

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: LUMARK

Report Number: P883739

Luminaire Tested: **NAV-SB4B-722-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883739
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-722-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 2200K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18197 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

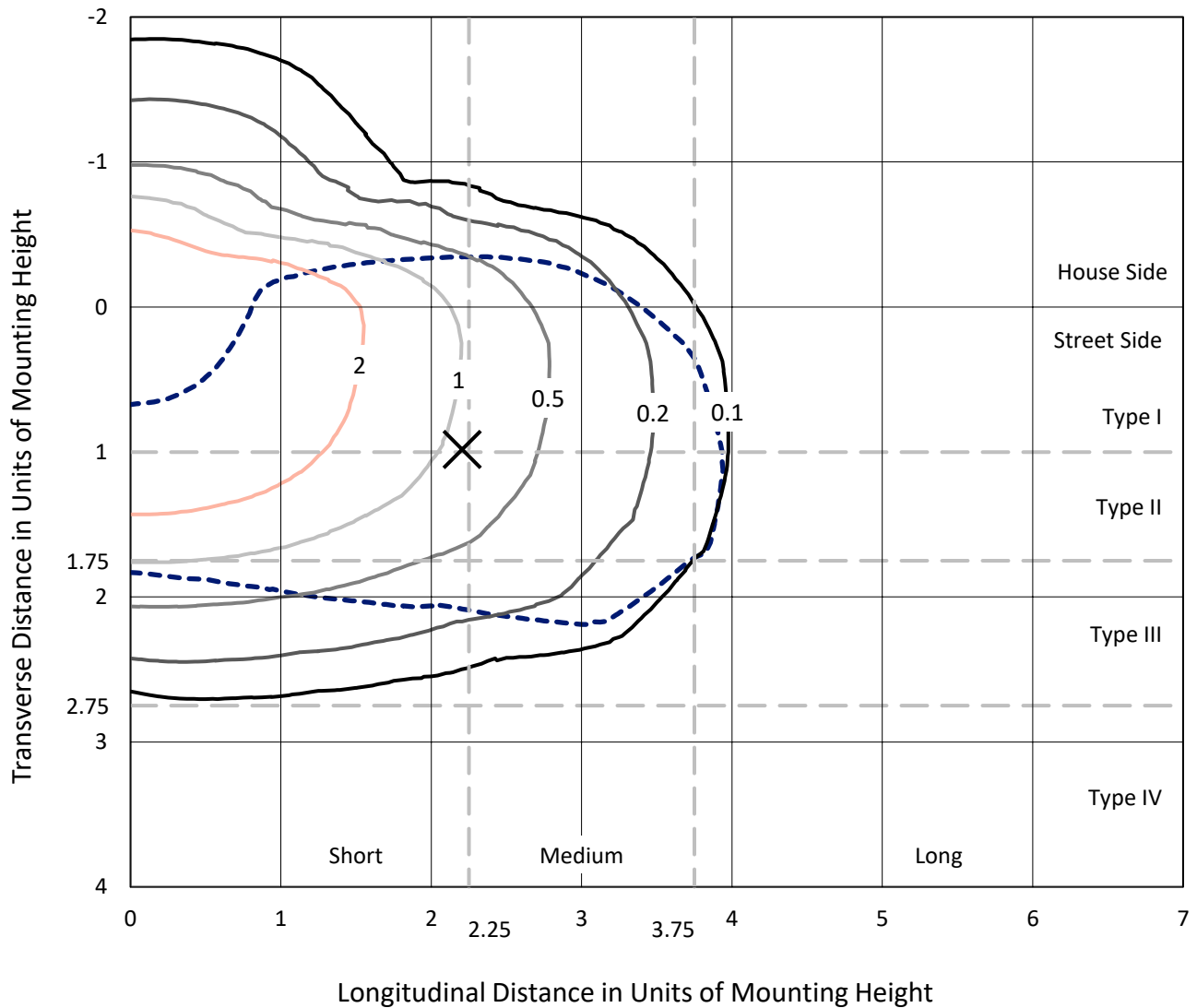
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

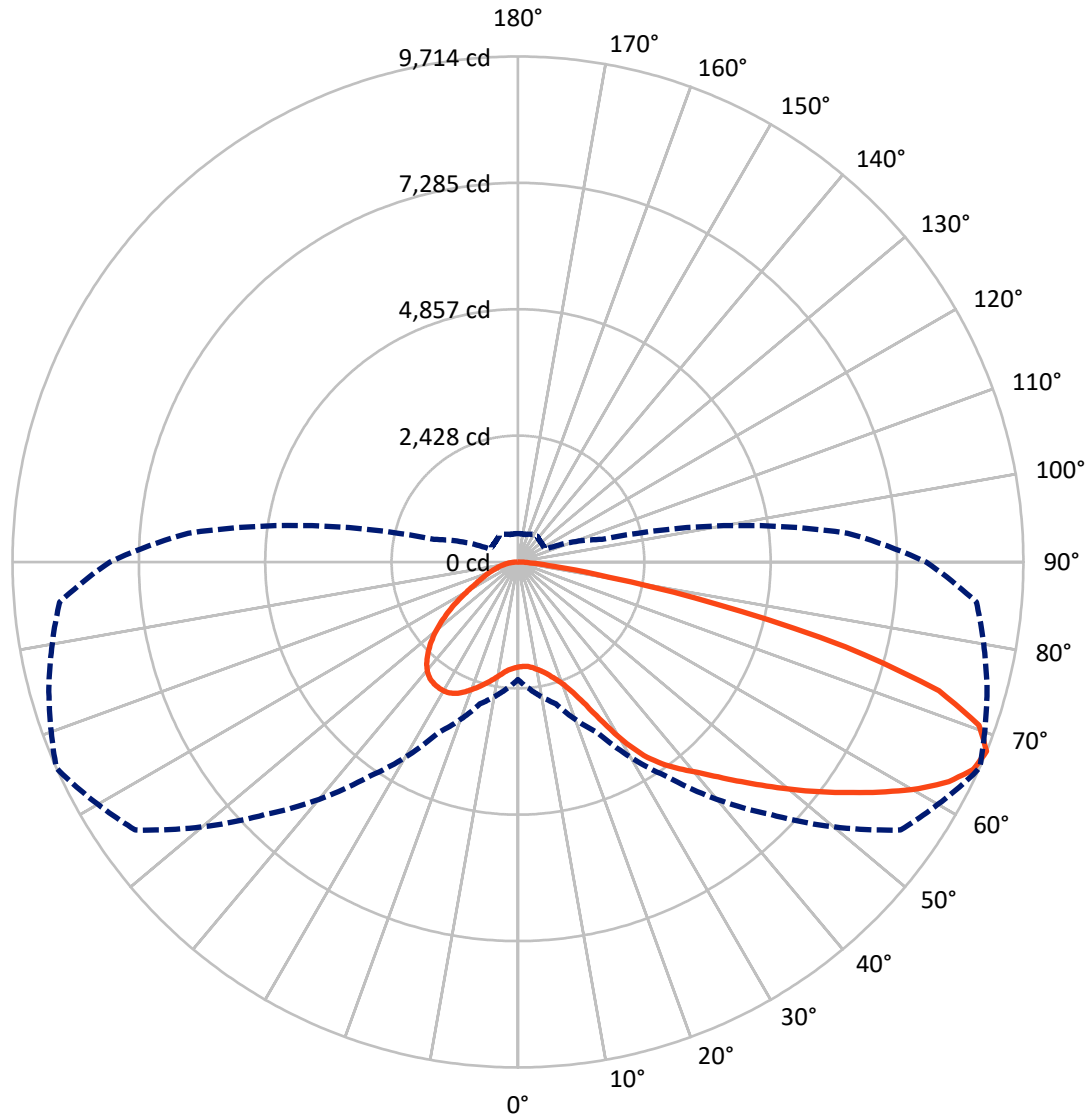
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4524.6 | 0.0 | 4524.6 |
| | % Fixture | 24.9 | 0.0 | 24.9 |
| Street Side | Lumens | 13672.4 | 0.0 | 13672.4 |
| | % Fixture | 75.1 | 0.0 | 75.1 |
| Total | Lumens | 18197.0 | 0.0 | 18197.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 200.1 | 1.1 |
| 10°-20° | 661.1 | 3.6 |
| 20°-30° | 1274.3 | 7.0 |
| 30°-40° | 2234.3 | 12.3 |
| 40°-50° | 3321.6 | 18.3 |
| 50°-60° | 4210.5 | 23.1 |
| 60°-70° | 4119.9 | 22.6 |
| 70°-80° | 1965.2 | 10.8 |
| 80°-90° | 210.0 | 1.2 |
| 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°-90° | 18197.0 | 100.0 |
| 0°-180° | 18197.0 | 100.0 |

Coefficient of Utilization



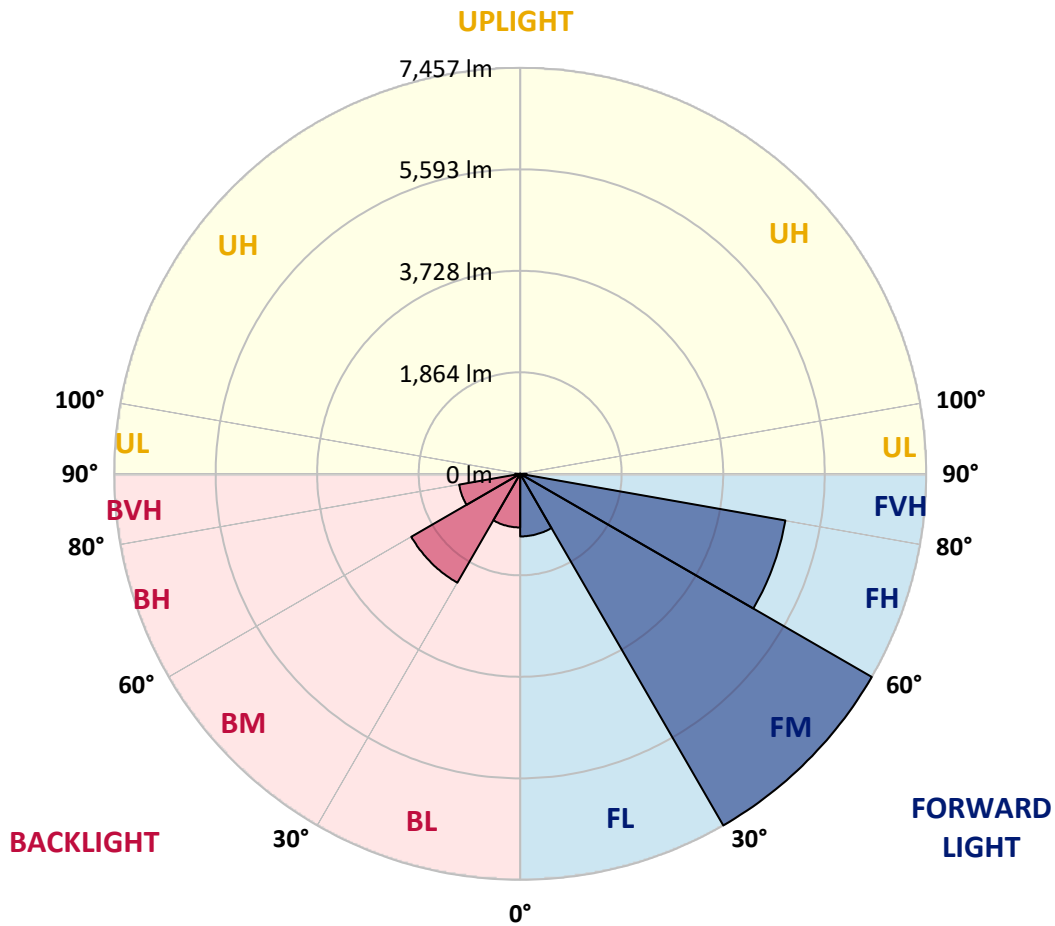
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1149.9 | 6.3 | | | |
| FM (30°-60°) | 7457.0 | 41.0 | | | |
| FH (60°-80°) | 4946.4 | 27.2 | | | G2/5000 |
| FVH (80°-90°) | 119.1 | 0.7 | | | G2/225 |
| BL (0°-30°) | 985.6 | 5.4 | B2/1000 | | |
| BM (30°-60°) | 2309.4 | 12.7 | B2/2500 | | |
