

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: P1335810

Luminaire Tested: P3A02R409830DE010 E3A451MW

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335810  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A02R409830DE010 E3A451MW  
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 98CRI , E3A451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

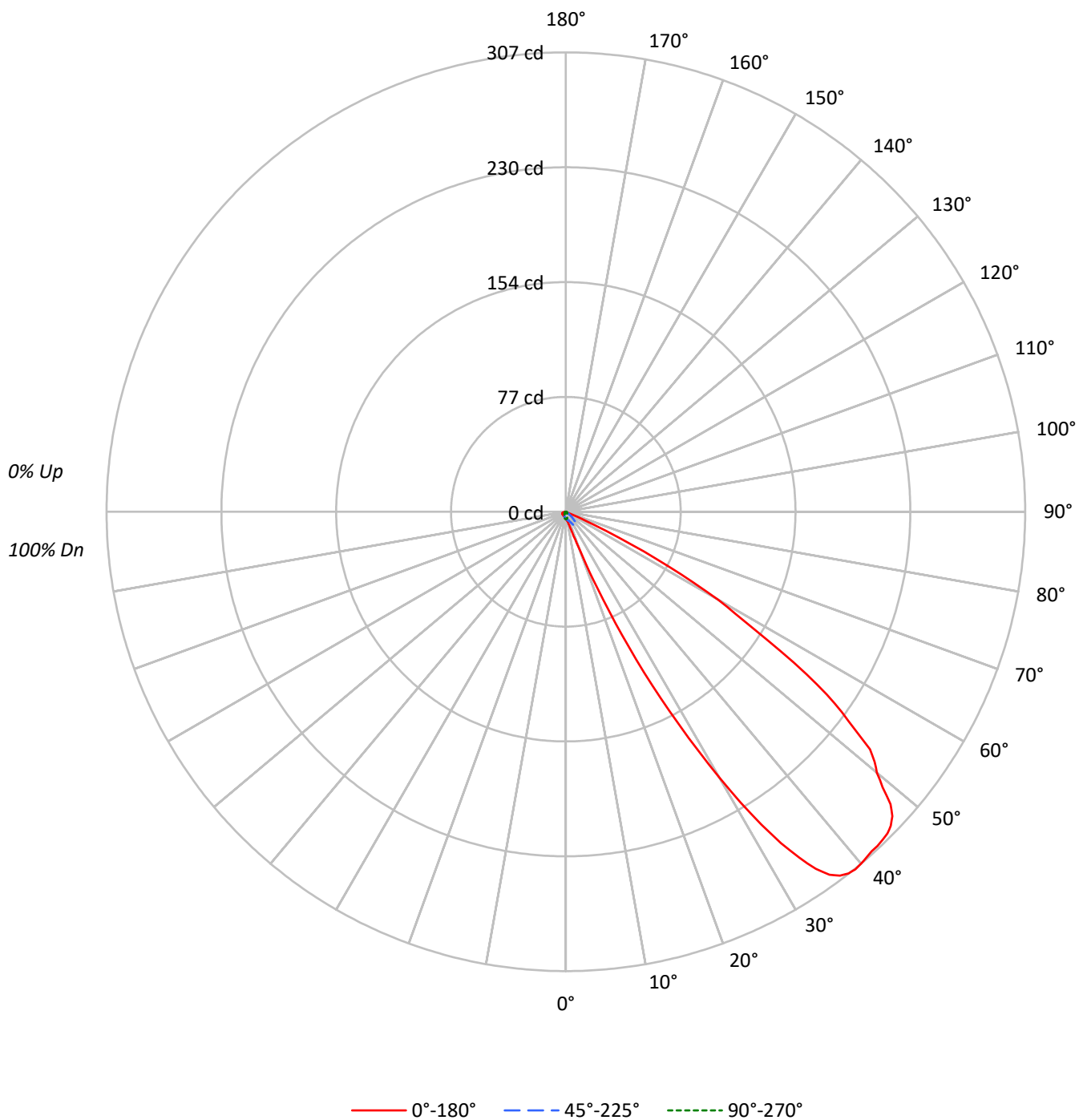
Lumens per Lamp: N/A  
Luminaire Lumens: 95.0 lumens  
Efficiency: N/A  
Efficacy: 26.4 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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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CATALOG NUMBER: P3A02R409830DE010 E3A451MW

