

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: P195461

Luminaire Tested: **NVN-AF-05-LED-U-5NQ-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195461
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-05-LED-U-5NQ-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20367 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 162
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

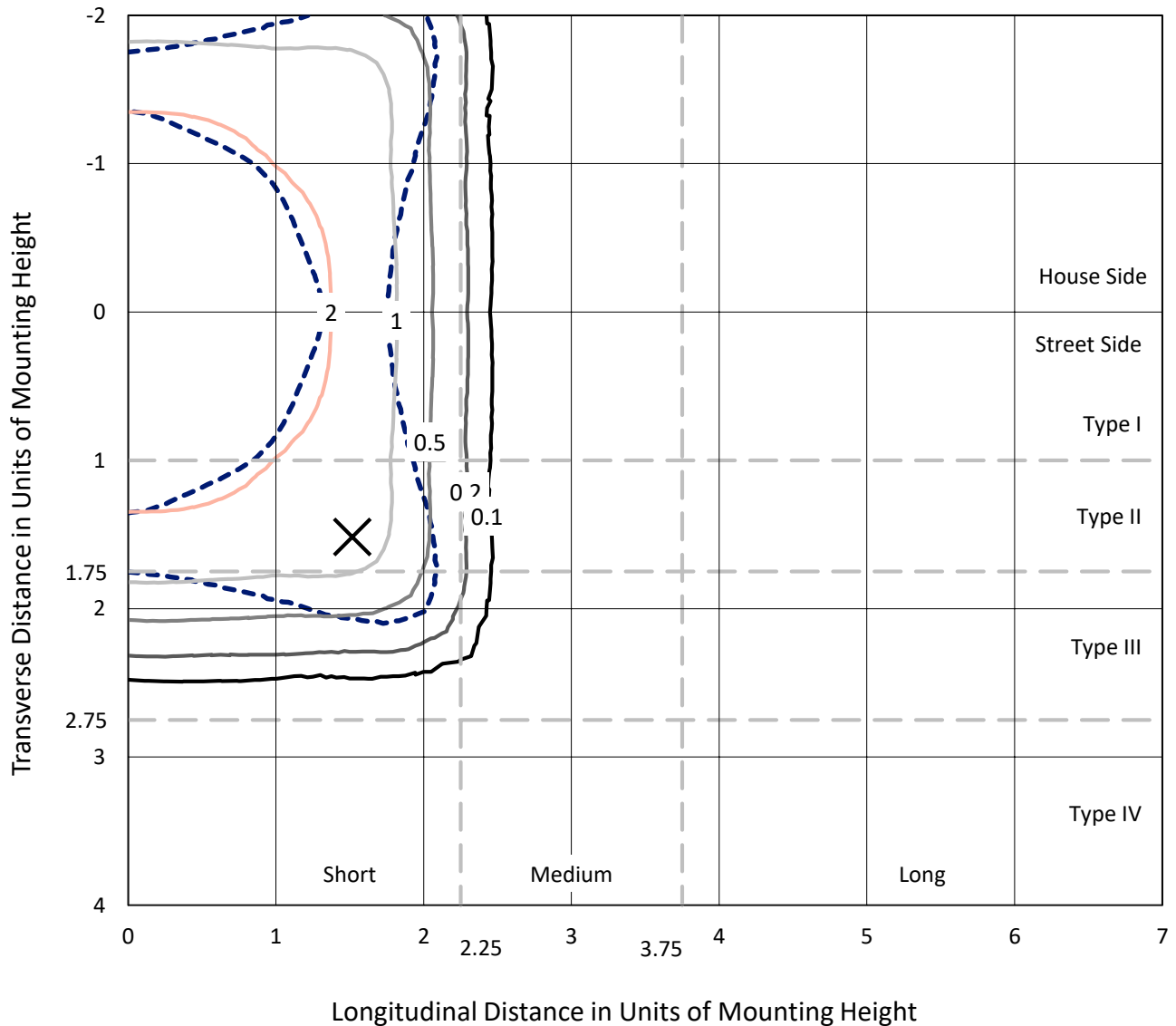


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

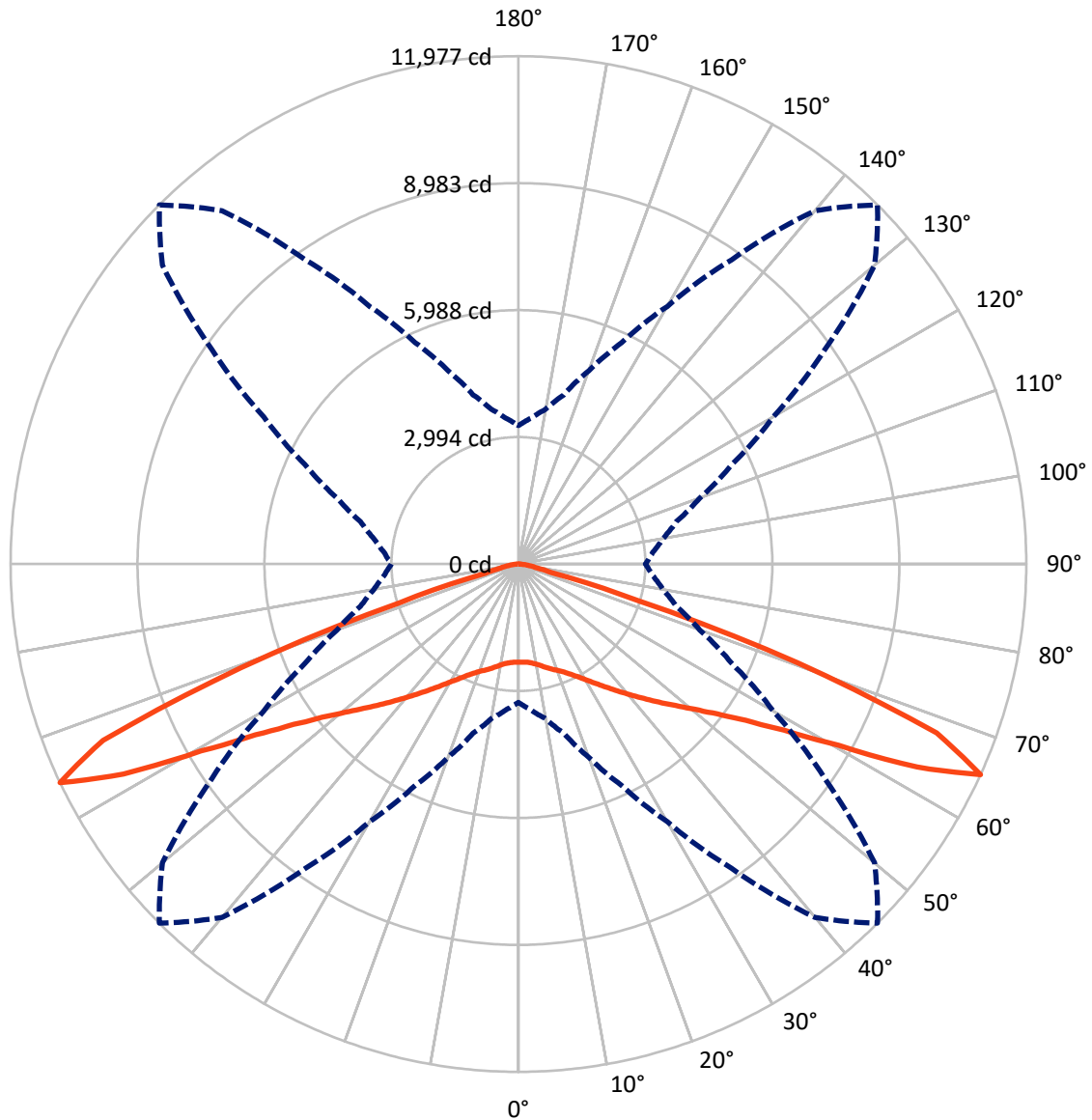


Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 10183.5 | 0.0 | 10183.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 10183.5 | 0.0 | 10183.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 20367.0 | 0.0 | 20367.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 225.6 | 1.1 |
| 10°-20° | 723.1 | 3.6 |
| 20°-30° | 1348.9 | 6.6 |
| 30°-40° | 2274.4 | 11.2 |
| 40°-50° | 3694.3 | 18.1 |
| 50°-60° | 5788.3 | 28.4 |
| 60°-70° | 5463.9 | 26.8 |
| 70°-80° | 736.4 | 3.6 |
| 80°-90° | 112.2 | 0.6 |
| 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° | 20367.0 | 100.0 |
| 0°-180° | 20367.0 | 100.0 |



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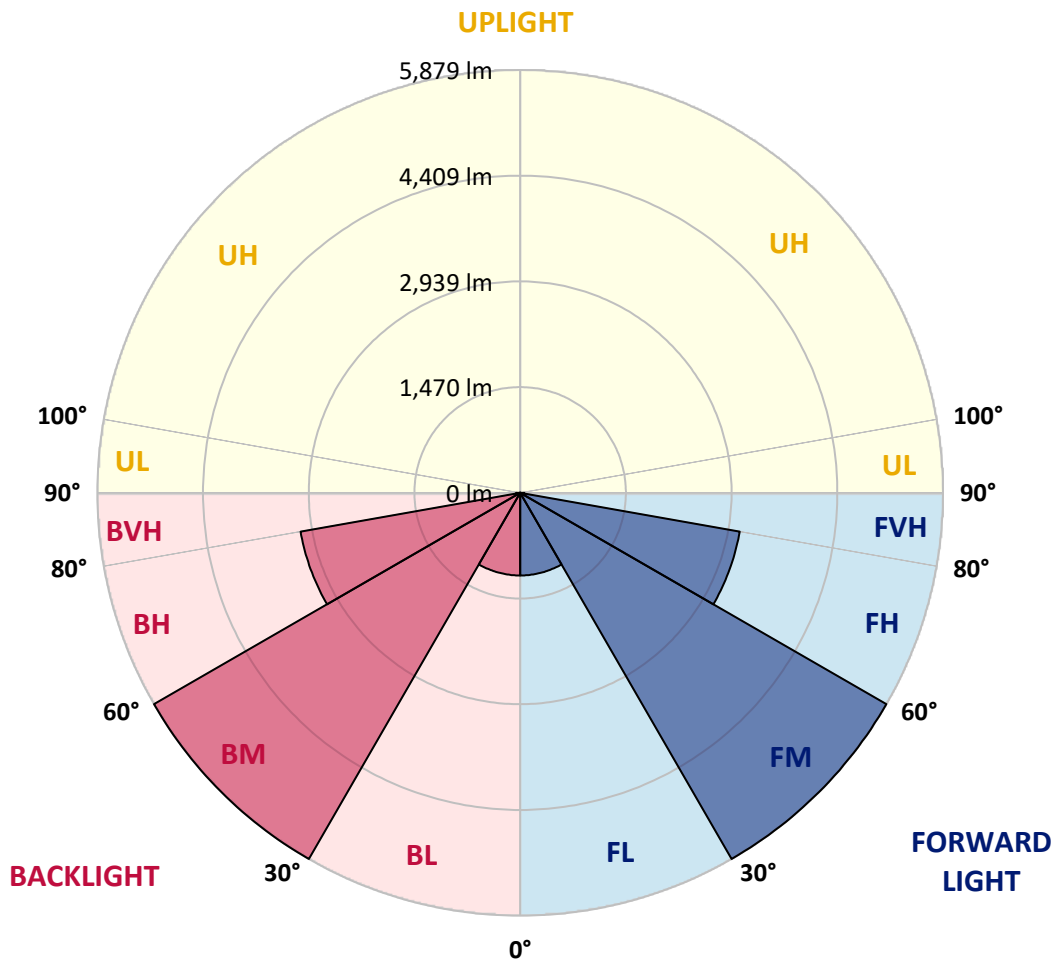
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1148.8 | 5.6 | | | |
| FM | (30°-60°) | 5878.5 | 28.9 | | | |
