

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: P884277

Luminaire Tested: **NAV-SB5A-735-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884277
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-735-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22554 lumens
Efficiency: N/A
Efficacy: 159.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

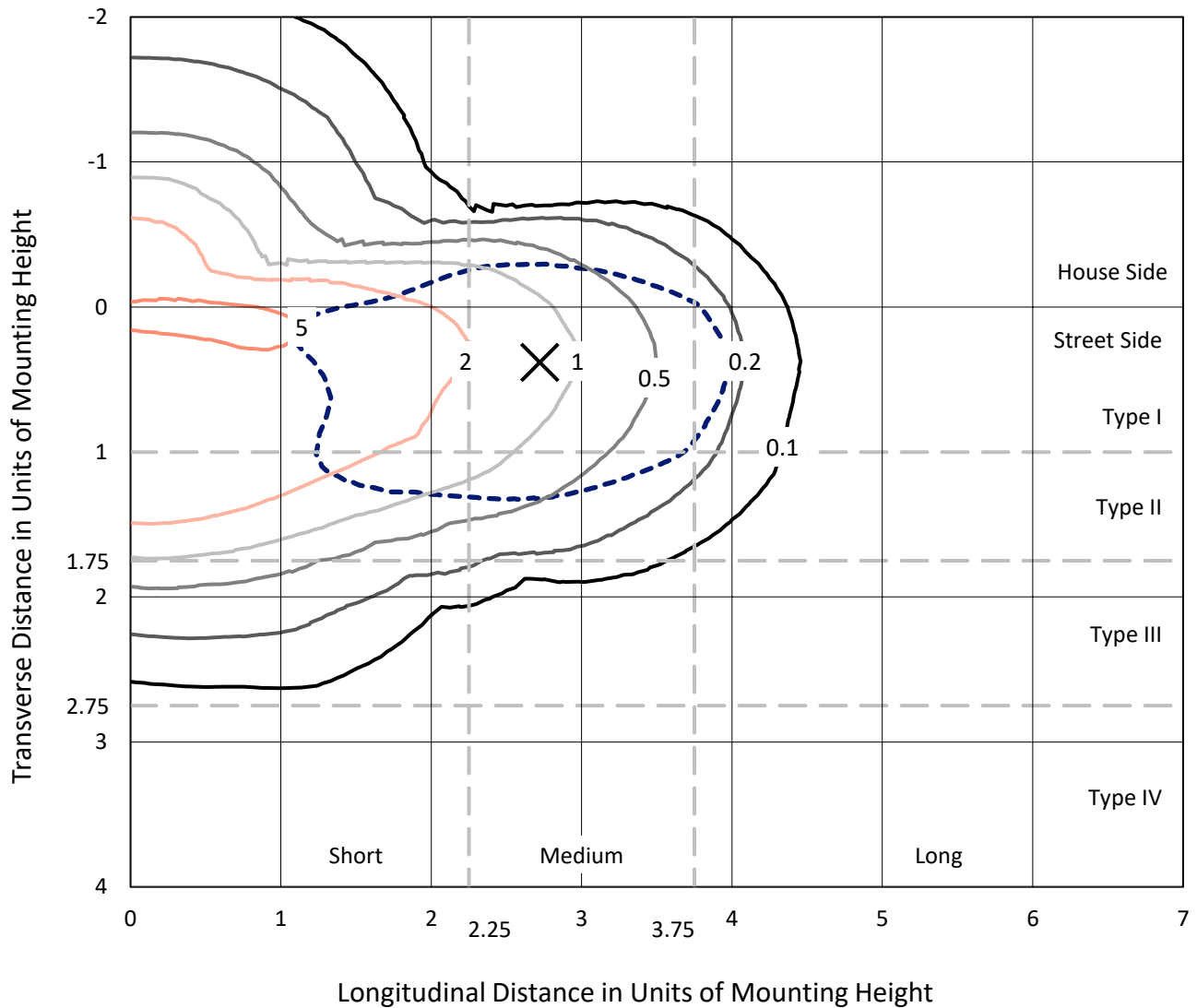
Input Watts (W): 141.7
Input Voltage (V): 120.0
Input Current (Ain): 1.201
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 10.503
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

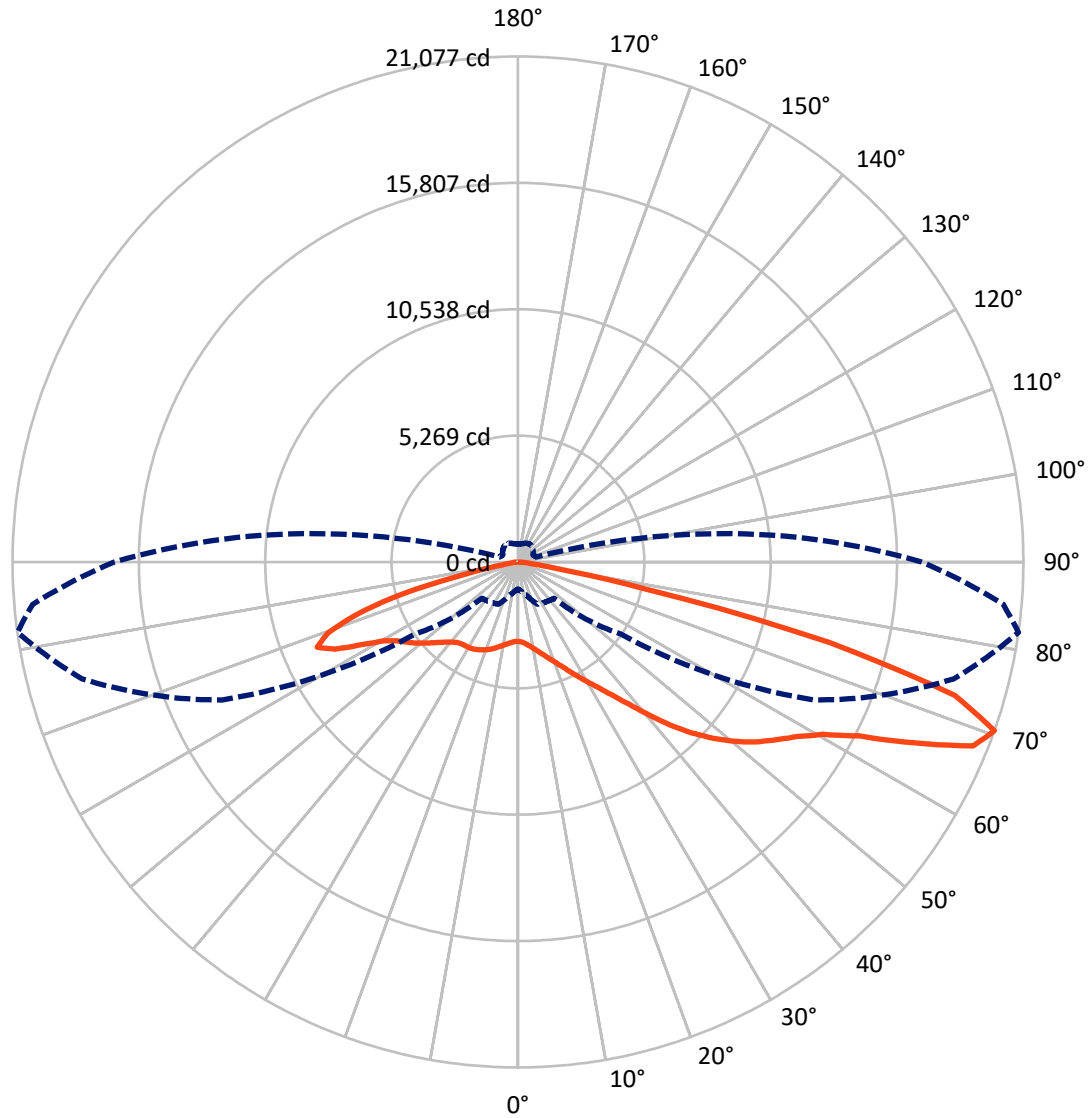
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 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 | 5560.1 | 0.0 | 5560.1 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 16993.9 | 0.0 | 16993.9 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 22554.0 | 0.0 | 22554.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 312.2 | 1.4 |
| 10°-20° | 897.0 | 4.0 |
| 20°-30° | 1500.6 | 6.7 |
| 30°-40° | 2344.3 | 10.4 |
| 40°-50° | 3733.6 | 16.6 |
| 50°-60° | 5195.7 | 23.0 |
| 60°-70° | 5435.0 | 24.1 |
| 70°-80° | 2840.6 | 12.6 |
| 80°-90° | 295.0 | 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° | 22554.0 | 100.0 |
| 0°-180° | 22554.0 | 100.0 |

Coefficient of Utilization



