

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: P1344981

Luminaire Tested: P3A13R309050DE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1344981  
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: P3A13R309050DE010 E3CA451MMS  
Description: 3in Adjustable LED luminaire with, R30 optic, 5000K CCT AND, 90CRI , E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

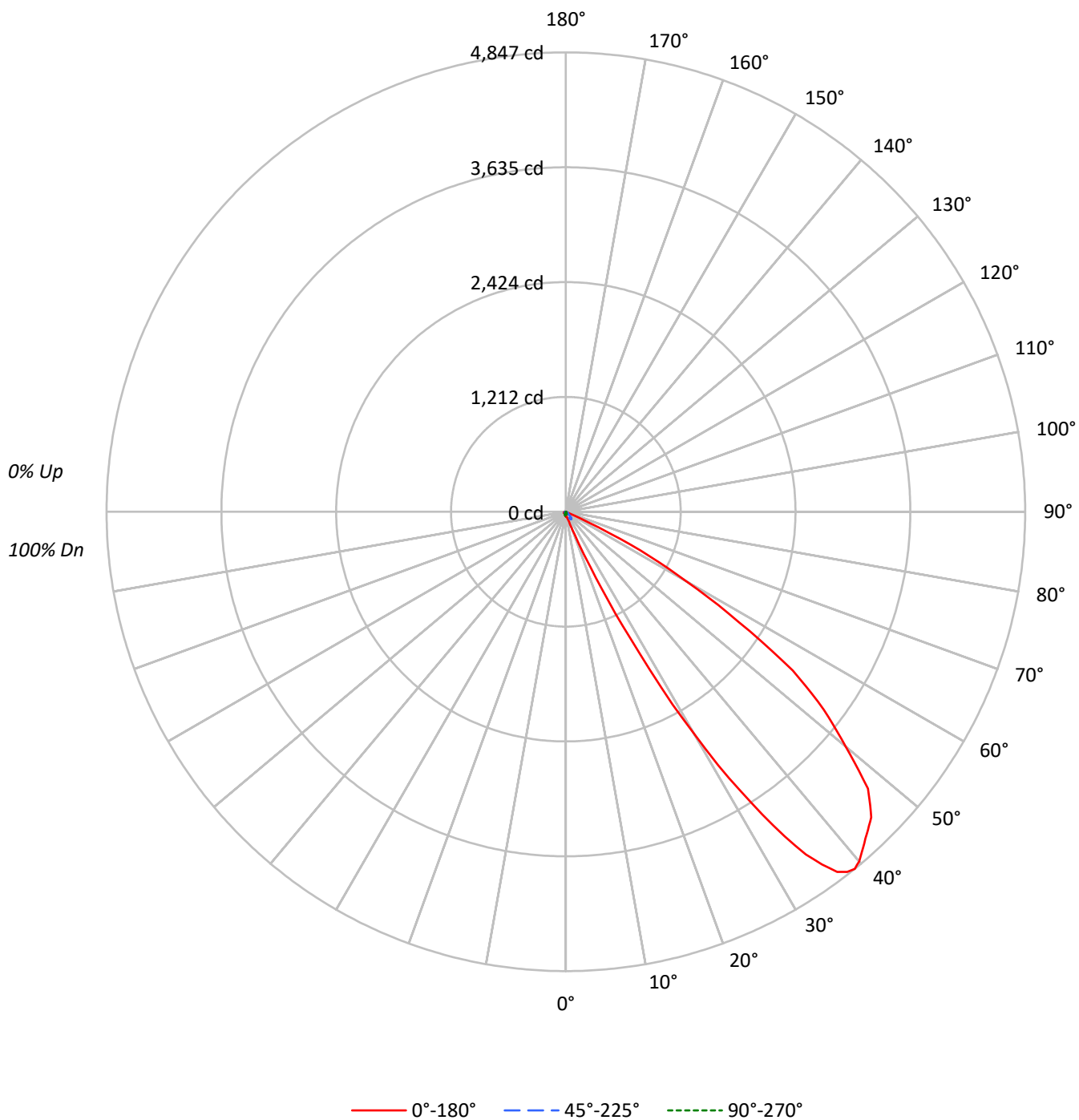
Lumens per Lamp: N/A  
Luminaire Lumens: 1260.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.6  
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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### Luminous Intensity Polar Plot



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CATALOG NUMBER: P3A13R309050DE010 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  | 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  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 89  | 89  | 87  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 75  | 75  | 73  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 63  | 63  | 61  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 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  | 37  | 49  | 42  | 37  | 48  | 42  | 37  | 37  | 37  | 35  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 36  | 31  | 31  | 31  | 29  |
| 8   | 56  | 42  | 33  | 27  | 55  | 41  | 33  | 27  | 40  | 32  | 26  | 39  | 32  | 26  | 37  | 31  | 26  | 26  | 26  | 24  |
| 9   | 52  | 37  | 29  | 23  | 50  | 37  | 28  | 23  | 36  | 28  | 22  | 34  | 27  | 22  | 33  | 27  | 22  | 22  | 22  | 20  |
| 10  | 48  | 33  | 25  | 19  | 46  | 33  | 25  | 19  | 32  | 24  | 19  | 31  | 24  | 19  | 30  | 24  | 19  | 19  | 19  | 17  |

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

|     | 0°      | 45°   | 90°   | 135°  | 180°  |
|-----|---------|-------|-------|-------|-------|
| 0°  | 10701   | 10701 | 10701 | 10701 | 10701 |
| 5°  | 11446   | 11204 | 10522 | 9575  | 9355  |
| 10° | 12536   | 11111 | 9218  | 8261  | 8038  |
| 15° | 18320   | 11078 | 7719  | 6992  | 7219  |
| 20° | 46064   | 12134 | 5951  | 5951  | 6697  |
