

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: P965212

Luminaire Tested: **NAV-SB3D-827-U-SL4**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P965212  
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-SB3D-827-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 2700K, 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: 26974.9 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B3 - U0 - G4

Input Watts (W): 218.1  
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



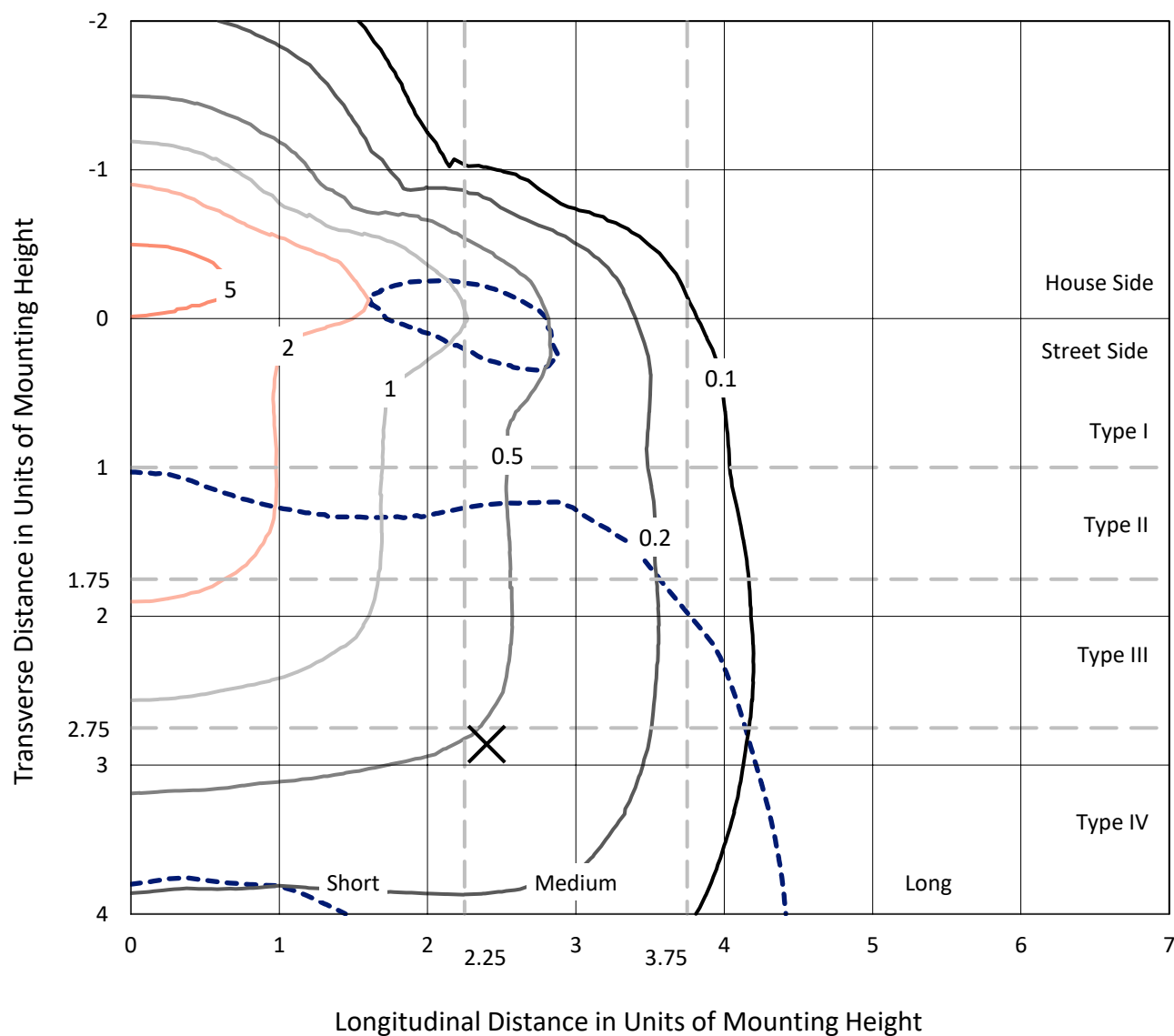
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

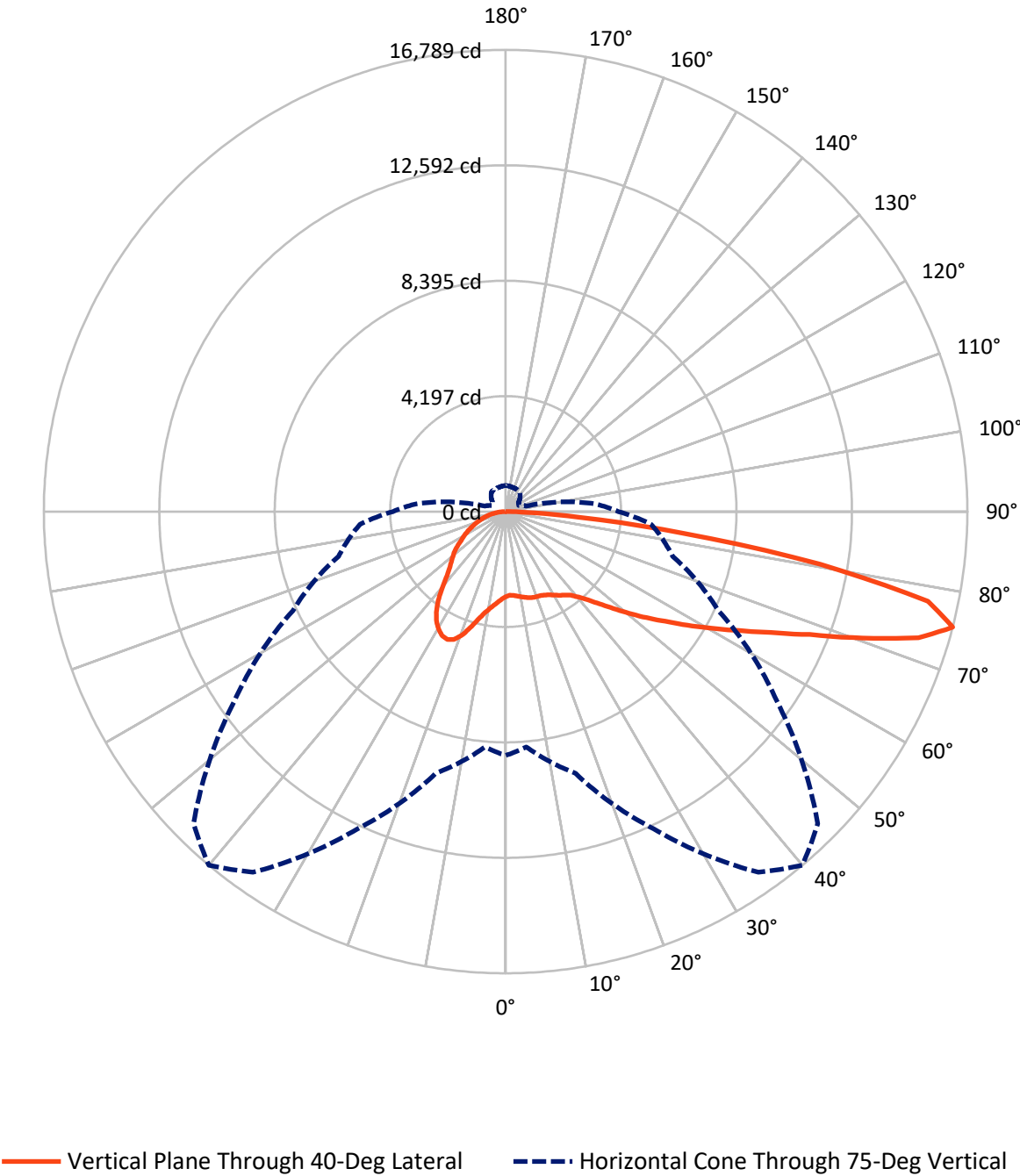
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc  
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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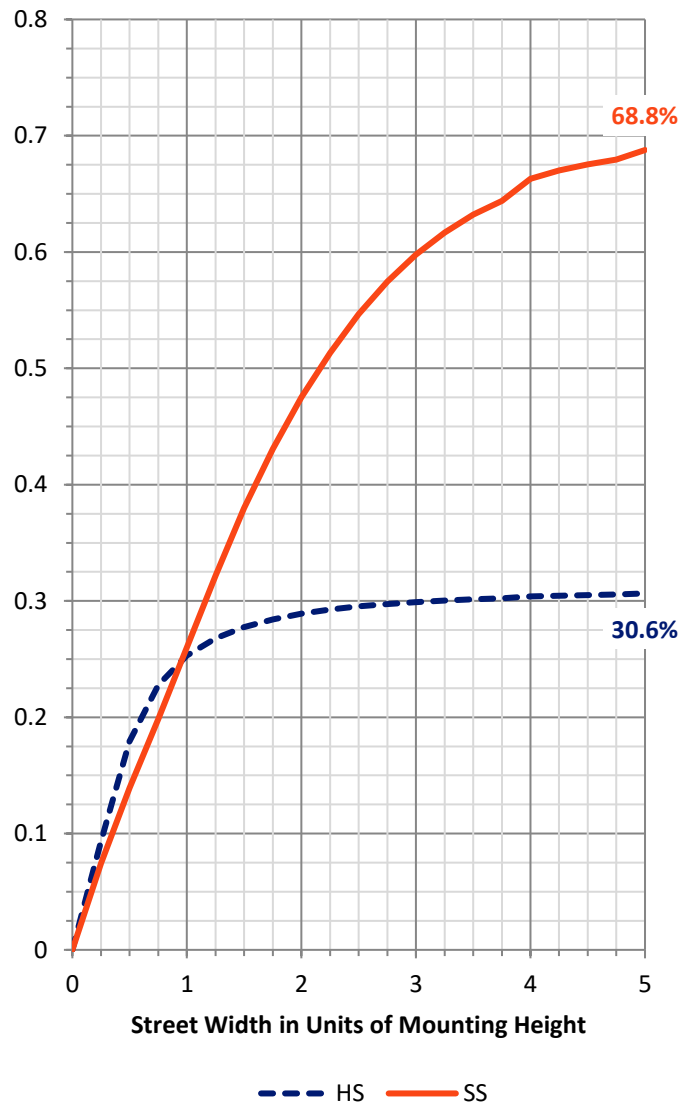
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8357.7   | 0.0    | 8357.7  |
|                    | % Fixture | 31.0     | 0.0    | 31.0    |
| <b>Street Side</b> | Lumens    | 18617.2  | 0.0    | 18617.2 |
|                    | % Fixture | 69.0     | 0.0    | 69.0    |
| <b>Total</b>       | Lumens    | 26974.9  | 0.0    | 26974.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 307.9   | 1.1       |
| 10°-20°   | 1033.8  | 3.8       |
| 20°-30°   | 1887.6  | 7.0       |
| 30°-40°   | 2677.1  | 9.9       |
| 40°-50°   | 3614.9  | 13.4      |
| 50°-60°   | 4863.0  | 18.0      |
| 60°-70°   | 6172.3  | 22.9      |
| 70°-80°   | 5601.7  | 20.8      |
