

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: P251606

Luminaire Tested: **LD4B15D010 EU4B10209727 4LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251606  
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 EU4B10209727 4LBSW1H  
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 947.0 lumens  
Efficiency: N/A  
Efficacy: 65.8 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

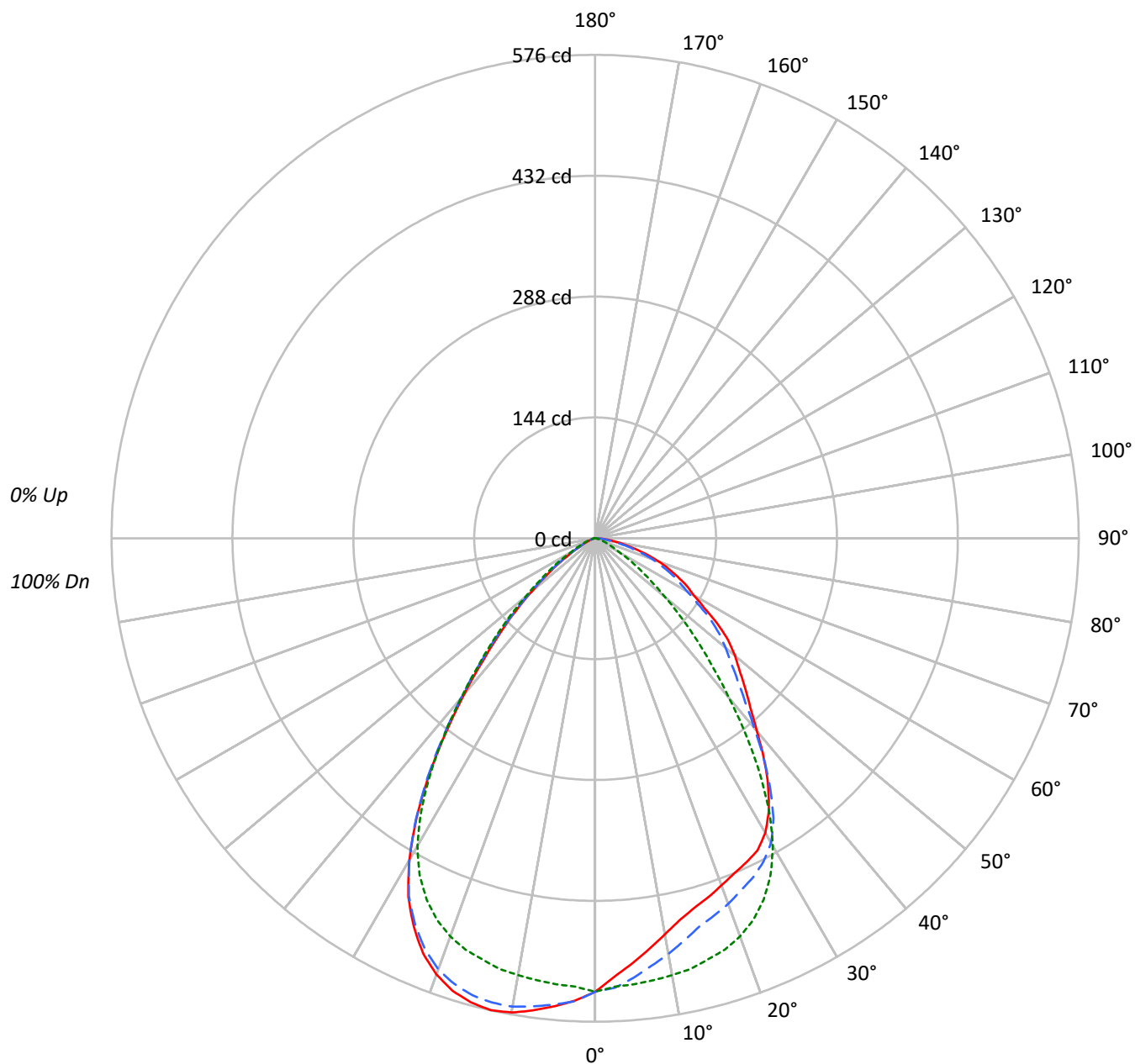
Input Watts (W): 14.39  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 52657 | 52657 | 52657 |
| 5°  | 49717 | 52173 | 54756 |
| 10° | 47403 | 52291 | 56774 |
| 15° | 46009 | 52405 | 57743 |
| 20° | 45634 | 52344 | 57332 |
| 25° | 45820 | 51057 | 54949 |
| 30° | 45599 | 47636 | 49830 |
| 35° | 42736 | 40665 | 41082 |
| 40° | 38090 | 31526 | 30826 |
| 45° | 34829 | 23513 | 22066 |
| 50° | 32931 | 16466 | 14889 |
| 55° | 30278 | 11112 | 9345  |
| 60° | 26470 | 6510  | 5165  |
| 65° | 25044 | 4174  | 2883  |
| 70° | 22824 | 2963  | 1795  |
| 75° | 18865 | 2109  | 1318  |
| 80° | 14873 | 1179  | 786   |
| 85° | 13195 | 783   | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 51.0   | 5.4       |
| 10°-20°   | 146.4  | 15.5      |
| 20°-30°   | 217.1  | 22.9      |
| 30°-40°   | 217.4  | 23.0      |
| 40°-50°   | 151.9  | 16.0      |
| 50°-60°   | 90.4   | 9.5       |
| 60°-70°   | 47.2   | 5.0       |
| 70°-80°   | 21.0   | 2.2       |
| 80°-90°   | 4.6    | 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°    | 414.6  | 43.8      |
| 0°-40°    | 631.9  | 66.7      |
| 0°-60°    | 874.3  | 92.3      |
| 0°-90°    | 947.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 947.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 540 | 540 | 540 | 540  | 540  |      |
| 5°  | 508 | 526 | 533 | 558  | 560  | 48   |
| 15° | 456 | 479 | 519 | 564  | 572  | 129  |
| 25° | 426 | 446 | 475 | 508  | 511  | 196  |
| 35° | 359 | 363 | 342 | 348  | 345  | 223  |
| 45° | 253 | 240 | 171 | 165  | 160  | 196  |
| 55° | 178 | 167 | 65  | 57   | 55   | 158  |
| 65° | 109 | 100 | 18  | 13   | 12   | 107  |
| 75° | 50  | 44  | 6   | 4    | 4    | 54   |
| 85° | 12  | 9   | 1   | 1    | 0    | 13   |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 |
