

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: P834957

Luminaire Tested: **ORLG-24-4-INS-OPL-LD4-1HI-27-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834957  
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-LD4-1HI-27-120-EDD  
Description: 2FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2700K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

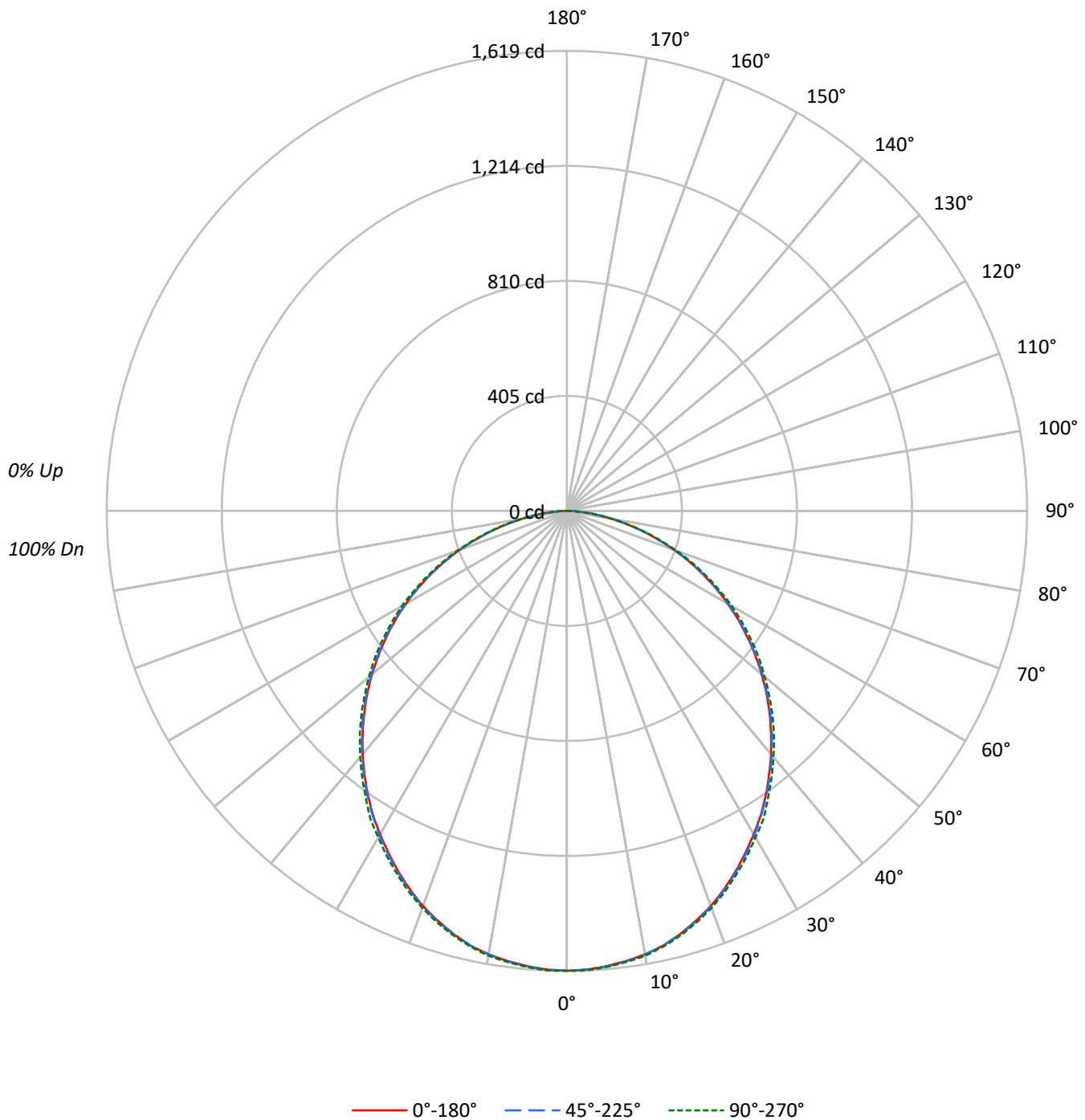
Lumens per Lamp: N/A  
Luminaire Lumens: 4373.1 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 44  
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°  | 2178 | 2178 | 2178 |
| 5°  | 2172 | 2174 | 2176 |
| 10° | 2165 | 2165 | 2172 |
| 15° | 2147 | 2148 | 2154 |
| 20° | 2119 | 2122 | 2129 |
| 25° | 2081 | 2086 | 2095 |
| 30° | 2042 | 2048 | 2061 |
| 35° | 2004 | 2009 | 2025 |
| 40° | 1962 | 1969 | 1986 |
| 45° | 1919 | 1927 | 1947 |
| 50° | 1873 | 1881 | 1903 |
| 55° | 1820 | 1828 | 1858 |
| 60° | 1759 | 1766 | 1806 |
| 65° | 1682 | 1688 | 1720 |
| 70° | 1579 | 1580 | 1615 |
| 75° | 1435 | 1430 | 1463 |
| 80° | 1234 | 1228 | 1249 |
| 85° | 957  | 942  | 946  |

