

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: P147856

Luminaire Tested: **TLM-F02-LED-E1-5WQ-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P147856  
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-7050  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (14) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

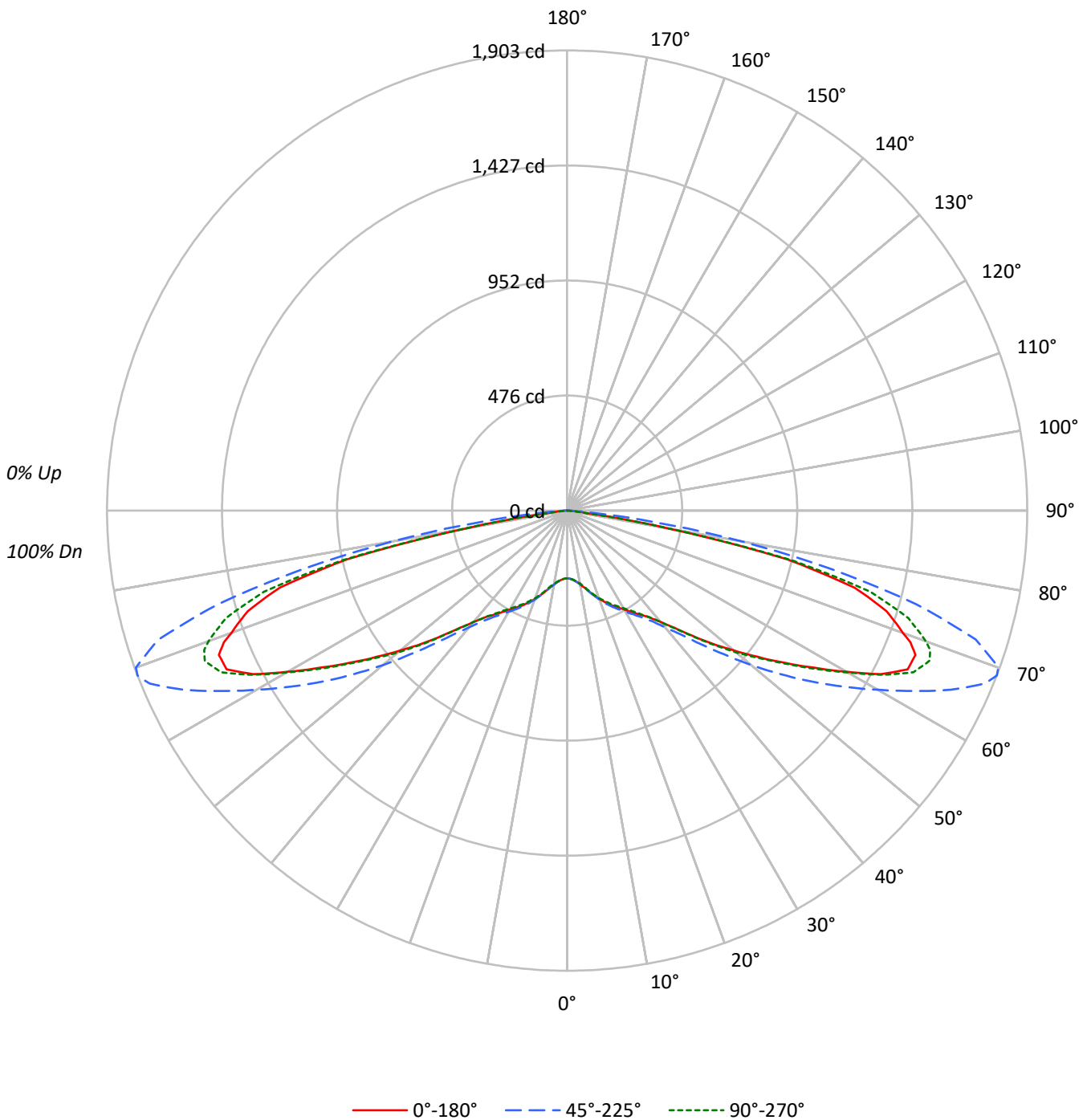
Lumens per Lamp: N/A  
Luminaire Lumens: 5393.8 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7050

### 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  | 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: P147856

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7050

**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: P147856

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7050

**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: P147856

CATALOG NUMBER: TLM-F02-LED-E1-5WQ-7050

**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)