

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: P835653

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

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835653  
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-OPL-LD4-5HI-35-120-EDD  
Description: 2FT x 2FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

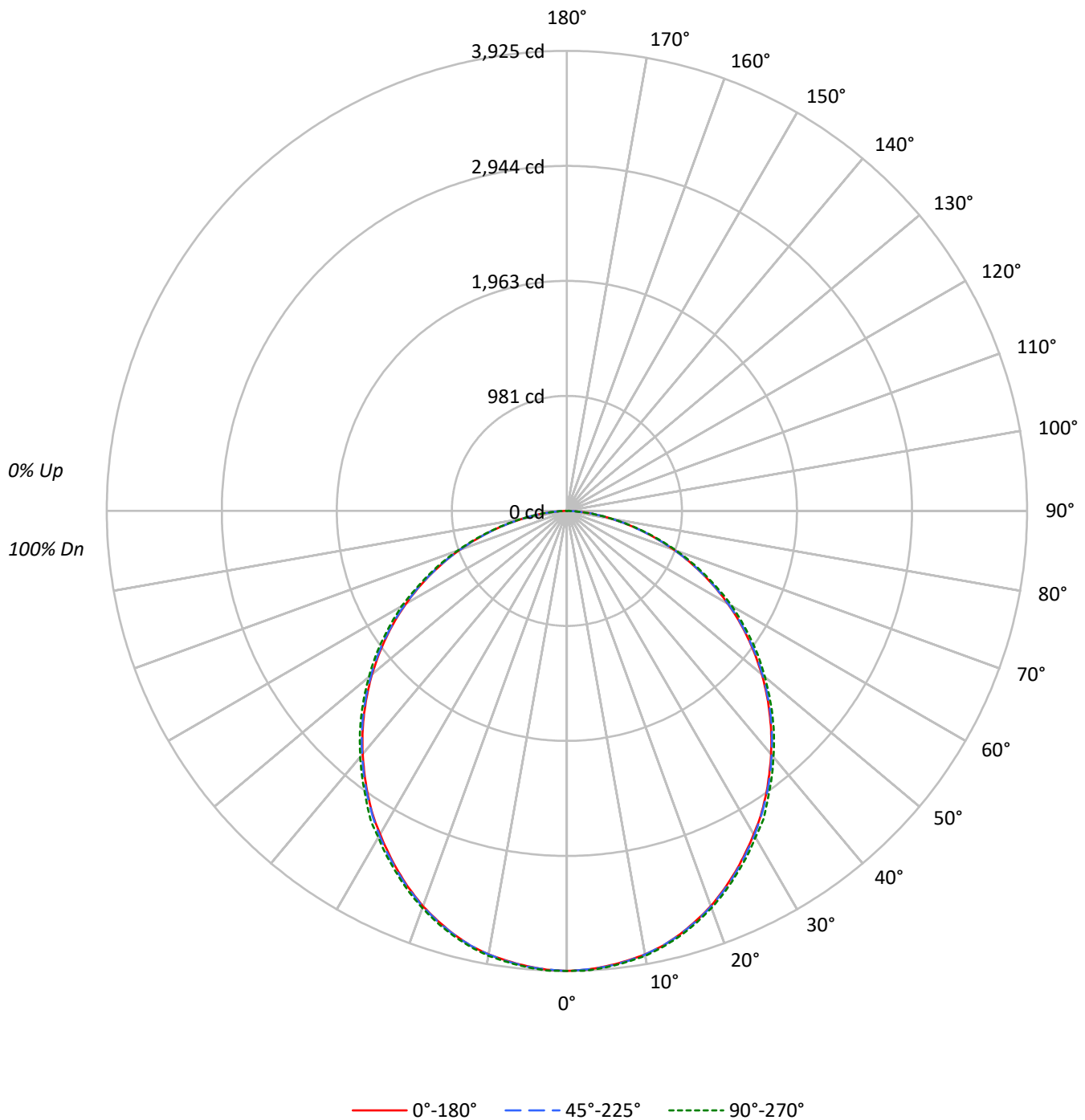
Lumens per Lamp: N/A  
Luminaire Lumens: 10604.6 lumens  
Efficiency: N/A  
Efficacy: 96.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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

