

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: P195147

Luminaire Tested: **NVN-AF-03-LED-U-SL3-7060-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195147
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-SL3-7060-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 615mA 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: 10131 lumens
Efficiency: N/A
Efficacy: 105.5 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 - G2

Input Watts (W): 96
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

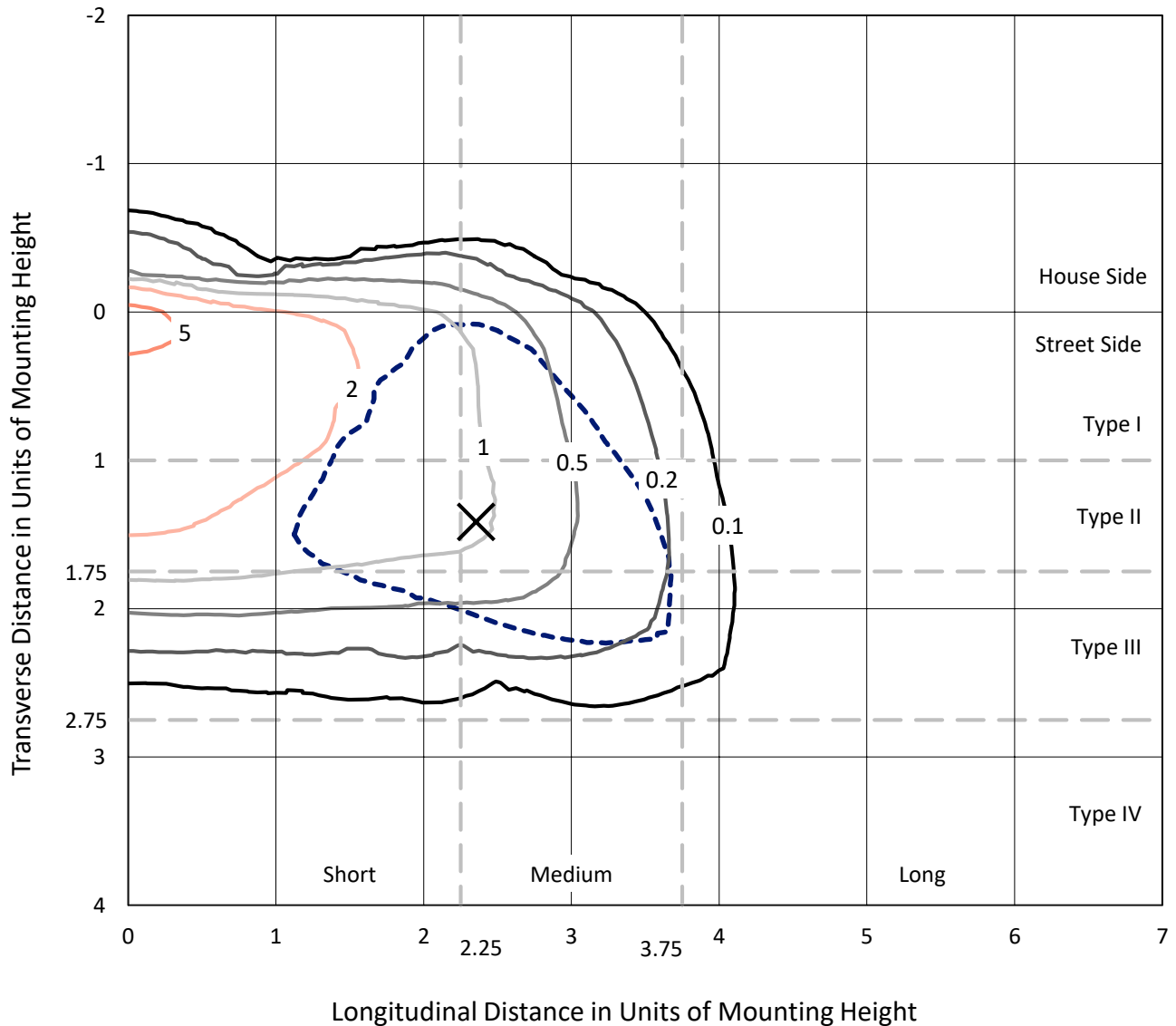


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

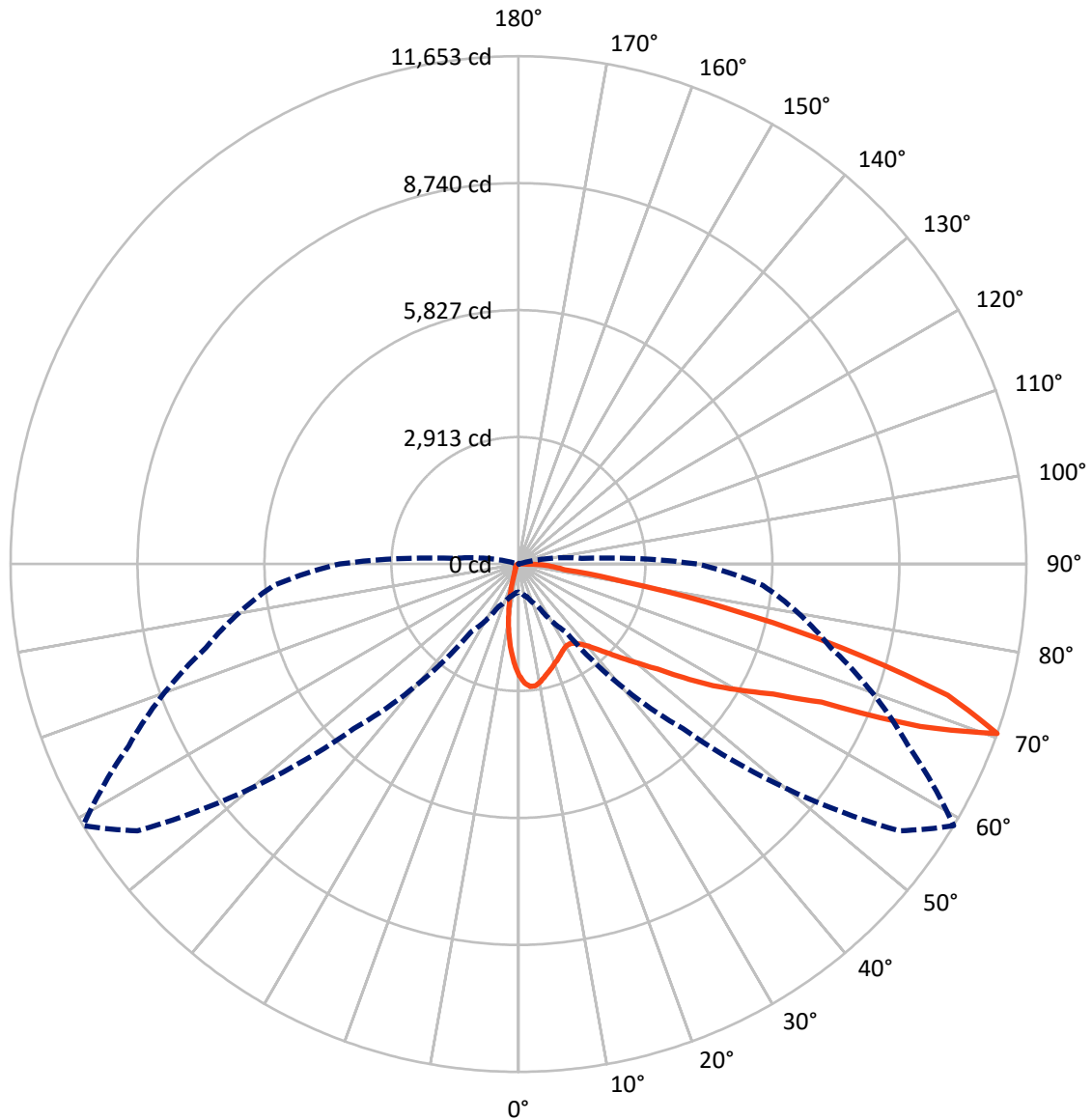


Based on 20 foot mounting height. Maximum calculated value = 6.8 fc
 Type III - Medium - Non-Cutoff

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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 | 778.8 | 0.0 | 778.8 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 9352.2 | 0.0 | 9352.2 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 10131.0 | 0.0 | 10131.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 210.7 | 2.1 |
| 10°-20° | 441.8 | 4.4 |
| 20°-30° | 598.1 | 5.9 |
| 30°-40° | 863.2 | 8.5 |
| 40°-50° | 1433.5 | 14.1 |
| 50°-60° | 2192.7 | 21.6 |
| 60°-70° | 2727.2 | 26.9 |
| 70°-80° | 1507.6 | 14.9 |
| 80°-90° | 156.3 | 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° | 10131.0 | 100.0 |
| 0°-180° | 10131.0 | 100.0 |



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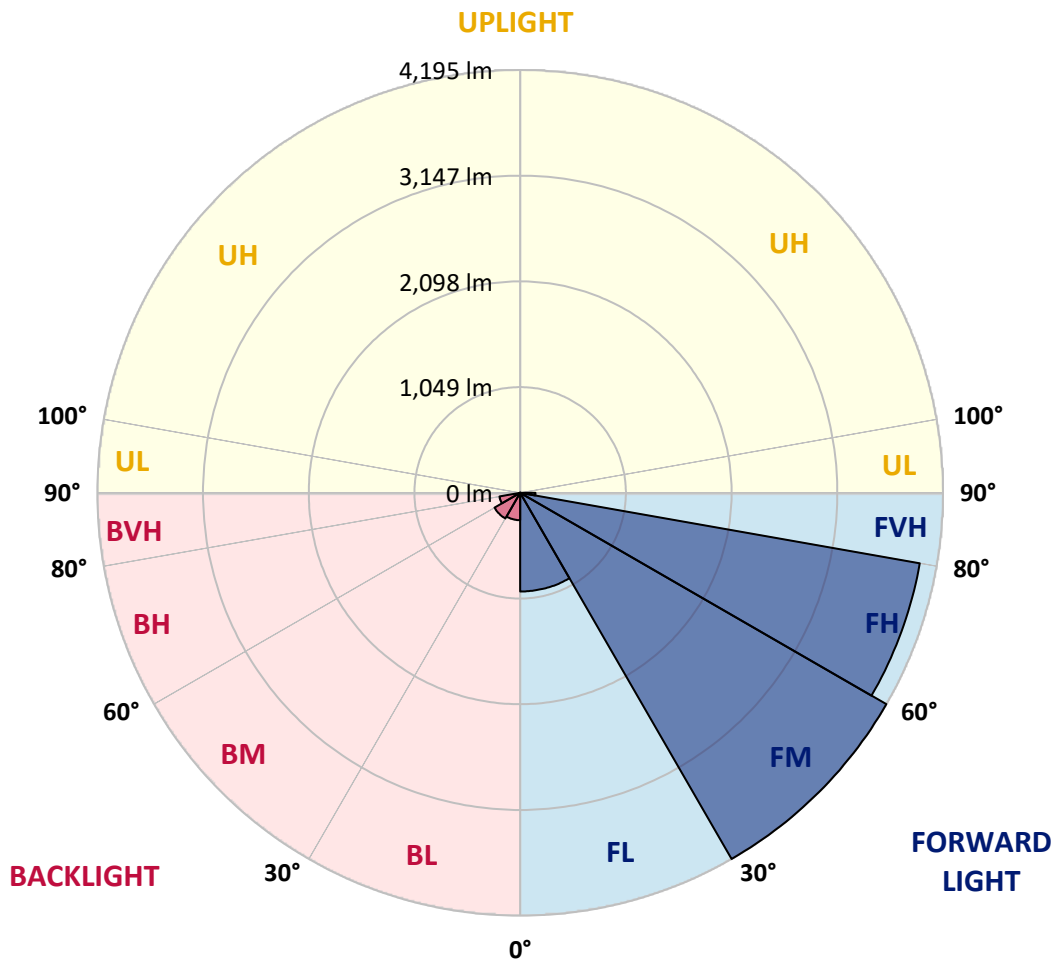
