

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: P883950

Luminaire Tested: **NAV-SB4C-740-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883950
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-SB4C-740-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 615mA 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: 24775 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

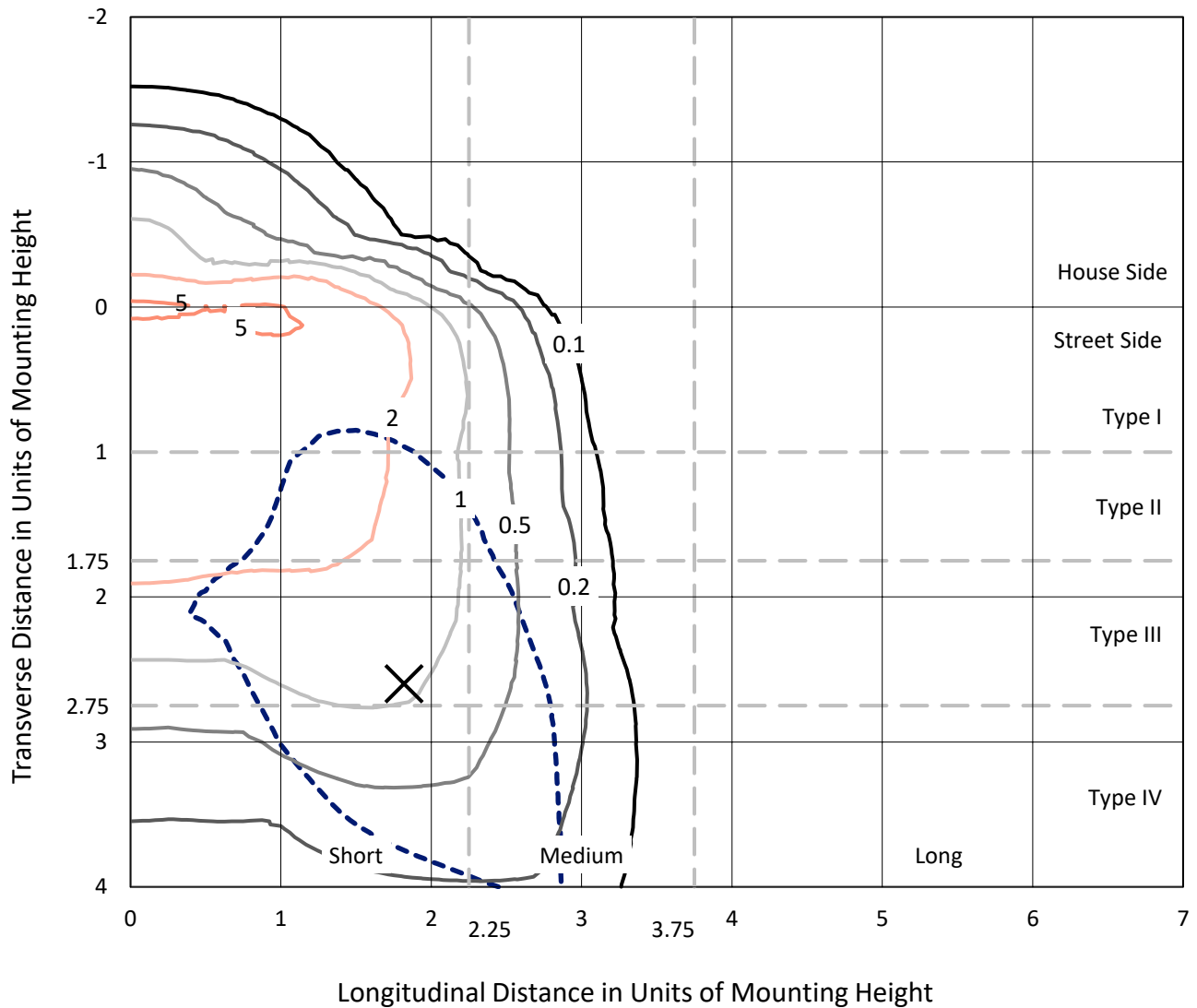
Input Watts (W): 200.7
Input Voltage (V): 120.0
Input Current (Ain): 1.714
Voltage Rise (V): NR
Power Factor: 0.994
Total Harmonic Distortion (THDi): 9.472
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

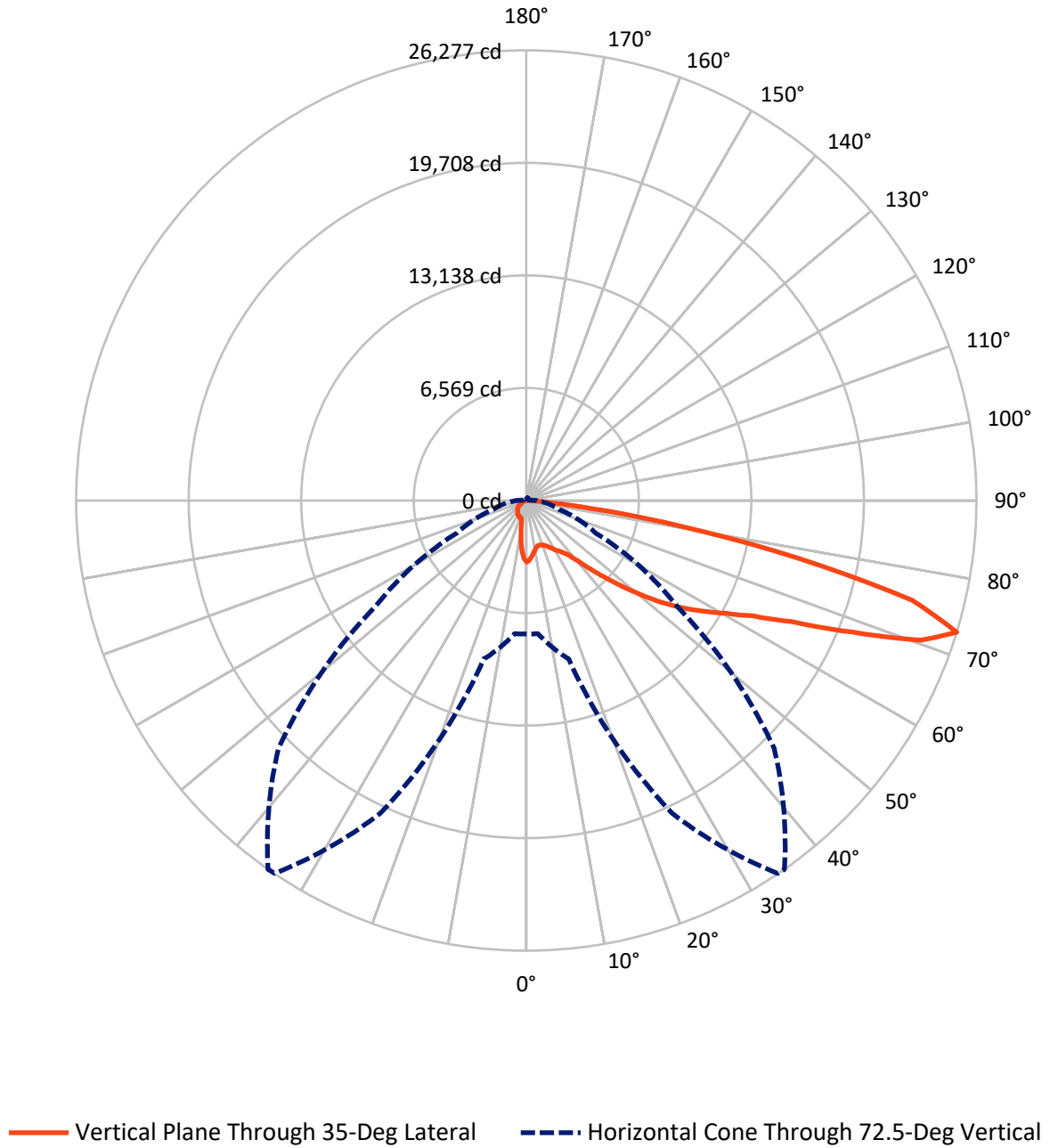
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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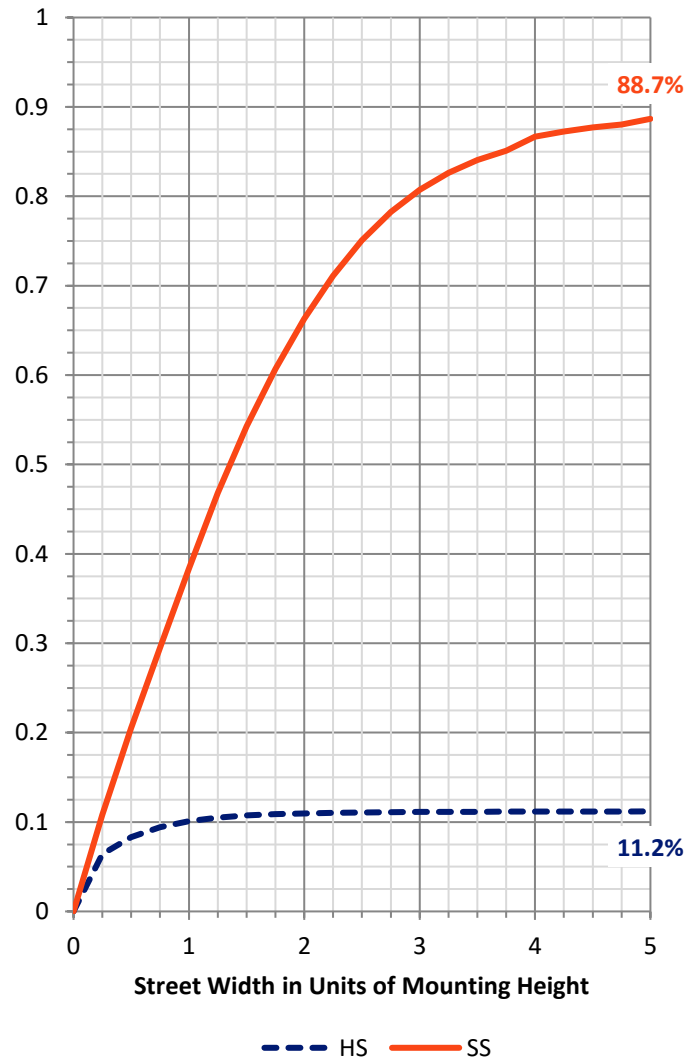
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2788.3 | 0.0 | 2788.3 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 21986.7 | 0.0 | 21986.7 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 24775.0 | 0.0 | 24775.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 295.1 | 1.2 |
| 10°-20° | 690.3 | 2.8 |
| 20°-30° | 1121.3 | 4.5 |
| 30°-40° | 1870.9 | 7.6 |
| 40°-50° | 3539.8 | 14.3 |
| 50°-60° | 5624.7 | 22.7 |
| 60°-70° | 6958.2 | 28.1 |
| 70°-80° | 4325.2 | 17.5 |
