

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: P459857

Luminaire Tested: **NAV-SA4A-AMB-U-5WQ**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-AMB-U-5WQ
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4264 lumens
Efficiency: N/A
Efficacy: 53.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B3 - U0 - G1

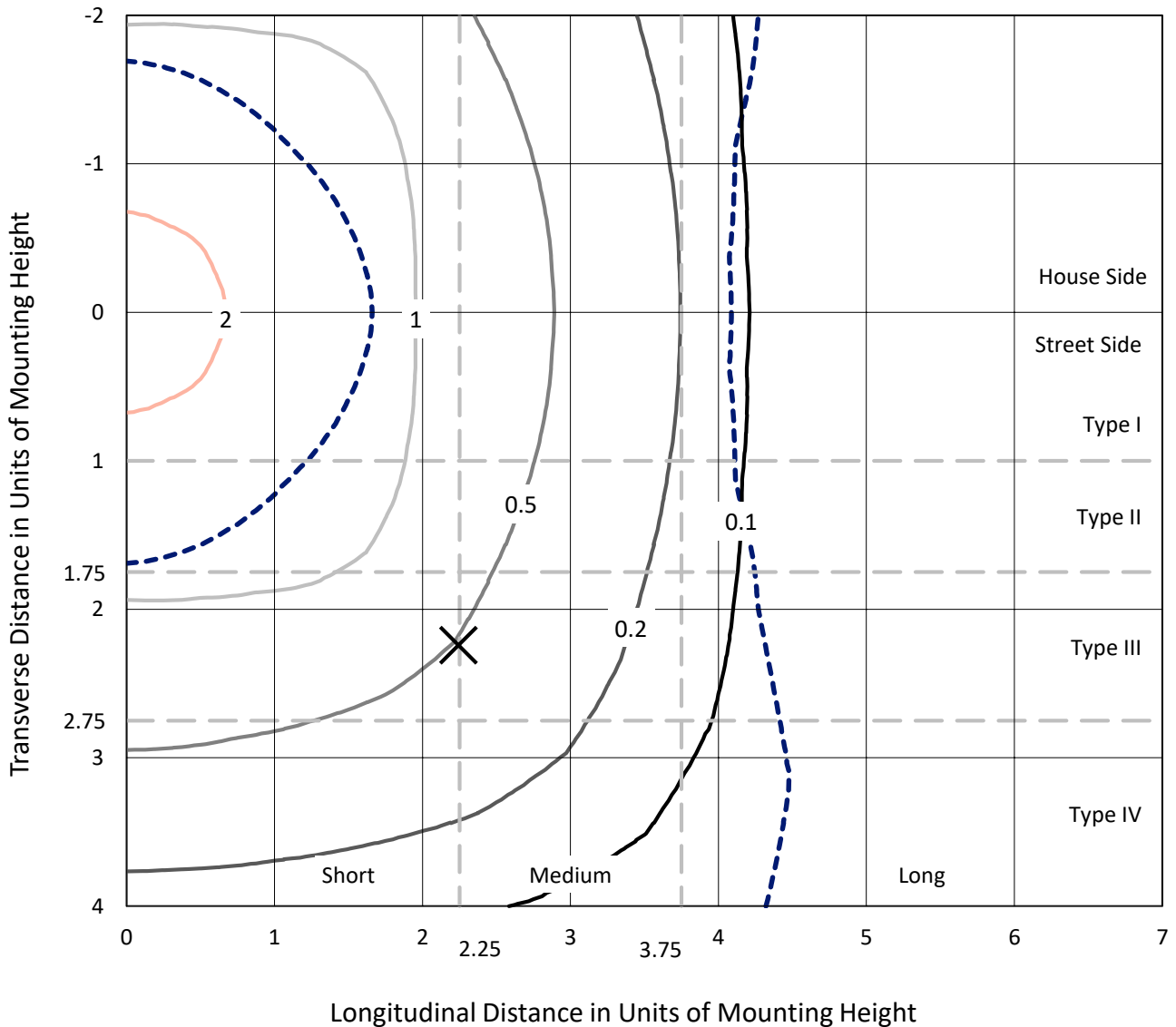
Input Watts (W): 79.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

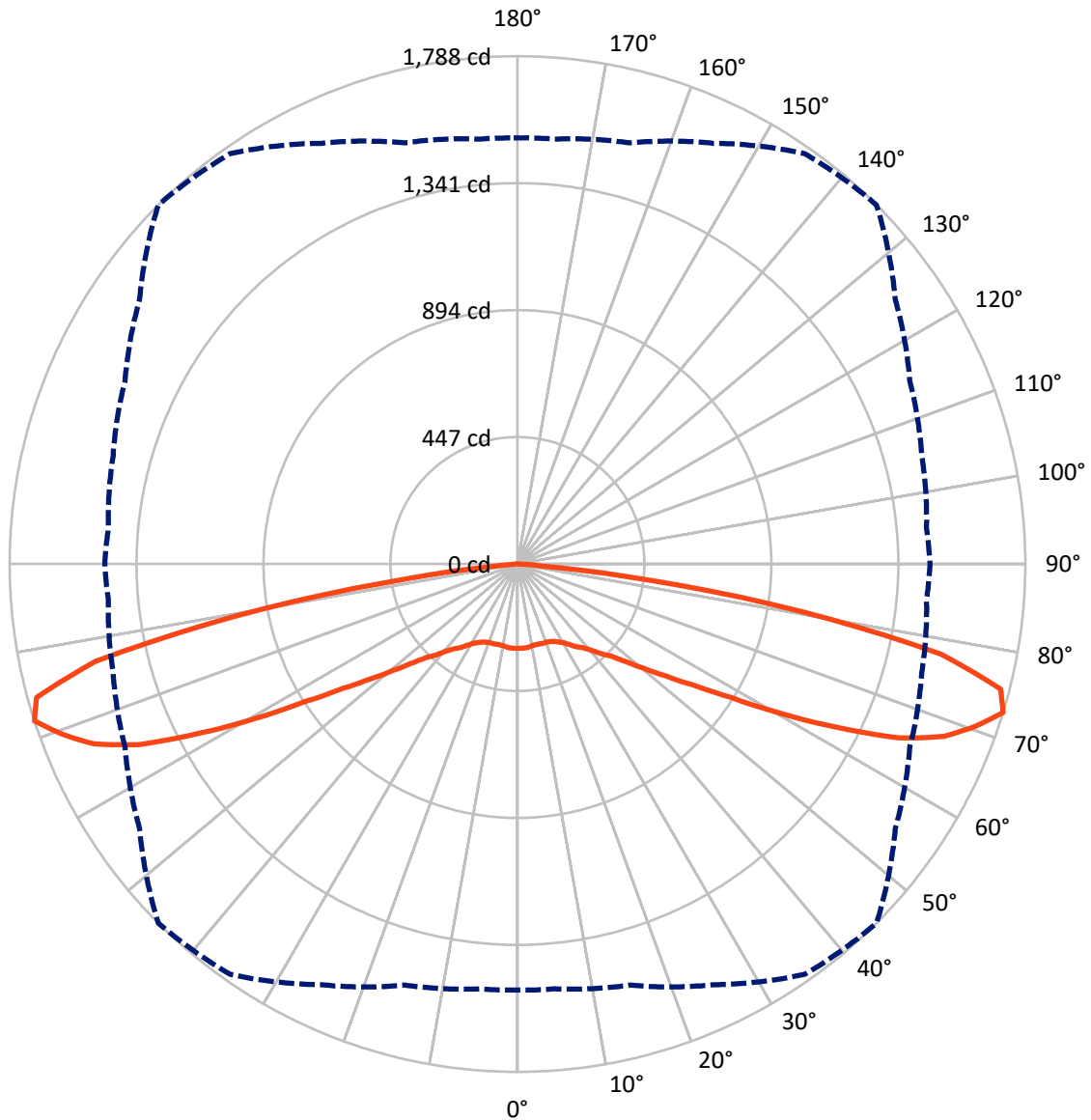


Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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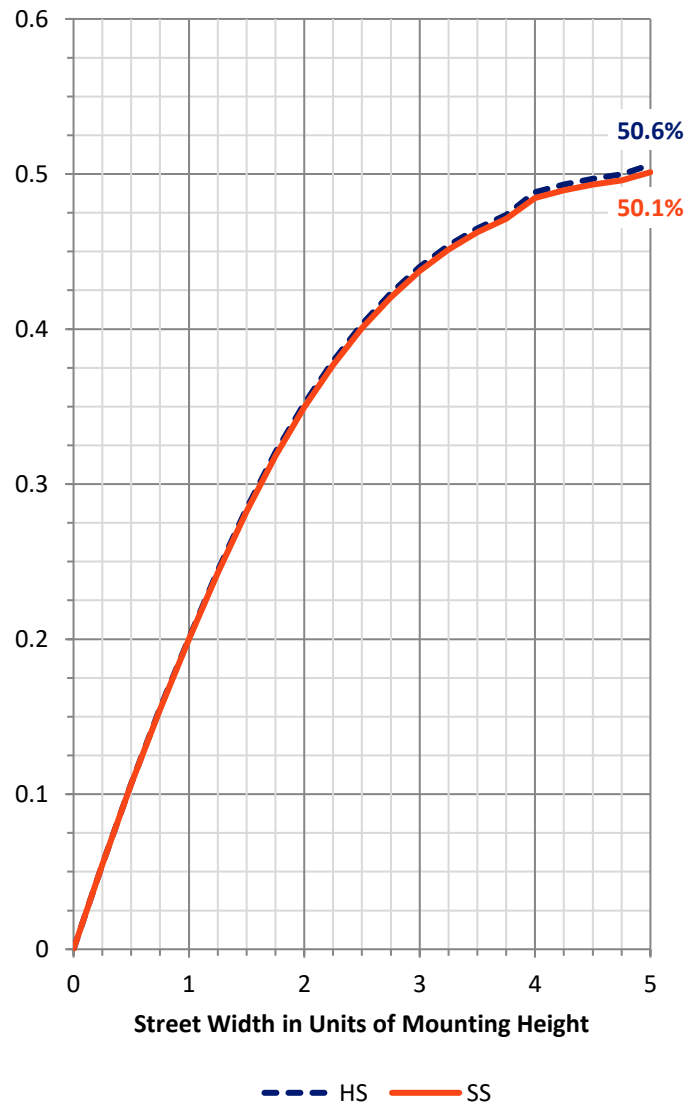
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2132.0 | 0.0 | 2132.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 2132.0 | 0.0 | 2132.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 4264.0 | 0.0 | 4264.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.2 | 0.7 |
| 10°-20° | 83.8 | 2.0 |
| 20°-30° | 143.5 | 3.4 |
| 30°-40° | 225.0 | 5.3 |
| 40°-50° | 372.3 | 8.7 |
| 50°-60° | 686.4 | 16.1 |
