

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: P962980

Luminaire Tested: **NAV-SB2D-735-U-SL4**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P962980  
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-SB2D-735-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 3500K, 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: 20677.3 lumens  
Efficiency: N/A  
Efficacy: 140.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B3 - U0 - G4

Input Watts (W): 147.6  
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



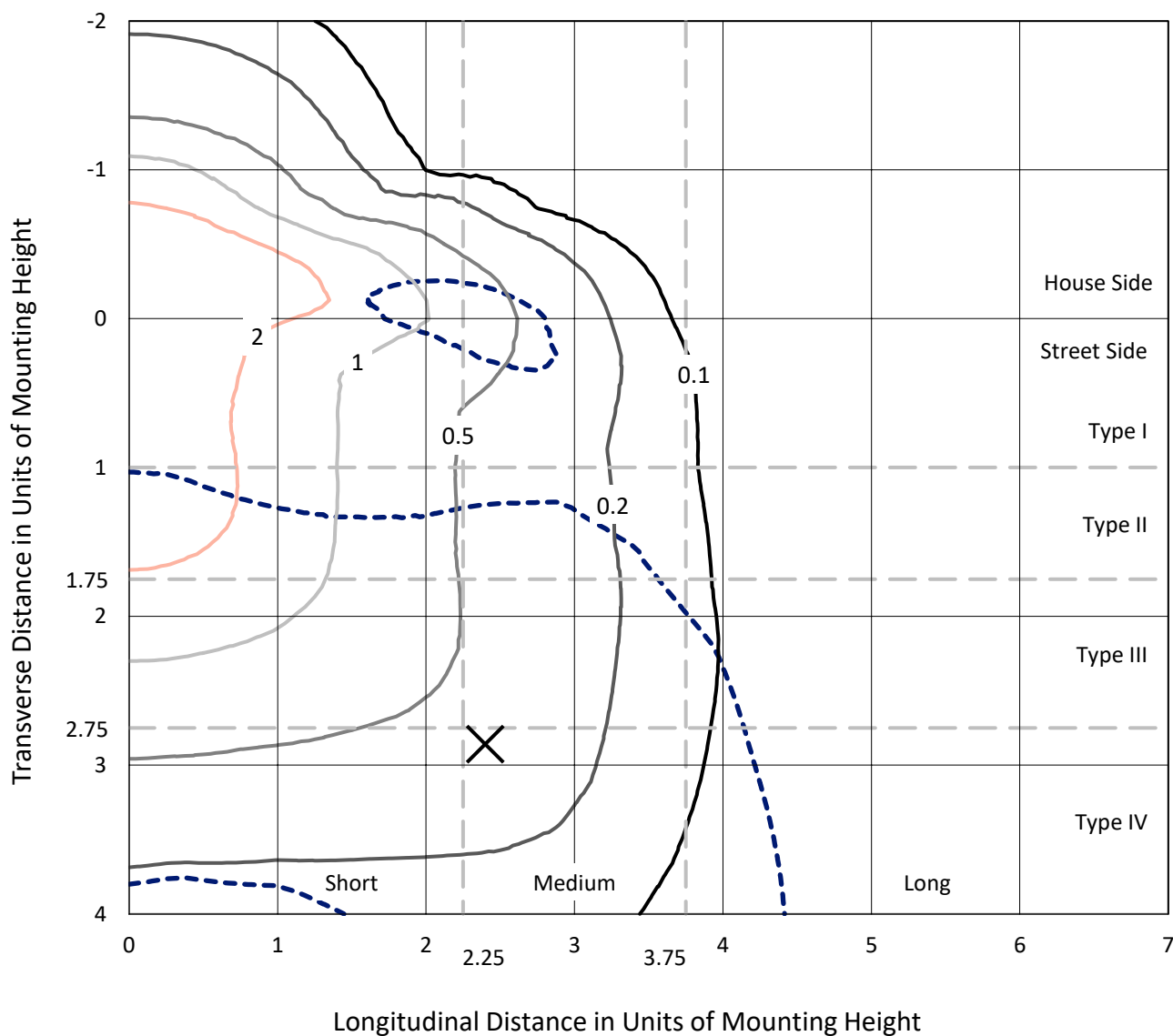
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

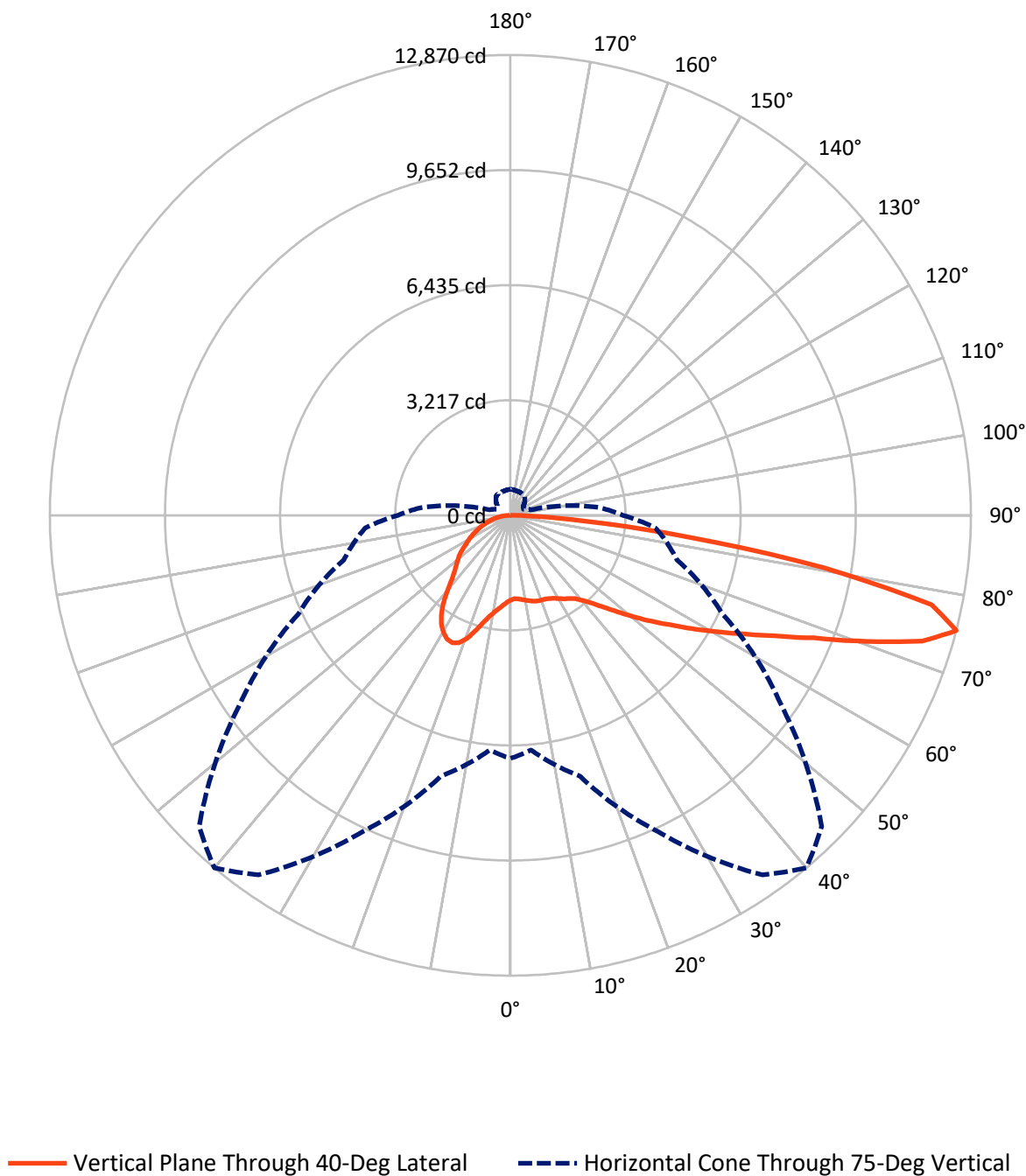
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc  
Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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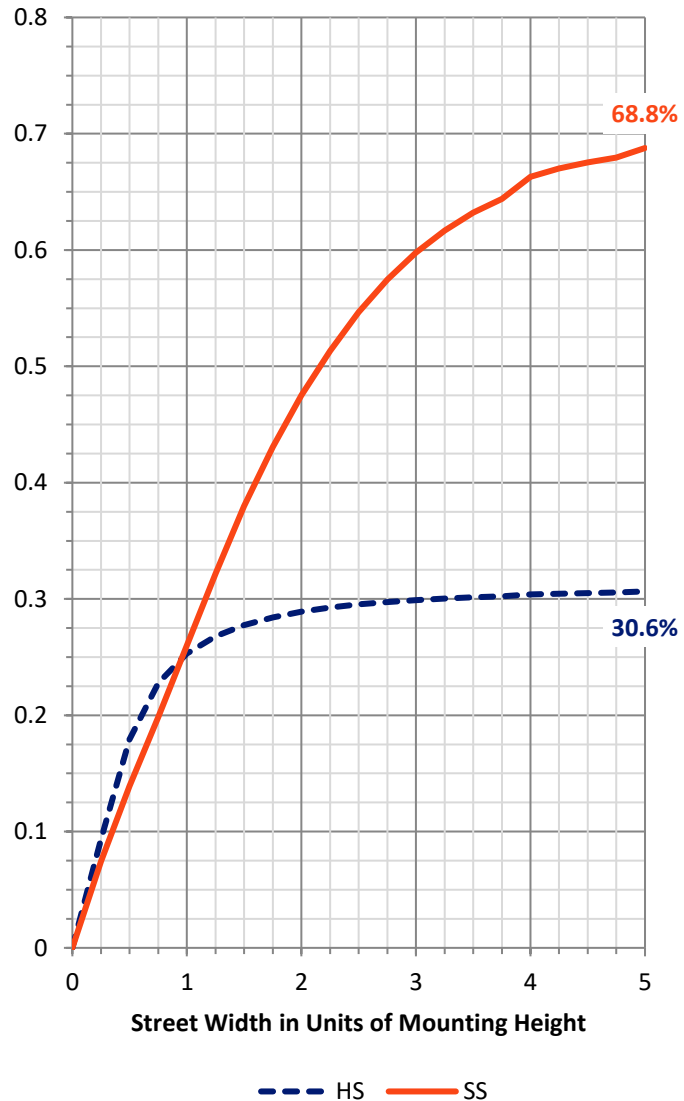
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6406.5   | 0.0    | 6406.5  |
|                    | % Fixture | 31.0     | 0.0    | 31.0    |
| <b>Street Side</b> | Lumens    | 14270.8  | 0.0    | 14270.8 |
|                    | % Fixture | 69.0     | 0.0    | 69.0    |
| <b>Total</b>       | Lumens    | 20677.3  | 0.0    | 20677.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 236.0   | 1.1       |
| 10°-20°   | 792.4   | 3.8       |
| 20°-30°   | 1446.9  | 7.0       |
| 30°-40°   | 2052.1  | 9.9       |
| 40°-50°   | 2771.0  | 13.4      |
| 50°-60°   | 3727.7  | 18.0      |
| 60°-70°   | 4731.3  | 22.9      |
| 70°-80°   | 4293.9  | 20.8      |
