

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: P835282

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835282
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-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

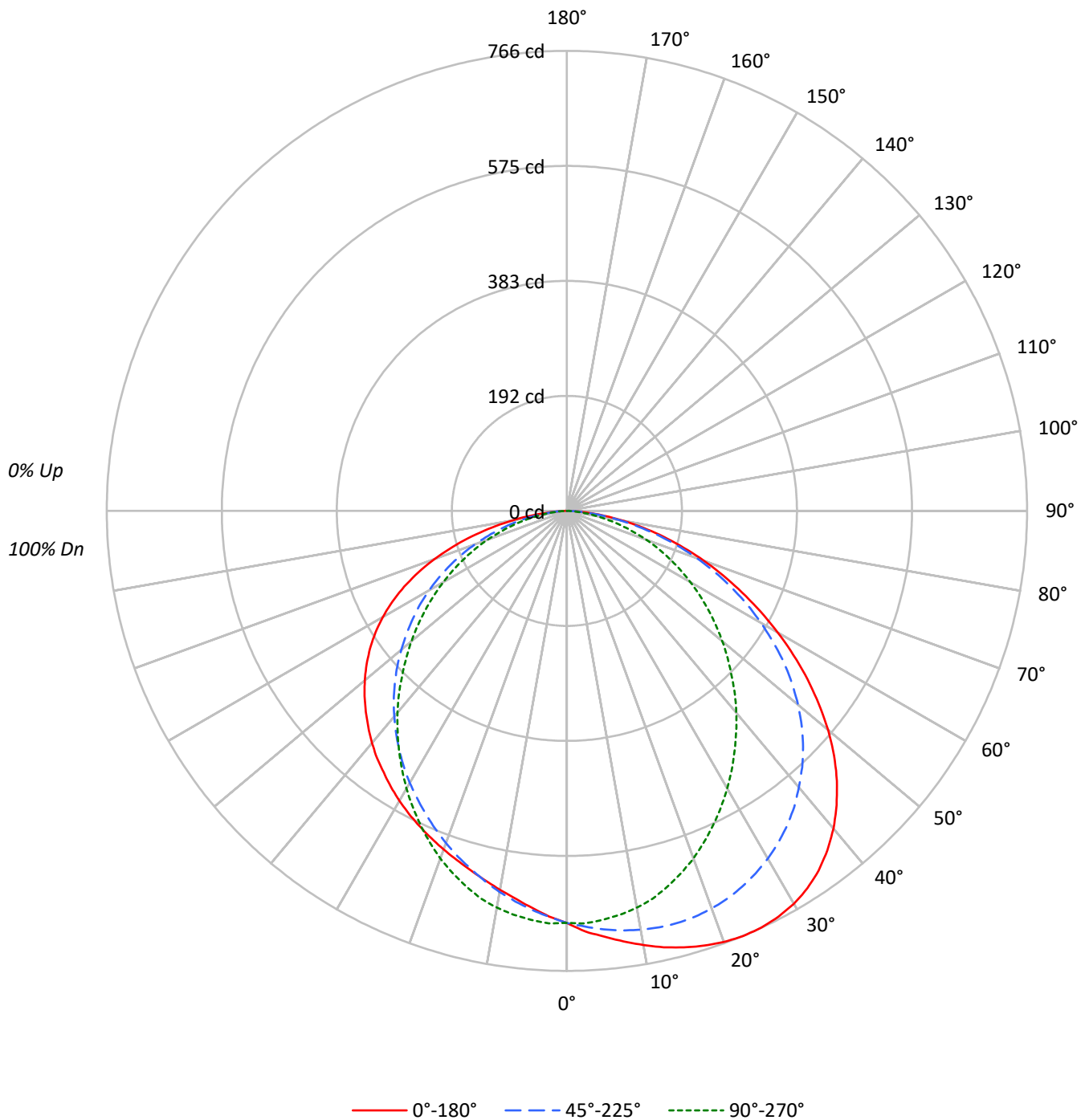
Lumens per Lamp: N/A
Luminaire Lumens: 2017.7 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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
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°	1846	1846	1846
5°	1922	1847	1792
10°	2006	1833	1751
15°	2096	1804	1726
20°	2188	1764	1718
25°	2273	1713	1721
30°	2348	1659	1732
35°	2401	1600	1747
40°	2425	1541	1772
45°	2419	1475	1801
50°	2376	1414	1839
55°	2295	1348	1877
60°	2183	1279	1905
65°	2050	1201	1903
70°	1907	1108	1846
75°	1732	973	1702
80°	1488	800	1437
85°	1133	546	985

