

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: P1335143

Luminaire Tested: P3A02R309830DE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335143  
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: P3A02R309830DE010 E3CA451MMS  
Description: 3in Adjustable LED luminaire with, R30 optic, 3000K CCT AND, 98CRI , E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

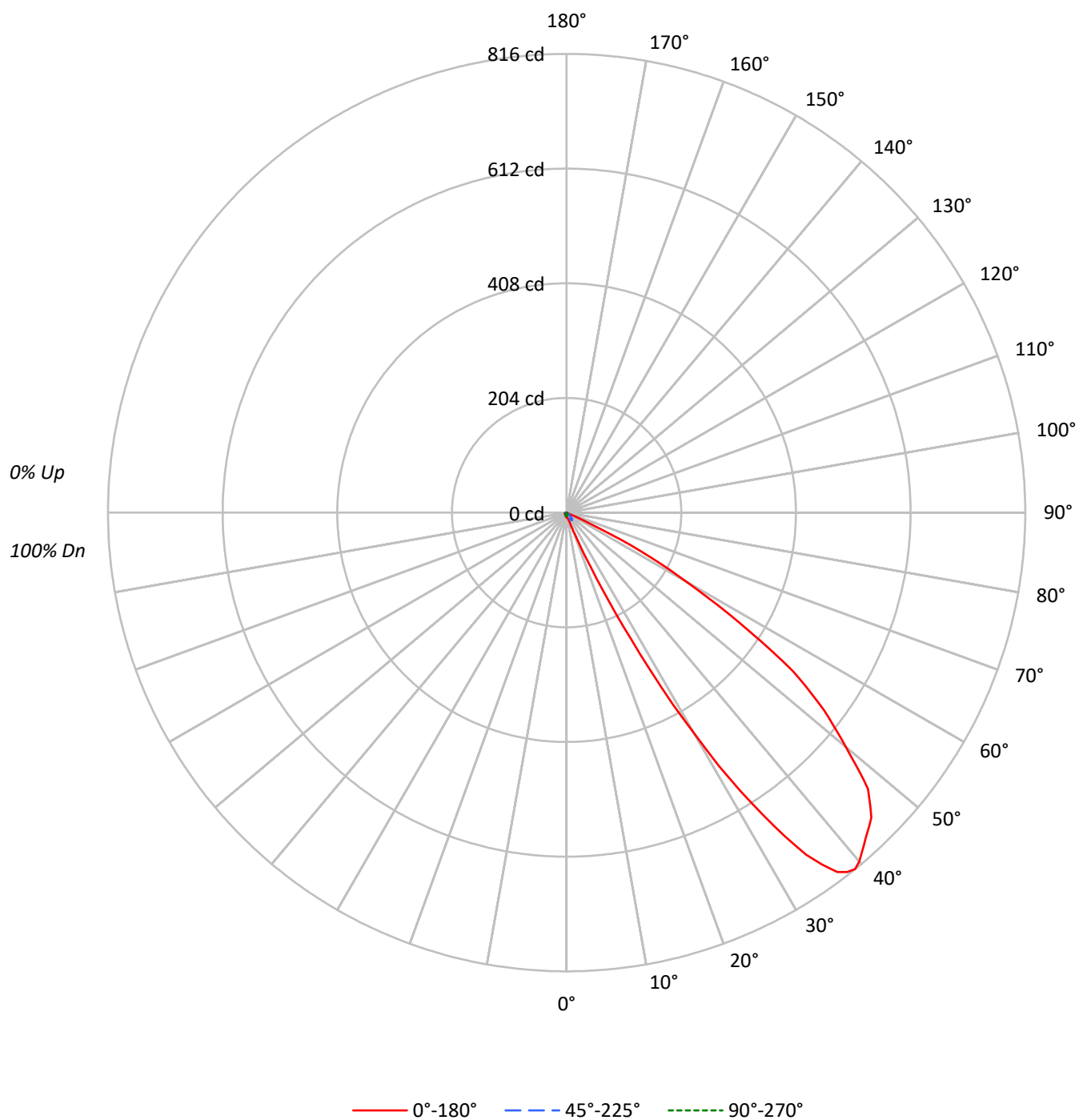
Lumens per Lamp: N/A  
Luminaire Lumens: 212.0 lumens  
Efficiency: N/A  
Efficacy: 58.9 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