| BH (60°-80°) | 1138.6 | 6.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 90.9 | 0.5 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 |
| 2.5° | 1997.3 | 2008.7 | 2005.9 | 2001.1 | 2000.1 | 2002.0 | 2004.9 | 2007.8 | 2006.8 | 2011.6 | 2019.2 |
| 5° | 1991.5 | 2003.0 | 2002.0 | 2002.0 | 2005.9 | 2013.5 | 2018.3 | 2023.1 | 2018.3 | 2024.0 | 2034.5 |
| 7.5° | 1995.3 | 2003.9 | 2007.8 | 2011.6 | 2021.2 | 2035.5 | 2047.0 | 2057.5 | 2051.8 | 2058.4 | 2071.8 |
| 10° | 2044.1 | 2050.8 | 2054.6 | 2054.6 | 2061.3 | 2077.6 | 2089.0 | 2108.2 | 2103.4 | 2113.9 | 2131.1 |
| 12.5° | 2133.0 | 2139.7 | 2139.7 | 2135.9 | 2140.7 | 2151.2 | 2155.0 | 2176.0 | 2167.4 | 2184.6 | 2201.9 |
| 15° | 2242.0 | 2255.4 | 2244.9 | 2238.2 | 2240.1 | 2250.6 | 2249.7 | 2265.9 | 2257.3 | 2271.6 | 2286.9 |
| 17.5° | 2362.5 | 2379.7 | 2362.5 | 2361.5 | 2357.7 | 2369.2 | 2370.1 | 2384.5 | 2369.2 | 2379.7 | 2390.2 |
| 20° | 2504.9 | 2528.8 | 2514.5 | 2519.3 | 2510.7 | 2515.5 | 2520.2 | 2541.3 | 2517.4 | 2525.0 | 2522.1 |
| 22.5° | 2705.7 | 2734.4 | 2719.1 | 2737.3 | 2731.5 | 2727.7 | 2726.7 | 2764.0 | 2726.7 | 2729.6 | 2701.9 |
| 25° | 2998.3 | 3032.7 | 3005.9 | 3030.8 | 3030.8 | 3043.2 | 3057.5 | 3105.4 | 3043.2 | 3025.0 | 2953.3 |
| 27.5° | 3430.4 | 3464.8 | 3412.3 | 3427.6 | 3422.8 | 3453.4 | 3438.1 | 3556.6 | 3489.7 | 3460.1 | 3315.7 |
| 30° | 3950.5 | 4011.7 | 3912.3 | 3908.5 | 3903.7 | 3952.4 | 3974.4 | 4052.8 | 3984.9 | 3955.3 | 3781.3 |
| 32.5° | 4512.7 | 4576.8 | 4458.2 | 4423.8 | 4405.6 | 4435.3 | 4417.1 | 4480.2 | 4433.3 | 4387.5 | 4172.3 |
