

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: P232688

Luminaire Tested: **CTN-8-3-D-E1-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232688
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-8-3-D-E1-T3-7030
Description: CELESTEON HIGH MAST LUMINAIRE
(8) 70 CRI, 3000K LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30499 lumens
Efficiency: N/A
Efficacy: 135.0 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): 226
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

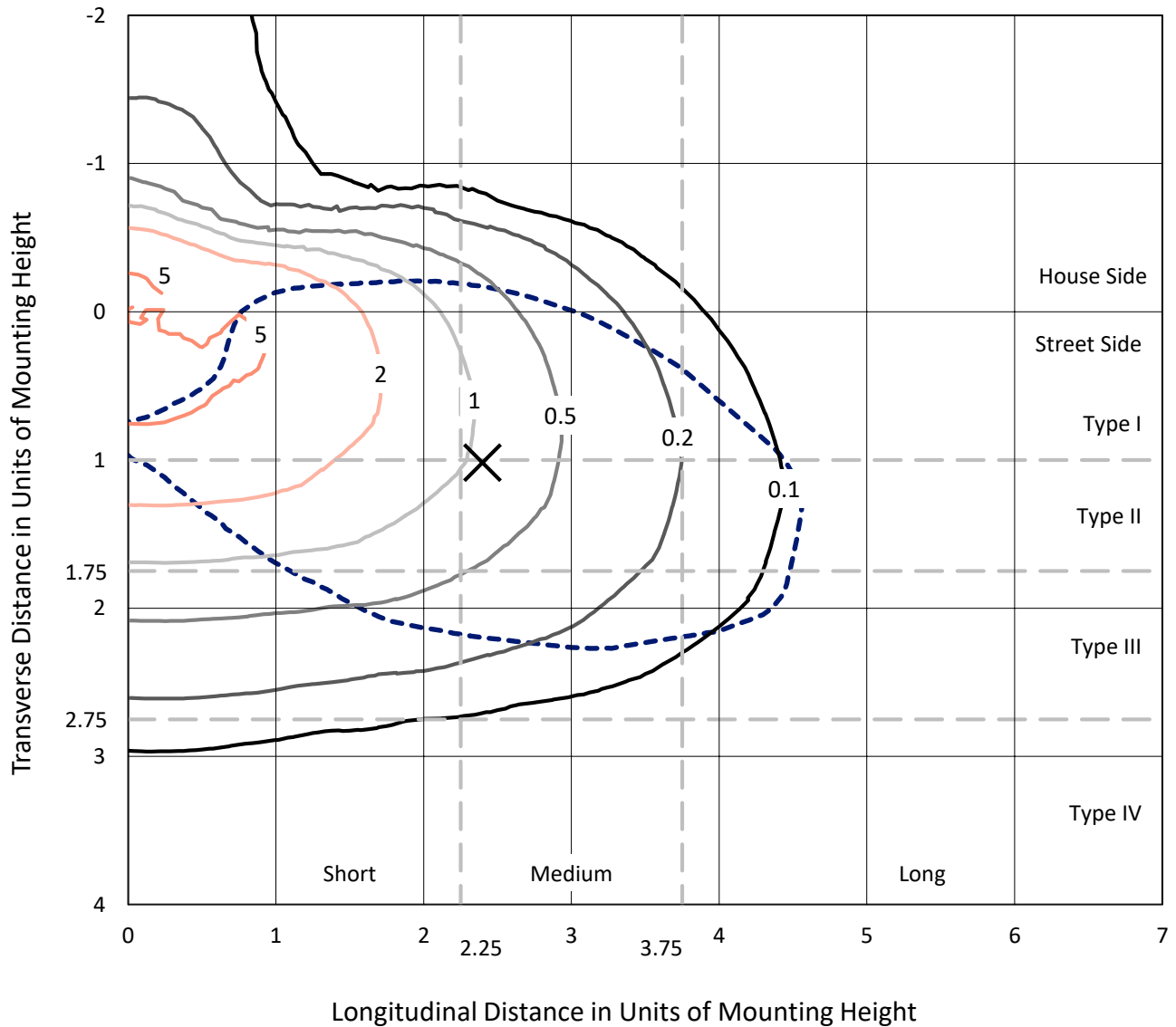


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

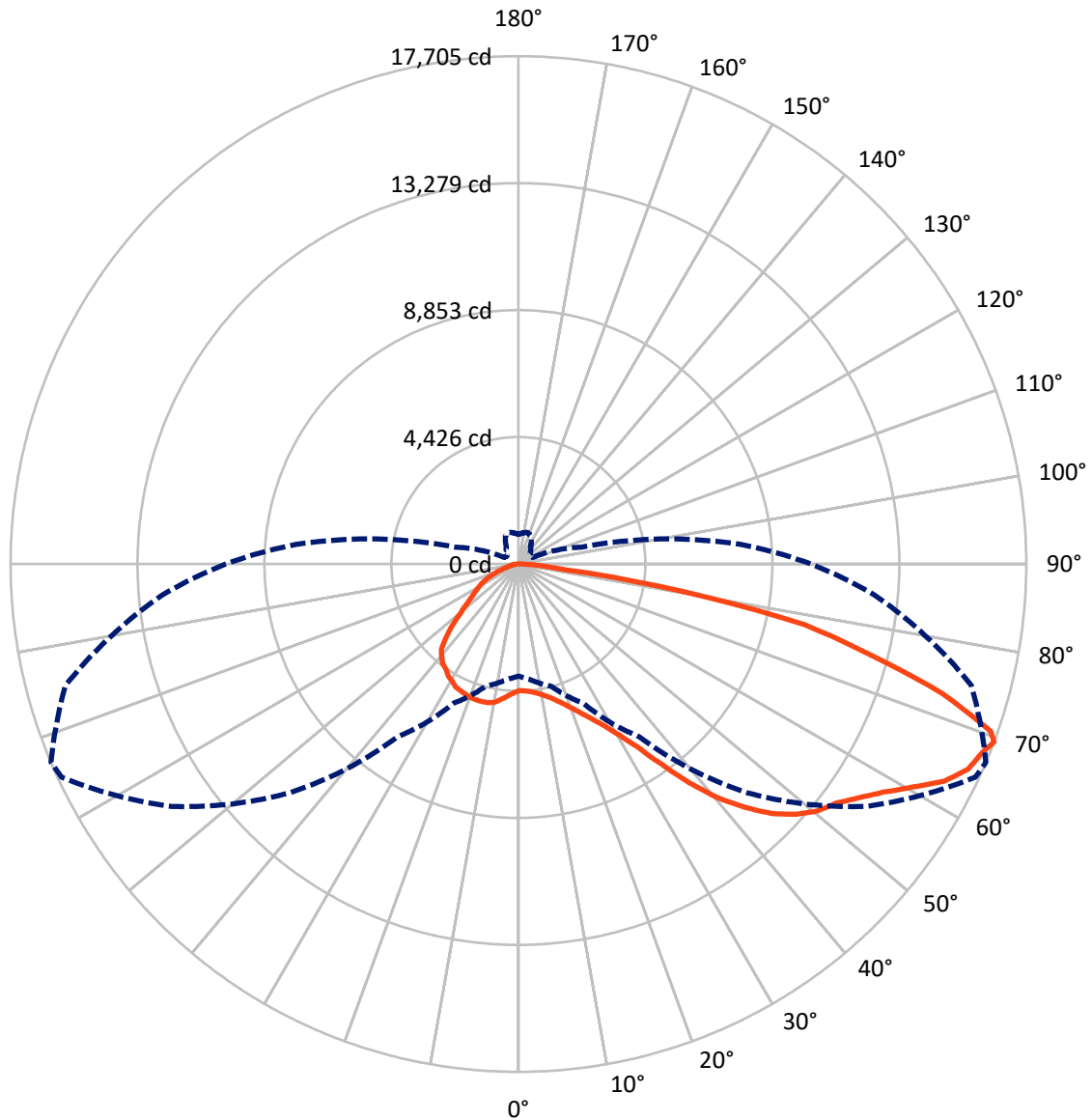


Based on 30 foot mounting height. Maximum calculated value = 5.8 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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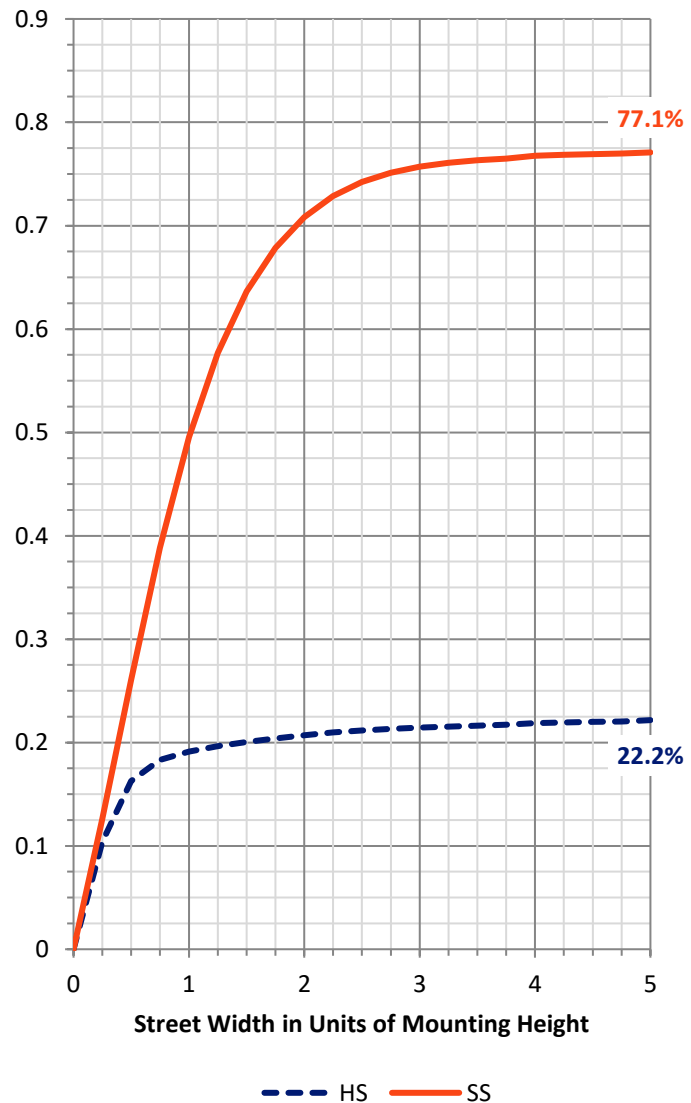
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6937.9 | 0.0 | 6937.9 |
| | % Fixture | 22.7 | 0.0 | 22.7 |
| Street Side | Lumens | 23561.1 | 0.0 | 23561.1 |
| | % Fixture | 77.3 | 0.0 | 77.3 |
| Total | Lumens | 30499.0 | 0.0 | 30499.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 448.0 | 1.5 |
| 10°-20° | 1439.0 | 4.7 |
| 20°-30° | 2502.4 | 8.2 |
| 30°-40° | 3769.5 | 12.4 |
| 40°-50° | 5206.0 | 17.1 |
| 50°-60° | 6213.4 | 20.4 |
| 60°-70° | 6543.9 | 21.5 |
| 70°-80° | 3838.7 | 12.6 |
| 80°-90° | 538.0 | 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° | 30499.0 | 100.0 |
