

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: INVUE

Report Number: P401466

Luminaire Tested: **ENT-SA1D-730-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401466
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-730-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5141 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 43.1
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

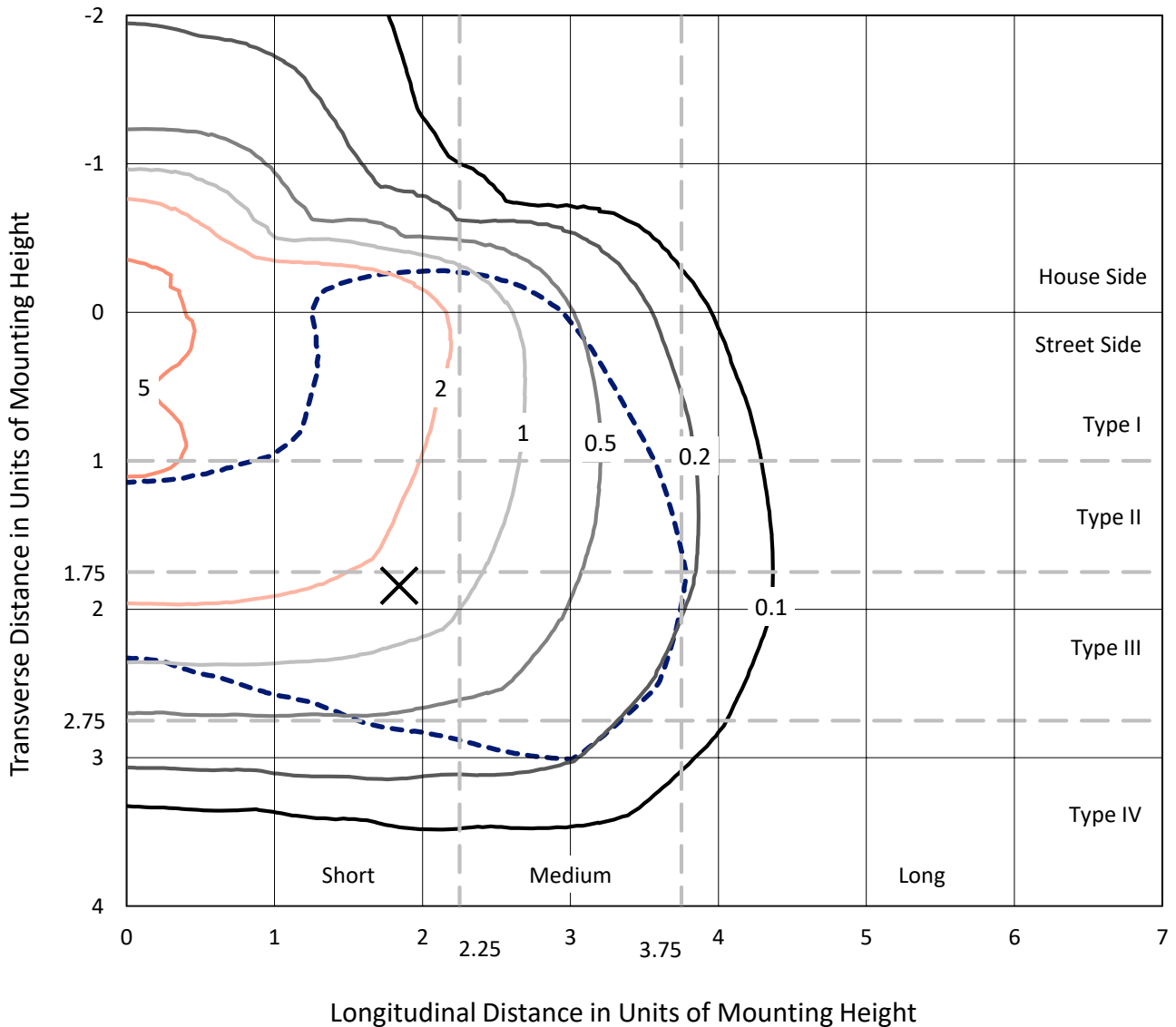


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

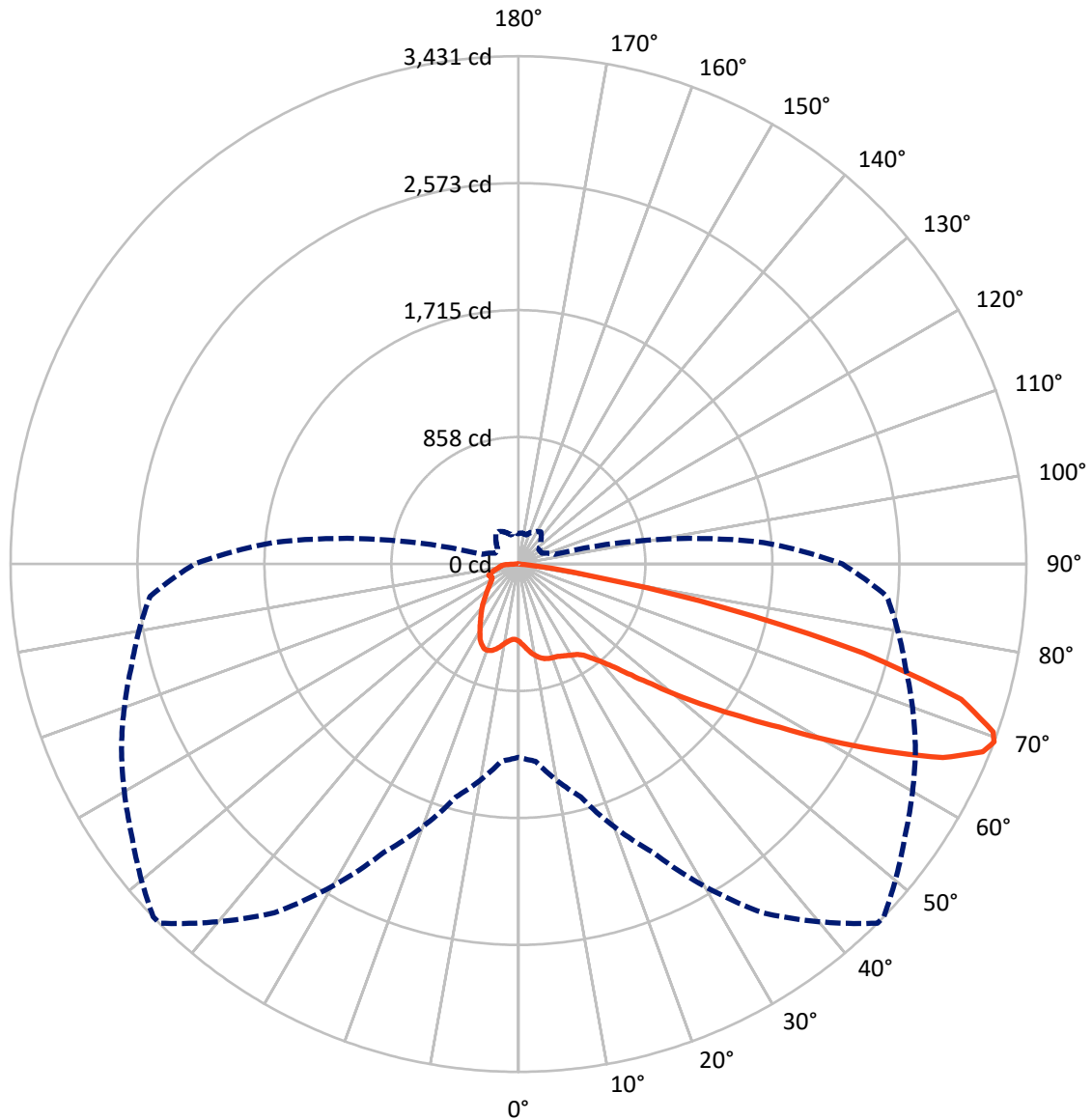


Based on 10 foot mounting height. Maximum calculated value = 6.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1210.4 | 0.0 | 1210.4 |
| | % Fixture | 23.5 | 0.0 | 23.5 |
| Street Side | Lumens | 3930.6 | 0.0 | 3930.6 |
| | % Fixture | 76.5 | 0.0 | 76.5 |
| Total | Lumens | 5141.0 | 0.0 | 5141.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 53.1 | 1.0 |
| 10°-20° | 176.2 | 3.4 |
| 20°-30° | 297.7 | 5.8 |
| 30°-40° | 430.8 | 8.4 |
| 40°-50° | 650.4 | 12.7 |
| 50°-60° | 1096.7 | 21.3 |
| 60°-70° | 1508.8 | 29.3 |
| 70°-80° | 836.1 | 16.3 |
| 80°-90° | 91.0 | 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° | 5141.0 | 100.0 |
| 0°-180° | 5141.0 | 100.0 |



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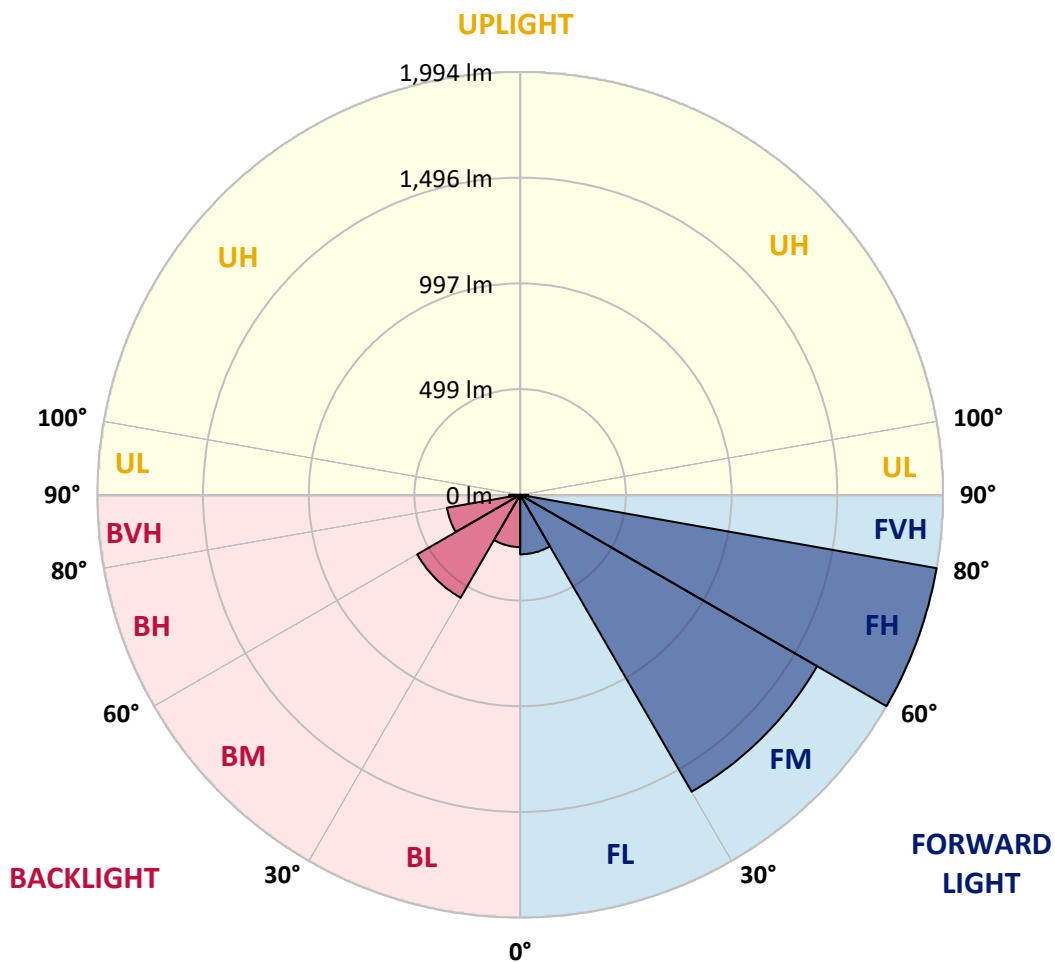
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 280.6 | 5.5 | | | |
| FM | (30°-60°) | 1616.9 | 31.5 | | | |
| FH | (60°-80°) | 1994.1 | 38.8 | | | G2/5000 |
