

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: P834557

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834557
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-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

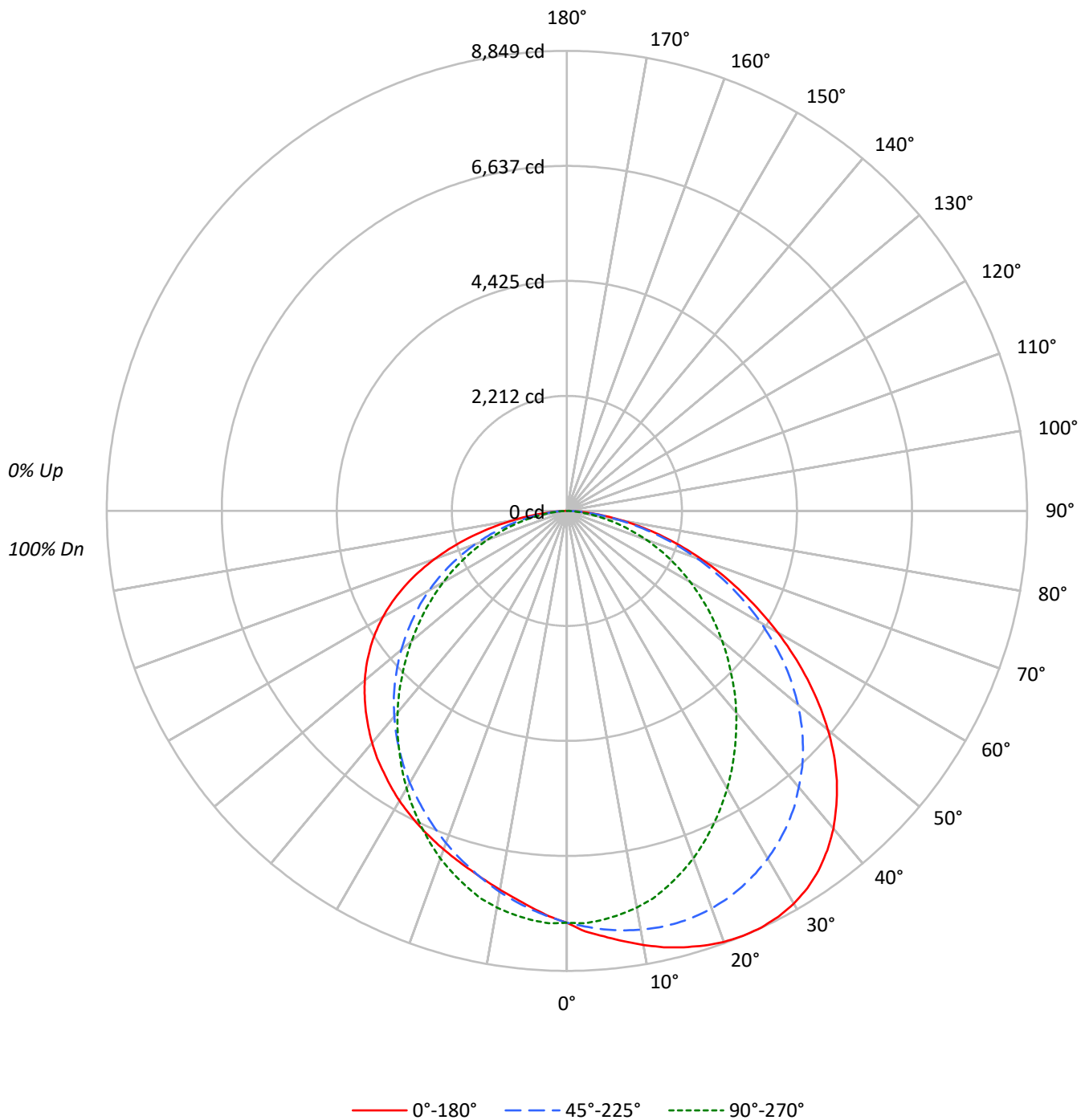
Lumens per Lamp: N/A
Luminaire Lumens: 23304.1 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	10660	10660	10660
5°	11098	10665	10349
10°	11583	10585	10110
15°	12104	10416	9965
20°	12633	10186	9923
25°	13129	9890	9939
30°	13557	9581	10003
35°	13866	9238	10086
40°	14006	8897	10235
45°	13968	8521	10402
50°	13720	8163	10617
55°	13251	7787	10838
60°	12605	7386	11002
65°	11837	6935	10988
70°	11015	6397	10661
75°	10002	5618	9830
80°	8588	4616	8292
85°	6550	3154	5693

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	751.4	3.2
10°-20°	2169.9	9.3
20°-30°	3324.2	14.3
30°-40°	4056.8	17.4
40°-50°	4242.5	18.2
50°-60°	3839.8	16.5
60°-70°	2908.0	12.5
70°-80°	1620.6	7.0
80°-90°	390.9	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°	6245.5	26.8
0°-40°	10302.3	44.2
0°-60°	18384.6	78.9
0°-90°	23304.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	23304.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7922	7922	7922	7922	7922	
5°	8217	8080	7896	7702	7663	792
15°	8690	8206	7477	7129	7154	2464
25°	8844	7974	6662	6426	6695	4080
35°	8442	7384	5624	5618	6140	5271
45°	7341	6421	4478	4676	5467	5648
55°	5649	5100	3320	3612	4620	5040
65°	3718	3496	2178	2476	3451	3688
75°	1924	1816	1081	1290	1891	2040
85°	424	374	204	274	369	511
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°	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4
2.5°	8097.3	8059.2	8028.1	8040.2	8047.1	8022.9	8002.1	8005.5	7984.8	8024.6	7931.1
5°	8216.8	8182.2	8145.8	8159.7	8145.8	8109.4	8080.0	8071.3	8015.9	8038.4	7943.2
7.5°	8350.1	8312.0	8258.4	8274.0	8244.5	8177.0	8138.9	8116.4	8031.5	8033.2	7927.6
10°	8478.3	8445.4	8372.7	8383.0	8329.4	8239.3	8178.7	8147.5	8028.1	8010.7	7901.6
12.5°	8597.8	8552.8	8474.8	8480.0	8402.1	8282.6	8204.7	8159.7	8003.8	7951.9	7844.5
15°	8689.6	8646.3	8552.8	8551.0	8450.6	8294.7	8206.4	8144.1	7946.7	7865.3	7752.7
