

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: P835316

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835316
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

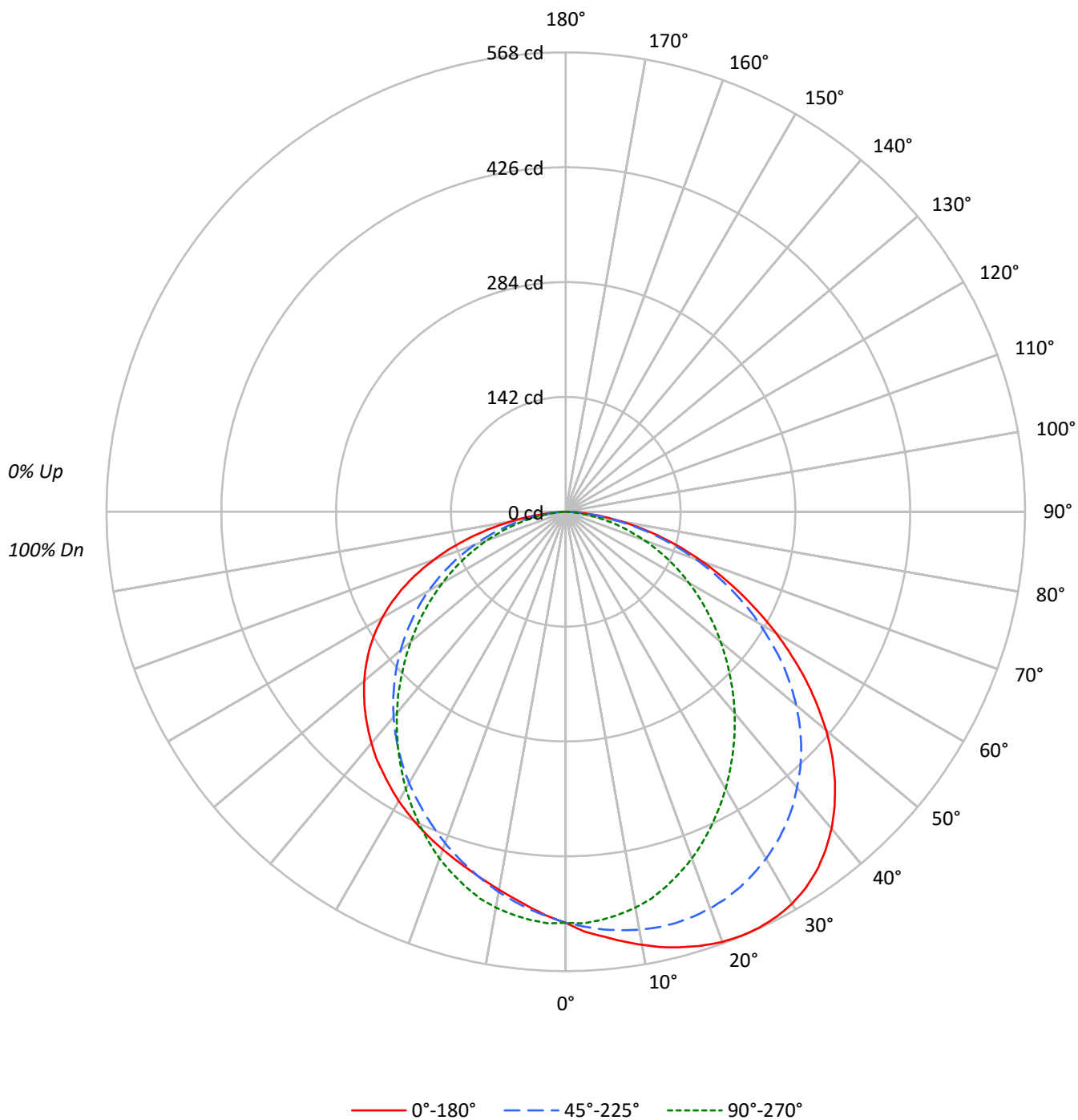
Lumens per Lamp: N/A
Luminaire Lumens: 1494.8 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	1368	1368	1368
5°	1424	1368	1328
10°	1486	1358	1297
15°	1553	1336	1278
20°	1621	1307	1273
25°	1684	1269	1275
30°	1739	1229	1283
35°	1779	1185	1294
40°	1797	1141	1313
45°	1792	1093	1335
50°	1760	1047	1362
55°	1700	999	1390
60°	1617	947	1411
65°	1519	890	1410
70°	1413	821	1367
75°	1283	721	1261
80°	1102	592	1063
85°	840	404	732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	3.2
10°-20°	139.2	9.3
20°-30°	213.2	14.3
30°-40°	260.2	17.4
40°-50°	272.1	18.2
50°-60°	246.3	16.5
60°-70°	186.5	12.5
70°-80°	103.9	7.0
80°-90°	25.1	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°	400.6	26.8
0°-40°	660.8	44.2
0°-60°	1179.2	78.9
0°-90°	1494.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1494.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	508	508	508	508	508	
5°	527	518	506	494	492	51
15°	557	526	480	457	459	158
25°	567	512	427	412	429	262
35°	542	474	361	360	394	338
45°	471	412	287	300	351	362
55°	362	327	213	232	296	323
65°	238	224	140	159	221	237
75°	123	116	69	83	121	131
85°	27	24	13	18	24	33
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°	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2
2.5°	519.4	516.9	514.9	515.7	516.2	514.6	513.3	513.5	512.2	514.7	508.7
5°	527.0	524.8	522.5	523.4	522.5	520.2	518.3	517.7	514.2	515.6	509.5
7.5°	535.6	533.1	529.7	530.7	528.8	524.5	522.0	520.6	515.2	515.3	508.5
10°	543.8	541.7	537.0	537.7	534.3	528.5	524.6	522.6	514.9	513.8	506.8
12.5°	551.5	548.6	543.6	543.9	538.9	531.3	526.3	523.4	513.4	510.0	503.2
15°	557.4	554.6	548.6	548.5	542.0	532.0	526.4	522.4	509.7	504.5	497.3
17.5°	562.4	559.8	552.4	552.1	544.4	531.7	524.9	519.9	504.4	497.9	489.9
20°	565.9	563.4	555.0	554.2	544.9	530.0	521.9	515.6	497.4	489.7	480.8
22.5°	567.6	565.0	555.6	554.5	543.6	526.7	517.6	510.2	489.4	479.4	470.2
25°	567.2	564.8	554.1	553.0	541.0	521.7	511.5	502.9	479.3	467.5	458.4
27.5°	564.5	562.6	551.4	549.9	536.4	514.9	504.0	494.6	468.1	455.0	445.1
30°	559.7	558.2	546.4	545.0	530.6	507.5	495.4	484.5	456.0	441.2	431.2
32.5°	552.0	550.7	538.7	537.5	522.8	497.9	485.3	474.1	442.7	426.4	416.4
35°	541.5	540.7	529.0	527.7	512.8	487.1	473.6	461.3	429.0	410.5	401.0
