

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: P884436

Luminaire Tested: **NAV-SB5B-730-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884436
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5B-730-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20539 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

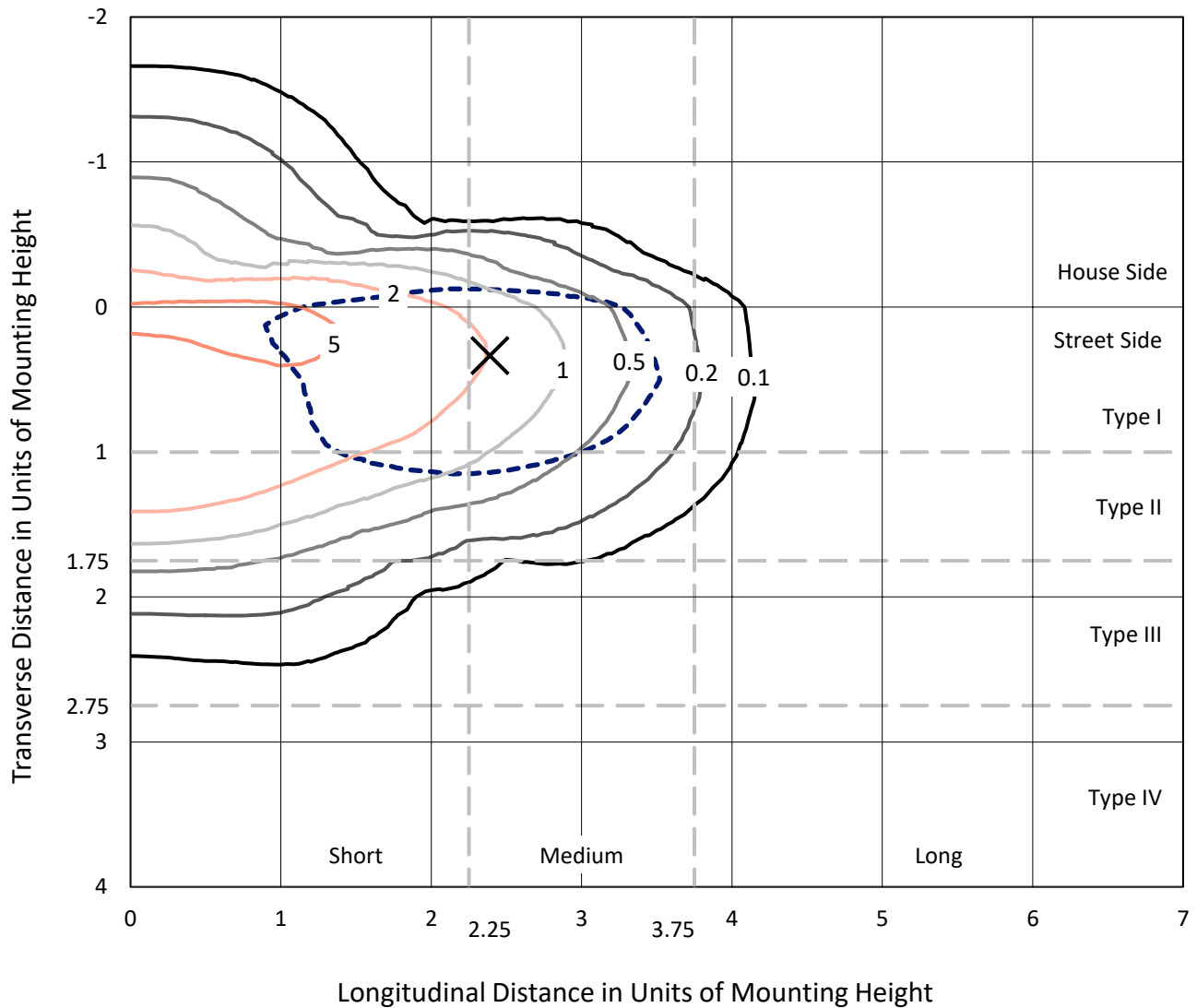
Input Watts (W): 182.7
Input Voltage (V): 120.0
Input Current (Ain): 1.547
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 11.125
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

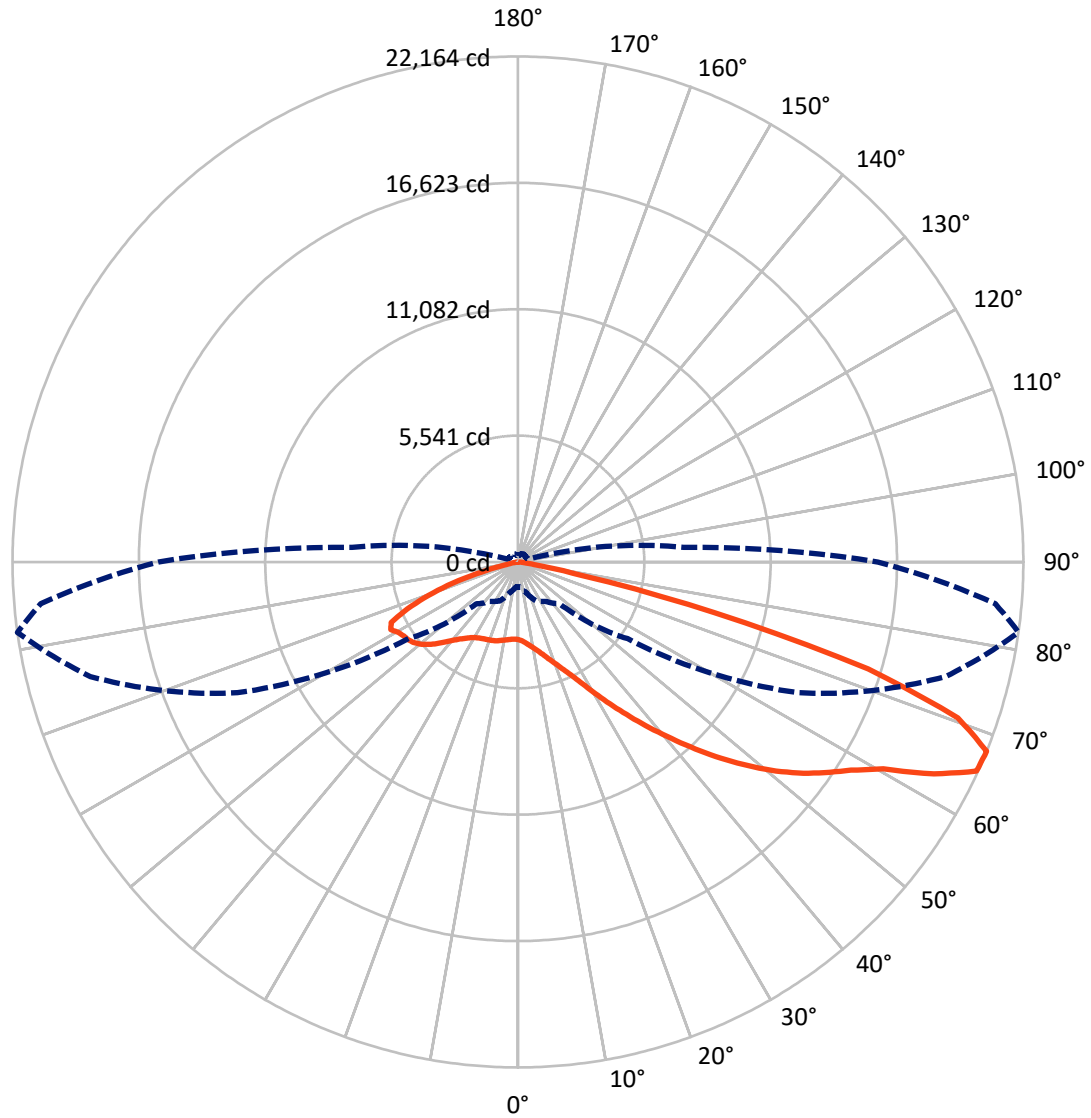
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3720.5 | 0.0 | 3720.5 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 16818.5 | 0.0 | 16818.5 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 20539.0 | 0.0 | 20539.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 303.1 | 1.5 |
| 10°-20° | 787.8 | 3.8 |
| 20°-30° | 1261.7 | 6.1 |
| 30°-40° | 2231.1 | 10.9 |
| 40°-50° | 3909.2 | 19.0 |
| 50°-60° | 5213.7 | 25.4 |
| 60°-70° | 4853.7 | 23.6 |
| 70°-80° | 1862.9 | 9.1 |
| 80°-90° | 115.7 | 0.6 |
| 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° | 20539.0 | 100.0 |
| 0°-180° | 20539.0 | 100.0 |

Coefficient of Utilization



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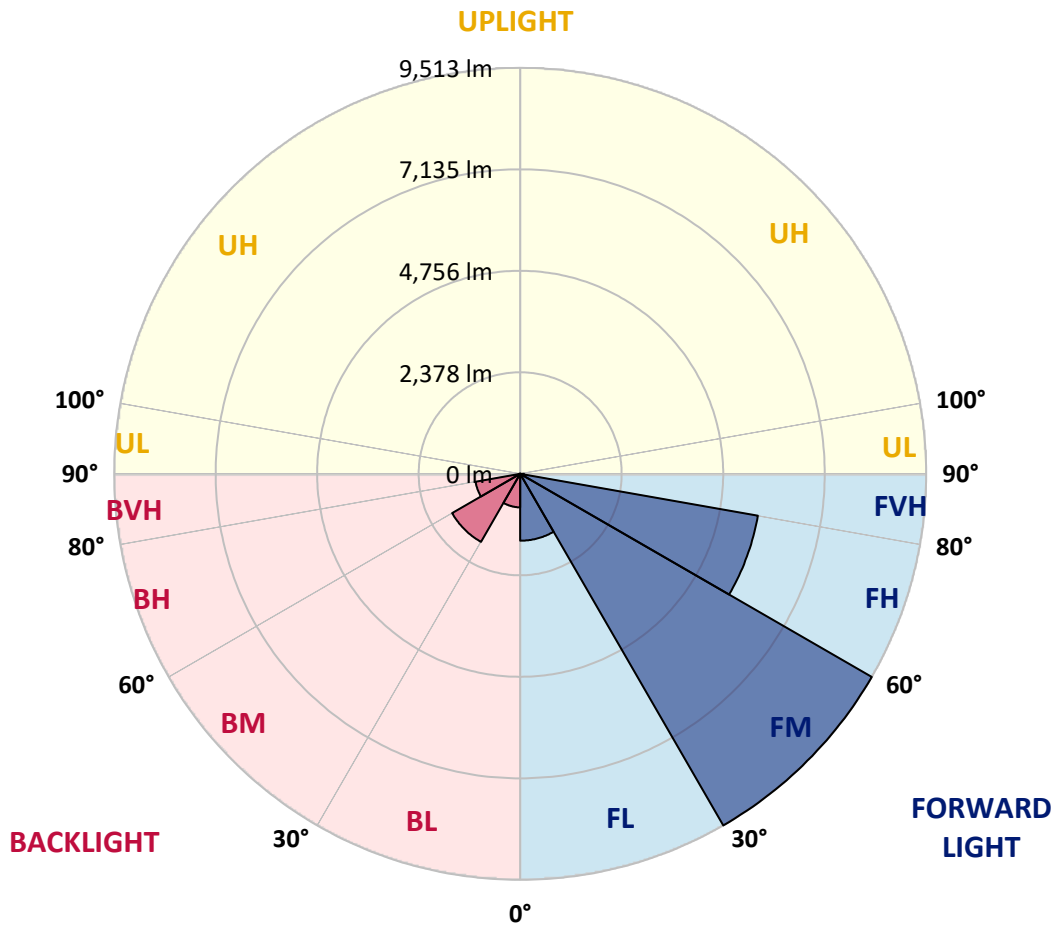
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1566.9 | 7.6 | | | |
| FM (30°-60°) | 9512.8 | 46.3 | | | |
| FH (60°-80°) | 5654.7 | 27.5 | | | G3/7500 |
| FVH (80°-90°) | 84.1 | 0.4 | | | G1/100 |
