

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: P457610

Luminaire Tested: **GALN-SA9A-722-U-T4FT-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P457610
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-29)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9A-722-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2200K, 615mA 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: 21946 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

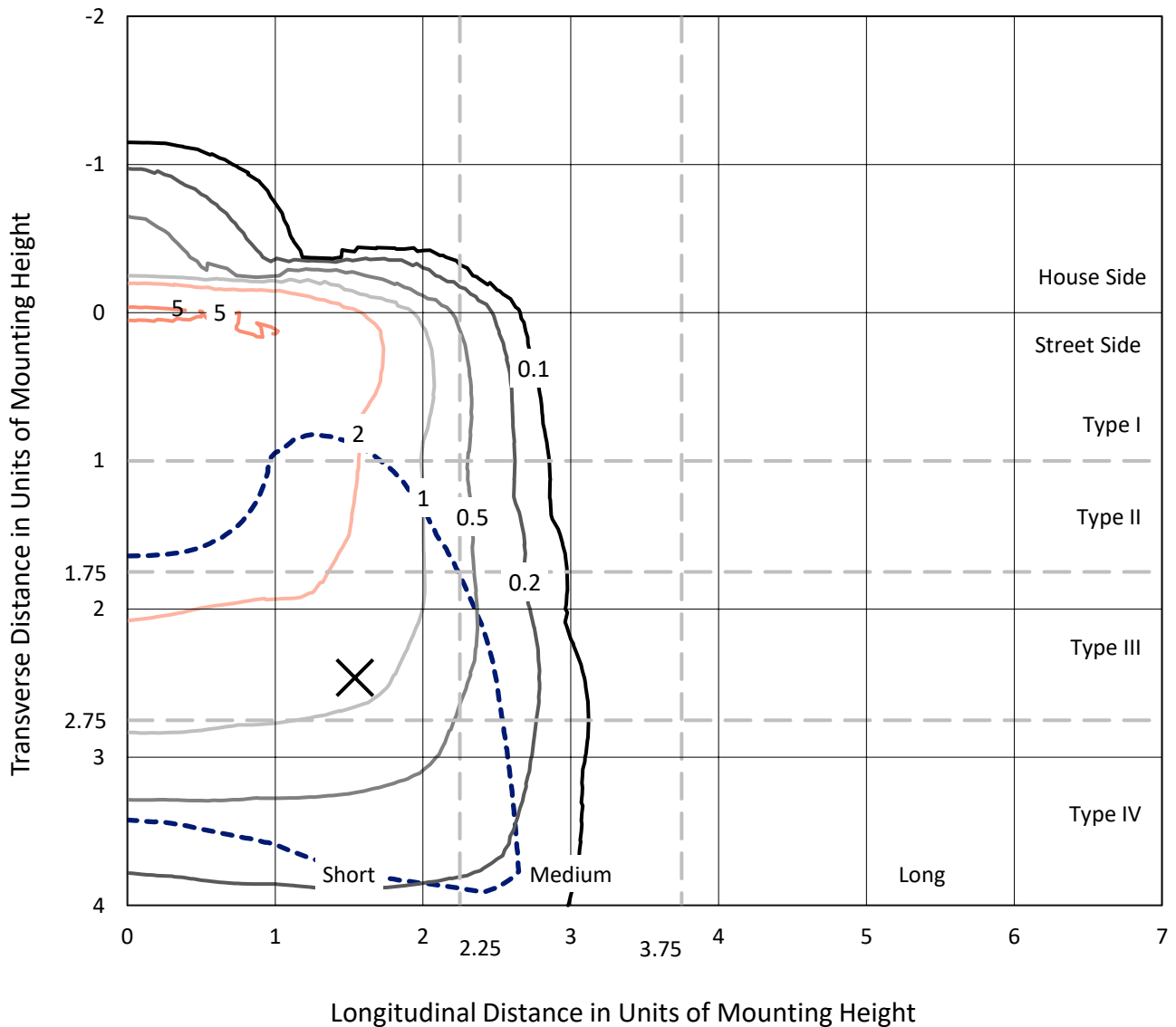
Input Watts (W): 274
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

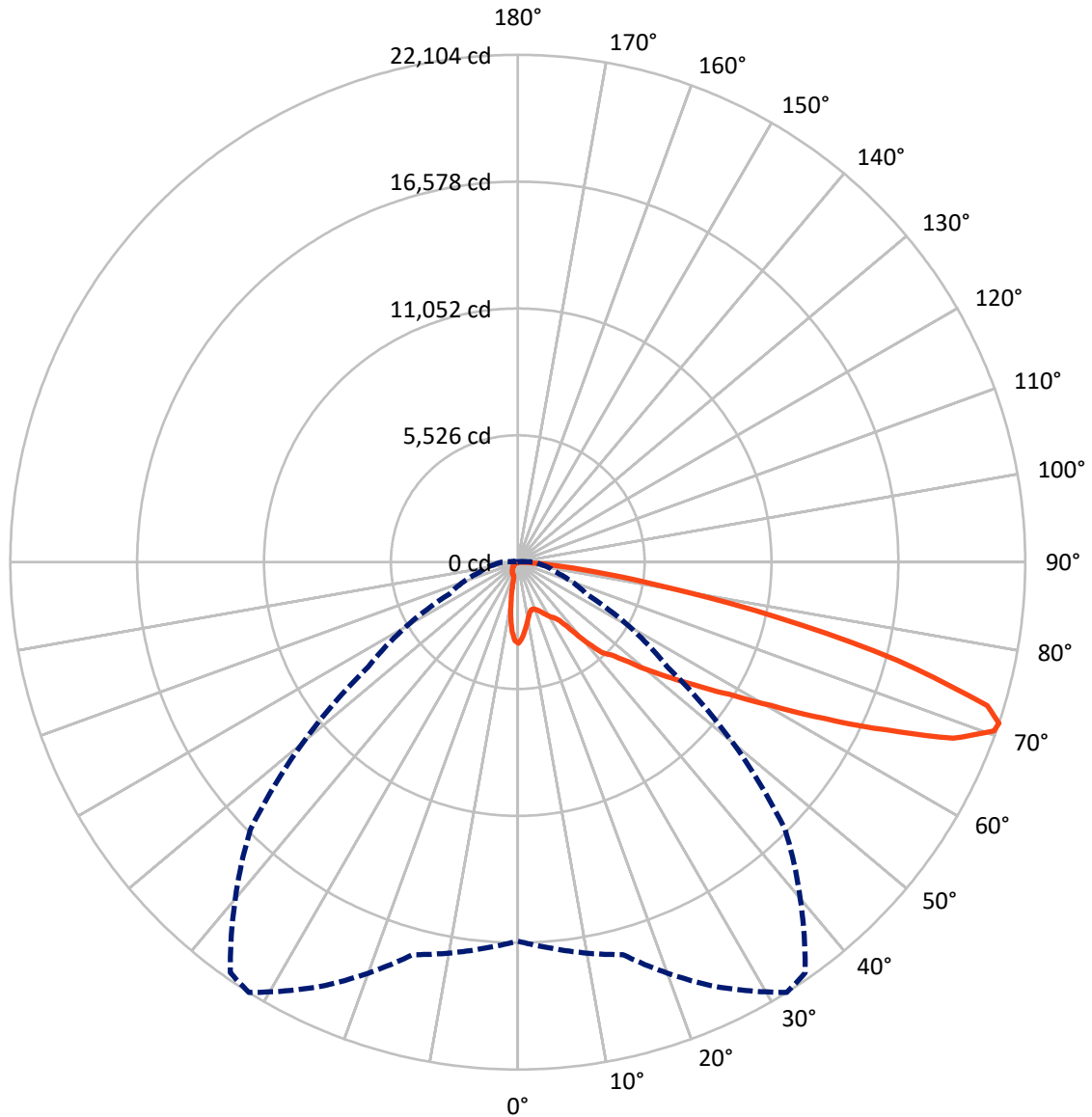
× Max cd
 - - - 1/2 Max cd



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 32-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1838.2 | 0.0 | 1838.2 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 20107.8 | 0.0 | 20107.8 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 21946.0 | 0.0 | 21946.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 287.0 | 1.3 |
| 10°-20° | 622.8 | 2.8 |
| 20°-30° | 968.9 | 4.4 |
| 30°-40° | 1614.2 | 7.4 |
| 40°-50° | 3002.8 | 13.7 |
| 50°-60° | 4821.0 | 22.0 |
| 60°-70° | 6484.5 | 29.5 |
| 70°-80° | 3847.4 | 17.5 |
| 80°-90° | 297.4 | 1.4 |
| 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° | 21946.0 | 100.0 |
| 0°-180° | 21946.0 | 100.0 |



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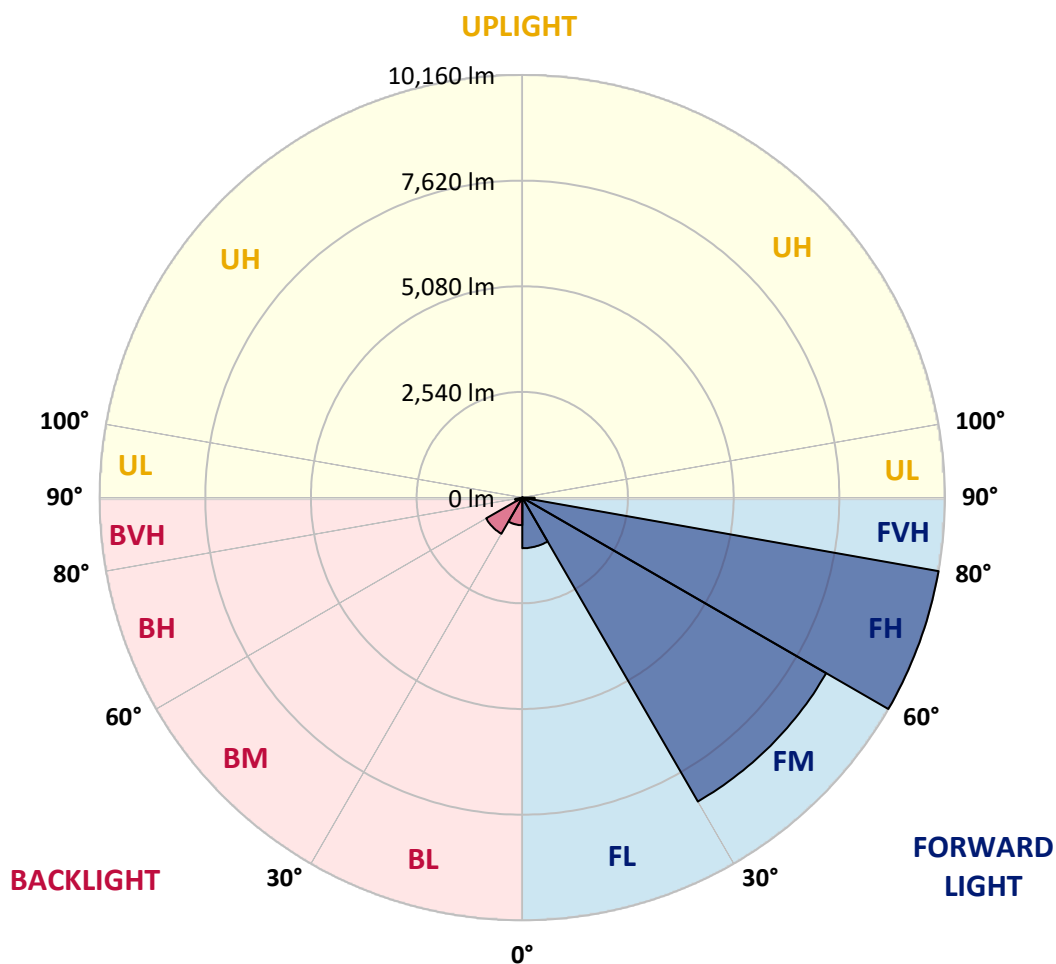
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1216.4 | 5.5 | | | |
| FM | (30°-60°) | 8435.2 | 38.4 | | | |
| FH | (60°-80°) | 10159.9 | 46.3 | | | G4/12000 |
