

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: P1345950

Luminaire Tested: P3A13R409030DE010 E3A451H

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1345950  
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: P3A13R409030DE010 E3A451H  
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 90CRI , E3A451H TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

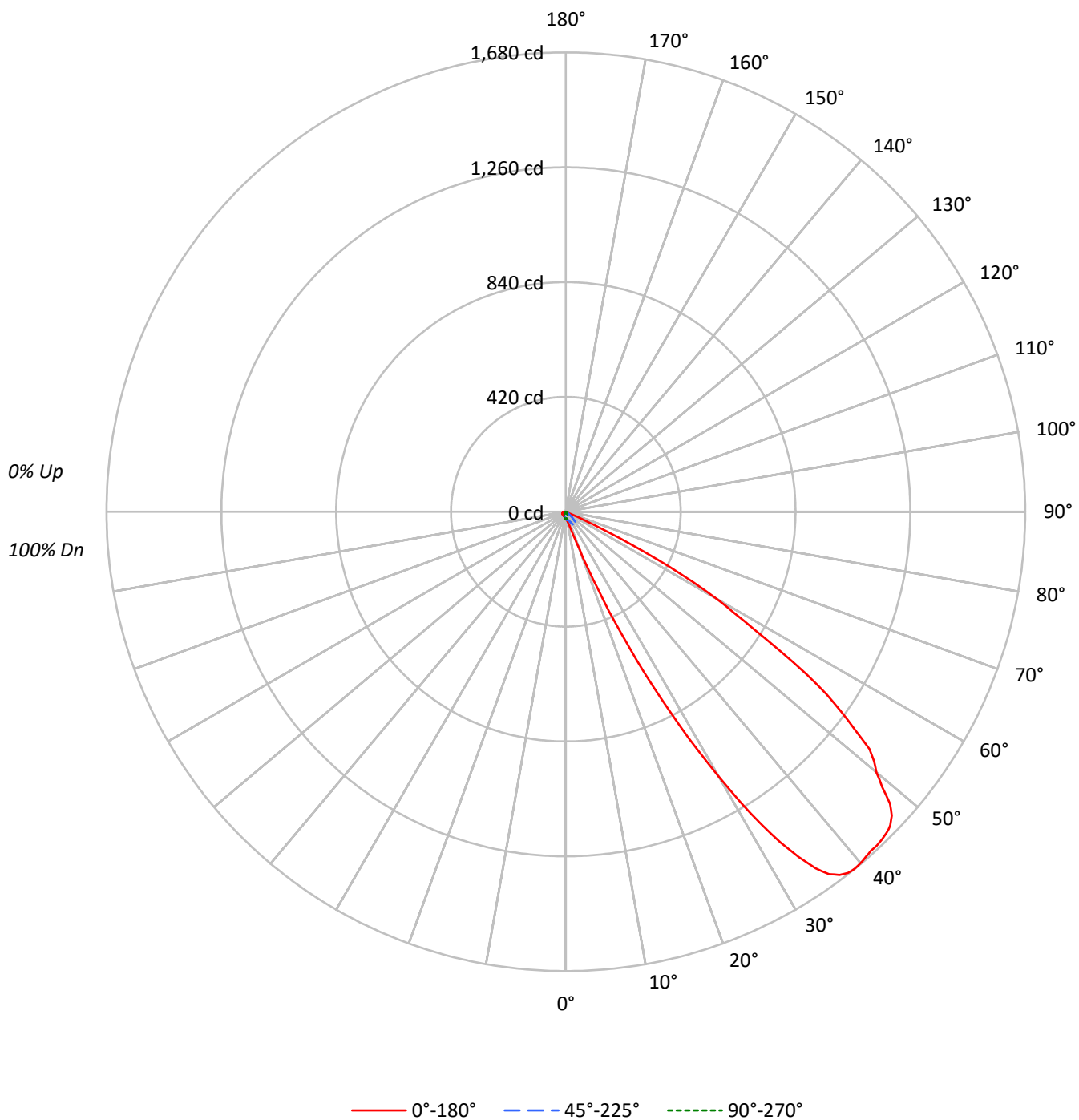
Lumens per Lamp: N/A  
Luminaire Lumens: 519.0 lumens  
Efficiency: N/A  
Efficacy: 35.5 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.6  
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: P3A13R409030DE010 E3A451H

