

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: P299995

Luminaire Tested: **GLNA-AF-05-LED-E1-SL3-7030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-05-LED-E1-SL3-7030-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 3000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18041.6 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 210  
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: 25 FT

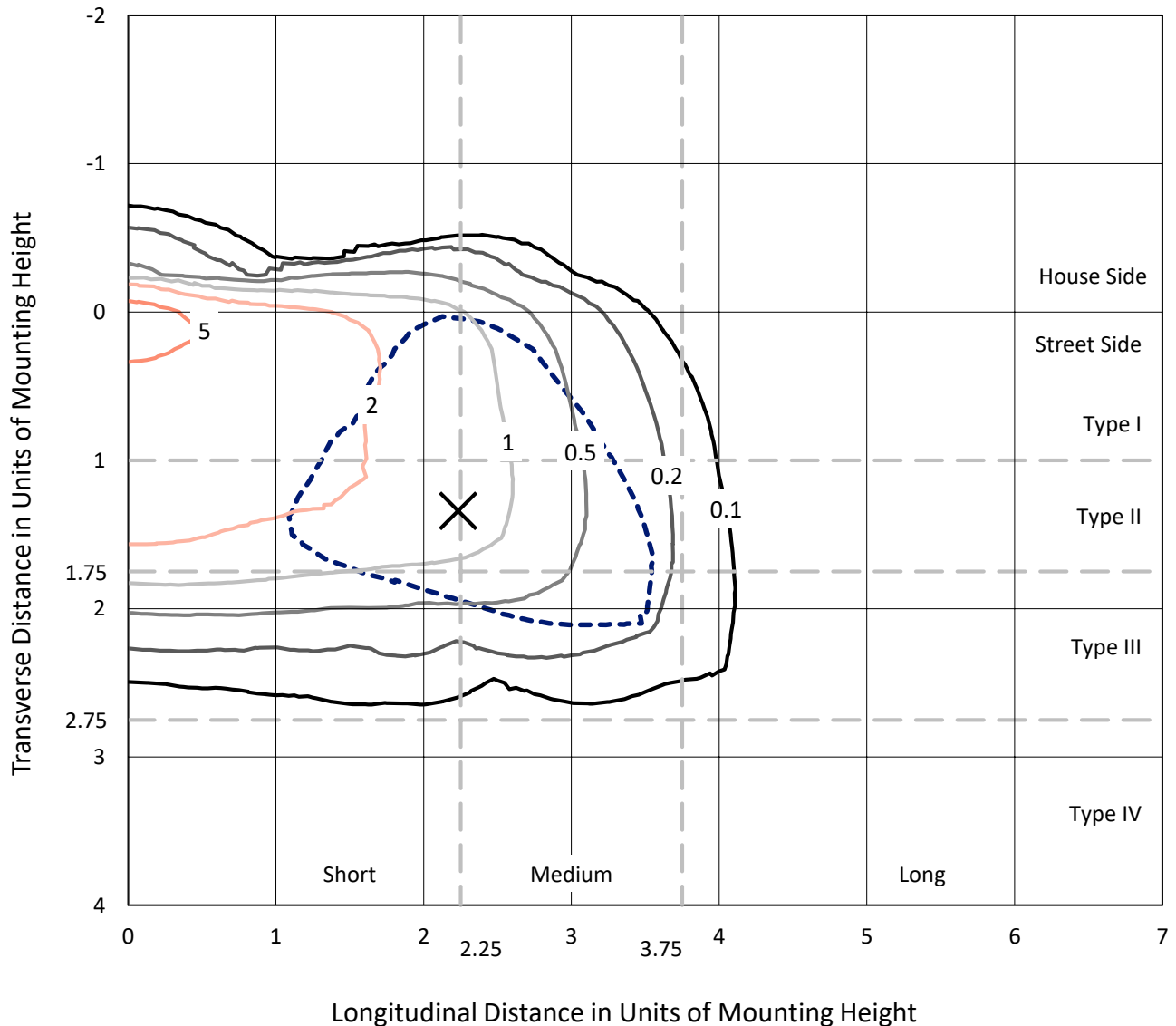


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

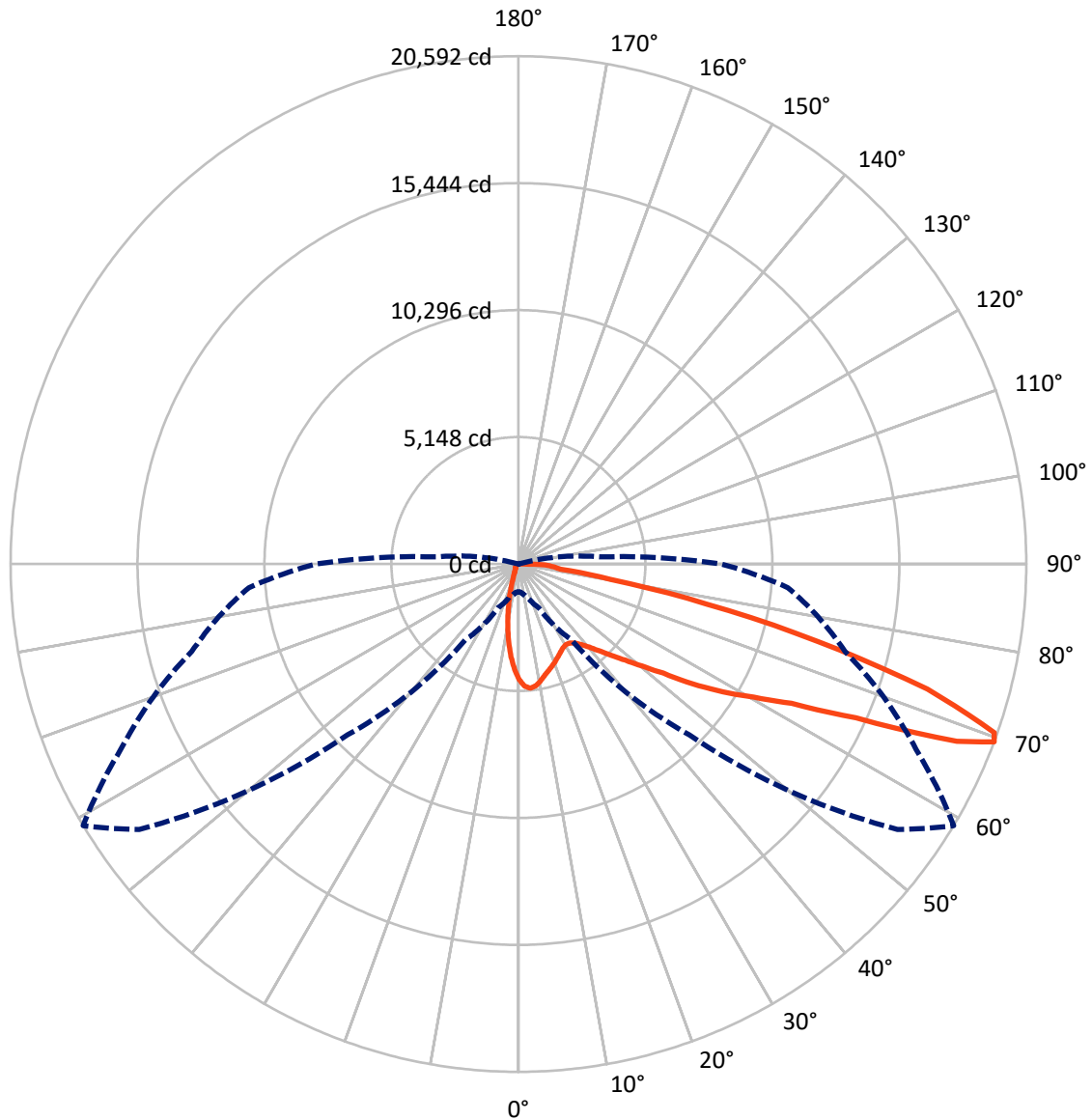


Based on 25 foot mounting height. Maximum calculated value = 7.5 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1469.2   | 0.0    | 1469.2  |
|                    | % Fixture | 8.1      | 0.0    | 8.1     |
| <b>Street Side</b> | Lumens    | 16572.4  | 0.0    | 16572.4 |
|                    | % Fixture | 91.9     | 0.0    | 91.9    |
| <b>Total</b>       | Lumens    | 18041.6  | 0.0    | 18041.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 381.2   | 2.1       |
| 10°-20°   | 787.6   | 4.4       |
| 20°-30°   | 1059.8  | 5.9       |
| 30°-40°   | 1538.8  | 8.5       |
| 40°-50°   | 2562.2  | 14.2      |
| 50°-60°   | 3997.0  | 22.2      |
| 60°-70°   | 4946.0  | 27.4      |
| 70°-80°   | 2506.6  | 13.9      |
| 80°-90°   | 262.3   | 1.5       |
| 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°    | 18041.6 | 100.0     |
| 0°-180°   | 18041.6 | 100.0     |



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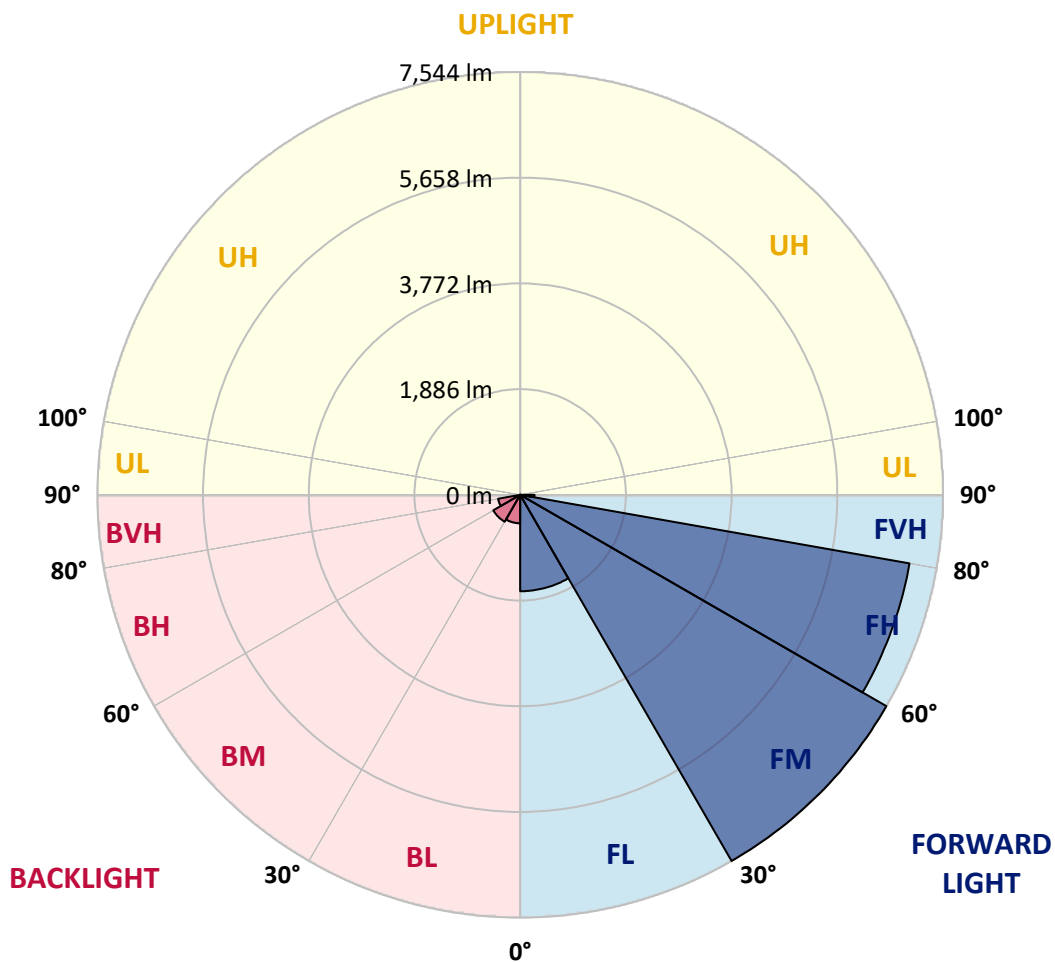
