

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: INVUE

Report Number: P367899

Luminaire Tested: **MSA-SA3B-830-U-5WQ**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367899
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-4)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-830-U-5WQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12531 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G2

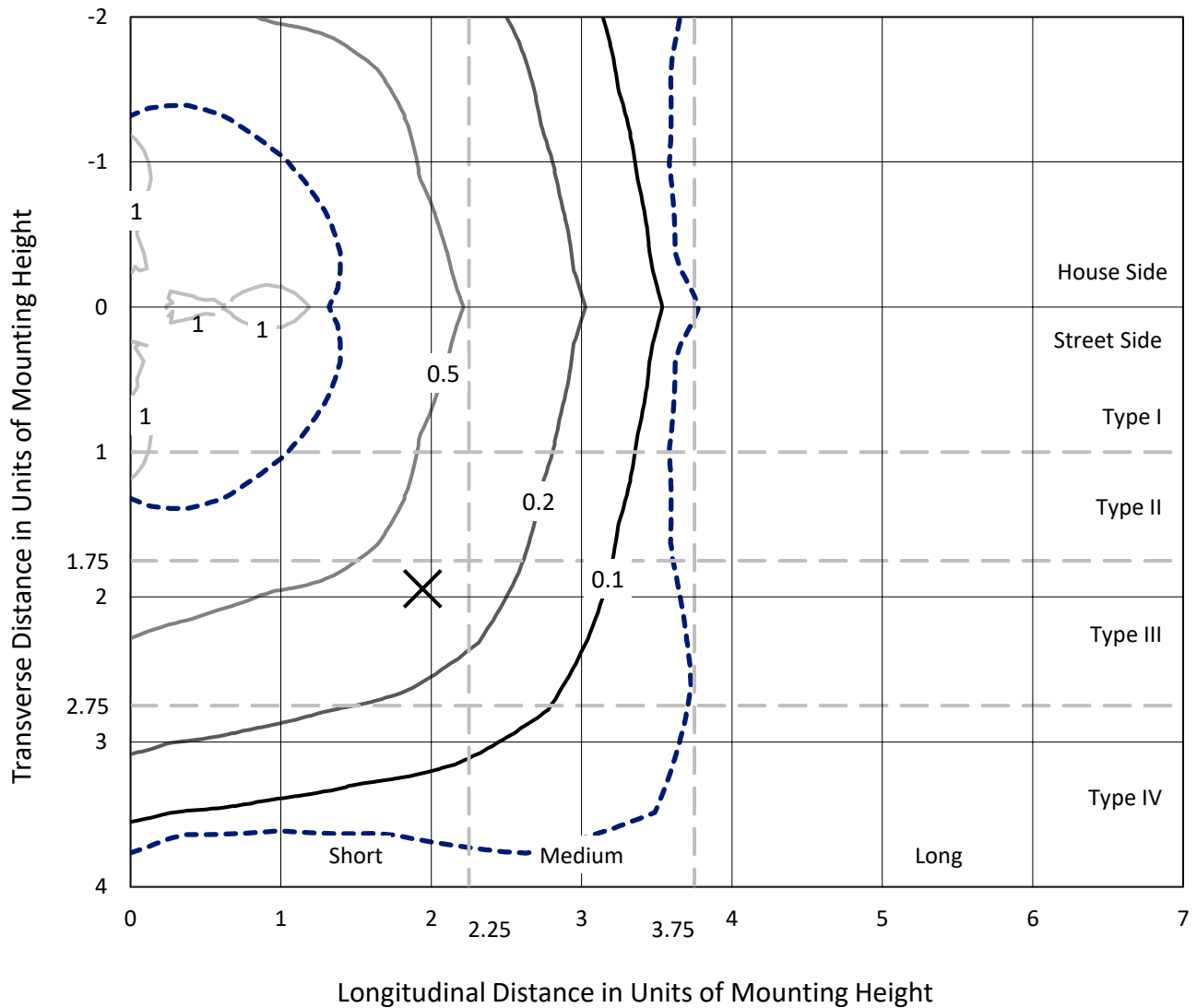
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

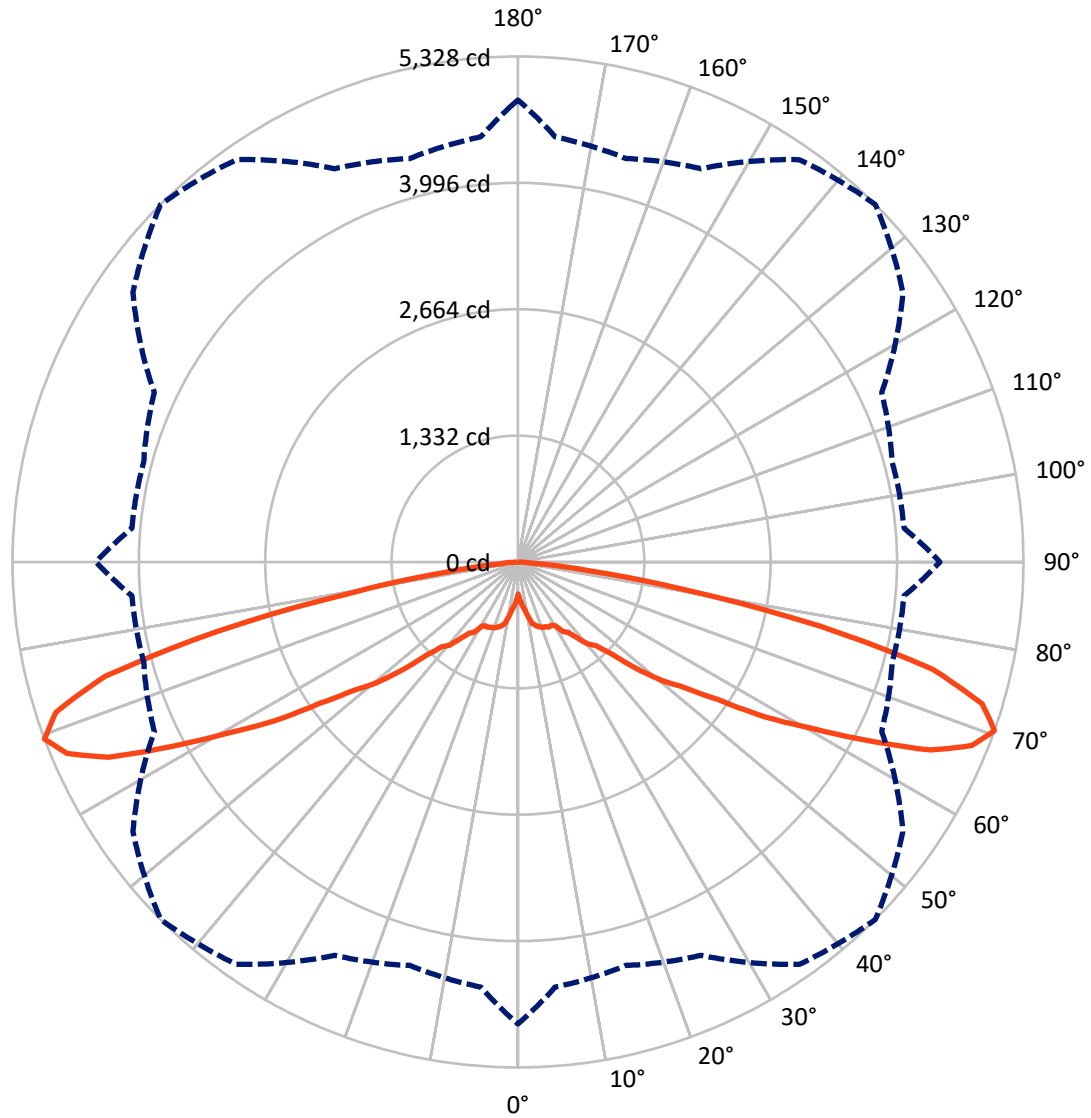
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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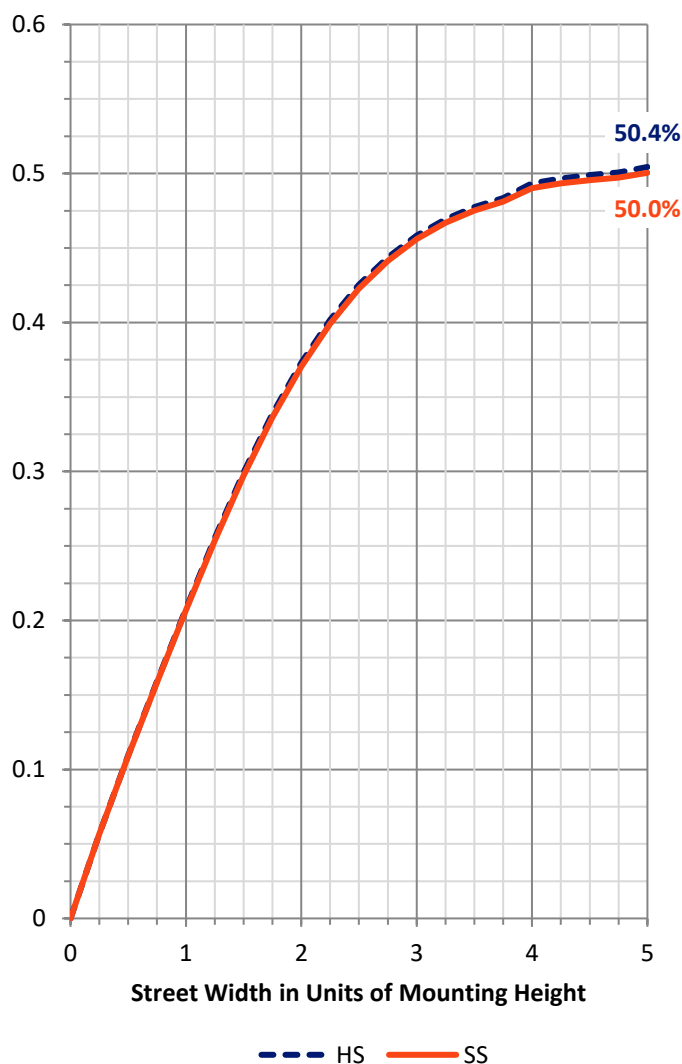
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6265.5 | 0.0 | 6265.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 6265.5 | 0.0 | 6265.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 12531.0 | 0.0 | 12531.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 49.3 | 0.4 |
| 10°-20° | 197.3 | 1.6 |
| 20°-30° | 372.9 | 3.0 |
| 30°-40° | 649.6 | 5.2 |
| 40°-50° | 1241.8 | 9.9 |
