

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: P367019

Luminaire Tested: **MSA-SA1D-730-U-5WQ**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367019
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-SA1D-730-U-5WQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6699 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G2

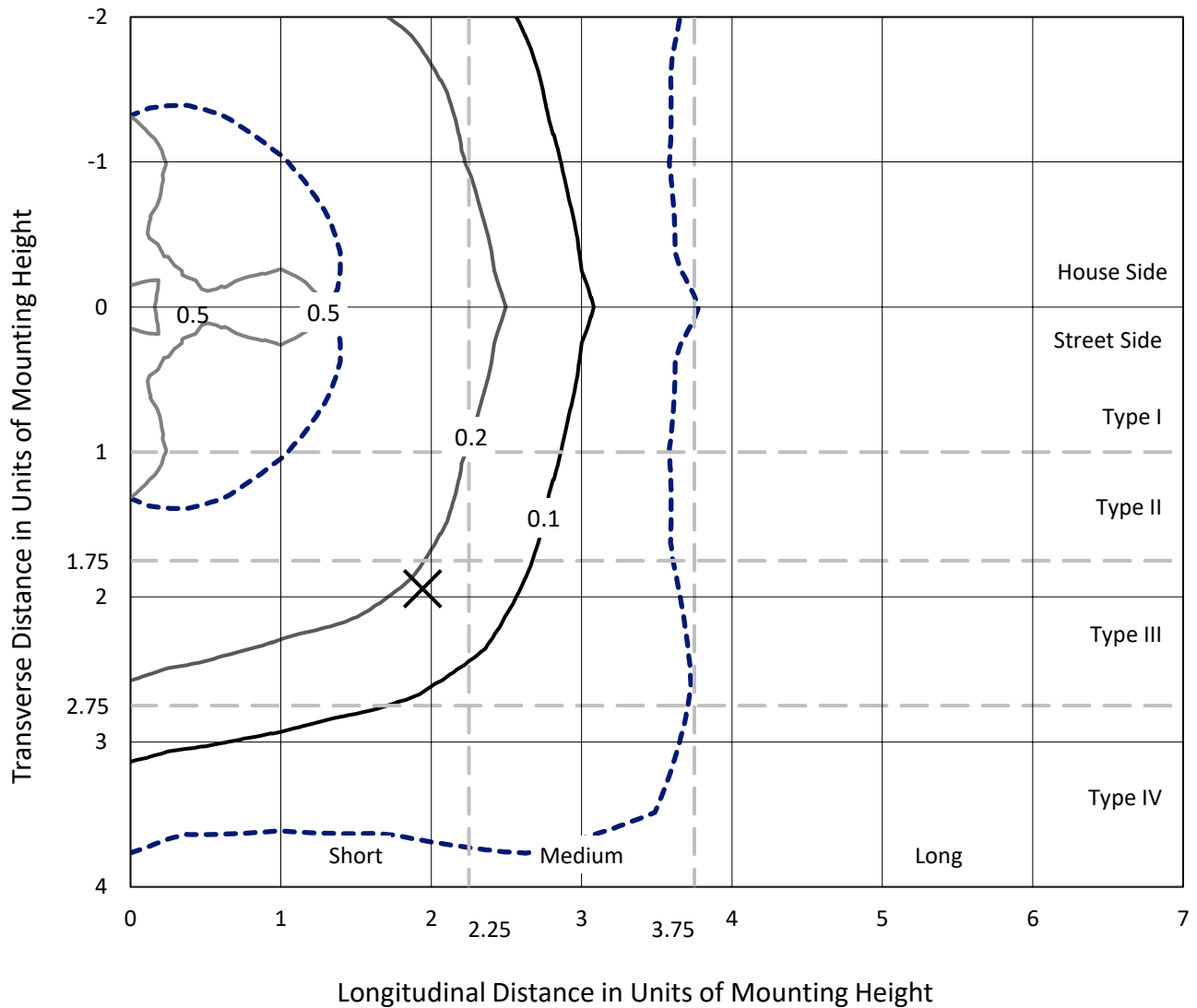
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

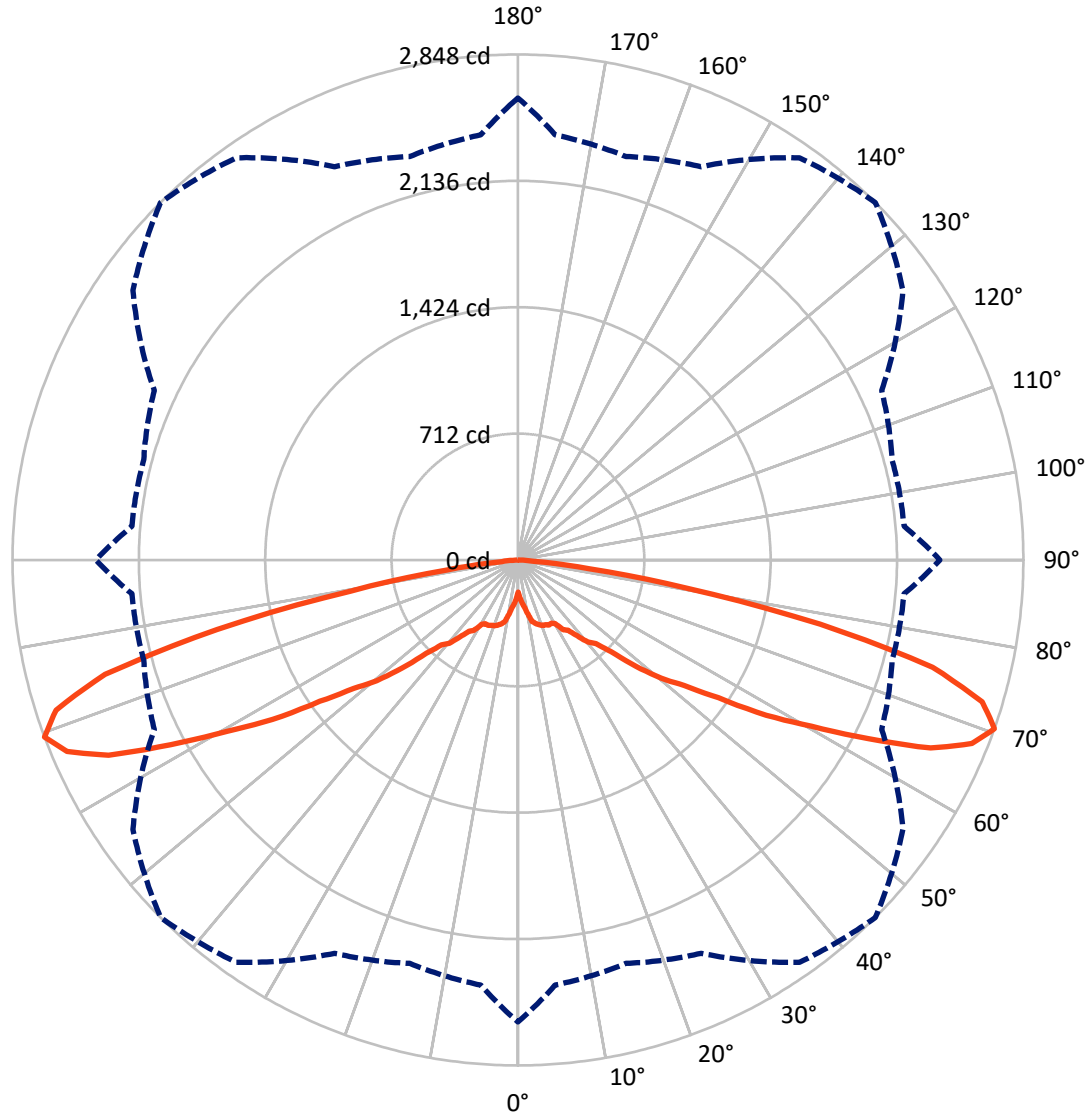
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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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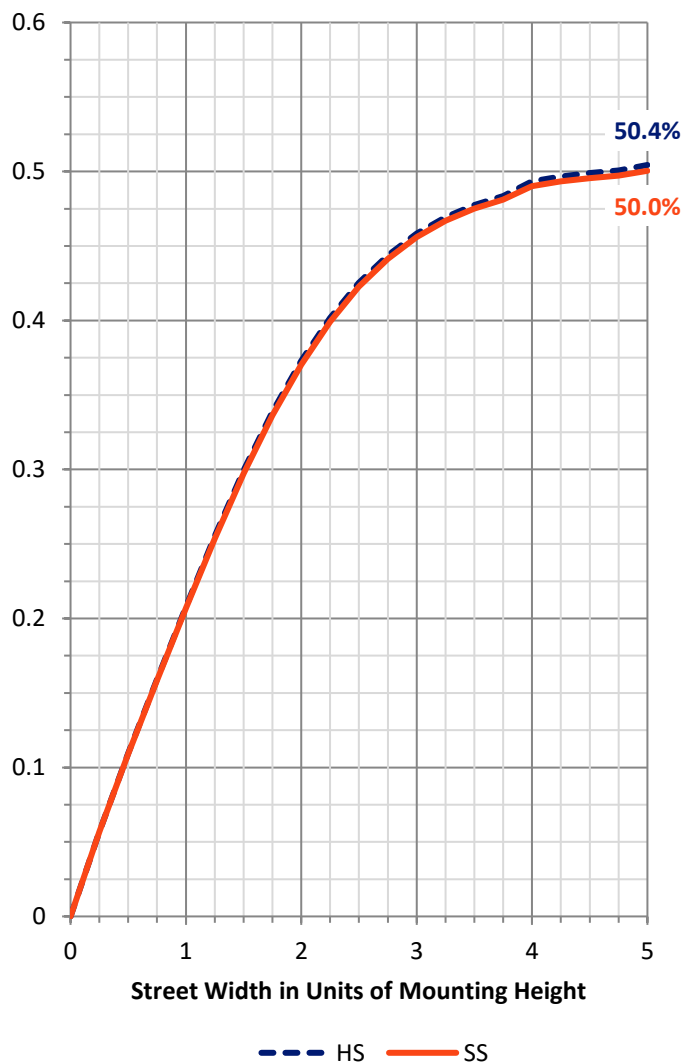
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 3349.5 | 0.0 | 3349.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 3349.5 | 0.0 | 3349.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 6699.0 | 0.0 | 6699.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 26.3 | 0.4 |
| 10°-20° | 105.5 | 1.6 |
| 20°-30° | 199.4 | 3.0 |
| 30°-40° | 347.3 | 5.2 |
| 40°-50° | 663.9 | 9.9 |
