

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: P834263

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834263
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-LD4-1STD-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

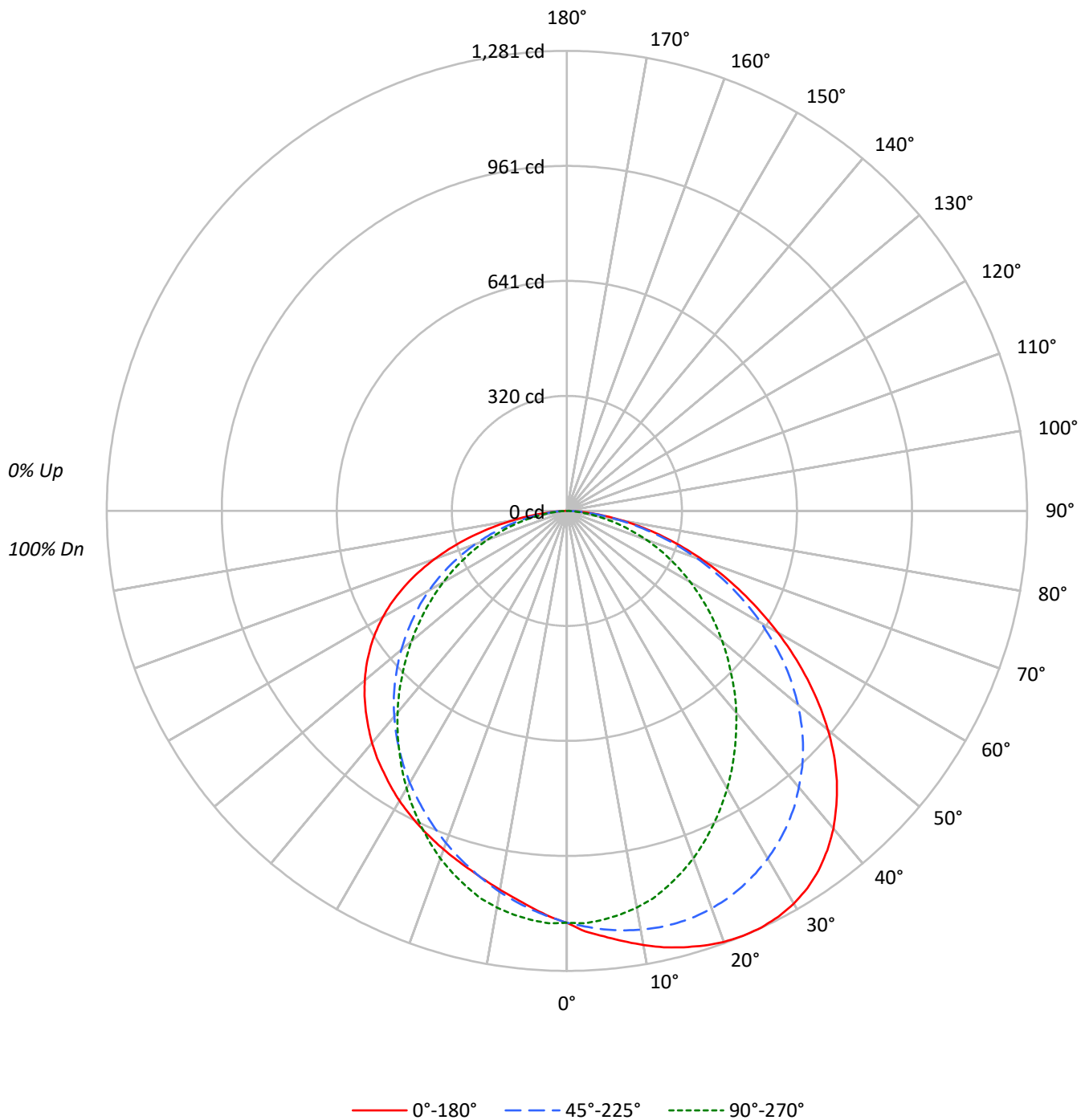
Lumens per Lamp: N/A
Luminaire Lumens: 3373.6 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3086	3086	3086
5°	3213	3088	2997
10°	3354	3065	2927
15°	3505	3016	2885
20°	3658	2949	2873
25°	3801	2863	2878
30°	3925	2774	2896
35°	4015	2675	2920
40°	4055	2576	2963
45°	4044	2467	3012
50°	3972	2364	3074
55°	3837	2255	3138
60°	3650	2138	3186
65°	3427	2008	3181
70°	3190	1852	3087
75°	2896	1626	2847
80°	2486	1336	2400
85°	1896	914	1649

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.8	3.2
10°-20°	314.1	9.3
20°-30°	481.2	14.3
30°-40°	587.3	17.4
40°-50°	614.2	18.2
50°-60°	555.9	16.5
60°-70°	421.0	12.5
70°-80°	234.6	7.0
80°-90°	56.6	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°	904.1	26.8
0°-40°	1491.4	44.2
0°-60°	2661.5	78.9
0°-90°	3373.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3373.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1147	1147	1147	1147	1147	
5°	1190	1170	1143	1115	1109	115
15°	1258	1188	1082	1032	1036	357
25°	1280	1154	964	930	969	591
35°	1222	1069	814	813	889	763
45°	1063	930	648	677	791	818
55°	818	738	481	523	669	730
65°	538	506	315	358	500	534
75°	278	263	156	187	274	295
85°	61	54	30	40	53	74
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°	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9
2.5°	1172.2	1166.7	1162.2	1164.0	1165.0	1161.4	1158.4	1158.9	1155.9	1161.7	1148.2
5°	1189.5	1184.5	1179.2	1181.3	1179.2	1174.0	1169.7	1168.5	1160.4	1163.7	1149.9
7.5°	1208.8	1203.3	1195.5	1197.8	1193.5	1183.8	1178.2	1175.0	1162.7	1163.0	1147.7
10°	1227.4	1222.6	1212.1	1213.6	1205.8	1192.8	1184.0	1179.5	1162.2	1159.7	1143.9
12.5°	1244.7	1238.2	1226.9	1227.6	1216.3	1199.0	1187.8	1181.3	1158.7	1151.2	1135.6
