

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: P130731

Luminaire Tested: **TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P130731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25252)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW  
Description: METALUX TOP BAY LED LOW-BAY LUMINAIRE.  
WIDE DISTRIBUTION WITH LUMAWATT WIRELESS SENSOR.  
Light Source: (160) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10471.9 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.71  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
CIE Type: Direct

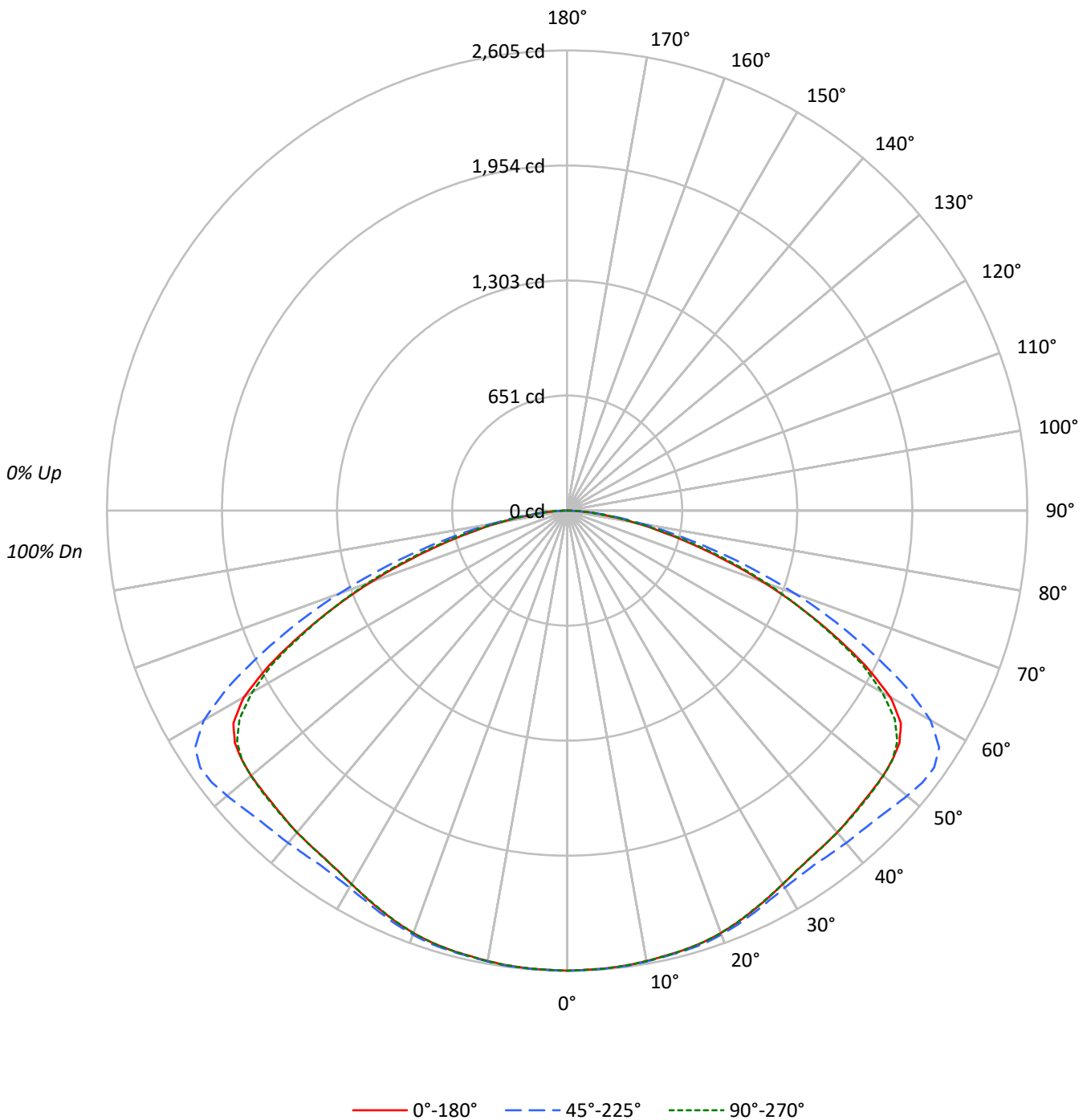
Input Watts (W): 108  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P130731

