

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: P451137

Luminaire Tested: **GALN-SA2A-727-U-T2R-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P451137  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA2A-727-U-T2R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6158 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B0 - U0 - G1

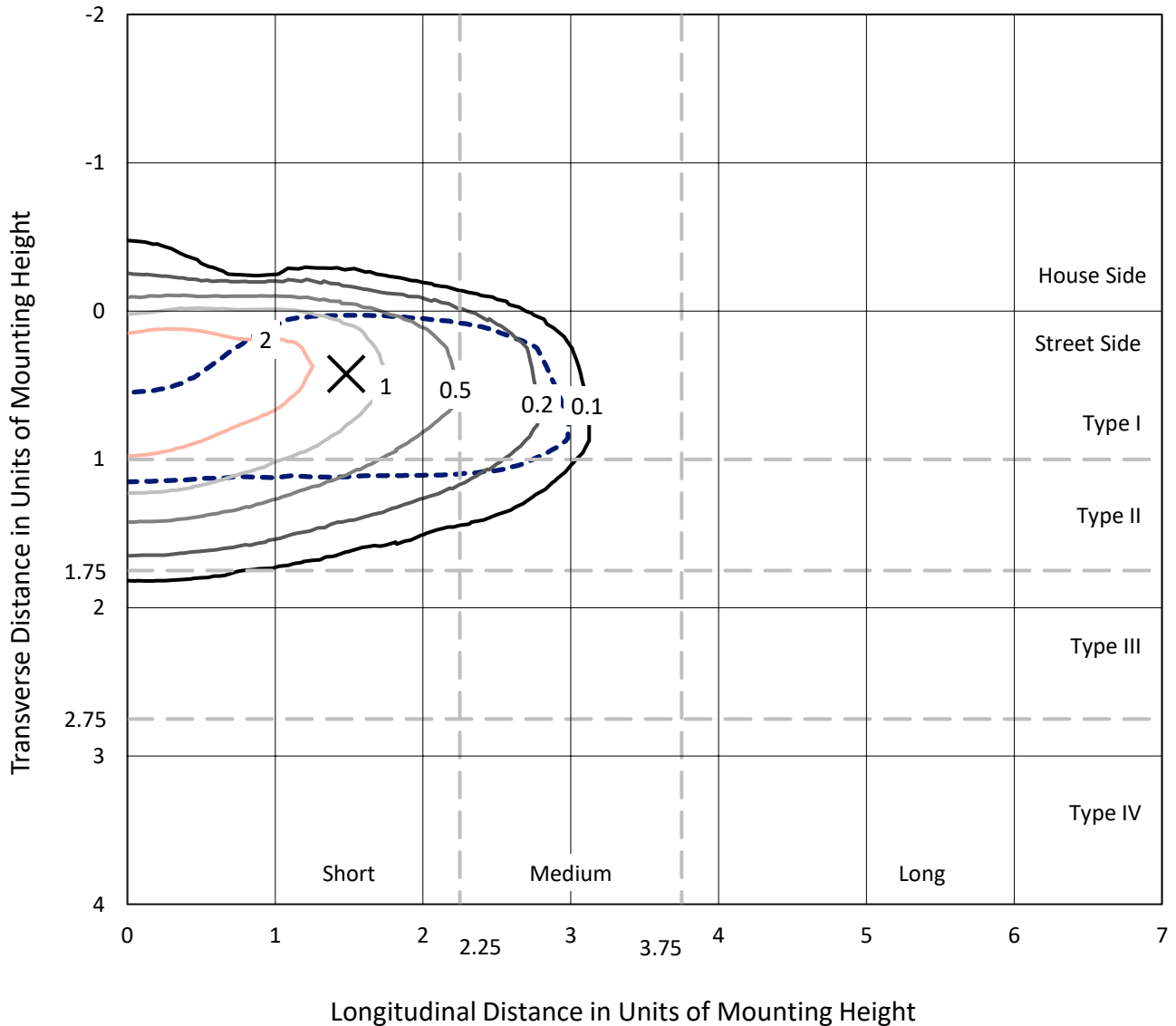
Input Watts (W): 63  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P451137  
 CATALOG NUMBER: GALN-SA2A-727-U-T2R-HSS

### Iso-Footcandle Lines of Horizontal Illumination

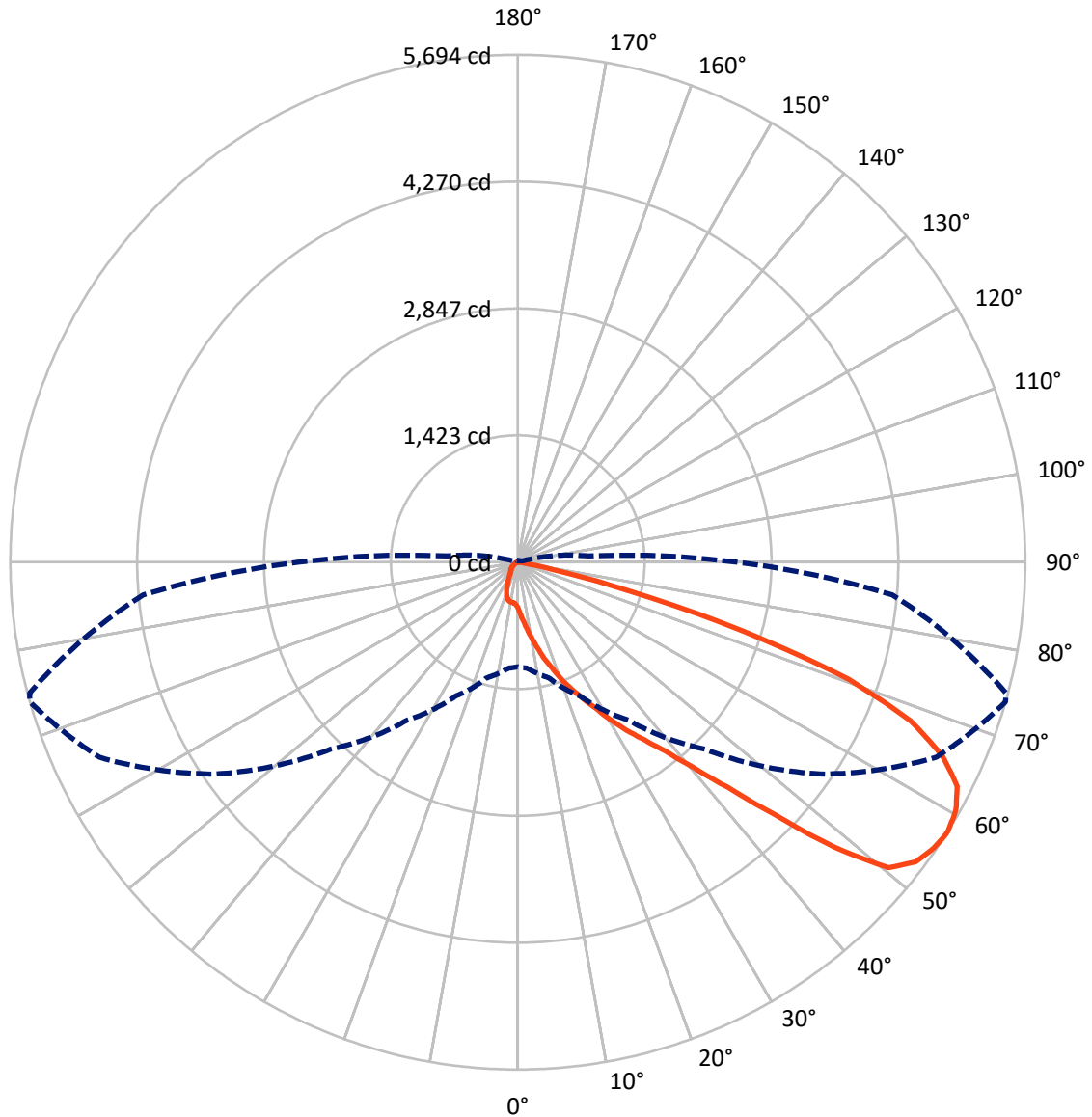
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type II - Short - N/A

REPORT NUMBER: P451137  
CATALOG NUMBER: GALN-SA2A-727-U-T2R-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 74-Deg Lateral      - - - Horizontal Cone Through 57-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 355.2    | 0.0    | 355.2  |
|                    | % Fixture | 5.8      | 0.0    | 5.8    |
| <b>Street Side</b> | Lumens    | 5802.8   | 0.0    | 5802.8 |
|                    | % Fixture | 94.2     | 0.0    | 94.2   |
| <b>Total</b>       | Lumens    | 6158.0   | 0.0    | 6158.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 62.2   | 1.0       |
| 10°-20°   | 245.4  | 4.0       |
| 20°-30°   | 525.0  | 8.5       |
| 30°-40°   | 965.0  | 15.7      |
| 40°-50°   | 1479.3 | 24.0      |
| 50°-60°   | 1564.9 | 25.4      |
| 60°-70°   | 1021.9 | 16.6      |
