

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: P147346

Luminaire Tested: **TLM-F03-LED-E1-5MQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P147346
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33674)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F03-LED-E1-5MQ-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (21) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8192.3 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 3.55 / 3.67 / 3.6
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
CIE Type: Direct

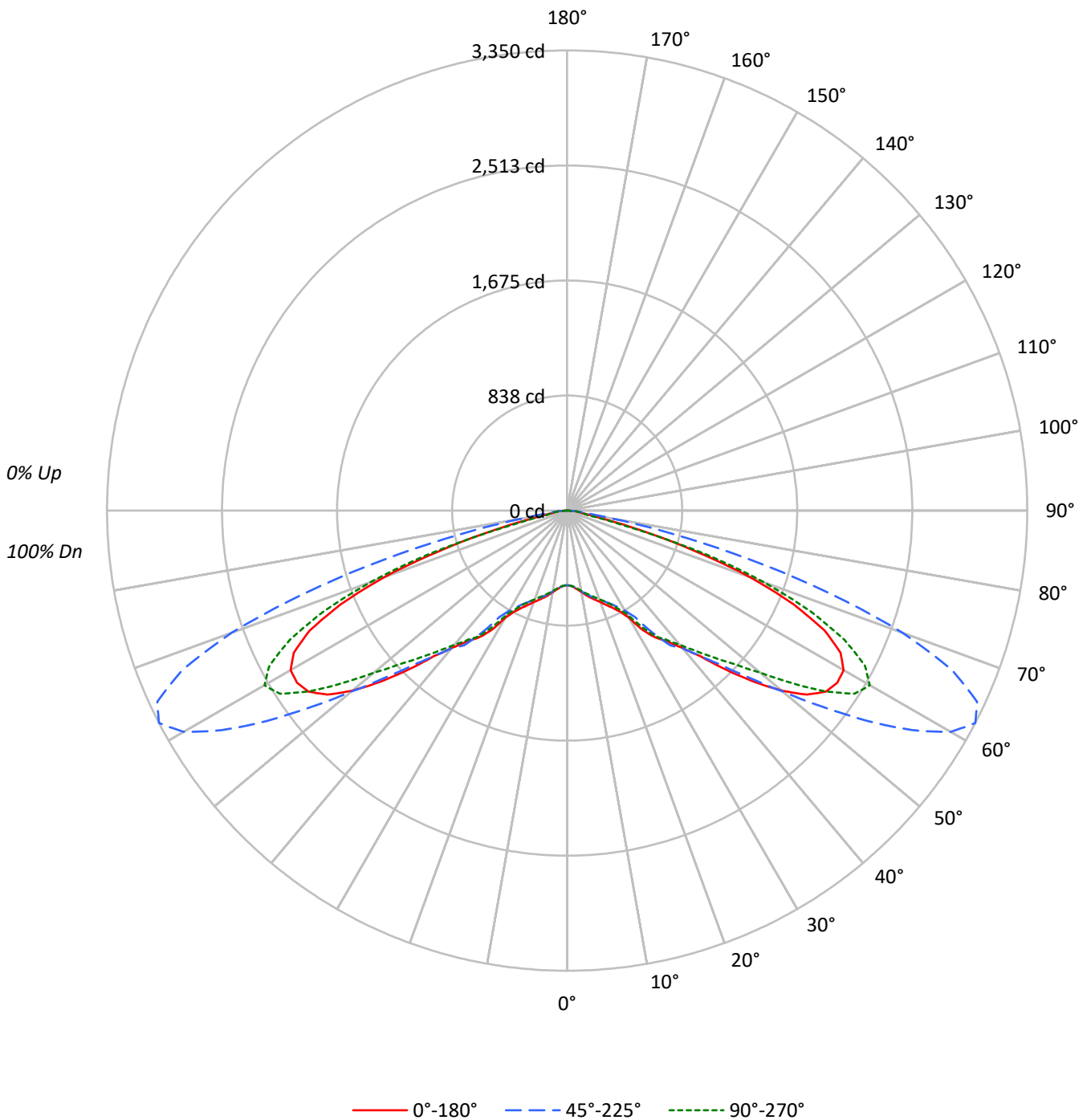
Input Watts (W): 78.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 106 | 100 | 94 | 90 | 103 | 97 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 78 |
| 2 | 93 | 82 | 73 | 66 | 90 | 80 | 72 | 65 | 76 | 70 | 64 | 73 | 67 | 62 | 70 | 65 | 61 | 58 |
| 3 | 82 | 68 | 58 | 50 | 79 | 67 | 57 | 49 | 63 | 55 | 48 | 60 | 53 | 47 | 57 | 51 | 46 | 44 |
| 4 | 73 | 57 | 46 | 38 | 70 | 56 | 46 | 38 | 53 | 44 | 37 | 51 | 43 | 36 | 48 | 41 | 36 | 33 |
| 5 | 65 | 49 | 38 | 30 | 63 | 48 | 37 | 30 | 46 | 36 | 29 | 43 | 35 | 29 | 41 | 34 | 28 | 26 |
| 6 | 59 | 43 | 32 | 24 | 57 | 42 | 31 | 24 | 40 | 30 | 23 | 38 | 29 | 23 | 36 | 29 | 23 | 20 |
| 7 | 54 | 37 | 27 | 20 | 52 | 37 | 27 | 19 | 35 | 26 | 19 | 33 | 25 | 19 | 32 | 24 | 19 | 16 |
| 8 | 49 | 33 | 23 | 16 | 47 | 33 | 23 | 16 | 31 | 22 | 16 | 30 | 22 | 16 | 28 | 21 | 16 | 13 |
| 9 | 46 | 30 | 20 | 14 | 44 | 29 | 20 | 14 | 28 | 20 | 14 | 27 | 19 | 14 | 26 | 19 | 13 | 11 |
| 10 | 42 | 27 | 18 | 12 | 41 | 27 | 18 | 12 | 25 | 17 | 12 | 24 | 17 | 12 | 23 | 17 | 12 | 10 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 11707 | 11707 | 11707 |
| 5° | 12099 | 12037 | 12009 |
| 10° | 13166 | 13026 | 12963 |
| 15° | 14612 | 14337 | 14197 |
| 20° | 16243 | 15853 | 15718 |
| 25° | 18542 | 17786 | 17927 |
| 30° | 22392 | 20888 | 21604 |
| 35° | 29729 | 28641 | 29363 |
