

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: P299586

Luminaire Tested: **GAA-AF-02-LED-U-5MQ-7060**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P299586  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-02-LED-U-5MQ-7060  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 12749.8 lumens  
Efficiency: N/A  
Efficacy: 112.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 113  
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

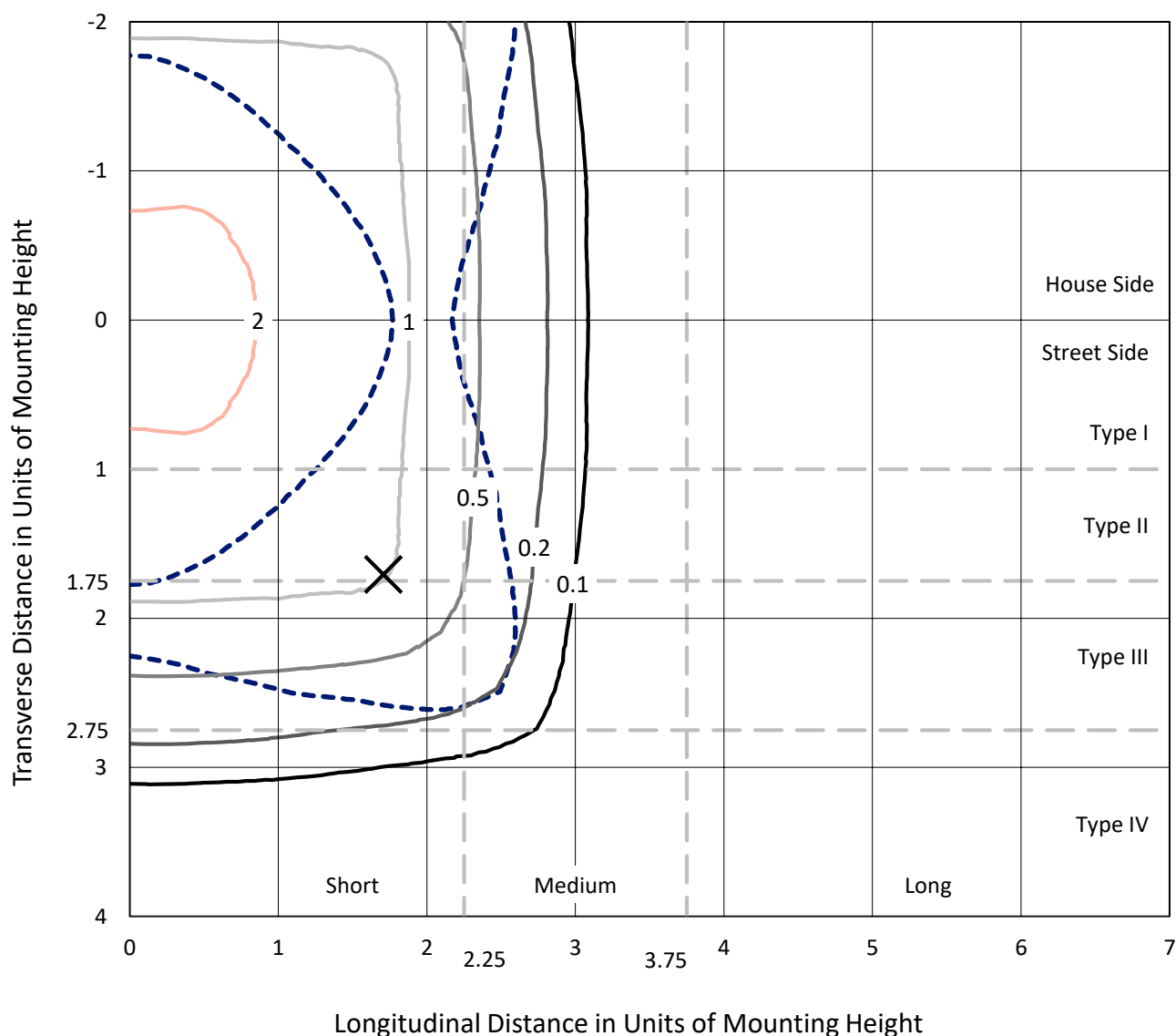


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

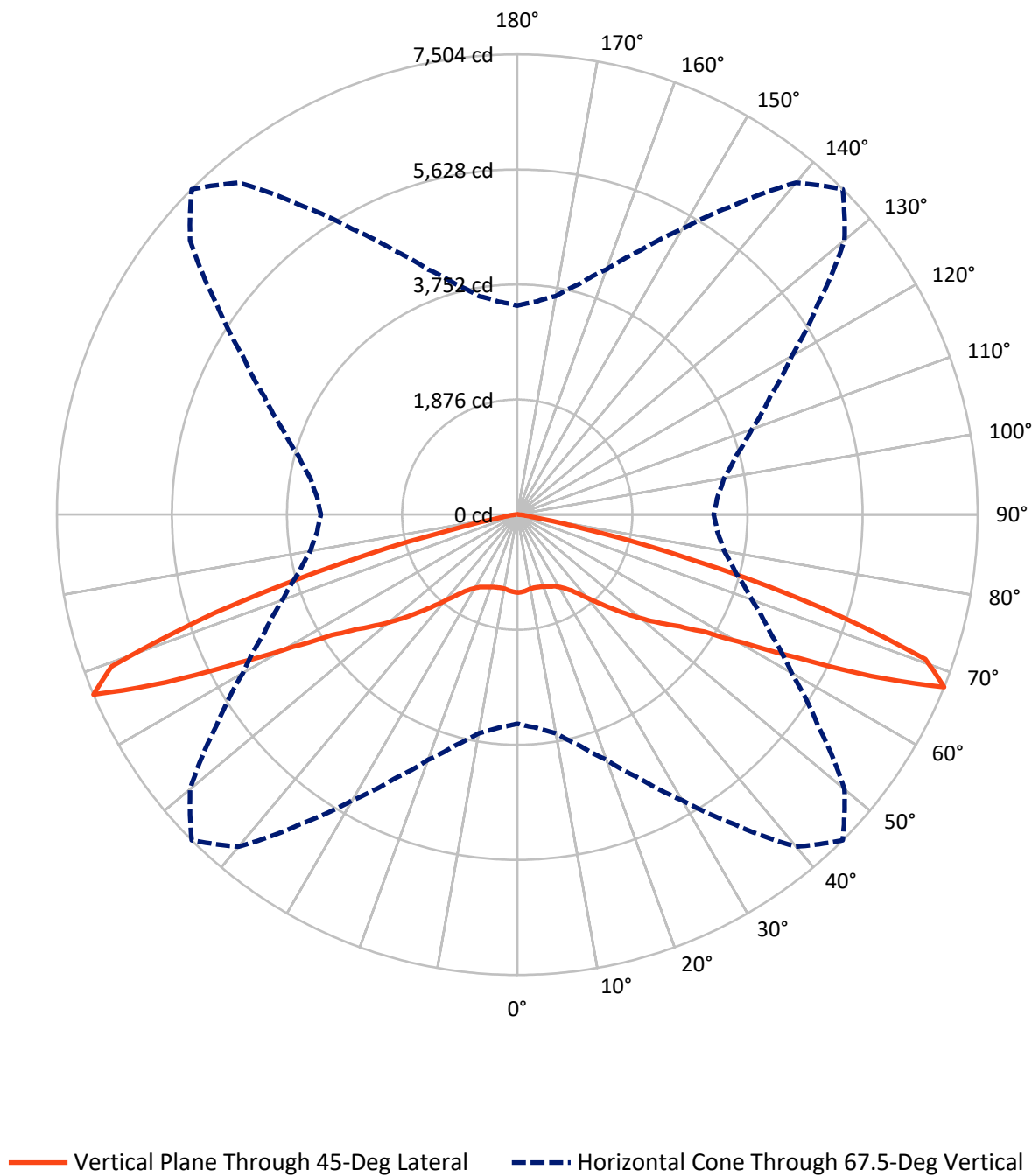


Based on 20 foot mounting height. Maximum calculated value = 3.2 fc  
 Type V - Short - Full Cutoff

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## Luminous Intensity Polar Plot



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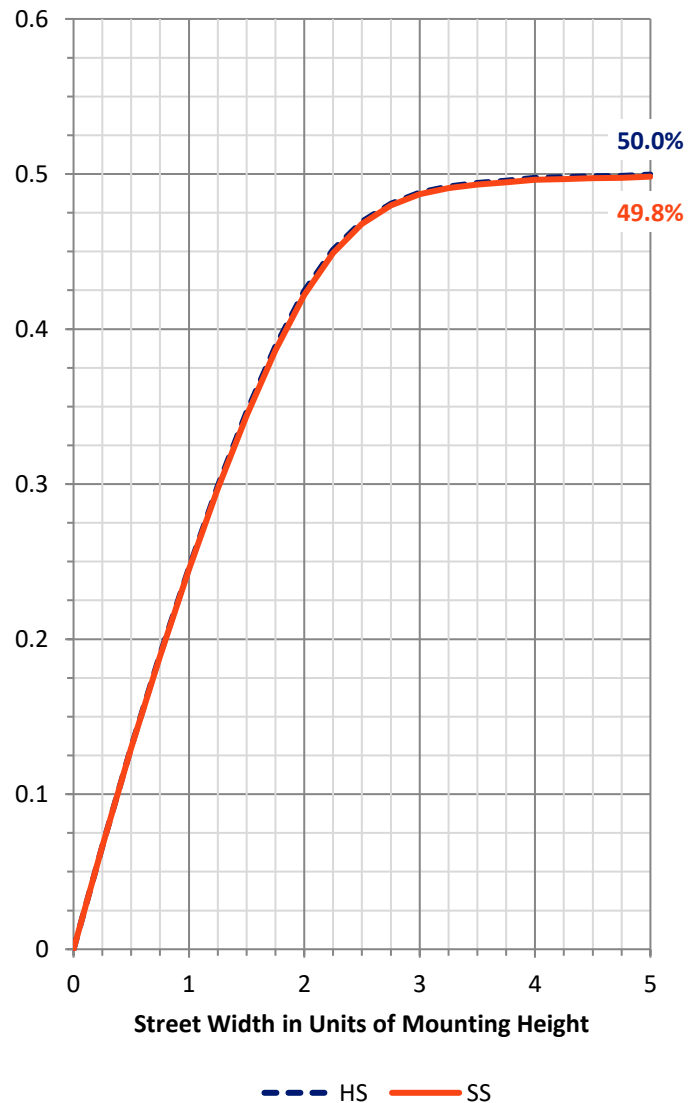
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6374.9   | 0.0    | 6374.9  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 6374.9   | 0.0    | 6374.9  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 12749.8  | 0.0    | 12749.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 118.9   | 0.9       |
| 10°-20°   | 345.1   | 2.7       |
| 20°-30°   | 586.6   | 4.6       |
| 30°-40°   | 959.0   | 7.5       |
| 40°-50°   | 1711.9  | 13.4      |
