

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: P301930

Luminaire Tested: **GAA-AF-02-LED-U-SL4-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301930
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-02-LED-U-SL4-7050-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5916.1 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

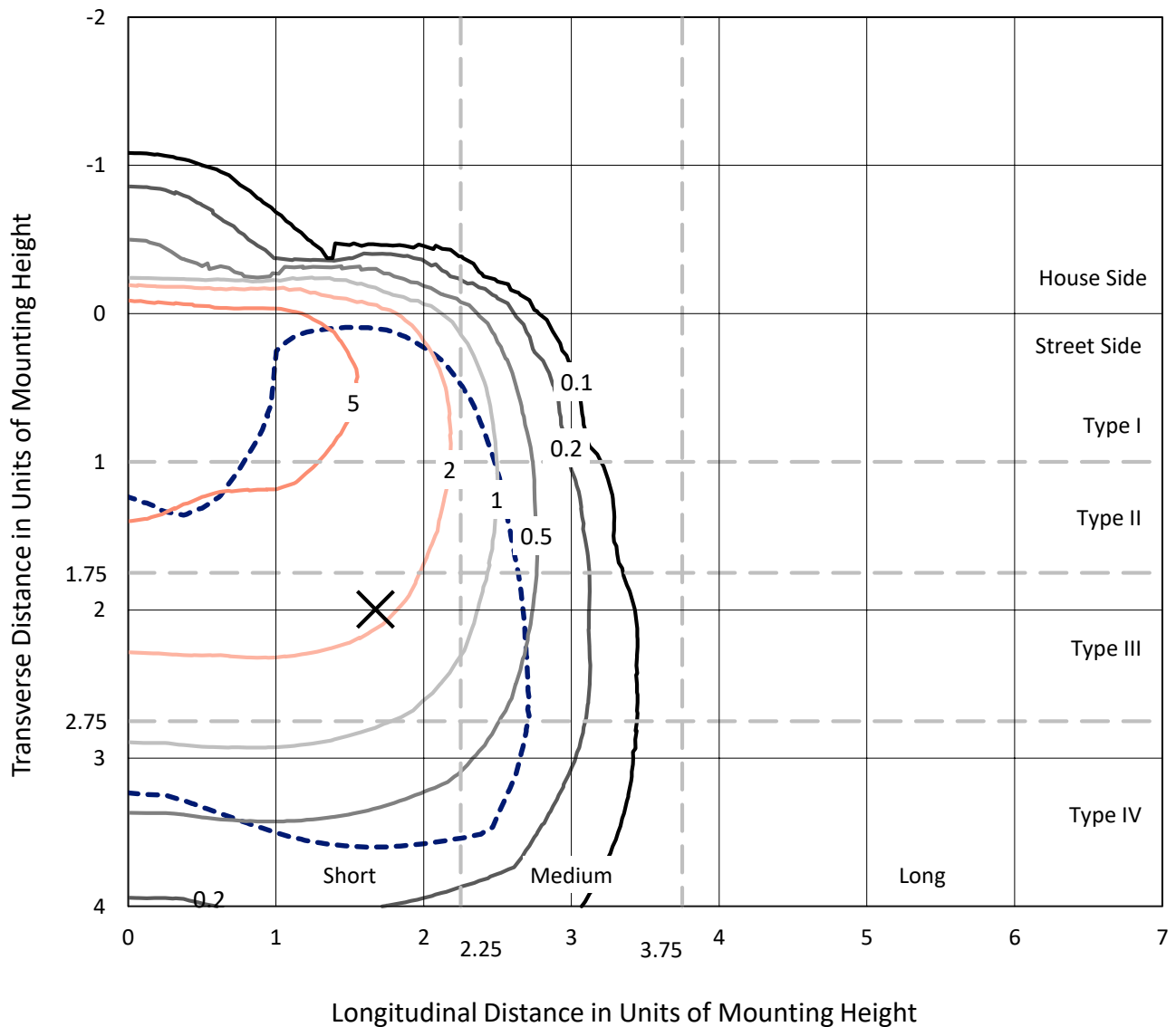


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

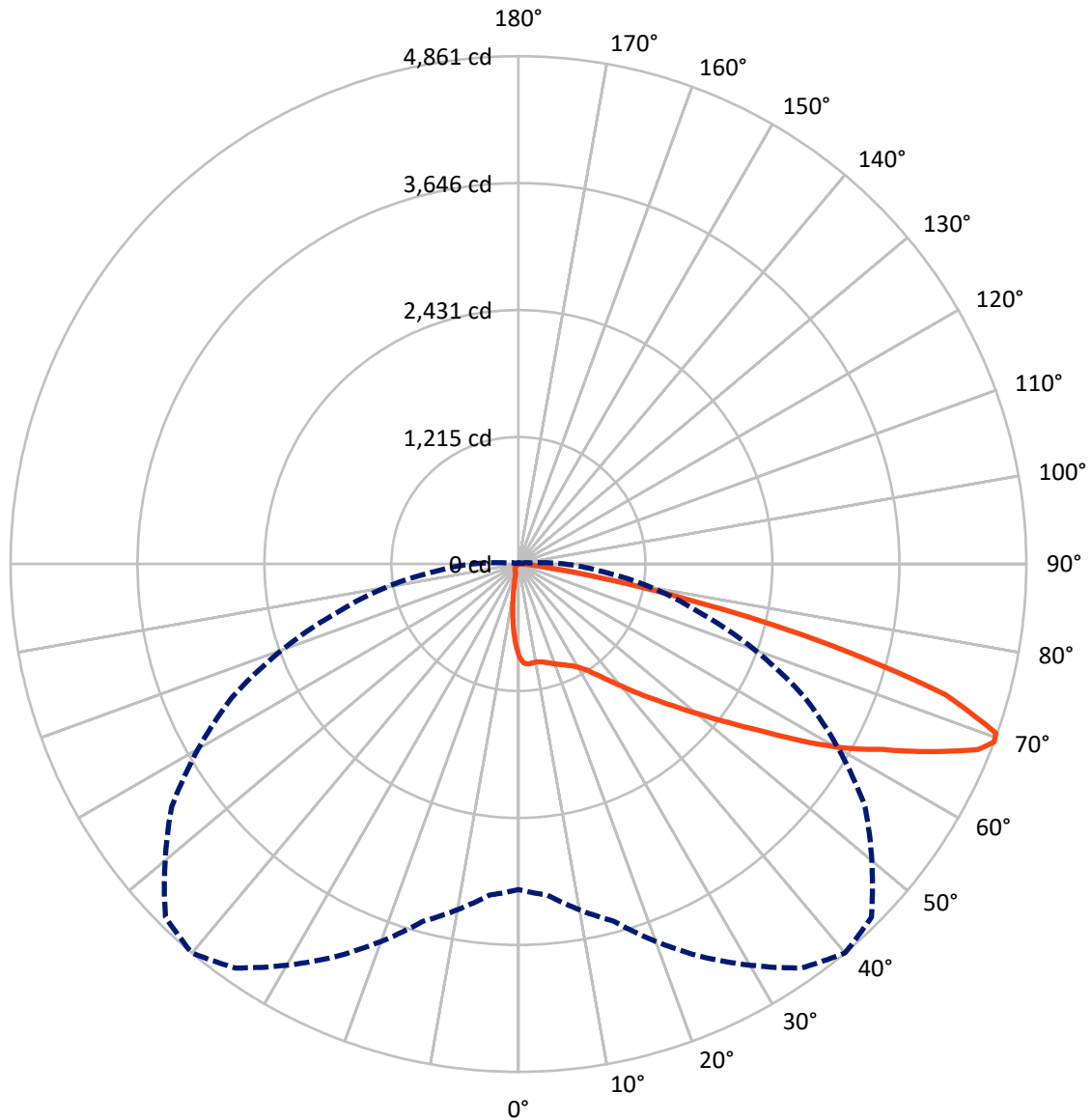


Based on 10 foot mounting height. Maximum calculated value = 9.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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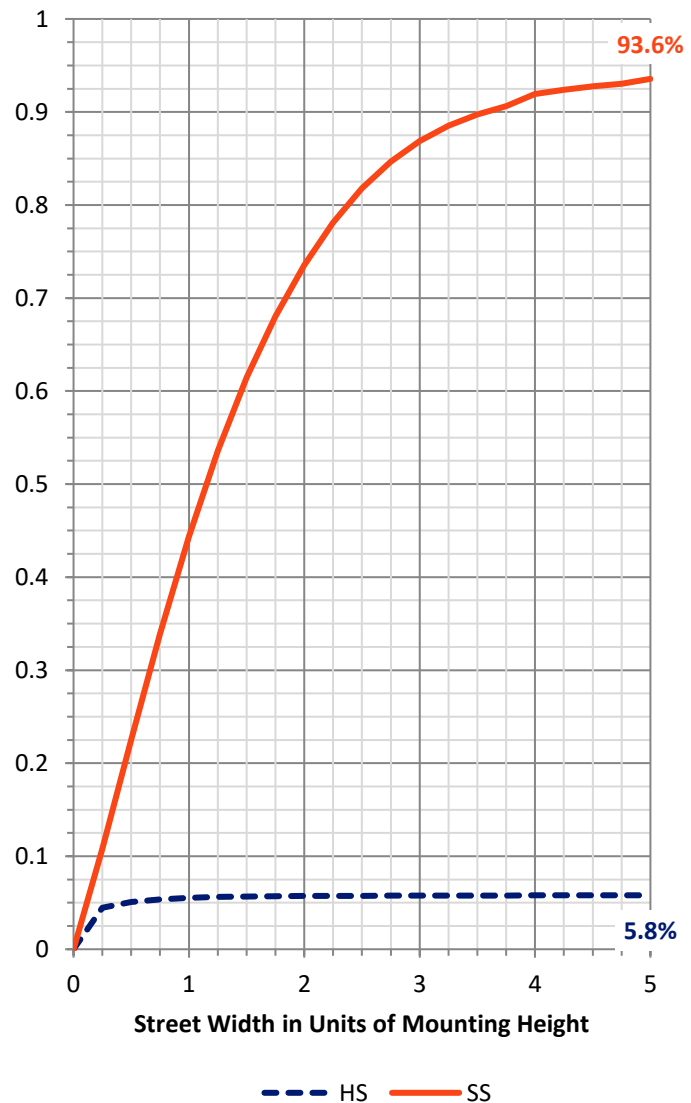
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 346.1 | 0.0 | 346.1 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 5570.0 | 0.0 | 5570.0 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 5916.1 | 0.0 | 5916.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.7 | 1.2 |
| 10°-20° | 176.2 | 3.0 |
| 20°-30° | 296.9 | 5.0 |
| 30°-40° | 486.0 | 8.2 |
| 40°-50° | 841.4 | 14.2 |
| 50°-60° | 1325.3 | 22.4 |
| 60°-70° | 1730.8 | 29.3 |
| 70°-80° | 891.4 | 15.1 |
| 80°-90° | 96.4 | 1.6 |
| 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° | 5916.1 | 100.0 |
