

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: P883095

Luminaire Tested: **NAV-SB3B-740-U-T1**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883095
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-2)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3B-740-U-T1
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 4000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE I OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18014 lumens
Efficiency: N/A
Efficacy: 165.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type I - Short
BUG Rating: B4 - U0 - G4

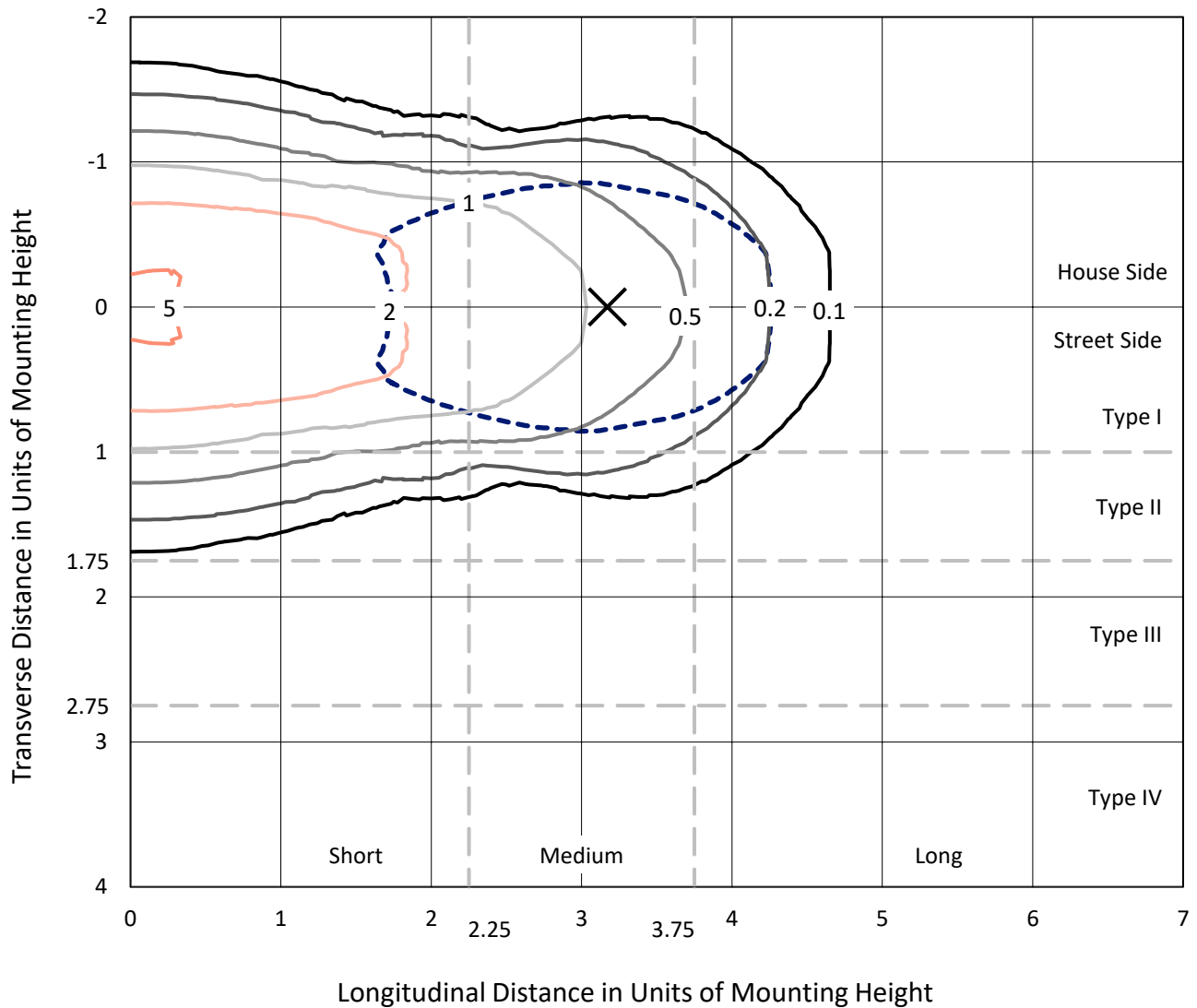
Input Watts (W): 109.2
Input Voltage (V): 120.0
Input Current (Ain): 0.919
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.657
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

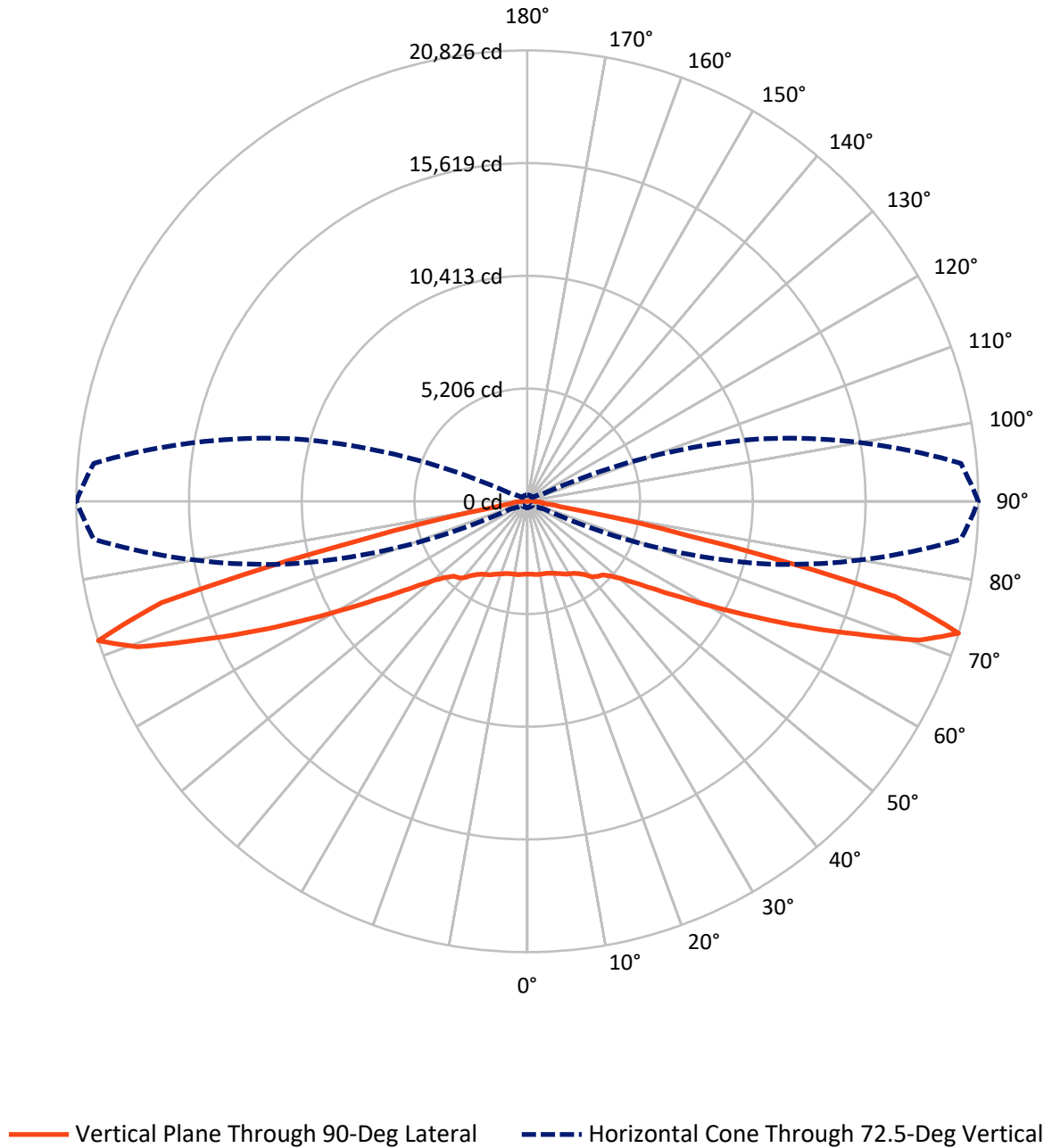
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



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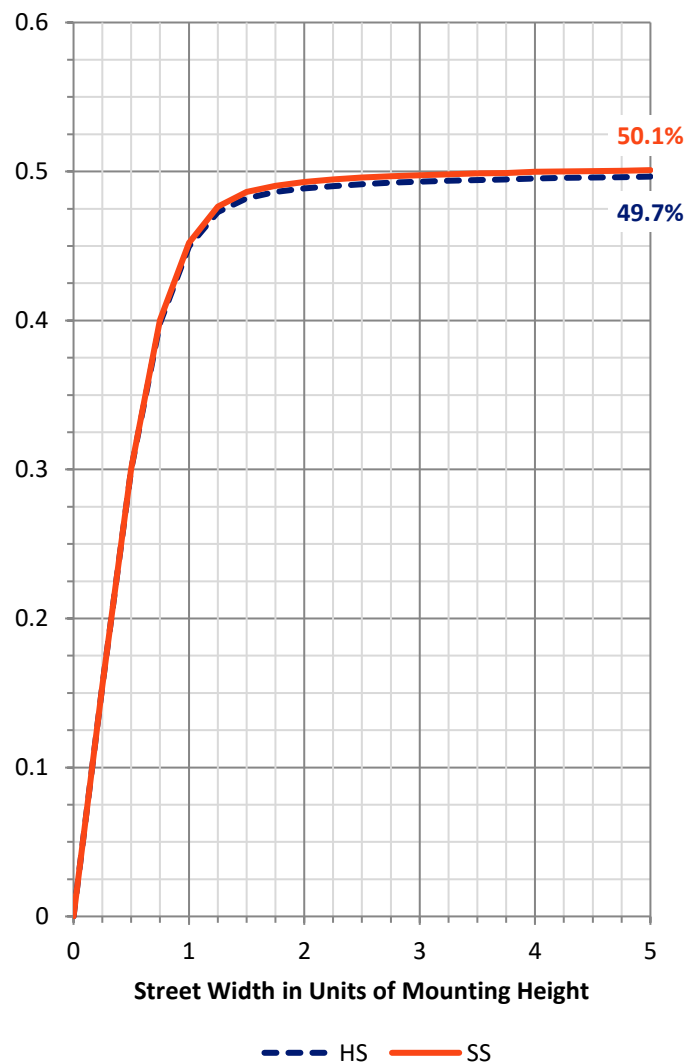
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9007.0 | 0.0 | 9007.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 9007.0 | 0.0 | 9007.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 18014.0 | 0.0 | 18014.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 326.4 | 1.8 |
