

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: P885018

Luminaire Tested: **NAV-SB6A-835-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P885018
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB6A-835-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(6) 80 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18017 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

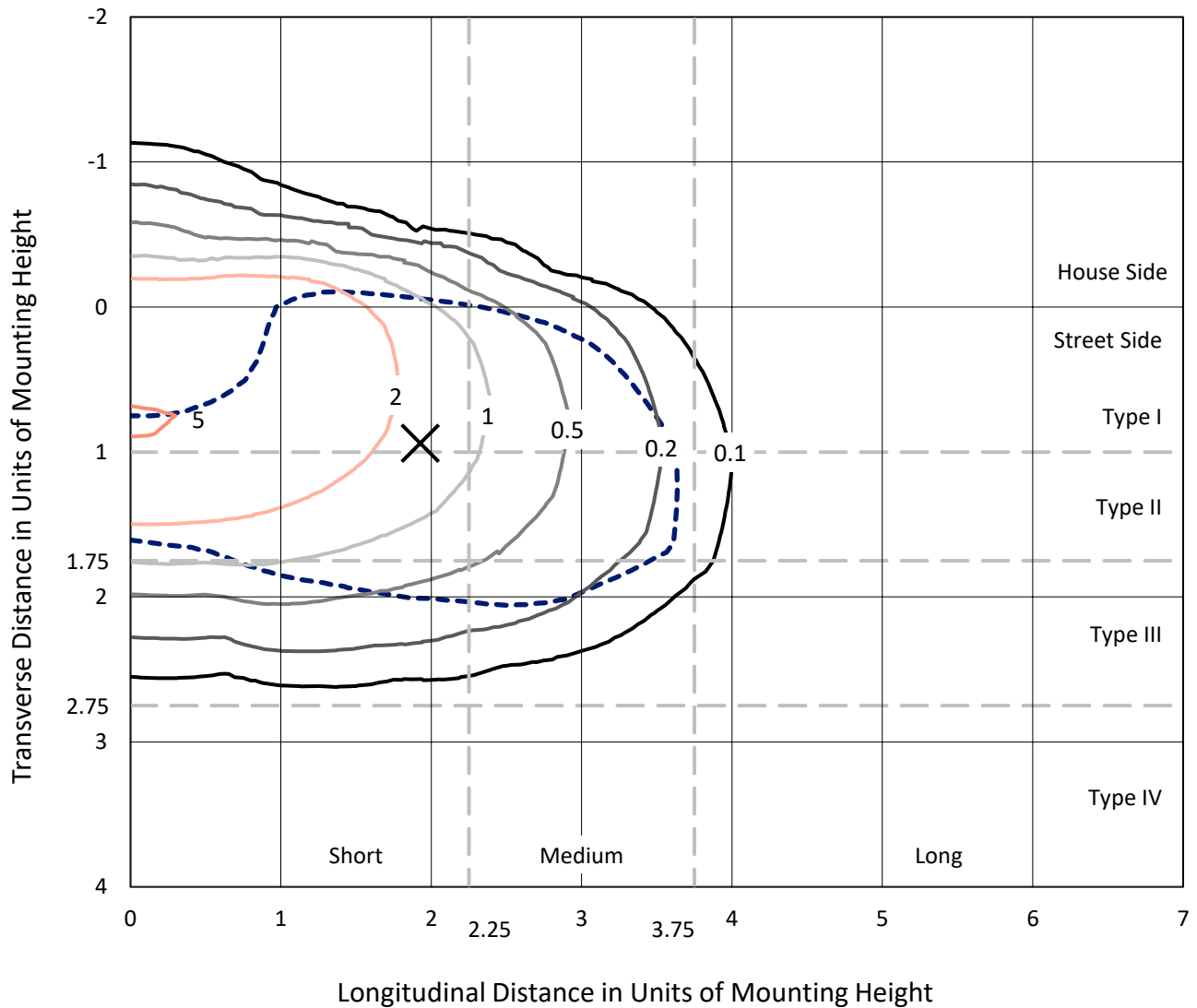
Input Watts (W): 170.9
Input Voltage (V): 120.0
Input Current (Ain): 1.434
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

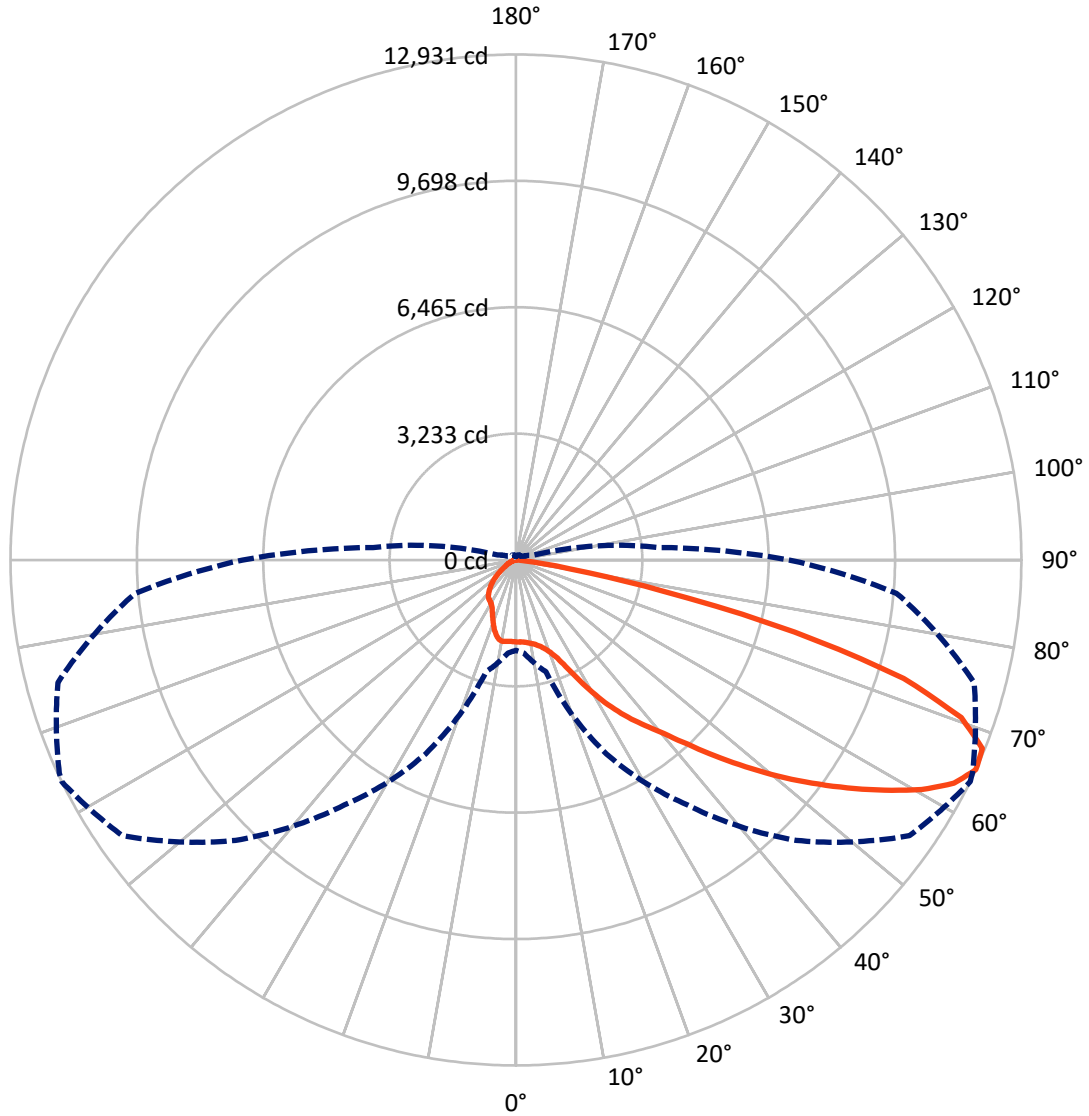
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2409.4 | 0.0 | 2409.4 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 15607.6 | 0.0 | 15607.6 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 18017.0 | 0.0 | 18017.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 193.3 | 1.1 |
| 10°-20° | 524.4 | 2.9 |
| 20°-30° | 993.7 | 5.5 |
| 30°-40° | 2010.7 | 11.2 |
| 40°-50° | 3425.3 | 19.0 |
| 50°-60° | 4658.1 | 25.9 |
| 60°-70° | 4374.2 | 24.3 |
| 70°-80° | 1752.5 | 9.7 |
| 80°-90° | 84.9 | 0.5 |
| 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° | 18017.0 | 100.0 |
| 0°-180° | 18017.0 | 100.0 |

Coefficient of Utilization



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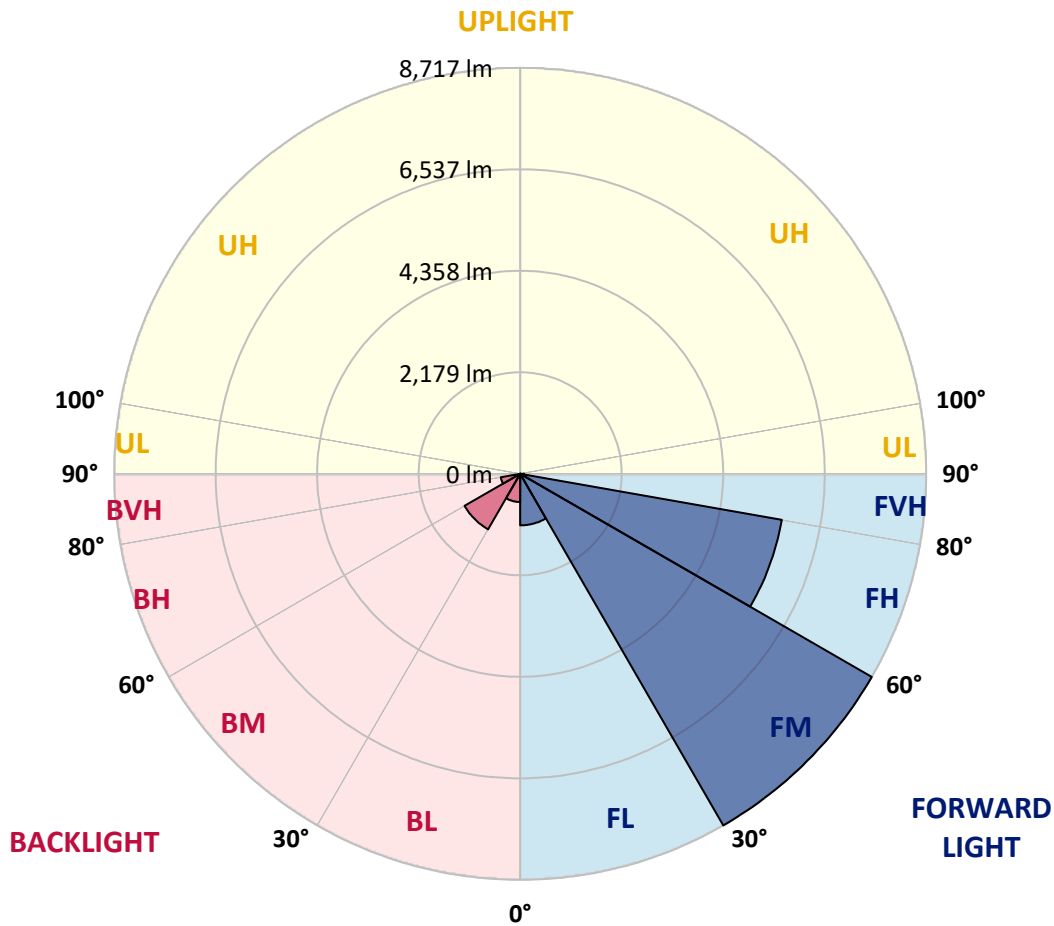
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1106.5 | 6.1 | | | |
| FM (30°-60°) | 8716.6 | 48.4 | | | |
| FH (60°-80°) | 5703.8 | 31.7 | | | G3/7500 |
