

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: STREETWORKS

Report Number: P232705

Luminaire Tested: **CST-10-3-D-U-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232705
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: STREETWORKS
Catalog Number: CST-10-3-D-U-T3-7050
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 5000K LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32013 lumens
Efficiency: N/A
Efficacy: 151.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 212
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: 28.75 FT

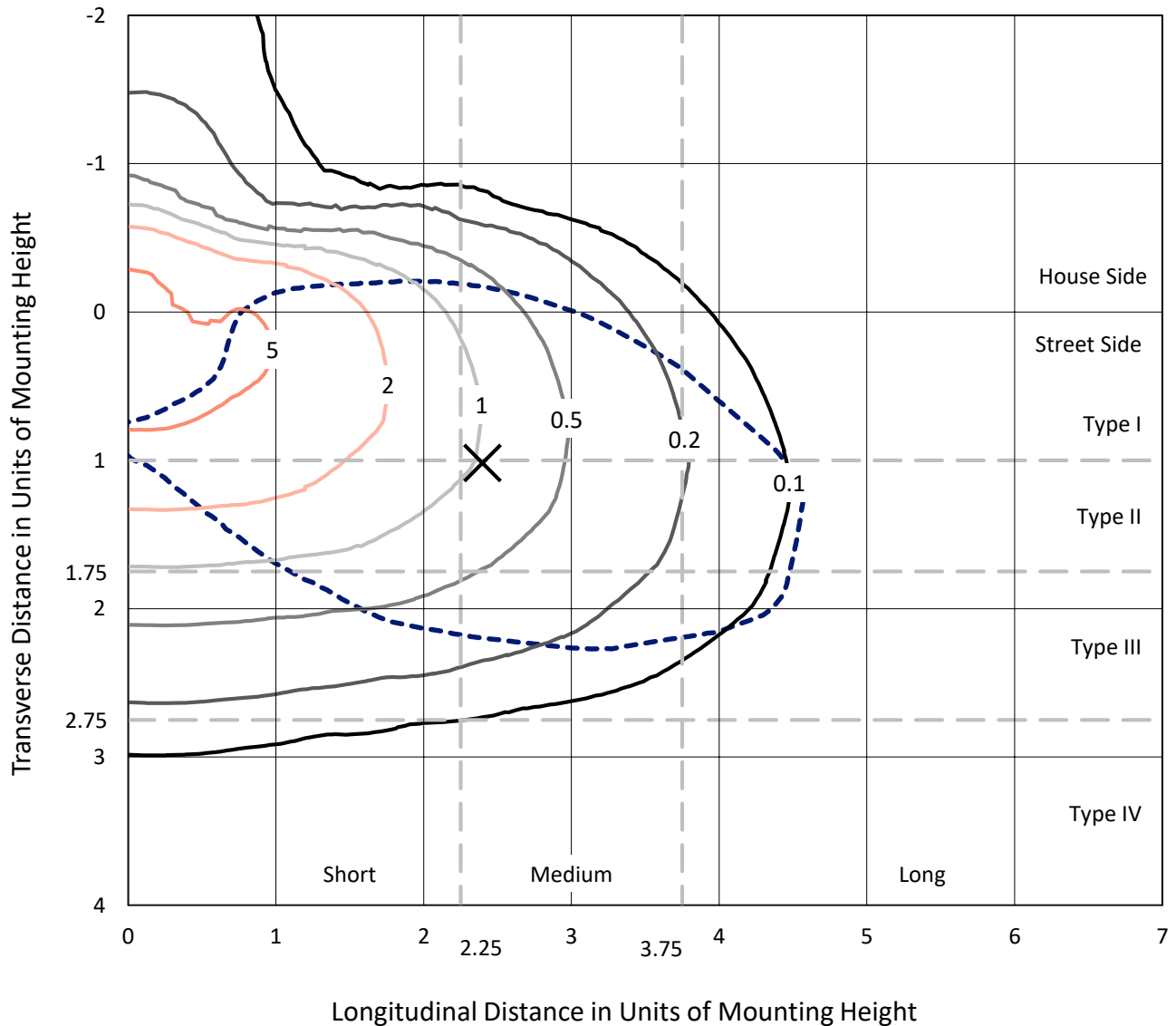


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

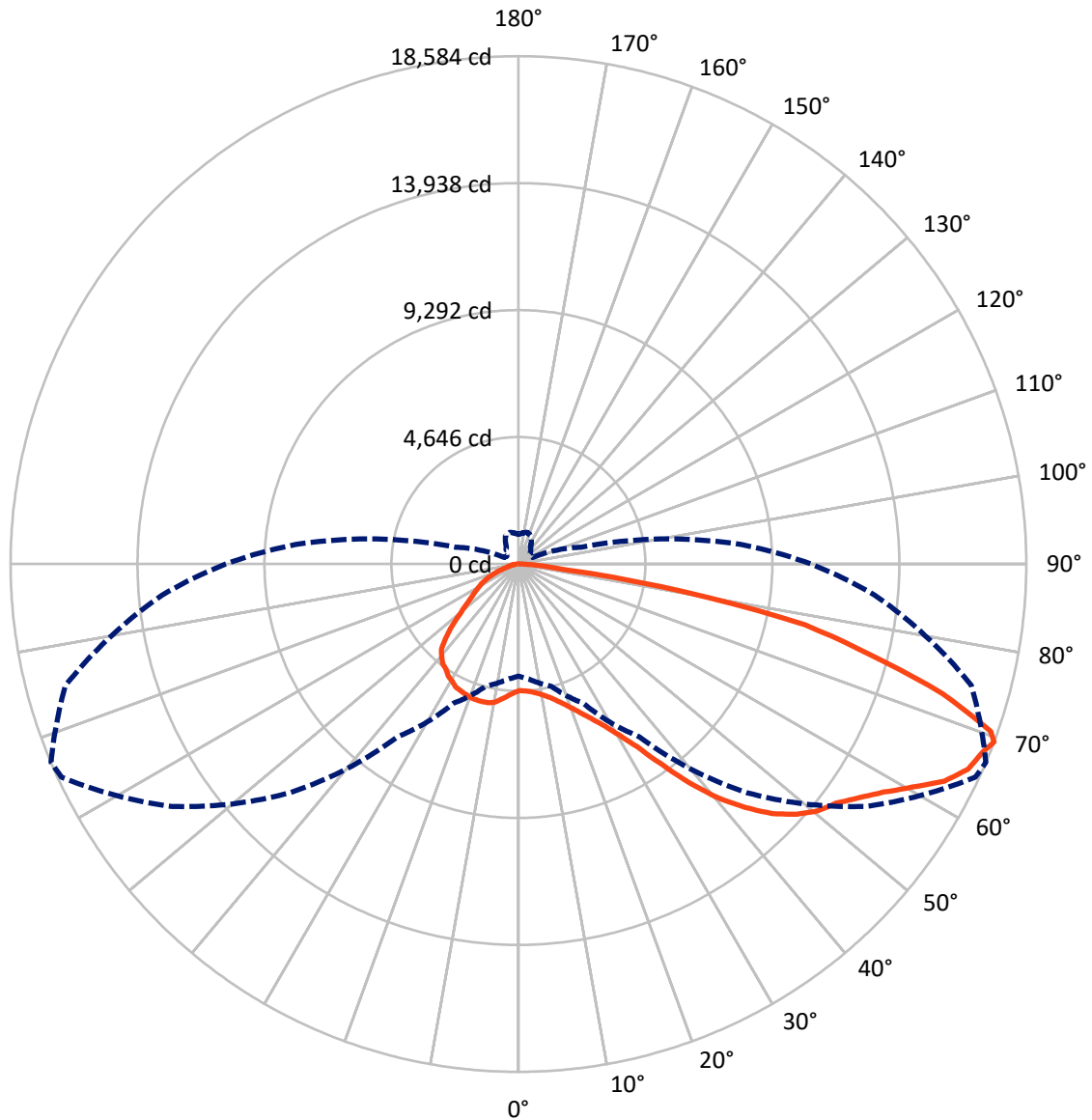


Based on 30 foot mounting height. Maximum calculated value = 6.1 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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



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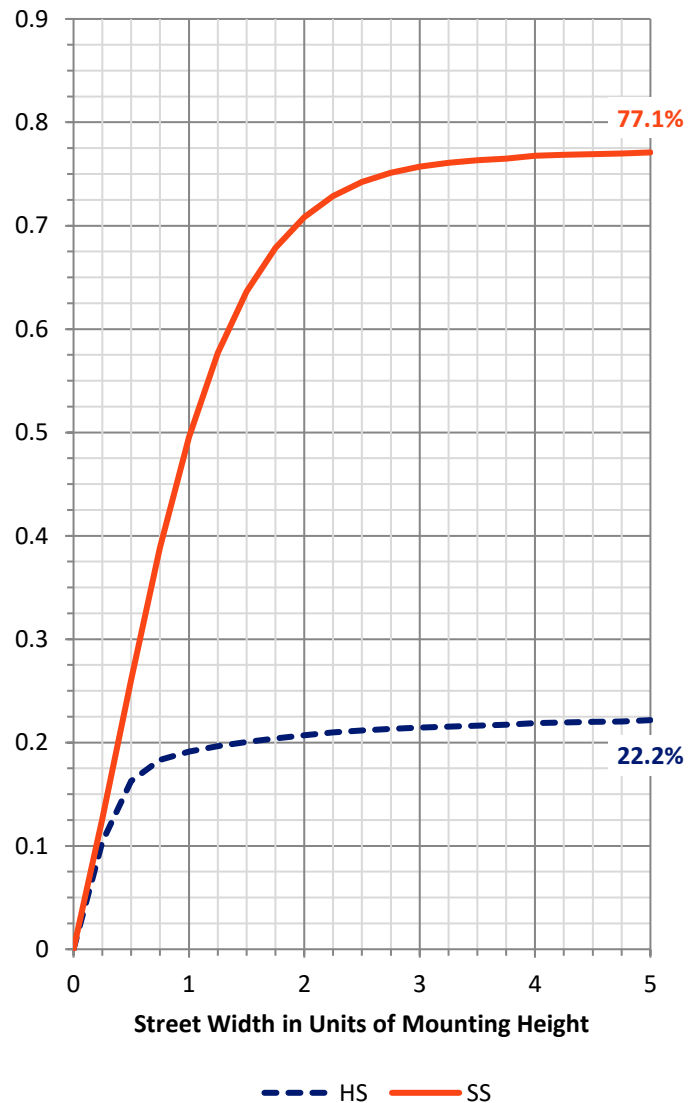
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7282.3 | 0.0 | 7282.3 |
| | % Fixture | 22.7 | 0.0 | 22.7 |
| Street Side | Lumens | 24730.7 | 0.0 | 24730.7 |
| | % Fixture | 77.3 | 0.0 | 77.3 |
| Total | Lumens | 32013.0 | 0.0 | 32013.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 470.3 | 1.5 |
| 10°-20° | 1510.4 | 4.7 |
| 20°-30° | 2626.6 | 8.2 |
| 30°-40° | 3956.6 | 12.4 |
| 40°-50° | 5464.5 | 17.1 |
| 50°-60° | 6521.9 | 20.4 |
| 60°-70° | 6868.7 | 21.5 |