| 80°-90° | 349.5 | 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° | 24775.0 | 100.0 |
| 0°-180° | 24775.0 | 100.0 |

Coefficient of Utilization



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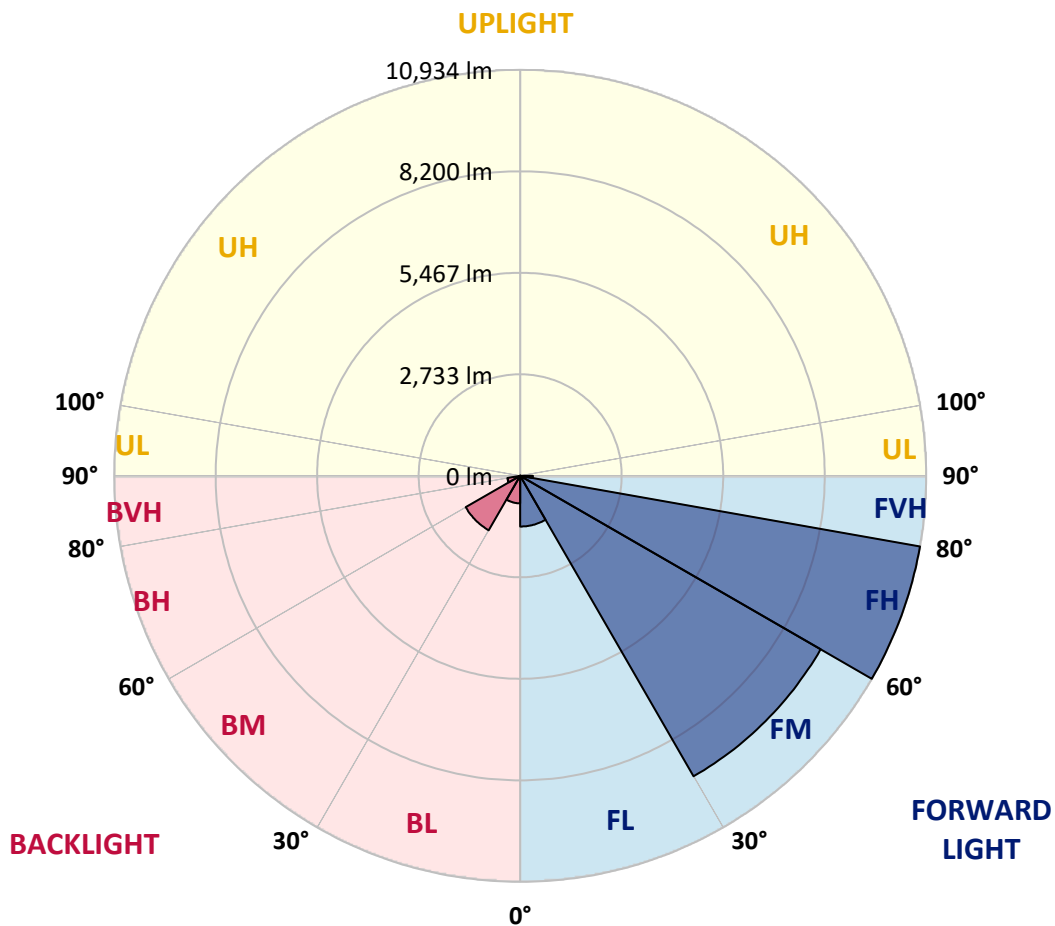
CATALOG NUMBER: NAV-SB4C-740-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1365.7 | 5.5 | | | |
| FM (30°-60°) | 9342.6 | 37.7 | | | |
| FH (60°-80°) | 10933.5 | 44.1 | | | G4/12000 |
| FVH (80°-90°) | 344.8 | 1.4 | | | G3/500 |
| BL (0°-30°) | 740.9 | 3.0 | B2/1000 | | |
| BM (30°-60°) | 1692.8 | 6.8 | B2/2500 | | |
| BH (60°-80°) | 349.9 | 1.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.8 | 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° | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 |
| 2.5° | 3431.0 | 3460.0 | 3465.5 | 3474.5 | 3474.5 | 3485.4 | 3503.6 | 3529.0 | 3570.8 | 3592.5 | 3607.1 |
| 5° | 3162.3 | 3184.1 | 3211.3 | 3233.1 | 3274.9 | 3280.3 | 3351.1 | 3420.1 | 3516.3 | 3588.9 | 3639.7 |
| 7.5° | 2891.8 | 2917.2 | 2953.5 | 3006.2 | 3060.7 | 3077.0 | 3184.1 | 3300.3 | 3452.8 | 3588.9 | 3674.2 |
| 10° | 2701.2 | 2703.0 | 2735.7 | 2788.4 | 2875.5 | 2895.5 | 3026.2 | 3191.4 | 3382.0 | 3567.1 | 3706.9 |
| 12.5° | 2594.1 | 2606.8 | 2621.3 | 2661.3 | 2744.8 | 2757.5 | 2897.3 | 3091.5 | 3311.2 | 3554.4 | 3745.0 |
| 15° | 2594.1 | 2603.2 | 2612.3 | 2632.2 | 2699.4 | 2710.3 | 2833.7 | 3028.0 | 3274.9 | 3559.9 | 3806.8 |