| 2.5°  | 522.8 | 529.1 | 522.8 | 524.9 | 533.3 | 525.6 | 529.8 | 529.8 | 527.7 | 532.6 | 536.1 |
| 5°    | 508.2 | 514.5 | 508.2 | 511.0 | 520.1 | 512.4 | 517.3 | 515.9 | 516.6 | 520.8 | 525.6 |
| 7.5°  | 493.6 | 498.5 | 492.9 | 496.4 | 504.7 | 498.5 | 502.7 | 502.7 | 503.4 | 509.6 | 513.8 |
| 10°   | 479.0 | 483.2 | 479.0 | 481.8 | 490.8 | 485.3 | 488.0 | 488.7 | 490.8 | 496.4 | 502.7 |
| 12.5° | 465.8 | 469.2 | 465.1 | 469.2 | 476.9 | 471.3 | 474.8 | 475.5 | 477.6 | 483.9 | 490.8 |
| 15°   | 456.0 | 459.5 | 455.3 | 458.8 | 465.8 | 461.6 | 464.4 | 465.8 | 467.2 | 472.7 | 479.0 |
| 17.5° | 448.4 | 451.1 | 447.7 | 451.8 | 457.4 | 452.5 | 456.7 | 456.7 | 458.8 | 464.4 | 471.3 |
| 20°   | 440.0 | 442.8 | 440.0 | 443.5 | 449.7 | 445.6 | 449.0 | 449.0 | 451.1 | 457.4 | 463.7 |
| 22.5° | 432.3 | 433.7 | 432.3 | 435.1 | 441.4 | 437.9 | 440.0 | 440.7 | 442.8 | 448.4 | 453.9 |
| 25°   | 426.1 | 428.9 | 427.5 | 430.3 | 434.4 | 430.9 | 433.0 | 433.7 | 435.8 | 440.7 | 445.6 |
| 27.5° | 419.1 | 420.5 | 419.1 | 422.6 | 426.1 | 423.3 | 425.4 | 424.7 | 426.1 | 430.3 | 434.4 |
| 30°   | 405.2 | 406.6 | 406.6 | 408.7 | 411.5 | 410.1 | 412.2 | 410.1 | 411.5 | 414.9 | 419.1 |
| 32.5° | 385.0 | 385.7 | 386.4 | 388.5 | 390.6 | 388.5 | 389.9 | 389.9 | 389.9 | 392.7 | 395.4 |
| 35°   | 359.2 | 360.6 | 359.9 | 361.3 | 363.4 | 362.7 | 362.7 | 362.0 | 360.6 | 362.0 | 363.4 |
| 37.5° | 330.0 | 327.9 | 327.9 | 330.0 | 331.4 | 328.6 | 330.0 | 328.6 | 328.6 | 329.3 | 329.3 |
| 40°   | 299.4 | 297.3 | 299.4 | 300.1 | 300.8 | 299.4 | 298.7 | 297.3 | 295.2 | 295.9 | 294.5 |
| 42.5° | 273.6 | 272.2 | 272.9 | 272.9 | 273.6 | 272.2 | 272.9 | 270.1 | 268.0 | 266.6 | 264.6 |
| 45°   | 252.7 | 250.6 | 252.7 | 251.3 | 251.3 | 250.6 | 249.9 | 248.5 | 245.8 | 243.7 | 240.2 |
| 47.5° | 233.2 | 233.2 | 233.9 | 233.9 | 233.9 | 232.5 | 232.5 | 229.7 | 227.0 | 224.2 | 219.3 |
| 50°   | 217.2 | 215.8 | 218.6 | 218.6 | 216.5 | 215.8 | 216.5 | 213.0 | 210.9 | 207.5 | 202.6 |
| 52.5° | 199.8 | 199.8 | 200.5 | 200.5 | 199.8 | 198.4 | 199.1 | 196.3 | 194.2 | 190.8 | 185.9 |
| 55°   | 178.2 | 176.8 | 178.9 | 178.9 | 178.2 | 177.5 | 178.2 | 176.1 | 174.1 | 171.3 | 167.1 |
