

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: P967158

Luminaire Tested: **NAV-SB4D-730-U-AFL**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P967158  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4D-730-U-AFL  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

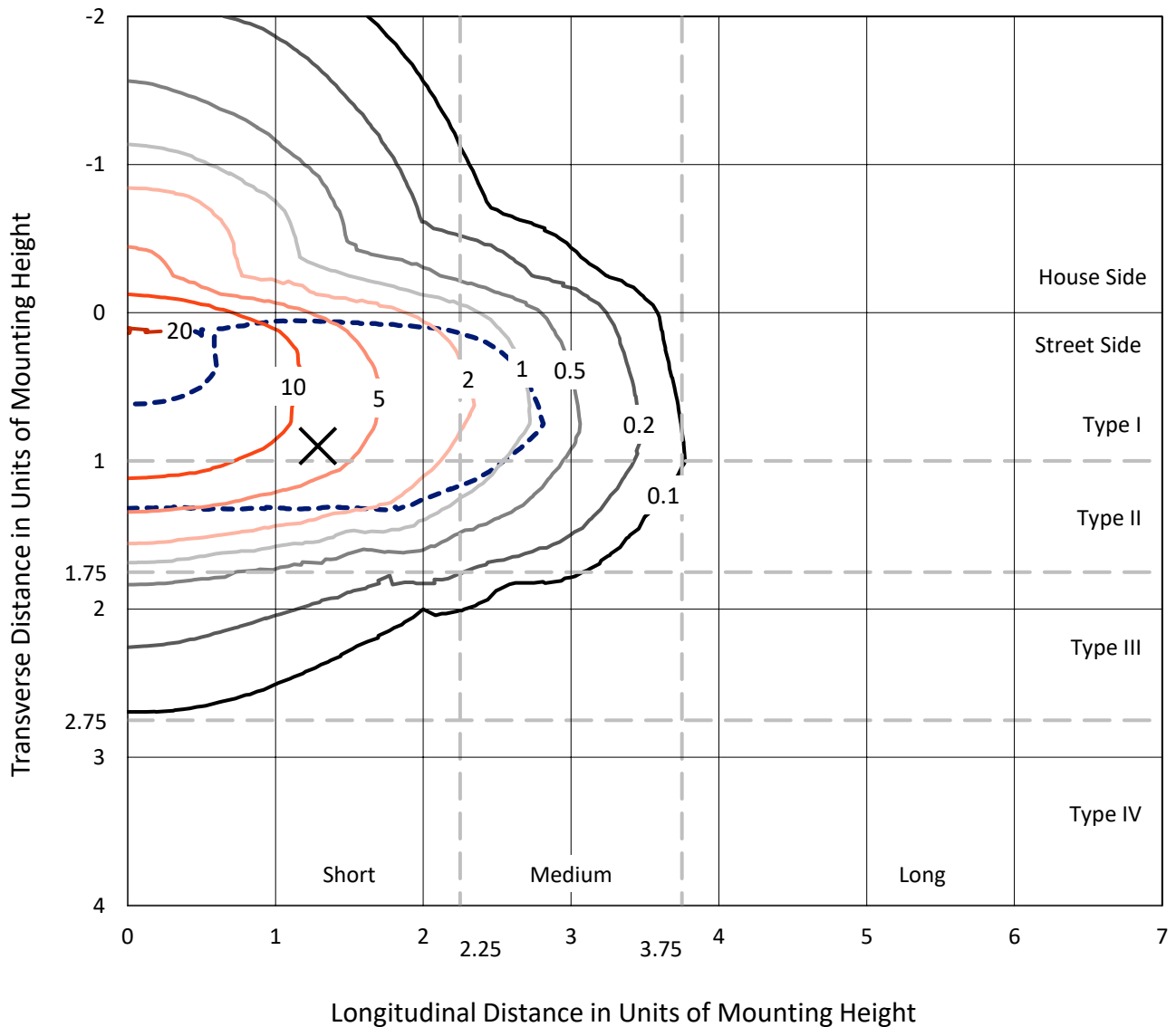
Lumens per Lamp: N/A  
Luminaire Lumens: 42515 lumens  
Efficiency: N/A  
Efficacy: 144.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 293.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

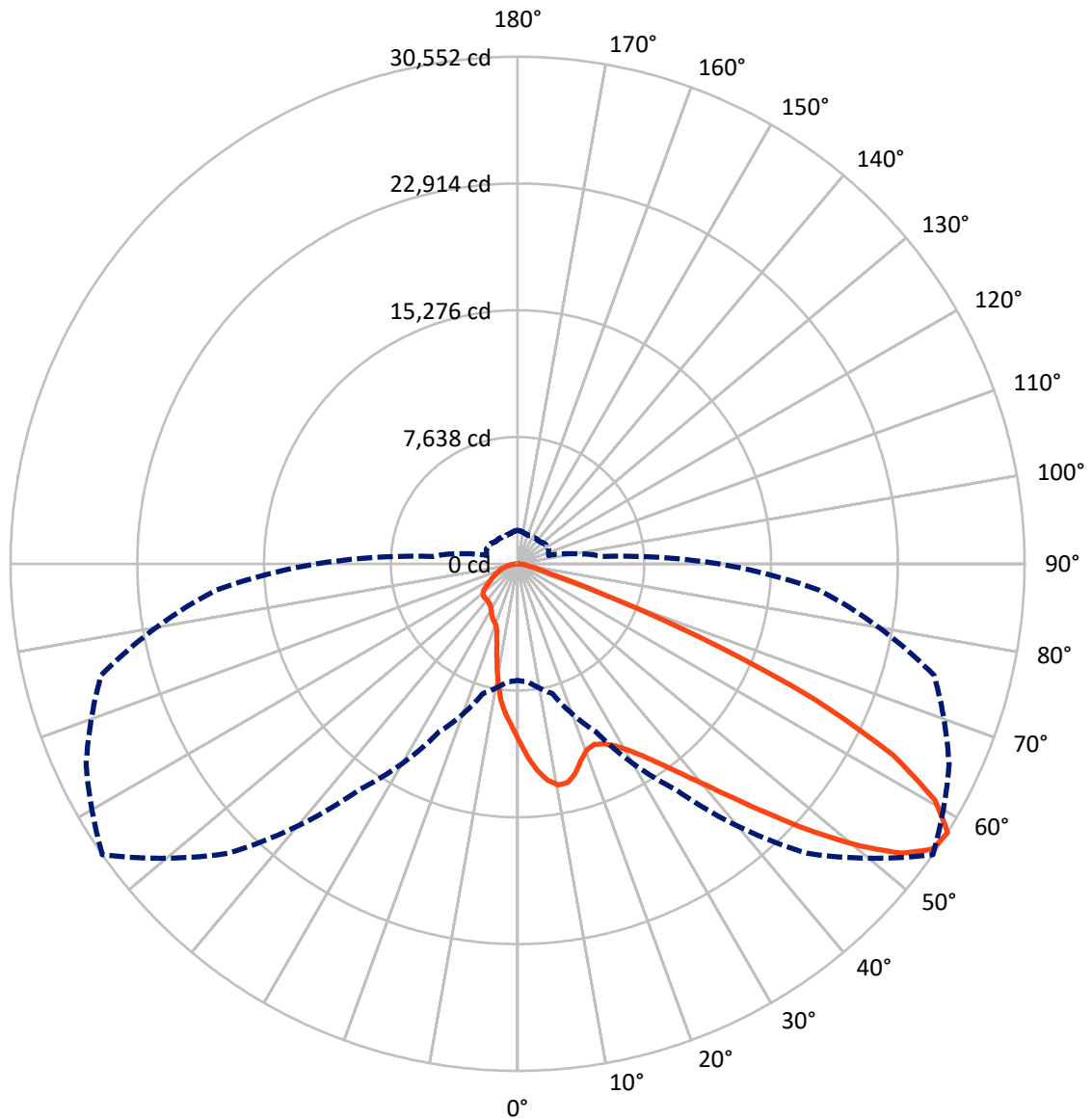
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 20.6 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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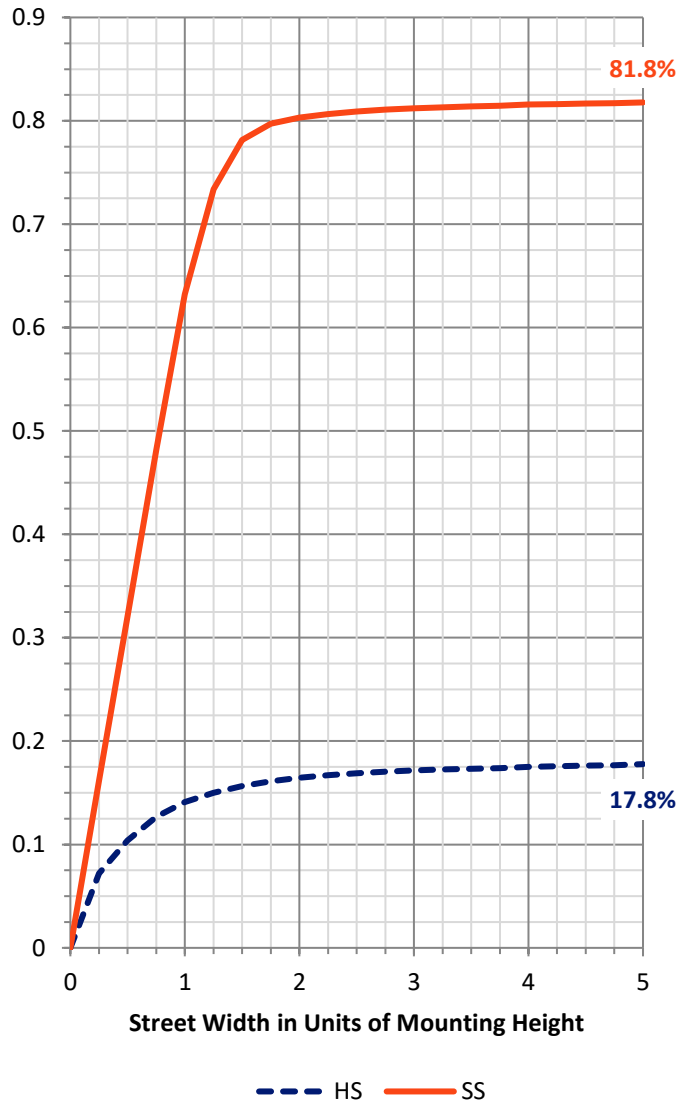
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 7692.9   | 0.0    | 7692.9  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 34822.1  | 0.0    | 34822.1 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 42515.0  | 0.0    | 42515.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 988.5   | 2.3       |
| 10°-20°   | 2495.1  | 5.9       |
| 20°-30°   | 3981.4  | 9.4       |
| 30°-40°   | 6303.6  | 14.8      |
| 40°-50°   | 9648.3  | 22.7      |
| 50°-60°   | 10334.2 | 24.3      |
| 60°-70°   | 6501.3  | 15.3      |
| 70°-80°   | 1922.6  | 4.5       |
| 80°-90°   | 339.9   | 0.8       |
| 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°    | 42515.0 | 100.0     |
| 0°-180°   | 42515.0 | 100.0     |

