

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: P300341

Luminaire Tested: **GLNA-AF-08-LED-E1-T4FT**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P300341  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24295)  
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-T4FT  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(8) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
Forward Throw OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 47829.1 lumens  
Efficiency: N/A  
Efficacy: 107.5 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

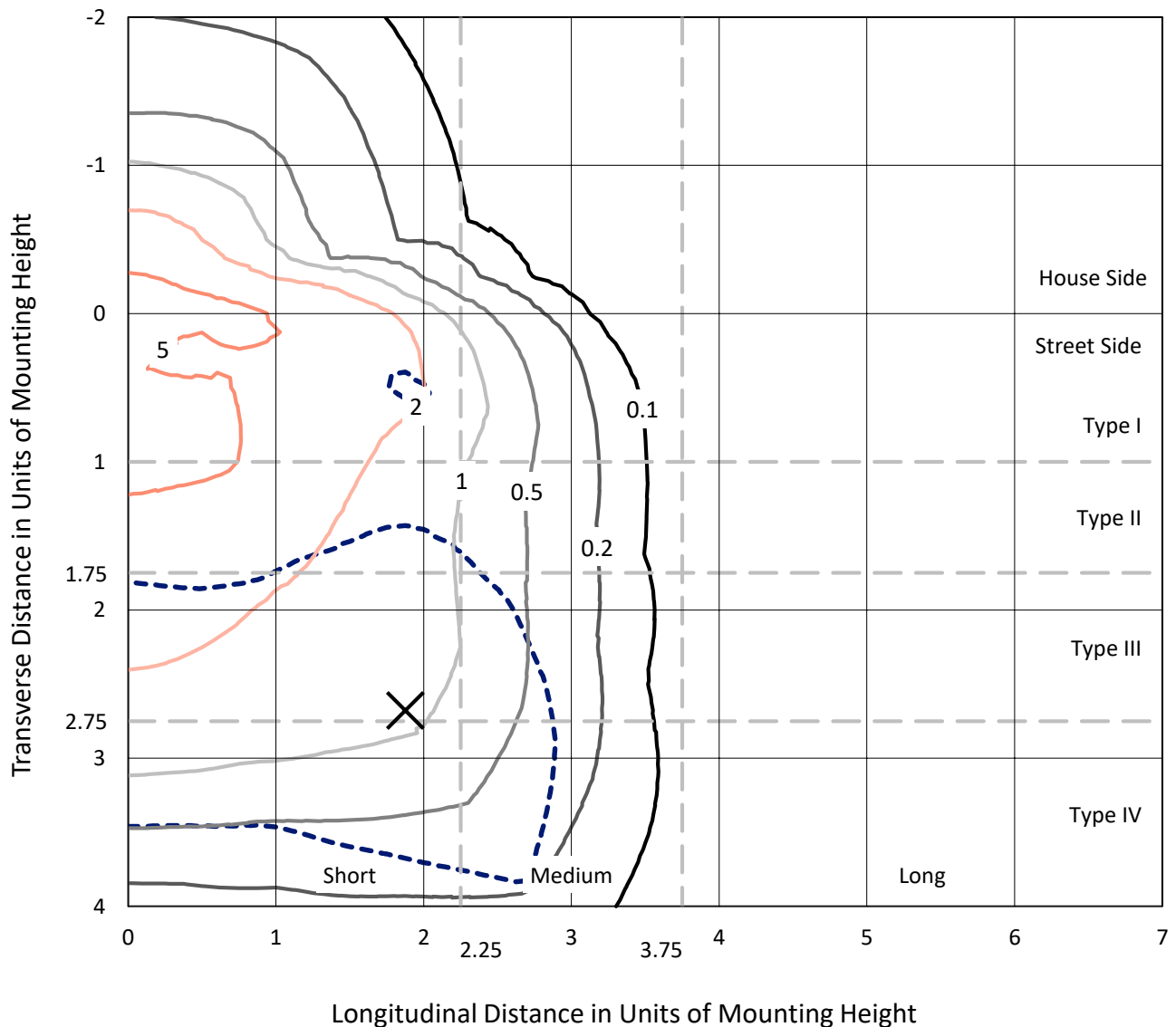
Input Watts (W): 445  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

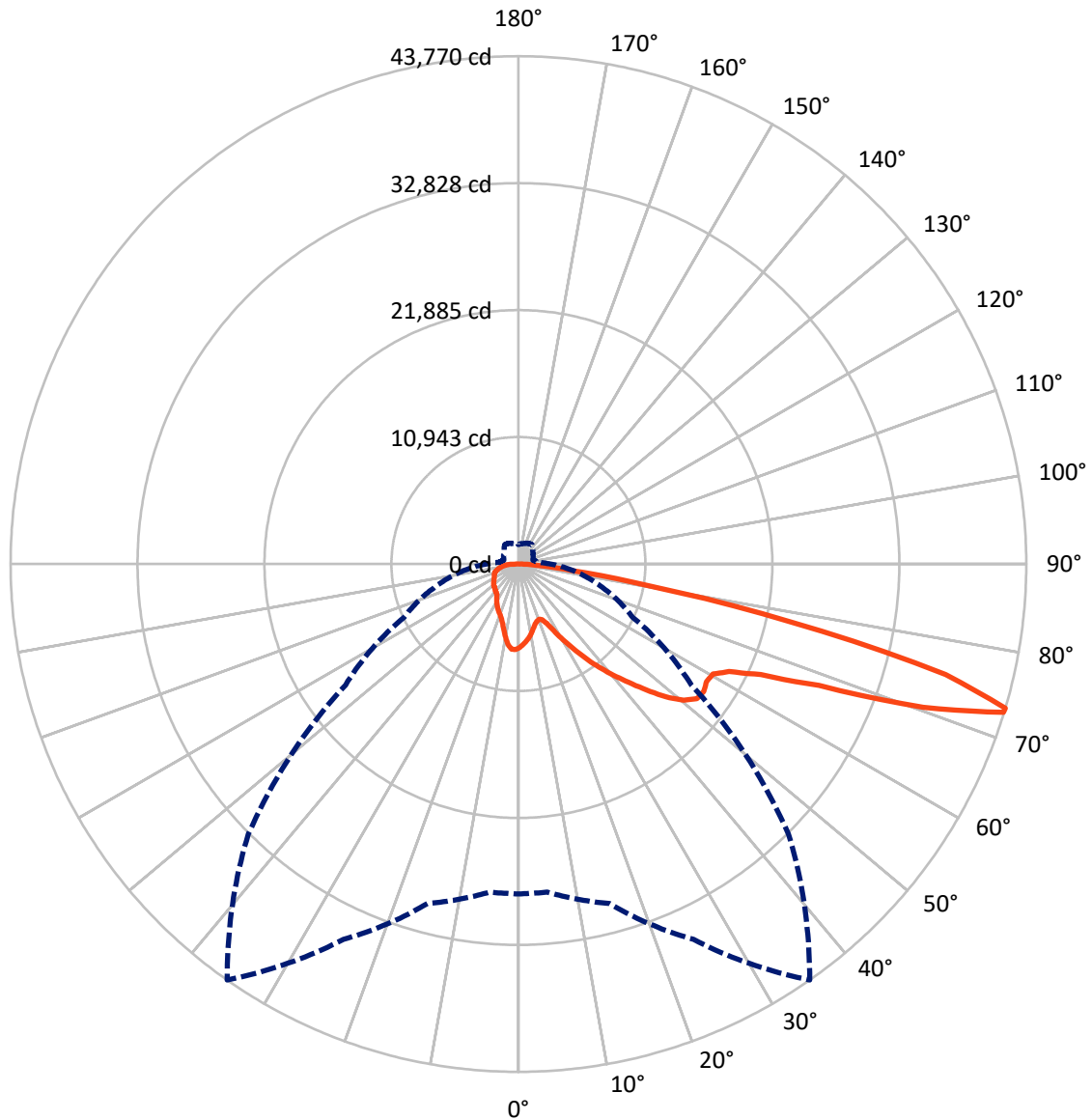


Based on 30 foot mounting height. Maximum calculated value = 8 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 9122.3   | 0.0    | 9122.3  |
|                    | % Fixture | 19.1     | 0.0    | 19.1    |
| <b>Street Side</b> | Lumens    | 38706.7  | 0.0    | 38706.7 |
|                    | % Fixture | 80.9     | 0.0    | 80.9    |
| <b>Total</b>       | Lumens    | 47829.1  | 0.0    | 47829.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 653.5   | 1.4       |
| 10°-20°   | 1631.1  | 3.4       |
| 20°-30°   | 2636.9  | 5.5       |
| 30°-40°   | 4421.7  | 9.2       |
| 40°-50°   | 6815.8  | 14.3      |
| 50°-60°   | 9144.1  | 19.1      |
| 60°-70°   | 12181.8 | 25.5      |
| 70°-80°   | 9291.0  | 19.4      |
| 80°-90°   | 1053.1  | 2.2       |
