

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: P835334

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1STD-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835334
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-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

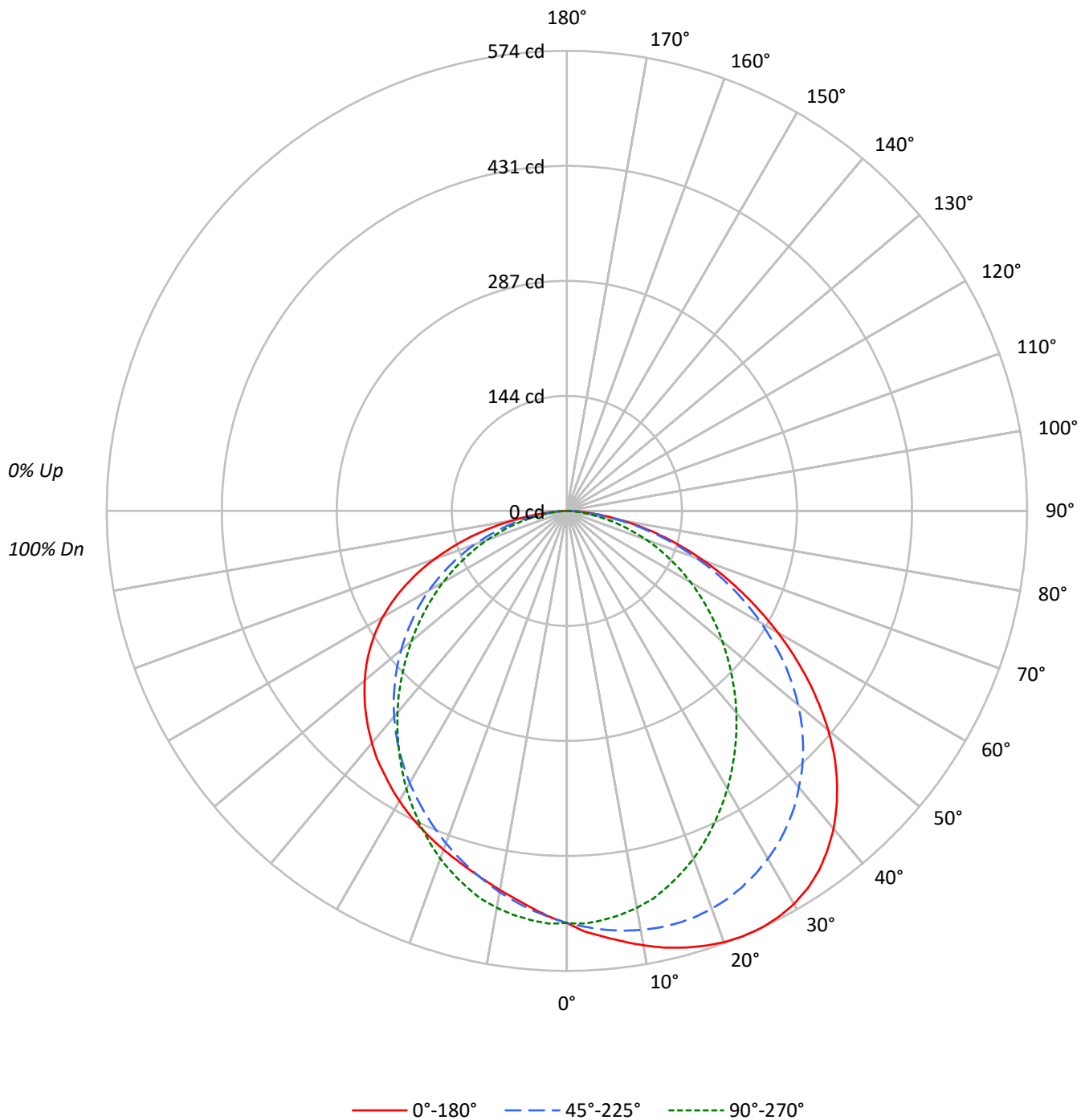
Lumens per Lamp: N/A
Luminaire Lumens: 1512.8 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1384	1384	1384
5°	1441	1385	1344
10°	1504	1374	1312
15°	1572	1352	1294
20°	1640	1322	1288
25°	1705	1284	1290
30°	1760	1244	1299
35°	1800	1199	1309
40°	1818	1155	1329
45°	1813	1106	1351
50°	1781	1060	1378
55°	1720	1011	1407
60°	1637	959	1428
65°	1536	900	1426
70°	1430	831	1384
75°	1299	729	1277
80°	1114	600	1077
85°	849	411	738