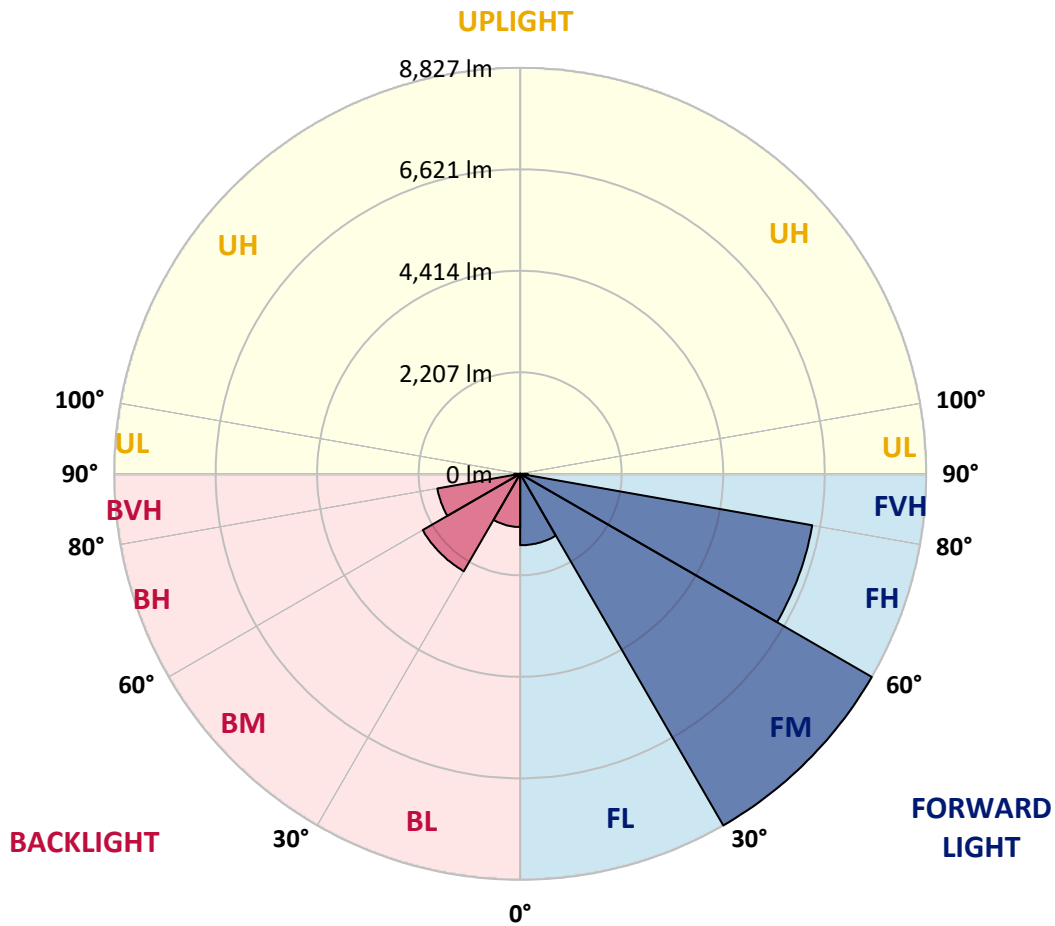
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1553.1 | 6.9 | | | |
| FM (30°-60°) | 8827.4 | 39.1 | | | |
| FH (60°-80°) | 6448.3 | 28.6 | | | G3/7500 |
| FVH (80°-90°) | 165.1 | 0.7 | | | G2/225 |
| BL (0°-30°) | 1156.7 | 5.1 | B3/2500 | | |
| BM (30°-60°) | 2446.2 | 10.8 | B2/2500 | | |
| BH (60°-80°) | 1827.3 | 8.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 129.8 | 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° | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 |
| 2.5° | 3385.7 | 3404.8 | 3398.9 | 3392.9 | 3392.9 | 3384.5 | 3383.3 | 3371.3 | 3361.8 | 3346.2 | 3342.6 |
| 5° | 3428.8 | 3449.1 | 3446.7 | 3451.5 | 3467.1 | 3470.7 | 3474.2 | 3467.1 | 3447.9 | 3428.8 | 3420.4 |
| 7.5° | 3390.5 | 3413.2 | 3420.4 | 3449.1 | 3497.0 | 3540.1 | 3572.4 | 3585.5 | 3567.6 | 3540.1 | 3526.9 |
| 10° | 3261.2 | 3286.4 | 3311.5 | 3379.7 | 3464.7 | 3566.4 | 3652.6 | 3704.0 | 3700.4 | 3674.1 | 3651.4 |
| 12.5° | 2999.1 | 3025.5 | 3079.3 | 3212.2 | 3367.7 | 3547.3 | 3707.6 | 3815.3 | 3852.4 | 3833.3 | 3793.8 |
| 15° | 2789.7 | 2812.4 | 2853.1 | 2989.6 | 3191.8 | 3464.7 | 3728.0 | 3937.4 | 4031.9 | 4021.2 | 3973.3 |
| 17.5° | 2783.7 | 2793.3 | 2818.4 | 2883.0 | 3038.6 | 3335.4 | 3706.4 | 4057.1 | 4237.8 | 4236.6 | 4176.8 |
| 20° | 2889.0 | 2892.6 | 2907.0 | 2920.1 | 3008.7 | 3237.3 | 3651.4 | 4156.4 | 4468.8 | 4468.8 | 4404.1 |