| FVH | (80°-90°) | 296.2 | 1.3 | | | G3/500 |
| BL | (0°-30°) | 662.3 | 3.0 | B2/1000 | | |
| BM | (30°-60°) | 1002.8 | 4.6 | B2/2500 | | |
| BH | (60°-80°) | 171.9 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.2 | 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° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| 0° | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 |
| 2.5° | 3273.2 | 3306.9 | 3301.8 | 3313.6 | 3342.3 | 3354.1 | 3386.1 | 3421.4 | 3470.3 | 3504.0 | 3525.9 |
| 5° | 2931.2 | 2956.5 | 2959.9 | 3018.8 | 3047.5 | 3079.5 | 3173.8 | 3276.6 | 3391.1 | 3482.1 | 3542.7 |
| 7.5° | 2565.7 | 2579.1 | 2606.1 | 2683.6 | 2756.0 | 2788.0 | 2931.2 | 3109.8 | 3290.0 | 3460.2 | 3569.7 |
| 10° | 2264.1 | 2279.3 | 2328.1 | 2410.7 | 2478.1 | 2520.2 | 2719.0 | 2943.0 | 3195.7 | 3448.4 | 3608.4 |
| 12.5° | 2092.3 | 2100.7 | 2119.2 | 2193.4 | 2279.3 | 2324.8 | 2538.7 | 2794.8 | 3119.9 | 3453.5 | 3674.1 |
| 15° | 2080.5 | 2077.1 | 2055.2 | 2085.5 | 2163.0 | 2210.2 | 2419.1 | 2693.7 | 3052.5 | 3470.3 | 3751.6 |
| 17.5° | 2142.8 | 2134.4 | 2082.2 | 2082.2 | 2146.2 | 2184.9 | 2368.6 | 2639.8 | 3018.8 | 3509.0 | 3861.1 |
| 20° | 2238.8 | 2225.4 | 2139.5 | 2132.7 | 2195.0 | 2235.5 | 2398.9 | 2643.2 | 3025.6 | 3581.5 | 4007.7 |
| 22.5° | 2360.1 | 2345.0 | 2215.3 | 2218.6 | 2286.0 | 2326.4 | 2486.5 | 2703.8 | 3067.7 | 3670.8 | 4164.4 |
| 25° | 2518.5 | 2501.6 | 2348.3 | 2341.6 | 2412.4 | 2447.7 | 2616.2 | 2811.6 | 3126.6 | 3782.0 | 4369.9 |
| 27.5° | 2729.1 | 2693.7 | 2510.1 | 2500.0 | 2575.8 | 2621.3 | 2772.9 | 2956.5 | 3231.1 | 3935.3 | 4646.2 |
