

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: P270919

Luminaire Tested: **NVN-AF-03-LED-U-SL3-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270919
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-03-LED-U-SL3-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA 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: 14655.5 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - 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

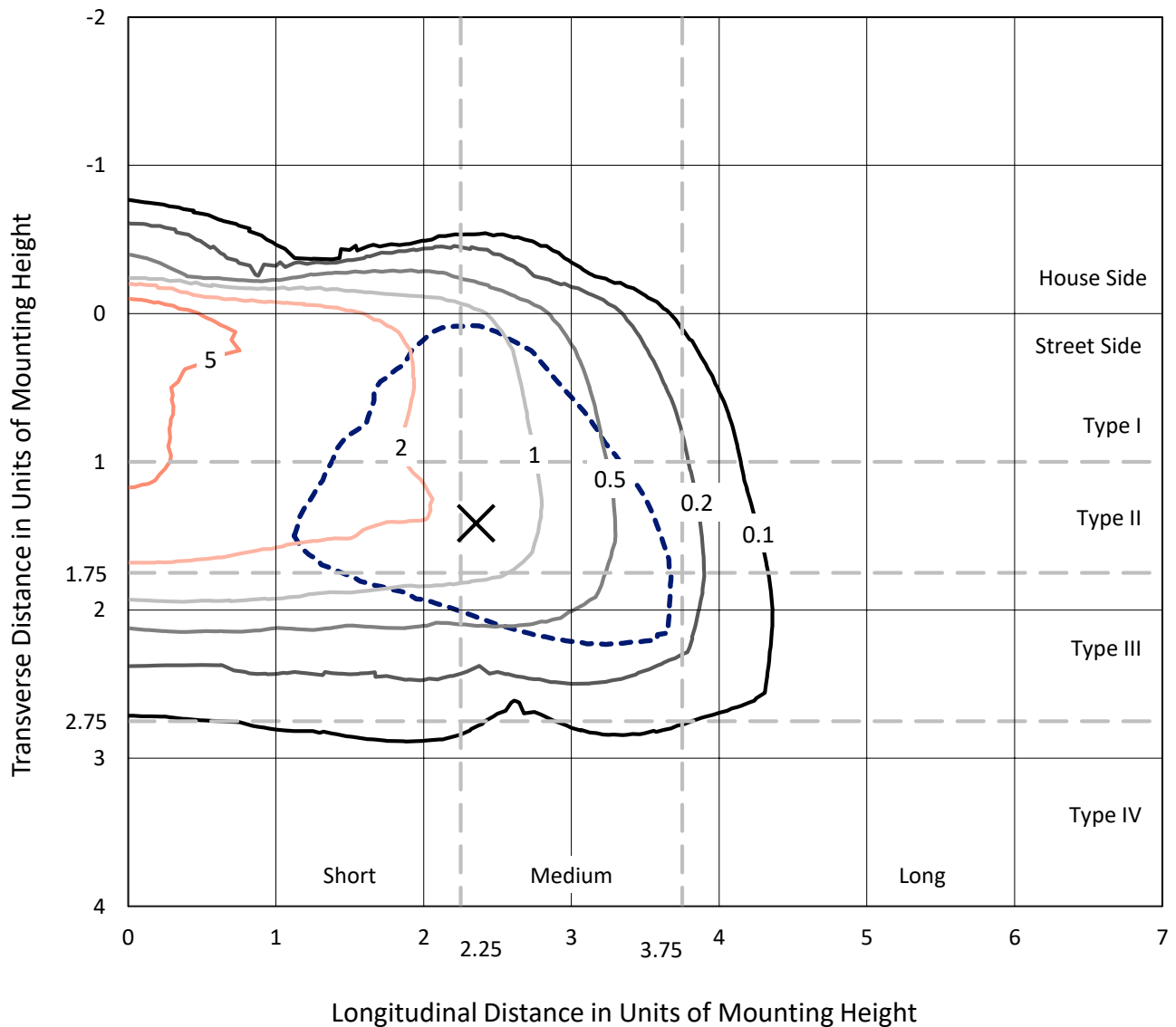


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

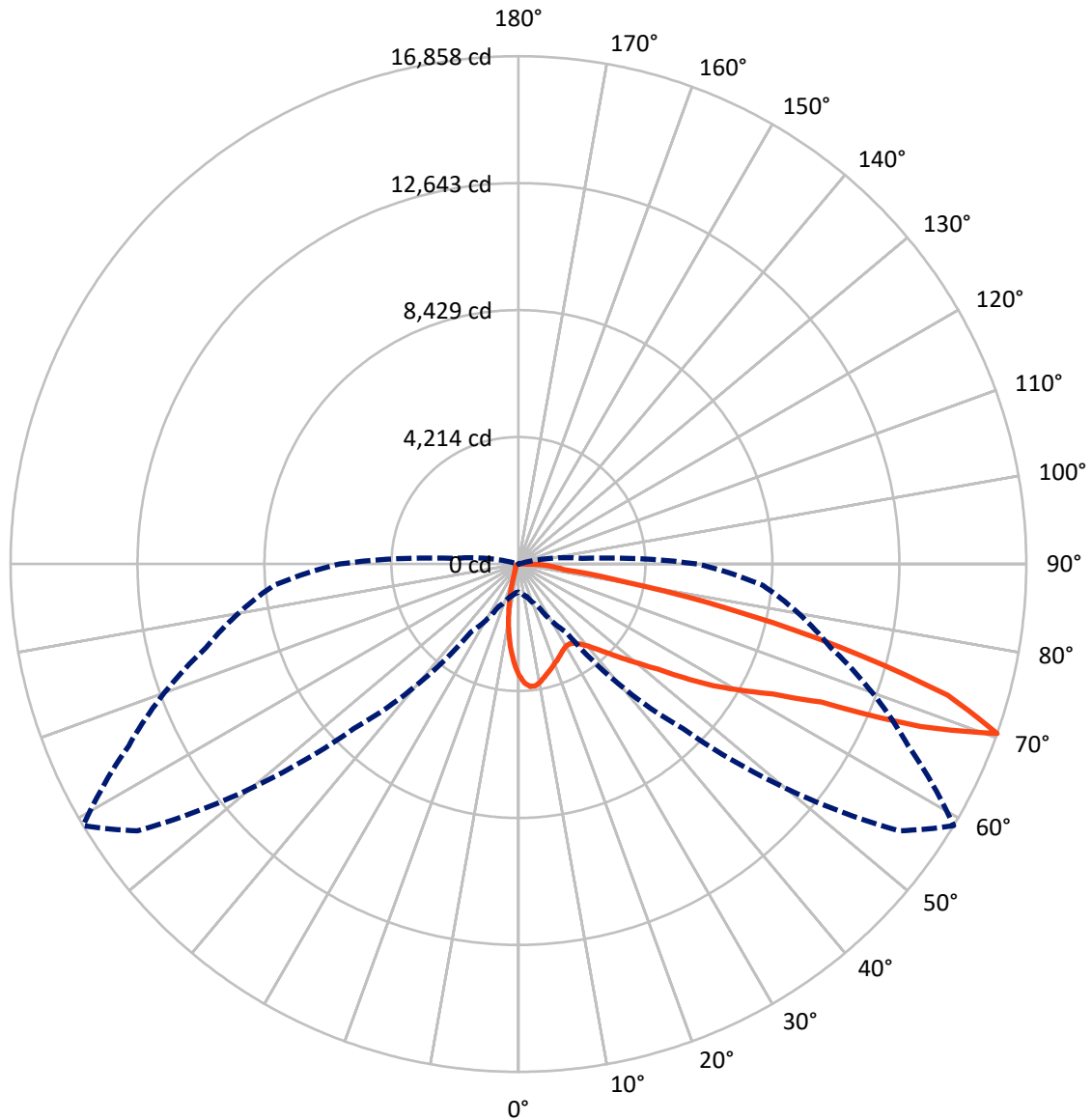


Based on 20 foot mounting height. Maximum calculated value = 9.9 fc
 Type III - Medium - Non-Cutoff

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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 | 1126.6 | 0.0 | 1126.6 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 13528.9 | 0.0 | 13528.9 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 14655.5 | 0.0 | 14655.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 304.7 | 2.1 |
| 10°-20° | 639.2 | 4.4 |
| 20°-30° | 865.2 | 5.9 |
| 30°-40° | 1248.6 | 8.5 |
| 40°-50° | 2073.7 | 14.1 |
| 50°-60° | 3171.9 | 21.6 |
| 60°-70° | 3945.1 | 26.9 |
| 70°-80° | 2180.9 | 14.9 |
| 80°-90° | 226.1 | 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° | 14655.5 | 100.0 |
| 0°-180° | 14655.5 | 100.0 |

Coefficient of Utilization



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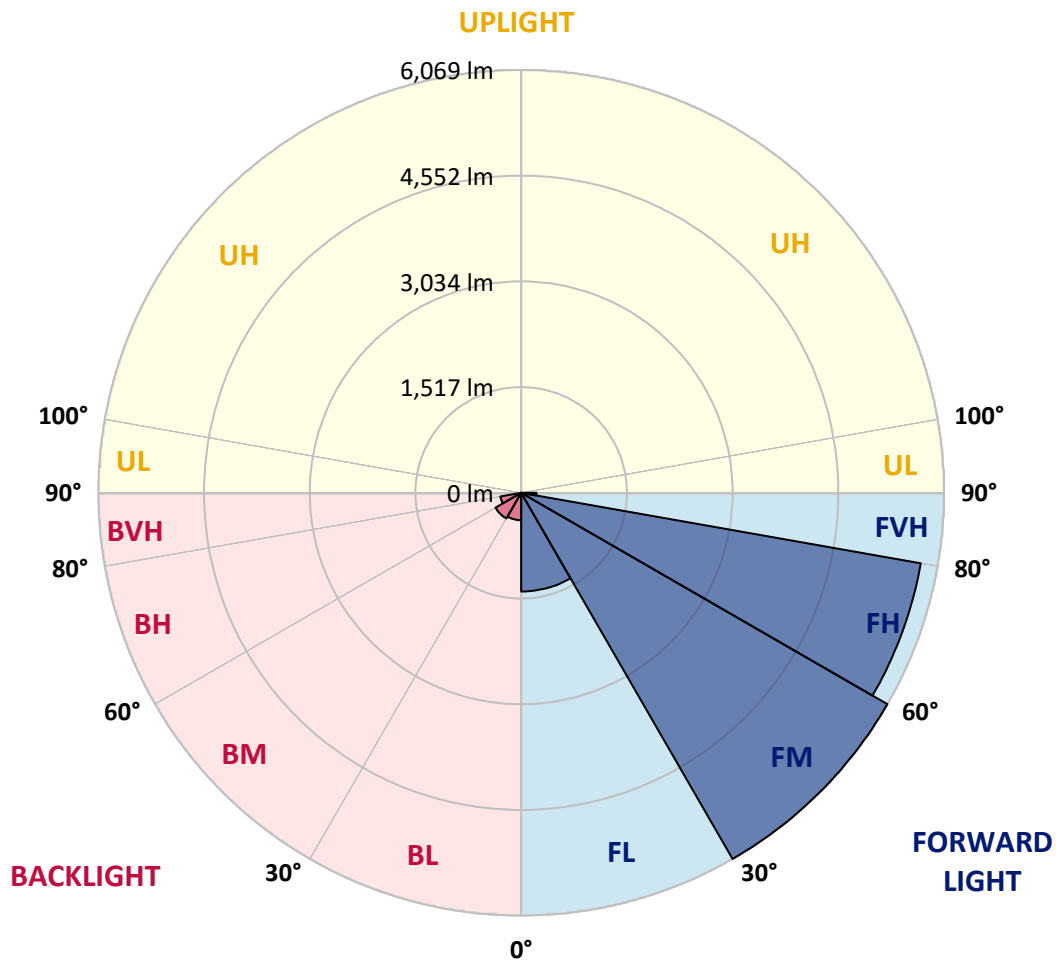
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1416.5 | 9.7 | | | |
