

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: P835239

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835239
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-5HI-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

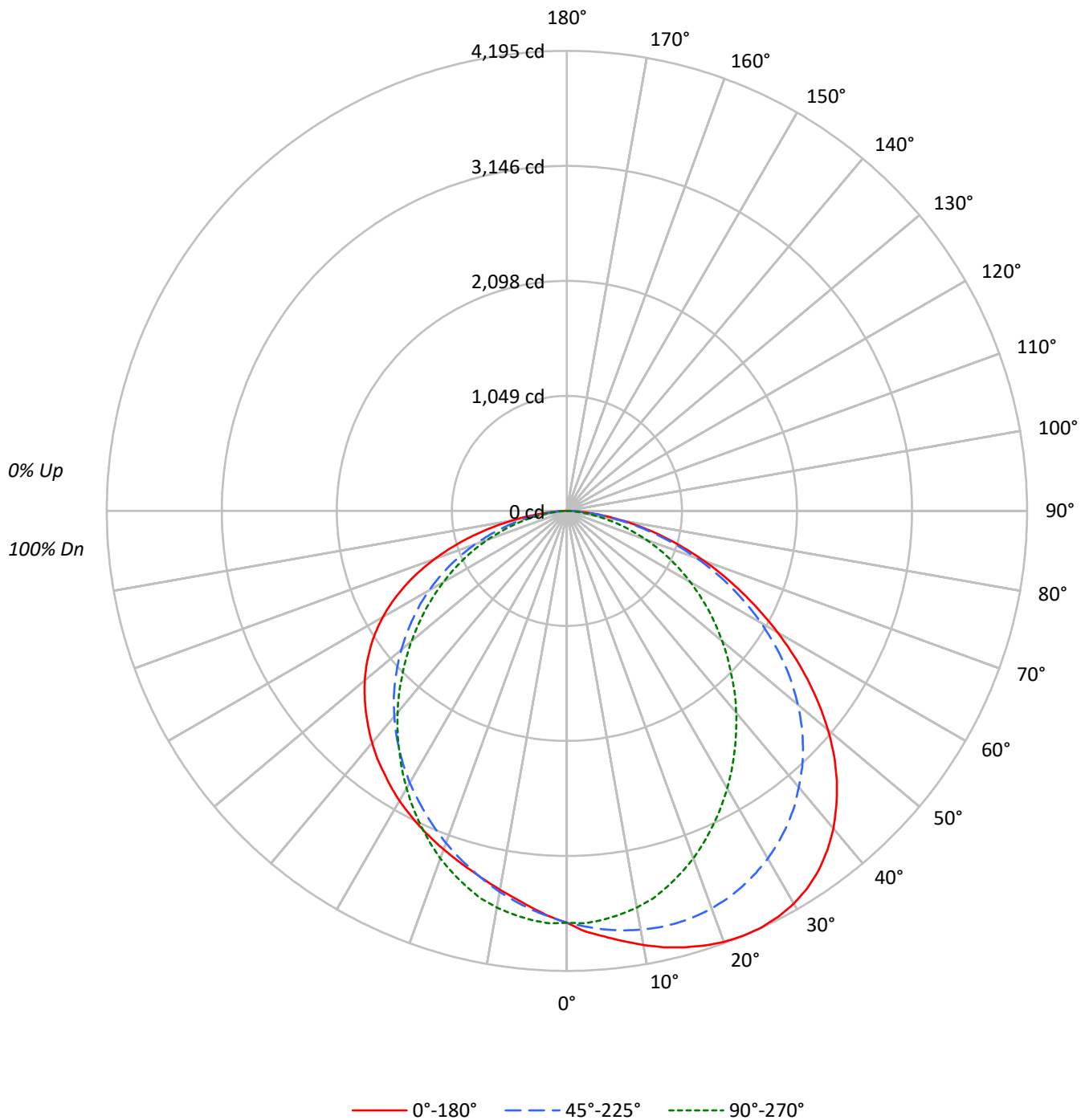
Lumens per Lamp: N/A
Luminaire Lumens: 11047.6 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 110
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

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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°	10107	10107	10107
5°	10522	10112	9813
10°	10983	10036	9585
15°	11476	9875	9448
20°	11978	9657	9408
25°	12448	9377	9423
30°	12854	9083	9484
35°	13147	8759	9563
40°	13280	8435	9704
45°	13243	8079	9863
50°	13008	7739	10066
55°	12564	7383	10275
60°	11951	7003	10431
65°	11223	6576	10418
70°	10444	6065	10109
75°	9483	5326	9321
80°	8142	4376	7861
85°	6209	2992	5400

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.2	3.2
10°-20°	1028.7	9.3
20°-30°	1575.9	14.3
30°-40°	1923.2	17.4
40°-50°	2011.2	18.2
50°-60°	1820.3	16.5
60°-70°	1378.6	12.5
70°-80°	768.3	7.0
80°-90°	185.3	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°	2960.8	26.8
0°-40°	4883.9	44.2
0°-60°	8715.5	78.9
0°-90°	11047.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11047.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3756	3756	3756	3756	3756	
5°	3895	3830	3743	3652	3633	376
15°	4119	3890	3545	3380	3391	1168
25°	4192	3780	3158	3046	3174	1934
35°	4002	3500	2666	2663	2911	2499
45°	3480	3044	2123	2216	2592	2677
55°	2678	2418	1574	1712	2190	2390
65°	1762	1658	1033	1174	1636	1748
75°	912	861	512	612	896	967
85°	201	177	97	130	175	242
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°	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7
2.5°	3838.7	3820.6	3805.8	3811.6	3814.9	3803.4	3793.5	3795.2	3785.3	3804.2	3759.9
5°	3895.3	3878.9	3861.6	3868.2	3861.6	3844.4	3830.5	3826.3	3800.1	3810.8	3765.6
7.5°	3958.5	3940.5	3915.0	3922.4	3908.4	3876.4	3858.4	3847.7	3807.5	3808.3	3758.2
10°	4019.3	4003.7	3969.2	3974.1	3948.7	3906.0	3877.2	3862.5	3805.8	3797.6	3745.9
