

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: P453098

Luminaire Tested: **GALN-SA4A-760-U-SL3-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P453098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GALN-SA4A-760-U-SL3-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14965 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G3

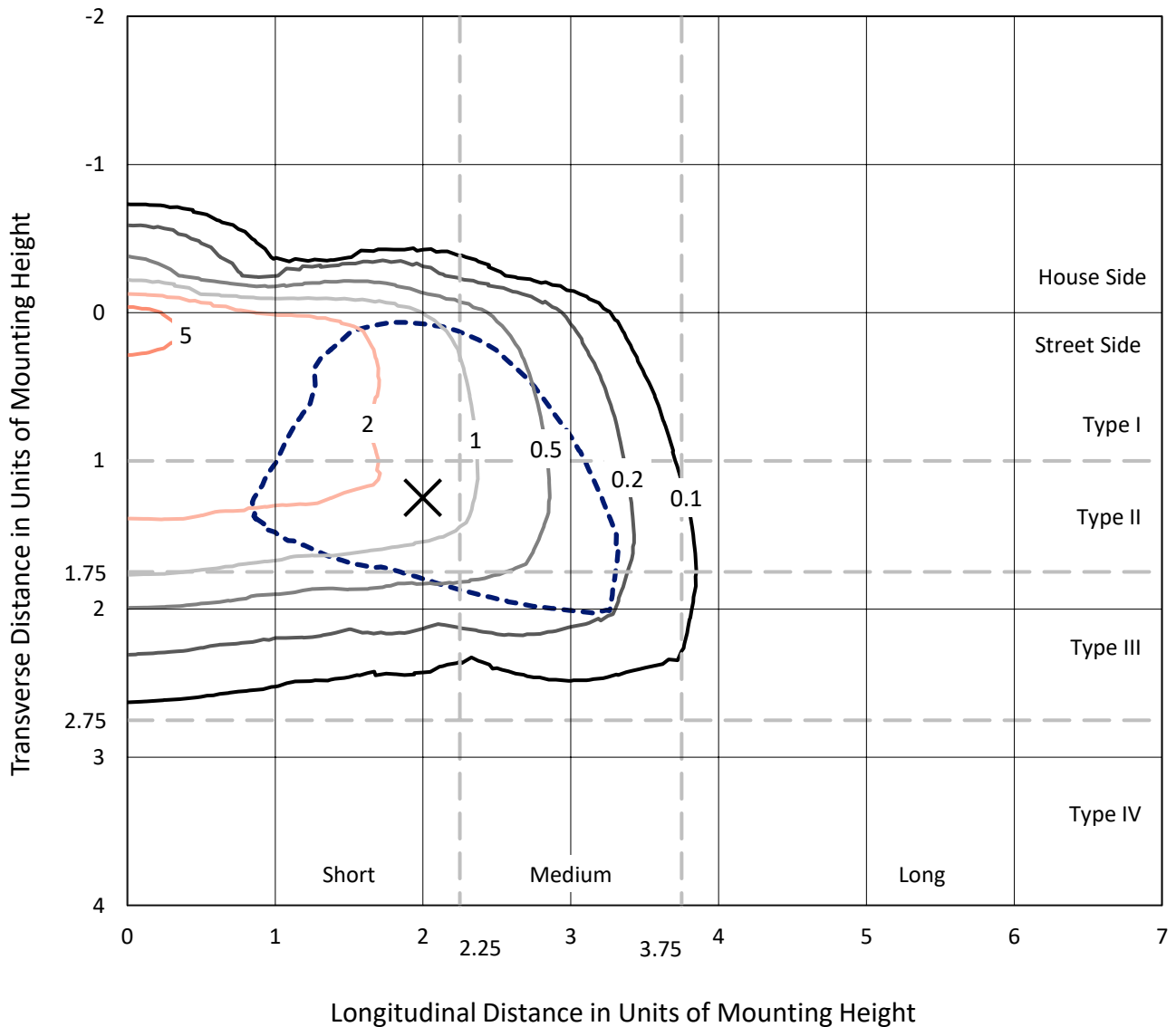
Input Watts (W): 121  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

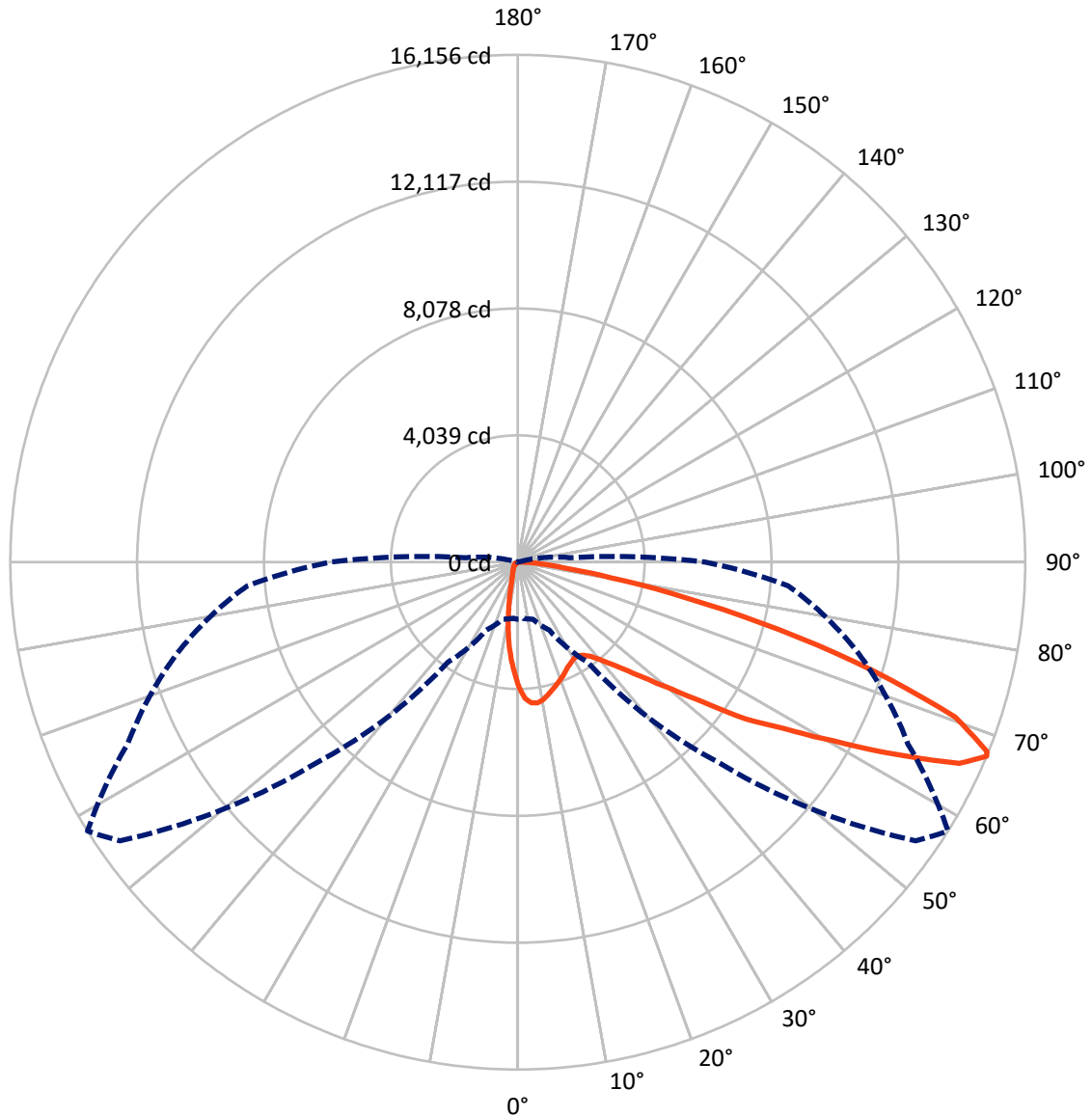
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1080.0   | 0.0    | 1080.0  |
|                    | % Fixture | 7.2      | 0.0    | 7.2     |
| <b>Street Side</b> | Lumens    | 13885.0  | 0.0    | 13885.0 |
|                    | % Fixture | 92.8     | 0.0    | 92.8    |
| <b>Total</b>       | Lumens    | 14965.0  | 0.0    | 14965.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 321.9   | 2.2       |
| 10°-20°   | 695.3   | 4.6       |
| 20°-30°   | 942.1   | 6.3       |
| 30°-40°   | 1306.7  | 8.7       |
| 40°-50°   | 2084.0  | 13.9      |
| 50°-60°   | 3602.4  | 24.1      |
| 60°-70°   | 4115.1  | 27.5      |
| 70°-80°   | 1715.6  | 11.5      |
| 80°-90°   | 181.9   | 1.2       |
| 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°    | 14965.0 | 100.0     |
| 0°-180°   | 14965.0 | 100.0     |

**Coefficient of Utilization**



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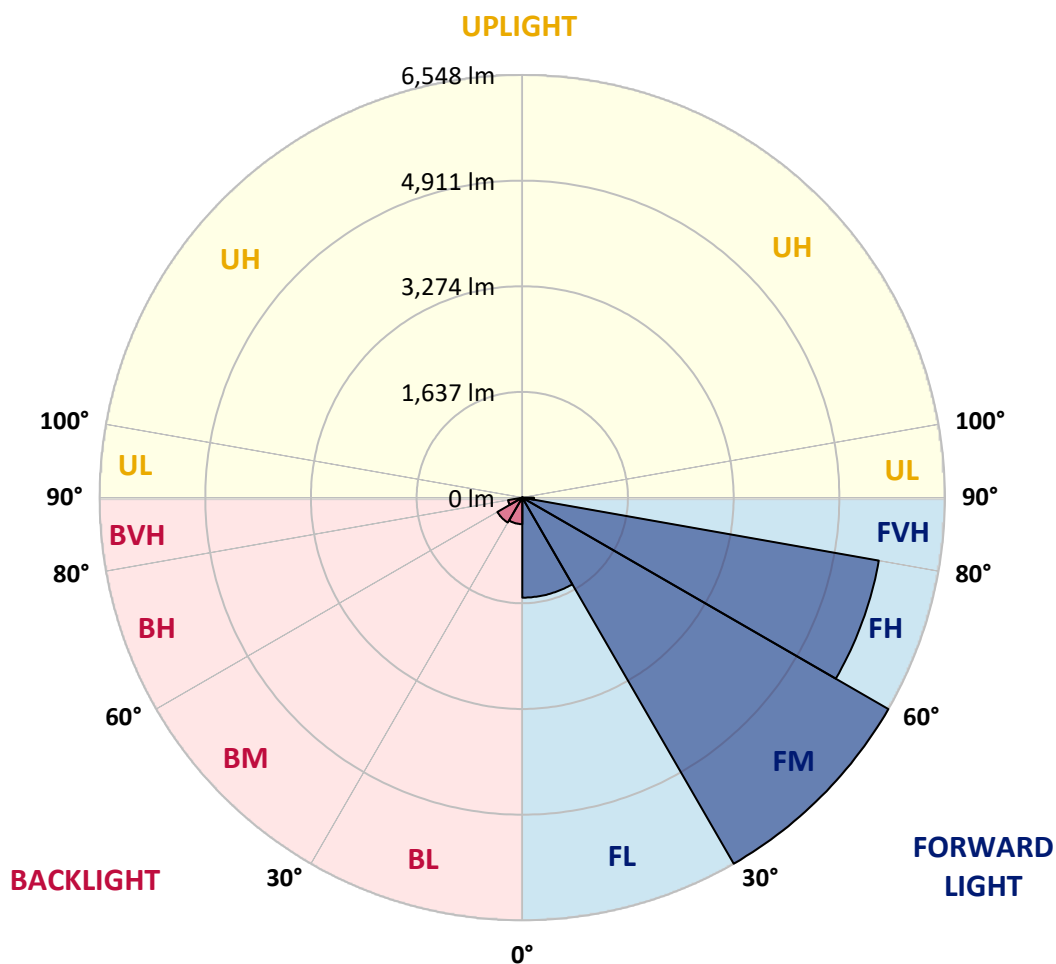
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1549.2 | 10.4      |                         |      |         |
| FM (30°-60°)   | 6547.8 | 43.8      |                         |      |         |
| FH (60°-80°)   | 5607.4 | 37.5      |                         |      | G3/7500 |
