

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: P835353

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835353
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-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

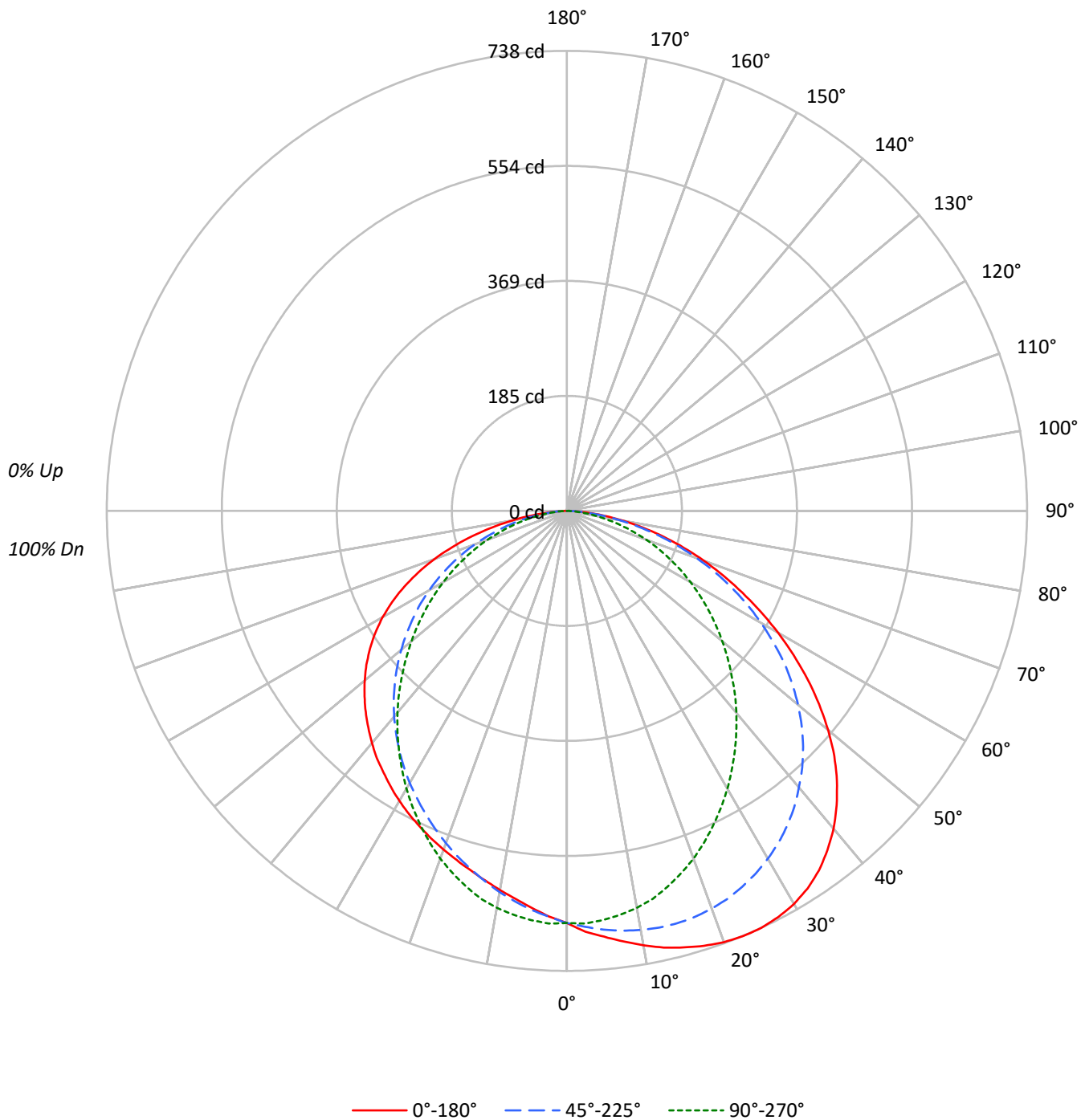
Lumens per Lamp: N/A
Luminaire Lumens: 1944.7 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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°	1779	1779	1779
5°	1852	1780	1727
10°	1933	1767	1687
15°	2020	1738	1663
20°	2109	1700	1656
25°	2191	1651	1659
30°	2263	1599	1670
35°	2314	1542	1683
40°	2337	1485	1708
45°	2331	1422	1736
50°	2290	1362	1772
55°	2212	1300	1809
60°	2104	1232	1836
65°	1976	1158	1834
70°	1839	1068	1780
75°	1669	938	1641
80°	1433	770	1384
85°	1093	528	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	3.2
10°-20°	181.1	9.3
20°-30°	277.4	14.3
30°-40°	338.5	17.4
40°-50°	354.0	18.2
50°-60°	320.4	16.5
60°-70°	242.7	12.5
70°-80°	135.2	7.0
80°-90°	32.6	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°	521.2	26.8
0°-40°	859.7	44.2
0°-60°	1534.2	78.9
0°-90°	1944.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1944.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	661	661	661	661	661	
5°	686	674	659	643	639	66
15°	725	685	624	595	597	206
25°	738	665	556	536	559	340
35°	704	616	469	469	512	440
45°	613	536	374	390	456	471
55°	471	426	277	301	386	421
65°	310	292	182	207	288	308
75°	160	152	90	108	158	170
85°	35	31	17	23	31	43
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°	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1
2.5°	675.7	672.5	669.9	670.9	671.5	669.5	667.8	668.0	666.3	669.6	661.8
5°	685.7	682.8	679.8	680.9	679.8	676.7	674.3	673.5	668.9	670.8	662.8
7.5°	696.8	693.6	689.1	690.4	688.0	682.4	679.2	677.3	670.2	670.4	661.5
10°	707.5	704.8	698.7	699.6	695.1	687.6	682.5	679.9	669.9	668.5	659.4
12.5°	717.5	713.7	707.2	707.6	701.1	691.2	684.7	680.9	667.9	663.6	654.6
15°	725.1	721.5	713.7	713.6	705.2	692.2	684.8	679.6	663.1	656.3	647.0
17.5°	731.6	728.3	718.6	718.3	708.2	691.7	682.9	676.4	656.2	647.8	637.4
20°	736.3	732.9	722.1	721.1	708.9	689.6	679.0	670.8	647.1	637.1	625.6
22.5°	738.4	735.1	722.8	721.4	707.2	685.2	673.4	663.7	636.7	623.7	611.7
25°	738.0	734.8	720.9	719.5	703.9	678.7	665.4	654.3	623.5	608.2	596.4
27.5°	734.4	731.9	717.3	715.4	697.8	669.9	655.8	643.5	608.9	591.9	579.0
30°	728.2	726.3	710.8	709.1	690.3	660.2	644.5	630.3	593.2	574.0	561.0
32.5°	718.2	716.5	700.9	699.3	680.2	647.8	631.3	616.7	576.0	554.8	541.8
