

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: P834539

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834539
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-LD4-6STD-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

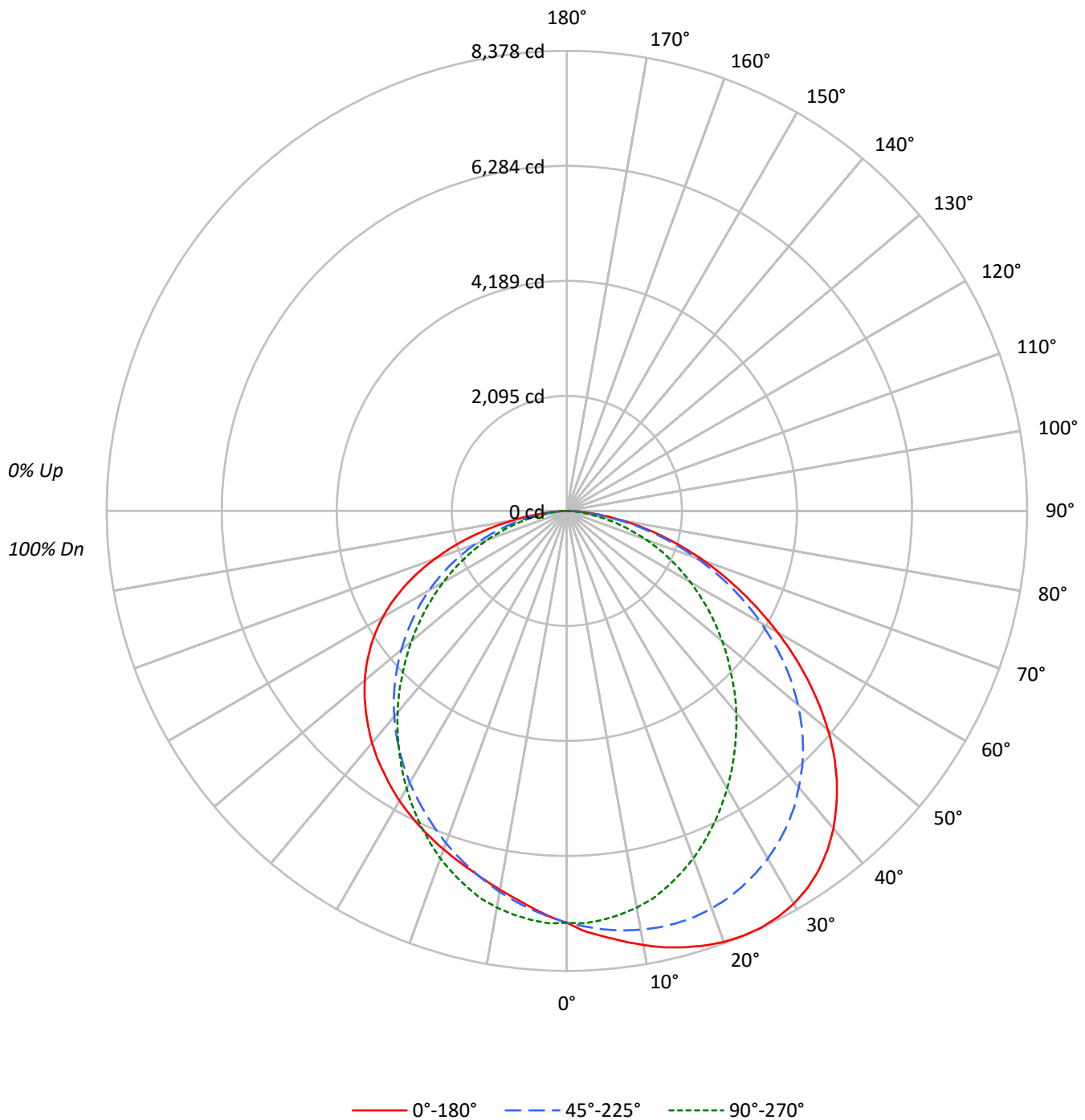
Lumens per Lamp: N/A
Luminaire Lumens: 22064.5 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 199.8
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°	10093	10093	10093
5°	10507	10098	9799
10°	10967	10022	9572
15°	11460	9862	9434
20°	11961	9644	9395
25°	12431	9364	9410
30°	12836	9071	9471
35°	13129	8747	9550
40°	13261	8423	9690
45°	13225	8068	9849
50°	12990	7729	10052
55°	12546	7373	10261
60°	11934	6993	10417
65°	11207	6567	10403
70°	10430	6057	10094
75°	9470	5319	9308
80°	8130	4370	7851
85°	6201	2987	5391

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	711.4	3.2
10°-20°	2054.4	9.3
20°-30°	3147.4	14.3
30°-40°	3841.0	17.4
40°-50°	4016.9	18.2
50°-60°	3635.5	16.5
60°-70°	2753.3	12.5
70°-80°	1534.4	7.0
80°-90°	370.1	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°	5913.3	26.8
0°-40°	9754.3	44.2
0°-60°	17406.7	78.9
0°-90°	22064.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22064.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7501	7501	7501	7501	7501	
5°	7780	7650	7476	7293	7255	750
15°	8227	7770	7080	6750	6773	2333
25°	8373	7550	6307	6084	6339	3863
35°	7993	6991	5325	5319	5814	4991
45°	6950	6080	4240	4427	5176	5347
55°	5348	4828	3143	3420	4374	4772
65°	3520	3310	2063	2345	3268	3492
75°	1822	1720	1023	1222	1790	1932
85°	402	354	194	259	349	483
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°	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0
2.5°	7666.6	7630.5	7601.0	7612.5	7619.1	7596.1	7576.4	7579.7	7560.0	7597.7	7509.2
5°	7779.7	7746.9	7712.5	7725.6	7712.5	7678.1	7650.2	7642.0	7589.6	7610.9	7520.7
7.5°	7906.0	7869.9	7819.1	7833.8	7806.0	7742.0	7706.0	7684.6	7604.3	7605.9	7505.9
10°	8027.3	7996.2	7927.3	7937.1	7886.3	7801.1	7743.7	7714.2	7601.0	7584.6	7481.3
12.5°	8140.4	8097.8	8024.0	8029.0	7955.2	7842.0	7768.3	7725.6	7578.1	7528.9	7427.2
