

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: McGRAW-EDISON

Report Number: P821125

Luminaire Tested: **TT-D1-830-24VDC-RW**

Issue Date: 10/15/2020



Test Information

Test Method: LM-79-08
Report Number: P821125
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-981-1)
Test Lab: INNOVATION CENTER
Issue Date: 10/15/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D1-830-24VDC-RW
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
3000K, 80 CRI LEDS AND RECTANGULAR DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

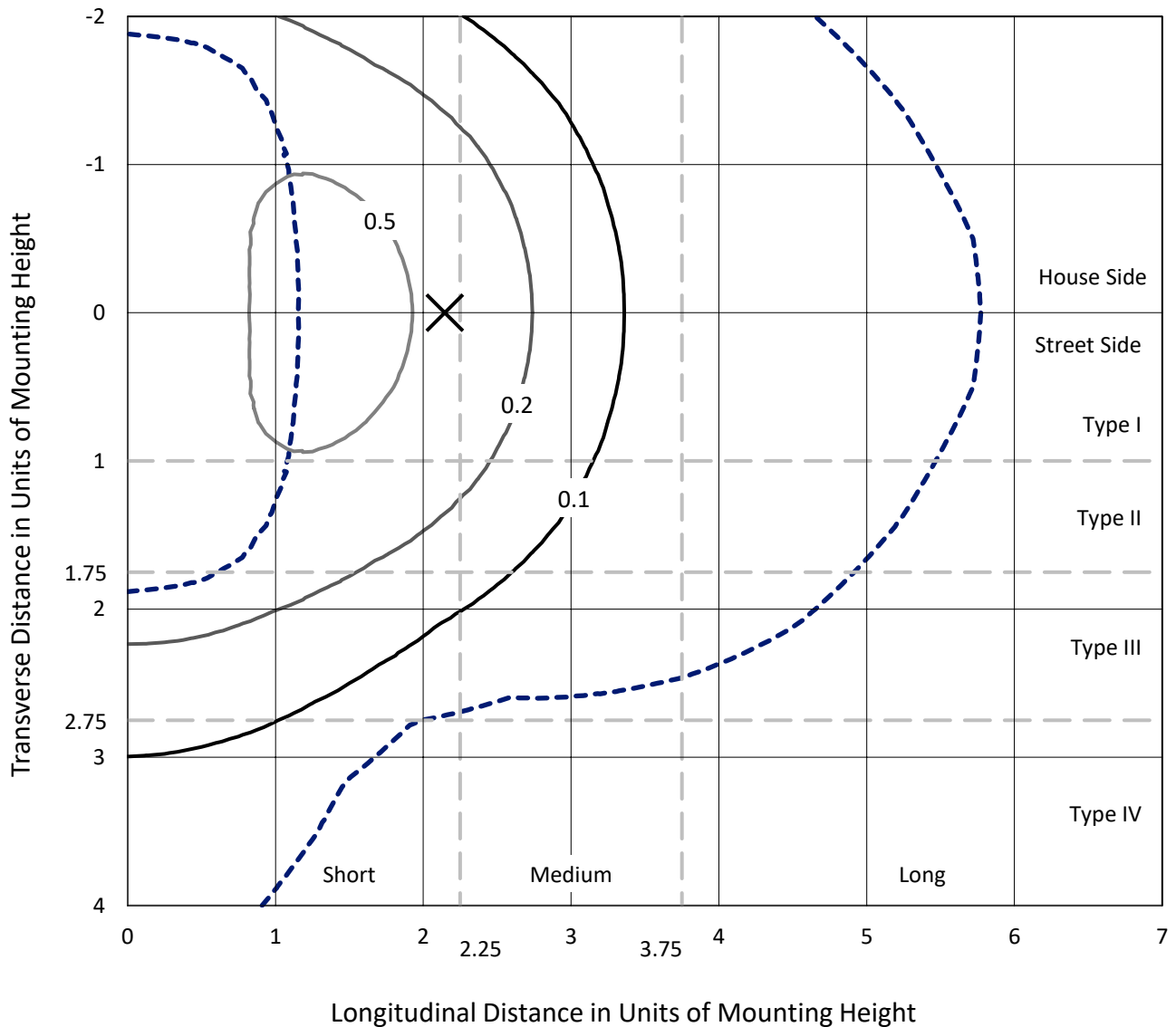
Lumens per Lamp: N/A
Luminaire Lumens: 2757 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 28
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: 25 FT

