

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: P835191

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835191
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-LD4-1HI-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

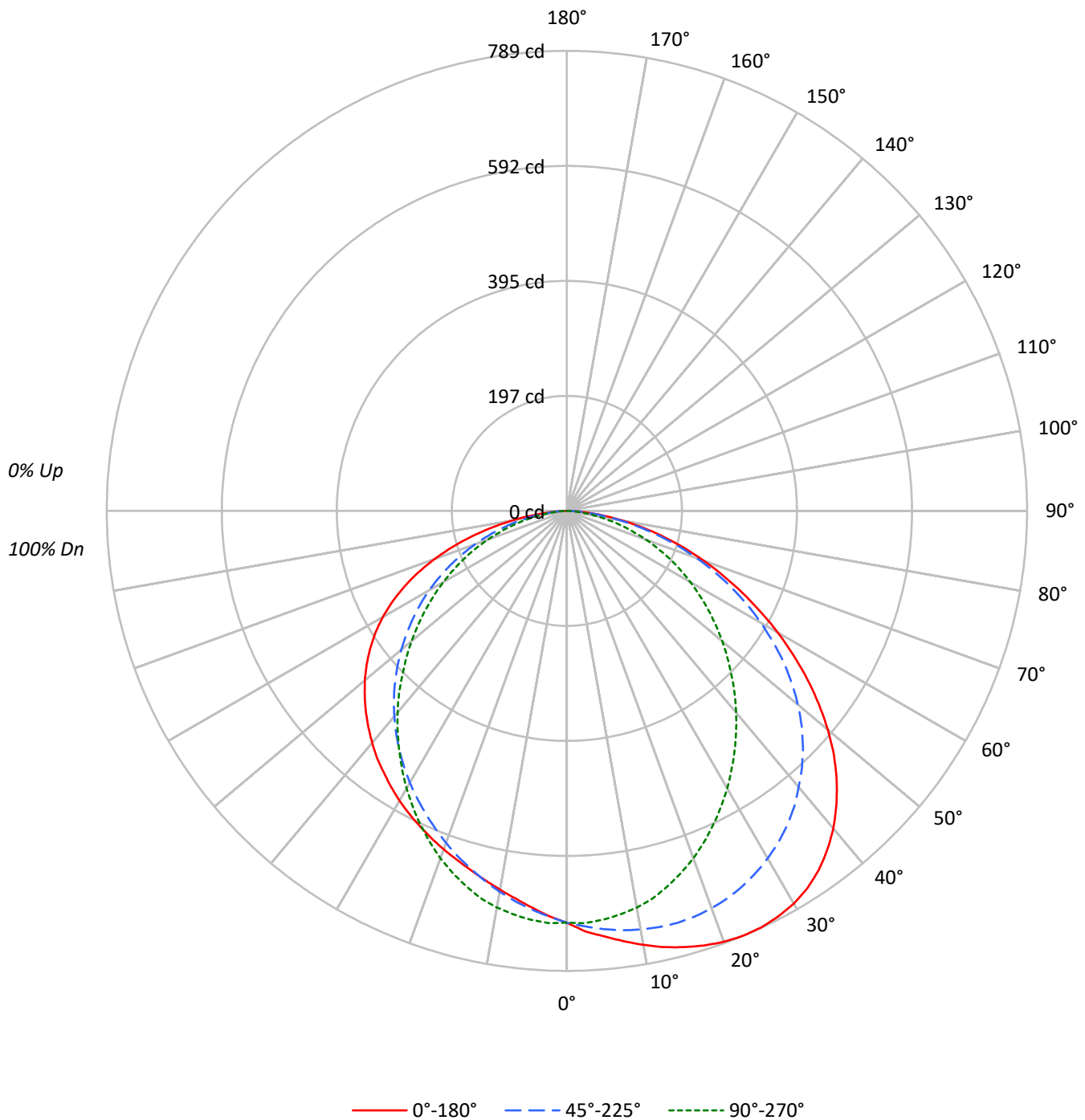
Lumens per Lamp: N/A
Luminaire Lumens: 2077.3 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 22
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°	1900	1900	1900
5°	1978	1901	1845
10°	2065	1887	1802
15°	2158	1857	1777
20°	2252	1816	1769
25°	2341	1763	1772
30°	2417	1708	1783
35°	2472	1647	1798
40°	2497	1586	1825
45°	2490	1519	1854
50°	2446	1455	1893
55°	2362	1388	1932
60°	2247	1317	1961
65°	2110	1237	1959
70°	1964	1140	1901
75°	1783	1001	1753
80°	1531	823	1478
85°	1167	562	1016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	3.2
10°-20°	193.4	9.3
20°-30°	296.3	14.3
30°-40°	361.6	17.4
40°-50°	378.2	18.2
50°-60°	342.3	16.5
60°-70°	259.2	12.5
70°-80°	144.5	7.0
80°-90°	34.8	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°	556.7	26.8
0°-40°	918.3	44.2
0°-60°	1638.8	78.9
0°-90°	2077.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2077.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	706	706	706	706	706	
5°	732	720	704	687	683	71
15°	775	732	666	636	638	220
25°	788	711	594	573	597	364
35°	752	658	501	501	547	470
45°	654	572	399	417	487	503
55°	504	455	296	322	412	449
65°	331	312	194	221	308	329
75°	172	162	96	115	169	182
85°	38	33	18	24	33	45
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°	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2
2.5°	721.8	718.4	715.6	716.7	717.3	715.1	713.3	713.6	711.7	715.3	707.0
5°	732.4	729.3	726.1	727.3	726.1	722.9	720.2	719.5	714.5	716.5	708.0
7.5°	744.3	740.9	736.1	737.5	734.9	728.9	725.5	723.5	715.9	716.1	706.7
10°	755.7	752.8	746.3	747.2	742.5	734.4	729.0	726.3	715.6	714.1	704.3
12.5°	766.4	762.4	755.4	755.9	748.9	738.3	731.3	727.3	713.4	708.8	699.2
15°	774.6	770.7	762.4	762.2	753.3	739.4	731.5	725.9	708.3	701.1	691.1
17.5°	781.5	778.0	767.6	767.3	756.5	738.9	729.5	722.5	700.9	692.0	680.9
20°	786.5	782.9	771.3	770.2	757.3	736.6	725.3	716.5	691.2	680.6	668.2
22.5°	788.8	785.2	772.1	770.6	755.4	732.0	719.3	709.0	680.1	666.2	653.4
25°	788.3	784.9	770.1	768.5	751.9	725.0	710.8	698.9	666.1	649.7	637.0
27.5°	784.4	781.8	766.2	764.2	745.4	715.6	700.5	687.4	650.5	632.3	618.5
30°	777.8	775.8	759.3	757.4	737.4	705.3	688.4	673.3	633.6	613.1	599.2
32.5°	767.2	765.3	748.6	746.9	726.6	692.0	674.4	658.8	615.3	592.6	578.7
35°	752.5	751.4	735.2	733.4	712.7	676.9	658.2	641.0	596.1	570.5	557.2
37.5°	733.2	733.2	717.6	715.6	695.4	658.3	640.0	621.8	574.5	547.4	534.2
40°	710.8	712.8	696.9	694.9	675.3	638.4	618.4	599.2	551.2	523.0	510.2
42.5°	684.0	685.8	672.5	670.7	652.3	615.4	596.7	575.9	526.8	498.1	484.8
45°	654.3	656.8	644.9	643.5	626.4	590.3	572.4	551.2	501.4	472.2	459.2
47.5°	621.3	624.5	614.2	613.4	597.5	564.5	545.8	524.4	474.7	445.2	433.0
50°	584.2	588.9	580.4	580.4	566.2	533.3	517.1	495.6	446.9	417.4	405.3
52.5°	544.6	550.4	544.1	544.3	532.7	503.2	486.4	465.4	417.8	388.8	377.7
55°	503.5	509.2	505.2	505.8	496.7	469.9	454.6	433.7	388.2	360.0	349.5
57.5°	460.6	466.8	464.2	465.4	459.1	435.0	419.1	400.9	357.6	329.7	320.8
60°	417.5	423.4	422.0	423.7	419.7	398.9	384.4	365.5	326.9	300.1	292.2
