

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: P195596

Luminaire Tested: **NVN-AF-02-LED-U-SL2-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195596
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-SL2-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10900 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

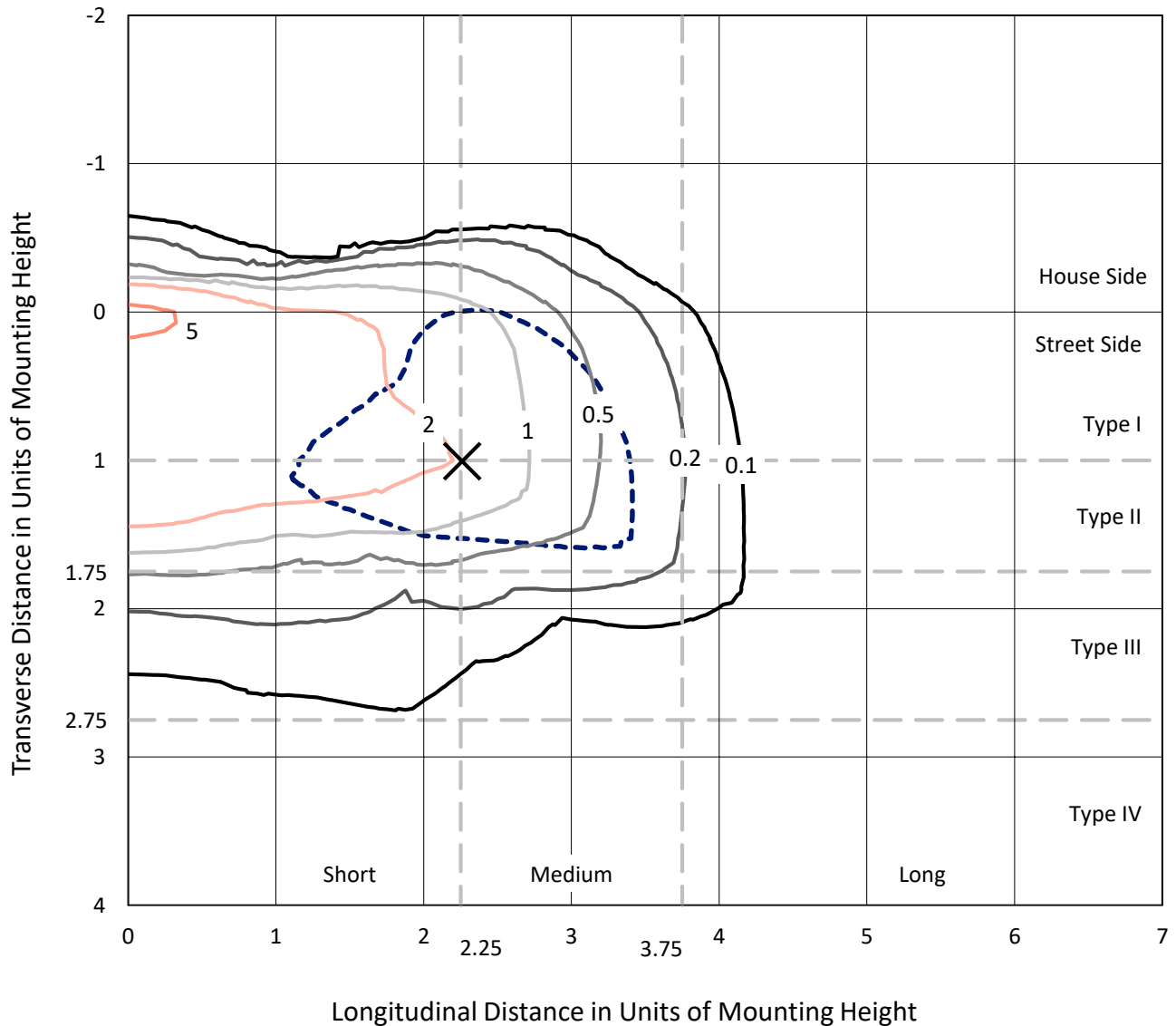


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Iso-Footcandle Lines of Horizontal Illumination

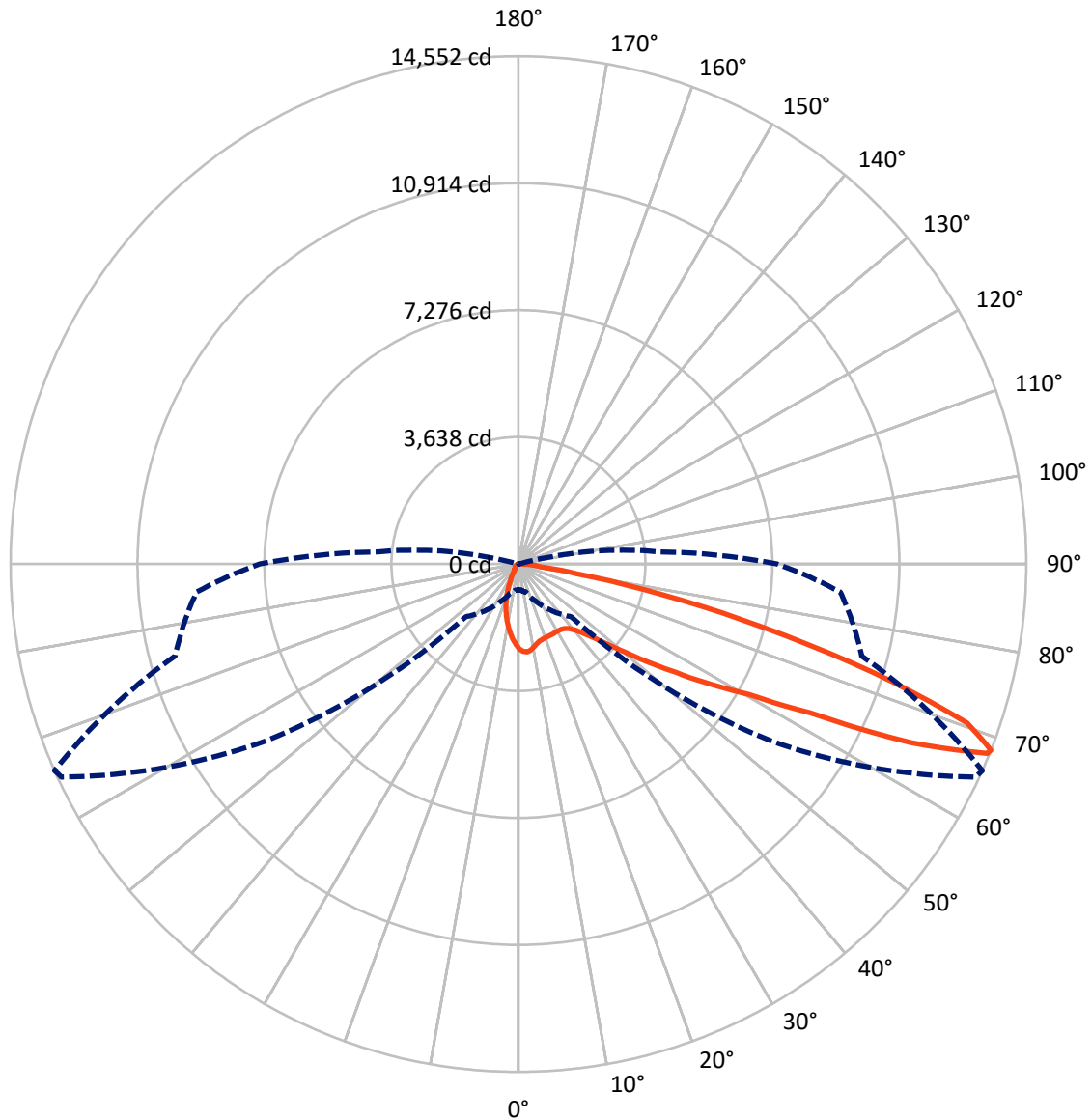
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.1 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1104.0 | 0.0 | 1104.0 |
| | % Fixture | 10.1 | 0.0 | 10.1 |
| Street Side | Lumens | 9795.9 | 0.0 | 9795.9 |
| | % Fixture | 89.9 | 0.0 | 89.9 |
| Total | Lumens | 10900.0 | 0.0 | 10900.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 199.1 | 1.8 |
| 10°-20° | 428.3 | 3.9 |
| 20°-30° | 620.7 | 5.7 |
| 30°-40° | 950.2 | 8.7 |
| 40°-50° | 1625.2 | 14.9 |
| 50°-60° | 2542.3 | 23.3 |
| 60°-70° | 2927.4 | 26.9 |
| 70°-80° | 1464.9 | 13.4 |
| 80°-90° | 141.9 | 1.3 |
| 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° | 10900.0 | 100.0 |
| 0°-180° | 10900.0 | 100.0 |



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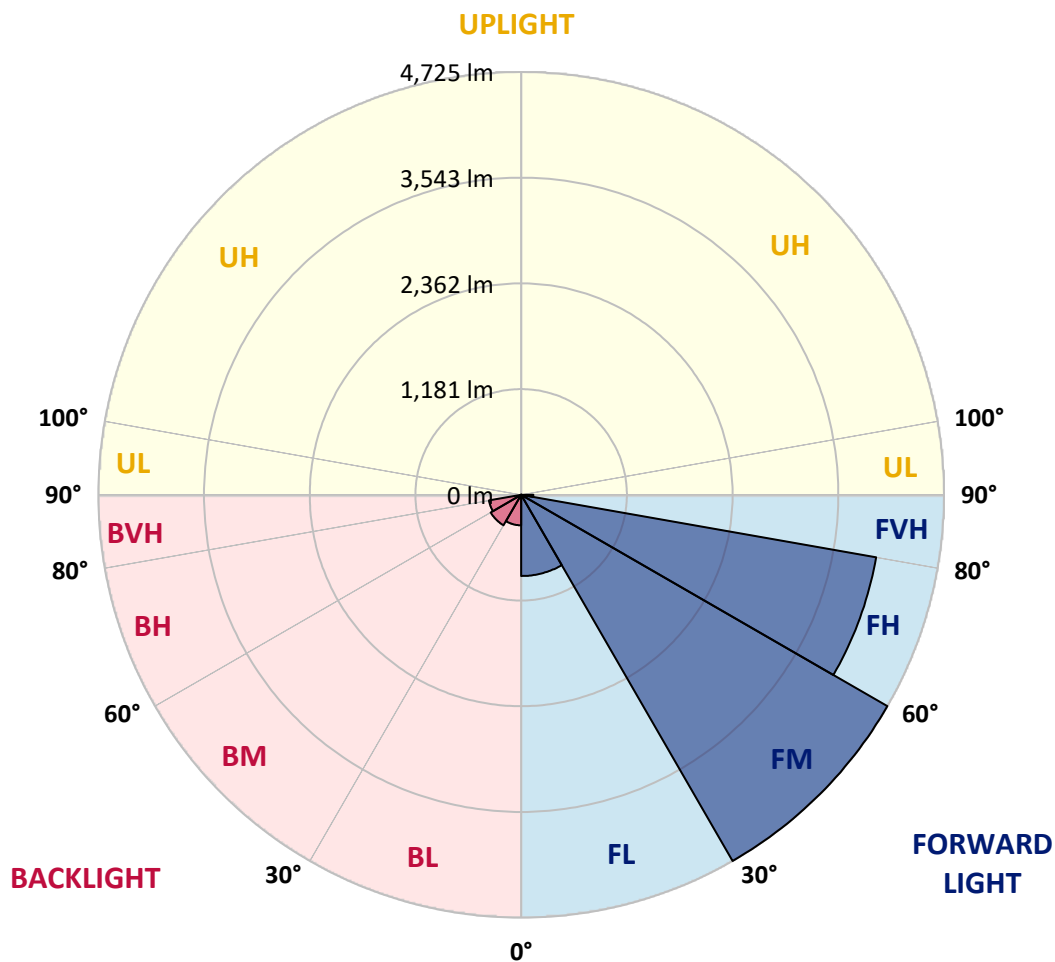
