

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: P1345109

Luminaire Tested: P3A13R309840DE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1345109  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A13R309840DE010 E3CA451MMS  
Description: 3in Adjustable LED luminaire with, R30 optic, 4000K CCT AND, 98CRI , E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

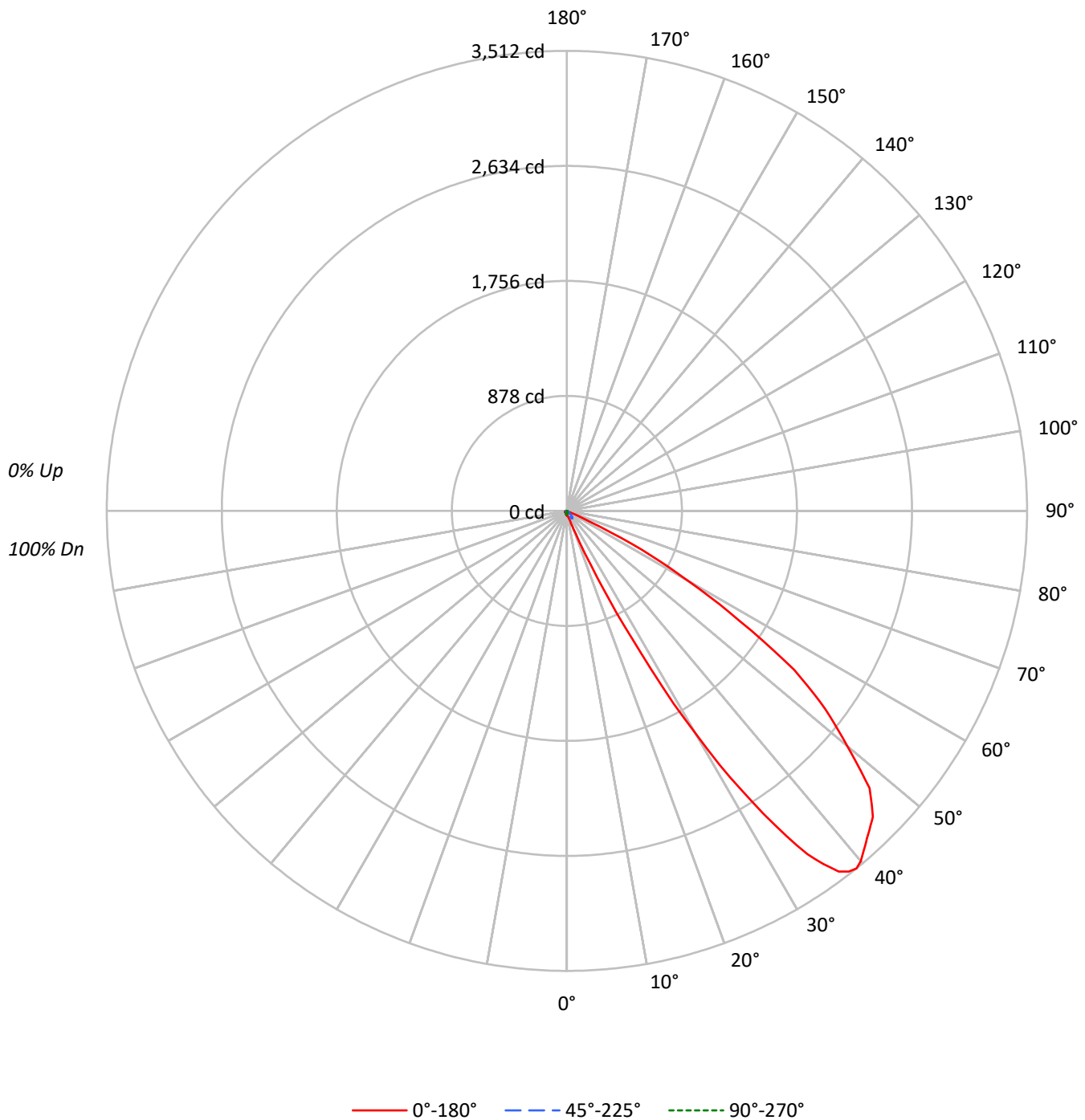
Lumens per Lamp: N/A  
Luminaire Lumens: 913.0 lumens  
Efficiency: N/A  
Efficacy: 63.0 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.5  
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: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

### Luminous Intensity Polar Plot



TEST NUMBER: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**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  | 108 | 104 | 100 | 97  | 100 | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  |  | 84  | 80  | 77  |  | 81  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 74  | 68  | 64  |  | 71  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 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  | 37  |  | 49  | 42  | 37  |  | 48  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 31  |  | 44  | 36  | 31  |  | 42  |
| 8   | 56  | 42  | 33  | 27  | 55  | 41  | 33  | 27  | 40  | 32  | 26  |  | 39  | 32  | 26  |  | 37  |
| 9   | 52  | 37  | 29  | 23  | 50  | 37  | 28  | 23  | 36  | 28  | 22  |  | 34  | 27  | 22  |  | 33  |
| 10  | 48  | 33  | 25  | 19  | 46  | 33  | 25  | 19  | 32  | 24  | 19  |  | 31  | 24  | 19  |  | 30  |

