

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: McGRAW-EDISON

Report Number: P147857

Luminaire Tested: **TLM-F02-LED-E1-5WQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P147857
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33675)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F02-LED-E1-5WQ-7060
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (14) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

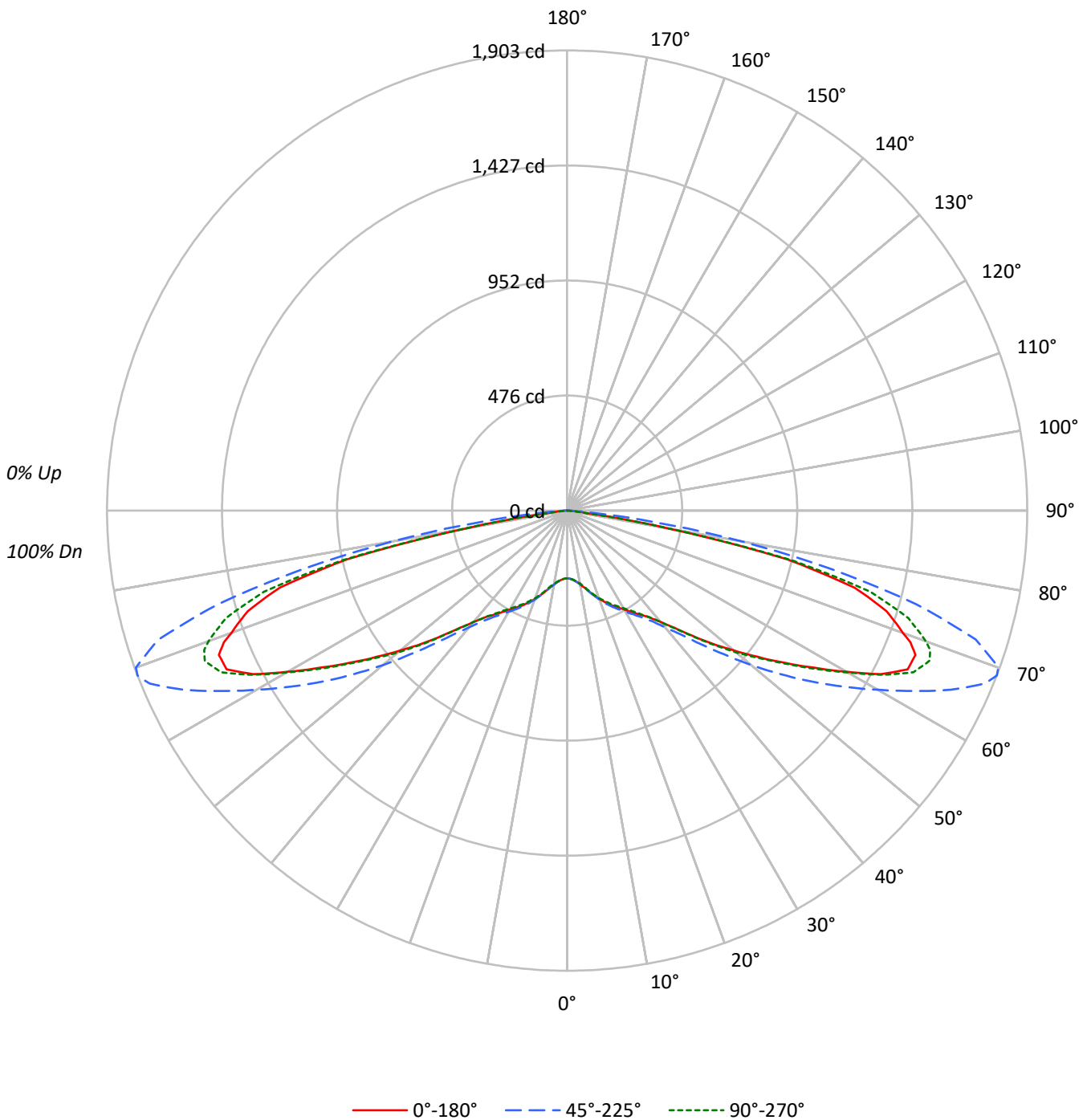
Lumens per Lamp: N/A
Luminaire Lumens: 5393.8 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 55
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: P147857
CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7060

