

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: P884460

Luminaire Tested: **NAV-SB5B-740-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5B-740-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 4000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23325 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

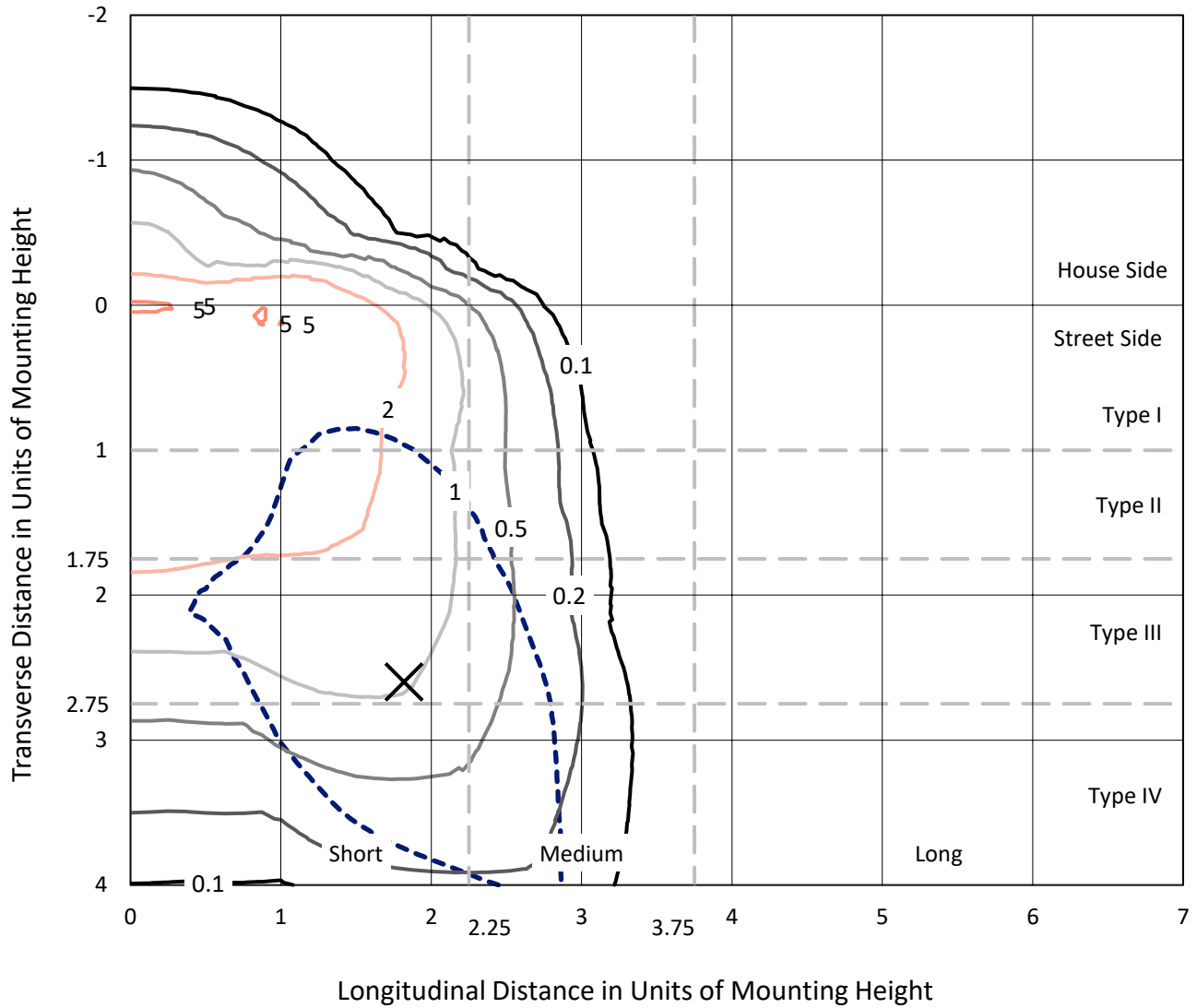
Input Watts (W): 182.7
Input Voltage (V): 120.0
Input Current (Ain): 1.547
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 11.125
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

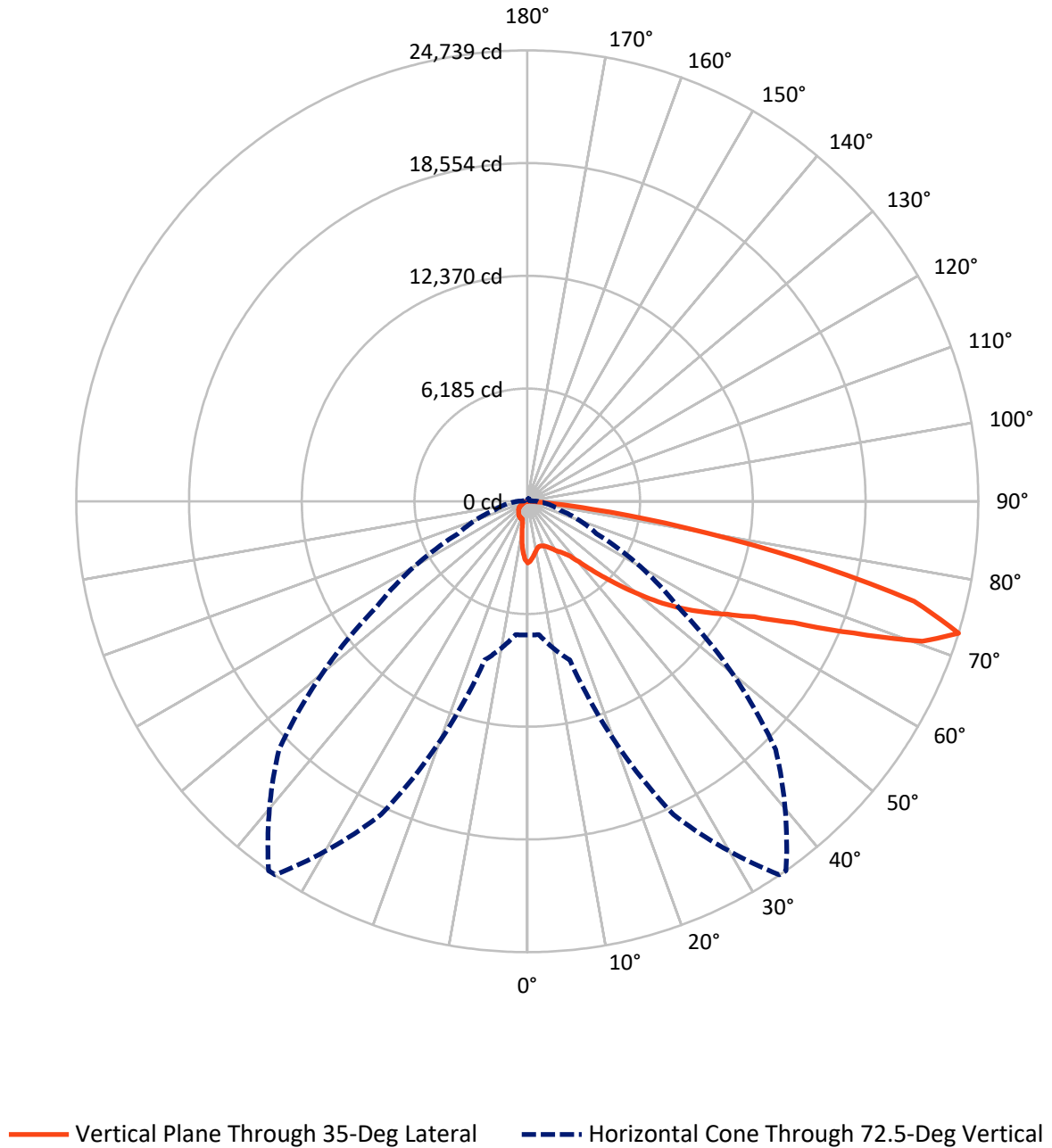
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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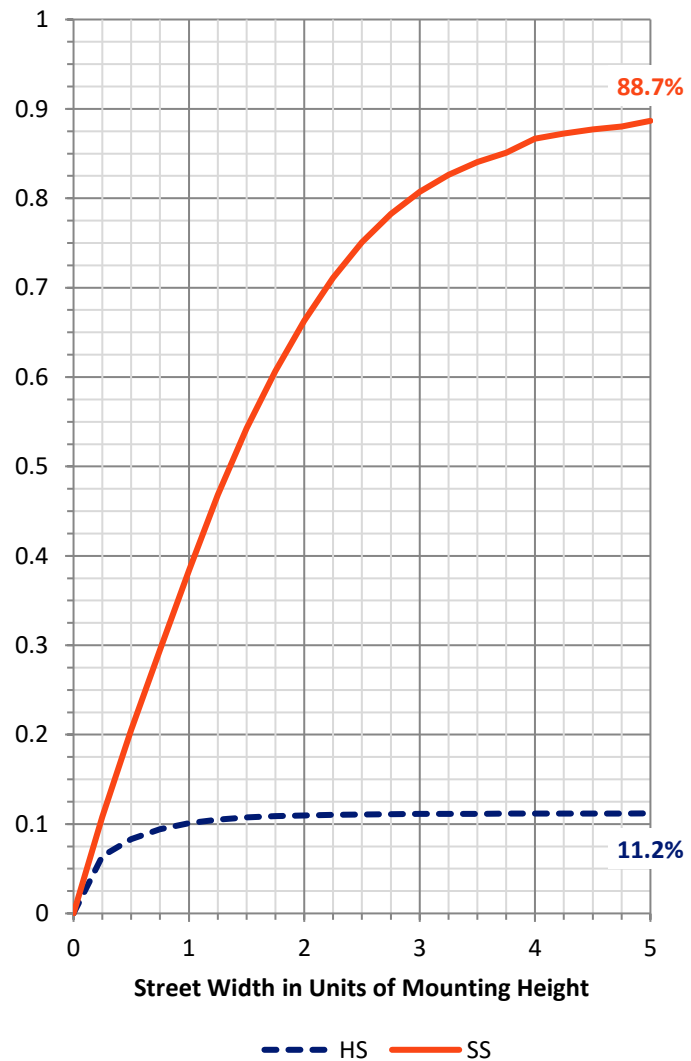
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2625.1 | 0.0 | 2625.1 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 20699.9 | 0.0 | 20699.9 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 23325.0 | 0.0 | 23325.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 277.8 | 1.2 |
| 10°-20° | 649.9 | 2.8 |
| 20°-30° | 1055.7 | 4.5 |
| 30°-40° | 1761.4 | 7.6 |
| 40°-50° | 3332.6 | 14.3 |
| 50°-60° | 5295.5 | 22.7 |
| 60°-70° | 6550.9 | 28.1 |
| 70°-80° | 4072.1 | 17.5 |
| 80°-90° | 329.1 | 1.4 |
| 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° | 23325.0 | 100.0 |
