

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: P1335666

Luminaire Tested: P3A02R409030DE010 E3A451MW

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335666  
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: P3A02R409030DE010 E3A451MW  
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 90CRI , E3A451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

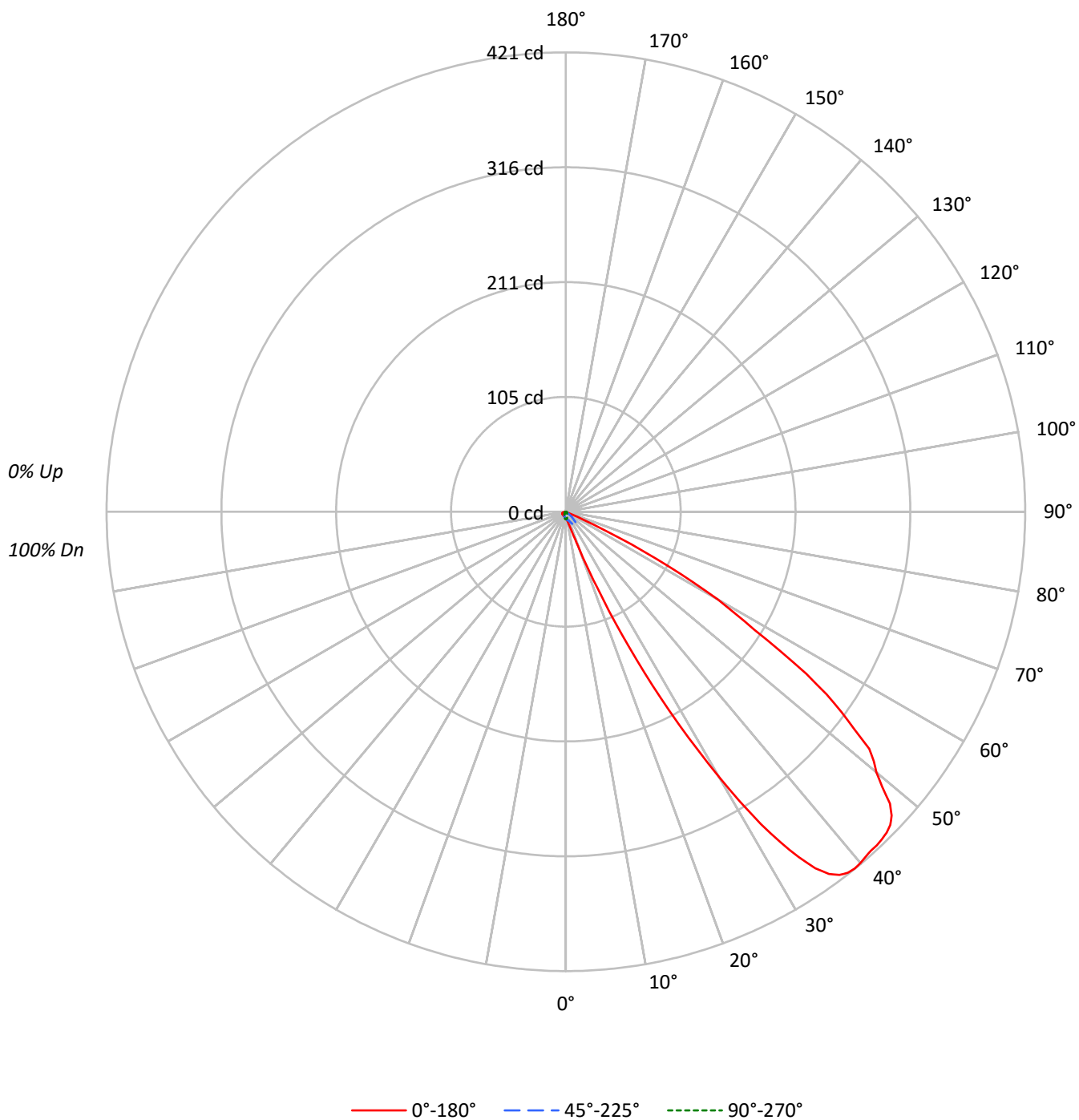
Lumens per Lamp: N/A  
Luminaire Lumens: 130.0 lumens  
Efficiency: N/A  
Efficacy: 36.1 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P1335666

