

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: P232693

Luminaire Tested: **CTN-10-8-D-E1-T3-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232693  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-8-D-E1-T3-7030  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 78609 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B4 - U0 - G5

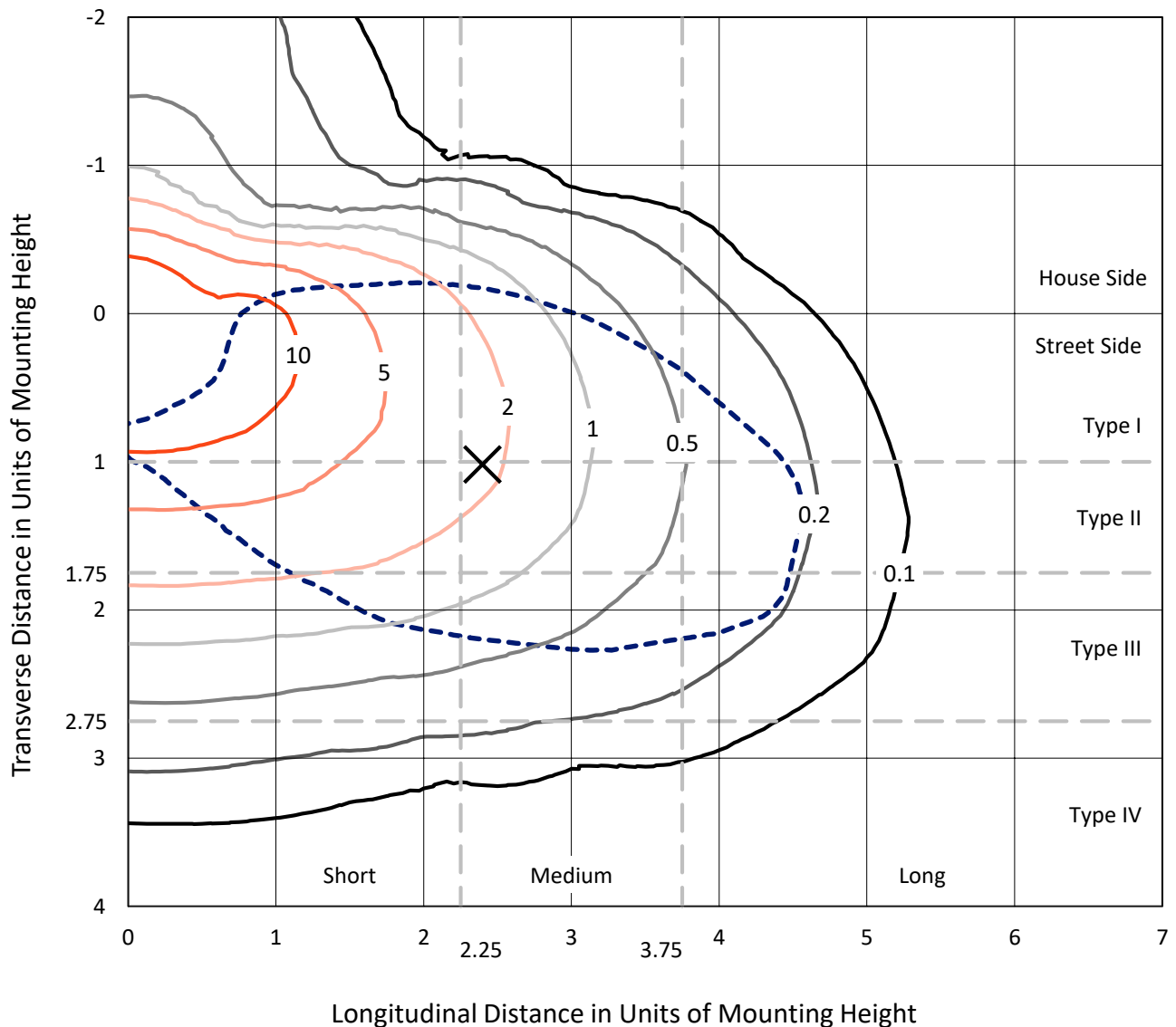
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

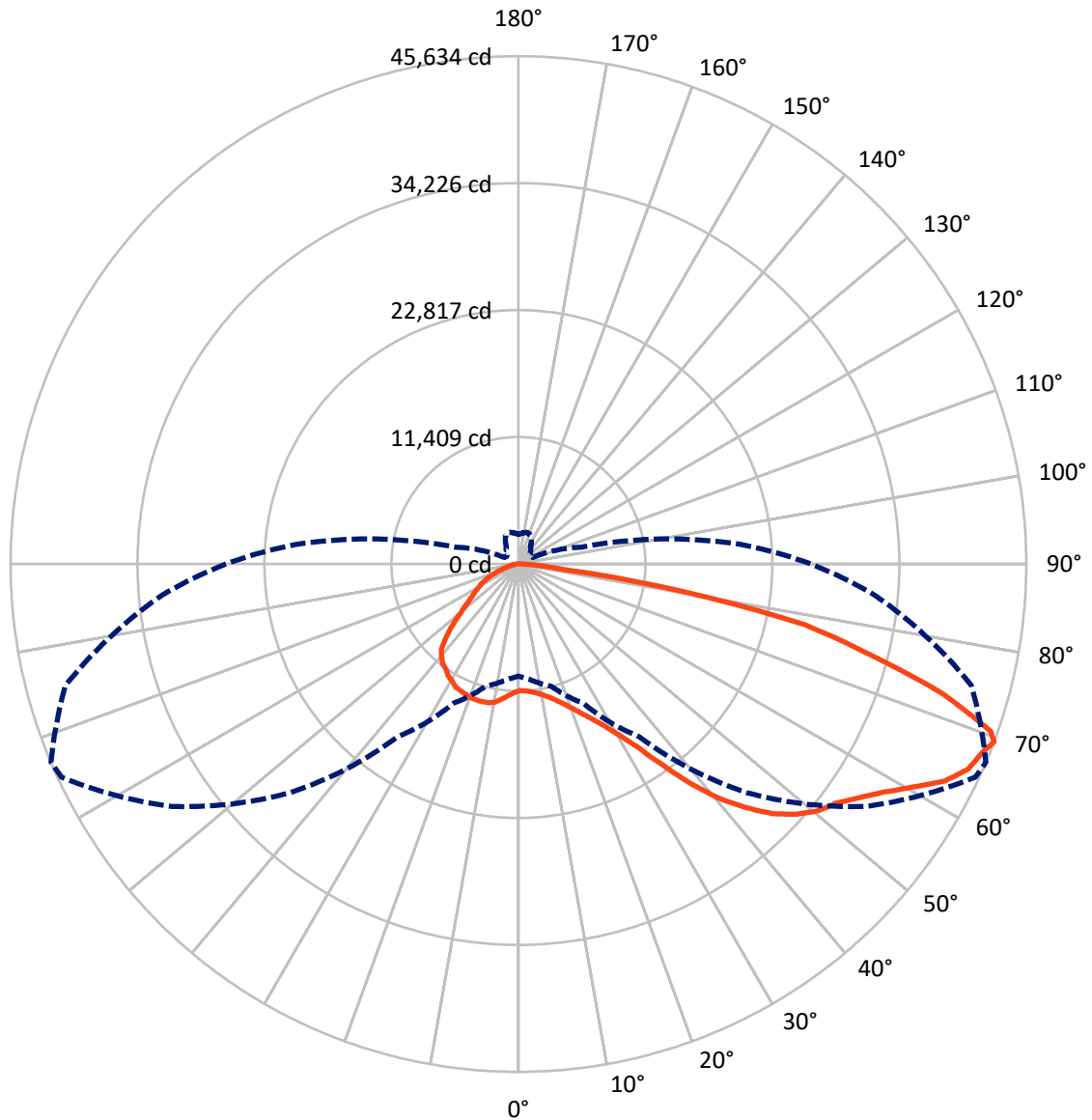
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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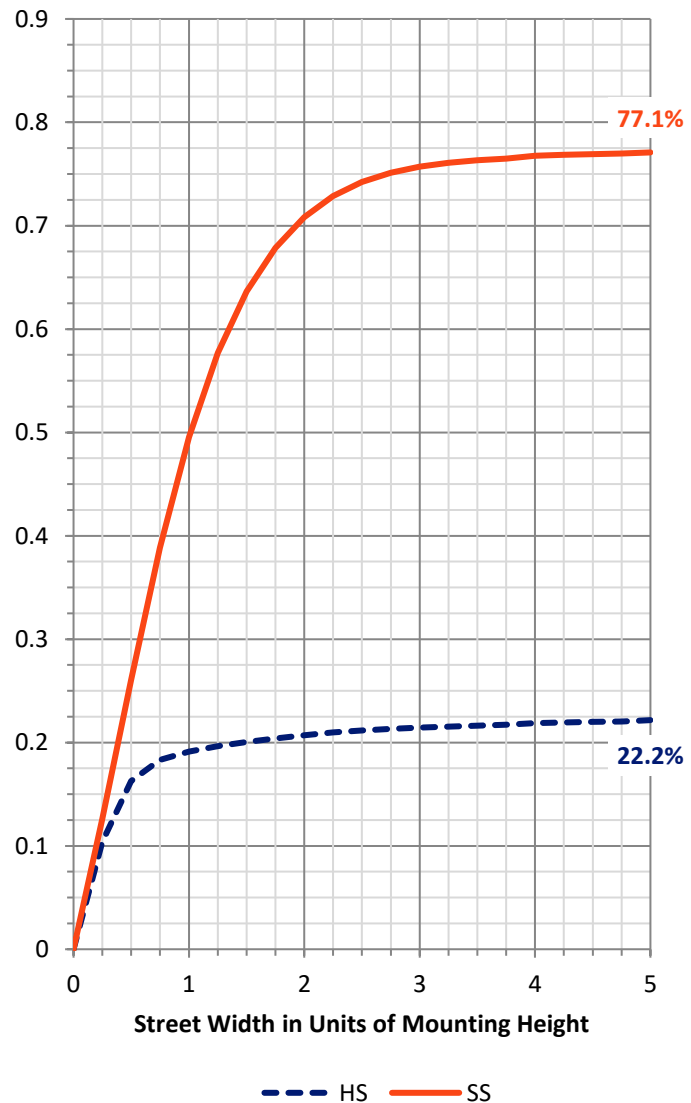
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 17881.9  | 0.0    | 17881.9 |
|                    | % Fixture | 22.7     | 0.0    | 22.7    |
| <b>Street Side</b> | Lumens    | 60727.1  | 0.0    | 60727.1 |
|                    | % Fixture | 77.3     | 0.0    | 77.3    |
| <b>Total</b>       | Lumens    | 78609.0  | 0.0    | 78609.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1154.8  | 1.5       |
| 10°-20°   | 3708.8  | 4.7       |
| 20°-30°   | 6449.7  | 8.2       |
| 30°-40°   | 9715.7  | 12.4      |
| 40°-50°   | 13418.2 | 17.1      |
| 50°-60°   | 16014.7 | 20.4      |
| 60°-70°   | 16866.4 | 21.5      |
| 70°-80°   | 9894.0  | 12.6      |
| 80°-90°   | 1386.7  | 1.8       |
| 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°    | 78609.0 | 100.0     |
| 0°-180°   | 78609.0 | 100.0     |



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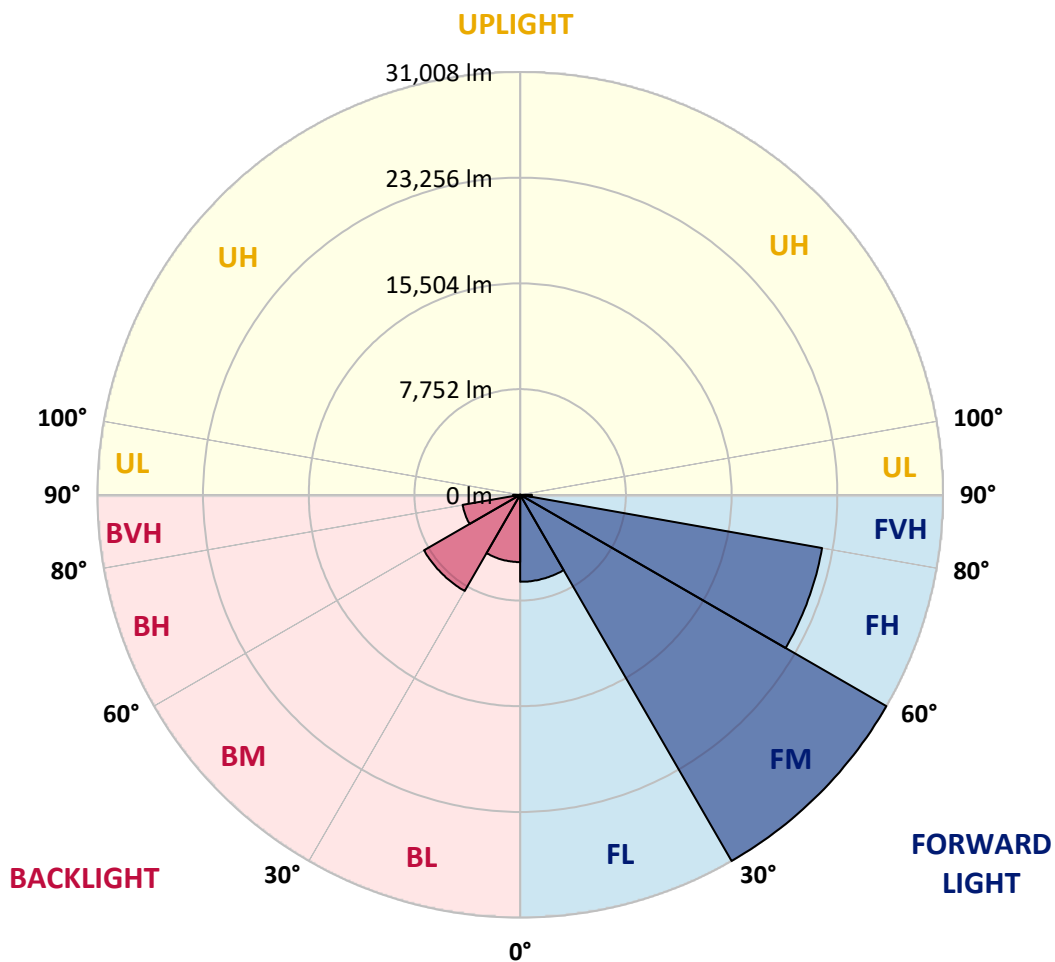
