

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: P147872

Luminaire Tested: **TLM-E04-LED-E1-5WQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P147872
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-E04-LED-E1-5WQ-7060
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (84) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

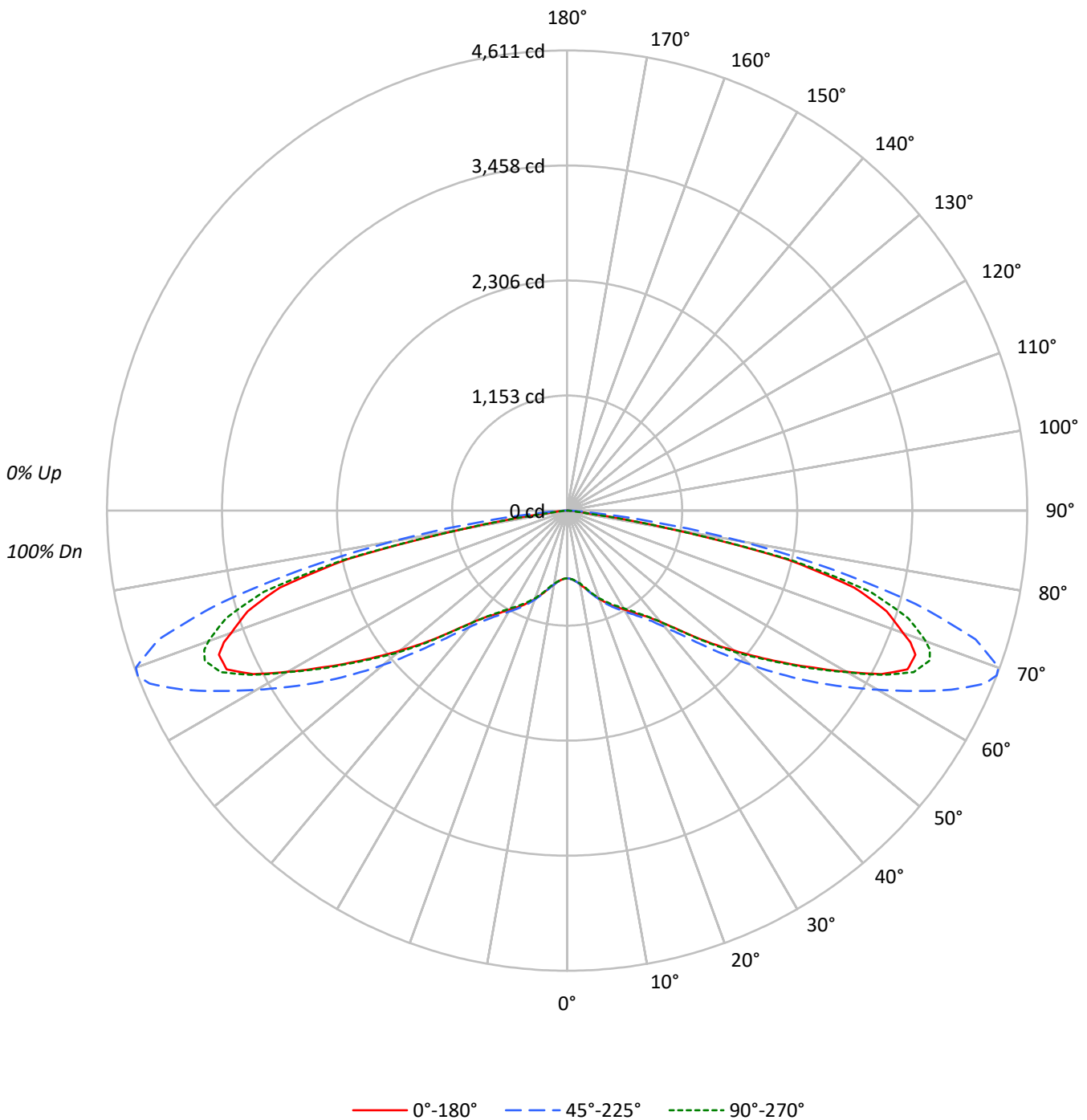
Lumens per Lamp: N/A
Luminaire Lumens: 13067.6 lumens
Efficiency: N/A
Efficacy: 134.4 lumens/watt
Spacing Criteria (0/90/45): 3.9 / 3.92 / 3.98
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
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-E04-LED-E1-5WQ-7060

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° | 10902 | 10902 | 10902 |
| 5° | 11253 | 11253 | 11208 |
| 10° | 12253 | 12230 | 12119 |
| 15° | 13903 | 13971 | 13767 |
| 20° | 16093 | 16233 | 15953 |
| 25° | 18529 | 18820 | 18262 |
| 30° | 21219 | 21701 | 20964 |
| 35° | 24955 | 25626 | 24739 |
| 40° | 30500 | 31907 | 30500 |
| 45° | 40285 | 42896 | 40442 |
| 50° | 54471 | 60114 | 55223 |
| 55° | 74457 | 83656 | 74878 |
| 60° | 103745 | 115351 | 104140 |
| 65° | 143078 | 161489 | 145572 |
| 70° | 168119 | 215994 | 179557 |
| 75° | 184964 | 224541 | 195243 |
| 80° | 93545 | 163664 | 96330 |
| 85° | 12111 | 44387 | 9327 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 68.2 | 0.5 |
| 10°-20° | 240.6 | 1.8 |
| 20°-30° | 487.2 | 3.7 |
| 30°-40° | 816.9 | 6.3 |
| 40°-50° | 1440.9 | 11.0 |
| 50°-60° | 2540.9 | 19.4 |
| 60°-70° | 3879.3 | 29.7 |
| 70°-80° | 3241.5 | 24.8 |
| 80°-90° | 352.2 | 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° | 796.0 | 6.1 |
| 0°-40° | 1612.8 | 12.3 |
| 0°-60° | 5594.6 | 42.8 |
| 0°-90° | 13067.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 13067.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 679 | 679 | 679 | 679 | 679 | |
