

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: P452115

Luminaire Tested: **GALN-SA3A-740-U-SL4**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P452115
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA3A-740-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13363 lumens
Efficiency: N/A
Efficacy: 143.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

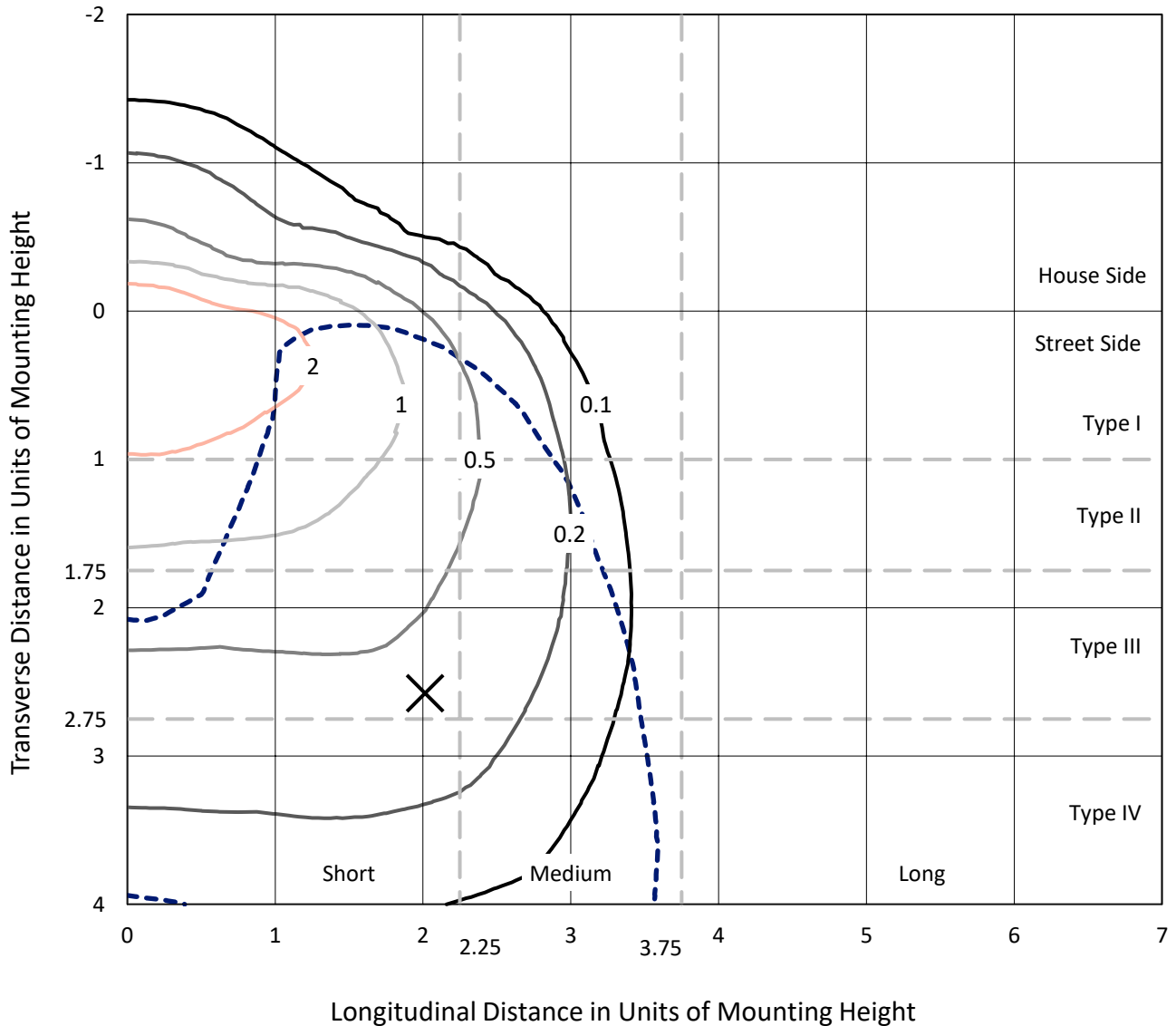
Input Watts (W): 93
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

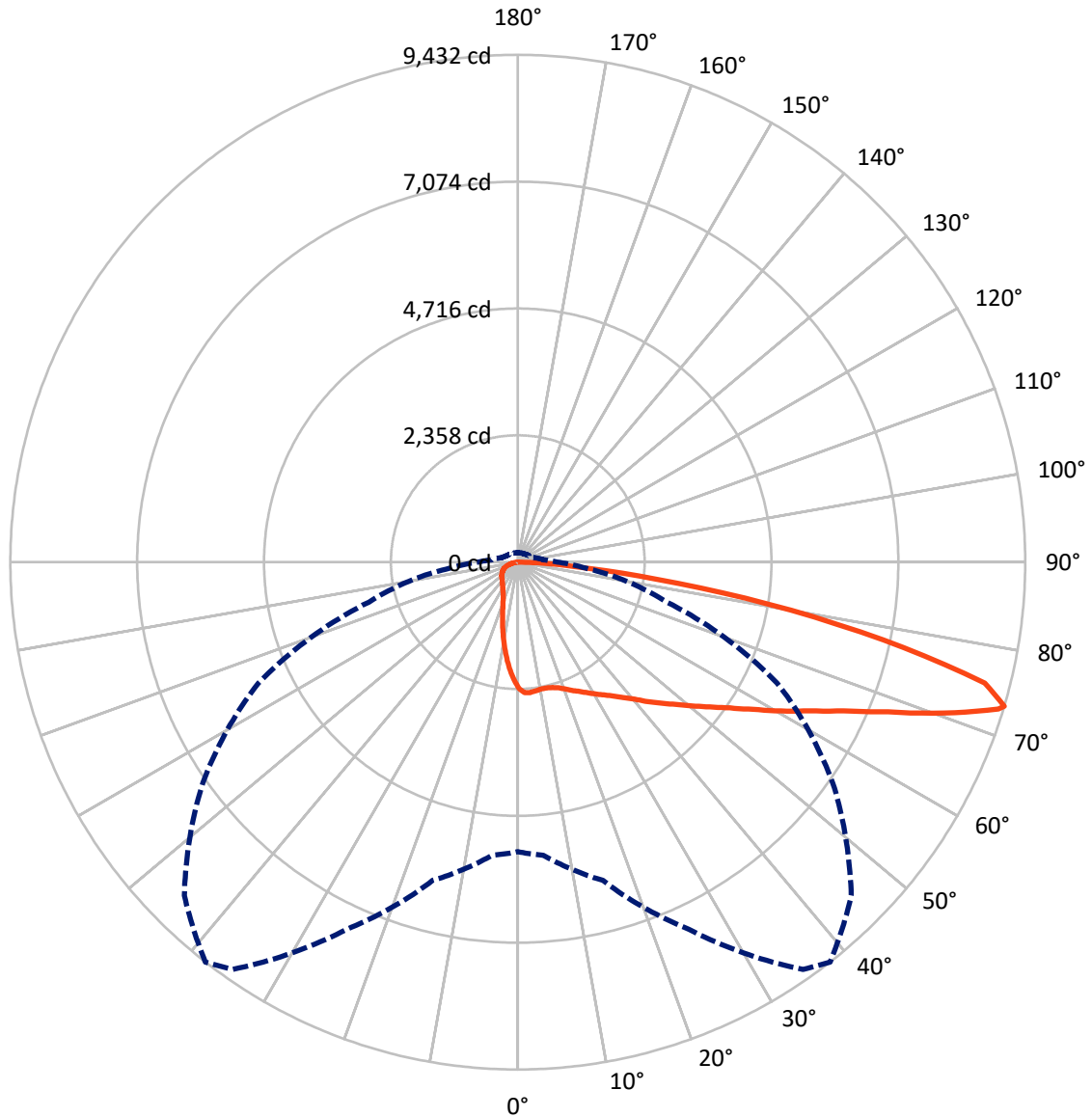
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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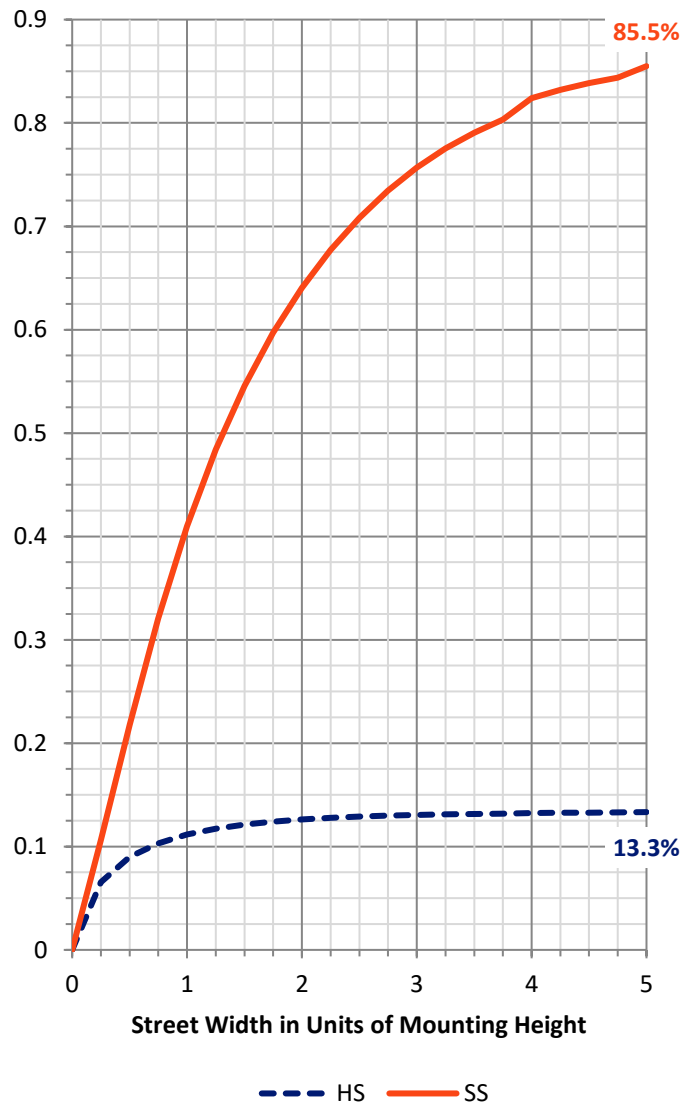
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1796.4 | 0.0 | 1796.4 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 11566.6 | 0.0 | 11566.6 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 13363.0 | 0.0 | 13363.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 204.9 | 1.5 |
| 10°-20° | 525.5 | 3.9 |
| 20°-30° | 818.3 | 6.1 |
| 30°-40° | 1200.2 | 9.0 |
| 40°-50° | 1780.4 | 13.3 |
| 50°-60° | 2522.5 | 18.9 |
| 60°-70° | 3199.9 | 23.9 |
| 70°-80° | 2663.7 | 19.9 |
| 80°-90° | 447.5 | 3.3 |
| 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° | 13363.0 | 100.0 |
| 0°-180° | 13363.0 | 100.0 |



