

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: McGRAW-EDISON

Report Number: P453175

Luminaire Tested: **GALN-SA4A-830-U-T4W-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P453175  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-27)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA4A-830-U-T4W-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10399 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 121  
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



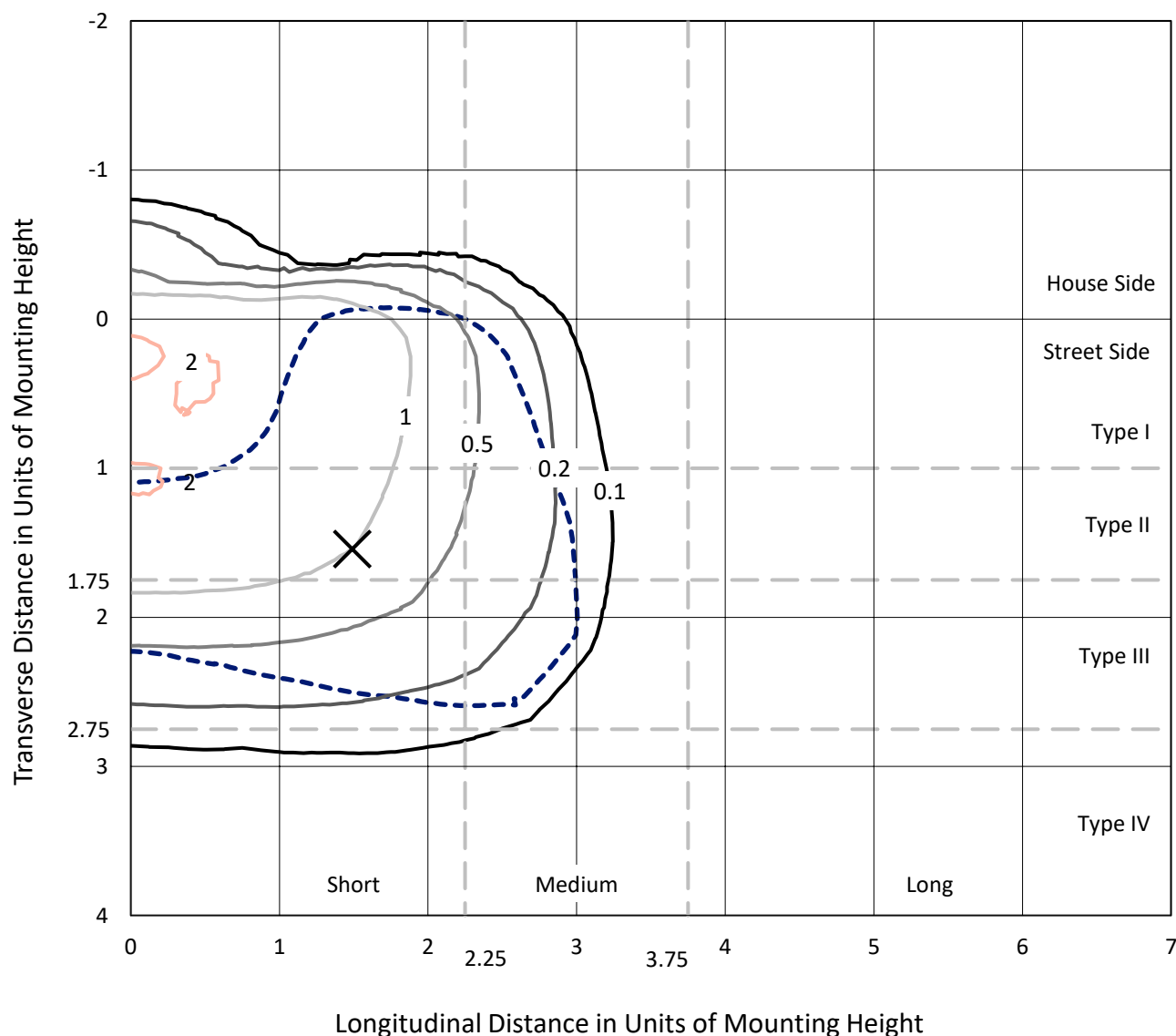
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

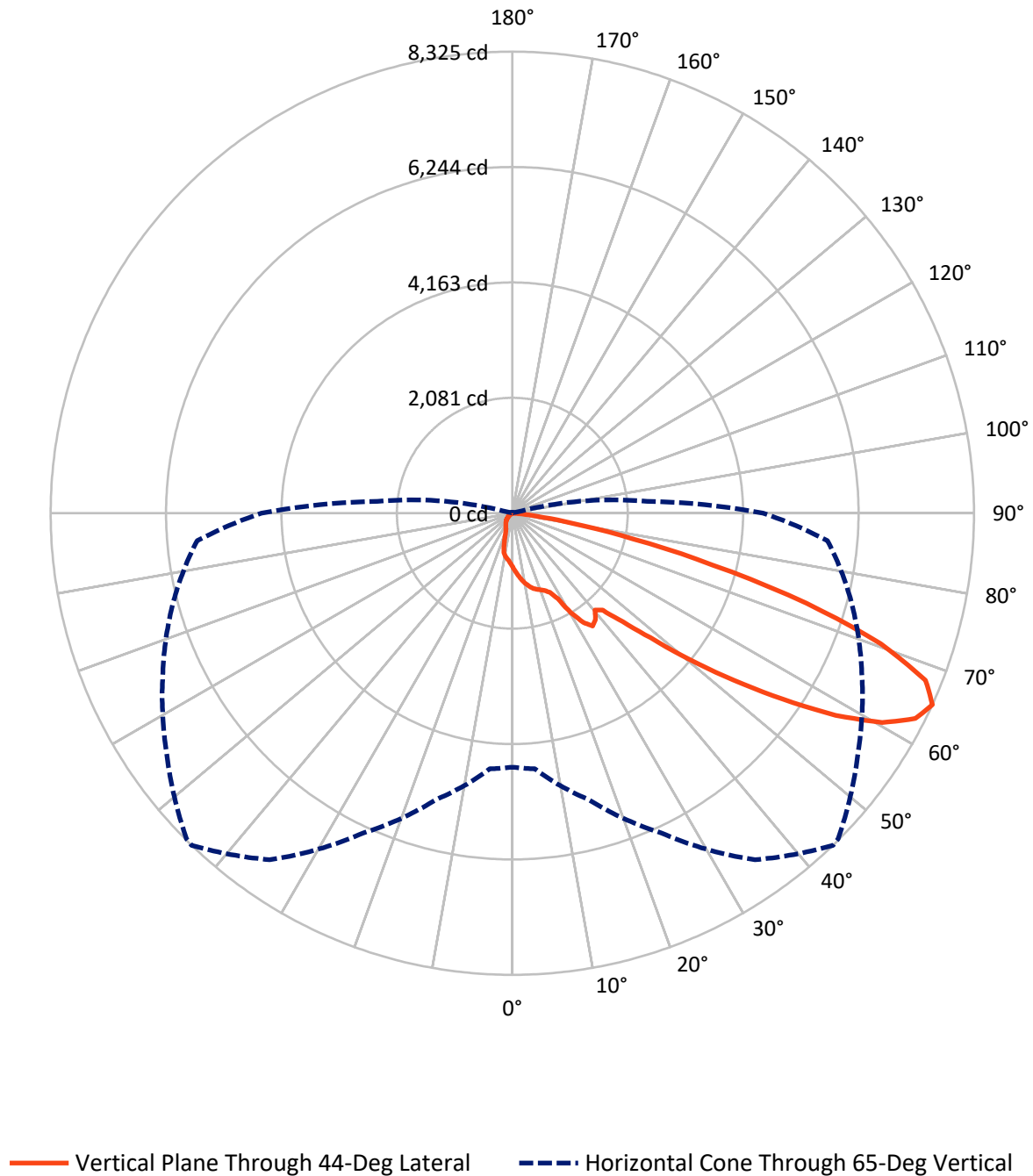
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



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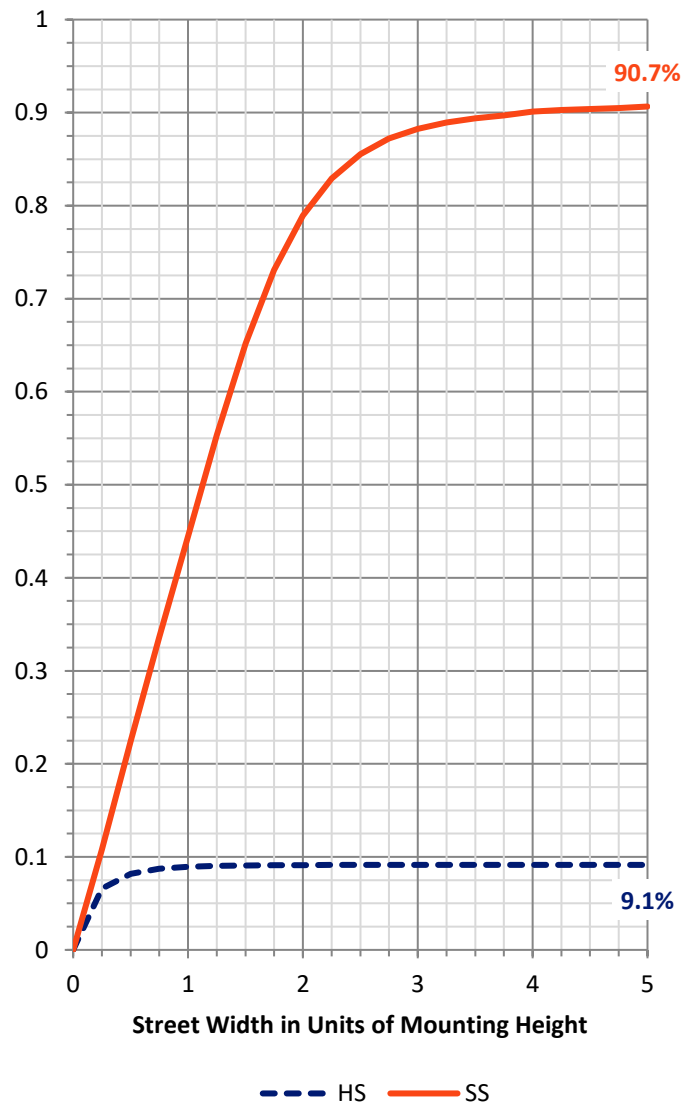
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 958.1    | 0.0    | 958.1   |
|                    | % Fixture | 9.2      | 0.0    | 9.2     |
| <b>Street Side</b> | Lumens    | 9440.9   | 0.0    | 9440.9  |
|                    | % Fixture | 90.8     | 0.0    | 90.8    |
| <b>Total</b>       | Lumens    | 10399.0  | 0.0    | 10399.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 96.3    | 0.9       |
| 10°-20°   | 289.7   | 2.8       |
| 20°-30°   | 491.3   | 4.7       |
| 30°-40°   | 816.8   | 7.9       |
| 40°-50°   | 1426.1  | 13.7      |
| 50°-60°   | 2786.2  | 26.8      |
| 60°-70°   | 3232.6  | 31.1      |
