

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: P884267

Luminaire Tested: **NAV-SB5A-730-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884267
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-SB5A-730-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22202 lumens
Efficiency: N/A
Efficacy: 156.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

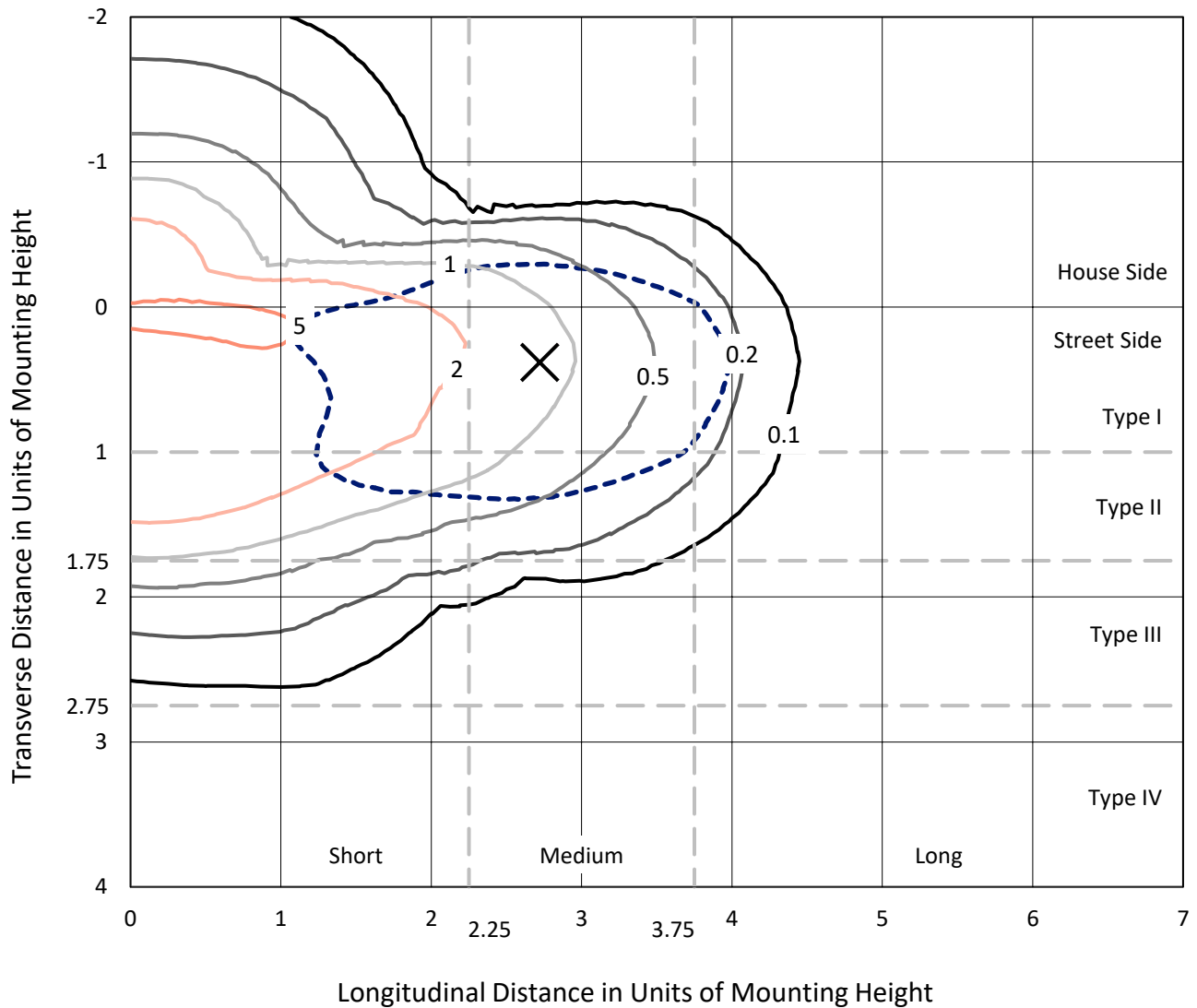
Input Watts (W): 141.7
Input Voltage (V): 120.0
Input Current (Ain): 1.201
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 10.503
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

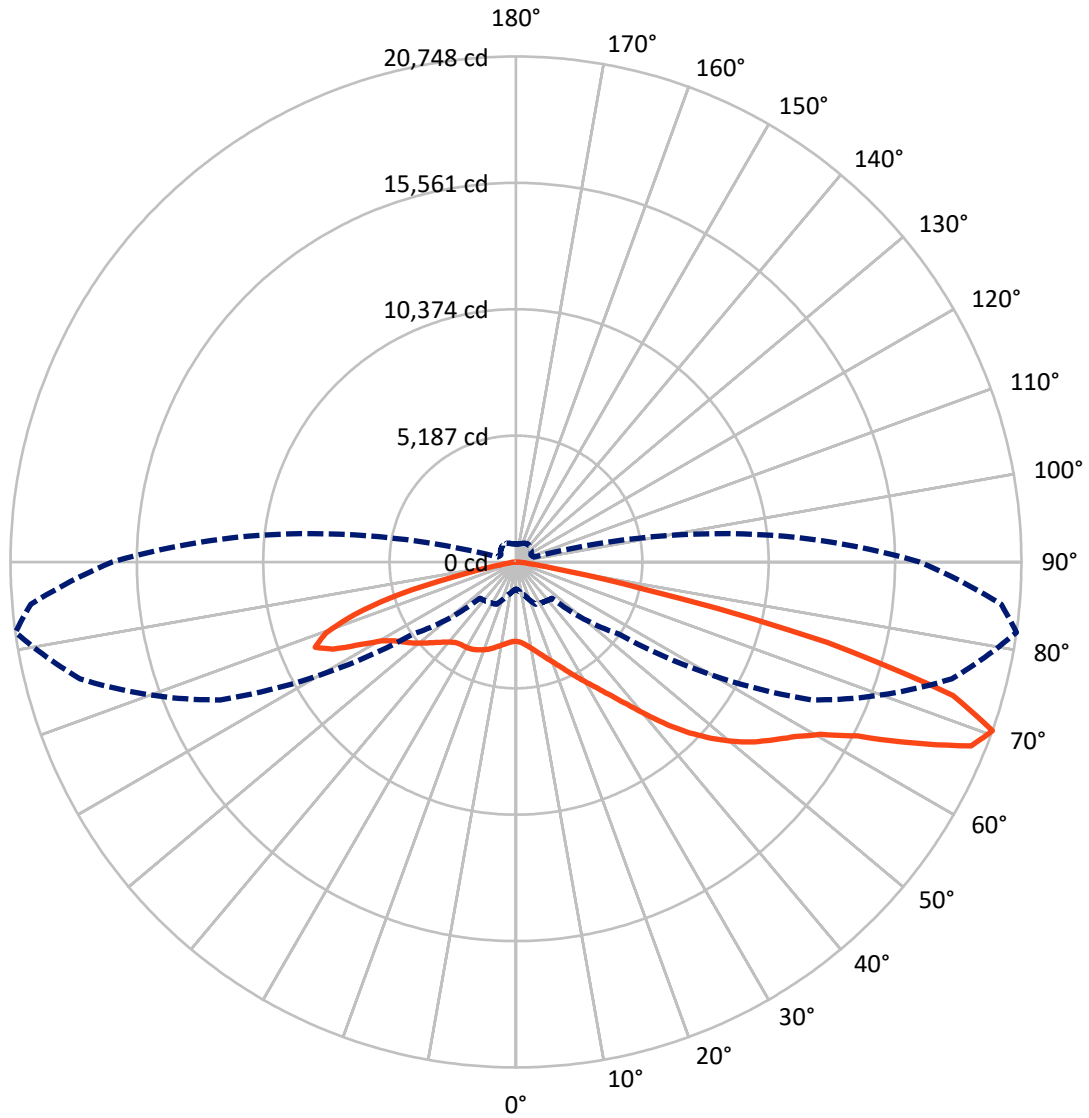
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 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 | 5473.3 | 0.0 | 5473.3 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 16728.7 | 0.0 | 16728.7 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 22202.0 | 0.0 | 22202.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 307.3 | 1.4 |
| 10°-20° | 883.0 | 4.0 |
| 20°-30° | 1477.2 | 6.7 |
| 30°-40° | 2307.7 | 10.4 |
| 40°-50° | 3675.3 | 16.6 |
| 50°-60° | 5114.7 | 23.0 |
| 60°-70° | 5350.2 | 24.1 |
| 70°-80° | 2796.3 | 12.6 |
| 80°-90° | 290.4 | 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° | 22202.0 | 100.0 |
| 0°-180° | 22202.0 | 100.0 |

Coefficient of Utilization



