

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: P835339

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835339
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-LD4-3LO-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

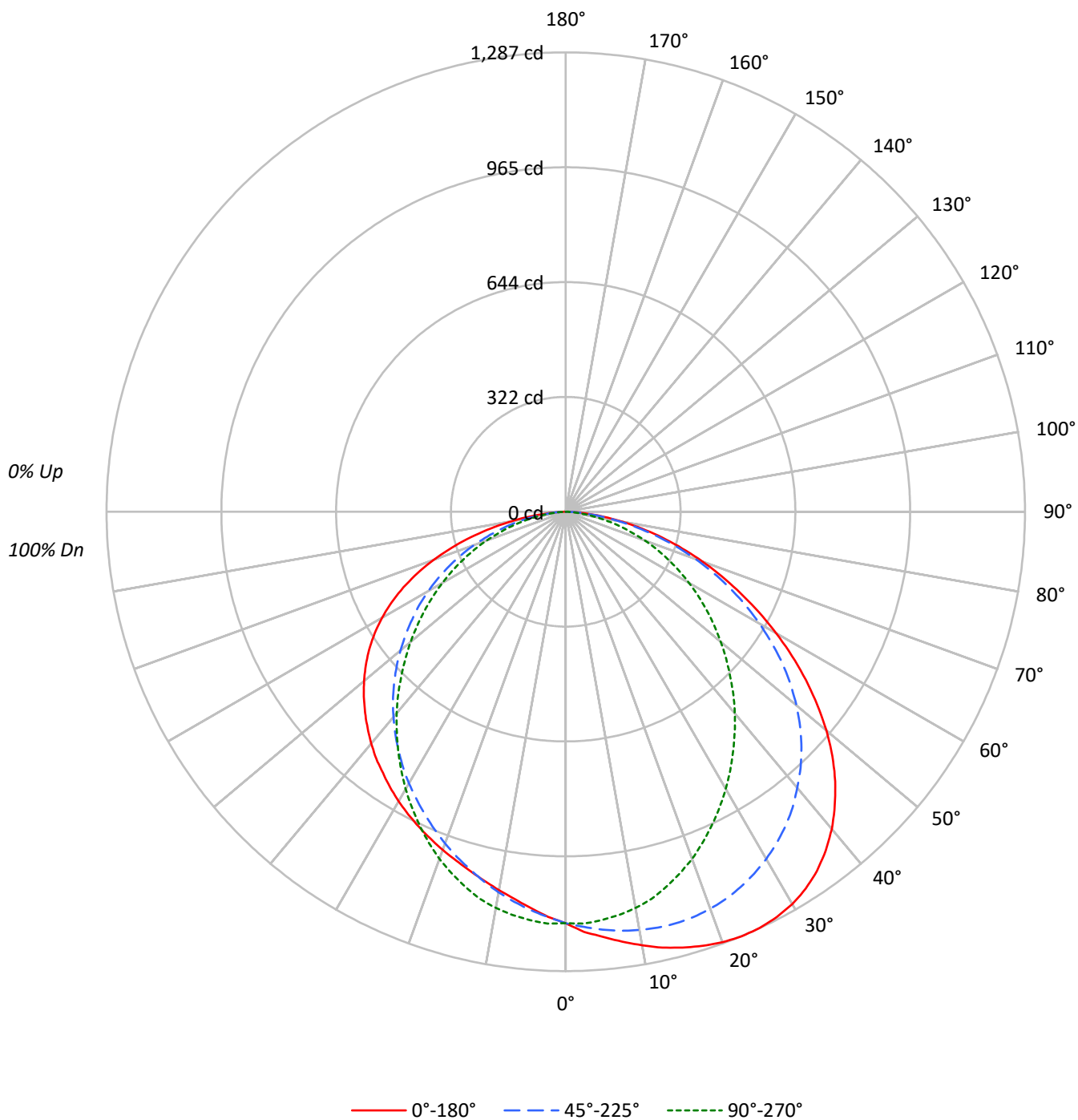
Lumens per Lamp: N/A
Luminaire Lumens: 3390.1 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	3101	3101	3101
5°	3229	3103	3011
10°	3370	3080	2941
15°	3522	3031	2899
20°	3676	2964	2887
25°	3820	2877	2892
30°	3944	2788	2910
35°	4034	2688	2935
40°	4075	2589	2978
45°	4064	2479	3027
50°	3992	2375	3089
55°	3855	2266	3153
60°	3667	2149	3201
65°	3444	2018	3197
70°	3205	1861	3102
75°	2910	1634	2860
80°	2498	1344	2413
85°	1905	917	1658

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.3	3.2
10°-20°	315.7	9.3
20°-30°	483.6	14.3
30°-40°	590.2	17.4
40°-50°	617.2	18.2
50°-60°	558.6	16.5
60°-70°	423.0	12.5
70°-80°	235.8	7.0
80°-90°	56.9	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°	908.6	26.8
0°-40°	1498.7	44.2
0°-60°	2674.5	78.9
0°-90°	3390.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3390.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1152	1152	1152	1152	1152	
5°	1195	1175	1149	1120	1115	115
15°	1264	1194	1088	1037	1041	359
25°	1286	1160	969	935	974	593
35°	1228	1074	818	817	893	767
45°	1068	934	652	680	795	822
55°	822	742	483	526	672	733
65°	541	509	317	360	502	537
75°	280	264	157	188	275	297
85°	62	54	30	40	54	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°	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5
2.5°	1178.0	1172.4	1167.9	1169.6	1170.6	1167.1	1164.1	1164.6	1161.6	1167.4	1153.8
5°	1195.3	1190.3	1185.0	1187.0	1185.0	1179.7	1175.4	1174.2	1166.1	1169.4	1155.5
7.5°	1214.7	1209.2	1201.4	1203.6	1199.4	1189.5	1184.0	1180.7	1168.4	1168.6	1153.3
10°	1233.4	1228.6	1218.0	1219.5	1211.7	1198.6	1189.8	1185.3	1167.9	1165.4	1149.5
12.5°	1250.8	1244.2	1232.9	1233.6	1222.3	1204.9	1193.6	1187.0	1164.4	1156.8	1141.2
