

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: P835268

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835268
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-LD4-3STD-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

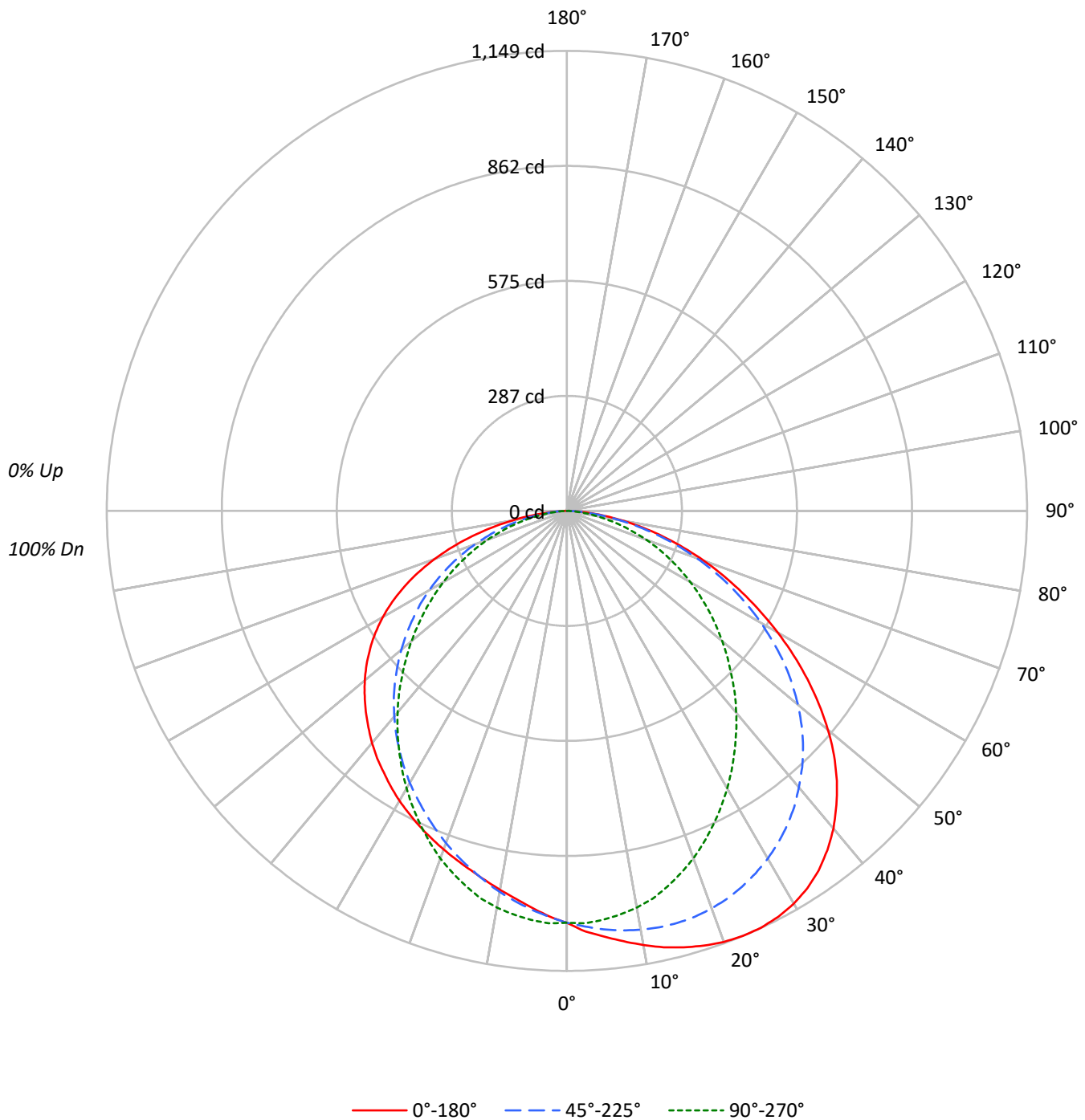
Lumens per Lamp: N/A
Luminaire Lumens: 3026.1 lumens
Efficiency: N/A
Efficacy: 60.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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°	2768	2768	2768
5°	2882	2770	2688
10°	3008	2749	2625
15°	3144	2705	2588
20°	3281	2645	2577
25°	3410	2568	2581
30°	3521	2488	2598
35°	3601	2399	2620
40°	3638	2310	2658
45°	3628	2213	2702
50°	3563	2120	2757
55°	3441	2023	2814
60°	3274	1918	2857
65°	3074	1801	2853
70°	2861	1661	2769
75°	2597	1459	2552
80°	2230	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°	431.7	14.3
30°-40°	526.8	17.4
40°-50°	550.9	18.2
50°-60°	498.6	16.5
60°-70°	377.6	12.5
70°-80°	210.4	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°	811.0	26.8
0°-40°	1337.8	44.2
0°-60°	2387.3	78.9
0°-90°	3026.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1029	1029	1029	1029	1029	
5°	1067	1049	1025	1000	995	103
15°	1128	1066	971	926	929	320
25°	1148	1036	865	834	869	530
35°	1096	959	730	730	797	685
45°	953	834	582	607	710	733
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°	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7
2.5°	1051.5	1046.5	1042.5	1044.0	1044.9	1041.8	1039.1	1039.5	1036.8	1042.0	1029.9
5°	1067.0	1062.5	1057.7	1059.5	1057.7	1053.0	1049.2	1048.1	1040.9	1043.8	1031.4
7.5°	1084.3	1079.3	1072.4	1074.4	1070.6	1061.8	1056.8	1053.9	1042.9	1043.1	1029.4
10°	1100.9	1096.7	1087.2	1088.6	1081.6	1069.9	1062.0	1058.0	1042.5	1040.2	1026.0
12.5°	1116.4	1110.6	1100.5	1101.1	1091.0	1075.5	1065.4	1059.5	1039.3	1032.6	1018.6
15°	1128.4	1122.7	1110.6	1110.4	1097.3	1077.1	1065.6	1057.5	1031.9	1021.3	1006.7
17.5°	1138.5	1133.3	1118.2	1117.8	1102.0	1076.4	1062.7	1052.6	1021.1	1008.1	991.9
20°	1145.7	1140.5	1123.6	1122.1	1103.2	1073.0	1056.6	1043.8	1006.9	991.4	973.4
22.5°	1149.0	1143.9	1124.8	1122.5	1100.5	1066.3	1047.9	1032.8	990.7	970.5	951.8
25°	1148.4	1143.4	1121.8	1119.6	1095.3	1056.2	1035.5	1018.2	970.3	946.4	928.0
27.5°	1142.7	1138.9	1116.2	1113.3	1085.9	1042.5	1020.4	1001.3	947.6	921.0	901.0
30°	1133.1	1130.2	1106.1	1103.4	1074.2	1027.4	1002.9	980.8	923.1	893.2	872.9
