

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P130638

Luminaire Tested: **TBLED-LD1-8-M-UNV-L850-CD1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P130638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25346)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: TBLED-LD1-8-M-UNV-L850-CD1
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.
MEDIUM DISTRIBUTION.
Light Source: (160) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

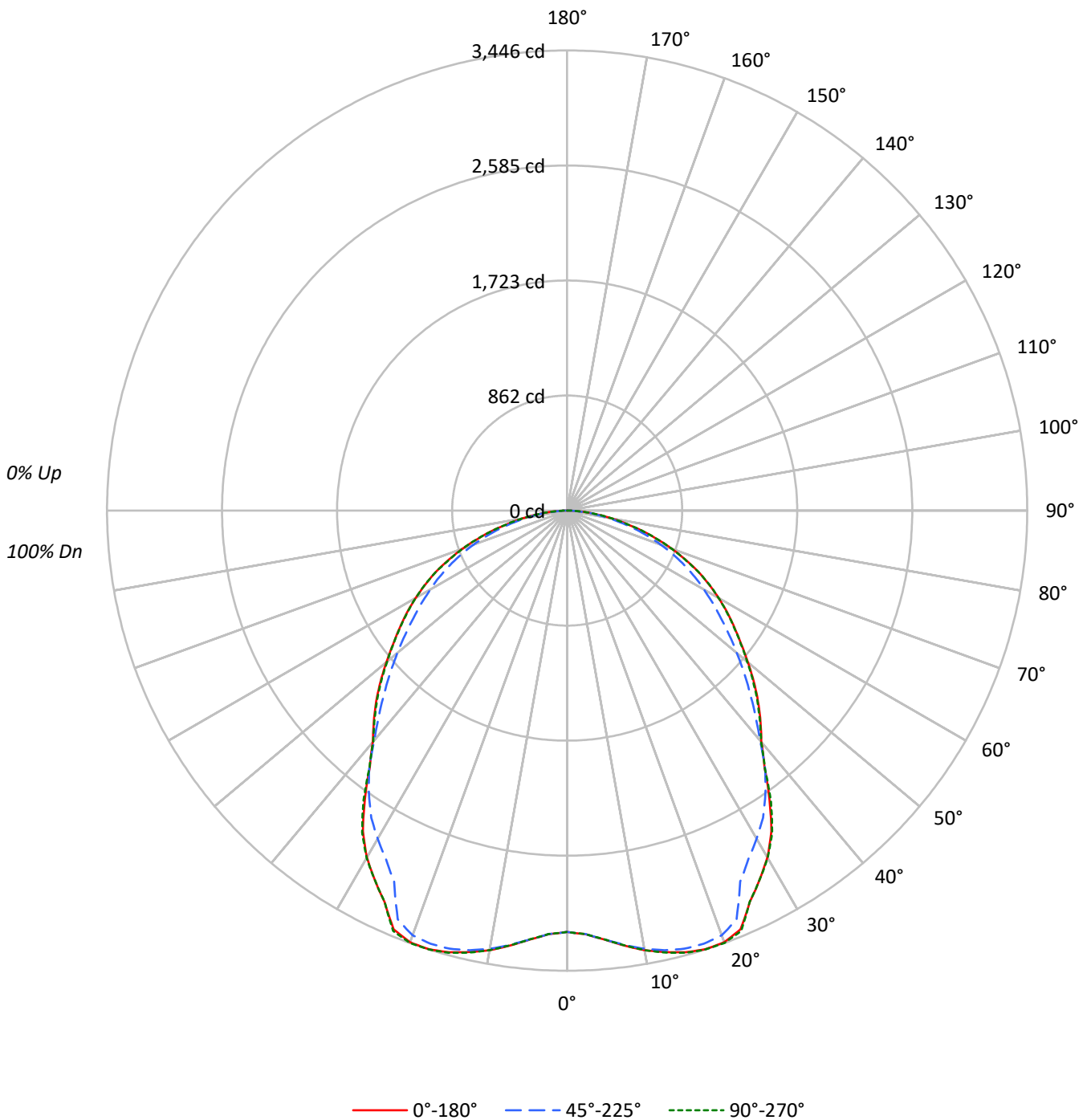
Lumens per Lamp: N/A
Luminaire Lumens: 9043.6 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