| 70°-80°   | 1177.1  | 11.3      |
| 80°-90°   | 82.9    | 0.8       |
| 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°    | 10399.0 | 100.0     |
| 0°-180°   | 10399.0 | 100.0     |

**Coefficient of Utilization**



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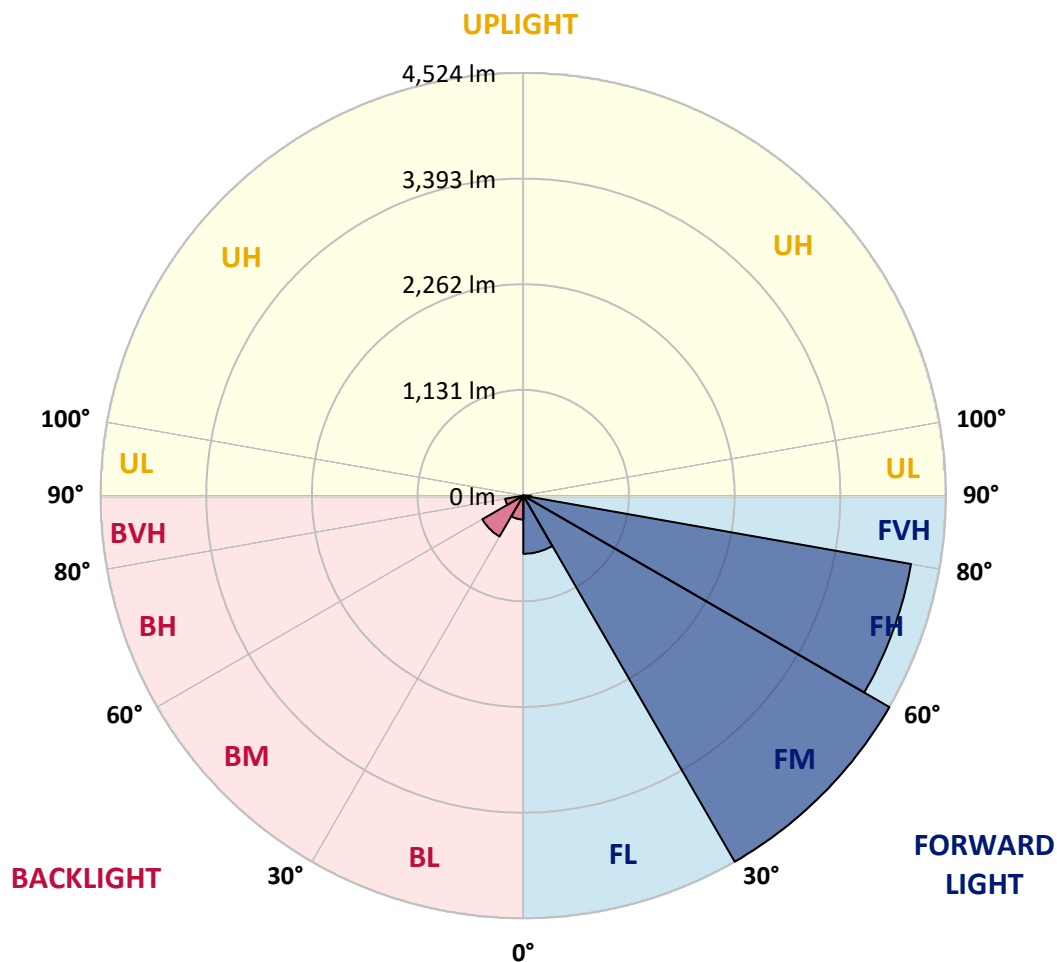
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 622.0  | 6.0       |                         |      |         |
| FM   | (30°-60°)   | 4523.6 | 43.5      |                         |      |         |
| FH   | (60°-80°)   | 4213.5 | 40.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 81.8   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 255.3  | 2.5       | B1/500                  |      |         |
| BM   | (30°-60°)   | 505.5  | 4.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 196.2  | 1.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 1.1    | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 44°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  | 967.8  |
| 2.5°  | 1089.4 | 1084.6 | 1082.3 | 1069.5 | 1060.0 | 1048.1 | 1048.1 | 1033.0 | 1015.5 | 996.4  | 979.0  |
| 5°    | 1211.0 | 1203.0 | 1192.7 | 1181.6 | 1159.3 | 1127.6 | 1127.6 | 1095.8 | 1059.2 | 1026.6 | 990.9  |
| 7.5°  | 1327.8 | 1320.6 | 1303.2 | 1281.7 | 1245.2 | 1211.8 | 1209.4 | 1163.3 | 1119.6 | 1070.3 | 1019.5 |
| 10°   | 1430.3 | 1424.7 | 1409.6 | 1368.3 | 1330.2 | 1286.5 | 1285.7 | 1234.0 | 1183.2 | 1122.8 | 1060.0 |
