

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: P1335617

Luminaire Tested: P3A02R409024DE010 E3A451LI

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1335617  
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: P3A02R409024DE010 E3A451LI  
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3A451LI TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

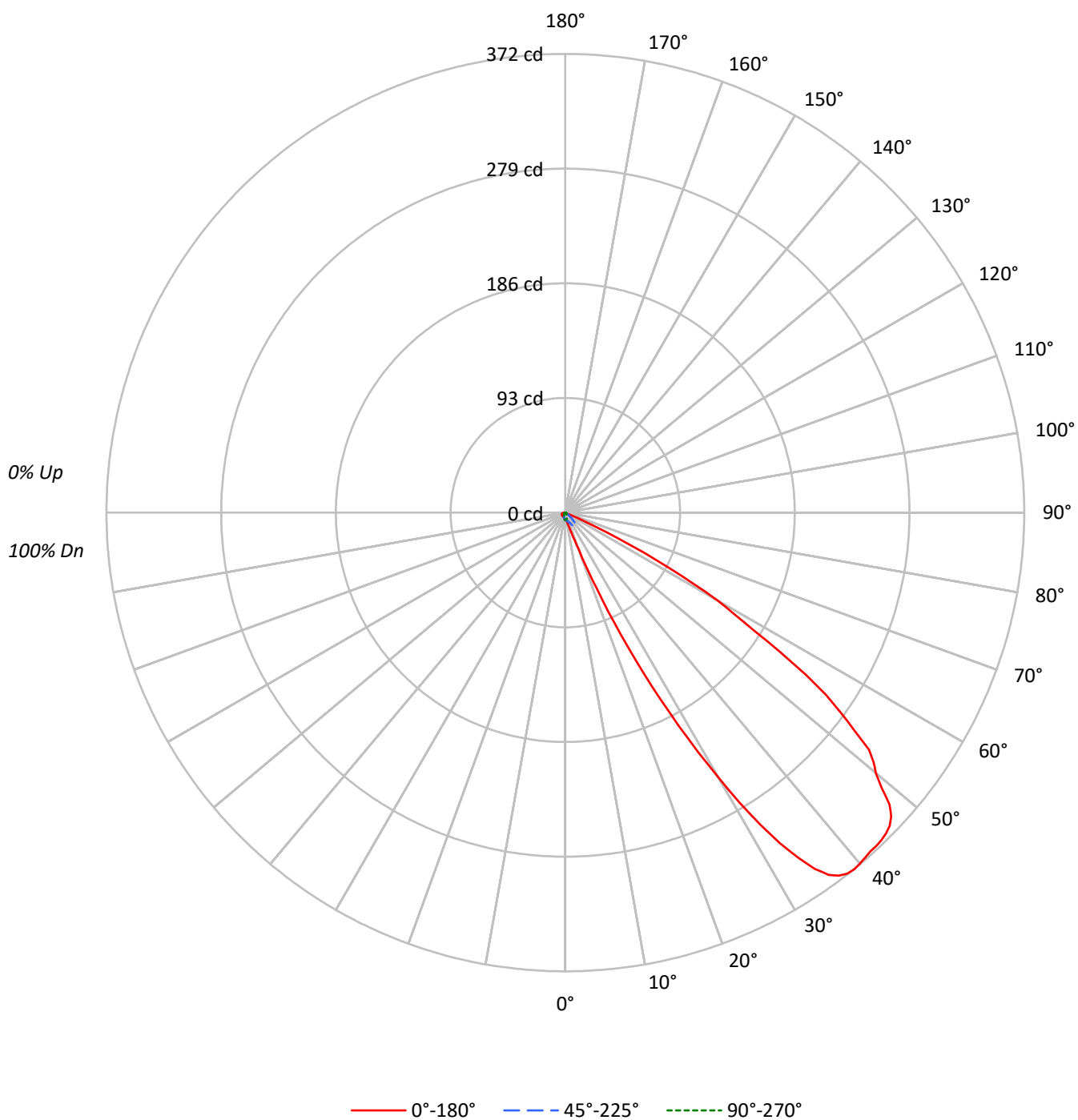
Lumens per Lamp: N/A  
Luminaire Lumens: 115.0 lumens  
Efficiency: N/A  
Efficacy: 31.9 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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: P3A02R409024DE010 E3A451LI

