

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: P195693

Luminaire Tested: **NVN-AF-03-LED-U-SL4-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-03-LED-U-SL4-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16188 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 191
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

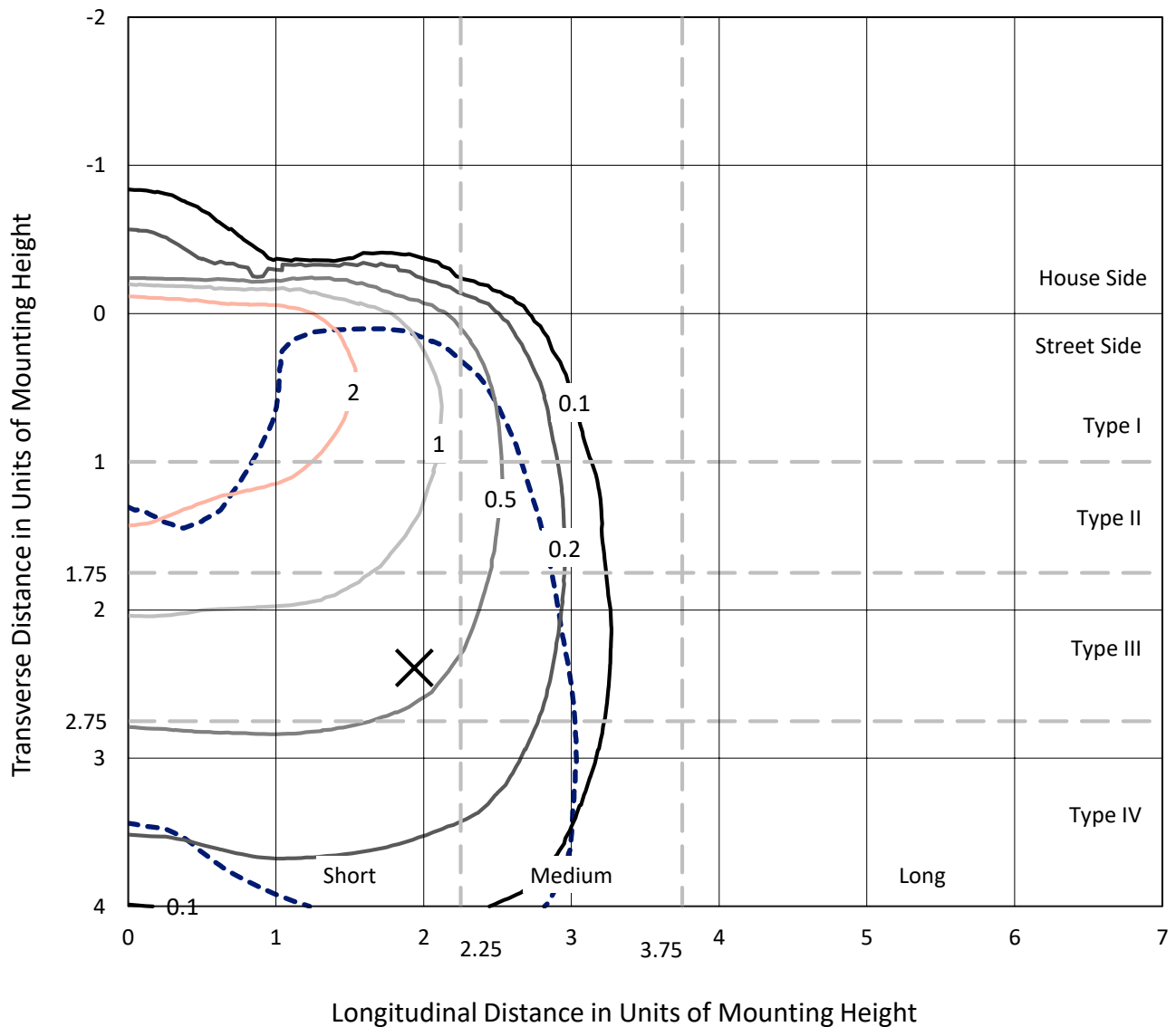


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

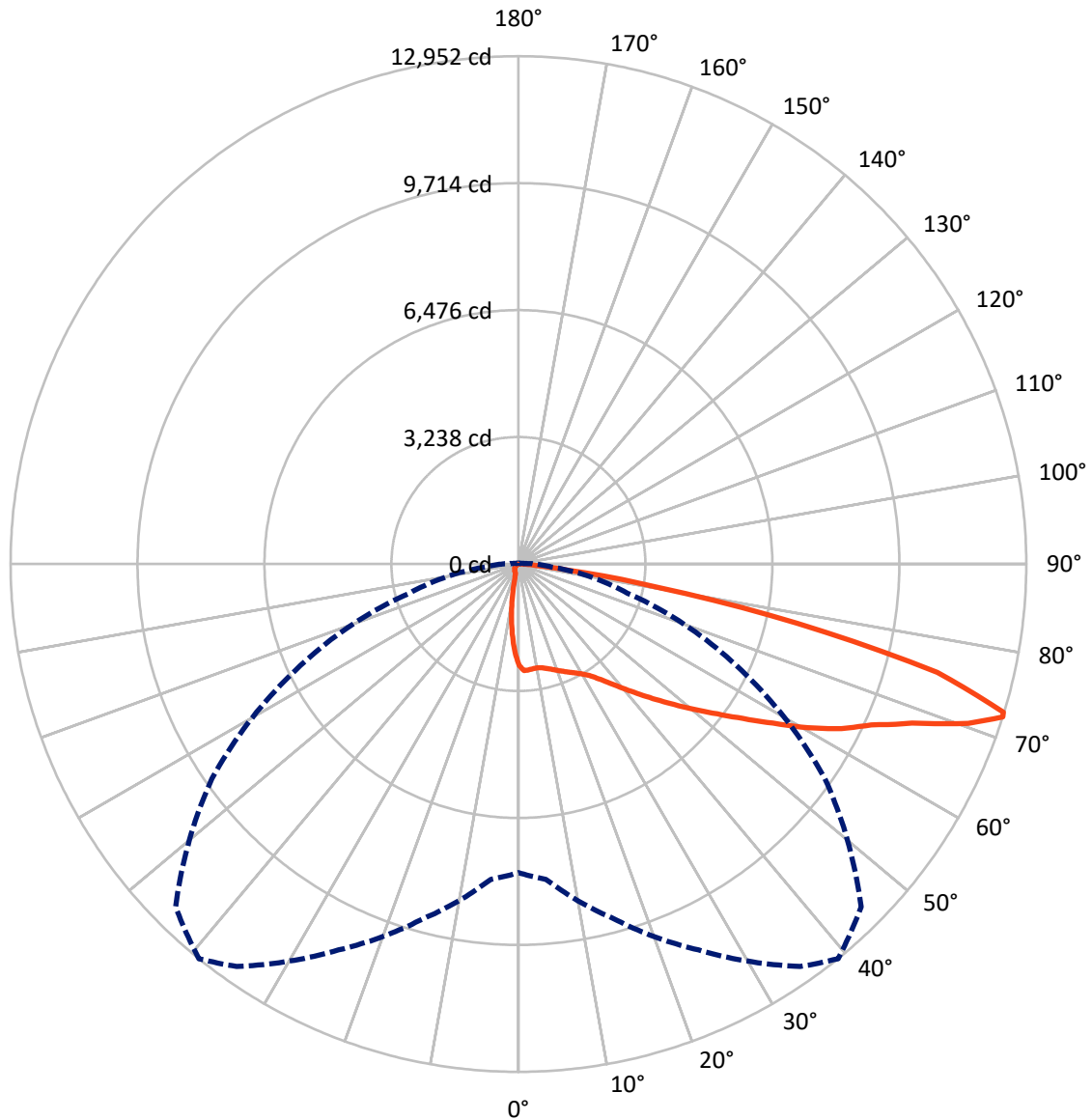


Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1060.9 | 0.0 | 1060.9 |
| | % Fixture | 6.6 | 0.0 | 6.6 |
| Street Side | Lumens | 15127.1 | 0.0 | 15127.1 |
| | % Fixture | 93.4 | 0.0 | 93.4 |
| Total | Lumens | 16188.0 | 0.0 | 16188.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 210.7 | 1.3 |
| 10°-20° | 510.2 | 3.2 |
| 20°-30° | 847.4 | 5.2 |
| 30°-40° | 1350.5 | 8.3 |
| 40°-50° | 2229.2 | 13.8 |
| 50°-60° | 3366.6 | 20.8 |
| 60°-70° | 4385.5 | 27.1 |
| 70°-80° | 2963.3 | 18.3 |
| 80°-90° | 324.5 | 2.0 |
| 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° | 16188.0 | 100.0 |
| 0°-180° | 16188.0 | 100.0 |

Coefficient of Utilization



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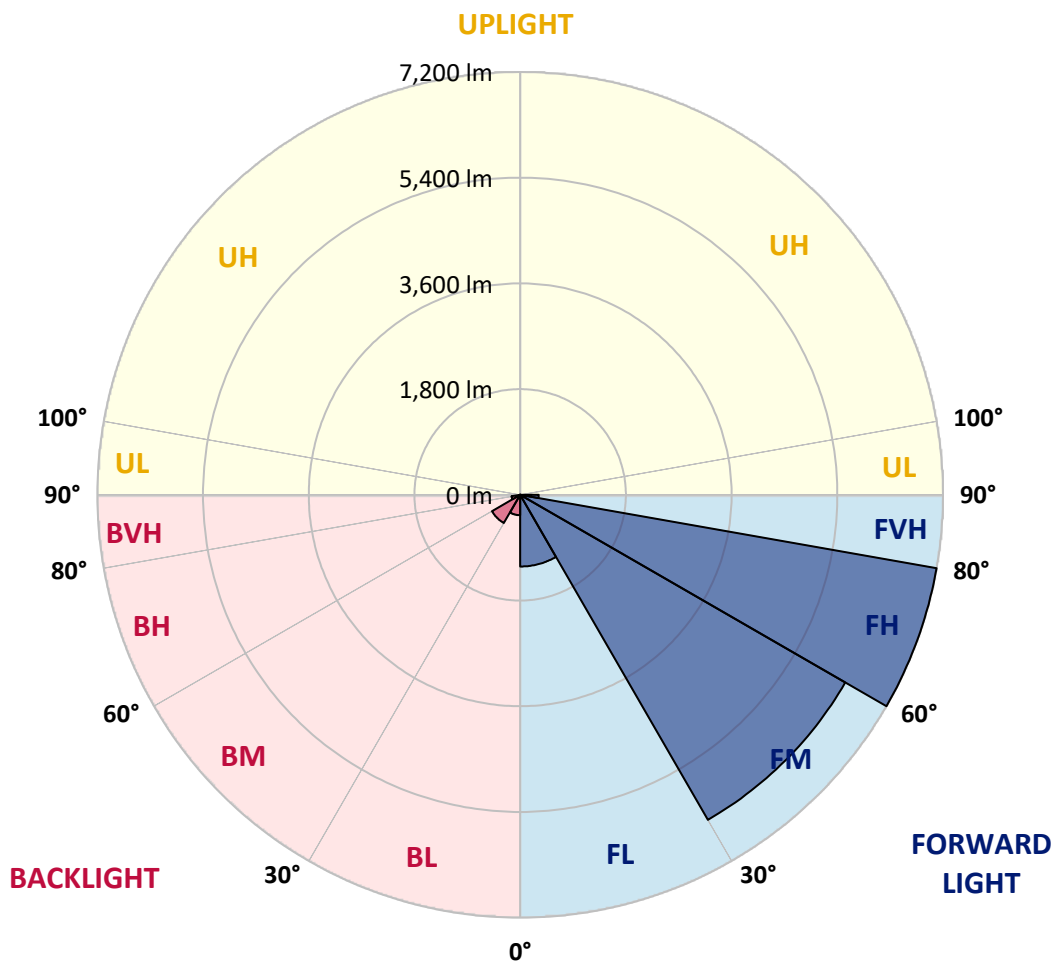
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1221.0 | 7.5 | | | |