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 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 86  | 86  | 84  |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 83  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 72  | 72  | 70  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 62  | 70  | 65  | 61  | 61  | 61  | 59  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 53  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 46  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 40  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 41  | 36  | 36  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 32  | 32  | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 29  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 26  | 26  | 25  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10561 | 10561 | 10561 |
| 5°  | 10533 | 10542 | 10555 |
| 10° | 10500 | 10502 | 10533 |
| 15° | 10413 | 10420 | 10449 |
| 20° | 10278 | 10289 | 10326 |
| 25° | 10092 | 10116 | 10162 |
| 30° | 9902  | 9935  | 9995  |
| 35° | 9722  | 9746  | 9823  |
| 40° | 9516  | 9548  | 9633  |
| 45° | 9307  | 9348  | 9444  |
| 50° | 9082  | 9123  | 9229  |
| 55° | 8825  | 8867  | 9012  |
| 60° | 8532  | 8567  | 8759  |
| 65° | 8159  | 8185  | 8340  |
| 70° | 7659  | 7665  | 7832  |
| 75° | 6961  | 6936  | 7096  |
| 80° | 5982  | 5955  | 6056  |
| 85° | 4641  | 4566  | 4591  |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 370.9   | 3.5       |
| 10°-20°   | 1054.9  | 9.9       |
| 20°-30°   | 1570.4  | 14.8      |
| 30°-40°   | 1857.2  | 17.5      |
| 40°-50°   | 1896.0  | 17.9      |
| 50°-60°   | 1692.0  | 16.0      |
| 60°-70°   | 1274.4  | 12.0      |
| 70°-80°   | 710.7   | 6.7       |
| 80°-90°   | 178.1   | 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°    | 2996.2  | 28.3      |
| 0°-40°    | 4853.4  | 45.8      |
| 0°-60°    | 8441.4  | 79.6      |
| 0°-90°    | 10604.6 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 10604.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3925 | 3925  | 3925 | 3925  | 3925 |      |
| 5°  | 3899 | 3907  | 3903 | 3903  | 3908 | 370  |
| 15° | 3738 | 3742  | 3740 | 3743  | 3751 | 1053 |
| 25° | 3399 | 3403  | 3407 | 3416  | 3422 | 1566 |
| 35° | 2959 | 2956  | 2967 | 2978  | 2990 | 1851 |
| 45° | 2446 | 2445  | 2456 | 2468  | 2482 | 1887 |
| 55° | 1881 | 1879  | 1890 | 1903  | 1921 | 1681 |
| 65° | 1281 | 1276  | 1285 | 1297  | 1310 | 1267 |
| 75° | 670  | 664   | 667  | 670   | 682  | 710  |
| 85° | 150  | 146   | 148  | 146   | 149  | 180  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3924.6 | 3924.6 | 3924.6 | 3924.6 | 3924.6 |
| 2.5°  | 3918.1 | 3924.6 | 3916.4 | 3918.1 | 3925.4 |
| 5°    | 3899.4 | 3906.7 | 3902.6 | 3903.4 | 3907.5 |
| 7.5°  | 3873.4 | 3883.1 | 3877.4 | 3879.1 | 3883.1 |
| 10°   | 3842.5 | 3849.8 | 3843.3 | 3847.4 | 3854.7 |
| 12.5° | 3798.6 | 3801.9 | 3798.6 | 3800.2 | 3808.4 |
| 15°   | 3737.7 | 3741.7 | 3740.1 | 3743.4 | 3750.7 |
| 17.5° | 3666.2 | 3671.1 | 3670.2 | 3676.7 | 3682.4 |
| 20°   | 3589.0 | 3589.8 | 3593.0 | 3599.5 | 3606.0 |
| 22.5° | 3498.0 | 3500.4 | 3503.7 | 3512.6 | 3519.1 |
| 25°   | 3398.9 | 3402.9 | 3407.0 | 3415.9 | 3422.4 |
| 27.5° | 3294.0 | 3298.1 | 3303.8 | 3313.5 | 3324.1 |
| 30°   | 3186.8 | 3186.8 | 3197.3 | 3207.1 | 3216.8 |
| 32.5° | 3078.7 | 3074.6 | 3084.4 | 3096.6 | 3120.2 |
| 35°   | 2959.3 | 2956.0 | 2966.6 | 2978.0 | 2990.1 |
| 37.5° | 2834.9 | 2832.5 | 2844.7 | 2856.9 | 2868.3 |
| 40°   | 2709.0 | 2705.8 | 2717.9 | 2730.1 | 2742.3 |
| 42.5° | 2579.8 | 2578.2 | 2589.6 | 2601.8 | 2614.8 |
| 45°   | 2445.7 | 2444.9 | 2456.3 | 2468.5 | 2481.5 |
| 47.5° | 2309.2 | 2307.6 | 2319.0 | 2332.0 | 2343.4 |
| 50°   | 2169.5 | 2167.9 | 2179.2 | 2192.2 | 2204.4 |
| 52.5° | 2025.7 | 2025.7 | 2036.2 | 2047.6 | 2066.3 |
| 55°   | 1881.0 | 1878.6 | 1890.0 | 1903.0 | 1920.8 |
| 57.5° | 1734.8 | 1731.5 | 1742.1 | 1755.1 | 1771.3 |
| 60°   | 1585.3 | 1582.0 | 1591.8 | 1604.8 | 1627.5 |
| 62.5° | 1434.1 | 1429.3 | 1439.0 | 1451.2 | 1465.0 |
| 65°   | 1281.4 | 1276.5 | 1285.4 | 1296.8 | 1309.8 |
| 67.5° | 1127.8 | 1122.1 | 1131.1 | 1140.8 | 1153.0 |
| 70°   | 973.4  | 967.7  | 974.2  | 984.0  | 995.4  |
| 72.5° | 819.9  | 814.2  | 819.9  | 823.9  | 837.7  |
| 75°   | 669.5  | 663.8  | 667.1  | 670.3  | 682.5  |
| 77.5° | 523.3  | 517.6  | 524.1  | 525.7  | 533.0  |
| 80°   | 386.0  | 380.3  | 384.3  | 385.1  | 390.8  |
| 82.5° | 260.8  | 255.9  | 261.6  | 257.6  | 262.5  |
| 85°   | 150.3  | 146.3  | 147.9  | 146.3  | 148.7  |
| 87.5° | 59.3   | 56.1   | 56.9   | 53.6   | 53.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)