

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: P299920

Luminaire Tested: **GLNA-AF-08-LED-E1-5WQ-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299920  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-08-LED-E1-5WQ-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(8) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40452.5 lumens  
Efficiency: N/A  
Efficacy: 121.1 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G4

Input Watts (W): 334  
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

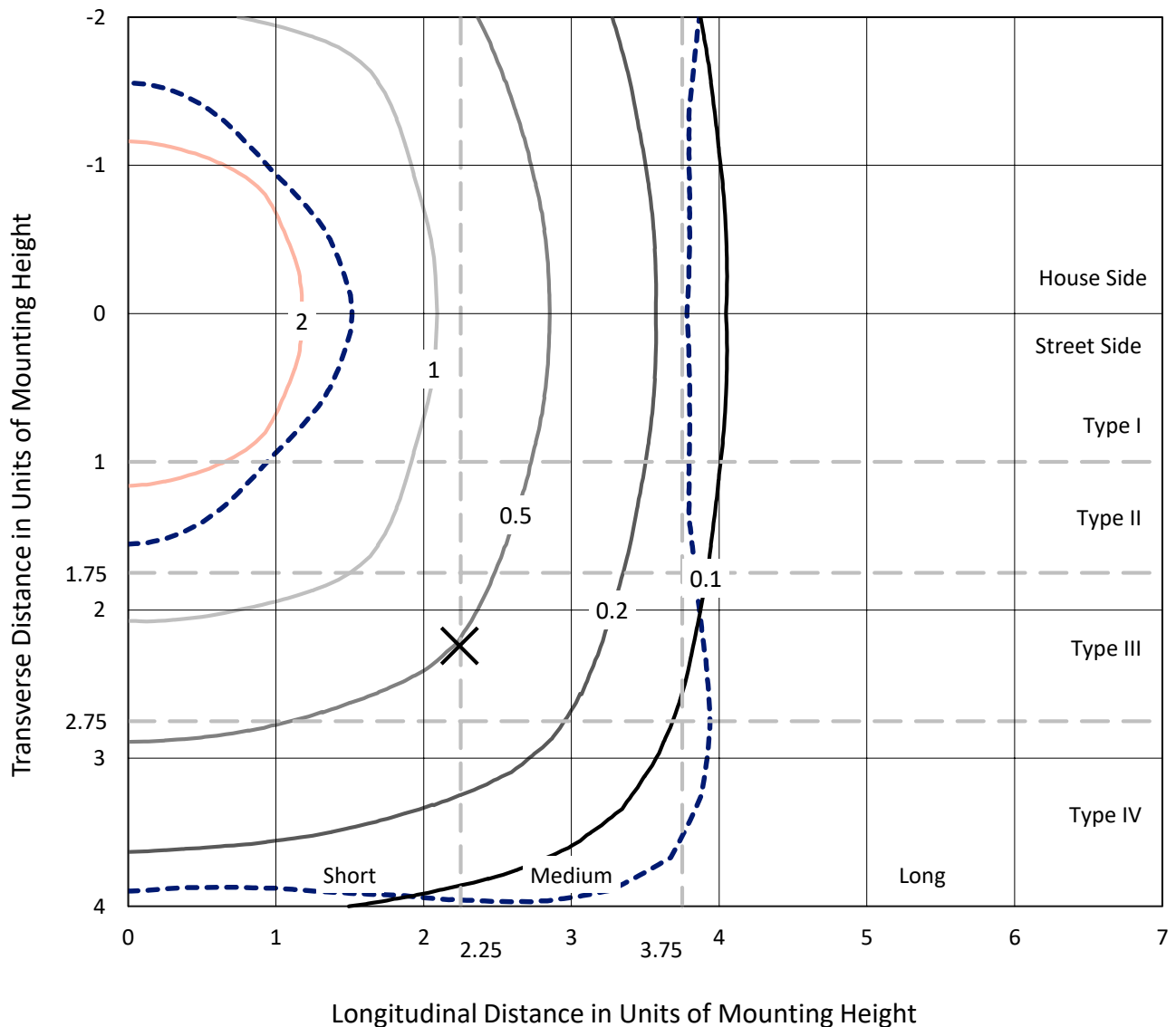


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

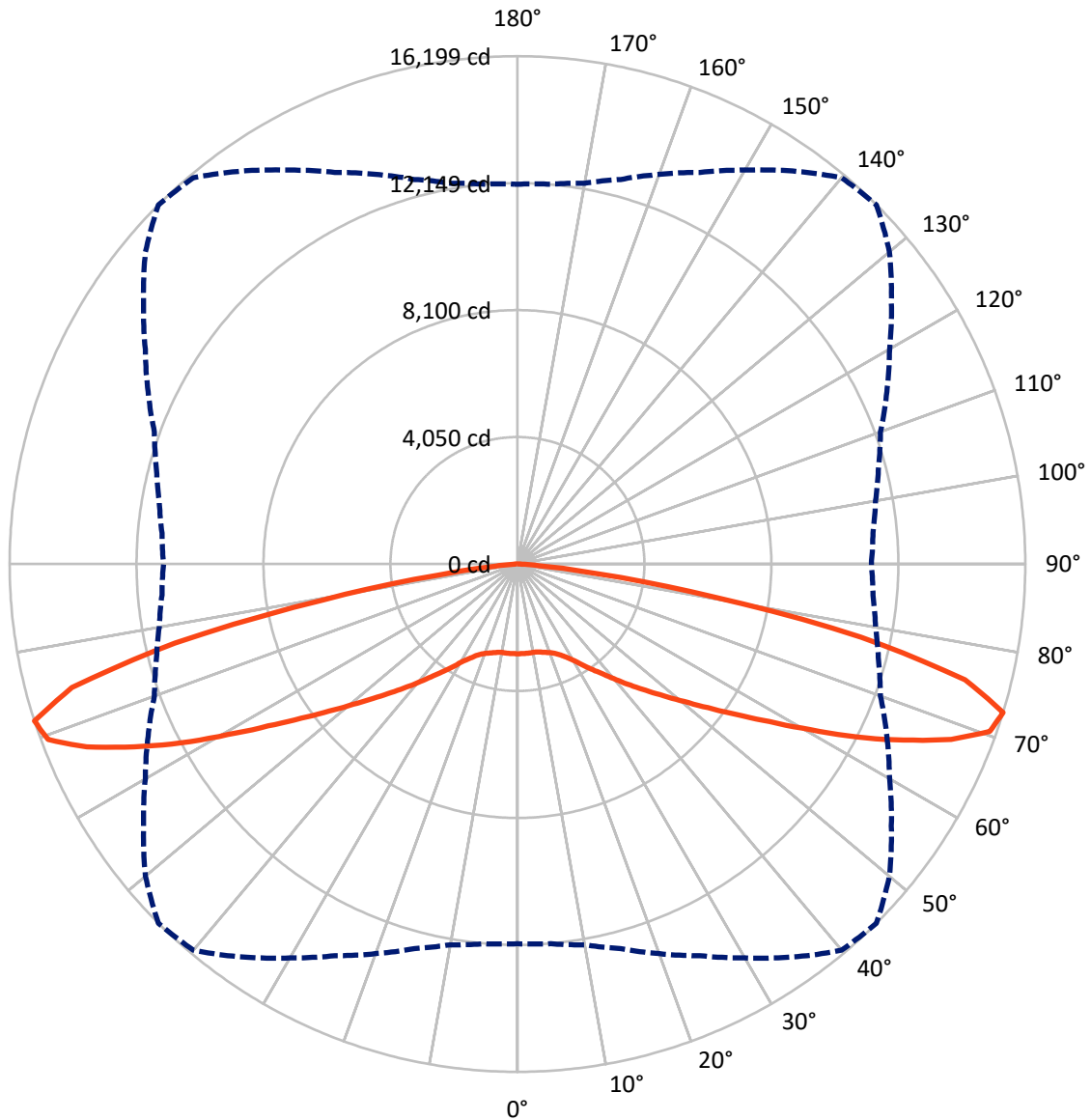


Based on 30 foot mounting height. Maximum calculated value = 3.2 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 20226.2  | 0.0    | 20226.2 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 20226.2  | 0.0    | 20226.2 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 40452.5  | 0.0    | 40452.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 273.5   | 0.7       |
| 10°-20°   | 830.8   | 2.1       |
| 20°-30°   | 1518.2  | 3.8       |
| 30°-40°   | 2617.6  | 6.5       |
| 40°-50°   | 4474.7  | 11.1      |
| 50°-60°   | 7253.0  | 17.9      |
| 60°-70°   | 12032.4 | 29.7      |
| 70°-80°   | 10597.8 | 26.2      |
| 80°-90°   | 854.5   | 2.1       |
| 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°    | 40452.5 | 100.0     |
| 0°-180°   | 40452.5 | 100.0     |



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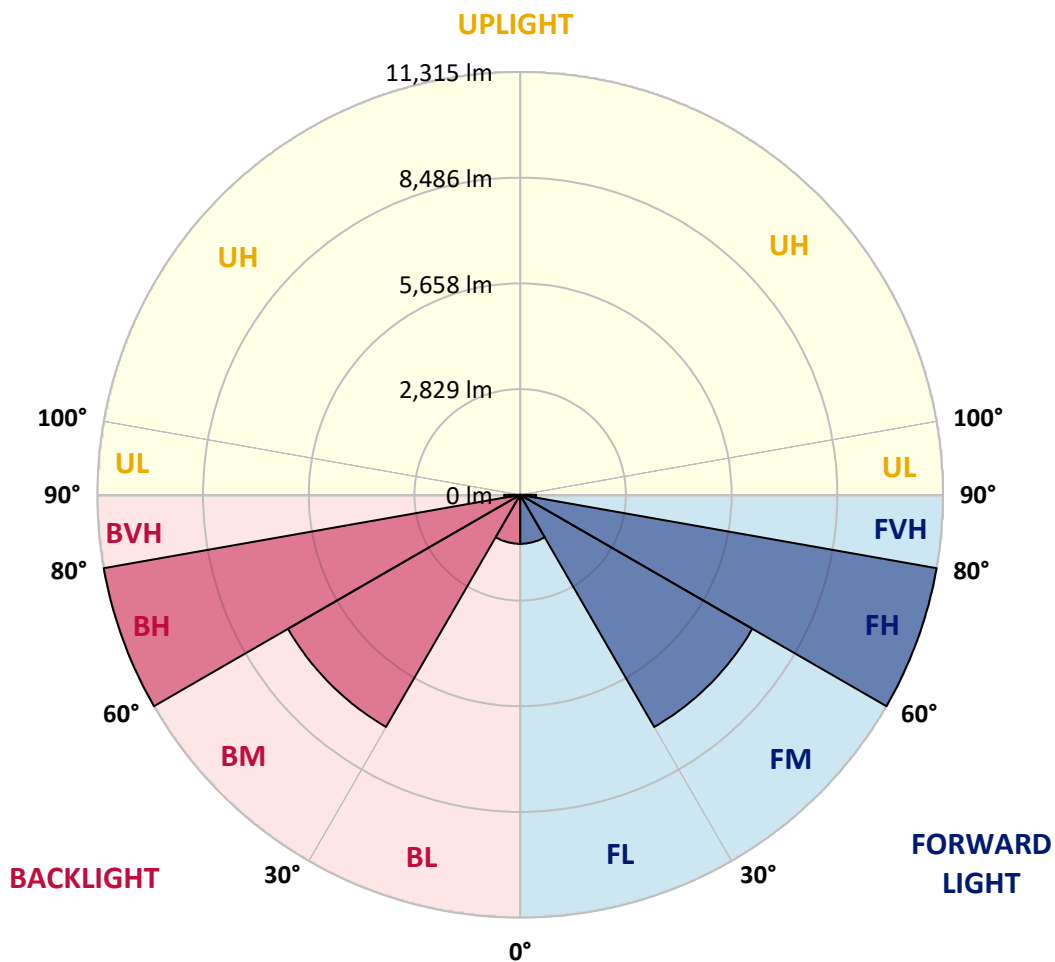
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1311.2  | 3.2       |                         |      |          |
