

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: P198815

Luminaire Tested: **XNV2-AF-02-LED-U-5NQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198815
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: XNV2-AF-02-LED-U-5NQ-7050
Description: XNV2 ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12397 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

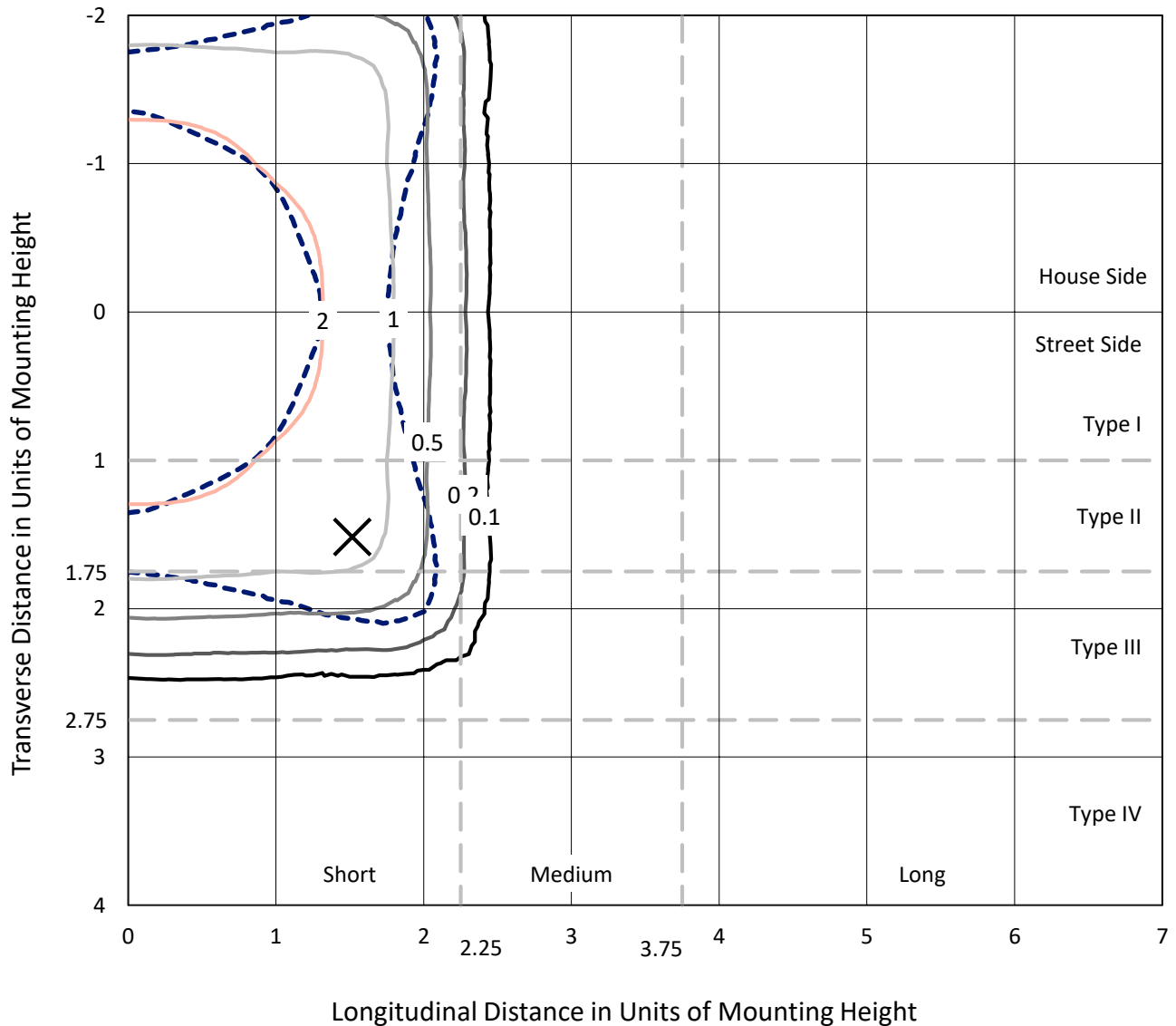
Input Watts (W): 111
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

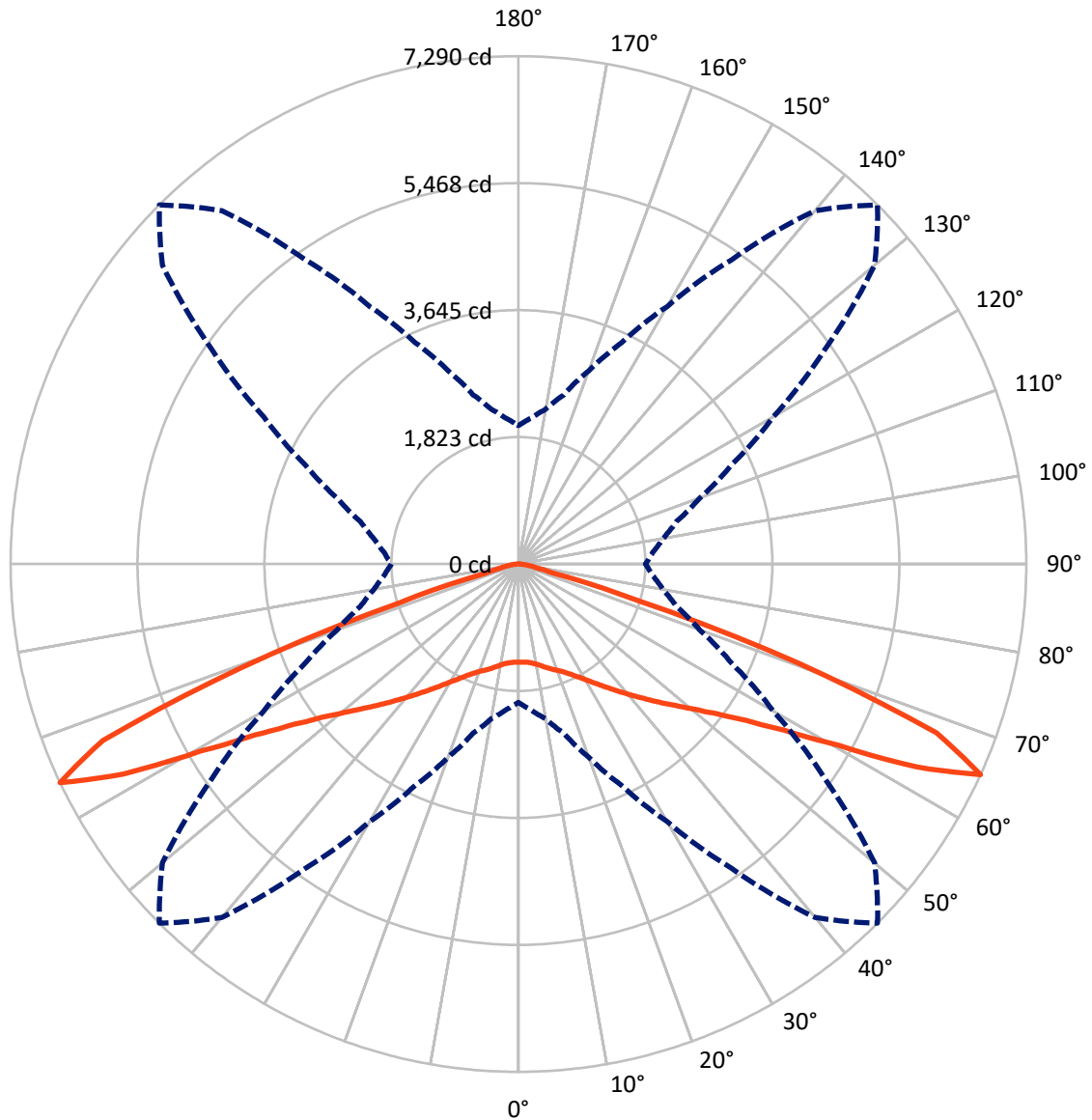
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 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 | 6198.5 | 0.0 | 6198.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 6198.5 | 0.0 | 6198.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 12397.0 | 0.0 | 12397.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 137.3 | 1.1 |
| 10°-20° | 440.1 | 3.6 |
| 20°-30° | 821.0 | 6.6 |
| 30°-40° | 1384.4 | 11.2 |
| 40°-50° | 2248.6 | 18.1 |
| 50°-60° | 3523.2 | 28.4 |
| 60°-70° | 3325.8 | 26.8 |
| 70°-80° | 448.2 | 3.6 |
| 80°-90° | 68.3 | 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° | 12397.0 | 100.0 |
| 0°-180° | 12397.0 | 100.0 |

Coefficient of Utilization



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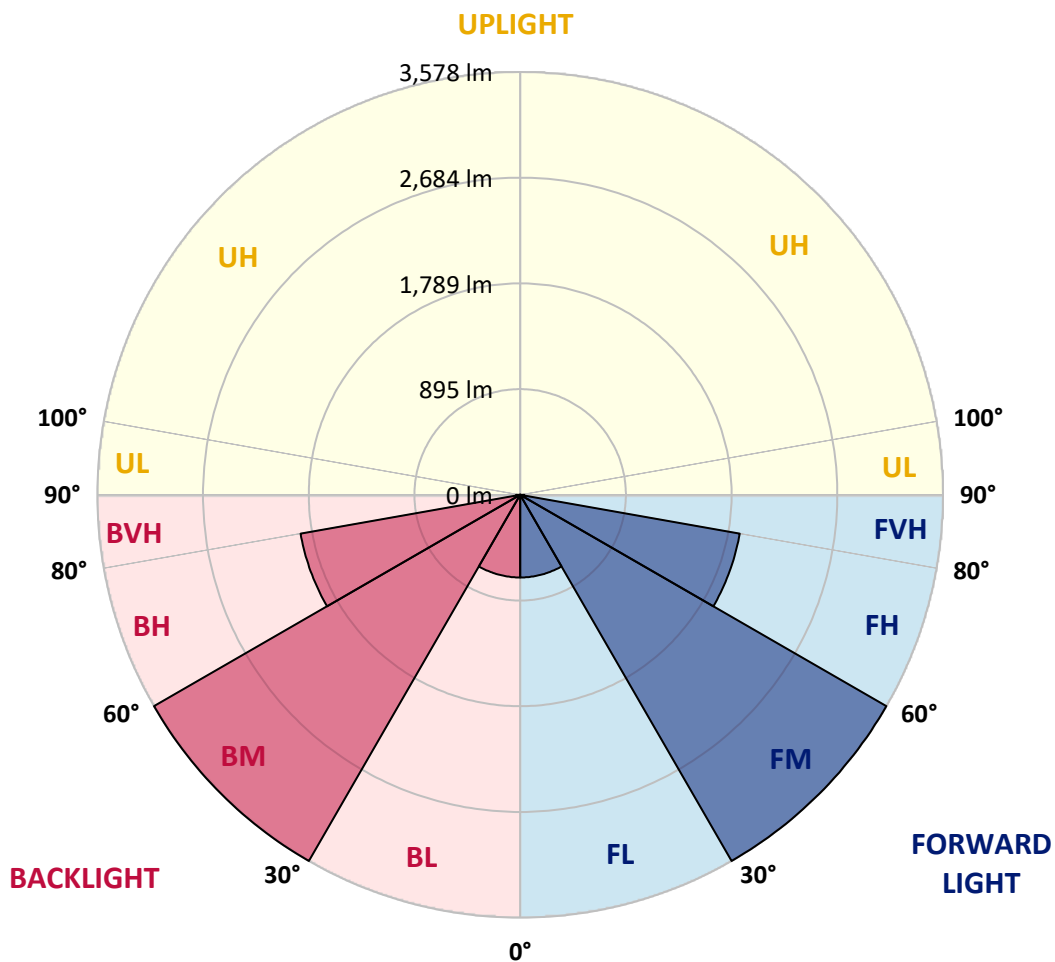
CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 699.2 | 5.6 | | | |
