

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: io LED

Report Number: P251607

Luminaire Tested: **LD4B15D010 EU4B10209730 4LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251607  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-13)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B15D010 EU4B10209730 4LBSW1H  
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 990.0 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct

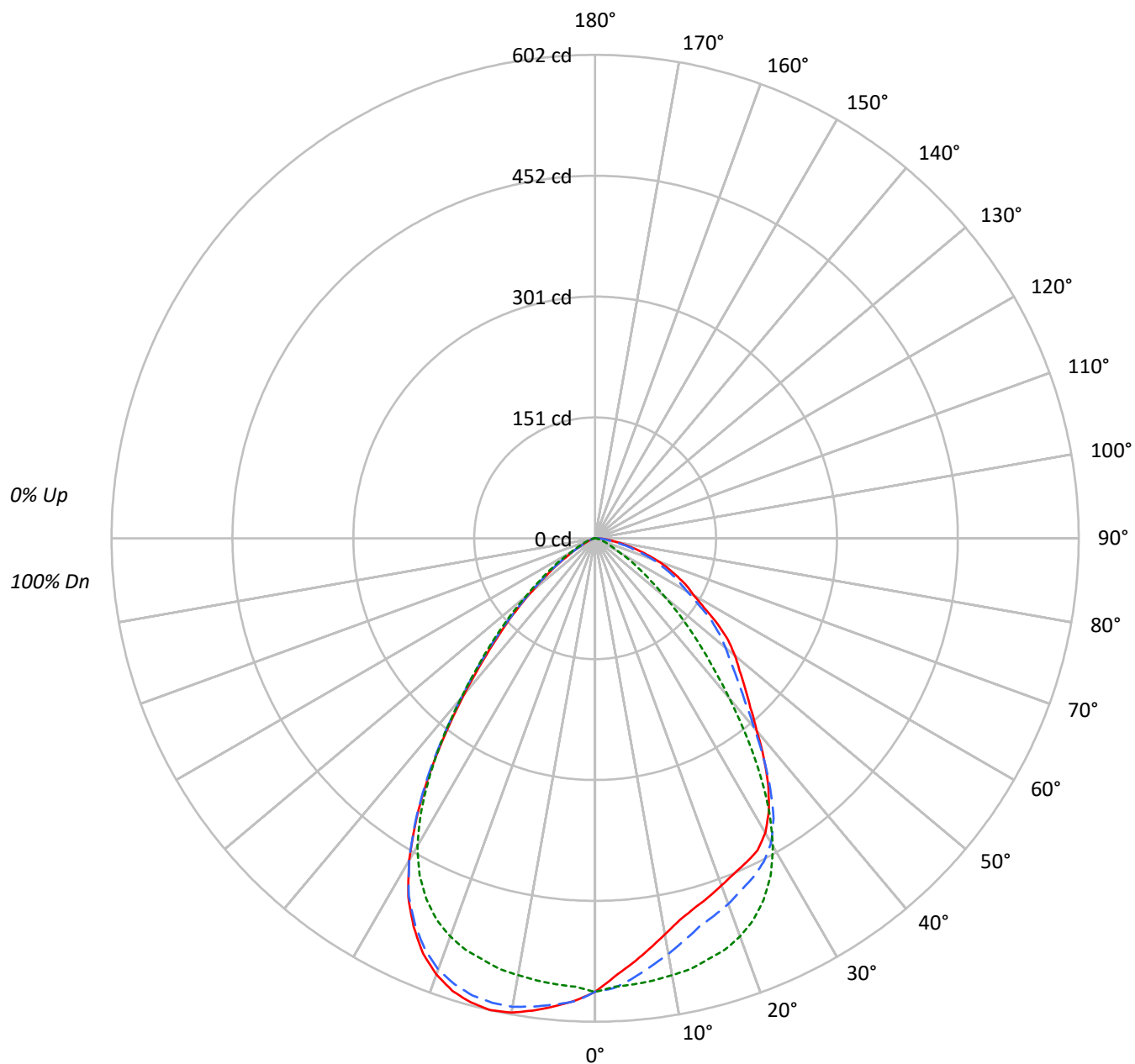
Input Watts (W): 14.39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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  | 30  | 10  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 111 | 108 | 104 | 101 |  | 109 | 106 | 103 | 100 |  | 101 | 99  | 97  |  | 98  | 96  | 94  |  | 94  | 93  | 91  |
| 2   | 104 | 97  | 92  | 87  |  | 101 | 95  | 90  | 86  |  | 92  | 88  | 84  |  | 89  | 85  | 82  |  | 86  | 83  | 81  |
| 3   | 96  | 88  | 81  | 76  |  | 94  | 86  | 80  | 75  |  | 83  | 78  | 74  |  | 81  | 76  | 73  |  | 78  | 75  | 72  |
| 4   | 90  | 80  | 72  | 67  |  | 88  | 78  | 72  | 66  |  | 76  | 70  | 66  |  | 74  | 69  | 65  |  | 72  | 68  | 64  |
| 5   | 83  | 73  | 65  | 60  |  | 82  | 72  | 65  | 59  |  | 70  | 63  | 59  |  | 68  | 62  | 58  |  | 66  | 61  | 58  |
| 6   | 78  | 67  | 59  | 53  |  | 76  | 66  | 59  | 53  |  | 64  | 58  | 53  |  | 62  | 57  | 52  |  | 61  | 56  | 52  |
| 7   | 73  | 61  | 54  | 48  |  | 71  | 61  | 53  | 48  |  | 59  | 53  | 48  |  | 58  | 52  | 48  |  | 56  | 51  | 47  |
| 8   | 68  | 57  | 49  | 44  |  | 67  | 56  | 49  | 44  |  | 55  | 48  | 44  |  | 54  | 48  | 43  |  | 52  | 47  | 43  |
| 9   | 64  | 52  | 45  | 40  |  | 63  | 52  | 45  | 40  |  | 51  | 44  | 40  |  | 50  | 44  | 40  |  | 49  | 44  | 40  |
| 10  | 61  | 49  | 42  | 37  |  | 59  | 48  | 42  | 37  |  | 47  | 41  | 37  |  | 47  | 41  | 37  |  | 46  | 40  | 37  |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 55044 | 55044 | 55044 |
| 5°  | 51977 | 54540 | 57250 |
| 10° | 49550 | 54666 | 59347 |
| 15° | 48097 | 54776 | 60366 |
| 20° | 47708 | 54729 | 59936 |
| 25° | 47895 | 53379 | 57444 |
| 30° | 47670 | 49797 | 52092 |
