

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: P299959

Luminaire Tested: **GAA-AF-05-LED-U-5WQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299959
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-05-LED-U-5WQ-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17873.1 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-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

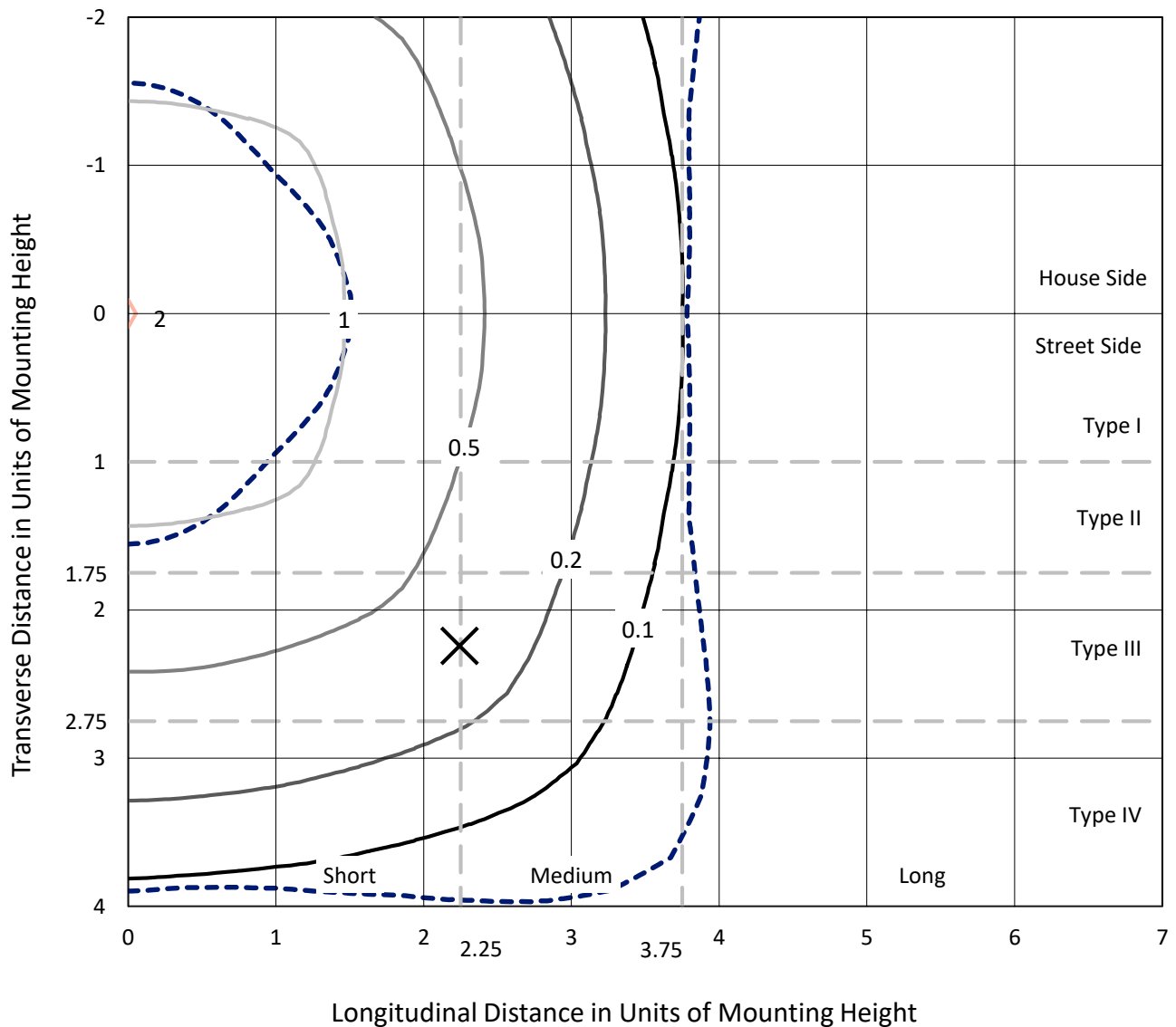


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

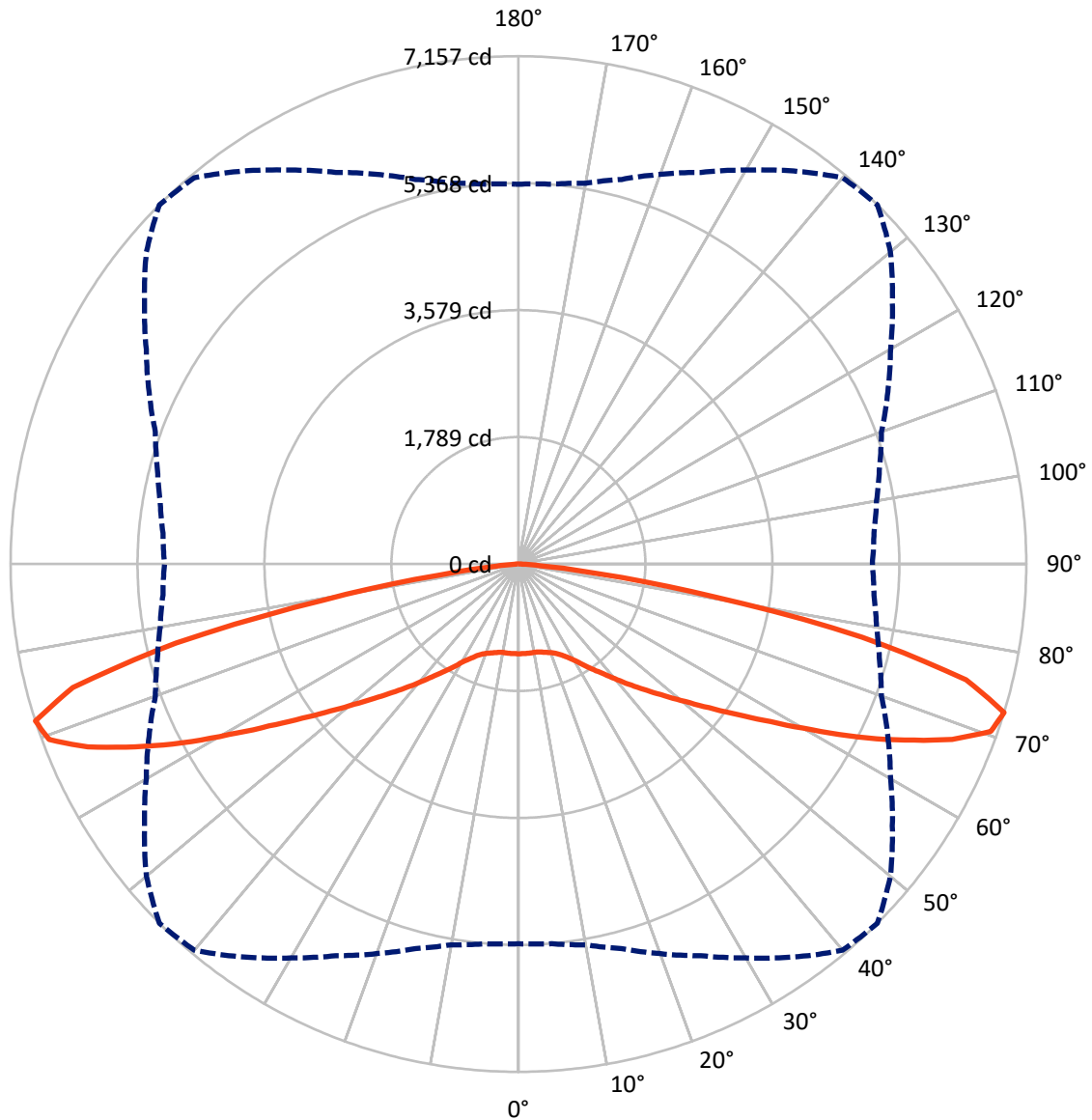


Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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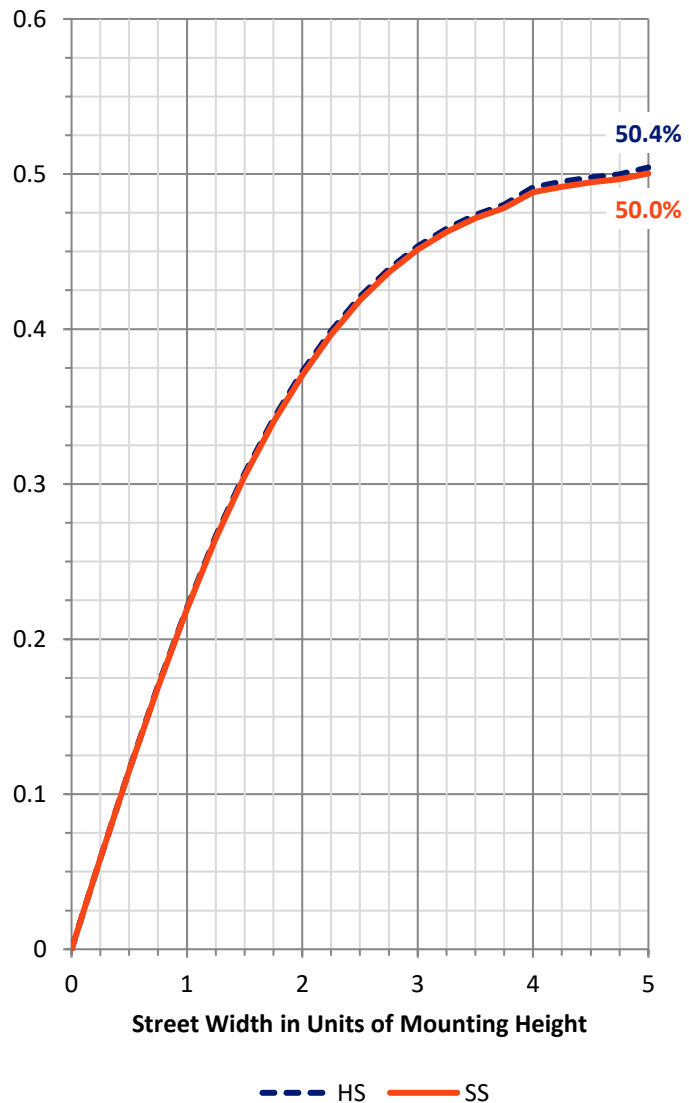
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8936.5 | 0.0 | 8936.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 8936.5 | 0.0 | 8936.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 17873.1 | 0.0 | 17873.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 120.9 | 0.7 |
| 10°-20° | 367.1 | 2.1 |
| 20°-30° | 670.8 | 3.8 |
| 30°-40° | 1156.5 | 6.5 |
| 40°-50° | 1977.1 | 11.1 |
| 50°-60° | 3204.6 | 17.9 |
| 60°-70° | 5316.3 | 29.7 |
| 70°-80° | 4682.4 | 26.2 |
| 80°-90° | 377.5 | 2.1 |
