

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: P834613

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834613
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1LO-20-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

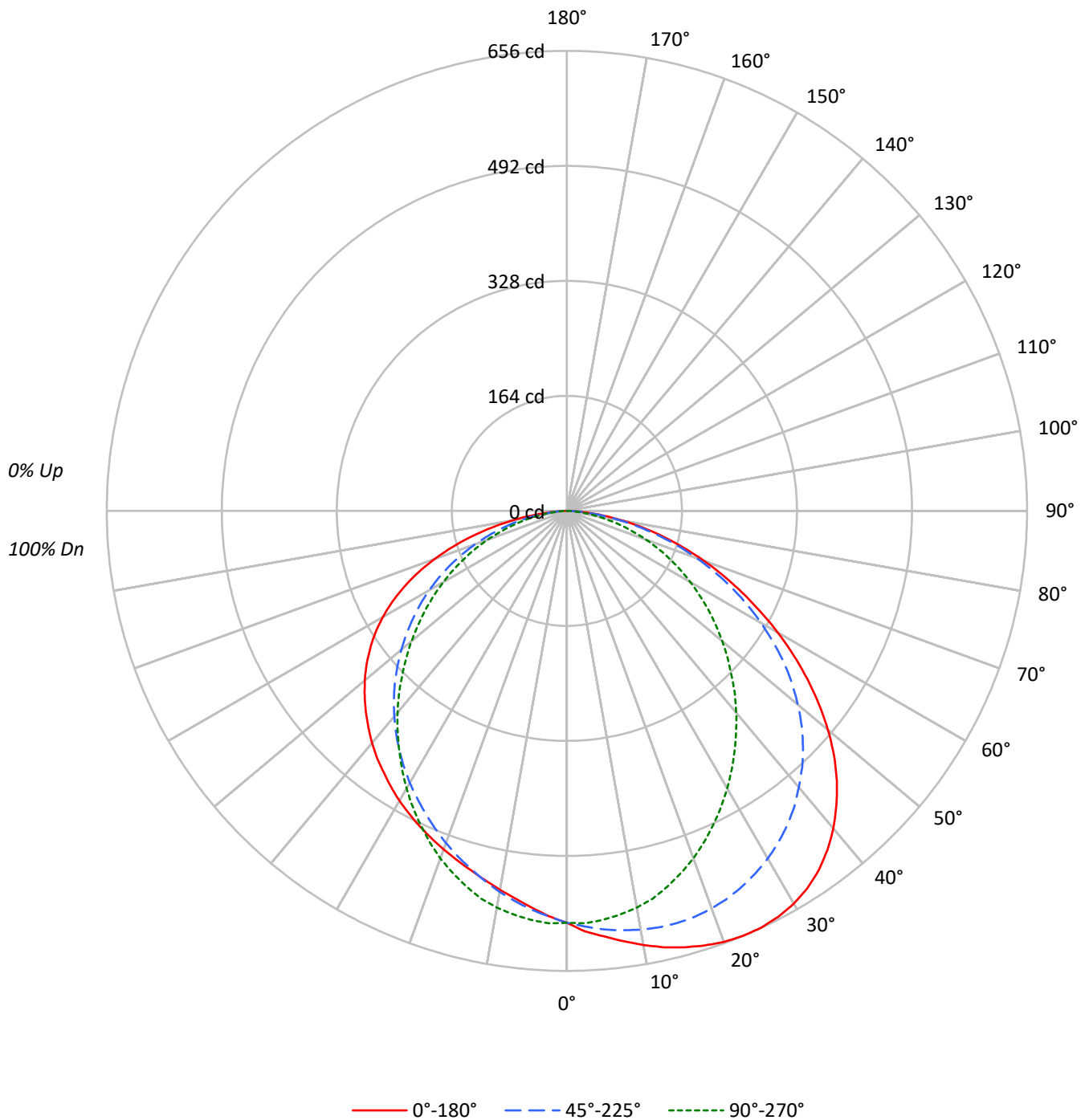
Lumens per Lamp: N/A
Luminaire Lumens: 1727.6 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	88		90
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	73	61	53	47	59	52	46		57	51	46		55
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	46	38	32	59	46	38	32	44	37	32		43	36	31		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	790	790	790
5°	823	791	767
10°	859	785	749
15°	897	772	739
20°	936	755	736
25°	973	733	737
30°	1005	710	742
35°	1028	685	748
40°	1038	660	759
45°	1036	632	771
50°	1017	605	787
55°	982	577	803
60°	934	548	816
65°	877	514	814
70°	817	474	790
75°	741	416	729
80°	637	342	614
85°	486	233	421