| 0°-180° | 23325.0 | 100.0 |

Coefficient of Utilization



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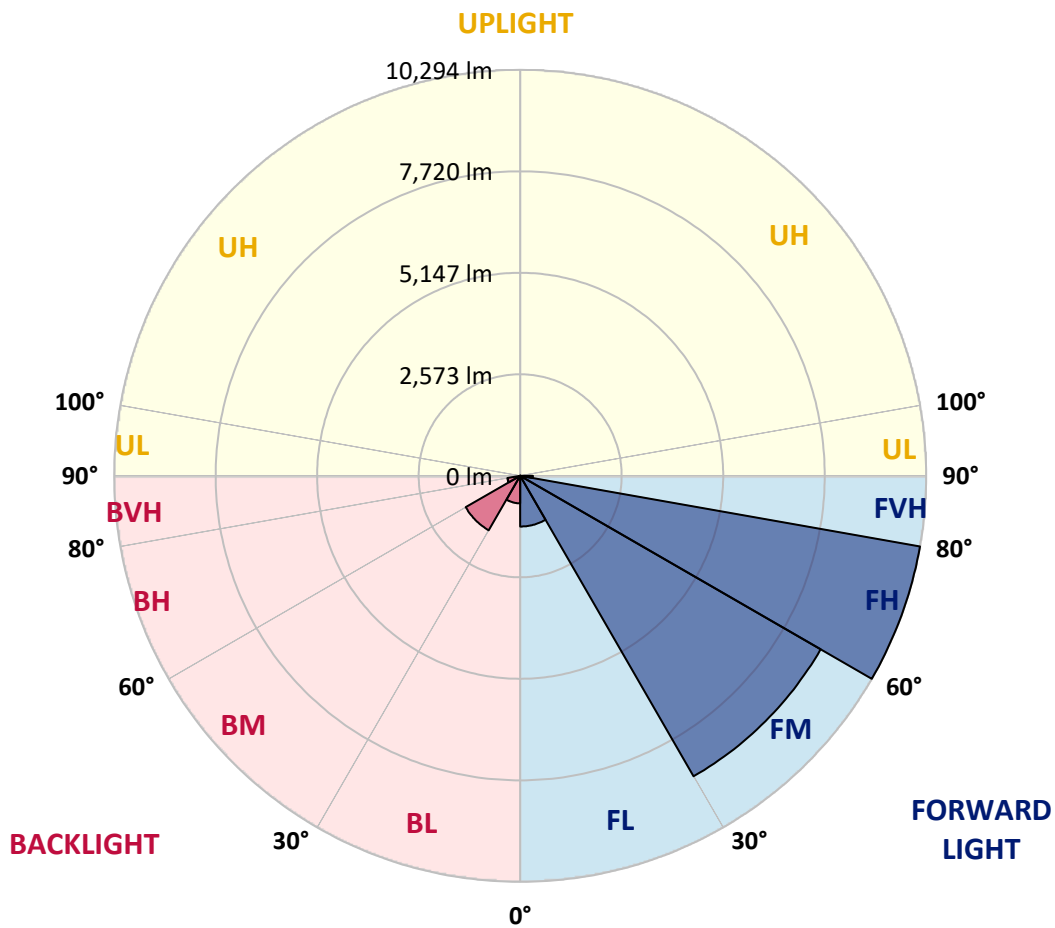
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1285.8 | 5.5 | | | |
| FM (30°-60°) | 8795.9 | 37.7 | | | |
| FH (60°-80°) | 10293.6 | 44.1 | | | G4/12000 |
| FVH (80°-90°) | 324.6 | 1.4 | | | G3/500 |
| BL (0°-30°) | 697.5 | 3.0 | B2/1000 | | |
| BM (30°-60°) | 1593.7 | 6.8 | B2/2500 | | |
| BH (60°-80°) | 329.4 | 1.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.5 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 |
| 2.5° | 3230.2 | 3257.5 | 3262.6 | 3271.2 | 3271.2 | 3281.4 | 3298.5 | 3322.5 | 3361.8 | 3382.3 | 3396.0 |
| 5° | 2977.2 | 2997.7 | 3023.4 | 3043.9 | 3083.2 | 3088.3 | 3155.0 | 3219.9 | 3310.5 | 3378.9 | 3426.7 |
| 7.5° | 2722.6 | 2746.5 | 2780.7 | 2830.2 | 2881.5 | 2896.9 | 2997.7 | 3107.1 | 3250.7 | 3378.9 | 3459.2 |
| 10° | 2543.1 | 2544.8 | 2575.6 | 2625.2 | 2707.2 | 2726.0 | 2849.0 | 3004.6 | 3184.0 | 3358.4 | 3490.0 |
| 12.5° | 2442.3 | 2454.2 | 2467.9 | 2505.5 | 2584.1 | 2596.1 | 2727.7 | 2910.6 | 3117.4 | 3346.4 | 3525.8 |
| 15° | 2442.3 | 2450.8 | 2459.4 | 2478.2 | 2541.4 | 2551.7 | 2667.9 | 2850.8 | 3083.2 | 3351.5 | 3584.0 |
| 17.5° | 2467.9 | 2481.6 | 2474.8 | 2497.0 | 2563.6 | 2570.5 | 2673.0 | 2833.7 | 3081.5 | 3384.0 | 3672.8 |
