

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: P1342563

Luminaire Tested: P3A09R409835DE010 E3A451GPH

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1342563  
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: P3A09R409835DE010 E3A451GPH  
Description: 3in Adjustable LED luminaire with, R40 optic, 3500K CCT AND, 98CRI , E3A451GPH TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

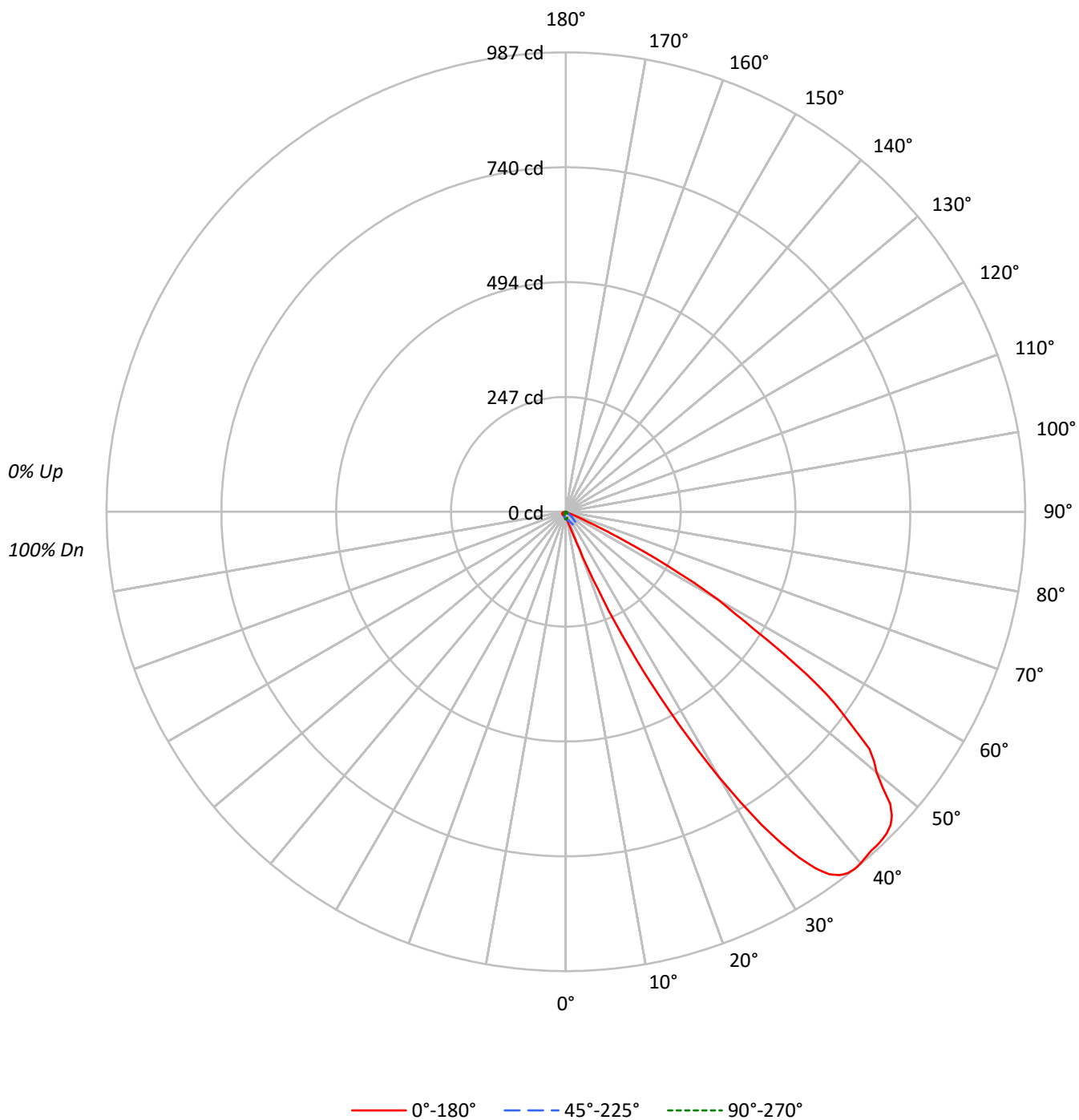
Lumens per Lamp: N/A  
Luminaire Lumens: 305.0 lumens  
Efficiency: N/A  
Efficacy: 27.7 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 11  
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: P1342563

