

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: P834191

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834191
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-27-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

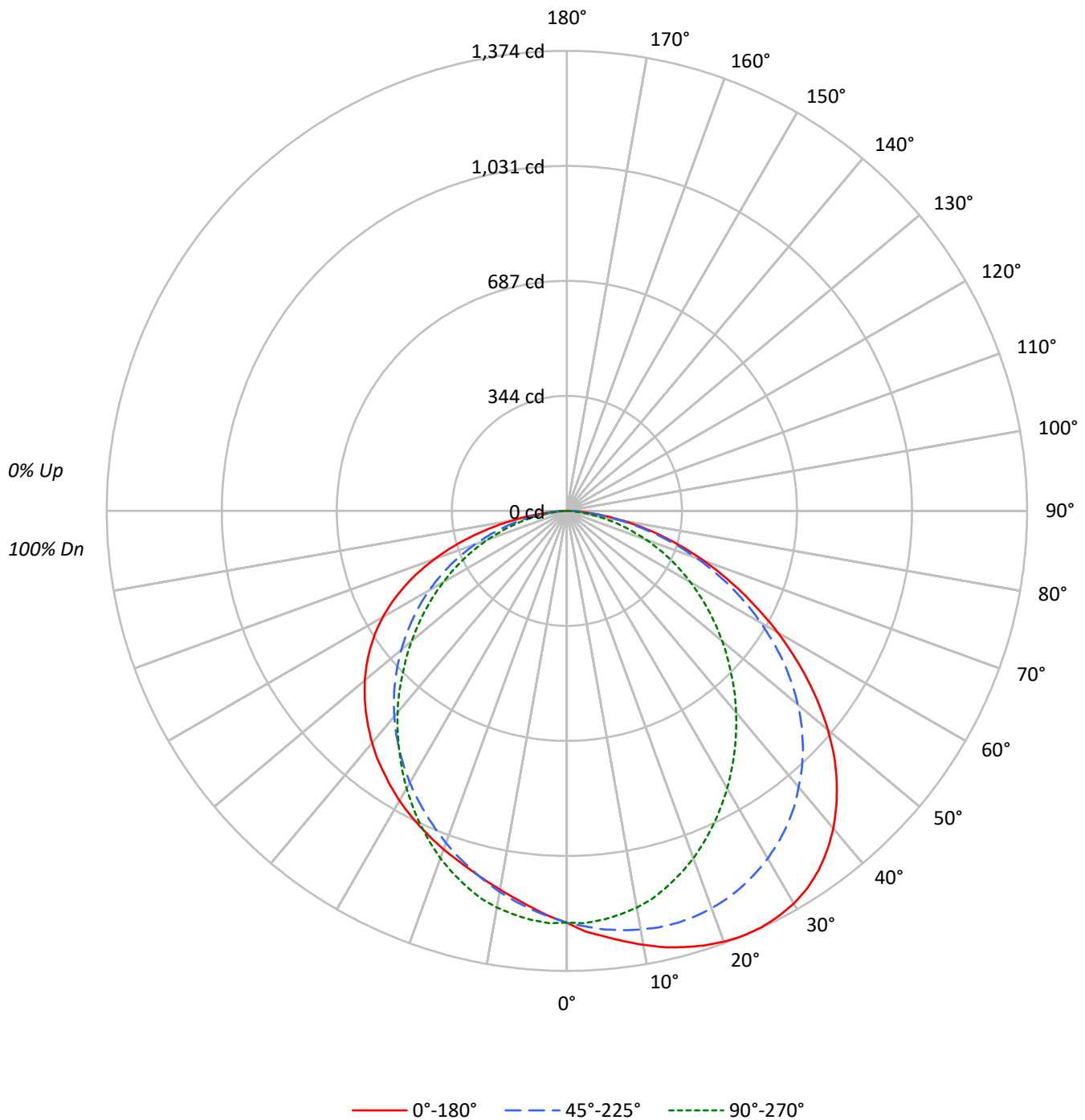
Lumens per Lamp: N/A
Luminaire Lumens: 3617.6 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	3309	3309	3309
5°	3445	3311	3213
10°	3596	3286	3139
15°	3758	3234	3094
20°	3922	3162	3081
25°	4076	3070	3086
30°	4209	2974	3105
35°	4305	2868	3131
40°	4349	2762	3178
45°	4337	2645	3229
50°	4260	2534	3296
55°	4114	2418	3365
60°	3913	2293	3416
65°	3675	2153	3411
70°	3420	1986	3310
75°	3106	1744	3052
80°	2665	1433	2574
85°	2035	979	1769

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	3.2
10°-20°	336.8	9.3
20°-30°	516.0	14.3
30°-40°	629.7	17.4
40°-50°	658.6	18.2
50°-60°	596.1	16.5
60°-70°	451.4	12.5
70°-80°	251.6	7.0
80°-90°	60.7	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°	969.5	26.8
0°-40°	1599.2	44.2
0°-60°	2853.9	78.9
0°-90°	3617.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3617.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1230	1230	1230	1230	1230	
5°	1276	1254	1226	1196	1190	123
15°	1349	1274	1161	1107	1110	383
25°	1373	1238	1034	998	1039	633
35°	1310	1146	873	872	953	818
45°	1140	997	695	726	849	877
55°	877	792	515	561	717	782
65°	577	543	338	384	536	572
75°	299	282	168	200	294	317
85°	66	58	32	42	57	79
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°	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8
2.5°	1257.0	1251.1	1246.2	1248.1	1249.2	1245.4	1242.2	1242.7	1239.5	1245.7	1231.2
5°	1275.5	1270.1	1264.5	1266.6	1264.5	1258.8	1254.3	1252.9	1244.3	1247.8	1233.0
7.5°	1296.2	1290.3	1282.0	1284.4	1279.8	1269.3	1263.4	1259.9	1246.7	1247.0	1230.6
10°	1316.1	1311.0	1299.7	1301.3	1293.0	1279.0	1269.6	1264.8	1246.2	1243.5	1226.6
12.5°	1334.7	1327.7	1315.6	1316.4	1304.3	1285.7	1273.6	1266.6	1242.4	1234.4	1217.7