| 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° | 17873.1 | 100.0 |
| 0°-180° | 17873.1 | 100.0 |



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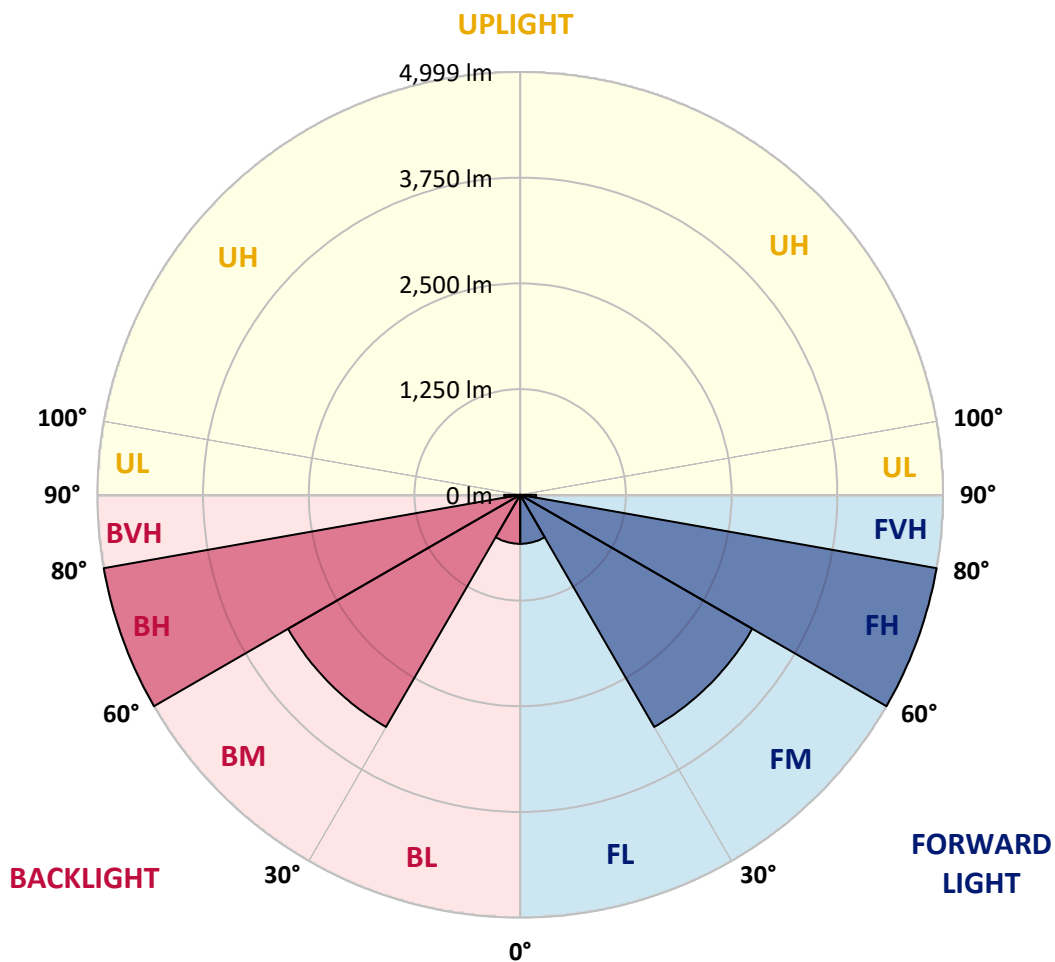
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 579.3 | 3.2 | | | |
| FM | (30°-60°) | 3169.1 | 17.7 | | | |
| FH | (60°-80°) | 4999.3 | 28.0 | | | G2/5000 |
| FVH | (80°-90°) | 188.8 | 1.1 | | | G2/225 |
| BL | (0°-30°) | 579.3 | 3.2 | B2/1000 | | |
| BM | (30°-60°) | 3169.1 | 17.7 | B3/5000 | | |
| BH | (60°-80°) | 4999.3 | 28.0 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 188.8 | 1.1 | | | G2/225 |
| 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° | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 |
| 2.5° | 1265.7 | 1266.5 | 1267.3 | 1266.5 | 1266.5 | 1265.7 | 1264.9 | 1265.7 | 1264.9 | 1263.2 | 1264.1 |
| 5° | 1269.8 | 1271.4 | 1271.4 | 1269.8 | 1270.6 | 1269.8 | 1268.2 | 1269.0 | 1267.3 | 1264.9 | 1264.9 |
| 7.5° | 1274.7 | 1275.5 | 1275.5 | 1273.9 | 1274.7 | 1273.1 | 1271.4 | 1270.6 | 1269.0 | 1265.7 | 1263.2 |
| 10° | 1282.1 | 1282.9 | 1282.1 | 1280.4 | 1280.4 | 1278.0 | 1273.9 | 1272.3 | 1269.0 | 1264.1 | 1261.6 |
| 12.5° | 1290.3 | 1291.1 | 1290.3 | 1288.6 | 1287.8 | 1283.7 | 1280.4 | 1278.0 | 1275.5 | 1271.4 | 1267.3 |