Input Watts (W): 77
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: P130638
CATALOG NUMBER: TBLED-LD1-8-M-UNV-L850-CD1

Luminous Intensity Polar Plot





TEST NUMBER: P130638

CATALOG NUMBER: TBLED-LD1-8-M-UNV-L850-CD1

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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 74 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 70 | 64 | 73 | 68 | 63 | 71 | 66 | 62 | 60 |
| 4 | 83 | 72 | 63 | 56 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 48 | 61 | 54 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 9 | 58 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 43 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 38 | 32 | 27 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 34161 | 34161 | 34161 |
| 5° | 35054 | 35054 | 35042 |
| 10° | 36755 | 36632 | 36755 |
| 15° | 38383 | 38084 | 38434 |
| 20° | 39647 | 39006 | 39699 |
| 25° | 38663 | 36631 | 38623 |
| 30° | 37514 | 35484 | 37555 |
| 35° | 34927 | 34221 | 35177 |
| 40° | 31988 | 31752 | 31941 |
| 45° | 30959 | 29682 | 30856 |
| 50° | 29768 | 27968 | 29655 |
| 55° | 28887 | 26557 | 28825 |
| 60° | 28369 | 25625 | 28369 |
| 65° | 27780 | 24846 | 27696 |
| 70° | 26370 | 23622 | 26336 |
| 75° | 24007 | 21727 | 24099 |
| 80° | 21009 | 19070 | 21078 |
| 85° | 18239 | 15891 | 18239 |



TEST NUMBER: P130638

CATALOG NUMBER: TBLED-LD1-8-M-UNV-L850-CD1

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 311.5 | 3.4 |
| 10°-20° | 965.5 | 10.7 |
| 20°-30° | 1460.1 | 16.1 |
| 30°-40° | 1593.9 | 17.6 |
| 40°-50° | 1564.7 | 17.3 |
| 50°-60° | 1369.8 | 15.1 |
| 60°-70° | 1029.3 | 11.4 |
| 70°-80° | 588.4 | 6.5 |
| 80°-90° | 160.5 | 1.8 |
| 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° | 2737.1 | 30.3 |
| 0°-40° | 4331.0 | 47.9 |
| 0°-60° | 7265.4 | 80.3 |
| 0°-90° | 9043.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 9043.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3155 | 3155 | 3155 | 3155 | 3155 | |
| 5° | 3225 | 3225 | 3225 | 3225 | 3224 | 312 |
| 15° | 3424 | 3421 | 3397 | 3423 | 3428 | 969 |
| 25° | 3236 | 3240 | 3066 | 3240 | 3233 | 1494 |
| 35° | 2642 | 2513 | 2589 | 2502 | 2661 | 1647 |
| 45° | 2022 | 2063 | 1938 | 2050 | 2015 | 1558 |
| 55° | 1530 | 1554 | 1407 | 1549 | 1527 | 1372 |
| 65° | 1084 | 1042 | 970 | 1041 | 1081 | 1066 |
| 75° | 574 | 552 | 519 | 552 | 576 | 609 |
| 85° | 147 | 138 | 128 | 138 | 147 | 164 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P130638