| FVH (80°-90°) | 80.8 | 0.4 | | | G1/100 |
| BL (0°-30°) | 604.9 | 3.4 | B2/1000 | | |
| BM (30°-60°) | 1377.4 | 7.6 | B2/2500 | | |
| BH (60°-80°) | 422.9 | 2.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 0° | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 |
| 2.5° | 2088.3 | 2102.8 | 2099.2 | 2095.6 | 2094.4 | 2096.8 | 2098.0 | 2096.8 | 2096.8 | 2096.8 | 2098.0 |
| 5° | 2048.5 | 2060.5 | 2060.5 | 2069.0 | 2081.1 | 2095.6 | 2106.4 | 2108.9 | 2111.3 | 2114.9 | 2113.7 |
| 7.5° | 1972.4 | 1982.0 | 1989.3 | 2017.1 | 2047.3 | 2085.9 | 2118.5 | 2135.4 | 2137.8 | 2151.1 | 2156.0 |
| 10° | 1920.4 | 1932.5 | 1944.6 | 1973.6 | 2017.1 | 2075.0 | 2130.6 | 2171.7 | 2177.7 | 2209.1 | 2223.6 |
| 12.5° | 1918.0 | 1930.1 | 1945.8 | 1977.2 | 2027.9 | 2089.5 | 2157.2 | 2216.3 | 2227.2 | 2273.1 | 2303.3 |
| 15° | 1943.4 | 1957.9 | 1972.4 | 2011.0 | 2065.4 | 2140.3 | 2212.7 | 2286.4 | 2297.3 | 2362.5 | 2395.1 |
| 17.5° | 1995.3 | 2014.6 | 2025.5 | 2064.2 | 2122.1 | 2205.5 | 2300.9 | 2385.4 | 2395.1 | 2471.2 | 2512.3 |
| 20° | 2098.0 | 2120.9 | 2124.6 | 2156.0 | 2212.7 | 2302.1 | 2415.6 | 2520.7 | 2532.8 | 2619.8 | 2665.7 |
| 22.5° | 2310.6 | 2343.2 | 2314.2 | 2329.9 | 2380.6 | 2470.0 | 2593.2 | 2726.0 | 2743.0 | 2842.0 | 2883.1 |
| 25° | 2685.0 | 2730.9 | 2656.0 | 2629.4 | 2651.2 | 2744.2 | 2898.8 | 3066.6 | 3086.0 | 3165.7 | 3186.2 |
| 27.5° | 3420.5 | 3361.4 | 3247.8 | 3136.7 | 3071.5 | 3124.6 | 3298.6 | 3506.3 | 3530.5 | 3607.8 | 3583.6 |
| 30° | 4228.6 | 4176.6 | 4023.2 | 3776.8 | 3622.2 | 3613.8 | 3774.4 | 4006.3 | 4034.1 | 4107.8 | 4034.1 |