| 15° | 1301.8 | 1303.4 | 1301.8 | 1298.5 | 1296.0 | 1292.7 | 1291.1 | 1291.9 | 1292.7 | 1289.5 | 1285.4 |
| 17.5° | 1323.1 | 1323.9 | 1321.4 | 1314.1 | 1310.8 | 1307.5 | 1307.5 | 1309.1 | 1311.6 | 1310.0 | 1305.9 |
| 20° | 1362.4 | 1360.0 | 1354.2 | 1345.2 | 1341.1 | 1335.4 | 1334.6 | 1335.4 | 1335.4 | 1334.6 | 1331.3 |
| 22.5° | 1411.6 | 1410.0 | 1402.6 | 1391.1 | 1385.4 | 1382.1 | 1377.2 | 1373.1 | 1372.3 | 1369.8 | 1366.5 |
| 25° | 1470.6 | 1469.8 | 1460.8 | 1451.0 | 1446.9 | 1442.8 | 1438.7 | 1432.9 | 1428.0 | 1422.3 | 1419.0 |
| 27.5° | 1546.0 | 1542.8 | 1529.7 | 1524.7 | 1519.0 | 1516.5 | 1510.8 | 1504.2 | 1500.1 | 1492.8 | 1488.7 |
| 30° | 1628.8 | 1628.8 | 1618.2 | 1616.5 | 1616.5 | 1610.8 | 1604.2 | 1592.8 | 1585.4 | 1578.0 | 1575.6 |
| 32.5° | 1711.6 | 1712.5 | 1701.8 | 1705.1 | 1707.5 | 1711.6 | 1713.3 | 1709.2 | 1704.3 | 1703.4 | 1698.5 |
| 35° | 1831.3 | 1828.0 | 1817.4 | 1819.8 | 1819.0 | 1818.2 | 1818.2 | 1827.2 | 1828.9 | 1830.5 | 1820.7 |
| 37.5° | 1979.7 | 1979.7 | 1969.0 | 1969.0 | 1964.1 | 1959.2 | 1952.6 | 1958.4 | 1967.4 | 1969.9 | 1963.3 |
| 40° | 2149.4 | 2155.1 | 2142.0 | 2141.2 | 2142.8 | 2127.2 | 2119.9 | 2128.9 | 2134.6 | 2144.5 | 2137.1 |
