

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: P219519

Luminaire Tested: **LDSQ4B30D010 EU4B30508040 4LBSQLWWLI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P219519
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: LDSQ4B30D010 EU4B30508040 4LBSQLWWLI
Description: PORTFOLIO 4 INCH SQUARE SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2358.9 lumens
Efficiency: N/A
Efficacy: 84.2 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

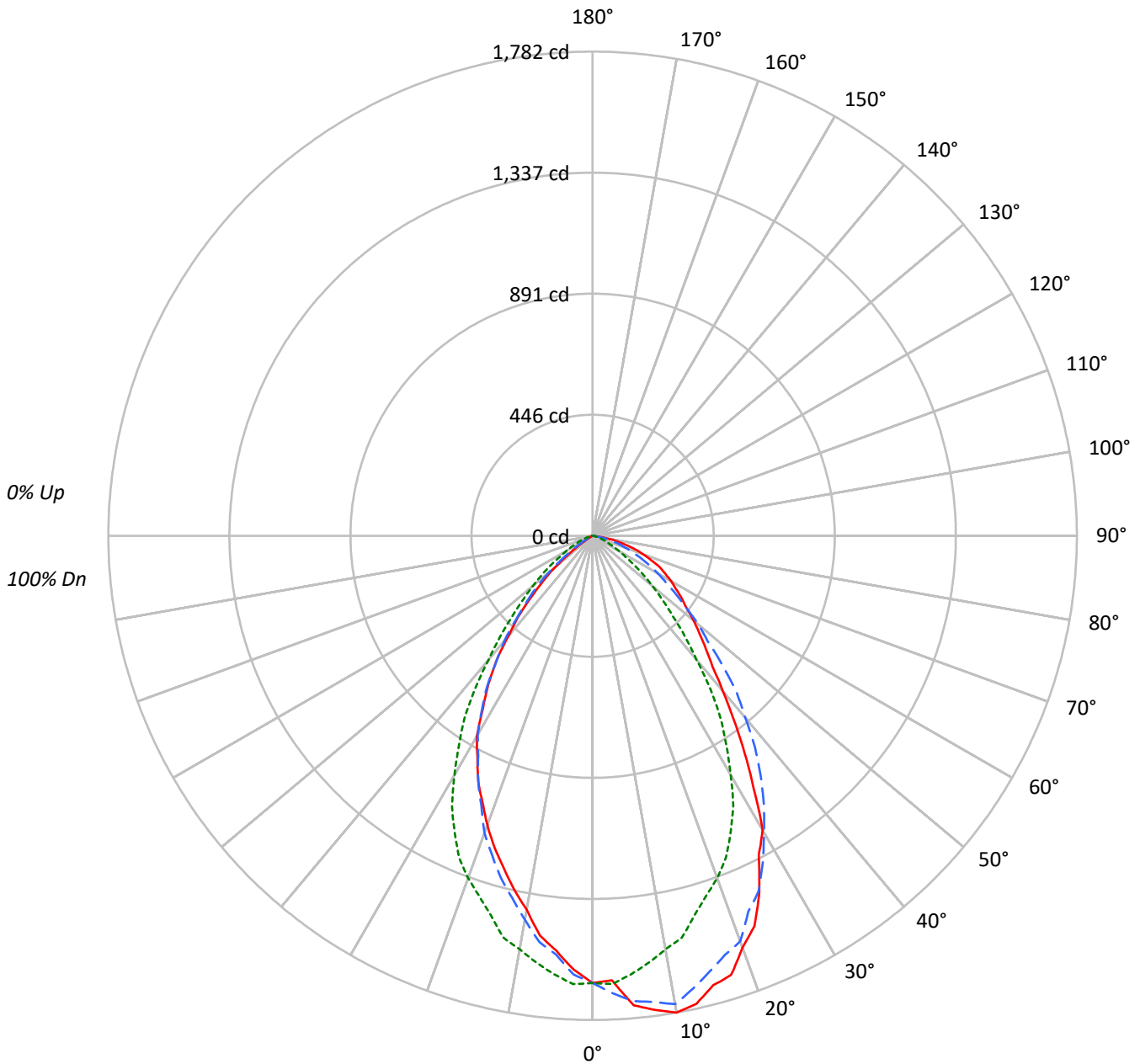
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P219519

CATALOG NUMBER: LDSQ4B30D010 EU4B30508040 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P219519

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF | 20 | | | | 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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | 90 |
| 2 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 84 | 82 | 80 | | | | 80 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 72 | | | | 72 |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 | | | | 64 |
| 5 | 85 | 75 | 67 | 62 | 83 | 74 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 64 | 60 | 58 | | | | 58 |
| 6 | 80 | 69 | 61 | 56 | 78 | 68 | 61 | 56 | 66 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 53 | | | | 53 |
| 7 | 75 | 63 | 56 | 51 | 73 | 63 | 56 | 51 | 61 | 55 | 50 | 60 | 54 | 50 | 59 | 54 | 50 | 48 | | | | 48 |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 46 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | 44 |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 51 | 46 | 42 | 41 | | | | 41 |
| 10 | 62 | 51 | 44 | 40 | 61 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | | 38 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 159428 | 159428 | 159428 |
| 5° | 168672 | 157538 | 149097 |
| 10° | 175285 | 151991 | 137433 |
| 15° | 171782 | 145064 | 126860 |
| 20° | 166206 | 138124 | 116773 |
| 25° | 155023 | 128450 | 106516 |
| 30° | 139939 | 113674 | 95351 |
| 35° | 115283 | 97307 | 79106 |
| 40° | 94075 | 75118 | 60891 |
| 45° | 80832 | 57048 | 43800 |
| 50° | 73155 | 43420 | 27656 |
| 55° | 67322 | 31330 | 9999 |
| 60° | 64616 | 21409 | 1531 |
| 65° | 62418 | 14464 | 458 |
| 70° | 55884 | 10055 | 566 |
| 75° | 45777 | 5165 | 0 |