| 80°-90°   | 625.9   | 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°    | 20677.3 | 100.0     |
| 0°-180°   | 20677.3 | 100.0     |

**Coefficient of Utilization**



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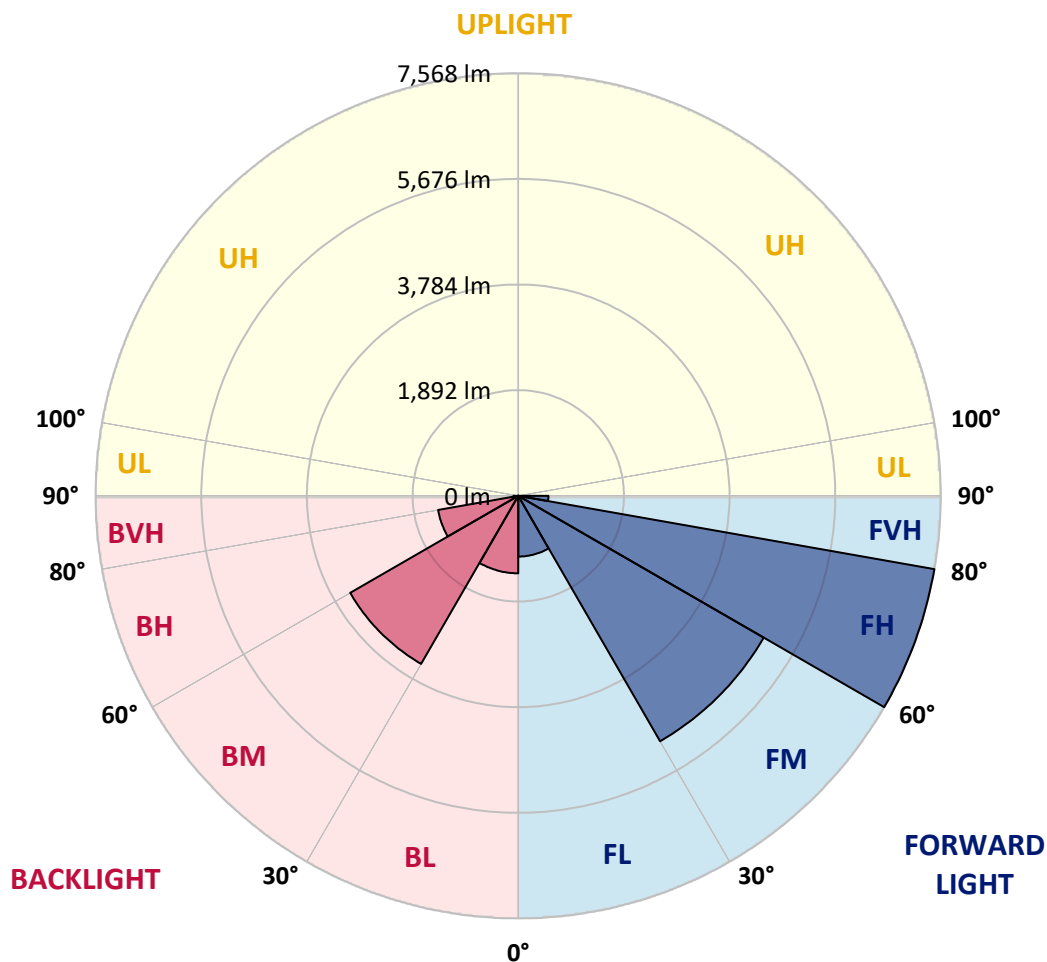
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|--------|-----------|-------------------------|------|----------|
|      |             |        |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1087.7 | 5.3       |                         |      |          |
| FM   | (30°-60°)   | 5075.8 | 24.5      |                         |      |          |
| FH   | (60°-80°)   | 7567.6 | 36.6      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 539.7  | 2.6       |                         |      | G4/750   |
| BL   | (0°-30°)    | 1387.7 | 6.7       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 3475.0 | 16.8      | B3/5000                 |      |          |
| BH   | (60°-80°)   | 1457.7 | 7.0       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 86.2   | 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-G4**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°     | 25°     | 35°     | 40°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0°    | 2364.5 | 2364.5 | 2364.5  | 2364.5  | 2364.5  | 2364.5  | 2364.5  | 2364.5 | 2364.5 | 2364.5 | 2364.5 |
| 2.5°  | 2328.3 | 2341.4 | 2338.1  | 2333.8  | 2333.8  | 2334.8  | 2333.8  | 2341.4 | 2349.1 | 2356.8 | 2368.9 |
| 5°    | 2352.4 | 2365.6 | 2359.0  | 2353.5  | 2349.1  | 2348.1  | 2344.8  | 2343.7 | 2348.1 | 2357.9 | 2374.3 |
