

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: P234027

Luminaire Tested: **VERD-C013-D-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234027
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-14)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-C013-D-U-T3
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 560mA LED AND TYPE III OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3021 lumens
Efficiency: N/A
Efficacy: 125.9 lumens/watt
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 24
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

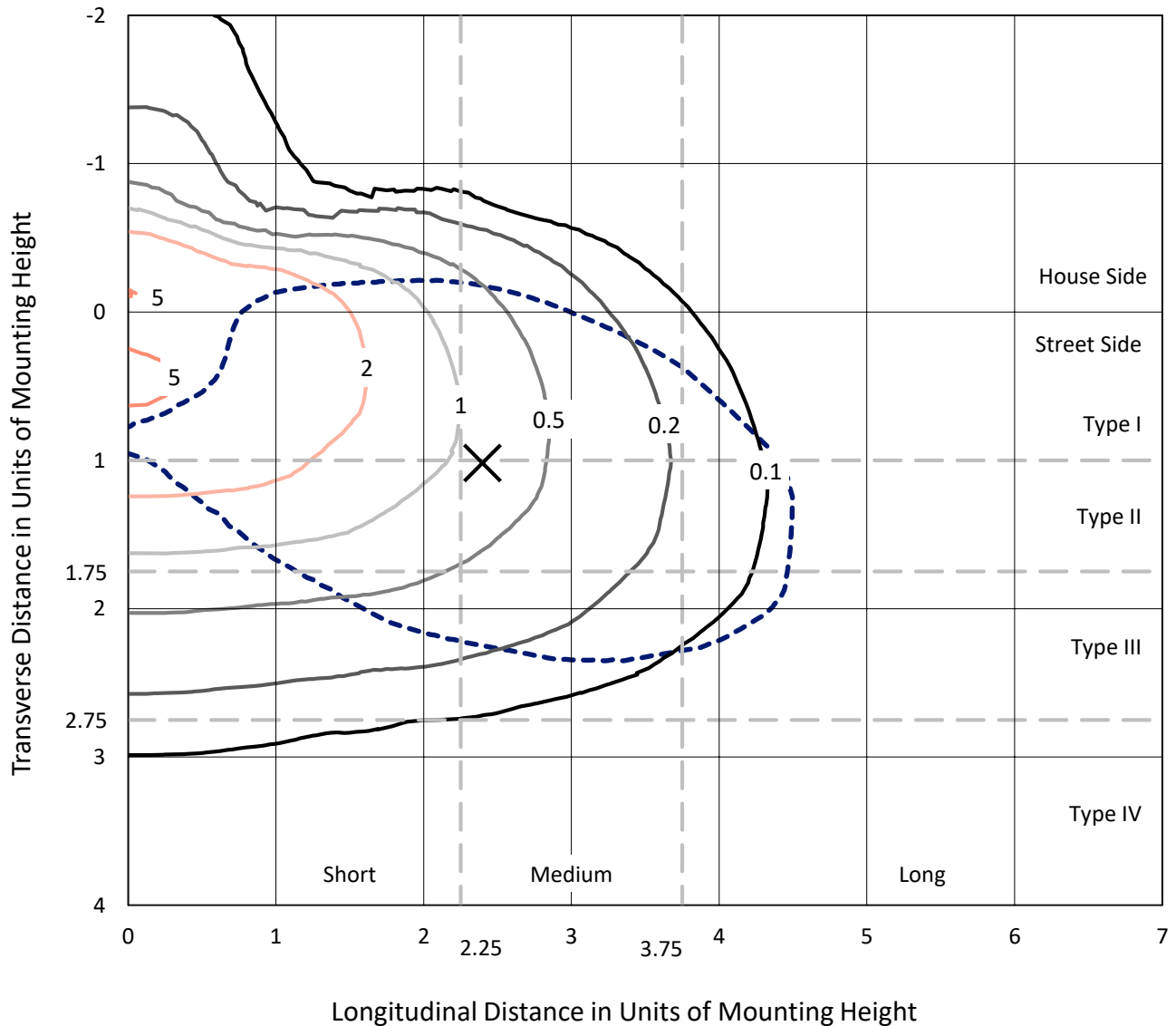


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Iso-Footcandle Lines of Horizontal Illumination

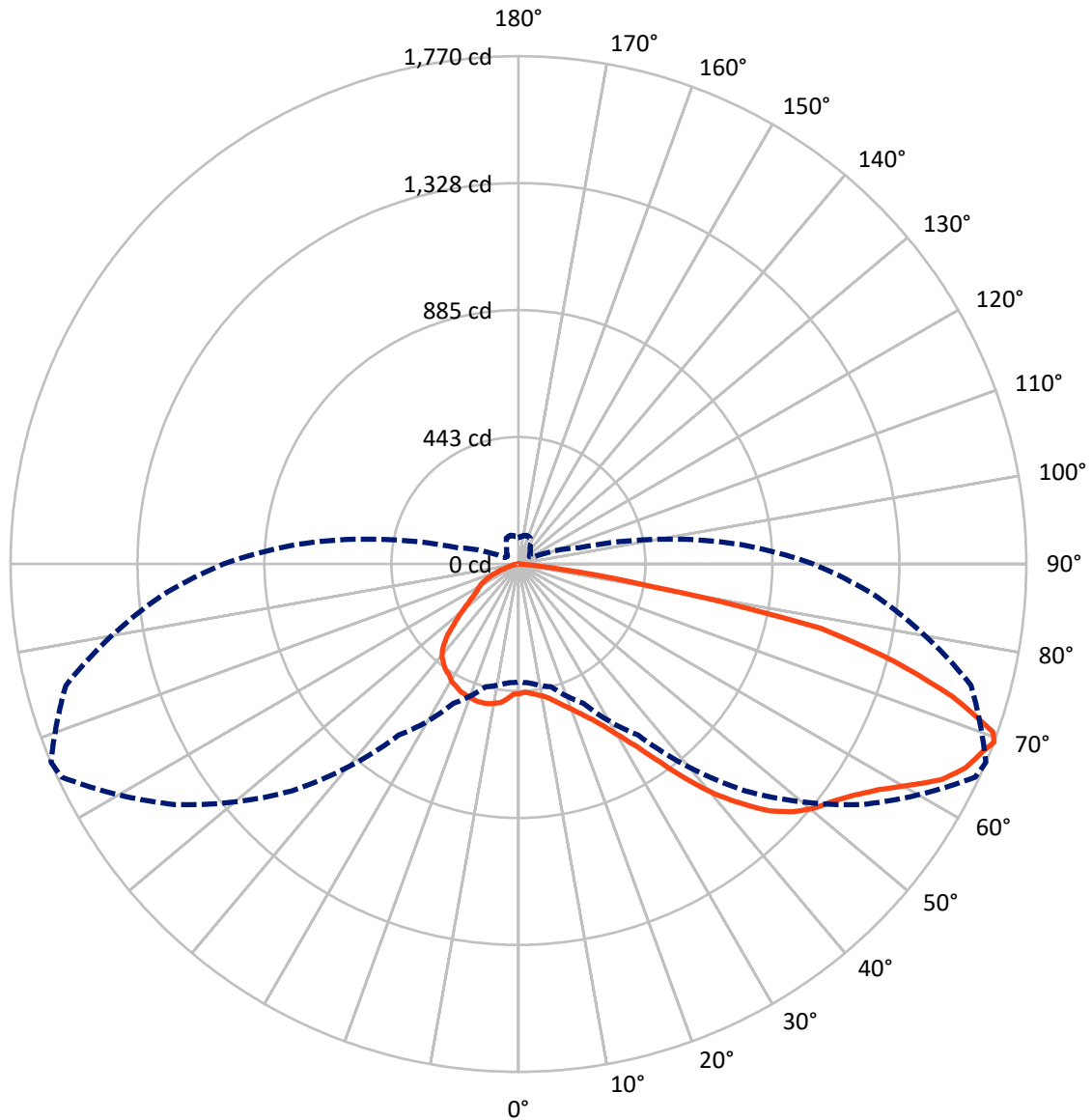
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 680.3 | 0.0 | 680.3 |
| | % Fixture | 22.5 | 0.0 | 22.5 |
| Street Side | Lumens | 2340.7 | 0.0 | 2340.7 |
| | % Fixture | 77.5 | 0.0 | 77.5 |
| Total | Lumens | 3021.0 | 0.0 | 3021.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.8 | 1.5 |
| 10°-20° | 145.9 | 4.8 |
| 20°-30° | 251.3 | 8.3 |
| 30°-40° | 373.7 | 12.4 |
| 40°-50° | 514.7 | 17.0 |
| 50°-60° | 615.3 | 20.4 |
| 60°-70° | 649.3 | 21.5 |
| 70°-80° | 389.1 | 12.9 |
| 80°-90° | 35.8 | 1.2 |
| 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° | 3021.0 | 100.0 |
| 0°-180° | 3021.0 | 100.0 |



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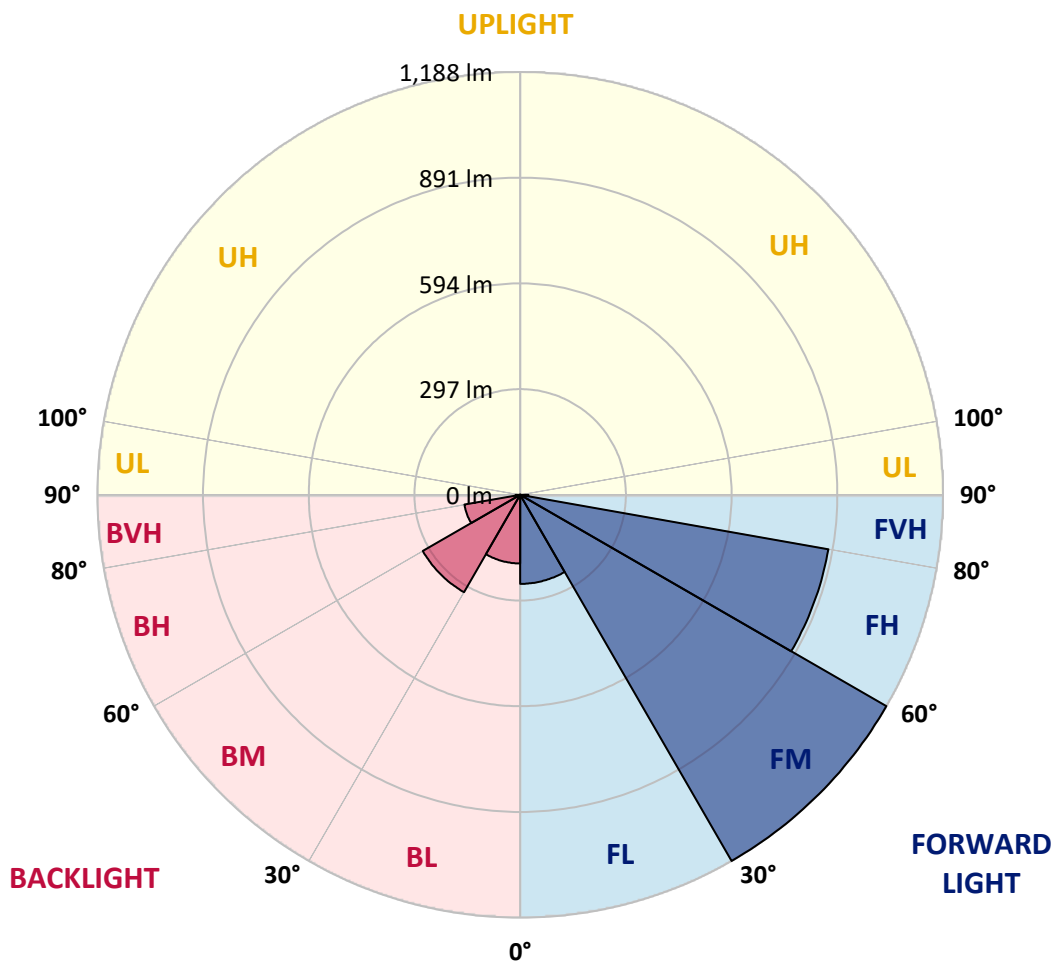
