

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: P1338812

Luminaire Tested: P3A05R409024DE010 E3A451MW

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1338812  
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: P3A05R409024DE010 E3A451MW  
Description: 3in Adjustable LED luminaire with, R40 optic, 2400K CCT AND, 90CRI , E3A451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

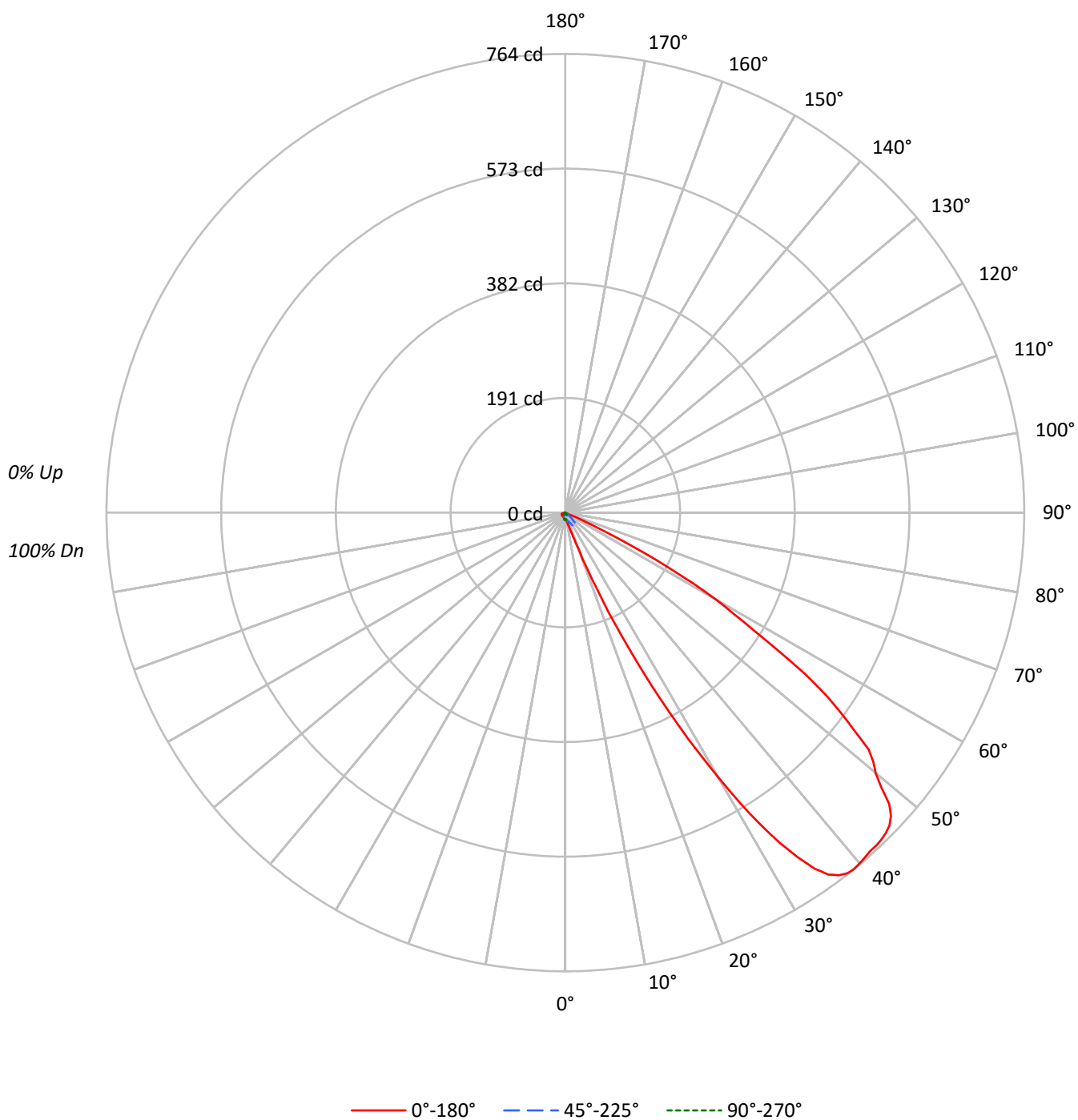
Lumens per Lamp: N/A  
Luminaire Lumens: 236.0 lumens  
Efficiency: N/A  
Efficacy: 32.8 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.74 / 1.55  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 7.2  
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: P1338812

CATALOG NUMBER: P3A05R409024DE010 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°  | 2653   | 2653 | 2653 | 2653 | 2653 |
| 5°  | 2950   | 2862 | 2619 | 2377 | 2333 |
| 10° | 3563   | 3050 | 2405 | 2182 | 2115 |
| 15° | 5857   | 3292 | 2066 | 1930 | 1975 |
| 20° | 15471  | 3897 | 1727 | 1727 | 1867 |
| 25° | 59665  | 4815 | 1355 | 1573 | 1839 |
| 30° | 128754 | 6431 | 1089 | 1545 | 1823 |
| 35° | 193782 | 7602 | 937  | 1499 | 1847 |
| 40° | 218323 | 7643 | 802  | 1546 | 1975 |
| 45° | 234102 | 5923 | 744  | 1613 | 2140 |
| 50° | 230099 | 3684 | 682  | 1706 | 2354 |
| 55° | 202430 | 1835 | 650  | 1912 | 2638 |
| 60° | 128148 | 395  | 746  | 2105 | 2938 |
| 65° | 26203  | 104  | 778  | 2231 | 3269 |
| 70° | 577    | 128  | 833  | 2500 | 3783 |
| 75° | 593    | 339  | 932  | 2796 | 4236 |
| 80° | 505    | 253  | 1137 | 3031 | 4925 |
| 85° | 503    | 503  | 2264 | 3271 | 5535 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 238316 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.1    | 0.5       |
| 10°-20°   | 3.7    | 1.6       |
| 20°-30°   | 18.3   | 7.8       |
| 30°-40°   | 59.6   | 25.3      |
| 40°-50°   | 82.2   | 34.8      |
| 50°-60°   | 57.3   | 24.3      |
| 60°-70°   | 10.9   | 4.6       |
| 70°-80°   | 2.0    | 0.8       |
| 80°-90°   | 0.9    | 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°    | 23.2   | 9.8       |