| 35° | 5107.4 | 5170.5 | 5057.7 | 4990.7 | 4918.1 | 4855.9 | 4790.9 | 4807.2 | 4763.2 | 4693.4 | 4470.6 |
| 37.5° | 5669.6 | 5785.2 | 5665.7 | 5594.0 | 5460.2 | 5338.8 | 5157.1 | 5081.6 | 5040.5 | 4976.4 | 4751.7 |
| 40° | 6242.3 | 6308.2 | 6217.4 | 6156.2 | 6010.9 | 5820.6 | 5530.0 | 5370.3 | 5314.9 | 5252.7 | 5062.5 |
| 42.5° | 6663.9 | 6727.0 | 6678.2 | 6636.2 | 6522.4 | 6301.5 | 5925.8 | 5726.0 | 5645.7 | 5575.9 | 5414.3 |
| 45° | 6998.5 | 7045.4 | 7014.8 | 7030.1 | 6981.3 | 6767.1 | 6336.0 | 6107.4 | 6024.3 | 5939.2 | 5812.0 |
| 47.5° | 7133.3 | 7183.0 | 7231.8 | 7322.6 | 7405.8 | 7248.1 | 6776.7 | 6520.5 | 6432.5 | 6345.5 | 6220.3 |
| 50° | 7118.0 | 7168.7 | 7310.2 | 7503.3 | 7761.5 | 7708.9 | 7241.4 | 6960.3 | 6879.0 | 6779.6 | 6663.9 |
| 52.5° | 6995.6 | 7053.0 | 7234.7 | 7555.9 | 7967.0 | 8054.0 | 7714.6 | 7414.4 | 7337.9 | 7219.4 | 7103.7 |
| 55° | 6674.4 | 6708.8 | 6981.3 | 7436.4 | 8015.8 | 8295.0 | 8178.3 | 7898.2 | 7821.7 | 7656.3 | 7530.1 |
| 57.5° | 6078.8 | 6128.5 | 6525.3 | 7114.2 | 7893.4 | 8458.5 | 8585.6 | 8406.8 | 8333.2 | 8095.1 | 7963.2 |
| 60° | 5301.5 | 5380.8 | 5835.0 | 6573.1 | 7581.7 | 8457.5 | 8955.6 | 8906.9 | 8845.7 | 8527.3 | 8389.6 |
| 62.5° | 4421.9 | 4513.7 | 4950.6 | 5808.2 | 7036.8 | 8217.5 | 9187.0 | 9325.6 | 9294.1 | 8926.0 | 8750.1 |
| 65° | 3396.0 | 3459.1 | 3894.1 | 4818.7 | 6188.7 | 7702.2 | 9213.8 | 9611.5 | 9617.2 | 9229.1 | 8938.4 |
| 67.5° | 2261.1 | 2442.8 | 2820.4 | 3615.9 | 5052.9 | 6859.9 | 8978.6 | 9658.3 | 9713.8 | 9333.3 | 8843.8 |
