

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: P835281

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835281
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-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

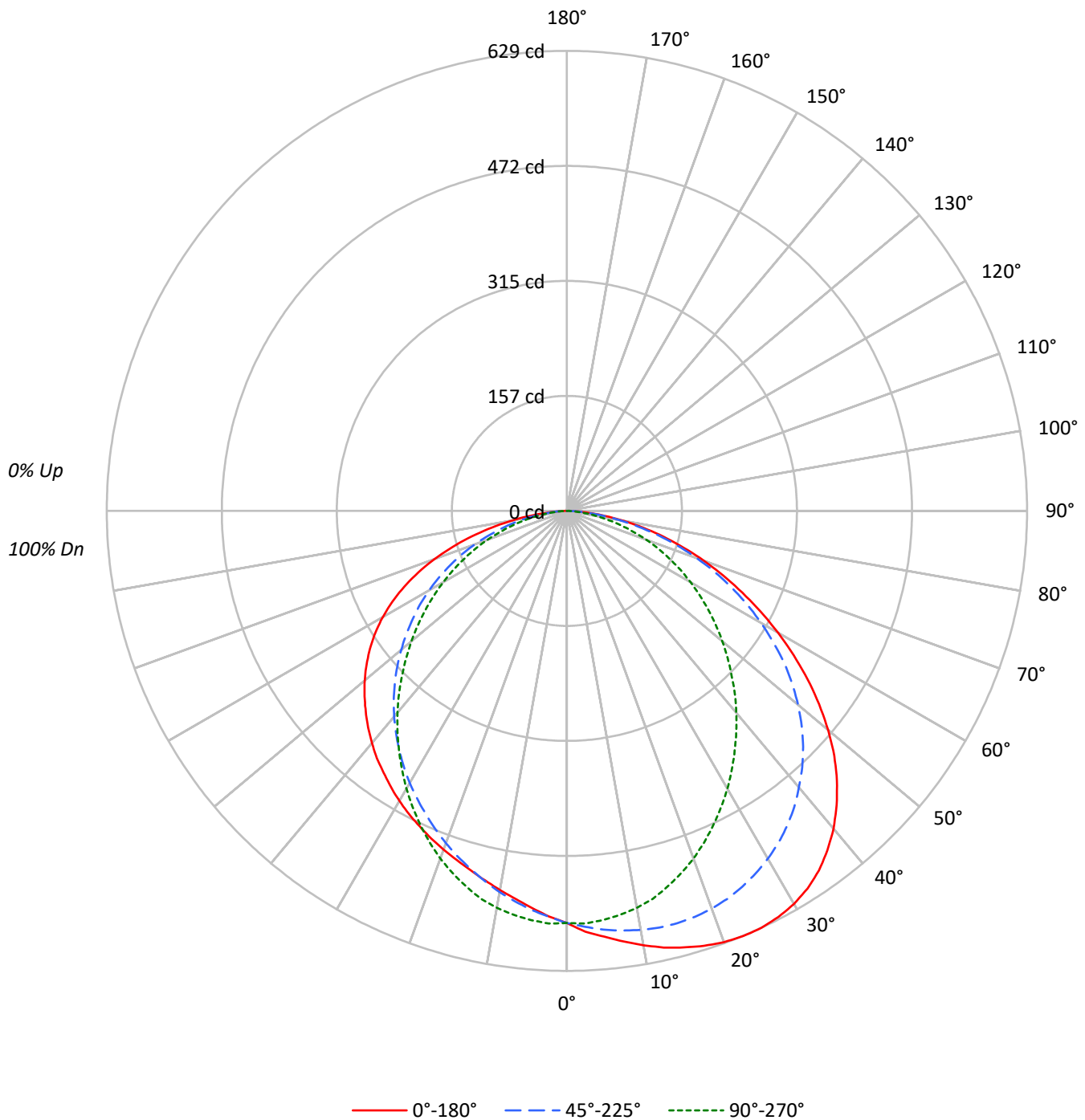
Lumens per Lamp: N/A
Luminaire Lumens: 1657.4 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1516	1516	1516
5°	1579	1517	1472
10°	1648	1506	1438
15°	1722	1482	1417
20°	1797	1449	1412
25°	1868	1407	1414
30°	1928	1363	1423
35°	1972	1314	1435
40°	1992	1265	1456
45°	1987	1212	1480
50°	1952	1161	1510
55°	1885	1108	1542
60°	1793	1051	1565
65°	1684	986	1563
70°	1566	910	1516
75°	1422	800	1398
80°	1221	657	1179
85°	932	448	809

