

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: IRiS

Report Number: P1343082

Luminaire Tested: P3A09R459835DE010 E3CA451MB

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1343082  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A09R459835DE010 E3CA451MB  
Description: 3in Adjustable LED luminaire with, R45 optic, 3500K CCT AND, 98CRI , E3CA451MB TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

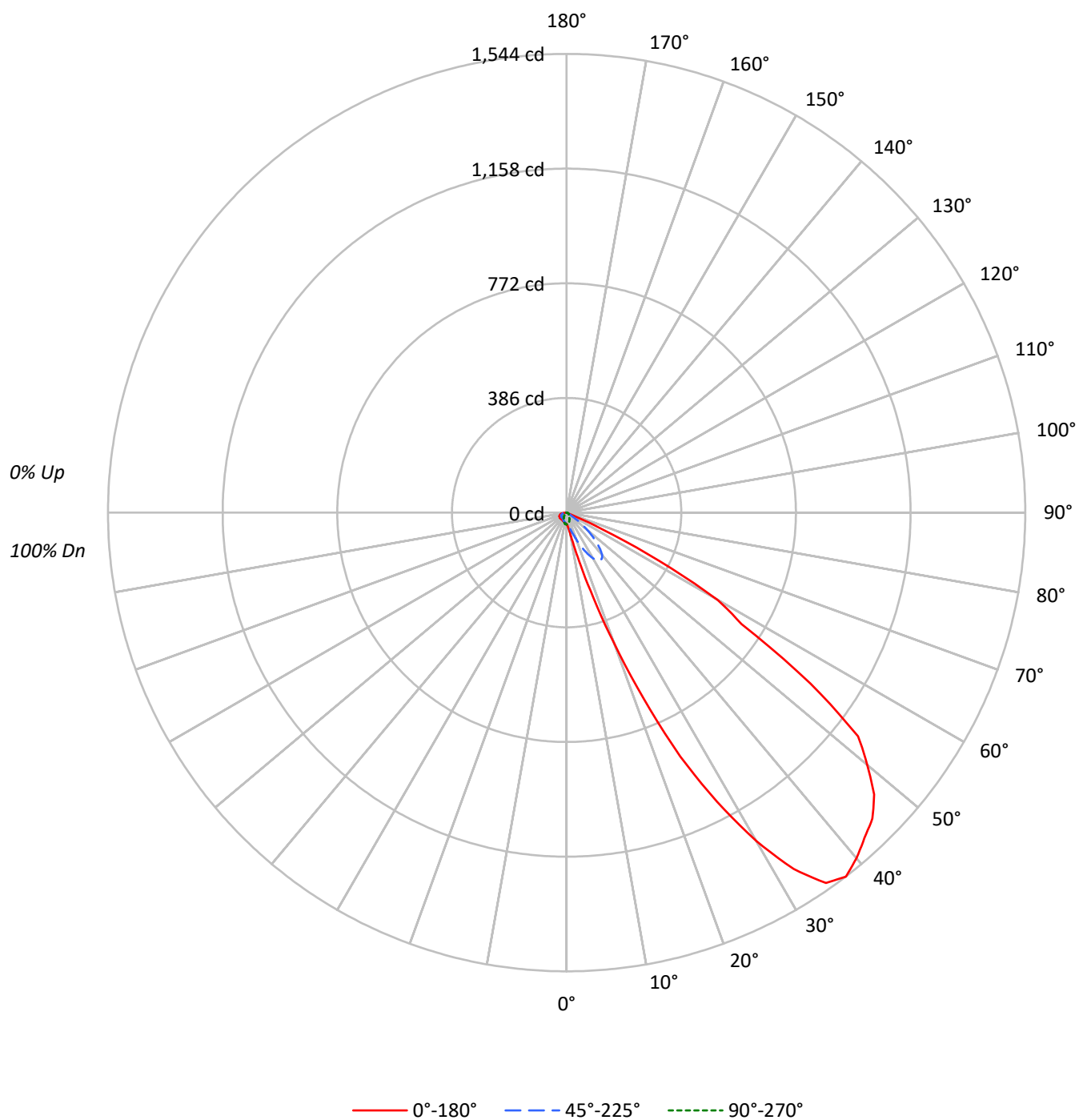
Lumens per Lamp: N/A  
Luminaire Lumens: 690.0 lumens  
Efficiency: N/A  
Efficacy: 62.7 lumens/watt  
Spacing Criteria (0/90/45): 3.81 / 0.82 / 1.83  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 11  
Input Voltage (V): NR  
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: 24 FT