| FVH | (80°-90°) | 39.0 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 246.5 | 4.8 | B1/500 | | |
| BM | (30°-60°) | 561.1 | 10.9 | B1/1000 | | |
| BH | (60°-80°) | 350.8 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 52.1 | 1.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 |
| 2.5° | 554.7 | 554.0 | 554.7 | 551.8 | 548.9 | 544.5 | 543.0 | 537.9 | 534.2 | 529.1 | 524.7 |
| 5° | 595.6 | 597.8 | 597.1 | 593.4 | 581.8 | 573.0 | 573.0 | 562.0 | 550.3 | 539.4 | 529.1 |
| 7.5° | 640.2 | 640.2 | 635.8 | 628.5 | 616.8 | 603.7 | 602.2 | 587.6 | 570.8 | 555.4 | 539.4 |
| 10° | 672.4 | 673.8 | 667.3 | 657.0 | 642.4 | 628.5 | 627.1 | 610.3 | 594.2 | 574.4 | 554.7 |
| 12.5° | 695.0 | 695.0 | 689.2 | 679.7 | 662.1 | 649.0 | 647.5 | 632.2 | 615.4 | 594.9 | 572.3 |
| 15° | 706.7 | 705.3 | 700.1 | 689.9 | 674.6 | 663.6 | 661.4 | 648.3 | 634.4 | 613.9 | 589.8 |
| 17.5° | 704.5 | 704.5 | 700.1 | 689.9 | 679.0 | 670.2 | 668.7 | 659.2 | 649.0 | 629.3 | 605.1 |
| 20° | 695.0 | 694.3 | 692.8 | 684.8 | 677.5 | 673.8 | 672.4 | 668.0 | 661.4 | 644.6 | 621.9 |
| 22.5° | 686.3 | 685.5 | 683.3 | 678.2 | 675.3 | 677.5 | 677.5 | 676.8 | 676.0 | 662.9 | 641.0 |
| 25° | 691.4 | 690.6 | 686.3 | 679.0 | 678.2 | 688.5 | 689.2 | 691.4 | 692.8 | 681.9 | 659.2 |
| 27.5° | 727.2 | 725.0 | 712.6 | 693.6 | 687.0 | 700.1 | 701.6 | 708.2 | 706.7 | 695.0 | 675.3 |
| 30° | 797.4 | 798.1 | 770.3 | 729.4 | 707.5 | 713.3 | 714.0 | 721.3 | 719.2 | 709.7 | 693.6 |
| 32.5° | 903.3 | 903.3 | 858.0 | 795.9 | 740.3 | 728.7 | 726.5 | 733.0 | 741.8 | 729.4 | 713.3 |