### 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°  | 1294   | 1294 | 1294 | 1294 | 1294 |
| 5°  | 1431   | 1387 | 1277 | 1167 | 1145 |
| 10° | 1737   | 1492 | 1180 | 1069 | 1024 |
| 15° | 2860   | 1612 | 999  | 931  | 953  |
| 20° | 7537   | 1890 | 840  | 840  | 910  |
| 25° | 29082  | 2347 | 653  | 774  | 895  |
| 30° | 62744  | 3140 | 532  | 760  | 886  |
| 35° | 94415  | 3694 | 455  | 723  | 910  |
| 40° | 106371 | 3721 | 401  | 744  | 973  |
| 45° | 114058 | 2884 | 372  | 775  | 1054 |
| 50° | 112133 | 1808 | 341  | 819  | 1160 |
| 55° | 98634  | 879  | 306  | 918  | 1300 |
| 60° | 62451  | 175  | 351  | 1009 | 1447 |
| 65° | 12764  | 52   | 363  | 1090 | 1608 |
| 70° | 256    | 64   | 385  | 1218 | 1859 |
| 75° | 254    | 169  | 424  | 1356 | 2033 |
| 80° | 253    | 126  | 505  | 1515 | 2399 |
| 85° | 252    | 252  | 1006 | 1510 | 2768 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 116135 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 0.6    | 0.5       |
| 10°-20°   | 1.8    | 1.6       |
| 20°-30°   | 8.9    | 7.8       |
| 30°-40°   | 29.1   | 25.3      |
| 40°-50°   | 40.1   | 34.8      |
| 50°-60°   | 27.9   | 24.3      |
| 60°-70°   | 5.3    | 4.6       |
| 70°-80°   | 0.9    | 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       |
| <hr/>     |        |           |
| 0°-30°    | 11.3   | 9.8       |
| 0°-40°    | 40.4   | 35.1      |
| 0°-60°    | 108.3  | 94.2      |
| 0°-90°    | 115.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 115.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 6   | 6   | 6   | 6    | 6    |      |
| 5°  | 6   | 6   | 6   | 5    | 5    | 1    |
| 15° | 13  | 7   | 4   | 4    | 4    | 5    |
| 25° | 120 | 10  | 3   | 3    | 4    | 62   |
| 35° | 353 | 14  | 2   | 3    | 3    | 213  |
| 45° | 368 | 9   | 1   | 2    | 3    | 280  |
| 55° | 258 | 2   | 1   | 2    | 3    | 221  |
| 65° | 25  | 0   | 1   | 2    | 3    | 44   |
| 75° | 0   | 0   | 0   | 2    | 2    | 0    |
| 85° | 0   | 0   | 0   | 1    | 1    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°  | 35°  | 45°  | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|-----|
| 0°    | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9   | 5.9  | 5.9  | 5.9  | 5.9   | 5.9 |
| 2.5°  | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1   | 6.1  | 6.1  | 6.1  | 6.0   | 5.9 |
