

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: P835221

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835221
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-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

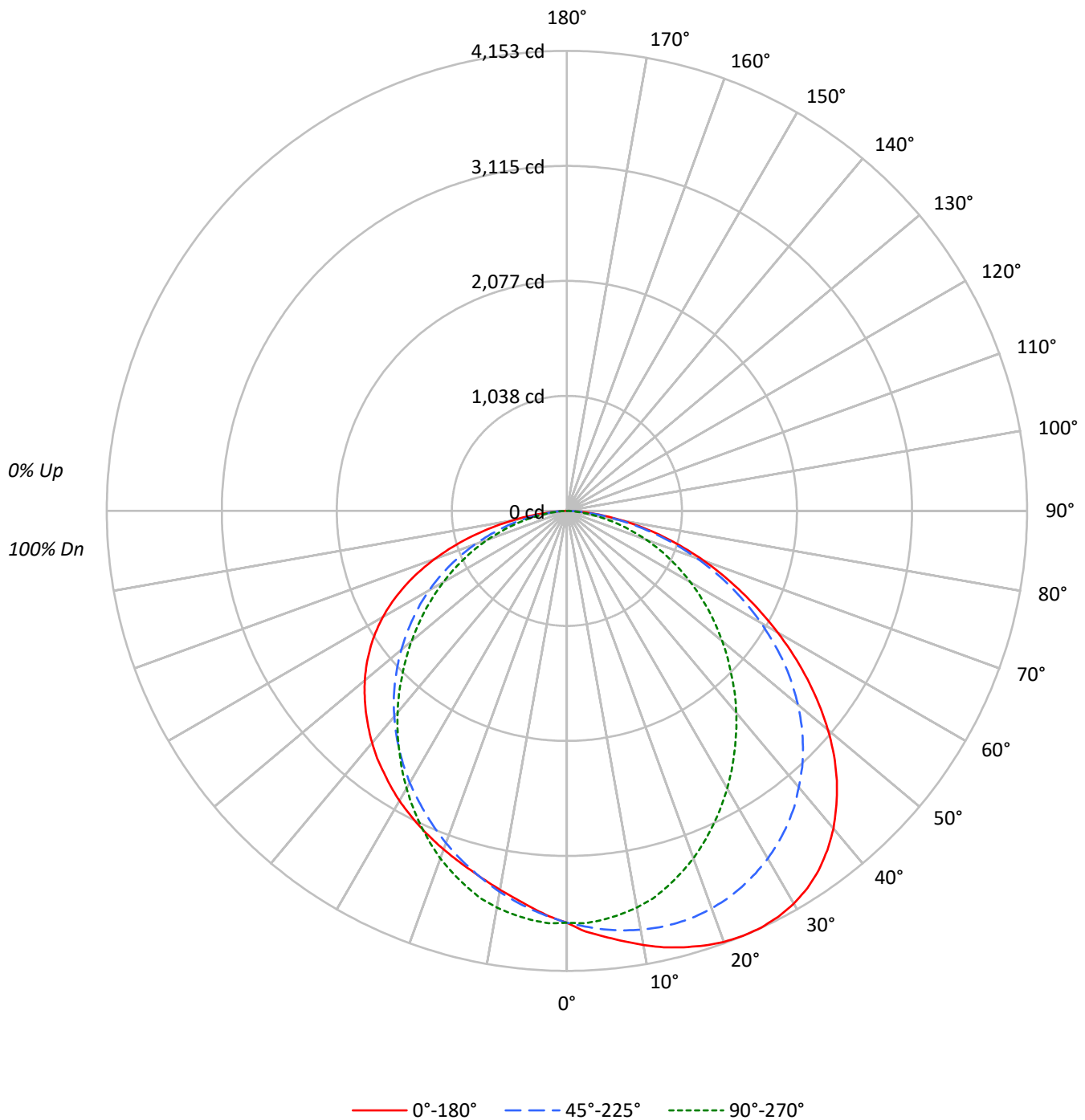
Lumens per Lamp: N/A
Luminaire Lumens: 10937.2 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10006	10006	10006
5°	10417	10011	9715
10°	10873	9936	9489
15°	11361	9777	9353
20°	11858	9561	9314
25°	12324	9283	9329
30°	12725	8993	9389
35°	13015	8672	9467
40°	13147	8351	9607
45°	13111	7998	9764
50°	12878	7662	9966
55°	12438	7309	10173
60°	11832	6933	10327
65°	11110	6510	10313
70°	10340	6004	10007
75°	9388	5272	9227
80°	8060	4333	7784
85°	6147	2961	5345

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.6	3.2
10°-20°	1018.4	9.3
20°-30°	1560.1	14.3
30°-40°	1903.9	17.4
40°-50°	1991.1	18.2
50°-60°	1802.1	16.5
60°-70°	1364.8	12.5
70°-80°	760.6	7.0
80°-90°	183.5	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°	2931.2	26.8
0°-40°	4835.1	44.2
0°-60°	8628.3	78.9
0°-90°	10937.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10937.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3718	3718	3718	3718	3718	
5°	3856	3792	3706	3615	3596	372
15°	4078	3852	3509	3346	3357	1157
25°	4151	3743	3126	3016	3142	1915
35°	3962	3465	2640	2636	2882	2474
45°	3445	3014	2102	2194	2566	2651
55°	2651	2394	1558	1695	2168	2366
65°	1745	1641	1022	1162	1620	1731
75°	903	852	507	606	888	958
85°	199	176	96	128	173	240
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°	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2
2.5°	3800.3	3782.4	3767.8	3773.5	3776.7	3765.3	3755.6	3757.2	3747.4	3766.1	3722.3
5°	3856.4	3840.1	3823.0	3829.5	3823.0	3806.0	3792.1	3788.1	3762.1	3772.6	3727.9
7.5°	3918.9	3901.1	3875.9	3883.2	3869.4	3837.7	3819.8	3809.2	3769.4	3770.2	3720.6
10°	3979.1	3963.6	3929.5	3934.4	3909.2	3866.9	3838.5	3823.8	3767.8	3759.6	3708.4
12.5°	4035.2	4014.0	3977.4	3979.9	3943.3	3887.2	3850.7	3829.5	3756.4	3732.0	3681.6
15°	4078.2	4057.9	4014.0	4013.2	3966.1	3892.9	3851.5	3822.2	3729.6	3691.4	3638.5
