

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: P401844

Luminaire Tested: **ENV-SA1F-735-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401844
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: ENV-SA1F-735-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7314 lumens
Efficiency: N/A
Efficacy: 110.7 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): 66.1
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

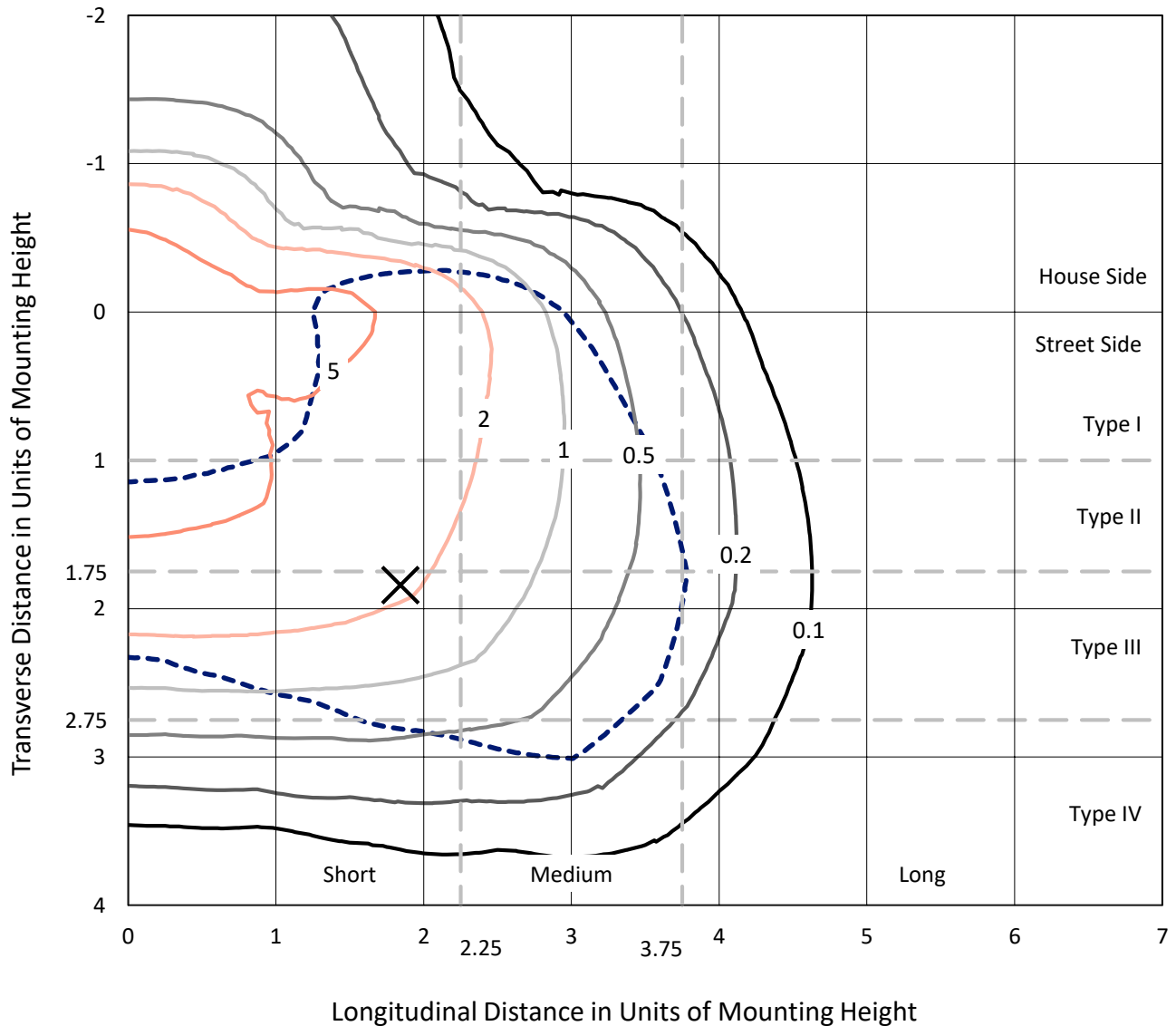


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

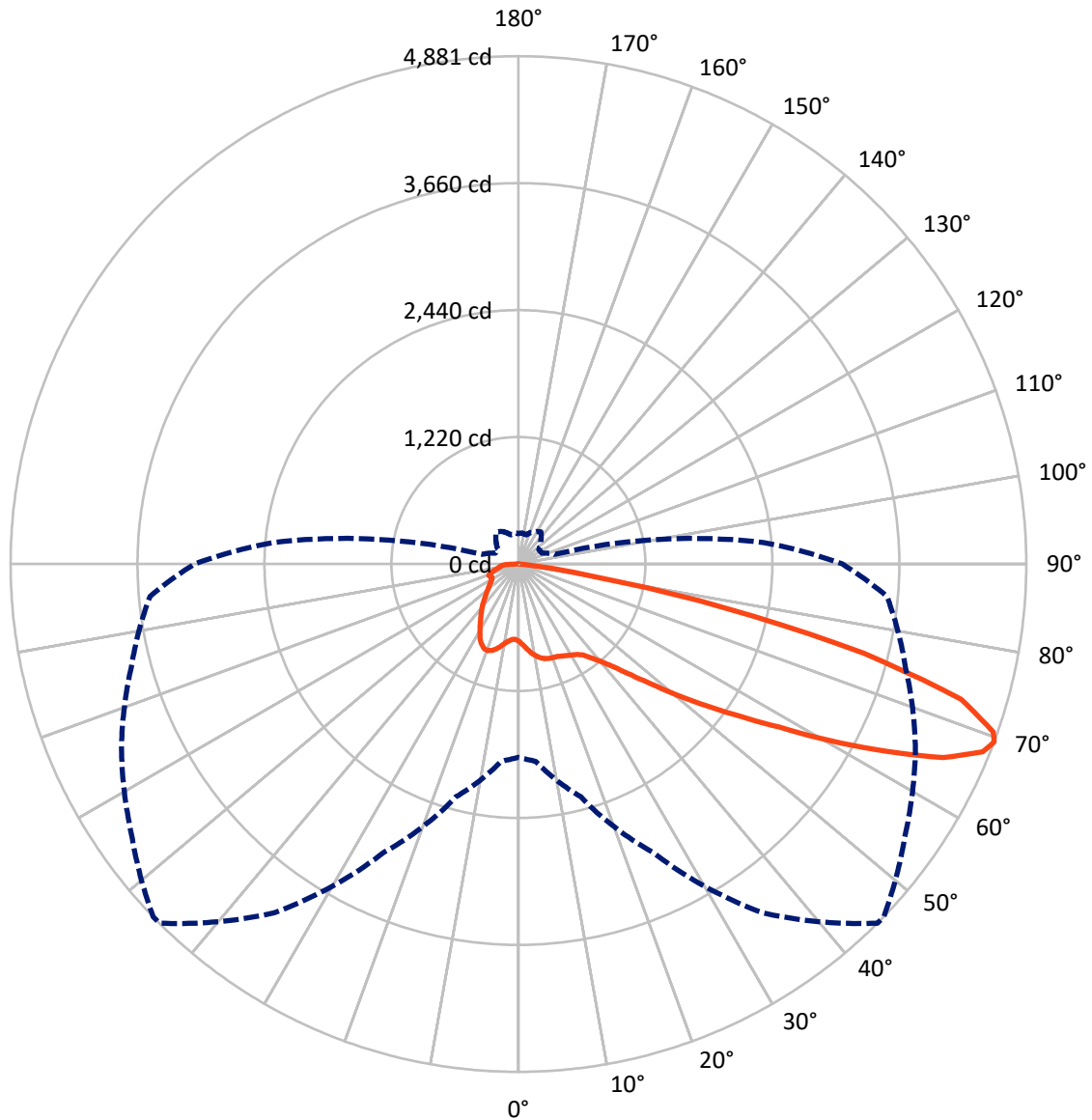


Based on 10 foot mounting height. Maximum calculated value = 9.1 fc
 Type IV - Short - Semi-Cutoff

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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 | 1722.0 | 0.0 | 1722.0 |
| | % Fixture | 23.5 | 0.0 | 23.5 |
| Street Side | Lumens | 5592.0 | 0.0 | 5592.0 |
| | % Fixture | 76.5 | 0.0 | 76.5 |
| Total | Lumens | 7314.0 | 0.0 | 7314.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.6 | 1.0 |
| 10°-20° | 250.7 | 3.4 |
| 20°-30° | 423.6 | 5.8 |
| 30°-40° | 612.9 | 8.4 |
| 40°-50° | 925.4 | 12.7 |
| 50°-60° | 1560.3 | 21.3 |
| 60°-70° | 2146.6 | 29.3 |
| 70°-80° | 1189.5 | 16.3 |
| 80°-90° | 129.5 | 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° | 7314.0 | 100.0 |
| 0°-180° | 7314.0 | 100.0 |



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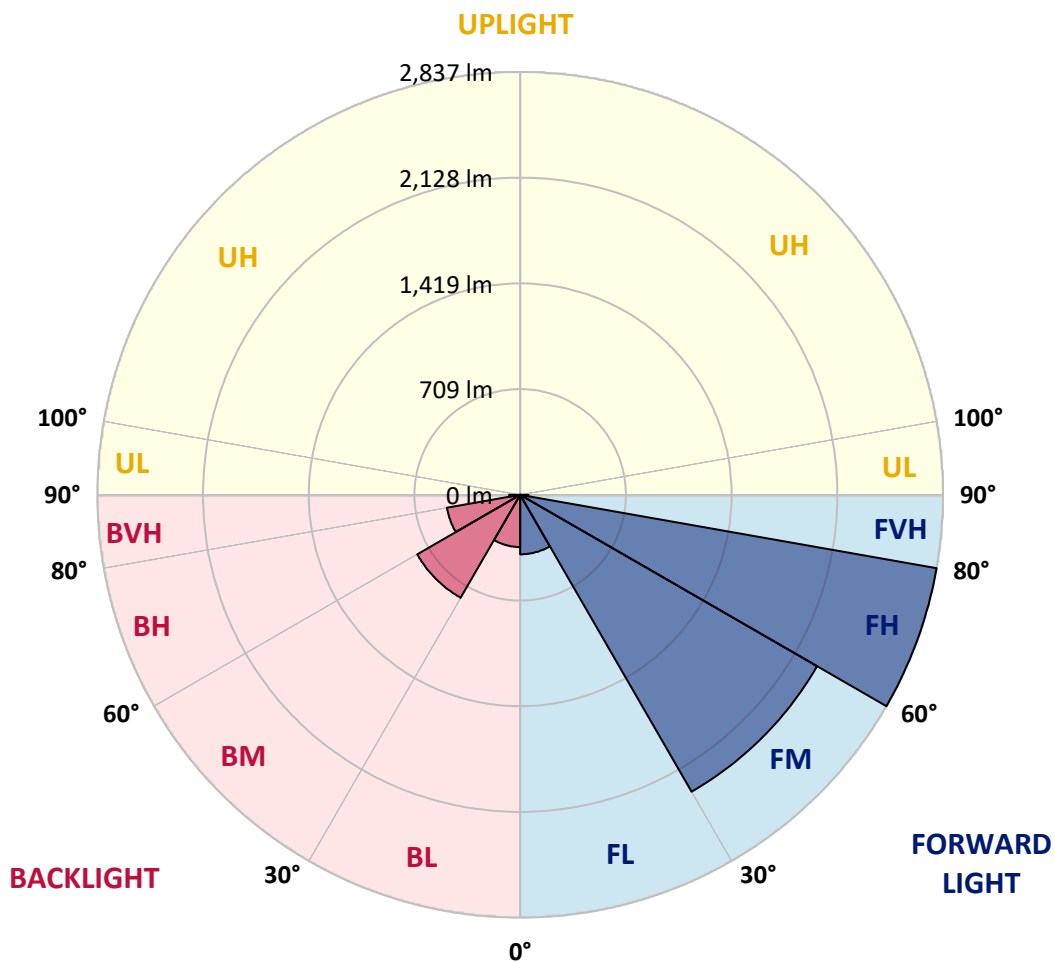
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 399.2 | 5.5 | | | |
| FM | (30°-60°) | 2300.3 | 31.5 | | | |