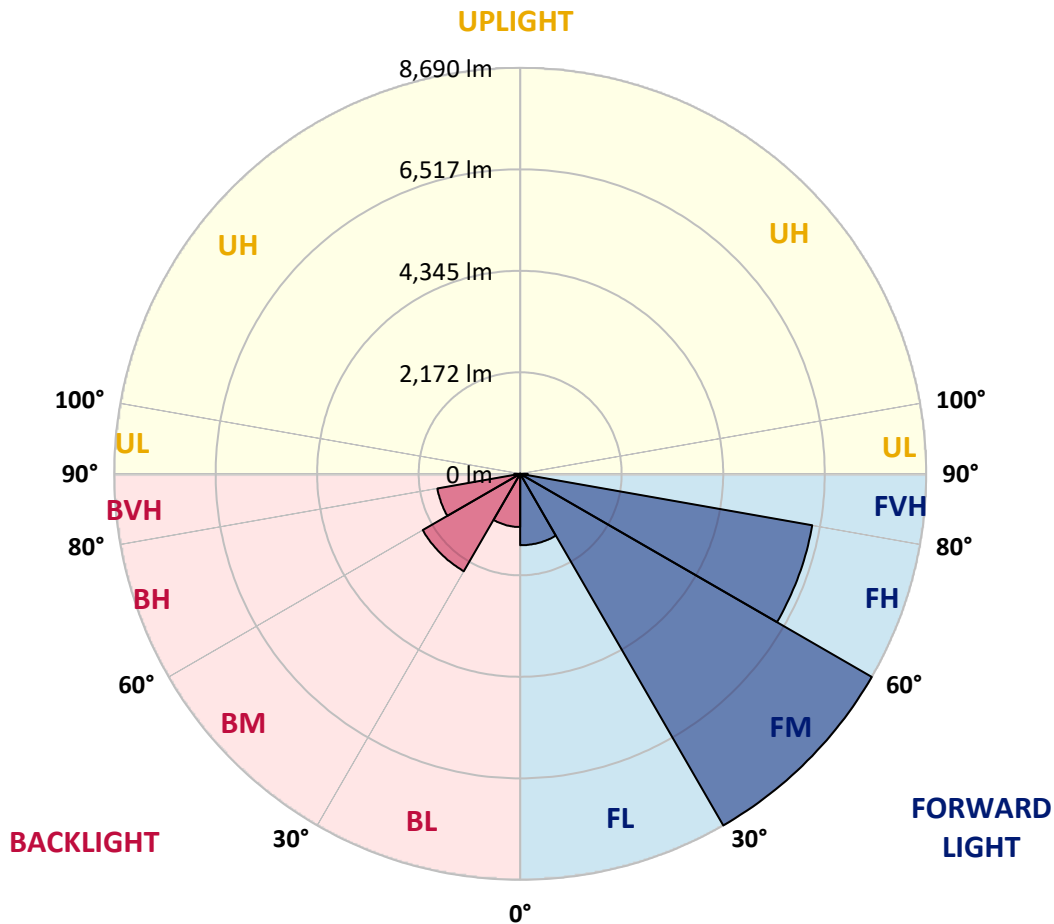
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1528.9 | 6.9 | | | |
| FM (30°-60°) | 8689.6 | 39.1 | | | |
| FH (60°-80°) | 6347.6 | 28.6 | | | G3/7500 |
| FVH (80°-90°) | 162.5 | 0.7 | | | G2/225 |
| BL (0°-30°) | 1138.7 | 5.1 | B3/2500 | | |
| BM (30°-60°) | 2408.1 | 10.8 | B2/2500 | | |
| BH (60°-80°) | 1798.8 | 8.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 127.8 | 0.6 | | | G2/225 |
| 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° | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 |
| 2.5° | 3332.8 | 3351.7 | 3345.8 | 3339.9 | 3339.9 | 3331.7 | 3330.5 | 3318.7 | 3309.3 | 3294.0 | 3290.4 |
| 5° | 3375.3 | 3395.3 | 3392.9 | 3397.6 | 3413.0 | 3416.5 | 3420.0 | 3413.0 | 3394.1 | 3375.3 | 3367.0 |
| 7.5° | 3337.6 | 3359.9 | 3367.0 | 3395.3 | 3442.4 | 3484.8 | 3516.6 | 3529.6 | 3511.9 | 3484.8 | 3471.9 |
| 10° | 3210.3 | 3235.1 | 3259.8 | 3327.0 | 3410.6 | 3510.7 | 3595.6 | 3646.2 | 3642.7 | 3616.8 | 3594.4 |
| 12.5° | 2952.3 | 2978.2 | 3031.3 | 3162.0 | 3315.2 | 3491.9 | 3649.8 | 3755.8 | 3792.3 | 3773.5 | 3734.6 |
| 15° | 2746.2 | 2768.5 | 2808.6 | 2942.9 | 3142.0 | 3410.6 | 3669.8 | 3875.9 | 3969.0 | 3958.4 | 3911.3 |
| 17.5° | 2740.3 | 2749.7 | 2774.4 | 2838.0 | 2991.2 | 3283.4 | 3648.6 | 3993.8 | 4171.7 | 4170.5 | 4111.6 |
| 20° | 2843.9 | 2847.5 | 2861.6 | 2874.6 | 2961.7 | 3186.8 | 3594.4 | 4091.5 | 4399.0 | 4399.0 | 4335.4 |