17.5°	4114.8	4096.1	4041.7	4040.0	3983.1	3890.5	3840.9	3804.3	3690.6	3643.4	3584.9
20°	4140.8	4122.1	4061.2	4055.5	3987.2	3878.3	3819.0	3772.6	3639.4	3583.3	3518.3
22.5°	4153.0	4134.3	4065.2	4057.1	3977.4	3853.9	3787.3	3732.8	3580.8	3507.7	3440.2
25°	4150.6	4132.7	4054.7	4046.5	3958.8	3817.3	3742.6	3680.0	3506.9	3420.7	3354.1
27.5°	4130.2	4116.4	4034.3	4023.8	3924.6	3767.8	3688.1	3619.0	3424.8	3328.9	3256.6
30°	4095.3	4084.7	3997.8	3988.0	3882.4	3713.3	3624.7	3545.1	3336.2	3228.1	3155.0
32.5°	4039.2	4029.5	3941.7	3932.7	3825.5	3643.4	3550.8	3468.7	3239.5	3120.0	3046.9
35°	3962.0	3956.3	3871.0	3861.2	3752.3	3563.8	3465.4	3375.2	3138.7	3003.8	2933.9
37.5°	3860.4	3860.4	3778.3	3767.8	3661.3	3466.2	3369.5	3273.6	3024.9	2881.9	2812.8
40°	3742.6	3753.1	3669.4	3658.9	3555.6	3361.4	3255.8	3155.0	2902.2	2753.5	2686.0
42.5°	3601.2	3610.9	3541.0	3531.3	3434.6	3240.3	3142.0	3032.3	2773.8	2622.6	2552.8
45°	3445.1	3458.1	3395.5	3388.2	3298.0	3107.8	3013.6	2902.2	2639.7	2486.1	2417.8
47.5°	3271.2	3288.3	3233.8	3229.7	3146.0	2972.1	2873.8	2760.8	2499.1	2343.9	2279.7
50°	3076.1	3100.5	3055.8	3055.8	2981.1	2807.9	2722.6	2609.6	2352.8	2197.6	2134.2
52.5°	2867.3	2898.2	2864.8	2865.6	2804.7	2649.5	2560.9	2450.3	2200.0	2047.2	1988.7
55°	2651.1	2681.2	2660.0	2663.3	2615.3	2473.9	2393.5	2283.7	2044.0	1895.3	1840.0
57.5°	2425.2	2457.7	2443.8	2450.3	2417.0	2290.2	2206.5	2110.6	1883.1	1736.0	1688.8
60°	2198.4	2229.3	2222.0	2230.9	2209.8	2100.1	2023.7	1924.5	1721.3	1579.9	1538.5
62.5°	1969.2	1997.7	1996.0	2005.8	1994.4	1903.4	1835.1	1750.6	1553.9	1423.9	1385.7
65°	1744.9	1769.3	1767.7	1778.2	1775.8	1702.6	1640.9	1563.7	1386.5	1267.0	1233.7
67.5°	1527.1	1547.4	1541.7	1553.9	1557.2	1498.7	1445.0	1375.9	1227.2	1111.0	1082.5
70°	1314.2	1328.0	1320.7	1328.8	1336.1	1292.2	1246.7	1185.8	1057.3	954.9	931.4
72.5°	1105.3	1115.1	1103.7	1111.8	1118.3	1086.6	1049.2	996.4	889.9	801.3	781.8
75°	902.9	916.7	893.2	901.3	906.2	874.5	852.5	809.5	717.6	649.4	636.4
77.5°	707.1	715.2	702.2	698.9	702.2	679.4	662.4	629.0	560.0	503.9	495.8
