

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: P835172

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835172
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-LD4-1STD-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

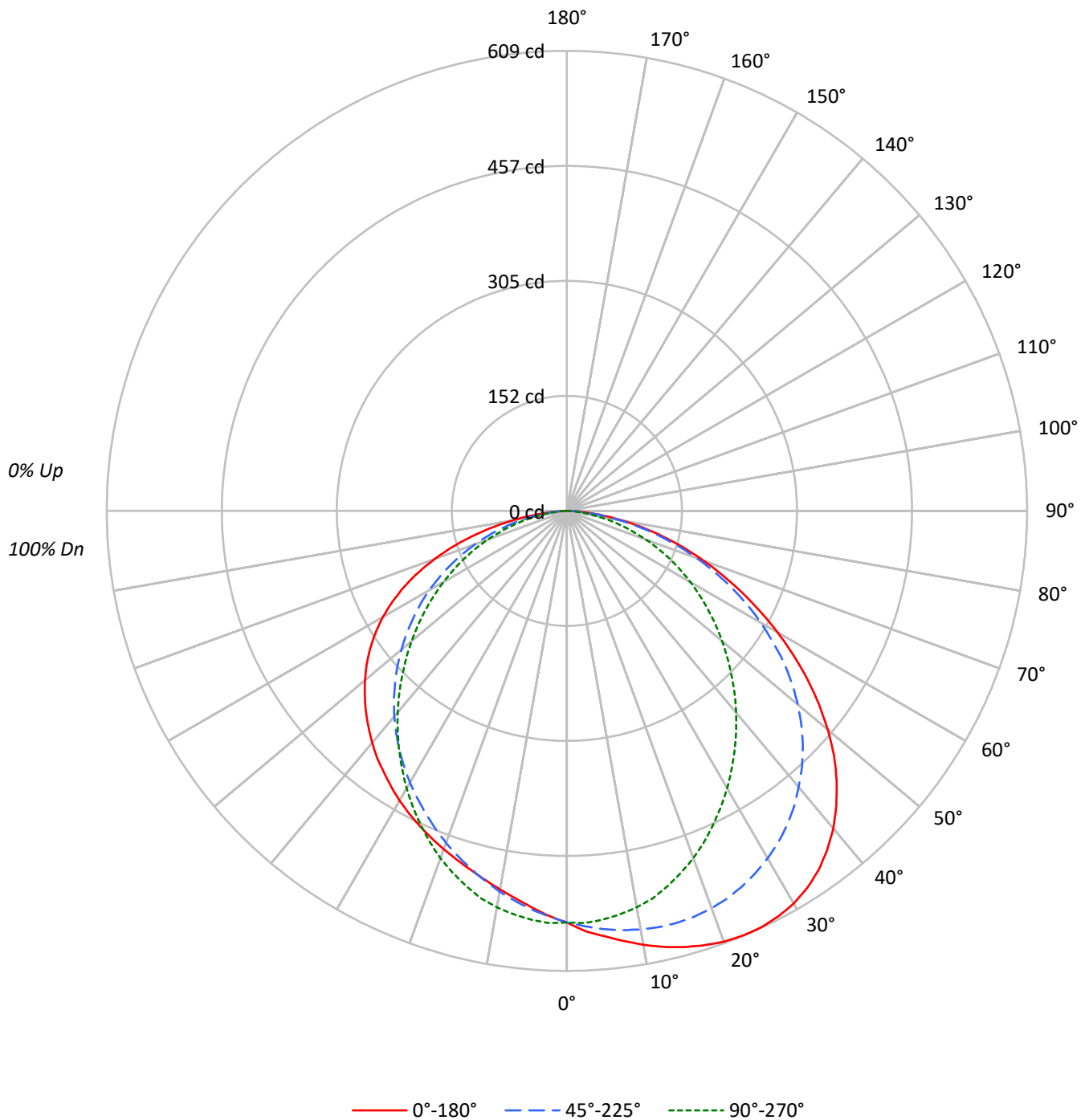
Lumens per Lamp: N/A
Luminaire Lumens: 1602.8 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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°	1466	1466	1466
5°	1526	1467	1424
10°	1593	1456	1391
15°	1665	1433	1371
20°	1738	1401	1365
25°	1806	1360	1367
30°	1865	1318	1376
35°	1907	1271	1387
40°	1927	1224	1408
45°	1921	1172	1431
50°	1887	1123	1460
55°	1823	1071	1491
60°	1734	1016	1513
65°	1628	954	1512
70°	1515	880	1467
75°	1376	773	1353
80°	1181	635	1141
85°	902	435	784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.7	3.2
10°-20°	149.2	9.3
20°-30°	228.6	14.3
30°-40°	279.0	17.4
40°-50°	291.8	18.2
50°-60°	264.1	16.5
60°-70°	200.0	12.5
70°-80°	111.5	7.0
80°-90°	26.9	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°	429.6	26.8
0°-40°	708.6	44.2
0°-60°	1264.5	78.9
0°-90°	1602.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1602.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	545	545	545	545	545	
5°	565	556	543	530	527	54
15°	598	564	514	490	492	169
25°	608	548	458	442	460	281
35°	581	508	387	386	422	363
45°	505	442	308	322	376	388
55°	388	351	228	248	318	347
65°	256	240	150	170	237	254
75°	132	125	74	89	130	140
85°	29	26	14	19	25	35
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°	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9
2.5°	556.9	554.3	552.2	553.0	553.5	551.8	550.4	550.6	549.2	551.9	545.5
5°	565.1	562.8	560.3	561.2	560.3	557.8	555.7	555.1	551.3	552.9	546.3
7.5°	574.3	571.7	568.0	569.1	567.0	562.4	559.8	558.2	552.4	552.5	545.2
10°	583.1	580.9	575.9	576.6	572.9	566.7	562.5	560.4	552.2	551.0	543.5
12.5°	591.3	588.2	582.9	583.2	577.9	569.7	564.3	561.2	550.5	546.9	539.5
15°	597.7	594.7	588.2	588.1	581.2	570.5	564.4	560.1	546.6	541.0	533.2
17.5°	603.0	600.3	592.3	592.1	583.7	570.1	562.9	557.5	540.8	533.9	525.4
20°	606.8	604.1	595.1	594.3	584.3	568.4	559.7	552.9	533.3	525.1	515.6
22.5°	608.6	605.9	595.7	594.6	582.9	564.8	555.0	547.0	524.8	514.0	504.2
25°	608.3	605.6	594.2	593.0	580.1	559.4	548.5	539.3	513.9	501.3	491.5
27.5°	605.3	603.2	591.2	589.7	575.1	552.2	540.5	530.4	501.9	487.8	477.2
30°	600.2	598.6	585.9	584.4	568.9	544.2	531.2	519.5	488.9	473.1	462.4
32.5°	591.9	590.5	577.6	576.3	560.6	533.9	520.4	508.3	474.7	457.2	446.5
35°	580.6	579.8	567.3	565.9	549.9	522.3	507.8	494.6	460.0	440.2	430.0
37.5°	565.7	565.7	553.7	552.2	536.6	508.0	493.8	479.7	443.3	422.3	412.2
40°	548.5	550.0	537.7	536.2	521.1	492.6	477.1	462.4	425.3	403.5	393.6
42.5°	527.7	529.2	518.9	517.5	503.3	474.9	460.4	444.4	406.5	384.3	374.1
45°	504.9	506.8	497.6	496.5	483.3	455.4	441.6	425.3	386.8	364.3	354.3
47.5°	479.4	481.9	473.9	473.3	461.0	435.6	421.1	404.6	366.2	343.5	334.1
50°	450.8	454.4	447.8	447.8	436.9	411.5	399.0	382.4	344.8	322.1	312.8
52.5°	420.2	424.7	419.8	420.0	411.0	388.3	375.3	359.1	322.4	300.0	291.4
55°	388.5	392.9	389.8	390.3	383.3	362.5	350.8	334.7	299.5	277.7	269.6
57.5°	355.4	360.2	358.1	359.1	354.2	335.6	323.4	309.3	276.0	254.4	247.5
60°	322.2	326.7	325.6	326.9	323.8	307.8	296.6	282.0	252.3	231.5	225.5