| 35° | 44687 | 42521 | 42950 |
| 40° | 39821 | 32963 | 32225 |
| 45° | 36414 | 24574 | 23072 |
| 50° | 34432 | 17209 | 15556 |
| 55° | 31655 | 11622 | 9770  |
| 60° | 27659 | 6803  | 5399  |
| 65° | 26174 | 4358  | 3021  |
| 70° | 23850 | 3106  | 1881  |
| 75° | 19731 | 2184  | 1356  |
| 80° | 15546 | 1235  | 842   |
| 85° | 13866 | 783   | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 53.4   | 5.4       |
| 10°-20°   | 153.1  | 15.5      |
| 20°-30°   | 226.9  | 22.9      |
| 30°-40°   | 227.2  | 23.0      |
| 40°-50°   | 158.8  | 16.0      |
| 50°-60°   | 94.5   | 9.5       |
| 60°-70°   | 49.3   | 5.0       |
| 70°-80°   | 21.9   | 2.2       |
| 80°-90°   | 4.8    | 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°    | 433.4  | 43.8      |
| 0°-40°    | 660.6  | 66.7      |
| 0°-60°    | 914.0  | 92.3      |
| 0°-90°    | 990.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 990.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 565 | 565 | 565 | 565  | 565  |      |
| 5°  | 531 | 550 | 558 | 583  | 585  | 50   |
| 15° | 477 | 501 | 543 | 590  | 598  | 135  |
| 25° | 445 | 466 | 496 | 531  | 534  | 205  |
| 35° | 376 | 380 | 357 | 364  | 361  | 233  |
| 45° | 264 | 251 | 178 | 172  | 167  | 205  |
| 55° | 186 | 175 | 68  | 60   | 58   | 165  |
| 65° | 114 | 104 | 19  | 14   | 13   | 112  |
| 75° | 52  | 46  | 6   | 4    | 4    | 57   |
| 85° | 12  | 10  | 1   | 1    | 0    | 14   |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



TEST NUMBER: P251607

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSW1H

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 |
| 2.5°  | 546.6 | 553.1 | 546.6 | 548.8 | 557.5 | 549.5 | 553.9 | 553.9 | 551.7 | 556.8 | 560.4 |
| 5°    | 531.3 | 537.9 | 531.3 | 534.2 | 543.7 | 535.7 | 540.8 | 539.3 | 540.0 | 544.4 | 549.5 |
| 7.5°  | 516.0 | 521.1 | 515.3 | 518.9 | 527.7 | 521.1 | 525.5 | 525.5 | 526.2 | 532.8 | 537.1 |
| 10°   | 500.7 | 505.1 | 500.7 | 503.6 | 513.1 | 507.3 | 510.2 | 510.9 | 513.1 | 518.9 | 525.5 |
| 12.5° | 486.9 | 490.5 | 486.2 | 490.5 | 498.6 | 492.7 | 496.4 | 497.1 | 499.3 | 505.8 | 513.1 |
| 15°   | 476.7 | 480.4 | 476.0 | 479.6 | 486.9 | 482.5 | 485.5 | 486.9 | 488.4 | 494.2 | 500.7 |
