

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: P509881

Luminaire Tested: **VERD-M-CA3-160-727-U-T4**

Issue Date: 4/6/2021

Test Information

Test Method: LM-79-08
Report Number: P509881
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-181-6)
Test Lab: INNOVATION CENTER
Issue Date: 4/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VERD-M-CA3-160-727-U-T4
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1000mA LEDS AND TYPE IV OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19715 lumens
Efficiency: N/A
Efficacy: 121.2 lumens/watt
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

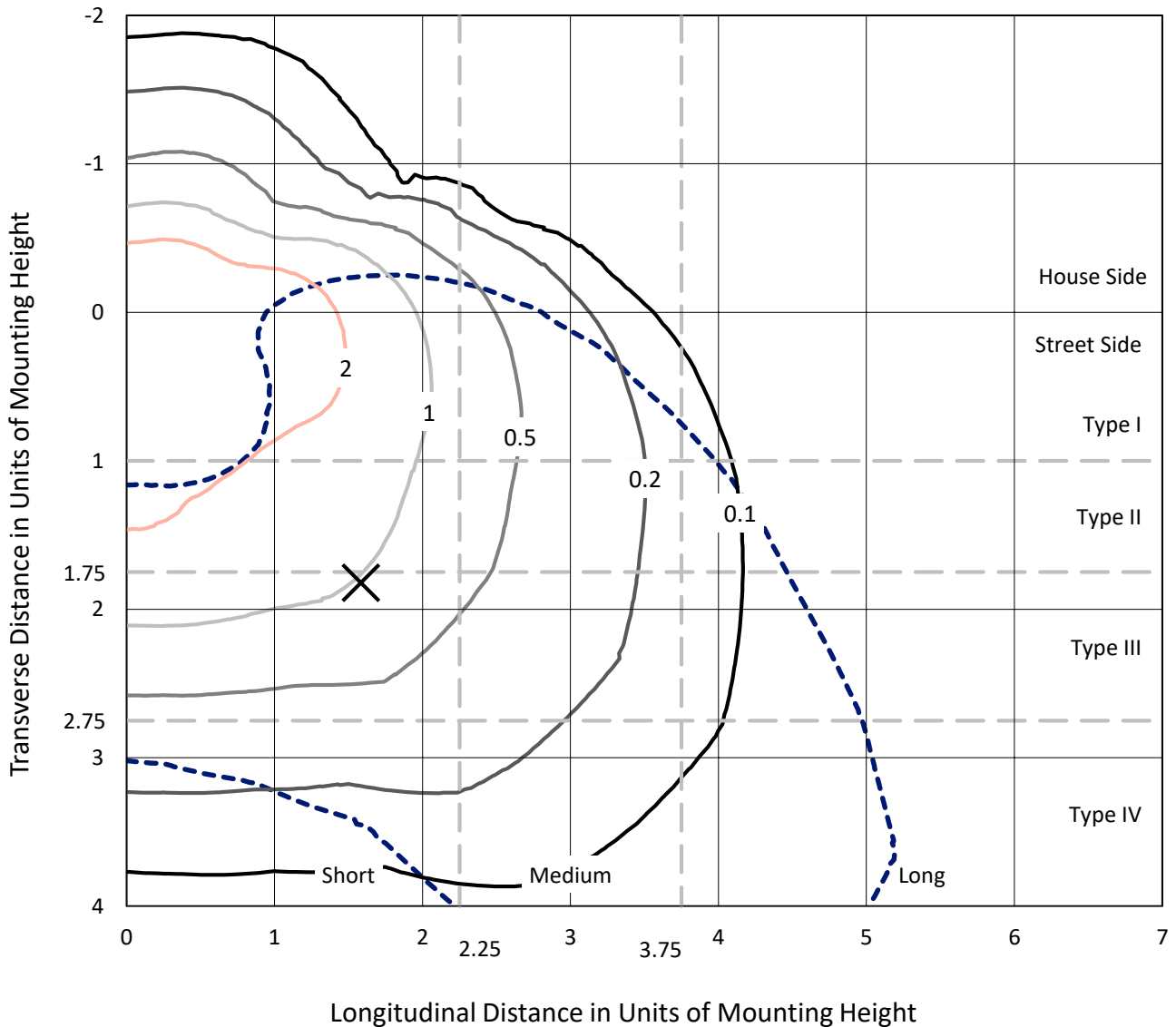
Input Watts (W): 162.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

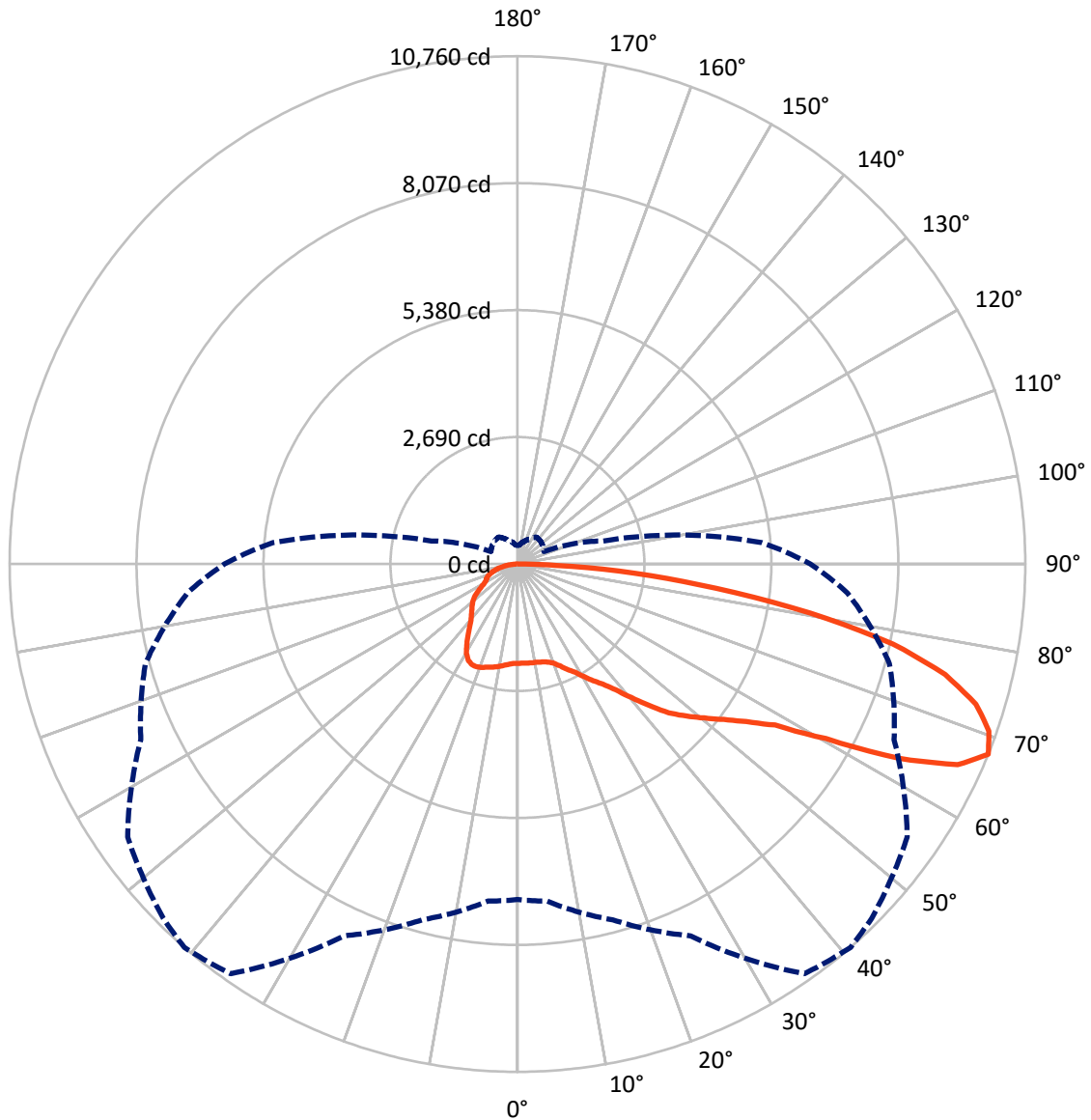
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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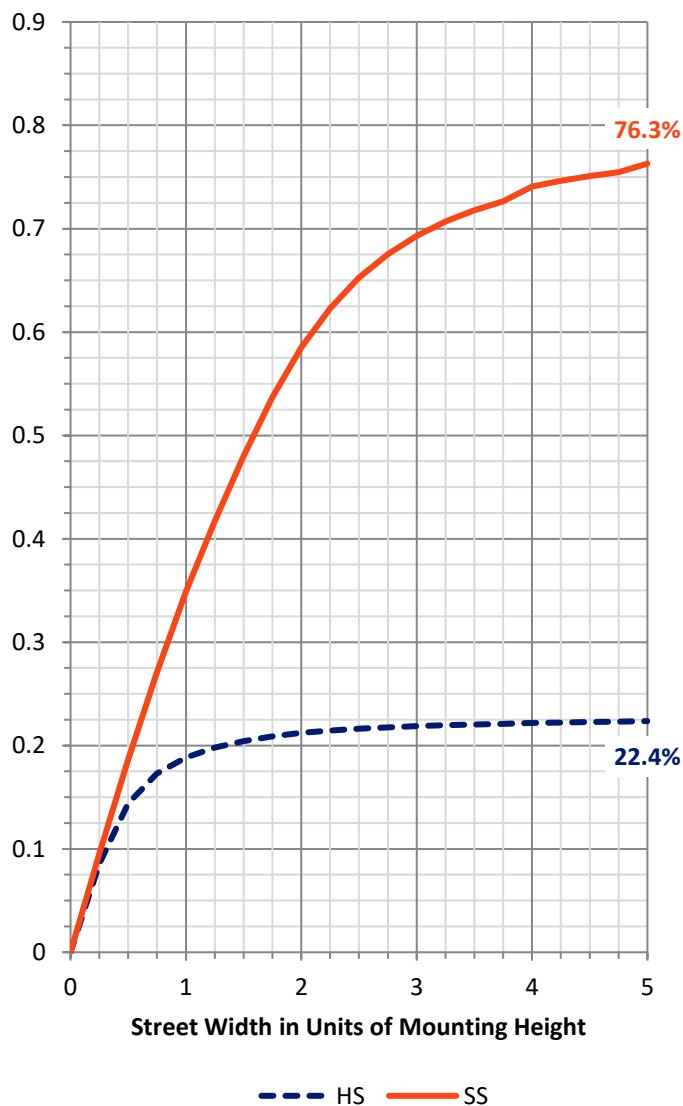
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4461.4 | 0.0 | 4461.4 |
| | % Fixture | 22.6 | 0.0 | 22.6 |
| Street Side | Lumens | 15253.6 | 0.0 | 15253.6 |
| | % Fixture | 77.4 | 0.0 | 77.4 |
| Total | Lumens | 19715.0 | 0.0 | 19715.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 203.4 | 1.0 |
| 10°-20° | 630.8 | 3.2 |
| 20°-30° | 1128.1 | 5.7 |
| 30°-40° | 1768.9 | 9.0 |
| 40°-50° | 2743.0 | 13.9 |
| 50°-60° | 3867.0 | 19.6 |
| 60°-70° | 4929.4 | 25.0 |