| 50°-60° | 1287.3 | 19.2 |
| 60°-70° | 2254.1 | 33.6 |
| 70°-80° | 1694.1 | 25.3 |
| 80°-90° | 121.2 | 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° | 6699.0 | 100.0 |
| 0°-180° | 6699.0 | 100.0 |

Coefficient of Utilization



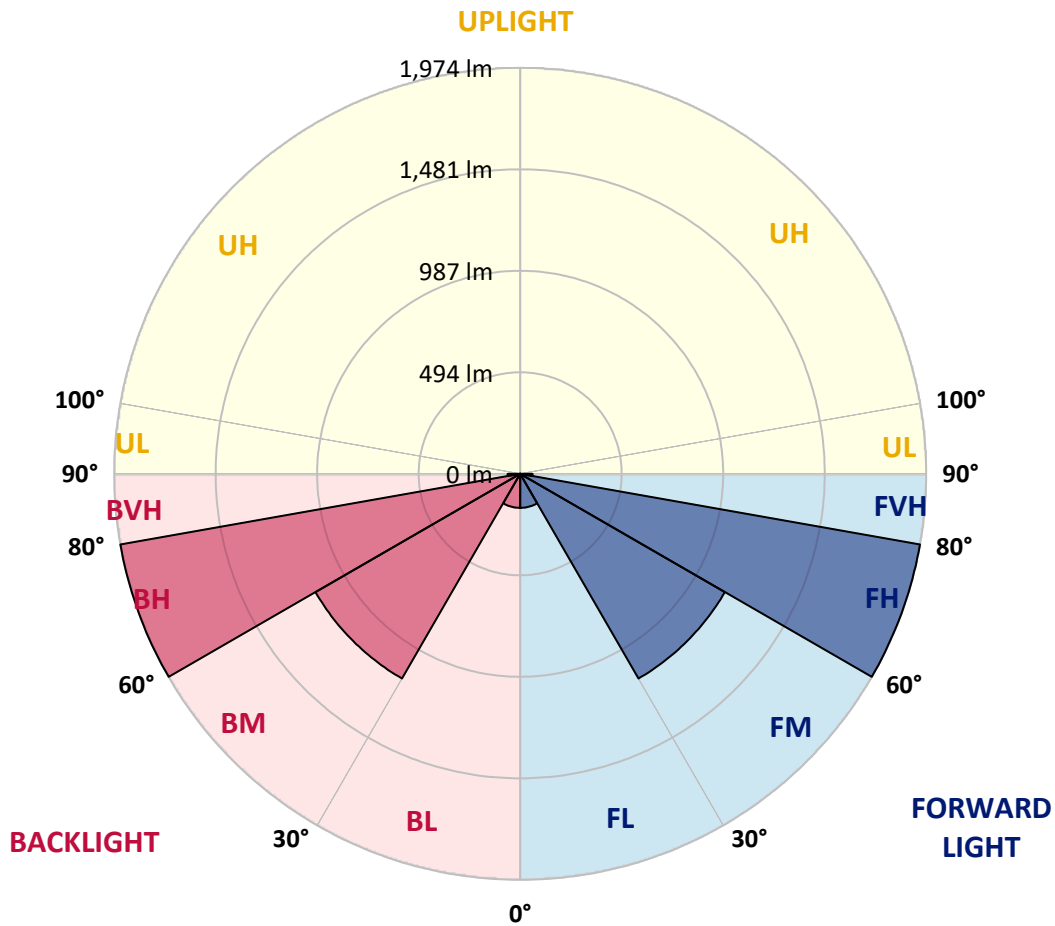
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 165.6 | 2.5 | | | |
| FM (30°-60°) | 1149.2 | 17.2 | | | |
| FH (60°-80°) | 1974.1 | 29.5 | | | G2/5000 |
| FVH (80°-90°) | 60.6 | 0.9 | | | G1/100 |
| BL (0°-30°) | 165.6 | 2.5 | B1/500 | | |
| BM (30°-60°) | 1149.2 | 17.2 | B2/2500 | | |
| BH (60°-80°) | 1974.1 | 29.5 | B3/2500 | | G2/5000 |
| BVH (80°-90°) | 60.6 | 0.9 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 | 181.1 |
| 2.5° | 220.4 | 217.0 | 206.3 | 206.9 | 211.8 | 212.3 | 212.8 | 206.3 | 204.8 | 218.0 | 218.8 |
| 5° | 279.9 | 272.1 | 264.3 | 261.2 | 256.5 | 243.5 | 257.8 | 259.4 | 262.5 | 272.6 | 277.3 |
| 7.5° | 319.7 | 310.0 | 299.4 | 292.9 | 280.2 | 269.5 | 281.2 | 290.8 | 297.0 | 308.5 | 315.0 |
| 10° | 327.2 | 321.5 | 321.0 | 309.5 | 307.2 | 311.1 | 310.3 | 310.6 | 319.9 | 320.2 | 324.1 |