| 17.5° | 468.7 | 471.6 | 468.0 | 472.4 | 478.2 | 473.1 | 477.4 | 477.4 | 479.6 | 485.5 | 492.7 |
| 20°   | 460.0 | 462.9 | 460.0 | 463.6 | 470.2 | 465.8 | 469.4 | 469.4 | 471.6 | 478.2 | 484.7 |
| 22.5° | 452.0 | 453.4 | 452.0 | 454.9 | 461.4 | 457.8 | 460.0 | 460.7 | 462.9 | 468.7 | 474.5 |
| 25°   | 445.4 | 448.3 | 446.9 | 449.8 | 454.2 | 450.5 | 452.7 | 453.4 | 455.6 | 460.7 | 465.8 |
| 27.5° | 438.1 | 439.6 | 438.1 | 441.8 | 445.4 | 442.5 | 444.7 | 444.0 | 445.4 | 449.8 | 454.2 |
| 30°   | 423.6 | 425.0 | 425.0 | 427.2 | 430.1 | 428.7 | 430.9 | 428.7 | 430.1 | 433.8 | 438.1 |
| 32.5° | 402.5 | 403.2 | 403.9 | 406.1 | 408.3 | 406.1 | 407.6 | 407.6 | 407.6 | 410.5 | 413.4 |
| 35°   | 375.6 | 377.0 | 376.3 | 377.7 | 379.9 | 379.2 | 379.2 | 378.5 | 377.0 | 378.5 | 379.9 |
| 37.5° | 345.0 | 342.8 | 342.8 | 345.0 | 346.4 | 343.5 | 345.0 | 343.5 | 343.5 | 344.3 | 344.3 |
| 40°   | 313.0 | 310.8 | 313.0 | 313.7 | 314.4 | 313.0 | 312.2 | 310.8 | 308.6 | 309.3 | 307.9 |
| 42.5° | 286.0 | 284.6 | 285.3 | 285.3 | 286.0 | 284.6 | 285.3 | 282.4 | 280.2 | 278.8 | 276.6 |
| 45°   | 264.2 | 262.0 | 264.2 | 262.7 | 262.7 | 262.0 | 261.3 | 259.8 | 256.9 | 254.7 | 251.1 |
| 47.5° | 243.8 | 243.8 | 244.5 | 244.5 | 244.5 | 243.1 | 243.1 | 240.2 | 237.3 | 234.4 | 229.3 |
| 50°   | 227.1 | 225.6 | 228.5 | 228.5 | 226.3 | 225.6 | 226.3 | 222.7 | 220.5 | 216.9 | 211.8 |
| 52.5° | 208.9 | 208.9 | 209.6 | 209.6 | 208.9 | 207.4 | 208.2 | 205.2 | 203.1 | 199.4 | 194.3 |
| 55°   | 186.3 | 184.9 | 187.0 | 187.0 | 186.3 | 185.6 | 186.3 | 184.1 | 182.0 | 179.0 | 174.7 |
| 57.5° | 160.8 | 160.1 | 161.6 | 162.3 | 160.8 | 160.8 | 161.6 | 159.4 | 158.7 | 155.8 | 151.4 |
| 60°   | 141.9 | 141.2 | 142.7 | 143.4 | 141.9 | 141.9 | 141.9 | 139.0 | 137.6 | 134.6 | 131.7 |
| 62.5° | 128.8 | 128.1 | 129.6 | 128.8 | 128.1 | 127.4 | 128.1 | 125.2 | 123.7 | 120.8 | 117.9 |
| 65°   | 113.5 | 114.3 | 115.0 | 115.0 | 114.3 | 113.5 | 113.5 | 112.1 | 110.6 | 107.7 | 104.1 |
| 67.5° | 99.0  | 99.0  | 99.7  | 100.4 | 99.7  | 99.7  | 99.7  | 97.5  | 96.1  | 93.9  | 89.5  |
| 70°   | 83.7  | 83.0  | 85.2  | 85.2  | 83.7  | 84.4  | 83.7  | 83.0  | 81.5  | 78.6  | 75.0  |
