

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: P834552

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4HI-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834552
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-LD4-4HI-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

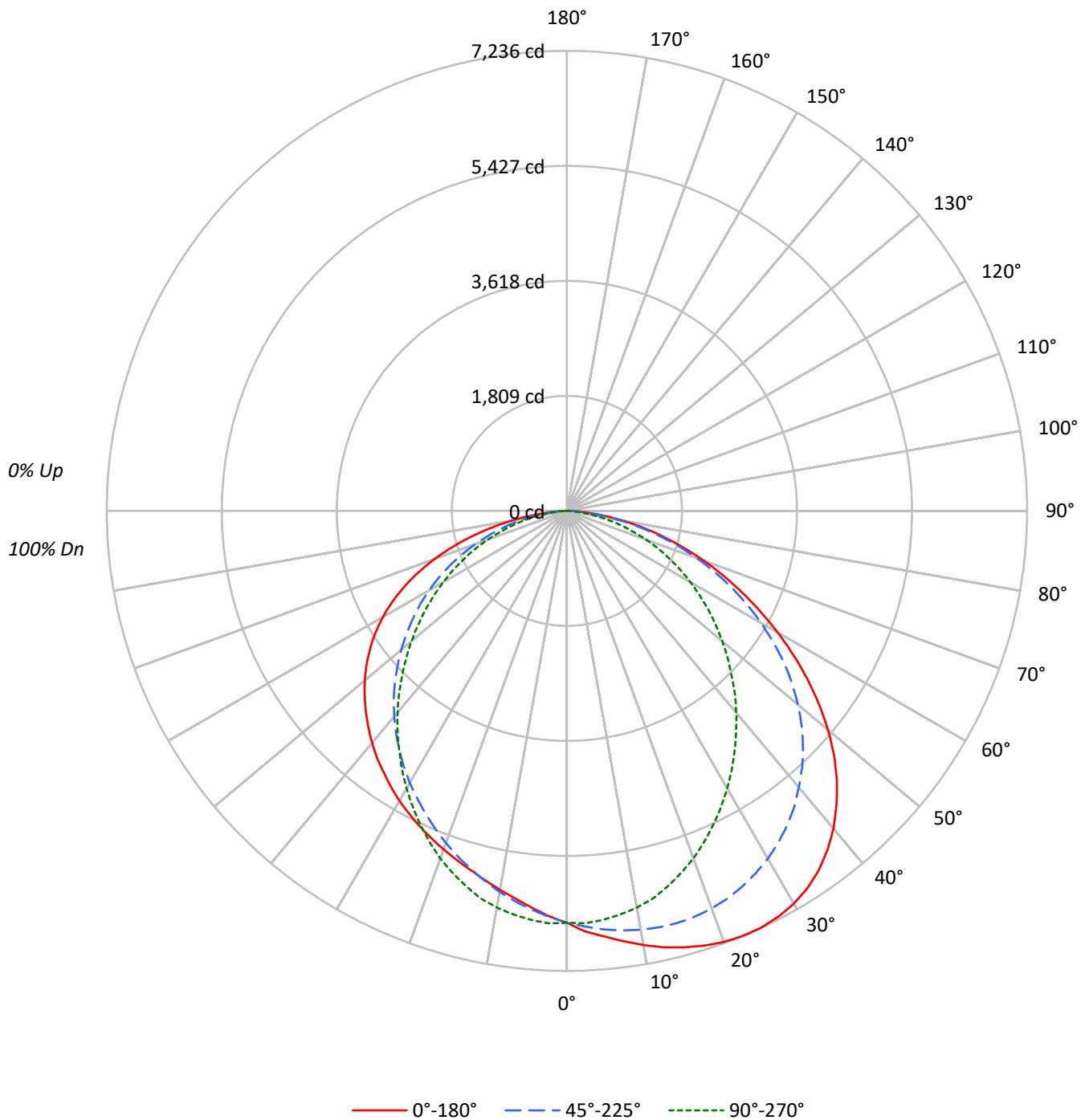
Lumens per Lamp: N/A
Luminaire Lumens: 19056.2 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 176
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°	8716	8716	8716
5°	9075	8721	8463
10°	9472	8656	8267
15°	9898	8517	8148
20°	10330	8329	8114
25°	10736	8087	8127
30°	11086	7834	8180
35°	11339	7555	8248
40°	11453	7275	8369
45°	11422	6968	8506
50°	11219	6675	8682
55°	10835	6368	8862
60°	10307	6040	8996
65°	9679	5671	8985
70°	9008	5231	8718
75°	8178	4593	8039
80°	7022	3774	6781
85°	5355	2580	4656

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	614.4	3.2
10°-20°	1774.3	9.3
20°-30°	2718.3	14.3
30°-40°	3317.3	17.4
40°-50°	3469.2	18.2
50°-60°	3139.9	16.5
60°-70°	2377.9	12.5
70°-80°	1325.2	7.0
80°-90°	319.6	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°	5107.0	26.8
0°-40°	8424.4	44.2
0°-60°	15033.4	78.9
0°-90°	19056.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19056.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6478	6478	6478	6478	6478	
5°	6719	6607	6457	6298	6266	648
15°	7106	6710	6114	5830	5850	2015
25°	7232	6521	5448	5255	5474	3336
35°	6903	6038	4599	4594	5021	4311
45°	6002	5251	3662	3823	4470	4618
55°	4619	4170	2714	2954	3778	4122
65°	3040	2859	1781	2025	2822	3016
75°	1573	1485	884	1055	1546	1668
85°	347	306	167	224	302	417
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°	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3
2.5°	6621.3	6590.2	6564.7	6574.6	6580.3	6560.4	6543.5	6546.3	6529.3	6561.9	6485.4
5°	6719.0	6690.7	6661.0	6672.3	6661.0	6631.2	6607.2	6600.1	6554.8	6573.2	6495.3
7.5°	6828.1	6796.9	6753.0	6765.8	6741.7	6686.5	6655.3	6636.9	6567.5	6568.9	6482.6
10°	6932.9	6906.0	6846.5	6855.0	6811.1	6737.5	6687.9	6662.4	6564.7	6550.5	6461.3
12.5°	7030.6	6993.8	6930.0	6934.3	6870.6	6772.9	6709.1	6672.3	6544.9	6502.4	6414.6