**Coefficient of Utilization**



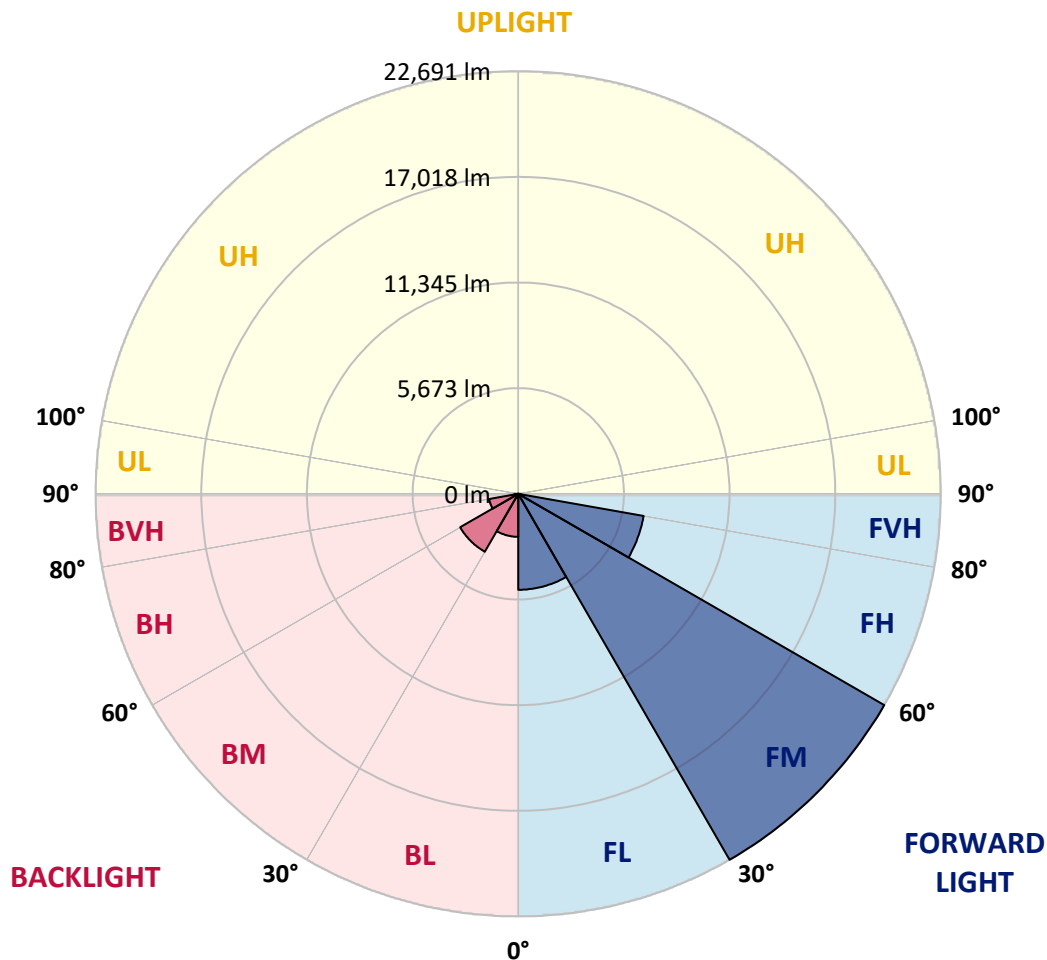
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 5152.8  | 12.1      |                         |      |         |
| FM (30°-60°)   | 22690.5 | 53.4      |                         |      |         |
| FH (60°-80°)   | 6835.1  | 16.1      |                         |      | G3/7500 |
| FVH (80°-90°)  | 143.6   | 0.3       |                         |      | G2/225  |
| BL (0°-30°)    | 2312.2  | 5.4       | B3/2500                 |      |         |
| BM (30°-60°)   | 3595.6  | 8.5       | B3/5000                 |      |         |
| BH (60°-80°)   | 1588.8  | 3.7       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 196.3   | 0.5       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 |
| 2.5°  | 12222.1 | 12213.3 | 12261.7 | 12096.8 | 11984.7 | 11833.1 | 11633.1 | 11378.1 | 11103.4 | 10813.3 | 10688.0 |
| 5°    | 13323.3 | 13246.3 | 13296.8 | 13173.8 | 13050.7 | 12822.1 | 12525.4 | 12110.1 | 11602.3 | 11024.3 | 10716.6 |
| 7.5°  | 13149.6 | 13096.8 | 13226.5 | 13336.4 | 13428.7 | 13400.1 | 13182.5 | 12747.4 | 12092.4 | 11252.9 | 10806.7 |
| 10°   | 11749.6 | 11690.2 | 11872.7 | 12252.8 | 12811.2 | 13296.8 | 13560.5 | 13290.3 | 12593.6 | 11503.5 | 10894.6 |
| 12.5° | 10514.4 | 10485.9 | 10606.7 | 10914.4 | 11534.2 | 12466.0 | 13512.3 | 13765.0 | 13114.5 | 11800.1 | 11013.3 |
| 15°   | 9986.9  | 9951.7  | 10028.7 | 10184.7 | 10580.4 | 11448.4 | 13072.6 | 14090.3 | 13626.6 | 12143.0 | 11202.3 |
