

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: P197074

Luminaire Tested: **NVN-AF-04-LED-U-SL3-8030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197074
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-04-LED-U-SL3-8030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13654 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 171
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

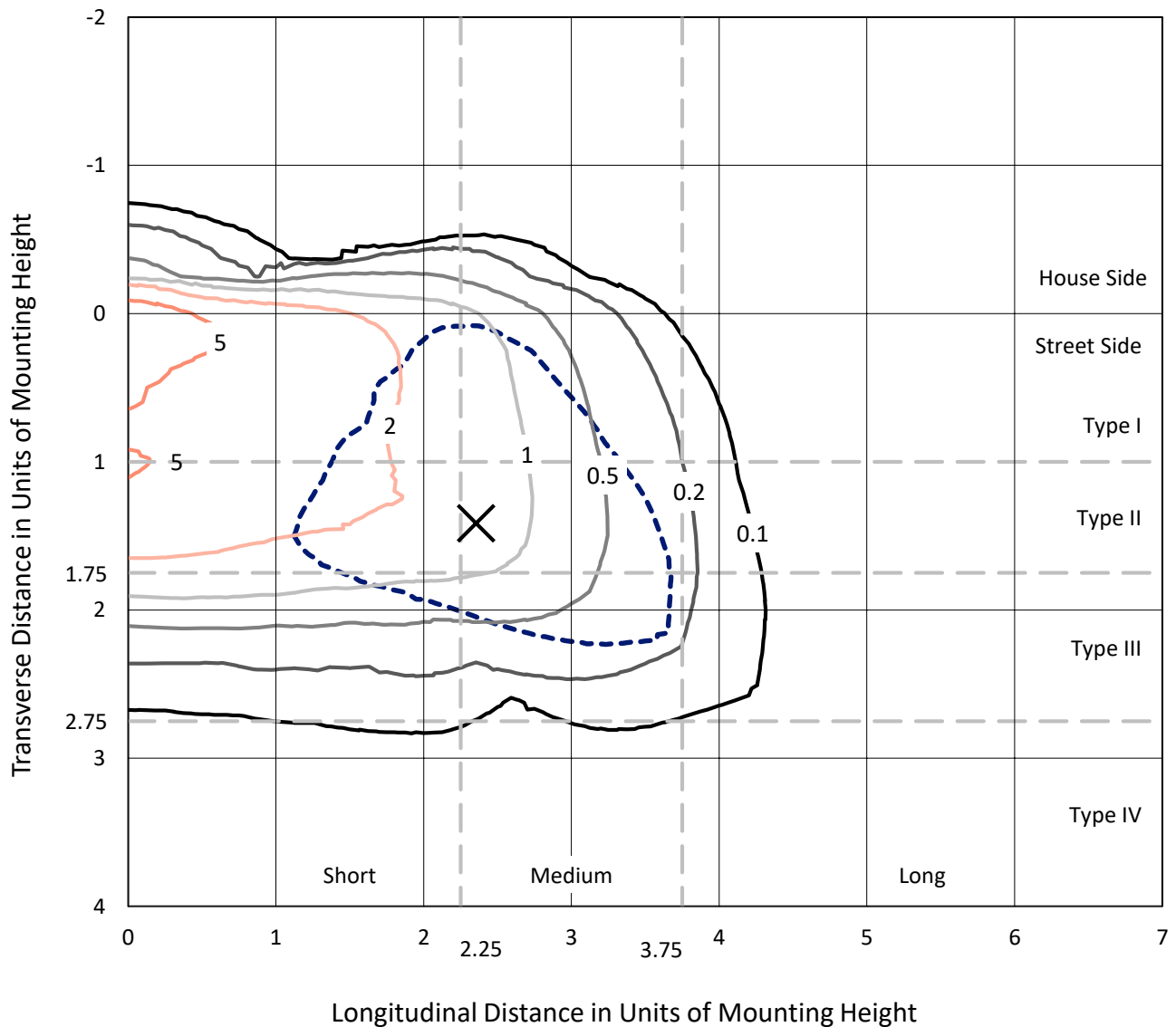


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

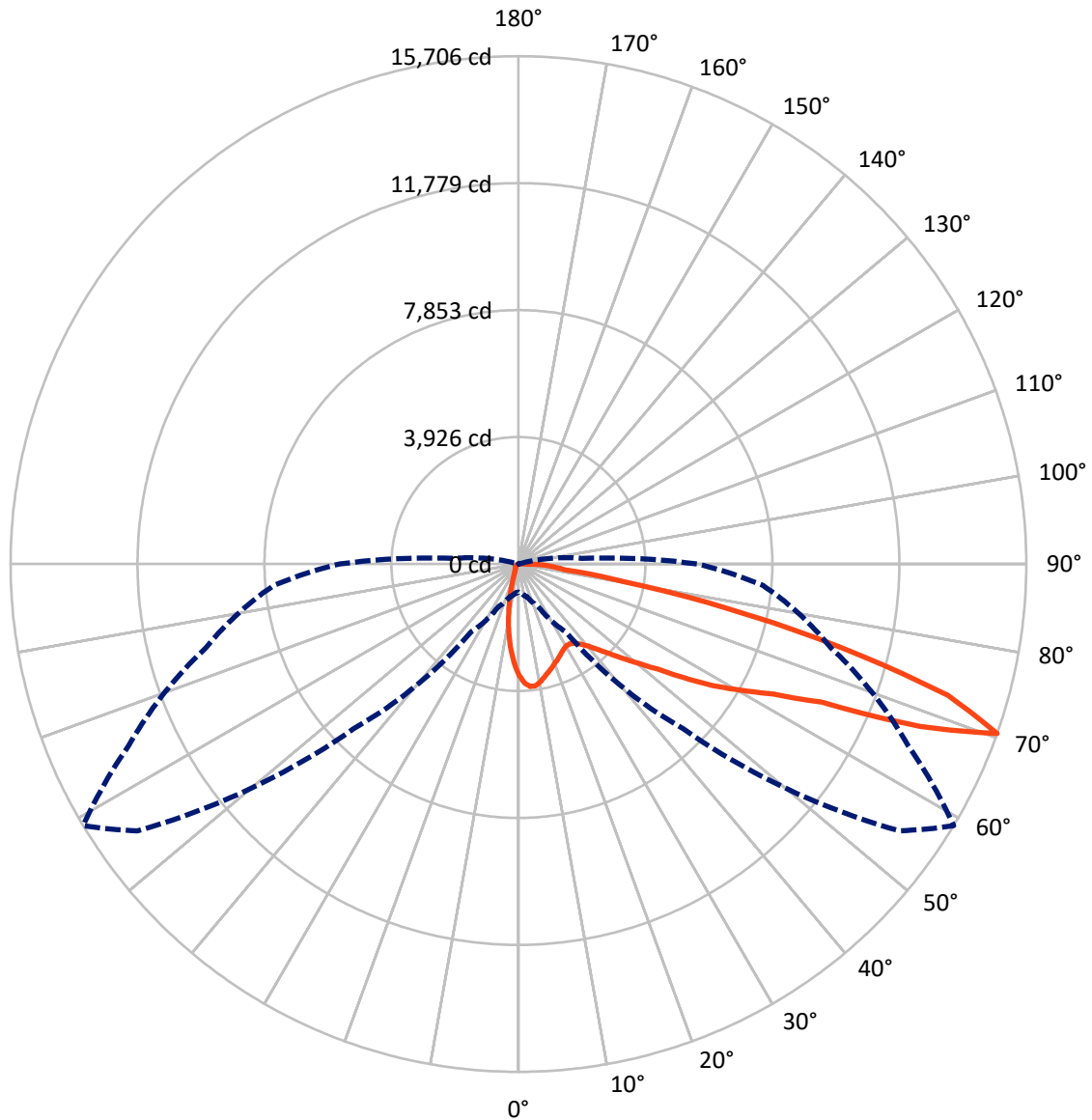


Based on 20 foot mounting height. Maximum calculated value = 9.2 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical



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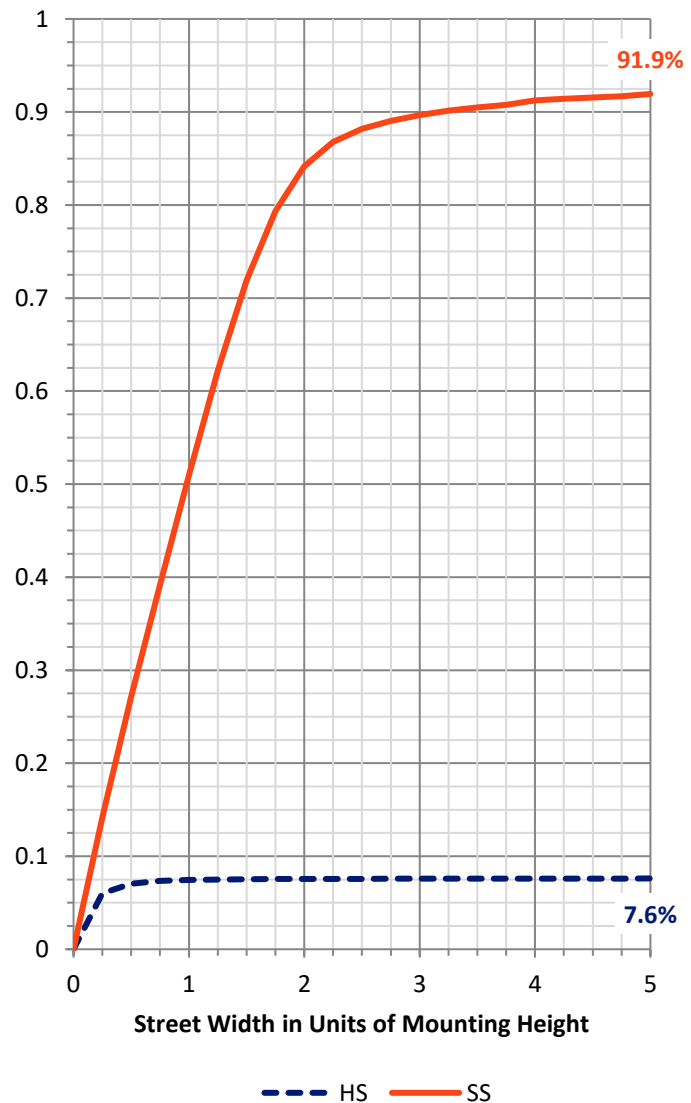
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1049.6 | 0.0 | 1049.6 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 12604.4 | 0.0 | 12604.4 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 13654.0 | 0.0 | 13654.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 283.9 | 2.1 |
| 10°-20° | 595.5 | 4.4 |
| 20°-30° | 806.1 | 5.9 |
| 30°-40° | 1163.3 | 8.5 |
| 40°-50° | 1932.0 | 14.1 |
| 50°-60° | 2955.2 | 21.6 |
| 60°-70° | 3675.6 | 26.9 |
| 70°-80° | 2031.8 | 14.9 |
| 80°-90° | 210.7 | 1.5 |