| 5°    | 6.5   | 6.5   | 6.5   | 6.5   | 6.4   | 6.4   | 6.4  | 6.3  | 6.3  | 6.1   | 5.8 |
| 7.5°  | 7.0   | 7.0   | 7.0   | 7.0   | 6.9   | 6.8   | 6.7  | 6.7  | 6.5  | 6.0   | 5.6 |
| 10°   | 7.8   | 7.8   | 7.7   | 7.6   | 7.5   | 7.3   | 7.2  | 7.0  | 6.7  | 5.9   | 5.3 |
| 12.5° | 9.5   | 9.3   | 9.2   | 9.0   | 8.7   | 8.2   | 7.8  | 7.5  | 6.8  | 5.7   | 5.0 |
| 15°   | 12.6  | 12.4  | 11.9  | 11.3  | 10.7  | 9.8   | 9.1  | 8.3  | 7.1  | 5.4   | 4.4 |
| 17.5° | 18.0  | 17.3  | 16.7  | 15.6  | 14.0  | 12.6  | 11.0 | 9.6  | 7.5  | 5.1   | 4.0 |
| 20°   | 32.3  | 31.9  | 28.1  | 25.1  | 20.4  | 17.0  | 13.8 | 11.5 | 8.1  | 4.8   | 3.6 |
| 22.5° | 66.6  | 62.2  | 56.0  | 45.8  | 35.7  | 26.3  | 19.1 | 14.5 | 8.8  | 4.3   | 3.2 |
| 25°   | 120.2 | 113.2 | 99.8  | 80.3  | 59.2  | 41.9  | 27.7 | 18.9 | 9.7  | 3.9   | 2.7 |
| 27.5° | 182.0 | 174.9 | 154.1 | 127.2 | 92.8  | 63.3  | 39.5 | 25.0 | 11.0 | 3.5   | 2.4 |
| 30°   | 247.8 | 241.7 | 215.3 | 178.1 | 130.9 | 88.6  | 52.9 | 31.3 | 12.4 | 3.1   | 2.1 |
| 31°   | 274.3 | 266.6 | 238.0 | 198.3 | 148.7 | 99.1  | 58.3 | 33.9 | 12.9 | 3.0   | 2.0 |
| 32°   | 298.7 | 289.9 | 260.3 | 217.8 | 163.2 | 110.4 | 64.2 | 36.2 | 13.3 | 2.7   | 1.9 |
| 33°   | 319.7 | 309.4 | 280.9 | 236.1 | 179.1 | 120.9 | 70.3 | 38.4 | 13.6 | 2.5   | 1.8 |
| 34°   | 337.5 | 328.7 | 298.0 | 254.6 | 193.3 | 131.1 | 76.4 | 40.7 | 13.8 | 2.4   | 1.7 |
| 35°   | 352.7 | 344.7 | 314.4 | 268.7 | 207.1 | 140.9 | 81.8 | 42.8 | 13.8 | 2.2   | 1.7 |
| 36°   | 363.0 | 356.0 | 328.6 | 283.0 | 218.7 | 149.2 | 86.5 | 44.7 | 13.8 | 2.0   | 1.6 |
| 37°   | 368.6 | 361.8 | 337.9 | 294.9 | 230.1 | 157.5 | 90.7 | 46.2 | 13.7 | 1.9   | 1.5 |
| 38°   | 371.4 | 365.5 | 344.7 | 304.5 | 238.0 | 163.4 | 94.4 | 47.3 | 13.6 | 1.7   | 1.5 |
| 39°   | 372.2 | 367.2 | 349.0 | 311.4 | 245.8 | 169.3 | 97.1 | 47.9 | 13.3 | 1.6   | 1.4 |
| 40°   | 371.6 | 367.3 | 351.4 | 317.7 | 251.7 | 173.9 | 99.0 | 48.2 | 13.0 | 1.4   | 1.4 |
| 41°   | 370.6 | 367.2 | 353.1 | 322.0 | 256.4 | 176.9 | 99.7 | 47.7 | 12.6 | 1.2   | 1.3 |
| 42°   | 369.6 | 365.9 | 353.8 | 325.0 | 259.7 | 178.4 | 99.6 | 46.9 | 11.9 | 1.1   | 1.3 |
| 43°   | 369.6 | 365.4 | 353.9 | 326.9 | 261.3 | 178.5 | 98.3 | 45.3 | 11.1 | 1.0   | 1.2 |
| 44°   | 369.0 | 365.1 | 354.4 | 328.1 | 261.7 | 177.5 | 96.3 | 43.6 | 10.1 | 0.8   | 1.2 |
