

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: P834183

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834183
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1HI-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

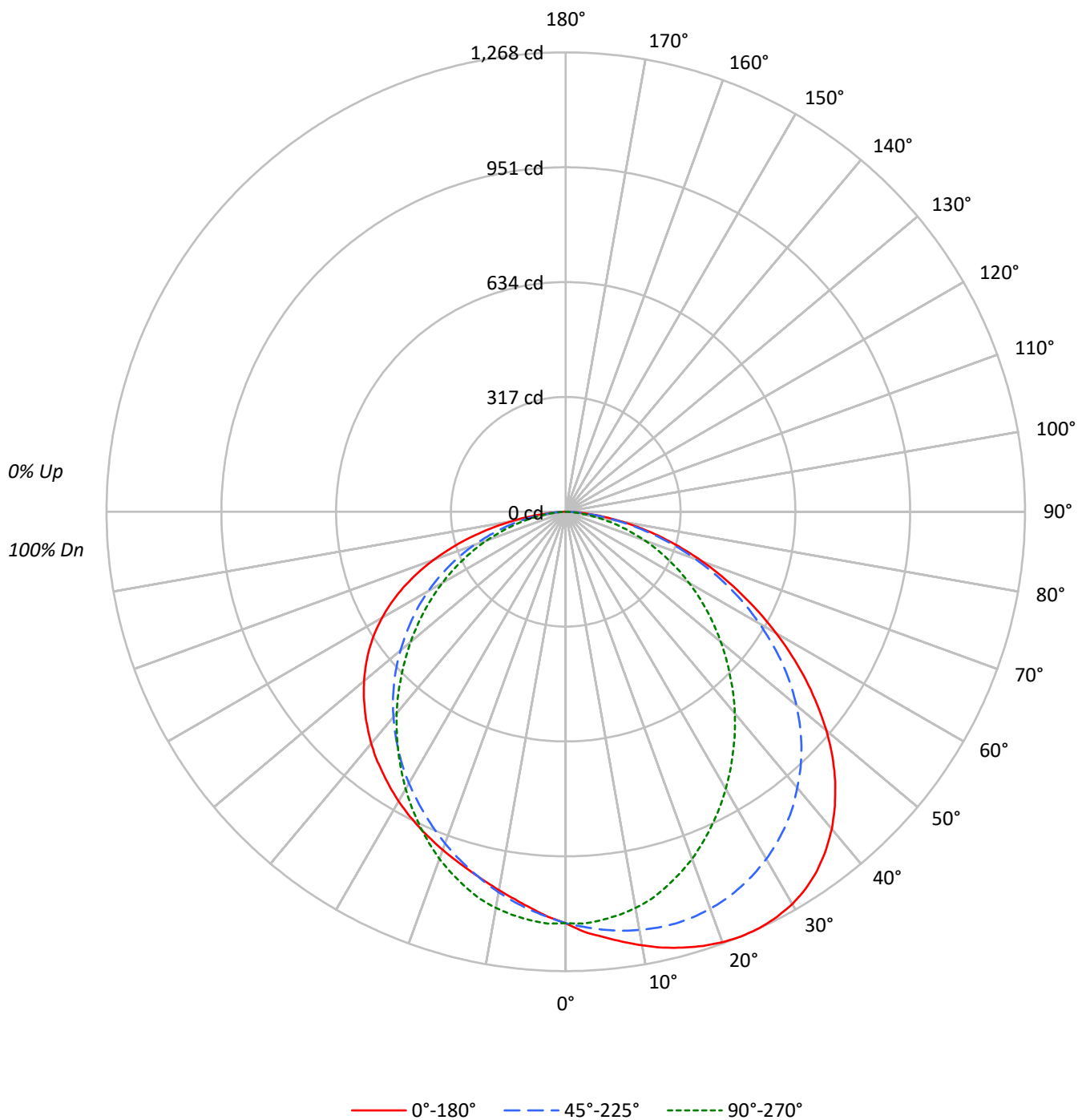
Lumens per Lamp: N/A
Luminaire Lumens: 3340.3 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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°	3056	3056	3056
5°	3182	3057	2967
10°	3321	3034	2898
15°	3470	2986	2857
20°	3621	2920	2844
25°	3764	2835	2849
30°	3886	2747	2867
35°	3975	2648	2892
40°	4015	2550	2934
45°	4004	2443	2982
50°	3933	2340	3044
55°	3799	2232	3107
60°	3613	2117	3154
65°	3393	1988	3150
70°	3158	1834	3056
75°	2868	1611	2818
80°	2462	1323	2377
85°	1877	905	1633

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.7	3.2
10°-20°	311.0	9.3
20°-30°	476.5	14.3
30°-40°	581.5	17.4
40°-50°	608.1	18.2
50°-60°	550.4	16.5
60°-70°	416.8	12.5
70°-80°	232.3	7.0
80°-90°	56.0	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°	895.2	26.8
0°-40°	1476.7	44.2
0°-60°	2635.2	78.9
0°-90°	3340.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3340.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1136	1136	1136	1136	1136	
5°	1178	1158	1132	1104	1098	114
15°	1246	1176	1072	1022	1025	353
25°	1268	1143	955	921	960	585
35°	1210	1058	806	805	880	756
45°	1052	920	642	670	784	810
55°	810	731	476	518	662	723
65°	533	501	312	355	495	529
75°	276	260	155	185	271	292
85°	61	54	29	39	53	73
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°	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6
2.5°	1160.6	1155.2	1150.7	1152.4	1153.4	1150.0	1147.0	1147.5	1144.5	1150.2	1136.8
5°	1177.8	1172.8	1167.6	1169.6	1167.6	1162.4	1158.1	1156.9	1149.0	1152.2	1138.5
7.5°	1196.9	1191.4	1183.7	1185.9	1181.7	1172.0	1166.6	1163.4	1151.2	1151.4	1136.3
10°	1215.2	1210.5	1200.1	1201.6	1193.9	1181.0	1172.3	1167.8	1150.7	1148.2	1132.6