| FM | (30°-60°) | 6391.2 | 39.5 | | | |
| FH | (60°-80°) | 7199.7 | 44.5 | | | G3/7500 |
| FVH | (80°-90°) | 315.2 | 1.9 | | | G3/500 |
| BL | (0°-30°) | 347.4 | 2.1 | B1/500 | | |
| BM | (30°-60°) | 555.1 | 3.4 | B1/1000 | | |
| BH | (60°-80°) | 149.1 | 0.9 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 9.3 | 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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 39° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 |
| 2.5° | 2759.0 | 2764.1 | 2757.7 | 2746.3 | 2729.7 | 2719.5 | 2705.5 | 2675.0 | 2636.8 | 2603.7 | 2565.5 |
| 5° | 2780.6 | 2783.2 | 2775.5 | 2753.9 | 2728.4 | 2714.4 | 2696.6 | 2663.5 | 2624.1 | 2578.3 | 2509.5 |
| 7.5° | 2787.0 | 2785.7 | 2776.8 | 2750.1 | 2710.6 | 2692.8 | 2662.3 | 2621.5 | 2580.8 | 2538.8 | 2461.2 |
| 10° | 2784.4 | 2784.4 | 2778.1 | 2752.6 | 2708.1 | 2691.5 | 2657.2 | 2613.9 | 2563.0 | 2521.0 | 2438.3 |
| 12.5° | 2775.5 | 2780.6 | 2776.8 | 2762.8 | 2729.7 | 2717.0 | 2686.4 | 2643.2 | 2594.8 | 2551.5 | 2463.7 |
| 15° | 2787.0 | 2794.6 | 2802.2 | 2797.2 | 2778.1 | 2766.6 | 2738.6 | 2694.1 | 2654.6 | 2608.8 | 2514.6 |
| 17.5° | 2832.8 | 2849.3 | 2867.1 | 2868.4 | 2848.1 | 2827.7 | 2795.9 | 2750.1 | 2711.9 | 2669.9 | 2568.1 |
| 20° | 2919.3 | 2932.0 | 2965.1 | 2971.5 | 2930.8 | 2901.5 | 2857.0 | 2803.5 | 2765.3 | 2729.7 | 2617.7 |