12.5°	4075.9	4054.6	4017.6	4020.1	3983.1	3926.5	3889.6	3868.2	3794.3	3769.7	3718.8
15°	4119.4	4098.9	4054.6	4053.7	4006.1	3932.2	3890.4	3860.8	3767.2	3728.7	3675.3
17.5°	4156.4	4137.5	4082.5	4080.8	4023.4	3929.8	3879.7	3842.8	3727.8	3680.2	3621.1
20°	4182.6	4163.7	4102.2	4096.4	4027.5	3917.5	3857.5	3810.8	3676.1	3619.5	3553.8
22.5°	4194.9	4176.1	4106.3	4098.1	4017.6	3892.8	3825.5	3770.5	3617.0	3543.1	3475.0
25°	4192.5	4174.4	4095.6	4087.4	3998.7	3855.9	3780.4	3717.2	3542.3	3455.3	3388.0
27.5°	4172.0	4158.0	4075.1	4064.4	3964.3	3805.8	3725.4	3655.6	3459.4	3362.5	3289.5
30°	4136.7	4126.0	4038.1	4028.3	3921.6	3750.8	3661.3	3580.9	3369.9	3260.7	3186.8
32.5°	4080.0	4070.2	3981.5	3972.5	3864.1	3680.2	3586.6	3503.7	3272.2	3151.5	3077.7
35°	4002.0	3996.3	3910.1	3900.2	3790.2	3599.8	3500.4	3409.3	3170.4	3034.2	2963.6
37.5°	3899.4	3899.4	3816.5	3805.8	3698.3	3501.3	3403.6	3306.7	3055.5	2911.0	2841.2
40°	3780.4	3791.0	3706.5	3695.8	3591.6	3395.4	3288.6	3186.8	2931.5	2781.3	2713.2
42.5°	3637.5	3647.4	3576.8	3566.9	3469.2	3273.0	3173.7	3062.9	2801.8	2649.1	2578.5
45°	3479.9	3493.1	3429.8	3422.5	3331.3	3139.2	3044.0	2931.5	2666.4	2511.2	2442.3
47.5°	3304.2	3321.5	3266.5	3262.4	3177.8	3002.1	2902.8	2788.7	2524.4	2367.6	2302.7
50°	3107.2	3131.8	3086.7	3086.7	3011.2	2836.3	2750.1	2636.0	2376.6	2219.8	2155.8
52.5°	2896.2	2927.4	2893.8	2894.6	2833.0	2676.2	2586.7	2475.1	2222.3	2067.9	2008.8
55°	2677.9	2708.2	2686.9	2690.2	2641.7	2498.9	2417.6	2306.8	2064.6	1914.4	1858.6
57.5°	2449.7	2482.5	2468.5	2475.1	2441.4	2313.4	2228.8	2132.0	1902.1	1753.5	1705.9
60°	2220.6	2251.8	2244.4	2253.4	2232.1	2121.3	2044.1	1944.0	1738.7	1595.9	1554.0
62.5°	1989.1	2017.8	2016.2	2026.1	2014.6	1922.6	1853.7	1768.3	1569.6	1438.3	1399.7
65°	1762.5	1787.2	1785.5	1796.2	1793.7	1719.8	1657.5	1579.5	1400.5	1279.8	1246.2
67.5°	1542.5	1563.0	1557.3	1569.6	1572.9	1513.8	1459.6	1389.8	1239.6	1122.2	1093.5
70°	1327.4	1341.4	1334.0	1342.2	1349.6	1305.3	1259.3	1197.7	1068.0	964.6	940.8
72.5°	1116.5	1126.3	1114.8	1123.0	1129.6	1097.6	1059.8	1006.5	898.9	809.4	789.7
75°	912.1	926.0	902.2	910.4	915.3	883.3	861.2	817.6	724.9	655.9	642.8