| FH | (60°-80°) | 2837.0 | 38.8 | | | G2/5000 |
| FVH | (80°-90°) | 55.4 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 350.6 | 4.8 | B1/500 | | |
| BM | (30°-60°) | 798.2 | 10.9 | B1/1000 | | |
| BH | (60°-80°) | 499.1 | 6.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 74.1 | 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° | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 |
| 2.5° | 789.2 | 788.1 | 789.2 | 785.0 | 780.9 | 774.6 | 772.5 | 765.3 | 760.1 | 752.8 | 746.5 |
| 5° | 847.4 | 850.5 | 849.5 | 844.3 | 827.6 | 815.2 | 815.2 | 799.6 | 782.9 | 767.3 | 752.8 |
| 7.5° | 910.8 | 910.8 | 904.6 | 894.2 | 877.6 | 858.8 | 856.8 | 836.0 | 812.1 | 790.2 | 767.3 |
| 10° | 956.6 | 958.7 | 949.3 | 934.7 | 913.9 | 894.2 | 892.1 | 868.2 | 845.3 | 817.3 | 789.2 |
| 12.5° | 988.8 | 988.8 | 980.5 | 967.0 | 942.0 | 923.3 | 921.2 | 899.4 | 875.5 | 846.4 | 814.1 |
| 15° | 1005.4 | 1003.4 | 996.1 | 981.5 | 959.7 | 944.1 | 941.0 | 922.3 | 902.5 | 873.4 | 839.1 |
| 17.5° | 1002.3 | 1002.3 | 996.1 | 981.5 | 965.9 | 953.5 | 951.4 | 937.9 | 923.3 | 895.2 | 860.9 |
| 20° | 988.8 | 987.8 | 985.7 | 974.3 | 963.9 | 958.7 | 956.6 | 950.3 | 941.0 | 917.1 | 884.8 |
| 22.5° | 976.3 | 975.3 | 972.2 | 964.9 | 960.7 | 963.9 | 963.9 | 962.8 | 961.8 | 943.1 | 911.9 |
| 25° | 983.6 | 982.6 | 976.3 | 965.9 | 964.9 | 979.5 | 980.5 | 983.6 | 985.7 | 970.1 | 937.9 |
| 27.5° | 1034.6 | 1031.4 | 1013.8 | 986.7 | 977.4 | 996.1 | 998.2 | 1007.5 | 1005.4 | 988.8 | 960.7 |
| 30° | 1134.4 | 1135.4 | 1095.9 | 1037.7 | 1006.5 | 1014.8 | 1015.8 | 1026.2 | 1023.1 | 1009.6 | 986.7 |
