

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: P591292

Luminaire Tested: **CTN-CA10-210-730-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591292  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-210-730-U-T2-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24901 lumens  
Efficiency: N/A  
Efficacy: 117.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

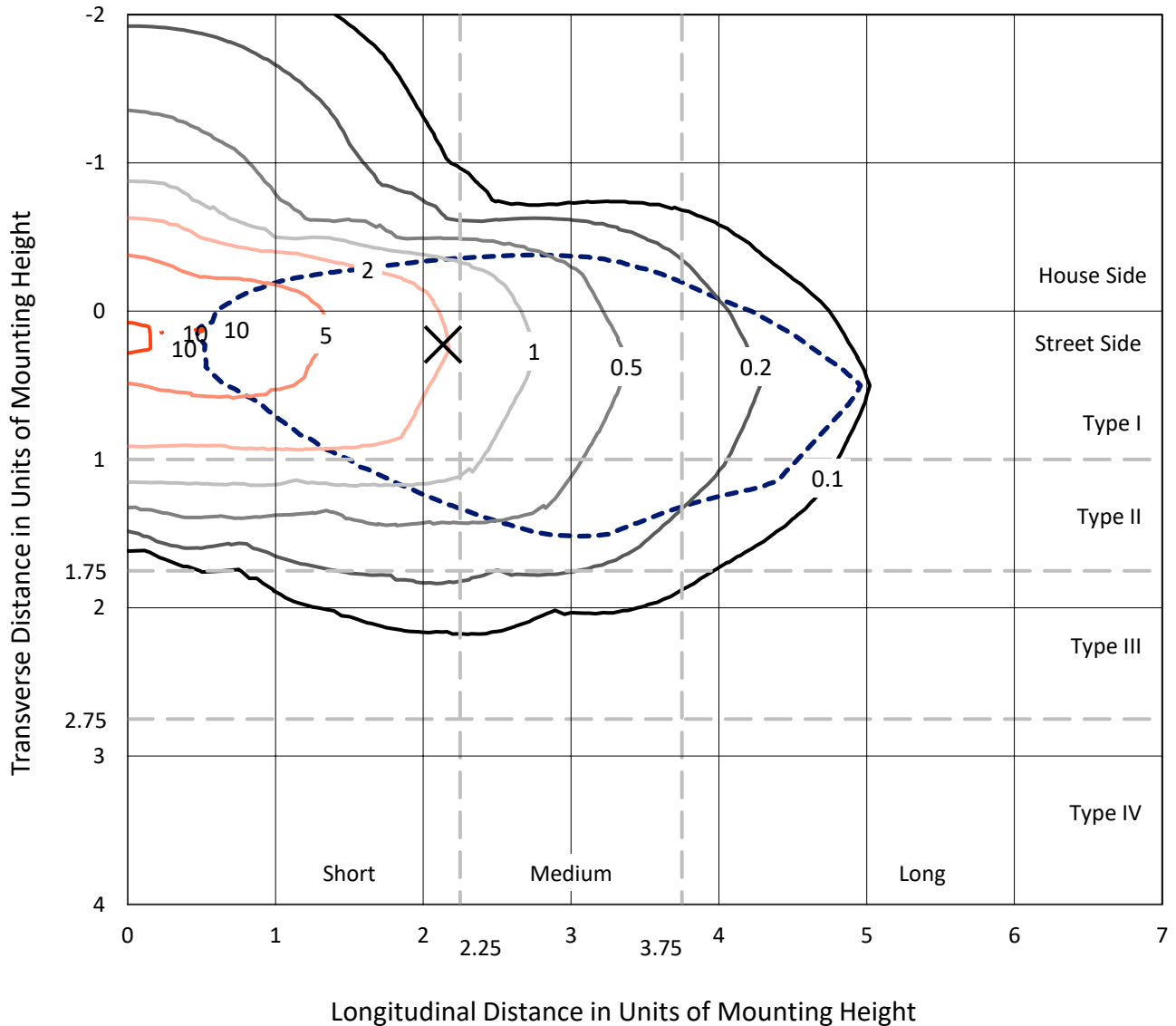
Input Watts (W): 212.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

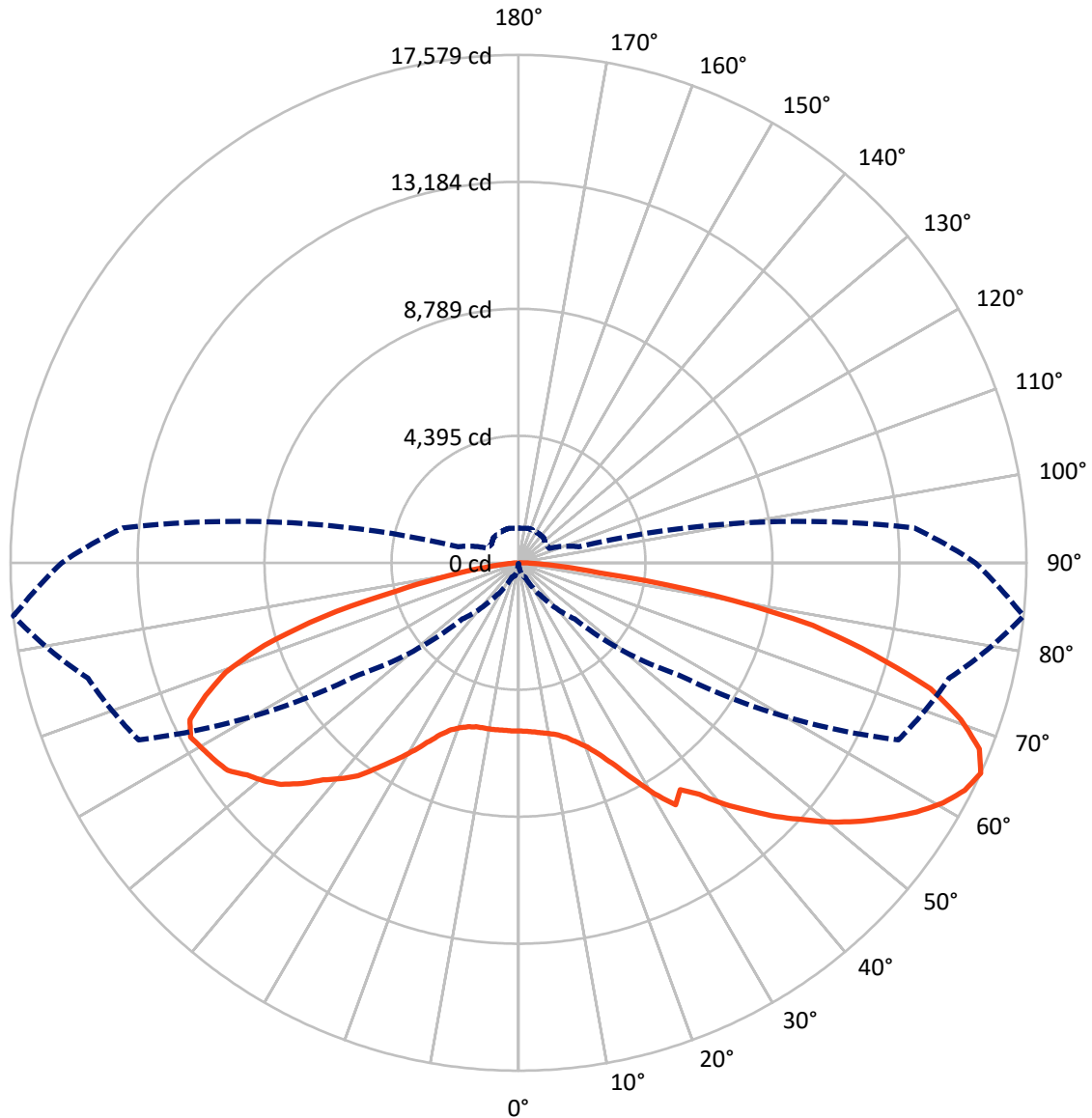
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.8 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 84-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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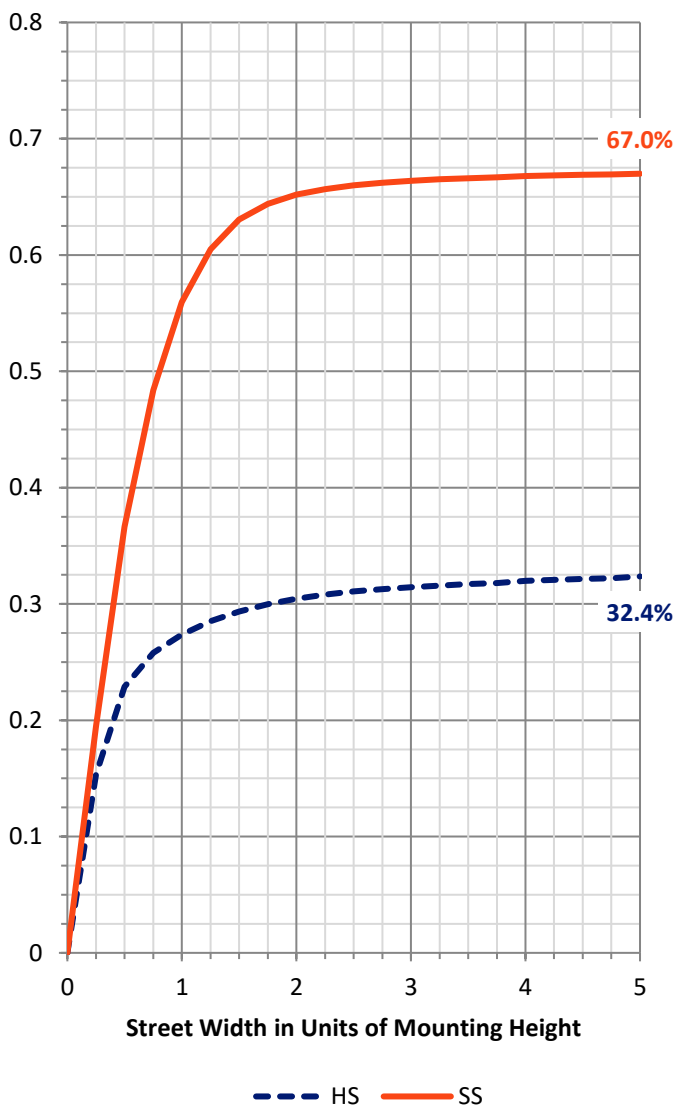
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8243.5   | 0.0    | 8243.5  |
|                    | % Fixture | 33.1     | 0.0    | 33.1    |
| <b>Street Side</b> | Lumens    | 16657.5  | 0.0    | 16657.5 |
|                    | % Fixture | 66.9     | 0.0    | 66.9    |
| <b>Total</b>       | Lumens    | 24901.0  | 0.0    | 24901.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 562.0   | 2.3       |
| 10°-20°   | 1672.7  | 6.7       |
| 20°-30°   | 2513.2  | 10.1      |
| 30°-40°   | 3342.1  | 13.4      |
| 40°-50°   | 4126.4  | 16.6      |
| 50°-60°   | 4637.0  | 18.6      |
| 60°-70°   | 4547.8  | 18.3      |
| 70°-80°   | 2957.1  | 11.9      |
| 80°-90°   | 542.7   | 2.2       |