17.5°	8767.5	8727.6	8611.6	8608.2	8486.9	8289.5	8183.9	8106.0	7863.5	7763.1	7638.4
20°	8822.9	8783.1	8653.2	8641.1	8495.6	8263.6	8137.1	8038.4	7754.4	7635.0	7496.4
22.5°	8848.9	8809.0	8661.8	8644.5	8474.8	8211.6	8069.6	7953.6	7629.8	7473.9	7330.2
25°	8843.7	8805.6	8639.3	8622.0	8435.0	8133.7	7974.4	7841.0	7472.2	7288.6	7146.6
27.5°	8800.4	8770.9	8596.0	8573.5	8362.3	8028.1	7858.3	7711.2	7297.3	7092.9	6938.8
30°	8725.9	8703.4	8518.1	8497.3	8272.2	7912.0	7723.3	7553.6	7108.5	6878.2	6722.4
32.5°	8606.4	8585.7	8398.6	8379.6	8151.0	7763.1	7565.7	7390.8	6902.5	6647.9	6492.1
35°	8441.9	8429.8	8248.0	8227.2	7995.2	7593.4	7383.9	7191.7	6687.7	6400.3	6251.4
37.5°	8225.5	8225.5	8050.6	8028.1	7801.2	7385.6	7179.5	6975.2	6445.3	6140.5	5993.3
40°	7974.4	7996.9	7818.5	7796.0	7576.1	7162.2	6937.1	6722.4	6183.8	5866.9	5723.2
42.5°	7673.1	7693.8	7544.9	7524.1	7318.1	6904.2	6694.7	6460.9	5910.2	5588.1	5439.2
45°	7340.6	7368.3	7234.9	7219.4	7027.1	6621.9	6421.1	6183.8	5624.5	5297.2	5151.7
47.5°	6970.0	7006.4	6890.3	6881.7	6703.3	6332.7	6123.2	5882.5	5324.9	4994.2	4857.4
50°	6554.4	6606.3	6511.1	6511.1	6351.8	5982.9	5801.1	5560.4	5013.2	4682.5	4547.4
52.5°	6109.4	6175.2	6104.2	6105.9	5976.0	5645.3	5456.5	5221.0	4687.6	4362.1	4237.4
55°	5648.7	5712.8	5667.8	5674.7	5572.5	5271.2	5099.8	4866.0	4355.2	4038.3	3920.5
57.5°	5167.3	5236.6	5207.2	5221.0	5150.0	4879.9	4701.5	4497.2	4012.3	3698.9	3598.4
60°	4684.2	4750.0	4734.4	4753.5	4708.4	4474.7	4311.9	4100.6	3667.7	3366.4	3278.1
62.5°	4195.9	4256.5	4253.0	4273.8	4249.5	4055.6	3910.1	3730.0	3311.0	3033.9	2952.5
65°	3717.9	3769.9	3766.4	3788.9	3783.7	3627.9	3496.3	3331.7	2954.2	2699.7	2628.7
67.5°	3253.8	3297.1	3285.0	3311.0	3317.9	3193.2	3078.9	2931.7	2614.8	2367.2	2306.6
70°	2800.1	2829.6	2814.0	2831.3	2846.9	2753.4	2656.4	2526.5	2252.9	2034.7	1984.5
72.5°	2355.1	2375.9	2351.6	2368.9	2382.8	2315.3	2235.6	2123.0	1896.2	1707.4	1665.9
75°	1923.9	1953.3	1903.1	1920.4	1930.8	1863.3	1816.5	1724.7	1529.1	1383.6	1355.9
77.5°	1506.6	1523.9	1496.2	1489.2	1496.2	1447.7	1411.3	1340.3	1193.1	1073.6	1056.3
