

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: P833186

Luminaire Tested: **TTN-D1-735-U-WQ-SG-UPL2**

Issue Date: 5/15/2024

Test Information

Test Method: LM-79-08
Report Number: P833186
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND
Test Lab: INNOVATION CENTER
Issue Date: 5/15/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TTN-D1-735-U-WQ-SG-UPL2
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH SOLITE GLASS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3509.8 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B1 - U4 - G1

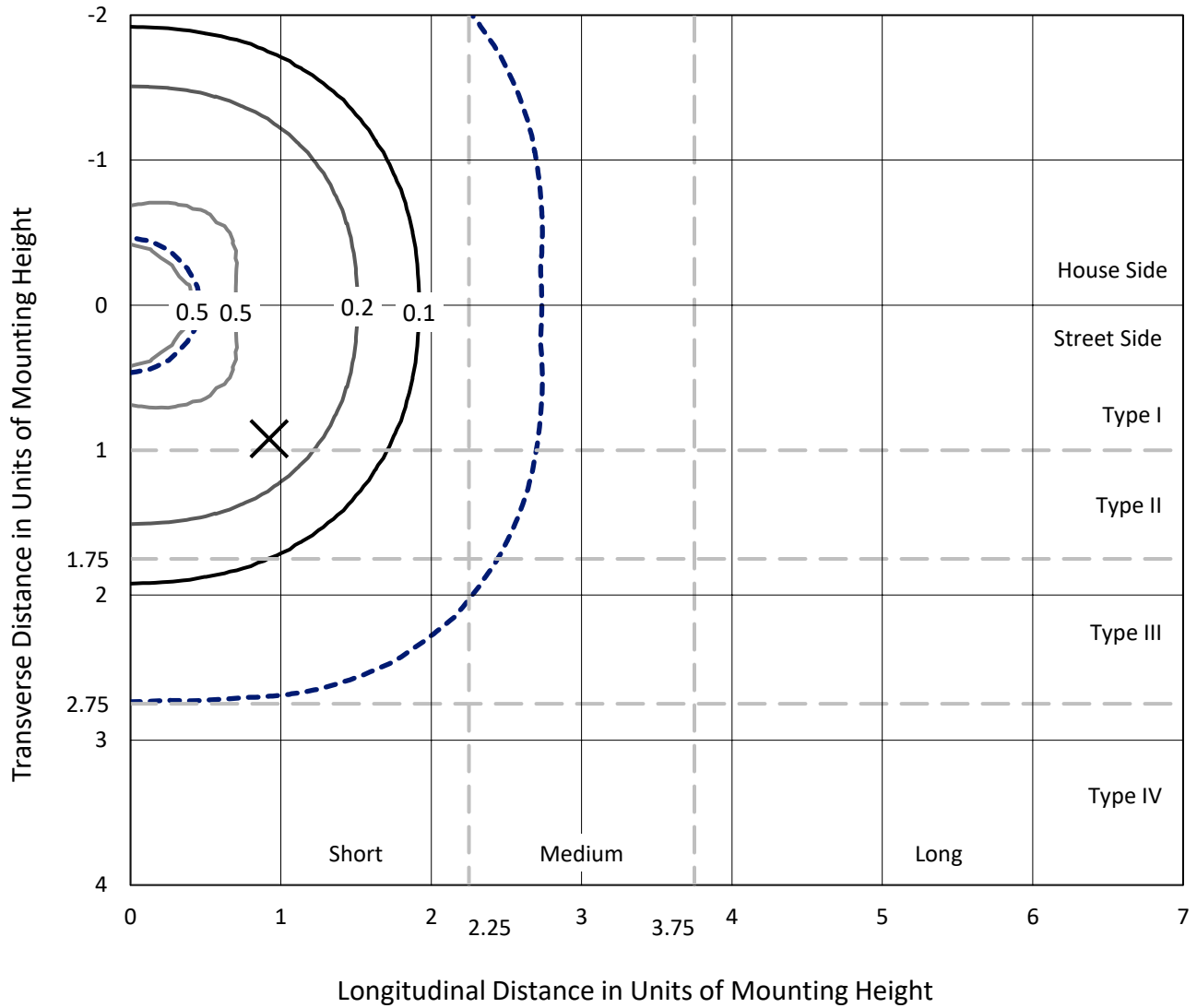
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P833186
 CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