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	3.2
10°-20°	160.9	9.3
20°-30°	246.4	14.3
30°-40°	300.7	17.4
40°-50°	314.5	18.2
50°-60°	284.6	16.5
60°-70°	215.6	12.5
70°-80°	120.1	7.0
80°-90°	29.0	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°	463.0	26.8
0°-40°	763.7	44.2
0°-60°	1362.9	78.9
0°-90°	1727.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1727.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	587	587	587	587	587	
5°	609	599	585	571	568	59
15°	644	608	554	528	530	183
25°	656	591	494	476	496	302
35°	626	547	417	416	455	391
45°	544	476	332	347	405	419
55°	419	378	246	268	342	374
65°	276	259	162	184	256	273
75°	143	135	80	96	140	151
85°	32	28	15	20	27	38
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°	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3
2.5°	600.3	597.4	595.1	596.0	596.5	594.7	593.2	593.5	591.9	594.9	587.9
5°	609.1	606.6	603.9	604.9	603.9	601.2	599.0	598.3	594.2	595.9	588.8
7.5°	619.0	616.2	612.2	613.4	611.2	606.2	603.3	601.7	595.4	595.5	587.7
10°	628.5	626.1	620.7	621.4	617.5	610.8	606.3	604.0	595.1	593.8	585.8
12.5°	637.4	634.0	628.2	628.6	622.9	614.0	608.2	604.9	593.3	589.5	581.5
15°	644.2	641.0	634.0	633.9	626.4	614.9	608.3	603.7	589.1	583.1	574.7
17.5°	649.9	647.0	638.4	638.1	629.1	614.5	606.7	600.9	582.9	575.5	566.2
20°	654.0	651.1	641.5	640.6	629.8	612.6	603.2	595.9	574.8	566.0	555.7
22.5°	656.0	653.0	642.1	640.8	628.2	608.7	598.2	589.6	565.6	554.0	543.4
25°	655.6	652.8	640.4	639.2	625.3	603.0	591.1	581.3	553.9	540.3	529.8
27.5°	652.4	650.2	637.2	635.6	619.9	595.1	582.5	571.6	541.0	525.8	514.4
30°	646.9	645.2	631.5	629.9	613.2	586.5	572.5	560.0	527.0	509.9	498.3
32.5°	638.0	636.5	622.6	621.2	604.2	575.5	560.9	547.9	511.7	492.8	481.3
35°	625.8	624.9	611.4	609.9	592.7	562.9	547.4	533.1	495.8	474.5	463.4
37.5°	609.8	609.8	596.8	595.1	578.3	547.5	532.2	517.1	477.8	455.2	444.3
40°	591.1	592.8	579.6	577.9	561.6	530.9	514.3	498.3	458.4	434.9	424.3
42.5°	568.8	570.4	559.3	557.8	542.5	511.8	496.3	479.0	438.1	414.3	403.2
45°	544.2	546.2	536.3	535.2	520.9	490.9	476.0	458.4	416.9	392.7	381.9
47.5°	516.7	519.4	510.8	510.1	496.9	469.5	453.9	436.1	394.7	370.2	360.1
50°	485.9	489.7	482.7	482.7	470.9	443.5	430.0	412.2	371.6	347.1	337.1
52.5°	452.9	457.8	452.5	452.6	443.0	418.5	404.5	387.0	347.5	323.4	314.1
55°	418.7	423.5	420.2	420.7	413.1	390.8	378.1	360.7	322.9	299.4	290.6
57.5°	383.1	388.2	386.0	387.0	381.8	361.7	348.5	333.4	297.4	274.2	266.8
60°	347.2	352.1	351.0	352.4	349.0	331.7	319.6	304.0	271.9	249.6	243.0
62.5°	311.0	315.5	315.3	316.8	315.0	300.6	289.9	276.5	245.4	224.9	218.9
65°	275.6	279.5	279.2	280.9	280.5	268.9	259.2	247.0	219.0	200.1	194.9
67.5°	241.2	244.4	243.5	245.4	246.0	236.7	228.2	217.3	193.8	175.5	171.0
70°	207.6	209.8	208.6	209.9	211.0	204.1	196.9	187.3	167.0	150.8	147.1
72.5°	174.6	176.1	174.3	175.6	176.6	171.6	165.7	157.4	140.6	126.6	123.5
75°	142.6	144.8	141.1	142.4	143.1	138.1	134.7	127.9	113.4	102.6	100.5
77.5°	111.7	113.0	110.9	110.4	110.9	107.3	104.6	99.4	88.4	79.6	78.3
80°	82.2	82.9	80.9	80.4	80.7	78.2	76.1	72.3	64.6	57.9	57.4
82.5°	55.1	55.5	53.7	53.1	53.4	52.6	50.2	47.5	43.9	38.3	38.1
85°	31.5	31.5	30.2	29.7	29.9	28.6	27.7	26.3	24.9	21.1	21.3
87.5°	11.6	11.6	10.9	10.8	12.1	10.7	10.3	9.6	10.0	8.0	8.5
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°	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3	587.3
