

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: P882951

Luminaire Tested: **NAV-SB3A-760-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882951
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-760-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 5700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14337 lumens
Efficiency: N/A
Efficacy: 169.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

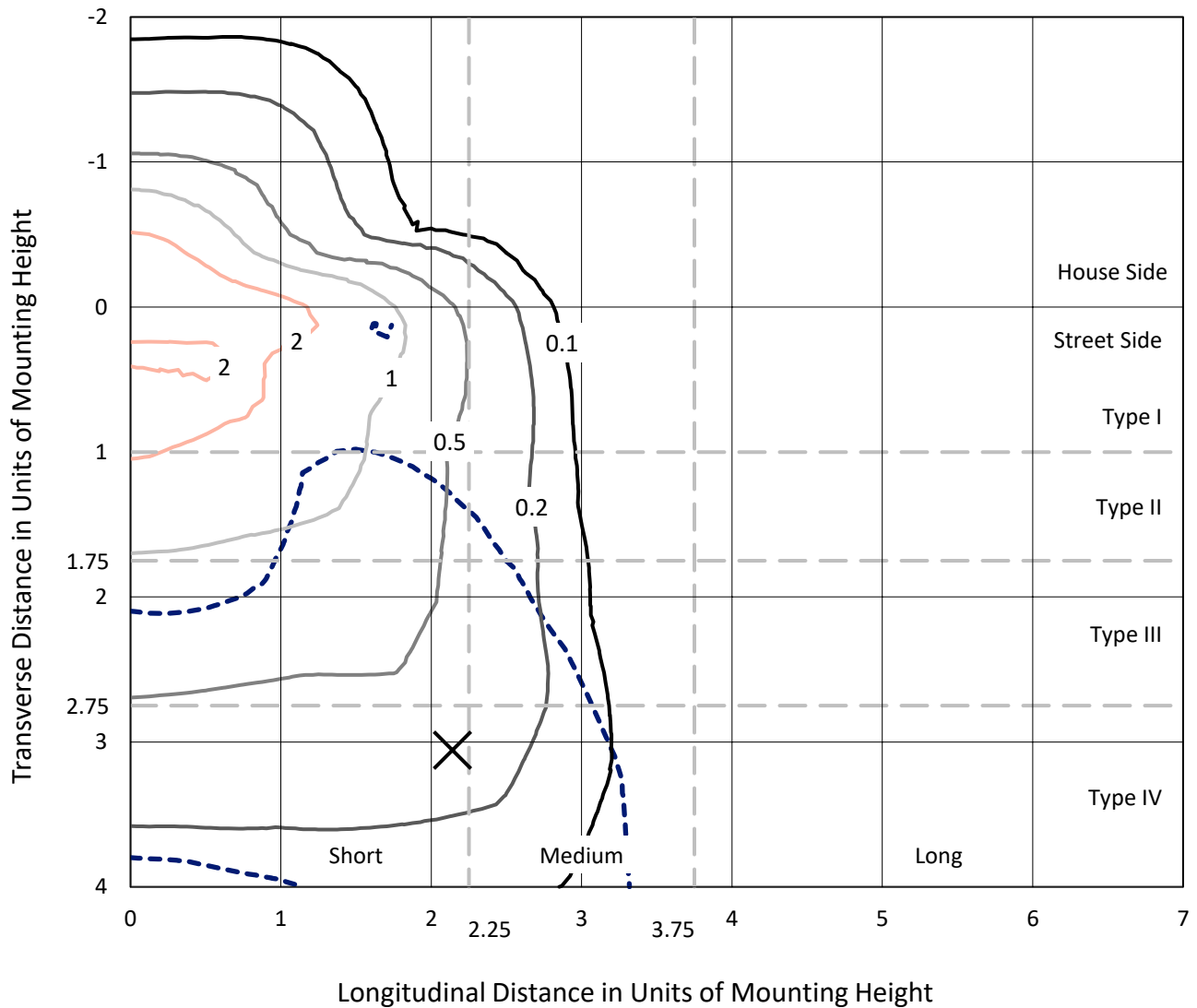
Input Watts (W): 84.7
Input Voltage (V): 120.0
Input Current (Ain): 0.717
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

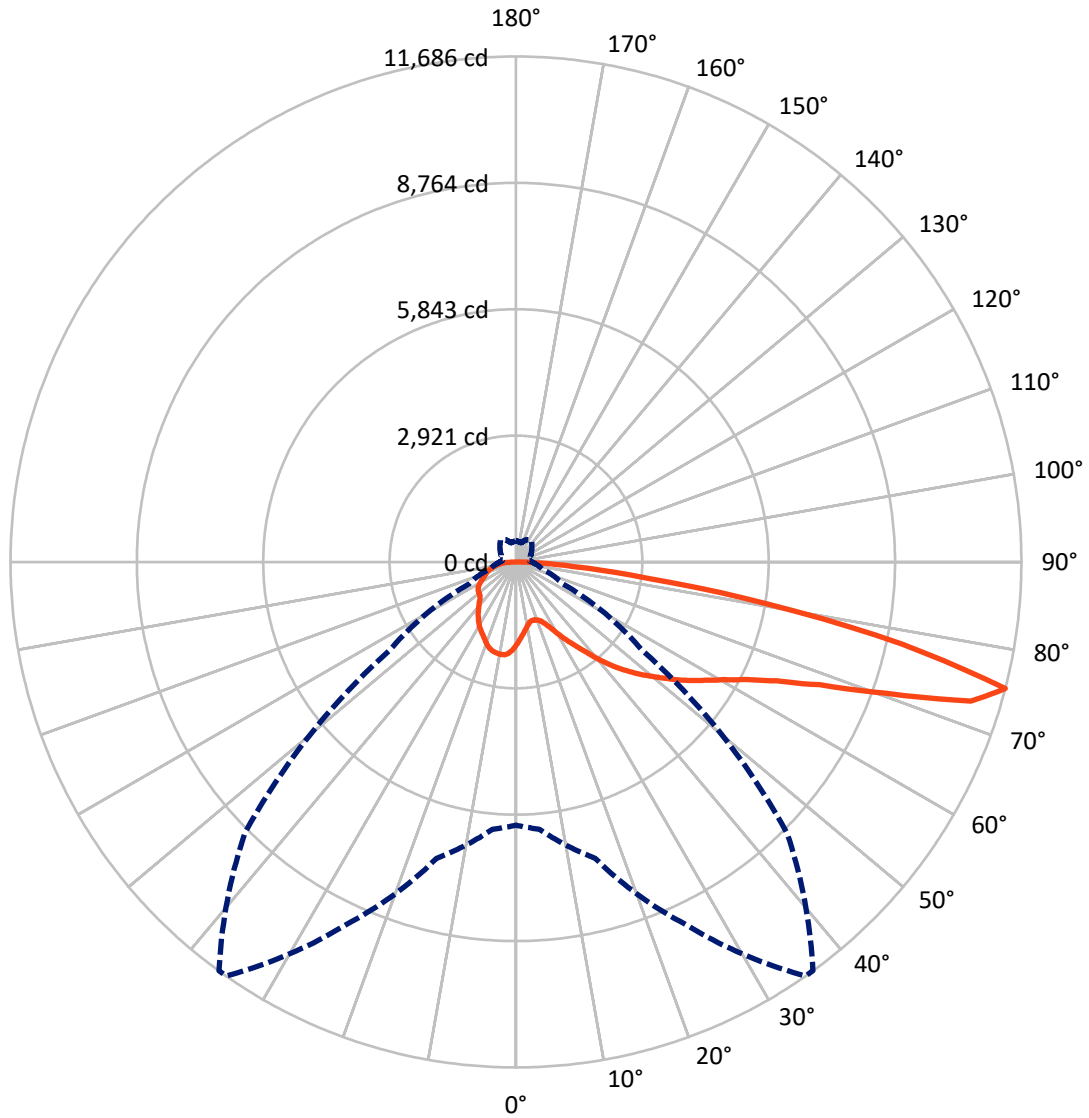
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3411.8 | 0.0 | 3411.8 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 10925.1 | 0.0 | 10925.1 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 14337.0 | 0.0 | 14337.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 180.9 | 1.3 |
| 10°-20° | 521.8 | 3.6 |
| 20°-30° | 876.2 | 6.1 |
| 30°-40° | 1361.7 | 9.5 |
| 40°-50° | 2021.1 | 14.1 |
| 50°-60° | 2790.2 | 19.5 |
| 60°-70° | 3385.2 | 23.6 |
| 70°-80° | 2797.6 | 19.5 |
| 80°-90° | 402.4 | 2.8 |
| 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°-90° | 14337.0 | 100.0 |
| 0°-180° | 14337.0 | 100.0 |

Coefficient of Utilization



