

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: P835227

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835227
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-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

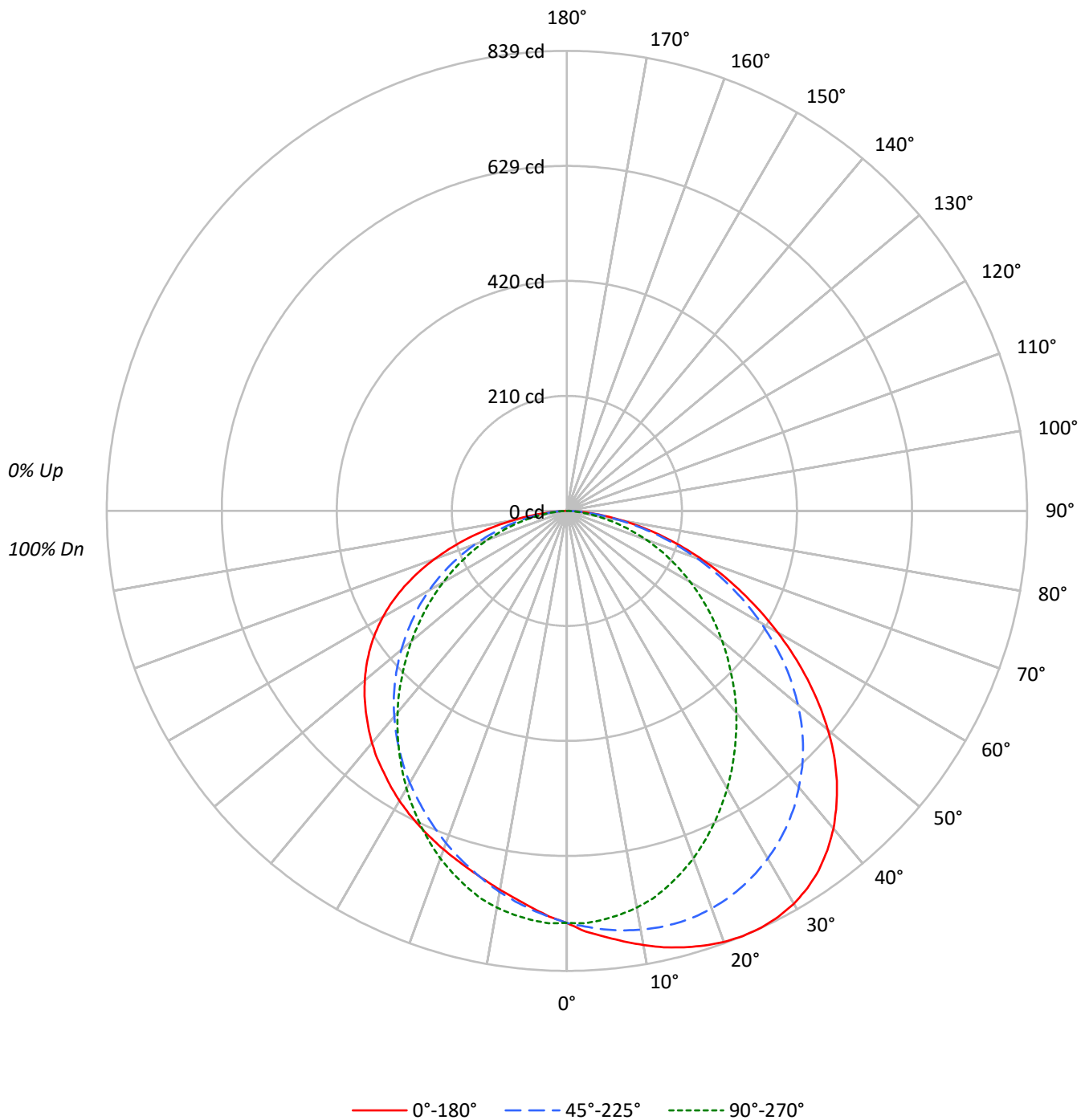
Lumens per Lamp: N/A
Luminaire Lumens: 2209.9 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	2022	2022	2022
5°	2105	2023	1963
10°	2197	2008	1917
15°	2296	1975	1890
20°	2396	1932	1882
25°	2490	1876	1885
30°	2571	1817	1897
35°	2630	1752	1913
40°	2656	1687	1941
45°	2649	1616	1973
50°	2602	1548	2014
55°	2513	1477	2055
60°	2391	1401	2087
65°	2245	1316	2084
70°	2089	1213	2022
75°	1896	1066	1864
80°	1629	876	1573
85°	1241	599	1081