| 42.5° | 2349.4 | 2345.3 | 2332.2 | 2330.5 | 2321.5 | 2316.6 | 2310.1 | 2317.4 | 2326.4 | 2333.0 | 2335.5 |
| 45° | 2541.2 | 2537.9 | 2523.2 | 2523.2 | 2514.2 | 2510.1 | 2513.3 | 2525.6 | 2529.7 | 2538.8 | 2547.8 |
| 47.5° | 2730.6 | 2726.5 | 2716.6 | 2720.7 | 2721.6 | 2728.9 | 2739.6 | 2751.1 | 2762.6 | 2774.8 | 2778.9 |
| 50° | 2924.0 | 2924.9 | 2914.2 | 2924.0 | 2936.3 | 2956.8 | 2985.5 | 3004.4 | 3028.2 | 3043.7 | 3048.6 |
| 52.5° | 3100.3 | 3103.6 | 3115.0 | 3138.0 | 3162.6 | 3202.8 | 3251.9 | 3297.8 | 3337.2 | 3363.4 | 3361.8 |
| 55° | 3311.8 | 3316.7 | 3344.6 | 3383.9 | 3424.1 | 3484.8 | 3557.7 | 3638.9 | 3704.4 | 3742.2 | 3718.4 |
| 57.5° | 3582.3 | 3593.0 | 3624.1 | 3677.4 | 3737.2 | 3815.9 | 3915.9 | 4038.1 | 4139.7 | 4190.6 | 4152.0 |
| 60° | 3953.6 | 3960.2 | 3997.9 | 4056.9 | 4129.1 | 4226.6 | 4360.2 | 4524.2 | 4667.6 | 4734.9 | 4690.6 |
| 62.5° | 4443.0 | 4455.3 | 4485.7 | 4545.5 | 4619.3 | 4730.0 | 4893.1 | 5098.0 | 5276.7 | 5370.2 | 5270.2 |
| 65° | 5027.5 | 5066.9 | 5092.3 | 5152.9 | 5221.8 | 5339.0 | 5509.5 | 5729.2 | 5921.0 | 5982.5 | 5866.9 |
| 67.5° | 5606.3 | 5640.7 | 5685.0 | 5754.6 | 5824.3 | 5956.3 | 6114.5 | 6327.6 | 6538.3 | 6594.1 | 6414.5 |
| 70° | 5859.6 | 5879.2 | 5948.1 | 6043.2 | 6176.8 | 6332.6 | 6515.4 | 6754.7 | 7015.4 | 7061.3 | 6833.4 |