| 70° | 1103.3 | 1342.3 | 1712.3 | 2350.0 | 3615.9 | 5568.2 | 8363.8 | 9274.0 | 9397.3 | 9029.2 | 8279.7 |
| 72.5° | 458.0 | 535.4 | 737.1 | 1159.7 | 2075.7 | 3757.4 | 7128.5 | 8231.9 | 8460.4 | 8000.5 | 6961.2 |
| 75° | 308.8 | 334.6 | 421.6 | 594.7 | 945.6 | 1852.9 | 5140.8 | 6138.0 | 6506.1 | 6042.4 | 4939.1 |
| 77.5° | 238.1 | 254.3 | 306.9 | 415.9 | 562.2 | 700.8 | 2751.6 | 3699.1 | 3889.3 | 3600.6 | 2569.9 |
| 80° | 187.4 | 199.8 | 229.5 | 303.1 | 398.7 | 374.8 | 937.9 | 1676.0 | 1786.0 | 1498.2 | 826.1 |
| 82.5° | 162.5 | 167.3 | 164.4 | 205.6 | 264.8 | 218.9 | 307.9 | 618.6 | 682.6 | 495.3 | 269.6 |
| 85° | 117.6 | 131.0 | 136.7 | 127.2 | 140.5 | 110.9 | 126.2 | 218.9 | 240.9 | 215.1 | 152.0 |
| 87.5° | 47.8 | 70.8 | 87.0 | 82.2 | 51.6 | 31.6 | 39.2 | 64.1 | 73.6 | 80.3 | 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 |

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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 | 2018.3 |
| 2.5° | 2020.2 | 2026.9 | 2031.7 | 2037.4 | 2041.2 | 2047.0 | 2058.4 | 2065.1 | 2066.1 | 2070.9 | 2069.9 |
| 5° | 2038.4 | 2047.9 | 2058.4 | 2073.7 | 2090.9 | 2105.3 | 2127.3 | 2142.6 | 2148.3 | 2153.1 | 2152.1 |
| 7.5° | 2077.6 | 2090.9 | 2110.1 | 2136.8 | 2161.7 | 2180.8 | 2207.6 | 2225.8 | 2243.9 | 2250.6 | 2251.6 |
| 10° | 2135.9 | 2155.0 | 2182.7 | 2219.1 | 2245.8 | 2270.7 | 2298.4 | 2313.7 | 2331.9 | 2339.5 | 2343.4 |
| 12.5° | 2208.5 | 2228.6 | 2265.0 | 2315.6 | 2340.5 | 2357.7 | 2367.3 | 2363.4 | 2367.3 | 2374.0 | 2375.9 |