| 0°-180° | 5916.1 | 100.0 |

Coefficient of Utilization



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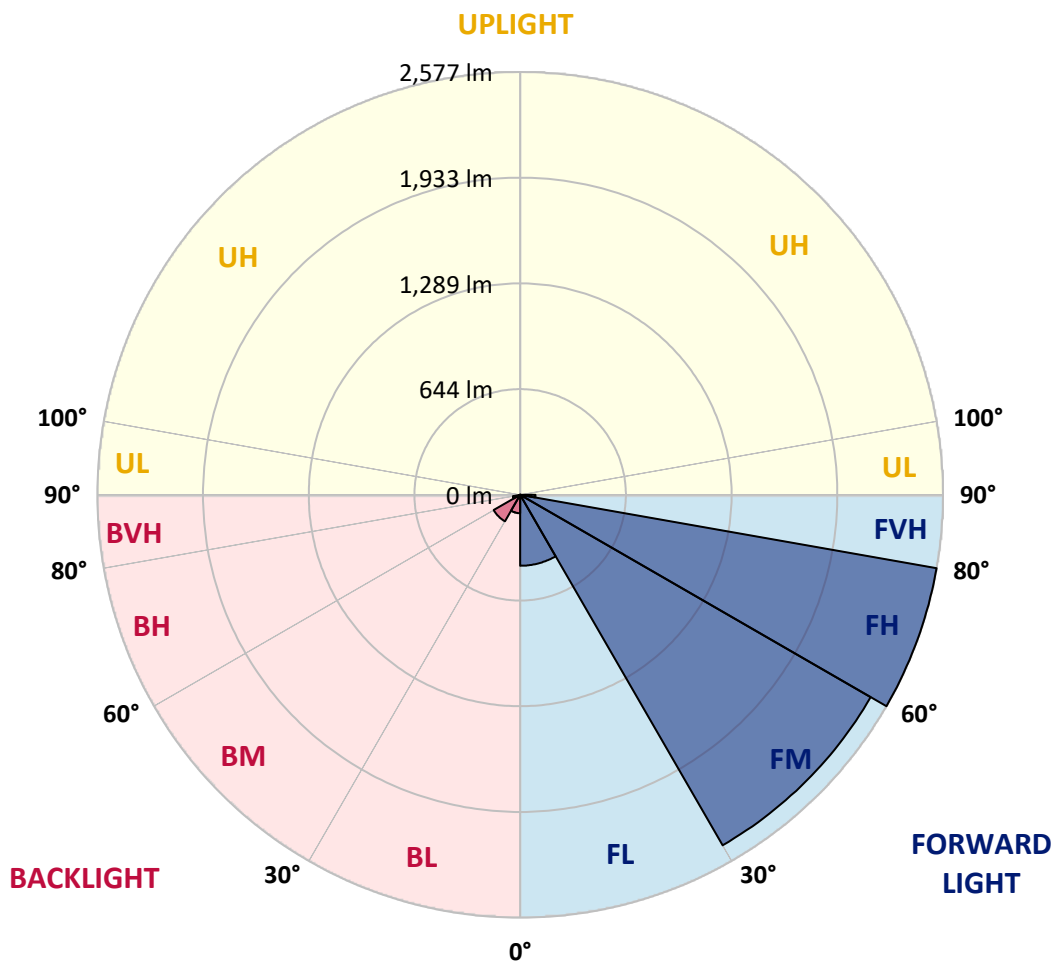
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 432.6 | 7.3 | | | |
| FM (30°-60°) | 2466.6 | 41.7 | | | |
| FH (60°-80°) | 2577.3 | 43.6 | | | G2/5000 |
| FVH (80°-90°) | 93.4 | 1.6 | | | G1/100 |
| BL (0°-30°) | 112.1 | 1.9 | B1/500 | | |
| BM (30°-60°) | 186.0 | 3.1 | B0/220 | | |
| BH (60°-80°) | 44.9 | 0.8 | B0/110 | | G0/110 |
| BVH (80°-90°) | 3.0 | 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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 |
| 2.5° | 970.5 | 965.2 | 962.1 | 957.8 | 952.6 | 948.0 | 946.2 | 933.2 | 920.9 | 904.0 | 884.6 |
| 5° | 988.5 | 986.7 | 981.1 | 975.5 | 969.1 | 962.1 | 958.2 | 942.7 | 925.1 | 900.4 | 866.6 |
| 7.5° | 990.2 | 988.1 | 981.1 | 973.3 | 964.5 | 956.1 | 949.4 | 933.9 | 917.7 | 892.7 | 851.5 |
| 10° | 987.4 | 985.0 | 979.7 | 971.2 | 960.3 | 952.2 | 945.5 | 930.7 | 917.0 | 894.5 | 848.7 |
| 12.5° | 984.3 | 981.8 | 979.3 | 975.1 | 965.6 | 960.0 | 954.3 | 940.2 | 927.9 | 908.9 | 858.9 |
| 15° | 987.4 | 986.0 | 988.8 | 987.1 | 981.8 | 976.9 | 971.2 | 958.5 | 947.3 | 931.4 | 877.6 |
| 17.5° | 1000.8 | 1000.8 | 1009.6 | 1010.7 | 1005.7 | 998.7 | 990.6 | 977.9 | 968.4 | 955.0 | 899.7 |
