

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: LUMARK

Report Number: P189780

Luminaire Tested: **NFFLD-S-C15-D-UNV-33-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P189780  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-16-1017-4)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NFFLD-S-C15-D-UNV-33-7030  
Description: LOW WATTAGE LED FLOODLIGHT  
Light Source: (2) CITIZEN 3000 70  
CLU028-1204C4-30AL7K3  
Ballast/Driver: OSRAM ELECTRONIC DRIVER  
OT50W/UNV/800C/2DIMLT2/P6

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5386.4 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Luminous Opening: (L: 0 ' x W: 0.46 ' x H: 0.33 '  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

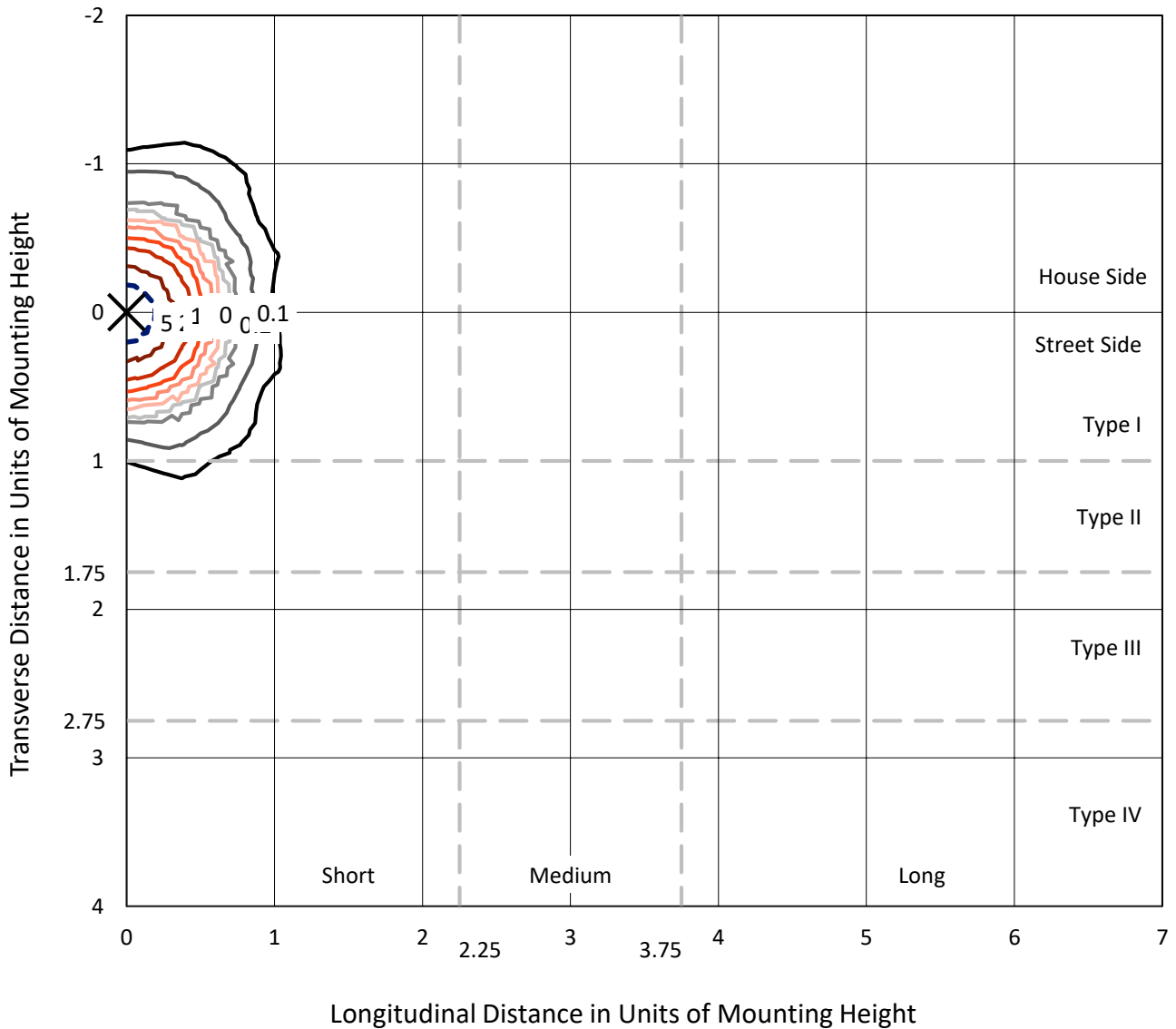
Input Watts (W): 57.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

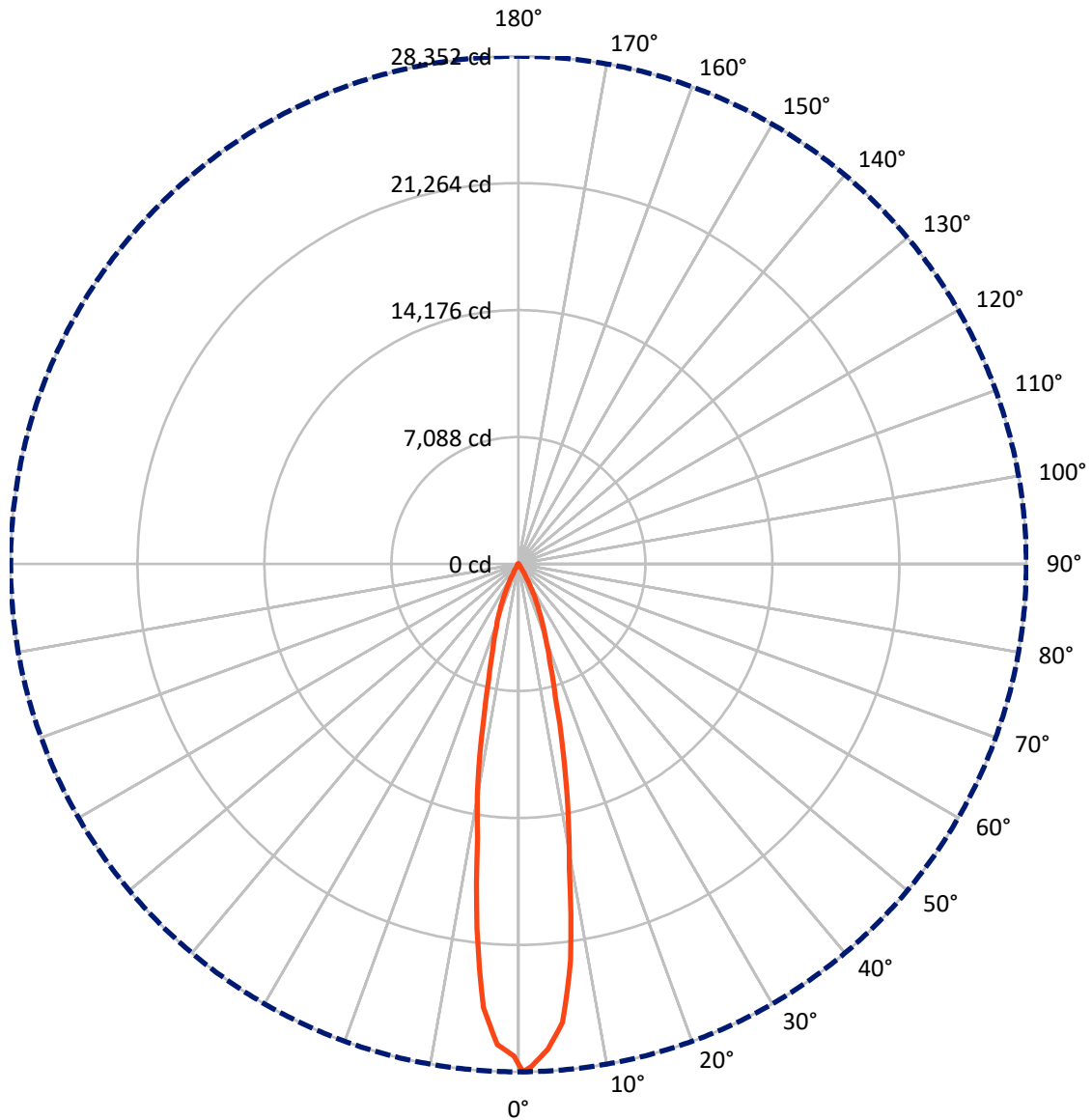
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 283.5 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 0-Deg Vertical

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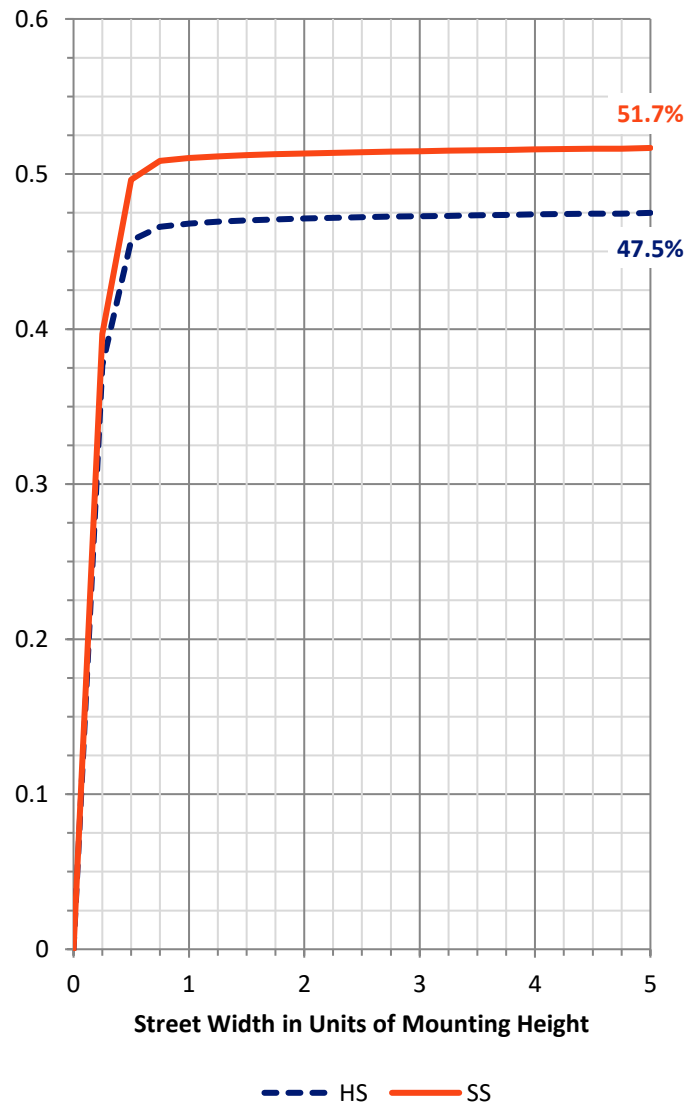
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2604.7   | 0.0    | 2604.7 |
|                    | % Fixture | 48.4     | 0.0    | 48.4   |
| <b>Street Side</b> | Lumens    | 2781.7   | 0.0    | 2781.7 |
|                    | % Fixture | 51.6     | 0.0    | 51.6   |
| <b>Total</b>       | Lumens    | 5386.4   | 0.0    | 5386.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2016.9 | 37.4      |
| 10°-20°   | 2133.8 | 39.6      |