| 0°-180° | 30499.0 | 100.0 |

Coefficient of Utilization



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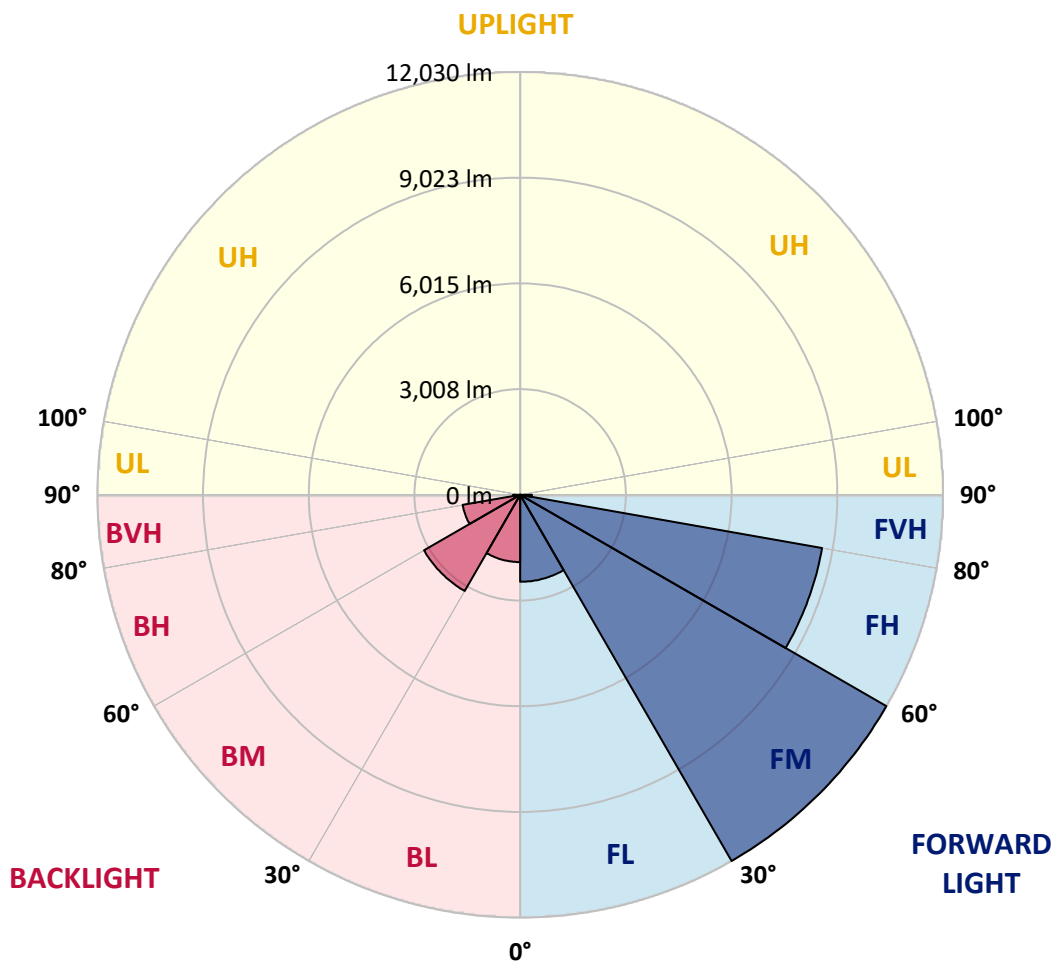
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 2475.0 | 8.1 | | | |
| FM | (30°-60°) | 12030.4 | 39.4 | | | |
| FH | (60°-80°) | 8721.4 | 28.6 | | | G4/12000 |
| FVH | (80°-90°) | 334.4 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1914.4 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 3158.6 | 10.4 | B3/5000 | | |
| BH | (60°-80°) | 1661.2 | 5.4 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 203.7 | 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° | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 |
| 2.5° | 4432.2 | 4438.0 | 4432.2 | 4422.4 | 4390.2 | 4404.9 | 4392.2 | 4433.2 | 4430.2 | 4414.6 | 4442.9 |
| 5° | 4535.7 | 4542.5 | 4529.8 | 4522.0 | 4472.2 | 4479.1 | 4451.7 | 4474.2 | 4466.4 | 4440.0 | 4483.9 |
| 7.5° | 4704.6 | 4711.4 | 4695.8 | 4685.0 | 4614.8 | 4599.1 | 4549.3 | 4556.2 | 4541.5 | 4499.6 | 4550.3 |
| 10° | 4932.0 | 4937.9 | 4911.5 | 4885.2 | 4795.4 | 4757.3 | 4674.3 | 4660.6 | 4639.2 | 4598.2 | 4649.9 |
| 12.5° | 5177.1 | 5185.9 | 5153.6 | 5119.5 | 5015.0 | 4952.5 | 4834.4 | 4792.4 | 4766.1 | 4716.3 | 4772.9 |
| 15° | 5439.7 | 5450.4 | 5417.2 | 5378.2 | 5263.0 | 5166.3 | 5018.9 | 4955.5 | 4930.1 | 4867.6 | 4902.7 |
| 17.5° | 5784.3 | 5781.4 | 5754.0 | 5700.3 | 5562.7 | 5421.1 | 5239.6 | 5144.9 | 5127.3 | 5066.8 | 5075.5 |
