

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: P834631

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834631
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1LO-27-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

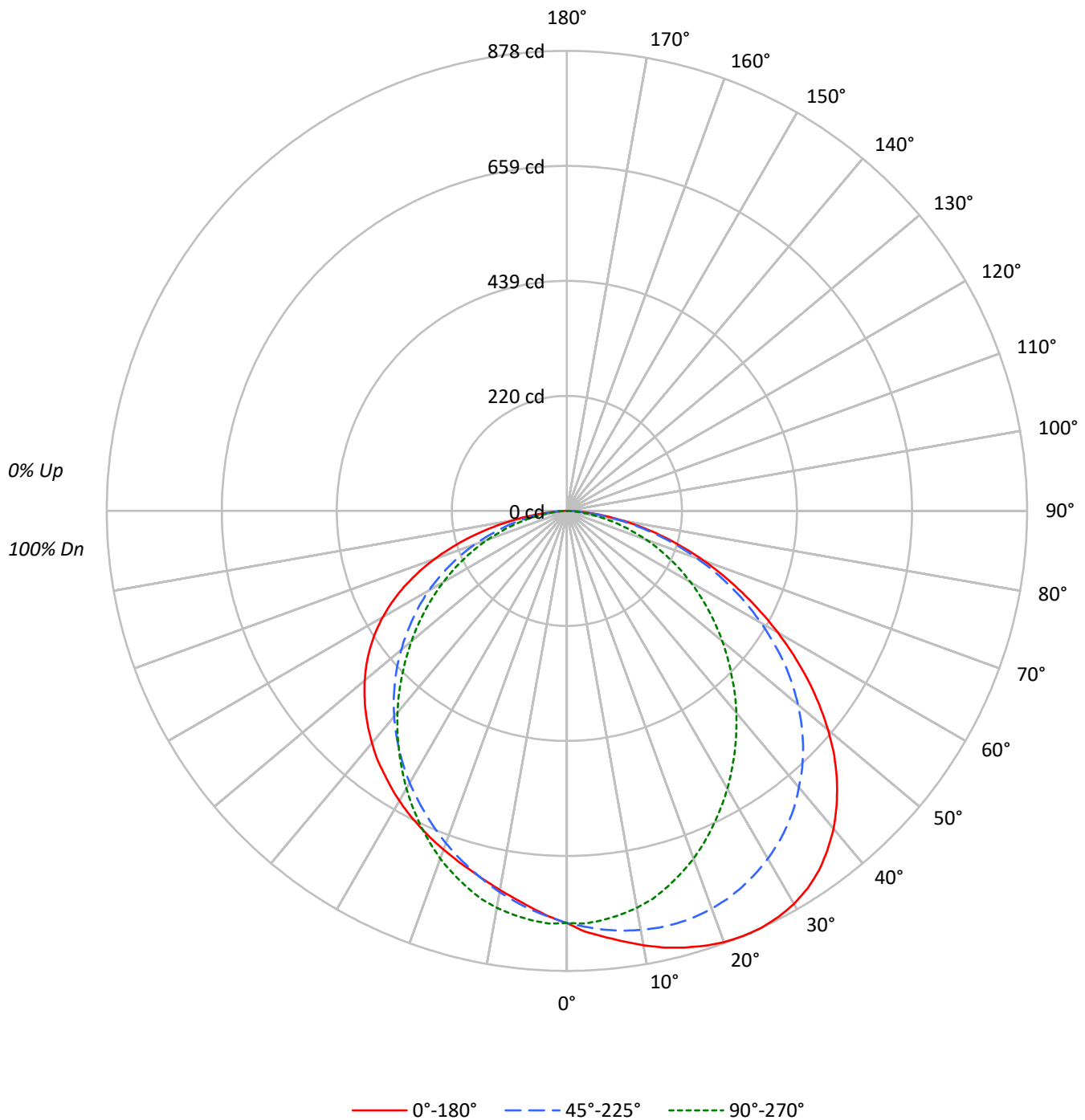
Lumens per Lamp: N/A
Luminaire Lumens: 2313.7 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	88		90
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	73	61	53	47	59	52	46		57	51	46		55
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	46	38	32	59	46	38	32	44	37	32		43	36	31		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1058	1058	1058
5°	1102	1059	1028
10°	1150	1051	1004
15°	1202	1034	989
20°	1254	1011	985
25°	1303	982	987
30°	1346	951	993
35°	1377	917	1001
40°	1391	883	1016
45°	1387	846	1033
50°	1362	810	1054
55°	1316	773	1076
60°	1252	733	1092
65°	1175	689	1091
70°	1094	635	1059
75°	993	558	976
80°	852	458	823
85°	650	313	565

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	3.2
10°-20°	215.4	9.3
20°-30°	330.0	14.3
30°-40°	402.8	17.4
40°-50°	421.2	18.2
50°-60°	381.2	16.5
60°-70°	288.7	12.5
70°-80°	160.9	7.0
80°-90°	38.8	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°	620.1	26.8
0°-40°	1022.8	44.2
0°-60°	1825.3	78.9
0°-90°	2313.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2313.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	787	787	787	787	787	
5°	816	802	784	765	761	79
15°	863	815	742	708	710	245
25°	878	792	661	638	665	405
35°	838	733	558	558	610	523
45°	729	638	445	464	543	561
55°	561	506	330	359	459	500
65°	369	347	216	246	343	366
75°	191	180	107	128	188	203
85°	42	37	20	27	37	51
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°	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6
2.5°	803.9	800.1	797.0	798.2	798.9	796.5	794.5	794.8	792.7	796.7	787.4
5°	815.8	812.3	808.7	810.1	808.7	805.1	802.2	801.3	795.8	798.1	788.6