| 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°    | 47829.1 | 100.0     |
| 0°-180°   | 47829.1 | 100.0     |



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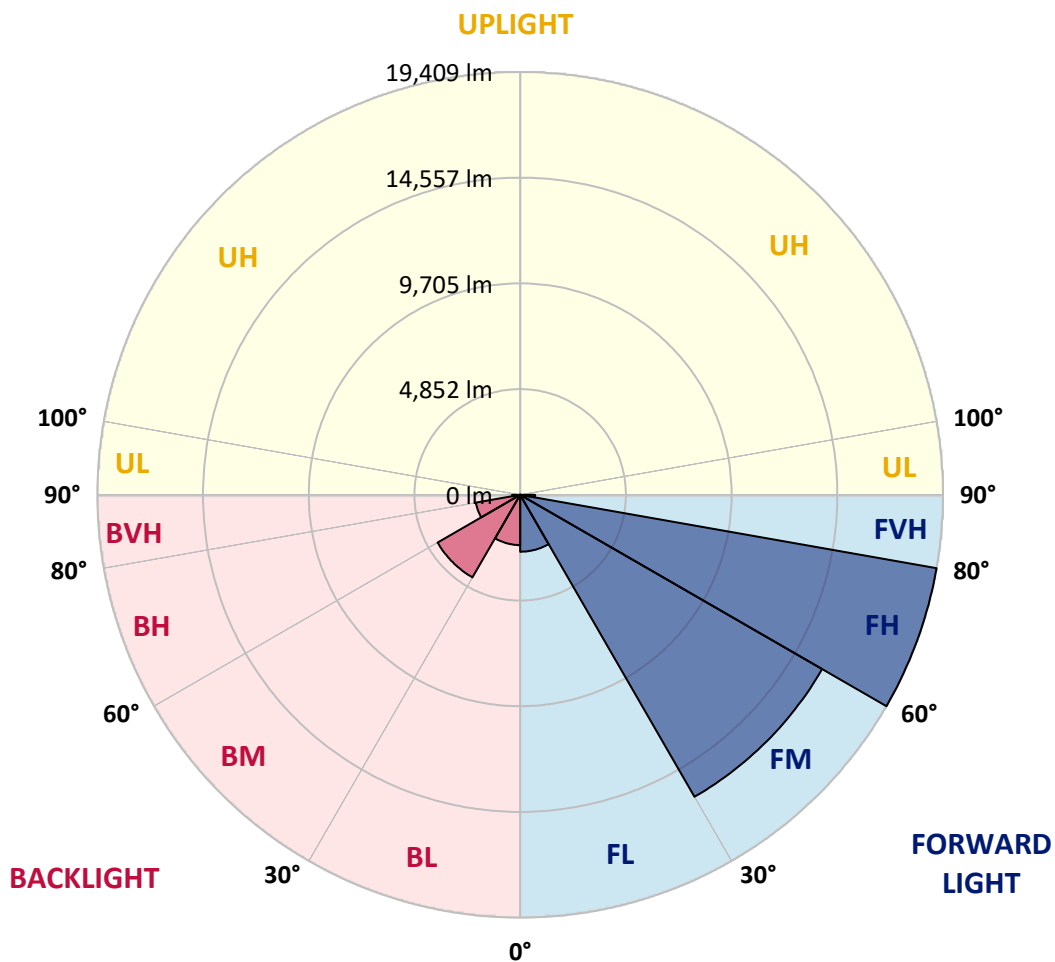
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2613.1  | 5.5       |                         |      |         |
| FM   | (30°-60°)   | 16003.9 | 33.5      |                         |      |         |
| FH   | (60°-80°)   | 19409.0 | 40.6      |                         |      | G5      |
| FVH  | (80°-90°)   | 680.7   | 1.4       |                         |      | G4/750  |
| BL   | (0°-30°)    | 2308.4  | 4.8       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 4377.7  | 9.2       | B3/5000                 |      |         |
| BH   | (60°-80°)   | 2063.9  | 4.3       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 372.4   | 0.8       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  | 7218.9  |
| 2.5°  | 6934.1  | 6947.9  | 6931.8  | 6952.5  | 6986.9  | 7023.7  | 7048.9  | 7085.7  | 7127.0  | 7184.4  | 7198.2  |
| 5°    | 6607.9  | 6628.6  | 6628.6  | 6665.4  | 6732.0  | 6791.7  | 6846.8  | 6906.5  | 6993.8  | 7092.6  | 7131.6  |
| 7.5°  | 6249.6  | 6261.1  | 6281.8  | 6336.9  | 6433.4  | 6518.4  | 6596.5  | 6692.9  | 6812.4  | 6943.3  | 7012.2  |
| 10°   | 5817.8  | 5833.9  | 5866.1  | 5944.2  | 6075.1  | 6192.2  | 6304.8  | 6438.0  | 6589.6  | 6752.6  | 6839.9  |
| 12.5° | 5512.4  | 5507.8  | 5521.5  | 5579.0  | 5693.8  | 5836.2  | 5999.3  | 6169.2  | 6355.3  | 6545.9  | 6651.6  |
