

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: P147320

Luminaire Tested: **TLM-E01-LED-E1-5MQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P147320
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-E01-LED-E1-5MQ
Description: TALON MEDIUM LED SITE LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (21) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

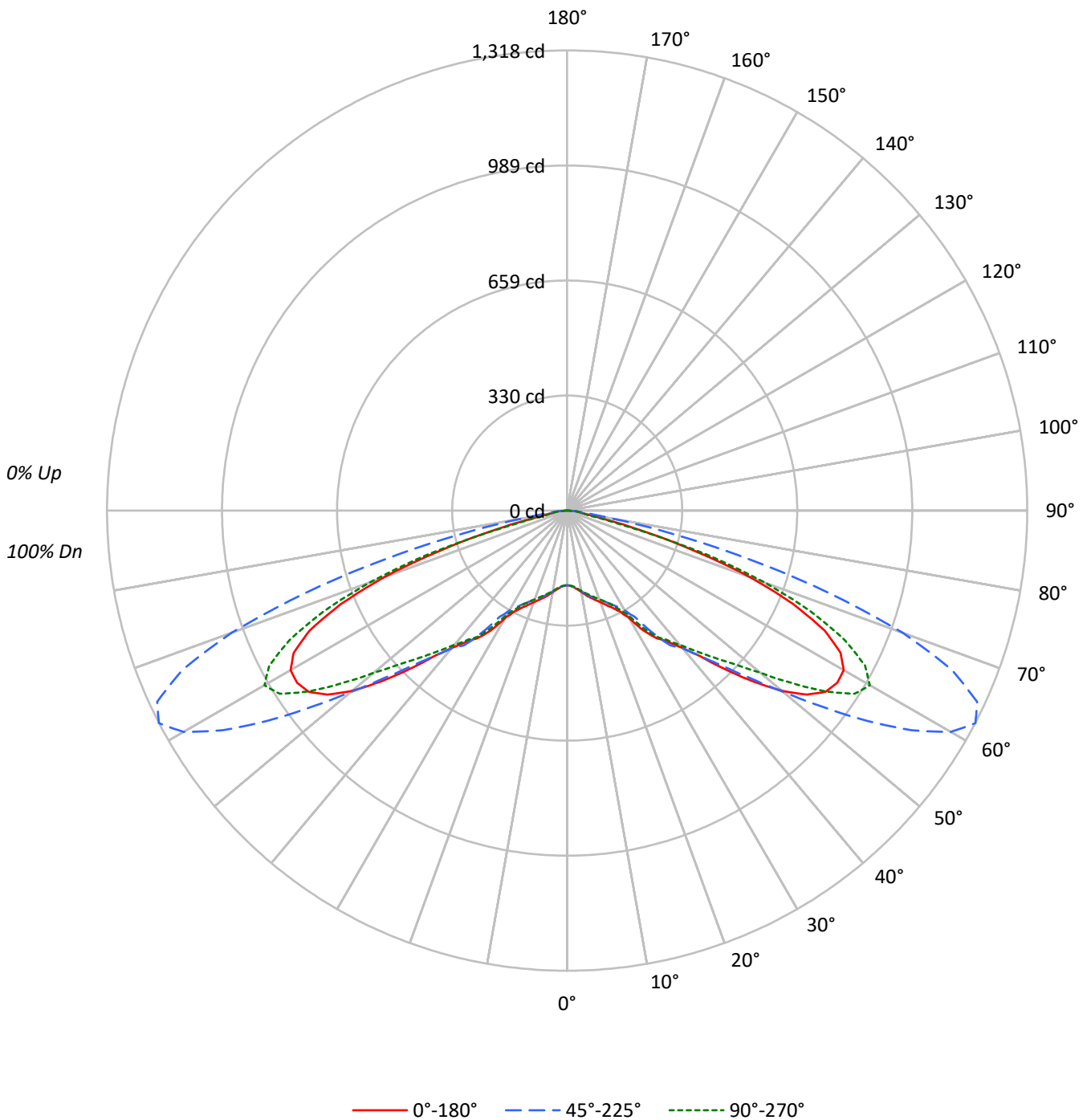
Lumens per Lamp: N/A
Luminaire Lumens: 3223.8 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 3.55 / 3.67 / 3.6
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 24.7
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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CATALOG NUMBER: TLM-E01-LED-E1-5MQ