CATALOG NUMBER: TBLED-LD1-8-M-UNV-L850-CD1

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 |
| 2.5° | 3175.9 | 3173.6 | 3174.7 | 3173.6 | 3175.9 | 3175.9 | 3174.7 | 3175.9 | 3174.7 | 3174.7 | 3174.7 |
| 5° | 3224.8 | 3222.6 | 3223.7 | 3221.5 | 3224.8 | 3225.9 | 3224.8 | 3225.9 | 3225.9 | 3224.8 | 3224.8 |
| 7.5° | 3285.9 | 3281.5 | 3282.6 | 3280.4 | 3283.7 | 3283.7 | 3282.6 | 3282.6 | 3281.5 | 3280.4 | 3281.5 |
| 10° | 3342.7 | 3340.4 | 3340.4 | 3339.3 | 3341.5 | 3340.4 | 3338.2 | 3337.1 | 3332.7 | 3331.5 | 3333.8 |
| 12.5° | 3386.0 | 3388.2 | 3391.6 | 3391.6 | 3390.5 | 3389.4 | 3383.8 | 3380.5 | 3373.8 | 3372.7 | 3374.9 |
| 15° | 3423.8 | 3424.9 | 3428.3 | 3427.2 | 3423.8 | 3418.3 | 3412.7 | 3406.0 | 3400.5 | 3397.1 | 3400.5 |
| 17.5° | 3443.8 | 3443.8 | 3442.7 | 3439.4 | 3432.7 | 3426.1 | 3418.3 | 3411.6 | 3406.0 | 3401.6 | 3406.0 |
| 20° | 3440.5 | 3440.5 | 3435.0 | 3428.3 | 3417.2 | 3407.2 | 3399.4 | 3392.7 | 3387.1 | 3384.9 | 3388.2 |
| 22.5° | 3393.8 | 3397.1 | 3392.7 | 3391.6 | 3382.7 | 3369.3 | 3353.8 | 3337.1 | 3319.3 | 3313.7 | 3321.5 |
| 25° | 3235.9 | 3233.7 | 3235.9 | 3257.0 | 3262.6 | 3218.1 | 3161.4 | 3109.1 | 3078.0 | 3065.8 | 3082.5 |
| 27.5° | 3119.1 | 3116.9 | 3089.1 | 3044.6 | 2983.5 | 2954.6 | 2959.0 | 2954.6 | 2946.8 | 2941.2 | 2949.0 |
| 30° | 3000.2 | 2983.5 | 2907.9 | 2826.7 | 2767.8 | 2758.9 | 2784.4 | 2816.7 | 2836.7 | 2837.8 | 2834.5 |
| 32.5° | 2846.7 | 2813.3 | 2715.5 | 2653.2 | 2628.8 | 2624.3 | 2632.1 | 2665.5 | 2711.0 | 2728.8 | 2705.5 |
| 35° | 2642.1 | 2623.2 | 2563.1 | 2523.1 | 2515.3 | 2509.8 | 2496.4 | 2513.1 | 2569.8 | 2588.7 | 2567.6 |
| 37.5° | 2429.7 | 2447.5 | 2421.9 | 2407.5 | 2406.4 | 2395.2 | 2376.3 | 2378.6 | 2408.6 | 2435.3 | 2405.2 |
| 40° | 2262.9 | 2280.7 | 2297.4 | 2296.3 | 2291.8 | 2275.1 | 2260.7 | 2252.9 | 2250.7 | 2246.2 | 2252.9 |
| 42.5° | 2143.9 | 2137.3 | 2169.5 | 2187.3 | 2176.2 | 2165.1 | 2152.8 | 2147.3 | 2106.1 | 2087.2 | 2111.7 |
