

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: P834279

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834279
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3HI-40-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

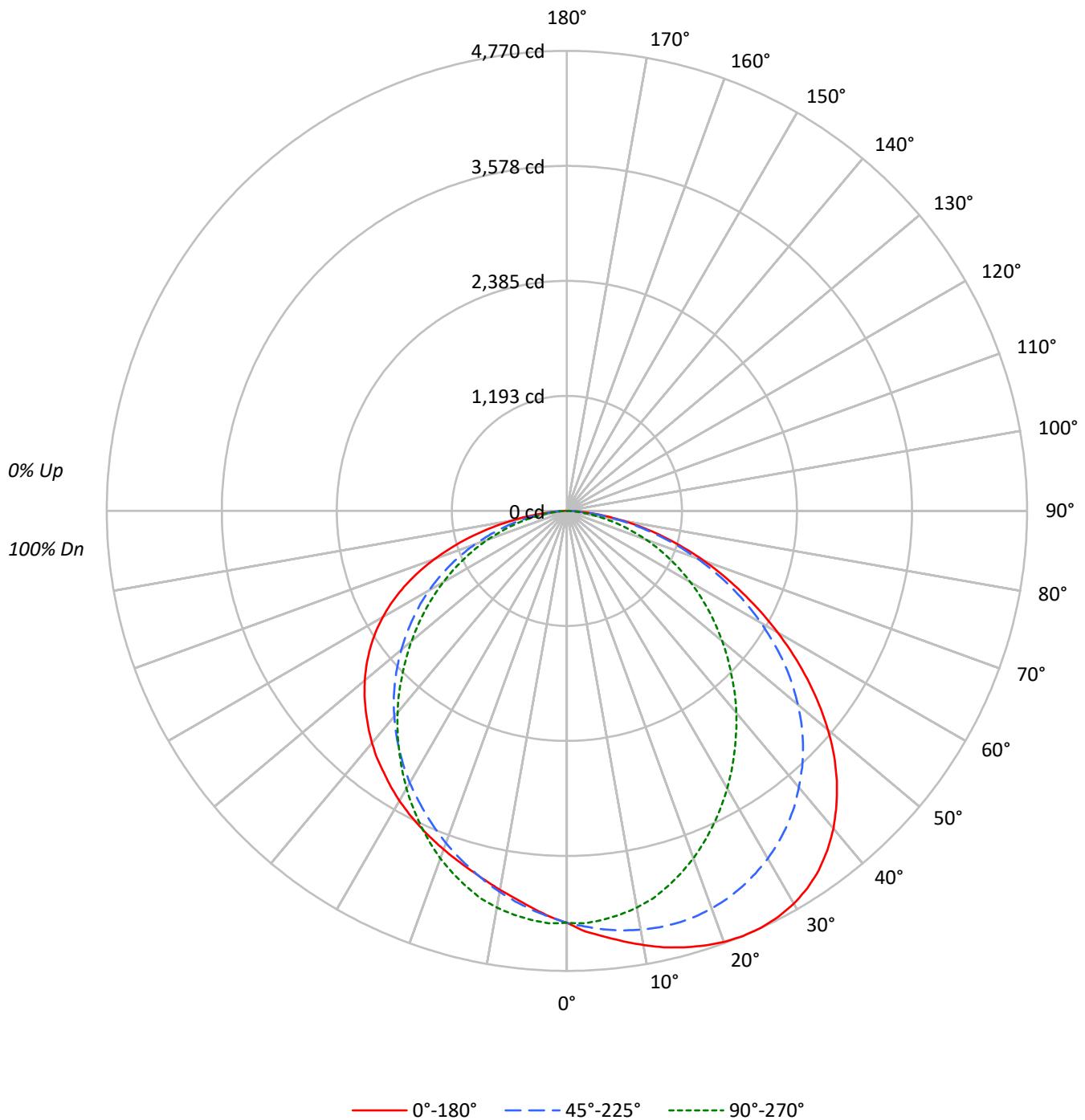
Lumens per Lamp: N/A
Luminaire Lumens: 12563.5 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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°	11493	11493	11493
5°	11966	11500	11159
10°	12490	11413	10900
15°	13051	11231	10744
20°	13621	10982	10699
25°	14156	10663	10716
30°	14618	10330	10785
35°	14951	9961	10875
40°	15102	9592	11036
45°	15060	9188	11216
50°	14793	8802	11447
55°	14287	8397	11686
60°	13591	7964	11863
65°	12763	7478	11847
70°	11877	6897	11495
75°	10784	6056	10600
80°	9259	4976	8940
85°	7061	3402	6141

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.1	3.2
10°-20°	1169.8	9.3
20°-30°	1792.1	14.3
30°-40°	2187.1	17.4
40°-50°	2287.2	18.2
50°-60°	2070.1	16.5
60°-70°	1567.7	12.5
70°-80°	873.7	7.0
80°-90°	210.7	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°	3367.0	26.8
0°-40°	5554.1	44.2
0°-60°	9911.4	78.9
0°-90°	12563.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12563.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4271	4271	4271	4271	4271	
5°	4430	4356	4257	4152	4131	427
15°	4685	4424	4031	3844	3857	1329
25°	4768	4299	3591	3464	3609	2199
35°	4551	3981	3032	3028	3310	2842
45°	3957	3462	2414	2521	2947	3045
55°	3045	2749	1790	1947	2491	2717
65°	2004	1885	1174	1335	1861	1988
75°	1037	979	582	696	1020	1100
85°	229	202	110	148	199	275
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°	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1
2.5°	4365.4	4344.8	4328.0	4334.6	4338.3	4325.2	4314.0	4315.9	4304.7	4326.2	4275.8
5°	4429.8	4411.1	4391.5	4399.0	4391.5	4371.9	4356.0	4351.4	4321.5	4333.6	4282.3
7.5°	4501.7	4481.1	4452.2	4460.6	4444.7	4408.3	4387.8	4375.6	4329.9	4330.8	4273.9
10°	4570.8	4553.0	4513.8	4519.4	4490.5	4441.9	4409.3	4392.4	4328.0	4318.7	4259.9
12.5°	4635.2	4610.9	4568.9	4571.7	4529.7	4465.3	4423.3	4399.0	4315.0	4287.0	4229.1