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 250.1 | 8.3 | | | |
| FM | (30°-60°) | 1188.0 | 39.3 | | | |
| FH | (60°-80°) | 879.4 | 29.1 | | | G1/1800 |
| FVH | (80°-90°) | 23.1 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 192.8 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 315.8 | 10.5 | B1/1000 | | |
| BH | (60°-80°) | 159.1 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 12.6 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 |
| 2.5° | 459.3 | 459.0 | 457.6 | 452.7 | 452.2 | 451.6 | 448.3 | 448.6 | 447.8 | 448.6 | 448.9 |
| 5° | 471.9 | 470.8 | 469.5 | 464.2 | 462.3 | 459.8 | 454.9 | 454.6 | 452.7 | 453.3 | 453.8 |
| 7.5° | 487.6 | 486.5 | 485.4 | 479.3 | 477.4 | 473.0 | 465.3 | 461.5 | 459.8 | 460.4 | 461.2 |
| 10° | 508.7 | 506.8 | 505.2 | 496.4 | 493.4 | 485.9 | 476.6 | 470.0 | 467.8 | 468.6 | 470.8 |
| 12.5° | 532.9 | 530.4 | 527.7 | 518.6 | 514.5 | 503.0 | 492.0 | 483.5 | 480.2 | 482.1 | 483.7 |
| 15° | 557.9 | 556.5 | 555.4 | 544.7 | 539.0 | 526.3 | 512.6 | 501.9 | 498.9 | 500.5 | 501.3 |
| 17.5° | 590.9 | 590.1 | 588.1 | 577.1 | 566.2 | 551.6 | 533.7 | 522.5 | 519.5 | 520.3 | 518.4 |
| 20° | 626.9 | 624.7 | 623.6 | 611.2 | 599.7 | 579.6 | 559.0 | 543.1 | 542.3 | 542.5 | 536.5 |
| 22.5° | 667.2 | 664.8 | 662.6 | 651.3 | 637.0 | 613.7 | 586.8 | 568.9 | 569.5 | 570.0 | 556.5 |
| 25° | 708.4 | 706.5 | 704.6 | 693.9 | 679.6 | 654.1 | 621.6 | 601.6 | 601.3 | 601.6 | 582.9 |
| 27.5° | 751.6 | 749.4 | 749.1 | 740.3 | 726.0 | 699.9 | 662.6 | 642.2 | 642.2 | 641.1 | 612.9 |
