

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: P883137

Luminaire Tested: **NAV-SB3B-830-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883137
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3B-830-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14644 lumens
Efficiency: N/A
Efficacy: 134.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

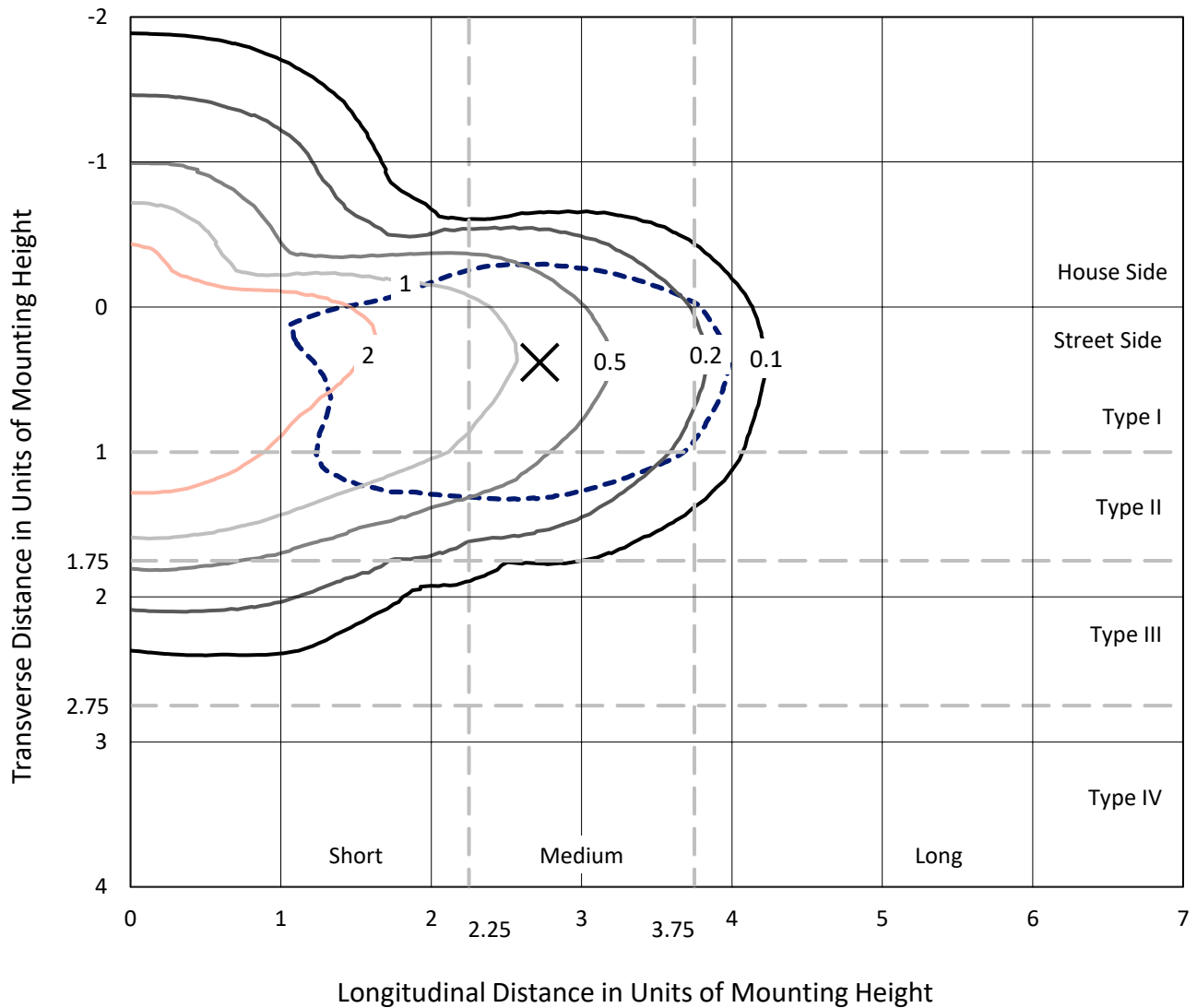
Input Watts (W): 109.2
Input Voltage (V): 120.0
Input Current (Ain): 0.919
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.657
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

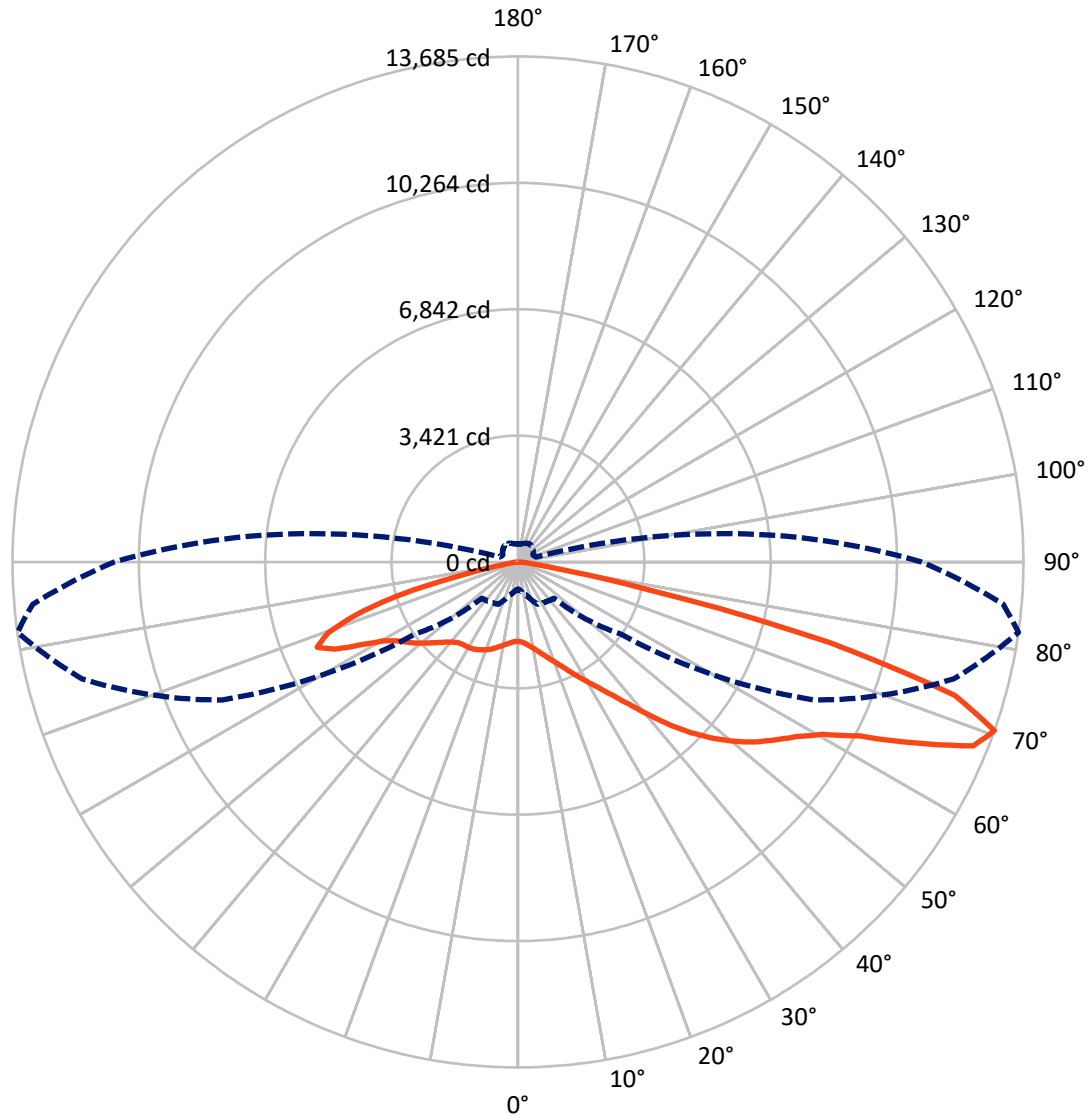
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3610.1 | 0.0 | 3610.1 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 11033.9 | 0.0 | 11033.9 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 14644.0 | 0.0 | 14644.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 202.7 | 1.4 |
| 10°-20° | 582.4 | 4.0 |
| 20°-30° | 974.3 | 6.7 |
| 30°-40° | 1522.1 | 10.4 |
| 40°-50° | 2424.2 | 16.6 |
| 50°-60° | 3373.5 | 23.0 |
| 60°-70° | 3528.9 | 24.1 |
| 70°-80° | 1844.4 | 12.6 |
| 80°-90° | 191.5 | 1.3 |
| 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° | 14644.0 | 100.0 |
| 0°-180° | 14644.0 | 100.0 |

Coefficient of Utilization



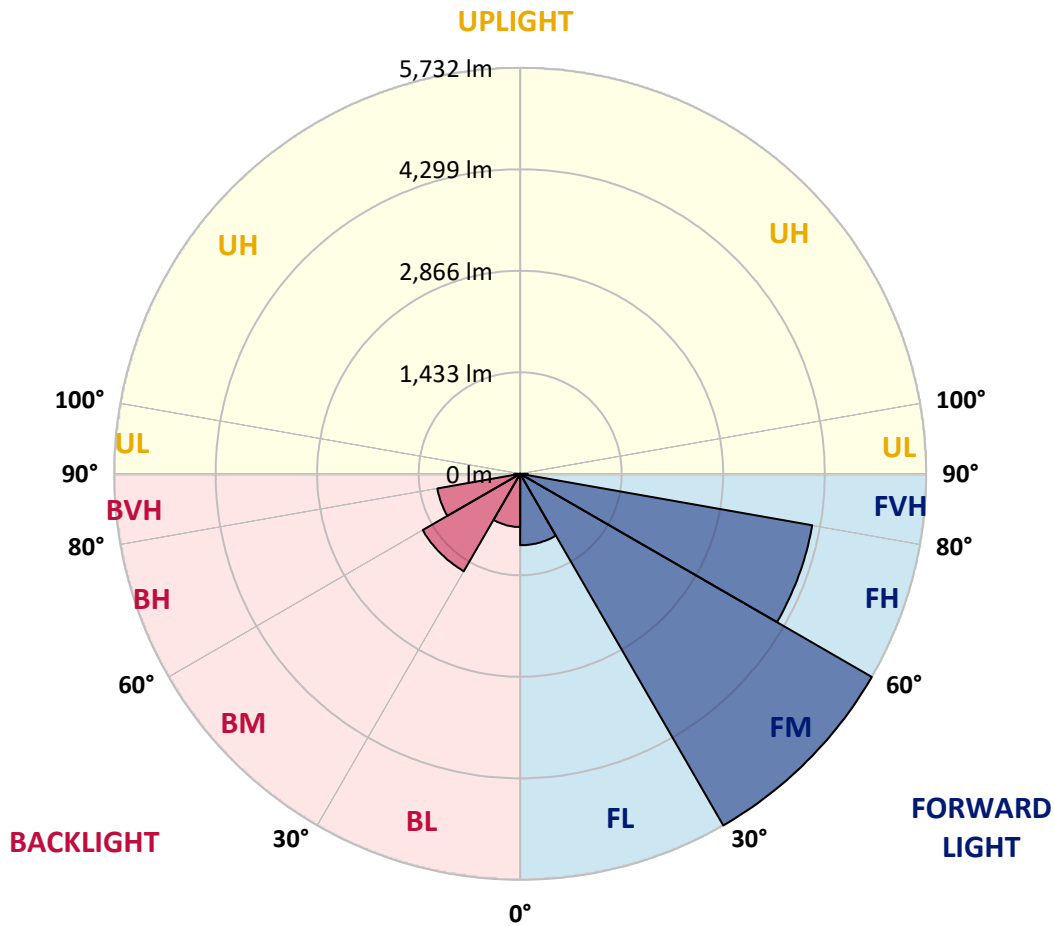
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1008.4 | 6.9 | | | |
| FM (30°-60°) | 5731.5 | 39.1 | | | |
| FH (60°-80°) | 4186.8 | 28.6 | | | G2/5000 |
| FVH (80°-90°) | 107.2 | 0.7 | | | G2/225 |
