

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: P301853

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-7060-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301853  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-09-LED-E1-SL4-7060-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 39241.5 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G5

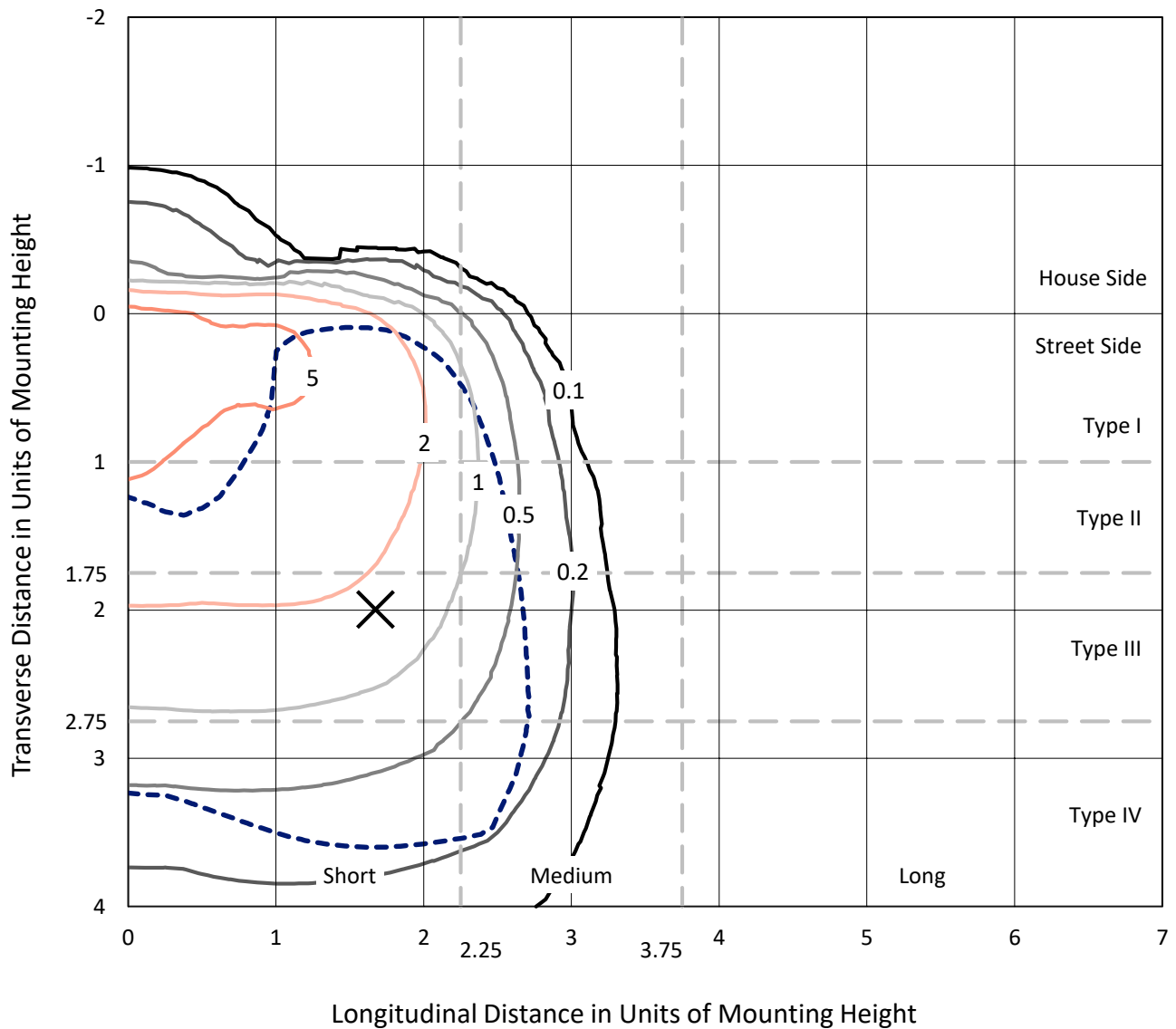
Input Watts (W): 501  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

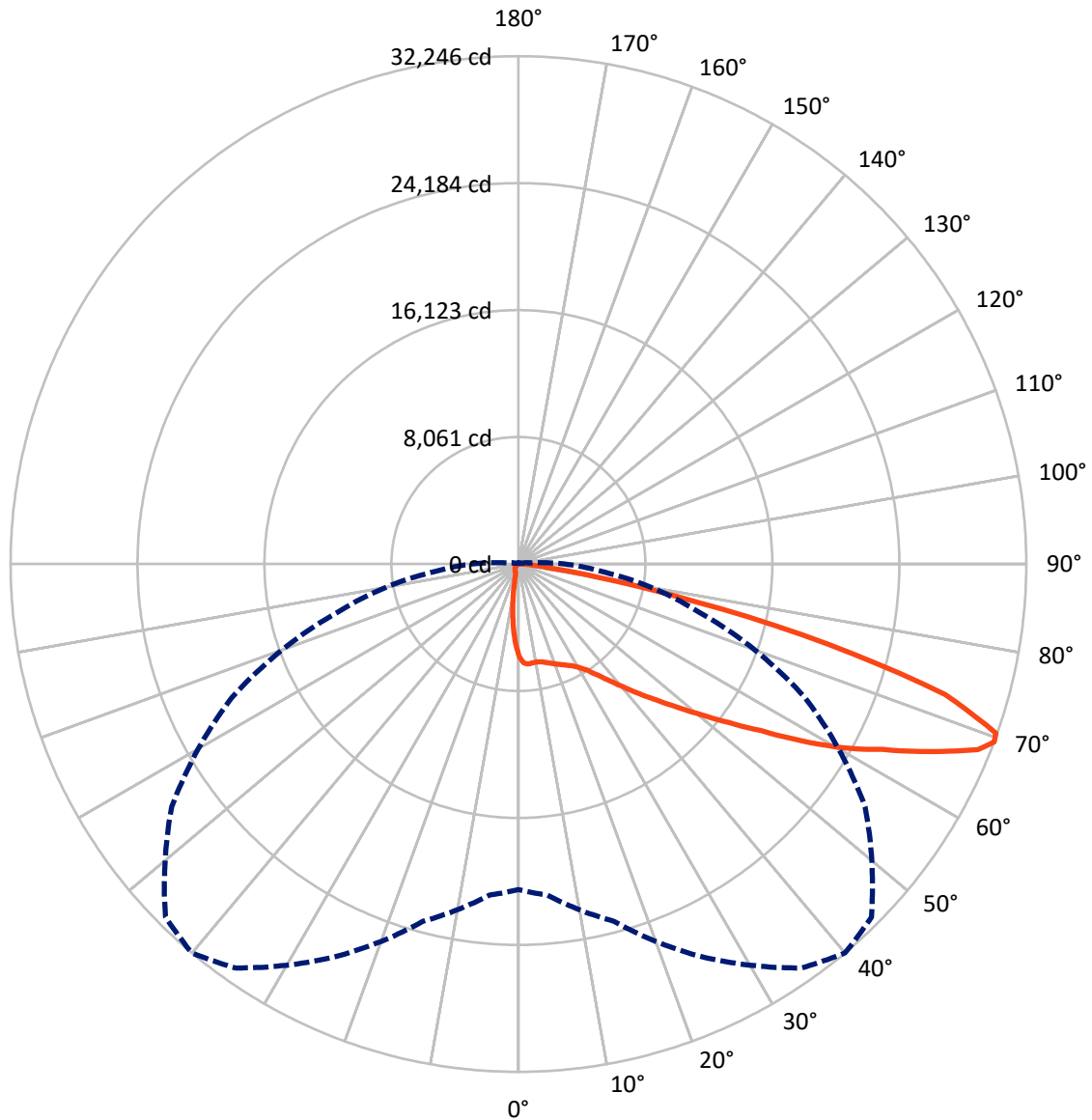
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2295.9   | 0.0    | 2295.9  |
|                    | % Fixture | 5.9      | 0.0    | 5.9     |
| <b>Street Side</b> | Lumens    | 36945.7  | 0.0    | 36945.7 |
|                    | % Fixture | 94.1     | 0.0    | 94.1    |
| <b>Total</b>       | Lumens    | 39241.5  | 0.0    | 39241.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 475.4   | 1.2       |
| 10°-20°   | 1169.0  | 3.0       |
| 20°-30°   | 1969.0  | 5.0       |
| 30°-40°   | 3223.3  | 8.2       |
| 40°-50°   | 5581.1  | 14.2      |
| 50°-60°   | 8790.8  | 22.4      |
| 60°-70°   | 11480.4 | 29.3      |
| 70°-80°   | 5912.9  | 15.1      |
| 80°-90°   | 639.6   | 1.6       |
| 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°    | 39241.5 | 100.0     |
| 0°-180°   | 39241.5 | 100.0     |



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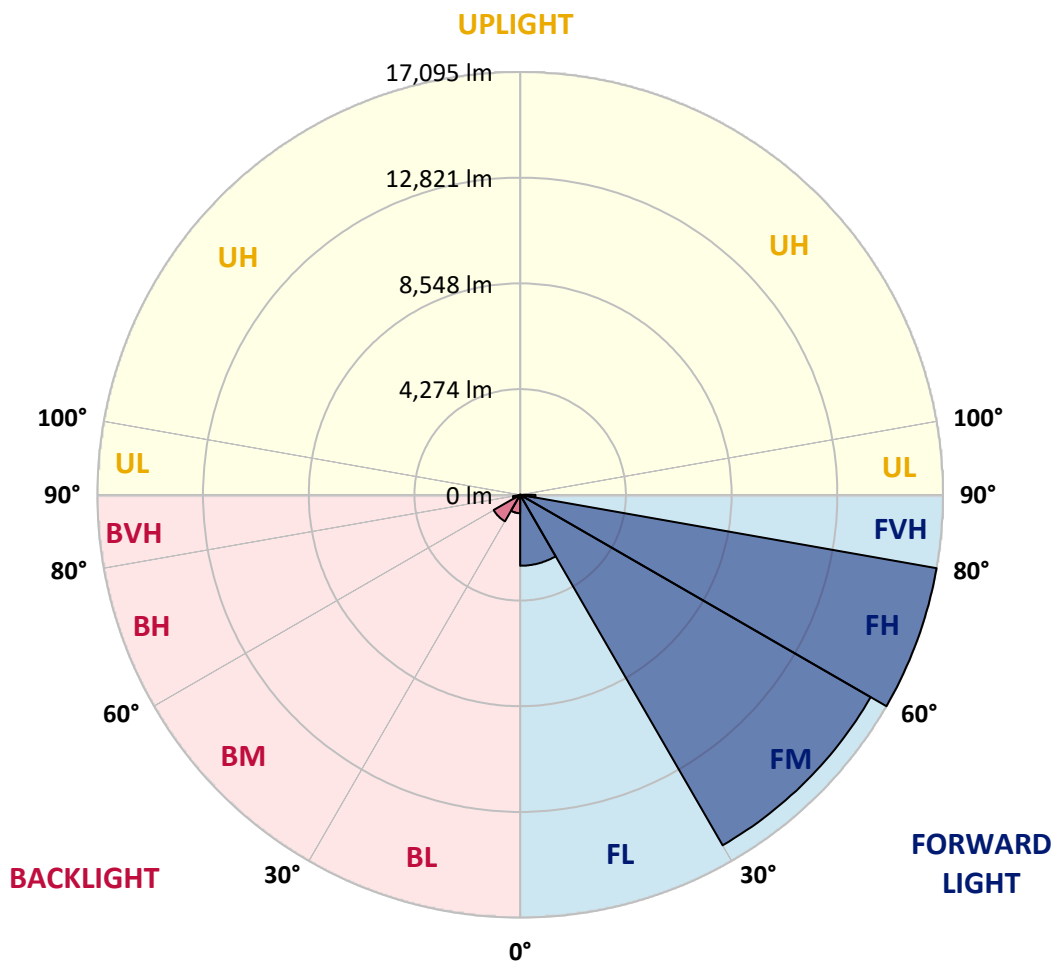
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|---------|-----------|-------------------------|------|--------|