| 80°-90°   | 816.6   | 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°    | 26974.9 | 100.0     |
| 0°-180°   | 26974.9 | 100.0     |

**Coefficient of Utilization**



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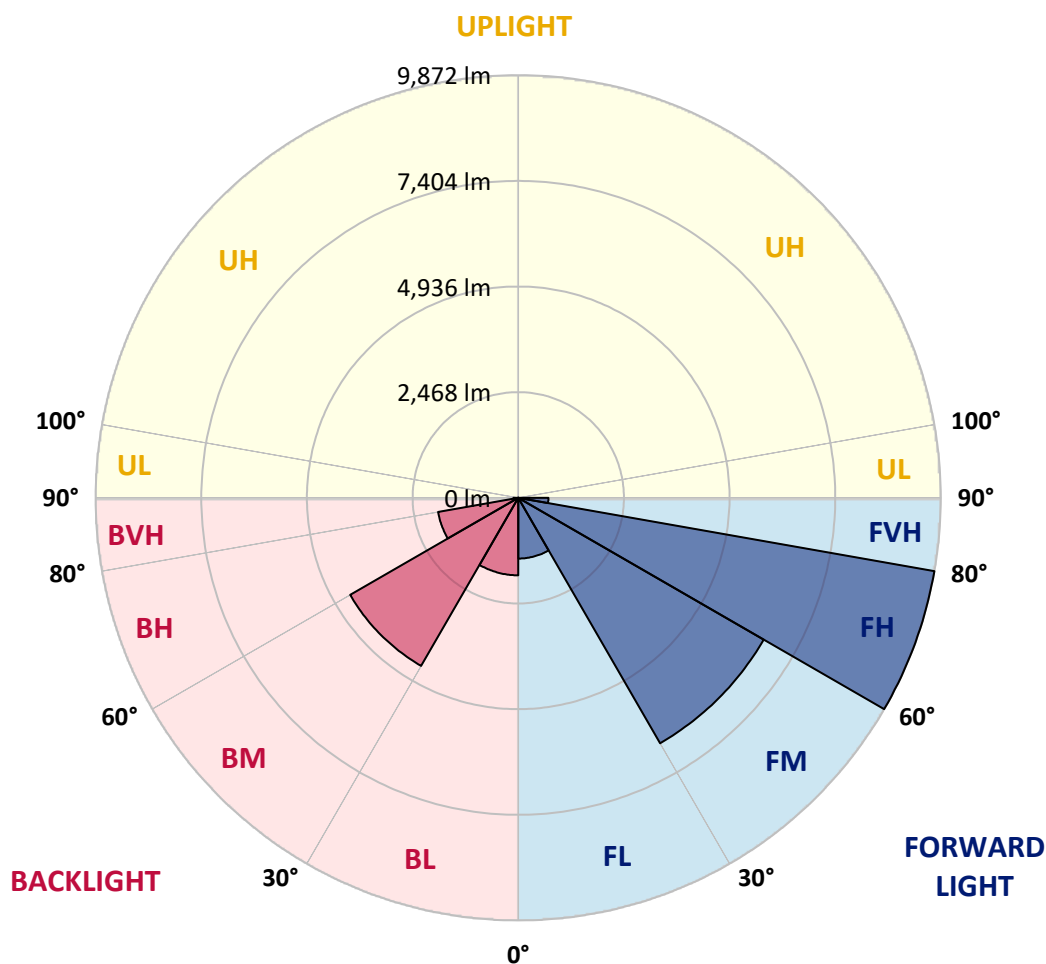
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|--------|-----------|-------------------------|------|----------|
|      |             |        |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1418.9 | 5.3       |                         |      |          |
| FM   | (30°-60°)   | 6621.7 | 24.5      |                         |      |          |
| FH   | (60°-80°)   | 9872.4 | 36.6      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 704.1  | 2.6       |                         |      | G4/750   |
| BL   | (0°-30°)    | 1810.4 | 6.7       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 4533.3 | 16.8      | B3/5000                 |      |          |
| BH   | (60°-80°)   | 1901.6 | 7.0       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 112.4  | 0.4       |                         |      | G2/225   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°    | 75°    | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0°    | 3084.6  | 3084.6  | 3084.6  | 3084.6  | 3084.6  | 3084.6  | 3084.6  | 3084.6  | 3084.6 | 3084.6 | 3084.6 |
| 2.5°  | 3037.4  | 3054.6  | 3050.3  | 3044.6  | 3044.6  | 3046.0  | 3044.6  | 3054.6  | 3064.5 | 3074.6 | 3090.4 |
| 5°    | 3068.8  | 3086.1  | 3077.5  | 3070.3  | 3064.5  | 3063.1  | 3058.9  | 3057.5  | 3063.1 | 3076.0 | 3097.4 |
