

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P300537

Luminaire Tested: **ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P300537  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-53)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB  
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG ASYMM WW, WITH ROUND ASYMM WW, LINEAR SPREAD LENS, MATTE WHITE FLANGE, BLACK LENS FRAME  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 297.0 lumens  
Efficiency: N/A  
Efficacy: 26.5 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.76 / 1.05  
Luminous Opening: Circular (Dia: 0.19' x H: 0')  
CIE Type: Direct

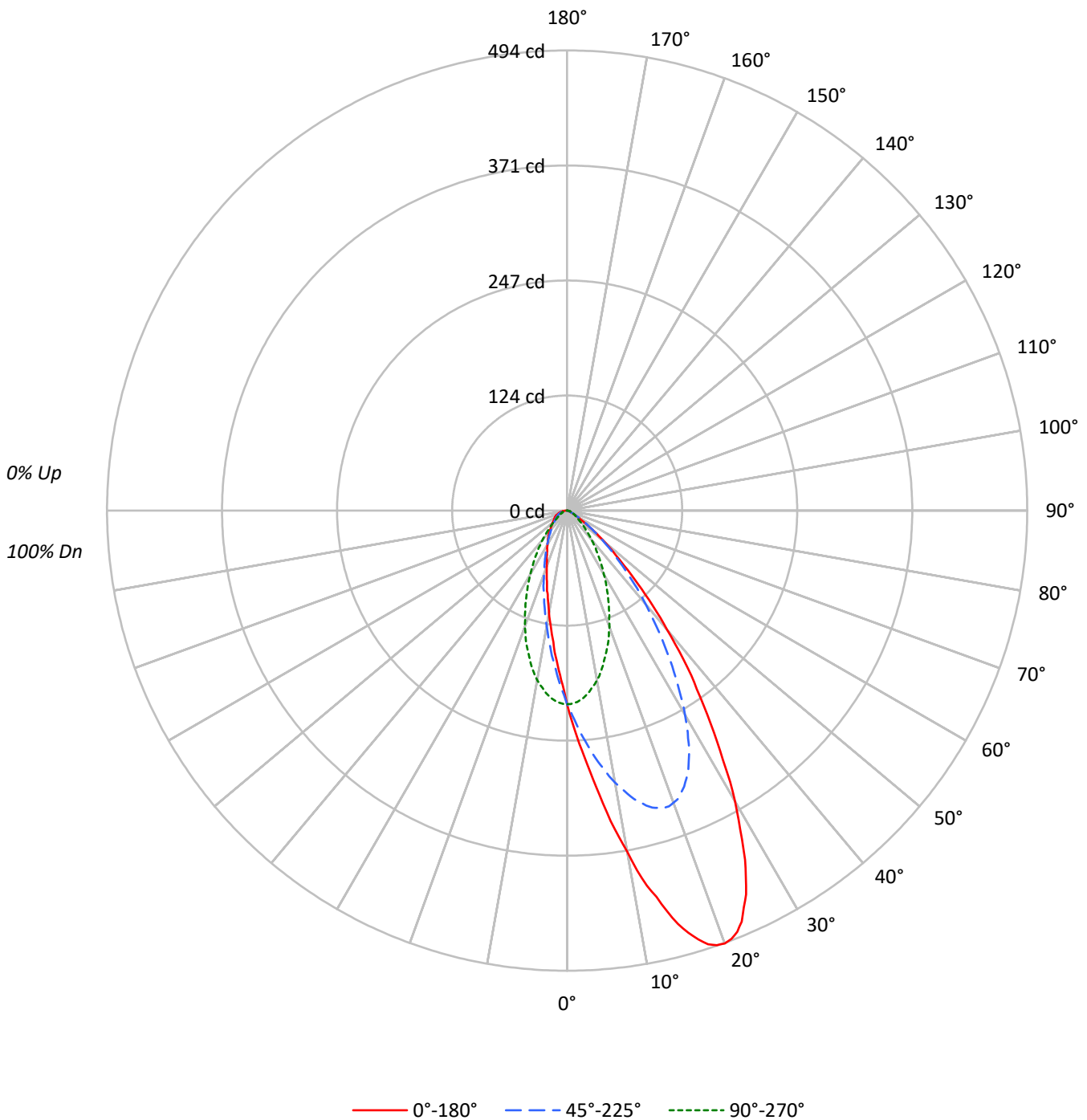
Input Watts (W): 11.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P300537

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |     |   |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|-----|---|--|---|
| RF  | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |    |    | 20 |    |     |   |  |   |
| RC  | 80  |     |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |    |    | 10 |    |     |   |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 50 | 30 | 10  | 0 |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |     |   |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    | 100 |   |  |   |
| 1   | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 101 | 103 | 100 | 98  | 99  | 97  | 95  | 95  | 94  | 93  | 91  |    |    |    |    | 91  |   |  |   |
| 2   | 105 | 99  | 94  | 90  | 103 | 98  | 93  | 89  | 94  | 91  | 87  | 91  | 88  | 85  | 88  | 86  | 84  | 82  |    |    |    |    | 82  |   |  |   |
| 3   | 99  | 91  | 85  | 80  | 97  | 90  | 84  | 80  | 87  | 82  | 78  | 84  | 80  | 77  | 82  | 79  | 76  | 74  |    |    |    |    | 74  |   |  |   |
| 4   | 93  | 84  | 77  | 72  | 91  | 82  | 76  | 72  | 80  | 75  | 71  | 78  | 73  | 70  | 76  | 72  | 69  | 67  |    |    |    |    | 67  |   |  |   |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 70  | 65  | 74  | 69  | 64  | 72  | 67  | 64  | 71  | 66  | 63  | 61  |    |    |    |    | 61  |   |  |   |
| 6   | 82  | 71  | 64  | 59  | 80  | 70  | 64  | 59  | 69  | 63  | 59  | 67  | 62  | 58  | 66  | 61  | 58  | 56  |    |    |    |    | 56  |   |  |   |
| 7   | 77  | 66  | 59  | 54  | 75  | 65  | 59  | 54  | 64  | 58  | 54  | 63  | 57  | 53  | 62  | 57  | 53  | 52  |    |    |    |    | 52  |   |  |   |
| 8   | 73  | 62  | 55  | 50  | 71  | 61  | 54  | 50  | 60  | 54  | 50  | 59  | 53  | 49  | 58  | 53  | 49  | 48  |    |    |    |    | 48  |   |  |   |
| 9   | 69  | 58  | 51  | 46  | 67  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 54  | 49  | 46  | 44  |    |    |    |    | 44  |   |  |   |
| 10  | 65  | 54  | 47  | 43  | 64  | 53  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 43  | 51  | 46  | 42  | 41  |    |    |    |    | 41  |   |  |   |

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

|     | 0°     | 90°   | 180°  |
|-----|--------|-------|-------|
| 0°  | 81007  | 81007 | 81007 |
| 5°  | 109844 | 78969 | 59794 |
| 10° | 147096 | 73152 | 44295 |
| 15° | 185447 | 64493 | 33861 |
| 20° | 205144 | 55134 | 26509 |
| 25° | 195538 | 44691 | 21894 |
| 30° | 162320 | 35516 | 18906 |
| 35° | 121687 | 27554 | 17132 |
| 40° | 84883  | 20864 | 14758 |
| 45° | 53973  | 14885 | 13231 |
| 50° | 32082  | 10916 | 12129 |
| 55° | 16312  | 8156  | 11554 |
| 60° | 7797   | 7017  | 11695 |
| 65° | 3690   | 6457  | 11991 |
| 70° | 2280   | 5699  | 12538 |
| 75° | 1506   | 4519  | 12050 |
| 80° | 2245   | 4490  | 13470 |
| 85° | 4473   | 4473  | 13418 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 20.1   | 6.8       |
| 10°-20°   | 60.1   | 20.2      |
| 20°-30°   | 81.5   | 27.4      |
| 30°-40°   | 66.6   | 22.4      |
| 40°-50°   | 37.9   | 12.8      |
| 50°-60°   | 17.1   | 5.7       |
| 60°-70°   | 7.8    | 2.6       |
| 70°-80°   | 4.4    | 1.5       |
| 80°-90°   | 1.6    | 0.5       |
| 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°    | 161.7  | 54.4      |
| 0°-40°    | 228.2  | 76.8      |
| 0°-60°    | 283.3  | 95.4      |
| 0°-90°    | 297.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 297.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 208 | 208 | 208 | 208  | 208  |      |
| 5°  | 281 | 253 | 202 | 164  | 153  | 30   |
| 15° | 460 | 328 | 160 | 96   | 84   | 130  |
| 25° | 455 | 308 | 104 | 56   | 51   | 204  |
| 35° | 256 | 189 | 58  | 34   | 36   | 160  |
| 45° | 98  | 84  | 27  | 21   | 24   | 78   |
| 55° | 24  | 26  | 12  | 14   | 17   | 24   |
| 65° | 4   | 5   | 7   | 10   | 13   | 4    |
| 75° | 1   | 2   | 3   | 6    | 8    | 1    |
| 85° | 1   | 1   | 1   | 2    | 3    | 1    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (FULL):**