| 0°-40°    | 82.8   | 35.1      |
| 0°-60°    | 222.3  | 94.2      |
| 0°-90°    | 236.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 236.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 12  | 12  | 12  | 12   | 12   |      |
| 5°  | 13  | 13  | 12  | 11   | 11   | 1    |
| 15° | 26  | 14  | 9   | 8    | 9    | 9    |
| 25° | 247 | 20  | 6   | 6    | 8    | 127  |
| 35° | 724 | 28  | 4   | 6    | 7    | 437  |
| 45° | 755 | 19  | 2   | 5    | 7    | 574  |
| 55° | 530 | 5   | 2   | 5    | 7    | 453  |
| 65° | 50  | 0   | 2   | 4    | 6    | 89   |
| 75° | 1   | 0   | 1   | 3    | 5    | 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°   | 25°   | 30°   | 35°  | 45°  | 67.5° | 90°  |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|------|
| 0°    | 12.1  | 12.1  | 12.1  | 12.1  | 12.1  | 12.1  | 12.1  | 12.1 | 12.1 | 12.1  | 12.1 |
| 2.5°  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6 | 12.6 | 12.4  | 12.1 |
| 5°    | 13.4  | 13.4  | 13.4  | 13.4  | 13.2  | 13.2  | 13.2  | 13.0 | 13.0 | 12.6  | 11.9 |
| 7.5°  | 14.3  | 14.3  | 14.3  | 14.3  | 14.1  | 13.9  | 13.7  | 13.7 | 13.4 | 12.4  | 11.5 |
| 10°   | 16.0  | 16.0  | 15.8  | 15.6  | 15.4  | 15.0  | 14.7  | 14.3 | 13.7 | 12.1  | 10.8 |
| 12.5° | 19.5  | 19.1  | 18.9  | 18.4  | 17.8  | 16.9  | 16.0  | 15.4 | 13.9 | 11.7  | 10.2 |
| 15°   | 25.8  | 25.4  | 24.5  | 23.2  | 21.9  | 20.2  | 18.6  | 17.1 | 14.5 | 11.1  | 9.1  |
| 17.5° | 36.8  | 35.5  | 34.2  | 32.1  | 28.8  | 25.8  | 22.5  | 19.7 | 15.4 | 10.4  | 8.2  |
| 20°   | 66.3  | 65.5  | 57.7  | 51.6  | 41.8  | 34.9  | 28.4  | 23.6 | 16.7 | 9.8   | 7.4  |
| 22.5° | 136.8 | 127.7 | 114.9 | 94.1  | 73.3  | 54.0  | 39.2  | 29.7 | 18.0 | 8.9   | 6.5  |
| 25°   | 246.6 | 232.3 | 204.8 | 164.7 | 121.6 | 86.0  | 56.8  | 38.8 | 19.9 | 8.0   | 5.6  |
| 27.5° | 373.4 | 358.9 | 316.2 | 260.9 | 190.5 | 129.8 | 81.1  | 51.4 | 22.5 | 7.2   | 5.0  |
| 30°   | 508.5 | 496.1 | 441.9 | 365.4 | 268.5 | 181.8 | 108.6 | 64.2 | 25.4 | 6.3   | 4.3  |
| 31°   | 562.9 | 547.0 | 488.5 | 407.0 | 305.2 | 203.3 | 119.6 | 69.6 | 26.4 | 6.1   | 4.1  |
