

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: P591345

Luminaire Tested: **CTN-CA6-230-730-U-T4-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591345  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA6-230-730-U-T4-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (6) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14874 lumens  
Efficiency: N/A  
Efficacy: 65.3 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

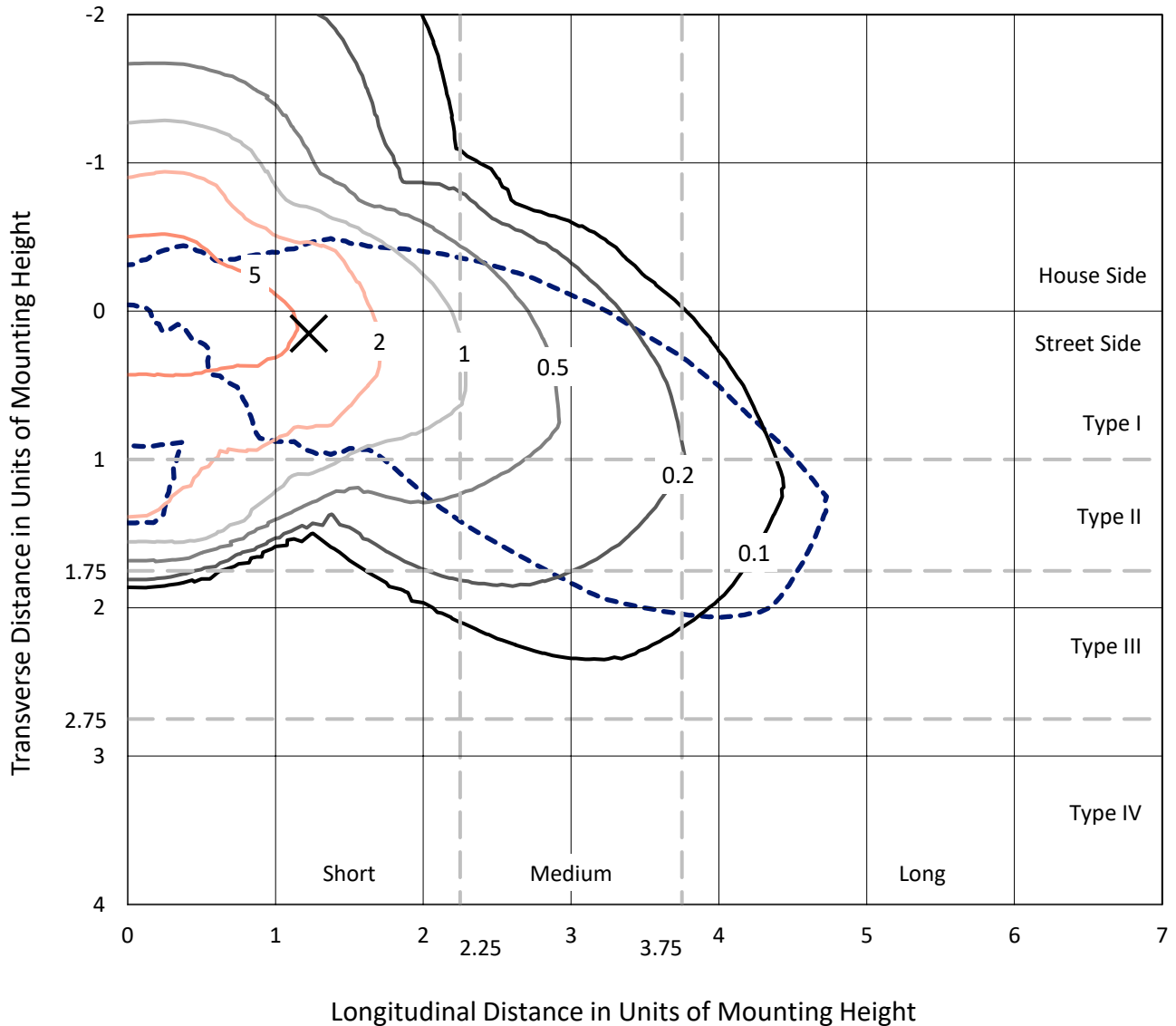
Input Watts (W): 227.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

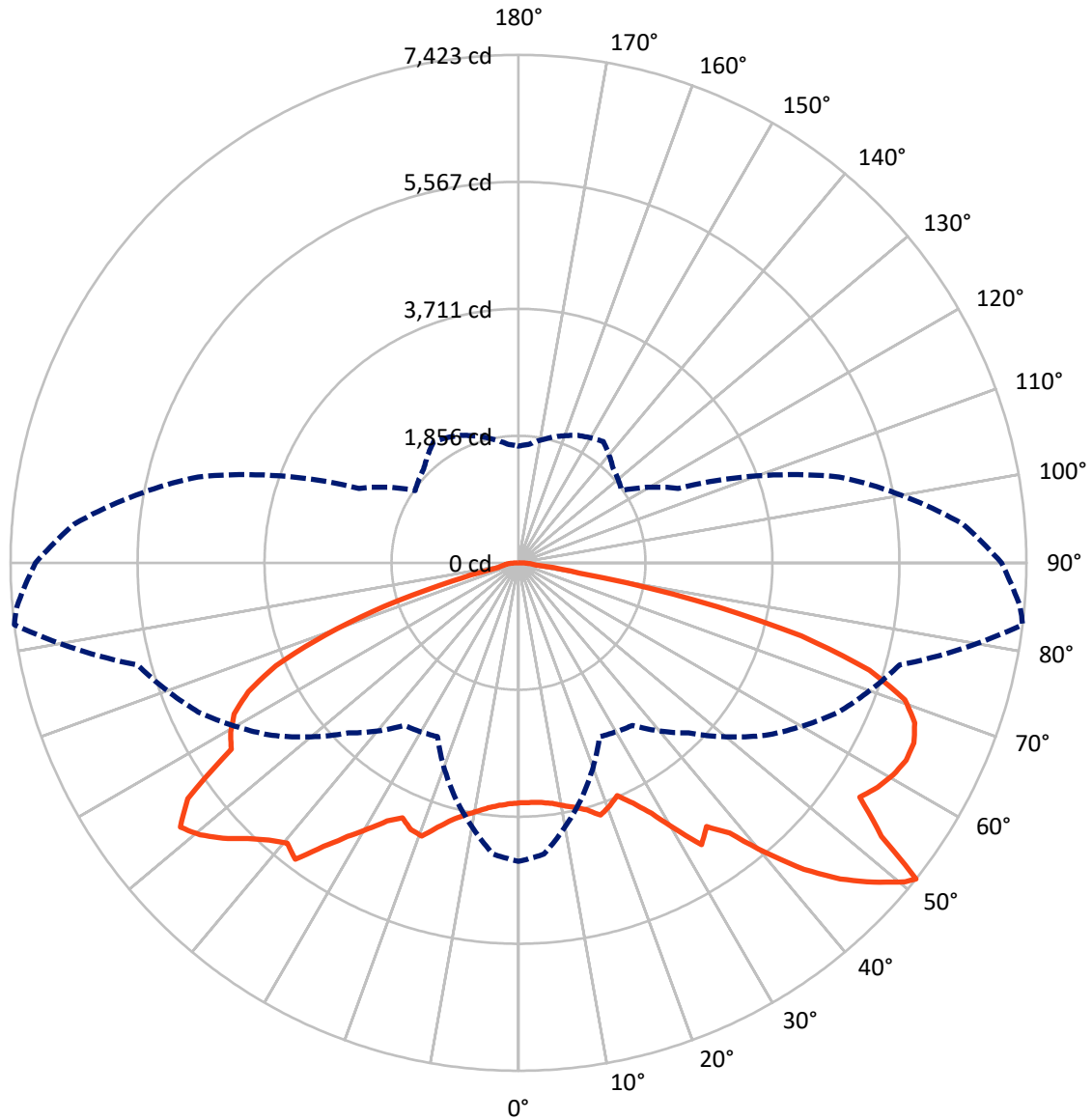
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral      - - - Horizontal Cone Through 51-Deg Vertical

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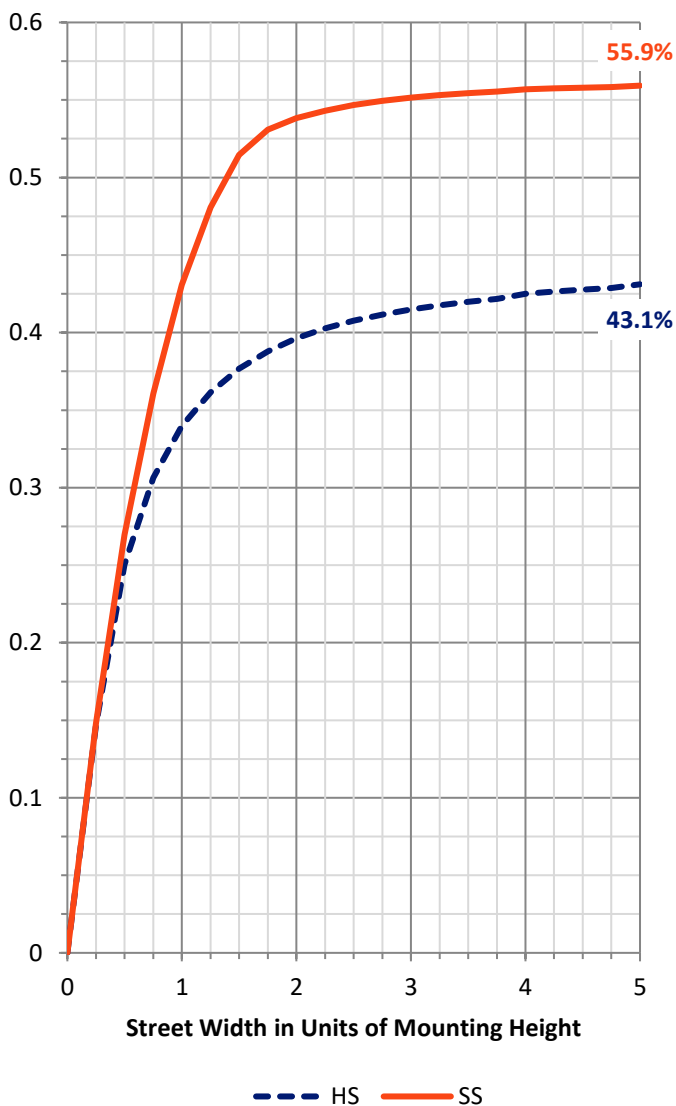
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6555.8   | 0.0    | 6555.8  |
|                    | % Fixture | 44.1     | 0.0    | 44.1    |
| <b>Street Side</b> | Lumens    | 8318.2   | 0.0    | 8318.2  |
|                    | % Fixture | 55.9     | 0.0    | 55.9    |
| <b>Total</b>       | Lumens    | 14874.0  | 0.0    | 14874.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 342.5   | 2.3       |
| 10°-20°   | 1042.3  | 7.0       |
| 20°-30°   | 1619.1  | 10.9      |
| 30°-40°   | 2166.4  | 14.6      |
| 40°-50°   | 2810.6  | 18.9      |
| 50°-60°   | 2993.4  | 20.1      |
| 60°-70°   | 2085.2  | 14.0      |
| 70°-80°   | 1454.8  | 9.8       |
| 80°-90°   | 359.9   | 2.4       |