| 17.5° | 2621.3 | 2635.9 | 2628.6 | 2652.2 | 2723.0 | 2730.3 | 2839.2 | 3009.8 | 3273.0 | 3594.4 | 3901.2 |
| 20° | 2686.7 | 2697.6 | 2683.1 | 2697.6 | 2768.4 | 2782.9 | 2895.5 | 3044.3 | 3303.9 | 3654.3 | 4019.1 |
| 22.5° | 2790.2 | 2795.6 | 2761.1 | 2772.0 | 2844.6 | 2862.8 | 2993.5 | 3142.3 | 3378.3 | 3750.5 | 4177.1 |
| 25° | 2920.9 | 2931.8 | 2879.1 | 2891.8 | 2960.8 | 2982.6 | 3133.3 | 3289.4 | 3496.3 | 3883.0 | 4378.6 |
| 27.5° | 3071.5 | 3077.0 | 3031.6 | 3029.8 | 3118.7 | 3149.6 | 3302.1 | 3470.9 | 3654.3 | 4050.0 | 4632.7 |
| 30° | 3244.0 | 3260.3 | 3216.8 | 3209.5 | 3322.1 | 3347.5 | 3498.1 | 3694.2 | 3886.6 | 4300.5 | 4994.0 |
| 32.5° | 3380.1 | 3392.9 | 3367.4 | 3385.6 | 3500.0 | 3519.9 | 3736.0 | 4010.1 | 4251.5 | 4656.3 | 5485.9 |
| 35° | 3576.2 | 3583.5 | 3525.4 | 3558.1 | 3688.8 | 3739.6 | 4060.9 | 4453.0 | 4710.8 | 5102.9 | 6128.6 |
| 37.5° | 4286.0 | 4286.0 | 4039.1 | 3877.6 | 4002.8 | 4048.2 | 4505.7 | 5010.3 | 5277.2 | 5702.0 | 6938.2 |
| 40° | 5268.1 | 5251.8 | 4890.5 | 4560.1 | 4543.8 | 4632.7 | 5139.2 | 5712.9 | 6008.8 | 6420.8 | 7849.5 |
| 42.5° | 6315.5 | 6290.1 | 5798.2 | 5471.4 | 5417.0 | 5447.8 | 5870.8 | 6578.8 | 6880.1 | 7297.6 | 8829.8 |
| 45° | 7245.0 | 7237.7 | 6787.5 | 6348.2 | 6250.2 | 6348.2 | 6783.9 | 7591.7 | 7807.7 | 8247.1 | 9808.2 |