| 60°-70° | 1275.2 | 29.9 |
| 70°-80° | 1327.7 | 31.1 |
| 80°-90° | 122.0 | 2.9 |
| 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° | 4264.0 | 100.0 |
| 0°-180° | 4264.0 | 100.0 |



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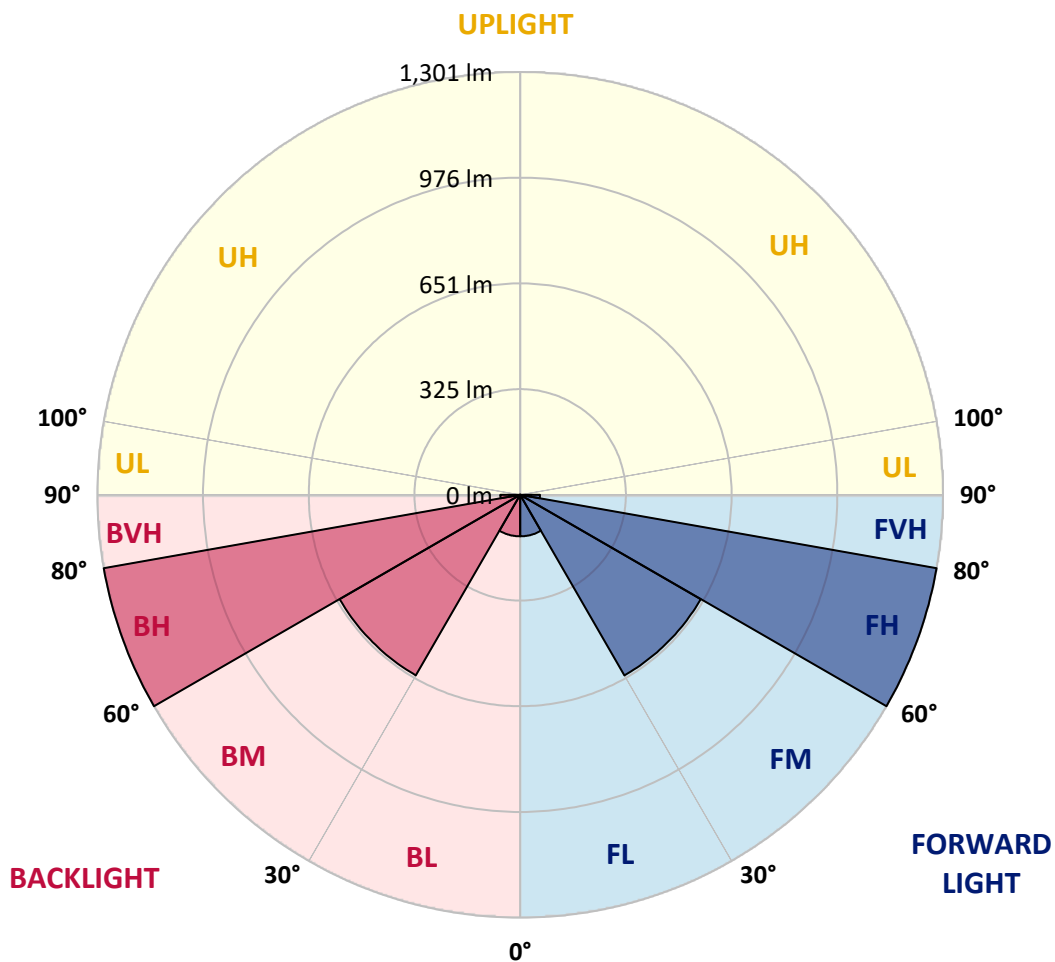
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 127.7 | 3.0 | | | |
| FM | (30°-60°) | 641.8 | 15.1 | | | |
| FH | (60°-80°) | 1301.4 | 30.5 | | | G1/1800 |
| FVH | (80°-90°) | 61.0 | 1.4 | | | G1/100 |
| BL | (0°-30°) | 127.7 | 3.0 | B1/500 | | |
| BM | (30°-60°) | 641.8 | 15.1 | B1/1000 | | |
| BH | (60°-80°) | 1301.4 | 30.5 | B3/2500 | | G1/1800 |
| BVH | (80°-90°) | 61.0 | 1.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 |
| 2.5° | 298.6 | 298.6 | 298.6 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 | 296.8 |
| 5° | 298.6 | 298.6 | 298.6 | 298.6 | 296.8 | 296.8 | 296.8 | 295.1 | 295.1 | 295.1 | 296.8 |
| 7.5° | 296.8 | 298.6 | 296.8 | 296.8 | 295.1 | 295.1 | 293.3 | 293.3 | 293.3 | 293.3 | 293.3 |