| 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°    | 14874.0 | 100.0     |
| 0°-180°   | 14874.0 | 100.0     |

**Coefficient of Utilization**



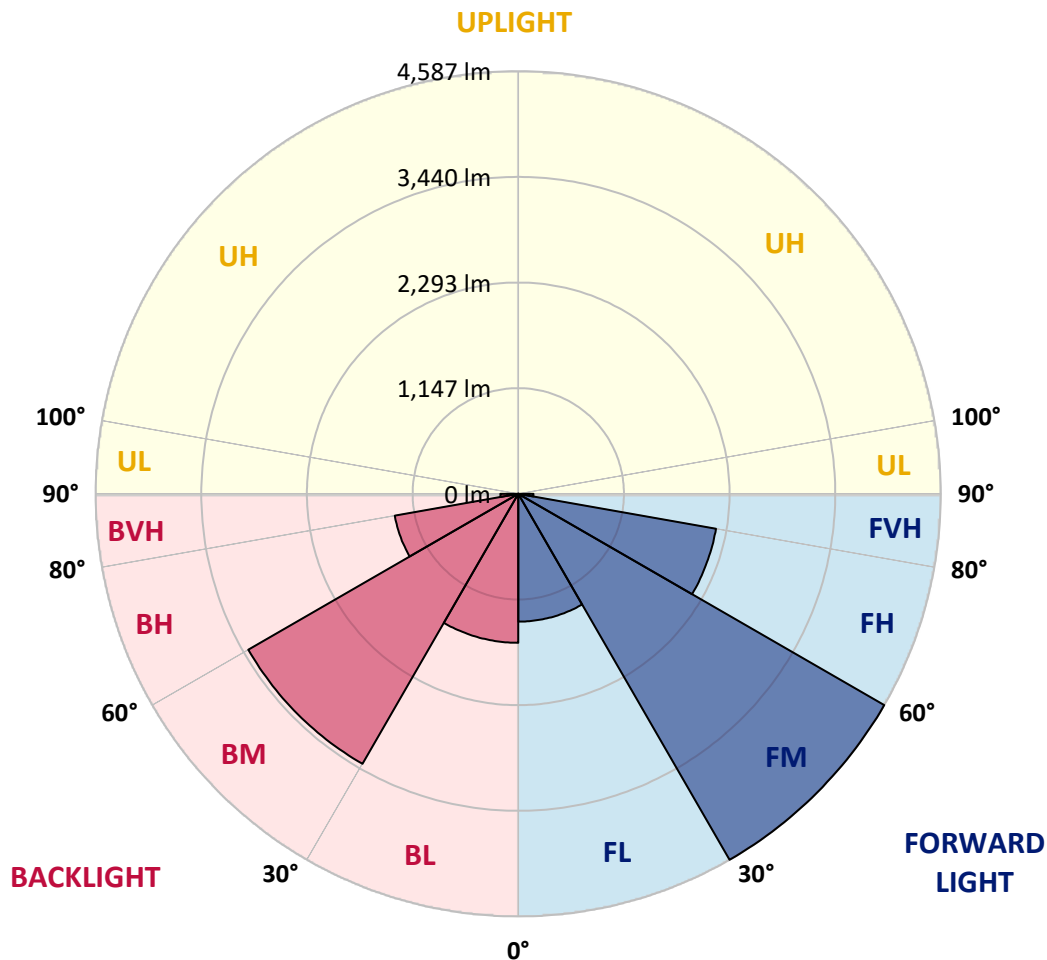
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 CATALOG NUMBER: CTN-CA6-230-730-U-T4-SSS-HM-EX180

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

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1386.9 | 9.3       |                         |      |         |
| FM (30°-60°)   | 4586.7 | 30.8      |                         |      |         |
| FH (60°-80°)   | 2179.4 | 14.7      |                         |      | G2/5000 |
| FVH (80°-90°)  | 165.2  | 1.1       |                         |      | G2/225  |
| BL (0°-30°)    | 1616.9 | 10.9      | B3/2500                 |      |         |
| BM (30°-60°)   | 3383.6 | 22.7      | B3/5000                 |      |         |
| BH (60°-80°)   | 1360.6 | 9.1       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 194.7  | 1.3       |                         |      | G2/225  |
| 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°    | 83°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 |
| 2.5°  | 3464.0 | 3440.0 | 3442.1 | 3474.5 | 3431.6 | 3459.8 | 3455.7 | 3505.8 | 3496.4 | 3506.9 | 3514.2 |
| 5°    | 3433.7 | 3414.9 | 3414.9 | 3457.7 | 3427.4 | 3457.7 | 3436.8 | 3480.7 | 3495.4 | 3518.4 | 3526.8 |
| 7.5°  | 3440.0 | 3420.1 | 3428.5 | 3466.1 | 3432.7 | 3464.0 | 3463.0 | 3504.8 | 3510.0 | 3550.8 | 3564.4 |
