

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: P591395

Luminaire Tested: **CTN-CA10-310-740-U-T1-SSS-HM-EX120**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591395
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-740-U-T1-SSS-HM-EX120
Description: CELESTEON HIGH MAST LUMINAIRE, 120D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28189 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type I - Short
BUG Rating: B5 - U0 - G5

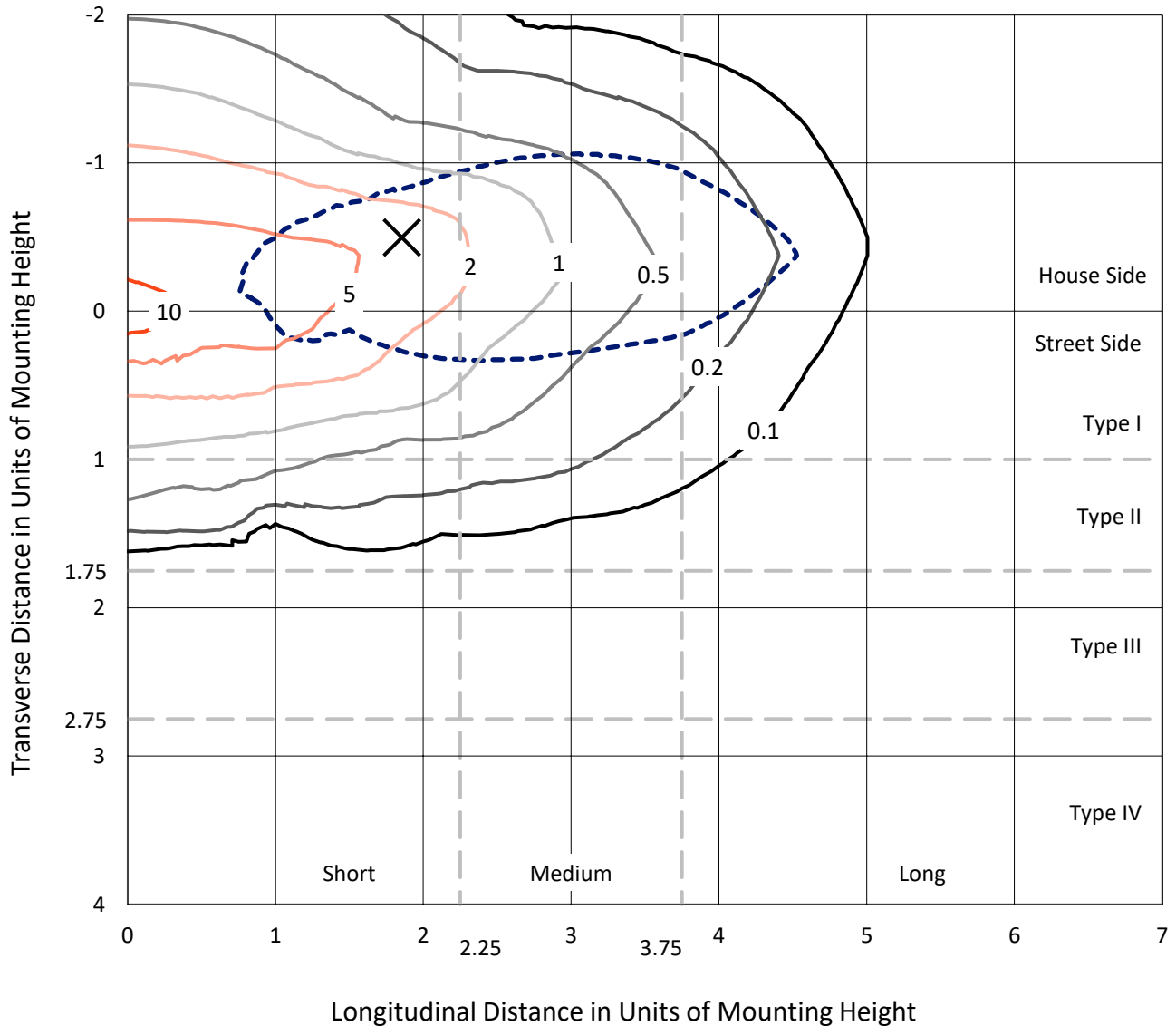
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

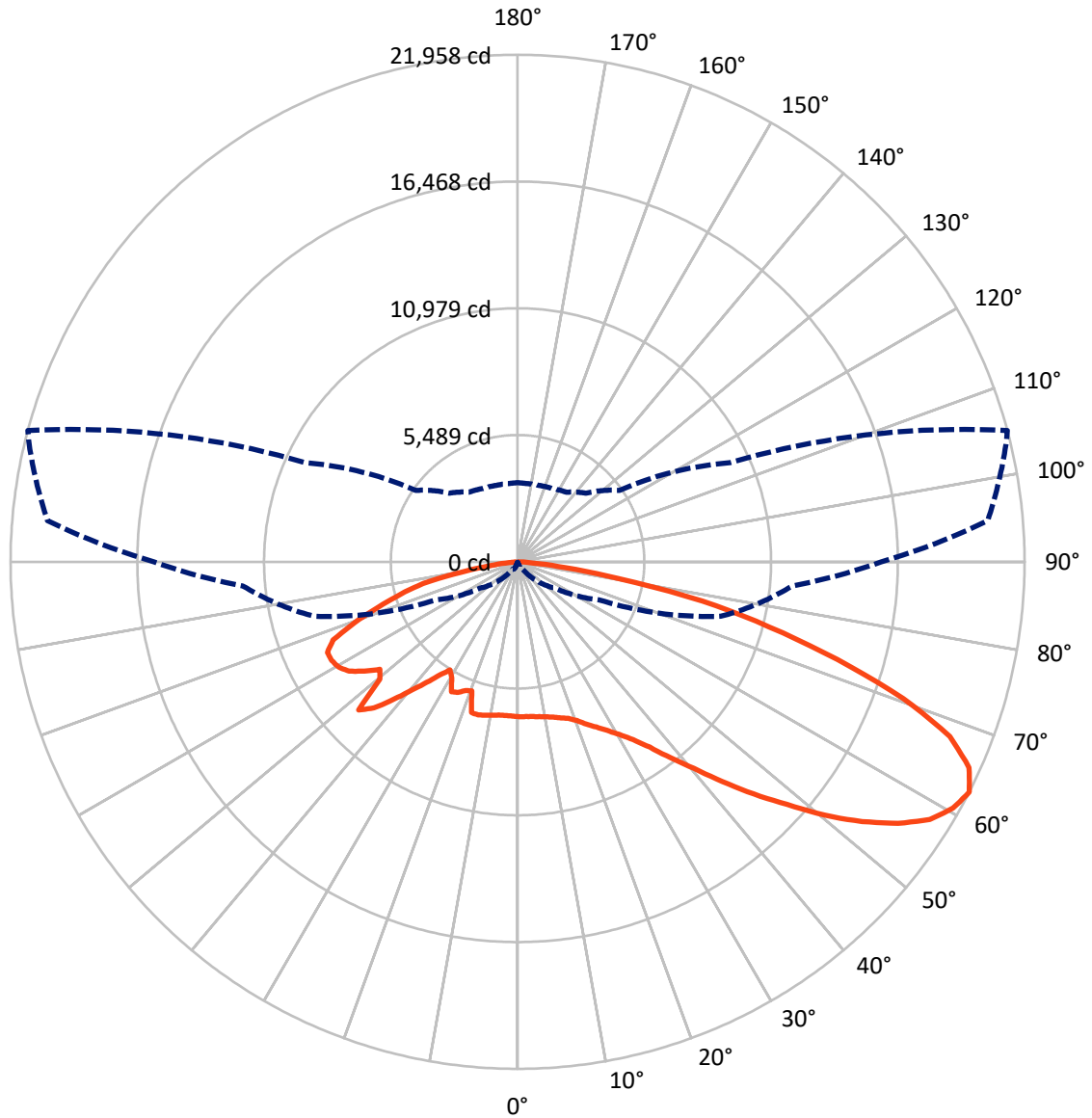
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.7 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 105-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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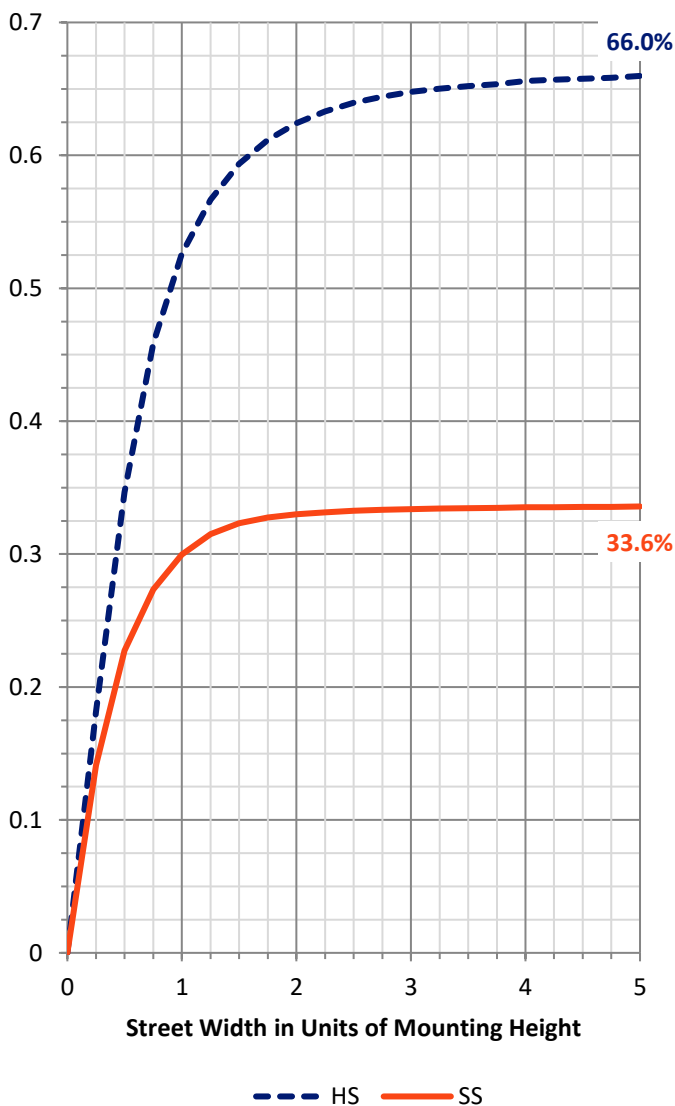
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 18756.6 | 0.0 | 18756.6 |
| | % Fixture | 66.5 | 0.0 | 66.5 |
| Street Side | Lumens | 9432.4 | 0.0 | 9432.4 |
| | % Fixture | 33.5 | 0.0 | 33.5 |
| Total | Lumens | 28189.0 | 0.0 | 28189.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 639.9 | 2.3 |
| 10°-20° | 1807.2 | 6.4 |
| 20°-30° | 2547.0 | 9.0 |
| 30°-40° | 3460.4 | 12.3 |
| 40°-50° | 4707.5 | 16.7 |
| 50°-60° | 5576.9 | 19.8 |
| 60°-70° | 5468.8 | 19.4 |
| 70°-80° | 3449.2 | 12.2 |
| 80°-90° | 532.1 | 1.9 |
