

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: P834262

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-35-120-EDD-90**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834262
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-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

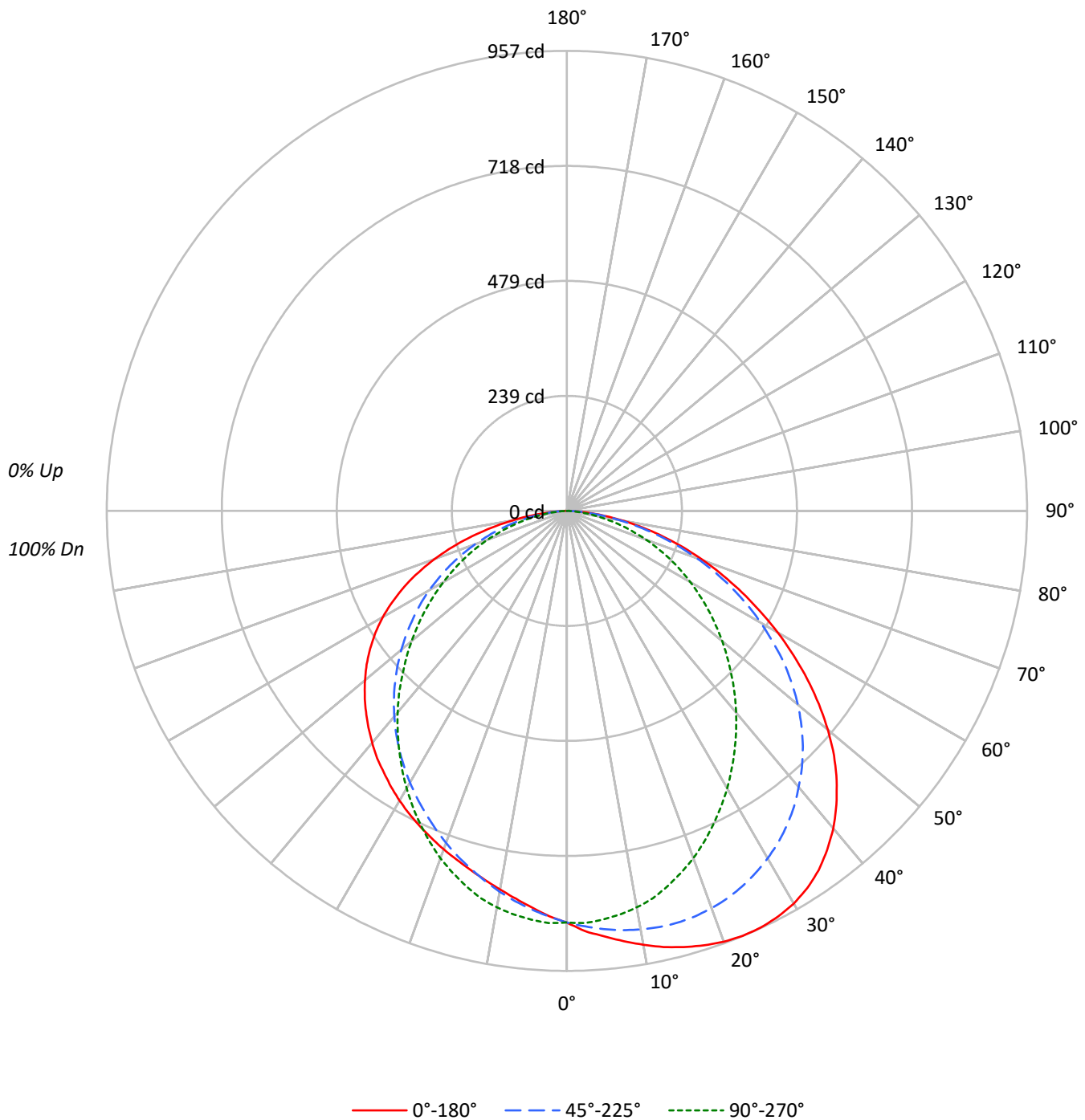
Lumens per Lamp: N/A
Luminaire Lumens: 2519.3 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	2305	2305	2305
5°	2400	2306	2238
10°	2504	2288	2186
15°	2617	2252	2154
20°	2731	2202	2145
25°	2839	2138	2149
30°	2931	2071	2163
35°	2998	1997	2181
40°	3028	1924	2213
45°	3020	1842	2249
50°	2966	1765	2295
55°	2865	1684	2343
60°	2725	1597	2379
65°	2559	1500	2376
70°	2382	1383	2305
75°	2163	1214	2125
80°	1857	998	1793
85°	1417	682	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.2
10°-20°	234.6	9.3
20°-30°	359.4	14.3
30°-40°	438.6	17.4
40°-50°	458.6	18.2
50°-60°	415.1	16.5
60°-70°	314.4	12.5
70°-80°	175.2	7.0
80°-90°	42.3	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°	675.2	26.8
0°-40°	1113.7	44.2
0°-60°	1987.4	78.9
0°-90°	2519.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2519.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	856	856	856	856	856	
5°	888	874	854	833	828	86
15°	939	887	808	771	773	266
25°	956	862	720	695	724	441
35°	913	798	608	607	664	570
45°	794	694	484	505	591	611
55°	611	551	359	390	500	545
65°	402	378	236	268	373	399
75°	208	196	117	140	204	221
85°	46	40	22	30	40	55
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°	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4
2.5°	875.4	871.2	867.9	869.2	869.9	867.3	865.1	865.4	863.2	867.5	857.4
5°	888.3	884.5	880.6	882.1	880.6	876.7	873.5	872.5	866.6	869.0	858.7
7.5°	902.7	898.6	892.8	894.5	891.3	884.0	879.8	877.4	868.2	868.4	857.0
10°	916.5	913.0	905.1	906.2	900.4	890.7	884.2	880.8	867.9	866.0	854.2
12.5°	929.5	924.6	916.2	916.7	908.3	895.4	887.0	882.1	865.2	859.6	848.0
15°	939.4	934.7	924.6	924.4	913.5	896.7	887.1	880.4	859.1	850.3	838.1
17.5°	947.8	943.5	931.0	930.6	917.5	896.1	884.7	876.3	850.1	839.2	825.7
20°	953.8	949.5	935.4	934.1	918.4	893.3	879.7	869.0	838.3	825.4	810.4
22.5°	956.6	952.3	936.4	934.5	916.2	887.7	872.4	859.8	824.8	808.0	792.4
25°	956.0	951.9	933.9	932.1	911.9	879.3	862.1	847.6	807.8	787.9	772.6
27.5°	951.4	948.2	929.3	926.8	904.0	867.9	849.5	833.6	788.9	766.8	750.1
30°	943.3	940.9	920.8	918.6	894.3	855.3	834.9	816.6	768.5	743.6	726.7
32.5°	930.4	928.1	907.9	905.9	881.2	839.2	817.9	799.0	746.2	718.7	701.8
35°	912.6	911.3	891.6	889.4	864.3	820.9	798.2	777.4	723.0	691.9	675.8
37.5°	889.2	889.2	870.3	867.9	843.3	798.4	776.1	754.0	696.8	663.8	647.9
40°	862.1	864.5	845.2	842.8	819.0	774.3	749.9	726.7	668.5	634.2	618.7
42.5°	829.5	831.7	815.6	813.4	791.1	746.4	723.7	698.4	638.9	604.1	588.0
45°	793.5	796.5	782.1	780.4	759.7	715.9	694.1	668.5	608.0	572.7	556.9
47.5°	753.5	757.4	744.9	743.9	724.7	684.6	661.9	635.9	575.6	539.9	525.1
50°	708.6	714.2	703.9	703.9	686.7	646.8	627.1	601.1	541.9	506.2	491.6
52.5°	660.4	667.6	659.9	660.1	646.0	610.3	589.9	564.4	506.8	471.6	458.1
55°	610.7	617.6	612.7	613.5	602.4	569.8	551.3	526.0	470.8	436.6	423.8
57.5°	558.6	566.1	562.9	564.4	556.7	527.5	508.3	486.2	433.7	399.9	389.0
60°	506.4	513.5	511.8	513.9	509.0	483.7	466.1	443.3	396.5	363.9	354.4