CATALOG NUMBER: P3A09R409835DE010 E3A451GPH

### Luminous Intensity Polar Plot



TEST NUMBER: P1342563

CATALOG NUMBER: P3A09R409835DE010 E3A451GPH

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

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

|     | 0°     | 45°  | 90°  | 135° | 180° |
|-----|--------|------|------|------|------|
| 0°  | 3443   | 3443 | 3443 | 3443 | 3443 |
| 5°  | 3830   | 3698 | 3390 | 3082 | 3016 |
| 10° | 4609   | 3919 | 3117 | 2806 | 2739 |
| 15° | 7560   | 4268 | 2679 | 2474 | 2543 |
| 20° | 19998  | 5040 | 2217 | 2217 | 2427 |
| 25° | 77133  | 6242 | 1766 | 2032 | 2371 |
| 30° | 166380 | 8305 | 1418 | 1975 | 2329 |
| 35° | 250426 | 9824 | 1205 | 1954 | 2409 |
| 40° | 282157 | 9876 | 1031 | 2004 | 2576 |
| 45° | 302543 | 7629 | 961  | 2078 | 2791 |
| 50° | 297372 | 4776 | 853  | 2183 | 3070 |
| 55° | 261611 | 2370 | 841  | 2447 | 3441 |
| 60° | 165601 | 482  | 965  | 2719 | 3815 |
| 65° | 33882  | 156  | 1038 | 2906 | 4203 |
| 70° | 705    | 192  | 1090 | 3206 | 4873 |
| 75° | 678    | 508  | 1186 | 3558 | 5422 |
| 80° | 758    | 379  | 1389 | 3915 | 6314 |
| 85° | 755    | 755  | 2768 | 4277 | 7045 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 307990 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.5    | 0.5       |
| 10°-20°   | 4.8    | 1.6       |
| 20°-30°   | 23.7   | 7.8       |
| 30°-40°   | 77.1   | 25.3      |
| 40°-50°   | 106.2  | 34.8      |
| 50°-60°   | 74.0   | 24.3      |
| 60°-70°   | 14.0   | 4.6       |
| 70°-80°   | 2.5    | 0.8       |
| 80°-90°   | 1.2    | 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°    | 30.0   | 9.8       |
| 0°-40°    | 107.0  | 35.1      |
| 0°-60°    | 287.3  | 94.2      |
| 0°-90°    | 305.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 305.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 16  | 16  | 16  | 16   | 16   |      |
| 5°  | 17  | 17  | 15  | 14   | 14   | 2    |
| 15° | 33  | 19  | 12  | 11   | 11   | 12   |
| 25° | 319 | 26  | 7   | 8    | 10   | 164  |
| 35° | 936 | 37  | 4   | 7    | 9    | 565  |
| 45° | 976 | 25  | 3   | 7    | 9    | 742  |
| 55° | 684 | 6   | 2   | 6    | 9    | 585  |
| 65° | 65  | 0   | 2   | 6    | 8    | 115  |
| 75° | 1   | 1   | 1   | 4    | 6    | 1    |
| 85° | 0   | 0   | 1   | 2    | 3    | 0    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1342563