| 15°   | 5409.0  | 5383.7  | 5330.9  | 5317.1  | 5379.1  | 5521.5  | 5709.9  | 5918.9  | 6141.7  | 6371.4  | 6502.3  |
| 17.5° | 5473.3  | 5429.7  | 5285.0  | 5179.3  | 5170.1  | 5278.1  | 5477.9  | 5712.2  | 5969.4  | 6249.6  | 6412.7  |
| 20°   | 5877.6  | 5774.2  | 5418.2  | 5172.4  | 5087.4  | 5140.3  | 5314.8  | 5562.9  | 5866.1  | 6238.2  | 6447.2  |
| 22.5° | 6844.5  | 6692.9  | 5937.3  | 5480.2  | 5193.1  | 5128.8  | 5259.7  | 5523.8  | 5877.6  | 6380.6  | 6647.0  |
| 25°   | 8252.5  | 8036.6  | 6828.4  | 6247.3  | 5654.8  | 5312.5  | 5342.4  | 5613.4  | 6040.6  | 6711.3  | 7032.9  |
| 27.5° | 9364.1  | 9224.0  | 7992.9  | 7329.1  | 6495.4  | 5808.6  | 5611.1  | 5838.5  | 6373.7  | 7253.3  | 7581.8  |
| 30°   | 10025.6 | 9940.6  | 9237.8  | 8555.6  | 7568.0  | 6598.8  | 6125.6  | 6261.1  | 6895.0  | 8004.4  | 8275.4  |
| 32.5° | 10792.7 | 10742.2 | 10397.7 | 9770.7  | 8725.6  | 7636.9  | 6941.0  | 6892.7  | 7593.3  | 8907.1  | 9031.1  |
| 35°   | 11587.4 | 11571.4 | 11369.2 | 10919.1 | 9968.2  | 9005.8  | 8022.8  | 7696.6  | 8353.5  | 9844.2  | 9766.1  |
| 37.5° | 12327.0 | 12299.4 | 12182.3 | 11920.5 | 11268.2 | 10475.8 | 9125.2  | 8521.2  | 9173.5  | 10739.9 | 10393.1 |
| 40°   | 13689.0 | 13473.1 | 13071.2 | 12873.7 | 12582.0 | 11713.8 | 10000.3 | 9290.6  | 10023.3 | 11594.3 | 10935.1 |
| 42.5° | 15349.6 | 14998.2 | 14249.4 | 13978.4 | 13937.1 | 12689.9 | 10597.5 | 10037.1 | 10880.0 | 12441.9 | 11468.0 |
| 45°   | 16656.5 | 16325.8 | 15680.4 | 15338.1 | 15489.7 | 13574.2 | 11197.0 | 10834.1 | 11762.0 | 13330.7 | 12016.9 |
