

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: P834397

Luminaire Tested: **ORLG-12-4-INS-OPL-LD4-1LO-20-120-EDD**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P834397  
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-LD4-1LO-20-120-EDD  
Description: 1FT x 4FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 2000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

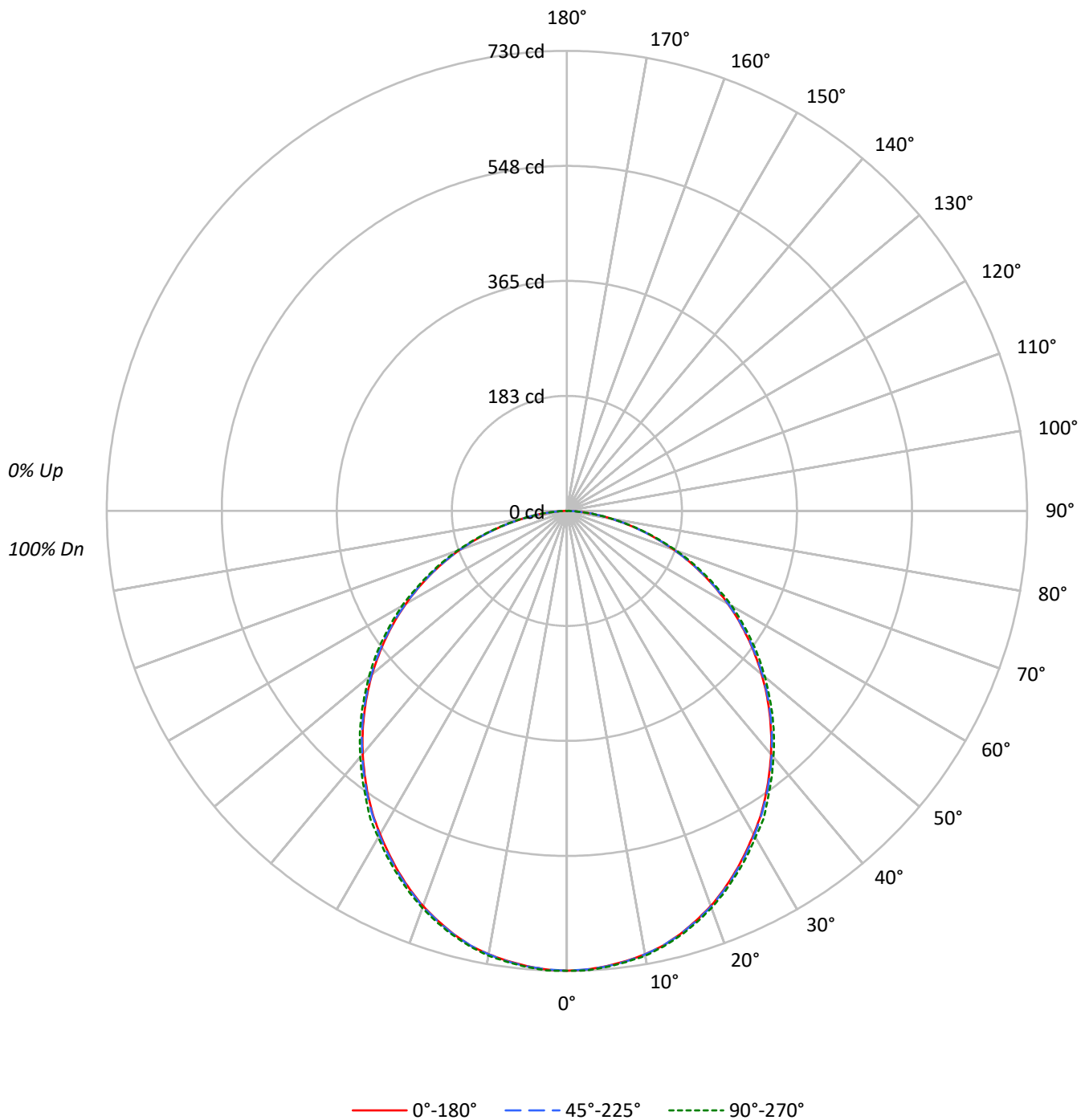
Lumens per Lamp: N/A  
Luminaire Lumens: 1971.8 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°  | 1964 | 1964 | 1964 |
| 5°  | 1958 | 1960 | 1962 |
| 10° | 1952 | 1953 | 1958 |
| 15° | 1936 | 1937 | 1943 |
| 20° | 1911 | 1913 | 1920 |
| 25° | 1877 | 1881 | 1890 |
| 30° | 1841 | 1847 | 1858 |
| 35° | 1807 | 1812 | 1827 |
| 40° | 1769 | 1775 | 1791 |
| 45° | 1731 | 1738 | 1756 |
| 50° | 1689 | 1696 | 1716 |
| 55° | 1641 | 1649 | 1676 |
| 60° | 1587 | 1593 | 1629 |
| 65° | 1517 | 1522 | 1550 |
| 70° | 1424 | 1425 | 1456 |
| 75° | 1294 | 1289 | 1319 |
| 80° | 1113 | 1108 | 1127 |
| 85° | 865  | 849  | 852  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 69.0   | 3.5       |
| 10°-20°   | 196.1  | 9.9       |
| 20°-30°   | 292.0  | 14.8      |
| 30°-40°   | 345.3  | 17.5      |
| 40°-50°   | 352.5  | 17.9      |
| 50°-60°   | 314.6  | 16.0      |
| 60°-70°   | 237.0  | 12.0      |
| 70°-80°   | 132.1  | 6.7       |
| 80°-90°   | 33.1   | 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°    | 557.1  | 28.3      |
| 0°-40°    | 902.4  | 45.8      |
| 0°-60°    | 1569.6 | 79.6      |
| 0°-90°    | 1971.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1971.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 730 | 730   | 730 | 730   | 730 |      |
| 5°  | 725 | 726   | 726 | 726   | 726 | 69   |
| 15° | 695 | 696   | 695 | 696   | 697 | 196  |
| 25° | 632 | 633   | 634 | 635   | 636 | 291  |
| 35° | 550 | 550   | 552 | 554   | 556 | 344  |
| 45° | 455 | 455   | 457 | 459   | 461 | 351  |
| 55° | 350 | 349   | 351 | 354   | 357 | 313  |
