

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: P251584

Luminaire Tested: **LD4B10D010 EU4B10208035 4LBSW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251584  
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: LD4B10D010 EU4B10208035 4LBSW1H  
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 976.0 lumens  
Efficiency: N/A  
Efficacy: 97.1 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

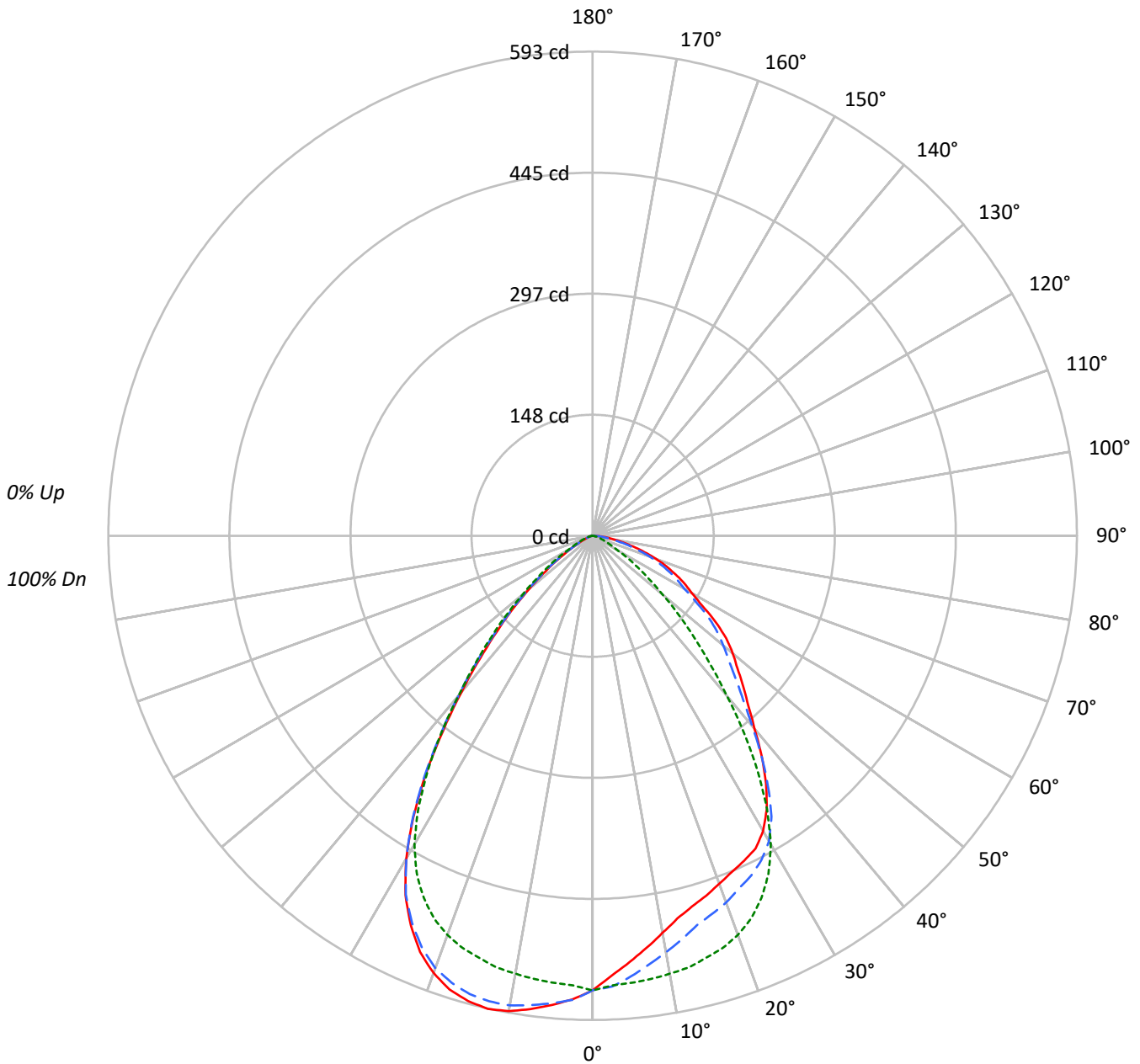
Input Watts (W): 10.05  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 111 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 104 | 97  | 92  | 87  | 101 | 95  | 90  | 86  | 92  | 88  | 84  | 89  | 85  | 82  | 86  | 83  | 81  | 79  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 96  | 88  | 81  | 76  | 94  | 86  | 80  | 75  | 83  | 78  | 74  | 81  | 76  | 73  | 78  | 75  | 72  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 90  | 80  | 72  | 67  | 88  | 78  | 72  | 66  | 76  | 70  | 66  | 74  | 69  | 65  | 72  | 68  | 64  | 62  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 83  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 63  | 59  | 68  | 62  | 58  | 66  | 61  | 58  | 56  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 78  | 67  | 59  | 53  | 76  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 57  | 52  | 61  | 56  | 52  | 50  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 73  | 61  | 54  | 48  | 71  | 61  | 53  | 48  | 59  | 53  | 48  | 58  | 52  | 48  | 56  | 51  | 47  | 46  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 68  | 57  | 49  | 44  | 67  | 56  | 49  | 44  | 55  | 48  | 44  | 54  | 48  | 43  | 52  | 47  | 43  | 42  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 64  | 52  | 45  | 40  | 63  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 40  | 49  | 44  | 40  | 38  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 61  | 49  | 42  | 37  | 59  | 48  | 42  | 37  | 47  | 41  | 37  | 47  | 41  | 37  | 46  | 40  | 37  | 35  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 54265 | 54265 | 54265 |
| 5°  | 51244 | 53768 | 56438 |
| 10° | 48857 | 53894 | 58506 |
| 15° | 47421 | 54010 | 59508 |
| 20° | 47034 | 53951 | 59085 |
| 25° | 47218 | 52616 | 56638 |
| 30° | 46995 | 49099 | 51350 |
| 35° | 44044 | 41915 | 42343 |
| 40° | 39248 | 32493 | 31767 |
| 45° | 35904 | 24230 | 22741 |
