

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: P835173

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835173
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
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

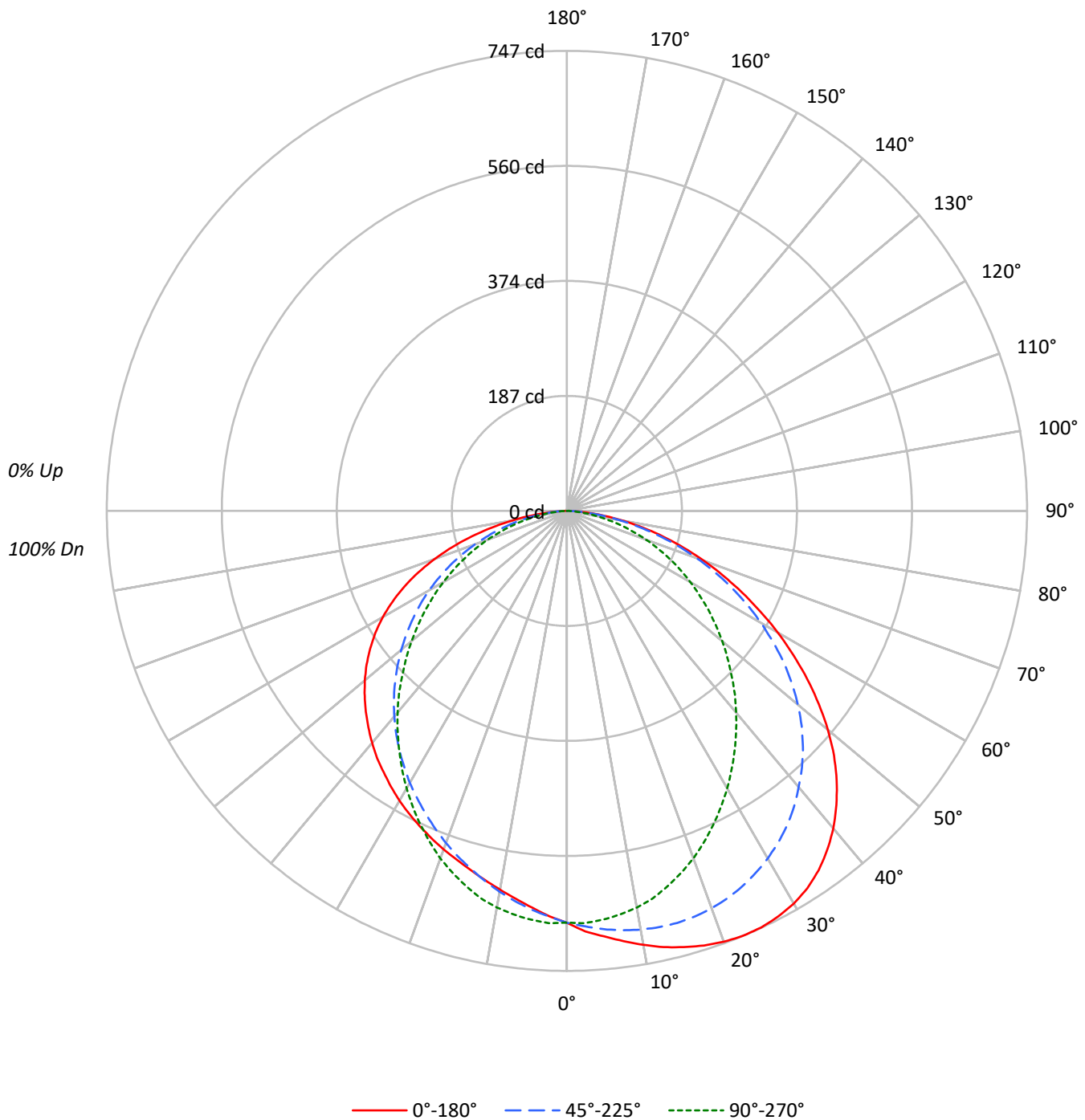
Lumens per Lamp: N/A
Luminaire Lumens: 1966.8 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1799	1799	1799
5°	1873	1800	1747
10°	1955	1787	1706
15°	2043	1758	1682
20°	2132	1719	1675
25°	2216	1669	1678
30°	2288	1617	1688
35°	2341	1559	1702
40°	2364	1502	1728
45°	2358	1438	1756
50°	2316	1378	1792
55°	2236	1315	1829
60°	2127	1246	1857
65°	1998	1171	1855
70°	1859	1079	1799
75°	1688	948	1659
80°	1449	779	1399
85°	1105	531	960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	3.2
10°-20°	183.1	9.3
20°-30°	280.6	14.3
30°-40°	342.4	17.4
40°-50°	358.1	18.2
50°-60°	324.1	16.5
60°-70°	245.4	12.5
70°-80°	136.8	7.0
80°-90°	33.0	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°	527.1	26.8
0°-40°	869.5	44.2
0°-60°	1551.6	78.9
0°-90°	1966.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1966.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	669	669	669	669	669	
5°	694	682	666	650	647	67
15°	733	693	631	602	604	208
25°	746	673	562	542	565	344
35°	712	623	475	474	518	445
45°	620	542	378	395	461	477
55°	477	430	280	305	390	425
65°	314	295	184	209	291	311
75°	162	153	91	109	160	172
85°	36	32	17	23	31	43
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°	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6
2.5°	683.4	680.2	677.5	678.6	679.1	677.1	675.3	675.6	673.9	677.2	669.4
5°	693.5	690.5	687.5	688.6	687.5	684.4	681.9	681.2	676.5	678.4	670.4
7.5°	704.7	701.5	697.0	698.3	695.8	690.1	686.9	685.0	677.8	678.0	669.1
10°	715.5	712.8	706.6	707.5	703.0	695.4	690.3	687.6	677.5	676.1	666.9
12.5°	725.6	721.8	715.2	715.7	709.1	699.0	692.4	688.6	675.5	671.1	662.0
15°	733.4	729.7	721.8	721.7	713.2	700.0	692.6	687.3	670.7	663.8	654.3
17.5°	739.9	736.6	726.8	726.5	716.3	699.6	690.7	684.1	663.7	655.2	644.7
20°	744.6	741.3	730.3	729.3	717.0	697.4	686.7	678.4	654.4	644.4	632.7
22.5°	746.8	743.5	731.0	729.6	715.2	693.0	681.0	671.3	643.9	630.8	618.6
25°	746.4	743.2	729.1	727.7	711.9	686.5	673.0	661.8	630.6	615.1	603.2
27.5°	742.7	740.2	725.5	723.6	705.7	677.5	663.2	650.8	615.9	598.6	585.6
30°	736.4	734.5	718.9	717.1	698.1	667.7	651.8	637.5	599.9	580.5	567.3
32.5°	726.4	724.6	708.8	707.2	687.9	655.2	638.5	623.8	582.5	561.1	547.9