| BL (0°-30°) | 751.0 | 5.1 | B2/1000 | | |
| BM (30°-60°) | 1588.3 | 10.8 | B2/2500 | | |
| BH (60°-80°) | 1186.5 | 8.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 84.3 | 0.6 | | | 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 II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 |
| 2.5° | 2198.3 | 2210.7 | 2206.8 | 2202.9 | 2202.9 | 2197.5 | 2196.7 | 2189.0 | 2182.7 | 2172.6 | 2170.3 |
| 5° | 2226.3 | 2239.5 | 2237.9 | 2241.0 | 2251.1 | 2253.4 | 2255.8 | 2251.1 | 2238.7 | 2226.3 | 2220.8 |
| 7.5° | 2201.4 | 2216.2 | 2220.8 | 2239.5 | 2270.5 | 2298.5 | 2319.5 | 2328.0 | 2316.4 | 2298.5 | 2290.0 |
| 10° | 2117.5 | 2133.8 | 2150.1 | 2194.4 | 2249.6 | 2315.6 | 2371.6 | 2405.0 | 2402.6 | 2385.5 | 2370.8 |
| 12.5° | 1947.3 | 1964.4 | 1999.4 | 2085.6 | 2186.6 | 2303.2 | 2407.3 | 2477.2 | 2501.3 | 2488.9 | 2463.3 |
| 15° | 1811.3 | 1826.1 | 1852.5 | 1941.1 | 2072.4 | 2249.6 | 2420.5 | 2556.5 | 2617.9 | 2610.9 | 2579.8 |
| 17.5° | 1807.4 | 1813.6 | 1830.0 | 1871.9 | 1972.9 | 2165.6 | 2406.5 | 2634.2 | 2751.5 | 2750.8 | 2711.9 |
| 20° | 1875.8 | 1878.1 | 1887.5 | 1896.0 | 1953.5 | 2101.9 | 2370.8 | 2698.7 | 2901.5 | 2901.5 | 2859.5 |
| 22.5° | 1970.6 | 1969.0 | 1978.4 | 1970.6 | 1998.6 | 2096.5 | 2348.2 | 2755.4 | 3068.6 | 3081.0 | 3028.2 |
| 25° | 2112.8 | 2105.0 | 2102.7 | 2084.8 | 2090.3 | 2147.0 | 2373.1 | 2819.9 | 3266.7 | 3292.4 | 3226.3 |
| 27.5° | 2302.4 | 2290.0 | 2281.4 | 2240.2 | 2226.3 | 2251.1 | 2449.3 | 2897.6 | 3487.4 | 3531.7 | 3447.8 |
| 30° | 2549.5 | 2527.0 | 2514.5 | 2443.1 | 2392.5 | 2396.4 | 2564.3 | 3001.0 | 3718.2 | 3789.7 | 3683.2 |