| 70°-80°   | 279.2  | 4.5       |
| 80°-90°   | 15.0   | 0.2       |
| 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°    | 6158.0 | 100.0     |
| 0°-180°   | 6158.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P451137

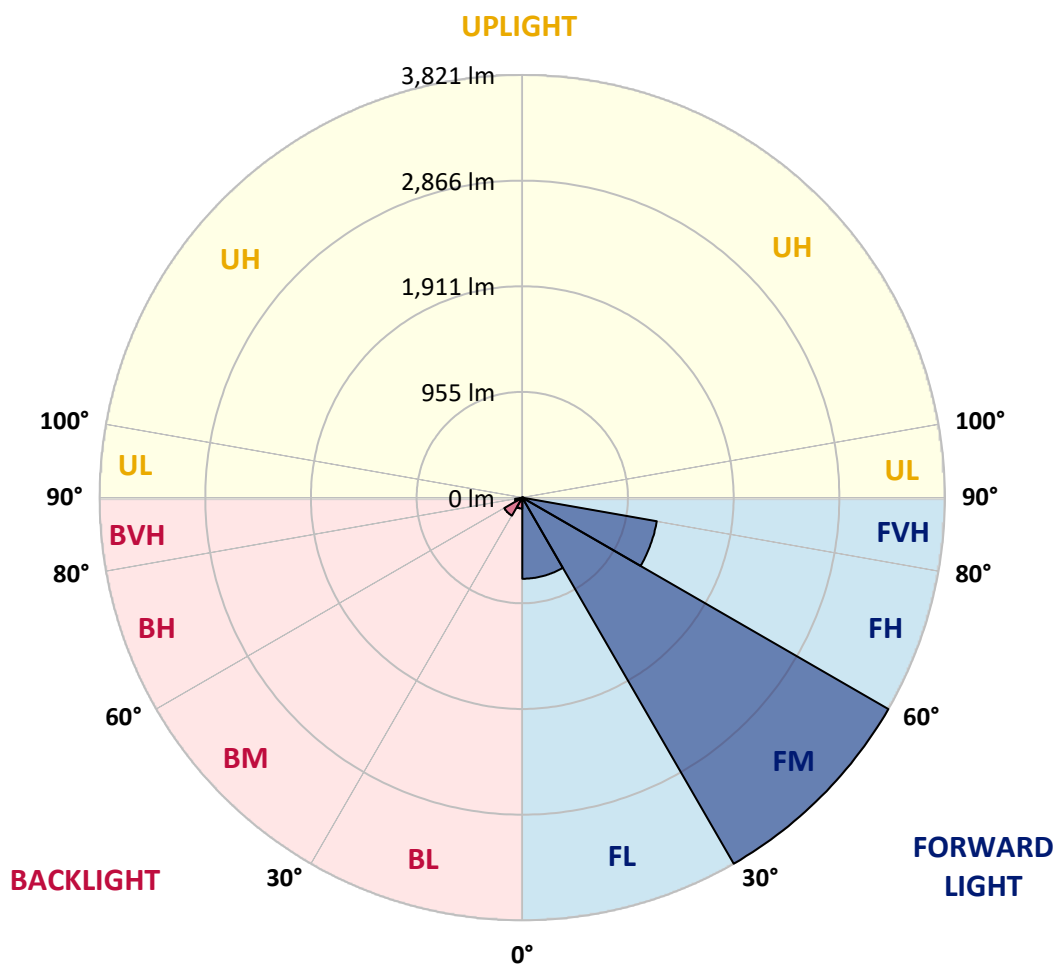
CATALOG NUMBER: GALN-SA2A-727-U-T2R-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 733.4  | 11.9      |                         |      |         |
| FM   | (30°-60°)   | 3821.2 | 62.1      |                         |      |         |
| FH   | (60°-80°)   | 1234.5 | 20.0      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 13.8   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 99.2   | 1.6       | B0/110                  |      |         |
| BM   | (30°-60°)   | 188.0  | 3.1       | B0/220                  |      |         |
| BH   | (60°-80°)   | 66.7   | 1.1       | B0/110                  |      | G0/110  |
| 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: B0-U0-G1**

Type II Short





REPORT NUMBER: P451137

CATALOG NUMBER: GALN-SA2A-727-U-T2R-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 74°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  | 515.7  |
| 2.5°  | 754.7  | 747.9  | 734.3  | 729.6  | 709.6  | 678.6  | 651.4  | 614.8  | 585.9  | 582.9  | 548.0  |
| 5°    | 1010.6 | 995.3  | 988.9  | 958.3  | 910.3  | 865.2  | 787.8  | 729.2  | 661.6  | 656.5  | 586.3  |
| 7.5°  | 1257.2 | 1236.0 | 1229.6 | 1200.7 | 1144.5 | 1073.5 | 973.2  | 866.5  | 759.3  | 749.6  | 637.7  |
