

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: P219507

Luminaire Tested: **LDSQ4B20D010 EU4B10208050 4LBSQLWWLI**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P219507  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35471)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQ4B20D010 EU4B10208050 4LBSQLWWLI  
Description: PORTFOLIO 4 INCH SQUARE SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1636.3 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

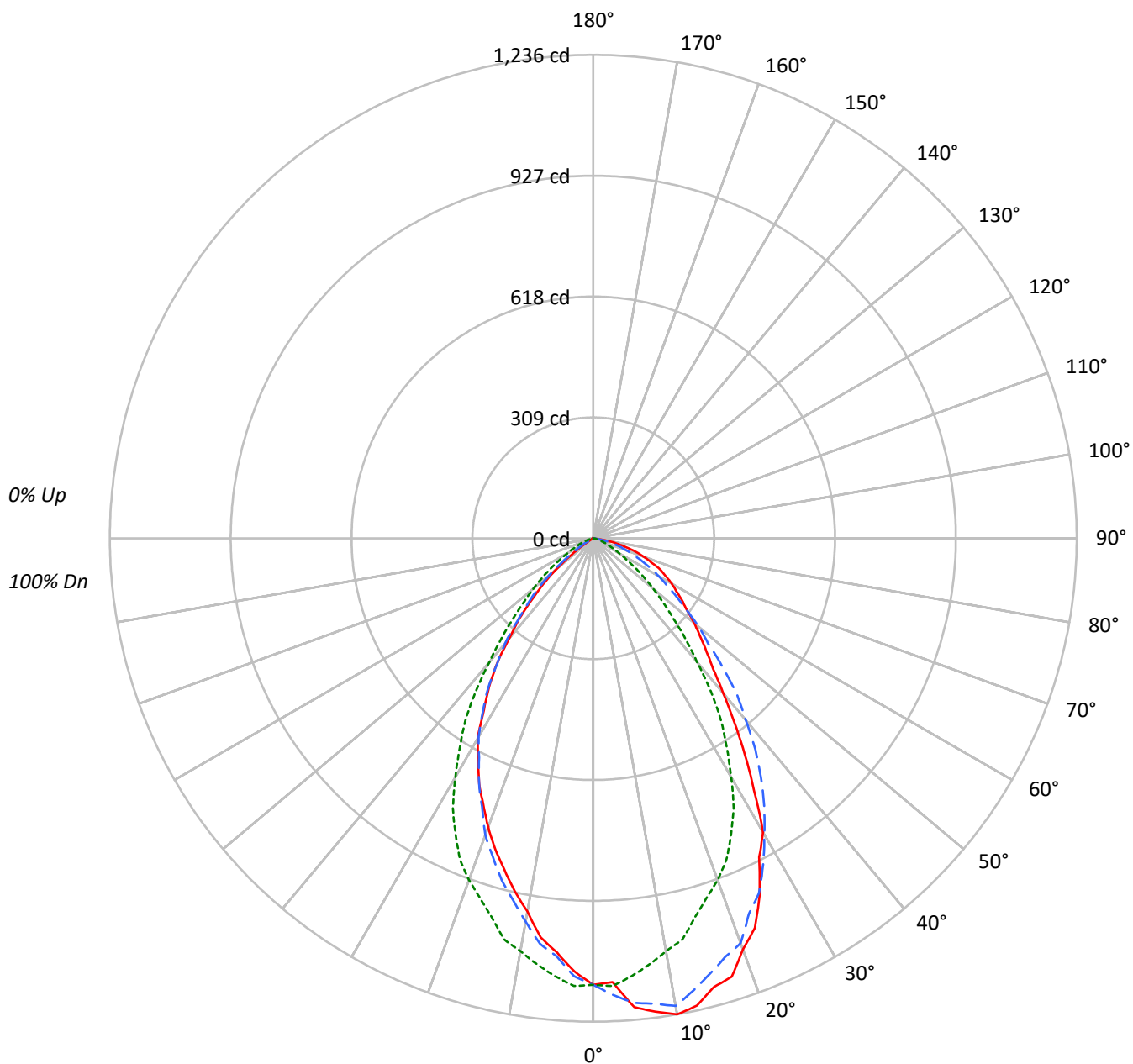
Input Watts (W): 20.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  |  | 98  | 96  | 95  |  | 95  |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  |  | 90  | 87  | 84  |  | 87  |
| 3   | 97  | 89  | 83  | 78  | 95  | 88  | 82  | 77  | 85  | 80  | 76  |  | 82  | 78  | 75  |  | 80  |
| 4   | 91  | 81  | 74  | 69  | 89  | 80  | 74  | 69  | 78  | 72  | 68  |  | 76  | 71  | 67  |  | 74  |
| 5   | 85  | 75  | 67  | 62  | 83  | 74  | 67  | 62  | 72  | 66  | 61  |  | 70  | 65  | 60  |  | 68  |
| 6   | 80  | 69  | 61  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 55  |  | 65  | 59  | 55  |  | 63  |
| 7   | 75  | 63  | 56  | 51  | 73  | 63  | 56  | 51  | 61  | 55  | 50  |  | 60  | 54  | 50  |  | 59  |
| 8   | 70  | 59  | 52  | 47  | 69  | 58  | 51  | 46  | 57  | 51  | 46  |  | 56  | 50  | 46  |  | 55  |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 43  |  | 52  | 46  | 42  |  | 51  |
| 10  | 62  | 51  | 44  | 40  | 61  | 51  | 44  | 40  | 50  | 44  | 39  |  | 49  | 43  | 39  |  | 48  |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 110593 | 110593 | 110593 |
| 5°  | 117006 | 109284 | 103421 |
| 10° | 121585 | 105433 | 95330  |
| 15° | 119158 | 100624 | 87997  |
| 20° | 115289 | 95814  | 81000  |
| 25° | 107542 | 89104  | 73883  |
| 30° | 97074  | 78852  | 66144  |
| 35° | 79969  | 67505  | 54874  |
| 40° | 65254  | 52102  | 42238  |
| 45° | 56075  | 39566  | 30373  |
| 50° | 50745  | 30112  | 19186  |
| 55° | 46700  | 21737  | 6942   |
| 60° | 44815  | 14861  | 1066   |
| 65° | 43301  | 10040  | 321    |
| 70° | 38776  | 6968   | 397    |
| 75° | 31778  | 3593   | 0      |
| 80° | 19861  | 1506   | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 107.0  | 6.5       |
| 10°-20°   | 288.2  | 17.6      |
| 20°-30°   | 384.8  | 23.5      |
| 30°-40°   | 365.3  | 22.3      |
| 40°-50°   | 252.5  | 15.4      |
| 50°-60°   | 139.5  | 8.5       |
