

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: P237536

Luminaire Tested: **CTN-10-3-D-E1-T3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237536
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-26)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-3-D-E1-T3-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29276 lumens
Efficiency: N/A
Efficacy: 138.1 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

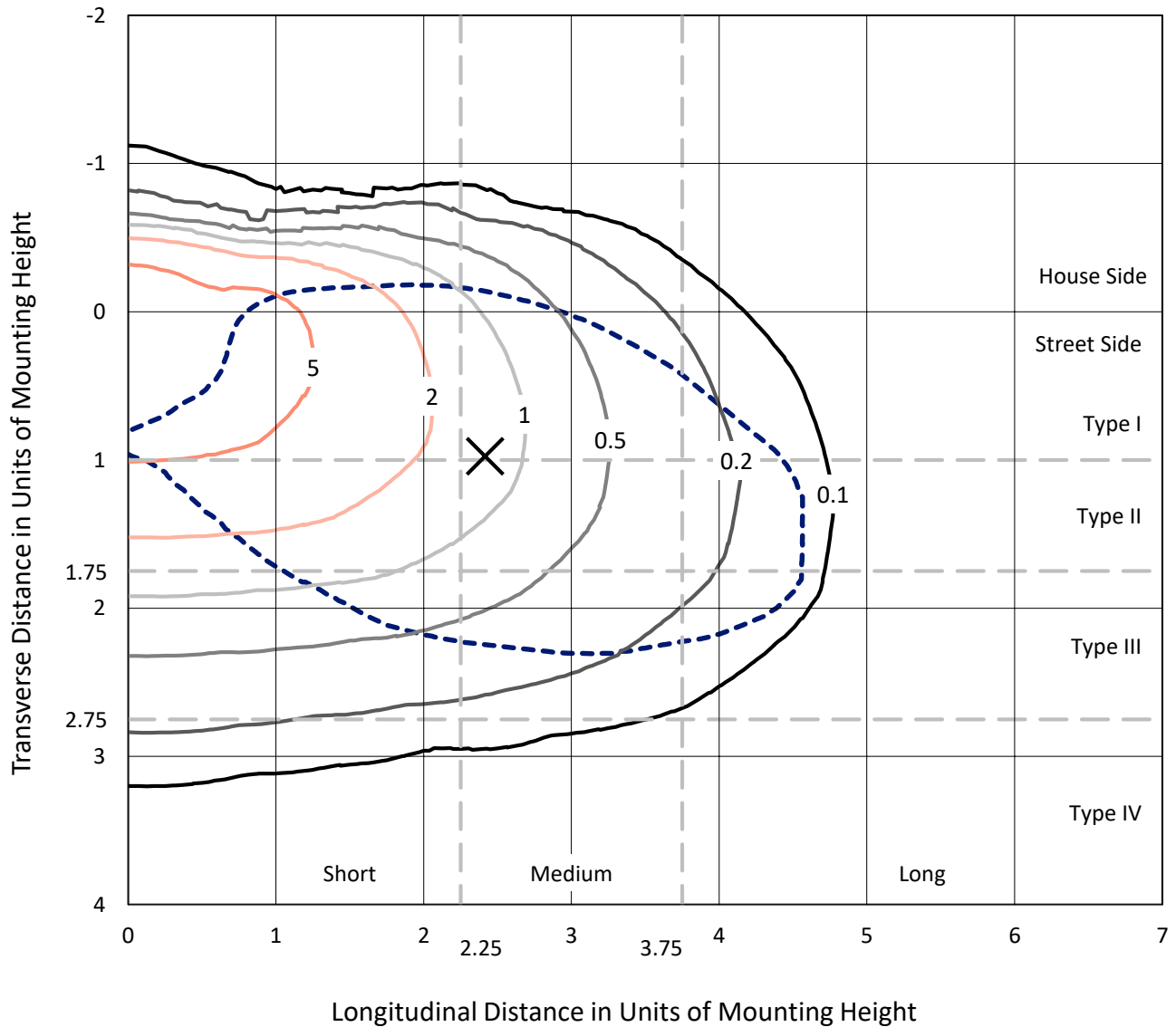
Input Watts (W): 212
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

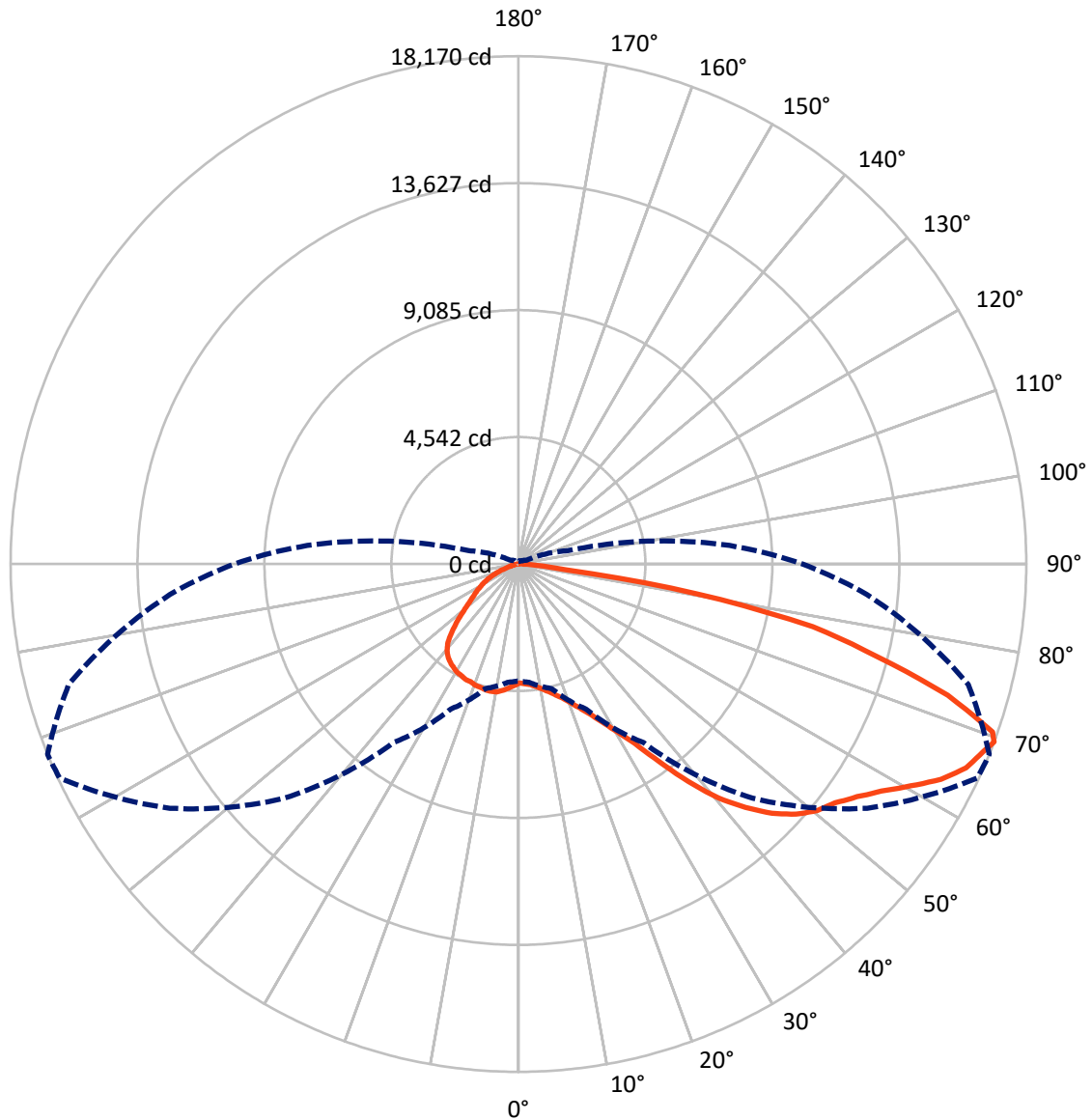


Based on 25 foot mounting height. Maximum calculated value = 8.3 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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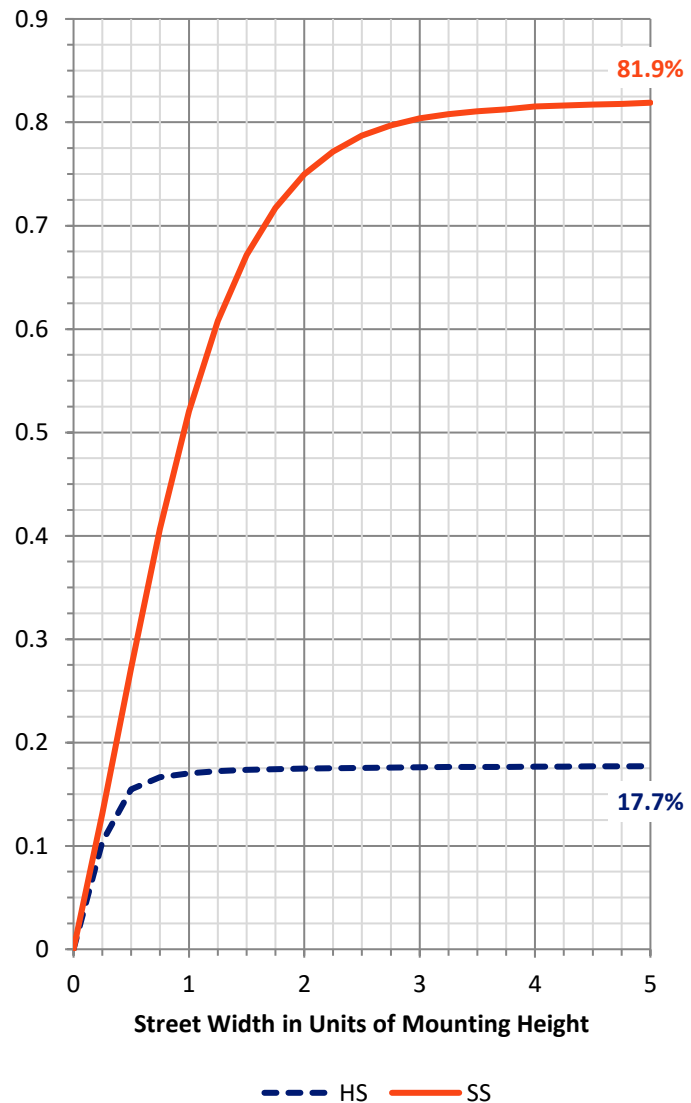
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5254.0 | 0.0 | 5254.0 |
| | % Fixture | 17.9 | 0.0 | 17.9 |
| Street Side | Lumens | 24022.0 | 0.0 | 24022.0 |
| | % Fixture | 82.1 | 0.0 | 82.1 |
| Total | Lumens | 29276.0 | 0.0 | 29276.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 427.7 | 1.5 |
| 10°-20° | 1342.0 | 4.6 |
| 20°-30° | 2294.0 | 7.8 |
| 30°-40° | 3534.7 | 12.1 |
| 40°-50° | 5072.5 | 17.3 |
| 50°-60° | 6105.0 | 20.9 |
| 60°-70° | 6406.7 | 21.9 |
| 70°-80° | 3711.6 | 12.7 |
| 80°-90° | 381.9 | 1.3 |
| 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° | 29276.0 | 100.0 |
