

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: P884807

Luminaire Tested: **NAV-SB5D-750-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884807
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-SB5D-750-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 5000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 55161 lumens
Efficiency: N/A
Efficacy: 151.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G5

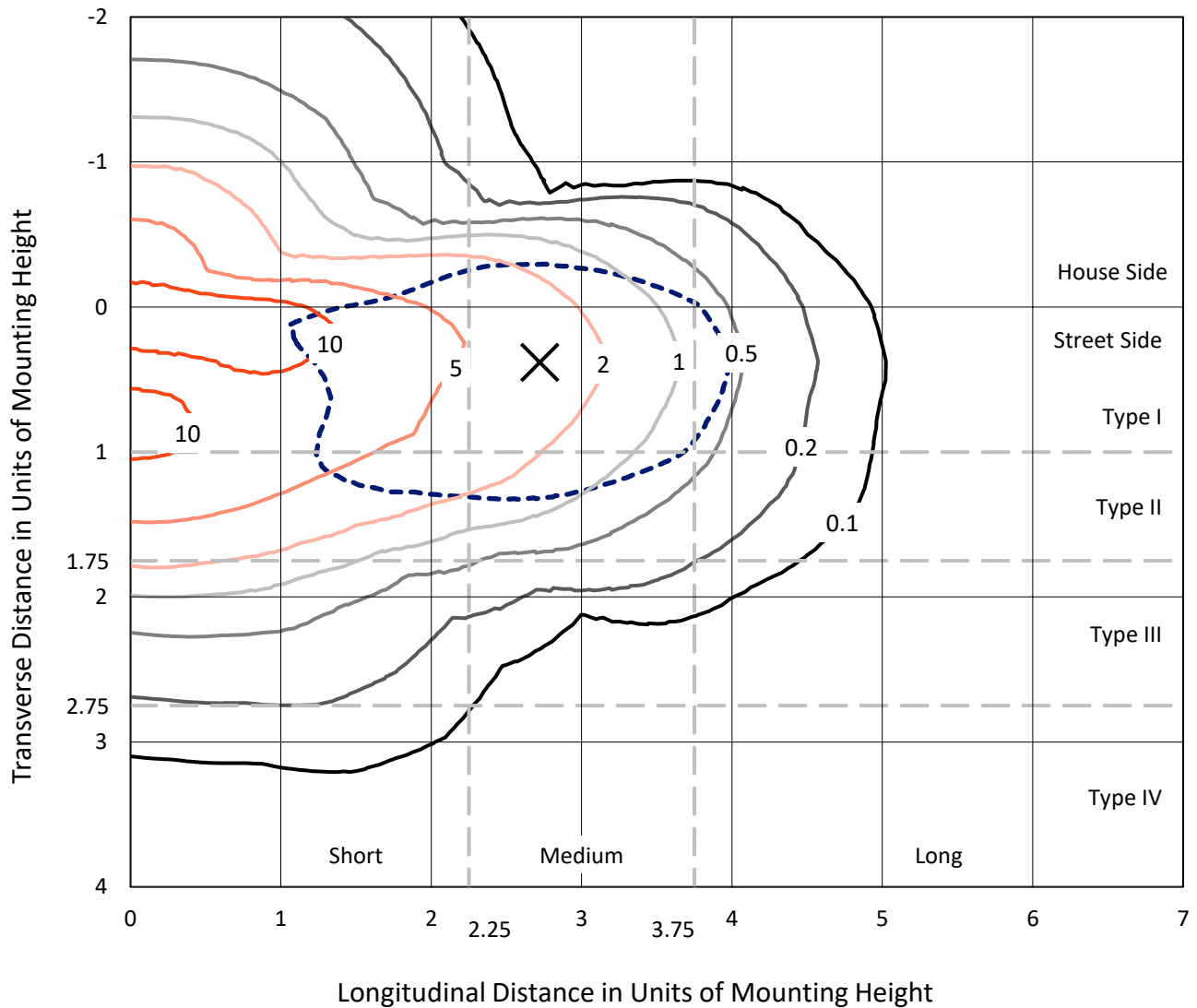
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

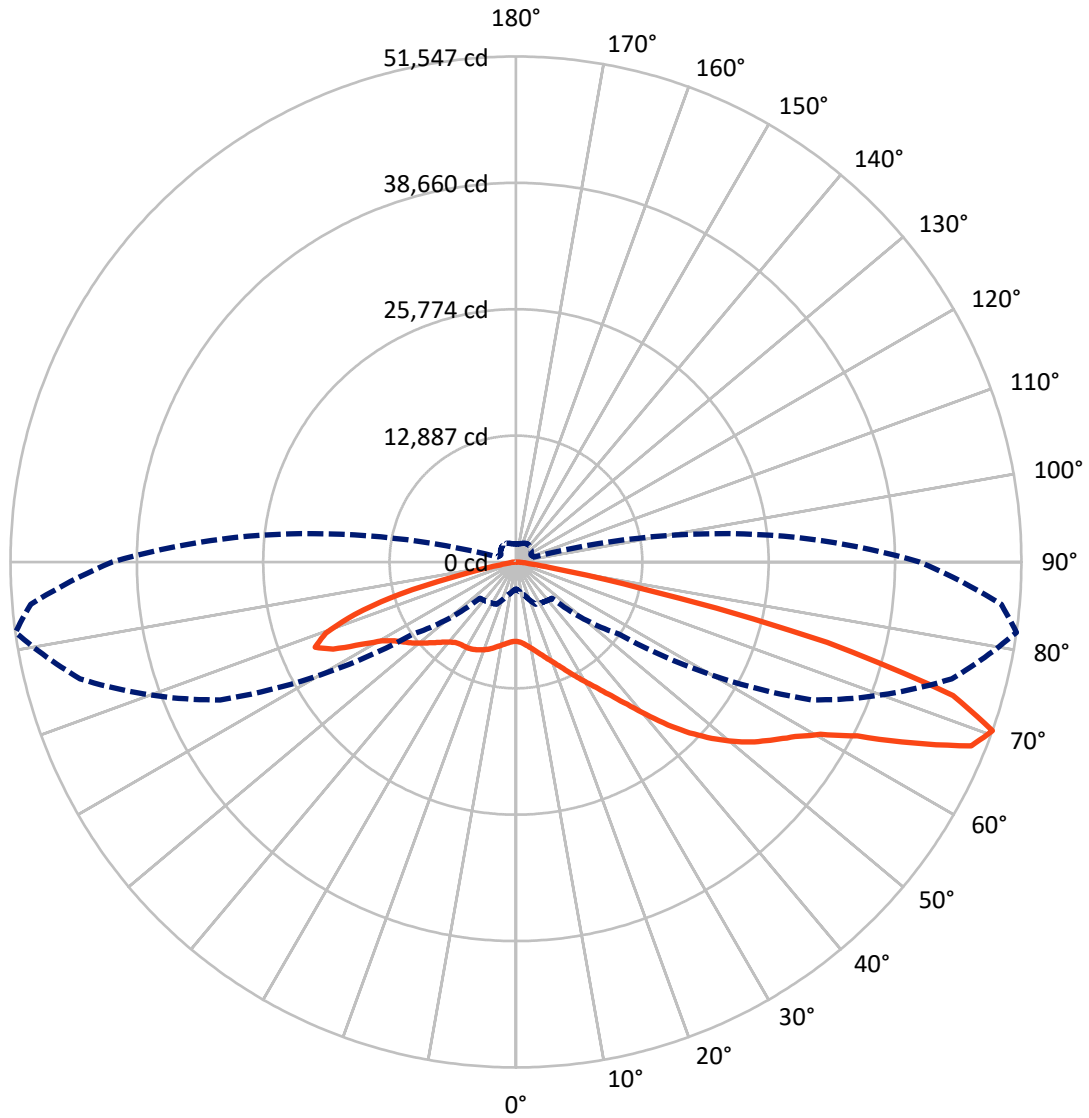
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.7 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 | 13598.5 | 0.0 | 13598.5 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 41562.5 | 0.0 | 41562.5 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 55161.0 | 0.0 | 55161.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 763.6 | 1.4 |
| 10°-20° | 2193.8 | 4.0 |
| 20°-30° | 3670.0 | 6.7 |
| 30°-40° | 5733.6 | 10.4 |
| 40°-50° | 9131.3 | 16.6 |
| 50°-60° | 12707.4 | 23.0 |
| 60°-70° | 13292.5 | 24.1 |
| 70°-80° | 6947.4 | 12.6 |
| 80°-90° | 721.4 | 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° | 55161.0 | 100.0 |
| 0°-180° | 55161.0 | 100.0 |

Coefficient of Utilization



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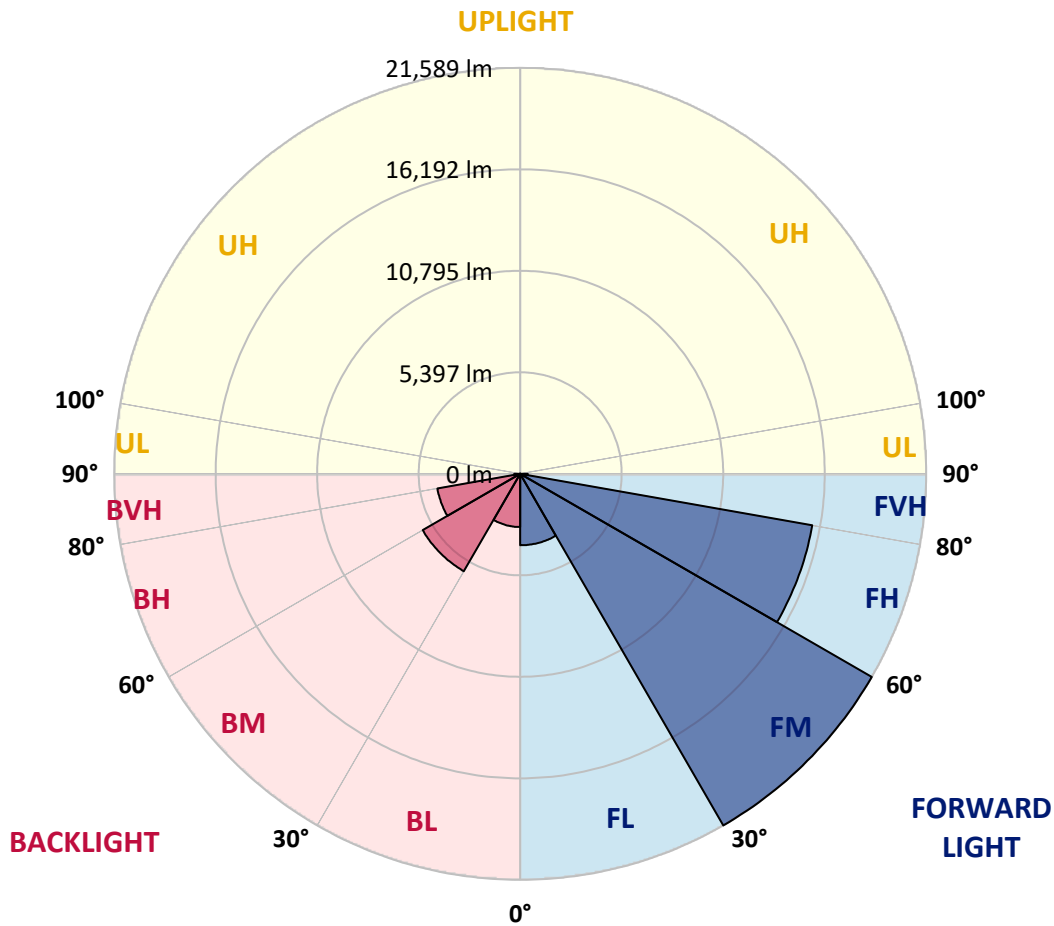