Classified

Scaled Data Report

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 152.9  | 3.5       |
| 10°-20°   | 435.0  | 9.9       |
| 20°-30°   | 647.6  | 14.8      |
| 30°-40°   | 765.9  | 17.5      |
| 40°-50°   | 781.8  | 17.9      |
| 50°-60°   | 697.8  | 16.0      |
| 60°-70°   | 525.5  | 12.0      |
| 70°-80°   | 293.1  | 6.7       |
| 80°-90°   | 73.4   | 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°    | 1235.6 | 28.3      |
| 0°-40°    | 2001.4 | 45.8      |
| 0°-60°    | 3481.0 | 79.6      |
| 0°-90°    | 4373.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4373.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1618 | 1618  | 1618 | 1618  | 1618 |      |
| 5°  | 1608 | 1611  | 1609 | 1610  | 1611 | 153  |
| 15° | 1541 | 1543  | 1542 | 1544  | 1547 | 434  |
| 25° | 1402 | 1403  | 1405 | 1409  | 1411 | 646  |
| 35° | 1220 | 1219  | 1223 | 1228  | 1233 | 763  |
| 45° | 1009 | 1008  | 1013 | 1018  | 1023 | 778  |
| 55° | 776  | 775   | 779  | 785   | 792  | 693  |
| 65° | 528  | 526   | 530  | 535   | 540  | 523  |
| 75° | 276  | 274   | 275  | 276   | 282  | 293  |
| 85° | 62   | 60    | 61   | 60    | 61   | 74   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1618.4 | 1618.4 | 1618.4 | 1618.4 | 1618.4 |
| 2.5°  | 1615.7 | 1618.4 | 1615.0 | 1615.7 | 1618.7 |
| 5°    | 1608.0 | 1611.0 | 1609.3 | 1609.7 | 1611.3 |
| 7.5°  | 1597.3 | 1601.3 | 1599.0 | 1599.6 | 1601.3 |
| 10°   | 1584.5 | 1587.6 | 1584.9 | 1586.6 | 1589.6 |
| 12.5° | 1566.5 | 1567.8 | 1566.5 | 1567.1 | 1570.5 |
| 15°   | 1541.3 | 1543.0 | 1542.3 | 1543.7 | 1546.7 |
| 17.5° | 1511.8 | 1513.8 | 1513.5 | 1516.2 | 1518.5 |
| 20°   | 1480.0 | 1480.3 | 1481.7 | 1484.4 | 1487.0 |
| 22.5° | 1442.5 | 1443.5 | 1444.8 | 1448.5 | 1451.2 |
| 25°   | 1401.6 | 1403.3 | 1404.9 | 1408.6 | 1411.3 |
| 27.5° | 1358.4 | 1360.0 | 1362.4 | 1366.4 | 1370.8 |
| 30°   | 1314.1 | 1314.1 | 1318.5 | 1322.5 | 1326.5 |
| 32.5° | 1269.6 | 1267.9 | 1271.9 | 1277.0 | 1286.7 |
| 35°   | 1220.3 | 1219.0 | 1223.3 | 1228.0 | 1233.1 |
| 37.5° | 1169.1 | 1168.1 | 1173.1 | 1178.1 | 1182.8 |
| 40°   | 1117.1 | 1115.8 | 1120.8 | 1125.8 | 1130.9 |
| 42.5° | 1063.8 | 1063.2 | 1067.9 | 1072.9 | 1078.3 |
| 45°   | 1008.6 | 1008.2 | 1012.9 | 1017.9 | 1023.3 |
| 47.5° | 952.3  | 951.6  | 956.3  | 961.6  | 966.3  |
| 50°   | 894.6  | 894.0  | 898.7  | 904.0  | 909.0  |
| 52.5° | 835.3  | 835.3  | 839.7  | 844.4  | 852.1  |
| 55°   | 775.7  | 774.7  | 779.4  | 784.7  | 792.1  |
| 57.5° | 715.4  | 714.0  | 718.4  | 723.8  | 730.5  |
| 60°   | 653.7  | 652.4  | 656.4  | 661.8  | 671.1  |
| 62.5° | 591.4  | 589.4  | 593.4  | 598.4  | 604.1  |
| 65°   | 528.4  | 526.4  | 530.1  | 534.8  | 540.1  |
| 67.5° | 465.1  | 462.7  | 466.4  | 470.4  | 475.5  |
| 70°   | 401.4  | 399.1  | 401.7  | 405.8  | 410.5  |
| 72.5° | 338.1  | 335.7  | 338.1  | 339.8  | 345.5  |
| 75°   | 276.1  | 273.8  | 275.1  | 276.4  | 281.5  |
| 77.5° | 215.8  | 213.4  | 216.1  | 216.8  | 219.8  |
| 80°   | 159.2  | 156.8  | 158.5  | 158.8  | 161.2  |
| 82.5° | 107.6  | 105.5  | 107.9  | 106.2  | 108.2  |
| 85°   | 62.0   | 60.3   | 61.0   | 60.3   | 61.3   |
| 87.5° | 24.5   | 23.1   | 23.5   | 22.1   | 22.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)