| 65° | 238 | 237   | 239 | 241   | 244 | 236  |
| 75° | 124 | 123   | 124 | 125   | 127 | 132  |
| 85° | 28  | 27    | 28  | 27    | 28  | 34   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 729.7 | 729.7 | 729.7 | 729.7 | 729.7 |
| 2.5°  | 728.5 | 729.7 | 728.2 | 728.5 | 729.9 |
| 5°    | 725.0 | 726.4 | 725.6 | 725.8 | 726.5 |
| 7.5°  | 720.2 | 722.0 | 721.0 | 721.3 | 722.0 |
| 10°   | 714.5 | 715.8 | 714.6 | 715.4 | 716.7 |
| 12.5° | 706.3 | 706.9 | 706.3 | 706.6 | 708.1 |
| 15°   | 695.0 | 695.7 | 695.4 | 696.0 | 697.4 |
| 17.5° | 681.7 | 682.6 | 682.4 | 683.6 | 684.7 |
| 20°   | 667.3 | 667.5 | 668.1 | 669.3 | 670.5 |
| 22.5° | 650.4 | 650.9 | 651.5 | 653.1 | 654.3 |
| 25°   | 632.0 | 632.7 | 633.5 | 635.1 | 636.4 |
| 27.5° | 612.5 | 613.2 | 614.3 | 616.1 | 618.1 |
| 30°   | 592.5 | 592.5 | 594.5 | 596.3 | 598.1 |
| 32.5° | 572.4 | 571.7 | 573.5 | 575.8 | 580.2 |
| 35°   | 550.2 | 549.6 | 551.6 | 553.7 | 556.0 |
| 37.5° | 527.1 | 526.7 | 528.9 | 531.2 | 533.3 |
| 40°   | 503.7 | 503.1 | 505.4 | 507.6 | 509.9 |
| 42.5° | 479.7 | 479.4 | 481.5 | 483.8 | 486.2 |
| 45°   | 454.8 | 454.6 | 456.7 | 459.0 | 461.4 |
| 47.5° | 429.4 | 429.1 | 431.2 | 433.6 | 435.7 |
| 50°   | 403.4 | 403.1 | 405.2 | 407.6 | 409.9 |
| 52.5° | 376.6 | 376.6 | 378.6 | 380.7 | 384.2 |
| 55°   | 349.8 | 349.3 | 351.4 | 353.8 | 357.2 |
| 57.5° | 322.6 | 322.0 | 323.9 | 326.3 | 329.4 |
| 60°   | 294.8 | 294.2 | 296.0 | 298.4 | 302.6 |
| 62.5° | 266.7 | 265.8 | 267.6 | 269.8 | 272.4 |
| 65°   | 238.3 | 237.3 | 239.0 | 241.1 | 243.5 |
| 67.5° | 209.7 | 208.6 | 210.3 | 212.1 | 214.4 |
| 70°   | 181.0 | 179.9 | 181.1 | 183.0 | 185.1 |
| 72.5° | 152.4 | 151.4 | 152.4 | 153.2 | 155.8 |
| 75°   | 124.5 | 123.4 | 124.0 | 124.6 | 126.9 |
| 77.5° | 97.3  | 96.2  | 97.4  | 97.7  | 99.1  |
| 80°   | 71.8  | 70.7  | 71.5  | 71.6  | 72.7  |
| 82.5° | 48.5  | 47.6  | 48.6  | 47.9  | 48.8  |
| 85°   | 28.0  | 27.2  | 27.5  | 27.2  | 27.6  |
| 87.5° | 11.0  | 10.4  | 10.6  | 10.0  | 10.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)