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 3798.5 | 6.9 | | | |
| FM (30°-60°) | 21589.5 | 39.1 | | | |
| FH (60°-80°) | 15770.7 | 28.6 | | | G5 |
| FVH (80°-90°) | 403.8 | 0.7 | | | G3/500 |
| BL (0°-30°) | 2829.0 | 5.1 | B4/5000 | | |
| BM (30°-60°) | 5982.8 | 10.8 | B4/8500 | | |
| BH (60°-80°) | 4469.2 | 8.1 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 317.6 | 0.6 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 |
| 2.5° | 8280.5 | 8327.3 | 8312.7 | 8298.0 | 8298.0 | 8277.5 | 8274.6 | 8245.4 | 8221.9 | 8183.9 | 8175.1 |
| 5° | 8385.8 | 8435.6 | 8429.8 | 8441.5 | 8479.5 | 8488.3 | 8497.1 | 8479.5 | 8432.7 | 8385.8 | 8365.4 |
| 7.5° | 8292.2 | 8347.8 | 8365.4 | 8435.6 | 8552.7 | 8658.1 | 8737.1 | 8769.3 | 8725.4 | 8658.1 | 8625.9 |
| 10° | 7976.1 | 8037.5 | 8099.0 | 8265.8 | 8473.7 | 8722.5 | 8933.2 | 9059.1 | 9050.3 | 8985.9 | 8930.3 |
| 12.5° | 7335.1 | 7399.4 | 7531.2 | 7856.1 | 8236.6 | 8675.6 | 9067.8 | 9331.3 | 9422.0 | 9375.2 | 9278.6 |
| 15° | 6822.8 | 6878.4 | 6978.0 | 7311.6 | 7806.3 | 8473.7 | 9117.6 | 9629.8 | 9861.1 | 9834.7 | 9717.6 |
| 17.5° | 6808.2 | 6831.6 | 6893.1 | 7051.1 | 7431.6 | 8157.5 | 9064.9 | 9922.5 | 10364.5 | 10361.6 | 10215.2 |
| 20° | 7065.8 | 7074.6 | 7109.7 | 7141.9 | 7358.5 | 7917.5 | 8930.3 | 10165.5 | 10929.4 | 10929.4 | 10771.3 |
| 22.5° | 7422.9 | 7417.0 | 7452.1 | 7422.9 | 7528.2 | 7897.0 | 8845.4 | 10379.1 | 11558.7 | 11605.5 | 11406.5 |
