

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: P834199

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-30-120-EDD**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834199
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-LD4-1LO-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

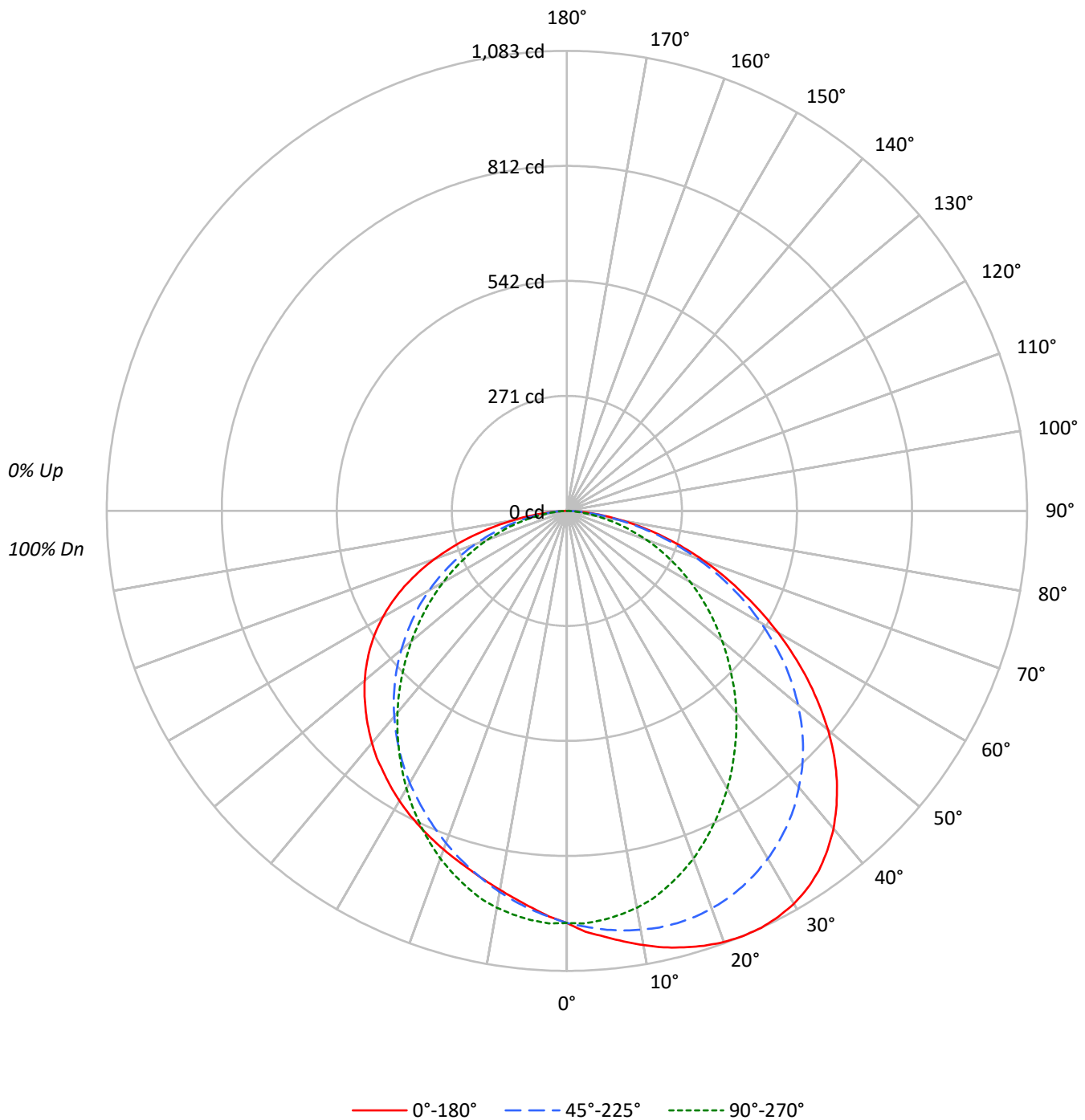
Lumens per Lamp: N/A
Luminaire Lumens: 2853.1 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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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°	2610	2610	2610
5°	2717	2612	2534
10°	2836	2592	2475
15°	2964	2550	2440
20°	3093	2494	2430
25°	3215	2422	2434
30°	3320	2346	2449
35°	3395	2262	2470
40°	3430	2178	2506
45°	3420	2087	2547
50°	3360	1999	2600
55°	3245	1907	2654
60°	3087	1808	2694
65°	2898	1698	2690
70°	2697	1566	2611
75°	2449	1376	2407
80°	2103	1130	2030
85°	1602	772	1396

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	3.2
10°-20°	265.7	9.3
20°-30°	407.0	14.3
30°-40°	496.7	17.4
40°-50°	519.4	18.2
50°-60°	470.1	16.5
60°-70°	356.0	12.5
70°-80°	198.4	7.0
80°-90°	47.9	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°	764.6	26.8
0°-40°	1261.3	44.2
0°-60°	2250.8	78.9
0°-90°	2853.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2853.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	970	970	970	970	970	
5°	1006	989	967	943	938	97
15°	1064	1005	916	873	876	302
25°	1083	976	816	787	820	499
35°	1034	904	689	688	752	645
45°	899	786	548	572	669	691
55°	692	624	406	442	566	617
65°	455	428	267	303	422	452
75°	236	222	132	158	232	250
85°	52	46	25	34	45	63
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°	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0
2.5°	991.4	986.7	982.9	984.4	985.2	982.3	979.7	980.1	977.6	982.5	971.0
5°	1006.0	1001.8	997.3	999.0	997.3	992.9	989.2	988.2	981.4	984.2	972.5
7.5°	1022.3	1017.7	1011.1	1013.0	1009.4	1001.1	996.5	993.7	983.3	983.5	970.6