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### Luminous Intensity Polar Plot



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  |
| 6   | 69  | 55  | 46  | 39  | 67  | 54  | 46  | 39  | 52  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 38  |
| 7   | 63  | 49  | 40  | 34  | 61  | 48  | 40  | 33  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 42  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  |
| 9   | 53  | 39  | 31  | 25  | 52  | 39  | 30  | 25  | 38  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 24  |
| 10  | 49  | 36  | 27  | 22  | 48  | 35  | 27  | 22  | 34  | 27  | 21  | 33  | 26  | 21  | 32  | 26  | 21  |

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

|     | 0°     | 45°   | 90°  | 135°  | 180°  |
|-----|--------|-------|------|-------|-------|
| 0°  | 8749   | 8749  | 8749 | 8749  | 8749  |
| 5°  | 10412  | 9663  | 8651 | 8034  | 8034  |
| 10° | 16633  | 11289 | 8127 | 7615  | 7615  |
| 15° | 41408  | 15142 | 7378 | 7128  | 7378  |
| 20° | 109093 | 22612 | 6394 | 6791  | 7187  |
| 25° | 219061 | 33510 | 5516 | 6339  | 7041  |
| 30° | 322936 | 44893 | 4482 | 6203  | 7216  |
| 35° | 407347 | 52655 | 3828 | 6103  | 7469  |
| 40° | 434614 | 53214 | 3435 | 6355  | 7986  |
| 45° | 451551 | 44377 | 3194 | 6884  | 8652  |
| 50° | 450851 | 30941 | 3104 | 7403  | 9722  |
| 55° | 383183 | 13725 | 3288 | 8296  | 10666 |
| 60° | 257523 | 2763  | 3245 | 9254  | 12236 |
| 65° | 68334  | 1193  | 3269 | 10066 | 13906 |
| 70° | 1859   | 1475  | 3270 | 10963 | 15708 |
| 75° | 1440   | 1440  | 3389 | 11607 | 17877 |
| 80° | 1389   | 2147  | 3662 | 12249 | 20205 |
| 85° | 1510   | 2768  | 5787 | 12831 | 20128 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 10°