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

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

|     | 0°     | 45°  | 90°  | 135° | 180° |
|-----|--------|------|------|------|------|
| 0°  | 1798   | 1798 | 1798 | 1798 | 1798 |
| 5°  | 1937   | 1893 | 1761 | 1607 | 1563 |
| 10° | 2115   | 1870 | 1559 | 1403 | 1358 |
| 15° | 3087   | 1862 | 1294 | 1180 | 1226 |
| 20° | 7747   | 2054 | 1003 | 1003 | 1120 |
| 25° | 36002  | 2540 | 774  | 919  | 1040 |
| 30° | 114575 | 3520 | 582  | 861  | 1038 |
| 35° | 198815 | 4310 | 482  | 803  | 1044 |
| 40° | 231863 | 4294 | 372  | 830  | 1088 |
| 45° | 237792 | 3039 | 403  | 899  | 1178 |
| 50° | 221127 | 1706 | 307  | 921  | 1330 |
| 55° | 187941 | 879  | 344  | 1032 | 1491 |
| 60° | 108544 | 219  | 395  | 1096 | 1667 |
| 65° | 22155  | 0    | 467  | 1297 | 1868 |
| 70° | 321    | 128  | 577  | 1475 | 2180 |
| 75° | 339    | 169  | 593  | 1525 | 2542 |
| 80° | 253    | 253  | 884  | 1768 | 2904 |
| 85° | 0      | 503  | 1761 | 1761 | 3522 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 237792 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.7    | 0.4       |
| 10°-20°   | 2.1    | 1.0       |
| 20°-30°   | 12.2   | 5.8       |
| 30°-40°   | 57.1   | 26.9      |
| 40°-50°   | 80.8   | 38.1      |
| 50°-60°   | 49.7   | 23.4      |
| 60°-70°   | 7.6    | 3.6       |
| 70°-80°   | 1.2    | 0.6       |
| 80°-90°   | 0.6    | 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°    | 15.1   | 7.1       |
| 0°-40°    | 72.2   | 34.1      |
| 0°-60°    | 202.7  | 95.6      |
| 0°-90°    | 212.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 212.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 8   | 8   | 8   | 8    | 8    |      |
| 5°  | 9   | 9   | 8   | 7    | 7    | 1    |
| 15° | 14  | 8   | 6   | 5    | 5    | 5    |
| 25° | 149 | 10  | 3   | 4    | 4    | 92   |
| 35° | 743 | 16  | 2   | 3    | 4    | 446  |
| 45° | 767 | 10  | 1   | 3    | 4    | 581  |
| 55° | 492 | 2   | 1   | 3    | 4    | 418  |
| 65° | 43  | 0   | 1   | 2    | 4    | 77   |
| 75° | 0   | 0   | 1   | 2    | 3    | 0    |
| 85° | 0   | 0   | 1   | 1    | 1    | 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°    | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 8.2  | 8.2   | 8.2 | 8.2    | 8.2  |
| 2.5°  | 8.4   | 8.4   | 8.6   | 8.6   | 8.4   | 8.6   | 8.6  | 8.6   | 8.2 | 8.0    | 7.7  |
| 5°    | 8.8   | 8.8   | 8.8   | 8.9   | 8.8   | 8.8   | 8.6  | 8.4   | 8.0 | 7.5    | 7.3  |
| 7.5°  | 9.1   | 9.1   | 8.9   | 9.1   | 8.9   | 8.9   | 8.6  | 8.2   | 7.7 | 7.1    | 6.8  |
| 10°   | 9.5   | 9.5   | 9.3   | 9.3   | 9.1   | 9.1   | 8.4  | 7.9   | 7.0 | 6.4    | 6.3  |
| 12.5° | 10.5  | 10.5  | 10.4  | 10.2  | 9.8   | 9.6   | 8.2  | 7.3   | 6.3 | 5.7    | 5.5  |
| 15°   | 13.6  | 13.4  | 13.0  | 12.5  | 11.6  | 11.4  | 8.2  | 6.8   | 5.7 | 5.2    | 5.2  |
| 17.5° | 18.6  | 18.4  | 17.9  | 16.4  | 14.8  | 14.3  | 8.2  | 6.1   | 5.0 | 4.6    | 4.6  |
| 20°   | 33.2  | 31.8  | 29.1  | 25.5  | 21.8  | 19.8  | 8.8  | 5.4   | 4.3 | 4.1    | 4.3  |
| 21°   | 43.4  | 42.0  | 38.6  | 32.7  | 26.1  | 23.9  | 9.1  | 5.2   | 4.1 | 3.9    | 4.3  |
| 22°   | 59.1  | 57.5  | 50.5  | 42.5  | 33.0  | 29.3  | 9.3  | 4.8   | 3.8 | 3.8    | 4.1  |
| 23°   | 82.5  | 79.8  | 68.0  | 55.2  | 41.3  | 35.9  | 9.6  | 4.6   | 3.6 | 3.8    | 3.9  |
| 24°   | 108.0 | 105.7 | 92.3  | 73.0  | 52.7  | 45.0  | 10.0 | 4.5   | 3.4 | 3.4    | 3.8  |