| 7.5°  | 3130.5  | 3147.6  | 3134.7  | 3121.8  | 3110.4  | 3104.6  | 3098.9  | 3090.4  | 3086.1 | 3093.2 | 3123.3 |
| 10°   | 3199.0  | 3216.2  | 3200.5  | 3177.6  | 3159.0  | 3151.9  | 3146.1  | 3137.5  | 3131.8 | 3136.1 | 3169.0 |
| 12.5° | 3267.7  | 3284.9  | 3263.5  | 3232.0  | 3207.6  | 3203.3  | 3196.3  | 3193.4  | 3192.0 | 3190.5 | 3223.4 |
| 15°   | 3332.2  | 3346.4  | 3319.3  | 3282.0  | 3256.3  | 3249.1  | 3242.0  | 3246.3  | 3253.5 | 3262.1 | 3299.3 |
| 17.5° | 3382.2  | 3396.5  | 3356.5  | 3307.8  | 3283.5  | 3280.6  | 3276.3  | 3290.7  | 3310.6 | 3332.2 | 3377.9 |
| 20°   | 3428.0  | 3442.3  | 3390.8  | 3325.0  | 3296.4  | 3296.4  | 3297.8  | 3327.9  | 3356.5 | 3387.9 | 3450.9 |
| 22.5° | 3492.4  | 3503.9  | 3440.8  | 3350.7  | 3309.2  | 3312.1  | 3323.6  | 3353.6  | 3389.4 | 3432.3 | 3519.5 |
| 25°   | 3588.2  | 3596.8  | 3519.5  | 3399.4  | 3352.2  | 3360.8  | 3370.7  | 3385.1  | 3419.4 | 3469.5 | 3586.8 |
| 27.5° | 3742.8  | 3749.9  | 3648.3  | 3485.2  | 3413.7  | 3428.0  | 3442.3  | 3432.3  | 3448.0 | 3490.9 | 3641.2 |
| 30°   | 3960.2  | 3964.5  | 3835.8  | 3619.7  | 3518.1  | 3525.3  | 3528.2  | 3486.6  | 3456.6 | 3490.9 | 3679.7 |
| 32.5° | 4217.8  | 4216.3  | 4063.2  | 3782.8  | 3636.9  | 3629.7  | 3605.4  | 3523.8  | 3453.7 | 3483.8 | 3714.1 |
| 35°   | 4616.9  | 4601.2  | 4403.7  | 4011.7  | 3771.4  | 3727.0  | 3669.8  | 3565.4  | 3468.1 | 3476.6 | 3744.2 |
| 37.5° | 5277.9  | 5229.2  | 4956.0  | 4386.6  | 3971.7  | 3858.6  | 3774.3  | 3632.6  | 3499.6 | 3473.7 | 3780.0 |
| 40°   | 6023.3  | 5961.8  | 5661.4  | 4900.2  | 4272.1  | 4090.4  | 3954.4  | 3728.4  | 3551.0 | 3486.6 | 3832.9 |