| 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° | 28189.0 | 100.0 |
| 0°-180° | 28189.0 | 100.0 |

Coefficient of Utilization

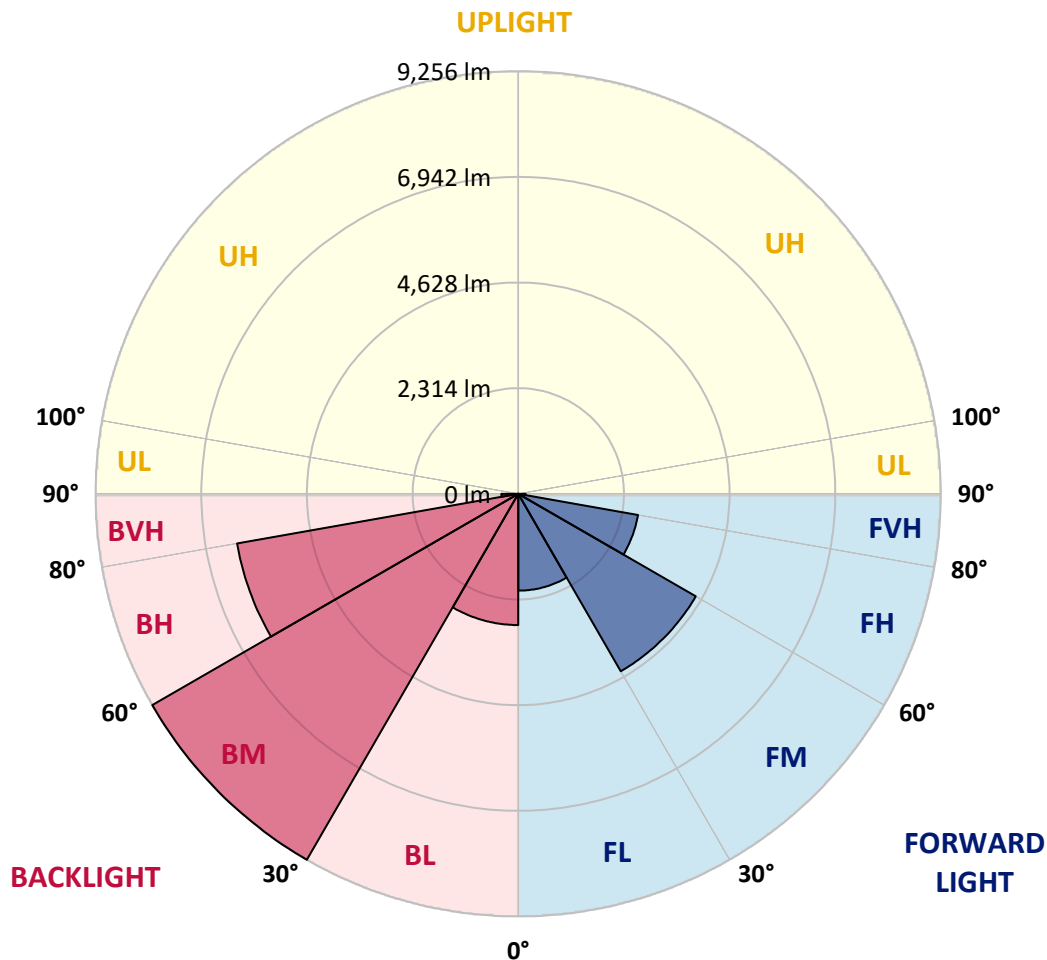


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2120.3 | 7.5 | | | |
| FM (30°-60°) | 4488.4 | 15.9 | | | |
| FH (60°-80°) | 2663.2 | 9.4 | | | G2/5000 |
| FVH (80°-90°) | 160.5 | 0.6 | | | G2/225 |
| BL (0°-30°) | 2873.7 | 10.2 | B4/5000 | | |
| BM (30°-60°) | 9256.5 | 32.8 | B5 | | |
| BH (60°-80°) | 6254.8 | 22.2 | B5 | | G5 |
| BVH (80°-90°) | 371.6 | 1.3 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5
 Type I Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 0° | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 |
| 2.5° | 6710.2 | 6657.8 | 6695.2 | 6752.1 | 6666.8 | 6716.2 | 6633.8 | 6701.2 | 6684.7 | 6689.2 | 6720.7 |
| 5° | 6657.8 | 6602.4 | 6647.3 | 6722.2 | 6638.3 | 6693.7 | 6626.3 | 6683.2 | 6677.3 | 6698.2 | 6723.7 |
| 7.5° | 6608.4 | 6556.0 | 6602.4 | 6651.8 | 6608.4 | 6662.3 | 6611.4 | 6681.8 | 6686.2 | 6732.7 | 6753.6 |
| 10° | 6556.0 | 6503.6 | 6548.5 | 6605.4 | 6569.4 | 6636.8 | 6615.9 | 6701.2 | 6734.2 | 6795.6 | 6813.5 |
| 12.5° | 6440.7 | 6394.2 | 6431.7 | 6497.6 | 6503.6 | 6602.4 | 6615.9 | 6747.6 | 6788.1 | 6868.9 | 6895.9 |
| 15° | 5747.3 | 5798.2 | 5997.4 | 6189.1 | 6271.4 | 6454.1 | 6554.5 | 6789.6 | 6846.5 | 6961.8 | 7003.7 |