| 32.5° | 1285.1 | 1285.1 | 1220.7 | 1132.3 | 1053.3 | 1036.6 | 1033.5 | 1042.9 | 1055.4 | 1037.7 | 1014.8 |
| 35° | 1476.5 | 1471.3 | 1393.3 | 1257.1 | 1133.3 | 1074.1 | 1072.0 | 1067.8 | 1089.7 | 1073.0 | 1039.8 |
| 37.5° | 1668.8 | 1650.1 | 1574.2 | 1424.5 | 1245.6 | 1146.9 | 1138.5 | 1126.1 | 1138.5 | 1103.2 | 1074.1 |
| 40° | 1823.7 | 1820.6 | 1758.2 | 1606.4 | 1378.7 | 1235.2 | 1229.0 | 1173.9 | 1182.2 | 1154.1 | 1142.7 |
| 42.5° | 1994.3 | 1996.3 | 1954.7 | 1801.9 | 1537.8 | 1354.8 | 1338.2 | 1252.9 | 1276.8 | 1266.4 | 1261.2 |
| 45° | 2181.4 | 2179.3 | 2148.1 | 1988.0 | 1732.2 | 1521.2 | 1500.4 | 1395.4 | 1444.2 | 1438.0 | 1467.1 |
| 47.5° | 2324.9 | 2336.3 | 2318.7 | 2205.3 | 1963.1 | 1722.9 | 1707.3 | 1579.4 | 1653.2 | 1703.1 | 1758.2 |
| 50° | 2520.4 | 2519.3 | 2471.5 | 2424.7 | 2231.3 | 1980.7 | 1965.1 | 1822.7 | 1928.8 | 2001.5 | 2102.4 |
| 52.5° | 2762.6 | 2754.3 | 2655.5 | 2638.9 | 2557.8 | 2262.5 | 2249.0 | 2100.3 | 2252.1 | 2315.5 | 2520.4 |
| 55° | 2914.4 | 2913.4 | 2862.5 | 2891.6 | 2893.6 | 2576.5 | 2559.9 | 2427.8 | 2599.4 | 2672.2 | 2982.0 |
| 57.5° | 3041.3 | 3042.3 | 3085.0 | 3186.9 | 3255.5 | 2958.1 | 2951.9 | 2790.7 | 2964.4 | 3066.3 | 3432.2 |
| 60° | 3139.0 | 3159.8 | 3279.4 | 3512.3 | 3626.7 | 3444.7 | 3417.7 | 3247.2 | 3363.6 | 3404.2 | 3776.4 |
| 62.5° | 3099.5 | 3126.6 | 3361.5 | 3704.7 | 3998.9 | 3960.4 | 3951.1 | 3704.7 | 3703.6 | 3682.8 | 4033.2 |
| 65° | 2787.6 | 2845.8 | 3216.0 | 3697.4 | 4244.3 | 4484.5 | 4471.0 | 4136.2 | 4019.7 | 3915.7 | 4110.2 |