Iso-Footcandle Lines of Horizontal Illumination

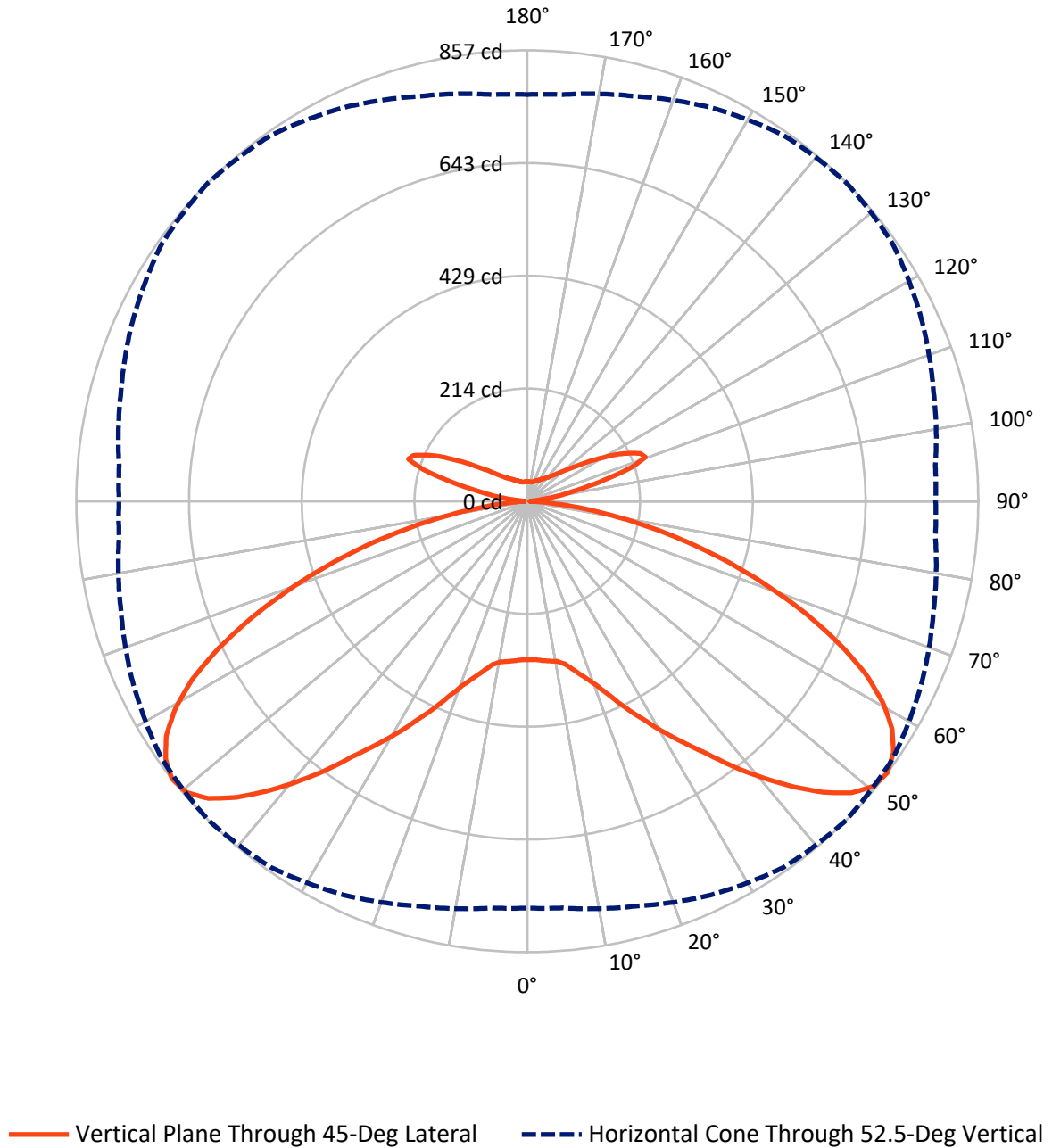
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.5 fc
 Type V - Short - N/A