| 22.5° | 3035.0 | 3032.6 | 3047.0 | 3035.0 | 3078.1 | 3228.9 | 3616.7 | 4243.8 | 4726.1 | 4745.2 | 4663.8 |
| 25° | 3254.0 | 3242.1 | 3238.5 | 3211.0 | 3219.3 | 3306.7 | 3655.0 | 4343.1 | 5031.3 | 5070.7 | 4969.0 |
| 27.5° | 3546.1 | 3526.9 | 3513.7 | 3450.3 | 3428.8 | 3467.1 | 3772.2 | 4462.8 | 5371.1 | 5439.4 | 5310.1 |
| 30° | 3926.6 | 3891.9 | 3872.8 | 3762.7 | 3684.9 | 3690.9 | 3949.4 | 4622.0 | 5726.6 | 5836.7 | 5672.7 |
| 32.5° | 4446.0 | 4392.2 | 4340.7 | 4160.0 | 4017.6 | 3970.9 | 4178.0 | 4842.2 | 6111.9 | 6287.9 | 6077.2 |
| 35° | 5027.7 | 4984.6 | 4929.5 | 4650.7 | 4431.7 | 4324.0 | 4486.7 | 5149.7 | 6563.1 | 6842.0 | 6567.9 |
| 37.5° | 5587.8 | 5550.7 | 5577.0 | 5201.2 | 4918.8 | 4762.0 | 4891.2 | 5562.6 | 7119.6 | 7531.3 | 7183.1 |
| 40° | 6167.0 | 6138.3 | 6141.9 | 5782.8 | 5453.7 | 5277.8 | 5381.9 | 6080.8 | 7757.5 | 8351.1 | 7922.7 |
| 42.5° | 6796.5 | 6775.0 | 6703.2 | 6384.8 | 6015.0 | 5851.0 | 5946.8 | 6679.2 | 8442.1 | 9284.6 | 8734.1 |
| 45° | 7501.4 | 7488.2 | 7421.2 | 7056.2 | 6632.5 | 6448.2 | 6577.5 | 7339.8 | 9130.2 | 10163.0 | 9549.1 |
| 47.5° | 8110.6 | 8121.3 | 8113.0 | 7805.4 | 7366.2 | 7095.7 | 7250.1 | 8029.2 | 9770.5 | 10988.8 | 10330.6 |
| 50° | 8403.8 | 8460.0 | 8542.6 | 8446.9 | 8174.0 | 7898.7 | 7928.7 | 8694.6 | 10380.9 | 11763.1 | 11079.8 |