| 17.5° | 9870.4  | 9830.9  | 9863.9  | 9945.2  | 10200.1 | 10861.6 | 12409.0 | 14250.7 | 14160.6 | 12525.4 | 11360.6 |
| 20°   | 10085.8 | 10052.9 | 10057.3 | 10052.9 | 10230.8 | 10756.1 | 11947.4 | 14189.2 | 14626.5 | 12877.1 | 11514.4 |
| 22.5° | 10606.7 | 10551.8 | 10554.0 | 10437.5 | 10534.2 | 10940.7 | 11826.6 | 14024.4 | 15042.0 | 13184.8 | 11630.9 |
| 25°   | 11455.1 | 11356.2 | 11376.0 | 11079.2 | 11052.9 | 11353.9 | 12015.6 | 13896.8 | 15455.2 | 13430.9 | 11652.9 |
| 27.5° | 12615.5 | 12503.5 | 12444.1 | 12002.3 | 11791.3 | 11940.8 | 12400.1 | 13940.8 | 15846.3 | 13644.1 | 11598.0 |
| 30°   | 14066.1 | 13929.9 | 13808.9 | 13182.5 | 12800.1 | 12745.2 | 12997.9 | 14230.9 | 16307.9 | 13868.2 | 11503.5 |
| 32.5° | 15844.1 | 15685.9 | 15466.1 | 14635.4 | 14096.8 | 13808.9 | 13771.6 | 14747.4 | 16848.5 | 14154.0 | 11455.1 |
| 35°   | 17960.7 | 17754.0 | 17441.9 | 16367.2 | 15685.9 | 15096.9 | 14791.4 | 15492.5 | 17589.2 | 14584.8 | 11510.0 |
| 37.5° | 20140.8 | 19908.0 | 19622.2 | 18343.1 | 17505.7 | 16637.6 | 16035.3 | 16503.5 | 18576.1 | 15169.4 | 11655.1 |
| 40°   | 22151.9 | 21890.3 | 21624.4 | 20486.0 | 19587.0 | 18540.9 | 17558.5 | 17782.6 | 19782.6 | 15868.3 | 11901.3 |
| 42.5° | 23338.7 | 23145.3 | 23044.3 | 22428.8 | 21734.3 | 20672.7 | 19453.0 | 19299.1 | 21138.7 | 16672.8 | 12182.5 |
| 45°   | 23285.9 | 23206.8 | 23518.9 | 23773.8 | 23609.0 | 23020.1 | 21672.8 | 20976.0 | 22499.2 | 17369.4 | 12441.9 |
| 47.5° | 22042.0 | 22094.8 | 22791.5 | 24224.4 | 24855.2 | 25162.9 | 24200.2 | 22622.3 | 23681.6 | 17890.4 | 12558.4 |