| 32.5° | 2886.7 | 2851.8 | 2818.4 | 2701.0 | 2608.6 | 2578.3 | 2712.7 | 3144.0 | 3968.4 | 4082.6 | 3945.9 |
| 35° | 3264.4 | 3236.4 | 3200.7 | 3019.6 | 2877.4 | 2807.5 | 2913.2 | 3343.7 | 4261.4 | 4442.4 | 4264.5 |
| 37.5° | 3628.1 | 3604.0 | 3621.1 | 3377.1 | 3193.7 | 3091.9 | 3175.8 | 3611.7 | 4622.7 | 4890.0 | 4663.9 |
| 40° | 4004.1 | 3985.5 | 3987.8 | 3754.7 | 3541.0 | 3426.8 | 3494.4 | 3948.2 | 5036.8 | 5422.3 | 5144.1 |
| 42.5° | 4412.9 | 4398.9 | 4352.3 | 4145.6 | 3905.5 | 3799.0 | 3861.2 | 4336.7 | 5481.3 | 6028.4 | 5670.9 |
| 45° | 4870.6 | 4862.0 | 4818.5 | 4581.5 | 4306.4 | 4186.8 | 4270.7 | 4765.7 | 5928.1 | 6598.7 | 6200.1 |
| 47.5° | 5266.1 | 5273.1 | 5267.6 | 5067.9 | 4782.8 | 4607.1 | 4707.4 | 5213.2 | 6343.8 | 7134.9 | 6707.5 |
| 50° | 5456.5 | 5493.0 | 5546.6 | 5484.4 | 5307.3 | 5128.5 | 5148.0 | 5645.3 | 6740.1 | 7637.6 | 7193.9 |
| 52.5° | 5357.0 | 5426.2 | 5572.2 | 5671.7 | 5740.1 | 5702.8 | 5650.7 | 6074.2 | 7113.1 | 8091.4 | 7654.0 |
| 55° | 4986.3 | 5083.5 | 5325.9 | 5566.0 | 5914.9 | 6186.1 | 6254.5 | 6549.8 | 7476.8 | 8490.8 | 8089.1 |
| 57.5° | 4311.1 | 4468.8 | 4686.4 | 5172.1 | 5759.5 | 6420.0 | 6958.5 | 7209.5 | 7862.2 | 8917.4 | 8544.5 |
| 60° | 3153.3 | 3364.6 | 3635.0 | 4357.7 | 5215.6 | 6294.9 | 7557.6 | 8222.8 | 8410.0 | 9469.9 | 9137.3 |
| 62.5° | 2018.0 | 2148.5 | 2397.2 | 3077.9 | 4064.0 | 5653.8 | 7741.0 | 9489.4 | 9338.6 | 10376.0 | 10026.3 |
| 65° | 1381.6 | 1465.5 | 1693.2 | 2075.5 | 2627.2 | 4208.5 | 7249.9 | 10438.9 | 10813.4 | 11812.0 | 11546.2 |