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

|     | 0°      | 45°   | 90°  | 135° | 180°  |
|-----|---------|-------|------|------|-------|
| 0°  | 7763    | 7763  | 7763 | 7763 | 7763  |
| 5°  | 8298    | 8122  | 7616 | 6934 | 6780  |
| 10° | 9085    | 8038  | 6680 | 5990 | 5812  |
| 15° | 13258   | 8036  | 5585 | 5062 | 5244  |
| 20° | 33370   | 8797  | 4317 | 4317 | 4854  |
| 25° | 154993  | 10985 | 3339 | 3920 | 4476  |
| 30° | 493443  | 15192 | 2532 | 3697 | 4482  |
| 35° | 856241  | 18524 | 2061 | 3507 | 4524  |
| 40° | 998585  | 18492 | 1546 | 3521 | 4637  |
| 45° | 1024106 | 13118 | 1675 | 3814 | 5024  |
| 50° | 952361  | 7335  | 1296 | 3923 | 5765  |
| 55° | 809453  | 3823  | 1453 | 4396 | 6461  |
| 60° | 467463  | 1009  | 1667 | 4736 | 7105  |
| 65° | 95367   | 0     | 1972 | 5604 | 7990  |
| 70° | 1475    | 513   | 2436 | 6411 | 9361  |
| 75° | 1271    | 678   | 2626 | 6524 | 11099 |
| 80° | 1010    | 1010  | 3915 | 7829 | 12628 |
| 85° | 0       | 2013  | 7799 | 7799 | 15599 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1024106 cd/sqm