| 47.5° | 18050.7 | 17531.6 | 16677.2 | 16780.5 | 17111.3 | 14410.2 | 11807.9 | 11690.8 | 12729.0 | 14325.2 | 12699.1 |
| 50°   | 18101.2 | 17703.9 | 17329.5 | 17947.3 | 18461.8 | 15179.7 | 12572.8 | 12588.8 | 13911.8 | 15577.0 | 13606.3 |
| 52.5° | 17051.6 | 16966.6 | 17561.5 | 18533.0 | 19274.9 | 15788.3 | 13443.3 | 13516.8 | 15425.4 | 17014.8 | 14603.2 |
| 55°   | 16684.1 | 16587.6 | 17274.4 | 18328.6 | 19385.1 | 16291.3 | 14387.3 | 14520.5 | 17256.0 | 18530.7 | 15574.7 |
| 57.5° | 17579.8 | 17366.2 | 17412.2 | 18232.1 | 19116.4 | 16842.6 | 15416.2 | 15685.0 | 19245.0 | 19856.0 | 16199.4 |
| 60°   | 20083.4 | 19626.3 | 18758.1 | 18737.4 | 19261.1 | 17669.4 | 16606.0 | 16934.4 | 21312.2 | 20489.9 | 15956.0 |
| 62.5° | 23595.2 | 23138.1 | 21512.0 | 20453.1 | 20375.1 | 19033.7 | 18066.8 | 18154.0 | 22506.5 | 19630.9 | 14469.9 |
| 65°   | 27396.4 | 26987.6 | 25170.8 | 23675.6 | 22954.4 | 21293.8 | 19764.1 | 18698.4 | 22116.0 | 17267.5 | 11869.9 |
| 67.5° | 32010.7 | 31572.0 | 30010.2 | 28629.8 | 27936.2 | 24941.1 | 20956.1 | 18177.0 | 19637.8 | 13376.7 | 8532.7  |
| 70°   | 35237.7 | 34789.9 | 34174.3 | 35292.9 | 36990.2 | 30203.1 | 21110.0 | 16057.0 | 14667.5 | 8891.0  | 5135.7  |
| 72.5° | 31027.7 | 30818.7 | 31941.8 | 36652.6 | 43722.2 | 33395.7 | 19081.9 | 11690.8 | 8518.9  | 4720.0  | 2972.1  |
| 73°   | 28427.7 | 28381.8 | 30297.3 | 35699.4 | 43770.4 | 32904.2 | 18193.1 | 10866.2 | 7306.2  | 4175.6  | 2717.1  |
