

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: P835157

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835157
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-LD4-2STD-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

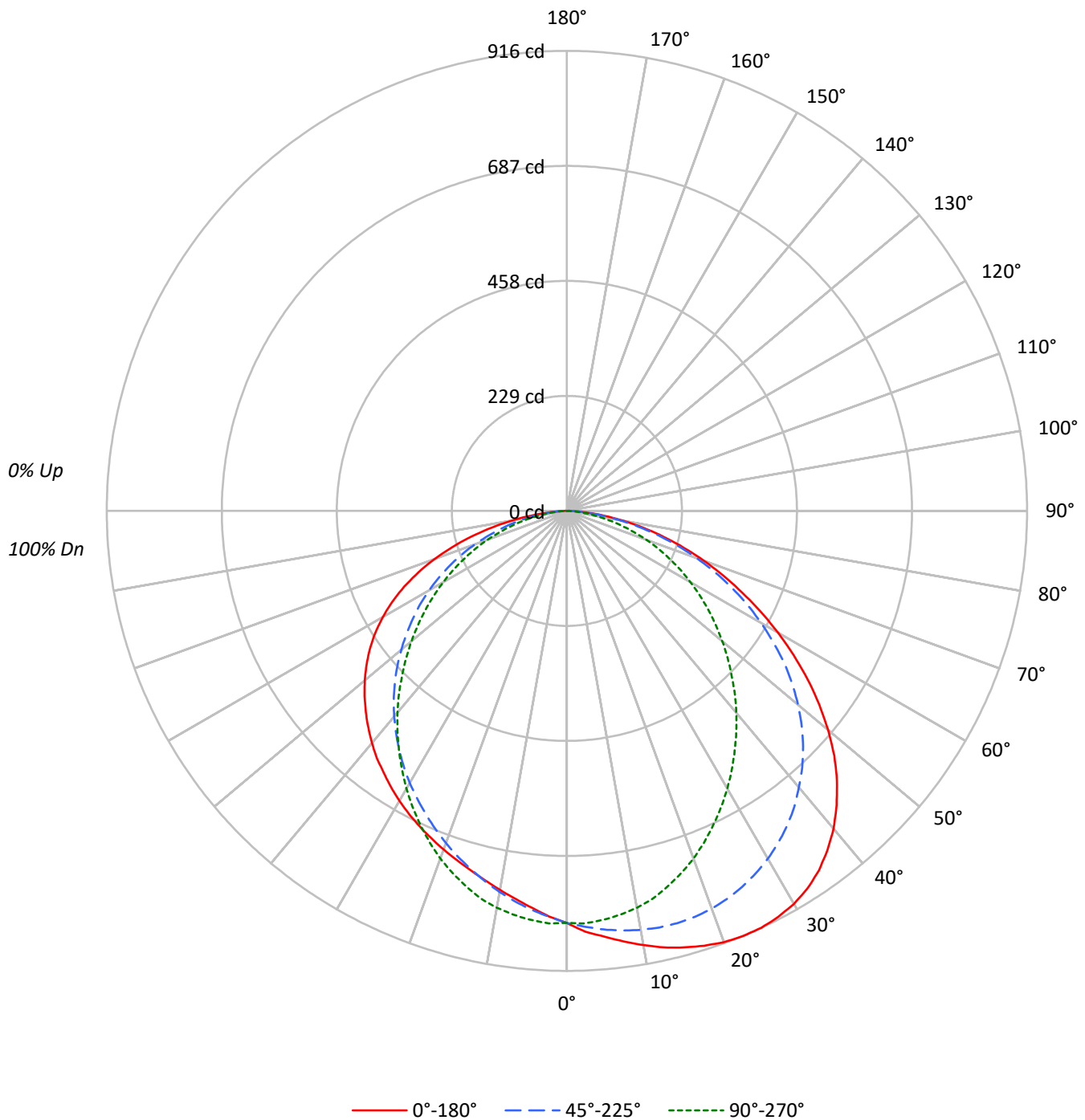
Lumens per Lamp: N/A
Luminaire Lumens: 2413.3 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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

Peachtree City, GA 30269



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2208	2208	2208
5°	2299	2209	2143
10°	2399	2192	2094
15°	2507	2157	2064
20°	2617	2110	2055
25°	2719	2048	2059
30°	2808	1984	2072
35°	2872	1914	2089
40°	2901	1842	2120
45°	2893	1765	2154
50°	2841	1690	2199
55°	2745	1613	2244
60°	2611	1530	2279
65°	2451	1436	2276
70°	2282	1325	2208
75°	2071	1163	2036
80°	1779	956	1717
85°	1355	655	1179