| 20° | 6183.6 | 6169.9 | 6144.5 | 6070.3 | 5921.0 | 5745.3 | 5508.0 | 5387.9 | 5370.4 | 5319.6 | 5265.9 |
| 22.5° | 6617.0 | 6603.4 | 6579.0 | 6484.3 | 6336.9 | 6106.5 | 5822.4 | 5680.8 | 5657.4 | 5593.9 | 5504.1 |
| 25° | 7043.7 | 7029.0 | 7015.4 | 6925.5 | 6782.0 | 6520.4 | 6178.7 | 5998.1 | 5987.4 | 5922.9 | 5757.9 |
| 27.5° | 7486.9 | 7478.1 | 7482.0 | 7404.9 | 7261.4 | 6990.0 | 6602.4 | 6406.2 | 6387.6 | 6305.6 | 6081.1 |
| 30° | 7942.8 | 7944.8 | 7981.8 | 7899.8 | 7768.0 | 7494.7 | 7110.1 | 6909.9 | 6912.9 | 6839.6 | 6511.6 |
| 32.5° | 8350.9 | 8352.8 | 8435.8 | 8394.8 | 8322.6 | 8050.2 | 7696.8 | 7556.2 | 7584.5 | 7578.7 | 7242.8 |
| 35° | 8645.7 | 8658.4 | 8843.9 | 8899.5 | 8872.2 | 8635.0 | 8422.1 | 8456.3 | 8546.1 | 8800.0 | 8447.5 |
| 37.5° | 8923.0 | 8927.8 | 9165.1 | 9293.9 | 9395.5 | 9252.9 | 9210.0 | 9534.1 | 9675.6 | 10027.1 | 9505.8 |
| 40° | 9003.0 | 9070.4 | 9370.1 | 9549.7 | 9786.0 | 9856.3 | 10074.0 | 10553.3 | 10720.2 | 10932.1 | 10218.4 |
| 42.5° | 8929.8 | 9025.5 | 9401.3 | 9827.9 | 10156.0 | 10504.5 | 10903.8 | 11446.6 | 11597.9 | 11728.7 | 10900.8 |
| 45° | 8776.5 | 8849.7 | 9240.2 | 9878.7 | 10473.2 | 11164.4 | 11625.2 | 12275.4 | 12412.1 | 12327.2 | 11433.9 |
| 47.5° | 8572.5 | 8628.1 | 9063.5 | 9797.7 | 10727.1 | 11756.0 | 12286.2 | 12940.2 | 13039.8 | 12841.6 | 11796.1 |
| 50° | 8289.4 | 8355.8 | 8841.9 | 9686.4 | 10913.5 | 12251.0 | 12817.2 | 13440.1 | 13524.0 | 13161.9 | 12151.4 |