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1720.1 | 9.5       |                         |      |         |
| FM (30°-60°)   | 7544.5 | 41.8      |                         |      |         |
| FH (60°-80°)   | 7053.6 | 39.1      |                         |      | G3/7500 |
| FVH (80°-90°)  | 254.2  | 1.4       |                         |      | G3/500  |
| BL (0°-30°)    | 508.5  | 2.8       | B2/1000                 |      |         |
| BM (30°-60°)   | 553.6  | 3.1       | B1/1000                 |      |         |
| BH (60°-80°)   | 399.0  | 2.2       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 8.1    | 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-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 59°     | 65°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0°    | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9  | 4695.9  | 4695.9  | 4695.9  | 4695.9  | 4695.9  |
| 2.5°  | 5146.9 | 5145.0 | 5122.5 | 5112.3 | 5093.7 | 5055.1  | 4994.9  | 4963.4  | 4912.4  | 4823.5  | 4704.2  |
| 5°    | 5099.9 | 5124.6 | 5137.6 | 5138.8 | 5152.1 | 5137.6  | 5083.5  | 5057.3  | 4986.9  | 4843.8  | 4629.8  |
| 7.5°  | 4781.8 | 4790.7 | 4828.7 | 4861.1 | 4924.5 | 4984.7  | 5004.2  | 4992.7  | 4951.0  | 4798.1  | 4513.3  |
| 10°   | 4441.1 | 4450.0 | 4495.1 | 4537.7 | 4623.6 | 4716.3  | 4814.2  | 4834.9  | 4852.2  | 4732.6  | 4401.2  |
| 12.5° | 4147.0 | 4156.3 | 4202.3 | 4258.2 | 4358.3 | 4472.6  | 4624.5  | 4658.2  | 4734.8  | 4670.6  | 4311.3  |
