

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: P834486

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-3HI-35-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834486  
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-OPL-LD4-3HI-35-120-EDD-90  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

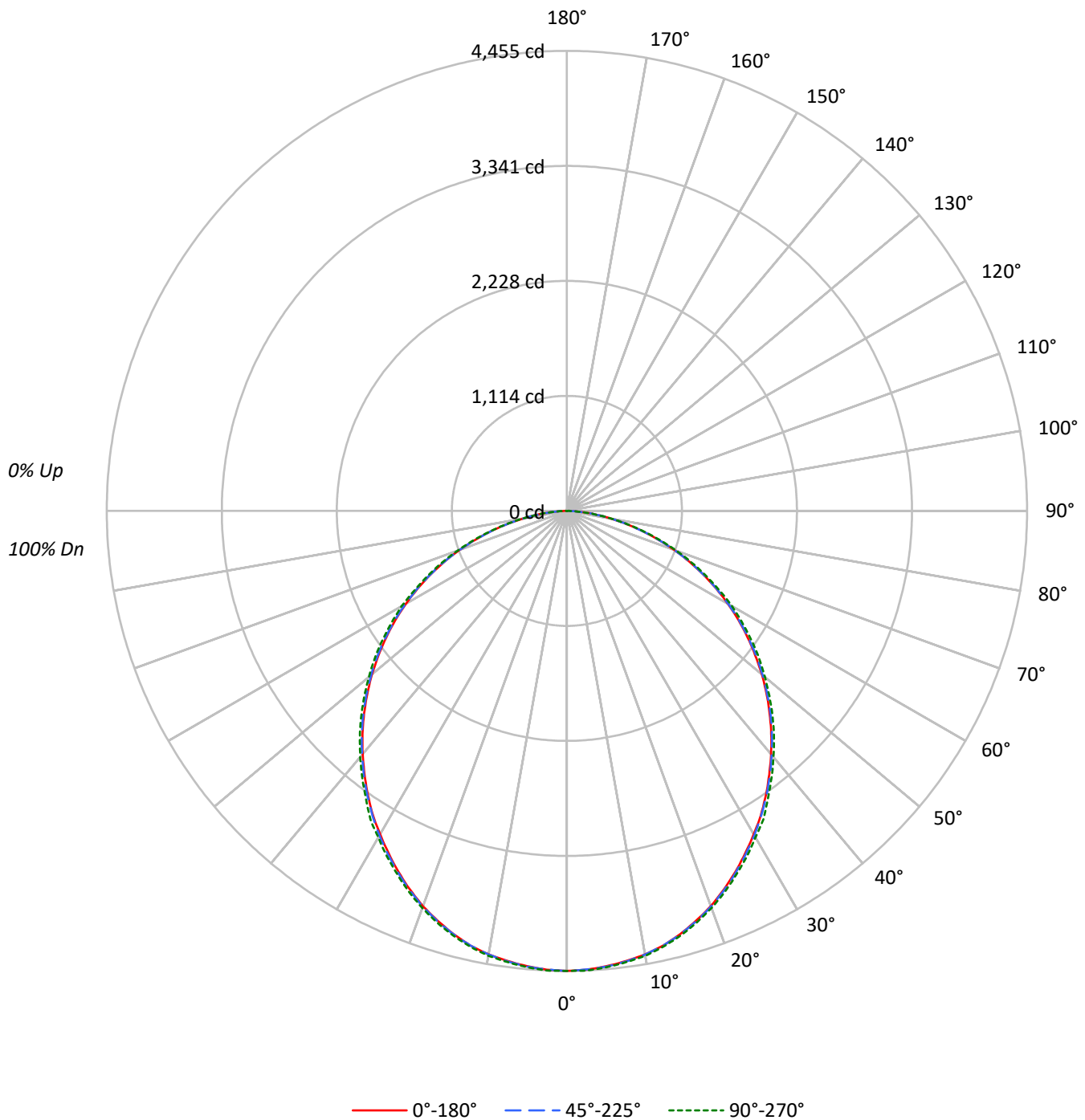
Lumens per Lamp: N/A  
Luminaire Lumens: 12036.5 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11987 | 11987 | 11987 |
| 5°  | 11955 | 11965 | 11980 |
| 10° | 11917 | 11920 | 11955 |
| 15° | 11819 | 11826 | 11860 |
| 20° | 11665 | 11679 | 11721 |
| 25° | 11454 | 11482 | 11534 |
| 30° | 11239 | 11277 | 11345 |
| 35° | 11034 | 11061 | 11149 |
| 40° | 10801 | 10837 | 10934 |
| 45° | 10564 | 10610 | 10719 |
| 50° | 10309 | 10355 | 10475 |
| 55° | 10017 | 10064 | 10229 |
| 60° | 9684  | 9724  | 9942  |
| 65° | 9261  | 9290  | 9466  |
| 70° | 8693  | 8700  | 8889  |
| 75° | 7901  | 7873  | 8055  |
| 80° | 6789  | 6760  | 6874  |
| 85° | 5267  | 5181  | 5212  |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 420.9   | 3.5       |
| 10°-20°   | 1197.4  | 9.9       |
| 20°-30°   | 1782.5  | 14.8      |
| 30°-40°   | 2108.0  | 17.5      |
| 40°-50°   | 2152.0  | 17.9      |
| 50°-60°   | 1920.5  | 16.0      |
| 60°-70°   | 1446.5  | 12.0      |
| 70°-80°   | 806.7   | 6.7       |
| 80°-90°   | 202.1   | 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°    | 3400.8  | 28.3      |
| 0°-40°    | 5508.8  | 45.8      |
| 0°-60°    | 9581.2  | 79.6      |
| 0°-90°    | 12036.5 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 12036.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 4454 | 4454  | 4454 | 4454  | 4454 |      |
| 5°  | 4426 | 4434  | 4430 | 4430  | 4435 | 420  |
| 15° | 4242 | 4247  | 4245 | 4249  | 4257 | 1196 |
| 25° | 3858 | 3862  | 3867 | 3877  | 3884 | 1777 |
| 35° | 3359 | 3355  | 3367 | 3380  | 3394 | 2100 |
| 45° | 2776 | 2775  | 2788 | 2802  | 2817 | 2141 |
| 55° | 2135 | 2132  | 2145 | 2160  | 2180 | 1908 |
| 65° | 1454 | 1449  | 1459 | 1472  | 1487 | 1438 |
| 75° | 760  | 754   | 757  | 761   | 775  | 806  |