| 75°   | 12836.9 | 13206.7 | 17405.3 | 27267.8 | 38028.4 | 27113.9 | 12804.7 | 6233.6  | 4127.4  | 2884.8  | 2051.1  |
| 77.5° | 3084.6  | 3213.2  | 5445.8  | 12949.4 | 24015.5 | 16158.1 | 5801.8  | 3082.3  | 2639.0  | 2037.3  | 1497.5  |
| 80°   | 1313.8  | 1357.4  | 2097.0  | 4784.3  | 11307.2 | 6506.9  | 2673.5  | 2064.8  | 1826.0  | 1421.7  | 1049.6  |
| 82.5° | 730.4   | 776.3   | 1189.8  | 2170.5  | 4563.8  | 2218.7  | 1630.7  | 1437.8  | 1201.2  | 856.7   | 682.2   |
| 85°   | 413.4   | 438.7   | 695.9   | 1212.7  | 1933.9  | 891.2   | 976.1   | 955.5   | 677.6   | 441.0   | 335.3   |
| 87.5° | 195.2   | 211.3   | 335.3   | 562.7   | 757.9   | 349.1   | 496.1   | 546.6   | 424.9   | 268.7   | 174.6   |
| 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):**

|       | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 7218.9  | 7218.9 | 7218.9 | 7218.9 | 7218.9 | 7218.9 | 7218.9 | 7218.9 | 7218.9 | 7218.9 |
| 2.5°  | 7214.3  | 7255.6 | 7303.9 | 7329.1 | 7352.1 | 7379.7 | 7407.2 | 7407.2 | 7411.8 | 7414.1 |
| 5°    | 7163.8  | 7248.8 | 7324.5 | 7356.7 | 7363.6 | 7363.6 | 7356.7 | 7320.0 | 7287.8 | 7301.6 |
| 7.5°  | 7058.1  | 7182.1 | 7246.5 | 7235.0 | 7147.7 | 7046.6 | 6961.6 | 6858.3 | 6805.5 | 6796.3 |
| 10°   | 6906.5  | 7048.9 | 7060.4 | 6945.6 | 6729.7 | 6513.8 | 6334.6 | 6160.1 | 6077.4 | 6056.7 |
| 12.5° | 6738.9  | 6869.8 | 6796.3 | 6559.7 | 6212.9 | 5898.2 | 5670.8 | 5494.0 | 5415.9 | 5395.2 |
| 15°   | 6603.3  | 6692.9 | 6506.9 | 6134.8 | 5698.4 | 5365.4 | 5177.0 | 5046.1 | 4991.0 | 4974.9 |