| 70°-80° | 3688.9 | 18.7 |
| 80°-90° | 755.5 | 3.8 |
| 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° | 19715.0 | 100.0 |
| 0°-180° | 19715.0 | 100.0 |

Coefficient of Utilization



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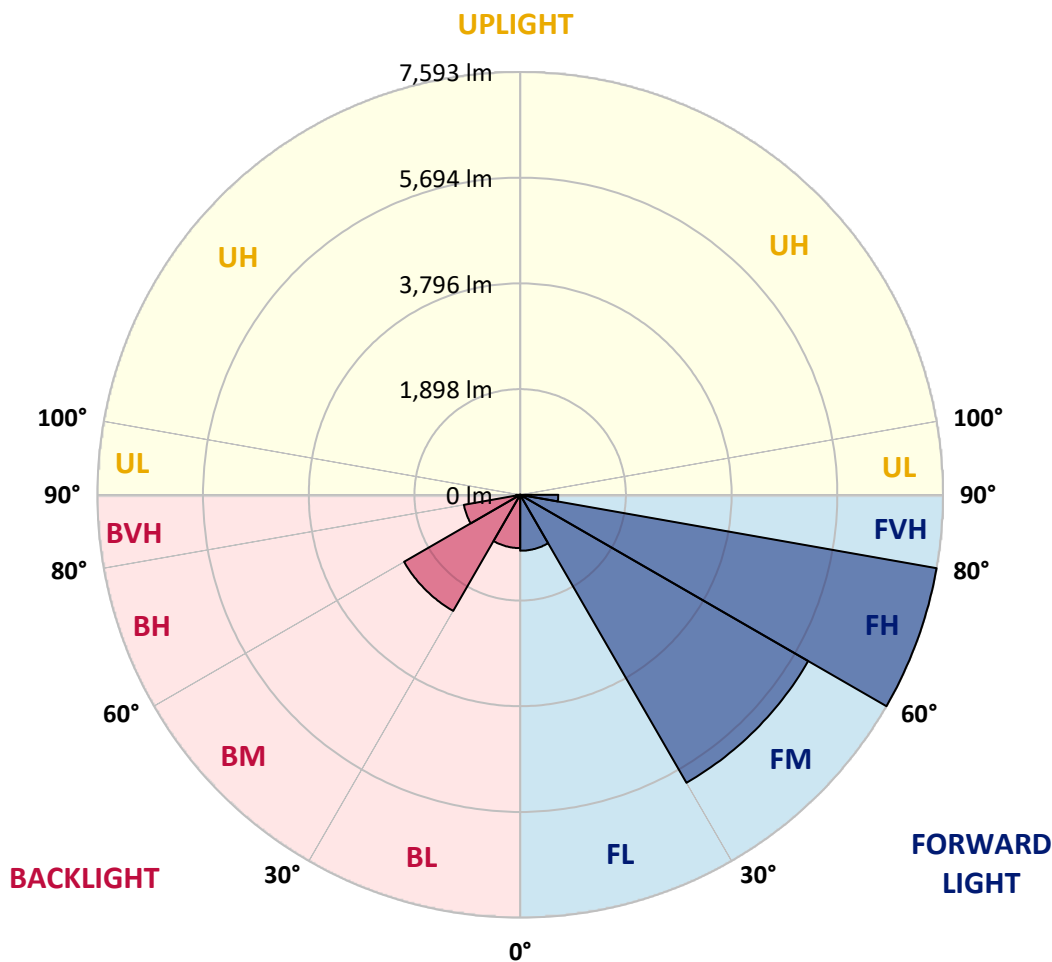
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1004.5 | 5.1 | | | |
| FM | (30°-60°) | 5971.5 | 30.3 | | | |
| FH | (60°-80°) | 7592.6 | 38.5 | | | G4/12000 |
| FVH | (80°-90°) | 684.9 | 3.5 | | | G4/750 |
| BL | (0°-30°) | 957.8 | 4.9 | B2/1000 | | |
| BM | (30°-60°) | 2407.3 | 12.2 | B2/2500 | | |
| BH | (60°-80°) | 1025.7 | 5.2 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 70.6 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 41° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 |
| 2.5° | 2079.0 | 2103.1 | 2099.6 | 2095.1 | 2102.2 | 2103.1 | 2082.6 | 2090.6 | 2095.1 | 2102.2 | 2113.8 |
| 5° | 2084.4 | 2108.5 | 2106.7 | 2098.7 | 2104.0 | 2106.7 | 2088.0 | 2102.2 | 2102.2 | 2104.9 | 2118.3 |
| 7.5° | 2072.8 | 2096.0 | 2096.0 | 2093.3 | 2104.9 | 2115.6 | 2098.7 | 2111.2 | 2118.3 | 2125.4 | 2134.4 |
| 10° | 2062.1 | 2081.7 | 2088.9 | 2087.1 | 2113.8 | 2116.5 | 2104.9 | 2135.3 | 2146.9 | 2154.0 | 2164.7 |
| 12.5° | 2050.5 | 2074.6 | 2084.4 | 2094.2 | 2122.8 | 2132.6 | 2126.3 | 2157.6 | 2181.7 | 2194.1 | 2205.7 |
| 15° | 2045.1 | 2071.9 | 2088.0 | 2102.2 | 2133.5 | 2151.3 | 2151.3 | 2198.6 | 2227.2 | 2243.2 | 2263.7 |