| 72.5° | 67.7  | 67.7  | 68.4  | 68.4  | 67.7  | 67.7  | 67.7  | 67.0  | 64.8  | 63.3  | 59.7  |
| 75°   | 52.4  | 52.4  | 53.1  | 53.9  | 52.4  | 52.4  | 53.1  | 51.7  | 50.2  | 48.0  | 45.9  |
| 77.5° | 39.3  | 38.6  | 39.3  | 39.3  | 38.6  | 38.6  | 38.6  | 37.8  | 37.1  | 34.9  | 32.8  |
| 80°   | 27.7  | 26.9  | 27.7  | 27.7  | 27.7  | 26.9  | 26.9  | 26.2  | 26.2  | 24.7  | 22.6  |
| 82.5° | 18.9  | 18.2  | 18.9  | 18.9  | 18.9  | 18.2  | 18.2  | 18.2  | 17.5  | 16.7  | 15.3  |
| 85°   | 12.4  | 11.6  | 11.6  | 12.4  | 11.6  | 11.6  | 11.6  | 11.6  | 10.9  | 10.2  | 9.5   |
| 87.5° | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   | 5.1   | 5.1   | 5.1   | 4.4   |
| 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: P251607

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 |
| 2.5°  | 557.5 | 556.0 | 560.4 | 559.0 | 559.7 | 556.0 | 561.9 | 559.0 | 562.6 | 559.0 | 566.2 |
| 5°    | 548.0 | 546.6 | 553.1 | 552.4 | 553.1 | 550.2 | 556.8 | 556.0 | 560.4 | 557.5 | 565.5 |
| 7.5°  | 537.9 | 536.4 | 543.7 | 544.4 | 545.9 | 542.9 | 551.7 | 551.7 | 556.0 | 555.3 | 564.1 |
| 10°   | 526.2 | 526.9 | 534.2 | 535.7 | 538.6 | 537.1 | 545.1 | 547.3 | 553.1 | 552.4 | 563.3 |
| 12.5° | 515.3 | 515.3 | 524.8 | 527.7 | 529.8 | 529.1 | 538.6 | 541.5 | 548.0 | 549.5 | 559.7 |
| 15°   | 504.4 | 505.1 | 513.8 | 518.2 | 521.1 | 520.4 | 530.6 | 534.2 | 542.2 | 542.9 | 555.3 |
| 17.5° | 495.6 | 494.9 | 504.4 | 508.0 | 512.4 | 511.7 | 522.6 | 526.9 | 534.9 | 537.1 | 548.8 |
| 20°   | 488.4 | 487.6 | 496.4 | 500.7 | 503.6 | 502.9 | 513.8 | 518.9 | 526.2 | 527.7 | 539.3 |
| 22.5° | 479.6 | 478.2 | 486.9 | 490.5 | 493.5 | 492.7 | 502.2 | 505.8 | 513.1 | 514.6 | 525.5 |
| 25°   | 469.4 | 468.0 | 476.0 | 478.2 | 480.4 | 478.9 | 486.9 | 489.1 | 494.9 | 496.4 | 507.3 |
| 27.5° | 457.8 | 454.2 | 460.7 | 460.7 | 462.2 | 460.0 | 465.8 | 468.0 | 473.1 | 473.1 | 483.3 |
| 30°   | 439.6 | 434.5 | 438.1 | 437.4 | 438.1 | 435.2 | 438.9 | 439.6 | 443.2 | 442.5 | 449.8 |
| 32.5° | 414.1 | 406.8 | 409.0 | 406.8 | 404.7 | 400.3 | 404.7 | 403.2 | 406.1 | 403.2 | 409.8 |
| 35°   | 379.2 | 371.9 | 371.2 | 368.3 | 366.1 | 362.5 | 362.5 | 358.8 | 359.5 | 357.4 | 361.7 |
