

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: P834573

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834573
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-LD4-5HI-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

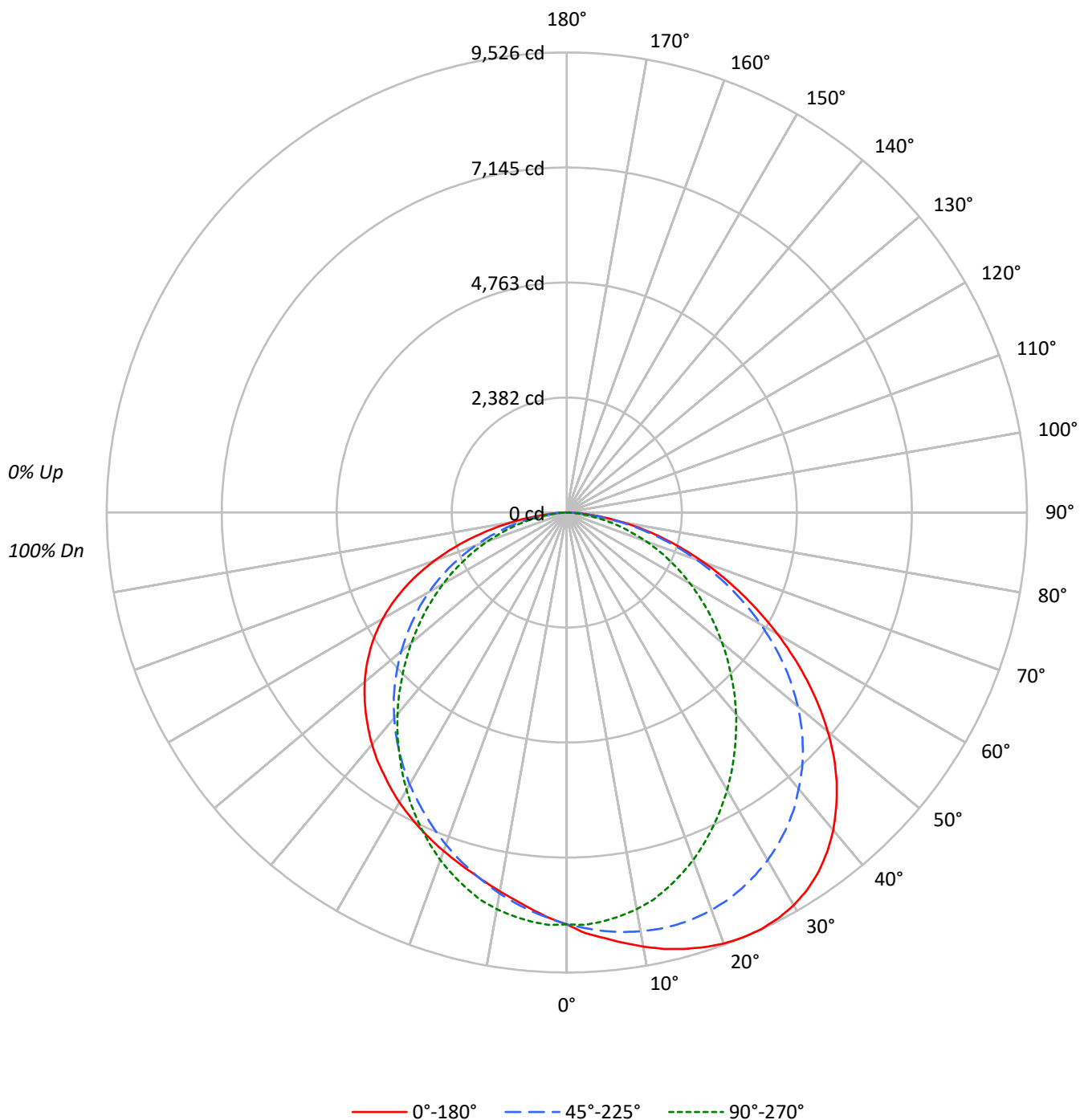
Lumens per Lamp: N/A
Luminaire Lumens: 25086.8 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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°	11475	11475	11475
5°	11947	11481	11141
10°	12470	11395	10883
15°	13030	11212	10727
20°	13599	10965	10682
25°	14134	10647	10699
30°	14594	10313	10768
35°	14927	9945	10858
40°	15078	9577	11018
45°	15036	9173	11198
50°	14769	8788	11429
55°	14264	8383	11667
60°	13569	7951	11844
65°	12742	7466	11828
70°	11858	6886	11477
75°	10767	6047	10582
80°	9245	4969	8926
85°	7050	3396	6130



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	808.9	3.2
10°-20°	2335.9	9.3
20°-30°	3578.5	14.3
30°-40°	4367.1	17.4
40°-50°	4567.1	18.2
50°-60°	4133.5	16.5
60°-70°	3130.5	12.5
70°-80°	1744.6	7.0
80°-90°	420.8	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°	6723.2	26.8
0°-40°	11090.4	44.2
0°-60°	19790.9	78.9
0°-90°	25086.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25086.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8528	8528	8528	8528	8528	
5°	8845	8698	8500	8292	8249	853
15°	9354	8834	8049	7675	7701	2653
25°	9520	8584	7171	6918	7207	4392
35°	9088	7949	6055	6047	6610	5675
45°	7902	6912	4821	5033	5885	6080
55°	6081	5490	3574	3889	4974	5426
65°	4002	3764	2345	2666	3715	3970
75°	2071	1956	1163	1389	2036	2197
85°	457	403	220	294	397	550
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°	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5
2.5°	8716.7	8675.7	8642.2	8655.2	8662.7	8636.6	8614.2	8617.9	8595.6	8638.5	8537.8
5°	8845.4	8808.1	8768.9	8783.9	8768.9	8729.8	8698.1	8688.8	8629.1	8653.4	8550.8
7.5°	8988.9	8947.9	8890.1	8906.9	8875.2	8802.5	8761.5	8737.3	8645.9	8647.8	8534.1
10°	9126.9	9091.4	9013.1	9024.3	8966.5	8869.6	8804.4	8770.8	8642.2	8623.5	8506.1
12.5°	9255.5	9207.0	9123.1	9128.7	9044.8	8916.2	8832.3	8783.9	8616.1	8560.2	8444.6