| 17.5° | 2082.6 | 2110.3 | 2122.8 | 2134.4 | 2162.9 | 2187.0 | 2185.2 | 2240.5 | 2282.5 | 2307.5 | 2344.9 |
| 20° | 2175.4 | 2208.4 | 2215.6 | 2220.0 | 2237.9 | 2246.8 | 2244.1 | 2303.9 | 2361.9 | 2409.2 | 2451.1 |
| 22.5° | 2336.9 | 2356.5 | 2360.1 | 2342.3 | 2346.7 | 2353.9 | 2349.4 | 2382.4 | 2448.4 | 2503.8 | 2578.7 |
| 25° | 2469.0 | 2500.2 | 2491.3 | 2465.4 | 2469.0 | 2478.8 | 2465.4 | 2516.3 | 2563.6 | 2635.8 | 2711.7 |
| 27.5° | 2608.2 | 2631.4 | 2621.6 | 2605.5 | 2601.9 | 2594.8 | 2592.1 | 2657.2 | 2726.8 | 2784.0 | 2896.4 |
| 30° | 2777.7 | 2790.2 | 2761.6 | 2754.5 | 2760.8 | 2765.2 | 2748.3 | 2831.2 | 2894.6 | 2976.7 | 3128.4 |
| 32.5° | 3063.2 | 3074.8 | 3033.8 | 2924.0 | 2926.7 | 2947.2 | 2933.0 | 3037.4 | 3156.9 | 3256.9 | 3411.2 |
| 35° | 3427.3 | 3427.3 | 3395.2 | 3240.8 | 3123.9 | 3124.8 | 3128.4 | 3275.6 | 3497.8 | 3721.7 | 3880.6 |
| 37.5° | 3795.8 | 3808.3 | 3747.6 | 3606.6 | 3458.5 | 3380.0 | 3314.0 | 3503.1 | 3794.0 | 4293.7 | 4530.2 |
| 40° | 4179.5 | 4199.1 | 4108.1 | 3978.7 | 3808.3 | 3719.1 | 3642.3 | 3757.4 | 4150.0 | 4860.3 | 5047.7 |
| 42.5° | 4515.0 | 4542.7 | 4449.0 | 4312.4 | 4193.8 | 4092.9 | 3976.9 | 4023.3 | 4541.8 | 5398.4 | 5504.5 |
| 45° | 4827.3 | 4842.5 | 4763.1 | 4650.6 | 4552.5 | 4497.2 | 4416.0 | 4469.5 | 4989.7 | 5924.8 | 5905.2 |
