

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: P1341530

Luminaire Tested: P3A09R309830DE010 E3CA451MB

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1341530  
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: P3A09R309830DE010 E3CA451MB  
Description: 3in Adjustable LED luminaire with, R30 optic, 3000K CCT AND, 98CRI , E3CA451MB TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

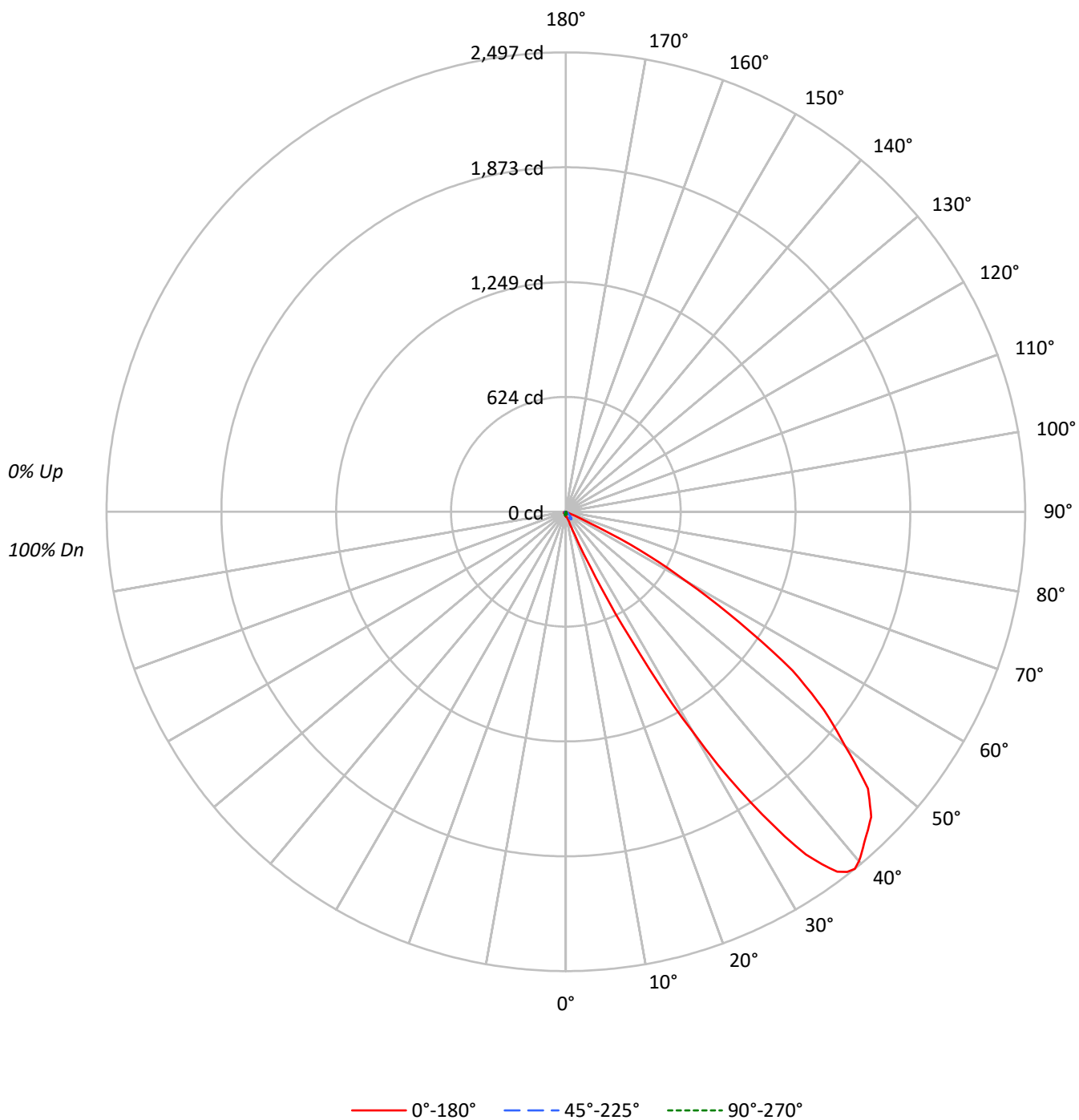
Lumens per Lamp: N/A  
Luminaire Lumens: 648.9 lumens  
Efficiency: N/A  
Efficacy: 59.0 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

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CATALOG NUMBER: P3A09R309830DE010 E3CA451MB