| 17.5° | 4649.7 | 4553.8 | 4243.9 | 4324.7 | 4780.0 | 5393.9 | 5626.0 | 6210.0 | 6827.0 | 7078.6 | 7132.5 |
| 20° | 2747.9 | 2944.0 | 3550.5 | 3736.2 | 3903.9 | 4564.3 | 5344.5 | 5691.9 | 5928.5 | 6822.5 | 7309.2 |
| 22.5° | 2265.7 | 2279.2 | 2713.4 | 3570.0 | 3758.7 | 4017.7 | 4621.2 | 5765.3 | 6009.4 | 6187.6 | 6729.7 |
| 25° | 2101.0 | 2114.4 | 2189.3 | 2851.2 | 3655.3 | 3954.8 | 4219.9 | 5269.6 | 6217.5 | 6437.7 | 6861.4 |
| 27.5° | 1969.2 | 1987.2 | 2056.0 | 2241.7 | 3408.3 | 3936.9 | 4272.3 | 4673.6 | 6310.4 | 6734.2 | 7131.0 |
| 30° | 1870.4 | 1877.8 | 1948.2 | 2127.9 | 2577.2 | 3941.4 | 4348.7 | 4777.0 | 5780.3 | 7110.0 | 7508.4 |
| 32.5° | 1780.5 | 1785.0 | 1858.4 | 2033.6 | 2304.6 | 3650.9 | 4464.0 | 4992.6 | 5519.7 | 7418.5 | 8026.5 |
| 35° | 1711.6 | 1708.6 | 1774.5 | 1946.7 | 2216.3 | 2795.8 | 4592.8 | 5251.7 | 5936.0 | 7126.5 | 8799.2 |
| 37.5° | 1645.7 | 1641.2 | 1698.1 | 1856.9 | 2138.4 | 2617.6 | 4443.0 | 5563.1 | 6533.5 | 7348.1 | 8736.3 |
| 40° | 1594.8 | 1585.8 | 1633.7 | 1776.0 | 2057.5 | 2572.7 | 3499.6 | 5892.6 | 7189.4 | 8490.7 | 9264.9 |
| 42.5° | 1549.9 | 1543.9 | 1584.3 | 1698.1 | 1975.2 | 2518.8 | 3261.5 | 6070.8 | 8005.5 | 9811.5 | 10632.1 |
| 45° | 1482.5 | 1491.5 | 1536.4 | 1645.7 | 1886.8 | 2442.4 | 3285.5 | 4875.8 | 8869.6 | 10957.1 | 11994.8 |
| 47.5° | 1454.1 | 1452.6 | 1481.0 | 1584.3 | 1810.5 | 2336.1 | 3269.0 | 4471.5 | 9413.2 | 12156.5 | 13329.1 |