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	3.2
10°-20°	224.7	9.3
20°-30°	344.2	14.3
30°-40°	420.1	17.4
40°-50°	439.3	18.2
50°-60°	397.6	16.5
60°-70°	301.1	12.5
70°-80°	167.8	7.0
80°-90°	40.5	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°	646.8	26.8
0°-40°	1066.9	44.2
0°-60°	1903.8	78.9
0°-90°	2413.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	820	820	820	820	820	
5°	851	837	818	798	794	82
15°	900	850	774	738	741	255
25°	916	826	690	666	693	422
35°	874	765	582	582	636	546
45°	760	665	464	484	566	585
55°	585	528	344	374	478	522
65°	385	362	226	256	357	382
75°	199	188	112	134	196	211
85°	44	39	21	28	38	53
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°	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4
2.5°	838.5	834.6	831.4	832.6	833.3	830.8	828.7	829.0	826.9	831.0	821.3
5°	850.9	847.3	843.6	845.0	843.6	839.8	836.7	835.8	830.1	832.4	822.6
7.5°	864.7	860.8	855.2	856.8	853.8	846.8	842.8	840.5	831.7	831.9	821.0
10°	878.0	874.6	867.0	868.1	862.6	853.2	847.0	843.7	831.4	829.6	818.3
12.5°	890.4	885.7	877.6	878.2	870.1	857.7	849.6	845.0	828.8	823.5	812.3
15°	899.9	895.4	885.7	885.5	875.1	859.0	849.8	843.4	822.9	814.5	802.8
17.5°	907.9	903.8	891.8	891.4	878.9	858.4	847.5	839.4	814.3	803.9	791.0
20°	913.7	909.5	896.1	894.8	879.8	855.7	842.7	832.4	803.0	790.6	776.3
22.5°	916.4	912.2	897.0	895.2	877.6	850.4	835.7	823.6	790.1	774.0	759.1
25°	915.8	911.9	894.7	892.9	873.5	842.3	825.8	812.0	773.8	754.8	740.1
27.5°	911.3	908.3	890.2	887.8	866.0	831.4	813.8	798.5	755.7	734.5	718.6
30°	903.6	901.3	882.1	880.0	856.6	819.3	799.8	782.2	736.1	712.3	696.1
32.5°	891.3	889.1	869.7	867.8	844.1	803.9	783.5	765.4	714.8	688.4	672.3
35°	874.2	873.0	854.1	852.0	827.9	786.3	764.6	744.7	692.6	662.8	647.4
37.5°	851.8	851.8	833.7	831.4	807.9	764.8	743.5	722.3	667.5	635.9	620.6
40°	825.8	828.1	809.7	807.3	784.6	741.7	718.4	696.1	640.4	607.6	592.7
42.5°	794.6	796.7	781.3	779.2	757.8	715.0	693.3	669.1	612.0	578.7	563.3
45°	760.2	763.0	749.2	747.6	727.7	685.7	664.9	640.4	582.5	548.6	533.5
47.5°	721.8	725.6	713.5	712.6	694.2	655.8	634.1	609.2	551.4	517.2	503.0
50°	678.7	684.1	674.3	674.3	657.8	619.6	600.7	575.8	519.1	484.9	470.9
52.5°	632.7	639.5	632.1	632.3	618.9	584.6	565.1	540.7	485.4	451.7	438.8
55°	585.0	591.6	586.9	587.7	577.1	545.9	528.1	503.9	451.0	418.2	406.0
57.5°	535.1	542.3	539.2	540.7	533.3	505.3	486.9	465.7	415.5	383.0	372.6
60°	485.1	491.9	490.3	492.3	487.6	463.4	446.5	424.6	379.8	348.6	339.5
62.5°	434.5	440.8	440.4	442.6	440.1	420.0	404.9	386.3	342.9	314.2	305.8
65°	385.0	390.4	390.0	392.4	391.8	375.7	362.1	345.0	305.9	279.6	272.2
67.5°	337.0	341.4	340.2	342.9	343.6	330.7	318.8	303.6	270.8	245.1	238.9
70°	290.0	293.0	291.4	293.2	294.8	285.1	275.1	261.6	233.3	210.7	205.5
72.5°	243.9	246.0	243.5	245.3	246.8	239.8	231.5	219.9	196.4	176.8	172.5
75°	199.2	202.3	197.1	198.9	199.9	193.0	188.1	178.6	158.3	143.3	140.4
77.5°	156.0	157.8	154.9	154.2	154.9	149.9	146.2	138.8	123.6	111.2	109.4
80°	114.8	115.8	113.0	112.3	112.8	109.2	106.3	101.0	90.2	80.9	80.2
82.5°	76.9	77.5	75.0	74.2	74.6	73.5	70.1	66.4	61.3	53.4	53.3
85°	43.9	43.9	42.1	41.4	41.8	40.0	38.7	36.8	34.8	29.4	29.8
87.5°	16.1	16.1	15.2	15.1	16.9	14.9	14.3	13.4	14.0	11.1	11.8
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°	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4	820.4
