

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: P835228

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835228
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-LD4-2LO-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

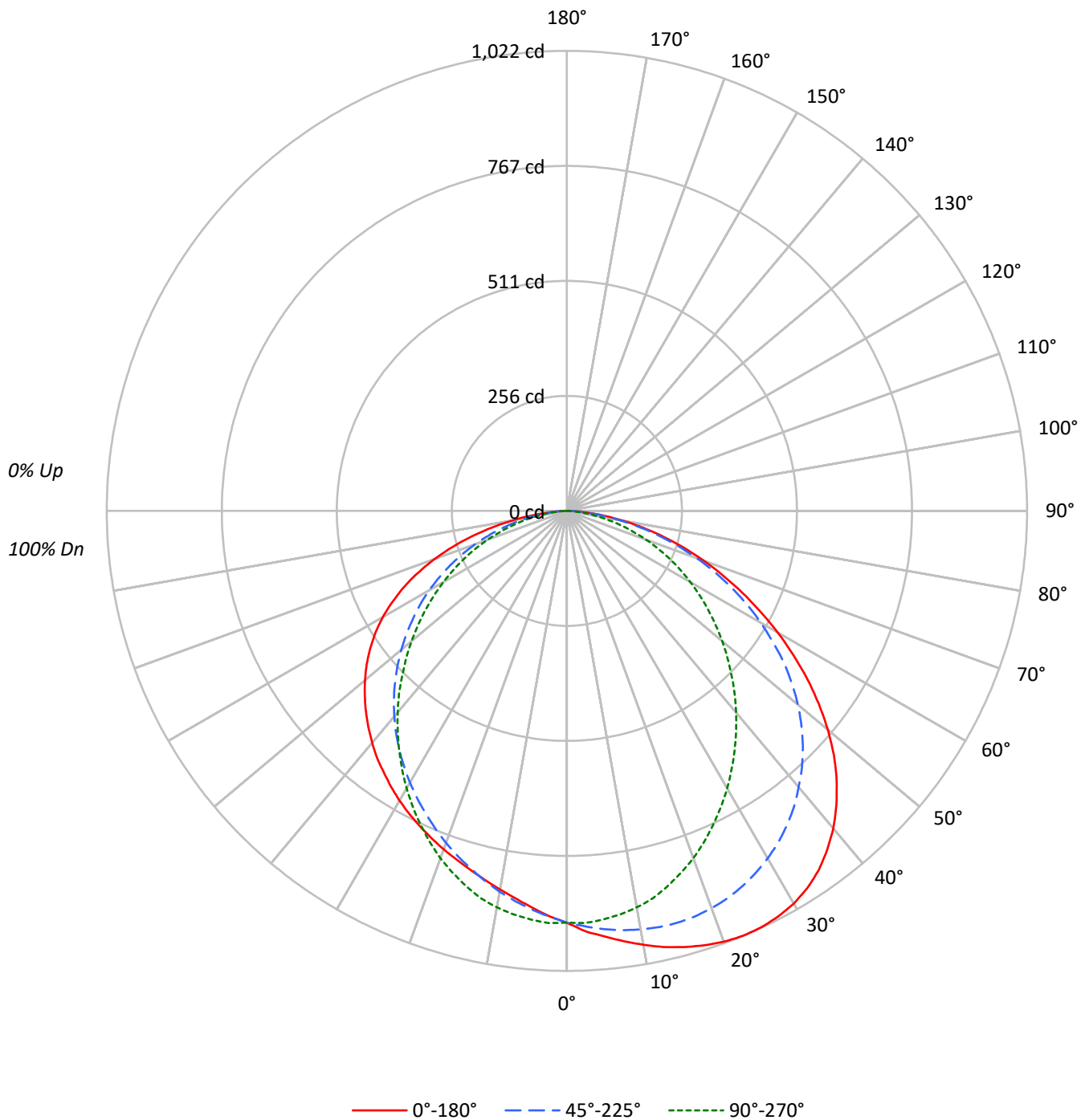
Lumens per Lamp: N/A
Luminaire Lumens: 2690.3 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	2461	2461	2461
5°	2562	2462	2390
10°	2675	2444	2334
15°	2795	2405	2301
20°	2917	2352	2291
25°	3032	2284	2295
30°	3130	2212	2310
35°	3202	2133	2329
40°	3234	2054	2363
45°	3225	1968	2402
50°	3168	1885	2451
55°	3059	1798	2502
60°	2911	1706	2540
65°	2733	1601	2537
70°	2544	1477	2462
75°	2309	1297	2270
80°	1982	1066	1914
85°	1513	729	1315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.7	3.2
10°-20°	250.5	9.3
20°-30°	383.8	14.3
30°-40°	468.3	17.4
40°-50°	489.8	18.2
50°-60°	443.3	16.5
60°-70°	335.7	12.5
70°-80°	187.1	7.0
80°-90°	45.1	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°	721.0	26.8
0°-40°	1189.3	44.2
0°-60°	2122.4	78.9
0°-90°	2690.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2690.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	915	915	915	915	915	
5°	949	933	912	889	885	91
15°	1003	947	863	823	826	285
25°	1021	921	769	742	773	471
35°	975	852	649	648	709	609
45°	847	741	517	540	631	652
55°	652	589	383	417	533	582
65°	429	404	252	286	398	426
75°	222	210	125	149	218	236
85°	49	43	24	32	43	59
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°	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6
2.5°	934.8	930.4	926.8	928.2	929.0	926.2	923.8	924.2	921.8	926.4	915.6
5°	948.6	944.6	940.4	942.0	940.4	936.2	932.8	931.8	925.4	928.0	917.0
7.5°	964.0	959.6	953.4	955.2	951.8	944.0	939.6	937.0	927.2	927.4	915.2
10°	978.8	975.0	966.6	967.8	961.6	951.2	944.2	940.6	926.8	924.8	912.2
12.5°	992.6	987.4	978.4	979.0	970.0	956.2	947.2	942.0	924.0	918.0	905.6
15°	1003.2	998.2	987.4	987.2	975.6	957.6	947.4	940.2	917.4	908.0	895.0
17.5°	1012.2	1007.6	994.2	993.8	979.8	957.0	944.8	935.8	907.8	896.2	881.8
20°	1018.6	1014.0	999.0	997.6	980.8	954.0	939.4	928.0	895.2	881.4	865.4
22.5°	1021.6	1017.0	1000.0	998.0	978.4	948.0	931.6	918.2	880.8	862.8	846.2
25°	1021.0	1016.6	997.4	995.4	973.8	939.0	920.6	905.2	862.6	841.4	825.0
27.5°	1016.0	1012.6	992.4	989.8	965.4	926.8	907.2	890.2	842.4	818.8	801.1
30°	1007.4	1004.8	983.4	981.0	955.0	913.4	891.6	872.0	820.6	794.1	776.1
32.5°	993.6	991.2	969.6	967.4	941.0	896.2	873.4	853.2	796.9	767.5	749.5