| 0°-180° | 29276.0 | 100.0 |



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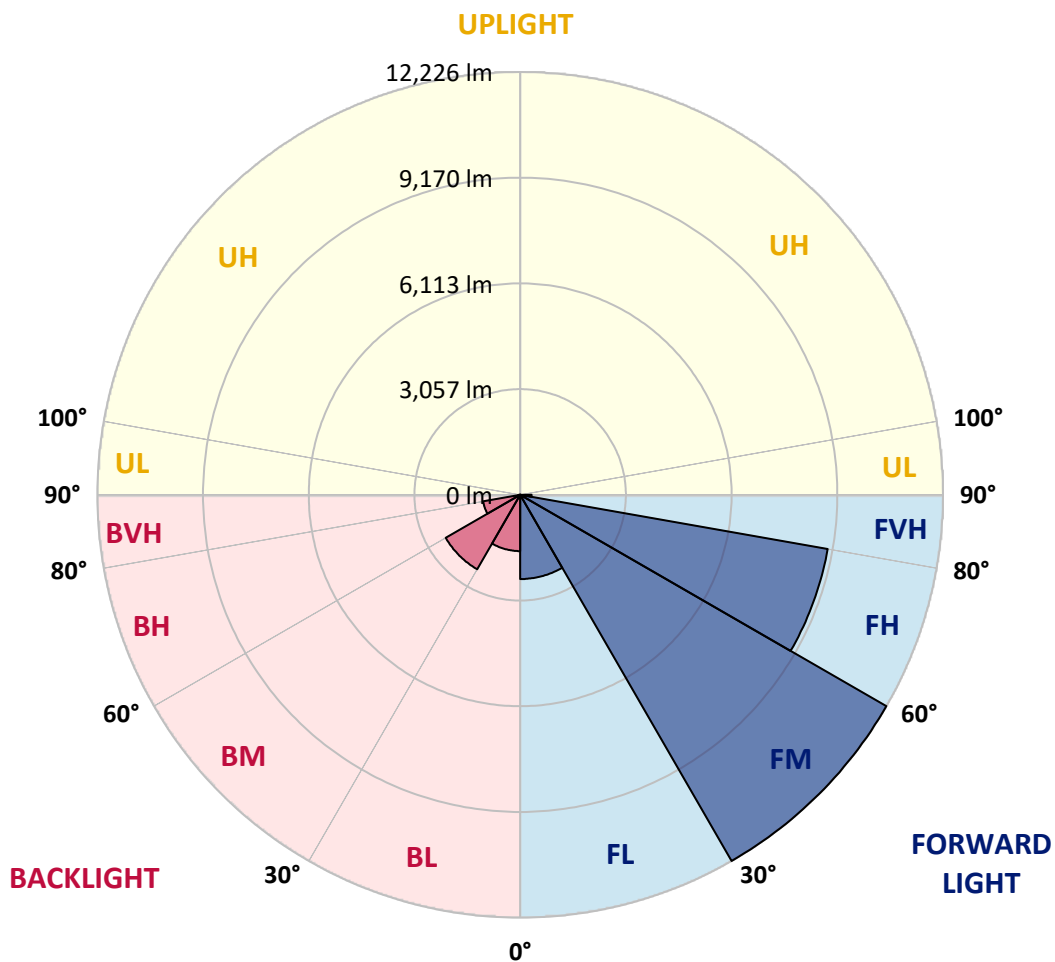
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2435.6 | 8.3 | | | |
| FM (30°-60°) | 12226.1 | 41.8 | | | |
| FH (60°-80°) | 9028.4 | 30.8 | | | G4/12000 |
| FVH (80°-90°) | 331.9 | 1.1 | | | G3/500 |
| BL (0°-30°) | 1628.0 | 5.6 | B3/2500 | | |
| BM (30°-60°) | 2486.2 | 8.5 | B2/2500 | | |
| BH (60°-80°) | 1089.8 | 3.7 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 50.0 | 0.2 | | | G1/100 |
| 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° | 68° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 |
| 2.5° | 4306.0 | 4271.5 | 4275.6 | 4303.0 | 4221.8 | 4256.3 | 4235.0 | 4279.6 | 4286.7 | 4265.4 | 4284.7 |
| 5° | 4391.2 | 4361.8 | 4360.8 | 4388.2 | 4297.9 | 4324.3 | 4290.8 | 4321.2 | 4330.4 | 4308.1 | 4341.5 |
| 7.5° | 4556.6 | 4525.1 | 4519.0 | 4546.4 | 4431.8 | 4439.9 | 4394.3 | 4409.5 | 4417.6 | 4387.2 | 4420.6 |
| 10° | 4793.9 | 4759.4 | 4737.1 | 4752.3 | 4623.5 | 4603.2 | 4525.1 | 4523.1 | 4535.3 | 4493.7 | 4547.4 |
| 12.5° | 5059.7 | 5019.1 | 4986.7 | 4989.7 | 4842.6 | 4808.1 | 4704.7 | 4668.2 | 4676.3 | 4620.5 | 4685.4 |
| 15° | 5348.8 | 5290.0 | 5259.5 | 5260.5 | 5095.2 | 5037.4 | 4904.5 | 4844.7 | 4839.6 | 4785.8 | 4823.4 |
| 17.5° | 5696.7 | 5649.1 | 5610.5 | 5590.2 | 5414.7 | 5300.1 | 5141.9 | 5063.8 | 5035.4 | 4999.9 | 4980.6 |