| 5° | 698 | 699 | 698 | 696 | 695 | 68 |
| 15° | 836 | 840 | 840 | 832 | 828 | 241 |
| 25° | 1045 | 1051 | 1062 | 1043 | 1030 | 486 |
| 35° | 1272 | 1281 | 1307 | 1279 | 1261 | 808 |
| 45° | 1773 | 1814 | 1888 | 1830 | 1780 | 1393 |
| 55° | 2658 | 2784 | 2987 | 2807 | 2673 | 2409 |
| 65° | 3764 | 3967 | 4248 | 3998 | 3829 | 3603 |
| 75° | 2980 | 3147 | 3617 | 3348 | 3145 | 2869 |
| 85° | 66 | 109 | 241 | 95 | 51 | 216 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P147872

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 |
| 2.5° | 684.1 | 685.4 | 684.1 | 684.1 | 684.1 | 684.1 | 684.1 | 682.7 | 682.7 | 682.7 | 684.1 |
| 5° | 697.8 | 699.1 | 697.8 | 699.1 | 699.1 | 699.1 | 699.1 | 697.8 | 697.8 | 697.8 | 697.8 |
| 7.5° | 719.6 | 719.6 | 719.6 | 721.0 | 719.6 | 719.6 | 721.0 | 719.6 | 719.6 | 719.6 | 719.6 |
| 10° | 751.1 | 749.7 | 749.7 | 749.7 | 749.7 | 749.7 | 751.1 | 751.1 | 751.1 | 749.7 | 749.7 |
| 12.5° | 789.4 | 788.0 | 789.4 | 789.4 | 790.8 | 790.8 | 790.8 | 790.8 | 790.8 | 790.8 | 789.4 |
| 15° | 835.9 | 835.9 | 835.9 | 837.3 | 840.0 | 840.0 | 838.7 | 840.0 | 840.0 | 840.0 | 840.0 |
| 17.5° | 887.9 | 890.7 | 887.9 | 889.3 | 890.7 | 889.3 | 892.0 | 893.4 | 894.8 | 893.4 | 889.3 |
| 20° | 941.3 | 942.6 | 942.6 | 942.6 | 942.6 | 945.4 | 946.8 | 946.8 | 950.9 | 949.5 | 948.1 |
| 22.5° | 991.9 | 994.6 | 994.6 | 996.0 | 996.0 | 1000.1 | 1000.1 | 1000.1 | 1002.8 | 1005.6 | 1002.8 |
| 25° | 1045.3 | 1043.9 | 1043.9 | 1046.6 | 1048.0 | 1053.5 | 1053.5 | 1056.2 | 1060.3 | 1061.7 | 1058.9 |
| 27.5° | 1093.1 | 1091.8 | 1091.8 | 1095.9 | 1097.2 | 1104.1 | 1104.1 | 1109.6 | 1112.3 | 1113.7 | 1110.9 |
| 30° | 1143.8 | 1143.8 | 1142.4 | 1146.5 | 1150.6 | 1156.1 | 1158.8 | 1164.3 | 1168.4 | 1169.8 | 1167.0 |