| 67.5° | 2281.2 | 2293.7 | 2739.8 | 3414.6 | 4242.2 | 4814.1 | 4799.5 | 4450.2 | 4216.2 | 3961.5 | 3884.5 |
| 69° | 1857.0 | 1902.8 | 2315.5 | 3056.9 | 4092.5 | 4880.6 | 4880.6 | 4537.5 | 4208.9 | 3852.3 | 3553.9 |
| 70° | 1606.4 | 1608.5 | 2006.7 | 2772.0 | 3888.7 | 4841.1 | 4850.5 | 4537.5 | 4149.7 | 3709.9 | 3260.7 |
| 72.5° | 752.8 | 799.6 | 1051.2 | 1809.2 | 3141.1 | 4450.2 | 4473.0 | 4238.1 | 3805.5 | 3196.2 | 2446.6 |
| 75° | 225.6 | 233.9 | 350.4 | 857.8 | 1799.8 | 3428.1 | 3479.0 | 3525.8 | 3099.5 | 2353.0 | 1506.6 |
| 77.5° | 134.1 | 133.1 | 169.5 | 291.1 | 832.8 | 2032.7 | 2055.6 | 2255.2 | 2010.9 | 1308.0 | 684.2 |
| 80° | 65.5 | 67.6 | 90.5 | 141.4 | 311.9 | 738.2 | 812.1 | 1054.3 | 891.1 | 511.6 | 250.6 |
| 82.5° | 21.8 | 23.9 | 37.4 | 57.2 | 132.0 | 238.1 | 263.1 | 330.6 | 284.9 | 186.1 | 107.1 |
| 85° | 0.0 | 0.0 | 1.0 | 2.1 | 7.3 | 17.7 | 17.7 | 39.5 | 59.3 | 65.5 | 35.4 |
| 87.5° | 0.0 | 0.0 | 1.0 | 1.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 3.1 |
| 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° | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 | 742.4 |
| 2.5° | 743.4 | 741.3 | 737.2 | 733.0 | 731.0 | 725.8 | 726.8 | 724.7 | 723.7 | 723.7 | 724.7 |
| 5° | 745.5 | 742.4 | 736.1 | 732.0 | 727.8 | 725.8 | 731.0 | 733.0 | 735.1 | 735.1 | 736.1 |
| 7.5° | 758.0 | 751.7 | 744.5 | 739.3 | 740.3 | 743.4 | 751.7 | 758.0 | 761.1 | 763.2 | 765.3 |
| 10° | 778.8 | 771.5 | 761.1 | 760.1 | 762.1 | 770.5 | 781.9 | 791.3 | 799.6 | 804.8 | 804.8 |
| 12.5° | 800.6 | 791.3 | 782.9 | 785.0 | 794.4 | 806.9 | 818.3 | 828.7 | 836.0 | 841.2 | 842.2 |