| 25° | 7958.5 | 7929.2 | 7920.5 | 7853.1 | 7873.6 | 8087.3 | 8939.0 | 10622.1 | 12305.1 | 12401.7 | 12152.9 |
| 27.5° | 8672.7 | 8625.9 | 8593.7 | 8438.5 | 8385.8 | 8479.5 | 9225.9 | 10914.8 | 13136.4 | 13303.2 | 12987.1 |
| 30° | 9603.5 | 9518.6 | 9471.8 | 9202.5 | 9012.2 | 9026.9 | 9659.1 | 11304.1 | 14005.7 | 14275.0 | 13874.0 |
| 32.5° | 10873.8 | 10742.1 | 10616.2 | 10174.2 | 9825.9 | 9711.8 | 10218.1 | 11842.6 | 14948.2 | 15378.4 | 14863.3 |
| 35° | 12296.3 | 12190.9 | 12056.3 | 11374.3 | 10838.7 | 10575.2 | 10973.3 | 12594.9 | 16051.7 | 16733.6 | 16063.4 |
| 37.5° | 13666.1 | 13575.4 | 13639.8 | 12720.7 | 12030.0 | 11646.5 | 11962.6 | 13604.7 | 17412.7 | 18419.6 | 17567.8 |
| 40° | 15082.8 | 15012.6 | 15021.3 | 14143.2 | 13338.3 | 12908.1 | 13162.7 | 14872.1 | 18972.8 | 20424.6 | 19376.7 |
| 42.5° | 16622.4 | 16569.7 | 16394.1 | 15615.5 | 14711.1 | 14310.1 | 14544.2 | 16335.6 | 20647.0 | 22707.6 | 21361.2 |
| 45° | 18346.4 | 18314.2 | 18150.3 | 17257.6 | 16221.4 | 15770.7 | 16086.8 | 17951.3 | 22330.1 | 24856.1 | 23354.5 |
| 47.5° | 19836.3 | 19862.6 | 19842.1 | 19089.9 | 18015.7 | 17354.2 | 17731.7 | 19637.2 | 23896.0 | 26875.7 | 25265.8 |
| 50° | 20553.4 | 20690.9 | 20892.9 | 20658.7 | 19991.4 | 19318.2 | 19391.4 | 21264.6 | 25388.8 | 28769.5 | 27098.1 |
| 52.5° | 20178.7 | 20439.2 | 20989.5 | 21364.2 | 21621.7 | 21481.2 | 21285.1 | 22880.3 | 26793.7 | 30478.8 | 28830.9 |