| 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°    | 24901.0 | 100.0     |
| 0°-180°   | 24901.0 | 100.0     |

**Coefficient of Utilization**



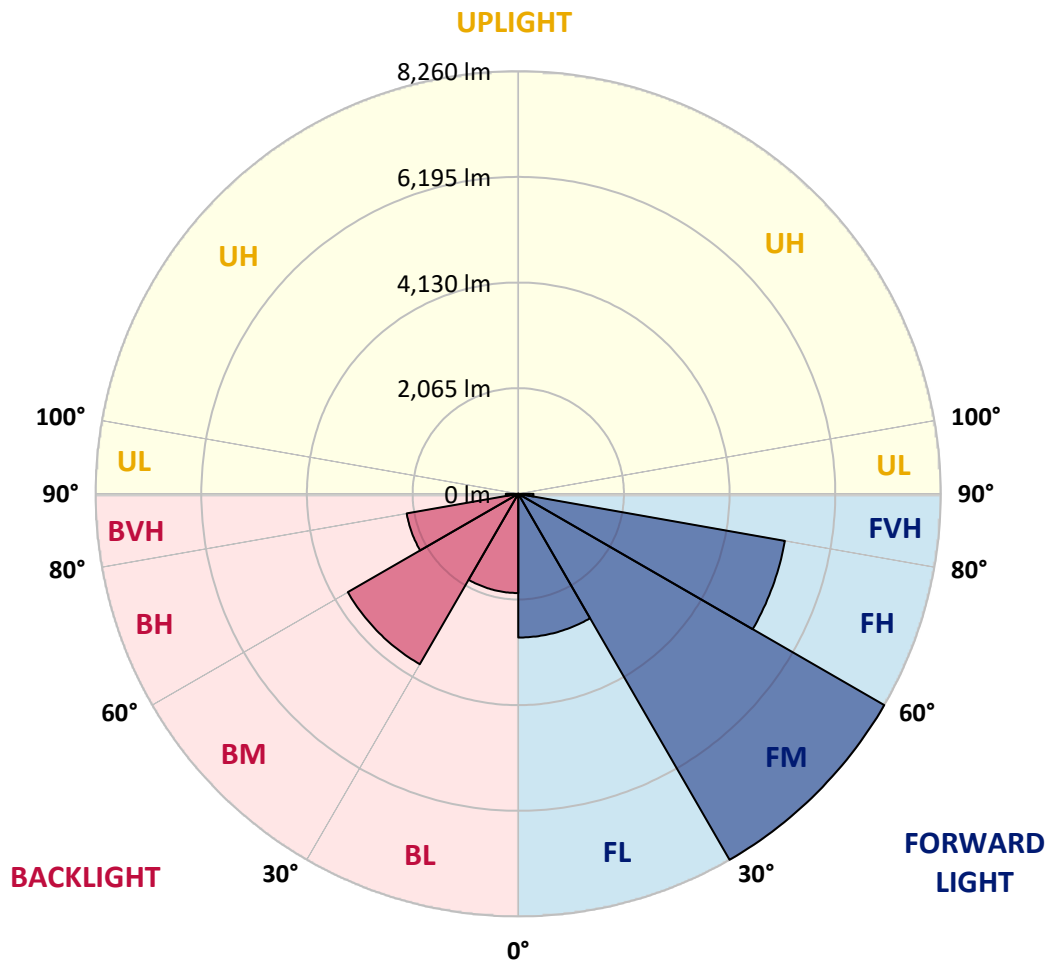
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 2808.7 | 11.3      |                         |      |         |
| FM (30°-60°)   | 8259.6 | 33.2      |                         |      |         |
| FH (60°-80°)   | 5291.1 | 21.2      |                         |      | G3/7500 |
| FVH (80°-90°)  | 298.1  | 1.2       |                         |      | G3/500  |
| BL (0°-30°)    | 1939.2 | 7.8       | B3/2500                 |      |         |
| BM (30°-60°)   | 3845.9 | 15.4      | B3/5000                 |      |         |
| BH (60°-80°)   | 2213.8 | 8.9       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 244.6  | 1.0       |                         |      | G3/500  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°     | 75°     | 84°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1  | 5821.1  | 5821.1  | 5821.1  |
| 2.5°  | 6071.1 | 6013.9 | 6020.2 | 6047.8 | 5941.9 | 5976.8 | 5917.5 | 5928.1  | 5857.1  | 5844.4  | 5851.8  |
| 5°    | 6497.9 | 6436.5 | 6436.5 | 6453.4 | 6275.5 | 6227.8 | 6062.6 | 6035.1  | 5930.2  | 5883.6  | 5885.7  |
| 7.5°  | 6718.2 | 6657.8 | 6646.2 | 6662.1 | 6533.9 | 6544.5 | 6375.0 | 6213.0  | 6026.6  | 5944.0  | 5939.7  |
| 10°   | 7042.3 | 6974.5 | 6934.3 | 6935.3 | 6762.7 | 6697.0 | 6572.1 | 6458.7  | 6173.8  | 6012.8  | 5992.7  |
