

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: P835737

Luminaire Tested: **ORLG-24-2-INS-OPL-LD4-3HI-30-120-EDD-90**

Issue Date: 5/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P835737  
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-LD4-3HI-30-120-EDD-90  
Description: 2FT x 2FT ORL LED LUMINAIRE WITH opal acrylic lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

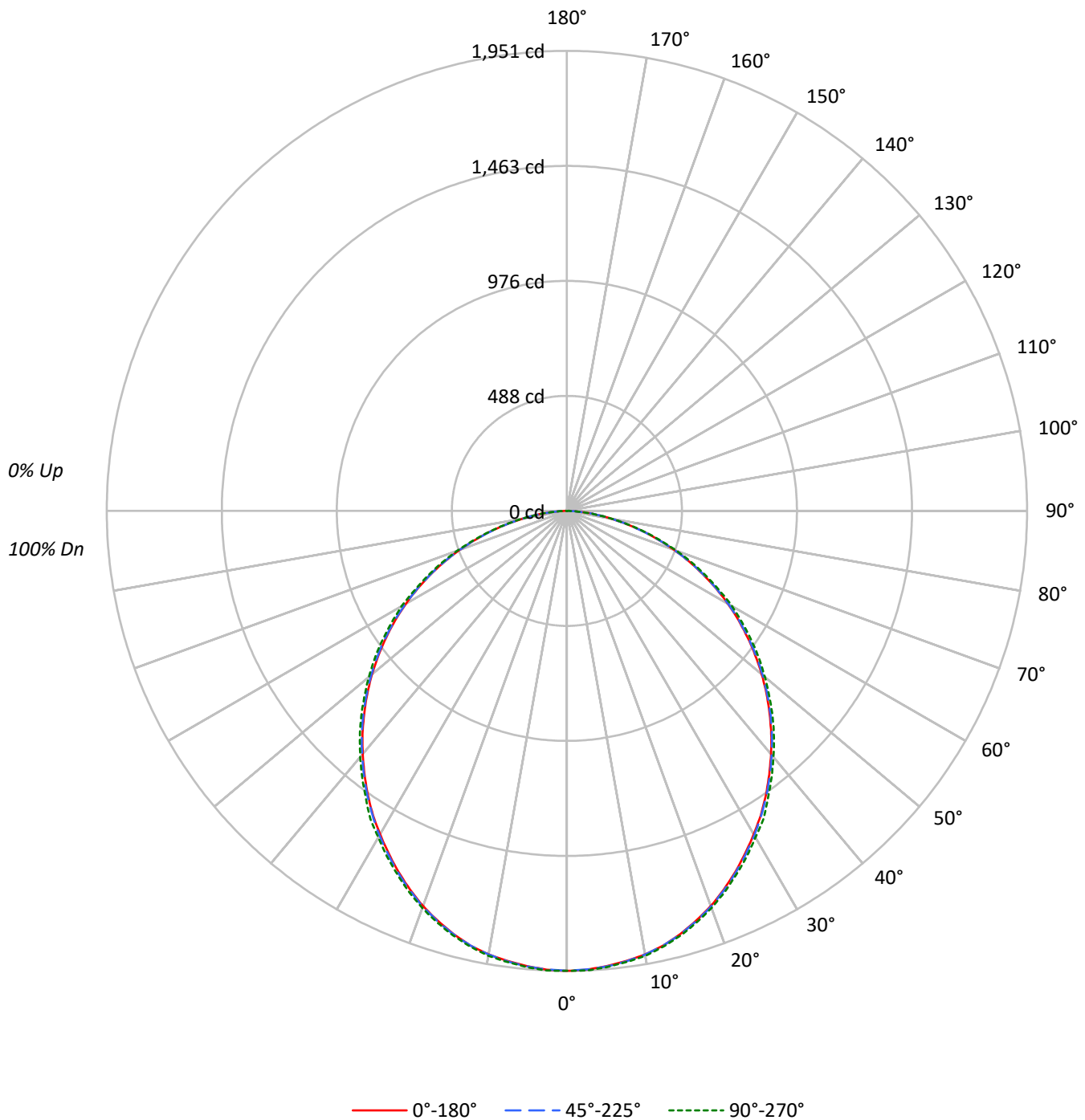
Lumens per Lamp: N/A  
Luminaire Lumens: 5270.3 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 66  
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  | 27  | 27  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5249 | 5249 | 5249 |
| 5°  | 5235 | 5239 | 5246 |
| 10° | 5218 | 5219 | 5235 |
| 15° | 5175 | 5178 | 5193 |
| 20° | 5108 | 5114 | 5132 |
| 25° | 5016 | 5027 | 5050 |
| 30° | 4921 | 4937 | 4968 |
| 35° | 4831 | 4843 | 4882 |
| 40° | 4729 | 4745 | 4788 |
| 45° | 4626 | 4646 | 4693 |
| 50° | 4514 | 4534 | 4587 |
| 55° | 4386 | 4407 | 4479 |
| 60° | 4240 | 4258 | 4353 |
| 65° | 4055 | 4067 | 4145 |
| 70° | 3806 | 3810 | 3892 |
| 75° | 3459 | 3447 | 3527 |
| 80° | 2972 | 2960 | 3009 |
| 85° | 2306 | 2269 | 2282 |