| 50° | 1409.1 | 1401.6 | 1221.9 | 1512.5 | 1732.6 | 2204.3 | 3200.1 | 4588.3 | 7833.3 | 13333.6 | 14554.0 |
| 52.5° | 1325.3 | 1178.5 | 1069.2 | 1461.5 | 1653.2 | 2060.5 | 3045.9 | 4639.2 | 7563.8 | 13123.9 | 15606.7 |
| 55° | 703.8 | 784.7 | 1012.3 | 1389.7 | 1560.4 | 1931.7 | 2819.8 | 4603.3 | 8146.3 | 10494.3 | 14488.1 |
| 57.5° | 624.4 | 621.5 | 643.9 | 1097.7 | 813.1 | 1791.0 | 2547.2 | 4438.5 | 8697.4 | 10973.5 | 14759.2 |
| 60° | 49.4 | 50.9 | 59.9 | 365.4 | 431.3 | 1260.9 | 2253.7 | 4234.9 | 8989.4 | 11539.6 | 15416.5 |
| 62.5° | 24.0 | 27.0 | 35.9 | 326.5 | 393.8 | 1147.1 | 1988.7 | 3887.5 | 9112.2 | 11948.4 | 15741.5 |
| 65° | 6.0 | 7.5 | 16.5 | 287.5 | 342.9 | 1021.3 | 1722.1 | 3480.1 | 9122.6 | 11964.9 | 16003.6 |
| 67.5° | 4.5 | 7.5 | 16.5 | 260.6 | 313.0 | 910.5 | 1488.5 | 3195.6 | 8676.4 | 11903.5 | 15871.8 |
| 70° | 4.5 | 7.5 | 16.5 | 233.6 | 283.0 | 789.2 | 1281.8 | 2917.1 | 7536.8 | 11674.3 | 15424.0 |
| 72.5° | 4.5 | 9.0 | 16.5 | 205.2 | 248.6 | 669.4 | 1088.7 | 2610.1 | 6325.4 | 10717.5 | 14426.7 |
| 75° | 4.5 | 9.0 | 18.0 | 166.2 | 212.6 | 533.1 | 894.0 | 2235.7 | 5260.6 | 9293.4 | 12773.5 |
| 77.5° | 4.5 | 9.0 | 18.0 | 128.8 | 172.2 | 398.3 | 676.9 | 1771.5 | 4197.4 | 6854.0 | 8974.4 |
| 80° | 4.5 | 9.0 | 18.0 | 91.3 | 140.8 | 280.0 | 492.7 | 1208.5 | 2503.8 | 3602.9 | 4570.3 |
| 82.5° | 4.5 | 9.0 | 18.0 | 65.9 | 101.8 | 202.2 | 304.0 | 596.0 | 1195.0 | 1729.6 | 2169.8 |