| 10° | 298.6 | 298.6 | 296.8 | 295.1 | 293.3 | 293.3 | 291.6 | 291.6 | 291.6 | 293.3 | 293.3 |
| 12.5° | 300.3 | 300.3 | 296.8 | 293.3 | 293.3 | 293.3 | 291.6 | 291.6 | 291.6 | 293.3 | 295.1 |
| 15° | 302.0 | 302.0 | 298.6 | 293.3 | 293.3 | 293.3 | 291.6 | 291.6 | 295.1 | 296.8 | 298.6 |
| 17.5° | 305.5 | 303.8 | 298.6 | 295.1 | 293.3 | 293.3 | 293.3 | 293.3 | 296.8 | 300.3 | 300.3 |
| 20° | 305.5 | 305.5 | 300.3 | 295.1 | 295.1 | 295.1 | 295.1 | 295.1 | 298.6 | 302.0 | 303.8 |
| 22.5° | 310.8 | 309.0 | 302.0 | 298.6 | 296.8 | 296.8 | 298.6 | 298.6 | 302.0 | 305.5 | 307.3 |
| 25° | 316.0 | 316.0 | 309.0 | 303.8 | 302.0 | 302.0 | 303.8 | 303.8 | 307.3 | 312.5 | 314.3 |
| 27.5° | 326.5 | 324.7 | 317.8 | 312.5 | 310.8 | 310.8 | 314.3 | 314.3 | 316.0 | 321.3 | 323.0 |
| 30° | 335.2 | 335.2 | 328.2 | 326.5 | 323.0 | 323.0 | 324.7 | 324.7 | 328.2 | 331.7 | 333.5 |
| 32.5° | 342.2 | 342.2 | 338.7 | 338.7 | 340.5 | 338.7 | 342.2 | 340.5 | 338.7 | 342.2 | 342.2 |
| 35° | 354.4 | 354.4 | 350.9 | 349.2 | 356.2 | 357.9 | 356.2 | 350.9 | 350.9 | 354.4 | 356.2 |