35°	712.5	711.4	696.1	694.3	674.8	640.9	623.2	607.0	564.4	540.2	527.6
37.5°	694.2	694.2	679.4	677.5	658.4	623.3	605.9	588.7	544.0	518.2	505.8
40°	673.0	674.9	659.9	658.0	639.4	604.5	585.5	567.3	521.9	495.1	483.0
42.5°	647.6	649.3	636.8	635.0	617.6	582.7	565.0	545.3	498.8	471.6	459.0
45°	619.5	621.9	610.6	609.3	593.1	558.9	541.9	521.9	474.7	447.1	434.8
47.5°	588.2	591.3	581.5	580.8	565.7	534.5	516.8	496.5	449.4	421.5	409.9
50°	553.2	557.6	549.5	549.5	536.1	504.9	489.6	469.3	423.1	395.2	383.8
52.5°	515.6	521.2	515.2	515.3	504.4	476.4	460.5	440.6	395.6	368.1	357.6
55°	476.7	482.1	478.3	478.9	470.3	444.9	430.4	410.7	367.6	340.8	330.9
57.5°	436.1	441.9	439.5	440.6	434.6	411.8	396.8	379.5	338.6	312.2	303.7
60°	395.3	400.9	399.6	401.2	397.4	377.6	363.9	346.1	309.5	284.1	276.7
62.5°	354.1	359.2	358.9	360.7	358.6	342.3	330.0	314.8	279.4	256.1	249.2
65°	313.8	318.2	317.9	319.8	319.3	306.2	295.1	281.2	249.3	227.8	221.9
67.5°	274.6	278.3	277.2	279.4	280.0	269.5	259.9	247.4	220.7	199.8	194.7
70°	236.3	238.8	237.5	239.0	240.3	232.4	224.2	213.2	190.1	171.7	167.5
72.5°	198.8	200.5	198.5	199.9	201.1	195.4	188.7	179.2	160.0	144.1	140.6
75°	162.4	164.9	160.6	162.1	163.0	157.3	153.3	145.6	129.0	116.8	114.4
77.5°	127.1	128.6	126.3	125.7	126.3	122.2	119.1	113.1	100.7	90.6	89.1
80°	93.5	94.4	92.1	91.5	91.9	89.0	86.7	82.3	73.5	65.9	65.3
82.5°	62.7	63.1	61.1	60.5	60.8	59.9	57.1	54.1	50.0	43.6	43.4
85°	35.8	35.8	34.3	33.8	34.1	32.6	31.6	30.0	28.4	24.0	24.3
87.5°	13.2	13.2	12.4	12.3	13.7	12.1	11.7	11.0	11.4	9.1	9.6
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6	668.6
2.5°	671.5	670.1	668.8	664.2	666.1	661.5	661.2	659.4	658.1	655.6	658.8
5°	669.4	666.4	662.6	657.2	658.8	653.3	652.1	650.1	648.3	645.1	647.6
7.5°	665.8	661.0	655.0	648.2	650.4	643.5	641.7	639.5	638.1	634.3	636.5
10°	660.7	653.9	646.8	638.5	640.1	632.7	630.5	628.1	626.8	623.5	625.7
12.5°	652.8	644.5	635.0	625.9	627.7	620.7	617.8	615.3	614.8	612.1	614.7
15°	642.6	631.1	621.3	611.6	613.7	605.5	604.2	601.7	602.4	600.5	603.7
17.5°	629.6	616.3	605.6	595.3	597.3	590.4	589.4	588.2	589.0	588.7	592.2
20°	615.0	600.4	588.1	577.9	579.0	573.6	574.1	573.8	575.2	576.8	581.7
22.5°	598.5	582.0	569.1	558.6	560.3	555.7	557.7	558.3	560.8	564.4	570.6
25°	579.9	562.2	548.8	538.8	540.5	537.4	540.9	542.4	546.3	552.4	558.7
27.5°	560.5	541.8	527.4	517.9	521.0	517.9	523.2	526.1	532.1	538.8	546.6
30°	539.9	520.4	505.7	497.2	500.1	497.3	505.8	509.8	515.8	525.0	534.2