| 12.5° | 350.8 | 355.0 | 346.9 | 343.0 | 345.4 | 355.0 | 347.2 | 343.8 | 346.2 | 356.8 | 352.4 |
| 15° | 381.8 | 386.7 | 374.5 | 368.2 | 362.0 | 371.1 | 363.1 | 369.0 | 376.6 | 384.4 | 380.5 |
| 17.5° | 416.1 | 416.3 | 399.7 | 376.6 | 382.0 | 383.3 | 380.5 | 375.5 | 397.1 | 415.8 | 414.0 |
| 20° | 434.8 | 434.5 | 405.9 | 374.5 | 390.6 | 393.5 | 390.9 | 374.0 | 406.5 | 432.2 | 431.4 |
| 22.5° | 454.0 | 448.3 | 414.0 | 388.5 | 394.5 | 396.8 | 390.9 | 389.3 | 414.0 | 449.9 | 449.6 |
| 25° | 464.4 | 469.3 | 431.7 | 415.8 | 410.9 | 405.4 | 410.6 | 413.2 | 436.9 | 471.9 | 461.8 |
| 27.5° | 496.9 | 488.8 | 436.9 | 435.3 | 424.9 | 403.3 | 421.3 | 434.0 | 435.3 | 492.0 | 502.3 |
| 30° | 526.3 | 529.4 | 460.2 | 462.6 | 443.6 | 416.3 | 444.1 | 464.4 | 468.3 | 529.9 | 528.9 |
| 32.5° | 557.4 | 558.7 | 501.8 | 477.7 | 469.6 | 468.6 | 457.9 | 475.6 | 506.2 | 555.6 | 557.7 |
| 35° | 604.7 | 615.4 | 539.0 | 506.5 | 496.4 | 486.0 | 495.3 | 511.2 | 539.8 | 613.8 | 608.6 |
| 37.5° | 713.1 | 696.2 | 619.8 | 552.5 | 545.7 | 541.6 | 549.1 | 560.6 | 619.0 | 698.0 | 722.2 |
