

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: P835192

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2LO-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: P835192
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-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

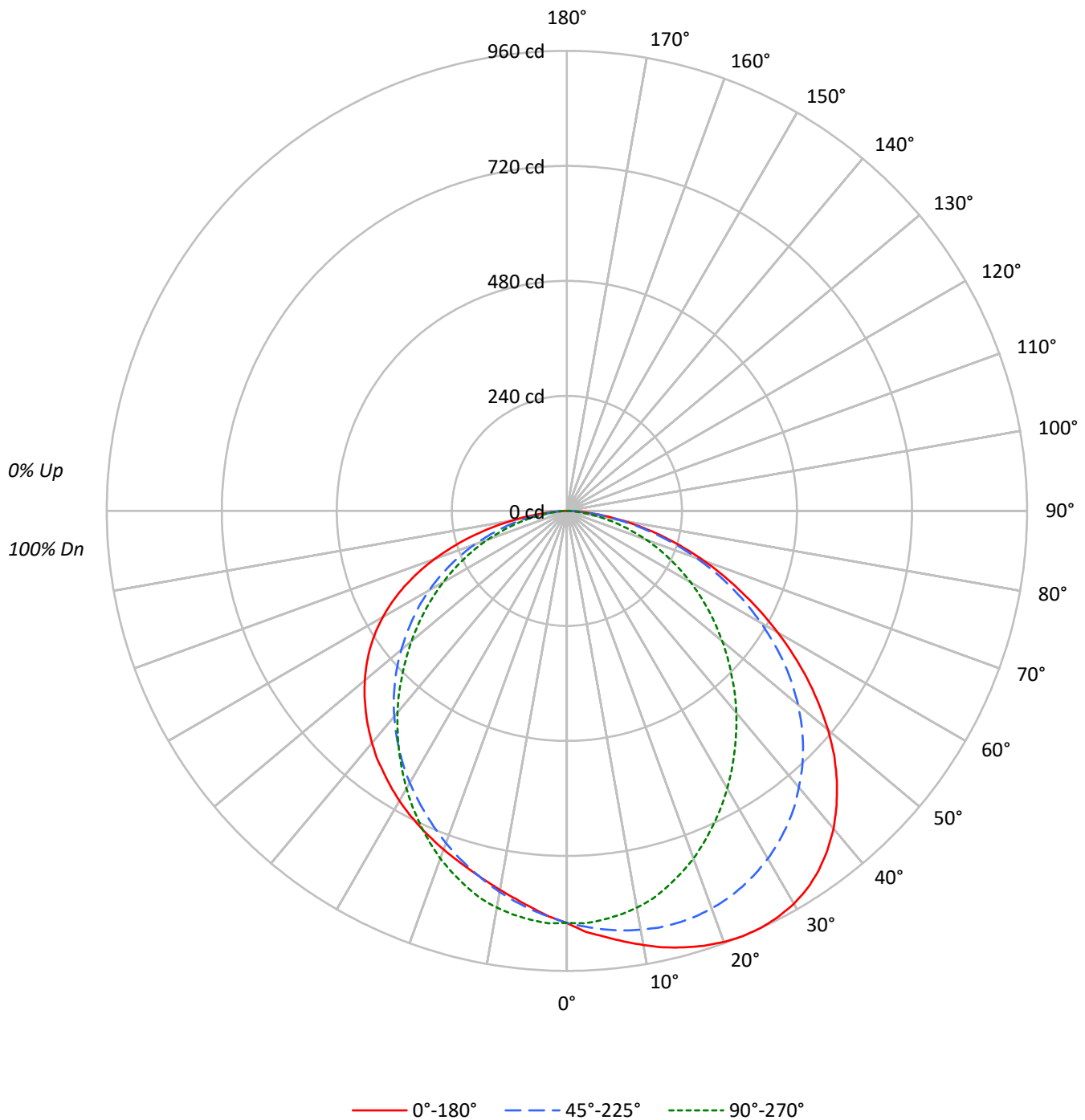
Lumens per Lamp: N/A
Luminaire Lumens: 2528.9 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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



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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°	2313	2313	2313
5°	2409	2315	2246
10°	2514	2297	2194
15°	2627	2260	2163
20°	2742	2211	2153
25°	2850	2146	2157
30°	2942	2079	2171
35°	3009	2005	2189
40°	3040	1931	2221
45°	3032	1850	2258
50°	2978	1772	2304
55°	2876	1690	2352
60°	2736	1603	2388
65°	2569	1505	2385
70°	2391	1389	2314
75°	2171	1220	2133
80°	1864	1001	1799
85°	1420	685	1235