| 55° | 18782.5 | 19148.4 | 20061.6 | 20966.1 | 22280.3 | 23301.8 | 23559.4 | 24671.7 | 28163.6 | 31983.3 | 30470.0 |
| 57.5° | 16239.0 | 16833.2 | 17652.7 | 19482.1 | 21694.9 | 24182.8 | 26211.3 | 27156.7 | 29615.4 | 33590.2 | 32185.3 |
| 60° | 11877.8 | 12673.9 | 13692.5 | 16414.6 | 19646.0 | 23711.6 | 28468.0 | 30973.5 | 31678.9 | 35671.3 | 34418.6 |
| 62.5° | 7601.4 | 8093.1 | 9029.8 | 11593.8 | 15308.2 | 21296.8 | 29158.7 | 35744.5 | 35176.6 | 39084.2 | 37767.0 |
| 65° | 5204.2 | 5520.3 | 6377.9 | 7818.0 | 9896.2 | 15852.6 | 27308.9 | 39321.3 | 40732.1 | 44493.3 | 43492.2 |
| 67.5° | 3781.7 | 4021.7 | 4753.4 | 6015.0 | 6448.2 | 9381.0 | 21191.5 | 39157.4 | 46132.4 | 50066.3 | 48509.1 |
| 70° | 2757.2 | 2927.0 | 3541.7 | 4753.4 | 4961.3 | 5218.8 | 12837.8 | 33285.8 | 46015.3 | 51547.3 | 49682.8 |
| 72.5° | 2043.0 | 2160.1 | 2572.8 | 3688.0 | 4015.8 | 3524.1 | 6354.5 | 24191.6 | 39540.8 | 46624.1 | 45128.4 |
| 75° | 1478.1 | 1565.9 | 1870.4 | 2821.6 | 3213.8 | 2684.1 | 3169.9 | 14137.4 | 27581.1 | 32797.0 | 33060.4 |
| 77.5° | 1129.8 | 1197.1 | 1396.2 | 2066.5 | 2572.8 | 2013.8 | 1966.9 | 6503.8 | 13077.8 | 13142.2 | 13879.8 |
| 80° | 907.4 | 951.3 | 1059.6 | 1454.7 | 1972.8 | 1507.4 | 1282.0 | 2625.5 | 4132.9 | 3497.8 | 3670.5 |
| 82.5° | 667.4 | 740.5 | 895.7 | 1021.5 | 1410.8 | 1039.1 | 781.5 | 1325.9 | 1571.8 | 1352.3 | 1364.0 |