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 907.4 | 8.3 | | | |
| FM (30°-60°) | 4724.6 | 43.3 | | | |
| FH (60°-80°) | 4027.5 | 36.9 | | | G2/5000 |
| FVH (80°-90°) | 136.5 | 1.3 | | | G2/225 |
| BL (0°-30°) | 340.8 | 3.1 | B1/500 | | |
| BM (30°-60°) | 393.1 | 3.6 | B1/1000 | | |
| BH (60°-80°) | 364.8 | 3.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 5.4 | 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 II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0° | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 |
| 2.5° | 2554.2 | 2555.9 | 2555.1 | 2557.6 | 2555.9 | 2543.1 | 2529.4 | 2500.3 | 2502.9 | 2465.2 | 2423.3 |
| 5° | 2374.5 | 2389.1 | 2403.6 | 2418.1 | 2453.2 | 2484.0 | 2520.8 | 2529.4 | 2529.4 | 2496.9 | 2435.3 |
| 7.5° | 2191.4 | 2192.2 | 2208.5 | 2228.2 | 2275.3 | 2331.7 | 2417.3 | 2494.3 | 2496.0 | 2504.6 | 2437.0 |
| 10° | 2053.6 | 2057.9 | 2069.0 | 2090.4 | 2137.5 | 2193.1 | 2288.9 | 2409.6 | 2419.0 | 2482.3 | 2419.9 |
| 12.5° | 1946.7 | 1951.8 | 1963.8 | 1988.6 | 2031.4 | 2088.7 | 2189.7 | 2327.4 | 2340.3 | 2460.9 | 2414.7 |
| 15° | 1864.5 | 1871.4 | 1880.8 | 1905.6 | 1951.8 | 2012.6 | 2122.9 | 2272.7 | 2288.1 | 2452.4 | 2431.0 |
| 17.5° | 1830.3 | 1830.3 | 1829.4 | 1846.6 | 1892.8 | 1954.4 | 2069.9 | 2243.6 | 2263.3 | 2459.2 | 2458.4 |