10°	1038.0	1034.0	1025.1	1026.3	1019.8	1008.8	1001.3	997.5	982.9	980.8	967.4
12.5°	1052.6	1047.1	1037.6	1038.2	1028.7	1014.1	1004.5	999.0	979.9	973.6	960.4
15°	1063.9	1058.6	1047.1	1046.9	1034.6	1015.5	1004.7	997.1	972.9	963.0	949.2
17.5°	1073.4	1068.5	1054.3	1053.9	1039.1	1014.9	1002.0	992.4	962.7	950.4	935.2
20°	1080.2	1075.3	1059.4	1057.9	1040.1	1011.7	996.2	984.2	949.4	934.8	917.8
22.5°	1083.4	1078.5	1060.5	1058.4	1037.6	1005.4	988.0	973.8	934.1	915.0	897.4
25°	1082.7	1078.1	1057.7	1055.6	1032.7	995.8	976.3	960.0	914.8	892.4	875.0
27.5°	1077.4	1073.8	1052.4	1049.7	1023.8	982.9	962.1	944.1	893.4	868.4	849.5
30°	1068.3	1065.6	1042.9	1040.3	1012.8	968.7	945.6	924.8	870.3	842.1	823.0
32.5°	1053.7	1051.2	1028.3	1025.9	997.9	950.4	926.3	904.9	845.1	813.9	794.8
35°	1033.6	1032.1	1009.8	1007.3	978.9	929.7	904.0	880.5	818.8	783.6	765.4
37.5°	1007.1	1007.1	985.6	982.9	955.1	904.2	879.0	854.0	789.1	751.8	733.8
40°	976.3	979.1	957.2	954.5	927.6	876.9	849.3	823.0	757.1	718.3	700.7
42.5°	939.4	942.0	923.7	921.2	896.0	845.3	819.6	791.0	723.6	684.2	665.9
45°	898.7	902.1	885.8	883.9	860.3	810.7	786.1	757.1	688.6	648.5	630.7
47.5°	853.3	857.8	843.6	842.5	820.7	775.3	749.7	720.2	651.9	611.4	594.7
50°	802.5	808.8	797.2	797.2	777.7	732.5	710.2	680.8	613.8	573.3	556.7
52.5°	748.0	756.0	747.3	747.6	731.7	691.2	668.0	639.2	573.9	534.1	518.8
55°	691.6	699.4	693.9	694.8	682.3	645.4	624.4	595.8	533.2	494.4	480.0
57.5°	632.6	641.1	637.5	639.2	630.5	597.4	575.6	550.6	491.2	452.9	440.6
60°	573.5	581.5	579.6	582.0	576.5	547.8	527.9	502.0	449.0	412.2	401.3
62.5°	513.7	521.1	520.7	523.2	520.3	496.5	478.7	456.7	405.4	371.4	361.5
65°	455.2	461.5	461.1	463.9	463.2	444.2	428.1	407.9	361.7	330.5	321.8
67.5°	398.4	403.7	402.2	405.4	406.2	390.9	377.0	358.9	320.1	289.8	282.4
70°	342.8	346.4	344.5	346.6	348.5	337.1	325.2	309.3	275.8	249.1	243.0
72.5°	288.3	290.9	287.9	290.0	291.7	283.5	273.7	259.9	232.2	209.0	204.0
