

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: P451167

Luminaire Tested: **GALN-SA2A-730-U-T2R**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P451167  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA2A-730-U-T2R  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8536 lumens  
Efficiency: N/A  
Efficacy: 135.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

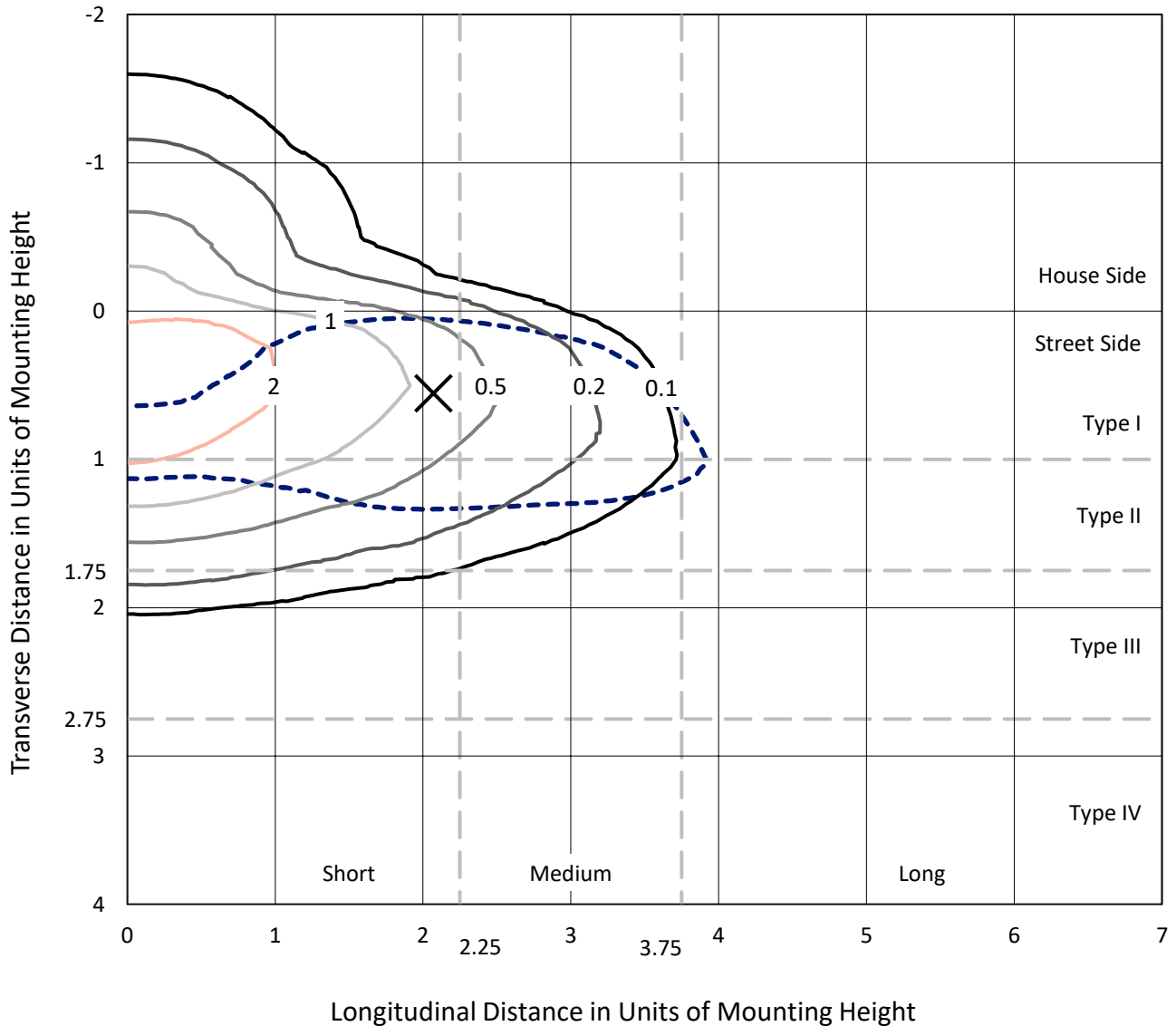
Input Watts (W): 63  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

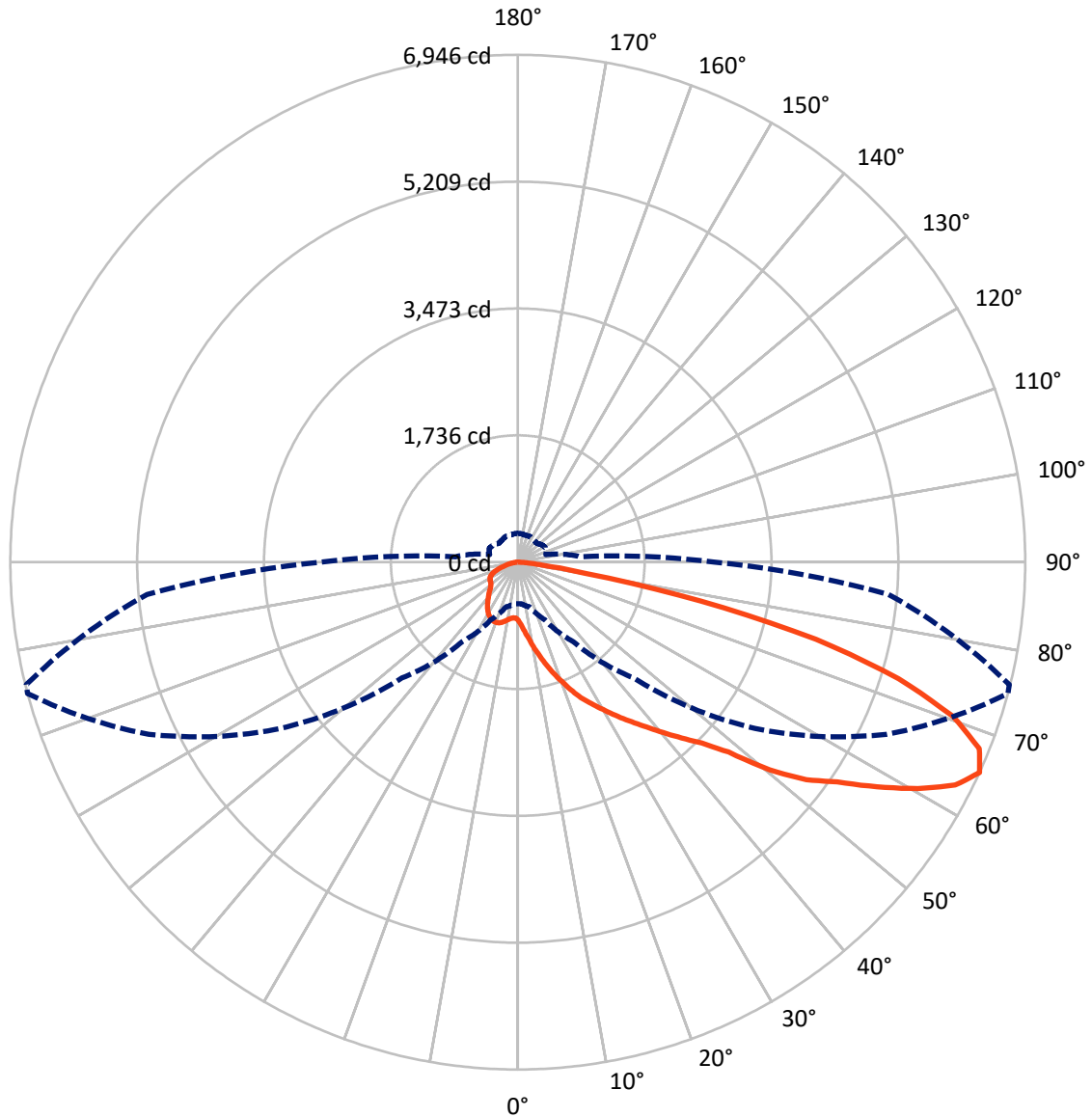
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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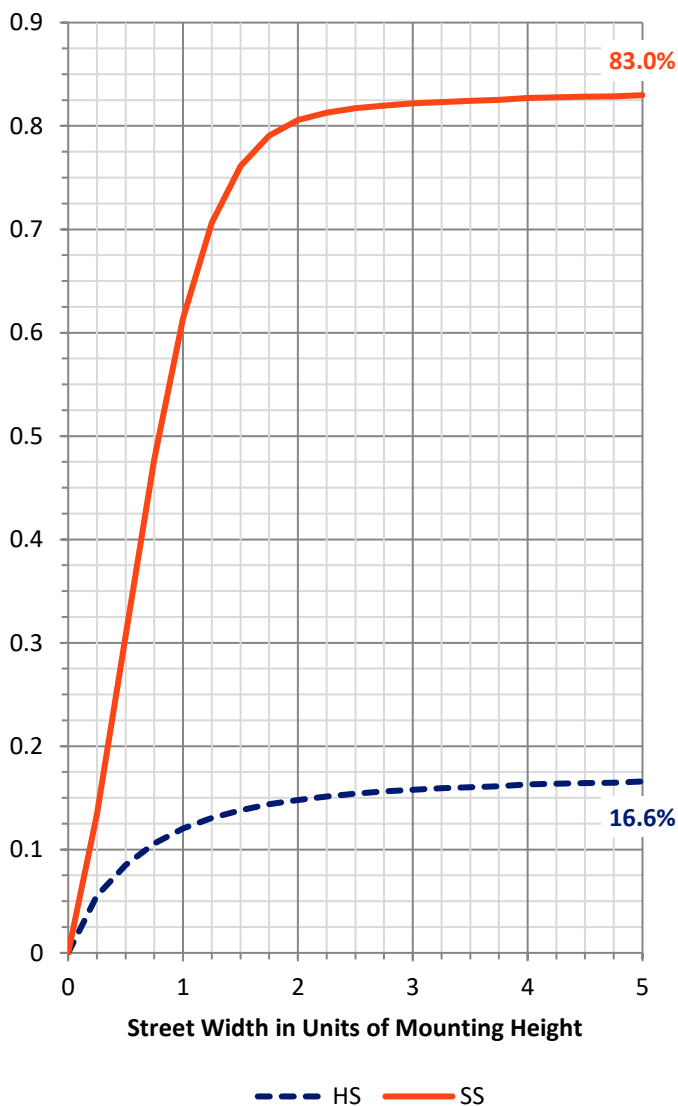
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1435.0   | 0.0    | 1435.0 |
|                    | % Fixture | 16.8     | 0.0    | 16.8   |
| <b>Street Side</b> | Lumens    | 7101.0   | 0.0    | 7101.0 |
|                    | % Fixture | 83.2     | 0.0    | 83.2   |
| <b>Total</b>       | Lumens    | 8536.0   | 0.0    | 8536.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.4   | 1.1       |
| 10°-20°   | 377.4  | 4.4       |
| 20°-30°   | 729.1  | 8.5       |
| 30°-40°   | 1184.2 | 13.9      |
| 40°-50°   | 1629.0 | 19.1      |
| 50°-60°   | 1923.3 | 22.5      |
| 60°-70°   | 1685.1 | 19.7      |
| 70°-80°   | 804.5  | 9.4       |
| 80°-90°   | 107.0  | 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°    | 8536.0 | 100.0     |