| BL (0°-30°) | 785.8 | 3.8 | B2/1000 | | |
| BM (30°-60°) | 1841.2 | 9.0 | B2/2500 | | |
| BH (60°-80°) | 1061.9 | 5.2 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 31.6 | 0.2 | | | 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° | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 |
| 2.5° | 3596.3 | 3617.0 | 3605.2 | 3599.3 | 3588.9 | 3574.2 | 3562.3 | 3525.4 | 3486.9 | 3461.8 | 3452.9 |
| 5° | 3668.8 | 3689.5 | 3688.0 | 3693.9 | 3701.3 | 3705.8 | 3702.8 | 3661.4 | 3606.7 | 3563.8 | 3538.7 |
| 7.5° | 3606.7 | 3630.3 | 3649.6 | 3679.1 | 3730.9 | 3785.6 | 3812.2 | 3803.4 | 3747.2 | 3688.0 | 3657.0 |
| 10° | 3430.7 | 3455.9 | 3501.7 | 3571.2 | 3680.6 | 3798.9 | 3898.0 | 3943.8 | 3908.4 | 3843.3 | 3800.4 |
| 12.5° | 3108.3 | 3133.5 | 3223.7 | 3374.5 | 3557.9 | 3763.4 | 3952.7 | 4075.5 | 4084.3 | 4019.3 | 3969.0 |
| 15° | 2746.0 | 2771.2 | 2867.3 | 3056.6 | 3336.1 | 3665.8 | 3982.3 | 4214.5 | 4292.8 | 4236.6 | 4176.0 |
| 17.5° | 2521.3 | 2543.5 | 2615.9 | 2768.2 | 3059.5 | 3470.6 | 3971.9 | 4362.3 | 4541.3 | 4496.9 | 4424.4 |
| 20° | 2453.3 | 2472.5 | 2506.5 | 2613.0 | 2855.5 | 3268.1 | 3903.9 | 4501.3 | 4808.9 | 4783.8 | 4702.4 |
| 22.5° | 2525.7 | 2543.5 | 2553.8 | 2601.1 | 2753.4 | 3135.0 | 3818.1 | 4643.3 | 5119.5 | 5122.4 | 5023.3 |
| 25° | 2692.8 | 2710.6 | 2698.7 | 2728.3 | 2794.8 | 3093.6 | 3785.6 | 4810.4 | 5509.8 | 5542.4 | 5430.0 |
| 27.5° | 2967.9 | 2969.3 | 2941.2 | 2939.8 | 2950.1 | 3155.7 | 3819.6 | 4989.3 | 6002.3 | 6062.9 | 5923.9 |
| 30° | 3519.4 | 3497.3 | 3389.3 | 3272.5 | 3219.3 | 3342.0 | 3914.3 | 5200.8 | 6583.4 | 6691.4 | 6516.9 |
