

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: P834649

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834649
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1LO-30-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

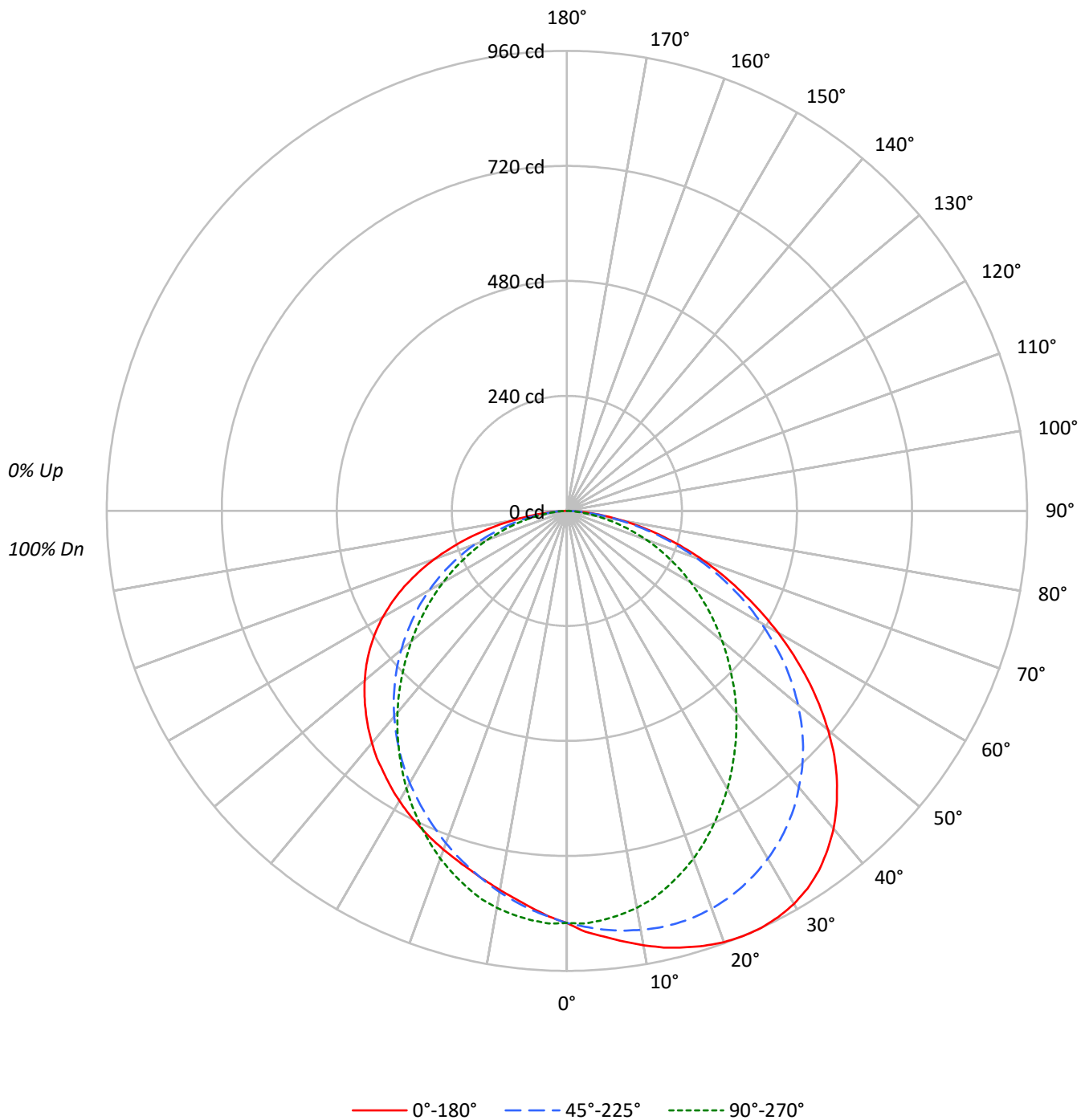
Lumens per Lamp: N/A
Luminaire Lumens: 2529.6 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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
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°	1157	1157	1157
5°	1205	1158	1123
10°	1257	1149	1097
15°	1314	1131	1082
20°	1371	1106	1077
25°	1425	1074	1079
30°	1472	1040	1086
35°	1505	1003	1095
40°	1520	966	1111
45°	1516	925	1129
50°	1489	886	1153
55°	1438	845	1176
60°	1368	802	1194
65°	1285	753	1193
70°	1196	694	1157
75°	1085	610	1067
80°	932	501	900
85°	712	343	618

