

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: P834554

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834554
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-LD4-5STD-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

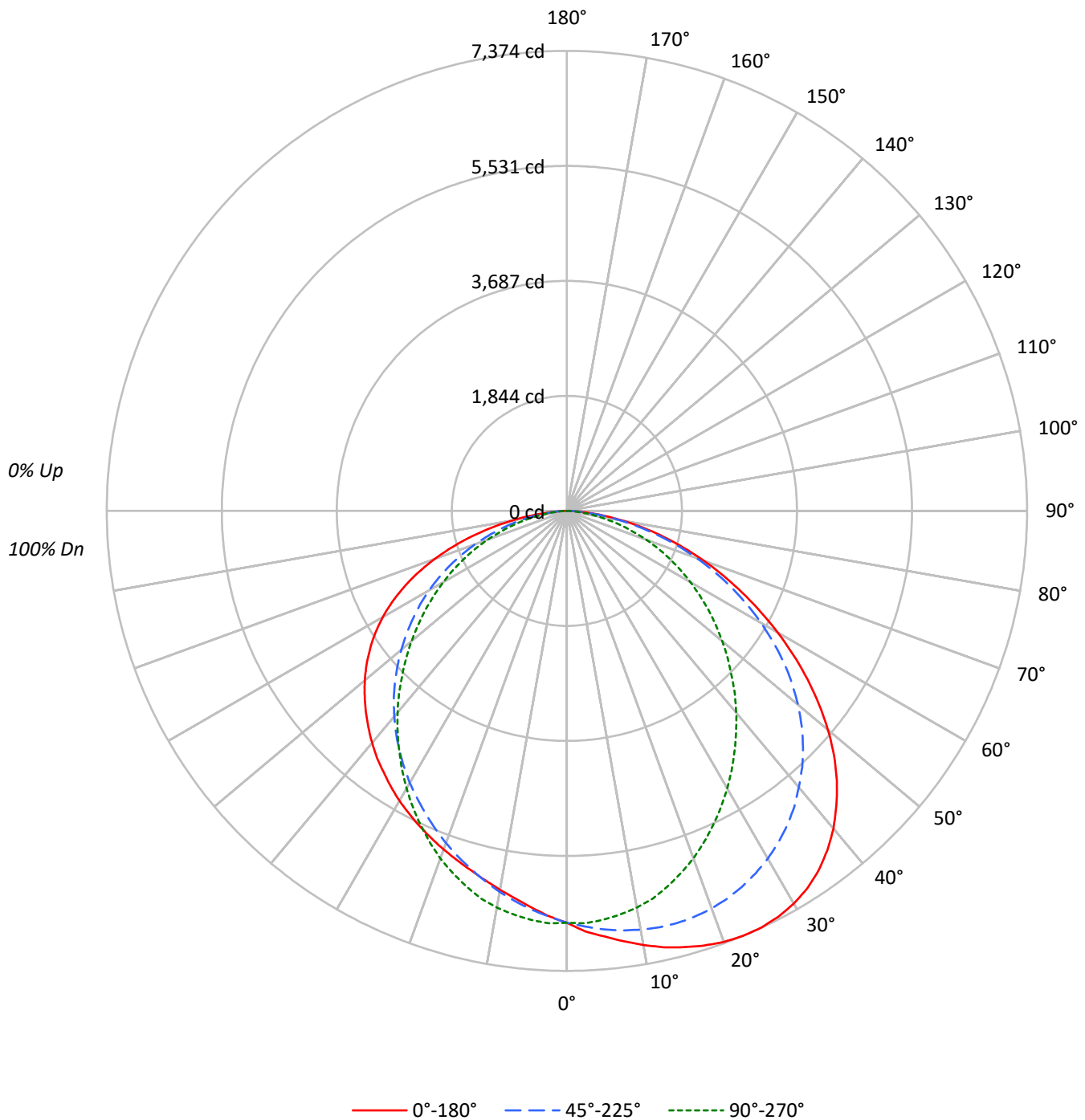
Lumens per Lamp: N/A
Luminaire Lumens: 19419.1 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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-LD4-5STD-30-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8883	8883	8883
5°	9248	8887	8624
10°	9652	8820	8424
15°	10086	8679	8303
20°	10527	8488	8269
25°	10940	8241	8282
30°	11297	7983	8335
35°	11555	7698	8405
40°	11671	7413	8529
45°	11639	7101	8668
50°	11432	6802	8847
55°	11042	6489	9031
60°	10504	6155	9168
65°	9863	5779	9156
70°	9179	5330	8884
75°	8334	4681	8192
80°	7156	3846	6910
85°	5457	2629	4746

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	626.1	3.2
10°-20°	1808.1	9.3
20°-30°	2770.1	14.3
30°-40°	3380.5	17.4
40°-50°	3535.3	18.2
50°-60°	3199.7	16.5
60°-70°	2423.2	12.5
70°-80°	1350.4	7.0
80°-90°	325.7	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°	5204.3	26.8
0°-40°	8584.8	44.2
0°-60°	15319.7	78.9
0°-90°	19419.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19419.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6602	6602	6602	6602	6602	
5°	6847	6733	6580	6418	6385	660
15°	7241	6838	6231	5941	5961	2054
25°	7369	6645	5551	5355	5579	3400
35°	7035	6153	4687	4681	5117	4393
45°	6117	5351	3732	3896	4556	4706
55°	4707	4250	2766	3010	3850	4200
65°	3098	2913	1815	2064	2876	3073
75°	1603	1514	900	1075	1576	1700
85°	354	312	170	228	307	425
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°	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7
2.5°	6747.4	6715.7	6689.7	6699.8	6705.6	6685.4	6668.1	6671.0	6653.6	6686.8	6608.9
5°	6847.0	6818.2	6787.8	6799.4	6787.8	6757.5	6733.0	6725.8	6679.6	6698.4	6619.0
7.5°	6958.1	6926.4	6881.6	6894.6	6870.1	6813.8	6782.1	6763.3	6692.6	6694.1	6606.0
10°	7064.9	7037.5	6976.9	6985.5	6940.8	6865.8	6815.3	6789.3	6689.7	6675.3	6584.4
12.5°	7164.5	7127.0	7062.0	7066.3	7001.4	6901.8	6836.9	6799.4	6669.5	6626.2	6536.8