| 50° | 33947 | 16966 | 15344 |
| 55° | 31213 | 11452 | 9634  |
| 60° | 27269 | 6705  | 5321  |
| 65° | 25805 | 4312  | 2975  |
| 70° | 23508 | 3077  | 1852  |
| 75° | 19468 | 2146  | 1356  |
| 80° | 15322 | 1235  | 786   |
| 85° | 13642 | 783   | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 52.6   | 5.4       |
| 10°-20°   | 150.9  | 15.5      |
| 20°-30°   | 223.7  | 22.9      |
| 30°-40°   | 224.0  | 23.0      |
| 40°-50°   | 156.6  | 16.0      |
| 50°-60°   | 93.2   | 9.5       |
| 60°-70°   | 48.6   | 5.0       |
| 70°-80°   | 21.6   | 2.2       |
| 80°-90°   | 4.7    | 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°    | 427.3  | 43.8      |
| 0°-40°    | 651.3  | 66.7      |
| 0°-60°    | 901.0  | 92.3      |
| 0°-90°    | 976.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 976.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 557 | 557 | 557 | 557  | 557  |      |
| 5°  | 524 | 542 | 550 | 575  | 577  | 49   |
| 15° | 470 | 494 | 535 | 581  | 590  | 133  |
| 25° | 439 | 459 | 489 | 523  | 527  | 202  |
| 35° | 370 | 374 | 352 | 359  | 356  | 230  |
| 45° | 260 | 248 | 176 | 170  | 165  | 202  |
| 55° | 184 | 172 | 67  | 59   | 57   | 163  |
| 65° | 112 | 103 | 19  | 14   | 13   | 111  |
| 75° | 52  | 45  | 6   | 4    | 4    | 56   |
| 85° | 12  | 9   | 1   | 1    | 0    | 14   |
| 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°    | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 |
| 2.5°  | 538.9 | 545.3 | 538.9 | 541.0 | 549.6 | 541.7 | 546.0 | 546.0 | 543.9 | 548.9 | 552.5 |
| 5°    | 523.8 | 530.2 | 523.8 | 526.7 | 536.0 | 528.1 | 533.1 | 531.7 | 532.4 | 536.7 | 541.7 |
| 7.5°  | 508.7 | 513.7 | 508.0 | 511.6 | 520.2 | 513.7 | 518.0 | 518.0 | 518.8 | 525.2 | 529.5 |
| 10°   | 493.7 | 498.0 | 493.7 | 496.5 | 505.9 | 500.1 | 503.0 | 503.7 | 505.9 | 511.6 | 518.0 |
| 12.5° | 480.0 | 483.6 | 479.3 | 483.6 | 491.5 | 485.8 | 489.3 | 490.1 | 492.2 | 498.7 | 505.9 |
| 15°   | 470.0 | 473.6 | 469.3 | 472.8 | 480.0 | 475.7 | 478.6 | 480.0 | 481.5 | 487.2 | 493.7 |
| 17.5° | 462.1 | 465.0 | 461.4 | 465.7 | 471.4 | 466.4 | 470.7 | 470.7 | 472.8 | 478.6 | 485.8 |
| 20°   | 453.5 | 456.3 | 453.5 | 457.1 | 463.5 | 459.2 | 462.8 | 462.8 | 465.0 | 471.4 | 477.9 |
| 22.5° | 445.6 | 447.0 | 445.6 | 448.5 | 454.9 | 451.3 | 453.5 | 454.2 | 456.3 | 462.1 | 467.8 |