| 52.5° | 7939.9 | 8022.9 | 8588.1 | 9497.0 | 11053.1 | 12620.0 | 13188.2 | 13773.0 | 13857.9 | 13622.6 | 12432.6 |
| 55° | 7543.5 | 7658.7 | 8240.6 | 9266.6 | 11062.9 | 12816.3 | 13419.6 | 14261.1 | 14382.2 | 14128.3 | 12678.6 |
| 57.5° | 7141.3 | 7215.5 | 7831.5 | 8914.2 | 10879.4 | 12881.7 | 13696.8 | 14829.3 | 15006.0 | 14618.4 | 12947.1 |
| 60° | 6650.2 | 6721.5 | 7331.7 | 8442.6 | 10513.3 | 12982.2 | 14251.4 | 15642.5 | 15783.1 | 15189.5 | 13175.5 |
| 62.5° | 6069.4 | 6150.4 | 6703.9 | 7797.3 | 9971.5 | 13023.2 | 14816.6 | 16507.5 | 16668.6 | 15708.9 | 13307.3 |
| 65° | 5331.3 | 5421.1 | 5925.9 | 7016.3 | 9197.3 | 12732.3 | 15060.7 | 17146.9 | 17229.9 | 16107.2 | 13250.7 |
| 67.5° | 4524.9 | 4599.1 | 5001.3 | 6045.0 | 8126.3 | 11973.8 | 14932.8 | 17383.2 | 17467.1 | 16377.6 | 12911.9 |
| 69° | 3907.9 | 4022.2 | 4408.8 | 5352.8 | 7356.1 | 11279.6 | 14737.5 | 17577.4 | 17705.3 | 16347.4 | 12466.8 |
| 70° | 3414.0 | 3541.8 | 3891.3 | 4742.6 | 6702.0 | 10559.2 | 14374.4 | 17430.0 | 17466.2 | 16055.5 | 12065.5 |
| 72.5° | 2157.5 | 2199.5 | 2358.6 | 2924.9 | 4715.3 | 8208.3 | 12579.0 | 15473.6 | 15463.9 | 14324.6 | 10532.8 |
| 75° | 1066.1 | 1120.7 | 1422.4 | 1642.1 | 2323.5 | 5279.6 | 9901.2 | 12708.9 | 12710.8 | 12089.9 | 8659.4 |
| 77.5° | 640.4 | 663.9 | 741.0 | 1058.3 | 1327.7 | 2369.4 | 6720.5 | 10061.3 | 10215.5 | 9839.7 | 6231.4 |