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 979.2 | 9.7 | | | |
| FM | (30°-60°) | 4195.4 | 41.4 | | | |
| FH | (60°-80°) | 4025.8 | 39.7 | | | G2/5000 |
| FVH | (80°-90°) | 151.8 | 1.5 | | | G2/225 |
| BL | (0°-30°) | 271.4 | 2.7 | B1/500 | | |
| BM | (30°-60°) | 294.0 | 2.9 | B1/1000 | | |
| BH | (60°-80°) | 208.9 | 2.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 4.5 | 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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|
| 0° | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 |
| 2.5° | 2895.7 | 2891.2 | 2872.1 | 2868.2 | 2846.8 | 2804.0 | 2754.4 | 2734.5 | 2694.0 | 2629.8 | 2558.7 |
| 5° | 2943.9 | 2946.2 | 2947.7 | 2939.3 | 2936.2 | 2901.1 | 2846.1 | 2822.4 | 2768.1 | 2662.6 | 2532.7 |
| 7.5° | 2763.5 | 2769.6 | 2788.7 | 2797.2 | 2833.8 | 2847.6 | 2836.1 | 2820.8 | 2778.0 | 2653.5 | 2470.8 |
| 10° | 2573.2 | 2584.7 | 2605.3 | 2619.1 | 2664.2 | 2700.9 | 2747.5 | 2751.3 | 2742.1 | 2622.9 | 2401.3 |
| 12.5° | 2409.7 | 2420.4 | 2443.3 | 2470.8 | 2516.7 | 2564.1 | 2633.6 | 2658.1 | 2688.6 | 2603.0 | 2351.6 |
| 15° | 2269.1 | 2272.1 | 2294.3 | 2328.7 | 2389.0 | 2454.0 | 2536.5 | 2572.5 | 2632.1 | 2595.4 | 2313.4 |
| 17.5° | 2146.0 | 2146.8 | 2161.3 | 2192.6 | 2266.0 | 2351.6 | 2447.9 | 2495.3 | 2570.9 | 2584.7 | 2279.8 |
| 20° | 2065.0 | 2064.2 | 2065.0 | 2081.8 | 2146.8 | 2248.4 | 2365.4 | 2415.0 | 2512.1 | 2571.7 | 2245.4 |
| 22.5° | 2037.5 | 2033.7 | 2016.1 | 2010.0 | 2051.2 | 2140.7 | 2280.5 | 2345.5 | 2459.4 | 2567.9 | 2220.1 |