| 80° | 28619 | 2176 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 154.2 | 6.5 |
| 10°-20° | 415.4 | 17.6 |
| 20°-30° | 554.7 | 23.5 |
| 30°-40° | 526.6 | 22.3 |
| 40°-50° | 364.0 | 15.4 |
| 50°-60° | 201.1 | 8.5 |
| 60°-70° | 99.9 | 4.2 |
| 70°-80° | 39.3 | 1.7 |
| 80°-90° | 3.7 | 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° | 1124.3 | 47.7 |
| 0°-40° | 1650.9 | 70.0 |
| 0°-60° | 2216.0 | 93.9 |
| 0°-90° | 2358.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2358.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1646 | 1646 | 1646 | 1646 | 1646 | |
| 5° | 1734 | 1719 | 1620 | 1547 | 1533 | 166 |
| 15° | 1713 | 1662 | 1446 | 1304 | 1265 | 485 |
| 25° | 1450 | 1444 | 1202 | 996 | 996 | 661 |
| 35° | 975 | 1077 | 823 | 677 | 669 | 611 |
| 45° | 590 | 677 | 416 | 341 | 320 | 460 |
| 55° | 399 | 375 | 186 | 95 | 59 | 359 |
| 65° | 272 | 197 | 63 | 2 | 2 | 264 |
| 75° | 122 | 75 | 14 | 0 | 0 | 130 |
| 85° | 0 | 2 | 0 | 0 | 0 | 11 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P219519

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 |
| 2.5° | 1637.8 | 1683.2 | 1687.1 | 1683.2 | 1689.1 | 1687.1 | 1697.0 | 1687.1 | 1699.0 | 1681.2 | 1685.2 |
| 5° | 1734.5 | 1716.7 | 1754.2 | 1734.5 | 1734.5 | 1732.5 | 1726.6 | 1724.6 | 1732.5 | 1706.9 | 1718.7 |
| 7.5° | 1760.1 | 1785.8 | 1819.3 | 1777.9 | 1779.9 | 1779.9 | 1768.0 | 1764.1 | 1764.1 | 1716.7 | 1730.5 |
| 10° | 1781.9 | 1766.1 | 1783.8 | 1768.0 | 1781.9 | 1779.9 | 1787.8 | 1762.1 | 1779.9 | 1752.3 | 1750.3 |
| 12.5° | 1764.1 | 1758.2 | 1781.9 | 1756.2 | 1748.3 | 1750.3 | 1740.4 | 1734.5 | 1740.4 | 1708.8 | 1706.9 |
| 15° | 1712.8 | 1718.7 | 1754.2 | 1726.6 | 1722.7 | 1718.7 | 1706.9 | 1687.1 | 1702.9 | 1659.5 | 1661.5 |
| 17.5° | 1695.0 | 1685.2 | 1691.1 | 1667.4 | 1673.3 | 1669.4 | 1667.4 | 1649.6 | 1645.7 | 1618.1 | 1618.1 |
| 20° | 1612.2 | 1633.9 | 1633.9 | 1618.1 | 1618.1 | 1616.1 | 1590.4 | 1606.2 | 1588.5 | 1580.6 | 1588.5 |
| 22.5° | 1554.9 | 1556.9 | 1556.9 | 1543.1 | 1545.1 | 1537.2 | 1523.4 | 1513.5 | 1523.4 | 1513.5 | 1497.7 |
| 25° | 1450.3 | 1454.3 | 1478.0 | 1452.3 | 1448.4 | 1456.3 | 1444.4 | 1438.5 | 1436.5 | 1412.9 | 1444.4 |
| 27.5° | 1324.1 | 1363.5 | 1361.5 | 1351.7 | 1363.5 | 1347.7 | 1341.8 | 1343.8 | 1349.7 | 1347.7 | 1355.6 |
