

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: P1338945

Luminaire Tested: P3A05R409730DE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1338945  
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 E3CA451MMS  
Description: 3in Adjustable LED luminaire with, R40 optic, 3000K CCT AND, 97CRI , E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

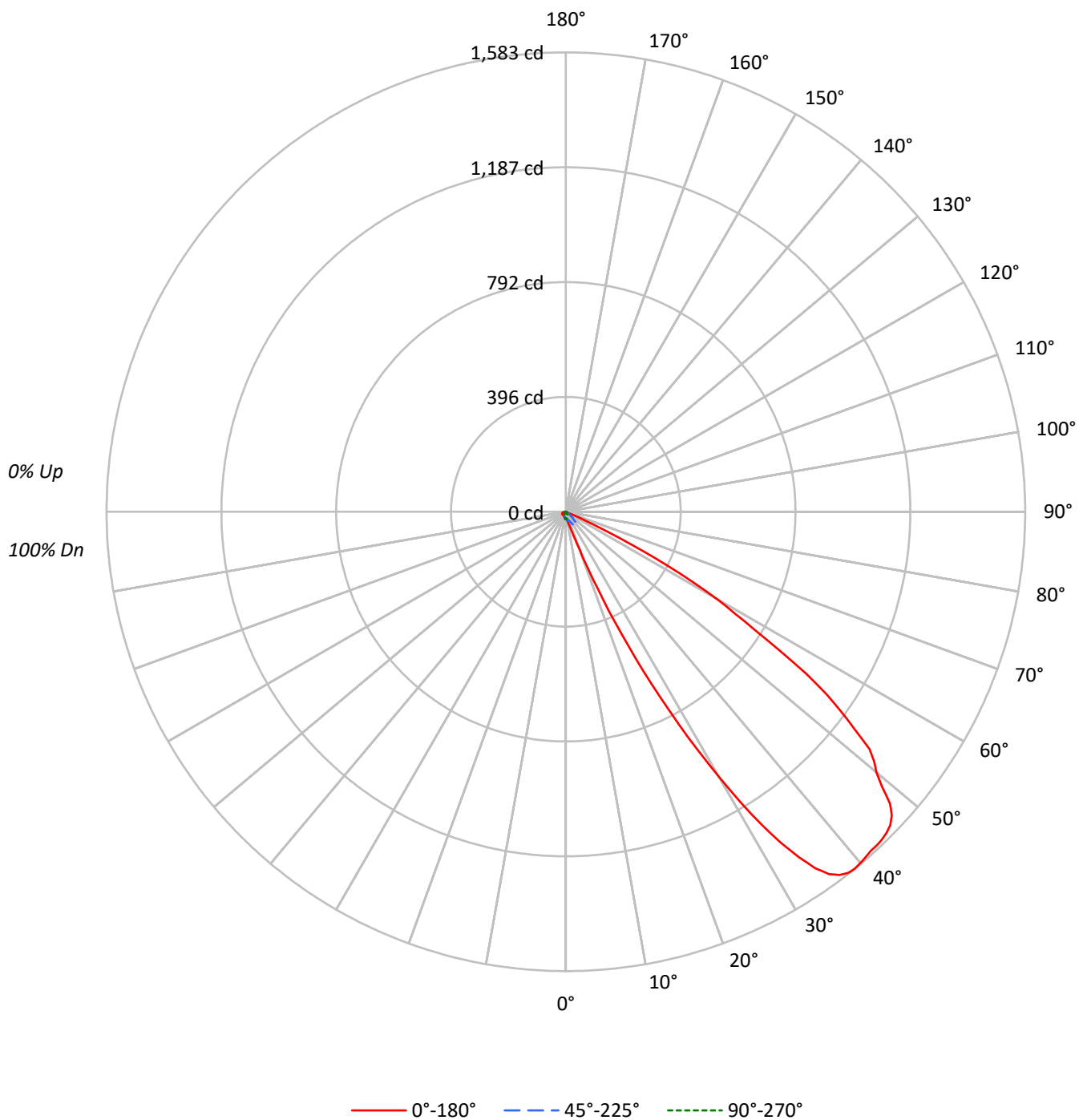
Lumens per Lamp: N/A  
Luminaire Lumens: 488.9 lumens  
Efficiency: N/A  
Efficacy: 67.9 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

