

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: P322699

Luminaire Tested: **GLEON-SA5D-827-U-T4FT-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P322699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA5D-827-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(5) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20245 lumens
Efficiency: N/A
Efficacy: 63.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

Input Watts (W): 320
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: 24 FT

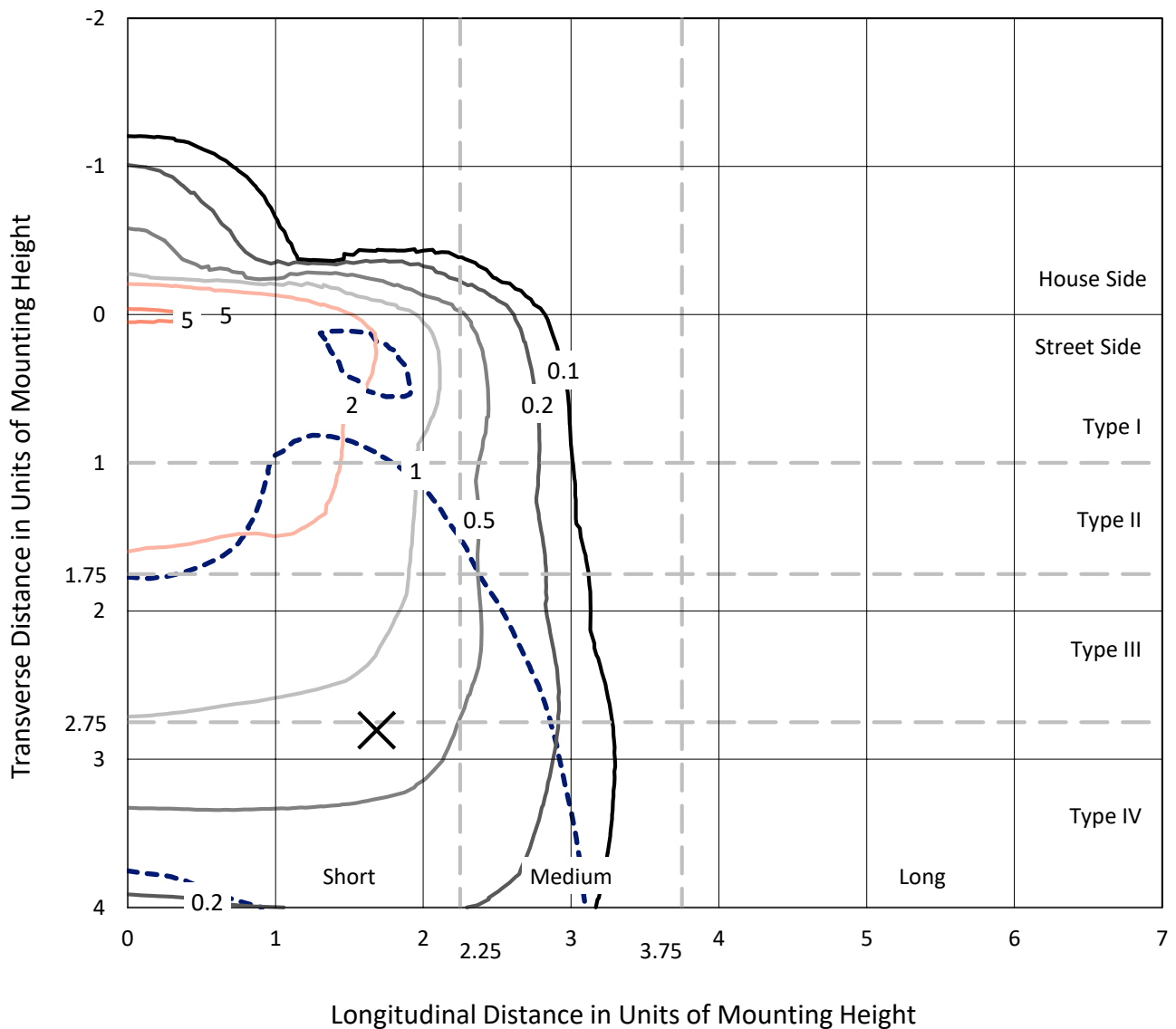




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Iso-Footcandle Lines of Horizontal Illumination

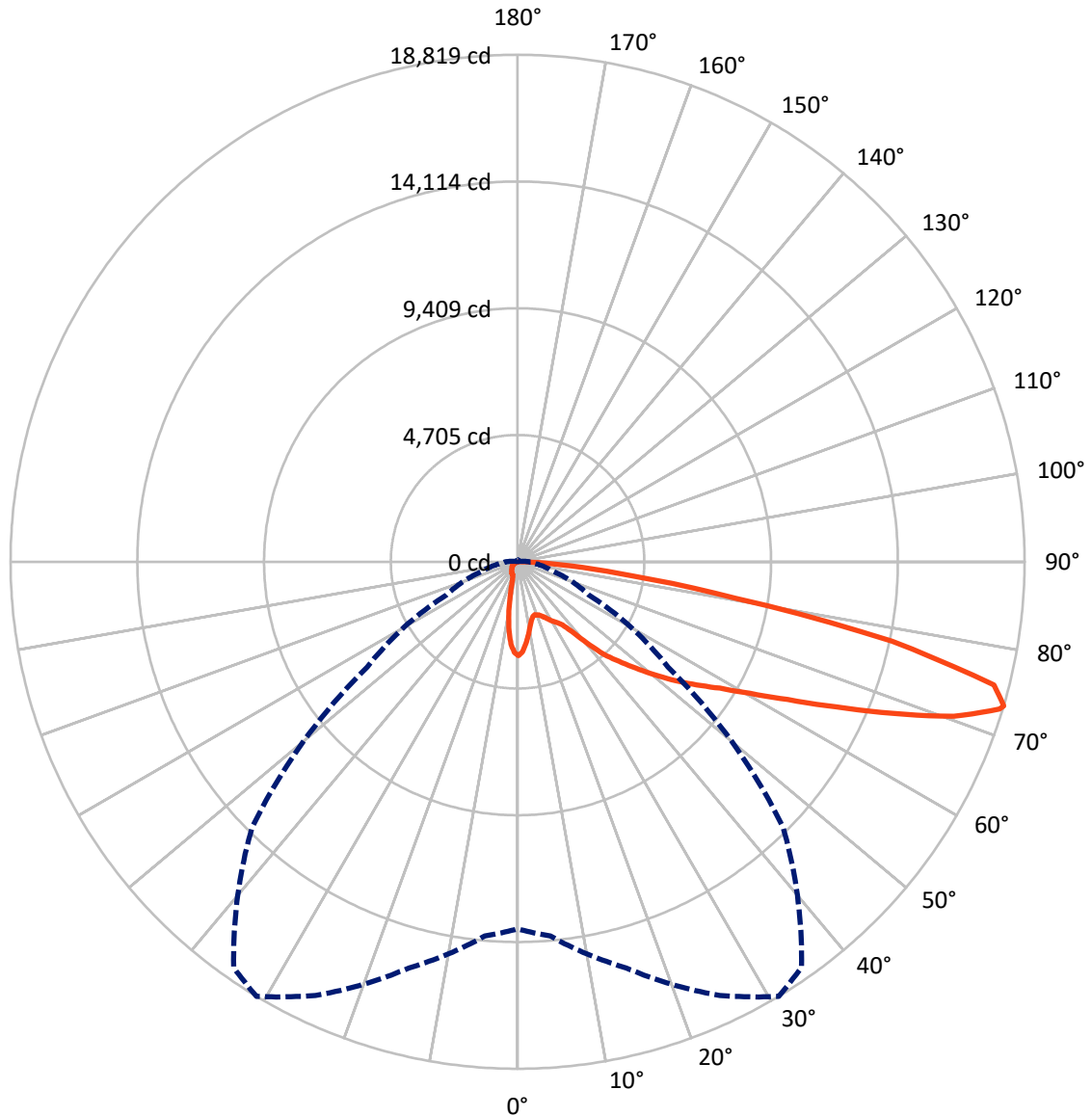
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 31-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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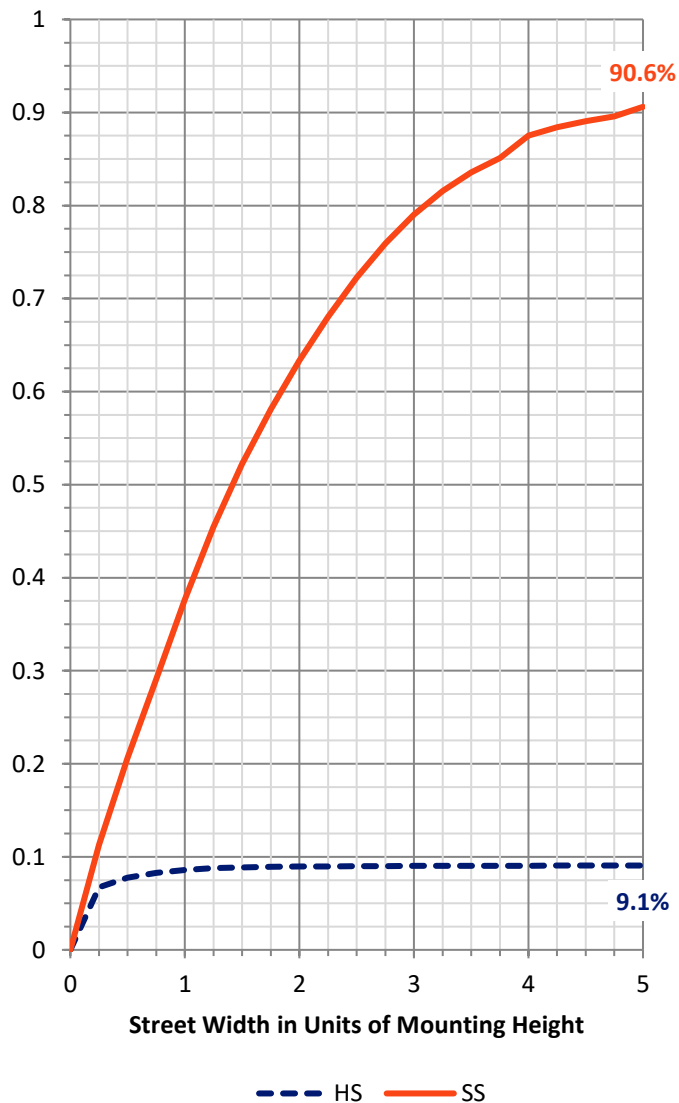
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1845.4 | 0.0 | 1845.4 |
| | % Fixture | 9.1 | 0.0 | 9.1 |
| Street Side | Lumens | 18399.6 | 0.0 | 18399.6 |
| | % Fixture | 90.9 | 0.0 | 90.9 |
| Total | Lumens | 20245.0 | 0.0 | 20245.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 288.8 | 1.4 |
| 10°-20° | 627.1 | 3.1 |
| 20°-30° | 939.5 | 4.6 |
| 30°-40° | 1494.8 | 7.4 |
| 40°-50° | 2669.3 | 13.2 |
| 50°-60° | 4142.1 | 20.5 |
