

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: P299897

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299897  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-04-LED-E1-SL3-7050-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Square Medium OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19332.8 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

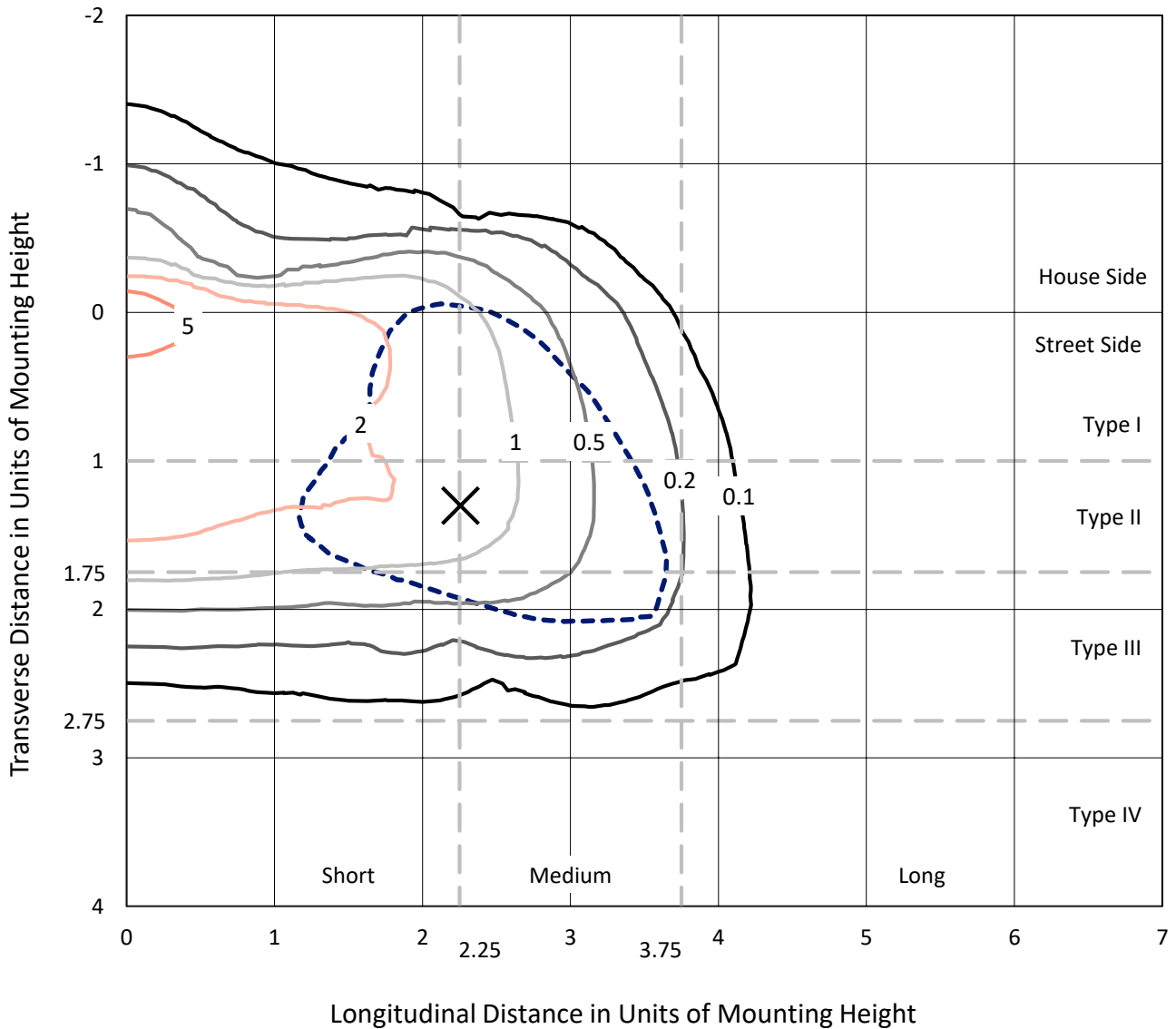
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

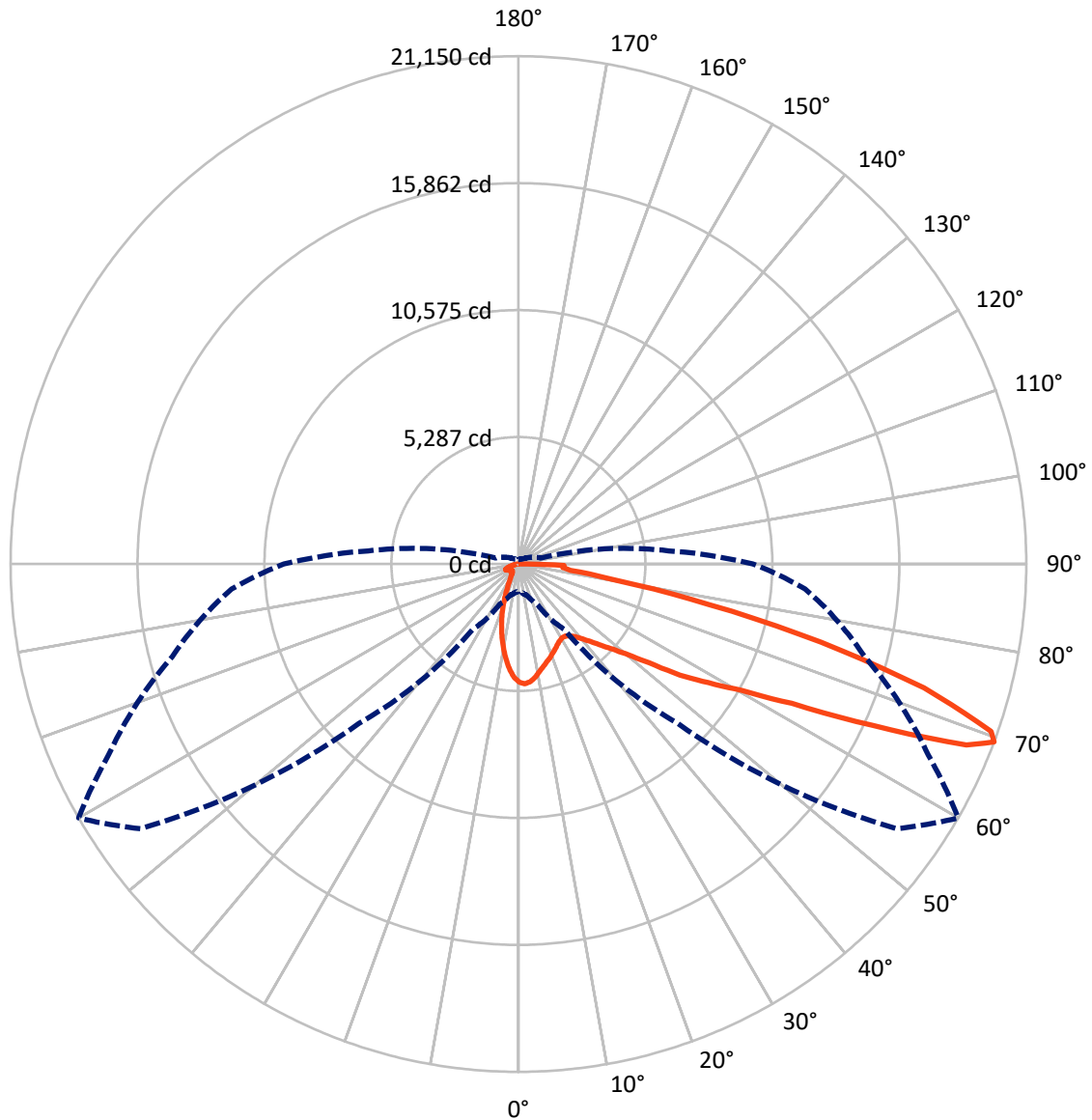
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2750.4   | 0.0    | 2750.4  |
|                    | % Fixture | 14.2     | 0.0    | 14.2    |
| <b>Street Side</b> | Lumens    | 16582.3  | 0.0    | 16582.3 |
|                    | % Fixture | 85.8     | 0.0    | 85.8    |
| <b>Total</b>       | Lumens    | 19332.8  | 0.0    | 19332.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 416.5   | 2.2       |
| 10°-20°   | 887.5   | 4.6       |
| 20°-30°   | 1130.8  | 5.8       |
| 30°-40°   | 1554.5  | 8.0       |
| 40°-50°   | 2522.4  | 13.0      |
| 50°-60°   | 4045.2  | 20.9      |
| 60°-70°   | 5383.9  | 27.8      |
| 70°-80°   | 2906.9  | 15.0      |
| 80°-90°   | 485.0   | 2.5       |
| 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°    | 19332.8 | 100.0     |
| 0°-180°   | 19332.8 | 100.0     |

**Coefficient of Utilization**



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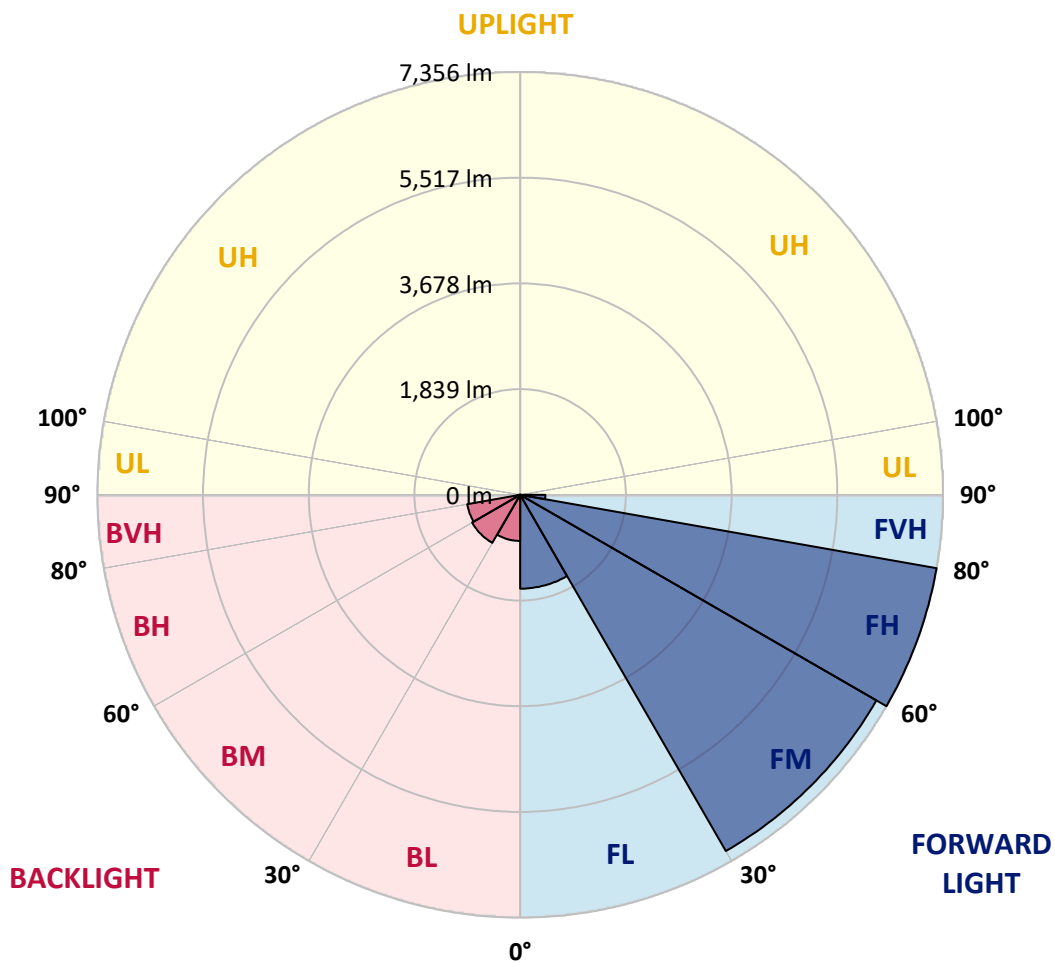
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1632.4 | 8.4       |                         |      |         |