| 30° | 790.0 | 792.2 | 792.2 | 787.3 | 773.8 | 747.7 | 712.6 | 692.2 | 695.0 | 692.8 | 656.8 |
| 32.5° | 832.1 | 831.5 | 835.4 | 831.5 | 820.5 | 796.4 | 767.0 | 754.0 | 758.7 | 765.9 | 729.9 |
| 35° | 856.5 | 860.4 | 870.0 | 875.5 | 870.2 | 850.5 | 829.0 | 838.9 | 845.2 | 877.4 | 834.3 |
| 37.5° | 884.8 | 888.1 | 901.3 | 914.7 | 916.9 | 906.2 | 906.2 | 938.6 | 951.0 | 993.0 | 942.8 |
| 40° | 904.3 | 907.6 | 921.9 | 937.5 | 959.0 | 966.4 | 985.6 | 1035.9 | 1053.5 | 1081.8 | 1023.5 |
| 42.5° | 892.8 | 894.4 | 925.2 | 963.4 | 995.0 | 1030.7 | 1061.2 | 1124.9 | 1141.6 | 1161.4 | 1090.0 |
| 45° | 872.4 | 875.5 | 909.5 | 971.1 | 1025.5 | 1096.3 | 1134.8 | 1208.7 | 1227.9 | 1226.0 | 1141.1 |
| 47.5° | 849.9 | 854.6 | 892.5 | 961.2 | 1051.5 | 1153.2 | 1202.1 | 1279.0 | 1290.0 | 1276.3 | 1176.5 |
| 50° | 824.9 | 832.9 | 873.3 | 951.3 | 1070.5 | 1202.9 | 1252.1 | 1331.7 | 1337.5 | 1309.5 | 1207.6 |
| 52.5° | 796.4 | 801.6 | 846.3 | 932.3 | 1083.7 | 1235.9 | 1291.9 | 1371.0 | 1373.5 | 1350.7 | 1240.3 |
| 55° | 756.8 | 761.5 | 811.2 | 907.1 | 1085.6 | 1255.4 | 1317.5 | 1413.1 | 1421.3 | 1399.0 | 1269.9 |
| 57.5° | 714.2 | 720.0 | 771.1 | 870.5 | 1068.0 | 1263.3 | 1348.2 | 1467.2 | 1483.1 | 1451.2 | 1293.8 |
| 60° | 664.8 | 672.2 | 723.8 | 826.0 | 1033.4 | 1275.7 | 1405.6 | 1546.0 | 1565.8 | 1510.3 | 1316.6 |
| 62.5° | 613.4 | 617.5 | 665.0 | 764.5 | 979.6 | 1282.0 | 1457.8 | 1636.1 | 1655.1 | 1566.1 | 1327.3 |
| 65° | 541.2 | 547.7 | 590.1 | 690.6 | 903.8 | 1254.8 | 1482.3 | 1699.0 | 1712.7 | 1611.4 | 1316.9 |
