

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: P835284

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835284
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-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

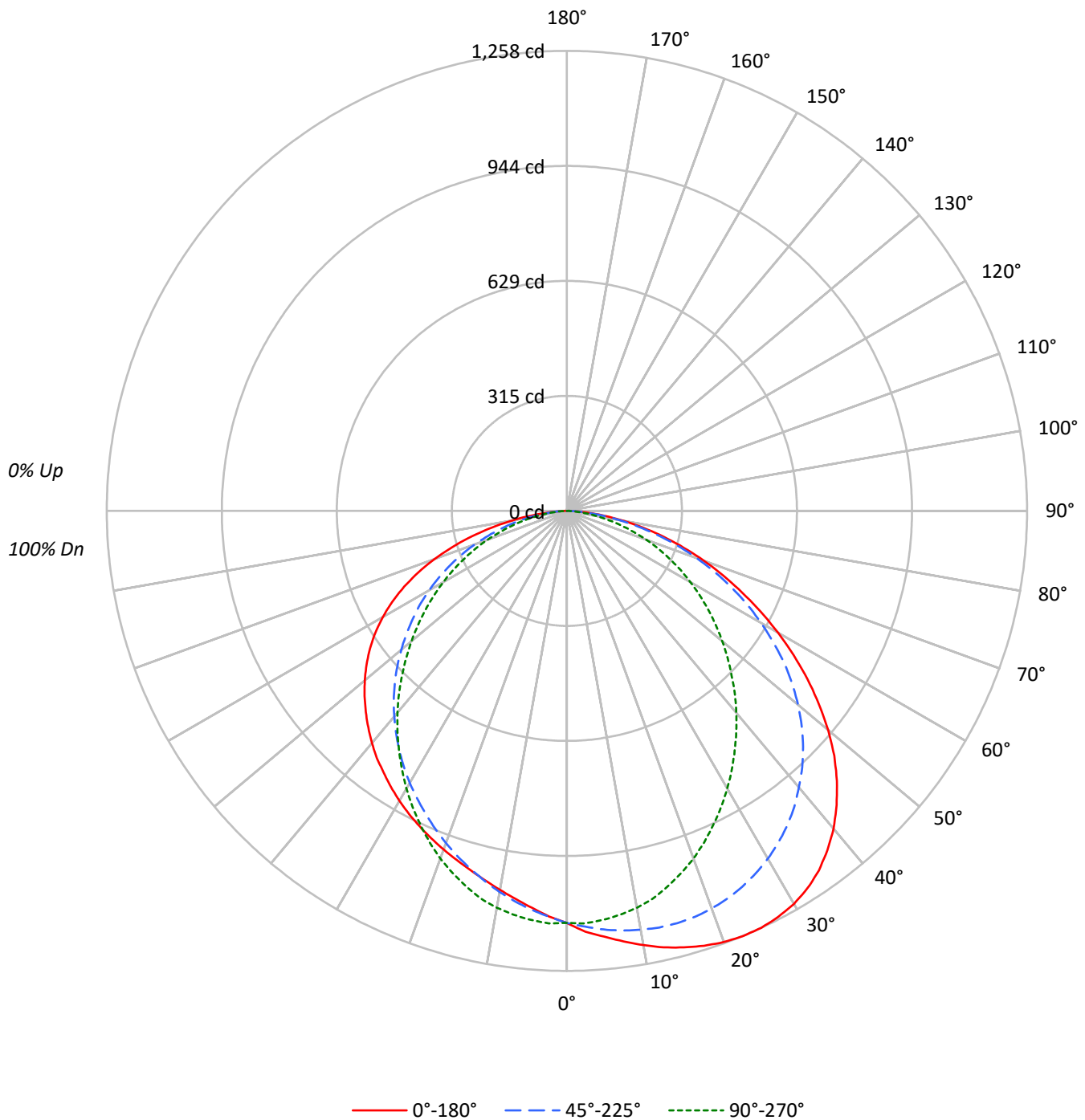
Lumens per Lamp: N/A
Luminaire Lumens: 3314.2 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	3032	3032	3032
5°	3157	3034	2944
10°	3295	3011	2875
15°	3443	2963	2834
20°	3593	2897	2822
25°	3734	2813	2827
30°	3856	2725	2845
35°	3944	2628	2869
40°	3984	2530	2911
45°	3973	2424	2959
50°	3902	2322	3020
55°	3769	2215	3083
60°	3585	2101	3129
65°	3366	1973	3125
70°	3133	1819	3032
75°	2845	1598	2796
80°	2442	1313	2359
85°	1862	898	1621

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	3.2
10°-20°	308.6	9.3
20°-30°	472.8	14.3
30°-40°	576.9	17.4
40°-50°	603.4	18.2
50°-60°	546.1	16.5
60°-70°	413.6	12.5
70°-80°	230.5	7.0
80°-90°	55.6	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°	888.2	26.8
0°-40°	1465.1	44.2
0°-60°	2614.6	78.9
0°-90°	3314.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3314.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1127	1127	1127	1127	1127	
5°	1169	1149	1123	1095	1090	113
15°	1236	1167	1063	1014	1017	350
25°	1258	1134	947	914	952	580
35°	1201	1050	800	799	873	750
45°	1044	913	637	665	778	803
55°	803	725	472	514	657	717
65°	529	497	310	352	491	524
75°	274	258	154	184	269	290
85°	60	53	29	39	52	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°	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7
2.5°	1151.6	1146.1	1141.7	1143.4	1144.4	1141.0	1138.0	1138.5	1135.6	1141.2	1127.9
5°	1168.6	1163.6	1158.5	1160.4	1158.5	1153.3	1149.1	1147.9	1140.0	1143.2	1129.6
7.5°	1187.5	1182.1	1174.5	1176.7	1172.5	1162.9	1157.5	1154.3	1142.2	1142.5	1127.4
10°	1205.7	1201.1	1190.7	1192.2	1184.6	1171.8	1163.1	1158.7	1141.7	1139.3	1123.7
12.5°	1222.7	1216.3	1205.3	1206.0	1194.9	1177.9	1166.8	1160.4	1138.3	1130.9	1115.6
