

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: STREETWORKS

Report Number: P234757

Luminaire Tested: **ARCH-AF24-20-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234757
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-AF24-20-D-U-T4W-8027-HSS
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 2700K, 260mA LIGHT ENGINE WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1556 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 21
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

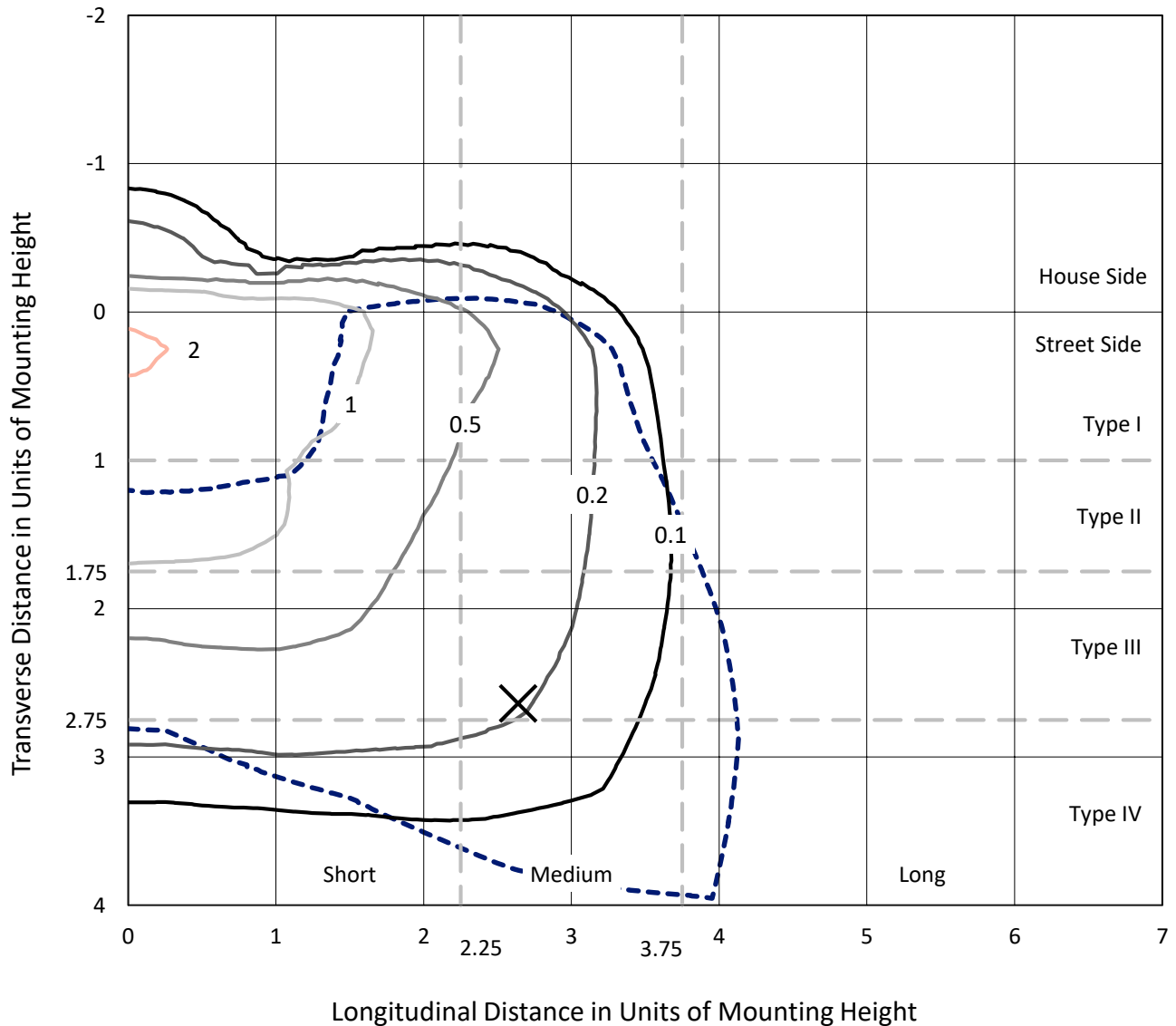


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

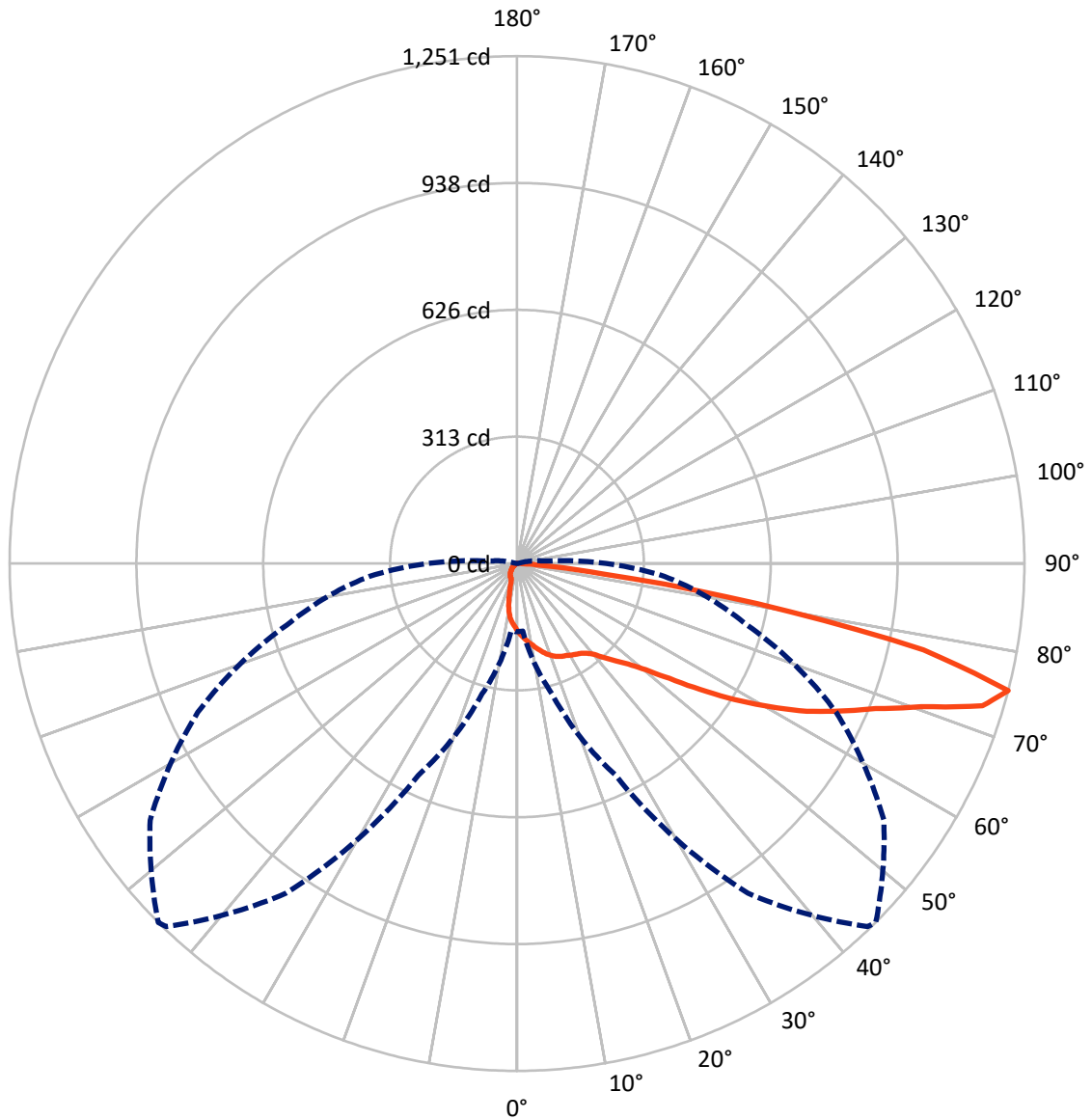


Based on 10 foot mounting height. Maximum calculated value = 2.2 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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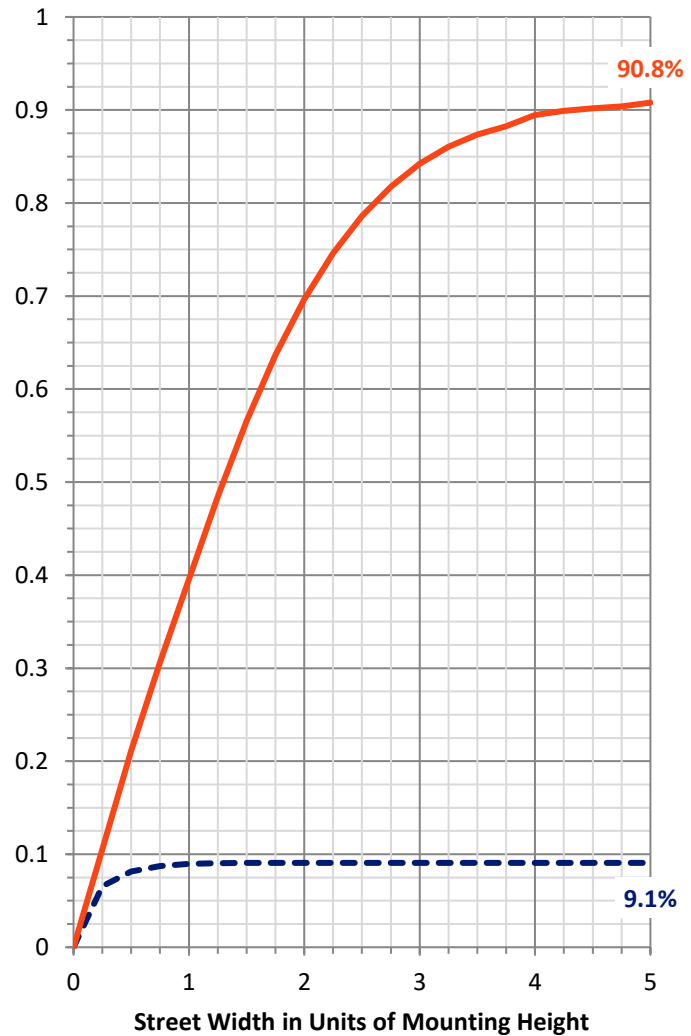
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 142.3 | 0.0 | 142.3 |
| | % Fixture | 9.1 | 0.0 | 9.1 |
| Street Side | Lumens | 1413.7 | 0.0 | 1413.7 |
| | % Fixture | 90.9 | 0.0 | 90.9 |
| Total | Lumens | 1556.0 | 0.0 | 1556.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 15.7 | 1.0 |
| 10°-20° | 44.5 | 2.9 |
| 20°-30° | 73.7 | 4.7 |
| 30°-40° | 106.7 | 6.9 |
| 40°-50° | 174.6 | 11.2 |
| 50°-60° | 311.2 | 20.0 |
| 60°-70° | 457.5 | 29.4 |
| 70°-80° | 345.1 | 22.2 |
| 80°-90° | 27.1 | 1.7 |