| FM | (30°-60°) | 3578.1 | 28.9 | | | |
| FH | (60°-80°) | 1887.0 | 15.2 | | | G2/5000 |
| FVH | (80°-90°) | 34.1 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 699.2 | 5.6 | B2/1000 | | |
| BM | (30°-60°) | 3578.1 | 28.9 | B3/5000 | | |
| BH | (60°-80°) | 1887.0 | 15.2 | B3/2500 | | G2/5000 |
| BVH | (80°-90°) | 34.1 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 |
| 2.5° | 1421.7 | 1421.7 | 1424.0 | 1423.3 | 1420.2 | 1417.9 | 1415.5 | 1412.5 | 1410.9 | 1409.4 | 1408.6 |
| 5° | 1429.5 | 1429.5 | 1431.8 | 1431.0 | 1428.7 | 1425.6 | 1424.0 | 1421.7 | 1419.4 | 1417.9 | 1418.6 |
| 7.5° | 1448.8 | 1449.5 | 1450.3 | 1449.5 | 1447.2 | 1444.9 | 1441.8 | 1441.0 | 1437.9 | 1435.6 | 1437.2 |
| 10° | 1478.1 | 1478.1 | 1478.9 | 1479.6 | 1478.1 | 1472.7 | 1472.7 | 1471.2 | 1468.1 | 1465.0 | 1465.7 |
| 12.5° | 1510.5 | 1510.5 | 1511.3 | 1511.3 | 1511.3 | 1508.2 | 1509.0 | 1508.2 | 1504.4 | 1502.8 | 1504.4 |
| 15° | 1542.2 | 1543.0 | 1543.0 | 1544.5 | 1544.5 | 1545.3 | 1548.4 | 1548.4 | 1546.8 | 1546.1 | 1546.1 |
| 17.5° | 1579.3 | 1580.8 | 1581.6 | 1583.9 | 1584.7 | 1586.2 | 1589.3 | 1590.1 | 1590.9 | 1588.5 | 1589.3 |
| 20° | 1628.7 | 1629.5 | 1631.8 | 1632.6 | 1635.6 | 1635.6 | 1637.2 | 1636.4 | 1634.9 | 1631.8 | 1631.8 |
| 22.5° | 1684.3 | 1685.8 | 1690.5 | 1690.5 | 1694.3 | 1692.0 | 1692.8 | 1690.5 | 1686.6 | 1685.1 | 1683.5 |