| 32.5° | 4369.7 | 4337.2 | 4139.0 | 3859.6 | 3578.6 | 3642.2 | 4084.3 | 5441.8 | 7216.3 | 7411.5 | 7198.6 |
| 35° | 5292.5 | 5283.6 | 5076.6 | 4661.0 | 4170.1 | 4069.5 | 4360.9 | 5758.3 | 7906.9 | 8217.4 | 7964.6 |
| 37.5° | 6150.1 | 6145.7 | 6027.4 | 5537.9 | 4940.5 | 4665.5 | 4804.5 | 6172.3 | 8646.3 | 9095.8 | 8797.1 |
| 40° | 6933.9 | 6947.2 | 6828.9 | 6391.2 | 5789.3 | 5430.0 | 5407.8 | 6684.0 | 9468.5 | 10052.6 | 9697.7 |
| 42.5° | 7611.2 | 7625.9 | 7506.2 | 7182.3 | 6627.8 | 6275.8 | 6148.7 | 7311.0 | 10271.4 | 11080.3 | 10660.4 |
| 45° | 8071.0 | 8162.7 | 8145.0 | 7886.2 | 7488.4 | 7123.2 | 7038.9 | 8097.7 | 11186.8 | 12170.2 | 11677.7 |
| 47.5° | 8201.2 | 8285.5 | 8418.6 | 8454.0 | 8211.5 | 7852.2 | 7952.7 | 9045.5 | 12112.5 | 13261.5 | 12701.0 |
| 50° | 7880.3 | 7958.7 | 8235.2 | 8603.4 | 8772.0 | 8661.1 | 8841.5 | 10061.5 | 13060.4 | 14349.8 | 13705.1 |
| 52.5° | 7247.4 | 7327.2 | 7676.2 | 8258.9 | 8946.5 | 9295.5 | 9733.2 | 11062.6 | 13978.7 | 15380.5 | 14655.9 |
| 55° | 6332.0 | 6416.3 | 6864.4 | 7523.9 | 8613.8 | 9557.2 | 10477.0 | 12062.2 | 14820.1 | 16307.7 | 15513.6 |
| 57.5° | 5086.9 | 5149.0 | 5614.8 | 6537.6 | 7776.8 | 9296.9 | 11025.6 | 13153.5 | 15612.7 | 17218.6 | 16363.9 |
| 60° | 3315.4 | 3370.1 | 3911.3 | 4940.5 | 6389.7 | 8427.4 | 11135.0 | 14370.5 | 16665.6 | 18403.1 | 17509.9 |
| 62.5° | 2204.8 | 2241.8 | 2562.7 | 3318.3 | 4499.9 | 6757.9 | 10494.7 | 15342.1 | 18209.4 | 20464.5 | 19475.2 |
| 65° | 1512.8 | 1549.7 | 1870.6 | 2397.1 | 2907.2 | 4470.3 | 8653.7 | 15213.4 | 19608.3 | 22101.5 | 20931.8 |