### Luminous Intensity Polar Plot



TEST NUMBER: P1341530

CATALOG NUMBER: P3A09R309830DE010 E3CA451MB

**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°  | 5504   | 5504  | 5504 | 5504 | 5504  |
| 5°  | 5899   | 5767  | 5415 | 4931 | 4821  |
| 10° | 6457   | 5722  | 4743 | 4253 | 4142  |
| 15° | 9421   | 5698  | 3973 | 3610 | 3723  |
| 20° | 23732  | 6254  | 3057 | 3057 | 3454  |
| 25° | 110184 | 7815  | 2371 | 2782 | 3170  |
| 30° | 350763 | 10786 | 1798 | 2633 | 3190  |
| 35° | 608652 | 13170 | 1472 | 2490 | 3212  |
| 40° | 709844 | 13139 | 1088 | 2490 | 3292  |
| 45° | 727983 | 9334  | 1178 | 2698 | 3566  |
| 50° | 676993 | 5219  | 921  | 2797 | 4094  |
| 55° | 575368 | 2714  | 1032 | 3135 | 4588  |
| 60° | 332298 | 702   | 1184 | 3377 | 5043  |
| 65° | 67815  | 0     | 1401 | 3995 | 5656  |
| 70° | 1026   | 321   | 1731 | 4552 | 6668  |
| 75° | 932    | 424   | 1864 | 4660 | 7879  |
| 80° | 631    | 631   | 2778 | 5556 | 8966  |
| 85° | 0      | 1258  | 5535 | 5535 | 11070 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 727983 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2.3    | 0.4       |
| 10°-20°   | 6.5    | 1.0       |
| 20°-30°   | 37.4   | 5.8       |
| 30°-40°   | 174.8  | 26.9      |
| 40°-50°   | 247.2  | 38.1      |
| 50°-60°   | 152.1  | 23.4      |
| 60°-70°   | 23.2   | 3.6       |
| 70°-80°   | 3.7    | 0.6       |
| 80°-90°   | 1.8    | 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°    | 46.2   | 7.1       |
| 0°-40°    | 221.0  | 34.1      |
| 0°-60°    | 620.3  | 95.6      |
| 0°-90°    | 648.9  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 648.9  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 25   | 25  | 25  | 25   | 25   |      |
| 5°  | 27   | 26  | 25  | 22   | 22   | 3    |
| 15° | 42   | 25  | 18  | 16   | 16   | 15   |
| 25° | 455  | 32  | 10  | 12   | 13   | 280  |
| 35° | 2274 | 49  | 6   | 9    | 12   | 1365 |
| 45° | 2348 | 30  | 4   | 9    | 12   | 1780 |
| 55° | 1505 | 7   | 3   | 8    | 12   | 1281 |
| 65° | 131  | 0   | 3   | 8    | 11   | 236  |
| 75° | 1    | 0   | 2   | 6    | 9    | 1    |
| 85° | 0    | 0   | 2   | 2    | 4    | 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°    | 25.1   | 25.1   | 25.1   | 25.1   | 25.1   | 25.1   | 25.1 | 25.1  | 25.1 | 25.1   | 25.1 |
| 2.5°  | 25.7   | 25.7   | 26.2   | 26.2   | 25.7   | 26.2   | 26.2 | 26.2  | 25.1 | 24.6   | 23.5 |
| 5°    | 26.8   | 26.8   | 26.8   | 27.3   | 26.8   | 26.8   | 26.2 | 25.7  | 24.6 | 23.0   | 22.4 |
| 7.5°  | 27.9   | 27.9   | 27.3   | 27.9   | 27.3   | 27.3   | 26.2 | 25.1  | 23.5 | 21.9   | 20.8 |
| 10°   | 29.0   | 29.0   | 28.4   | 28.4   | 27.9   | 27.9   | 25.7 | 24.1  | 21.3 | 19.7   | 19.1 |
| 12.5° | 32.3   | 32.3   | 31.7   | 31.2   | 30.1   | 29.5   | 25.1 | 22.4  | 19.1 | 17.5   | 16.9 |