|     | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°  | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 |
| 1°  | 221.8 | 220.8 | 219.8 | 220.8 | 219.8 | 221.8 | 219.8 | 220.8 | 217.8 | 217.8 | 215.8 |
| 2°  | 235.8 | 234.8 | 235.8 | 233.8 | 232.8 | 235.8 | 233.8 | 231.8 | 228.8 | 228.8 | 224.8 |
| 3°  | 250.8 | 249.8 | 250.8 | 248.8 | 245.8 | 246.8 | 245.8 | 244.8 | 239.8 | 238.8 | 234.8 |
| 4°  | 264.7 | 264.7 | 264.7 | 261.7 | 259.7 | 261.7 | 257.7 | 258.7 | 251.8 | 248.8 | 243.8 |
| 5°  | 280.7 | 280.7 | 281.7 | 279.7 | 275.7 | 275.7 | 272.7 | 270.7 | 264.7 | 259.7 | 252.8 |
| 6°  | 298.7 | 298.7 | 298.7 | 293.7 | 290.7 | 291.7 | 286.7 | 283.7 | 275.7 | 270.7 | 262.7 |
| 7°  | 316.7 | 314.7 | 313.7 | 311.7 | 306.7 | 305.7 | 302.7 | 296.7 | 288.7 | 282.7 | 271.7 |
| 8°  | 336.7 | 333.7 | 331.7 | 328.7 | 322.7 | 322.7 | 314.7 | 310.7 | 300.7 | 291.7 | 279.7 |
| 9°  | 354.7 | 353.7 | 350.7 | 344.7 | 338.7 | 336.7 | 331.7 | 324.7 | 311.7 | 302.7 | 288.7 |
| 10° | 371.6 | 371.6 | 369.6 | 362.6 | 354.7 | 353.7 | 345.7 | 336.7 | 322.7 | 311.7 | 296.7 |
| 11° | 393.6 | 387.6 | 385.6 | 381.6 | 371.6 | 369.6 | 360.6 | 350.7 | 334.7 | 321.7 | 303.7 |
| 12° | 411.6 | 406.6 | 402.6 | 395.6 | 386.6 | 381.6 | 374.6 | 362.6 | 345.7 | 329.7 | 310.7 |
| 13° | 425.6 | 422.6 | 420.6 | 413.6 | 402.6 | 397.6 | 388.6 | 375.6 | 356.6 | 338.7 | 317.7 |
| 14° | 443.6 | 440.6 | 436.6 | 428.6 | 414.6 | 410.6 | 400.6 | 386.6 | 364.6 | 345.7 | 322.7 |
| 15° | 459.5 | 455.6 | 451.6 | 441.6 | 428.6 | 423.6 | 410.6 | 396.6 | 372.6 | 351.7 | 327.7 |
| 16° | 471.5 | 467.5 | 462.5 | 453.6 | 438.6 | 433.6 | 420.6 | 404.6 | 379.6 | 357.6 | 331.7 |
| 17° | 481.5 | 477.5 | 472.5 | 462.5 | 447.6 | 441.6 | 427.6 | 411.6 | 385.6 | 361.6 | 333.7 |
| 18° | 489.5 | 484.5 | 480.5 | 468.5 | 453.6 | 447.6 | 433.6 | 415.6 | 389.6 | 363.6 | 335.7 |
| 19° | 493.5 | 489.5 | 484.5 | 472.5 | 456.6 | 451.6 | 437.6 | 418.6 | 390.6 | 364.6 | 335.7 |
| 20° | 494.5 | 490.5 | 485.5 | 473.5 | 458.5 | 452.6 | 437.6 | 418.6 | 390.6 | 364.6 | 333.7 |
| 21° | 492.5 | 488.5 | 483.5 | 472.5 | 456.6 | 450.6 | 436.6 | 416.6 | 389.6 | 361.6 | 331.7 |
| 22° | 487.5 | 483.5 | 478.5 | 466.5 | 452.6 | 445.6 | 431.6 | 412.6 | 385.6 | 357.6 | 326.7 |
| 23° | 479.5 | 475.5 | 470.5 | 459.5 | 445.6 | 438.6 | 424.6 | 405.6 | 379.6 | 351.7 | 321.7 |
| 24° | 466.5 | 463.5 | 460.5 | 448.6 | 434.6 | 429.6 | 415.6 | 397.6 | 371.6 | 346.7 | 314.7 |
| 25° | 454.6 | 450.6 | 446.6 | 435.6 | 422.6 | 416.6 | 404.6 | 386.6 | 361.6 | 336.7 | 307.7 |
| 26° | 437.6 | 433.6 | 430.6 | 421.6 | 408.6 | 401.6 | 390.6 | 375.6 | 349.7 | 326.7 | 297.7 |
| 27° | 420.6 | 416.6 | 412.6 | 405.6 | 393.6 | 388.6 | 375.6 | 359.6 | 337.7 | 313.7 | 288.7 |
| 28° | 399.6 | 395.6 | 395.6 | 385.6 | 376.6 | 370.6 | 360.6 | 345.7 | 323.7 | 302.7 | 276.7 |
| 29° | 379.6 | 377.6 | 374.6 | 368.6 | 357.6 | 352.7 | 343.7 | 328.7 | 309.7 | 289.7 | 265.7 |
| 30° | 360.6 | 357.6 | 354.7 | 347.7 | 338.7 | 333.7 | 326.7 | 312.7 | 293.7 | 275.7 | 252.8 |
| 31° | 339.7 | 336.7 | 333.7 | 327.7 | 319.7 | 314.7 | 307.7 | 295.7 | 278.7 | 260.7 | 240.8 |
| 32° | 315.7 | 316.7 | 314.7 | 309.7 | 300.7 | 296.7 | 288.7 | 278.7 | 262.7 | 246.8 | 226.8 |
| 33° | 295.7 | 296.7 | 293.7 | 289.7 | 283.7 | 278.7 | 270.7 | 261.7 | 246.8 | 232.8 | 213.8 |
| 34° | 275.7 | 276.7 | 273.7 | 267.7 | 262.7 | 258.7 | 252.8 | 245.8 | 232.8 | 217.8 | 201.8 |
| 35° | 255.7 | 256.7 | 255.7 | 249.8 | 244.8 | 242.8 | 235.8 | 229.8 | 216.8 | 205.8 | 188.8 |
| 36° | 236.8 | 238.8 | 236.8 | 231.8 | 226.8 | 224.8 | 219.8 | 213.8 | 203.8 | 190.8 | 176.8 |
| 37° | 221.8 | 218.8 | 217.8 | 213.8 | 210.8 | 208.8 | 202.8 | 196.8 | 188.8 | 177.8 | 164.8 |
| 38° | 202.8 | 199.8 | 200.8 | 196.8 | 193.8 | 191.8 | 187.8 | 182.8 | 173.8 | 164.8 | 151.9 |
| 39° | 183.8 | 183.8 | 182.8 | 179.8 | 178.8 | 177.8 | 172.8 | 168.8 | 160.8 | 152.8 | 140.9 |
| 40° | 166.8 | 166.8 | 166.8 | 164.8 | 162.8 | 161.8 | 158.8 | 154.8 | 148.9 | 139.9 | 130.9 |
| 41° | 152.8 | 151.9 | 150.9 | 149.9 | 147.9 | 147.9 | 144.9 | 141.9 | 135.9 | 129.9 | 120.9 |
| 42° | 136.9 | 134.9 | 134.9 | 135.9 | 133.9 | 132.9 | 131.9 | 128.9 | 124.9 | 118.9 | 111.9 |
| 43° | 122.9 | 121.9 | 121.9 | 121.9 | 120.9 | 119.9 | 119.9 | 117.9 | 113.9 | 107.9 | 101.9 |
| 44° | 109.9 | 108.9 | 108.9 | 108.9 | 107.9 | 107.9 | 107.9 | 105.9 | 103.9 | 98.9  | 91.9  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 0°   | 5°   | 10°  | 15°  | 20°  | 22.5° | 25°  | 30°  | 35°  | 40°  | 45°  |
|-----|------|------|------|------|------|-------|------|------|------|------|------|
| 45° | 97.9 | 96.9 | 97.9 | 97.9 | 97.9 | 96.9  | 96.9 | 94.9 | 93.9 | 88.9 | 83.9 |
| 46° | 84.9 | 86.9 | 86.9 | 86.9 | 86.9 | 86.9  | 85.9 | 85.9 | 84.9 | 80.9 | 75.9 |
| 47° | 75.9 | 75.9 | 76.9 | 76.9 | 77.9 | 77.9  | 76.9 | 76.9 | 75.9 | 72.9 | 68.9 |