| 67.5° | 1004.0 | 1067.7 | 1261.9 | 1596.8 | 1711.8 | 2490.5 | 5625.9 | 10395.4 | 12247.1 | 13291.5 | 12878.1 |
| 70° | 732.0 | 777.1 | 940.2 | 1261.9 | 1317.1 | 1385.5 | 3408.1 | 8836.6 | 12216.0 | 13684.7 | 13189.7 |
| 72.5° | 542.4 | 573.5 | 683.0 | 979.1 | 1066.1 | 935.6 | 1687.0 | 6422.3 | 10497.2 | 12377.7 | 11980.6 |
| 75° | 392.4 | 415.7 | 496.5 | 749.1 | 853.2 | 712.6 | 841.5 | 3753.2 | 7322.2 | 8706.9 | 8776.8 |
| 77.5° | 299.9 | 317.8 | 370.7 | 548.6 | 683.0 | 534.6 | 522.2 | 1726.6 | 3471.9 | 3489.0 | 3684.8 |
| 80° | 240.9 | 252.5 | 281.3 | 386.2 | 523.7 | 400.2 | 340.3 | 697.0 | 1097.2 | 928.6 | 974.4 |
| 82.5° | 177.2 | 196.6 | 237.8 | 271.2 | 374.5 | 275.9 | 207.5 | 352.0 | 417.3 | 359.0 | 362.1 |
| 85° | 101.0 | 114.2 | 143.8 | 194.3 | 239.3 | 168.6 | 118.9 | 156.2 | 194.3 | 159.3 | 142.2 |
| 87.5° | 35.7 | 46.6 | 50.5 | 76.2 | 104.1 | 69.9 | 45.8 | 45.1 | 63.7 | 47.4 | 39.6 |
| 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° | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 | 2147.0 |
| 2.5° | 2162.5 | 2158.6 | 2143.1 | 2122.1 | 2100.4 | 2079.4 | 2072.4 | 2057.6 | 2047.5 | 2042.1 | 2048.3 |
| 5° | 2206.0 | 2193.6 | 2157.1 | 2110.5 | 2061.5 | 2008.7 | 1971.4 | 1937.2 | 1912.3 | 1889.0 | 1898.3 |
| 7.5° | 2268.2 | 2246.5 | 2183.5 | 2101.9 | 2014.9 | 1927.1 | 1861.8 | 1812.1 | 1778.7 | 1756.9 | 1761.6 |
| 10° | 2340.5 | 2307.1 | 2210.7 | 2088.7 | 1954.3 | 1828.4 | 1751.5 | 1708.7 | 1687.8 | 1676.1 | 1679.2 |
| 12.5° | 2423.6 | 2376.2 | 2238.7 | 2058.4 | 1861.8 | 1718.1 | 1665.2 | 1652.8 | 1653.6 | 1654.3 | 1655.9 |
