

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: P882946

Luminaire Tested: **NAV-SB3A-760-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882946
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-760-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 5700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10593 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

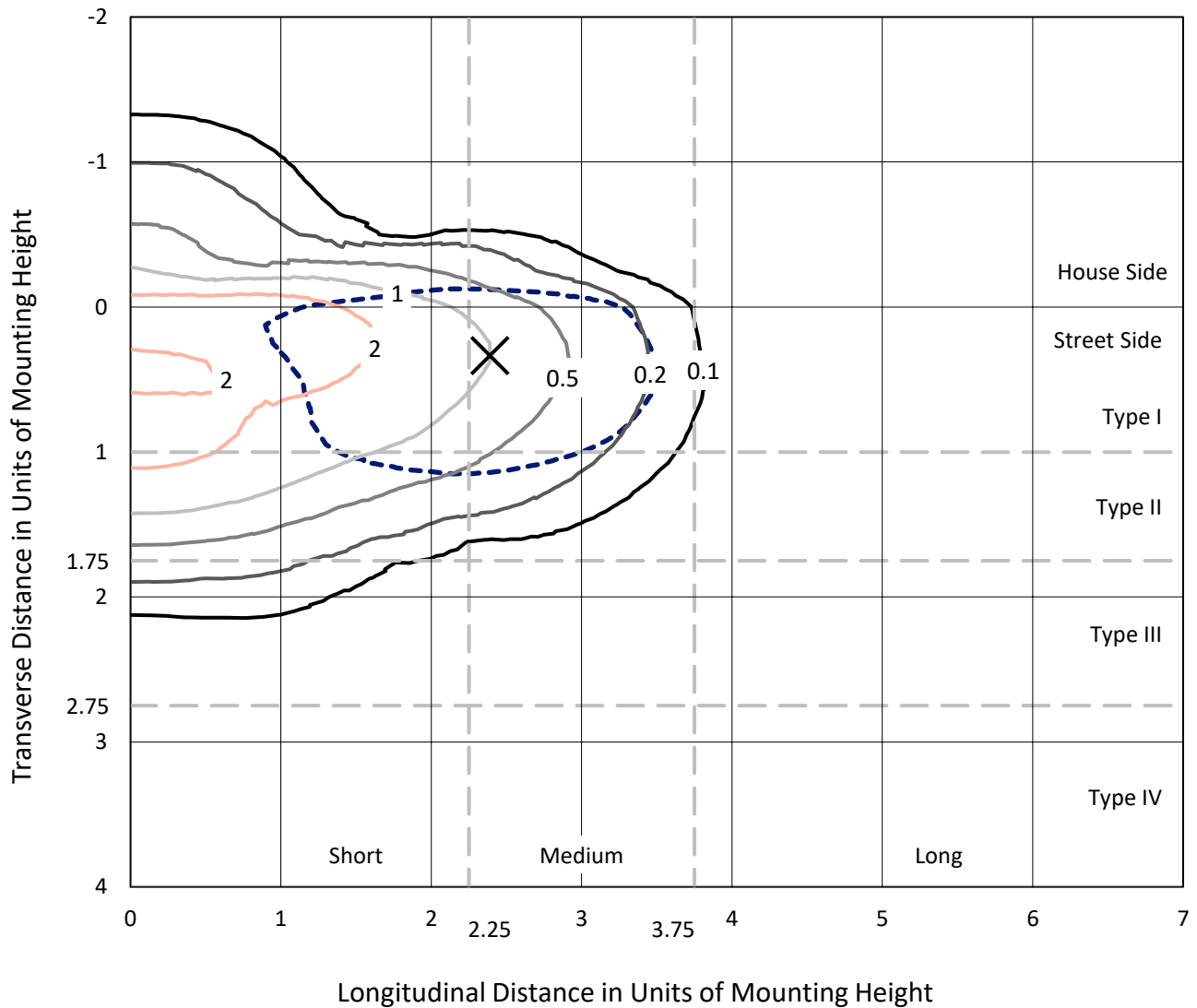
Input Watts (W): 84.7
Input Voltage (V): 120.0
Input Current (Ain): 0.717
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

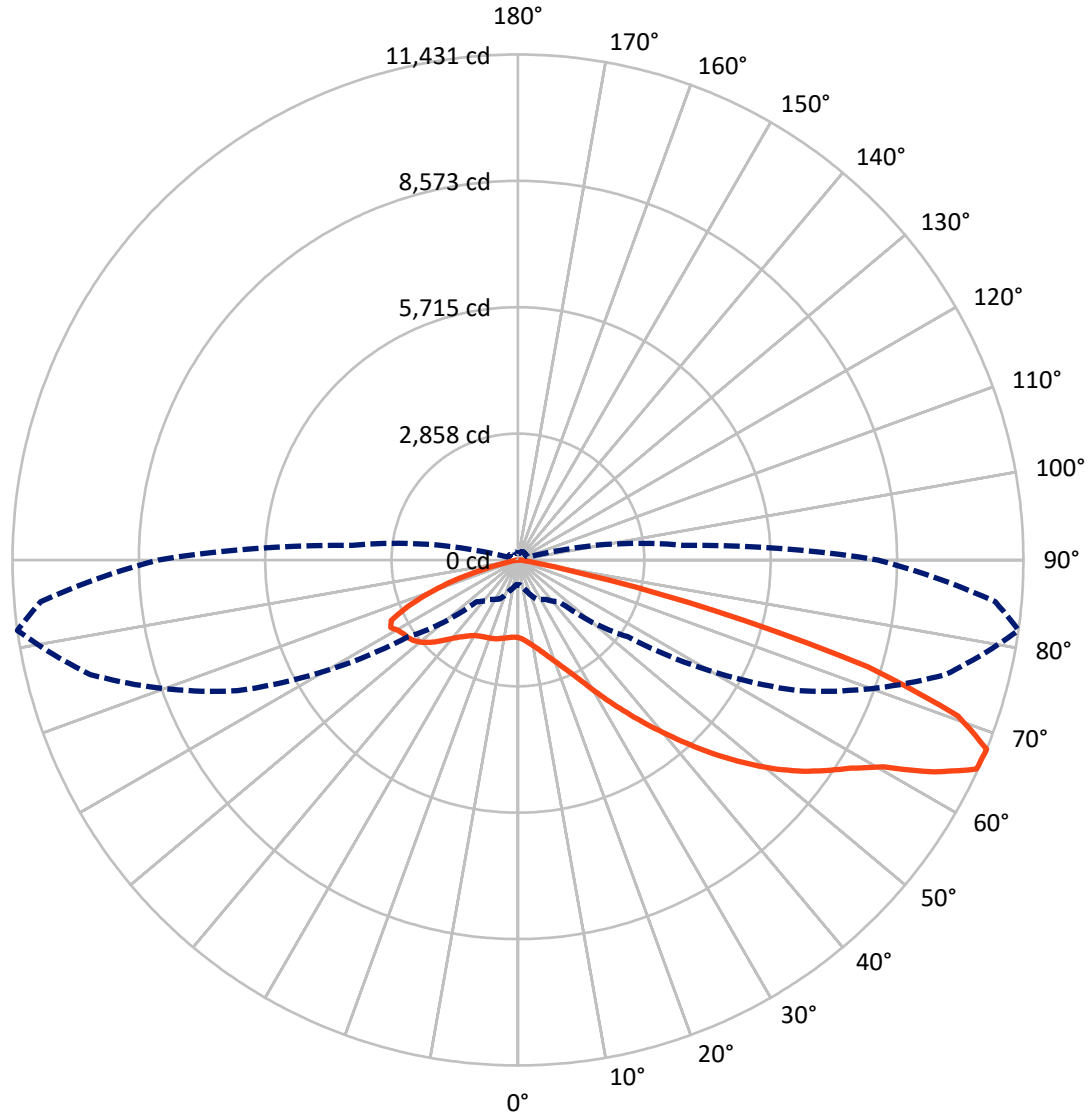
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1918.8 | 0.0 | 1918.8 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 8674.2 | 0.0 | 8674.2 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 10593.0 | 0.0 | 10593.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 156.3 | 1.5 |
| 10°-20° | 406.3 | 3.8 |
| 20°-30° | 650.7 | 6.1 |
| 30°-40° | 1150.7 | 10.9 |
| 40°-50° | 2016.2 | 19.0 |
| 50°-60° | 2689.0 | 25.4 |
| 60°-70° | 2503.3 | 23.6 |
| 70°-80° | 960.8 | 9.1 |
| 80°-90° | 59.7 | 0.6 |
| 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° | 10593.0 | 100.0 |
| 0°-180° | 10593.0 | 100.0 |

Coefficient of Utilization



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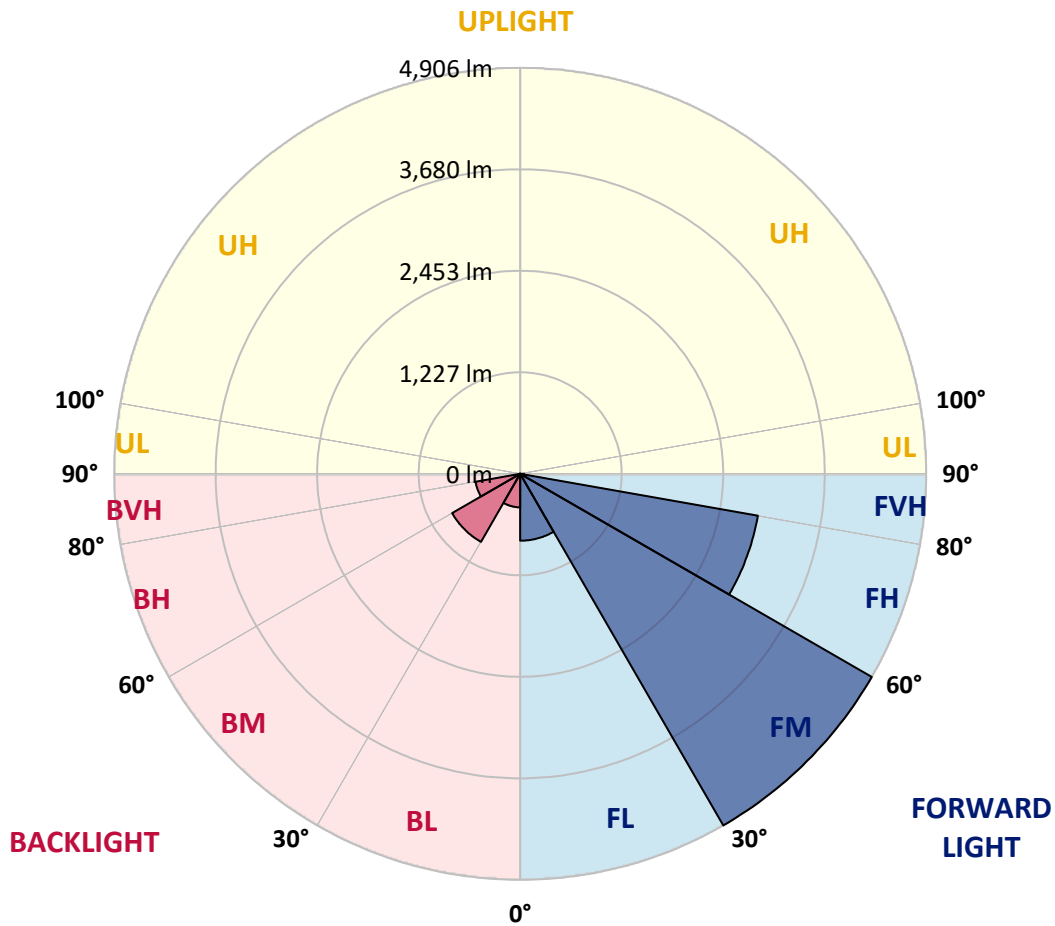
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 808.1 | 7.6 | | | |
| FM (30°-60°) | 4906.2 | 46.3 | | | |
| FH (60°-80°) | 2916.4 | 27.5 | | | G2/5000 |