| FH | (60°-80°) | 3100.1 | 15.2 | | | G2/5000 |
| FVH | (80°-90°) | 56.1 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1148.8 | 5.6 | B3/2500 | | |
| BM | (30°-60°) | 5878.5 | 28.9 | B4/8500 | | |
| BH | (60°-80°) | 3100.1 | 15.2 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 56.1 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 |
| 2.5° | 2335.8 | 2335.8 | 2339.6 | 2338.3 | 2333.2 | 2329.4 | 2325.6 | 2320.5 | 2318.0 | 2315.5 | 2314.2 |
| 5° | 2348.4 | 2348.4 | 2352.2 | 2351.0 | 2347.2 | 2342.1 | 2339.6 | 2335.8 | 2331.9 | 2329.4 | 2330.7 |
| 7.5° | 2380.2 | 2381.4 | 2382.7 | 2381.4 | 2377.6 | 2373.8 | 2368.7 | 2367.5 | 2362.4 | 2358.6 | 2361.1 |
| 10° | 2428.4 | 2428.4 | 2429.6 | 2430.9 | 2428.4 | 2419.5 | 2419.5 | 2417.0 | 2411.9 | 2406.8 | 2408.1 |
| 12.5° | 2481.7 | 2481.7 | 2482.9 | 2482.9 | 2482.9 | 2477.9 | 2479.1 | 2477.9 | 2471.5 | 2469.0 | 2471.5 |
| 15° | 2533.7 | 2534.9 | 2534.9 | 2537.5 | 2537.5 | 2538.8 | 2543.8 | 2543.8 | 2541.3 | 2540.0 | 2540.0 |
| 17.5° | 2594.6 | 2597.1 | 2598.4 | 2602.2 | 2603.5 | 2606.0 | 2611.1 | 2612.3 | 2613.6 | 2609.8 | 2611.1 |
| 20° | 2675.8 | 2677.0 | 2680.9 | 2682.1 | 2687.2 | 2687.2 | 2689.7 | 2688.5 | 2685.9 | 2680.9 | 2680.9 |
| 22.5° | 2767.1 | 2769.7 | 2777.3 | 2777.3 | 2783.6 | 2779.8 | 2781.1 | 2777.3 | 2770.9 | 2768.4 | 2765.9 |
| 25° | 2886.4 | 2890.2 | 2896.5 | 2894.0 | 2896.5 | 2890.2 | 2890.2 | 2890.2 | 2886.4 | 2882.6 | 2881.3 |