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Iso-Footcandle Lines of Horizontal Illumination

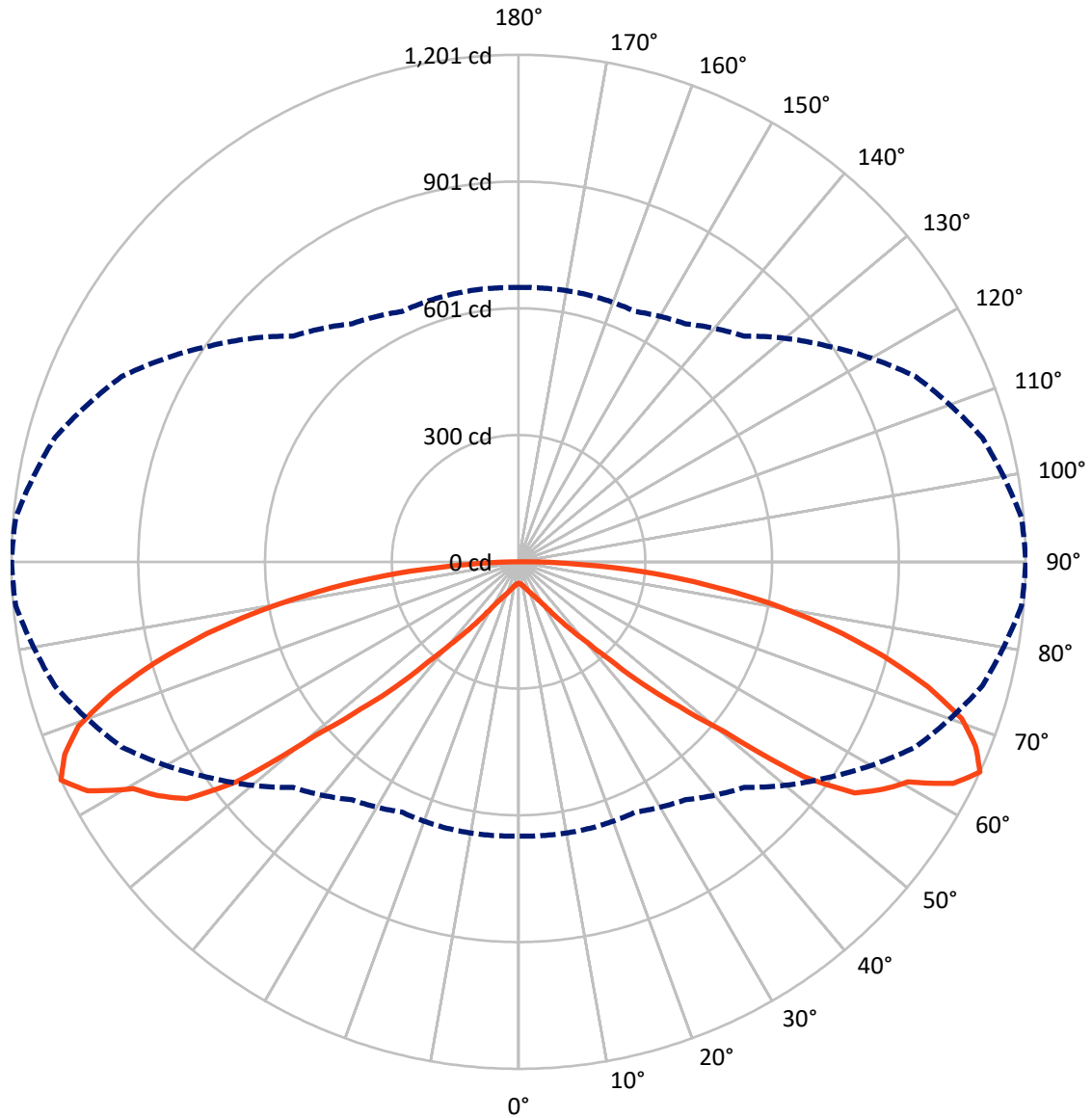
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 0.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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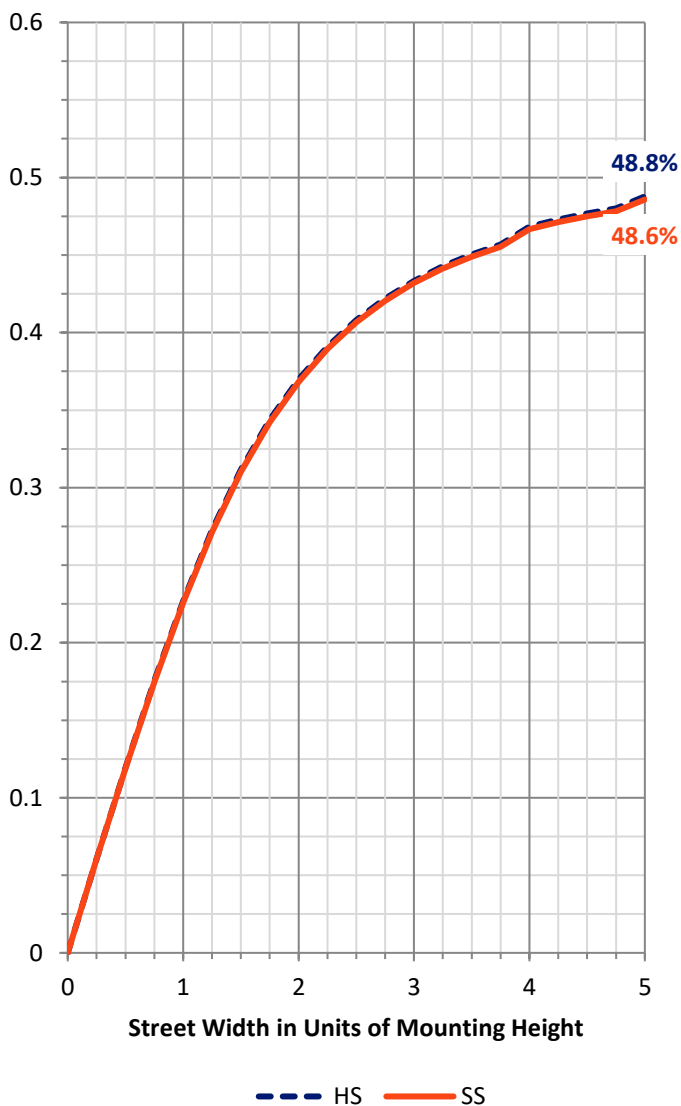
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1378.5 | 0.0 | 1378.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 1378.5 | 0.0 | 1378.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 2757.0 | 0.0 | 2757.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 5.3 | 0.2 |
| 10°-20° | 19.7 | 0.7 |
| 20°-30° | 45.4 | 1.6 |
| 30°-40° | 102.7 | 3.7 |
| 40°-50° | 250.2 | 9.1 |
| 50°-60° | 562.7 | 20.4 |
| 60°-70° | 822.3 | 29.8 |
| 70°-80° | 716.6 | 26.0 |
| 80°-90° | 232.1 | 8.4 |
| 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° | 2757.0 | 100.0 |
| 0°-180° | 2757.0 | 100.0 |