| 85° | 171  | 166   | 168  | 166   | 169  | 205  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 4454.5 | 4454.5 | 4454.5 | 4454.5 | 4454.5 |
| 2.5°  | 4447.1 | 4454.5 | 4445.3 | 4447.1 | 4455.4 |
| 5°    | 4425.9 | 4434.2 | 4429.6 | 4430.5 | 4435.1 |
| 7.5°  | 4396.4 | 4407.4 | 4401.0 | 4402.8 | 4407.4 |
| 10°   | 4361.3 | 4369.6 | 4362.3 | 4366.9 | 4375.2 |
| 12.5° | 4311.5 | 4315.2 | 4311.5 | 4313.4 | 4322.6 |
| 15°   | 4242.4 | 4247.0 | 4245.1 | 4248.8 | 4257.1 |
| 17.5° | 4161.2 | 4166.7 | 4165.8 | 4173.2 | 4179.6 |
| 20°   | 4073.6 | 4074.5 | 4078.2 | 4085.6 | 4093.0 |
| 22.5° | 3970.3 | 3973.1 | 3976.8 | 3986.9 | 3994.3 |
| 25°   | 3857.8 | 3862.4 | 3867.0 | 3877.1 | 3884.5 |
| 27.5° | 3738.8 | 3743.4 | 3749.9 | 3760.9 | 3772.9 |
| 30°   | 3617.1 | 3617.1 | 3629.1 | 3640.1 | 3651.2 |
| 32.5° | 3494.4 | 3489.8 | 3500.9 | 3514.7 | 3541.4 |
| 35°   | 3358.8 | 3355.2 | 3367.1 | 3380.1 | 3393.9 |
| 37.5° | 3217.7 | 3215.0 | 3228.8 | 3242.6 | 3255.5 |
| 40°   | 3074.8 | 3071.1 | 3084.9 | 3098.8 | 3112.6 |
| 42.5° | 2928.2 | 2926.3 | 2939.2 | 2953.1 | 2967.8 |
| 45°   | 2776.0 | 2775.1 | 2788.0 | 2801.8 | 2816.6 |
| 47.5° | 2621.0 | 2619.2 | 2632.1 | 2646.9 | 2659.8 |
| 50°   | 2462.4 | 2460.6 | 2473.5 | 2488.2 | 2502.1 |
| 52.5° | 2299.2 | 2299.2 | 2311.2 | 2324.1 | 2345.3 |
| 55°   | 2135.0 | 2132.2 | 2145.2 | 2159.9 | 2180.2 |
| 57.5° | 1969.0 | 1965.3 | 1977.3 | 1992.1 | 2010.5 |
| 60°   | 1799.3 | 1795.6 | 1806.7 | 1821.4 | 1847.3 |
| 62.5° | 1627.8 | 1622.2 | 1633.3 | 1647.1 | 1662.8 |
| 65°   | 1454.4 | 1448.9 | 1459.0 | 1471.9 | 1486.7 |
| 67.5° | 1280.1 | 1273.6 | 1283.8 | 1294.8 | 1308.7 |
| 70°   | 1104.9 | 1098.4 | 1105.8 | 1116.8 | 1129.8 |
| 72.5° | 930.6  | 924.1  | 930.6  | 935.2  | 950.8  |
| 75°   | 759.9  | 753.5  | 757.2  | 760.9  | 774.7  |
| 77.5° | 593.9  | 587.5  | 594.9  | 596.7  | 605.0  |
| 80°   | 438.1  | 431.6  | 436.2  | 437.1  | 443.6  |
| 82.5° | 296.0  | 290.5  | 297.0  | 292.4  | 297.9  |
| 85°   | 170.6  | 166.0  | 167.8  | 166.0  | 168.8  |
| 87.5° | 67.3   | 63.6   | 64.6   | 60.9   | 60.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)