| 30° | 2902.6 | 2863.8 | 2688.6 | 2661.7 | 2742.5 | 2777.9 | 2934.6 | 3151.9 | 3436.6 | 4203.1 | 5028.6 |
| 32.5° | 3130.0 | 3072.7 | 2867.2 | 2796.5 | 2882.4 | 2927.9 | 3168.8 | 3515.8 | 3741.5 | 4486.1 | 5483.4 |
| 35° | 3642.1 | 3606.8 | 3355.7 | 3108.1 | 3103.1 | 3160.3 | 3514.1 | 3883.0 | 4054.9 | 4927.5 | 6103.3 |
| 37.5° | 4374.9 | 4349.7 | 4083.5 | 3751.6 | 3655.6 | 3628.7 | 3933.6 | 4287.3 | 4555.2 | 5533.9 | 6824.4 |
| 40° | 5225.7 | 5166.7 | 4922.4 | 4641.1 | 4516.4 | 4437.3 | 4428.8 | 4888.7 | 5208.8 | 6357.7 | 7575.7 |
| 42.5° | 5835.5 | 5727.7 | 5431.2 | 5411.0 | 5384.0 | 5301.5 | 5062.3 | 5768.1 | 6052.8 | 7243.8 | 8379.3 |
| 45° | 6475.6 | 6312.2 | 5870.9 | 5795.1 | 5785.0 | 5779.9 | 6019.1 | 6809.2 | 6972.6 | 8204.1 | 9204.7 |
| 47.5° | 6972.6 | 6842.9 | 6480.7 | 6447.0 | 6489.1 | 6603.7 | 7284.3 | 7914.3 | 7880.6 | 9059.8 | 9897.1 |
| 50° | 7634.7 | 7536.9 | 7134.3 | 7198.3 | 7415.7 | 7602.6 | 8711.1 | 9118.8 | 8626.9 | 9733.7 | 10400.8 |
| 52.5° | 8416.3 | 8236.1 | 7862.1 | 8035.6 | 8369.1 | 8680.8 | 10225.6 | 10173.4 | 9150.8 | 10240.7 | 10776.5 |
| 55° | 9093.5 | 8965.5 | 8837.5 | 9017.7 | 9516.4 | 9905.5 | 11593.5 | 10963.4 | 9531.5 | 10648.4 | 10941.5 |
| 57.5° | 10239.1 | 10208.7 | 10077.3 | 10261.0 | 10865.7 | 11270.0 | 12818.2 | 11576.6 | 9775.8 | 10860.7 | 10747.8 |
| 60° | 11933.8 | 11884.9 | 11640.7 | 11874.8 | 12663.2 | 13298.3 | 13946.9 | 12127.5 | 9831.4 | 10778.1 | 10190.2 |
| 62.5° | 13972.2 | 13805.4 | 13596.5 | 13941.8 | 15023.4 | 15303.0 | 15009.9 | 12454.3 | 9624.2 | 10121.1 | 8845.9 |
