

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: P195986

Luminaire Tested: **NVN-AF-02-LED-U-AFL-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-AFL-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6890.6 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

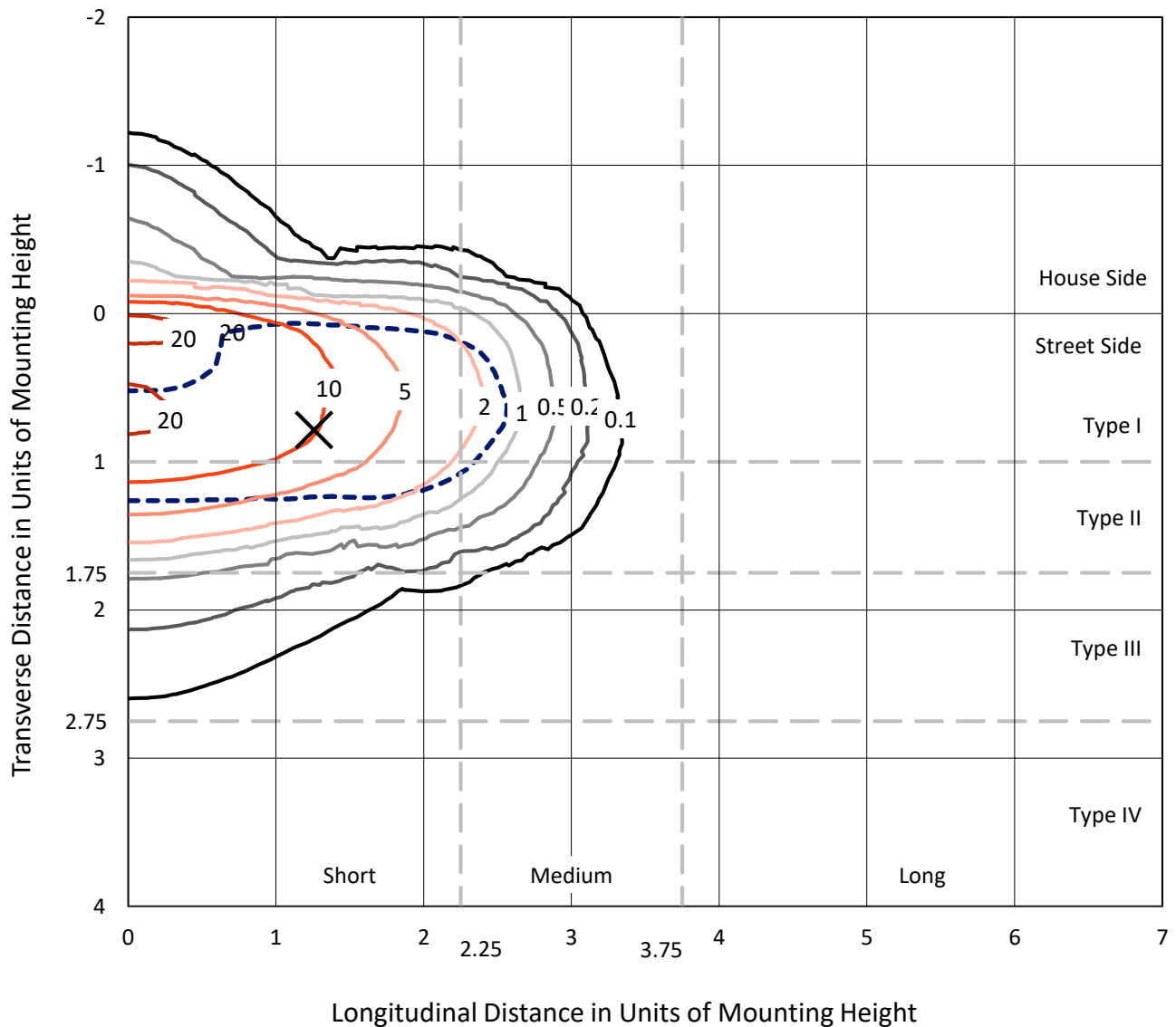
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

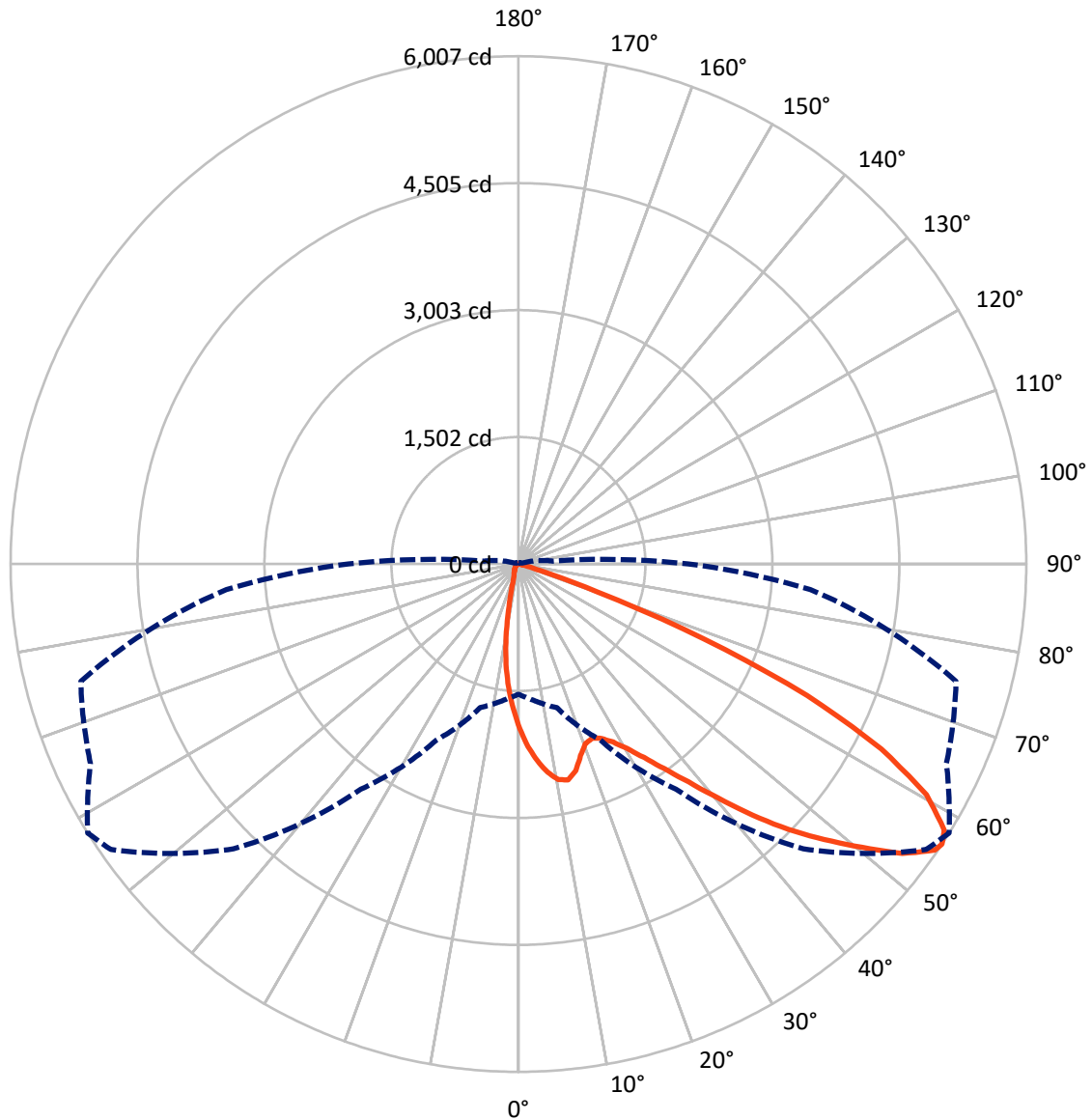
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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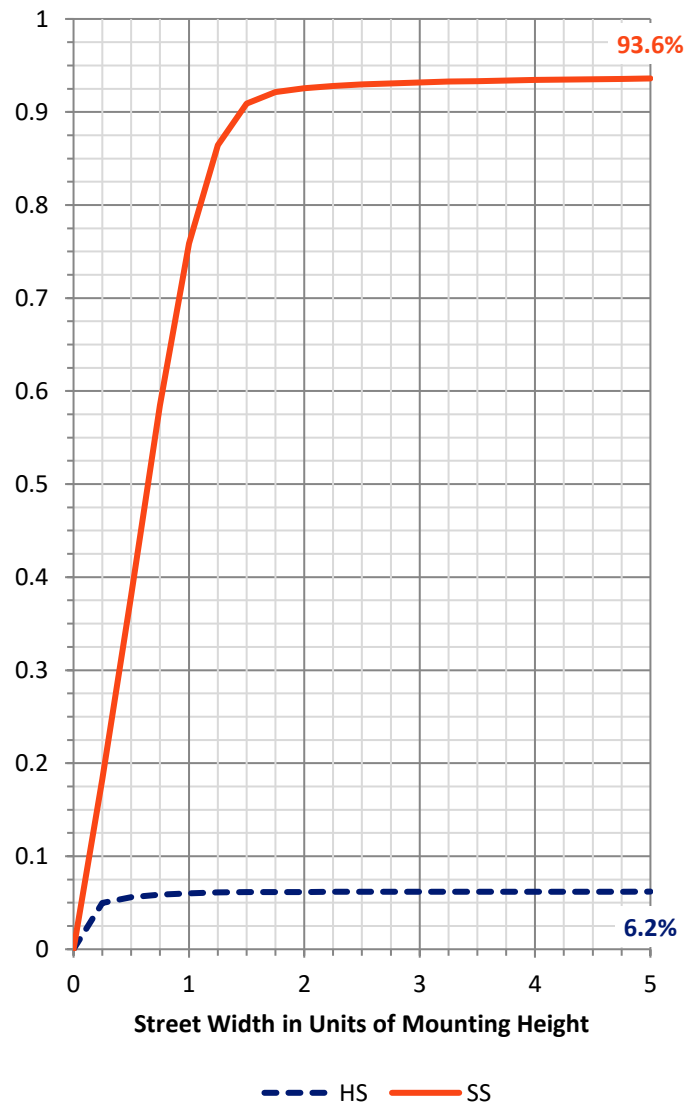
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 430.1 | 0.0 | 430.1 |
| | % Fixture | 6.2 | 0.0 | 6.2 |
| Street Side | Lumens | 6460.5 | 0.0 | 6460.5 |
| | % Fixture | 93.8 | 0.0 | 93.8 |
| Total | Lumens | 6890.6 | 0.0 | 6890.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 166.4 | 2.4 |
| 10°-20° | 387.2 | 5.6 |
| 20°-30° | 651.6 | 9.5 |
| 30°-40° | 1115.8 | 16.2 |
| 40°-50° | 1683.8 | 24.4 |
| 50°-60° | 1750.2 | 25.4 |
| 60°-70° | 982.6 | 14.3 |
| 70°-80° | 134.7 | 2.0 |
| 80°-90° | 18.2 | 0.3 |
| 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° | 6890.6 | 100.0 |
| 0°-180° | 6890.6 | 100.0 |

Coefficient of Utilization



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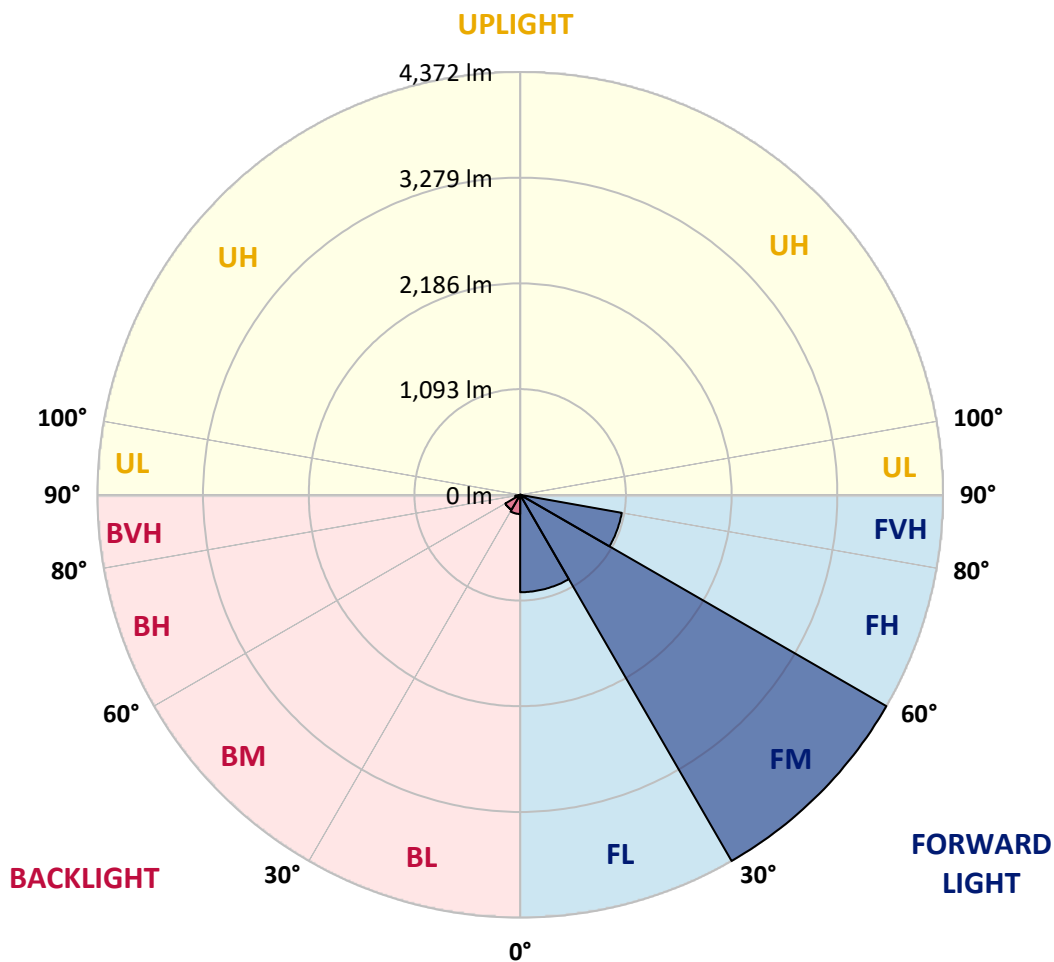