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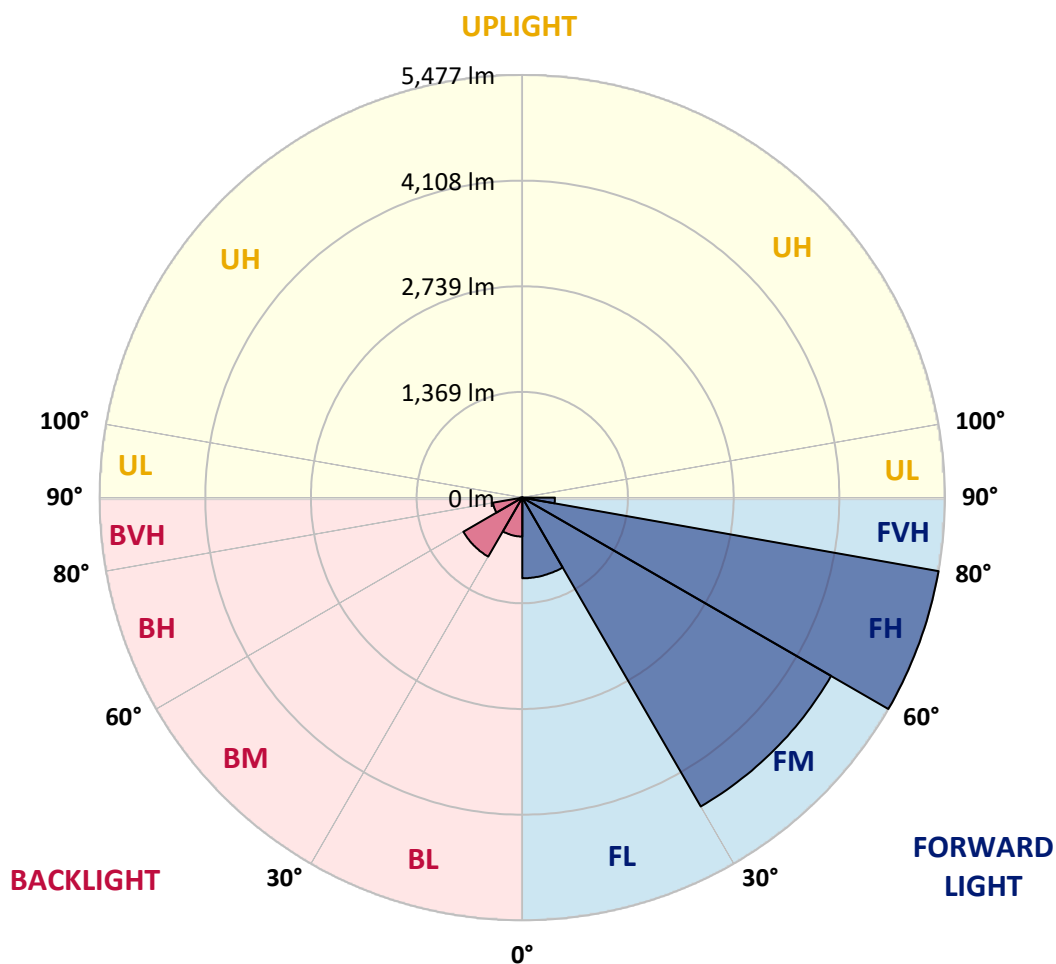
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1044.6 | 7.8 | | | |
| FM | (30°-60°) | 4621.3 | 34.6 | | | |
| FH | (60°-80°) | 5477.4 | 41.0 | | | G3/7500 |
| FVH | (80°-90°) | 423.3 | 3.2 | | | G3/500 |
| BL | (0°-30°) | 504.1 | 3.8 | B2/1000 | | |
| BM | (30°-60°) | 881.9 | 6.6 | B1/1000 | | |
| BH | (60°-80°) | 386.1 | 2.9 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 24.3 | 0.2 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 |
| 2.5° | 2442.0 | 2454.1 | 2448.0 | 2439.7 | 2434.4 | 2429.2 | 2421.6 | 2399.7 | 2382.4 | 2363.5 | 2334.1 |
| 5° | 2460.1 | 2467.6 | 2462.4 | 2451.8 | 2439.7 | 2434.4 | 2420.1 | 2391.4 | 2363.5 | 2331.8 | 2288.0 |
| 7.5° | 2449.5 | 2452.5 | 2446.5 | 2433.7 | 2423.1 | 2413.3 | 2396.7 | 2365.0 | 2331.1 | 2292.6 | 2235.2 |
| 10° | 2411.8 | 2423.1 | 2423.1 | 2412.6 | 2402.0 | 2396.7 | 2380.1 | 2349.9 | 2319.0 | 2275.2 | 2207.3 |
| 12.5° | 2380.9 | 2392.9 | 2402.7 | 2399.7 | 2399.0 | 2399.0 | 2386.1 | 2363.5 | 2327.3 | 2285.8 | 2205.0 |
| 15° | 2359.7 | 2374.1 | 2395.2 | 2407.3 | 2414.8 | 2417.1 | 2411.8 | 2392.2 | 2355.2 | 2306.9 | 2214.1 |
| 17.5° | 2355.2 | 2372.6 | 2411.0 | 2437.5 | 2457.1 | 2456.3 | 2454.8 | 2427.6 | 2386.9 | 2337.1 | 2225.4 |
| 20° | 2375.6 | 2398.2 | 2451.8 | 2493.3 | 2522.0 | 2516.7 | 2508.4 | 2472.9 | 2425.4 | 2369.5 | 2236.0 |
