

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: P834280

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834280
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-LD4-1LO-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

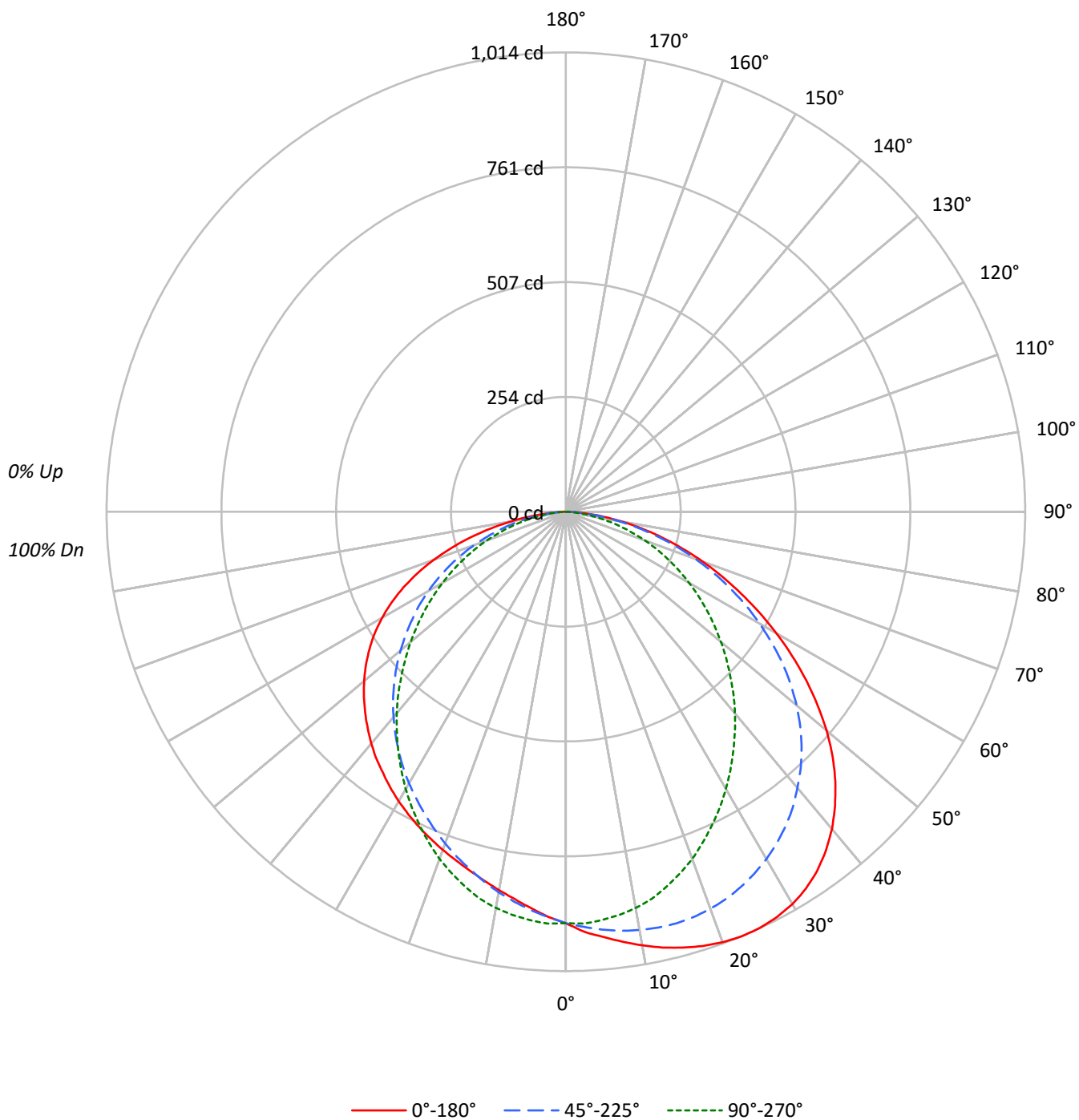
Lumens per Lamp: N/A
Luminaire Lumens: 2671.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2443	2443	2443
5°	2544	2445	2373
10°	2655	2426	2317
15°	2775	2388	2284
20°	2896	2335	2275
25°	3010	2267	2278
30°	3108	2196	2293
35°	3179	2118	2312
40°	3211	2040	2346
45°	3202	1953	2385
50°	3145	1871	2434
55°	3037	1785	2484
60°	2890	1693	2522
65°	2713	1590	2519
70°	2525	1467	2444
75°	2293	1288	2253
80°	1968	1058	1901
85°	1501	722	1306

