

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: P969459

Luminaire Tested: **NAV-SB5D-830-U-SL4**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P969459  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5D-830-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

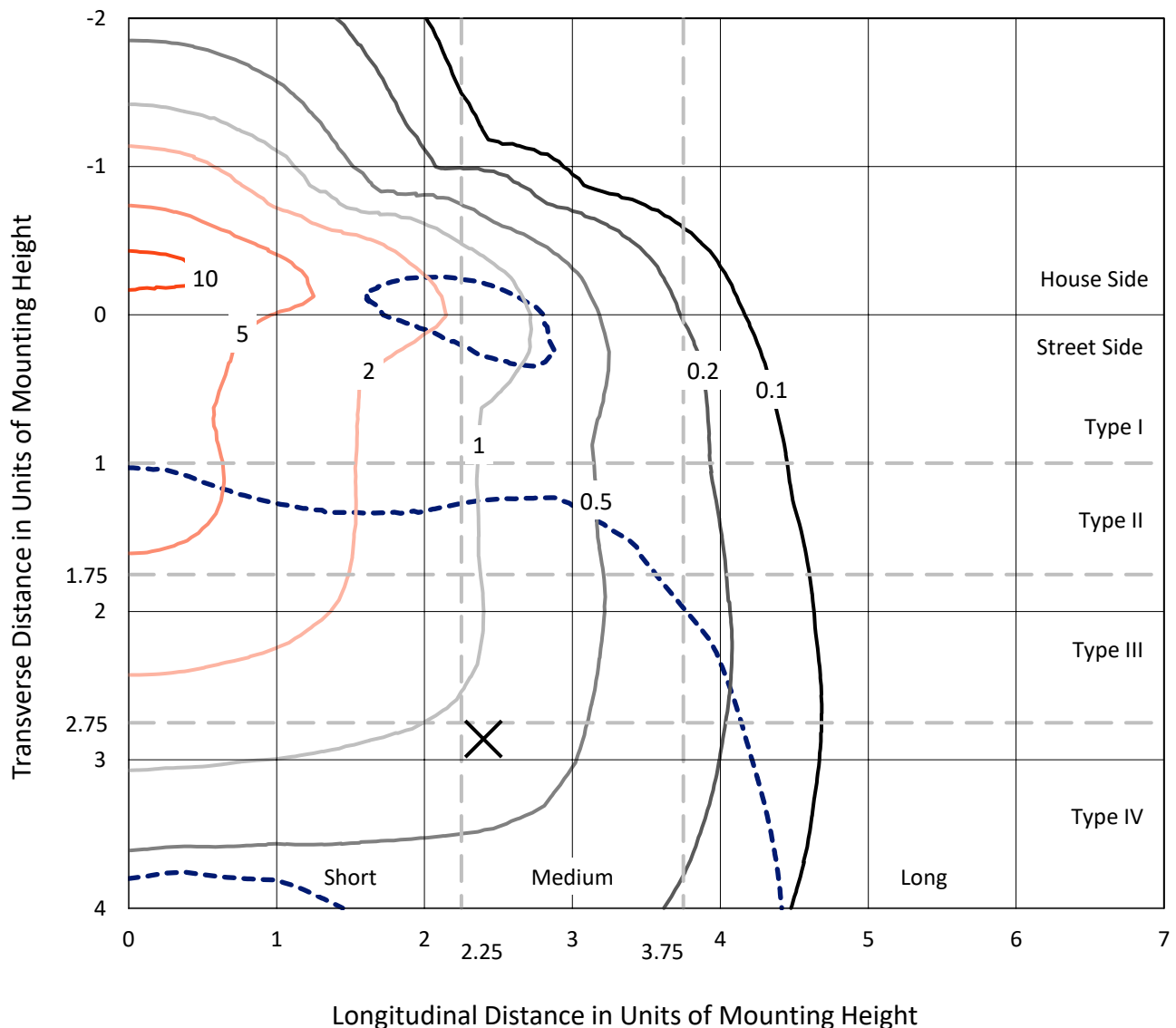
Lumens per Lamp: N/A  
Luminaire Lumens: 46929.6 lumens  
Efficiency: N/A  
Efficacy: 128.6 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B4 - U0 - G5

Input Watts (W): 364.9  
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



## Iso-Footcandle Lines of Horizontal Illumination

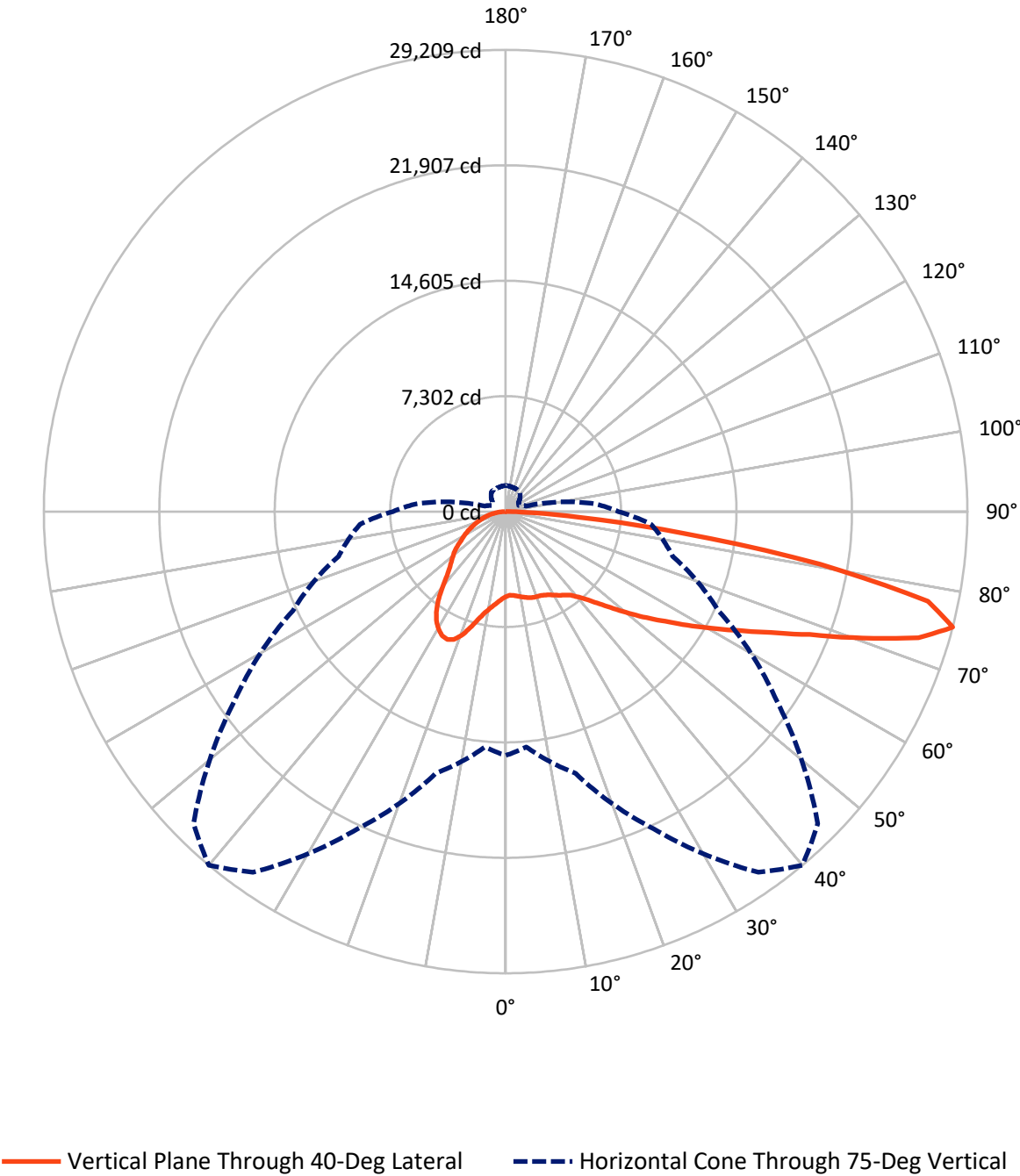
✕ Max cd  
 --- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.1 fc  
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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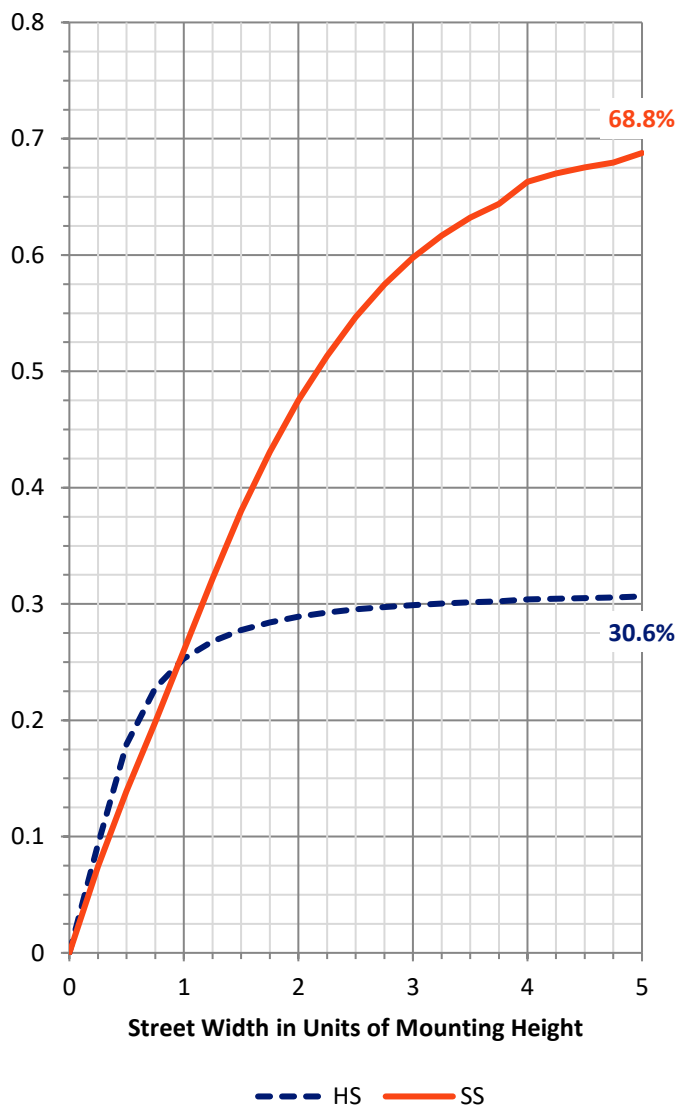
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 14540.4  | 0.0    | 14540.4 |
|                    | % Fixture | 31.0     | 0.0    | 31.0    |
| <b>Street Side</b> | Lumens    | 32389.3  | 0.0    | 32389.3 |
|                    | % Fixture | 69.0     | 0.0    | 69.0    |
| <b>Total</b>       | Lumens    | 46929.6  | 0.0    | 46929.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 535.7   | 1.1       |
| 10°-20°   | 1798.5  | 3.8       |
| 20°-30°   | 3283.9  | 7.0       |
| 30°-40°   | 4657.5  | 9.9       |
| 40°-50°   | 6289.0  | 13.4      |
| 50°-60°   | 8460.5  | 18.0      |
| 60°-70°   | 10738.3 | 22.9      |
| 70°-80°   | 9745.6  | 20.8      |