| 32°   | 612.9 | 594.9 | 534.2 | 446.9 | 334.9 | 226.5 | 131.8 | 74.3 | 27.3 | 5.6   | 3.9  |
| 33°   | 656.1 | 635.0 | 576.5 | 484.6 | 367.6 | 248.2 | 144.3 | 78.9 | 28.0 | 5.2   | 3.7  |
| 34°   | 692.7 | 674.5 | 611.6 | 522.5 | 396.6 | 269.0 | 156.7 | 83.4 | 28.4 | 5.0   | 3.5  |
| 35°   | 723.9 | 707.4 | 645.2 | 551.4 | 425.0 | 289.1 | 168.0 | 87.8 | 28.4 | 4.6   | 3.5  |
| 36°   | 744.9 | 730.6 | 674.3 | 580.8 | 448.9 | 306.2 | 177.5 | 91.7 | 28.4 | 4.1   | 3.3  |
| 37°   | 756.4 | 742.5 | 693.3 | 605.1 | 472.3 | 323.1 | 186.2 | 94.7 | 28.2 | 3.9   | 3.0  |
| 38°   | 762.3 | 750.1 | 707.4 | 624.8 | 488.5 | 335.3 | 193.8 | 97.1 | 28.0 | 3.5   | 3.0  |
| 39°   | 763.8 | 753.6 | 716.3 | 639.1 | 504.3 | 347.4 | 199.2 | 98.4 | 27.3 | 3.3   | 2.8  |
| 40°   | 762.7 | 753.8 | 721.1 | 651.9 | 516.5 | 357.0 | 203.1 | 98.8 | 26.7 | 2.8   | 2.8  |
| 41°   | 760.5 | 753.6 | 724.5 | 660.8 | 526.2 | 363.0 | 204.6 | 98.0 | 25.8 | 2.4   | 2.6  |
| 42°   | 758.6 | 751.0 | 726.1 | 666.9 | 532.9 | 366.1 | 204.4 | 96.2 | 24.5 | 2.2   | 2.6  |
| 43°   | 758.6 | 749.9 | 726.3 | 670.8 | 536.2 | 366.3 | 201.8 | 93.0 | 22.8 | 2.0   | 2.4  |
| 44°   | 757.3 | 749.2 | 727.4 | 673.4 | 537.1 | 364.3 | 197.7 | 89.5 | 20.8 | 1.7   | 2.4  |
| 45°   | 754.9 | 746.4 | 727.1 | 673.6 | 535.5 | 359.6 | 190.9 | 85.0 | 19.1 | 1.3   | 2.4  |
| 46°   | 750.3 | 742.7 | 725.2 | 672.1 | 531.0 | 352.6 | 182.9 | 80.4 | 17.1 | 1.1   | 2.2  |
| 47°   | 741.2 | 735.4 | 720.0 | 666.9 | 524.1 | 342.4 | 173.4 | 75.2 | 15.6 | 0.9   | 2.2  |
| 48°   | 725.6 | 721.5 | 711.1 | 655.4 | 510.8 | 329.9 | 163.2 | 69.6 | 14.1 | 0.9   | 2.2  |
| 49°   | 697.0 | 693.8 | 687.7 | 637.0 | 493.9 | 314.5 | 152.1 | 63.3 | 12.6 | 0.7   | 2.2  |
| 50°   | 674.5 | 671.0 | 658.7 | 606.0 | 469.7 | 295.0 | 140.0 | 57.0 | 10.8 | 0.4   | 2.0  |
| 51°   | 659.5 | 653.9 | 634.4 | 570.0 | 434.3 | 269.0 | 126.8 | 50.7 | 9.1  | 0.4   | 2.0  |
| 52°   | 640.7 | 632.2 | 607.9 | 537.7 | 402.0 | 243.0 | 112.5 | 44.4 | 8.0  | 0.4   | 2.0  |
| 53°   | 601.2 | 598.2 | 574.1 | 503.0 | 369.7 | 218.0 | 97.7  | 39.2 | 6.9  | 0.4   | 2.0  |