### 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  | 107 | 104 | 100 | 97  | 99  | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  |  | 84  | 80  | 76  |  | 81  |
| 3   | 91  | 81  | 73  | 66  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 73  | 68  | 64  |  | 71  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 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  | 38  |  | 50  | 43  | 37  |  | 48  |
| 7   | 62  | 48  | 39  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  |  | 44  | 37  | 31  |  | 42  |
| 8   | 57  | 42  | 33  | 27  | 55  | 42  | 33  | 27  | 40  | 32  | 27  |  | 39  | 32  | 27  |  | 38  |
| 9   | 52  | 38  | 29  | 23  | 51  | 37  | 29  | 23  | 36  | 28  | 23  |  | 35  | 28  | 23  |  | 34  |
| 10  | 48  | 34  | 25  | 20  | 47  | 33  | 25  | 20  | 32  | 25  | 20  |  | 31  | 24  | 20  |  | 30  |

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

|     | 0°    | 45°  | 90°  | 135° | 180° |
|-----|-------|------|------|------|------|
| 0°  | 1074  | 1074 | 1074 | 1074 | 1074 |
| 5°  | 1189  | 1145 | 1057 | 969  | 947  |
| 10° | 1447  | 1225 | 980  | 868  | 846  |
| 15° | 2361  | 1317 | 840  | 772  | 795  |
| 20° | 6231  | 1563 | 700  | 700  | 747  |
| 25° | 24026 | 1936 | 556  | 629  | 750  |
| 30° | 51831 | 2583 | 430  | 608  | 734  |
| 35° | 78006 | 3052 | 375  | 616  | 750  |
| 40° | 87879 | 3063 | 315  | 630  | 802  |
| 45° | 94242 | 2388 | 310  | 651  | 868  |
| 50° | 92620 | 1501 | 273  | 682  | 955  |
| 55° | 81469 | 726  | 268  | 765  | 1070 |
| 60° | 51575 | 132  | 307  | 833  | 1184 |
| 65° | 10533 | 52   | 311  | 882  | 1297 |
| 70° | 192   | 64   | 321  | 1026 | 1539 |
| 75° | 254   | 169  | 339  | 1101 | 1694 |
| 80° | 253   | 126  | 379  | 1263 | 2020 |
| 85° | 252   | 252  | 755  | 1258 | 2264 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 95944 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.5    | 0.5       |
| 10°-20°   | 1.5    | 1.6       |
| 20°-30°   | 7.4    | 7.8       |
| 30°-40°   | 24.0   | 25.3      |
| 40°-50°   | 33.1   | 34.8      |
| 50°-60°   | 23.0   | 24.3      |
| 60°-70°   | 4.4    | 4.6       |
| 70°-80°   | 0.8    | 0.8       |
| 80°-90°   | 0.4    | 0.4       |
| 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°    | 9.3    | 9.8       |
| 0°-40°    | 33.3   | 35.1      |
| 0°-60°    | 89.5   | 94.2      |
| 0°-90°    | 95.0   | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 95.0   | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 5   | 5   | 5   | 5    | 5    |      |
| 5°  | 5   | 5   | 5   | 4    | 4    | 1    |
| 15° | 10  | 6   | 4   | 3    | 4    | 4    |
| 25° | 99  | 8   | 2   | 3    | 3    | 51   |
| 35° | 291 | 11  | 1   | 2    | 3    | 176  |
| 45° | 304 | 8   | 1   | 2    | 3    | 231  |
| 55° | 213 | 2   | 1   | 2    | 3    | 182  |
| 65° | 20  | 0   | 1   | 2    | 2    | 36   |
| 75° | 0   | 0   | 0   | 1    | 2    | 0    |
| 85° | 0   | 0   | 0   | 0    | 1    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1335810