32.5°	1117.6	1114.9	1090.6	1088.1	1058.4	1008.1	982.4	959.7	896.3	863.2	843.0
35°	1096.2	1094.6	1071.0	1068.3	1038.2	986.0	958.8	933.9	868.4	831.1	811.8
37.5°	1068.1	1068.1	1045.4	1042.5	1013.0	959.0	932.3	905.7	836.9	797.4	778.2
40°	1035.5	1038.4	1015.3	1012.3	983.8	930.0	900.8	872.9	803.0	761.8	743.2
42.5°	996.4	999.1	979.7	977.0	950.3	896.5	869.3	839.0	767.5	725.6	706.3
45°	953.2	956.8	939.5	937.4	912.5	859.9	833.8	803.0	730.4	687.9	669.0
47.5°	905.1	909.8	894.7	893.6	870.4	822.3	795.1	763.9	691.4	648.5	630.7
50°	851.1	857.8	845.5	845.5	824.8	776.9	753.3	722.0	651.0	608.0	590.5
52.5°	793.3	801.9	792.6	792.9	776.0	733.0	708.5	678.0	608.7	566.4	550.2
55°	733.5	741.8	736.0	736.9	723.6	684.5	662.2	631.9	565.5	524.4	509.1
57.5°	671.0	680.0	676.2	678.0	668.7	633.7	610.5	584.0	521.0	480.3	467.3
60°	608.3	616.8	614.8	617.2	611.4	581.0	559.9	532.5	476.3	437.1	425.7
62.5°	544.8	552.7	552.3	555.0	551.8	526.6	507.7	484.4	429.9	394.0	383.4
65°	482.8	489.5	489.1	492.0	491.3	471.1	454.0	432.6	383.6	350.6	341.3
67.5°	422.5	428.1	426.6	429.9	430.8	414.6	399.8	380.7	339.5	307.4	299.5
70°	363.6	367.4	365.4	367.6	369.7	357.5	344.9	328.1	292.5	264.2	257.7
72.5°	305.8	308.5	305.4	307.6	309.4	300.6	290.3	275.7	246.2	221.7	216.3
75°	249.8	253.6	247.1	249.4	250.7	242.0	235.9	224.0	198.6	179.7	176.1
77.5°	195.6	197.9	194.3	193.4	194.3	188.0	183.3	174.0	154.9	139.4	137.2
80°	143.9	145.3	141.7	140.8	141.4	136.9	133.3	126.6	113.1	101.4	100.5
82.5°	96.5	97.1	94.0	93.1	93.5	92.2	87.9	83.2	76.9	67.0	66.8
85°	55.1	55.1	52.8	51.9	52.4	50.1	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°	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7	1028.7
2.5°	1033.2	1031.0	1029.0	1022.0	1024.9	1017.7	1017.3	1014.6	1012.6	1008.7	1013.7
5°	1029.9	1025.4	1019.5	1011.2	1013.7	1005.1	1003.3	1000.2	997.5	992.5	996.4
7.5°	1024.5	1017.0	1007.8	997.3	1000.6	990.1	987.4	984.0	981.7	975.9	979.3
10°	1016.6	1006.0	995.2	982.4	984.9	973.4	970.1	966.5	964.4	959.3	962.6
12.5°	1004.5	991.6	977.0	963.1	965.8	955.0	950.5	946.7	946.0	941.7	945.8
15°	988.7	971.0	955.9	941.0	944.2	931.6	929.6	925.8	926.9	924.0	928.9
17.5°	968.7	948.2	931.8	915.9	919.0	908.4	906.9	905.1	906.2	905.7	911.1
20°	946.2	923.7	904.8	889.1	890.9	882.6	883.3	882.8	885.1	887.5	894.9
22.5°	920.8	895.4	875.6	859.4	862.1	854.9	858.1	859.0	862.8	868.4	877.9
25°	892.3	865.0	844.4	829.1	831.5	826.8	832.2	834.5	840.5	850.0	859.6
27.5°	862.3	833.6	811.5	796.9	801.6	796.9	805.0	809.5	818.7	829.1	841.0
