

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: P1335972

Luminaire Tested: P3A02R459027DE010 E3A451WMH

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335972  
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: P3A02R459027DE010 E3A451WMH  
Description: 3in Adjustable LED luminaire with, R45 optic, 2700K CCT AND, 90CRI , E3A451WMH TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

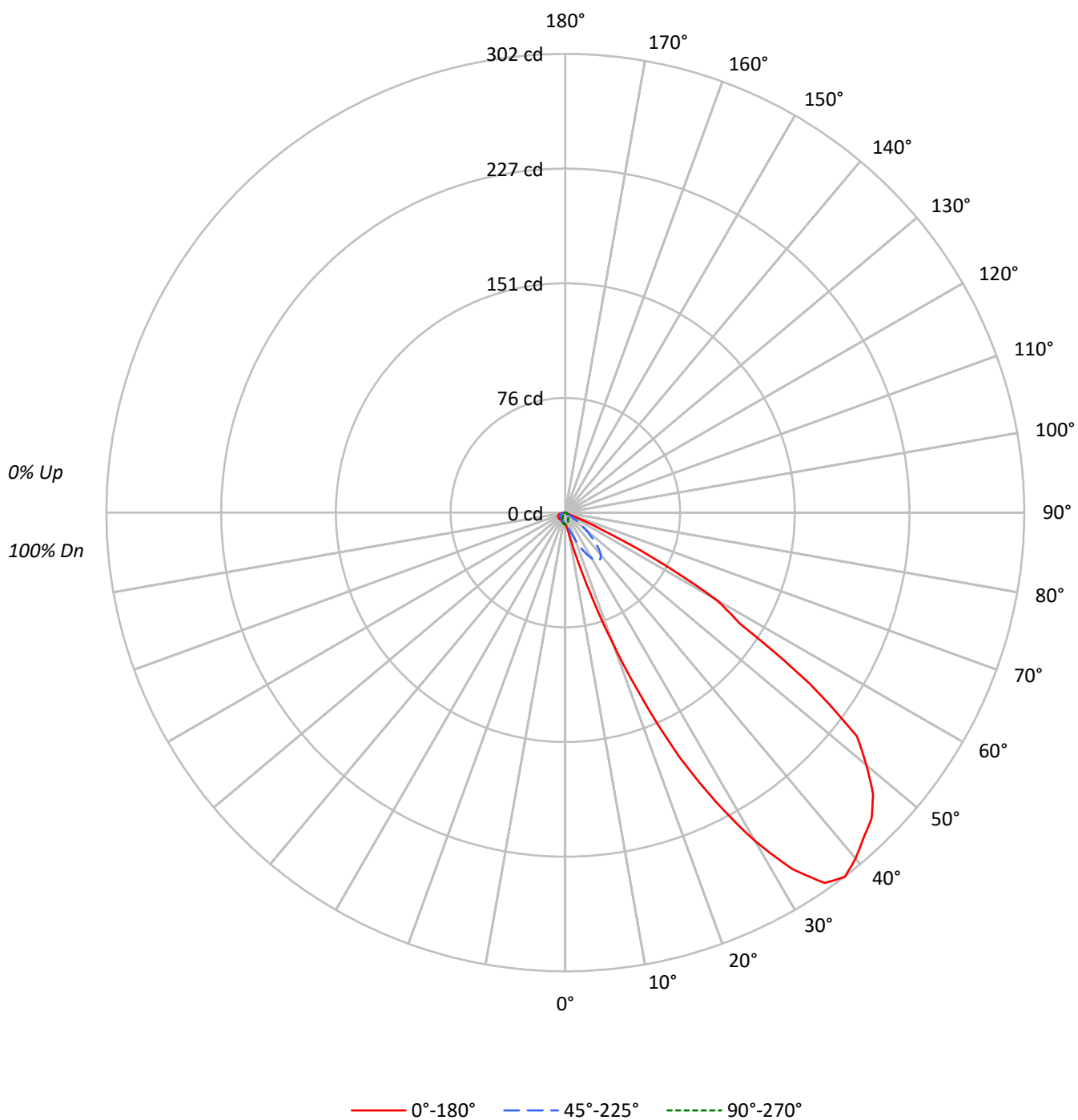
Lumens per Lamp: N/A  
Luminaire Lumens: 135.0 lumens  
Efficiency: N/A  
Efficacy: 37.5 lumens/watt  
Spacing Criteria (0/90/45): 3.81 / 0.82 / 1.83  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 3.6  
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