| 25° | 1756.9 | 1759.2 | 1763.1 | 1761.5 | 1763.1 | 1759.2 | 1759.2 | 1759.2 | 1756.9 | 1754.6 | 1753.8 |
| 27.5° | 1848.8 | 1844.9 | 1848.8 | 1845.7 | 1844.9 | 1841.8 | 1842.6 | 1841.1 | 1838.7 | 1838.0 | 1834.9 |
| 30° | 1944.5 | 1939.9 | 1942.2 | 1943.0 | 1941.5 | 1940.7 | 1937.6 | 1935.3 | 1931.4 | 1932.2 | 1929.9 |
| 32.5° | 2054.2 | 2049.6 | 2051.9 | 2052.7 | 2051.1 | 2052.7 | 2051.9 | 2046.5 | 2041.9 | 2044.9 | 2044.9 |
| 35° | 2184.7 | 2181.6 | 2187.8 | 2190.1 | 2185.5 | 2183.2 | 2180.1 | 2173.9 | 2167.0 | 2171.6 | 2172.4 |
| 37.5° | 2341.5 | 2337.6 | 2342.3 | 2348.4 | 2339.9 | 2335.3 | 2323.0 | 2313.7 | 2309.1 | 2311.4 | 2314.5 |
| 40° | 2504.4 | 2505.2 | 2518.3 | 2519.9 | 2510.6 | 2505.2 | 2492.9 | 2478.9 | 2465.8 | 2465.8 | 2469.7 |
| 42.5° | 2675.9 | 2678.2 | 2693.6 | 2699.0 | 2696.0 | 2685.9 | 2668.9 | 2651.9 | 2634.9 | 2638.0 | 2642.7 |
| 45° | 2869.7 | 2866.6 | 2882.8 | 2896.0 | 2893.7 | 2890.6 | 2874.3 | 2843.5 | 2828.0 | 2827.2 | 2835.0 |
| 47.5° | 3073.6 | 3079.8 | 3096.8 | 3119.2 | 3118.4 | 3110.7 | 3089.8 | 3061.2 | 3032.7 | 3035.0 | 3044.2 |
| 50° | 3311.4 | 3319.9 | 3348.5 | 3370.9 | 3374.0 | 3371.7 | 3347.0 | 3313.8 | 3273.6 | 3275.9 | 3288.3 |
| 52.5° | 3524.6 | 3536.9 | 3570.2 | 3616.5 | 3645.1 | 3658.2 | 3642.0 | 3611.1 | 3570.2 | 3572.5 | 3585.6 |
| 55° | 3717.7 | 3737.0 | 3786.4 | 3849.7 | 3906.9 | 3960.1 | 3984.1 | 3983.3 | 3953.2 | 3960.1 | 3977.1 |