| 80°-90°   | 1420.6  | 3.0       |
| 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°    | 46929.6 | 100.0     |
| 0°-180°   | 46929.6 | 100.0     |

**Coefficient of Utilization**



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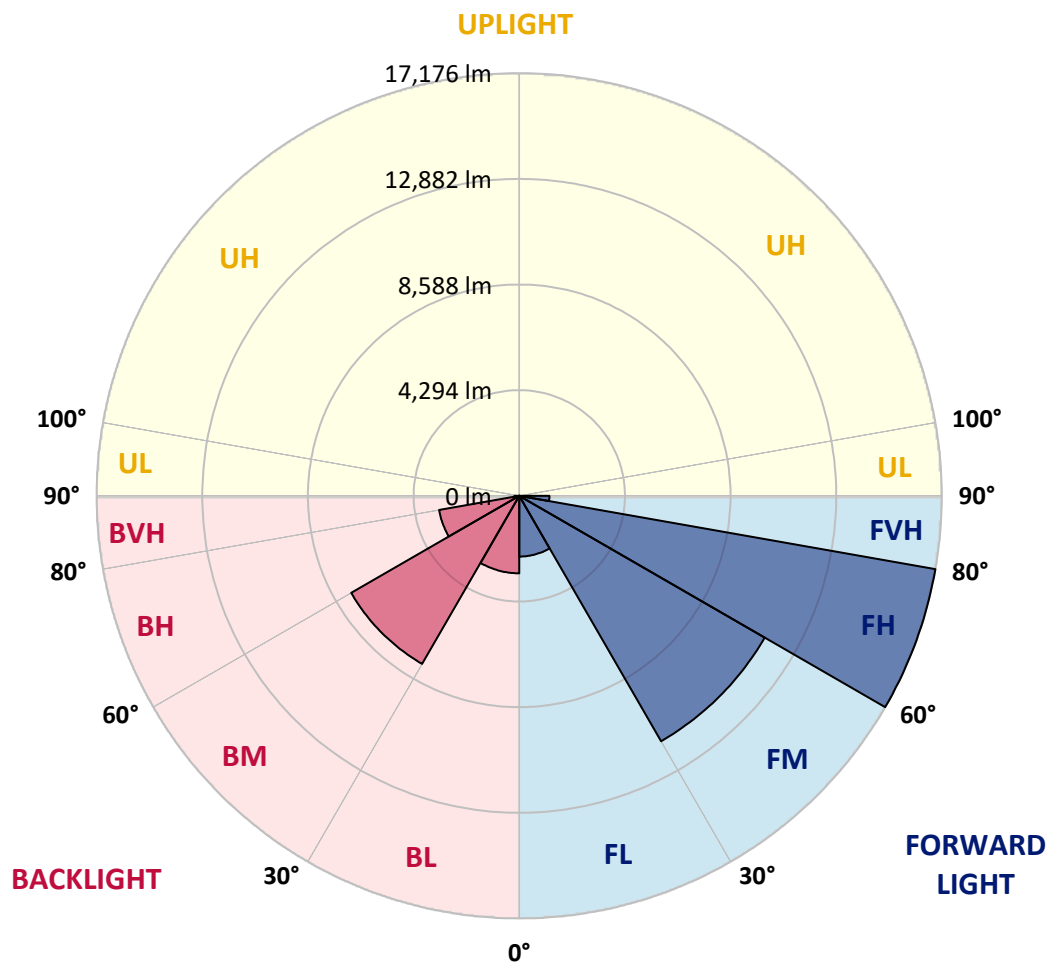
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2468.5  | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 11520.2 | 24.5      |                         |      |         |
| FH   | (60°-80°)   | 17175.5 | 36.6      |                         |      | G5      |
| FVH  | (80°-90°)   | 1225.0  | 2.6       |                         |      | G5      |
| BL   | (0°-30°)    | 3149.6  | 6.7       | B4/5000                 |      |         |
| BM   | (30°-60°)   | 7886.8  | 16.8      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 3308.4  | 7.0       | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 195.6   | 0.4       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G5**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5  |
| 2.5°  | 5284.3  | 5314.2  | 5306.7  | 5296.8  | 5296.8  | 5299.2  | 5296.8  | 5314.2  | 5331.6  | 5349.1  | 5376.4  |
| 5°    | 5339.1  | 5369.0  | 5354.0  | 5341.6  | 5331.6  | 5329.2  | 5321.7  | 5319.1  | 5329.2  | 5351.5  | 5388.8  |
| 7.5°  | 5446.1  | 5476.0  | 5453.6  | 5431.2  | 5411.3  | 5401.3  | 5391.4  | 5376.4  | 5369.0  | 5381.4  | 5433.6  |
| 10°   | 5565.5  | 5595.5  | 5568.1  | 5528.2  | 5495.9  | 5483.4  | 5473.5  | 5458.5  | 5448.6  | 5456.1  | 5513.3  |
| 12.5° | 5685.1  | 5714.9  | 5677.6  | 5622.8  | 5580.5  | 5573.0  | 5560.6  | 5555.6  | 5553.1  | 5550.7  | 5607.9  |