| 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° | 1556.0 | 100.0 |
| 0°-180° | 1556.0 | 100.0 |



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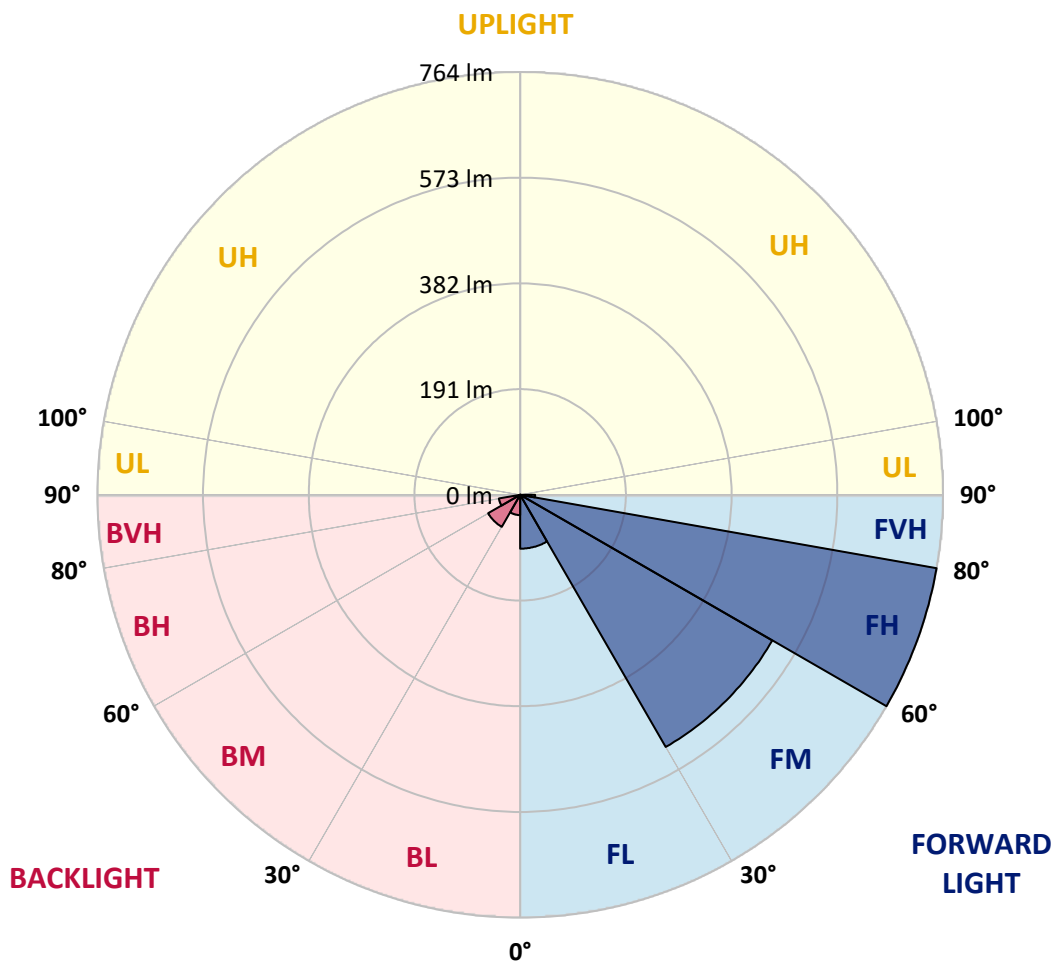
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 97.3 | 6.3 | | | |
| FM | (30°-60°) | 525.8 | 33.8 | | | |
| FH | (60°-80°) | 763.6 | 49.1 | | | G1/1800 |
| FVH | (80°-90°) | 27.0 | 1.7 | | | G1/100 |
| BL | (0°-30°) | 36.6 | 2.4 | B0/110 | | |
| BM | (30°-60°) | 66.7 | 4.3 | B0/220 | | |
| BH | (60°-80°) | 39.0 | 2.5 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.1 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|--------|
| 0° | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 |
| 2.5° | 180.8 | 180.8 | 180.4 | 180.0 | 178.2 | 176.4 | 176.0 | 174.9 | 171.6 | 169.4 | 167.2 |
| 5° | 195.9 | 196.2 | 195.5 | 193.7 | 189.6 | 185.6 | 185.2 | 182.3 | 176.0 | 171.6 | 166.8 |
| 7.5° | 210.2 | 211.0 | 209.1 | 205.8 | 201.0 | 195.1 | 194.8 | 189.3 | 181.2 | 174.9 | 167.9 |
| 10° | 222.4 | 222.4 | 219.8 | 215.8 | 210.6 | 204.3 | 203.6 | 197.4 | 188.1 | 180.4 | 171.2 |
| 12.5° | 235.6 | 235.3 | 231.6 | 226.1 | 220.2 | 214.3 | 213.9 | 206.2 | 197.4 | 187.4 | 176.0 |
| 15° | 247.8 | 247.1 | 242.3 | 237.1 | 230.9 | 224.6 | 224.2 | 216.5 | 207.3 | 195.5 | 183.0 |
| 17.5° | 254.4 | 254.1 | 249.6 | 244.5 | 239.3 | 234.5 | 234.2 | 226.1 | 216.1 | 204.0 | 190.0 |
| 20° | 255.5 | 255.9 | 252.2 | 247.8 | 244.8 | 242.3 | 242.3 | 234.9 | 224.2 | 211.3 | 197.4 |