15°	7240.9	7204.9	7127.0	7125.5	7041.8	6911.9	6838.4	6786.4	6621.9	6554.1	6460.3
17.5°	7305.9	7272.7	7176.0	7173.1	7072.1	6907.6	6819.6	6754.7	6552.6	6468.9	6365.1
20°	7352.1	7318.9	7210.6	7200.5	7079.3	6886.0	6780.6	6698.4	6461.7	6362.2	6246.7
22.5°	7373.7	7340.5	7217.9	7203.4	7062.0	6842.7	6724.4	6627.7	6357.8	6228.0	6108.2
25°	7369.4	7337.6	7199.1	7184.7	7028.8	6777.7	6645.0	6533.9	6226.5	6073.6	5955.2
27.5°	7333.3	7308.8	7163.0	7144.3	6968.2	6689.7	6548.3	6425.7	6080.8	5910.5	5782.1
30°	7271.3	7252.5	7098.1	7080.8	6893.2	6593.0	6435.8	6294.3	5923.5	5731.6	5601.7
32.5°	7171.7	7154.4	6998.5	6982.7	6792.2	6468.9	6304.4	6158.7	5751.8	5539.7	5409.8
35°	7034.6	7024.5	6873.0	6855.7	6662.3	6327.5	6152.9	5992.8	5572.8	5333.3	5209.2
37.5°	6854.2	6854.2	6708.5	6689.7	6500.7	6154.4	5982.7	5812.4	5370.8	5116.9	4994.2
40°	6645.0	6663.8	6515.1	6496.4	6313.1	5968.2	5780.6	5601.7	5152.9	4888.9	4769.1
42.5°	6393.9	6411.2	6287.1	6269.8	6098.1	5753.2	5578.6	5383.8	4924.9	4656.5	4532.4
45°	6116.9	6139.9	6028.8	6015.8	5855.7	5518.0	5350.6	5152.9	4686.8	4414.1	4292.9
47.5°	5808.1	5838.4	5741.7	5734.5	5585.8	5277.0	5102.4	4901.9	4437.2	4161.6	4047.6
50°	5461.7	5505.0	5425.7	5425.7	5292.9	4985.5	4834.0	4633.5	4177.5	3901.9	3789.3
52.5°	5090.9	5145.7	5086.6	5088.0	4979.8	4704.2	4546.9	4350.6	3906.2	3634.9	3531.0
55°	4707.0	4760.4	4722.9	4728.7	4643.6	4392.5	4249.6	4054.8	3629.1	3365.1	3266.9
57.5°	4305.9	4363.6	4339.1	4350.6	4291.5	4066.4	3917.7	3747.5	3343.4	3082.2	2998.5
60°	3903.3	3958.1	3945.1	3961.0	3923.5	3728.7	3593.1	3417.0	3056.3	2805.2	2731.6
62.5°	3496.4	3546.9	3544.0	3561.3	3541.1	3379.5	3258.3	3108.2	2759.0	2528.1	2460.3
65°	3098.1	3141.4	3138.5	3157.3	3152.9	3023.1	2913.4	2776.3	2461.7	2249.6	2190.5
67.5°	2711.4	2747.5	2737.4	2759.0	2764.8	2660.9	2565.6	2443.0	2178.9	1972.6	1922.1
70°	2333.3	2357.9	2344.9	2359.3	2372.3	2294.4	2213.6	2105.3	1877.3	1695.5	1653.7
72.5°	1962.5	1979.8	1959.6	1974.0	1985.6	1929.3	1862.9	1769.1	1580.1	1422.8	1388.2
75°	1603.2	1627.7	1585.9	1600.3	1608.9	1552.7	1513.7	1437.2	1274.2	1153.0	1129.9
77.5°	1255.4	1269.8	1246.7	1241.0	1246.7	1206.3	1176.0	1116.9	994.2	894.7	880.2