| 45°   | 367.8 | 363.7 | 354.3 | 328.2 | 261.0 | 175.2 | 93.0 | 41.4 | 9.3  | 0.6   | 1.2 |
| 46°   | 365.6 | 361.9 | 353.4 | 327.5 | 258.7 | 171.8 | 89.1 | 39.2 | 8.3  | 0.5   | 1.1 |
| 47°   | 361.2 | 358.3 | 350.8 | 325.0 | 255.4 | 166.9 | 84.5 | 36.6 | 7.6  | 0.4   | 1.1 |
| 48°   | 353.6 | 351.6 | 346.5 | 319.4 | 248.9 | 160.7 | 79.5 | 33.9 | 6.9  | 0.4   | 1.1 |
| 49°   | 339.6 | 338.1 | 335.1 | 310.4 | 240.7 | 153.2 | 74.1 | 30.8 | 6.1  | 0.3   | 1.1 |
| 50°   | 328.7 | 327.0 | 321.0 | 295.3 | 228.9 | 143.7 | 68.2 | 27.8 | 5.3  | 0.2   | 1.0 |
| 51°   | 321.4 | 318.6 | 309.1 | 277.8 | 211.6 | 131.1 | 61.8 | 24.7 | 4.4  | 0.2   | 1.0 |
| 52°   | 312.2 | 308.1 | 296.2 | 262.0 | 195.9 | 118.4 | 54.8 | 21.7 | 3.9  | 0.2   | 1.0 |
| 53°   | 293.0 | 291.5 | 279.8 | 245.1 | 180.2 | 106.2 | 47.6 | 19.1 | 3.4  | 0.2   | 1.0 |
| 54°   | 276.2 | 274.0 | 258.0 | 221.7 | 163.1 | 92.7  | 40.2 | 16.9 | 2.9  | 0.2   | 1.0 |
| 55°   | 258.0 | 253.7 | 239.5 | 201.9 | 143.0 | 80.3  | 33.2 | 14.6 | 2.3  | 0.2   | 0.8 |
| 56°   | 235.1 | 231.3 | 216.1 | 180.8 | 124.5 | 67.6  | 27.8 | 11.9 | 1.8  | 0.2   | 0.8 |
| 57°   | 207.2 | 203.7 | 192.0 | 154.8 | 105.3 | 55.2  | 22.6 | 9.6  | 1.4  | 0.2   | 0.8 |
| 58°   | 180.3 | 176.4 | 163.0 | 129.9 | 85.0  | 43.8  | 18.9 | 7.8  | 1.1  | 0.2   | 0.8 |
| 59°   | 159.6 | 154.3 | 137.0 | 109.1 | 66.5  | 33.3  | 15.0 | 6.2  | 0.7  | 0.2   | 0.8 |
| 60°   | 142.4 | 138.0 | 120.1 | 90.8  | 52.2  | 24.5  | 11.1 | 4.8  | 0.4  | 0.2   | 0.8 |
| 62.5° | 82.5  | 81.3  | 65.2  | 46.8  | 24.6  | 11.4  | 5.5  | 2.2  | 0.2  | 0.3   | 0.8 |
| 65°   | 24.6  | 21.4  | 16.7  | 9.9   | 6.3   | 3.8   | 2.0  | 0.7  | 0.1  | 0.3   | 0.7 |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.4 | 0.2 | 0.1 | 0.3   | 0.7 |
| 70°   | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.3   | 0.6 |
| 72.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3   | 0.5 |
| 75°   | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3   | 0.5 |
| 77.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3   | 0.5 |
| 80°   | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.4 |
| 82.5° | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.4 |
| 85°   | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3   | 0.4 |
| 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: P1335617

