

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: P1341512

Luminaire Tested: P3A09R309827DE010 E3A451WMH

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1341512  
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: P3A09R309827DE010 E3A451WMH  
Description: 3in Adjustable LED luminaire with, R30 optic, 2700K CCT AND, 98CRI , E3A451WMH TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

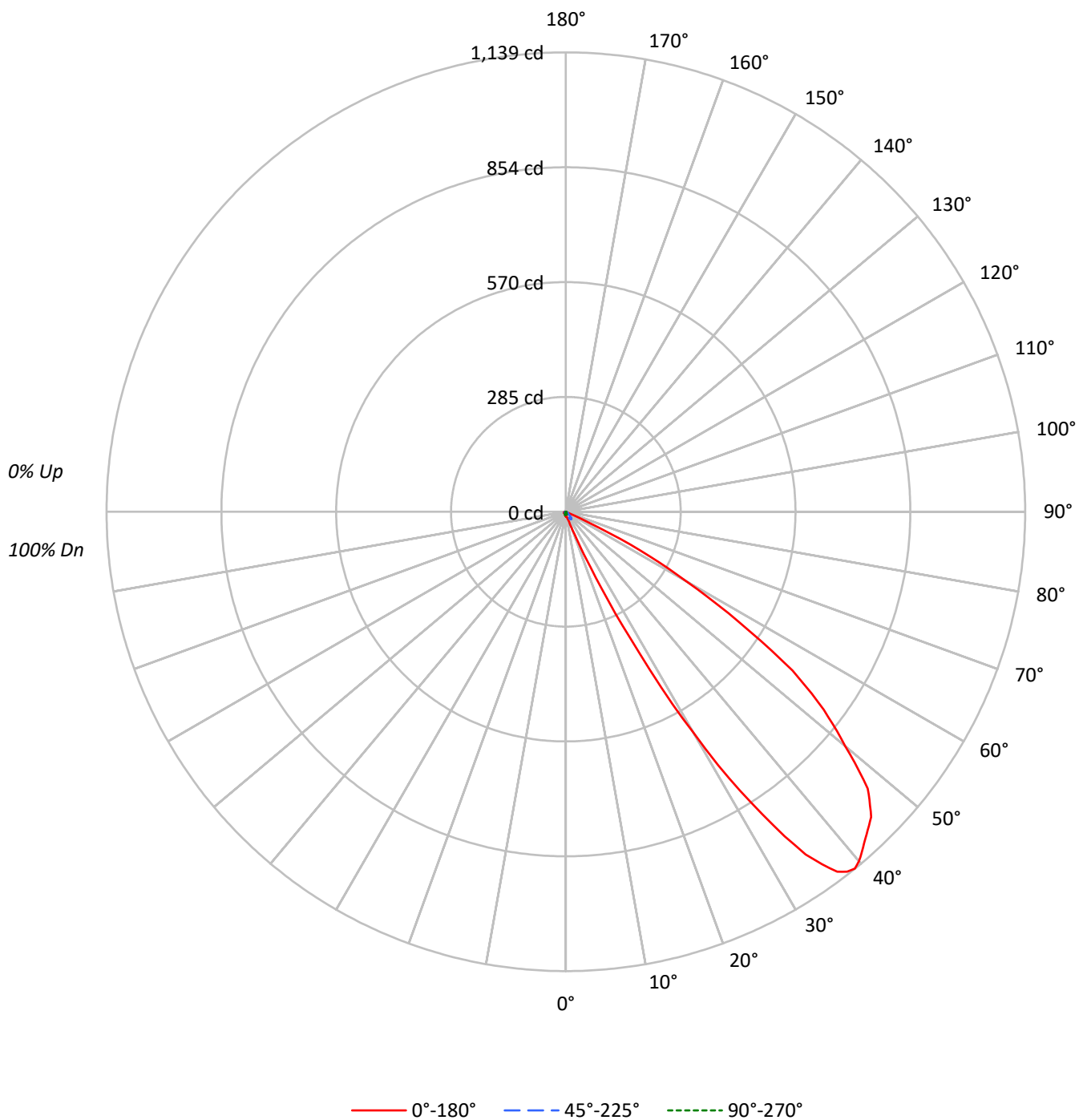
Lumens per Lamp: N/A  
Luminaire Lumens: 295.9 lumens  
Efficiency: N/A  
Efficacy: 26.9 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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