15°	9354.3	9307.7	9207.0	9205.2	9097.0	8929.3	8834.2	8767.1	8554.6	8467.0	8345.8
17.5°	9438.2	9395.3	9270.4	9266.7	9136.2	8923.7	8810.0	8726.1	8465.1	8357.0	8222.8
20°	9497.8	9455.0	9315.1	9302.1	9145.5	8895.7	8759.6	8653.4	8347.6	8219.0	8069.9
22.5°	9525.8	9482.9	9324.5	9305.8	9123.1	8839.8	8686.9	8562.0	8213.4	8045.7	7890.9
25°	9520.2	9479.2	9300.2	9281.6	9080.3	8755.9	8584.4	8440.9	8043.8	7846.2	7693.3
27.5°	9473.6	9441.9	9253.6	9229.4	9002.0	8642.2	8459.5	8301.0	7855.5	7635.5	7469.6
30°	9393.4	9369.2	9169.7	9147.4	8905.0	8517.3	8314.1	8131.4	7652.3	7404.4	7236.6
32.5°	9264.8	9242.4	9041.1	9020.6	8774.5	8357.0	8144.5	7956.2	7430.5	7156.5	6988.7
35°	9087.7	9074.7	8878.9	8856.6	8606.8	8174.3	7948.7	7741.8	7199.3	6889.9	6729.6
37.5°	8854.7	8854.7	8666.4	8642.2	8398.0	7950.6	7728.8	7508.8	6938.4	6610.3	6451.8
40°	8584.4	8608.6	8416.6	8392.4	8155.6	7710.1	7467.8	7236.6	6656.9	6315.7	6161.0
42.5°	8260.0	8282.4	8122.1	8099.7	7877.9	7432.4	7206.8	6955.1	6362.3	6015.6	5855.3
45°	7902.1	7931.9	7788.4	7771.6	7564.7	7128.5	6912.3	6656.9	6054.7	5702.4	5545.8
47.5°	7503.2	7542.3	7417.4	7408.1	7216.1	6817.2	6591.6	6332.5	5732.3	5376.2	5228.9
50°	7055.8	7111.7	7009.2	7009.2	6837.7	6440.6	6244.9	5985.8	5396.7	5040.7	4895.2
52.5°	6576.7	6647.5	6571.1	6573.0	6433.2	6077.1	5873.9	5620.4	5046.2	4695.8	4561.6
55°	6080.8	6149.8	6101.4	6108.8	5998.8	5674.5	5489.9	5238.3	4688.3	4347.2	4220.4
57.5°	5562.6	5637.2	5605.5	5620.4	5544.0	5253.2	5061.2	4841.2	4319.2	3981.8	3873.7
60°	5042.5	5113.4	5096.6	5117.1	5068.6	4817.0	4641.7	4414.3	3948.3	3623.9	3528.8
62.5°	4516.8	4582.1	4578.3	4600.7	4574.6	4365.8	4209.2	4015.4	3564.2	3266.0	3178.4
65°	4002.3	4058.2	4054.5	4078.8	4073.2	3905.4	3763.7	3586.6	3180.2	2906.2	2829.8
67.5°	3502.7	3549.3	3536.3	3564.2	3571.7	3437.5	3314.5	3156.0	2814.9	2548.3	2483.0
70°	3014.3	3046.0	3029.2	3047.9	3064.7	2964.0	2859.6	2719.8	2425.3	2190.4	2136.3
72.5°	2535.2	2557.6	2531.5	2550.2	2565.1	2492.4	2406.6	2285.4	2041.2	1838.0	1793.3
75°	2071.1	2102.8	2048.7	2067.3	2078.5	2005.8	1955.5	1856.7	1646.0	1489.5	1459.6
77.5°	1621.8	1640.4	1610.6	1603.2	1610.6	1558.4	1519.3	1442.8	1284.4	1155.8	1137.1