80°	923.5	932.2	909.1	903.3	907.6	878.8	855.7	812.4	725.8	650.8	645.0
82.5°	619.0	623.4	603.2	597.4	600.3	591.6	564.2	533.9	493.5	430.0	428.6
85°	353.5	353.5	339.1	333.3	336.2	321.8	311.7	295.8	279.9	236.7	239.5
87.5°	129.9	129.9	122.7	121.2	135.6	119.8	115.4	108.2	112.6	89.5	95.2
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°	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7	6601.7
2.5°	6630.6	6616.1	6603.1	6558.4	6577.2	6531.0	6528.1	6510.8	6497.8	6473.3	6505.0
5°	6608.9	6580.1	6542.5	6489.1	6505.0	6450.2	6438.6	6418.4	6401.1	6369.4	6393.9
7.5°	6574.3	6526.7	6467.5	6399.7	6421.3	6353.5	6336.2	6314.5	6300.1	6262.6	6284.2
10°	6523.8	6456.0	6386.7	6304.4	6320.3	6246.7	6225.1	6202.0	6189.0	6155.8	6177.5
12.5°	6445.9	6363.6	6269.8	6180.3	6197.7	6128.4	6099.5	6075.0	6070.7	6043.3	6069.2
15°	6344.8	6230.9	6134.2	6038.9	6059.1	5978.3	5965.3	5940.8	5948.0	5929.3	5961.0
17.5°	6216.4	6085.1	5979.8	5877.3	5897.5	5829.7	5819.6	5808.1	5815.3	5812.4	5847.0
20°	6072.1	5927.8	5806.6	5705.6	5717.1	5663.8	5668.1	5665.2	5679.6	5695.5	5743.1
22.5°	5909.1	5746.0	5619.0	5515.1	5532.4	5486.3	5506.5	5512.2	5536.8	5572.8	5633.5
25°	5725.8	5551.2	5418.4	5320.3	5336.2	5305.9	5340.5	5355.0	5393.9	5454.5	5516.6
27.5°	5533.9	5349.2	5207.8	5114.0	5144.3	5114.0	5165.9	5194.8	5253.9	5320.3	5396.8
30°	5330.4	5138.5	4992.8	4909.1	4937.9	4910.5	4994.2	5033.2	5092.3	5183.2	5274.1
32.5°	5116.9	4914.8	4772.0	4707.0	4727.3	4722.9	4816.7	4860.0	4939.4	5043.3	5139.9
35°	4897.5	4686.8	4542.5	4487.7	4512.2	4518.0	4630.6	4681.1	4767.7	4893.2	4997.1
37.5°	4671.0	4456.0	4314.6	4269.8	4291.5	4313.1	4444.4	4494.9	4593.1	4730.1	4844.1
40°	4435.8	4220.8	4082.2	4046.2	4067.8	4090.9	4233.7	4303.0	4409.8	4558.4	4682.5
42.5°	4197.7	3982.7	3848.5	3822.5	3844.1	3888.9	4040.4	4105.3	4217.9	4382.4	4519.5
45°	3955.2	3731.6	3614.7	3594.5	3617.6	3669.5	3818.2	3896.1	4015.9	4196.2	4343.4
47.5°	3709.9	3492.0	3380.9	3368.0	3391.0	3448.8	3613.3	3684.0	3810.9	4002.9	4161.6
50°	3461.7	3249.6	3142.8	3138.5	3160.2	3222.2	3379.5	3463.2	3594.5	3809.5	3972.6
52.5°	3210.7	3007.2	2910.5	2910.5	2930.7	2994.2	3152.9	3239.5	3375.2	3601.7	3782.1