### 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°  | 5855   | 5855  | 5855 | 5855 | 5855  |
| 5°  | 6516   | 6295  | 5767 | 5239 | 5151  |
| 10° | 7860   | 6680  | 5299 | 4765 | 4676  |
| 15° | 12872  | 7242  | 4540 | 4222 | 4336  |
| 20° | 34023  | 8564  | 3780 | 3780 | 4107  |
| 25° | 131233 | 10597 | 3000 | 3460 | 4041  |
| 30° | 283132 | 14129 | 2405 | 3368 | 3975  |
| 35° | 426139 | 16704 | 2034 | 3319 | 4096  |
| 40° | 480128 | 16774 | 1775 | 3406 | 4380  |
| 45° | 514813 | 12994 | 1613 | 3535 | 4745  |
| 50° | 506013 | 8119  | 1467 | 3753 | 5219  |
| 55° | 445155 | 4014  | 1453 | 4205 | 5849  |
| 60° | 281776 | 833   | 1667 | 4605 | 6491  |
| 65° | 57646  | 259   | 1712 | 4929 | 7160  |
| 70° | 1218   | 321   | 1859 | 5514 | 8271  |
| 75° | 1186   | 847   | 2033 | 6015 | 9320  |
| 80° | 1263   | 631   | 2399 | 6566 | 10860 |
| 85° | 1258   | 1258  | 4780 | 7296 | 12077 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 524121 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2.5    | 0.5       |
| 10°-20°   | 8.2    | 1.6       |
| 20°-30°   | 40.3   | 7.8       |
| 30°-40°   | 131.1  | 25.3      |
| 40°-50°   | 180.8  | 34.8      |
| 50°-60°   | 125.9  | 24.3      |
| 60°-70°   | 23.9   | 4.6       |
| 70°-80°   | 4.3    | 0.8       |
| 80°-90°   | 2.0    | 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°    | 51.0   | 9.8       |
| 0°-40°    | 182.2  | 35.1      |
| 0°-60°    | 488.8  | 94.2      |
| 0°-90°    | 519.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 519.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 27   | 27  | 27  | 27   | 27   |      |
| 5°  | 30   | 29  | 26  | 24   | 23   | 3    |
| 15° | 57   | 32  | 20  | 19   | 19   | 21   |
| 25° | 542  | 44  | 12  | 14   | 17   | 279  |
| 35° | 1592 | 62  | 8   | 12   | 15   | 962  |
| 45° | 1660 | 42  | 5   | 11   | 15   | 1262 |
| 55° | 1164 | 10  | 4   | 11   | 15   | 995  |
| 65° | 111  | 0   | 3   | 10   | 14   | 196  |
| 75° | 1    | 1   | 2   | 7    | 11   | 1    |
| 85° | 0    | 0   | 2   | 3    | 5    | 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°    | 26.7   | 26.7   | 26.7   | 26.7   | 26.7   | 26.7  | 26.7  | 26.7  | 26.7 | 26.7  | 26.7 |
| 2.5°  | 27.6   | 27.6   | 27.6   | 27.6   | 27.6   | 27.6  | 27.6  | 27.6  | 27.6 | 27.2  | 26.7 |
| 5°    | 29.6   | 29.6   | 29.6   | 29.6   | 29.1   | 29.1  | 29.1  | 28.6  | 28.6 | 27.6  | 26.2 |
| 7.5°  | 31.5   | 31.5   | 31.5   | 31.5   | 31.0   | 30.5  | 30.0  | 30.0  | 29.6 | 27.2  | 25.3 |