| 70°-80° | 4029.3 | 12.6 |
| 80°-90° | 564.7 | 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° | 32013.0 | 100.0 |
| 0°-180° | 32013.0 | 100.0 |



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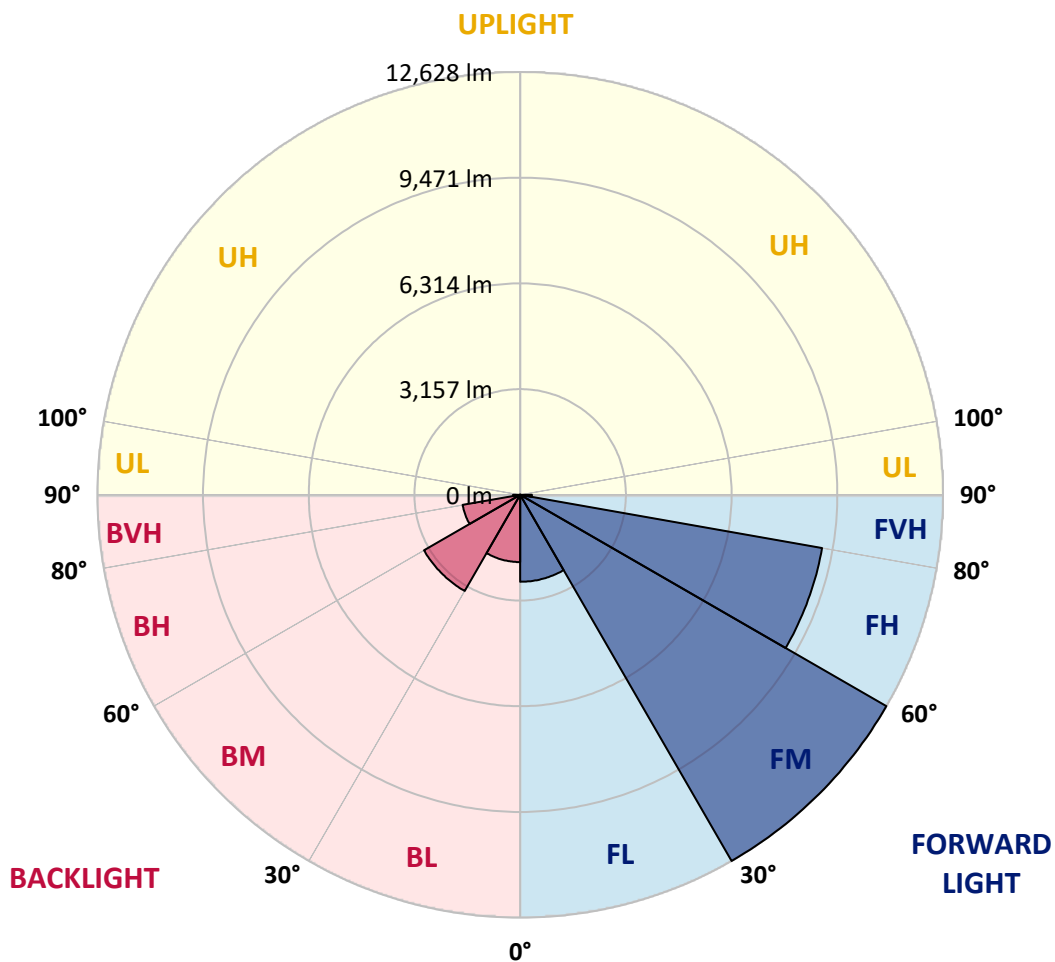
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 2597.8 | 8.1 | | | |
| FM | (30°-60°) | 12627.6 | 39.4 | | | |
| FH | (60°-80°) | 9154.3 | 28.6 | | | G4/12000 |
| FVH | (80°-90°) | 351.0 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 2009.5 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 3315.4 | 10.4 | B3/5000 | | |
| BH | (60°-80°) | 1743.7 | 5.4 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 213.8 | 0.7 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 |
| 2.5° | 4652.2 | 4658.4 | 4652.2 | 4642.0 | 4608.1 | 4623.5 | 4610.2 | 4653.2 | 4650.2 | 4633.8 | 4663.5 |
| 5° | 4760.8 | 4768.0 | 4754.7 | 4746.5 | 4694.2 | 4701.4 | 4672.7 | 4696.3 | 4688.1 | 4660.4 | 4706.5 |
| 7.5° | 4938.1 | 4945.3 | 4928.9 | 4917.6 | 4843.8 | 4827.4 | 4775.2 | 4782.3 | 4767.0 | 4722.9 | 4776.2 |
| 10° | 5176.9 | 5183.0 | 5155.3 | 5127.7 | 5033.4 | 4993.4 | 4906.3 | 4892.0 | 4869.4 | 4826.4 | 4880.7 |
| 12.5° | 5434.1 | 5443.3 | 5409.5 | 5373.6 | 5264.0 | 5198.4 | 5074.4 | 5030.3 | 5002.7 | 4950.4 | 5009.8 |
| 15° | 5709.7 | 5721.0 | 5686.1 | 5645.2 | 5524.2 | 5422.8 | 5268.1 | 5201.5 | 5174.8 | 5109.2 | 5146.1 |