| 17.5° | 6532.1  | 6550.5 | 6210.6 | 5707.6 | 5243.6 | 4965.7 | 4848.6 | 4786.6 | 4765.9 | 4754.4 |
| 20°   | 6566.6  | 6438.0 | 5928.1 | 5310.2 | 4871.5 | 4676.3 | 4648.8 | 4632.7 | 4628.1 | 4621.2 |
| 22.5° | 6738.9  | 6403.5 | 5668.5 | 4933.6 | 4545.4 | 4460.4 | 4483.4 | 4481.1 | 4476.5 | 4471.9 |
| 25°   | 7046.6  | 6433.4 | 5415.9 | 4575.3 | 4272.1 | 4253.7 | 4295.0 | 4295.0 | 4276.7 | 4276.7 |
| 27.5° | 7453.2  | 6495.4 | 5133.4 | 4235.3 | 4024.0 | 4026.3 | 4058.5 | 4049.3 | 4028.6 | 4014.8 |
| 30°   | 7949.3  | 6534.4 | 4802.6 | 3929.9 | 3792.0 | 3782.9 | 3792.0 | 3753.0 | 3691.0 | 3686.4 |
| 32.5° | 8456.9  | 6486.2 | 4419.1 | 3658.8 | 3546.3 | 3525.6 | 3518.7 | 3463.6 | 3392.4 | 3371.7 |
| 35°   | 8916.2  | 6309.4 | 4028.6 | 3442.9 | 3312.0 | 3266.1 | 3298.2 | 3279.9 | 3215.5 | 3199.5 |
| 37.5° | 9251.6  | 5980.9 | 3677.2 | 3252.3 | 3144.3 | 3132.9 | 3153.5 | 3160.4 | 3084.6 | 3068.5 |
| 40°   | 9476.7  | 5535.3 | 3376.3 | 3091.5 | 3112.2 | 3068.5 | 2999.6 | 2951.4 | 2928.4 | 2921.5 |
| 42.5° | 9658.1  | 5071.4 | 3123.7 | 3015.7 | 3119.1 | 2992.8 | 2843.5 | 2765.4 | 2806.7 | 2825.1 |
| 45°   | 9867.1  | 4618.9 | 2912.4 | 2921.5 | 3084.6 | 2905.5 | 2735.5 | 2659.7 | 2675.8 | 2680.4 |
| 47.5° | 10154.2 | 4067.7 | 2685.0 | 2770.0 | 2969.8 | 2845.8 | 2668.9 | 2560.9 | 2485.2 | 2450.7 |
| 50°   | 10551.6 | 3415.4 | 2448.4 | 2600.0 | 2857.2 | 2802.1 | 2565.5 | 2450.7 | 2310.6 | 2278.4 |
| 52.5° | 10827.2 | 2806.7 | 2253.2 | 2457.6 | 2756.2 | 2714.8 | 2482.9 | 2333.6 | 2186.6 | 2159.0 |
| 55°   | 10677.9 | 2331.3 | 2083.2 | 2299.1 | 2623.0 | 2606.9 | 2414.0 | 2214.1 | 2099.3 | 2076.3 |