| 67.5° | 1079.5 | 1110.5 | 1382.6 | 1879.5 | 2104.3 | 2596.7 | 5866.2 | 13569.1 | 19407.2 | 22163.6 | 21010.2 |
| 70° | 773.4 | 791.1 | 1015.9 | 1464.0 | 1672.5 | 1560.1 | 3262.1 | 10377.9 | 16992.4 | 20466.0 | 19410.1 |
| 72.5° | 541.2 | 547.1 | 705.4 | 1115.0 | 1347.1 | 1138.6 | 1552.7 | 6919.1 | 12851.9 | 16063.7 | 15047.8 |
| 75° | 366.7 | 374.1 | 474.7 | 817.8 | 1081.0 | 869.5 | 822.2 | 3710.2 | 7544.6 | 8891.8 | 7970.5 |
| 77.5° | 224.8 | 227.7 | 306.1 | 559.0 | 808.9 | 662.5 | 529.4 | 1571.9 | 2919.1 | 2865.8 | 2442.9 |
| 80° | 127.2 | 127.2 | 195.2 | 347.5 | 551.6 | 427.4 | 371.2 | 668.4 | 924.2 | 811.8 | 715.7 |
| 82.5° | 71.0 | 72.5 | 142.0 | 215.9 | 365.3 | 252.9 | 204.1 | 309.1 | 399.3 | 353.4 | 307.6 |
| 85° | 29.6 | 32.5 | 87.2 | 102.0 | 174.5 | 125.7 | 82.8 | 130.1 | 147.9 | 131.6 | 96.1 |
| 87.5° | 3.0 | 4.4 | 26.6 | 19.2 | 20.7 | 25.1 | 11.8 | 25.1 | 20.7 | 20.7 | 14.8 |
| 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° | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 | 3402.6 |
| 2.5° | 3424.8 | 3402.6 | 3346.4 | 3281.4 | 3195.6 | 3154.2 | 3098.0 | 3059.5 | 3027.0 | 3030.0 | 3000.4 |
| 5° | 3491.3 | 3435.1 | 3309.5 | 3152.7 | 2957.5 | 2818.5 | 2670.6 | 2568.6 | 2485.8 | 2468.0 | 2428.1 |
| 7.5° | 3583.0 | 3494.3 | 3274.0 | 2991.5 | 2661.8 | 2411.9 | 2188.6 | 2045.1 | 1943.1 | 1910.6 | 1878.0 |
| 10° | 3701.3 | 3572.7 | 3228.1 | 2788.9 | 2314.3 | 1996.3 | 1756.8 | 1644.4 | 1574.9 | 1551.2 | 1533.5 |
| 12.5° | 3838.9 | 3662.9 | 3167.5 | 2542.0 | 1956.4 | 1650.3 | 1498.0 | 1441.8 | 1419.6 | 1412.2 | 1407.8 |