| FM | (30°-60°) | 6069.0 | 41.4 | | | |
| FH | (60°-80°) | 5823.8 | 39.7 | | | G3/7500 |
| FVH | (80°-90°) | 219.6 | 1.5 | | | G2/225 |
| BL | (0°-30°) | 392.6 | 2.7 | B1/500 | | |
| BM | (30°-60°) | 425.3 | 2.9 | B1/1000 | | |
| BH | (60°-80°) | 302.2 | 2.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.5 | 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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 0° | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 |
| 2.5° | 4188.9 | 4182.4 | 4154.8 | 4149.2 | 4118.2 | 4056.2 | 3984.4 | 3955.6 | 3897.0 | 3804.2 | 3701.5 |
| 5° | 4258.7 | 4262.0 | 4264.2 | 4251.9 | 4247.5 | 4196.7 | 4117.1 | 4082.8 | 4004.4 | 3851.8 | 3663.8 |
| 7.5° | 3997.6 | 4006.6 | 4034.2 | 4046.3 | 4099.4 | 4119.3 | 4102.7 | 4080.6 | 4018.7 | 3838.5 | 3574.3 |
| 10° | 3722.4 | 3739.0 | 3768.8 | 3788.7 | 3854.0 | 3907.1 | 3974.6 | 3980.0 | 3966.7 | 3794.4 | 3473.7 |
| 12.5° | 3485.9 | 3501.4 | 3534.6 | 3574.3 | 3640.7 | 3709.1 | 3809.7 | 3845.1 | 3889.4 | 3765.5 | 3401.8 |
| 15° | 3282.3 | 3286.9 | 3318.9 | 3368.6 | 3456.0 | 3549.9 | 3669.3 | 3721.3 | 3807.6 | 3754.5 | 3346.5 |
| 17.5° | 3104.5 | 3105.5 | 3126.6 | 3171.8 | 3277.9 | 3401.8 | 3541.1 | 3609.7 | 3719.2 | 3739.0 | 3297.9 |
| 20° | 2987.3 | 2986.1 | 2987.3 | 3011.6 | 3105.5 | 3252.6 | 3421.7 | 3493.6 | 3634.0 | 3720.2 | 3248.1 |
| 22.5° | 2947.3 | 2941.9 | 2916.4 | 2907.6 | 2967.3 | 3096.6 | 3298.9 | 3393.0 | 3557.6 | 3714.8 | 3211.7 |
| 25° | 2996.0 | 2992.8 | 2938.5 | 2887.7 | 2893.3 | 2974.0 | 3174.2 | 3289.1 | 3498.0 | 3734.7 | 3202.7 |