15°	1258.0	1251.7	1238.2	1237.9	1223.4	1200.8	1188.0	1179.0	1150.4	1138.6	1122.3
17.5°	1269.2	1263.5	1246.7	1246.2	1228.6	1200.1	1184.8	1173.5	1138.4	1123.8	1105.8
20°	1277.3	1271.5	1252.7	1250.9	1229.9	1196.3	1178.0	1163.7	1122.6	1105.3	1085.2
22.5°	1281.0	1275.3	1254.0	1251.4	1226.9	1188.8	1168.2	1151.4	1104.5	1082.0	1061.2
25°	1280.3	1274.8	1250.7	1248.2	1221.1	1177.5	1154.4	1135.1	1081.7	1055.2	1034.6
27.5°	1274.0	1269.7	1244.4	1241.2	1210.6	1162.2	1137.6	1116.3	1056.4	1026.8	1004.5
30°	1263.2	1260.0	1233.1	1230.1	1197.5	1145.4	1118.1	1093.5	1029.1	995.7	973.2
32.5°	1245.9	1242.9	1215.8	1213.1	1180.0	1123.8	1095.3	1069.9	999.2	962.4	939.8
35°	1222.1	1220.4	1194.0	1191.0	1157.4	1099.3	1068.9	1041.1	968.2	926.5	905.0
37.5°	1190.8	1190.8	1165.5	1162.2	1129.4	1069.2	1039.4	1009.8	933.1	888.9	867.6
40°	1154.4	1157.7	1131.9	1128.6	1096.8	1036.9	1004.3	973.2	895.2	849.3	828.5
42.5°	1110.8	1113.8	1092.3	1089.2	1059.4	999.5	969.2	935.3	855.6	809.0	787.4
45°	1062.7	1066.7	1047.4	1045.1	1017.3	958.6	929.6	895.2	814.2	766.9	745.8
47.5°	1009.0	1014.3	997.5	996.2	970.4	916.8	886.4	851.6	770.9	723.0	703.2
50°	948.9	956.4	942.6	942.6	919.5	866.1	839.8	805.0	725.7	677.9	658.3
52.5°	884.4	894.0	883.7	883.9	865.1	817.2	789.9	755.8	678.6	631.5	613.4
55°	817.8	827.0	820.5	821.5	806.7	763.1	738.3	704.4	630.5	584.6	567.6
57.5°	748.1	758.1	753.8	755.8	745.6	706.4	680.6	651.0	580.8	535.5	520.9
60°	678.1	687.6	685.4	688.1	681.6	647.8	624.2	593.6	531.0	487.3	474.6
62.5°	607.4	616.2	615.7	618.7	615.2	587.1	566.1	540.0	479.3	439.2	427.4
65°	538.2	545.8	545.3	548.5	547.8	525.2	506.1	482.3	427.7	390.8	380.5
67.5°	471.0	477.3	475.6	479.3	480.3	462.3	445.7	424.4	378.5	342.7	333.9
70°	405.4	409.6	407.4	409.9	412.1	398.6	384.6	365.8	326.1	294.6	287.3
72.5°	340.9	343.9	340.4	342.9	344.9	335.2	323.6	307.3	274.5	247.2	241.2
75°	278.5	282.8	275.5	278.0	279.5	269.7	263.0	249.7	221.4	200.3	196.3