| 35° | 1037.8 | 1034.1 | 979.3 | 883.6 | 796.6 | 755.0 | 753.5 | 750.6 | 765.9 | 754.2 | 730.8 |
| 37.5° | 1173.0 | 1159.9 | 1106.5 | 1001.3 | 875.6 | 806.1 | 800.3 | 791.5 | 800.3 | 775.4 | 755.0 |
| 40° | 1281.9 | 1279.7 | 1235.9 | 1129.2 | 969.1 | 868.2 | 863.9 | 825.1 | 831.0 | 811.2 | 803.2 |
| 42.5° | 1401.8 | 1403.2 | 1374.0 | 1266.6 | 1080.9 | 952.3 | 940.6 | 880.7 | 897.5 | 890.2 | 886.5 |
| 45° | 1533.3 | 1531.9 | 1509.9 | 1397.4 | 1217.6 | 1069.2 | 1054.6 | 980.8 | 1015.1 | 1010.8 | 1031.2 |
| 47.5° | 1634.2 | 1642.2 | 1629.8 | 1550.1 | 1379.8 | 1211.0 | 1200.0 | 1110.2 | 1162.0 | 1197.1 | 1235.9 |
| 50° | 1771.6 | 1770.8 | 1737.2 | 1704.3 | 1568.4 | 1392.3 | 1381.3 | 1281.2 | 1355.7 | 1406.9 | 1477.8 |
| 52.5° | 1941.9 | 1936.0 | 1866.6 | 1854.9 | 1797.9 | 1590.3 | 1580.8 | 1476.3 | 1583.0 | 1627.6 | 1771.6 |
| 55° | 2048.6 | 2047.8 | 2012.0 | 2032.5 | 2033.9 | 1811.0 | 1799.3 | 1706.5 | 1827.1 | 1878.3 | 2096.1 |
| 57.5° | 2137.7 | 2138.5 | 2168.4 | 2240.0 | 2288.3 | 2079.3 | 2074.9 | 1961.6 | 2083.6 | 2155.3 | 2412.5 |
| 60° | 2206.4 | 2221.0 | 2305.1 | 2468.8 | 2549.2 | 2421.3 | 2402.3 | 2282.4 | 2364.3 | 2392.8 | 2654.4 |
| 62.5° | 2178.6 | 2197.7 | 2362.8 | 2604.0 | 2810.8 | 2783.8 | 2777.2 | 2604.0 | 2603.3 | 2588.7 | 2834.9 |
| 65° | 1959.4 | 2000.3 | 2260.5 | 2598.9 | 2983.3 | 3152.1 | 3142.6 | 2907.3 | 2825.4 | 2752.4 | 2889.0 |
| 67.5° | 1603.5 | 1612.2 | 1925.8 | 2400.1 | 2981.8 | 3383.8 | 3373.6 | 3128.0 | 2963.6 | 2784.5 | 2730.4 |