| 0°-180°   | 8536.0 | 100.0     |

**Coefficient of Utilization**



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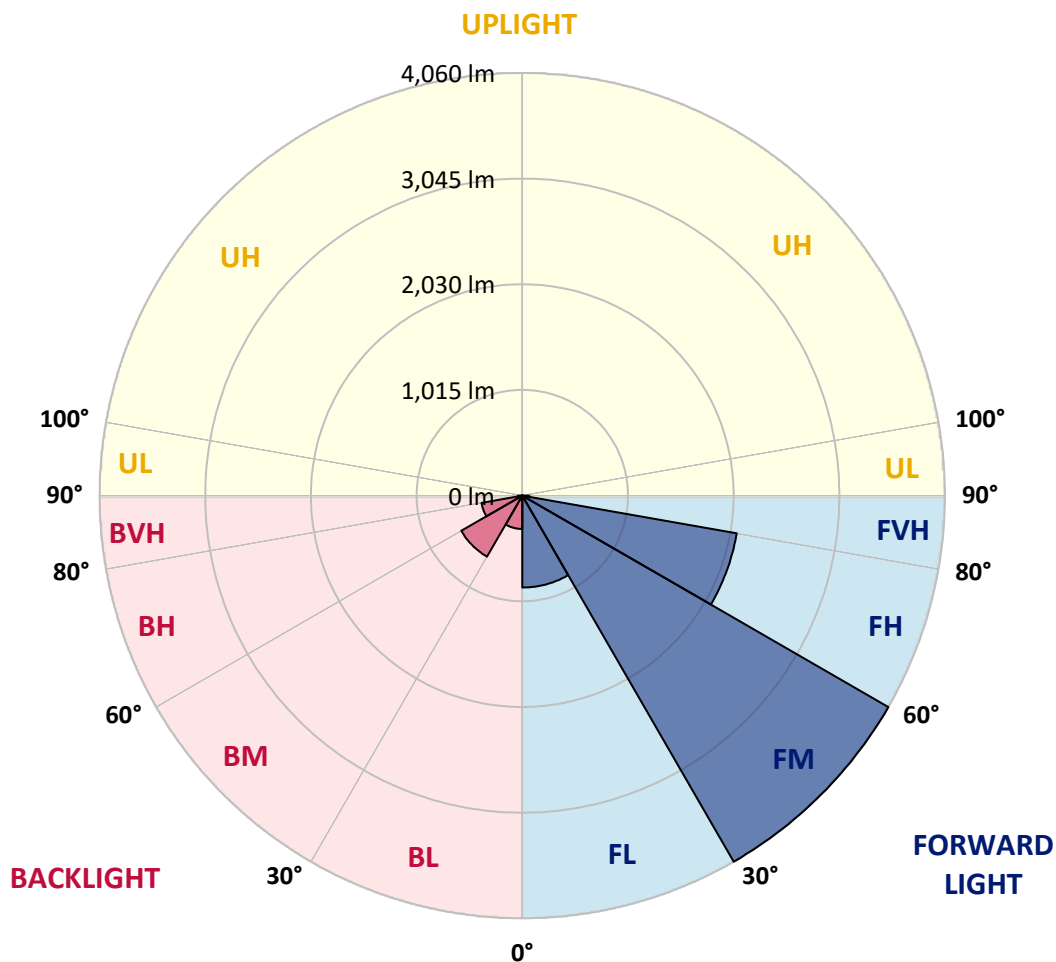
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 882.5  | 10.3      |                         |      |         |
| FM   | (30°-60°)   | 4059.9 | 47.6      |                         |      |         |
| FH   | (60°-80°)   | 2091.7 | 24.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 66.9   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 320.4  | 3.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 676.6  | 7.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 397.9  | 4.7       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 40.2   | 0.5       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 76°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  | 793.1  |
| 2.5°  | 1053.8 | 1046.8 | 1039.4 | 1019.0 | 997.3  | 972.7  | 937.6  | 903.8  | 858.8  | 857.5  | 824.1  |
| 5°    | 1345.9 | 1341.3 | 1308.4 | 1289.4 | 1239.0 | 1171.8 | 1114.9 | 1026.4 | 944.5  | 934.8  | 870.0  |
| 7.5°  | 1614.4 | 1596.4 | 1583.9 | 1549.6 | 1499.6 | 1413.5 | 1303.3 | 1183.9 | 1046.8 | 1033.9 | 926.4  |
| 10°   | 1816.8 | 1814.9 | 1808.4 | 1778.8 | 1741.3 | 1655.7 | 1533.4 | 1362.1 | 1176.5 | 1151.0 | 995.0  |
| 12.5° | 1968.2 | 1969.6 | 1968.6 | 1968.2 | 1941.3 | 1868.6 | 1736.2 | 1555.6 | 1307.5 | 1289.4 | 1074.1 |