| 10°   | 35.3   | 35.3   | 34.8   | 34.3   | 33.8   | 32.9  | 32.4  | 31.5  | 30.0 | 26.7  | 23.8 |
| 12.5° | 42.9   | 41.9   | 41.5   | 40.5   | 39.1   | 37.2  | 35.3  | 33.8  | 30.5 | 25.7  | 22.4 |
| 15°   | 56.7   | 55.8   | 53.9   | 51.0   | 48.1   | 44.3  | 41.0  | 37.7  | 31.9 | 24.3  | 20.0 |
| 17.5° | 81.0   | 78.2   | 75.3   | 70.5   | 63.4   | 56.7  | 49.6  | 43.4  | 33.8 | 22.9  | 18.1 |
| 20°   | 145.8  | 143.9  | 126.8  | 113.4  | 92.0   | 76.7  | 62.4  | 52.0  | 36.7 | 21.4  | 16.2 |
| 22.5° | 300.8  | 280.7  | 252.6  | 206.9  | 161.1  | 118.7 | 86.3  | 65.3  | 39.6 | 19.5  | 14.3 |
| 25°   | 542.4  | 510.9  | 450.4  | 362.2  | 267.4  | 189.2 | 124.9 | 85.3  | 43.8 | 17.6  | 12.4 |
| 27.5° | 821.2  | 789.3  | 695.4  | 573.9  | 419.0  | 285.5 | 178.3 | 113.0 | 49.6 | 15.7  | 11.0 |
| 30°   | 1118.2 | 1091.0 | 971.8  | 803.6  | 590.5  | 399.9 | 238.8 | 141.1 | 55.8 | 13.8  | 9.5  |
| 31°   | 1237.8 | 1203.0 | 1074.3 | 895.1  | 671.1  | 447.1 | 263.1 | 153.0 | 58.1 | 13.3  | 9.1  |
| 32°   | 1347.9 | 1308.3 | 1174.9 | 982.8  | 736.4  | 498.1 | 289.8 | 163.5 | 60.1 | 12.4  | 8.6  |
| 33°   | 1442.8 | 1396.5 | 1267.8 | 1065.7 | 808.4  | 545.7 | 317.4 | 173.5 | 61.5 | 11.4  | 8.1  |
| 34°   | 1523.3 | 1483.3 | 1345.0 | 1149.2 | 872.2  | 591.5 | 344.6 | 183.5 | 62.4 | 11.0  | 7.6  |
| 35°   | 1591.9 | 1555.7 | 1418.9 | 1212.5 | 934.7  | 635.8 | 369.4 | 193.0 | 62.4 | 10.0  | 7.6  |
| 36°   | 1638.2 | 1606.7 | 1482.8 | 1277.4 | 987.1  | 673.5 | 390.4 | 201.6 | 62.4 | 9.1   | 7.1  |
| 37°   | 1663.4 | 1632.9 | 1524.7 | 1330.7 | 1038.6 | 710.7 | 409.4 | 208.3 | 62.0 | 8.6   | 6.7  |
| 38°   | 1676.3 | 1649.6 | 1555.7 | 1374.1 | 1074.3 | 737.3 | 426.1 | 213.5 | 61.5 | 7.6   | 6.7  |
| 39°   | 1679.6 | 1657.2 | 1575.3 | 1405.6 | 1109.1 | 764.0 | 438.0 | 216.4 | 60.1 | 7.1   | 6.2  |
| 40°   | 1677.3 | 1657.7 | 1585.7 | 1433.7 | 1135.8 | 785.0 | 446.6 | 217.3 | 58.6 | 6.2   | 6.2  |
| 41°   | 1672.5 | 1657.2 | 1593.4 | 1453.2 | 1157.3 | 798.4 | 449.9 | 215.4 | 56.7 | 5.2   | 5.7  |
| 42°   | 1668.2 | 1651.5 | 1596.7 | 1466.6 | 1172.0 | 805.0 | 449.5 | 211.6 | 53.9 | 4.8   | 5.7  |
| 43°   | 1668.2 | 1649.1 | 1597.2 | 1475.2 | 1179.2 | 805.5 | 443.7 | 204.5 | 50.0 | 4.3   | 5.2  |
| 44°   | 1665.3 | 1647.7 | 1599.6 | 1480.9 | 1181.1 | 801.2 | 434.7 | 196.8 | 45.8 | 3.8   | 5.2  |
| 45°   | 1660.1 | 1641.5 | 1599.1 | 1481.4 | 1177.8 | 790.7 | 419.9 | 186.8 | 41.9 | 2.9   | 5.2  |