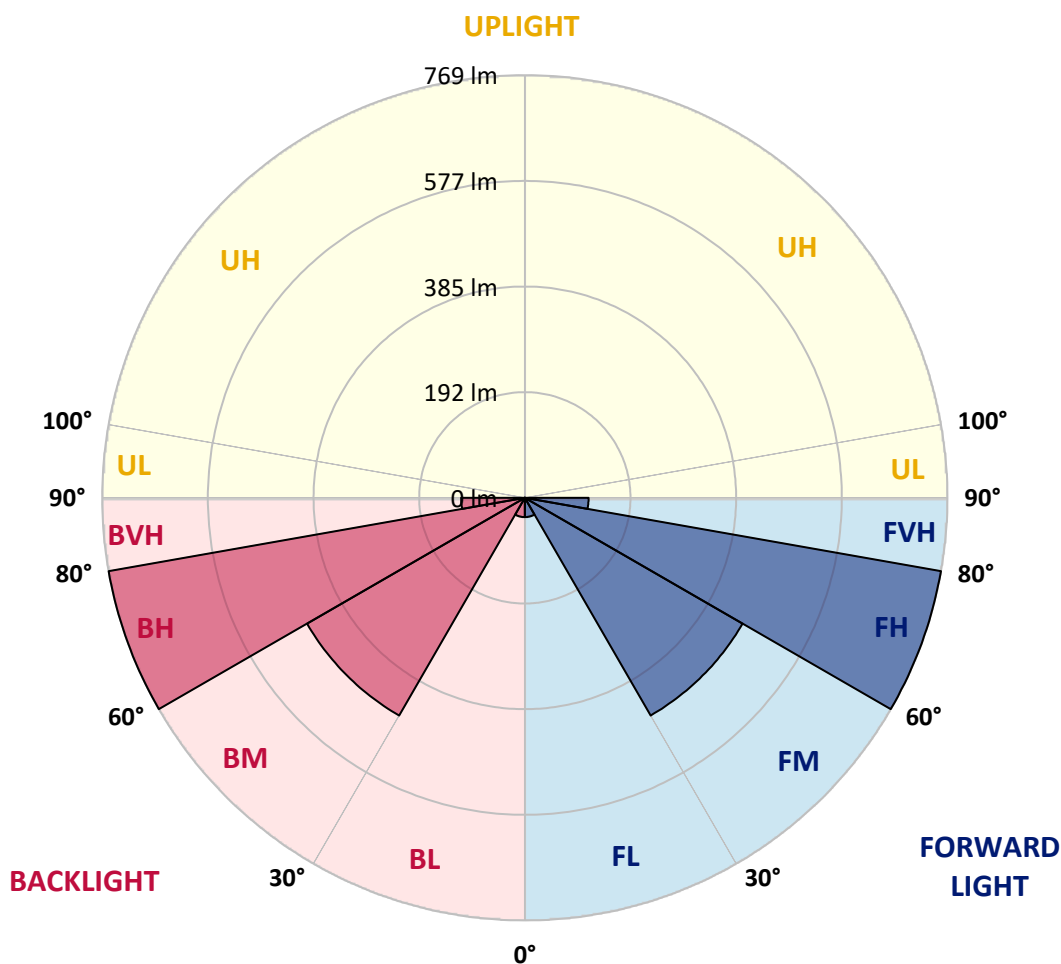


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 35.2 | 1.3 | | | |
| FM (30°-60°) | 457.8 | 16.6 | | | |
| FH (60°-80°) | 769.5 | 27.9 | | | G1/1800 |
| FVH (80°-90°) | 116.1 | 4.2 | | | G2/225 |
| BL (0°-30°) | 35.2 | 1.3 | B0/110 | | |
| BM (30°-60°) | 457.8 | 16.6 | B1/1000 | | |
| BH (60°-80°) | 769.5 | 27.9 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 116.1 | 4.2 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0° | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 | 50.4 |
| 2.5° | 51.0 | 51.0 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 | 51.7 |
| 5° | 53.0 | 53.0 | 53.0 | 53.0 | 53.6 | 53.6 | 53.0 | 53.0 | 53.0 | 53.0 | 53.0 |
| 7.5° | 56.3 | 55.6 | 56.3 | 56.3 | 56.3 | 55.6 | 55.6 | 55.6 | 54.9 | 54.9 | 54.9 |
| 10° | 59.5 | 59.5 | 60.2 | 59.5 | 59.5 | 58.9 | 58.9 | 58.9 | 58.2 | 58.2 | 58.2 |
| 12.5° | 64.1 | 64.1 | 64.1 | 64.1 | 63.5 | 63.5 | 62.8 | 62.1 | 61.5 | 61.5 | 61.5 |
| 15° | 70.0 | 69.3 | 69.3 | 68.7 | 68.0 | 67.4 | 66.7 | 66.7 | 66.1 | 66.1 | 66.1 |
| 17.5° | 75.9 | 75.9 | 75.2 | 74.6 | 73.3 | 72.6 | 72.6 | 72.0 | 71.3 | 71.3 | 71.3 |
| 20° | 83.1 | 83.1 | 82.4 | 81.1 | 79.8 | 79.2 | 78.5 | 78.5 | 77.8 | 77.8 | 77.8 |
| 22.5° | 91.6 | 90.9 | 89.6 | 88.3 | 87.0 | 86.3 | 85.7 | 85.0 | 85.0 | 85.0 | 85.0 |
| 25° | 100.7 | 100.1 | 99.4 | 97.5 | 95.5 | 94.9 | 93.5 | 93.5 | 92.9 | 93.5 | 93.5 |
| 27.5° | 111.9 | 111.2 | 109.9 | 107.9 | 105.3 | 104.0 | 103.4 | 103.4 | 104.0 | 104.0 | 104.7 |
| 30° | 125.6 | 124.3 | 123.0 | 120.4 | 117.7 | 115.8 | 115.8 | 116.4 | 118.4 | 119.7 | 119.7 |
| 32.5° | 142.0 | 141.3 | 139.3 | 136.7 | 132.1 | 130.8 | 132.1 | 136.1 | 138.7 | 140.6 | 142.0 |
| 35° | 160.9 | 160.3 | 157.7 | 153.1 | 149.8 | 149.1 | 153.1 | 159.6 | 168.1 | 170.7 | 172.0 |
| 37.5° | 181.9 | 182.5 | 179.2 | 174.0 | 170.7 | 172.0 | 179.9 | 192.3 | 200.8 | 206.7 | 208.0 |
| 40° | 208.0 | 209.3 | 205.4 | 199.5 | 196.2 | 201.5 | 213.9 | 228.3 | 243.3 | 250.5 | 252.5 |