| 60°-70°   | 69.3   | 4.2       |
| 70°-80°   | 27.3   | 1.7       |
| 80°-90°   | 2.6    | 0.2       |
| 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°    | 779.9  | 47.7      |
| 0°-40°    | 1145.2 | 70.0      |
| 0°-60°    | 1537.2 | 93.9      |
| 0°-90°    | 1636.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1636.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1142 | 1142 | 1142 | 1142 | 1142 |      |
| 5°  | 1203 | 1192 | 1124 | 1073 | 1064 | 115  |
| 15° | 1188 | 1152 | 1003 | 905  | 877  | 336  |
| 25° | 1006 | 1002 | 834  | 691  | 691  | 459  |
| 35° | 676  | 747  | 571  | 470  | 464  | 424  |
| 45° | 409  | 470  | 289  | 237  | 222  | 319  |
| 55° | 276  | 260  | 129  | 66   | 41   | 249  |
| 65° | 189  | 137  | 44   | 1    | 1    | 183  |
| 75° | 85   | 52   | 10   | 0    | 0    | 90   |
| 85° | 0    | 1    | 0    | 0    | 0    | 8    |
| 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°    | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 |
| 2.5°  | 1136.1 | 1167.6 | 1170.3 | 1167.6 | 1171.7 | 1170.3 | 1177.2 | 1170.3 | 1178.5 | 1166.2 | 1168.9 |
| 5°    | 1203.2 | 1190.8 | 1216.8 | 1203.2 | 1203.2 | 1201.8 | 1197.7 | 1196.3 | 1201.8 | 1184.0 | 1192.2 |
| 7.5°  | 1221.0 | 1238.7 | 1262.0 | 1233.3 | 1234.6 | 1234.6 | 1226.4 | 1223.7 | 1223.7 | 1190.8 | 1200.4 |
| 10°   | 1236.0 | 1225.1 | 1237.4 | 1226.4 | 1236.0 | 1234.6 | 1240.1 | 1222.3 | 1234.6 | 1215.5 | 1214.1 |
| 12.5° | 1223.7 | 1219.6 | 1236.0 | 1218.2 | 1212.7 | 1214.1 | 1207.3 | 1203.2 | 1207.3 | 1185.4 | 1184.0 |
| 15°   | 1188.1 | 1192.2 | 1216.8 | 1197.7 | 1194.9 | 1192.2 | 1184.0 | 1170.3 | 1181.3 | 1151.1 | 1152.5 |
| 17.5° | 1175.8 | 1168.9 | 1173.0 | 1156.6 | 1160.7 | 1158.0 | 1156.6 | 1144.3 | 1141.6 | 1122.4 | 1122.4 |
| 20°   | 1118.3 | 1133.3 | 1133.3 | 1122.4 | 1122.4 | 1121.0 | 1103.2 | 1114.2 | 1101.9 | 1096.4 | 1101.9 |
| 22.5° | 1078.6 | 1080.0 | 1080.0 | 1070.4 | 1071.8 | 1066.3 | 1056.7 | 1049.9 | 1056.7 | 1049.9 | 1038.9 |
| 25°   | 1006.1 | 1008.8 | 1025.2 | 1007.4 | 1004.7 | 1010.2 | 1001.9 | 997.8  | 996.5  | 980.0  | 1001.9 |
| 27.5° | 918.5  | 945.8  | 944.5  | 937.6  | 945.8  | 934.9  | 930.8  | 932.1  | 936.2  | 934.9  | 940.4  |
| 30°   | 867.8  | 871.9  | 876.0  | 870.5  | 871.9  | 867.8  | 867.8  | 869.2  | 880.1  | 876.0  | 874.7  |
| 32.5° | 765.1  | 778.8  | 789.8  | 789.8  | 791.2  | 795.3  | 793.9  | 822.6  | 829.5  | 815.8  | 813.1  |