| 25° | 2071.1 | 2068.8 | 2031.4 | 1996.2 | 2000.0 | 2055.8 | 2194.2 | 2273.6 | 2418.1 | 2581.6 | 2214.0 |
| 27.5° | 2179.6 | 2175.1 | 2117.7 | 2049.0 | 2005.4 | 2015.3 | 2130.0 | 2213.3 | 2385.2 | 2615.3 | 2222.4 |
| 30° | 2321.8 | 2322.6 | 2261.4 | 2178.1 | 2075.7 | 2019.1 | 2095.6 | 2174.3 | 2363.1 | 2665.7 | 2240.8 |
| 32.5° | 2480.0 | 2479.2 | 2435.7 | 2339.4 | 2208.7 | 2089.5 | 2110.9 | 2177.3 | 2366.1 | 2739.8 | 2275.9 |
| 35° | 2643.5 | 2635.1 | 2620.6 | 2535.8 | 2382.9 | 2212.5 | 2180.4 | 2229.3 | 2398.2 | 2837.7 | 2335.5 |
| 37.5° | 2832.3 | 2829.3 | 2843.8 | 2754.4 | 2598.4 | 2393.6 | 2302.7 | 2335.5 | 2479.2 | 2982.1 | 2431.8 |
| 40° | 3132.7 | 3115.8 | 3122.7 | 3001.2 | 2841.5 | 2637.4 | 2473.9 | 2482.3 | 2608.4 | 3173.2 | 2583.9 |
| 42.5° | 3705.1 | 3637.1 | 3509.4 | 3281.7 | 3109.0 | 2908.0 | 2697.8 | 2683.3 | 2791.0 | 3404.7 | 2784.2 |
| 45° | 4389.1 | 4311.1 | 3989.4 | 3591.2 | 3376.5 | 3198.4 | 2974.5 | 2935.5 | 3015.7 | 3680.6 | 3042.5 |
| 47.5° | 4960.0 | 4875.9 | 4449.5 | 3914.5 | 3648.5 | 3498.0 | 3280.9 | 3235.1 | 3284.7 | 4000.8 | 3352.8 |
| 50° | 5154.9 | 5108.2 | 4733.8 | 4183.5 | 3922.9 | 3834.2 | 3665.3 | 3588.9 | 3601.1 | 4346.3 | 3715.0 |
| 52.5° | 5065.4 | 5049.4 | 4798.7 | 4367.7 | 4176.6 | 4205.7 | 4086.4 | 4006.2 | 3992.4 | 4723.8 | 4115.5 |
| 55° | 4876.7 | 4869.0 | 4746.8 | 4470.1 | 4400.6 | 4545.8 | 4677.2 | 4607.7 | 4477.7 | 5125.1 | 4446.4 |
| 57.5° | 4606.9 | 4635.9 | 4723.8 | 4667.3 | 4675.7 | 4905.0 | 5225.9 | 5261.9 | 5067.7 | 5444.5 | 4691.7 |