| 10°-20° | 998.0 | 5.5 |
| 20°-30° | 1664.0 | 9.2 |
| 30°-40° | 2288.5 | 12.7 |
| 40°-50° | 2794.9 | 15.5 |
| 50°-60° | 3232.6 | 17.9 |
| 60°-70° | 3854.3 | 21.4 |
| 70°-80° | 2690.1 | 14.9 |
| 80°-90° | 165.2 | 0.9 |
| 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° | 18014.0 | 100.0 |
| 0°-180° | 18014.0 | 100.0 |

Coefficient of Utilization



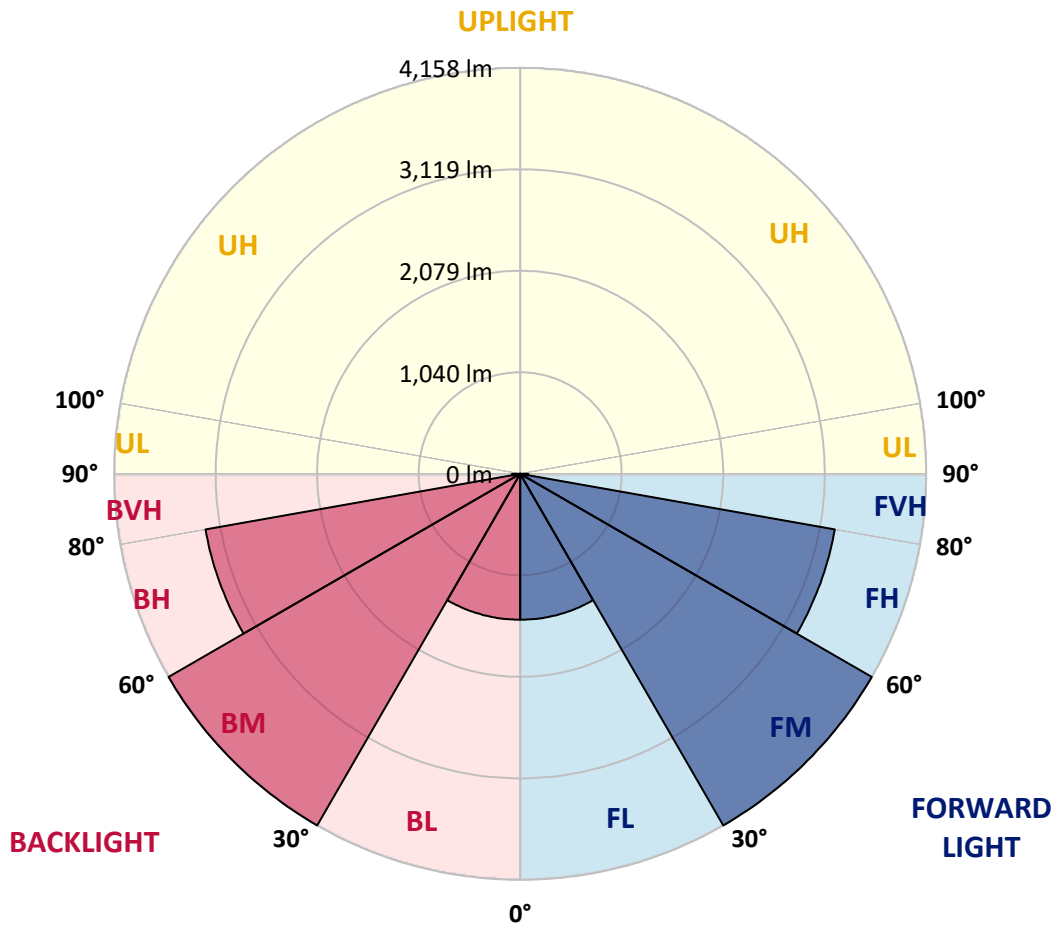
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1494.2 | 8.3 | | | |
| FM (30°-60°) | 4158.0 | 23.1 | | | |
| FH (60°-80°) | 3272.2 | 18.2 | | | G2/5000 |
| FVH (80°-90°) | 82.6 | 0.5 | | | G1/100 |
| BL (0°-30°) | 1494.2 | 8.3 | B3/2500 | | |
| BM (30°-60°) | 4158.0 | 23.1 | B3/5000 | | |
| BH (60°-80°) | 3272.2 | 18.2 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 82.6 | 0.5 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G4

Type I Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 | 3366.1 |
| 2.5° | 3369.0 | 3372.8 | 3372.8 | 3369.9 | 3376.6 | 3370.9 | 3370.9 | 3368.0 | 3370.9 | 3368.0 | 3368.0 |