15°	8227.3	8186.4	8097.8	8096.2	8001.1	7853.5	7769.9	7710.9	7524.0	7446.9	7340.3
17.5°	8301.1	8263.4	8153.6	8150.3	8035.5	7848.6	7748.6	7674.8	7445.3	7350.2	7232.1
20°	8353.6	8315.9	8192.9	8181.4	8043.7	7824.0	7704.3	7610.9	7342.0	7228.8	7097.7
22.5°	8378.2	8340.5	8201.1	8184.7	8024.0	7774.8	7640.4	7530.5	7223.9	7076.4	6940.3
25°	8373.3	8337.2	8179.8	8163.4	7986.3	7701.0	7550.2	7424.0	7074.7	6900.9	6766.5
27.5°	8332.3	8304.4	8138.8	8117.5	7917.5	7601.0	7440.4	7301.0	6909.1	6715.7	6569.7
30°	8261.8	8240.5	8065.0	8045.4	7832.2	7491.2	7312.5	7151.8	6730.4	6512.4	6364.8
32.5°	8148.6	8129.0	7951.9	7933.9	7717.4	7350.2	7163.3	6997.7	6535.3	6294.3	6146.7
35°	7992.9	7981.4	7809.3	7789.6	7569.9	7189.5	6991.1	6809.1	6332.0	6059.8	5918.8
37.5°	7787.9	7787.9	7622.3	7601.0	7386.2	6992.7	6797.6	6604.2	6102.5	5813.9	5674.5
40°	7550.2	7571.5	7402.6	7381.3	7173.1	6781.2	6568.1	6364.8	5854.9	5554.8	5418.8
42.5°	7264.9	7284.6	7143.6	7123.9	6928.8	6537.0	6338.6	6117.2	5595.8	5290.9	5149.9
45°	6950.1	6976.4	6850.1	6835.4	6653.4	6269.7	6079.5	5854.9	5325.3	5015.4	4877.7
47.5°	6599.3	6633.7	6523.8	6515.6	6346.8	5995.9	5797.5	5569.6	5041.7	4728.5	4599.0
50°	6205.8	6254.9	6164.8	6164.8	6013.9	5664.7	5492.5	5264.6	4746.5	4433.4	4305.5
52.5°	5784.4	5846.7	5779.5	5781.1	5658.1	5345.0	5166.3	4943.3	4438.3	4130.1	4012.0
55°	5348.3	5408.9	5366.3	5372.9	5276.1	4990.8	4828.5	4607.2	4123.5	3823.5	3712.0
57.5°	4892.5	4958.0	4930.2	4943.3	4876.1	4620.3	4451.4	4258.0	3798.9	3502.1	3407.0
60°	4435.0	4497.3	4482.6	4500.6	4458.0	4236.6	4082.5	3882.5	3472.6	3187.3	3103.7
62.5°	3972.7	4030.1	4026.8	4046.4	4023.5	3839.9	3702.1	3531.6	3134.9	2872.5	2795.5
65°	3520.1	3569.3	3566.1	3587.4	3582.5	3434.9	3310.3	3154.5	2797.1	2556.1	2488.9
67.5°	3080.7	3121.7	3110.3	3134.9	3141.4	3023.4	2915.1	2775.8	2475.7	2241.3	2183.9
70°	2651.2	2679.1	2664.3	2680.7	2695.4	2606.9	2515.1	2392.1	2133.1	1926.5	1878.9
72.5°	2229.8	2249.5	2226.5	2242.9	2256.0	2192.1	2116.7	2010.1	1795.3	1616.6	1577.3
75°	1821.6	1849.4	1801.9	1818.3	1828.1	1764.2	1719.9	1633.0	1447.7	1310.0	1283.8
77.5°	1426.4	1442.8	1416.6	1410.0	1416.6	1370.7	1336.2	1269.0	1129.7	1016.5	1000.1