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	3.2
10°-20°	187.9	9.3
20°-30°	287.8	14.3
30°-40°	351.2	17.4
40°-50°	367.3	18.2
50°-60°	332.5	16.5
60°-70°	251.8	12.5
70°-80°	140.3	7.0
80°-90°	33.8	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°	540.8	26.8
0°-40°	892.0	44.2
0°-60°	1591.8	78.9
0°-90°	2017.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	686	686	686	686	686	
5°	711	700	684	667	664	69
15°	752	710	647	617	619	213
25°	766	690	577	556	580	353
35°	731	639	487	486	532	456
45°	636	556	388	405	473	489
55°	489	442	287	313	400	436
65°	322	303	189	214	299	319
75°	167	157	94	112	164	177
85°	37	32	18	24	32	44
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°	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0
2.5°	701.1	697.8	695.1	696.1	696.7	694.6	692.8	693.1	691.3	694.8	686.7
5°	711.4	708.4	705.3	706.5	705.3	702.1	699.6	698.8	694.0	696.0	687.8
7.5°	723.0	719.7	715.0	716.4	713.8	708.0	704.7	702.7	695.4	695.5	686.4
10°	734.1	731.2	724.9	725.8	721.2	713.4	708.1	705.4	695.1	693.6	684.2
12.5°	744.4	740.5	733.8	734.2	727.5	717.1	710.4	706.5	693.0	688.5	679.2
15°	752.4	748.6	740.5	740.4	731.7	718.2	710.5	705.1	688.1	681.0	671.3
17.5°	759.1	755.7	745.6	745.3	734.8	717.7	708.6	701.8	680.9	672.2	661.4
20°	763.9	760.5	749.2	748.2	735.6	715.5	704.5	696.0	671.4	661.1	649.1
22.5°	766.2	762.7	750.0	748.5	733.8	711.0	698.7	688.7	660.6	647.1	634.7
25°	765.7	762.4	748.0	746.5	730.3	704.2	690.4	678.9	647.0	631.1	618.8
27.5°	762.0	759.4	744.3	742.3	724.0	695.1	680.4	667.7	631.8	614.1	600.8
30°	755.5	753.6	737.5	735.7	716.2	685.1	668.7	654.0	615.5	595.5	582.0
32.5°	745.2	743.4	727.2	725.5	705.7	672.2	655.1	639.9	597.6	575.6	562.1
35°	730.9	729.9	714.1	712.3	692.2	657.5	639.3	622.7	579.0	554.2	541.3
37.5°	712.2	712.2	697.0	695.1	675.5	639.5	621.6	603.9	558.1	531.7	518.9
40°	690.4	692.4	677.0	675.0	656.0	620.1	600.6	582.0	535.4	508.0	495.5
42.5°	664.4	666.2	653.3	651.5	633.6	597.8	579.6	559.4	511.7	483.8	470.9
45°	635.6	638.0	626.4	625.1	608.4	573.4	556.0	535.4	487.0	458.7	446.1
47.5°	603.5	606.6	596.6	595.8	580.4	548.3	530.2	509.3	461.0	432.4	420.6
50°	567.5	572.0	563.8	563.8	550.0	518.0	502.3	481.4	434.1	405.4	393.7
52.5°	529.0	534.7	528.5	528.7	517.4	488.8	472.4	452.1	405.9	377.7	366.9
55°	489.1	494.6	490.7	491.3	482.5	456.4	441.6	421.3	377.1	349.6	339.5
57.5°	447.4	453.4	450.9	452.1	445.9	422.5	407.1	389.4	347.4	320.3	311.6
60°	405.6	411.3	409.9	411.6	407.7	387.4	373.3	355.0	317.6	291.5	283.8
62.5°	363.3	368.5	368.2	370.0	367.9	351.1	338.6	323.0	286.7	262.7	255.6
65°	321.9	326.4	326.1	328.1	327.6	314.1	302.7	288.5	255.8	233.7	227.6
67.5°	281.7	285.5	284.4	286.7	287.3	276.5	266.6	253.8	226.4	205.0	199.7
70°	242.4	245.0	243.6	245.1	246.5	238.4	230.0	218.8	195.1	176.2	171.8
72.5°	203.9	205.7	203.6	205.1	206.3	200.5	193.6	183.8	164.2	147.8	144.2
75°	166.6	169.1	164.8	166.3	167.2	161.3	157.3	149.3	132.4	119.8	117.4
77.5°	130.4	131.9	129.5	128.9	129.5	125.3	122.2	116.0	103.3	93.0	91.5
80°	96.0	96.9	94.5	93.9	94.3	91.3	88.9	84.4	75.4	67.6	67.0
82.5°	64.3	64.8	62.7	62.1	62.4	61.5	58.6	55.5	51.3	44.7	44.5
85°	36.7	36.7	35.2	34.6	34.9	33.4	32.4	30.7	29.1	24.6	24.9
87.5°	13.5	13.5	12.7	12.6	14.1	12.4	12.0	11.2	11.7	9.3	9.9
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°	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0	686.0