| 32.5° | 5037.8 | 4988.3 | 4821.6 | 4518.4 | 4250.3 | 4117.5 | 4228.6 | 4485.8 | 4500.3 | 4547.4 | 4438.7 |
| 35° | 5833.8 | 5783.0 | 5616.4 | 5305.9 | 4976.2 | 4674.3 | 4652.5 | 4942.4 | 4947.2 | 4996.7 | 4834.9 |
| 37.5° | 6634.5 | 6592.3 | 6414.7 | 6110.4 | 5785.4 | 5368.8 | 5167.0 | 5374.8 | 5380.8 | 5429.1 | 5261.3 |
| 40° | 7205.8 | 7224.0 | 7102.0 | 6866.4 | 6587.4 | 6132.1 | 5744.4 | 5835.0 | 5798.7 | 5879.7 | 5779.4 |
| 42.5° | 7696.2 | 7732.5 | 7626.2 | 7507.8 | 7345.9 | 6945.0 | 6459.4 | 6443.7 | 6385.7 | 6429.2 | 6325.3 |
| 45° | 8120.2 | 8150.4 | 8054.9 | 8027.2 | 8023.5 | 7742.1 | 7240.9 | 7146.7 | 7065.7 | 7057.3 | 6932.9 |
| 47.5° | 8276.0 | 8333.9 | 8375.0 | 8468.0 | 8649.2 | 8530.8 | 8048.9 | 7902.8 | 7812.2 | 7745.7 | 7548.9 |
| 50° | 8335.2 | 8396.8 | 8536.9 | 8807.4 | 9236.2 | 9286.9 | 8853.3 | 8689.0 | 8577.9 | 8457.1 | 8167.3 |
| 52.5° | 8255.4 | 8365.3 | 8553.8 | 9009.1 | 9631.1 | 9893.2 | 9625.1 | 9481.4 | 9354.6 | 9157.7 | 8727.7 |
| 55° | 7785.6 | 7895.5 | 8280.8 | 9006.7 | 9828.0 | 10318.4 | 10354.6 | 10290.6 | 10148.1 | 9837.7 | 9180.6 |
| 57.5° | 6795.2 | 6958.2 | 7568.2 | 8699.9 | 9824.4 | 10684.4 | 11069.7 | 11115.5 | 10956.1 | 10511.6 | 9536.9 |
| 60° | 5423.1 | 5644.1 | 6388.1 | 8019.9 | 9521.2 | 10882.4 | 11696.5 | 11926.0 | 11756.9 | 11175.9 | 9825.6 |
| 62.5° | 3784.1 | 4040.2 | 4744.3 | 6954.6 | 8827.9 | 10739.9 | 12154.3 | 12578.2 | 12450.2 | 11770.2 | 9936.7 |
| 65° | 2308.1 | 2390.3 | 2957.9 | 5472.6 | 7649.1 | 10143.3 | 12295.6 | 12930.9 | 12888.6 | 12133.7 | 9772.5 |