CATALOG NUMBER: TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW

### Luminous Intensity Polar Plot





TEST NUMBER: P130731

CATALOG NUMBER: TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW

**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   | 108 | 103 | 98  | 94  | 105 | 100 | 96  | 92  | 96  | 93  | 89  | 92  | 89  | 87  | 88  | 86  | 84  | 82  |    |    |    |    | 82  |   |  |   |
| 2   | 97  | 88  | 81  | 74  | 94  | 86  | 79  | 73  | 82  | 77  | 72  | 79  | 74  | 70  | 76  | 72  | 68  | 66  |    |    |    |    | 66  |   |  |   |
| 3   | 87  | 76  | 67  | 60  | 85  | 74  | 66  | 59  | 71  | 64  | 58  | 68  | 62  | 57  | 66  | 61  | 56  | 54  |    |    |    |    | 54  |   |  |   |
| 4   | 79  | 66  | 57  | 49  | 77  | 65  | 56  | 49  | 62  | 55  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 45  |    |    |    |    | 45  |   |  |   |
| 5   | 72  | 58  | 49  | 42  | 70  | 57  | 48  | 41  | 55  | 47  | 41  | 53  | 46  | 40  | 51  | 45  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 6   | 66  | 52  | 42  | 36  | 64  | 51  | 42  | 35  | 49  | 41  | 35  | 47  | 40  | 35  | 46  | 39  | 34  | 32  |    |    |    |    | 32  |   |  |   |
| 7   | 61  | 47  | 37  | 31  | 59  | 46  | 37  | 31  | 44  | 36  | 30  | 43  | 36  | 30  | 41  | 35  | 30  | 28  |    |    |    |    | 28  |   |  |   |
| 8   | 57  | 42  | 33  | 27  | 55  | 42  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 26  | 24  |    |    |    |    | 24  |   |  |   |
| 9   | 53  | 39  | 30  | 24  | 51  | 38  | 30  | 24  | 37  | 29  | 24  | 36  | 29  | 24  | 35  | 28  | 23  | 22  |    |    |    |    | 22  |   |  |   |
| 10  | 49  | 35  | 27  | 22  | 48  | 35  | 27  | 21  | 34  | 26  | 21  | 33  | 26  | 21  | 32  | 26  | 21  | 19  |    |    |    |    | 19  |   |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 28205 | 28205 | 28205 |
| 5°  | 28269 | 28283 | 28269 |
| 10° | 28476 | 28505 | 28476 |
| 15° | 28850 | 28910 | 28850 |
| 20° | 29325 | 29435 | 29325 |
| 25° | 29821 | 29984 | 29805 |
| 30° | 30527 | 30817 | 30527 |
| 35° | 31717 | 32328 | 31734 |
| 40° | 33628 | 34723 | 33628 |
| 45° | 36034 | 37867 | 36097 |
| 50° | 39343 | 42322 | 39365 |
| 55° | 43345 | 47891 | 43063 |
| 60° | 45777 | 51462 | 44597 |
| 65° | 42588 | 48755 | 42239 |
| 70° | 37379 | 43451 | 37980 |
| 75° | 30559 | 35509 | 31756 |
| 80° | 23834 | 27058 | 24345 |
| 85° | 16897 | 18761 | 17233 |



TEST NUMBER: P130731

CATALOG NUMBER: TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 248.0   | 2.4       |
| 10°-20°   | 729.1   | 7.0       |
| 20°-30°   | 1157.3  | 11.1      |
| 30°-40°   | 1525.3  | 14.6      |
| 40°-50°   | 1872.6  | 17.9      |
| 50°-60°   | 2137.5  | 20.4      |
| 60°-70°   | 1758.5  | 16.8      |
| 70°-80°   | 862.9   | 8.2       |
| 80°-90°   | 180.6   | 1.7       |
| 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°    | 2134.4  | 20.4      |
| 0°-40°    | 3659.7  | 34.9      |
| 0°-60°    | 7669.8  | 73.2      |
| 0°-90°    | 10471.9 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 10471.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2605 | 2605  | 2605 | 2605  | 2605 |      |
| 5°  | 2601 | 2602  | 2602 | 2602  | 2601 | 248  |
| 15° | 2573 | 2575  | 2579 | 2577  | 2573 | 728  |
| 25° | 2496 | 2504  | 2510 | 2504  | 2494 | 1154 |
| 35° | 2399 | 2424  | 2446 | 2424  | 2401 | 1509 |
| 45° | 2353 | 2414  | 2473 | 2418  | 2357 | 1823 |
| 55° | 2296 | 2425  | 2537 | 2418  | 2281 | 2035 |
| 65° | 1662 | 1794  | 1903 | 1791  | 1648 | 1640 |
| 75° | 730  | 801   | 849  | 811   | 759  | 790  |
| 85° | 136  | 148   | 151  | 146   | 139  | 168  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P130731