| 50°-60°   | 2886.4  | 22.6      |
| 60°-70°   | 4479.2  | 35.1      |
| 70°-80°   | 1573.8  | 12.3      |
| 80°-90°   | 88.9    | 0.7       |
| 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°    | 12749.8 | 100.0     |
| 0°-180°   | 12749.8 | 100.0     |

**Coefficient of Utilization**



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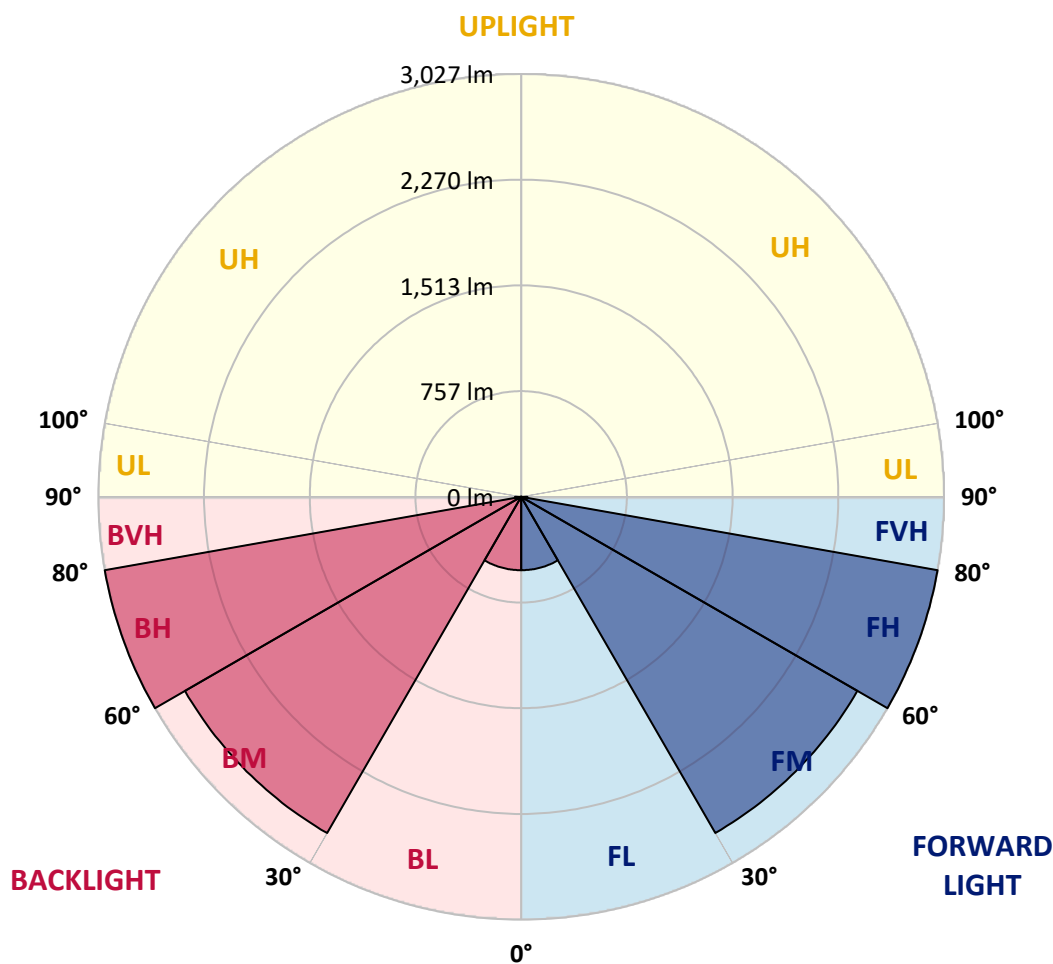
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 525.3  | 4.1       |                         |      |         |
| FM   | (30°-60°)   | 2778.6 | 21.8      |                         |      |         |
| FH   | (60°-80°)   | 3026.5 | 23.7      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 44.5   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 525.3  | 4.1       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 2778.6 | 21.8      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 3026.5 | 23.7      | B4/5000                 |      | G2/5000 |
| BVH  | (80°-90°)   | 44.5   | 0.3       |                         |      | G1/100  |
| 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°    | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 |
| 2.5°  | 1265.9 | 1267.1 | 1267.1 | 1267.1 | 1266.5 | 1266.5 | 1265.3 | 1266.5 | 1265.9 | 1264.1 | 1264.7 |