77.5°	218.1	220.6	216.6	215.6	216.6	209.6	204.3	194.0	172.7	155.4	152.9
80°	160.4	161.9	157.9	156.9	157.7	152.7	148.7	141.1	126.1	113.1	112.1
82.5°	107.5	108.3	104.8	103.8	104.3	102.8	98.0	92.8	85.7	74.7	74.5
85°	61.4	61.4	58.9	57.9	58.4	55.9	54.1	51.4	48.6	41.1	41.6
87.5°	22.6	22.6	21.3	21.1	23.6	20.8	20.1	18.8	19.6	15.5	16.5
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°	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9	1146.9
2.5°	1151.9	1149.4	1147.2	1139.4	1142.6	1134.6	1134.1	1131.1	1128.9	1124.6	1130.1
5°	1148.2	1143.1	1136.6	1127.4	1130.1	1120.6	1118.6	1115.1	1112.1	1106.5	1110.8
7.5°	1142.1	1133.9	1123.6	1111.8	1115.6	1103.8	1100.8	1097.0	1094.5	1088.0	1091.8
10°	1133.4	1121.6	1109.6	1095.3	1098.0	1085.2	1081.5	1077.5	1075.2	1069.4	1073.2
12.5°	1119.8	1105.5	1089.2	1073.7	1076.7	1064.7	1059.7	1055.4	1054.7	1049.9	1054.4
15°	1102.3	1082.5	1065.7	1049.1	1052.6	1038.6	1036.4	1032.1	1033.3	1030.1	1035.6
17.5°	1080.0	1057.2	1038.9	1021.1	1024.6	1012.8	1011.0	1009.0	1010.3	1009.8	1015.8
20°	1054.9	1029.8	1008.8	991.2	993.2	984.0	984.7	984.2	986.7	989.5	997.7
22.5°	1026.6	998.2	976.2	958.1	961.1	953.1	956.6	957.6	961.9	968.2	978.7
25°	994.7	964.4	941.3	924.3	927.1	921.8	927.8	930.3	937.1	947.6	958.4
27.5°	961.4	929.3	904.7	888.4	893.7	888.4	897.5	902.5	912.8	924.3	937.6
30°	926.0	892.7	867.4	852.8	857.9	853.1	867.6	874.4	884.7	900.5	916.3
32.5°	888.9	853.8	829.0	817.8	821.3	820.5	836.8	844.3	858.1	876.2	893.0
35°	850.8	814.2	789.2	779.6	783.9	784.9	804.5	813.2	828.3	850.1	868.1
37.5°	811.5	774.1	749.6	741.8	745.6	749.3	772.1	780.9	797.9	821.8	841.6
40°	770.6	733.3	709.2	702.9	706.7	710.7	735.5	747.6	766.1	791.9	813.5
42.5°	729.3	691.9	668.6	664.1	667.8	675.6	701.9	713.2	732.8	761.3	785.2
45°	687.1	648.3	628.0	624.5	628.5	637.5	663.3	676.9	697.7	729.0	754.6
47.5°	644.5	606.7	587.4	585.1	589.1	599.1	627.7	640.0	662.1	695.4	723.0
50°	601.4	564.6	546.0	545.3	549.0	559.8	587.1	601.7	624.5	661.8	690.1