| 40° | 788.7 | 780.7 | 676.7 | 628.6 | 586.0 | 608.4 | 590.7 | 634.9 | 683.2 | 781.2 | 796.8 |
| 42.5° | 905.9 | 870.1 | 763.3 | 703.8 | 659.6 | 643.7 | 653.6 | 711.3 | 772.9 | 882.0 | 912.7 |
| 45° | 1018.5 | 963.1 | 871.6 | 819.1 | 752.1 | 735.5 | 748.7 | 816.5 | 887.7 | 974.0 | 1028.1 |
| 47.5° | 1133.3 | 1076.2 | 975.6 | 899.7 | 844.9 | 894.5 | 851.1 | 915.6 | 986.5 | 1086.8 | 1134.9 |
| 50° | 1252.6 | 1189.2 | 1089.9 | 1007.3 | 1002.6 | 1046.5 | 994.6 | 1027.6 | 1093.3 | 1197.3 | 1253.9 |
| 52.5° | 1389.6 | 1321.2 | 1222.0 | 1166.1 | 1177.0 | 1174.1 | 1163.7 | 1157.8 | 1222.5 | 1324.6 | 1391.9 |
| 55° | 1552.5 | 1478.7 | 1399.5 | 1373.7 | 1403.9 | 1371.4 | 1386.7 | 1384.6 | 1394.0 | 1467.0 | 1545.8 |
| 57.5° | 1749.5 | 1666.1 | 1586.6 | 1580.8 | 1619.6 | 1650.2 | 1622.9 | 1583.7 | 1567.3 | 1638.3 | 1728.5 |
| 60° | 1997.7 | 1895.3 | 1808.0 | 1790.1 | 1900.5 | 1900.2 | 1875.6 | 1787.7 | 1781.5 | 1861.8 | 1970.4 |
| 62.5° | 2271.9 | 2147.1 | 2051.7 | 2023.2 | 2196.2 | 2215.7 | 2138.8 | 1981.3 | 2013.5 | 2078.3 | 2207.2 |