12.5°	1232.4	1225.9	1214.7	1215.5	1204.3	1187.2	1176.0	1169.6	1147.2	1139.8	1124.4
15°	1245.5	1239.3	1225.9	1225.7	1211.3	1188.9	1176.3	1167.3	1139.0	1127.4	1111.2
17.5°	1256.7	1251.0	1234.3	1233.8	1216.5	1188.2	1173.0	1161.9	1127.1	1112.7	1094.9
20°	1264.6	1258.9	1240.3	1238.6	1217.7	1184.5	1166.3	1152.2	1111.5	1094.4	1074.5
22.5°	1268.4	1262.6	1241.5	1239.1	1214.7	1177.0	1156.7	1140.0	1093.6	1071.3	1050.7
25°	1267.6	1262.1	1238.3	1235.8	1209.0	1165.8	1143.0	1123.9	1071.0	1044.7	1024.4
27.5°	1261.4	1257.2	1232.1	1228.9	1198.6	1150.7	1126.4	1105.3	1046.0	1016.7	994.6
30°	1250.7	1247.5	1220.9	1218.0	1185.7	1134.1	1107.0	1082.7	1018.9	985.9	963.5
32.5°	1233.6	1230.6	1203.8	1201.1	1168.3	1112.7	1084.4	1059.4	989.4	952.9	930.5
35°	1210.0	1208.3	1182.2	1179.2	1146.0	1088.4	1058.4	1030.8	958.6	917.4	896.0
37.5°	1179.0	1179.0	1153.9	1150.7	1118.2	1058.6	1029.1	999.8	923.8	880.2	859.1
40°	1143.0	1146.2	1120.7	1117.4	1085.9	1026.6	994.3	963.5	886.4	840.9	820.3
42.5°	1099.8	1102.8	1081.4	1078.5	1048.9	989.6	959.6	926.1	847.1	801.0	779.6
45°	1052.2	1056.1	1037.0	1034.8	1007.2	949.2	920.4	886.4	806.2	759.3	738.4
47.5°	999.0	1004.3	987.6	986.4	960.8	907.7	877.7	843.2	763.2	715.8	696.2
50°	939.5	946.9	933.3	933.3	910.4	857.6	831.5	797.0	718.6	671.2	651.8
52.5°	875.7	885.1	874.9	875.2	856.6	809.2	782.1	748.4	671.9	625.2	607.4
55°	809.7	818.8	812.4	813.4	798.7	755.5	731.0	697.5	624.2	578.8	561.9
57.5°	740.7	750.6	746.4	748.4	738.2	699.5	673.9	644.6	575.1	530.2	515.8
60°	671.4	680.8	678.6	681.3	674.9	641.4	618.0	587.8	525.7	482.5	469.9
62.5°	601.4	610.1	609.6	612.6	609.1	581.3	560.5	534.6	474.6	434.9	423.2
65°	532.9	540.4	539.9	543.1	542.3	520.0	501.1	477.6	423.4	387.0	376.8
67.5°	466.4	472.6	470.9	474.6	475.6	457.7	441.3	420.2	374.8	339.3	330.6
70°	401.4	405.6	403.3	405.8	408.1	394.7	380.8	362.1	322.9	291.6	284.4
72.5°	337.6	340.5	337.1	339.6	341.5	331.9	320.4	304.3	271.8	244.7	238.8
75°	275.8	280.0	272.8	275.3	276.8	267.1	260.4	247.2	219.2	198.3	194.3