| 35°   | 676.2  | 685.8  | 695.3  | 696.7  | 714.5  | 715.9  | 717.2  | 725.5  | 744.6  | 748.7  | 747.4  |
| 37.5° | 591.3  | 600.9  | 603.6  | 616.0  | 625.5  | 635.1  | 646.1  | 657.0  | 673.4  | 687.1  | 680.3  |
| 40°   | 516.0  | 520.1  | 527.0  | 532.5  | 551.6  | 551.6  | 557.1  | 579.0  | 596.8  | 607.7  | 606.4  |
| 42.5° | 453.1  | 454.4  | 459.9  | 469.5  | 487.3  | 483.2  | 487.3  | 502.3  | 528.3  | 529.7  | 544.8  |
| 45°   | 409.3  | 407.9  | 412.0  | 413.4  | 424.3  | 429.8  | 432.5  | 443.5  | 465.4  | 468.1  | 469.5  |
| 47.5° | 369.6  | 368.2  | 375.0  | 377.8  | 381.9  | 387.4  | 387.4  | 388.7  | 396.9  | 403.8  | 398.3  |
| 50°   | 336.7  | 336.7  | 336.7  | 339.5  | 346.3  | 344.9  | 346.3  | 351.8  | 355.9  | 353.1  | 351.8  |
| 52.5° | 301.1  | 306.6  | 310.7  | 312.1  | 313.5  | 313.5  | 314.8  | 312.1  | 310.7  | 306.6  | 298.4  |
| 55°   | 276.5  | 282.0  | 282.0  | 282.0  | 282.0  | 287.4  | 280.6  | 282.0  | 282.0  | 271.0  | 260.1  |
| 57.5° | 251.9  | 257.3  | 261.4  | 256.0  | 261.4  | 256.0  | 253.2  | 251.9  | 249.1  | 238.2  | 221.7  |
| 60°   | 231.3  | 234.1  | 232.7  | 231.3  | 234.1  | 230.0  | 227.2  | 221.7  | 219.0  | 203.9  | 193.0  |
| 62.5° | 208.1  | 209.4  | 210.8  | 208.1  | 205.3  | 203.9  | 198.5  | 190.3  | 184.8  | 172.5  | 162.9  |
| 65°   | 188.9  | 184.8  | 183.4  | 182.0  | 179.3  | 175.2  | 171.1  | 161.5  | 157.4  | 146.5  | 136.9  |
| 67.5° | 160.1  | 158.8  | 161.5  | 157.4  | 150.6  | 150.6  | 146.5  | 138.2  | 128.7  | 121.8  | 112.2  |
| 70°   | 136.9  | 135.5  | 132.8  | 128.7  | 127.3  | 121.8  | 121.8  | 112.2  | 109.5  | 97.2   | 89.0   |
| 72.5° | 112.2  | 112.2  | 108.1  | 104.0  | 99.9   | 97.2   | 95.8   | 89.0   | 84.9   | 78.0   | 71.2   |
| 75°   | 84.9   | 84.9   | 83.5   | 79.4   | 76.7   | 73.9   | 72.5   | 67.1   | 63.0   | 56.1   | 52.0   |
| 77.5° | 60.2   | 60.2   | 54.8   | 52.0   | 53.4   | 50.6   | 47.9   | 46.5   | 45.2   | 41.1   | 35.6   |
| 80°   | 35.6   | 34.2   | 30.1   | 31.5   | 30.1   | 30.1   | 28.7   | 27.4   | 24.6   | 21.9   | 19.2   |
| 82.5° | 9.6    | 11.0   | 11.0   | 11.0   | 12.3   | 9.6    | 9.6    | 9.6    | 11.0   | 11.0   | 6.8    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.4    | 1.4    | 1.4    |
| 87.5° | 1.4    | 2.7    | 5.5    | 5.5    | 5.5    | 5.5    | 5.5    | 4.1    | 4.1    | 4.1    | 2.7    |
| 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°    | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 |
