

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: P834235

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834235
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1LO-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

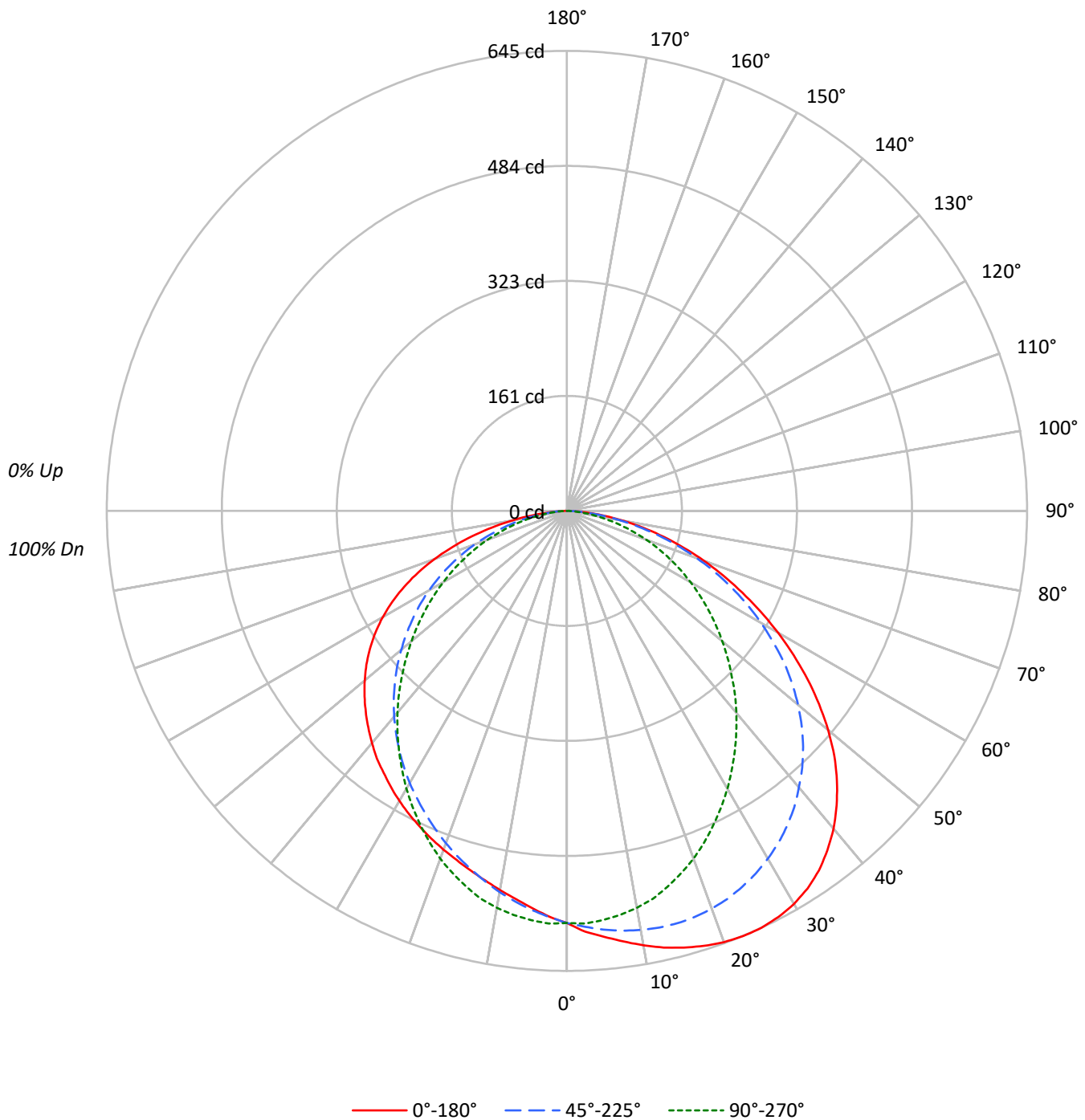
Lumens per Lamp: N/A
Luminaire Lumens: 1699.7 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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°	1555	1555	1555
5°	1619	1556	1510
10°	1690	1544	1475
15°	1766	1519	1454
20°	1843	1486	1448
25°	1915	1443	1450
30°	1978	1398	1459
35°	2023	1348	1471
40°	2043	1298	1493
45°	2038	1243	1517
50°	2002	1191	1549
55°	1933	1136	1581
60°	1839	1077	1605
65°	1727	1012	1603
70°	1607	933	1555
75°	1459	819	1434
80°	1252	673	1210
85°	954	460	831