| 57.5° | 153.9 | 153.2 | 154.6 | 155.3 | 153.9 | 153.9 | 154.6 | 152.5 | 151.8 | 149.0 | 144.8 |
| 60°   | 135.8 | 135.1 | 136.5 | 137.2 | 135.8 | 135.8 | 135.8 | 133.0 | 131.6 | 128.8 | 126.0 |
| 62.5° | 123.2 | 122.5 | 123.9 | 123.2 | 122.5 | 121.8 | 122.5 | 119.7 | 118.4 | 115.6 | 112.8 |
| 65°   | 108.6 | 109.3 | 110.0 | 110.0 | 109.3 | 108.6 | 108.6 | 107.2 | 105.8 | 103.0 | 99.6  |
| 67.5° | 94.7  | 94.7  | 95.4  | 96.1  | 95.4  | 95.4  | 95.4  | 93.3  | 91.9  | 89.8  | 85.6  |
| 70°   | 80.1  | 79.4  | 81.5  | 81.5  | 80.1  | 80.8  | 80.1  | 79.4  | 78.0  | 75.2  | 71.7  |
| 72.5° | 64.7  | 64.7  | 65.4  | 65.4  | 64.7  | 64.7  | 64.7  | 64.1  | 62.0  | 60.6  | 57.1  |
| 75°   | 50.1  | 50.1  | 50.8  | 51.5  | 50.1  | 50.1  | 50.8  | 49.4  | 48.0  | 45.9  | 43.9  |
| 77.5° | 37.6  | 36.9  | 37.6  | 37.6  | 36.9  | 36.9  | 36.9  | 36.2  | 35.5  | 33.4  | 31.3  |
| 80°   | 26.5  | 25.8  | 26.5  | 26.5  | 26.5  | 25.8  | 25.8  | 25.1  | 25.1  | 23.7  | 21.6  |
| 82.5° | 18.1  | 17.4  | 18.1  | 18.1  | 18.1  | 17.4  | 17.4  | 17.4  | 16.7  | 16.0  | 14.6  |
| 85°   | 11.8  | 11.1  | 11.1  | 11.8  | 11.1  | 11.1  | 11.1  | 11.1  | 10.4  | 9.7   | 9.1   |
| 87.5° | 5.6   | 5.6   | 5.6   | 5.6   | 5.6   | 5.6   | 5.6   | 4.9   | 4.9   | 4.9   | 4.2   |
| 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):**

|       | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 |
| 2.5°  | 533.3 | 531.9 | 536.1 | 534.7 | 535.4 | 531.9 | 537.5 | 534.7 | 538.2 | 534.7 | 541.6 |
| 5°    | 524.2 | 522.8 | 529.1 | 528.4 | 529.1 | 526.3 | 532.6 | 531.9 | 536.1 | 533.3 | 540.9 |
| 7.5°  | 514.5 | 513.1 | 520.1 | 520.8 | 522.2 | 519.4 | 527.7 | 527.7 | 531.9 | 531.2 | 539.6 |
| 10°   | 503.4 | 504.0 | 511.0 | 512.4 | 515.2 | 513.8 | 521.5 | 523.5 | 529.1 | 528.4 | 538.9 |
| 12.5° | 492.9 | 492.9 | 502.0 | 504.7 | 506.8 | 506.1 | 515.2 | 518.0 | 524.2 | 525.6 | 535.4 |
| 15°   | 482.5 | 483.2 | 491.5 | 495.7 | 498.5 | 497.8 | 507.5 | 511.0 | 518.7 | 519.4 | 531.2 |
| 17.5° | 474.1 | 473.4 | 482.5 | 485.9 | 490.1 | 489.4 | 499.9 | 504.0 | 511.7 | 513.8 | 524.9 |
| 20°   | 467.2 | 466.5 | 474.8 | 479.0 | 481.8 | 481.1 | 491.5 | 496.4 | 503.4 | 504.7 | 515.9 |