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°  | 35°  | 45°  | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|-----|
| 0°    | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9  | 4.9  | 4.9  | 4.9   | 4.9 |
| 2.5°  | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1  | 5.1  | 5.1  | 5.0   | 4.9 |
| 5°    | 5.4   | 5.4   | 5.4   | 5.4   | 5.3   | 5.3   | 5.3  | 5.2  | 5.2  | 5.1   | 4.8 |
| 7.5°  | 5.8   | 5.8   | 5.8   | 5.8   | 5.7   | 5.6   | 5.5  | 5.5  | 5.4  | 5.0   | 4.6 |
| 10°   | 6.5   | 6.5   | 6.4   | 6.3   | 6.2   | 6.0   | 5.9  | 5.8  | 5.5  | 4.9   | 4.4 |
| 12.5° | 7.9   | 7.7   | 7.6   | 7.4   | 7.2   | 6.8   | 6.5  | 6.2  | 5.6  | 4.7   | 4.1 |
| 15°   | 10.4  | 10.2  | 9.9   | 9.3   | 8.8   | 8.1   | 7.5  | 6.9  | 5.8  | 4.4   | 3.7 |
| 17.5° | 14.8  | 14.3  | 13.8  | 12.9  | 11.6  | 10.4  | 9.1  | 7.9  | 6.2  | 4.2   | 3.3 |
| 20°   | 26.7  | 26.3  | 23.2  | 20.8  | 16.8  | 14.0  | 11.4 | 9.5  | 6.7  | 3.9   | 3.0 |
| 22.5° | 55.1  | 51.4  | 46.2  | 37.9  | 29.5  | 21.7  | 15.8 | 12.0 | 7.2  | 3.6   | 2.6 |
| 25°   | 99.3  | 93.5  | 82.4  | 66.3  | 48.9  | 34.6  | 22.9 | 15.6 | 8.0  | 3.2   | 2.3 |
| 27.5° | 150.3 | 144.5 | 127.3 | 105.0 | 76.7  | 52.3  | 32.6 | 20.7 | 9.1  | 2.9   | 2.0 |
| 30°   | 204.7 | 199.7 | 177.9 | 147.1 | 108.1 | 73.2  | 43.7 | 25.8 | 10.2 | 2.5   | 1.7 |
| 31°   | 226.6 | 220.2 | 196.6 | 163.8 | 122.8 | 81.8  | 48.2 | 28.0 | 10.6 | 2.4   | 1.7 |
| 32°   | 246.7 | 239.5 | 215.1 | 179.9 | 134.8 | 91.2  | 53.0 | 29.9 | 11.0 | 2.3   | 1.6 |
| 33°   | 264.1 | 255.6 | 232.1 | 195.1 | 148.0 | 99.9  | 58.1 | 31.8 | 11.3 | 2.1   | 1.5 |
| 34°   | 278.8 | 271.5 | 246.2 | 210.3 | 159.7 | 108.3 | 63.1 | 33.6 | 11.4 | 2.0   | 1.4 |
| 35°   | 291.4 | 284.8 | 259.7 | 221.9 | 171.1 | 116.4 | 67.6 | 35.3 | 11.4 | 1.8   | 1.4 |
| 36°   | 299.9 | 294.1 | 271.4 | 233.8 | 180.7 | 123.3 | 71.5 | 36.9 | 11.4 | 1.7   | 1.3 |
| 37°   | 304.5 | 298.9 | 279.1 | 243.6 | 190.1 | 130.1 | 74.9 | 38.1 | 11.3 | 1.6   | 1.2 |
| 38°   | 306.8 | 302.0 | 284.8 | 251.5 | 196.6 | 135.0 | 78.0 | 39.1 | 11.3 | 1.4   | 1.2 |
| 39°   | 307.4 | 303.3 | 288.3 | 257.3 | 203.0 | 139.9 | 80.2 | 39.6 | 11.0 | 1.3   | 1.1 |
| 40°   | 307.0 | 303.4 | 290.3 | 262.4 | 207.9 | 143.7 | 81.7 | 39.8 | 10.7 | 1.1   | 1.1 |
| 41°   | 306.1 | 303.3 | 291.7 | 266.0 | 211.8 | 146.1 | 82.4 | 39.4 | 10.4 | 1.0   | 1.0 |
| 42°   | 305.4 | 302.3 | 292.3 | 268.5 | 214.5 | 147.4 | 82.3 | 38.7 | 9.9  | 0.9   | 1.0 |