| 65° | 15875.8 | 15703.9 | 15709.0 | 16436.7 | 17614.3 | 17804.7 | 16249.8 | 12405.5 | 9017.7 | 8475.3 | 6524.5 |
| 67.5° | 17333.0 | 17304.3 | 17509.8 | 18930.0 | 20469.7 | 20338.3 | 17358.2 | 11674.4 | 7220.2 | 5493.5 | 3466.9 |
| 70° | 17407.1 | 17462.7 | 18052.3 | 20449.5 | 22012.8 | 21803.9 | 17263.9 | 9489.4 | 4501.3 | 2526.9 | 1366.2 |
| 71° | 16510.9 | 16884.9 | 17700.2 | 20402.3 | 22103.8 | 21832.6 | 16468.8 | 7948.0 | 3301.8 | 1762.1 | 985.5 |
| 72.5° | 14069.9 | 14267.0 | 16029.1 | 19201.2 | 21384.4 | 20804.9 | 14452.3 | 5571.0 | 2114.2 | 1078.2 | 566.0 |
| 75° | 7749.2 | 8234.4 | 10734.3 | 15063.8 | 17103.9 | 16595.1 | 9418.7 | 2646.5 | 1054.6 | 589.6 | 234.2 |
| 77.5° | 3689.3 | 3595.0 | 5237.5 | 8958.8 | 11596.9 | 11569.9 | 4745.5 | 1175.9 | 614.9 | 399.3 | 117.9 |
| 80° | 1054.6 | 1186.0 | 2004.7 | 4258.7 | 6438.6 | 6509.3 | 1822.7 | 567.7 | 426.2 | 311.7 | 60.6 |
| 82.5° | 318.4 | 325.1 | 736.2 | 1883.4 | 3202.4 | 3018.8 | 684.0 | 289.8 | 306.6 | 247.6 | 35.4 |
| 85° | 55.6 | 69.1 | 217.3 | 663.7 | 1221.3 | 926.5 | 171.8 | 138.1 | 202.2 | 163.4 | 20.2 |
| 87.5° | 3.4 | 5.1 | 72.4 | 75.8 | 107.8 | 62.3 | 30.3 | 20.2 | 43.8 | 43.8 | 11.8 |
| 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° | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 | 3529.3 |
| 2.5° | 3541.1 | 3551.2 | 3544.4 | 3529.3 | 3504.0 | 3473.7 | 3433.2 | 3399.5 | 3370.9 | 3355.7 | 3374.3 |
| 5° | 3563.0 | 3576.4 | 3542.7 | 3466.9 | 3352.4 | 3227.7 | 3086.2 | 2976.7 | 2890.8 | 2863.8 | 2853.7 |
| 7.5° | 3596.6 | 3605.1 | 3514.1 | 3345.6 | 3103.1 | 2808.2 | 2550.5 | 2333.2 | 2164.7 | 2114.2 | 2040.1 |