| 22.5° | 2987.7 | 2985.3 | 2999.4 | 2987.7 | 3030.1 | 3178.5 | 3560.2 | 4177.5 | 4652.3 | 4671.2 | 4591.1 |
| 25° | 3203.3 | 3191.5 | 3187.9 | 3160.8 | 3169.1 | 3255.1 | 3597.9 | 4275.3 | 4952.7 | 4991.6 | 4891.5 |
| 27.5° | 3490.7 | 3471.9 | 3458.9 | 3396.5 | 3375.3 | 3413.0 | 3713.4 | 4393.1 | 5287.3 | 5354.5 | 5227.2 |
| 30° | 3865.3 | 3831.2 | 3812.3 | 3703.9 | 3627.4 | 3633.3 | 3887.7 | 4549.8 | 5637.2 | 5745.6 | 5584.2 |
| 32.5° | 4376.6 | 4323.6 | 4273.0 | 4095.1 | 3954.9 | 3908.9 | 4112.7 | 4766.6 | 6016.6 | 6189.7 | 5982.4 |
| 35° | 4949.2 | 4906.8 | 4852.6 | 4578.1 | 4362.5 | 4256.5 | 4416.7 | 5069.4 | 6460.7 | 6735.2 | 6465.4 |
| 37.5° | 5500.5 | 5464.0 | 5489.9 | 5120.0 | 4842.0 | 4687.7 | 4814.9 | 5475.8 | 7008.5 | 7413.8 | 7071.0 |
| 40° | 6070.8 | 6042.5 | 6046.0 | 5692.6 | 5368.6 | 5195.4 | 5297.9 | 5985.9 | 7636.4 | 8220.8 | 7799.0 |
| 42.5° | 6690.4 | 6669.2 | 6598.5 | 6285.2 | 5921.1 | 5759.7 | 5854.0 | 6575.0 | 8310.3 | 9139.7 | 8597.8 |
| 45° | 7384.3 | 7371.4 | 7305.4 | 6946.1 | 6529.0 | 6347.6 | 6474.8 | 7225.3 | 8987.7 | 10004.4 | 9400.1 |
| 47.5° | 7984.0 | 7994.6 | 7986.3 | 7683.6 | 7251.2 | 6985.0 | 7136.9 | 7903.9 | 9618.0 | 10817.3 | 10169.4 |
| 50° | 8272.6 | 8328.0 | 8409.3 | 8315.0 | 8046.4 | 7775.5 | 7804.9 | 8558.9 | 10218.8 | 11579.5 | 10906.9 |