| 20° | 1844.8 | 1842.3 | 1824.3 | 1820.0 | 1848.3 | 1909.9 | 2028.0 | 2224.8 | 2247.0 | 2472.1 | 2491.7 |
| 22.5° | 1921.9 | 1916.7 | 1876.5 | 1843.1 | 1834.6 | 1875.6 | 1999.7 | 2211.9 | 2238.5 | 2498.6 | 2536.2 |
| 25° | 2085.3 | 2069.9 | 2014.3 | 1939.0 | 1871.4 | 1867.1 | 1980.0 | 2205.1 | 2233.3 | 2529.4 | 2585.0 |
| 27.5° | 2297.5 | 2293.2 | 2204.2 | 2103.3 | 1973.2 | 1895.3 | 1974.1 | 2200.0 | 2228.2 | 2551.6 | 2624.4 |
| 30° | 2561.0 | 2562.8 | 2460.1 | 2328.3 | 2131.5 | 1974.9 | 1992.9 | 2197.4 | 2226.5 | 2553.3 | 2641.5 |
| 32.5° | 2833.2 | 2834.9 | 2749.3 | 2608.1 | 2348.0 | 2111.8 | 2045.9 | 2209.4 | 2235.9 | 2546.5 | 2640.6 |
| 35° | 3095.0 | 3097.6 | 3046.2 | 2932.4 | 2637.2 | 2301.8 | 2146.0 | 2250.4 | 2269.3 | 2550.8 | 2638.9 |
| 37.5° | 3426.1 | 3436.4 | 3373.1 | 3267.0 | 3000.0 | 2580.7 | 2309.5 | 2333.4 | 2348.8 | 2585.9 | 2651.7 |
| 40° | 3990.9 | 3977.2 | 3795.8 | 3616.1 | 3393.6 | 2920.4 | 2545.6 | 2476.3 | 2481.5 | 2676.6 | 2700.5 |
| 42.5° | 4648.9 | 4631.8 | 4321.2 | 4011.4 | 3798.4 | 3330.3 | 2847.7 | 2695.4 | 2694.5 | 2828.9 | 2806.6 |
| 45° | 5215.4 | 5205.1 | 4878.2 | 4464.9 | 4246.7 | 3783.0 | 3219.9 | 3011.1 | 3000.9 | 3092.4 | 3000.0 |
| 47.5° | 5617.5 | 5609.0 | 5361.7 | 4947.5 | 4765.3 | 4281.0 | 3684.6 | 3441.5 | 3420.1 | 3437.3 | 3314.0 |