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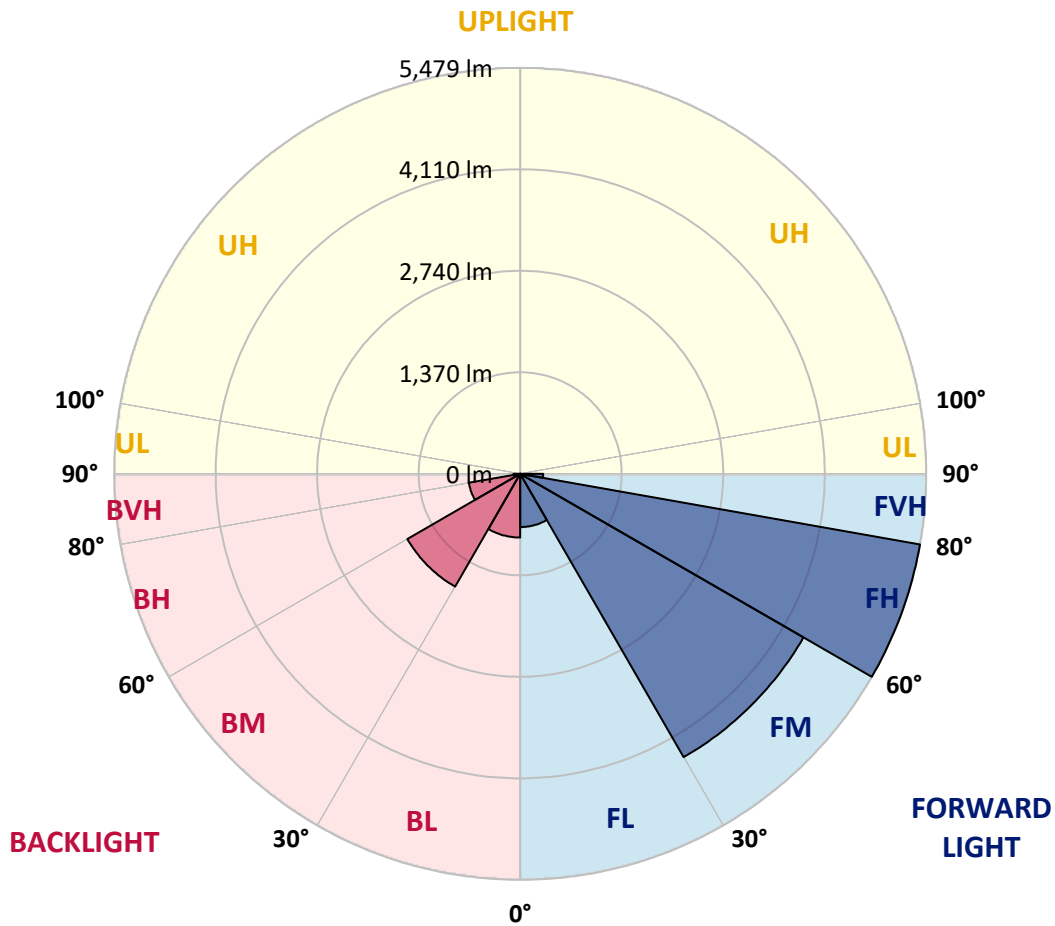
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 719.0 | 5.0 | | | |
| FM (30°-60°) | 4415.0 | 30.8 | | | |
| FH (60°-80°) | 5479.4 | 38.2 | | | G3/7500 |
| FVH (80°-90°) | 311.8 | 2.2 | | | G3/500 |
| BL (0°-30°) | 859.8 | 6.0 | B2/1000 | | |
| BM (30°-60°) | 1758.0 | 12.3 | B2/2500 | | |
| BH (60°-80°) | 703.4 | 4.9 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 90.6 | 0.6 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 |
| 2.5° | 1761.7 | 1772.5 | 1777.2 | 1774.9 | 1786.5 | 1784.9 | 1801.2 | 1821.4 | 1849.3 | 1876.4 | 1915.9 |
| 5° | 1626.1 | 1637.7 | 1647.8 | 1657.1 | 1679.5 | 1686.5 | 1712.1 | 1750.8 | 1802.0 | 1853.9 | 1919.0 |
| 7.5° | 1499.7 | 1509.8 | 1525.3 | 1542.4 | 1580.3 | 1587.3 | 1629.9 | 1690.4 | 1761.7 | 1837.6 | 1927.6 |
| 10° | 1396.6 | 1406.7 | 1423.0 | 1442.4 | 1489.6 | 1498.2 | 1552.4 | 1633.0 | 1726.0 | 1822.1 | 1936.9 |
| 12.5° | 1352.5 | 1355.6 | 1364.9 | 1384.2 | 1425.3 | 1430.7 | 1490.4 | 1582.7 | 1691.2 | 1810.5 | 1950.8 |
| 15° | 1350.1 | 1356.3 | 1357.1 | 1367.2 | 1401.3 | 1403.6 | 1458.6 | 1550.1 | 1669.5 | 1808.2 | 1971.7 |
| 17.5° | 1373.4 | 1378.0 | 1371.1 | 1377.3 | 1405.9 | 1409.8 | 1453.2 | 1534.6 | 1662.5 | 1818.3 | 2007.4 |
| 20° | 1435.4 | 1439.3 | 1418.3 | 1409.8 | 1430.7 | 1433.8 | 1476.5 | 1544.7 | 1669.5 | 1839.2 | 2056.2 |