Luminous Intensity Polar Plot





TEST NUMBER: P147857

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7060

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 | 103 | 96 | 90 | 84 | 100 | 94 | 88 | 82 | 89 | 84 | 80 | 85 | 81 | 77 | 81 | 78 | 75 | 72 |
| 2 | 89 | 77 | 67 | 58 | 86 | 75 | 65 | 58 | 71 | 63 | 56 | 67 | 60 | 55 | 64 | 58 | 53 | 51 |
| 3 | 78 | 63 | 51 | 42 | 75 | 61 | 50 | 42 | 58 | 48 | 41 | 54 | 46 | 40 | 52 | 45 | 39 | 36 |
| 4 | 69 | 52 | 41 | 31 | 66 | 51 | 40 | 31 | 48 | 38 | 31 | 45 | 37 | 30 | 43 | 36 | 29 | 27 |
| 5 | 62 | 45 | 33 | 24 | 59 | 44 | 32 | 24 | 41 | 31 | 24 | 39 | 30 | 23 | 37 | 29 | 23 | 20 |
| 6 | 56 | 39 | 28 | 19 | 54 | 38 | 27 | 19 | 36 | 26 | 19 | 34 | 25 | 19 | 32 | 24 | 18 | 16 |
| 7 | 51 | 34 | 24 | 16 | 49 | 34 | 23 | 16 | 32 | 22 | 16 | 30 | 22 | 15 | 29 | 21 | 15 | 13 |
| 8 | 47 | 31 | 20 | 13 | 45 | 30 | 20 | 13 | 29 | 20 | 13 | 27 | 19 | 13 | 26 | 18 | 13 | 10 |
| 9 | 44 | 28 | 18 | 11 | 42 | 27 | 18 | 11 | 26 | 17 | 11 | 25 | 17 | 11 | 23 | 16 | 11 | 9 |
| 10 | 41 | 25 | 16 | 10 | 39 | 25 | 16 | 10 | 24 | 15 | 10 | 23 | 15 | 10 | 22 | 15 | 10 | 7 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 9136 | 9136 | 9136 |
| 5° | 9430 | 9430 | 9394 |
| 10° | 10268 | 10251 | 10155 |
| 15° | 11650 | 11708 | 11539 |
| 20° | 13485 | 13603 | 13367 |
| 25° | 15526 | 15771 | 15303 |
| 30° | 17781 | 18184 | 17570 |
| 35° | 20913 | 21474 | 20734 |
| 40° | 25561 | 26740 | 25561 |
| 45° | 33762 | 35948 | 33891 |
| 50° | 45650 | 50379 | 46279 |
| 55° | 62395 | 70106 | 62753 |
| 60° | 86940 | 96666 | 87273 |
| 65° | 119900 | 135328 | 121992 |
| 70° | 140888 | 181009 | 150472 |
| 75° | 155012 | 188169 | 163620 |
| 80° | 78385 | 137160 | 80714 |
| 85° | 10142 | 37200 | 7822 |



TEST NUMBER: P147857

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7060

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.1 | 0.5 |
| 10°-20° | 99.3 | 1.8 |
| 20°-30° | 201.1 | 3.7 |
| 30°-40° | 337.2 | 6.3 |
| 40°-50° | 594.7 | 11.0 |
| 50°-60° | 1048.8 | 19.4 |
| 60°-70° | 1601.2 | 29.7 |
| 70°-80° | 1338.0 | 24.8 |
| 80°-90° | 145.4 | 2.7 |
| 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° | 328.5 | 6.1 |
| 0°-40° | 665.7 | 12.3 |
| 0°-60° | 2309.2 | 42.8 |
| 0°-90° | 5393.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5393.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 280 | 280 | 280 | 280 | 280 | |
| 5° | 288 | 289 | 288 | 287 | 287 | 28 |
| 15° | 345 | 347 | 347 | 344 | 342 | 99 |
| 25° | 431 | 434 | 438 | 431 | 425 | 200 |
| 35° | 525 | 529 | 539 | 528 | 521 | 334 |
| 45° | 732 | 749 | 779 | 755 | 735 | 575 |
| 55° | 1097 | 1149 | 1233 | 1158 | 1104 | 994 |
| 65° | 1554 | 1637 | 1753 | 1650 | 1581 | 1487 |
| 75° | 1230 | 1299 | 1493 | 1382 | 1298 | 1184 |
| 85° | 27 | 45 | 99 | 39 | 21 | 89 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P147857