| 85° | 3.0 | 7.5 | 16.5 | 43.4 | 53.9 | 122.8 | 181.2 | 265.1 | 357.9 | 473.2 | 639.4 |
| 87.5° | 3.0 | 4.5 | 10.5 | 16.5 | 22.5 | 43.4 | 67.4 | 59.9 | 67.4 | 140.8 | 202.2 |
| 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):

| | 95° | 104° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 | 6705.7 |
| 2.5° | 6716.2 | 6710.2 | 6711.7 | 6744.6 | 6716.2 | 6722.2 | 6672.8 | 6771.6 | 6762.6 | 6749.1 | 6788.1 |
| 5° | 6723.7 | 6720.7 | 6732.7 | 6761.1 | 6717.7 | 6725.2 | 6678.8 | 6794.1 | 6765.6 | 6761.1 | 6807.5 |
| 7.5° | 6761.1 | 6756.6 | 6768.6 | 6782.1 | 6734.2 | 6734.2 | 6693.7 | 6785.1 | 6768.6 | 6738.7 | 6791.1 |
| 10° | 6828.5 | 6812.0 | 6824.0 | 6831.5 | 6758.1 | 6755.1 | 6680.3 | 6788.1 | 6746.1 | 6731.2 | 6798.6 |
| 12.5° | 6922.8 | 6885.4 | 6903.4 | 6891.4 | 6794.1 | 6776.1 | 6675.8 | 6746.1 | 6693.7 | 6684.7 | 6746.1 |
| 15° | 7050.1 | 7000.7 | 7014.2 | 6991.7 | 6868.9 | 6816.5 | 6654.8 | 6684.7 | 6600.9 | 6593.4 | 6638.3 |
| 17.5° | 7168.4 | 7138.5 | 7131.0 | 7131.0 | 6987.2 | 6857.0 | 6635.3 | 6593.4 | 6482.6 | 6475.1 | 6497.6 |
| 20° | 7382.6 | 7342.1 | 7337.6 | 7301.7 | 7089.1 | 6889.9 | 6603.9 | 6475.1 | 6310.4 | 6272.9 | 6314.9 |
| 22.5° | 7451.5 | 7647.6 | 7634.1 | 7475.4 | 7174.4 | 6916.9 | 6539.5 | 6326.8 | 6100.7 | 6028.9 | 6049.8 |
| 25° | 7656.6 | 7951.6 | 7927.7 | 7697.0 | 7261.3 | 6931.8 | 6461.6 | 6163.6 | 5852.1 | 5726.4 | 5730.9 |