15°	4684.7	4661.3	4610.9	4610.0	4555.8	4471.8	4424.2	4390.6	4284.2	4240.3	4179.6
17.5°	4726.7	4705.2	4642.6	4640.8	4575.4	4469.0	4412.1	4370.0	4239.3	4185.2	4118.0
20°	4756.5	4735.1	4665.0	4658.5	4580.1	4455.0	4386.8	4333.6	4180.5	4116.1	4041.4
22.5°	4770.5	4749.1	4669.7	4660.4	4568.9	4427.0	4350.4	4287.9	4113.3	4029.3	3951.8
25°	4767.7	4747.2	4657.6	4648.2	4547.4	4385.0	4299.1	4227.2	4028.4	3929.4	3852.8
27.5°	4744.4	4728.5	4634.2	4622.1	4508.2	4328.0	4236.5	4157.2	3934.1	3823.9	3740.8
30°	4704.3	4692.1	4592.2	4581.0	4459.7	4265.5	4163.7	4072.2	3832.3	3708.1	3624.1
32.5°	4639.8	4628.6	4527.8	4517.5	4394.3	4185.2	4078.8	3984.5	3721.2	3584.0	3500.0
35°	4551.2	4544.6	4446.6	4435.4	4310.3	4093.7	3980.7	3877.1	3605.4	3450.5	3370.2
37.5°	4434.5	4434.5	4340.2	4328.0	4205.7	3981.7	3870.6	3760.4	3474.7	3310.4	3231.1
40°	4299.1	4311.2	4215.1	4202.9	4084.4	3861.2	3739.9	3624.1	3333.8	3162.9	3085.4
42.5°	4136.6	4147.9	4067.6	4056.4	3945.3	3722.1	3609.2	3483.2	3186.3	3012.6	2932.3
45°	3957.4	3972.3	3900.5	3892.1	3788.4	3570.0	3461.7	3333.8	3032.2	2855.8	2777.4
47.5°	3757.6	3777.2	3714.7	3710.0	3613.8	3414.1	3301.1	3171.3	2870.7	2692.4	2618.7
50°	3533.6	3561.6	3510.2	3510.2	3424.3	3225.5	3127.5	2997.7	2702.7	2524.4	2451.6
52.5°	3293.6	3329.1	3290.8	3291.8	3221.8	3043.4	2941.7	2814.7	2527.2	2351.7	2284.4
55°	3045.3	3079.8	3055.6	3059.3	3004.2	2841.8	2749.4	2623.3	2347.9	2177.1	2113.6
57.5°	2785.8	2823.1	2807.2	2814.7	2776.4	2630.8	2534.6	2424.5	2163.1	1994.1	1940.0
60°	2525.3	2560.8	2552.4	2562.6	2538.4	2412.3	2324.6	2210.7	1977.3	1814.9	1767.2
62.5°	2262.0	2294.7	2292.8	2304.1	2291.0	2186.4	2108.0	2010.9	1785.0	1635.6	1591.7
65°	2004.4	2032.4	2030.5	2042.7	2039.9	1955.8	1884.9	1796.2	1592.7	1455.4	1417.2
67.5°	1754.2	1777.5	1771.0	1785.0	1788.7	1721.5	1659.9	1580.5	1409.7	1276.2	1243.5
70°	1509.6	1525.5	1517.1	1526.4	1534.8	1484.4	1432.1	1362.1	1214.6	1096.9	1069.9
72.5°	1269.7	1280.9	1267.8	1277.1	1284.6	1248.2	1205.2	1144.6	1022.3	920.5	898.1
75°	1037.2	1053.1	1026.0	1035.3	1040.9	1004.5	979.3	929.8	824.3	745.9	731.0
77.5°	812.2	821.5	806.6	802.9	806.6	780.5	760.9	722.6	643.2	578.8	569.5