| 20° | 6105.5 | 6045.7 | 6005.1 | 5998.0 | 5783.0 | 5630.8 | 5420.8 | 5317.4 | 5283.9 | 5254.5 | 5168.2 |
| 22.5° | 6561.0 | 6500.1 | 6444.3 | 6435.2 | 6207.0 | 6023.4 | 5741.4 | 5613.6 | 5584.1 | 5550.7 | 5378.2 |
| 25° | 6980.9 | 6973.8 | 6912.0 | 6901.8 | 6681.7 | 6443.3 | 6112.6 | 5949.3 | 5949.3 | 5909.7 | 5645.0 |
| 27.5° | 7449.6 | 7459.7 | 7403.9 | 7391.7 | 7184.8 | 6921.1 | 6527.5 | 6371.3 | 6403.7 | 6332.7 | 5980.8 |
| 30° | 7943.6 | 7922.3 | 7907.1 | 7920.2 | 7728.5 | 7449.6 | 7039.8 | 6907.9 | 6958.6 | 6877.5 | 6431.1 |
| 32.5° | 8385.8 | 8369.6 | 8379.8 | 8430.5 | 8292.5 | 8034.9 | 7682.9 | 7600.7 | 7649.4 | 7700.1 | 7238.6 |
| 35° | 8735.8 | 8701.3 | 8829.1 | 8940.7 | 8901.1 | 8656.7 | 8373.7 | 8547.1 | 8681.0 | 8912.3 | 8428.4 |
| 37.5° | 9044.2 | 9018.8 | 9174.0 | 9402.2 | 9451.9 | 9316.0 | 9228.8 | 9712.6 | 9865.8 | 10177.2 | 9472.2 |
| 40° | 9198.4 | 9193.3 | 9384.0 | 9681.2 | 9883.1 | 9971.3 | 10124.5 | 10783.8 | 11007.0 | 11092.2 | 10266.5 |
| 42.5° | 9148.6 | 9164.9 | 9501.6 | 9960.1 | 10286.8 | 10665.1 | 10973.5 | 11698.8 | 11903.7 | 11833.7 | 10962.3 |
| 45° | 9009.7 | 9017.8 | 9359.6 | 10074.8 | 10636.7 | 11378.2 | 11790.1 | 12546.8 | 12728.4 | 12481.9 | 11516.2 |
| 47.5° | 8816.9 | 8820.0 | 9181.1 | 9995.7 | 10922.8 | 12023.4 | 12494.1 | 13224.4 | 13371.5 | 13023.6 | 11914.8 |
| 50° | 8556.3 | 8561.3 | 8992.4 | 9896.2 | 11169.3 | 12551.9 | 13044.9 | 13749.9 | 13863.5 | 13408.0 | 12259.7 |