| 69° | 1305.3 | 1337.4 | 1627.6 | 2148.7 | 2876.6 | 3430.6 | 3430.6 | 3189.4 | 2958.5 | 2707.8 | 2498.0 |
| 70° | 1129.2 | 1130.6 | 1410.5 | 1948.4 | 2733.4 | 3402.8 | 3409.4 | 3189.4 | 2916.8 | 2607.7 | 2291.9 |
| 72.5° | 529.1 | 562.0 | 738.9 | 1271.7 | 2207.9 | 3128.0 | 3144.1 | 2978.9 | 2674.9 | 2246.6 | 1719.7 |
| 75° | 158.6 | 164.4 | 246.3 | 602.9 | 1265.1 | 2409.6 | 2445.4 | 2478.3 | 2178.6 | 1653.9 | 1059.0 |
| 77.5° | 94.3 | 93.5 | 119.1 | 204.6 | 585.4 | 1428.8 | 1444.9 | 1585.2 | 1413.5 | 919.4 | 480.9 |
| 80° | 46.0 | 47.5 | 63.6 | 99.4 | 219.3 | 518.9 | 570.8 | 741.1 | 626.3 | 359.6 | 176.1 |
| 82.5° | 15.3 | 16.8 | 26.3 | 40.2 | 92.8 | 167.4 | 184.9 | 232.4 | 200.3 | 130.8 | 75.3 |
| 85° | 0.0 | 0.0 | 0.7 | 1.5 | 5.1 | 12.4 | 12.4 | 27.8 | 41.7 | 46.0 | 24.8 |
| 87.5° | 0.0 | 0.0 | 0.7 | 0.7 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 2.2 |
| 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° | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 | 521.8 |
| 2.5° | 522.6 | 521.1 | 518.2 | 515.2 | 513.8 | 510.1 | 510.9 | 509.4 | 508.7 | 508.7 | 509.4 |
| 5° | 524.0 | 521.8 | 517.4 | 514.5 | 511.6 | 510.1 | 513.8 | 515.2 | 516.7 | 516.7 | 517.4 |
| 7.5° | 532.8 | 528.4 | 523.3 | 519.6 | 520.4 | 522.6 | 528.4 | 532.8 | 535.0 | 536.4 | 537.9 |
| 10° | 547.4 | 542.3 | 535.0 | 534.2 | 535.7 | 541.6 | 549.6 | 556.2 | 562.0 | 565.7 | 565.7 |
| 12.5° | 562.8 | 556.2 | 550.3 | 551.8 | 558.4 | 567.1 | 575.2 | 582.5 | 587.6 | 591.3 | 592.0 |
