

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: P835357

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835357
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-LD4-3LO-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

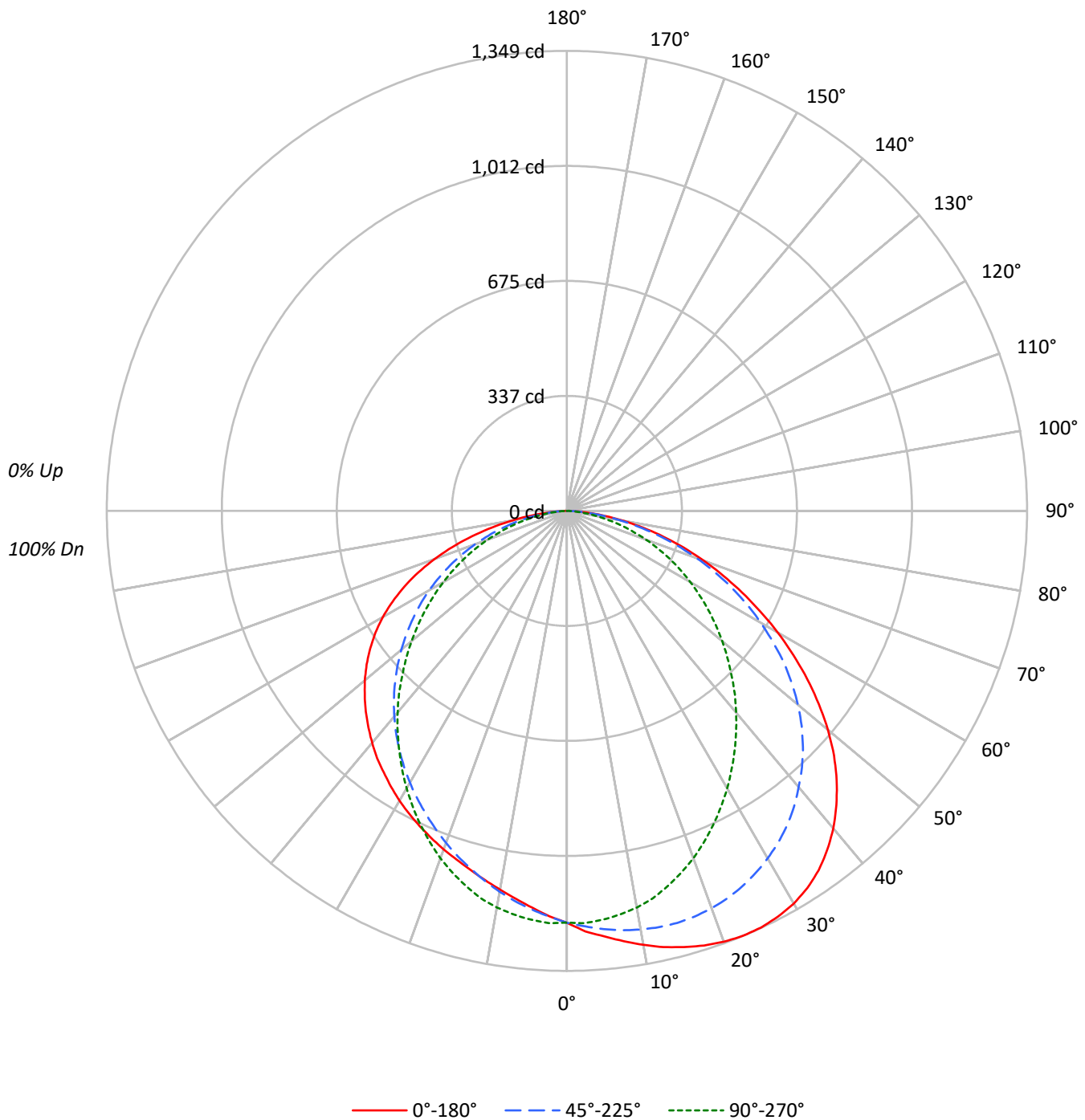
Lumens per Lamp: N/A
Luminaire Lumens: 3551.6 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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°	3249	3249	3249
5°	3383	3251	3155
10°	3531	3226	3081
15°	3689	3175	3037
20°	3851	3105	3025
25°	4002	3015	3029
30°	4132	2920	3049
35°	4227	2816	3074
40°	4269	2712	3120
45°	4257	2597	3171
50°	4182	2488	3236
55°	4039	2373	3303
60°	3842	2251	3353
65°	3608	2114	3349
70°	3357	1950	3249
75°	3048	1712	2996
80°	2617	1407	2528
85°	1998	960	1735

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	3.2
10°-20°	330.7	9.3
20°-30°	506.6	14.3
30°-40°	618.3	17.4
40°-50°	646.6	18.2
50°-60°	585.2	16.5
60°-70°	443.2	12.5
70°-80°	247.0	7.0
80°-90°	59.6	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°	951.8	26.8
0°-40°	1570.1	44.2
0°-60°	2801.8	78.9
0°-90°	3551.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3551.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1207	1207	1207	1207	1207	
5°	1252	1231	1203	1174	1168	121
15°	1324	1251	1140	1086	1090	376
25°	1348	1215	1015	979	1020	622
35°	1287	1125	857	856	936	803
45°	1119	979	682	713	833	861
55°	861	777	506	550	704	768
65°	567	533	332	377	526	562
75°	293	277	165	197	288	311
85°	65	57	31	42	56	78
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°	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4
2.5°	1234.0	1228.2	1223.5	1225.3	1226.4	1222.7	1219.5	1220.1	1216.9	1223.0	1208.7
5°	1252.3	1247.0	1241.4	1243.5	1241.4	1235.9	1231.4	1230.1	1221.6	1225.1	1210.6
7.5°	1272.6	1266.8	1258.6	1261.0	1256.5	1246.2	1240.4	1237.0	1224.0	1224.3	1208.2
10°	1292.1	1287.1	1276.0	1277.6	1269.4	1255.7	1246.5	1241.7	1223.5	1220.9	1204.2