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7060

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 |
| 2.5° | 282.4 | 282.9 | 282.4 | 282.4 | 282.4 | 282.4 | 282.4 | 281.8 | 281.8 | 281.8 | 282.4 |
| 5° | 288.0 | 288.6 | 288.0 | 288.6 | 288.6 | 288.6 | 288.6 | 288.0 | 288.0 | 288.0 | 288.0 |
| 7.5° | 297.0 | 297.0 | 297.0 | 297.6 | 297.0 | 297.0 | 297.6 | 297.0 | 297.0 | 297.0 | 297.0 |
| 10° | 310.0 | 309.5 | 309.5 | 309.5 | 309.5 | 309.5 | 310.0 | 310.0 | 310.0 | 309.5 | 309.5 |
| 12.5° | 325.8 | 325.3 | 325.8 | 325.8 | 326.4 | 326.4 | 326.4 | 326.4 | 326.4 | 326.4 | 325.8 |
| 15° | 345.0 | 345.0 | 345.0 | 345.6 | 346.7 | 346.7 | 346.2 | 346.7 | 346.7 | 346.7 | 346.7 |
| 17.5° | 366.5 | 367.6 | 366.5 | 367.1 | 367.6 | 367.1 | 368.2 | 368.8 | 369.3 | 368.8 | 367.1 |
| 20° | 388.5 | 389.1 | 389.1 | 389.1 | 389.1 | 390.2 | 390.8 | 390.8 | 392.5 | 391.9 | 391.3 |
| 22.5° | 409.4 | 410.5 | 410.5 | 411.1 | 411.1 | 412.8 | 412.8 | 412.8 | 413.9 | 415.1 | 413.9 |
| 25° | 431.4 | 430.9 | 430.9 | 432.0 | 432.6 | 434.8 | 434.8 | 436.0 | 437.7 | 438.2 | 437.1 |
| 27.5° | 451.2 | 450.6 | 450.6 | 452.3 | 452.9 | 455.7 | 455.7 | 458.0 | 459.1 | 459.7 | 458.6 |
| 30° | 472.1 | 472.1 | 471.5 | 473.2 | 474.9 | 477.2 | 478.3 | 480.6 | 482.3 | 482.8 | 481.7 |
| 32.5° | 497.0 | 495.8 | 496.4 | 497.5 | 498.6 | 500.9 | 502.6 | 505.4 | 507.7 | 508.2 | 507.1 |
| 35° | 525.2 | 523.5 | 524.1 | 525.2 | 526.9 | 530.3 | 533.1 | 534.8 | 538.2 | 539.3 | 537.0 |
| 37.5° | 556.2 | 556.8 | 556.2 | 559.1 | 561.9 | 565.8 | 569.2 | 571.5 | 574.9 | 576.6 | 574.9 |
| 40° | 600.3 | 598.6 | 600.3 | 603.1 | 607.6 | 612.7 | 619.5 | 621.2 | 624.6 | 628.0 | 624.0 |
| 42.5° | 657.3 | 656.2 | 660.2 | 662.4 | 667.5 | 673.1 | 681.6 | 686.1 | 691.2 | 693.5 | 690.1 |
| 45° | 731.9 | 731.9 | 736.4 | 737.0 | 744.9 | 752.2 | 764.1 | 769.7 | 779.3 | 779.3 | 779.3 |
