

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: P835267

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835267
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-LD4-3LO-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

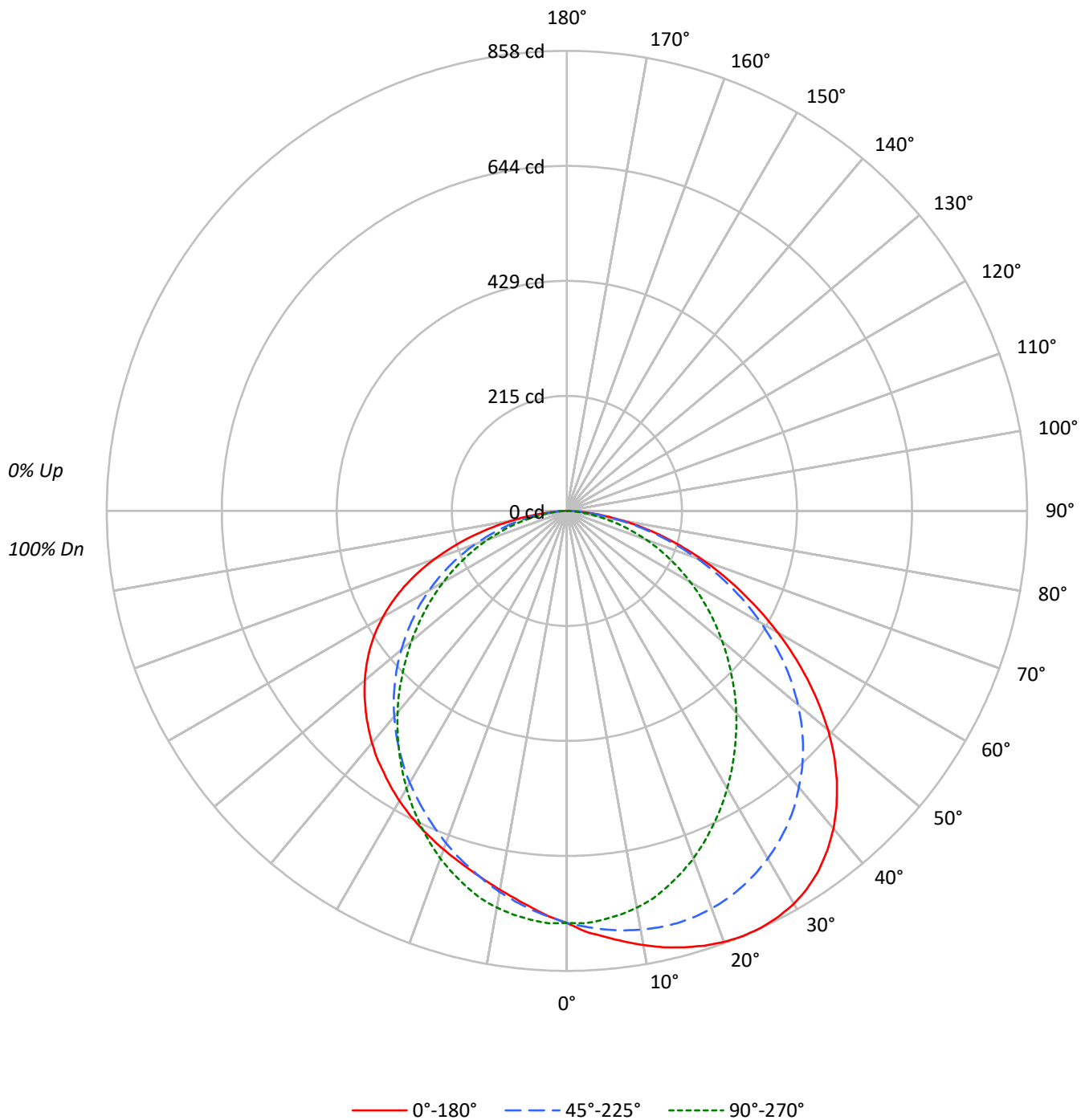
Lumens per Lamp: N/A
Luminaire Lumens: 2260.1 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	2067	2067	2067
5°	2153	2069	2007
10°	2247	2053	1961
15°	2348	2020	1933
20°	2450	1976	1925
25°	2547	1918	1928
30°	2630	1858	1940
35°	2689	1792	1956
40°	2717	1725	1985
45°	2709	1653	2018
50°	2661	1583	2059
55°	2570	1510	2102
60°	2445	1433	2134
65°	2296	1345	2131
70°	2137	1241	2068
75°	1940	1090	1907
80°	1666	896	1609
85°	1269	611	1105