| 7.5°  | 2399.5 | 2412.7 | 2402.9  | 2393.0  | 2384.3  | 2379.8  | 2375.4  | 2368.9 | 2365.6 | 2371.0 | 2394.1 |
| 10°   | 2452.2 | 2465.3 | 2453.3  | 2435.8  | 2421.5  | 2416.0  | 2411.6  | 2405.1 | 2400.7 | 2403.9 | 2429.1 |
| 12.5° | 2504.9 | 2518.0 | 2501.6  | 2477.4  | 2458.8  | 2455.5  | 2450.1  | 2447.8 | 2446.8 | 2445.6 | 2470.9 |
| 15°   | 2554.2 | 2565.2 | 2544.4  | 2515.9  | 2496.1  | 2490.6  | 2485.1  | 2488.4 | 2493.9 | 2500.5 | 2529.0 |
| 17.5° | 2592.6 | 2603.6 | 2572.9  | 2535.5  | 2516.9  | 2514.7  | 2511.5  | 2522.4 | 2537.8 | 2554.2 | 2589.3 |
| 20°   | 2627.7 | 2638.7 | 2599.2  | 2548.8  | 2526.8  | 2526.8  | 2527.9  | 2550.9 | 2572.9 | 2596.9 | 2645.2 |
| 22.5° | 2677.0 | 2685.8 | 2637.5  | 2568.4  | 2536.7  | 2538.8  | 2547.6  | 2570.7 | 2598.1 | 2631.0 | 2697.9 |
| 25°   | 2750.5 | 2757.1 | 2697.9  | 2605.8  | 2569.6  | 2576.1  | 2583.8  | 2594.8 | 2621.1 | 2659.5 | 2749.5 |
| 27.5° | 2869.0 | 2874.4 | 2796.6  | 2671.6  | 2616.7  | 2627.7  | 2638.7  | 2631.0 | 2643.1 | 2676.0 | 2791.1 |
| 30°   | 3035.6 | 3038.9 | 2940.2  | 2774.7  | 2696.8  | 2702.3  | 2704.5  | 2672.7 | 2649.6 | 2676.0 | 2820.7 |
| 32.5° | 3233.1 | 3231.9 | 3114.7  | 2899.6  | 2787.8  | 2782.4  | 2763.7  | 2701.2 | 2647.5 | 2670.4 | 2847.0 |
| 35°   | 3539.0 | 3527.0 | 3375.6  | 3075.1  | 2890.9  | 2856.9  | 2813.0  | 2733.0 | 2658.4 | 2665.0 | 2870.1 |
| 37.5° | 4045.7 | 4008.5 | 3799.0  | 3362.5  | 3044.5  | 2957.8  | 2893.1  | 2784.5 | 2682.5 | 2662.7 | 2897.5 |