| 47.5° | 814.3 | 817.7 | 820.5 | 826.2 | 831.8 | 845.4 | 857.2 | 869.7 | 878.7 | 879.8 | 878.1 |
| 50° | 899.6 | 903.0 | 911.5 | 919.4 | 931.8 | 948.7 | 961.7 | 978.1 | 986.0 | 992.8 | 990.5 |
| 52.5° | 993.9 | 994.5 | 1004.6 | 1014.8 | 1032.9 | 1051.5 | 1072.4 | 1089.3 | 1103.5 | 1109.7 | 1104.6 |
| 55° | 1097.2 | 1098.4 | 1107.4 | 1118.1 | 1138.5 | 1159.9 | 1185.9 | 1203.4 | 1221.5 | 1232.8 | 1224.3 |
| 57.5° | 1209.1 | 1209.6 | 1218.7 | 1231.6 | 1255.9 | 1277.4 | 1302.2 | 1327.1 | 1344.0 | 1354.2 | 1348.5 |
| 60° | 1332.7 | 1335.6 | 1342.3 | 1358.7 | 1381.9 | 1404.5 | 1429.3 | 1451.3 | 1471.1 | 1481.8 | 1476.2 |
| 62.5° | 1464.9 | 1467.7 | 1477.3 | 1490.3 | 1510.6 | 1535.5 | 1559.2 | 1587.4 | 1603.8 | 1615.7 | 1607.2 |
| 65° | 1553.5 | 1558.6 | 1573.9 | 1591.4 | 1621.3 | 1653.5 | 1681.2 | 1719.6 | 1739.3 | 1753.4 | 1745.5 |
| 67.5° | 1559.2 | 1562.0 | 1580.6 | 1607.2 | 1647.3 | 1695.8 | 1752.3 | 1812.2 | 1851.1 | 1869.8 | 1856.2 |
| 69° | 1520.8 | 1524.7 | 1542.8 | 1572.7 | 1617.3 | 1673.8 | 1741.0 | 1815.6 | 1875.4 | 1903.1 | 1890.1 |
| 70° | 1477.3 | 1485.8 | 1505.5 | 1538.3 | 1581.8 | 1641.1 | 1710.5 | 1790.2 | 1860.2 | 1898.0 | 1888.4 |
| 72.5° | 1385.8 | 1388.1 | 1401.1 | 1427.0 | 1460.4 | 1509.5 | 1575.0 | 1650.1 | 1716.7 | 1771.0 | 1778.9 |
| 75° | 1230.0 | 1237.3 | 1246.9 | 1264.4 | 1281.3 | 1316.9 | 1361.0 | 1412.4 | 1451.3 | 1493.1 | 1494.8 |
| 77.5° | 929.5 | 951.5 | 958.9 | 962.8 | 970.2 | 998.4 | 1036.8 | 1081.4 | 1113.6 | 1120.4 | 1119.3 |
| 80° | 417.3 | 446.7 | 453.5 | 485.7 | 505.4 | 552.3 | 611.0 | 679.4 | 725.1 | 730.2 | 717.8 |
| 82.5° | 81.9 | 87.5 | 102.2 | 127.6 | 173.9 | 201.6 | 240.0 | 288.0 | 332.1 | 357.5 | 342.2 |
| 85° | 27.1 | 28.8 | 33.3 | 36.7 | 42.4 | 48.0 | 58.2 | 72.3 | 89.8 | 99.4 | 88.7 |
| 87.5° | 10.7 | 10.7 | 12.4 | 13.6 | 14.7 | 14.7 | 14.7 | 13.6 | 13.0 | 10.7 | 9.6 |
| 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: P147857