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	3.2
10°-20°	205.8	9.3
20°-30°	315.2	14.3
30°-40°	384.7	17.4
40°-50°	402.3	18.2
50°-60°	364.1	16.5
60°-70°	275.8	12.5
70°-80°	153.7	7.0
80°-90°	37.1	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°	592.2	26.8
0°-40°	976.9	44.2
0°-60°	1743.4	78.9
0°-90°	2209.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2209.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	751	751	751	751	751	
5°	779	766	749	730	727	75
15°	824	778	709	676	678	234
25°	839	756	632	609	635	387
35°	800	700	533	533	582	500
45°	696	609	425	443	518	536
55°	536	484	315	342	438	478
65°	353	332	207	235	327	350
75°	182	172	102	122	179	193
85°	40	36	19	26	35	48
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°	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3
2.5°	767.8	764.2	761.3	762.4	763.1	760.8	758.8	759.1	757.2	761.0	752.1
5°	779.2	775.9	772.4	773.8	772.4	769.0	766.2	765.4	760.1	762.3	753.2
7.5°	791.8	788.2	783.1	784.6	781.8	775.4	771.8	769.7	761.6	761.8	751.8
10°	804.0	800.9	794.0	794.9	789.9	781.3	775.6	772.6	761.3	759.6	749.3
12.5°	815.3	811.0	803.6	804.1	796.7	785.4	778.0	773.8	759.0	754.1	743.9
15°	824.0	819.9	811.0	810.9	801.3	786.6	778.2	772.3	753.6	745.8	735.2
17.5°	831.4	827.6	816.6	816.3	804.8	786.1	776.1	768.7	745.7	736.2	724.3
20°	836.7	832.9	820.6	819.4	805.6	783.6	771.6	762.3	735.3	724.0	710.9
22.5°	839.1	835.3	821.4	819.7	803.6	778.7	765.2	754.2	723.5	708.7	695.1
25°	838.6	835.0	819.2	817.6	799.9	771.3	756.2	743.5	708.6	691.2	677.7
27.5°	834.5	831.7	815.1	813.0	793.0	761.3	745.2	731.2	692.0	672.6	658.0
30°	827.5	825.3	807.8	805.8	784.4	750.3	732.4	716.3	674.1	652.2	637.5
32.5°	816.1	814.2	796.4	794.6	772.9	736.2	717.4	700.9	654.5	630.4	615.6
35°	800.5	799.4	782.1	780.2	758.2	720.1	700.2	682.0	634.2	606.9	592.8
37.5°	780.0	780.0	763.4	761.3	739.8	700.4	680.8	661.4	611.2	582.3	568.3
40°	756.2	758.3	741.4	739.3	718.4	679.2	657.8	637.5	586.4	556.3	542.7
42.5°	727.6	729.6	715.5	713.5	694.0	654.7	634.8	612.7	560.5	529.9	515.8
45°	696.1	698.7	686.1	684.6	666.4	627.9	608.9	586.4	533.4	502.3	488.5
47.5°	660.9	664.4	653.4	652.6	635.7	600.5	580.6	557.8	504.9	473.6	460.6
50°	621.5	626.5	617.4	617.4	602.3	567.3	550.1	527.3	475.4	444.0	431.2
52.5°	579.3	585.6	578.8	579.0	566.7	535.3	517.4	495.1	444.5	413.6	401.8
55°	535.7	541.7	537.5	538.1	528.4	499.9	483.6	461.4	413.0	382.9	371.8
57.5°	490.0	496.6	493.8	495.1	488.4	462.7	445.8	426.5	380.5	350.8	341.2
60°	444.2	450.4	449.0	450.8	446.5	424.3	408.9	388.9	347.8	319.2	310.9
62.5°	397.9	403.6	403.3	405.3	403.0	384.6	370.8	353.7	314.0	287.7	280.0
65°	352.6	357.5	357.2	359.3	358.8	344.0	331.5	315.9	280.1	256.0	249.3
67.5°	308.6	312.7	311.5	314.0	314.6	302.8	292.0	278.0	248.0	224.5	218.7
70°	265.5	268.3	266.8	268.5	270.0	261.1	251.9	239.6	213.6	192.9	188.2
72.5°	223.3	225.3	223.0	224.6	226.0	219.5	212.0	201.3	179.8	161.9	158.0
75°	182.4	185.2	180.5	182.1	183.1	176.7	172.3	163.6	145.0	131.2	128.6
77.5°	142.9	144.5	141.9	141.2	141.9	137.3	133.8	127.1	113.1	101.8	100.2
80°	105.1	106.1	103.5	102.8	103.3	100.0	97.4	92.5	82.6	74.1	73.4
82.5°	70.4	70.9	68.6	68.0	68.3	67.3	64.2	60.8	56.2	48.9	48.8
85°	40.2	40.2	38.6	37.9	38.3	36.6	35.5	33.7	31.9	26.9	27.3
87.5°	14.8	14.8	14.0	13.8	15.4	13.6	13.1	12.3	12.8	10.2	10.8
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3	751.3