| 5° | 3386.2 | 3391.0 | 3392.9 | 3392.0 | 3400.6 | 3395.8 | 3395.8 | 3392.0 | 3392.9 | 3390.0 | 3390.0 |
| 7.5° | 3418.8 | 3425.5 | 3429.3 | 3434.1 | 3446.5 | 3440.8 | 3437.0 | 3425.5 | 3420.7 | 3413.0 | 3413.0 |
| 10° | 3429.3 | 3437.0 | 3449.4 | 3474.3 | 3503.0 | 3504.0 | 3492.5 | 3463.8 | 3441.7 | 3424.5 | 3421.6 |
| 12.5° | 3396.7 | 3407.3 | 3433.1 | 3483.9 | 3548.0 | 3573.9 | 3555.7 | 3507.8 | 3464.7 | 3434.1 | 3429.3 |
| 15° | 3355.6 | 3367.1 | 3406.3 | 3482.9 | 3577.7 | 3638.0 | 3636.1 | 3572.9 | 3504.0 | 3456.1 | 3448.4 |
| 17.5° | 3291.4 | 3302.9 | 3359.4 | 3466.6 | 3600.7 | 3700.2 | 3727.0 | 3661.9 | 3565.2 | 3501.1 | 3490.6 |
| 20° | 3175.6 | 3186.1 | 3264.6 | 3414.9 | 3608.3 | 3766.3 | 3836.2 | 3778.7 | 3658.1 | 3571.0 | 3554.7 |
| 22.5° | 3025.3 | 3041.6 | 3133.5 | 3325.9 | 3590.1 | 3835.2 | 3960.6 | 3921.4 | 3766.3 | 3645.7 | 3623.6 |
| 25° | 2864.4 | 2881.7 | 2988.9 | 3216.8 | 3543.2 | 3885.0 | 4108.1 | 4083.2 | 3888.8 | 3738.5 | 3707.9 |
| 27.5° | 2725.6 | 2743.8 | 2860.6 | 3108.6 | 3470.5 | 3904.1 | 4253.6 | 4266.0 | 4037.2 | 3841.0 | 3808.4 |
| 30° | 2616.5 | 2633.7 | 2758.2 | 3021.5 | 3376.6 | 3885.0 | 4380.9 | 4467.1 | 4188.5 | 3930.0 | 3883.1 |
| 32.5° | 2496.8 | 2518.8 | 2650.0 | 2915.2 | 3265.6 | 3839.0 | 4492.0 | 4684.4 | 4363.7 | 4025.7 | 3966.4 |