| FM   | (30°-60°)   | 7172.7  | 17.7      |                         |      |          |
| FH   | (60°-80°)   | 11315.1 | 28.0      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 427.2   | 1.1       |                         |      | G3/500   |
| BL   | (0°-30°)    | 1311.2  | 3.2       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 7172.7  | 17.7      | B4/8500                 |      |          |
| BH   | (60°-80°)   | 11315.1 | 28.0      | B5                      |      | G4/12000 |
| BVH  | (80°-90°)   | 427.2   | 1.1       |                         |      | G3/500   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B5-U0-G4**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 10°     | 15°     | 20°     | 25°     | 30°     | 35°     | 40°     | 45°     | 50°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  |
| 2.5°  | 2864.7  | 2866.5  | 2868.4  | 2866.5  | 2866.5  | 2864.7  | 2862.8  | 2864.7  | 2862.8  | 2859.1  | 2861.0  |
| 5°    | 2873.9  | 2877.7  | 2877.7  | 2873.9  | 2875.8  | 2873.9  | 2870.2  | 2872.1  | 2868.4  | 2862.8  | 2862.8  |
| 7.5°  | 2885.1  | 2886.9  | 2886.9  | 2883.2  | 2885.1  | 2881.4  | 2877.7  | 2875.8  | 2872.1  | 2864.7  | 2859.1  |
| 10°   | 2901.8  | 2903.6  | 2901.8  | 2898.1  | 2898.1  | 2892.5  | 2883.2  | 2879.5  | 2872.1  | 2861.0  | 2855.4  |
| 12.5° | 2920.3  | 2922.2  | 2920.3  | 2916.6  | 2914.8  | 2905.5  | 2898.1  | 2892.5  | 2886.9  | 2877.7  | 2868.4  |
| 15°   | 2946.3  | 2950.0  | 2946.3  | 2938.9  | 2933.3  | 2925.9  | 2922.2  | 2924.0  | 2925.9  | 2918.5  | 2909.2  |
| 17.5° | 2994.5  | 2996.4  | 2990.8  | 2974.1  | 2966.7  | 2959.3  | 2959.3  | 2963.0  | 2968.6  | 2964.9  | 2955.6  |