| 25°   | 439.1 | 442.0 | 440.6 | 443.4 | 447.7 | 444.1 | 446.3 | 447.0 | 449.2 | 454.2 | 459.2 |
| 27.5° | 431.9 | 433.4 | 431.9 | 435.5 | 439.1 | 436.3 | 438.4 | 437.7 | 439.1 | 443.4 | 447.7 |
| 30°   | 417.6 | 419.0 | 419.0 | 421.2 | 424.1 | 422.6 | 424.8 | 422.6 | 424.1 | 427.6 | 431.9 |
| 32.5° | 396.8 | 397.5 | 398.2 | 400.4 | 402.5 | 400.4 | 401.8 | 401.8 | 401.8 | 404.7 | 407.6 |
| 35°   | 370.2 | 371.7 | 371.0 | 372.4 | 374.5 | 373.8 | 373.8 | 373.1 | 371.7 | 373.1 | 374.5 |
| 37.5° | 340.1 | 338.0 | 338.0 | 340.1 | 341.5 | 338.7 | 340.1 | 338.7 | 338.7 | 339.4 | 339.4 |
| 40°   | 308.5 | 306.4 | 308.5 | 309.3 | 310.0 | 308.5 | 307.8 | 306.4 | 304.2 | 304.9 | 303.5 |
| 42.5° | 282.0 | 280.6 | 281.3 | 281.3 | 282.0 | 280.6 | 281.3 | 278.4 | 276.2 | 274.8 | 272.7 |
| 45°   | 260.5 | 258.3 | 260.5 | 259.0 | 259.0 | 258.3 | 257.6 | 256.2 | 253.3 | 251.1 | 247.5 |
| 47.5° | 240.4 | 240.4 | 241.1 | 241.1 | 241.1 | 239.7 | 239.7 | 236.8 | 233.9 | 231.0 | 226.0 |
| 50°   | 223.9 | 222.4 | 225.3 | 225.3 | 223.1 | 222.4 | 223.1 | 219.6 | 217.4 | 213.8 | 208.8 |
| 52.5° | 205.9 | 205.9 | 206.6 | 206.6 | 205.9 | 204.5 | 205.2 | 202.3 | 200.2 | 196.6 | 191.6 |
| 55°   | 183.7 | 182.3 | 184.4 | 184.4 | 183.7 | 183.0 | 183.7 | 181.5 | 179.4 | 176.5 | 172.2 |
| 57.5° | 158.6 | 157.9 | 159.3 | 160.0 | 158.6 | 158.6 | 159.3 | 157.1 | 156.4 | 153.5 | 149.2 |
| 60°   | 139.9 | 139.2 | 140.6 | 141.4 | 139.9 | 139.9 | 139.9 | 137.0 | 135.6 | 132.7 | 129.9 |
| 62.5° | 127.0 | 126.3 | 127.7 | 127.0 | 126.3 | 125.6 | 126.3 | 123.4 | 122.0 | 119.1 | 116.2 |
| 65°   | 111.9 | 112.7 | 113.4 | 113.4 | 112.7 | 111.9 | 111.9 | 110.5 | 109.1 | 106.2 | 102.6 |
| 67.5° | 97.6  | 97.6  | 98.3  | 99.0  | 98.3  | 98.3  | 98.3  | 96.1  | 94.7  | 92.6  | 88.3  |
| 70°   | 82.5  | 81.8  | 83.9  | 83.9  | 82.5  | 83.2  | 82.5  | 81.8  | 80.4  | 77.5  | 73.9  |
| 72.5° | 66.7  | 66.7  | 67.4  | 67.4  | 66.7  | 66.7  | 66.7  | 66.0  | 63.9  | 62.4  | 58.8  |
| 75°   | 51.7  | 51.7  | 52.4  | 53.1  | 51.7  | 51.7  | 52.4  | 50.9  | 49.5  | 47.4  | 45.2  |
| 77.5° | 38.7  | 38.0  | 38.7  | 38.7  | 38.0  | 38.0  | 38.0  | 37.3  | 36.6  | 34.4  | 32.3  |
| 80°   | 27.3  | 26.5  | 27.3  | 27.3  | 27.3  | 26.5  | 26.5  | 25.8  | 25.8  | 24.4  | 22.2  |
| 82.5° | 18.7  | 17.9  | 18.7  | 18.7  | 18.7  | 17.9  | 17.9  | 17.9  | 17.2  | 16.5  | 15.1  |