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	3.2
10°-20°	158.3	9.3
20°-30°	242.5	14.3
30°-40°	295.9	17.4
40°-50°	309.4	18.2
50°-60°	280.1	16.5
60°-70°	212.1	12.5
70°-80°	118.2	7.0
80°-90°	28.5	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°	455.5	26.8
0°-40°	751.4	44.2
0°-60°	1340.9	78.9
0°-90°	1699.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1699.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	578	578	578	578	578	
5°	599	589	576	562	559	58
15°	634	599	545	520	522	180
25°	645	582	486	469	488	298
35°	616	539	410	410	448	384
45°	535	468	327	341	399	412
55°	412	372	242	264	337	368
65°	271	255	159	181	252	269
75°	140	132	79	94	138	149
85°	31	27	15	20	27	37
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°	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8
2.5°	590.6	587.8	585.5	586.4	586.9	585.2	583.7	583.9	582.4	585.3	578.5
5°	599.3	596.8	594.1	595.1	594.1	591.5	589.3	588.7	584.7	586.3	579.4
7.5°	609.0	606.3	602.3	603.5	601.3	596.4	593.6	592.0	585.8	585.9	578.2
10°	618.4	616.0	610.7	611.4	607.5	601.0	596.5	594.3	585.5	584.3	576.3
12.5°	627.1	623.8	618.1	618.5	612.8	604.1	598.4	595.1	583.8	580.0	572.2
15°	633.8	630.6	623.8	623.7	616.4	605.0	598.6	594.0	579.6	573.7	565.5
17.5°	639.5	636.6	628.1	627.9	619.0	604.6	596.9	591.2	573.6	566.2	557.1
20°	643.5	640.6	631.1	630.3	619.7	602.7	593.5	586.3	565.6	556.9	546.8
22.5°	645.4	642.5	631.8	630.5	618.1	598.9	588.6	580.1	556.5	545.1	534.6
25°	645.0	642.3	630.1	628.9	615.2	593.3	581.6	571.9	545.0	531.6	521.3
27.5°	641.9	639.7	627.0	625.3	609.9	585.5	573.2	562.4	532.2	517.3	506.1
30°	636.5	634.8	621.3	619.8	603.4	577.1	563.3	550.9	518.5	501.7	490.3
32.5°	627.7	626.2	612.6	611.2	594.5	566.2	551.8	539.1	503.5	484.9	473.5
35°	615.7	614.9	601.6	600.1	583.1	553.8	538.6	524.5	487.8	466.8	456.0
37.5°	599.9	599.9	587.2	585.5	569.0	538.7	523.7	508.8	470.1	447.9	437.1
40°	581.6	583.3	570.3	568.6	552.6	522.4	506.0	490.3	451.0	427.9	417.4
42.5°	559.7	561.2	550.3	548.8	533.8	503.6	488.3	471.2	431.1	407.6	396.7
45°	535.4	537.4	527.7	526.6	512.5	483.0	468.3	451.0	410.2	386.4	375.8
47.5°	508.4	511.0	502.6	501.9	488.9	461.9	446.6	429.1	388.4	364.3	354.3
50°	478.1	481.9	474.9	474.9	463.3	436.4	423.1	405.6	365.7	341.5	331.7
52.5°	445.6	450.4	445.2	445.4	435.9	411.8	398.0	380.8	341.9	318.2	309.1
55°	412.0	416.7	413.4	413.9	406.4	384.5	372.0	354.9	317.7	294.5	286.0
57.5°	376.9	381.9	379.8	380.8	375.6	355.9	342.9	328.0	292.6	269.8	262.5
60°	341.7	346.5	345.3	346.7	343.4	326.4	314.5	299.1	267.5	245.5	239.1
62.5°	306.0	310.5	310.2	311.7	310.0	295.8	285.2	272.1	241.5	221.3	215.3
65°	271.2	275.0	274.7	276.4	276.0	264.6	255.0	243.0	215.5	196.9	191.7
67.5°	237.3	240.5	239.6	241.5	242.0	232.9	224.6	213.8	190.7	172.7	168.2
70°	204.2	206.4	205.2	206.5	207.6	200.8	193.8	184.3	164.3	148.4	144.7
72.5°	171.8	173.3	171.5	172.8	173.8	168.9	163.1	154.8	138.3	124.5	121.5
75°	140.3	142.5	138.8	140.1	140.8	135.9	132.5	125.8	111.5	100.9	98.9
77.5°	109.9	111.1	109.1	108.6	109.1	105.6	102.9	97.8	87.0	78.3	77.0
80°	80.8	81.6	79.6	79.1	79.4	76.9	74.9	71.1	63.5	57.0	56.5
82.5°	54.2	54.6	52.8	52.3	52.5	51.8	49.4	46.7	43.2	37.6	37.5
85°	30.9	30.9	29.7	29.2	29.4	28.2	27.3	25.9	24.5	20.7	21.0
87.5°	11.4	11.4	10.7	10.6	11.9	10.5	10.1	9.5	9.9	7.8	8.3
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°	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8	577.8
