

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: P1338942

Luminaire Tested: P3A05R409730DE010 E3A451WMH

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1338942  
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: P3A05R409730DE010 E3A451WMH  
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 97CRI , E3A451WMH TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

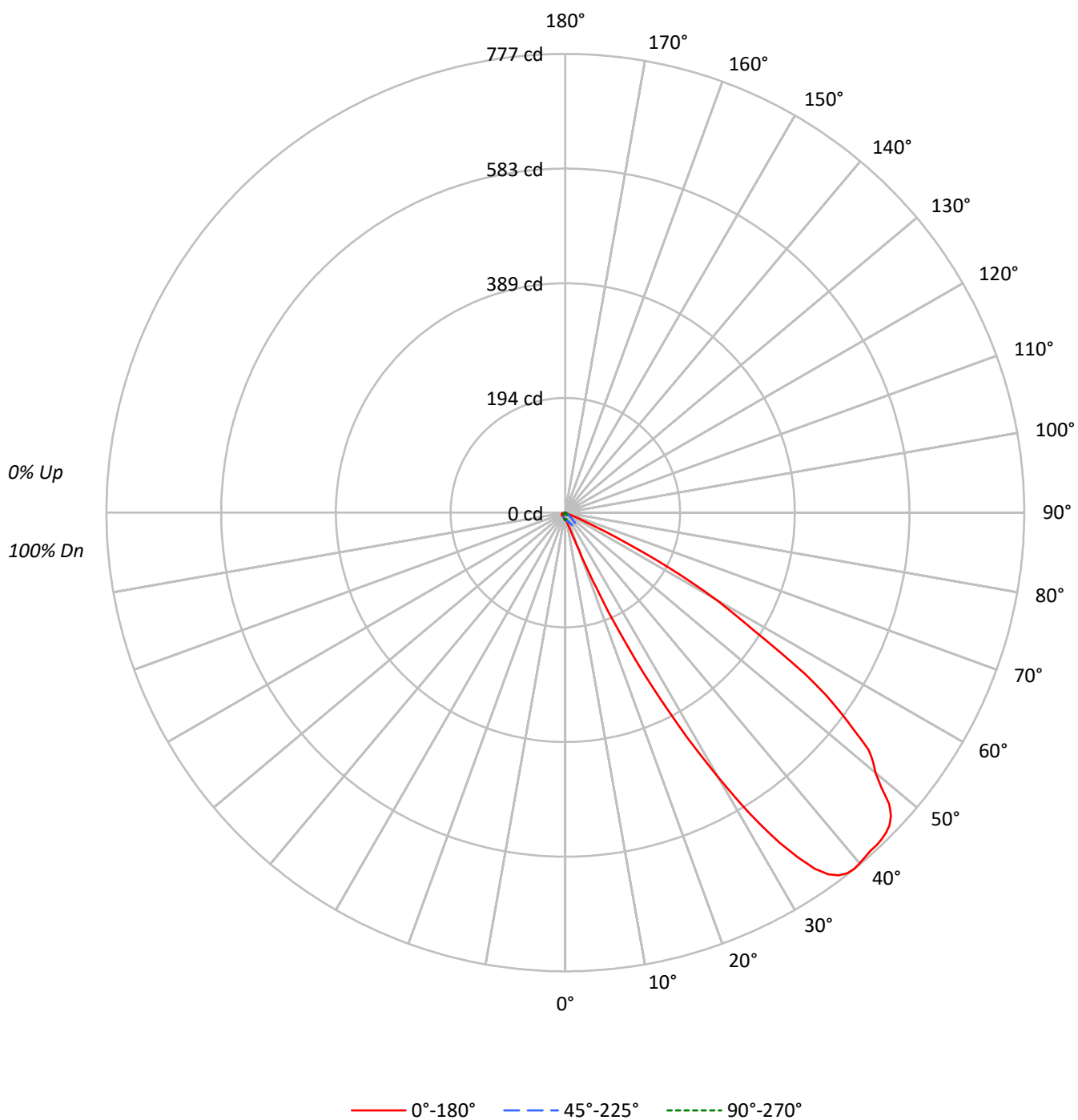
Lumens per Lamp: N/A  
Luminaire Lumens: 240.0 lumens  
Efficiency: N/A  
Efficacy: 33.3 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.55  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