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1006.9 | 14.6 | | | |
| FM | (30°-60°) | 4371.7 | 63.4 | | | |
| FH | (60°-80°) | 1066.2 | 15.5 | | | G1/1800 |
| FVH | (80°-90°) | 15.7 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 198.4 | 2.9 | B1/500 | | |
| BM | (30°-60°) | 178.2 | 2.6 | B0/220 | | |
| BH | (60°-80°) | 51.0 | 0.7 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.5 | 0.0 | | | 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 II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 |
| 2.5° | 2347.4 | 2333.1 | 2318.4 | 2291.1 | 2265.8 | 2227.0 | 2173.4 | 2160.2 | 2118.1 | 2048.8 | 1984.0 |
| 5° | 2549.7 | 2547.1 | 2537.1 | 2515.0 | 2487.7 | 2440.4 | 2379.9 | 2339.5 | 2274.2 | 2164.9 | 2040.3 |
| 7.5° | 2429.8 | 2451.9 | 2488.2 | 2539.8 | 2574.5 | 2569.8 | 2523.4 | 2488.2 | 2423.6 | 2274.2 | 2095.5 |
| 10° | 2048.2 | 2052.4 | 2102.4 | 2210.6 | 2382.0 | 2541.8 | 2602.3 | 2592.9 | 2533.4 | 2370.0 | 2143.9 |
| 12.5° | 1913.6 | 1916.2 | 1927.9 | 1962.5 | 2073.9 | 2296.8 | 2570.8 | 2620.2 | 2615.5 | 2461.4 | 2195.4 |
| 15° | 1924.2 | 1925.7 | 1928.9 | 1939.9 | 1971.4 | 2083.4 | 2410.9 | 2536.6 | 2668.1 | 2548.2 | 2245.9 |
| 17.5° | 2007.2 | 2006.1 | 1996.2 | 1985.6 | 1995.6 | 2032.4 | 2247.9 | 2380.4 | 2657.0 | 2621.2 | 2287.4 |