12.5°	1310.3	1303.5	1291.6	1292.4	1280.5	1262.3	1250.4	1243.5	1219.8	1211.9	1195.5
15°	1324.3	1317.7	1303.5	1303.2	1287.9	1264.1	1250.7	1241.2	1211.1	1198.7	1181.5
17.5°	1336.2	1330.1	1312.4	1311.9	1293.4	1263.3	1247.2	1235.4	1198.4	1183.1	1164.1
20°	1344.6	1338.6	1318.8	1316.9	1294.7	1259.4	1240.1	1225.1	1181.8	1163.6	1142.5
22.5°	1348.6	1342.5	1320.1	1317.4	1291.6	1251.5	1229.8	1212.1	1162.8	1139.0	1117.1
25°	1347.8	1342.0	1316.7	1314.0	1285.5	1239.6	1215.3	1195.0	1138.8	1110.8	1089.2
27.5°	1341.2	1336.7	1310.1	1306.6	1274.4	1223.5	1197.6	1175.2	1112.1	1081.0	1057.5
30°	1329.8	1326.4	1298.2	1295.0	1260.7	1205.8	1177.0	1151.2	1083.4	1048.3	1024.5
32.5°	1311.6	1308.5	1280.0	1277.1	1242.2	1183.1	1153.0	1126.4	1051.9	1013.2	989.4
35°	1286.6	1284.7	1257.0	1253.8	1218.5	1157.2	1125.3	1096.0	1019.2	975.4	952.7
37.5°	1253.6	1253.6	1226.9	1223.5	1188.9	1125.6	1094.2	1063.0	982.3	935.8	913.4
40°	1215.3	1218.7	1191.6	1188.1	1154.6	1091.5	1057.2	1024.5	942.4	894.1	872.2
42.5°	1169.4	1172.6	1149.9	1146.7	1115.3	1052.2	1020.3	984.7	900.7	851.6	828.9
45°	1118.7	1122.9	1102.6	1100.2	1071.0	1009.2	978.6	942.4	857.2	807.3	785.1
47.5°	1062.2	1067.8	1050.1	1048.8	1021.6	965.1	933.2	896.5	811.5	761.1	740.3
50°	998.9	1006.8	992.3	992.3	968.0	911.8	884.1	847.4	764.0	713.6	693.0
52.5°	931.1	941.1	930.3	930.5	910.8	860.3	831.6	795.7	714.4	664.8	645.8
55°	860.9	870.6	863.8	864.8	849.3	803.3	777.2	741.6	663.7	615.4	597.5
57.5°	787.5	798.1	793.6	795.7	784.9	743.7	716.5	685.4	611.5	563.7	548.4
60°	713.9	723.9	721.5	724.4	717.6	681.9	657.1	624.9	559.0	513.0	499.6
62.5°	639.5	648.7	648.2	651.3	647.6	618.1	595.9	568.5	504.6	462.4	450.0
65°	566.6	574.5	574.0	577.4	576.6	552.9	532.8	507.8	450.2	411.4	400.6
67.5°	495.9	502.5	500.6	504.6	505.7	486.7	469.2	446.8	398.5	360.8	351.5
70°	426.7	431.2	428.9	431.5	433.9	419.6	404.8	385.0	343.3	310.1	302.4
72.5°	358.9	362.1	358.4	361.0	363.1	352.8	340.7	323.6	289.0	260.2	253.9
75°	293.2	297.7	290.0	292.7	294.3	284.0	276.8	262.9	233.0	210.9	206.6