| 22.5° | 2436.7 | 2460.1 | 2519.0 | 2564.2 | 2592.2 | 2592.2 | 2567.2 | 2520.5 | 2469.9 | 2407.3 | 2250.3 |
| 25° | 2524.2 | 2549.9 | 2612.5 | 2658.6 | 2671.4 | 2661.6 | 2636.7 | 2580.1 | 2522.0 | 2461.6 | 2280.5 |
| 27.5° | 2631.4 | 2662.3 | 2720.4 | 2758.9 | 2755.2 | 2747.6 | 2721.9 | 2649.5 | 2591.4 | 2536.3 | 2331.8 |
| 30° | 2765.0 | 2787.6 | 2848.0 | 2857.0 | 2843.4 | 2841.9 | 2805.7 | 2733.3 | 2678.9 | 2636.7 | 2405.0 |
| 32.5° | 2891.0 | 2911.4 | 2959.7 | 2963.4 | 2939.3 | 2942.3 | 2908.3 | 2841.9 | 2811.0 | 2795.9 | 2528.0 |
| 35° | 3024.6 | 3035.1 | 3076.6 | 3072.1 | 3056.2 | 3054.0 | 3040.4 | 2977.0 | 2986.8 | 3014.0 | 2702.3 |
| 37.5° | 3136.2 | 3157.4 | 3180.8 | 3184.5 | 3183.8 | 3191.3 | 3200.4 | 3170.2 | 3226.8 | 3312.1 | 2931.0 |
| 40° | 3238.9 | 3257.0 | 3291.7 | 3303.8 | 3333.2 | 3348.3 | 3379.2 | 3380.0 | 3510.5 | 3650.9 | 3212.5 |
| 42.5° | 3308.3 | 3339.2 | 3404.1 | 3426.0 | 3497.7 | 3543.0 | 3589.0 | 3638.1 | 3827.5 | 4007.8 | 3544.5 |
| 45° | 3368.7 | 3409.4 | 3517.3 | 3585.2 | 3682.6 | 3737.7 | 3835.0 | 3937.7 | 4210.1 | 4446.3 | 3881.8 |
| 47.5° | 3460.0 | 3496.2 | 3620.0 | 3739.9 | 3887.1 | 3950.5 | 4096.1 | 4249.3 | 4605.5 | 4864.3 | 4204.8 |
| 50° | 3586.8 | 3608.6 | 3734.7 | 3930.1 | 4118.0 | 4199.5 | 4391.9 | 4613.1 | 5028.1 | 5277.1 | 4488.5 |