| 20°-30°   | 976.9  | 18.1      |
| 30°-40°   | 192.5  | 3.6       |
| 40°-50°   | 32.8   | 0.6       |
| 50°-60°   | 19.6   | 0.4       |
| 60°-70°   | 17.8   | 0.3       |
| 70°-80°   | 33.6   | 0.6       |
| 80°-90°   | 23.7   | 0.4       |
| 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°    | 5386.4 | 100.0     |
| 0°-180°   | 5386.4 | 100.0     |



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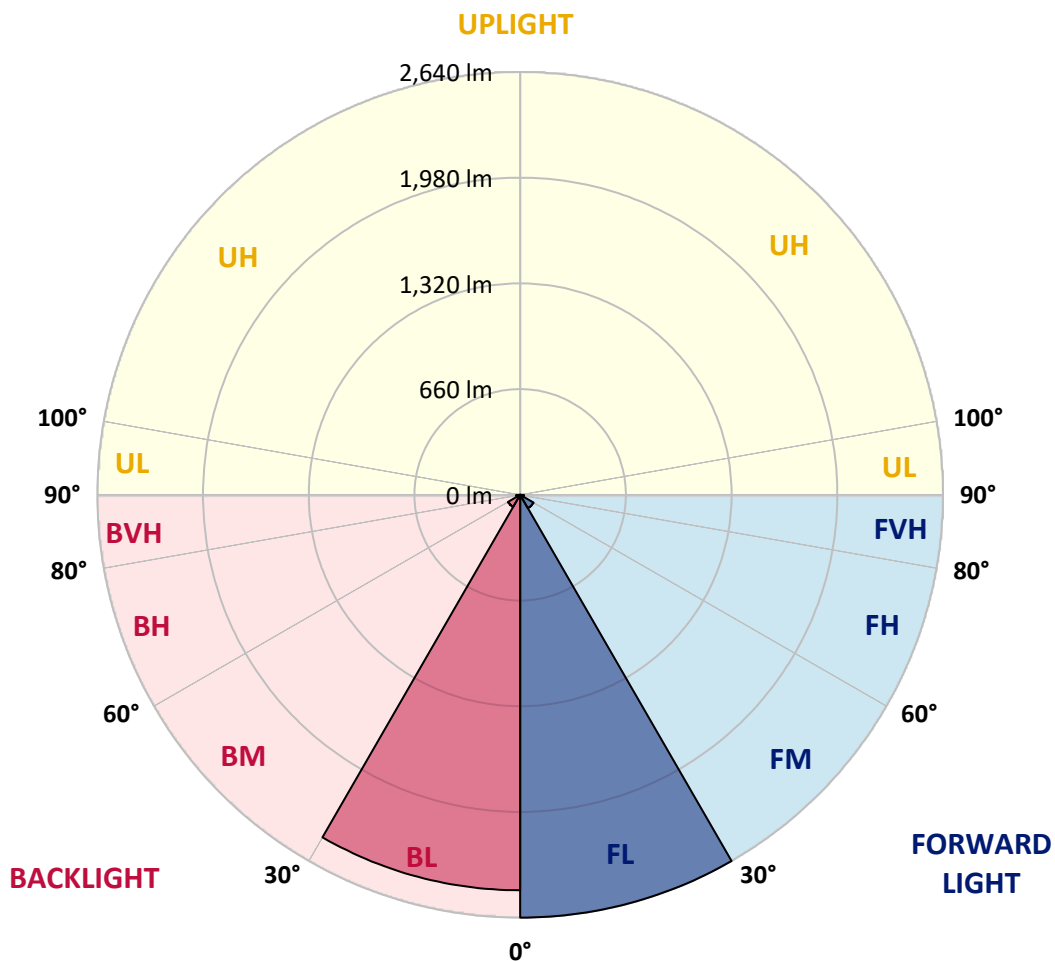
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|--------|-----------|-------------------------|------|--------|
|      |             |        |           | B                       | U    | G      |
| FL   | (0°-30°)    | 2639.7 | 49.0      |                         |      |        |
| FM   | (30°-60°)   | 96.6   | 1.8       |                         |      |        |
| FH   | (60°-80°)   | 22.4   | 0.4       |                         |      | G0/660 |
| FVH  | (80°-90°)   | 22.6   | 0.4       |                         |      | G1/100 |
| BL   | (0°-30°)    | 2468.8 | 45.8      | B3/2500                 |      |        |
| BM   | (30°-60°)   | 88.0   | 1.6       | B0/220                  |      |        |
| BH   | (60°-80°)   | 23.9   | 0.4       | B0/110                  |      | G0/660 |
| BVH  | (80°-90°)   | 23.6   | 0.4       |                         |      | G1/100 |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |        |

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 10°     | 20°     | 30°     | 40°     | 50°     | 60°     | 70°     | 80°     | 90°     | 100°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 |