| 85° | 380.5 | 430.3 | 541.5 | 731.7 | 901.5 | 635.2 | 447.8 | 588.3 | 731.7 | 600.0 | 535.6 |
| 87.5° | 134.6 | 175.6 | 190.3 | 286.8 | 392.2 | 263.4 | 172.7 | 169.8 | 240.0 | 178.5 | 149.3 |
| 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° | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 | 8087.3 |
| 2.5° | 8145.8 | 8131.2 | 8072.7 | 7993.6 | 7911.7 | 7832.6 | 7806.3 | 7750.7 | 7712.6 | 7692.1 | 7715.6 |
| 5° | 8309.7 | 8262.9 | 8125.3 | 7949.7 | 7765.3 | 7566.3 | 7425.8 | 7297.0 | 7203.3 | 7115.5 | 7150.7 |
| 7.5° | 8543.9 | 8461.9 | 8224.9 | 7917.5 | 7589.7 | 7259.0 | 7013.1 | 6825.8 | 6699.9 | 6617.9 | 6635.5 |
| 10° | 8816.1 | 8690.3 | 8327.3 | 7867.8 | 7361.4 | 6887.2 | 6597.5 | 6436.5 | 6357.4 | 6313.5 | 6325.2 |
| 12.5° | 9129.3 | 8950.8 | 8432.7 | 7753.6 | 7013.1 | 6471.6 | 6272.6 | 6225.7 | 6228.6 | 6231.6 | 6237.4 |
| 15° | 9515.7 | 9266.9 | 8517.6 | 7504.8 | 6559.4 | 6152.5 | 6117.4 | 6193.5 | 6272.6 | 6310.6 | 6307.7 |
| 17.5° | 9951.8 | 9600.5 | 8532.2 | 7095.0 | 6114.5 | 5947.7 | 6058.9 | 6222.8 | 6342.8 | 6395.5 | 6407.2 |
| 20° | 10420.1 | 9940.1 | 8426.8 | 6515.5 | 5748.6 | 5780.8 | 5979.9 | 6190.6 | 6322.3 | 6389.6 | 6407.2 |
| 22.5° | 10955.7 | 10303.0 | 8175.1 | 5906.7 | 5450.1 | 5599.3 | 5833.5 | 6038.4 | 6176.0 | 6243.3 | 6260.8 |
| 25° | 11567.5 | 10709.9 | 7780.0 | 5394.5 | 5192.5 | 5394.5 | 5628.6 | 5798.4 | 5909.6 | 5971.1 | 5988.6 |