| 27.5° | 3153.1 | 3146.5 | 3063.5 | 2964.0 | 2900.9 | 2915.4 | 3081.1 | 3201.6 | 3450.5 | 3783.2 | 3214.9 |
| 30° | 3358.8 | 3359.8 | 3271.4 | 3150.9 | 3002.8 | 2920.8 | 3031.4 | 3145.3 | 3418.4 | 3856.2 | 3241.5 |
| 32.5° | 3587.6 | 3586.5 | 3523.4 | 3384.2 | 3195.1 | 3022.5 | 3053.6 | 3149.7 | 3422.8 | 3963.4 | 3292.4 |
| 35° | 3824.2 | 3812.0 | 3790.9 | 3668.3 | 3447.2 | 3200.7 | 3154.2 | 3224.9 | 3469.3 | 4105.0 | 3378.5 |
| 37.5° | 4097.2 | 4092.8 | 4113.8 | 3984.4 | 3758.9 | 3462.6 | 3331.1 | 3378.5 | 3586.5 | 4313.9 | 3517.9 |
| 40° | 4531.7 | 4507.3 | 4517.3 | 4341.6 | 4110.5 | 3815.3 | 3578.7 | 3590.9 | 3773.3 | 4590.2 | 3737.8 |
| 42.5° | 5359.7 | 5261.4 | 5076.7 | 4747.4 | 4497.5 | 4206.7 | 3902.6 | 3881.7 | 4037.5 | 4925.2 | 4027.6 |
| 45° | 6349.2 | 6236.5 | 5771.0 | 5195.1 | 4884.4 | 4626.8 | 4302.8 | 4246.5 | 4362.6 | 5324.3 | 4401.2 |
| 47.5° | 7175.1 | 7053.5 | 6436.5 | 5662.6 | 5277.9 | 5060.2 | 4746.1 | 4679.8 | 4751.8 | 5787.6 | 4850.0 |
| 50° | 7457.0 | 7389.5 | 6847.9 | 6051.8 | 5674.9 | 5546.7 | 5302.2 | 5191.8 | 5209.5 | 6287.3 | 5374.1 |
| 52.5° | 7327.7 | 7304.5 | 6941.8 | 6318.3 | 6041.9 | 6084.0 | 5911.4 | 5795.3 | 5775.5 | 6833.4 | 5953.4 |
| 55° | 7054.6 | 7043.5 | 6866.6 | 6466.4 | 6365.7 | 6576.0 | 6766.0 | 6665.5 | 6477.5 | 7413.9 | 6432.1 |
| 57.5° | 6664.3 | 6706.3 | 6833.4 | 6751.8 | 6763.8 | 7095.5 | 7559.9 | 7611.8 | 7331.0 | 7876.0 | 6787.1 |
| 60° | 5621.9 | 5734.5 | 6317.2 | 7058.0 | 7625.1 | 7960.1 | 8410.0 | 8507.3 | 8054.1 | 8192.3 | 7197.2 |