| 5°    | 1255.3 | 1256.5 | 1256.5 | 1255.9 | 1257.7 | 1257.1 | 1255.3 | 1256.5 | 1255.9 | 1254.7 | 1255.3 |
| 7.5°  | 1240.1 | 1241.8 | 1241.8 | 1241.3 | 1243.0 | 1242.4 | 1241.3 | 1241.8 | 1241.8 | 1240.1 | 1240.1 |
| 10°   | 1223.1 | 1224.3 | 1224.3 | 1223.7 | 1226.6 | 1226.6 | 1226.0 | 1227.8 | 1228.4 | 1226.6 | 1225.4 |
| 12.5° | 1207.3 | 1209.0 | 1209.0 | 1211.4 | 1214.3 | 1215.5 | 1218.4 | 1220.7 | 1223.1 | 1222.5 | 1220.2 |
| 15°   | 1197.9 | 1199.0 | 1201.4 | 1204.3 | 1209.0 | 1213.1 | 1217.8 | 1223.1 | 1227.8 | 1228.9 | 1225.4 |
| 17.5° | 1192.0 | 1193.8 | 1197.3 | 1201.4 | 1207.8 | 1214.9 | 1221.9 | 1228.9 | 1235.4 | 1237.7 | 1233.6 |
| 20°   | 1190.2 | 1191.4 | 1194.9 | 1202.0 | 1210.8 | 1221.3 | 1231.3 | 1239.5 | 1248.3 | 1251.2 | 1248.3 |
| 22.5° | 1193.8 | 1196.1 | 1200.2 | 1208.4 | 1220.2 | 1233.6 | 1245.4 | 1256.5 | 1267.6 | 1272.9 | 1268.8 |
| 25°   | 1209.6 | 1211.9 | 1217.2 | 1227.8 | 1240.7 | 1254.7 | 1268.2 | 1281.1 | 1291.1 | 1296.4 | 1293.4 |
| 27.5° | 1238.9 | 1241.8 | 1248.3 | 1258.8 | 1272.9 | 1288.2 | 1302.8 | 1313.4 | 1321.6 | 1323.3 | 1319.8 |
| 30°   | 1282.9 | 1289.3 | 1297.0 | 1308.7 | 1325.1 | 1338.0 | 1352.7 | 1362.0 | 1372.0 | 1372.0 | 1369.1 |
| 32.5° | 1351.5 | 1357.9 | 1366.1 | 1377.3 | 1390.2 | 1404.3 | 1417.2 | 1425.4 | 1435.9 | 1436.5 | 1429.5 |
| 35°   | 1454.1 | 1457.0 | 1464.1 | 1471.1 | 1482.8 | 1495.1 | 1506.3 | 1511.6 | 1520.4 | 1520.9 | 1514.5 |