| 80° | 441.3 | 429.6 | 452.0 | 520.3 | 714.6 | 1245.7 | 2762.8 | 5687.7 | 5854.6 | 5399.7 | 2654.4 |
| 82.5° | 347.5 | 337.8 | 344.6 | 362.2 | 340.7 | 577.0 | 1168.6 | 1700.6 | 1650.8 | 1455.6 | 1020.2 |
| 85° | 243.1 | 223.6 | 236.3 | 229.4 | 203.1 | 338.8 | 568.2 | 706.8 | 701.9 | 725.4 | 555.5 |
| 87.5° | 77.1 | 68.3 | 70.3 | 68.3 | 56.6 | 120.1 | 204.0 | 275.3 | 253.8 | 257.7 | 195.3 |
| 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° | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 | 4413.6 |
| 2.5° | 4449.8 | 4442.0 | 4450.7 | 4496.6 | 4485.9 | 4525.9 | 4535.7 | 4601.1 | 4604.0 | 4598.2 | 4627.4 |
| 5° | 4504.4 | 4512.2 | 4545.4 | 4618.7 | 4643.1 | 4729.0 | 4768.0 | 4848.1 | 4855.9 | 4858.8 | 4887.1 |
| 7.5° | 4583.5 | 4597.2 | 4668.4 | 4764.1 | 4810.0 | 4922.3 | 4980.8 | 5079.4 | 5086.3 | 5097.0 | 5129.2 |
| 10° | 4700.7 | 4720.2 | 4776.8 | 4907.6 | 4922.3 | 5011.1 | 5064.8 | 5149.7 | 5143.9 | 5158.5 | 5187.8 |
| 12.5° | 4818.8 | 4829.5 | 4872.5 | 4962.3 | 4952.5 | 5039.4 | 5062.9 | 5118.5 | 5114.6 | 5113.6 | 5135.1 |
| 15° | 4945.7 | 4927.2 | 4933.0 | 4967.2 | 4931.1 | 4984.8 | 4968.2 | 5009.2 | 4955.5 | 4934.0 | 4948.6 |
| 17.5° | 5080.4 | 5035.5 | 4977.9 | 4952.5 | 4884.2 | 4875.4 | 4818.8 | 4799.3 | 4762.2 | 4750.5 | 4762.2 |
| 20° | 5240.5 | 5144.9 | 5005.3 | 4932.0 | 4782.7 | 4705.5 | 4597.2 | 4533.7 | 4447.8 | 4454.6 | 4471.2 |
| 22.5° | 5403.6 | 5268.8 | 5058.0 | 4861.7 | 4650.9 | 4494.7 | 4278.9 | 4221.3 | 4109.1 | 4075.9 | 4109.1 |
