

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: P1335156

Luminaire Tested: P3A02R309835DE010 E3A451WMH

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335156  
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: P3A02R309835DE010 E3A451WMH  
Description: 3in Adjustable LED luminaire with, R30 optic, 3500K CCT AND, 98CRI , E3A451WMH TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

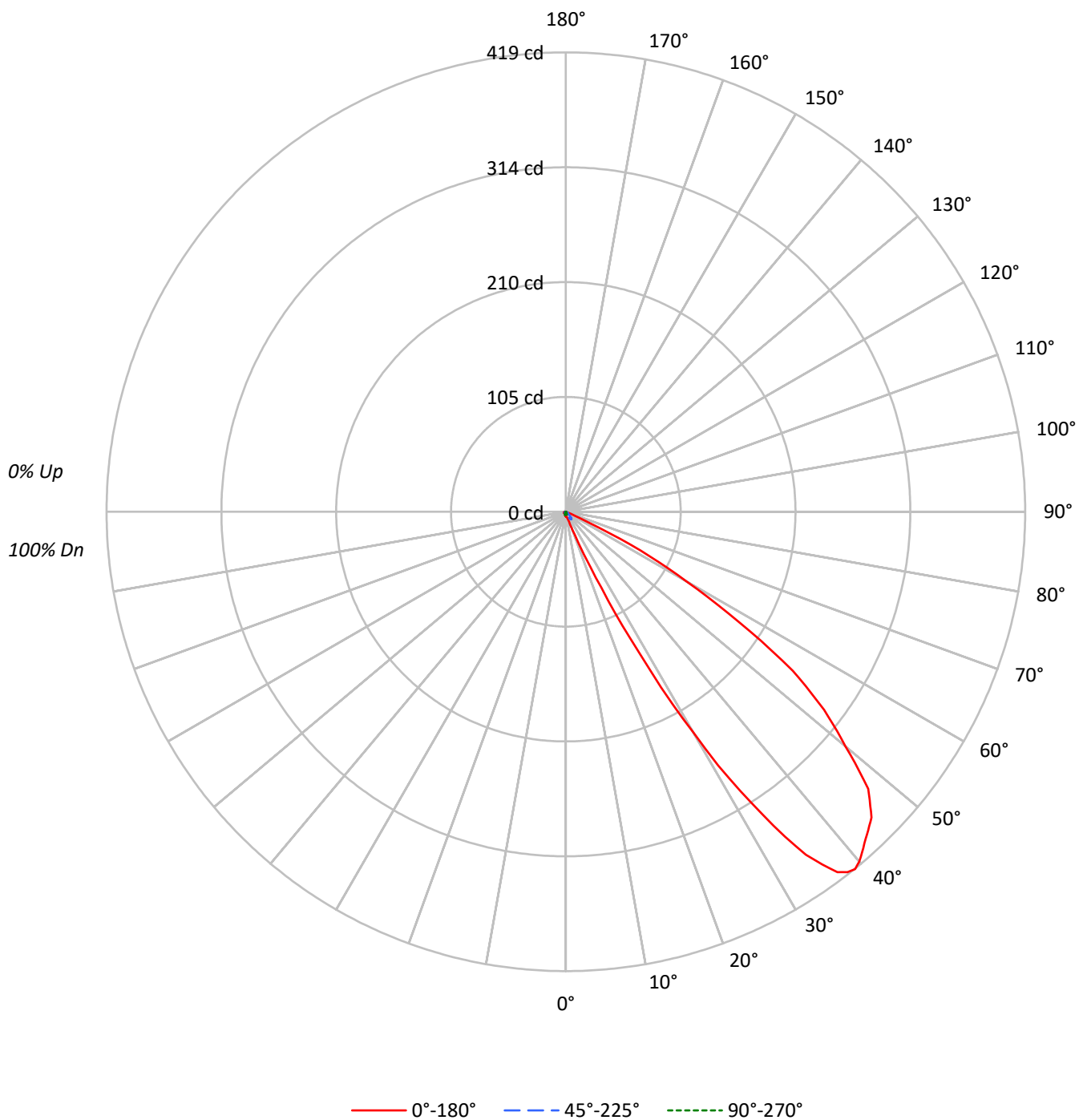
Lumens per Lamp: N/A  
Luminaire Lumens: 109.0 lumens  
Efficiency: N/A  
Efficacy: 30.3 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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  |     |     |     | 0   |
| 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  | 31  | 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°  | 921    | 921  | 921  | 921  | 921  |
| 5°  | 991    | 969  | 902  | 836  | 814  |
| 10° | 1091   | 957  | 802  | 713  | 690  |
| 15° | 1589   | 953  | 658  | 613  | 636  |
| 20° | 3990   | 1050 | 513  | 513  | 583  |
| 25° | 18509  | 1307 | 411  | 460  | 532  |
| 30° | 58920  | 1823 | 304  | 430  | 532  |
| 35° | 102232 | 2222 | 241  | 428  | 535  |
| 40° | 119223 | 2204 | 172  | 429  | 544  |
| 45° | 122276 | 1551 | 186  | 465  | 589  |
| 50° | 113702 | 887  | 171  | 478  | 682  |
| 55° | 96647  | 459  | 191  | 535  | 765  |
| 60° | 55829  | 132  | 219  | 570  | 833  |
| 65° | 11363  | 0    | 259  | 675  | 934  |
| 70° | 192    | 64   | 321  | 769  | 1090 |
| 75° | 169    | 85   | 339  | 763  | 1356 |
| 80° | 126    | 126  | 505  | 884  | 1515 |
| 85° | 0      | 252  | 1006 | 1006 | 1761 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 122276 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.4    | 0.3       |
| 10°-20°   | 1.1    | 1.0       |
| 20°-30°   | 6.3    | 5.8       |
| 30°-40°   | 29.4   | 26.9      |
| 40°-50°   | 41.5   | 38.1      |
| 50°-60°   | 25.5   | 23.4      |
| 60°-70°   | 3.9    | 3.6       |
| 70°-80°   | 0.6    | 0.6       |
| 80°-90°   | 0.3    | 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°    | 7.8    | 7.1       |
| 0°-40°    | 37.1   | 34.1      |
| 0°-60°    | 104.2  | 95.6      |
| 0°-90°    | 109.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 109.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 4   | 4   | 4   | 4    | 4    |      |
| 5°  | 4   | 4   | 4   | 4    | 4    | 0    |
| 15° | 7   | 4   | 3   | 3    | 3    | 2    |
| 25° | 76  | 5   | 2   | 2    | 2    | 47   |
| 35° | 382 | 8   | 1   | 2    | 2    | 229  |
| 45° | 394 | 5   | 1   | 2    | 2    | 299  |
| 55° | 253 | 1   | 0   | 1    | 2    | 215  |
| 65° | 22  | 0   | 0   | 1    | 2    | 40   |
| 75° | 0   | 0   | 0   | 1    | 2    | 0    |
| 85° | 0   | 0   | 0   | 0    | 1    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1335156

