

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: P883490

Luminaire Tested: **NAV-SB3D-835-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883490
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-SB3D-835-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 3500K, 900mA 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: 19499 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

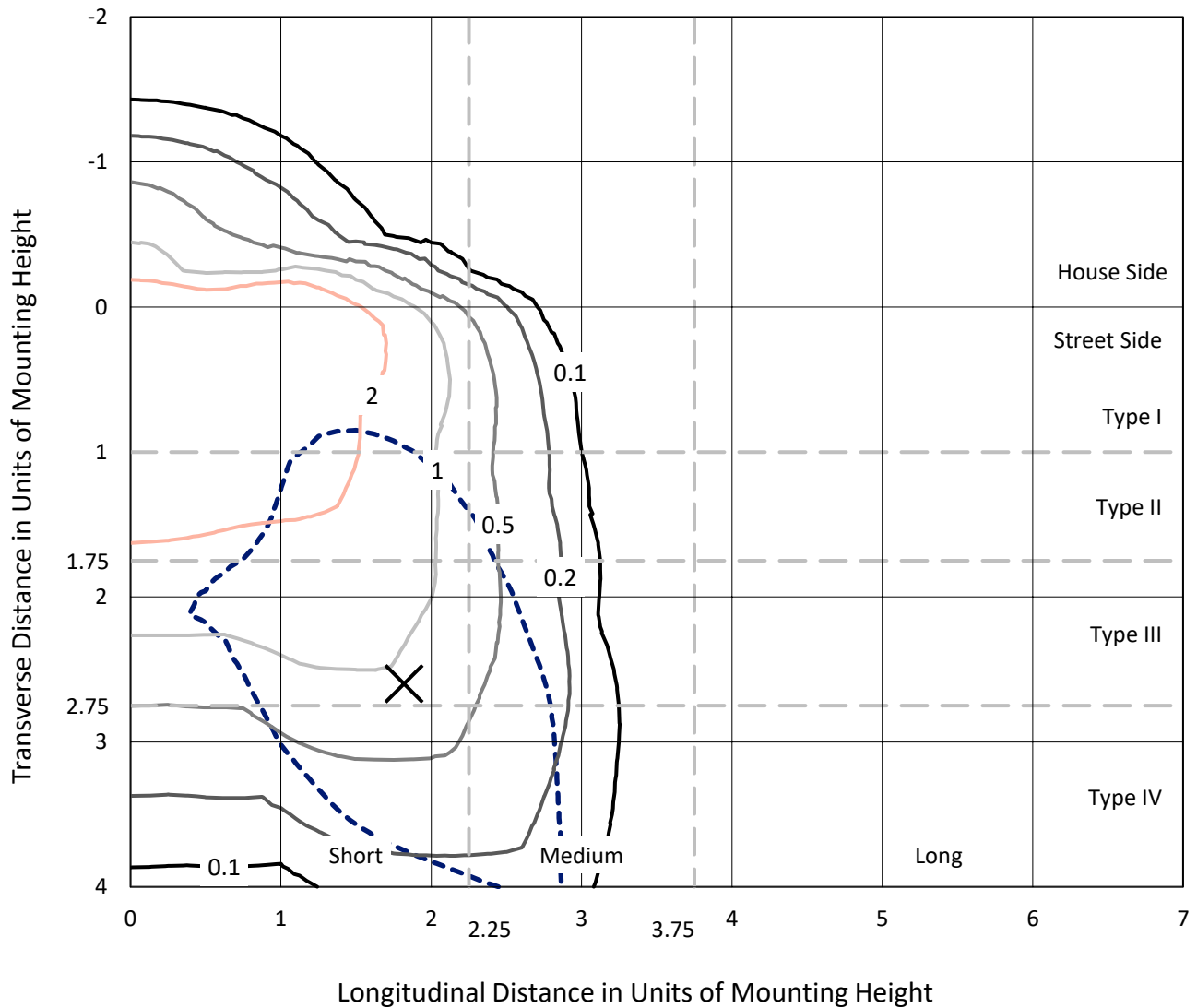
Input Watts (W): 218.1
Input Voltage (V): 120.0
Input Current (Ain): 1.84
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 2.542
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

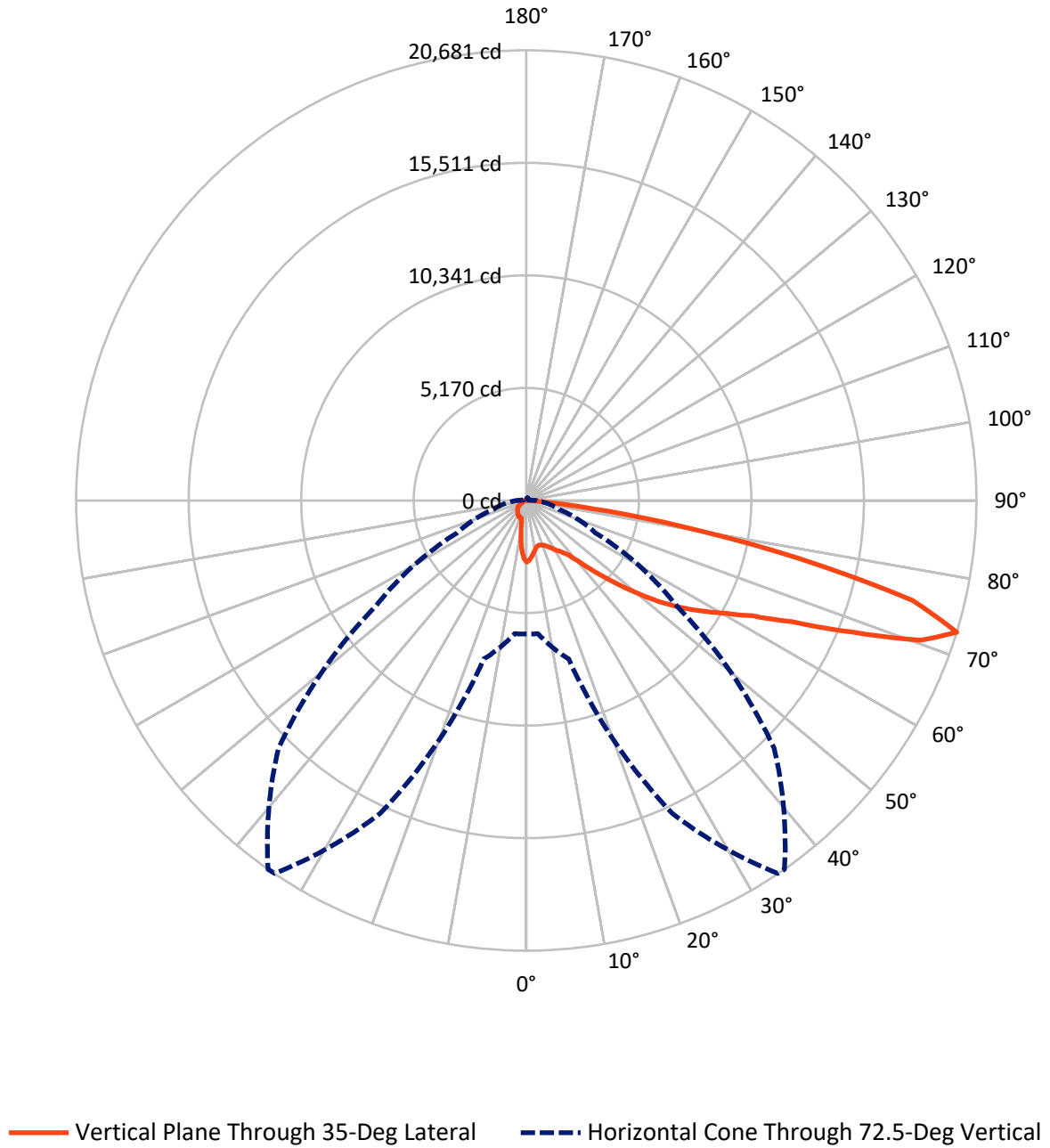
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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 | 2194.5 | 0.0 | 2194.5 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 17304.5 | 0.0 | 17304.5 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 19499.0 | 0.0 | 19499.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 232.2 | 1.2 |
| 10°-20° | 543.3 | 2.8 |
| 20°-30° | 882.5 | 4.5 |
| 30°-40° | 1472.5 | 7.6 |
| 40°-50° | 2786.0 | 14.3 |
| 50°-60° | 4426.9 | 22.7 |
| 60°-70° | 5476.4 | 28.1 |
| 70°-80° | 3404.1 | 17.5 |
| 80°-90° | 275.1 | 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° | 19499.0 | 100.0 |