| 15° | 824.5 | 815.2 | 806.9 | 812.1 | 827.6 | 842.2 | 852.6 | 856.8 | 859.9 | 865.1 | 866.1 |
| 17.5° | 846.4 | 838.0 | 830.8 | 844.3 | 857.8 | 869.2 | 872.4 | 870.3 | 866.1 | 869.2 | 871.3 |
| 20° | 869.2 | 862.0 | 857.8 | 872.4 | 881.7 | 882.8 | 874.4 | 865.1 | 854.7 | 854.7 | 855.7 |
| 22.5° | 897.3 | 888.0 | 885.9 | 893.2 | 890.0 | 877.6 | 856.8 | 842.2 | 827.6 | 825.6 | 828.7 |
| 25° | 924.3 | 915.0 | 913.9 | 908.7 | 881.7 | 849.5 | 821.4 | 804.8 | 793.3 | 794.4 | 800.6 |
| 27.5° | 951.4 | 945.1 | 946.2 | 918.1 | 857.8 | 808.9 | 771.5 | 758.0 | 761.1 | 763.2 | 769.4 |
| 30° | 978.4 | 978.4 | 982.6 | 918.1 | 824.5 | 751.7 | 716.4 | 715.4 | 723.7 | 729.9 | 737.2 |
| 32.5° | 1009.6 | 1019.0 | 1011.7 | 906.7 | 779.8 | 693.5 | 665.4 | 667.5 | 676.9 | 687.3 | 693.5 |
| 35° | 1039.8 | 1061.6 | 1040.8 | 880.7 | 718.5 | 640.5 | 617.6 | 614.5 | 621.8 | 631.1 | 634.3 |
| 37.5° | 1087.6 | 1122.9 | 1065.8 | 840.1 | 655.0 | 593.7 | 570.8 | 562.5 | 555.2 | 562.5 | 561.5 |
| 40° | 1170.8 | 1213.4 | 1084.5 | 772.5 | 593.7 | 550.0 | 526.1 | 510.5 | 492.8 | 477.2 | 477.2 |
| 42.5° | 1303.9 | 1331.9 | 1094.9 | 690.4 | 532.4 | 506.4 | 482.4 | 459.6 | 432.5 | 404.5 | 404.5 |
| 45° | 1521.2 | 1527.4 | 1099.0 | 603.1 | 476.2 | 462.7 | 437.7 | 415.9 | 380.6 | 352.5 | 346.2 |
| 47.5° | 1811.3 | 1784.2 | 1109.4 | 518.8 | 427.3 | 424.2 | 403.4 | 378.5 | 340.0 | 314.0 | 310.9 |
| 50° | 2201.2 | 2084.7 | 1155.2 | 451.3 | 387.8 | 390.9 | 375.4 | 346.2 | 309.8 | 291.1 | 287.0 |
| 52.5° | 2639.9 | 2464.2 | 1190.5 | 397.2 | 353.5 | 362.9 | 351.4 | 323.4 | 292.2 | 276.6 | 273.5 |