| 32.5° | 1204.0 | 1201.2 | 1202.6 | 1205.3 | 1208.1 | 1213.5 | 1217.6 | 1224.5 | 1230.0 | 1231.3 | 1228.6 |
| 35° | 1272.4 | 1268.3 | 1269.6 | 1272.4 | 1276.5 | 1284.7 | 1291.5 | 1295.6 | 1303.8 | 1306.6 | 1301.1 |
| 37.5° | 1347.6 | 1349.0 | 1347.6 | 1354.5 | 1361.3 | 1370.9 | 1379.1 | 1384.6 | 1392.8 | 1396.9 | 1392.8 |
| 40° | 1454.3 | 1450.2 | 1454.3 | 1461.2 | 1472.1 | 1484.4 | 1500.9 | 1505.0 | 1513.2 | 1521.4 | 1511.8 |
| 42.5° | 1592.5 | 1589.8 | 1599.4 | 1604.8 | 1617.1 | 1630.8 | 1651.3 | 1662.3 | 1674.6 | 1680.1 | 1671.9 |
| 45° | 1773.1 | 1773.1 | 1784.1 | 1785.4 | 1804.6 | 1822.4 | 1851.1 | 1864.8 | 1888.0 | 1888.0 | 1888.0 |
| 47.5° | 1972.9 | 1981.1 | 1987.9 | 2001.6 | 2015.3 | 2048.1 | 2076.8 | 2106.9 | 2128.8 | 2131.6 | 2127.5 |
| 50° | 2179.4 | 2187.7 | 2208.2 | 2227.3 | 2257.4 | 2298.5 | 2329.9 | 2369.6 | 2388.8 | 2405.2 | 2399.7 |
| 52.5° | 2407.9 | 2409.3 | 2433.9 | 2458.5 | 2502.3 | 2547.5 | 2598.1 | 2639.1 | 2673.3 | 2688.4 | 2676.1 |
| 55° | 2658.3 | 2661.0 | 2682.9 | 2708.9 | 2758.2 | 2810.2 | 2873.1 | 2915.5 | 2959.3 | 2986.7 | 2966.1 |
| 57.5° | 2929.2 | 2930.6 | 2952.4 | 2983.9 | 3042.7 | 3094.7 | 3154.9 | 3215.1 | 3256.2 | 3280.8 | 3267.1 |
| 60° | 3228.8 | 3235.7 | 3252.1 | 3291.7 | 3347.8 | 3402.6 | 3462.8 | 3516.1 | 3564.0 | 3590.0 | 3576.3 |
| 62.5° | 3549.0 | 3555.8 | 3579.1 | 3610.5 | 3659.8 | 3720.0 | 3777.4 | 3845.8 | 3885.5 | 3914.3 | 3893.7 |
| 65° | 3763.8 | 3776.1 | 3813.0 | 3855.4 | 3927.9 | 4005.9 | 4073.0 | 4166.0 | 4213.9 | 4248.1 | 4228.9 |
| 67.5° | 3777.4 | 3784.3 | 3829.4 | 3893.7 | 3990.9 | 4108.5 | 4245.3 | 4390.4 | 4484.8 | 4529.9 | 4497.1 |
| 69° | 3684.4 | 3694.0 | 3737.8 | 3810.3 | 3918.4 | 4055.2 | 4218.0 | 4398.6 | 4543.6 | 4610.6 | 4579.2 |
| 70° | 3579.1 | 3599.6 | 3647.5 | 3726.8 | 3832.2 | 3975.8 | 4144.1 | 4337.0 | 4506.7 | 4598.3 | 4575.1 |