| 48° | 66.9 | 67.9 | 67.9 | 67.9 | 68.9 | 68.9  | 67.9 | 68.9 | 67.9 | 64.9 | 62.9 |
| 49° | 59.9 | 58.9 | 59.9 | 59.9 | 59.9 | 59.9  | 60.9 | 60.9 | 59.9 | 58.9 | 55.9 |
| 50° | 52.9 | 51.9 | 51.9 | 52.9 | 52.9 | 53.9  | 53.9 | 53.9 | 52.9 | 51.9 | 50.0 |
| 51° | 46.0 | 45.0 | 46.0 | 46.0 | 47.0 | 47.0  | 47.0 | 47.0 | 47.0 | 46.0 | 44.0 |
| 52° | 40.0 | 40.0 | 40.0 | 40.0 | 41.0 | 41.0  | 42.0 | 42.0 | 42.0 | 40.0 | 39.0 |
| 53° | 34.0 | 34.0 | 34.0 | 35.0 | 36.0 | 35.0  | 36.0 | 37.0 | 37.0 | 36.0 | 34.0 |
| 54° | 29.0 | 29.0 | 30.0 | 30.0 | 31.0 | 31.0  | 31.0 | 32.0 | 32.0 | 31.0 | 30.0 |
| 55° | 24.0 | 25.0 | 25.0 | 26.0 | 26.0 | 27.0  | 27.0 | 28.0 | 28.0 | 27.0 | 26.0 |
| 56° | 20.0 | 21.0 | 21.0 | 22.0 | 22.0 | 23.0  | 23.0 | 24.0 | 24.0 | 23.0 | 23.0 |
| 57° | 17.0 | 17.0 | 18.0 | 18.0 | 19.0 | 19.0  | 20.0 | 20.0 | 21.0 | 21.0 | 20.0 |
| 58° | 15.0 | 14.0 | 15.0 | 15.0 | 16.0 | 16.0  | 17.0 | 17.0 | 18.0 | 18.0 | 17.0 |
| 59° | 12.0 | 12.0 | 12.0 | 13.0 | 13.0 | 14.0  | 14.0 | 15.0 | 15.0 | 15.0 | 14.0 |
| 60° | 10.0 | 10.0 | 10.0 | 10.0 | 11.0 | 11.0  | 12.0 | 12.0 | 13.0 | 13.0 | 12.0 |
| 61° | 8.0  | 8.0  | 8.0  | 9.0  | 9.0  | 9.0   | 10.0 | 10.0 | 11.0 | 11.0 | 10.0 |
| 62° | 6.0  | 6.0  | 7.0  | 7.0  | 8.0  | 8.0   | 8.0  | 9.0  | 9.0  | 9.0  | 9.0  |
| 63° | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  | 6.0   | 7.0  | 7.0  | 7.0  | 8.0  | 7.0  |
| 64° | 4.0  | 4.0  | 4.0  | 5.0  | 5.0  | 5.0   | 5.0  | 6.0  | 6.0  | 6.0  | 6.0  |
| 65° | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  | 4.0   | 5.0  | 5.0  | 5.0  | 5.0  | 5.0  |
| 66° | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 4.0   | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  |
| 67° | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 3.0  | 3.0  | 4.0  | 4.0  | 4.0  |
| 68° | 2.0  | 2.0  | 2.0  | 2.0  | 3.0  | 3.0   | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 69° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 3.0  | 3.0  | 3.0  |
| 70° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 3.0  |
| 71° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 72° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 73° | 1.0  | 1.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 74° | 1.0  | 1.0  | 1.0  | 1.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 75° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 76° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 77° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 2.0  | 2.0  |
| 78° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 2.0  |
| 79° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 80° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 81° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 82° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 83° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 84° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 85° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 86° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 87° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 88° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 89° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     |     |     |     |     |     |       |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
|     | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
| 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: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°  | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 |
| 1°  | 216.8 | 214.8 | 213.8 | 211.8 | 211.8 | 211.8 | 210.8 | 208.8 | 208.8 | 207.8 | 206.8 |
| 2°  | 224.8 | 221.8 | 220.8 | 217.8 | 215.8 | 215.8 | 212.8 | 209.8 | 208.8 | 206.8 | 203.8 |
| 3°  | 232.8 | 228.8 | 225.8 | 221.8 | 219.8 | 218.8 | 214.8 | 210.8 | 208.8 | 205.8 | 201.8 |
| 4°  | 240.8 | 235.8 | 231.8 | 225.8 | 223.8 | 221.8 | 216.8 | 211.8 | 208.8 | 203.8 | 199.8 |
| 5°  | 249.8 | 242.8 | 236.8 | 230.8 | 226.8 | 224.8 | 218.8 | 211.8 | 207.8 | 201.8 | 195.8 |
| 6°  | 256.7 | 248.8 | 241.8 | 233.8 | 229.8 | 226.8 | 218.8 | 210.8 | 205.8 | 198.8 | 192.8 |
| 7°  | 264.7 | 254.7 | 246.8 | 236.8 | 231.8 | 227.8 | 219.8 | 209.8 | 203.8 | 195.8 | 188.8 |
| 8°  | 270.7 | 259.7 | 249.8 | 238.8 | 232.8 | 228.8 | 218.8 | 208.8 | 200.8 | 191.8 | 183.8 |
| 9°  | 278.7 | 264.7 | 253.8 | 240.8 | 234.8 | 229.8 | 217.8 | 206.8 | 197.8 | 188.8 | 180.8 |
| 10° | 283.7 | 268.7 | 255.7 | 241.8 | 234.8 | 229.8 | 216.8 | 204.8 | 194.8 | 184.8 | 174.8 |
| 11° | 289.7 | 273.7 | 258.7 | 242.8 | 235.8 | 228.8 | 215.8 | 201.8 | 190.8 | 180.8 | 169.8 |
| 12° | 294.7 | 276.7 | 259.7 | 243.8 | 234.8 | 227.8 | 212.8 | 197.8 | 186.8 | 175.8 | 164.8 |
| 13° | 299.7 | 278.7 | 261.7 | 242.8 | 233.8 | 225.8 | 209.8 | 194.8 | 182.8 | 170.8 | 159.8 |