| 15°   | 2067.7 | 2081.6 | 2087.2 | 2110.3 | 2112.6 | 2064.0 | 1950.1 | 1742.7 | 1455.2 | 1428.3 | 1159.3 |
| 17.5° | 2133.5 | 2140.4 | 2166.3 | 2205.7 | 2237.6 | 2228.8 | 2127.4 | 1915.9 | 1606.1 | 1561.2 | 1247.8 |
| 20°   | 2196.4 | 2208.5 | 2228.4 | 2282.1 | 2338.6 | 2364.5 | 2293.2 | 2093.2 | 1755.7 | 1727.0 | 1345.4 |
| 22.5° | 2327.5 | 2344.6 | 2351.5 | 2378.8 | 2427.0 | 2472.8 | 2440.4 | 2263.1 | 1919.6 | 1880.7 | 1449.2 |
| 25°   | 2549.2 | 2567.3 | 2547.8 | 2541.4 | 2557.1 | 2579.8 | 2572.8 | 2423.3 | 2074.2 | 2018.6 | 1547.3 |
| 27.5° | 2838.1 | 2840.4 | 2802.5 | 2766.4 | 2727.5 | 2715.9 | 2694.6 | 2565.4 | 2208.5 | 2162.2 | 1645.9 |
| 30°   | 3148.3 | 3137.2 | 3074.3 | 3009.0 | 2943.2 | 2878.4 | 2817.3 | 2702.5 | 2358.0 | 2304.8 | 1742.7 |
| 32.5° | 3436.3 | 3430.3 | 3360.4 | 3259.0 | 3147.9 | 3086.8 | 2963.1 | 2840.9 | 2518.2 | 2466.8 | 1842.2 |
| 35°   | 3652.1 | 3660.9 | 3584.0 | 3473.4 | 3352.0 | 3297.9 | 3141.9 | 2986.3 | 2684.0 | 2627.9 | 1950.6 |
| 37.5° | 3805.3 | 3800.7 | 3732.6 | 3636.8 | 3530.3 | 3483.1 | 3350.7 | 3145.1 | 2862.2 | 2808.5 | 2069.1 |
| 40°   | 3859.9 | 3857.2 | 3806.7 | 3736.8 | 3669.2 | 3652.5 | 3569.2 | 3316.4 | 3066.4 | 3003.4 | 2211.7 |
| 42.5° | 3825.2 | 3831.2 | 3797.9 | 3778.9 | 3766.4 | 3778.5 | 3786.3 | 3540.9 | 3289.1 | 3231.2 | 2366.3 |