| FM (30°-60°)   | 7155.9 | 37.0      |                         |      |         |
| FH (60°-80°)   | 7355.7 | 38.0      |                         |      | G3/7500 |
| FVH (80°-90°)  | 438.3  | 2.3       |                         |      | G3/500  |
| BL (0°-30°)    | 802.4  | 4.2       | B2/1000                 |      |         |
| BM (30°-60°)   | 966.3  | 5.0       | B1/1000                 |      |         |
| BH (60°-80°)   | 935.1  | 4.8       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 46.7   | 0.2       |                         |      | G1/100  |
| 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 Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 60°     | 65°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0°    | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3  | 4926.3  | 4926.3  | 4926.3  | 4926.3  | 4926.3  |
| 2.5°  | 5027.1 | 5038.3 | 5033.7 | 5030.9 | 5039.3 | 5026.2  | 4999.1  | 4990.7  | 4977.6  | 4946.8  | 4894.5  |
| 5°    | 4838.5 | 4872.1 | 4870.2 | 4895.5 | 4937.5 | 4948.7  | 4936.6  | 4938.4  | 4914.1  | 4875.9  | 4789.0  |
| 7.5°  | 4512.6 | 4526.6 | 4534.0 | 4589.1 | 4665.7 | 4727.4  | 4779.7  | 4796.5  | 4785.3  | 4752.6  | 4640.5  |
| 10°   | 4176.4 | 4187.6 | 4205.3 | 4269.8 | 4366.9 | 4451.9  | 4550.9  | 4607.8  | 4632.1  | 4626.5  | 4501.4  |
| 12.5° | 3887.8 | 3899.0 | 3922.3 | 3995.2 | 4111.0 | 4215.6  | 4359.4  | 4430.4  | 4488.3  | 4522.8  | 4388.4  |