| 47.5° | 5057.5 | 5079.8 | 5007.5 | 4946.9 | 4846.0 | 4813.0 | 4812.1 | 4959.4 | 5493.8 | 6344.2 | 6253.2 |
| 50° | 5431.4 | 5414.4 | 5252.0 | 5178.0 | 5116.4 | 5127.1 | 5153.0 | 5407.3 | 6086.3 | 6748.4 | 6545.9 |
| 52.5° | 6058.7 | 6027.4 | 5666.9 | 5512.6 | 5436.7 | 5471.5 | 5484.9 | 5813.3 | 6684.2 | 7097.3 | 6787.7 |
| 55° | 6869.8 | 6769.8 | 6507.5 | 6093.5 | 5855.2 | 5888.2 | 5873.1 | 6249.6 | 7162.4 | 7430.1 | 6967.0 |
| 57.5° | 7406.0 | 7499.7 | 7373.9 | 7137.4 | 6545.9 | 6437.9 | 6402.2 | 6681.5 | 7605.0 | 7748.7 | 7152.6 |
| 60° | 7871.8 | 8027.1 | 8226.9 | 8075.2 | 7915.5 | 7511.3 | 7178.5 | 7172.2 | 7994.9 | 7961.0 | 7227.6 |
| 62.5° | 8363.5 | 8445.5 | 8753.4 | 8847.1 | 9143.3 | 9069.3 | 8623.1 | 7793.3 | 8384.9 | 8116.3 | 7271.3 |
| 65° | 7866.4 | 7976.2 | 8536.6 | 9047.8 | 10144.5 | 10251.5 | 10106.1 | 8947.9 | 8655.2 | 8195.7 | 7208.8 |
| 67.5° | 7109.8 | 7170.5 | 7804.9 | 8691.8 | 10597.7 | 10760.1 | 10613.8 | 10081.1 | 8805.1 | 8160.9 | 7016.1 |
| 70° | 6139.9 | 6211.2 | 6817.1 | 8027.1 | 10574.5 | 10596.0 | 10538.9 | 10185.5 | 8745.4 | 7997.6 | 6530.7 |
| 72.5° | 4978.1 | 5068.2 | 5600.9 | 6857.3 | 10067.7 | 10160.5 | 10070.4 | 9978.5 | 8577.6 | 7540.8 | 5694.6 |
| 75° | 3766.4 | 3885.9 | 4361.5 | 5467.1 | 8897.0 | 9364.6 | 9376.2 | 9660.0 | 7926.2 | 6464.7 | 4133.1 |
| 77.5° | 2568.9 | 2683.1 | 3133.7 | 4165.2 | 7385.5 | 8132.3 | 8326.9 | 8637.4 | 6622.6 | 4777.3 | 2254.8 |