| 1°    | 28055.1 | 27939.9 | 27837.7 | 27752.3 | 27686.7 | 27642.9 | 27622.3 | 27625.4 | 27651.7 | 27699.8 | 27660.2 |
| 3°    | 27121.9 | 27084.2 | 27044.0 | 26920.4 | 26842.8 | 26816.6 | 26842.5 | 26917.0 | 26928.6 | 26951.5 | 26902.2 |
| 5°    | 25698.8 | 25537.7 | 25323.6 | 25258.7 | 25247.6 | 25175.8 | 25078.5 | 25057.0 | 25188.2 | 25191.6 | 25057.6 |
| 7°    | 22320.4 | 22019.5 | 21813.6 | 21729.9 | 21724.7 | 21625.9 | 21392.5 | 21281.1 | 21329.7 | 21327.1 | 21084.1 |
| 9°    | 17241.0 | 17032.4 | 17198.4 | 17200.5 | 17025.6 | 16886.8 | 16879.3 | 16701.6 | 16388.1 | 16310.7 | 16184.3 |
| 11°   | 13800.5 | 13632.8 | 13559.6 | 13524.9 | 13492.5 | 13430.8 | 13334.7 | 13287.3 | 13297.0 | 13298.1 | 13082.0 |
| 13°   | 10636.9 | 10473.3 | 10463.4 | 10352.0 | 10319.1 | 10297.6 | 10247.2 | 10191.0 | 10008.8 | 9894.4  | 9744.6  |
| 15°   | 7748.3  | 7673.5  | 7807.3  | 7601.9  | 7682.7  | 7650.1  | 7468.5  | 7484.3  | 7249.9  | 7101.6  | 7052.9  |
| 17°   | 5949.6  | 5887.1  | 5904.3  | 5827.4  | 5834.7  | 5757.1  | 5727.1  | 5675.8  | 5589.3  | 5481.1  | 5456.7  |
| 19.5° | 4455.9  | 4379.9  | 4375.7  | 4323.7  | 4328.1  | 4334.3  | 4292.5  | 4278.8  | 4191.3  | 4199.4  | 4099.9  |
| 22.5° | 3162.6  | 3129.6  | 3112.3  | 3109.6  | 3107.0  | 3102.6  | 3052.2  | 3032.4  | 2999.4  | 2951.6  | 2922.7  |
| 25.5° | 2108.4  | 2069.9  | 2069.2  | 2055.1  | 2075.5  | 2060.3  | 2008.3  | 2003.0  | 1975.0  | 1938.0  | 1907.6  |
| 29°   | 1008.7  | 991.8   | 1014.2  | 978.7   | 987.2   | 972.8   | 977.4   | 970.8   | 899.0   | 856.7   | 858.6   |