| 52.5° | 3749.0 | 3758.1 | 3858.4 | 4118.8 | 4366.3 | 4467.4 | 4722.5 | 4980.6 | 5397.9 | 5635.6 | 4713.4 |
| 55° | 3940.7 | 3925.6 | 4004.1 | 4318.7 | 4650.0 | 4782.1 | 5056.0 | 5352.6 | 5813.7 | 5925.4 | 4877.2 |
| 57.5° | 4130.1 | 4106.7 | 4169.3 | 4561.7 | 5000.2 | 5159.4 | 5478.6 | 5735.9 | 6184.9 | 6196.3 | 4991.9 |
| 60° | 4330.8 | 4313.5 | 4388.2 | 4847.0 | 5429.6 | 5618.2 | 5913.3 | 6133.6 | 6544.1 | 6384.9 | 5010.0 |
| 62.5° | 4536.8 | 4508.9 | 4615.3 | 5167.7 | 5913.3 | 6084.6 | 6370.6 | 6556.2 | 6896.6 | 6455.1 | 4835.7 |
| 65° | 4736.8 | 4724.0 | 4888.5 | 5548.8 | 6464.2 | 6658.9 | 6936.6 | 7062.6 | 7178.8 | 6349.5 | 4403.3 |
| 67.5° | 4949.6 | 4975.3 | 5237.9 | 6057.4 | 7182.6 | 7427.1 | 7726.7 | 7608.2 | 7259.5 | 5849.1 | 3708.2 |
| 70° | 5274.1 | 5290.7 | 5696.7 | 6723.7 | 8108.5 | 8403.6 | 8548.4 | 7802.1 | 6870.1 | 4899.1 | 2787.6 |
| 72.5° | 5413.7 | 5486.9 | 6106.5 | 7423.3 | 9160.4 | 9340.8 | 8824.6 | 7369.7 | 5723.1 | 3327.9 | 1464.7 |
| 73° | 5382.8 | 5470.3 | 6125.3 | 7529.7 | 9242.7 | 9432.1 | 8765.8 | 7147.1 | 5320.1 | 2866.1 | 1255.7 |
| 75° | 4997.2 | 5105.1 | 5880.1 | 7440.6 | 9082.7 | 8969.5 | 7819.5 | 6091.4 | 3595.1 | 1303.2 | 572.0 |
| 77.5° | 3942.9 | 3973.9 | 4659.1 | 6008.4 | 7152.4 | 6942.6 | 5852.2 | 3807.1 | 1468.5 | 484.5 | 324.5 |
| 80° | 1977.9 | 2091.8 | 2626.1 | 3441.9 | 4782.8 | 4714.2 | 3693.9 | 1800.5 | 612.0 | 284.5 | 215.1 |