| 30° | 1251.0 | 1257.0 | 1262.9 | 1255.0 | 1257.0 | 1251.0 | 1251.0 | 1253.0 | 1268.8 | 1262.9 | 1260.9 |
| 32.5° | 1103.1 | 1122.8 | 1138.6 | 1138.6 | 1140.5 | 1146.5 | 1144.5 | 1185.9 | 1195.8 | 1176.1 | 1172.1 |
| 35° | 974.8 | 988.6 | 1002.4 | 1004.4 | 1030.0 | 1032.0 | 1034.0 | 1045.8 | 1073.5 | 1079.4 | 1077.4 |
| 37.5° | 852.4 | 866.3 | 870.2 | 888.0 | 901.8 | 915.6 | 931.4 | 947.2 | 970.8 | 990.6 | 980.7 |
| 40° | 743.9 | 749.8 | 759.7 | 767.6 | 795.2 | 795.2 | 803.1 | 834.7 | 860.3 | 876.1 | 874.2 |
| 42.5° | 653.1 | 655.1 | 663.0 | 676.8 | 702.5 | 696.6 | 702.5 | 724.2 | 761.7 | 763.7 | 785.4 |
| 45° | 590.0 | 588.0 | 594.0 | 595.9 | 611.7 | 619.6 | 623.5 | 639.3 | 670.9 | 674.9 | 676.8 |
| 47.5° | 532.8 | 530.8 | 540.7 | 544.6 | 550.5 | 558.4 | 558.4 | 560.4 | 572.2 | 582.1 | 574.2 |
| 50° | 485.4 | 485.4 | 485.4 | 489.4 | 499.2 | 497.3 | 499.2 | 507.1 | 513.0 | 509.1 | 507.1 |
| 52.5° | 434.1 | 442.0 | 447.9 | 449.9 | 451.9 | 451.9 | 453.8 | 449.9 | 447.9 | 442.0 | 430.2 |
| 55° | 398.6 | 406.5 | 406.5 | 406.5 | 406.5 | 414.4 | 404.5 | 406.5 | 406.5 | 390.7 | 374.9 |
| 57.5° | 363.1 | 371.0 | 376.9 | 369.0 | 376.9 | 369.0 | 365.1 | 363.1 | 359.1 | 343.3 | 319.7 |
| 60° | 333.5 | 337.4 | 335.5 | 333.5 | 337.4 | 331.5 | 327.6 | 319.7 | 315.7 | 294.0 | 278.2 |
| 62.5° | 299.9 | 301.9 | 303.9 | 299.9 | 296.0 | 294.0 | 286.1 | 274.3 | 266.4 | 248.6 | 234.8 |
| 65° | 272.3 | 266.4 | 264.4 | 262.4 | 258.5 | 252.6 | 246.7 | 232.8 | 226.9 | 211.1 | 197.3 |
| 67.5° | 230.9 | 228.9 | 232.8 | 226.9 | 217.1 | 217.1 | 211.1 | 199.3 | 185.5 | 175.6 | 161.8 |
| 70° | 197.3 | 195.4 | 191.4 | 185.5 | 183.5 | 175.6 | 175.6 | 161.8 | 157.9 | 140.1 | 128.3 |
| 72.5° | 161.8 | 161.8 | 155.9 | 150.0 | 144.0 | 140.1 | 138.1 | 128.3 | 122.3 | 112.5 | 102.6 |
| 75° | 122.3 | 122.3 | 120.4 | 114.4 | 110.5 | 106.6 | 104.6 | 96.7 | 90.8 | 80.9 | 75.0 |
| 77.5° | 86.8 | 86.8 | 78.9 | 75.0 | 77.0 | 73.0 | 69.1 | 67.1 | 65.1 | 59.2 | 51.3 |
| 80° | 51.3 | 49.3 | 43.4 | 45.4 | 43.4 | 43.4 | 41.4 | 39.5 | 35.5 | 31.6 | 27.6 |
| 82.5° | 13.8 | 15.8 | 15.8 | 15.8 | 17.8 | 13.8 | 13.8 | 13.8 | 15.8 | 15.8 | 9.9 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 |
| 87.5° | 2.0 | 3.9 | 7.9 | 7.9 | 7.9 | 7.9 | 7.9 | 5.9 | 5.9 | 5.9 | 3.9 |
