

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: PORTFOLIO

Report Number: P183622

Luminaire Tested: **LSM55M9027D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183622
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27020)
Test Lab: INNOVATION CENTER-P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LSM55M9027D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 90 CRI, 2700K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4694.2 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

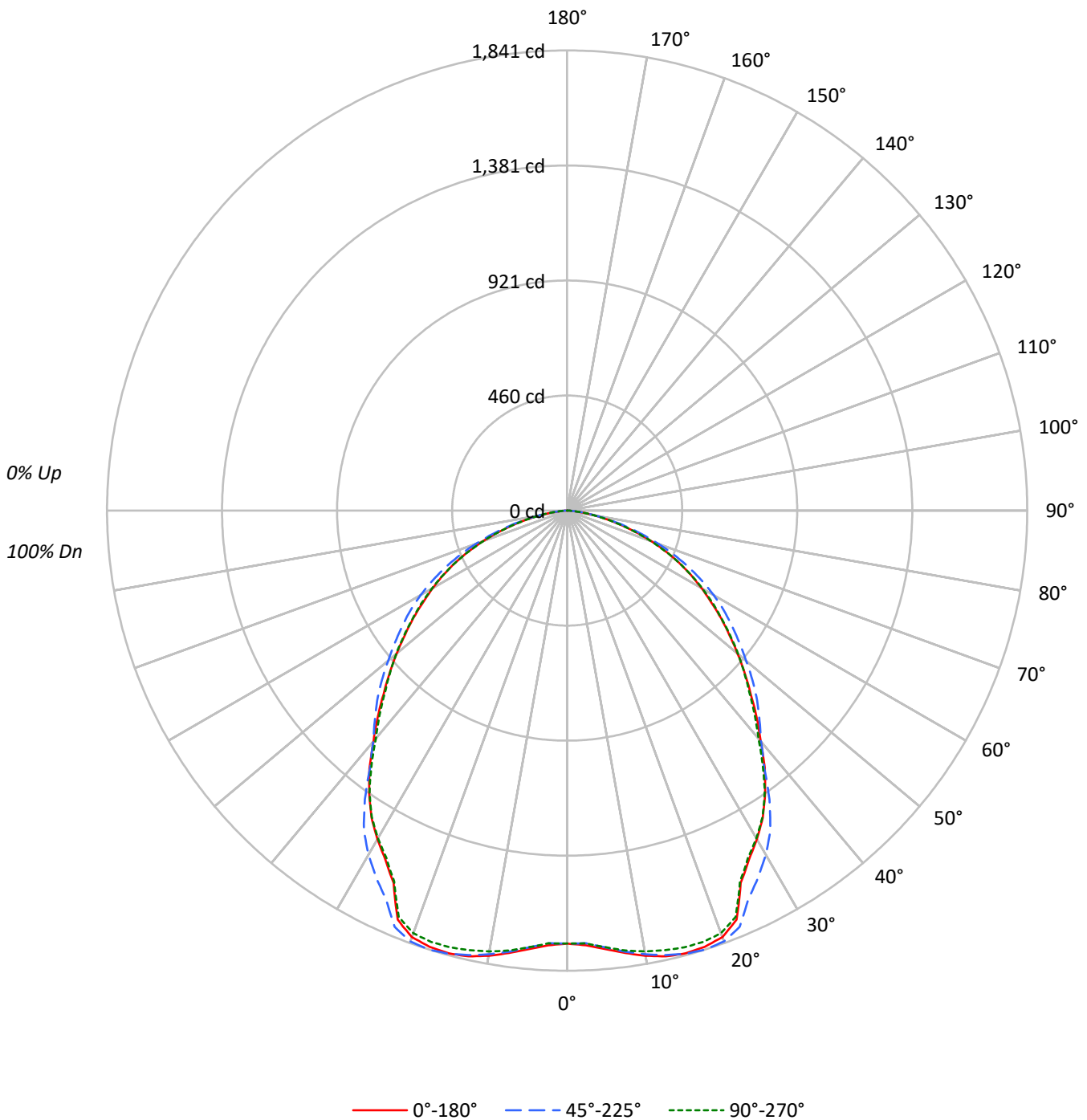
Input Watts (W): 56.22
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P183622