| FVH (80°-90°) | 43.4 | 0.4 | | | G1/100 |
| BL (0°-30°) | 405.3 | 3.8 | B1/500 | | |
| BM (30°-60°) | 949.6 | 9.0 | B1/1000 | | |
| BH (60°-80°) | 547.7 | 5.2 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 16.3 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 |
| 2.5° | 1854.8 | 1865.5 | 1859.4 | 1856.3 | 1851.0 | 1843.4 | 1837.3 | 1818.2 | 1798.4 | 1785.4 | 1780.8 |
| 5° | 1892.2 | 1902.9 | 1902.1 | 1905.1 | 1909.0 | 1911.2 | 1909.7 | 1888.4 | 1860.1 | 1838.0 | 1825.1 |
| 7.5° | 1860.1 | 1872.4 | 1882.3 | 1897.5 | 1924.2 | 1952.4 | 1966.2 | 1961.6 | 1932.6 | 1902.1 | 1886.1 |
| 10° | 1769.4 | 1782.4 | 1806.0 | 1841.8 | 1898.3 | 1959.3 | 2010.4 | 2034.0 | 2015.7 | 1982.2 | 1960.1 |
| 12.5° | 1603.1 | 1616.1 | 1662.6 | 1740.4 | 1835.0 | 1941.0 | 2038.6 | 2101.9 | 2106.5 | 2072.9 | 2047.0 |
| 15° | 1416.3 | 1429.2 | 1478.8 | 1576.4 | 1720.6 | 1890.7 | 2053.9 | 2173.6 | 2214.0 | 2185.0 | 2153.8 |
| 17.5° | 1300.4 | 1311.8 | 1349.2 | 1427.7 | 1578.0 | 1790.0 | 2048.5 | 2249.9 | 2342.2 | 2319.3 | 2281.9 |
| 20° | 1265.3 | 1275.2 | 1292.7 | 1347.6 | 1472.7 | 1685.5 | 2013.4 | 2321.6 | 2480.2 | 2467.2 | 2425.3 |
| 22.5° | 1302.6 | 1311.8 | 1317.1 | 1341.5 | 1420.1 | 1616.9 | 1969.2 | 2394.8 | 2640.4 | 2641.9 | 2590.8 |
| 25° | 1388.8 | 1398.0 | 1391.9 | 1407.1 | 1441.4 | 1595.5 | 1952.4 | 2481.0 | 2841.7 | 2858.5 | 2800.5 |
| 27.5° | 1530.7 | 1531.4 | 1516.9 | 1516.2 | 1521.5 | 1627.5 | 1970.0 | 2573.2 | 3095.7 | 3126.9 | 3055.3 |
| 30° | 1815.2 | 1803.7 | 1748.0 | 1687.8 | 1660.3 | 1723.6 | 2018.8 | 2682.3 | 3395.4 | 3451.1 | 3361.1 |