| 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° | 13654.0 | 100.0 |
| 0°-180° | 13654.0 | 100.0 |

Coefficient of Utilization



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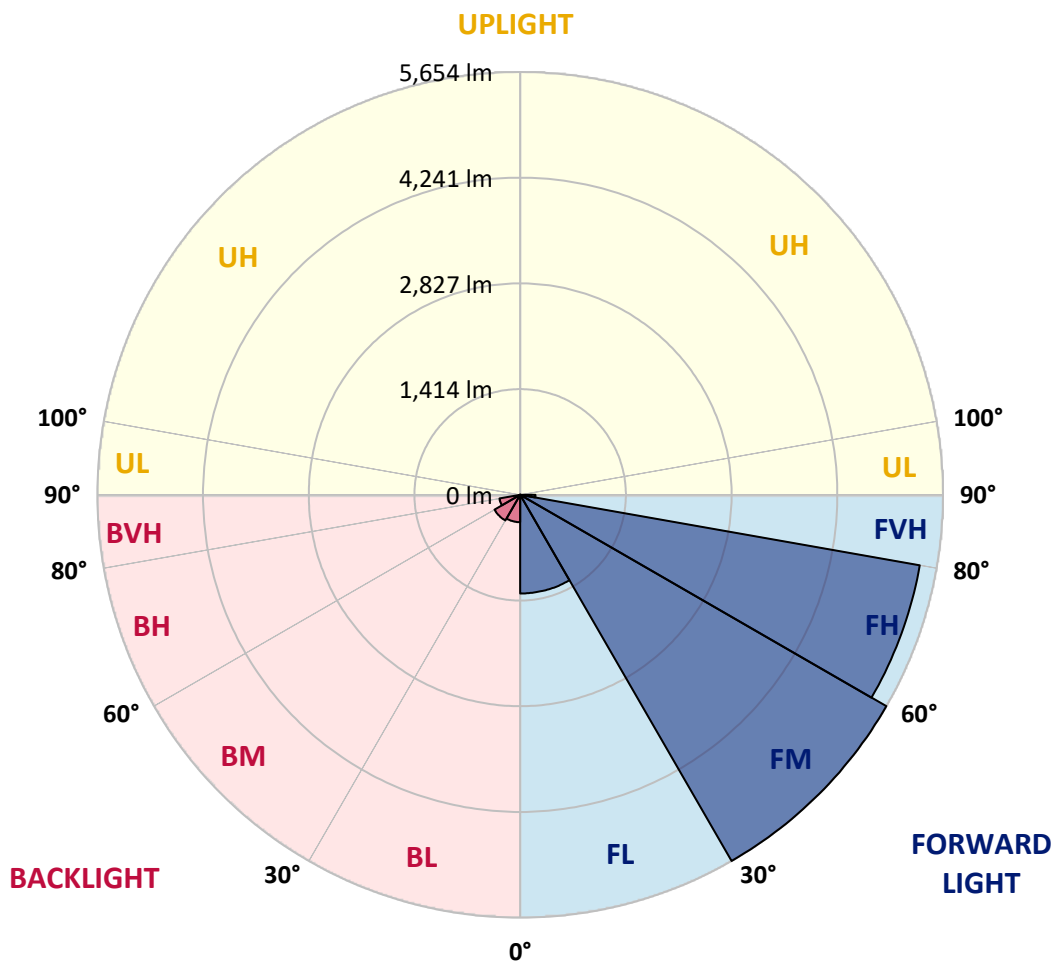
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1319.7 | 9.7 | | | |
| FM | (30°-60°) | 5654.3 | 41.4 | | | |
| FH | (60°-80°) | 5425.8 | 39.7 | | | G3/7500 |
| FVH | (80°-90°) | 204.6 | 1.5 | | | G2/225 |
| BL | (0°-30°) | 365.8 | 2.7 | B1/500 | | |
| BM | (30°-60°) | 396.2 | 2.9 | B1/1000 | | |
| BH | (60°-80°) | 281.6 | 2.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.1 | 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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0° | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 |
| 2.5° | 3902.7 | 3896.5 | 3870.8 | 3865.6 | 3836.8 | 3779.1 | 3712.2 | 3685.4 | 3630.8 | 3544.3 | 3448.5 |
| 5° | 3967.6 | 3970.7 | 3972.8 | 3961.4 | 3957.3 | 3909.9 | 3835.8 | 3803.8 | 3730.7 | 3588.6 | 3413.5 |
| 7.5° | 3724.5 | 3732.8 | 3758.5 | 3769.8 | 3819.3 | 3837.8 | 3822.4 | 3801.8 | 3744.1 | 3576.2 | 3330.0 |
| 10° | 3468.1 | 3483.5 | 3511.3 | 3529.9 | 3590.6 | 3640.1 | 3702.9 | 3708.0 | 3695.7 | 3535.0 | 3236.3 |
| 12.5° | 3247.6 | 3262.1 | 3293.0 | 3330.0 | 3391.8 | 3455.7 | 3549.4 | 3582.4 | 3623.6 | 3508.2 | 3169.4 |