80°	597.5	603.1	588.1	584.4	587.2	568.5	553.6	525.6	469.6	421.0	417.3
82.5°	400.5	403.3	390.2	386.5	388.4	382.8	365.0	345.4	319.3	278.2	277.3
85°	228.7	228.7	219.4	215.7	217.5	208.2	201.7	191.4	181.1	153.1	155.0
87.5°	84.0	84.0	79.4	78.4	87.8	77.5	74.7	70.0	72.8	57.9	61.6
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°	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1	4271.1
2.5°	4289.8	4280.4	4272.0	4243.1	4255.2	4225.3	4223.5	4212.3	4203.9	4188.0	4208.5
5°	4275.8	4257.1	4232.8	4198.3	4208.5	4173.1	4165.6	4152.5	4141.3	4120.8	4136.6
7.5°	4253.3	4222.5	4184.3	4140.4	4154.4	4110.5	4099.3	4085.3	4076.0	4051.7	4065.7
10°	4220.7	4176.8	4132.0	4078.8	4089.0	4041.4	4027.4	4012.5	4004.1	3982.6	3996.6
12.5°	4170.3	4117.0	4056.4	3998.5	4009.7	3964.9	3946.2	3930.3	3927.5	3909.8	3926.6
15°	4104.9	4031.2	3968.6	3907.0	3920.1	3867.8	3859.4	3843.5	3848.2	3836.0	3856.6
17.5°	4021.8	3936.9	3868.7	3802.4	3815.5	3771.6	3765.1	3757.6	3762.3	3760.4	3782.8
20°	3928.5	3835.1	3756.7	3691.3	3698.8	3664.3	3667.1	3665.2	3674.5	3684.8	3715.6
22.5°	3823.0	3717.5	3635.3	3568.1	3579.3	3549.4	3562.5	3566.2	3582.1	3605.4	3644.7
25°	3704.4	3591.4	3505.6	3442.1	3452.3	3432.7	3455.1	3464.5	3489.7	3528.9	3569.0
27.5°	3580.2	3460.7	3369.3	3308.6	3328.2	3308.6	3342.2	3360.9	3399.1	3442.1	3491.6
30°	3448.6	3324.4	3230.2	3176.0	3194.7	3176.9	3231.1	3256.3	3294.6	3353.4	3412.2
32.5°	3310.4	3179.7	3087.3	3045.3	3058.4	3055.6	3116.3	3144.3	3195.6	3262.8	3325.4
35°	3168.5	3032.2	2938.9	2903.4	2919.3	2923.0	2995.8	3028.5	3084.5	3165.7	3233.0
37.5°	3022.0	2882.9	2791.4	2762.4	2776.4	2790.4	2875.4	2908.1	2971.6	3060.2	3134.0
40°	2869.8	2730.7	2641.1	2617.7	2631.7	2646.7	2739.1	2783.9	2853.0	2949.1	3029.4
42.5°	2715.8	2576.7	2489.8	2473.0	2487.0	2516.0	2614.0	2656.0	2728.8	2835.3	2923.9
45°	2558.9	2414.2	2338.6	2325.5	2340.5	2374.1	2470.2	2520.6	2598.1	2714.8	2810.0
47.5°	2400.2	2259.2	2187.4	2179.0	2193.9	2231.2	2337.7	2383.4	2465.6	2589.7	2692.4
50°	2239.6	2102.4	2033.3	2030.5	2044.5	2084.7	2186.4	2240.6	2325.5	2464.6	2570.1
52.5°	2077.2	1945.6	1883.0	1883.0	1896.1	1937.2	2039.9	2095.9	2183.6	2330.2	2446.9