| 82.5° | 951.6 | 1032.3 | 1279.1 | 1678.3 | 2642.7 | 2580.1 | 1829.2 | 984.0 | 388.6 | 166.0 | 126.8 |
| 85° | 612.8 | 673.1 | 814.2 | 800.7 | 1086.7 | 1037.6 | 821.8 | 744.8 | 230.2 | 86.8 | 88.3 |
| 87.5° | 404.5 | 443.0 | 531.3 | 424.9 | 395.4 | 357.7 | 363.0 | 419.6 | 45.3 | 33.2 | 12.1 |
| 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° | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 | 2347.7 |
| 2.5° | 2322.0 | 2312.2 | 2279.7 | 2248.0 | 2217.9 | 2189.2 | 2170.3 | 2145.4 | 2128.8 | 2133.3 | 2140.1 |
| 5° | 2263.9 | 2242.0 | 2184.7 | 2128.8 | 2076.0 | 2013.4 | 1962.8 | 1922.0 | 1891.1 | 1879.8 | 1877.5 |
| 7.5° | 2202.8 | 2165.8 | 2083.5 | 1987.7 | 1897.9 | 1820.2 | 1730.4 | 1685.8 | 1633.8 | 1615.7 | 1609.6 |
| 10° | 2165.8 | 2116.0 | 2000.5 | 1867.0 | 1731.9 | 1602.8 | 1505.5 | 1426.2 | 1354.6 | 1341.0 | 1334.2 |
| 12.5° | 2155.2 | 2089.6 | 1934.1 | 1762.1 | 1582.5 | 1424.0 | 1279.9 | 1175.7 | 1106.3 | 1090.4 | 1067.0 |
| 15° | 2149.2 | 2067.7 | 1872.2 | 1656.4 | 1428.5 | 1235.3 | 1083.6 | 962.2 | 898.8 | 856.5 | 857.3 |
| 17.5° | 2143.9 | 2042.8 | 1802.8 | 1541.0 | 1295.7 | 1073.1 | 905.6 | 796.1 | 738.0 | 715.4 | 713.1 |
| 20° | 2136.4 | 2013.4 | 1722.8 | 1419.5 | 1144.0 | 925.2 | 773.5 | 692.0 | 652.8 | 633.9 | 633.1 |
| 22.5° | 2133.3 | 1984.7 | 1644.3 | 1295.7 | 1009.7 | 811.2 | 686.0 | 628.6 | 603.7 | 590.9 | 590.9 |