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.2
10°-20°	140.9	9.3
20°-30°	215.8	14.3
30°-40°	263.3	17.4
40°-50°	275.4	18.2
50°-60°	249.3	16.5
60°-70°	188.8	12.5
70°-80°	105.2	7.0
80°-90°	25.4	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°	405.4	26.8
0°-40°	668.8	44.2
0°-60°	1193.4	78.9
0°-90°	1512.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1512.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	514	514	514	514	514	
5°	533	524	513	500	497	51
15°	564	533	485	463	464	160
25°	574	518	432	417	435	265
35°	548	479	365	365	399	342
45°	476	417	291	304	355	367
55°	367	331	216	234	300	327
65°	241	227	141	161	224	239
75°	125	118	70	84	123	132
85°	28	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°	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3
2.5°	525.6	523.2	521.1	521.9	522.4	520.8	519.4	519.7	518.3	520.9	514.8
5°	533.4	531.1	528.8	529.7	528.8	526.4	524.5	523.9	520.3	521.8	515.6
7.5°	542.0	539.6	536.1	537.1	535.2	530.8	528.3	526.9	521.4	521.5	514.6
10°	550.4	548.2	543.5	544.2	540.7	534.8	530.9	528.9	521.1	520.0	512.9
12.5°	558.1	555.2	550.1	550.5	545.4	537.7	532.6	529.7	519.6	516.2	509.2
15°	564.1	561.3	555.2	555.1	548.6	538.4	532.7	528.7	515.9	510.6	503.3
17.5°	569.1	566.5	559.0	558.8	550.9	538.1	531.3	526.2	510.5	503.9	495.8
20°	572.7	570.1	561.7	560.9	551.5	536.4	528.2	521.8	503.4	495.6	486.6
22.5°	574.4	571.8	562.3	561.2	550.1	533.0	523.8	516.3	495.3	485.2	475.8
25°	574.1	571.6	560.8	559.7	547.6	528.0	517.6	509.0	485.1	473.1	463.9
27.5°	571.3	569.4	558.0	556.5	542.8	521.1	510.1	500.6	473.7	460.4	450.4
30°	566.4	565.0	552.9	551.6	537.0	513.6	501.4	490.3	461.4	446.5	436.4
32.5°	558.7	557.3	545.2	544.0	529.1	503.9	491.1	479.8	448.1	431.5	421.4
35°	548.0	547.2	535.4	534.1	519.0	492.9	479.3	466.8	434.1	415.5	405.8
37.5°	533.9	533.9	522.6	521.1	506.4	479.4	466.1	452.8	418.4	398.6	389.1
40°	517.6	519.1	507.5	506.1	491.8	464.9	450.3	436.4	401.4	380.8	371.5
42.5°	498.1	499.4	489.8	488.4	475.0	448.2	434.6	419.4	383.7	362.7	353.1
45°	476.5	478.3	469.7	468.6	456.2	429.9	416.8	401.4	365.1	343.9	334.4
47.5°	452.5	454.8	447.3	446.7	435.1	411.1	397.5	381.9	345.7	324.2	315.3
50°	425.5	428.8	422.7	422.7	412.3	388.4	376.6	360.9	325.4	304.0	295.2
52.5°	396.6	400.9	396.2	396.4	387.9	366.5	354.2	338.9	304.3	283.2	275.1
55°	366.7	370.8	367.9	368.4	361.7	342.2	331.0	315.9	282.7	262.1	254.5
57.5°	335.4	339.9	338.0	338.9	334.3	316.8	305.2	291.9	260.5	240.1	233.6
60°	304.1	308.3	307.3	308.6	305.6	290.5	279.9	266.2	238.1	218.5	212.8
62.5°	272.4	276.3	276.1	277.4	275.9	263.3	253.8	242.1	214.9	196.9	191.7
65°	241.3	244.7	244.5	246.0	245.6	235.5	227.0	216.3	191.8	175.2	170.6
67.5°	211.2	214.0	213.2	214.9	215.4	207.3	199.9	190.3	169.7	153.7	149.7
70°	181.8	183.7	182.7	183.8	184.8	178.7	172.4	164.0	146.2	132.1	128.8
72.5°	152.9	154.2	152.7	153.8	154.7	150.3	145.1	137.8	123.1	110.8	108.1
75°	124.9	126.8	123.5	124.7	125.3	121.0	117.9	112.0	99.3	89.8	88.0
77.5°	97.8	98.9	97.1	96.7	97.1	94.0	91.6	87.0	77.5	69.7	68.6
80°	71.9	72.6	70.8	70.4	70.7	68.5	66.7	63.3	56.5	50.7	50.2
82.5°	48.2	48.6	47.0	46.5	46.8	46.1	44.0	41.6	38.4	33.5	33.4
85°	27.5	27.5	26.4	26.0	26.2	25.1	24.3	23.0	21.8	18.4	18.7
87.5°	10.1	10.1	9.6	9.4	10.6	9.3	9.0	8.4	8.8	7.0	7.4
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3	514.3
2.5°	516.5	515.4	514.4	510.9	512.4	508.8	508.5	507.2	506.2	504.3	506.7
5°	514.8	512.6	509.7	505.5	506.7	502.5	501.6	500.0	498.7	496.2	498.1
7.5°	512.1	508.4	503.8	498.5	500.2	494.9	493.6	491.9	490.8	487.9	489.5
10°	508.2	502.9	497.5	491.1	492.4	486.6	484.9	483.1	482.1	479.5	481.2
12.5°	502.1	495.7	488.4	481.5	482.8	477.4	475.2	473.2	472.9	470.8	472.8
15°	494.3	485.4	477.9	470.4	472.0	465.7	464.7	462.8	463.4	461.9	464.4
17.5°	484.3	474.0	465.8	457.8	459.4	454.1	453.4	452.5	453.0	452.8	455.5
20°	473.0	461.8	452.3	444.5	445.4	441.2	441.5	441.3	442.4	443.7	447.4
22.5°	460.3	447.6	437.7	429.6	431.0	427.4	429.0	429.4	431.3	434.1	438.8
25°	446.0	432.4	422.1	414.5	415.7	413.3	416.0	417.2	420.2	424.9	429.7
27.5°	431.1	416.7	405.7	398.4	400.7	398.4	402.4	404.7	409.3	414.5	420.4
30°	415.2	400.3	388.9	382.4	384.7	382.5	389.1	392.1	396.7	403.8	410.9
32.5°	398.6	382.9	371.7	366.7	368.3	367.9	375.2	378.6	384.8	392.9	400.4
35°	381.5	365.1	353.9	349.6	351.5	352.0	360.7	364.7	371.4	381.2	389.3
37.5°	363.9	347.1	336.1	332.6	334.3	336.0	346.2	350.2	357.8	368.5	377.4
40°	345.5	328.8	318.0	315.2	316.9	318.7	329.8	335.2	343.5	355.1	364.8
42.5°	327.0	310.3	299.8	297.8	299.5	302.9	314.7	319.8	328.6	341.4	352.1
45°	308.1	290.7	281.6	280.0	281.8	285.9	297.4	303.5	312.8	326.9	338.4
47.5°	289.0	272.0	263.4	262.4	264.2	268.7	281.5	287.0	296.9	311.8	324.2
50°	269.7	253.1	244.8	244.5	246.2	251.0	263.3	269.8	280.0	296.8	309.5
52.5°	250.1	234.3	226.7	226.7	228.3	233.3	245.6	252.4	262.9	280.6	294.6
55°	230.6	215.5	208.3	208.9	211.1	215.4	227.4	234.5	245.2	263.5	278.3
57.5°	211.0	196.7	190.2	191.0	193.1	197.4	209.2	217.2	226.8	245.8	261.0
60°	191.7	178.2	172.4	173.3	175.2	179.5	191.8	198.6	208.3	227.6	242.8
62.5°	172.1	159.8	154.5	155.6	157.3	161.5	173.1	179.7	189.3	208.3	223.6
65°	152.8	141.4	136.8	137.9	139.5	143.4	154.3	160.7	169.9	188.4	203.0
67.5°	133.7	123.3	119.5	120.6	121.9	125.6	134.6	141.5	150.1	167.7	181.5
70°	114.8	105.6	102.2	103.3	104.4	107.8	115.7	122.1	129.9	146.1	158.9
72.5°	96.1	87.1	85.4	86.4	87.3	90.3	97.8	102.9	109.7	124.1	135.1
75°	77.9	70.1	69.0	70.0	70.8	73.1	79.4	83.7	89.5	102.0	110.9
77.5°	60.4	53.8	53.4	54.2	55.0	56.5	61.5	66.1	70.6	79.8	87.8
80°	44.0	38.7	38.7	39.5	39.2	41.1	44.6	48.3	51.6	58.2	64.1
82.5°	29.0	24.8	25.4	26.0	26.3	27.1	29.2	32.0	34.1	38.1	41.9
85°	16.1	13.3	13.8	14.3	14.1	15.0	16.1	17.8	18.8	20.7	22.7
87.5°	6.0	4.9	5.1	5.4	5.6	6.1	6.1	7.1	7.2	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):