| 62.5° | 4155.7 | 4317.3 | 5147.5 | 6508.4 | 8099.4 | 9604.0 | 9541.0 | 9497.9 | 8743.9 | 8615.6 | 7943.4 |
| 65° | 2441.1 | 2630.1 | 3332.2 | 5085.6 | 7384.1 | 10660.9 | 11652.6 | 11055.6 | 9795.3 | 9495.7 | 9131.9 |
| 67.5° | 1216.1 | 1217.3 | 1534.6 | 2684.3 | 5457.1 | 9923.5 | 14734.9 | 14389.9 | 12030.7 | 10792.4 | 9600.6 |
| 70° | 935.3 | 960.7 | 1135.4 | 1559.9 | 2759.5 | 7728.9 | 15441.3 | 16857.7 | 14277.2 | 10735.0 | 8145.8 |
| 72.5° | 792.7 | 809.3 | 1010.5 | 1357.6 | 2063.0 | 4243.1 | 13367.4 | 14900.7 | 13623.9 | 9070.0 | 6004.4 |
| 75° | 570.5 | 583.8 | 894.4 | 1231.5 | 1899.3 | 2105.0 | 9169.4 | 11051.2 | 10222.1 | 6380.2 | 3304.5 |
| 77.5° | 141.6 | 140.4 | 311.8 | 999.5 | 1699.2 | 1753.4 | 5261.4 | 7086.6 | 5865.0 | 2612.5 | 849.1 |
| 80° | 63.1 | 60.8 | 70.7 | 210.1 | 1580.9 | 1655.0 | 2313.9 | 3578.7 | 2249.8 | 423.5 | 259.8 |
| 82.5° | 44.2 | 42.0 | 44.2 | 77.3 | 528.5 | 1535.7 | 1398.5 | 1551.2 | 823.7 | 144.8 | 110.5 |
| 85° | 14.4 | 13.2 | 24.3 | 65.2 | 148.1 | 885.5 | 1364.3 | 1158.6 | 612.5 | 62.0 | 74.1 |
| 87.5° | 2.2 | 2.2 | 8.9 | 35.4 | 43.1 | 295.3 | 800.4 | 802.6 | 275.3 | 36.6 | 33.1 |
| 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° | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 | 3705.9 |
| 2.5° | 3649.5 | 3584.2 | 3492.5 | 3400.8 | 3317.8 | 3232.7 | 3164.1 | 3132.1 | 3117.7 | 3097.7 | 3054.6 |
| 5° | 3565.5 | 3447.2 | 3245.9 | 3047.9 | 2863.3 | 2686.6 | 2535.0 | 2448.8 | 2356.0 | 2351.6 | 2306.2 |