| 25° | 213908  | 15146 | 4621  | 5395  | 6170  |
| 30° | 680991  | 20965 | 3494  | 5115  | 6178  |
| 35° | 1181647 | 25565 | 2838  | 4818  | 6264  |
| 40° | 1378125 | 25534 | 2118  | 4866  | 6383  |
| 45° | 1413325 | 18110 | 2295  | 5272  | 6915  |
| 50° | 1314345 | 10132 | 1808  | 5424  | 7983  |
| 55° | 1117093 | 5276  | 2026  | 6079  | 8946  |
| 60° | 645168  | 1403  | 2324  | 6535  | 9780  |
| 65° | 131635  | 0     | 2750  | 7731  | 11000 |
| 70° | 2052    | 705   | 3398  | 8848  | 12951 |
| 75° | 1779    | 932   | 3558  | 8981  | 15250 |
| 80° | 1389    | 1389  | 5304  | 10734 | 17426 |
| 85° | 0       | 2768  | 10567 | 10567 | 21386 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1413325 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 4.4    | 0.4       |
| 10°-20°   | 12.7   | 1.0       |
| 20°-30°   | 72.7   | 5.8       |
| 30°-40°   | 339.4  | 26.9      |
| 40°-50°   | 479.9  | 38.1      |
| 50°-60°   | 295.3  | 23.4      |
| 60°-70°   | 45.0   | 3.6       |
| 70°-80°   | 7.1    | 0.6       |
| 80°-90°   | 3.6    | 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°    | 89.8   | 7.1       |
| 0°-40°    | 429.2  | 34.1      |
| 0°-60°    | 1204.4 | 95.6      |
| 0°-90°    | 1260.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1260.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 49   | 49  | 49  | 49   | 49   |      |
| 5°  | 52   | 51  | 48  | 44   | 42   | 5    |
| 15° | 81   | 49  | 34  | 31   | 32   | 29   |
| 25° | 884  | 63  | 19  | 22   | 26   | 544  |
| 35° | 4414 | 96  | 11  | 18   | 23   | 2649 |
| 45° | 4558 | 58  | 7   | 17   | 22   | 3455 |
| 55° | 2922 | 14  | 5   | 16   | 23   | 2486 |
| 65° | 254  | 0   | 5   | 15   | 21   | 459  |
| 75° | 2    | 1   | 4   | 11   | 18   | 2    |
| 85° | 0    | 1   | 4   | 4    | 8    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 45°  | 67.5° | 90°  | 112.5° | 135° |
|-------|--------|--------|--------|--------|--------|--------|------|-------|------|--------|------|
| 0°    | 48.8   | 48.8   | 48.8   | 48.8   | 48.8   | 48.8   | 48.8 | 48.8  | 48.8 | 48.8   | 48.8 |