77.5°	215.9	218.4	214.5	213.5	214.5	207.5	202.3	192.1	171.0	153.9	151.4
80°	158.9	160.3	156.4	155.4	156.1	151.2	147.2	139.7	124.8	111.9	110.9
82.5°	106.5	107.2	103.8	102.8	103.3	101.8	97.0	91.8	84.9	74.0	73.7
85°	60.8	60.8	58.3	57.3	57.8	55.4	53.6	50.9	48.2	40.7	41.2
87.5°	22.3	22.3	21.1	20.8	23.3	20.6	19.9	18.6	19.4	15.4	16.4
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°	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6	1135.6
2.5°	1140.5	1138.0	1135.8	1128.1	1131.3	1123.4	1122.9	1119.9	1117.7	1113.5	1118.9
5°	1136.8	1131.8	1125.4	1116.2	1118.9	1109.5	1107.5	1104.0	1101.1	1095.6	1099.8
7.5°	1130.8	1122.7	1112.5	1100.8	1104.5	1092.9	1089.9	1086.2	1083.7	1077.2	1081.0
10°	1122.2	1110.5	1098.6	1084.4	1087.2	1074.5	1070.8	1066.8	1064.6	1058.9	1062.6
12.5°	1108.8	1094.6	1078.5	1063.1	1066.1	1054.1	1049.2	1045.0	1044.2	1039.5	1044.0
15°	1091.4	1071.8	1055.1	1038.8	1042.2	1028.3	1026.1	1021.9	1023.1	1019.9	1025.4
17.5°	1069.3	1046.7	1028.6	1011.0	1014.4	1002.8	1001.0	999.0	1000.3	999.8	1005.7
20°	1044.5	1019.6	998.8	981.4	983.4	974.2	975.0	974.5	977.0	979.7	987.9
22.5°	1016.4	988.4	966.5	948.7	951.6	943.7	947.2	948.2	952.4	958.6	969.0
25°	984.9	954.9	932.0	915.1	917.9	912.7	918.6	921.1	927.8	938.2	948.9
27.5°	951.9	920.1	895.8	879.7	884.9	879.7	888.6	893.6	903.7	915.1	928.3
30°	916.9	883.9	858.8	844.4	849.4	844.7	859.1	865.8	875.9	891.6	907.2
32.5°	880.2	845.4	820.8	809.7	813.1	812.4	828.5	836.0	849.6	867.5	884.1
35°	842.4	806.2	781.4	771.9	776.2	777.1	796.5	805.2	820.1	841.7	859.5
37.5°	803.5	766.5	742.1	734.5	738.2	741.9	764.5	773.2	790.1	813.6	833.2
40°	763.0	726.0	702.2	696.0	699.7	703.7	728.2	740.2	758.5	784.1	805.4
42.5°	722.0	685.1	662.0	657.5	661.2	668.9	695.0	706.2	725.5	753.8	777.4
45°	680.3	641.9	621.8	618.3	622.3	631.2	656.8	670.2	690.8	721.8	747.1
47.5°	638.1	600.7	581.6	579.3	583.3	593.2	621.5	633.7	655.5	688.5	715.8
50°	595.5	559.0	540.6	539.9	543.6	554.3	581.3	595.7	618.3	655.3	683.3