| 57.5° | 3838.9 | 3865.9 | 3940.8 | 4042.8 | 4156.3 | 4263.6 | 4356.3 | 4443.6 | 4462.9 | 4499.2 | 4499.2 |
| 60° | 3676.0 | 3739.3 | 3838.9 | 4013.4 | 4236.6 | 4477.6 | 4738.6 | 4992.7 | 5156.4 | 5285.3 | 5215.8 |
| 62.5° | 3069.7 | 3163.2 | 3302.9 | 3533.1 | 3880.6 | 4310.7 | 4835.1 | 5425.9 | 6042.2 | 6419.0 | 6142.5 |
| 65° | 1986.2 | 2103.6 | 2255.8 | 2514.5 | 2952.3 | 3506.1 | 4269.8 | 5331.7 | 6621.3 | 7290.1 | 6672.3 |
| 67.5° | 786.9 | 866.5 | 959.1 | 1142.9 | 1522.9 | 2066.6 | 2923.8 | 4233.5 | 5846.8 | 6477.7 | 5785.0 |
| 70° | 376.1 | 389.2 | 407.0 | 446.4 | 541.4 | 730.6 | 1174.6 | 2085.9 | 3585.6 | 4250.5 | 3499.9 |
| 72.5° | 271.8 | 274.2 | 282.6 | 295.8 | 323.6 | 362.2 | 440.2 | 637.9 | 1236.4 | 1797.8 | 1237.9 |
| 75° | 206.2 | 209.3 | 213.9 | 220.9 | 235.5 | 254.1 | 283.4 | 339.8 | 423.2 | 488.1 | 422.4 |
| 77.5° | 156.8 | 159.9 | 163.7 | 170.7 | 178.4 | 191.5 | 202.3 | 224.7 | 260.3 | 274.2 | 272.6 |
| 80° | 114.3 | 119.7 | 125.9 | 132.1 | 137.5 | 143.6 | 144.4 | 155.2 | 175.3 | 188.4 | 184.6 |
| 82.5° | 72.6 | 77.2 | 93.4 | 100.4 | 101.2 | 102.7 | 101.9 | 102.7 | 113.5 | 122.8 | 119.7 |
| 85° | 46.3 | 49.4 | 57.9 | 65.6 | 64.1 | 67.2 | 67.2 | 65.6 | 61.0 | 52.5 | 62.6 |
| 87.5° | 23.2 | 23.9 | 27.8 | 34.8 | 33.2 | 29.3 | 28.6 | 28.6 | 20.9 | 17.8 | 19.3 |
| 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° | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 |
