

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: P1345094

Luminaire Tested: P3A13R309835DE010 E3CA451MW

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1345094  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A13R309835DE010 E3CA451MW  
Description: 3in Adjustable LED luminaire with, R30 optic, 3500K CCT AND, 98CRI , E3CA451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

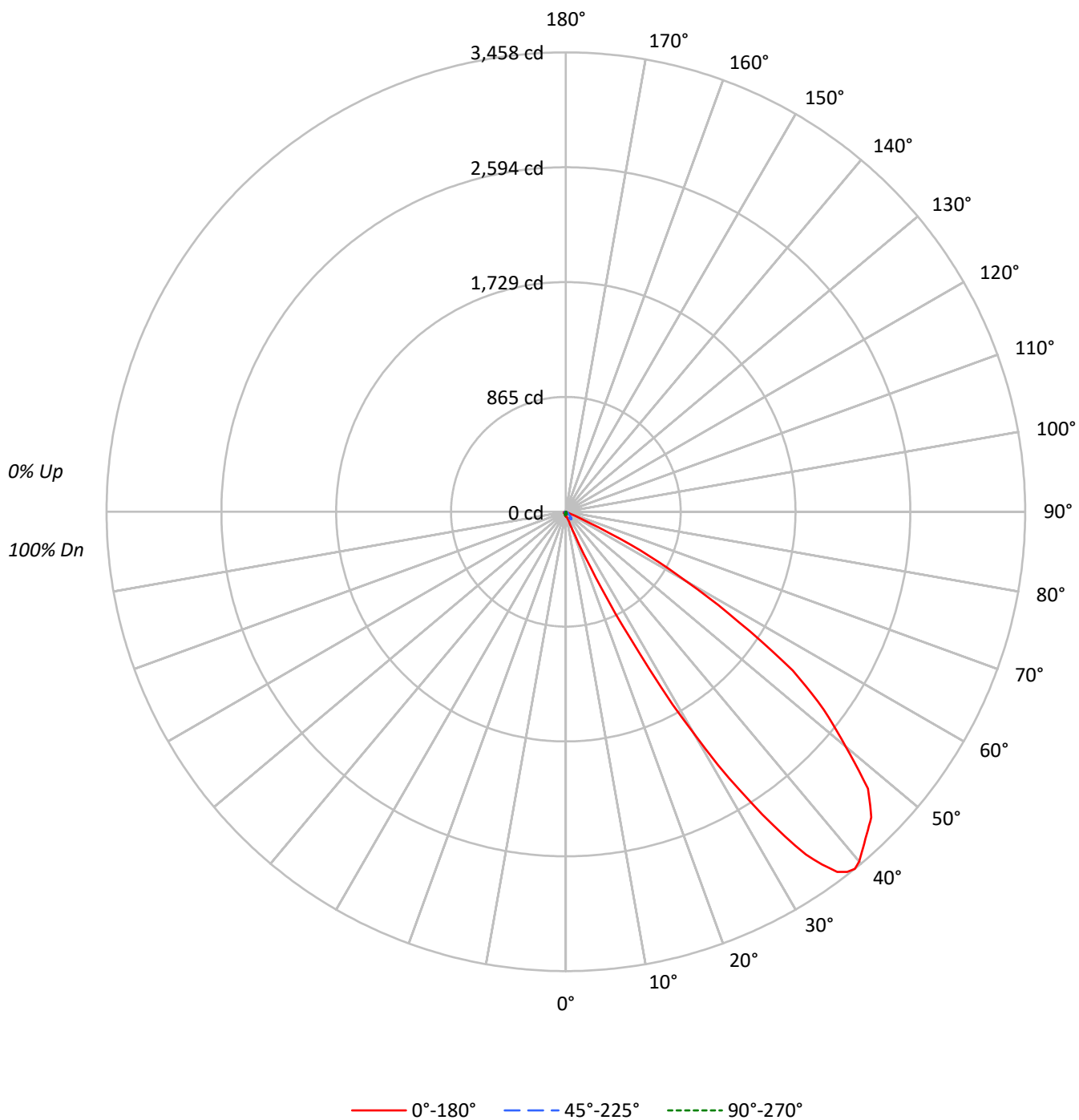
Lumens per Lamp: N/A  
Luminaire Lumens: 899.0 lumens  
Efficiency: N/A  
Efficacy: 62.0 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.5  
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  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 |
| 1   | 110 | 106 | 102 | 99  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 87  | 87  | 87  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 73  | 73  | 73  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 61  | 61  | 61  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 50  | 50  | 50  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  | 56  | 50  | 44  | 54  | 49  | 44  | 42  | 42  | 42  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 42  | 37  | 35  | 35  | 35  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 36  | 31  | 29  | 29  | 29  |
| 8   | 56  | 42  | 33  | 27  | 55  | 41  | 33  | 27  | 40  | 32  | 26  | 39  | 32  | 26  | 37  | 31  | 26  | 24  | 24  | 24  |
| 9   | 52  | 37  | 29  | 23  | 50  | 37  | 28  | 23  | 36  | 28  | 22  | 34  | 27  | 22  | 33  | 27  | 22  | 20  | 20  | 20  |
| 10  | 48  | 33  | 25  | 19  | 46  | 33  | 25  | 19  | 32  | 24  | 19  | 31  | 24  | 19  | 30  | 24  | 19  | 17  | 17  | 17  |