| 27.5° | 3037.4 | 3031.0 | 3037.4 | 3032.3 | 3031.0 | 3025.9 | 3027.2 | 3024.7 | 3020.9 | 3019.6 | 3014.5 |
| 30° | 3194.7 | 3187.1 | 3190.9 | 3192.2 | 3189.6 | 3188.3 | 3183.3 | 3179.5 | 3173.1 | 3174.4 | 3170.6 |
| 32.5° | 3374.9 | 3367.2 | 3371.0 | 3372.3 | 3369.8 | 3372.3 | 3371.0 | 3362.2 | 3354.6 | 3359.6 | 3359.6 |
| 35° | 3589.3 | 3584.2 | 3594.3 | 3598.2 | 3590.5 | 3586.7 | 3581.7 | 3571.5 | 3560.1 | 3567.7 | 3569.0 |
| 37.5° | 3846.8 | 3840.5 | 3848.1 | 3858.2 | 3844.3 | 3836.7 | 3816.4 | 3801.1 | 3793.5 | 3797.3 | 3802.4 |
| 40° | 4114.5 | 4115.8 | 4137.4 | 4139.9 | 4124.7 | 4115.8 | 4095.5 | 4072.7 | 4051.1 | 4051.1 | 4057.4 |
| 42.5° | 4396.2 | 4400.0 | 4425.4 | 4434.3 | 4429.2 | 4412.7 | 4384.8 | 4356.9 | 4328.9 | 4334.0 | 4341.6 |
| 45° | 4714.6 | 4709.6 | 4736.2 | 4757.8 | 4754.0 | 4748.9 | 4722.3 | 4671.5 | 4646.1 | 4644.9 | 4657.5 |
| 47.5° | 5049.6 | 5059.7 | 5087.7 | 5124.4 | 5123.2 | 5110.5 | 5076.2 | 5029.3 | 4982.3 | 4986.2 | 5001.4 |
| 50° | 5440.4 | 5454.3 | 5501.3 | 5538.1 | 5543.1 | 5539.3 | 5498.7 | 5444.2 | 5378.2 | 5382.0 | 5402.3 |
| 52.5° | 5790.5 | 5810.8 | 5865.4 | 5941.5 | 5988.5 | 6010.0 | 5983.4 | 5932.6 | 5865.4 | 5869.2 | 5890.8 |
| 55° | 6107.7 | 6139.4 | 6220.6 | 6324.7 | 6418.6 | 6506.1 | 6545.4 | 6544.2 | 6494.7 | 6506.1 | 6534.0 |