| 20° | 1032.1 | 1031.1 | 1042.4 | 1044.5 | 1032.5 | 1021.6 | 1009.6 | 994.1 | 986.7 | 978.3 | 921.6 |
| 22.5° | 1086.0 | 1081.1 | 1087.8 | 1085.7 | 1062.1 | 1045.2 | 1030.4 | 1011.4 | 1007.5 | 1003.6 | 945.9 |
| 25° | 1156.1 | 1153.3 | 1157.9 | 1137.1 | 1095.5 | 1072.6 | 1055.0 | 1033.6 | 1033.6 | 1037.4 | 973.3 |
| 27.5° | 1257.9 | 1247.3 | 1231.8 | 1195.2 | 1132.9 | 1103.6 | 1084.6 | 1061.7 | 1067.7 | 1082.2 | 1009.6 |
| 30° | 1362.1 | 1350.5 | 1314.9 | 1258.6 | 1178.3 | 1147.7 | 1125.5 | 1101.5 | 1115.6 | 1142.0 | 1058.2 |
| 32.5° | 1464.9 | 1451.9 | 1401.6 | 1330.4 | 1243.4 | 1212.8 | 1191.3 | 1164.9 | 1188.5 | 1232.9 | 1129.3 |
| 35° | 1564.6 | 1553.0 | 1494.9 | 1411.1 | 1330.1 | 1304.7 | 1285.0 | 1262.1 | 1292.4 | 1354.4 | 1229.7 |
| 37.5° | 1676.6 | 1663.9 | 1593.1 | 1502.3 | 1435.4 | 1417.0 | 1402.6 | 1379.7 | 1432.5 | 1523.4 | 1369.5 |
| 40° | 1814.3 | 1792.8 | 1697.4 | 1606.9 | 1557.2 | 1548.4 | 1538.5 | 1535.4 | 1617.4 | 1743.1 | 1555.8 |
| 42.5° | 1972.0 | 1936.8 | 1806.5 | 1717.1 | 1691.0 | 1697.4 | 1694.9 | 1709.0 | 1848.8 | 2016.4 | 1782.6 |
| 45° | 2129.8 | 2084.4 | 1928.0 | 1834.7 | 1838.2 | 1860.4 | 1874.1 | 1930.5 | 2138.6 | 2329.8 | 2026.6 |
| 47.5° | 2263.6 | 2218.9 | 2044.6 | 1961.8 | 2004.1 | 2047.7 | 2085.1 | 2191.8 | 2436.5 | 2638.3 | 2216.4 |