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CATALOG NUMBER: P3A05R409730DE010 E3CA451MMS

### Luminous Intensity Polar Plot



TEST NUMBER: P1338945

CATALOG NUMBER: P3A05R409730DE010 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  | 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°  | 5504   | 5504  | 5504 | 5504 | 5504  |
| 5°  | 6119   | 5921  | 5437 | 4953 | 4843  |
| 10° | 7392   | 6301  | 5010 | 4498 | 4409  |
| 15° | 12123  | 6833  | 4291 | 3973 | 4086  |
| 20° | 32063  | 8074  | 3570 | 3570 | 3874  |
| 25° | 123660 | 9993  | 2831 | 3266 | 3799  |
| 30° | 266750 | 13293 | 2279 | 3190 | 3747  |
| 35° | 401512 | 15740 | 1927 | 3132 | 3855  |
| 40° | 452362 | 15801 | 1660 | 3206 | 4122  |
| 45° | 485043 | 12249 | 1520 | 3349 | 4466  |
| 50° | 476743 | 7676  | 1365 | 3514 | 4912  |
| 55° | 419426 | 3785  | 1376 | 3938 | 5505  |
| 60° | 265505 | 789   | 1579 | 4342 | 6096  |
| 65° | 54273  | 208   | 1608 | 4670 | 6745  |
| 70° | 1154   | 256   | 1731 | 5193 | 7758  |
| 75° | 1101   | 763   | 1864 | 5676 | 8727  |
| 80° | 1137   | 505   | 2273 | 6188 | 10229 |
| 85° | 1006   | 1006  | 4529 | 6793 | 11322 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 493801 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2.3    | 0.5       |
| 10°-20°   | 7.8    | 1.6       |
| 20°-30°   | 38.0   | 7.8       |
| 30°-40°   | 123.5  | 25.3      |
| 40°-50°   | 170.3  | 34.8      |
| 50°-60°   | 118.6  | 24.3      |
| 60°-70°   | 22.5   | 4.6       |
| 70°-80°   | 4.0    | 0.8       |
| 80°-90°   | 1.9    | 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°    | 48.1   | 9.8       |
| 0°-40°    | 171.6  | 35.1      |
| 0°-60°    | 460.6  | 94.2      |
| 0°-90°    | 488.9  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 488.9  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 25   | 25  | 25  | 25   | 25   |      |
| 5°  | 28   | 27  | 25  | 22   | 22   | 3    |
| 15° | 53   | 30  | 19  | 18   | 18   | 19   |
| 25° | 511  | 41  | 12  | 14   | 16   | 263  |
| 35° | 1500 | 59  | 7   | 12   | 14   | 906  |
| 45° | 1564 | 40  | 5   | 11   | 14   | 1189 |
| 55° | 1097 | 10  | 4   | 10   | 14   | 938  |
| 65° | 105  | 0   | 3   | 9    | 13   | 185  |
| 75° | 1    | 1   | 2   | 7    | 10   | 1    |
| 85° | 0    | 0   | 2   | 3    | 4    | 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°    | 25.1   | 25.1   | 25.1   | 25.1   | 25.1   | 25.1  | 25.1  | 25.1  | 25.1 | 25.1  | 25.1 |
| 2.5°  | 26.0   | 26.0   | 26.0   | 26.0   | 26.0   | 26.0  | 26.0  | 26.0  | 26.0 | 25.6  | 25.1 |