80°	520.1	525.0	512.0	508.8	511.2	494.9	481.9	457.6	408.8	366.5	363.3
82.5°	348.7	351.1	339.7	336.5	338.1	333.2	317.8	300.7	277.9	242.2	241.4
85°	199.1	199.1	191.0	187.7	189.4	181.2	175.5	166.6	157.7	133.3	134.9
87.5°	73.1	73.1	69.1	68.3	76.4	67.5	65.0	61.0	63.4	50.4	53.6
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°	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2	3718.2
2.5°	3734.4	3726.3	3719.0	3693.8	3704.4	3678.4	3676.7	3667.0	3659.7	3645.9	3663.7
5°	3722.3	3706.0	3684.9	3654.8	3663.7	3632.9	3626.4	3615.0	3605.2	3587.3	3601.2
7.5°	3702.7	3675.9	3642.6	3604.4	3616.6	3578.4	3568.6	3556.5	3548.3	3527.2	3539.4
10°	3674.3	3636.1	3597.1	3550.8	3559.7	3518.3	3506.1	3493.1	3485.8	3467.1	3479.3
12.5°	3630.4	3584.1	3531.3	3480.9	3490.6	3451.6	3435.4	3421.5	3419.1	3403.7	3418.3
15°	3573.5	3509.3	3454.9	3401.2	3412.6	3367.1	3359.8	3346.0	3350.0	3339.5	3357.3
17.5°	3501.2	3427.2	3367.9	3310.2	3321.6	3283.4	3277.7	3271.2	3275.3	3273.6	3293.1
20°	3419.9	3338.7	3270.4	3213.5	3220.0	3189.9	3192.4	3190.7	3198.9	3207.8	3234.6
22.5°	3328.1	3236.2	3164.7	3106.2	3116.0	3090.0	3101.3	3104.6	3118.4	3138.7	3172.9
25°	3224.9	3126.5	3051.8	2996.5	3005.4	2988.4	3007.9	3016.0	3037.9	3072.1	3107.0
27.5°	3116.8	3012.8	2933.1	2880.3	2897.3	2880.3	2909.5	2925.8	2959.1	2996.5	3039.6
30°	3002.2	2894.1	2812.0	2764.9	2781.1	2765.7	2812.8	2834.8	2868.1	2919.3	2970.5
32.5°	2881.9	2768.1	2687.7	2651.1	2662.5	2660.0	2712.9	2737.2	2781.9	2840.5	2894.9
35°	2758.4	2639.7	2558.4	2527.6	2541.4	2544.6	2608.0	2636.5	2685.2	2755.9	2814.4
37.5°	2630.8	2509.7	2430.0	2404.8	2417.0	2429.2	2503.2	2531.6	2586.9	2664.1	2728.3
40°	2498.3	2377.2	2299.2	2278.9	2291.1	2304.1	2384.5	2423.5	2483.7	2567.4	2637.3
42.5°	2364.2	2243.1	2167.5	2152.9	2165.1	2190.3	2275.6	2312.2	2375.6	2468.2	2545.4
45°	2227.7	2101.7	2035.9	2024.5	2037.5	2066.7	2150.5	2194.3	2261.8	2363.4	2446.3
47.5°	2089.5	1966.8	1904.2	1896.9	1909.9	1942.4	2035.0	2074.9	2146.4	2254.5	2343.9
50°	1949.7	1830.2	1770.1	1767.7	1779.9	1814.8	1903.4	1950.5	2024.5	2145.6	2237.4
52.5°	1808.3	1693.7	1639.3	1639.3	1650.6	1686.4	1775.8	1824.6	1901.0	2028.5	2130.1