| 43°   | 305.4 | 301.9 | 292.4 | 270.0 | 215.8 | 147.4 | 81.2 | 37.4 | 9.2  | 0.8   | 1.0 |
| 44°   | 304.8 | 301.6 | 292.8 | 271.1 | 216.2 | 146.7 | 79.6 | 36.0 | 8.4  | 0.7   | 1.0 |
| 45°   | 303.9 | 300.5 | 292.7 | 271.2 | 215.6 | 144.7 | 76.9 | 34.2 | 7.7  | 0.5   | 1.0 |
| 46°   | 302.0 | 299.0 | 291.9 | 270.5 | 213.7 | 141.9 | 73.6 | 32.4 | 6.9  | 0.4   | 0.9 |
| 47°   | 298.4 | 296.0 | 289.8 | 268.5 | 211.0 | 137.8 | 69.8 | 30.3 | 6.3  | 0.3   | 0.9 |
| 48°   | 292.1 | 290.4 | 286.2 | 263.8 | 205.6 | 132.8 | 65.7 | 28.0 | 5.7  | 0.3   | 0.9 |
| 49°   | 280.6 | 279.3 | 276.8 | 256.4 | 198.8 | 126.6 | 61.2 | 25.5 | 5.1  | 0.3   | 0.9 |
| 50°   | 271.5 | 270.1 | 265.1 | 243.9 | 189.1 | 118.7 | 56.4 | 22.9 | 4.4  | 0.2   | 0.8 |
| 51°   | 265.5 | 263.2 | 255.4 | 229.5 | 174.8 | 108.3 | 51.0 | 20.4 | 3.7  | 0.2   | 0.8 |
| 52°   | 257.9 | 254.5 | 244.7 | 216.5 | 161.8 | 97.8  | 45.3 | 17.9 | 3.2  | 0.2   | 0.8 |
| 53°   | 242.0 | 240.8 | 231.1 | 202.5 | 148.8 | 87.8  | 39.3 | 15.8 | 2.8  | 0.2   | 0.8 |
| 54°   | 228.1 | 226.3 | 213.1 | 183.1 | 134.7 | 76.6  | 33.2 | 14.0 | 2.4  | 0.2   | 0.8 |
| 55°   | 213.1 | 209.6 | 197.9 | 166.8 | 118.1 | 66.3  | 27.4 | 12.0 | 1.9  | 0.2   | 0.7 |
| 56°   | 194.2 | 191.1 | 178.5 | 149.4 | 102.9 | 55.8  | 22.9 | 9.9  | 1.5  | 0.2   | 0.7 |
| 57°   | 171.2 | 168.3 | 158.6 | 127.9 | 87.0  | 45.6  | 18.7 | 7.9  | 1.1  | 0.2   | 0.7 |
| 58°   | 148.9 | 145.7 | 134.6 | 107.3 | 70.2  | 36.2  | 15.6 | 6.5  | 0.9  | 0.2   | 0.7 |
| 59°   | 131.8 | 127.5 | 113.2 | 90.1  | 55.0  | 27.5  | 12.4 | 5.1  | 0.6  | 0.2   | 0.7 |
| 60°   | 117.6 | 114.0 | 99.2  | 75.0  | 43.1  | 20.2  | 9.2  | 3.9  | 0.3  | 0.2   | 0.7 |
| 62.5° | 68.1  | 67.2  | 53.8  | 38.6  | 20.3  | 9.4   | 4.5  | 1.8  | 0.2  | 0.3   | 0.7 |
| 65°   | 20.3  | 17.7  | 13.8  | 8.2   | 5.2   | 3.1   | 1.7  | 0.6  | 0.1  | 0.3   | 0.6 |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 | 0.2 | 0.1 | 0.3   | 0.6 |
| 70°   | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.3   | 0.5 |
| 72.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3   | 0.4 |
| 75°   | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3   | 0.4 |
| 77.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3   | 0.4 |
| 80°   | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.3 |
| 82.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.3 |
| 85°   | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 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: P1335810