| 5°    | 27.8   | 27.8   | 27.8   | 27.8   | 27.4   | 27.4  | 27.4  | 26.9  | 26.9 | 26.0  | 24.7 |
| 7.5°  | 29.6   | 29.6   | 29.6   | 29.6   | 29.2   | 28.7  | 28.3  | 28.3  | 27.8 | 25.6  | 23.8 |
| 10°   | 33.2   | 33.2   | 32.8   | 32.3   | 31.9   | 31.0  | 30.5  | 29.6  | 28.3 | 25.1  | 22.5 |
| 12.5° | 40.4   | 39.5   | 39.1   | 38.2   | 36.8   | 35.0  | 33.2  | 31.9  | 28.7 | 24.3  | 21.1 |
| 15°   | 53.4   | 52.5   | 50.7   | 48.1   | 45.4   | 41.8  | 38.6  | 35.5  | 30.1 | 22.9  | 18.9 |
| 17.5° | 76.3   | 73.6   | 71.0   | 66.5   | 59.7   | 53.4  | 46.7  | 40.9  | 31.9 | 21.6  | 17.1 |
| 20°   | 137.4  | 135.6  | 119.5  | 106.9  | 86.7   | 72.3  | 58.8  | 48.9  | 34.6 | 20.2  | 15.3 |
| 22.5° | 283.4  | 264.5  | 238.0  | 194.9  | 151.8  | 111.8 | 81.3  | 61.5  | 37.3 | 18.4  | 13.5 |
| 25°   | 511.1  | 481.4  | 424.4  | 341.3  | 251.9  | 178.3 | 117.7 | 80.4  | 41.3 | 16.6  | 11.7 |
| 27.5° | 773.8  | 743.7  | 655.2  | 540.7  | 394.7  | 269.0 | 168.0 | 106.4 | 46.7 | 14.8  | 10.3 |
| 30°   | 1053.5 | 1027.9 | 915.7  | 757.1  | 556.4  | 376.8 | 225.0 | 132.9 | 52.5 | 13.0  | 9.0  |
| 31°   | 1166.3 | 1133.5 | 1012.2 | 843.4  | 632.3  | 421.2 | 247.9 | 144.2 | 54.8 | 12.6  | 8.5  |
| 32°   | 1270.0 | 1232.7 | 1107.0 | 926.0  | 693.8  | 469.3 | 273.0 | 154.0 | 56.6 | 11.7  | 8.1  |
| 33°   | 1359.4 | 1315.8 | 1194.5 | 1004.1 | 761.6  | 514.2 | 299.1 | 163.5 | 57.9 | 10.8  | 7.6  |
| 34°   | 1435.3 | 1397.5 | 1267.3 | 1082.7 | 821.8  | 557.3 | 324.7 | 172.9 | 58.8 | 10.3  | 7.2  |
| 35°   | 1499.9 | 1465.8 | 1336.9 | 1142.5 | 880.6  | 599.1 | 348.0 | 181.9 | 58.8 | 9.4   | 7.2  |
| 36°   | 1543.5 | 1513.8 | 1397.1 | 1203.5 | 930.0  | 634.5 | 367.8 | 190.0 | 58.8 | 8.5   | 6.7  |
| 37°   | 1567.3 | 1538.5 | 1436.6 | 1253.8 | 978.5  | 669.6 | 385.8 | 196.2 | 58.4 | 8.1   | 6.3  |
| 38°   | 1579.4 | 1554.3 | 1465.8 | 1294.7 | 1012.2 | 694.7 | 401.5 | 201.2 | 57.9 | 7.2   | 6.3  |
| 39°   | 1582.6 | 1561.4 | 1484.2 | 1324.3 | 1045.0 | 719.9 | 412.7 | 203.9 | 56.6 | 6.7   | 5.8  |
| 40°   | 1580.3 | 1561.9 | 1494.1 | 1350.8 | 1070.2 | 739.6 | 420.8 | 204.8 | 55.2 | 5.8   | 5.8  |
| 41°   | 1575.8 | 1561.4 | 1501.3 | 1369.2 | 1090.4 | 752.2 | 423.9 | 203.0 | 53.4 | 4.9   | 5.4  |
| 42°   | 1571.8 | 1556.1 | 1504.4 | 1381.8 | 1104.3 | 758.5 | 423.5 | 199.4 | 50.7 | 4.5   | 5.4  |
| 43°   | 1571.8 | 1553.8 | 1504.9 | 1389.9 | 1111.0 | 758.9 | 418.1 | 192.7 | 47.2 | 4.0   | 4.9  |
| 44°   | 1569.1 | 1552.5 | 1507.1 | 1395.3 | 1112.8 | 754.9 | 409.6 | 185.5 | 43.1 | 3.6   | 4.9  |
