

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: P834237

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834237
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1HI-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

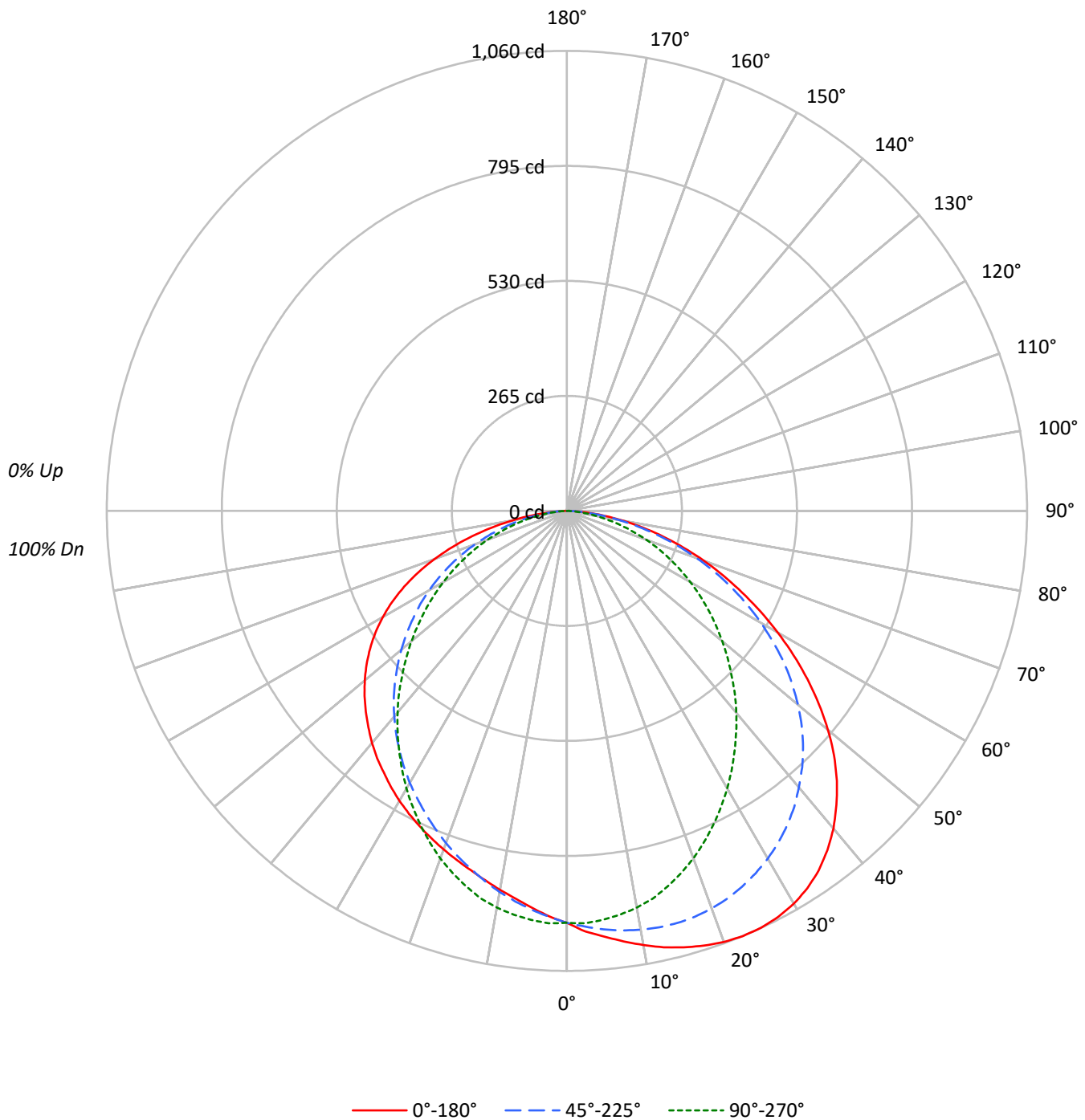
Lumens per Lamp: N/A
Luminaire Lumens: 2791.9 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2554	2554	2554
5°	2659	2555	2480
10°	2775	2536	2422
15°	2900	2496	2388
20°	3027	2440	2377
25°	3146	2370	2381
30°	3248	2296	2397
35°	3323	2213	2417
40°	3356	2132	2452
45°	3347	2042	2492
50°	3287	1956	2544
55°	3175	1866	2597
60°	3020	1770	2636
65°	2836	1662	2633
70°	2640	1533	2555
75°	2397	1346	2355
80°	2058	1106	1987
85°	1568	756	1365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	3.2
10°-20°	260.0	9.3
20°-30°	398.2	14.3
30°-40°	486.0	17.4
40°-50°	508.3	18.2
50°-60°	460.0	16.5
60°-70°	348.4	12.5
70°-80°	194.2	7.0
80°-90°	46.8	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°	748.2	26.8
0°-40°	1234.2	44.2
0°-60°	2202.5	78.9
0°-90°	2791.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2791.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	949	949	949	949	949	
5°	984	968	946	923	918	95
15°	1041	983	896	854	857	295
25°	1060	955	798	770	802	489
35°	1011	885	674	673	736	632
45°	879	769	536	560	655	677
55°	677	611	398	433	554	604
65°	445	419	261	297	414	442
75°	230	218	130	155	226	244
85°	51	45	24	33	44	61
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°	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1
2.5°	970.1	965.5	961.8	963.2	964.1	961.2	958.7	959.1	956.6	961.4	950.2
5°	984.4	980.2	975.9	977.5	975.9	971.5	968.0	967.0	960.3	963.0	951.6
7.5°	1000.4	995.8	989.4	991.2	987.7	979.6	975.1	972.4	962.2	962.4	949.7
10°	1015.7	1011.8	1003.1	1004.3	997.9	987.1	979.8	976.1	961.8	959.7	946.6
12.5°	1030.0	1024.6	1015.3	1015.9	1006.6	992.3	982.9	977.5	958.9	952.7	939.8