80°	1049.3	1059.2	1032.9	1026.4	1031.3	998.5	972.3	923.1	824.7	739.4	732.9
82.5°	703.4	708.3	685.3	678.8	682.1	672.2	641.1	606.6	560.7	488.6	487.0
85°	401.7	401.7	385.3	378.7	382.0	365.6	354.1	336.1	318.1	268.9	272.2
87.5°	147.6	147.6	139.4	137.7	154.1	136.1	131.2	123.0	127.9	101.7	108.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0	7501.0
2.5°	7533.8	7517.4	7502.7	7451.8	7473.1	7420.7	7417.4	7397.7	7383.0	7355.1	7391.2
5°	7509.2	7476.4	7433.8	7373.1	7391.2	7328.9	7315.7	7292.8	7273.1	7237.0	7264.9
7.5°	7469.9	7415.8	7348.5	7271.5	7296.1	7219.0	7199.3	7174.7	7158.3	7115.7	7140.3
10°	7412.5	7335.4	7256.7	7163.3	7181.3	7097.7	7073.1	7046.9	7032.1	6994.4	7019.0
12.5°	7323.9	7230.5	7123.9	7022.3	7041.9	6963.2	6930.4	6902.6	6897.7	6866.5	6896.0
15°	7209.2	7079.6	6969.8	6861.6	6884.5	6792.7	6778.0	6750.1	6758.3	6737.0	6773.0
17.5°	7063.3	6914.1	6794.4	6678.0	6700.9	6623.8	6612.4	6599.3	6607.5	6604.2	6643.5
20°	6899.3	6735.3	6597.6	6482.8	6496.0	6435.3	6440.2	6436.9	6453.3	6471.4	6525.5
22.5°	6714.0	6528.8	6384.5	6266.4	6286.1	6233.6	6256.6	6263.1	6291.0	6332.0	6400.9
25°	6505.8	6307.4	6156.6	6045.1	6063.1	6028.7	6068.0	6084.4	6128.7	6197.6	6268.1
27.5°	6287.7	6077.9	5917.2	5810.6	5845.1	5810.6	5869.6	5902.4	5969.7	6045.1	6132.0
30°	6056.6	5838.5	5672.9	5577.8	5610.6	5579.4	5674.5	5718.8	5786.0	5889.3	5992.6
32.5°	5813.9	5584.4	5422.0	5348.3	5371.2	5366.3	5472.9	5522.1	5612.2	5730.3	5840.1
35°	5564.7	5325.3	5161.4	5099.1	5126.9	5133.5	5261.4	5318.8	5417.1	5559.8	5677.8
37.5°	5307.3	5063.0	4902.3	4851.5	4876.1	4900.7	5049.9	5107.2	5218.7	5374.5	5504.0
40°	5040.0	4795.7	4638.3	4597.3	4621.9	4648.2	4810.5	4889.2	5010.5	5179.4	5320.4
42.5°	4769.5	4525.2	4372.7	4343.2	4367.8	4418.6	4590.8	4664.6	4792.5	4979.4	5135.1
45°	4494.1	4239.9	4107.1	4084.2	4110.4	4169.4	4338.3	4426.8	4562.9	4767.9	4935.1
47.5°	4215.3	3967.7	3841.5	3826.7	3853.0	3918.6	4105.5	4185.8	4330.1	4548.2	4728.5
50°	3933.3	3692.3	3571.0	3566.1	3590.6	3661.2	3839.9	3935.0	4084.2	4328.5	4513.7
52.5°	3648.0	3416.9	3307.0	3307.0	3330.0	3402.1	3582.5	3680.8	3834.9	4092.4	4297.3