| 52.5° | 8250.6 | 8357.1 | 8582.1 | 8735.3 | 8840.6 | 8783.2 | 8703.0 | 9355.2 | 10955.3 | 12462.1 | 11788.3 |
| 55° | 7679.7 | 7829.3 | 8202.7 | 8572.5 | 9109.9 | 9527.6 | 9632.9 | 10087.6 | 11515.4 | 13077.2 | 12458.5 |
| 57.5° | 6639.7 | 6882.7 | 7217.8 | 7965.8 | 8870.5 | 9887.8 | 10717.1 | 11103.7 | 12109.0 | 13734.2 | 13159.8 |
| 60° | 4856.5 | 5182.1 | 5598.5 | 6711.5 | 8032.8 | 9695.1 | 11639.9 | 12664.3 | 12952.7 | 14585.1 | 14072.9 |
| 62.5° | 3108.0 | 3309.1 | 3692.1 | 4740.4 | 6259.2 | 8707.8 | 11922.3 | 14615.1 | 14382.9 | 15980.6 | 15442.0 |
| 65° | 2127.9 | 2257.1 | 2607.8 | 3196.6 | 4046.3 | 6481.8 | 11165.9 | 16077.5 | 16654.4 | 18192.2 | 17782.9 |
| 67.5° | 1546.2 | 1644.4 | 1943.6 | 2459.4 | 2636.5 | 3835.7 | 8664.7 | 16010.5 | 18862.4 | 20470.9 | 19834.2 |
| 70° | 1127.4 | 1196.8 | 1448.1 | 1943.6 | 2028.5 | 2133.9 | 5249.1 | 13609.8 | 18814.6 | 21076.5 | 20314.1 |
| 72.5° | 835.4 | 883.2 | 1052.0 | 1507.9 | 1642.0 | 1440.9 | 2598.2 | 9891.4 | 16167.3 | 19063.5 | 18451.9 |
| 75° | 604.4 | 640.3 | 764.7 | 1153.7 | 1314.1 | 1097.4 | 1296.1 | 5780.4 | 11277.2 | 13409.9 | 13517.6 |
| 77.5° | 462.0 | 489.5 | 570.9 | 844.9 | 1052.0 | 823.4 | 804.2 | 2659.2 | 5347.2 | 5373.5 | 5675.1 |
| 80° | 371.0 | 389.0 | 433.2 | 594.8 | 806.6 | 616.3 | 524.2 | 1073.5 | 1689.9 | 1430.2 | 1500.8 |
| 82.5° | 272.9 | 302.8 | 366.2 | 417.7 | 576.8 | 424.9 | 319.5 | 542.1 | 642.7 | 552.9 | 557.7 |