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 6379.0  | 8.1       |                         |      |         |
| FM   | (30°-60°)   | 31007.5 | 39.4      |                         |      |         |
| FH   | (60°-80°)   | 22478.8 | 28.6      |                         |      | G5      |
| FVH  | (80°-90°)   | 861.8   | 1.1       |                         |      | G5      |
| BL   | (0°-30°)    | 4934.3  | 6.3       | B4/5000                 |      |         |
| BM   | (30°-60°)   | 8141.0  | 10.4      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 4281.6  | 5.4       | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 524.9   | 0.7       |                         |      | G4/750  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G5**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 |
| 2.5°  | 11423.7 | 11438.8 | 11423.7 | 11398.5 | 11315.5 | 11353.2 | 11320.5 | 11426.2 | 11418.6 | 11378.4 | 11451.3 |
| 5°    | 11690.4 | 11708.0 | 11675.3 | 11655.2 | 11526.8 | 11544.4 | 11474.0 | 11531.9 | 11511.7 | 11443.8 | 11557.0 |
| 7.5°  | 12125.7 | 12143.3 | 12103.0 | 12075.4 | 11894.2 | 11853.9 | 11725.6 | 11743.2 | 11705.5 | 11597.3 | 11728.1 |
| 10°   | 12712.0 | 12727.1 | 12659.1 | 12591.2 | 12359.7 | 12261.6 | 12047.7 | 12012.5 | 11957.1 | 11851.4 | 11984.8 |
| 12.5° | 13343.5 | 13366.2 | 13283.1 | 13195.1 | 12925.8 | 12764.8 | 12460.3 | 12352.1 | 12284.2 | 12155.9 | 12301.8 |
| 15°   | 14020.4 | 14048.1 | 13962.5 | 13861.9 | 13565.0 | 13315.9 | 12935.9 | 12772.4 | 12706.9 | 12545.9 | 12636.5 |
| 17.5° | 14908.6 | 14901.1 | 14830.6 | 14692.2 | 14337.4 | 13972.6 | 13504.6 | 13260.5 | 13215.2 | 13059.2 | 13081.8 |