| FVH (80°-90°)  | 180.6  | 1.2       |                         |      | G2/225  |
| BL (0°-30°)    | 410.1  | 2.7       | B1/500                  |      |         |
| BM (30°-60°)   | 445.3  | 3.0       | B1/1000                 |      |         |
| BH (60°-80°)   | 223.3  | 1.5       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 1.3    | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 58°     | 65°     | 75°     | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 0°    | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1  | 3967.1  | 3967.1  | 3967.1  | 3967.1  | 3967.1 |
| 2.5°  | 4604.1 | 4611.1 | 4585.1 | 4564.1 | 4510.1 | 4452.1  | 4375.1  | 4334.1  | 4264.1  | 4143.1  | 4009.1 |
| 5°    | 4712.1 | 4721.1 | 4717.1 | 4712.1 | 4691.1 | 4635.1  | 4537.1  | 4501.1  | 4398.1  | 4201.1  | 3959.1 |
| 7.5°  | 4472.1 | 4505.1 | 4509.1 | 4548.1 | 4585.1 | 4590.1  | 4553.1  | 4526.1  | 4431.1  | 4200.1  | 3870.1 |
| 10°   | 4154.1 | 4176.1 | 4208.1 | 4253.1 | 4342.1 | 4416.1  | 4452.1  | 4448.1  | 4393.1  | 4169.1  | 3766.1 |
| 12.5° | 3833.1 | 3845.1 | 3894.1 | 3971.1 | 4080.1 | 4206.1  | 4302.1  | 4321.1  | 4322.1  | 4132.1  | 3679.1 |
| 15°   | 3557.1 | 3552.1 | 3590.1 | 3679.1 | 3832.1 | 3990.1  | 4162.1  | 4192.1  | 4240.1  | 4096.1  | 3598.1 |
| 17.5° | 3321.1 | 3347.1 | 3353.1 | 3451.1 | 3592.1 | 3797.1  | 4016.1  | 4069.1  | 4165.1  | 4065.1  | 3531.1 |
| 20°   | 3175.1 | 3189.1 | 3202.1 | 3257.1 | 3384.1 | 3600.1  | 3879.1  | 3952.1  | 4095.1  | 4037.1  | 3456.1 |
| 22.5° | 3132.1 | 3141.1 | 3130.1 | 3147.1 | 3237.1 | 3429.1  | 3730.1  | 3827.1  | 4028.1  | 4011.1  | 3395.1 |
| 25°   | 3165.1 | 3174.1 | 3148.1 | 3128.1 | 3159.1 | 3290.1  | 3586.1  | 3704.1  | 3974.1  | 4006.1  | 3349.1 |