| 15° | 3058.1 | 3062.2 | 3092.1 | 3138.5 | 3219.8 | 3307.4 | 3418.6 | 3467.0 | 3547.4 | 3497.9 | 3117.9 |
| 17.5° | 2892.3 | 2893.3 | 2912.9 | 2955.1 | 3054.0 | 3169.4 | 3299.1 | 3363.0 | 3465.0 | 3483.5 | 3072.5 |
| 20° | 2783.1 | 2782.1 | 2783.1 | 2805.8 | 2893.3 | 3030.3 | 3187.9 | 3254.8 | 3385.7 | 3466.0 | 3026.2 |
| 22.5° | 2746.0 | 2740.9 | 2717.2 | 2708.9 | 2764.6 | 2885.1 | 3073.6 | 3161.1 | 3314.6 | 3460.8 | 2992.2 |
| 25° | 2791.3 | 2788.2 | 2737.8 | 2690.4 | 2695.5 | 2770.7 | 2957.2 | 3064.3 | 3259.0 | 3479.4 | 2983.9 |
| 27.5° | 2937.6 | 2931.4 | 2854.2 | 2761.5 | 2702.8 | 2716.1 | 2870.6 | 2982.9 | 3214.7 | 3524.7 | 2995.3 |
| 30° | 3129.2 | 3130.2 | 3047.8 | 2935.5 | 2797.5 | 2721.3 | 2824.3 | 2930.4 | 3184.8 | 3592.7 | 3020.0 |
| 32.5° | 3342.4 | 3341.4 | 3282.7 | 3152.9 | 2976.7 | 2816.1 | 2844.9 | 2934.5 | 3188.9 | 3692.6 | 3067.4 |
| 35° | 3562.8 | 3551.5 | 3531.9 | 3417.6 | 3211.6 | 2981.9 | 2938.6 | 3004.5 | 3232.2 | 3824.4 | 3147.7 |
| 37.5° | 3817.2 | 3813.1 | 3832.7 | 3712.2 | 3502.0 | 3226.0 | 3103.4 | 3147.7 | 3341.4 | 4019.1 | 3277.5 |
| 40° | 4222.0 | 4199.4 | 4208.6 | 4044.9 | 3829.6 | 3554.6 | 3334.2 | 3345.5 | 3515.4 | 4276.6 | 3482.5 |
| 42.5° | 4993.5 | 4901.8 | 4729.8 | 4422.9 | 4190.1 | 3919.2 | 3635.9 | 3616.4 | 3761.6 | 4588.7 | 3752.3 |
| 45° | 5915.4 | 5810.3 | 5376.7 | 4840.0 | 4550.6 | 4310.6 | 4008.8 | 3956.3 | 4064.4 | 4960.5 | 4100.5 |