| 37.5° | 341.3 | 331.9 | 330.4 | 324.6 | 321.0 | 316.6 | 316.6 | 313.7 | 310.0 | 308.6 | 312.2 |
| 40°   | 304.2 | 294.0 | 290.4 | 280.9 | 277.3 | 272.9 | 270.0 | 266.4 | 264.9 | 259.1 | 262.0 |
| 42.5° | 272.2 | 261.3 | 253.3 | 243.1 | 239.5 | 232.9 | 228.5 | 224.2 | 222.0 | 215.4 | 218.3 |
| 45°   | 245.3 | 232.2 | 223.4 | 210.3 | 205.2 | 198.0 | 191.4 | 186.3 | 181.2 | 178.3 | 176.9 |
| 47.5° | 222.7 | 208.9 | 197.2 | 182.7 | 174.7 | 168.1 | 159.4 | 154.3 | 147.7 | 144.1 | 141.9 |
| 50°   | 203.8 | 188.5 | 175.4 | 158.7 | 150.7 | 143.4 | 133.2 | 125.2 | 119.4 | 113.5 | 112.1 |
| 52.5° | 187.0 | 171.0 | 156.5 | 137.6 | 128.1 | 119.4 | 108.4 | 99.7  | 94.6  | 88.1  | 87.3  |
| 55°   | 167.4 | 153.6 | 137.6 | 117.9 | 108.4 | 99.7  | 88.1  | 79.3  | 72.8  | 68.4  | 67.0  |
| 57.5° | 146.3 | 133.2 | 117.9 | 98.3  | 88.8  | 79.3  | 68.4  | 60.4  | 54.6  | 50.9  | 50.2  |
| 60°   | 126.6 | 114.3 | 99.7  | 80.1  | 70.6  | 62.6  | 50.9  | 42.9  | 37.8  | 34.9  | 33.5  |
| 62.5° | 112.1 | 100.4 | 86.6  | 68.4  | 59.7  | 51.7  | 40.8  | 33.5  | 29.1  | 26.2  | 24.7  |
| 65°   | 98.3  | 86.6  | 74.2  | 57.5  | 50.2  | 42.9  | 32.8  | 26.2  | 21.8  | 18.9  | 17.5  |
| 67.5° | 83.7  | 73.5  | 61.9  | 48.0  | 40.8  | 34.9  | 26.2  | 20.4  | 16.7  | 14.6  | 13.1  |
| 70°   | 69.1  | 59.7  | 50.2  | 38.6  | 33.5  | 27.7  | 20.4  | 16.0  | 12.4  | 10.9  | 9.5   |
| 72.5° | 54.6  | 47.3  | 39.3  | 29.8  | 25.5  | 21.8  | 16.0  | 11.6  | 9.5   | 8.0   | 6.6   |
| 75°   | 40.8  | 35.7  | 29.1  | 22.6  | 18.9  | 16.0  | 11.6  | 8.7   | 7.3   | 5.8   | 5.1   |
| 77.5° | 29.1  | 24.7  | 20.4  | 15.3  | 13.8  | 11.6  | 8.0   | 6.6   | 5.1   | 3.6   | 2.9   |
| 80°   | 19.7  | 17.5  | 13.8  | 10.9  | 8.7   | 8.0   | 5.8   | 4.4   | 2.9   | 2.2   | 2.2   |
| 82.5° | 13.1  | 10.9  | 8.7   | 6.6   | 5.8   | 5.1   | 3.6   | 2.9   | 2.2   | 1.5   | 1.5   |
| 85°   | 8.0   | 6.6   | 5.1   | 3.6   | 3.6   | 2.9   | 2.2   | 1.5   | 0.7   | 0.7   | 0.7   |
| 87.5° | 3.6   | 2.9   | 2.2   | 1.5   | 1.5   | 0.7   | 0.7   | 0.7   | 0.0   | 0.0   | 0.0   |
| 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: P251607