| 85°   | 12.2  | 11.5  | 11.5  | 12.2  | 11.5  | 11.5  | 11.5  | 11.5  | 10.8  | 10.0  | 9.3   |
| 87.5° | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   | 5.7   | 5.0   | 5.0   | 5.0   | 4.3   |
| 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°    | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 |
| 2.5°  | 549.6 | 548.2 | 552.5 | 551.1 | 551.8 | 548.2 | 553.9 | 551.1 | 554.6 | 551.1 | 558.2 |
| 5°    | 540.3 | 538.9 | 545.3 | 544.6 | 545.3 | 542.4 | 548.9 | 548.2 | 552.5 | 549.6 | 557.5 |
| 7.5°  | 530.2 | 528.8 | 536.0 | 536.7 | 538.1 | 535.3 | 543.9 | 543.9 | 548.2 | 547.5 | 556.1 |
| 10°   | 518.8 | 519.5 | 526.7 | 528.1 | 531.0 | 529.5 | 537.4 | 539.6 | 545.3 | 544.6 | 555.4 |
| 12.5° | 508.0 | 508.0 | 517.3 | 520.2 | 522.4 | 521.6 | 531.0 | 533.8 | 540.3 | 541.7 | 551.8 |
| 15°   | 497.2 | 498.0 | 506.6 | 510.9 | 513.7 | 513.0 | 523.1 | 526.7 | 534.6 | 535.3 | 547.5 |
| 17.5° | 488.6 | 487.9 | 497.2 | 500.8 | 505.1 | 504.4 | 515.2 | 519.5 | 527.4 | 529.5 | 541.0 |
| 20°   | 481.5 | 480.7 | 489.3 | 493.7 | 496.5 | 495.8 | 506.6 | 511.6 | 518.8 | 520.2 | 531.7 |
| 22.5° | 472.8 | 471.4 | 480.0 | 483.6 | 486.5 | 485.8 | 495.1 | 498.7 | 505.9 | 507.3 | 518.0 |
| 25°   | 462.8 | 461.4 | 469.3 | 471.4 | 473.6 | 472.1 | 480.0 | 482.2 | 487.9 | 489.3 | 500.1 |
| 27.5° | 451.3 | 447.7 | 454.2 | 454.2 | 455.6 | 453.5 | 459.2 | 461.4 | 466.4 | 466.4 | 476.4 |
| 30°   | 433.4 | 428.4 | 431.9 | 431.2 | 431.9 | 429.1 | 432.7 | 433.4 | 437.0 | 436.3 | 443.4 |
| 32.5° | 408.3 | 401.1 | 403.2 | 401.1 | 398.9 | 394.6 | 398.9 | 397.5 | 400.4 | 397.5 | 404.0 |
| 35°   | 373.8 | 366.7 | 365.9 | 363.1 | 360.9 | 357.3 | 357.3 | 353.7 | 354.5 | 352.3 | 356.6 |
| 37.5° | 336.5 | 327.2 | 325.8 | 320.0 | 316.4 | 312.1 | 312.1 | 309.3 | 305.7 | 304.2 | 307.8 |
| 40°   | 299.9 | 289.9 | 286.3 | 277.0 | 273.4 | 269.1 | 266.2 | 262.6 | 261.2 | 255.4 | 258.3 |
| 42.5° | 268.4 | 257.6 | 249.7 | 239.7 | 236.1 | 229.6 | 225.3 | 221.0 | 218.8 | 212.4 | 215.3 |
| 45°   | 241.8 | 228.9 | 220.3 | 207.4 | 202.3 | 195.2 | 188.7 | 183.7 | 178.7 | 175.8 | 174.4 |
| 47.5° | 219.6 | 205.9 | 194.4 | 180.1 | 172.2 | 165.7 | 157.1 | 152.1 | 145.7 | 142.1 | 139.9 |
| 50°   | 200.9 | 185.8 | 172.9 | 156.4 | 148.5 | 141.4 | 131.3 | 123.4 | 117.7 | 111.9 | 110.5 |
| 52.5° | 184.4 | 168.6 | 154.3 | 135.6 | 126.3 | 117.7 | 106.9 | 98.3  | 93.3  | 86.8  | 86.1  |