| 47.5° | 6684.8 | 6571.5 | 5996.7 | 5275.7 | 4917.3 | 4714.4 | 4421.8 | 4360.0 | 4427.0 | 5392.1 | 4518.7 |
| 50° | 6947.4 | 6884.6 | 6379.9 | 5638.3 | 5287.1 | 5167.6 | 4939.9 | 4836.9 | 4853.4 | 5857.7 | 5006.9 |
| 52.5° | 6826.9 | 6805.3 | 6467.5 | 5886.5 | 5629.0 | 5668.2 | 5507.5 | 5399.3 | 5380.8 | 6366.5 | 5546.6 |
| 55° | 6572.5 | 6562.2 | 6397.4 | 6024.5 | 5930.8 | 6126.5 | 6303.7 | 6210.0 | 6034.8 | 6907.3 | 5992.6 |
| 57.5° | 6208.9 | 6248.1 | 6366.5 | 6290.3 | 6301.6 | 6610.6 | 7043.2 | 7091.6 | 6830.0 | 7337.8 | 6323.3 |
| 60° | 5237.6 | 5342.7 | 5885.5 | 6575.6 | 7104.0 | 7416.1 | 7835.3 | 7926.0 | 7503.6 | 7632.4 | 6705.4 |
| 62.5° | 3871.8 | 4022.2 | 4795.7 | 6063.7 | 7545.9 | 8947.7 | 8889.0 | 8848.8 | 8146.4 | 8026.9 | 7400.6 |
| 65° | 2274.3 | 2450.4 | 3104.5 | 4738.1 | 6879.5 | 9932.4 | 10856.3 | 10300.1 | 9125.9 | 8846.8 | 8507.9 |
| 67.5° | 1133.0 | 1134.0 | 1429.7 | 2500.9 | 5084.1 | 9245.4 | 13728.0 | 13406.7 | 11208.6 | 10055.0 | 8944.6 |
| 70° | 871.4 | 895.1 | 1057.8 | 1453.3 | 2570.9 | 7200.8 | 14386.2 | 15705.6 | 13301.6 | 10001.4 | 7589.1 |
| 72.5° | 738.5 | 754.0 | 941.4 | 1264.9 | 1922.0 | 3953.2 | 12453.9 | 13882.5 | 12692.9 | 8450.2 | 5594.0 |
| 75° | 531.5 | 543.8 | 833.3 | 1147.4 | 1769.6 | 1961.1 | 8542.9 | 10296.0 | 9523.5 | 5944.2 | 3078.7 |
