

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: P835093

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-5LO-30-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835093  
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-OPL-LD4-5LO-30-120-EDD-90  
Description: 2FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

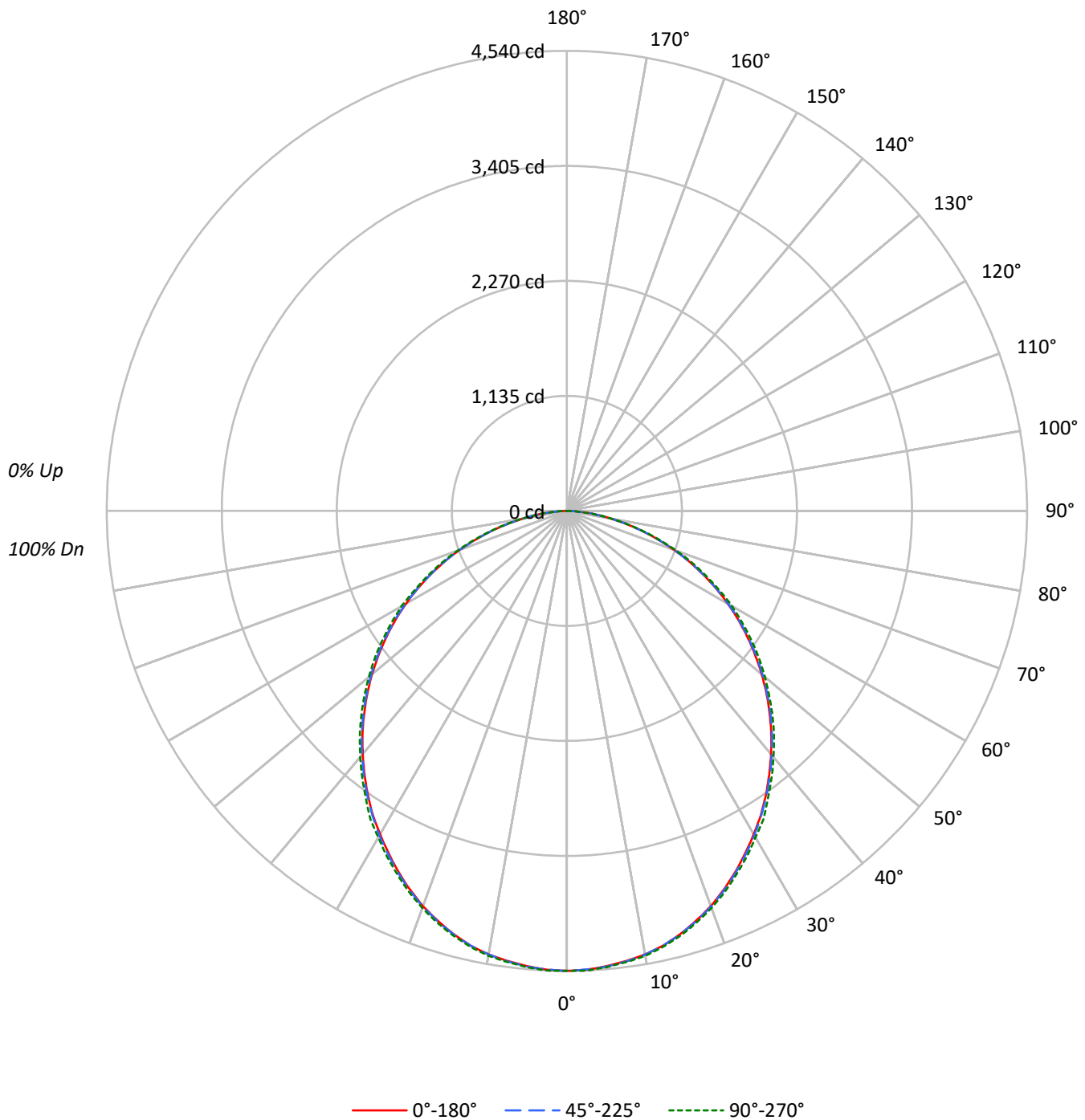
Lumens per Lamp: N/A  
Luminaire Lumens: 12265.1 lumens  
Efficiency: N/A  
Efficacy: 104.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 117  
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  | 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  | 95  | 98  | 94  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |    |    |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 70  |    |    |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 62  | 70  | 65  | 61  | 59  |    |    |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 51  |    |    |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 44  |    |    |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38  |    |    |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |    |    |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |    |    |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |    |    |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6107 | 6107 | 6107 |
| 5°  | 6091 | 6096 | 6104 |
| 10° | 6072 | 6073 | 6091 |
| 15° | 6022 | 6026 | 6043 |
| 20° | 5944 | 5950 | 5972 |
| 25° | 5836 | 5850 | 5876 |
| 30° | 5726 | 5745 | 5780 |
| 35° | 5622 | 5636 | 5680 |
| 40° | 5503 | 5521 | 5571 |
| 45° | 5382 | 5406 | 5461 |
| 50° | 5252 | 5276 | 5337 |
| 55° | 5103 | 5128 | 5211 |
| 60° | 4934 | 4954 | 5065 |
| 65° | 4718 | 4733 | 4823 |
| 70° | 4429 | 4433 | 4529 |
| 75° | 4026 | 4011 | 4104 |
| 80° | 3459 | 3444 | 3502 |
| 85° | 2685 | 2640 | 2655 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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CATALOG NUMBER: ORLG-24-4-INS-OPL-LD4-5LO-30-120-EDD-90