|      |             |         |           | B                       | U    | G      |
| FL   | (0°-30°)    | 2869.7  | 7.3       |                         |      |        |
| FM   | (30°-60°)   | 16361.3 | 41.7      |                         |      |        |
| FH   | (60°-80°)   | 17095.2 | 43.6      |                         |      | G5     |
| FVH  | (80°-90°)   | 619.5   | 1.6       |                         |      | G4/750 |
| BL   | (0°-30°)    | 743.7   | 1.9       | B2/1000                 |      |        |
| BM   | (30°-60°)   | 1234.0  | 3.1       | B2/2500                 |      |        |
| BH   | (60°-80°)   | 298.1   | 0.8       | B1/500                  |      | G1/500 |
| BVH  | (80°-90°)   | 20.1    | 0.1       |                         |      | G1/100 |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |        |

**BUG Rating: B2-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  | 5862.9  |
| 2.5°  | 6437.5  | 6402.5  | 6381.4  | 6353.4  | 6318.4  | 6288.0  | 6276.3  | 6189.9  | 6108.1  | 5996.0  | 5867.6  |
| 5°    | 6556.6  | 6544.9  | 6507.6  | 6470.2  | 6428.2  | 6381.4  | 6355.7  | 6253.0  | 6136.2  | 5972.7  | 5748.4  |
| 7.5°  | 6568.3  | 6554.3  | 6507.6  | 6456.2  | 6397.8  | 6341.7  | 6297.3  | 6194.6  | 6087.1  | 5921.3  | 5648.0  |
| 10°   | 6549.6  | 6533.3  | 6498.2  | 6442.2  | 6369.8  | 6316.0  | 6271.7  | 6173.5  | 6082.5  | 5933.0  | 5629.3  |
| 12.5° | 6528.6  | 6512.2  | 6495.9  | 6467.9  | 6404.8  | 6367.4  | 6330.0  | 6236.6  | 6154.9  | 6028.7  | 5697.0  |