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: P1338942

CATALOG NUMBER: P3A05R409730DE010 E3A451WMH

### Luminous Intensity Polar Plot



TEST NUMBER: P1338942

CATALOG NUMBER: P3A05R409730DE010 E3A451WMH

**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  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 88  | 88  | 86  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 75  | 75  | 75  | 72  |
| 3   | 91  | 81  | 73  | 66  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 73  | 68  | 64  | 71  | 66  | 62  | 62  | 62  | 60  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 52  | 52  | 50  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  | 56  | 50  | 44  | 54  | 49  | 44  | 44  | 44  | 42  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 38  | 50  | 43  | 37  | 48  | 42  | 37  | 37  | 37  | 35  |
| 7   | 62  | 48  | 39  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 44  | 37  | 31  | 42  | 36  | 31  | 31  | 31  | 29  |
| 8   | 57  | 42  | 33  | 27  | 55  | 42  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 26  | 26  | 26  | 24  |
| 9   | 52  | 38  | 29  | 23  | 51  | 37  | 29  | 23  | 36  | 28  | 23  | 35  | 28  | 23  | 34  | 27  | 23  | 23  | 23  | 21  |
| 10  | 48  | 34  | 25  | 20  | 47  | 33  | 25  | 20  | 32  | 25  | 20  | 31  | 24  | 20  | 30  | 24  | 19  | 19  | 19  | 18  |

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

|     | 0°     | 45°  | 90°  | 135° | 180° |
|-----|--------|------|------|------|------|
| 0°  | 2697   | 2697 | 2697 | 2697 | 2697 |
| 5°  | 3016   | 2906 | 2663 | 2421 | 2377 |
| 10° | 3629   | 3095 | 2449 | 2204 | 2160 |
| 15° | 5948   | 3360 | 2111 | 1952 | 1998 |
| 20° | 15728  | 3967 | 1750 | 1750 | 1913 |
| 25° | 60681  | 4912 | 1379 | 1597 | 1863 |
| 30° | 130932 | 6533 | 1114 | 1570 | 1848 |
| 35° | 197075 | 7736 | 937  | 1526 | 1901 |
| 40° | 222016 | 7757 | 830  | 1574 | 2032 |
| 45° | 238071 | 6016 | 744  | 1644 | 2202 |
| 50° | 233988 | 3753 | 682  | 1740 | 2422 |
| 55° | 205871 | 1835 | 688  | 1950 | 2714 |
| 60° | 130297 | 395  | 789  | 2105 | 2982 |
| 65° | 26670  | 104  | 778  | 2283 | 3321 |
| 70° | 577    | 128  | 833  | 2565 | 3847 |
| 75° | 593    | 339  | 932  | 2796 | 4321 |
| 80° | 505    | 253  | 1137 | 3031 | 5051 |
| 85° | 503    | 503  | 2264 | 3271 | 5535 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 242367 cd/sqm

TEST NUMBER: P1338942

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.2    | 0.5       |
| 10°-20°   | 3.8    | 1.6       |
| 20°-30°   | 18.6   | 7.8       |
| 30°-40°   | 60.6   | 25.3      |
| 40°-50°   | 83.6   | 34.8      |
| 50°-60°   | 58.2   | 24.3      |
| 60°-70°   | 11.0   | 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°    | 23.6   | 9.8       |
| 0°-40°    | 84.2   | 35.1      |
| 0°-60°    | 226.0  | 94.2      |
| 0°-90°    | 240.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 240.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 12  | 12  | 12  | 12   | 12   |      |
| 5°  | 14  | 13  | 12  | 11   | 11   | 1    |
| 15° | 26  | 15  | 9   | 9    | 9    | 10   |
| 25° | 251 | 20  | 6   | 7    | 8    | 129  |
| 35° | 736 | 29  | 4   | 6    | 7    | 445  |
| 45° | 768 | 19  | 2   | 5    | 7    | 584  |
| 55° | 538 | 5   | 2   | 5    | 7    | 460  |
| 65° | 51  | 0   | 2   | 4    | 6    | 91   |
| 75° | 1   | 0   | 1   | 3    | 5    | 1    |
| 85° | 0   | 0   | 1   | 1    | 2    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1338942