| 27.5° | 3245.1 | 3262.1 | 3226.1 | 3190.1 | 3172.1 | 3215.1  | 3473.1  | 3610.1  | 3937.1  | 4030.1  | 3328.1 |
| 30°   | 3370.1 | 3380.1 | 3353.1 | 3309.1 | 3268.1 | 3225.1  | 3414.1  | 3545.1  | 3927.1  | 4086.1  | 3326.1 |
| 32.5° | 3506.1 | 3527.1 | 3512.1 | 3483.1 | 3430.1 | 3328.1  | 3431.1  | 3547.1  | 3951.1  | 4167.1  | 3351.1 |
| 35°   | 3674.1 | 3698.1 | 3712.1 | 3706.1 | 3638.1 | 3511.1  | 3539.1  | 3637.1  | 4015.1  | 4316.1  | 3419.1 |
| 37.5° | 3839.1 | 3860.1 | 3939.1 | 3966.1 | 3906.1 | 3786.1  | 3749.1  | 3814.1  | 4156.1  | 4511.1  | 3542.1 |
| 40°   | 4028.1 | 4056.1 | 4167.1 | 4270.1 | 4241.1 | 4115.1  | 4047.1  | 4101.1  | 4372.1  | 4805.1  | 3775.1 |
| 42.5° | 4209.1 | 4259.1 | 4428.1 | 4610.1 | 4637.1 | 4496.1  | 4451.1  | 4469.1  | 4692.1  | 5228.1  | 4100.1 |
| 45°   | 4466.1 | 4513.1 | 4731.1 | 4978.1 | 5105.1 | 4995.1  | 4949.1  | 4946.1  | 5131.1  | 5823.1  | 4627.1 |
| 47.5° | 4837.1 | 4879.1 | 5136.1 | 5380.1 | 5606.1 | 5621.1  | 5534.1  | 5564.1  | 5683.1  | 6519.1  | 5273.1 |
| 50°   | 5292.1 | 5391.1 | 5560.1 | 5814.1 | 6116.1 | 6360.1  | 6387.1  | 6347.1  | 6449.1  | 7325.2  | 6049.1 |
| 52.5° | 5953.1 | 5991.1 | 6146.1 | 6355.1 | 6709.1 | 7123.2  | 7444.2  | 7389.2  | 7357.2  | 8093.2  | 6833.1 |
| 55°   | 6446.1 | 6497.1 | 6738.1 | 7025.1 | 7544.2 | 8090.2  | 8786.2  | 8805.2  | 8401.2  | 8831.2  | 7600.2 |
| 57.5° | 6297.1 | 6375.1 | 6740.1 | 7317.2 | 8458.2 | 9456.2  | 9974.2  | 9987.2  | 9367.2  | 9548.2  | 8466.2 |
| 60°   | 5532.1 | 5569.1 | 6092.1 | 6862.1 | 8536.2 | 10936.2 | 11659.2 | 11554.2 | 10350.2 | 10350.2 | 9231.2 |
| 62.5° | 3923.1 | 3981.1 | 4405.1 | 5538.1 | 7709.2 | 11450.2 | 13677.3 | 13460.3 | 11704.2 | 11117.2 | 9687.2 |