	160°	170°	180°
0°	514.3	514.3	514.3
2.5°	502.0	504.7	506.7
5°	493.4	495.6	497.4
7.5°	484.9	487.0	488.5
10°	477.0	479.2	480.3
12.5°	468.8	471.3	472.2
15°	460.7	463.2	464.4
17.5°	452.3	455.7	456.9
20°	444.6	448.9	449.9
22.5°	436.7	441.1	442.3
25°	428.2	433.3	434.6
27.5°	419.1	425.2	426.5
30°	410.0	416.7	417.9
32.5°	400.2	407.5	408.6
35°	390.0	397.3	398.6
37.5°	378.6	386.6	389.3
40°	366.8	375.5	378.3
42.5°	354.4	363.9	366.8
45°	341.2	351.5	354.9
47.5°	327.8	339.5	342.4
50°	313.3	325.8	329.2
52.5°	298.1	311.7	315.2
55°	282.4	296.1	299.9
57.5°	265.3	279.5	283.5
60°	247.4	261.6	265.4
62.5°	229.1	241.9	245.6
65°	208.6	220.7	224.0
67.5°	186.9	198.0	200.8
70°	163.9	173.4	175.9
72.5°	139.8	146.5	149.7
75°	115.0	120.3	122.8
77.5°	90.0	93.8	95.8
80°	65.6	67.8	69.5
82.5°	42.9	43.8	45.1
85°	23.2	23.2	23.9
87.5°	7.9	7.5	7.9
90°	0.0	0.0	0.0

(END OF REPORT)