15°	1348.9	1342.2	1327.7	1327.4	1311.8	1287.6	1273.9	1264.2	1233.6	1220.9	1203.5
17.5°	1361.0	1354.8	1336.8	1336.3	1317.4	1286.8	1270.4	1258.3	1220.7	1205.1	1185.7
20°	1369.6	1363.4	1343.3	1341.4	1318.8	1282.8	1263.1	1247.8	1203.7	1185.2	1163.7
22.5°	1373.6	1367.4	1344.6	1341.9	1315.6	1274.7	1252.7	1234.7	1184.4	1160.2	1137.9
25°	1372.8	1366.9	1341.1	1338.4	1309.4	1262.6	1237.9	1217.2	1159.9	1131.4	1109.4
27.5°	1366.1	1361.5	1334.4	1330.9	1298.1	1246.2	1219.9	1197.0	1132.8	1101.1	1077.1
30°	1354.5	1351.0	1322.3	1319.1	1284.1	1228.2	1198.9	1172.6	1103.5	1067.7	1043.5
32.5°	1336.0	1332.8	1303.7	1300.8	1265.3	1205.1	1174.4	1147.3	1071.5	1032.0	1007.8
35°	1310.5	1308.6	1280.4	1277.1	1241.1	1178.7	1146.2	1116.4	1038.2	993.5	970.4
37.5°	1276.9	1276.9	1249.7	1246.2	1211.0	1146.5	1114.5	1082.8	1000.5	953.2	930.4
40°	1237.9	1241.4	1213.7	1210.2	1176.1	1111.8	1076.9	1043.5	959.9	910.7	888.4
42.5°	1191.1	1194.3	1171.2	1168.0	1136.0	1071.8	1039.2	1002.9	917.5	867.5	844.3
45°	1139.5	1143.8	1123.1	1120.7	1090.8	1027.9	996.8	959.9	873.1	822.3	799.7
47.5°	1082.0	1087.6	1069.6	1068.3	1040.6	983.0	950.5	913.2	826.6	775.3	754.0
50°	1017.5	1025.5	1010.7	1010.7	986.0	928.7	900.5	863.2	778.2	726.9	705.9
52.5°	948.4	958.6	947.6	947.8	927.7	876.3	847.0	810.5	727.7	677.1	657.8
55°	876.9	886.8	879.8	880.9	865.0	818.3	791.7	755.4	676.1	626.9	608.6
57.5°	802.1	812.9	808.3	810.5	799.4	757.5	729.8	698.1	622.8	574.2	558.6
60°	727.1	737.4	734.9	737.9	730.9	694.6	669.3	636.5	569.3	522.6	508.9
62.5°	651.3	660.7	660.2	663.4	659.7	629.6	607.0	579.0	514.0	471.0	458.3
65°	577.1	585.2	584.7	588.2	587.4	563.2	542.7	517.2	458.6	419.1	408.1
67.5°	505.1	511.8	509.9	514.0	515.0	495.7	477.9	455.1	405.9	367.5	358.1
70°	434.7	439.2	436.8	439.5	441.9	427.4	412.4	392.2	349.7	315.9	308.1
72.5°	365.6	368.8	365.0	367.7	369.9	359.4	347.0	329.6	294.3	265.0	258.6
75°	298.7	303.2	295.4	298.1	299.7	289.2	282.0	267.7	237.4	214.8	210.5
77.5°	233.9	236.6	232.3	231.2	232.3	224.7	219.1	208.1	185.2	166.7	164.0