| 33°   | 201.4   | 232.1   | 284.0   | 250.3   | 264.2   | 252.6   | 277.0   | 281.7   | 227.4   | 164.6   | 210.5   |
| 37.5° | 47.4    | 65.9    | 78.4    | 74.0    | 69.0    | 63.1    | 68.2    | 68.0    | 72.7    | 51.3    | 66.0    |
| 42.5° | 38.7    | 46.8    | 60.4    | 55.7    | 59.0    | 51.9    | 49.3    | 47.2    | 48.7    | 36.8    | 34.0    |
| 47.5° | 19.4    | 27.4    | 44.1    | 39.4    | 43.5    | 37.8    | 21.7    | 34.7    | 24.3    | 17.4    | 19.5    |
| 55°   | 11.6    | 21.6    | 25.5    | 15.6    | 18.8    | 19.2    | 4.1     | 8.1     | 8.0     | 3.9     | 4.2     |
| 65°   | 19.4    | 26.8    | 19.9    | 16.8    | 12.6    | 10.4    | 11.6    | 15.0    | 12.7    | 5.8     | 17.2    |
| 75°   | 7.7     | 26.1    | 14.6    | 16.4    | 18.2    | 24.6    | 27.5    | 28.5    | 35.7    | 27.1    | 34.7    |
| 85°   | 0.0     | 12.9    | 40.4    | 59.7    | 74.4    | 74.6    | 77.4    | 85.0    | 88.0    | 88.1    | 82.2    |
| 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):**

|       | 110°    | 120°    | 130°    | 140°    | 150°    | 160°    | 170°    | 180°    | 190°    | 200°    | 210°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 |
| 1°    | 27632.2 | 27608.4 | 27583.4 | 27554.6 | 27523.0 | 27492.8 | 27470.9 | 27466.5 | 27470.9 | 27492.8 | 27523.0 |
| 3°    | 26870.4 | 26744.8 | 26676.6 | 26670.2 | 26726.0 | 26839.5 | 26838.8 | 26859.5 | 26838.8 | 26839.5 | 26726.0 |
| 5°    | 24795.6 | 24713.1 | 24707.3 | 24617.6 | 24529.2 | 24598.5 | 24851.6 | 24848.9 | 24851.6 | 24598.5 | 24529.2 |