| 7.5° | 3430.5 | 3262.6 | 2945.3 | 2637.9 | 2356.0 | 2086.3 | 1854.0 | 1703.6 | 1600.9 | 1536.7 | 1492.5 |
| 10° | 3280.3 | 3064.6 | 2644.5 | 2212.3 | 1828.6 | 1468.2 | 1169.8 | 975.1 | 856.9 | 797.2 | 762.8 |
| 12.5° | 3160.7 | 2889.9 | 2348.2 | 1804.2 | 1323.4 | 909.9 | 632.3 | 490.8 | 427.9 | 403.5 | 392.5 |
| 15° | 3058.0 | 2729.6 | 2070.8 | 1439.4 | 883.4 | 523.0 | 365.9 | 319.4 | 309.6 | 309.6 | 308.5 |
| 17.5° | 2954.0 | 2574.8 | 1800.9 | 1081.2 | 556.1 | 342.8 | 288.5 | 281.9 | 283.1 | 286.3 | 286.3 |
| 20° | 2855.6 | 2427.8 | 1541.1 | 770.6 | 364.8 | 274.3 | 262.0 | 259.8 | 263.2 | 267.5 | 266.4 |
| 22.5° | 2776.0 | 2298.5 | 1298.0 | 529.6 | 280.8 | 248.7 | 241.0 | 237.7 | 239.8 | 243.3 | 242.2 |
| 25° | 2719.7 | 2187.9 | 1074.6 | 369.3 | 244.2 | 226.6 | 217.7 | 213.3 | 211.1 | 213.3 | 212.3 |
| 27.5° | 2685.5 | 2095.0 | 864.6 | 277.4 | 218.8 | 204.5 | 193.4 | 184.6 | 179.1 | 179.1 | 176.8 |
| 30° | 2663.3 | 2007.7 | 677.7 | 230.0 | 197.8 | 182.4 | 166.9 | 154.8 | 146.0 | 143.6 | 142.7 |
| 32.5° | 2662.1 | 1932.6 | 506.4 | 203.5 | 178.0 | 160.3 | 141.6 | 126.0 | 116.2 | 113.8 | 112.7 |
| 35° | 2689.9 | 1871.7 | 372.5 | 183.6 | 160.3 | 139.2 | 118.2 | 101.7 | 92.9 | 92.9 | 91.7 |
| 37.5° | 2761.7 | 1836.3 | 281.9 | 168.1 | 146.0 | 121.6 | 99.5 | 84.0 | 76.3 | 78.5 | 78.5 |
| 40° | 2895.4 | 1829.7 | 230.0 | 155.9 | 133.8 | 106.1 | 80.7 | 68.5 | 65.2 | 68.5 | 68.5 |
| 42.5° | 3100.1 | 1865.2 | 204.5 | 147.1 | 122.7 | 90.6 | 67.5 | 58.6 | 57.5 | 60.8 | 60.8 |
| 45° | 3366.5 | 1934.7 | 190.1 | 139.2 | 110.5 | 75.2 | 56.4 | 50.8 | 49.8 | 54.2 | 54.2 |