| 22.5° | 1567.2 | 1569.5 | 1518.3 | 1483.4 | 1485.0 | 1486.5 | 1523.8 | 1585.8 | 1696.6 | 1877.2 | 2118.2 |
| 25° | 1772.5 | 1771.0 | 1689.6 | 1622.2 | 1583.4 | 1574.9 | 1599.7 | 1652.4 | 1742.3 | 1927.6 | 2198.0 |
| 27.5° | 2012.8 | 2001.2 | 1919.8 | 1819.0 | 1734.6 | 1722.2 | 1716.7 | 1739.2 | 1807.4 | 1994.2 | 2295.7 |
| 30° | 2284.1 | 2273.2 | 2185.6 | 2053.9 | 1936.9 | 1916.7 | 1865.5 | 1853.9 | 1904.3 | 2084.9 | 2431.3 |
| 32.5° | 2581.7 | 2574.7 | 2470.1 | 2310.4 | 2153.9 | 2130.6 | 2044.6 | 2013.6 | 2053.1 | 2222.1 | 2620.4 |
| 35° | 2831.3 | 2825.1 | 2738.3 | 2573.9 | 2382.5 | 2353.8 | 2266.3 | 2231.4 | 2251.5 | 2398.0 | 2867.7 |
| 37.5° | 3056.8 | 3053.7 | 2979.3 | 2849.9 | 2652.2 | 2617.3 | 2518.9 | 2507.3 | 2503.4 | 2629.8 | 3167.6 |
| 40° | 3266.1 | 3258.3 | 3180.8 | 3112.6 | 2966.1 | 2934.3 | 2847.5 | 2837.5 | 2808.0 | 2915.0 | 3507.1 |
| 42.5° | 3497.8 | 3477.7 | 3365.3 | 3333.5 | 3294.0 | 3267.6 | 3215.7 | 3217.2 | 3152.1 | 3236.6 | 3866.7 |
| 45° | 3686.9 | 3675.3 | 3559.8 | 3541.2 | 3583.8 | 3573.0 | 3617.9 | 3629.6 | 3503.2 | 3573.8 | 4240.3 |
| 47.5° | 3890.0 | 3879.1 | 3781.5 | 3768.3 | 3883.8 | 3886.9 | 4045.8 | 4049.6 | 3845.8 | 3924.1 | 4614.7 |
| 50° | 4140.3 | 4124.8 | 4027.9 | 4044.2 | 4173.7 | 4185.3 | 4475.9 | 4449.6 | 4161.3 | 4279.8 | 4985.9 |