| 20° | 2169.1 | 2174.4 | 2140.7 | 2094.0 | 2069.7 | 2071.4 | 2167.5 | 2266.9 | 2594.9 | 2678.0 | 2318.4 |
| 22.5° | 2396.8 | 2400.5 | 2345.2 | 2264.3 | 2193.3 | 2157.5 | 2184.3 | 2236.9 | 2523.4 | 2730.6 | 2343.7 |
| 25° | 2668.6 | 2668.6 | 2591.2 | 2476.2 | 2366.3 | 2287.9 | 2264.8 | 2284.8 | 2496.1 | 2790.0 | 2368.8 |
| 27.5° | 2961.9 | 2972.4 | 2871.4 | 2720.5 | 2575.5 | 2460.9 | 2388.3 | 2384.7 | 2517.2 | 2864.7 | 2397.3 |
| 30° | 3281.0 | 3290.4 | 3170.6 | 2986.1 | 2814.1 | 2667.4 | 2556.0 | 2531.8 | 2597.6 | 2965.0 | 2438.8 |
| 32.5° | 3598.5 | 3606.4 | 3473.9 | 3285.7 | 3085.4 | 2913.0 | 2766.4 | 2727.9 | 2742.1 | 3111.7 | 2499.8 |
| 35° | 4002.3 | 4003.8 | 3836.2 | 3612.2 | 3398.2 | 3195.8 | 3010.2 | 2972.4 | 2956.6 | 3296.8 | 2587.6 |
| 37.5° | 4323.5 | 4310.9 | 4204.6 | 3992.8 | 3747.3 | 3535.9 | 3317.8 | 3268.4 | 3230.6 | 3557.0 | 2723.7 |
| 40° | 4399.2 | 4399.2 | 4383.4 | 4319.8 | 4124.7 | 3921.3 | 3709.9 | 3636.4 | 3552.8 | 3863.5 | 2906.7 |
| 42.5° | 4202.1 | 4214.7 | 4318.8 | 4457.0 | 4458.6 | 4328.2 | 4121.7 | 4059.6 | 3912.4 | 4212.6 | 3106.5 |
| 45° | 3761.0 | 3764.7 | 4014.4 | 4387.6 | 4641.0 | 4715.7 | 4563.2 | 4477.6 | 4273.6 | 4575.4 | 3289.4 |
| 47.5° | 3602.2 | 3613.8 | 3720.0 | 4176.3 | 4654.7 | 5029.5 | 4987.0 | 4869.1 | 4607.9 | 4906.5 | 3460.2 |