| 52.5° | 8121.8 | 8226.7 | 8448.2 | 8599.0 | 8702.6 | 8646.1 | 8567.1 | 9209.2 | 10784.3 | 12267.6 | 11604.3 |
| 55° | 7559.9 | 7707.1 | 8074.7 | 8438.7 | 8967.7 | 9378.9 | 9482.5 | 9930.2 | 11335.7 | 12873.1 | 12264.0 |
| 57.5° | 6536.1 | 6775.3 | 7105.1 | 7841.4 | 8732.1 | 9733.5 | 10549.9 | 10930.4 | 11920.0 | 13519.9 | 12954.4 |
| 60° | 4780.7 | 5101.2 | 5511.2 | 6606.8 | 7907.4 | 9543.8 | 11458.2 | 12466.7 | 12750.6 | 14357.5 | 13853.3 |
| 62.5° | 3059.5 | 3257.4 | 3634.4 | 4666.5 | 6161.5 | 8571.9 | 11736.2 | 14387.0 | 14158.4 | 15731.2 | 15201.0 |
| 65° | 2094.7 | 2221.9 | 2567.1 | 3146.7 | 3983.2 | 6380.6 | 10991.7 | 15826.6 | 16394.4 | 17908.3 | 17505.4 |
| 67.5° | 1522.1 | 1618.7 | 1913.2 | 2421.0 | 2595.4 | 3775.8 | 8529.4 | 15760.6 | 18568.0 | 20151.4 | 19524.7 |
| 70° | 1109.8 | 1178.1 | 1425.5 | 1913.2 | 1996.9 | 2100.6 | 5167.1 | 13397.4 | 18520.9 | 20747.5 | 19997.1 |
| 72.5° | 822.3 | 869.4 | 1035.6 | 1484.4 | 1616.4 | 1418.4 | 2557.7 | 9737.0 | 15915.0 | 18766.0 | 18163.9 |
| 75° | 594.9 | 630.3 | 752.8 | 1135.7 | 1293.6 | 1080.3 | 1275.9 | 5690.2 | 11101.2 | 13200.6 | 13306.6 |
| 77.5° | 454.7 | 481.8 | 562.0 | 831.7 | 1035.6 | 810.5 | 791.7 | 2617.7 | 5263.8 | 5289.7 | 5586.6 |
| 80° | 365.2 | 382.9 | 426.5 | 585.5 | 794.0 | 606.7 | 516.0 | 1056.8 | 1663.5 | 1407.8 | 1477.3 |
| 82.5° | 268.6 | 298.1 | 360.5 | 411.2 | 567.8 | 418.2 | 314.6 | 533.7 | 632.6 | 544.3 | 549.0 |
