

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: P835156

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2LO-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835156
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-LD4-2LO-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

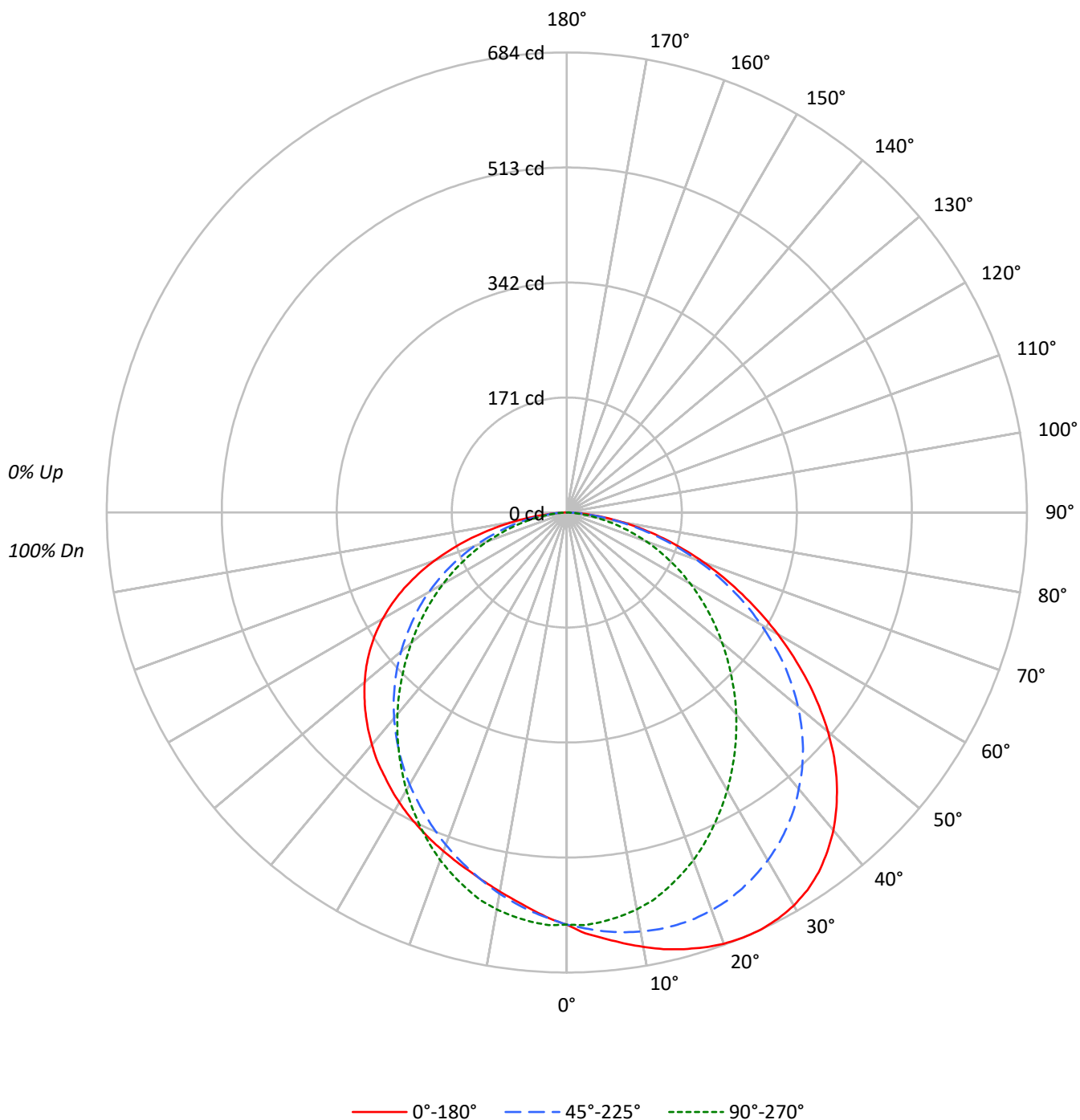
Lumens per Lamp: N/A
Luminaire Lumens: 1802.5 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	1649	1649	1649
5°	1717	1650	1601
10°	1792	1638	1564
15°	1872	1611	1541
20°	1954	1576	1535
25°	2031	1530	1537
30°	2097	1482	1547
35°	2145	1429	1560
40°	2167	1376	1583
45°	2161	1318	1609
50°	2123	1263	1642
55°	2050	1205	1677
60°	1950	1143	1702
65°	1831	1073	1699
70°	1704	990	1649
75°	1547	869	1521
80°	1328	714	1283
85°	1013	488	880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	3.2
10°-20°	167.8	9.3
20°-30°	257.1	14.3
30°-40°	313.8	17.4
40°-50°	328.1	18.2
50°-60°	297.0	16.5
60°-70°	224.9	12.5
70°-80°	125.4	7.0
80°-90°	30.2	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°	483.1	26.8
0°-40°	796.9	44.2
0°-60°	1422.0	78.9
0°-90°	1802.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1802.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	613	613	613	613	613	
5°	636	625	611	596	593	61
15°	672	635	578	551	553	191
25°	684	617	515	497	518	316
35°	653	571	435	434	475	408
45°	568	497	346	362	423	437
55°	437	394	257	279	357	390
65°	288	270	168	192	267	285
75°	149	140	84	100	146	158
85°	33	29	16	21	28	40
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°	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8
2.5°	626.3	623.4	621.0	621.9	622.4	620.6	618.9	619.2	617.6	620.7	613.5
5°	635.6	632.9	630.1	631.1	630.1	627.2	625.0	624.3	620.0	621.8	614.4
7.5°	645.9	642.9	638.8	640.0	637.7	632.5	629.5	627.8	621.2	621.4	613.2
10°	655.8	653.2	647.6	648.4	644.3	637.3	632.6	630.2	621.0	619.6	611.2
12.5°	665.0	661.5	655.5	655.9	649.9	640.6	634.6	631.1	619.1	615.1	606.8
15°	672.1	668.8	661.5	661.4	653.6	641.6	634.7	629.9	614.7	608.4	599.7
17.5°	678.1	675.1	666.1	665.8	656.4	641.2	633.0	627.0	608.2	600.5	590.8
20°	682.4	679.4	669.3	668.4	657.1	639.2	629.4	621.8	599.8	590.5	579.8
22.5°	684.4	681.4	670.0	668.6	655.5	635.2	624.2	615.2	590.1	578.1	567.0
25°	684.0	681.1	668.2	666.9	652.4	629.1	616.8	606.5	578.0	563.8	552.8
27.5°	680.7	678.4	664.9	663.1	646.8	621.0	607.8	596.4	564.4	548.6	536.7
30°	674.9	673.2	658.9	657.3	639.8	612.0	597.4	584.3	549.8	532.0	520.0