| 10°   | 3457.7 | 3435.8 | 3440.0 | 3470.3 | 3451.5 | 3505.8 | 3496.4 | 3553.9 | 3553.9 | 3608.3 | 3629.2 |
| 12.5° | 3421.2 | 3406.5 | 3414.9 | 3455.7 | 3472.4 | 3528.8 | 3541.4 | 3599.9 | 3608.3 | 3666.9 | 3693.0 |
| 15°   | 3381.4 | 3360.5 | 3387.7 | 3446.2 | 3474.5 | 3556.0 | 3583.2 | 3673.1 | 3685.7 | 3746.3 | 3775.6 |
| 17.5° | 3189.0 | 3175.4 | 3225.6 | 3272.7 | 3288.4 | 3367.8 | 3421.2 | 3570.7 | 3750.5 | 3877.0 | 3911.5 |
| 20°   | 2806.3 | 2804.3 | 2711.2 | 2691.3 | 2935.0 | 3225.6 | 3262.2 | 3389.8 | 3597.9 | 3795.5 | 3865.5 |
| 22.5° | 2343.2 | 2405.9 | 2708.1 | 2804.3 | 2798.0 | 2913.0 | 3381.4 | 3501.7 | 3593.7 | 3694.0 | 3735.9 |
| 25°   | 2343.2 | 2337.9 | 2516.7 | 2930.8 | 2931.8 | 2981.0 | 3085.5 | 3687.8 | 3775.6 | 3890.6 | 3924.1 |
| 27.5° | 2417.4 | 2422.6 | 2411.1 | 2713.3 | 3076.1 | 3122.1 | 3167.1 | 3478.7 | 4017.1 | 4144.7 | 4200.1 |
| 30°   | 2542.9 | 2551.2 | 2505.2 | 2506.3 | 3124.2 | 3262.2 | 3348.0 | 3470.3 | 4185.5 | 4512.7 | 4537.8 |
| 32.5° | 2790.7 | 2787.5 | 2730.0 | 2655.8 | 2741.5 | 3399.2 | 3524.7 | 3683.6 | 3919.9 | 4910.1 | 4968.6 |
| 35°   | 2988.3 | 2974.7 | 2935.0 | 2883.7 | 2770.8 | 3360.5 | 3693.0 | 3912.6 | 4213.7 | 4733.4 | 5042.9 |
| 37.5° | 3207.9 | 3188.0 | 3143.0 | 3080.3 | 2977.8 | 2345.2 | 3859.3 | 4174.0 | 4641.3 | 5010.4 | 5030.3 |
| 40°   | 3455.7 | 3433.7 | 3372.0 | 3280.0 | 3149.3 | 2402.8 | 3933.5 | 4497.1 | 5198.6 | 5569.8 | 5566.7 |
| 42.5° | 3646.0 | 3624.0 | 3591.6 | 3494.3 | 2768.7 | 2650.6 | 3430.6 | 4950.8 | 5801.9 | 6124.0 | 6096.8 |