| 40°   | 4617.1 | 4570.0 | 4339.6  | 3756.2  | 3274.8  | 3135.5  | 3031.2  | 2858.0 | 2722.0 | 2672.7 | 2938.1 |
| 42.5° | 5294.8 | 5227.9 | 4980.1  | 4220.1  | 3566.5  | 3364.7  | 3207.8  | 2951.2 | 2780.1 | 2704.5 | 2992.9 |
| 45°   | 6127.2 | 6038.4 | 5687.5  | 4743.2  | 3933.8  | 3665.2  | 3455.7  | 3092.7 | 2869.0 | 2765.9 | 3075.1 |
| 47.5° | 6968.5 | 6990.4 | 6491.3  | 5342.0  | 4374.7  | 4035.8  | 3766.1  | 3305.4 | 2998.3 | 2864.6 | 3207.8 |
| 50°   | 7862.3 | 7877.5 | 7290.8  | 6005.5  | 4874.8  | 4454.8  | 4114.8  | 3543.4 | 3178.2 | 3005.0 | 3406.4 |
| 52.5° | 8559.7 | 8561.9 | 8016.8  | 6699.7  | 5395.7  | 4915.4  | 4490.9  | 3815.5 | 3386.6 | 3191.4 | 3670.6 |
| 55°   | 8996.2 | 8990.7 | 8525.7  | 7356.6  | 5994.5  | 5399.1  | 4907.7  | 4124.7 | 3641.0 | 3410.7 | 4002.9 |
| 57.5° | 9313.2 | 9296.8 | 8876.7  | 7921.4  | 6632.8  | 5970.4  | 5379.3  | 4475.7 | 3941.5 | 3671.8 | 4440.5 |
| 60°   | 9433.8 | 9424.0 | 9114.6  | 8409.5  | 7304.0  | 6602.1  | 5923.3  | 4868.2 | 4282.6 | 3979.9 | 5003.1 |
| 62.5° | 9479.8 | 9498.5 | 9348.2  | 8882.1  | 8022.4  | 7301.8  | 6520.9  | 5337.6 | 4666.4 | 4328.7 | 5596.4 |
| 65°   | 9642.2 | 9676.2 | 9645.5  | 9500.7  | 8833.9  | 8121.1  | 7313.9  | 5895.8 | 5085.4 | 4702.6 | 6216.1 |
| 67.5° | 9963.5 | 9997.5 | 10010.7 | 10241.0 | 9825.3  | 9142.1  | 8303.1  | 6591.2 | 5575.6 | 5090.9 | 6682.2 |
| 70°   | 9955.8 | 9946.0 | 10178.5 | 10829.8 | 11066.8 | 10555.8 | 9636.6  | 7446.6 | 6160.1 | 5413.3 | 6741.4 |
| 72.5° | 9062.0 | 8983.0 | 9532.5  | 10823.3 | 12099.8 | 12031.9 | 11265.3 | 8549.8 | 6664.7 | 5452.8 | 5849.8 |