| 15° | 579.6 | 573.0 | 567.1 | 570.8 | 581.8 | 592.0 | 599.3 | 602.2 | 604.4 | 608.1 | 608.8 |
| 17.5° | 594.9 | 589.1 | 583.9 | 593.4 | 602.9 | 611.0 | 613.2 | 611.7 | 608.8 | 611.0 | 612.4 |
| 20° | 611.0 | 605.9 | 602.9 | 613.2 | 619.8 | 620.5 | 614.6 | 608.1 | 600.8 | 600.8 | 601.5 |
| 22.5° | 630.7 | 624.1 | 622.7 | 627.8 | 625.6 | 616.8 | 602.2 | 592.0 | 581.8 | 580.3 | 582.5 |
| 25° | 649.7 | 643.1 | 642.4 | 638.8 | 619.8 | 597.1 | 577.4 | 565.7 | 557.6 | 558.4 | 562.8 |
| 27.5° | 668.7 | 664.3 | 665.1 | 645.3 | 602.9 | 568.6 | 542.3 | 532.8 | 535.0 | 536.4 | 540.8 |
| 30° | 687.7 | 687.7 | 690.6 | 645.3 | 579.6 | 528.4 | 503.6 | 502.8 | 508.7 | 513.1 | 518.2 |
| 32.5° | 709.7 | 716.2 | 711.1 | 637.3 | 548.1 | 487.5 | 467.7 | 469.2 | 475.8 | 483.1 | 487.5 |
| 35° | 730.8 | 746.2 | 731.6 | 619.0 | 505.0 | 450.2 | 434.1 | 431.9 | 437.0 | 443.6 | 445.8 |
| 37.5° | 764.5 | 789.3 | 749.1 | 590.5 | 460.4 | 417.3 | 401.2 | 395.4 | 390.3 | 395.4 | 394.7 |
| 40° | 822.9 | 852.9 | 762.3 | 543.0 | 417.3 | 386.6 | 369.8 | 358.8 | 346.4 | 335.5 | 335.5 |
| 42.5° | 916.5 | 936.2 | 769.6 | 485.3 | 374.2 | 355.9 | 339.1 | 323.0 | 304.0 | 284.3 | 284.3 |
| 45° | 1069.2 | 1073.6 | 772.5 | 423.9 | 334.7 | 325.2 | 307.7 | 292.3 | 267.5 | 247.8 | 243.4 |
| 47.5° | 1273.1 | 1254.1 | 779.8 | 364.7 | 300.4 | 298.2 | 283.6 | 266.0 | 239.0 | 220.7 | 218.5 |
| 50° | 1547.2 | 1465.3 | 812.0 | 317.2 | 272.6 | 274.8 | 263.8 | 243.4 | 217.8 | 204.6 | 201.7 |
| 52.5° | 1855.6 | 1732.1 | 836.8 | 279.2 | 248.5 | 255.1 | 247.0 | 227.3 | 205.4 | 194.4 | 192.2 |