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 184.3  | 3.5       |
| 10°-20°   | 524.3  | 9.9       |
| 20°-30°   | 780.5  | 14.8      |
| 30°-40°   | 923.0  | 17.5      |
| 40°-50°   | 942.3  | 17.9      |
| 50°-60°   | 840.9  | 16.0      |
| 60°-70°   | 633.4  | 12.0      |
| 70°-80°   | 353.2  | 6.7       |
| 80°-90°   | 88.5   | 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°    | 1489.1 | 28.3      |
| 0°-40°    | 2412.1 | 45.8      |
| 0°-60°    | 4195.3 | 79.6      |
| 0°-90°    | 5270.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5270.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1950 | 1950  | 1950 | 1950  | 1950 |      |
| 5°  | 1938 | 1942  | 1940 | 1940  | 1942 | 184  |
| 15° | 1858 | 1860  | 1859 | 1860  | 1864 | 524  |
| 25° | 1689 | 1691  | 1693 | 1698  | 1701 | 778  |
| 35° | 1471 | 1469  | 1474 | 1480  | 1486 | 920  |
| 45° | 1216 | 1215  | 1221 | 1227  | 1233 | 938  |
| 55° | 935  | 934   | 939  | 946   | 955  | 836  |
| 65° | 637  | 634   | 639  | 644   | 651  | 630  |
| 75° | 333  | 330   | 332  | 333   | 339  | 353  |
| 85° | 75   | 73    | 74   | 73    | 74   | 90   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1950.5 | 1950.5 | 1950.5 | 1950.5 | 1950.5 |
| 2.5°  | 1947.2 | 1950.5 | 1946.4 | 1947.2 | 1950.9 |
| 5°    | 1937.9 | 1941.6 | 1939.6 | 1940.0 | 1942.0 |
| 7.5°  | 1925.0 | 1929.9 | 1927.0 | 1927.8 | 1929.9 |
| 10°   | 1909.7 | 1913.3 | 1910.1 | 1912.1 | 1915.7 |
| 12.5° | 1887.9 | 1889.5 | 1887.9 | 1888.7 | 1892.7 |
| 15°   | 1857.6 | 1859.6 | 1858.8 | 1860.4 | 1864.0 |
| 17.5° | 1822.0 | 1824.5 | 1824.1 | 1827.3 | 1830.1 |
| 20°   | 1783.7 | 1784.1 | 1785.7 | 1788.9 | 1792.2 |
| 22.5° | 1738.4 | 1739.7 | 1741.3 | 1745.7 | 1748.9 |
| 25°   | 1689.2 | 1691.2 | 1693.2 | 1697.7 | 1700.9 |
| 27.5° | 1637.1 | 1639.1 | 1641.9 | 1646.8 | 1652.0 |
| 30°   | 1583.8 | 1583.8 | 1589.0 | 1593.9 | 1598.7 |
| 32.5° | 1530.1 | 1528.1 | 1532.9 | 1539.0 | 1550.7 |
| 35°   | 1470.7 | 1469.1 | 1474.3 | 1480.0 | 1486.1 |
| 37.5° | 1408.9 | 1407.7 | 1413.8 | 1419.8 | 1425.5 |
| 40°   | 1346.3 | 1344.7 | 1350.8 | 1356.8 | 1362.9 |
| 42.5° | 1282.1 | 1281.3 | 1287.0 | 1293.0 | 1299.5 |
| 45°   | 1215.5 | 1215.1 | 1220.7 | 1226.8 | 1233.3 |
| 47.5° | 1147.7 | 1146.9 | 1152.5 | 1159.0 | 1164.6 |
| 50°   | 1078.2 | 1077.4 | 1083.0 | 1089.5 | 1095.6 |
| 52.5° | 1006.7 | 1006.7 | 1012.0 | 1017.6 | 1026.9 |
| 55°   | 934.8  | 933.6  | 939.3  | 945.7  | 954.6  |
| 57.5° | 862.2  | 860.5  | 865.8  | 872.3  | 880.3  |
| 60°   | 787.9  | 786.2  | 791.1  | 797.5  | 808.9  |
| 62.5° | 712.7  | 710.3  | 715.2  | 721.2  | 728.1  |
| 65°   | 636.8  | 634.4  | 638.8  | 644.5  | 651.0  |
| 67.5° | 560.5  | 557.7  | 562.1  | 567.0  | 573.0  |
| 70°   | 483.8  | 481.0  | 484.2  | 489.0  | 494.7  |
| 72.5° | 407.5  | 404.6  | 407.5  | 409.5  | 416.3  |
| 75°   | 332.7  | 329.9  | 331.5  | 333.2  | 339.2  |
| 77.5° | 260.1  | 257.2  | 260.5  | 261.3  | 264.9  |
| 80°   | 191.8  | 189.0  | 191.0  | 191.4  | 194.2  |
| 82.5° | 129.6  | 127.2  | 130.0  | 128.0  | 130.4  |
| 85°   | 74.7   | 72.7   | 73.5   | 72.7   | 73.9   |
| 87.5° | 29.5   | 27.9   | 28.3   | 26.7   | 26.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)