| 60° | 3886.2 | 3964.2 | 4366.9 | 4879.0 | 5271.0 | 5502.6 | 5813.6 | 5880.9 | 5567.6 | 5663.1 | 4975.3 |
| 62.5° | 2872.8 | 2984.4 | 3558.3 | 4499.1 | 5598.9 | 6639.0 | 6595.5 | 6565.7 | 6044.5 | 5955.8 | 5491.1 |
| 65° | 1687.5 | 1818.2 | 2303.4 | 3515.5 | 5104.4 | 7369.7 | 8055.2 | 7642.5 | 6771.3 | 6564.1 | 6312.7 |
| 67.5° | 840.7 | 841.4 | 1060.8 | 1855.6 | 3772.3 | 6859.9 | 10185.9 | 9947.5 | 8316.6 | 7460.6 | 6636.7 |
| 70° | 646.6 | 664.1 | 784.9 | 1078.4 | 1907.6 | 5342.9 | 10674.3 | 11653.3 | 9869.5 | 7420.9 | 5631.0 |
| 72.5° | 548.0 | 559.4 | 698.5 | 938.5 | 1426.1 | 2933.2 | 9240.5 | 10300.6 | 9417.9 | 6269.9 | 4150.6 |
| 75° | 394.4 | 403.5 | 618.3 | 851.4 | 1313.0 | 1455.1 | 6338.7 | 7639.4 | 7066.3 | 4410.5 | 2284.3 |
| 77.5° | 97.8 | 97.1 | 215.5 | 690.9 | 1174.7 | 1212.1 | 3637.1 | 4898.8 | 4054.3 | 1805.9 | 586.9 |
| 80° | 43.6 | 42.0 | 48.9 | 145.2 | 1092.9 | 1144.1 | 1599.6 | 2473.9 | 1555.2 | 292.7 | 179.6 |
| 82.5° | 30.6 | 29.0 | 30.6 | 53.5 | 365.3 | 1061.5 | 966.8 | 1072.2 | 569.4 | 100.1 | 76.4 |
| 85° | 9.9 | 9.2 | 16.8 | 45.1 | 102.4 | 612.2 | 943.1 | 800.9 | 423.4 | 42.8 | 51.2 |
| 87.5° | 1.5 | 1.5 | 6.1 | 24.5 | 29.8 | 204.1 | 553.3 | 554.8 | 190.3 | 25.2 | 22.9 |
| 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° | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 | 2561.8 |
| 2.5° | 2522.8 | 2477.7 | 2414.3 | 2350.8 | 2293.5 | 2234.7 | 2187.3 | 2165.1 | 2155.2 | 2141.4 | 2111.6 |
| 5° | 2464.7 | 2382.9 | 2243.8 | 2107.0 | 1979.4 | 1857.1 | 1752.4 | 1692.8 | 1628.6 | 1625.6 | 1594.2 |