| 67.5° | 464.5 | 464.5 | 500.5 | 602.1 | 802.7 | 1182.9 | 1472.4 | 1729.2 | 1745.7 | 1643.2 | 1283.9 |
| 69° | 411.5 | 415.6 | 443.1 | 535.7 | 728.5 | 1118.8 | 1461.7 | 1757.0 | 1770.4 | 1633.1 | 1246.0 |
| 70° | 370.8 | 374.4 | 402.2 | 487.3 | 673.3 | 1068.3 | 1438.6 | 1744.6 | 1754.5 | 1601.8 | 1206.2 |
| 72.5° | 272.8 | 275.8 | 295.0 | 339.5 | 506.3 | 862.0 | 1297.1 | 1577.3 | 1583.4 | 1440.5 | 1064.2 |
| 75° | 186.0 | 187.6 | 202.2 | 229.4 | 295.3 | 602.7 | 1059.8 | 1332.3 | 1350.1 | 1249.3 | 871.3 |
| 77.5° | 64.3 | 69.2 | 78.0 | 105.5 | 126.4 | 236.8 | 718.3 | 1049.9 | 1076.5 | 967.5 | 609.6 |
| 80° | 22.0 | 21.7 | 41.8 | 54.1 | 66.5 | 108.8 | 227.2 | 440.1 | 465.1 | 398.9 | 219.5 |
| 82.5° | 16.5 | 17.0 | 27.7 | 29.9 | 20.3 | 40.1 | 88.5 | 134.6 | 147.5 | 128.8 | 90.9 |
| 85° | 10.4 | 10.2 | 12.4 | 12.9 | 9.3 | 17.0 | 21.4 | 21.7 | 22.5 | 19.5 | 19.8 |
| 87.5° | 5.8 | 5.8 | 5.5 | 4.7 | 2.5 | 2.2 | 1.9 | 1.9 | 1.6 | 1.6 | 1.6 |
| 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° | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 | 451.9 |
| 2.5° | 447.5 | 451.3 | 452.2 | 453.3 | 456.0 | 459.6 | 464.5 | 464.5 | 466.4 | 472.2 | 474.1 |
| 5° | 453.8 | 458.5 | 464.5 | 470.8 | 478.3 | 486.2 | 494.2 | 496.9 | 500.8 | 508.5 | 510.1 |
| 7.5° | 463.4 | 468.6 | 479.1 | 487.6 | 493.9 | 501.9 | 508.5 | 509.6 | 514.5 | 521.7 | 523.0 |
| 10° | 473.3 | 478.0 | 488.4 | 492.8 | 501.3 | 510.1 | 513.4 | 515.1 | 519.2 | 524.7 | 523.9 |
