

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: P834464

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-2STD-27-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834464  
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-LD4-2STD-27-120-EDD-90  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

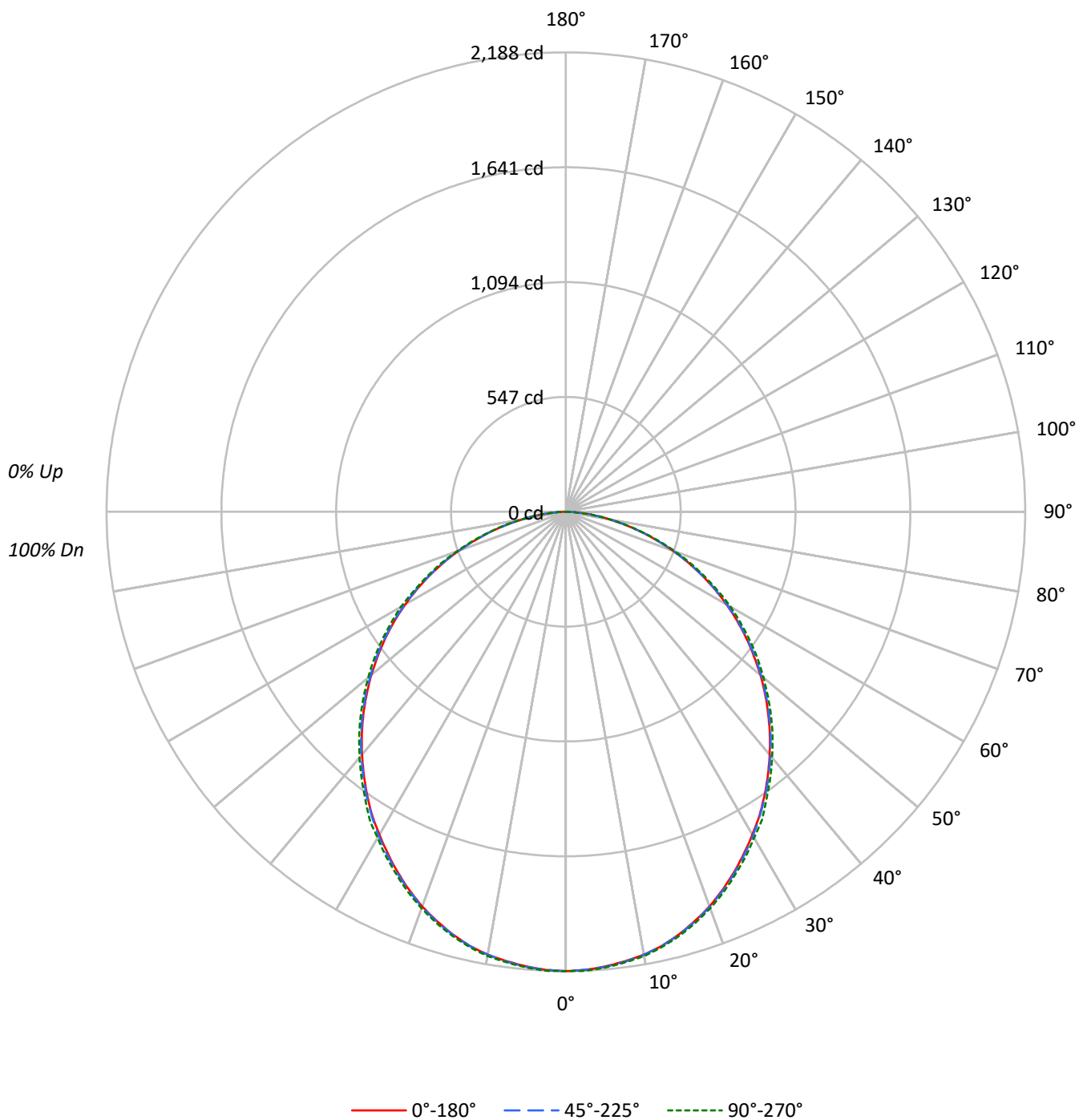
Lumens per Lamp: N/A  
Luminaire Lumens: 5911.6 lumens  
Efficiency: N/A  
Efficacy: 88.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°  | 5887 | 5887 | 5887 |
| 5°  | 5872 | 5877 | 5884 |
| 10° | 5853 | 5854 | 5872 |
| 15° | 5805 | 5808 | 5825 |
| 20° | 5729 | 5736 | 5757 |
| 25° | 5626 | 5639 | 5665 |
| 30° | 5520 | 5538 | 5572 |
| 35° | 5419 | 5433 | 5476 |
| 40° | 5305 | 5322 | 5370 |
| 45° | 5189 | 5211 | 5264 |
| 50° | 5063 | 5086 | 5145 |
| 55° | 4920 | 4943 | 5024 |
| 60° | 4756 | 4775 | 4883 |
| 65° | 4548 | 4563 | 4649 |
| 70° | 4269 | 4273 | 4366 |
| 75° | 3880 | 3867 | 3956 |
| 80° | 3335 | 3319 | 3377 |
| 85° | 2587 | 2544 | 2560 |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 206.7  | 3.5       |
| 10°-20°   | 588.1  | 9.9       |
| 20°-30°   | 875.4  | 14.8      |
| 30°-40°   | 1035.3 | 17.5      |
| 40°-50°   | 1056.9 | 17.9      |
| 50°-60°   | 943.2  | 16.0      |
| 60°-70°   | 710.4  | 12.0      |
| 70°-80°   | 396.2  | 6.7       |
| 80°-90°   | 99.3   | 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°    | 1670.3 | 28.3      |
| 0°-40°    | 2705.6 | 45.8      |
| 0°-60°    | 4705.7 | 79.6      |
| 0°-90°    | 5911.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5911.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2188 | 2188  | 2188 | 2188  | 2188 |      |
| 5°  | 2174 | 2178  | 2176 | 2176  | 2178 | 206  |
| 15° | 2084 | 2086  | 2085 | 2087  | 2091 | 587  |
| 25° | 1895 | 1897  | 1899 | 1904  | 1908 | 873  |
| 35° | 1650 | 1648  | 1654 | 1660  | 1667 | 1032 |
| 45° | 1363 | 1363  | 1369 | 1376  | 1383 | 1052 |
| 55° | 1049 | 1047  | 1054 | 1061  | 1071 | 937  |
| 65° | 714  | 712   | 717  | 723   | 730  | 706  |
| 75° | 373  | 370   | 372  | 374   | 380  | 396  |