| 10°   | 1435.8 | 1438.8 | 1427.3 | 1408.1 | 1362.7 | 1290.4 | 1166.7 | 1020.8 | 868.2  | 855.9  | 695.6  |
| 12.5° | 1563.8 | 1563.3 | 1565.5 | 1565.0 | 1540.8 | 1485.9 | 1355.8 | 1187.9 | 988.1  | 963.8  | 761.9  |
| 15°   | 1647.1 | 1648.4 | 1654.7 | 1676.8 | 1679.4 | 1645.4 | 1537.0 | 1347.8 | 1127.1 | 1096.9 | 833.7  |
| 17.5° | 1731.3 | 1740.2 | 1750.4 | 1771.2 | 1789.9 | 1776.3 | 1699.8 | 1514.4 | 1253.0 | 1230.4 | 910.7  |
| 20°   | 1870.3 | 1882.6 | 1876.7 | 1889.4 | 1899.2 | 1900.5 | 1841.4 | 1668.3 | 1405.6 | 1367.8 | 998.7  |
| 22.5° | 2092.7 | 2092.2 | 2076.9 | 2054.0 | 2034.8 | 2034.0 | 1980.4 | 1826.5 | 1544.2 | 1507.6 | 1087.1 |
| 25°   | 2373.7 | 2375.0 | 2345.2 | 2279.7 | 2232.1 | 2173.9 | 2112.2 | 1965.1 | 1692.6 | 1647.5 | 1180.3 |
| 27.5° | 2696.0 | 2687.9 | 2642.8 | 2552.7 | 2458.3 | 2358.8 | 2270.0 | 2126.2 | 1849.9 | 1812.5 | 1287.0 |
| 30°   | 2985.5 | 2982.5 | 2929.8 | 2819.7 | 2695.5 | 2595.6 | 2466.8 | 2328.2 | 2053.5 | 2007.6 | 1406.4 |
| 32.5° | 3255.1 | 3259.3 | 3186.2 | 3072.2 | 2952.3 | 2837.1 | 2701.1 | 2521.2 | 2253.4 | 2188.3 | 1536.5 |
| 35°   | 3465.5 | 3469.8 | 3394.1 | 3299.3 | 3176.0 | 3080.3 | 2950.6 | 2727.0 | 2450.6 | 2395.8 | 1686.2 |
| 37.5° | 3577.8 | 3583.3 | 3539.5 | 3468.1 | 3391.1 | 3343.1 | 3222.3 | 2991.9 | 2690.4 | 2657.3 | 1863.1 |
| 40°   | 3599.0 | 3605.4 | 3586.3 | 3567.1 | 3562.9 | 3597.3 | 3562.0 | 3304.0 | 3022.9 | 2971.0 | 2126.7 |
