

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: P835211

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835211
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-LD4-2STD-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

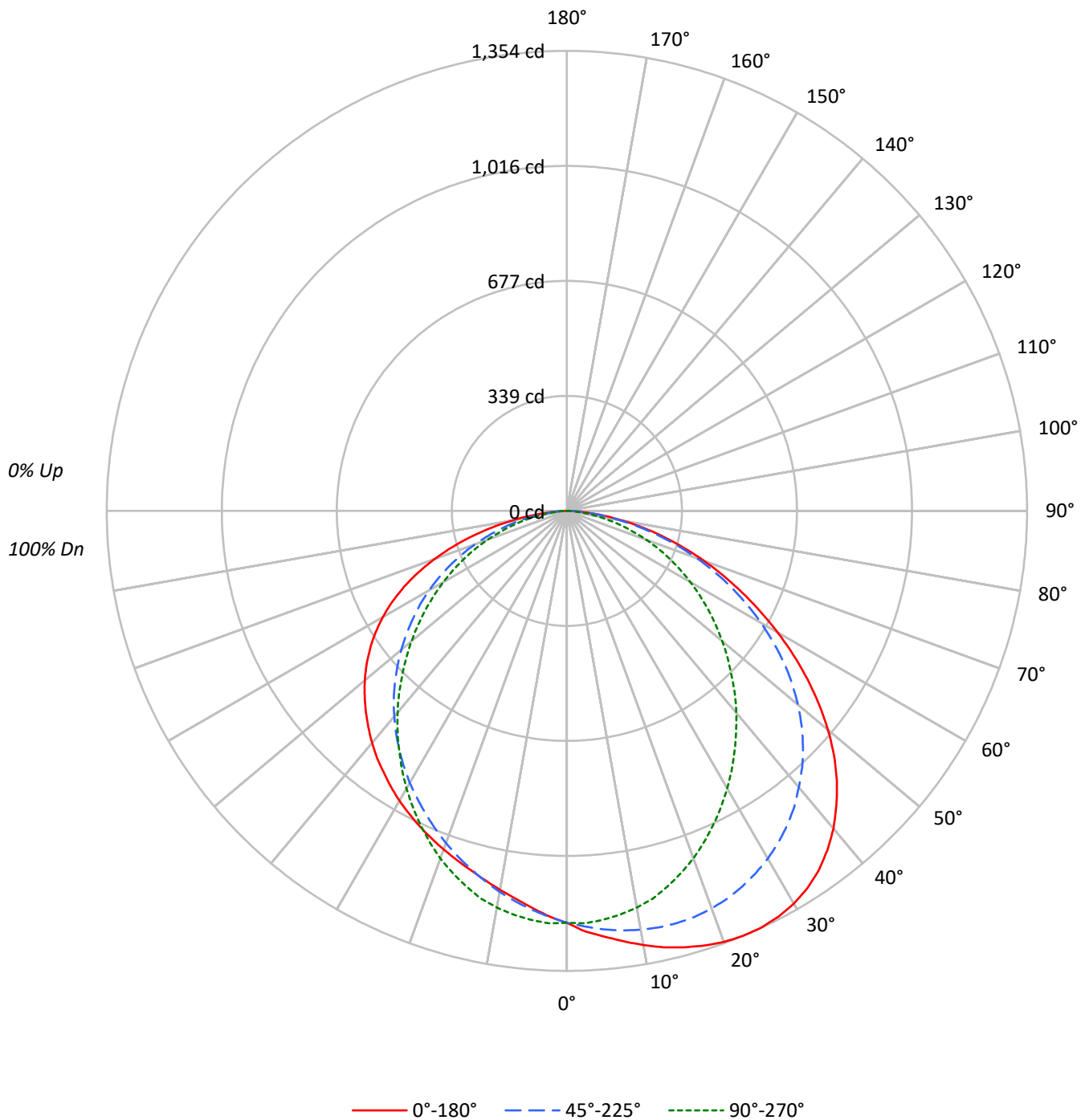
Lumens per Lamp: N/A
Luminaire Lumens: 3565.9 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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	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°	3262	3262	3262
5°	3396	3264	3167
10°	3545	3239	3094
15°	3704	3188	3049
20°	3866	3117	3037
25°	4018	3027	3042
30°	4149	2932	3061
35°	4244	2827	3087
40°	4286	2723	3132
45°	4274	2608	3183
50°	4199	2498	3249
55°	4055	2383	3317
60°	3858	2260	3367
65°	3622	2122	3363
70°	3371	1958	3263
75°	3061	1719	3009
80°	2628	1413	2538
85°	2004	966	1741

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.0	3.2
10°-20°	332.0	9.3
20°-30°	508.7	14.3
30°-40°	620.8	17.4
40°-50°	649.2	18.2
50°-60°	587.5	16.5
60°-70°	445.0	12.5
70°-80°	248.0	7.0
80°-90°	59.8	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°	955.7	26.8
0°-40°	1576.4	44.2
0°-60°	2813.1	78.9
0°-90°	3565.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3565.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1212	1212	1212	1212	1212	
5°	1257	1236	1208	1179	1172	121
15°	1330	1256	1144	1091	1095	377
25°	1353	1220	1019	983	1024	624
35°	1292	1130	861	860	940	807
45°	1123	982	685	715	836	864
55°	864	780	508	553	707	771
65°	569	535	333	379	528	564
75°	294	278	165	197	289	312
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°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1239.0	1233.2	1228.4	1230.3	1231.3	1227.6	1224.4	1225.0	1221.8	1227.9	1213.6
5°	1257.3	1252.0	1246.4	1248.6	1246.4	1240.9	1236.4	1235.0	1226.6	1230.0	1215.4
7.5°	1277.7	1271.9	1263.7	1266.0	1261.5	1251.2	1245.4	1241.9	1229.0	1229.2	1213.1
10°	1297.3	1292.3	1281.2	1282.7	1274.5	1260.7	1251.5	1246.7	1228.4	1225.8	1209.1