| 75°   | 6798.4 | 6587.9 | 7558.5  | 9754.0  | 12272.0 | 12869.7 | 12300.5 | 9234.2 | 6545.1 | 4817.8 | 4070.9 |
| 77.5° | 2907.3 | 2695.6 | 3839.5  | 7220.6  | 10983.4 | 12030.7 | 11350.8 | 8056.3 | 5224.6 | 3185.9 | 1999.3 |
| 80°   | 761.1  | 760.0  | 1160.3  | 3273.6  | 7469.6  | 8884.4  | 7794.2  | 5202.7 | 2985.2 | 1138.4 | 551.7  |
| 82.5° | 314.8  | 307.1  | 426.6   | 1273.3  | 3649.8  | 4985.6  | 4068.7  | 2320.6 | 1078.1 | 308.2  | 183.2  |
| 85°   | 117.4  | 116.2  | 207.3   | 439.7   | 1287.5  | 2056.4  | 1488.2  | 593.3  | 268.7  | 150.3  | 82.2   |
| 87.5° | 32.9   | 31.8   | 45.0    | 152.4   | 313.6   | 476.0   | 254.4   | 97.6   | 75.6   | 59.2   | 24.1   |
| 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°    | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 | 2364.5 |
| 2.5°  | 2372.2 | 2377.6 | 2387.5 | 2395.2 | 2405.1 | 2416.0 | 2431.4 | 2441.2 | 2451.1 | 2457.7 | 2453.3 |
| 5°    | 2382.0 | 2394.1 | 2419.3 | 2444.5 | 2474.1 | 2501.6 | 2533.4 | 2556.5 | 2575.0 | 2580.5 | 2582.7 |
| 7.5°  | 2403.9 | 2423.7 | 2466.5 | 2509.2 | 2556.5 | 2601.3 | 2647.5 | 2686.9 | 2718.7 | 2730.8 | 2731.8 |
| 10°   | 2442.4 | 2468.7 | 2529.0 | 2589.3 | 2651.8 | 2720.9 | 2780.1 | 2837.2 | 2882.1 | 2900.7 | 2901.9 |
| 12.5° | 2490.6 | 2523.5 | 2602.5 | 2685.8 | 2772.4 | 2867.8 | 2944.6 | 3014.8 | 3070.8 | 3096.0 | 3096.0 |
| 15°   | 2553.1 | 2595.9 | 2696.8 | 2808.6 | 2935.9 | 3068.5 | 3166.1 | 3244.0 | 3306.5 | 3337.3 | 3335.0 |
| 17.5° | 2621.1 | 2678.1 | 2805.3 | 2974.2 | 3156.3 | 3330.6 | 3444.7 | 3501.7 | 3566.5 | 3596.1 | 3595.0 |