| 14° | 302.7 | 280.7 | 261.7 | 241.8 | 231.8 | 223.8 | 206.8 | 190.8 | 177.8 | 164.8 | 153.8 |
| 15° | 305.7 | 282.7 | 261.7 | 240.8 | 229.8 | 221.8 | 203.8 | 185.8 | 172.8 | 159.8 | 148.9 |
| 16° | 307.7 | 282.7 | 260.7 | 238.8 | 226.8 | 217.8 | 198.8 | 181.8 | 167.8 | 154.8 | 142.9 |
| 17° | 308.7 | 281.7 | 258.7 | 235.8 | 223.8 | 214.8 | 194.8 | 176.8 | 162.8 | 149.9 | 137.9 |
| 18° | 309.7 | 281.7 | 256.7 | 232.8 | 220.8 | 210.8 | 190.8 | 171.8 | 157.8 | 143.9 | 131.9 |
| 19° | 307.7 | 279.7 | 253.8 | 228.8 | 216.8 | 205.8 | 184.8 | 166.8 | 151.9 | 137.9 | 125.9 |
| 20° | 305.7 | 275.7 | 249.8 | 224.8 | 211.8 | 201.8 | 179.8 | 160.8 | 145.9 | 132.9 | 119.9 |
| 21° | 302.7 | 272.7 | 245.8 | 219.8 | 206.8 | 195.8 | 174.8 | 154.8 | 139.9 | 125.9 | 114.9 |
| 22° | 298.7 | 267.7 | 240.8 | 214.8 | 200.8 | 189.8 | 168.8 | 148.9 | 133.9 | 120.9 | 109.9 |
| 23° | 292.7 | 262.7 | 234.8 | 208.8 | 195.8 | 183.8 | 162.8 | 142.9 | 127.9 | 114.9 | 104.9 |
| 24° | 286.7 | 255.7 | 228.8 | 202.8 | 188.8 | 178.8 | 156.8 | 137.9 | 122.9 | 109.9 | 98.9  |
| 25° | 279.7 | 249.8 | 221.8 | 195.8 | 182.8 | 171.8 | 150.9 | 130.9 | 116.9 | 103.9 | 93.9  |
| 26° | 269.7 | 241.8 | 214.8 | 188.8 | 174.8 | 164.8 | 143.9 | 125.9 | 110.9 | 98.9  | 88.9  |
| 27° | 260.7 | 232.8 | 206.8 | 181.8 | 168.8 | 158.8 | 137.9 | 119.9 | 105.9 | 93.9  | 83.9  |
| 28° | 250.8 | 224.8 | 199.8 | 174.8 | 161.8 | 151.9 | 130.9 | 113.9 | 99.9  | 88.9  | 78.9  |
| 29° | 241.8 | 213.8 | 190.8 | 166.8 | 153.8 | 144.9 | 124.9 | 107.9 | 94.9  | 83.9  | 74.9  |
| 30° | 230.8 | 204.8 | 181.8 | 158.8 | 147.9 | 137.9 | 118.9 | 102.9 | 89.9  | 78.9  | 70.9  |
| 31° | 218.8 | 195.8 | 172.8 | 150.9 | 139.9 | 130.9 | 112.9 | 96.9  | 84.9  | 74.9  | 65.9  |
| 32° | 206.8 | 185.8 | 164.8 | 143.9 | 132.9 | 123.9 | 106.9 | 91.9  | 79.9  | 69.9  | 61.9  |
| 33° | 195.8 | 174.8 | 155.8 | 135.9 | 125.9 | 116.9 | 100.9 | 85.9  | 74.9  | 65.9  | 57.9  |
| 34° | 183.8 | 164.8 | 146.9 | 127.9 | 117.9 | 110.9 | 94.9  | 80.9  | 69.9  | 61.9  | 54.9  |
| 35° | 173.8 | 154.8 | 137.9 | 119.9 | 110.9 | 103.9 | 88.9  | 75.9  | 65.9  | 57.9  | 50.9  |
| 36° | 161.8 | 144.9 | 128.9 | 112.9 | 103.9 | 96.9  | 82.9  | 70.9  | 60.9  | 53.9  | 48.0  |
| 37° | 150.9 | 136.9 | 120.9 | 104.9 | 96.9  | 90.9  | 77.9  | 65.9  | 56.9  | 50.9  | 45.0  |
| 38° | 139.9 | 126.9 | 111.9 | 97.9  | 90.9  | 84.9  | 71.9  | 60.9  | 53.9  | 47.0  | 42.0  |
| 39° | 130.9 | 116.9 | 104.9 | 90.9  | 83.9  | 78.9  | 66.9  | 56.9  | 50.0  | 44.0  | 39.0  |
| 40° | 119.9 | 107.9 | 96.9  | 83.9  | 77.9  | 72.9  | 61.9  | 52.9  | 46.0  | 41.0  | 36.0  |
| 41° | 111.9 | 100.9 | 89.9  | 77.9  | 71.9  | 66.9  | 56.9  | 49.0  | 43.0  | 38.0  | 34.0  |
| 42° | 101.9 | 91.9  | 81.9  | 71.9  | 66.9  | 61.9  | 52.9  | 45.0  | 39.0  | 35.0  | 31.0  |
| 43° | 93.9  | 84.9  | 75.9  | 65.9  | 60.9  | 56.9  | 48.0  | 41.0  | 36.0  | 32.0  | 29.0  |
| 44° | 85.9  | 77.9  | 68.9  | 59.9  | 54.9  | 51.9  | 44.0  | 38.0  | 33.0  | 29.0  | 27.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 50°  | 55°  | 60°  | 65°  | 67.5° | 70°  | 75°  | 80°  | 85°  | 90°  | 95°  |
|-----|------|------|------|------|-------|------|------|------|------|------|------|
| 45° | 78.9 | 70.9 | 62.9 | 54.9 | 50.9  | 48.0 | 41.0 | 35.0 | 30.0 | 27.0 | 25.0 |
| 46° | 71.9 | 63.9 | 57.9 | 50.0 | 46.0  | 43.0 | 37.0 | 32.0 | 28.0 | 25.0 | 23.0 |
| 47° | 64.9 | 57.9 | 51.9 | 46.0 | 42.0  | 39.0 | 34.0 | 29.0 | 25.0 | 23.0 | 21.0 |
| 48° | 58.9 | 51.9 | 47.0 | 41.0 | 38.0  | 35.0 | 30.0 | 26.0 | 23.0 | 21.0 | 20.0 |
| 49° | 51.9 | 47.0 | 42.0 | 37.0 | 34.0  | 32.0 | 27.0 | 24.0 | 21.0 | 20.0 | 18.0 |
| 50° | 47.0 | 42.0 | 38.0 | 33.0 | 31.0  | 29.0 | 25.0 | 22.0 | 20.0 | 18.0 | 17.0 |
| 51° | 41.0 | 38.0 | 34.0 | 30.0 | 27.0  | 26.0 | 22.0 | 19.0 | 18.0 | 17.0 | 16.0 |
| 52° | 37.0 | 34.0 | 30.0 | 27.0 | 25.0  | 23.0 | 20.0 | 18.0 | 16.0 | 15.0 | 15.0 |
| 53° | 32.0 | 29.0 | 27.0 | 23.0 | 22.0  | 21.0 | 18.0 | 16.0 | 15.0 | 14.0 | 14.0 |
| 54° | 29.0 | 26.0 | 24.0 | 21.0 | 19.0  | 18.0 | 16.0 | 14.0 | 14.0 | 13.0 | 13.0 |
| 55° | 25.0 | 23.0 | 21.0 | 18.0 | 17.0  | 16.0 | 14.0 | 13.0 | 13.0 | 12.0 | 12.0 |
| 56° | 21.0 | 20.0 | 18.0 | 16.0 | 15.0  | 14.0 | 13.0 | 12.0 | 12.0 | 12.0 | 11.0 |
| 57° | 18.0 | 17.0 | 15.0 | 14.0 | 13.0  | 13.0 | 12.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 58° | 16.0 | 15.0 | 13.0 | 12.0 | 12.0  | 11.0 | 11.0 | 11.0 | 10.0 | 10.0 | 10.0 |
| 59° | 14.0 | 13.0 | 12.0 | 11.0 | 10.0  | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 60° | 12.0 | 11.0 | 10.0 | 10.0 | 9.0   | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  |
| 61° | 10.0 | 9.0  | 9.0  | 9.0  | 8.0   | 8.0  | 8.0  | 8.0  | 9.0  | 9.0  | 9.0  |
| 62° | 8.0  | 8.0  | 8.0  | 8.0  | 8.0   | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  |