| 12.5° | 1501.8 | 1502.6 | 1482.7 | 1443.0 | 1393.7 | 1352.4 | 1349.3 | 1298.4 | 1245.2 | 1180.0 | 1102.9 |
| 15°   | 1552.7 | 1552.7 | 1532.0 | 1487.5 | 1443.0 | 1406.5 | 1403.3 | 1358.8 | 1304.0 | 1233.2 | 1149.8 |
| 17.5° | 1567.0 | 1571.7 | 1549.5 | 1509.8 | 1474.0 | 1442.2 | 1441.4 | 1404.1 | 1360.4 | 1292.0 | 1197.5 |
| 20°   | 1561.4 | 1566.2 | 1548.7 | 1517.7 | 1493.1 | 1474.8 | 1472.4 | 1457.3 | 1416.8 | 1352.4 | 1248.3 |
| 22.5° | 1549.5 | 1554.3 | 1541.5 | 1523.3 | 1511.4 | 1516.9 | 1512.9 | 1525.7 | 1504.2 | 1426.3 | 1308.7 |
| 25°   | 1551.9 | 1556.6 | 1547.1 | 1536.8 | 1547.1 | 1581.3 | 1591.6 | 1646.4 | 1627.4 | 1520.1 | 1373.9 |
| 27.5° | 1626.6 | 1636.1 | 1622.6 | 1627.4 | 1663.9 | 1743.4 | 1763.2 | 1857.8 | 1773.6 | 1639.3 | 1475.6 |
| 30°   | 1792.6 | 1786.3 | 1760.9 | 1783.9 | 1911.0 | 2079.5 | 2073.9 | 2058.8 | 1926.9 | 1776.8 | 1596.4 |
| 32.5° | 1943.6 | 1938.1 | 1936.5 | 2035.8 | 2266.2 | 2348.1 | 2344.1 | 2197.9 | 2064.4 | 1934.1 | 1715.6 |
| 35°   | 2004.8 | 1983.4 | 1978.6 | 2219.3 | 2604.7 | 2496.7 | 2472.0 | 2255.1 | 2231.3 | 2105.7 | 1837.1 |
| 37.5° | 2189.2 | 2174.1 | 2100.2 | 2249.5 | 2469.7 | 2433.9 | 2414.8 | 2353.6 | 2409.3 | 2257.5 | 1974.6 |
| 40°   | 2569.0 | 2526.9 | 2460.1 | 2313.9 | 2278.2 | 2293.2 | 2312.3 | 2480.0 | 2619.8 | 2464.9 | 2158.2 |
| 42.5° | 3041.0 | 3031.4 | 2907.5 | 2634.9 | 2367.1 | 2387.8 | 2412.4 | 2743.8 | 2922.6 | 2777.2 | 2457.7 |