| 20°   | 3083.6  | 3078.0  | 3065.0  | 3044.6  | 3035.4  | 3022.4  | 3020.5  | 3022.4  | 3022.4  | 3020.5  | 3013.1  |
| 22.5° | 3194.9  | 3191.2  | 3174.5  | 3148.5  | 3135.5  | 3128.1  | 3117.0  | 3107.7  | 3105.9  | 3100.3  | 3092.9  |
| 25°   | 3328.5  | 3326.6  | 3306.2  | 3284.0  | 3274.7  | 3265.4  | 3256.1  | 3243.2  | 3232.0  | 3219.0  | 3211.6  |
| 27.5° | 3499.2  | 3491.8  | 3462.1  | 3451.0  | 3438.0  | 3432.4  | 3419.4  | 3404.6  | 3395.3  | 3378.6  | 3369.3  |
| 30°   | 3686.6  | 3686.6  | 3662.5  | 3658.8  | 3658.8  | 3645.8  | 3630.9  | 3604.9  | 3588.3  | 3571.6  | 3566.0  |
| 32.5° | 3874.0  | 3875.8  | 3851.7  | 3859.1  | 3864.7  | 3874.0  | 3877.7  | 3868.4  | 3857.3  | 3855.4  | 3844.3  |
| 35°   | 4144.9  | 4137.4  | 4113.3  | 4118.9  | 4117.0  | 4115.2  | 4115.2  | 4135.6  | 4139.3  | 4143.0  | 4120.7  |
| 37.5° | 4480.7  | 4480.7  | 4456.6  | 4456.6  | 4445.4  | 4434.3  | 4419.4  | 4432.4  | 4452.8  | 4458.4  | 4443.6  |
| 40°   | 4864.7  | 4877.7  | 4848.0  | 4846.2  | 4849.9  | 4814.6  | 4797.9  | 4818.4  | 4831.3  | 4853.6  | 4836.9  |
| 42.5° | 5317.4  | 5308.2  | 5278.5  | 5274.8  | 5254.4  | 5243.2  | 5228.4  | 5245.1  | 5265.5  | 5280.3  | 5285.9  |
| 45°   | 5751.6  | 5744.2  | 5710.8  | 5710.8  | 5690.4  | 5681.1  | 5688.5  | 5716.3  | 5725.6  | 5746.0  | 5766.4  |
| 47.5° | 6180.2  | 6170.9  | 6148.6  | 6157.9  | 6159.8  | 6176.5  | 6200.6  | 6226.6  | 6252.5  | 6280.4  | 6289.6  |
| 50°   | 6618.0  | 6619.9  | 6595.8  | 6618.0  | 6645.9  | 6692.3  | 6757.2  | 6799.9  | 6853.7  | 6888.9  | 6900.1  |
| 52.5° | 7016.9  | 7024.4  | 7050.3  | 7102.3  | 7157.9  | 7248.9  | 7360.2  | 7464.1  | 7553.1  | 7612.5  | 7608.8  |