| 15°   | 5797.1  | 5822.0  | 5774.6  | 5710.0  | 5665.2  | 5652.7  | 5640.3  | 5647.7  | 5660.2  | 5675.1  | 5739.8  |
| 17.5° | 5884.2  | 5909.1  | 5839.4  | 5754.8  | 5712.4  | 5707.5  | 5700.0  | 5724.9  | 5759.8  | 5797.1  | 5876.7  |
| 20°   | 5963.9  | 5988.8  | 5899.1  | 5784.6  | 5734.9  | 5734.9  | 5737.3  | 5789.6  | 5839.4  | 5894.2  | 6003.6  |
| 22.5° | 6075.9  | 6095.8  | 5986.2  | 5829.5  | 5757.2  | 5762.2  | 5782.1  | 5834.4  | 5896.6  | 5971.3  | 6123.1  |
| 25°   | 6242.7  | 6257.5  | 6123.1  | 5914.0  | 5831.9  | 5846.9  | 5864.3  | 5889.1  | 5948.9  | 6036.0  | 6240.1  |
| 27.5° | 6511.4  | 6523.9  | 6347.2  | 6063.4  | 5939.0  | 5963.9  | 5988.8  | 5971.3  | 5998.7  | 6073.3  | 6334.7  |
| 30°   | 6889.7  | 6897.2  | 6673.3  | 6297.4  | 6120.7  | 6133.1  | 6138.1  | 6065.8  | 6013.7  | 6073.3  | 6401.9  |
| 32.5° | 7337.8  | 7335.3  | 7069.0  | 6581.1  | 6327.2  | 6314.8  | 6272.5  | 6130.6  | 6008.7  | 6060.9  | 6461.7  |
| 35°   | 8032.3  | 8004.9  | 7661.4  | 6979.4  | 6561.2  | 6484.0  | 6384.5  | 6202.8  | 6033.6  | 6048.5  | 6514.0  |
| 37.5° | 9182.3  | 9097.6  | 8622.2  | 7631.5  | 6909.7  | 6713.0  | 6566.3  | 6319.7  | 6088.3  | 6043.5  | 6576.2  |
| 40°   | 10479.1 | 10372.0 | 9849.3  | 8525.1  | 7432.4  | 7116.3  | 6879.8  | 6486.5  | 6177.9  | 6065.8  | 6668.2  |
| 42.5° | 12017.3 | 11865.5 | 11302.9 | 9578.0  | 8094.5  | 7636.6  | 7280.6  | 6698.2  | 6309.8  | 6138.1  | 6792.7  |
| 45°   | 13906.5 | 13704.9 | 12908.4 | 10765.3 | 8928.4  | 8318.5  | 7843.1  | 7019.2  | 6511.4  | 6277.5  | 6979.4  |