CATALOG NUMBER: P3A09R409835DE010 E3A451GPH

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 45°  | 67.5° | 90°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 0°    | 15.7  | 15.7  | 15.7  | 15.7  | 15.7  | 15.7  | 15.7  | 15.7  | 15.7 | 15.7  | 15.7 |
| 2.5°  | 16.2  | 16.2  | 16.2  | 16.2  | 16.2  | 16.2  | 16.2  | 16.2  | 16.2 | 16.0  | 15.7 |
| 5°    | 17.4  | 17.4  | 17.4  | 17.4  | 17.1  | 17.1  | 17.1  | 16.8  | 16.8 | 16.2  | 15.4 |
| 7.5°  | 18.5  | 18.5  | 18.5  | 18.5  | 18.2  | 17.9  | 17.6  | 17.6  | 17.4 | 16.0  | 14.8 |
| 10°   | 20.7  | 20.7  | 20.4  | 20.2  | 19.9  | 19.3  | 19.0  | 18.5  | 17.6 | 15.7  | 14.0 |
| 12.5° | 25.2  | 24.6  | 24.4  | 23.8  | 23.0  | 21.8  | 20.7  | 19.9  | 17.9 | 15.1  | 13.2 |
| 15°   | 33.3  | 32.8  | 31.7  | 30.0  | 28.3  | 26.0  | 24.1  | 22.1  | 18.8 | 14.3  | 11.8 |
| 17.5° | 47.6  | 45.9  | 44.3  | 41.5  | 37.3  | 33.3  | 29.1  | 25.5  | 19.9 | 13.4  | 10.6 |
| 20°   | 85.7  | 84.6  | 74.5  | 66.7  | 54.1  | 45.1  | 36.7  | 30.5  | 21.6 | 12.6  | 9.5  |
| 22.5° | 176.7 | 165.0 | 148.5 | 121.6 | 94.7  | 69.7  | 50.7  | 38.4  | 23.2 | 11.5  | 8.4  |
| 25°   | 318.8 | 300.3 | 264.7 | 212.9 | 157.1 | 111.2 | 73.4  | 50.1  | 25.8 | 10.4  | 7.3  |
| 27.5° | 482.6 | 463.8 | 408.7 | 337.2 | 246.2 | 167.8 | 104.8 | 66.4  | 29.1 | 9.2   | 6.4  |
| 30°   | 657.1 | 641.1 | 571.1 | 472.2 | 347.0 | 235.0 | 140.3 | 82.9  | 32.8 | 8.1   | 5.6  |
| 31°   | 727.4 | 707.0 | 631.3 | 526.0 | 394.4 | 262.7 | 154.6 | 89.9  | 34.2 | 7.8   | 5.3  |
| 32°   | 792.1 | 768.9 | 690.4 | 577.6 | 432.8 | 292.7 | 170.3 | 96.1  | 35.3 | 7.3   | 5.0  |
| 33°   | 847.9 | 820.7 | 745.1 | 626.3 | 475.0 | 320.7 | 186.5 | 102.0 | 36.1 | 6.7   | 4.8  |
| 34°   | 895.2 | 871.7 | 790.4 | 675.3 | 512.6 | 347.6 | 202.5 | 107.8 | 36.7 | 6.4   | 4.5  |
| 35°   | 935.5 | 914.2 | 833.9 | 712.6 | 549.3 | 373.7 | 217.1 | 113.4 | 36.7 | 5.9   | 4.5  |
| 36°   | 962.7 | 944.2 | 871.4 | 750.7 | 580.1 | 395.8 | 229.4 | 118.5 | 36.7 | 5.3   | 4.2  |
| 37°   | 977.5 | 959.6 | 896.0 | 782.0 | 610.3 | 417.6 | 240.6 | 122.4 | 36.4 | 5.0   | 3.9  |
| 38°   | 985.1 | 969.4 | 914.2 | 807.5 | 631.3 | 433.3 | 250.4 | 125.5 | 36.1 | 4.5   | 3.9  |
| 39°   | 987.1 | 973.9 | 925.7 | 826.0 | 651.8 | 449.0 | 257.4 | 127.2 | 35.3 | 4.2   | 3.6  |