| 42.5° | 6907.5  | 6820.2  | 6496.9  | 5505.4  | 4652.7  | 4389.5  | 4184.9  | 3850.0  | 3626.9 | 3528.2 | 3904.4 |
| 45°   | 7993.4  | 7877.5  | 7419.7  | 6187.8  | 5132.0  | 4781.4  | 4508.2  | 4034.6  | 3742.8 | 3608.3 | 4011.7 |
| 47.5° | 9090.7  | 9119.3  | 8468.3  | 6969.0  | 5707.1  | 5265.0  | 4913.0  | 4312.2  | 3911.6 | 3737.0 | 4184.9 |
| 50°   | 10256.8 | 10276.9 | 9511.4  | 7834.6  | 6359.5  | 5811.5  | 5368.0  | 4622.6  | 4146.2 | 3920.1 | 4443.8 |
| 52.5° | 11166.8 | 11169.6 | 10458.5 | 8740.3  | 7039.1  | 6412.5  | 5858.8  | 4977.5  | 4418.1 | 4163.3 | 4788.6 |
| 55°   | 11736.1 | 11729.0 | 11122.4 | 9597.2  | 7820.2  | 7043.4  | 6402.5  | 5380.9  | 4750.0 | 4449.5 | 5222.1 |
| 57.5° | 12149.6 | 12128.2 | 11580.2 | 10334.0 | 8652.9  | 7788.8  | 7017.7  | 5838.7  | 5142.0 | 4790.0 | 5793.0 |
| 60°   | 12307.0 | 12294.2 | 11890.6 | 10970.7 | 9528.5  | 8612.9  | 7727.3  | 6350.9  | 5587.0 | 5192.0 | 6526.9 |
| 62.5° | 12367.1 | 12391.4 | 12195.4 | 11587.3 | 10465.7 | 9525.7  | 8507.0  | 6963.2  | 6087.7 | 5647.0 | 7301.0 |
| 65°   | 12578.8 | 12623.2 | 12583.1 | 12394.3 | 11524.4 | 10594.4 | 9541.4  | 7691.5  | 6634.2 | 6134.9 | 8109.3 |
| 67.5° | 12998.0 | 13042.4 | 13059.5 | 13360.1 | 12817.7 | 11926.4 | 10831.9 | 8598.6  | 7273.7 | 6641.4 | 8717.3 |
| 70°   | 12988.0 | 12975.2 | 13278.5 | 14128.3 | 14437.3 | 13770.7 | 12571.7 | 9714.5  | 8036.3 | 7062.0 | 8794.6 |
| 72.5° | 11821.9 | 11718.9 | 12435.8 | 14119.7 | 15785.1 | 15696.3 | 14696.2 | 11153.8 | 8694.5 | 7113.5 | 7631.4 |