| 42.5° | 3535.2 | 3543.7 | 3552.2 | 3594.8 | 3681.5 | 3807.8 | 3930.6 | 3727.4 | 3451.1 | 3381.3 | 2448.9 |
| 45°   | 3367.7 | 3366.9 | 3400.5 | 3510.6 | 3704.9 | 3974.4 | 4315.8 | 4257.6 | 4034.4 | 3951.5 | 2904.3 |
| 47.5° | 3081.2 | 3076.9 | 3149.6 | 3306.5 | 3609.2 | 4005.0 | 4630.0 | 4901.3 | 4778.8 | 4702.3 | 3393.7 |
| 50°   | 2644.5 | 2665.4 | 2779.7 | 2998.7 | 3371.6 | 3912.4 | 4727.0 | 5323.5 | 5389.8 | 5308.6 | 3789.1 |
| 52.5° | 2133.1 | 2132.2 | 2311.6 | 2608.8 | 3019.5 | 3708.3 | 4659.4 | 5400.0 | 5588.4 | 5526.3 | 3983.8 |
| 55°   | 1578.6 | 1589.7 | 1776.3 | 2076.1 | 2562.5 | 3335.8 | 4438.7 | 5321.4 | 5664.0 | 5620.2 | 4112.2 |
| 57°   | 1174.3 | 1193.9 | 1343.5 | 1660.7 | 2164.5 | 2967.2 | 4144.9 | 5180.6 | 5693.8 | 5670.0 | 4218.9 |
| 57.5° | 1096.1 | 1096.9 | 1242.8 | 1531.0 | 2048.0 | 2825.6 | 4060.7 | 5122.0 | 5693.0 | 5679.8 | 4236.3 |
| 60°   | 674.7  | 696.0  | 796.8  | 1034.9 | 1499.1 | 2205.3 | 3496.6 | 4784.8 | 5648.7 | 5667.9 | 4310.7 |
| 62.5° | 403.9  | 412.8  | 478.3  | 623.7  | 966.4  | 1609.7 | 2861.4 | 4353.3 | 5533.5 | 5591.8 | 4305.6 |
| 65°   | 259.8  | 261.9  | 291.7  | 377.5  | 604.2  | 1088.0 | 2204.9 | 3783.1 | 5235.5 | 5342.6 | 4137.3 |
| 67.5° | 200.7  | 204.1  | 216.0  | 247.9  | 350.3  | 677.7  | 1559.5 | 3174.7 | 4753.3 | 4891.5 | 3729.1 |
| 70°   | 178.1  | 179.8  | 184.1  | 194.3  | 231.7  | 382.6  | 970.2  | 2480.0 | 3941.7 | 3980.8 | 2918.3 |
| 72.5° | 145.4  | 150.1  | 163.3  | 166.7  | 183.7  | 238.9  | 540.0  | 1664.5 | 2648.3 | 2658.1 | 1632.6 |