Vertical Angle: 47.5°

Luminance: 463171 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 4.0    | 0.6       |
| 10°-20°   | 19.5   | 2.8       |
| 20°-30°   | 80.3   | 11.6      |
| 30°-40°   | 169.2  | 24.5      |
| 40°-50°   | 208.7  | 30.2      |
| 50°-60°   | 156.4  | 22.7      |
| 60°-70°   | 40.3   | 5.8       |
| 70°-80°   | 8.4    | 1.2       |
| 80°-90°   | 3.4    | 0.5       |
| 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°    | 103.7  | 15.0      |
| 0°-40°    | 272.9  | 39.5      |
| 0°-60°    | 638.0  | 92.5      |
| 0°-90°    | 690.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 690.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 40   | 40  | 40  | 40   | 40   |      |
| 5°  | 47   | 44  | 39  | 36   | 36   | 5    |
| 15° | 182  | 67  | 32  | 31   | 32   | 67   |
| 25° | 905  | 138 | 23  | 26   | 29   | 422  |
| 35° | 1522 | 197 | 14  | 23   | 28   | 927  |
| 45° | 1456 | 143 | 10  | 22   | 28   | 1114 |
| 55° | 1002 | 36  | 9   | 22   | 28   | 865  |
| 65° | 132  | 2   | 6   | 19   | 27   | 190  |
| 75° | 2    | 2   | 4   | 14   | 21   | 2    |
| 85° | 1    | 1   | 2   | 5    | 8    | 1    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°   | 45°   | 67.5° | 90°  | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|------|--------|
| 0°    | 39.9   | 39.9   | 39.9   | 39.9   | 39.9   | 39.9   | 39.9  | 39.9  | 39.9  | 39.9 | 39.9   |
| 2.5°  | 42.2   | 42.2   | 42.2   | 42.2   | 42.2   | 42.2   | 42.2  | 41.6  | 41.0  | 39.9 | 38.8   |
| 5°    | 47.3   | 46.8   | 46.8   | 46.8   | 46.2   | 45.6   | 45.6  | 43.9  | 41.6  | 39.3 | 37.6   |
| 7.5°  | 55.9   | 55.9   | 55.3   | 54.2   | 53.6   | 52.5   | 51.3  | 46.8  | 41.6  | 38.2 | 35.9   |
| 10°   | 74.7   | 73.5   | 71.8   | 70.7   | 67.8   | 63.9   | 61.0  | 50.7  | 41.0  | 36.5 | 34.8   |
| 12.5° | 111.7  | 114.0  | 108.3  | 102.6  | 94.6   | 87.2   | 78.1  | 57.6  | 41.0  | 34.8 | 33.1   |
| 15°   | 182.4  | 186.4  | 175.6  | 164.2  | 144.8  | 126.6  | 109.5 | 66.7  | 39.9  | 32.5 | 30.8   |
| 17.5° | 298.2  | 303.3  | 285.1  | 258.3  | 228.1  | 191.6  | 160.2 | 79.2  | 38.8  | 30.2 | 29.1   |
| 20°   | 467.5  | 466.9  | 431.6  | 398.0  | 339.8  | 286.2  | 227.5 | 96.9  | 37.1  | 27.4 | 27.4   |
| 22.5° | 675.6  | 677.9  | 634.6  | 574.1  | 491.5  | 405.4  | 311.9 | 117.4 | 34.8  | 25.1 | 25.7   |
| 25°   | 905.4  | 886.0  | 834.7  | 761.1  | 655.6  | 536.5  | 413.3 | 138.5 | 32.5  | 22.8 | 23.9   |
| 27.5° | 1096.9 | 1078.1 | 1019.4 | 932.2  | 818.7  | 677.3  | 516.5 | 159.6 | 29.6  | 20.5 | 22.2   |
| 30°   | 1275.4 | 1251.4 | 1180.7 | 1082.1 | 947.0  | 794.2  | 613.5 | 177.3 | 26.2  | 17.7 | 20.5   |
| 32.5° | 1422.5 | 1400.8 | 1320.4 | 1205.8 | 1058.7 | 894.5  | 695.6 | 191.0 | 22.8  | 16.0 | 19.4   |
| 35°   | 1521.7 | 1499.4 | 1425.3 | 1299.3 | 1139.1 | 967.5  | 762.3 | 196.7 | 20.0  | 14.3 | 18.8   |
| 37.5° | 1544.5 | 1532.5 | 1479.5 | 1361.5 | 1194.4 | 1014.3 | 805.0 | 195.0 | 16.5  | 13.1 | 17.7   |
| 40°   | 1518.3 | 1521.1 | 1496.0 | 1398.0 | 1224.1 | 1034.2 | 822.7 | 185.9 | 13.7  | 12.0 | 17.1   |
| 42.5° | 1484.6 | 1492.0 | 1490.3 | 1412.8 | 1236.6 | 1035.4 | 815.3 | 167.6 | 10.8  | 10.8 | 16.5   |
| 45°   | 1456.1 | 1463.5 | 1473.8 | 1406.5 | 1228.1 | 1020.5 | 791.9 | 143.1 | 8.0   | 10.3 | 16.5   |
| 47.5° | 1404.2 | 1412.2 | 1427.0 | 1356.3 | 1184.7 | 982.3  | 749.7 | 116.3 | 5.7   | 9.7  | 16.0   |
| 50°   | 1321.6 | 1325.6 | 1321.6 | 1242.3 | 1101.5 | 920.8  | 681.3 | 90.7  | 4.0   | 9.1  | 16.0   |
| 52.5° | 1236.6 | 1228.6 | 1195.6 | 1095.2 | 969.2  | 823.3  | 595.2 | 64.4  | 2.9   | 8.6  | 15.4   |
| 55°   | 1002.3 | 989.7  | 965.2  | 903.7  | 831.8  | 703.5  | 481.2 | 35.9  | 2.9   | 8.6  | 14.8   |
| 57.5° | 698.4  | 705.3  | 713.8  | 701.3  | 668.2  | 554.2  | 365.5 | 16.0  | 2.9   | 8.0  | 14.8   |
| 60°   | 587.2  | 581.5  | 582.1  | 574.1  | 519.4  | 404.2  | 251.4 | 6.3   | 2.9   | 7.4  | 14.3   |
| 62.5° | 350.6  | 354.6  | 362.0  | 363.7  | 309.6  | 225.8  | 131.7 | 2.9   | 2.9   | 6.8  | 13.7   |
| 65°   | 131.7  | 138.0  | 120.9  | 104.9  | 83.2   | 61.0   | 30.8  | 2.3   | 3.4   | 6.3  | 12.5   |
| 67.5° | 4.0    | 4.6    | 5.7    | 5.1    | 5.1    | 4.6    | 3.4   | 2.3   | 3.4   | 5.7  | 12.0   |
| 70°   | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.3    | 2.3   | 2.3   | 2.9   | 5.1  | 10.8   |
| 72.5° | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    | 2.3   | 2.3   | 2.9   | 4.6  | 9.7    |
| 75°   | 1.7    | 2.3    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7   | 1.7   | 2.9   | 4.0  | 8.0    |
| 77.5° | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7   | 1.7   | 2.3   | 3.4  | 6.8    |
| 80°   | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | 1.1   | 1.7   | 2.3   | 2.9  | 5.7    |
| 82.5° | 1.1    | 1.1    | 1.1    | 0.6    | 1.1    | 1.1    | 1.1   | 1.1   | 2.3   | 2.3  | 4.6    |
| 85°   | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 0.6   | 1.1   | 1.7   | 2.3  | 2.9    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.6    | 0.6    | 0.6   | 1.1   | 1.7   | 1.7  | 1.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0  | 0.0    |