35°	704.5	703.5	688.3	686.5	667.2	633.7	616.2	600.1	558.1	534.1	521.7
37.5°	686.4	686.4	671.8	669.9	651.0	616.3	599.1	582.1	537.8	512.4	500.1
40°	665.4	667.3	652.4	650.6	632.2	597.7	578.9	561.0	516.0	489.6	477.6
42.5°	640.3	642.0	629.6	627.9	610.7	576.1	558.7	539.1	493.2	466.3	453.9
45°	612.6	614.9	603.7	602.4	586.4	552.6	535.8	516.0	469.4	442.0	429.9
47.5°	581.6	584.7	575.0	574.3	559.4	528.5	511.0	490.9	444.4	416.8	405.3
50°	547.0	551.3	543.3	543.3	530.0	499.3	484.1	464.0	418.3	390.7	379.5
52.5°	509.8	515.3	509.4	509.5	498.7	471.1	455.3	435.7	391.2	364.0	353.6
55°	471.4	476.7	473.0	473.5	465.0	439.9	425.6	406.1	363.4	337.0	327.2
57.5°	431.2	437.0	434.5	435.7	429.8	407.2	392.3	375.3	334.8	308.7	300.3
60°	390.9	396.4	395.1	396.7	392.9	373.4	359.8	342.2	306.1	280.9	273.5
62.5°	350.1	355.2	354.9	356.6	354.6	338.4	326.3	311.3	276.3	253.2	246.4
65°	310.3	314.6	314.3	316.2	315.7	302.7	291.8	278.0	246.5	225.3	219.4
67.5°	271.5	275.1	274.1	276.3	276.9	266.5	256.9	244.6	218.2	197.5	192.5
70°	233.7	236.1	234.8	236.3	237.6	229.8	221.7	210.8	188.0	169.8	165.6
72.5°	196.5	198.3	196.2	197.7	198.8	193.2	186.6	177.2	158.2	142.5	139.0
75°	160.5	163.0	158.8	160.3	161.1	155.5	151.6	143.9	127.6	115.5	113.1
77.5°	125.7	127.2	124.9	124.3	124.9	120.8	117.8	111.8	99.6	89.6	88.1
80°	92.5	93.4	91.0	90.5	90.9	88.0	85.7	81.4	72.7	65.2	64.6
82.5°	62.0	62.4	60.4	59.8	60.1	59.2	56.5	53.5	49.4	43.1	42.9
85°	35.4	35.4	34.0	33.4	33.7	32.2	31.2	29.6	28.0	23.7	24.0
87.5°	13.0	13.0	12.3	12.1	13.6	12.0	11.6	10.8	11.3	9.0	9.5
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°	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1	661.1
2.5°	664.0	662.6	661.3	656.8	658.7	654.0	653.7	652.0	650.7	648.3	651.4
5°	661.8	658.9	655.2	649.8	651.4	645.9	644.8	642.8	641.0	637.8	640.3
7.5°	658.4	653.6	647.7	640.9	643.0	636.3	634.5	632.4	630.9	627.2	629.3
10°	653.3	646.5	639.6	631.3	632.9	625.6	623.4	621.1	619.8	616.5	618.6
12.5°	645.5	637.3	627.9	618.9	620.7	613.7	610.8	608.4	607.9	605.2	607.8
15°	635.4	624.0	614.3	604.8	606.8	598.7	597.4	594.9	595.7	593.8	597.0
17.5°	622.5	609.4	598.8	588.6	590.6	583.8	582.8	581.6	582.4	582.1	585.5
20°	608.1	593.6	581.5	571.4	572.5	567.2	567.6	567.3	568.8	570.4	575.1
22.5°	591.7	575.4	562.7	552.3	554.0	549.4	551.4	552.0	554.5	558.1	564.1
25°	573.4	555.9	542.6	532.8	534.4	531.3	534.8	536.3	540.2	546.2	552.4
27.5°	554.2	535.7	521.5	512.1	515.2	512.1	517.3	520.2	526.1	532.8	540.4
30°	533.8	514.6	500.0	491.6	494.5	491.8	500.1	504.0	510.0	519.1	528.2