7.5°	829.0	825.2	819.9	821.5	818.5	811.8	808.0	805.8	797.4	797.6	787.1
10°	841.7	838.5	831.3	832.3	827.0	818.0	812.0	808.9	797.0	795.3	784.5
12.5°	853.6	849.1	841.4	841.9	834.2	822.3	814.6	810.1	794.6	789.5	778.8
15°	862.7	858.4	849.1	849.0	839.0	823.5	814.8	808.6	789.0	780.9	769.7
17.5°	870.5	866.5	855.0	854.6	842.6	823.0	812.5	804.8	780.7	770.7	758.4
20°	876.0	872.0	859.1	857.9	843.5	820.4	807.9	798.1	769.9	758.0	744.3
22.5°	878.5	874.6	860.0	858.2	841.4	815.3	801.2	789.7	757.5	742.0	727.8
25°	878.0	874.2	857.7	856.0	837.4	807.5	791.7	778.5	741.9	723.6	709.5
27.5°	873.7	870.8	853.4	851.2	830.2	797.0	780.2	765.6	724.5	704.2	688.9
30°	866.3	864.1	845.7	843.6	821.3	785.5	766.8	749.9	705.8	682.9	667.4
32.5°	854.5	852.4	833.8	831.9	809.3	770.7	751.1	733.8	685.3	660.0	644.5
35°	838.1	836.9	818.9	816.8	793.8	753.9	733.1	714.0	664.0	635.4	620.6
37.5°	816.6	816.6	799.3	797.0	774.5	733.3	712.8	692.5	639.9	609.6	595.0
40°	791.7	793.9	776.2	774.0	752.2	711.1	688.7	667.4	613.9	582.5	568.2
42.5°	761.8	763.9	749.1	747.0	726.6	685.5	664.7	641.5	586.8	554.8	540.0
45°	728.8	731.5	718.3	716.8	697.7	657.4	637.5	613.9	558.4	525.9	511.5
47.5°	692.0	695.6	684.1	683.2	665.5	628.7	607.9	584.0	528.7	495.8	482.2
50°	650.7	655.9	646.4	646.4	630.6	594.0	575.9	552.1	497.7	464.9	451.5
52.5°	606.6	613.1	606.0	606.2	593.3	560.5	541.7	518.4	465.4	433.1	420.7
55°	560.8	567.2	562.7	563.4	553.3	523.3	506.3	483.1	432.4	400.9	389.2
57.5°	513.0	519.9	517.0	518.4	511.3	484.5	466.8	446.5	398.3	367.2	357.3
60°	465.1	471.6	470.0	471.9	467.5	444.3	428.1	407.1	364.1	334.2	325.5
62.5°	416.6	422.6	422.2	424.3	421.9	402.6	388.2	370.3	328.7	301.2	293.1
65°	369.1	374.3	373.9	376.2	375.7	360.2	347.1	330.8	293.3	268.0	261.0
67.5°	323.0	327.3	326.1	328.7	329.4	317.0	305.7	291.1	259.6	235.0	229.0
70°	278.0	280.9	279.4	281.1	282.6	273.4	263.7	250.8	223.7	202.0	197.0
72.5°	233.8	235.9	233.5	235.2	236.6	229.9	222.0	210.8	188.3	169.5	165.4