| 52.5° | 8226.6 | 8271.2 | 8742.9 | 9737.0 | 11323.5 | 12927.2 | 13461.8 | 14135.3 | 14191.1 | 13867.5 | 12565.1 |
| 55° | 7846.2 | 7892.9 | 8425.4 | 9520.9 | 11383.3 | 13140.2 | 13753.9 | 14610.0 | 14699.3 | 14380.8 | 12813.6 |
| 57.5° | 7395.8 | 7459.7 | 8020.7 | 9169.9 | 11243.3 | 13229.5 | 14051.1 | 15196.4 | 15317.1 | 14917.4 | 13069.2 |
| 60° | 6873.4 | 6952.5 | 7542.9 | 8731.7 | 10919.7 | 13323.8 | 14607.0 | 15982.5 | 16122.5 | 15494.6 | 13292.4 |
| 62.5° | 6327.7 | 6378.4 | 6912.0 | 8134.3 | 10401.4 | 13396.8 | 15205.5 | 16951.2 | 16963.4 | 16000.7 | 13416.1 |
| 65° | 5597.3 | 5651.1 | 6128.9 | 7379.6 | 9623.4 | 13164.6 | 15507.8 | 17630.9 | 17594.3 | 16397.4 | 13374.5 |
| 67.5° | 4761.5 | 4812.2 | 5202.7 | 6441.3 | 8555.2 | 12513.3 | 15404.3 | 17901.7 | 17926.0 | 16685.5 | 12975.9 |
| 69° | 4181.3 | 4248.2 | 4616.4 | 5728.2 | 7800.5 | 11846.9 | 15230.8 | 18112.7 | 18169.5 | 16659.1 | 12514.3 |
| 70° | 3685.2 | 3771.4 | 4121.4 | 5098.2 | 7161.5 | 11241.3 | 14896.1 | 17993.0 | 17997.0 | 16392.3 | 12089.3 |
| 72.5° | 2407.1 | 2459.9 | 2520.7 | 3307.9 | 5152.0 | 8908.2 | 13181.8 | 15957.1 | 16062.6 | 14627.3 | 10569.8 |
| 75° | 1190.9 | 1237.5 | 1464.8 | 1749.8 | 2649.5 | 5967.6 | 10451.1 | 13073.3 | 13273.1 | 12422.0 | 8659.7 |
| 77.5° | 657.3 | 666.4 | 746.6 | 1146.2 | 1373.5 | 2698.2 | 7143.2 | 10421.7 | 10771.6 | 10123.5 | 6219.1 |