| 15°   | 6549.6  | 6540.3  | 6559.0  | 6547.3  | 6512.2  | 6479.5  | 6442.2  | 6358.1  | 6283.3  | 6178.2  | 5820.8  |
| 17.5° | 6638.4  | 6638.4  | 6696.8  | 6703.8  | 6671.1  | 6624.4  | 6570.6  | 6486.5  | 6423.5  | 6334.7  | 5968.0  |
| 20°   | 6846.3  | 6839.3  | 6914.0  | 6928.0  | 6848.6  | 6776.2  | 6696.8  | 6594.0  | 6544.9  | 6488.9  | 6112.8  |
| 22.5° | 7203.6  | 7170.9  | 7215.3  | 7201.3  | 7044.8  | 6932.7  | 6834.6  | 6708.4  | 6682.8  | 6657.1  | 6274.0  |
| 25°   | 7668.5  | 7649.8  | 7680.1  | 7542.3  | 7266.7  | 7114.9  | 6998.1  | 6855.6  | 6855.6  | 6881.3  | 6456.2  |
| 27.5° | 8343.5  | 8273.4  | 8170.7  | 7927.7  | 7514.3  | 7320.4  | 7194.3  | 7042.5  | 7082.2  | 7177.9  | 6696.8  |
| 30°   | 9034.9  | 8957.8  | 8721.9  | 8348.2  | 7815.6  | 7612.4  | 7465.3  | 7306.4  | 7399.8  | 7575.0  | 7019.1  |
| 32.5° | 9717.0  | 9630.5  | 9296.5  | 8824.7  | 8247.7  | 8044.5  | 7902.0  | 7726.9  | 7883.4  | 8177.7  | 7490.9  |
| 35°   | 10378.0 | 10300.9 | 9915.5  | 9359.6  | 8822.4  | 8654.2  | 8523.4  | 8371.5  | 8572.4  | 8983.5  | 8156.7  |
| 37.5° | 11120.8 | 11036.7 | 10567.2 | 9964.6  | 9520.8  | 9399.3  | 9303.5  | 9151.7  | 9502.1  | 10104.7 | 9084.0  |
| 40°   | 12034.1 | 11891.6 | 11258.6 | 10658.3 | 10329.0 | 10270.6 | 10205.2 | 10184.1 | 10728.4 | 11562.3 | 10319.6 |
| 42.5° | 13080.5 | 12847.0 | 11982.7 | 11389.4 | 11216.6 | 11258.6 | 11242.3 | 11335.7 | 12263.0 | 13374.9 | 11823.9 |
| 45°   | 14127.0 | 13825.7 | 12788.6 | 12169.6 | 12192.9 | 12340.1 | 12431.2 | 12804.9 | 14185.4 | 15453.7 | 13442.6 |