| 60°-70° | 5506.3 | 27.2 |
| 70°-80° | 4141.8 | 20.5 |
| 80°-90° | 435.2 | 2.1 |
| 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° | 20245.0 | 100.0 |
| 0°-180° | 20245.0 | 100.0 |

Coefficient of Utilization



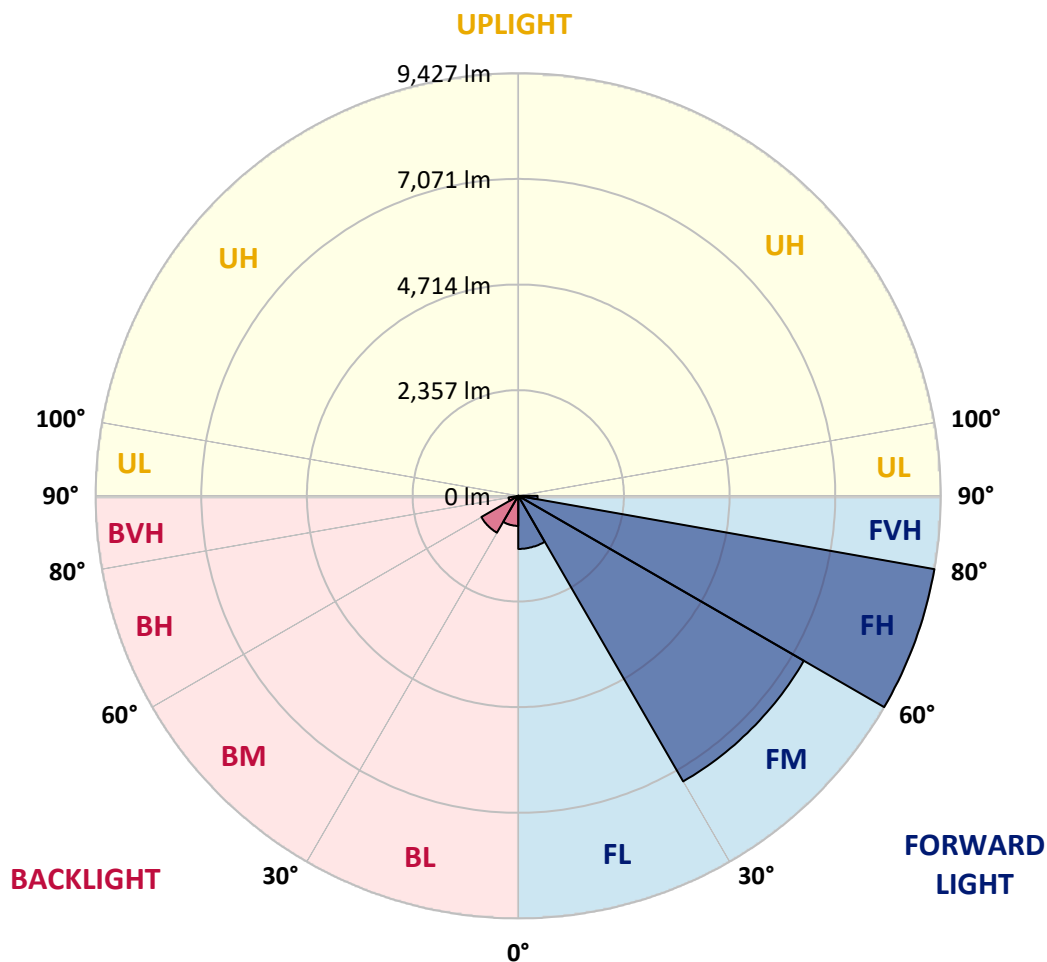
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1184.4 | 5.9 | | | |
| FM (30°-60°) | 7356.3 | 36.3 | | | |
| FH (60°-80°) | 9427.3 | 46.6 | | | G4/12000 |
| FVH (80°-90°) | 431.6 | 2.1 | | | G3/500 |
| BL (0°-30°) | 671.1 | 3.3 | B2/1000 | | |
| BM (30°-60°) | 949.9 | 4.7 | B1/1000 | | |
| BH (60°-80°) | 220.8 | 1.1 | B1/500 | | G1/500 |
| BVH (80°-90°) | 3.7 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 31° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 |
| 2.5° | 3300.9 | 3314.8 | 3329.6 | 3332.6 | 3357.4 | 3358.4 | 3394.0 | 3420.8 | 3447.5 | 3473.3 | 3482.2 |
| 5° | 2962.1 | 2984.9 | 3011.6 | 3038.4 | 3090.9 | 3111.7 | 3198.9 | 3288.0 | 3373.2 | 3454.5 | 3494.1 |
| 7.5° | 2600.5 | 2626.3 | 2663.9 | 2730.3 | 2788.7 | 2829.4 | 2967.1 | 3125.6 | 3284.1 | 3433.7 | 3519.8 |
| 10° | 2270.6 | 2294.4 | 2334.0 | 2404.4 | 2494.5 | 2550.0 | 2735.2 | 2955.2 | 3188.0 | 3414.8 | 3558.5 |
| 12.5° | 2060.6 | 2073.5 | 2095.3 | 2170.6 | 2251.8 | 2314.2 | 2532.2 | 2804.6 | 3108.7 | 3413.8 | 3620.9 |
| 15° | 2022.0 | 2025.9 | 2008.1 | 2041.8 | 2105.2 | 2165.6 | 2386.5 | 2682.7 | 3048.3 | 3429.7 | 3702.1 |