| 46°   | 1650.1 | 1633.4 | 1594.8 | 1478.0 | 1167.7 | 775.5 | 402.3 | 176.8 | 37.7 | 2.4   | 4.8  |
| 47°   | 1630.1 | 1617.2 | 1583.4 | 1466.6 | 1152.5 | 753.1 | 381.3 | 165.4 | 34.3 | 1.9   | 4.8  |
| 48°   | 1595.8 | 1586.7 | 1563.8 | 1441.3 | 1123.4 | 725.4 | 358.9 | 153.0 | 31.0 | 1.9   | 4.8  |
| 49°   | 1532.8 | 1525.7 | 1512.3 | 1400.8 | 1086.2 | 691.6 | 334.6 | 139.2 | 27.6 | 1.4   | 4.8  |
| 50°   | 1483.3 | 1475.6 | 1448.5 | 1332.7 | 1032.9 | 648.7 | 307.9 | 125.4 | 23.8 | 1.0   | 4.3  |
| 51°   | 1450.4 | 1438.0 | 1395.1 | 1253.5 | 955.2  | 591.5 | 278.8 | 111.5 | 20.0 | 1.0   | 4.3  |
| 52°   | 1408.9 | 1390.3 | 1336.9 | 1182.5 | 884.1  | 534.3 | 247.4 | 97.7  | 17.6 | 1.0   | 4.3  |
| 53°   | 1322.2 | 1315.5 | 1262.6 | 1106.3 | 813.1  | 479.5 | 215.0 | 86.3  | 15.3 | 1.0   | 4.3  |
| 54°   | 1246.4 | 1236.4 | 1164.4 | 1000.4 | 735.9  | 418.5 | 181.6 | 76.3  | 12.9 | 1.0   | 4.3  |
| 55°   | 1164.4 | 1144.9 | 1081.0 | 911.3  | 645.4  | 362.2 | 149.7 | 65.8  | 10.5 | 1.0   | 3.8  |
| 56°   | 1061.0 | 1043.8 | 975.2  | 816.0  | 561.9  | 305.0 | 125.4 | 53.9  | 8.1  | 1.0   | 3.8  |
| 57°   | 935.1  | 919.4  | 866.5  | 698.7  | 475.2  | 249.3 | 102.0 | 43.4  | 6.2  | 1.0   | 3.8  |
| 58°   | 813.6  | 796.0  | 735.4  | 586.3  | 383.7  | 197.8 | 85.3  | 35.3  | 4.8  | 1.0   | 3.8  |
| 59°   | 720.2  | 696.4  | 618.2  | 492.4  | 300.3  | 150.1 | 67.7  | 28.1  | 3.3  | 1.0   | 3.8  |
| 60°   | 642.5  | 623.0  | 541.9  | 409.9  | 235.5  | 110.6 | 50.0  | 21.4  | 1.9  | 1.0   | 3.8  |
| 62.5° | 372.2  | 367.0  | 294.1  | 211.1  | 111.1  | 51.5  | 24.8  | 10.0  | 1.0  | 1.4   | 3.8  |
| 65°   | 111.1  | 96.8   | 75.3   | 44.8   | 28.6   | 17.2  | 9.1   | 3.3   | 0.5  | 1.4   | 3.3  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 1.9 | 1.0 | 0.5 | 1.4   | 3.3 |
| 70°   | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.0 | 1.0 | 0.5 | 0.5 | 1.4   | 2.9 |
| 72.5° | 1.4 | 1.4 | 1.4 | 1.4 | 1.0 | 1.0 | 1.0 | 0.5 | 1.0 | 1.4   | 2.4 |
| 75°   | 1.4 | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 1.0 | 1.4   | 2.4 |
| 77.5° | 1.0 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 1.4   | 2.4 |
| 80°   | 1.0 | 1.0 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.4   | 1.9 |
| 82.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.4   | 1.9 |
| 85°   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.4   | 1.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 | 1.4   | 1.4 |
| 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: P1345950