| 17.5° | 6071.4 | 6068.4 | 6039.7 | 5983.3 | 5838.8 | 5690.2 | 5499.6 | 5400.3 | 5381.8 | 5318.3 | 5327.5 |
| 20° | 6490.5 | 6476.2 | 6449.6 | 6371.7 | 6214.9 | 6030.5 | 5781.4 | 5655.4 | 5637.0 | 5583.7 | 5527.3 |
| 22.5° | 6945.5 | 6931.2 | 6905.6 | 6806.2 | 6651.4 | 6409.6 | 6111.4 | 5962.8 | 5938.2 | 5871.6 | 5777.3 |
| 25° | 7393.3 | 7378.0 | 7363.6 | 7269.3 | 7118.7 | 6844.1 | 6485.4 | 6295.9 | 6284.6 | 6217.0 | 6043.8 |
| 27.5° | 7858.5 | 7849.3 | 7853.4 | 7772.5 | 7621.8 | 7337.0 | 6930.2 | 6724.2 | 6704.7 | 6618.6 | 6383.0 |
| 30° | 8337.1 | 8339.1 | 8378.1 | 8292.0 | 8153.7 | 7866.7 | 7463.0 | 7252.9 | 7256.0 | 7179.2 | 6834.9 |
| 32.5° | 8765.4 | 8767.5 | 8854.6 | 8811.5 | 8735.7 | 8449.8 | 8078.9 | 7931.3 | 7961.0 | 7954.9 | 7602.4 |
| 35° | 9074.9 | 9088.2 | 9282.9 | 9341.3 | 9312.6 | 9063.6 | 8840.2 | 8876.1 | 8970.4 | 9236.8 | 8866.9 |
| 37.5° | 9365.9 | 9371.0 | 9620.0 | 9755.3 | 9861.9 | 9712.3 | 9667.2 | 10007.4 | 10156.0 | 10524.9 | 9977.7 |
| 40° | 9449.9 | 9520.6 | 9835.2 | 10023.8 | 10271.8 | 10345.5 | 10574.0 | 11077.2 | 11252.4 | 11474.8 | 10725.7 |
| 42.5° | 9373.1 | 9473.5 | 9868.0 | 10315.8 | 10660.1 | 11025.9 | 11445.1 | 12014.8 | 12173.6 | 12310.9 | 11442.0 |
| 45° | 9212.2 | 9289.0 | 9698.9 | 10369.1 | 10993.2 | 11718.6 | 12202.3 | 12884.8 | 13028.2 | 12939.1 | 12001.5 |
| 47.5° | 8998.0 | 9056.4 | 9513.5 | 10284.0 | 11259.6 | 12339.6 | 12896.0 | 13582.6 | 13687.1 | 13479.1 | 12381.6 |
| 50° | 8700.9 | 8770.5 | 9280.9 | 10167.2 | 11455.3 | 12859.2 | 13453.5 | 14107.3 | 14195.4 | 13815.2 | 12754.6 |