TEST NUMBER: P1335972

CATALOG NUMBER: P3A02R459027DE010 E3A451WMH

### Luminous Intensity Polar Plot



TEST NUMBER: P1335972

CATALOG NUMBER: P3A02R459027DE010 E3A451WMH

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |     |     |     |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 | 100 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  |  | 96  | 93  | 91  |  | 92  | 90  | 88  | 86  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  |  | 84  | 80  | 77  |  | 81  | 78  | 75  | 73  |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  |  | 74  | 69  | 64  |  | 71  | 67  | 63  | 61  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  | 58  | 53  | 51  |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  |  | 57  | 51  | 45  |  | 55  | 50  | 45  | 43  |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 52  | 45  | 39  |  | 51  | 44  | 39  |  | 49  | 43  | 38  | 36  |
| 7   | 63  | 49  | 40  | 34  | 61  | 48  | 40  | 33  | 47  | 39  | 33  |  | 45  | 38  | 33  |  | 44  | 37  | 33  | 31  |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 42  | 34  | 29  |  | 40  | 33  | 28  |  | 39  | 33  | 28  | 26  |
| 9   | 53  | 39  | 31  | 25  | 52  | 39  | 30  | 25  | 38  | 30  | 25  |  | 36  | 29  | 25  |  | 35  | 29  | 24  | 22  |
| 10  | 49  | 36  | 27  | 22  | 48  | 35  | 27  | 22  | 34  | 27  | 21  |  | 33  | 26  | 21  |  | 32  | 26  | 21  | 19  |

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

|     | 0°    | 45°   | 90°  | 135° | 180° |
|-----|-------|-------|------|------|------|
| 0°  | 1710  | 1710  | 1710 | 1710 | 1710 |
| 5°  | 2047  | 1893  | 1695 | 1563 | 1563 |
| 10° | 3251  | 2204  | 1581 | 1492 | 1492 |
| 15° | 8104  | 2974  | 1453 | 1385 | 1453 |
| 20° | 21352 | 4434  | 1260 | 1330 | 1400 |
| 25° | 42849 | 6557  | 1089 | 1234 | 1379 |
| 30° | 63174 | 8786  | 886  | 1215 | 1418 |
| 35° | 79692 | 10306 | 750  | 1205 | 1472 |
| 40° | 85045 | 10420 | 658  | 1260 | 1574 |
| 45° | 88350 | 8683  | 620  | 1364 | 1706 |
| 50° | 88219 | 6038  | 614  | 1433 | 1910 |
| 55° | 74970 | 2676  | 650  | 1606 | 2103 |
| 60° | 50391 | 526   | 658  | 1798 | 2412 |
| 65° | 13387 | 208   | 623  | 1972 | 2698 |
| 70° | 385   | 256   | 641  | 2116 | 3077 |
| 75° | 254   | 254   | 678  | 2288 | 3474 |
| 80° | 253   | 379   | 758  | 2399 | 3915 |
| 85° | 252   | 503   | 1006 | 2516 | 4026 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 10°

Vertical Angle: 47.5°

Luminance: 90622 cd/sqm

TEST NUMBER: P1335972

CATALOG NUMBER: P3A02R459027DE010 E3A451WMH

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.8    | 0.6       |
| 10°-20°   | 3.8    | 2.8       |
| 20°-30°   | 15.7   | 11.6      |
| 30°-40°   | 33.1   | 24.5      |
| 40°-50°   | 40.8   | 30.2      |
| 50°-60°   | 30.6   | 22.7      |
| 60°-70°   | 7.9    | 5.8       |
| 70°-80°   | 1.6    | 1.2       |
| 80°-90°   | 0.7    | 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°    | 20.3   | 15.0      |
| 0°-40°    | 53.4   | 39.6      |
| 0°-60°    | 124.8  | 92.5      |
| 0°-90°    | 135.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 135.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 8   | 8   | 8   | 8    | 8    |      |
| 5°  | 9   | 9   | 8   | 7    | 7    | 1    |
| 15° | 36  | 13  | 6   | 6    | 6    | 13   |
| 25° | 177 | 27  | 4   | 5    | 6    | 83   |
| 35° | 298 | 38  | 3   | 4    | 6    | 181  |
| 45° | 285 | 28  | 2   | 4    | 6    | 218  |
| 55° | 196 | 7   | 2   | 4    | 6    | 169  |
| 65° | 26  | 0   | 1   | 4    | 5    | 37   |
| 75° | 0   | 0   | 1   | 3    | 4    | 0    |
| 85° | 0   | 0   | 0   | 1    | 2    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1335972