CATALOG NUMBER: TBLED-LD1-11-W-UNV-L850-CD1-DIMRF-LW

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 |
| 2.5°  | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2603.3 | 2603.3 | 2603.3 | 2603.3 | 2603.3 | 2603.3 | 2601.9 |
| 5°    | 2600.6 | 2600.6 | 2600.6 | 2600.6 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 |
| 7.5°  | 2596.5 | 2596.5 | 2597.9 | 2597.9 | 2597.9 | 2597.9 | 2597.9 | 2599.2 | 2599.2 | 2599.2 | 2599.2 |
| 10°   | 2589.7 | 2589.7 | 2589.7 | 2589.7 | 2591.1 | 2591.1 | 2592.4 | 2592.4 | 2592.4 | 2592.4 | 2592.4 |
| 12.5° | 2580.2 | 2580.2 | 2581.5 | 2581.5 | 2581.5 | 2582.9 | 2584.3 | 2584.3 | 2584.3 | 2584.3 | 2584.3 |
| 15°   | 2573.4 | 2573.4 | 2573.4 | 2574.7 | 2574.7 | 2576.1 | 2577.5 | 2577.5 | 2578.8 | 2578.8 | 2578.8 |
| 17.5° | 2562.5 | 2563.9 | 2563.9 | 2563.9 | 2565.2 | 2566.6 | 2569.3 | 2569.3 | 2570.7 | 2570.7 | 2570.7 |
| 20°   | 2544.8 | 2544.8 | 2546.2 | 2547.5 | 2548.9 | 2550.3 | 2553.0 | 2554.3 | 2554.3 | 2554.3 | 2555.7 |
| 22.5° | 2523.1 | 2523.1 | 2524.4 | 2525.8 | 2528.5 | 2529.9 | 2532.6 | 2533.9 | 2533.9 | 2533.9 | 2533.9 |
| 25°   | 2495.9 | 2497.2 | 2498.6 | 2499.9 | 2502.7 | 2505.4 | 2508.1 | 2510.8 | 2510.8 | 2509.5 | 2510.8 |
| 27.5° | 2468.7 | 2470.0 | 2471.4 | 2474.1 | 2476.8 | 2479.5 | 2482.3 | 2485.0 | 2485.0 | 2485.0 | 2486.3 |
| 30°   | 2441.4 | 2442.8 | 2445.5 | 2448.2 | 2452.3 | 2455.0 | 2459.1 | 2463.2 | 2464.6 | 2464.6 | 2463.2 |
| 32.5° | 2417.0 | 2418.3 | 2422.4 | 2426.5 | 2431.9 | 2437.4 | 2442.8 | 2446.9 | 2451.0 | 2451.0 | 2448.2 |
| 35°   | 2399.3 | 2400.6 | 2406.1 | 2412.9 | 2421.0 | 2427.8 | 2434.6 | 2440.1 | 2445.5 | 2445.5 | 2444.2 |
| 37.5° | 2388.4 | 2389.8 | 2396.6 | 2404.7 | 2417.0 | 2426.5 | 2436.0 | 2442.8 | 2448.2 | 2449.6 | 2448.2 |
| 40°   | 2378.9 | 2380.2 | 2388.4 | 2399.3 | 2412.9 | 2426.5 | 2438.7 | 2448.2 | 2453.7 | 2456.4 | 2456.4 |
| 42.5° | 2365.3 | 2368.0 | 2376.2 | 2391.1 | 2407.4 | 2423.8 | 2438.7 | 2452.3 | 2459.1 | 2461.8 | 2460.5 |