REPORT NUMBER: P833186
CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

Luminous Intensity Polar Plot



REPORT NUMBER: P833186
 CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

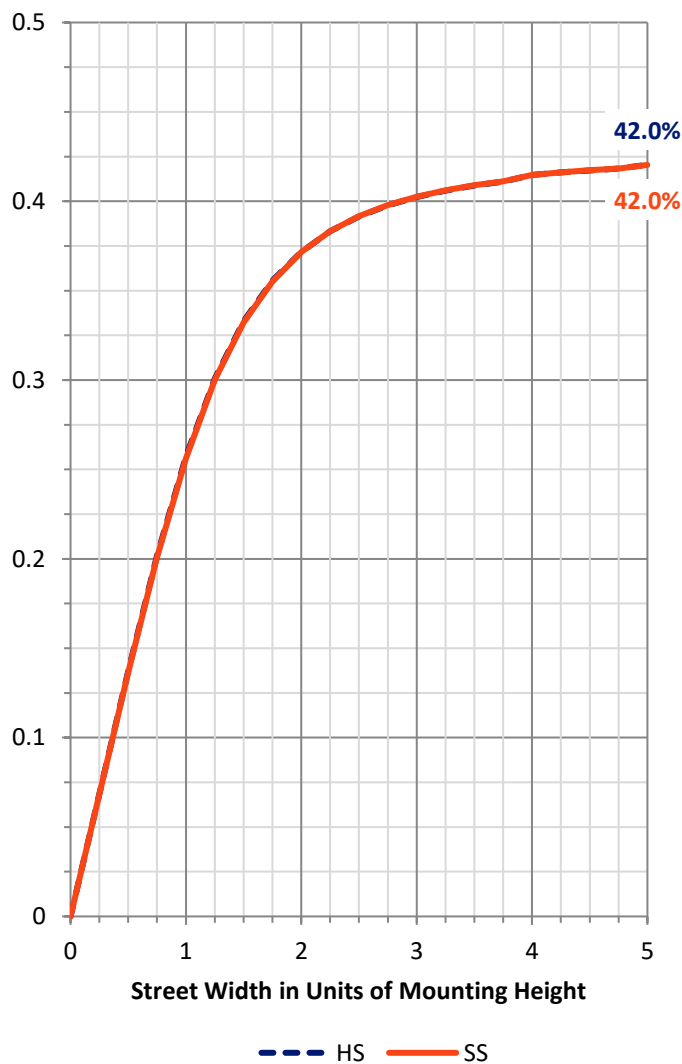
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1483.4 | 271.5 | 1754.9 |
| | % Fixture | 42.3 | 7.7 | 50.0 |
| Street Side | Lumens | 1483.4 | 271.5 | 1754.9 |
| | % Fixture | 42.3 | 7.7 | 50.0 |
| Total | Lumens | 2966.7 | 543.0 | 3509.8 |
| | % Fixture | 84.5 | 15.5 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 29.1 | 0.8 |
| 10°-20° | 95.7 | 2.7 |
| 20°-30° | 202.0 | 5.8 |
| 30°-40° | 369.0 | 10.5 |
| 40°-50° | 587.4 | 16.7 |
| 50°-60° | 710.3 | 20.2 |
| 60°-70° | 597.3 | 17.0 |
| 70°-80° | 316.6 | 9.0 |
| 80°-90° | 59.3 | 1.7 |
| 90°-100° | 12.1 | 0.3 |
| 100°-110° | 123.2 | 3.5 |
| 110°-120° | 180.1 | 5.1 |
| 120°-130° | 104.5 | 3.0 |
| 130°-140° | 55.4 | 1.6 |
| 140°-150° | 32.9 | 0.9 |
| 150°-160° | 20.2 | 0.6 |
| 160°-170° | 11.0 | 0.3 |
| 170°-180° | 3.6 | 0.1 |
| 0°-90° | 2966.7 | 84.5 |
| 0°-180° | 3509.8 | 100.0 |