| 22.5° | 255.9 | 257.0 | 254.4 | 248.5 | 247.8 | 248.2 | 248.9 | 243.0 | 232.0 | 219.8 | 205.1 |
| 25° | 258.5 | 259.9 | 258.1 | 251.1 | 250.4 | 252.9 | 253.7 | 251.1 | 241.2 | 229.0 | 213.9 |
| 27.5° | 263.6 | 265.1 | 263.6 | 254.8 | 253.7 | 256.3 | 257.0 | 258.5 | 251.1 | 237.9 | 223.1 |
| 30° | 273.9 | 274.3 | 271.0 | 259.9 | 257.7 | 261.0 | 262.2 | 266.2 | 260.3 | 246.3 | 232.0 |
| 32.5° | 292.0 | 288.3 | 278.4 | 263.6 | 261.8 | 265.5 | 266.6 | 271.0 | 268.8 | 254.4 | 241.2 |
| 35° | 328.8 | 309.6 | 286.8 | 268.8 | 266.9 | 270.6 | 272.1 | 278.4 | 279.5 | 265.8 | 252.6 |
| 37.5° | 328.4 | 311.1 | 306.7 | 278.7 | 276.1 | 278.7 | 280.6 | 288.3 | 292.7 | 280.9 | 269.1 |
| 40° | 351.6 | 344.3 | 344.3 | 297.5 | 289.0 | 292.7 | 294.6 | 302.3 | 310.0 | 300.8 | 288.7 |
| 42.5° | 424.5 | 419.7 | 414.6 | 333.6 | 307.1 | 317.4 | 318.5 | 323.3 | 332.5 | 329.5 | 315.2 |
| 45° | 505.9 | 501.5 | 481.6 | 394.7 | 338.0 | 339.8 | 342.4 | 350.2 | 363.4 | 368.9 | 352.0 |
| 47.5° | 569.6 | 565.2 | 548.2 | 468.3 | 386.2 | 370.0 | 370.0 | 385.1 | 405.7 | 419.7 | 403.5 |
| 50° | 620.8 | 615.6 | 605.3 | 546.8 | 465.4 | 413.5 | 411.3 | 428.9 | 459.5 | 481.2 | 470.2 |
| 52.5° | 670.5 | 655.4 | 649.1 | 627.8 | 554.9 | 476.4 | 470.5 | 483.1 | 525.4 | 552.3 | 543.1 |
| 55° | 703.6 | 701.4 | 694.8 | 702.1 | 648.8 | 553.0 | 547.9 | 550.4 | 603.5 | 621.5 | 610.1 |