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° | 13550 | 13550 | 13550 |
| 5° | 14008 | 13932 | 13900 |
| 10° | 15238 | 15077 | 15000 |
| 15° | 16912 | 16597 | 16434 |
| 20° | 18799 | 18355 | 18193 |
| 25° | 21462 | 20589 | 20749 |
| 30° | 25918 | 24178 | 25004 |
| 35° | 34412 | 33145 | 33987 |
| 40° | 42427 | 42551 | 41468 |
| 45° | 57801 | 56162 | 53341 |
| 50° | 79049 | 79453 | 71218 |
| 55° | 99848 | 115998 | 99715 |
| 60° | 115807 | 160572 | 126761 |
| 65° | 121954 | 194123 | 131348 |
| 70° | 103449 | 189237 | 111206 |
| 75° | 52475 | 132839 | 45576 |
| 80° | 16627 | 46126 | 16773 |
| 85° | 18017 | 23974 | 18380 |



TEST NUMBER: P147320

CATALOG NUMBER: TLM-E01-LED-E1-5MQ

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 21.4 | 0.7 |
| 10°-20° | 72.5 | 2.2 |
| 20°-30° | 140.2 | 4.3 |
| 30°-40° | 271.4 | 8.4 |
| 40°-50° | 490.0 | 15.2 |
| 50°-60° | 852.1 | 26.4 |
| 60°-70° | 967.3 | 30.0 |
| 70°-80° | 375.0 | 11.6 |
| 80°-90° | 33.8 | 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° | 234.1 | 7.3 |
| 0°-40° | 505.5 | 15.7 |
| 0°-60° | 1847.6 | 57.3 |
| 0°-90° | 3223.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3223.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|------|-------|-----|------|
| 0° | 214 | 214 | 214 | 214 | 214 | |
| 5° | 220 | 220 | 219 | 219 | 219 | 22 |
| 15° | 258 | 256 | 253 | 251 | 251 | 74 |
| 25° | 307 | 301 | 295 | 295 | 297 | 145 |
| 35° | 445 | 437 | 429 | 436 | 440 | 278 |
| 45° | 646 | 631 | 627 | 603 | 596 | 506 |
| 55° | 904 | 948 | 1051 | 935 | 903 | 796 |
| 65° | 814 | 934 | 1296 | 1006 | 877 | 776 |
| 75° | 214 | 300 | 543 | 284 | 186 | 260 |
| 85° | 25 | 36 | 33 | 36 | 25 | 24 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P147320

