

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: P233973

Luminaire Tested: **CTN-10-4-D-E1-T1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-24)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-4-D-E1-T1
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE I OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 46037 lumens
Efficiency: N/A
Efficacy: 149.5 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type I - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G5

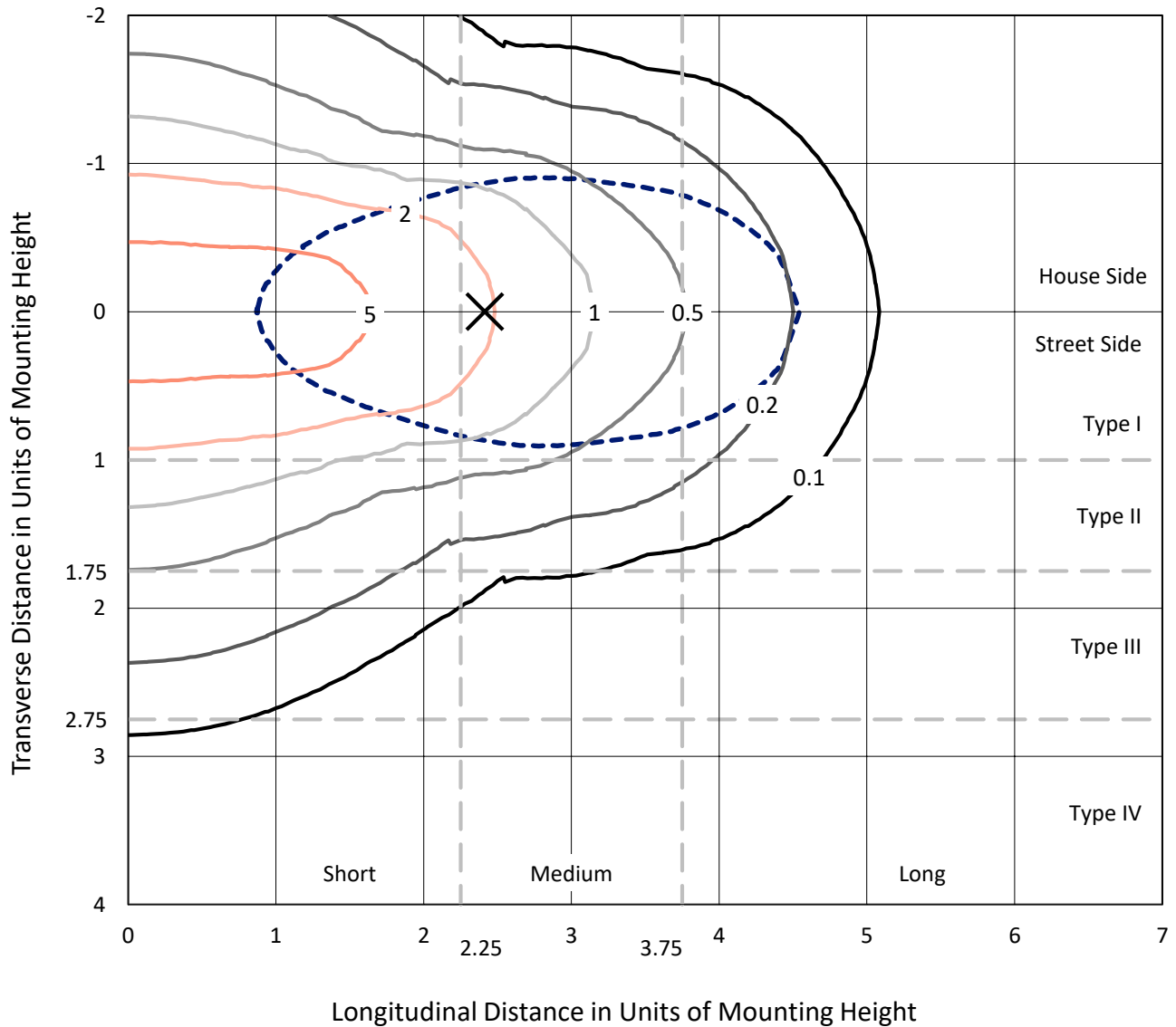
Input Watts (W): 308
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

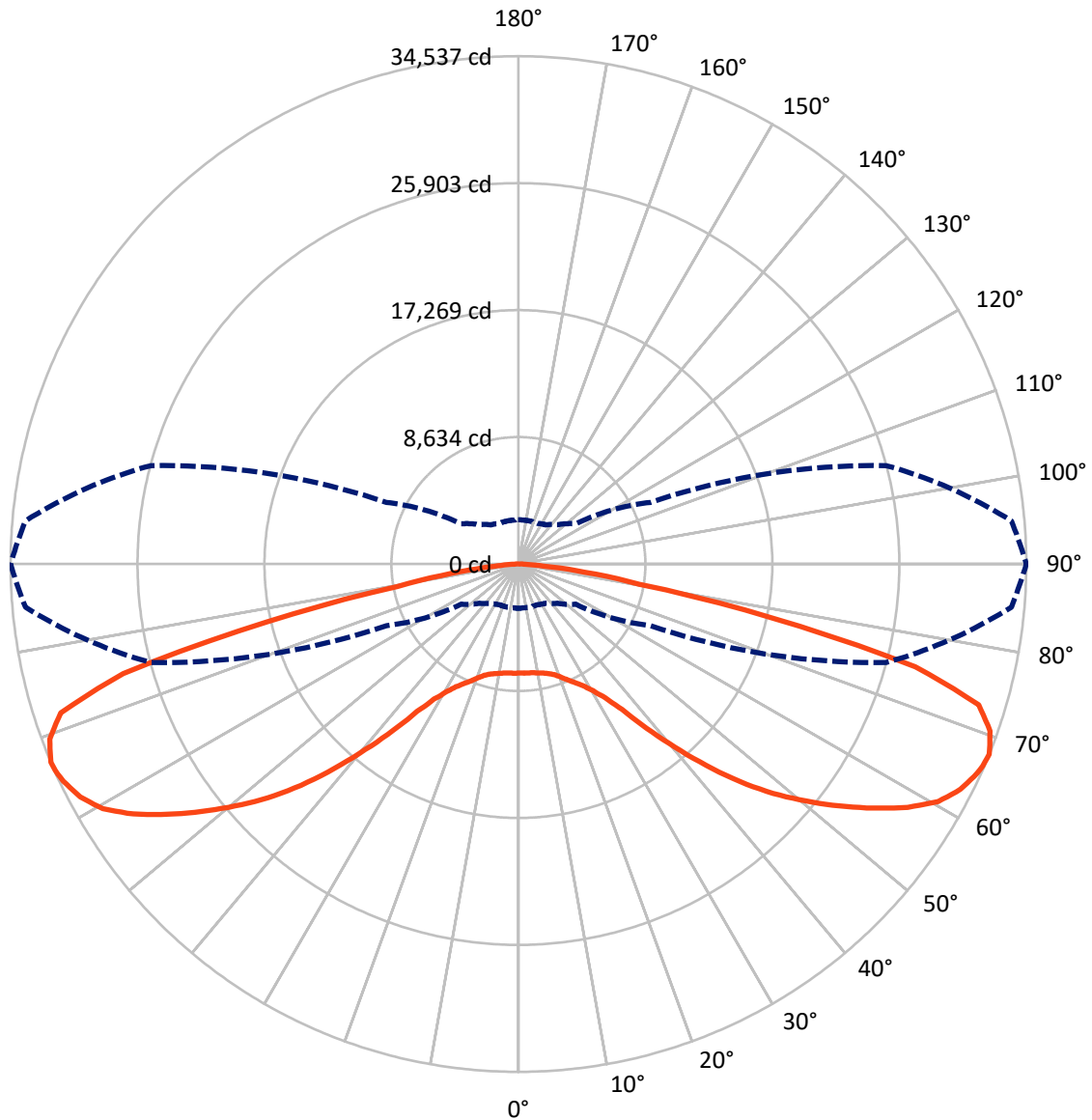
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.3 fc
 Type I - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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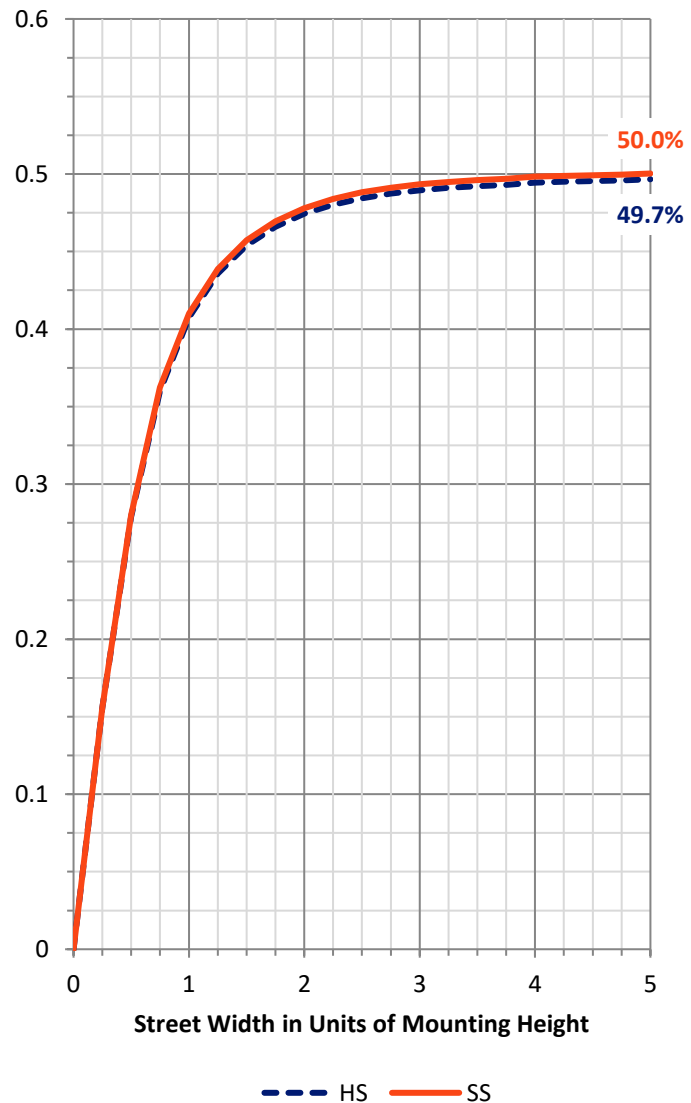
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 23018.5 | 0.0 | 23018.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 23018.5 | 0.0 | 23018.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 46037.0 | 0.0 | 46037.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 704.7 | 1.5 |
| 10°-20° | 2096.4 | 4.6 |
| 20°-30° | 3468.9 | 7.5 |