| 35° | 2345.6 | 2365.7 | 2503.5 | 2769.7 | 3120.1 | 3765.3 | 4584.8 | 4925.7 | 4614.5 | 4171.3 | 4105.2 |
| 37.5° | 2161.7 | 2180.9 | 2317.8 | 2587.8 | 2975.5 | 3661.9 | 4655.7 | 5197.6 | 4913.2 | 4380.9 | 4292.8 |
| 40° | 1977.0 | 1995.2 | 2123.4 | 2384.8 | 2802.2 | 3529.8 | 4680.6 | 5463.7 | 5256.0 | 4669.1 | 4575.3 |
| 42.5° | 1807.5 | 1823.8 | 1941.5 | 2184.7 | 2607.9 | 3361.3 | 4648.0 | 5695.4 | 5563.3 | 4870.1 | 4749.5 |
| 45° | 1651.5 | 1665.8 | 1770.2 | 1997.1 | 2405.9 | 3156.4 | 4550.4 | 5944.3 | 5929.0 | 5013.7 | 4851.0 |
| 47.5° | 1473.4 | 1487.7 | 1595.9 | 1815.2 | 2203.9 | 2916.1 | 4384.7 | 6189.4 | 6437.3 | 5339.2 | 5151.6 |
| 50° | 1256.1 | 1268.5 | 1379.6 | 1605.5 | 1994.2 | 2660.5 | 4155.0 | 6381.8 | 7078.8 | 5832.3 | 5596.8 |
| 52.5° | 998.5 | 1011.9 | 1120.1 | 1346.1 | 1745.3 | 2385.8 | 3852.4 | 6507.2 | 7819.8 | 6552.2 | 6262.1 |
| 55° | 742.9 | 752.5 | 846.3 | 1049.3 | 1437.0 | 2072.7 | 3473.3 | 6542.7 | 8660.4 | 7536.4 | 7173.6 |
| 57.5° | 539.0 | 544.7 | 605.1 | 756.3 | 1089.5 | 1681.1 | 3012.8 | 6450.7 | 9660.8 | 8798.2 | 8341.5 |
| 60° | 436.6 | 438.5 | 456.7 | 523.7 | 757.3 | 1238.8 | 2456.6 | 6134.8 | 10746.5 | 10424.8 | 9849.4 |