| 2.5°  | 49.9   | 49.9   | 50.9   | 50.9   | 49.9   | 50.9   | 50.9 | 50.9  | 48.8 | 47.8   | 45.6 |
| 5°    | 52.0   | 52.0   | 52.0   | 53.1   | 52.0   | 52.0   | 50.9 | 49.9  | 47.8 | 44.6   | 43.5 |
| 7.5°  | 54.1   | 54.1   | 53.1   | 54.1   | 53.1   | 53.1   | 50.9 | 48.8  | 45.6 | 42.5   | 40.3 |
| 10°   | 56.3   | 56.3   | 55.2   | 55.2   | 54.1   | 54.1   | 49.9 | 46.7  | 41.4 | 38.2   | 37.1 |
| 12.5° | 62.6   | 62.6   | 61.6   | 60.5   | 58.4   | 57.3   | 48.8 | 43.5  | 37.1 | 34.0   | 32.9 |
| 15°   | 80.7   | 79.6   | 77.5   | 74.3   | 69.0   | 67.9   | 48.8 | 40.3  | 34.0 | 30.8   | 30.8 |
| 17.5° | 110.4  | 109.3  | 106.1  | 97.6   | 88.1   | 84.9   | 48.8 | 36.1  | 29.7 | 27.6   | 27.6 |
| 20°   | 197.4  | 188.9  | 173.0  | 151.8  | 129.5  | 117.8  | 52.0 | 31.8  | 25.5 | 24.4   | 25.5 |
| 21°   | 257.9  | 249.4  | 229.3  | 194.2  | 155.0  | 142.2  | 54.1 | 30.8  | 24.4 | 23.4   | 25.5 |
| 22°   | 351.3  | 341.8  | 300.4  | 252.6  | 196.4  | 174.1  | 55.2 | 28.7  | 22.3 | 22.3   | 24.4 |
| 23°   | 490.4  | 474.4  | 404.4  | 328.0  | 245.2  | 213.3  | 57.3 | 27.6  | 21.2 | 22.3   | 23.4 |
| 24°   | 642.1  | 628.3  | 548.7  | 434.1  | 313.1  | 267.5  | 59.4 | 26.5  | 20.2 | 20.2   | 22.3 |
| 25°   | 884.1  | 868.2  | 727.0  | 547.7  | 397.0  | 321.6  | 62.6 | 24.4  | 19.1 | 19.1   | 22.3 |
| 26°   | 1197.2 | 1124.0 | 936.1  | 705.8  | 489.3  | 403.3  | 65.8 | 23.4  | 18.0 | 19.1   | 21.2 |
| 27°   | 1494.4 | 1433.9 | 1222.7 | 905.3  | 605.0  | 495.7  | 70.1 | 22.3  | 17.0 | 18.0   | 21.2 |
| 28°   | 1885.0 | 1800.1 | 1533.7 | 1145.2 | 762.1  | 599.7  | 74.3 | 21.2  | 15.9 | 18.0   | 20.2 |
| 29°   | 2322.3 | 2203.4 | 1881.8 | 1414.8 | 939.3  | 716.4  | 78.5 | 20.2  | 14.9 | 17.0   | 20.2 |
| 30°   | 2689.5 | 2578.1 | 2256.5 | 1734.3 | 1143.1 | 870.3  | 82.8 | 19.1  | 13.8 | 17.0   | 20.2 |
| 31°   | 3120.4 | 2951.7 | 2562.1 | 2004.9 | 1318.2 | 1024.2 | 87.0 | 17.0  | 12.7 | 15.9   | 19.1 |
| 32°   | 3469.6 | 3351.8 | 2937.9 | 2310.6 | 1548.5 | 1194.0 | 90.2 | 15.9  | 12.7 | 15.9   | 19.1 |
| 33°   | 3807.1 | 3649.0 | 3248.9 | 2603.5 | 1756.6 | 1368.1 | 93.4 | 14.9  | 11.7 | 14.9   | 19.1 |