| 45° | 2021.6 | 2019.4 | 2041.6 | 2079.4 | 2070.5 | 2055.0 | 2051.6 | 2029.4 | 1959.3 | 1938.2 | 1964.9 |
| 47.5° | 1896.0 | 1904.8 | 1924.9 | 1956.0 | 1961.6 | 1948.2 | 1938.2 | 1892.6 | 1821.4 | 1795.9 | 1820.3 |
| 50° | 1767.0 | 1787.0 | 1814.8 | 1827.0 | 1832.6 | 1824.8 | 1818.1 | 1759.2 | 1686.9 | 1660.2 | 1688.0 |
| 52.5° | 1643.5 | 1671.3 | 1708.0 | 1698.0 | 1693.6 | 1696.9 | 1685.8 | 1632.4 | 1562.4 | 1530.1 | 1563.5 |
| 55° | 1530.1 | 1556.8 | 1589.0 | 1569.0 | 1547.9 | 1560.1 | 1550.1 | 1507.9 | 1446.7 | 1406.7 | 1444.5 |
| 57.5° | 1423.4 | 1440.0 | 1465.6 | 1438.9 | 1414.5 | 1428.9 | 1418.9 | 1385.5 | 1328.8 | 1294.4 | 1331.1 |
| 60° | 1309.9 | 1323.3 | 1337.7 | 1312.2 | 1286.6 | 1294.4 | 1289.9 | 1259.9 | 1213.2 | 1183.2 | 1211.0 |
| 62.5° | 1196.5 | 1203.2 | 1213.2 | 1185.4 | 1164.3 | 1164.3 | 1162.0 | 1133.1 | 1096.4 | 1079.7 | 1095.3 |
| 65° | 1084.2 | 1083.1 | 1086.4 | 1058.6 | 1043.1 | 1040.8 | 1036.4 | 1009.7 | 980.8 | 969.7 | 981.9 |
| 67.5° | 957.4 | 959.7 | 960.8 | 935.2 | 923.0 | 917.4 | 914.1 | 889.6 | 866.2 | 858.5 | 867.4 |
| 70° | 832.9 | 834.0 | 834.0 | 810.6 | 801.7 | 792.9 | 789.5 | 770.6 | 751.7 | 746.1 | 753.9 |
| 72.5° | 701.7 | 709.5 | 706.1 | 687.2 | 680.5 | 669.4 | 667.2 | 655.0 | 640.5 | 632.7 | 640.5 |
| 75° | 573.8 | 584.9 | 581.6 | 564.9 | 557.1 | 546.0 | 547.1 | 540.4 | 524.9 | 519.3 | 527.1 |
| 77.5° | 450.4 | 457.0 | 458.1 | 449.2 | 437.0 | 429.2 | 432.6 | 431.5 | 420.3 | 407.0 | 417.0 |
| 80° | 336.9 | 344.7 | 345.8 | 338.0 | 328.0 | 321.4 | 325.8 | 325.8 | 316.9 | 305.8 | 314.7 |
| 82.5° | 234.6 | 240.2 | 240.2 | 235.7 | 231.3 | 224.6 | 226.8 | 228.0 | 222.4 | 211.3 | 219.1 |
| 85° | 146.8 | 147.9 | 145.7 | 142.3 | 139.0 | 136.8 | 136.8 | 139.0 | 134.6 | 127.9 | 133.4 |
| 87.5° | 54.5 | 55.6 | 54.5 | 57.8 | 54.5 | 53.4 | 54.5 | 57.8 | 53.4 | 53.4 | 54.5 |
| 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: P130638