12.5°	1315.6	1308.7	1296.8	1297.6	1285.7	1267.4	1255.4	1248.6	1224.7	1216.8	1200.3
15°	1329.6	1323.0	1308.7	1308.4	1293.1	1269.2	1255.7	1246.2	1216.0	1203.5	1186.3
17.5°	1341.6	1335.5	1317.7	1317.2	1298.6	1268.4	1252.3	1240.3	1203.2	1187.9	1168.8
20°	1350.0	1344.0	1324.1	1322.2	1300.0	1264.5	1245.1	1230.0	1186.6	1168.3	1147.1
22.5°	1354.0	1347.9	1325.4	1322.8	1296.8	1256.5	1234.8	1217.0	1167.5	1143.6	1121.6
25°	1353.2	1347.4	1322.0	1319.3	1290.7	1244.6	1220.2	1199.8	1143.4	1115.3	1093.5
27.5°	1346.6	1342.1	1315.3	1311.9	1279.6	1228.4	1202.5	1179.9	1116.6	1085.3	1061.8
30°	1335.2	1331.8	1303.4	1300.2	1265.8	1210.7	1181.8	1155.8	1087.7	1052.5	1028.6
32.5°	1316.9	1313.7	1285.1	1282.2	1247.2	1187.9	1157.7	1130.9	1056.2	1017.2	993.4
35°	1291.8	1289.9	1262.1	1258.9	1223.4	1161.9	1129.9	1100.4	1023.3	979.3	956.6
37.5°	1258.6	1258.6	1231.9	1228.4	1193.7	1130.1	1098.6	1067.3	986.2	939.6	917.1
40°	1220.2	1223.7	1196.4	1192.9	1159.3	1095.9	1061.5	1028.6	946.2	897.7	875.7
42.5°	1174.1	1177.3	1154.5	1151.3	1119.8	1056.5	1024.4	988.6	904.4	855.1	832.3
45°	1123.2	1127.5	1107.1	1104.7	1075.3	1013.3	982.5	946.2	860.6	810.6	788.3
47.5°	1066.5	1072.1	1054.3	1053.0	1025.7	969.0	936.9	900.1	814.8	764.2	743.3
50°	1002.9	1010.9	996.3	996.3	971.9	915.5	887.7	850.8	767.1	716.5	695.8
52.5°	934.8	944.9	934.0	934.3	914.4	863.8	834.9	798.9	717.3	667.5	648.4
55°	864.3	874.2	867.3	868.3	852.7	806.6	780.3	744.6	666.4	617.9	599.9
57.5°	790.7	801.3	796.8	798.9	788.0	746.7	719.4	688.1	613.9	566.0	550.6
60°	716.8	726.8	724.4	727.4	720.5	684.7	659.8	627.5	561.2	515.1	501.6
62.5°	642.0	651.3	650.8	654.0	650.2	620.6	598.3	570.8	506.6	464.2	451.8
65°	568.9	576.8	576.3	579.8	579.0	555.1	535.0	509.8	452.0	413.1	402.2
67.5°	497.9	504.5	502.7	506.6	507.7	488.6	471.1	448.6	400.1	362.2	352.9
70°	428.5	433.0	430.6	433.2	435.6	421.3	406.5	386.6	344.7	311.3	303.7
72.5°	360.4	363.5	359.8	362.5	364.6	354.3	342.1	324.9	290.1	261.3	254.9
75°	294.4	298.9	291.2	293.9	295.4	285.1	278.0	263.9	234.0	211.7	207.5