| 62.5° | 396.4 | 396.4 | 401.1 | 419.3 | 512.2 | 817.6 | 1783.6 | 5480.0 | 11910.6 | 12480.2 | 11709.6 |
| 65° | 368.6 | 368.6 | 370.5 | 379.1 | 404.0 | 520.8 | 1125.9 | 4413.5 | 12891.9 | 14888.0 | 13913.4 |
| 67.5° | 343.7 | 344.7 | 343.7 | 346.6 | 360.9 | 384.9 | 652.9 | 3048.3 | 13420.4 | 17382.9 | 16330.8 |
| 70° | 317.8 | 319.8 | 315.0 | 315.0 | 326.5 | 327.4 | 408.8 | 1671.6 | 12981.9 | 19473.8 | 19197.1 |
| 72.5° | 287.2 | 290.1 | 282.4 | 280.5 | 289.1 | 285.3 | 307.3 | 802.3 | 11145.7 | 20098.0 | 20825.6 |
| 75° | 260.4 | 264.2 | 247.0 | 242.2 | 242.2 | 239.3 | 249.9 | 411.7 | 7233.9 | 16394.9 | 17536.1 |
| 77.5° | 236.5 | 244.1 | 216.4 | 201.0 | 197.2 | 188.6 | 203.9 | 251.8 | 3164.1 | 7697.2 | 7537.4 |
| 80° | 195.3 | 205.8 | 178.1 | 159.9 | 153.2 | 143.6 | 160.8 | 176.2 | 941.1 | 1787.4 | 1711.8 |
| 82.5° | 145.5 | 150.3 | 126.4 | 113.9 | 108.2 | 101.5 | 120.6 | 122.5 | 306.4 | 632.8 | 715.2 |
| 85° | 92.9 | 94.8 | 77.5 | 67.0 | 64.1 | 61.3 | 76.6 | 67.0 | 116.8 | 465.3 | 675.9 |
| 87.5° | 32.6 | 37.3 | 29.7 | 26.8 | 28.7 | 23.9 | 35.4 | 20.1 | 32.6 | 328.4 | 406.9 |
| 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)