| 12.5° | 486.8 | 488.1 | 495.6 | 498.6 | 502.7 | 508.2 | 509.8 | 509.8 | 512.3 | 521.1 | 521.4 |
| 15° | 500.0 | 500.0 | 501.1 | 499.4 | 500.0 | 502.7 | 503.0 | 499.4 | 502.1 | 506.5 | 504.9 |
| 17.5° | 514.0 | 510.1 | 505.2 | 498.0 | 491.7 | 491.4 | 485.7 | 477.2 | 474.7 | 481.0 | 480.7 |
| 20° | 527.1 | 520.6 | 508.7 | 492.5 | 483.7 | 471.9 | 457.4 | 452.4 | 452.2 | 453.3 | 452.4 |
| 22.5° | 544.5 | 531.0 | 509.6 | 487.3 | 463.1 | 444.5 | 432.4 | 415.6 | 415.1 | 412.6 | 408.8 |
| 25° | 565.1 | 545.8 | 513.1 | 481.5 | 446.4 | 422.2 | 393.1 | 375.2 | 365.1 | 367.3 | 360.7 |
| 27.5° | 591.7 | 568.4 | 514.5 | 468.9 | 423.3 | 382.4 | 347.2 | 324.1 | 315.4 | 311.5 | 307.1 |
| 30° | 628.2 | 592.3 | 524.4 | 458.2 | 394.7 | 340.6 | 297.5 | 264.0 | 251.3 | 254.6 | 255.2 |
| 32.5° | 686.7 | 637.6 | 529.6 | 437.0 | 361.8 | 295.0 | 239.0 | 202.7 | 195.3 | 204.7 | 207.1 |
| 35° | 788.7 | 707.9 | 542.0 | 424.4 | 324.1 | 241.7 | 177.7 | 162.9 | 164.5 | 172.5 | 173.1 |
| 37.5° | 888.9 | 796.9 | 580.2 | 396.9 | 279.1 | 179.1 | 137.9 | 129.9 | 137.9 | 148.1 | 149.4 |
| 40° | 959.2 | 866.4 | 614.0 | 369.7 | 215.9 | 129.7 | 105.2 | 95.6 | 107.1 | 123.3 | 126.4 |
| 42.5° | 1021.6 | 921.6 | 637.9 | 332.1 | 147.8 | 92.6 | 75.5 | 78.0 | 95.0 | 106.9 | 109.6 |
| 45° | 1066.4 | 959.5 | 654.3 | 283.2 | 94.2 | 70.0 | 67.6 | 75.5 | 91.7 | 101.1 | 101.9 |
| 47.5° | 1094.7 | 981.8 | 642.2 | 223.1 | 70.9 | 66.2 | 66.5 | 76.6 | 92.8 | 103.3 | 103.0 |
| 50° | 1120.2 | 993.6 | 603.0 | 176.9 | 67.3 | 63.5 | 67.9 | 79.7 | 96.4 | 106.0 | 105.5 |