| 55°   | 7495.6  | 7506.8  | 7569.8  | 7658.9  | 7749.8  | 7887.1  | 8052.2  | 8235.9  | 8384.3  | 8469.7  | 8415.9  |
| 57.5° | 8107.9  | 8132.0  | 8202.5  | 8323.1  | 8458.6  | 8636.7  | 8863.0  | 9139.5  | 9369.5  | 9484.6  | 9397.4  |
| 60°   | 8948.4  | 8963.2  | 9048.6  | 9182.1  | 9345.4  | 9566.2  | 9868.6  | 10239.7 | 10564.4 | 10716.5 | 10616.3 |
| 62.5° | 10056.0 | 10083.8 | 10152.5 | 10287.9 | 10454.9 | 10705.4 | 11074.6 | 11538.4 | 11942.9 | 12154.4 | 11928.1 |
| 65°   | 11378.9 | 11467.9 | 11525.4 | 11662.7 | 11818.6 | 12083.9 | 12469.8 | 12967.1 | 13401.2 | 13540.4 | 13278.8 |
| 67.5° | 12688.8 | 12766.7 | 12866.9 | 13024.6 | 13182.3 | 13481.0 | 13839.1 | 14321.5 | 14798.3 | 14924.5 | 14518.1 |
| 70°   | 13262.1 | 13306.6 | 13462.4 | 13677.7 | 13980.1 | 14332.6 | 14746.3 | 15288.1 | 15878.1 | 15982.0 | 15466.2 |
| 72.5° | 12113.6 | 12158.1 | 12332.5 | 12698.0 | 13225.0 | 13785.3 | 14507.0 | 15302.9 | 16082.2 | 16199.1 | 15488.5 |
| 75°   | 9161.7  | 9089.4  | 9347.3  | 9831.5  | 10542.1 | 11323.2 | 12332.5 | 13473.6 | 14599.8 | 14746.3 | 13898.4 |
| 77.5° | 4734.9  | 4725.6  | 4920.4  | 5521.5  | 6369.4  | 7258.1  | 8369.5  | 9659.0  | 10761.0 | 11206.3 | 10516.1 |
| 80°   | 1334.0  | 1348.8  | 1441.6  | 1740.3  | 2235.7  | 2877.7  | 3746.0  | 4953.8  | 5855.5  | 6315.6  | 5929.7  |
| 82.5° | 523.2   | 564.0   | 599.3   | 654.9   | 719.9   | 814.5   | 1087.2  | 1617.9  | 2170.8  | 2593.8  | 2124.4  |
| 85°   | 187.4   | 200.4   | 283.9   | 335.8   | 341.4   | 359.9   | 410.0   | 478.7   | 577.0   | 688.3   | 565.9   |
| 87.5° | 70.5    | 77.9    | 90.9    | 150.3   | 148.4   | 135.4   | 165.1   | 172.5   | 129.9   | 118.7   | 146.6   |
| 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):**