| 47.5° | 15014.6 | 14717.9 | 13561.7 | 13012.8 | 13293.1 | 13582.7 | 13830.3 | 14538.1 | 16161.5 | 17499.9 | 14701.6 |
| 50°   | 15773.7 | 15493.4 | 14381.6 | 13940.1 | 14570.8 | 15038.0 | 15439.7 | 16488.5 | 18287.1 | 19057.9 | 15584.5 |
| 52.5° | 16395.1 | 16208.2 | 15231.8 | 15002.9 | 16030.7 | 16715.1 | 17303.7 | 18560.4 | 20169.7 | 20323.9 | 16271.3 |
| 55°   | 17000.0 | 16866.9 | 16145.1 | 16266.6 | 17745.2 | 18677.1 | 19422.3 | 20758.4 | 21790.8 | 21379.7 | 16930.0 |
| 57.5° | 17696.1 | 17574.6 | 17186.9 | 17869.0 | 19999.2 | 21171.8 | 21984.7 | 22706.4 | 23218.0 | 22458.8 | 17551.3 |
| 60°   | 18406.2 | 18336.1 | 18345.5 | 19648.8 | 22587.3 | 23713.2 | 24161.6 | 24348.5 | 24619.4 | 23474.9 | 17586.3 |
| 62.5° | 19083.6 | 19216.7 | 19669.9 | 21629.6 | 25065.6 | 25929.8 | 26156.4 | 26340.9 | 26023.3 | 23636.1 | 16247.9 |
| 65°   | 20230.5 | 20447.7 | 21529.2 | 24280.8 | 27791.5 | 28716.5 | 28950.0 | 28317.0 | 26245.2 | 21552.5 | 13216.0 |
| 67.5° | 20791.1 | 21188.1 | 23117.5 | 26752.0 | 30435.6 | 31463.4 | 31376.9 | 28445.5 | 23552.0 | 16434.8 | 8481.3  |
| 69°   | 20674.3 | 21097.0 | 23484.2 | 27508.8 | 31313.9 | 32245.9 | 31697.0 | 26873.5 | 20064.6 | 11905.6 | 5206.5  |
| 70°   | 20211.8 | 20639.2 | 23295.0 | 27480.8 | 31426.0 | 32164.1 | 31103.7 | 24932.4 | 16965.0 | 8705.6  | 3256.1  |
| 72.5° | 16878.6 | 17247.6 | 20681.3 | 24839.0 | 28950.0 | 28349.7 | 26020.9 | 17273.3 | 8266.4  | 2370.8  | 733.4   |
| 75°   | 10389.7 | 10595.2 | 14839.4 | 18712.2 | 21865.5 | 20323.9 | 17336.4 | 8593.4  | 2464.3  | 670.4   | 406.4   |