62.5°	374.0	379.4	379.1	381.0	378.8	361.5	348.5	332.5	295.1	270.4	263.2
65°	331.4	336.0	335.7	337.7	337.3	323.4	311.6	297.0	263.3	240.6	234.3
67.5°	290.0	293.9	292.8	295.1	295.7	284.6	274.4	261.3	233.1	211.0	205.6
70°	249.6	252.2	250.8	252.4	253.8	245.4	236.8	225.2	200.8	181.4	176.9
72.5°	209.9	211.8	209.6	211.2	212.4	206.4	199.3	189.2	169.0	152.2	148.5
75°	171.5	174.1	169.6	171.2	172.1	166.1	161.9	153.7	136.3	123.3	120.9
77.5°	134.3	135.8	133.4	132.7	133.4	129.0	125.8	119.5	106.4	95.7	94.2
80°	98.8	99.7	97.2	96.6	97.1	94.0	91.5	86.9	77.6	69.6	69.0
82.5°	66.2	66.7	64.5	63.9	64.2	63.3	60.4	57.1	52.8	46.0	45.8
85°	37.8	37.8	36.3	35.7	36.0	34.4	33.3	31.6	29.9	25.3	25.6
87.5°	13.9	13.9	13.1	13.0	14.5	12.8	12.3	11.6	12.0	9.6	10.2
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°	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2	706.2
2.5°	709.3	707.7	706.3	701.6	703.6	698.6	698.3	696.5	695.1	692.4	695.8
5°	707.0	703.9	699.9	694.1	695.8	690.0	688.7	686.6	684.7	681.3	684.0
7.5°	703.3	698.2	691.8	684.6	686.9	679.6	677.8	675.5	673.9	669.9	672.2
10°	697.9	690.6	683.2	674.4	676.1	668.2	665.9	663.4	662.0	658.5	660.8
12.5°	689.5	680.7	670.7	661.1	663.0	655.6	652.5	649.8	649.4	646.5	649.2
15°	678.7	666.5	656.2	646.0	648.1	639.5	638.1	635.5	636.3	634.3	637.7
17.5°	665.0	650.9	639.7	628.7	630.9	623.6	622.5	621.3	622.1	621.8	625.5
20°	649.5	634.1	621.1	610.3	611.6	605.9	606.3	606.0	607.6	609.3	614.3
22.5°	632.1	614.7	601.1	590.0	591.8	586.9	589.0	589.6	592.3	596.1	602.6
25°	612.5	593.8	579.6	569.1	570.8	567.6	571.3	572.8	577.0	583.5	590.1
27.5°	592.0	572.2	557.1	547.0	550.3	547.0	552.6	555.7	562.0	569.1	577.3
30°	570.2	549.7	534.1	525.1	528.2	525.3	534.2	538.4	544.7	554.5	564.2
32.5°	547.4	525.7	510.5	503.5	505.7	505.2	515.2	519.9	528.4	539.5	549.8
35°	523.9	501.4	485.9	480.1	482.7	483.3	495.3	500.7	510.0	523.4	534.5
37.5°	499.7	476.7	461.5	456.7	459.1	461.4	475.4	480.8	491.3	506.0	518.2
40°	474.5	451.5	436.7	432.8	435.1	437.6	452.9	460.3	471.7	487.6	500.9
42.5°	449.0	426.0	411.7	408.9	411.2	416.0	432.2	439.1	451.2	468.8	483.4
45°	423.1	399.2	386.7	384.5	387.0	392.5	408.4	416.8	429.6	448.9	464.6
47.5°	396.9	373.5	361.7	360.3	362.7	368.9	386.5	394.1	407.7	428.2	445.2
50°	370.3	347.6	336.2	335.7	338.0	344.7	361.5	370.5	384.5	407.5	424.9
52.5°	343.4	321.7	311.3	311.3	313.5	320.3	337.3	346.5	361.0	385.3	404.6
55°	316.6	295.9	286.0	286.8	289.9	295.7	312.3	322.0	336.7	361.8	382.2
57.5°	289.7	270.1	261.2	262.3	265.2	271.1	287.3	298.2	311.5	337.6	358.4
60°	263.2	244.7	236.8	238.0	240.6	246.5	263.3	272.8	286.0	312.6	333.4
62.5°	236.3	219.5	212.1	213.6	215.9	221.8	237.7	246.8	259.9	286.0	307.0
65°	209.8	194.2	187.9	189.4	191.6	197.0	211.9	220.7	233.2	258.7	278.8
67.5°	183.5	169.3	164.1	165.6	167.3	172.4	184.8	194.3	206.1	230.3	249.3
70°	157.6	144.9	140.3	141.9	143.4	148.0	158.8	167.6	178.4	200.7	218.3
72.5°	132.0	119.6	117.3	118.7	119.9	123.9	134.3	141.2	150.7	170.4	185.5
75°	107.0	96.3	94.8	96.2	97.2	100.3	109.0	115.0	122.9	140.0	152.4
77.5°	82.9	73.9	73.3	74.4	75.5	77.6	84.4	90.8	96.9	109.6	120.6
80°	60.4	53.1	53.1	54.2	53.9	56.5	61.3	66.4	70.9	80.0	88.0
82.5°	39.8	34.1	34.9	35.7	36.1	37.2	40.1	44.0	46.8	52.3	57.6
85°	22.1	18.2	19.0	19.6	19.3	20.5	22.1	24.4	25.8	28.4	31.2
87.5°	8.2	6.8	6.9	7.4	7.7	8.3	8.3	9.7	9.9	10.2	10.8
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):