| 75°   | 8869.0  | 8594.3  | 9860.5  | 12724.8 | 16009.7 | 16789.4 | 16046.9 | 12046.6 | 8538.5 | 6285.1 | 5310.8 |
| 77.5° | 3792.8  | 3516.7  | 5009.0  | 9419.9  | 14328.6 | 15694.9 | 14807.9 | 10510.0 | 6815.9 | 4156.3 | 2608.2 |
| 80°   | 992.9   | 991.5   | 1513.7  | 4270.7  | 9744.6  | 11590.2 | 10168.1 | 6787.3  | 3894.4 | 1485.1 | 719.7  |
| 82.5° | 410.6   | 400.6   | 556.6   | 1661.0  | 4761.4  | 6504.0  | 5308.0  | 3027.4  | 1406.4 | 402.0  | 238.9  |
| 85°   | 153.1   | 151.7   | 270.4   | 573.7   | 1679.7  | 2682.6  | 1941.5  | 774.0   | 350.5  | 196.0  | 107.3  |
| 87.5° | 42.9    | 41.5    | 58.6    | 198.8   | 409.2   | 620.9   | 331.9   | 127.3   | 98.7   | 77.3   | 31.5   |
| 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°    | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 | 3084.6 |
| 2.5°  | 3094.7 | 3101.8 | 3114.7 | 3124.7 | 3137.5 | 3151.9 | 3171.9 | 3184.8 | 3197.7 | 3206.2 | 3200.5 |
| 5°    | 3107.5 | 3123.3 | 3156.2 | 3189.1 | 3227.7 | 3263.5 | 3304.9 | 3335.0 | 3359.3 | 3366.5 | 3369.4 |
| 7.5°  | 3136.1 | 3161.9 | 3217.7 | 3273.4 | 3335.0 | 3393.7 | 3453.7 | 3505.3 | 3546.7 | 3562.5 | 3563.9 |
| 10°   | 3186.2 | 3220.5 | 3299.3 | 3377.9 | 3459.5 | 3549.6 | 3626.9 | 3701.3 | 3759.9 | 3784.2 | 3785.6 |
| 12.5° | 3249.1 | 3292.1 | 3395.1 | 3503.9 | 3616.8 | 3741.4 | 3841.5 | 3933.0 | 4006.0 | 4038.9 | 4038.9 |
| 15°   | 3330.7 | 3386.5 | 3518.1 | 3664.1 | 3830.0 | 4003.1 | 4130.4 | 4232.0 | 4313.6 | 4353.7 | 4350.8 |
| 17.5° | 3419.4 | 3493.8 | 3659.8 | 3880.1 | 4117.6 | 4345.1 | 4493.9 | 4568.2 | 4652.7 | 4691.3 | 4689.9 |