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

|     | 0°      | 45°   | 90°  | 135° | 180°  |
|-----|---------|-------|------|------|-------|
| 0°  | 7631    | 7631  | 7631 | 7631 | 7631  |
| 5°  | 8166    | 7990  | 7506 | 6824 | 6670  |
| 10° | 8929    | 7927  | 6569 | 5901 | 5722  |
| 15° | 13076   | 7900  | 5494 | 4994 | 5153  |
| 20° | 32880   | 8657  | 4247 | 4247 | 4760  |
| 25° | 152622  | 10815 | 3291 | 3847 | 4403  |
| 30° | 485872  | 14964 | 2481 | 3646 | 4406  |
| 35° | 843097  | 18257 | 2034 | 3453 | 4470  |
| 40° | 983271  | 18206 | 1517 | 3464 | 4551  |
| 45° | 1008415 | 12932 | 1644 | 3752 | 4931  |
| 50° | 937760  | 7232  | 1296 | 3889 | 5697  |
| 55° | 797028  | 3747  | 1453 | 4358 | 6384  |
| 60° | 460314  | 1009  | 1667 | 4649 | 6973  |
| 65° | 93914   | 0     | 1972 | 5500 | 7835  |
| 70° | 1475    | 513   | 2436 | 6283 | 9232  |
| 75° | 1271    | 678   | 2542 | 6439 | 10929 |
| 80° | 1010    | 1010  | 3788 | 7703 | 12375 |
| 85° | 0       | 2013  | 7548 | 7548 | 15347 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1008415 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 3.1    | 0.4       |
| 10°-20°   | 9.1    | 1.0       |
| 20°-30°   | 51.8   | 5.8       |
| 30°-40°   | 242.1  | 26.9      |
| 40°-50°   | 342.4  | 38.1      |
| 50°-60°   | 210.7  | 23.4      |
| 60°-70°   | 32.1   | 3.6       |
| 70°-80°   | 5.1    | 0.6       |
| 80°-90°   | 2.5    | 0.3       |
| 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°    | 64.1   | 7.1       |
| 0°-40°    | 306.2  | 34.1      |
| 0°-60°    | 859.3  | 95.6      |
| 0°-90°    | 899.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 899.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 35   | 35  | 35  | 35   | 35   |      |
| 5°  | 37   | 36  | 34  | 31   | 30   | 4    |
| 15° | 58   | 35  | 24  | 22   | 23   | 21   |
| 25° | 631  | 45  | 14  | 16   | 18   | 388  |
| 35° | 3150 | 68  | 8   | 13   | 17   | 1890 |
| 45° | 3252 | 42  | 5   | 12   | 16   | 2465 |
| 55° | 2085 | 10  | 4   | 11   | 17   | 1774 |
| 65° | 181  | 0   | 4   | 11   | 15   | 328  |
| 75° | 2    | 1   | 3   | 8    | 13   | 2    |
| 85° | 0    | 1   | 3   | 3    | 6    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 45°  | 67.5° | 90°  | 112.5° | 135° |
|-------|--------|--------|--------|--------|--------|--------|------|-------|------|--------|------|
| 0°    | 34.8   | 34.8   | 34.8   | 34.8   | 34.8   | 34.8   | 34.8 | 34.8  | 34.8 | 34.8   | 34.8 |
| 2.5°  | 35.6   | 35.6   | 36.3   | 36.3   | 35.6   | 36.3   | 36.3 | 36.3  | 34.8 | 34.1   | 32.6 |
| 5°    | 37.1   | 37.1   | 37.1   | 37.9   | 37.1   | 37.1   | 36.3 | 35.6  | 34.1 | 31.8   | 31.0 |
| 7.5°  | 38.6   | 38.6   | 37.9   | 38.6   | 37.9   | 37.9   | 36.3 | 34.8  | 32.6 | 30.3   | 28.8 |
| 10°   | 40.1   | 40.1   | 39.4   | 39.4   | 38.6   | 38.6   | 35.6 | 33.3  | 29.5 | 27.3   | 26.5 |