| 50° | 3358.2 | 3372.5 | 3502.3 | 3865.1 | 4531.7 | 5230.9 | 5392.3 | 5266.2 | 4912.3 | 5182.5 | 3544.9 |
| 52.5° | 2774.8 | 2796.8 | 2980.3 | 3453.5 | 4224.2 | 5239.2 | 5763.4 | 5687.7 | 5224.0 | 5330.3 | 3534.9 |
| 55° | 1909.4 | 1925.7 | 2139.7 | 2695.9 | 3603.8 | 4982.2 | 5923.3 | 5975.3 | 5502.1 | 5363.3 | 3486.5 |
| 56° | 1540.4 | 1601.3 | 1758.0 | 2296.8 | 3250.5 | 4763.5 | 5886.5 | 6006.9 | 5584.7 | 5358.1 | 3465.6 |
| 57.5° | 1018.3 | 1029.9 | 1200.7 | 1664.4 | 2610.2 | 4288.8 | 5720.3 | 5939.6 | 5690.9 | 5331.3 | 3450.3 |
| 60° | 478.9 | 484.2 | 545.7 | 768.0 | 1412.6 | 3125.4 | 5180.4 | 5544.2 | 5729.8 | 5275.1 | 3449.8 |
| 62.5° | 312.3 | 313.3 | 320.7 | 366.4 | 577.8 | 1702.3 | 4294.6 | 4818.2 | 5407.5 | 5268.7 | 3439.8 |
| 65° | 257.1 | 259.7 | 250.7 | 256.6 | 302.3 | 641.9 | 3029.2 | 3756.3 | 4651.1 | 5120.5 | 3327.2 |
| 67.5° | 226.6 | 227.1 | 215.0 | 208.2 | 221.4 | 281.8 | 1526.1 | 2369.4 | 3478.6 | 4350.8 | 2740.6 |
| 70° | 206.6 | 206.1 | 192.4 | 176.7 | 177.2 | 187.2 | 497.4 | 984.2 | 1924.7 | 2583.4 | 1573.5 |
| 72.5° | 183.5 | 184.5 | 176.7 | 154.6 | 147.2 | 132.5 | 187.2 | 265.5 | 655.0 | 829.6 | 414.8 |
| 75° | 160.9 | 158.8 | 150.9 | 136.7 | 123.1 | 88.9 | 94.1 | 113.0 | 170.8 | 169.3 | 89.4 |