| 17.5° | 2083.4 | 2081.4 | 2022.0 | 2018.0 | 2068.5 | 2118.1 | 2315.2 | 2598.5 | 3005.7 | 3466.4 | 3807.1 |
| 20° | 2176.5 | 2169.6 | 2066.5 | 2047.7 | 2101.2 | 2147.8 | 2310.2 | 2566.8 | 2989.8 | 3527.8 | 3934.9 |
| 22.5° | 2300.3 | 2288.4 | 2127.0 | 2107.2 | 2164.6 | 2213.2 | 2371.7 | 2597.5 | 3003.7 | 3610.0 | 4083.5 |
| 25° | 2453.9 | 2436.1 | 2231.0 | 2209.2 | 2267.6 | 2316.2 | 2481.6 | 2685.7 | 3045.3 | 3710.1 | 4271.8 |
| 27.5° | 2627.3 | 2601.5 | 2397.4 | 2341.0 | 2407.3 | 2457.9 | 2628.2 | 2820.4 | 3110.7 | 3816.1 | 4502.6 |
| 30° | 2790.7 | 2757.0 | 2572.8 | 2479.6 | 2560.9 | 2617.3 | 2786.8 | 2980.9 | 3215.7 | 3979.5 | 4818.6 |
| 32.5° | 2955.2 | 2917.5 | 2729.3 | 2618.3 | 2691.6 | 2753.1 | 2950.2 | 3201.8 | 3412.9 | 4229.2 | 5238.7 |
| 35° | 3333.6 | 3294.0 | 3063.1 | 2879.9 | 2878.9 | 2913.6 | 3179.1 | 3504.0 | 3673.4 | 4576.9 | 5739.9 |
| 37.5° | 3970.6 | 3947.8 | 3727.9 | 3380.2 | 3287.0 | 3248.4 | 3491.1 | 3864.6 | 4047.9 | 5055.4 | 6305.6 |
| 40° | 4668.0 | 4648.2 | 4401.5 | 4086.5 | 3944.8 | 3849.7 | 3938.9 | 4366.9 | 4576.9 | 5639.9 | 6883.2 |
| 42.5° | 5455.6 | 5361.5 | 4921.6 | 4827.5 | 4700.7 | 4628.4 | 4548.2 | 4986.0 | 5226.8 | 6275.9 | 7455.8 |
| 45° | 6170.9 | 6012.4 | 5441.7 | 5299.1 | 5270.4 | 5288.2 | 5332.8 | 5818.2 | 5957.9 | 7031.8 | 8026.4 |
| 47.5° | 6596.9 | 6472.0 | 6034.2 | 5897.5 | 5889.5 | 6007.4 | 6344.2 | 6758.3 | 6686.0 | 7690.6 | 8528.7 |