| 45°   | 3718.7 | 3715.5 | 3710.9 | 3741.9 | 3812.3 | 3891.4 | 4001.2 | 3753.0 | 3531.2 | 3484.9 | 2573.8 |
| 47.5° | 3528.4 | 3551.6 | 3563.2 | 3648.8 | 3802.5 | 3990.0 | 4248.4 | 4037.3 | 3882.6 | 3842.4 | 2890.0 |
| 50°   | 3262.2 | 3280.7 | 3349.3 | 3501.6 | 3730.8 | 4027.1 | 4490.1 | 4502.1 | 4468.8 | 4393.3 | 3233.5 |
| 52.5° | 2846.5 | 2875.2 | 3016.4 | 3295.6 | 3583.5 | 4011.8 | 4636.4 | 4900.8 | 4944.7 | 4888.3 | 3572.0 |
| 55°   | 2381.2 | 2421.4 | 2570.5 | 2936.7 | 3380.8 | 3928.5 | 4737.3 | 5131.8 | 5307.3 | 5254.9 | 3897.9 |
| 57.5° | 1925.6 | 1968.2 | 2121.4 | 2476.1 | 3027.0 | 3744.2 | 4803.5 | 5389.2 | 5800.8 | 5732.7 | 4303.5 |
| 60°   | 1443.1 | 1487.6 | 1619.1 | 1984.4 | 2523.3 | 3384.0 | 4758.6 | 5612.4 | 6293.9 | 6264.7 | 4709.5 |
| 62.5° | 931.1  | 980.2  | 1094.5 | 1396.8 | 1939.5 | 2891.8 | 4518.3 | 5735.5 | 6720.8 | 6685.6 | 5005.9 |
| 65°   | 567.2  | 572.7  | 635.7  | 867.2  | 1327.4 | 2239.0 | 3968.8 | 5572.1 | 6945.8 | 6935.1 | 5096.1 |
| 67.5° | 366.7  | 375.5  | 404.2  | 519.5  | 795.9  | 1555.2 | 3173.3 | 5032.7 | 6814.3 | 6810.6 | 4909.5 |
| 70°   | 309.7  | 312.5  | 325.5  | 350.5  | 462.5  | 943.1  | 2228.4 | 4172.9 | 6314.7 | 6314.7 | 4460.9 |
| 72.5° | 276.9  | 280.6  | 285.2  | 293.1  | 330.1  | 534.3  | 1329.7 | 3248.3 | 5452.2 | 5488.3 | 3797.0 |
| 75°   | 251.4  | 250.5  | 253.3  | 254.6  | 281.5  | 349.1  | 687.5  | 2402.5 | 4217.8 | 4145.6 | 2749.7 |
