

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: P834594

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834594
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-LD4-6HI-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

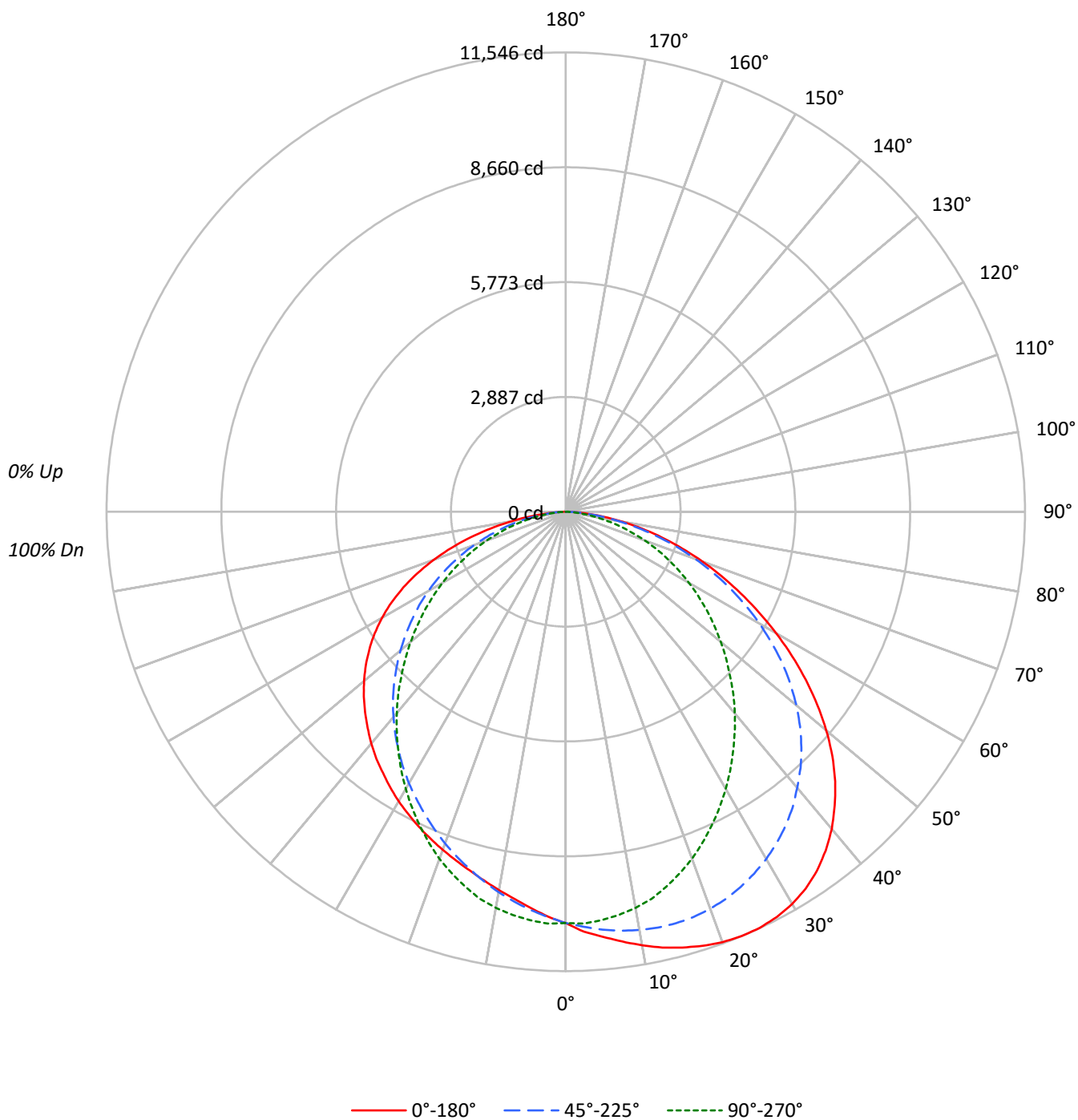
Lumens per Lamp: N/A
Luminaire Lumens: 30407.8 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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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CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-40-120-EDD

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°	13909	13909	13909
5°	14481	13916	13504
10°	15114	13812	13191
15°	15794	13591	13002
20°	16484	13291	12948
25°	17131	12905	12968
30°	17689	12501	13052
35°	18093	12055	13161
40°	18276	11608	13355
45°	18225	11118	13574
50°	17902	10651	13853
55°	17290	10161	14142
60°	16448	9637	14356
65°	15445	9050	14337
70°	14373	8347	13911
75°	13050	7330	12827
80°	11205	6023	10820
85°	8546	4116	7430

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	980.4	3.2
10°-20°	2831.3	9.3
20°-30°	4337.6	14.3
30°-40°	5293.4	17.4
40°-50°	5535.8	18.2
50°-60°	5010.2	16.5
60°-70°	3794.5	12.5
70°-80°	2114.6	7.0
80°-90°	510.1	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°	8149.3	26.8
0°-40°	13442.7	44.2
0°-60°	23988.7	78.9
0°-90°	30407.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	30407.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10337	10337	10337	10337	10337	
5°	10722	10543	10304	10050	9998	###
15°	11338	10708	9757	9302	9334	3216
25°	11540	10405	8692	8385	8735	5323
35°	11015	9635	7339	7330	8012	6878
45°	9578	8378	5843	6101	7133	7369
55°	7371	6654	4332	4713	6028	6577
65°	4851	4562	2842	3231	4503	4812
75°	2510	2370	1410	1683	2467	2662
85°	554	488	267	357	481	666
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°	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4
2.5°	10565.6	10515.9	10475.2	10491.1	10500.1	10468.5	10441.3	10445.9	10418.7	10470.7	10348.7
5°	10721.5	10676.3	10628.9	10647.0	10628.9	10581.4	10543.0	10531.7	10459.4	10488.8	10364.5
7.5°	10895.5	10845.8	10775.8	10796.1	10757.7	10669.6	10619.8	10590.5	10479.8	10482.0	10344.2