| 22.5° | 3047.9 | 3061.9 | 3088.6 | 3079.7 | 3010.9 | 2976.6 | 2920.6 | 2859.5 | 2820.1 | 2799.7 | 2675.0 |
| 25° | 3242.6 | 3246.4 | 3252.7 | 3213.3 | 3100.0 | 3061.9 | 2993.1 | 2924.4 | 2892.6 | 2890.1 | 2756.4 |
| 27.5° | 3471.6 | 3476.7 | 3448.7 | 3360.9 | 3199.3 | 3149.7 | 3072.0 | 3009.7 | 2994.4 | 3013.5 | 2859.5 |
| 30° | 3733.8 | 3735.1 | 3657.4 | 3514.9 | 3313.8 | 3259.1 | 3178.9 | 3110.2 | 3124.2 | 3171.3 | 2991.9 |
| 32.5° | 4002.3 | 3989.6 | 3882.7 | 3696.9 | 3470.4 | 3404.2 | 3335.5 | 3266.7 | 3307.5 | 3402.9 | 3185.3 |
| 35° | 4247.9 | 4242.8 | 4116.8 | 3900.5 | 3674.0 | 3615.4 | 3565.8 | 3493.3 | 3559.4 | 3714.7 | 3448.7 |
| 37.5° | 4493.5 | 4489.7 | 4345.9 | 4120.6 | 3924.7 | 3882.7 | 3845.8 | 3789.8 | 3897.9 | 4125.7 | 3801.2 |
| 40° | 4764.6 | 4758.2 | 4581.3 | 4365.0 | 4216.1 | 4193.2 | 4171.6 | 4147.4 | 4331.9 | 4648.8 | 4240.3 |
| 42.5° | 5099.3 | 5071.3 | 4830.8 | 4631.0 | 4536.8 | 4543.1 | 4544.4 | 4568.6 | 4857.5 | 5271.1 | 4758.2 |
| 45° | 5483.6 | 5421.2 | 5081.5 | 4916.0 | 4889.3 | 4927.5 | 4965.6 | 5066.2 | 5469.6 | 5987.5 | 5330.9 |
| 47.5° | 5856.5 | 5755.9 | 5370.3 | 5222.7 | 5277.4 | 5356.3 | 5448.0 | 5643.9 | 6156.8 | 6737.1 | 5850.1 |
| 50° | 6177.2 | 6074.1 | 5656.7 | 5534.5 | 5708.8 | 5825.9 | 5988.8 | 6285.3 | 6882.2 | 7370.8 | 6177.2 |