CATALOG NUMBER: P3A02R409030DE010 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°  | 1469   | 1469 | 1469 | 1469 | 1469 |
| 5°  | 1629   | 1585 | 1453 | 1321 | 1277 |
| 10° | 1959   | 1670 | 1336 | 1202 | 1180 |
| 15° | 3224   | 1816 | 1135 | 1067 | 1090 |
| 20° | 8517   | 2147 | 957  | 957  | 1027 |
| 25° | 32881  | 2661 | 750  | 871  | 1016 |
| 30° | 70922  | 3545 | 608  | 836  | 987  |
| 35° | 106756 | 4176 | 509  | 830  | 1017 |
| 40° | 120254 | 4208 | 458  | 859  | 1088 |
| 45° | 128944 | 3256 | 403  | 899  | 1178 |
| 50° | 126734 | 2047 | 375  | 921  | 1296 |
| 55° | 111518 | 994  | 382  | 1032 | 1453 |
| 60° | 70565  | 219  | 439  | 1140 | 1623 |
| 65° | 14424  | 52   | 415  | 1245 | 1816 |
| 70° | 321    | 64   | 449  | 1346 | 2052 |
| 75° | 339    | 169  | 508  | 1525 | 2288 |
| 80° | 253    | 126  | 631  | 1642 | 2652 |
| 85° | 252    | 252  | 1258 | 1761 | 3019 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 131279 cd/sqm

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CATALOG NUMBER: P3A02R409030DE010 E3A451MW

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.6    | 0.5       |
| 10°-20°   | 2.1    | 1.6       |
| 20°-30°   | 10.1   | 7.8       |
| 30°-40°   | 32.8   | 25.3      |
| 40°-50°   | 45.3   | 34.8      |
| 50°-60°   | 31.5   | 24.3      |
| 60°-70°   | 6.0    | 4.6       |
| 70°-80°   | 1.1    | 0.8       |
| 80°-90°   | 0.5    | 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°    | 12.8   | 9.8       |
| 0°-40°    | 45.6   | 35.1      |
| 0°-60°    | 122.4  | 94.2      |
| 0°-90°    | 130.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 130.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 7   | 7   | 7   | 7    | 7    |      |
| 5°  | 7   | 7   | 7   | 6    | 6    | 1    |
| 15° | 14  | 8   | 5   | 5    | 5    | 5    |
| 25° | 136 | 11  | 3   | 4    | 4    | 70   |
| 35° | 399 | 16  | 2   | 3    | 4    | 241  |
| 45° | 416 | 10  | 1   | 3    | 4    | 316  |
| 55° | 292 | 3   | 1   | 3    | 4    | 249  |
| 65° | 28  | 0   | 1   | 2    | 4    | 49   |
| 75° | 0   | 0   | 1   | 2    | 3    | 0    |
| 85° | 0   | 0   | 0   | 1    | 1    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1335666