| 42.5° | 238.8 | 240.7 | 235.5 | 229.6 | 227.6 | 236.2 | 253.8 | 277.4 | 304.2 | 312.7 | 316.0 |
| 45° | 276.7 | 278.0 | 271.5 | 266.2 | 264.9 | 280.0 | 310.1 | 349.3 | 391.8 | 411.5 | 414.7 |
| 47.5° | 321.8 | 321.2 | 315.3 | 308.8 | 310.1 | 331.7 | 376.8 | 429.8 | 474.9 | 505.0 | 511.6 |
| 50° | 373.5 | 370.3 | 365.7 | 357.8 | 366.3 | 397.7 | 454.6 | 518.8 | 594.6 | 621.5 | 633.2 |
| 52.5° | 425.2 | 419.3 | 415.4 | 410.2 | 425.2 | 465.8 | 545.6 | 657.4 | 771.9 | 833.4 | 845.8 |
| 55° | 471.7 | 467.1 | 465.1 | 465.8 | 489.3 | 547.5 | 652.2 | 795.5 | 906.0 | 957.0 | 966.2 |
| 57.5° | 517.4 | 514.8 | 512.9 | 516.8 | 554.1 | 630.0 | 747.7 | 881.8 | 972.7 | 1010.7 | 1017.2 |
| 60° | 560.6 | 563.2 | 561.9 | 573.7 | 618.8 | 695.4 | 797.4 | 929.6 | 1017.2 | 1051.9 | 1059.1 |
| 62.5° | 608.4 | 610.3 | 610.3 | 623.4 | 660.1 | 727.4 | 831.4 | 985.8 | 1097.0 | 1148.1 | 1155.9 |
| 65° | 649.6 | 650.9 | 653.5 | 654.2 | 688.2 | 755.6 | 891.6 | 1037.5 | 1136.9 | 1195.8 | 1201.0 |
| 67.5° | 680.3 | 681.6 | 678.4 | 675.1 | 701.3 | 762.1 | 887.0 | 1031.0 | 1119.3 | 1163.8 | 1167.7 |
| 70° | 705.2 | 699.3 | 690.1 | 673.8 | 682.3 | 728.1 | 849.1 | 978.6 | 1067.6 | 1107.5 | 1113.4 |
| 72.5° | 708.5 | 703.2 | 674.4 | 637.8 | 627.3 | 667.2 | 782.4 | 898.8 | 975.4 | 1013.3 | 1014.0 |
| 75° | 688.8 | 675.1 | 627.3 | 572.4 | 552.8 | 590.7 | 689.5 | 795.5 | 857.0 | 889.0 | 892.3 |
| 77.5° | 622.8 | 609.7 | 549.5 | 486.7 | 464.5 | 497.2 | 580.9 | 666.6 | 725.5 | 756.9 | 758.8 |
| 80° | 505.7 | 501.1 | 446.1 | 388.6 | 361.8 | 380.7 | 454.0 | 521.4 | 569.1 | 606.4 | 609.7 |
| 82.5° | 372.9 | 368.9 | 327.1 | 276.7 | 255.1 | 270.8 | 323.2 | 372.9 | 417.4 | 447.4 | 449.4 |
| 85° | 232.9 | 225.0 | 198.9 | 163.5 | 149.1 | 159.6 | 194.3 | 227.6 | 267.6 | 291.1 | 292.4 |
| 87.5° | 77.8 | 74.6 | 64.1 | 53.0 | 44.5 | 46.4 | 56.9 | 69.3 | 101.4 | 111.9 | 118.4 |
| 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)