| 2.5°  | 1155.2 | 1153.9 | 1155.2 | 1145.7 | 1167.6 | 1151.1 | 1148.4 | 1145.7 | 1155.2 | 1145.7 | 1132.0 |
| 5°    | 1179.9 | 1166.2 | 1162.1 | 1158.0 | 1170.3 | 1151.1 | 1147.0 | 1148.4 | 1141.6 | 1123.8 | 1125.1 |
| 7.5°  | 1188.1 | 1175.8 | 1163.5 | 1137.5 | 1148.4 | 1144.3 | 1133.3 | 1125.1 | 1114.2 | 1099.1 | 1096.4 |
| 10°   | 1190.8 | 1177.2 | 1159.4 | 1151.1 | 1134.7 | 1129.2 | 1125.1 | 1111.4 | 1097.8 | 1071.8 | 1064.9 |
| 12.5° | 1182.6 | 1166.2 | 1144.3 | 1137.5 | 1125.1 | 1107.3 | 1097.8 | 1084.1 | 1071.8 | 1051.2 | 1036.2 |
| 15°   | 1147.0 | 1133.3 | 1126.5 | 1103.2 | 1097.8 | 1086.8 | 1067.6 | 1048.5 | 1030.7 | 1003.3 | 995.1  |
| 17.5° | 1106.0 | 1100.5 | 1093.7 | 1075.9 | 1074.5 | 1063.5 | 1045.7 | 1029.3 | 1006.1 | 963.6  | 949.9  |
| 20°   | 1063.5 | 1063.5 | 1041.6 | 1034.8 | 1048.5 | 1026.6 | 1012.9 | 997.8  | 949.9  | 929.4  | 904.8  |
| 22.5° | 1032.1 | 1017.0 | 1004.7 | 993.7  | 995.1  | 981.4  | 962.3  | 932.1  | 914.3  | 889.7  | 861.0  |
| 25°   | 970.5  | 975.9  | 948.6  | 944.5  | 948.6  | 917.1  | 907.5  | 882.9  | 856.9  | 833.6  | 811.7  |
| 27.5° | 932.1  | 917.1  | 899.3  | 884.2  | 884.2  | 871.9  | 844.5  | 839.1  | 799.4  | 777.5  | 750.1  |
| 30°   | 874.7  | 863.7  | 848.6  | 826.7  | 824.0  | 814.4  | 792.5  | 778.8  | 737.8  | 704.9  | 689.9  |
| 32.5° | 802.1  | 798.0  | 785.7  | 761.0  | 752.8  | 741.9  | 714.5  | 691.2  | 672.1  | 635.1  | 617.3  |
| 35°   | 750.1  | 735.0  | 709.0  | 688.5  | 681.7  | 662.5  | 640.6  | 624.2  | 603.6  | 570.8  | 547.5  |
| 37.5° | 672.1  | 657.0  | 632.4  | 607.7  | 607.7  | 588.6  | 558.5  | 542.0  | 513.3  | 494.1  | 475.0  |
| 40°   | 603.6  | 584.5  | 559.8  | 531.1  | 527.0  | 499.6  | 487.3  | 459.9  | 442.1  | 412.0  | 409.3  |
| 42.5° | 527.0  | 509.2  | 487.3  | 465.4  | 449.0  | 435.3  | 403.8  | 383.3  | 364.1  | 349.0  | 344.9  |
| 45°   | 457.2  | 433.9  | 414.7  | 387.4  | 370.9  | 354.5  | 334.0  | 320.3  | 305.2  | 288.8  | 279.2  |
| 47.5° | 396.9  | 377.8  | 350.4  | 325.8  | 309.3  | 301.1  | 277.9  | 262.8  | 250.5  | 239.5  | 232.7  |
| 50°   | 335.4  | 312.1  | 297.0  | 269.6  | 266.9  | 247.7  | 228.6  | 216.3  | 209.4  | 199.8  | 190.3  |
| 52.5° | 288.8  | 266.9  | 246.4  | 225.8  | 214.9  | 208.1  | 190.3  | 177.9  | 168.4  | 161.5  | 156.0  |
| 55°   | 243.6  | 224.5  | 208.1  | 187.5  | 180.7  | 171.1  | 150.6  | 147.8  | 138.2  | 128.7  | 121.8  |