| 30°-40° | 5082.5 | 11.0 |
| 40°-50° | 7477.4 | 16.2 |
| 50°-60° | 9696.4 | 21.1 |
| 60°-70° | 10305.3 | 22.4 |
| 70°-80° | 6361.5 | 13.8 |
| 80°-90° | 843.8 | 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° | 46037.0 | 100.0 |
| 0°-180° | 46037.0 | 100.0 |



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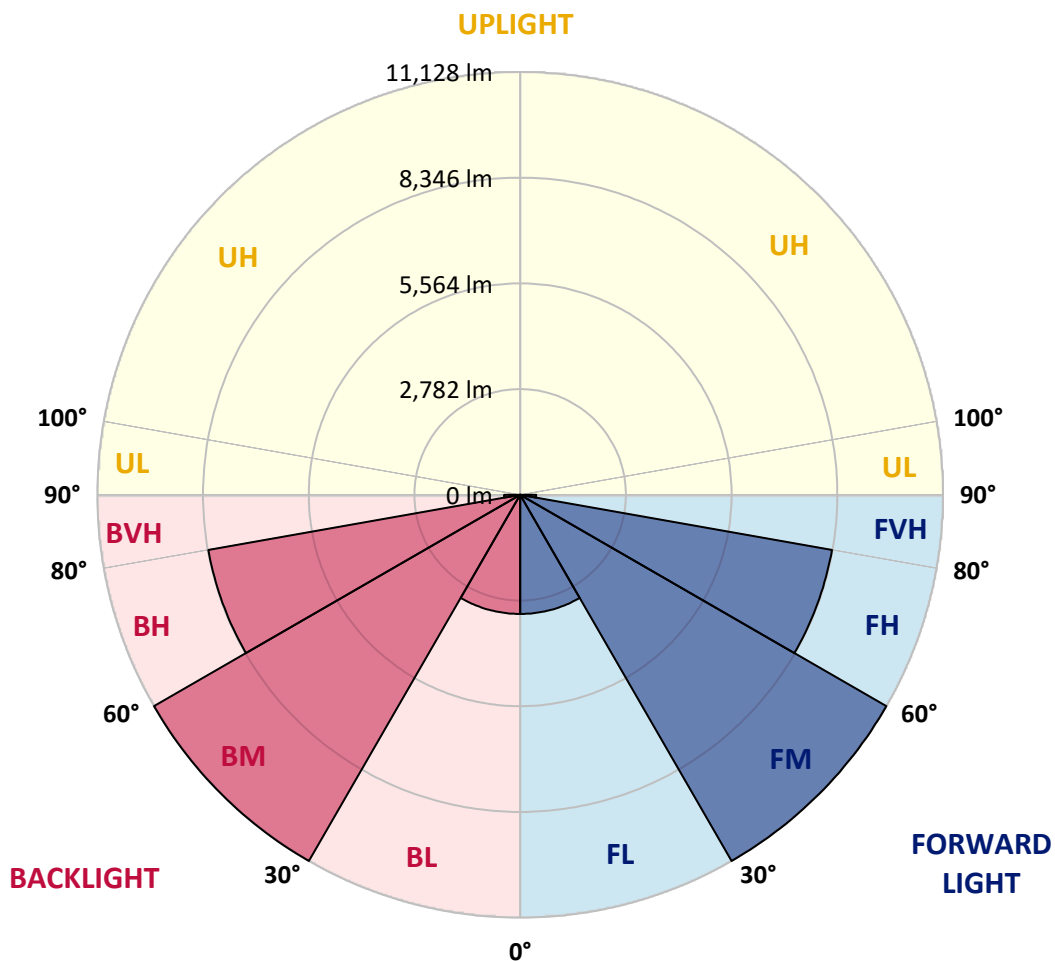
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 3135.0 | 6.8 | | | |
| FM (30°-60°) | 11128.2 | 24.2 | | | |
| FH (60°-80°) | 8333.4 | 18.1 | | | G4/12000 |
| FVH (80°-90°) | 421.9 | 0.9 | | | G3/500 |
| BL (0°-30°) | 3135.0 | 6.8 | B4/5000 | | |
| BM (30°-60°) | 11128.2 | 24.2 | B5 | | |
| BH (60°-80°) | 8333.4 | 18.1 | B5 | | G5 |
| BVH (80°-90°) | 421.9 | 0.9 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5

Type I Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 | 7413.9 |
| 2.5° | 7434.6 | 7411.2 | 7420.8 | 7455.3 | 7329.8 | 7391.8 | 7369.8 | 7425.0 | 7396.0 | 7420.8 | 7433.2 |
| 5° | 7382.2 | 7353.2 | 7367.0 | 7431.8 | 7317.4 | 7380.8 | 7364.3 | 7426.3 | 7389.1 | 7423.6 | 7437.4 |
| 7.5° | 7336.7 | 7306.3 | 7331.2 | 7385.0 | 7298.1 | 7368.4 | 7354.6 | 7438.7 | 7408.4 | 7452.5 | 7466.3 |