| 15° | 4011.9 | 3775.3 | 3075.8 | 2249.2 | 1653.2 | 1438.8 | 1373.8 | 1366.4 | 1369.3 | 1366.4 | 1364.9 |
| 17.5° | 4217.4 | 3898.0 | 2926.5 | 1947.5 | 1449.2 | 1330.9 | 1307.2 | 1313.1 | 1320.5 | 1319.1 | 1316.1 |
| 20° | 4442.2 | 4019.3 | 2735.7 | 1679.9 | 1310.2 | 1254.0 | 1240.7 | 1246.6 | 1252.5 | 1249.5 | 1248.1 |
| 22.5° | 4698.0 | 4149.4 | 2524.2 | 1471.4 | 1217.0 | 1183.0 | 1168.2 | 1169.7 | 1169.7 | 1163.8 | 1160.8 |
| 25° | 5004.1 | 4292.8 | 2302.4 | 1323.5 | 1146.0 | 1119.4 | 1101.7 | 1095.8 | 1086.9 | 1069.1 | 1066.2 |
| 27.5° | 5369.4 | 4445.1 | 2089.5 | 1220.0 | 1089.8 | 1064.7 | 1044.0 | 1029.2 | 1007.0 | 977.5 | 974.5 |
| 30° | 5780.5 | 4630.0 | 1909.1 | 1154.9 | 1045.5 | 1020.3 | 996.7 | 974.5 | 942.0 | 905.0 | 902.0 |
| 32.5° | 6264.0 | 4828.1 | 1777.5 | 1112.0 | 1005.6 | 978.9 | 950.8 | 924.2 | 888.7 | 851.8 | 853.2 |
| 35° | 6840.7 | 5067.7 | 1700.6 | 1082.4 | 974.5 | 939.0 | 908.0 | 878.4 | 851.8 | 819.2 | 816.3 |
| 37.5° | 7466.2 | 5322.0 | 1676.9 | 1067.7 | 953.8 | 899.1 | 863.6 | 842.9 | 839.9 | 820.7 | 819.2 |
| 40° | 8150.9 | 5623.7 | 1694.7 | 1058.8 | 931.6 | 860.6 | 822.2 | 817.8 | 825.1 | 791.1 | 792.6 |
| 42.5° | 8875.5 | 5981.6 | 1724.2 | 1048.4 | 900.6 | 822.2 | 785.2 | 785.2 | 779.3 | 732.0 | 732.0 |
| 45° | 9659.2 | 6394.1 | 1753.8 | 1023.3 | 863.6 | 783.7 | 755.6 | 745.3 | 720.2 | 674.3 | 672.8 |
| 47.5° | 10448.9 | 6814.1 | 1776.0 | 977.5 | 819.2 | 751.2 | 726.1 | 702.4 | 665.4 | 624.0 | 622.6 |