| 67.5° | 1537.6 | 1606.4 | 1769.5 | 3752.7 | 5937.6 | 8951.1 | 11957.4 | 12869.3 | 12881.4 | 12074.6 | 9171.0 |
| 70° | 926.4 | 985.6 | 1091.9 | 2182.5 | 3848.1 | 7085.1 | 10910.2 | 12084.2 | 12154.3 | 11283.4 | 8030.8 |
| 72.5° | 381.7 | 421.5 | 518.2 | 989.2 | 1992.9 | 4496.7 | 8687.8 | 10375.2 | 10538.2 | 9487.4 | 6163.5 |
| 75° | 216.2 | 236.7 | 304.4 | 496.4 | 864.8 | 2095.6 | 5262.5 | 7365.3 | 7605.6 | 6539.1 | 3708.0 |
| 77.5° | 143.7 | 153.4 | 196.9 | 321.3 | 486.8 | 715.0 | 2249.0 | 3837.2 | 4296.2 | 3571.5 | 1605.2 |
| 80° | 96.6 | 105.1 | 135.3 | 215.0 | 316.4 | 306.8 | 716.2 | 1421.6 | 1748.9 | 1227.1 | 391.3 |
| 82.5° | 65.2 | 66.4 | 96.6 | 141.3 | 200.5 | 148.6 | 211.4 | 442.1 | 555.6 | 355.1 | 148.6 |
| 85° | 37.4 | 36.2 | 71.3 | 82.1 | 89.4 | 61.6 | 64.0 | 132.9 | 173.9 | 149.8 | 84.5 |
| 87.5° | 4.8 | 7.2 | 27.8 | 21.7 | 12.1 | 13.3 | 13.3 | 22.9 | 33.8 | 36.2 | 18.1 |
| 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° | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 | 2095.6 |
| 2.5° | 2098.0 | 2096.8 | 2093.1 | 2089.5 | 2081.1 | 2076.2 | 2078.7 | 2076.2 | 2075.0 | 2076.2 | 2081.1 |
| 5° | 2113.7 | 2110.1 | 2100.4 | 2088.3 | 2071.4 | 2050.9 | 2037.6 | 2018.3 | 2000.1 | 1989.3 | 1991.7 |
| 7.5° | 2156.0 | 2152.3 | 2139.0 | 2105.2 | 2050.9 | 1965.1 | 1886.6 | 1817.8 | 1765.8 | 1735.6 | 1736.8 |
| 10° | 2223.6 | 2217.6 | 2197.0 | 2122.1 | 1979.6 | 1792.4 | 1636.6 | 1507.4 | 1422.8 | 1383.0 | 1379.3 |
