

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: P#

Luminaire Tested: **4ILED-LD5-7-W-ASY-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34179)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U
Description: Metalux 4' ILED WITH ASYMMETRIC DIRECTIONAL LOUVER DISTRIBUTION

Light Source: (1) 3500 CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

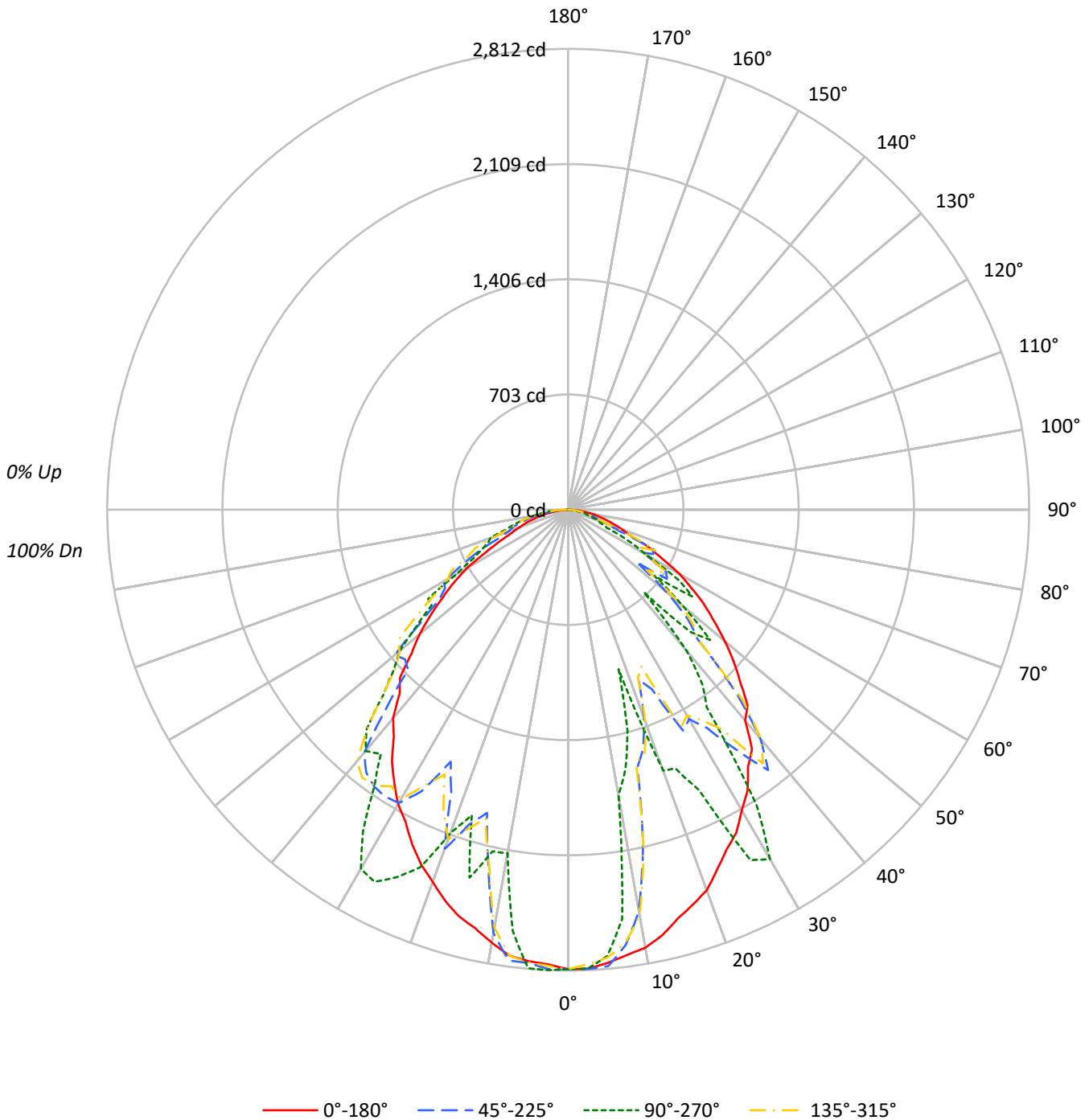
Lumens per Lamp: N/A
Luminaire Lumens: 5521.0 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.25 / 1.27
Luminous Opening: Rectangular w/ Sides (W: 0.92' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 50.4
Input Voltage (V):
Input Current (A_{in}): 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: P#
CATALOG NUMBER: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U