| 25° | 2140.9 | 1964.3 | 1562.1 | 1178.0 | 890.5 | 713.9 | 625.6 | 586.3 | 572.0 | 565.2 | 563.0 |
| 27.5° | 2164.3 | 1955.2 | 1480.6 | 1060.3 | 781.0 | 647.5 | 584.8 | 557.7 | 547.1 | 541.8 | 542.6 |
| 30° | 2208.8 | 1954.5 | 1400.6 | 944.0 | 699.5 | 596.9 | 552.4 | 533.5 | 525.2 | 522.2 | 521.4 |
| 32.5° | 2280.5 | 1971.1 | 1322.1 | 848.2 | 630.9 | 554.7 | 522.2 | 508.6 | 504.8 | 502.6 | 501.8 |
| 35° | 2402.0 | 2017.9 | 1244.4 | 760.7 | 578.0 | 516.9 | 493.5 | 486.7 | 481.5 | 483.7 | 484.5 |
| 37.5° | 2565.7 | 2098.6 | 1170.4 | 692.0 | 538.1 | 489.0 | 469.4 | 463.3 | 460.3 | 462.6 | 464.9 |
| 40° | 2785.3 | 2214.8 | 1108.6 | 636.9 | 509.4 | 465.6 | 448.2 | 443.0 | 439.9 | 443.7 | 444.5 |
| 42.5° | 3027.6 | 2349.2 | 1057.2 | 593.9 | 486.0 | 446.0 | 429.4 | 423.3 | 421.1 | 423.3 | 424.1 |
| 45° | 3276.6 | 2505.4 | 1030.8 | 563.0 | 466.4 | 431.6 | 414.3 | 407.5 | 402.2 | 400.7 | 403.0 |
| 47.5° | 3521.9 | 2641.2 | 1030.1 | 544.1 | 450.5 | 418.8 | 400.0 | 392.4 | 385.6 | 381.8 | 381.1 |
| 50° | 3721.8 | 2749.1 | 1048.2 | 535.8 | 436.9 | 404.5 | 385.6 | 378.1 | 369.0 | 361.5 | 363.0 |
| 52.5° | 3872.8 | 2819.3 | 1056.5 | 532.0 | 429.4 | 389.4 | 370.5 | 363.7 | 353.2 | 343.4 | 343.4 |
| 55° | 3970.1 | 2835.9 | 1036.1 | 528.2 | 423.3 | 373.5 | 353.2 | 347.1 | 336.6 | 326.8 | 326.8 |