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 564.8 | 564.8 | 564.8 | 564.8  | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 |
| 2.5°  | 572.1 | 567.7 | 564.8 | 568.4  | 569.9 | 567.7 | 569.9 | 573.5 | 577.2 | 577.9 | 567.7 |
| 5°    | 572.8 | 568.4 | 567.0 | 571.3  | 572.1 | 571.3 | 573.5 | 578.6 | 583.0 | 584.4 | 574.2 |
| 7.5°  | 572.8 | 569.9 | 569.1 | 574.2  | 575.0 | 574.2 | 577.9 | 583.7 | 588.1 | 591.0 | 580.8 |
| 10°   | 571.3 | 569.9 | 570.6 | 575.0  | 576.4 | 576.4 | 581.5 | 588.1 | 592.4 | 595.4 | 585.2 |
| 12.5° | 569.1 | 569.1 | 569.1 | 574.2  | 575.7 | 576.4 | 580.8 | 589.5 | 592.4 | 596.8 | 586.6 |
| 15°   | 565.5 | 565.5 | 565.5 | 570.6  | 572.8 | 572.8 | 577.9 | 585.9 | 589.5 | 593.9 | 583.7 |
| 17.5° | 559.0 | 559.0 | 559.7 | 564.1  | 566.2 | 566.2 | 571.3 | 580.1 | 582.2 | 587.3 | 577.2 |
| 20°   | 549.5 | 549.5 | 550.2 | 554.6  | 556.8 | 555.3 | 561.9 | 569.1 | 571.3 | 575.7 | 565.5 |
| 22.5° | 535.7 | 535.7 | 535.7 | 540.0  | 541.5 | 540.8 | 547.3 | 553.9 | 553.9 | 559.7 | 548.8 |
| 25°   | 515.3 | 516.7 | 515.3 | 519.7  | 521.1 | 520.4 | 526.2 | 532.0 | 530.6 | 537.1 | 526.2 |
| 27.5° | 490.5 | 489.8 | 489.8 | 493.5  | 493.5 | 492.7 | 497.1 | 503.6 | 502.2 | 506.6 | 496.4 |
| 30°   | 456.3 | 458.5 | 454.9 | 460.0  | 457.8 | 456.3 | 459.2 | 465.1 | 462.9 | 466.5 | 458.5 |
| 32.5° | 417.0 | 414.1 | 414.1 | 414.1  | 415.6 | 411.9 | 414.9 | 417.8 | 415.6 | 419.2 | 410.5 |
| 35°   | 365.4 | 366.1 | 363.9 | 364.6  | 365.4 | 361.0 | 363.9 | 366.8 | 363.9 | 366.1 | 358.1 |
| 37.5° | 313.7 | 314.4 | 309.3 | 312.2  | 309.3 | 307.9 | 310.8 | 312.2 | 309.3 | 311.5 | 302.8 |
| 40°   | 262.0 | 260.6 | 259.8 | 259.8  | 260.6 | 256.9 | 259.1 | 261.3 | 259.1 | 260.6 | 252.6 |
| 42.5° | 216.9 | 216.2 | 214.7 | 215.4  | 213.2 | 212.5 | 213.2 | 215.4 | 213.2 | 214.7 | 208.9 |
| 45°   | 177.6 | 176.1 | 173.9 | 174.7  | 174.7 | 171.0 | 173.2 | 174.7 | 172.5 | 173.2 | 168.1 |
| 47.5° | 141.2 | 139.0 | 139.0 | 138.3  | 138.3 | 136.8 | 139.0 | 138.3 | 136.1 | 137.6 | 132.5 |
| 50°   | 109.9 | 108.4 | 108.4 | 108.4  | 108.4 | 106.3 | 107.0 | 108.4 | 106.3 | 106.3 | 103.3 |
| 52.5° | 85.9  | 83.7  | 82.2  | 82.2   | 82.2  | 81.5  | 81.5  | 82.2  | 80.1  | 80.1  | 79.3  |