| 50° | 5656.9 | 5647.5 | 5561.1 | 5294.9 | 5371.1 | 5011.7 | 4258.7 | 4005.4 | 3978.1 | 3951.5 | 3788.9 |
| 52.5° | 5289.0 | 5288.1 | 5333.4 | 5316.3 | 5795.5 | 5952.1 | 4962.9 | 4702.8 | 4670.3 | 4602.7 | 4441.0 |
| 55° | 4536.8 | 4532.5 | 4704.5 | 4954.4 | 5786.1 | 6922.4 | 6036.8 | 5532.8 | 5490.0 | 5354.8 | 5142.6 |
| 57.5° | 3314.9 | 3292.7 | 3652.0 | 4181.7 | 5379.7 | 7346.9 | 7742.2 | 6563.9 | 6492.9 | 6064.2 | 5737.3 |
| 60° | 1830.3 | 1838.9 | 2300.9 | 2928.1 | 4417.0 | 7263.0 | 9311.5 | 7766.1 | 7579.6 | 6676.0 | 6346.6 |
| 62.5° | 1026.0 | 1047.4 | 1391.3 | 1903.0 | 2816.0 | 6582.7 | 10153.5 | 9835.2 | 9385.9 | 7389.6 | 7116.7 |
| 65° | 776.1 | 788.9 | 961.8 | 1468.3 | 1775.5 | 4600.1 | 10287.8 | 12728.2 | 12340.6 | 8471.2 | 8342.9 |
| 67.5° | 730.7 | 741.0 | 825.7 | 1217.6 | 1617.2 | 2385.6 | 9276.4 | 14439.6 | 14488.4 | 9946.4 | 9292.7 |
| 68° | 735.9 | 748.7 | 833.4 | 1171.4 | 1614.7 | 2134.1 | 8845.2 | 14448.1 | 14551.7 | 10184.3 | 9260.2 |
| 70° | 676.0 | 679.4 | 881.3 | 1149.2 | 1565.0 | 1681.4 | 6398.8 | 13458.1 | 13643.8 | 10467.5 | 8406.2 |
| 72.5° | 258.4 | 259.3 | 395.3 | 995.2 | 1639.5 | 1690.8 | 3223.3 | 10636.9 | 10646.4 | 9109.6 | 6553.6 |
| 75° | 134.3 | 112.9 | 124.1 | 311.5 | 1565.9 | 1648.0 | 1617.2 | 7263.0 | 7217.7 | 6160.9 | 4015.7 |
| 77.5° | 92.4 | 78.7 | 83.0 | 107.8 | 651.2 | 1647.2 | 1168.0 | 4176.6 | 4167.2 | 2620.9 | 1145.8 |