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

|     | 0°     | 45°  | 90°  | 135° | 180° |
|-----|--------|------|------|------|------|
| 0°  | 2522   | 2522 | 2522 | 2522 | 2522 |
| 5°  | 2685   | 2641 | 2465 | 2245 | 2201 |
| 10° | 2939   | 2605 | 2160 | 1937 | 1893 |
| 15° | 4291   | 2611 | 1816 | 1635 | 1703 |
| 20° | 10828  | 2847 | 1400 | 1400 | 1563 |
| 25° | 50253  | 3557 | 1089 | 1258 | 1452 |
| 30° | 159974 | 4912 | 810  | 1190 | 1443 |
| 35° | 277597 | 5996 | 669  | 1124 | 1472 |
| 40° | 323749 | 5983 | 487  | 1145 | 1489 |
| 45° | 332034 | 4249 | 527  | 1240 | 1613 |
| 50° | 308766 | 2388 | 409  | 1262 | 1876 |
| 55° | 262414 | 1223 | 459  | 1415 | 2103 |
| 60° | 151567 | 307  | 526  | 1535 | 2281 |
| 65° | 30924  | 0    | 623  | 1816 | 2594 |
| 70° | 449    | 128  | 769  | 2052 | 3013 |
| 75° | 424    | 169  | 847  | 2118 | 3558 |
| 80° | 253    | 253  | 1263 | 2526 | 4041 |
| 85° | 0      | 503  | 2516 | 2516 | 5032 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 332034 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.0    | 0.4       |
| 10°-20°   | 3.0    | 1.0       |
| 20°-30°   | 17.1   | 5.8       |
| 30°-40°   | 79.7   | 26.9      |
| 40°-50°   | 112.7  | 38.1      |
| 50°-60°   | 69.3   | 23.4      |
| 60°-70°   | 10.5   | 3.6       |
| 70°-80°   | 1.6    | 0.6       |
| 80°-90°   | 0.8    | 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°    | 21.1   | 7.1       |
| 0°-40°    | 100.8  | 34.1      |
| 0°-60°    | 282.9  | 95.6      |
| 0°-90°    | 295.9  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 295.9  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 12   | 12  | 12  | 12   | 12   |      |
| 5°  | 12   | 12  | 11  | 10   | 10   | 1    |
| 15° | 19   | 12  | 8   | 7    | 8    | 7    |
| 25° | 208  | 15  | 4   | 5    | 6    | 128  |
| 35° | 1037 | 22  | 2   | 4    | 6    | 622  |
| 45° | 1071 | 14  | 2   | 4    | 5    | 812  |
| 55° | 686  | 3   | 1   | 4    | 6    | 584  |
| 65° | 60   | 0   | 1   | 4    | 5    | 108  |
| 75° | 0    | 0   | 1   | 2    | 4    | 1    |
| 85° | 0    | 0   | 1   | 1    | 2    | 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°    | 11.5   | 11.5   | 11.5   | 11.5  | 11.5  | 11.5  | 11.5 | 11.5  | 11.5 | 11.5   | 11.5 |
| 2.5°  | 11.7   | 11.7   | 12.0   | 12.0  | 11.7  | 12.0  | 12.0 | 12.0  | 11.5 | 11.2   | 10.7 |
| 5°    | 12.2   | 12.2   | 12.2   | 12.5  | 12.2  | 12.2  | 12.0 | 11.7  | 11.2 | 10.5   | 10.2 |
| 7.5°  | 12.7   | 12.7   | 12.5   | 12.7  | 12.5  | 12.5  | 12.0 | 11.5  | 10.7 | 10.0   | 9.5  |
| 10°   | 13.2   | 13.2   | 13.0   | 13.0  | 12.7  | 12.7  | 11.7 | 11.0  | 9.7  | 9.0    | 8.7  |
| 12.5° | 14.7   | 14.7   | 14.5   | 14.2  | 13.7  | 13.5  | 11.5 | 10.2  | 8.7  | 8.0    | 7.7  |
| 15°   | 18.9   | 18.7   | 18.2   | 17.5  | 16.2  | 16.0  | 11.5 | 9.5   | 8.0  | 7.2    | 7.2  |
| 17.5° | 25.9   | 25.7   | 24.9   | 22.9  | 20.7  | 19.9  | 11.5 | 8.5   | 7.0  | 6.5    | 6.5  |
| 20°   | 46.4   | 44.4   | 40.6   | 35.7  | 30.4  | 27.7  | 12.2 | 7.5   | 6.0  | 5.7    | 6.0  |
| 21°   | 60.6   | 58.6   | 53.9   | 45.6  | 36.4  | 33.4  | 12.7 | 7.2   | 5.7  | 5.5    | 6.0  |
| 22°   | 82.5   | 80.3   | 70.6   | 59.3  | 46.1  | 40.9  | 13.0 | 6.7   | 5.2  | 5.2    | 5.7  |
| 23°   | 115.2  | 111.5  | 95.0   | 77.0  | 57.6  | 50.1  | 13.5 | 6.5   | 5.0  | 5.2    | 5.5  |