| 12.5° | 2303.3 | 2296.1 | 2259.8 | 2106.4 | 1844.3 | 1552.0 | 1337.1 | 1193.3 | 1114.8 | 1079.8 | 1076.2 |
| 15° | 2397.5 | 2387.9 | 2316.6 | 2031.5 | 1647.5 | 1286.3 | 1089.5 | 982.0 | 931.2 | 899.8 | 901.0 |
| 17.5° | 2514.7 | 2497.8 | 2358.9 | 1919.2 | 1433.7 | 1083.4 | 937.3 | 856.3 | 811.7 | 781.5 | 779.0 |
| 20° | 2666.9 | 2639.1 | 2392.7 | 1785.2 | 1236.8 | 955.4 | 834.6 | 767.0 | 733.1 | 706.6 | 701.7 |
| 22.5° | 2879.4 | 2839.6 | 2433.8 | 1640.2 | 1097.9 | 867.2 | 758.5 | 709.0 | 681.2 | 651.0 | 646.2 |
| 25° | 3142.7 | 3095.6 | 2484.5 | 1506.1 | 1002.5 | 791.1 | 703.0 | 661.9 | 629.3 | 594.2 | 590.6 |
| 27.5° | 3511.1 | 3426.6 | 2544.9 | 1396.2 | 920.4 | 725.9 | 652.2 | 606.3 | 568.9 | 539.9 | 533.9 |
| 30° | 3921.8 | 3782.9 | 2598.0 | 1329.8 | 845.5 | 665.5 | 585.8 | 539.9 | 504.9 | 484.3 | 480.7 |
| 32.5° | 4310.7 | 4122.3 | 2633.0 | 1300.8 | 777.8 | 596.7 | 513.3 | 463.8 | 437.2 | 431.2 | 434.8 |
| 35° | 4677.9 | 4429.1 | 2629.4 | 1273.0 | 717.4 | 527.8 | 442.1 | 391.3 | 370.8 | 374.4 | 374.4 |
| 37.5° | 5100.6 | 4756.4 | 2604.1 | 1229.6 | 667.9 | 465.0 | 380.5 | 335.8 | 317.7 | 318.9 | 323.7 |
| 40° | 5592.2 | 5134.4 | 2588.4 | 1147.4 | 613.6 | 407.0 | 329.7 | 293.5 | 280.2 | 275.4 | 274.2 |
| 42.5° | 6116.4 | 5500.4 | 2590.8 | 1054.4 | 545.9 | 355.1 | 294.7 | 264.5 | 252.4 | 248.8 | 247.6 |
| 45° | 6643.0 | 5849.5 | 2594.4 | 957.8 | 474.7 | 315.2 | 269.3 | 244.0 | 236.7 | 231.9 | 231.9 |
| 47.5° | 7138.2 | 6146.6 | 2526.8 | 853.9 | 404.6 | 285.0 | 248.8 | 231.9 | 225.9 | 219.8 | 219.8 |