2.5°	824.0	822.2	820.6	815.0	817.4	811.6	811.3	809.1	807.5	804.5	808.4
5°	821.3	817.7	813.1	806.4	808.4	801.6	800.2	797.6	795.5	791.5	794.6
7.5°	817.0	811.1	803.7	795.3	798.0	789.6	787.4	784.7	782.9	778.3	781.0
10°	810.7	802.3	793.7	783.5	785.4	776.3	773.6	770.7	769.1	765.0	767.7
12.5°	801.0	790.8	779.2	768.1	770.2	761.6	758.0	755.0	754.4	751.0	754.2
15°	788.5	774.3	762.3	750.5	753.0	742.9	741.3	738.3	739.2	736.9	740.8
17.5°	772.5	756.2	743.1	730.4	732.9	724.5	723.2	721.8	722.7	722.3	726.6
20°	754.6	736.7	721.6	709.1	710.5	703.9	704.4	704.0	705.8	707.8	713.7
22.5°	734.3	714.1	698.3	685.4	687.5	681.8	684.3	685.0	688.1	692.6	700.1
25°	711.6	689.9	673.4	661.2	663.1	659.4	663.7	665.5	670.3	677.9	685.6
27.5°	687.7	664.8	647.2	635.5	639.3	635.5	642.0	645.6	652.9	661.2	670.7
30°	662.4	638.6	620.5	610.1	613.7	610.2	620.6	625.5	632.8	644.1	655.4
32.5°	635.9	610.8	593.0	585.0	587.5	586.9	598.6	604.0	613.8	626.7	638.8
35°	608.6	582.5	564.5	557.7	560.8	561.5	575.5	581.7	592.5	608.1	621.0
37.5°	580.5	553.8	536.2	530.6	533.3	536.0	552.3	558.6	570.8	587.8	602.0
40°	551.2	524.5	507.3	502.8	505.5	508.4	526.1	534.8	548.0	566.5	581.9
42.5°	521.7	494.9	478.3	475.0	477.7	483.3	502.1	510.2	524.2	544.6	561.6
45°	491.5	463.7	449.2	446.7	449.6	456.0	474.5	484.2	499.1	521.5	539.8
47.5°	461.0	434.0	420.2	418.5	421.4	428.6	449.0	457.8	473.6	497.5	517.2
50°	430.2	403.8	390.6	390.0	392.7	400.4	420.0	430.4	446.7	473.4	493.7
52.5°	399.0	373.7	361.7	361.7	364.2	372.1	391.8	402.6	419.4	447.6	470.0
55°	367.8	343.8	332.3	333.2	336.8	343.6	362.8	374.1	391.1	420.3	444.0
57.5°	336.6	313.8	303.4	304.7	308.1	314.9	333.7	346.5	361.9	392.2	416.4
60°	305.8	284.2	275.1	276.5	279.6	286.4	305.9	316.9	332.3	363.1	387.3
62.5°	274.5	255.0	246.4	248.2	250.9	257.7	276.2	286.7	302.0	332.3	356.7
65°	243.7	225.6	218.2	220.0	222.5	228.8	246.2	256.4	271.0	300.6	323.9
67.5°	213.2	196.7	190.6	192.4	194.4	200.3	214.7	225.8	239.4	267.6	289.6
70°	183.1	168.4	163.0	164.8	166.6	172.0	184.5	194.7	207.3	233.1	253.6
72.5°	153.3	139.0	136.3	137.9	139.3	144.0	156.0	164.1	175.0	198.0	215.6
75°	124.3	111.9	110.1	111.7	113.0	116.6	126.6	133.6	142.7	162.6	177.0
77.5°	96.3	85.9	85.2	86.4	87.7	90.2	98.1	105.4	112.6	127.3	140.1
80°	70.1	61.7	61.7	62.9	62.6	65.6	71.2	77.1	82.3	92.9	102.2
82.5°	46.3	39.6	40.5	41.4	42.0	43.2	46.6	51.1	54.3	60.8	66.9
85°	25.6	21.2	22.1	22.8	22.4	23.9	25.6	28.3	29.9	33.0	36.2
87.5°	9.5	7.9	8.1	8.6	9.0	9.7	9.7	11.3	11.5	11.8	12.6
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°	820.4	820.4	820.4
2.5°	800.9	805.2	808.4
5°	787.1	790.6	793.5
7.5°	773.6	776.8	779.4
10°	760.9	764.5	766.3
12.5°	747.8	751.9	753.3
15°	734.9	739.0	740.8
17.5°	721.6	727.0	729.0
20°	709.2	716.0	717.7
22.5°	696.7	703.7	705.6
25°	683.1	691.3	693.3
27.5°	668.5	678.4	680.4
30°	654.0	664.8	666.7
32.5°	638.4	650.1	651.9
35°	622.1	633.7	635.9
37.5°	604.0	616.7	621.0
40°	585.1	598.9	603.4
42.5°	565.4	580.5	585.1
45°	544.3	560.8	566.1
47.5°	522.9	541.6	546.2
50°	499.8	519.7	525.2
52.5°	475.6	497.3	502.8
55°	450.5	472.3	478.4
57.5°	423.2	445.8	452.3
60°	394.7	417.3	423.4
62.5°	365.5	385.9	391.8
65°	332.8	352.0	357.4
67.5°	298.2	315.8	320.3
70°	261.5	276.7	280.6
72.5°	223.1	233.7	238.9
75°	183.5	191.9	195.8
77.5°	143.6	149.6	152.8
80°	104.7	108.1	110.8
82.5°	68.5	69.9	71.9
85°	36.9	36.9	38.2
87.5°	12.6	12.0	12.6
90°	0.0	0.0	0.0

(END OF REPORT)