| 40° | 36660 | 36767 | 35825 |
| 45° | 49942 | 48523 | 46085 |
| 50° | 68302 | 68657 | 61534 |
| 55° | 86272 | 100227 | 86160 |
| 60° | 100061 | 138738 | 109525 |
| 65° | 105373 | 167722 | 113482 |
| 70° | 89386 | 163501 | 96076 |
| 75° | 45340 | 114776 | 39384 |
| 80° | 14381 | 39845 | 14493 |
| 85° | 15586 | 20699 | 15907 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 54.5 | 0.7 |
| 10°-20° | 184.2 | 2.2 |
| 20°-30° | 356.2 | 4.3 |
| 30°-40° | 689.7 | 8.4 |
| 40°-50° | 1245.3 | 15.2 |
| 50°-60° | 2165.3 | 26.4 |
| 60°-70° | 2458.2 | 30.0 |
| 70°-80° | 953.0 | 11.6 |
| 80°-90° | 86.0 | 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° | 594.9 | 7.3 |
| 0°-40° | 1284.6 | 15.7 |
| 0°-60° | 4695.1 | 57.3 |
| 0°-90° | 8192.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 8192.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 544 | 544 | 544 | 544 | 544 | |
| 5° | 560 | 559 | 557 | 557 | 556 | 55 |
| 15° | 656 | 651 | 643 | 639 | 637 | 187 |
| 25° | 781 | 765 | 749 | 750 | 755 | 368 |
| 35° | 1131 | 1109 | 1090 | 1109 | 1117 | 707 |
| 45° | 1640 | 1603 | 1594 | 1532 | 1514 | 1285 |
| 55° | 2299 | 2409 | 2670 | 2377 | 2296 | 2024 |
| 65° | 2069 | 2375 | 3293 | 2556 | 2228 | 1972 |
| 75° | 545 | 763 | 1380 | 722 | 474 | 660 |
| 85° | 63 | 90 | 84 | 90 | 64 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 |
| 2.5° | 547.2 | 548.9 | 548.4 | 547.6 | 547.6 | 547.7 | 547.2 | 546.0 | 545.5 | 546.4 | 547.2 |
| 5° | 559.9 | 559.9 | 559.9 | 559.9 | 559.1 | 559.0 | 558.2 | 557.4 | 557.8 | 557.0 | 556.6 |
| 7.5° | 579.4 | 578.2 | 578.1 | 577.7 | 577.7 | 576.8 | 575.6 | 573.9 | 574.4 | 573.9 | 573.5 |
| 10° | 602.3 | 602.7 | 601.4 | 602.7 | 600.6 | 600.2 | 598.4 | 597.6 | 597.2 | 595.9 | 595.9 |
| 12.5° | 629.8 | 628.5 | 628.6 | 627.7 | 626.8 | 626.0 | 623.4 | 623.0 | 621.3 | 620.4 | 619.2 |
| 15° | 655.6 | 655.2 | 653.5 | 651.8 | 651.4 | 650.6 | 647.6 | 645.8 | 645.4 | 643.3 | 641.6 |