55°	2959.6	2766.2	2673.9	2681.1	2709.9	2764.8	2919.2	3010.1	3147.2	3382.4	3572.9
57.5°	2708.5	2525.2	2441.5	2451.6	2479.1	2533.9	2685.4	2787.9	2912.0	3155.8	3350.6
60°	2460.3	2287.1	2213.6	2225.1	2249.6	2304.5	2461.7	2549.8	2673.9	2922.1	3116.9
62.5°	2209.2	2051.9	1982.7	1997.1	2018.7	2073.6	2222.2	2307.3	2430.0	2673.9	2870.1
65°	1961.0	1815.3	1756.1	1770.6	1790.8	1841.3	1981.2	2063.5	2180.4	2418.5	2606.0
67.5°	1715.7	1583.0	1533.9	1548.3	1564.2	1611.8	1727.3	1816.7	1926.4	2152.9	2330.4
70°	1473.3	1355.0	1311.7	1326.1	1340.5	1383.8	1484.8	1567.1	1668.1	1875.9	2040.4
72.5°	1233.8	1118.3	1096.7	1109.7	1121.2	1158.7	1255.4	1320.3	1408.4	1593.1	1734.5
75°	1000.0	900.4	886.0	899.0	909.1	937.9	1018.8	1075.0	1148.6	1308.8	1424.2
77.5°	774.9	691.2	685.4	695.5	705.6	725.8	789.3	848.5	906.2	1024.5	1127.0
80°	564.2	496.4	496.4	506.5	503.6	528.1	572.9	620.5	662.3	747.5	822.5
82.5°	372.3	318.9	326.1	333.3	337.7	347.8	375.2	411.3	437.2	489.2	538.2
85°	206.3	170.3	177.5	183.3	180.4	191.9	206.3	228.0	241.0	265.5	291.5
87.5°	76.5	63.5	64.9	69.3	72.1	77.9	77.9	90.9	92.4	95.2	101.0
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°	6601.7	6601.7	6601.7
2.5°	6444.4	6479.0	6505.0
5°	6333.3	6362.2	6385.3
7.5°	6225.1	6251.1	6271.3
10°	6122.6	6151.5	6165.9
12.5°	6017.3	6050.5	6062.0
15°	5913.4	5946.6	5961.0
17.5°	5806.6	5849.9	5865.8
20°	5707.0	5761.9	5774.9
22.5°	5606.0	5662.3	5678.2
25°	5496.4	5562.7	5578.6
27.5°	5379.5	5458.9	5474.7
30°	5262.6	5349.2	5365.1
32.5°	5137.1	5230.9	5245.3
35°	5005.7	5099.5	5116.9
37.5°	4860.0	4962.5	4997.1
40°	4708.5	4819.6	4855.7
42.5°	4549.8	4671.0	4708.5
45°	4379.5	4512.2	4555.5
47.5°	4207.8	4357.8	4395.4
50°	4021.6	4181.8	4226.5
52.5°	3826.8	4001.4	4046.2
55°	3624.8	3800.8	3849.9
57.5°	3405.5	3587.3	3639.2
60°	3176.0	3357.8	3406.9
62.5°	2940.8	3105.3	3152.9
65°	2678.2	2832.6	2875.9
67.5°	2399.7	2541.1	2577.2
70°	2103.9	2226.5	2258.3
72.5°	1795.1	1880.2	1922.1
75°	1476.2	1544.0	1575.8
77.5°	1155.8	1203.5	1229.4
80°	842.7	870.1	891.8
82.5°	551.2	562.8	578.6
85°	297.3	297.3	307.4
87.5°	101.0	96.7	101.0
90°	0.0	0.0	0.0

(END OF REPORT)