| 80° | 52.2 | 45.4 | 49.6 | 90.7 | 228.5 | 1546.2 | 1088.4 | 1795.2 | 1691.7 | 460.4 | 185.7 |
| 82.5° | 26.5 | 22.2 | 26.5 | 76.2 | 142.0 | 972.9 | 1058.5 | 704.2 | 627.2 | 109.5 | 120.7 |
| 85° | 6.8 | 6.8 | 12.8 | 53.1 | 88.1 | 319.2 | 948.9 | 508.3 | 456.9 | 47.9 | 85.6 |
| 87.5° | 1.7 | 0.9 | 5.1 | 19.7 | 31.7 | 69.3 | 526.2 | 283.2 | 243.9 | 24.8 | 49.6 |
| 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° | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 | 2428.4 |
| 2.5° | 2406.2 | 2382.2 | 2335.1 | 2282.1 | 2244.4 | 2203.4 | 2179.4 | 2150.3 | 2128.1 | 2108.4 | 2122.9 |
| 5° | 2397.6 | 2351.4 | 2247.0 | 2129.8 | 2031.4 | 1937.3 | 1867.1 | 1800.3 | 1749.9 | 1718.2 | 1731.0 |
| 7.5° | 2375.4 | 2306.9 | 2137.5 | 1954.4 | 1793.5 | 1642.0 | 1518.8 | 1408.4 | 1322.9 | 1276.7 | 1291.2 |
| 10° | 2337.7 | 2241.0 | 2013.4 | 1759.3 | 1534.2 | 1320.3 | 1137.2 | 972.9 | 848.8 | 790.6 | 804.3 |
| 12.5° | 2310.3 | 2182.8 | 1885.1 | 1571.0 | 1275.0 | 971.2 | 728.2 | 539.9 | 443.2 | 385.1 | 390.2 |
| 15° | 2298.4 | 2137.5 | 1765.3 | 1372.5 | 991.7 | 623.8 | 393.6 | 284.9 | 251.6 | 239.6 | 240.4 |
| 17.5° | 2300.1 | 2101.5 | 1651.5 | 1166.3 | 705.9 | 358.5 | 241.3 | 217.3 | 212.2 | 209.6 | 209.6 |