CATALOG NUMBER: TBLED-LD1-8-M-UNV-L850-CD1

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 | 3154.7 |
| 2.5° | 3174.7 | 3175.9 | 3175.9 | 3174.7 | 3174.7 | 3174.7 | 3173.6 | 3174.7 |
| 5° | 3224.8 | 3225.9 | 3225.9 | 3223.7 | 3224.8 | 3223.7 | 3222.6 | 3223.7 |
| 7.5° | 3282.6 | 3284.8 | 3283.7 | 3284.8 | 3285.9 | 3283.7 | 3283.7 | 3283.7 |
| 10° | 3336.0 | 3339.3 | 3341.5 | 3343.8 | 3344.9 | 3342.7 | 3343.8 | 3342.7 |
| 12.5° | 3379.4 | 3386.0 | 3390.5 | 3392.7 | 3394.9 | 3394.9 | 3392.7 | 3390.5 |
| 15° | 3406.0 | 3413.8 | 3419.4 | 3426.1 | 3430.5 | 3431.6 | 3429.4 | 3428.3 |
| 17.5° | 3412.7 | 3419.4 | 3427.2 | 3433.8 | 3440.5 | 3445.0 | 3447.2 | 3446.1 |
| 20° | 3393.8 | 3399.4 | 3408.3 | 3418.3 | 3427.2 | 3436.1 | 3442.7 | 3445.0 |
| 22.5° | 3339.3 | 3354.9 | 3371.6 | 3383.8 | 3391.6 | 3396.0 | 3399.4 | 3407.2 |
| 25° | 3115.8 | 3157.0 | 3217.0 | 3262.6 | 3254.8 | 3233.7 | 3225.9 | 3232.6 |
| 27.5° | 2956.8 | 2952.3 | 2945.7 | 2981.3 | 3036.9 | 3085.8 | 3109.1 | 3120.3 |
| 30° | 2814.5 | 2781.1 | 2750.0 | 2762.2 | 2818.9 | 2903.4 | 2974.6 | 3003.5 |
| 32.5° | 2665.5 | 2619.9 | 2615.4 | 2623.2 | 2649.9 | 2706.6 | 2803.3 | 2857.8 |
| 35° | 2508.7 | 2484.2 | 2497.5 | 2507.5 | 2516.4 | 2545.4 | 2612.1 | 2661.0 |
| 37.5° | 2368.6 | 2364.1 | 2381.9 | 2394.1 | 2398.6 | 2413.0 | 2438.6 | 2431.9 |
| 40° | 2245.1 | 2248.5 | 2264.0 | 2277.4 | 2286.3 | 2287.4 | 2271.8 | 2259.6 |
| 42.5° | 2133.9 | 2148.4 | 2148.4 | 2165.1 | 2180.6 | 2159.5 | 2127.2 | 2136.1 |
| 45° | 2020.5 | 2043.8 | 2042.7 | 2057.2 | 2071.6 | 2035.0 | 2008.3 | 2014.9 |
| 47.5° | 1887.1 | 1931.5 | 1938.2 | 1953.8 | 1953.8 | 1916.0 | 1894.8 | 1887.1 |
| 50° | 1751.4 | 1809.2 | 1817.0 | 1825.9 | 1821.4 | 1807.0 | 1779.2 | 1760.3 |
| 52.5° | 1625.7 | 1680.2 | 1688.0 | 1684.7 | 1693.6 | 1700.2 | 1662.4 | 1639.1 |
| 55° | 1502.3 | 1544.6 | 1554.6 | 1543.4 | 1564.6 | 1583.5 | 1547.9 | 1526.8 |
| 57.5° | 1380.0 | 1412.2 | 1421.1 | 1412.2 | 1435.6 | 1456.7 | 1433.4 | 1418.9 |
| 60° | 1256.6 | 1285.5 | 1291.0 | 1283.2 | 1311.0 | 1329.9 | 1318.8 | 1309.9 |
| 62.5° | 1135.3 | 1155.4 | 1160.9 | 1164.3 | 1180.9 | 1203.2 | 1201.0 | 1199.8 |
| 65° | 1013.0 | 1034.2 | 1036.4 | 1046.4 | 1057.5 | 1086.4 | 1080.9 | 1080.9 |
| 67.5° | 894.0 | 908.5 | 911.8 | 927.4 | 931.9 | 959.7 | 956.3 | 951.9 |
| 70° | 770.6 | 785.1 | 789.5 | 805.1 | 811.8 | 834.0 | 835.1 | 831.8 |
| 72.5° | 657.2 | 662.7 | 667.2 | 681.7 | 687.2 | 708.3 | 708.3 | 703.9 |
| 75° | 541.5 | 540.4 | 544.9 | 559.3 | 564.9 | 582.7 | 581.6 | 576.0 |
| 77.5° | 432.6 | 427.0 | 430.3 | 440.4 | 447.0 | 460.4 | 455.9 | 451.5 |
| 80° | 330.3 | 321.4 | 322.5 | 332.5 | 336.9 | 345.8 | 341.4 | 338.0 |
| 82.5° | 233.5 | 225.7 | 223.5 | 231.3 | 238.0 | 239.1 | 238.0 | 235.7 |
| 85° | 142.3 | 135.7 | 136.8 | 140.1 | 144.6 | 144.6 | 146.8 | 146.8 |
| 87.5° | 55.6 | 52.3 | 52.3 | 55.6 | 55.6 | 56.7 | 55.6 | 53.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)