| 45°   | 3607.5 | 3621.0 | 3442.3 | 3120.4 | 2769.2 | 2786.7 | 2822.5 | 3133.2 | 3332.6 | 3262.7 | 2928.9 |
| 47.5° | 4122.4 | 4112.1 | 4051.7 | 3717.2 | 3393.0 | 3354.1 | 3412.1 | 3633.0 | 3900.0 | 3911.1 | 3513.8 |
| 50°   | 4640.5 | 4695.4 | 4605.6 | 4474.5 | 4233.7 | 4151.8 | 4130.4 | 4238.5 | 4645.3 | 4592.1 | 4216.2 |
| 52.5° | 5385.1 | 5413.7 | 5245.2 | 5211.9 | 5266.7 | 5001.3 | 4979.8 | 5006.1 | 5370.0 | 5187.2 | 4742.2 |
| 55°   | 5853.1 | 5836.4 | 5773.6 | 6034.3 | 6251.2 | 5919.9 | 5892.8 | 5787.2 | 5971.5 | 5607.6 | 5248.4 |
| 57.5° | 6000.9 | 6024.7 | 6171.0 | 6642.2 | 7155.5 | 6874.2 | 6824.9 | 6524.6 | 6405.4 | 5999.3 | 5714.1 |
| 60°   | 5935.0 | 5978.7 | 6294.1 | 6995.0 | 7706.9 | 7664.8 | 7622.7 | 7118.1 | 6716.9 | 6326.7 | 6040.6 |
| 62.5° | 5465.3 | 5526.5 | 6031.1 | 6932.2 | 7893.7 | 8156.7 | 8104.2 | 7488.4 | 6924.2 | 6485.6 | 6097.8 |
| 65°   | 4580.1 | 4625.4 | 5350.1 | 6362.5 | 7628.3 | 8325.1 | 8306.1 | 7604.4 | 6956.8 | 6340.2 | 5706.1 |
| 67.5° | 3265.1 | 3419.2 | 4090.7 | 5362.0 | 6843.2 | 8037.5 | 8070.1 | 7465.4 | 6650.9 | 5711.7 | 4725.6 |
| 70°   | 2052.5 | 2157.4 | 2638.9 | 3838.8 | 5486.0 | 7051.4 | 7158.7 | 6828.9 | 5772.1 | 4452.2 | 3163.3 |
| 72.5° | 979.0  | 1056.8 | 1400.1 | 2429.9 | 3872.1 | 5548.0 | 5633.0 | 5606.0 | 4463.3 | 2805.0 | 1632.1 |
| 75°   | 436.2  | 465.6  | 668.3  | 1240.4 | 2499.8 | 3729.1 | 3949.2 | 3985.8 | 2789.1 | 1372.3 | 634.9  |