55°	1666.9	1558.0	1506.0	1510.0	1526.3	1557.2	1644.1	1695.3	1772.5	1905.0	2012.3
57.5°	1525.5	1422.3	1375.1	1380.8	1396.3	1427.1	1512.5	1570.2	1640.1	1777.4	1887.1
60°	1385.7	1288.2	1246.7	1253.2	1267.0	1297.9	1386.5	1436.1	1506.0	1645.8	1755.5
62.5°	1244.3	1155.7	1116.7	1124.8	1137.0	1167.9	1251.6	1299.5	1368.6	1506.0	1616.5
65°	1104.5	1022.4	989.1	997.2	1008.6	1037.0	1115.9	1162.2	1228.0	1362.1	1467.8
67.5°	966.3	891.6	863.9	872.0	881.0	907.8	972.8	1023.2	1085.0	1212.6	1312.5
70°	829.8	763.1	738.8	746.9	755.0	779.4	836.3	882.6	939.5	1056.5	1149.2
72.5°	694.9	629.9	617.7	625.0	631.5	652.6	707.1	743.6	793.2	897.2	976.9
75°	563.2	507.1	499.0	506.3	512.0	528.3	573.8	605.5	646.9	737.1	802.2
77.5°	436.4	389.3	386.0	391.7	397.4	408.8	444.6	477.9	510.4	577.0	634.7
80°	317.8	279.6	279.6	285.3	283.6	297.5	322.6	349.5	373.0	421.0	463.2
82.5°	209.7	179.6	183.7	187.7	190.2	195.9	211.3	231.6	246.3	275.5	303.1
85°	116.2	95.9	100.0	103.2	101.6	108.1	116.2	128.4	135.7	149.5	164.2
87.5°	43.1	35.8	36.6	39.0	40.6	43.9	43.9	51.2	52.0	53.6	56.9
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°	3718.2	3718.2	3718.2
2.5°	3629.6	3649.1	3663.7
5°	3567.0	3583.3	3596.3
7.5°	3506.1	3520.7	3532.1
10°	3448.4	3464.6	3472.7
12.5°	3389.0	3407.7	3414.2
15°	3330.5	3349.2	3357.3
17.5°	3270.4	3294.8	3303.7
20°	3214.3	3245.2	3252.5
22.5°	3157.4	3189.1	3198.1
25°	3095.6	3133.0	3142.0
27.5°	3029.8	3074.5	3083.5
30°	2964.0	3012.8	3021.7
32.5°	2893.3	2946.1	2954.2
35°	2819.3	2872.1	2881.9
37.5°	2737.2	2794.9	2814.4
40°	2651.9	2714.5	2734.8
42.5°	2562.5	2630.8	2651.9
45°	2466.6	2541.4	2565.8
47.5°	2369.9	2454.4	2475.5
50°	2265.0	2355.3	2380.5
52.5°	2155.3	2253.7	2278.9
55°	2041.6	2140.7	2168.3
57.5°	1918.0	2020.4	2049.7
60°	1788.8	1891.2	1918.8
62.5°	1656.3	1749.0	1775.8
65°	1508.4	1595.4	1619.7
67.5°	1351.6	1431.2	1451.5
70°	1184.9	1254.0	1271.9
72.5°	1011.0	1059.0	1082.5
75°	831.4	869.6	887.5
77.5°	651.0	677.8	692.4
80°	474.6	490.1	502.3
82.5°	310.5	317.0	325.9
85°	167.4	167.4	173.1
87.5°	56.9	54.5	56.9
90°	0.0	0.0	0.0

(END OF REPORT)