52.5°	557.8	522.4	505.6	505.6	509.2	520.2	547.8	562.8	586.4	625.7	657.1
55°	514.2	480.6	464.5	465.8	470.8	480.3	507.1	522.9	546.8	587.6	620.7
57.5°	470.5	438.7	424.2	425.9	430.7	440.2	466.5	484.3	505.9	548.3	582.1
60°	427.4	397.3	384.6	386.6	390.8	400.4	427.7	443.0	464.5	507.6	541.5
62.5°	383.8	356.5	344.4	347.0	350.7	360.2	386.1	400.9	422.2	464.5	498.6
65°	340.7	315.4	305.1	307.6	311.1	319.9	344.2	358.5	378.8	420.2	452.7
67.5°	298.1	275.0	266.5	269.0	271.7	280.0	300.1	315.6	334.7	374.0	404.9
70°	256.0	235.4	227.9	230.4	232.9	240.4	258.0	272.2	289.8	325.9	354.5
72.5°	214.3	194.3	190.5	192.8	194.8	201.3	218.1	229.4	244.7	276.8	301.3
75°	173.7	156.4	153.9	156.2	157.9	162.9	177.0	186.8	199.5	227.4	247.4
77.5°	134.6	120.1	119.1	120.8	122.6	126.1	137.1	147.4	157.4	178.0	195.8
80°	98.0	86.2	86.2	88.0	87.5	91.8	99.5	107.8	115.1	129.9	142.9
82.5°	64.7	55.4	56.7	57.9	58.7	60.4	65.2	71.4	76.0	85.0	93.5
85°	35.8	29.6	30.8	31.8	31.3	33.3	35.8	39.6	41.9	46.1	50.6
87.5°	13.3	11.0	11.3	12.0	12.5	13.5	13.5	15.8	16.0	16.5	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):

	160°	170°	180°
0°	1146.9	1146.9	1146.9
2.5°	1119.6	1125.6	1130.1
5°	1100.3	1105.3	1109.3
7.5°	1081.5	1086.0	1089.5
10°	1063.7	1068.7	1071.2
12.5°	1045.4	1051.1	1053.1
15°	1027.3	1033.1	1035.6
17.5°	1008.8	1016.3	1019.1
20°	991.5	1001.0	1003.3
22.5°	973.9	983.7	986.5
25°	954.9	966.4	969.2
27.5°	934.6	948.4	951.1
30°	914.3	929.3	932.1
32.5°	892.5	908.8	911.3
35°	869.6	885.9	888.9
37.5°	844.3	862.1	868.1
40°	818.0	837.3	843.6
42.5°	790.4	811.5	818.0
45°	760.8	783.9	791.4
47.5°	731.0	757.1	763.6
50°	698.7	726.5	734.3
52.5°	664.8	695.2	702.9
55°	629.7	660.3	668.8
57.5°	591.6	623.2	632.2
60°	551.8	583.4	591.9
62.5°	510.9	539.5	547.8
65°	465.3	492.1	499.6
67.5°	416.9	441.5	447.7
70°	365.5	386.8	392.3
72.5°	311.9	326.6	333.9
75°	256.5	268.2	273.8
77.5°	200.8	209.1	213.6
80°	146.4	151.2	154.9
82.5°	95.8	97.8	100.5
85°	51.6	51.6	53.4
87.5°	17.5	16.8	17.5
90°	0.0	0.0	0.0

(END OF REPORT)