

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: P834217

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834217
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-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

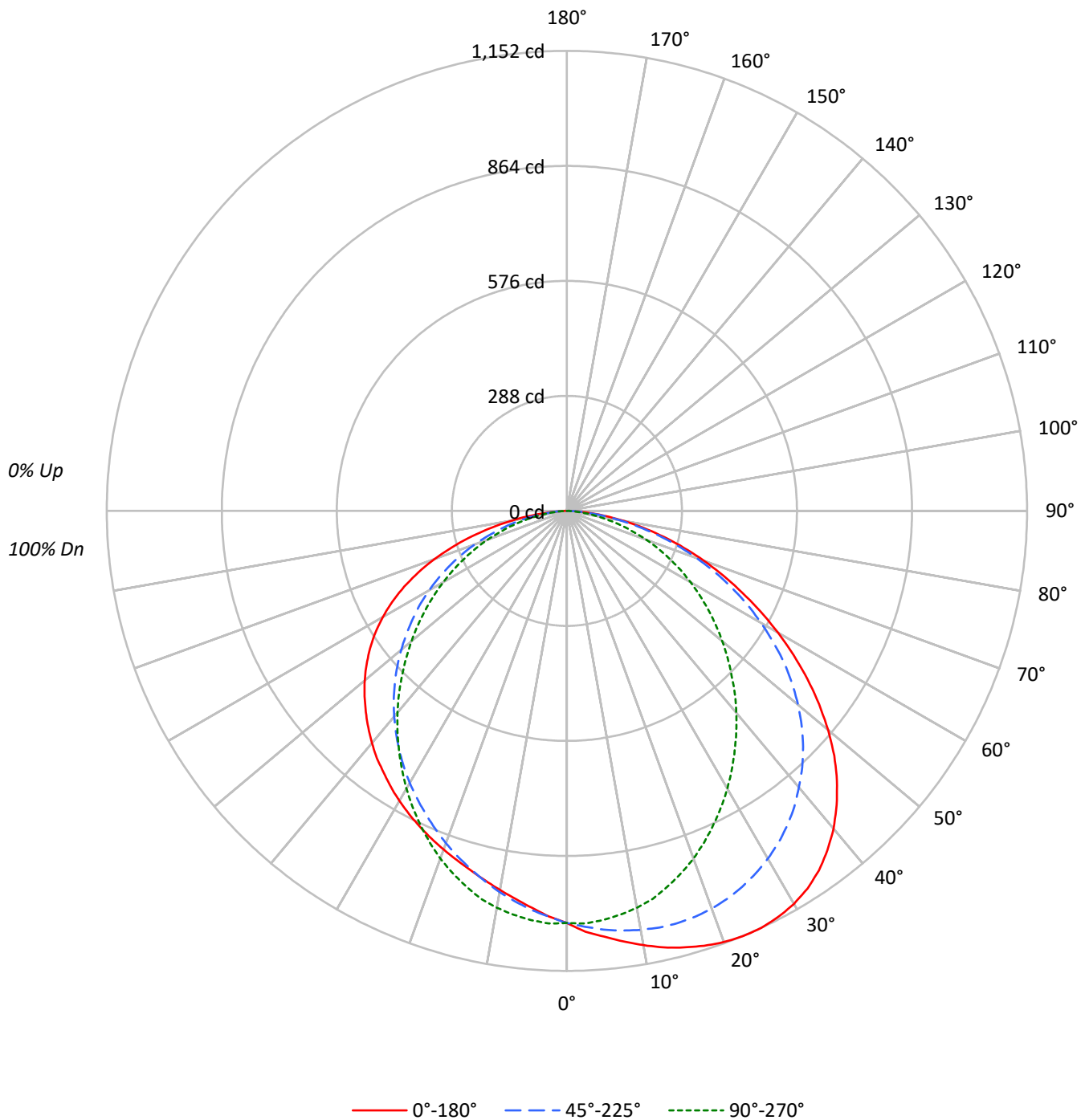
Lumens per Lamp: N/A
Luminaire Lumens: 3035.3 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



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°	2777	2777	2777
5°	2891	2778	2696
10°	3017	2757	2634
15°	3153	2713	2596
20°	3291	2653	2585
25°	3420	2576	2589
30°	3531	2496	2606
35°	3612	2407	2627
40°	3648	2317	2666
45°	3639	2220	2710
50°	3574	2126	2766
55°	3452	2029	2823
60°	3284	1924	2866
65°	3083	1806	2862
70°	2869	1666	2777
75°	2606	1463	2561
80°	2236	1203	2160
85°	1707	821	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.2
10°-20°	282.6	9.3
20°-30°	433.0	14.3
30°-40°	528.4	17.4
40°-50°	552.6	18.2
50°-60°	500.1	16.5
60°-70°	378.8	12.5
70°-80°	211.1	7.0
80°-90°	50.9	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°	813.4	26.8
0°-40°	1341.8	44.2
0°-60°	2394.5	78.9
0°-90°	3035.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3035.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1032	1032	1032	1032	1032	
5°	1070	1052	1028	1003	998	103
15°	1132	1069	974	929	932	321
25°	1152	1039	868	837	872	531
35°	1100	962	733	732	800	687
45°	956	836	583	609	712	736
55°	736	664	432	470	602	656
65°	484	455	284	322	450	480
75°	251	237	141	168	246	266
85°	55	49	27	36	48	67
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°	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9
2.5°	1054.6	1049.7	1045.6	1047.2	1048.1	1044.9	1042.2	1042.7	1040.0	1045.2	1033.0
5°	1070.2	1065.7	1061.0	1062.8	1061.0	1056.2	1052.4	1051.3	1044.0	1047.0	1034.6
7.5°	1087.6	1082.6	1075.6	1077.7	1073.8	1065.0	1060.1	1057.1	1046.1	1046.3	1032.5
10°	1104.3	1100.0	1090.5	1091.9	1084.9	1073.1	1065.2	1061.2	1045.6	1043.4	1029.2