| 22.5° | 458.8 | 457.4 | 465.8 | 469.2 | 472.0 | 471.3 | 480.4 | 483.9 | 490.8 | 492.2 | 502.7 |
| 25°   | 449.0 | 447.7 | 455.3 | 457.4 | 459.5 | 458.1 | 465.8 | 467.8 | 473.4 | 474.8 | 485.3 |
| 27.5° | 437.9 | 434.4 | 440.7 | 440.7 | 442.1 | 440.0 | 445.6 | 447.7 | 452.5 | 452.5 | 462.3 |
| 30°   | 420.5 | 415.6 | 419.1 | 418.4 | 419.1 | 416.3 | 419.8 | 420.5 | 424.0 | 423.3 | 430.3 |
| 32.5° | 396.1 | 389.2 | 391.3 | 389.2 | 387.1 | 382.9 | 387.1 | 385.7 | 388.5 | 385.7 | 392.0 |
| 35°   | 362.7 | 355.8 | 355.1 | 352.3 | 350.2 | 346.7 | 346.7 | 343.2 | 343.9 | 341.8 | 346.0 |
| 37.5° | 326.5 | 317.5 | 316.1 | 310.5 | 307.0 | 302.8 | 302.8 | 300.1 | 296.6 | 295.2 | 298.7 |
| 40°   | 291.0 | 281.3 | 277.8 | 268.7 | 265.3 | 261.1 | 258.3 | 254.8 | 253.4 | 247.8 | 250.6 |
| 42.5° | 260.4 | 249.9 | 242.3 | 232.5 | 229.0 | 222.8 | 218.6 | 214.4 | 212.3 | 206.1 | 208.9 |
| 45°   | 234.6 | 222.1 | 213.7 | 201.2 | 196.3 | 189.4 | 183.1 | 178.2 | 173.4 | 170.6 | 169.2 |
| 47.5° | 213.0 | 199.8 | 188.7 | 174.7 | 167.1 | 160.8 | 152.5 | 147.6 | 141.3 | 137.8 | 135.8 |
| 50°   | 194.9 | 180.3 | 167.8 | 151.8 | 144.1 | 137.2 | 127.4 | 119.7 | 114.2 | 108.6 | 107.2 |
| 52.5° | 178.9 | 163.6 | 149.7 | 131.6 | 122.5 | 114.2 | 103.7 | 95.4  | 90.5  | 84.2  | 83.5  |
| 55°   | 160.1 | 146.9 | 131.6 | 112.8 | 103.7 | 95.4  | 84.2  | 75.9  | 69.6  | 65.4  | 64.1  |
| 57.5° | 139.9 | 127.4 | 112.8 | 94.0  | 84.9  | 75.9  | 65.4  | 57.8  | 52.2  | 48.7  | 48.0  |
| 60°   | 121.1 | 109.3 | 95.4  | 76.6  | 67.5  | 59.9  | 48.7  | 41.1  | 36.2  | 33.4  | 32.0  |
| 62.5° | 107.2 | 96.1  | 82.8  | 65.4  | 57.1  | 49.4  | 39.0  | 32.0  | 27.8  | 25.1  | 23.7  |
| 65°   | 94.0  | 82.8  | 71.0  | 55.0  | 48.0  | 41.1  | 31.3  | 25.1  | 20.9  | 18.1  | 16.7  |
| 67.5° | 80.1  | 70.3  | 59.2  | 45.9  | 39.0  | 33.4  | 25.1  | 19.5  | 16.0  | 13.9  | 12.5  |
| 70°   | 66.1  | 57.1  | 48.0  | 36.9  | 32.0  | 26.5  | 19.5  | 15.3  | 11.8  | 10.4  | 9.1   |
| 72.5° | 52.2  | 45.3  | 37.6  | 28.5  | 24.4  | 20.9  | 15.3  | 11.1  | 9.1   | 7.7   | 6.3   |
| 75°   | 39.0  | 34.1  | 27.8  | 21.6  | 18.1  | 15.3  | 11.1  | 8.4   | 7.0   | 5.6   | 4.9   |
| 77.5° | 27.8  | 23.7  | 19.5  | 14.6  | 13.2  | 11.1  | 7.7   | 6.3   | 4.9   | 3.5   | 2.8   |