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 428.9   | 3.5       |
| 10°-20°   | 1220.1  | 9.9       |
| 20°-30°   | 1816.4  | 14.8      |
| 30°-40°   | 2148.0  | 17.5      |
| 40°-50°   | 2192.8  | 17.9      |
| 50°-60°   | 1957.0  | 16.0      |
| 60°-70°   | 1474.0  | 12.0      |
| 70°-80°   | 822.0   | 6.7       |
| 80°-90°   | 205.9   | 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°    | 3465.4  | 28.3      |
| 0°-40°    | 5613.4  | 45.8      |
| 0°-60°    | 9763.2  | 79.6      |
| 0°-90°    | 12265.1 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 12265.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 4539 | 4539  | 4539 | 4539  | 4539 |      |
| 5°  | 4510 | 4518  | 4514 | 4515  | 4519 | 428  |
| 15° | 4323 | 4328  | 4326 | 4330  | 4338 | 1218 |
| 25° | 3931 | 3936  | 3940 | 3951  | 3958 | 1811 |
| 35° | 3423 | 3419  | 3431 | 3444  | 3458 | 2140 |
| 45° | 2829 | 2828  | 2841 | 2855  | 2870 | 2182 |
| 55° | 2176 | 2173  | 2186 | 2201  | 2222 | 1945 |
| 65° | 1482 | 1476  | 1487 | 1500  | 1515 | 1466 |
| 75° | 774  | 768   | 772  | 775   | 789  | 821  |
| 85° | 174  | 169   | 171  | 169   | 172  | 209  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 4539.1 | 4539.1 | 4539.1 | 4539.1 | 4539.1 |
| 2.5°  | 4531.6 | 4539.1 | 4529.7 | 4531.6 | 4540.0 |
| 5°    | 4509.9 | 4518.4 | 4513.7 | 4514.6 | 4519.3 |
| 7.5°  | 4479.9 | 4491.2 | 4484.6 | 4486.5 | 4491.2 |
| 10°   | 4444.2 | 4452.6 | 4445.1 | 4449.8 | 4458.3 |
| 12.5° | 4393.4 | 4397.2 | 4393.4 | 4395.3 | 4404.7 |
| 15°   | 4322.9 | 4327.6 | 4325.8 | 4329.5 | 4338.0 |
| 17.5° | 4240.2 | 4245.9 | 4244.9 | 4252.5 | 4259.0 |
| 20°   | 4151.0 | 4151.9 | 4155.7 | 4163.2 | 4170.7 |
| 22.5° | 4045.7 | 4048.5 | 4052.3 | 4062.6 | 4070.1 |
| 25°   | 3931.0 | 3935.7 | 3940.4 | 3950.8 | 3958.3 |
| 27.5° | 3809.8 | 3814.5 | 3821.1 | 3832.4 | 3844.6 |
| 30°   | 3685.8 | 3685.8 | 3698.0 | 3709.3 | 3720.5 |
| 32.5° | 3560.8 | 3556.1 | 3567.4 | 3581.5 | 3608.7 |
| 35°   | 3422.6 | 3418.9 | 3431.1 | 3444.2 | 3458.3 |
| 37.5° | 3278.9 | 3276.0 | 3290.1 | 3304.2 | 3317.4 |
| 40°   | 3133.2 | 3129.4 | 3143.5 | 3157.6 | 3171.7 |
| 42.5° | 2983.8 | 2981.9 | 2995.0 | 3009.1 | 3024.2 |
| 45°   | 2828.7 | 2827.8 | 2840.9 | 2855.0 | 2870.1 |
| 47.5° | 2670.8 | 2668.9 | 2682.1 | 2697.1 | 2710.3 |
| 50°   | 2509.2 | 2507.3 | 2520.5 | 2535.5 | 2549.6 |
| 52.5° | 2342.8 | 2342.8 | 2355.1 | 2368.2 | 2389.8 |
| 55°   | 2175.6 | 2172.7 | 2185.9 | 2200.9 | 2221.6 |
| 57.5° | 2006.4 | 2002.6 | 2014.9 | 2029.9 | 2048.7 |
| 60°   | 1833.5 | 1829.7 | 1841.0 | 1856.0 | 1882.4 |
| 62.5° | 1658.7 | 1653.1 | 1664.3 | 1678.4 | 1694.4 |
| 65°   | 1482.0 | 1476.4 | 1486.7 | 1499.9 | 1514.9 |
| 67.5° | 1304.4 | 1297.8 | 1308.2 | 1319.4 | 1333.5 |
| 70°   | 1125.8 | 1119.3 | 1126.8 | 1138.1 | 1151.2 |
| 72.5° | 948.2  | 941.6  | 948.2  | 952.9  | 968.9  |
| 75°   | 774.4  | 767.8  | 771.5  | 775.3  | 789.4  |
| 77.5° | 605.2  | 598.6  | 606.2  | 608.0  | 616.5  |
| 80°   | 446.4  | 439.8  | 444.5  | 445.5  | 452.0  |
| 82.5° | 301.7  | 296.0  | 302.6  | 297.9  | 303.5  |
| 85°   | 173.9  | 169.2  | 171.0  | 169.2  | 172.0  |
| 87.5° | 68.6   | 64.8   | 65.8   | 62.0   | 62.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)