| 20°   | 3505.3 | 3596.8 | 3834.3 | 4154.8 | 4470.9 | 4712.7 | 4833.0 | 4853.0 | 4858.7 | 4863.0 | 4874.5 |
| 22.5° | 3594.0 | 3717.0 | 4053.3 | 4501.0 | 4840.2 | 5007.5 | 5024.7 | 4938.9 | 4818.6 | 4762.9 | 4778.5 |
| 25°   | 3691.2 | 3854.3 | 4339.3 | 4883.0 | 5157.7 | 5177.8 | 5046.2 | 4837.3 | 4609.7 | 4505.3 | 4521.1 |
| 27.5° | 3785.6 | 4013.2 | 4682.7 | 5247.9 | 5386.7 | 5210.7 | 4927.4 | 4631.3 | 4356.6 | 4246.4 | 4259.3 |
| 30°   | 3880.1 | 4194.8 | 5061.9 | 5566.9 | 5491.1 | 5129.1 | 4739.9 | 4409.4 | 4133.3 | 4017.5 | 4030.3 |
| 32.5° | 3976.0 | 4406.6 | 5498.2 | 5797.3 | 5472.5 | 4956.0 | 4506.7 | 4160.5 | 3917.3 | 3795.7 | 3811.5 |
| 35°   | 4084.7 | 4667.0 | 5911.7 | 5923.2 | 5348.0 | 4701.4 | 4199.1 | 3862.9 | 3651.2 | 3553.9 | 3575.3 |
| 37.5° | 4226.3 | 4997.5 | 6276.6 | 5954.6 | 5130.5 | 4328.0 | 3817.1 | 3510.9 | 3336.4 | 3292.1 | 3323.6 |
| 40°   | 4402.3 | 5395.2 | 6555.5 | 5904.5 | 4808.6 | 3874.4 | 3399.4 | 3154.7 | 3056.0 | 3066.0 | 3100.3 |
| 42.5° | 4631.3 | 5840.1 | 6751.6 | 5775.8 | 4360.9 | 3406.5 | 3033.1 | 2924.4 | 2971.6 | 3011.7 | 3048.9 |
| 45°   | 4928.8 | 6302.3 | 6873.1 | 5556.9 | 3854.3 | 3010.2 | 2817.1 | 2842.8 | 2878.6 | 2882.9 | 2911.5 |
| 47.5° | 5309.4 | 6770.1 | 6953.3 | 5226.4 | 3337.8 | 2731.2 | 2679.8 | 2685.5 | 2678.3 | 2648.3 | 2671.1 |
| 50°   | 5784.4 | 7225.1 | 7024.8 | 4788.6 | 2898.6 | 2556.7 | 2488.0 | 2468.0 | 2369.3 | 2272.0 | 2284.8 |
| 52.5° | 6325.2 | 7642.9 | 7054.9 | 4244.9 | 2556.7 | 2410.8 | 2299.2 | 2173.2 | 1988.7 | 1958.7 | 1968.6 |