| 34°   | 4129.8 | 3984.4 | 3542.9 | 2840.2 | 1952.9 | 1533.7 | 95.5 | 12.7  | 11.7 | 14.9   | 18.0 |
| 35°   | 4414.2 | 4245.5 | 3801.8 | 3071.6 | 2154.6 | 1684.4 | 95.5 | 11.7  | 10.6 | 13.8   | 18.0 |
| 36°   | 4598.9 | 4477.9 | 4026.8 | 3299.8 | 2337.1 | 1827.7 | 95.5 | 10.6  | 9.6  | 13.8   | 17.0 |
| 37°   | 4757.1 | 4615.9 | 4207.3 | 3474.9 | 2471.9 | 1942.3 | 95.5 | 9.6   | 9.6  | 13.8   | 17.0 |
| 38°   | 4821.8 | 4700.8 | 4331.5 | 3629.9 | 2598.2 | 2059.1 | 94.5 | 8.5   | 8.5  | 12.7   | 17.0 |
| 39°   | 4847.3 | 4739.0 | 4424.9 | 3741.3 | 2691.6 | 2137.6 | 92.3 | 7.4   | 8.5  | 12.7   | 17.0 |
| 40°   | 4814.4 | 4732.7 | 4472.6 | 3813.5 | 2765.9 | 2194.9 | 89.2 | 6.4   | 7.4  | 12.7   | 17.0 |
| 42.5° | 4678.5 | 4624.4 | 4462.0 | 3885.7 | 2829.6 | 2237.4 | 77.5 | 4.2   | 7.4  | 11.7   | 17.0 |
| 45°   | 4557.5 | 4498.1 | 4354.8 | 3810.3 | 2746.8 | 2153.5 | 58.4 | 2.1   | 7.4  | 11.7   | 17.0 |
| 47.5° | 4323.0 | 4285.8 | 4173.3 | 3618.2 | 2565.3 | 1964.6 | 41.4 | 1.1   | 6.4  | 10.6   | 15.9 |
| 50°   | 3852.8 | 3817.8 | 3669.2 | 3141.7 | 2206.6 | 1661.0 | 29.7 | 1.1   | 5.3  | 10.6   | 15.9 |
| 52.5° | 3431.4 | 3394.3 | 3180.9 | 2612.0 | 1695.0 | 1217.4 | 19.1 | 1.1   | 5.3  | 10.6   | 15.9 |
| 55°   | 2922.0 | 2857.2 | 2577.0 | 1982.6 | 1201.5 | 816.2  | 13.8 | 1.1   | 5.3  | 9.6    | 15.9 |
| 57.5° | 2163.1 | 2068.6 | 1818.1 | 1352.2 | 692.0  | 442.6  | 7.4  | 1.1   | 5.3  | 9.6    | 15.9 |
| 60°   | 1471.1 | 1414.8 | 1137.8 | 713.2  | 295.1  | 186.8  | 3.2  | 1.1   | 5.3  | 9.6    | 14.9 |
| 62.5° | 891.6  | 820.4  | 572.1  | 303.6  | 127.4  | 84.9   | 0.0  | 2.1   | 5.3  | 9.6    | 14.9 |
| 65°   | 253.7  | 225.0  | 149.7  | 69.0   | 36.1   | 27.6   | 0.0  | 2.1   | 5.3  | 9.6    | 14.9 |
| 67.5° | 8.5    | 8.5    | 8.5    | 7.4    | 5.3    | 5.3    | 1.1  | 2.1   | 5.3  | 9.6    | 13.8 |
| 70°   | 3.2    | 3.2    | 3.2    | 2.1    | 2.1    | 1.1    | 1.1  | 2.1   | 5.3  | 8.5    | 13.8 |
| 72.5° | 2.1    | 2.1    | 2.1    | 2.1    | 1.1    | 1.1    | 1.1  | 2.1   | 4.2  | 7.4    | 12.7 |