CATALOG NUMBER: LSM55M9027D010TEP

Luminous Intensity Polar Plot





TEST NUMBER: P183622

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|-----|
| RF | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | | 106 | 106 | 106 | | 102 | 102 | 102 | 100 |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | | 95 | 92 | 90 | | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 80 | 98 | 90 | 85 | 79 | 87 | 82 | 78 | | 84 | 80 | 76 | | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | | 74 | 69 | 65 | | 72 | 67 | 64 | 61 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 63 | 57 | 69 | 62 | 57 | | 67 | 61 | 56 | | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 56 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 49 | | 60 | 54 | 49 | | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | | 54 | 48 | 43 | | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | | 50 | 43 | 38 | | 48 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | | 46 | 39 | 34 | | 45 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 32 | 57 | 44 | 37 | 32 | 43 | 36 | 31 | | 42 | 36 | 31 | | 41 | 35 | 31 | 29 |
| 10 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 29 | | 39 | 33 | 28 | | 38 | 33 | 28 | 27 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18759 | 18759 | 18759 |
| 5° | 19142 | 19068 | 19062 |
| 10° | 19885 | 19823 | 19693 |
| 15° | 20560 | 20575 | 20281 |
| 20° | 20926 | 21134 | 20732 |
| 25° | 19632 | 20490 | 19558 |
| 30° | 18978 | 19875 | 18923 |
| 35° | 18249 | 18646 | 18216 |
| 40° | 17037 | 17045 | 16834 |
| 45° | 15916 | 16460 | 15792 |
| 50° | 14987 | 15753 | 15049 |
| 55° | 14192 | 15203 | 14250 |
| 60° | 13456 | 14658 | 13564 |
| 65° | 12660 | 13747 | 12642 |
| 70° | 11357 | 12265 | 11297 |
| 75° | 9343 | 10075 | 9372 |
| 80° | 6810 | 7277 | 7003 |
| 85° | 3951 | 4187 | 4113 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 169.9 | 3.6 |
| 10°-20° | 519.4 | 11.1 |
| 20°-30° | 779.9 | 16.6 |
| 30°-40° | 853.8 | 18.2 |
| 40°-50° | 835.1 | 17.8 |
| 50°-60° | 720.6 | 15.4 |
| 60°-70° | 515.2 | 11.0 |
| 70°-80° | 253.1 | 5.4 |
| 80°-90° | 47.2 | 1.0 |
| 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° | 1469.3 | 31.3 |
| 0°-40° | 2323.0 | 49.5 |
| 0°-60° | 3878.8 | 82.6 |
| 0°-90° | 4694.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4694.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1732 | 1732 | 1732 | 1732 | 1732 | |
| 5° | 1761 | 1776 | 1754 | 1768 | 1754 | 170 |
| 15° | 1834 | 1859 | 1835 | 1837 | 1809 | 518 |
| 25° | 1643 | 1740 | 1715 | 1729 | 1637 | 766 |
| 35° | 1380 | 1359 | 1410 | 1343 | 1378 | 860 |
| 45° | 1039 | 1108 | 1075 | 1096 | 1031 | 805 |
| 55° | 752 | 820 | 805 | 812 | 755 | 673 |
| 65° | 494 | 521 | 536 | 516 | 493 | 487 |
| 75° | 223 | 236 | 241 | 231 | 224 | 240 |
| 85° | 32 | 34 | 34 | 33 | 33 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P183622