| 15°   | 3894.0 | 3898.1 | 3943.2 | 4012.3 | 4131.9 | 4278.6  | 4451.3  | 4505.3  | 4622.7  | 4626.7  | 4232.9  |
| 17.5° | 3678.8 | 3688.9 | 3716.7 | 3782.8 | 3913.5 | 4095.1  | 4296.2  | 4373.7  | 4511.2  | 4589.9  | 4156.3  |
| 20°   | 3547.2 | 3557.4 | 3556.4 | 3593.2 | 3710.6 | 3904.2  | 4141.1  | 4233.8  | 4401.2  | 4552.3  | 4088.0  |
| 22.5° | 3521.8 | 3521.8 | 3495.3 | 3490.0 | 3559.5 | 3721.7  | 3979.9  | 4093.0  | 4302.1  | 4535.9  | 4040.1  |
| 25°   | 3612.7 | 3608.3 | 3542.2 | 3488.2 | 3491.3 | 3587.9  | 3823.6  | 3958.3  | 4218.7  | 4547.0  | 4014.5  |
| 27.5° | 3804.5 | 3799.2 | 3715.5 | 3612.7 | 3529.9 | 3528.9  | 3705.3  | 3850.2  | 4152.3  | 4600.1  | 4024.7  |
| 30°   | 4069.5 | 4067.6 | 3976.8 | 3847.1 | 3697.3 | 3559.5  | 3664.5  | 3796.1  | 4109.3  | 4695.9  | 4048.2  |
| 32.5° | 4359.2 | 4356.1 | 4287.9 | 4151.3 | 3961.4 | 3697.3  | 3707.5  | 3817.7  | 4121.7  | 4823.5  | 4105.3  |
| 35°   | 4666.5 | 4661.3 | 4631.6 | 4512.4 | 4303.3 | 3951.2  | 3848.3  | 3933.9  | 4199.2  | 5014.3  | 4217.4  |
| 37.5° | 4998.9 | 5004.2 | 5025.5 | 4911.2 | 4691.9 | 4307.3  | 4084.0  | 4142.1  | 4355.2  | 5273.5  | 4400.0  |
| 40°   | 5489.7 | 5488.8 | 5495.9 | 5345.8 | 5134.8 | 4742.8  | 4413.3  | 4431.8  | 4616.5  | 5617.3  | 4677.7  |
| 42.5° | 6380.2 | 6318.1 | 6129.4 | 5823.3 | 5611.1 | 5240.8  | 4828.7  | 4809.2  | 4935.9  | 6042.6  | 5066.2  |
| 45°   | 7577.1 | 7444.3 | 6954.7 | 6368.2 | 6096.7 | 5802.0  | 5339.6  | 5277.5  | 5358.1  | 6553.8  | 5545.9  |