15°	7105.6	7070.2	6993.8	6992.3	6910.2	6782.8	6710.5	6659.6	6498.1	6431.6	6339.5
17.5°	7169.3	7136.8	7041.9	7039.1	6939.9	6778.5	6692.1	6628.4	6430.2	6348.0	6246.1
20°	7214.7	7182.1	7075.9	7066.0	6947.0	6757.3	6653.9	6573.2	6341.0	6243.3	6130.0
22.5°	7235.9	7203.3	7083.0	7068.8	6930.0	6714.8	6598.7	6503.8	6239.0	6111.6	5994.0
25°	7231.6	7200.5	7064.6	7050.4	6897.5	6651.1	6520.8	6411.8	6110.2	5960.1	5843.9
27.5°	7196.2	7172.2	7029.2	7010.7	6838.0	6564.7	6425.9	6305.6	5967.1	5800.0	5674.0
30°	7135.4	7116.9	6965.4	6948.4	6764.4	6469.8	6315.5	6176.7	5812.8	5624.5	5497.0
32.5°	7037.6	7020.7	6867.7	6852.1	6665.2	6348.0	6186.6	6043.6	5644.3	5436.1	5308.7
35°	6903.1	6893.2	6744.5	6727.5	6537.8	6209.3	6037.9	5880.8	5468.7	5233.6	5111.9
37.5°	6726.1	6726.1	6583.1	6564.7	6379.2	6039.3	5870.8	5703.8	5270.4	5021.2	4900.9
40°	6520.8	6539.2	6393.4	6374.9	6195.1	5856.7	5672.6	5497.0	5056.6	4797.5	4680.0
42.5°	6274.4	6291.4	6169.6	6152.6	5984.1	5645.7	5474.4	5283.2	4832.9	4569.5	4447.7
45°	6002.5	6025.2	5916.2	5903.4	5746.2	5414.9	5250.6	5056.6	4599.3	4331.6	4212.7
47.5°	5699.5	5729.2	5634.4	5627.3	5481.4	5178.4	5007.1	4810.2	4354.3	4083.8	3972.0
50°	5359.7	5402.1	5324.3	5324.3	5194.0	4892.4	4743.7	4546.9	4099.4	3828.9	3718.5
52.5°	4995.7	5049.5	4991.5	4992.9	4886.7	4616.2	4461.9	4269.3	3833.2	3567.0	3465.0
55°	4619.1	4671.5	4634.7	4640.3	4556.8	4310.4	4170.2	3979.0	3561.3	3302.2	3205.9
57.5°	4225.4	4282.1	4258.0	4269.3	4211.3	3990.4	3844.5	3677.4	3280.9	3024.6	2942.5
60°	3830.3	3884.2	3871.4	3887.0	3850.2	3659.0	3525.9	3353.1	2999.1	2752.8	2680.5
62.5°	3431.0	3480.6	3477.8	3494.8	3474.9	3316.3	3197.4	3050.1	2707.4	2480.9	2414.3
65°	3040.2	3082.7	3079.9	3098.3	3094.0	2966.6	2859.0	2724.4	2415.7	2207.6	2149.5
67.5°	2660.7	2696.1	2686.2	2707.4	2713.1	2611.2	2517.7	2397.3	2138.2	1935.7	1886.1
70°	2289.7	2313.8	2301.0	2315.2	2327.9	2251.5	2172.2	2066.0	1842.2	1663.8	1622.8
72.5°	1925.8	1942.8	1923.0	1937.1	1948.5	1893.2	1828.1	1736.0	1550.5	1396.2	1362.2
75°	1573.2	1597.3	1556.2	1570.4	1578.9	1523.6	1485.4	1410.4	1250.4	1131.4	1108.7
77.5°	1231.9	1246.1	1223.4	1217.8	1223.4	1183.8	1154.1	1096.0	975.6	877.9	863.8