| 55°   | 64.8  | 64.0  | 61.9  | 61.9   | 61.9  | 59.7  | 60.4  | 60.4  | 59.7  | 59.7  | 57.5  |
| 57.5° | 48.0  | 45.9  | 44.4  | 44.4   | 42.9  | 42.9  | 42.2  | 42.9  | 41.5  | 41.5  | 40.0  |
| 60°   | 32.0  | 30.6  | 29.8  | 29.1   | 29.1  | 28.4  | 29.1  | 28.4  | 28.4  | 27.7  | 26.9  |
| 62.5° | 23.3  | 21.8  | 20.4  | 20.4   | 20.4  | 19.7  | 19.7  | 19.7  | 19.7  | 19.7  | 18.9  |
| 65°   | 16.7  | 15.3  | 15.3  | 14.6   | 14.6  | 13.8  | 13.8  | 13.8  | 13.8  | 13.8  | 13.1  |
| 67.5° | 11.6  | 10.9  | 10.2  | 10.2   | 10.2  | 10.2  | 10.2  | 10.2  | 9.5   | 9.5   | 9.5   |
| 70°   | 8.7   | 8.0   | 7.3   | 7.3    | 7.3   | 7.3   | 7.3   | 6.6   | 7.3   | 7.3   | 6.6   |
| 72.5° | 5.8   | 5.8   | 5.1   | 5.1    | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   |
| 75°   | 4.4   | 4.4   | 3.6   | 3.6    | 3.6   | 3.6   | 3.6   | 3.6   | 3.6   | 3.6   | 3.6   |
| 77.5° | 2.9   | 2.9   | 2.2   | 2.2    | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |
| 80°   | 2.2   | 1.5   | 1.5   | 1.5    | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| 82.5° | 1.5   | 0.7   | 0.7   | 0.7    | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   |
| 85°   | 0.7   | 0.7   | 0.7   | 0.7    | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.0   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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: P251607

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 564.8 | 564.8 | 564.8  | 564.8 | 564.8 | 564.8 | 564.8 | 564.8 |
| 2.5°  | 578.6 | 577.9 | 576.4  | 578.6 | 572.8 | 570.6 | 569.9 | 576.4 |
| 5°    | 586.6 | 585.2 | 585.2  | 587.3 | 580.8 | 579.3 | 577.9 | 585.2 |
| 7.5°  | 593.9 | 592.4 | 592.4  | 594.6 | 588.8 | 587.3 | 585.9 | 593.2 |
| 10°   | 598.3 | 598.3 | 598.3  | 599.7 | 594.6 | 593.2 | 592.4 | 599.7 |
| 12.5° | 600.4 | 600.4 | 599.7  | 602.6 | 596.1 | 596.1 | 594.6 | 601.9 |
| 15°   | 597.5 | 597.5 | 597.5  | 599.7 | 593.9 | 592.4 | 592.4 | 598.3 |
| 17.5° | 590.3 | 590.3 | 589.5  | 591.7 | 585.2 | 585.2 | 584.4 | 591.0 |
| 20°   | 579.3 | 579.3 | 577.9  | 580.8 | 574.2 | 572.1 | 571.3 | 577.9 |
| 22.5° | 561.9 | 561.1 | 560.4  | 561.9 | 556.0 | 554.6 | 553.9 | 559.7 |