77.5°	229.6	232.2	228.0	227.0	228.0	220.6	215.1	204.3	181.8	163.6	161.0
80°	168.9	170.5	166.3	165.2	166.0	160.7	156.5	148.6	132.7	119.0	118.0
82.5°	113.2	114.0	110.3	109.3	109.8	108.2	103.2	97.6	90.3	78.6	78.4
85°	64.7	64.7	62.0	61.0	61.5	58.9	57.0	54.1	51.2	43.3	43.8
87.5°	23.8	23.8	22.4	22.2	24.8	21.9	21.1	19.8	20.6	16.4	17.4
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°	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4	1207.4
2.5°	1212.7	1210.0	1207.7	1199.5	1202.9	1194.5	1193.9	1190.8	1188.4	1183.9	1189.7
5°	1208.7	1203.4	1196.6	1186.8	1189.7	1179.7	1177.6	1173.9	1170.7	1164.9	1169.4
7.5°	1202.4	1193.7	1182.8	1170.4	1174.4	1162.0	1158.8	1154.9	1152.2	1145.4	1149.3
10°	1193.1	1180.7	1168.1	1153.0	1155.9	1142.5	1138.5	1134.3	1131.9	1125.8	1129.8
12.5°	1178.9	1163.8	1146.7	1130.3	1133.5	1120.8	1115.6	1111.1	1110.3	1105.3	1110.0
15°	1160.4	1139.6	1121.9	1104.5	1108.2	1093.4	1091.0	1086.5	1087.8	1084.4	1090.2
17.5°	1136.9	1112.9	1093.6	1074.9	1078.6	1066.2	1064.4	1062.2	1063.6	1063.0	1069.4
20°	1110.5	1084.1	1062.0	1043.5	1045.6	1035.9	1036.6	1036.1	1038.8	1041.7	1050.4
22.5°	1080.7	1050.9	1027.7	1008.7	1011.8	1003.4	1007.1	1008.1	1012.6	1019.2	1030.3
25°	1047.2	1015.3	991.0	973.0	975.9	970.4	976.7	979.4	986.5	997.6	1008.9
27.5°	1012.1	978.3	952.5	935.3	940.8	935.3	944.8	950.1	960.9	973.0	987.0
30°	974.9	939.8	913.1	897.8	903.1	898.1	913.4	920.5	931.3	948.0	964.6
32.5°	935.8	898.9	872.8	860.9	864.6	863.8	880.9	888.9	903.4	922.4	940.1
35°	895.7	857.2	830.8	820.8	825.2	826.3	846.9	856.1	872.0	894.9	913.9
37.5°	854.3	815.0	789.1	780.9	784.9	788.8	812.8	822.1	840.0	865.1	885.9
40°	811.3	771.9	746.6	740.0	744.0	748.2	774.3	787.0	806.5	833.7	856.4
42.5°	767.7	728.4	703.9	699.1	703.1	711.2	739.0	750.8	771.4	801.5	826.6
45°	723.4	682.5	661.1	657.4	661.6	671.1	698.3	712.6	734.5	767.5	794.4
47.5°	678.5	638.7	618.3	616.0	620.2	630.7	660.8	673.8	697.0	732.1	761.1
50°	633.1	594.3	574.8	574.0	578.0	589.3	618.1	633.4	657.4	696.7	726.5