| 27.5° | 7981.6 | 8282.6 | 8266.1 | 7933.6 | 7369.1 | 6936.3 | 6374.8 | 5991.4 | 5605.1 | 5440.3 | 5453.8 |
| 30° | 8394.9 | 8698.9 | 8674.9 | 8197.2 | 7532.3 | 6945.3 | 6308.9 | 5784.8 | 5378.9 | 5200.7 | 5197.7 |
| 32.5° | 8969.9 | 9245.4 | 9175.1 | 8549.1 | 7728.5 | 6982.7 | 6222.0 | 5588.6 | 5172.3 | 4985.1 | 4970.1 |
| 35° | 9838.4 | 9940.3 | 9853.4 | 8968.4 | 7936.6 | 7006.7 | 6082.8 | 5396.9 | 4980.6 | 4796.4 | 4782.9 |
| 37.5° | 11012.5 | 10886.7 | 10769.9 | 9440.1 | 8152.3 | 7000.7 | 5906.1 | 5211.2 | 4815.9 | 4640.7 | 4640.7 |
| 40° | 11127.8 | 11973.8 | 11758.2 | 9937.3 | 8346.9 | 6967.8 | 5738.3 | 5030.0 | 4682.6 | 4540.4 | 4562.8 |
| 42.5° | 11668.4 | 13305.1 | 13002.6 | 10418.0 | 8487.7 | 6871.9 | 5558.6 | 4865.3 | 4558.3 | 4443.0 | 4452.0 |
| 45° | 12996.6 | 14516.6 | 14339.9 | 10882.2 | 8564.1 | 6702.7 | 5350.5 | 4703.6 | 4419.1 | 4327.7 | 4345.7 |
| 47.5° | 14425.2 | 15957.1 | 15698.1 | 11310.5 | 8522.2 | 6452.6 | 5128.9 | 4555.3 | 4273.8 | 4215.4 | 4248.3 |
| 50° | 15775.9 | 17472.6 | 17256.9 | 11611.5 | 8336.5 | 6102.2 | 4892.3 | 4398.1 | 4160.0 | 4113.6 | 4130.0 |
| 52.5° | 17101.2 | 18848.8 | 18687.0 | 11774.7 | 7965.1 | 5735.3 | 4673.6 | 4248.3 | 4053.7 | 3995.3 | 4017.7 |
| 55° | 18194.4 | 20153.1 | 19995.8 | 11758.2 | 7406.5 | 5352.0 | 4456.5 | 4086.6 | 3945.9 | 3893.4 | 3911.4 |
| 57.5° | 19047.9 | 21168.4 | 21056.1 | 11508.1 | 6756.6 | 5000.1 | 4210.9 | 3927.9 | 3803.6 | 3757.2 | 3772.1 |
