

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: P401575

Luminaire Tested: **ENT-SA1D-830-U-SL2-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401575
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-2)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-830-U-SL2-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3626 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

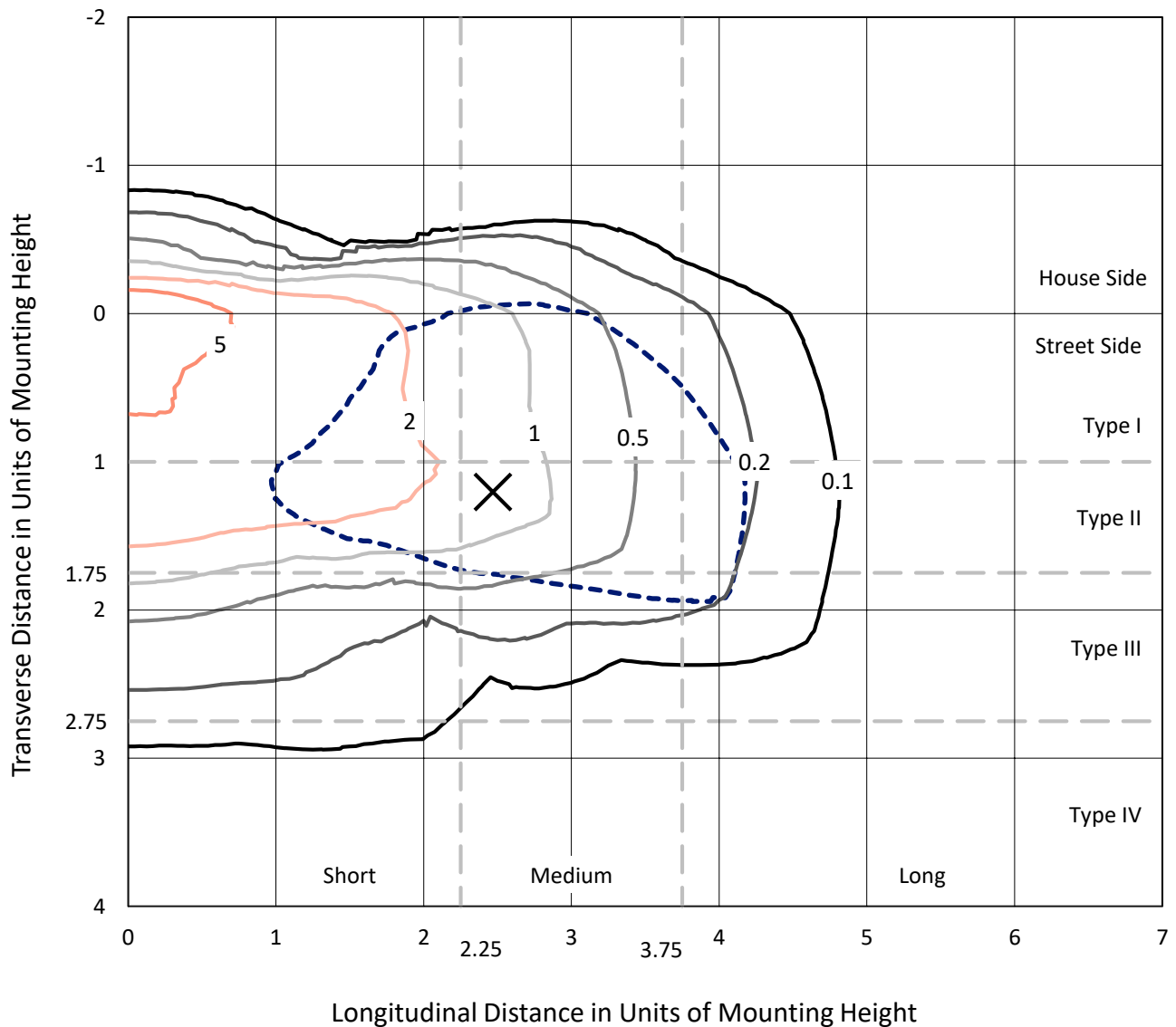
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

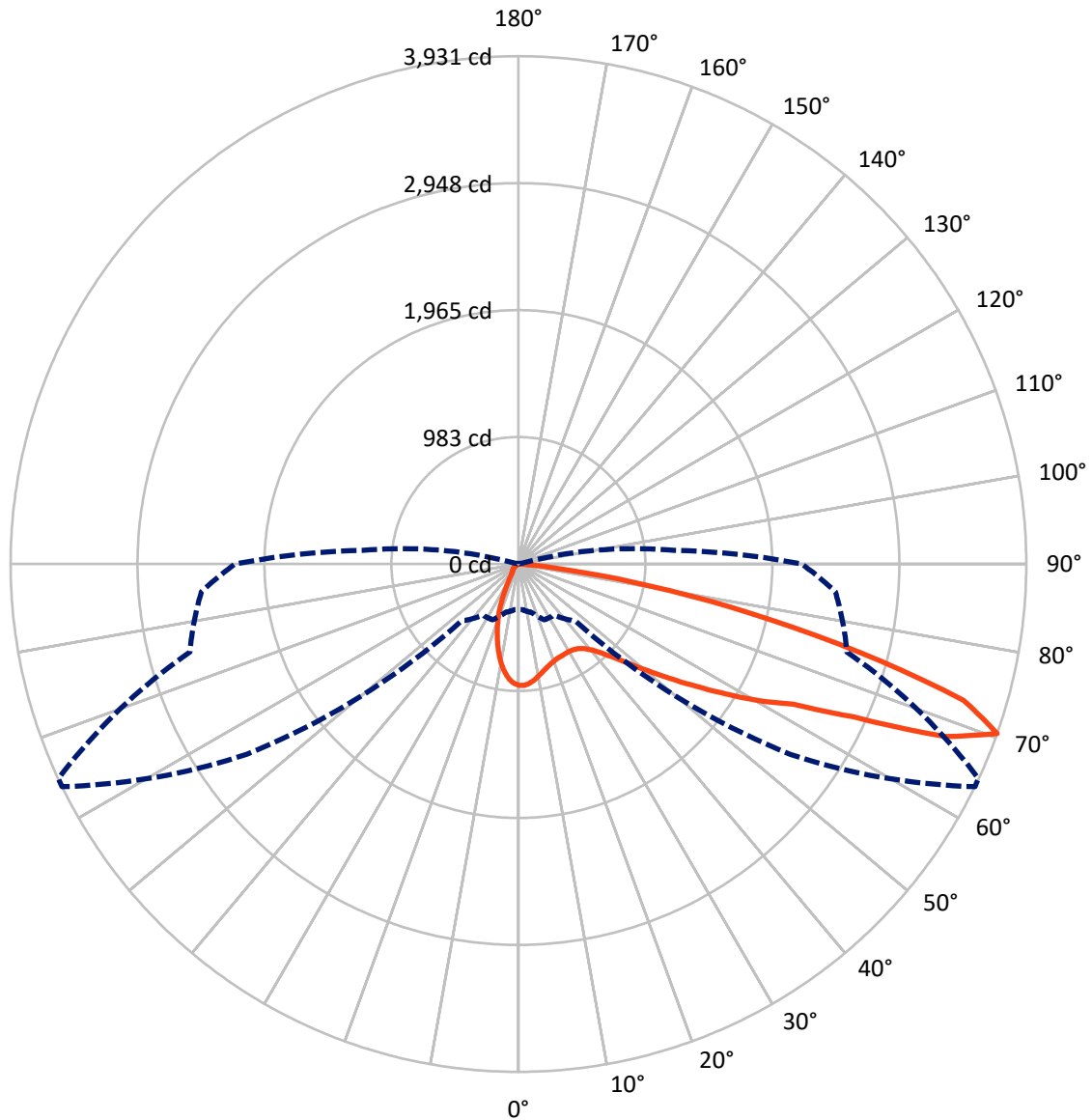
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 465.8 | 0.0 | 465.8 |
| | % Fixture | 12.8 | 0.0 | 12.8 |
| Street Side | Lumens | 3160.2 | 0.0 | 3160.2 |
| | % Fixture | 87.2 | 0.0 | 87.2 |
| Total | Lumens | 3626.0 | 0.0 | 3626.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 79.1 | 2.2 |
| 10°-20° | 175.5 | 4.8 |
| 20°-30° | 241.7 | 6.7 |
| 30°-40° | 332.9 | 9.2 |
| 40°-50° | 496.1 | 13.7 |
| 50°-60° | 783.8 | 21.6 |
| 60°-70° | 888.1 | 24.5 |
| 70°-80° | 583.1 | 16.1 |
| 80°-90° | 45.7 | 1.3 |
| 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° | 3626.0 | 100.0 |
| 0°-180° | 3626.0 | 100.0 |



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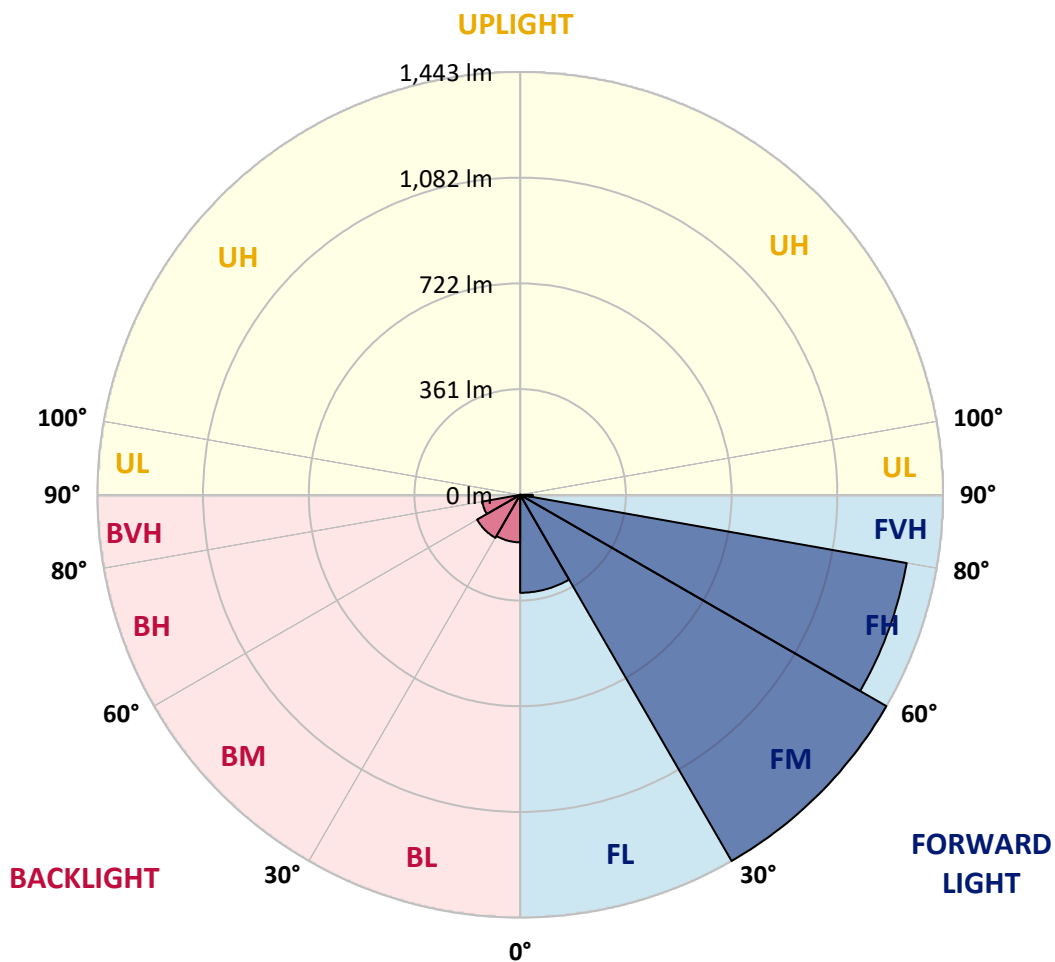
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 334.2 | 9.2 | | | |
| FM | (30°-60°) | 1443.1 | 39.8 | | | |
| FH | (60°-80°) | 1339.7 | 36.9 | | | G1/1800 |