| 85° | 153.2 | 173.2 | 217.9 | 294.5 | 362.9 | 255.6 | 180.2 | 236.8 | 294.5 | 241.5 | 215.6 |
| 87.5° | 54.2 | 70.7 | 76.6 | 115.5 | 157.9 | 106.0 | 69.5 | 68.3 | 96.6 | 71.9 | 60.1 |
| 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° | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 | 3255.1 |
| 2.5° | 3278.7 | 3272.8 | 3249.2 | 3217.4 | 3184.4 | 3152.6 | 3142.0 | 3119.6 | 3104.3 | 3096.0 | 3105.5 |
| 5° | 3344.6 | 3325.8 | 3270.4 | 3199.7 | 3125.5 | 3045.4 | 2988.8 | 2937.0 | 2899.3 | 2864.0 | 2878.1 |
| 7.5° | 3438.9 | 3405.9 | 3310.5 | 3186.8 | 3054.8 | 2921.7 | 2822.7 | 2747.3 | 2696.7 | 2663.7 | 2670.8 |
| 10° | 3548.4 | 3497.8 | 3351.7 | 3166.7 | 2962.9 | 2772.1 | 2655.4 | 2590.6 | 2558.8 | 2541.2 | 2545.9 |
| 12.5° | 3674.5 | 3602.6 | 3394.1 | 3120.8 | 2822.7 | 2604.8 | 2524.7 | 2505.8 | 2507.0 | 2508.2 | 2510.5 |
| 15° | 3830.0 | 3729.9 | 3428.3 | 3020.6 | 2640.1 | 2476.4 | 2462.2 | 2492.9 | 2524.7 | 2540.0 | 2538.8 |
| 17.5° | 4005.5 | 3864.2 | 3434.2 | 2855.7 | 2461.1 | 2393.9 | 2438.7 | 2504.6 | 2552.9 | 2574.1 | 2578.9 |
| 20° | 4194.0 | 4000.8 | 3391.8 | 2622.5 | 2313.8 | 2326.7 | 2406.9 | 2491.7 | 2544.7 | 2571.8 | 2578.9 |
| 22.5° | 4409.6 | 4146.9 | 3290.4 | 2377.4 | 2193.6 | 2253.7 | 2348.0 | 2430.4 | 2485.8 | 2512.9 | 2520.0 |