| 32.5° | 2253.7 | 2236.9 | 2134.7 | 1990.6 | 1845.7 | 1878.5 | 2106.5 | 2806.6 | 3721.8 | 3822.5 | 3712.7 |
| 35° | 2729.6 | 2725.0 | 2618.2 | 2403.9 | 2150.7 | 2098.9 | 2249.1 | 2969.8 | 4078.0 | 4238.2 | 4107.7 |
| 37.5° | 3171.9 | 3169.7 | 3108.6 | 2856.2 | 2548.1 | 2406.2 | 2477.9 | 3183.4 | 4459.3 | 4691.2 | 4537.1 |
| 40° | 3576.2 | 3583.0 | 3522.0 | 3296.3 | 2985.8 | 2800.5 | 2789.1 | 3447.3 | 4883.4 | 5184.6 | 5001.6 |
| 42.5° | 3925.5 | 3933.1 | 3871.3 | 3704.3 | 3418.3 | 3236.8 | 3171.2 | 3770.6 | 5297.5 | 5714.7 | 5498.1 |
| 45° | 4162.6 | 4209.9 | 4200.8 | 4067.3 | 3862.2 | 3673.8 | 3630.3 | 4176.4 | 5769.6 | 6276.8 | 6022.8 |
| 47.5° | 4229.8 | 4273.2 | 4341.9 | 4360.2 | 4235.1 | 4049.8 | 4101.6 | 4665.2 | 6247.0 | 6839.6 | 6550.6 |
| 50° | 4064.3 | 4104.7 | 4247.3 | 4437.2 | 4524.2 | 4467.0 | 4560.0 | 5189.2 | 6735.9 | 7400.9 | 7068.4 |
| 52.5° | 3737.8 | 3779.0 | 3959.0 | 4259.5 | 4614.1 | 4794.1 | 5019.9 | 5705.5 | 7209.5 | 7932.5 | 7558.8 |
| 55° | 3265.7 | 3309.2 | 3540.3 | 3880.5 | 4442.5 | 4929.1 | 5403.5 | 6221.1 | 7643.5 | 8410.7 | 8001.2 |
| 57.5° | 2623.6 | 2655.6 | 2895.9 | 3371.8 | 4010.9 | 4794.9 | 5686.5 | 6783.9 | 8052.3 | 8880.5 | 8439.7 |
| 60° | 1709.9 | 1738.1 | 2017.3 | 2548.1 | 3295.5 | 4346.5 | 5742.9 | 7411.6 | 8595.3 | 9491.4 | 9030.8 |
| 62.5° | 1137.1 | 1156.2 | 1321.7 | 1711.4 | 2320.8 | 3485.4 | 5412.7 | 7912.7 | 9391.5 | 10554.6 | 10044.4 |
| 65° | 780.2 | 799.3 | 964.8 | 1236.3 | 1499.4 | 2305.5 | 4463.1 | 7846.3 | 10113.0 | 11398.9 | 10795.6 |