| 50° | 11198.6 | 7191.2 | 1752.3 | 909.4 | 769.0 | 720.2 | 693.5 | 661.0 | 621.1 | 593.0 | 588.5 |
| 52.5° | 11868.5 | 7518.0 | 1651.8 | 829.6 | 715.7 | 687.6 | 664.0 | 629.9 | 597.4 | 567.8 | 564.9 |
| 55° | 12451.1 | 7782.7 | 1474.3 | 754.2 | 668.4 | 659.5 | 635.9 | 593.0 | 548.6 | 523.5 | 520.5 |
| 57.5° | 13010.1 | 7983.8 | 1252.5 | 692.1 | 625.5 | 628.5 | 593.0 | 554.5 | 513.1 | 486.5 | 483.6 |
| 60° | 13753.9 | 8252.9 | 1027.7 | 634.4 | 579.7 | 588.5 | 550.1 | 522.0 | 470.2 | 436.2 | 431.8 |
| 62.5° | 14942.8 | 8671.4 | 816.3 | 563.4 | 526.4 | 529.4 | 513.1 | 479.1 | 417.0 | 377.1 | 374.1 |
| 65° | 15886.3 | 8517.6 | 643.3 | 486.5 | 465.8 | 470.2 | 470.2 | 433.3 | 366.7 | 320.9 | 316.5 |
| 67.5° | 15779.8 | 7293.2 | 513.1 | 411.1 | 408.1 | 411.1 | 421.4 | 390.4 | 325.3 | 288.4 | 282.4 |
| 70° | 14536.2 | 5801.2 | 411.1 | 341.6 | 354.9 | 347.5 | 377.1 | 356.4 | 292.8 | 255.8 | 251.4 |
| 72.5° | 11861.1 | 4179.0 | 313.5 | 282.4 | 272.1 | 283.9 | 340.1 | 320.9 | 244.0 | 202.6 | 198.2 |
| 75° | 6930.9 | 2230.0 | 233.6 | 223.3 | 196.7 | 236.6 | 301.7 | 273.6 | 186.3 | 149.4 | 144.9 |
| 77.5° | 2256.6 | 777.8 | 171.5 | 164.1 | 146.4 | 190.8 | 257.3 | 230.7 | 152.3 | 118.3 | 113.9 |
| 80° | 604.8 | 235.1 | 116.8 | 107.9 | 94.6 | 142.0 | 204.1 | 183.4 | 109.4 | 76.9 | 75.4 |
| 82.5° | 242.5 | 99.1 | 68.0 | 60.6 | 51.8 | 97.6 | 161.2 | 147.9 | 81.3 | 48.8 | 48.8 |
| 85° | 78.4 | 32.5 | 25.1 | 19.2 | 23.7 | 60.6 | 96.1 | 100.6 | 57.7 | 25.1 | 19.2 |
| 87.5° | 10.4 | 4.4 | 4.4 | 5.9 | 4.4 | 10.4 | 29.6 | 28.1 | 16.3 | 3.0 | 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)