| 47.5° | 8023.8 | 8023.8 | 7695.2 | 7408.4 | 7357.5 | 7415.6 | 8020.1 | 8715.4 | 8695.4 | 9258.2 | 10761.3 |
| 50° | 8920.5 | 8913.3 | 8601.0 | 8477.6 | 8530.2 | 8611.9 | 9443.4 | 9899.0 | 9614.0 | 10251.2 | 11612.7 |
| 52.5° | 9548.7 | 9592.2 | 9485.1 | 9465.1 | 9733.8 | 9875.4 | 10888.4 | 11057.2 | 10436.3 | 11193.3 | 12249.9 |
| 55° | 10046.1 | 10096.9 | 10220.3 | 10360.1 | 10877.5 | 11062.6 | 12288.0 | 12155.5 | 11124.4 | 12010.2 | 12616.6 |
| 57.5° | 10750.4 | 10677.8 | 10868.4 | 11144.3 | 11981.2 | 12204.5 | 13644.0 | 13192.0 | 11678.0 | 12672.8 | 12656.5 |
| 60° | 11605.4 | 11616.3 | 11649.0 | 11997.5 | 13083.1 | 13369.9 | 14980.1 | 14172.3 | 12033.8 | 13079.5 | 12213.6 |
| 62.5° | 12632.9 | 12649.2 | 12716.4 | 13251.9 | 14562.6 | 14833.1 | 16403.3 | 14974.7 | 12197.2 | 12965.1 | 11069.9 |
| 65° | 12562.1 | 12631.1 | 13380.8 | 15212.5 | 16811.8 | 17078.7 | 18064.4 | 15537.4 | 11950.3 | 11919.5 | 9013.1 |
| 67.5° | 11443.9 | 11556.4 | 12810.8 | 17554.3 | 20202.8 | 20500.6 | 20072.1 | 15648.2 | 10884.7 | 9269.1 | 5879.9 |
| 70° | 9977.1 | 10017.0 | 11525.5 | 19660.1 | 24129.4 | 24430.7 | 21869.3 | 14430.1 | 8259.8 | 5170.1 | 2634.0 |
| 72.5° | 7791.4 | 7800.5 | 9570.4 | 20148.4 | 26260.6 | 26276.9 | 20458.8 | 10712.3 | 4442.1 | 1986.0 | 914.9 |
| 75° | 5565.8 | 5511.4 | 6409.9 | 16339.8 | 23103.7 | 23288.9 | 15337.7 | 5024.8 | 1697.3 | 938.5 | 455.6 |