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	3.2
10°-20°	154.3	9.3
20°-30°	236.4	14.3
30°-40°	288.5	17.4
40°-50°	301.7	18.2
50°-60°	273.1	16.5
60°-70°	206.8	12.5
70°-80°	115.3	7.0
80°-90°	27.8	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°	444.2	26.8
0°-40°	732.7	44.2
0°-60°	1307.5	78.9
0°-90°	1657.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1657.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	563	563	563	563	563	
5°	584	575	562	548	545	56
15°	618	584	532	507	509	175
25°	629	567	474	457	476	290
35°	600	525	400	400	437	375
45°	522	457	318	332	389	402
55°	402	363	236	257	329	358
65°	264	249	155	176	246	262
75°	137	129	77	92	134	145
85°	30	27	14	20	26	36
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°	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4
2.5°	575.9	573.2	571.0	571.8	572.3	570.6	569.1	569.4	567.9	570.7	564.1
5°	584.4	581.9	579.3	580.3	579.3	576.7	574.7	574.0	570.1	571.7	564.9
7.5°	593.9	591.2	587.3	588.4	586.4	581.6	578.8	577.2	571.2	571.3	563.8
10°	603.0	600.6	595.5	596.2	592.4	586.0	581.7	579.5	571.0	569.7	562.0
12.5°	611.5	608.3	602.7	603.1	597.6	589.1	583.5	580.3	569.2	565.5	557.9
15°	618.0	614.9	608.3	608.2	601.0	589.9	583.6	579.2	565.2	559.4	551.4
17.5°	623.5	620.7	612.5	612.2	603.6	589.6	582.0	576.5	559.3	552.1	543.2
20°	627.5	624.7	615.4	614.6	604.2	587.7	578.7	571.7	551.5	543.0	533.2
22.5°	629.3	626.5	616.0	614.8	602.7	584.0	573.9	565.7	542.6	531.5	521.3
25°	629.0	626.3	614.4	613.2	599.9	578.5	567.1	557.7	531.4	518.4	508.3
27.5°	625.9	623.8	611.4	609.8	594.7	571.0	558.9	548.4	519.0	504.5	493.5
30°	620.6	619.0	605.8	604.3	588.3	562.7	549.3	537.2	505.6	489.2	478.1
32.5°	612.1	610.6	597.3	596.0	579.7	552.1	538.1	525.6	490.9	472.8	461.7
35°	600.4	599.5	586.6	585.1	568.6	540.0	525.1	511.5	475.6	455.2	444.6
37.5°	585.0	585.0	572.6	571.0	554.8	525.3	510.6	496.1	458.4	436.7	426.2
40°	567.1	568.7	556.1	554.5	538.8	509.4	493.4	478.1	439.8	417.3	407.0
42.5°	545.7	547.2	536.6	535.1	520.5	491.0	476.1	459.5	420.3	397.4	386.8
45°	522.1	524.0	514.6	513.4	499.8	471.0	456.7	439.8	400.0	376.7	366.4
47.5°	495.7	498.3	490.0	489.4	476.7	450.4	435.5	418.4	378.7	355.2	345.5
50°	466.2	469.8	463.1	463.1	451.7	425.5	412.6	395.5	356.5	333.0	323.4
52.5°	434.5	439.2	434.1	434.3	425.0	401.5	388.1	371.3	333.4	310.2	301.4
55°	401.7	406.3	403.1	403.6	396.3	374.9	362.7	346.1	309.7	287.2	278.8
57.5°	367.5	372.4	370.3	371.3	366.3	347.1	334.4	319.8	285.4	263.1	255.9
60°	333.1	337.8	336.7	338.1	334.9	318.2	306.7	291.6	260.8	239.4	233.1
62.5°	298.4	302.7	302.5	304.0	302.2	288.4	278.1	265.3	235.5	215.8	210.0
65°	264.4	268.1	267.9	269.5	269.1	258.0	248.7	237.0	210.1	192.0	187.0
67.5°	231.4	234.5	233.6	235.5	236.0	227.1	219.0	208.5	186.0	168.4	164.0
70°	199.1	201.2	200.1	201.4	202.5	195.8	188.9	179.7	160.2	144.7	141.1
72.5°	167.5	169.0	167.2	168.5	169.5	164.7	159.0	151.0	134.9	121.4	118.5
75°	136.8	138.9	135.4	136.6	137.3	132.5	129.2	122.7	108.7	98.4	96.4
77.5°	107.1	108.4	106.4	105.9	106.4	103.0	100.4	95.3	84.9	76.4	75.1
80°	78.8	79.6	77.6	77.1	77.5	75.0	73.0	69.3	61.9	55.5	55.1
82.5°	52.8	53.2	51.5	51.0	51.2	50.5	48.2	45.6	42.1	36.7	36.6
85°	30.2	30.2	28.9	28.4	28.7	27.5	26.6	25.2	23.9	20.2	20.4
87.5°	11.1	11.1	10.5	10.3	11.6	10.2	9.9	9.2	9.6	7.6	8.1
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4