| 0°-180° | 19499.0 | 100.0 |

Coefficient of Utilization



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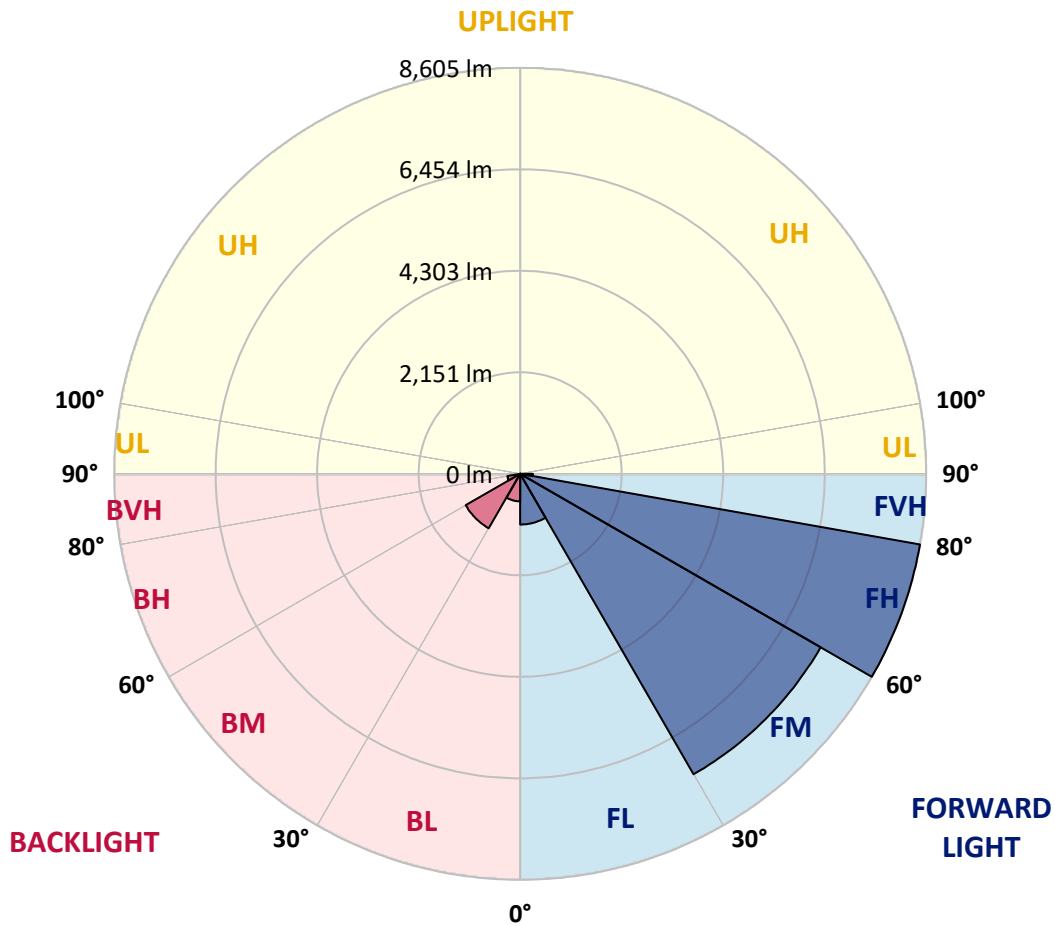
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1074.9 | 5.5 | | | |
| FM (30°-60°) | 7353.1 | 37.7 | | | |
| FH (60°-80°) | 8605.1 | 44.1 | | | G4/12000 |
| FVH (80°-90°) | 271.4 | 1.4 | | | G3/500 |
| BL (0°-30°) | 583.1 | 3.0 | B2/1000 | | |
| BM (30°-60°) | 1332.3 | 6.8 | B2/2500 | | |
| BH (60°-80°) | 275.4 | 1.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 3.7 | 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° | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 |
| 2.5° | 2700.3 | 2723.2 | 2727.5 | 2734.6 | 2734.6 | 2743.2 | 2757.5 | 2777.5 | 2810.3 | 2827.5 | 2838.9 |
| 5° | 2488.9 | 2506.0 | 2527.5 | 2544.6 | 2577.5 | 2581.7 | 2637.5 | 2691.8 | 2767.5 | 2824.6 | 2864.6 |
| 7.5° | 2276.0 | 2296.0 | 2324.6 | 2366.0 | 2408.9 | 2421.7 | 2506.0 | 2597.5 | 2717.5 | 2824.6 | 2891.8 |
| 10° | 2126.0 | 2127.4 | 2153.1 | 2194.6 | 2263.1 | 2278.8 | 2381.7 | 2511.7 | 2661.8 | 2807.5 | 2917.5 |
| 12.5° | 2041.7 | 2051.7 | 2063.1 | 2094.5 | 2160.3 | 2170.3 | 2280.3 | 2433.2 | 2606.0 | 2797.5 | 2947.5 |
| 15° | 2041.7 | 2048.8 | 2056.0 | 2071.7 | 2124.5 | 2133.1 | 2230.3 | 2383.1 | 2577.5 | 2801.8 | 2996.1 |