| 50°-60° | 2408.0 | 19.2 |
| 60°-70° | 4216.5 | 33.6 |
| 70°-80° | 3168.9 | 25.3 |
| 80°-90° | 226.7 | 1.8 |
| 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° | 12531.0 | 100.0 |
| 0°-180° | 12531.0 | 100.0 |

Coefficient of Utilization



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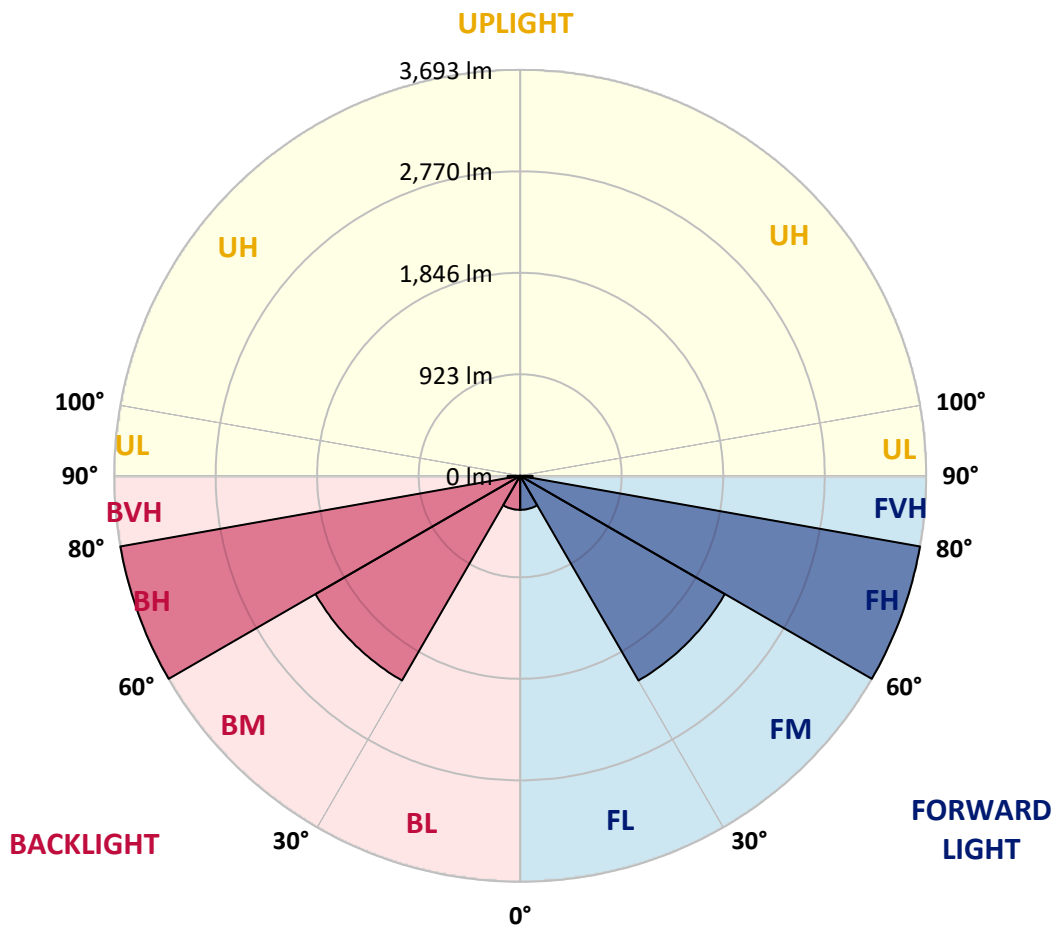
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 309.7 | 2.5 | | | |
| FM (30°-60°) | 2149.7 | 17.2 | | | |
| FH (60°-80°) | 3692.7 | 29.5 | | | G2/5000 |
| FVH (80°-90°) | 113.4 | 0.9 | | | G2/225 |
| BL (0°-30°) | 309.7 | 2.5 | B1/500 | | |
| BM (30°-60°) | 2149.7 | 17.2 | B2/2500 | | |
| BH (60°-80°) | 3692.7 | 29.5 | B4/5000 | | G2/5000 |
| BVH (80°-90°) | 113.4 | 0.9 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 | 338.8 |
| 2.5° | 412.2 | 405.9 | 386.0 | 387.0 | 396.2 | 397.2 | 398.1 | 386.0 | 383.1 | 407.9 | 409.3 |
| 5° | 523.6 | 509.0 | 494.4 | 488.6 | 479.8 | 455.5 | 482.2 | 485.2 | 491.0 | 509.9 | 518.7 |
| 7.5° | 597.9 | 579.9 | 560.0 | 547.9 | 524.0 | 504.1 | 526.0 | 544.0 | 555.6 | 577.0 | 589.2 |