| 52.5° | 1147.4 | 1005.1 | 555.2 | 138.7 | 64.6 | 62.1 | 69.5 | 81.6 | 96.4 | 102.5 | 101.6 |
| 55° | 1170.8 | 1015.3 | 519.2 | 111.5 | 62.6 | 61.8 | 71.1 | 84.6 | 95.9 | 98.3 | 96.7 |
| 57.5° | 1182.9 | 998.0 | 480.2 | 93.7 | 60.7 | 61.8 | 72.2 | 84.1 | 99.2 | 107.1 | 105.5 |
| 60° | 1176.3 | 981.8 | 448.6 | 87.1 | 58.0 | 61.5 | 72.8 | 90.1 | 121.7 | 129.1 | 128.6 |
| 62.5° | 1164.2 | 963.9 | 404.4 | 78.3 | 54.9 | 62.1 | 72.5 | 95.6 | 140.1 | 137.6 | 130.8 |
| 65° | 1139.5 | 928.2 | 343.9 | 68.1 | 51.9 | 63.2 | 72.5 | 107.7 | 122.2 | 119.5 | 116.5 |
| 67.5° | 1086.7 | 851.0 | 275.2 | 58.5 | 48.6 | 59.9 | 71.4 | 102.5 | 105.2 | 98.1 | 94.5 |
| 69° | 1027.6 | 777.4 | 217.8 | 53.3 | 46.7 | 58.2 | 71.1 | 98.9 | 103.6 | 95.9 | 91.7 |
| 70° | 981.5 | 720.0 | 176.1 | 49.4 | 44.8 | 57.7 | 70.9 | 96.4 | 102.7 | 94.2 | 89.8 |
| 72.5° | 817.5 | 581.8 | 92.3 | 39.8 | 38.2 | 52.5 | 68.4 | 94.2 | 103.0 | 90.4 | 84.1 |
| 75° | 642.2 | 414.0 | 61.3 | 30.5 | 29.4 | 45.9 | 62.6 | 90.7 | 97.0 | 81.3 | 71.7 |
| 77.5° | 396.1 | 181.3 | 42.3 | 21.2 | 21.4 | 35.7 | 53.8 | 81.0 | 97.8 | 82.1 | 69.8 |
| 80° | 115.1 | 70.0 | 26.9 | 14.3 | 13.2 | 21.2 | 42.3 | 69.8 | 92.8 | 84.3 | 76.1 |
| 82.5° | 66.5 | 45.6 | 18.1 | 9.1 | 8.0 | 9.6 | 26.6 | 54.1 | 81.9 | 77.2 | 78.8 |
| 85° | 15.1 | 12.6 | 6.6 | 4.4 | 4.4 | 5.5 | 9.1 | 31.3 | 56.6 | 66.2 | 74.7 |
| 87.5° | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.4 | 1.6 | 8.5 | 24.7 | 35.2 | 40.9 |
| 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)