| 27.5° | 12246.6 | 11134.3 | 7253.1 | 4987.6 | 4967.1 | 5183.7 | 5376.9 | 5508.6 | 5567.1 | 5614.0 | 5631.5 |
| 30° | 12928.5 | 11520.7 | 6615.0 | 4680.3 | 4771.0 | 4975.9 | 5113.5 | 5172.0 | 5189.6 | 5198.3 | 5218.8 |
| 32.5° | 13666.1 | 11854.3 | 5944.7 | 4425.6 | 4583.7 | 4773.9 | 4855.9 | 4882.2 | 4800.3 | 4744.7 | 4762.2 |
| 35° | 14558.9 | 12211.4 | 5289.1 | 4223.7 | 4399.3 | 4563.2 | 4589.5 | 4566.1 | 4469.5 | 4355.4 | 4361.2 |
| 37.5° | 15662.4 | 12656.3 | 4765.2 | 4080.2 | 4226.6 | 4334.9 | 4302.7 | 4296.8 | 4305.6 | 4171.0 | 4179.8 |
| 40° | 17014.6 | 13235.9 | 4381.7 | 3969.0 | 4086.1 | 4109.5 | 4018.8 | 4068.5 | 4112.4 | 3907.5 | 3913.4 |
| 42.5° | 18516.2 | 13935.4 | 4138.8 | 3892.9 | 3969.0 | 3913.4 | 3772.9 | 3828.5 | 3822.7 | 3553.4 | 3550.4 |
| 45° | 20047.0 | 14696.5 | 4053.9 | 3837.3 | 3860.7 | 3749.5 | 3594.4 | 3609.0 | 3486.1 | 3243.1 | 3251.9 |
| 47.5° | 21569.0 | 15513.1 | 4106.6 | 3790.5 | 3726.1 | 3600.2 | 3480.2 | 3415.8 | 3234.3 | 3052.9 | 3052.9 |
| 50° | 23061.8 | 16370.7 | 4299.8 | 3696.8 | 3541.7 | 3468.5 | 3380.7 | 3266.5 | 3073.3 | 2918.2 | 2906.5 |
| 52.5° | 24446.3 | 17234.2 | 4516.4 | 3541.7 | 3310.4 | 3354.3 | 3298.7 | 3167.0 | 2976.8 | 2818.7 | 2821.6 |
| 55° | 25757.6 | 18097.6 | 4601.2 | 3328.0 | 3093.8 | 3254.8 | 3222.6 | 2979.7 | 2751.4 | 2622.6 | 2610.9 |