| 45°   | 3807.0 | 3788.2 | 3791.3 | 3688.8 | 2597.2 | 2954.8 | 3821.6 | 5188.2 | 6370.7 | 6590.3 | 6554.8 |
| 47.5° | 3932.4 | 3903.2 | 3823.7 | 3103.3 | 2664.1 | 3165.0 | 4139.5 | 4525.3 | 6850.7 | 6975.1 | 6935.4 |
| 50°   | 4237.8 | 4188.6 | 3716.0 | 2755.1 | 2833.5 | 3422.2 | 4441.6 | 4991.6 | 6240.0 | 7325.4 | 7255.3 |
| 51°   | 4362.2 | 4273.3 | 3561.3 | 2803.2 | 2900.5 | 3515.3 | 4396.7 | 5161.0 | 5764.3 | 7422.6 | 7359.9 |
| 52.5° | 4492.9 | 4317.2 | 3136.8 | 2876.4 | 2982.0 | 3643.9 | 3734.8 | 5421.4 | 5897.1 | 6642.6 | 7012.7 |
| 55°   | 3790.2 | 3859.3 | 3239.2 | 3144.1 | 3136.8 | 3149.3 | 3814.3 | 5809.3 | 6174.2 | 6048.7 | 5975.5 |
| 57.5° | 2229.2 | 2270.0 | 3290.5 | 3520.5 | 2714.3 | 2501.0 | 4024.5 | 6102.0 | 6413.6 | 6187.8 | 6106.2 |
| 60°   | 1120.9 | 1173.1 | 1198.2 | 1092.6 | 1463.8 | 2281.5 | 3389.8 | 4422.8 | 6560.0 | 6292.3 | 6194.0 |
| 62.5° | 49.1   | 81.6   | 32.4   | 35.5   | 59.6   | 795.7  | 2490.6 | 4543.1 | 6683.4 | 6356.1 | 6226.5 |
| 65°   | 4.2    | 4.2    | 5.2    | 10.5   | 26.1   | 835.4  | 2771.8 | 4709.3 | 6733.6 | 6349.8 | 6176.3 |
| 67.5° | 1.0    | 1.0    | 2.1    | 7.3    | 18.8   | 904.4  | 3102.2 | 4777.3 | 6735.7 | 6243.2 | 6030.9 |
| 70°   | 0.0    | 1.0    | 2.1    | 6.3    | 16.7   | 946.3  | 3174.4 | 4763.7 | 6649.9 | 5992.2 | 5700.5 |
| 72.5° | 0.0    | 0.0    | 1.0    | 5.2    | 14.6   | 892.9  | 3090.7 | 4736.5 | 6357.2 | 5360.7 | 4946.7 |
| 75°   | 0.0    | 0.0    | 1.0    | 4.2    | 12.5   | 908.6  | 3099.1 | 4431.2 | 5551.0 | 4268.1 | 3765.1 |