| 57.5° | 209.4  | 191.6  | 172.5  | 158.8  | 146.5  | 139.6  | 123.2  | 112.2  | 106.8  | 98.6   | 91.7   |
| 60°   | 177.9  | 158.8  | 143.7  | 127.3  | 121.8  | 112.2  | 99.9   | 90.3   | 83.5   | 76.7   | 69.8   |
| 62.5° | 149.2  | 132.8  | 116.3  | 102.7  | 94.4   | 89.0   | 79.4   | 71.2   | 64.3   | 58.9   | 53.4   |
| 65°   | 123.2  | 108.1  | 94.4   | 80.8   | 76.7   | 69.8   | 63.0   | 56.1   | 50.6   | 43.8   | 38.3   |
| 67.5° | 101.3  | 87.6   | 73.9   | 64.3   | 60.2   | 57.5   | 49.3   | 42.4   | 38.3   | 34.2   | 28.7   |
| 70°   | 79.4   | 69.8   | 58.9   | 50.6   | 46.5   | 42.4   | 37.0   | 32.9   | 27.4   | 24.6   | 20.5   |
| 72.5° | 61.6   | 53.4   | 43.8   | 37.0   | 34.2   | 31.5   | 26.0   | 21.9   | 19.2   | 16.4   | 13.7   |
| 75°   | 43.8   | 37.0   | 31.5   | 24.6   | 23.3   | 21.9   | 17.8   | 15.1   | 12.3   | 9.6    | 8.2    |
| 77.5° | 30.1   | 24.6   | 19.2   | 16.4   | 15.1   | 12.3   | 11.0   | 8.2    | 6.8    | 5.5    | 4.1    |
| 80°   | 16.4   | 12.3   | 9.6    | 8.2    | 6.8    | 5.5    | 5.5    | 4.1    | 2.7    | 2.7    | 1.4    |
| 82.5° | 5.5    | 4.1    | 2.7    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 0.0    | 1.4    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 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°    | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 |
| 2.5°  | 1140.2 | 1125.1 | 1129.2 | 1129.2 | 1126.5 | 1126.5 | 1123.8 | 1119.7 | 1121.0 | 1112.8 | 1095.0 |
| 5°    | 1127.9 | 1108.7 | 1106.0 | 1108.7 | 1097.8 | 1095.0 | 1089.5 | 1097.8 | 1073.1 | 1082.7 | 1071.8 |
| 7.5°  | 1092.3 | 1074.5 | 1070.4 | 1080.0 | 1066.3 | 1058.1 | 1056.7 | 1067.6 | 1045.7 | 1034.8 | 1022.5 |
| 10°   | 1052.6 | 1045.7 | 1033.4 | 1026.6 | 1022.5 | 1023.8 | 1012.9 | 999.2  | 995.1  | 992.4  | 981.4  |
| 12.5° | 1017.0 | 1001.9 | 991.0  | 982.8  | 980.0  | 980.0  | 962.3  | 959.5  | 947.2  | 944.5  | 928.0  |
| 15°   | 974.6  | 956.8  | 949.9  | 939.0  | 929.4  | 934.9  | 914.3  | 908.9  | 904.8  | 887.0  | 889.7  |
| 17.5° | 937.6  | 918.5  | 902.0  | 895.2  | 887.0  | 878.8  | 859.6  | 863.7  | 854.1  | 854.1  | 829.5  |
| 20°   | 889.7  | 869.2  | 856.9  | 843.2  | 843.2  | 832.2  | 818.5  | 819.9  | 807.6  | 795.3  | 773.4  |
| 22.5° | 839.1  | 817.2  | 802.1  | 796.6  | 782.9  | 780.2  | 763.8  | 759.7  | 743.2  | 744.6  | 725.5  |