| 15°   | 3629.1 | 3653.4 | 3675.8 | 3759.9 | 3889.7 | 4026.9  | 4189.4  | 4279.1  | 4368.7  | 4446.3  | 4288.4  |
| 17.5° | 3427.4 | 3451.7 | 3464.7 | 3541.3 | 3679.5 | 3847.6  | 4038.2  | 4143.7  | 4255.7  | 4382.8  | 4189.4  |
| 20°   | 3310.6 | 3321.9 | 3316.3 | 3359.2 | 3483.4 | 3661.8  | 3887.8  | 4010.1  | 4145.5  | 4323.0  | 4090.4  |
| 22.5° | 3278.0 | 3278.9 | 3258.4 | 3253.7 | 3334.0 | 3484.4  | 3727.2  | 3875.7  | 4041.9  | 4283.8  | 4005.5  |
| 25°   | 3357.3 | 3354.5 | 3298.5 | 3252.7 | 3261.2 | 3348.9  | 3572.1  | 3744.9  | 3955.0  | 4275.4  | 3940.1  |
| 27.5° | 3533.8 | 3542.3 | 3459.1 | 3373.2 | 3288.2 | 3285.4  | 3454.5  | 3636.6  | 3884.1  | 4313.6  | 3912.1  |
| 30°   | 3781.3 | 3795.3 | 3706.6 | 3597.4 | 3437.7 | 3306.0  | 3408.7  | 3572.1  | 3840.2  | 4393.0  | 3907.4  |
| 32.5° | 4052.2 | 4067.1 | 3999.9 | 3885.0 | 3675.8 | 3433.0  | 3440.5  | 3577.7  | 3838.3  | 4504.2  | 3939.2  |
| 35°   | 4340.7 | 4357.5 | 4323.0 | 4225.9 | 3993.3 | 3667.4  | 3561.9  | 3668.3  | 3899.0  | 4674.1  | 4024.1  |
| 37.5° | 4662.9 | 4689.1 | 4698.4 | 4606.0 | 4357.5 | 3976.5  | 3760.8  | 3840.2  | 4036.3  | 4910.4  | 4180.1  |
| 40°   | 5127.1 | 5163.5 | 5160.7 | 5028.1 | 4775.0 | 4394.0  | 4068.0  | 4088.6  | 4250.1  | 5226.1  | 4429.5  |
| 42.5° | 6016.1 | 6023.6 | 5791.1 | 5502.5 | 5234.5 | 4832.9  | 4430.4  | 4413.6  | 4545.3  | 5625.8  | 4796.5  |
| 45°   | 7147.1 | 7116.3 | 6598.9 | 6041.3 | 5714.5 | 5337.2  | 4902.0  | 4819.8  | 4919.7  | 6113.3  | 5255.9  |
| 47.5° | 8085.6 | 8014.7 | 7360.9 | 6591.4 | 6222.5 | 5885.4  | 5455.8  | 5312.0  | 5367.1  | 6666.1  | 5849.9  |