32.5°	512.4	492.2	477.9	471.4	473.4	473.0	482.4	486.7	494.6	505.0	514.7
35°	490.5	469.4	454.9	449.4	451.9	452.4	463.7	468.8	477.4	490.0	500.4
37.5°	467.8	446.2	432.1	427.6	429.8	431.9	445.1	450.1	460.0	473.7	485.1
40°	444.2	422.7	408.8	405.2	407.4	409.7	424.0	430.9	441.6	456.5	468.9
42.5°	420.4	398.8	385.4	382.8	385.0	389.4	404.6	411.1	422.4	438.9	452.6
45°	396.1	373.7	362.0	360.0	362.3	367.5	382.4	390.2	402.2	420.2	435.0
47.5°	371.5	349.7	338.6	337.3	339.6	345.4	361.8	368.9	381.6	400.9	416.8
50°	346.7	325.4	314.7	314.3	316.5	322.7	338.4	346.8	360.0	381.5	397.8
52.5°	321.5	301.1	291.5	291.5	293.5	299.8	315.7	324.4	338.0	360.7	378.7
55°	296.4	277.0	267.8	268.5	271.4	276.9	292.3	301.4	315.2	338.7	357.8
57.5°	271.2	252.9	244.5	245.5	248.3	253.8	268.9	279.2	291.6	316.0	335.5
60°	246.4	229.0	221.7	222.8	225.3	230.8	246.5	255.3	267.8	292.6	312.1
62.5°	221.2	205.5	198.6	200.0	202.2	207.7	222.5	231.1	243.3	267.8	287.4
65°	196.4	181.8	175.9	177.3	179.3	184.4	198.4	206.6	218.3	242.2	261.0
67.5°	171.8	158.5	153.6	155.1	156.6	161.4	173.0	181.9	192.9	215.6	233.4
70°	147.5	135.7	131.4	132.8	134.2	138.6	148.7	156.9	167.0	187.9	204.3
72.5°	123.6	112.0	109.8	111.1	112.3	116.0	125.7	132.2	141.0	159.5	173.7
75°	100.1	90.2	88.7	90.0	91.0	93.9	102.0	107.7	115.0	131.1	142.6
77.5°	77.6	69.2	68.6	69.7	70.7	72.7	79.0	85.0	90.7	102.6	112.9
80°	56.5	49.7	49.7	50.7	50.4	52.9	57.4	62.1	66.3	74.9	82.4
82.5°	37.3	31.9	32.7	33.4	33.8	34.8	37.6	41.2	43.8	49.0	53.9
85°	20.7	17.1	17.8	18.4	18.1	19.2	20.7	22.8	24.1	26.6	29.2
87.5°	7.7	6.4	6.5	6.9	7.2	7.8	7.8	9.1	9.2	9.5	10.1
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°	661.1	661.1	661.1
2.5°	645.4	648.8	651.4
5°	634.2	637.1	639.4
7.5°	623.4	626.0	628.0
10°	613.1	616.0	617.5
12.5°	602.6	605.9	607.1
15°	592.2	595.5	597.0
17.5°	581.5	585.8	587.4
20°	571.5	577.0	578.3
22.5°	561.4	567.0	568.6
25°	550.4	557.1	558.7
27.5°	538.7	546.7	548.3
30°	527.0	535.7	537.3
32.5°	514.4	523.8	525.3
35°	501.3	510.7	512.4
37.5°	486.7	497.0	500.4
40°	471.5	482.6	486.3
42.5°	455.6	467.8	471.5
45°	438.6	451.9	456.2
47.5°	421.4	436.4	440.2
50°	402.7	418.8	423.3
52.5°	383.2	400.7	405.2
55°	363.0	380.6	385.5
57.5°	341.0	359.2	364.4
60°	318.1	336.3	341.2
62.5°	294.5	311.0	315.7
65°	268.2	283.7	288.0
67.5°	240.3	254.5	258.1
70°	210.7	223.0	226.2
72.5°	179.8	188.3	192.5
75°	147.8	154.6	157.8
77.5°	115.7	120.5	123.1
80°	84.4	87.1	89.3
82.5°	55.2	56.4	57.9
85°	29.8	29.8	30.8
87.5°	10.1	9.7	10.1
90°	0.0	0.0	0.0

(END OF REPORT)