| 65°   | 2507.1 | 2451.1 | 2732.1 | 3496.1 | 5743.1 | 10691.2 | 15434.3 | 15447.3 | 12978.3 | 11424.2 | 9438.2 |
| 67°   | 1816.0 | 1794.0 | 1875.0 | 2390.1 | 3894.1 | 8987.2  | 15471.3 | 16156.3 | 13710.3 | 11230.2 | 8642.2 |
| 67.5° | 1661.0 | 1678.0 | 1737.0 | 2156.0 | 3538.1 | 8178.2  | 15303.3 | 16114.3 | 13875.3 | 11113.2 | 8354.2 |
| 70°   | 1259.0 | 1230.0 | 1294.0 | 1525.0 | 2121.0 | 5159.1  | 13164.3 | 14779.3 | 13670.3 | 9952.2  | 6675.1 |
| 72.5° | 926.0  | 923.0  | 1012.0 | 1247.0 | 1633.0 | 2748.1  | 9882.2  | 11850.3 | 11168.2 | 7578.2  | 4203.1 |
| 75°   | 625.0  | 653.0  | 795.0  | 1042.0 | 1480.0 | 1782.0  | 6737.1  | 8597.2  | 7753.2  | 4303.1  | 1718.0 |
| 77.5° | 356.0  | 358.0  | 512.0  | 837.0  | 1329.0 | 1434.0  | 3992.1  | 5477.1  | 4104.1  | 1431.0  | 510.0  |
| 80°   | 154.0  | 169.0  | 254.0  | 608.0  | 1102.0 | 1270.0  | 2289.0  | 3010.1  | 1660.0  | 303.0   | 165.0  |
| 82.5° | 57.0   | 67.0   | 112.0  | 374.0  | 804.0  | 1046.0  | 1383.0  | 1437.0  | 563.0   | 107.0   | 103.0  |
| 85°   | 0.0    | 2.0    | 41.0   | 175.0  | 419.0  | 467.0   | 924.0   | 852.0   | 249.0   | 51.0    | 67.0   |
| 87.5° | 0.0    | 0.0    | 0.0    | 18.0   | 55.0   | 174.0   | 287.0   | 320.0   | 60.0    | 18.0    | 16.0   |
| 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°    | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 | 3967.1 |
| 2.5°  | 3937.1 | 3872.1 | 3709.1 | 3546.1 | 3425.1 | 3324.1 | 3172.1 | 3089.1 | 3045.1 | 2980.1 | 2984.1 |
| 5°    | 3838.1 | 3706.1 | 3419.1 | 3122.1 | 2882.1 | 2648.1 | 2368.1 | 2255.0 | 2160.0 | 2106.0 | 2070.0 |
| 7.5°  | 3691.1 | 3496.1 | 3071.1 | 2675.1 | 2306.0 | 1897.0 | 1590.0 | 1385.0 | 1247.0 | 1196.0 | 1147.0 |