| 10° | 7307.7 | 7274.6 | 7298.1 | 7357.4 | 7264.9 | 7375.3 | 7362.9 | 7474.6 | 7459.4 | 7520.1 | 7536.7 |
| 12.5° | 7236.0 | 7201.5 | 7218.1 | 7296.7 | 7255.3 | 7369.8 | 7400.1 | 7528.4 | 7524.3 | 7597.4 | 7615.3 |
| 15° | 7107.7 | 7073.2 | 7095.3 | 7200.1 | 7215.3 | 7373.9 | 7467.7 | 7619.4 | 7644.3 | 7717.4 | 7732.5 |
| 17.5° | 6946.3 | 6921.5 | 6954.6 | 7093.9 | 7189.1 | 7430.5 | 7565.6 | 7758.8 | 7819.4 | 7893.9 | 7914.6 |
| 20° | 6725.6 | 6711.8 | 6771.1 | 6961.5 | 7143.6 | 7471.8 | 7682.9 | 7954.6 | 8065.0 | 8186.3 | 8201.5 |
| 22.5° | 6424.9 | 6408.4 | 6532.5 | 6800.1 | 7062.2 | 7481.5 | 7797.4 | 8157.4 | 8361.5 | 8517.4 | 8557.4 |
| 25° | 6087.0 | 6081.5 | 6251.1 | 6602.9 | 6951.8 | 7474.6 | 7909.1 | 8373.9 | 8685.7 | 8891.2 | 8935.3 |
| 27.5° | 5754.6 | 5771.1 | 5976.7 | 6391.8 | 6860.8 | 7489.8 | 8037.4 | 8651.2 | 9091.2 | 9347.7 | 9367.1 |
| 30° | 5471.8 | 5485.6 | 5707.7 | 6183.6 | 6773.9 | 7507.7 | 8196.0 | 8982.2 | 9596.0 | 9942.2 | 9998.8 |
| 32.5° | 5205.6 | 5237.3 | 5463.5 | 5957.3 | 6677.4 | 7542.2 | 8401.5 | 9414.0 | 10215.3 | 10761.6 | 10831.9 |
| 35° | 4986.3 | 5013.9 | 5234.6 | 5727.0 | 6524.2 | 7569.8 | 8673.2 | 9960.2 | 11138.1 | 12047.1 | 12156.1 |