80°	906.3	914.8	892.1	886.4	890.7	862.4	839.7	797.2	712.3	638.6	633.0
82.5°	607.5	611.7	591.9	586.2	589.1	580.6	553.7	523.9	484.3	422.0	420.6
85°	346.9	346.9	332.8	327.1	329.9	315.8	305.9	290.3	274.7	232.2	235.1
87.5°	127.4	127.4	120.4	118.9	133.1	117.5	113.3	106.2	110.5	87.8	93.5
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°	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3	6478.3
2.5°	6506.6	6492.5	6479.7	6435.8	6454.2	6408.9	6406.1	6389.1	6376.4	6352.3	6383.4
5°	6485.4	6457.1	6420.3	6367.9	6383.4	6329.6	6318.3	6298.5	6281.5	6250.3	6274.4
7.5°	6451.4	6404.7	6346.6	6280.1	6301.3	6234.8	6217.8	6196.5	6182.4	6145.6	6166.8
10°	6401.9	6335.3	6267.3	6186.6	6202.2	6130.0	6108.7	6086.1	6073.3	6040.8	6062.0
12.5°	6325.4	6244.7	6152.6	6064.8	6081.8	6013.9	5985.5	5961.5	5957.2	5930.3	5955.8
15°	6226.3	6114.4	6019.5	5926.1	5945.9	5866.6	5853.9	5829.8	5836.9	5818.4	5849.6
17.5°	6100.2	5971.4	5868.0	5767.5	5787.3	5720.7	5710.8	5699.5	5706.6	5703.8	5737.7
20°	5958.6	5817.0	5698.1	5599.0	5610.3	5557.9	5562.1	5559.3	5573.5	5589.1	5635.8
22.5°	5798.6	5638.6	5514.0	5412.1	5429.0	5383.7	5403.6	5409.2	5433.3	5468.7	5528.2
25°	5618.8	5447.5	5317.2	5220.9	5236.5	5206.7	5240.7	5254.9	5293.1	5352.6	5413.5
27.5°	5430.5	5249.2	5110.4	5018.4	5048.1	5018.4	5069.4	5097.7	5155.7	5220.9	5295.9
30°	5230.8	5042.5	4899.4	4817.3	4845.6	4818.7	4900.9	4939.1	4997.2	5086.4	5175.6
32.5°	5021.2	4823.0	4682.8	4619.1	4638.9	4634.7	4726.7	4769.2	4847.1	4949.0	5043.9
35°	4806.0	4599.3	4457.6	4403.8	4427.9	4433.6	4544.0	4593.6	4678.5	4801.7	4903.7
37.5°	4583.7	4372.7	4233.9	4190.0	4211.3	4232.5	4361.4	4410.9	4507.2	4641.7	4753.6
40°	4352.9	4141.9	4005.9	3970.5	3991.8	4014.4	4154.6	4222.6	4327.4	4473.2	4595.0
42.5°	4119.2	3908.2	3776.5	3751.1	3772.3	3816.2	3964.9	4028.6	4139.0	4300.5	4435.0
45°	3881.3	3661.8	3547.1	3527.3	3550.0	3601.0	3746.8	3823.3	3940.8	4117.8	4262.2
47.5°	3640.6	3426.8	3317.7	3305.0	3327.7	3384.3	3545.7	3615.1	3739.7	3928.1	4083.8
50°	3397.0	3188.9	3084.1	3079.9	3101.1	3162.0	3316.3	3398.5	3527.3	3738.3	3898.3
52.5°	3150.7	2951.0	2856.1	2856.1	2875.9	2938.3	3094.0	3179.0	3312.1	3534.4	3711.4