| 7°    | 20813.0 | 20709.8 | 20695.8 | 20583.2 | 20352.1 | 20266.6 | 20445.8 | 20466.5 | 20445.8 | 20266.6 | 20352.1 |
| 9°    | 16311.5 | 16171.1 | 15970.9 | 15887.5 | 15893.3 | 15842.1 | 15545.3 | 15406.5 | 15545.3 | 15842.1 | 15893.3 |
| 11°   | 12864.6 | 12788.7 | 12707.6 | 12579.7 | 12491.2 | 12378.6 | 12399.4 | 12444.3 | 12399.4 | 12378.6 | 12491.2 |
| 13°   | 9645.3  | 9535.4  | 9452.9  | 9359.2  | 9243.5  | 9160.8  | 9113.3  | 8999.0  | 9113.3  | 9160.8  | 9243.5  |
| 15°   | 7038.6  | 6874.5  | 6878.9  | 6840.2  | 6653.1  | 6744.5  | 6661.7  | 6525.6  | 6661.7  | 6744.5  | 6653.1  |
| 17°   | 5388.8  | 5334.0  | 5279.9  | 5243.4  | 5218.0  | 5208.9  | 5147.6  | 5138.4  | 5147.6  | 5208.9  | 5218.0  |
| 19.5° | 4065.4  | 3988.3  | 3970.1  | 3927.4  | 3909.2  | 3910.4  | 3837.9  | 3833.5  | 3837.9  | 3910.4  | 3909.2  |
| 22.5° | 2884.8  | 2861.5  | 2861.6  | 2806.5  | 2787.0  | 2769.1  | 2749.7  | 2739.6  | 2749.7  | 2769.1  | 2787.0  |
| 25.5° | 1889.7  | 1851.9  | 1835.4  | 1811.0  | 1770.5  | 1775.6  | 1745.4  | 1721.2  | 1745.4  | 1775.6  | 1770.5  |
| 29°   | 890.9   | 846.0   | 819.9   | 812.8   | 779.7   | 806.8   | 768.6   | 732.8   | 768.6   | 806.8   | 779.7   |
| 33°   | 248.7   | 233.0   | 211.6   | 210.1   | 173.8   | 221.0   | 172.9   | 133.6   | 172.9   | 221.0   | 173.8   |
| 37.5° | 62.0    | 71.9    | 61.0    | 69.4    | 74.2    | 79.8    | 71.3    | 62.9    | 71.3    | 79.8    | 74.2    |
| 42.5° | 44.8    | 51.7    | 47.4    | 57.2    | 57.5    | 63.1    | 58.4    | 59.1    | 58.4    | 63.1    | 57.5    |