| 20° | 2529.4 | 2539.7 | 2526.0 | 2539.7 | 2606.4 | 2620.0 | 2726.0 | 2866.1 | 3110.5 | 3440.4 | 3783.9 |
| 22.5° | 2626.9 | 2632.0 | 2599.5 | 2609.8 | 2678.1 | 2695.2 | 2818.3 | 2958.4 | 3180.6 | 3531.0 | 3932.6 |
| 25° | 2749.9 | 2760.2 | 2710.6 | 2722.6 | 2787.5 | 2808.0 | 2949.9 | 3096.9 | 3291.7 | 3655.7 | 4122.3 |
| 27.5° | 2891.8 | 2896.9 | 2854.2 | 2852.5 | 2936.2 | 2965.3 | 3108.8 | 3267.8 | 3440.4 | 3813.0 | 4361.6 |
| 30° | 3054.1 | 3069.5 | 3028.5 | 3021.7 | 3127.6 | 3151.6 | 3293.4 | 3478.0 | 3659.2 | 4048.8 | 4701.7 |
| 32.5° | 3182.3 | 3194.3 | 3170.4 | 3187.4 | 3295.1 | 3313.9 | 3517.3 | 3775.4 | 4002.7 | 4383.8 | 5164.9 |
| 35° | 3366.9 | 3373.7 | 3319.0 | 3349.8 | 3472.9 | 3520.7 | 3823.2 | 4192.4 | 4435.1 | 4804.2 | 5769.9 |
| 37.5° | 4035.2 | 4035.2 | 3802.7 | 3650.6 | 3768.5 | 3811.3 | 4242.0 | 4717.1 | 4968.3 | 5368.2 | 6532.1 |
| 40° | 4959.8 | 4944.4 | 4604.3 | 4293.2 | 4277.8 | 4361.6 | 4838.4 | 5378.5 | 5657.1 | 6045.0 | 7390.1 |
| 42.5° | 5945.9 | 5922.0 | 5458.8 | 5151.2 | 5099.9 | 5129.0 | 5527.2 | 6193.7 | 6477.4 | 6870.5 | 8313.0 |
| 45° | 6821.0 | 6814.1 | 6390.3 | 5976.7 | 5884.4 | 5976.7 | 6386.9 | 7147.4 | 7350.8 | 7764.4 | 9234.2 |
| 47.5° | 7554.2 | 7554.2 | 7244.8 | 6974.8 | 6926.9 | 6981.6 | 7550.7 | 8205.3 | 8186.5 | 8716.3 | 10131.5 |