	160°	170°	180°
0°	706.2	706.2	706.2
2.5°	689.4	693.1	695.8
5°	677.5	680.6	683.0
7.5°	665.9	668.7	670.8
10°	654.9	658.0	659.6
12.5°	643.7	647.2	648.5
15°	632.6	636.1	637.7
17.5°	621.1	625.8	627.5
20°	610.5	616.4	617.7
22.5°	599.7	605.7	607.4
25°	587.9	595.0	596.7
27.5°	575.4	583.9	585.6
30°	562.9	572.2	573.9
32.5°	549.5	559.5	561.1
35°	535.5	545.5	547.4
37.5°	519.9	530.8	534.5
40°	503.7	515.6	519.4
42.5°	486.7	499.7	503.7
45°	468.5	482.7	487.3
47.5°	450.1	466.2	470.2
50°	430.2	447.3	452.1
52.5°	409.4	428.0	432.8
55°	387.7	406.6	411.8
57.5°	364.3	383.7	389.3
60°	339.7	359.2	364.4
62.5°	314.6	332.2	337.3
65°	286.5	303.0	307.6
67.5°	256.7	271.8	275.7
70°	225.1	238.2	241.6
72.5°	192.0	201.1	205.6
75°	157.9	165.2	168.6
77.5°	123.6	128.7	131.5
80°	90.1	93.1	95.4
82.5°	59.0	60.2	61.9
85°	31.8	31.8	32.9
87.5°	10.8	10.3	10.8
90°	0.0	0.0	0.0

(END OF REPORT)