| 63° | 7.0  | 7.0  | 7.0  | 7.0  | 7.0   | 7.0  | 7.0  | 7.0  | 7.0  | 8.0  | 8.0  |
| 64° | 6.0  | 6.0  | 6.0  | 6.0  | 6.0   | 6.0  | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  |
| 65° | 5.0  | 5.0  | 5.0  | 6.0  | 6.0   | 6.0  | 6.0  | 6.0  | 7.0  | 7.0  | 7.0  |
| 66° | 5.0  | 5.0  | 5.0  | 5.0  | 5.0   | 5.0  | 5.0  | 6.0  | 6.0  | 6.0  | 7.0  |
| 67° | 4.0  | 4.0  | 4.0  | 4.0  | 5.0   | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  | 6.0  |
| 68° | 3.0  | 4.0  | 4.0  | 4.0  | 4.0   | 4.0  | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  |
| 69° | 3.0  | 3.0  | 3.0  | 4.0  | 4.0   | 4.0  | 4.0  | 5.0  | 5.0  | 5.0  | 6.0  |
| 70° | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 4.0  | 4.0  | 4.0  | 5.0  | 5.0  | 5.0  |
| 71° | 3.0  | 3.0  | 3.0  | 3.0  | 3.0   | 3.0  | 4.0  | 4.0  | 4.0  | 5.0  | 5.0  |
| 72° | 2.0  | 2.0  | 3.0  | 3.0  | 3.0   | 3.0  | 3.0  | 4.0  | 4.0  | 4.0  | 5.0  |
| 73° | 2.0  | 2.0  | 2.0  | 3.0  | 3.0   | 3.0  | 3.0  | 3.0  | 4.0  | 4.0  | 4.0  |
| 74° | 2.0  | 2.0  | 2.0  | 3.0  | 3.0   | 3.0  | 3.0  | 3.0  | 3.0  | 4.0  | 4.0  |
| 75° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 4.0  |
| 76° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 77° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 78° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 3.0  | 3.0  | 3.0  |
| 79° | 2.0  | 2.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 3.0  | 3.0  |
| 80° | 1.0  | 1.0  | 2.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 3.0  |
| 81° | 1.0  | 1.0  | 1.0  | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 82° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 83° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 2.0  | 2.0  |
| 84° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 85° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 86° | 1.0  | 1.0  | 1.0  | 1.0  | 1.0   | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 87° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 88° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.0  |
| 89° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     |     |     |     |     |       |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|
|     | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° | 95° |
| 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: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-----|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°  | 207.8 | 207.8 | 207.8 | 207.8  | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 |
| 1°  | 203.8 | 204.8 | 202.8 | 200.8  | 200.8 | 200.8 | 200.8 | 198.8 | 197.8 | 197.8 | 195.8 |
| 2°  | 200.8 | 200.8 | 197.8 | 195.8  | 194.8 | 193.8 | 192.8 | 189.8 | 189.8 | 187.8 | 185.8 |
| 3°  | 197.8 | 196.8 | 192.8 | 190.8  | 189.8 | 186.8 | 185.8 | 181.8 | 180.8 | 179.8 | 176.8 |
| 4°  | 193.8 | 191.8 | 187.8 | 184.8  | 183.8 | 180.8 | 177.8 | 173.8 | 171.8 | 170.8 | 167.8 |
| 5°  | 189.8 | 186.8 | 181.8 | 178.8  | 176.8 | 173.8 | 170.8 | 165.8 | 163.8 | 161.8 | 159.8 |
| 6°  | 185.8 | 181.8 | 175.8 | 172.8  | 170.8 | 166.8 | 163.8 | 158.8 | 156.8 | 153.8 | 150.9 |
| 7°  | 180.8 | 176.8 | 170.8 | 166.8  | 164.8 | 159.8 | 155.8 | 150.9 | 147.9 | 145.9 | 142.9 |
| 8°  | 175.8 | 170.8 | 163.8 | 159.8  | 157.8 | 153.8 | 148.9 | 142.9 | 140.9 | 137.9 | 134.9 |
| 9°  | 170.8 | 165.8 | 157.8 | 153.8  | 151.9 | 146.9 | 141.9 | 136.9 | 132.9 | 130.9 | 127.9 |
| 10° | 165.8 | 159.8 | 151.9 | 148.9  | 145.9 | 140.9 | 135.9 | 129.9 | 125.9 | 123.9 | 120.9 |
| 11° | 160.8 | 154.8 | 145.9 | 141.9  | 139.9 | 133.9 | 129.9 | 123.9 | 119.9 | 116.9 | 113.9 |
| 12° | 154.8 | 147.9 | 139.9 | 135.9  | 132.9 | 126.9 | 122.9 | 116.9 | 113.9 | 110.9 | 107.9 |
| 13° | 148.9 | 141.9 | 133.9 | 129.9  | 126.9 | 121.9 | 116.9 | 110.9 | 106.9 | 104.9 | 101.9 |
| 14° | 143.9 | 135.9 | 127.9 | 123.9  | 120.9 | 114.9 | 110.9 | 105.9 | 101.9 | 98.9  | 95.9  |
| 15° | 137.9 | 129.9 | 122.9 | 117.9  | 114.9 | 109.9 | 104.9 | 99.9  | 95.9  | 93.9  | 90.9  |
| 16° | 131.9 | 124.9 | 116.9 | 111.9  | 109.9 | 103.9 | 98.9  | 93.9  | 90.9  | 88.9  | 85.9  |
| 17° | 126.9 | 118.9 | 110.9 | 106.9  | 103.9 | 98.9  | 93.9  | 88.9  | 86.9  | 83.9  | 80.9  |
| 18° | 120.9 | 113.9 | 105.9 | 101.9  | 98.9  | 93.9  | 88.9  | 84.9  | 81.9  | 79.9  | 76.9  |
| 19° | 114.9 | 107.9 | 99.9  | 96.9   | 93.9  | 88.9  | 83.9  | 79.9  | 76.9  | 74.9  | 72.9  |
| 20° | 109.9 | 102.9 | 94.9  | 90.9   | 88.9  | 83.9  | 79.9  | 75.9  | 72.9  | 70.9  | 68.9  |
| 21° | 104.9 | 96.9  | 89.9  | 86.9   | 84.9  | 79.9  | 75.9  | 71.9  | 68.9  | 66.9  | 65.9  |
| 22° | 99.9  | 92.9  | 84.9  | 81.9   | 79.9  | 74.9  | 71.9  | 67.9  | 64.9  | 63.9  | 61.9  |
| 23° | 94.9  | 87.9  | 80.9  | 77.9   | 74.9  | 70.9  | 67.9  | 63.9  | 61.9  | 60.9  | 58.9  |