| 50°   | 18657.4 | 18701.3 | 20314.5 | 23404.6 | 25176.2 | 26910.1 | 26708.0 | 24228.8 | 24598.1 | 18209.0 | 12532.0 |
| 52.5° | 15978.2 | 16006.8 | 16699.1 | 20973.9 | 24116.7 | 27789.3 | 28967.3 | 25743.2 | 25268.4 | 18296.9 | 12384.8 |
| 55°   | 12035.3 | 12134.2 | 12910.1 | 16455.1 | 21360.7 | 27092.6 | 30343.2 | 27303.6 | 25692.5 | 18305.7 | 12230.9 |
| 57.5° | 7030.9  | 7138.5  | 8096.8  | 11169.3 | 16602.3 | 24664.1 | 30552.0 | 28688.2 | 25980.5 | 18235.4 | 12138.6 |
| 60°   | 3444.0  | 3490.1  | 3907.7  | 5870.4  | 10237.5 | 19984.8 | 28872.8 | 29358.6 | 26141.0 | 18198.1 | 12134.2 |
| 62.5° | 2320.9  | 2314.3  | 2331.9  | 2896.8  | 5044.0  | 12839.7 | 25373.9 | 28184.9 | 26055.2 | 18055.2 | 12090.3 |
| 65°   | 1995.7  | 1971.5  | 1905.5  | 2033.0  | 2613.2  | 5872.6  | 19604.7 | 24681.6 | 25402.5 | 17696.9 | 11789.1 |
| 67.5° | 1725.3  | 1727.5  | 1729.7  | 1690.1  | 1865.9  | 2709.9  | 11980.4 | 19442.0 | 23059.6 | 16000.1 | 10628.7 |
| 70°   | 1428.5  | 1448.3  | 1457.1  | 1457.1  | 1520.9  | 1778.1  | 5114.3  | 13325.4 | 18189.2 | 12545.2 | 8560.5  |
| 72.5° | 1301.1  | 1259.3  | 1263.7  | 1241.8  | 1241.8  | 1353.8  | 2059.3  | 7553.9  | 11459.5 | 7057.2  | 5224.2  |
| 75°   | 1061.6  | 1087.9  | 1092.3  | 1077.0  | 1026.4  | 1033.0  | 1222.0  | 3169.3  | 4903.4  | 2927.5  | 2582.5  |
| 77.5° | 916.5   | 916.5   | 925.3   | 914.3   | 874.7   | 773.7   | 815.4   | 1228.6  | 1668.2  | 1200.0  | 1290.2  |