| 20°   | 15937.8 | 15902.5 | 15837.1 | 15645.9 | 15260.9 | 14808.0 | 14196.5 | 13887.0 | 13841.7 | 13710.9 | 13572.5 |
| 22.5° | 17055.0 | 17019.7 | 16956.8 | 16712.8 | 16332.8 | 15739.0 | 15006.8 | 14641.9 | 14581.5 | 14418.0 | 14186.5 |
| 25°   | 18154.6 | 18116.8 | 18081.6 | 17850.1 | 17480.2 | 16805.9 | 15925.2 | 15459.7 | 15432.0 | 15265.9 | 14840.7 |
| 27.5° | 19296.9 | 19274.3 | 19284.3 | 19085.6 | 18715.7 | 18016.2 | 17017.2 | 16511.5 | 16463.7 | 16252.3 | 15673.6 |
| 30°   | 20472.0 | 20477.0 | 20572.6 | 20361.3 | 20021.6 | 19317.1 | 18325.7 | 17809.8 | 17817.4 | 17628.7 | 16783.2 |
| 32.5° | 21523.8 | 21528.8 | 21742.7 | 21637.0 | 21450.8 | 20748.8 | 19837.9 | 19475.6 | 19548.5 | 19533.4 | 18667.9 |
| 35°   | 22283.7 | 22316.4 | 22794.5 | 22937.9 | 22867.4 | 22256.0 | 21707.5 | 21795.5 | 22027.0 | 22681.2 | 21772.9 |
| 37.5° | 22998.3 | 23010.9 | 23622.3 | 23954.5 | 24216.1 | 23848.8 | 23738.1 | 24573.4 | 24938.3 | 25844.1 | 24500.5 |
| 40°   | 23204.6 | 23378.2 | 24150.7 | 24613.7 | 25222.6 | 25403.8 | 25964.9 | 27200.4 | 27630.7 | 28176.7 | 26337.3 |
| 42.5° | 23015.9 | 23262.5 | 24231.2 | 25330.8 | 26176.3 | 27074.6 | 28103.7 | 29502.7 | 29892.7 | 30229.9 | 28096.2 |
| 45°   | 22620.9 | 22809.6 | 23816.1 | 25461.7 | 26994.1 | 28775.5 | 29963.2 | 31639.0 | 31991.3 | 31772.4 | 29470.0 |
| 47.5° | 22095.0 | 22238.4 | 23360.6 | 25252.8 | 27648.3 | 30300.4 | 31666.7 | 33352.6 | 33609.2 | 33098.4 | 30403.5 |
| 50°   | 21365.3 | 21536.4 | 22789.4 | 24966.0 | 28128.9 | 31576.1 | 33035.5 | 34640.9 | 34857.3 | 33923.7 | 31319.4 |