80°	1193.1	1204.2	1174.4	1167.0	1172.5	1135.3	1105.4	1049.5	937.7	840.7	833.3
82.5°	799.7	805.3	779.2	771.8	775.5	764.3	728.9	689.7	637.5	555.5	553.7
85°	456.7	456.7	438.1	430.6	434.3	415.7	402.7	382.2	361.6	305.7	309.4
87.5°	167.8	167.8	158.5	156.6	175.2	154.7	149.1	139.8	145.4	115.6	123.0
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5	8528.5
2.5°	8565.8	8547.1	8530.3	8472.5	8496.8	8437.1	8433.4	8411.0	8394.3	8362.6	8403.6
5°	8537.8	8500.5	8452.0	8383.1	8403.6	8332.7	8317.8	8291.7	8269.4	8228.3	8260.0
7.5°	8493.1	8431.5	8355.1	8267.5	8295.5	8207.8	8185.5	8157.5	8138.9	8090.4	8118.4
10°	8427.8	8340.2	8250.7	8144.5	8165.0	8069.9	8041.9	8012.1	7995.3	7952.4	7980.4
12.5°	8327.1	8220.9	8099.7	7984.1	8006.5	7917.0	7879.7	7848.1	7842.5	7807.0	7840.6
15°	8196.7	8049.4	7924.5	7801.5	7827.6	7723.2	7706.4	7674.7	7684.0	7659.8	7700.8
17.5°	8030.7	7861.1	7725.0	7592.7	7618.8	7531.2	7518.1	7503.2	7512.5	7508.8	7553.5
20°	7844.3	7657.9	7501.3	7370.8	7385.7	7316.8	7322.4	7318.6	7337.3	7357.8	7419.3
22.5°	7633.7	7423.0	7259.0	7124.8	7147.1	7087.5	7113.6	7121.0	7152.7	7199.3	7277.6
25°	7396.9	7171.4	6999.9	6873.1	6893.6	6854.5	6899.2	6917.8	6968.2	7046.5	7126.6
27.5°	7149.0	6910.4	6727.7	6606.5	6645.7	6606.5	6673.6	6710.9	6787.4	6873.1	6971.9
30°	6886.2	6638.2	6449.9	6341.8	6379.1	6343.7	6451.8	6502.1	6578.6	6696.0	6813.5
32.5°	6610.3	6349.3	6164.7	6080.8	6106.9	6101.4	6222.5	6278.4	6381.0	6515.2	6640.1
35°	6326.9	6054.7	5868.3	5797.5	5829.2	5836.6	5982.0	6047.3	6159.1	6321.3	6455.5
37.5°	6034.2	5756.5	5573.8	5516.0	5544.0	5571.9	5741.6	5806.8	5933.6	6110.7	6257.9
40°	5730.4	5452.6	5273.7	5227.1	5255.0	5284.9	5469.4	5558.9	5696.8	5888.8	6049.2
42.5°	5422.8	5145.0	4971.7	4938.1	4966.1	5023.9	5219.6	5303.5	5448.9	5661.4	5838.5
45°	5109.6	4820.7	4669.7	4643.6	4673.4	4740.5	4932.5	5033.2	5187.9	5420.9	5611.1
47.5°	4792.7	4511.2	4367.7	4350.9	4380.7	4455.3	4667.8	4759.2	4923.2	5171.1	5376.2
50°	4472.1	4198.1	4060.1	4054.5	4082.5	4162.6	4365.8	4474.0	4643.6	4921.3	5132.0
52.5°	4147.7	3884.9	3760.0	3760.0	3786.1	3868.1	4073.2	4185.0	4360.2	4652.9	4885.9