| 37.5° | 1589.5 | 1590.1 | 1594.8 | 1597.2 | 1607.7 | 1621.2 | 1631.8 | 1635.3 | 1643.5 | 1642.3 | 1635.9 |
| 40°   | 1747.3 | 1750.2 | 1752.0 | 1755.5 | 1766.6 | 1779.5 | 1790.6 | 1792.4 | 1801.2 | 1799.4 | 1791.2 |
| 42.5° | 1929.6 | 1930.8 | 1940.7 | 1946.0 | 1956.6 | 1963.0 | 1977.1 | 1978.9 | 1989.4 | 1984.7 | 1975.3 |
| 45°   | 2134.2 | 2144.8 | 2154.2 | 2164.7 | 2175.9 | 2183.5 | 2194.6 | 2192.3 | 2199.3 | 2192.3 | 2187.0 |
| 47.5° | 2349.4 | 2357.0 | 2378.2 | 2394.6 | 2412.7 | 2419.2 | 2435.0 | 2428.0 | 2435.0 | 2425.1 | 2423.3 |
| 50°   | 2586.3 | 2599.8 | 2618.0 | 2636.7 | 2656.1 | 2666.6 | 2687.1 | 2678.4 | 2687.7 | 2678.4 | 2673.1 |
| 52.5° | 2819.7 | 2823.2 | 2863.0 | 2890.6 | 2917.6 | 2929.9 | 2942.2 | 2938.1 | 2938.7 | 2938.1 | 2932.8 |
| 55°   | 3041.3 | 3049.5 | 3089.4 | 3126.9 | 3173.8 | 3208.4 | 3229.5 | 3227.2 | 3221.9 | 3216.6 | 3207.8 |
| 57.5° | 3291.1 | 3299.3 | 3345.0 | 3391.3 | 3444.7 | 3493.9 | 3536.7 | 3580.7 | 3597.7 | 3602.4 | 3583.1 |
| 60°   | 3628.8 | 3628.2 | 3689.2 | 3745.5 | 3821.7 | 3895.0 | 3988.8 | 4084.4 | 4194.0 | 4245.0 | 4177.6 |
| 62.5° | 3972.4 | 3986.5 | 4074.4 | 4174.1 | 4331.2 | 4484.2 | 4657.2 | 4827.2 | 5000.8 | 5142.1 | 4992.0 |
| 65°   | 3931.3 | 3985.3 | 4116.0 | 4341.8 | 4632.0 | 4976.8 | 5349.7 | 5744.3 | 6100.8 | 6345.8 | 6070.9 |
