

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: P835285

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835285
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-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

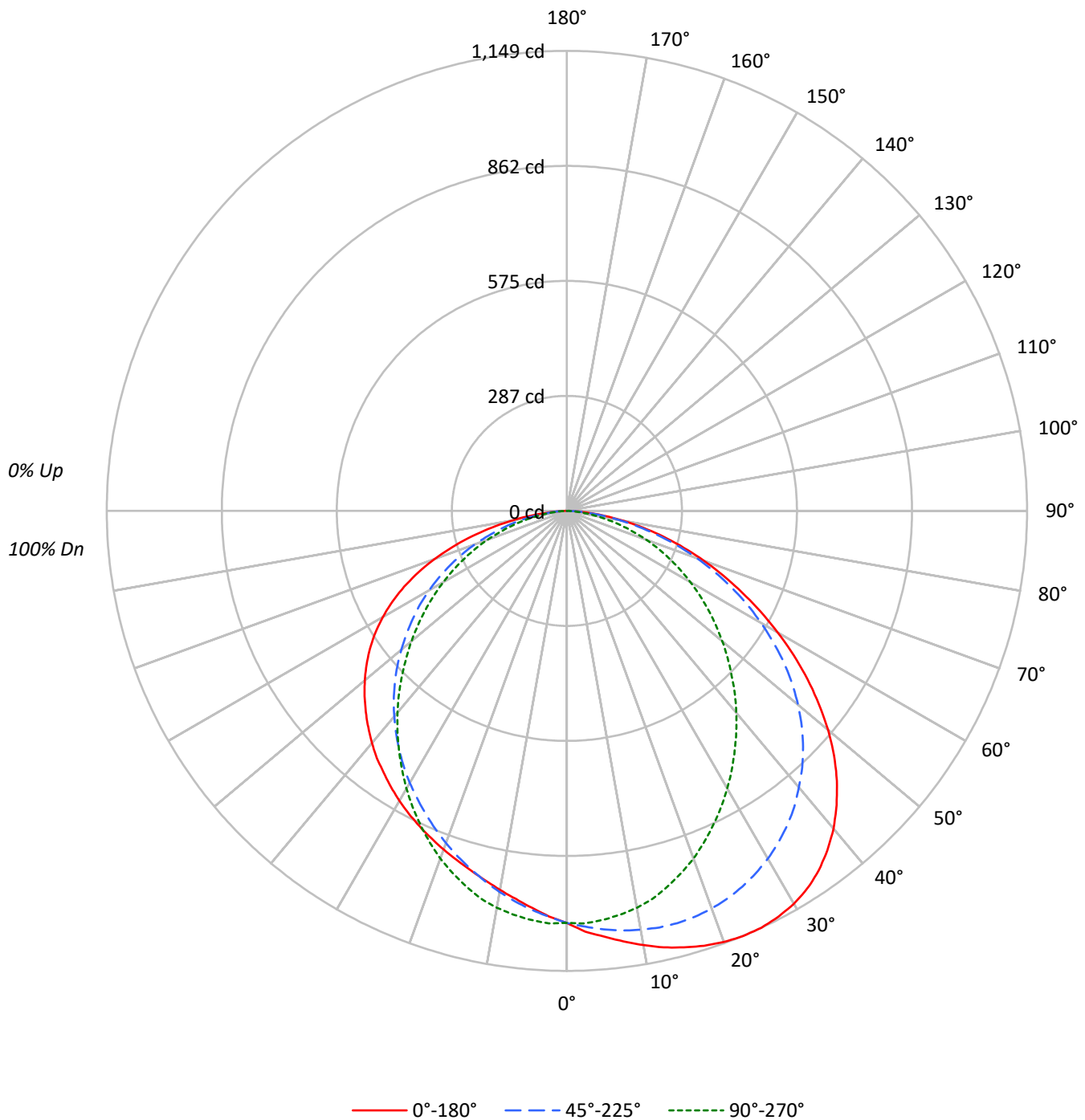
Lumens per Lamp: N/A
Luminaire Lumens: 3026.9 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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
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°	2769	2769	2769
5°	2883	2771	2689
10°	3009	2750	2626
15°	3144	2706	2589
20°	3282	2646	2578
25°	3411	2569	2582
30°	3522	2489	2599
35°	3602	2400	2620
40°	3639	2311	2659
45°	3629	2214	2702
50°	3564	2120	2758
55°	3442	2023	2815
60°	3274	1919	2858
65°	3075	1802	2855
70°	2862	1662	2769
75°	2598	1460	2554
80°	2232	1199	2154
85°	1701	818	1479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.6	3.2
10°-20°	281.8	9.3
20°-30°	431.8	14.3
30°-40°	526.9	17.4
40°-50°	551.1	18.2
50°-60°	498.7	16.5
60°-70°	377.7	12.5
70°-80°	210.5	7.0
80°-90°	50.8	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°	811.2	26.8
0°-40°	1338.1	44.2
0°-60°	2387.9	78.9
0°-90°	3026.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1029	1029	1029	1029	1029	
5°	1067	1050	1026	1000	995	103
15°	1129	1066	971	926	929	320
25°	1149	1036	865	835	870	530
35°	1096	959	731	730	798	685
45°	954	834	582	607	710	734
55°	734	662	431	469	600	655
65°	483	454	283	322	448	479
75°	250	236	140	168	246	265
85°	55	49	26	36	48	66
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°	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0
2.5°	1051.7	1046.8	1042.7	1044.3	1045.2	1042.1	1039.4	1039.8	1037.1	1042.3	1030.2
5°	1067.3	1062.8	1058.0	1059.8	1058.0	1053.3	1049.5	1048.4	1041.2	1044.1	1031.7
7.5°	1084.6	1079.6	1072.7	1074.7	1070.9	1062.1	1057.1	1054.2	1043.2	1043.4	1029.7
10°	1101.2	1097.0	1087.5	1088.9	1081.9	1070.2	1062.3	1058.3	1042.7	1040.5	1026.3