|       | 55°     | 60°     | 65°     | 70°     | 75°     | 80°     | 85°     | 90°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  | 2864.7  |
| 2.5°  | 2857.2  | 2859.1  | 2859.1  | 2861.0  | 2862.8  | 2862.8  | 2866.5  | 2866.5  |
| 5°    | 2859.1  | 2859.1  | 2855.4  | 2857.2  | 2855.4  | 2855.4  | 2857.2  | 2857.2  |
| 7.5°  | 2855.4  | 2853.5  | 2849.8  | 2848.0  | 2844.3  | 2844.3  | 2844.3  | 2844.3  |
| 10°   | 2849.8  | 2848.0  | 2844.3  | 2842.4  | 2840.5  | 2840.5  | 2840.5  | 2840.5  |
| 12.5° | 2864.7  | 2859.1  | 2855.4  | 2853.5  | 2853.5  | 2853.5  | 2853.5  | 2853.5  |
| 15°   | 2903.6  | 2890.6  | 2881.4  | 2881.4  | 2883.2  | 2886.9  | 2886.9  | 2890.6  |
| 17.5° | 2951.9  | 2937.0  | 2927.7  | 2920.3  | 2924.0  | 2929.6  | 2933.3  | 2937.0  |
| 20°   | 3009.4  | 3002.0  | 2989.0  | 2981.6  | 2981.6  | 2989.0  | 2992.7  | 2994.5  |
| 22.5° | 3089.2  | 3083.6  | 3078.0  | 3068.8  | 3068.8  | 3072.5  | 3079.9  | 3079.9  |
| 25°   | 3207.9  | 3204.2  | 3200.5  | 3193.1  | 3191.2  | 3191.2  | 3194.9  | 3198.6  |
| 27.5° | 3356.3  | 3358.2  | 3354.5  | 3352.6  | 3347.1  | 3345.2  | 3350.8  | 3348.9  |
| 30°   | 3554.9  | 3564.1  | 3573.4  | 3566.0  | 3556.7  | 3551.1  | 3545.6  | 3538.2  |
| 32.5° | 3823.9  | 3812.7  | 3805.3  | 3792.3  | 3775.6  | 3760.8  | 3749.7  | 3736.7  |
| 35°   | 4078.1  | 4059.5  | 4052.1  | 4063.2  | 4061.4  | 4052.1  | 4039.1  | 4028.0  |
| 37.5° | 4389.8  | 4386.1  | 4389.8  | 4410.2  | 4406.5  | 4415.7  | 4389.8  | 4387.9  |
| 40°   | 4783.1  | 4786.8  | 4812.8  | 4836.9  | 4849.9  | 4862.9  | 4848.0  | 4833.2  |
| 42.5° | 5239.5  | 5237.7  | 5246.9  | 5280.3  | 5302.6  | 5317.4  | 5285.9  | 5282.2  |