| 47.5° | 32.8    | 27.6    | 34.5    | 45.5    | 49.1    | 44.5    | 38.6    | 31.0    | 38.6    | 44.5    | 49.1    |
| 55°   | 18.5    | 10.3    | 15.1    | 33.4    | 27.8    | 31.3    | 16.1    | 0.0     | 16.1    | 31.3    | 27.8    |
| 65°   | 17.6    | 11.7    | 25.1    | 15.1    | 15.8    | 27.0    | 16.5    | 0.0     | 16.5    | 27.0    | 15.8    |
| 75°   | 33.4    | 30.9    | 34.4    | 21.7    | 15.3    | 13.8    | 24.1    | 0.0     | 24.1    | 13.8    | 15.3    |
| 85°   | 88.5    | 78.8    | 80.8    | 81.7    | 64.3    | 46.1    | 12.8    | 0.0     | 12.8    | 46.1    | 64.3    |
| 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):**

|       | 220°    | 230°    | 240°    | 250°    | 260°    | 270°    | 280°    | 290°    | 300°    | 310°    | 320°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 | 28352.3 |
| 1°    | 27554.6 | 27583.4 | 27608.4 | 27632.2 | 27660.2 | 27699.8 | 27651.7 | 27625.4 | 27622.3 | 27642.9 | 27686.7 |
| 3°    | 26670.2 | 26676.6 | 26744.8 | 26870.4 | 26902.2 | 26951.5 | 26928.6 | 26917.0 | 26842.5 | 26816.6 | 26842.8 |
| 5°    | 24617.6 | 24707.3 | 24713.1 | 24795.6 | 25057.6 | 25191.6 | 25188.2 | 25057.0 | 25078.5 | 25175.8 | 25247.6 |
| 7°    | 20583.2 | 20695.8 | 20709.8 | 20813.0 | 21084.1 | 21327.1 | 21329.7 | 21281.1 | 21392.5 | 21625.9 | 21724.7 |
| 9°    | 15887.5 | 15970.9 | 16171.1 | 16311.5 | 16184.3 | 16310.7 | 16388.1 | 16701.6 | 16879.3 | 16886.8 | 17025.6 |
| 11°   | 12579.7 | 12707.6 | 12788.7 | 12864.6 | 13082.0 | 13298.1 | 13297.0 | 13287.3 | 13334.7 | 13430.8 | 13492.5 |