62.5°	453.6	460.1	459.8	462.0	459.4	438.4	422.7	403.2	357.9	328.0	319.2
65°	401.9	407.5	407.2	409.6	409.0	392.2	378.0	360.2	319.4	291.8	284.2
67.5°	351.8	356.4	355.1	357.9	358.7	345.2	332.8	316.9	282.7	255.9	249.4
70°	302.7	305.9	304.2	306.1	307.8	297.7	287.2	273.1	243.5	220.0	214.5
72.5°	254.6	256.8	254.2	256.1	257.6	250.3	241.7	229.5	205.0	184.6	180.1
75°	208.0	211.2	205.7	207.6	208.7	201.4	196.4	186.5	165.3	149.6	146.6
77.5°	162.9	164.7	161.7	161.0	161.7	156.5	152.6	144.9	129.0	116.1	114.2
80°	119.8	120.9	117.9	117.2	117.7	114.0	111.0	105.4	94.2	84.4	83.7
82.5°	80.3	80.9	78.3	77.5	77.9	76.8	73.2	69.3	64.0	55.8	55.6
85°	45.9	45.9	44.0	43.2	43.6	41.7	40.4	38.4	36.3	30.7	31.1
87.5°	16.8	16.8	15.9	15.7	17.6	15.5	15.0	14.0	14.6	11.6	12.4
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°	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4
2.5°	860.2	858.3	856.6	850.8	853.3	847.3	846.9	844.7	843.0	839.8	843.9
5°	857.4	853.6	848.8	841.8	843.9	836.8	835.3	832.7	830.4	826.3	829.5
7.5°	852.9	846.7	839.0	830.2	833.0	824.2	822.0	819.2	817.3	812.5	815.3
10°	846.3	837.5	828.6	817.9	819.9	810.4	807.6	804.6	802.9	798.6	801.4
12.5°	836.2	825.6	813.4	801.8	804.0	795.0	791.3	788.1	787.6	784.0	787.4
15°	823.1	808.3	795.8	783.4	786.1	775.6	773.9	770.7	771.6	769.2	773.3
17.5°	806.5	789.4	775.8	762.5	765.1	756.3	755.0	753.5	754.4	754.0	758.5
20°	787.7	769.0	753.3	740.2	741.7	734.8	735.3	735.0	736.8	738.9	745.1
22.5°	766.6	745.4	729.0	715.5	717.7	711.7	714.4	715.1	718.3	723.0	730.8
25°	742.8	720.2	702.9	690.2	692.3	688.3	692.8	694.7	699.8	707.6	715.7
27.5°	717.9	694.0	675.6	663.4	667.4	663.4	670.2	673.9	681.6	690.2	700.1
30°	691.5	666.6	647.7	636.9	640.6	637.0	647.9	653.0	660.6	672.4	684.2
32.5°	663.8	637.6	619.1	610.7	613.3	612.7	624.9	630.5	640.8	654.3	666.8
35°	635.4	608.0	589.3	582.2	585.4	586.1	600.7	607.3	618.5	634.8	648.3
37.5°	606.0	578.1	559.7	553.9	556.7	559.5	576.6	583.1	595.9	613.6	628.4
40°	575.5	547.6	529.6	524.9	527.7	530.7	549.3	558.2	572.1	591.4	607.5
42.5°	544.6	516.7	499.3	495.9	498.7	504.5	524.2	532.6	547.2	568.5	586.3
45°	513.1	484.1	468.9	466.3	469.3	476.1	495.3	505.4	521.0	544.4	563.5
47.5°	481.3	453.0	438.6	436.9	439.9	447.4	468.8	477.9	494.4	519.3	539.9
50°	449.1	421.6	407.7	407.2	410.0	418.0	438.4	449.3	466.3	494.2	515.4
52.5°	416.5	390.1	377.6	377.6	380.2	388.4	409.0	420.3	437.9	467.3	490.7
55°	384.0	358.9	346.9	347.8	351.6	358.7	378.7	390.5	408.3	438.8	463.5
57.5°	351.4	327.6	316.7	318.1	321.6	328.7	348.4	361.7	377.8	409.4	434.7
60°	319.2	296.7	287.2	288.7	291.8	299.0	319.4	330.8	346.9	379.1	404.4
62.5°	286.6	266.2	257.2	259.1	261.9	269.0	288.3	299.3	315.2	346.9	372.3
65°	254.4	235.5	227.8	229.7	232.3	238.9	257.0	267.7	282.9	313.8	338.1
67.5°	222.6	205.4	199.0	200.9	202.9	209.1	224.1	235.7	249.9	279.3	302.3
70°	191.1	175.8	170.2	172.0	173.9	179.5	192.6	203.3	216.4	243.4	264.7
72.5°	160.1	145.1	142.3	144.0	145.5	150.3	162.9	171.3	182.7	206.7	225.0
75°	129.7	116.8	114.9	116.6	117.9	121.7	132.2	139.5	149.0	169.8	184.8
77.5°	100.5	89.7	88.9	90.2	91.5	94.2	102.4	110.1	117.6	132.9	146.2
80°	73.2	64.4	64.4	65.7	65.3	68.5	74.3	80.5	85.9	97.0	106.7
82.5°	48.3	41.4	42.3	43.2	43.8	45.1	48.7	53.4	56.7	63.5	69.8
85°	26.8	22.1	23.0	23.8	23.4	24.9	26.8	29.6	31.3	34.4	37.8
87.5°	9.9	8.2	8.4	9.0	9.4	10.1	10.1	11.8	12.0	12.4	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):