| 15° | 2291.7 | 2313.7 | 2354.8 | 2409.3 | 2426.5 | 2411.2 | 2390.2 | 2371.1 | 2368.2 | 2370.1 | 2376.8 |
| 17.5° | 2390.2 | 2406.5 | 2454.3 | 2500.2 | 2487.7 | 2424.6 | 2378.7 | 2348.1 | 2332.8 | 2328.1 | 2334.8 |
| 20° | 2527.9 | 2527.9 | 2567.1 | 2595.8 | 2512.6 | 2405.5 | 2333.8 | 2284.1 | 2252.5 | 2239.1 | 2236.3 |
| 22.5° | 2695.2 | 2679.9 | 2704.8 | 2684.7 | 2507.8 | 2352.0 | 2252.5 | 2166.5 | 2118.7 | 2099.6 | 2096.7 |
| 25° | 2907.4 | 2889.3 | 2882.6 | 2758.3 | 2473.4 | 2266.9 | 2105.3 | 2001.1 | 1959.0 | 1948.5 | 1950.4 |
| 27.5° | 3227.7 | 3181.8 | 3094.8 | 2798.5 | 2410.3 | 2133.0 | 1933.2 | 1836.6 | 1812.7 | 1813.7 | 1816.6 |
| 30° | 3654.1 | 3562.4 | 3349.2 | 2805.1 | 2307.0 | 1943.7 | 1757.3 | 1688.4 | 1677.0 | 1681.7 | 1698.0 |
| 32.5° | 4049.0 | 3962.0 | 3609.2 | 2774.5 | 2148.3 | 1758.2 | 1599.5 | 1553.6 | 1536.4 | 1542.2 | 1549.8 |
| 35° | 4358.8 | 4334.9 | 3850.1 | 2731.5 | 1953.3 | 1584.2 | 1458.0 | 1418.8 | 1385.4 | 1377.7 | 1383.4 |
| 37.5° | 4651.3 | 4641.8 | 4030.8 | 2671.3 | 1760.1 | 1460.9 | 1344.3 | 1292.6 | 1243.9 | 1217.1 | 1218.0 |
| 40° | 4972.6 | 4963.0 | 4149.4 | 2578.6 | 1589.0 | 1353.8 | 1241.9 | 1174.1 | 1113.8 | 1065.1 | 1069.9 |
| 42.5° | 5334.0 | 5277.6 | 4205.8 | 2445.7 | 1443.7 | 1263.0 | 1158.8 | 1067.0 | 987.6 | 942.7 | 945.6 |
| 45° | 5728.8 | 5601.7 | 4204.8 | 2276.4 | 1321.3 | 1179.8 | 1069.9 | 939.8 | 866.2 | 824.1 | 822.2 |
| 47.5° | 6147.6 | 5911.5 | 4153.2 | 2089.0 | 1202.8 | 1088.0 | 932.2 | 832.7 | 784.0 | 758.2 | 752.4 |
| 50° | 6579.8 | 6201.1 | 4065.3 | 1873.9 | 1081.3 | 983.8 | 846.1 | 778.3 | 741.0 | 717.1 | 708.5 |