75°	235.5	239.1	233.0	235.1	236.4	228.1	222.4	211.2	187.2	169.4	166.0
77.5°	184.5	186.6	183.2	182.3	183.2	177.2	172.8	164.1	146.1	131.4	129.3
80°	135.7	137.0	133.6	132.7	133.4	129.1	125.7	119.4	106.6	95.6	94.8
82.5°	91.0	91.6	88.6	87.8	88.2	86.9	82.9	78.4	72.5	63.2	63.0
85°	51.9	51.9	49.8	49.0	49.4	47.3	45.8	43.5	41.1	34.8	35.2
87.5°	19.1	19.1	18.0	17.8	19.9	17.6	17.0	15.9	16.5	13.1	14.0
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°	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0	970.0
2.5°	974.2	972.1	970.2	963.6	966.3	959.6	959.1	956.6	954.7	951.1	955.7
5°	971.0	966.8	961.3	953.4	955.7	947.7	946.0	943.0	940.5	935.8	939.4
7.5°	965.9	958.9	950.2	940.3	943.5	933.5	930.9	927.8	925.6	920.1	923.3
10°	958.5	948.5	938.4	926.3	928.6	917.8	914.6	911.2	909.3	904.4	907.6
12.5°	947.1	935.0	921.2	908.0	910.6	900.4	896.2	892.6	891.9	887.9	891.7
15°	932.2	915.5	901.3	887.3	890.2	878.4	876.5	872.9	873.9	871.2	875.8
17.5°	913.3	894.1	878.6	863.5	866.5	856.5	855.0	853.3	854.4	854.0	859.1
20°	892.1	870.9	853.1	838.3	840.0	832.1	832.8	832.4	834.5	836.8	843.8
22.5°	868.2	844.2	825.6	810.3	812.9	806.1	809.0	809.9	813.5	818.8	827.7
25°	841.3	815.6	796.1	781.7	784.0	779.6	784.7	786.8	792.5	801.4	810.5
27.5°	813.1	785.9	765.2	751.4	755.8	751.4	759.0	763.2	771.9	781.7	792.9
30°	783.2	755.0	733.6	721.3	725.5	721.5	733.8	739.5	748.2	761.5	774.9
32.5°	751.8	722.1	701.1	691.6	694.6	693.9	707.7	714.1	725.7	741.0	755.2
35°	719.6	688.6	667.4	659.4	663.0	663.8	680.3	687.8	700.5	718.9	734.2
37.5°	686.3	654.7	633.9	627.3	630.5	633.7	653.0	660.4	674.8	695.0	711.7
40°	651.7	620.1	599.8	594.5	597.7	601.1	622.0	632.2	647.9	669.7	688.0
42.5°	616.7	585.2	565.4	561.6	564.8	571.4	593.6	603.2	619.7	643.9	664.0
45°	581.1	548.3	531.1	528.1	531.5	539.1	561.0	572.4	590.0	616.5	638.2
47.5°	545.1	513.1	496.7	494.8	498.2	506.7	530.9	541.3	559.9	588.1	611.4
50°	508.6	477.5	461.8	461.1	464.3	473.4	496.5	508.8	528.1	559.7	583.7