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 45°  | 67.5° | 90°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 0°    | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 12.3 | 12.3  | 12.3 |
| 2.5°  | 12.8  | 12.8  | 12.8  | 12.8  | 12.8  | 12.8  | 12.8  | 12.8  | 12.8 | 12.6  | 12.3 |
| 5°    | 13.7  | 13.7  | 13.7  | 13.7  | 13.4  | 13.4  | 13.4  | 13.2  | 13.2 | 12.8  | 12.1 |
| 7.5°  | 14.5  | 14.5  | 14.5  | 14.5  | 14.3  | 14.1  | 13.9  | 13.9  | 13.7 | 12.6  | 11.7 |
| 10°   | 16.3  | 16.3  | 16.1  | 15.9  | 15.6  | 15.2  | 15.0  | 14.5  | 13.9 | 12.3  | 11.0 |
| 12.5° | 19.8  | 19.4  | 19.2  | 18.7  | 18.1  | 17.2  | 16.3  | 15.6  | 14.1 | 11.9  | 10.4 |
| 15°   | 26.2  | 25.8  | 24.9  | 23.6  | 22.3  | 20.5  | 19.0  | 17.4  | 14.8 | 11.2  | 9.3  |
| 17.5° | 37.5  | 36.1  | 34.8  | 32.6  | 29.3  | 26.2  | 22.9  | 20.1  | 15.6 | 10.6  | 8.4  |
| 20°   | 67.4  | 66.6  | 58.6  | 52.5  | 42.5  | 35.5  | 28.9  | 24.0  | 17.0 | 9.9   | 7.5  |
| 22.5° | 139.1 | 129.8 | 116.8 | 95.7  | 74.5  | 54.9  | 39.9  | 30.2  | 18.3 | 9.0   | 6.6  |
| 25°   | 250.8 | 236.3 | 208.3 | 167.5 | 123.6 | 87.5  | 57.7  | 39.5  | 20.3 | 8.2   | 5.7  |
| 27.5° | 379.8 | 365.0 | 321.6 | 265.4 | 193.7 | 132.0 | 82.4  | 52.2  | 22.9 | 7.3   | 5.1  |
| 30°   | 517.1 | 504.5 | 449.4 | 371.6 | 273.1 | 184.9 | 110.4 | 65.2  | 25.8 | 6.4   | 4.4  |
| 31°   | 572.4 | 556.3 | 496.8 | 413.9 | 310.3 | 206.7 | 121.7 | 70.8  | 26.9 | 6.2   | 4.2  |
| 32°   | 623.3 | 605.0 | 543.3 | 454.5 | 340.5 | 230.3 | 134.0 | 75.6  | 27.8 | 5.7   | 4.0  |
| 33°   | 667.2 | 645.8 | 586.3 | 492.8 | 373.8 | 252.4 | 146.8 | 80.2  | 28.4 | 5.3   | 3.7  |
| 34°   | 704.4 | 685.9 | 622.0 | 531.4 | 403.3 | 273.5 | 159.4 | 84.9  | 28.9 | 5.1   | 3.5  |
| 35°   | 736.2 | 719.4 | 656.2 | 560.7 | 432.2 | 294.0 | 170.8 | 89.3  | 28.9 | 4.6   | 3.5  |
| 36°   | 757.5 | 743.0 | 685.7 | 590.7 | 456.5 | 311.4 | 180.5 | 93.2  | 28.9 | 4.2   | 3.3  |
| 37°   | 769.2 | 755.1 | 705.1 | 615.4 | 480.3 | 328.6 | 189.3 | 96.3  | 28.7 | 4.0   | 3.1  |
| 38°   | 775.2 | 762.8 | 719.4 | 635.4 | 496.8 | 341.0 | 197.0 | 98.7  | 28.4 | 3.5   | 3.1  |
| 39°   | 776.7 | 766.4 | 728.4 | 650.0 | 512.9 | 353.3 | 202.6 | 100.1 | 27.8 | 3.3   | 2.9  |