| 25°   | 539.3 | 538.6 | 537.1  | 538.6 | 532.0 | 529.8 | 529.8 | 534.2 |
| 27.5° | 507.3 | 507.3 | 505.1  | 507.3 | 500.0 | 499.3 | 498.6 | 503.6 |
| 30°   | 468.0 | 465.1 | 463.6  | 466.5 | 459.2 | 459.2 | 457.8 | 462.9 |
| 32.5° | 419.2 | 416.3 | 415.6  | 417.0 | 410.5 | 408.3 | 411.2 | 414.1 |
| 35°   | 363.2 | 363.9 | 361.0  | 361.0 | 355.2 | 355.9 | 356.6 | 361.0 |
| 37.5° | 309.3 | 307.9 | 307.1  | 307.9 | 303.5 | 302.0 | 300.6 | 305.0 |
| 40°   | 259.1 | 255.5 | 254.7  | 254.7 | 251.1 | 250.4 | 251.1 | 253.3 |
| 42.5° | 211.8 | 211.1 | 208.2  | 209.6 | 206.0 | 207.4 | 206.7 | 206.7 |
| 45°   | 171.0 | 171.8 | 168.9  | 171.0 | 168.1 | 165.9 | 165.9 | 167.4 |
| 47.5° | 135.4 | 135.4 | 134.6  | 134.6 | 132.5 | 133.2 | 131.7 | 133.9 |
| 50°   | 104.8 | 104.8 | 103.3  | 104.1 | 102.6 | 102.6 | 101.9 | 102.6 |
| 52.5° | 80.1  | 79.3  | 79.3   | 78.6  | 77.1  | 77.9  | 78.6  | 77.1  |
| 55°   | 58.2  | 59.0  | 57.5   | 58.2  | 56.8  | 57.5  | 56.8  | 57.5  |
| 57.5° | 40.0  | 40.8  | 39.3   | 40.8  | 39.3  | 40.0  | 39.3  | 39.3  |
| 60°   | 27.7  | 27.7  | 26.9   | 27.7  | 26.9  | 26.9  | 26.2  | 27.7  |
| 62.5° | 18.9  | 18.9  | 18.9   | 18.9  | 18.9  | 18.2  | 18.9  | 18.9  |
| 65°   | 13.8  | 13.1  | 13.1   | 13.1  | 13.1  | 13.1  | 13.1  | 13.1  |
| 67.5° | 9.5   | 9.5   | 9.5    | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   |
| 70°   | 6.6   | 6.6   | 6.6    | 6.6   | 6.6   | 6.6   | 6.6   | 6.6   |
| 72.5° | 5.1   | 5.1   | 5.1    | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   |
| 75°   | 3.6   | 3.6   | 3.6    | 3.6   | 3.6   | 3.6   | 3.6   | 3.6   |
| 77.5° | 2.2   | 2.2   | 2.2    | 2.2   | 2.2   | 2.2   | 2.2   | 2.2   |
| 80°   | 1.5   | 1.5   | 1.5    | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| 82.5° | 0.7   | 0.7   | 0.7    | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   |
| 85°   | 0.7   | 0.7   | 0.7    | 0.0   | 0.7   | 0.0   | 0.0   | 0.0   |
| 87.5° | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 90°   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |



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— 0°-180°    - - 45°-225°    - - - 90°-270°















(END OF REPORT)