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**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 4.9    | 4.9  | 4.9    | 4.9  |
| 2.5°  | 4.7    | 4.6  | 4.5    | 4.5  |
| 5°    | 4.5    | 4.4  | 4.4    | 4.3  |
| 7.5°  | 4.3    | 4.1  | 4.1    | 4.1  |
| 10°   | 4.0    | 3.9  | 3.9    | 3.8  |
| 12.5° | 3.7    | 3.7  | 3.7    | 3.7  |
| 15°   | 3.4    | 3.4  | 3.5    | 3.5  |
| 17.5° | 3.1    | 3.1  | 3.3    | 3.4  |
| 20°   | 2.8    | 3.0  | 3.1    | 3.2  |
| 22.5° | 2.6    | 2.8  | 3.1    | 3.1  |
| 25°   | 2.4    | 2.6  | 3.0    | 3.1  |
| 27.5° | 2.2    | 2.5  | 2.8    | 3.0  |
| 30°   | 2.0    | 2.4  | 2.7    | 2.9  |
| 31°   | 2.0    | 2.4  | 2.7    | 2.9  |
| 32°   | 1.9    | 2.3  | 2.7    | 2.8  |
| 33°   | 1.9    | 2.3  | 2.7    | 2.8  |
| 34°   | 1.8    | 2.3  | 2.6    | 2.8  |
| 35°   | 1.8    | 2.3  | 2.6    | 2.8  |
| 36°   | 1.7    | 2.2  | 2.6    | 2.8  |
| 37°   | 1.7    | 2.2  | 2.6    | 2.8  |
| 38°   | 1.7    | 2.2  | 2.6    | 2.8  |
| 39°   | 1.7    | 2.2  | 2.6    | 2.8  |
| 40°   | 1.7    | 2.2  | 2.6    | 2.8  |
| 41°   | 1.6    | 2.2  | 2.6    | 2.8  |
| 42°   | 1.6    | 2.2  | 2.6    | 2.8  |
| 43°   | 1.6    | 2.1  | 2.6    | 2.8  |
| 44°   | 1.6    | 2.1  | 2.6    | 2.8  |
| 45°   | 1.5    | 2.1  | 2.6    | 2.8  |
| 46°   | 1.5    | 2.1  | 2.6    | 2.8  |
| 47°   | 1.5    | 2.1  | 2.6    | 2.8  |
| 48°   | 1.5    | 2.1  | 2.6    | 2.8  |
| 49°   | 1.5    | 2.1  | 2.6    | 2.8  |
| 50°   | 1.4    | 2.0  | 2.6    | 2.8  |
| 51°   | 1.4    | 2.0  | 2.6    | 2.8  |
| 52°   | 1.4    | 2.0  | 2.6    | 2.8  |
| 53°   | 1.4    | 2.0  | 2.6    | 2.8  |
| 54°   | 1.3    | 2.0  | 2.6    | 2.8  |
| 55°   | 1.3    | 2.0  | 2.6    | 2.8  |
| 56°   | 1.3    | 2.0  | 2.6    | 2.7  |
| 57°   | 1.3    | 2.0  | 2.5    | 2.7  |
| 58°   | 1.3    | 1.9  | 2.5    | 2.7  |
| 59°   | 1.3    | 1.9  | 2.5    | 2.7  |
| 60°   | 1.3    | 1.9  | 2.5    | 2.7  |
| 62.5° | 1.2    | 1.9  | 2.4    | 2.6  |
| 65°   | 1.1    | 1.7  | 2.4    | 2.5  |



TEST NUMBER: P1335810

CATALOG NUMBER: P3A02R409830DE010 E3A451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 1.1    | 1.7  | 2.3    | 2.4  |
| 70°   | 1.0    | 1.6  | 2.2    | 2.4  |
| 72.5° | 0.9    | 1.5  | 2.0    | 2.2  |
| 75°   | 0.8    | 1.3  | 1.8    | 2.0  |
| 77.5° | 0.7    | 1.1  | 1.7    | 1.7  |
| 80°   | 0.6    | 1.0  | 1.4    | 1.6  |
| 82.5° | 0.4    | 0.7  | 1.1    | 1.2  |
| 85°   | 0.3    | 0.5  | 0.8    | 0.9  |
| 87.5° | 0.3    | 0.3  | 0.4    | 0.4  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)