12.5°	1116.7	1110.9	1100.8	1101.5	1091.3	1075.8	1065.7	1059.8	1039.6	1032.9	1018.9
15°	1128.7	1123.0	1110.9	1110.7	1097.6	1077.4	1065.9	1057.8	1032.2	1021.6	1007.0
17.5°	1138.8	1133.6	1118.5	1118.1	1102.4	1076.7	1063.0	1052.9	1021.4	1008.3	992.1
20°	1146.0	1140.8	1123.9	1122.4	1103.5	1073.3	1056.9	1044.1	1007.2	991.7	973.7
22.5°	1149.4	1144.2	1125.1	1122.8	1100.8	1066.6	1048.1	1033.1	991.0	970.8	952.1
25°	1148.7	1143.7	1122.1	1119.9	1095.6	1056.5	1035.8	1018.5	970.5	946.7	928.3
27.5°	1143.1	1139.2	1116.5	1113.6	1086.2	1042.7	1020.7	1001.6	947.8	921.3	901.3
30°	1133.4	1130.5	1106.4	1103.7	1074.5	1027.7	1003.2	981.1	923.3	893.4	873.2
32.5°	1117.9	1115.2	1090.9	1088.4	1058.7	1008.3	982.7	960.0	896.5	863.5	843.2
35°	1096.5	1094.9	1071.3	1068.6	1038.5	986.3	959.1	934.1	868.7	831.3	812.0
37.5°	1068.4	1068.4	1045.7	1042.7	1013.3	959.3	932.5	906.0	837.2	797.6	778.5
40°	1035.8	1038.7	1015.5	1012.6	984.0	930.3	901.0	873.2	803.2	762.0	743.4
42.5°	996.6	999.3	980.0	977.3	950.5	896.8	869.6	839.2	767.7	725.8	706.5
45°	953.5	957.1	939.7	937.7	912.7	860.1	834.0	803.2	730.6	688.0	669.1
47.5°	905.3	910.0	895.0	893.8	870.7	822.5	795.3	764.1	691.6	648.7	630.9
50°	851.3	858.1	845.7	845.7	825.0	777.1	753.5	722.2	651.2	608.2	590.7
52.5°	793.5	802.1	792.9	793.1	776.2	733.3	708.7	678.1	608.9	566.6	550.4
55°	733.7	742.0	736.2	737.1	723.8	684.7	662.4	632.0	565.7	524.5	509.2
57.5°	671.2	680.2	676.3	678.1	668.9	633.8	610.7	584.1	521.1	480.4	467.4
60°	608.4	617.0	614.9	617.4	611.6	581.2	560.1	532.6	476.4	437.3	425.8
62.5°	545.0	552.9	552.4	555.1	552.0	526.8	507.9	484.5	430.1	394.1	383.5
65°	482.9	489.7	489.2	492.1	491.5	471.2	454.1	432.8	383.7	350.7	341.4
67.5°	422.6	428.3	426.7	430.1	431.0	414.8	399.9	380.8	339.6	307.5	299.6
70°	363.7	367.5	365.5	367.8	369.8	357.6	345.0	328.2	292.6	264.3	257.8
72.5°	305.9	308.6	305.4	307.7	309.5	300.7	290.4	275.8	246.3	221.8	216.4
75°	249.9	253.7	247.2	249.4	250.8	242.0	235.9	224.0	198.6	179.7	176.1