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	3.2
10°-20°	235.5	9.3
20°-30°	360.8	14.3
30°-40°	440.4	17.4
40°-50°	460.5	18.2
50°-60°	416.8	16.5
60°-70°	315.7	12.5
70°-80°	175.9	7.0
80°-90°	42.4	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°	677.9	26.8
0°-40°	1118.3	44.2
0°-60°	1995.6	78.9
0°-90°	2529.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2529.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	860	860	860	860	860	
5°	892	877	857	836	832	86
15°	943	891	812	774	776	268
25°	960	866	723	698	727	443
35°	916	802	610	610	666	572
45°	797	697	486	508	593	613
55°	613	554	360	392	502	547
65°	404	380	236	269	375	400
75°	209	197	117	140	205	221
85°	46	41	22	30	40	55
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°	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0
2.5°	879.0	874.8	871.4	872.8	873.5	870.9	868.6	869.0	866.7	871.1	860.9
5°	891.9	888.2	884.2	885.7	884.2	880.3	877.1	876.1	870.1	872.6	862.2
7.5°	906.4	902.3	896.4	898.1	894.9	887.6	883.5	881.0	871.8	872.0	860.5
10°	920.3	916.7	908.8	910.0	904.1	894.4	887.8	884.4	871.4	869.6	857.7
12.5°	933.3	928.4	919.9	920.5	912.0	899.1	890.6	885.7	868.8	863.2	851.5
15°	943.2	938.5	928.4	928.2	917.3	900.4	890.8	884.0	862.6	853.8	841.5
17.5°	951.7	947.4	934.8	934.4	921.2	899.8	888.4	879.9	853.6	842.7	829.1
20°	957.7	953.4	939.3	938.0	922.2	897.0	883.3	872.6	841.7	828.8	813.7
22.5°	960.5	956.2	940.2	938.4	919.9	891.4	875.9	863.4	828.2	811.3	795.7
25°	960.0	955.8	937.8	935.9	915.6	882.9	865.6	851.1	811.1	791.2	775.8
27.5°	955.3	952.1	933.1	930.6	907.7	871.4	853.0	837.0	792.1	769.9	753.2
30°	947.2	944.7	924.6	922.4	897.9	858.8	838.4	819.9	771.6	746.6	729.7
32.5°	934.2	932.0	911.7	909.6	884.8	842.7	821.2	802.3	749.3	721.6	704.7
35°	916.4	915.0	895.3	893.1	867.9	824.3	801.5	780.6	725.9	694.7	678.6
37.5°	892.9	892.9	873.9	871.4	846.8	801.7	779.3	757.1	699.6	666.5	650.6
40°	865.6	868.1	848.7	846.2	822.4	777.4	753.0	729.7	671.2	636.8	621.2
42.5°	832.9	835.2	819.0	816.7	794.4	749.4	726.7	701.3	641.5	606.6	590.4
45°	796.8	799.8	785.3	783.7	762.8	718.8	697.0	671.2	610.5	575.0	559.2
47.5°	756.6	760.5	747.9	747.0	727.6	687.4	664.7	638.5	578.0	542.1	527.3
50°	711.5	717.1	706.8	706.8	689.5	649.4	629.7	603.6	544.2	508.3	493.6
52.5°	663.2	670.3	662.6	662.8	648.7	612.8	592.3	566.7	508.8	473.5	460.0
55°	613.2	620.1	615.2	616.0	604.9	572.2	553.6	528.2	472.7	438.3	425.6
57.5°	560.9	568.4	565.2	566.7	559.0	529.7	510.3	488.2	435.5	401.5	390.6
60°	508.5	515.6	513.9	516.0	511.1	485.7	468.0	445.1	398.1	365.4	355.8
62.5°	455.5	462.0	461.7	463.9	461.3	440.2	424.4	404.9	359.4	329.3	320.5
65°	403.6	409.2	408.8	411.3	410.7	393.8	379.5	361.7	320.7	293.0	285.3
67.5°	353.2	357.9	356.6	359.4	360.2	346.6	334.2	318.2	283.8	257.0	250.4
70°	303.9	307.1	305.5	307.3	309.0	298.9	288.3	274.2	244.6	220.9	215.4
72.5°	255.6	257.9	255.3	257.1	258.6	251.3	242.7	230.5	205.8	185.3	180.8
75°	208.8	212.0	206.6	208.5	209.6	202.3	197.2	187.2	166.0	150.2	147.2
77.5°	163.5	165.4	162.4	161.7	162.4	157.1	153.2	145.5	129.5	116.5	114.7
80°	120.3	121.4	118.4	117.7	118.2	114.5	111.5	105.8	94.5	84.8	84.0
82.5°	80.6	81.2	78.6	77.8	78.2	77.1	73.5	69.5	64.3	56.0	55.8
85°	46.1	46.1	44.2	43.4	43.8	41.9	40.6	38.5	36.5	30.8	31.2
87.5°	16.9	16.9	16.0	15.8	17.7	15.6	15.0	14.1	14.7	11.7	12.4
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°	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0	860.0