52.5°	471.7	441.8	427.6	427.6	430.6	439.9	463.2	476.0	495.9	529.2	555.7
55°	434.8	406.4	392.9	393.9	398.2	406.2	428.9	442.3	462.4	497.0	524.9
57.5°	397.9	371.0	358.7	360.2	364.2	372.3	394.6	409.6	427.8	463.7	492.3
60°	361.5	336.0	325.2	326.9	330.5	338.6	361.7	374.6	392.9	429.3	457.9
62.5°	324.6	301.5	291.3	293.4	296.6	304.7	326.5	339.0	357.0	392.9	421.7
65°	288.1	266.7	258.0	260.1	263.1	270.5	291.1	303.2	320.3	355.3	382.9
67.5°	252.1	232.6	225.4	227.5	229.8	236.8	253.8	266.9	283.0	316.3	342.4
70°	216.5	199.1	192.7	194.8	197.0	203.3	218.2	230.2	245.1	275.6	299.8
72.5°	181.3	164.3	161.1	163.0	164.7	170.2	184.5	194.0	206.9	234.1	254.8
75°	146.9	132.3	130.2	132.1	133.6	137.8	149.7	157.9	168.8	192.3	209.3
77.5°	113.9	101.6	100.7	102.2	103.7	106.6	116.0	124.7	133.1	150.5	165.6
80°	82.9	72.9	72.9	74.4	74.0	77.6	84.2	91.2	97.3	109.8	120.8
82.5°	54.7	46.9	47.9	49.0	49.6	51.1	55.1	60.4	64.2	71.9	79.1
85°	30.3	25.0	26.1	26.9	26.5	28.2	30.3	33.5	35.4	39.0	42.8
87.5°	11.2	9.3	9.5	10.2	10.6	11.4	11.4	13.4	13.6	14.0	14.8
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°	970.0	970.0	970.0
2.5°	946.8	951.9	955.7
5°	930.5	934.8	938.2
7.5°	914.6	918.4	921.4
10°	899.6	903.8	905.9
12.5°	884.1	889.0	890.7
15°	868.8	873.7	875.8
17.5°	853.1	859.5	861.8
20°	838.5	846.6	848.5
22.5°	823.7	831.9	834.3
25°	807.6	817.3	819.6
27.5°	790.4	802.0	804.4
30°	773.2	785.9	788.3
32.5°	754.8	768.5	770.7
35°	735.5	749.2	751.8
37.5°	714.1	729.1	734.2
40°	691.8	708.1	713.4
42.5°	668.5	686.3	691.8
45°	643.5	663.0	669.3
47.5°	618.2	640.3	645.8
50°	590.9	614.4	621.0
52.5°	562.3	587.9	594.5
55°	532.6	558.4	565.6
57.5°	500.3	527.1	534.7
60°	466.6	493.4	500.6
62.5°	432.1	456.2	463.2
65°	393.5	416.2	422.5
67.5°	352.6	373.4	378.7
70°	309.1	327.1	331.8
72.5°	263.7	276.3	282.4
75°	216.9	226.9	231.5
77.5°	169.8	176.8	180.6
80°	123.8	127.8	131.0
82.5°	81.0	82.7	85.0
85°	43.7	43.7	45.2
87.5°	14.8	14.2	14.8
90°	0.0	0.0	0.0

(END OF REPORT)