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	3.2
10°-20°	235.5	9.3
20°-30°	360.7	14.3
30°-40°	440.2	17.4
40°-50°	460.4	18.2
50°-60°	416.7	16.5
60°-70°	315.6	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°	677.7	26.8
0°-40°	1118.0	44.2
0°-60°	1995.1	78.9
0°-90°	2528.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2528.9	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	890	811	774	776	267
25°	960	865	723	697	726	443
35°	916	801	610	610	666	572
45°	797	697	486	507	593	613
55°	613	553	360	392	501	547
65°	404	379	236	269	374	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°	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7
2.5°	878.7	874.6	871.2	872.5	873.3	870.6	868.4	868.7	866.5	870.8	860.7
5°	891.7	887.9	884.0	885.5	884.0	880.0	876.8	875.9	869.9	872.3	862.0
7.5°	906.1	902.0	896.2	897.9	894.7	887.3	883.2	880.8	871.6	871.8	860.3
10°	920.0	916.5	908.6	909.7	903.9	894.1	887.5	884.2	871.2	869.3	857.5
12.5°	933.0	928.1	919.7	920.2	911.8	898.8	890.4	885.5	868.6	862.9	851.3
15°	943.0	938.3	928.1	927.9	917.0	900.1	890.5	883.8	862.4	853.5	841.3
17.5°	951.4	947.1	934.5	934.1	921.0	899.6	888.1	879.6	853.3	842.4	828.9
20°	957.4	953.1	939.0	937.7	921.9	896.7	883.0	872.3	841.5	828.5	813.5
22.5°	960.3	955.9	940.0	938.1	919.7	891.1	875.7	863.1	828.0	811.1	795.5
25°	959.7	955.6	937.5	935.6	915.3	882.7	865.4	850.9	810.9	790.9	775.5
27.5°	955.0	951.8	932.8	930.4	907.5	871.2	852.8	836.8	791.9	769.7	753.0
30°	946.9	944.5	924.4	922.1	897.7	858.6	838.1	819.7	771.4	746.4	729.5
32.5°	934.0	931.7	911.4	909.3	884.5	842.4	821.0	802.0	749.0	721.4	704.5
35°	916.1	914.8	895.1	892.8	867.6	824.0	801.3	780.4	725.7	694.5	678.4
37.5°	892.6	892.6	873.6	871.2	846.6	801.5	779.1	756.9	699.4	666.4	650.4
40°	865.4	867.8	848.5	846.0	822.1	777.2	752.8	729.5	671.1	636.7	621.1
42.5°	832.7	834.9	818.8	816.5	794.1	749.2	726.5	701.1	641.4	606.4	590.3
45°	796.6	799.6	785.1	783.4	762.6	718.6	696.8	671.1	610.4	574.8	559.1
47.5°	756.4	760.3	747.7	746.8	727.4	687.2	664.5	638.4	577.8	542.0	527.1
50°	711.3	716.9	706.6	706.6	689.3	649.3	629.5	603.4	544.0	508.1	493.5
52.5°	663.0	670.1	662.4	662.6	648.5	612.6	592.1	566.6	508.7	473.4	459.8
55°	613.0	619.9	615.1	615.8	604.7	572.0	553.4	528.1	472.6	438.2	425.4
57.5°	560.7	568.3	565.1	566.6	558.9	529.6	510.2	488.0	435.4	401.4	390.5
60°	508.3	515.5	513.8	515.8	510.9	485.6	467.9	445.0	398.0	365.3	355.7
62.5°	455.3	461.9	461.5	463.8	461.2	440.1	424.3	404.8	359.3	329.2	320.4
65°	403.5	409.1	408.7	411.2	410.6	393.7	379.4	361.6	320.6	293.0	285.3
67.5°	353.1	357.8	356.5	359.3	360.1	346.5	334.1	318.1	283.8	256.9	250.3
70°	303.9	307.1	305.4	307.2	308.9	298.8	288.3	274.2	244.5	220.8	215.4
72.5°	255.6	257.8	255.2	257.1	258.6	251.2	242.6	230.4	205.8	185.3	180.8
75°	208.8	212.0	206.5	208.4	209.5	202.2	197.1	187.2	165.9	150.1	147.1
77.5°	163.5	165.4	162.4	161.6	162.4	157.1	153.2	145.4	129.5	116.5	114.6
80°	120.3	121.4	118.4	117.6	118.2	114.4	111.4	105.8	94.5	84.8	84.0
82.5°	80.6	81.2	78.5	77.8	78.2	77.0	73.5	69.5	64.3	56.0	55.8
85°	46.0	46.0	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°	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7	859.7
2.5°	863.5	861.6	859.9	854.1	856.5	850.5	850.1	847.9	846.2	843.0	847.1