| 10°   | 3530.1 | 3271.1 | 2718.1 | 2169.0 | 1657.0 | 1235.0 | 975.0  | 787.0  | 720.0  | 658.0  | 664.0  |
| 12.5° | 3381.1 | 3066.1 | 2394.1 | 1712.0 | 1161.0 | 785.0  | 612.0  | 535.0  | 513.0  | 506.0  | 506.0  |
| 15°   | 3259.1 | 2870.1 | 2046.0 | 1287.0 | 796.0  | 564.0  | 490.0  | 469.0  | 461.0  | 459.0  | 459.0  |
| 17.5° | 3129.1 | 2684.1 | 1732.0 | 951.0  | 579.0  | 472.0  | 447.0  | 433.0  | 430.0  | 428.0  | 428.0  |
| 20°   | 3013.1 | 2497.1 | 1434.0 | 708.0  | 468.0  | 425.0  | 409.0  | 400.0  | 397.0  | 395.0  | 396.0  |
| 22.5° | 2903.1 | 2331.0 | 1154.0 | 535.0  | 412.0  | 387.0  | 371.0  | 362.0  | 356.0  | 351.0  | 352.0  |
| 25°   | 2805.1 | 2171.0 | 928.0  | 438.0  | 371.0  | 349.0  | 333.0  | 320.0  | 307.0  | 301.0  | 300.0  |
| 27.5° | 2736.1 | 2031.0 | 723.0  | 375.0  | 334.0  | 310.0  | 290.0  | 274.0  | 257.0  | 248.0  | 246.0  |
| 30°   | 2679.1 | 1889.0 | 572.0  | 331.0  | 297.0  | 274.0  | 249.0  | 226.0  | 208.0  | 199.0  | 195.0  |
| 32.5° | 2642.1 | 1754.0 | 451.0  | 295.0  | 266.0  | 238.0  | 210.0  | 187.0  | 167.0  | 158.0  | 156.0  |
| 35°   | 2636.1 | 1641.0 | 369.0  | 265.0  | 238.0  | 208.0  | 179.0  | 154.0  | 137.0  | 128.0  | 126.0  |
| 37.5° | 2679.1 | 1554.0 | 309.0  | 241.0  | 215.0  | 182.0  | 150.0  | 127.0  | 112.0  | 105.0  | 104.0  |
| 40°   | 2794.1 | 1499.0 | 268.0  | 221.0  | 194.0  | 158.0  | 128.0  | 108.0  | 93.0   | 86.0   | 86.0   |
| 42.5° | 3013.1 | 1501.0 | 241.0  | 202.0  | 173.0  | 135.0  | 109.0  | 90.0   | 77.0   | 71.0   | 69.0   |
| 45°   | 3355.1 | 1569.0 | 218.0  | 183.0  | 153.0  | 117.0  | 93.0   | 74.0   | 61.0   | 56.0   | 56.0   |
| 47.5° | 3813.1 | 1704.0 | 198.0  | 164.0  | 135.0  | 100.0  | 79.0   | 60.0   | 49.0   | 44.0   | 44.0   |