| 77.5° | 2984.4 | 3044.3 | 3627.0 | 9690.2 | 15960.4 | 16276.3 | 8368.7 | 1448.6 | 864.1 | 639.0 | 301.3 |
| 80° | 922.2 | 973.0 | 1486.8 | 4436.7 | 9040.4 | 9231.0 | 3102.4 | 644.4 | 602.7 | 455.6 | 197.9 |
| 82.5° | 290.5 | 301.3 | 693.5 | 1864.3 | 3752.3 | 3839.4 | 898.6 | 364.9 | 412.1 | 301.3 | 116.2 |
| 85° | 83.5 | 85.3 | 308.6 | 695.3 | 927.6 | 945.8 | 252.3 | 141.6 | 236.0 | 187.0 | 59.9 |
| 87.5° | 9.1 | 29.0 | 116.2 | 116.2 | 81.7 | 79.9 | 27.2 | 30.9 | 67.2 | 23.6 | 10.9 |
| 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° | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 | 3590.7 |
| 2.5° | 3598.0 | 3599.8 | 3576.2 | 3536.3 | 3492.7 | 3456.4 | 3411.0 | 3374.7 | 3349.3 | 3342.0 | 3354.7 |
| 5° | 3623.4 | 3610.7 | 3543.5 | 3421.9 | 3276.7 | 3151.4 | 3011.6 | 2900.9 | 2828.3 | 2797.4 | 2808.3 |
| 7.5° | 3661.5 | 3625.2 | 3478.2 | 3238.6 | 2960.8 | 2713.9 | 2463.4 | 2269.2 | 2145.7 | 2084.0 | 2093.1 |
| 10° | 3694.2 | 3621.6 | 3369.3 | 2973.5 | 2548.7 | 2174.8 | 1837.1 | 1602.9 | 1472.2 | 1410.5 | 1412.3 |
| 12.5° | 3725.1 | 3619.8 | 3227.7 | 2659.5 | 2084.0 | 1626.5 | 1312.5 | 1196.3 | 1160.0 | 1147.3 | 1143.7 |
| 15° | 3783.2 | 3625.2 | 3049.8 | 2300.0 | 1621.1 | 1229.0 | 1114.6 | 1112.8 | 1120.1 | 1116.4 | 1114.6 |
| 17.5° | 3863.0 | 3630.7 | 2848.3 | 1918.8 | 1250.8 | 1083.8 | 1078.3 | 1094.6 | 1105.5 | 1100.1 | 1098.3 |