| 15°   | 41.5   | 41.0   | 39.9   | 38.3   | 35.5   | 35.0   | 25.1 | 20.8  | 17.5 | 15.9   | 15.9 |
| 17.5° | 56.9   | 56.3   | 54.7   | 50.3   | 45.4   | 43.7   | 25.1 | 18.6  | 15.3 | 14.2   | 14.2 |
| 20°   | 101.7  | 97.3   | 89.1   | 78.2   | 66.7   | 60.7   | 26.8 | 16.4  | 13.1 | 12.6   | 13.1 |
| 21°   | 132.8  | 128.5  | 118.1  | 100.0  | 79.8   | 73.3   | 27.9 | 15.9  | 12.6 | 12.0   | 13.1 |
| 22°   | 181.0  | 176.0  | 154.7  | 130.1  | 101.1  | 89.7   | 28.4 | 14.8  | 11.5 | 11.5   | 12.6 |
| 23°   | 252.6  | 244.4  | 208.3  | 168.9  | 126.3  | 109.9  | 29.5 | 14.2  | 10.9 | 11.5   | 12.0 |
| 24°   | 330.7  | 323.6  | 282.6  | 223.6  | 161.3  | 137.8  | 30.6 | 13.7  | 10.4 | 10.4   | 11.5 |
| 25°   | 455.4  | 447.2  | 374.5  | 282.1  | 204.5  | 165.6  | 32.3 | 12.6  | 9.8  | 9.8    | 11.5 |
| 26°   | 616.7  | 578.9  | 482.2  | 363.5  | 252.0  | 207.7  | 33.9 | 12.0  | 9.3  | 9.8    | 10.9 |
| 27°   | 769.7  | 738.6  | 629.8  | 466.3  | 311.6  | 255.3  | 36.1 | 11.5  | 8.7  | 9.3    | 10.9 |
| 28°   | 970.9  | 927.2  | 790.0  | 589.9  | 392.5  | 308.9  | 38.3 | 10.9  | 8.2  | 9.3    | 10.4 |
| 29°   | 1196.2 | 1134.9 | 969.3  | 728.7  | 483.8  | 369.0  | 40.5 | 10.4  | 7.7  | 8.7    | 10.4 |
| 30°   | 1385.3 | 1327.9 | 1162.3 | 893.3  | 588.8  | 448.3  | 42.6 | 9.8   | 7.1  | 8.7    | 10.4 |
| 31°   | 1607.3 | 1520.3 | 1319.7 | 1032.7 | 679.0  | 527.6  | 44.8 | 8.7   | 6.6  | 8.2    | 9.8  |
| 32°   | 1787.1 | 1726.4 | 1513.2 | 1190.1 | 797.6  | 615.0  | 46.5 | 8.2   | 6.6  | 8.2    | 9.8  |
| 33°   | 1961.0 | 1879.5 | 1673.4 | 1341.0 | 904.8  | 704.7  | 48.1 | 7.7   | 6.0  | 7.7    | 9.8  |
| 34°   | 2127.2 | 2052.3 | 1824.9 | 1462.9 | 1005.9 | 790.0  | 49.2 | 6.6   | 6.0  | 7.7    | 9.3  |
| 35°   | 2273.7 | 2186.8 | 1958.2 | 1582.1 | 1109.8 | 867.6  | 49.2 | 6.0   | 5.5  | 7.1    | 9.3  |
| 36°   | 2368.8 | 2306.5 | 2074.1 | 1699.7 | 1203.8 | 941.4  | 49.2 | 5.5   | 4.9  | 7.1    | 8.7  |
| 37°   | 2450.3 | 2377.6 | 2167.1 | 1789.9 | 1273.2 | 1000.4 | 49.2 | 4.9   | 4.9  | 7.1    | 8.7  |
| 38°   | 2483.6 | 2421.3 | 2231.0 | 1869.7 | 1338.3 | 1060.6 | 48.7 | 4.4   | 4.4  | 6.6    | 8.7  |
| 39°   | 2496.7 | 2441.0 | 2279.2 | 1927.1 | 1386.4 | 1101.0 | 47.6 | 3.8   | 4.4  | 6.6    | 8.7  |
| 40°   | 2479.8 | 2437.7 | 2303.8 | 1964.3 | 1424.7 | 1130.6 | 45.9 | 3.3   | 3.8  | 6.6    | 8.7  |
| 42.5° | 2409.8 | 2381.9 | 2298.3 | 2001.4 | 1457.5 | 1152.4 | 39.9 | 2.2   | 3.8  | 6.0    | 8.7  |
| 45°   | 2347.5 | 2316.9 | 2243.1 | 1962.6 | 1414.8 | 1109.2 | 30.1 | 1.1   | 3.8  | 6.0    | 8.7  |
| 47.5° | 2226.7 | 2207.5 | 2149.6 | 1863.7 | 1321.4 | 1011.9 | 21.3 | 0.5   | 3.3  | 5.5    | 8.2  |
| 50°   | 1984.5 | 1966.4 | 1889.9 | 1618.2 | 1136.6 | 855.6  | 15.3 | 0.5   | 2.7  | 5.5    | 8.2  |
| 52.5° | 1767.4 | 1748.3 | 1638.4 | 1345.4 | 873.1  | 627.1  | 9.8  | 0.5   | 2.7  | 5.5    | 8.2  |