15°	1264.1	1257.8	1244.2	1244.0	1229.3	1206.7	1193.8	1184.8	1156.0	1144.2	1127.8
17.5°	1275.4	1269.7	1252.8	1252.3	1234.6	1205.9	1190.6	1179.2	1143.9	1129.3	1111.2
20°	1283.5	1277.7	1258.8	1257.1	1235.9	1202.1	1183.7	1169.4	1128.1	1110.7	1090.5
22.5°	1287.3	1281.5	1260.1	1257.6	1232.9	1194.6	1173.9	1157.0	1109.9	1087.3	1066.4
25°	1286.5	1281.0	1256.8	1254.3	1227.1	1183.2	1160.1	1140.7	1087.0	1060.3	1039.7
27.5°	1280.2	1275.9	1250.5	1247.2	1216.5	1167.9	1143.2	1121.8	1061.6	1031.8	1009.4
30°	1269.4	1266.1	1239.2	1236.1	1203.4	1151.0	1123.5	1098.9	1034.1	1000.6	977.9
32.5°	1252.0	1249.0	1221.8	1219.0	1185.8	1129.3	1100.6	1075.2	1004.1	967.1	944.4
35°	1228.1	1226.3	1199.9	1196.8	1163.1	1104.6	1074.2	1046.2	972.9	931.1	909.4
37.5°	1196.6	1196.6	1171.2	1167.9	1134.9	1074.4	1044.4	1014.7	937.6	893.3	871.9
40°	1160.1	1163.3	1137.4	1134.1	1102.1	1041.9	1009.2	977.9	899.6	853.5	832.6
42.5°	1116.2	1119.3	1097.6	1094.6	1064.6	1004.4	973.9	939.9	859.8	812.9	791.3
45°	1067.9	1071.9	1052.5	1050.2	1022.3	963.3	934.1	899.6	818.2	770.6	749.4
47.5°	1014.0	1019.2	1002.4	1001.1	975.2	921.3	890.8	855.8	774.6	726.5	706.6
50°	953.5	961.1	947.2	947.2	924.0	870.4	843.9	808.9	729.3	681.2	661.5
52.5°	888.8	898.3	888.0	888.3	869.4	821.2	793.8	759.5	681.9	634.6	616.4
55°	821.7	831.1	824.5	825.5	810.7	766.8	741.9	707.9	633.6	587.5	570.3
57.5°	751.7	761.8	757.5	759.5	749.2	709.9	683.9	654.2	583.7	538.1	523.5
60°	681.4	691.0	688.7	691.5	685.0	650.9	627.3	596.5	533.6	489.7	476.9
62.5°	610.4	619.2	618.7	621.7	618.2	590.0	568.8	542.6	481.7	441.4	429.5
65°	540.9	548.4	547.9	551.2	550.4	527.8	508.6	484.7	429.8	392.7	382.4
67.5°	473.3	479.6	477.9	481.7	482.7	464.5	447.9	426.5	380.4	344.4	335.6
70°	407.3	411.6	409.4	411.9	414.1	400.5	386.4	367.5	327.7	296.0	288.7
72.5°	342.6	345.6	342.1	344.6	346.6	336.8	325.2	308.8	275.8	248.4	242.3
75°	279.9	284.2	276.9	279.4	280.9	271.1	264.3	250.9	222.4	201.3	197.2