| 50°   | 4412.1 | 1921.0 | 181.0  | 148.0  | 120.0  | 86.0   | 64.0   | 49.0   | 38.0   | 34.0   | 33.0   |
| 52.5° | 5038.1 | 2189.0 | 161.0  | 134.0  | 103.0  | 73.0   | 52.0   | 38.0   | 29.0   | 26.0   | 25.0   |
| 55°   | 5729.1 | 2451.1 | 142.0  | 120.0  | 84.0   | 61.0   | 41.0   | 30.0   | 21.0   | 18.0   | 18.0   |
| 57.5° | 6426.1 | 2708.1 | 119.0  | 100.0  | 66.0   | 45.0   | 32.0   | 22.0   | 14.0   | 11.0   | 11.0   |
| 60°   | 7016.1 | 2791.1 | 101.0  | 81.0   | 50.0   | 32.0   | 23.0   | 14.0   | 8.0    | 5.0    | 5.0    |
| 62.5° | 7097.2 | 2511.1 | 85.0   | 62.0   | 36.0   | 22.0   | 12.0   | 8.0    | 3.0    | 2.0    | 2.0    |
| 65°   | 6657.1 | 2040.0 | 71.0   | 47.0   | 24.0   | 11.0   | 5.0    | 3.0    | 1.0    | 0.0    | 0.0    |
| 67°   | 5965.1 | 1654.0 | 58.0   | 35.0   | 17.0   | 7.0    | 3.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 67.5° | 5788.1 | 1577.0 | 56.0   | 33.0   | 15.0   | 6.0    | 2.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 70°   | 4542.1 | 1181.0 | 40.0   | 20.0   | 9.0    | 4.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5° | 2823.1 | 668.0  | 29.0   | 12.0   | 6.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 1067.0 | 234.0  | 20.0   | 8.0    | 4.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 332.0  | 89.0   | 12.0   | 6.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 112.0  | 34.0   | 8.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 69.0   | 14.0   | 5.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 43.0   | 6.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 8.0    | 2.0    | 1.0    | 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)