80°	1108.3	1118.7	1091.0	1084.0	1089.2	1054.6	1026.9	974.9	871.0	781.0	774.1
82.5°	742.9	748.1	723.8	716.9	720.4	710.0	677.1	640.7	592.2	516.0	514.3
85°	424.3	424.3	406.9	400.0	403.5	386.2	374.0	355.0	335.9	284.0	287.5
87.5°	155.9	155.9	147.2	145.5	162.8	143.7	138.5	129.9	135.1	107.4	114.3
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°	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4	7922.4
2.5°	7957.1	7939.7	7924.2	7870.5	7893.0	7837.6	7834.1	7813.3	7797.7	7768.3	7806.4
5°	7931.1	7896.4	7851.4	7787.3	7806.4	7740.6	7726.7	7702.5	7681.7	7643.6	7673.1
7.5°	7889.5	7832.4	7761.4	7680.0	7706.0	7624.6	7603.8	7577.8	7560.5	7515.5	7541.5
10°	7828.9	7747.5	7664.4	7565.7	7584.7	7496.4	7470.5	7442.7	7427.2	7387.3	7413.3
12.5°	7735.4	7636.7	7524.1	7416.8	7437.6	7354.4	7319.8	7290.4	7285.2	7252.3	7283.4
15°	7614.2	7477.4	7361.4	7247.1	7271.3	7174.3	7158.8	7129.3	7138.0	7115.5	7153.6
17.5°	7460.1	7302.5	7176.1	7053.1	7077.4	6996.0	6983.9	6970.0	6978.7	6975.2	7016.8
20°	7286.9	7113.7	6968.3	6847.0	6860.9	6796.8	6802.0	6798.6	6815.9	6834.9	6892.1
22.5°	7091.2	6895.5	6743.1	6618.5	6639.2	6583.8	6608.1	6615.0	6644.4	6687.7	6760.5
25°	6871.3	6661.8	6502.4	6384.7	6403.7	6367.4	6408.9	6426.3	6473.0	6545.7	6620.2
27.5°	6641.0	6419.3	6249.6	6137.1	6173.4	6137.1	6199.4	6234.0	6305.0	6384.7	6476.5
30°	6396.8	6166.5	5991.6	5891.2	5925.8	5892.9	5993.3	6040.1	6111.1	6220.2	6329.3
32.5°	6140.5	5898.1	5726.7	5648.7	5673.0	5667.8	5780.3	5832.3	5927.5	6052.2	6168.2
35°	5877.3	5624.5	5451.3	5385.5	5415.0	5421.9	5557.0	5617.6	5721.5	5872.1	5996.8
37.5°	5605.4	5347.4	5177.7	5124.0	5150.0	5176.0	5333.6	5394.2	5511.9	5676.4	5813.2
40°	5323.2	5065.2	4898.9	4855.6	4881.6	4909.3	5080.7	5163.9	5292.0	5470.4	5619.3
42.5°	5037.4	4779.4	4618.4	4587.2	4613.2	4666.9	4848.7	4926.6	5061.7	5259.1	5423.6
45°	4746.5	4478.1	4337.8	4313.6	4341.3	4403.7	4582.0	4675.5	4819.3	5035.7	5212.3
47.5°	4452.1	4190.7	4057.3	4041.7	4069.4	4138.7	4336.1	4421.0	4573.4	4803.7	4994.2
50°	4154.3	3899.7	3771.6	3766.4	3792.4	3866.8	4055.6	4156.0	4313.6	4571.6	4767.3
52.5°	3853.0	3608.8	3492.8	3492.8	3517.0	3593.2	3783.7	3887.6	4050.4	4322.3	4538.7