32.5°	518.2	497.8	483.3	476.7	478.8	478.3	487.8	492.2	500.3	510.8	520.6
35°	496.0	474.7	460.1	454.5	457.0	457.6	469.0	474.1	482.9	495.6	506.1
37.5°	473.1	451.3	437.0	432.5	434.6	436.8	450.1	455.2	465.2	479.1	490.6
40°	449.3	427.5	413.5	409.8	412.0	414.3	428.8	435.8	446.6	461.7	474.2
42.5°	425.1	403.4	389.8	387.1	389.3	393.9	409.2	415.8	427.2	443.8	457.7
45°	400.6	377.9	366.1	364.1	366.4	371.7	386.7	394.6	406.7	425.0	439.9
47.5°	375.7	353.7	342.4	341.1	343.4	349.3	366.0	373.1	386.0	405.4	421.5
50°	350.6	329.1	318.3	317.9	320.1	326.3	342.3	350.8	364.1	385.8	402.3
52.5°	325.2	304.6	294.8	294.8	296.8	303.3	319.3	328.1	341.8	364.8	383.1
55°	299.7	280.2	270.8	271.5	274.5	280.0	295.7	304.9	318.7	342.6	361.9
57.5°	274.3	255.8	247.3	248.3	251.1	256.6	272.0	282.4	294.9	319.6	339.4
60°	249.2	231.6	224.2	225.4	227.8	233.4	249.3	258.2	270.8	295.9	315.7
62.5°	223.8	207.8	200.8	202.3	204.5	210.0	225.1	233.7	246.1	270.8	290.7
65°	198.6	183.9	177.9	179.3	181.4	186.5	200.7	209.0	220.8	244.9	263.9
67.5°	173.8	160.3	155.4	156.8	158.4	163.2	174.9	184.0	195.1	218.1	236.0
70°	149.2	137.2	132.8	134.3	135.8	140.2	150.4	158.7	168.9	190.0	206.7
72.5°	125.0	113.3	111.1	112.4	113.6	117.4	127.1	133.7	142.6	161.3	175.7
75°	101.3	91.2	89.7	91.0	92.1	95.0	103.2	108.9	116.3	132.6	144.2
77.5°	78.5	70.0	69.4	70.4	71.5	73.5	79.9	85.9	91.8	103.8	114.1
80°	57.1	50.3	50.3	51.3	51.0	53.5	58.0	62.8	67.1	75.7	83.3
82.5°	37.7	32.3	33.0	33.8	34.2	35.2	38.0	41.7	44.3	49.5	54.5
85°	20.9	17.2	18.0	18.6	18.3	19.4	20.9	23.1	24.4	26.9	29.5
87.5°	7.7	6.4	6.6	7.0	7.3	7.9	7.9	9.2	9.4	9.6	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	668.6	668.6	668.6
2.5°	652.7	656.2	658.8
5°	641.4	644.4	646.7
7.5°	630.5	633.1	635.2
10°	620.1	623.0	624.5
12.5°	609.4	612.8	614.0
15°	598.9	602.3	603.7
17.5°	588.1	592.5	594.1
20°	578.0	583.6	584.9
22.5°	567.8	573.5	575.1
25°	556.7	563.4	565.0
27.5°	544.8	552.9	554.5
30°	533.0	541.8	543.4
32.5°	520.3	529.8	531.2
35°	507.0	516.5	518.2
37.5°	492.2	502.6	506.1
40°	476.9	488.1	491.8
42.5°	460.8	473.1	476.9
45°	443.6	457.0	461.4
47.5°	426.2	441.4	445.2
50°	407.3	423.5	428.1
52.5°	387.6	405.3	409.8
55°	367.1	385.0	389.9
57.5°	344.9	363.3	368.6
60°	321.7	340.1	345.1
62.5°	297.8	314.5	319.3
65°	271.2	286.9	291.3
67.5°	243.0	257.4	261.0
70°	213.1	225.5	228.7
72.5°	181.8	190.4	194.7
75°	149.5	156.4	159.6
77.5°	117.1	121.9	124.5
80°	85.4	88.1	90.3
82.5°	55.8	57.0	58.6
85°	30.1	30.1	31.1
87.5°	10.2	9.8	10.2
90°	0.0	0.0	0.0

(END OF REPORT)