77.5°	714.2	722.4	709.3	706.0	709.3	686.3	669.1	635.4	565.6	509.0	500.8
80°	525.4	530.3	517.2	513.9	516.4	499.9	486.8	462.2	412.9	370.2	367.0
82.5°	352.2	354.6	343.1	339.9	341.5	336.6	321.0	303.7	280.8	244.6	243.8
85°	201.1	201.1	192.9	189.6	191.3	183.1	177.3	168.3	159.3	134.6	136.3
87.5°	73.9	73.9	69.8	69.0	77.2	68.1	65.7	61.6	64.0	50.9	54.2
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°	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7	3755.7
2.5°	3772.2	3764.0	3756.6	3731.1	3741.8	3715.5	3713.9	3704.0	3696.6	3682.7	3700.7
5°	3759.9	3743.4	3722.1	3691.7	3700.7	3669.6	3663.0	3651.5	3641.6	3623.6	3637.5
7.5°	3740.2	3713.1	3679.4	3640.8	3653.1	3614.5	3604.7	3592.4	3584.2	3562.8	3575.1
10°	3711.4	3672.8	3633.4	3586.6	3595.7	3553.8	3541.5	3528.4	3521.0	3502.1	3514.4
12.5°	3667.1	3620.3	3566.9	3516.0	3525.9	3486.5	3470.1	3456.1	3453.6	3438.0	3452.8
15°	3609.6	3544.8	3489.8	3435.6	3447.1	3401.1	3393.7	3379.8	3383.9	3373.2	3391.3
17.5°	3536.6	3461.9	3401.9	3343.6	3355.1	3316.6	3310.8	3304.2	3308.3	3306.7	3326.4
20°	3454.5	3372.4	3303.4	3246.0	3252.5	3222.1	3224.6	3223.0	3231.2	3240.2	3267.3
22.5°	3361.7	3268.9	3196.7	3137.6	3147.4	3121.2	3132.7	3135.9	3149.9	3170.4	3204.9
25°	3257.4	3158.1	3082.6	3026.8	3035.8	3018.6	3038.3	3046.5	3068.6	3103.1	3138.4
27.5°	3148.3	3043.2	2962.7	2909.4	2926.6	2909.4	2938.9	2955.3	2989.0	3026.8	3070.3
30°	3032.5	2923.3	2840.4	2792.8	2809.2	2793.6	2841.2	2863.4	2897.1	2948.8	3000.5
32.5°	2911.0	2796.1	2714.8	2677.9	2689.4	2686.9	2740.3	2764.9	2810.0	2869.1	2924.1
35°	2786.2	2666.4	2584.3	2553.1	2567.0	2570.3	2634.4	2663.1	2712.3	2783.8	2842.9
37.5°	2657.3	2535.0	2454.6	2429.1	2441.4	2453.8	2528.5	2557.2	2613.0	2691.0	2755.9
40°	2523.5	2401.2	2322.4	2301.9	2314.2	2327.3	2408.6	2448.0	2508.8	2593.3	2663.9
42.5°	2388.1	2265.8	2189.4	2174.6	2187.0	2212.4	2298.6	2335.5	2399.6	2493.2	2571.1
45°	2250.2	2122.9	2056.4	2044.9	2058.1	2087.6	2172.2	2216.5	2284.6	2387.3	2471.0
47.5°	2110.6	1986.6	1923.4	1916.0	1929.2	1962.0	2055.6	2095.8	2168.1	2277.3	2367.6
50°	1969.4	1848.7	1788.0	1785.5	1797.8	1833.1	1922.6	1970.2	2044.9	2167.3	2260.0