| 40°   | 775.6 | 766.6 | 733.3 | 663.0 | 525.2 | 363.0 | 206.5 | 100.5 | 27.1 | 2.9   | 2.9  |
| 41°   | 773.4 | 766.4 | 736.8 | 672.0 | 535.1 | 369.2 | 208.1 | 99.6  | 26.2 | 2.4   | 2.6  |
| 42°   | 771.4 | 763.7 | 738.4 | 678.2 | 542.0 | 372.3 | 207.8 | 97.9  | 24.9 | 2.2   | 2.6  |
| 43°   | 771.4 | 762.6 | 738.6 | 682.2 | 545.3 | 372.5 | 205.2 | 94.6  | 23.1 | 2.0   | 2.4  |
| 44°   | 770.1 | 761.9 | 739.7 | 684.8 | 546.2 | 370.5 | 201.0 | 91.0  | 21.2 | 1.8   | 2.4  |
| 45°   | 767.7 | 759.1 | 739.5 | 685.0 | 544.6 | 365.7 | 194.2 | 86.4  | 19.4 | 1.3   | 2.4  |
| 46°   | 763.0 | 755.3 | 737.5 | 683.5 | 540.0 | 358.6 | 186.0 | 81.8  | 17.4 | 1.1   | 2.2  |
| 47°   | 753.8 | 747.8 | 732.2 | 678.2 | 532.9 | 348.2 | 176.3 | 76.5  | 15.9 | 0.9   | 2.2  |
| 48°   | 737.9 | 733.7 | 723.2 | 666.5 | 519.5 | 335.5 | 166.0 | 70.8  | 14.3 | 0.9   | 2.2  |
| 49°   | 708.8 | 705.5 | 699.4 | 647.8 | 502.3 | 319.8 | 154.7 | 64.4  | 12.8 | 0.7   | 2.2  |
| 50°   | 685.9 | 682.4 | 669.8 | 616.3 | 477.6 | 300.0 | 142.4 | 58.0  | 11.0 | 0.4   | 2.0  |
| 51°   | 670.7 | 665.0 | 645.1 | 579.7 | 441.7 | 273.5 | 128.9 | 51.6  | 9.3  | 0.4   | 2.0  |
| 52°   | 651.5 | 642.9 | 618.2 | 546.8 | 408.9 | 247.1 | 114.4 | 45.2  | 8.2  | 0.4   | 2.0  |
| 53°   | 611.4 | 608.3 | 583.9 | 511.6 | 376.0 | 221.7 | 99.4  | 39.9  | 7.1  | 0.4   | 2.0  |
| 54°   | 576.4 | 571.7 | 538.5 | 462.6 | 340.3 | 193.5 | 84.0  | 35.3  | 6.0  | 0.4   | 2.0  |
| 55°   | 538.5 | 529.4 | 499.9 | 421.4 | 298.4 | 167.5 | 69.2  | 30.4  | 4.8  | 0.4   | 1.8  |
| 56°   | 490.6 | 482.7 | 451.0 | 377.3 | 259.9 | 141.1 | 58.0  | 24.9  | 3.7  | 0.4   | 1.8  |
| 57°   | 432.4 | 425.2 | 400.7 | 323.1 | 219.7 | 115.3 | 47.2  | 20.1  | 2.9  | 0.4   | 1.8  |
| 58°   | 376.2 | 368.1 | 340.1 | 271.1 | 177.4 | 91.5  | 39.5  | 16.3  | 2.2  | 0.4   | 1.8  |
| 59°   | 333.0 | 322.0 | 285.9 | 227.7 | 138.9 | 69.4  | 31.3  | 13.0  | 1.5  | 0.4   | 1.8  |
| 60°   | 297.1 | 288.1 | 250.6 | 189.5 | 108.9 | 51.1  | 23.1  | 9.9   | 0.9  | 0.4   | 1.8  |
| 62.5° | 172.1 | 169.7 | 136.0 | 97.6  | 51.4  | 23.8  | 11.5  | 4.6   | 0.4  | 0.7   | 1.8  |
| 65°   | 51.4  | 44.7  | 34.8  | 20.7  | 13.2  | 7.9   | 4.2   | 1.5   | 0.2  | 0.7   | 1.5  |