| 12.5° | 44.7   | 44.7   | 43.9   | 43.2   | 41.7   | 40.9   | 34.8 | 31.0  | 26.5 | 24.2   | 23.5 |
| 15°   | 57.6   | 56.8   | 55.3   | 53.0   | 49.2   | 48.5   | 34.8 | 28.8  | 24.2 | 22.0   | 22.0 |
| 17.5° | 78.8   | 78.0   | 75.7   | 69.7   | 62.9   | 60.6   | 34.8 | 25.7  | 21.2 | 19.7   | 19.7 |
| 20°   | 140.9  | 134.8  | 123.4  | 108.3  | 92.4   | 84.1   | 37.1 | 22.7  | 18.2 | 17.4   | 18.2 |
| 21°   | 184.0  | 178.0  | 163.6  | 138.6  | 110.6  | 101.5  | 38.6 | 22.0  | 17.4 | 16.7   | 18.2 |
| 22°   | 250.7  | 243.8  | 214.3  | 180.2  | 140.1  | 124.2  | 39.4 | 20.4  | 15.9 | 15.9   | 17.4 |
| 23°   | 349.9  | 338.5  | 288.5  | 234.0  | 174.9  | 152.2  | 40.9 | 19.7  | 15.1 | 15.9   | 16.7 |
| 24°   | 458.2  | 448.3  | 391.5  | 309.7  | 223.4  | 190.8  | 42.4 | 18.9  | 14.4 | 14.4   | 15.9 |
| 25°   | 630.8  | 619.5  | 518.7  | 390.8  | 283.2  | 229.5  | 44.7 | 17.4  | 13.6 | 13.6   | 15.9 |
| 26°   | 854.2  | 802.0  | 667.9  | 503.6  | 349.1  | 287.8  | 47.0 | 16.7  | 12.9 | 13.6   | 15.1 |
| 27°   | 1066.2 | 1023.1 | 872.4  | 646.0  | 431.6  | 353.6  | 50.0 | 15.9  | 12.1 | 12.9   | 15.1 |
| 28°   | 1344.9 | 1284.3 | 1094.3 | 817.1  | 543.7  | 427.9  | 53.0 | 15.1  | 11.4 | 12.9   | 14.4 |
| 29°   | 1656.9 | 1572.1 | 1342.7 | 1009.5 | 670.2  | 511.2  | 56.0 | 14.4  | 10.6 | 12.1   | 14.4 |
| 30°   | 1918.9 | 1839.4 | 1610.0 | 1237.4 | 815.6  | 621.0  | 59.1 | 13.6  | 9.8  | 12.1   | 14.4 |
| 31°   | 2226.4 | 2106.0 | 1828.1 | 1430.5 | 940.5  | 730.8  | 62.1 | 12.1  | 9.1  | 11.4   | 13.6 |
| 32°   | 2475.5 | 2391.5 | 2096.2 | 1648.6 | 1104.9 | 851.9  | 64.4 | 11.4  | 9.1  | 11.4   | 13.6 |
| 33°   | 2716.4 | 2603.5 | 2318.0 | 1857.6 | 1253.3 | 976.1  | 66.6 | 10.6  | 8.3  | 10.6   | 13.6 |
| 34°   | 2946.6 | 2842.8 | 2527.8 | 2026.5 | 1393.4 | 1094.3 | 68.2 | 9.1   | 8.3  | 10.6   | 12.9 |
| 35°   | 3149.5 | 3029.1 | 2712.6 | 2191.6 | 1537.3 | 1201.8 | 68.2 | 8.3   | 7.6  | 9.8    | 12.9 |
| 36°   | 3281.3 | 3195.0 | 2873.1 | 2354.4 | 1667.5 | 1304.0 | 68.2 | 7.6   | 6.8  | 9.8    | 12.1 |
| 37°   | 3394.1 | 3293.4 | 3001.9 | 2479.3 | 1763.7 | 1385.8 | 68.2 | 6.8   | 6.8  | 9.8    | 12.1 |
| 38°   | 3440.3 | 3354.0 | 3090.5 | 2589.9 | 1853.8 | 1469.1 | 67.4 | 6.1   | 6.1  | 9.1    | 12.1 |
| 39°   | 3458.5 | 3381.3 | 3157.1 | 2669.4 | 1920.5 | 1525.2 | 65.9 | 5.3   | 6.1  | 9.1    | 12.1 |
| 40°   | 3435.0 | 3376.7 | 3191.2 | 2720.9 | 1973.5 | 1566.1 | 63.6 | 4.5   | 5.3  | 9.1    | 12.1 |
| 42.5° | 3338.1 | 3299.5 | 3183.6 | 2772.4 | 2018.9 | 1596.3 | 55.3 | 3.0   | 5.3  | 8.3    | 12.1 |
| 45°   | 3251.8 | 3209.4 | 3107.1 | 2718.6 | 1959.8 | 1536.5 | 41.7 | 1.5   | 5.3  | 8.3    | 12.1 |
| 47.5° | 3084.4 | 3057.9 | 2977.6 | 2581.6 | 1830.3 | 1401.7 | 29.5 | 0.8   | 4.5  | 7.6    | 11.4 |
| 50°   | 2748.9 | 2723.9 | 2617.9 | 2241.5 | 1574.4 | 1185.1 | 21.2 | 0.8   | 3.8  | 7.6    | 11.4 |