| 77.5° | 215.3  | 216.7  | 215.3  | 221.3  | 248.6  | 265.8  | 349.1  | 1612.1 | 2556.2 | 2462.6 | 1380.2 |
| 80°   | 176.9  | 179.2  | 181.5  | 185.2  | 212.5  | 201.9  | 209.7  | 734.8  | 945.4  | 925.5  | 426.4  |
| 82.5° | 132.9  | 136.1  | 139.8  | 148.6  | 167.1  | 133.3  | 132.4  | 313.9  | 341.2  | 312.5  | 157.0  |
| 85°   | 53.7   | 63.4   | 95.8   | 104.6  | 105.1  | 73.2   | 81.5   | 131.0  | 139.4  | 136.1  | 61.6   |
| 87.5° | 12.5   | 14.8   | 31.0   | 46.8   | 43.1   | 27.3   | 30.1   | 42.6   | 48.6   | 44.9   | 20.8   |
| 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°    | 793.1  | 793.1  | 793.1 | 793.1 | 793.1 | 793.1 | 793.1 | 793.1 | 793.1 | 793.1 | 793.1 |
| 2.5°  | 808.8  | 792.6  | 764.9 | 743.6 | 728.3 | 714.9 | 706.5 | 701.4 | 699.6 | 699.1 | 699.6 |
| 5°    | 836.2  | 807.5  | 763.5 | 735.7 | 720.4 | 711.6 | 706.5 | 706.1 | 706.5 | 707.0 | 705.6 |
| 7.5°  | 873.7  | 832.5  | 775.0 | 749.1 | 737.5 | 731.1 | 728.7 | 727.8 | 728.3 | 727.8 | 727.8 |
| 10°   | 923.7  | 867.2  | 797.7 | 770.9 | 761.2 | 753.7 | 750.0 | 747.7 | 745.9 | 744.0 | 743.1 |
| 12.5° | 978.8  | 905.6  | 822.3 | 796.3 | 782.5 | 770.9 | 762.5 | 756.5 | 752.4 | 748.2 | 747.3 |
| 15°   | 1040.3 | 946.4  | 849.6 | 813.5 | 793.6 | 776.4 | 762.1 | 752.4 | 745.0 | 738.9 | 738.5 |
| 17.5° | 1099.1 | 984.8  | 868.1 | 821.3 | 792.2 | 768.1 | 749.1 | 735.7 | 726.4 | 718.6 | 717.6 |
