	1110.6	1076.8	1051.0	1032.0	1035.1	1029.2	1035.9	1038.7	1046.2	1058.0	1070.0
27.5°	1073.4	1037.6	1010.1	991.9	997.8	991.9	1002.0	1007.6	1019.1	1032.0	1046.8
30°	1033.9	996.7	968.4	952.2	957.8	952.5	968.7	976.3	987.7	1005.4	1023.0
32.5°	992.5	953.3	925.6	913.0	916.9	916.1	934.3	942.7	958.1	978.2	997.0
35°	950.0	909.1	881.1	870.5	875.2	876.3	898.2	908.0	924.8	949.1	969.3
37.5°	906.0	864.3	836.9	828.2	832.4	836.6	862.1	871.9	890.9	917.5	939.6
40°	860.4	818.7	791.8	784.8	789.0	793.5	821.2	834.6	855.4	884.2	908.3
42.5°	814.2	772.5	746.5	741.4	745.6	754.3	783.7	796.3	818.1	850.0	876.6
45°	767.2	723.8	701.1	697.2	701.7	711.8	740.6	755.7	778.9	813.9	842.5
47.5°	719.6	677.3	655.8	653.3	657.8	668.9	700.9	714.6	739.2	776.4	807.2
50°	671.5	630.3	609.6	608.8	613.0	625.0	655.5	671.7	697.2	738.9	770.5
52.5°	622.8	583.3	564.5	564.5	568.5	580.8	611.6	628.4	654.7	698.6	733.6
55°	574.1	536.6	518.6	520.0	525.6	536.3	566.2	583.9	610.5	656.1	693.0
57.5°	525.4	489.8	473.6	475.5	480.9	491.5	520.9	540.8	564.8	612.1	649.9
60°	477.2	443.6	429.4	431.6	436.4	447.0	477.5	494.6	518.6	566.8	604.6
62.5°	428.5	398.0	384.6	387.4	391.6	402.2	431.0	447.6	471.3	518.6	556.7
65°	380.4	352.1	340.6	343.4	347.3	357.1	384.3	400.2	422.9	469.1	505.5
67.5°	332.8	307.0	297.5	300.3	303.4	312.6	335.0	352.4	373.7	417.6	452.0
70°	285.8	262.8	254.4	257.2	260.0	268.4	288.0	304.0	323.6	363.9	395.8
72.5°	239.3	216.9	212.7	215.2	217.5	224.8	243.5	256.1	273.2	309.0	336.4
75°	194.0	174.7	171.9	174.4	176.3	181.9	197.6	208.5	222.8	253.9	276.3
77.5°	150.3	134.1	132.9	134.9	136.9	140.8	153.1	164.6	175.8	198.7	218.6
80°	109.4	96.3	96.3	98.2	97.7	102.4	111.1	120.4	128.5	145.0	159.5
82.5°	72.2	61.9	63.3	64.7	65.5	67.5	72.8	79.8	84.8	94.9	104.4
85°	40.0	33.0	34.4	35.5	35.0	37.2	40.0	44.2	46.7	51.5	56.5
87.5°	14.8	12.3	12.6	13.4	14.0	15.1	15.1	17.6	17.9	18.5	19.6
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°	1280.5	1280.5	1280.5
2.5°	1250.0	1256.7	1261.8
5°	1228.5	1234.1	1238.5
7.5°	1207.5	1212.5	1216.4
10°	1187.6	1193.2	1196.0
12.5°	1167.2	1173.6	1175.8
15°	1147.0	1153.4	1156.2
17.5°	1126.3	1134.7	1137.8
20°	1107.0	1117.6	1120.1
22.5°	1087.4	1098.3	1101.4
25°	1066.1	1079.0	1082.1
27.5°	1043.4	1058.8	1061.9
30°	1020.8	1037.6	1040.6
32.5°	996.4	1014.6	1017.4
35°	971.0	989.1	992.5
37.5°	942.7	962.6	969.3
40°	913.3	934.8	941.8
42.5°	882.5	906.0	913.3
45°	849.5	875.2	883.6
47.5°	816.2	845.3	852.6
50°	780.1	811.1	819.8
52.5°	742.3	776.1	784.8
55°	703.1	737.2	746.8
57.5°	660.6	695.8	705.9
60°	616.0	651.3	660.8
62.5°	570.4	602.3	611.6
65°	519.5	549.4	557.8
67.5°	465.5	492.9	499.9
70°	408.1	431.9	438.0
72.5°	348.2	364.7	372.8
75°	286.3	299.5	305.6
77.5°	224.2	233.4	238.5
80°	163.5	168.8	173.0
82.5°	106.9	109.2	112.2
85°	57.7	57.7	59.6
87.5°	19.6	18.8	19.6
90°	0.0	0.0	0.0

(END OF REPORT)