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	3.2
10°-20°	210.4	9.3
20°-30°	322.4	14.3
30°-40°	393.4	17.4
40°-50°	411.5	18.2
50°-60°	372.4	16.5
60°-70°	282.0	12.5
70°-80°	157.2	7.0
80°-90°	37.9	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°	605.7	26.8
0°-40°	999.1	44.2
0°-60°	1783.0	78.9
0°-90°	2260.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2260.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	768	768	768	768	768	
5°	797	784	766	747	743	77
15°	843	796	725	691	694	239
25°	858	773	646	623	649	396
35°	819	716	546	545	596	511
45°	712	623	434	453	530	548
55°	548	495	322	350	448	489
65°	361	339	211	240	335	358
75°	187	176	105	125	183	198
85°	41	36	20	26	36	49
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°	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3
2.5°	785.3	781.6	778.6	779.8	780.4	778.1	776.1	776.4	774.4	778.2	769.2
5°	796.9	793.5	790.0	791.3	790.0	786.5	783.6	782.8	777.4	779.6	770.4
7.5°	809.8	806.1	800.9	802.4	799.6	793.0	789.3	787.2	778.9	779.1	768.8
10°	822.3	819.1	812.0	813.0	807.8	799.1	793.2	790.2	778.6	776.9	766.3
12.5°	833.8	829.5	821.9	822.4	814.9	803.3	795.7	791.3	776.2	771.2	760.8
15°	842.7	838.5	829.5	829.3	819.6	804.4	795.9	789.8	770.7	762.8	751.9
17.5°	850.3	846.4	835.2	834.8	823.1	803.9	793.7	786.1	762.6	752.9	740.8
20°	855.7	851.8	839.2	838.0	823.9	801.4	789.2	779.6	752.1	740.5	727.0
22.5°	858.2	854.3	840.1	838.4	821.9	796.4	782.6	771.4	740.0	724.8	710.9
25°	857.7	854.0	837.9	836.2	818.1	788.8	773.4	760.4	724.7	706.9	693.1
27.5°	853.5	850.6	833.7	831.5	811.0	778.6	762.1	747.9	707.7	687.9	672.9
30°	846.3	844.1	826.1	824.1	802.3	767.3	749.0	732.6	689.4	667.1	652.0
32.5°	834.7	832.7	814.5	812.7	790.5	752.9	733.7	716.8	669.4	644.7	629.6
35°	818.7	817.5	799.9	797.9	775.4	736.4	716.1	697.5	648.6	620.7	606.3
37.5°	797.7	797.7	780.8	778.6	756.6	716.3	696.3	676.5	625.1	595.5	581.3
40°	773.4	775.6	758.3	756.1	734.8	694.6	672.8	652.0	599.7	569.0	555.1
42.5°	744.2	746.2	731.7	729.7	709.7	669.6	649.3	626.6	573.2	542.0	527.5
45°	711.9	714.6	701.7	700.2	681.5	642.2	622.7	599.7	545.5	513.7	499.6
47.5°	676.0	679.5	668.2	667.4	650.1	614.2	593.8	570.5	516.4	484.3	471.1
50°	635.7	640.7	631.5	631.5	616.0	580.2	562.6	539.3	486.2	454.1	441.0
52.5°	592.5	598.9	592.0	592.2	579.6	547.5	529.2	506.3	454.6	423.0	411.0
55°	547.8	554.0	549.7	550.4	540.4	511.2	494.6	471.9	422.4	391.6	380.2
57.5°	501.1	507.9	505.0	506.3	499.5	473.3	456.0	436.1	389.1	358.7	349.0
60°	454.3	460.7	459.2	461.0	456.6	434.0	418.2	397.7	355.7	326.5	317.9
62.5°	406.9	412.8	412.5	414.5	412.1	393.3	379.2	361.7	321.1	294.2	286.3
65°	360.6	365.6	365.3	367.5	367.0	351.8	339.1	323.1	286.5	261.8	254.9
67.5°	315.6	319.8	318.6	321.1	321.8	309.7	298.6	284.3	253.6	229.6	223.7
70°	271.6	274.4	272.9	274.6	276.1	267.0	257.6	245.0	218.5	197.3	192.5
72.5°	228.4	230.4	228.1	229.7	231.1	224.5	216.8	205.9	183.9	165.6	161.6
75°	186.6	189.4	184.6	186.2	187.3	180.7	176.2	167.3	148.3	134.2	131.5
77.5°	146.1	147.8	145.1	144.4	145.1	140.4	136.9	130.0	115.7	104.1	102.4
80°	107.5	108.5	105.8	105.1	105.6	102.3	99.6	94.6	84.5	75.7	75.1
82.5°	72.0	72.6	70.2	69.5	69.9	68.9	65.7	62.1	57.4	50.0	49.9
85°	41.1	41.1	39.5	38.8	39.1	37.5	36.3	34.4	32.6	27.5	27.9
87.5°	15.1	15.1	14.3	14.1	15.8	13.9	13.4	12.6	13.1	10.4	11.1
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°	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3	768.3