| 52.5° | 6429.1 | 6347.7 | 5959.5 | 5878.1 | 6187.3 | 6347.7 | 6603.5 | 6992.9 | 7566.8 | 7788.3 | 6406.2 |
| 55° | 6614.9 | 6574.2 | 6249.7 | 6261.1 | 6719.3 | 6950.9 | 7269.0 | 7709.4 | 8144.6 | 8112.8 | 6578.0 |
| 57.5° | 6824.9 | 6793.1 | 6553.8 | 6712.9 | 7359.4 | 7658.4 | 8026.2 | 8380.0 | 8564.5 | 8373.6 | 6746.0 |
| 60° | 7040.0 | 7050.2 | 6922.9 | 7260.1 | 8150.9 | 8481.8 | 8802.5 | 8890.3 | 8924.7 | 8638.3 | 6922.9 |
| 62.5° | 7202.9 | 7246.1 | 7257.6 | 7850.6 | 8962.9 | 9245.4 | 9384.1 | 9321.7 | 9314.1 | 8993.4 | 6908.9 |
| 65° | 7389.9 | 7503.2 | 7691.5 | 8498.4 | 9701.0 | 9886.8 | 9986.0 | 10076.4 | 9885.5 | 9099.0 | 6229.3 |
| 67.5° | 7713.2 | 7891.3 | 8315.1 | 9292.5 | 10553.6 | 10828.5 | 11109.7 | 11014.3 | 9970.7 | 8026.2 | 4745.5 |
| 70° | 8148.4 | 8366.0 | 9114.3 | 10329.6 | 11710.4 | 12171.1 | 12406.5 | 10939.2 | 8465.3 | 5545.9 | 2503.2 |
| 72° | 7873.5 | 8070.8 | 9361.2 | 10859.0 | 12529.9 | 12952.4 | 12363.2 | 9541.9 | 6136.4 | 2874.8 | 838.6 |
| 72.5° | 7606.3 | 7809.9 | 9282.3 | 10852.7 | 12611.4 | 12934.6 | 12082.0 | 8990.9 | 5430.1 | 2237.2 | 577.8 |
| 75° | 5277.4 | 5534.5 | 7957.5 | 9755.7 | 11388.4 | 11033.4 | 9244.1 | 5444.1 | 1967.4 | 384.3 | 190.9 |
| 77.5° | 2728.4 | 2927.0 | 4826.9 | 6893.6 | 7937.1 | 7269.0 | 5463.2 | 2361.9 | 544.7 | 203.6 | 126.0 |