| 13°   | 9359.2  | 9452.9  | 9535.4  | 9645.3  | 9744.6  | 9894.4  | 10008.8 | 10191.0 | 10247.2 | 10297.6 | 10319.1 |
| 15°   | 6840.2  | 6878.9  | 6874.5  | 7038.6  | 7052.9  | 7101.6  | 7249.9  | 7484.3  | 7468.5  | 7650.1  | 7682.7  |
| 17°   | 5243.4  | 5279.9  | 5334.0  | 5388.8  | 5456.7  | 5481.1  | 5589.3  | 5675.8  | 5727.1  | 5757.1  | 5834.7  |
| 19.5° | 3927.4  | 3970.1  | 3988.3  | 4065.4  | 4099.9  | 4199.4  | 4191.3  | 4278.8  | 4292.5  | 4334.3  | 4328.1  |
| 22.5° | 2806.5  | 2861.6  | 2861.5  | 2884.8  | 2922.7  | 2951.6  | 2999.4  | 3032.4  | 3052.2  | 3102.6  | 3107.0  |
| 25.5° | 1811.0  | 1835.4  | 1851.9  | 1889.7  | 1907.6  | 1938.0  | 1975.0  | 2003.0  | 2008.3  | 2060.3  | 2075.5  |
| 29°   | 812.8   | 819.9   | 846.0   | 890.9   | 858.6   | 856.7   | 899.0   | 970.8   | 977.4   | 972.8   | 987.2   |
| 33°   | 210.1   | 211.6   | 233.0   | 248.7   | 210.5   | 164.6   | 227.4   | 281.7   | 277.0   | 252.6   | 264.2   |
| 37.5° | 69.4    | 61.0    | 71.9    | 62.0    | 66.0    | 51.3    | 72.7    | 68.0    | 68.2    | 63.1    | 69.0    |
| 42.5° | 57.2    | 47.4    | 51.7    | 44.8    | 34.0    | 36.8    | 48.7    | 47.2    | 49.3    | 51.9    | 59.0    |
| 47.5° | 45.5    | 34.5    | 27.6    | 32.8    | 19.5    | 17.4    | 24.3    | 34.7    | 21.7    | 37.8    | 43.5    |
| 55°   | 33.4    | 15.1    | 10.3    | 18.5    | 4.2     | 3.9     | 8.0     | 8.1     | 4.1     | 19.2    | 18.8    |
| 65°   | 15.1    | 25.1    | 11.7    | 17.6    | 17.2    | 5.8     | 12.7    | 15.0    | 11.6    | 10.4    | 12.6    |