| 67.5° | 3407.2 | 3484.0 | 3617.1 | 3891.5 | 4254.4 | 4751.6 | 5377.8 | 6158.2 | 7065.3 | 7503.8 | 6960.3 |
| 70°   | 2469.6 | 2556.4 | 2695.9 | 2963.9 | 3323.3 | 3795.9 | 4476.0 | 5413.0 | 6613.8 | 7055.9 | 6457.2 |
| 72.5° | 1228.9 | 1275.9 | 1362.0 | 1532.7 | 1804.7 | 2188.2 | 2805.0 | 3705.6 | 4768.0 | 5173.8 | 4626.7 |
| 75°   | 417.5  | 439.2  | 453.8  | 509.5  | 595.7  | 746.4  | 1053.0 | 1620.0 | 2471.4 | 2962.7 | 2436.2 |
| 77.5° | 241.0  | 241.6  | 251.5  | 261.5  | 276.2  | 292.6  | 333.6  | 438.0  | 757.5  | 1075.9 | 783.9  |
| 80°   | 156.0  | 155.4  | 163.6  | 171.2  | 181.2  | 189.4  | 191.7  | 202.9  | 233.9  | 277.3  | 248.0  |
| 82.5° | 80.9   | 90.9   | 109.1  | 119.0  | 137.8  | 141.3  | 136.6  | 132.5  | 140.1  | 145.4  | 148.9  |
| 85°   | 44.6   | 38.7   | 58.0   | 75.1   | 83.3   | 84.4   | 84.4   | 79.7   | 82.7   | 80.9   | 87.9   |
| 87.5° | 20.5   | 18.8   | 22.9   | 36.9   | 39.3   | 33.4   | 35.2   | 31.1   | 22.3   | 21.7   | 24.6   |
| 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):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 | 1270.6 |
| 2.5°  | 1264.7 | 1265.3 | 1265.3 | 1267.1 | 1267.6 | 1268.8 | 1270.0 | 1270.6 |
| 5°    | 1254.7 | 1256.5 | 1255.3 | 1257.1 | 1257.1 | 1258.3 | 1258.3 | 1258.8 |
| 7.5°  | 1240.1 | 1241.8 | 1241.8 | 1241.8 | 1241.3 | 1243.0 | 1243.0 | 1243.0 |