| 52.5° | 8334.0 | 8421.1 | 9014.4 | 9968.4 | 11601.8 | 13246.5 | 13842.9 | 14456.7 | 14545.8 | 14298.9 | 13049.8 |
| 55° | 7918.0 | 8038.9 | 8649.6 | 9726.6 | 11612.1 | 13452.5 | 14085.7 | 14969.0 | 15096.1 | 14829.7 | 13308.0 |
| 57.5° | 7495.8 | 7573.7 | 8220.3 | 9356.7 | 11419.4 | 13521.1 | 14376.8 | 15565.4 | 15750.9 | 15344.1 | 13589.8 |
| 60° | 6980.4 | 7055.2 | 7695.6 | 8861.7 | 11035.2 | 13626.7 | 14958.8 | 16419.0 | 16566.6 | 15943.6 | 13829.6 |
| 62.5° | 6370.7 | 6455.7 | 7036.7 | 8184.4 | 10466.4 | 13669.7 | 15552.1 | 17326.9 | 17496.0 | 16488.7 | 13967.9 |
| 65° | 5596.0 | 5690.2 | 6220.0 | 7364.6 | 9653.8 | 13364.3 | 15808.3 | 17998.1 | 18085.2 | 16906.8 | 13908.5 |
| 67.5° | 4749.6 | 4827.4 | 5249.6 | 6345.0 | 8529.7 | 12568.1 | 15674.1 | 18246.1 | 18334.2 | 17190.6 | 13552.9 |
| 69° | 4101.9 | 4221.8 | 4627.6 | 5618.5 | 7721.2 | 11839.6 | 15469.1 | 18450.0 | 18584.2 | 17158.9 | 13085.6 |
| 70° | 3583.4 | 3717.7 | 4084.5 | 4978.1 | 7034.7 | 11083.3 | 15087.9 | 18295.3 | 18333.2 | 16852.5 | 12664.5 |
| 72.5° | 2264.6 | 2308.7 | 2475.7 | 3070.0 | 4949.4 | 8615.8 | 13203.5 | 16241.7 | 16231.5 | 15035.7 | 11055.7 |
| 75° | 1119.0 | 1176.4 | 1493.0 | 1723.6 | 2438.8 | 5541.7 | 10392.7 | 13339.8 | 13341.8 | 12690.1 | 9089.2 |
| 77.5° | 672.2 | 696.8 | 777.8 | 1110.8 | 1393.6 | 2487.0 | 7054.1 | 10560.7 | 10722.6 | 10328.1 | 6540.8 |