| 55°   | 1505.0 | 1471.7 | 1327.4 | 1021.2 | 618.9  | 420.4  | 7.1  | 0.5   | 2.7  | 4.9    | 8.2  |
| 57.5° | 1114.2 | 1065.5 | 936.5  | 696.5  | 356.4  | 228.0  | 3.8  | 0.5   | 2.7  | 4.9    | 8.2  |
| 60°   | 757.7  | 728.7  | 586.1  | 367.4  | 152.0  | 96.2   | 1.6  | 0.5   | 2.7  | 4.9    | 7.7  |
| 62.5° | 459.2  | 422.6  | 294.7  | 156.4  | 65.6   | 43.7   | 0.0  | 1.1   | 2.7  | 4.9    | 7.7  |
| 65°   | 130.7  | 115.9  | 77.1   | 35.5   | 18.6   | 14.2   | 0.0  | 1.1   | 2.7  | 4.9    | 7.7  |
| 67.5° | 4.4    | 4.4    | 4.4    | 3.8    | 2.7    | 2.7    | 0.5  | 1.1   | 2.7  | 4.9    | 7.1  |
| 70°   | 1.6    | 1.6    | 1.6    | 1.1    | 1.1    | 0.5    | 0.5  | 1.1   | 2.7  | 4.4    | 7.1  |
| 72.5° | 1.1    | 1.1    | 1.1    | 1.1    | 0.5    | 0.5    | 0.5  | 1.1   | 2.2  | 3.8    | 6.6  |
| 75°   | 1.1    | 1.1    | 1.1    | 0.5    | 0.5    | 0.5    | 0.5  | 1.6   | 2.2  | 3.8    | 5.5  |
| 77.5° | 1.1    | 1.1    | 1.1    | 0.5    | 0.5    | 0.5    | 0.5  | 1.6   | 2.2  | 3.3    | 5.5  |
| 80°   | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5  | 1.6   | 2.2  | 3.3    | 4.4  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0   | 0.5 | 1.6   | 2.2 | 2.2    | 3.3  |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.5 | 1.6   | 2.2 | 1.6    | 2.2  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.5 | 1.6   | 1.6 | 1.6    | 1.1  |
| 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°    | 25.1   | 25.1 |
| 2.5°  | 23.5   | 23.5 |
| 5°    | 21.9   | 21.9 |
| 7.5°  | 20.2   | 20.2 |
| 10°   | 18.6   | 18.6 |
| 12.5° | 17.5   | 17.5 |
| 15°   | 15.9   | 16.4 |
| 17.5° | 14.8   | 15.3 |
| 20°   | 14.2   | 14.8 |
| 21°   | 14.2   | 14.8 |
| 22°   | 13.7   | 14.2 |
| 23°   | 13.7   | 14.2 |
| 24°   | 13.1   | 13.7 |
| 25°   | 12.6   | 13.1 |
| 26°   | 12.6   | 13.1 |
| 27°   | 12.6   | 13.1 |
| 28°   | 12.0   | 13.1 |
| 29°   | 12.0   | 12.6 |
| 30°   | 12.0   | 12.6 |
| 31°   | 11.5   | 12.6 |
| 32°   | 11.5   | 12.6 |
| 33°   | 11.5   | 12.0 |
| 34°   | 10.9   | 12.0 |
| 35°   | 10.9   | 12.0 |
| 36°   | 10.9   | 12.0 |
| 37°   | 10.9   | 11.5 |
| 38°   | 10.9   | 12.0 |
| 39°   | 10.9   | 11.5 |
| 40°   | 10.9   | 11.5 |
| 42.5° | 10.9   | 11.5 |
| 45°   | 10.9   | 11.5 |
| 47.5° | 10.9   | 12.0 |
| 50°   | 10.9   | 12.0 |
| 52.5° | 10.9   | 12.0 |
| 55°   | 10.9   | 12.0 |
| 57.5° | 10.9   | 11.5 |
| 60°   | 10.9   | 11.5 |
| 62.5° | 10.4   | 11.5 |
| 65°   | 10.4   | 10.9 |
| 67.5° | 10.4   | 10.9 |
| 70°   | 9.8    | 10.4 |
| 72.5° | 9.3    | 9.8  |
| 75°   | 8.2    | 9.3  |
| 77.5° | 7.7    | 8.2  |
| 80°   | 6.6    | 7.1  |

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CATALOG NUMBER: P3A09R309830DE010 E3CA451MB

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 5.5    | 5.5  |
| 85°   | 3.8    | 4.4  |
| 87.5° | 2.2    | 2.2  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)