2.5°	565.9	564.7	563.6	559.8	561.4	557.4	557.2	555.7	554.6	552.5	555.2
5°	564.1	561.6	558.4	553.8	555.2	550.5	549.5	547.8	546.3	543.6	545.7
7.5°	561.1	557.0	552.0	546.2	548.1	542.3	540.8	538.9	537.7	534.5	536.4
10°	556.8	551.0	545.1	538.1	539.4	533.2	531.3	529.3	528.2	525.4	527.2
12.5°	550.1	543.1	535.1	527.5	529.0	523.1	520.6	518.5	518.1	515.8	518.0
15°	541.5	531.8	523.5	515.4	517.1	510.2	509.1	507.0	507.7	506.1	508.8
17.5°	530.6	519.4	510.4	501.6	503.3	497.6	496.7	495.7	496.3	496.1	499.0
20°	518.2	505.9	495.6	487.0	488.0	483.4	483.8	483.5	484.7	486.1	490.2
22.5°	504.3	490.4	479.6	470.7	472.2	468.2	470.0	470.5	472.6	475.6	480.8
25°	488.7	473.8	462.5	454.1	455.4	452.9	455.8	457.0	460.4	465.5	470.8
27.5°	472.3	456.5	444.5	436.5	439.1	436.5	440.9	443.4	448.4	454.1	460.6
30°	454.9	438.6	426.1	419.0	421.4	419.1	426.2	429.6	434.6	442.4	450.1
32.5°	436.7	419.5	407.3	401.7	403.5	403.1	411.1	414.8	421.6	430.4	438.7
35°	418.0	400.0	387.7	383.0	385.1	385.6	395.2	399.5	406.9	417.6	426.5
37.5°	398.7	380.3	368.2	364.4	366.3	368.1	379.3	383.6	392.0	403.7	413.4
40°	378.6	360.2	348.4	345.3	347.2	349.2	361.3	367.3	376.4	389.1	399.6
42.5°	358.3	339.9	328.5	326.2	328.1	331.9	344.8	350.4	360.0	374.0	385.7
45°	337.6	318.5	308.5	306.8	308.8	313.2	325.9	332.5	342.7	358.1	370.7
47.5°	316.6	298.0	288.6	287.5	289.4	294.3	308.4	314.4	325.3	341.6	355.2
50°	295.5	277.4	268.2	267.9	269.7	275.0	288.4	295.6	306.8	325.1	339.1
52.5°	274.0	256.7	248.4	248.4	250.1	255.6	269.1	276.5	288.1	307.4	322.8
55°	252.6	236.1	228.2	228.8	231.3	236.0	249.1	256.9	268.6	288.7	304.9
57.5°	231.2	215.5	208.4	209.2	211.6	216.3	229.2	237.9	248.5	269.3	286.0
60°	210.0	195.2	188.9	189.9	192.0	196.7	210.1	217.6	228.2	249.4	266.0
62.5°	188.6	175.1	169.2	170.5	172.3	177.0	189.7	196.9	207.4	228.2	245.0
65°	167.4	154.9	149.9	151.1	152.8	157.1	169.1	176.1	186.1	206.4	222.4
67.5°	146.4	135.1	130.9	132.1	133.5	137.6	147.4	155.1	164.4	183.8	198.9
70°	125.7	115.6	112.0	113.2	114.4	118.1	126.7	133.7	142.4	160.1	174.1
72.5°	105.3	95.4	93.6	94.7	95.7	98.9	107.1	112.7	120.2	136.0	148.0
75°	85.3	76.9	75.6	76.7	77.6	80.1	86.9	91.8	98.0	111.7	121.6
77.5°	66.1	59.0	58.5	59.4	60.2	61.9	67.4	72.4	77.3	87.4	96.2
80°	48.2	42.4	42.4	43.2	43.0	45.1	48.9	53.0	56.5	63.8	70.2
82.5°	31.8	27.2	27.8	28.4	28.8	29.7	32.0	35.1	37.3	41.8	45.9
85°	17.6	14.5	15.1	15.6	15.4	16.4	17.6	19.5	20.6	22.7	24.9
87.5°	6.5	5.4	5.5	5.9	6.2	6.7	6.7	7.8	7.9	8.1	8.6
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°	563.4	563.4	563.4
2.5°	550.0	553.0	555.2
5°	540.5	543.0	545.0
7.5°	531.3	533.5	535.2
10°	522.6	525.0	526.3
12.5°	513.6	516.4	517.4
15°	504.7	507.5	508.8
17.5°	495.6	499.3	500.6
20°	487.1	491.8	492.9
22.5°	478.5	483.3	484.6
25°	469.1	474.8	476.1
27.5°	459.1	465.9	467.3
30°	449.2	456.5	457.9
32.5°	438.4	446.4	447.7
35°	427.2	435.2	436.7
37.5°	414.8	423.5	426.5
40°	401.9	411.3	414.4
42.5°	388.3	398.7	401.9
45°	373.8	385.1	388.8
47.5°	359.1	371.9	375.1
50°	343.2	356.9	360.7
52.5°	326.6	341.5	345.3
55°	309.4	324.4	328.6
57.5°	290.7	306.2	310.6
60°	271.1	286.6	290.8
62.5°	251.0	265.0	269.1
65°	228.6	241.8	245.5
67.5°	204.8	216.9	220.0
70°	179.6	190.0	192.7
72.5°	153.2	160.5	164.0
75°	126.0	131.8	134.5
77.5°	98.6	102.7	104.9
80°	71.9	74.3	76.1
82.5°	47.0	48.0	49.4
85°	25.4	25.4	26.2
87.5°	8.6	8.3	8.6
90°	0.0	0.0	0.0

(END OF REPORT)