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7060

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 | 280.1 |
| 2.5° | 281.8 | 281.8 | 281.8 | 281.8 | 281.8 | 281.8 | 281.8 | 281.8 |
| 5° | 288.0 | 287.4 | 287.4 | 286.9 | 286.9 | 286.9 | 286.9 | 286.9 |
| 7.5° | 296.5 | 295.9 | 295.3 | 295.9 | 295.3 | 295.3 | 295.3 | 295.3 |
| 10° | 309.5 | 308.3 | 307.8 | 307.2 | 307.2 | 307.2 | 306.6 | 306.6 |
| 12.5° | 324.7 | 324.7 | 324.1 | 323.6 | 322.5 | 323.0 | 322.5 | 321.3 |
| 15° | 345.6 | 344.5 | 343.9 | 343.3 | 342.2 | 342.2 | 342.2 | 341.7 |
| 17.5° | 366.5 | 365.4 | 365.4 | 363.7 | 363.1 | 363.1 | 363.1 | 363.7 |
| 20° | 389.7 | 388.0 | 386.8 | 385.7 | 384.6 | 385.1 | 384.0 | 385.1 |
| 22.5° | 412.8 | 410.5 | 409.4 | 407.7 | 406.0 | 406.0 | 405.5 | 404.3 |
| 25° | 435.4 | 432.6 | 431.4 | 429.7 | 427.5 | 427.5 | 426.4 | 425.2 |
| 27.5° | 456.9 | 454.0 | 452.9 | 449.5 | 447.3 | 446.7 | 445.6 | 445.0 |
| 30° | 480.6 | 477.2 | 475.5 | 472.1 | 468.7 | 468.2 | 466.5 | 466.5 |
| 32.5° | 505.4 | 502.0 | 500.9 | 495.8 | 493.0 | 493.0 | 491.9 | 490.7 |
| 35° | 536.5 | 531.4 | 530.3 | 525.2 | 521.2 | 521.2 | 520.1 | 520.7 |
| 37.5° | 573.2 | 569.2 | 565.3 | 561.3 | 556.8 | 556.2 | 555.1 | 554.0 |
| 40° | 622.3 | 617.8 | 613.3 | 607.6 | 603.7 | 602.6 | 600.9 | 600.3 |
| 42.5° | 687.8 | 683.3 | 674.3 | 669.8 | 665.8 | 662.4 | 661.8 | 661.3 |
| 45° | 771.4 | 765.8 | 759.5 | 751.1 | 746.0 | 738.6 | 737.5 | 734.7 |
| 47.5° | 871.9 | 861.2 | 850.5 | 843.1 | 835.2 | 826.7 | 825.1 | 820.5 |
| 50° | 978.7 | 970.2 | 952.1 | 940.3 | 927.8 | 919.4 | 913.7 | 912.0 |
| 52.5° | 1093.3 | 1077.5 | 1059.4 | 1043.6 | 1025.5 | 1014.2 | 1004.1 | 1001.2 |
| 55° | 1213.0 | 1190.4 | 1167.8 | 1149.2 | 1131.1 | 1117.6 | 1108.0 | 1103.5 |
| 57.5° | 1332.7 | 1307.9 | 1283.0 | 1262.7 | 1247.5 | 1230.0 | 1220.4 | 1218.1 |
| 60° | 1457.5 | 1433.8 | 1408.4 | 1388.1 | 1369.4 | 1354.2 | 1348.5 | 1337.8 |
| 62.5° | 1589.7 | 1564.8 | 1541.1 | 1521.3 | 1497.6 | 1486.9 | 1477.3 | 1471.1 |
| 65° | 1719.6 | 1690.8 | 1660.8 | 1639.9 | 1616.2 | 1601.0 | 1589.1 | 1580.6 |
| 67.5° | 1820.1 | 1776.6 | 1736.5 | 1701.5 | 1669.3 | 1645.6 | 1630.3 | 1622.4 |
| 69° | 1848.3 | 1794.1 | 1742.7 | 1697.0 | 1659.1 | 1632.6 | 1615.7 | 1607.7 |
| 70° | 1844.9 | 1785.1 | 1728.6 | 1678.3 | 1637.1 | 1608.9 | 1592.5 | 1577.8 |
| 72.5° | 1740.5 | 1685.7 | 1623.0 | 1568.2 | 1530.9 | 1503.8 | 1487.5 | 1479.6 |
| 75° | 1485.2 | 1448.5 | 1403.3 | 1361.0 | 1333.9 | 1318.0 | 1297.7 | 1298.3 |
| 77.5° | 1081.4 | 1082.6 | 1052.1 | 1008.6 | 978.1 | 972.4 | 963.4 | 954.4 |
| 80° | 670.9 | 617.2 | 582.2 | 535.4 | 500.9 | 471.0 | 458.0 | 429.7 |
| 82.5° | 309.5 | 241.7 | 187.5 | 141.7 | 109.0 | 85.3 | 74.5 | 61.0 |
| 85° | 68.9 | 52.5 | 43.5 | 35.0 | 29.9 | 27.7 | 22.6 | 20.9 |
| 87.5° | 9.6 | 8.5 | 7.9 | 7.3 | 6.2 | 4.5 | 3.4 | 2.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)