52.5°	552.3	517.3	500.6	500.6	504.1	515.0	542.3	557.2	580.6	619.5	650.6
55°	509.1	475.8	459.9	461.2	466.1	475.6	502.1	517.8	541.3	581.8	614.6
57.5°	465.9	434.4	420.0	421.7	426.4	435.9	461.9	479.5	500.9	542.8	576.3
60°	423.2	393.4	380.8	382.7	387.0	396.4	423.4	438.6	459.9	502.6	536.1
62.5°	380.0	353.0	341.0	343.5	347.2	356.7	382.2	396.9	418.0	459.9	493.7
65°	337.3	312.2	302.1	304.6	308.0	316.7	340.8	354.9	375.0	416.0	448.3
67.5°	295.1	272.3	263.8	266.3	269.1	277.2	297.1	312.5	331.4	370.3	400.9
70°	253.4	233.1	225.6	228.1	230.6	238.0	255.4	269.6	286.9	322.7	351.0
72.5°	212.2	192.4	188.6	190.9	192.9	199.3	215.9	227.1	242.3	274.0	298.3
75°	172.0	154.9	152.4	154.6	156.4	161.3	175.2	184.9	197.6	225.1	245.0
77.5°	133.3	118.9	117.9	119.6	121.4	124.8	135.8	145.9	155.9	176.2	193.9
80°	97.0	85.4	85.4	87.1	86.6	90.8	98.5	106.7	113.9	128.6	141.5
82.5°	64.0	54.9	56.1	57.3	58.1	59.8	64.5	70.7	75.2	84.1	92.6
85°	35.5	29.3	30.5	31.5	31.0	33.0	35.5	39.2	41.5	45.7	50.1
87.5°	13.2	10.9	11.2	11.9	12.4	13.4	13.4	15.6	15.9	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):

	160°	170°	180°
0°	1135.6	1135.6	1135.6
2.5°	1108.5	1114.5	1118.9
5°	1089.4	1094.4	1098.3
7.5°	1070.8	1075.2	1078.7
10°	1053.2	1058.1	1060.6
12.5°	1035.0	1040.7	1042.7
15°	1017.2	1022.9	1025.4
17.5°	998.8	1006.2	1009.0
20°	981.7	991.1	993.3
22.5°	964.3	974.0	976.7
25°	945.4	956.8	959.6
27.5°	925.3	939.0	941.7
30°	905.2	920.1	922.8
32.5°	883.6	899.8	902.2
35°	861.0	877.2	880.2
37.5°	836.0	853.6	859.5
40°	809.9	829.0	835.2
42.5°	782.6	803.5	809.9
45°	753.3	776.2	783.6
47.5°	723.8	749.6	756.0
50°	691.8	719.3	727.0
52.5°	658.3	688.3	696.0
55°	623.5	653.8	662.2
57.5°	585.8	617.0	626.0
60°	546.3	577.6	586.0
62.5°	505.9	534.1	542.3
65°	460.7	487.2	494.7
67.5°	412.8	437.1	443.3
70°	361.9	383.0	388.4
72.5°	308.8	323.4	330.6
75°	253.9	265.6	271.0
77.5°	198.8	207.0	211.5
80°	145.0	149.7	153.4
82.5°	94.8	96.8	99.5
85°	51.1	51.1	52.9
87.5°	17.4	16.6	17.4
90°	0.0	0.0	0.0

(END OF REPORT)