| 10°   | 1224.8 | 1226.0 | 1225.4 | 1224.3 | 1223.1 | 1224.8 | 1224.3 | 1223.7 |
| 12.5° | 1220.2 | 1217.2 | 1214.9 | 1213.7 | 1211.4 | 1211.9 | 1210.2 | 1210.2 |
| 15°   | 1223.1 | 1217.8 | 1213.7 | 1211.9 | 1209.6 | 1208.4 | 1207.3 | 1207.8 |
| 17.5° | 1230.7 | 1224.3 | 1219.0 | 1216.0 | 1213.1 | 1211.4 | 1209.0 | 1209.6 |
| 20°   | 1244.2 | 1236.6 | 1228.9 | 1223.1 | 1217.8 | 1214.9 | 1213.1 | 1212.5 |
| 22.5° | 1264.1 | 1253.0 | 1241.8 | 1233.0 | 1226.0 | 1221.9 | 1220.2 | 1219.0 |
| 25°   | 1287.0 | 1274.7 | 1261.8 | 1251.8 | 1244.8 | 1239.5 | 1236.0 | 1236.0 |
| 27.5° | 1315.7 | 1305.8 | 1294.0 | 1282.3 | 1275.9 | 1270.6 | 1268.2 | 1267.1 |
| 30°   | 1363.8 | 1354.4 | 1345.0 | 1333.9 | 1325.7 | 1320.4 | 1316.3 | 1312.8 |
| 32.5° | 1425.4 | 1417.7 | 1410.1 | 1401.9 | 1394.3 | 1387.3 | 1380.8 | 1377.9 |
| 35°   | 1512.1 | 1506.3 | 1501.0 | 1491.6 | 1488.7 | 1484.6 | 1481.1 | 1478.1 |
| 37.5° | 1631.8 | 1629.4 | 1629.4 | 1619.4 | 1617.1 | 1615.3 | 1611.8 | 1612.4 |
| 40°   | 1788.9 | 1791.2 | 1788.3 | 1784.8 | 1783.0 | 1778.3 | 1778.3 | 1782.4 |
| 42.5° | 1974.8 | 1976.5 | 1983.0 | 1977.1 | 1983.6 | 1977.7 | 1974.2 | 1977.1 |
| 45°   | 2190.5 | 2197.0 | 2209.9 | 2204.0 | 2208.1 | 2198.1 | 2185.8 | 2186.4 |
| 47.5° | 2432.7 | 2438.5 | 2443.8 | 2439.7 | 2440.3 | 2423.9 | 2407.5 | 2403.4 |