| 10° | 612.0 | 601.3 | 600.4 | 579.0 | 574.6 | 581.9 | 580.4 | 580.9 | 598.4 | 598.9 | 606.2 |
| 12.5° | 656.3 | 664.0 | 649.0 | 641.7 | 646.1 | 664.0 | 649.5 | 643.1 | 647.5 | 667.4 | 659.2 |
| 15° | 714.1 | 723.4 | 700.5 | 688.8 | 677.2 | 694.2 | 679.1 | 690.3 | 704.4 | 719.0 | 711.7 |
| 17.5° | 778.3 | 778.8 | 747.7 | 704.4 | 714.6 | 717.0 | 711.7 | 702.5 | 742.8 | 777.8 | 774.4 |
| 20° | 813.3 | 812.8 | 759.3 | 700.5 | 730.6 | 736.0 | 731.1 | 699.5 | 760.3 | 808.4 | 807.0 |
| 22.5° | 849.3 | 838.6 | 774.4 | 726.8 | 737.9 | 742.3 | 731.1 | 728.2 | 774.4 | 841.5 | 841.0 |
| 25° | 868.7 | 877.9 | 807.5 | 777.8 | 768.6 | 758.4 | 768.1 | 772.9 | 817.2 | 882.8 | 863.8 |
| 27.5° | 929.5 | 914.4 | 817.2 | 814.3 | 794.8 | 754.5 | 788.0 | 811.8 | 814.3 | 920.2 | 939.7 |
| 30° | 984.4 | 990.2 | 860.9 | 865.3 | 829.8 | 778.8 | 830.8 | 868.7 | 876.0 | 991.2 | 989.3 |
| 32.5° | 1042.7 | 1045.2 | 938.7 | 893.5 | 878.4 | 876.5 | 856.6 | 889.6 | 947.0 | 1039.3 | 1043.2 |
| 35° | 1131.2 | 1151.1 | 1008.2 | 947.5 | 928.5 | 909.1 | 926.6 | 956.2 | 1009.7 | 1148.2 | 1138.5 |
| 37.5° | 1333.9 | 1302.3 | 1159.4 | 1033.5 | 1020.9 | 1013.1 | 1027.2 | 1048.6 | 1157.9 | 1305.7 | 1350.9 |