| 10° | 3640.4 | 3635.4 | 3463.6 | 3150.2 | 2724.0 | 2281.0 | 1881.7 | 1585.2 | 1361.2 | 1280.3 | 1273.6 |
| 12.5° | 3707.8 | 3680.9 | 3399.5 | 2884.1 | 2272.5 | 1693.0 | 1199.4 | 938.3 | 796.8 | 749.7 | 739.5 |
| 15° | 3792.1 | 3728.0 | 3298.5 | 2572.4 | 1740.2 | 1093.3 | 739.5 | 660.4 | 641.8 | 638.5 | 635.1 |
| 17.5° | 3891.5 | 3790.4 | 3165.4 | 2190.0 | 1223.0 | 709.2 | 618.3 | 616.6 | 618.3 | 614.9 | 613.2 |
| 20° | 4026.2 | 3856.1 | 3007.0 | 1736.8 | 808.6 | 598.0 | 589.6 | 589.6 | 591.3 | 589.6 | 589.6 |
| 22.5° | 4169.4 | 3933.6 | 2811.6 | 1325.8 | 609.8 | 567.7 | 566.0 | 569.4 | 572.8 | 571.1 | 571.1 |
| 25° | 4346.3 | 4034.6 | 2553.9 | 908.0 | 545.8 | 542.4 | 544.1 | 550.9 | 557.6 | 559.3 | 557.6 |
| 27.5° | 4602.4 | 4159.3 | 2277.6 | 625.0 | 500.3 | 503.7 | 520.5 | 537.4 | 547.5 | 549.2 | 549.2 |
| 30° | 4890.4 | 4297.4 | 1917.1 | 507.1 | 463.3 | 463.3 | 483.5 | 515.5 | 537.4 | 540.8 | 542.4 |
| 32.5° | 5261.0 | 4457.5 | 1517.8 | 456.5 | 427.9 | 424.5 | 443.1 | 481.8 | 522.2 | 534.0 | 534.0 |
| 35° | 5719.3 | 4646.2 | 1128.7 | 424.5 | 402.6 | 394.2 | 404.3 | 436.3 | 488.5 | 522.2 | 525.6 |
| 37.5° | 6256.6 | 4824.7 | 825.5 | 395.9 | 379.0 | 367.2 | 374.0 | 399.3 | 441.4 | 491.9 | 505.4 |
| 40° | 6753.6 | 4983.1 | 616.6 | 372.3 | 355.5 | 347.0 | 352.1 | 363.9 | 399.3 | 446.4 | 454.8 |
| 42.5° | 7296.0 | 5106.1 | 490.2 | 347.0 | 331.9 | 328.5 | 328.5 | 333.6 | 357.1 | 384.1 | 385.8 |
| 45° | 7836.8 | 5149.9 | 411.0 | 316.7 | 306.6 | 310.0 | 308.3 | 304.9 | 315.0 | 311.7 | 311.7 |
