

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: P835225

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835225
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-LD4-1LO-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

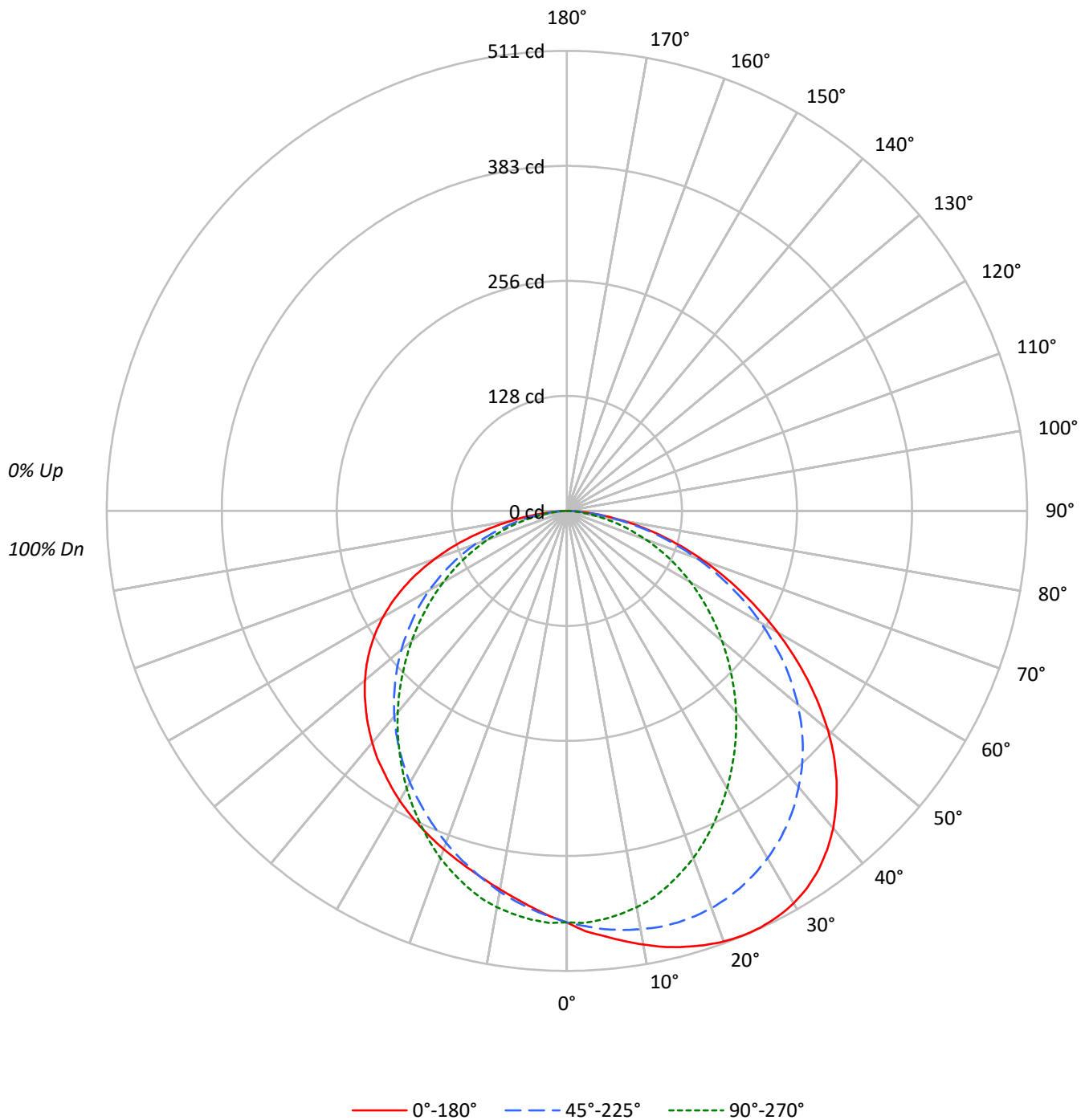
Lumens per Lamp: N/A
Luminaire Lumens: 1344.7 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	1230	1230	1230
5°	1281	1231	1194
10°	1337	1221	1167
15°	1397	1202	1150
20°	1458	1176	1145
25°	1515	1141	1147
30°	1565	1106	1154
35°	1600	1066	1164
40°	1616	1027	1181
45°	1612	983	1200
50°	1583	942	1225
55°	1529	898	1251
60°	1455	853	1270
65°	1366	800	1268
70°	1271	738	1231
75°	1154	649	1134
80°	990	533	958
85°	756	364	658