| 20° | 3966.5 | 3652.4 | 2634.0 | 1541.2 | 1074.7 | 1047.4 | 1060.2 | 1074.7 | 1083.8 | 1074.7 | 1072.9 |
| 22.5° | 4111.7 | 3690.6 | 2399.9 | 1238.1 | 1018.4 | 1025.7 | 1036.6 | 1052.9 | 1062.0 | 1049.3 | 1047.4 |
| 25° | 4289.6 | 3750.5 | 2169.3 | 1076.5 | 991.2 | 1000.2 | 1016.6 | 1034.7 | 1045.6 | 1032.9 | 1031.1 |
| 27.5° | 4520.2 | 3846.7 | 1956.9 | 1040.2 | 963.9 | 969.4 | 993.0 | 1020.2 | 1034.7 | 1018.4 | 1018.4 |
| 30° | 4854.2 | 4004.6 | 1773.6 | 1056.5 | 947.6 | 934.9 | 967.6 | 1005.7 | 1022.0 | 1007.5 | 1005.7 |
| 32.5° | 5297.1 | 4227.9 | 1661.0 | 1081.9 | 940.3 | 895.0 | 925.8 | 974.8 | 1002.1 | 993.0 | 993.0 |
| 35° | 5878.0 | 4567.4 | 1617.5 | 1111.0 | 934.9 | 853.2 | 875.0 | 927.6 | 974.8 | 983.9 | 983.9 |
| 37.5° | 6582.4 | 5039.4 | 1630.2 | 1123.7 | 918.6 | 818.7 | 829.6 | 875.0 | 936.7 | 965.8 | 973.0 |
| 40° | 7383.0 | 5589.4 | 1702.8 | 1111.0 | 900.4 | 789.7 | 791.5 | 826.0 | 880.4 | 924.0 | 938.5 |
| 42.5° | 8208.9 | 6232.0 | 1837.1 | 1063.8 | 884.1 | 764.3 | 758.8 | 782.4 | 818.7 | 849.6 | 862.3 |
| 45° | 8995.0 | 6892.8 | 1969.6 | 998.4 | 864.1 | 738.8 | 726.1 | 735.2 | 742.5 | 755.2 | 762.4 |
| 47.5° | 9681.2 | 7357.5 | 1931.5 | 938.5 | 836.9 | 709.8 | 688.0 | 684.4 | 662.6 | 660.8 | 659.0 |
| 50° | 10155.0 | 7459.2 | 1715.5 | 878.6 | 796.9 | 677.1 | 642.6 | 620.8 | 582.7 | 564.6 | 566.4 |