| 45°   | 5721.9  | 5708.9  | 5716.3  | 5744.2  | 5766.4  | 5783.1  | 5747.9  | 5747.9  |
| 47.5° | 6252.5  | 6230.3  | 6206.2  | 6237.7  | 6250.7  | 6261.8  | 6234.0  | 6224.7  |
| 50°   | 6844.4  | 6798.0  | 6746.1  | 6759.0  | 6759.0  | 6755.3  | 6720.1  | 6718.2  |
| 52.5° | 7523.5  | 7438.1  | 7343.5  | 7308.2  | 7287.8  | 7265.6  | 7204.3  | 7174.6  |
| 55°   | 8304.6  | 8176.5  | 8028.1  | 7937.2  | 7889.0  | 7827.7  | 7725.7  | 7697.9  |
| 57.5° | 9217.4  | 9017.0  | 8761.0  | 8649.7  | 8542.0  | 8441.9  | 8328.7  | 8297.1  |
| 60°   | 10299.1 | 10004.1 | 9664.5  | 9458.6  | 9341.7  | 9245.2  | 9128.3  | 9122.8  |
| 62.5° | 11505.0 | 11039.3 | 10655.3 | 10469.8 | 10384.4 | 10299.1 | 10187.7 | 10202.6 |
| 65°   | 12731.4 | 12245.3 | 11885.4 | 11735.1 | 11655.3 | 11584.8 | 11473.5 | 11490.2 |
| 67.5° | 13941.1 | 13494.0 | 13098.8 | 12944.8 | 12855.7 | 12766.7 | 12666.5 | 12683.2 |
| 70°   | 14809.4 | 14254.7 | 13809.4 | 13468.0 | 13254.6 | 13013.4 | 12857.6 | 12818.6 |
| 72.5° | 14560.8 | 13705.5 | 12998.6 | 12321.4 | 11924.4 | 11601.5 | 11382.6 | 11288.0 |
| 75°   | 12601.6 | 11432.7 | 10523.6 | 9692.4  | 9224.8  | 8844.5  | 8568.0  | 8395.5  |
| 77.5° | 9358.4  | 8044.8  | 6970.6  | 6013.2  | 5256.2  | 4747.8  | 4389.8  | 4157.8  |
| 80°   | 5122.6  | 3896.2  | 2848.0  | 2001.9  | 1471.3  | 1222.7  | 1079.8  | 1011.2  |
| 82.5° | 1595.6  | 1029.7  | 758.8   | 654.9   | 608.6   | 582.6   | 539.9   | 471.3   |
| 85°   | 508.4   | 445.3   | 413.7   | 395.2   | 376.6   | 328.4   | 226.4   | 205.9   |
| 87.5° | 196.7   | 202.2   | 200.4   | 189.2   | 193.0   | 139.2   | 111.3   | 98.3    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)