| 50°   | 8411.6 | 8358.3 | 7816.7 | 7049.0 | 6703.5 | 6554.1  | 6137.5  | 5934.0  | 5948.9  | 7325.5  | 6545.7  |
| 52.5° | 8341.5 | 8334.1 | 7972.6 | 7350.7 | 7153.6 | 7256.3  | 7103.2  | 6827.7  | 6682.0  | 8057.6  | 7296.5  |
| 55°   | 8176.2 | 8192.1 | 8061.4 | 7701.8 | 7668.2 | 7934.3  | 8364.9  | 8161.3  | 7708.3  | 8796.3  | 8072.6  |
| 57.5° | 7601.9 | 7643.0 | 7930.6 | 8143.5 | 8496.6 | 8892.5  | 9380.9  | 9323.0  | 8813.1  | 9594.8  | 8995.3  |
| 60°   | 6124.5 | 6219.7 | 6991.1 | 8057.6 | 9349.2 | 10587.5 | 10806.1 | 10671.6 | 9952.5  | 10585.7 | 10214.0 |
| 62.5° | 4291.2 | 4390.2 | 5307.3 | 6976.2 | 9209.1 | 12502.0 | 13353.7 | 12773.8 | 11588.7 | 12045.3 | 11791.3 |
| 65°   | 2297.4 | 2345.0 | 3045.4 | 4840.4 | 7774.7 | 12897.1 | 17077.2 | 16194.6 | 14179.3 | 13845.0 | 13140.8 |
| 67.5° | 1267.3 | 1293.4 | 1561.5 | 2444.0 | 4979.5 | 11357.1 | 19449.2 | 20116.0 | 17417.1 | 15043.1 | 12895.2 |
| 69°   | 1145.9 | 1170.2 | 1345.7 | 1851.0 | 3332.1 | 9390.3  | 19217.6 | 21149.9 | 18836.6 | 14924.5 | 11987.4 |
| 70°   | 1120.7 | 1143.1 | 1300.9 | 1706.2 | 2697.1 | 7740.1  | 18441.6 | 20885.6 | 19174.7 | 14499.6 | 11195.5 |
| 72.5° | 1008.6 | 1032.9 | 1186.0 | 1532.5 | 2304.8 | 3858.8  | 14607.9 | 17659.0 | 17408.7 | 12572.1 | 8491.9  |
| 75°   | 940.4  | 962.8  | 1222.5 | 1500.8 | 2206.8 | 2442.1  | 9630.3  | 13014.7 | 12797.1 | 8794.5  | 4578.9  |
| 77.5° | 402.5  | 400.6  | 566.9  | 1270.1 | 2239.5 | 2364.6  | 5174.7  | 8130.5  | 7417.9  | 3758.9  | 1314.9  |