| 72.5° | 3357.4 | 3362.9 | 3394.4 | 3457.3 | 3538.0 | 3657.0 | 3815.7 | 3997.7 | 4159.1 | 4290.5 | 4309.6 |
| 75° | 2979.8 | 2997.6 | 3020.9 | 3063.3 | 3104.3 | 3190.5 | 3297.2 | 3421.7 | 3516.1 | 3617.4 | 3621.5 |
| 77.5° | 2252.0 | 2305.3 | 2323.1 | 2332.7 | 2350.5 | 2418.9 | 2511.9 | 2620.0 | 2698.0 | 2714.4 | 2711.7 |
| 80° | 1011.1 | 1082.2 | 1098.6 | 1176.6 | 1224.5 | 1338.0 | 1480.3 | 1645.9 | 1756.7 | 1769.0 | 1738.9 |
| 82.5° | 198.4 | 212.1 | 247.6 | 309.2 | 421.4 | 488.4 | 581.5 | 697.8 | 804.5 | 866.0 | 829.1 |
| 85° | 65.7 | 69.8 | 80.7 | 88.9 | 102.6 | 116.3 | 140.9 | 175.1 | 217.5 | 240.8 | 214.8 |
| 87.5° | 26.0 | 26.0 | 30.1 | 32.8 | 35.6 | 35.6 | 35.6 | 32.8 | 31.5 | 26.0 | 23.3 |
| 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° | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 | 678.6 |
| 2.5° | 682.7 | 682.7 | 682.7 | 682.7 | 682.7 | 682.7 | 682.7 | 682.7 |
| 5° | 697.8 | 696.4 | 696.4 | 695.0 | 695.0 | 695.0 | 695.0 | 695.0 |
| 7.5° | 718.3 | 716.9 | 715.5 | 716.9 | 715.5 | 715.5 | 715.5 | 715.5 |
| 10° | 749.7 | 747.0 | 745.6 | 744.3 | 744.3 | 744.3 | 742.9 | 742.9 |
| 12.5° | 786.7 | 786.7 | 785.3 | 783.9 | 781.2 | 782.6 | 781.2 | 778.5 |
| 15° | 837.3 | 834.6 | 833.2 | 831.8 | 829.1 | 829.1 | 829.1 | 827.7 |
| 17.5° | 887.9 | 885.2 | 885.2 | 881.1 | 879.7 | 879.7 | 879.7 | 881.1 |
| 20° | 944.0 | 939.9 | 937.2 | 934.4 | 931.7 | 933.1 | 930.3 | 933.1 |
| 22.5° | 1000.1 | 994.6 | 991.9 | 987.8 | 983.7 | 983.7 | 982.3 | 979.6 |
| 25° | 1054.8 | 1048.0 | 1045.3 | 1041.2 | 1035.7 | 1035.7 | 1032.9 | 1030.2 |
| 27.5° | 1106.8 | 1100.0 | 1097.2 | 1089.0 | 1083.6 | 1082.2 | 1079.5 | 1078.1 |
| 30° | 1164.3 | 1156.1 | 1152.0 | 1143.8 | 1135.6 | 1134.2 | 1130.1 | 1130.1 |
| 32.5° | 1224.5 | 1216.3 | 1213.5 | 1201.2 | 1194.4 | 1194.4 | 1191.7 | 1188.9 |
| 35° | 1299.7 | 1287.4 | 1284.7 | 1272.4 | 1262.8 | 1262.8 | 1260.1 | 1261.4 |