| 17.5° | 2063.1 | 2074.5 | 2068.8 | 2087.4 | 2143.1 | 2148.8 | 2234.6 | 2368.9 | 2576.0 | 2828.9 | 3070.4 |
| 20° | 2114.5 | 2123.1 | 2111.7 | 2123.1 | 2178.8 | 2190.3 | 2278.8 | 2396.0 | 2600.3 | 2876.1 | 3163.2 |
| 22.5° | 2196.0 | 2200.3 | 2173.1 | 2181.7 | 2238.8 | 2253.1 | 2356.0 | 2473.2 | 2658.9 | 2951.8 | 3287.5 |
| 25° | 2298.9 | 2307.4 | 2266.0 | 2276.0 | 2330.3 | 2347.4 | 2466.0 | 2588.9 | 2751.8 | 3056.1 | 3446.1 |
| 27.5° | 2417.4 | 2421.7 | 2386.0 | 2384.6 | 2454.6 | 2478.9 | 2598.9 | 2731.8 | 2876.1 | 3187.5 | 3646.2 |
| 30° | 2553.2 | 2566.0 | 2531.7 | 2526.0 | 2614.6 | 2634.6 | 2753.2 | 2907.5 | 3058.9 | 3384.7 | 3930.5 |
| 32.5° | 2660.3 | 2670.3 | 2650.3 | 2664.6 | 2754.6 | 2770.3 | 2940.4 | 3156.1 | 3346.1 | 3664.7 | 4317.7 |
| 35° | 2814.6 | 2820.3 | 2774.6 | 2800.3 | 2903.2 | 2943.2 | 3196.1 | 3504.7 | 3707.6 | 4016.2 | 4823.4 |
| 37.5° | 3373.3 | 3373.3 | 3179.0 | 3051.8 | 3150.4 | 3186.1 | 3546.1 | 3943.3 | 4153.4 | 4487.7 | 5460.7 |
| 40° | 4146.2 | 4133.4 | 3849.0 | 3589.0 | 3576.2 | 3646.2 | 4044.8 | 4496.3 | 4729.1 | 5053.5 | 6177.9 |
| 42.5° | 4970.6 | 4950.6 | 4563.4 | 4306.2 | 4263.4 | 4287.7 | 4620.6 | 5177.8 | 5414.9 | 5743.6 | 6949.4 |
| 45° | 5702.1 | 5696.4 | 5342.1 | 4996.3 | 4919.2 | 4996.3 | 5339.2 | 5975.0 | 6145.0 | 6490.8 | 7719.5 |