| 77.5° | 121.9 | 119.9 | 123.6 | 116.7 | 96.2 | 62.0 | 51.6 | 58.9 | 77.2 | 72.0 | 36.3 |
| 80° | 93.1 | 92.0 | 84.1 | 99.8 | 87.8 | 46.7 | 35.2 | 36.3 | 42.0 | 38.4 | 17.9 |
| 82.5° | 67.3 | 66.8 | 63.6 | 61.5 | 55.8 | 34.2 | 26.8 | 28.4 | 31.5 | 26.8 | 13.1 |
| 85° | 25.8 | 25.8 | 49.9 | 42.0 | 38.4 | 23.1 | 18.9 | 20.5 | 24.1 | 19.4 | 8.9 |
| 87.5° | 4.2 | 4.2 | 33.7 | 27.8 | 17.4 | 11.6 | 12.1 | 13.1 | 14.2 | 11.6 | 6.9 |
| 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° | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 | 1951.0 |
| 2.5° | 1945.7 | 1910.5 | 1833.1 | 1758.6 | 1693.3 | 1621.9 | 1585.6 | 1543.5 | 1527.8 | 1496.2 | 1499.3 |
| 5° | 1965.7 | 1892.0 | 1737.0 | 1573.5 | 1423.6 | 1271.2 | 1162.9 | 1060.9 | 1004.1 | 947.9 | 947.9 |
| 7.5° | 1986.2 | 1873.6 | 1634.0 | 1372.7 | 1120.3 | 859.0 | 673.9 | 525.7 | 443.1 | 388.0 | 386.4 |
| 10° | 2000.4 | 1850.0 | 1516.7 | 1139.8 | 767.5 | 442.6 | 267.1 | 210.3 | 189.8 | 180.9 | 180.3 |
| 12.5° | 2018.8 | 1826.4 | 1383.1 | 865.3 | 426.4 | 210.3 | 166.6 | 157.7 | 154.1 | 151.9 | 151.9 |
| 15° | 2034.5 | 1792.7 | 1221.2 | 582.0 | 223.9 | 157.7 | 143.5 | 140.3 | 139.8 | 139.3 | 139.8 |
| 17.5° | 2038.2 | 1744.8 | 1027.2 | 340.6 | 162.4 | 137.7 | 131.4 | 128.8 | 128.8 | 128.3 | 128.3 |