5°	860.7	856.9	852.0	845.1	847.1	840.0	838.5	835.9	833.6	829.5	832.7
7.5°	856.2	850.0	842.2	833.4	836.2	827.4	825.1	822.3	820.5	815.6	818.4
10°	849.6	840.7	831.7	821.0	823.1	813.5	810.7	807.7	806.0	801.7	804.5
12.5°	839.4	828.7	816.5	804.9	807.1	798.1	794.3	791.1	790.6	787.0	790.4
15°	826.3	811.4	798.8	786.4	789.1	778.5	776.9	773.7	774.6	772.2	776.3
17.5°	809.6	792.5	778.7	765.4	768.0	759.2	757.9	756.4	757.3	756.9	761.4
20°	790.8	772.0	756.2	743.0	744.5	737.6	738.1	737.8	739.6	741.7	747.9
22.5°	769.5	748.3	731.8	718.2	720.5	714.5	717.1	717.8	721.0	725.7	733.6
25°	745.7	722.9	705.6	692.9	694.9	691.0	695.5	697.4	702.4	710.3	718.4
27.5°	720.7	696.6	678.2	666.0	669.9	666.0	672.7	676.5	684.2	692.9	702.8
30°	694.2	669.2	650.2	639.3	643.1	639.5	650.4	655.5	663.2	675.0	686.8
32.5°	666.4	640.0	621.4	613.0	615.6	615.1	627.3	632.9	643.2	656.8	669.4
35°	637.8	610.4	591.6	584.4	587.6	588.4	603.0	609.6	620.9	637.2	650.8
37.5°	608.3	580.3	561.9	556.0	558.9	561.7	578.8	585.4	598.1	616.0	630.8
40°	577.7	549.7	531.6	526.9	529.7	532.7	551.4	560.4	574.3	593.6	609.8
42.5°	546.7	518.7	501.2	497.8	500.6	506.4	526.2	534.6	549.3	570.7	588.6
45°	515.1	486.0	470.7	468.1	471.1	477.9	497.2	507.4	523.0	546.5	565.6
47.5°	483.1	454.8	440.3	438.6	441.6	449.1	470.5	479.8	496.3	521.3	542.0
50°	450.8	423.2	409.3	408.7	411.5	419.6	440.1	451.0	468.1	496.1	517.3
52.5°	418.1	391.6	379.0	379.0	381.7	389.9	410.6	421.9	439.5	469.0	492.5
55°	385.4	360.2	348.2	349.2	352.9	360.1	380.2	392.0	409.8	440.5	465.3
57.5°	352.7	328.9	318.0	319.3	322.8	330.0	349.7	363.1	379.2	411.0	436.3
60°	320.4	297.9	288.3	289.8	293.0	300.1	320.6	332.1	348.2	380.5	405.9
62.5°	287.7	267.2	258.2	260.1	262.9	270.0	289.4	300.5	316.5	348.2	373.8
65°	255.4	236.4	228.7	230.6	233.2	239.8	258.0	268.7	283.9	315.0	339.4
67.5°	223.4	206.1	199.8	201.6	203.7	209.9	224.9	236.6	250.9	280.4	303.5
70°	191.9	176.5	170.8	172.7	174.6	180.2	193.4	204.1	217.2	244.3	265.7
72.5°	160.7	145.6	142.8	144.5	146.0	150.9	163.5	171.9	183.4	207.5	225.9
75°	130.2	117.3	115.4	117.1	118.4	122.1	132.7	140.0	149.6	170.4	185.5
77.5°	100.9	90.0	89.3	90.6	91.9	94.5	102.8	110.5	118.0	133.4	146.8
80°	73.5	64.6	64.6	66.0	65.6	68.8	74.6	80.8	86.3	97.3	107.1
82.5°	48.5	41.5	42.5	43.4	44.0	45.3	48.9	53.6	56.9	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	10.1	10.1	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°	859.7	859.7	859.7
2.5°	839.2	843.8	847.1
5°	824.8	828.5	831.5
7.5°	810.7	814.1	816.7
10°	797.3	801.1	803.0
12.5°	783.6	787.9	789.4
15°	770.1	774.4	776.3
17.5°	756.2	761.8	763.9
20°	743.2	750.4	752.0
22.5°	730.1	737.4	739.5
25°	715.8	724.4	726.5
27.5°	700.6	710.9	713.0
30°	685.3	696.6	698.7
32.5°	669.0	681.2	683.1
35°	651.9	664.1	666.4
37.5°	632.9	646.3	650.8
40°	613.2	627.6	632.3
42.5°	592.5	608.3	613.2
45°	570.3	587.6	593.3
47.5°	548.0	567.5	572.4
50°	523.7	544.6	550.4
52.5°	498.4	521.1	526.9
55°	472.1	495.0	501.4
57.5°	443.5	467.2	473.9
60°	413.6	437.3	443.7
62.5°	383.0	404.4	410.6
65°	348.8	368.9	374.5
67.5°	312.5	330.9	335.6
70°	274.0	290.0	294.1
72.5°	233.8	244.9	250.3
75°	192.2	201.1	205.2
77.5°	150.5	156.7	160.1
80°	109.7	113.3	116.1
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)