| 7.5° | 2371.5 | 2255.3 | 2036.0 | 1823.5 | 1628.6 | 1442.1 | 1281.6 | 1177.7 | 1106.6 | 1062.3 | 1031.7 |
| 10° | 2267.5 | 2118.5 | 1828.1 | 1529.3 | 1264.1 | 1014.9 | 808.6 | 674.1 | 592.3 | 551.0 | 527.3 |
| 12.5° | 2185.0 | 1997.7 | 1623.3 | 1247.3 | 914.8 | 629.0 | 437.2 | 339.3 | 295.8 | 279.0 | 271.3 |
| 15° | 2113.9 | 1886.9 | 1431.4 | 995.1 | 610.6 | 361.5 | 253.0 | 220.9 | 214.0 | 214.0 | 213.2 |
| 17.5° | 2042.1 | 1779.9 | 1245.0 | 747.4 | 384.4 | 236.9 | 199.5 | 194.9 | 195.6 | 197.9 | 197.9 |
| 20° | 1974.1 | 1678.3 | 1065.4 | 532.7 | 252.2 | 189.5 | 181.1 | 179.6 | 181.9 | 184.9 | 184.2 |
| 22.5° | 1919.0 | 1588.9 | 897.2 | 366.1 | 194.1 | 172.0 | 166.6 | 164.3 | 165.8 | 168.1 | 167.4 |
| 25° | 1880.1 | 1512.5 | 742.9 | 255.3 | 168.9 | 156.7 | 150.6 | 147.5 | 146.0 | 147.5 | 146.7 |
| 27.5° | 1856.4 | 1448.3 | 597.6 | 191.8 | 151.3 | 141.4 | 133.7 | 127.6 | 123.8 | 123.8 | 122.3 |
| 30° | 1841.1 | 1387.9 | 468.5 | 159.0 | 136.8 | 126.1 | 115.4 | 107.0 | 100.9 | 99.4 | 98.6 |
| 32.5° | 1840.3 | 1335.9 | 350.0 | 140.6 | 123.0 | 110.8 | 97.8 | 87.1 | 80.2 | 78.7 | 78.0 |
| 35° | 1859.4 | 1293.9 | 257.6 | 126.9 | 110.8 | 96.3 | 81.8 | 70.3 | 64.2 | 64.2 | 63.4 |
| 37.5° | 1909.1 | 1269.4 | 194.9 | 116.2 | 100.9 | 84.1 | 68.8 | 58.1 | 52.7 | 54.3 | 54.3 |
| 40° | 2001.6 | 1264.8 | 159.0 | 107.8 | 92.5 | 73.4 | 55.8 | 47.4 | 45.1 | 47.4 | 47.4 |
| 42.5° | 2143.0 | 1289.3 | 141.4 | 101.6 | 84.8 | 62.7 | 46.6 | 40.5 | 39.7 | 42.0 | 42.0 |
| 45° | 2327.1 | 1337.4 | 131.5 | 96.3 | 76.4 | 52.0 | 39.0 | 35.2 | 34.4 | 37.4 | 37.4 |