| 57.5° | 6306.9 | 6351.3 | 6474.4 | 6641.9 | 6828.4 | 7004.7 | 7157.0 | 7300.3 | 7332.1 | 7391.7 | 7391.7 |
| 60° | 6039.2 | 6143.2 | 6306.9 | 6593.6 | 6960.3 | 7356.2 | 7785.0 | 8202.4 | 8471.4 | 8683.3 | 8569.1 |
| 62.5° | 5043.2 | 5196.8 | 5426.4 | 5804.5 | 6375.4 | 7082.1 | 7943.6 | 8914.2 | 9926.6 | 10545.8 | 10091.6 |
| 65° | 3263.2 | 3456.1 | 3706.0 | 4131.0 | 4850.4 | 5760.1 | 7014.9 | 8759.4 | 10878.2 | 11976.9 | 10961.9 |
| 67.5° | 1292.8 | 1423.5 | 1575.8 | 1877.7 | 2502.0 | 3395.2 | 4803.5 | 6955.2 | 9605.6 | 10642.2 | 9504.1 |
| 70° | 617.9 | 639.4 | 668.6 | 733.3 | 889.4 | 1200.2 | 1929.8 | 3426.9 | 5890.8 | 6983.2 | 5749.9 |
| 72.5° | 446.6 | 450.4 | 464.4 | 485.9 | 531.6 | 595.0 | 723.2 | 1048.0 | 2031.3 | 2953.6 | 2033.8 |
| 75° | 338.8 | 343.8 | 351.4 | 362.9 | 387.0 | 417.4 | 465.6 | 558.2 | 695.3 | 801.8 | 694.0 |
| 77.5° | 257.6 | 262.6 | 269.0 | 280.4 | 293.1 | 314.6 | 332.4 | 369.2 | 427.6 | 450.4 | 447.9 |
| 80° | 187.8 | 196.7 | 206.8 | 217.0 | 225.8 | 236.0 | 237.3 | 255.0 | 288.0 | 309.6 | 303.2 |
| 82.5° | 119.3 | 126.9 | 153.5 | 164.9 | 166.2 | 168.7 | 167.5 | 168.7 | 186.5 | 201.7 | 196.7 |
| 85° | 76.1 | 81.2 | 95.2 | 107.8 | 105.3 | 110.4 | 110.4 | 107.8 | 100.2 | 86.3 | 102.8 |
| 87.5° | 38.1 | 39.3 | 45.7 | 57.1 | 54.6 | 48.2 | 46.9 | 46.9 | 34.3 | 29.2 | 31.7 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 | 2316.7 |
| 2.5° | 2310.4 | 2312.9 | 2309.1 | 2309.1 | 2307.8 | 2310.4 | 2306.6 | 2306.6 |