| 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° | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 |
| 2.5° | 1665.4 | 1663.5 | 1665.4 | 1651.6 | 1683.2 | 1659.5 | 1655.6 | 1651.6 | 1665.4 | 1651.6 | 1631.9 |
| 5° | 1700.9 | 1681.2 | 1675.3 | 1669.4 | 1687.1 | 1659.5 | 1653.6 | 1655.6 | 1645.7 | 1620.0 | 1622.0 |
| 7.5° | 1712.8 | 1695.0 | 1677.3 | 1639.8 | 1655.6 | 1649.6 | 1633.9 | 1622.0 | 1606.2 | 1584.5 | 1580.6 |
| 10° | 1716.7 | 1697.0 | 1671.4 | 1659.5 | 1635.8 | 1627.9 | 1622.0 | 1602.3 | 1582.6 | 1545.1 | 1535.2 |
| 12.5° | 1704.9 | 1681.2 | 1649.6 | 1639.8 | 1622.0 | 1596.4 | 1582.6 | 1562.8 | 1545.1 | 1515.5 | 1493.8 |
| 15° | 1653.6 | 1633.9 | 1624.0 | 1590.4 | 1582.6 | 1566.8 | 1539.1 | 1511.5 | 1485.9 | 1446.4 | 1434.6 |
| 17.5° | 1594.4 | 1586.5 | 1576.6 | 1551.0 | 1549.0 | 1533.2 | 1507.6 | 1483.9 | 1450.3 | 1389.2 | 1369.4 |
| 20° | 1533.2 | 1533.2 | 1501.7 | 1491.8 | 1511.5 | 1479.9 | 1460.2 | 1438.5 | 1369.4 | 1339.8 | 1304.3 |
| 22.5° | 1487.8 | 1466.1 | 1448.4 | 1432.6 | 1434.6 | 1414.8 | 1387.2 | 1343.8 | 1318.1 | 1282.6 | 1241.2 |
| 25° | 1399.0 | 1406.9 | 1367.5 | 1361.5 | 1367.5 | 1322.1 | 1308.3 | 1272.8 | 1235.3 | 1201.7 | 1170.1 |
| 27.5° | 1343.8 | 1322.1 | 1296.4 | 1274.7 | 1274.7 | 1257.0 | 1217.5 | 1209.6 | 1152.4 | 1120.8 | 1081.3 |
| 30° | 1260.9 | 1245.1 | 1223.4 | 1191.8 | 1187.9 | 1174.1 | 1142.5 | 1122.8 | 1063.6 | 1016.2 | 994.5 |
| 32.5° | 1156.3 | 1150.4 | 1132.7 | 1097.1 | 1085.3 | 1069.5 | 1030.0 | 996.5 | 968.9 | 915.6 | 889.9 |
| 35° | 1081.3 | 1059.6 | 1022.1 | 992.5 | 982.7 | 955.1 | 923.5 | 899.8 | 870.2 | 822.8 | 789.3 |
| 37.5° | 968.9 | 947.2 | 911.6 | 876.1 | 876.1 | 848.5 | 805.1 | 781.4 | 740.0 | 712.3 | 684.7 |
| 40° | 870.2 | 842.6 | 807.1 | 765.6 | 759.7 | 720.2 | 702.5 | 663.0 | 637.4 | 594.0 | 590.0 |
| 42.5° | 759.7 | 734.1 | 702.5 | 670.9 | 647.2 | 627.5 | 582.1 | 552.5 | 524.9 | 503.2 | 497.3 |
| 45° | 659.1 | 625.5 | 597.9 | 558.4 | 534.8 | 511.1 | 481.5 | 461.7 | 440.0 | 416.4 | 402.5 |
| 47.5° | 572.2 | 544.6 | 505.2 | 469.6 | 446.0 | 434.1 | 400.6 | 378.9 | 361.1 | 345.3 | 335.5 |
| 50° | 483.4 | 449.9 | 428.2 | 388.7 | 384.8 | 357.2 | 329.5 | 311.8 | 301.9 | 288.1 | 274.3 |
| 52.5° | 416.4 | 384.8 | 355.2 | 325.6 | 309.8 | 299.9 | 274.3 | 256.5 | 242.7 | 232.8 | 225.0 |