| 75°   | 112.7  | 113.5  | 133.1  | 142.9  | 154.8  | 164.5  | 241.1  | 839.3  | 1272.1 | 1204.1 | 629.2  |
| 77.5° | 84.2   | 88.0   | 96.9   | 109.3  | 126.3  | 117.8  | 108.0  | 316.3  | 395.0  | 387.7  | 182.8  |
| 80°   | 54.0   | 56.1   | 67.6   | 82.1   | 98.2   | 77.0   | 60.8   | 92.7   | 86.7   | 89.3   | 43.8   |
| 82.5° | 27.2   | 27.6   | 43.4   | 66.8   | 62.5   | 38.7   | 38.3   | 37.8   | 32.3   | 31.9   | 20.4   |
| 85°   | 3.0    | 6.4    | 28.1   | 38.3   | 28.1   | 12.8   | 17.9   | 17.4   | 17.0   | 17.4   | 11.9   |
| 87.5° | 0.4    | 0.4    | 4.7    | 5.5    | 3.8    | 4.3    | 5.1    | 5.5    | 6.8    | 6.4    | 5.1    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P451137

CATALOG NUMBER: GALN-SA2A-727-U-T2R-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 515.7  | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 | 515.7 |
| 2.5°  | 531.0  | 514.0 | 482.6 | 452.4 | 429.8 | 415.4 | 396.7 | 389.9 | 380.1 | 378.8 | 374.1 |
| 5°    | 554.0  | 521.7 | 466.8 | 423.5 | 388.6 | 362.2 | 339.3 | 320.1 | 304.8 | 301.4 | 303.1 |
| 7.5°  | 586.7  | 538.7 | 462.2 | 403.1 | 354.6 | 309.5 | 273.0 | 250.4 | 234.3 | 228.3 | 229.2 |
| 10°   | 623.7  | 561.2 | 461.3 | 381.4 | 307.4 | 252.1 | 212.2 | 192.2 | 182.8 | 179.4 | 175.6 |
| 12.5° | 667.5  | 587.2 | 459.2 | 347.8 | 255.5 | 201.1 | 172.6 | 160.7 | 151.8 | 149.2 | 149.2 |
| 15°   | 716.8  | 614.8 | 449.0 | 306.1 | 207.5 | 166.2 | 147.1 | 137.8 | 134.8 | 132.2 | 132.2 |