| 80° | 1691.3 | 1789.3 | 2257.6 | 3396.5 | 4123.2 | 3606.5 | 2410.3 | 954.4 | 348.7 | 120.9 | 100.5 |
| 82.5° | 875.5 | 950.6 | 1421.5 | 1370.6 | 1523.3 | 1266.2 | 889.5 | 799.2 | 215.1 | 75.1 | 103.1 |
| 85° | 287.6 | 305.4 | 873.0 | 911.2 | 651.6 | 437.8 | 394.5 | 762.3 | 62.4 | 48.4 | 87.8 |
| 87.5° | 38.2 | 44.5 | 306.7 | 521.8 | 320.7 | 198.5 | 236.7 | 268.5 | 21.6 | 26.7 | 24.2 |
| 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° | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 | 2591.0 |
| 2.5° | 2540.1 | 2523.5 | 2471.4 | 2419.2 | 2359.4 | 2304.7 | 2261.4 | 2233.4 | 2246.1 | 2204.1 | 2210.5 |
| 5° | 2467.6 | 2425.6 | 2311.0 | 2187.6 | 2054.0 | 1929.2 | 1830.0 | 1756.2 | 1742.2 | 1678.5 | 1681.1 |
| 7.5° | 2397.6 | 2328.8 | 2143.0 | 1939.4 | 1718.0 | 1538.6 | 1375.7 | 1233.1 | 1182.2 | 1130.1 | 1099.5 |
| 10° | 2359.4 | 2265.2 | 2001.8 | 1705.3 | 1393.5 | 1130.1 | 901.0 | 721.6 | 646.5 | 591.8 | 565.0 |
| 12.5° | 2370.8 | 2246.1 | 1896.2 | 1492.7 | 1083.0 | 748.3 | 509.0 | 378.0 | 332.1 | 306.7 | 297.8 |
| 15° | 2409.0 | 2249.9 | 1800.7 | 1285.3 | 787.7 | 453.0 | 299.1 | 255.8 | 252.0 | 250.7 | 249.4 |
| 17.5° | 2444.6 | 2253.8 | 1700.2 | 1069.0 | 526.9 | 288.9 | 240.5 | 236.7 | 236.7 | 236.7 | 236.7 |
| 20° | 2481.6 | 2255.0 | 1589.5 | 842.5 | 346.1 | 236.7 | 226.5 | 224.0 | 226.5 | 226.5 | 226.5 |