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 | 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 | | | | | 100 | | | |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 3 | 92 | 82 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 63 | | | | | 63 | | | |
| 4 | 85 | 74 | 65 | 59 | 83 | 72 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 51 | 61 | 55 | 50 | 59 | 54 | 50 | 47 | | | | | 47 | | | |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | 42 | | | |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 34 | | | | | 34 | | | |
| 9 | 59 | 46 | 38 | 33 | 58 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 39 | 34 | 29 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|------|------|------|------|
| 0° | 8230 | 8230 | 8230 | 8230 |
| 5° | 8162 | 7980 | 8131 | 8197 |
| 10° | 8051 | 5177 | 7963 | 6227 |
| 15° | 7798 | 4124 | 7757 | 6865 |
| 20° | 7650 | 5091 | 7479 | 6300 |
| 25° | 7321 | 5818 | 7208 | 7626 |
| 30° | 7073 | 7849 | 6933 | 8066 |
| 35° | 6739 | 4904 | 6601 | 6863 |
| 40° | 6299 | 3947 | 6235 | 6751 |
| 45° | 6005 | 3947 | 5873 | 5964 |
| 50° | 5524 | 3675 | 5253 | 5420 |
| 55° | 5018 | 4090 | 4621 | 4500 |
| 60° | 4402 | 2689 | 3999 | 3887 |
| 65° | 3558 | 1462 | 3085 | 3285 |
| 70° | 2777 | 1280 | 2562 | 3324 |
| 75° | 2458 | 947 | 2249 | 2710 |
| 80° | 2206 | 658 | 1852 | 2215 |
| 85° | 1852 | 487 | 1200 | 1818 |



