

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: P835318

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2LO-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835318
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

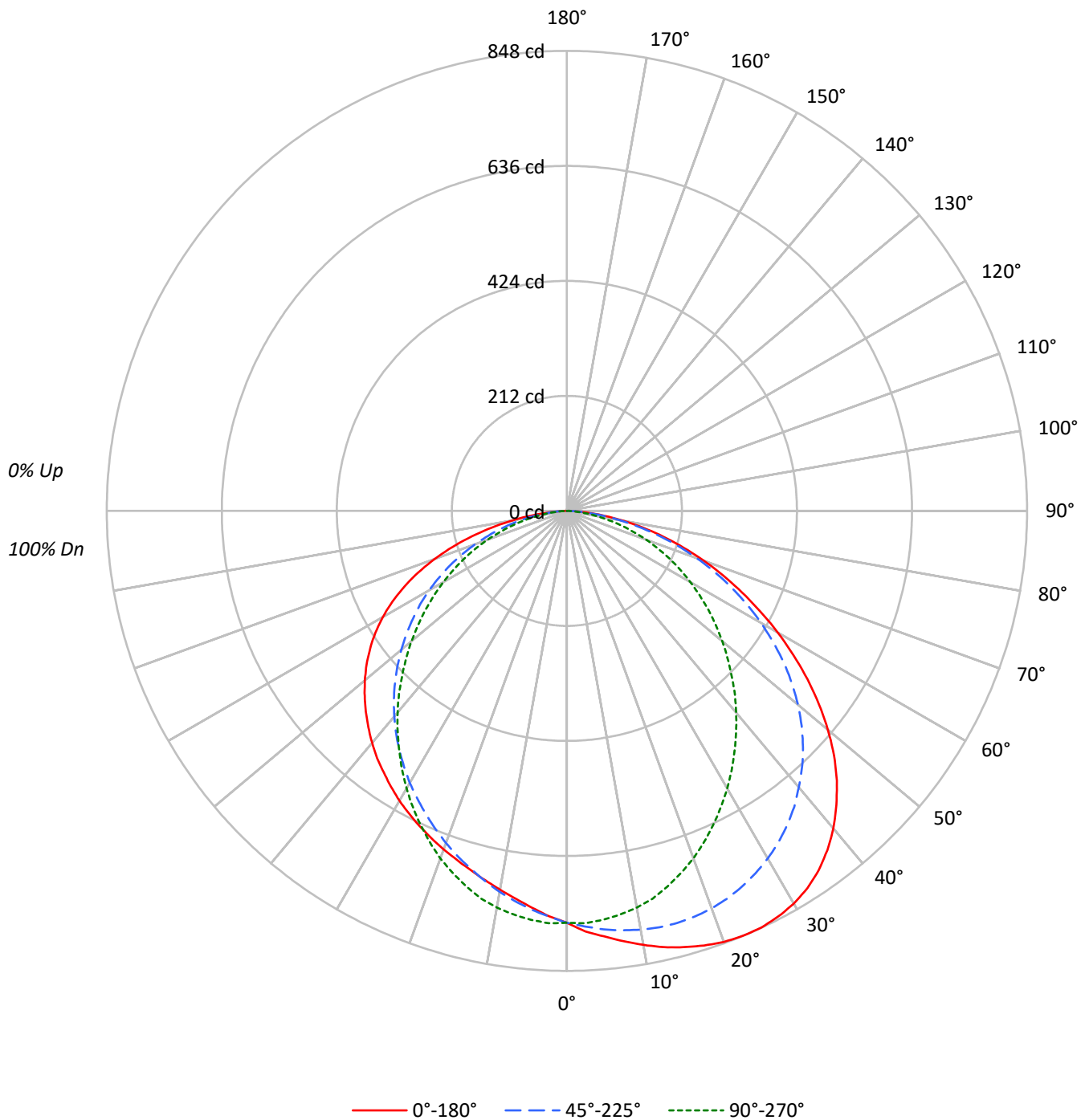
Lumens per Lamp: N/A
Luminaire Lumens: 2233.0 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	2043	2043	2043
5°	2127	2044	1983
10°	2220	2029	1937
15°	2320	1996	1909
20°	2421	1952	1901
25°	2516	1895	1905
30°	2598	1836	1917
35°	2657	1770	1933
40°	2684	1705	1961
45°	2677	1633	1993
50°	2629	1564	2035
55°	2540	1492	2077
60°	2415	1415	2109
65°	2268	1329	2106
70°	2111	1226	2043
75°	1916	1076	1884
80°	1646	885	1588
85°	1257	605	1090