10°	11062.7	11019.8	10924.9	10938.4	10868.4	10750.9	10671.8	10631.1	10475.2	10452.6	10310.3
12.5°	11218.6	11159.9	11058.2	11065.0	10963.3	10807.4	10705.7	10647.0	10443.6	10375.8	10235.7
15°	11338.4	11281.9	11159.9	11157.6	11026.6	10823.2	10708.0	10626.6	10369.0	10262.8	10116.0
17.5°	11440.1	11388.1	11236.7	11232.2	11074.0	10816.4	10678.6	10576.9	10260.6	10129.5	9966.8
20°	11512.4	11460.4	11290.9	11275.1	11085.3	10782.5	10617.6	10488.8	10118.2	9962.3	9781.6
22.5°	11546.3	11494.3	11302.2	11279.6	11058.2	10714.7	10529.5	10378.1	9955.5	9752.2	9564.6
25°	11539.5	11489.8	11272.9	11250.3	11006.2	10613.1	10405.2	10231.2	9749.9	9510.4	9325.1
27.5°	11483.0	11444.6	11216.4	11187.0	10911.3	10475.2	10253.8	10061.7	9521.7	9255.1	9054.0
30°	11385.8	11356.5	11114.7	11087.6	10793.8	10323.8	10077.6	9856.1	9275.4	8974.9	8771.5
32.5°	11229.9	11202.8	10958.8	10933.9	10635.7	10129.5	9871.9	9643.7	9006.5	8674.4	8471.0
35°	11015.3	10999.5	10762.2	10735.1	10432.3	9908.1	9634.7	9383.9	8726.4	8351.3	8156.9
37.5°	10732.8	10732.8	10504.6	10475.2	10179.2	9636.9	9368.1	9101.4	8410.0	8012.3	7820.3
40°	10405.2	10434.6	10201.8	10172.5	9885.5	9345.5	9051.7	8771.5	8068.8	7655.3	7467.8
42.5°	10012.0	10039.1	9844.8	9817.7	9548.8	9008.8	8735.4	8430.4	7711.8	7291.5	7097.2
45°	9578.2	9614.4	9440.4	9420.0	9169.2	8640.5	8378.4	8068.8	7339.0	6911.9	6722.1
47.5°	9094.7	9142.1	8990.7	8979.4	8746.7	8263.1	7989.7	7675.7	6948.1	6516.5	6338.0
50°	8552.4	8620.2	8495.9	8495.9	8288.0	7806.7	7569.5	7255.4	6541.4	6109.8	5933.6
52.5°	7971.7	8057.5	7964.9	7967.1	7797.7	7366.1	7119.8	6812.5	6116.6	5691.8	5529.1
55°	7370.6	7454.2	7395.5	7404.5	7271.2	6878.0	6654.4	6349.3	5682.7	5269.3	5115.6
57.5°	6742.5	6832.9	6794.4	6812.5	6719.9	6367.4	6134.7	5868.0	5235.4	4826.4	4695.3
60°	6112.1	6197.9	6177.6	6202.4	6143.7	5838.7	5626.3	5350.6	4785.7	4392.6	4277.3
62.5°	5474.9	5554.0	5549.4	5576.6	5544.9	5291.8	5102.0	4867.1	4320.2	3958.7	3852.5
65°	4851.2	4919.0	4914.5	4943.9	4937.1	4733.7	4562.0	4347.4	3854.8	3522.6	3430.0
67.5°	4245.7	4302.2	4286.4	4320.2	4329.3	4166.6	4017.5	3825.4	3411.9	3088.8	3009.7
70°	3653.7	3692.1	3671.8	3694.4	3714.7	3592.7	3466.1	3296.7	2939.7	2655.0	2589.4
72.5°	3073.0	3100.1	3068.5	3091.1	3109.1	3021.0	2917.1	2770.2	2474.2	2227.9	2173.7