75°	191.0	193.9	188.9	190.7	191.7	185.0	180.3	171.2	151.8	137.4	134.6
77.5°	149.6	151.3	148.5	147.9	148.5	143.7	140.1	133.1	118.5	106.6	104.9
80°	110.0	111.1	108.3	107.6	108.1	104.7	102.0	96.8	86.5	77.5	76.9
82.5°	73.8	74.3	71.9	71.2	71.5	70.5	67.2	63.6	58.8	51.2	51.1
85°	42.1	42.1	40.4	39.7	40.1	38.3	37.1	35.2	33.4	28.2	28.5
87.5°	15.5	15.5	14.6	14.4	16.2	14.3	13.8	12.9	13.4	10.7	11.3
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°	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6	786.6
2.5°	790.0	788.3	786.7	781.4	783.6	778.1	777.8	775.7	774.2	771.3	775.0
5°	787.4	784.0	779.5	773.1	775.0	768.5	767.1	764.7	762.7	758.9	761.8
7.5°	783.3	777.6	770.6	762.5	765.1	757.0	754.9	752.3	750.6	746.2	748.7
10°	777.3	769.2	760.9	751.1	753.0	744.3	741.7	738.9	737.4	733.4	736.0
12.5°	768.0	758.2	747.0	736.4	738.4	730.2	726.7	723.8	723.3	720.0	723.1
15°	756.0	742.4	730.9	719.5	721.9	712.3	710.7	707.8	708.7	706.4	710.2
17.5°	740.7	725.0	712.5	700.3	702.7	694.6	693.4	692.0	692.9	692.5	696.6
20°	723.5	706.3	691.8	679.8	681.2	674.8	675.3	675.0	676.7	678.6	684.3
22.5°	704.0	684.6	669.5	657.1	659.2	653.7	656.1	656.8	659.7	664.0	671.2
25°	682.2	661.4	645.6	633.9	635.8	632.2	636.3	638.0	642.7	649.9	657.3
27.5°	659.3	637.3	620.5	609.3	612.9	609.3	615.5	618.9	626.0	633.9	643.0
30°	635.1	612.2	594.9	584.9	588.3	585.1	595.0	599.7	606.7	617.6	628.4
32.5°	609.6	585.6	568.6	560.8	563.2	562.7	573.9	579.0	588.5	600.9	612.4
35°	583.5	558.4	541.2	534.7	537.6	538.3	551.7	557.7	568.0	583.0	595.4
37.5°	556.5	530.9	514.1	508.7	511.3	513.9	529.5	535.5	547.2	563.6	577.2
40°	528.5	502.9	486.4	482.1	484.7	487.4	504.4	512.7	525.4	543.1	557.9
42.5°	500.1	474.5	458.5	455.4	458.0	463.3	481.4	489.1	502.5	522.1	538.5
45°	471.2	444.6	430.7	428.3	431.0	437.2	454.9	464.2	478.5	500.0	517.5
47.5°	442.0	416.1	402.8	401.3	404.0	410.9	430.5	438.9	454.1	476.9	495.8
50°	412.4	387.2	374.5	373.9	376.5	383.9	402.6	412.6	428.3	453.9	473.3