| 55°   | 165.0 | 151.4 | 135.6 | 116.2 | 106.9 | 98.3  | 86.8  | 78.2  | 71.8  | 67.4  | 66.0  |
| 57.5° | 144.2 | 131.3 | 116.2 | 96.9  | 87.5  | 78.2  | 67.4  | 59.6  | 53.8  | 50.2  | 49.5  |
| 60°   | 124.8 | 112.7 | 98.3  | 78.9  | 69.6  | 61.7  | 50.2  | 42.3  | 37.3  | 34.4  | 33.0  |
| 62.5° | 110.5 | 99.0  | 85.4  | 67.4  | 58.8  | 50.9  | 40.2  | 33.0  | 28.7  | 25.8  | 24.4  |
| 65°   | 96.9  | 85.4  | 73.2  | 56.7  | 49.5  | 42.3  | 32.3  | 25.8  | 21.5  | 18.7  | 17.2  |
| 67.5° | 82.5  | 72.5  | 61.0  | 47.4  | 40.2  | 34.4  | 25.8  | 20.1  | 16.5  | 14.4  | 12.9  |
| 70°   | 68.2  | 58.8  | 49.5  | 38.0  | 33.0  | 27.3  | 20.1  | 15.8  | 12.2  | 10.8  | 9.3   |
| 72.5° | 53.8  | 46.6  | 38.7  | 29.4  | 25.1  | 21.5  | 15.8  | 11.5  | 9.3   | 7.9   | 6.5   |
| 75°   | 40.2  | 35.2  | 28.7  | 22.2  | 18.7  | 15.8  | 11.5  | 8.6   | 7.2   | 5.7   | 5.0   |
| 77.5° | 28.7  | 24.4  | 20.1  | 15.1  | 13.6  | 11.5  | 7.9   | 6.5   | 5.0   | 3.6   | 2.9   |
| 80°   | 19.4  | 17.2  | 13.6  | 10.8  | 8.6   | 7.9   | 5.7   | 4.3   | 2.9   | 2.2   | 2.2   |
| 82.5° | 12.9  | 10.8  | 8.6   | 6.5   | 5.7   | 5.0   | 3.6   | 2.9   | 2.2   | 1.4   | 1.4   |
| 85°   | 7.9   | 6.5   | 5.0   | 3.6   | 3.6   | 2.9   | 2.2   | 1.4   | 0.7   | 0.7   | 0.7   |
| 87.5° | 3.6   | 2.9   | 2.2   | 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°    | 556.8 | 556.8 | 556.8 | 556.8  | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 |
| 2.5°  | 564.0 | 559.7 | 556.8 | 560.4  | 561.8 | 559.7 | 561.8 | 565.4 | 569.0 | 569.7 | 559.7 |
| 5°    | 564.7 | 560.4 | 558.9 | 563.3  | 564.0 | 563.3 | 565.4 | 570.4 | 574.7 | 576.2 | 566.1 |
| 7.5°  | 564.7 | 561.8 | 561.1 | 566.1  | 566.8 | 566.1 | 569.7 | 575.5 | 579.8 | 582.6 | 572.6 |
| 10°   | 563.3 | 561.8 | 562.5 | 566.8  | 568.3 | 568.3 | 573.3 | 579.8 | 584.1 | 586.9 | 576.9 |
| 12.5° | 561.1 | 561.1 | 561.1 | 566.1  | 567.6 | 568.3 | 572.6 | 581.2 | 584.1 | 588.4 | 578.3 |
| 15°   | 557.5 | 557.5 | 557.5 | 562.5  | 564.7 | 564.7 | 569.7 | 577.6 | 581.2 | 585.5 | 575.5 |
| 17.5° | 551.1 | 551.1 | 551.8 | 556.1  | 558.2 | 558.2 | 563.3 | 571.9 | 574.0 | 579.0 | 569.0 |
| 20°   | 541.7 | 541.7 | 542.4 | 546.8  | 548.9 | 547.5 | 553.9 | 561.1 | 563.3 | 567.6 | 557.5 |
| 22.5° | 528.1 | 528.1 | 528.1 | 532.4  | 533.8 | 533.1 | 539.6 | 546.0 | 546.0 | 551.8 | 541.0 |
