

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: P834272

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834272
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-40-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

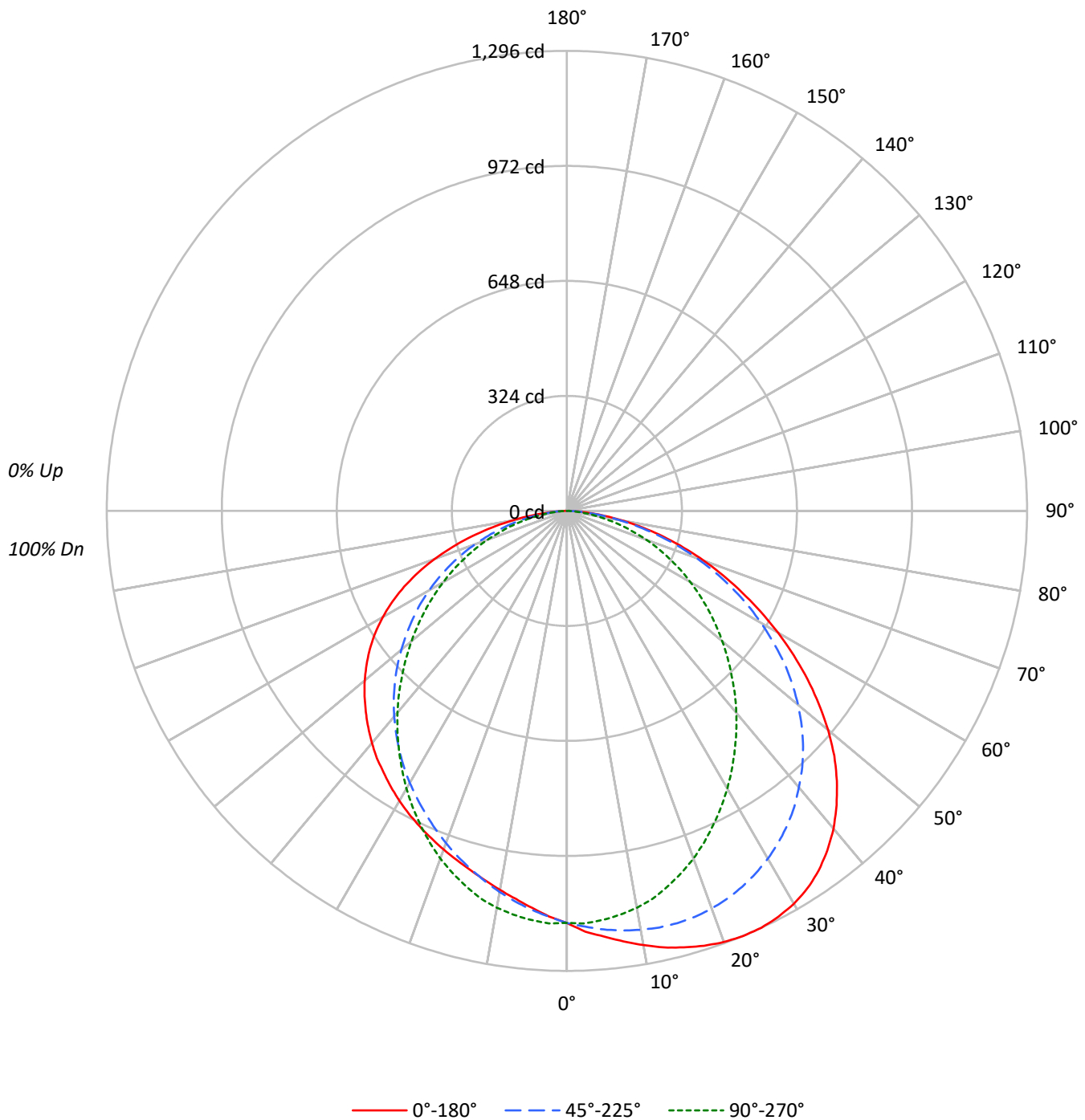
Lumens per Lamp: N/A
Luminaire Lumens: 3414.3 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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°	3123	3123	3123
5°	3252	3125	3033
10°	3394	3102	2962
15°	3547	3052	2920
20°	3702	2985	2907
25°	3847	2898	2912
30°	3972	2807	2931
35°	4063	2707	2956
40°	4104	2607	2999
45°	4093	2497	3048
50°	4020	2392	3111
55°	3883	2282	3176
60°	3694	2164	3224
65°	3468	2032	3219
70°	3227	1874	3124
75°	2931	1646	2881
80°	2517	1353	2430
85°	1920	923	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	3.2
10°-20°	317.9	9.3
20°-30°	487.0	14.3
30°-40°	594.4	17.4
40°-50°	621.6	18.2
50°-60°	562.6	16.5
60°-70°	426.1	12.5
70°-80°	237.4	7.0
80°-90°	57.3	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°	915.0	26.8
0°-40°	1509.4	44.2
0°-60°	2693.5	78.9
0°-90°	3414.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3414.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1161	1161	1161	1161	1161	
5°	1204	1184	1157	1128	1123	116
15°	1273	1202	1096	1044	1048	361
25°	1296	1168	976	942	981	598
35°	1237	1082	824	823	900	772
45°	1076	941	656	685	801	827
55°	828	747	486	529	677	738
65°	545	512	319	363	506	540
75°	282	266	158	189	277	299
85°	62	55	30	40	54	75
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°	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7
2.5°	1186.3	1180.8	1176.2	1178.0	1179.0	1175.4	1172.4	1172.9	1169.9	1175.7	1162.0
5°	1203.9	1198.8	1193.5	1195.5	1193.5	1188.1	1183.8	1182.5	1174.4	1177.7	1163.8
7.5°	1223.4	1217.8	1209.9	1212.2	1207.9	1198.0	1192.4	1189.1	1176.7	1177.0	1161.5
10°	1242.2	1237.3	1226.7	1228.2	1220.3	1207.2	1198.3	1193.7	1176.2	1173.7	1157.7