| 77.5° | 222.5  | 223.3  | 313.1  | 600.7  | 1248.3 | 2224.9 | 2268.6 | 2396.5 | 1512.1 | 604.7  | 220.9  |
| 80°   | 118.4  | 126.3  | 166.1  | 283.7  | 647.6  | 1095.8 | 1090.2 | 1198.3 | 670.7  | 296.4  | 73.9   |
| 82.5° | 53.2   | 58.8   | 93.8   | 148.6  | 316.3  | 415.6  | 448.2  | 490.3  | 287.6  | 189.1  | 32.6   |
| 85°   | 15.9   | 19.1   | 46.1   | 74.7   | 114.4  | 120.0  | 134.3  | 173.2  | 162.9  | 134.3  | 16.7   |
| 87.5° | 2.4    | 2.4    | 19.1   | 20.7   | 16.7   | 21.5   | 22.2   | 24.6   | 52.4   | 49.3   | 8.7    |
| 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°    | 967.8  | 967.8  | 967.8  | 967.8 | 967.8 | 967.8 | 967.8 | 967.8 | 967.8 | 967.8 | 967.8 |
| 2.5°  | 969.4  | 963.9  | 944.0  | 927.3 | 913.0 | 904.3 | 893.9 | 887.6 | 884.4 | 882.0 | 882.8 |
| 5°    | 973.4  | 959.9  | 925.7  | 898.7 | 878.0 | 855.8 | 840.7 | 832.0 | 828.0 | 821.6 | 821.6 |
| 7.5°  | 995.6  | 974.2  | 926.5  | 885.2 | 849.4 | 819.2 | 790.6 | 780.3 | 773.2 | 771.6 | 770.0 |
| 10°   | 1027.4 | 1000.4 | 935.3  | 878.0 | 827.2 | 785.9 | 745.3 | 709.6 | 681.8 | 665.1 | 662.7 |
| 12.5° | 1067.2 | 1028.2 | 948.8  | 873.3 | 808.1 | 735.0 | 627.7 | 555.4 | 507.0 | 491.9 | 494.2 |
| 15°   | 1103.7 | 1061.6 | 962.3  | 869.3 | 773.2 | 609.5 | 487.9 | 405.3 | 380.6 | 378.2 | 379.0 |
| 17.5° | 1147.4 | 1097.4 | 978.2  | 863.7 | 677.0 | 465.6 | 362.3 | 340.1 | 344.9 | 352.8 | 352.0 |