| 80°   | 736.3   | 734.1   | 771.4   | 793.5   | 731.8   | 571.4   | 520.9   | 679.2   | 740.7   | 527.5   | 670.3   |
| 82.5° | 358.2   | 380.3   | 529.7   | 604.4   | 556.1   | 413.2   | 318.7   | 422.0   | 395.6   | 233.0   | 301.1   |
| 85°   | 208.8   | 197.8   | 237.4   | 336.3   | 318.7   | 228.6   | 153.9   | 219.8   | 206.6   | 118.7   | 120.8   |
| 87.5° | 65.9    | 61.5    | 48.4    | 114.3   | 92.4    | 63.8    | 41.7    | 63.8    | 57.1    | 26.3    | 26.3    |
| 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):**

|       | 95°     | 105°    | 115°    | 125°    | 135°    | 145°    | 155°    | 165°    | 175°    | 180°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 | 10652.8 |
| 2.5°  | 10532.0 | 10272.7 | 10015.5 | 9780.3  | 9637.5  | 9545.2  | 9452.9  | 9349.5  | 9310.0  | 9250.6  |
| 5°    | 10426.5 | 9925.4  | 9479.2  | 9094.6  | 8745.2  | 8470.4  | 8193.5  | 7969.3  | 7868.2  | 7936.4  |
| 7.5°  | 10364.9 | 9639.7  | 8951.7  | 8246.2  | 7567.2  | 7024.2  | 6551.7  | 6219.8  | 6070.4  | 6107.8  |
| 10°   | 10310.0 | 9316.6  | 8268.3  | 7153.9  | 6178.1  | 5505.6  | 5022.0  | 4769.3  | 4674.8  | 4694.6  |
| 12.5° | 10259.4 | 8954.0  | 7444.1  | 5978.1  | 4940.7  | 4496.8  | 4358.3  | 4360.5  | 4378.1  | 4391.3  |
| 15°   | 10250.6 | 8516.6  | 6523.1  | 4949.5  | 4272.6  | 4244.0  | 4393.5  | 4488.0  | 4538.5  | 4553.9  |
| 17.5° | 10237.5 | 7993.5  | 5584.7  | 4248.4  | 4109.9  | 4303.4  | 4441.8  | 4503.3  | 4542.9  | 4545.1  |
| 20°   | 10184.7 | 7329.8  | 4718.7  | 3914.4  | 4074.8  | 4241.8  | 4327.5  | 4375.8  | 4408.8  | 4419.8  |