| 80° | 1446.4 | 1435.7 | 2007.7 | 2975.8 | 5633.0 | 6288.9 | 6533.4 | 6520.9 | 4650.6 | 2452.9 | 459.5 |
| 82.5° | 668.3 | 670.1 | 1027.0 | 1899.7 | 3813.7 | 4246.4 | 4345.5 | 3782.4 | 1632.0 | 415.8 | 146.3 |
| 85° | 332.8 | 336.4 | 494.3 | 953.0 | 2153.1 | 2487.7 | 2364.6 | 1574.0 | 349.8 | 121.4 | 87.4 |
| 87.5° | 132.1 | 126.7 | 195.4 | 391.7 | 777.2 | 823.6 | 719.2 | 315.0 | 63.4 | 42.8 | 29.4 |
| 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° | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 | 2104.9 |
| 2.5° | 2111.2 | 2112.9 | 2121.0 | 2104.9 | 2109.4 | 2105.8 | 2103.1 | 2117.4 | 2116.5 | 2119.2 | 2114.7 |
| 5° | 2117.4 | 2121.9 | 2129.9 | 2122.8 | 2129.9 | 2126.3 | 2129.0 | 2148.6 | 2151.3 | 2150.4 | 2150.4 |
| 7.5° | 2134.4 | 2138.8 | 2154.0 | 2145.1 | 2161.1 | 2156.7 | 2157.6 | 2176.3 | 2179.9 | 2174.5 | 2172.7 |
| 10° | 2170.1 | 2173.6 | 2195.0 | 2193.3 | 2199.5 | 2195.9 | 2192.4 | 2200.4 | 2198.6 | 2190.6 | 2187.0 |
| 12.5° | 2211.1 | 2220.9 | 2245.0 | 2245.9 | 2253.9 | 2236.1 | 2217.3 | 2214.7 | 2209.3 | 2196.8 | 2194.1 |
| 15° | 2272.7 | 2284.3 | 2320.9 | 2311.9 | 2306.6 | 2268.2 | 2237.0 | 2212.0 | 2190.6 | 2179.9 | 2170.1 |
| 17.5° | 2361.0 | 2380.6 | 2431.5 | 2403.8 | 2364.6 | 2308.4 | 2253.9 | 2199.5 | 2154.0 | 2115.6 | 2100.5 |
| 20° | 2473.4 | 2495.7 | 2538.6 | 2502.0 | 2442.2 | 2358.3 | 2270.0 | 2171.8 | 2072.8 | 1988.0 | 1975.5 |