| 52.5° | 20464.5 | 20678.3 | 22135.2 | 24477.8 | 28488.7 | 32527.2 | 33991.7 | 35498.9 | 35717.8 | 35111.4 | 32044.1 |
| 55°   | 19442.9 | 19739.8 | 21239.4 | 23884.0 | 28513.9 | 33033.0 | 34588.0 | 36757.0 | 37069.0 | 36414.8 | 32678.2 |
| 57.5° | 18406.2 | 18597.4 | 20185.2 | 22975.6 | 28040.8 | 33201.6 | 35302.6 | 38221.4 | 38676.9 | 37677.9 | 33370.2 |
| 60°   | 17140.5 | 17324.2 | 18896.8 | 21760.3 | 27097.2 | 33460.7 | 36731.8 | 40317.5 | 40679.8 | 39149.9 | 33959.0 |
| 62.5° | 15643.4 | 15852.2 | 17278.9 | 20097.1 | 25700.7 | 33566.4 | 38188.7 | 42546.8 | 42962.0 | 40488.6 | 34298.7 |
| 65°   | 13741.1 | 13972.6 | 15273.5 | 18084.1 | 23705.3 | 32816.6 | 38817.8 | 44195.0 | 44408.8 | 41515.2 | 34152.7 |
| 67.5° | 11662.7 | 11853.9 | 12890.6 | 15580.5 | 20945.0 | 30861.5 | 38488.2 | 44803.9 | 45020.3 | 42212.2 | 33279.6 |
| 69°   | 10072.4 | 10366.8 | 11363.3 | 13796.5 | 18959.7 | 29072.5 | 37984.9 | 45304.6 | 45634.2 | 42134.2 | 32132.2 |
| 70°   | 8799.2  | 9128.9  | 10029.7 | 12223.8 | 17273.9 | 27215.5 | 37048.9 | 44924.7 | 45017.8 | 41381.8 | 31098.0 |
| 72.5° | 5560.9  | 5669.1  | 6079.2  | 7538.6  | 12153.4 | 21156.4 | 32421.5 | 39882.2 | 39857.0 | 36920.6 | 27147.5 |
| 75°   | 2747.7  | 2888.6  | 3666.1  | 4232.3  | 5988.6  | 13607.7 | 25519.5 | 32756.2 | 32761.2 | 31160.9 | 22318.9 |
| 77.5° | 1650.6  | 1711.0  | 1909.8  | 2727.6  | 3422.1  | 6106.9  | 17321.7 | 25932.2 | 26329.8 | 25361.0 | 16061.1 |
| 80°   | 1137.3  | 1107.1  | 1165.0  | 1341.1  | 1841.9  | 3210.7  | 7120.9  | 14659.5 | 15089.8 | 13917.2 | 6841.6  |