| 47.5° | 2550.3 | 1402.4 | 122.3 | 90.2 | 68.0 | 42.8 | 32.9 | 29.8 | 29.8 | 32.9 | 33.6 |
| 50° | 2814.7 | 1490.3 | 113.1 | 84.1 | 61.1 | 35.9 | 27.5 | 25.2 | 26.0 | 29.0 | 29.8 |
| 52.5° | 3118.9 | 1598.0 | 104.7 | 78.7 | 53.5 | 29.0 | 22.9 | 21.4 | 22.2 | 25.2 | 26.0 |
| 55° | 3381.0 | 1692.0 | 94.8 | 73.4 | 43.6 | 23.7 | 19.1 | 18.3 | 19.1 | 22.9 | 22.9 |
| 57.5° | 3609.6 | 1782.2 | 85.6 | 65.0 | 34.4 | 19.1 | 15.3 | 15.3 | 16.8 | 20.6 | 21.4 |
| 60° | 3913.0 | 1924.4 | 78.0 | 55.0 | 26.0 | 14.5 | 12.2 | 13.0 | 15.3 | 18.3 | 19.1 |
| 62.5° | 4450.2 | 2165.9 | 68.0 | 45.9 | 19.1 | 11.5 | 9.9 | 10.7 | 13.8 | 17.6 | 18.3 |
| 65° | 5122.8 | 2394.4 | 56.6 | 38.2 | 14.5 | 8.4 | 7.6 | 9.9 | 13.8 | 17.6 | 18.3 |
| 67.5° | 5054.0 | 2082.6 | 44.3 | 30.6 | 10.7 | 6.9 | 6.1 | 9.2 | 13.0 | 17.6 | 18.3 |
| 70° | 4098.7 | 1459.7 | 32.9 | 20.6 | 8.4 | 6.1 | 6.1 | 9.2 | 13.0 | 16.8 | 17.6 |
| 72.5° | 2843.0 | 812.4 | 25.2 | 13.8 | 7.6 | 6.1 | 5.3 | 8.4 | 12.2 | 16.8 | 17.6 |
| 75° | 1352.7 | 249.1 | 19.9 | 9.9 | 6.9 | 5.3 | 4.6 | 8.4 | 12.2 | 16.8 | 17.6 |
| 77.5° | 259.8 | 63.4 | 16.0 | 8.4 | 6.1 | 5.3 | 4.6 | 7.6 | 12.2 | 16.0 | 16.8 |
| 80° | 87.9 | 28.3 | 13.0 | 7.6 | 6.1 | 5.3 | 4.6 | 7.6 | 11.5 | 15.3 | 16.0 |
| 82.5° | 48.1 | 16.0 | 11.5 | 6.9 | 6.1 | 4.6 | 3.8 | 6.9 | 10.7 | 15.3 | 16.0 |
| 85° | 37.4 | 11.5 | 9.2 | 6.9 | 6.1 | 4.6 | 3.8 | 6.9 | 10.7 | 14.5 | 15.3 |
| 87.5° | 19.1 | 8.4 | 7.6 | 6.9 | 6.1 | 4.6 | 3.8 | 6.1 | 9.9 | 13.8 | 15.3 |
| 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)