| 40° | 1475.4 | 1460.3 | 1265.9 | 1175.9 | 1096.2 | 1138.0 | 1105.0 | 1187.6 | 1278.0 | 1461.3 | 1490.5 |
| 42.5° | 1694.6 | 1627.5 | 1427.7 | 1316.4 | 1233.8 | 1204.1 | 1222.6 | 1330.5 | 1445.7 | 1649.9 | 1707.3 |
| 45° | 1905.1 | 1801.6 | 1630.5 | 1532.3 | 1406.8 | 1375.7 | 1400.5 | 1527.4 | 1660.6 | 1822.0 | 1923.1 |
| 47.5° | 2120.0 | 2013.0 | 1824.9 | 1683.0 | 1580.4 | 1673.2 | 1592.1 | 1712.6 | 1845.3 | 2033.0 | 2122.9 |
| 50° | 2343.1 | 2224.5 | 2038.8 | 1884.2 | 1875.5 | 1957.6 | 1860.4 | 1922.1 | 2045.1 | 2239.6 | 2345.6 |
| 52.5° | 2599.3 | 2471.5 | 2285.8 | 2181.2 | 2201.7 | 2196.3 | 2176.9 | 2165.7 | 2286.7 | 2477.8 | 2603.7 |
| 55° | 2904.1 | 2766.1 | 2617.8 | 2569.7 | 2626.0 | 2565.3 | 2594.0 | 2590.1 | 2607.6 | 2744.2 | 2891.5 |
| 57.5° | 3272.6 | 3116.5 | 2967.8 | 2957.1 | 3029.5 | 3086.9 | 3035.9 | 2962.4 | 2931.8 | 3064.5 | 3233.2 |
| 60° | 3736.8 | 3545.3 | 3382.0 | 3348.4 | 3555.0 | 3554.5 | 3508.4 | 3344.1 | 3332.4 | 3482.6 | 3685.8 |
| 62.5° | 4249.7 | 4016.4 | 3838.0 | 3784.5 | 4108.2 | 4144.7 | 4000.8 | 3706.2 | 3766.5 | 3887.5 | 4128.7 |