15°	1041.0	1035.8	1024.6	1024.4	1012.4	993.7	983.1	975.7	952.0	942.3	928.8
17.5°	1050.4	1045.6	1031.7	1031.3	1016.8	993.1	980.4	971.1	942.1	930.0	915.1
20°	1057.0	1052.2	1036.7	1035.2	1017.8	990.0	974.8	963.0	929.0	914.7	898.1
22.5°	1060.1	1055.3	1037.7	1035.6	1015.3	983.8	966.8	952.9	914.1	895.4	878.2
25°	1059.5	1054.9	1035.0	1032.9	1010.5	974.4	955.3	939.4	895.2	873.2	856.2
27.5°	1054.3	1050.8	1029.8	1027.1	1001.8	961.8	941.4	923.8	874.2	849.8	831.3
30°	1045.4	1042.7	1020.5	1018.0	991.0	947.9	925.3	904.9	851.6	824.0	805.4
32.5°	1031.1	1028.6	1006.2	1003.9	976.5	930.0	906.4	885.4	826.9	796.4	777.8
35°	1011.4	1009.9	988.1	985.6	957.8	909.7	884.6	861.6	801.2	766.8	748.9
37.5°	985.4	985.4	964.5	961.8	934.6	884.8	860.1	835.6	772.2	735.6	718.0
40°	955.3	958.0	936.7	934.0	907.6	858.0	831.1	805.4	740.8	702.9	685.7
42.5°	919.2	921.7	903.9	901.4	876.7	827.1	802.0	774.0	708.1	669.5	651.6
45°	879.4	882.7	866.8	864.9	841.9	793.3	769.3	740.8	673.8	634.6	617.2
47.5°	835.0	839.4	825.5	824.4	803.1	758.7	733.6	704.7	637.9	598.3	581.9
50°	785.2	791.5	780.0	780.0	761.0	716.8	695.0	666.1	600.6	561.0	544.8
52.5°	731.9	739.8	731.3	731.5	715.9	676.3	653.7	625.5	561.6	522.6	507.7
55°	676.7	684.4	679.0	679.8	667.6	631.5	611.0	583.0	521.8	483.8	469.7
57.5°	619.1	627.4	623.8	625.5	617.0	584.6	563.3	538.8	480.7	443.1	431.1
60°	561.2	569.1	567.2	569.5	564.1	536.1	516.6	491.3	439.4	403.3	392.7
62.5°	502.7	509.9	509.5	512.0	509.1	485.9	468.4	446.9	396.7	363.5	353.7
65°	445.4	451.6	451.2	453.9	453.3	434.6	418.9	399.2	353.9	323.4	314.9
67.5°	389.8	395.0	393.5	396.7	397.5	382.6	368.9	351.2	313.3	283.6	276.3
70°	335.5	339.0	337.1	339.2	341.1	329.9	318.2	302.7	269.9	243.8	237.7
72.5°	282.1	284.6	281.7	283.8	285.5	277.4	267.8	254.3	227.2	204.6	199.6
75°	230.5	234.0	228.0	230.1	231.3	223.2	217.6	206.6	183.2	165.8	162.4
77.5°	180.5	182.6	179.2	178.4	179.2	173.4	169.1	160.6	142.9	128.6	126.5