CATALOG NUMBER: P3A02R309835DE010 E3A451WMH

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|--------|------|
| 0°    | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   | 4.2   | 4.2 | 4.2   | 4.2 | 4.2    | 4.2  |
| 2.5°  | 4.3   | 4.3   | 4.4   | 4.4   | 4.3   | 4.4   | 4.4 | 4.4   | 4.2 | 4.1    | 3.9  |
| 5°    | 4.5   | 4.5   | 4.5   | 4.6   | 4.5   | 4.5   | 4.4 | 4.3   | 4.1 | 3.9    | 3.8  |
| 7.5°  | 4.7   | 4.7   | 4.6   | 4.7   | 4.6   | 4.6   | 4.4 | 4.2   | 3.9 | 3.7    | 3.5  |
| 10°   | 4.9   | 4.9   | 4.8   | 4.8   | 4.7   | 4.7   | 4.3 | 4.0   | 3.6 | 3.3    | 3.2  |
| 12.5° | 5.4   | 5.4   | 5.3   | 5.2   | 5.0   | 5.0   | 4.2 | 3.8   | 3.2 | 2.9    | 2.8  |
| 15°   | 7.0   | 6.9   | 6.7   | 6.4   | 6.0   | 5.9   | 4.2 | 3.5   | 2.9 | 2.7    | 2.7  |
| 17.5° | 9.5   | 9.5   | 9.2   | 8.4   | 7.6   | 7.3   | 4.2 | 3.1   | 2.6 | 2.4    | 2.4  |
| 20°   | 17.1  | 16.3  | 15.0  | 13.1  | 11.2  | 10.2  | 4.5 | 2.8   | 2.2 | 2.1    | 2.2  |
| 21°   | 22.3  | 21.6  | 19.8  | 16.8  | 13.4  | 12.3  | 4.7 | 2.7   | 2.1 | 2.0    | 2.2  |
| 22°   | 30.4  | 29.6  | 26.0  | 21.9  | 17.0  | 15.1  | 4.8 | 2.5   | 1.9 | 1.9    | 2.1  |
| 23°   | 42.4  | 41.0  | 35.0  | 28.4  | 21.2  | 18.5  | 5.0 | 2.4   | 1.8 | 1.9    | 2.0  |
| 24°   | 55.5  | 54.4  | 47.5  | 37.6  | 27.1  | 23.1  | 5.1 | 2.3   | 1.7 | 1.7    | 1.9  |
| 25°   | 76.5  | 75.1  | 62.9  | 47.4  | 34.3  | 27.8  | 5.4 | 2.1   | 1.7 | 1.7    | 1.9  |
| 26°   | 103.6 | 97.2  | 81.0  | 61.1  | 42.3  | 34.9  | 5.7 | 2.0   | 1.6 | 1.7    | 1.8  |
| 27°   | 129.3 | 124.0 | 105.8 | 78.3  | 52.3  | 42.9  | 6.1 | 1.9   | 1.5 | 1.6    | 1.8  |
| 28°   | 163.1 | 155.7 | 132.7 | 99.1  | 65.9  | 51.9  | 6.4 | 1.8   | 1.4 | 1.6    | 1.7  |
| 29°   | 200.9 | 190.6 | 162.8 | 122.4 | 81.3  | 62.0  | 6.8 | 1.7   | 1.3 | 1.5    | 1.7  |
| 30°   | 232.7 | 223.0 | 195.2 | 150.0 | 98.9  | 75.3  | 7.2 | 1.7   | 1.2 | 1.5    | 1.7  |
| 31°   | 269.9 | 255.3 | 221.6 | 173.4 | 114.0 | 88.6  | 7.5 | 1.5   | 1.1 | 1.4    | 1.7  |
| 32°   | 300.1 | 290.0 | 254.1 | 199.9 | 134.0 | 103.3 | 7.8 | 1.4   | 1.1 | 1.4    | 1.7  |
| 33°   | 329.3 | 315.7 | 281.1 | 225.2 | 152.0 | 118.4 | 8.1 | 1.3   | 1.0 | 1.3    | 1.7  |