| 25° | 5603.7 | 5423.1 | 5084.3 | 4799.3 | 4451.7 | 4173.5 | 3954.8 | 3750.8 | 3665.8 | 3582.9 | 3614.1 |
| 27.5° | 5866.3 | 5622.2 | 5180.0 | 4722.1 | 4226.2 | 3855.2 | 3507.7 | 3244.1 | 3138.7 | 3049.8 | 3055.7 |
| 30° | 6207.0 | 5888.8 | 5216.1 | 4560.1 | 3954.8 | 3418.8 | 2981.5 | 2688.6 | 2556.8 | 2520.7 | 2505.1 |
| 32.5° | 6836.7 | 6318.3 | 5280.6 | 4442.0 | 3617.0 | 2944.4 | 2407.4 | 2093.1 | 2010.1 | 2025.7 | 2076.5 |
| 35° | 7952.6 | 7217.4 | 5475.8 | 4195.0 | 3244.1 | 2427.0 | 1870.5 | 1627.4 | 1641.1 | 1669.4 | 1663.5 |
| 37.5° | 8915.1 | 8028.7 | 5800.9 | 4021.2 | 2788.2 | 1838.3 | 1412.6 | 1283.8 | 1365.8 | 1421.4 | 1419.5 |
| 40° | 9569.2 | 8620.3 | 6226.5 | 3696.1 | 2212.2 | 1310.1 | 1039.7 | 968.4 | 1072.9 | 1192.0 | 1212.5 |
| 42.5° | 10218.4 | 9158.2 | 6432.5 | 3408.1 | 1553.2 | 924.5 | 752.7 | 771.2 | 905.0 | 1017.3 | 1037.8 |
| 45° | 10685.1 | 9548.7 | 6523.3 | 2894.6 | 991.9 | 707.8 | 657.0 | 725.4 | 869.8 | 958.7 | 968.4 |
| 47.5° | 11027.8 | 9842.6 | 6424.7 | 2342.0 | 730.2 | 647.3 | 648.2 | 735.1 | 880.6 | 981.1 | 985.0 |
| 50° | 11330.4 | 10049.6 | 6027.4 | 1826.6 | 657.0 | 626.8 | 660.9 | 763.4 | 911.8 | 1013.4 | 1010.4 |
| 52.5° | 11537.4 | 10110.1 | 5545.1 | 1496.6 | 636.5 | 615.0 | 671.7 | 789.8 | 921.6 | 989.9 | 984.1 |
| 55° | 11675.0 | 10019.3 | 5174.1 | 1232.0 | 618.9 | 614.1 | 689.2 | 823.0 | 931.3 | 958.7 | 945.0 |