| 25°   | 785.7  | 763.8  | 743.2  | 744.6  | 732.3  | 726.8  | 717.2  | 698.1  | 691.2  | 683.0  | 677.5  |
| 27.5° | 722.7  | 707.7  | 689.9  | 688.5  | 665.2  | 666.6  | 654.3  | 648.8  | 632.4  | 636.5  | 624.2  |
| 30°   | 665.2  | 643.3  | 626.9  | 622.8  | 613.2  | 610.5  | 591.3  | 583.1  | 585.8  | 574.9  | 568.0  |
| 32.5° | 606.4  | 573.5  | 566.7  | 558.5  | 553.0  | 546.1  | 532.5  | 537.9  | 525.6  | 528.3  | 517.4  |
| 35°   | 528.3  | 514.7  | 496.9  | 496.9  | 491.4  | 485.9  | 476.3  | 481.8  | 469.5  | 464.0  | 453.1  |
| 37.5° | 462.6  | 450.3  | 432.5  | 438.0  | 428.4  | 420.2  | 412.0  | 413.4  | 402.4  | 401.1  | 390.1  |
| 40°   | 391.5  | 384.6  | 372.3  | 372.3  | 365.5  | 365.5  | 361.4  | 357.3  | 350.4  | 342.2  | 329.9  |
| 42.5° | 324.4  | 318.9  | 313.5  | 314.8  | 305.2  | 313.5  | 302.5  | 309.3  | 287.4  | 286.1  | 277.9  |
| 45°   | 275.1  | 262.8  | 264.2  | 258.7  | 253.2  | 256.0  | 246.4  | 249.1  | 236.8  | 234.1  | 225.8  |
| 47.5° | 223.1  | 219.0  | 210.8  | 208.1  | 208.1  | 203.9  | 199.8  | 198.5  | 193.0  | 186.2  | 175.2  |
| 50°   | 183.4  | 168.4  | 165.6  | 161.5  | 158.8  | 158.8  | 153.3  | 145.1  | 146.5  | 139.6  | 128.7  |
| 52.5° | 143.7  | 131.4  | 125.9  | 124.6  | 119.1  | 116.3  | 109.5  | 104.0  | 99.9   | 97.2   | 90.3   |
| 55°   | 110.9  | 99.9   | 93.1   | 93.1   | 84.9   | 84.9   | 75.3   | 71.2   | 65.7   | 60.2   | 56.1   |
| 57.5° | 83.5   | 78.0   | 71.2   | 65.7   | 63.0   | 56.1   | 50.6   | 43.8   | 39.7   | 31.5   | 26.0   |
| 60°   | 63.0   | 57.5   | 50.6   | 46.5   | 43.8   | 37.0   | 30.1   | 24.6   | 15.1   | 12.3   | 11.0   |
| 62.5° | 46.5   | 41.1   | 34.2   | 31.5   | 28.7   | 23.3   | 16.4   | 8.2    | 4.1    | 4.1    | 4.1    |
| 65°   | 34.2   | 27.4   | 21.9   | 19.2   | 16.4   | 12.3   | 5.5    | 2.7    | 1.4    | 1.4    | 1.4    |
| 67.5° | 23.3   | 17.8   | 12.3   | 11.0   | 8.2    | 4.1    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 70°   | 15.1   | 11.0   | 5.5    | 4.1    | 2.7    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 72.5° | 9.6    | 5.5    | 2.7    | 1.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 5.5    | 2.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 2.7    | 1.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 1.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.4    | 1.4    | 1.4    |
| 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: P219507