| 50° | 7599.6 | 6344.7 | 2363.7 | 733.1 | 349.1 | 260.9 | 233.1 | 221.0 | 215.0 | 209.0 | 209.0 |
| 52.5° | 7958.3 | 6376.1 | 2094.4 | 608.7 | 310.4 | 242.8 | 223.4 | 212.6 | 205.3 | 199.3 | 198.1 |
| 55° | 8117.7 | 6179.2 | 1711.5 | 492.8 | 280.2 | 227.1 | 213.8 | 202.9 | 194.5 | 188.4 | 187.2 |
| 57.5° | 8076.7 | 5764.9 | 1334.6 | 396.2 | 251.2 | 211.4 | 201.7 | 194.5 | 184.8 | 175.1 | 173.9 |
| 60° | 7875.0 | 5210.5 | 1006.1 | 329.7 | 224.7 | 194.5 | 188.4 | 182.4 | 169.1 | 154.6 | 152.2 |
| 62.5° | 7525.9 | 4513.6 | 717.4 | 273.0 | 195.7 | 175.1 | 172.7 | 167.9 | 148.6 | 122.0 | 119.6 |
| 65° | 6992.1 | 3666.9 | 483.1 | 227.1 | 167.9 | 153.4 | 154.6 | 146.1 | 120.8 | 90.6 | 88.2 |
| 67.5° | 6211.8 | 2681.4 | 309.2 | 186.0 | 140.1 | 128.0 | 129.2 | 124.4 | 102.7 | 77.3 | 73.7 |
| 70° | 5217.8 | 1775.5 | 201.7 | 141.3 | 112.3 | 99.0 | 106.3 | 107.5 | 87.0 | 62.8 | 60.4 |
| 72.5° | 3825.2 | 1048.4 | 141.3 | 105.1 | 82.1 | 68.8 | 87.0 | 89.4 | 70.1 | 47.1 | 44.7 |
| 75° | 2180.1 | 497.6 | 106.3 | 76.1 | 50.7 | 48.3 | 67.6 | 67.6 | 48.3 | 31.4 | 29.0 |
| 77.5° | 915.5 | 207.7 | 74.9 | 49.5 | 29.0 | 27.8 | 45.9 | 42.3 | 24.2 | 14.5 | 14.5 |
| 80° | 264.5 | 93.0 | 39.9 | 24.2 | 12.1 | 10.9 | 18.1 | 13.3 | 6.0 | 2.4 | 2.4 |
| 82.5° | 103.9 | 41.1 | 15.7 | 9.7 | 4.8 | 4.8 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 61.6 | 16.9 | 7.2 | 3.6 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 15.7 | 3.6 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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)