| 54°   | 566.8 | 562.2 | 529.5 | 454.9 | 334.6 | 190.3 | 82.6  | 34.7 | 5.9  | 0.4   | 2.0  |
| 55°   | 529.5 | 520.6 | 491.6 | 414.4 | 293.5 | 164.7 | 68.1  | 29.9 | 4.8  | 0.4   | 1.7  |
| 56°   | 482.4 | 474.6 | 443.4 | 371.0 | 255.5 | 138.7 | 57.0  | 24.5 | 3.7  | 0.4   | 1.7  |
| 57°   | 425.2 | 418.1 | 394.0 | 317.7 | 216.1 | 113.4 | 46.4  | 19.7 | 2.8  | 0.4   | 1.7  |
| 58°   | 370.0 | 361.9 | 334.4 | 266.6 | 174.5 | 89.9  | 38.8  | 16.0 | 2.2  | 0.4   | 1.7  |
| 59°   | 327.5 | 316.6 | 281.1 | 223.9 | 136.5 | 68.3  | 30.8  | 12.8 | 1.5  | 0.4   | 1.7  |
| 60°   | 292.2 | 283.3 | 246.4 | 186.4 | 107.1 | 50.3  | 22.8  | 9.8  | 0.9  | 0.4   | 1.7  |
| 62.5° | 169.3 | 166.9 | 133.7 | 96.0  | 50.5  | 23.4  | 11.3  | 4.6  | 0.4  | 0.7   | 1.7  |
| 65°   | 50.5  | 44.0  | 34.2  | 20.4  | 13.0  | 7.8   | 4.1   | 1.5  | 0.2  | 0.7   | 1.5  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.9 | 0.4 | 0.2 | 0.7   | 1.5 |
| 70°   | 0.9 | 0.7 | 0.7 | 0.7 | 0.7 | 0.4 | 0.4 | 0.2 | 0.2 | 0.7   | 1.3 |
| 72.5° | 0.7 | 0.7 | 0.7 | 0.7 | 0.4 | 0.4 | 0.4 | 0.2 | 0.4 | 0.7   | 1.1 |
| 75°   | 0.7 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.4 | 0.7   | 1.1 |
| 77.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.7   | 1.1 |
| 80°   | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.7   | 0.9 |
| 82.5° | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.7   | 0.9 |
| 85°   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.7   | 0.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.7   | 0.7 |
| 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: P1338812

CATALOG NUMBER: P3A05R409024DE010 E3A451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 12.1   | 12.1 | 12.1   | 12.1 |
| 2.5°  | 11.7   | 11.5 | 11.3   | 11.3 |
| 5°    | 11.3   | 10.8 | 10.8   | 10.6 |
| 7.5°  | 10.6   | 10.2 | 10.2   | 10.2 |
| 10°   | 10.0   | 9.8  | 9.8    | 9.5  |
| 12.5° | 9.1    | 9.1  | 9.1    | 9.1  |
| 15°   | 8.5    | 8.5  | 8.7    | 8.7  |
| 17.5° | 7.6    | 7.8  | 8.2    | 8.5  |