30°	830.6	800.7	778.0	765.0	769.5	765.2	778.2	784.3	793.5	807.7	821.9
32.5°	797.4	765.9	743.6	733.5	736.6	736.0	750.6	757.3	769.7	785.9	801.0
35°	763.2	730.4	707.9	699.3	703.1	704.0	721.6	729.5	742.9	762.5	778.7
37.5°	727.9	694.4	672.3	665.4	668.7	672.1	692.6	700.4	715.7	737.1	754.9
40°	691.2	657.7	636.1	630.5	633.9	637.5	659.7	670.5	687.2	710.3	729.7
42.5°	654.1	620.6	599.7	595.7	599.0	606.0	629.6	639.7	657.3	682.9	704.3
45°	616.3	581.5	563.3	560.1	563.7	571.8	595.0	607.1	625.8	653.9	676.8
47.5°	578.1	544.2	526.9	524.8	528.4	537.4	563.1	574.1	593.9	623.8	648.5
50°	539.4	506.4	489.7	489.1	492.4	502.1	526.6	539.7	560.1	593.6	619.0
52.5°	500.3	468.6	453.5	453.5	456.7	466.6	491.3	504.8	526.0	561.3	589.4
55°	461.2	431.1	416.7	417.8	422.3	430.8	454.9	469.1	490.4	527.1	556.8
57.5°	422.1	393.5	380.5	382.0	386.3	394.9	418.5	434.4	453.8	491.8	522.1
60°	383.4	356.4	344.9	346.7	350.6	359.1	383.6	397.3	416.7	455.3	485.7
62.5°	344.3	319.8	309.0	311.2	314.6	323.1	346.3	359.6	378.7	416.7	447.2
65°	305.6	282.9	273.7	275.9	279.1	286.9	308.7	321.6	339.8	376.9	406.1
67.5°	267.4	246.7	239.0	241.3	243.8	251.2	269.2	283.1	300.2	335.5	363.2
70°	229.6	211.1	204.4	206.6	208.9	215.6	231.4	244.2	259.9	292.3	318.0
72.5°	192.3	174.3	170.9	172.9	174.7	180.6	195.6	205.7	219.5	248.2	270.3
75°	155.8	140.3	138.1	140.1	141.7	146.2	158.8	167.5	179.0	203.9	221.9
77.5°	120.8	107.7	106.8	108.4	110.0	113.1	123.0	132.2	141.2	159.7	175.6
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	51.9	52.6	54.2	58.5	64.1	68.1	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°	1028.7	1028.7	1028.7
2.5°	1004.2	1009.6	1013.7
5°	986.9	991.4	995.0
7.5°	970.1	974.1	977.2
10°	954.1	958.6	960.8
12.5°	937.7	942.8	944.6
15°	921.5	926.7	928.9
17.5°	904.8	911.6	914.1
20°	889.3	897.9	899.9
22.5°	873.6	882.4	884.8
25°	856.5	866.8	869.3
27.5°	838.3	850.7	853.1
30°	820.1	833.6	836.0
32.5°	800.5	815.1	817.4
35°	780.0	794.7	797.4
37.5°	757.3	773.3	778.7
40°	733.7	751.0	756.7
42.5°	709.0	727.9	733.7
45°	682.5	703.1	709.9
47.5°	655.7	679.1	684.9
50°	626.7	651.6	658.6
52.5°	596.3	623.5	630.5
55°	564.9	592.3	599.9
57.5°	530.7	559.0	567.1
60°	494.9	523.3	530.9
62.5°	458.3	483.9	491.3
65°	417.3	441.4	448.1
67.5°	373.9	396.0	401.6
70°	327.8	347.0	351.9
72.5°	279.7	293.0	299.5
75°	230.0	240.6	245.5
77.5°	180.1	187.5	191.6
80°	131.3	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)