CATALOG NUMBER: P3A02R409024DE010 E3A451LI

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 5.9    | 5.9  | 5.9    | 5.9  |
| 2.5°  | 5.7    | 5.6  | 5.5    | 5.5  |
| 5°    | 5.5    | 5.3  | 5.3    | 5.2  |
| 7.5°  | 5.2    | 5.0  | 5.0    | 5.0  |
| 10°   | 4.9    | 4.8  | 4.8    | 4.6  |
| 12.5° | 4.4    | 4.4  | 4.4    | 4.4  |
| 15°   | 4.1    | 4.1  | 4.2    | 4.2  |
| 17.5° | 3.7    | 3.8  | 4.0    | 4.1  |
| 20°   | 3.4    | 3.6  | 3.8    | 3.9  |
| 22.5° | 3.2    | 3.4  | 3.7    | 3.8  |
| 25°   | 2.9    | 3.2  | 3.6    | 3.7  |
| 27.5° | 2.6    | 3.1  | 3.4    | 3.6  |
| 30°   | 2.4    | 3.0  | 3.3    | 3.5  |
| 31°   | 2.4    | 2.9  | 3.3    | 3.5  |
| 32°   | 2.3    | 2.7  | 3.3    | 3.4  |
| 33°   | 2.3    | 2.7  | 3.3    | 3.4  |
| 34°   | 2.2    | 2.7  | 3.2    | 3.4  |
| 35°   | 2.2    | 2.7  | 3.2    | 3.4  |
| 36°   | 2.1    | 2.6  | 3.2    | 3.4  |
| 37°   | 2.1    | 2.6  | 3.2    | 3.4  |
| 38°   | 2.0    | 2.6  | 3.2    | 3.4  |
| 39°   | 2.0    | 2.6  | 3.2    | 3.4  |
| 40°   | 2.0    | 2.6  | 3.2    | 3.4  |
| 41°   | 1.9    | 2.6  | 3.2    | 3.4  |
| 42°   | 1.9    | 2.6  | 3.2    | 3.4  |
| 43°   | 1.9    | 2.5  | 3.2    | 3.4  |
| 44°   | 1.9    | 2.5  | 3.2    | 3.4  |
| 45°   | 1.8    | 2.5  | 3.2    | 3.4  |
| 46°   | 1.8    | 2.5  | 3.2    | 3.4  |
| 47°   | 1.8    | 2.5  | 3.2    | 3.4  |
| 48°   | 1.8    | 2.5  | 3.2    | 3.4  |
| 49°   | 1.8    | 2.5  | 3.2    | 3.4  |
| 50°   | 1.7    | 2.4  | 3.2    | 3.4  |
| 51°   | 1.7    | 2.4  | 3.2    | 3.4  |
| 52°   | 1.7    | 2.4  | 3.2    | 3.4  |
| 53°   | 1.7    | 2.4  | 3.2    | 3.4  |
| 54°   | 1.6    | 2.4  | 3.2    | 3.4  |
| 55°   | 1.6    | 2.4  | 3.2    | 3.4  |
| 56°   | 1.6    | 2.4  | 3.2    | 3.3  |
| 57°   | 1.6    | 2.4  | 3.1    | 3.3  |
| 58°   | 1.6    | 2.3  | 3.1    | 3.3  |
| 59°   | 1.6    | 2.3  | 3.1    | 3.3  |
| 60°   | 1.6    | 2.3  | 3.1    | 3.3  |
| 62.5° | 1.5    | 2.3  | 3.0    | 3.2  |
| 65°   | 1.4    | 2.1  | 3.0    | 3.1  |



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CATALOG NUMBER: P3A02R409024DE010 E3A451LI

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 1.4    | 2.0  | 2.7    | 3.0  |
| 70°   | 1.3    | 1.9  | 2.6    | 2.9  |
| 72.5° | 1.1    | 1.8  | 2.4    | 2.6  |
| 75°   | 1.0    | 1.6  | 2.2    | 2.4  |
| 77.5° | 0.8    | 1.4  | 2.0    | 2.1  |
| 80°   | 0.7    | 1.2  | 1.7    | 1.9  |
| 82.5° | 0.5    | 0.8  | 1.4    | 1.5  |
| 85°   | 0.4    | 0.6  | 1.0    | 1.1  |
| 87.5° | 0.3    | 0.3  | 0.5    | 0.5  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)