CATALOG NUMBER: TLM-E01-LED-E1-5MQ

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0° | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 |
| 2.5° | 215.4 | 216.0 | 215.8 | 215.5 | 215.5 | 215.5 | 215.4 | 214.8 | 214.7 | 215.0 | 215.4 |
| 5° | 220.4 | 220.4 | 220.4 | 220.4 | 220.0 | 220.0 | 219.6 | 219.4 | 219.5 | 219.2 | 219.0 |
| 7.5° | 228.0 | 227.5 | 227.5 | 227.3 | 227.4 | 227.0 | 226.5 | 225.8 | 226.0 | 225.8 | 225.6 |
| 10° | 237.0 | 237.2 | 236.6 | 237.2 | 236.3 | 236.2 | 235.5 | 235.2 | 235.0 | 234.5 | 234.5 |
| 12.5° | 247.8 | 247.4 | 247.4 | 247.0 | 246.6 | 246.4 | 245.4 | 245.2 | 244.5 | 244.2 | 243.7 |
| 15° | 258.0 | 257.8 | 257.2 | 256.5 | 256.3 | 256.0 | 254.8 | 254.2 | 254.0 | 253.2 | 252.5 |
| 17.5° | 268.2 | 267.8 | 267.0 | 266.6 | 266.0 | 265.5 | 264.5 | 263.5 | 263.0 | 262.6 | 261.8 |
| 20° | 279.0 | 278.7 | 277.8 | 277.2 | 276.4 | 275.6 | 274.2 | 273.4 | 272.8 | 272.4 | 271.6 |
| 22.5° | 292.5 | 291.8 | 290.5 | 289.4 | 287.5 | 286.8 | 284.8 | 283.6 | 282.8 | 282.2 | 281.8 |
| 25° | 307.2 | 307.4 | 305.5 | 304.0 | 301.8 | 300.0 | 297.5 | 296.2 | 295.4 | 294.7 | 294.5 |
| 27.5° | 325.5 | 325.7 | 324.0 | 321.8 | 318.5 | 316.5 | 313.2 | 311.5 | 311.0 | 310.3 | 310.2 |
| 30° | 354.5 | 353.0 | 350.2 | 346.6 | 343.7 | 339.3 | 334.5 | 332.8 | 331.2 | 330.7 | 330.6 |
| 32.5° | 407.8 | 407.0 | 404.6 | 396.0 | 392.0 | 383.0 | 374.5 | 369.7 | 364.2 | 361.5 | 359.8 |
| 35° | 445.2 | 444.8 | 443.0 | 440.0 | 437.5 | 435.6 | 430.6 | 429.8 | 428.8 | 428.8 | 430.2 |
| 37.5° | 472.7 | 470.6 | 470.3 | 470.8 | 470.2 | 470.5 | 474.5 | 480.0 | 484.7 | 487.0 | 486.6 |
| 40° | 513.3 | 510.5 | 512.2 | 511.0 | 509.5 | 509.2 | 510.5 | 512.6 | 514.8 | 514.8 | 514.3 |
| 42.5° | 566.5 | 567.8 | 568.5 | 563.7 | 560.5 | 559.6 | 562.8 | 562.2 | 564.4 | 563.5 | 561.3 |
| 45° | 645.5 | 644.7 | 643.5 | 637.6 | 632.6 | 628.7 | 629.5 | 628.4 | 628.5 | 627.2 | 625.5 |
| 47.5° | 725.2 | 728.0 | 723.2 | 720.4 | 714.7 | 711.8 | 714.2 | 712.2 | 716.0 | 709.0 | 705.6 |
| 50° | 802.5 | 804.5 | 802.8 | 798.8 | 798.8 | 802.8 | 805.6 | 809.3 | 814.6 | 806.6 | 794.6 |
| 52.5° | 865.8 | 867.5 | 870.0 | 873.4 | 881.5 | 890.0 | 902.0 | 914.8 | 925.0 | 923.5 | 909.8 |
| 55° | 904.5 | 906.5 | 910.6 | 922.2 | 936.8 | 959.2 | 986.3 | 1016.2 | 1039.5 | 1050.8 | 1040.8 |
| 57.5° | 917.5 | 919.0 | 930.4 | 944.2 | 967.0 | 1000.2 | 1045.6 | 1097.2 | 1142.0 | 1170.5 | 1166.0 |
| 60° | 914.5 | 914.5 | 926.0 | 945.0 | 977.0 | 1021.0 | 1085.3 | 1156.6 | 1225.4 | 1268.0 | 1261.7 |
| 62.5° | 883.0 | 884.6 | 901.2 | 924.0 | 962.6 | 1015.4 | 1092.0 | 1183.2 | 1265.3 | 1318.4 | 1313.2 |
| 65° | 814.0 | 815.2 | 833.0 | 860.2 | 903.3 | 965.6 | 1049.5 | 1150.5 | 1244.6 | 1295.7 | 1286.0 |
| 67.5° | 702.5 | 703.7 | 718.2 | 748.8 | 794.5 | 859.6 | 950.2 | 1061.4 | 1153.5 | 1193.8 | 1164.8 |
| 70° | 558.8 | 562.2 | 571.5 | 604.0 | 638.7 | 702.5 | 785.8 | 897.0 | 984.0 | 1022.2 | 990.2 |
| 72.5° | 380.8 | 389.3 | 400.7 | 429.5 | 462.6 | 515.7 | 582.0 | 675.7 | 745.5 | 789.7 | 761.2 |
| 75° | 214.5 | 226.5 | 230.0 | 251.8 | 279.2 | 321.0 | 369.5 | 436.6 | 507.2 | 543.0 | 508.6 |