| 5° | 2328.1 | 2331.9 | 2330.7 | 2330.7 | 2333.2 | 2335.8 | 2334.5 | 2333.2 |
| 7.5° | 2359.9 | 2362.4 | 2364.9 | 2366.2 | 2368.7 | 2367.5 | 2370.0 | 2368.7 |
| 10° | 2408.1 | 2405.5 | 2409.3 | 2405.5 | 2406.8 | 2404.3 | 2405.5 | 2405.5 |
| 12.5° | 2469.0 | 2465.2 | 2462.6 | 2460.1 | 2460.1 | 2455.0 | 2455.0 | 2456.3 |
| 15° | 2538.8 | 2532.4 | 2527.3 | 2524.8 | 2522.3 | 2522.3 | 2518.5 | 2521.0 |
| 17.5° | 2607.3 | 2600.9 | 2592.0 | 2592.0 | 2588.2 | 2585.7 | 2583.2 | 2589.5 |
| 20° | 2679.6 | 2673.2 | 2668.2 | 2666.9 | 2659.3 | 2656.7 | 2658.0 | 2665.6 |
| 22.5° | 2763.3 | 2759.5 | 2759.5 | 2757.0 | 2751.9 | 2748.1 | 2748.1 | 2757.0 |
| 25° | 2876.2 | 2868.6 | 2869.9 | 2871.2 | 2868.6 | 2868.6 | 2866.1 | 2872.4 |
| 27.5° | 3014.5 | 3008.2 | 3012.0 | 3014.5 | 3012.0 | 3015.8 | 3012.0 | 3017.1 |
| 30° | 3176.9 | 3173.1 | 3176.9 | 3180.7 | 3174.4 | 3174.4 | 3171.9 | 3175.7 |
| 32.5° | 3371.0 | 3366.0 | 3368.5 | 3368.5 | 3359.6 | 3352.0 | 3341.9 | 3349.5 |
| 35° | 3584.2 | 3577.9 | 3582.9 | 3586.7 | 3576.6 | 3569.0 | 3553.7 | 3560.1 |
| 37.5° | 3818.9 | 3821.4 | 3827.8 | 3844.3 | 3841.7 | 3829.1 | 3817.6 | 3822.7 |
| 40° | 4081.5 | 4094.2 | 4122.1 | 4133.6 | 4131.0 | 4118.3 | 4103.1 | 4105.6 |
| 42.5° | 4378.4 | 4394.9 | 4424.1 | 4443.1 | 4434.3 | 4416.5 | 4397.5 | 4405.1 |
| 45° | 4702.0 | 4727.3 | 4765.4 | 4784.4 | 4773.0 | 4754.0 | 4727.3 | 4741.3 |