| 25°   | 508.0 | 509.4 | 508.0 | 512.3  | 513.7 | 513.0 | 518.8 | 524.5 | 523.1 | 529.5 | 518.8 |
| 27.5° | 483.6 | 482.9 | 482.9 | 486.5  | 486.5 | 485.8 | 490.1 | 496.5 | 495.1 | 499.4 | 489.3 |
| 30°   | 449.9 | 452.0 | 448.5 | 453.5  | 451.3 | 449.9 | 452.8 | 458.5 | 456.3 | 459.9 | 452.0 |
| 32.5° | 411.1 | 408.3 | 408.3 | 408.3  | 409.7 | 406.1 | 409.0 | 411.9 | 409.7 | 413.3 | 404.7 |
| 35°   | 360.2 | 360.9 | 358.8 | 359.5  | 360.2 | 355.9 | 358.8 | 361.6 | 358.8 | 360.9 | 353.0 |
| 37.5° | 309.3 | 310.0 | 304.9 | 307.8  | 304.9 | 303.5 | 306.4 | 307.8 | 304.9 | 307.1 | 298.5 |
| 40°   | 258.3 | 256.9 | 256.2 | 256.2  | 256.9 | 253.3 | 255.4 | 257.6 | 255.4 | 256.9 | 249.0 |
| 42.5° | 213.8 | 213.1 | 211.7 | 212.4  | 210.2 | 209.5 | 210.2 | 212.4 | 210.2 | 211.7 | 205.9 |
| 45°   | 175.1 | 173.6 | 171.5 | 172.2  | 172.2 | 168.6 | 170.8 | 172.2 | 170.1 | 170.8 | 165.7 |
| 47.5° | 139.2 | 137.0 | 137.0 | 136.3  | 136.3 | 134.9 | 137.0 | 136.3 | 134.2 | 135.6 | 130.6 |
| 50°   | 108.3 | 106.9 | 106.9 | 106.9  | 106.9 | 104.8 | 105.5 | 106.9 | 104.8 | 104.8 | 101.9 |
| 52.5° | 84.7  | 82.5  | 81.1  | 81.1   | 81.1  | 80.4  | 80.4  | 81.1  | 78.9  | 78.9  | 78.2  |
| 55°   | 63.9  | 63.1  | 61.0  | 61.0   | 61.0  | 58.8  | 59.6  | 59.6  | 58.8  | 58.8  | 56.7  |
| 57.5° | 47.4  | 45.2  | 43.8  | 43.8   | 42.3  | 42.3  | 41.6  | 42.3  | 40.9  | 40.9  | 39.5  |
| 60°   | 31.6  | 30.1  | 29.4  | 28.7   | 28.7  | 28.0  | 28.7  | 28.0  | 28.0  | 27.3  | 26.5  |
| 62.5° | 23.0  | 21.5  | 20.1  | 20.1   | 20.1  | 19.4  | 19.4  | 19.4  | 19.4  | 19.4  | 18.7  |
| 65°   | 16.5  | 15.1  | 15.1  | 14.4   | 14.4  | 13.6  | 13.6  | 13.6  | 13.6  | 13.6  | 12.9  |
| 67.5° | 11.5  | 10.8  | 10.0  | 10.0   | 10.0  | 10.0  | 10.0  | 10.0  | 9.3   | 9.3   | 9.3   |
| 70°   | 8.6   | 7.9   | 7.2   | 7.2    | 7.2   | 7.2   | 7.2   | 6.5   | 7.2   | 7.2   | 6.5   |
| 72.5° | 5.7   | 5.7   | 5.0   | 5.0    | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| 75°   | 4.3   | 4.3   | 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   | 1.4   | 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: P251584

CATALOG NUMBER: LD4B10D010 EU4B10208035 4LBSW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  |
|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 0°    | 556.8 | 556.8 | 556.8  | 556.8 | 556.8 | 556.8 | 556.8 | 556.8 |