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	3.2
10°-20°	248.7	9.3
20°-30°	381.0	14.3
30°-40°	465.0	17.4
40°-50°	486.3	18.2
50°-60°	440.1	16.5
60°-70°	333.3	12.5
70°-80°	185.7	7.0
80°-90°	44.8	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°	715.8	26.8
0°-40°	1180.8	44.2
0°-60°	2107.2	78.9
0°-90°	2671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2671.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	908	908	908	908	908	
5°	942	926	905	883	878	91
15°	996	941	857	817	820	282
25°	1014	914	764	737	767	468
35°	968	846	645	644	704	604
45°	841	736	513	536	627	647
55°	647	584	380	414	530	578
65°	426	401	250	284	396	423
75°	220	208	124	148	217	234
85°	49	43	23	31	42	58
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°	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0
2.5°	928.1	923.7	920.1	921.5	922.3	919.6	917.2	917.6	915.2	919.8	909.0
5°	941.8	937.8	933.6	935.2	933.6	929.5	926.1	925.1	918.8	921.3	910.4
7.5°	957.1	952.7	946.5	948.3	945.0	937.2	932.9	930.3	920.5	920.7	908.6
10°	971.8	968.0	959.6	960.8	954.7	944.4	937.4	933.8	920.1	918.2	905.7
12.5°	985.4	980.3	971.4	972.0	963.0	949.3	940.4	935.2	917.4	911.4	899.1
15°	996.0	991.0	980.3	980.1	968.6	950.7	940.6	933.4	910.8	901.5	888.6
17.5°	1004.9	1000.3	987.0	986.6	972.7	950.1	938.0	929.1	901.3	889.8	875.5
20°	1011.3	1006.7	991.8	990.4	973.7	947.1	932.7	921.3	888.8	875.1	859.2
22.5°	1014.2	1009.7	992.8	990.8	971.4	941.2	924.9	911.6	874.5	856.6	840.2
25°	1013.6	1009.3	990.2	988.2	966.8	932.3	914.0	898.7	856.4	835.4	819.1
27.5°	1008.7	1005.3	985.2	982.7	958.5	920.1	900.7	883.8	836.4	813.0	795.3
30°	1000.1	997.6	976.3	973.9	948.1	906.9	885.2	865.8	814.8	788.4	770.5
32.5°	986.4	984.1	962.6	960.4	934.2	889.8	867.2	847.1	791.1	762.0	744.1
35°	967.6	966.2	945.4	943.0	916.4	870.3	846.3	824.3	766.5	733.6	716.5
37.5°	942.8	942.8	922.7	920.1	894.1	846.5	822.9	799.5	738.7	703.8	686.9
40°	914.0	916.6	896.1	893.6	868.3	820.9	795.1	770.5	708.8	672.4	656.0
42.5°	879.5	881.8	864.8	862.4	838.8	791.3	767.3	740.5	677.4	640.5	623.4
45°	841.4	844.5	829.2	827.5	805.4	759.0	736.0	708.8	644.7	607.1	590.5
47.5°	798.9	803.0	789.7	788.8	768.3	725.8	701.8	674.2	610.3	572.4	556.7
50°	751.2	757.2	746.3	746.3	728.0	685.7	664.9	637.3	574.6	536.7	521.2
52.5°	700.2	707.8	699.6	699.8	685.0	647.0	625.4	598.4	537.3	500.0	485.7
55°	647.4	654.8	649.6	650.4	638.7	604.2	584.5	557.7	499.2	462.9	449.4
57.5°	592.3	600.2	596.8	598.4	590.3	559.3	538.9	515.5	459.9	424.0	412.4
60°	536.9	544.4	542.6	544.8	539.7	512.9	494.2	470.0	420.4	385.8	375.7
62.5°	480.9	487.9	487.5	489.8	487.1	464.8	448.2	427.5	379.5	347.7	338.4
65°	426.1	432.1	431.7	434.3	433.7	415.8	400.7	381.9	338.6	309.4	301.3
67.5°	372.9	377.9	376.5	379.5	380.3	366.0	352.9	336.0	299.7	271.3	264.4
70°	320.9	324.3	322.5	324.5	326.3	315.6	304.5	289.6	258.2	233.2	227.5
72.5°	269.9	272.3	269.5	271.5	273.1	265.4	256.2	243.3	217.3	195.7	190.9
75°	220.5	223.9	218.1	220.1	221.3	213.6	208.2	197.7	175.3	158.6	155.4
77.5°	172.7	174.7	171.5	170.7	171.5	165.9	161.8	153.6	136.8	123.1	121.1
80°	127.0	128.2	125.0	124.2	124.8	120.9	117.7	111.7	99.8	89.5	88.7
82.5°	85.1	85.7	83.0	82.2	82.6	81.4	77.6	73.4	67.9	59.1	58.9
85°	48.6	48.6	46.6	45.8	46.2	44.3	42.9	40.7	38.5	32.6	32.9
87.5°	17.9	17.9	16.9	16.7	18.7	16.5	15.9	14.9	15.5	12.3	13.1
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°	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0	908.0