| 52.5° | 6986.1 | 6464.1 | 3959.1 | 1630.1 | 958.0 | 882.5 | 807.9 | 755.3 | 716.1 | 689.3 | 677.9 |
| 55° | 7363.7 | 6690.7 | 3809.0 | 1380.6 | 857.6 | 814.6 | 789.7 | 745.7 | 700.8 | 669.3 | 656.8 |
| 57.5° | 7699.3 | 6837.9 | 3549.9 | 1146.3 | 785.9 | 767.7 | 770.6 | 729.5 | 677.9 | 651.1 | 633.9 |
| 60° | 7978.5 | 6945.9 | 3166.5 | 929.3 | 727.6 | 721.8 | 741.0 | 698.9 | 638.7 | 608.1 | 594.7 |
| 62.5° | 8145.8 | 6944.0 | 2696.1 | 761.0 | 677.9 | 679.8 | 701.8 | 660.7 | 599.5 | 570.8 | 562.2 |
| 65° | 8131.5 | 6773.8 | 2179.9 | 651.1 | 630.1 | 632.0 | 660.7 | 618.6 | 567.0 | 549.7 | 548.8 |
| 67.5° | 7843.7 | 6358.9 | 1672.2 | 579.4 | 577.5 | 586.1 | 619.5 | 589.9 | 546.9 | 545.0 | 547.8 |
| 70° | 7064.5 | 5497.5 | 1204.7 | 522.0 | 523.0 | 535.4 | 579.4 | 571.7 | 536.4 | 540.2 | 539.2 |
| 72.5° | 5664.8 | 4191.5 | 808.8 | 461.8 | 462.7 | 482.8 | 541.1 | 557.4 | 525.8 | 576.5 | 584.2 |
| 75° | 3772.7 | 2613.9 | 520.1 | 397.7 | 398.7 | 424.5 | 507.7 | 529.7 | 497.2 | 574.6 | 579.4 |
| 77.5° | 1812.7 | 1175.0 | 376.7 | 334.6 | 334.6 | 358.5 | 438.8 | 474.2 | 423.5 | 446.5 | 409.2 |
| 80° | 626.2 | 441.7 | 296.4 | 269.6 | 263.9 | 280.1 | 370.0 | 411.1 | 365.2 | 336.5 | 315.5 |
| 82.5° | 246.7 | 229.5 | 238.1 | 209.4 | 190.3 | 200.8 | 287.8 | 339.4 | 268.7 | 242.8 | 241.9 |
| 85° | 141.5 | 149.1 | 168.3 | 138.6 | 109.9 | 123.3 | 211.3 | 243.8 | 202.7 | 178.8 | 182.6 |
| 87.5° | 38.2 | 52.6 | 77.4 | 71.7 | 49.7 | 52.6 | 100.4 | 134.8 | 116.6 | 89.9 | 92.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)