| 55° | 351.2 | 323.6 | 299.9 | 270.3 | 260.5 | 246.7 | 217.1 | 213.1 | 199.3 | 185.5 | 175.6 |
| 57.5° | 301.9 | 276.3 | 248.6 | 228.9 | 211.1 | 201.3 | 177.6 | 161.8 | 153.9 | 142.1 | 132.2 |
| 60° | 256.5 | 228.9 | 207.2 | 183.5 | 175.6 | 161.8 | 144.0 | 130.2 | 120.4 | 110.5 | 100.6 |
| 62.5° | 215.1 | 191.4 | 167.7 | 148.0 | 136.2 | 128.3 | 114.4 | 102.6 | 92.7 | 84.9 | 77.0 |
| 65° | 177.6 | 155.9 | 136.2 | 116.4 | 110.5 | 100.6 | 90.8 | 80.9 | 73.0 | 63.1 | 55.3 |
| 67.5° | 146.0 | 126.3 | 106.6 | 92.7 | 86.8 | 82.9 | 71.0 | 61.2 | 55.3 | 49.3 | 41.4 |
| 70° | 114.4 | 100.6 | 84.9 | 73.0 | 67.1 | 61.2 | 53.3 | 47.4 | 39.5 | 35.5 | 29.6 |
| 72.5° | 88.8 | 77.0 | 63.1 | 53.3 | 49.3 | 45.4 | 37.5 | 31.6 | 27.6 | 23.7 | 19.7 |
| 75° | 63.1 | 53.3 | 45.4 | 35.5 | 33.5 | 31.6 | 25.7 | 21.7 | 17.8 | 13.8 | 11.8 |
| 77.5° | 43.4 | 35.5 | 27.6 | 23.7 | 21.7 | 17.8 | 15.8 | 11.8 | 9.9 | 7.9 | 5.9 |
| 80° | 23.7 | 17.8 | 13.8 | 11.8 | 9.9 | 7.9 | 7.9 | 5.9 | 3.9 | 3.9 | 2.0 |
| 82.5° | 7.9 | 5.9 | 3.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 |
| 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° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 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 |



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CANDELA DISTRIBUTION (continued):

| | 100° | 105° | 110° | 112.5° | 115° | 120° | 125° | 130° | 135° | 140° | 145° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 |
| 2.5° | 1643.7 | 1622.0 | 1627.9 | 1627.9 | 1624.0 | 1624.0 | 1620.0 | 1614.1 | 1616.1 | 1604.3 | 1578.6 |
| 5° | 1626.0 | 1598.3 | 1594.4 | 1598.3 | 1582.6 | 1578.6 | 1570.7 | 1582.6 | 1547.0 | 1560.8 | 1545.1 |
| 7.5° | 1574.7 | 1549.0 | 1543.1 | 1556.9 | 1537.2 | 1525.3 | 1523.4 | 1539.1 | 1507.6 | 1491.8 | 1474.0 |
| 10° | 1517.4 | 1507.6 | 1489.8 | 1479.9 | 1474.0 | 1476.0 | 1460.2 | 1440.5 | 1434.6 | 1430.6 | 1414.8 |
| 12.5° | 1466.1 | 1444.4 | 1428.6 | 1416.8 | 1412.9 | 1412.9 | 1387.2 | 1383.3 | 1365.5 | 1361.5 | 1337.9 |
| 15° | 1405.0 | 1379.3 | 1369.4 | 1353.7 | 1339.8 | 1347.7 | 1318.1 | 1310.2 | 1304.3 | 1278.7 | 1282.6 |
| 17.5° | 1351.7 | 1324.1 | 1300.4 | 1290.5 | 1278.7 | 1266.8 | 1239.2 | 1245.1 | 1231.3 | 1231.3 | 1195.8 |
| 20° | 1282.6 | 1253.0 | 1235.3 | 1215.5 | 1215.5 | 1199.7 | 1180.0 | 1182.0 | 1164.2 | 1146.5 | 1114.9 |