| 80°   | 18.8  | 16.7  | 13.2  | 10.4  | 8.4   | 7.7   | 5.6   | 4.2   | 2.8   | 2.1   | 2.1   |
| 82.5° | 12.5  | 10.4  | 8.4   | 6.3   | 5.6   | 4.9   | 3.5   | 2.8   | 2.1   | 1.4   | 1.4   |
| 85°   | 7.7   | 6.3   | 4.9   | 3.5   | 3.5   | 2.8   | 2.1   | 1.4   | 0.7   | 0.7   | 0.7   |
| 87.5° | 3.5   | 2.8   | 2.1   | 1.4   | 1.4   | 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   |



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**CANDELA DISTRIBUTION (continued):**

|       | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 540.3 | 540.3 | 540.3 | 540.3  | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 |
| 2.5°  | 547.2 | 543.0 | 540.3 | 543.7  | 545.1 | 543.0 | 545.1 | 548.6 | 552.1 | 552.8 | 543.0 |
| 5°    | 547.9 | 543.7 | 542.3 | 546.5  | 547.2 | 546.5 | 548.6 | 553.5 | 557.7 | 559.0 | 549.3 |
| 7.5°  | 547.9 | 545.1 | 544.4 | 549.3  | 550.0 | 549.3 | 552.8 | 558.4 | 562.5 | 565.3 | 555.6 |
| 10°   | 546.5 | 545.1 | 545.8 | 550.0  | 551.4 | 551.4 | 556.3 | 562.5 | 566.7 | 569.5 | 559.7 |
| 12.5° | 544.4 | 544.4 | 544.4 | 549.3  | 550.7 | 551.4 | 555.6 | 563.9 | 566.7 | 570.9 | 561.1 |
| 15°   | 540.9 | 540.9 | 540.9 | 545.8  | 547.9 | 547.9 | 552.8 | 560.4 | 563.9 | 568.1 | 558.4 |
| 17.5° | 534.7 | 534.7 | 535.4 | 539.6  | 541.6 | 541.6 | 546.5 | 554.9 | 557.0 | 561.8 | 552.1 |
| 20°   | 525.6 | 525.6 | 526.3 | 530.5  | 532.6 | 531.2 | 537.5 | 544.4 | 546.5 | 550.7 | 540.9 |
| 22.5° | 512.4 | 512.4 | 512.4 | 516.6  | 518.0 | 517.3 | 523.5 | 529.8 | 529.8 | 535.4 | 524.9 |
| 25°   | 492.9 | 494.3 | 492.9 | 497.1  | 498.5 | 497.8 | 503.4 | 508.9 | 507.5 | 513.8 | 503.4 |
| 27.5° | 469.2 | 468.5 | 468.5 | 472.0  | 472.0 | 471.3 | 475.5 | 481.8 | 480.4 | 484.6 | 474.8 |
| 30°   | 436.5 | 438.6 | 435.1 | 440.0  | 437.9 | 436.5 | 439.3 | 444.9 | 442.8 | 446.3 | 438.6 |
| 32.5° | 398.9 | 396.1 | 396.1 | 396.1  | 397.5 | 394.0 | 396.8 | 399.6 | 397.5 | 401.0 | 392.7 |
| 35°   | 349.5 | 350.2 | 348.1 | 348.8  | 349.5 | 345.3 | 348.1 | 350.9 | 348.1 | 350.2 | 342.5 |
| 37.5° | 300.1 | 300.8 | 295.9 | 298.7  | 295.9 | 294.5 | 297.3 | 298.7 | 295.9 | 298.0 | 289.6 |