| 15° | 2526.2 | 2460.1 | 2261.2 | 1992.4 | 1741.4 | 1633.4 | 1624.0 | 1644.2 | 1665.2 | 1675.3 | 1674.5 |
| 17.5° | 2642.0 | 2548.7 | 2265.1 | 1883.6 | 1623.3 | 1579.0 | 1608.5 | 1652.0 | 1683.9 | 1697.9 | 1701.0 |
| 20° | 2766.3 | 2638.9 | 2237.1 | 1729.7 | 1526.1 | 1534.7 | 1587.5 | 1643.5 | 1678.4 | 1696.3 | 1701.0 |
| 22.5° | 2908.5 | 2735.2 | 2170.3 | 1568.1 | 1446.9 | 1486.5 | 1548.7 | 1603.1 | 1639.6 | 1657.5 | 1662.1 |
| 25° | 3070.9 | 2843.2 | 2065.4 | 1432.1 | 1378.5 | 1432.1 | 1494.3 | 1539.3 | 1568.9 | 1585.2 | 1589.8 |
| 27.5° | 3251.2 | 2955.9 | 1925.5 | 1324.1 | 1318.7 | 1376.2 | 1427.4 | 1462.4 | 1478.0 | 1490.4 | 1495.0 |
| 30° | 3432.2 | 3058.5 | 1756.1 | 1242.5 | 1266.6 | 1321.0 | 1357.5 | 1373.1 | 1377.7 | 1380.0 | 1385.5 |
| 32.5° | 3628.1 | 3147.1 | 1578.2 | 1174.9 | 1216.9 | 1267.4 | 1289.1 | 1296.1 | 1274.4 | 1259.6 | 1264.3 |
| 35° | 3865.1 | 3241.9 | 1404.1 | 1121.3 | 1167.9 | 1211.4 | 1218.4 | 1212.2 | 1186.6 | 1156.3 | 1157.8 |
| 37.5° | 4158.0 | 3360.0 | 1265.0 | 1083.2 | 1122.1 | 1150.8 | 1142.3 | 1140.7 | 1143.0 | 1107.3 | 1109.6 |
| 40° | 4517.0 | 3513.8 | 1163.2 | 1053.7 | 1084.8 | 1091.0 | 1066.9 | 1080.1 | 1091.8 | 1037.4 | 1038.9 |
| 42.5° | 4915.6 | 3699.5 | 1098.8 | 1033.5 | 1053.7 | 1038.9 | 1001.6 | 1016.4 | 1014.8 | 943.3 | 942.6 |
| 45° | 5322.0 | 3901.6 | 1076.2 | 1018.7 | 1024.9 | 995.4 | 954.2 | 958.1 | 925.5 | 861.0 | 863.3 |
| 47.5° | 5726.1 | 4118.4 | 1090.2 | 1006.3 | 989.2 | 955.8 | 923.9 | 906.8 | 858.6 | 810.5 | 810.5 |
| 50° | 6122.4 | 4346.0 | 1141.5 | 981.4 | 940.2 | 920.8 | 897.5 | 867.2 | 815.9 | 774.7 | 771.6 |