Coefficient of Utilization

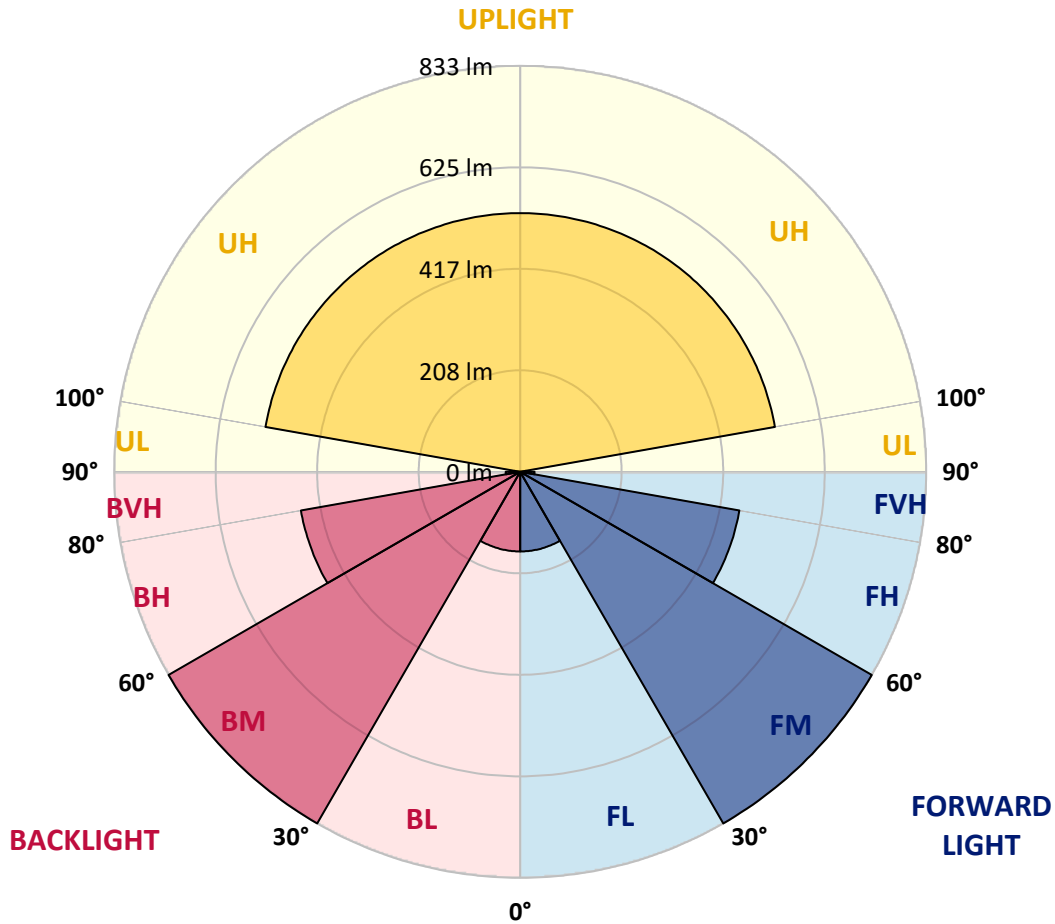


REPORT NUMBER: P833186
 CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|---------|--------|
| | | | B | U | G |
| FL (0°-30°) | 163.4 | 4.7 | | | |
| FM (30°-60°) | 833.4 | 23.7 | | | |
| FH (60°-80°) | 456.9 | 13.0 | | | G0/660 |
| FVH (80°-90°) | 29.7 | 0.8 | | | G1/100 |
| BL (0°-30°) | 163.4 | 4.7 | B1/500 | | |
| BM (30°-60°) | 833.4 | 23.7 | B1/1000 | | |
| BH (60°-80°) | 456.9 | 13.0 | B1/500 | | G0/660 |
| BVH (80°-90°) | 29.7 | 0.8 | | | G1/100 |
| UL (90°-100°) | 12.1 | 0.3 | | U2/50 | |
| UH (100°-180°) | 530.9 | 15.1 | | U4/1000 | |