2.5°	754.5	752.9	751.4	746.3	748.5	743.2	742.9	740.9	739.4	736.6	740.3
5°	752.1	748.8	744.5	738.5	740.3	734.0	732.7	730.4	728.4	724.8	727.6
7.5°	748.1	742.7	736.0	728.3	730.7	723.0	721.0	718.6	716.9	712.7	715.1
10°	742.4	734.7	726.8	717.4	719.2	710.9	708.4	705.8	704.3	700.5	703.0
12.5°	733.5	724.2	713.5	703.3	705.3	697.4	694.1	691.3	690.8	687.7	690.7
15°	722.0	709.1	698.1	687.2	689.5	680.3	678.8	676.1	676.9	674.7	678.4
17.5°	707.4	692.5	680.5	668.8	671.1	663.4	662.3	660.9	661.8	661.4	665.4
20°	691.0	674.6	660.8	649.3	650.6	644.5	645.0	644.7	646.3	648.1	653.6
22.5°	672.4	653.9	639.4	627.6	629.6	624.3	626.6	627.3	630.1	634.2	641.1
25°	651.6	631.7	616.6	605.4	607.3	603.8	607.7	609.4	613.8	620.7	627.8
27.5°	629.7	608.7	592.6	582.0	585.4	582.0	587.9	591.2	597.9	605.4	614.1
30°	606.6	584.8	568.2	558.6	561.9	558.8	568.3	572.8	579.5	589.8	600.2
32.5°	582.3	559.3	543.0	535.7	538.0	537.5	548.1	553.1	562.1	573.9	584.9
35°	557.3	533.4	516.9	510.7	513.5	514.1	527.0	532.7	542.6	556.8	568.7
37.5°	531.5	507.1	491.0	485.9	488.4	490.8	505.8	511.5	522.7	538.3	551.3
40°	504.8	480.3	464.6	460.4	462.9	465.5	481.8	489.7	501.8	518.7	532.9
42.5°	477.7	453.2	437.9	435.0	437.5	442.5	459.8	467.2	480.0	498.7	514.3
45°	450.1	424.6	411.3	409.0	411.7	417.6	434.5	443.4	457.0	477.5	494.3
47.5°	422.2	397.4	384.7	383.3	385.9	392.5	411.2	419.2	433.7	455.5	473.6
50°	393.9	369.8	357.7	357.2	359.6	366.7	384.6	394.1	409.0	433.5	452.1
52.5°	365.4	342.2	331.2	331.2	333.5	340.7	358.8	368.7	384.1	409.9	430.4
55°	336.8	314.8	304.3	305.1	308.4	314.6	332.2	342.5	358.1	384.9	406.6
57.5°	308.2	287.4	277.8	279.0	282.1	288.4	305.6	317.3	331.4	359.1	381.3
60°	280.0	260.3	251.9	253.2	256.0	262.2	280.1	290.2	304.3	332.5	354.7
62.5°	251.4	233.5	225.6	227.3	229.7	236.0	252.9	262.6	276.5	304.3	326.6
65°	223.2	206.6	199.8	201.5	203.8	209.5	225.5	234.8	248.1	275.2	296.6
67.5°	195.2	180.1	174.6	176.2	178.0	183.4	196.6	206.7	219.2	245.0	265.2
70°	167.7	154.2	149.3	150.9	152.6	157.5	169.0	178.3	189.8	213.5	232.2
72.5°	140.4	127.3	124.8	126.3	127.6	131.9	142.9	150.3	160.3	181.3	197.4
75°	113.8	102.5	100.8	102.3	103.5	106.7	115.9	122.3	130.7	148.9	162.1
77.5°	88.2	78.7	78.0	79.1	80.3	82.6	89.8	96.6	103.1	116.6	128.2
80°	64.2	56.5	56.5	57.6	57.3	60.1	65.2	70.6	75.4	85.1	93.6
82.5°	42.4	36.3	37.1	37.9	38.4	39.6	42.7	46.8	49.8	55.7	61.3
85°	23.5	19.4	20.2	20.9	20.5	21.8	23.5	25.9	27.4	30.2	33.2
87.5°	8.7	7.2	7.4	7.9	8.2	8.9	8.9	10.3	10.5	10.8	11.5
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°	751.3	751.3	751.3
2.5°	733.4	737.3	740.3
5°	720.7	724.0	726.6
7.5°	708.4	711.4	713.7
10°	696.7	700.0	701.7
12.5°	684.8	688.5	689.8
15°	672.9	676.7	678.4
17.5°	660.8	665.7	667.5
20°	649.5	655.7	657.2
22.5°	638.0	644.4	646.2
25°	625.5	633.0	634.8
27.5°	612.2	621.2	623.0
30°	598.9	608.7	610.5
32.5°	584.6	595.3	596.9
35°	569.6	580.3	582.3
37.5°	553.1	564.7	568.7
40°	535.8	548.5	552.6
42.5°	517.8	531.5	535.8
45°	498.4	513.5	518.4
47.5°	478.8	495.9	500.2
50°	457.7	475.9	481.0
52.5°	435.5	455.4	460.4
55°	412.5	432.5	438.1
57.5°	387.5	408.2	414.1
60°	361.4	382.1	387.7
62.5°	334.7	353.4	358.8
65°	304.8	322.3	327.3
67.5°	273.1	289.2	293.3
70°	239.4	253.4	257.0
72.5°	204.3	214.0	218.7
75°	168.0	175.7	179.3
77.5°	131.5	137.0	139.9
80°	95.9	99.0	101.5
82.5°	62.7	64.0	65.8
85°	33.8	33.8	35.0
87.5°	11.5	11.0	11.5
90°	0.0	0.0	0.0

(END OF REPORT)