| 85° | 155.6 | 175.9 | 221.4 | 299.2 | 368.6 | 259.7 | 183.1 | 240.6 | 299.2 | 245.3 | 219.0 |
| 87.5° | 55.1 | 71.8 | 77.8 | 117.3 | 160.4 | 107.7 | 70.6 | 69.4 | 98.1 | 73.0 | 61.0 |
| 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° | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 | 3306.7 |
| 2.5° | 3330.6 | 3324.7 | 3300.7 | 3268.4 | 3234.9 | 3202.6 | 3191.8 | 3169.1 | 3153.5 | 3145.1 | 3154.7 |
| 5° | 3397.7 | 3378.5 | 3322.3 | 3250.4 | 3175.1 | 3093.7 | 3036.2 | 2983.6 | 2945.3 | 2909.4 | 2923.7 |
| 7.5° | 3493.4 | 3459.9 | 3362.9 | 3237.3 | 3103.2 | 2968.0 | 2867.5 | 2790.9 | 2739.4 | 2705.9 | 2713.1 |
| 10° | 3604.7 | 3553.2 | 3404.8 | 3216.9 | 3009.9 | 2816.0 | 2697.5 | 2631.7 | 2599.4 | 2581.5 | 2586.2 |
| 12.5° | 3732.8 | 3659.7 | 3447.9 | 3170.3 | 2867.5 | 2646.1 | 2564.7 | 2545.5 | 2546.7 | 2547.9 | 2550.3 |
| 15° | 3890.7 | 3789.0 | 3482.6 | 3068.5 | 2682.0 | 2515.6 | 2501.3 | 2532.4 | 2564.7 | 2580.3 | 2579.1 |
| 17.5° | 4069.0 | 3925.4 | 3488.6 | 2901.0 | 2500.1 | 2431.9 | 2477.3 | 2544.4 | 2593.4 | 2615.0 | 2619.7 |
| 20° | 4260.5 | 4064.3 | 3445.5 | 2664.0 | 2350.5 | 2363.6 | 2445.0 | 2531.2 | 2585.0 | 2612.6 | 2619.7 |
| 22.5° | 4479.5 | 4212.7 | 3342.6 | 2415.1 | 2228.4 | 2289.4 | 2385.2 | 2469.0 | 2525.2 | 2552.7 | 2559.9 |