| 50° | 7002.1 | 6889.1 | 6525.5 | 6559.2 | 6595.9 | 6756.4 | 7492.4 | 7725.2 | 7350.8 | 8287.9 | 8989.3 |
| 52.5° | 7330.0 | 7157.6 | 6967.4 | 7156.6 | 7336.9 | 7595.5 | 8677.3 | 8593.1 | 7822.3 | 8763.5 | 9383.6 |
| 55° | 7519.2 | 7440.9 | 7533.1 | 7723.3 | 8062.1 | 8482.1 | 9795.7 | 9315.3 | 8167.1 | 9197.4 | 9646.1 |
| 57.5° | 8212.6 | 8059.1 | 8242.4 | 8406.8 | 8848.7 | 9436.1 | 10753.7 | 9853.2 | 8415.7 | 9465.8 | 9706.6 |
| 60° | 9051.7 | 8927.9 | 9035.9 | 9309.3 | 9905.7 | 10596.2 | 11649.3 | 10292.1 | 8545.5 | 9638.2 | 9550.1 |
| 62.5° | 10387.2 | 10223.7 | 10156.3 | 10462.5 | 11253.0 | 12006.9 | 12328.9 | 10596.2 | 8516.8 | 9561.9 | 9013.1 |
| 65° | 12176.3 | 12006.9 | 11705.8 | 11983.1 | 12988.7 | 13520.7 | 13088.7 | 10660.6 | 8318.7 | 8944.8 | 7655.9 |
| 67.5° | 14009.1 | 13886.2 | 13628.6 | 14096.2 | 15003.7 | 15175.1 | 13892.2 | 10504.1 | 7680.7 | 7252.7 | 5409.1 |
| 70° | 15219.7 | 15167.1 | 15334.6 | 16368.8 | 17178.2 | 17128.7 | 14629.2 | 9663.0 | 5986.6 | 4460.0 | 2675.8 |
| 72.5° | 14346.9 | 14598.5 | 15834.9 | 17710.2 | 18698.9 | 18294.7 | 14250.8 | 7420.1 | 3421.8 | 1715.8 | 773.7 |
| 73° | 13623.7 | 13945.7 | 15610.0 | 17760.7 | 18818.8 | 18375.9 | 13932.8 | 6810.9 | 2916.5 | 1354.2 | 586.5 |
| 75° | 9477.7 | 9873.0 | 12923.3 | 16541.2 | 18258.0 | 17508.1 | 11613.6 | 4168.7 | 1351.3 | 600.3 | 236.8 |