| 80° | 409.8 | 407.8 | 426.0 | 533.6 | 769.9 | 1279.1 | 3016.8 | 5848.9 | 6477.8 | 5285.9 | 2457.8 |
| 82.5° | 319.5 | 313.4 | 314.5 | 344.9 | 325.6 | 602.5 | 1255.8 | 1703.1 | 1718.4 | 1525.6 | 956.6 |
| 85° | 163.3 | 184.6 | 219.1 | 229.2 | 192.7 | 327.6 | 578.2 | 672.5 | 688.8 | 603.6 | 498.1 |
| 87.5° | 54.8 | 55.8 | 58.8 | 57.8 | 51.7 | 112.6 | 214.0 | 249.5 | 222.1 | 125.8 | 170.4 |
| 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° | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 | 4258.3 |
| 2.5° | 4314.1 | 4305.0 | 4323.3 | 4364.9 | 4330.4 | 4361.8 | 4330.4 | 4435.9 | 4423.7 | 4416.6 | 4436.9 |
| 5° | 4374.0 | 4373.0 | 4402.4 | 4469.3 | 4466.3 | 4522.1 | 4491.7 | 4596.1 | 4580.9 | 4578.9 | 4597.1 |
| 7.5° | 4455.1 | 4474.4 | 4505.9 | 4574.8 | 4575.8 | 4621.5 | 4587.0 | 4669.2 | 4635.7 | 4627.6 | 4652.9 |
| 10° | 4578.9 | 4584.0 | 4608.3 | 4656.0 | 4589.0 | 4609.3 | 4552.5 | 4617.4 | 4570.8 | 4565.7 | 4603.2 |
| 12.5° | 4697.6 | 4704.7 | 4668.2 | 4652.9 | 4566.7 | 4540.3 | 4440.9 | 4475.4 | 4421.7 | 4416.6 | 4434.8 |
| 15° | 4824.4 | 4776.7 | 4689.5 | 4639.8 | 4490.6 | 4395.3 | 4283.7 | 4215.7 | 4123.4 | 4080.8 | 4097.1 |
| 17.5° | 4956.2 | 4863.9 | 4700.6 | 4579.9 | 4380.1 | 4241.1 | 4019.0 | 3903.3 | 3766.4 | 3696.4 | 3683.2 |
| 20° | 5100.3 | 4970.4 | 4728.0 | 4549.5 | 4268.5 | 3994.6 | 3723.8 | 3459.0 | 3302.8 | 3230.8 | 3211.5 |