77.5°	219.2	221.7	217.7	216.6	217.7	210.6	205.3	195.0	173.6	156.2	153.7
80°	161.2	162.7	158.7	157.7	158.5	153.4	149.4	141.8	126.7	113.6	112.6
82.5°	108.1	108.8	105.3	104.3	104.8	103.3	98.5	93.2	86.2	75.1	74.8
85°	61.7	61.7	59.2	58.2	58.7	56.2	54.4	51.6	48.9	41.3	41.8
87.5°	22.7	22.7	21.4	21.2	23.7	20.9	20.2	18.9	19.6	15.6	16.6
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°	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5
2.5°	1157.5	1155.0	1152.8	1145.0	1148.2	1140.2	1139.7	1136.6	1134.4	1130.1	1135.6
5°	1153.8	1148.7	1142.2	1132.9	1135.6	1126.1	1124.0	1120.5	1117.5	1112.0	1116.2
7.5°	1147.7	1139.4	1129.1	1117.2	1121.0	1109.2	1106.2	1102.4	1099.9	1093.3	1097.1
10°	1138.9	1127.1	1115.0	1100.6	1103.4	1090.5	1086.8	1082.7	1080.5	1074.7	1078.4
12.5°	1125.3	1110.9	1094.6	1079.0	1082.0	1069.9	1064.8	1060.6	1059.8	1055.0	1059.6
15°	1107.7	1087.8	1070.9	1054.3	1057.8	1043.7	1041.4	1037.1	1038.4	1035.1	1040.7
17.5°	1085.2	1062.3	1043.9	1026.0	1029.6	1017.7	1016.0	1014.0	1015.2	1014.7	1020.8
20°	1060.1	1034.9	1013.7	996.1	998.1	988.8	989.5	989.0	991.5	994.3	1002.6
22.5°	1031.6	1003.1	981.0	962.8	965.8	957.8	961.3	962.3	966.6	972.9	983.5
25°	999.6	969.1	945.9	928.8	931.6	926.3	932.3	934.9	941.7	952.2	963.1
27.5°	966.1	933.8	909.2	892.8	898.1	892.8	901.9	906.9	917.2	928.8	942.2
30°	930.6	897.1	871.6	857.0	862.1	857.3	871.9	878.7	889.0	904.9	920.7
32.5°	893.3	858.0	833.1	821.7	825.3	824.5	840.9	848.4	862.3	880.4	897.3
35°	855.0	818.2	793.0	783.5	787.7	788.7	808.4	817.2	832.3	854.2	872.4
37.5°	815.4	777.9	753.2	745.4	749.2	753.0	775.9	784.7	801.8	825.8	845.7
40°	774.4	736.9	712.7	706.4	710.1	714.2	739.1	751.2	769.9	795.8	817.5
42.5°	732.8	695.3	671.9	667.3	671.1	678.9	705.4	716.7	736.3	765.1	789.0
45°	690.5	651.5	631.0	627.5	631.6	640.6	666.6	680.2	701.1	732.6	758.3
47.5°	647.7	609.6	590.2	588.0	592.0	602.1	630.8	643.1	665.3	698.8	726.5
50°	604.3	567.3	548.7	547.9	551.7	562.5	590.0	604.6	627.5	665.1	693.5