| 25°   | 148.8 | 146.1 | 122.3 | 92.1  | 66.8  | 54.1  | 10.5 | 4.1   | 3.2 | 3.2    | 3.8  |
| 26°   | 201.4 | 189.1 | 157.5 | 118.8 | 82.3  | 67.9  | 11.1 | 3.9   | 3.0 | 3.2    | 3.6  |
| 27°   | 251.4 | 241.3 | 205.7 | 152.3 | 101.8 | 83.4  | 11.8 | 3.8   | 2.9 | 3.0    | 3.6  |
| 28°   | 317.2 | 302.9 | 258.0 | 192.7 | 128.2 | 100.9 | 12.5 | 3.6   | 2.7 | 3.0    | 3.4  |
| 29°   | 390.7 | 370.7 | 316.6 | 238.0 | 158.0 | 120.5 | 13.2 | 3.4   | 2.5 | 2.9    | 3.4  |
| 30°   | 452.5 | 433.8 | 379.7 | 291.8 | 192.3 | 146.4 | 13.9 | 3.2   | 2.3 | 2.9    | 3.4  |
| 31°   | 525.0 | 496.6 | 431.1 | 337.3 | 221.8 | 172.3 | 14.6 | 2.9   | 2.1 | 2.7    | 3.2  |
| 32°   | 583.8 | 564.0 | 494.3 | 388.8 | 260.5 | 200.9 | 15.2 | 2.7   | 2.1 | 2.7    | 3.2  |
| 33°   | 640.6 | 614.0 | 546.6 | 438.1 | 295.5 | 230.2 | 15.7 | 2.5   | 2.0 | 2.5    | 3.2  |
| 34°   | 694.9 | 670.4 | 596.1 | 477.9 | 328.6 | 258.0 | 16.1 | 2.1   | 2.0 | 2.5    | 3.0  |
| 35°   | 742.7 | 714.3 | 639.7 | 516.8 | 362.5 | 283.4 | 16.1 | 2.0   | 1.8 | 2.3    | 3.0  |
| 36°   | 773.8 | 753.4 | 677.5 | 555.2 | 393.2 | 307.5 | 16.1 | 1.8   | 1.6 | 2.3    | 2.9  |
| 37°   | 800.4 | 776.6 | 707.9 | 584.7 | 415.9 | 326.8 | 16.1 | 1.6   | 1.6 | 2.3    | 2.9  |
| 38°   | 811.3 | 790.9 | 728.8 | 610.7 | 437.2 | 346.4 | 15.9 | 1.4   | 1.4 | 2.1    | 2.9  |
| 39°   | 815.6 | 797.4 | 744.5 | 629.5 | 452.9 | 359.7 | 15.5 | 1.3   | 1.4 | 2.1    | 2.9  |
| 40°   | 810.0 | 796.3 | 752.5 | 641.6 | 465.4 | 369.3 | 15.0 | 1.1   | 1.3 | 2.1    | 2.9  |
| 42.5° | 787.2 | 778.1 | 750.7 | 653.8 | 476.1 | 376.4 | 13.0 | 0.7   | 1.3 | 2.0    | 2.9  |
| 45°   | 766.8 | 756.8 | 732.7 | 641.1 | 462.2 | 362.3 | 9.8  | 0.4   | 1.3 | 2.0    | 2.9  |
| 47.5° | 727.4 | 721.1 | 702.2 | 608.8 | 431.6 | 330.6 | 7.0  | 0.2   | 1.1 | 1.8    | 2.7  |
| 50°   | 648.2 | 642.4 | 617.4 | 528.6 | 371.3 | 279.5 | 5.0  | 0.2   | 0.9 | 1.8    | 2.7  |
| 52.5° | 577.3 | 571.1 | 535.2 | 439.5 | 285.2 | 204.8 | 3.2  | 0.2   | 0.9 | 1.8    | 2.7  |
| 55°   | 491.6 | 480.7 | 433.6 | 333.6 | 202.2 | 137.3 | 2.3  | 0.2   | 0.9 | 1.6    | 2.7  |
| 57.5° | 363.9 | 348.1 | 305.9 | 227.5 | 116.4 | 74.5  | 1.3  | 0.2   | 0.9 | 1.6    | 2.7  |
| 60°   | 247.5 | 238.0 | 191.4 | 120.0 | 49.6  | 31.4  | 0.5  | 0.2   | 0.9 | 1.6    | 2.5  |
| 62.5° | 150.0 | 138.0 | 96.3  | 51.1  | 21.4  | 14.3  | 0.0  | 0.4   | 0.9 | 1.6    | 2.5  |
| 65°   | 42.7  | 37.9  | 25.2  | 11.6  | 6.1   | 4.6   | 0.0  | 0.4   | 0.9 | 1.6    | 2.5  |
| 67.5° | 1.4   | 1.4   | 1.4   | 1.3   | 0.9   | 0.9   | 0.2  | 0.4   | 0.9 | 1.6    | 2.3  |
| 70°   | 0.5   | 0.5   | 0.5   | 0.4   | 0.4   | 0.2   | 0.2  | 0.4   | 0.9 | 1.4    | 2.3  |
| 72.5° | 0.4   | 0.4   | 0.4   | 0.4   | 0.2   | 0.2   | 0.2  | 0.4   | 0.7 | 1.3    | 2.1  |
| 75°   | 0.4   | 0.4   | 0.4   | 0.2   | 0.2   | 0.2   | 0.2  | 0.5   | 0.7 | 1.3    | 1.8  |
| 77.5° | 0.4   | 0.4   | 0.4   | 0.2   | 0.2   | 0.2   | 0.2  | 0.5   | 0.7 | 1.1    | 1.8  |
| 80°   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.5   | 0.7 | 1.1    | 1.4  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0   | 0.2 | 0.5   | 0.7 | 0.7    | 1.1  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.2 | 0.5   | 0.7 | 0.5    | 0.7  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.2 | 0.5   | 0.5 | 0.5    | 0.4  |
| 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: P1335143