| 50° | 8398.5 | 8391.6 | 8097.7 | 7981.4 | 8031.0 | 8107.9 | 8890.7 | 9319.7 | 9051.3 | 9651.2 | 10933.0 |
| 52.5° | 8989.8 | 9030.8 | 8930.0 | 8911.2 | 9164.1 | 9297.4 | 10251.1 | 10410.1 | 9825.5 | 10538.2 | 11532.9 |
| 55° | 9458.1 | 9505.9 | 9622.2 | 9753.8 | 10240.9 | 10415.2 | 11568.8 | 11444.0 | 10473.3 | 11307.3 | 11878.2 |
| 57.5° | 10121.2 | 10052.9 | 10232.3 | 10492.1 | 11280.0 | 11490.2 | 12845.5 | 12419.9 | 10994.6 | 11931.1 | 11915.8 |
| 60° | 10926.2 | 10936.4 | 10967.2 | 11295.4 | 12317.4 | 12587.4 | 14103.4 | 13342.8 | 11329.5 | 12314.0 | 11498.7 |
| 62.5° | 11893.5 | 11908.9 | 11972.2 | 12476.3 | 13710.3 | 13965.0 | 15443.3 | 14098.3 | 11483.4 | 12206.3 | 10422.0 |
| 65° | 11826.9 | 11891.8 | 12597.7 | 14322.2 | 15827.9 | 16079.1 | 17007.1 | 14628.1 | 11250.9 | 11221.9 | 8485.6 |
| 67.5° | 10774.1 | 10880.0 | 12061.0 | 16526.9 | 19020.4 | 19300.7 | 18897.4 | 14732.3 | 10247.7 | 8726.6 | 5535.7 |
| 70° | 9393.1 | 9430.7 | 10851.0 | 18509.4 | 22717.2 | 23000.9 | 20589.4 | 13585.5 | 7776.3 | 4867.5 | 2479.9 |
| 72.5° | 7335.4 | 7343.9 | 9010.3 | 18969.2 | 24723.7 | 24739.0 | 19261.4 | 10085.3 | 4182.1 | 1869.7 | 861.4 |
| 75° | 5240.1 | 5188.8 | 6034.8 | 15383.5 | 21751.6 | 21925.9 | 14440.1 | 4730.8 | 1598.0 | 883.6 | 429.0 |
