

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: P835265

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835265
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-LD4-2STD-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

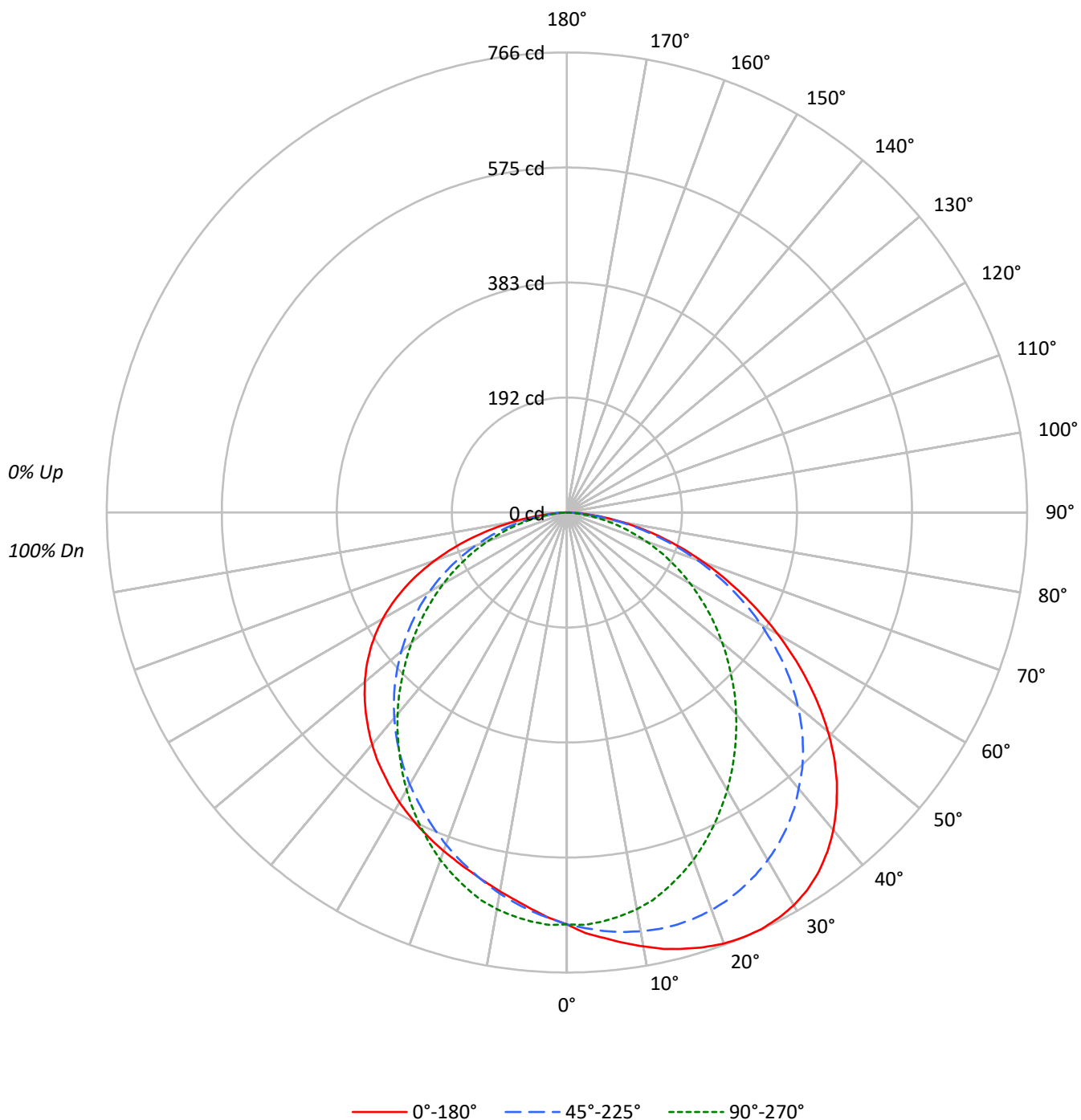
Lumens per Lamp: N/A
Luminaire Lumens: 2017.1 lumens
Efficiency: N/A
Efficacy: 60.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	1845	1845	1845
5°	1921	1846	1791
10°	2005	1832	1750
15°	2095	1803	1725
20°	2187	1763	1718
25°	2273	1712	1721
30°	2347	1658	1732
35°	2400	1599	1746
40°	2425	1540	1772
45°	2418	1475	1801
50°	2375	1413	1838
55°	2294	1348	1876
60°	2182	1279	1905
65°	2049	1201	1902
70°	1907	1107	1846
75°	1731	972	1702
80°	1486	800	1435
85°	1133	546	985

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	3.2
10°-20°	187.8	9.3
20°-30°	287.7	14.3
30°-40°	351.1	17.4
40°-50°	367.2	18.2
50°-60°	332.4	16.5
60°-70°	251.7	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°	540.6	26.8
0°-40°	891.7	44.2
0°-60°	1591.3	78.9
0°-90°	2017.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	686	686	686	686	686	
5°	711	699	684	667	663	69
15°	752	710	647	617	619	213
25°	766	690	577	556	580	353
35°	731	639	487	486	532	456
45°	635	556	388	405	473	489
55°	489	441	287	313	400	436
65°	322	303	189	214	299	319
75°	166	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°	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7
2.5°	700.9	697.6	694.9	695.9	696.5	694.4	692.6	692.9	691.1	694.6	686.5
5°	711.2	708.2	705.1	706.3	705.1	701.9	699.4	698.6	693.8	695.8	687.5
7.5°	722.7	719.4	714.8	716.1	713.6	707.8	704.5	702.5	695.2	695.3	686.2
10°	733.8	731.0	724.7	725.6	720.9	713.2	707.9	705.2	694.9	693.4	683.9
12.5°	744.2	740.3	733.5	734.0	727.2	716.9	710.2	706.3	692.8	688.3	679.0
15°	752.1	748.4	740.3	740.1	731.4	717.9	710.3	704.9	687.8	680.8	671.0
17.5°	758.9	755.4	745.4	745.1	734.6	717.5	708.4	701.6	680.6	671.9	661.1
20°	763.7	760.2	749.0	747.9	735.3	715.2	704.3	695.8	671.2	660.8	648.9
22.5°	765.9	762.5	749.7	748.2	733.5	710.8	698.5	688.4	660.4	646.9	634.5
25°	765.5	762.2	747.8	746.3	730.1	704.0	690.2	678.7	646.8	630.9	618.6
27.5°	761.7	759.2	744.0	742.1	723.8	694.9	680.2	667.4	631.6	613.9	600.6
30°	755.3	753.3	737.3	735.5	716.0	684.8	668.5	653.8	615.3	595.3	581.9