| 24°   | 150.8  | 147.6  | 128.9  | 102.0 | 73.6  | 62.8  | 14.0 | 6.2   | 4.7  | 4.7    | 5.2  |
| 25°   | 207.7  | 204.0  | 170.8  | 128.7 | 93.3  | 75.5  | 14.7 | 5.7   | 4.5  | 4.5    | 5.2  |
| 26°   | 281.3  | 264.0  | 219.9  | 165.8 | 114.9 | 94.7  | 15.5 | 5.5   | 4.2  | 4.5    | 5.0  |
| 27°   | 351.1  | 336.9  | 287.2  | 212.7 | 142.1 | 116.4 | 16.5 | 5.2   | 4.0  | 4.2    | 5.0  |
| 28°   | 442.8  | 422.9  | 360.3  | 269.0 | 179.0 | 140.9 | 17.5 | 5.0   | 3.7  | 4.2    | 4.7  |
| 29°   | 545.6  | 517.6  | 442.1  | 332.4 | 220.7 | 168.3 | 18.5 | 4.7   | 3.5  | 4.0    | 4.7  |
| 30°   | 631.8  | 605.6  | 530.1  | 407.4 | 268.5 | 204.5 | 19.4 | 4.5   | 3.2  | 4.0    | 4.7  |
| 31°   | 733.1  | 693.4  | 601.9  | 471.0 | 309.7 | 240.6 | 20.4 | 4.0   | 3.0  | 3.7    | 4.5  |
| 32°   | 815.1  | 787.4  | 690.2  | 542.8 | 363.8 | 280.5 | 21.2 | 3.7   | 3.0  | 3.7    | 4.5  |
| 33°   | 894.4  | 857.2  | 763.2  | 611.6 | 412.7 | 321.4 | 21.9 | 3.5   | 2.7  | 3.5    | 4.5  |
| 34°   | 970.2  | 936.0  | 832.3  | 667.2 | 458.8 | 360.3 | 22.4 | 3.0   | 2.7  | 3.5    | 4.2  |
| 35°   | 1037.0 | 997.4  | 893.1  | 721.6 | 506.2 | 395.7 | 22.4 | 2.7   | 2.5  | 3.2    | 4.2  |
| 36°   | 1080.4 | 1052.0 | 946.0  | 775.2 | 549.0 | 429.4 | 22.4 | 2.5   | 2.2  | 3.2    | 4.0  |
| 37°   | 1117.5 | 1084.4 | 988.4  | 816.3 | 580.7 | 456.3 | 22.4 | 2.2   | 2.2  | 3.2    | 4.0  |
| 38°   | 1132.7 | 1104.3 | 1017.5 | 852.7 | 610.4 | 483.7 | 22.2 | 2.0   | 2.0  | 3.0    | 4.0  |
| 39°   | 1138.7 | 1113.3 | 1039.5 | 878.9 | 632.3 | 502.2 | 21.7 | 1.7   | 2.0  | 3.0    | 4.0  |
| 40°   | 1131.0 | 1111.8 | 1050.7 | 895.9 | 649.8 | 515.6 | 20.9 | 1.5   | 1.7  | 3.0    | 4.0  |
| 42.5° | 1099.1 | 1086.4 | 1048.2 | 912.8 | 664.7 | 525.6 | 18.2 | 1.0   | 1.7  | 2.7    | 4.0  |
| 45°   | 1070.7 | 1056.7 | 1023.0 | 895.1 | 645.3 | 505.9 | 13.7 | 0.5   | 1.7  | 2.7    | 4.0  |
| 47.5° | 1015.6 | 1006.8 | 980.4  | 850.0 | 602.6 | 461.5 | 9.7  | 0.2   | 1.5  | 2.5    | 3.7  |
| 50°   | 905.1  | 896.9  | 862.0  | 738.0 | 518.4 | 390.2 | 7.0  | 0.2   | 1.2  | 2.5    | 3.7  |
| 52.5° | 806.1  | 797.4  | 747.3  | 613.6 | 398.2 | 286.0 | 4.5  | 0.2   | 1.2  | 2.5    | 3.7  |
| 55°   | 686.4  | 671.2  | 605.4  | 465.8 | 282.3 | 191.7 | 3.2  | 0.2   | 1.2  | 2.2    | 3.7  |
| 57.5° | 508.2  | 486.0  | 427.1  | 317.7 | 162.6 | 104.0 | 1.7  | 0.2   | 1.2  | 2.2    | 3.7  |
| 60°   | 345.6  | 332.4  | 267.3  | 167.6 | 69.3  | 43.9  | 0.7  | 0.2   | 1.2  | 2.2    | 3.5  |
| 62.5° | 209.4  | 192.7  | 134.4  | 71.3  | 29.9  | 19.9  | 0.0  | 0.5   | 1.2  | 2.2    | 3.5  |
| 65°   | 59.6   | 52.9   | 35.2   | 16.2  | 8.5   | 6.5   | 0.0  | 0.5   | 1.2  | 2.2    | 3.5  |
| 67.5° | 2.0    | 2.0    | 2.0    | 1.7   | 1.2   | 1.2   | 0.2  | 0.5   | 1.2  | 2.2    | 3.2  |
| 70°   | 0.7    | 0.7    | 0.7    | 0.5   | 0.5   | 0.2   | 0.2  | 0.5   | 1.2  | 2.0    | 3.2  |
| 72.5° | 0.5    | 0.5    | 0.5    | 0.5   | 0.2   | 0.2   | 0.2  | 0.5   | 1.0  | 1.7    | 3.0  |
| 75°   | 0.5    | 0.5    | 0.5    | 0.2   | 0.2   | 0.2   | 0.2  | 0.7   | 1.0  | 1.7    | 2.5  |
| 77.5° | 0.5    | 0.5    | 0.5    | 0.2   | 0.2   | 0.2   | 0.2  | 0.7   | 1.0  | 1.5    | 2.5  |
| 80°   | 0.2    | 0.2    | 0.2    | 0.2   | 0.2   | 0.2   | 0.2  | 0.7   | 1.0  | 1.5    | 2.0  |