| 47.5° | 8606.3 | 8468.5 | 7776.0 | 6935.3 | 6611.9 | 6334.5  | 5938.5  | 5826.4  | 5853.0  | 7126.2  | 6153.8  |
| 50°   | 8956.3 | 8888.9 | 8284.1 | 7429.2 | 7110.7 | 7004.8  | 6633.5  | 6496.7  | 6459.0  | 7788.1  | 6858.7  |
| 52.5° | 8834.9 | 8829.9 | 8426.8 | 7749.5 | 7567.8 | 7698.5  | 7507.6  | 7349.5  | 7210.8  | 8486.1  | 7575.9  |
| 55°   | 8640.0 | 8665.6 | 8484.9 | 8029.9 | 8023.8 | 8332.0  | 8703.3  | 8571.7  | 8169.9  | 9244.1  | 8194.3  |
| 57.5° | 8102.5 | 8211.6 | 8452.5 | 8560.6 | 8811.4 | 9126.8  | 9699.1  | 9776.6  | 9301.3  | 9824.5  | 8707.3  |
| 60°   | 6574.2 | 6813.9 | 7601.5 | 8636.9 | 9826.7 | 10612.2 | 10901.0 | 10967.1 | 10229.5 | 10307.0 | 9400.1  |
| 62.5° | 4666.5 | 4911.2 | 5910.1 | 7661.7 | 9841.8 | 12563.7 | 12691.2 | 12431.2 | 11251.9 | 11022.4 | 10594.9 |
| 65°   | 2476.9 | 2665.9 | 3482.0 | 5530.5 | 8533.1 | 13016.8 | 15822.3 | 15047.1 | 13055.4 | 12429.0 | 12138.3 |
| 67.5° | 1267.0 | 1324.2 | 1648.8 | 2706.7 | 5866.2 | 11562.0 | 18628.8 | 19174.6 | 16164.0 | 13824.8 | 12063.9 |
| 69°   | 1121.2 | 1154.9 | 1370.2 | 1956.7 | 3756.3 | 9793.0  | 18765.6 | 20591.7 | 17791.4 | 13708.4 | 10963.0 |
| 70°   | 1085.4 | 1115.1 | 1310.9 | 1771.1 | 2936.2 | 8212.5  | 18242.1 | 20467.3 | 18207.5 | 13265.7 | 10140.8 |
| 72.5° | 921.4  | 946.7  | 1167.3 | 1565.1 | 2386.4 | 4076.6  | 14818.5 | 17343.6 | 16338.5 | 11050.8 | 7340.2  |
| 75°   | 616.2  | 699.9  | 1120.3 | 1467.2 | 2219.9 | 2316.0  | 9769.5  | 12533.1 | 11642.6 | 7453.6  | 3823.6  |
| 77.5° | 148.0  | 159.1  | 316.3  | 1167.3 | 2030.3 | 2038.3  | 5024.5  | 7791.2  | 6354.9  | 2656.7  | 903.8   |