37.5°	527.6	527.6	516.4	514.9	500.4	473.7	460.5	447.4	413.4	393.9	384.4
40°	511.5	512.9	501.5	500.0	485.9	459.4	445.0	431.2	396.6	376.3	367.1
42.5°	492.2	493.5	483.9	482.6	469.4	442.8	429.4	414.4	379.1	358.4	348.9
45°	470.8	472.6	464.1	463.1	450.7	424.7	411.9	396.6	360.8	339.8	330.4
47.5°	447.1	449.4	442.0	441.4	430.0	406.2	392.8	377.3	341.5	320.3	311.6
50°	420.4	423.7	417.6	417.6	407.4	383.8	372.1	356.7	321.6	300.3	291.7
52.5°	391.9	396.1	391.5	391.6	383.3	362.1	350.0	334.9	300.7	279.8	271.8
55°	362.3	366.4	363.5	364.0	357.4	338.1	327.1	312.1	279.3	259.0	251.5
57.5°	331.4	335.9	334.0	334.9	330.3	313.0	301.6	288.5	257.4	237.3	230.8
60°	300.5	304.7	303.7	304.9	302.0	287.0	276.6	263.0	235.3	215.9	210.3
62.5°	269.1	273.0	272.8	274.1	272.6	260.1	250.8	239.2	212.4	194.6	189.4
65°	238.5	241.8	241.6	243.0	242.7	232.7	224.3	213.7	189.5	173.2	168.6
67.5°	208.7	211.5	210.7	212.4	212.8	204.8	197.5	188.0	167.7	151.8	147.9
70°	179.6	181.5	180.5	181.6	182.6	176.6	170.4	162.1	144.5	130.5	127.3
72.5°	151.1	152.4	150.8	151.9	152.8	148.5	143.4	136.2	121.6	109.5	106.9
75°	123.4	125.3	122.1	123.2	123.8	119.5	116.5	110.6	98.1	88.7	87.0
77.5°	96.6	97.7	96.0	95.5	96.0	92.9	90.5	86.0	76.5	68.9	67.8
80°	71.1	71.8	70.0	69.5	69.9	67.6	65.9	62.5	55.9	50.1	49.6
82.5°	47.6	48.0	46.4	46.0	46.2	45.5	43.4	41.1	38.0	33.1	33.0
85°	27.2	27.2	26.1	25.7	25.9	24.8	24.0	22.8	21.5	18.2	18.4
87.5°	10.0	10.0	9.4	9.3	10.4	9.2	8.9	8.3	8.7	6.9	7.3
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°	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2	508.2
2.5°	510.4	509.3	508.3	504.8	506.3	502.7	502.5	501.2	500.2	498.3	500.7
5°	508.7	506.5	503.6	499.5	500.7	496.5	495.6	494.0	492.7	490.3	492.2
7.5°	506.0	502.4	497.8	492.6	494.3	489.1	487.7	486.1	484.9	482.1	483.7
10°	502.2	496.9	491.6	485.3	486.5	480.8	479.2	477.4	476.4	473.8	475.5
12.5°	496.2	489.8	482.6	475.7	477.1	471.7	469.5	467.6	467.3	465.2	467.2
15°	488.4	479.6	472.2	464.8	466.4	460.2	459.2	457.3	457.8	456.4	458.8
17.5°	478.5	468.4	460.3	452.4	454.0	448.7	448.0	447.1	447.6	447.4	450.1
20°	467.4	456.3	447.0	439.2	440.1	436.0	436.3	436.1	437.2	438.4	442.1
22.5°	454.8	442.3	432.5	424.5	425.9	422.3	423.9	424.3	426.2	429.0	433.6
25°	440.7	427.3	417.1	409.5	410.7	408.4	411.1	412.2	415.2	419.9	424.6
27.5°	426.0	411.7	400.9	393.6	396.0	393.6	397.6	399.9	404.4	409.5	415.4
30°	410.3	395.5	384.3	377.9	380.1	378.0	384.4	387.4	392.0	399.0	406.0