| 77.5° | 2809.7 | 2866.1 | 3414.8 | 9123.1 | 15026.3 | 15323.7 | 7878.9 | 1363.9 | 813.5 | 601.6 | 283.7 |
| 80° | 868.2 | 916.1 | 1399.7 | 4177.0 | 8511.3 | 8690.7 | 2920.8 | 606.7 | 567.4 | 429.0 | 186.3 |
| 82.5° | 273.5 | 283.7 | 652.9 | 1755.2 | 3532.7 | 3614.7 | 846.0 | 343.5 | 388.0 | 283.7 | 109.4 |
| 85° | 78.6 | 80.3 | 290.5 | 654.6 | 873.3 | 890.4 | 237.6 | 133.3 | 222.2 | 176.0 | 56.4 |
| 87.5° | 8.5 | 27.3 | 109.4 | 109.4 | 76.9 | 75.2 | 25.6 | 29.1 | 63.2 | 22.2 | 10.3 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 | 3380.6 |
| 2.5° | 3387.4 | 3389.1 | 3366.9 | 3329.3 | 3288.3 | 3254.1 | 3211.4 | 3177.2 | 3153.3 | 3146.4 | 3158.4 |
| 5° | 3411.3 | 3399.4 | 3336.1 | 3221.6 | 3084.9 | 2967.0 | 2835.4 | 2731.1 | 2662.8 | 2633.7 | 2644.0 |
| 7.5° | 3447.2 | 3413.0 | 3274.6 | 3049.0 | 2787.5 | 2555.1 | 2319.2 | 2136.4 | 2020.1 | 1962.0 | 1970.6 |
| 10° | 3478.0 | 3409.6 | 3172.1 | 2799.5 | 2399.6 | 2047.5 | 1729.6 | 1509.1 | 1386.1 | 1328.0 | 1329.7 |
| 12.5° | 3507.0 | 3407.9 | 3038.8 | 2503.8 | 1962.0 | 1531.3 | 1235.7 | 1126.3 | 1092.1 | 1080.1 | 1076.7 |
| 15° | 3561.7 | 3413.0 | 2871.3 | 2165.4 | 1526.2 | 1157.1 | 1049.4 | 1047.7 | 1054.5 | 1051.1 | 1049.4 |
| 17.5° | 3636.9 | 3418.2 | 2681.6 | 1806.5 | 1177.6 | 1020.3 | 1015.2 | 1030.6 | 1040.8 | 1035.7 | 1034.0 |