| 22.5° | 2607.3 | 2643.0 | 2674.2 | 2590.3 | 2502.0 | 2395.8 | 2270.0 | 2129.0 | 1964.8 | 1838.1 | 1806.9 |
| 25° | 2763.4 | 2791.1 | 2781.3 | 2663.5 | 2535.9 | 2402.0 | 2245.0 | 2053.2 | 1821.2 | 1673.9 | 1649.0 |
| 27.5° | 2933.0 | 2945.5 | 2869.6 | 2698.3 | 2539.5 | 2365.5 | 2174.5 | 1918.4 | 1653.4 | 1537.4 | 1513.3 |
| 30° | 3141.8 | 3104.3 | 2959.7 | 2719.7 | 2503.8 | 2284.3 | 2048.7 | 1721.2 | 1516.9 | 1415.2 | 1387.5 |
| 32.5° | 3366.6 | 3297.9 | 3024.0 | 2704.5 | 2425.2 | 2148.6 | 1854.2 | 1582.0 | 1425.9 | 1301.9 | 1278.7 |
| 35° | 3794.9 | 3599.5 | 3117.7 | 2659.0 | 2288.7 | 1967.5 | 1665.9 | 1475.0 | 1329.5 | 1196.6 | 1175.1 |
| 37.5° | 4373.1 | 4033.2 | 3248.8 | 2595.7 | 2127.2 | 1791.7 | 1525.8 | 1360.7 | 1234.9 | 1097.5 | 1063.6 |
| 40° | 4822.8 | 4471.3 | 3459.4 | 2527.9 | 1978.2 | 1624.9 | 1424.1 | 1301.0 | 1172.5 | 1026.1 | 996.7 |
| 42.5° | 5251.1 | 4871.9 | 3718.2 | 2452.0 | 1824.7 | 1508.9 | 1379.5 | 1287.6 | 1155.5 | 1006.5 | 978.8 |
| 45° | 5629.5 | 5195.8 | 3941.3 | 2376.2 | 1651.6 | 1401.8 | 1346.5 | 1261.7 | 1131.4 | 981.5 | 954.8 |
| 47.5° | 5935.5 | 5474.2 | 4134.9 | 2294.1 | 1494.6 | 1320.6 | 1303.6 | 1214.4 | 1085.0 | 930.7 | 898.5 |
| 50° | 6212.1 | 5709.8 | 4268.7 | 2206.6 | 1341.1 | 1254.6 | 1233.1 | 1127.9 | 993.1 | 856.6 | 836.1 |
| 52.5° | 6382.6 | 5869.5 | 4349.0 | 2220.9 | 1195.7 | 1180.5 | 1145.7 | 1037.7 | 912.8 | 795.9 | 769.2 |