CATALOG NUMBER: LSM55M9027D010TEP

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 |
| 2.5° | 1740.5 | 1754.8 | 1742.9 | 1740.5 | 1730.5 | 1754.2 | 1745.4 | 1747.3 | 1740.5 | 1741.7 | 1732.3 |
| 5° | 1761.0 | 1776.0 | 1764.8 | 1761.7 | 1751.7 | 1776.0 | 1767.3 | 1768.5 | 1761.7 | 1763.5 | 1754.2 |
| 7.5° | 1785.4 | 1801.0 | 1789.1 | 1787.2 | 1777.9 | 1802.2 | 1794.1 | 1795.3 | 1787.9 | 1789.1 | 1779.8 |
| 10° | 1808.4 | 1825.3 | 1813.4 | 1812.2 | 1802.8 | 1829.0 | 1820.3 | 1821.6 | 1812.8 | 1813.4 | 1802.8 |
| 12.5° | 1826.5 | 1844.0 | 1832.2 | 1832.2 | 1823.4 | 1848.4 | 1841.5 | 1842.8 | 1834.0 | 1834.0 | 1821.6 |
| 15° | 1834.0 | 1852.1 | 1839.6 | 1841.5 | 1832.8 | 1859.0 | 1852.7 | 1853.4 | 1845.9 | 1847.8 | 1835.3 |
| 17.5° | 1829.7 | 1847.8 | 1836.5 | 1837.8 | 1829.7 | 1856.5 | 1850.2 | 1852.7 | 1846.5 | 1851.5 | 1840.9 |
| 20° | 1815.9 | 1832.2 | 1818.4 | 1819.7 | 1813.4 | 1840.3 | 1835.9 | 1840.3 | 1835.9 | 1843.4 | 1834.0 |
| 22.5° | 1771.6 | 1786.6 | 1779.1 | 1787.2 | 1786.0 | 1814.7 | 1812.2 | 1815.9 | 1809.1 | 1812.8 | 1802.8 |
| 25° | 1643.1 | 1662.5 | 1660.0 | 1683.1 | 1704.9 | 1740.5 | 1738.0 | 1739.2 | 1724.9 | 1726.1 | 1714.9 |
| 27.5° | 1574.5 | 1590.7 | 1581.4 | 1582.6 | 1573.9 | 1593.9 | 1595.1 | 1626.3 | 1645.0 | 1661.9 | 1654.4 |
| 30° | 1517.8 | 1530.2 | 1507.8 | 1492.2 | 1469.7 | 1489.7 | 1488.4 | 1515.9 | 1548.9 | 1588.2 | 1589.5 |
| 32.5° | 1456.6 | 1460.4 | 1428.5 | 1407.3 | 1399.2 | 1420.4 | 1419.2 | 1427.3 | 1452.2 | 1494.7 | 1513.4 |
| 35° | 1380.5 | 1383.6 | 1344.3 | 1338.1 | 1338.1 | 1359.3 | 1354.3 | 1356.8 | 1370.5 | 1398.0 | 1410.5 |
| 37.5° | 1298.8 | 1294.4 | 1272.0 | 1273.2 | 1278.2 | 1297.5 | 1293.8 | 1293.8 | 1298.2 | 1310.6 | 1295.0 |
| 40° | 1205.2 | 1210.2 | 1203.3 | 1209.6 | 1214.0 | 1232.7 | 1230.8 | 1232.0 | 1230.2 | 1223.3 | 1205.8 |