| 20° | 2304.3 | 2065.6 | 1533.4 | 951.5 | 451.8 | 231.0 | 201.1 | 193.4 | 190.8 | 187.4 | 188.2 |
| 22.5° | 2317.2 | 2038.2 | 1414.4 | 735.9 | 278.1 | 188.2 | 178.0 | 171.1 | 166.9 | 161.7 | 162.6 |
| 25° | 2336.9 | 2017.7 | 1297.2 | 529.7 | 196.0 | 164.3 | 154.9 | 145.5 | 137.8 | 131.8 | 132.6 |
| 27.5° | 2348.8 | 1988.6 | 1172.3 | 361.1 | 162.6 | 143.8 | 130.9 | 118.1 | 109.5 | 104.4 | 103.5 |
| 30° | 2340.3 | 1941.5 | 1030.2 | 237.0 | 143.8 | 124.1 | 108.7 | 94.1 | 85.6 | 81.3 | 81.3 |
| 32.5° | 2317.2 | 1880.8 | 873.6 | 172.8 | 127.5 | 107.0 | 88.1 | 75.3 | 69.3 | 66.7 | 67.6 |
| 35° | 2290.7 | 1817.5 | 706.8 | 146.3 | 114.7 | 90.7 | 71.9 | 61.6 | 59.0 | 58.2 | 58.2 |
| 37.5° | 2276.1 | 1762.7 | 546.8 | 132.6 | 102.7 | 75.3 | 59.0 | 53.1 | 50.5 | 50.5 | 50.5 |
| 40° | 2292.4 | 1720.8 | 404.7 | 122.4 | 90.7 | 62.5 | 49.6 | 45.4 | 44.5 | 44.5 | 44.5 |
| 42.5° | 2361.7 | 1706.2 | 296.1 | 113.8 | 78.7 | 52.2 | 42.8 | 39.4 | 38.5 | 39.4 | 39.4 |
| 45° | 2496.9 | 1737.9 | 224.2 | 105.2 | 67.6 | 42.8 | 36.8 | 34.2 | 34.2 | 35.1 | 35.1 |
| 47.5° | 2726.2 | 1819.2 | 184.0 | 96.7 | 56.5 | 35.9 | 31.7 | 29.9 | 29.9 | 30.8 | 30.8 |
| 50° | 3082.2 | 1969.8 | 165.1 | 87.3 | 47.1 | 30.8 | 26.5 | 25.7 | 25.7 | 26.5 | 27.4 |
| 52.5° | 3622.9 | 2256.4 | 155.7 | 77.9 | 38.5 | 25.7 | 22.2 | 21.4 | 22.2 | 23.1 | 23.1 |