CATALOG NUMBER: LDSQ4B20D010 EU4B10208050 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 | 1141.6 |
| 2.5°  | 1114.2 | 1104.6 | 1110.1 | 1097.8 | 1103.2 | 1112.8 | 1106.0 | 1108.7 |
| 5°    | 1075.9 | 1070.4 | 1063.5 | 1045.7 | 1059.4 | 1070.4 | 1064.9 | 1063.5 |
| 7.5°  | 1034.8 | 1015.6 | 1025.2 | 1019.7 | 1017.0 | 1028.0 | 1015.6 | 1029.3 |
| 10°   | 992.4  | 978.7  | 977.3  | 967.7  | 967.7  | 975.9  | 977.3  | 969.1  |
| 12.5° | 929.4  | 922.6  | 922.6  | 921.2  | 919.8  | 928.0  | 929.4  | 925.3  |
| 15°   | 884.2  | 881.5  | 874.7  | 873.3  | 865.1  | 877.4  | 878.8  | 877.4  |
| 17.5° | 829.5  | 830.8  | 824.0  | 824.0  | 829.5  | 833.6  | 822.6  | 833.6  |
| 20°   | 792.5  | 785.7  | 782.9  | 770.6  | 777.5  | 784.3  | 784.3  | 785.7  |
| 22.5° | 739.1  | 728.2  | 732.3  | 725.5  | 721.3  | 730.9  | 730.9  | 735.0  |
| 25°   | 678.9  | 678.9  | 681.7  | 677.5  | 680.3  | 685.8  | 681.7  | 691.2  |
| 27.5° | 621.4  | 626.9  | 626.9  | 621.4  | 624.2  | 640.6  | 647.4  | 636.5  |
| 30°   | 568.0  | 569.4  | 573.5  | 570.8  | 579.0  | 584.5  | 583.1  | 591.3  |
| 32.5° | 507.8  | 514.7  | 517.4  | 513.3  | 516.0  | 528.3  | 521.5  | 520.1  |
| 35°   | 461.3  | 449.0  | 447.6  | 449.0  | 454.4  | 457.2  | 454.4  | 464.0  |
| 37.5° | 394.2  | 390.1  | 384.6  | 386.0  | 390.1  | 395.6  | 398.3  | 405.2  |
| 40°   | 329.9  | 324.4  | 324.4  | 323.0  | 318.9  | 334.0  | 334.0  | 334.0  |
| 42.5° | 273.8  | 272.4  | 265.5  | 265.5  | 271.0  | 275.1  | 272.4  | 282.0  |
| 45°   | 224.5  | 219.0  | 214.9  | 214.9  | 219.0  | 219.0  | 223.1  | 221.7  |
| 47.5° | 176.6  | 171.1  | 172.5  | 168.4  | 172.5  | 177.9  | 171.1  | 172.5  |
| 50°   | 132.8  | 132.8  | 130.0  | 132.8  | 131.4  | 132.8  | 130.0  | 127.3  |
| 52.5° | 90.3   | 102.7  | 104.0  | 98.6   | 86.2   | 75.3   | 68.4   | 73.9   |
| 55°   | 52.0   | 46.5   | 46.5   | 45.2   | 42.4   | 41.1   | 37.0   | 41.1   |
| 57.5° | 26.0   | 23.3   | 23.3   | 23.3   | 21.9   | 20.5   | 17.8   | 17.8   |
| 60°   | 11.0   | 9.6    | 9.6    | 8.2    | 6.8    | 5.5    | 4.1    | 5.5    |
| 62.5° | 4.1    | 2.7    | 2.7    | 2.7    | 2.7    | 2.7    | 2.7    | 2.7    |
| 65°   | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 67.5° | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 70°   | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 72.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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)