| 12.5° | 7303.9 | 7252.0 | 7230.8 | 7215.0 | 7024.3 | 6980.9 | 6745.8 | 6653.6  | 6349.6  | 6117.7  | 6091.2  |
| 15°   | 7455.4 | 7406.7 | 7376.0 | 7339.9 | 7234.0 | 7163.1 | 7061.4 | 6851.7  | 6558.3  | 6286.1  | 6253.2  |
| 17.5° | 7060.3 | 6976.6 | 6831.5 | 6768.0 | 6743.6 | 6846.4 | 7283.8 | 7176.8  | 6827.3  | 6525.4  | 6490.5  |
| 20°   | 6018.1 | 6094.4 | 6204.5 | 5954.6 | 6031.9 | 6795.5 | 7616.4 | 7606.8  | 7203.3  | 6812.5  | 6766.9  |
| 22.5° | 5120.0 | 4918.7 | 5266.1 | 5647.4 | 5891.0 | 6611.2 | 7745.6 | 8103.6  | 7712.8  | 7216.0  | 7163.1  |
| 25°   | 4197.4 | 4311.8 | 4780.0 | 5547.9 | 5888.9 | 6471.4 | 7674.6 | 8484.9  | 8364.1  | 7765.7  | 7703.2  |
| 27.5° | 4072.4 | 4074.6 | 4524.7 | 5112.5 | 6005.4 | 6795.5 | 7752.0 | 8499.7  | 9100.3  | 8476.4  | 8355.7  |
| 30°   | 4046.0 | 4033.3 | 4155.1 | 4868.9 | 5799.9 | 7098.5 | 8249.8 | 8632.1  | 9279.3  | 9270.8  | 9109.8  |
| 32.5° | 3922.0 | 3914.6 | 4041.7 | 4365.8 | 5360.4 | 7419.4 | 8721.1 | 9249.6  | 9214.6  | 9986.8  | 9943.3  |
| 35°   | 3745.2 | 3771.6 | 3929.5 | 4266.3 | 5153.8 | 7152.5 | 9205.1 | 9957.1  | 10016.4 | 9639.4  | 9812.0  |
| 37.5° | 3560.9 | 3575.7 | 3728.2 | 4134.9 | 4808.6 | 6685.4 | 9573.7 | 10650.9 | 10854.2 | 10173.2 | 10035.5 |
| 40°   | 3309.9 | 3340.6 | 3519.6 | 3977.1 | 4738.7 | 6252.2 | 9313.1 | 11441.0 | 11757.7 | 10987.7 | 10775.8 |
| 42.5° | 3044.0 | 3058.8 | 3277.0 | 3720.8 | 4622.1 | 6258.5 | 8778.3 | 12123.1 | 12590.2 | 11731.2 | 11516.2 |
| 45°   | 2811.0 | 2815.2 | 3019.6 | 3416.8 | 4392.3 | 6219.4 | 8440.4 | 12150.6 | 13586.8 | 12527.7 | 12257.6 |