| 25° | 4729.7 | 4379.0 | 3181.0 | 2205.7 | 2123.1 | 2205.7 | 2301.4 | 2370.8 | 2416.3 | 2441.4 | 2448.6 |
| 27.5° | 5007.3 | 4552.5 | 2965.6 | 2039.3 | 2030.9 | 2119.5 | 2198.5 | 2252.3 | 2276.3 | 2295.4 | 2302.6 |
| 30° | 5286.2 | 4710.5 | 2704.7 | 1913.6 | 1950.7 | 2034.5 | 2090.8 | 2114.7 | 2121.9 | 2125.5 | 2133.9 |
| 32.5° | 5587.8 | 4847.0 | 2430.7 | 1809.5 | 1874.2 | 1951.9 | 1985.5 | 1996.2 | 1962.7 | 1940.0 | 1947.2 |
| 35° | 5952.8 | 4993.0 | 2162.6 | 1727.0 | 1798.8 | 1865.8 | 1876.5 | 1867.0 | 1827.5 | 1780.8 | 1783.2 |
| 37.5° | 6404.0 | 5174.9 | 1948.4 | 1668.3 | 1728.1 | 1772.4 | 1759.3 | 1756.9 | 1760.5 | 1705.4 | 1709.0 |
| 40° | 6956.9 | 5411.8 | 1791.6 | 1622.8 | 1670.7 | 1680.3 | 1643.2 | 1663.5 | 1681.5 | 1597.7 | 1600.1 |
| 42.5° | 7570.8 | 5697.9 | 1692.2 | 1591.7 | 1622.8 | 1600.1 | 1542.6 | 1565.4 | 1563.0 | 1452.9 | 1451.7 |
| 45° | 8196.7 | 6009.0 | 1657.5 | 1569.0 | 1578.6 | 1533.1 | 1469.6 | 1475.6 | 1425.4 | 1326.0 | 1329.6 |
| 47.5° | 8819.1 | 6342.9 | 1679.1 | 1549.8 | 1523.5 | 1472.0 | 1423.0 | 1396.6 | 1322.4 | 1248.2 | 1248.2 |
| 50° | 9429.4 | 6693.6 | 1758.1 | 1511.5 | 1448.1 | 1418.2 | 1382.3 | 1335.6 | 1256.6 | 1193.2 | 1188.4 |
| 52.5° | 9995.5 | 7046.6 | 1846.6 | 1448.1 | 1353.6 | 1371.5 | 1348.8 | 1294.9 | 1217.1 | 1152.5 | 1153.7 |
| 55° | 10531.6 | 7399.7 | 1881.3 | 1360.7 | 1265.0 | 1330.8 | 1317.7 | 1218.3 | 1125.0 | 1072.3 | 1067.5 |