| 24° | 89.9  | 82.9  | 76.9  | 73.9   | 70.9  | 66.9  | 63.9  | 60.9  | 58.9  | 56.9  | 55.9  |
| 25° | 84.9  | 77.9  | 71.9  | 68.9   | 66.9  | 62.9  | 60.9  | 57.9  | 55.9  | 54.9  | 53.9  |
| 26° | 79.9  | 73.9  | 67.9  | 64.9   | 62.9  | 59.9  | 56.9  | 54.9  | 52.9  | 51.9  | 50.9  |
| 27° | 75.9  | 69.9  | 63.9  | 61.9   | 59.9  | 56.9  | 53.9  | 51.9  | 50.0  | 49.0  | 49.0  |
| 28° | 70.9  | 65.9  | 60.9  | 58.9   | 56.9  | 53.9  | 50.9  | 49.0  | 48.0  | 47.0  | 46.0  |
| 29° | 66.9  | 61.9  | 56.9  | 54.9   | 52.9  | 50.0  | 49.0  | 47.0  | 45.0  | 45.0  | 44.0  |
| 30° | 62.9  | 57.9  | 53.9  | 51.9   | 50.0  | 48.0  | 46.0  | 44.0  | 43.0  | 43.0  | 42.0  |
| 31° | 59.9  | 54.9  | 50.9  | 49.0   | 48.0  | 45.0  | 43.0  | 42.0  | 41.0  | 41.0  | 40.0  |
| 32° | 55.9  | 51.9  | 47.0  | 46.0   | 45.0  | 43.0  | 41.0  | 40.0  | 39.0  | 39.0  | 39.0  |
| 33° | 51.9  | 49.0  | 45.0  | 43.0   | 42.0  | 40.0  | 39.0  | 38.0  | 37.0  | 37.0  | 37.0  |
| 34° | 50.0  | 45.0  | 42.0  | 41.0   | 40.0  | 38.0  | 37.0  | 36.0  | 35.0  | 35.0  | 35.0  |
| 35° | 46.0  | 43.0  | 40.0  | 38.0   | 37.0  | 36.0  | 35.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| 36° | 43.0  | 40.0  | 37.0  | 36.0   | 35.0  | 34.0  | 33.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| 37° | 40.0  | 38.0  | 35.0  | 34.0   | 33.0  | 32.0  | 31.0  | 31.0  | 30.0  | 31.0  | 31.0  |
| 38° | 38.0  | 35.0  | 33.0  | 32.0   | 31.0  | 30.0  | 30.0  | 29.0  | 29.0  | 29.0  | 30.0  |
| 39° | 35.0  | 33.0  | 31.0  | 30.0   | 29.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| 40° | 33.0  | 31.0  | 29.0  | 28.0   | 28.0  | 27.0  | 26.0  | 26.0  | 26.0  | 27.0  | 27.0  |
| 41° | 31.0  | 29.0  | 27.0  | 26.0   | 26.0  | 26.0  | 25.0  | 25.0  | 25.0  | 26.0  | 26.0  |
| 42° | 29.0  | 27.0  | 26.0  | 25.0   | 25.0  | 24.0  | 24.0  | 24.0  | 24.0  | 25.0  | 25.0  |
| 43° | 27.0  | 25.0  | 24.0  | 23.0   | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 24.0  | 24.0  |
| 44° | 25.0  | 24.0  | 22.0  | 22.0   | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 23.0  | 23.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 100° | 105° | 110° | 112.5° | 115° | 120° | 125° | 130° | 135° | 140° | 145° |
|-----|------|------|------|--------|------|------|------|------|------|------|------|
| 45° | 23.0 | 22.0 | 21.0 | 21.0   | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 | 22.0 | 22.0 |
| 46° | 22.0 | 21.0 | 20.0 | 20.0   | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 21.0 | 22.0 |
| 47° | 20.0 | 19.0 | 19.0 | 19.0   | 19.0 | 19.0 | 19.0 | 19.0 | 20.0 | 20.0 | 21.0 |
| 48° | 19.0 | 18.0 | 18.0 | 18.0   | 18.0 | 18.0 | 18.0 | 18.0 | 19.0 | 19.0 | 20.0 |
| 49° | 17.0 | 17.0 | 17.0 | 17.0   | 17.0 | 17.0 | 17.0 | 18.0 | 18.0 | 19.0 | 19.0 |
| 50° | 16.0 | 16.0 | 16.0 | 16.0   | 16.0 | 16.0 | 17.0 | 17.0 | 17.0 | 18.0 | 19.0 |
| 51° | 15.0 | 15.0 | 15.0 | 15.0   | 15.0 | 15.0 | 16.0 | 16.0 | 17.0 | 17.0 | 18.0 |
| 52° | 14.0 | 14.0 | 14.0 | 14.0   | 14.0 | 15.0 | 15.0 | 16.0 | 16.0 | 17.0 | 17.0 |
| 53° | 13.0 | 13.0 | 14.0 | 14.0   | 14.0 | 14.0 | 15.0 | 15.0 | 16.0 | 16.0 | 17.0 |
| 54° | 13.0 | 13.0 | 13.0 | 13.0   | 13.0 | 14.0 | 14.0 | 14.0 | 15.0 | 16.0 | 16.0 |
| 55° | 12.0 | 12.0 | 12.0 | 12.0   | 13.0 | 13.0 | 14.0 | 14.0 | 14.0 | 15.0 | 16.0 |
| 56° | 11.0 | 12.0 | 12.0 | 12.0   | 12.0 | 13.0 | 13.0 | 14.0 | 14.0 | 15.0 | 15.0 |
| 57° | 11.0 | 11.0 | 11.0 | 11.0   | 12.0 | 12.0 | 13.0 | 13.0 | 14.0 | 14.0 | 15.0 |
| 58° | 10.0 | 11.0 | 11.0 | 11.0   | 11.0 | 12.0 | 12.0 | 13.0 | 13.0 | 14.0 | 14.0 |
| 59° | 10.0 | 10.0 | 10.0 | 11.0   | 11.0 | 11.0 | 12.0 | 12.0 | 13.0 | 13.0 | 14.0 |
| 60° | 9.0  | 10.0 | 10.0 | 10.0   | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 | 13.0 | 13.0 |
| 61° | 9.0  | 9.0  | 10.0 | 10.0   | 10.0 | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 | 13.0 |
| 62° | 9.0  | 9.0  | 9.0  | 9.0    | 10.0 | 10.0 | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 |
| 63° | 8.0  | 8.0  | 9.0  | 9.0    | 9.0  | 10.0 | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 |
| 64° | 8.0  | 8.0  | 8.0  | 9.0    | 9.0  | 9.0  | 10.0 | 10.0 | 11.0 | 11.0 | 12.0 |
| 65° | 7.0  | 8.0  | 8.0  | 8.0    | 8.0  | 9.0  | 9.0  | 10.0 | 10.0 | 11.0 | 11.0 |
| 66° | 7.0  | 7.0  | 8.0  | 8.0    | 8.0  | 8.0  | 9.0  | 9.0  | 10.0 | 10.0 | 11.0 |
| 67° | 7.0  | 7.0  | 7.0  | 7.0    | 8.0  | 8.0  | 9.0  | 9.0  | 9.0  | 10.0 | 10.0 |
| 68° | 6.0  | 7.0  | 7.0  | 7.0    | 7.0  | 8.0  | 8.0  | 9.0  | 9.0  | 10.0 | 10.0 |
| 69° | 6.0  | 6.0  | 7.0  | 7.0    | 7.0  | 7.0  | 8.0  | 8.0  | 9.0  | 9.0  | 10.0 |
| 70° | 6.0  | 6.0  | 6.0  | 6.0    | 7.0  | 7.0  | 7.0  | 8.0  | 8.0  | 9.0  | 9.0  |
| 71° | 5.0  | 6.0  | 6.0  | 6.0    | 6.0  | 7.0  | 7.0  | 8.0  | 8.0  | 8.0  | 9.0  |