2.5°	689.0	687.5	686.1	681.5	683.4	678.6	678.3	676.5	675.2	672.6	675.9
5°	686.7	683.7	679.8	674.3	675.9	670.2	669.0	666.9	665.1	661.8	664.4
7.5°	683.1	678.2	672.0	665.0	667.2	660.2	658.4	656.1	654.6	650.7	653.0
10°	677.9	670.8	663.6	655.1	656.7	649.1	646.8	644.4	643.1	639.6	641.9
12.5°	669.8	661.2	651.5	642.2	644.0	636.8	633.8	631.2	630.8	627.9	630.6
15°	659.3	647.4	637.4	627.5	629.6	621.2	619.8	617.3	618.0	616.1	619.4
17.5°	645.9	632.3	621.3	610.7	612.8	605.7	604.7	603.5	604.2	603.9	607.5
20°	630.9	615.9	603.3	592.8	594.0	588.5	588.9	588.6	590.1	591.8	596.7
22.5°	614.0	597.0	583.8	573.1	574.8	570.1	572.2	572.8	575.3	579.0	585.3
25°	594.9	576.8	563.0	552.8	554.5	551.3	554.9	556.4	560.5	566.8	573.2
27.5°	575.0	555.8	541.1	531.4	534.5	531.4	536.8	539.8	545.9	552.8	560.8
30°	553.9	533.9	518.8	510.1	513.1	510.2	518.9	523.0	529.1	538.6	548.0
32.5°	531.7	510.7	495.8	489.1	491.2	490.7	500.5	505.0	513.2	524.0	534.1
35°	508.9	487.0	472.0	466.3	468.8	469.4	481.1	486.4	495.4	508.4	519.2
37.5°	485.3	463.0	448.3	443.7	445.9	448.2	461.8	467.0	477.2	491.5	503.3
40°	460.9	438.6	424.2	420.4	422.7	425.1	439.9	447.1	458.2	473.6	486.5
42.5°	436.2	413.8	399.9	397.2	399.4	404.1	419.8	426.6	438.3	455.4	469.6
45°	411.0	387.7	375.6	373.5	375.9	381.3	396.7	404.8	417.3	436.0	451.3
47.5°	385.5	362.8	351.3	349.9	352.3	358.3	375.4	382.8	396.0	415.9	432.4
50°	359.7	337.7	326.6	326.1	328.4	334.8	351.1	359.8	373.5	395.8	412.8
52.5°	333.6	312.5	302.4	302.4	304.5	311.1	327.6	336.6	350.7	374.2	393.0
55°	307.5	287.4	277.8	278.6	281.6	287.3	303.3	312.8	327.0	351.4	371.2
57.5°	281.4	262.4	253.7	254.7	257.6	263.3	279.0	289.7	302.6	327.9	348.1
60°	255.6	237.6	230.0	231.2	233.7	239.4	255.8	264.9	277.8	303.6	323.9
62.5°	229.6	213.2	206.0	207.5	209.8	215.5	230.9	239.7	252.5	277.8	298.2
65°	203.8	188.6	182.5	184.0	186.1	191.3	205.9	214.4	226.6	251.3	270.8
67.5°	178.3	164.5	159.4	160.9	162.5	167.5	179.5	188.8	200.2	223.7	242.1
70°	153.1	140.8	136.3	137.8	139.3	143.8	154.3	162.8	173.3	194.9	212.0
72.5°	128.2	116.2	114.0	115.3	116.5	120.4	130.4	137.2	146.3	165.5	180.2
75°	103.9	93.6	92.1	93.4	94.5	97.5	105.9	111.7	119.3	136.0	148.0
77.5°	80.5	71.8	71.2	72.3	73.3	75.4	82.0	88.2	94.2	106.5	117.1
80°	58.6	51.6	51.6	52.6	52.3	54.9	59.5	64.5	68.8	77.7	85.5
82.5°	38.7	33.1	33.9	34.6	35.1	36.1	39.0	42.7	45.4	50.8	55.9
85°	21.4	17.7	18.4	19.0	18.7	19.9	21.4	23.7	25.0	27.6	30.3
87.5°	7.9	6.6	6.7	7.2	7.5	8.1	8.1	9.4	9.6	9.9	10.5
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°	686.0	686.0	686.0
2.5°	669.6	673.2	675.9
5°	658.1	661.1	663.5
7.5°	646.8	649.5	651.6
10°	636.2	639.2	640.7
12.5°	625.2	628.7	629.9
15°	614.4	617.9	619.4
17.5°	603.3	607.8	609.5
20°	593.0	598.7	600.0
22.5°	582.5	588.3	590.0
25°	571.1	578.0	579.6
27.5°	559.0	567.2	568.9
30°	546.8	555.8	557.5
32.5°	533.8	543.5	545.0
35°	520.1	529.9	531.7
37.5°	505.0	515.6	519.2
40°	489.2	500.8	504.5
42.5°	472.7	485.3	489.2
45°	455.1	468.8	473.3
47.5°	437.2	452.8	456.7
50°	417.9	434.5	439.2
52.5°	397.6	415.8	420.4
55°	376.6	394.9	400.0
57.5°	353.8	372.7	378.1
60°	330.0	348.9	354.0
62.5°	305.6	322.7	327.6
65°	278.3	294.3	298.8
67.5°	249.3	264.0	267.8
70°	218.6	231.3	234.6
72.5°	186.5	195.4	199.7
75°	153.4	160.4	163.7
77.5°	120.1	125.0	127.7
80°	87.6	90.4	92.7
82.5°	57.3	58.5	60.1
85°	30.9	30.9	31.9
87.5°	10.5	10.0	10.5
90°	0.0	0.0	0.0

(END OF REPORT)