| 52.5° | 10305.6 | 7058.0 | 1401.4 | 818.7 | 731.6 | 633.6 | 584.5 | 550.0 | 502.8 | 486.5 | 484.7 |
| 55° | 10106.0 | 6272.0 | 1120.1 | 746.1 | 640.8 | 575.5 | 521.0 | 475.6 | 437.5 | 417.5 | 417.5 |
| 57.5° | 9617.6 | 5271.7 | 885.9 | 660.8 | 544.6 | 510.1 | 455.6 | 410.3 | 377.6 | 357.6 | 354.0 |
| 60° | 8808.0 | 4186.2 | 700.7 | 559.1 | 464.7 | 439.3 | 383.0 | 354.0 | 324.9 | 301.3 | 295.9 |
| 62.5° | 7579.0 | 2988.0 | 550.0 | 442.9 | 388.5 | 359.4 | 326.8 | 305.0 | 270.5 | 237.8 | 232.4 |
| 65° | 5914.4 | 1828.0 | 424.8 | 324.9 | 312.2 | 297.7 | 277.7 | 257.8 | 216.0 | 183.3 | 177.9 |
| 67.5° | 3730.5 | 865.9 | 303.2 | 245.1 | 246.9 | 239.6 | 230.5 | 214.2 | 183.3 | 154.3 | 150.7 |
| 70° | 1642.9 | 419.3 | 199.7 | 187.0 | 183.3 | 183.3 | 190.6 | 185.2 | 156.1 | 128.9 | 123.4 |
| 72.5° | 559.1 | 225.1 | 148.9 | 141.6 | 132.5 | 130.7 | 159.7 | 154.3 | 125.3 | 99.8 | 94.4 |
| 75° | 292.3 | 150.7 | 108.9 | 101.7 | 79.9 | 96.2 | 127.1 | 119.8 | 89.0 | 65.4 | 59.9 |
| 77.5° | 190.6 | 107.1 | 74.4 | 65.4 | 45.4 | 63.5 | 94.4 | 83.5 | 52.6 | 32.7 | 29.0 |
| 80° | 119.8 | 70.8 | 43.6 | 30.9 | 21.8 | 34.5 | 50.8 | 36.3 | 20.0 | 7.3 | 5.4 |
| 82.5° | 63.5 | 36.3 | 16.3 | 10.9 | 9.1 | 10.9 | 12.7 | 9.1 | 3.6 | 0.0 | 0.0 |
| 85° | 25.4 | 12.7 | 5.4 | 3.6 | 1.8 | 0.0 | 3.6 | 1.8 | 0.0 | 0.0 | 0.0 |
| 87.5° | 9.1 | 1.8 | 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)