| 77.5° | 4601.7 | 4893.9 | 7116.0 | 11951.4 | 14199.3 | 13679.2 | 7229.9 | 1553.4 | 610.3 | 375.5 | 109.0 |
| 80° | 1717.8 | 1910.0 | 3088.9 | 6082.7 | 8205.7 | 8420.7 | 3180.0 | 587.5 | 406.2 | 302.2 | 55.5 |
| 82.5° | 449.8 | 501.3 | 1139.3 | 2712.5 | 4205.4 | 4401.5 | 1002.6 | 296.2 | 297.2 | 248.7 | 33.7 |
| 85° | 143.6 | 164.5 | 355.7 | 1217.5 | 1981.3 | 1739.6 | 261.5 | 143.6 | 216.0 | 185.3 | 18.8 |
| 87.5° | 17.8 | 22.8 | 112.9 | 286.3 | 436.9 | 242.7 | 40.6 | 42.6 | 92.1 | 103.0 | 10.9 |
| 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° | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 |
| 2.5° | 3491.1 | 3486.2 | 3487.2 | 3461.4 | 3444.6 | 3410.9 | 3376.2 | 3360.4 | 3343.5 | 3336.6 | 3343.5 |
| 5° | 3509.0 | 3500.0 | 3474.3 | 3395.0 | 3310.8 | 3201.8 | 3099.8 | 3022.5 | 2925.4 | 2898.7 | 2926.4 |
| 7.5° | 3536.7 | 3518.9 | 3443.6 | 3282.1 | 3094.9 | 2886.8 | 2653.0 | 2482.6 | 2342.9 | 2252.8 | 2285.5 |
| 10° | 3577.3 | 3543.6 | 3392.1 | 3117.6 | 2782.8 | 2414.3 | 2082.4 | 1823.8 | 1640.5 | 1565.3 | 1562.3 |
| 12.5° | 3645.7 | 3582.3 | 3328.6 | 2903.7 | 2401.4 | 1910.0 | 1475.1 | 1194.7 | 1046.1 | 950.1 | 948.1 |
| 15° | 3721.0 | 3627.8 | 3248.4 | 2647.1 | 1957.6 | 1368.1 | 950.1 | 737.1 | 641.0 | 610.3 | 606.3 |
| 17.5° | 3813.1 | 3680.3 | 3144.4 | 2331.0 | 1492.9 | 906.5 | 620.2 | 558.7 | 554.8 | 551.8 | 551.8 |