80°	172.0	173.7	169.4	168.3	169.1	163.7	159.4	151.3	135.2	121.2	120.2
82.5°	115.3	116.1	112.4	111.3	111.8	110.2	105.1	99.5	91.9	80.1	79.8
85°	65.9	65.9	63.2	62.1	62.6	59.9	58.1	55.1	52.1	44.1	44.6
87.5°	24.2	24.2	22.8	22.6	25.3	22.3	21.5	20.2	21.0	16.7	17.7
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°	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8	1229.8
2.5°	1235.2	1232.5	1230.1	1221.8	1225.2	1216.6	1216.1	1212.9	1210.5	1205.9	1211.8
5°	1231.2	1225.8	1218.8	1208.8	1211.8	1201.6	1199.4	1195.7	1192.4	1186.5	1191.1
7.5°	1224.7	1215.8	1204.8	1192.2	1196.2	1183.6	1180.4	1176.3	1173.6	1166.6	1170.7
10°	1215.3	1202.7	1189.8	1174.4	1177.4	1163.7	1159.7	1155.4	1152.9	1146.8	1150.8
12.5°	1200.8	1185.5	1168.0	1151.3	1154.5	1141.6	1136.3	1131.7	1130.9	1125.8	1130.6
15°	1182.0	1160.7	1142.7	1125.0	1128.7	1113.7	1111.3	1106.7	1108.0	1104.5	1110.5
17.5°	1158.0	1133.6	1114.0	1094.9	1098.6	1086.0	1084.1	1082.0	1083.3	1082.8	1089.2
20°	1131.2	1104.3	1081.7	1062.9	1065.0	1055.1	1055.9	1055.4	1058.0	1061.0	1069.9
22.5°	1100.8	1070.4	1046.8	1027.4	1030.6	1022.0	1025.8	1026.9	1031.4	1038.2	1049.4
25°	1066.6	1034.1	1009.4	991.1	994.1	988.4	994.9	997.6	1004.8	1016.1	1027.7
27.5°	1030.9	996.5	970.1	952.7	958.3	952.7	962.3	967.7	978.7	991.1	1005.4
30°	993.0	957.2	930.1	914.5	919.9	914.8	930.4	937.6	948.6	965.6	982.5
32.5°	953.2	915.6	889.0	876.9	880.6	879.8	897.3	905.4	920.1	939.5	957.5
35°	912.3	873.1	846.2	836.0	840.6	841.7	862.6	872.0	888.2	911.5	930.9
37.5°	870.1	830.1	803.7	795.4	799.4	803.5	827.9	837.3	855.6	881.2	902.4
40°	826.3	786.3	760.5	753.7	757.8	762.1	788.7	801.6	821.5	849.2	872.3
42.5°	782.0	741.9	716.9	712.1	716.1	724.4	752.7	764.8	785.7	816.4	841.9
45°	736.8	695.1	673.4	669.6	673.9	683.6	711.3	725.8	748.1	781.7	809.1
47.5°	691.1	650.5	629.8	627.4	631.7	642.5	673.1	686.3	709.9	745.7	775.3
50°	644.9	605.4	585.5	584.7	588.7	600.3	629.6	645.1	669.6	709.7	740.0