52.5°	1826.6	1710.8	1655.8	1655.8	1667.3	1703.4	1793.7	1843.0	1920.2	2049.0	2151.7
55°	1683.7	1573.7	1521.2	1525.3	1541.7	1572.9	1660.7	1712.5	1790.4	1924.3	2032.6
57.5°	1540.9	1436.6	1389.0	1394.8	1410.4	1441.6	1527.7	1586.0	1656.6	1795.4	1906.2
60°	1399.7	1301.2	1259.3	1265.9	1279.8	1311.0	1400.5	1450.6	1521.2	1662.4	1773.2
62.5°	1256.8	1167.4	1128.0	1136.2	1148.5	1179.7	1264.2	1312.7	1382.4	1521.2	1632.8
65°	1115.6	1032.7	999.1	1007.3	1018.8	1047.5	1127.1	1173.9	1240.4	1375.9	1482.6
67.5°	976.1	900.6	872.6	880.9	889.9	917.0	982.7	1033.5	1095.9	1224.8	1325.8
70°	838.2	770.9	746.2	754.4	762.6	787.3	844.7	891.5	949.0	1067.2	1160.8
72.5°	701.9	636.2	623.9	631.3	637.9	659.2	714.2	751.1	801.2	906.3	986.8
75°	568.9	512.3	504.1	511.4	517.2	533.6	579.6	611.6	653.5	744.6	810.3
77.5°	440.8	393.2	389.9	395.7	401.4	412.9	449.0	482.7	515.5	582.9	641.1
80°	321.0	282.4	282.4	288.1	286.5	300.5	325.9	353.0	376.8	425.2	467.9
82.5°	211.8	181.4	185.5	189.6	192.1	197.8	213.4	234.0	248.7	278.3	306.2
85°	117.4	96.9	101.0	104.3	102.6	109.2	117.4	129.7	137.1	151.1	165.8
87.5°	43.5	36.1	36.9	39.4	41.0	44.3	44.3	51.7	52.5	54.2	57.5
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°	3755.7	3755.7	3755.7
2.5°	3666.3	3686.0	3700.7
5°	3603.1	3619.5	3632.6
7.5°	3541.5	3556.3	3567.8
10°	3483.2	3499.6	3507.8
12.5°	3423.3	3442.2	3448.7
15°	3364.2	3383.0	3391.3
17.5°	3303.4	3328.0	3337.1
20°	3246.8	3278.0	3285.4
22.5°	3189.3	3221.3	3230.4
25°	3126.9	3164.7	3173.7
27.5°	3060.4	3105.6	3114.6
30°	2993.9	3043.2	3052.2
32.5°	2922.5	2975.9	2984.1
35°	2847.8	2901.2	2911.0
37.5°	2764.9	2823.2	2842.9
40°	2678.7	2741.9	2762.4
42.5°	2588.4	2657.3	2678.7
45°	2491.5	2567.0	2591.7
47.5°	2393.8	2479.2	2500.5
50°	2287.9	2379.1	2404.5
52.5°	2177.1	2276.4	2301.9
55°	2062.2	2162.3	2190.2
57.5°	1937.4	2040.8	2070.4
60°	1806.9	1910.3	1938.2
62.5°	1673.1	1766.6	1793.7
65°	1523.6	1611.5	1636.1
67.5°	1365.2	1445.7	1466.2
70°	1196.9	1266.7	1284.8
72.5°	1021.2	1069.7	1093.5
75°	839.8	878.4	896.5
77.5°	657.6	684.7	699.4
80°	479.4	495.0	507.3
82.5°	313.6	320.2	329.2
85°	169.1	169.1	174.9
87.5°	57.5	55.0	57.5
90°	0.0	0.0	0.0

(END OF REPORT)