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.4	3.2
10°-20°	125.2	9.3
20°-30°	191.8	14.3
30°-40°	234.1	17.4
40°-50°	244.8	18.2
50°-60°	221.6	16.5
60°-70°	167.8	12.5
70°-80°	93.5	7.0
80°-90°	22.6	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°	360.4	26.8
0°-40°	594.4	44.2
0°-60°	1060.8	78.9
0°-90°	1344.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1344.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	457	457	457	457	457	
5°	474	466	456	444	442	46
15°	501	474	432	411	413	142
25°	510	460	384	371	386	235
35°	487	426	324	324	354	304
45°	424	370	258	270	315	326
55°	326	294	192	208	267	291
65°	214	202	126	143	199	213
75°	111	105	62	74	109	118
85°	24	22	12	16	21	29
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°	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1
2.5°	467.2	465.0	463.2	463.9	464.3	462.9	461.7	461.9	460.7	463.0	457.6
5°	474.1	472.1	470.0	470.8	470.0	467.9	466.2	465.7	462.5	463.8	458.3
7.5°	481.8	479.6	476.5	477.4	475.7	471.8	469.6	468.3	463.4	463.5	457.4
10°	489.2	487.3	483.1	483.7	480.6	475.4	471.9	470.1	463.2	462.2	455.9
12.5°	496.1	493.5	489.0	489.3	484.8	477.9	473.4	470.8	461.8	458.8	452.6
15°	501.4	498.9	493.5	493.4	487.6	478.6	473.5	469.9	458.5	453.8	447.3
17.5°	505.9	503.6	496.9	496.7	489.7	478.3	472.2	467.7	453.7	447.9	440.7
20°	509.1	506.8	499.3	498.6	490.2	476.8	469.5	463.8	447.4	440.5	432.6
22.5°	510.6	508.3	499.8	498.8	489.0	473.8	465.6	458.9	440.2	431.3	423.0
25°	510.3	508.1	498.5	497.5	486.7	469.3	460.1	452.4	431.2	420.6	412.4
27.5°	507.8	506.1	496.0	494.7	482.5	463.2	453.4	444.9	421.1	409.3	400.4
30°	503.5	502.2	491.5	490.3	477.3	456.5	445.6	435.9	410.2	396.9	387.9
32.5°	496.6	495.4	484.6	483.5	470.3	447.9	436.6	426.5	398.3	383.6	374.6
35°	487.1	486.4	475.9	474.7	461.3	438.1	426.1	415.0	385.9	369.3	360.7
37.5°	474.6	474.6	464.5	463.2	450.1	426.2	414.3	402.5	371.9	354.3	345.8
40°	460.1	461.4	451.1	449.8	437.1	413.3	400.3	387.9	356.8	338.5	330.2
42.5°	442.7	443.9	435.4	434.2	422.3	398.4	386.3	372.8	341.0	322.4	313.8
45°	423.6	425.2	417.5	416.6	405.5	382.1	370.5	356.8	324.5	305.7	297.3
47.5°	402.2	404.3	397.6	397.1	386.8	365.4	353.3	339.4	307.3	288.2	280.3
50°	378.2	381.2	375.7	375.7	366.5	345.2	334.7	320.8	289.3	270.2	262.4
52.5°	352.5	356.3	352.2	352.3	344.8	325.7	314.8	301.3	270.5	251.7	244.5
55°	325.9	329.6	327.0	327.4	321.5	304.2	294.3	280.8	251.3	233.0	226.2
57.5°	298.2	302.2	300.5	301.3	297.2	281.6	271.3	259.5	231.5	213.4	207.6
60°	270.3	274.1	273.2	274.3	271.7	258.2	248.8	236.6	211.6	194.2	189.1
62.5°	242.1	245.6	245.4	246.6	245.2	234.0	225.6	215.2	191.0	175.1	170.4
65°	214.5	217.5	217.3	218.6	218.3	209.3	201.7	192.2	170.5	155.8	151.7
67.5°	187.7	190.2	189.5	191.0	191.4	184.3	177.7	169.2	150.9	136.6	133.1
70°	161.6	163.3	162.4	163.4	164.3	158.9	153.3	145.8	130.0	117.4	114.5
72.5°	135.9	137.1	135.7	136.7	137.5	133.6	129.0	122.5	109.4	98.5	96.1
75°	111.0	112.7	109.8	110.8	111.4	107.5	104.8	99.5	88.2	79.8	78.2
77.5°	86.9	87.9	86.3	85.9	86.3	83.5	81.4	77.3	68.8	62.0	61.0
80°	63.9	64.5	62.9	62.5	62.8	60.9	59.3	56.3	50.3	45.1	44.7
82.5°	42.9	43.2	41.8	41.4	41.6	41.0	39.1	37.0	34.2	29.8	29.7
85°	24.5	24.5	23.5	23.1	23.3	22.3	21.6	20.5	19.4	16.4	16.6
87.5°	9.0	9.0	8.5	8.4	9.4	8.3	8.0	7.5	7.8	6.2	6.6
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°	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1
