

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: P835264

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835264
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-LD4-2LO-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

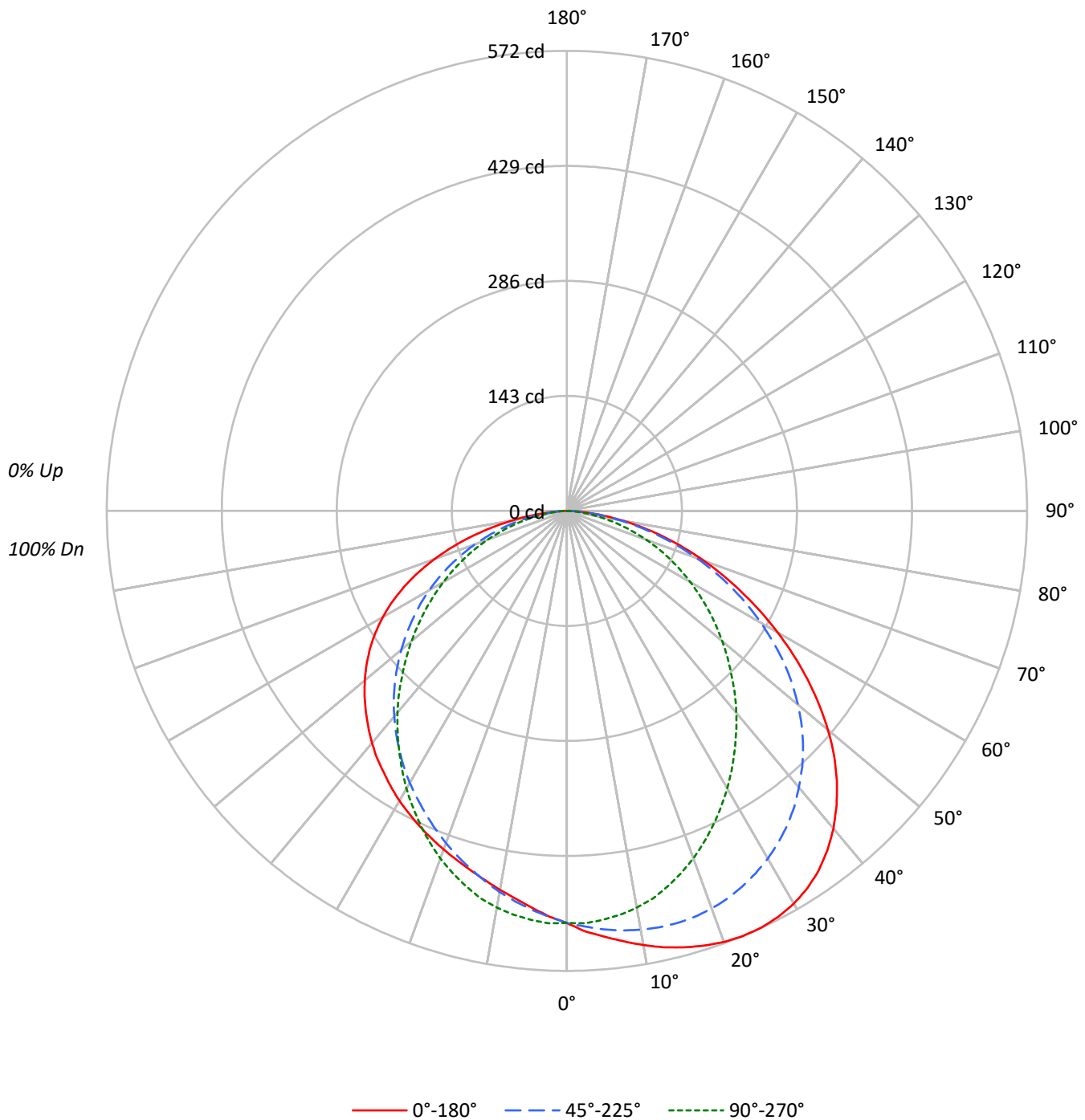
Lumens per Lamp: N/A
Luminaire Lumens: 1506.6 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1378	1378	1378
5°	1435	1379	1338
10°	1498	1369	1307
15°	1565	1347	1288
20°	1633	1317	1283
25°	1697	1279	1285
30°	1753	1239	1293
35°	1793	1194	1304
40°	1811	1150	1323
45°	1806	1102	1345
50°	1774	1055	1373
55°	1713	1007	1401
60°	1630	955	1422
65°	1531	897	1421
70°	1424	827	1378
75°	1293	727	1272
80°	1110	597	1072
85°	846	408	735