| 22.5° | 1209.6 | 1178.0 | 1156.3 | 1148.4 | 1128.7 | 1124.8 | 1101.1 | 1095.2 | 1071.5 | 1073.5 | 1045.8 |
| 25° | 1132.7 | 1101.1 | 1071.5 | 1073.5 | 1055.7 | 1047.8 | 1034.0 | 1006.4 | 996.5 | 984.7 | 976.8 |
| 27.5° | 1041.9 | 1020.2 | 994.5 | 992.5 | 959.0 | 961.0 | 943.2 | 935.3 | 911.6 | 917.6 | 899.8 |
| 30° | 959.0 | 927.4 | 903.8 | 897.8 | 884.0 | 880.1 | 852.4 | 840.6 | 844.6 | 828.8 | 818.9 |
| 32.5° | 874.2 | 826.8 | 816.9 | 805.1 | 797.2 | 787.3 | 767.6 | 775.5 | 757.7 | 761.7 | 745.9 |
| 35° | 761.7 | 741.9 | 716.3 | 716.3 | 708.4 | 700.5 | 686.7 | 694.6 | 676.8 | 668.9 | 653.1 |
| 37.5° | 667.0 | 649.2 | 623.5 | 631.4 | 617.6 | 605.8 | 594.0 | 595.9 | 580.1 | 578.2 | 562.4 |
| 40° | 564.4 | 554.5 | 536.7 | 536.7 | 526.9 | 526.9 | 520.9 | 515.0 | 505.2 | 493.3 | 475.6 |
| 42.5° | 467.7 | 459.8 | 451.9 | 453.8 | 440.0 | 451.9 | 436.1 | 446.0 | 414.4 | 412.4 | 400.6 |
| 45° | 396.6 | 378.9 | 380.8 | 372.9 | 365.1 | 369.0 | 355.2 | 359.1 | 341.4 | 337.4 | 325.6 |
| 47.5° | 321.6 | 315.7 | 303.9 | 299.9 | 299.9 | 294.0 | 288.1 | 286.1 | 278.2 | 268.4 | 252.6 |
| 50° | 264.4 | 242.7 | 238.8 | 232.8 | 228.9 | 228.9 | 221.0 | 209.2 | 211.1 | 201.3 | 185.5 |
| 52.5° | 207.2 | 189.4 | 181.5 | 179.6 | 171.7 | 167.7 | 157.9 | 150.0 | 144.0 | 140.1 | 130.2 |
| 55° | 159.8 | 144.0 | 134.2 | 134.2 | 122.3 | 122.3 | 108.5 | 102.6 | 94.7 | 86.8 | 80.9 |
| 57.5° | 120.4 | 112.5 | 102.6 | 94.7 | 90.8 | 80.9 | 73.0 | 63.1 | 57.2 | 45.4 | 37.5 |
| 60° | 90.8 | 82.9 | 73.0 | 67.1 | 63.1 | 53.3 | 43.4 | 35.5 | 21.7 | 17.8 | 15.8 |
| 62.5° | 67.1 | 59.2 | 49.3 | 45.4 | 41.4 | 33.5 | 23.7 | 11.8 | 5.9 | 5.9 | 5.9 |
| 65° | 49.3 | 39.5 | 31.6 | 27.6 | 23.7 | 17.8 | 7.9 | 3.9 | 2.0 | 2.0 | 2.0 |
| 67.5° | 33.5 | 25.7 | 17.8 | 15.8 | 11.8 | 5.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 70° | 21.7 | 15.8 | 7.9 | 5.9 | 3.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 72.5° | 13.8 | 7.9 | 3.9 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 7.9 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 3.9 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 2.0 | 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 | 2.0 | 2.0 | 2.0 |
| 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: P219519