| 45°   | 1564.1 | 1546.6 | 1506.7 | 1395.7 | 1109.7 | 745.0 | 395.6 | 176.0 | 39.5 | 2.7   | 4.9  |
| 46°   | 1554.7 | 1539.0 | 1502.6 | 1392.6 | 1100.2 | 730.7 | 379.0 | 166.6 | 35.5 | 2.2   | 4.5  |
| 47°   | 1535.8 | 1523.7 | 1491.8 | 1381.8 | 1085.9 | 709.5 | 359.3 | 155.8 | 32.3 | 1.8   | 4.5  |
| 48°   | 1503.5 | 1495.0 | 1473.4 | 1358.0 | 1058.5 | 683.5 | 338.2 | 144.2 | 29.2 | 1.8   | 4.5  |
| 49°   | 1444.2 | 1437.5 | 1424.9 | 1319.8 | 1023.4 | 651.6 | 315.3 | 131.1 | 26.0 | 1.3   | 4.5  |
| 50°   | 1397.5 | 1390.3 | 1364.7 | 1255.6 | 973.2  | 611.2 | 290.1 | 118.1 | 22.5 | 0.9   | 4.0  |
| 51°   | 1366.5 | 1354.9 | 1314.5 | 1181.1 | 900.0  | 557.3 | 262.7 | 105.1 | 18.9 | 0.9   | 4.0  |
| 52°   | 1327.5 | 1310.0 | 1259.7 | 1114.2 | 833.0  | 503.4 | 233.1 | 92.1  | 16.6 | 0.9   | 4.0  |
| 53°   | 1245.7 | 1239.5 | 1189.6 | 1042.3 | 766.1  | 451.8 | 202.5 | 81.3  | 14.4 | 0.9   | 4.0  |
| 54°   | 1174.3 | 1164.9 | 1097.1 | 942.6  | 693.4  | 394.3 | 171.1 | 71.9  | 12.1 | 0.9   | 4.0  |
| 55°   | 1097.1 | 1078.7 | 1018.5 | 858.6  | 608.1  | 341.3 | 141.0 | 62.0  | 9.9  | 0.9   | 3.6  |
| 56°   | 999.6  | 983.5  | 918.8  | 768.8  | 529.5  | 287.4 | 118.1 | 50.7  | 7.6  | 0.9   | 3.6  |
| 57°   | 881.1  | 866.3  | 816.4  | 658.3  | 447.7  | 234.9 | 96.1  | 40.9  | 5.8  | 0.9   | 3.6  |
| 58°   | 766.6  | 750.0  | 692.9  | 552.4  | 361.5  | 186.4 | 80.4  | 33.2  | 4.5  | 0.9   | 3.6  |
| 59°   | 678.6  | 656.1  | 582.5  | 463.9  | 282.9  | 141.5 | 63.8  | 26.5  | 3.1  | 0.9   | 3.6  |
| 60°   | 605.4  | 586.9  | 510.6  | 386.2  | 221.8  | 104.2 | 47.2  | 20.2  | 1.8  | 0.9   | 3.6  |
| 62.5° | 350.7  | 345.8  | 277.1  | 198.9  | 104.6  | 48.5  | 23.4  | 9.4   | 0.9  | 1.3   | 3.6  |
| 65°   | 104.6  | 91.2   | 71.0   | 42.2   | 26.9   | 16.2  | 8.5   | 3.1   | 0.4  | 1.3   | 3.1  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 1.8 | 0.9 | 0.4 | 1.3   | 3.1 |
| 70°   | 1.8 | 1.3 | 1.3 | 1.3 | 1.3 | 0.9 | 0.9 | 0.4 | 0.4 | 1.3   | 2.7 |
| 72.5° | 1.3 | 1.3 | 1.3 | 1.3 | 0.9 | 0.9 | 0.9 | 0.4 | 0.9 | 1.3   | 2.2 |
| 75°   | 1.3 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.4 | 0.4 | 0.9 | 1.3   | 2.2 |
| 77.5° | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.4 | 0.4 | 0.4 | 0.9 | 1.3   | 2.2 |
| 80°   | 0.9 | 0.9 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.3   | 1.8 |
| 82.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.3   | 1.8 |
| 85°   | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.3   | 1.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 1.3   | 1.3 |
| 90°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 |