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.6	3.2
10°-20°	140.3	9.3
20°-30°	214.9	14.3
30°-40°	262.3	17.4
40°-50°	274.3	18.2
50°-60°	248.2	16.5
60°-70°	188.0	12.5
70°-80°	104.8	7.0
80°-90°	25.3	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°	403.8	26.8
0°-40°	666.0	44.2
0°-60°	1188.5	78.9
0°-90°	1506.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1506.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	512	512	512	512	512	
5°	531	522	510	498	495	51
15°	562	530	483	461	462	159
25°	572	516	431	416	433	264
35°	546	477	364	363	397	341
45°	475	415	290	302	353	365
55°	365	330	215	234	299	326
65°	240	226	141	160	223	238
75°	124	117	70	83	122	132
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°	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2
2.5°	523.5	521.0	519.0	519.8	520.2	518.7	517.3	517.6	516.2	518.8	512.7
5°	531.2	529.0	526.6	527.5	526.6	524.3	522.4	521.8	518.2	519.7	513.5
7.5°	539.8	537.4	533.9	534.9	533.0	528.6	526.2	524.7	519.2	519.3	512.5
10°	548.1	546.0	541.3	542.0	538.5	532.7	528.7	526.7	519.0	517.9	510.8
12.5°	555.8	552.9	547.9	548.2	543.2	535.5	530.4	527.5	517.4	514.1	507.1
15°	561.8	559.0	552.9	552.8	546.3	536.2	530.5	526.5	513.7	508.5	501.2
17.5°	566.8	564.2	556.7	556.5	548.7	535.9	529.1	524.0	508.4	501.9	493.8
20°	570.4	567.8	559.4	558.6	549.2	534.2	526.1	519.7	501.3	493.6	484.6
22.5°	572.1	569.5	560.0	558.9	547.9	530.9	521.7	514.2	493.3	483.2	473.9
25°	571.7	569.3	558.5	557.4	545.3	525.8	515.5	506.9	483.1	471.2	462.0
27.5°	568.9	567.0	555.7	554.3	540.6	519.0	508.0	498.5	471.8	458.6	448.6
30°	564.1	562.7	550.7	549.3	534.8	511.5	499.3	488.3	459.6	444.7	434.6
32.5°	556.4	555.1	543.0	541.7	527.0	501.9	489.1	477.8	446.2	429.8	419.7
35°	545.8	545.0	533.2	531.9	516.9	490.9	477.4	464.9	432.4	413.8	404.1
37.5°	531.8	531.8	520.5	519.0	504.3	477.5	464.1	450.9	416.7	397.0	387.5
40°	515.5	517.0	505.5	504.0	489.8	463.0	448.5	434.6	399.8	379.3	370.0
42.5°	496.1	497.4	487.8	486.4	473.1	446.3	432.8	417.7	382.1	361.3	351.6
45°	474.6	476.4	467.7	466.7	454.3	428.1	415.1	399.8	363.6	342.5	333.1
47.5°	450.6	453.0	445.5	444.9	433.4	409.4	395.9	380.3	344.3	322.9	314.0
50°	423.7	427.1	420.9	420.9	410.6	386.8	375.0	359.5	324.1	302.7	294.0
52.5°	395.0	399.2	394.6	394.7	386.3	365.0	352.8	337.5	303.1	282.0	273.9
55°	365.2	369.3	366.4	366.9	360.3	340.8	329.7	314.6	281.6	261.1	253.5
57.5°	334.1	338.5	336.6	337.5	332.9	315.5	303.9	290.7	259.4	239.1	232.6
60°	302.8	307.1	306.1	307.3	304.4	289.3	278.8	265.1	237.1	217.6	211.9
62.5°	271.3	275.2	275.0	276.3	274.7	262.2	252.8	241.1	214.1	196.1	190.9
65°	240.4	243.7	243.5	244.9	244.6	234.5	226.0	215.4	191.0	174.5	169.9
67.5°	210.4	213.2	212.4	214.1	214.5	206.4	199.0	189.5	169.0	153.0	149.1
70°	181.0	182.9	181.9	183.0	184.0	178.0	171.7	163.3	145.6	131.5	128.3
72.5°	152.3	153.6	152.0	153.1	154.0	149.7	144.5	137.3	122.6	110.4	107.7
75°	124.4	126.3	123.0	124.2	124.8	120.5	117.4	111.5	98.9	89.4	87.7
77.5°	97.4	98.5	96.7	96.3	96.7	93.6	91.2	86.7	77.1	69.4	68.3
80°	71.6	72.3	70.5	70.1	70.4	68.2	66.4	63.0	56.3	50.5	50.0
82.5°	48.0	48.4	46.8	46.3	46.6	45.9	43.8	41.4	38.3	33.4	33.2
85°	27.4	27.4	26.3	25.9	26.1	25.0	24.2	23.0	21.7	18.4	18.6
87.5°	10.1	10.1	9.5	9.4	10.5	9.3	9.0	8.4	8.7	6.9	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°	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2	512.2