| 17.5° | 681.4 | 680.6 | 678.5 | 677.6 | 676.0 | 674.7 | 672.2 | 669.6 | 668.3 | 667.5 | 665.3 |
| 20° | 709.0 | 708.2 | 706.0 | 704.3 | 702.2 | 700.6 | 696.8 | 694.6 | 693.4 | 692.0 | 690.4 |
| 22.5° | 743.4 | 741.6 | 738.2 | 735.3 | 730.6 | 728.9 | 723.8 | 720.8 | 718.8 | 717.0 | 716.2 |
| 25° | 780.6 | 781.0 | 776.3 | 772.5 | 767.0 | 762.3 | 756.0 | 752.6 | 750.5 | 748.8 | 748.4 |
| 27.5° | 827.2 | 827.6 | 823.4 | 817.8 | 809.4 | 804.3 | 795.8 | 791.6 | 790.4 | 788.6 | 788.2 |
| 30° | 900.8 | 897.0 | 889.8 | 881.0 | 873.4 | 862.4 | 850.0 | 845.8 | 841.6 | 840.3 | 840.3 |
| 32.5° | 1036.4 | 1034.3 | 1028.4 | 1006.4 | 996.2 | 973.3 | 951.7 | 939.4 | 925.4 | 918.6 | 914.4 |
| 35° | 1131.2 | 1130.4 | 1125.8 | 1118.1 | 1111.8 | 1107.1 | 1094.4 | 1092.3 | 1089.8 | 1089.8 | 1093.2 |
| 37.5° | 1201.2 | 1196.0 | 1195.2 | 1196.5 | 1194.8 | 1195.6 | 1205.8 | 1219.8 | 1231.6 | 1237.6 | 1236.7 |
| 40° | 1304.5 | 1297.3 | 1301.5 | 1298.6 | 1294.8 | 1293.9 | 1297.3 | 1302.8 | 1308.3 | 1308.3 | 1307.0 |
| 42.5° | 1439.6 | 1443.0 | 1444.6 | 1432.4 | 1424.4 | 1422.2 | 1430.2 | 1428.6 | 1434.1 | 1432.0 | 1426.4 |
| 45° | 1640.4 | 1638.2 | 1635.3 | 1620.4 | 1607.8 | 1597.6 | 1599.7 | 1596.8 | 1597.2 | 1593.8 | 1589.5 |
| 47.5° | 1842.8 | 1850.0 | 1837.8 | 1830.6 | 1816.2 | 1809.0 | 1814.8 | 1809.8 | 1819.5 | 1801.8 | 1793.2 |
| 50° | 2039.4 | 2044.4 | 2040.2 | 2030.0 | 2030.0 | 2040.2 | 2047.4 | 2056.7 | 2070.2 | 2050.0 | 2019.4 |
| 52.5° | 2200.3 | 2204.5 | 2210.9 | 2219.4 | 2240.1 | 2261.7 | 2292.2 | 2324.8 | 2350.6 | 2346.8 | 2312.1 |
| 55° | 2298.6 | 2303.6 | 2314.2 | 2343.4 | 2380.7 | 2437.5 | 2506.5 | 2582.4 | 2641.6 | 2670.4 | 2645.0 |
| 57.5° | 2331.6 | 2335.4 | 2364.2 | 2399.4 | 2457.4 | 2541.6 | 2657.2 | 2788.2 | 2902.1 | 2974.5 | 2963.1 |
| 60° | 2324.0 | 2324.0 | 2353.2 | 2401.4 | 2482.8 | 2594.6 | 2758.1 | 2939.4 | 3113.8 | 3222.3 | 3206.2 |