| 57.5° | 9931.4  | 2030.4 | 1952.3 | 2149.8 | 2459.9 | 2515.0 | 2322.1 | 2113.1 | 2030.4 | 2014.3 |
| 60°   | 8507.4  | 1842.0 | 1869.6 | 2048.8 | 2326.7 | 2423.1 | 2230.2 | 2057.9 | 2002.8 | 1991.3 |
| 62.5° | 6601.0  | 1715.7 | 1807.6 | 1975.3 | 2223.3 | 2358.8 | 2179.7 | 2051.1 | 2030.4 | 2016.6 |
| 65°   | 4729.1  | 1614.7 | 1741.0 | 1901.8 | 2129.1 | 2299.1 | 2161.3 | 2041.9 | 2046.5 | 2035.0 |
| 67.5° | 3213.2  | 1525.1 | 1660.6 | 1819.1 | 2037.3 | 2246.3 | 2136.0 | 2009.7 | 2067.1 | 2053.4 |
| 70°   | 2248.6  | 1437.8 | 1566.4 | 1713.4 | 1922.4 | 2172.8 | 2090.1 | 1961.5 | 1956.9 | 1901.8 |
| 72.5° | 1754.8  | 1323.0 | 1437.8 | 1566.4 | 1775.4 | 2069.4 | 1998.2 | 1853.5 | 1777.7 | 1720.3 |
| 73°   | 1674.4  | 1295.4 | 1405.7 | 1534.3 | 1743.3 | 2044.2 | 1973.0 | 1823.7 | 1738.7 | 1685.9 |
| 75°   | 1385.0  | 1176.0 | 1277.0 | 1391.9 | 1605.5 | 1924.7 | 1848.9 | 1688.2 | 1580.2 | 1548.1 |
| 77.5° | 1088.7  | 1006.0 | 1102.5 | 1205.8 | 1414.8 | 1750.2 | 1665.2 | 1511.3 | 1451.6 | 1424.0 |
| 80°   | 806.2   | 833.7  | 918.7  | 1010.6 | 1226.5 | 1564.1 | 1488.3 | 1334.4 | 1600.9 | 1534.3 |
| 82.5° | 567.3   | 631.6  | 709.7  | 792.4  | 1029.0 | 1382.7 | 1290.8 | 1132.3 | 1171.4 | 973.8  |
| 85°   | 335.3   | 413.4  | 486.9  | 558.1  | 741.9  | 1146.1 | 1065.7 | 902.6  | 739.6  | 705.1  |
| 87.5° | 195.2   | 229.7  | 250.4  | 323.9  | 509.9  | 863.6  | 751.1  | 668.4  | 383.6  | 259.5  |
| 90°   | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)