| 52.5° | 4305.4 | 4314.7 | 4293.8 | 4320.1 | 4496.8 | 4507.7 | 4899.1 | 4831.7 | 4473.6 | 4630.9 | 5350.2 |
| 55° | 4427.1 | 4445.7 | 4510.8 | 4571.3 | 4837.9 | 4848.7 | 5298.3 | 5195.2 | 4732.5 | 4956.5 | 5692.8 |
| 57.5° | 4583.7 | 4557.3 | 4679.0 | 4796.8 | 5161.8 | 5190.5 | 5686.6 | 5545.5 | 4961.9 | 5237.0 | 5927.6 |
| 60° | 4808.4 | 4789.8 | 4884.4 | 5058.8 | 5524.6 | 5570.3 | 6097.3 | 5860.9 | 5130.1 | 5459.5 | 5973.3 |
| 62.5° | 5264.2 | 5217.6 | 5232.4 | 5386.6 | 5981.8 | 6042.3 | 6560.8 | 6136.1 | 5213.8 | 5546.3 | 5728.4 |
| 65° | 5945.4 | 5865.6 | 5791.2 | 5898.1 | 6625.9 | 6685.6 | 7084.0 | 6352.3 | 5182.8 | 5378.1 | 5078.1 |
| 67.5° | 6803.4 | 6724.3 | 6632.9 | 6733.6 | 7574.6 | 7621.9 | 7729.6 | 6474.0 | 4938.6 | 4730.1 | 3928.7 |
| 70° | 7511.0 | 7481.6 | 7590.9 | 8005.5 | 9089.8 | 9091.4 | 8557.3 | 6373.2 | 4269.8 | 3353.6 | 2273.2 |
| 72.5° | 7417.2 | 7399.4 | 7975.3 | 9257.2 | 10999.5 | 10958.5 | 9340.9 | 5610.6 | 2876.2 | 1512.9 | 851.8 |
| 75° | 6084.9 | 6200.4 | 7092.5 | 9234.7 | 11685.5 | 11680.0 | 8861.2 | 3566.8 | 1189.7 | 627.0 | 440.2 |
| 77.5° | 3263.0 | 3445.9 | 4604.6 | 6818.1 | 9122.4 | 9259.5 | 6229.9 | 1247.8 | 510.8 | 401.5 | 304.6 |
| 80° | 1064.1 | 1223.8 | 1835.3 | 3471.5 | 5927.6 | 5902.0 | 2670.1 | 489.8 | 349.5 | 284.4 | 210.8 |
| 82.5° | 451.9 | 470.5 | 820.0 | 1639.2 | 3042.1 | 2994.8 | 850.2 | 281.3 | 245.7 | 194.5 | 130.2 |