| FVH | (80°-90°) | 43.2 | 1.2 | | | G1/100 |
| BL | (0°-30°) | 162.1 | 4.5 | B1/500 | | |
| BM | (30°-60°) | 169.6 | 4.7 | B0/220 | | |
| BH | (60°-80°) | 131.5 | 3.6 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 2.5 | 0.1 | | | G0/10 |
| 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° | 64° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 |
| 2.5° | 912.5 | 912.5 | 917.0 | 921.4 | 924.0 | 931.0 | 936.1 | 939.9 | 939.9 | 942.5 | 938.0 |
| 5° | 851.9 | 851.9 | 855.7 | 866.6 | 878.1 | 892.7 | 909.3 | 925.9 | 929.1 | 941.2 | 940.5 |
| 7.5° | 795.8 | 800.9 | 807.3 | 818.1 | 830.2 | 851.9 | 874.9 | 903.6 | 906.8 | 936.1 | 942.5 |
| 10° | 756.9 | 760.1 | 763.9 | 776.0 | 793.9 | 818.8 | 843.6 | 877.4 | 883.2 | 927.2 | 942.5 |
| 12.5° | 725.7 | 726.3 | 732.0 | 745.4 | 762.6 | 786.9 | 814.9 | 851.9 | 858.9 | 911.2 | 939.9 |
| 15° | 703.3 | 702.7 | 709.1 | 721.8 | 738.4 | 763.3 | 790.7 | 829.6 | 837.2 | 897.8 | 939.3 |
| 17.5° | 689.9 | 690.6 | 695.7 | 705.3 | 721.2 | 744.8 | 772.8 | 811.1 | 818.8 | 887.0 | 942.5 |
| 20° | 689.9 | 689.9 | 693.1 | 697.6 | 709.7 | 730.8 | 758.2 | 797.7 | 805.4 | 880.0 | 946.9 |
| 22.5° | 703.3 | 702.1 | 704.6 | 700.8 | 706.5 | 721.2 | 749.2 | 788.8 | 797.1 | 876.8 | 953.9 |
| 25° | 727.6 | 725.0 | 726.9 | 718.6 | 712.3 | 718.6 | 743.5 | 785.0 | 793.9 | 877.4 | 960.3 |
| 27.5° | 761.4 | 761.4 | 757.5 | 746.1 | 730.1 | 723.1 | 742.9 | 782.4 | 791.3 | 877.4 | 964.8 |