| 37.5° | 373.6 | 373.6 | 370.1 | 366.6 | 368.4 | 373.6 | 368.4 | 366.6 | 370.1 | 375.4 | 377.1 |
| 40° | 401.6 | 403.3 | 399.8 | 398.1 | 392.8 | 398.1 | 392.8 | 396.3 | 401.6 | 405.1 | 405.1 |
| 42.5° | 433.0 | 434.7 | 429.5 | 426.0 | 427.8 | 431.2 | 424.3 | 426.0 | 433.0 | 438.2 | 438.2 |
| 45° | 481.9 | 480.1 | 471.4 | 466.2 | 460.9 | 462.7 | 459.2 | 467.9 | 474.9 | 483.6 | 487.1 |
| 47.5° | 529.0 | 527.3 | 523.8 | 518.5 | 511.6 | 513.3 | 513.3 | 520.3 | 529.0 | 537.8 | 537.8 |
| 50° | 588.4 | 588.4 | 583.1 | 579.7 | 574.4 | 577.9 | 574.4 | 583.1 | 593.6 | 600.6 | 602.4 |
| 52.5° | 656.5 | 654.7 | 654.7 | 653.0 | 649.5 | 656.5 | 651.2 | 661.7 | 670.4 | 672.2 | 675.7 |
| 55° | 728.1 | 733.3 | 740.3 | 740.3 | 745.5 | 752.5 | 749.0 | 750.8 | 757.7 | 750.8 | 754.2 |
| 57.5° | 820.6 | 825.8 | 836.3 | 850.3 | 867.7 | 886.9 | 874.7 | 866.0 | 852.0 | 841.5 | 839.8 |
| 60° | 916.6 | 921.9 | 942.8 | 984.7 | 1028.4 | 1070.3 | 1033.6 | 993.4 | 962.0 | 935.8 | 934.1 |
| 62.5° | 1021.4 | 1030.1 | 1059.8 | 1122.6 | 1206.4 | 1269.3 | 1211.7 | 1133.1 | 1075.5 | 1035.3 | 1037.1 |