52.5°	587.2	550.0	532.3	532.3	536.0	547.6	576.6	592.5	617.3	658.7	691.7
55°	541.3	505.9	489.0	490.3	495.6	505.7	533.9	550.5	575.6	618.6	653.4
57.5°	495.4	461.8	446.5	448.4	453.4	463.4	491.1	509.9	532.6	577.2	612.8
60°	450.0	418.3	404.8	407.0	411.4	421.5	450.2	466.3	489.0	534.4	570.0
62.5°	404.0	375.3	362.6	365.3	369.2	379.2	406.4	422.0	444.4	489.0	524.9
65°	358.7	332.0	321.2	323.8	327.5	336.8	362.3	377.4	398.8	442.3	476.6
67.5°	313.8	289.5	280.5	283.2	286.1	294.8	315.9	332.3	352.3	393.8	426.2
70°	269.5	247.8	239.9	242.5	245.2	253.1	271.6	286.6	305.1	343.1	373.2
72.5°	225.6	204.5	200.6	202.9	205.1	211.9	229.6	241.5	257.6	291.4	317.2
75°	182.9	164.7	162.0	164.4	166.3	171.5	186.3	196.6	210.1	239.4	260.5
77.5°	141.7	126.4	125.4	127.2	129.1	132.7	144.4	155.2	165.7	187.4	206.1
80°	103.2	90.8	90.8	92.6	92.1	96.6	104.8	113.5	121.1	136.7	150.4
82.5°	68.1	58.3	59.6	61.0	61.8	63.6	68.6	75.2	80.0	89.5	98.4
85°	37.7	31.1	32.5	33.5	33.0	35.1	37.7	41.7	44.1	48.6	53.3
87.5°	14.0	11.6	11.9	12.7	13.2	14.3	14.3	16.6	16.9	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):

	160°	170°	180°
0°	1207.4	1207.4	1207.4
2.5°	1178.6	1185.0	1189.7
5°	1158.3	1163.6	1167.8
7.5°	1138.5	1143.3	1147.0
10°	1119.8	1125.1	1127.7
12.5°	1100.5	1106.6	1108.7
15°	1081.5	1087.6	1090.2
17.5°	1062.0	1069.9	1072.8
20°	1043.8	1053.8	1056.2
22.5°	1025.3	1035.6	1038.5
25°	1005.2	1017.4	1020.3
27.5°	983.9	998.4	1001.3
30°	962.5	978.3	981.2
32.5°	939.5	956.7	959.3
35°	915.5	932.7	935.8
37.5°	888.9	907.6	913.9
40°	861.1	881.5	888.1
42.5°	832.1	854.3	861.1
45°	801.0	825.2	833.2
47.5°	769.6	797.0	803.9
50°	735.5	764.8	773.0
52.5°	699.9	731.8	740.0
55°	662.9	695.1	704.1
57.5°	622.8	656.1	665.6
60°	580.9	614.1	623.1
62.5°	537.9	567.9	576.6
65°	489.8	518.1	526.0
67.5°	438.9	464.7	471.3
70°	384.8	407.2	413.0
72.5°	328.3	343.9	351.5
75°	270.0	282.4	288.2
77.5°	211.4	220.1	224.9
80°	154.1	159.1	163.1
82.5°	100.8	102.9	105.8
85°	54.4	54.4	56.2
87.5°	18.5	17.7	18.5
90°	0.0	0.0	0.0

(END OF REPORT)