32.5°	665.7	664.1	649.6	648.1	630.5	600.5	585.2	571.7	533.9	514.2	502.1
35°	653.0	652.0	638.0	636.4	618.4	587.3	571.1	556.3	517.3	495.0	483.5
37.5°	636.2	636.2	622.7	621.0	603.4	571.3	555.3	539.5	498.5	475.0	463.6
40°	616.8	618.5	604.7	603.0	586.0	554.0	536.6	520.0	478.3	453.8	442.7
42.5°	593.5	595.1	583.6	582.0	566.0	534.0	517.8	499.7	457.1	432.2	420.7
45°	567.8	569.9	559.6	558.4	543.5	512.2	496.7	478.3	435.0	409.7	398.5
47.5°	539.1	541.9	533.0	532.3	518.5	489.8	473.6	455.0	411.9	386.3	375.7
50°	507.0	511.0	503.6	503.6	491.3	462.8	448.7	430.1	387.8	362.2	351.7
52.5°	472.5	477.6	472.1	472.3	462.2	436.6	422.1	403.8	362.6	337.4	327.8
55°	436.9	441.9	438.4	438.9	431.0	407.7	394.5	376.4	336.9	312.4	303.2
57.5°	399.7	405.0	402.8	403.8	398.3	377.4	363.7	347.8	310.3	286.1	278.3
60°	362.3	367.4	366.2	367.7	364.2	346.1	333.5	317.2	283.7	260.4	253.6
62.5°	324.5	329.2	329.0	330.6	328.7	313.7	302.4	288.5	256.1	234.7	228.4
65°	287.6	291.6	291.3	293.1	292.7	280.6	270.4	257.7	228.5	208.8	203.3
67.5°	251.7	255.0	254.1	256.1	256.6	247.0	238.1	226.8	202.3	183.1	178.4
70°	216.6	218.9	217.7	219.0	220.2	213.0	205.5	195.4	174.3	157.4	153.5
72.5°	182.2	183.8	181.9	183.2	184.3	179.1	172.9	164.2	146.7	132.1	128.9
75°	148.8	151.1	147.2	148.5	149.3	144.1	140.5	133.4	118.3	107.0	104.9
77.5°	116.5	117.9	115.7	115.2	115.7	112.0	109.2	103.7	92.3	83.0	81.7
80°	85.7	86.5	84.4	83.8	84.2	81.6	79.4	75.4	67.4	60.4	59.9
82.5°	57.5	57.9	56.0	55.5	55.7	54.9	52.4	49.6	45.8	39.9	39.8
85°	32.8	32.8	31.5	30.9	31.2	29.9	28.9	27.5	26.0	22.0	22.2
87.5°	12.1	12.1	11.4	11.3	12.6	11.1	10.7	10.0	10.4	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8	612.8
2.5°	615.5	614.1	612.9	608.8	610.5	606.2	606.0	604.3	603.1	600.9	603.8
5°	613.5	610.8	607.3	602.3	603.8	598.7	597.6	595.8	594.2	591.2	593.5
7.5°	610.2	605.8	600.3	594.0	596.0	589.7	588.1	586.1	584.8	581.3	583.3
10°	605.6	599.3	592.8	585.2	586.7	579.8	577.8	575.7	574.5	571.4	573.4
12.5°	598.3	590.7	582.0	573.7	575.3	568.9	566.2	563.9	563.5	560.9	563.4
15°	588.9	578.4	569.4	560.5	562.4	554.9	553.7	551.4	552.1	550.4	553.3
17.5°	577.0	564.8	555.1	545.5	547.4	541.1	540.2	539.1	539.8	539.5	542.7
20°	563.6	550.2	539.0	529.6	530.7	525.7	526.1	525.9	527.2	528.7	533.1
22.5°	548.5	533.4	521.6	511.9	513.5	509.2	511.1	511.7	513.9	517.3	522.9
25°	531.5	515.3	503.0	493.8	495.3	492.5	495.7	497.1	500.7	506.3	512.1
27.5°	513.7	496.5	483.4	474.7	477.5	474.7	479.5	482.2	487.7	493.8	500.9
30°	494.8	477.0	463.4	455.7	458.3	455.8	463.6	467.2	472.7	481.1	489.6