CATALOG NUMBER: P3A02R409030DE010 E3A451MW

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°  | 45°  | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-----|
| 0°    | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   | 6.7  | 6.7  | 6.7   | 6.7 |
| 2.5°  | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   | 6.9  | 6.9  | 6.8   | 6.7 |
| 5°    | 7.4   | 7.4   | 7.4   | 7.4   | 7.3   | 7.3   | 7.3   | 7.2  | 7.2  | 6.9   | 6.6 |
| 7.5°  | 7.9   | 7.9   | 7.9   | 7.9   | 7.8   | 7.6   | 7.5   | 7.5  | 7.4  | 6.8   | 6.3 |
| 10°   | 8.8   | 8.8   | 8.7   | 8.6   | 8.5   | 8.2   | 8.1   | 7.9  | 7.5  | 6.7   | 6.0 |
| 12.5° | 10.7  | 10.5  | 10.4  | 10.1  | 9.8   | 9.3   | 8.8   | 8.5  | 7.6  | 6.4   | 5.6 |
| 15°   | 14.2  | 14.0  | 13.5  | 12.8  | 12.1  | 11.1  | 10.3  | 9.4  | 8.0  | 6.1   | 5.0 |
| 17.5° | 20.3  | 19.6  | 18.9  | 17.7  | 15.9  | 14.2  | 12.4  | 10.9 | 8.5  | 5.7   | 4.5 |
| 20°   | 36.5  | 36.1  | 31.8  | 28.4  | 23.0  | 19.2  | 15.6  | 13.0 | 9.2  | 5.4   | 4.1 |
| 22.5° | 75.3  | 70.3  | 63.3  | 51.8  | 40.4  | 29.7  | 21.6  | 16.4 | 9.9  | 4.9   | 3.6 |
| 25°   | 135.9 | 128.0 | 112.8 | 90.7  | 67.0  | 47.4  | 31.3  | 21.4 | 11.0 | 4.4   | 3.1 |
| 27.5° | 205.7 | 197.7 | 174.2 | 143.7 | 104.9 | 71.5  | 44.7  | 28.3 | 12.4 | 3.9   | 2.7 |
| 30°   | 280.1 | 273.3 | 243.4 | 201.3 | 147.9 | 100.2 | 59.8  | 35.3 | 14.0 | 3.5   | 2.4 |
| 31°   | 310.0 | 301.3 | 269.1 | 224.2 | 168.1 | 112.0 | 65.9  | 38.3 | 14.6 | 3.3   | 2.3 |
| 32°   | 337.6 | 327.7 | 294.3 | 246.2 | 184.5 | 124.8 | 72.6  | 40.9 | 15.0 | 3.1   | 2.1 |
| 33°   | 361.4 | 349.8 | 317.6 | 266.9 | 202.5 | 136.7 | 79.5  | 43.5 | 15.4 | 2.9   | 2.0 |
| 34°   | 381.6 | 371.5 | 336.9 | 287.8 | 218.5 | 148.2 | 86.3  | 46.0 | 15.6 | 2.7   | 1.9 |
| 35°   | 398.8 | 389.7 | 355.4 | 303.7 | 234.1 | 159.3 | 92.5  | 48.4 | 15.6 | 2.5   | 1.9 |
| 36°   | 410.3 | 402.5 | 371.4 | 320.0 | 247.3 | 168.7 | 97.8  | 50.5 | 15.6 | 2.3   | 1.8 |
| 37°   | 416.7 | 409.0 | 381.9 | 333.3 | 260.1 | 178.0 | 102.6 | 52.2 | 15.5 | 2.1   | 1.7 |
| 38°   | 419.9 | 413.2 | 389.7 | 344.2 | 269.1 | 184.7 | 106.7 | 53.5 | 15.4 | 1.9   | 1.7 |
| 39°   | 420.7 | 415.1 | 394.6 | 352.1 | 277.8 | 191.4 | 109.7 | 54.2 | 15.0 | 1.8   | 1.6 |
| 40°   | 420.1 | 415.2 | 397.2 | 359.1 | 284.5 | 196.6 | 111.9 | 54.4 | 14.7 | 1.6   | 1.6 |
| 41°   | 418.9 | 415.1 | 399.1 | 364.0 | 289.9 | 200.0 | 112.7 | 54.0 | 14.2 | 1.3   | 1.4 |
| 42°   | 417.9 | 413.7 | 399.9 | 367.4 | 293.6 | 201.6 | 112.6 | 53.0 | 13.5 | 1.2   | 1.4 |