	160°	170°	180°
0°	856.4	856.4	856.4
2.5°	836.0	840.5	843.9
5°	821.6	825.4	828.4
7.5°	807.6	811.0	813.6
10°	794.3	798.0	799.9
12.5°	780.6	784.9	786.4
15°	767.2	771.5	773.3
17.5°	753.3	758.9	761.0
20°	740.4	747.5	749.2
22.5°	727.3	734.6	736.6
25°	713.1	721.7	723.7
27.5°	697.9	708.2	710.2
30°	682.7	694.0	696.0
32.5°	666.4	678.6	680.5
35°	649.4	661.6	663.8
37.5°	630.5	643.8	648.3
40°	610.8	625.3	629.9
42.5°	590.2	606.0	610.8
45°	568.2	585.4	591.0
47.5°	545.9	565.3	570.2
50°	521.7	542.5	548.3
52.5°	496.5	519.1	524.9
55°	470.3	493.1	499.5
57.5°	441.8	465.4	472.1
60°	412.0	435.6	442.0
62.5°	381.5	402.9	409.0
65°	347.4	367.5	373.1
67.5°	311.3	329.7	334.3
70°	272.9	288.9	293.0
72.5°	232.9	243.9	249.4
75°	191.5	200.3	204.4
77.5°	149.9	156.1	159.5
80°	109.3	112.9	115.7
82.5°	71.5	73.0	75.1
85°	38.6	38.6	39.9
87.5°	13.1	12.5	13.1
90°	0.0	0.0	0.0

(END OF REPORT)