62.5°	288.6	292.8	292.5	293.9	292.3	278.9	268.9	256.5	227.7	208.7	203.1
65°	255.7	259.3	259.0	260.6	260.2	249.5	240.5	229.2	203.2	185.7	180.8
67.5°	223.8	226.8	225.9	227.7	228.2	219.6	211.8	201.6	179.8	162.8	158.6
70°	192.6	194.6	193.5	194.7	195.8	189.4	182.7	173.8	155.0	139.9	136.5
72.5°	162.0	163.4	161.7	162.9	163.9	159.2	153.8	146.0	130.4	117.4	114.6
75°	132.3	134.3	130.9	132.1	132.8	128.2	124.9	118.6	105.2	95.2	93.3
77.5°	103.6	104.8	102.9	102.4	102.9	99.6	97.1	92.2	82.1	73.8	72.7
80°	76.2	76.9	75.0	74.6	74.9	72.5	70.6	67.1	59.9	53.7	53.2
82.5°	51.1	51.5	49.8	49.3	49.5	48.8	46.6	44.1	40.7	35.5	35.4
85°	29.2	29.2	28.0	27.5	27.8	26.6	25.7	24.4	23.1	19.5	19.8
87.5°	10.7	10.7	10.1	10.0	11.2	9.9	9.5	8.9	9.3	7.4	7.9
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°	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9	544.9
2.5°	547.3	546.1	545.0	541.3	542.9	539.1	538.8	537.4	536.3	534.3	536.9
5°	545.5	543.1	540.0	535.6	536.9	532.4	531.4	529.8	528.3	525.7	527.7
7.5°	542.6	538.7	533.8	528.2	530.0	524.4	523.0	521.2	520.0	516.9	518.7
10°	538.5	532.9	527.1	520.4	521.7	515.6	513.8	511.9	510.8	508.1	509.9
12.5°	532.0	525.2	517.5	510.1	511.5	505.8	503.4	501.4	501.1	498.8	500.9
15°	523.7	514.3	506.3	498.4	500.1	493.4	492.4	490.3	490.9	489.4	492.0
17.5°	513.1	502.3	493.6	485.1	486.8	481.2	480.3	479.4	480.0	479.7	482.6
20°	501.2	489.3	479.3	470.9	471.9	467.5	467.8	467.6	468.8	470.1	474.0
22.5°	487.7	474.3	463.8	455.2	456.6	452.8	454.5	455.0	457.0	460.0	465.0
25°	472.6	458.2	447.2	439.1	440.4	437.9	440.8	442.0	445.2	450.2	455.3
27.5°	456.8	441.5	429.8	422.1	424.6	422.1	426.4	428.8	433.6	439.1	445.4
30°	440.0	424.1	412.1	405.2	407.6	405.3	412.2	415.4	420.3	427.8	435.3
32.5°	422.3	405.7	393.9	388.5	390.2	389.8	397.6	401.1	407.7	416.3	424.2
35°	404.2	386.8	374.9	370.4	372.4	372.9	382.2	386.4	393.5	403.9	412.4
37.5°	385.5	367.8	356.1	352.4	354.2	356.0	366.8	371.0	379.1	390.4	399.8
40°	366.1	348.4	336.9	334.0	335.7	337.7	349.4	355.2	364.0	376.2	386.5
42.5°	346.5	328.7	317.6	315.5	317.3	321.0	333.5	338.8	348.1	361.7	373.0
45°	326.5	308.0	298.3	296.7	298.6	302.9	315.1	321.6	331.5	346.3	358.5
47.5°	306.2	288.2	279.1	278.0	279.9	284.7	298.2	304.1	314.5	330.4	343.5
50°	285.7	268.2	259.4	259.0	260.8	266.0	278.9	285.8	296.7	314.4	327.9
52.5°	265.0	248.2	240.2	240.2	241.9	247.1	260.2	267.4	278.6	297.3	312.2
55°	244.3	228.3	220.7	221.3	223.7	228.2	240.9	248.4	259.8	279.2	294.9
57.5°	223.6	208.4	201.5	202.4	204.6	209.1	221.6	230.1	240.3	260.5	276.6
60°	203.1	188.8	182.7	183.7	185.7	190.2	203.2	210.5	220.7	241.2	257.3
62.5°	182.3	169.4	163.6	164.8	166.6	171.1	183.4	190.4	200.6	220.7	236.9
65°	161.9	149.8	144.9	146.1	147.8	152.0	163.5	170.3	180.0	199.6	215.1
67.5°	141.6	130.7	126.6	127.8	129.1	133.0	142.6	149.9	159.0	177.7	192.3
70°	121.6	111.8	108.3	109.5	110.6	114.2	122.6	129.3	137.7	154.8	168.4
72.5°	101.8	92.3	90.5	91.6	92.5	95.6	103.6	109.0	116.2	131.5	143.2
75°	82.5	74.3	73.1	74.2	75.0	77.4	84.1	88.7	94.8	108.0	117.6
77.5°	64.0	57.0	56.6	57.4	58.2	59.9	65.1	70.0	74.8	84.6	93.0
80°	46.6	41.0	41.0	41.8	41.6	43.6	47.3	51.2	54.7	61.7	67.9
82.5°	30.7	26.3	26.9	27.5	27.9	28.7	31.0	33.9	36.1	40.4	44.4
85°	17.0	14.1	14.6	15.1	14.9	15.8	17.0	18.8	19.9	21.9	24.1
87.5°	6.3	5.2	5.4	5.7	6.0	6.4	6.4	7.5	7.6	7.9	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):