| 17.5° | 768.3  | 642.0 | 427.7 | 254.7 | 172.2 | 142.4 | 130.5 | 125.0 | 120.7 | 117.8 | 117.8 |
| 20°   | 826.9  | 668.8 | 393.7 | 209.2 | 145.4 | 127.1 | 117.8 | 111.4 | 108.0 | 105.4 | 104.6 |
| 22.5° | 882.6  | 690.5 | 350.3 | 171.8 | 126.7 | 114.4 | 105.9 | 99.1  | 95.7  | 94.4  | 94.4  |
| 25°   | 940.5  | 703.6 | 298.0 | 142.0 | 115.6 | 103.7 | 94.4  | 88.9  | 85.9  | 85.0  | 84.6  |
| 27.5° | 996.6  | 711.3 | 252.1 | 124.1 | 105.4 | 94.0  | 85.0  | 80.8  | 77.8  | 77.0  | 77.4  |
| 30°   | 1064.6 | 712.6 | 207.5 | 111.4 | 96.5  | 84.6  | 76.5  | 72.7  | 71.0  | 70.2  | 69.7  |
| 32.5° | 1133.5 | 710.9 | 174.3 | 103.7 | 88.0  | 76.5  | 69.7  | 66.8  | 65.5  | 64.2  | 64.2  |
| 35°   | 1210.9 | 701.9 | 148.4 | 96.1  | 79.9  | 69.7  | 63.8  | 61.2  | 59.5  | 58.2  | 57.8  |
| 37.5° | 1307.0 | 697.3 | 133.5 | 87.6  | 72.7  | 63.3  | 57.8  | 55.3  | 54.0  | 52.3  | 51.9  |
| 40°   | 1458.3 | 718.1 | 128.8 | 79.9  | 65.5  | 57.4  | 52.3  | 49.3  | 47.6  | 45.9  | 45.5  |
| 42.5° | 1647.1 | 754.7 | 121.2 | 72.3  | 59.1  | 51.9  | 46.8  | 43.4  | 40.4  | 38.3  | 37.4  |
| 45°   | 1891.6 | 802.7 | 109.3 | 64.2  | 53.6  | 45.9  | 41.2  | 37.0  | 33.2  | 31.5  | 31.0  |
| 47.5° | 2147.9 | 849.1 | 98.6  | 57.8  | 47.6  | 40.8  | 35.7  | 31.0  | 27.6  | 26.4  | 25.9  |
| 50°   | 2305.2 | 858.4 | 91.8  | 50.6  | 41.7  | 35.3  | 30.2  | 25.9  | 23.8  | 22.5  | 22.5  |
| 52.5° | 2377.1 | 843.5 | 82.5  | 44.2  | 36.1  | 31.0  | 25.9  | 22.5  | 21.3  | 20.4  | 20.0  |