| 40°   | 985.7 | 974.2 | 931.9 | 842.5 | 667.5 | 461.3 | 262.5 | 127.7 | 34.5 | 3.6   | 3.6  |
| 41°   | 982.9 | 973.9 | 936.4 | 854.0 | 680.1 | 469.2 | 264.4 | 126.6 | 33.3 | 3.1   | 3.4  |
| 42°   | 980.4 | 970.5 | 938.3 | 861.9 | 688.8 | 473.1 | 264.1 | 124.4 | 31.7 | 2.8   | 3.4  |
| 43°   | 980.4 | 969.1 | 938.6 | 866.9 | 693.0 | 473.4 | 260.8 | 120.2 | 29.4 | 2.5   | 3.1  |
| 44°   | 978.7 | 968.3 | 940.0 | 870.3 | 694.1 | 470.8 | 255.5 | 115.7 | 26.9 | 2.2   | 3.1  |
| 45°   | 975.6 | 964.7 | 939.7 | 870.6 | 692.1 | 464.7 | 246.8 | 109.8 | 24.6 | 1.7   | 3.1  |
| 46°   | 969.7 | 959.9 | 937.2 | 868.6 | 686.2 | 455.7 | 236.4 | 103.9 | 22.1 | 1.4   | 2.8  |
| 47°   | 957.9 | 950.4 | 930.5 | 861.9 | 677.3 | 442.6 | 224.1 | 97.2  | 20.2 | 1.1   | 2.8  |
| 48°   | 937.8 | 932.5 | 919.0 | 847.0 | 660.2 | 426.3 | 210.9 | 89.9  | 18.2 | 1.1   | 2.8  |
| 49°   | 900.8 | 896.6 | 888.8 | 823.2 | 638.3 | 406.4 | 196.6 | 81.8  | 16.2 | 0.8   | 2.8  |
| 50°   | 871.7 | 867.2 | 851.2 | 783.2 | 607.0 | 381.2 | 180.9 | 73.7  | 14.0 | 0.6   | 2.5  |
| 51°   | 852.3 | 845.1 | 819.9 | 736.7 | 561.3 | 347.6 | 163.9 | 65.5  | 11.8 | 0.6   | 2.5  |
| 52°   | 828.0 | 817.1 | 785.7 | 694.9 | 519.6 | 314.0 | 145.4 | 57.4  | 10.4 | 0.6   | 2.5  |
| 53°   | 777.0 | 773.1 | 742.0 | 650.1 | 477.9 | 281.8 | 126.3 | 50.7  | 9.0  | 0.6   | 2.5  |
| 54°   | 732.5 | 726.6 | 684.3 | 587.9 | 432.5 | 245.9 | 106.7 | 44.8  | 7.6  | 0.6   | 2.5  |
| 55°   | 684.3 | 672.8 | 635.3 | 535.6 | 379.3 | 212.9 | 88.0  | 38.7  | 6.2  | 0.6   | 2.2  |
| 56°   | 623.5 | 613.4 | 573.1 | 479.5 | 330.2 | 179.3 | 73.7  | 31.7  | 4.8  | 0.6   | 2.2  |
| 57°   | 549.6 | 540.3 | 509.2 | 410.6 | 279.3 | 146.5 | 59.9  | 25.5  | 3.6  | 0.6   | 2.2  |
| 58°   | 478.1 | 467.8 | 432.2 | 344.5 | 225.5 | 116.2 | 50.1  | 20.7  | 2.8  | 0.6   | 2.2  |
| 59°   | 423.2 | 409.2 | 363.3 | 289.3 | 176.5 | 88.2  | 39.8  | 16.5  | 2.0  | 0.6   | 2.2  |
| 60°   | 377.6 | 366.1 | 318.5 | 240.9 | 138.4 | 65.0  | 29.4  | 12.6  | 1.1  | 0.6   | 2.2  |
| 62.5° | 218.8 | 215.7 | 172.8 | 124.1 | 65.3  | 30.3  | 14.6  | 5.9   | 0.6  | 0.8   | 2.2  |
| 65°   | 65.3  | 56.9  | 44.3  | 26.3  | 16.8  | 10.1  | 5.3   | 2.0   | 0.3  | 0.8   | 2.0  |