| 80°   | 269.0  | 264.3  | 269.0  | 373.6  | 2053.6 | 2377.7  | 2711.1  | 4126.9  | 3117.3  | 958.2   | 648.1   |
| 82.5° | 231.6  | 227.9  | 236.3  | 227.9  | 721.9  | 2713.9  | 2304.8  | 2194.6  | 1482.1  | 544.5   | 321.3   |
| 85°   | 156.0  | 149.4  | 203.6  | 204.5  | 340.9  | 2411.3  | 2596.2  | 1853.8  | 1199.1  | 323.1   | 158.8   |
| 87.5° | 74.7   | 72.8   | 118.6  | 144.8  | 199.9  | 979.7   | 2912.8  | 1899.5  | 1209.4  | 165.3   | 75.6    |
| 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°    | 4926.3  | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 | 4926.3 |
| 2.5°  | 4878.7  | 4840.4 | 4803.0 | 4758.2 | 4711.5 | 4659.2 | 4633.0 | 4606.9 | 4600.4 | 4592.9 | 4566.7 |
| 5°    | 4744.2  | 4690.0 | 4596.6 | 4493.9 | 4385.6 | 4280.0 | 4199.7 | 4149.3 | 4111.0 | 4091.4 | 4056.8 |
| 7.5°  | 4570.5  | 4491.1 | 4327.7 | 4150.2 | 3968.1 | 3801.9 | 3658.1 | 3567.5 | 3481.6 | 3441.4 | 3395.6 |
| 10°   | 4405.2  | 4286.6 | 4032.5 | 3771.1 | 3509.6 | 3258.4 | 3022.1 | 2854.9 | 2706.4 | 2623.3 | 2564.5 |
| 12.5° | 4263.2  | 4100.7 | 3748.6 | 3394.7 | 3036.1 | 2678.4 | 2324.5 | 2046.2 | 1813.6 | 1691.3 | 1628.7 |
| 15°   | 4125.0  | 3928.9 | 3478.7 | 3029.5 | 2569.1 | 2082.6 | 1617.5 | 1301.8 | 1109.5 | 1032.9 | 1006.7 |
| 17.5° | 3999.9  | 3748.6 | 3207.9 | 2661.6 | 2087.2 | 1498.9 | 1087.1 | 913.3  | 839.6  | 814.4  | 805.9  |
| 20°   | 3864.4  | 3566.5 | 2926.8 | 2276.8 | 1584.8 | 1047.8 | 848.9  | 772.3  | 742.4  | 735.0  | 731.2  |
| 22.5° | 3733.7  | 3387.2 | 2657.9 | 1865.0 | 1138.4 | 808.8  | 729.4  | 697.6  | 692.9  | 699.5  | 699.5  |