52.5°	382.5	358.3	346.8	346.8	349.2	356.7	375.7	386.0	402.1	429.1	450.6
55°	352.6	329.6	318.6	319.4	322.9	329.4	347.8	358.6	375.0	403.0	425.7
57.5°	322.7	300.9	290.9	292.1	295.4	301.9	320.0	332.2	346.9	376.0	399.2
60°	293.1	272.5	263.7	265.1	268.0	274.6	293.3	303.8	318.6	348.1	371.4
62.5°	263.2	244.5	236.2	237.9	240.5	247.1	264.8	274.9	289.5	318.6	342.0
65°	233.6	216.3	209.2	211.0	213.4	219.4	236.1	245.9	259.8	288.1	310.5
67.5°	204.4	188.6	182.8	184.5	186.4	192.0	205.8	216.5	229.5	256.5	277.7
70°	175.5	161.4	156.3	158.0	159.7	164.9	176.9	186.7	198.7	223.5	243.1
72.5°	147.0	133.2	130.7	132.2	133.6	138.1	149.6	157.3	167.8	189.8	206.7
75°	119.1	107.3	105.6	107.1	108.3	111.8	121.4	128.1	136.9	155.9	169.7
77.5°	92.3	82.4	81.7	82.9	84.1	86.5	94.0	101.1	108.0	122.1	134.3
80°	67.2	59.1	59.1	60.3	60.0	62.9	68.3	73.9	78.9	89.1	98.0
82.5°	44.4	38.0	38.9	39.7	40.2	41.4	44.7	49.0	52.1	58.3	64.1
85°	24.6	20.3	21.1	21.8	21.5	22.9	24.6	27.2	28.7	31.6	34.7
87.5°	9.1	7.6	7.7	8.3	8.6	9.3	9.3	10.8	11.0	11.3	12.0
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°	786.6	786.6	786.6
2.5°	767.8	771.9	775.0
5°	754.6	758.0	760.8
7.5°	741.7	744.8	747.2
10°	729.5	732.9	734.6
12.5°	716.9	720.9	722.3
15°	704.5	708.5	710.2
17.5°	691.8	697.0	698.9
20°	680.0	686.5	688.0
22.5°	667.9	674.6	676.5
25°	654.9	662.8	664.7
27.5°	640.9	650.4	652.3
30°	627.0	637.3	639.2
32.5°	612.1	623.2	624.9
35°	596.4	607.6	609.6
37.5°	579.0	591.2	595.4
40°	561.0	574.2	578.5
42.5°	542.1	556.5	561.0
45°	521.8	537.6	542.8
47.5°	501.3	519.2	523.7
50°	479.2	498.2	503.6
52.5°	455.9	476.7	482.1
55°	431.9	452.9	458.7
57.5°	405.7	427.4	433.6
60°	378.4	400.1	405.9
62.5°	350.4	370.0	375.7
65°	319.1	337.5	342.6
67.5°	285.9	302.8	307.1
70°	250.7	265.3	269.1
72.5°	213.9	224.0	229.0
75°	175.9	184.0	187.7
77.5°	137.7	143.4	146.5
80°	100.4	103.7	106.2
82.5°	65.7	67.1	68.9
85°	35.4	35.4	36.6
87.5°	12.0	11.5	12.0
90°	0.0	0.0	0.0

(END OF REPORT)