| 57.5° | 734.5 | 734.2 | 748.9 | 783.1 | 751.1 | 640.7 | 632.6 | 628.5 | 678.9 | 674.5 | 684.5 |
| 60° | 772.8 | 766.2 | 800.4 | 849.4 | 845.0 | 726.1 | 716.9 | 708.8 | 736.8 | 724.2 | 773.6 |
| 62.5° | 774.7 | 772.8 | 842.4 | 912.7 | 938.2 | 813.0 | 802.3 | 773.2 | 787.2 | 772.8 | 858.6 |
| 65° | 704.4 | 713.6 | 860.1 | 946.3 | 1016.2 | 889.2 | 876.3 | 831.0 | 832.1 | 822.5 | 958.8 |
| 67.5° | 688.5 | 693.3 | 811.5 | 982.3 | 1072.5 | 966.1 | 954.0 | 897.7 | 884.4 | 885.1 | 1018.0 |
| 70° | 649.1 | 656.5 | 751.1 | 979.8 | 1117.1 | 1068.9 | 1056.7 | 995.6 | 963.6 | 927.8 | 972.4 |
| 72.5° | 496.0 | 508.5 | 632.9 | 859.0 | 1104.9 | 1203.3 | 1199.9 | 1119.7 | 995.2 | 852.0 | 735.6 |
| 75° | 167.9 | 167.5 | 332.5 | 577.0 | 992.6 | 1244.5 | 1251.1 | 1104.2 | 868.2 | 587.6 | 365.2 |
| 77.5° | 36.1 | 36.5 | 68.5 | 233.8 | 659.4 | 999.3 | 1024.7 | 832.8 | 560.0 | 261.8 | 83.6 |
| 80° | 17.7 | 18.0 | 28.4 | 61.9 | 263.6 | 560.4 | 600.2 | 428.2 | 206.9 | 52.3 | 14.0 |
| 82.5° | 8.8 | 9.2 | 14.7 | 32.8 | 97.6 | 199.2 | 212.8 | 157.6 | 59.3 | 29.5 | 7.0 |
| 85° | 3.3 | 3.3 | 7.4 | 19.5 | 44.6 | 46.8 | 57.4 | 45.7 | 35.7 | 23.9 | 1.8 |
| 87.5° | 0.7 | 0.7 | 4.1 | 9.6 | 19.9 | 14.7 | 14.7 | 14.0 | 21.7 | 16.2 | 0.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 | 166.4 |
| 2.5° | 166.1 | 164.6 | 162.0 | 159.4 | 157.6 | 155.4 | 154.3 | 153.2 | 152.8 | 152.4 | 153.2 |