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**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 8.2    | 8.2  |
| 2.5°  | 7.7    | 7.7  |
| 5°    | 7.1    | 7.1  |
| 7.5°  | 6.6    | 6.6  |
| 10°   | 6.1    | 6.1  |
| 12.5° | 5.7    | 5.7  |
| 15°   | 5.2    | 5.4  |
| 17.5° | 4.8    | 5.0  |
| 20°   | 4.6    | 4.8  |
| 21°   | 4.6    | 4.8  |
| 22°   | 4.5    | 4.6  |
| 23°   | 4.5    | 4.6  |
| 24°   | 4.3    | 4.5  |
| 25°   | 4.1    | 4.3  |
| 26°   | 4.1    | 4.3  |
| 27°   | 4.1    | 4.3  |
| 28°   | 3.9    | 4.3  |
| 29°   | 3.9    | 4.1  |
| 30°   | 3.9    | 4.1  |
| 31°   | 3.8    | 4.1  |
| 32°   | 3.8    | 4.1  |
| 33°   | 3.8    | 3.9  |
| 34°   | 3.6    | 3.9  |
| 35°   | 3.6    | 3.9  |
| 36°   | 3.6    | 3.9  |
| 37°   | 3.6    | 3.8  |
| 38°   | 3.6    | 3.9  |
| 39°   | 3.6    | 3.8  |
| 40°   | 3.6    | 3.8  |
| 42.5° | 3.6    | 3.8  |
| 45°   | 3.6    | 3.8  |
| 47.5° | 3.6    | 3.9  |
| 50°   | 3.6    | 3.9  |
| 52.5° | 3.6    | 3.9  |
| 55°   | 3.6    | 3.9  |
| 57.5° | 3.6    | 3.8  |
| 60°   | 3.6    | 3.8  |
| 62.5° | 3.4    | 3.8  |
| 65°   | 3.4    | 3.6  |
| 67.5° | 3.4    | 3.6  |
| 70°   | 3.2    | 3.4  |
| 72.5° | 3.0    | 3.2  |
| 75°   | 2.7    | 3.0  |
| 77.5° | 2.5    | 2.7  |
| 80°   | 2.1    | 2.3  |

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**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 1.8    | 1.8  |
| 85°   | 1.3    | 1.4  |
| 87.5° | 0.7    | 0.7  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)