2.5°	912.0	910.0	908.2	902.1	904.7	898.3	897.9	895.5	893.8	890.4	894.7
5°	909.0	905.1	899.9	892.6	894.7	887.2	885.6	882.8	880.5	876.1	879.5
7.5°	904.3	897.7	889.6	880.3	883.2	873.9	871.5	868.5	866.6	861.4	864.4
10°	897.3	888.0	878.5	867.2	869.3	859.2	856.2	853.1	851.3	846.7	849.7
12.5°	886.6	875.3	862.4	850.1	852.5	842.9	839.0	835.6	835.0	831.2	834.8
15°	872.7	857.0	843.7	830.6	833.4	822.3	820.5	817.1	818.1	815.6	819.9
17.5°	855.0	837.0	822.5	808.4	811.2	801.9	800.5	798.9	799.9	799.5	804.2
20°	835.2	815.4	798.7	784.8	786.4	779.0	779.6	779.2	781.2	783.4	789.9
22.5°	812.8	790.3	772.9	758.6	761.0	754.6	757.4	758.2	761.6	766.5	774.9
25°	787.6	763.5	745.3	731.8	734.0	729.8	734.6	736.6	741.9	750.3	758.8
27.5°	761.2	735.8	716.3	703.4	707.6	703.4	710.6	714.5	722.7	731.8	742.3
30°	733.2	706.8	686.7	675.2	679.2	675.4	686.9	692.3	700.4	712.9	725.4
32.5°	703.8	676.0	656.4	647.4	650.2	649.6	662.5	668.5	679.4	693.7	707.0
35°	673.6	644.7	624.8	617.3	620.6	621.4	636.9	643.9	655.8	673.0	687.3
37.5°	642.5	612.9	593.5	587.3	590.3	593.3	611.3	618.3	631.8	650.6	666.3
40°	610.1	580.6	561.5	556.5	559.5	562.7	582.3	591.9	606.6	627.0	644.1
42.5°	577.4	547.8	529.3	525.8	528.7	534.9	555.7	564.7	580.2	602.8	621.6
45°	544.0	513.3	497.2	494.4	497.6	504.7	525.2	535.9	552.4	577.2	597.4
47.5°	510.3	480.3	465.0	463.3	466.4	474.4	497.0	506.7	524.2	550.6	572.4
50°	476.2	447.0	432.3	431.7	434.7	443.2	464.8	476.3	494.4	524.0	546.4
52.5°	441.6	413.6	400.3	400.3	403.1	411.8	433.7	445.6	464.2	495.4	520.2
55°	407.1	380.5	367.8	368.8	372.7	380.3	401.5	414.0	432.9	465.2	491.4
57.5°	372.5	347.3	335.8	337.2	341.0	348.5	369.4	383.5	400.5	434.1	460.9
60°	338.4	314.6	304.5	306.1	309.4	317.0	338.6	350.7	367.8	401.9	428.7
62.5°	303.9	282.2	272.7	274.7	277.7	285.2	305.7	317.4	334.2	367.8	394.8
65°	269.7	249.7	241.5	243.5	246.3	253.3	272.5	283.8	299.9	332.7	358.5
67.5°	236.0	217.7	211.0	213.0	215.2	221.7	237.6	249.9	265.0	296.1	320.5
70°	202.6	186.4	180.4	182.4	184.4	190.3	204.2	215.5	229.4	258.0	280.6
72.5°	169.7	153.8	150.8	152.6	154.2	159.4	172.7	181.6	193.7	219.1	238.6
75°	137.5	123.9	121.9	123.7	125.0	129.0	140.1	147.9	158.0	180.0	195.9
77.5°	106.6	95.1	94.3	95.7	97.1	99.8	108.6	116.7	124.6	140.9	155.0
80°	77.6	68.3	68.3	69.7	69.3	72.6	78.8	85.3	91.1	102.8	113.1
82.5°	51.2	43.9	44.9	45.8	46.4	47.8	51.6	56.6	60.1	67.3	74.0
85°	28.4	23.4	24.4	25.2	24.8	26.4	28.4	31.4	33.1	36.5	40.1
87.5°	10.5	8.7	8.9	9.5	9.9	10.7	10.7	12.5	12.7	13.1	13.9
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°	908.0	908.0	908.0
2.5°	886.4	891.2	894.7
5°	871.1	875.1	878.3
7.5°	856.2	859.8	862.6
10°	842.1	846.1	848.1
12.5°	827.7	832.2	833.8
15°	813.4	817.9	819.9
17.5°	798.7	804.6	806.8
20°	785.0	792.5	794.3
22.5°	771.1	778.8	781.0
25°	756.0	765.1	767.3
27.5°	739.9	750.8	753.0
30°	723.9	735.8	737.9
32.5°	706.6	719.5	721.5
35°	688.5	701.4	703.8
37.5°	668.5	682.6	687.3
40°	647.6	662.9	667.9
42.5°	625.8	642.5	647.6
45°	602.4	620.6	626.6
47.5°	578.8	599.4	604.6
50°	553.2	575.2	581.3
52.5°	526.4	550.4	556.5
55°	498.6	522.8	529.5
57.5°	468.4	493.4	500.6
60°	436.9	461.9	468.6
62.5°	404.5	427.1	433.7
65°	368.4	389.6	395.6
67.5°	330.1	349.5	354.5
70°	289.4	306.3	310.6
72.5°	246.9	258.6	264.4
75°	203.0	212.4	216.7
77.5°	159.0	165.5	169.1
80°	115.9	119.7	122.7
82.5°	75.8	77.4	79.6
85°	40.9	40.9	42.3
87.5°	13.9	13.3	13.9
90°	0.0	0.0	0.0

(END OF REPORT)