TEST NUMBER: P#

CATALOG NUMBER: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 255.1 | 4.6 |
| 10°-20° | 592.5 | 10.7 |
| 20°-30° | 881.9 | 16.0 |
| 30°-40° | 1112.3 | 20.1 |
| 40°-50° | 1007.4 | 18.2 |
| 50°-60° | 837.6 | 15.2 |
| 60°-70° | 506.0 | 9.2 |
| 70°-80° | 251.0 | 4.5 |
| 80°-90° | 77.2 | 1.4 |
| 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° | 1729.6 | 31.3 |
| 0°-40° | 2841.8 | 51.5 |
| 0°-60° | 4686.8 | 84.9 |
| 0°-90° | 5521.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5521.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2804 | 2804 | 2804 | 2804 | 2804 | |
| 5° | 2776 | 2734 | 2765 | 2808 | 2776 | 263 |
| 15° | 2583 | 1396 | 2570 | 2325 | 2583 | 731 |
| 25° | 2287 | 1888 | 2251 | 2474 | 2287 | 1057 |
| 35° | 1913 | 1473 | 1874 | 2061 | 1913 | 1202 |
| 45° | 1482 | 1054 | 1450 | 1593 | 1482 | 1144 |
| 55° | 1015 | 924 | 935 | 1016 | 1015 | 904 |
| 65° | 540 | 260 | 468 | 584 | 540 | 530 |
| 75° | 237 | 118 | 217 | 336 | 237 | 254 |
| 85° | 71 | 32 | 46 | 121 | 71 | 78 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 |
| 2.5° | 2802.5 | 2818.8 | 2805.4 | 2802.5 | 2801.6 | 2804.5 | 2775.8 | 2767.2 | 2776.8 | 2805.4 | 2804.5 |
| 5° | 2775.8 | 2799.7 | 2795.9 | 2755.7 | 2733.8 | 2757.7 | 2744.3 | 2746.2 | 2765.3 | 2785.4 | 2775.8 |
| 7.5° | 2740.5 | 2770.1 | 2680.3 | 2566.6 | 2519.8 | 2579.0 | 2666.9 | 2735.7 | 2744.3 | 2776.8 | 2774.8 |
| 10° | 2712.8 | 2739.5 | 2485.4 | 2098.6 | 1770.0 | 2029.8 | 2512.2 | 2680.3 | 2683.1 | 2728.0 | 2623.0 |
| 12.5° | 2658.3 | 2620.1 | 2110.0 | 1644.8 | 1617.1 | 1661.1 | 2124.4 | 2557.1 | 2617.2 | 2647.8 | 2242.8 |
| 15° | 2582.9 | 2469.2 | 1629.6 | 1437.6 | 1396.5 | 1443.3 | 1600.9 | 2450.1 | 2569.5 | 2598.1 | 1915.2 |
| 17.5° | 2526.5 | 2311.6 | 1521.6 | 1273.3 | 1021.1 | 1215.0 | 1554.1 | 2359.3 | 2500.7 | 2454.9 | 2015.5 |
| 20° | 2471.1 | 2153.0 | 1351.6 | 1385.0 | 1694.5 | 1378.3 | 1372.6 | 2183.6 | 2415.7 | 2142.5 | 2202.7 |
| 22.5° | 2375.6 | 1813.9 | 1120.4 | 1651.5 | 1707.9 | 1635.3 | 1111.8 | 1875.0 | 2344.1 | 1934.3 | 1863.6 |
| 25° | 2286.7 | 1503.5 | 1207.4 | 1714.6 | 1887.5 | 1690.7 | 1054.5 | 1486.3 | 2251.4 | 1729.9 | 1695.5 |
| 27.5° | 2220.8 | 1418.5 | 1519.7 | 1971.5 | 2410.0 | 1835.9 | 1493.0 | 1372.6 | 2148.2 | 1636.3 | 1937.1 |
| 30° | 2116.7 | 1300.0 | 1474.8 | 2407.1 | 2461.5 | 2364.1 | 1449.0 | 1320.1 | 2074.7 | 1731.8 | 2066.1 |
| 32.5° | 2034.6 | 1154.8 | 1580.8 | 2270.5 | 2141.5 | 2259.0 | 1521.6 | 1231.2 | 1974.4 | 1822.5 | 2076.6 |
| 35° | 1913.3 | 1094.7 | 1789.1 | 1985.9 | 1472.9 | 1922.8 | 1637.2 | 1131.0 | 1874.1 | 1684.0 | 2062.3 |
| 37.5° | 1841.6 | 900.7 | 2003.0 | 1346.8 | 1345.9 | 1348.7 | 1951.5 | 997.2 | 1746.1 | 1429.9 | 2023.1 |
| 40° | 1678.3 | 974.3 | 1824.4 | 1231.2 | 1124.3 | 1257.0 | 1829.2 | 813.8 | 1661.1 | 1263.7 | 1935.2 |
| 42.5° | 1619.1 | 1093.7 | 1518.8 | 1011.6 | 682.0 | 1073.6 | 1573.2 | 1031.6 | 1521.6 | 1320.1 | 1642.0 |
| 45° | 1482.5 | 1065.0 | 1116.6 | 640.0 | 1054.5 | 683.0 | 1111.8 | 1020.1 | 1450.0 | 1391.7 | 1380.3 |
| 47.5° | 1367.8 | 999.1 | 994.4 | 982.9 | 1174.9 | 954.2 | 1030.7 | 958.1 | 1294.3 | 1353.5 | 1350.6 |
| 50° | 1245.6 | 1033.5 | 792.8 | 1033.5 | 909.3 | 1047.9 | 881.6 | 901.7 | 1184.4 | 1269.5 | 1379.3 |
| 52.5° | 1124.3 | 1081.3 | 520.6 | 772.8 | 659.1 | 799.5 | 605.6 | 890.2 | 1058.4 | 1193.0 | 1139.5 |
| 55° | 1015.4 | 1074.6 | 735.5 | 663.9 | 923.7 | 632.3 | 663.9 | 986.7 | 935.1 | 1073.6 | 960.0 |
| 57.5° | 893.1 | 907.4 | 707.8 | 810.0 | 799.5 | 850.1 | 711.6 | 875.0 | 826.2 | 955.2 | 891.2 |
| 60° | 782.3 | 675.3 | 520.6 | 633.3 | 544.5 | 704.0 | 530.1 | 721.2 | 710.7 | 750.8 | 875.0 |
| 62.5° | 640.9 | 546.4 | 584.6 | 463.3 | 427.0 | 456.6 | 501.5 | 522.5 | 568.3 | 636.2 | 725.9 |
| 65° | 539.7 | 431.7 | 576.0 | 295.2 | 259.8 | 345.8 | 586.5 | 461.4 | 468.0 | 576.0 | 604.6 |
| 67.5° | 404.0 | 318.1 | 330.5 | 236.9 | 214.0 | 232.1 | 412.6 | 357.2 | 375.4 | 426.0 | 466.1 |
| 70° | 345.8 | 282.7 | 239.8 | 194.9 | 193.9 | 195.8 | 258.9 | 266.5 | 319.0 | 359.2 | 385.9 |
| 72.5° | 288.5 | 233.1 | 191.0 | 160.5 | 145.2 | 176.7 | 189.1 | 219.7 | 270.3 | 427.0 | 352.5 |
| 75° | 236.9 | 269.4 | 154.7 | 131.8 | 117.5 | 129.0 | 151.9 | 199.6 | 216.8 | 265.5 | 288.5 |
| 77.5° | 191.0 | 156.7 | 121.3 | 109.8 | 105.1 | 113.7 | 117.5 | 208.2 | 170.0 | 205.4 | 243.6 |
| 80° | 149.0 | 116.5 | 94.6 | 73.6 | 63.0 | 71.6 | 93.6 | 106.0 | 125.1 | 152.8 | 181.5 |
| 82.5° | 107.0 | 88.8 | 65.9 | 53.5 | 45.8 | 52.5 | 62.1 | 74.5 | 85.0 | 105.1 | 127.0 |
| 85° | 70.7 | 58.3 | 46.8 | 38.2 | 32.5 | 37.3 | 42.0 | 46.8 | 45.8 | 63.0 | 81.2 |
| 87.5° | 35.3 | 31.5 | 31.5 | 27.7 | 22.9 | 25.8 | 28.7 | 24.8 | 13.4 | 27.7 | 49.7 |
| 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: P#