| 42.5° | 1122.2 | 1134.7 | 1142.2 | 1149.7 | 1150.3 | 1168.4 | 1167.2 | 1172.2 | 1162.8 | 1144.7 | 1139.1 |
| 45° | 1039.3 | 1054.3 | 1074.8 | 1089.8 | 1091.1 | 1108.5 | 1108.5 | 1109.8 | 1090.4 | 1077.3 | 1074.8 |
| 47.5° | 964.4 | 980.0 | 1001.2 | 1023.7 | 1027.4 | 1045.5 | 1045.5 | 1042.4 | 1021.8 | 1013.7 | 1005.6 |
| 50° | 889.6 | 909.5 | 929.5 | 956.3 | 958.2 | 971.9 | 972.5 | 969.4 | 960.1 | 950.1 | 935.1 |
| 52.5° | 818.4 | 842.8 | 862.1 | 884.0 | 885.2 | 896.4 | 893.9 | 896.4 | 897.7 | 886.4 | 868.4 |
| 55° | 751.7 | 776.7 | 793.5 | 809.1 | 812.2 | 819.7 | 814.7 | 822.8 | 830.3 | 820.3 | 805.3 |
| 57.5° | 683.1 | 709.9 | 724.3 | 734.9 | 737.4 | 743.6 | 738.6 | 749.2 | 759.2 | 752.9 | 743.0 |
| 60° | 621.3 | 642.5 | 652.5 | 662.5 | 663.1 | 669.4 | 665.0 | 675.6 | 686.8 | 683.7 | 676.8 |
| 62.5° | 557.7 | 572.7 | 580.2 | 590.8 | 587.6 | 593.9 | 595.7 | 605.1 | 613.2 | 613.8 | 608.2 |
| 65° | 494.1 | 502.2 | 508.4 | 514.7 | 515.9 | 520.9 | 522.8 | 526.5 | 539.0 | 540.2 | 536.5 |
| 67.5° | 426.7 | 431.7 | 437.3 | 442.9 | 442.3 | 447.3 | 452.3 | 456.0 | 464.1 | 467.2 | 462.2 |
| 70° | 358.7 | 364.9 | 368.1 | 370.5 | 369.9 | 374.9 | 379.3 | 382.4 | 389.9 | 391.8 | 387.4 |
| 72.5° | 290.1 | 296.3 | 298.8 | 299.4 | 298.8 | 304.4 | 308.2 | 310.0 | 316.3 | 319.4 | 312.5 |
| 75° | 223.3 | 231.4 | 232.7 | 231.4 | 230.8 | 235.8 | 237.7 | 240.8 | 245.2 | 245.8 | 240.8 |
| 77.5° | 162.8 | 169.7 | 170.9 | 169.1 | 167.8 | 171.6 | 172.8 | 175.9 | 178.4 | 179.7 | 174.7 |
| 80° | 109.2 | 116.0 | 115.4 | 114.8 | 112.9 | 115.4 | 117.3 | 118.5 | 120.4 | 120.4 | 116.7 |
| 82.5° | 65.5 | 69.9 | 69.2 | 69.9 | 68.0 | 68.6 | 69.9 | 71.7 | 71.1 | 72.4 | 69.9 |
| 85° | 31.8 | 33.7 | 33.7 | 33.7 | 33.1 | 33.7 | 34.3 | 35.6 | 34.3 | 35.6 | 33.7 |
| 87.5° | 11.2 | 11.9 | 11.2 | 11.2 | 11.2 | 11.2 | 11.9 | 11.9 | 11.2 | 11.9 | 11.2 |
| 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: P183622