| 47.5° | 6315.1 | 6315.1 | 6056.5 | 5830.7 | 5790.7 | 5836.4 | 6312.2 | 6859.4 | 6843.7 | 7286.6 | 8469.6 |
| 50° | 7020.9 | 7015.1 | 6769.4 | 6672.2 | 6713.7 | 6778.0 | 7432.3 | 7790.9 | 7566.6 | 8068.1 | 9139.7 |
| 52.5° | 7515.2 | 7549.5 | 7465.2 | 7449.5 | 7660.9 | 7772.4 | 8569.6 | 8702.5 | 8213.9 | 8809.6 | 9641.2 |
| 55° | 7906.7 | 7946.7 | 8043.8 | 8153.9 | 8561.0 | 8706.8 | 9671.2 | 9566.9 | 8755.4 | 9452.6 | 9929.8 |
| 57.5° | 8461.0 | 8403.9 | 8553.9 | 8771.1 | 9429.7 | 9605.5 | 10738.5 | 10382.7 | 9191.1 | 9974.1 | 9961.2 |
| 60° | 9134.0 | 9142.5 | 9168.3 | 9442.6 | 10297.0 | 10522.7 | 11790.0 | 11154.2 | 9471.2 | 10294.1 | 9612.6 |
| 62.5° | 9942.6 | 9955.5 | 10008.4 | 10429.8 | 11461.4 | 11674.3 | 12910.1 | 11785.7 | 9599.7 | 10204.1 | 8712.5 |
| 65° | 9886.9 | 9941.2 | 10531.3 | 11972.9 | 13231.6 | 13441.6 | 14217.4 | 12228.6 | 9405.4 | 9381.1 | 7093.7 |
| 67.5° | 9006.8 | 9095.4 | 10082.7 | 13816.0 | 15900.5 | 16134.8 | 15797.6 | 12315.8 | 8566.8 | 7295.2 | 4627.7 |
| 70° | 7852.4 | 7883.8 | 9071.1 | 15473.3 | 18990.9 | 19228.1 | 17212.1 | 11357.1 | 6500.8 | 4069.1 | 2073.1 |
| 72.5° | 6132.2 | 6139.3 | 7532.3 | 15857.6 | 20668.2 | 20681.1 | 16102.0 | 8431.0 | 3496.1 | 1563.0 | 720.1 |
| 75° | 4380.5 | 4337.7 | 5044.9 | 12860.1 | 18183.6 | 18329.4 | 12071.5 | 3954.8 | 1335.9 | 738.7 | 358.6 |