2.5°	459.1	458.1	457.2	454.1	455.4	452.2	452.0	450.8	449.9	448.2	450.4
5°	457.6	455.6	453.0	449.3	450.4	446.6	445.8	444.4	443.2	441.0	442.7
7.5°	455.2	451.9	447.8	443.1	444.6	439.9	438.7	437.2	436.3	433.7	435.2
10°	451.7	447.0	442.2	436.6	437.6	432.6	431.1	429.5	428.6	426.3	427.8
12.5°	446.3	440.6	434.2	428.0	429.2	424.4	422.4	420.7	420.4	418.5	420.3
15°	439.3	431.5	424.8	418.2	419.6	414.0	413.1	411.4	411.9	410.6	412.8
17.5°	430.5	421.4	414.1	407.0	408.4	403.7	403.0	402.2	402.7	402.5	404.9
20°	420.5	410.5	402.1	395.1	395.9	392.2	392.5	392.3	393.3	394.4	397.7
22.5°	409.2	397.9	389.1	381.9	383.1	379.9	381.3	381.7	383.4	385.9	390.1
25°	396.5	384.4	375.2	368.4	369.5	367.4	369.8	370.8	373.5	377.7	382.0
27.5°	383.2	370.4	360.6	354.1	356.2	354.1	357.7	359.7	363.8	368.4	373.7
30°	369.1	355.8	345.7	339.9	341.9	340.0	345.8	348.5	352.6	358.9	365.2
32.5°	354.3	340.3	330.4	325.9	327.3	327.0	333.5	336.5	342.0	349.2	355.9
35°	339.1	324.5	314.5	310.8	312.4	312.8	320.6	324.1	330.1	338.8	346.0
37.5°	323.4	308.6	298.8	295.7	297.2	298.7	307.8	311.3	318.0	327.5	335.4
40°	307.2	292.3	282.7	280.2	281.7	283.3	293.2	298.0	305.4	315.6	324.2
42.5°	290.7	275.8	266.5	264.7	266.2	269.3	279.8	284.3	292.1	303.5	312.9
45°	273.9	258.4	250.3	248.9	250.5	254.1	264.4	269.8	278.1	290.6	300.8
47.5°	256.9	241.8	234.1	233.2	234.8	238.8	250.2	255.1	263.9	277.2	288.2
50°	239.7	225.0	217.6	217.3	218.8	223.1	234.0	239.8	248.9	263.8	275.1
52.5°	222.3	208.2	201.5	201.5	202.9	207.3	218.3	224.3	233.7	249.4	261.9
55°	204.9	191.5	185.2	185.7	187.6	191.4	202.1	208.4	217.9	234.2	247.4
57.5°	187.5	174.9	169.1	169.8	171.7	175.5	186.0	193.0	201.6	218.5	232.0
60°	170.4	158.4	153.3	154.1	155.8	159.6	170.5	176.6	185.2	202.3	215.8
62.5°	153.0	142.1	137.3	138.3	139.8	143.6	153.9	159.8	168.3	185.2	198.7
65°	135.8	125.7	121.6	122.6	124.0	127.5	137.2	142.9	151.0	167.5	180.5
67.5°	118.8	109.6	106.2	107.2	108.3	111.6	119.6	125.8	133.4	149.1	161.4
70°	102.0	93.8	90.8	91.8	92.8	95.8	102.8	108.5	115.5	129.9	141.3
72.5°	85.4	77.4	75.9	76.8	77.6	80.2	86.9	91.4	97.5	110.3	120.1
75°	69.2	62.4	61.4	62.3	62.9	64.9	70.5	74.4	79.5	90.6	98.6
77.5°	53.7	47.9	47.5	48.2	48.9	50.3	54.7	58.8	62.7	70.9	78.0
80°	39.1	34.4	34.4	35.1	34.9	36.6	39.7	43.0	45.9	51.8	57.0
82.5°	25.8	22.1	22.6	23.1	23.4	24.1	26.0	28.5	30.3	33.9	37.3
85°	14.3	11.8	12.3	12.7	12.5	13.3	14.3	15.8	16.7	18.4	20.2
87.5°	5.3	4.4	4.5	4.8	5.0	5.4	5.4	6.3	6.4	6.6	7.0
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°	457.1	457.1	457.1
2.5°	446.2	448.6	450.4
5°	438.5	440.5	442.1
7.5°	431.1	432.9	434.3
10°	424.0	426.0	427.0
12.5°	416.7	419.0	419.8
15°	409.5	411.8	412.8
17.5°	402.1	405.1	406.2
20°	395.2	399.0	399.9
22.5°	388.2	392.1	393.2
25°	380.6	385.2	386.3
27.5°	372.5	378.0	379.1
30°	364.4	370.4	371.5
32.5°	355.7	362.2	363.2
35°	346.6	353.1	354.3
37.5°	336.5	343.6	346.0
40°	326.0	333.7	336.2
42.5°	315.0	323.4	326.0
45°	303.3	312.4	315.4
47.5°	291.4	301.8	304.4
50°	278.5	289.6	292.7
52.5°	265.0	277.1	280.2
55°	251.0	263.2	266.6
57.5°	235.8	248.4	252.0
60°	219.9	232.5	235.9
62.5°	203.6	215.0	218.3
65°	185.5	196.1	199.1
67.5°	166.2	176.0	178.5
70°	145.7	154.2	156.4
72.5°	124.3	130.2	133.1
75°	102.2	106.9	109.1
77.5°	80.0	83.3	85.1
80°	58.4	60.3	61.8
82.5°	38.2	39.0	40.1
85°	20.6	20.6	21.3
87.5°	7.0	6.7	7.0
90°	0.0	0.0	0.0

(END OF REPORT)