| 2.5° | 1406.3 | 1407.8 | 1405.5 | 1405.5 | 1404.7 | 1406.3 | 1404.0 | 1404.0 |
| 5° | 1417.1 | 1419.4 | 1418.6 | 1418.6 | 1420.2 | 1421.7 | 1421.0 | 1420.2 |
| 7.5° | 1436.4 | 1437.9 | 1439.5 | 1440.3 | 1441.8 | 1441.0 | 1442.6 | 1441.8 |
| 10° | 1465.7 | 1464.2 | 1466.5 | 1464.2 | 1465.0 | 1463.4 | 1464.2 | 1464.2 |
| 12.5° | 1502.8 | 1500.5 | 1499.0 | 1497.4 | 1497.4 | 1494.3 | 1494.3 | 1495.1 |
| 15° | 1545.3 | 1541.4 | 1538.3 | 1536.8 | 1535.2 | 1535.2 | 1532.9 | 1534.5 |
| 17.5° | 1587.0 | 1583.1 | 1577.7 | 1577.7 | 1575.4 | 1573.9 | 1572.3 | 1576.2 |
| 20° | 1631.0 | 1627.1 | 1624.1 | 1623.3 | 1618.7 | 1617.1 | 1617.9 | 1622.5 |
| 22.5° | 1682.0 | 1679.7 | 1679.7 | 1678.1 | 1675.0 | 1672.7 | 1672.7 | 1678.1 |
| 25° | 1750.7 | 1746.1 | 1746.8 | 1747.6 | 1746.1 | 1746.1 | 1744.5 | 1748.4 |
| 27.5° | 1834.9 | 1831.0 | 1833.3 | 1834.9 | 1833.3 | 1835.7 | 1833.3 | 1836.4 |
| 30° | 1933.7 | 1931.4 | 1933.7 | 1936.1 | 1932.2 | 1932.2 | 1930.6 | 1933.0 |
| 32.5° | 2051.9 | 2048.8 | 2050.3 | 2050.3 | 2044.9 | 2040.3 | 2034.1 | 2038.8 |
| 35° | 2181.6 | 2177.8 | 2180.9 | 2183.2 | 2177.0 | 2172.4 | 2163.1 | 2167.0 |
| 37.5° | 2324.5 | 2326.0 | 2329.9 | 2339.9 | 2338.4 | 2330.7 | 2323.7 | 2326.8 |
| 40° | 2484.4 | 2492.1 | 2509.1 | 2516.0 | 2514.5 | 2506.8 | 2497.5 | 2499.0 |
| 42.5° | 2665.1 | 2675.1 | 2692.9 | 2704.4 | 2699.0 | 2688.2 | 2676.6 | 2681.3 |