15°	1235.8	1229.6	1216.3	1216.1	1201.8	1179.6	1167.1	1158.2	1130.1	1118.6	1102.6
17.5°	1246.9	1241.2	1224.7	1224.2	1207.0	1178.9	1163.9	1152.8	1118.3	1104.0	1086.3
20°	1254.8	1249.1	1230.6	1228.9	1208.2	1175.2	1157.2	1143.2	1102.8	1085.8	1066.1
22.5°	1258.4	1252.8	1231.9	1229.4	1205.3	1167.8	1147.6	1131.1	1085.1	1062.9	1042.5
25°	1257.7	1252.3	1228.7	1226.2	1199.6	1156.7	1134.1	1115.1	1062.7	1036.6	1016.4
27.5°	1251.6	1247.4	1222.5	1219.3	1189.2	1141.7	1117.6	1096.6	1037.8	1008.7	986.8
30°	1241.0	1237.8	1211.4	1208.5	1176.4	1125.2	1098.4	1074.2	1010.9	978.2	956.0
32.5°	1224.0	1221.0	1194.4	1191.7	1159.2	1104.0	1076.0	1051.1	981.6	945.4	923.3
35°	1200.6	1198.9	1173.0	1170.0	1137.0	1079.9	1050.1	1022.8	951.1	910.2	889.0
37.5°	1169.8	1169.8	1144.9	1141.7	1109.5	1050.3	1021.0	992.0	916.6	873.3	852.3
40°	1134.1	1137.3	1111.9	1108.7	1077.4	1018.6	986.6	956.0	879.4	834.4	813.9
42.5°	1091.2	1094.2	1073.0	1070.1	1040.7	981.9	952.1	918.8	840.5	794.7	773.5
45°	1043.9	1047.9	1028.9	1026.7	999.4	941.7	913.2	879.4	799.9	753.3	732.7
47.5°	991.2	996.4	979.9	978.7	953.3	900.6	870.8	836.6	757.3	710.2	690.8
50°	932.1	939.5	926.0	926.0	903.3	850.9	825.0	790.8	713.0	665.9	646.7
52.5°	868.8	878.2	868.1	868.4	849.9	802.8	776.0	742.5	666.7	620.4	602.6
55°	803.3	812.5	806.0	807.0	792.5	749.7	725.3	692.0	619.4	574.3	557.6
57.5°	734.9	744.7	740.5	742.5	732.4	694.0	668.6	639.6	570.6	526.0	511.8
60°	666.2	675.5	673.3	676.0	669.6	636.4	613.2	583.2	521.6	478.8	466.2
62.5°	596.7	605.3	604.8	607.8	604.4	576.8	556.1	530.5	470.9	431.5	419.9
65°	528.7	536.1	535.6	538.8	538.1	515.9	497.2	473.8	420.1	383.9	373.8
67.5°	462.7	468.9	467.2	470.9	471.9	454.1	437.9	416.9	371.9	336.7	328.0
70°	398.2	402.4	400.2	402.7	404.9	391.6	377.8	359.3	320.4	289.4	282.2
72.5°	334.9	337.9	334.4	336.9	338.9	329.3	317.9	301.9	269.7	242.8	236.9
75°	273.6	277.8	270.7	273.1	274.6	265.0	258.3	245.3	217.5	196.8	192.8