| 72° | 5.0  | 5.0  | 6.0  | 6.0    | 6.0  | 6.0  | 7.0  | 7.0  | 8.0  | 8.0  | 8.0  |
| 73° | 5.0  | 5.0  | 5.0  | 5.0    | 6.0  | 6.0  | 6.0  | 7.0  | 7.0  | 8.0  | 8.0  |
| 74° | 4.0  | 5.0  | 5.0  | 5.0    | 5.0  | 6.0  | 6.0  | 6.0  | 7.0  | 7.0  | 8.0  |
| 75° | 4.0  | 4.0  | 5.0  | 5.0    | 5.0  | 5.0  | 6.0  | 6.0  | 6.0  | 7.0  | 7.0  |
| 76° | 4.0  | 4.0  | 4.0  | 5.0    | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  | 6.0  | 7.0  |
| 77° | 4.0  | 4.0  | 4.0  | 4.0    | 4.0  | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  | 6.0  |
| 78° | 3.0  | 4.0  | 4.0  | 4.0    | 4.0  | 4.0  | 5.0  | 5.0  | 5.0  | 6.0  | 6.0  |
| 79° | 3.0  | 3.0  | 4.0  | 4.0    | 4.0  | 4.0  | 4.0  | 5.0  | 5.0  | 5.0  | 5.0  |
| 80° | 3.0  | 3.0  | 3.0  | 3.0    | 3.0  | 4.0  | 4.0  | 4.0  | 4.0  | 5.0  | 5.0  |
| 81° | 2.0  | 3.0  | 3.0  | 3.0    | 3.0  | 3.0  | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  |
| 82° | 2.0  | 2.0  | 2.0  | 3.0    | 3.0  | 3.0  | 3.0  | 3.0  | 4.0  | 4.0  | 4.0  |
| 83° | 2.0  | 2.0  | 2.0  | 2.0    | 2.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 84° | 2.0  | 2.0  | 2.0  | 2.0    | 2.0  | 2.0  | 2.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 85° | 1.0  | 1.0  | 2.0  | 2.0    | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 3.0  |
| 86° | 1.0  | 1.0  | 1.0  | 1.0    | 1.0  | 1.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 87° | 1.0  | 1.0  | 1.0  | 1.0    | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 2.0  |
| 88° | 1.0  | 1.0  | 1.0  | 1.0    | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 89° | 0.0  | 0.0  | 0.0  | 0.0    | 0.0  | 0.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     |      |      |      |        |      |      |      |      |      |      |      |
|-----|------|------|------|--------|------|------|------|------|------|------|------|
|     | 100° | 105° | 110° | 112.5° | 115° | 120° | 125° | 130° | 135° | 140° | 145° |
| 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: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°  | 207.8 | 207.8 | 207.8  | 207.8 | 207.8 | 207.8 | 207.8 | 207.8 |
| 1°  | 196.8 | 194.8 | 194.8  | 194.8 | 193.8 | 194.8 | 195.8 | 192.8 |
| 2°  | 187.8 | 183.8 | 183.8  | 183.8 | 182.8 | 183.8 | 182.8 | 181.8 |
| 3°  | 176.8 | 172.8 | 172.8  | 173.8 | 172.8 | 172.8 | 171.8 | 171.8 |
| 4°  | 166.8 | 164.8 | 163.8  | 163.8 | 161.8 | 162.8 | 161.8 | 161.8 |
| 5°  | 158.8 | 154.8 | 154.8  | 154.8 | 152.8 | 152.8 | 151.9 | 152.8 |
| 6°  | 149.9 | 145.9 | 145.9  | 145.9 | 143.9 | 143.9 | 142.9 | 141.9 |
| 7°  | 140.9 | 136.9 | 136.9  | 136.9 | 134.9 | 134.9 | 134.9 | 133.9 |
| 8°  | 132.9 | 129.9 | 129.9  | 128.9 | 126.9 | 126.9 | 126.9 | 125.9 |
| 9°  | 126.9 | 122.9 | 122.9  | 121.9 | 120.9 | 119.9 | 118.9 | 118.9 |
| 10° | 118.9 | 115.9 | 114.9  | 114.9 | 112.9 | 112.9 | 111.9 | 111.9 |
| 11° | 112.9 | 109.9 | 108.9  | 108.9 | 106.9 | 106.9 | 105.9 | 104.9 |
| 12° | 106.9 | 102.9 | 102.9  | 101.9 | 100.9 | 100.9 | 99.9  | 98.9  |
| 13° | 99.9  | 96.9  | 96.9   | 95.9  | 94.9  | 94.9  | 93.9  | 92.9  |
| 14° | 93.9  | 91.9  | 90.9   | 90.9  | 89.9  | 88.9  | 88.9  | 88.9  |
| 15° | 89.9  | 86.9  | 86.9   | 85.9  | 83.9  | 83.9  | 83.9  | 83.9  |
| 16° | 83.9  | 81.9  | 81.9   | 80.9  | 79.9  | 79.9  | 78.9  | 78.9  |
| 17° | 79.9  | 77.9  | 76.9   | 76.9  | 75.9  | 75.9  | 74.9  | 74.9  |
| 18° | 75.9  | 72.9  | 72.9   | 72.9  | 71.9  | 71.9  | 70.9  | 70.9  |
| 19° | 70.9  | 69.9  | 68.9   | 68.9  | 67.9  | 67.9  | 66.9  | 66.9  |
| 20° | 67.9  | 65.9  | 65.9   | 65.9  | 64.9  | 64.9  | 63.9  | 63.9  |
| 21° | 63.9  | 62.9  | 61.9   | 61.9  | 60.9  | 61.9  | 60.9  | 60.9  |
| 22° | 60.9  | 59.9  | 58.9   | 58.9  | 58.9  | 58.9  | 58.9  | 57.9  |
| 23° | 57.9  | 56.9  | 56.9   | 56.9  | 55.9  | 55.9  | 55.9  | 55.9  |
| 24° | 54.9  | 53.9  | 53.9   | 53.9  | 52.9  | 53.9  | 53.9  | 53.9  |
| 25° | 52.9  | 51.9  | 51.9   | 51.9  | 50.9  | 50.9  | 50.9  | 50.9  |
| 26° | 50.9  | 50.0  | 49.0   | 50.0  | 49.0  | 49.0  | 49.0  | 49.0  |
| 27° | 48.0  | 48.0  | 47.0   | 48.0  | 47.0  | 47.0  | 47.0  | 47.0  |
| 28° | 46.0  | 46.0  | 45.0   | 46.0  | 45.0  | 46.0  | 45.0  | 46.0  |
| 29° | 44.0  | 44.0  | 44.0   | 44.0  | 44.0  | 44.0  | 44.0  | 44.0  |
| 30° | 42.0  | 42.0  | 42.0   | 42.0  | 42.0  | 42.0  | 42.0  | 42.0  |
| 31° | 40.0  | 40.0  | 40.0   | 40.0  | 40.0  | 41.0  | 41.0  | 41.0  |
| 32° | 39.0  | 39.0  | 39.0   | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  |
| 33° | 37.0  | 37.0  | 37.0   | 37.0  | 37.0  | 38.0  | 38.0  | 38.0  |
| 34° | 35.0  | 35.0  | 36.0   | 36.0  | 36.0  | 36.0  | 37.0  | 37.0  |
| 35° | 34.0  | 34.0  | 34.0   | 35.0  | 35.0  | 35.0  | 35.0  | 36.0  |