| 30° | 808.6 | 806.6 | 800.9 | 789.4 | 764.6 | 741.0 | 749.2 | 782.4 | 791.3 | 878.1 | 966.1 |
| 32.5° | 855.7 | 857.0 | 860.2 | 848.7 | 814.9 | 771.6 | 764.6 | 788.1 | 795.8 | 877.4 | 964.1 |
| 35° | 903.6 | 904.2 | 918.2 | 919.5 | 876.1 | 820.7 | 790.7 | 803.5 | 808.6 | 883.8 | 965.4 |
| 37.5° | 945.6 | 948.8 | 976.3 | 989.6 | 953.9 | 883.8 | 832.1 | 832.1 | 834.7 | 901.0 | 973.1 |
| 40° | 992.8 | 1001.1 | 1034.3 | 1064.3 | 1050.2 | 964.8 | 892.7 | 874.2 | 875.5 | 932.3 | 990.3 |
| 42.5° | 1047.7 | 1057.9 | 1101.2 | 1144.6 | 1144.0 | 1064.3 | 969.2 | 941.2 | 942.5 | 986.5 | 1025.4 |
| 45° | 1117.2 | 1124.2 | 1179.0 | 1233.2 | 1244.7 | 1173.9 | 1065.5 | 1028.5 | 1029.8 | 1068.7 | 1093.6 |
| 47.5° | 1202.0 | 1210.3 | 1263.2 | 1328.2 | 1357.6 | 1305.9 | 1190.5 | 1150.3 | 1146.5 | 1173.9 | 1191.8 |
| 50° | 1312.9 | 1328.9 | 1360.1 | 1422.6 | 1493.4 | 1459.0 | 1337.2 | 1297.0 | 1291.9 | 1313.6 | 1319.3 |
| 52.5° | 1418.8 | 1433.5 | 1446.2 | 1503.6 | 1640.7 | 1649.0 | 1517.0 | 1473.0 | 1467.9 | 1473.0 | 1480.0 |
| 55° | 1434.7 | 1443.0 | 1452.6 | 1530.4 | 1759.9 | 1890.7 | 1721.7 | 1669.4 | 1654.7 | 1645.2 | 1668.8 |
| 57.5° | 1307.8 | 1302.7 | 1334.6 | 1440.5 | 1779.7 | 2157.8 | 1998.4 | 1897.0 | 1883.0 | 1830.1 | 1806.5 |
| 60° | 1035.6 | 1028.5 | 1058.5 | 1203.3 | 1668.8 | 2290.5 | 2382.3 | 2148.9 | 2114.5 | 1937.2 | 1914.3 |
| 62.5° | 727.6 | 719.3 | 758.2 | 843.6 | 1294.4 | 2264.3 | 2815.3 | 2387.4 | 2319.2 | 2032.2 | 2001.0 |