| 20° | 3929.0 | 3742.7 | 3010.6 | 1969.5 | 1059.0 | 605.3 | 527.0 | 531.0 | 533.0 | 529.0 | 530.0 |
| 22.5° | 4063.7 | 3806.2 | 2851.1 | 1581.1 | 716.3 | 506.2 | 504.3 | 509.2 | 511.2 | 509.2 | 510.2 |
| 25° | 4220.3 | 3879.5 | 2657.0 | 1173.9 | 517.1 | 480.5 | 485.4 | 492.4 | 497.3 | 497.3 | 497.3 |
| 27.5° | 4414.4 | 3968.6 | 2423.2 | 819.3 | 446.8 | 453.7 | 467.6 | 480.5 | 487.4 | 489.4 | 489.4 |
| 30° | 4667.0 | 4079.6 | 2142.8 | 561.7 | 406.2 | 418.1 | 443.8 | 468.6 | 481.5 | 483.4 | 484.4 |
| 32.5° | 4986.0 | 4204.4 | 1817.9 | 415.1 | 371.5 | 380.4 | 408.2 | 449.8 | 474.5 | 478.5 | 478.5 |
| 35° | 5351.6 | 4349.0 | 1468.2 | 361.6 | 346.7 | 349.7 | 371.5 | 419.1 | 462.6 | 473.5 | 474.5 |
| 37.5° | 5751.8 | 4491.7 | 1116.5 | 337.8 | 325.9 | 325.9 | 341.8 | 382.4 | 433.9 | 467.6 | 471.6 |
| 40° | 6125.3 | 4577.9 | 782.6 | 319.0 | 307.1 | 307.1 | 321.0 | 350.7 | 399.2 | 449.8 | 460.7 |
| 42.5° | 6470.1 | 4607.6 | 544.9 | 301.2 | 289.3 | 292.2 | 304.1 | 327.9 | 364.6 | 415.1 | 425.0 |
| 45° | 6824.7 | 4602.7 | 397.3 | 280.4 | 271.4 | 280.4 | 289.3 | 307.1 | 333.9 | 362.6 | 364.6 |
| 47.5° | 7092.2 | 4561.0 | 315.0 | 260.5 | 254.6 | 266.5 | 274.4 | 286.3 | 301.2 | 299.2 | 299.2 |
| 50° | 7342.8 | 4460.0 | 253.6 | 233.8 | 237.8 | 251.6 | 255.6 | 259.6 | 260.5 | 241.7 | 239.7 |
| 52.5° | 7533.1 | 4302.5 | 203.1 | 205.1 | 220.9 | 234.8 | 230.8 | 224.9 | 215.0 | 192.2 | 188.2 |