| 36° | 32.0  | 33.0  | 33.0   | 33.0  | 33.0  | 34.0  | 34.0  | 34.0  |
| 37° | 31.0  | 31.0  | 32.0   | 32.0  | 32.0  | 33.0  | 33.0  | 33.0  |
| 38° | 30.0  | 30.0  | 30.0   | 31.0  | 31.0  | 32.0  | 32.0  | 32.0  |
| 39° | 29.0  | 29.0  | 29.0   | 30.0  | 30.0  | 30.0  | 30.0  | 31.0  |
| 40° | 28.0  | 28.0  | 28.0   | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  |
| 41° | 27.0  | 27.0  | 27.0   | 27.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| 42° | 26.0  | 26.0  | 26.0   | 26.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| 43° | 25.0  | 25.0  | 25.0   | 26.0  | 26.0  | 26.0  | 26.0  | 26.0  |
| 44° | 24.0  | 24.0  | 24.0   | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |



TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     | 150° | 155° | 157.5° | 160° | 165° | 170° | 175° | 180° |
|-----|------|------|--------|------|------|------|------|------|
| 45° | 23.0 | 23.0 | 23.0   | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |
| 46° | 22.0 | 23.0 | 23.0   | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| 47° | 21.0 | 22.0 | 22.0   | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 |
| 48° | 21.0 | 21.0 | 21.0   | 21.0 | 21.0 | 22.0 | 22.0 | 22.0 |
| 49° | 20.0 | 20.0 | 20.0   | 21.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| 50° | 19.0 | 20.0 | 20.0   | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| 51° | 18.0 | 19.0 | 19.0   | 19.0 | 19.0 | 19.0 | 20.0 | 20.0 |
| 52° | 18.0 | 18.0 | 18.0   | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| 53° | 17.0 | 18.0 | 18.0   | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| 54° | 17.0 | 17.0 | 17.0   | 17.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| 55° | 16.0 | 17.0 | 17.0   | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| 56° | 16.0 | 16.0 | 16.0   | 16.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| 57° | 15.0 | 16.0 | 16.0   | 16.0 | 16.0 | 16.0 | 16.0 | 17.0 |
| 58° | 15.0 | 15.0 | 15.0   | 15.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| 59° | 14.0 | 15.0 | 15.0   | 15.0 | 15.0 | 15.0 | 16.0 | 16.0 |
| 60° | 14.0 | 14.0 | 14.0   | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 |
| 61° | 13.0 | 14.0 | 14.0   | 14.0 | 14.0 | 15.0 | 15.0 | 15.0 |
| 62° | 13.0 | 13.0 | 14.0   | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 63° | 12.0 | 13.0 | 13.0   | 13.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 64° | 12.0 | 13.0 | 13.0   | 13.0 | 13.0 | 13.0 | 13.0 | 14.0 |
| 65° | 12.0 | 12.0 | 12.0   | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 66° | 11.0 | 12.0 | 12.0   | 12.0 | 12.0 | 12.0 | 13.0 | 13.0 |
| 67° | 11.0 | 11.0 | 11.0   | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 68° | 10.0 | 11.0 | 11.0   | 11.0 | 11.0 | 12.0 | 12.0 | 12.0 |
| 69° | 10.0 | 10.0 | 10.0   | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 70° | 10.0 | 10.0 | 10.0   | 10.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 71° | 9.0  | 10.0 | 10.0   | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 72° | 9.0  | 9.0  | 9.0    | 9.0  | 10.0 | 10.0 | 10.0 | 10.0 |
| 73° | 8.0  | 9.0  | 9.0    | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  |
| 74° | 8.0  | 8.0  | 8.0    | 8.0  | 9.0  | 9.0  | 9.0  | 9.0  |
| 75° | 7.0  | 8.0  | 8.0    | 8.0  | 8.0  | 8.0  | 8.0  | 8.0  |
| 76° | 7.0  | 7.0  | 7.0    | 7.0  | 8.0  | 8.0  | 8.0  | 8.0  |
| 77° | 7.0  | 7.0  | 7.0    | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  |
| 78° | 6.0  | 6.0  | 7.0    | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  |
| 79° | 6.0  | 6.0  | 6.0    | 6.0  | 6.0  | 6.0  | 6.0  | 6.0  |
| 80° | 5.0  | 5.0  | 5.0    | 6.0  | 6.0  | 6.0  | 6.0  | 6.0  |
| 81° | 5.0  | 5.0  | 5.0    | 5.0  | 5.0  | 5.0  | 5.0  | 5.0  |
| 82° | 4.0  | 4.0  | 4.0    | 4.0  | 5.0  | 5.0  | 5.0  | 5.0  |
| 83° | 4.0  | 4.0  | 4.0    | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  |
| 84° | 3.0  | 3.0  | 3.0    | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 85° | 3.0  | 3.0  | 3.0    | 3.0  | 3.0  | 3.0  | 3.0  | 3.0  |
| 86° | 2.0  | 2.0  | 2.0    | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 87° | 2.0  | 2.0  | 2.0    | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 88° | 1.0  | 1.0  | 1.0    | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 89° | 1.0  | 1.0  | 1.0    | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |





TEST NUMBER: P300537

CATALOG NUMBER: ML4D09\_27D2WE - TIR50AWW25 - TL45R6GMWBB

**CANDELA DISTRIBUTION (continued):**

|     |      |      |        |      |      |      |      |      |
|-----|------|------|--------|------|------|------|------|------|
|     | 150° | 155° | 157.5° | 160° | 165° | 170° | 175° | 180° |
| 90° | 0.0  | 0.0  | 0.0    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |

(END OF REPORT)