| 47.5° | 8222.6 | 5097.6 | 340.3 | 288.1 | 288.1 | 293.1 | 284.7 | 272.9 | 267.9 | 247.6 | 249.3 |
| 50° | 8487.1 | 4907.3 | 279.6 | 254.4 | 267.9 | 274.6 | 257.7 | 239.2 | 220.7 | 198.8 | 193.7 |
| 52.5° | 8596.6 | 4568.7 | 229.1 | 210.6 | 237.5 | 246.0 | 225.7 | 203.8 | 175.2 | 156.7 | 151.6 |
| 55° | 8525.8 | 4150.9 | 190.4 | 171.8 | 200.5 | 210.6 | 190.4 | 165.1 | 133.1 | 112.9 | 109.5 |
| 57.5° | 8214.2 | 3652.2 | 161.7 | 136.5 | 160.0 | 166.8 | 153.3 | 126.3 | 94.3 | 74.1 | 74.1 |
| 60° | 7675.1 | 3136.7 | 131.4 | 107.8 | 119.6 | 129.7 | 116.2 | 91.0 | 64.0 | 45.5 | 42.1 |
| 62.5° | 6581.8 | 2547.1 | 106.1 | 84.2 | 84.2 | 92.7 | 80.9 | 65.7 | 40.4 | 23.6 | 21.9 |
| 65° | 4752.3 | 1746.9 | 84.2 | 62.3 | 60.6 | 60.6 | 50.5 | 43.8 | 23.6 | 10.1 | 6.7 |
| 67.5° | 2582.5 | 985.5 | 67.4 | 47.2 | 42.1 | 40.4 | 32.0 | 25.3 | 10.1 | 1.7 | 0.0 |
| 70° | 1015.8 | 379.0 | 52.2 | 32.0 | 27.0 | 25.3 | 16.8 | 11.8 | 6.7 | 0.0 | 0.0 |
| 71° | 689.0 | 261.1 | 45.5 | 27.0 | 21.9 | 18.5 | 13.5 | 10.1 | 5.1 | 0.0 | 0.0 |
| 72.5° | 394.2 | 161.7 | 35.4 | 20.2 | 16.8 | 13.5 | 10.1 | 6.7 | 5.1 | 0.0 | 0.0 |
| 75° | 171.8 | 82.5 | 21.9 | 15.2 | 11.8 | 8.4 | 6.7 | 5.1 | 1.7 | 0.0 | 0.0 |
| 77.5° | 87.6 | 45.5 | 15.2 | 11.8 | 6.7 | 5.1 | 3.4 | 1.7 | 0.0 | 0.0 | 0.0 |
| 80° | 48.9 | 23.6 | 10.1 | 6.7 | 5.1 | 3.4 | 1.7 | 1.7 | 0.0 | 0.0 | 0.0 |
| 82.5° | 27.0 | 13.5 | 5.1 | 3.4 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 16.8 | 8.4 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 8.4 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 1.7 | 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)