TEST NUMBER: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 3.2    | 0.4       |
| 10°-20°   | 9.2    | 1.0       |
| 20°-30°   | 52.7   | 5.8       |
| 30°-40°   | 245.9  | 26.9      |
| 40°-50°   | 347.8  | 38.1      |
| 50°-60°   | 213.9  | 23.4      |
| 60°-70°   | 32.6   | 3.6       |
| 70°-80°   | 5.2    | 0.6       |
| 80°-90°   | 2.6    | 0.3       |
| 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°    | 65.1   | 7.1       |
| 0°-40°    | 311.0  | 34.1      |
| 0°-60°    | 872.7  | 95.6      |
| 0°-90°    | 913.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 913.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 35   | 35  | 35  | 35   | 35   |      |
| 5°  | 38   | 37  | 35  | 32   | 31   | 4    |
| 15° | 58   | 35  | 25  | 22   | 23   | 21   |
| 25° | 641  | 45  | 14  | 16   | 18   | 394  |
| 35° | 3199 | 69  | 8   | 13   | 17   | 1920 |
| 45° | 3302 | 42  | 5   | 12   | 16   | 2504 |
| 55° | 2117 | 10  | 4   | 12   | 17   | 1802 |
| 65° | 184  | 0   | 4   | 11   | 15   | 333  |
| 75° | 2    | 1   | 3   | 8    | 13   | 2    |
| 85° | 0    | 1   | 3   | 3    | 6    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 45°  | 67.5° | 90°  | 112.5° | 135° |
|-------|--------|--------|--------|--------|--------|--------|------|-------|------|--------|------|
| 0°    | 35.4   | 35.4   | 35.4   | 35.4   | 35.4   | 35.4   | 35.4 | 35.4  | 35.4 | 35.4   | 35.4 |
| 2.5°  | 36.1   | 36.1   | 36.9   | 36.9   | 36.1   | 36.9   | 36.9 | 36.9  | 35.4 | 34.6   | 33.1 |
| 5°    | 37.7   | 37.7   | 37.7   | 38.5   | 37.7   | 37.7   | 36.9 | 36.1  | 34.6 | 32.3   | 31.5 |
| 7.5°  | 39.2   | 39.2   | 38.5   | 39.2   | 38.5   | 38.5   | 36.9 | 35.4  | 33.1 | 30.8   | 29.2 |
| 10°   | 40.8   | 40.8   | 40.0   | 40.0   | 39.2   | 39.2   | 36.1 | 33.8  | 30.0 | 27.7   | 26.9 |
| 12.5° | 45.4   | 45.4   | 44.6   | 43.8   | 42.3   | 41.5   | 35.4 | 31.5  | 26.9 | 24.6   | 23.8 |
| 15°   | 58.4   | 57.7   | 56.1   | 53.8   | 50.0   | 49.2   | 35.4 | 29.2  | 24.6 | 22.3   | 22.3 |
| 17.5° | 80.0   | 79.2   | 76.9   | 70.8   | 63.8   | 61.5   | 35.4 | 26.1  | 21.5 | 20.0   | 20.0 |
| 20°   | 143.0  | 136.9  | 125.4  | 110.0  | 93.8   | 85.4   | 37.7 | 23.1  | 18.5 | 17.7   | 18.5 |
| 21°   | 186.9  | 180.7  | 166.1  | 140.7  | 112.3  | 103.1  | 39.2 | 22.3  | 17.7 | 16.9   | 18.5 |
| 22°   | 254.6  | 247.6  | 217.6  | 183.0  | 142.3  | 126.1  | 40.0 | 20.8  | 16.2 | 16.2   | 17.7 |
| 23°   | 355.3  | 343.8  | 293.0  | 237.6  | 177.7  | 154.6  | 41.5 | 20.0  | 15.4 | 16.2   | 16.9 |
| 24°   | 465.3  | 455.3  | 397.6  | 314.6  | 226.9  | 193.8  | 43.1 | 19.2  | 14.6 | 14.6   | 16.2 |
| 25°   | 640.6  | 629.1  | 526.8  | 396.8  | 287.6  | 233.0  | 45.4 | 17.7  | 13.8 | 13.8   | 16.2 |
| 26°   | 867.5  | 814.4  | 678.3  | 511.4  | 354.5  | 292.2  | 47.7 | 16.9  | 13.1 | 13.8   | 15.4 |
| 27°   | 1082.9 | 1039.0 | 886.0  | 656.0  | 438.4  | 359.2  | 50.8 | 16.2  | 12.3 | 13.1   | 15.4 |
| 28°   | 1365.9 | 1304.3 | 1111.3 | 829.8  | 552.2  | 434.5  | 53.8 | 15.4  | 11.5 | 13.1   | 14.6 |
| 29°   | 1682.7 | 1596.6 | 1363.6 | 1025.2 | 680.6  | 519.1  | 56.9 | 14.6  | 10.8 | 12.3   | 14.6 |
| 30°   | 1948.8 | 1868.1 | 1635.0 | 1256.7 | 828.3  | 630.6  | 60.0 | 13.8  | 10.0 | 12.3   | 14.6 |
| 31°   | 2261.1 | 2138.8 | 1856.5 | 1452.8 | 955.2  | 742.2  | 63.1 | 12.3  | 9.2  | 11.5   | 13.8 |
| 32°   | 2514.1 | 2428.7 | 2128.8 | 1674.3 | 1122.1 | 865.2  | 65.4 | 11.5  | 9.2  | 11.5   | 13.8 |
| 33°   | 2758.7 | 2644.1 | 2354.1 | 1886.5 | 1272.8 | 991.3  | 67.7 | 10.8  | 8.5  | 10.8   | 13.8 |
| 34°   | 2992.5 | 2887.1 | 2567.2 | 2058.0 | 1415.1 | 1111.3 | 69.2 | 9.2   | 8.5  | 10.8   | 13.1 |
| 35°   | 3198.6 | 3076.3 | 2754.8 | 2225.7 | 1561.2 | 1220.5 | 69.2 | 8.5   | 7.7  | 10.0   | 13.1 |
| 36°   | 3332.4 | 3244.7 | 2917.9 | 2391.0 | 1693.5 | 1324.3 | 69.2 | 7.7   | 6.9  | 10.0   | 12.3 |
| 37°   | 3447.0 | 3344.7 | 3048.6 | 2517.9 | 1791.2 | 1407.4 | 69.2 | 6.9   | 6.9  | 10.0   | 12.3 |
| 38°   | 3493.9 | 3406.2 | 3138.6 | 2630.2 | 1882.7 | 1492.0 | 68.4 | 6.2   | 6.2  | 9.2    | 12.3 |
| 39°   | 3512.4 | 3433.9 | 3206.3 | 2711.0 | 1950.4 | 1548.9 | 66.9 | 5.4   | 6.2  | 9.2    | 12.3 |
| 40°   | 3488.5 | 3429.3 | 3240.9 | 2763.3 | 2004.2 | 1590.4 | 64.6 | 4.6   | 5.4  | 9.2    | 12.3 |
| 42.5° | 3390.1 | 3350.8 | 3233.2 | 2815.6 | 2050.3 | 1621.2 | 56.1 | 3.1   | 5.4  | 8.5    | 12.3 |
| 45°   | 3302.4 | 3259.3 | 3155.5 | 2761.0 | 1990.4 | 1560.4 | 42.3 | 1.5   | 5.4  | 8.5    | 12.3 |
| 47.5° | 3132.4 | 3105.5 | 3024.0 | 2621.8 | 1858.8 | 1423.6 | 30.0 | 0.8   | 4.6  | 7.7    | 11.5 |
| 50°   | 2791.7 | 2766.4 | 2658.7 | 2276.5 | 1598.9 | 1203.6 | 21.5 | 0.8   | 3.8  | 7.7    | 11.5 |
| 52.5° | 2486.4 | 2459.5 | 2304.9 | 1892.7 | 1228.2 | 882.1  | 13.8 | 0.8   | 3.8  | 7.7    | 11.5 |
| 55°   | 2117.3 | 2070.3 | 1867.3 | 1436.6 | 870.6  | 591.4  | 10.0 | 0.8   | 3.8  | 6.9    | 11.5 |
| 57.5° | 1567.4 | 1498.9 | 1317.4 | 979.8  | 501.4  | 320.7  | 5.4  | 0.8   | 3.8  | 6.9    | 11.5 |
| 60°   | 1065.9 | 1025.2 | 824.4  | 516.8  | 213.8  | 135.4  | 2.3  | 0.8   | 3.8  | 6.9    | 10.8 |
| 62.5° | 646.0  | 594.5  | 414.5  | 220.0  | 92.3   | 61.5   | 0.0  | 1.5   | 3.8  | 6.9    | 10.8 |
| 65°   | 183.8  | 163.0  | 108.4  | 50.0   | 26.1   | 20.0   | 0.0  | 1.5   | 3.8  | 6.9    | 10.8 |
| 67.5° | 6.2    | 6.2    | 6.2    | 5.4    | 3.8    | 3.8    | 0.8  | 1.5   | 3.8  | 6.9    | 10.0 |
| 70°   | 2.3    | 2.3    | 2.3    | 1.5    | 1.5    | 0.8    | 0.8  | 1.5   | 3.8  | 6.2    | 10.0 |
| 72.5° | 1.5    | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8  | 1.5   | 3.1  | 5.4    | 9.2  |
| 75°   | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.1  | 5.4    | 7.7  |
| 77.5° | 1.5    | 1.5    | 1.5    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.1  | 4.6    | 7.7  |
| 80°   | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8  | 2.3   | 3.1  | 4.6    | 6.2  |