| 72.5° | 5352.1 | 5371.8 | 5448.9 | 5610.4 | 5843.2 | 6090.7 | 6409.6 | 6761.3 | 7105.6 | 7157.2 | 6843.3 |
| 75° | 4047.9 | 4015.9 | 4129.9 | 4343.8 | 4657.8 | 5002.9 | 5448.9 | 5953.0 | 6450.6 | 6515.4 | 6140.7 |
| 77.5° | 2092.0 | 2087.9 | 2174.0 | 2439.6 | 2814.2 | 3206.9 | 3697.9 | 4267.6 | 4754.5 | 4951.3 | 4646.3 |
| 80° | 589.4 | 596.0 | 636.9 | 768.9 | 987.8 | 1271.4 | 1655.1 | 2188.7 | 2587.1 | 2790.4 | 2619.9 |
| 82.5° | 231.2 | 249.2 | 264.8 | 289.4 | 318.1 | 359.9 | 480.4 | 714.8 | 959.1 | 1146.0 | 938.6 |
| 85° | 82.8 | 88.5 | 125.4 | 148.4 | 150.8 | 159.0 | 181.2 | 211.5 | 254.9 | 304.1 | 250.0 |
| 87.5° | 31.2 | 34.4 | 40.2 | 66.4 | 65.6 | 59.8 | 73.0 | 76.2 | 57.4 | 52.5 | 64.8 |
| 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° | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 | 1265.7 |
| 2.5° | 1262.4 | 1263.2 | 1263.2 | 1264.1 | 1264.9 | 1264.9 | 1266.5 | 1266.5 |
| 5° | 1263.2 | 1263.2 | 1261.6 | 1262.4 | 1261.6 | 1261.6 | 1262.4 | 1262.4 |
| 7.5° | 1261.6 | 1260.8 | 1259.1 | 1258.3 | 1256.7 | 1256.7 | 1256.7 | 1256.7 |
| 10° | 1259.1 | 1258.3 | 1256.7 | 1255.9 | 1255.0 | 1255.0 | 1255.0 | 1255.0 |
| 12.5° | 1265.7 | 1263.2 | 1261.6 | 1260.8 | 1260.8 | 1260.8 | 1260.8 | 1260.8 |