| 47.5° | 15815.6 | 15865.5 | 14732.8 | 12124.3 | 9929.0  | 9159.8  | 8547.5  | 7502.1  | 6805.2  | 6501.5  | 7280.6  |
| 50°   | 17844.2 | 17879.1 | 16547.4 | 13630.2 | 11064.0 | 10110.7 | 9339.1  | 8042.3  | 7213.3  | 6820.0  | 7731.1  |
| 52.5° | 19427.3 | 19432.3 | 18195.2 | 15205.8 | 12246.3 | 11156.1 | 10192.8 | 8659.5  | 7686.3  | 7243.3  | 8331.0  |
| 55°   | 20418.0 | 20405.5 | 19350.2 | 16696.7 | 13605.3 | 12253.8 | 11138.7 | 9361.4  | 8263.8  | 7741.0  | 9085.2  |
| 57.5° | 21137.3 | 21099.9 | 20146.7 | 17978.7 | 15054.0 | 13550.6 | 12209.0 | 10158.0 | 8945.8  | 8333.5  | 10078.3 |
| 60°   | 21411.1 | 21388.7 | 20686.8 | 19086.3 | 16577.3 | 14984.3 | 13443.6 | 11049.1 | 9719.9  | 9032.9  | 11355.2 |
| 62.5° | 21515.7 | 21558.0 | 21217.0 | 20159.1 | 18207.7 | 16572.3 | 14800.1 | 12114.4 | 10591.0 | 9824.4  | 12701.8 |
| 65°   | 21884.1 | 21961.1 | 21891.5 | 21562.9 | 20049.6 | 18431.7 | 16599.7 | 13381.3 | 11541.9 | 10673.2 | 14108.1 |
| 67.5° | 22613.3 | 22690.5 | 22720.4 | 23243.1 | 22299.7 | 20749.0 | 18844.8 | 14959.4 | 12654.5 | 11554.3 | 15166.0 |
| 70°   | 22595.9 | 22573.5 | 23101.1 | 24579.7 | 25117.3 | 23957.4 | 21871.6 | 16900.9 | 13981.2 | 12286.2 | 15300.4 |
| 72.5° | 20567.3 | 20388.1 | 21635.1 | 24564.7 | 27462.1 | 27307.7 | 25567.9 | 19404.9 | 15126.1 | 12375.7 | 13276.8 |
| 75°   | 15429.8 | 14951.9 | 17154.8 | 22137.9 | 27852.8 | 29209.4 | 27917.6 | 20958.1 | 14854.8 | 10934.5 | 9239.5  |
| 77.5° | 6598.5  | 6118.1  | 8714.2  | 16388.1 | 24928.2 | 27305.3 | 25762.0 | 18284.8 | 11858.0 | 7230.8  | 4537.6  |