| 47.5° | 2526.1 | 2566.3 | 2768.6 | 3164.8 | 4098.9 | 6088.0 | 8598.2 | 11295.9 | 14586.7 | 13287.1 | 13040.3 |
| 50°   | 1937.2 | 1969.0 | 2360.9 | 2918.0 | 3778.0 | 5868.8 | 8706.2 | 11984.3 | 13472.4 | 14111.1 | 13934.2 |
| 52.5° | 1666.0 | 1612.0 | 1893.8 | 2640.5 | 3484.6 | 5503.4 | 8751.8 | 12950.3 | 13470.3 | 14856.8 | 14679.9 |
| 55°   | 712.8  | 1093.0 | 1706.3 | 2168.1 | 3216.7 | 5016.2 | 8719.0 | 13895.0 | 14127.0 | 15560.0 | 15498.6 |
| 57.5° | 563.5  | 589.9  | 1254.0 | 1754.0 | 2898.9 | 4440.0 | 8570.7 | 14519.9 | 14703.2 | 16264.4 | 16089.6 |
| 60°   | 103.8  | 117.6  | 616.4  | 741.4  | 2099.2 | 3579.9 | 8030.5 | 14608.9 | 15123.7 | 16877.6 | 16654.1 |
| 62.5° | 47.7   | 56.1   | 495.7  | 617.5  | 1678.8 | 2944.4 | 7567.7 | 14580.3 | 15512.4 | 17333.1 | 17136.1 |
| 65°   | 22.2   | 28.6   | 443.8  | 560.3  | 1453.2 | 2747.4 | 6765.9 | 14503.0 | 15426.6 | 17578.8 | 17258.9 |
| 67.5° | 16.9   | 24.4   | 407.8  | 503.1  | 1208.5 | 2551.5 | 6004.3 | 13691.7 | 15013.5 | 17198.5 | 16754.8 |
| 70°   | 16.9   | 24.4   | 372.8  | 457.6  | 1025.3 | 2302.6 | 4874.2 | 12676.0 | 14070.9 | 16237.9 | 15868.3 |
| 72.5° | 18.0   | 24.4   | 331.5  | 414.1  | 888.6  | 1988.0 | 3807.7 | 11054.4 | 12940.7 | 14911.8 | 14523.1 |
| 75°   | 18.0   | 24.4   | 286.0  | 366.5  | 748.8  | 1665.0 | 2549.4 | 7901.3  | 11146.5 | 12691.8 | 12259.7 |
| 77.5° | 18.0   | 24.4   | 237.3  | 306.1  | 610.1  | 1330.3 | 1649.1 | 4259.9  | 8769.8  | 10408.3 | 9854.4  |