| 20° | 2029.8 | 1681.7 | 812.7 | 210.3 | 140.3 | 126.7 | 119.9 | 116.7 | 116.2 | 116.2 | 116.2 |
| 22.5° | 2012.5 | 1601.3 | 600.9 | 159.3 | 127.8 | 116.7 | 107.8 | 104.6 | 104.6 | 105.2 | 105.7 |
| 25° | 1990.9 | 1506.2 | 412.7 | 137.2 | 118.3 | 106.2 | 97.3 | 94.1 | 95.1 | 96.2 | 96.8 |
| 27.5° | 1963.6 | 1392.6 | 270.3 | 118.8 | 105.7 | 95.6 | 87.8 | 85.7 | 87.8 | 89.9 | 90.9 |
| 30° | 1936.2 | 1268.0 | 182.9 | 103.0 | 91.5 | 84.1 | 79.4 | 78.9 | 82.0 | 86.7 | 87.3 |
| 32.5° | 1918.3 | 1140.3 | 138.3 | 92.6 | 80.4 | 74.2 | 72.0 | 73.0 | 77.8 | 83.1 | 84.1 |
| 35° | 1916.8 | 1015.7 | 117.7 | 84.1 | 73.0 | 67.3 | 66.3 | 69.4 | 74.7 | 78.9 | 79.9 |
| 37.5° | 1941.5 | 899.0 | 106.7 | 77.8 | 67.3 | 61.5 | 59.9 | 65.7 | 70.5 | 74.7 | 75.7 |
| 40° | 1991.4 | 794.3 | 99.3 | 72.0 | 62.6 | 55.8 | 54.6 | 59.4 | 64.1 | 68.8 | 70.5 |
| 42.5° | 2054.0 | 696.5 | 90.9 | 66.3 | 57.3 | 49.4 | 48.4 | 52.1 | 56.8 | 63.6 | 64.7 |
| 45° | 2108.1 | 605.6 | 82.0 | 59.9 | 51.6 | 42.6 | 42.0 | 46.2 | 49.9 | 56.3 | 57.3 |
| 47.5° | 2153.8 | 529.9 | 73.6 | 53.1 | 44.2 | 37.8 | 37.3 | 39.4 | 41.5 | 47.4 | 48.4 |
| 50° | 2129.7 | 465.7 | 65.2 | 43.7 | 35.7 | 32.6 | 32.0 | 32.0 | 34.7 | 40.5 | 41.5 |
| 52.5° | 2070.2 | 425.9 | 57.3 | 36.3 | 29.5 | 27.8 | 26.3 | 26.8 | 29.5 | 32.0 | 32.6 |