| 20°   | 2686.9 | 2757.1 | 2939.2 | 3184.8 | 3427.2 | 3612.5 | 3704.7 | 3720.0 | 3724.3 | 3727.7 | 3736.4 |
| 22.5° | 2754.9 | 2849.2 | 3107.0 | 3450.3 | 3710.1 | 3838.4 | 3851.6 | 3785.8 | 3693.7 | 3650.9 | 3662.9 |
| 25°   | 2829.5 | 2954.5 | 3326.3 | 3743.0 | 3953.6 | 3968.9 | 3868.0 | 3707.9 | 3533.6 | 3453.5 | 3465.5 |
| 27.5° | 2901.9 | 3076.2 | 3589.4 | 4022.7 | 4129.1 | 3994.2 | 3777.0 | 3550.0 | 3339.4 | 3255.0 | 3264.8 |
| 30°   | 2974.2 | 3215.5 | 3880.1 | 4267.3 | 4209.2 | 3931.7 | 3633.3 | 3380.0 | 3168.4 | 3079.5 | 3089.4 |
| 32.5° | 3047.7 | 3377.8 | 4214.6 | 4443.8 | 4194.9 | 3799.0 | 3454.6 | 3189.2 | 3002.7 | 2909.6 | 2921.6 |
| 35°   | 3131.1 | 3577.5 | 4531.5 | 4540.3 | 4099.5 | 3603.8 | 3218.8 | 2961.1 | 2798.8 | 2724.2 | 2740.6 |
| 37.5° | 3239.6 | 3830.7 | 4811.2 | 4564.4 | 3932.7 | 3317.5 | 2926.0 | 2691.3 | 2557.5 | 2523.5 | 2547.6 |
| 40°   | 3374.5 | 4135.7 | 5025.1 | 4526.1 | 3686.0 | 2969.8 | 2605.8 | 2418.2 | 2342.5 | 2350.2 | 2376.6 |
| 42.5° | 3550.0 | 4476.7 | 5175.3 | 4427.4 | 3342.7 | 2611.2 | 2325.0 | 2241.7 | 2277.9 | 2308.5 | 2337.1 |
| 45°   | 3778.2 | 4830.9 | 5268.5 | 4259.6 | 2954.5 | 2307.5 | 2159.4 | 2179.1 | 2206.5 | 2209.8 | 2231.7 |
| 47.5° | 4069.9 | 5189.6 | 5330.0 | 4006.2 | 2558.6 | 2093.6 | 2054.1 | 2058.5 | 2053.0 | 2030.0 | 2047.5 |
| 50°   | 4433.9 | 5538.3 | 5384.7 | 3670.6 | 2221.9 | 1959.8 | 1907.1 | 1891.8 | 1816.1 | 1741.6 | 1751.4 |
| 52.5° | 4848.5 | 5858.6 | 5407.8 | 3253.9 | 1959.8 | 1848.0 | 1762.4 | 1665.9 | 1524.4 | 1501.4 | 1509.0 |