77.5°	214.3	216.7	212.8	211.8	212.8	205.9	200.7	190.6	169.7	152.7	150.2
80°	157.6	159.1	155.2	154.2	154.9	150.0	146.0	138.7	123.9	111.1	110.1
82.5°	105.7	106.4	102.9	102.0	102.4	101.0	96.3	91.1	84.2	73.4	73.1
85°	60.3	60.3	57.9	56.9	57.4	54.9	53.2	50.5	47.8	40.4	40.9
87.5°	22.2	22.2	20.9	20.7	23.1	20.4	19.7	18.5	19.2	15.3	16.3
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°	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7	1126.7
2.5°	1131.6	1129.2	1126.9	1119.3	1122.5	1114.6	1114.1	1111.2	1109.0	1104.8	1110.2
5°	1127.9	1123.0	1116.6	1107.5	1110.2	1100.8	1098.9	1095.4	1092.5	1087.0	1091.2
7.5°	1122.0	1113.9	1103.8	1092.2	1095.9	1084.3	1081.4	1077.7	1075.2	1068.8	1072.5
10°	1113.4	1101.8	1090.0	1076.0	1078.7	1066.1	1062.4	1058.5	1056.3	1050.6	1054.3
12.5°	1100.1	1086.1	1070.1	1054.8	1057.7	1045.9	1041.0	1036.8	1036.1	1031.4	1035.8
15°	1082.9	1063.4	1046.9	1030.6	1034.1	1020.3	1018.1	1013.9	1015.1	1011.9	1017.3
17.5°	1060.9	1038.5	1020.6	1003.1	1006.5	994.9	993.2	991.2	992.5	992.0	997.9
20°	1036.3	1011.7	991.0	973.8	975.7	966.6	967.4	966.9	969.3	972.0	980.2
22.5°	1008.5	980.7	959.0	941.3	944.2	936.3	939.8	940.8	944.9	951.1	961.4
25°	977.2	947.4	924.8	908.0	910.7	905.5	911.5	913.9	920.6	930.9	941.5
27.5°	944.5	912.9	888.8	872.8	878.0	872.8	881.7	886.6	896.7	908.0	921.1
30°	909.7	877.0	852.1	837.8	842.7	838.1	852.3	859.0	869.1	884.6	900.1
32.5°	873.3	838.8	814.4	803.3	806.8	806.0	822.1	829.4	843.0	860.7	877.2
35°	835.8	799.9	775.3	765.9	770.1	771.1	790.3	798.9	813.7	835.1	852.8
37.5°	797.2	760.5	736.4	728.7	732.4	736.1	758.5	767.1	783.9	807.3	826.7
40°	757.0	720.3	696.7	690.5	694.2	698.2	722.6	734.4	752.6	778.0	799.2
42.5°	716.4	679.7	656.8	652.4	656.1	663.7	689.6	700.6	719.9	747.9	771.3
45°	675.0	636.9	616.9	613.5	617.4	626.3	651.6	664.9	685.4	716.2	741.3
47.5°	633.2	596.0	577.0	574.8	578.7	588.6	616.7	628.7	650.4	683.2	710.2
50°	590.8	554.6	536.4	535.6	539.3	549.9	576.8	591.1	613.5	650.2	678.0