52.5°	598.1	560.2	542.2	542.2	546.0	557.8	587.4	603.5	628.8	671.0	704.6
55°	551.3	515.3	498.1	499.5	504.8	515.0	543.8	560.7	586.3	630.1	665.6
57.5°	504.6	470.4	454.8	456.7	461.8	472.0	500.3	519.3	542.5	587.9	624.2
60°	458.3	426.1	412.4	414.5	419.1	429.3	458.6	475.0	498.1	544.3	580.6
62.5°	411.6	382.3	369.3	372.0	376.1	386.3	414.0	429.8	452.7	498.1	534.7
65°	365.3	338.2	327.1	329.8	333.6	343.0	369.1	384.4	406.2	450.5	485.5
67.5°	319.6	294.9	285.7	288.4	291.4	300.3	321.8	338.4	358.9	401.1	434.1
70°	274.5	252.4	244.4	247.0	249.7	257.8	276.6	291.9	310.7	349.5	380.1
72.5°	229.8	208.3	204.3	206.7	208.9	215.9	233.9	246.0	262.4	296.8	323.1
75°	186.3	167.7	165.1	167.5	169.4	174.7	189.8	200.3	214.0	243.8	265.3
77.5°	144.4	128.8	127.7	129.6	131.4	135.2	147.0	158.1	168.8	190.9	209.9
80°	105.1	92.5	92.5	94.4	93.8	98.4	106.7	115.6	123.4	139.2	153.2
82.5°	69.4	59.4	60.8	62.1	62.9	64.8	69.9	76.6	81.5	91.1	100.3
85°	38.4	31.7	33.1	34.1	33.6	35.8	38.4	42.5	44.9	49.5	54.3
87.5°	14.2	11.8	12.1	12.9	13.4	14.5	14.5	16.9	17.2	17.7	18.8
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°	1229.8	1229.8	1229.8
2.5°	1200.5	1207.0	1211.8
5°	1179.8	1185.2	1189.5
7.5°	1159.7	1164.5	1168.3
10°	1140.6	1145.9	1148.6
12.5°	1120.9	1127.1	1129.3
15°	1101.6	1107.8	1110.5
17.5°	1081.7	1089.8	1092.7
20°	1063.2	1073.4	1075.8
22.5°	1044.3	1054.8	1057.8
25°	1023.9	1036.3	1039.2
27.5°	1002.1	1016.9	1019.9
30°	980.4	996.5	999.4
32.5°	957.0	974.4	977.1
35°	932.5	950.0	953.2
37.5°	905.4	924.4	930.9
40°	877.1	897.8	904.6
42.5°	847.6	870.1	877.1
45°	815.8	840.6	848.6
47.5°	783.9	811.8	818.8
50°	749.2	779.0	787.4
52.5°	712.9	745.4	753.7
55°	675.3	708.1	717.2
57.5°	634.4	668.3	677.9
60°	591.7	625.5	634.7
62.5°	547.8	578.5	587.4
65°	498.9	527.7	535.7
67.5°	447.0	473.4	480.1
70°	391.9	414.8	420.7
72.5°	334.4	350.3	358.1
75°	275.0	287.6	293.5
77.5°	215.3	224.2	229.0
80°	157.0	162.1	166.1
82.5°	102.7	104.8	107.8
85°	55.4	55.4	57.3
87.5°	18.8	18.0	18.8
90°	0.0	0.0	0.0

(END OF REPORT)