55°	3551.7	3319.6	3208.8	3217.5	3252.1	3317.9	3503.2	3612.3	3776.8	4059.0	4287.6
57.5°	3250.4	3030.4	2930.0	2942.1	2975.0	3040.8	3222.7	3345.6	3494.5	3787.2	4021.0
60°	2952.5	2744.7	2656.4	2670.2	2699.7	2765.5	2954.2	3059.9	3208.8	3506.6	3740.4
62.5°	2651.2	2462.4	2379.3	2396.6	2422.6	2488.4	2666.8	2769.0	2916.1	3208.8	3444.3
65°	2353.3	2178.4	2107.5	2124.8	2149.0	2209.6	2377.6	2476.3	2616.6	2902.3	3127.4
67.5°	2059.0	1899.6	1840.8	1858.1	1877.1	1934.3	2072.8	2180.2	2311.8	2583.7	2796.7
70°	1768.0	1626.0	1574.1	1591.4	1608.7	1660.7	1781.9	1880.6	2001.8	2251.2	2448.6
72.5°	1480.6	1342.0	1316.1	1331.7	1345.5	1390.5	1506.6	1584.5	1690.1	1911.8	2081.5
75°	1200.1	1080.6	1063.2	1078.8	1091.0	1125.6	1222.6	1290.1	1378.4	1570.6	1709.2
77.5°	929.9	829.5	822.5	834.7	846.8	871.0	947.2	1018.2	1087.5	1229.5	1352.4
80°	677.1	595.7	595.7	607.8	604.4	633.8	687.5	744.6	794.8	897.0	987.1
82.5°	446.8	382.7	391.4	400.0	405.2	417.3	450.2	493.5	524.7	587.0	645.9
85°	247.6	204.3	213.0	219.9	216.5	230.3	247.6	273.6	289.2	318.6	349.8
87.5°	91.8	76.2	77.9	83.1	86.6	93.5	93.5	109.1	110.8	114.3	121.2
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°	7922.4	7922.4	7922.4
2.5°	7733.7	7775.2	7806.4
5°	7600.3	7635.0	7662.7
7.5°	7470.5	7501.6	7525.9
10°	7347.5	7382.1	7399.5
12.5°	7221.1	7260.9	7274.8
15°	7096.4	7136.2	7153.6
17.5°	6968.3	7020.2	7039.3
20°	6848.8	6914.6	6930.2
22.5°	6727.6	6795.1	6814.1
25°	6596.0	6675.6	6694.7
27.5°	6455.7	6550.9	6570.0
30°	6315.4	6419.3	6438.4
32.5°	6164.8	6277.3	6294.6
35°	6007.2	6119.7	6140.5
37.5°	5832.3	5955.2	5996.8
40°	5650.5	5783.8	5827.1
42.5°	5460.0	5605.4	5650.5
45°	5255.6	5415.0	5466.9
47.5°	5049.6	5229.7	5274.7
50°	4826.2	5018.4	5072.1
52.5°	4592.4	4801.9	4855.6
55°	4350.0	4561.2	4620.1
57.5°	4086.8	4304.9	4367.3
60°	3811.4	4029.6	4088.5
62.5°	3529.2	3726.6	3783.7
65°	3214.0	3399.3	3451.2
67.5°	2879.8	3049.5	3092.8
70°	2524.8	2672.0	2710.1
72.5°	2154.2	2256.4	2306.6
75°	1771.5	1852.9	1891.0
77.5°	1387.1	1444.2	1475.4
80°	1011.3	1044.2	1070.2
82.5°	661.5	675.4	694.4
85°	356.7	356.7	368.8
87.5°	121.2	116.0	121.2
90°	0.0	0.0	0.0

(END OF REPORT)