| 55°   | 2427.3 | 820.6 | 70.2  | 38.3  | 31.0  | 26.4  | 23.0  | 20.4  | 18.7  | 17.9  | 17.4  |
| 57°   | 2456.6 | 789.5 | 60.8  | 33.6  | 26.8  | 23.0  | 20.4  | 18.3  | 16.6  | 14.9  | 14.9  |
| 57.5° | 2457.9 | 777.6 | 58.2  | 33.2  | 25.5  | 22.1  | 20.0  | 17.9  | 15.7  | 14.0  | 13.6  |
| 60°   | 2420.0 | 696.0 | 46.8  | 28.1  | 20.4  | 18.7  | 16.6  | 14.0  | 11.1  | 9.4   | 8.9   |
| 62.5° | 2298.4 | 592.3 | 38.7  | 23.8  | 16.6  | 14.5  | 11.9  | 10.6  | 7.7   | 5.5   | 5.5   |
| 65°   | 2114.3 | 480.4 | 33.2  | 19.1  | 13.6  | 10.6  | 8.1   | 7.7   | 4.7   | 2.6   | 2.1   |
| 67.5° | 1848.2 | 374.1 | 28.1  | 15.7  | 11.5  | 7.7   | 5.5   | 5.1   | 2.6   | 0.9   | 0.0   |
| 70°   | 1408.1 | 255.1 | 23.4  | 12.8  | 8.5   | 5.5   | 3.8   | 3.0   | 1.7   | 0.4   | 0.0   |
| 72.5° | 811.6  | 140.3 | 19.6  | 9.8   | 6.4   | 4.3   | 3.0   | 1.7   | 1.7   | 0.0   | 0.0   |
| 75°   | 290.0  | 60.4  | 14.9  | 7.2   | 5.1   | 3.4   | 2.1   | 0.9   | 1.3   | 0.4   | 0.0   |
| 77.5° | 92.3   | 32.3  | 9.8   | 5.5   | 4.3   | 2.6   | 1.7   | 0.9   | 0.9   | 0.4   | 0.0   |
| 80°   | 27.2   | 17.0  | 6.0   | 4.7   | 3.0   | 2.1   | 1.3   | 0.4   | 0.9   | 0.4   | 0.0   |
| 82.5° | 14.9   | 8.5   | 4.7   | 3.4   | 3.0   | 1.7   | 1.3   | 0.4   | 0.4   | 0.4   | 0.0   |
| 85°   | 7.7    | 5.1   | 3.8   | 3.4   | 3.0   | 1.7   | 1.3   | 0.4   | 0.0   | 0.4   | 0.4   |
| 87.5° | 4.3    | 3.8   | 3.8   | 3.4   | 3.0   | 2.1   | 1.3   | 0.4   | 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)