| 65° | 560.5 | 556.7 | 577.7 | 596.8 | 790.1 | 1961.4 | 3053.7 | 2852.9 | 2712.0 | 2135.5 | 2095.3 |
| 67.5° | 439.3 | 444.4 | 470.6 | 526.1 | 510.1 | 1222.4 | 3031.4 | 3563.2 | 3422.3 | 2325.5 | 2300.0 |
| 70° | 353.3 | 354.5 | 387.1 | 475.7 | 481.4 | 622.4 | 2566.6 | 3930.5 | 3928.6 | 2632.3 | 2462.6 |
| 72.5° | 213.6 | 219.4 | 272.3 | 411.3 | 485.9 | 476.3 | 1725.5 | 3601.5 | 3651.2 | 2703.7 | 2221.0 |
| 75° | 102.7 | 108.4 | 140.9 | 276.1 | 482.7 | 463.6 | 933.5 | 2726.6 | 2790.4 | 2424.4 | 1800.7 |
| 77.5° | 38.3 | 43.4 | 65.0 | 135.2 | 357.7 | 424.7 | 491.0 | 1838.4 | 1888.7 | 1774.6 | 1219.8 |
| 80° | 12.1 | 14.0 | 25.5 | 61.9 | 181.7 | 350.7 | 316.3 | 1036.8 | 1070.6 | 776.7 | 410.0 |
| 82.5° | 1.3 | 1.9 | 7.0 | 21.0 | 70.1 | 178.5 | 185.6 | 390.2 | 407.5 | 151.8 | 82.9 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 1.3 | 45.9 | 74.6 | 61.2 | 14.7 | 24.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 1.3 | 1.9 | 1.9 | 1.9 | 2.6 |
| 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° | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 | 938.6 |
| 2.5° | 937.4 | 937.4 | 932.9 | 925.9 | 917.0 | 904.2 | 901.0 | 890.8 | 890.8 | 882.5 | 881.2 |
| 5° | 938.6 | 934.8 | 920.1 | 898.5 | 868.5 | 836.0 | 815.6 | 793.2 | 774.1 | 762.0 | 763.3 |
| 7.5° | 938.6 | 930.3 | 901.0 | 853.2 | 797.1 | 741.0 | 698.2 | 648.5 | 625.5 | 610.2 | 617.3 |