BUG Rating: B1-U4-G1
 Type V Short





REPORT NUMBER: P833186

CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 |
| 2.5° | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 | 301.5 |
| 5° | 304.2 | 304.2 | 301.5 | 304.2 | 304.2 | 304.2 | 304.2 | 304.2 | 304.2 | 304.2 | 304.2 |
| 7.5° | 304.2 | 304.2 | 304.2 | 306.8 | 306.8 | 306.8 | 306.8 | 304.2 | 304.2 | 304.2 | 304.2 |
| 10° | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 | 309.4 |
| 12.5° | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 |
| 15° | 330.4 | 330.4 | 330.4 | 330.4 | 333.0 | 333.0 | 333.0 | 330.4 | 330.4 | 330.4 | 330.4 |
| 17.5° | 346.1 | 346.1 | 348.7 | 348.7 | 351.4 | 351.4 | 351.4 | 348.7 | 346.1 | 348.7 | 346.1 |
| 20° | 369.7 | 369.7 | 369.7 | 372.3 | 375.0 | 375.0 | 375.0 | 369.7 | 369.7 | 369.7 | 369.7 |
| 22.5° | 395.9 | 395.9 | 395.9 | 398.6 | 401.2 | 401.2 | 401.2 | 395.9 | 395.9 | 395.9 | 395.9 |
| 25° | 427.4 | 427.4 | 427.4 | 430.0 | 432.7 | 435.3 | 435.3 | 430.0 | 427.4 | 427.4 | 424.8 |
| 27.5° | 458.9 | 458.9 | 464.1 | 466.7 | 469.4 | 469.4 | 469.4 | 464.1 | 461.5 | 461.5 | 461.5 |
| 30° | 495.6 | 495.6 | 500.8 | 503.4 | 508.7 | 508.7 | 508.7 | 500.8 | 498.2 | 495.6 | 495.6 |
| 32.5° | 529.7 | 532.3 | 537.5 | 542.8 | 548.0 | 548.0 | 550.6 | 540.2 | 534.9 | 532.3 | 532.3 |
| 35° | 566.4 | 569.0 | 574.2 | 582.1 | 587.4 | 590.0 | 592.6 | 582.1 | 574.2 | 571.6 | 571.6 |
| 37.5° | 608.3 | 611.0 | 618.8 | 626.7 | 637.2 | 642.4 | 645.0 | 629.3 | 616.2 | 611.0 | 611.0 |
| 40° | 655.5 | 658.2 | 666.0 | 676.5 | 687.0 | 692.2 | 694.9 | 679.1 | 666.0 | 660.8 | 658.2 |
| 42.5° | 694.9 | 700.1 | 708.0 | 723.7 | 734.2 | 742.1 | 742.1 | 723.7 | 708.0 | 700.1 | 700.1 |
| 45° | 731.6 | 736.8 | 749.9 | 765.7 | 781.4 | 789.3 | 786.6 | 768.3 | 749.9 | 739.4 | 736.8 |
| 47.5° | 760.4 | 765.7 | 781.4 | 799.8 | 820.7 | 828.6 | 826.0 | 805.0 | 781.4 | 768.3 | 765.7 |
| 50° | 776.2 | 778.8 | 797.1 | 823.4 | 844.3 | 852.2 | 846.9 | 826.0 | 799.8 | 781.4 | 778.8 |
| 52.5° | 773.5 | 776.2 | 797.1 | 826.0 | 849.6 | 857.4 | 849.6 | 826.0 | 799.8 | 778.8 | 776.2 |