| 45°   | 2353.0 | 2355.8 | 2366.6 | 2384.3 | 2403.4 | 2423.8 | 2442.8 | 2459.1 | 2468.7 | 2472.7 | 2470.0 |
| 47.5° | 2343.5 | 2347.6 | 2361.2 | 2381.6 | 2404.7 | 2430.6 | 2453.7 | 2472.7 | 2485.0 | 2490.4 | 2486.3 |
| 50°   | 2335.4 | 2340.8 | 2355.8 | 2380.2 | 2410.2 | 2442.8 | 2470.0 | 2491.8 | 2506.7 | 2512.2 | 2508.1 |
| 52.5° | 2320.4 | 2329.9 | 2347.6 | 2377.5 | 2414.2 | 2451.0 | 2483.6 | 2509.5 | 2527.1 | 2532.6 | 2527.1 |
| 55°   | 2295.9 | 2305.4 | 2325.8 | 2359.8 | 2404.7 | 2445.5 | 2485.0 | 2513.5 | 2529.9 | 2536.7 | 2528.5 |
| 57.5° | 2240.1 | 2249.7 | 2270.1 | 2309.5 | 2354.4 | 2400.6 | 2441.4 | 2472.7 | 2493.1 | 2497.2 | 2480.9 |
| 60°   | 2113.7 | 2120.5 | 2151.7 | 2191.2 | 2234.7 | 2279.6 | 2321.8 | 2357.1 | 2374.8 | 2376.2 | 2353.0 |
| 62.5° | 1904.2 | 1915.1 | 1946.4 | 1988.5 | 2029.3 | 2066.0 | 2105.5 | 2142.2 | 2155.8 | 2161.3 | 2143.6 |
| 65°   | 1662.1 | 1677.1 | 1700.2 | 1738.3 | 1779.1 | 1809.0 | 1852.5 | 1883.8 | 1897.4 | 1902.8 | 1896.0 |
| 67.5° | 1421.3 | 1434.9 | 1447.2 | 1483.9 | 1520.6 | 1549.2 | 1591.4 | 1619.9 | 1630.8 | 1639.0 | 1634.9 |
| 70°   | 1180.6 | 1192.8 | 1203.7 | 1233.6 | 1262.2 | 1298.9 | 1323.4 | 1350.6 | 1357.4 | 1372.4 | 1365.6 |
| 72.5° | 946.7  | 956.2  | 967.1  | 995.6  | 1013.3 | 1052.7 | 1063.6 | 1086.8 | 1099.0 | 1103.1 | 1096.3 |
| 75°   | 730.4  | 737.2  | 749.4  | 772.6  | 786.2  | 816.1  | 820.2  | 840.6  | 848.7  | 848.7  | 846.0  |
| 77.5° | 541.3  | 546.8  | 560.4  | 574.0  | 587.6  | 608.0  | 603.9  | 617.5  | 622.9  | 625.7  | 622.9  |
| 80°   | 382.2  | 389.0  | 391.7  | 402.6  | 414.8  | 423.0  | 420.3  | 427.1  | 428.4  | 433.9  | 432.5  |
| 82.5° | 244.8  | 251.6  | 247.5  | 254.3  | 262.5  | 267.9  | 269.3  | 269.3  | 269.3  | 273.4  | 272.0  |
| 85°   | 136.0  | 141.5  | 138.7  | 141.5  | 145.5  | 149.6  | 146.9  | 148.3  | 149.6  | 151.0  | 149.6  |
| 87.5° | 44.9   | 50.3   | 46.2   | 47.6   | 50.3   | 53.0   | 54.4   | 50.3   | 53.0   | 53.0   | 53.0   |
| 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: P130731