| 57.5° | 11760.0 | 9835.8 | 4860.8 | 1059.2 | 604.3 | 614.1 | 708.8 | 835.7 | 967.5 | 1017.3 | 1001.6 |
| 60° | 11734.6 | 9753.7 | 4436.1 | 917.7 | 583.8 | 616.0 | 719.5 | 854.2 | 1112.9 | 1230.1 | 1233.0 |
| 62.5° | 11683.8 | 9593.6 | 4021.2 | 805.4 | 559.4 | 627.7 | 733.2 | 961.6 | 1366.8 | 1367.7 | 1318.9 |
| 65° | 11442.7 | 9111.4 | 3417.9 | 703.9 | 534.0 | 630.7 | 736.1 | 1138.3 | 1532.7 | 1403.9 | 1340.4 |
| 67.5° | 10778.8 | 8405.5 | 2712.0 | 609.2 | 505.7 | 613.1 | 733.2 | 1113.9 | 1237.9 | 1108.0 | 1075.8 |
| 69° | 10199.9 | 7793.4 | 2265.9 | 552.6 | 485.2 | 595.5 | 736.1 | 1068.0 | 1146.1 | 1069.0 | 1039.7 |
| 70° | 9778.2 | 7297.5 | 1925.2 | 518.4 | 466.6 | 586.7 | 736.1 | 1051.4 | 1133.4 | 1060.2 | 1031.9 |
| 72.5° | 8392.9 | 5732.6 | 1153.9 | 432.5 | 413.0 | 552.6 | 729.3 | 1026.0 | 1143.2 | 1080.7 | 1043.6 |
| 75° | 6429.6 | 4169.6 | 671.7 | 355.4 | 347.5 | 495.9 | 693.1 | 1010.4 | 1176.4 | 1081.7 | 1000.7 |
| 77.5° | 4119.8 | 1924.2 | 500.8 | 289.0 | 282.1 | 429.6 | 647.3 | 959.7 | 1208.6 | 1134.4 | 1031.9 |
| 80° | 1431.2 | 872.8 | 373.9 | 228.4 | 218.7 | 351.5 | 567.2 | 865.0 | 1151.0 | 1158.8 | 1081.7 |
| 82.5° | 784.9 | 575.0 | 264.6 | 169.9 | 161.1 | 220.6 | 441.3 | 745.9 | 1065.1 | 1147.1 | 1153.0 |
| 85° | 431.5 | 324.1 | 173.8 | 109.3 | 123.0 | 189.4 | 305.6 | 579.9 | 857.2 | 996.8 | 1040.7 |
| 87.5° | 174.7 | 117.2 | 68.3 | 43.0 | 50.8 | 75.2 | 103.5 | 296.8 | 517.4 | 667.8 | 735.1 |
| 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)