55°	2904.3	2714.5	2623.9	2631.0	2659.3	2713.1	2864.6	2953.8	3088.4	3319.2	3506.1
57.5°	2657.9	2478.0	2395.9	2405.8	2432.7	2486.5	2635.2	2735.8	2857.5	3096.8	3288.0
60°	2414.3	2244.4	2172.2	2183.5	2207.6	2261.4	2415.7	2502.1	2623.9	2867.5	3058.6
62.5°	2167.9	2013.6	1945.6	1959.8	1981.0	2034.8	2180.7	2264.2	2384.6	2623.9	2816.5
65°	1924.4	1781.4	1723.3	1737.5	1757.3	1806.8	1944.2	2024.9	2139.6	2373.3	2557.3
67.5°	1683.7	1553.4	1505.2	1519.4	1535.0	1581.7	1695.0	1782.8	1890.4	2112.7	2286.9
70°	1445.8	1329.6	1287.2	1301.3	1315.5	1358.0	1457.1	1537.8	1636.9	1840.8	2002.3
72.5°	1210.7	1097.4	1076.2	1088.9	1100.3	1137.1	1231.9	1295.7	1382.0	1563.3	1702.1
75°	981.3	883.6	869.4	882.2	892.1	920.4	999.7	1054.9	1127.2	1284.3	1397.6
77.5°	760.4	678.3	672.6	682.5	692.4	712.3	774.6	832.6	889.3	1005.4	1105.9
80°	553.7	487.1	487.1	497.0	494.2	518.3	562.2	608.9	650.0	733.5	807.1
82.5°	365.3	312.9	320.0	327.1	331.4	341.3	368.2	403.6	429.1	480.0	528.2
85°	202.5	167.1	174.2	179.8	177.0	188.3	202.5	223.7	236.5	260.5	286.0
87.5°	75.0	62.3	63.7	68.0	70.8	76.5	76.5	89.2	90.6	93.5	99.1
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):

	160°	170°	180°
0°	6478.3	6478.3	6478.3
2.5°	6324.0	6358.0	6383.4
5°	6214.9	6243.3	6265.9
7.5°	6108.7	6134.2	6154.0
10°	6008.2	6036.5	6050.7
12.5°	5904.8	5937.4	5948.7
15°	5802.9	5835.4	5849.6
17.5°	5698.1	5740.6	5756.1
20°	5600.4	5654.2	5666.9
22.5°	5501.3	5556.5	5572.1
25°	5393.6	5458.8	5474.4
27.5°	5278.9	5356.8	5372.4
30°	5164.2	5249.2	5264.8
32.5°	5041.1	5133.1	5147.3
35°	4912.2	5004.2	5021.2
37.5°	4769.2	4869.7	4903.7
40°	4620.5	4729.5	4764.9
42.5°	4464.7	4583.7	4620.5
45°	4297.6	4427.9	4470.4
47.5°	4129.1	4276.4	4313.2
50°	3946.5	4103.6	4147.5
52.5°	3755.3	3926.6	3970.5
55°	3557.1	3729.8	3778.0
57.5°	3341.8	3520.2	3571.2
60°	3116.7	3295.1	3343.2
62.5°	2885.9	3047.3	3094.0
65°	2628.1	2779.7	2822.1
67.5°	2354.9	2493.6	2529.0
70°	2064.6	2184.9	2216.1
72.5°	1761.5	1845.1	1886.1
75°	1448.6	1515.1	1546.3
77.5°	1134.2	1181.0	1206.5
80°	827.0	853.9	875.1
82.5°	540.9	552.3	567.8
85°	291.7	291.7	301.6
87.5°	99.1	94.9	99.1
90°	0.0	0.0	0.0

(END OF REPORT)