| 45° | 2862.0 | 2877.4 | 2900.6 | 2912.2 | 2905.2 | 2893.7 | 2877.4 | 2885.9 |
| 47.5° | 3070.5 | 3101.4 | 3132.3 | 3147.7 | 3145.4 | 3129.2 | 3108.3 | 3110.7 |
| 50° | 3319.9 | 3360.9 | 3400.3 | 3415.7 | 3404.1 | 3379.4 | 3350.1 | 3349.3 |
| 52.5° | 3630.4 | 3674.4 | 3706.8 | 3703.0 | 3674.4 | 3635.8 | 3602.6 | 3601.0 |
| 55° | 4018.1 | 4032.7 | 4028.1 | 3994.9 | 3944.7 | 3884.5 | 3842.0 | 3835.0 |
| 57.5° | 4486.8 | 4437.4 | 4364.8 | 4264.4 | 4151.7 | 4037.4 | 3960.1 | 3931.6 |
| 60° | 5059.8 | 4836.7 | 4577.2 | 4303.8 | 4054.4 | 3867.5 | 3749.3 | 3677.5 |
| 62.5° | 5533.2 | 4886.9 | 4306.9 | 3831.9 | 3443.5 | 3212.6 | 3051.2 | 2951.6 |
| 65° | 5371.1 | 4221.9 | 3381.7 | 2769.3 | 2345.3 | 2106.7 | 1936.1 | 1822.5 |
| 67.5° | 4149.3 | 2821.1 | 1963.1 | 1360.7 | 1031.7 | 873.4 | 763.0 | 691.2 |
| 70° | 2092.0 | 1081.9 | 655.6 | 462.6 | 395.4 | 367.6 | 349.1 | 338.2 |
| 72.5° | 613.9 | 410.1 | 340.6 | 301.2 | 277.2 | 260.3 | 249.4 | 244.0 |
| 75° | 339.8 | 277.2 | 244.8 | 222.4 | 207.0 | 195.4 | 188.4 | 183.8 |
| 77.5° | 234.0 | 201.6 | 185.3 | 170.7 | 158.3 | 149.8 | 144.4 | 139.8 |
| 80° | 163.7 | 147.5 | 140.6 | 132.8 | 123.6 | 116.6 | 108.9 | 105.8 |
| 82.5° | 108.9 | 101.9 | 100.4 | 94.2 | 88.8 | 81.1 | 67.2 | 62.6 |
| 85° | 64.1 | 63.3 | 63.3 | 61.0 | 57.1 | 50.2 | 40.2 | 40.2 |
| 87.5° | 22.4 | 23.2 | 23.9 | 25.5 | 24.7 | 20.9 | 17.0 | 16.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)