| 50° | 2378.1 | 2335.8 | 2168.2 | 2101.6 | 2196.7 | 2267.1 | 2327.7 | 2485.8 | 2757.0 | 2873.2 | 2349.5 |
| 52.5° | 2471.7 | 2443.6 | 2296.4 | 2261.9 | 2416.8 | 2520.0 | 2608.7 | 2798.2 | 3040.8 | 3064.0 | 2453.1 |
| 55° | 2562.9 | 2542.9 | 2434.1 | 2452.4 | 2675.3 | 2815.8 | 2928.1 | 3129.5 | 3285.2 | 3223.2 | 2552.4 |
| 57.5° | 2667.9 | 2649.6 | 2591.1 | 2693.9 | 3015.1 | 3191.9 | 3314.4 | 3423.2 | 3500.4 | 3385.9 | 2646.0 |
| 60° | 2774.9 | 2764.4 | 2765.8 | 2962.3 | 3405.3 | 3575.0 | 3642.6 | 3670.8 | 3711.7 | 3539.1 | 2651.3 |
| 62.5° | 2877.1 | 2897.1 | 2965.4 | 3260.9 | 3778.9 | 3909.2 | 3943.4 | 3971.2 | 3923.3 | 3563.4 | 2449.5 |
| 65° | 3050.0 | 3082.7 | 3245.8 | 3660.6 | 4189.9 | 4329.3 | 4364.5 | 4269.1 | 3956.7 | 3249.3 | 1992.5 |
| 67.5° | 3134.5 | 3194.3 | 3485.2 | 4033.2 | 4588.5 | 4743.4 | 4730.4 | 4288.5 | 3550.7 | 2477.7 | 1278.7 |
| 69° | 3116.9 | 3180.6 | 3540.5 | 4147.3 | 4720.9 | 4861.4 | 4778.7 | 4051.5 | 3025.0 | 1794.9 | 784.9 |
| 70° | 3047.1 | 3111.6 | 3512.0 | 4143.0 | 4737.8 | 4849.1 | 4689.2 | 3758.8 | 2557.7 | 1312.5 | 490.9 |
| 72.5° | 2544.6 | 2600.3 | 3117.9 | 3744.8 | 4364.5 | 4274.0 | 3922.9 | 2604.1 | 1246.3 | 357.4 | 110.6 |
| 75° | 1566.4 | 1597.3 | 2237.2 | 2821.1 | 3296.5 | 3064.0 | 2613.7 | 1295.6 | 371.5 | 101.1 | 61.3 |