| 22.5° | 2524.8 | 2263.9 | 1482.6 | 622.3 | 255.8 | 222.7 | 216.3 | 215.1 | 216.3 | 216.3 | 215.1 |
| 25° | 2578.3 | 2283.0 | 1366.8 | 445.4 | 231.6 | 213.8 | 207.4 | 206.2 | 207.4 | 206.2 | 206.2 |
| 27.5° | 2649.5 | 2308.5 | 1231.9 | 319.4 | 221.4 | 204.9 | 198.5 | 198.5 | 198.5 | 197.3 | 197.3 |
| 30° | 2741.2 | 2339.0 | 1051.2 | 252.0 | 211.3 | 196.0 | 190.9 | 190.9 | 189.6 | 188.3 | 188.3 |
| 32.5° | 2872.2 | 2388.7 | 853.9 | 227.8 | 199.8 | 184.5 | 179.4 | 180.7 | 179.4 | 178.2 | 176.9 |
| 35° | 3058.0 | 2466.3 | 659.2 | 215.1 | 188.3 | 173.1 | 168.0 | 168.0 | 168.0 | 165.4 | 165.4 |
| 37.5° | 3321.5 | 2584.6 | 493.8 | 202.3 | 176.9 | 161.6 | 155.3 | 155.3 | 154.0 | 151.4 | 152.7 |
| 40° | 3647.2 | 2733.5 | 357.6 | 190.9 | 165.4 | 148.9 | 143.8 | 141.3 | 138.7 | 136.2 | 136.2 |
| 42.5° | 4039.2 | 2878.6 | 268.5 | 179.4 | 154.0 | 138.7 | 132.3 | 129.8 | 124.7 | 122.2 | 120.9 |
| 45° | 4478.2 | 3032.6 | 222.7 | 165.4 | 141.3 | 127.3 | 122.2 | 117.1 | 110.7 | 106.9 | 105.6 |
| 47.5° | 4848.6 | 3126.8 | 198.5 | 151.4 | 128.5 | 115.8 | 110.7 | 103.1 | 95.4 | 92.9 | 92.9 |
| 50° | 5071.3 | 3087.3 | 178.2 | 137.4 | 115.8 | 104.4 | 98.0 | 87.8 | 82.7 | 80.2 | 78.9 |
| 52.5° | 5196.0 | 2970.2 | 161.6 | 126.0 | 104.4 | 91.6 | 82.7 | 73.8 | 71.3 | 68.7 | 68.7 |
| 55° | 5281.3 | 2801.0 | 143.8 | 114.5 | 94.2 | 80.2 | 70.0 | 63.6 | 61.1 | 59.8 | 58.5 |