| 20°   | 1162.1 | 1021.4 | 876.4 | 816.3 | 778.3 | 749.1 | 724.1 | 707.9 | 697.3 | 688.5 | 687.1 |
| 22.5° | 1225.5 | 1052.4 | 875.5 | 800.0 | 754.2 | 719.9 | 693.6 | 676.4 | 663.9 | 655.1 | 651.9 |
| 25°   | 1286.2 | 1077.4 | 863.9 | 774.1 | 720.9 | 685.2 | 658.4 | 642.6 | 631.5 | 620.9 | 620.9 |
| 27.5° | 1340.8 | 1092.2 | 842.2 | 742.6 | 686.6 | 649.1 | 627.8 | 613.5 | 603.3 | 596.3 | 592.2 |
| 30°   | 1394.5 | 1099.1 | 812.5 | 702.8 | 650.5 | 618.6 | 601.4 | 593.1 | 583.8 | 576.0 | 575.0 |
| 32.5° | 1442.7 | 1097.7 | 775.5 | 663.9 | 616.2 | 593.6 | 586.6 | 580.1 | 570.4 | 559.3 | 556.5 |
| 35°   | 1489.4 | 1088.5 | 731.5 | 621.3 | 587.5 | 578.7 | 580.6 | 571.3 | 553.7 | 539.8 | 537.5 |
| 37.5° | 1540.4 | 1071.8 | 683.4 | 586.6 | 563.5 | 571.8 | 576.4 | 556.1 | 527.3 | 505.6 | 500.5 |
| 40°   | 1599.2 | 1052.8 | 633.4 | 551.9 | 544.5 | 565.3 | 565.3 | 527.8 | 488.5 | 475.0 | 471.3 |
| 42.5° | 1668.2 | 1037.1 | 591.7 | 522.7 | 528.7 | 549.6 | 547.3 | 490.3 | 474.1 | 467.2 | 465.3 |
| 45°   | 1777.4 | 1031.5 | 548.6 | 497.3 | 515.8 | 531.0 | 512.1 | 477.3 | 468.1 | 462.5 | 460.7 |
| 47.5° | 1950.1 | 1038.0 | 510.7 | 478.3 | 501.0 | 512.5 | 472.7 | 468.5 | 462.1 | 454.2 | 453.3 |
| 50°   | 2110.3 | 1032.0 | 483.8 | 467.6 | 488.0 | 490.3 | 456.5 | 457.9 | 454.2 | 445.4 | 443.5 |
| 52.5° | 2241.3 | 1013.0 | 466.7 | 462.1 | 476.9 | 451.4 | 441.2 | 446.3 | 444.9 | 433.8 | 432.0 |
| 55°   | 2385.3 | 1001.4 | 458.4 | 462.1 | 469.5 | 417.6 | 426.9 | 434.3 | 432.4 | 424.6 | 424.1 |