| 25° | 4655.9 | 4310.7 | 3131.4 | 2171.2 | 2089.9 | 2171.2 | 2265.5 | 2333.8 | 2378.6 | 2403.3 | 2410.4 |
| 27.5° | 4929.2 | 4481.5 | 2919.3 | 2007.5 | 1999.2 | 2086.4 | 2164.2 | 2217.2 | 2240.7 | 2259.6 | 2266.7 |
| 30° | 5203.7 | 4637.0 | 2662.5 | 1883.8 | 1920.3 | 2002.8 | 2058.1 | 2081.7 | 2088.8 | 2092.3 | 2100.6 |
| 32.5° | 5500.5 | 4771.3 | 2392.7 | 1781.3 | 1844.9 | 1921.5 | 1954.5 | 1965.1 | 1932.1 | 1909.7 | 1916.8 |
| 35° | 5859.9 | 4915.0 | 2128.8 | 1700.0 | 1770.7 | 1836.7 | 1847.3 | 1837.8 | 1799.0 | 1753.0 | 1755.4 |
| 37.5° | 6304.0 | 5094.1 | 1917.9 | 1642.3 | 1701.2 | 1744.8 | 1731.8 | 1729.5 | 1733.0 | 1678.8 | 1682.3 |
| 40° | 6848.3 | 5327.4 | 1763.6 | 1597.5 | 1644.6 | 1654.1 | 1617.5 | 1637.6 | 1655.2 | 1572.8 | 1575.1 |
| 42.5° | 7452.7 | 5608.9 | 1665.8 | 1566.9 | 1597.5 | 1575.1 | 1518.6 | 1541.0 | 1538.6 | 1430.2 | 1429.0 |
| 45° | 8068.8 | 5915.2 | 1631.7 | 1544.5 | 1553.9 | 1509.1 | 1446.7 | 1452.6 | 1403.1 | 1305.3 | 1308.9 |
| 47.5° | 8681.4 | 6243.9 | 1652.9 | 1525.6 | 1499.7 | 1449.1 | 1400.8 | 1374.8 | 1301.8 | 1228.8 | 1228.8 |
| 50° | 9282.3 | 6589.1 | 1730.6 | 1487.9 | 1425.5 | 1396.0 | 1360.7 | 1314.8 | 1237.0 | 1174.6 | 1169.9 |
| 52.5° | 9839.5 | 6936.7 | 1817.8 | 1425.5 | 1332.4 | 1350.1 | 1327.7 | 1274.7 | 1198.1 | 1134.5 | 1135.7 |
| 55° | 10367.3 | 7284.2 | 1852.0 | 1339.5 | 1245.3 | 1310.0 | 1297.1 | 1199.3 | 1107.4 | 1055.6 | 1050.9 |