| 77.5° | 131.8 | 130.8 | 290.5 | 931.1 | 1583.1 | 1633.6 | 4901.8 | 6602.4 | 5464.2 | 2433.9 | 791.1 |
| 80° | 58.7 | 56.7 | 65.9 | 195.7 | 1472.9 | 1541.9 | 2155.8 | 3334.2 | 2096.1 | 394.5 | 242.1 |
| 82.5° | 41.2 | 39.1 | 41.2 | 72.1 | 492.3 | 1430.7 | 1303.0 | 1445.1 | 767.4 | 134.9 | 103.0 |
| 85° | 13.4 | 12.4 | 22.7 | 60.8 | 138.0 | 825.0 | 1271.0 | 1079.5 | 570.6 | 57.7 | 69.0 |
| 87.5° | 2.1 | 2.1 | 8.2 | 33.0 | 40.2 | 275.0 | 745.7 | 747.8 | 256.5 | 34.0 | 30.9 |
| 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° | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 | 3452.6 |
| 2.5° | 3400.1 | 3339.3 | 3253.8 | 3168.3 | 3091.1 | 3011.8 | 2947.9 | 2918.0 | 2904.6 | 2886.1 | 2845.9 |
| 5° | 3321.8 | 3211.6 | 3024.1 | 2839.7 | 2667.7 | 2502.9 | 2361.8 | 2281.5 | 2195.0 | 2190.8 | 2148.6 |
| 7.5° | 3196.1 | 3039.6 | 2744.0 | 2457.6 | 2195.0 | 1943.6 | 1727.3 | 1587.3 | 1491.5 | 1431.7 | 1390.5 |
| 10° | 3056.1 | 2855.2 | 2463.8 | 2061.1 | 1703.6 | 1367.9 | 1089.8 | 908.5 | 798.3 | 742.6 | 710.7 |
| 12.5° | 2944.8 | 2692.5 | 2187.7 | 1681.0 | 1232.9 | 847.7 | 589.2 | 457.3 | 398.6 | 376.0 | 365.7 |
| 15° | 2849.0 | 2543.1 | 1929.2 | 1341.1 | 823.0 | 487.2 | 340.9 | 297.7 | 288.4 | 288.4 | 287.4 |
| 17.5° | 2752.2 | 2398.9 | 1677.9 | 1007.4 | 518.1 | 319.3 | 268.8 | 262.7 | 263.7 | 266.8 | 266.8 |