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CATALOG NUMBER: P3A05R409730DE010 E3A451WMH

**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: P1338942

CATALOG NUMBER: P3A05R409730DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 12.3   | 12.3 | 12.3   | 12.3 |
| 2.5°  | 11.9   | 11.7 | 11.5   | 11.5 |
| 5°    | 11.5   | 11.0 | 11.0   | 10.8 |
| 7.5°  | 10.8   | 10.4 | 10.4   | 10.4 |
| 10°   | 10.1   | 9.9  | 9.9    | 9.7  |
| 12.5° | 9.3    | 9.3  | 9.3    | 9.3  |
| 15°   | 8.6    | 8.6  | 8.8    | 8.8  |
| 17.5° | 7.7    | 7.9  | 8.4    | 8.6  |
| 20°   | 7.1    | 7.5  | 7.9    | 8.2  |
| 22.5° | 6.6    | 7.1  | 7.7    | 7.9  |
| 25°   | 6.0    | 6.6  | 7.5    | 7.7  |
| 27.5° | 5.5    | 6.4  | 7.1    | 7.5  |
| 30°   | 5.1    | 6.2  | 6.8    | 7.3  |
| 31°   | 5.1    | 6.0  | 6.8    | 7.3  |
| 32°   | 4.8    | 5.7  | 6.8    | 7.1  |
| 33°   | 4.8    | 5.7  | 6.8    | 7.1  |
| 34°   | 4.6    | 5.7  | 6.6    | 7.1  |
| 35°   | 4.6    | 5.7  | 6.6    | 7.1  |
| 36°   | 4.4    | 5.5  | 6.6    | 7.1  |
| 37°   | 4.4    | 5.5  | 6.6    | 7.1  |
| 38°   | 4.2    | 5.5  | 6.6    | 7.1  |
| 39°   | 4.2    | 5.5  | 6.6    | 7.1  |
| 40°   | 4.2    | 5.5  | 6.6    | 7.1  |
| 41°   | 4.0    | 5.5  | 6.6    | 7.1  |
| 42°   | 4.0    | 5.5  | 6.6    | 7.1  |
| 43°   | 4.0    | 5.3  | 6.6    | 7.1  |
| 44°   | 4.0    | 5.3  | 6.6    | 7.1  |
| 45°   | 3.7    | 5.3  | 6.6    | 7.1  |
| 46°   | 3.7    | 5.3  | 6.6    | 7.1  |
| 47°   | 3.7    | 5.3  | 6.6    | 7.1  |
| 48°   | 3.7    | 5.3  | 6.6    | 7.1  |
| 49°   | 3.7    | 5.3  | 6.6    | 7.1  |
| 50°   | 3.5    | 5.1  | 6.6    | 7.1  |
| 51°   | 3.5    | 5.1  | 6.6    | 7.1  |
| 52°   | 3.5    | 5.1  | 6.6    | 7.1  |
| 53°   | 3.5    | 5.1  | 6.6    | 7.1  |
| 54°   | 3.3    | 5.1  | 6.6    | 7.1  |
| 55°   | 3.3    | 5.1  | 6.6    | 7.1  |
| 56°   | 3.3    | 5.1  | 6.6    | 6.8  |
| 57°   | 3.3    | 5.1  | 6.4    | 6.8  |
| 58°   | 3.3    | 4.8  | 6.4    | 6.8  |
| 59°   | 3.3    | 4.8  | 6.4    | 6.8  |
| 60°   | 3.3    | 4.8  | 6.4    | 6.8  |
| 62.5° | 3.1    | 4.8  | 6.2    | 6.6  |
| 65°   | 2.9    | 4.4  | 6.2    | 6.4  |





TEST NUMBER: P1338942

CATALOG NUMBER: P3A05R409730DE010 E3A451WMH

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 2.9    | 4.2  | 5.7    | 6.2  |
| 70°   | 2.6    | 4.0  | 5.5    | 6.0  |
| 72.5° | 2.2    | 3.7  | 5.1    | 5.5  |
| 75°   | 2.0    | 3.3  | 4.6    | 5.1  |
| 77.5° | 1.8    | 2.9  | 4.2    | 4.4  |
| 80°   | 1.5    | 2.4  | 3.5    | 4.0  |
| 82.5° | 1.1    | 1.8  | 2.9    | 3.1  |
| 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)