| 85° | 176.7 | 197.6 | 361.9 | 758.0 | 1317.6 | 1288.9 | 306.9 | 139.5 | 157.3 | 127.1 | 77.5 |
| 87.5° | 58.1 | 70.5 | 129.4 | 259.6 | 410.0 | 395.3 | 75.2 | 48.1 | 68.2 | 58.1 | 27.9 |
| 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° | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 | 1910.5 |
| 2.5° | 1926.8 | 1939.2 | 1953.9 | 1975.6 | 1994.2 | 2009.7 | 2026.0 | 2036.1 | 2039.9 | 2051.6 | 2050.8 |
| 5° | 1940.7 | 1967.9 | 2004.3 | 2039.9 | 2074.8 | 2095.7 | 2114.3 | 2123.6 | 2132.2 | 2138.4 | 2139.9 |
| 7.5° | 1964.0 | 1998.9 | 2056.2 | 2102.7 | 2132.2 | 2149.2 | 2161.6 | 2158.5 | 2161.6 | 2163.2 | 2165.5 |
| 10° | 1984.1 | 2033.0 | 2101.2 | 2145.3 | 2167.8 | 2168.6 | 2165.5 | 2154.6 | 2149.2 | 2150.0 | 2151.5 |
| 12.5° | 2008.2 | 2062.4 | 2136.0 | 2173.2 | 2179.4 | 2162.4 | 2149.2 | 2130.6 | 2123.6 | 2120.5 | 2119.0 |
| 15° | 2040.7 | 2102.7 | 2174.0 | 2188.0 | 2172.5 | 2150.8 | 2128.3 | 2098.1 | 2082.6 | 2070.2 | 2074.0 |
| 17.5° | 2080.2 | 2148.4 | 2203.5 | 2193.4 | 2160.1 | 2124.4 | 2088.0 | 2042.3 | 2010.5 | 1997.3 | 1998.1 |
| 20° | 2135.3 | 2196.5 | 2225.9 | 2181.8 | 2131.4 | 2077.1 | 2015.1 | 1959.3 | 1929.9 | 1916.7 | 1915.2 |
| 22.5° | 2201.9 | 2260.8 | 2247.6 | 2161.6 | 2090.3 | 2003.5 | 1926.0 | 1884.9 | 1870.2 | 1860.9 | 1862.4 |