77.5°	195.7	197.9	194.3	193.4	194.3	188.0	183.3	174.1	155.0	139.5	137.2
80°	144.0	145.3	141.7	140.8	141.5	137.0	133.4	126.6	113.1	101.4	100.5
82.5°	96.5	97.2	94.0	93.1	93.6	92.2	87.9	83.2	76.9	67.0	66.8
85°	55.1	55.1	52.9	52.0	52.4	50.2	48.6	46.1	43.6	36.9	37.3
87.5°	20.2	20.2	19.1	18.9	21.1	18.7	18.0	16.9	17.5	13.9	14.8
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0	1029.0
2.5°	1033.5	1031.3	1029.3	1022.3	1025.2	1018.0	1017.6	1014.9	1012.8	1009.0	1014.0
5°	1030.2	1025.7	1019.8	1011.5	1014.0	1005.4	1003.6	1000.5	997.8	992.8	996.6
7.5°	1024.8	1017.3	1008.1	997.5	1000.9	990.3	987.6	984.3	982.0	976.2	979.5
10°	1016.9	1006.3	995.5	982.7	985.2	973.7	970.3	966.7	964.7	959.5	962.9
12.5°	1004.7	991.9	977.3	963.3	966.0	955.3	950.8	946.9	946.3	942.0	946.0
15°	989.0	971.2	956.2	941.3	944.5	931.9	929.8	926.0	927.1	924.2	929.2
17.5°	969.0	948.5	932.1	916.1	919.3	908.7	907.1	905.3	906.4	906.0	911.4
20°	946.5	924.0	905.1	889.3	891.1	882.8	883.5	883.1	885.3	887.8	895.2
22.5°	921.1	895.6	875.9	859.7	862.4	855.2	858.3	859.2	863.0	868.7	878.1
25°	892.5	865.3	844.6	829.3	831.8	827.0	832.4	834.7	840.8	850.2	859.9
27.5°	862.6	833.8	811.8	797.1	801.9	797.1	805.2	809.7	818.9	829.3	841.2
30°	830.9	801.0	778.2	765.2	769.7	765.4	778.5	784.5	793.8	807.9	822.1
32.5°	797.6	766.1	743.8	733.7	736.9	736.2	750.8	757.5	769.9	786.1	801.2
35°	763.4	730.6	708.1	699.5	703.3	704.2	721.8	729.7	743.1	762.7	778.9
37.5°	728.1	694.6	672.5	665.6	668.9	672.3	692.8	700.6	715.9	737.3	755.1
40°	691.4	657.9	636.3	630.7	634.1	637.7	659.9	670.7	687.4	710.5	729.9
42.5°	654.3	620.8	599.9	595.8	599.2	606.2	629.8	639.9	657.5	683.1	704.5
45°	616.5	581.7	563.4	560.3	563.9	572.0	595.1	607.3	626.0	654.1	677.0
47.5°	578.3	544.3	527.0	525.0	528.6	537.6	563.2	574.2	594.0	623.9	648.7
50°	539.6	506.5	489.9	489.2	492.6	502.3	526.8	539.8	560.3	593.8	619.2
52.5°	500.5	468.7	453.7	453.7	456.8	466.7	491.5	505.0	526.1	561.4	589.5