52.5°	560.5	525.0	508.1	508.1	511.6	522.7	550.4	565.5	589.2	628.8	660.3
55°	516.7	482.9	466.8	468.1	473.1	482.7	509.6	525.5	549.4	590.5	623.7
57.5°	472.8	440.9	426.2	428.0	432.8	442.4	468.8	486.7	508.4	550.9	584.9
60°	429.5	399.3	386.4	388.5	392.7	402.3	429.8	445.1	466.8	510.1	544.1
62.5°	385.7	358.2	346.1	348.7	352.4	362.0	387.9	402.8	424.2	466.8	501.1
65°	342.4	316.9	306.6	309.1	312.6	321.4	345.9	360.2	380.6	422.2	455.0
67.5°	299.5	276.4	267.8	270.3	273.1	281.4	301.5	317.2	336.3	375.9	406.8
70°	257.2	236.5	229.0	231.5	234.0	241.6	259.2	273.6	291.2	327.5	356.2
72.5°	215.4	195.2	191.5	193.7	195.7	202.3	219.2	230.5	245.9	278.1	302.8
75°	174.6	157.2	154.7	156.9	158.7	163.7	177.9	187.7	200.5	228.5	248.6
77.5°	135.3	120.7	119.7	121.4	123.2	126.7	137.8	148.1	158.2	178.9	196.7
80°	98.5	86.7	86.7	88.4	87.9	92.2	100.0	108.3	115.6	130.5	143.6
82.5°	65.0	55.7	56.9	58.2	58.9	60.7	65.5	71.8	76.3	85.4	94.0
85°	36.0	29.7	31.0	32.0	31.5	33.5	36.0	39.8	42.1	46.4	50.9
87.5°	13.4	11.1	11.3	12.1	12.6	13.6	13.6	15.9	16.1	16.6	17.6
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°	1152.5	1152.5	1152.5
2.5°	1125.1	1131.1	1135.6
5°	1105.7	1110.7	1114.7
7.5°	1086.8	1091.3	1094.8
10°	1068.9	1073.9	1076.4
12.5°	1050.5	1056.3	1058.3
15°	1032.3	1038.1	1040.7
17.5°	1013.7	1021.3	1024.0
20°	996.3	1005.9	1008.2
22.5°	978.7	988.5	991.3
25°	959.5	971.1	973.9
27.5°	939.1	953.0	955.8
30°	918.7	933.8	936.6
32.5°	896.8	913.2	915.7
35°	873.9	890.3	893.3
37.5°	848.4	866.3	872.4
40°	822.0	841.4	847.7
42.5°	794.3	815.4	822.0
45°	764.6	787.7	795.3
47.5°	734.6	760.8	767.3
50°	702.1	730.0	737.9
52.5°	668.1	698.6	706.4
55°	632.8	663.5	672.1
57.5°	594.5	626.3	635.3
60°	554.5	586.2	594.8
62.5°	513.4	542.1	550.4
65°	467.6	494.5	502.1
67.5°	418.9	443.6	449.9
70°	367.3	388.7	394.2
72.5°	313.4	328.2	335.6
75°	257.7	269.5	275.1
77.5°	201.8	210.1	214.6
80°	147.1	151.9	155.7
82.5°	96.2	98.2	101.0
85°	51.9	51.9	53.7
87.5°	17.6	16.9	17.6
90°	0.0	0.0	0.0

(END OF REPORT)