| 37.5° | 1388.7 | 1379.1 | 1369.5 | 1359.9 | 1349.0 | 1347.6 | 1344.9 | 1342.1 |
| 40° | 1507.7 | 1496.7 | 1485.8 | 1472.1 | 1462.5 | 1459.8 | 1455.7 | 1454.3 |
| 42.5° | 1666.4 | 1655.5 | 1633.6 | 1622.6 | 1613.0 | 1604.8 | 1603.5 | 1602.1 |
| 45° | 1868.9 | 1855.2 | 1840.1 | 1819.6 | 1807.3 | 1789.5 | 1786.8 | 1780.0 |
| 47.5° | 2112.4 | 2086.4 | 2060.4 | 2042.6 | 2023.5 | 2003.0 | 1998.9 | 1987.9 |
| 50° | 2371.0 | 2350.5 | 2306.7 | 2278.0 | 2247.9 | 2227.3 | 2213.7 | 2209.5 |
| 52.5° | 2648.7 | 2610.4 | 2566.6 | 2528.3 | 2484.5 | 2457.2 | 2432.6 | 2425.7 |
| 55° | 2938.8 | 2884.0 | 2829.3 | 2784.2 | 2740.4 | 2707.6 | 2684.3 | 2673.3 |
| 57.5° | 3228.8 | 3168.6 | 3108.4 | 3059.2 | 3022.2 | 2979.8 | 2956.6 | 2951.1 |
| 60° | 3531.2 | 3473.7 | 3412.1 | 3362.9 | 3317.7 | 3280.8 | 3267.1 | 3241.1 |
| 62.5° | 3851.3 | 3791.1 | 3733.7 | 3685.8 | 3628.3 | 3602.3 | 3579.1 | 3564.0 |
| 65° | 4166.0 | 4096.2 | 4023.7 | 3973.1 | 3915.6 | 3878.7 | 3849.9 | 3829.4 |
| 67.5° | 4409.5 | 4304.2 | 4207.0 | 4122.2 | 4044.2 | 3986.8 | 3949.8 | 3930.7 |
| 69° | 4477.9 | 4346.6 | 4222.1 | 4111.3 | 4019.6 | 3955.3 | 3914.3 | 3895.1 |
| 70° | 4469.7 | 4324.7 | 4187.9 | 4066.1 | 3966.2 | 3897.8 | 3858.2 | 3822.6 |
| 72.5° | 4216.6 | 4083.9 | 3932.0 | 3799.3 | 3709.0 | 3643.4 | 3603.7 | 3584.5 |
| 75° | 3598.2 | 3509.3 | 3399.8 | 3297.2 | 3231.5 | 3193.2 | 3144.0 | 3145.4 |
| 77.5° | 2620.0 | 2622.7 | 2548.8 | 2443.5 | 2369.6 | 2355.9 | 2334.0 | 2312.2 |
| 80° | 1625.4 | 1495.4 | 1410.6 | 1297.0 | 1213.5 | 1141.0 | 1109.6 | 1041.2 |
| 82.5° | 749.7 | 585.6 | 454.2 | 343.4 | 264.1 | 206.6 | 180.6 | 147.8 |
| 85° | 166.9 | 127.2 | 105.3 | 84.8 | 72.5 | 67.0 | 54.7 | 50.6 |
| 87.5° | 23.3 | 20.5 | 19.2 | 17.8 | 15.0 | 10.9 | 8.2 | 6.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)