| 57.5° | 5362.7 | 2594.8 | 127.3 | 104.4 | 84.0 | 71.3 | 59.8 | 57.3 | 52.2 | 50.9 | 50.9 |
| 60° | 5386.9 | 2311.0 | 112.0 | 92.9 | 75.1 | 62.4 | 52.2 | 48.4 | 43.3 | 42.0 | 42.0 |
| 62.5° | 5078.9 | 1838.9 | 99.3 | 78.9 | 66.2 | 53.4 | 45.8 | 40.7 | 35.6 | 35.6 | 35.6 |
| 65° | 4244.1 | 1248.4 | 85.3 | 68.7 | 58.5 | 45.8 | 39.5 | 33.1 | 30.5 | 30.5 | 30.5 |
| 67.5° | 2956.2 | 696.1 | 72.5 | 58.5 | 49.6 | 38.2 | 33.1 | 28.0 | 26.7 | 28.0 | 28.0 |
| 70° | 1332.4 | 276.2 | 61.1 | 48.4 | 40.7 | 31.8 | 28.0 | 24.2 | 26.7 | 26.7 | 26.7 |
| 72° | 399.6 | 147.6 | 50.9 | 39.5 | 33.1 | 28.0 | 24.2 | 22.9 | 25.5 | 26.7 | 26.7 |
| 72.5° | 296.5 | 132.3 | 48.4 | 38.2 | 33.1 | 26.7 | 22.9 | 22.9 | 25.5 | 26.7 | 26.7 |
| 75° | 152.7 | 90.4 | 36.9 | 28.0 | 24.2 | 21.6 | 19.1 | 21.6 | 25.5 | 25.5 | 25.5 |
| 77.5° | 119.6 | 73.8 | 30.5 | 21.6 | 20.4 | 19.1 | 17.8 | 20.4 | 22.9 | 22.9 | 22.9 |
| 80° | 112.0 | 48.4 | 24.2 | 20.4 | 17.8 | 16.5 | 16.5 | 17.8 | 20.4 | 21.6 | 21.6 |
| 82.5° | 113.3 | 39.5 | 21.6 | 19.1 | 16.5 | 15.3 | 15.3 | 16.5 | 19.1 | 20.4 | 20.4 |
| 85° | 72.5 | 26.7 | 19.1 | 16.5 | 15.3 | 14.0 | 14.0 | 15.3 | 17.8 | 19.1 | 19.1 |
| 87.5° | 24.2 | 20.4 | 16.5 | 15.3 | 12.7 | 12.7 | 12.7 | 12.7 | 15.3 | 16.5 | 17.8 |
| 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)