| 80° | 463.2 | 450.9 | 474.4 | 546.2 | 750.1 | 1307.5 | 2899.9 | 5970.0 | 6145.2 | 5667.7 | 2786.2 |
| 82.5° | 364.8 | 354.6 | 361.7 | 380.2 | 357.6 | 605.6 | 1226.6 | 1785.1 | 1732.8 | 1527.9 | 1070.8 |
| 85° | 255.2 | 234.7 | 248.0 | 240.8 | 213.1 | 355.6 | 596.4 | 741.9 | 736.8 | 761.4 | 583.1 |
| 87.5° | 81.0 | 71.7 | 73.8 | 71.7 | 59.4 | 126.0 | 214.2 | 289.0 | 266.4 | 270.5 | 204.9 |
| 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° | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 | 4632.7 |
| 2.5° | 4670.7 | 4662.5 | 4671.7 | 4719.8 | 4708.6 | 4750.6 | 4760.8 | 4829.5 | 4832.6 | 4826.4 | 4857.2 |
| 5° | 4728.0 | 4736.2 | 4771.1 | 4847.9 | 4873.5 | 4963.7 | 5004.7 | 5088.7 | 5096.9 | 5100.0 | 5129.7 |
| 7.5° | 4811.0 | 4825.4 | 4900.2 | 5000.6 | 5048.8 | 5166.6 | 5228.1 | 5331.6 | 5338.8 | 5350.0 | 5383.9 |
| 10° | 4934.0 | 4954.5 | 5013.9 | 5151.2 | 5166.6 | 5259.9 | 5316.2 | 5405.4 | 5399.2 | 5414.6 | 5445.3 |
| 12.5° | 5058.0 | 5069.3 | 5114.4 | 5208.6 | 5198.4 | 5289.6 | 5314.2 | 5372.6 | 5368.5 | 5367.5 | 5390.0 |
| 15° | 5191.2 | 5171.7 | 5177.9 | 5213.8 | 5175.8 | 5232.2 | 5214.8 | 5257.8 | 5201.5 | 5178.9 | 5194.3 |
| 17.5° | 5332.6 | 5285.5 | 5225.0 | 5198.4 | 5126.7 | 5117.4 | 5058.0 | 5037.5 | 4998.6 | 4986.3 | 4998.6 |
| 20° | 5500.7 | 5400.3 | 5253.7 | 5176.9 | 5020.1 | 4939.1 | 4825.4 | 4758.8 | 4668.6 | 4675.8 | 4693.2 |
| 22.5° | 5671.8 | 5530.4 | 5309.1 | 5103.1 | 4881.7 | 4717.8 | 4491.3 | 4430.9 | 4313.0 | 4278.2 | 4313.0 |