| 80°   | 79.7   | 76.6   | 88.6   | 231.7  | 1890.3 | 1912.9  | 2261.9  | 3781.9  | 2269.0  | 440.8   | 297.8   |
| 82.5° | 56.2   | 53.1   | 57.1   | 97.0   | 594.9  | 1742.4  | 1636.4  | 1711.8  | 940.5   | 169.3   | 133.7   |
| 85°   | 20.4   | 19.5   | 31.5   | 87.7   | 186.6  | 1001.7  | 1681.2  | 1411.9  | 762.0   | 77.5    | 97.9    |
| 87.5° | 7.1    | 6.2    | 12.4   | 47.9   | 57.1   | 426.6   | 1037.5  | 1067.2  | 299.9   | 46.9    | 46.0    |
| 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°    | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 | 4695.9 |
| 2.5°  | 4654.2 | 4590.9 | 4474.7 | 4355.2 | 4244.9 | 4112.4 | 4046.0 | 3980.8 | 3953.3 | 3943.2 | 3895.3 |
| 5°    | 4519.5 | 4412.3 | 4165.5 | 3917.5 | 3688.9 | 3446.2 | 3286.2 | 3157.7 | 3082.0 | 3045.2 | 2987.2 |
| 7.5°  | 4347.2 | 4171.7 | 3797.1 | 3414.7 | 3058.5 | 2707.6 | 2447.6 | 2247.4 | 2109.6 | 2043.5 | 1983.3 |
| 10°   | 4179.8 | 3946.2 | 3413.7 | 2892.3 | 2408.6 | 1943.5 | 1584.2 | 1324.2 | 1158.0 | 1081.4 | 1032.6 |
| 12.5° | 4029.9 | 3726.9 | 3043.4 | 2383.3 | 1776.1 | 1231.5 | 866.1  | 659.1  | 556.0  | 520.2  | 502.9  |
| 15°   | 3896.2 | 3524.9 | 2693.4 | 1899.6 | 1202.8 | 703.9  | 473.5  | 403.1  | 386.7  | 386.7  | 384.6  |
| 17.5° | 3769.6 | 3326.9 | 2355.5 | 1445.6 | 754.9  | 430.6  | 360.2  | 350.9  | 350.9  | 354.9  | 354.9  |
| 20°   | 3648.2 | 3138.2 | 2029.0 | 1037.5 | 475.4  | 341.6  | 325.6  | 323.4  | 325.6  | 330.5  | 330.5  |