| 77.5° | 827.6 | 841.6 | 1224.8 | 1662.8 | 2089.7 | 1729.1 | 1339.6 | 505.3 | 171.1 | 63.4 | 44.4 |
| 80° | 489.1 | 499.7 | 659.6 | 760.3 | 904.3 | 755.4 | 535.6 | 310.2 | 122.5 | 39.8 | 39.4 |
| 82.5° | 280.0 | 286.6 | 478.2 | 422.6 | 356.4 | 304.3 | 266.6 | 294.0 | 73.6 | 26.8 | 40.8 |
| 85° | 102.8 | 104.2 | 269.0 | 321.5 | 212.0 | 126.1 | 132.4 | 243.7 | 19.7 | 16.9 | 32.0 |
| 87.5° | 47.9 | 46.8 | 138.4 | 196.9 | 124.0 | 79.9 | 103.2 | 53.5 | 7.7 | 10.9 | 8.8 |
| 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° | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 | 883.9 |
| 2.5° | 873.3 | 860.3 | 836.7 | 812.4 | 787.8 | 768.7 | 750.1 | 735.3 | 730.4 | 721.2 | 721.9 |
| 5° | 846.6 | 822.6 | 773.3 | 723.3 | 671.2 | 628.2 | 587.7 | 555.0 | 539.1 | 522.9 | 522.9 |
| 7.5° | 823.3 | 788.5 | 711.3 | 630.0 | 545.8 | 475.0 | 411.3 | 363.4 | 337.0 | 315.9 | 315.5 |
| 10° | 814.5 | 767.3 | 659.6 | 543.0 | 425.7 | 329.3 | 253.5 | 205.0 | 179.9 | 163.7 | 163.0 |
| 12.5° | 818.4 | 759.9 | 619.8 | 462.7 | 315.5 | 211.6 | 146.8 | 115.5 | 104.9 | 100.0 | 100.0 |
| 15° | 829.7 | 757.8 | 580.0 | 384.2 | 222.9 | 132.4 | 97.5 | 89.1 | 88.4 | 88.4 | 88.4 |
| 17.5° | 843.4 | 758.5 | 539.1 | 307.8 | 151.8 | 94.7 | 84.2 | 83.1 | 83.8 | 83.8 | 83.8 |