| 77.5° | 2348.9 | 2396.0 | 2854.6 | 7626.6 | 12561.5 | 12810.1 | 6586.5 | 1140.1 | 680.1 | 502.9 | 237.2 |
| 80° | 725.8 | 765.8 | 1170.1 | 3491.9 | 7115.2 | 7265.2 | 2441.7 | 507.2 | 474.3 | 358.6 | 155.7 |
| 82.5° | 228.6 | 237.2 | 545.8 | 1467.3 | 2953.2 | 3021.8 | 707.2 | 287.2 | 324.3 | 237.2 | 91.4 |
| 85° | 65.7 | 67.2 | 242.9 | 547.2 | 730.1 | 744.4 | 198.6 | 111.4 | 185.7 | 147.2 | 47.1 |
| 87.5° | 7.1 | 22.9 | 91.4 | 91.4 | 64.3 | 62.9 | 21.4 | 24.3 | 52.9 | 18.6 | 8.6 |
| 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° | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 | 2826.1 |
| 2.5° | 2831.8 | 2833.2 | 2814.6 | 2783.2 | 2748.9 | 2720.3 | 2684.6 | 2656.0 | 2636.0 | 2630.3 | 2640.3 |
| 5° | 2851.8 | 2841.8 | 2788.9 | 2693.2 | 2578.9 | 2480.3 | 2370.3 | 2283.1 | 2226.0 | 2201.7 | 2210.3 |
| 7.5° | 2881.8 | 2853.2 | 2737.5 | 2548.9 | 2330.3 | 2136.0 | 1938.8 | 1785.9 | 1688.8 | 1640.2 | 1647.3 |
| 10° | 2907.5 | 2850.3 | 2651.8 | 2340.3 | 2006.0 | 1711.6 | 1445.9 | 1261.6 | 1158.7 | 1110.1 | 1111.6 |
| 12.5° | 2931.8 | 2848.9 | 2540.3 | 2093.1 | 1640.2 | 1280.2 | 1033.0 | 941.5 | 913.0 | 903.0 | 900.1 |
| 15° | 2977.5 | 2853.2 | 2400.3 | 1810.2 | 1275.9 | 967.3 | 877.2 | 875.8 | 881.5 | 878.7 | 877.2 |