| 55° | 6561.0 | 6020.3 | 4348.1 | 2140.6 | 1074.3 | 1069.0 | 1036.0 | 953.0 | 854.8 | 756.7 | 740.6 |
| 57.5° | 6634.2 | 6033.7 | 4266.9 | 1763.2 | 967.2 | 933.3 | 926.2 | 882.5 | 796.8 | 704.0 | 686.2 |
| 60° | 6683.3 | 5974.8 | 4113.5 | 1203.7 | 832.5 | 808.4 | 843.2 | 813.8 | 736.1 | 638.9 | 621.0 |
| 62.5° | 6635.1 | 5910.5 | 3711.0 | 869.1 | 729.9 | 743.3 | 776.3 | 744.2 | 663.0 | 574.6 | 559.5 |
| 65° | 6520.0 | 5665.2 | 2930.3 | 677.2 | 684.4 | 713.8 | 739.7 | 686.2 | 537.2 | 449.7 | 440.8 |
| 67.5° | 6205.9 | 5198.5 | 1885.4 | 621.0 | 658.5 | 688.8 | 697.8 | 580.9 | 486.3 | 402.4 | 392.6 |
| 70° | 5544.7 | 4173.2 | 726.3 | 585.3 | 632.6 | 646.0 | 609.4 | 532.7 | 447.0 | 374.8 | 365.8 |
| 72.5° | 4337.4 | 2740.2 | 419.4 | 535.4 | 577.3 | 564.8 | 565.7 | 478.3 | 403.3 | 334.6 | 327.5 |
| 75° | 2695.6 | 992.2 | 373.0 | 476.5 | 489.0 | 512.2 | 482.7 | 414.9 | 347.1 | 306.1 | 297.1 |
| 77.5° | 891.4 | 282.0 | 345.3 | 410.5 | 438.1 | 421.2 | 404.2 | 354.2 | 297.1 | 265.0 | 260.5 |
| 80° | 215.9 | 211.5 | 309.6 | 321.2 | 343.5 | 315.0 | 313.2 | 294.5 | 250.7 | 232.0 | 227.5 |
| 82.5° | 133.0 | 151.7 | 246.3 | 199.9 | 229.3 | 232.0 | 264.1 | 242.7 | 182.9 | 190.1 | 183.8 |
| 85° | 82.1 | 116.9 | 129.4 | 96.4 | 97.3 | 130.3 | 157.9 | 146.3 | 109.8 | 103.5 | 102.6 |
| 87.5° | 27.7 | 24.1 | 27.7 | 20.5 | 27.7 | 47.3 | 71.4 | 67.8 | 45.5 | 31.2 | 29.4 |
| 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)