| 65° | 4685.3 | 4404.8 | 4238.5 | 4223.9 | 4619.6 | 4780.6 | 4462.6 | 4059.6 | 4079.1 | 4179.7 | 4440.8 |
| 67.5° | 4969.2 | 4631.3 | 4499.1 | 4569.6 | 5061.5 | 5162.2 | 4866.6 | 4295.9 | 4226.9 | 4268.7 | 4580.8 |
| 70° | 4869.5 | 4498.1 | 4402.8 | 4574.0 | 5175.8 | 5327.9 | 4953.6 | 4229.8 | 4083.0 | 4084.9 | 4447.6 |
| 72.5° | 4114.6 | 3761.1 | 3806.4 | 4120.4 | 4905.5 | 5118.9 | 4551.1 | 3820.5 | 3520.0 | 3512.7 | 3841.8 |
| 75° | 2720.8 | 2484.6 | 2663.0 | 3152.5 | 4078.1 | 4514.6 | 3770.9 | 2994.5 | 2617.8 | 2495.3 | 2749.5 |
| 77.5° | 1190.0 | 1159.9 | 1310.1 | 1863.3 | 2780.1 | 3253.6 | 2701.4 | 1956.2 | 1423.9 | 1184.2 | 1293.6 |
| 80° | 318.9 | 312.1 | 391.8 | 706.8 | 1353.4 | 1791.9 | 1461.8 | 780.2 | 407.4 | 296.5 | 314.5 |
| 82.5° | 116.2 | 119.1 | 145.4 | 197.9 | 445.8 | 754.5 | 485.6 | 228.0 | 154.1 | 126.4 | 126.4 |
| 85° | 50.6 | 49.1 | 70.5 | 79.2 | 121.5 | 170.6 | 139.5 | 96.7 | 77.8 | 58.3 | 55.9 |
| 87.5° | 13.6 | 17.0 | 23.8 | 24.8 | 31.6 | 25.8 | 36.9 | 34.0 | 29.2 | 20.4 | 16.5 |
| 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)