| 52.5° | 2448.3 | 2421.8 | 2269.6 | 1863.7 | 1209.4 | 868.6  | 13.6 | 0.8   | 3.8  | 7.6    | 11.4 |
| 55°   | 2084.8 | 2038.6 | 1838.7 | 1414.6 | 857.2  | 582.3  | 9.8  | 0.8   | 3.8  | 6.8    | 11.4 |
| 57.5° | 1543.3 | 1475.9 | 1297.2 | 964.8  | 493.7  | 315.8  | 5.3  | 0.8   | 3.8  | 6.8    | 11.4 |
| 60°   | 1049.6 | 1009.5 | 811.8  | 508.9  | 210.5  | 133.3  | 2.3  | 0.8   | 3.8  | 6.8    | 10.6 |
| 62.5° | 636.1  | 585.4  | 408.2  | 216.6  | 90.9   | 60.6   | 0.0  | 1.5   | 3.8  | 6.8    | 10.6 |
| 65°   | 181.0  | 160.5  | 106.8  | 49.2   | 25.7   | 19.7   | 0.0  | 1.5   | 3.8  | 6.8    | 10.6 |
| 67.5° | 6.1    | 6.1    | 6.1    | 5.3    | 3.8    | 3.8    | 0.8  | 1.5   | 3.8  | 6.8    | 9.8  |
| 70°   | 2.3    | 2.3    | 2.3    | 1.5    | 1.5    | 0.8    | 0.8  | 1.5   | 3.8  | 6.1    | 9.8  |
| 72.5° | 1.5    | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8  | 1.5   | 3.0  | 5.3    | 9.1  |
| 75°   | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.0  | 5.3    | 7.6  |
| 77.5° | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.0  | 4.5    | 7.6  |
| 80°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.0  | 4.5    | 6.1  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 3.0 | 3.0    | 4.5  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 3.0 | 2.3    | 3.0  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 2.3 | 2.3    | 1.5  |
| 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):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 34.8   | 34.8 |
| 2.5°  | 32.6   | 32.6 |
| 5°    | 30.3   | 30.3 |
| 7.5°  | 28.0   | 28.0 |
| 10°   | 25.7   | 25.7 |
| 12.5° | 24.2   | 24.2 |
| 15°   | 22.0   | 22.7 |
| 17.5° | 20.4   | 21.2 |
| 20°   | 19.7   | 20.4 |
| 21°   | 19.7   | 20.4 |
| 22°   | 18.9   | 19.7 |
| 23°   | 18.9   | 19.7 |
| 24°   | 18.2   | 18.9 |
| 25°   | 17.4   | 18.2 |
| 26°   | 17.4   | 18.2 |
| 27°   | 17.4   | 18.2 |
| 28°   | 16.7   | 18.2 |
| 29°   | 16.7   | 17.4 |
| 30°   | 16.7   | 17.4 |
| 31°   | 15.9   | 17.4 |
| 32°   | 15.9   | 17.4 |
| 33°   | 15.9   | 16.7 |
| 34°   | 15.1   | 16.7 |
| 35°   | 15.1   | 16.7 |
| 36°   | 15.1   | 16.7 |
| 37°   | 15.1   | 15.9 |
| 38°   | 15.1   | 16.7 |
| 39°   | 15.1   | 15.9 |
| 40°   | 15.1   | 15.9 |
| 42.5° | 15.1   | 15.9 |
| 45°   | 15.1   | 15.9 |
| 47.5° | 15.1   | 16.7 |
| 50°   | 15.1   | 16.7 |
| 52.5° | 15.1   | 16.7 |
| 55°   | 15.1   | 16.7 |
| 57.5° | 15.1   | 15.9 |
| 60°   | 15.1   | 15.9 |
| 62.5° | 14.4   | 15.9 |
| 65°   | 14.4   | 15.1 |
| 67.5° | 14.4   | 15.1 |
| 70°   | 13.6   | 14.4 |
| 72.5° | 12.9   | 13.6 |
| 75°   | 11.4   | 12.9 |
| 77.5° | 10.6   | 11.4 |
| 80°   | 9.1    | 9.8  |

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CATALOG NUMBER: P3A13R309835DE010 E3CA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 7.6    | 7.6  |
| 85°   | 5.3    | 6.1  |
| 87.5° | 3.0    | 3.0  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)