| 52.5° | 6489.9 | 4575.3 | 1199.0 | 940.2 | 878.8 | 890.5 | 875.7 | 840.8 | 790.3 | 748.3 | 749.1 |
| 55° | 6838.1 | 4804.5 | 1221.5 | 883.5 | 821.3 | 864.1 | 855.5 | 791.0 | 730.4 | 696.2 | 693.1 |
| 57.5° | 7217.3 | 5080.4 | 1196.7 | 811.2 | 774.7 | 833.8 | 801.1 | 729.7 | 694.7 | 669.0 | 666.7 |
| 60° | 7742.5 | 5513.2 | 1143.0 | 721.9 | 730.4 | 788.7 | 732.8 | 703.2 | 665.2 | 636.4 | 634.9 |
| 62.5° | 8615.2 | 6320.5 | 1056.8 | 633.3 | 678.4 | 721.9 | 700.1 | 670.6 | 631.7 | 603.8 | 603.8 |
| 65° | 9905.1 | 7442.6 | 894.4 | 564.1 | 620.1 | 656.6 | 665.2 | 635.6 | 595.2 | 565.7 | 567.2 |
| 67.5° | 10992.9 | 8146.6 | 676.8 | 506.6 | 560.3 | 603.8 | 627.9 | 599.1 | 556.4 | 527.6 | 528.4 |
| 70° | 10933.1 | 7635.3 | 516.7 | 449.9 | 507.4 | 551.7 | 582.8 | 560.3 | 514.4 | 487.2 | 489.5 |
| 72.5° | 9710.8 | 6387.4 | 418.1 | 392.4 | 453.8 | 497.3 | 534.6 | 517.5 | 470.9 | 444.5 | 444.5 |
| 75° | 7134.1 | 4534.1 | 334.1 | 334.1 | 387.0 | 440.6 | 481.8 | 470.9 | 428.2 | 409.5 | 404.1 |
| 77.5° | 3007.2 | 1902.2 | 261.9 | 277.4 | 321.7 | 378.4 | 429.7 | 433.6 | 396.3 | 419.6 | 380.8 |
| 80° | 799.6 | 524.5 | 199.7 | 218.4 | 252.5 | 312.4 | 373.8 | 372.2 | 331.8 | 310.0 | 288.3 |
| 82.5° | 304.6 | 206.7 | 142.2 | 153.9 | 182.6 | 239.3 | 296.1 | 305.4 | 265.0 | 229.2 | 229.2 |
| 85° | 117.3 | 88.6 | 87.8 | 92.5 | 106.5 | 158.5 | 223.8 | 231.6 | 199.7 | 169.4 | 174.8 |
| 87.5° | 30.3 | 26.4 | 32.6 | 31.1 | 49.0 | 84.7 | 128.2 | 132.9 | 122.0 | 70.7 | 101.0 |
| 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)