| 37.5° | 4791.8 | 4824.9 | 5015.3 | 5514.6 | 6342.2 | 7579.4 | 8943.6 | 10633.3 | 12387.8 | 13834.7 | 14174.0 |
| 40° | 4651.1 | 4677.3 | 4841.5 | 5302.2 | 6146.3 | 7535.3 | 9252.6 | 11386.4 | 13792.0 | 15968.5 | 16341.0 |
| 42.5° | 4535.2 | 4557.3 | 4692.5 | 5093.9 | 5925.6 | 7448.4 | 9540.8 | 12136.8 | 15276.1 | 18229.3 | 18714.8 |
| 45° | 4418.0 | 4423.5 | 4553.2 | 4914.6 | 5702.2 | 7310.5 | 9757.4 | 12855.4 | 16838.9 | 20535.5 | 21103.8 |
| 47.5° | 4313.2 | 4306.3 | 4408.3 | 4738.0 | 5462.2 | 7078.7 | 9841.5 | 13451.3 | 18357.5 | 22696.9 | 23317.6 |
| 50° | 4215.2 | 4186.3 | 4274.6 | 4569.7 | 5229.1 | 6746.3 | 9735.3 | 13863.7 | 19954.8 | 24785.2 | 25335.6 |
| 52.5° | 4069.0 | 4055.2 | 4139.4 | 4404.2 | 4995.9 | 6349.1 | 9385.0 | 14081.6 | 21658.3 | 26763.2 | 27338.4 |
| 55° | 3938.0 | 3928.3 | 4015.2 | 4235.9 | 4767.0 | 5944.9 | 8780.8 | 14022.3 | 23336.9 | 28670.8 | 29308.1 |
| 57.5° | 3793.2 | 3786.3 | 3867.7 | 4052.5 | 4514.6 | 5569.7 | 8033.2 | 13638.8 | 24836.3 | 30317.7 | 31218.5 |
| 60° | 3651.1 | 3655.2 | 3707.6 | 3866.3 | 4258.0 | 5155.9 | 7180.8 | 12971.3 | 26032.2 | 31808.8 | 32792.3 |
| 62.5° | 3485.6 | 3481.4 | 3520.1 | 3652.5 | 3964.2 | 4709.0 | 6340.8 | 12045.7 | 26732.9 | 33110.9 | 33739.9 |