| 57.5° | 27185.9 | 19136.7 | 4507.6 | 3055.8 | 2918.2 | 3140.7 | 3017.7 | 2748.5 | 2616.7 | 2520.1 | 2511.4 |
| 60° | 29164.6 | 20767.0 | 4305.6 | 2719.2 | 2751.4 | 2970.9 | 2760.2 | 2648.9 | 2505.5 | 2397.2 | 2391.4 |
| 62.5° | 32451.6 | 23808.2 | 3980.7 | 2385.5 | 2555.3 | 2719.2 | 2637.2 | 2526.0 | 2379.6 | 2274.3 | 2274.3 |
| 65° | 37310.4 | 28034.8 | 3369.0 | 2125.0 | 2335.7 | 2473.3 | 2505.5 | 2394.3 | 2242.1 | 2130.9 | 2136.7 |
| 67.5° | 41408.2 | 30686.6 | 2549.4 | 1908.4 | 2110.4 | 2274.3 | 2365.0 | 2256.7 | 2095.7 | 1987.4 | 1990.4 |
| 70° | 41182.8 | 28760.7 | 1946.5 | 1694.7 | 1911.3 | 2078.2 | 2195.2 | 2110.4 | 1937.7 | 1835.2 | 1844.0 |
| 72.5° | 36578.7 | 24059.9 | 1574.7 | 1478.1 | 1709.4 | 1873.3 | 2013.8 | 1949.4 | 1773.8 | 1674.2 | 1674.2 |
| 75° | 26872.8 | 17079.0 | 1258.6 | 1258.6 | 1457.6 | 1659.6 | 1814.7 | 1773.8 | 1612.8 | 1542.5 | 1522.0 |
| 77.5° | 11327.5 | 7165.3 | 986.4 | 1044.9 | 1211.8 | 1425.4 | 1618.6 | 1633.3 | 1492.8 | 1580.6 | 1434.2 |
| 80° | 3011.9 | 1975.7 | 752.2 | 822.5 | 951.3 | 1176.7 | 1407.9 | 1402.0 | 1249.8 | 1167.9 | 1085.9 |
| 82.5° | 1147.4 | 778.6 | 535.6 | 579.5 | 687.8 | 901.5 | 1115.2 | 1150.3 | 998.1 | 863.5 | 863.5 |
| 85° | 442.0 | 333.7 | 330.8 | 348.3 | 401.0 | 597.1 | 843.0 | 872.2 | 752.2 | 638.1 | 658.6 |
| 87.5° | 114.2 | 99.5 | 122.9 | 117.1 | 184.4 | 319.0 | 483.0 | 500.5 | 459.5 | 266.4 | 380.5 |
| 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)