CATALOG NUMBER: LSM55M9027D010TEP

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 | 1732.3 |
| 2.5° | 1745.4 | 1735.5 | 1745.4 | 1741.1 | 1746.7 | 1744.8 | 1745.4 | 1752.3 | 1736.7 | 1733.0 |
| 5° | 1767.3 | 1756.7 | 1766.7 | 1763.5 | 1767.9 | 1766.0 | 1767.3 | 1774.1 | 1757.9 | 1753.6 |
| 7.5° | 1792.2 | 1781.0 | 1791.0 | 1786.6 | 1791.0 | 1789.1 | 1789.7 | 1795.3 | 1778.5 | 1774.8 |
| 10° | 1815.3 | 1803.5 | 1812.2 | 1807.8 | 1810.3 | 1808.4 | 1809.7 | 1813.4 | 1795.3 | 1791.0 |
| 12.5° | 1833.4 | 1821.6 | 1830.3 | 1825.3 | 1826.5 | 1824.0 | 1823.4 | 1825.3 | 1806.6 | 1801.6 |
| 15° | 1848.4 | 1836.5 | 1842.8 | 1837.8 | 1837.1 | 1833.4 | 1832.2 | 1832.8 | 1814.1 | 1809.1 |
| 17.5° | 1852.7 | 1839.0 | 1842.8 | 1837.1 | 1835.3 | 1832.2 | 1830.9 | 1832.2 | 1814.1 | 1809.1 |
| 20° | 1844.0 | 1827.8 | 1829.7 | 1822.8 | 1820.3 | 1817.8 | 1817.8 | 1819.7 | 1802.2 | 1799.1 |
| 22.5° | 1814.1 | 1800.3 | 1804.7 | 1800.3 | 1797.8 | 1795.3 | 1791.0 | 1786.6 | 1764.2 | 1759.8 |
| 25° | 1726.7 | 1717.4 | 1733.6 | 1736.1 | 1729.2 | 1716.1 | 1691.8 | 1673.1 | 1640.6 | 1636.9 |
| 27.5° | 1662.5 | 1643.1 | 1623.8 | 1599.5 | 1585.1 | 1579.5 | 1583.3 | 1590.1 | 1573.3 | 1567.0 |
| 30° | 1590.7 | 1548.9 | 1511.5 | 1486.6 | 1477.2 | 1476.0 | 1490.9 | 1509.0 | 1512.1 | 1513.4 |
| 32.5° | 1501.5 | 1448.5 | 1419.8 | 1411.7 | 1405.5 | 1403.6 | 1408.6 | 1429.2 | 1442.3 | 1454.1 |
| 35° | 1400.5 | 1363.7 | 1348.7 | 1349.3 | 1343.1 | 1340.6 | 1337.5 | 1349.9 | 1363.7 | 1378.0 |
| 37.5° | 1306.3 | 1290.1 | 1285.7 | 1288.2 | 1281.3 | 1277.6 | 1273.8 | 1277.0 | 1281.3 | 1286.3 |
| 40° | 1217.7 | 1221.4 | 1223.9 | 1225.8 | 1217.1 | 1214.6 | 1211.5 | 1210.2 | 1202.7 | 1190.9 |
| 42.5° | 1142.2 | 1152.2 | 1163.4 | 1163.4 | 1154.1 | 1152.8 | 1153.4 | 1149.7 | 1127.2 | 1111.0 |
| 45° | 1077.3 | 1081.1 | 1100.4 | 1104.2 | 1096.0 | 1094.2 | 1094.8 | 1082.9 | 1047.4 | 1031.2 |
| 47.5° | 1013.7 | 1015.6 | 1033.0 | 1041.8 | 1033.0 | 1031.2 | 1033.0 | 1008.1 | 969.4 | 961.3 |
| 50° | 949.5 | 954.4 | 961.9 | 970.0 | 961.9 | 961.3 | 959.4 | 935.7 | 897.7 | 893.3 |
| 52.5° | 884.6 | 894.6 | 890.8 | 892.7 | 887.7 | 888.3 | 890.2 | 865.9 | 830.9 | 823.4 |
| 55° | 818.4 | 827.8 | 818.4 | 813.5 | 811.6 | 813.5 | 817.2 | 794.7 | 767.3 | 754.8 |
| 57.5° | 752.9 | 758.6 | 748.6 | 738.6 | 735.5 | 739.8 | 743.0 | 724.3 | 700.5 | 691.2 |
| 60° | 685.0 | 683.7 | 675.6 | 666.2 | 660.0 | 665.0 | 670.0 | 653.1 | 631.9 | 626.3 |
| 62.5° | 613.2 | 612.0 | 602.0 | 593.9 | 587.6 | 591.4 | 596.4 | 580.2 | 565.8 | 560.8 |
| 65° | 539.6 | 538.4 | 527.8 | 521.5 | 515.9 | 517.1 | 522.8 | 507.8 | 499.1 | 493.4 |
| 67.5° | 468.5 | 464.1 | 453.5 | 449.8 | 442.9 | 445.4 | 449.1 | 437.3 | 429.2 | 424.2 |
| 70° | 393.6 | 389.9 | 380.5 | 376.8 | 371.2 | 372.4 | 376.2 | 368.7 | 359.9 | 356.8 |
| 72.5° | 317.5 | 316.9 | 308.2 | 303.2 | 300.1 | 300.7 | 303.8 | 300.1 | 291.9 | 289.5 |
| 75° | 243.9 | 245.8 | 238.9 | 234.6 | 231.4 | 231.4 | 235.2 | 235.8 | 227.1 | 224.0 |
| 77.5° | 179.7 | 179.7 | 174.0 | 174.7 | 169.7 | 169.7 | 172.2 | 174.7 | 165.3 | 163.4 |
| 80° | 120.4 | 119.8 | 117.9 | 116.0 | 113.5 | 114.2 | 116.0 | 119.1 | 111.7 | 112.3 |
| 82.5° | 71.1 | 71.1 | 71.1 | 69.9 | 68.0 | 67.4 | 69.9 | 72.4 | 67.4 | 67.4 |
| 85° | 34.9 | 34.3 | 34.3 | 34.3 | 33.1 | 32.4 | 34.3 | 35.6 | 32.4 | 33.1 |
| 87.5° | 11.9 | 11.2 | 11.2 | 11.9 | 11.2 | 11.2 | 11.2 | 11.2 | 10.6 | 11.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)