| 2.5°  | 570.4 | 569.7 | 568.3  | 570.4 | 564.7 | 562.5 | 561.8 | 568.3 |
| 5°    | 578.3 | 576.9 | 576.9  | 579.0 | 572.6 | 571.1 | 569.7 | 576.9 |
| 7.5°  | 585.5 | 584.1 | 584.1  | 586.2 | 580.5 | 579.0 | 577.6 | 584.8 |
| 10°   | 589.8 | 589.8 | 589.8  | 591.2 | 586.2 | 584.8 | 584.1 | 591.2 |
| 12.5° | 592.0 | 592.0 | 591.2  | 594.1 | 587.6 | 587.6 | 586.2 | 593.4 |
| 15°   | 589.1 | 589.1 | 589.1  | 591.2 | 585.5 | 584.1 | 584.1 | 589.8 |
| 17.5° | 581.9 | 581.9 | 581.2  | 583.3 | 576.9 | 576.9 | 576.2 | 582.6 |
| 20°   | 571.1 | 571.1 | 569.7  | 572.6 | 566.1 | 564.0 | 563.3 | 569.7 |
| 22.5° | 553.9 | 553.2 | 552.5  | 553.9 | 548.2 | 546.8 | 546.0 | 551.8 |
| 25°   | 531.7 | 531.0 | 529.5  | 531.0 | 524.5 | 522.4 | 522.4 | 526.7 |
| 27.5° | 500.1 | 500.1 | 498.0  | 500.1 | 492.9 | 492.2 | 491.5 | 496.5 |
| 30°   | 461.4 | 458.5 | 457.1  | 459.9 | 452.8 | 452.8 | 451.3 | 456.3 |
| 32.5° | 413.3 | 410.4 | 409.7  | 411.1 | 404.7 | 402.5 | 405.4 | 408.3 |
| 35°   | 358.0 | 358.8 | 355.9  | 355.9 | 350.1 | 350.9 | 351.6 | 355.9 |
| 37.5° | 304.9 | 303.5 | 302.8  | 303.5 | 299.2 | 297.8 | 296.3 | 300.6 |
| 40°   | 255.4 | 251.8 | 251.1  | 251.1 | 247.5 | 246.8 | 247.5 | 249.7 |
| 42.5° | 208.8 | 208.1 | 205.2  | 206.6 | 203.1 | 204.5 | 203.8 | 203.8 |
| 45°   | 168.6 | 169.3 | 166.5  | 168.6 | 165.7 | 163.6 | 163.6 | 165.0 |
| 47.5° | 133.5 | 133.5 | 132.7  | 132.7 | 130.6 | 131.3 | 129.9 | 132.0 |
| 50°   | 103.3 | 103.3 | 101.9  | 102.6 | 101.2 | 101.2 | 100.5 | 101.2 |
| 52.5° | 78.9  | 78.2  | 78.2   | 77.5  | 76.1  | 76.8  | 77.5  | 76.1  |
| 55°   | 57.4  | 58.1  | 56.7   | 57.4  | 56.0  | 56.7  | 56.0  | 56.7  |
| 57.5° | 39.5  | 40.2  | 38.7   | 40.2  | 38.7  | 39.5  | 38.7  | 38.7  |
| 60°   | 27.3  | 27.3  | 26.5   | 27.3  | 26.5  | 26.5  | 25.8  | 27.3  |
| 62.5° | 18.7  | 18.7  | 18.7   | 18.7  | 18.7  | 17.9  | 18.7  | 18.7  |
| 65°   | 13.6  | 12.9  | 12.9   | 12.9  | 12.9  | 12.9  | 12.9  | 12.9  |
| 67.5° | 9.3   | 9.3   | 9.3    | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |
| 70°   | 6.5   | 6.5   | 6.5    | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| 72.5° | 5.0   | 5.0   | 5.0    | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| 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°   | 1.4   | 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)