CATALOG NUMBER: P3A13R409030DE010 E3A451H

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 26.7   | 26.7 | 26.7   | 26.7 |
| 2.5°  | 25.7   | 25.3 | 24.8   | 24.8 |
| 5°    | 24.8   | 23.8 | 23.8   | 23.4 |
| 7.5°  | 23.4   | 22.4 | 22.4   | 22.4 |
| 10°   | 21.9   | 21.4 | 21.4   | 21.0 |
| 12.5° | 20.0   | 20.0 | 20.0   | 20.0 |
| 15°   | 18.6   | 18.6 | 19.1   | 19.1 |
| 17.5° | 16.7   | 17.2 | 18.1   | 18.6 |
| 20°   | 15.3   | 16.2 | 17.2   | 17.6 |
| 22.5° | 14.3   | 15.3 | 16.7   | 17.2 |
| 25°   | 12.9   | 14.3 | 16.2   | 16.7 |
| 27.5° | 11.9   | 13.8 | 15.3   | 16.2 |
| 30°   | 11.0   | 13.3 | 14.8   | 15.7 |
| 31°   | 11.0   | 12.9 | 14.8   | 15.7 |
| 32°   | 10.5   | 12.4 | 14.8   | 15.3 |
| 33°   | 10.5   | 12.4 | 14.8   | 15.3 |
| 34°   | 10.0   | 12.4 | 14.3   | 15.3 |
| 35°   | 10.0   | 12.4 | 14.3   | 15.3 |
| 36°   | 9.5    | 11.9 | 14.3   | 15.3 |
| 37°   | 9.5    | 11.9 | 14.3   | 15.3 |
| 38°   | 9.1    | 11.9 | 14.3   | 15.3 |
| 39°   | 9.1    | 11.9 | 14.3   | 15.3 |
| 40°   | 9.1    | 11.9 | 14.3   | 15.3 |
| 41°   | 8.6    | 11.9 | 14.3   | 15.3 |
| 42°   | 8.6    | 11.9 | 14.3   | 15.3 |
| 43°   | 8.6    | 11.4 | 14.3   | 15.3 |
| 44°   | 8.6    | 11.4 | 14.3   | 15.3 |
| 45°   | 8.1    | 11.4 | 14.3   | 15.3 |
| 46°   | 8.1    | 11.4 | 14.3   | 15.3 |
| 47°   | 8.1    | 11.4 | 14.3   | 15.3 |
| 48°   | 8.1    | 11.4 | 14.3   | 15.3 |
| 49°   | 8.1    | 11.4 | 14.3   | 15.3 |
| 50°   | 7.6    | 11.0 | 14.3   | 15.3 |
| 51°   | 7.6    | 11.0 | 14.3   | 15.3 |
| 52°   | 7.6    | 11.0 | 14.3   | 15.3 |
| 53°   | 7.6    | 11.0 | 14.3   | 15.3 |
| 54°   | 7.1    | 11.0 | 14.3   | 15.3 |
| 55°   | 7.1    | 11.0 | 14.3   | 15.3 |
| 56°   | 7.1    | 11.0 | 14.3   | 14.8 |
| 57°   | 7.1    | 11.0 | 13.8   | 14.8 |
| 58°   | 7.1    | 10.5 | 13.8   | 14.8 |
| 59°   | 7.1    | 10.5 | 13.8   | 14.8 |
| 60°   | 7.1    | 10.5 | 13.8   | 14.8 |
| 62.5° | 6.7    | 10.5 | 13.3   | 14.3 |
| 65°   | 6.2    | 9.5  | 13.3   | 13.8 |



TEST NUMBER: P1345950

CATALOG NUMBER: P3A13R409030DE010 E3A451H

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 6.2    | 9.1  | 12.4   | 13.3 |
| 70°   | 5.7    | 8.6  | 11.9   | 12.9 |
| 72.5° | 4.8    | 8.1  | 11.0   | 11.9 |
| 75°   | 4.3    | 7.1  | 10.0   | 11.0 |
| 77.5° | 3.8    | 6.2  | 9.1    | 9.5  |
| 80°   | 3.3    | 5.2  | 7.6    | 8.6  |
| 82.5° | 2.4    | 3.8  | 6.2    | 6.7  |
| 85°   | 1.9    | 2.9  | 4.3    | 4.8  |
| 87.5° | 1.4    | 1.4  | 2.4    | 2.4  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)