| 62.5° | 2243.9 | 2248.2 | 2290.0 | 2348.1 | 2446.4 | 2580.2 | 2775.0 | 3006.7 | 3215.5 | 3350.2 | 3337.0 |
| 65° | 2068.6 | 2071.6 | 2116.8 | 2185.9 | 2295.6 | 2454.0 | 2667.0 | 2923.7 | 3163.0 | 3292.6 | 3268.0 |
| 67.5° | 1785.2 | 1788.2 | 1825.0 | 1903.0 | 2019.0 | 2184.6 | 2414.6 | 2697.1 | 2931.3 | 3033.8 | 2960.1 |
| 70° | 1420.1 | 1428.6 | 1452.3 | 1534.9 | 1623.0 | 1785.2 | 1997.0 | 2279.5 | 2500.6 | 2597.6 | 2516.2 |
| 72.5° | 967.8 | 989.4 | 1018.2 | 1091.4 | 1175.7 | 1310.4 | 1479.0 | 1717.0 | 1894.4 | 2006.8 | 1934.3 |
| 75° | 545.1 | 575.6 | 584.5 | 640.0 | 709.4 | 815.8 | 939.0 | 1109.7 | 1288.8 | 1379.9 | 1292.6 |
| 77.5° | 235.5 | 260.5 | 271.5 | 297.4 | 351.5 | 396.0 | 471.0 | 586.2 | 724.7 | 788.6 | 684.0 |
| 80° | 116.0 | 122.0 | 126.6 | 134.6 | 150.0 | 164.3 | 199.9 | 250.3 | 307.0 | 321.4 | 255.8 |
| 82.5° | 89.8 | 94.0 | 102.1 | 108.5 | 112.2 | 116.0 | 119.4 | 126.2 | 131.8 | 134.7 | 127.0 |
| 85° | 63.1 | 68.6 | 77.5 | 84.7 | 89.0 | 91.9 | 94.8 | 97.0 | 91.9 | 83.8 | 88.1 |
| 87.5° | 16.5 | 21.6 | 30.0 | 32.6 | 36.8 | 39.0 | 38.1 | 39.4 | 35.6 | 25.8 | 28.8 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 | 543.8 |
| 2.5° | 546.8 | 546.4 | 546.8 | 546.8 | 546.8 | 546.4 | 546.4 | 546.4 |
| 5° | 556.6 | 556.6 | 557.0 | 556.1 | 556.1 | 556.6 | 556.1 | 555.7 |
| 7.5° | 573.0 | 572.6 | 572.6 | 572.2 | 572.6 | 572.2 | 572.2 | 571.8 |
| 10° | 595.0 | 594.2 | 594.7 | 593.4 | 593.4 | 593.0 | 593.0 | 593.0 |
| 12.5° | 618.8 | 617.5 | 617.9 | 616.7 | 614.6 | 615.0 | 615.4 | 615.0 |
| 15° | 641.6 | 640.4 | 639.2 | 638.2 | 637.0 | 637.4 | 637.4 | 637.0 |
| 17.5° | 665.0 | 662.4 | 662.0 | 660.8 | 660.3 | 660.3 | 660.3 | 660.7 |
| 20° | 689.1 | 687.4 | 687.0 | 685.7 | 685.3 | 686.6 | 687.0 | 686.1 |
| 22.5° | 715.0 | 714.1 | 714.9 | 714.1 | 715.4 | 716.2 | 716.6 | 715.8 |
| 25° | 747.6 | 746.7 | 748.0 | 751.0 | 752.6 | 753.4 | 755.6 | 754.7 |
| 27.5° | 789.4 | 788.6 | 791.6 | 795.8 | 798.4 | 802.6 | 804.8 | 805.6 |