75°	2510.4	2548.8	2483.2	2505.8	2519.4	2431.3	2370.3	2250.5	1995.2	1805.4	1769.2
77.5°	1965.8	1988.4	1952.2	1943.2	1952.2	1889.0	1841.5	1748.9	1556.8	1400.9	1378.3
80°	1446.1	1459.7	1423.5	1414.5	1421.3	1376.1	1339.9	1272.1	1136.5	1019.1	1010.0
82.5°	969.3	976.1	944.5	935.5	940.0	926.4	883.5	836.0	772.8	673.3	671.1
85°	553.6	553.6	531.0	522.0	526.5	503.9	488.1	463.2	438.4	370.6	375.1
87.5°	203.4	203.4	192.1	189.8	212.4	187.5	180.8	169.5	176.2	140.1	149.1
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°	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4	10337.4
2.5°	10382.6	10360.0	10339.7	10269.6	10299.0	10226.7	10222.2	10195.1	10174.7	10136.3	10186.0
5°	10348.7	10303.5	10244.8	10161.2	10186.0	10100.2	10082.1	10050.4	10023.3	9973.6	10012.0
7.5°	10294.5	10219.9	10127.3	10021.1	10055.0	9948.8	9921.7	9887.8	9865.2	9806.4	9840.3
10°	10215.4	10109.2	10000.7	9871.9	9896.8	9781.6	9747.7	9711.5	9691.2	9639.2	9673.1
12.5°	10093.4	9964.6	9817.7	9677.6	9704.7	9596.3	9551.1	9512.7	9505.9	9463.0	9503.6
15°	9935.2	9756.7	9605.3	9456.2	9487.8	9361.3	9340.9	9302.5	9313.8	9284.5	9334.2
17.5°	9734.1	9528.5	9363.5	9203.1	9234.7	9128.6	9112.7	9094.7	9106.0	9101.4	9155.7
20°	9508.2	9282.2	9092.4	8934.2	8952.3	8868.7	8875.5	8871.0	8893.6	8918.4	8993.0
22.5°	9252.8	8997.5	8798.7	8636.0	8663.1	8590.8	8622.4	8631.5	8669.9	8726.4	8821.3
25°	8965.9	8692.5	8484.6	8330.9	8355.8	8308.3	8362.6	8385.2	8446.2	8541.1	8638.2
27.5°	8665.3	8376.1	8154.7	8007.8	8055.3	8007.8	8089.2	8134.4	8227.0	8330.9	8450.7
30°	8346.7	8046.2	7818.0	7687.0	7732.2	7689.2	7820.3	7881.3	7973.9	8116.3	8258.6
32.5°	8012.3	7696.0	7472.3	7370.6	7402.3	7395.5	7542.4	7610.1	7734.4	7897.1	8048.5
35°	7668.9	7339.0	7113.0	7027.2	7065.6	7074.6	7250.9	7330.0	7465.5	7662.1	7824.8
37.5°	7314.1	6977.5	6756.0	6686.0	6719.9	6753.8	6959.4	7038.5	7192.1	7406.8	7585.3
40°	6945.8	6609.2	6392.2	6335.8	6369.6	6405.8	6629.5	6738.0	6905.2	7137.9	7332.2
42.5°	6573.0	6236.3	6026.2	5985.5	6019.4	6089.5	6326.7	6428.4	6604.6	6862.2	7076.9
45°	6193.4	5843.2	5660.2	5628.5	5664.7	5746.0	5978.7	6100.8	6288.3	6570.7	6801.2
47.5°	5809.3	5468.1	5294.1	5273.8	5309.9	5400.3	5657.9	5768.6	5967.5	6268.0	6516.5
50°	5420.6	5088.5	4921.3	4914.5	4948.4	5045.6	5291.8	5422.9	5628.5	5965.2	6220.5