12.5°	1259.7	1253.1	1241.7	1242.4	1231.0	1213.5	1202.1	1195.5	1172.6	1165.0	1149.3
15°	1273.1	1266.8	1253.1	1252.8	1238.1	1215.3	1202.3	1193.2	1164.3	1152.4	1135.9
17.5°	1284.5	1278.7	1261.7	1261.2	1243.4	1214.5	1199.0	1187.6	1152.1	1137.4	1119.1
20°	1292.7	1286.8	1267.8	1266.0	1244.7	1210.7	1192.2	1177.7	1136.1	1118.6	1098.3
22.5°	1296.5	1290.6	1269.1	1266.5	1241.7	1203.1	1182.3	1165.3	1117.8	1095.0	1074.0
25°	1295.7	1290.1	1265.8	1263.2	1235.8	1191.7	1168.3	1148.8	1094.8	1067.9	1047.1
27.5°	1289.4	1285.0	1259.4	1256.1	1225.2	1176.2	1151.3	1129.8	1069.1	1039.2	1016.6
30°	1278.4	1275.1	1248.0	1245.0	1212.0	1159.2	1131.5	1106.7	1041.5	1007.7	984.9
32.5°	1260.9	1257.9	1230.5	1227.7	1194.2	1137.4	1108.5	1082.8	1011.3	974.0	951.2
35°	1236.8	1235.1	1208.4	1205.4	1171.4	1112.5	1081.8	1053.7	979.8	937.7	915.9
37.5°	1205.1	1205.1	1179.5	1176.2	1143.0	1082.1	1051.9	1021.9	944.3	899.7	878.1
40°	1168.3	1171.6	1145.5	1142.2	1110.0	1049.3	1016.4	984.9	906.0	859.6	838.5
42.5°	1124.2	1127.2	1105.4	1102.4	1072.2	1011.5	980.8	946.6	865.9	818.7	796.9
45°	1075.5	1079.5	1060.0	1057.7	1029.6	970.2	940.8	906.0	824.1	776.1	754.8
47.5°	1021.2	1026.5	1009.5	1008.2	982.1	927.8	897.1	861.9	780.2	731.7	711.7
50°	960.3	967.9	954.0	954.0	930.6	876.6	849.9	814.7	734.5	686.0	666.2
52.5°	895.1	904.7	894.3	894.6	875.6	827.1	799.4	764.9	686.8	639.1	620.8
55°	827.6	837.0	830.4	831.4	816.4	772.3	747.2	712.9	638.1	591.7	574.4
57.5°	757.1	767.2	762.9	764.9	754.5	715.0	688.8	658.9	587.8	541.9	527.2
60°	686.3	695.9	693.6	696.4	689.8	655.6	631.7	600.8	537.4	493.2	480.3
62.5°	614.7	623.6	623.1	626.2	622.6	594.2	572.9	546.5	485.1	444.5	432.6
65°	544.7	552.3	551.8	555.1	554.4	531.5	512.2	488.1	432.8	395.5	385.1
67.5°	476.7	483.1	481.3	485.1	486.1	467.8	451.1	429.5	383.1	346.8	337.9
70°	410.2	414.6	412.3	414.8	417.1	403.4	389.2	370.2	330.1	298.1	290.8
72.5°	345.0	348.1	344.5	347.1	349.1	339.2	327.5	311.0	277.8	250.2	244.1
75°	281.9	286.2	278.8	281.4	282.9	273.0	266.1	252.7	224.0	202.7	198.7