| 77.5° | 5489.2  | 5582.6  | 8124.0  | 11029.7 | 13860.7 | 11468.8 | 8885.4  | 3351.9  | 1135.2  | 420.4   | 294.3   |
| 80°   | 3244.4  | 3314.5  | 4375.0  | 5043.0  | 5998.4  | 5010.3  | 3552.8  | 2057.8  | 812.9   | 263.9   | 261.6   |
| 82.5° | 1857.0  | 1901.4  | 3172.0  | 2803.0  | 2363.8  | 2018.1  | 1768.2  | 1950.4  | 488.2   | 177.5   | 271.0   |
| 85°   | 682.1   | 691.4   | 1784.6  | 2132.6  | 1406.2  | 836.2   | 878.3   | 1616.4  | 130.8   | 112.1   | 212.6   |
| 87.5° | 317.7   | 310.7   | 918.0   | 1305.7  | 822.2   | 530.2   | 684.4   | 355.0   | 51.4    | 72.4    | 58.4    |
| 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°    | 5862.9  | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 | 5862.9 |
| 2.5°  | 5792.8  | 5706.4 | 5549.9 | 5388.7 | 5225.2 | 5099.1 | 4975.3 | 4877.2 | 4844.5 | 4783.7 | 4788.4 |
| 5°    | 5615.3  | 5456.5 | 5129.4 | 4797.8 | 4452.1 | 4167.1 | 3898.5 | 3681.2 | 3576.1 | 3468.7 | 3468.7 |
| 7.5°  | 5461.1  | 5229.9 | 4718.3 | 4178.8 | 3620.5 | 3151.0 | 2728.2 | 2410.6 | 2235.4 | 2095.2 | 2092.9 |
| 10°   | 5402.7  | 5089.7 | 4375.0 | 3601.8 | 2824.0 | 2184.0 | 1681.8 | 1359.4 | 1193.6 | 1086.2 | 1081.5 |
| 12.5° | 5428.4  | 5040.7 | 4111.0 | 3069.3 | 2092.9 | 1403.8 | 974.0  | 766.1  | 696.1  | 663.4  | 663.4  |
| 15°   | 5503.2  | 5026.7 | 3847.1 | 2548.4 | 1478.6 | 878.3  | 647.0  | 591.0  | 586.3  | 586.3  | 586.3  |
| 17.5° | 5594.3  | 5031.3 | 3576.1 | 2041.5 | 1006.7 | 628.3  | 558.3  | 551.3  | 555.9  | 555.9  | 555.9  |
| 20°   | 5687.7  | 5033.7 | 3284.2 | 1572.0 | 710.1  | 546.6  | 525.6  | 523.2  | 527.9  | 527.9  | 530.2  |