52.5°	548.0	513.2	496.7	496.7	500.2	511.0	538.1	552.9	576.0	614.7	645.5
55°	505.1	472.1	456.3	457.6	462.5	471.9	498.2	513.7	537.1	577.3	609.8
57.5°	462.3	431.0	416.7	418.4	423.1	432.5	458.3	475.8	497.0	538.6	571.8
60°	419.9	390.3	377.8	379.8	383.9	393.3	420.1	435.2	456.3	498.7	531.9
62.5°	377.0	350.2	338.4	340.8	344.5	353.9	379.3	393.8	414.7	456.3	489.8
65°	334.7	309.8	299.7	302.2	305.6	314.2	338.1	352.2	372.1	412.8	444.8
67.5°	292.8	270.2	261.8	264.2	267.0	275.1	294.8	310.1	328.8	367.4	397.7
70°	251.4	231.2	223.9	226.3	228.8	236.2	253.4	267.5	284.7	320.2	348.2
72.5°	210.6	190.9	187.2	189.4	191.4	197.8	214.3	225.3	240.4	271.9	296.0
75°	170.7	153.7	151.2	153.4	155.2	160.1	173.9	183.5	196.0	223.4	243.1
77.5°	132.2	118.0	117.0	118.7	120.4	123.9	134.7	144.8	154.7	174.9	192.3
80°	96.3	84.7	84.7	86.4	85.9	90.1	97.8	105.9	113.0	127.6	140.4
82.5°	63.5	54.4	55.7	56.9	57.6	59.4	64.0	70.2	74.6	83.5	91.9
85°	35.2	29.1	30.3	31.3	30.8	32.8	35.2	38.9	41.1	45.3	49.7
87.5°	13.1	10.8	11.1	11.8	12.3	13.3	13.3	15.5	15.8	16.3	17.2
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°	1126.7	1126.7	1126.7
2.5°	1099.9	1105.8	1110.2
5°	1080.9	1085.8	1089.8
7.5°	1062.4	1066.9	1070.3
10°	1044.9	1049.9	1052.3
12.5°	1027.0	1032.6	1034.6
15°	1009.2	1014.9	1017.3
17.5°	991.0	998.4	1001.1
20°	974.0	983.4	985.6
22.5°	956.8	966.4	969.1
25°	938.0	949.4	952.1
27.5°	918.1	931.6	934.4
30°	898.2	912.9	915.6
32.5°	876.7	892.7	895.2
35°	854.3	870.3	873.3
37.5°	829.4	846.9	852.8
40°	803.6	822.5	828.7
42.5°	776.5	797.2	803.6
45°	747.4	770.1	777.5
47.5°	718.1	743.7	750.1
50°	686.4	713.7	721.3
52.5°	653.1	682.9	690.5
55°	618.6	648.7	657.1
57.5°	581.2	612.2	621.1
60°	542.0	573.1	581.4
62.5°	501.9	530.0	538.1
65°	457.1	483.4	490.8
67.5°	409.6	433.7	439.8
70°	359.1	380.0	385.4
72.5°	306.4	320.9	328.0
75°	251.9	263.5	268.9
77.5°	197.3	205.4	209.8
80°	143.8	148.5	152.2
82.5°	94.1	96.0	98.8
85°	50.7	50.7	52.5
87.5°	17.2	16.5	17.2
90°	0.0	0.0	0.0

(END OF REPORT)