80°	132.8	134.0	130.7	129.9	130.5	126.3	123.0	116.8	104.4	93.6	92.7
82.5°	89.0	89.6	86.7	85.9	86.3	85.1	81.1	76.8	71.0	61.8	61.6
85°	50.8	50.8	48.8	47.9	48.3	46.3	44.8	42.5	40.2	34.0	34.4
87.5°	18.7	18.7	17.6	17.4	19.5	17.2	16.6	15.6	16.2	12.9	13.7
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°	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1	949.1
2.5°	953.3	951.2	949.3	942.9	945.6	939.0	938.5	936.1	934.2	930.7	935.2
5°	950.2	946.0	940.6	932.9	935.2	927.3	925.7	922.8	920.3	915.7	919.2
7.5°	945.2	938.3	929.8	920.1	923.2	913.4	911.0	907.8	905.8	900.4	903.5
10°	937.9	928.2	918.2	906.4	908.7	898.1	895.0	891.7	889.8	885.0	888.1
12.5°	926.7	914.9	901.4	888.5	891.0	881.1	876.9	873.4	872.8	868.8	872.6
15°	912.2	895.8	881.9	868.2	871.1	859.5	857.6	854.1	855.1	852.4	857.0
17.5°	893.7	874.9	859.7	845.0	847.9	838.1	836.7	835.0	836.1	835.6	840.6
20°	873.0	852.2	834.8	820.3	822.0	814.3	814.9	814.5	816.6	818.8	825.7
22.5°	849.5	826.1	807.8	792.9	795.4	788.8	791.7	792.5	796.0	801.2	809.9
25°	823.2	798.1	779.0	764.9	767.2	762.8	767.8	769.9	775.5	784.2	793.1
27.5°	795.6	769.0	748.7	735.2	739.6	735.2	742.7	746.9	755.4	764.9	775.9
30°	766.4	738.8	717.8	705.8	709.9	706.0	718.0	723.6	732.1	745.2	758.3
32.5°	735.6	706.6	686.1	676.7	679.6	679.0	692.5	698.7	710.1	725.1	739.0
35°	704.1	673.8	653.1	645.2	648.7	649.6	665.7	673.0	685.4	703.5	718.4
37.5°	671.5	640.6	620.3	613.9	617.0	620.1	639.0	646.2	660.3	680.0	696.4
40°	637.7	606.8	586.9	581.7	584.8	588.1	608.7	618.6	634.0	655.4	673.2
42.5°	603.5	572.6	553.3	549.6	552.7	559.1	580.9	590.2	606.4	630.1	649.8
45°	568.6	536.5	519.7	516.8	520.1	527.6	548.9	560.1	577.4	603.3	624.5
47.5°	533.4	502.0	486.1	484.2	487.5	495.8	519.5	529.6	547.9	575.5	598.3
50°	497.7	467.2	451.8	451.2	454.3	463.3	485.9	497.9	516.8	547.7	571.1
52.5°	461.6	432.3	418.4	418.4	421.3	430.5	453.3	465.7	485.2	517.8	543.7