| 75°   | 21.7    | 34.4    | 30.9    | 33.4    | 34.7    | 27.1    | 35.7    | 28.5    | 27.5    | 24.6    | 18.2    |
| 85°   | 81.7    | 80.8    | 78.8    | 88.5    | 82.2    | 88.1    | 88.0    | 85.0    | 77.4    | 74.6    | 74.4    |
| 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):**

|       | 330°    | 340°    | 350°    | 360°    |
|-------|---------|---------|---------|---------|
| 0°    | 28352.3 | 28352.3 | 28352.3 | 28352.3 |
| 1°    | 27752.3 | 27837.7 | 27939.9 | 28055.1 |
| 3°    | 26920.4 | 27044.0 | 27084.2 | 27121.9 |
| 5°    | 25258.7 | 25323.6 | 25537.7 | 25698.8 |
| 7°    | 21729.9 | 21813.6 | 22019.5 | 22320.4 |
| 9°    | 17200.5 | 17198.4 | 17032.4 | 17241.0 |
| 11°   | 13524.9 | 13559.6 | 13632.8 | 13800.5 |
| 13°   | 10352.0 | 10463.4 | 10473.3 | 10636.9 |
| 15°   | 7601.9  | 7807.3  | 7673.5  | 7748.3  |
| 17°   | 5827.4  | 5904.3  | 5887.1  | 5949.6  |
| 19.5° | 4323.7  | 4375.7  | 4379.9  | 4455.9  |
| 22.5° | 3109.6  | 3112.3  | 3129.6  | 3162.6  |
| 25.5° | 2055.1  | 2069.2  | 2069.9  | 2108.4  |
| 29°   | 978.7   | 1014.2  | 991.8   | 1008.7  |
| 33°   | 250.3   | 284.0   | 232.1   | 201.4   |
| 37.5° | 74.0    | 78.4    | 65.9    | 47.4    |
| 42.5° | 55.7    | 60.4    | 46.8    | 38.7    |
| 47.5° | 39.4    | 44.1    | 27.4    | 19.4    |
| 55°   | 15.6    | 25.5    | 21.6    | 11.6    |
| 65°   | 16.8    | 19.9    | 26.8    | 19.4    |
| 75°   | 16.4    | 14.6    | 26.1    | 7.7     |
| 85°   | 59.7    | 40.4    | 12.9    | 0.0     |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)