| 15° | 1282.9 | 1277.2 | 1273.1 | 1273.1 | 1273.9 | 1275.5 | 1275.5 | 1277.2 |
| 17.5° | 1304.2 | 1297.7 | 1293.6 | 1290.3 | 1291.9 | 1294.4 | 1296.0 | 1297.7 |
| 20° | 1329.6 | 1326.4 | 1320.6 | 1317.3 | 1317.3 | 1320.6 | 1322.3 | 1323.1 |
| 22.5° | 1364.9 | 1362.4 | 1360.0 | 1355.9 | 1355.9 | 1357.5 | 1360.8 | 1360.8 |
| 25° | 1417.3 | 1415.7 | 1414.1 | 1410.8 | 1410.0 | 1410.0 | 1411.6 | 1413.2 |
| 27.5° | 1482.9 | 1483.7 | 1482.1 | 1481.3 | 1478.8 | 1478.0 | 1480.5 | 1479.6 |
| 30° | 1570.6 | 1574.7 | 1578.8 | 1575.6 | 1571.5 | 1569.0 | 1566.5 | 1563.3 |
| 32.5° | 1689.5 | 1684.6 | 1681.3 | 1675.6 | 1668.2 | 1661.6 | 1656.7 | 1651.0 |
| 35° | 1801.8 | 1793.6 | 1790.3 | 1795.2 | 1794.4 | 1790.3 | 1784.6 | 1779.7 |
| 37.5° | 1939.5 | 1937.9 | 1939.5 | 1948.5 | 1946.9 | 1951.0 | 1939.5 | 1938.7 |
| 40° | 2113.3 | 2115.0 | 2126.4 | 2137.1 | 2142.8 | 2148.6 | 2142.0 | 2135.4 |
| 42.5° | 2315.0 | 2314.2 | 2318.2 | 2333.0 | 2342.8 | 2349.4 | 2335.5 | 2333.8 |
| 45° | 2528.1 | 2522.4 | 2525.6 | 2537.9 | 2547.8 | 2555.2 | 2539.6 | 2539.6 |
| 47.5° | 2762.6 | 2752.7 | 2742.1 | 2756.0 | 2761.7 | 2766.7 | 2754.4 | 2750.3 |
| 50° | 3024.1 | 3003.6 | 2980.6 | 2986.3 | 2986.3 | 2984.7 | 2969.1 | 2968.3 |