| 77.5° | 0.0    | 0.0    | 1.0    | 4.2    | 11.5   | 838.6  | 2837.7 | 3837.3 | 4387.3 | 2656.8 | 2106.9 |
| 80°   | 0.0    | 0.0    | 1.0    | 4.2    | 10.5   | 719.4  | 2333.7 | 2995.6 | 2455.0 | 901.3  | 581.3  |
| 82.5° | 0.0    | 0.0    | 1.0    | 4.2    | 8.4    | 487.2  | 1550.6 | 1497.3 | 494.6  | 258.3  | 232.1  |
| 85°   | 0.0    | 0.0    | 1.0    | 3.1    | 6.3    | 290.7  | 776.9  | 203.9  | 191.3  | 164.2  | 148.5  |
| 87.5° | 0.0    | 0.0    | 1.0    | 2.1    | 4.2    | 123.4  | 239.4  | 62.7   | 79.5   | 66.9   | 59.6   |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 | 3505.8 |
| 2.5°  | 3520.5 | 3520.5 | 3532.0 | 3570.7 | 3566.5 | 3597.9 | 3580.1 | 3618.8 | 3621.9 | 3614.6 | 3632.4 |
| 5°    | 3534.1 | 3546.6 | 3585.3 | 3626.1 | 3609.4 | 3655.4 | 3677.3 | 3728.6 | 3726.5 | 3720.2 | 3741.1 |
| 7.5°  | 3572.8 | 3598.9 | 3637.6 | 3686.7 | 3704.5 | 3742.1 | 3744.2 | 3814.3 | 3810.1 | 3807.0 | 3827.9 |
| 10°   | 3637.6 | 3672.1 | 3715.0 | 3789.2 | 3778.7 | 3833.1 | 3810.1 | 3861.3 | 3860.3 | 3858.2 | 3879.1 |
| 12.5° | 3704.5 | 3754.7 | 3807.0 | 3879.1 | 3878.1 | 3880.2 | 3860.3 | 3886.4 | 3881.2 | 3866.6 | 3882.3 |
| 15°   | 3798.6 | 3865.5 | 3937.7 | 3989.9 | 3943.9 | 3934.5 | 3890.6 | 3874.9 | 3844.6 | 3802.8 | 3815.3 |
| 17.5° | 3954.4 | 4020.3 | 4112.3 | 4140.5 | 4065.2 | 4022.4 | 3903.2 | 3816.4 | 3722.3 | 3658.5 | 3672.1 |
| 20°   | 4094.5 | 4216.8 | 4304.7 | 4302.6 | 4206.4 | 4093.5 | 3908.4 | 3762.0 | 3580.1 | 3456.7 | 3446.2 |
| 22.5° | 3919.9 | 4125.9 | 4508.6 | 4463.6 | 4295.3 | 4135.3 | 3902.1 | 3675.2 | 3373.1 | 3181.7 | 3174.4 |