| 34°   | 357.3 | 344.7 | 306.5 | 245.7 | 168.9 | 132.7 | 8.3 | 1.1   | 1.0 | 1.3    | 1.6  |
| 35°   | 381.9 | 367.3 | 328.9 | 265.7 | 186.4 | 145.7 | 8.3 | 1.0   | 0.9 | 1.2    | 1.6  |
| 36°   | 397.8 | 387.4 | 348.4 | 285.5 | 202.2 | 158.1 | 8.3 | 0.9   | 0.8 | 1.2    | 1.5  |
| 37°   | 411.5 | 399.3 | 364.0 | 300.6 | 213.8 | 168.0 | 8.3 | 0.8   | 0.8 | 1.2    | 1.5  |
| 38°   | 417.1 | 406.7 | 374.7 | 314.0 | 224.8 | 178.1 | 8.2 | 0.7   | 0.7 | 1.1    | 1.5  |
| 39°   | 419.3 | 410.0 | 382.8 | 323.7 | 232.8 | 184.9 | 8.0 | 0.6   | 0.7 | 1.1    | 1.5  |
| 40°   | 416.5 | 409.4 | 386.9 | 329.9 | 239.3 | 189.9 | 7.7 | 0.6   | 0.6 | 1.1    | 1.5  |
| 42.5° | 404.7 | 400.0 | 386.0 | 336.1 | 244.8 | 193.6 | 6.7 | 0.4   | 0.6 | 1.0    | 1.5  |
| 45°   | 394.3 | 389.1 | 376.7 | 329.6 | 237.6 | 186.3 | 5.0 | 0.2   | 0.6 | 1.0    | 1.5  |
| 47.5° | 374.0 | 370.8 | 361.0 | 313.0 | 221.9 | 170.0 | 3.6 | 0.1   | 0.6 | 0.9    | 1.4  |
| 50°   | 333.3 | 330.3 | 317.4 | 271.8 | 190.9 | 143.7 | 2.6 | 0.1   | 0.5 | 0.9    | 1.4  |
| 52.5° | 296.8 | 293.6 | 275.2 | 226.0 | 146.6 | 105.3 | 1.7 | 0.1   | 0.5 | 0.9    | 1.4  |
| 55°   | 252.8 | 247.2 | 222.9 | 171.5 | 103.9 | 70.6  | 1.2 | 0.1   | 0.5 | 0.8    | 1.4  |
| 57.5° | 187.1 | 179.0 | 157.3 | 117.0 | 59.9  | 38.3  | 0.6 | 0.1   | 0.5 | 0.8    | 1.4  |
| 60°   | 127.3 | 122.4 | 98.4  | 61.7  | 25.5  | 16.2  | 0.3 | 0.1   | 0.5 | 0.8    | 1.3  |
| 62.5° | 77.1  | 71.0  | 49.5  | 26.3  | 11.0  | 7.3   | 0.0 | 0.2   | 0.5 | 0.8    | 1.3  |
| 65°   | 21.9  | 19.5  | 12.9  | 6.0   | 3.1   | 2.4   | 0.0 | 0.2   | 0.5 | 0.8    | 1.3  |
| 67.5° | 0.7   | 0.7   | 0.7   | 0.6   | 0.5   | 0.5   | 0.1 | 0.2   | 0.5 | 0.8    | 1.2  |
| 70°   | 0.3   | 0.3   | 0.3   | 0.2   | 0.2   | 0.1   | 0.1 | 0.2   | 0.5 | 0.7    | 1.2  |
| 72.5° | 0.2   | 0.2   | 0.2   | 0.2   | 0.1   | 0.1   | 0.1 | 0.2   | 0.4 | 0.6    | 1.1  |
| 75°   | 0.2   | 0.2   | 0.2   | 0.1   | 0.1   | 0.1   | 0.1 | 0.3   | 0.4 | 0.6    | 0.9  |
| 77.5° | 0.2   | 0.2   | 0.2   | 0.1   | 0.1   | 0.1   | 0.1 | 0.3   | 0.4 | 0.6    | 0.9  |
| 80°   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1 | 0.3   | 0.4 | 0.6    | 0.7  |