| 55° | 757.8 | 760.4 | 781.4 | 812.9 | 836.5 | 844.3 | 836.5 | 812.9 | 784.0 | 763.0 | 760.4 |
| 57.5° | 729.0 | 731.6 | 752.6 | 784.0 | 810.2 | 818.1 | 807.6 | 781.4 | 752.6 | 731.6 | 731.6 |
| 60° | 687.0 | 689.6 | 710.6 | 744.7 | 768.3 | 776.2 | 763.0 | 742.1 | 713.2 | 689.6 | 687.0 |
| 62.5° | 631.9 | 631.9 | 655.5 | 689.6 | 710.6 | 721.1 | 708.0 | 684.4 | 658.2 | 631.9 | 634.6 |
| 65° | 566.4 | 563.8 | 587.4 | 618.8 | 642.4 | 650.3 | 637.2 | 616.2 | 590.0 | 566.4 | 566.4 |
| 67.5° | 498.2 | 498.2 | 516.6 | 542.8 | 563.8 | 571.6 | 558.5 | 540.2 | 519.2 | 498.2 | 498.2 |
| 70° | 424.8 | 424.8 | 437.9 | 464.1 | 482.5 | 487.7 | 479.9 | 461.5 | 443.1 | 424.8 | 424.8 |
| 72.5° | 351.4 | 348.7 | 361.9 | 382.8 | 398.6 | 403.8 | 395.9 | 385.5 | 364.5 | 351.4 | 351.4 |
| 75° | 277.9 | 275.3 | 283.2 | 301.5 | 314.7 | 319.9 | 312.0 | 304.2 | 288.4 | 277.9 | 277.9 |
| 77.5° | 207.1 | 204.5 | 212.4 | 228.1 | 236.0 | 238.6 | 233.4 | 228.1 | 215.0 | 207.1 | 207.1 |
| 80° | 141.6 | 139.0 | 144.2 | 154.7 | 162.6 | 162.6 | 160.0 | 157.3 | 146.8 | 141.6 | 144.2 |
| 82.5° | 83.9 | 81.3 | 86.5 | 94.4 | 99.6 | 97.0 | 97.0 | 94.4 | 86.5 | 83.9 | 83.9 |
| 85° | 36.7 | 34.1 | 36.7 | 42.0 | 47.2 | 44.6 | 44.6 | 44.6 | 39.3 | 36.7 | 36.7 |
| 87.5° | 5.2 | 5.2 | 5.2 | 7.9 | 10.5 | 7.9 | 7.9 | 7.9 | 5.2 | 5.2 | 5.2 |
| 90° | 4.6 | 4.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 4.6 | 4.6 |
| 92.5° | 4.6 | 4.6 | 4.6 | 6.5 | 7.4 | 6.5 | 7.4 | 5.6 | 5.6 | 4.6 | 4.6 |
| 95° | 5.6 | 5.6 | 6.5 | 8.4 | 10.2 | 11.1 | 11.1 | 6.5 | 6.5 | 5.6 | 5.6 |
| 97.5° | 7.4 | 8.4 | 8.4 | 10.2 | 16.7 | 30.7 | 18.6 | 9.3 | 9.3 | 8.4 | 7.4 |
| 100° | 12.1 | 13.0 | 13.0 | 23.2 | 49.2 | 66.0 | 47.4 | 24.2 | 17.7 | 13.0 | 13.0 |
| 102.5° | 39.0 | 40.9 | 50.2 | 75.3 | 111.5 | 101.3 | 85.5 | 80.8 | 55.7 | 44.6 | 42.7 |
| 105° | 99.4 | 98.5 | 105.9 | 125.4 | 156.1 | 153.3 | 141.2 | 128.2 | 110.6 | 102.2 | 102.2 |
| 107.5° | 131.0 | 131.0 | 137.5 | 154.2 | 177.4 | 207.2 | 210.0 | 166.3 | 145.9 | 136.6 | 135.6 |
| 110° | 147.7 | 147.7 | 153.3 | 167.2 | 197.9 | 239.7 | 237.8 | 205.3 | 180.2 | 168.2 | 166.3 |