77.5°	220.7	223.3	219.2	218.2	219.2	212.1	206.8	196.4	174.8	157.3	154.8
80°	162.4	163.9	159.8	158.8	159.6	154.5	150.5	142.8	127.6	114.4	113.4
82.5°	108.8	109.6	106.1	105.0	105.5	104.0	99.2	93.9	86.8	75.6	75.4
85°	62.2	62.2	59.6	58.6	59.1	56.6	54.8	52.0	49.2	41.6	42.1
87.5°	22.8	22.8	21.6	21.3	23.8	21.1	20.3	19.0	19.8	15.7	16.7
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°	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7	1160.7
2.5°	1165.8	1163.3	1161.0	1153.1	1156.4	1148.3	1147.8	1144.7	1142.5	1138.1	1143.7
5°	1162.0	1156.9	1150.3	1140.9	1143.7	1134.1	1132.1	1128.5	1125.5	1119.9	1124.2
7.5°	1155.9	1147.5	1137.1	1125.2	1129.0	1117.1	1114.0	1110.2	1107.7	1101.1	1104.9
10°	1147.0	1135.1	1122.9	1108.5	1111.3	1098.3	1094.5	1090.4	1088.2	1082.3	1086.1
12.5°	1133.3	1118.9	1102.4	1086.6	1089.7	1077.5	1072.4	1068.1	1067.4	1062.5	1067.1
15°	1115.6	1095.5	1078.5	1061.8	1065.3	1051.1	1048.8	1044.5	1045.8	1042.5	1048.1
17.5°	1093.0	1069.9	1051.4	1033.4	1036.9	1025.0	1023.2	1021.2	1022.5	1021.9	1028.0
20°	1067.6	1042.2	1020.9	1003.2	1005.2	995.8	996.6	996.1	998.6	1001.4	1009.8
22.5°	1038.9	1010.3	987.9	969.7	972.7	964.6	968.2	969.2	973.5	979.8	990.5
25°	1006.7	976.0	952.7	935.4	938.2	932.9	939.0	941.5	948.4	959.0	969.9
27.5°	973.0	940.5	915.6	899.1	904.5	899.1	908.3	913.4	923.8	935.4	948.9
30°	937.2	903.5	877.8	863.1	868.2	863.4	878.1	884.9	895.3	911.3	927.3
32.5°	899.7	864.1	839.0	827.6	831.2	830.4	846.9	854.5	868.4	886.7	903.7
35°	861.1	824.1	798.7	789.0	793.4	794.4	814.2	823.0	838.3	860.3	878.6
37.5°	821.3	783.5	758.6	750.7	754.5	758.3	781.4	790.3	807.6	831.7	851.7
40°	779.9	742.1	717.7	711.4	715.2	719.3	744.4	756.6	775.3	801.5	823.3
42.5°	738.0	700.2	676.6	672.1	675.9	683.7	710.4	721.8	741.6	770.5	794.6
45°	695.4	656.1	635.5	632.0	636.1	645.2	671.3	685.0	706.1	737.8	763.7
47.5°	652.3	614.0	594.4	592.2	596.2	606.4	635.3	647.7	670.0	703.8	731.7
50°	608.7	571.4	552.6	551.8	555.6	566.5	594.2	608.9	632.0	669.8	698.5