| 22.5° | 5802.2  | 5045.4 | 2992.2 | 1174.9 | 586.3  | 516.2  | 499.9  | 499.9  | 502.2  | 502.2  | 499.9  |
| 25°   | 5933.0  | 5068.7 | 2688.5 | 871.3  | 534.9  | 495.2  | 481.2  | 478.8  | 481.2  | 478.8  | 476.5  |
| 27.5° | 6096.5  | 5101.4 | 2349.8 | 682.1  | 511.5  | 474.2  | 462.5  | 462.5  | 460.2  | 457.8  | 455.5  |
| 30°   | 6302.0  | 5138.8 | 1969.1 | 579.3  | 488.2  | 455.5  | 443.8  | 441.5  | 439.1  | 434.5  | 434.5  |
| 32.5° | 6615.0  | 5220.5 | 1593.0 | 525.6  | 462.5  | 429.8  | 420.4  | 420.4  | 415.8  | 411.1  | 408.8  |
| 35°   | 7096.2  | 5381.7 | 1256.7 | 492.9  | 434.5  | 401.8  | 390.1  | 390.1  | 385.4  | 383.1  | 380.7  |
| 37.5° | 7761.9  | 5627.0 | 976.4  | 462.5  | 406.4  | 371.4  | 359.7  | 357.4  | 352.7  | 348.0  | 345.7  |
| 40°   | 8647.2  | 5930.6 | 768.5  | 434.5  | 378.4  | 341.0  | 331.7  | 327.0  | 317.7  | 310.7  | 310.7  |
| 42.5° | 9759.0  | 6276.3 | 623.7  | 404.1  | 345.7  | 313.0  | 306.0  | 299.0  | 282.6  | 275.6  | 273.3  |
| 45°   | 10922.3 | 6587.0 | 527.9  | 369.1  | 313.0  | 285.0  | 280.3  | 268.6  | 247.6  | 240.6  | 240.6  |
| 47.5° | 11760.8 | 6659.4 | 464.8  | 336.4  | 282.6  | 254.6  | 252.3  | 231.2  | 212.6  | 207.9  | 205.6  |
| 50°   | 12284.0 | 6516.9 | 413.4  | 303.7  | 254.6  | 226.6  | 219.6  | 193.9  | 182.2  | 177.5  | 175.2  |
| 52.5° | 12636.7 | 6262.3 | 371.4  | 275.6  | 228.9  | 200.9  | 184.5  | 165.8  | 156.5  | 151.8  | 151.8  |
| 55°   | 12919.4 | 5902.6 | 329.3  | 249.9  | 207.9  | 179.9  | 156.5  | 142.5  | 133.1  | 128.5  | 128.5  |