| 20°   | 1192.7 | 1135.5 | 997.2  | 830.4 | 540.3 | 350.4 | 320.2 | 322.6 | 329.8 | 336.9 | 338.5 |
| 22.5° | 1241.2 | 1179.2 | 1019.5 | 750.1 | 412.4 | 305.1 | 303.5 | 306.7 | 313.9 | 321.8 | 323.4 |
| 25°   | 1307.9 | 1234.0 | 1036.2 | 645.2 | 312.3 | 282.1 | 285.3 | 290.8 | 297.2 | 305.9 | 307.5 |
| 27.5° | 1393.7 | 1307.9 | 1044.9 | 508.6 | 270.2 | 261.4 | 262.2 | 270.2 | 278.1 | 286.1 | 286.1 |
| 30°   | 1505.0 | 1396.1 | 1027.4 | 384.6 | 249.5 | 241.6 | 238.4 | 243.2 | 253.5 | 261.4 | 262.2 |
| 32.5° | 1604.3 | 1479.6 | 981.3  | 294.0 | 234.4 | 223.3 | 215.3 | 216.1 | 220.1 | 224.9 | 225.7 |
| 35°   | 1703.6 | 1560.6 | 902.7  | 247.1 | 218.5 | 205.8 | 193.9 | 187.5 | 184.3 | 182.0 | 184.3 |
| 37.5° | 1830.8 | 1661.5 | 797.8  | 224.9 | 205.0 | 189.1 | 172.4 | 158.9 | 147.8 | 140.6 | 142.2 |
| 40°   | 1994.5 | 1801.4 | 673.8  | 210.6 | 192.3 | 173.2 | 151.0 | 133.5 | 114.4 | 108.1 | 104.9 |
| 42.5° | 2264.6 | 2013.5 | 543.5  | 198.7 | 179.6 | 156.5 | 128.7 | 104.9 | 87.4  | 81.1  | 82.6  |
| 45°   | 2691.3 | 2281.3 | 418.8  | 185.9 | 166.9 | 138.3 | 108.1 | 82.6  | 68.3  | 65.2  | 66.7  |
| 47.5° | 3257.1 | 2627.8 | 322.6  | 171.6 | 151.0 | 118.4 | 85.0  | 65.2  | 56.4  | 55.6  | 54.8  |
| 50°   | 3789.5 | 2950.4 | 269.4  | 155.7 | 131.9 | 98.5  | 69.9  | 54.8  | 49.3  | 48.5  | 48.5  |
| 52.5° | 4271.0 | 3181.6 | 219.3  | 137.5 | 111.2 | 81.1  | 58.8  | 48.5  | 43.7  | 41.3  | 41.3  |