35°	974.6	973.2	952.2	949.8	923.0	876.6	852.4	830.2	772.1	738.9	721.7
37.5°	949.6	949.6	929.4	926.8	900.6	852.6	828.8	805.2	744.1	708.9	691.9
40°	920.6	923.2	902.6	900.0	874.6	826.8	800.9	776.1	713.9	677.3	660.7
42.5°	885.8	888.2	871.0	868.6	844.8	797.1	772.9	745.9	682.3	645.1	627.9
45°	847.4	850.6	835.2	833.4	811.2	764.5	741.3	713.9	649.3	611.5	594.7
47.5°	804.6	808.8	795.5	794.5	773.9	731.1	706.9	679.1	614.7	576.5	560.8
50°	756.7	762.7	751.7	751.7	733.3	690.7	669.7	641.9	578.7	540.6	525.0
52.5°	705.3	712.9	704.7	704.9	689.9	651.7	629.9	602.7	541.2	503.6	489.2
55°	652.1	659.5	654.3	655.1	643.3	608.5	588.7	561.8	502.8	466.2	452.6
57.5°	596.5	604.5	601.1	602.7	594.5	563.4	542.8	519.2	463.2	427.0	415.4
60°	540.8	548.4	546.6	548.8	543.6	516.6	497.8	473.4	423.4	388.6	378.4
62.5°	484.4	491.4	491.0	493.4	490.6	468.2	451.4	430.6	382.2	350.2	340.9
65°	429.2	435.2	434.8	437.4	436.8	418.8	403.6	384.6	341.1	311.7	303.5
67.5°	375.6	380.6	379.2	382.2	383.0	368.6	355.4	338.5	301.9	273.3	266.3
70°	323.3	326.7	324.9	326.9	328.7	317.9	306.7	291.7	260.1	234.9	229.1
72.5°	271.9	274.3	271.5	273.5	275.1	267.3	258.1	245.1	218.9	197.1	192.3
75°	222.1	225.5	219.7	221.7	222.9	215.1	209.7	199.1	176.5	159.7	156.5
77.5°	173.9	175.9	172.7	171.9	172.7	167.1	162.9	154.7	137.7	123.9	121.9
80°	127.9	129.1	125.9	125.1	125.7	121.7	118.5	112.6	100.6	90.2	89.4
82.5°	85.8	86.4	83.6	82.8	83.2	82.0	78.2	74.0	68.4	59.6	59.4
85°	49.0	49.0	47.0	46.2	46.6	44.6	43.2	41.0	38.8	32.8	33.2
87.5°	18.0	18.0	17.0	16.8	18.8	16.6	16.0	15.0	15.6	12.4	13.2
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°	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6	914.6
2.5°	918.6	916.6	914.8	908.6	911.2	904.8	904.4	902.0	900.2	896.8	901.2
5°	915.6	911.6	906.4	899.0	901.2	893.6	892.0	889.2	886.8	882.4	885.8
7.5°	910.8	904.2	896.0	886.6	889.6	880.2	877.8	874.8	872.8	867.6	870.6
10°	903.8	894.4	884.8	873.4	875.6	865.4	862.4	859.2	857.4	852.8	855.8
12.5°	893.0	881.6	868.6	856.2	858.6	849.0	845.0	841.6	841.0	837.2	840.8
15°	879.0	863.2	849.8	836.6	839.4	828.2	826.4	823.0	824.0	821.4	825.8
17.5°	861.2	843.0	828.4	814.2	817.0	807.6	806.2	804.6	805.6	805.2	810.0
20°	841.2	821.2	804.4	790.5	792.1	784.7	785.3	784.9	786.9	789.1	795.7
22.5°	818.6	796.1	778.5	764.1	766.5	760.1	762.9	763.7	767.1	772.1	780.5
25°	793.3	769.1	750.7	737.1	739.3	735.1	739.9	741.9	747.3	755.7	764.3
27.5°	766.7	741.1	721.5	708.5	712.7	708.5	715.7	719.7	727.9	737.1	747.7
30°	738.5	711.9	691.7	680.1	684.1	680.3	691.9	697.3	705.5	718.1	730.7