| 80°   | 18.0   | 24.4   | 176.9  | 232.0  | 458.6  | 938.4  | 985.0  | 2148.0  | 4718.5  | 6837.9  | 6934.3  |
| 82.5° | 18.0   | 23.3   | 122.9  | 169.5  | 299.7  | 514.7  | 544.4  | 1036.9  | 1741.2  | 2804.6  | 2843.8  |
| 85°   | 16.9   | 20.1   | 87.9   | 112.3  | 164.2  | 193.8  | 264.8  | 515.8   | 834.6   | 1196.8  | 1187.3  |
| 87.5° | 10.6   | 10.6   | 28.6   | 44.5   | 66.7   | 76.3   | 118.6  | 190.6   | 288.1   | 395.1   | 372.8   |
| 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):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 5821.1  | 5821.1  | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 | 5821.1 |
| 2.5°  | 5850.8  | 5826.4  | 5795.7 | 5787.2 | 5715.2 | 5681.3 | 5612.5 | 5643.2 | 5608.2 | 5579.6 | 5612.5 |
| 5°    | 5859.2  | 5823.2  | 5758.6 | 5682.4 | 5528.8 | 5458.9 | 5361.4 | 5372.0 | 5321.2 | 5282.0 | 5304.2 |
| 7.5°  | 5880.4  | 5835.9  | 5734.3 | 5562.7 | 5379.4 | 5269.3 | 5167.6 | 5247.1 | 5212.1 | 5182.4 | 5204.7 |
| 10°   | 5891.0  | 5856.1  | 5676.0 | 5494.9 | 5231.2 | 5170.8 | 5043.7 | 5034.2 | 5037.3 | 5034.2 | 5069.1 |
| 12.5° | 5919.6  | 5869.8  | 5608.2 | 5377.3 | 5152.8 | 4992.9 | 4914.5 | 4913.4 | 4812.8 | 4769.4 | 4788.4 |
| 15°   | 6004.3  | 5896.3  | 5562.7 | 5237.5 | 4989.7 | 4883.8 | 4635.9 | 4637.0 | 4594.6 | 4544.8 | 4543.8 |
| 17.5° | 6173.8  | 5975.7  | 5562.7 | 5143.3 | 4839.3 | 4625.3 | 4409.3 | 4291.7 | 4263.1 | 4269.5 | 4265.2 |
| 20°   | 6397.3  | 6109.2  | 5560.6 | 5004.5 | 4627.4 | 4406.1 | 4094.7 | 3995.1 | 3905.1 | 3911.5 | 3911.5 |