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**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 | 2604.7 |
| 2.5°  | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2601.9 |
| 5°    | 2601.9 | 2601.9 | 2601.9 | 2601.9 | 2600.6 | 2600.6 | 2600.6 | 2600.6 |
| 7.5°  | 2597.9 | 2597.9 | 2597.9 | 2597.9 | 2596.5 | 2596.5 | 2596.5 | 2596.5 |
| 10°   | 2591.1 | 2591.1 | 2591.1 | 2589.7 | 2589.7 | 2589.7 | 2589.7 | 2589.7 |
| 12.5° | 2584.3 | 2582.9 | 2582.9 | 2582.9 | 2582.9 | 2581.5 | 2581.5 | 2581.5 |
| 15°   | 2578.8 | 2577.5 | 2577.5 | 2576.1 | 2574.7 | 2574.7 | 2573.4 | 2573.4 |
| 17.5° | 2569.3 | 2569.3 | 2567.9 | 2566.6 | 2565.2 | 2563.9 | 2563.9 | 2562.5 |
| 20°   | 2554.3 | 2553.0 | 2550.3 | 2548.9 | 2548.9 | 2547.5 | 2546.2 | 2544.8 |
| 22.5° | 2532.6 | 2531.2 | 2529.9 | 2527.1 | 2525.8 | 2524.4 | 2523.1 | 2521.7 |
| 25°   | 2508.1 | 2506.7 | 2505.4 | 2502.7 | 2501.3 | 2498.6 | 2497.2 | 2494.5 |
| 27.5° | 2483.6 | 2483.6 | 2479.5 | 2476.8 | 2474.1 | 2471.4 | 2470.0 | 2467.3 |
| 30°   | 2461.8 | 2460.5 | 2457.8 | 2452.3 | 2449.6 | 2445.5 | 2442.8 | 2441.4 |
| 32.5° | 2445.5 | 2444.2 | 2438.7 | 2431.9 | 2426.5 | 2421.0 | 2419.7 | 2417.0 |
| 35°   | 2441.4 | 2436.0 | 2427.8 | 2419.7 | 2412.9 | 2406.1 | 2402.0 | 2400.6 |
| 37.5° | 2445.5 | 2436.0 | 2426.5 | 2415.6 | 2406.1 | 2396.6 | 2391.1 | 2388.4 |
| 40°   | 2449.6 | 2440.1 | 2429.2 | 2414.2 | 2400.6 | 2389.8 | 2383.0 | 2378.9 |
| 42.5° | 2452.3 | 2441.4 | 2427.8 | 2410.2 | 2393.8 | 2380.2 | 2372.1 | 2368.0 |
| 45°   | 2459.1 | 2446.9 | 2429.2 | 2407.4 | 2387.0 | 2372.1 | 2362.6 | 2357.1 |
| 47.5° | 2474.1 | 2456.4 | 2434.6 | 2408.8 | 2384.3 | 2363.9 | 2353.0 | 2347.6 |
| 50°   | 2493.1 | 2471.4 | 2444.2 | 2412.9 | 2383.0 | 2357.1 | 2343.5 | 2336.7 |
| 52.5° | 2510.8 | 2485.0 | 2452.3 | 2415.6 | 2377.5 | 2347.6 | 2327.2 | 2320.4 |
| 55°   | 2510.8 | 2479.5 | 2438.7 | 2396.6 | 2353.0 | 2317.7 | 2290.5 | 2281.0 |
| 57.5° | 2457.8 | 2423.8 | 2373.4 | 2327.2 | 2279.6 | 2237.4 | 2208.9 | 2199.3 |
| 60°   | 2321.8 | 2291.8 | 2233.3 | 2188.5 | 2135.4 | 2089.2 | 2067.4 | 2059.2 |
| 62.5° | 2113.7 | 2091.9 | 2038.8 | 1999.4 | 1942.3 | 1905.6 | 1879.7 | 1881.1 |
| 65°   | 1871.5 | 1852.5 | 1809.0 | 1773.6 | 1721.9 | 1693.4 | 1667.5 | 1648.5 |
| 67.5° | 1617.2 | 1595.4 | 1560.1 | 1528.8 | 1486.6 | 1466.2 | 1437.7 | 1420.0 |
| 70°   | 1350.6 | 1334.3 | 1301.7 | 1279.9 | 1244.5 | 1226.8 | 1199.6 | 1199.6 |
| 72.5° | 1084.0 | 1075.9 | 1052.7 | 1033.7 | 1006.5 | 990.2  | 968.4  | 972.5  |
| 75°   | 836.5  | 840.6  | 817.4  | 803.8  | 782.1  | 768.5  | 752.2  | 759.0  |
| 77.5° | 627.0  | 621.6  | 605.3  | 597.1  | 578.1  | 572.6  | 556.3  | 561.7  |
| 80°   | 433.9  | 432.5  | 418.9  | 413.5  | 402.6  | 399.9  | 386.3  | 390.4  |
| 82.5° | 273.4  | 273.4  | 267.9  | 262.5  | 258.4  | 255.7  | 246.2  | 248.9  |
| 85°   | 151.0  | 149.6  | 148.3  | 144.2  | 141.5  | 142.8  | 136.0  | 138.7  |
| 87.5° | 53.0   | 51.7   | 51.7   | 49.0   | 46.2   | 50.3   | 44.9   | 46.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)