32.5°	708.9	680.9	661.1	652.1	654.9	654.3	667.3	673.3	684.3	698.7	712.1
35°	678.5	649.3	629.3	621.7	625.1	625.9	641.5	648.5	660.5	677.9	692.3
37.5°	647.1	617.3	597.7	591.5	594.5	597.5	615.7	622.7	636.3	655.3	671.1
40°	614.5	584.7	565.6	560.6	563.6	566.8	586.5	596.1	610.9	631.5	648.7
42.5°	581.5	551.8	533.2	529.6	532.6	538.8	559.8	568.8	584.3	607.1	626.1
45°	548.0	517.0	500.8	498.0	501.2	508.4	529.0	539.8	556.4	581.3	601.7
47.5°	514.0	483.8	468.4	466.6	469.8	477.8	500.6	510.4	528.0	554.6	576.5
50°	479.6	450.2	435.4	434.8	437.8	446.4	468.2	479.8	498.0	527.8	550.4
52.5°	444.8	416.6	403.2	403.2	406.0	414.8	436.8	448.8	467.6	499.0	524.0
55°	410.0	383.2	370.4	371.4	375.4	383.0	404.4	417.0	436.0	468.6	495.0
57.5°	375.2	349.8	338.3	339.7	343.5	351.0	372.0	386.2	403.4	437.2	464.2
60°	340.9	316.9	306.7	308.3	311.7	319.3	341.1	353.2	370.4	404.8	431.8
62.5°	306.1	284.3	274.7	276.7	279.7	287.3	307.9	319.7	336.7	370.4	397.6
65°	271.7	251.5	243.3	245.3	248.1	255.1	274.5	285.9	302.1	335.1	361.0
67.5°	237.7	219.3	212.5	214.5	216.7	223.3	239.3	251.7	266.9	298.3	322.9
70°	204.1	187.7	181.7	183.7	185.7	191.7	205.7	217.1	231.1	259.9	282.7
72.5°	170.9	154.9	151.9	153.7	155.3	160.5	173.9	182.9	195.1	220.7	240.3
75°	138.5	124.7	122.7	124.5	125.9	129.9	141.1	148.9	159.1	181.3	197.3
77.5°	107.4	95.8	95.0	96.4	97.8	100.6	109.4	117.5	125.5	141.9	156.1
80°	78.2	68.8	68.8	70.2	69.8	73.2	79.4	86.0	91.8	103.6	114.0
82.5°	51.6	44.2	45.2	46.2	46.8	48.2	52.0	57.0	60.6	67.8	74.6
85°	28.6	23.6	24.6	25.4	25.0	26.6	28.6	31.6	33.4	36.8	40.4
87.5°	10.6	8.8	9.0	9.6	10.0	10.8	10.8	12.6	12.8	13.2	14.0
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°	914.6	914.6	914.6
2.5°	892.8	897.6	901.2
5°	877.4	881.4	884.6
7.5°	862.4	866.0	868.8
10°	848.2	852.2	854.2
12.5°	833.6	838.2	839.8
15°	819.2	823.8	825.8
17.5°	804.4	810.4	812.6
20°	790.7	798.3	800.1
22.5°	776.7	784.5	786.7
25°	761.5	770.7	772.9
27.5°	745.3	756.3	758.5
30°	729.1	741.1	743.3
32.5°	711.7	724.7	726.7
35°	693.5	706.5	708.9
37.5°	673.3	687.5	692.3
40°	652.3	667.7	672.7
42.5°	630.3	647.1	652.3
45°	606.7	625.1	631.1
47.5°	582.9	603.7	608.9
50°	557.2	579.3	585.5
52.5°	530.2	554.4	560.6
55°	502.2	526.6	533.4
57.5°	471.8	497.0	504.2
60°	440.0	465.2	472.0
62.5°	407.4	430.2	436.8
65°	371.0	392.4	398.4
67.5°	332.5	352.0	357.0
70°	291.5	308.5	312.9
72.5°	248.7	260.5	266.3
75°	204.5	213.9	218.3
77.5°	160.1	166.7	170.3
80°	116.7	120.5	123.5
82.5°	76.4	78.0	80.2
85°	41.2	41.2	42.6
87.5°	14.0	13.4	14.0
90°	0.0	0.0	0.0

(END OF REPORT)