| 22.5° | 6718.2  | 6306.2  | 5564.8 | 4877.4 | 4425.1 | 4124.3 | 3773.8 | 3647.7 | 3551.3 | 3554.5 | 3554.5 |
| 25°   | 7178.9  | 6644.1  | 5614.6 | 4800.1 | 4154.0 | 3792.8 | 3439.1 | 3243.1 | 3144.6 | 3145.7 | 3147.8 |
| 27.5° | 7765.7  | 7115.4  | 5787.2 | 4635.9 | 3928.4 | 3400.9 | 3013.3 | 2869.2 | 2770.7 | 2745.3 | 2745.3 |
| 30°   | 8429.8  | 7681.0  | 6010.7 | 4528.9 | 3578.9 | 2959.3 | 2637.3 | 2530.3 | 2411.7 | 2376.7 | 2376.7 |
| 32.5° | 9165.9  | 8248.7  | 6241.6 | 4397.6 | 3249.5 | 2580.1 | 2312.1 | 2213.6 | 2065.4 | 2021.9 | 2007.1 |
| 35°   | 9931.7  | 8835.5  | 6522.3 | 4213.3 | 2835.4 | 2267.6 | 2030.4 | 1910.7 | 1803.7 | 1746.5 | 1732.8 |
| 37.5° | 10344.8 | 9503.8  | 6775.4 | 4026.9 | 2515.5 | 2020.9 | 1756.1 | 1662.9 | 1591.9 | 1551.7 | 1544.2 |
| 40°   | 10912.5 | 9989.9  | 6906.7 | 3718.7 | 2171.3 | 1769.8 | 1502.9 | 1498.7 | 1508.2 | 1472.2 | 1470.1 |
| 42.5° | 11490.8 | 10469.7 | 6870.7 | 3305.6 | 1903.3 | 1513.5 | 1375.8 | 1448.9 | 1501.9 | 1470.1 | 1472.2 |
| 45°   | 12214.2 | 11115.8 | 7002.1 | 2871.4 | 1638.5 | 1371.6 | 1349.4 | 1435.2 | 1508.2 | 1500.8 | 1500.8 |
| 47.5° | 12946.0 | 11740.7 | 6759.5 | 2339.7 | 1460.6 | 1330.3 | 1352.5 | 1412.9 | 1504.0 | 1528.4 | 1523.1 |
| 50°   | 13542.3 | 12168.6 | 6610.2 | 1888.5 | 1360.0 | 1331.4 | 1363.1 | 1385.4 | 1484.9 | 1524.1 | 1523.1 |
| 52.5° | 14024.3 | 12576.4 | 6053.1 | 1594.0 | 1302.8 | 1335.6 | 1397.0 | 1381.1 | 1451.0 | 1492.3 | 1516.7 |
| 55°   | 14706.4 | 13140.9 | 5418.6 | 1480.7 | 1273.1 | 1331.4 | 1408.7 | 1396.0 | 1424.6 | 1443.6 | 1461.6 |