32.5°	475.0	456.2	442.9	436.9	438.8	438.4	447.1	451.1	458.5	468.1	477.1
35°	454.6	435.0	421.6	416.6	418.8	419.4	429.8	434.5	442.5	454.2	463.8
37.5°	433.6	413.6	400.5	396.3	398.3	400.4	412.5	417.2	426.3	439.1	449.6
40°	411.7	391.8	378.9	375.6	377.6	379.7	393.0	399.4	409.3	423.1	434.6
42.5°	389.6	369.7	357.2	354.8	356.8	361.0	375.0	381.1	391.5	406.8	419.5
45°	367.1	346.4	335.5	333.6	335.8	340.6	354.4	361.6	372.8	389.5	403.2
47.5°	344.4	324.1	313.8	312.6	314.8	320.1	335.4	342.0	353.7	371.6	386.3
50°	321.3	301.6	291.7	291.3	293.3	299.1	313.7	321.5	333.6	353.6	368.7
52.5°	298.0	279.1	270.2	270.2	272.0	277.9	292.7	300.7	313.3	334.3	351.1
55°	274.7	256.8	248.2	248.9	251.5	256.6	271.0	279.4	292.1	314.0	331.6
57.5°	251.4	234.4	226.6	227.6	230.1	235.2	249.3	258.8	270.3	292.9	311.0
60°	228.4	212.3	205.5	206.5	208.8	213.9	228.5	236.7	248.2	271.2	289.3
62.5°	205.1	190.5	184.0	185.4	187.4	192.5	206.3	214.2	225.6	248.2	266.4
65°	182.0	168.5	163.0	164.3	166.2	170.9	183.9	191.5	202.4	224.5	241.9
67.5°	159.3	146.9	142.4	143.7	145.2	149.6	160.3	168.6	178.8	199.8	216.3
70°	136.8	125.8	121.8	123.1	124.4	128.5	137.8	145.5	154.8	174.1	189.4
72.5°	114.5	103.8	101.8	103.0	104.1	107.6	116.5	122.6	130.7	147.9	161.0
75°	92.8	83.6	82.2	83.4	84.4	87.1	94.6	99.8	106.6	121.5	132.2
77.5°	71.9	64.2	63.6	64.6	65.5	67.4	73.3	78.8	84.1	95.1	104.6
80°	52.4	46.1	46.1	47.0	46.7	49.0	53.2	57.6	61.5	69.4	76.3
82.5°	34.6	29.6	30.3	30.9	31.3	32.3	34.8	38.2	40.6	45.4	50.0
85°	19.2	15.8	16.5	17.0	16.7	17.8	19.2	21.2	22.4	24.6	27.1
87.5°	7.1	5.9	6.0	6.4	6.7	7.2	7.2	8.4	8.6	8.8	9.4
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°	612.8	612.8	612.8
2.5°	598.2	601.4	603.8
5°	587.9	590.5	592.7
7.5°	577.8	580.2	582.1
10°	568.3	571.0	572.3
12.5°	558.5	561.6	562.7
15°	548.9	552.0	553.3
17.5°	539.0	543.0	544.5
20°	529.7	534.8	536.0
22.5°	520.4	525.6	527.1
25°	510.2	516.3	517.8
27.5°	499.3	506.7	508.2
30°	488.5	496.5	498.0
32.5°	476.8	485.5	486.9
35°	464.6	473.3	475.0
37.5°	451.1	460.6	463.8
40°	437.1	447.4	450.7
42.5°	422.3	433.6	437.1
45°	406.5	418.8	422.9
47.5°	390.6	404.5	408.0
50°	373.3	388.2	392.3
52.5°	355.2	371.4	375.6
55°	336.5	352.8	357.4
57.5°	316.1	333.0	337.8
60°	294.8	311.7	316.2
62.5°	273.0	288.2	292.7
65°	248.6	262.9	266.9
67.5°	222.7	235.9	239.2
70°	195.3	206.7	209.6
72.5°	166.6	174.5	178.4
75°	137.0	143.3	146.3
77.5°	107.3	111.7	114.1
80°	78.2	80.8	82.8
82.5°	51.2	52.2	53.7
85°	27.6	27.6	28.5
87.5°	9.4	9.0	9.4
90°	0.0	0.0	0.0

(END OF REPORT)