12.5°	1119.8	1114.0	1103.8	1104.5	1094.3	1078.8	1068.6	1062.8	1042.5	1035.7	1021.7
15°	1131.8	1126.1	1114.0	1113.7	1100.7	1080.4	1068.9	1060.7	1035.0	1024.4	1009.8
17.5°	1141.9	1136.7	1121.6	1121.2	1105.4	1079.7	1065.9	1055.8	1024.2	1011.1	994.9
20°	1149.1	1144.0	1127.0	1125.5	1106.5	1076.3	1059.8	1047.0	1010.0	994.4	976.4
22.5°	1152.5	1147.3	1128.2	1125.9	1103.8	1069.5	1051.0	1035.9	993.7	973.4	954.7
25°	1151.9	1146.9	1125.2	1123.0	1098.6	1059.4	1038.6	1021.3	973.2	949.3	930.8
27.5°	1146.2	1142.4	1119.6	1116.7	1089.2	1045.6	1023.5	1004.3	950.4	923.8	903.8
30°	1136.5	1133.6	1109.5	1106.7	1077.4	1030.5	1005.9	983.8	925.9	895.9	875.6
32.5°	1121.0	1118.2	1093.9	1091.4	1061.6	1011.1	985.4	962.6	899.0	865.9	845.6
35°	1099.5	1097.9	1074.3	1071.6	1041.3	989.0	961.7	936.7	871.1	833.6	814.2
37.5°	1071.3	1071.3	1048.6	1045.6	1016.1	961.9	935.1	908.5	839.5	799.8	780.6
40°	1038.6	1041.6	1018.3	1015.4	986.8	932.9	903.5	875.6	805.4	764.1	745.4
42.5°	999.4	1002.1	982.7	980.0	953.2	899.2	872.0	841.5	769.8	727.8	708.4
45°	956.1	959.7	942.3	940.3	915.3	862.5	836.3	805.4	732.6	689.9	671.0
47.5°	907.8	912.6	897.4	896.3	873.1	824.8	797.5	766.2	693.5	650.5	632.7
50°	853.7	860.5	848.0	848.0	827.3	779.3	755.6	724.2	653.0	609.9	592.3
52.5°	795.7	804.3	795.0	795.3	778.4	735.3	710.7	680.0	610.5	568.1	551.9
55°	735.7	744.1	738.2	739.1	725.8	686.6	664.2	633.8	567.2	526.0	510.6
57.5°	673.0	682.0	678.2	680.0	670.8	635.6	612.4	585.7	522.6	481.8	468.7
60°	610.1	618.7	616.6	619.1	613.3	582.8	561.6	534.1	477.7	438.5	427.0
62.5°	546.5	554.4	553.9	556.6	553.5	528.2	509.3	485.8	431.2	395.2	384.6
65°	484.2	491.0	490.6	493.5	492.8	472.5	455.4	433.9	384.8	351.6	342.4
67.5°	423.8	429.4	427.9	431.2	432.1	415.9	401.0	381.8	340.6	308.3	300.4
70°	364.7	368.5	366.5	368.8	370.8	358.6	346.0	329.1	293.4	265.0	258.5
72.5°	306.7	309.4	306.3	308.5	310.3	301.6	291.2	276.5	247.0	222.4	217.0
75°	250.6	254.4	247.9	250.1	251.5	242.7	236.6	224.6	199.2	180.2	176.6