| 25° | 2281.8 | 2332.1 | 2263.2 | 2132.2 | 2022.9 | 1905.9 | 1846.2 | 1833.0 | 1826.0 | 1819.0 | 1819.0 |
| 27.5° | 2385.6 | 2412.7 | 2274.8 | 2088.8 | 1917.5 | 1802.0 | 1780.3 | 1782.6 | 1780.3 | 1768.7 | 1771.0 |
| 30° | 2522.8 | 2517.4 | 2285.6 | 2018.2 | 1796.6 | 1708.2 | 1709.8 | 1719.8 | 1721.4 | 1713.6 | 1717.5 |
| 32.5° | 2703.4 | 2648.4 | 2291.1 | 1926.8 | 1681.1 | 1626.1 | 1627.6 | 1638.5 | 1646.2 | 1633.0 | 1639.2 |
| 35° | 2921.9 | 2801.0 | 2282.5 | 1812.1 | 1592.0 | 1547.8 | 1536.2 | 1539.3 | 1541.6 | 1529.2 | 1537.7 |
| 37.5° | 3176.9 | 2972.3 | 2244.5 | 1685.0 | 1518.3 | 1471.0 | 1446.2 | 1425.3 | 1412.9 | 1401.3 | 1409.0 |
| 40° | 3456.7 | 3159.1 | 2174.8 | 1561.0 | 1436.2 | 1389.7 | 1352.5 | 1312.9 | 1271.1 | 1255.6 | 1262.6 |
| 42.5° | 3749.7 | 3351.3 | 2090.3 | 1442.4 | 1341.6 | 1303.6 | 1264.1 | 1206.8 | 1144.0 | 1112.2 | 1116.1 |
| 45° | 4053.5 | 3548.2 | 2007.4 | 1325.3 | 1244.7 | 1228.5 | 1182.7 | 1113.7 | 1045.5 | 1005.2 | 1002.1 |
| 47.5° | 4351.1 | 3734.2 | 1885.7 | 1207.5 | 1154.1 | 1171.9 | 1136.2 | 1072.7 | 996.7 | 933.2 | 926.2 |
| 50° | 4635.6 | 3908.6 | 1686.5 | 1088.2 | 1080.4 | 1154.8 | 1120.7 | 1029.3 | 942.5 | 861.1 | 854.1 |
| 52.5° | 4917.7 | 4049.6 | 1431.5 | 979.7 | 1040.9 | 1150.2 | 1100.6 | 999.8 | 893.6 | 808.4 | 799.1 |
| 55° | 5157.2 | 4122.5 | 1185.8 | 886.7 | 983.5 | 1110.6 | 1076.5 | 964.9 | 824.7 | 734.0 | 726.2 |