| 82.5° | 895.8   | 870.6   | 888.2   | 933.5   | 878.2   | 1487.1  | 3011.9  | 4383.3  | 4254.9  | 3751.7  | 2629.5  |
| 85°   | 626.5   | 576.2   | 608.9   | 591.3   | 523.4   | 873.1   | 1464.4  | 1821.7  | 1809.2  | 1869.6  | 1431.7  |
| 87.5° | 198.8   | 176.1   | 181.2   | 176.1   | 145.9   | 309.5   | 525.9   | 709.6   | 654.2   | 664.3   | 503.2   |
| 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°    | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 | 11375.8 |
| 2.5°  | 11468.9 | 11448.8 | 11471.5 | 11589.7 | 11562.0 | 11665.2 | 11690.4 | 11859.0 | 11866.5 | 11851.4 | 11926.9 |
| 5°    | 11609.9 | 11630.0 | 11715.5 | 11904.3 | 11967.2 | 12188.6 | 12289.2 | 12495.6 | 12515.7 | 12523.2 | 12596.2 |
| 7.5°  | 11813.7 | 11848.9 | 12032.6 | 12279.2 | 12397.4 | 12686.8 | 12837.8 | 13091.9 | 13109.5 | 13137.2 | 13220.2 |
| 10°   | 12115.6 | 12165.9 | 12311.9 | 12649.1 | 12686.8 | 12915.8 | 13054.2 | 13273.1 | 13258.0 | 13295.7 | 13371.2 |
| 12.5° | 12420.1 | 12447.8 | 12558.5 | 12790.0 | 12764.8 | 12988.7 | 13049.1 | 13192.6 | 13182.5 | 13180.0 | 13235.3 |
| 15°   | 12747.2 | 12699.4 | 12714.5 | 12802.5 | 12709.4 | 12847.8 | 12805.1 | 12910.7 | 12772.4 | 12717.0 | 12754.7 |
| 17.5° | 13094.4 | 12978.7 | 12830.2 | 12764.8 | 12588.7 | 12566.0 | 12420.1 | 12369.8 | 12274.1 | 12243.9 | 12274.1 |
| 20°   | 13507.1 | 13260.5 | 12900.7 | 12712.0 | 12327.0 | 12128.2 | 11848.9 | 11685.3 | 11463.9 | 11481.5 | 11524.3 |
| 22.5° | 13927.3 | 13580.1 | 13036.6 | 12530.8 | 11987.3 | 11584.7 | 11028.6 | 10880.2 | 10590.8 | 10505.2 | 10590.8 |
| 25°   | 14443.1 | 13977.6 | 13104.5 | 12369.8 | 11474.0 | 10756.9 | 10193.2 | 9667.3  | 9448.4  | 9234.5  | 9315.1  |