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CATALOG NUMBER: P3A02R309835DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0   | 0.1 | 0.3   | 0.4 | 0.4    | 0.6  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.1 | 0.3   | 0.4 | 0.3    | 0.4  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.1 | 0.3   | 0.3 | 0.3    | 0.2  |
| 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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CATALOG NUMBER: P3A02R309835DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 4.2    | 4.2  |
| 2.5°  | 3.9    | 3.9  |
| 5°    | 3.7    | 3.7  |
| 7.5°  | 3.4    | 3.4  |
| 10°   | 3.1    | 3.1  |
| 12.5° | 2.9    | 2.9  |
| 15°   | 2.7    | 2.8  |
| 17.5° | 2.5    | 2.6  |
| 20°   | 2.4    | 2.5  |
| 21°   | 2.4    | 2.5  |
| 22°   | 2.3    | 2.4  |
| 23°   | 2.3    | 2.4  |
| 24°   | 2.2    | 2.3  |
| 25°   | 2.1    | 2.2  |
| 26°   | 2.1    | 2.2  |
| 27°   | 2.1    | 2.2  |
| 28°   | 2.0    | 2.2  |
| 29°   | 2.0    | 2.1  |
| 30°   | 2.0    | 2.1  |
| 31°   | 1.9    | 2.1  |
| 32°   | 1.9    | 2.1  |
| 33°   | 1.9    | 2.0  |
| 34°   | 1.8    | 2.0  |
| 35°   | 1.8    | 2.0  |
| 36°   | 1.8    | 2.0  |
| 37°   | 1.8    | 1.9  |
| 38°   | 1.8    | 2.0  |
| 39°   | 1.8    | 1.9  |
| 40°   | 1.8    | 1.9  |
| 42.5° | 1.8    | 1.9  |
| 45°   | 1.8    | 1.9  |
| 47.5° | 1.8    | 2.0  |
| 50°   | 1.8    | 2.0  |
| 52.5° | 1.8    | 2.0  |
| 55°   | 1.8    | 2.0  |
| 57.5° | 1.8    | 1.9  |
| 60°   | 1.8    | 1.9  |
| 62.5° | 1.7    | 1.9  |
| 65°   | 1.7    | 1.8  |
| 67.5° | 1.7    | 1.8  |
| 70°   | 1.7    | 1.7  |
| 72.5° | 1.6    | 1.7  |
| 75°   | 1.4    | 1.6  |
| 77.5° | 1.3    | 1.4  |
| 80°   | 1.1    | 1.2  |



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CATALOG NUMBER: P3A02R309835DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 0.9    | 0.9  |
| 85°   | 0.6    | 0.7  |
| 87.5° | 0.4    | 0.4  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)