| 52.5° | 3324.1 | 3286.4 | 3244.6 | 3229.0 | 3220.0 | 3210.1 | 3183.1 | 3170.0 |
| 55° | 3669.2 | 3612.6 | 3547.1 | 3506.9 | 3485.6 | 3458.5 | 3413.4 | 3401.1 |
| 57.5° | 4072.5 | 3984.0 | 3870.9 | 3821.7 | 3774.1 | 3729.9 | 3679.9 | 3665.9 |
| 60° | 4550.4 | 4420.1 | 4270.1 | 4179.1 | 4127.4 | 4084.8 | 4033.2 | 4030.7 |
| 62.5° | 5083.3 | 4877.5 | 4707.8 | 4625.8 | 4588.1 | 4550.4 | 4501.2 | 4507.8 |
| 65° | 5625.1 | 5410.3 | 5251.3 | 5184.9 | 5149.7 | 5118.5 | 5069.3 | 5076.7 |
| 67.5° | 6159.6 | 5962.0 | 5787.4 | 5719.4 | 5680.0 | 5640.7 | 5596.4 | 5603.8 |
| 70° | 6543.2 | 6298.1 | 6101.4 | 5950.6 | 5856.3 | 5749.7 | 5680.9 | 5663.6 |
| 72.5° | 6433.4 | 6055.5 | 5743.2 | 5444.0 | 5268.5 | 5125.9 | 5029.2 | 4987.4 |
| 75° | 5567.7 | 5051.3 | 4649.6 | 4282.4 | 4075.8 | 3907.7 | 3785.6 | 3709.4 |
| 77.5° | 4134.8 | 3554.4 | 3079.8 | 2656.8 | 2322.3 | 2097.7 | 1939.5 | 1837.1 |
| 80° | 2263.3 | 1721.5 | 1258.3 | 884.5 | 650.1 | 540.2 | 477.1 | 446.8 |
| 82.5° | 705.0 | 455.0 | 335.3 | 289.4 | 268.9 | 257.4 | 238.5 | 208.2 |
| 85° | 224.6 | 196.7 | 182.8 | 174.6 | 166.4 | 145.1 | 100.0 | 91.0 |
| 87.5° | 86.9 | 89.4 | 88.5 | 83.6 | 85.3 | 61.5 | 49.2 | 43.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)