| 20° | 3734.4 | 3438.7 | 2479.9 | 1451.0 | 1011.8 | 986.1 | 998.1 | 1011.8 | 1020.3 | 1011.8 | 1010.1 |
| 22.5° | 3871.1 | 3474.6 | 2259.4 | 1165.6 | 958.8 | 965.6 | 975.9 | 991.3 | 999.8 | 987.9 | 986.1 |
| 25° | 4038.6 | 3531.0 | 2042.4 | 1013.5 | 933.2 | 941.7 | 957.1 | 974.2 | 984.4 | 972.5 | 970.8 |
| 27.5° | 4255.6 | 3621.6 | 1842.4 | 979.3 | 907.5 | 912.7 | 934.9 | 960.5 | 974.2 | 958.8 | 958.8 |
| 30° | 4570.1 | 3770.2 | 1669.8 | 994.7 | 892.1 | 880.2 | 910.9 | 946.8 | 962.2 | 948.5 | 946.8 |
| 32.5° | 4987.1 | 3980.5 | 1563.8 | 1018.6 | 885.3 | 842.6 | 871.6 | 917.8 | 943.4 | 934.9 | 934.9 |
| 35° | 5534.0 | 4300.1 | 1522.8 | 1046.0 | 880.2 | 803.3 | 823.8 | 873.3 | 917.8 | 926.3 | 926.3 |
| 37.5° | 6197.2 | 4744.4 | 1534.8 | 1057.9 | 864.8 | 770.8 | 781.1 | 823.8 | 881.9 | 909.2 | 916.1 |
| 40° | 6950.9 | 5262.3 | 1603.1 | 1046.0 | 847.7 | 743.5 | 745.2 | 777.6 | 828.9 | 869.9 | 883.6 |
| 42.5° | 7728.5 | 5867.3 | 1729.6 | 1001.5 | 832.3 | 719.5 | 714.4 | 736.6 | 770.8 | 799.9 | 811.8 |
| 45° | 8468.5 | 6489.4 | 1854.4 | 940.0 | 813.5 | 695.6 | 683.6 | 692.2 | 699.0 | 711.0 | 717.8 |
| 47.5° | 9114.6 | 6926.9 | 1818.5 | 883.6 | 787.9 | 668.3 | 647.7 | 644.3 | 623.8 | 622.1 | 620.4 |
| 50° | 9560.6 | 7022.6 | 1615.1 | 827.2 | 750.3 | 637.5 | 605.0 | 584.5 | 548.6 | 531.5 | 533.2 |
| 52.5° | 9702.5 | 6644.9 | 1319.4 | 770.8 | 688.8 | 596.5 | 550.3 | 517.9 | 473.4 | 458.0 | 456.3 |