55°	425.5	397.7	384.4	385.5	389.6	397.5	419.7	432.8	452.5	486.3	513.7
57.5°	389.4	363.1	351.0	352.5	356.4	364.3	386.1	400.8	418.7	453.7	481.7
60°	353.7	328.8	318.2	319.9	323.4	331.3	353.9	366.6	384.4	420.1	448.1
62.5°	317.6	295.0	285.0	287.1	290.2	298.1	319.5	331.7	349.4	384.4	412.6
65°	281.9	261.0	252.5	254.6	257.5	264.7	284.8	296.7	313.5	347.7	374.7
67.5°	246.7	227.6	220.5	222.6	224.9	231.7	248.3	261.2	277.0	309.5	335.0
70°	211.8	194.8	188.6	190.7	192.7	199.0	213.5	225.3	239.8	269.7	293.3
72.5°	177.4	160.8	157.7	159.5	161.2	166.6	180.5	189.8	202.5	229.0	249.4
75°	143.8	129.5	127.4	129.2	130.7	134.8	146.5	154.6	165.1	188.2	204.8
77.5°	111.4	99.4	98.5	100.0	101.4	104.4	113.5	122.0	130.3	147.3	162.0
80°	81.1	71.4	71.4	72.8	72.4	75.9	82.4	89.2	95.2	107.5	118.3
82.5°	53.5	45.8	46.9	47.9	48.5	50.0	53.9	59.1	62.9	70.3	77.4
85°	29.7	24.5	25.5	26.3	25.9	27.6	29.7	32.8	34.6	38.2	41.9
87.5°	11.0	9.1	9.3	10.0	10.4	11.2	11.2	13.1	13.3	13.7	14.5
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°	949.1	949.1	949.1
2.5°	926.5	931.5	935.2
5°	910.5	914.7	918.0
7.5°	895.0	898.7	901.6
10°	880.2	884.4	886.5
12.5°	865.1	869.9	871.5
15°	850.2	854.9	857.0
17.5°	834.8	841.0	843.3
20°	820.5	828.4	830.2
22.5°	806.0	814.1	816.3
25°	790.2	799.8	802.0
27.5°	773.4	784.8	787.1
30°	756.6	769.0	771.3
32.5°	738.6	752.0	754.1
35°	719.7	733.2	735.6
37.5°	698.7	713.5	718.4
40°	676.9	692.9	698.1
42.5°	654.1	671.5	676.9
45°	629.6	648.7	654.9
47.5°	604.9	626.5	631.9
50°	578.2	601.2	607.6
52.5°	550.2	575.3	581.7
55°	521.1	546.4	553.5
57.5°	489.6	515.7	523.2
60°	456.6	482.8	489.8
62.5°	422.8	446.5	453.3
65°	385.0	407.2	413.5
67.5°	345.0	365.3	370.5
70°	302.5	320.1	324.7
72.5°	258.1	270.3	276.3
75°	212.2	222.0	226.5
77.5°	166.2	173.0	176.8
80°	121.2	125.1	128.2
82.5°	79.2	80.9	83.2
85°	42.7	42.7	44.2
87.5°	14.5	13.9	14.5
90°	0.0	0.0	0.0

(END OF REPORT)