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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 | 0.7   | 1.0 | 1.0    | 1.5  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.2 | 0.7   | 1.0 | 0.7    | 1.0  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.2 | 0.7   | 0.7 | 0.7    | 0.5  |
| 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°    | 11.5   | 11.5 |
| 2.5°  | 10.7   | 10.7 |
| 5°    | 10.0   | 10.0 |
| 7.5°  | 9.2    | 9.2  |
| 10°   | 8.5    | 8.5  |
| 12.5° | 8.0    | 8.0  |
| 15°   | 7.2    | 7.5  |
| 17.5° | 6.7    | 7.0  |
| 20°   | 6.5    | 6.7  |
| 21°   | 6.5    | 6.7  |
| 22°   | 6.2    | 6.5  |
| 23°   | 6.2    | 6.5  |
| 24°   | 6.0    | 6.2  |
| 25°   | 5.7    | 6.0  |
| 26°   | 5.7    | 6.0  |
| 27°   | 5.7    | 6.0  |
| 28°   | 5.5    | 6.0  |
| 29°   | 5.5    | 5.7  |
| 30°   | 5.5    | 5.7  |
| 31°   | 5.2    | 5.7  |
| 32°   | 5.2    | 5.7  |
| 33°   | 5.2    | 5.5  |
| 34°   | 5.0    | 5.5  |
| 35°   | 5.0    | 5.5  |
| 36°   | 5.0    | 5.5  |
| 37°   | 5.0    | 5.2  |
| 38°   | 5.0    | 5.5  |
| 39°   | 5.0    | 5.2  |
| 40°   | 5.0    | 5.2  |
| 42.5° | 5.0    | 5.2  |
| 45°   | 5.0    | 5.2  |
| 47.5° | 5.0    | 5.5  |
| 50°   | 5.0    | 5.5  |
| 52.5° | 5.0    | 5.5  |
| 55°   | 5.0    | 5.5  |
| 57.5° | 5.0    | 5.2  |
| 60°   | 5.0    | 5.2  |
| 62.5° | 4.7    | 5.2  |
| 65°   | 4.7    | 5.0  |
| 67.5° | 4.7    | 5.0  |
| 70°   | 4.5    | 4.7  |
| 72.5° | 4.2    | 4.5  |
| 75°   | 3.7    | 4.2  |
| 77.5° | 3.5    | 3.7  |
| 80°   | 3.0    | 3.2  |



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CATALOG NUMBER: P3A09R309827DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 2.5    | 2.5  |
| 85°   | 1.7    | 2.0  |
| 87.5° | 1.0    | 1.0  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)