| 55° | 9514.5 | 5904.9 | 1054.5 | 702.4 | 603.3 | 541.8 | 490.5 | 447.8 | 411.9 | 393.1 | 393.1 |
| 57.5° | 9054.7 | 4963.2 | 834.0 | 622.1 | 512.7 | 480.3 | 429.0 | 386.3 | 355.5 | 336.7 | 333.3 |
| 60° | 8292.5 | 3941.2 | 659.7 | 526.4 | 437.5 | 413.6 | 360.6 | 333.3 | 305.9 | 283.7 | 278.6 |
| 62.5° | 7135.4 | 2813.2 | 517.9 | 417.0 | 365.7 | 338.4 | 307.6 | 287.1 | 254.7 | 223.9 | 218.8 |
| 65° | 5568.2 | 1721.1 | 399.9 | 305.9 | 294.0 | 280.3 | 261.5 | 242.7 | 203.4 | 172.6 | 167.5 |
| 67.5° | 3512.2 | 815.2 | 285.4 | 230.7 | 232.4 | 225.6 | 217.1 | 201.7 | 172.6 | 145.3 | 141.9 |
| 70° | 1546.7 | 394.8 | 188.0 | 176.0 | 172.6 | 172.6 | 179.5 | 174.3 | 147.0 | 121.3 | 116.2 |
| 72.5° | 526.4 | 211.9 | 140.1 | 133.3 | 124.8 | 123.1 | 150.4 | 145.3 | 117.9 | 94.0 | 88.9 |
| 75° | 275.2 | 141.9 | 102.5 | 95.7 | 75.2 | 90.6 | 119.6 | 112.8 | 83.7 | 61.5 | 56.4 |
| 77.5° | 179.5 | 100.8 | 70.1 | 61.5 | 42.7 | 59.8 | 88.9 | 78.6 | 49.6 | 30.8 | 27.3 |
| 80° | 112.8 | 66.7 | 41.0 | 29.1 | 20.5 | 32.5 | 47.9 | 34.2 | 18.8 | 6.8 | 5.1 |
| 82.5° | 59.8 | 34.2 | 15.4 | 10.3 | 8.5 | 10.3 | 12.0 | 8.5 | 3.4 | 0.0 | 0.0 |
| 85° | 23.9 | 12.0 | 5.1 | 3.4 | 1.7 | 0.0 | 3.4 | 1.7 | 0.0 | 0.0 | 0.0 |
| 87.5° | 8.5 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)