| 55°   | 6926.1 | 8029.1 | 6977.6 | 3576.7 | 2269.1 | 2223.3 | 2054.5 | 1902.8 | 1882.8 | 1857.1 | 1861.4 |
| 57.5° | 7644.3 | 8445.5 | 6820.2 | 2831.4 | 1974.4 | 2004.4 | 1839.9 | 1857.1 | 1821.3 | 1781.2 | 1774.1 |
| 60°   | 8429.8 | 8876.2 | 6544.1 | 2151.8 | 1669.6 | 1731.1 | 1784.1 | 1782.7 | 1772.6 | 1739.7 | 1728.3 |
| 62.5° | 9136.5 | 9159.4 | 6000.5 | 1648.2 | 1402.1 | 1519.5 | 1663.9 | 1662.4 | 1653.9 | 1635.3 | 1628.1 |
| 65°   | 9557.2 | 9116.6 | 5093.3 | 1297.6 | 1181.7 | 1344.9 | 1500.8 | 1512.3 | 1513.7 | 1512.3 | 1512.3 |
| 67.5° | 9482.8 | 8614.3 | 3848.7 | 1033.0 | 1000.1 | 1167.5 | 1339.2 | 1354.8 | 1366.3 | 1369.2 | 1372.1 |
| 70°   | 8641.5 | 7511.2 | 2509.5 | 824.1  | 838.3  | 1011.5 | 1186.0 | 1201.8 | 1211.9 | 1223.2 | 1229.0 |
| 72.5° | 6735.8 | 5522.6 | 1436.4 | 666.8  | 696.8  | 877.0  | 1034.4 | 1053.0 | 1058.7 | 1080.1 | 1088.8 |
| 75°   | 4104.7 | 3247.7 | 775.4  | 525.1  | 572.3  | 749.7  | 884.2  | 905.7  | 915.6  | 941.4  | 944.2  |
| 77.5° | 1951.5 | 1406.4 | 442.1  | 409.2  | 460.7  | 612.3  | 746.8  | 771.1  | 743.9  | 758.3  | 746.8  |
| 80°   | 659.6  | 522.2  | 279.0  | 311.9  | 352.0  | 477.9  | 598.1  | 622.4  | 565.1  | 562.3  | 556.6  |
| 82.5° | 230.3  | 211.8  | 177.4  | 207.5  | 227.4  | 341.9  | 452.1  | 483.6  | 420.7  | 419.2  | 399.1  |
| 85°   | 90.1   | 85.8   | 98.7   | 113.1  | 135.9  | 210.3  | 297.6  | 313.3  | 258.9  | 208.9  | 206.0  |
| 87.5° | 18.6   | 20.0   | 24.3   | 25.7   | 41.5   | 73.0   | 107.3  | 131.6  | 104.4  | 88.7   | 81.6   |
| 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)