| 27.5° | 15120.0 | 14490.9 | 13351.1 | 12171.0 | 10892.7 | 9936.6  | 9040.8  | 8361.4  | 8089.7  | 7860.7  | 7875.8  |
| 30°   | 15998.2 | 15177.9 | 13444.2 | 11753.3 | 10193.2 | 8811.8  | 7684.5  | 6929.7  | 6590.0  | 6496.9  | 6456.6  |
| 32.5° | 17621.1 | 16285.0 | 13610.3 | 11448.8 | 9322.6  | 7588.9  | 6205.0  | 5394.8  | 5180.9  | 5221.2  | 5352.0  |
| 35°   | 20497.2 | 18602.4 | 14113.5 | 10812.2 | 8361.4  | 6255.3  | 4821.1  | 4194.5  | 4229.8  | 4302.7  | 4287.6  |
| 37.5° | 22978.2 | 20693.4 | 14951.4 | 10364.3 | 7186.3  | 4738.1  | 3641.0  | 3308.8  | 3520.2  | 3663.6  | 3658.6  |
| 40°   | 24664.0 | 22218.3 | 16048.5 | 9526.4  | 5701.8  | 3376.8  | 2679.8  | 2496.1  | 2765.3  | 3072.3  | 3125.2  |
| 42.5° | 26337.3 | 23604.7 | 16579.4 | 8784.1  | 4003.3  | 2382.9  | 1940.0  | 1987.8  | 2332.5  | 2621.9  | 2674.7  |
| 45°   | 27540.1 | 24611.2 | 16813.4 | 7460.6  | 2556.5  | 1824.3  | 1693.4  | 1869.6  | 2242.0  | 2470.9  | 2496.1  |
| 47.5° | 28423.3 | 25368.6 | 16559.3 | 6036.4  | 1882.1  | 1668.3  | 1670.8  | 1894.7  | 2269.6  | 2528.8  | 2538.9  |
| 50°   | 29203.3 | 25902.0 | 15535.2 | 4707.9  | 1693.4  | 1615.4  | 1703.5  | 1967.7  | 2350.2  | 2611.8  | 2604.3  |
| 52.5° | 29736.7 | 26058.0 | 14292.2 | 3857.4  | 1640.6  | 1585.2  | 1731.2  | 2035.6  | 2375.3  | 2551.5  | 2536.4  |
| 55°   | 30091.5 | 25824.0 | 13336.0 | 3175.5  | 1595.3  | 1582.7  | 1776.5  | 2121.2  | 2400.5  | 2470.9  | 2435.7  |
| 57.5° | 30310.4 | 25351.0 | 12528.3 | 2730.1  | 1557.5  | 1582.7  | 1826.8  | 2153.9  | 2493.6  | 2621.9  | 2581.6  |