| 80°   | 1727.4  | 1725.0  | 2633.4  | 7429.9  | 16953.2 | 20164.1 | 17690.0 | 11808.2 | 6775.2  | 2583.7  | 1252.0  |
| 82.5° | 714.3   | 696.9   | 968.2   | 2889.8  | 8283.6  | 11315.4 | 9234.5  | 5266.9  | 2446.8  | 699.5   | 415.6   |
| 85°   | 266.3   | 263.8   | 470.5   | 998.1   | 2922.2  | 4667.0  | 3377.7  | 1346.6  | 609.9   | 341.0   | 186.7   |
| 87.5° | 74.7    | 72.2    | 102.1   | 345.9   | 711.9   | 1080.2  | 577.5   | 221.5   | 171.8   | 134.4   | 54.7    |
| 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°    | 5366.5  | 5366.5  | 5366.5  | 5366.5  | 5366.5 | 5366.5 | 5366.5 | 5366.5 | 5366.5 | 5366.5 | 5366.5 |
| 2.5°  | 5383.9  | 5396.3  | 5418.8  | 5436.2  | 5458.5 | 5483.4 | 5518.3 | 5540.7 | 5563.1 | 5578.0 | 5568.1 |
| 5°    | 5406.3  | 5433.6  | 5490.9  | 5548.1  | 5615.4 | 5677.6 | 5749.7 | 5802.0 | 5844.3 | 5856.8 | 5861.8 |
| 7.5°  | 5456.1  | 5500.9  | 5597.9  | 5695.0  | 5802.0 | 5904.1 | 6008.7 | 6098.2 | 6170.4 | 6197.9 | 6200.3 |
| 10°   | 5543.2  | 5603.0  | 5739.8  | 5876.7  | 6018.6 | 6175.4 | 6309.8 | 6439.3 | 6541.3 | 6583.7 | 6586.1 |
| 12.5° | 5652.7  | 5727.4  | 5906.6  | 6095.8  | 6292.4 | 6509.0 | 6683.2 | 6842.5 | 6969.4 | 7026.7 | 7026.7 |
| 15°   | 5794.6  | 5891.7  | 6120.7  | 6374.6  | 6663.3 | 6964.5 | 7186.0 | 7362.7 | 7504.5 | 7574.2 | 7569.3 |
| 17.5° | 5948.9  | 6078.4  | 6367.1  | 6750.4  | 7163.6 | 7559.4 | 7818.2 | 7947.6 | 8094.5 | 8161.7 | 8159.2 |
| 20°   | 6098.2  | 6257.5  | 6670.7  | 7228.3  | 7778.4 | 8199.1 | 8408.1 | 8442.9 | 8453.0 | 8460.3 | 8480.3 |