2.5°	580.4	579.1	578.0	574.1	575.7	571.7	571.4	569.9	568.8	566.6	569.4
5°	578.5	576.0	572.7	568.0	569.4	564.6	563.6	561.8	560.3	557.5	559.7
7.5°	575.4	571.3	566.1	560.2	562.1	556.1	554.6	552.7	551.4	548.2	550.1
10°	571.0	565.1	559.0	551.8	553.2	546.8	544.9	542.9	541.7	538.8	540.7
12.5°	564.2	557.0	548.8	541.0	542.5	536.4	533.9	531.7	531.4	529.0	531.2
15°	555.4	545.4	536.9	528.6	530.4	523.3	522.1	520.0	520.6	519.0	521.8
17.5°	544.1	532.6	523.4	514.4	516.2	510.3	509.4	508.4	509.0	508.8	511.8
20°	531.5	518.9	508.3	499.4	500.4	495.7	496.1	495.9	497.1	498.5	502.7
22.5°	517.2	502.9	491.8	482.7	484.3	480.2	482.0	482.5	484.6	487.8	493.1
25°	501.2	485.9	474.3	465.7	467.1	464.4	467.5	468.7	472.1	477.4	482.9
27.5°	484.4	468.2	455.8	447.6	450.3	447.6	452.2	454.7	459.9	465.7	472.4
30°	466.6	449.8	437.0	429.7	432.2	429.8	437.1	440.6	445.7	453.7	461.6
32.5°	447.9	430.2	417.7	412.0	413.8	413.4	421.6	425.4	432.3	441.4	449.9
35°	428.7	410.2	397.6	392.8	395.0	395.5	405.3	409.7	417.3	428.3	437.4
37.5°	408.8	390.0	377.7	373.7	375.6	377.5	389.0	393.4	402.0	414.0	424.0
40°	388.3	369.4	357.3	354.2	356.1	358.1	370.6	376.6	386.0	399.0	409.9
42.5°	367.4	348.6	336.9	334.6	336.5	340.4	353.7	359.3	369.2	383.6	395.6
45°	346.2	326.6	316.4	314.6	316.6	321.2	334.2	341.0	351.5	367.3	380.2
47.5°	324.7	305.7	295.9	294.8	296.8	301.9	316.3	322.5	333.6	350.4	364.3
50°	303.0	284.4	275.1	274.7	276.6	282.0	295.8	303.1	314.6	333.4	347.7
52.5°	281.0	263.2	254.8	254.8	256.5	262.1	276.0	283.6	295.4	315.3	331.0
55°	259.1	242.1	234.0	234.7	237.2	242.0	255.5	263.5	275.5	296.1	312.7
57.5°	237.1	221.0	213.7	214.6	217.0	221.8	235.1	244.0	254.9	276.2	293.3
60°	215.3	200.2	193.8	194.8	196.9	201.7	215.5	223.2	234.0	255.8	272.8
62.5°	193.4	179.6	173.5	174.8	176.7	181.5	194.5	202.0	212.7	234.0	251.2
65°	171.6	158.9	153.7	155.0	156.7	161.2	173.4	180.6	190.8	211.7	228.1
67.5°	150.2	138.6	134.3	135.5	136.9	141.1	151.2	159.0	168.6	188.4	204.0
70°	129.0	118.6	114.8	116.1	117.3	121.1	130.0	137.2	146.0	164.2	178.6
72.5°	108.0	97.9	96.0	97.1	98.1	101.4	109.9	115.6	123.3	139.4	151.8
75°	87.5	78.8	77.6	78.7	79.6	82.1	89.2	94.1	100.5	114.6	124.7
77.5°	67.8	60.5	60.0	60.9	61.8	63.5	69.1	74.3	79.3	89.7	98.6
80°	49.4	43.4	43.4	44.3	44.1	46.2	50.1	54.3	58.0	65.4	72.0
82.5°	32.6	27.9	28.5	29.2	29.6	30.4	32.8	36.0	38.3	42.8	47.1
85°	18.1	14.9	15.5	16.0	15.8	16.8	18.1	20.0	21.1	23.2	25.5
87.5°	6.7	5.6	5.7	6.1	6.3	6.8	6.8	8.0	8.1	8.3	8.8
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°	577.8	577.8	577.8
2.5°	564.1	567.1	569.4
5°	554.4	556.9	558.9
7.5°	544.9	547.2	548.9
10°	535.9	538.4	539.7
12.5°	526.7	529.6	530.6
15°	517.6	520.5	521.8
17.5°	508.3	512.0	513.4
20°	499.5	504.3	505.5
22.5°	490.7	495.6	497.0
25°	481.1	486.9	488.3
27.5°	470.9	477.8	479.2
30°	460.6	468.2	469.6
32.5°	449.6	457.9	459.1
35°	438.2	446.4	447.9
37.5°	425.4	434.4	437.4
40°	412.1	421.9	425.0
42.5°	398.2	408.8	412.1
45°	383.3	395.0	398.7
47.5°	368.3	381.4	384.7
50°	352.0	366.0	369.9
52.5°	335.0	350.2	354.2
55°	317.3	332.7	337.0
57.5°	298.1	314.0	318.5
60°	278.0	293.9	298.2
62.5°	257.4	271.8	276.0
65°	234.4	247.9	251.7
67.5°	210.0	222.4	225.6
70°	184.2	194.9	197.7
72.5°	157.1	164.6	168.2
75°	129.2	135.1	137.9
77.5°	101.2	105.3	107.6
80°	73.8	76.2	78.1
82.5°	48.2	49.3	50.6
85°	26.0	26.0	26.9
87.5°	8.8	8.5	8.8
90°	0.0	0.0	0.0

(END OF REPORT)