77.5°	196.2	198.5	194.9	194.0	194.9	188.6	183.8	174.6	155.4	139.8	137.6
80°	144.3	145.7	142.1	141.2	141.9	137.4	133.7	127.0	113.4	101.7	100.8
82.5°	96.8	97.4	94.3	93.4	93.8	92.5	88.2	83.5	77.1	67.2	67.0
85°	55.3	55.3	53.0	52.1	52.6	50.3	48.7	46.2	43.8	37.0	37.4
87.5°	20.3	20.3	19.2	18.9	21.2	18.7	18.0	16.9	17.6	14.0	14.9
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°	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9	1031.9
2.5°	1036.4	1034.1	1032.1	1025.1	1028.0	1020.8	1020.4	1017.7	1015.6	1011.8	1016.8
5°	1033.0	1028.5	1022.6	1014.3	1016.8	1008.2	1006.4	1003.2	1000.5	995.6	999.4
7.5°	1027.6	1020.1	1010.9	1000.3	1003.7	993.1	990.4	987.0	984.7	978.9	982.2
10°	1019.7	1009.1	998.3	985.4	987.9	976.4	973.0	969.4	967.4	962.2	965.6
12.5°	1007.5	994.7	980.0	966.0	968.7	957.9	953.4	949.5	948.9	944.6	948.6
15°	991.7	973.9	958.8	943.9	947.1	934.4	932.4	928.6	929.7	926.8	931.7
17.5°	971.6	951.1	934.7	918.6	921.8	911.2	909.6	907.8	908.9	908.5	913.9
20°	949.1	926.5	907.6	891.8	893.6	885.3	885.9	885.5	887.7	890.2	897.7
22.5°	923.6	898.1	878.3	862.0	864.7	857.5	860.7	861.6	865.4	871.1	880.5
25°	895.0	867.7	846.9	831.6	834.1	829.3	834.7	837.0	843.1	852.6	862.3
27.5°	865.0	836.1	814.0	799.3	804.1	799.3	807.4	812.0	821.2	831.6	843.5
30°	833.2	803.2	780.4	767.3	771.8	767.5	780.6	786.7	795.9	810.2	824.4
32.5°	799.8	768.2	745.9	735.7	738.9	738.2	752.9	759.6	772.0	788.3	803.4
35°	765.5	732.6	710.0	701.4	705.3	706.2	723.8	731.7	745.2	764.8	781.1
37.5°	730.1	696.5	674.4	667.4	670.8	674.2	694.7	702.6	717.9	739.3	757.2
40°	693.3	659.7	638.1	632.4	635.8	639.4	661.7	672.6	689.3	712.5	731.9
42.5°	656.1	622.5	601.5	597.5	600.9	607.8	631.5	641.7	659.3	685.0	706.4
45°	618.2	583.3	565.0	561.8	565.4	573.6	596.8	609.0	627.7	655.9	678.9
47.5°	579.9	545.8	528.5	526.4	530.0	539.1	564.8	575.8	595.7	625.7	650.5
50°	541.1	507.9	491.2	490.6	493.9	503.6	528.2	541.3	561.8	595.4	620.9