| 10° | 936.1 | 922.1 | 871.0 | 798.3 | 709.7 | 631.9 | 561.8 | 504.4 | 464.9 | 448.3 | 434.2 |
| 12.5° | 930.3 | 909.9 | 833.4 | 730.1 | 616.6 | 514.6 | 417.7 | 342.4 | 290.1 | 264.0 | 260.8 |
| 15° | 925.2 | 897.2 | 789.4 | 655.5 | 511.4 | 378.1 | 269.7 | 197.7 | 153.0 | 142.8 | 144.1 |
| 17.5° | 924.0 | 885.1 | 747.3 | 576.4 | 408.7 | 251.9 | 155.6 | 125.6 | 119.2 | 116.7 | 116.1 |
| 20° | 924.6 | 874.2 | 701.4 | 498.0 | 289.5 | 156.9 | 118.0 | 111.0 | 108.4 | 107.1 | 106.5 |
| 22.5° | 927.2 | 862.1 | 656.2 | 415.8 | 197.7 | 114.8 | 105.2 | 100.8 | 97.6 | 95.6 | 95.0 |
| 25° | 927.2 | 848.7 | 605.8 | 328.4 | 129.4 | 100.8 | 94.4 | 88.6 | 84.2 | 81.6 | 81.6 |
| 27.5° | 925.2 | 833.4 | 553.5 | 249.3 | 102.7 | 89.9 | 82.9 | 75.2 | 69.5 | 66.3 | 66.3 |
| 30° | 919.5 | 814.9 | 503.1 | 174.1 | 89.9 | 80.3 | 71.4 | 61.9 | 54.8 | 51.7 | 50.4 |
| 32.5° | 911.2 | 795.2 | 445.1 | 122.4 | 81.0 | 70.1 | 59.9 | 49.7 | 43.4 | 39.5 | 39.5 |
| 35° | 902.3 | 775.4 | 382.6 | 93.7 | 73.3 | 61.9 | 50.4 | 40.2 | 34.4 | 31.9 | 31.2 |
| 37.5° | 897.8 | 754.4 | 321.4 | 81.0 | 65.7 | 52.9 | 40.8 | 32.5 | 28.1 | 26.1 | 25.5 |
| 40° | 901.0 | 738.4 | 261.4 | 72.7 | 58.7 | 44.6 | 33.8 | 27.4 | 23.6 | 21.0 | 21.0 |
| 42.5° | 920.1 | 729.5 | 204.7 | 66.3 | 52.3 | 37.6 | 28.1 | 22.3 | 18.5 | 16.6 | 16.6 |
| 45° | 959.0 | 735.9 | 155.6 | 60.6 | 44.6 | 31.2 | 23.6 | 17.9 | 14.0 | 12.1 | 12.1 |
| 47.5° | 1024.1 | 761.4 | 118.0 | 55.5 | 38.3 | 25.5 | 19.1 | 14.0 | 10.8 | 9.6 | 8.9 |