REPORT NUMBER: P833186
 CATALOG NUMBER: TTN-D1-735-U-WQ-SG-UPL2

CANDELA DISTRIBUTION (continued):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 151.4 | 152.4 | 159.8 | 181.2 | 214.6 | 233.2 | 224.8 | 211.8 | 200.7 | 191.4 | 189.5 |
| 115° | 157.0 | 157.0 | 165.4 | 185.8 | 204.4 | 211.8 | 202.5 | 192.3 | 184.9 | 181.2 | 183.0 |
| 117.5° | 155.1 | 157.9 | 159.8 | 170.9 | 183.0 | 188.6 | 183.9 | 170.0 | 164.4 | 162.6 | 159.8 |
| 120° | 144.0 | 144.0 | 145.9 | 151.4 | 157.9 | 160.7 | 158.9 | 149.6 | 144.9 | 144.0 | 142.1 |
| 122.5° | 128.2 | 129.1 | 128.2 | 131.0 | 135.6 | 138.4 | 136.6 | 129.1 | 127.3 | 127.3 | 125.4 |
| 125° | 112.4 | 112.4 | 111.5 | 113.3 | 116.1 | 115.2 | 116.1 | 112.4 | 111.5 | 111.5 | 110.6 |
| 127.5° | 101.3 | 100.3 | 98.5 | 99.4 | 100.3 | 100.3 | 101.3 | 97.5 | 98.5 | 99.4 | 98.5 |
| 130° | 90.1 | 90.1 | 88.3 | 88.3 | 88.3 | 86.4 | 88.3 | 86.4 | 87.3 | 88.3 | 89.2 |
| 132.5° | 79.9 | 79.9 | 77.1 | 76.2 | 76.2 | 76.2 | 77.1 | 76.2 | 78.0 | 79.9 | 79.9 |
| 135° | 71.5 | 71.5 | 68.7 | 69.7 | 69.7 | 68.7 | 69.7 | 68.7 | 70.6 | 71.5 | 71.5 |
| 137.5° | 65.0 | 65.0 | 63.2 | 63.2 | 63.2 | 62.2 | 63.2 | 63.2 | 64.1 | 66.0 | 66.9 |
| 140° | 59.5 | 59.5 | 58.5 | 58.5 | 57.6 | 58.5 | 58.5 | 58.5 | 59.5 | 60.4 | 60.4 |
| 142.5° | 56.7 | 55.7 | 54.8 | 53.9 | 54.8 | 54.8 | 54.8 | 53.9 | 54.8 | 56.7 | 56.7 |
| 145° | 52.0 | 52.0 | 51.1 | 51.1 | 51.1 | 52.0 | 51.1 | 51.1 | 52.0 | 52.0 | 53.0 |
| 147.5° | 49.2 | 49.2 | 48.3 | 49.2 | 49.2 | 49.2 | 49.2 | 48.3 | 49.2 | 49.2 | 50.2 |
| 150° | 48.3 | 47.4 | 46.5 | 47.4 | 47.4 | 46.5 | 46.5 | 46.5 | 46.5 | 47.4 | 47.4 |
| 152.5° | 45.5 | 45.5 | 44.6 | 45.5 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 45.5 | 46.5 |
| 155° | 43.7 | 43.7 | 42.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 | 43.7 |
| 157.5° | 41.8 | 42.7 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 42.7 | 42.7 |
| 160° | 40.9 | 40.9 | 40.9 | 40.9 | 39.9 | 39.9 | 39.9 | 40.9 | 40.9 | 40.9 | 41.8 |
| 162.5° | 39.9 | 39.9 | 39.9 | 39.9 | 39.0 | 39.0 | 39.0 | 39.0 | 39.9 | 39.9 | 40.9 |
| 165° | 39.9 | 39.0 | 39.0 | 39.0 | 38.1 | 38.1 | 38.1 | 38.1 | 39.0 | 39.9 | 39.0 |
| 167.5° | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 38.1 | 38.1 | 38.1 | 39.0 |
| 170° | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 38.1 |
| 172.5° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 37.2 | 37.2 | 38.1 | 38.1 |
| 175° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 37.2 | 37.2 | 38.1 | 38.1 | 38.1 | 37.2 |
| 177.5° | 38.1 | 38.1 | 38.1 | 38.1 | 37.2 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 |
| 180° | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 |

(END OF REPORT)