| 20° | 857.5 | 758.9 | 495.1 | 237.0 | 107.1 | 82.4 | 79.2 | 78.9 | 79.6 | 79.6 | 79.9 |
| 22.5° | 874.7 | 760.6 | 451.1 | 177.1 | 88.4 | 77.8 | 75.4 | 75.4 | 75.7 | 75.7 | 75.4 |
| 25° | 894.5 | 764.2 | 405.3 | 131.4 | 80.6 | 74.7 | 72.5 | 72.2 | 72.5 | 72.2 | 71.8 |
| 27.5° | 919.1 | 769.1 | 354.3 | 102.8 | 77.1 | 71.5 | 69.7 | 69.7 | 69.4 | 69.0 | 68.7 |
| 30° | 950.1 | 774.7 | 296.9 | 87.3 | 73.6 | 68.7 | 66.9 | 66.6 | 66.2 | 65.5 | 65.5 |
| 32.5° | 997.3 | 787.1 | 240.2 | 79.2 | 69.7 | 64.8 | 63.4 | 63.4 | 62.7 | 62.0 | 61.6 |
| 35° | 1069.8 | 811.4 | 189.5 | 74.3 | 65.5 | 60.6 | 58.8 | 58.8 | 58.1 | 57.8 | 57.4 |
| 37.5° | 1170.2 | 848.3 | 147.2 | 69.7 | 61.3 | 56.0 | 54.2 | 53.9 | 53.2 | 52.5 | 52.1 |
| 40° | 1303.7 | 894.1 | 115.9 | 65.5 | 57.0 | 51.4 | 50.0 | 49.3 | 47.9 | 46.8 | 46.8 |
| 42.5° | 1471.3 | 946.2 | 94.0 | 60.9 | 52.1 | 47.2 | 46.1 | 45.1 | 42.6 | 41.6 | 41.2 |
| 45° | 1646.6 | 993.1 | 79.6 | 55.6 | 47.2 | 43.0 | 42.3 | 40.5 | 37.3 | 36.3 | 36.3 |
| 47.5° | 1773.1 | 1004.0 | 70.1 | 50.7 | 42.6 | 38.4 | 38.0 | 34.9 | 32.0 | 31.3 | 31.0 |
| 50° | 1852.0 | 982.5 | 62.3 | 45.8 | 38.4 | 34.2 | 33.1 | 29.2 | 27.5 | 26.8 | 26.4 |
| 52.5° | 1905.1 | 944.1 | 56.0 | 41.6 | 34.5 | 30.3 | 27.8 | 25.0 | 23.6 | 22.9 | 22.9 |