| 5° | 164.2 | 162.0 | 157.2 | 153.2 | 149.5 | 146.5 | 144.3 | 142.1 | 141.0 | 140.3 | 140.6 |
| 7.5° | 164.2 | 160.9 | 153.9 | 147.6 | 141.8 | 135.5 | 129.2 | 124.4 | 120.8 | 118.6 | 118.9 |
| 10° | 166.1 | 161.6 | 152.4 | 144.0 | 132.9 | 119.7 | 106.0 | 95.7 | 88.7 | 84.7 | 84.7 |
| 12.5° | 170.1 | 164.2 | 152.8 | 139.5 | 120.8 | 97.6 | 77.0 | 64.4 | 59.3 | 56.3 | 56.7 |
| 15° | 175.6 | 168.6 | 154.6 | 133.7 | 103.8 | 72.5 | 53.8 | 45.7 | 45.7 | 46.4 | 46.8 |
| 17.5° | 181.9 | 174.2 | 156.1 | 124.8 | 82.1 | 51.9 | 42.3 | 41.6 | 42.7 | 44.6 | 44.6 |
| 20° | 188.1 | 179.7 | 156.8 | 110.8 | 61.5 | 41.2 | 40.1 | 40.1 | 40.9 | 42.7 | 43.1 |
| 22.5° | 195.9 | 186.7 | 156.1 | 93.5 | 46.0 | 39.0 | 38.7 | 38.7 | 38.7 | 40.9 | 40.9 |
| 25° | 204.0 | 194.8 | 153.2 | 75.1 | 39.0 | 37.6 | 37.2 | 36.8 | 36.8 | 38.7 | 39.0 |
| 27.5° | 213.2 | 203.2 | 146.2 | 57.4 | 36.8 | 36.1 | 35.7 | 35.0 | 35.0 | 36.5 | 36.5 |
| 30° | 222.4 | 212.8 | 135.5 | 43.4 | 35.0 | 34.6 | 33.9 | 33.1 | 32.4 | 33.9 | 33.9 |
| 32.5° | 232.3 | 222.8 | 121.5 | 34.6 | 32.4 | 32.4 | 32.0 | 30.9 | 30.2 | 30.9 | 31.3 |
| 35° | 245.6 | 234.2 | 105.7 | 30.2 | 29.1 | 29.1 | 29.1 | 28.7 | 27.2 | 28.0 | 28.0 |
| 37.5° | 263.3 | 250.0 | 87.3 | 28.0 | 26.5 | 25.8 | 25.8 | 25.8 | 24.7 | 25.0 | 25.0 |
| 40° | 285.7 | 268.4 | 69.6 | 26.1 | 24.7 | 22.8 | 22.1 | 22.5 | 21.7 | 21.7 | 21.4 |
| 42.5° | 316.3 | 288.3 | 52.3 | 24.7 | 23.2 | 20.6 | 19.1 | 18.8 | 18.0 | 17.7 | 17.7 |