| 75°   | 2.1    | 2.1    | 2.1    | 1.1    | 1.1    | 1.1    | 1.1  | 3.2   | 4.2  | 7.4    | 10.6 |
| 77.5° | 2.1    | 2.1    | 2.1    | 1.1    | 1.1    | 1.1    | 1.1  | 3.2   | 4.2  | 6.4    | 10.6 |
| 80°   | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    | 1.1  | 3.2   | 4.2  | 6.4    | 8.5  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 1.1 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0   | 1.1 | 3.2   | 4.2 | 4.2    | 6.4  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 1.1 | 3.2   | 4.2 | 3.2    | 4.2  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 1.1 | 3.2   | 3.2 | 3.2    | 2.1  |
| 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):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 48.8   | 48.8 |
| 2.5°  | 45.6   | 45.6 |
| 5°    | 42.5   | 42.5 |
| 7.5°  | 39.3   | 39.3 |
| 10°   | 36.1   | 36.1 |
| 12.5° | 34.0   | 34.0 |
| 15°   | 30.8   | 31.8 |
| 17.5° | 28.7   | 29.7 |
| 20°   | 27.6   | 28.7 |
| 21°   | 27.6   | 28.7 |
| 22°   | 26.5   | 27.6 |
| 23°   | 26.5   | 27.6 |
| 24°   | 25.5   | 26.5 |
| 25°   | 24.4   | 25.5 |
| 26°   | 24.4   | 25.5 |
| 27°   | 24.4   | 25.5 |
| 28°   | 23.4   | 25.5 |
| 29°   | 23.4   | 24.4 |
| 30°   | 23.4   | 24.4 |
| 31°   | 22.3   | 24.4 |
| 32°   | 22.3   | 24.4 |
| 33°   | 22.3   | 23.4 |
| 34°   | 21.2   | 23.4 |
| 35°   | 21.2   | 23.4 |
| 36°   | 21.2   | 23.4 |
| 37°   | 21.2   | 22.3 |
| 38°   | 21.2   | 23.4 |
| 39°   | 21.2   | 22.3 |
| 40°   | 21.2   | 22.3 |
| 42.5° | 21.2   | 22.3 |
| 45°   | 21.2   | 22.3 |
| 47.5° | 21.2   | 23.4 |
| 50°   | 21.2   | 23.4 |
| 52.5° | 21.2   | 23.4 |
| 55°   | 21.2   | 23.4 |
| 57.5° | 21.2   | 22.3 |
| 60°   | 21.2   | 22.3 |
| 62.5° | 20.2   | 22.3 |
| 65°   | 20.2   | 21.2 |
| 67.5° | 20.2   | 21.2 |
| 70°   | 19.1   | 20.2 |
| 72.5° | 18.0   | 19.1 |
| 75°   | 15.9   | 18.0 |
| 77.5° | 14.9   | 15.9 |
| 80°   | 12.7   | 13.8 |





TEST NUMBER: P1344981

CATALOG NUMBER: P3A13R309050DE010 E3CA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 10.6   | 10.6 |
| 85°   | 7.4    | 8.5  |
| 87.5° | 4.2    | 4.2  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)