| 55°   | 5309.1 | 6154.7 | 5348.6 | 2741.8 | 1739.3 | 1704.3 | 1574.8 | 1458.6 | 1443.3 | 1423.5 | 1426.8 |
| 57.5° | 5859.6 | 6473.8 | 5227.9 | 2170.3 | 1513.4 | 1536.5 | 1410.4 | 1423.5 | 1396.0 | 1365.4 | 1359.9 |
| 60°   | 6461.7 | 6804.0 | 5016.2 | 1649.4 | 1279.8 | 1327.0 | 1367.6 | 1366.5 | 1358.8 | 1333.6 | 1324.8 |
| 62.5° | 7003.5 | 7021.0 | 4599.6 | 1263.4 | 1074.7 | 1164.7 | 1275.5 | 1274.4 | 1267.8 | 1253.6 | 1248.0 |
| 65°   | 7326.0 | 6988.1 | 3904.2 | 994.7  | 905.9  | 1030.9 | 1150.5 | 1159.2 | 1160.3 | 1159.2 | 1159.2 |
| 67.5° | 7268.9 | 6603.3 | 2950.2 | 791.8  | 766.6  | 894.9  | 1026.5 | 1038.5 | 1047.3 | 1049.5 | 1051.8 |
| 70°   | 6624.1 | 5757.6 | 1923.6 | 631.7  | 642.7  | 775.4  | 909.2  | 921.3  | 928.9  | 937.7  | 942.1  |
| 72.5° | 5163.2 | 4233.2 | 1101.1 | 511.1  | 534.1  | 672.3  | 792.9  | 807.2  | 811.6  | 828.0  | 834.6  |
| 75°   | 3146.4 | 2489.5 | 594.4  | 402.5  | 438.7  | 574.7  | 677.7  | 694.2  | 701.9  | 721.6  | 723.9  |
| 77.5° | 1495.9 | 1078.1 | 338.9  | 313.6  | 353.1  | 469.3  | 572.5  | 591.1  | 570.3  | 581.3  | 572.5  |
| 80°   | 505.5  | 400.3  | 213.8  | 239.0  | 269.8  | 366.3  | 458.4  | 477.0  | 433.2  | 431.0  | 426.6  |
| 82.5° | 176.6  | 162.4  | 136.0  | 159.0  | 174.4  | 262.1  | 346.6  | 370.6  | 322.5  | 321.3  | 306.0  |
| 85°   | 69.1   | 65.8   | 75.6   | 86.6   | 104.1  | 161.2  | 228.1  | 240.2  | 198.5  | 160.1  | 158.0  |
| 87.5° | 14.2   | 15.4   | 18.7   | 19.8   | 31.8   | 56.0   | 82.2   | 100.9  | 80.1   | 68.0   | 62.5   |
| 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)