| 25°   | 4020.3 | 4024.5 | 4367.4 | 4553.5 | 4335.0 | 4117.5 | 3826.8 | 3523.6 | 3136.8 | 2938.1 | 2926.6 |
| 27.5° | 4276.4 | 4253.4 | 4158.3 | 4457.3 | 4298.4 | 4026.5 | 3675.2 | 3265.4 | 2921.4 | 2748.8 | 2740.5 |
| 30°   | 4580.7 | 4509.6 | 4285.8 | 3991.0 | 4147.8 | 3849.8 | 3442.1 | 3000.8 | 2726.9 | 2570.0 | 2557.5 |
| 32.5° | 4944.6 | 4795.0 | 4401.9 | 3939.8 | 3654.3 | 3583.2 | 3140.9 | 2791.7 | 2565.9 | 2402.8 | 2370.3 |
| 35°   | 5376.4 | 5152.6 | 4513.8 | 3853.0 | 3269.5 | 3188.0 | 2857.6 | 2603.5 | 2414.3 | 2249.1 | 2216.6 |
| 37.5° | 5375.3 | 5608.5 | 4679.0 | 3733.8 | 3031.1 | 2744.7 | 2651.6 | 2478.0 | 2308.7 | 2108.9 | 2072.3 |
| 40°   | 5415.1 | 5422.4 | 4860.9 | 3617.7 | 2808.4 | 2516.7 | 2529.3 | 2416.3 | 2241.7 | 2022.2 | 1984.5 |
| 42.5° | 5898.1 | 5542.6 | 5083.6 | 3461.9 | 2598.3 | 2348.4 | 2477.0 | 2394.4 | 2206.2 | 1981.4 | 1939.6 |
| 45°   | 6318.5 | 5908.6 | 4595.3 | 3291.5 | 2377.7 | 2217.7 | 2435.2 | 2343.2 | 2156.0 | 1932.2 | 1885.2 |
| 47.5° | 6684.4 | 6199.3 | 4719.8 | 2993.5 | 2162.3 | 2111.0 | 2354.7 | 2244.9 | 2066.1 | 1858.0 | 1816.2 |
| 50°   | 6962.5 | 6439.8 | 4828.5 | 2593.0 | 1953.2 | 2004.4 | 2224.0 | 2112.1 | 1939.6 | 1771.2 | 1735.7 |
| 51°   | 7057.7 | 6517.1 | 4850.5 | 2575.3 | 1842.3 | 1954.2 | 2162.3 | 2053.5 | 1898.8 | 1737.8 | 1705.3 |
| 52.5° | 7160.2 | 6617.5 | 4882.9 | 2615.0 | 1685.5 | 1871.6 | 2061.9 | 1966.7 | 1838.1 | 1700.1 | 1663.5 |
| 55°   | 5953.6 | 6218.1 | 4800.3 | 2531.4 | 1503.6 | 1707.4 | 1877.9 | 1835.0 | 1763.9 | 1641.6 | 1615.4 |