| 20° | 2660.5 | 2261.9 | 1435.8 | 717.9 | 339.9 | 255.4 | 244.1 | 242.1 | 245.1 | 249.3 | 248.2 |
| 22.5° | 2586.4 | 2141.4 | 1209.2 | 493.4 | 261.6 | 231.8 | 224.5 | 221.5 | 223.5 | 226.6 | 225.6 |
| 25° | 2533.8 | 2038.4 | 1001.2 | 344.0 | 227.6 | 211.2 | 202.9 | 198.8 | 196.7 | 198.8 | 197.8 |
| 27.5° | 2501.9 | 1951.9 | 805.5 | 258.5 | 203.9 | 190.6 | 180.3 | 172.0 | 166.9 | 166.9 | 164.8 |
| 30° | 2481.3 | 1870.5 | 631.4 | 214.2 | 184.4 | 170.0 | 155.5 | 144.2 | 136.0 | 133.9 | 132.9 |
| 32.5° | 2480.3 | 1800.5 | 471.7 | 189.5 | 165.8 | 149.4 | 131.8 | 117.4 | 108.2 | 106.1 | 105.1 |
| 35° | 2506.0 | 1743.8 | 347.1 | 171.0 | 149.4 | 129.8 | 110.2 | 94.8 | 86.5 | 86.5 | 85.5 |
| 37.5° | 2573.0 | 1710.9 | 262.7 | 156.6 | 136.0 | 113.3 | 92.7 | 78.3 | 71.1 | 73.1 | 73.1 |
| 40° | 2697.6 | 1704.7 | 214.2 | 145.2 | 124.6 | 98.9 | 75.2 | 63.9 | 60.8 | 63.9 | 63.9 |
| 42.5° | 2888.2 | 1737.6 | 190.6 | 137.0 | 114.3 | 84.5 | 62.8 | 54.6 | 53.6 | 56.7 | 56.7 |
| 45° | 3136.4 | 1802.5 | 177.2 | 129.8 | 103.0 | 70.0 | 52.5 | 47.4 | 46.4 | 50.5 | 50.5 |
| 47.5° | 3437.2 | 1890.1 | 164.8 | 121.5 | 91.7 | 57.7 | 44.3 | 40.2 | 40.2 | 44.3 | 45.3 |
| 50° | 3793.5 | 2008.5 | 152.4 | 113.3 | 82.4 | 48.4 | 37.1 | 34.0 | 35.0 | 39.1 | 40.2 |