| 47.5° | 5044.5 | 5095.3 | 5146.0 | 5171.4 | 5167.6 | 5140.9 | 5106.7 | 5110.5 |
| 50° | 5454.3 | 5521.6 | 5586.3 | 5611.6 | 5592.6 | 5552.0 | 5503.8 | 5502.5 |
| 52.5° | 5964.4 | 6036.7 | 6090.0 | 6083.6 | 6036.7 | 5973.2 | 5918.7 | 5916.1 |
| 55° | 6601.3 | 6625.4 | 6617.8 | 6563.2 | 6480.7 | 6381.8 | 6312.0 | 6300.6 |
| 57.5° | 7371.4 | 7290.2 | 7170.9 | 7006.0 | 6820.8 | 6633.0 | 6506.1 | 6459.2 |
| 60° | 8312.8 | 7946.1 | 7519.8 | 7070.7 | 6660.9 | 6353.9 | 6159.7 | 6041.7 |
| 62.5° | 9090.5 | 8028.6 | 7075.8 | 6295.5 | 5657.3 | 5278.0 | 5012.8 | 4849.1 |
| 65° | 8824.1 | 6936.2 | 5555.8 | 4549.7 | 3853.2 | 3461.1 | 3180.7 | 2994.2 |
| 67.5° | 6816.9 | 4634.7 | 3225.1 | 2235.5 | 1695.0 | 1434.9 | 1253.5 | 1135.5 |
| 70° | 3437.0 | 1777.5 | 1077.2 | 760.0 | 649.6 | 603.9 | 573.5 | 555.7 |
| 72.5° | 1008.6 | 673.7 | 559.5 | 494.8 | 455.5 | 427.6 | 409.8 | 400.9 |
| 75° | 558.2 | 455.5 | 402.2 | 365.4 | 340.0 | 321.0 | 309.6 | 302.0 |
| 77.5° | 384.4 | 331.1 | 304.5 | 280.4 | 260.1 | 246.1 | 237.3 | 229.6 |
| 80° | 269.0 | 242.3 | 230.9 | 218.2 | 203.0 | 191.6 | 178.9 | 173.8 |
| 82.5° | 178.9 | 167.5 | 164.9 | 154.8 | 145.9 | 133.2 | 110.4 | 102.8 |
| 85° | 105.3 | 104.0 | 104.0 | 100.2 | 93.9 | 82.5 | 66.0 | 66.0 |
| 87.5° | 36.8 | 38.1 | 39.3 | 41.9 | 40.6 | 34.3 | 27.9 | 26.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)