2.5°	771.7	770.0	768.5	763.3	765.5	760.1	759.8	757.8	756.2	753.4	757.1
5°	769.2	765.8	761.5	755.2	757.1	750.7	749.4	747.0	745.0	741.3	744.2
7.5°	765.1	759.6	752.7	744.8	747.3	739.5	737.4	734.9	733.2	728.9	731.4
10°	759.3	751.4	743.3	733.7	735.6	727.0	724.5	721.8	720.3	716.4	719.0
12.5°	750.2	740.6	729.7	719.3	721.3	713.3	709.9	707.0	706.5	703.3	706.4
15°	738.4	725.2	713.9	702.8	705.2	695.8	694.3	691.4	692.3	690.1	693.8
17.5°	723.5	708.2	696.0	684.0	686.4	678.5	677.3	676.0	676.8	676.5	680.5
20°	706.7	689.9	675.8	664.0	665.4	659.2	659.7	659.3	661.0	662.9	668.4
22.5°	687.7	668.8	654.0	641.9	643.9	638.5	640.9	641.5	644.4	648.6	655.7
25°	666.4	646.1	630.6	619.2	621.1	617.5	621.6	623.2	627.8	634.8	642.0
27.5°	644.1	622.6	606.1	595.2	598.7	595.2	601.2	604.6	611.5	619.2	628.1
30°	620.4	598.0	581.1	571.3	574.7	571.5	581.3	585.8	592.7	603.3	613.8
32.5°	595.5	572.0	555.4	547.8	550.2	549.7	560.6	565.6	574.9	587.0	598.2
35°	570.0	545.5	528.7	522.3	525.2	525.8	538.9	544.8	554.9	569.5	581.6
37.5°	543.6	518.6	502.2	496.9	499.5	502.0	517.3	523.1	534.6	550.5	563.8
40°	516.3	491.2	475.1	470.9	473.4	476.1	492.7	500.8	513.2	530.5	545.0
42.5°	488.5	463.5	447.9	444.9	447.4	452.6	470.2	477.8	490.9	510.0	526.0
45°	460.3	434.3	420.7	418.3	421.0	427.1	444.4	453.4	467.4	488.4	505.5
47.5°	431.8	406.4	393.5	392.0	394.7	401.4	420.5	428.8	443.5	465.9	484.3
50°	402.9	378.2	365.8	365.3	367.8	375.0	393.3	403.1	418.3	443.4	462.3
52.5°	373.7	350.0	338.7	338.7	341.1	348.5	367.0	377.0	392.8	419.2	440.2
55°	344.5	321.9	311.2	312.0	315.4	321.8	339.7	350.3	366.3	393.7	415.8
57.5°	315.2	293.9	284.2	285.3	288.5	294.9	312.5	324.5	338.9	367.3	390.0
60°	286.3	266.2	257.6	259.0	261.8	268.2	286.5	296.8	311.2	340.1	362.8
62.5°	257.1	238.8	230.8	232.4	235.0	241.3	258.6	268.5	282.8	311.2	334.0
65°	228.2	211.3	204.4	206.1	208.4	214.3	230.6	240.2	253.8	281.5	303.3
67.5°	199.7	184.2	178.5	180.2	182.1	187.6	201.0	211.4	224.2	250.6	271.2
70°	171.5	157.7	152.7	154.3	156.0	161.1	172.8	182.4	194.1	218.3	237.5
72.5°	143.6	130.2	127.6	129.1	130.5	134.9	146.1	153.7	163.9	185.4	201.9
75°	116.4	104.8	103.1	104.6	105.8	109.2	118.6	125.1	133.7	152.3	165.8
77.5°	90.2	80.4	79.8	80.9	82.1	84.5	91.9	98.8	105.5	119.2	131.2
80°	65.7	57.8	57.8	58.9	58.6	61.5	66.7	72.2	77.1	87.0	95.7
82.5°	43.3	37.1	38.0	38.8	39.3	40.5	43.7	47.9	50.9	56.9	62.6
85°	24.0	19.8	20.7	21.3	21.0	22.3	24.0	26.5	28.0	30.9	33.9
87.5°	8.9	7.4	7.6	8.1	8.4	9.1	9.1	10.6	10.7	11.1	11.8
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°	768.3	768.3	768.3
2.5°	750.0	754.1	757.1
5°	737.1	740.5	743.1
7.5°	724.5	727.5	729.9
10°	712.6	715.9	717.6
12.5°	700.3	704.2	705.5
15°	688.2	692.1	693.8
17.5°	675.8	680.8	682.7
20°	664.2	670.6	672.1
22.5°	652.5	659.0	660.9
25°	639.7	647.4	649.3
27.5°	626.1	635.3	637.2
30°	612.5	622.6	624.4
32.5°	597.9	608.8	610.5
35°	582.6	593.5	595.5
37.5°	565.6	577.6	581.6
40°	548.0	560.9	565.1
42.5°	529.5	543.6	548.0
45°	509.7	525.2	530.2
47.5°	489.7	507.2	511.6
50°	468.1	486.7	491.9
52.5°	445.4	465.7	470.9
55°	421.9	442.4	448.1
57.5°	396.3	417.5	423.6
60°	369.6	390.8	396.5
62.5°	342.3	361.4	367.0
65°	311.7	329.7	334.7
67.5°	279.3	295.7	299.9
70°	244.9	259.1	262.8
72.5°	208.9	218.8	223.7
75°	171.8	179.7	183.4
77.5°	134.5	140.1	143.1
80°	98.1	101.3	103.8
82.5°	64.2	65.5	67.3
85°	34.6	34.6	35.8
87.5°	11.8	11.3	11.8
90°	0.0	0.0	0.0

(END OF REPORT)