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	3.2
10°-20°	207.9	9.3
20°-30°	318.5	14.3
30°-40°	388.7	17.4
40°-50°	406.5	18.2
50°-60°	367.9	16.5
60°-70°	278.6	12.5
70°-80°	155.3	7.0
80°-90°	37.5	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°	598.4	26.8
0°-40°	987.2	44.2
0°-60°	1761.6	78.9
0°-90°	2233.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2233.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	759	759	759	759	759	
5°	787	774	757	738	734	76
15°	833	786	716	683	685	236
25°	847	764	638	616	642	391
35°	809	708	539	538	588	505
45°	703	615	429	448	524	541
55°	541	489	318	346	443	483
65°	356	335	209	237	331	353
75°	184	174	104	124	181	196
85°	41	36	20	26	35	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°	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1
2.5°	775.9	772.2	769.2	770.4	771.1	768.7	766.8	767.1	765.1	768.9	759.9
5°	787.3	784.0	780.5	781.9	780.5	777.0	774.2	773.4	768.1	770.2	761.1
7.5°	800.1	796.5	791.3	792.8	790.0	783.5	779.9	777.7	769.6	769.7	759.6
10°	812.4	809.2	802.3	803.3	798.1	789.5	783.7	780.7	769.2	767.6	757.1
12.5°	823.8	819.5	812.1	812.5	805.1	793.6	786.2	781.9	766.9	761.9	751.7
15°	832.6	828.5	819.5	819.4	809.7	794.8	786.3	780.4	761.4	753.6	742.9
17.5°	840.1	836.3	825.2	824.8	813.2	794.3	784.2	776.7	753.5	743.9	731.9
20°	845.4	841.6	829.1	828.0	814.0	791.8	779.7	770.2	743.0	731.6	718.3
22.5°	847.9	844.1	830.0	828.3	812.1	786.8	773.2	762.1	731.1	716.1	702.4
25°	847.4	843.7	827.8	826.2	808.2	779.4	764.1	751.3	716.0	698.4	684.8
27.5°	843.2	840.4	823.7	821.5	801.3	769.2	753.0	738.9	699.2	679.6	664.9
30°	836.1	834.0	816.2	814.2	792.6	758.1	740.0	723.8	681.1	659.1	644.1
32.5°	824.7	822.7	804.7	802.9	781.0	743.9	724.9	708.2	661.4	637.0	622.1
35°	808.9	807.7	790.3	788.3	766.1	727.6	707.5	689.1	640.8	613.3	599.0
37.5°	788.2	788.2	771.4	769.2	747.5	707.7	687.9	668.4	617.6	588.4	574.3
40°	764.1	766.3	749.2	747.0	725.9	686.3	664.7	644.1	592.5	562.2	548.4
42.5°	735.2	737.2	722.9	721.0	701.2	661.6	641.5	619.1	566.3	535.4	521.2
45°	703.4	706.0	693.2	691.8	673.3	634.5	615.3	592.5	538.9	507.6	493.6
47.5°	667.9	671.3	660.2	659.4	642.3	606.8	586.7	563.7	510.2	478.5	465.4
50°	628.0	633.0	623.9	623.9	608.6	573.3	555.9	532.8	480.4	448.7	435.7
52.5°	585.4	591.7	584.9	585.1	572.6	540.9	522.8	500.3	449.2	418.0	406.0
55°	541.3	547.4	543.1	543.7	534.0	505.1	488.7	466.3	417.3	386.9	375.7
57.5°	495.1	501.8	498.9	500.3	493.5	467.6	450.5	430.9	384.5	354.4	344.8
60°	448.8	455.1	453.6	455.5	451.2	428.8	413.2	392.9	351.4	322.6	314.1
62.5°	402.0	407.9	407.5	409.5	407.2	388.6	374.7	357.4	317.3	290.7	282.9
65°	356.2	361.2	360.9	363.0	362.6	347.6	335.0	319.2	283.1	258.7	251.9
67.5°	311.8	315.9	314.8	317.3	317.9	306.0	295.0	280.9	250.6	226.8	221.0
70°	268.3	271.1	269.6	271.3	272.8	263.8	254.5	242.1	215.9	195.0	190.2
72.5°	225.7	227.7	225.3	227.0	228.3	221.8	214.2	203.4	181.7	163.6	159.6
75°	184.3	187.2	182.4	184.0	185.0	178.5	174.1	165.3	146.5	132.6	129.9
77.5°	144.4	146.0	143.4	142.7	143.4	138.7	135.2	128.4	114.3	102.9	101.2
80°	106.2	107.2	104.5	103.9	104.4	101.1	98.4	93.4	83.5	74.8	74.2
82.5°	71.2	71.7	69.4	68.7	69.0	68.0	64.9	61.4	56.7	49.4	49.3
85°	40.7	40.7	39.0	38.3	38.7	37.0	35.8	34.0	32.2	27.2	27.5
87.5°	14.9	14.9	14.1	13.9	15.6	13.8	13.3	12.4	12.9	10.3	11.0
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1	759.1