| 25° | 5881.9 | 5692.3 | 5336.7 | 5037.5 | 4672.7 | 4380.7 | 4151.1 | 3937.0 | 3847.8 | 3760.7 | 3793.5 |
| 27.5° | 6157.5 | 5901.3 | 5437.1 | 4956.6 | 4436.0 | 4046.6 | 3681.8 | 3405.1 | 3294.5 | 3201.2 | 3207.4 |
| 30° | 6515.1 | 6181.1 | 5475.1 | 4786.4 | 4151.1 | 3588.6 | 3129.5 | 2822.1 | 2683.7 | 2645.8 | 2629.4 |
| 32.5° | 7176.1 | 6632.0 | 5542.7 | 4662.5 | 3796.6 | 3090.5 | 2526.9 | 2197.0 | 2109.9 | 2126.3 | 2179.6 |
| 35° | 8347.3 | 7575.7 | 5747.6 | 4403.2 | 3405.1 | 2547.4 | 1963.4 | 1708.2 | 1722.5 | 1752.3 | 1746.1 |
| 37.5° | 9357.7 | 8427.3 | 6088.9 | 4220.8 | 2926.6 | 1929.5 | 1482.8 | 1347.5 | 1433.6 | 1492.0 | 1489.9 |
| 40° | 10044.3 | 9048.2 | 6535.6 | 3879.6 | 2322.0 | 1375.2 | 1091.3 | 1016.5 | 1126.2 | 1251.2 | 1272.7 |
| 42.5° | 10725.7 | 9612.9 | 6751.9 | 3577.3 | 1630.3 | 970.4 | 790.1 | 809.5 | 949.9 | 1067.8 | 1089.3 |
| 45° | 11215.5 | 10022.7 | 6847.2 | 3038.3 | 1041.1 | 742.9 | 689.6 | 761.4 | 913.0 | 1006.3 | 1016.5 |
| 47.5° | 11575.2 | 10331.2 | 6743.7 | 2458.3 | 766.5 | 679.4 | 680.4 | 771.6 | 924.3 | 1029.8 | 1033.9 |
| 50° | 11892.9 | 10548.4 | 6326.6 | 1917.2 | 689.6 | 657.9 | 693.7 | 801.3 | 957.1 | 1063.7 | 1060.6 |
| 52.5° | 12110.1 | 10612.0 | 5820.4 | 1570.9 | 668.1 | 645.6 | 705.0 | 829.0 | 967.3 | 1039.1 | 1032.9 |
| 55° | 12254.6 | 10516.7 | 5431.0 | 1293.2 | 649.7 | 644.5 | 723.4 | 863.8 | 977.6 | 1006.3 | 991.9 |