| 67.5° | 556.7 | 572.8 | 713.1 | 969.4 | 1085.3 | 1339.2 | 3025.5 | 6998.3 | 10009.3 | 11430.9 | 10836.0 |
| 70° | 398.9 | 408.0 | 524.0 | 755.0 | 862.6 | 804.6 | 1682.4 | 5352.4 | 8763.8 | 10555.3 | 10010.8 |
| 72.5° | 279.1 | 282.2 | 363.8 | 575.1 | 694.8 | 587.3 | 800.8 | 3568.5 | 6628.4 | 8284.9 | 7760.9 |
| 75° | 189.1 | 193.0 | 244.8 | 421.8 | 557.5 | 448.4 | 424.0 | 1913.5 | 3891.1 | 4585.9 | 4110.8 |
| 77.5° | 115.9 | 117.5 | 157.9 | 288.3 | 417.2 | 341.7 | 273.0 | 810.7 | 1505.5 | 1478.1 | 1259.9 |
| 80° | 65.6 | 65.6 | 100.7 | 179.2 | 284.5 | 220.4 | 191.4 | 344.7 | 476.7 | 418.7 | 369.1 |
| 82.5° | 36.6 | 37.4 | 73.2 | 111.3 | 188.4 | 130.4 | 105.2 | 159.4 | 205.9 | 182.3 | 158.6 |
| 85° | 15.3 | 16.8 | 45.0 | 52.6 | 90.0 | 64.8 | 42.7 | 67.1 | 76.3 | 67.9 | 49.6 |
| 87.5° | 1.5 | 2.3 | 13.7 | 9.9 | 10.7 | 13.0 | 6.1 | 13.0 | 10.7 | 10.7 | 7.6 |
| 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° | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 | 1754.9 |
| 2.5° | 1766.3 | 1754.9 | 1725.9 | 1692.4 | 1648.1 | 1626.8 | 1597.8 | 1578.0 | 1561.2 | 1562.7 | 1547.5 |
| 5° | 1800.7 | 1771.7 | 1706.9 | 1626.0 | 1525.3 | 1453.6 | 1377.4 | 1324.8 | 1282.0 | 1272.9 | 1252.3 |
| 7.5° | 1847.9 | 1802.2 | 1688.5 | 1542.9 | 1372.8 | 1243.9 | 1128.8 | 1054.8 | 1002.1 | 985.4 | 968.6 |
| 10° | 1909.0 | 1842.6 | 1664.9 | 1438.4 | 1193.6 | 1029.6 | 906.1 | 848.1 | 812.2 | 800.0 | 790.9 |