TEST NUMBER: P1342563

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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.1 | 0.6 | 0.3 | 0.8   | 2.0 |
| 70°   | 1.1 | 0.8 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.3 | 0.3 | 0.8   | 1.7 |
| 72.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.6 | 0.3 | 0.6 | 0.8   | 1.4 |
| 75°   | 0.8 | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.6 | 0.8   | 1.4 |
| 77.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.6 | 0.8   | 1.4 |
| 80°   | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.8   | 1.1 |
| 82.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.8   | 1.1 |
| 85°   | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.8   | 1.1 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.8   | 0.8 |
| 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: P1342563

CATALOG NUMBER: P3A09R409835DE010 E3A451GPH

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 15.7   | 15.7 | 15.7   | 15.7 |
| 2.5°  | 15.1   | 14.8 | 14.6   | 14.6 |
| 5°    | 14.6   | 14.0 | 14.0   | 13.7 |
| 7.5°  | 13.7   | 13.2 | 13.2   | 13.2 |
| 10°   | 12.9   | 12.6 | 12.6   | 12.3 |
| 12.5° | 11.8   | 11.8 | 11.8   | 11.8 |
| 15°   | 10.9   | 10.9 | 11.2   | 11.2 |
| 17.5° | 9.8    | 10.1 | 10.6   | 10.9 |
| 20°   | 9.0    | 9.5  | 10.1   | 10.4 |
| 22.5° | 8.4    | 9.0  | 9.8    | 10.1 |
| 25°   | 7.6    | 8.4  | 9.5    | 9.8  |
| 27.5° | 7.0    | 8.1  | 9.0    | 9.5  |
| 30°   | 6.4    | 7.8  | 8.7    | 9.2  |
| 31°   | 6.4    | 7.6  | 8.7    | 9.2  |
| 32°   | 6.2    | 7.3  | 8.7    | 9.0  |
| 33°   | 6.2    | 7.3  | 8.7    | 9.0  |
| 34°   | 5.9    | 7.3  | 8.4    | 9.0  |
| 35°   | 5.9    | 7.3  | 8.4    | 9.0  |
| 36°   | 5.6    | 7.0  | 8.4    | 9.0  |
| 37°   | 5.6    | 7.0  | 8.4    | 9.0  |
| 38°   | 5.3    | 7.0  | 8.4    | 9.0  |
| 39°   | 5.3    | 7.0  | 8.4    | 9.0  |
| 40°   | 5.3    | 7.0  | 8.4    | 9.0  |
| 41°   | 5.0    | 7.0  | 8.4    | 9.0  |
| 42°   | 5.0    | 7.0  | 8.4    | 9.0  |
| 43°   | 5.0    | 6.7  | 8.4    | 9.0  |
| 44°   | 5.0    | 6.7  | 8.4    | 9.0  |
| 45°   | 4.8    | 6.7  | 8.4    | 9.0  |
| 46°   | 4.8    | 6.7  | 8.4    | 9.0  |
| 47°   | 4.8    | 6.7  | 8.4    | 9.0  |
| 48°   | 4.8    | 6.7  | 8.4    | 9.0  |
| 49°   | 4.8    | 6.7  | 8.4    | 9.0  |
| 50°   | 4.5    | 6.4  | 8.4    | 9.0  |
| 51°   | 4.5    | 6.4  | 8.4    | 9.0  |
| 52°   | 4.5    | 6.4  | 8.4    | 9.0  |
| 53°   | 4.5    | 6.4  | 8.4    | 9.0  |
| 54°   | 4.2    | 6.4  | 8.4    | 9.0  |
| 55°   | 4.2    | 6.4  | 8.4    | 9.0  |
| 56°   | 4.2    | 6.4  | 8.4    | 8.7  |
| 57°   | 4.2    | 6.4  | 8.1    | 8.7  |
| 58°   | 4.2    | 6.2  | 8.1    | 8.7  |
| 59°   | 4.2    | 6.2  | 8.1    | 8.7  |
| 60°   | 4.2    | 6.2  | 8.1    | 8.7  |
| 62.5° | 3.9    | 6.2  | 7.8    | 8.4  |
| 65°   | 3.6    | 5.6  | 7.8    | 8.1  |



TEST NUMBER: P1342563

CATALOG NUMBER: P3A09R409835DE010 E3A451GPH

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 3.6    | 5.3  | 7.3    | 7.8  |
| 70°   | 3.4    | 5.0  | 7.0    | 7.6  |
| 72.5° | 2.8    | 4.8  | 6.4    | 7.0  |
| 75°   | 2.5    | 4.2  | 5.9    | 6.4  |
| 77.5° | 2.2    | 3.6  | 5.3    | 5.6  |
| 80°   | 2.0    | 3.1  | 4.5    | 5.0  |
| 82.5° | 1.4    | 2.2  | 3.6    | 3.9  |
| 85°   | 1.1    | 1.7  | 2.5    | 2.8  |
| 87.5° | 0.8    | 0.8  | 1.4    | 1.4  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)