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**CANDELA DISTRIBUTION (continued):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 0°    | 39.9 | 39.9   | 39.9 |
| 2.5°  | 37.6 | 37.6   | 37.6 |
| 5°    | 36.5 | 36.5   | 36.5 |
| 7.5°  | 35.3 | 35.3   | 35.3 |
| 10°   | 34.2 | 34.2   | 34.2 |
| 12.5° | 33.1 | 33.1   | 33.6 |
| 15°   | 31.4 | 32.5   | 32.5 |
| 17.5° | 30.2 | 31.4   | 31.9 |
| 20°   | 29.1 | 30.2   | 30.8 |
| 22.5° | 27.4 | 29.1   | 30.2 |
| 25°   | 26.2 | 28.5   | 29.1 |
| 27.5° | 25.1 | 27.9   | 29.1 |
| 30°   | 24.5 | 27.4   | 28.5 |
| 32.5° | 23.4 | 26.8   | 27.9 |
| 35°   | 22.8 | 26.8   | 27.9 |
| 37.5° | 22.8 | 26.2   | 27.9 |
| 40°   | 22.2 | 26.2   | 27.9 |
| 42.5° | 22.2 | 26.2   | 27.9 |
| 45°   | 22.2 | 26.2   | 27.9 |
| 47.5° | 21.7 | 26.2   | 28.5 |
| 50°   | 21.7 | 26.8   | 28.5 |
| 52.5° | 21.7 | 26.8   | 28.5 |
| 55°   | 21.7 | 26.8   | 27.9 |
| 57.5° | 21.1 | 26.2   | 27.9 |
| 60°   | 21.1 | 26.2   | 27.9 |
| 62.5° | 20.0 | 25.7   | 27.4 |
| 65°   | 19.4 | 25.1   | 26.8 |
| 67.5° | 18.2 | 24.5   | 25.7 |
| 70°   | 17.1 | 22.8   | 24.5 |
| 72.5° | 15.4 | 21.7   | 23.4 |
| 75°   | 13.7 | 20.0   | 21.1 |
| 77.5° | 12.0 | 17.7   | 18.8 |
| 80°   | 9.7  | 14.8   | 16.0 |
| 82.5° | 7.4  | 11.4   | 12.0 |
| 85°   | 5.1  | 7.4    | 8.0  |
| 87.5° | 2.3  | 3.4    | 4.0  |
| 90°   | 0.0  | 0.0    | 0.0  |

(END OF REPORT)