| 50°   | 2684.2 | 2686.6 | 2689.5 | 2683.6 | 2684.8 | 2666.6 | 2647.9 | 2648.4 |
| 52.5° | 2932.8 | 2944.0 | 2955.7 | 2939.9 | 2936.3 | 2915.8 | 2889.4 | 2878.9 |
| 55°   | 3217.2 | 3233.0 | 3219.5 | 3192.0 | 3164.4 | 3136.9 | 3102.3 | 3096.4 |
| 57.5° | 3567.8 | 3540.8 | 3498.6 | 3446.4 | 3408.3 | 3369.6 | 3334.5 | 3319.8 |
| 60°   | 4055.6 | 3954.2 | 3878.0 | 3800.6 | 3751.9 | 3704.4 | 3658.1 | 3651.1 |
| 62.5° | 4745.2 | 4569.8 | 4418.0 | 4257.9 | 4127.2 | 4025.1 | 3943.6 | 3920.8 |
| 65°   | 5609.4 | 5194.9 | 4835.5 | 4500.1 | 4208.7 | 3988.8 | 3850.4 | 3789.4 |
| 67.5° | 5981.1 | 5162.6 | 4546.4 | 4070.3 | 3689.2 | 3423.0 | 3273.5 | 3199.0 |
| 70°   | 5255.9 | 4281.4 | 3611.2 | 3134.5 | 2787.4 | 2503.6 | 2368.2 | 2288.4 |
| 72.5° | 3615.9 | 2723.5 | 2153.6 | 1757.8 | 1480.5 | 1243.0 | 1149.2 | 1142.2 |
| 75°   | 1623.5 | 1075.3 | 741.1  | 571.1  | 480.8  | 418.1  | 398.7  | 384.0  |
| 77.5° | 454.4  | 336.0  | 299.6  | 280.3  | 261.5  | 239.8  | 231.6  | 233.4  |
| 80°   | 221.0  | 208.7  | 200.5  | 188.2  | 171.2  | 153.0  | 144.8  | 148.3  |
| 82.5° | 146.6  | 144.8  | 150.1  | 141.3  | 116.7  | 99.1   | 83.3   | 76.2   |
| 85°   | 89.1   | 90.3   | 92.1   | 92.6   | 78.6   | 55.1   | 37.5   | 42.2   |
| 87.5° | 35.2   | 40.5   | 44.0   | 45.7   | 42.8   | 26.4   | 21.1   | 21.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)