32.5°	744.9	743.1	726.9	725.3	705.5	671.9	654.8	639.7	597.4	575.4	561.9
35°	730.7	729.6	713.9	712.1	692.0	657.2	639.1	622.5	578.9	554.0	541.1
37.5°	712.0	712.0	696.8	694.9	675.2	639.3	621.4	603.7	557.9	531.5	518.8
40°	690.2	692.2	676.7	674.8	655.7	619.9	600.4	581.9	535.2	507.8	495.4
42.5°	664.1	665.9	653.0	651.2	633.4	597.6	579.5	559.2	511.6	483.7	470.8
45°	635.4	637.8	626.2	624.9	608.2	573.2	555.8	535.2	486.8	458.5	445.9
47.5°	603.3	606.4	596.4	595.6	580.2	548.1	530.0	509.2	460.9	432.3	420.4
50°	567.3	571.8	563.6	563.6	549.8	517.9	502.1	481.3	433.9	405.3	393.6
52.5°	528.8	534.5	528.3	528.5	517.3	488.6	472.3	451.9	405.7	377.6	366.8
55°	488.9	494.5	490.6	491.2	482.3	456.2	441.4	421.2	377.0	349.5	339.3
57.5°	447.3	453.3	450.7	451.9	445.8	422.4	406.9	389.3	347.3	320.2	311.5
60°	405.4	411.1	409.8	411.4	407.5	387.3	373.2	354.9	317.5	291.4	283.7
62.5°	363.2	368.4	368.1	369.9	367.8	351.0	338.4	322.9	286.6	262.6	255.6
65°	321.8	326.3	326.0	327.9	327.5	314.0	302.6	288.4	255.7	233.7	227.5
67.5°	281.6	285.4	284.3	286.6	287.2	276.4	266.5	253.8	226.3	204.9	199.6
70°	242.4	244.9	243.6	245.1	246.4	238.3	229.9	218.7	195.0	176.1	171.8
72.5°	203.8	205.6	203.5	205.0	206.2	200.4	193.5	183.8	164.1	147.8	144.2
75°	166.5	169.1	164.7	166.2	167.1	161.3	157.2	149.3	132.3	119.8	117.4
77.5°	130.4	131.9	129.5	128.9	129.5	125.3	122.2	116.0	103.3	92.9	91.4
80°	95.9	96.8	94.4	93.8	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°	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7
2.5°	688.7	687.2	685.9	681.2	683.2	678.4	678.1	676.3	674.9	672.4	675.7
5°	686.5	683.5	679.6	674.0	675.7	670.0	668.8	666.7	664.9	661.6	664.1
7.5°	682.9	677.9	671.8	664.7	667.0	659.9	658.1	655.9	654.4	650.5	652.7
10°	677.6	670.6	663.4	654.8	656.5	648.9	646.6	644.2	642.9	639.4	641.7
12.5°	669.5	661.0	651.2	642.0	643.8	636.6	633.6	631.0	630.6	627.7	630.4
15°	659.0	647.2	637.2	627.3	629.4	621.0	619.6	617.1	617.8	615.9	619.2
17.5°	645.7	632.1	621.1	610.5	612.6	605.5	604.5	603.3	604.0	603.7	607.3
20°	630.7	615.7	603.1	592.6	593.8	588.3	588.7	588.4	589.9	591.6	596.5
22.5°	613.8	596.8	583.7	572.9	574.7	569.9	572.0	572.6	575.1	578.9	585.1
25°	594.7	576.6	562.8	552.6	554.3	551.1	554.7	556.2	560.3	566.6	573.0
27.5°	574.8	555.6	540.9	531.2	534.3	531.2	536.6	539.6	545.7	552.6	560.6
30°	553.7	533.7	518.6	509.9	512.9	510.1	518.8	522.8	528.9	538.4	547.8