| 52.5° | 4203.5 | 2153.8 | 141.1 | 106.1 | 72.1 | 39.1 | 30.9 | 28.8 | 29.9 | 34.0 | 35.0 |
| 55° | 4556.8 | 2280.4 | 127.7 | 98.9 | 58.7 | 31.9 | 25.8 | 24.7 | 25.8 | 30.9 | 30.9 |
| 57.5° | 4864.8 | 2402.0 | 115.4 | 87.6 | 46.4 | 25.8 | 20.6 | 20.6 | 22.7 | 27.8 | 28.8 |
| 60° | 5273.7 | 2593.6 | 105.1 | 74.2 | 35.0 | 19.6 | 16.5 | 17.5 | 20.6 | 24.7 | 25.8 |
| 62.5° | 5997.8 | 2919.1 | 91.7 | 61.8 | 25.8 | 15.5 | 13.4 | 14.4 | 18.5 | 23.7 | 24.7 |
| 65° | 6904.2 | 3227.0 | 76.2 | 51.5 | 19.6 | 11.3 | 10.3 | 13.4 | 18.5 | 23.7 | 24.7 |
| 67.5° | 6811.5 | 2806.8 | 59.7 | 41.2 | 14.4 | 9.3 | 8.2 | 12.4 | 17.5 | 23.7 | 24.7 |
| 70° | 5524.0 | 1967.3 | 44.3 | 27.8 | 11.3 | 8.2 | 8.2 | 12.4 | 17.5 | 22.7 | 23.7 |
| 72.5° | 3831.7 | 1094.9 | 34.0 | 18.5 | 10.3 | 8.2 | 7.2 | 11.3 | 16.5 | 22.7 | 23.7 |
| 75° | 1823.1 | 335.8 | 26.8 | 13.4 | 9.3 | 7.2 | 6.2 | 11.3 | 16.5 | 22.7 | 23.7 |
| 77.5° | 350.2 | 85.5 | 21.6 | 11.3 | 8.2 | 7.2 | 6.2 | 10.3 | 16.5 | 21.6 | 22.7 |
| 80° | 118.5 | 38.1 | 17.5 | 10.3 | 8.2 | 7.2 | 6.2 | 10.3 | 15.5 | 20.6 | 21.6 |
| 82.5° | 64.9 | 21.6 | 15.5 | 9.3 | 8.2 | 6.2 | 5.2 | 9.3 | 14.4 | 20.6 | 21.6 |
| 85° | 50.5 | 15.5 | 12.4 | 9.3 | 8.2 | 6.2 | 5.2 | 9.3 | 14.4 | 19.6 | 20.6 |
| 87.5° | 25.8 | 11.3 | 10.3 | 9.3 | 8.2 | 6.2 | 5.2 | 8.2 | 13.4 | 18.5 | 20.6 |
| 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)