55°	461.3	431.2	416.8	417.9	422.4	431.0	455.0	469.2	490.6	527.2	556.9
57.5°	422.2	393.6	380.6	382.1	386.4	395.0	418.6	434.6	453.9	491.9	522.3
60°	383.5	356.5	345.0	346.8	350.7	359.2	383.7	397.4	416.8	455.5	485.8
62.5°	344.4	319.8	309.0	311.3	314.7	323.2	346.4	359.7	378.8	416.8	447.4
65°	305.7	283.0	273.7	276.0	279.1	287.0	308.8	321.6	339.9	377.0	406.2
67.5°	267.4	246.7	239.1	241.3	243.8	251.2	269.2	283.2	300.3	335.6	363.3
70°	229.6	211.2	204.5	206.7	209.0	215.7	231.4	244.3	260.0	292.4	318.0
72.5°	192.3	174.3	170.9	173.0	174.8	180.6	195.7	205.8	219.5	248.3	270.4
75°	155.9	140.4	138.1	140.1	141.7	146.2	158.8	167.6	179.0	204.0	222.0
77.5°	120.8	107.7	106.8	108.4	110.0	113.1	123.0	132.3	141.3	159.7	175.7
80°	87.9	77.4	77.4	78.9	78.5	82.3	89.3	96.7	103.2	116.5	128.2
82.5°	58.0	49.7	50.8	52.0	52.6	54.2	58.5	64.1	68.2	76.2	83.9
85°	32.2	26.5	27.7	28.6	28.1	29.9	32.2	35.5	37.6	41.4	45.4
87.5°	11.9	9.9	10.1	10.8	11.2	12.1	12.1	14.2	14.4	14.8	15.7
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):

	160°	170°	180°
0°	1029.0	1029.0	1029.0
2.5°	1004.5	1009.9	1014.0
5°	987.2	991.7	995.3
7.5°	970.3	974.4	977.5
10°	954.4	958.9	961.1
12.5°	937.9	943.1	944.9
15°	921.7	926.9	929.2
17.5°	905.1	911.8	914.3
20°	889.6	898.1	900.1
22.5°	873.8	882.6	885.1
25°	856.7	867.1	869.6
27.5°	838.5	850.9	853.4
30°	820.3	833.8	836.3
32.5°	800.7	815.3	817.6
35°	780.3	794.9	797.6
37.5°	757.5	773.5	778.9
40°	733.9	751.2	756.9
42.5°	709.2	728.1	733.9
45°	682.6	703.3	710.1
47.5°	655.9	679.3	685.1
50°	626.9	651.8	658.8
52.5°	596.5	623.7	630.7
55°	565.0	592.4	600.1
57.5°	530.8	559.2	567.3
60°	495.1	523.4	531.0
62.5°	458.4	484.0	491.5
65°	417.5	441.5	448.3
67.5°	374.0	396.1	401.7
70°	327.9	347.1	352.0
72.5°	279.8	293.1	299.6
75°	230.1	240.7	245.6
77.5°	180.2	187.6	191.6
80°	131.4	135.6	139.0
82.5°	85.9	87.7	90.2
85°	46.3	46.3	47.9
87.5°	15.7	15.1	15.7
90°	0.0	0.0	0.0

(END OF REPORT)