CATALOG NUMBER: P3A02R459027DE010 E3A451WMH

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 45°  | 67.5° | 90° | 112.5° |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|--------|
| 0°    | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   | 7.8  | 7.8   | 7.8 | 7.8    |
| 2.5°  | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   | 8.1  | 8.0   | 7.8 | 7.6    |
| 5°    | 9.3   | 9.1   | 9.1   | 9.1   | 9.0   | 8.9   | 8.9   | 8.6  | 8.1   | 7.7 | 7.4    |
| 7.5°  | 10.9  | 10.9  | 10.8  | 10.6  | 10.5  | 10.3  | 10.0  | 9.1  | 8.1   | 7.5 | 7.0    |
| 10°   | 14.6  | 14.4  | 14.1  | 13.8  | 13.3  | 12.5  | 11.9  | 9.9  | 8.0   | 7.1 | 6.8    |
| 12.5° | 21.9  | 22.3  | 21.2  | 20.1  | 18.5  | 17.1  | 15.3  | 11.3 | 8.0   | 6.8 | 6.5    |
| 15°   | 35.7  | 36.5  | 34.4  | 32.1  | 28.3  | 24.8  | 21.4  | 13.1 | 7.8   | 6.4 | 6.0    |
| 17.5° | 58.3  | 59.3  | 55.8  | 50.5  | 44.6  | 37.5  | 31.3  | 15.5 | 7.6   | 5.9 | 5.7    |
| 20°   | 91.5  | 91.4  | 84.4  | 77.9  | 66.5  | 56.0  | 44.5  | 19.0 | 7.3   | 5.4 | 5.4    |
| 22.5° | 132.2 | 132.6 | 124.2 | 112.3 | 96.2  | 79.3  | 61.0  | 23.0 | 6.8   | 4.9 | 5.0    |
| 25°   | 177.1 | 173.3 | 163.3 | 148.9 | 128.3 | 105.0 | 80.9  | 27.1 | 6.4   | 4.5 | 4.7    |
| 27.5° | 214.6 | 210.9 | 199.4 | 182.4 | 160.2 | 132.5 | 101.1 | 31.2 | 5.8   | 4.0 | 4.4    |
| 30°   | 249.5 | 244.8 | 231.0 | 211.7 | 185.3 | 155.4 | 120.0 | 34.7 | 5.1   | 3.5 | 4.0    |
| 32.5° | 278.3 | 274.1 | 258.3 | 235.9 | 207.1 | 175.0 | 136.1 | 37.4 | 4.5   | 3.1 | 3.8    |
| 35°   | 297.7 | 293.4 | 278.9 | 254.2 | 222.9 | 189.3 | 149.1 | 38.5 | 3.9   | 2.8 | 3.7    |
| 37.5° | 302.2 | 299.8 | 289.5 | 266.4 | 233.7 | 198.4 | 157.5 | 38.1 | 3.2   | 2.6 | 3.5    |
| 40°   | 297.1 | 297.6 | 292.7 | 273.5 | 239.5 | 202.3 | 161.0 | 36.4 | 2.7   | 2.3 | 3.3    |
| 42.5° | 290.5 | 291.9 | 291.6 | 276.4 | 241.9 | 202.6 | 159.5 | 32.8 | 2.1   | 2.1 | 3.2    |
| 45°   | 284.9 | 286.3 | 288.3 | 275.2 | 240.3 | 199.7 | 154.9 | 28.0 | 1.6   | 2.0 | 3.2    |
| 47.5° | 274.7 | 276.3 | 279.2 | 265.4 | 231.8 | 192.2 | 146.7 | 22.8 | 1.1   | 1.9 | 3.1    |
| 50°   | 258.6 | 259.3 | 258.6 | 243.1 | 215.5 | 180.1 | 133.3 | 17.7 | 0.8   | 1.8 | 3.1    |
| 52.5° | 241.9 | 240.4 | 233.9 | 214.3 | 189.6 | 161.1 | 116.5 | 12.6 | 0.6   | 1.7 | 3.0    |
| 55°   | 196.1 | 193.6 | 188.8 | 176.8 | 162.7 | 137.6 | 94.1  | 7.0  | 0.6   | 1.7 | 2.9    |
| 57.5° | 136.6 | 138.0 | 139.7 | 137.2 | 130.7 | 108.4 | 71.5  | 3.1  | 0.6   | 1.6 | 2.9    |
| 60°   | 114.9 | 113.8 | 113.9 | 112.3 | 101.6 | 79.1  | 49.2  | 1.2  | 0.6   | 1.5 | 2.8    |
| 62.5° | 68.6  | 69.4  | 70.8  | 71.2  | 60.6  | 44.2  | 25.8  | 0.6  | 0.6   | 1.3 | 2.7    |
| 65°   | 25.8  | 27.0  | 23.6  | 20.5  | 16.3  | 11.9  | 6.0   | 0.4  | 0.7   | 1.2 | 2.5    |
| 67.5° | 0.8   | 0.9   | 1.1   | 1.0   | 1.0   | 0.9   | 0.7   | 0.4  | 0.7   | 1.1 | 2.3    |
| 70°   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.4   | 0.4   | 0.4  | 0.6   | 1.0 | 2.1    |
| 72.5° | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4   | 0.4  | 0.6   | 0.9 | 1.9    |
| 75°   | 0.3   | 0.4   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3  | 0.6   | 0.8 | 1.6    |
| 77.5° | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3  | 0.4   | 0.7 | 1.3    |
| 80°   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.3  | 0.4   | 0.6 | 1.1    |
| 82.5° | 0.2   | 0.2   | 0.2   | 0.1   | 0.2   | 0.2   | 0.2   | 0.2  | 0.4   | 0.4 | 0.9    |
| 85°   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.2  | 0.3   | 0.4 | 0.6    |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.1   | 0.1   | 0.2  | 0.3   | 0.3 | 0.3    |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0 | 0.0    |