55°	3823.4	3573.6	3454.3	3463.6	3500.9	3571.7	3771.2	3888.6	4065.7	4369.6	4615.6
57.5°	3499.0	3262.3	3154.1	3167.2	3202.6	3273.4	3469.2	3601.5	3761.8	4076.9	4328.5
60°	3178.4	2954.7	2859.6	2874.5	2906.2	2977.0	3180.2	3293.9	3454.3	3774.9	4026.6
62.5°	2854.0	2650.8	2561.3	2580.0	2607.9	2678.8	2870.8	2980.8	3139.2	3454.3	3707.8
65°	2533.4	2345.1	2268.7	2287.3	2313.4	2378.7	2559.5	2665.7	2816.7	3124.3	3366.6
67.5°	2216.5	2045.0	1981.6	2000.2	2020.7	2082.3	2231.4	2347.0	2488.6	2781.3	3010.6
70°	1903.3	1750.4	1694.5	1713.2	1731.8	1787.7	1918.2	2024.5	2155.0	2423.4	2635.9
72.5°	1593.8	1444.7	1416.8	1433.5	1448.4	1496.9	1621.8	1705.7	1819.4	2058.0	2240.7
75°	1291.9	1163.2	1144.6	1161.4	1174.4	1211.7	1316.1	1388.8	1483.9	1690.8	1839.9
77.5°	1001.0	892.9	885.5	898.5	911.6	937.7	1019.7	1096.1	1170.7	1323.5	1455.9
80°	728.9	641.3	641.3	654.3	650.6	682.3	740.1	801.6	855.6	965.6	1062.6
82.5°	480.9	412.0	421.3	430.6	436.2	449.3	484.7	531.3	564.8	631.9	695.3
85°	266.6	220.0	229.3	236.7	233.0	247.9	266.6	294.5	311.3	343.0	376.6
87.5°	98.8	82.0	83.9	89.5	93.2	100.7	100.7	117.4	119.3	123.0	130.5
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):

	160°	170°	180°
0°	8528.5	8528.5	8528.5
2.5°	8325.3	8370.0	8403.6
5°	8181.7	8219.0	8248.8
7.5°	8041.9	8075.5	8101.6
10°	7909.6	7946.9	7965.5
12.5°	7773.5	7816.4	7831.3
15°	7639.3	7682.1	7700.8
17.5°	7501.3	7557.3	7577.8
20°	7372.7	7443.5	7460.3
22.5°	7242.2	7314.9	7335.4
25°	7100.5	7186.3	7206.8
27.5°	6949.5	7052.1	7072.6
30°	6798.5	6910.4	6930.9
32.5°	6636.4	6757.5	6776.2
35°	6466.7	6587.9	6610.3
37.5°	6278.4	6410.8	6455.5
40°	6082.7	6226.2	6272.9
42.5°	5877.7	6034.2	6082.7
45°	5657.7	5829.2	5885.1
47.5°	5435.9	5629.7	5678.2
50°	5195.4	5402.3	5460.1
52.5°	4943.7	5169.3	5227.1
55°	4682.7	4910.2	4973.5
57.5°	4399.4	4634.3	4701.4
60°	4103.0	4337.9	4401.2
62.5°	3799.1	4011.6	4073.2
65°	3459.9	3659.3	3715.2
67.5°	3100.1	3282.8	3329.4
70°	2717.9	2876.4	2917.4
72.5°	2319.0	2429.0	2483.0
75°	1907.0	1994.6	2035.6
77.5°	1493.2	1554.7	1588.3
80°	1088.7	1124.1	1152.0
82.5°	712.1	727.0	747.5
85°	384.0	384.0	397.1
87.5°	130.5	124.9	130.5
90°	0.0	0.0	0.0

(END OF REPORT)