| 57.5° | 12998.8 | 5414.4 | 287.3  | 228.9  | 186.9  | 158.8  | 133.1  | 123.8  | 112.1  | 109.8  | 109.8  |
| 60°   | 12421.8 | 4533.8 | 254.6  | 203.2  | 168.2  | 137.8  | 116.8  | 105.1  | 93.4   | 91.1   | 88.8   |
| 62.5° | 10901.2 | 3508.4 | 224.2  | 179.9  | 147.2  | 119.1  | 100.4  | 86.4   | 77.1   | 77.1   | 77.1   |
| 65°   | 8315.5  | 2352.2 | 196.2  | 156.5  | 128.5  | 100.4  | 86.4   | 70.1   | 65.4   | 65.4   | 67.7   |
| 67.5° | 4977.6  | 1280.0 | 168.2  | 133.1  | 109.8  | 84.1   | 72.4   | 60.7   | 58.4   | 60.7   | 60.7   |
| 69°   | 2917.4  | 752.1  | 151.8  | 119.1  | 95.8   | 74.7   | 63.1   | 53.7   | 58.4   | 60.7   | 60.7   |
| 70°   | 1800.9  | 506.9  | 140.1  | 107.4  | 86.4   | 67.7   | 58.4   | 51.4   | 56.1   | 58.4   | 58.4   |
| 72.5° | 502.2   | 261.6  | 112.1  | 84.1   | 70.1   | 56.1   | 46.7   | 46.7   | 53.7   | 56.1   | 56.1   |
| 75°   | 327.0   | 193.9  | 86.4   | 63.1   | 53.7   | 44.4   | 39.7   | 44.4   | 51.4   | 53.7   | 53.7   |
| 77.5° | 271.0   | 158.8  | 70.1   | 51.4   | 44.4   | 42.0   | 37.4   | 39.7   | 46.7   | 49.1   | 49.1   |
| 80°   | 247.6   | 112.1  | 56.1   | 46.7   | 39.7   | 37.4   | 35.0   | 32.7   | 42.0   | 44.4   | 44.4   |
| 82.5° | 235.9   | 88.8   | 49.1   | 42.0   | 37.4   | 32.7   | 30.4   | 32.7   | 37.4   | 39.7   | 42.0   |
| 85°   | 147.2   | 58.4   | 44.4   | 39.7   | 32.7   | 30.4   | 30.4   | 30.4   | 35.0   | 37.4   | 37.4   |
| 87.5° | 53.7    | 46.7   | 39.7   | 32.7   | 28.0   | 28.0   | 28.0   | 28.0   | 30.4   | 35.0   | 35.0   |
| 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)