TEST NUMBER: P1335972

CATALOG NUMBER: P3A02R459027DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 0°    | 7.8  | 7.8    | 7.8  |
| 2.5°  | 7.4  | 7.4    | 7.4  |
| 5°    | 7.1  | 7.1    | 7.1  |
| 7.5°  | 6.9  | 6.9    | 6.9  |
| 10°   | 6.7  | 6.7    | 6.7  |
| 12.5° | 6.5  | 6.5    | 6.6  |
| 15°   | 6.1  | 6.4    | 6.4  |
| 17.5° | 5.9  | 6.1    | 6.2  |
| 20°   | 5.7  | 5.9    | 6.0  |
| 22.5° | 5.4  | 5.7    | 5.9  |
| 25°   | 5.1  | 5.6    | 5.7  |
| 27.5° | 4.9  | 5.5    | 5.7  |
| 30°   | 4.8  | 5.4    | 5.6  |
| 32.5° | 4.6  | 5.2    | 5.5  |
| 35°   | 4.5  | 5.2    | 5.5  |
| 37.5° | 4.5  | 5.1    | 5.5  |
| 40°   | 4.4  | 5.1    | 5.5  |
| 42.5° | 4.4  | 5.1    | 5.5  |
| 45°   | 4.4  | 5.1    | 5.5  |
| 47.5° | 4.2  | 5.1    | 5.6  |
| 50°   | 4.2  | 5.2    | 5.6  |
| 52.5° | 4.2  | 5.2    | 5.6  |
| 55°   | 4.2  | 5.2    | 5.5  |
| 57.5° | 4.1  | 5.1    | 5.5  |
| 60°   | 4.1  | 5.1    | 5.5  |
| 62.5° | 3.9  | 5.0    | 5.4  |
| 65°   | 3.8  | 4.9    | 5.2  |
| 67.5° | 3.6  | 4.8    | 5.0  |
| 70°   | 3.3  | 4.5    | 4.8  |
| 72.5° | 3.0  | 4.2    | 4.6  |
| 75°   | 2.7  | 3.9    | 4.1  |
| 77.5° | 2.3  | 3.5    | 3.7  |
| 80°   | 1.9  | 2.9    | 3.1  |
| 82.5° | 1.5  | 2.2    | 2.3  |
| 85°   | 1.0  | 1.5    | 1.6  |
| 87.5° | 0.4  | 0.7    | 0.8  |
| 90°   | 0.0  | 0.0    | 0.0  |

(END OF REPORT)