| 57.5° | 10942.2 | 7702.4 | 1814.3 | 1229.9 | 1174.6 | 1264.1 | 1214.6 | 1106.2 | 1053.2 | 1014.3 | 1010.8 |
| 60° | 11738.6 | 8358.6 | 1733.0 | 1094.5 | 1107.4 | 1195.8 | 1110.9 | 1066.2 | 1008.5 | 964.9 | 962.5 |
| 62.5° | 13061.6 | 9582.7 | 1602.2 | 960.2 | 1028.5 | 1094.5 | 1061.5 | 1016.7 | 957.8 | 915.4 | 915.4 |
| 65° | 15017.2 | 11283.8 | 1356.0 | 855.3 | 940.1 | 995.5 | 1008.5 | 963.7 | 902.4 | 857.7 | 860.0 |
| 67.5° | 16666.6 | 12351.2 | 1026.1 | 768.1 | 849.4 | 915.4 | 951.9 | 908.3 | 843.5 | 799.9 | 801.1 |
| 70° | 16575.9 | 11576.0 | 783.4 | 682.1 | 769.3 | 836.5 | 883.6 | 849.4 | 779.9 | 738.7 | 742.2 |
| 72.5° | 14722.7 | 9684.0 | 633.8 | 594.9 | 688.0 | 754.0 | 810.5 | 784.6 | 713.9 | 673.9 | 673.9 |
| 75° | 10816.1 | 6874.2 | 506.6 | 506.6 | 586.7 | 668.0 | 730.4 | 713.9 | 649.1 | 620.9 | 612.6 |
| 77.5° | 4559.2 | 2884.0 | 397.0 | 420.6 | 487.7 | 573.7 | 651.5 | 657.4 | 600.8 | 636.2 | 577.3 |
| 80° | 1212.3 | 795.2 | 302.8 | 331.0 | 382.9 | 473.6 | 566.7 | 564.3 | 503.0 | 470.1 | 437.1 |
| 82.5° | 461.8 | 313.4 | 215.6 | 233.3 | 276.9 | 362.9 | 448.9 | 463.0 | 401.7 | 347.5 | 347.5 |
| 85° | 177.9 | 134.3 | 133.1 | 140.2 | 161.4 | 240.3 | 339.3 | 351.1 | 302.8 | 256.8 | 265.1 |
| 87.5° | 45.9 | 40.1 | 49.5 | 47.1 | 74.2 | 128.4 | 194.4 | 201.5 | 185.0 | 107.2 | 153.2 |
| 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)