CATALOG NUMBER: 4ILED-LD5-7-W-ASY-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 | 2803.5 |
| 2.5° | 2804.5 | 2812.1 | 2810.2 | 2786.3 | 2788.2 | 2802.5 |
| 5° | 2784.4 | 2808.3 | 2802.5 | 2772.0 | 2770.1 | 2775.8 |
| 7.5° | 2687.9 | 2592.4 | 2732.8 | 2745.2 | 2734.7 | 2740.5 |
| 10° | 2193.1 | 2129.1 | 2291.5 | 2589.5 | 2713.7 | 2712.8 |
| 12.5° | 1968.7 | 2134.9 | 2001.1 | 2226.6 | 2654.5 | 2658.3 |
| 15° | 2244.7 | 2324.9 | 2276.2 | 1948.6 | 2587.6 | 2582.9 |
| 17.5° | 2101.4 | 1954.3 | 2120.5 | 2044.1 | 2502.6 | 2526.5 |
| 20° | 1874.1 | 2096.7 | 1896.1 | 2139.6 | 2204.6 | 2471.1 |
| 22.5° | 2274.3 | 2362.2 | 2185.5 | 1985.9 | 1995.4 | 2375.6 |
| 25° | 2330.7 | 2474.0 | 2286.7 | 1783.4 | 1817.7 | 2286.7 |
| 27.5° | 2396.6 | 2559.9 | 2382.3 | 1895.1 | 1710.8 | 2220.8 |
| 30° | 2424.3 | 2529.4 | 2468.2 | 2040.3 | 1744.2 | 2116.7 |
| 32.5° | 2370.8 | 2328.8 | 2425.2 | 2002.1 | 1721.3 | 2034.6 |
| 35° | 2092.8 | 2061.3 | 2208.4 | 2054.6 | 1700.2 | 1913.3 |
| 37.5° | 1775.7 | 1877.0 | 1939.0 | 2062.3 | 1551.2 | 1841.6 |
| 40° | 1749.0 | 1922.8 | 1791.0 | 2002.1 | 1420.4 | 1678.3 |
| 42.5° | 1790.0 | 1819.6 | 1754.7 | 1812.0 | 1312.4 | 1619.1 |
| 45° | 1592.3 | 1593.3 | 1698.3 | 1595.2 | 1323.9 | 1482.5 |
| 47.5° | 1386.0 | 1439.5 | 1488.2 | 1421.3 | 1314.3 | 1367.8 |
| 50° | 1216.9 | 1341.1 | 1334.4 | 1342.1 | 1224.6 | 1245.6 |
| 52.5° | 1216.9 | 1165.3 | 1178.7 | 1305.8 | 1168.2 | 1124.3 |
| 55° | 1035.4 | 1016.3 | 1103.3 | 1124.3 | 1122.4 | 1015.4 |
| 57.5° | 918.9 | 1013.5 | 949.5 | 967.6 | 1008.7 | 893.1 |
| 60° | 815.7 | 787.1 | 909.3 | 848.2 | 894.1 | 782.3 |
| 62.5° | 637.1 | 662.0 | 704.9 | 801.4 | 747.0 | 640.9 |
| 65° | 545.4 | 583.6 | 610.4 | 670.5 | 604.6 | 539.7 |
| 67.5° | 513.9 | 530.1 | 522.5 | 614.2 | 519.6 | 404.0 |
| 70° | 451.8 | 503.4 | 469.0 | 460.4 | 428.9 | 345.8 |
| 72.5° | 376.3 | 392.6 | 428.9 | 366.8 | 331.5 | 288.5 |
| 75° | 320.9 | 336.2 | 339.1 | 317.1 | 325.7 | 236.9 |
| 77.5° | 255.0 | 271.3 | 269.4 | 270.3 | 269.4 | 191.0 |
| 80° | 200.6 | 212.1 | 212.1 | 207.3 | 181.5 | 149.0 |
| 82.5° | 150.9 | 162.4 | 165.2 | 150.0 | 134.7 | 107.0 |
| 85° | 107.9 | 121.3 | 120.4 | 107.0 | 88.8 | 70.7 |
| 87.5° | 69.7 | 85.0 | 86.9 | 68.8 | 52.5 | 35.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)