| 65° | 2504.7 | 2354.8 | 2265.9 | 2258.1 | 2469.6 | 2555.7 | 2385.7 | 2170.3 | 2180.6 | 2234.4 | 2374.0 |
| 67.5° | 2656.5 | 2475.9 | 2405.2 | 2442.9 | 2705.9 | 2759.7 | 2601.7 | 2296.6 | 2259.7 | 2282.0 | 2448.8 |
| 70° | 2603.2 | 2404.7 | 2353.7 | 2445.2 | 2766.9 | 2848.3 | 2648.2 | 2261.2 | 2182.7 | 2183.8 | 2377.6 |
| 72.5° | 2199.6 | 2010.7 | 2034.9 | 2202.7 | 2622.4 | 2736.5 | 2433.0 | 2042.4 | 1881.8 | 1877.9 | 2053.8 |
| 75° | 1454.5 | 1328.2 | 1423.6 | 1685.3 | 2180.1 | 2413.5 | 2015.9 | 1600.9 | 1399.5 | 1334.0 | 1469.9 |
| 77.5° | 636.2 | 620.1 | 700.4 | 996.1 | 1486.3 | 1739.4 | 1444.2 | 1045.8 | 761.2 | 633.1 | 691.5 |
| 80° | 170.5 | 166.8 | 209.5 | 377.9 | 723.5 | 957.9 | 781.5 | 417.1 | 217.8 | 158.5 | 168.1 |
| 82.5° | 62.1 | 63.7 | 77.7 | 105.8 | 238.3 | 403.3 | 259.6 | 121.9 | 82.4 | 67.6 | 67.6 |
| 85° | 27.0 | 26.2 | 37.7 | 42.4 | 65.0 | 91.2 | 74.6 | 51.7 | 41.6 | 31.2 | 29.9 |
| 87.5° | 7.3 | 9.1 | 12.7 | 13.3 | 16.9 | 13.8 | 19.8 | 18.2 | 15.6 | 10.9 | 8.8 |
| 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)