52.5°	564.5	528.7	511.7	511.7	515.3	526.4	554.4	569.6	593.4	633.3	665.0
55°	520.4	486.4	470.1	471.4	476.5	486.1	513.3	529.2	553.3	594.7	628.2
57.5°	476.2	444.0	429.3	431.1	435.9	445.5	472.2	490.2	512.0	554.9	589.1
60°	432.6	402.1	389.2	391.2	395.5	405.2	432.8	448.3	470.1	513.8	548.0
62.5°	388.4	360.8	348.6	351.1	354.9	364.6	390.7	405.7	427.2	470.1	504.6
65°	344.8	319.2	308.8	311.3	314.9	323.7	348.3	362.8	383.4	425.2	458.2
67.5°	301.7	278.3	269.7	272.2	275.0	283.4	303.7	319.4	338.7	378.5	409.7
70°	259.0	238.2	230.6	233.2	235.7	243.3	261.1	275.5	293.3	329.8	358.7
72.5°	216.9	196.6	192.8	195.1	197.1	203.7	220.7	232.1	247.6	280.1	305.0
75°	175.8	158.3	155.8	158.1	159.8	164.9	179.1	189.0	202.0	230.1	250.4
77.5°	136.2	121.5	120.5	122.3	124.1	127.6	138.8	149.2	159.3	180.1	198.1
80°	99.2	87.3	87.3	89.1	88.5	92.9	100.7	109.1	116.5	131.4	144.6
82.5°	65.5	56.1	57.3	58.6	59.4	61.1	66.0	72.3	76.9	86.0	94.6
85°	36.3	29.9	31.2	32.2	31.7	33.7	36.3	40.1	42.4	46.7	51.2
87.5°	13.4	11.2	11.4	12.2	12.7	13.7	13.7	16.0	16.2	16.7	17.8
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°	1160.7	1160.7	1160.7
2.5°	1133.1	1139.2	1143.7
5°	1113.5	1118.6	1122.7
7.5°	1094.5	1099.1	1102.6
10°	1076.5	1081.6	1084.1
12.5°	1058.0	1063.8	1065.8
15°	1039.7	1045.5	1048.1
17.5°	1020.9	1028.5	1031.3
20°	1003.4	1013.1	1015.3
22.5°	985.7	995.6	998.3
25°	966.4	978.1	980.8
27.5°	945.8	959.8	962.6
30°	925.3	940.5	943.3
32.5°	903.2	919.7	922.2
35°	880.1	896.6	899.7
37.5°	854.5	872.5	878.6
40°	827.9	847.4	853.7
42.5°	799.9	821.3	827.9
45°	770.0	793.4	801.0
47.5°	739.8	766.2	772.8
50°	707.1	735.3	743.1
52.5°	672.8	703.5	711.4
55°	637.3	668.3	676.9
57.5°	598.8	630.7	639.9
60°	558.4	590.4	599.0
62.5°	517.1	546.0	554.4
65°	470.9	498.0	505.6
67.5°	421.9	446.8	453.1
70°	369.9	391.5	397.1
72.5°	315.6	330.6	337.9
75°	259.5	271.5	277.1
77.5°	203.2	211.6	216.2
80°	148.2	153.0	156.8
82.5°	96.9	98.9	101.7
85°	52.3	52.3	54.0
87.5°	17.8	17.0	17.8
90°	0.0	0.0	0.0

(END OF REPORT)