| 60° | 19811.6 | 21812.3 | 21667.0 | 10955.6 | 6067.8 | 4612.2 | 3957.8 | 3739.2 | 3635.9 | 3598.4 | 3622.4 |
| 62.5° | 20437.6 | 21825.8 | 21957.5 | 10155.9 | 5392.4 | 4201.9 | 3676.3 | 3507.1 | 3432.2 | 3409.8 | 3424.7 |
| 65° | 20597.8 | 21424.4 | 21488.8 | 9167.6 | 4708.1 | 3794.6 | 3337.9 | 3227.1 | 3195.6 | 3182.1 | 3212.1 |
| 67.5° | 20376.2 | 20578.4 | 20195.0 | 8332.0 | 4083.6 | 3333.4 | 2972.5 | 2903.6 | 2923.1 | 2926.1 | 2965.0 |
| 70° | 19804.2 | 18314.2 | 17722.7 | 7632.7 | 3501.1 | 2822.7 | 2571.2 | 2548.7 | 2601.1 | 2644.5 | 2673.0 |
| 72.5° | 18345.6 | 15036.2 | 14473.1 | 6644.3 | 2759.9 | 2160.9 | 2024.6 | 2096.5 | 2078.5 | 2098.0 | 2148.9 |
| 75° | 15793.9 | 11605.5 | 11256.6 | 5407.4 | 2102.5 | 1570.9 | 1388.2 | 1395.7 | 1418.1 | 1516.9 | 1570.9 |
| 77.5° | 11250.6 | 8346.9 | 8191.2 | 4148.0 | 1392.7 | 923.9 | 955.4 | 1061.7 | 1093.2 | 1096.2 | 1133.6 |
| 80° | 5961.5 | 4652.7 | 4441.5 | 2443.9 | 920.9 | 660.4 | 718.8 | 765.2 | 807.1 | 850.6 | 861.1 |
| 82.5° | 2686.5 | 2104.0 | 2045.6 | 1214.5 | 584.0 | 509.1 | 522.6 | 602.0 | 636.4 | 643.9 | 651.4 |
| 85° | 1043.7 | 726.3 | 691.8 | 504.7 | 383.4 | 344.4 | 381.9 | 462.7 | 495.7 | 480.7 | 476.2 |
| 87.5° | 278.5 | 170.7 | 155.7 | 169.2 | 179.7 | 190.2 | 217.1 | 247.1 | 283.0 | 272.5 | 263.6 |
| 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)