| 55° | 2192.5 | 1988.6 | 831.0 | 253.6 | 230.2 | 237.5 | 234.6 | 217.8 | 198.1 | 188.6 | 186.4 |
| 57.5° | 2467.3 | 2169.1 | 779.8 | 230.9 | 211.9 | 222.2 | 225.1 | 211.9 | 193.7 | 184.9 | 182.7 |
| 60° | 2673.4 | 2267.8 | 674.6 | 211.9 | 197.3 | 209.8 | 217.8 | 208.3 | 192.9 | 187.8 | 185.6 |
| 62.5° | 2767.0 | 2259.0 | 537.9 | 197.3 | 186.4 | 201.0 | 218.5 | 214.1 | 203.9 | 207.6 | 208.3 |
| 65° | 2714.4 | 2148.7 | 403.4 | 186.4 | 179.8 | 202.4 | 230.9 | 230.9 | 215.6 | 222.2 | 222.9 |
| 67.5° | 2444.7 | 1860.0 | 293.8 | 178.3 | 173.2 | 209.8 | 254.3 | 239.7 | 210.5 | 215.6 | 213.4 |
| 69° | 2188.2 | 1664.1 | 252.1 | 173.9 | 168.1 | 213.4 | 264.6 | 241.2 | 204.6 | 210.5 | 204.6 |
| 70° | 1999.6 | 1487.3 | 226.6 | 170.3 | 165.9 | 213.4 | 267.5 | 239.7 | 201.7 | 206.1 | 199.5 |
| 72.5° | 1423.0 | 1032.7 | 186.4 | 163.0 | 157.9 | 197.3 | 262.4 | 231.7 | 193.7 | 188.6 | 176.1 |
| 75° | 827.3 | 570.8 | 158.6 | 154.9 | 139.6 | 173.2 | 249.2 | 222.9 | 185.6 | 176.1 | 167.4 |
| 77.5° | 347.2 | 255.1 | 135.2 | 141.1 | 123.5 | 154.2 | 233.1 | 214.1 | 176.1 | 163.0 | 158.6 |
| 80° | 141.1 | 127.2 | 112.6 | 122.1 | 107.4 | 135.9 | 214.9 | 199.5 | 162.2 | 149.1 | 142.5 |
| 82.5° | 73.8 | 70.2 | 86.2 | 98.7 | 89.2 | 125.0 | 202.4 | 189.3 | 150.6 | 137.4 | 129.4 |
| 85° | 21.9 | 29.2 | 49.0 | 67.2 | 68.0 | 112.6 | 196.6 | 175.4 | 130.8 | 113.3 | 111.8 |
| 87.5° | 1.5 | 5.8 | 16.8 | 35.1 | 44.6 | 86.2 | 159.3 | 144.0 | 106.0 | 89.2 | 89.9 |
| 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)