| 45° | 360.1 | 312.6 | 37.6 | 23.2 | 22.1 | 18.0 | 16.6 | 15.5 | 13.6 | 12.5 | 12.5 |
| 47.5° | 416.8 | 340.2 | 28.0 | 21.7 | 21.0 | 15.8 | 14.0 | 11.8 | 9.2 | 8.5 | 8.5 |
| 50° | 486.0 | 371.1 | 23.6 | 19.5 | 19.1 | 14.0 | 11.0 | 7.7 | 5.2 | 4.4 | 4.8 |
| 52.5° | 553.4 | 400.2 | 21.0 | 17.3 | 16.9 | 12.2 | 8.1 | 4.1 | 2.2 | 2.2 | 2.2 |
| 55° | 610.1 | 420.8 | 19.1 | 15.5 | 14.7 | 9.6 | 4.4 | 1.8 | 1.1 | 1.1 | 1.1 |
| 57.5° | 661.3 | 432.6 | 17.3 | 13.6 | 11.8 | 6.6 | 1.8 | 0.7 | 0.7 | 0.4 | 0.4 |
| 60° | 708.0 | 439.6 | 15.1 | 11.8 | 9.2 | 3.7 | 0.7 | 0.4 | 0.4 | 0.0 | 0.0 |
| 62.5° | 754.1 | 444.8 | 12.9 | 9.6 | 7.0 | 1.5 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 |
| 65° | 789.0 | 442.9 | 10.3 | 7.7 | 4.4 | 0.7 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 787.9 | 417.9 | 7.7 | 5.9 | 2.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 704.7 | 352.0 | 5.2 | 3.7 | 0.7 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 500.0 | 225.7 | 3.3 | 2.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 220.2 | 68.5 | 1.8 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 43.1 | 15.8 | 1.1 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 10.3 | 1.8 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 4.4 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 1.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.7 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)