| 20°   | 6.9    | 7.4  | 7.8    | 8.0  |
| 22.5° | 6.5    | 6.9  | 7.6    | 7.8  |
| 25°   | 5.9    | 6.5  | 7.4    | 7.6  |
| 27.5° | 5.4    | 6.3  | 6.9    | 7.4  |
| 30°   | 5.0    | 6.1  | 6.7    | 7.2  |
| 31°   | 5.0    | 5.9  | 6.7    | 7.2  |
| 32°   | 4.8    | 5.6  | 6.7    | 6.9  |
| 33°   | 4.8    | 5.6  | 6.7    | 6.9  |
| 34°   | 4.6    | 5.6  | 6.5    | 6.9  |
| 35°   | 4.6    | 5.6  | 6.5    | 6.9  |
| 36°   | 4.3    | 5.4  | 6.5    | 6.9  |
| 37°   | 4.3    | 5.4  | 6.5    | 6.9  |
| 38°   | 4.1    | 5.4  | 6.5    | 6.9  |
| 39°   | 4.1    | 5.4  | 6.5    | 6.9  |
| 40°   | 4.1    | 5.4  | 6.5    | 6.9  |
| 41°   | 3.9    | 5.4  | 6.5    | 6.9  |
| 42°   | 3.9    | 5.4  | 6.5    | 6.9  |
| 43°   | 3.9    | 5.2  | 6.5    | 6.9  |
| 44°   | 3.9    | 5.2  | 6.5    | 6.9  |
| 45°   | 3.7    | 5.2  | 6.5    | 6.9  |
| 46°   | 3.7    | 5.2  | 6.5    | 6.9  |
| 47°   | 3.7    | 5.2  | 6.5    | 6.9  |
| 48°   | 3.7    | 5.2  | 6.5    | 6.9  |
| 49°   | 3.7    | 5.2  | 6.5    | 6.9  |
| 50°   | 3.5    | 5.0  | 6.5    | 6.9  |
| 51°   | 3.5    | 5.0  | 6.5    | 6.9  |
| 52°   | 3.5    | 5.0  | 6.5    | 6.9  |
| 53°   | 3.5    | 5.0  | 6.5    | 6.9  |
| 54°   | 3.3    | 5.0  | 6.5    | 6.9  |
| 55°   | 3.3    | 5.0  | 6.5    | 6.9  |
| 56°   | 3.3    | 5.0  | 6.5    | 6.7  |
| 57°   | 3.3    | 5.0  | 6.3    | 6.7  |
| 58°   | 3.3    | 4.8  | 6.3    | 6.7  |
| 59°   | 3.3    | 4.8  | 6.3    | 6.7  |
| 60°   | 3.3    | 4.8  | 6.3    | 6.7  |
| 62.5° | 3.0    | 4.8  | 6.1    | 6.5  |
| 65°   | 2.8    | 4.3  | 6.1    | 6.3  |





TEST NUMBER: P1338812

CATALOG NUMBER: P3A05R409024DE010 E3A451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 2.8    | 4.1  | 5.6    | 6.1  |
| 70°   | 2.6    | 3.9  | 5.4    | 5.9  |
| 72.5° | 2.2    | 3.7  | 5.0    | 5.4  |
| 75°   | 2.0    | 3.3  | 4.6    | 5.0  |
| 77.5° | 1.7    | 2.8  | 4.1    | 4.3  |
| 80°   | 1.5    | 2.4  | 3.5    | 3.9  |
| 82.5° | 1.1    | 1.7  | 2.8    | 3.0  |
| 85°   | 0.9    | 1.3  | 2.0    | 2.2  |
| 87.5° | 0.7    | 0.7  | 1.1    | 1.1  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)