| 40°   | 250.6 | 249.2 | 248.5 | 248.5  | 249.2 | 245.8 | 247.8 | 249.9 | 247.8 | 249.2 | 241.6 |
| 42.5° | 207.5 | 206.8 | 205.4 | 206.1  | 204.0 | 203.3 | 204.0 | 206.1 | 204.0 | 205.4 | 199.8 |
| 45°   | 169.9 | 168.5 | 166.4 | 167.1  | 167.1 | 163.6 | 165.7 | 167.1 | 165.0 | 165.7 | 160.8 |
| 47.5° | 135.1 | 133.0 | 133.0 | 132.3  | 132.3 | 130.9 | 133.0 | 132.3 | 130.2 | 131.6 | 126.7 |
| 50°   | 105.1 | 103.7 | 103.7 | 103.7  | 103.7 | 101.6 | 102.3 | 103.7 | 101.6 | 101.6 | 98.9  |
| 52.5° | 82.2  | 80.1  | 78.7  | 78.7   | 78.7  | 78.0  | 78.0  | 78.7  | 76.6  | 76.6  | 75.9  |
| 55°   | 62.0  | 61.3  | 59.2  | 59.2   | 59.2  | 57.1  | 57.8  | 57.8  | 57.1  | 57.1  | 55.0  |
| 57.5° | 45.9  | 43.9  | 42.5  | 42.5   | 41.1  | 41.1  | 40.4  | 41.1  | 39.7  | 39.7  | 38.3  |
| 60°   | 30.6  | 29.2  | 28.5  | 27.8   | 27.8  | 27.2  | 27.8  | 27.2  | 27.2  | 26.5  | 25.8  |
| 62.5° | 22.3  | 20.9  | 19.5  | 19.5   | 19.5  | 18.8  | 18.8  | 18.8  | 18.8  | 18.8  | 18.1  |
| 65°   | 16.0  | 14.6  | 14.6  | 13.9   | 13.9  | 13.2  | 13.2  | 13.2  | 13.2  | 13.2  | 12.5  |
| 67.5° | 11.1  | 10.4  | 9.7   | 9.7    | 9.7   | 9.7   | 9.7   | 9.7   | 9.1   | 9.1   | 9.1   |
| 70°   | 8.4   | 7.7   | 7.0   | 7.0    | 7.0   | 7.0   | 7.0   | 6.3   | 7.0   | 7.0   | 6.3   |
| 72.5° | 5.6   | 5.6   | 4.9   | 4.9    | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   |
| 75°   | 4.2   | 4.2   | 3.5   | 3.5    | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| 77.5° | 2.8   | 2.8   | 2.1   | 2.1    | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   |
| 80°   | 2.1   | 1.4   | 1.4   | 1.4    | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   |
| 82.5° | 1.4   | 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: P251606

CATALOG NUMBER: LD4B15D010 EU4B10209727 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 540.3 | 540.3 | 540.3  | 540.3 | 540.3 | 540.3 | 540.3 | 540.3 |
| 2.5°  | 553.5 | 552.8 | 551.4  | 553.5 | 547.9 | 545.8 | 545.1 | 551.4 |
| 5°    | 561.1 | 559.7 | 559.7  | 561.8 | 555.6 | 554.2 | 552.8 | 559.7 |
| 7.5°  | 568.1 | 566.7 | 566.7  | 568.8 | 563.2 | 561.8 | 560.4 | 567.4 |
| 10°   | 572.3 | 572.3 | 572.3  | 573.7 | 568.8 | 567.4 | 566.7 | 573.7 |