| 25°   | 3622.6  | 3226.6 | 2367.4 | 1434.5 | 835.8  | 680.8  | 652.8  | 645.3  | 663.1  | 687.3  | 692.0  |
| 27.5° | 3539.5  | 3094.9 | 2058.3 | 1059.0 | 665.9  | 592.1  | 591.2  | 603.3  | 647.2  | 693.9  | 703.2  |
| 30°   | 3482.5  | 2969.8 | 1727.7 | 763.9  | 558.5  | 521.1  | 536.1  | 562.2  | 626.6  | 692.9  | 710.7  |
| 32.5° | 3453.5  | 2877.3 | 1383.1 | 591.2  | 478.2  | 457.6  | 482.8  | 514.6  | 578.1  | 639.7  | 663.1  |
| 35°   | 3475.9  | 2809.1 | 1058.1 | 493.1  | 422.1  | 406.2  | 432.4  | 463.2  | 500.6  | 526.7  | 544.5  |
| 37.5° | 3560.0  | 2782.1 | 798.5  | 441.7  | 383.8  | 368.9  | 389.4  | 407.2  | 422.1  | 429.6  | 438.0  |
| 40°   | 3741.2  | 2811.0 | 639.7  | 415.6  | 362.4  | 343.7  | 352.1  | 358.6  | 368.0  | 375.4  | 379.2  |
| 42.5° | 4008.3  | 2897.9 | 573.4  | 405.3  | 351.1  | 324.1  | 322.2  | 325.0  | 337.1  | 351.1  | 353.9  |
| 45°   | 4381.8  | 3051.0 | 568.7  | 411.8  | 345.5  | 308.2  | 299.8  | 303.5  | 322.2  | 343.7  | 347.4  |
| 47.5° | 4859.0  | 3284.5 | 606.1  | 431.5  | 350.2  | 299.8  | 285.8  | 290.4  | 313.8  | 342.7  | 347.4  |
| 50°   | 5437.1  | 3610.4 | 668.7  | 460.4  | 370.8  | 301.6  | 281.1  | 283.9  | 308.2  | 339.9  | 344.6  |
| 52.5° | 6119.8  | 4072.7 | 736.8  | 488.4  | 392.2  | 313.8  | 284.8  | 278.3  | 300.7  | 328.7  | 334.3  |
| 55°   | 6879.1  | 4665.7 | 806.9  | 513.6  | 403.4  | 328.7  | 292.3  | 270.8  | 286.7  | 310.1  | 314.7  |
| 57.5° | 7811.1  | 5495.0 | 928.3  | 537.9  | 410.9  | 339.0  | 299.8  | 263.4  | 269.0  | 285.8  | 289.5  |