| 22.5° | 5262.6 | 5104.3 | 4766.5 | 4448.0 | 4094.0 | 3761.3 | 3303.8 | 2970.1 | 2742.9 | 2672.9 | 2653.6 |
| 25° | 5465.5 | 5254.5 | 4819.3 | 4422.7 | 3926.6 | 3379.9 | 2810.8 | 2432.5 | 2167.7 | 2061.2 | 2038.9 |
| 27.5° | 5711.9 | 5461.4 | 4905.5 | 4302.0 | 3632.5 | 2954.9 | 2320.9 | 1885.7 | 1610.8 | 1485.0 | 1457.7 |
| 30° | 6071.0 | 5726.1 | 4963.3 | 4231.0 | 3370.8 | 2513.6 | 1803.6 | 1317.7 | 1057.0 | 964.7 | 940.3 |
| 32.5° | 6779.1 | 6180.6 | 5081.0 | 4067.6 | 2984.3 | 2000.3 | 1241.6 | 808.5 | 625.9 | 573.1 | 552.8 |
| 35° | 7831.0 | 7036.7 | 5250.4 | 3873.9 | 2550.1 | 1423.2 | 737.5 | 468.6 | 376.3 | 357.1 | 351.0 |
| 37.5° | 8789.6 | 7881.7 | 5578.0 | 3575.7 | 1980.1 | 875.4 | 427.1 | 300.3 | 276.9 | 280.0 | 280.0 |
| 40° | 9512.8 | 8509.6 | 5960.5 | 3182.1 | 1343.0 | 491.0 | 293.2 | 249.5 | 254.6 | 255.6 | 254.6 |
| 42.5° | 10190.4 | 9084.7 | 6145.1 | 2747.9 | 778.0 | 325.6 | 254.6 | 232.3 | 236.3 | 233.3 | 231.3 |
| 45° | 10723.0 | 9496.6 | 6199.9 | 2163.7 | 426.0 | 291.1 | 239.4 | 216.1 | 214.0 | 216.1 | 218.1 |
| 47.5° | 11068.9 | 9748.1 | 6075.1 | 1656.5 | 321.6 | 270.8 | 230.3 | 204.9 | 199.8 | 214.0 | 213.0 |
| 50° | 11325.5 | 9920.6 | 5591.2 | 1259.9 | 313.4 | 253.6 | 219.1 | 191.7 | 193.7 | 211.0 | 209.0 |
| 52.5° | 11512.1 | 9965.2 | 5060.7 | 1010.3 | 299.2 | 241.4 | 209.0 | 185.6 | 183.6 | 196.8 | 197.8 |
| 55° | 11660.2 | 9845.5 | 4730.0 | 795.3 | 287.1 | 229.2 | 200.8 | 179.5 | 169.4 | 173.5 | 172.4 |