| 57.5° | 5736.1 | 5261.4 | 3981.6 | 2143.4 | 1343.6 | 1511.9 | 1699.1 | 1727.3 | 1672.9 | 1548.5 | 1529.7 |
| 60°   | 5783.1 | 5213.3 | 3545.6 | 1598.7 | 1184.6 | 1337.3 | 1565.2 | 1590.3 | 1543.3 | 1449.2 | 1423.0 |
| 62.5° | 5774.8 | 5089.9 | 3161.8 | 1126.1 | 1046.6 | 1246.3 | 1469.0 | 1479.5 | 1414.7 | 1336.3 | 1312.2 |
| 65°   | 5636.7 | 4806.6 | 2638.0 | 852.2  | 970.3  | 1196.1 | 1412.6 | 1417.8 | 1337.3 | 1236.9 | 1224.4 |
| 67.5° | 5329.3 | 4358.0 | 1835.0 | 748.6  | 927.4  | 1157.5 | 1374.9 | 1351.9 | 1274.6 | 1169.0 | 1150.1 |
| 70°   | 4740.7 | 3550.8 | 857.4  | 689.0  | 862.6  | 1086.4 | 1282.9 | 1255.7 | 1171.1 | 1072.8 | 1056.0 |
| 72.5° | 3800.7 | 2467.6 | 406.7  | 630.5  | 794.6  | 997.5  | 1170.0 | 1127.1 | 1057.1 | 1020.5 | 1011.1 |
| 75°   | 2487.4 | 1158.5 | 339.8  | 567.8  | 704.7  | 889.8  | 1072.8 | 1057.1 | 992.3  | 919.1  | 883.5  |
| 77.5° | 1009.0 | 305.3  | 307.4  | 504.0  | 632.6  | 819.7  | 969.3  | 956.7  | 871.0  | 805.1  | 790.5  |
| 80°   | 254.1  | 229.0  | 281.3  | 416.1  | 551.0  | 714.1  | 850.1  | 814.5  | 783.1  | 712.0  | 689.0  |
| 82.5° | 193.4  | 184.0  | 220.6  | 322.0  | 452.7  | 588.7  | 725.6  | 740.3  | 688.0  | 633.6  | 622.1  |
| 85°   | 134.9  | 167.3  | 133.8  | 229.0  | 335.6  | 464.2  | 608.5  | 634.7  | 599.1  | 537.4  | 495.6  |
| 87.5° | 74.2   | 87.8   | 55.4   | 120.2  | 177.7  | 254.1  | 349.2  | 352.4  | 291.7  | 267.7  | 252.0  |
| 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)