| 12.5° | 1979.9 | 1889.1 | 1633.6 | 1311.0 | 1009.0 | 851.1 | 772.6 | 743.6 | 732.2 | 728.3 | 726.1 |
| 15° | 2069.1 | 1947.1 | 1586.4 | 1160.0 | 852.7 | 742.1 | 708.5 | 704.7 | 706.2 | 704.7 | 703.9 |
| 17.5° | 2175.1 | 2010.4 | 1509.3 | 1004.4 | 747.4 | 686.4 | 674.2 | 677.3 | 681.1 | 680.3 | 678.8 |
| 20° | 2291.1 | 2072.9 | 1410.9 | 866.4 | 675.7 | 646.7 | 639.9 | 642.9 | 646.0 | 644.5 | 643.7 |
| 22.5° | 2423.0 | 2140.0 | 1301.9 | 758.9 | 627.7 | 610.1 | 602.5 | 603.3 | 603.3 | 600.2 | 598.7 |
| 25° | 2580.9 | 2214.0 | 1187.5 | 682.6 | 591.1 | 577.3 | 568.2 | 565.1 | 560.6 | 551.4 | 549.9 |
| 27.5° | 2769.3 | 2292.6 | 1077.7 | 629.2 | 562.1 | 549.1 | 538.4 | 530.8 | 519.4 | 504.1 | 502.6 |
| 30° | 2981.3 | 2387.9 | 984.6 | 595.6 | 539.2 | 526.2 | 514.0 | 502.6 | 485.8 | 466.8 | 465.2 |
| 32.5° | 3230.7 | 2490.1 | 916.7 | 573.5 | 518.6 | 504.9 | 490.4 | 476.7 | 458.4 | 439.3 | 440.1 |
| 35° | 3528.1 | 2613.7 | 877.1 | 558.3 | 502.6 | 484.3 | 468.3 | 453.0 | 439.3 | 422.5 | 421.0 |
| 37.5° | 3850.7 | 2744.8 | 864.9 | 550.6 | 491.9 | 463.7 | 445.4 | 434.7 | 433.2 | 423.3 | 422.5 |
| 40° | 4203.8 | 2900.4 | 874.0 | 546.1 | 480.5 | 443.9 | 424.0 | 421.8 | 425.6 | 408.0 | 408.8 |
| 42.5° | 4577.5 | 3085.0 | 889.3 | 540.7 | 464.5 | 424.0 | 405.0 | 405.0 | 401.9 | 377.5 | 377.5 |
| 45° | 4981.8 | 3297.8 | 904.5 | 527.8 | 445.4 | 404.2 | 389.7 | 384.4 | 371.4 | 347.8 | 347.0 |
| 47.5° | 5389.0 | 3514.4 | 916.0 | 504.1 | 422.5 | 387.4 | 374.5 | 362.3 | 343.2 | 321.8 | 321.1 |
| 50° | 5775.7 | 3708.9 | 903.8 | 469.0 | 396.6 | 371.4 | 357.7 | 340.9 | 320.3 | 305.8 | 303.5 |