| 65° | 1159.3 | 1164.5 | 1196.0 | 1269.3 | 1400.2 | 1477.1 | 1388.0 | 1283.3 | 1211.7 | 1166.3 | 1168.0 |
| 67.5° | 1367.1 | 1363.6 | 1379.3 | 1449.1 | 1557.4 | 1620.2 | 1513.7 | 1428.2 | 1354.9 | 1302.5 | 1311.2 |
| 70° | 1512.0 | 1510.2 | 1520.7 | 1594.0 | 1698.8 | 1711.0 | 1604.5 | 1508.5 | 1447.4 | 1416.0 | 1416.0 |
| 72.5° | 1499.8 | 1501.5 | 1534.7 | 1634.2 | 1763.4 | 1787.8 | 1623.7 | 1524.2 | 1473.6 | 1445.6 | 1452.6 |
| 75° | 1213.4 | 1216.9 | 1311.2 | 1492.8 | 1709.3 | 1756.4 | 1580.1 | 1412.5 | 1265.8 | 1185.5 | 1171.5 |
| 77.5° | 583.1 | 588.4 | 728.1 | 1028.4 | 1379.3 | 1524.2 | 1367.1 | 1014.4 | 742.0 | 602.4 | 616.3 |
| 80° | 176.3 | 181.6 | 240.9 | 422.5 | 789.2 | 1017.9 | 817.1 | 417.3 | 213.0 | 155.4 | 155.4 |
| 82.5° | 38.4 | 47.1 | 55.9 | 92.5 | 272.4 | 464.4 | 272.4 | 103.0 | 62.9 | 45.4 | 41.9 |
| 85° | 21.0 | 21.0 | 31.4 | 33.2 | 43.6 | 76.8 | 52.4 | 41.9 | 36.7 | 24.4 | 24.4 |
| 87.5° | 8.7 | 8.7 | 15.7 | 15.7 | 17.5 | 12.2 | 19.2 | 21.0 | 21.0 | 12.2 | 12.2 |
| 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)