| 57.5° | 5293.6 | 4063.6 | 981.2 | 795.2 | 904.5 | 1045.5 | 1035.5 | 890.5 | 742.5 | 672.7 | 663.4 |
| 60° | 5234.7 | 3824.9 | 813.8 | 715.4 | 829.3 | 975.0 | 964.2 | 816.9 | 679.7 | 613.8 | 604.5 |
| 62.5° | 4910.0 | 3369.9 | 681.3 | 645.6 | 761.1 | 902.9 | 892.9 | 760.3 | 631.7 | 568.1 | 558.0 |
| 65° | 4255.8 | 2741.4 | 578.2 | 587.5 | 692.1 | 816.1 | 830.9 | 713.0 | 593.7 | 531.7 | 521.6 |
| 67.5° | 3245.9 | 1985.7 | 497.6 | 537.1 | 624.7 | 730.9 | 773.5 | 678.9 | 561.9 | 503.0 | 493.7 |
| 70° | 1850.0 | 1127.7 | 429.4 | 488.3 | 565.0 | 651.8 | 729.3 | 651.8 | 527.8 | 479.0 | 472.8 |
| 72.5° | 701.4 | 517.7 | 371.2 | 439.5 | 507.7 | 585.2 | 680.5 | 609.2 | 488.3 | 451.9 | 445.7 |
| 75° | 374.3 | 315.4 | 312.3 | 382.1 | 441.8 | 520.1 | 619.3 | 567.3 | 458.8 | 477.4 | 492.9 |
| 77.5° | 255.0 | 223.2 | 261.2 | 327.1 | 369.7 | 448.0 | 554.2 | 503.8 | 397.6 | 396.1 | 365.0 |
| 80° | 176.7 | 158.1 | 212.4 | 263.5 | 286.0 | 376.7 | 483.6 | 432.5 | 324.0 | 302.3 | 289.1 |
| 82.5° | 106.2 | 103.1 | 158.9 | 196.9 | 202.3 | 290.6 | 400.7 | 362.7 | 265.1 | 231.0 | 232.5 |
| 85° | 58.1 | 61.2 | 101.5 | 115.5 | 117.8 | 203.1 | 313.9 | 280.6 | 203.8 | 171.3 | 172.8 |
| 87.5° | 16.3 | 20.9 | 37.2 | 45.7 | 56.6 | 105.4 | 186.8 | 166.6 | 102.3 | 71.3 | 71.3 |
| 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)