| 85° | 84   | 82    | 82   | 82    | 83   | 101  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2187.8 | 2187.8 | 2187.8 | 2187.8 | 2187.8 |
| 2.5°  | 2184.1 | 2187.8 | 2183.2 | 2184.1 | 2188.2 |
| 5°    | 2173.7 | 2177.8 | 2175.5 | 2176.0 | 2178.3 |
| 7.5°  | 2159.2 | 2164.7 | 2161.5 | 2162.4 | 2164.7 |
| 10°   | 2142.0 | 2146.1 | 2142.5 | 2144.7 | 2148.8 |
| 12.5° | 2117.6 | 2119.4 | 2117.6 | 2118.5 | 2123.0 |
| 15°   | 2083.6 | 2085.9 | 2084.9 | 2086.8 | 2090.8 |
| 17.5° | 2043.7 | 2046.4 | 2046.0 | 2049.6 | 2052.8 |
| 20°   | 2000.7 | 2001.1 | 2003.0 | 2006.6 | 2010.2 |
| 22.5° | 1950.0 | 1951.3 | 1953.1 | 1958.1 | 1961.7 |
| 25°   | 1894.7 | 1897.0 | 1899.2 | 1904.2 | 1907.8 |
| 27.5° | 1836.3 | 1838.5 | 1841.7 | 1847.1 | 1853.0 |
| 30°   | 1776.5 | 1776.5 | 1782.4 | 1787.8 | 1793.2 |
| 32.5° | 1716.2 | 1714.0 | 1719.4 | 1726.2 | 1739.3 |
| 35°   | 1649.7 | 1647.8 | 1653.7 | 1660.1 | 1666.9 |
| 37.5° | 1580.4 | 1579.0 | 1585.8 | 1592.6 | 1598.9 |
| 40°   | 1510.1 | 1508.3 | 1515.1 | 1521.9 | 1528.7 |
| 42.5° | 1438.1 | 1437.2 | 1443.6 | 1450.4 | 1457.6 |
| 45°   | 1363.4 | 1362.9 | 1369.3 | 1376.1 | 1383.3 |
| 47.5° | 1287.3 | 1286.4 | 1292.7 | 1300.0 | 1306.3 |
| 50°   | 1209.4 | 1208.5 | 1214.8 | 1222.1 | 1228.9 |
| 52.5° | 1129.2 | 1129.2 | 1135.1 | 1141.4 | 1151.9 |
| 55°   | 1048.6 | 1047.2 | 1053.6 | 1060.8 | 1070.8 |
| 57.5° | 967.1  | 965.2  | 971.1  | 978.4  | 987.4  |
| 60°   | 883.7  | 881.9  | 887.3  | 894.6  | 907.3  |
| 62.5° | 799.5  | 796.7  | 802.2  | 809.0  | 816.7  |
| 65°   | 714.3  | 711.6  | 716.6  | 722.9  | 730.2  |
| 67.5° | 628.7  | 625.5  | 630.5  | 635.9  | 642.7  |
| 70°   | 542.6  | 539.5  | 543.1  | 548.5  | 554.9  |
| 72.5° | 457.0  | 453.9  | 457.0  | 459.3  | 467.0  |
| 75°   | 373.2  | 370.1  | 371.9  | 373.7  | 380.5  |
| 77.5° | 291.7  | 288.5  | 292.2  | 293.1  | 297.1  |
| 80°   | 215.2  | 212.0  | 214.2  | 214.7  | 217.9  |
| 82.5° | 145.4  | 142.7  | 145.9  | 143.6  | 146.3  |
| 85°   | 83.8   | 81.5   | 82.4   | 81.5   | 82.9   |
| 87.5° | 33.1   | 31.3   | 31.7   | 29.9   | 29.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)