| 57.5° | 15233.8 | 13421.6 | 4569.2 | 1407.6 | 1246.6 | 1325.0 | 1399.1 | 1400.2 | 1414.0 | 1406.6 | 1399.1 |
| 60°   | 15676.5 | 13677.9 | 3737.8 | 1336.7 | 1212.7 | 1311.2 | 1358.9 | 1373.7 | 1369.5 | 1360.0 | 1340.9 |
| 62.5° | 15892.6 | 13955.4 | 2903.1 | 1261.5 | 1176.7 | 1271.0 | 1293.2 | 1310.2 | 1300.6 | 1268.9 | 1266.7 |
| 65°   | 15811.1 | 13756.3 | 2152.2 | 1179.9 | 1133.3 | 1226.5 | 1225.4 | 1232.9 | 1237.1 | 1196.8 | 1201.1 |
| 67.5° | 15353.5 | 12881.4 | 1639.6 | 1076.1 | 1083.5 | 1163.0 | 1157.7 | 1161.9 | 1150.2 | 1122.7 | 1126.9 |
| 70°   | 14023.2 | 11887.9 | 1163.0 | 901.3  | 981.8  | 1063.4 | 1070.8 | 1088.8 | 1062.3 | 1013.6 | 1016.8 |
| 72.5° | 12056.4 | 10180.6 | 815.5  | 718.1  | 862.2  | 965.9  | 961.7  | 960.7  | 924.6  | 943.7  | 967.0  |
| 75°   | 10283.3 | 7796.4  | 619.6  | 578.3  | 681.0  | 831.4  | 879.1  | 882.3  | 887.6  | 1078.2 | 1092.0 |
| 77.5° | 7916.1  | 4716.4  | 527.5  | 456.5  | 528.5  | 689.5  | 778.5  | 814.5  | 1118.5 | 1158.7 | 1137.5 |
| 80°   | 4717.5  | 2724.1  | 407.8  | 355.9  | 426.8  | 526.4  | 665.1  | 860.0  | 1123.8 | 1004.1 | 960.7  |
| 82.5° | 2296.2  | 1263.6  | 296.6  | 271.1  | 314.6  | 382.4  | 522.2  | 1002.0 | 951.1  | 776.4  | 765.8  |
| 85°   | 856.9   | 426.8   | 177.9  | 185.4  | 209.7  | 251.0  | 397.2  | 956.4  | 729.8  | 632.3  | 597.4  |
| 87.5° | 213.9   | 78.4    | 72.0   | 74.1   | 94.3   | 126.0  | 203.4  | 460.7  | 353.8  | 293.4  | 287.0  |
| 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)