55°	1914.8	1789.7	1729.9	1734.6	1753.2	1788.7	1888.6	1947.4	2036.1	2188.3	2311.5
57.5°	1752.3	1633.7	1579.6	1586.1	1603.9	1639.3	1737.4	1803.7	1883.9	2041.7	2167.7
60°	1591.7	1479.7	1432.1	1439.6	1455.4	1490.9	1592.7	1649.6	1729.9	1890.5	2016.5
62.5°	1429.3	1327.5	1282.7	1292.1	1306.1	1341.5	1437.7	1492.8	1572.1	1729.9	1856.9
65°	1268.7	1174.4	1136.2	1145.5	1158.6	1191.2	1281.8	1335.0	1410.6	1564.7	1686.0
67.5°	1110.0	1024.1	992.4	1001.7	1012.0	1042.8	1117.5	1175.4	1246.3	1392.9	1507.7
70°	953.2	876.6	848.6	858.0	867.3	895.3	960.6	1013.9	1079.2	1213.6	1320.1
72.5°	798.2	723.5	709.5	717.9	725.4	749.7	812.2	854.2	911.2	1030.7	1122.2
75°	647.0	582.5	573.2	581.6	588.1	606.8	659.1	695.5	743.1	846.7	921.4
77.5°	501.3	447.2	443.4	450.0	456.5	469.6	510.7	548.9	586.3	662.8	729.1
80°	365.0	321.1	321.1	327.7	325.8	341.7	370.6	401.4	428.5	483.6	532.1
82.5°	240.9	206.3	211.0	215.7	218.5	225.0	242.7	266.1	282.9	316.5	348.2
85°	133.5	110.2	114.8	118.6	116.7	124.2	133.5	147.5	155.9	171.8	188.6
87.5°	49.5	41.1	42.0	44.8	46.7	50.4	50.4	58.8	59.7	61.6	65.3
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):

	160°	170°	180°
0°	4271.1	4271.1	4271.1
2.5°	4169.3	4191.7	4208.5
5°	4097.4	4116.1	4131.0
7.5°	4027.4	4044.2	4057.3
10°	3961.1	3979.8	3989.1
12.5°	3893.0	3914.5	3921.9
15°	3825.8	3847.2	3856.6
17.5°	3756.7	3784.7	3795.0
20°	3692.3	3727.7	3736.1
22.5°	3626.9	3663.3	3673.6
25°	3556.0	3598.9	3609.2
27.5°	3480.3	3531.7	3542.0
30°	3404.7	3460.7	3471.0
32.5°	3323.5	3384.2	3393.5
35°	3238.6	3299.2	3310.4
37.5°	3144.3	3210.5	3233.0
40°	3046.2	3118.1	3141.5
42.5°	2943.5	3022.0	3046.2
45°	2833.4	2919.3	2947.3
47.5°	2722.3	2819.4	2843.7
50°	2601.9	2705.5	2734.4
52.5°	2475.8	2588.8	2617.7
55°	2345.1	2459.0	2490.8
57.5°	2203.2	2320.9	2354.5
60°	2054.8	2172.4	2204.2
62.5°	1902.6	2009.0	2039.9
65°	1732.7	1832.6	1860.6
67.5°	1552.5	1644.0	1667.4
70°	1361.1	1440.5	1461.0
72.5°	1161.4	1216.4	1243.5
75°	955.0	998.9	1019.5
77.5°	747.8	778.6	795.4
80°	545.2	562.9	576.9
82.5°	356.6	364.1	374.4
85°	192.3	192.3	198.9
87.5°	65.3	62.5	65.3
90°	0.0	0.0	0.0

(END OF REPORT)