| 55° | 2022.5 | 406.9 | 50.4 | 32.0 | 24.8 | 23.1 | 21.6 | 21.1 | 21.6 | 20.5 | 19.4 |
| 56° | 2010.9 | 404.8 | 48.9 | 31.0 | 23.6 | 21.6 | 19.4 | 18.4 | 17.9 | 15.8 | 15.2 |
| 57.5° | 2005.6 | 404.8 | 46.2 | 28.9 | 22.1 | 19.4 | 16.8 | 14.7 | 12.6 | 11.0 | 11.0 |
| 60° | 2001.4 | 407.4 | 43.1 | 25.3 | 18.9 | 15.8 | 12.1 | 8.9 | 7.4 | 7.4 | 7.4 |
| 62.5° | 1992.5 | 406.4 | 39.4 | 21.1 | 16.3 | 12.1 | 7.4 | 5.8 | 5.2 | 5.8 | 6.3 |
| 65° | 1892.0 | 377.5 | 34.7 | 16.8 | 12.6 | 8.4 | 4.2 | 4.2 | 4.7 | 5.8 | 6.3 |
| 67.5° | 1524.6 | 286.0 | 28.4 | 13.1 | 8.9 | 6.3 | 3.7 | 3.7 | 4.7 | 5.8 | 6.3 |
| 70° | 837.5 | 150.9 | 24.1 | 9.5 | 6.9 | 5.2 | 3.7 | 3.2 | 4.7 | 5.8 | 6.3 |
| 72.5° | 204.5 | 63.1 | 22.1 | 7.4 | 6.3 | 4.7 | 3.2 | 3.2 | 4.7 | 5.8 | 6.3 |
| 75° | 50.4 | 47.4 | 17.9 | 5.8 | 5.2 | 4.2 | 3.2 | 3.2 | 4.7 | 5.8 | 6.3 |
| 77.5° | 23.6 | 62.6 | 12.1 | 5.2 | 4.7 | 3.7 | 3.2 | 3.2 | 4.7 | 5.8 | 5.8 |
| 80° | 14.2 | 47.4 | 7.4 | 4.7 | 4.2 | 3.7 | 3.2 | 3.2 | 4.7 | 5.8 | 6.3 |
| 82.5° | 8.4 | 13.7 | 5.2 | 4.7 | 4.2 | 3.2 | 3.2 | 3.2 | 4.7 | 5.8 | 6.3 |
| 85° | 7.4 | 6.9 | 5.2 | 4.7 | 4.2 | 3.7 | 3.2 | 3.2 | 5.2 | 6.3 | 6.3 |
| 87.5° | 5.8 | 5.2 | 4.7 | 4.2 | 4.2 | 3.7 | 3.2 | 3.2 | 4.7 | 5.8 | 6.3 |
| 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)