| 50° | 1119.1 | 811.7 | 92.5 | 50.4 | 31.9 | 21.7 | 15.9 | 10.8 | 8.3 | 7.0 | 7.0 |
| 52.5° | 1256.2 | 899.1 | 79.1 | 44.6 | 26.1 | 17.9 | 12.8 | 8.3 | 6.4 | 5.1 | 5.1 |
| 55° | 1424.5 | 1010.1 | 71.4 | 39.5 | 21.0 | 14.7 | 10.2 | 6.4 | 4.5 | 3.8 | 3.2 |
| 57.5° | 1561.0 | 1098.0 | 67.0 | 34.4 | 17.9 | 12.8 | 7.7 | 5.1 | 3.8 | 2.6 | 2.6 |
| 60° | 1681.5 | 1154.8 | 59.3 | 28.7 | 15.3 | 10.2 | 6.4 | 3.8 | 2.6 | 1.9 | 1.9 |
| 62.5° | 1779.1 | 1191.8 | 49.1 | 23.0 | 12.8 | 8.3 | 5.1 | 3.2 | 2.6 | 1.9 | 1.9 |
| 65° | 1890.0 | 1221.8 | 40.2 | 17.9 | 10.8 | 7.0 | 4.5 | 2.6 | 1.9 | 1.9 | 1.9 |
| 67.5° | 2107.5 | 1288.7 | 30.0 | 14.0 | 8.3 | 5.7 | 3.8 | 2.6 | 1.9 | 1.3 | 1.3 |
| 70° | 2192.3 | 1210.3 | 23.6 | 11.5 | 6.4 | 5.1 | 3.8 | 2.6 | 1.3 | 1.3 | 1.3 |
| 72.5° | 1865.8 | 906.1 | 18.5 | 9.6 | 5.7 | 4.5 | 3.8 | 2.6 | 1.9 | 1.9 | 1.3 |
| 75° | 1480.0 | 612.2 | 14.7 | 7.7 | 5.7 | 5.1 | 3.8 | 3.8 | 3.2 | 2.6 | 2.6 |
| 77.5° | 945.0 | 271.0 | 11.5 | 6.4 | 5.7 | 6.4 | 5.7 | 3.8 | 3.8 | 3.2 | 3.2 |
| 80° | 281.8 | 65.0 | 8.3 | 5.1 | 4.5 | 5.1 | 5.7 | 3.8 | 2.6 | 1.9 | 1.9 |
| 82.5° | 61.2 | 15.3 | 5.1 | 2.6 | 3.2 | 2.6 | 3.8 | 3.8 | 2.6 | 1.9 | 1.9 |
| 85° | 20.4 | 5.7 | 3.2 | 2.6 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.3 |
| 87.5° | 1.3 | 1.9 | 1.9 | 1.3 | 1.3 | 1.3 | 1.3 | 0.6 | 0.6 | 1.3 | 1.3 |
| 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)