| 22.5° | 10022.0 | 6591.3  | 4044.0  | 3764.9  | 3934.2  | 4068.2  | 4169.3  | 4224.2  | 4244.0  | 4257.2  |
| 25°   | 9729.8  | 5764.9  | 3578.1  | 3622.0  | 3738.5  | 3907.7  | 3989.1  | 4000.1  | 3993.5  | 4013.2  |
| 27.5° | 9347.4  | 4879.2  | 3288.0  | 3428.6  | 3578.1  | 3723.1  | 3767.1  | 3760.5  | 3747.3  | 3769.2  |
| 30°   | 8885.8  | 4083.6  | 3103.3  | 3211.0  | 3415.4  | 3547.3  | 3586.9  | 3571.5  | 3545.1  | 3569.3  |
| 32.5° | 8397.9  | 3433.0  | 2951.7  | 3059.4  | 3281.3  | 3411.0  | 3450.6  | 3435.2  | 3415.4  | 3435.2  |
| 35°   | 7942.9  | 2978.0  | 2811.1  | 2958.3  | 3175.9  | 3303.4  | 3353.9  | 3356.1  | 3356.1  | 3380.2  |
| 37.5° | 7525.3  | 2712.1  | 2694.5  | 2894.5  | 3103.3  | 3217.6  | 3290.1  | 3294.6  | 3200.0  | 3206.6  |
| 40°   | 7138.5  | 2600.0  | 2641.8  | 2852.8  | 3033.0  | 3142.9  | 3147.3  | 2901.2  | 2727.5  | 2723.1  |
| 42.5° | 6822.1  | 2578.1  | 2657.2  | 2848.4  | 2982.4  | 2986.8  | 2677.0  | 2485.7  | 2437.3  | 2439.6  |
| 45°   | 6525.4  | 2571.4  | 2692.4  | 2848.4  | 2907.7  | 2580.2  | 2371.4  | 2320.9  | 2325.3  | 2342.8  |
| 47.5° | 6193.5  | 2545.1  | 2698.9  | 2808.8  | 2692.4  | 2294.6  | 2233.0  | 2211.0  | 2202.2  | 2206.6  |
| 50°   | 5830.8  | 2450.6  | 2615.4  | 2729.7  | 2323.1  | 2171.5  | 2094.5  | 2087.9  | 2098.9  | 2105.6  |
| 52.5° | 5448.4  | 2296.7  | 2472.5  | 2586.8  | 2153.8  | 2063.7  | 1978.0  | 1993.4  | 2041.8  | 2057.2  |
| 55°   | 5197.9  | 2116.5  | 2283.5  | 2301.1  | 2035.1  | 1962.7  | 1890.1  | 1925.3  | 2015.5  | 2044.0  |