| 22.5° | 3544.1 | 2966.8 | 1724.2 | 712.0  | 353.0  | 308.0  | 299.9  | 296.8  | 297.8  | 300.8  | 303.0  |
| 25°   | 3466.6 | 2821.9 | 1436.6 | 482.5  | 303.9  | 280.5  | 271.5  | 266.3  | 262.2  | 262.2  | 264.1  |
| 27.5° | 3417.7 | 2699.6 | 1158.0 | 350.9  | 273.4  | 255.1  | 240.6  | 232.6  | 223.3  | 218.4  | 220.2  |
| 30°   | 3381.9 | 2583.2 | 896.7  | 286.6  | 244.9  | 226.4  | 208.2  | 194.9  | 181.6  | 175.4  | 177.6  |
| 32.5° | 3368.6 | 2489.3 | 670.3  | 253.0  | 219.3  | 198.9  | 176.4  | 159.1  | 144.9  | 139.6  | 140.8  |
| 35°   | 3404.5 | 2414.8 | 490.8  | 228.6  | 198.9  | 173.3  | 148.0  | 128.5  | 117.4  | 114.3  | 115.2  |
| 37.5° | 3498.4 | 2375.0 | 367.3  | 208.2  | 180.7  | 152.0  | 123.6  | 105.0  | 97.9   | 97.9   | 98.8   |
| 40°   | 3675.7 | 2374.0 | 295.0  | 194.0  | 164.3  | 131.6  | 101.9  | 88.6   | 84.6   | 86.8   | 87.7   |
| 42.5° | 3934.8 | 2428.1 | 257.0  | 180.7  | 150.1  | 112.1  | 84.6   | 75.4   | 74.4   | 76.6   | 77.5   |
| 45°   | 4288.8 | 2526.9 | 236.6  | 169.3  | 134.7  | 93.9   | 71.4   | 65.2   | 65.2   | 68.3   | 69.5   |
| 47.5° | 4722.5 | 2671.8 | 219.3  | 158.1  | 119.2  | 78.5   | 61.2   | 57.1   | 58.1   | 61.2   | 62.1   |
| 50°   | 5244.8 | 2854.7 | 202.0  | 145.8  | 108.1  | 65.2   | 53.1   | 50.0   | 51.0   | 55.0   | 56.2   |
| 52.5° | 5839.7 | 3100.5 | 187.8  | 134.7  | 93.9   | 54.1   | 44.8   | 42.9   | 44.8   | 49.1   | 50.0   |
| 55°   | 6349.6 | 3320.8 | 170.5  | 125.4  | 75.4   | 44.8   | 36.8   | 36.8   | 38.9   | 43.9   | 44.8   |