| 55°   | 4699.3 | 3332.6 | 178.0  | 115.2 | 87.4  | 64.4  | 50.9  | 43.7  | 38.1  | 35.0  | 34.2  |
| 57.5° | 5022.7 | 3350.9 | 133.5  | 92.2  | 65.2  | 50.1  | 43.7  | 38.1  | 31.8  | 27.8  | 26.2  |
| 60°   | 5161.0 | 3192.7 | 98.5   | 69.9  | 48.5  | 39.7  | 35.0  | 31.0  | 23.8  | 19.9  | 19.1  |
| 62.5° | 5021.9 | 2885.2 | 73.1   | 53.2  | 37.3  | 29.4  | 24.6  | 23.0  | 16.7  | 11.9  | 11.1  |
| 65°   | 4523.7 | 2441.0 | 58.0   | 40.5  | 27.8  | 21.5  | 15.9  | 15.1  | 10.3  | 5.6   | 4.8   |
| 67.5° | 3624.2 | 1911.8 | 46.1   | 30.2  | 19.9  | 14.3  | 10.3  | 9.5   | 5.6   | 1.6   | 1.6   |
| 70°   | 2356.8 | 1222.1 | 37.3   | 22.2  | 12.7  | 9.5   | 6.4   | 4.8   | 3.2   | 0.8   | 0.0   |
| 72.5° | 1165.7 | 571.3  | 30.2   | 17.5  | 8.7   | 4.8   | 2.4   | 1.6   | 2.4   | 0.0   | 0.0   |
| 75°   | 452.1  | 203.4  | 22.2   | 11.9  | 4.8   | 2.4   | 1.6   | 0.0   | 0.8   | 0.0   | 0.0   |
| 77.5° | 150.2  | 67.5   | 13.5   | 6.4   | 3.2   | 1.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 55.6   | 26.2   | 7.2    | 4.0   | 1.6   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 22.2   | 10.3   | 4.8    | 3.2   | 1.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 11.1   | 6.4    | 3.2    | 2.4   | 1.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 7.9    | 4.8    | 3.2    | 2.4   | 1.6   | 0.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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)