52.5°	501.8	470.0	454.9	454.9	458.1	468.0	492.8	506.3	527.5	563.0	591.2
55°	462.6	432.4	417.9	419.1	423.6	432.1	456.3	470.5	491.9	528.7	558.4
57.5°	423.3	394.7	381.6	383.2	387.5	396.1	419.7	435.8	455.1	493.3	523.7
60°	384.6	357.5	346.0	347.8	351.6	360.2	384.8	398.5	417.9	456.7	487.2
62.5°	345.3	320.7	309.9	312.2	315.5	324.1	347.3	360.6	379.8	417.9	448.6
65°	306.5	283.7	274.5	276.7	279.9	287.8	309.7	322.5	340.8	378.0	407.3
67.5°	268.2	247.4	239.8	242.0	244.5	251.9	270.0	284.0	301.1	336.5	364.3
70°	230.3	211.8	205.0	207.3	209.5	216.3	232.1	244.9	260.7	293.2	318.9
72.5°	192.8	174.8	171.4	173.4	175.2	181.1	196.2	206.4	220.1	249.0	271.1
75°	156.3	140.7	138.5	140.5	142.1	146.6	159.2	168.0	179.5	204.6	222.6
77.5°	121.1	108.0	107.1	108.7	110.3	113.4	123.4	132.6	141.6	160.1	176.2
80°	88.2	77.6	77.6	79.2	78.7	82.5	89.5	97.0	103.5	116.8	128.6
82.5°	58.2	49.8	51.0	52.1	52.8	54.4	58.6	64.3	68.3	76.5	84.1
85°	32.3	26.6	27.7	28.6	28.2	30.0	32.3	35.6	37.7	41.5	45.6
87.5°	12.0	9.9	10.1	10.8	11.3	12.2	12.2	14.2	14.4	14.9	15.8
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°	1031.9	1031.9	1031.9
2.5°	1007.3	1012.7	1016.8
5°	989.9	994.4	998.0
7.5°	973.0	977.1	980.2
10°	957.0	961.5	963.8
12.5°	940.5	945.7	947.5
15°	924.3	929.5	931.7
17.5°	907.6	914.4	916.8
20°	892.0	900.6	902.6
22.5°	876.2	885.0	887.5
25°	859.1	869.5	872.0
27.5°	840.8	853.2	855.7
30°	822.6	836.1	838.6
32.5°	802.9	817.6	819.9
35°	782.4	797.1	799.8
37.5°	759.6	775.6	781.1
40°	736.0	753.3	759.0
42.5°	711.1	730.1	736.0
45°	684.5	705.3	712.0
47.5°	657.7	681.1	687.0
50°	628.6	653.6	660.6
52.5°	598.1	625.4	632.4
55°	566.6	594.1	601.8
57.5°	532.3	560.7	568.8
60°	496.4	524.8	532.5
62.5°	459.7	485.4	492.8
65°	418.6	442.7	449.5
67.5°	375.1	397.2	402.8
70°	328.8	348.0	353.0
72.5°	280.6	293.9	300.4
75°	230.7	241.3	246.3
77.5°	180.7	188.1	192.2
80°	131.7	136.0	139.4
82.5°	86.2	88.0	90.4
85°	46.5	46.5	48.0
87.5°	15.8	15.1	15.8
90°	0.0	0.0	0.0

(END OF REPORT)