32.5°	531.5	510.5	495.7	488.9	491.0	490.6	500.3	504.8	513.1	523.8	533.9
35°	508.7	486.8	471.8	466.1	468.7	469.3	481.0	486.2	495.2	508.3	519.1
37.5°	485.2	462.8	448.2	443.5	445.8	448.0	461.6	466.9	477.1	491.3	503.2
40°	460.7	438.4	424.0	420.3	422.5	424.9	439.8	447.0	458.0	473.5	486.4
42.5°	436.0	413.7	399.7	397.0	399.3	403.9	419.7	426.4	438.1	455.2	469.4
45°	410.8	387.6	375.5	373.4	375.8	381.2	396.6	404.7	417.1	435.9	451.2
47.5°	385.4	362.7	351.2	349.8	352.2	358.2	375.3	382.7	395.8	415.8	432.3
50°	359.6	337.5	326.4	326.0	328.2	334.7	351.0	359.7	373.4	395.7	412.6
52.5°	333.5	312.4	302.3	302.3	304.4	311.0	327.5	336.5	350.6	374.1	392.8
55°	307.4	287.3	277.7	278.5	281.5	287.2	303.2	312.7	326.9	351.3	371.1
57.5°	281.3	262.3	253.6	254.7	257.5	263.2	278.9	289.6	302.5	327.8	348.0
60°	255.6	237.6	229.9	231.1	233.7	239.4	255.7	264.8	277.7	303.5	323.8
62.5°	229.5	213.1	205.9	207.4	209.7	215.4	230.8	239.7	252.4	277.7	298.1
65°	203.7	188.6	182.4	183.9	186.0	191.3	205.8	214.3	226.5	251.2	270.7
67.5°	178.2	164.4	159.3	160.8	162.5	167.4	179.4	188.7	200.1	223.6	242.1
70°	153.0	140.7	136.2	137.7	139.2	143.7	154.2	162.8	173.3	194.8	211.9
72.5°	128.2	116.2	113.9	115.3	116.5	120.4	130.4	137.1	146.3	165.5	180.2
75°	103.9	93.5	92.0	93.4	94.4	97.4	105.8	111.7	119.3	135.9	147.9
77.5°	80.5	71.8	71.2	72.2	73.3	75.4	82.0	88.1	94.1	106.4	117.1
80°	58.6	51.6	51.6	52.6	52.3	54.9	59.5	64.5	68.8	77.6	85.4
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°	685.7	685.7	685.7
2.5°	669.4	673.0	675.7
5°	657.8	660.8	663.2
7.5°	646.6	649.3	651.4
10°	636.0	639.0	640.5
12.5°	625.0	628.5	629.7
15°	614.2	617.7	619.2
17.5°	603.1	607.6	609.3
20°	592.8	598.5	599.8
22.5°	582.3	588.1	589.8
25°	570.9	577.8	579.5
27.5°	558.8	567.0	568.7
30°	546.6	555.6	557.3
32.5°	533.6	543.3	544.8
35°	519.9	529.7	531.5
37.5°	504.8	515.5	519.1
40°	489.1	500.6	504.4
42.5°	472.6	485.2	489.1
45°	454.9	468.7	473.2
47.5°	437.1	452.7	456.5
50°	417.7	434.4	439.0
52.5°	397.5	415.6	420.3
55°	376.5	394.8	399.9
57.5°	353.7	372.6	378.0
60°	329.9	348.8	353.9
62.5°	305.5	322.6	327.5
65°	278.2	294.2	298.7
67.5°	249.3	263.9	267.7
70°	218.5	231.3	234.6
72.5°	186.5	195.3	199.6
75°	153.3	160.4	163.7
77.5°	120.1	125.0	127.7
80°	87.5	90.4	92.6
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)