77.5°	230.5	233.2	228.9	227.9	228.9	221.5	216.0	205.1	182.6	164.3	161.6
80°	169.6	171.2	166.9	165.9	166.7	161.4	157.1	149.2	133.3	119.5	118.4
82.5°	113.7	114.5	110.8	109.7	110.2	108.6	103.6	98.0	90.6	79.0	78.7
85°	64.9	64.9	62.3	61.2	61.7	59.1	57.2	54.3	51.4	43.5	44.0
87.5°	23.8	23.8	22.5	22.3	24.9	22.0	21.2	19.9	20.7	16.4	17.5
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°	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3	1212.3
2.5°	1217.6	1214.9	1212.5	1204.3	1207.8	1199.3	1198.7	1195.6	1193.2	1188.7	1194.5
5°	1213.6	1208.3	1201.4	1191.6	1194.5	1184.4	1182.3	1178.6	1175.4	1169.6	1174.1
7.5°	1207.2	1198.5	1187.6	1175.2	1179.1	1166.7	1163.5	1159.5	1156.9	1150.0	1154.0
10°	1197.9	1185.5	1172.8	1157.7	1160.6	1147.1	1143.1	1138.9	1136.5	1130.4	1134.4
12.5°	1183.6	1168.5	1151.3	1134.9	1138.1	1125.3	1120.0	1115.5	1114.7	1109.7	1114.5
15°	1165.1	1144.2	1126.4	1108.9	1112.6	1097.8	1095.4	1090.9	1092.2	1088.8	1094.6
17.5°	1141.5	1117.4	1098.1	1079.2	1083.0	1070.5	1068.6	1066.5	1067.8	1067.3	1073.7
20°	1115.0	1088.5	1066.3	1047.7	1049.8	1040.0	1040.8	1040.3	1042.9	1045.9	1054.6
22.5°	1085.1	1055.1	1031.8	1012.7	1015.9	1007.4	1011.1	1012.2	1016.7	1023.3	1034.5
25°	1051.4	1019.4	995.0	977.0	979.9	974.3	980.7	983.3	990.5	1001.6	1013.0
27.5°	1016.2	982.3	956.3	939.1	944.6	939.1	948.6	953.9	964.8	977.0	991.0
30°	978.8	943.6	916.8	901.4	906.7	901.7	917.1	924.2	935.1	951.8	968.5
32.5°	939.6	902.5	876.3	864.3	868.1	867.3	884.5	892.4	907.0	926.1	943.8
35°	899.3	860.6	834.1	824.1	828.6	829.6	850.3	859.6	875.5	898.5	917.6
37.5°	857.7	818.2	792.3	784.1	788.0	792.0	816.1	825.4	843.4	868.6	889.5
40°	814.5	775.1	749.6	743.0	747.0	751.2	777.4	790.2	809.8	837.1	859.8
42.5°	770.8	731.3	706.7	701.9	705.9	714.1	741.9	753.9	774.5	804.7	829.9
45°	726.3	685.2	663.8	660.1	664.3	673.8	701.1	715.4	737.4	770.5	797.6
47.5°	681.2	641.2	620.8	618.5	622.7	633.3	663.5	676.5	699.8	735.0	764.2
50°	635.7	596.7	577.1	576.3	580.3	591.7	620.6	635.9	660.1	699.5	729.5