CATALOG NUMBER: LDSQ4B30D010 EU4B30508040 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

| | 150° | 155° | 157.5° | 160° | 165° | 170° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 | 1645.7 |
| 2.5° | 1606.2 | 1592.4 | 1600.3 | 1582.6 | 1590.4 | 1604.3 | 1594.4 | 1598.3 |
| 5° | 1551.0 | 1543.1 | 1533.2 | 1507.6 | 1527.3 | 1543.1 | 1535.2 | 1533.2 |
| 7.5° | 1491.8 | 1464.2 | 1478.0 | 1470.1 | 1466.1 | 1481.9 | 1464.2 | 1483.9 |
| 10° | 1430.6 | 1410.9 | 1408.9 | 1395.1 | 1395.1 | 1406.9 | 1408.9 | 1397.1 |
| 12.5° | 1339.8 | 1330.0 | 1330.0 | 1328.0 | 1326.0 | 1337.9 | 1339.8 | 1333.9 |
| 15° | 1274.7 | 1270.8 | 1260.9 | 1258.9 | 1247.1 | 1264.9 | 1266.8 | 1264.9 |
| 17.5° | 1195.8 | 1197.8 | 1187.9 | 1187.9 | 1195.8 | 1201.7 | 1185.9 | 1201.7 |
| 20° | 1142.5 | 1132.7 | 1128.7 | 1110.9 | 1120.8 | 1130.7 | 1130.7 | 1132.7 |
| 22.5° | 1065.6 | 1049.8 | 1055.7 | 1045.8 | 1039.9 | 1053.7 | 1053.7 | 1059.6 |
| 25° | 978.7 | 978.7 | 982.7 | 976.8 | 980.7 | 988.6 | 982.7 | 996.5 |
| 27.5° | 895.9 | 903.8 | 903.8 | 895.9 | 899.8 | 923.5 | 933.4 | 917.6 |
| 30° | 818.9 | 820.9 | 826.8 | 822.8 | 834.7 | 842.6 | 840.6 | 852.4 |
| 32.5° | 732.1 | 741.9 | 745.9 | 740.0 | 743.9 | 761.7 | 751.8 | 749.8 |
| 35° | 665.0 | 647.2 | 645.3 | 647.2 | 655.1 | 659.1 | 655.1 | 668.9 |
| 37.5° | 568.3 | 562.4 | 554.5 | 556.5 | 562.4 | 570.3 | 574.2 | 584.1 |
| 40° | 475.6 | 467.7 | 467.7 | 465.7 | 459.8 | 481.5 | 481.5 | 481.5 |
| 42.5° | 394.7 | 392.7 | 382.8 | 382.8 | 390.7 | 396.6 | 392.7 | 406.5 |
| 45° | 323.6 | 315.7 | 309.8 | 309.8 | 315.7 | 315.7 | 321.6 | 319.7 |
| 47.5° | 254.6 | 246.7 | 248.6 | 242.7 | 248.6 | 256.5 | 246.7 | 248.6 |
| 50° | 191.4 | 191.4 | 187.5 | 191.4 | 189.4 | 191.4 | 187.5 | 183.5 |
| 52.5° | 130.2 | 148.0 | 150.0 | 142.1 | 124.3 | 108.5 | 98.7 | 106.6 |
| 55° | 75.0 | 67.1 | 67.1 | 65.1 | 61.2 | 59.2 | 53.3 | 59.2 |
| 57.5° | 37.5 | 33.5 | 33.5 | 33.5 | 31.6 | 29.6 | 25.7 | 25.7 |
| 60° | 15.8 | 13.8 | 13.8 | 11.8 | 9.9 | 7.9 | 5.9 | 7.9 |
| 62.5° | 5.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 65° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 67.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 70° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 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)