2.5°	762.4	760.8	759.3	754.1	756.3	751.0	750.7	748.7	747.2	744.4	748.0
5°	759.9	756.6	752.3	746.2	748.0	741.7	740.4	738.0	736.1	732.4	735.2
7.5°	756.0	750.5	743.7	735.9	738.4	730.6	728.6	726.1	724.4	720.1	722.6
10°	750.2	742.4	734.4	724.9	726.8	718.3	715.8	713.2	711.7	707.8	710.3
12.5°	741.2	731.7	721.0	710.7	712.7	704.7	701.4	698.6	698.1	694.9	697.9
15°	729.6	716.5	705.4	694.4	696.7	687.4	685.9	683.1	684.0	681.8	685.4
17.5°	714.8	699.7	687.6	675.8	678.1	670.3	669.2	667.9	668.7	668.4	672.3
20°	698.2	681.6	667.7	656.1	657.4	651.3	651.8	651.4	653.1	654.9	660.4
22.5°	679.5	660.7	646.1	634.2	636.2	630.9	633.2	633.8	636.7	640.8	647.8
25°	658.4	638.3	623.1	611.8	613.6	610.1	614.1	615.8	620.2	627.2	634.3
27.5°	636.3	615.1	598.8	588.0	591.5	588.0	594.0	597.3	604.1	611.8	620.6
30°	612.9	590.9	574.1	564.5	567.8	564.7	574.3	578.8	585.6	596.0	606.5
32.5°	588.4	565.2	548.7	541.3	543.6	543.1	553.9	558.8	568.0	579.9	591.0
35°	563.2	538.9	522.3	516.0	518.9	519.5	532.5	538.3	548.2	562.7	574.6
37.5°	537.1	512.4	496.1	491.0	493.5	496.0	511.1	516.9	528.1	543.9	557.0
40°	510.1	485.3	469.4	465.3	467.8	470.4	486.8	494.8	507.1	524.2	538.4
42.5°	482.7	458.0	442.5	439.5	442.0	447.2	464.6	472.1	485.0	503.9	519.7
45°	454.8	429.1	415.6	413.3	416.0	422.0	439.0	448.0	461.8	482.5	499.4
47.5°	426.6	401.5	388.8	387.3	389.9	396.6	415.5	423.6	438.2	460.3	478.5
50°	398.1	373.7	361.4	360.9	363.4	370.5	388.6	398.2	413.3	438.0	456.8
52.5°	369.2	345.8	334.7	334.7	337.0	344.3	362.6	372.5	388.1	414.2	434.9
55°	340.3	318.1	307.5	308.3	311.6	317.9	335.7	346.1	361.9	388.9	410.8
57.5°	311.4	290.4	280.7	281.9	285.1	291.4	308.8	320.6	334.8	362.9	385.3
60°	282.9	263.0	254.5	255.9	258.7	265.0	283.1	293.2	307.5	336.0	358.4
62.5°	254.0	235.9	228.0	229.6	232.1	238.4	255.5	265.3	279.4	307.5	330.0
65°	225.5	208.7	201.9	203.6	205.9	211.7	227.8	237.3	250.7	278.1	299.7
67.5°	197.3	182.0	176.4	178.0	179.9	185.3	198.6	208.9	221.5	247.6	268.0
70°	169.4	155.8	150.8	152.5	154.1	159.1	170.7	180.2	191.8	215.7	234.6
72.5°	141.9	128.6	126.1	127.6	128.9	133.2	144.4	151.8	161.9	183.2	199.4
75°	115.0	103.5	101.9	103.4	104.5	107.9	117.1	123.6	132.1	150.5	163.8
77.5°	89.1	79.5	78.8	80.0	81.1	83.5	90.8	97.6	104.2	117.8	129.6
80°	64.9	57.1	57.1	58.2	57.9	60.7	65.9	71.3	76.2	86.0	94.6
82.5°	42.8	36.7	37.5	38.3	38.8	40.0	43.1	47.3	50.3	56.2	61.9
85°	23.7	19.6	20.4	21.1	20.7	22.1	23.7	26.2	27.7	30.5	33.5
87.5°	8.8	7.3	7.5	8.0	8.3	9.0	9.0	10.5	10.6	11.0	11.6
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°	759.1	759.1	759.1
2.5°	741.0	745.0	748.0
5°	728.3	731.6	734.2
7.5°	715.8	718.8	721.1
10°	704.0	707.4	709.0
12.5°	691.9	695.7	697.1
15°	680.0	683.8	685.4
17.5°	667.7	672.7	674.5
20°	656.2	662.5	664.0
22.5°	644.6	651.1	652.9
25°	632.0	639.7	641.5
27.5°	618.6	627.7	629.5
30°	605.1	615.1	616.9
32.5°	590.7	601.5	603.1
35°	575.6	586.4	588.4
37.5°	558.8	570.6	574.6
40°	541.4	554.2	558.3
42.5°	523.2	537.1	541.4
45°	503.6	518.9	523.8
47.5°	483.8	501.1	505.4
50°	462.4	480.9	486.0
52.5°	440.0	460.1	465.3
55°	416.8	437.1	442.7
57.5°	391.6	412.5	418.5
60°	365.2	386.1	391.8
62.5°	338.2	357.1	362.6
65°	308.0	325.7	330.7
67.5°	275.9	292.2	296.3
70°	241.9	256.0	259.7
72.5°	206.4	216.2	221.0
75°	169.7	177.5	181.2
77.5°	132.9	138.4	141.4
80°	96.9	100.1	102.5
82.5°	63.4	64.7	66.5
85°	34.2	34.2	35.3
87.5°	11.6	11.1	11.6
90°	0.0	0.0	0.0

(END OF REPORT)