	160°	170°	180°
0°	544.9	544.9	544.9
2.5°	531.9	534.8	536.9
5°	522.7	525.1	527.0
7.5°	513.8	515.9	517.6
10°	505.3	507.7	508.9
12.5°	496.7	499.4	500.3
15°	488.1	490.8	492.0
17.5°	479.3	482.8	484.1
20°	471.0	475.6	476.6
22.5°	462.7	467.4	468.7
25°	453.7	459.1	460.4
27.5°	444.0	450.6	451.9
30°	434.4	441.5	442.8
32.5°	424.0	431.7	432.9
35°	413.2	420.9	422.3
37.5°	401.1	409.6	412.4
40°	388.6	397.8	400.8
42.5°	375.5	385.5	388.6
45°	361.5	372.4	376.0
47.5°	347.3	359.7	362.8
50°	331.9	345.2	348.8
52.5°	315.9	330.3	334.0
55°	299.2	313.7	317.8
57.5°	281.1	296.1	300.4
60°	262.1	277.1	281.2
62.5°	242.7	256.3	260.2
65°	221.1	233.8	237.4
67.5°	198.1	209.7	212.7
70°	173.6	183.8	186.4
72.5°	148.2	155.2	158.6
75°	121.8	127.4	130.1
77.5°	95.4	99.3	101.5
80°	69.6	71.8	73.6
82.5°	45.5	46.4	47.8
85°	24.5	24.5	25.4
87.5°	8.3	8.0	8.3
90°	0.0	0.0	0.0

(END OF REPORT)