| 55° | 1947.7 | 889.9 | 49.7 | 37.7 | 31.3 | 27.1 | 23.6 | 21.5 | 20.1 | 19.4 | 19.4 |
| 57.5° | 1959.7 | 816.3 | 43.3 | 34.5 | 28.2 | 23.9 | 20.1 | 18.7 | 16.9 | 16.6 | 16.6 |
| 60° | 1872.7 | 683.5 | 38.4 | 30.6 | 25.4 | 20.8 | 17.6 | 15.8 | 14.1 | 13.7 | 13.4 |
| 62.5° | 1643.5 | 528.9 | 33.8 | 27.1 | 22.2 | 18.0 | 15.1 | 13.0 | 11.6 | 11.6 | 11.6 |
| 65° | 1253.7 | 354.6 | 29.6 | 23.6 | 19.4 | 15.1 | 13.0 | 10.6 | 9.9 | 9.9 | 10.2 |
| 67.5° | 750.4 | 193.0 | 25.4 | 20.1 | 16.6 | 12.7 | 10.9 | 9.2 | 8.8 | 9.2 | 9.2 |
| 69° | 439.8 | 113.4 | 22.9 | 18.0 | 14.4 | 11.3 | 9.5 | 8.1 | 8.8 | 9.2 | 9.2 |
| 70° | 271.5 | 76.4 | 21.1 | 16.2 | 13.0 | 10.2 | 8.8 | 7.7 | 8.5 | 8.8 | 8.8 |
| 72.5° | 75.7 | 39.4 | 16.9 | 12.7 | 10.6 | 8.5 | 7.0 | 7.0 | 8.1 | 8.5 | 8.5 |
| 75° | 49.3 | 29.2 | 13.0 | 9.5 | 8.1 | 6.7 | 6.0 | 6.7 | 7.7 | 8.1 | 8.1 |
| 77.5° | 40.8 | 23.9 | 10.6 | 7.7 | 6.7 | 6.3 | 5.6 | 6.0 | 7.0 | 7.4 | 7.4 |
| 80° | 37.3 | 16.9 | 8.5 | 7.0 | 6.0 | 5.6 | 5.3 | 4.9 | 6.3 | 6.7 | 6.7 |
| 82.5° | 35.6 | 13.4 | 7.4 | 6.3 | 5.6 | 4.9 | 4.6 | 4.9 | 5.6 | 6.0 | 6.3 |
| 85° | 22.2 | 8.8 | 6.7 | 6.0 | 4.9 | 4.6 | 4.6 | 4.6 | 5.3 | 5.6 | 5.6 |
| 87.5° | 8.1 | 7.0 | 6.0 | 4.9 | 4.2 | 4.2 | 4.2 | 4.2 | 4.6 | 5.3 | 5.3 |
| 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)