| 30° | 843.6 | 847.5 | 849.2 | 857.6 | 859.4 | 866.2 | 866.2 | 869.1 |
| 32.5° | 922.4 | 929.7 | 942.4 | 955.5 | 973.8 | 986.8 | 986.8 | 993.6 |
| 35° | 1095.3 | 1098.2 | 1108.0 | 1110.1 | 1113.9 | 1118.1 | 1113.9 | 1117.3 |
| 37.5° | 1227.8 | 1214.7 | 1205.4 | 1192.2 | 1184.2 | 1184.2 | 1185.1 | 1184.2 |
| 40° | 1295.6 | 1290.6 | 1286.3 | 1275.3 | 1273.6 | 1273.2 | 1273.2 | 1274.8 |
| 42.5° | 1416.8 | 1404.4 | 1397.6 | 1388.4 | 1385.4 | 1384.6 | 1384.1 | 1385.0 |
| 45° | 1574.3 | 1554.4 | 1536.2 | 1526.8 | 1518.8 | 1511.2 | 1513.7 | 1513.7 |
| 47.5° | 1757.6 | 1726.8 | 1697.1 | 1681.0 | 1667.0 | 1660.7 | 1656.4 | 1655.2 |
| 50° | 1980.9 | 1937.7 | 1899.6 | 1869.5 | 1849.2 | 1848.8 | 1850.8 | 1837.3 |
| 52.5° | 2254.5 | 2186.3 | 2138.8 | 2098.2 | 2079.2 | 2077.0 | 2070.2 | 2062.6 |
| 55° | 2557.8 | 2476.8 | 2398.5 | 2354.8 | 2329.9 | 2316.3 | 2308.3 | 2295.6 |
| 57.5° | 2870.3 | 2761.4 | 2648.8 | 2578.9 | 2534.8 | 2504.4 | 2488.3 | 2481.1 |
| 60° | 3111.3 | 2962.6 | 2814.0 | 2701.8 | 2628.5 | 2583.2 | 2555.2 | 2543.8 |
| 62.5° | 3206.2 | 3004.6 | 2814.0 | 2666.6 | 2560.7 | 2498.0 | 2460.4 | 2443.8 |
| 65° | 3093.1 | 2854.2 | 2637.4 | 2474.8 | 2356.6 | 2286.7 | 2245.6 | 2227.8 |
| 67.5° | 2777.1 | 2566.2 | 2330.4 | 2168.5 | 2047.0 | 1978.0 | 1933.4 | 1920.3 |
| 70° | 2328.2 | 2112.6 | 1887.3 | 1742.8 | 1634.4 | 1578.1 | 1531.9 | 1526.4 |
| 72.5° | 1749.6 | 1563.7 | 1370.6 | 1251.2 | 1163.8 | 1070.7 | 1047.0 | 1058.8 |
| 75° | 1121.5 | 947.4 | 775.5 | 667.9 | 588.3 | 499.4 | 465.0 | 473.5 |
| 77.5° | 531.1 | 411.2 | 296.9 | 229.6 | 192.8 | 164.8 | 157.6 | 153.3 |
| 80° | 197.0 | 159.6 | 141.0 | 133.8 | 128.8 | 124.0 | 120.7 | 116.9 |
| 82.5° | 127.4 | 124.6 | 120.7 | 119.4 | 115.6 | 109.7 | 98.7 | 94.0 |
| 85° | 95.3 | 95.3 | 90.2 | 90.6 | 87.6 | 80.1 | 69.9 | 64.4 |
| 87.5° | 27.9 | 25.0 | 22.9 | 21.2 | 20.8 | 18.6 | 13.6 | 11.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)