| 57.5° | 5132.0  | 1925.3  | 2068.1  | 2048.4  | 1883.5  | 1874.7  | 1830.8  | 1861.6  | 1975.9  | 2017.6  |
| 60°   | 5112.2  | 1753.9  | 1857.2  | 1841.8  | 1736.2  | 1778.1  | 1767.1  | 1782.5  | 1822.0  | 1835.2  |
| 62.5° | 4958.3  | 1617.6  | 1668.2  | 1646.2  | 1604.4  | 1676.9  | 1703.3  | 1670.3  | 1701.1  | 1716.5  |
| 65°   | 4567.1  | 1507.7  | 1483.5  | 1468.1  | 1485.7  | 1551.6  | 1604.4  | 1538.5  | 1567.0  | 1611.0  |
| 67.5° | 3920.9  | 1358.2  | 1292.3  | 1309.9  | 1364.9  | 1400.0  | 1468.1  | 1393.4  | 1417.6  | 1492.3  |
| 70°   | 3171.5  | 1169.2  | 1109.9  | 1160.4  | 1213.2  | 1285.8  | 1296.7  | 1246.2  | 1303.3  | 1386.8  |
| 72.5° | 2243.9  | 978.1   | 936.2   | 1039.6  | 1057.2  | 1151.7  | 1127.5  | 1103.3  | 1182.4  | 1211.0  |
| 75°   | 1556.1  | 789.0   | 764.9   | 844.0   | 907.7   | 989.0   | 971.4   | 1000.0  | 1167.1  | 1180.2  |
| 77.5° | 984.6   | 613.2   | 597.8   | 648.3   | 736.3   | 826.4   | 855.0   | 1180.2  | 1993.4  | 2072.5  |
| 80°   | 571.4   | 457.2   | 439.5   | 479.1   | 556.1   | 639.6   | 824.2   | 1448.3  | 1314.3  | 1298.9  |
| 82.5° | 318.7   | 314.3   | 292.3   | 303.3   | 371.5   | 461.6   | 1164.8  | 1019.8  | 828.6   | 855.0   |
| 85°   | 149.4   | 184.6   | 158.3   | 151.7   | 208.8   | 540.7   | 778.1   | 582.4   | 386.8   | 378.0   |
| 87.5° | 39.6    | 35.2    | 35.2    | 39.6    | 87.9    | 466.0   | 309.9   | 248.4   | 147.3   | 142.9   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)