| 65° | 3262.1 | 3247.0 | 3291.1 | 3375.2 | 3608.3 | 4251.1 | 5513.2 | 10925.7 | 26750.8 | 33757.8 | 34293.0 |
| 66° | 3166.9 | 3150.4 | 3190.4 | 3249.7 | 3469.0 | 4066.3 | 5208.4 | 10451.2 | 26476.3 | 33777.1 | 34442.0 |
| 67.5° | 3019.4 | 3000.1 | 3026.3 | 3053.8 | 3251.1 | 3771.1 | 4761.5 | 9913.3 | 25874.9 | 33655.7 | 34537.1 |
| 70° | 2652.5 | 2655.2 | 2682.8 | 2673.1 | 2773.8 | 3114.5 | 3932.5 | 8914.6 | 22974.2 | 33164.7 | 34026.8 |
| 72.5° | 2064.9 | 2041.4 | 2001.4 | 1962.8 | 2011.1 | 2310.4 | 2978.0 | 7481.5 | 18812.7 | 31047.4 | 32723.3 |
| 75° | 1332.4 | 1328.3 | 1326.9 | 1373.8 | 1380.7 | 1583.5 | 2300.7 | 6036.0 | 14665.1 | 25479.0 | 27891.5 |
| 77.5° | 833.1 | 826.2 | 885.5 | 1000.0 | 1017.9 | 1023.5 | 1509.0 | 4587.7 | 10601.6 | 16303.7 | 17568.6 |
| 80° | 597.3 | 597.3 | 601.4 | 616.6 | 713.1 | 728.3 | 1042.8 | 2880.0 | 6029.1 | 7947.7 | 8350.5 |
| 82.5° | 452.4 | 445.5 | 446.9 | 453.8 | 462.1 | 496.6 | 627.6 | 1278.6 | 2408.3 | 4027.7 | 4557.3 |
| 85° | 326.9 | 336.6 | 353.1 | 340.7 | 307.6 | 311.7 | 355.9 | 440.0 | 925.5 | 1560.0 | 1686.9 |
| 87.5° | 118.6 | 136.6 | 140.7 | 146.2 | 140.7 | 142.1 | 146.2 | 137.9 | 187.6 | 384.8 | 444.1 |
| 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)