TEST NUMBER: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 3.1 | 3.1    | 4.6  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 3.1 | 2.3    | 3.1  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.8 | 2.3   | 2.3 | 2.3    | 1.5  |
| 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: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 35.4   | 35.4 |
| 2.5°  | 33.1   | 33.1 |
| 5°    | 30.8   | 30.8 |
| 7.5°  | 28.5   | 28.5 |
| 10°   | 26.1   | 26.1 |
| 12.5° | 24.6   | 24.6 |
| 15°   | 22.3   | 23.1 |
| 17.5° | 20.8   | 21.5 |
| 20°   | 20.0   | 20.8 |
| 21°   | 20.0   | 20.8 |
| 22°   | 19.2   | 20.0 |
| 23°   | 19.2   | 20.0 |
| 24°   | 18.5   | 19.2 |
| 25°   | 17.7   | 18.5 |
| 26°   | 17.7   | 18.5 |
| 27°   | 17.7   | 18.5 |
| 28°   | 16.9   | 18.5 |
| 29°   | 16.9   | 17.7 |
| 30°   | 16.9   | 17.7 |
| 31°   | 16.2   | 17.7 |
| 32°   | 16.2   | 17.7 |
| 33°   | 16.2   | 16.9 |
| 34°   | 15.4   | 16.9 |
| 35°   | 15.4   | 16.9 |
| 36°   | 15.4   | 16.9 |
| 37°   | 15.4   | 16.2 |
| 38°   | 15.4   | 16.9 |
| 39°   | 15.4   | 16.2 |
| 40°   | 15.4   | 16.2 |
| 42.5° | 15.4   | 16.2 |
| 45°   | 15.4   | 16.2 |
| 47.5° | 15.4   | 16.9 |
| 50°   | 15.4   | 16.9 |
| 52.5° | 15.4   | 16.9 |
| 55°   | 15.4   | 16.9 |
| 57.5° | 15.4   | 16.2 |
| 60°   | 15.4   | 16.2 |
| 62.5° | 14.6   | 16.2 |
| 65°   | 14.6   | 15.4 |
| 67.5° | 14.6   | 15.4 |
| 70°   | 13.8   | 14.6 |
| 72.5° | 13.1   | 13.8 |
| 75°   | 11.5   | 13.1 |
| 77.5° | 10.8   | 11.5 |
| 80°   | 9.2    | 10.0 |

TEST NUMBER: P1345109

CATALOG NUMBER: P3A13R309840DE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 7.7    | 7.7  |
| 85°   | 5.4    | 6.2  |
| 87.5° | 3.1    | 3.1  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)