| 43°   | 417.9 | 413.1 | 400.1 | 369.5 | 295.4 | 201.8 | 111.1 | 51.2 | 12.5 | 1.1   | 1.3 |
| 44°   | 417.1 | 412.7 | 400.7 | 370.9 | 295.8 | 200.7 | 108.9 | 49.3 | 11.5 | 1.0   | 1.3 |
| 45°   | 415.8 | 411.2 | 400.5 | 371.1 | 295.0 | 198.1 | 105.2 | 46.8 | 10.5 | 0.7   | 1.3 |
| 46°   | 413.3 | 409.1 | 399.5 | 370.2 | 292.5 | 194.2 | 100.8 | 44.3 | 9.4  | 0.6   | 1.2 |
| 47°   | 408.3 | 405.1 | 396.6 | 367.4 | 288.7 | 188.6 | 95.5  | 41.4 | 8.6  | 0.5   | 1.2 |
| 48°   | 399.7 | 397.4 | 391.7 | 361.0 | 281.4 | 181.7 | 89.9  | 38.3 | 7.8  | 0.5   | 1.2 |
| 49°   | 383.9 | 382.2 | 378.8 | 350.9 | 272.1 | 173.2 | 83.8  | 34.9 | 6.9  | 0.4   | 1.2 |
| 50°   | 371.5 | 369.6 | 362.8 | 333.8 | 258.7 | 162.5 | 77.1  | 31.4 | 6.0  | 0.2   | 1.1 |
| 51°   | 363.3 | 360.2 | 349.4 | 314.0 | 239.3 | 148.2 | 69.8  | 27.9 | 5.0  | 0.2   | 1.1 |
| 52°   | 352.9 | 348.3 | 334.9 | 296.2 | 221.5 | 133.8 | 62.0  | 24.5 | 4.4  | 0.2   | 1.1 |
| 53°   | 331.2 | 329.5 | 316.3 | 277.1 | 203.7 | 120.1 | 53.8  | 21.6 | 3.8  | 0.2   | 1.1 |
| 54°   | 312.2 | 309.7 | 291.7 | 250.6 | 184.3 | 104.8 | 45.5  | 19.1 | 3.2  | 0.2   | 1.1 |
| 55°   | 291.7 | 286.8 | 270.8 | 228.3 | 161.6 | 90.7  | 37.5  | 16.5 | 2.6  | 0.2   | 1.0 |
| 56°   | 265.8 | 261.5 | 244.3 | 204.4 | 140.8 | 76.4  | 31.4  | 13.5 | 2.0  | 0.2   | 1.0 |
| 57°   | 234.2 | 230.3 | 217.0 | 175.0 | 119.0 | 62.4  | 25.5  | 10.9 | 1.6  | 0.2   | 1.0 |
| 58°   | 203.8 | 199.4 | 184.2 | 146.8 | 96.1  | 49.5  | 21.4  | 8.8  | 1.2  | 0.2   | 1.0 |
| 59°   | 180.4 | 174.4 | 154.8 | 123.3 | 75.2  | 37.6  | 17.0  | 7.0  | 0.8  | 0.2   | 1.0 |
| 60°   | 160.9 | 156.0 | 135.7 | 102.7 | 59.0  | 27.7  | 12.5  | 5.4  | 0.5  | 0.2   | 1.0 |
| 62.5° | 93.2  | 91.9  | 73.7  | 52.9  | 27.8  | 12.9  | 6.2   | 2.5  | 0.2  | 0.4   | 1.0 |
| 65°   | 27.8  | 24.2  | 18.9  | 11.2  | 7.2   | 4.3   | 2.3   | 0.8  | 0.1  | 0.4   | 0.8 |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.5 | 0.2 | 0.1 | 0.4   | 0.8 |
| 70°   | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4   | 0.7 |
| 72.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.4   | 0.6 |
| 75°   | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.4   | 0.6 |
| 77.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.4   | 0.6 |
| 80°   | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4   | 0.5 |
| 82.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4   | 0.5 |
| 85°   | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.4   | 0.5 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.4   | 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: P1335666