52.5°	5027.5	4708.9	4557.5	4557.5	4589.1	4688.6	4937.1	5072.7	5285.1	5639.8	5922.3
55°	4634.3	4331.5	4186.9	4198.2	4243.4	4329.3	4571.1	4713.4	4928.1	5296.4	5594.6
57.5°	4241.2	3954.2	3823.1	3839.0	3881.9	3967.8	4205.0	4365.4	4559.8	4941.6	5246.7
60°	3852.5	3581.4	3466.1	3484.2	3522.6	3608.5	3854.8	3992.6	4186.9	4575.6	4880.6
62.5°	3459.4	3213.1	3104.6	3127.2	3161.1	3247.0	3479.7	3613.0	3805.1	4186.9	4494.2
65°	3070.7	2842.5	2749.9	2772.5	2804.1	2883.2	3102.4	3231.1	3414.2	3787.0	4080.7
67.5°	2686.6	2478.7	2401.9	2424.5	2449.3	2523.9	2704.7	2844.8	3016.5	3371.2	3649.2
70°	2307.0	2121.7	2053.9	2076.5	2099.1	2166.9	2325.1	2453.9	2612.0	2937.4	3195.0
72.5°	1931.9	1751.1	1717.3	1737.6	1755.7	1814.4	1965.8	2067.5	2205.3	2494.5	2716.0
75°	1565.9	1410.0	1387.4	1407.7	1423.5	1468.7	1595.2	1683.4	1798.6	2049.4	2230.2
77.5°	1213.4	1082.3	1073.3	1089.1	1104.9	1136.5	1236.0	1328.6	1419.0	1604.3	1764.7
80°	883.5	777.3	777.3	793.1	788.6	827.0	897.0	971.6	1037.1	1170.4	1287.9
82.5°	583.0	499.4	510.7	522.0	528.7	544.5	587.5	644.0	684.6	766.0	842.8
85°	323.1	266.6	277.9	287.0	282.4	300.5	323.1	357.0	377.3	415.8	456.4
87.5°	119.8	99.4	101.7	108.5	113.0	122.0	122.0	142.4	144.6	149.1	158.2
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°	10337.4	10337.4	10337.4
2.5°	10091.1	10145.3	10186.0
5°	9917.1	9962.3	9998.5
7.5°	9747.7	9788.3	9820.0
10°	9587.2	9632.4	9655.0
12.5°	9422.3	9474.3	9492.3
15°	9259.6	9311.6	9334.2
17.5°	9092.4	9160.2	9185.0
20°	8936.5	9022.4	9042.7
22.5°	8778.3	8866.4	8891.3
25°	8606.6	8710.5	8735.4
27.5°	8423.6	8547.8	8572.7
30°	8240.6	8376.1	8401.0
32.5°	8044.0	8190.8	8213.4
35°	7838.4	7985.2	8012.3
37.5°	7610.1	7770.6	7824.8
40°	7372.9	7546.9	7603.4
42.5°	7124.3	7314.1	7372.9
45°	6857.7	7065.6	7133.4
47.5°	6588.8	6823.8	6882.6
50°	6297.3	6548.2	6618.2
52.5°	5992.3	6265.7	6335.8
55°	5676.0	5951.6	6028.5
57.5°	5332.5	5617.2	5698.6
60°	4973.3	5258.0	5334.8
62.5°	4604.9	4862.5	4937.1
65°	4193.7	4435.5	4503.3
67.5°	3757.6	3979.1	4035.5
70°	3294.4	3486.5	3536.2
72.5°	2810.9	2944.2	3009.7
75°	2311.5	2417.7	2467.4
77.5°	1809.9	1884.5	1925.1
80°	1319.6	1362.5	1396.4
82.5°	863.1	881.2	906.1
85°	465.5	465.5	481.3
87.5°	158.2	151.4	158.2
90°	0.0	0.0	0.0

(END OF REPORT)