| 60°   | 9072.8  | 6668.0 | 1142.2 | 578.1  | 427.7  | 342.7  | 298.8  | 256.8  | 251.2  | 260.6  | 262.4  |
| 62.5° | 10584.7 | 7941.8 | 1320.5 | 628.5  | 455.7  | 345.5  | 293.2  | 252.2  | 236.3  | 236.3  | 238.1  |
| 65°   | 11482.2 | 8282.7 | 1221.5 | 670.5  | 479.1  | 342.7  | 286.7  | 247.5  | 225.1  | 214.8  | 215.7  |
| 67.5° | 10721.1 | 7284.4 | 1046.9 | 678.9  | 478.2  | 329.7  | 276.4  | 239.1  | 213.9  | 198.0  | 197.1  |
| 69°   | 9767.6  | 6285.1 | 968.4  | 656.5  | 455.7  | 312.9  | 263.4  | 229.7  | 205.5  | 188.6  | 187.7  |
| 70°   | 8999.0  | 5675.3 | 917.1  | 632.2  | 431.5  | 300.7  | 253.1  | 221.3  | 198.9  | 183.0  | 181.2  |
| 72.5° | 6542.8  | 3718.8 | 783.5  | 543.5  | 355.8  | 252.2  | 218.5  | 194.2  | 177.4  | 168.1  | 166.2  |
| 75°   | 3269.6  | 1773.5 | 636.0  | 440.8  | 272.7  | 201.7  | 179.3  | 162.5  | 154.1  | 152.2  | 151.3  |
| 77.5° | 1074.0  | 812.5  | 454.8  | 328.7  | 202.7  | 157.8  | 144.8  | 132.6  | 130.7  | 136.3  | 134.5  |
| 80°   | 590.2   | 472.5  | 288.6  | 217.6  | 138.2  | 115.8  | 113.9  | 107.4  | 110.2  | 119.5  | 117.7  |
| 82.5° | 300.7   | 245.6  | 178.4  | 130.7  | 93.4   | 83.1   | 90.6   | 86.9   | 90.6   | 99.0   | 98.1   |
| 85°   | 148.5   | 134.5  | 113.0  | 79.4   | 61.6   | 53.2   | 64.4   | 67.2   | 69.1   | 75.6   | 75.6   |
| 87.5° | 85.9    | 79.4   | 59.8   | 37.4   | 30.8   | 28.0   | 37.4   | 36.4   | 43.0   | 46.7   | 45.8   |
| 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)