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**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 25.1   | 25.1 | 25.1   | 25.1 |
| 2.5°  | 24.3   | 23.8 | 23.4   | 23.4 |
| 5°    | 23.4   | 22.5 | 22.5   | 22.0 |
| 7.5°  | 22.0   | 21.1 | 21.1   | 21.1 |
| 10°   | 20.7   | 20.2 | 20.2   | 19.8 |
| 12.5° | 18.9   | 18.9 | 18.9   | 18.9 |
| 15°   | 17.5   | 17.5 | 18.0   | 18.0 |
| 17.5° | 15.7   | 16.2 | 17.1   | 17.5 |
| 20°   | 14.4   | 15.3 | 16.2   | 16.6 |
| 22.5° | 13.5   | 14.4 | 15.7   | 16.2 |
| 25°   | 12.1   | 13.5 | 15.3   | 15.7 |
| 27.5° | 11.2   | 13.0 | 14.4   | 15.3 |
| 30°   | 10.3   | 12.6 | 13.9   | 14.8 |
| 31°   | 10.3   | 12.1 | 13.9   | 14.8 |
| 32°   | 9.9    | 11.7 | 13.9   | 14.4 |
| 33°   | 9.9    | 11.7 | 13.9   | 14.4 |
| 34°   | 9.4    | 11.7 | 13.5   | 14.4 |
| 35°   | 9.4    | 11.7 | 13.5   | 14.4 |
| 36°   | 9.0    | 11.2 | 13.5   | 14.4 |
| 37°   | 9.0    | 11.2 | 13.5   | 14.4 |
| 38°   | 8.5    | 11.2 | 13.5   | 14.4 |
| 39°   | 8.5    | 11.2 | 13.5   | 14.4 |
| 40°   | 8.5    | 11.2 | 13.5   | 14.4 |
| 41°   | 8.1    | 11.2 | 13.5   | 14.4 |
| 42°   | 8.1    | 11.2 | 13.5   | 14.4 |
| 43°   | 8.1    | 10.8 | 13.5   | 14.4 |
| 44°   | 8.1    | 10.8 | 13.5   | 14.4 |
| 45°   | 7.6    | 10.8 | 13.5   | 14.4 |
| 46°   | 7.6    | 10.8 | 13.5   | 14.4 |
| 47°   | 7.6    | 10.8 | 13.5   | 14.4 |
| 48°   | 7.6    | 10.8 | 13.5   | 14.4 |
| 49°   | 7.6    | 10.8 | 13.5   | 14.4 |
| 50°   | 7.2    | 10.3 | 13.5   | 14.4 |
| 51°   | 7.2    | 10.3 | 13.5   | 14.4 |
| 52°   | 7.2    | 10.3 | 13.5   | 14.4 |
| 53°   | 7.2    | 10.3 | 13.5   | 14.4 |
| 54°   | 6.7    | 10.3 | 13.5   | 14.4 |
| 55°   | 6.7    | 10.3 | 13.5   | 14.4 |
| 56°   | 6.7    | 10.3 | 13.5   | 13.9 |
| 57°   | 6.7    | 10.3 | 13.0   | 13.9 |
| 58°   | 6.7    | 9.9  | 13.0   | 13.9 |
| 59°   | 6.7    | 9.9  | 13.0   | 13.9 |
| 60°   | 6.7    | 9.9  | 13.0   | 13.9 |
| 62.5° | 6.3    | 9.9  | 12.6   | 13.5 |
| 65°   | 5.8    | 9.0  | 12.6   | 13.0 |



TEST NUMBER: P1338945

CATALOG NUMBER: P3A05R409730DE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 5.8    | 8.5  | 11.7   | 12.6 |
| 70°   | 5.4    | 8.1  | 11.2   | 12.1 |
| 72.5° | 4.5    | 7.6  | 10.3   | 11.2 |
| 75°   | 4.0    | 6.7  | 9.4    | 10.3 |
| 77.5° | 3.6    | 5.8  | 8.5    | 9.0  |
| 80°   | 3.1    | 4.9  | 7.2    | 8.1  |
| 82.5° | 2.2    | 3.6  | 5.8    | 6.3  |
| 85°   | 1.8    | 2.7  | 4.0    | 4.5  |
| 87.5° | 1.3    | 1.3  | 2.2    | 2.2  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)