| 55° | 4224.5 | 2623.5 | 144.6 | 68.5 | 32.5 | 21.4 | 18.0 | 18.0 | 18.8 | 20.5 | 20.5 |
| 57.5° | 4785.0 | 2977.8 | 134.3 | 56.5 | 28.2 | 17.1 | 14.5 | 14.5 | 16.3 | 18.0 | 18.0 |
| 60° | 5377.1 | 3325.2 | 120.7 | 45.4 | 24.0 | 13.7 | 12.0 | 12.0 | 14.5 | 16.3 | 17.1 |
| 62.5° | 6108.7 | 3729.0 | 102.7 | 35.9 | 18.8 | 10.3 | 8.6 | 11.1 | 13.7 | 16.3 | 16.3 |
| 65° | 7166.3 | 4231.3 | 80.4 | 28.2 | 14.5 | 7.7 | 6.8 | 10.3 | 12.8 | 15.4 | 16.3 |
| 67.5° | 7550.5 | 4167.2 | 60.8 | 23.1 | 11.1 | 6.0 | 6.0 | 9.4 | 12.8 | 15.4 | 15.4 |
| 68° | 7410.2 | 4026.8 | 58.2 | 22.2 | 10.3 | 6.0 | 6.0 | 9.4 | 12.8 | 15.4 | 15.4 |
| 70° | 6457.0 | 3291.8 | 47.9 | 17.1 | 8.6 | 5.1 | 5.1 | 8.6 | 12.8 | 14.5 | 15.4 |
| 72.5° | 4834.6 | 2187.1 | 41.1 | 11.1 | 7.7 | 5.1 | 4.3 | 8.6 | 12.0 | 14.5 | 14.5 |
| 75° | 2773.3 | 907.9 | 35.1 | 8.6 | 6.8 | 4.3 | 4.3 | 7.7 | 12.0 | 14.5 | 14.5 |
| 77.5° | 783.8 | 212.2 | 28.2 | 6.8 | 6.0 | 4.3 | 3.4 | 7.7 | 11.1 | 13.7 | 13.7 |
| 80° | 143.8 | 63.3 | 22.2 | 6.0 | 5.1 | 4.3 | 3.4 | 7.7 | 11.1 | 13.7 | 13.7 |
| 82.5° | 95.0 | 29.9 | 16.3 | 6.0 | 5.1 | 4.3 | 3.4 | 6.8 | 10.3 | 12.8 | 12.8 |
| 85° | 71.0 | 21.4 | 10.3 | 6.0 | 5.1 | 4.3 | 3.4 | 6.8 | 10.3 | 12.8 | 12.8 |
| 87.5° | 39.4 | 9.4 | 7.7 | 6.8 | 6.0 | 4.3 | 3.4 | 6.0 | 9.4 | 12.0 | 12.0 |
| 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)