| 52.5° | 6121.2 | 3877.4 | 851.9 | 427.9 | 369.1 | 354.6 | 342.4 | 324.9 | 308.1 | 292.9 | 291.3 |
| 55° | 6421.7 | 4013.9 | 760.4 | 389.0 | 344.7 | 340.2 | 327.9 | 305.8 | 283.0 | 270.0 | 268.5 |
| 57.5° | 6710.0 | 4117.7 | 646.0 | 356.9 | 322.6 | 324.1 | 305.8 | 286.0 | 264.6 | 250.9 | 249.4 |
| 60° | 7093.6 | 4256.5 | 530.1 | 327.2 | 299.0 | 303.5 | 283.7 | 269.2 | 242.5 | 225.0 | 222.7 |
| 62.5° | 7706.8 | 4472.3 | 421.0 | 290.6 | 271.5 | 273.0 | 264.6 | 247.1 | 215.1 | 194.5 | 193.0 |
| 65° | 8193.4 | 4393.0 | 331.8 | 250.9 | 240.2 | 242.5 | 242.5 | 223.5 | 189.1 | 165.5 | 163.2 |
| 67.5° | 8138.4 | 3761.5 | 264.6 | 212.0 | 210.5 | 212.0 | 217.4 | 201.3 | 167.8 | 148.7 | 145.7 |
| 70° | 7497.0 | 2992.0 | 212.0 | 176.2 | 183.0 | 179.2 | 194.5 | 183.8 | 151.0 | 131.9 | 129.7 |
| 72.5° | 6117.4 | 2155.3 | 161.7 | 145.7 | 140.3 | 146.4 | 175.4 | 165.5 | 125.8 | 104.5 | 102.2 |
| 75° | 3574.6 | 1150.1 | 120.5 | 115.2 | 101.4 | 122.0 | 155.6 | 141.1 | 96.1 | 77.0 | 74.7 |
| 77.5° | 1163.8 | 401.2 | 88.5 | 84.7 | 75.5 | 98.4 | 132.7 | 119.0 | 78.6 | 61.0 | 58.7 |
| 80° | 311.9 | 121.3 | 60.3 | 55.7 | 48.8 | 73.2 | 105.2 | 94.6 | 56.4 | 39.7 | 38.9 |
| 82.5° | 125.1 | 51.1 | 35.1 | 31.3 | 26.7 | 50.3 | 83.1 | 76.3 | 41.9 | 25.2 | 25.2 |
| 85° | 40.4 | 16.8 | 13.0 | 9.9 | 12.2 | 31.3 | 49.6 | 51.9 | 29.7 | 13.0 | 9.9 |
| 87.5° | 5.3 | 2.3 | 2.3 | 3.1 | 2.3 | 5.3 | 15.3 | 14.5 | 8.4 | 1.5 | 0.0 |
| 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)