| 57.5° | 11752.5 | 9708.6 | 4352.7 | 663.4 | 275.9 | 216.1 | 189.7 | 163.3 | 148.1 | 149.1 | 148.1 |
| 60° | 11732.3 | 9617.3 | 3919.5 | 543.7 | 261.7 | 203.9 | 174.5 | 146.1 | 130.9 | 126.8 | 126.8 |
| 62.5° | 11691.7 | 9429.6 | 3472.2 | 473.7 | 249.5 | 199.8 | 156.2 | 132.9 | 121.7 | 117.7 | 117.7 |
| 65° | 11415.8 | 8982.3 | 2873.7 | 405.7 | 237.4 | 188.7 | 146.1 | 127.8 | 114.6 | 110.6 | 110.6 |
| 67.5° | 10731.1 | 8242.8 | 2225.5 | 353.0 | 228.2 | 170.4 | 143.0 | 124.8 | 110.6 | 105.5 | 105.5 |
| 69° | 10152.9 | 7585.5 | 1827.9 | 324.6 | 219.1 | 162.3 | 143.0 | 125.8 | 108.5 | 102.5 | 102.5 |
| 70° | 9701.5 | 7069.2 | 1512.4 | 307.4 | 210.0 | 157.2 | 143.0 | 126.8 | 107.5 | 100.4 | 99.4 |
| 72.5° | 8325.0 | 5519.2 | 839.9 | 260.7 | 174.5 | 143.0 | 140.0 | 127.8 | 102.5 | 92.3 | 91.3 |
| 75° | 6387.5 | 3880.0 | 500.1 | 220.1 | 147.1 | 130.9 | 132.9 | 122.7 | 94.3 | 83.2 | 83.2 |
| 77.5° | 3991.6 | 1782.3 | 372.3 | 172.4 | 119.7 | 113.6 | 115.6 | 108.5 | 85.2 | 76.1 | 76.1 |
| 80° | 1363.3 | 804.4 | 281.0 | 132.9 | 86.2 | 88.3 | 95.4 | 91.3 | 76.1 | 69.0 | 68.0 |
| 82.5° | 746.6 | 523.4 | 198.8 | 92.3 | 59.8 | 73.0 | 73.0 | 74.0 | 65.9 | 60.9 | 59.8 |
| 85° | 405.7 | 272.9 | 122.7 | 55.8 | 42.6 | 53.8 | 51.7 | 55.8 | 53.8 | 49.7 | 48.7 |
| 87.5° | 141.0 | 93.3 | 40.6 | 20.3 | 17.2 | 18.3 | 21.3 | 28.4 | 27.4 | 28.4 | 29.4 |
| 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)