| 47.5° | 3689.2 | 2028.7 | 176.8 | 130.4 | 98.5 | 62.0 | 47.5 | 43.1 | 43.1 | 47.5 | 48.7 |
| 50° | 4071.7 | 2155.8 | 163.6 | 121.6 | 88.5 | 51.9 | 39.9 | 36.6 | 37.5 | 42.0 | 43.1 |
| 52.5° | 4511.7 | 2311.7 | 151.5 | 113.8 | 77.3 | 42.0 | 33.1 | 30.9 | 32.1 | 36.6 | 37.5 |
| 55° | 4891.0 | 2447.7 | 137.1 | 106.1 | 63.1 | 34.2 | 27.7 | 26.5 | 27.7 | 33.1 | 33.1 |
| 57.5° | 5221.6 | 2578.1 | 123.8 | 94.0 | 49.8 | 27.7 | 22.1 | 22.1 | 24.3 | 29.9 | 30.9 |
| 60° | 5660.5 | 2783.8 | 112.7 | 79.6 | 37.5 | 21.0 | 17.6 | 18.8 | 22.1 | 26.5 | 27.7 |
| 62.5° | 6437.8 | 3133.2 | 98.5 | 66.4 | 27.7 | 16.6 | 14.4 | 15.5 | 19.9 | 25.4 | 26.5 |
| 65° | 7410.6 | 3463.8 | 81.8 | 55.2 | 21.0 | 12.1 | 11.0 | 14.4 | 19.9 | 25.4 | 26.5 |
| 67.5° | 7311.0 | 3012.6 | 64.0 | 44.2 | 15.5 | 9.9 | 8.9 | 13.2 | 18.8 | 25.4 | 26.5 |
| 70° | 5929.2 | 2111.6 | 47.5 | 29.9 | 12.1 | 8.9 | 8.9 | 13.2 | 18.8 | 24.3 | 25.4 |
| 72.5° | 4112.7 | 1175.3 | 36.6 | 19.9 | 11.0 | 8.9 | 7.7 | 12.1 | 17.6 | 24.3 | 25.4 |
| 75° | 1956.9 | 360.4 | 28.7 | 14.4 | 9.9 | 7.7 | 6.6 | 12.1 | 17.6 | 24.3 | 25.4 |
| 77.5° | 375.9 | 91.7 | 23.3 | 12.1 | 8.9 | 7.7 | 6.6 | 11.0 | 17.6 | 23.3 | 24.3 |
| 80° | 127.1 | 41.0 | 18.8 | 11.0 | 8.9 | 7.7 | 6.6 | 11.0 | 16.6 | 22.1 | 23.3 |
| 82.5° | 69.7 | 23.3 | 16.6 | 9.9 | 8.9 | 6.6 | 5.5 | 9.9 | 15.5 | 22.1 | 23.3 |
| 85° | 54.2 | 16.6 | 13.2 | 9.9 | 8.9 | 6.6 | 5.5 | 9.9 | 15.5 | 21.0 | 22.1 |
| 87.5° | 27.7 | 12.1 | 11.0 | 9.9 | 8.9 | 6.6 | 5.5 | 8.9 | 14.4 | 19.9 | 22.1 |
| 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)