| 57.5° | 6840.4 | 3551.2 | 155.1  | 108.1  | 59.3   | 35.8   | 30.6   | 31.5   | 34.6   | 39.8   | 40.8   |
| 60°   | 7560.7 | 3941.9 | 136.8  | 90.8   | 44.8   | 28.4   | 25.6   | 26.6   | 30.6   | 35.8   | 36.8   |
| 62.5° | 8783.9 | 4536.8 | 118.3  | 75.4   | 34.6   | 22.5   | 20.4   | 22.5   | 27.5   | 33.7   | 34.6   |
| 65°   | 9887.8 | 4778.7 | 97.0   | 63.3   | 26.6   | 17.3   | 17.3   | 20.4   | 26.6   | 32.7   | 33.7   |
| 67.5° | 9272.6 | 4022.5 | 75.4   | 50.0   | 20.4   | 13.3   | 14.2   | 19.5   | 25.6   | 32.7   | 33.7   |
| 69°   | 8200.4 | 3289.3 | 64.2   | 39.8   | 17.3   | 12.4   | 13.3   | 19.5   | 25.6   | 31.5   | 32.7   |
| 70°   | 7364.9 | 2777.1 | 57.1   | 33.7   | 15.4   | 12.4   | 13.3   | 18.2   | 25.6   | 31.5   | 32.7   |
| 72.5° | 4932.8 | 1499.6 | 46.0   | 24.4   | 14.2   | 11.1   | 11.1   | 18.2   | 24.4   | 30.6   | 31.5   |
| 75°   | 2119.8 | 414.2  | 36.8   | 17.3   | 12.4   | 10.2   | 10.2   | 17.3   | 23.5   | 29.7   | 31.5   |
| 77.5° | 387.6  | 105.0  | 29.7   | 15.4   | 12.4   | 10.2   | 9.3    | 16.4   | 22.5   | 28.4   | 29.7   |
| 80°   | 154.1  | 51.9   | 23.5   | 13.3   | 11.1   | 9.3    | 8.0    | 15.4   | 21.3   | 27.5   | 28.4   |
| 82.5° | 93.0   | 29.7   | 19.5   | 12.4   | 11.1   | 8.0    | 7.1    | 13.3   | 20.4   | 26.6   | 27.5   |
| 85°   | 75.4   | 20.4   | 15.4   | 12.4   | 10.2   | 8.0    | 6.2    | 12.4   | 18.2   | 25.6   | 26.6   |
| 87.5° | 36.8   | 14.2   | 14.2   | 11.1   | 10.2   | 8.0    | 6.2    | 11.1   | 17.3   | 24.4   | 25.6   |
| 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)