2.5°	589.9	588.6	587.4	583.4	585.1	581.0	580.7	579.2	578.1	575.9	578.7
5°	587.9	585.4	582.0	577.3	578.7	573.8	572.8	571.0	569.5	566.6	568.8
7.5°	584.9	580.6	575.4	569.3	571.2	565.2	563.7	561.7	560.5	557.1	559.1
10°	580.4	574.3	568.2	560.9	562.3	555.7	553.8	551.7	550.6	547.6	549.6
12.5°	573.4	566.1	557.8	549.8	551.4	545.2	542.6	540.4	540.1	537.6	539.9
15°	564.4	554.3	545.7	537.2	539.0	531.8	530.7	528.5	529.1	527.5	530.3
17.5°	553.0	541.3	532.0	522.9	524.7	518.6	517.7	516.7	517.3	517.1	520.2
20°	540.2	527.3	516.6	507.6	508.6	503.9	504.2	504.0	505.3	506.7	510.9
22.5°	525.7	511.2	499.9	490.6	492.2	488.1	489.9	490.4	492.6	495.8	501.2
25°	509.4	493.8	482.0	473.3	474.7	472.0	475.1	476.4	479.8	485.2	490.8
27.5°	492.3	475.9	463.3	454.9	457.6	454.9	459.6	462.1	467.4	473.3	480.1
30°	474.2	457.1	444.2	436.7	439.3	436.8	444.3	447.8	453.0	461.1	469.2
32.5°	455.2	437.2	424.5	418.7	420.5	420.2	428.5	432.4	439.4	448.7	457.3
35°	435.7	416.9	404.1	399.2	401.4	401.9	411.9	416.4	424.1	435.3	444.5
37.5°	415.5	396.4	383.8	379.8	381.8	383.7	395.4	399.9	408.6	420.8	430.9
40°	394.6	375.5	363.2	360.0	361.9	363.9	376.6	382.8	392.3	405.5	416.6
42.5°	373.4	354.3	342.4	340.1	342.0	346.0	359.4	365.2	375.2	389.9	402.1
45°	351.9	332.0	321.6	319.8	321.8	326.4	339.7	346.6	357.3	373.3	386.4
47.5°	330.0	310.7	300.8	299.6	301.7	306.8	321.4	327.7	339.0	356.1	370.2
50°	308.0	289.1	279.6	279.2	281.1	286.7	300.6	308.1	319.8	338.9	353.4
52.5°	285.6	267.5	258.9	258.9	260.7	266.4	280.5	288.2	300.3	320.4	336.5
55°	263.3	246.1	237.9	238.5	241.1	246.0	259.7	267.8	280.0	300.9	317.8
57.5°	241.0	224.6	217.2	218.1	220.5	225.4	238.9	248.0	259.1	280.7	298.1
60°	218.9	203.5	196.9	197.9	200.1	205.0	219.0	226.8	237.9	260.0	277.3
62.5°	196.5	182.5	176.4	177.7	179.6	184.5	197.7	205.3	216.2	237.9	255.3
65°	174.5	161.5	156.2	157.5	159.3	163.8	176.3	183.6	194.0	215.1	231.8
67.5°	152.6	140.8	136.5	137.7	139.2	143.4	153.7	161.6	171.4	191.5	207.3
70°	131.1	120.5	116.7	118.0	119.3	123.1	132.1	139.4	148.4	166.9	181.5
72.5°	109.8	99.5	97.6	98.7	99.7	103.1	111.7	117.5	125.3	141.7	154.3
75°	89.0	80.1	78.8	80.0	80.9	83.4	90.6	95.6	102.2	116.4	126.7
77.5°	68.9	61.5	61.0	61.9	62.8	64.6	70.2	75.5	80.6	91.1	100.3
80°	50.2	44.2	44.2	45.1	44.8	47.0	51.0	55.2	58.9	66.5	73.2
82.5°	33.1	28.4	29.0	29.7	30.0	30.9	33.4	36.6	38.9	43.5	47.9
85°	18.4	15.1	15.8	16.3	16.0	17.1	18.4	20.3	21.4	23.6	25.9
87.5°	6.8	5.6	5.8	6.2	6.4	6.9	6.9	8.1	8.2	8.5	9.0
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°	587.3	587.3	587.3
2.5°	573.3	576.4	578.7
5°	563.4	566.0	568.0
7.5°	553.8	556.1	557.9
10°	544.7	547.2	548.5
12.5°	535.3	538.3	539.3
15°	526.1	529.0	530.3
17.5°	516.6	520.4	521.8
20°	507.7	512.6	513.7
22.5°	498.7	503.7	505.1
25°	489.0	494.9	496.3
27.5°	478.6	485.6	487.0
30°	468.2	475.9	477.3
32.5°	457.0	465.3	466.6
35°	445.3	453.7	455.2
37.5°	432.4	441.5	444.5
40°	418.9	428.8	432.0
42.5°	404.8	415.5	418.9
45°	389.6	401.4	405.3
47.5°	374.3	387.7	391.0
50°	357.8	372.0	376.0
52.5°	340.4	356.0	360.0
55°	322.5	338.1	342.5
57.5°	303.0	319.1	323.8
60°	282.5	298.7	303.1
62.5°	261.6	276.3	280.5
65°	238.3	252.0	255.8
67.5°	213.5	226.1	229.3
70°	187.2	198.1	200.9
72.5°	159.7	167.3	171.0
75°	131.3	137.4	140.2
77.5°	102.8	107.1	109.4
80°	75.0	77.4	79.3
82.5°	49.0	50.1	51.5
85°	26.4	26.4	27.3
87.5°	9.0	8.6	9.0
90°	0.0	0.0	0.0

(END OF REPORT)