52.5°	589.6	552.2	534.5	534.5	538.2	549.8	579.0	594.9	619.8	661.4	694.5
55°	543.5	508.0	491.0	492.3	497.6	507.7	536.0	552.7	577.9	621.1	656.1
57.5°	497.4	463.7	448.3	450.2	455.2	465.3	493.1	511.9	534.7	579.5	615.3
60°	451.8	420.0	406.5	408.6	413.1	423.2	452.0	468.2	491.0	536.6	572.3
62.5°	405.7	376.8	364.1	366.7	370.7	380.8	408.1	423.7	446.2	491.0	527.0
65°	360.1	333.3	322.5	325.1	328.8	338.1	363.8	378.9	400.4	444.1	478.5
67.5°	315.1	290.7	281.7	284.3	287.2	296.0	317.2	333.6	353.7	395.3	427.9
70°	270.5	248.8	240.9	243.5	246.2	254.1	272.7	287.8	306.3	344.5	374.7
72.5°	226.6	205.4	201.4	203.8	205.9	212.8	230.5	242.5	258.6	292.5	318.5
75°	183.6	165.3	162.7	165.1	166.9	172.2	187.1	197.4	210.9	240.3	261.5
77.5°	142.3	126.9	125.9	127.7	129.6	133.3	144.9	155.8	166.4	188.1	206.9
80°	103.6	91.2	91.2	93.0	92.5	97.0	105.2	113.9	121.6	137.3	151.0
82.5°	68.4	58.6	59.9	61.2	62.0	63.9	68.9	75.5	80.3	89.8	98.8
85°	37.9	31.3	32.6	33.7	33.1	35.2	37.9	41.9	44.3	48.8	53.5
87.5°	14.0	11.7	11.9	12.7	13.2	14.3	14.3	16.7	17.0	17.5	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°	1212.3	1212.3	1212.3
2.5°	1183.4	1189.7	1194.5
5°	1163.0	1168.3	1172.5
7.5°	1143.1	1147.9	1151.6
10°	1124.3	1129.6	1132.2
12.5°	1104.9	1111.0	1113.2
15°	1085.9	1092.0	1094.6
17.5°	1066.3	1074.2	1077.1
20°	1048.0	1058.0	1060.4
22.5°	1029.4	1039.8	1042.7
25°	1009.3	1021.5	1024.4
27.5°	987.8	1002.4	1005.3
30°	966.4	982.3	985.2
32.5°	943.3	960.5	963.2
35°	919.2	936.4	939.6
37.5°	892.4	911.2	917.6
40°	864.6	885.0	891.6
42.5°	835.5	857.7	864.6
45°	804.2	828.6	836.5
47.5°	772.7	800.2	807.1
50°	738.5	767.9	776.1
52.5°	702.7	734.8	743.0
55°	665.6	697.9	707.0
57.5°	625.3	658.7	668.3
60°	583.2	616.6	625.6
62.5°	540.0	570.2	579.0
65°	491.8	520.1	528.1
67.5°	440.7	466.6	473.2
70°	386.3	408.9	414.7
72.5°	329.6	345.3	352.9
75°	271.1	283.5	289.4
77.5°	212.2	221.0	225.8
80°	154.7	159.8	163.8
82.5°	101.2	103.3	106.3
85°	54.6	54.6	56.4
87.5°	18.5	17.8	18.5
90°	0.0	0.0	0.0

(END OF REPORT)