| 57.5° | 12343.7 | 10324.0 | 5102.1 | 1111.8 | 634.3 | 644.5 | 743.9 | 877.2 | 1015.5 | 1067.8 | 1051.4 |
| 60° | 12317.1 | 10237.9 | 4656.3 | 963.2 | 612.8 | 646.6 | 755.2 | 896.6 | 1168.2 | 1291.1 | 1294.2 |
| 62.5° | 12263.8 | 10069.9 | 4220.8 | 845.4 | 587.2 | 658.9 | 769.6 | 1009.3 | 1434.6 | 1435.6 | 1384.4 |
| 65° | 12010.7 | 9563.7 | 3587.5 | 738.8 | 560.5 | 662.0 | 772.6 | 1194.8 | 1608.8 | 1473.5 | 1406.9 |
| 67.5° | 11313.9 | 8822.8 | 2846.7 | 639.4 | 530.8 | 643.5 | 769.6 | 1169.2 | 1299.3 | 1163.1 | 1129.2 |
| 69° | 10706.2 | 8180.3 | 2378.4 | 580.0 | 509.3 | 625.1 | 772.6 | 1121.0 | 1203.0 | 1122.1 | 1091.3 |
| 70° | 10263.6 | 7659.8 | 2020.7 | 544.1 | 489.8 | 615.9 | 772.6 | 1103.6 | 1189.7 | 1112.8 | 1083.1 |
| 72.5° | 8809.5 | 6017.1 | 1211.2 | 453.9 | 433.5 | 580.0 | 765.5 | 1077.0 | 1199.9 | 1134.4 | 1095.4 |
| 75° | 6748.8 | 4376.6 | 705.0 | 373.0 | 364.8 | 520.6 | 727.5 | 1060.6 | 1234.8 | 1135.4 | 1050.3 |
| 77.5° | 4324.3 | 2019.7 | 525.7 | 303.3 | 296.1 | 450.9 | 679.4 | 1007.3 | 1268.6 | 1190.7 | 1083.1 |
| 80° | 1502.2 | 916.1 | 392.5 | 239.8 | 229.5 | 368.9 | 595.4 | 907.9 | 1208.1 | 1216.3 | 1135.4 |
| 82.5° | 823.9 | 603.6 | 277.7 | 178.3 | 169.1 | 231.6 | 463.2 | 782.9 | 1118.0 | 1204.0 | 1210.2 |
| 85° | 452.9 | 340.2 | 182.4 | 114.8 | 129.1 | 198.8 | 320.7 | 608.7 | 899.7 | 1046.2 | 1092.3 |
| 87.5° | 183.4 | 123.0 | 71.7 | 45.1 | 53.3 | 78.9 | 108.6 | 311.5 | 543.1 | 700.9 | 771.6 |
| 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)