32.5°	393.9	378.3	367.3	362.3	363.9	363.5	370.8	374.1	380.2	388.2	395.6
35°	377.0	360.8	349.7	345.4	347.3	347.8	356.4	360.3	367.0	376.6	384.6
37.5°	359.5	343.0	332.1	328.7	330.3	332.0	342.1	346.0	353.5	364.1	372.9
40°	341.4	324.9	314.2	311.4	313.1	314.9	325.9	331.2	339.4	350.9	360.4
42.5°	323.1	306.6	296.2	294.2	295.9	299.3	311.0	316.0	324.7	337.3	347.9
45°	304.4	287.2	278.2	276.7	278.5	282.5	293.9	299.9	309.1	323.0	334.3
47.5°	285.6	268.8	260.2	259.2	261.0	265.5	278.1	283.6	293.3	308.1	320.3
50°	266.5	250.1	241.9	241.6	243.2	248.0	260.1	266.6	276.7	293.2	305.8
52.5°	247.1	231.5	224.0	224.0	225.6	230.5	242.7	249.4	259.8	277.2	291.1
55°	227.8	212.9	205.8	206.4	208.6	212.8	224.7	231.7	242.2	260.4	275.0
57.5°	208.5	194.4	187.9	188.7	190.8	195.0	206.7	214.6	224.1	242.9	257.9
60°	189.4	176.0	170.4	171.3	173.2	177.4	189.5	196.3	205.8	224.9	239.9
62.5°	170.1	157.9	152.6	153.7	155.4	159.6	171.1	177.6	187.0	205.8	220.9
65°	150.9	139.7	135.2	136.3	137.8	141.7	152.5	158.8	167.8	186.2	200.6
67.5°	132.1	121.8	118.1	119.2	120.4	124.1	133.0	139.8	148.3	165.7	179.4
70°	113.4	104.3	101.0	102.1	103.2	106.5	114.3	120.6	128.4	144.4	157.1
72.5°	95.0	86.1	84.4	85.4	86.3	89.2	96.6	101.6	108.4	122.6	133.5
75°	77.0	69.3	68.2	69.2	70.0	72.2	78.4	82.7	88.4	100.7	109.6
77.5°	59.6	53.2	52.8	53.5	54.3	55.9	60.8	65.3	69.8	78.9	86.7
80°	43.4	38.2	38.2	39.0	38.8	40.7	44.1	47.8	51.0	57.5	63.3
82.5°	28.7	24.5	25.1	25.7	26.0	26.8	28.9	31.7	33.7	37.7	41.4
85°	15.9	13.1	13.7	14.1	13.9	14.8	15.9	17.5	18.5	20.4	22.4
87.5°	5.9	4.9	5.0	5.3	5.6	6.0	6.0	7.0	7.1	7.3	7.8
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°	508.2	508.2	508.2
2.5°	496.0	498.7	500.7
5°	487.5	489.7	491.5
7.5°	479.2	481.2	482.7
10°	471.3	473.5	474.6
12.5°	463.2	465.7	466.6
15°	455.2	457.7	458.8
17.5°	447.0	450.3	451.5
20°	439.3	443.5	444.5
22.5°	431.5	435.8	437.1
25°	423.1	428.2	429.4
27.5°	414.1	420.2	421.4
30°	405.1	411.7	413.0
32.5°	395.4	402.6	403.7
35°	385.3	392.5	393.9
37.5°	374.1	382.0	384.6
40°	362.4	371.0	373.8
42.5°	350.2	359.5	362.4
45°	337.1	347.3	350.7
47.5°	323.9	335.4	338.3
50°	309.6	321.9	325.3
52.5°	294.6	308.0	311.4
55°	279.0	292.6	296.3
57.5°	262.1	276.1	280.1
60°	244.5	258.5	262.2
62.5°	226.4	239.0	242.7
65°	206.1	218.0	221.4
67.5°	184.7	195.6	198.4
70°	161.9	171.4	173.8
72.5°	138.2	144.7	147.9
75°	113.6	118.8	121.3
77.5°	89.0	92.6	94.6
80°	64.9	67.0	68.6
82.5°	42.4	43.3	44.5
85°	22.9	22.9	23.7
87.5°	7.8	7.4	7.8
90°	0.0	0.0	0.0

(END OF REPORT)