| 57.5° | 4003.3 | 2784.6 | 962.9 | 519.2 | 417.3 | 360.0 | 335.8 | 330.5 | 322.2 | 312.4 | 310.9 |
| 60° | 3926.3 | 2611.0 | 834.6 | 492.0 | 405.2 | 345.6 | 316.9 | 314.7 | 311.7 | 303.4 | 302.6 |
| 62.5° | 3629.8 | 2242.8 | 695.0 | 456.6 | 384.9 | 330.5 | 299.6 | 303.4 | 305.6 | 301.1 | 300.3 |
| 65° | 3136.2 | 1820.9 | 593.9 | 407.5 | 357.7 | 309.4 | 280.7 | 290.5 | 296.6 | 296.6 | 295.1 |
| 67.5° | 2543.9 | 1398.3 | 500.3 | 365.2 | 323.7 | 280.7 | 259.6 | 267.1 | 271.7 | 270.2 | 273.9 |
| 70° | 1808.1 | 947.1 | 407.5 | 316.9 | 280.7 | 248.3 | 232.4 | 232.4 | 229.4 | 227.9 | 227.9 |
| 72.5° | 876.9 | 541.1 | 330.5 | 264.9 | 239.2 | 212.1 | 199.2 | 193.9 | 187.9 | 187.1 | 183.4 |
| 73° | 732.7 | 485.2 | 315.4 | 255.1 | 229.4 | 206.8 | 192.4 | 184.1 | 180.4 | 177.3 | 176.6 |
| 75° | 446.0 | 368.3 | 263.4 | 215.1 | 195.4 | 178.1 | 165.3 | 157.7 | 153.9 | 151.7 | 150.9 |
| 77.5° | 293.6 | 274.7 | 204.5 | 164.5 | 149.4 | 138.9 | 133.6 | 126.0 | 123.8 | 120.7 | 120.7 |
| 80° | 218.8 | 209.8 | 146.4 | 116.2 | 107.2 | 98.1 | 96.6 | 95.1 | 89.0 | 85.3 | 83.8 |
| 82.5° | 141.1 | 149.4 | 99.6 | 77.7 | 67.9 | 60.4 | 61.1 | 63.4 | 57.4 | 52.1 | 50.6 |
| 85° | 100.4 | 107.9 | 60.4 | 35.5 | 28.7 | 24.9 | 27.9 | 24.9 | 25.7 | 20.4 | 16.6 |
| 87.5° | 16.6 | 28.7 | 10.6 | 4.5 | 2.3 | 1.5 | 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)