| 22.5° | 6252.6  | 6466.6  | 7051.6  | 7830.7  | 8420.6 | 8711.8 | 8741.7 | 8592.3 | 8383.3 | 8286.2 | 8313.6 |
| 25°   | 6421.8  | 6705.6  | 7549.4  | 8495.2  | 8973.2 | 9008.0 | 8779.0 | 8415.6 | 8019.8 | 7838.2 | 7865.5 |
| 27.5° | 6586.1  | 6981.9  | 8146.8  | 9130.0  | 9371.4 | 9065.2 | 8572.4 | 8057.1 | 7579.3 | 7387.6 | 7410.0 |
| 30°   | 6750.4  | 7298.0  | 8806.4  | 9685.0  | 9553.1 | 8923.3 | 8246.3 | 7671.4 | 7191.0 | 6989.4 | 7011.7 |
| 32.5° | 6917.2  | 7666.4  | 9565.5  | 10085.8 | 9520.7 | 8622.2 | 7840.6 | 7238.2 | 6815.1 | 6603.6 | 6630.9 |
| 35°   | 7106.3  | 8119.4  | 10284.8 | 10304.8 | 9304.2 | 8179.1 | 7305.5 | 6720.5 | 6352.1 | 6182.9 | 6220.2 |
| 37.5° | 7352.7  | 8694.4  | 10919.6 | 10359.6 | 8925.9 | 7529.4 | 6640.9 | 6108.2 | 5804.6 | 5727.4 | 5782.1 |
| 40°   | 7658.9  | 9386.3  | 11405.0 | 10272.4 | 8365.8 | 6740.4 | 5914.0 | 5488.5 | 5316.7 | 5334.1 | 5393.9 |
| 42.5° | 8057.1  | 10160.4 | 11746.0 | 10048.4 | 7586.7 | 5926.5 | 5276.9 | 5087.7 | 5169.8 | 5239.5 | 5304.3 |
| 45°   | 8574.9  | 10964.4 | 11957.5 | 9667.6  | 6705.6 | 5237.0 | 4901.0 | 4945.8 | 5008.0 | 5015.5 | 5065.2 |
| 47.5° | 9237.0  | 11778.4 | 12096.9 | 9092.7  | 5807.0 | 4751.7 | 4662.0 | 4672.1 | 4659.5 | 4607.3 | 4647.1 |
| 50°   | 10063.3 | 12569.9 | 12221.4 | 8331.0  | 5042.9 | 4448.0 | 4328.5 | 4293.6 | 4121.9 | 3952.7 | 3975.1 |
| 52.5° | 11004.2 | 13296.7 | 12273.7 | 7385.1  | 4448.0 | 4194.1 | 4000.0 | 3780.9 | 3459.8 | 3407.5 | 3424.9 |
| 55°   | 12049.7 | 13968.7 | 12139.3 | 6222.7  | 3947.7 | 3868.0 | 3574.3 | 3310.4 | 3275.6 | 3230.8 | 3238.3 |