| 57.5° | 2559.9 | 1003.8 | 452.3 | 463.5 | 462.1 | 400.5 | 412.5 | 421.3 | 420.9 | 418.5 | 418.5 |
| 60°   | 2738.6 | 1004.7 | 443.1 | 463.0 | 453.3 | 387.1 | 397.7 | 410.2 | 411.1 | 412.5 | 412.5 |
| 62.5° | 2797.8 | 964.4  | 425.0 | 454.7 | 433.8 | 374.1 | 383.8 | 400.9 | 400.0 | 403.7 | 404.2 |
| 65°   | 2687.2 | 852.8  | 398.2 | 435.7 | 408.8 | 364.8 | 373.2 | 388.9 | 383.8 | 393.5 | 395.4 |
| 67.5° | 2446.0 | 705.6  | 356.5 | 401.4 | 381.0 | 355.1 | 366.2 | 372.2 | 363.0 | 382.0 | 382.4 |
| 70°   | 2114.0 | 551.0  | 303.7 | 352.8 | 349.6 | 344.9 | 360.7 | 351.4 | 338.4 | 361.6 | 357.0 |
| 72.5° | 1767.7 | 420.9  | 242.6 | 288.4 | 307.4 | 329.6 | 350.9 | 324.6 | 306.5 | 313.4 | 305.1 |
| 75°   | 1327.9 | 311.1  | 194.9 | 225.9 | 256.0 | 307.9 | 342.1 | 292.1 | 264.4 | 257.9 | 256.0 |
| 77.5° | 676.9  | 203.3  | 145.8 | 169.0 | 192.1 | 278.3 | 330.1 | 254.2 | 219.0 | 208.8 | 204.2 |
| 80°   | 241.7  | 126.4  | 102.8 | 116.7 | 129.6 | 239.4 | 288.4 | 210.2 | 169.9 | 168.1 | 169.9 |
| 82.5° | 112.0  | 81.5   | 69.0  | 76.4  | 76.9  | 159.7 | 219.9 | 157.0 | 129.2 | 196.3 | 165.8 |
| 85°   | 48.2   | 40.7   | 38.9  | 38.0  | 35.2  | 71.3  | 123.6 | 84.3  | 131.5 | 58.8  | 54.2  |
| 87.5° | 14.4   | 16.2   | 14.4  | 10.6  | 7.9   | 7.9   | 12.5  | 4.6   | 3.2   | 2.3   | 2.3   |
| 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)