CATALOG NUMBER: P3A02R409030DE010 E3A451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 6.7    | 6.7  | 6.7    | 6.7  |
| 2.5°  | 6.4    | 6.3  | 6.2    | 6.2  |
| 5°    | 6.2    | 6.0  | 6.0    | 5.8  |
| 7.5°  | 5.8    | 5.6  | 5.6    | 5.6  |
| 10°   | 5.5    | 5.4  | 5.4    | 5.3  |
| 12.5° | 5.0    | 5.0  | 5.0    | 5.0  |
| 15°   | 4.7    | 4.7  | 4.8    | 4.8  |
| 17.5° | 4.2    | 4.3  | 4.5    | 4.7  |
| 20°   | 3.8    | 4.1  | 4.3    | 4.4  |
| 22.5° | 3.6    | 3.8  | 4.2    | 4.3  |
| 25°   | 3.2    | 3.6  | 4.1    | 4.2  |
| 27.5° | 3.0    | 3.5  | 3.8    | 4.1  |
| 30°   | 2.7    | 3.3  | 3.7    | 3.9  |
| 31°   | 2.7    | 3.2  | 3.7    | 3.9  |
| 32°   | 2.6    | 3.1  | 3.7    | 3.8  |
| 33°   | 2.6    | 3.1  | 3.7    | 3.8  |
| 34°   | 2.5    | 3.1  | 3.6    | 3.8  |
| 35°   | 2.5    | 3.1  | 3.6    | 3.8  |
| 36°   | 2.4    | 3.0  | 3.6    | 3.8  |
| 37°   | 2.4    | 3.0  | 3.6    | 3.8  |
| 38°   | 2.3    | 3.0  | 3.6    | 3.8  |
| 39°   | 2.3    | 3.0  | 3.6    | 3.8  |
| 40°   | 2.3    | 3.0  | 3.6    | 3.8  |
| 41°   | 2.1    | 3.0  | 3.6    | 3.8  |
| 42°   | 2.1    | 3.0  | 3.6    | 3.8  |
| 43°   | 2.1    | 2.9  | 3.6    | 3.8  |
| 44°   | 2.1    | 2.9  | 3.6    | 3.8  |
| 45°   | 2.0    | 2.9  | 3.6    | 3.8  |
| 46°   | 2.0    | 2.9  | 3.6    | 3.8  |
| 47°   | 2.0    | 2.9  | 3.6    | 3.8  |
| 48°   | 2.0    | 2.9  | 3.6    | 3.8  |
| 49°   | 2.0    | 2.9  | 3.6    | 3.8  |
| 50°   | 1.9    | 2.7  | 3.6    | 3.8  |
| 51°   | 1.9    | 2.7  | 3.6    | 3.8  |
| 52°   | 1.9    | 2.7  | 3.6    | 3.8  |
| 53°   | 1.9    | 2.7  | 3.6    | 3.8  |
| 54°   | 1.8    | 2.7  | 3.6    | 3.8  |
| 55°   | 1.8    | 2.7  | 3.6    | 3.8  |
| 56°   | 1.8    | 2.7  | 3.6    | 3.7  |
| 57°   | 1.8    | 2.7  | 3.5    | 3.7  |
| 58°   | 1.8    | 2.6  | 3.5    | 3.7  |
| 59°   | 1.8    | 2.6  | 3.5    | 3.7  |
| 60°   | 1.8    | 2.6  | 3.5    | 3.7  |
| 62.5° | 1.7    | 2.6  | 3.3    | 3.6  |
| 65°   | 1.6    | 2.4  | 3.3    | 3.5  |



TEST NUMBER: P1335666

CATALOG NUMBER: P3A02R409030DE010 E3A451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 1.6    | 2.3  | 3.1    | 3.3  |
| 70°   | 1.4    | 2.1  | 3.0    | 3.2  |
| 72.5° | 1.2    | 2.0  | 2.7    | 3.0  |
| 75°   | 1.1    | 1.8  | 2.5    | 2.7  |
| 77.5° | 1.0    | 1.6  | 2.3    | 2.4  |
| 80°   | 0.8    | 1.3  | 1.9    | 2.1  |
| 82.5° | 0.6    | 1.0  | 1.6    | 1.7  |
| 85°   | 0.5    | 0.7  | 1.1    | 1.2  |
| 87.5° | 0.4    | 0.4  | 0.6    | 0.6  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)