| 55° | 3119.3 | 2829.2 | 1182.2 | 360.8 | 327.5 | 337.9 | 333.8 | 309.8 | 281.8 | 268.3 | 265.1 |
| 57.5° | 3510.2 | 3086.0 | 1109.4 | 328.6 | 301.5 | 316.1 | 320.2 | 301.5 | 275.5 | 263.1 | 259.9 |
| 60° | 3803.4 | 3226.4 | 959.7 | 301.5 | 280.7 | 298.4 | 309.8 | 296.3 | 274.5 | 267.2 | 264.1 |
| 62.5° | 3936.5 | 3213.9 | 765.3 | 280.7 | 265.1 | 285.9 | 310.9 | 304.6 | 290.1 | 295.3 | 296.3 |
| 65° | 3861.7 | 3056.9 | 573.9 | 265.1 | 255.8 | 288.0 | 328.6 | 328.6 | 306.7 | 316.1 | 317.1 |
| 67.5° | 3478.0 | 2646.2 | 418.0 | 253.7 | 246.4 | 298.4 | 361.8 | 341.0 | 299.5 | 306.7 | 303.6 |
| 69° | 3113.0 | 2367.5 | 358.7 | 247.5 | 239.1 | 303.6 | 376.4 | 343.1 | 291.1 | 299.5 | 291.1 |
| 70° | 2844.8 | 2115.9 | 322.3 | 242.3 | 236.0 | 303.6 | 380.6 | 341.0 | 287.0 | 293.2 | 283.9 |
| 72.5° | 2024.4 | 1469.2 | 265.1 | 231.9 | 224.6 | 280.7 | 373.3 | 329.6 | 275.5 | 268.3 | 250.6 |
| 75° | 1177.0 | 812.1 | 225.6 | 220.4 | 198.6 | 246.4 | 354.6 | 317.1 | 264.1 | 250.6 | 238.1 |
| 77.5° | 493.9 | 362.9 | 192.4 | 200.7 | 175.7 | 219.4 | 331.7 | 304.6 | 250.6 | 231.9 | 225.6 |
| 80° | 200.7 | 180.9 | 160.1 | 173.6 | 152.8 | 193.4 | 305.7 | 283.9 | 230.8 | 212.1 | 202.8 |
| 82.5° | 105.0 | 99.8 | 122.7 | 140.4 | 126.9 | 177.8 | 288.0 | 269.3 | 214.2 | 195.5 | 184.0 |
| 85° | 31.2 | 41.6 | 69.7 | 95.7 | 96.7 | 160.1 | 279.7 | 249.5 | 186.1 | 161.2 | 159.1 |
| 87.5° | 2.1 | 8.3 | 23.9 | 49.9 | 63.4 | 122.7 | 226.7 | 204.8 | 150.8 | 126.9 | 127.9 |
| 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)