| 60°   | 30245.0 | 25139.6 | 11433.7 | 2365.3  | 1504.7  | 1587.7  | 1854.5  | 2201.7  | 2868.5  | 3170.4  | 3178.0  |
| 62.5° | 30114.2 | 24726.9 | 10364.3 | 2075.9  | 1441.8  | 1617.9  | 1889.7  | 2478.5  | 3522.7  | 3525.2  | 3399.4  |
| 65°   | 29492.7 | 23483.9 | 8809.3  | 1814.2  | 1376.4  | 1625.5  | 1897.2  | 2933.9  | 3950.5  | 3618.3  | 3454.8  |
| 67.5° | 27781.6 | 21664.7 | 6990.1  | 1570.1  | 1303.4  | 1580.2  | 1889.7  | 2871.0  | 3190.6  | 2855.9  | 2772.9  |
| 69°   | 26289.5 | 20087.0 | 5840.2  | 1424.2  | 1250.6  | 1534.9  | 1897.2  | 2752.7  | 2954.0  | 2755.3  | 2679.8  |
| 70°   | 25202.5 | 18808.8 | 4962.0  | 1336.1  | 1202.8  | 1512.3  | 1897.2  | 2710.0  | 2921.3  | 2732.6  | 2659.6  |
| 72.5° | 21632.0 | 14775.3 | 2974.2  | 1114.7  | 1064.4  | 1424.2  | 1879.6  | 2644.6  | 2946.5  | 2785.5  | 2689.8  |
| 75°   | 16571.9 | 10746.8 | 1731.2  | 915.9   | 895.8   | 1278.2  | 1786.5  | 2604.3  | 3032.1  | 2788.0  | 2579.1  |
| 77.5° | 10618.5 | 4959.5  | 1290.8  | 744.8   | 727.2   | 1107.1  | 1668.3  | 2473.4  | 3115.1  | 2923.9  | 2659.6  |
| 80°   | 3688.8  | 2249.5  | 963.7   | 588.8   | 563.6   | 905.8   | 1461.9  | 2229.4  | 2966.6  | 2986.8  | 2788.0  |
| 82.5° | 2023.0  | 1482.1  | 681.9   | 437.8   | 415.2   | 568.7   | 1137.3  | 1922.4  | 2745.2  | 2956.6  | 2971.7  |
| 85°   | 1112.2  | 835.4   | 447.9   | 281.8   | 317.0   | 488.1   | 787.6   | 1494.6  | 2209.2  | 2569.1  | 2682.3  |
| 87.5° | 450.4   | 301.9   | 176.1   | 110.7   | 130.8   | 193.7   | 266.7   | 764.9   | 1333.6  | 1721.1  | 1894.7  |
| 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)