| 12.5° | 574.4 | 574.4 | 573.7  | 576.5 | 570.2 | 570.2 | 568.8 | 575.8 |
| 15°   | 571.6 | 571.6 | 571.6  | 573.7 | 568.1 | 566.7 | 566.7 | 572.3 |
| 17.5° | 564.6 | 564.6 | 563.9  | 566.0 | 559.7 | 559.7 | 559.0 | 565.3 |
| 20°   | 554.2 | 554.2 | 552.8  | 555.6 | 549.3 | 547.2 | 546.5 | 552.8 |
| 22.5° | 537.5 | 536.8 | 536.1  | 537.5 | 531.9 | 530.5 | 529.8 | 535.4 |
| 25°   | 515.9 | 515.2 | 513.8  | 515.2 | 508.9 | 506.8 | 506.8 | 511.0 |
| 27.5° | 485.3 | 485.3 | 483.2  | 485.3 | 478.3 | 477.6 | 476.9 | 481.8 |
| 30°   | 447.7 | 444.9 | 443.5  | 446.3 | 439.3 | 439.3 | 437.9 | 442.8 |
| 32.5° | 401.0 | 398.2 | 397.5  | 398.9 | 392.7 | 390.6 | 393.4 | 396.1 |
| 35°   | 347.4 | 348.1 | 345.3  | 345.3 | 339.7 | 340.4 | 341.1 | 345.3 |
| 37.5° | 295.9 | 294.5 | 293.8  | 294.5 | 290.3 | 288.9 | 287.5 | 291.7 |
| 40°   | 247.8 | 244.4 | 243.7  | 243.7 | 240.2 | 239.5 | 240.2 | 242.3 |
| 42.5° | 202.6 | 201.9 | 199.1  | 200.5 | 197.0 | 198.4 | 197.7 | 197.7 |
| 45°   | 163.6 | 164.3 | 161.5  | 163.6 | 160.8 | 158.7 | 158.7 | 160.1 |
| 47.5° | 129.5 | 129.5 | 128.8  | 128.8 | 126.7 | 127.4 | 126.0 | 128.1 |
| 50°   | 100.3 | 100.3 | 98.9   | 99.6  | 98.2  | 98.2  | 97.5  | 98.2  |
| 52.5° | 76.6  | 75.9  | 75.9   | 75.2  | 73.8  | 74.5  | 75.2  | 73.8  |
| 55°   | 55.7  | 56.4  | 55.0   | 55.7  | 54.3  | 55.0  | 54.3  | 55.0  |
| 57.5° | 38.3  | 39.0  | 37.6   | 39.0  | 37.6  | 38.3  | 37.6  | 37.6  |
| 60°   | 26.5  | 26.5  | 25.8   | 26.5  | 25.8  | 25.8  | 25.1  | 26.5  |
| 62.5° | 18.1  | 18.1  | 18.1   | 18.1  | 18.1  | 17.4  | 18.1  | 18.1  |
| 65°   | 13.2  | 12.5  | 12.5   | 12.5  | 12.5  | 12.5  | 12.5  | 12.5  |
| 67.5° | 9.1   | 9.1   | 9.1    | 9.1   | 9.1   | 9.1   | 9.1   | 9.1   |
| 70°   | 6.3   | 6.3   | 6.3    | 6.3   | 6.3   | 6.3   | 6.3   | 6.3   |
| 72.5° | 4.9   | 4.9   | 4.9    | 4.9   | 4.9   | 4.9   | 4.9   | 4.9   |
| 75°   | 3.5   | 3.5   | 3.5    | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| 77.5° | 2.1   | 2.1   | 2.1    | 2.1   | 2.1   | 2.1   | 2.1   | 2.1   |
| 80°   | 1.4   | 1.4   | 1.4    | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   |
| 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)