| 57.5° | 13299.2 | 14693.1 | 11865.5 | 4925.9  | 3435.0 | 3487.3 | 3201.0 | 3230.8 | 3168.6 | 3098.9 | 3086.5 |
| 60°   | 14665.7 | 15442.2 | 11385.1 | 3743.6  | 2904.7 | 3011.8 | 3103.9 | 3101.4 | 3084.0 | 3026.7 | 3006.8 |
| 62.5° | 15895.3 | 15935.2 | 10439.2 | 2867.4  | 2439.3 | 2643.4 | 2894.8 | 2892.3 | 2877.4 | 2845.0 | 2832.6 |
| 65°   | 16627.0 | 15860.4 | 8861.1  | 2257.6  | 2055.9 | 2339.8 | 2611.1 | 2631.0 | 2633.4 | 2631.0 | 2631.0 |
| 67.5° | 16497.7 | 14986.7 | 6695.6  | 1797.1  | 1739.8 | 2031.1 | 2329.8 | 2357.2 | 2377.1 | 2382.1 | 2387.0 |
| 70°   | 15034.1 | 13067.7 | 4365.9  | 1433.7  | 1458.6 | 1759.8 | 2063.4 | 2090.8 | 2108.2 | 2128.2 | 2138.1 |
| 72.5° | 11718.6 | 9607.8  | 2499.1  | 1159.9  | 1212.2 | 1525.8 | 1799.6 | 1832.0 | 1841.9 | 1879.2 | 1894.2 |
| 75°   | 7141.2  | 5650.2  | 1349.1  | 913.5   | 995.6  | 1304.3 | 1538.2 | 1575.6 | 1593.1 | 1637.8 | 1642.8 |
| 77.5° | 3395.1  | 2446.8  | 769.2   | 711.9   | 801.4  | 1065.3 | 1299.3 | 1341.6 | 1294.4 | 1319.2 | 1299.3 |
| 80°   | 1147.5  | 908.6   | 485.3   | 542.6   | 612.3  | 831.4  | 1040.5 | 1082.7 | 983.2  | 978.3  | 968.2  |
| 82.5° | 400.8   | 368.4   | 308.6   | 360.9   | 395.8  | 594.9  | 786.6  | 841.3  | 731.7  | 729.3  | 694.4  |
| 85°   | 156.8   | 149.3   | 171.8   | 196.6   | 236.5  | 365.9  | 517.7  | 545.1  | 450.5  | 363.4  | 358.4  |
| 87.5° | 32.4    | 34.8    | 42.3    | 44.8    | 72.2   | 126.9  | 186.7  | 229.0  | 181.7  | 154.4  | 141.9  |
| 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)