2.5°	863.7	861.8	860.2	854.3	856.8	850.8	850.4	848.1	846.4	843.2	847.4
5°	860.9	857.1	852.3	845.3	847.4	840.2	838.7	836.1	833.8	829.7	832.9
7.5°	856.4	850.2	842.5	833.7	836.5	827.6	825.4	822.6	820.7	815.8	818.6
10°	849.8	841.0	832.0	821.2	823.3	813.7	810.9	807.9	806.2	801.9	804.7
12.5°	839.7	829.0	816.7	805.1	807.3	798.3	794.6	791.4	790.8	787.2	790.6
15°	826.5	811.7	799.1	786.7	789.3	778.8	777.1	773.9	774.8	772.4	776.5
17.5°	809.8	792.7	779.0	765.6	768.2	759.4	758.1	756.6	757.5	757.1	761.7
20°	791.0	772.2	756.4	743.2	744.7	737.8	738.4	738.0	739.9	741.9	748.1
22.5°	769.7	748.5	732.0	718.4	720.7	714.7	717.3	718.0	721.2	725.9	733.8
25°	745.9	723.1	705.8	693.0	695.1	691.2	695.7	697.6	702.6	710.5	718.6
27.5°	720.9	696.8	678.4	666.2	670.1	666.2	672.9	676.7	684.4	693.0	703.0
30°	694.4	669.4	650.4	639.5	643.2	639.7	650.6	655.6	663.4	675.2	687.0
32.5°	666.5	640.2	621.6	613.2	615.8	615.2	627.4	633.1	643.4	657.0	669.6
35°	638.0	610.5	591.7	584.6	587.8	588.5	603.2	609.8	621.1	637.4	650.9
37.5°	608.5	580.5	562.0	556.2	559.0	561.8	579.0	585.5	598.3	616.2	631.0
40°	577.8	549.8	531.8	527.1	529.9	532.9	551.5	560.5	574.4	593.8	610.0
42.5°	546.8	518.8	501.3	497.9	500.8	506.6	526.3	534.8	549.4	570.9	588.7
45°	515.2	486.1	470.9	468.2	471.2	478.0	497.4	507.5	523.1	546.6	565.8
47.5°	483.3	454.9	440.4	438.7	441.7	449.3	470.7	479.9	496.4	521.4	542.1
50°	450.9	423.3	409.4	408.8	411.7	419.7	440.2	451.1	468.2	496.2	517.5
52.5°	418.2	391.7	379.1	379.1	381.8	390.0	410.7	422.0	439.7	469.2	492.7
55°	385.5	360.3	348.3	349.3	353.0	360.2	380.3	392.1	410.0	440.6	465.4
57.5°	352.8	328.9	318.0	319.4	322.9	330.1	349.8	363.2	379.3	411.1	436.5
60°	320.5	297.9	288.3	289.9	293.0	300.2	320.7	332.1	348.3	380.6	406.0
62.5°	287.8	267.3	258.3	260.2	263.0	270.1	289.5	300.6	316.5	348.3	373.9
65°	255.5	236.5	228.8	230.6	233.3	239.9	258.1	268.8	284.0	315.0	339.5
67.5°	223.5	206.2	199.8	201.7	203.8	210.0	225.0	236.7	250.9	280.5	303.6
70°	191.9	176.5	170.9	172.7	174.6	180.3	193.4	204.1	217.3	244.4	265.8
72.5°	160.7	145.7	142.9	144.5	146.1	150.9	163.5	172.0	183.5	207.5	225.9
75°	130.3	117.3	115.4	117.1	118.4	122.2	132.7	140.0	149.6	170.5	185.5
77.5°	100.9	90.0	89.3	90.6	91.9	94.5	102.8	110.5	118.0	133.5	146.8
80°	73.5	64.7	64.7	66.0	65.6	68.8	74.6	80.8	86.3	97.4	107.1
82.5°	48.5	41.5	42.5	43.4	44.0	45.3	48.9	53.6	57.0	63.7	70.1
85°	26.9	22.2	23.1	23.9	23.5	25.0	26.9	29.7	31.4	34.6	38.0
87.5°	10.0	8.3	8.5	9.0	9.4	10.2	10.2	11.8	12.0	12.4	13.2
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°	860.0	860.0	860.0
2.5°	839.5	844.0	847.4
5°	825.0	828.8	831.8
7.5°	810.9	814.3	816.9
10°	797.6	801.3	803.2
12.5°	783.8	788.2	789.7
15°	770.3	774.6	776.5
17.5°	756.4	762.0	764.1
20°	743.4	750.6	752.3
22.5°	730.3	737.6	739.7
25°	716.0	724.6	726.7
27.5°	700.8	711.1	713.2
30°	685.5	696.8	698.9
32.5°	669.2	681.4	683.3
35°	652.1	664.3	666.5
37.5°	633.1	646.4	650.9
40°	613.4	627.8	632.5
42.5°	592.7	608.5	613.4
45°	570.5	587.8	593.4
47.5°	548.1	567.7	572.6
50°	523.9	544.7	550.6
52.5°	498.5	521.2	527.1
55°	472.2	495.1	501.5
57.5°	443.6	467.3	474.1
60°	413.7	437.4	443.8
62.5°	383.1	404.5	410.7
65°	348.9	369.0	374.6
67.5°	312.6	331.0	335.7
70°	274.1	290.0	294.2
72.5°	233.8	244.9	250.4
75°	192.3	201.1	205.3
77.5°	150.6	156.8	160.2
80°	109.8	113.3	116.2
82.5°	71.8	73.3	75.4
85°	38.7	38.7	40.0
87.5°	13.2	12.6	13.2
90°	0.0	0.0	0.0

(END OF REPORT)