| 77.5° | 92.6 | 102.5 | 106.8 | 117.0 | 138.4 | 155.8 | 185.3 | 230.6 | 285.2 | 310.4 | 269.2 |
| 80° | 45.6 | 48.0 | 49.8 | 53.0 | 59.0 | 64.6 | 78.7 | 98.5 | 120.8 | 126.5 | 100.7 |
| 82.5° | 35.4 | 37.0 | 40.2 | 42.7 | 44.2 | 45.7 | 47.0 | 49.6 | 51.8 | 53.0 | 50.0 |
| 85° | 24.8 | 27.0 | 30.5 | 33.3 | 35.0 | 36.2 | 37.3 | 38.2 | 36.2 | 33.0 | 34.6 |
| 87.5° | 6.5 | 8.5 | 11.8 | 12.8 | 14.5 | 15.4 | 15.0 | 15.5 | 14.0 | 10.2 | 11.4 |
| 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° | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 |
| 2.5° | 215.2 | 215.0 | 215.2 | 215.2 | 215.2 | 215.0 | 215.0 | 215.0 |
| 5° | 219.0 | 219.0 | 219.2 | 218.8 | 218.8 | 219.0 | 218.8 | 218.7 |
| 7.5° | 225.5 | 225.4 | 225.3 | 225.2 | 225.4 | 225.2 | 225.2 | 225.0 |
| 10° | 234.2 | 233.8 | 234.0 | 233.5 | 233.5 | 233.4 | 233.4 | 233.3 |
| 12.5° | 243.5 | 243.0 | 243.2 | 242.6 | 241.8 | 242.0 | 242.2 | 242.0 |
| 15° | 252.5 | 252.0 | 251.5 | 251.2 | 250.6 | 250.8 | 250.8 | 250.7 |
| 17.5° | 261.6 | 260.6 | 260.5 | 260.0 | 259.8 | 259.8 | 259.8 | 260.0 |
| 20° | 271.2 | 270.5 | 270.4 | 269.8 | 269.6 | 270.2 | 270.4 | 270.0 |
| 22.5° | 281.4 | 281.0 | 281.4 | 281.0 | 281.5 | 281.8 | 282.0 | 281.7 |
| 25° | 294.2 | 293.8 | 294.4 | 295.5 | 296.2 | 296.5 | 297.4 | 297.0 |
| 27.5° | 310.6 | 310.4 | 311.5 | 313.2 | 314.2 | 315.8 | 316.7 | 317.0 |
| 30° | 332.0 | 333.5 | 334.2 | 337.5 | 338.2 | 340.8 | 340.8 | 342.0 |
| 32.5° | 363.0 | 365.8 | 370.8 | 376.0 | 383.2 | 388.4 | 388.4 | 391.0 |
| 35° | 431.0 | 432.2 | 436.0 | 436.8 | 438.4 | 440.0 | 438.4 | 439.7 |
| 37.5° | 483.2 | 478.0 | 474.4 | 469.2 | 466.0 | 466.0 | 466.4 | 466.0 |
| 40° | 509.8 | 507.8 | 506.2 | 501.8 | 501.2 | 501.0 | 501.0 | 501.7 |
| 42.5° | 557.5 | 552.7 | 550.0 | 546.3 | 545.2 | 544.8 | 544.6 | 545.0 |
| 45° | 619.5 | 611.7 | 604.5 | 600.8 | 597.7 | 594.6 | 595.6 | 595.7 |
| 47.5° | 691.6 | 679.5 | 667.8 | 661.5 | 656.0 | 653.5 | 651.8 | 651.3 |
| 50° | 779.5 | 762.5 | 747.5 | 735.7 | 727.7 | 727.5 | 728.3 | 723.0 |
| 52.5° | 887.2 | 860.4 | 841.6 | 825.6 | 818.2 | 817.3 | 814.7 | 811.7 |
| 55° | 1006.5 | 974.6 | 943.8 | 926.6 | 916.8 | 911.5 | 908.4 | 903.3 |
| 57.5° | 1129.5 | 1086.6 | 1042.4 | 1014.8 | 997.5 | 985.5 | 979.2 | 976.3 |
| 60° | 1224.4 | 1165.8 | 1107.4 | 1063.2 | 1034.3 | 1016.5 | 1005.5 | 1001.0 |
| 62.5° | 1261.6 | 1182.3 | 1107.4 | 1049.3 | 1007.6 | 983.0 | 968.2 | 961.7 |
| 65° | 1217.2 | 1123.2 | 1037.8 | 973.8 | 927.4 | 899.8 | 883.6 | 876.7 |
| 67.5° | 1092.8 | 1009.8 | 917.0 | 853.4 | 805.5 | 778.4 | 760.8 | 755.7 |
| 70° | 916.2 | 831.3 | 742.6 | 685.8 | 643.2 | 621.0 | 602.8 | 600.7 |
| 72.5° | 688.5 | 615.3 | 539.4 | 492.4 | 458.0 | 421.3 | 412.0 | 416.7 |
| 75° | 441.3 | 372.8 | 305.2 | 262.8 | 231.5 | 196.5 | 183.0 | 186.3 |
| 77.5° | 209.0 | 161.9 | 116.8 | 90.3 | 75.8 | 64.8 | 62.0 | 60.3 |
| 80° | 77.5 | 62.8 | 55.5 | 52.6 | 50.7 | 48.8 | 47.5 | 46.0 |
| 82.5° | 50.2 | 49.0 | 47.5 | 47.0 | 45.5 | 43.2 | 38.8 | 37.0 |
| 85° | 37.5 | 37.5 | 35.5 | 35.7 | 34.5 | 31.5 | 27.5 | 25.3 |
| 87.5° | 11.0 | 9.9 | 9.0 | 8.3 | 8.2 | 7.4 | 5.3 | 4.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)