| 55° | 7596.5 | 3999.3 | 159.5 | 169.4 | 196.2 | 214.0 | 199.1 | 186.2 | 167.4 | 148.6 | 144.6 |
| 57.5° | 7481.5 | 3608.0 | 129.8 | 131.8 | 165.4 | 180.3 | 163.5 | 148.6 | 127.8 | 111.9 | 109.0 |
| 60° | 7237.8 | 3173.1 | 107.0 | 99.1 | 127.8 | 140.7 | 129.8 | 114.9 | 96.1 | 84.2 | 83.2 |
| 62.5° | 6754.4 | 2709.5 | 88.2 | 77.3 | 97.1 | 108.0 | 101.0 | 90.2 | 74.3 | 66.4 | 65.4 |
| 65° | 5738.0 | 2167.6 | 71.3 | 62.4 | 75.3 | 84.2 | 78.3 | 70.3 | 58.4 | 52.5 | 51.5 |
| 67.5° | 4005.3 | 1465.2 | 58.4 | 51.5 | 59.4 | 66.4 | 61.4 | 57.5 | 46.6 | 45.6 | 46.6 |
| 70° | 1931.8 | 706.3 | 48.5 | 41.6 | 46.6 | 51.5 | 49.5 | 46.6 | 44.6 | 51.5 | 59.4 |
| 72.5° | 553.8 | 236.8 | 38.6 | 34.7 | 37.6 | 40.6 | 42.6 | 41.6 | 48.5 | 62.4 | 72.3 |
| 73° | 426.0 | 191.2 | 36.7 | 32.7 | 35.7 | 39.6 | 41.6 | 40.6 | 49.5 | 63.4 | 72.3 |
| 75° | 182.3 | 92.1 | 27.7 | 26.7 | 29.7 | 34.7 | 36.7 | 36.7 | 49.5 | 64.4 | 69.3 |
| 77.5° | 82.2 | 49.5 | 17.8 | 20.8 | 25.8 | 27.7 | 30.7 | 30.7 | 39.6 | 49.5 | 49.5 |
| 80° | 46.6 | 26.7 | 13.9 | 15.9 | 18.8 | 18.8 | 18.8 | 16.8 | 17.8 | 19.8 | 21.8 |
| 82.5° | 29.7 | 17.8 | 10.9 | 12.9 | 11.9 | 9.9 | 7.9 | 7.9 | 6.9 | 7.9 | 9.9 |
| 85° | 16.8 | 9.9 | 9.9 | 7.9 | 5.0 | 4.0 | 5.0 | 4.0 | 1.0 | 0.0 | 1.0 |
| 87.5° | 9.9 | 5.9 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)