| 57.5° | 11115.7 | 7824.5 | 1843.0 | 1249.4 | 1193.2 | 1284.1 | 1233.9 | 1123.8 | 1069.9 | 1030.4 | 1026.8 |
| 60° | 11924.7 | 8491.1 | 1760.5 | 1111.8 | 1125.0 | 1214.7 | 1128.6 | 1083.1 | 1024.4 | 980.2 | 977.8 |
| 62.5° | 13268.7 | 9734.6 | 1627.6 | 975.4 | 1044.8 | 1111.8 | 1078.3 | 1032.8 | 973.0 | 929.9 | 929.9 |
| 65° | 15255.3 | 11462.7 | 1377.5 | 868.9 | 955.0 | 1011.3 | 1024.4 | 979.0 | 916.7 | 871.3 | 873.6 |
| 67.5° | 16930.8 | 12547.0 | 1042.4 | 780.3 | 862.9 | 929.9 | 967.0 | 922.7 | 856.9 | 812.6 | 813.8 |
| 70° | 16838.7 | 11759.5 | 795.9 | 692.9 | 781.5 | 849.7 | 897.6 | 862.9 | 792.3 | 750.4 | 754.0 |
| 72.5° | 14956.1 | 9837.5 | 643.9 | 604.4 | 698.9 | 765.9 | 823.4 | 797.1 | 725.2 | 684.6 | 684.6 |
| 75° | 10987.6 | 6983.2 | 514.6 | 514.6 | 596.0 | 678.6 | 742.0 | 725.2 | 659.4 | 630.7 | 622.3 |
| 77.5° | 4631.5 | 2929.7 | 403.3 | 427.2 | 495.5 | 582.8 | 661.8 | 667.8 | 610.4 | 646.3 | 586.4 |
| 80° | 1231.5 | 807.8 | 307.6 | 336.3 | 389.0 | 481.1 | 575.7 | 573.3 | 511.0 | 477.5 | 444.0 |
| 82.5° | 469.1 | 318.3 | 219.0 | 237.0 | 281.2 | 368.6 | 456.0 | 470.3 | 408.1 | 353.0 | 353.0 |
| 85° | 180.7 | 136.4 | 135.2 | 142.4 | 164.0 | 244.1 | 344.7 | 356.6 | 307.6 | 260.9 | 269.3 |
| 87.5° | 46.7 | 40.7 | 50.3 | 47.9 | 75.4 | 130.4 | 197.5 | 204.6 | 187.9 | 108.9 | 155.6 |
| 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)