55°	3362.8	3143.0	3038.1	3046.3	3079.1	3141.4	3316.8	3420.1	3575.9	3843.1	4059.6
57.5°	3077.5	2869.2	2774.1	2785.6	2816.8	2879.1	3051.2	3167.6	3308.6	3585.7	3807.1
60°	2795.5	2598.7	2515.1	2528.2	2556.1	2618.4	2797.1	2897.1	3038.1	3320.1	3541.5
62.5°	2510.2	2331.5	2252.8	2269.2	2293.8	2356.1	2524.9	2621.7	2761.0	3038.1	3261.1
65°	2228.2	2062.6	1995.4	2011.7	2034.7	2092.1	2251.1	2344.6	2477.4	2747.9	2961.1
67.5°	1949.4	1798.6	1742.9	1759.3	1777.3	1831.4	1962.6	2064.2	2188.8	2446.2	2647.9
70°	1674.0	1539.6	1490.4	1506.8	1523.2	1572.3	1687.1	1780.6	1895.3	2131.4	2318.3
72.5°	1401.8	1270.7	1246.1	1260.8	1273.9	1316.6	1426.4	1500.2	1600.2	1810.1	1970.8
75°	1136.2	1023.1	1006.7	1021.4	1032.9	1065.7	1157.5	1221.5	1305.1	1487.1	1618.3
77.5°	880.4	785.4	778.8	790.3	801.7	824.7	896.8	964.1	1029.6	1164.1	1280.5
80°	641.1	564.0	564.0	575.5	572.2	600.1	650.9	705.0	752.6	849.3	934.6
82.5°	423.0	362.3	370.5	378.7	383.7	395.1	426.3	467.3	496.8	555.8	611.6
85°	234.5	193.5	201.7	208.2	204.9	218.1	234.5	259.1	273.8	301.7	331.2
87.5°	86.9	72.1	73.8	78.7	82.0	88.5	88.5	103.3	104.9	108.2	114.8
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°	7501.0	7501.0	7501.0
2.5°	7322.3	7361.7	7391.2
5°	7196.1	7228.8	7255.1
7.5°	7073.1	7102.6	7125.6
10°	6956.7	6989.5	7005.9
12.5°	6837.0	6874.7	6887.8
15°	6718.9	6756.7	6773.0
17.5°	6597.6	6646.8	6664.8
20°	6484.5	6546.8	6561.5
22.5°	6369.7	6433.7	6451.7
25°	6245.1	6320.5	6338.6
27.5°	6112.3	6202.5	6220.5
30°	5979.5	6077.9	6095.9
32.5°	5836.9	5943.4	5959.8
35°	5687.7	5794.2	5813.9
37.5°	5522.1	5638.5	5677.8
40°	5349.9	5476.2	5517.1
42.5°	5169.6	5307.3	5349.9
45°	4976.1	5126.9	5176.1
47.5°	4781.0	4951.5	4994.1
50°	4569.5	4751.5	4802.3
52.5°	4348.1	4546.5	4597.3
55°	4118.6	4318.6	4374.4
57.5°	3869.4	4076.0	4135.0
60°	3608.7	3815.3	3871.0
62.5°	3341.4	3528.3	3582.5
65°	3043.0	3218.5	3267.7
67.5°	2726.6	2887.3	2928.3
70°	2390.5	2529.9	2565.9
72.5°	2039.6	2136.4	2183.9
75°	1677.3	1754.3	1790.4
77.5°	1313.3	1367.4	1396.9
80°	957.5	988.7	1013.3
82.5°	626.3	639.4	657.5
85°	337.8	337.8	349.2
87.5°	114.8	109.9	114.8
90°	0.0	0.0	0.0

(END OF REPORT)