2.5°	514.4	513.3	512.3	508.8	510.3	506.7	506.5	505.1	504.1	502.2	504.7
5°	512.7	510.5	507.6	503.4	504.7	500.4	499.5	498.0	496.6	494.2	496.1
7.5°	510.1	506.4	501.8	496.5	498.2	492.9	491.6	489.9	488.8	485.9	487.5
10°	506.1	500.9	495.5	489.1	490.3	484.6	483.0	481.2	480.2	477.6	479.3
12.5°	500.1	493.7	486.4	479.5	480.8	475.5	473.2	471.3	471.0	468.9	470.9
15°	492.2	483.4	475.9	468.5	470.1	463.8	462.8	460.9	461.5	460.0	462.5
17.5°	482.3	472.1	463.9	456.0	457.5	452.3	451.5	450.6	451.2	450.9	453.6
20°	471.1	459.9	450.5	442.7	443.6	439.4	439.7	439.5	440.6	441.9	445.6
22.5°	458.4	445.8	435.9	427.9	429.2	425.6	427.2	427.7	429.6	432.4	437.1
25°	444.2	430.7	420.4	412.8	414.0	411.6	414.3	415.5	418.5	423.2	428.0
27.5°	429.3	415.0	404.0	396.8	399.1	396.8	400.8	403.0	407.6	412.8	418.7
30°	413.5	398.7	387.4	380.9	383.1	381.0	387.5	390.5	395.1	402.1	409.2
32.5°	397.0	381.3	370.2	365.2	366.8	366.4	373.7	377.1	383.2	391.3	398.8
35°	380.0	363.6	352.4	348.2	350.1	350.5	359.3	363.2	369.9	379.6	387.7
37.5°	362.4	345.7	334.7	331.3	332.9	334.6	344.8	348.7	356.3	367.0	375.8
40°	344.1	327.5	316.7	313.9	315.6	317.4	328.5	333.8	342.1	353.7	363.3
42.5°	325.7	309.0	298.6	296.6	298.2	301.7	313.5	318.5	327.2	340.0	350.6
45°	306.9	289.5	280.4	278.9	280.7	284.7	296.2	302.3	311.6	325.6	337.0
47.5°	287.8	270.9	262.3	261.3	263.1	267.6	280.3	285.8	295.7	310.6	322.9
50°	268.6	252.1	243.8	243.5	245.2	250.0	262.2	268.7	278.9	295.6	308.2
52.5°	249.1	233.3	225.8	225.8	227.4	232.3	244.6	251.3	261.9	279.4	293.4
55°	229.6	214.6	207.4	208.0	210.2	214.5	226.5	233.5	244.2	262.4	277.2
57.5°	210.1	195.9	189.4	190.2	192.3	196.6	208.3	216.3	225.9	244.8	260.0
60°	190.9	177.4	171.7	172.6	174.5	178.8	191.0	197.8	207.4	226.7	241.8
62.5°	171.4	159.2	153.8	154.9	156.6	160.9	172.4	179.0	188.5	207.4	222.7
65°	152.1	140.8	136.2	137.4	138.9	142.8	153.7	160.1	169.2	187.6	202.2
67.5°	133.1	122.8	119.0	120.1	121.4	125.0	134.0	140.9	149.5	167.0	180.8
70°	114.3	105.1	101.8	102.9	104.0	107.4	115.2	121.6	129.4	145.5	158.3
72.5°	95.7	86.8	85.1	86.1	87.0	89.9	97.4	102.4	109.3	123.6	134.6
75°	77.6	69.9	68.7	69.7	70.5	72.8	79.0	83.4	89.1	101.5	110.5
77.5°	60.1	53.6	53.2	54.0	54.7	56.3	61.2	65.8	70.3	79.5	87.4
80°	43.8	38.5	38.5	39.3	39.1	41.0	44.4	48.1	51.4	58.0	63.8
82.5°	28.9	24.7	25.3	25.9	26.2	27.0	29.1	31.9	33.9	38.0	41.8
85°	16.0	13.2	13.8	14.2	14.0	14.9	16.0	17.7	18.7	20.6	22.6
87.5°	5.9	4.9	5.0	5.4	5.6	6.0	6.0	7.1	7.2	7.4	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°	512.2	512.2	512.2
2.5°	500.0	502.7	504.7
5°	491.4	493.6	495.4
7.5°	483.0	485.0	486.5
10°	475.0	477.2	478.4
12.5°	466.8	469.4	470.3
15°	458.8	461.4	462.5
17.5°	450.5	453.9	455.1
20°	442.8	447.0	448.0
22.5°	434.9	439.3	440.5
25°	426.4	431.6	432.8
27.5°	417.4	423.5	424.7
30°	408.3	415.0	416.2
32.5°	398.5	405.8	406.9
35°	388.4	395.6	397.0
37.5°	377.1	385.0	387.7
40°	365.3	373.9	376.7
42.5°	353.0	362.4	365.3
45°	339.8	350.1	353.4
47.5°	326.4	338.1	341.0
50°	312.0	324.4	327.9
52.5°	296.9	310.4	313.9
55°	281.2	294.9	298.7
57.5°	264.2	278.3	282.3
60°	246.4	260.5	264.3
62.5°	228.2	240.9	244.6
65°	207.8	219.8	223.1
67.5°	186.2	197.1	199.9
70°	163.2	172.7	175.2
72.5°	139.3	145.9	149.1
75°	114.5	119.8	122.3
77.5°	89.7	93.4	95.4
80°	65.4	67.5	69.2
82.5°	42.8	43.7	44.9
85°	23.1	23.1	23.8
87.5°	7.8	7.5	7.8
90°	0.0	0.0	0.0

(END OF REPORT)