| 17.5° | 3040.4 | 2857.5 | 2241.7 | 1510.2 | 984.4 | 853.0 | 848.7 | 861.5 | 870.1 | 865.8 | 864.4 |
| 20° | 3121.8 | 2874.6 | 2073.1 | 1213.0 | 845.8 | 824.4 | 834.4 | 845.8 | 853.0 | 845.8 | 844.4 |
| 22.5° | 3236.1 | 2904.6 | 1888.8 | 974.4 | 801.5 | 807.2 | 815.8 | 828.7 | 835.8 | 825.8 | 824.4 |
| 25° | 3376.1 | 2951.8 | 1707.4 | 847.2 | 780.1 | 787.2 | 800.1 | 814.4 | 823.0 | 813.0 | 811.5 |
| 27.5° | 3557.6 | 3027.5 | 1540.2 | 818.7 | 758.7 | 763.0 | 781.5 | 803.0 | 814.4 | 801.5 | 801.5 |
| 30° | 3820.5 | 3151.8 | 1395.9 | 831.5 | 745.8 | 735.8 | 761.5 | 791.5 | 804.4 | 793.0 | 791.5 |
| 32.5° | 4169.1 | 3327.5 | 1307.3 | 851.5 | 740.1 | 704.4 | 728.7 | 767.2 | 788.7 | 781.5 | 781.5 |
| 35° | 4626.3 | 3594.7 | 1273.0 | 874.4 | 735.8 | 671.5 | 688.7 | 730.1 | 767.2 | 774.4 | 774.4 |
| 37.5° | 5180.6 | 3966.2 | 1283.0 | 884.4 | 722.9 | 644.4 | 652.9 | 688.7 | 737.2 | 760.1 | 765.8 |
| 40° | 5810.7 | 4399.1 | 1340.2 | 874.4 | 708.7 | 621.5 | 622.9 | 650.1 | 692.9 | 727.2 | 738.7 |
| 42.5° | 6460.8 | 4904.9 | 1445.9 | 837.2 | 695.8 | 601.5 | 597.2 | 615.8 | 644.4 | 668.7 | 678.7 |
| 45° | 7079.4 | 5424.9 | 1550.2 | 785.8 | 680.1 | 581.5 | 571.5 | 578.6 | 584.4 | 594.4 | 600.1 |
| 47.5° | 7619.5 | 5790.7 | 1520.2 | 738.7 | 658.7 | 558.6 | 541.5 | 538.6 | 521.5 | 520.1 | 518.6 |
| 50° | 7992.4 | 5870.7 | 1350.2 | 691.5 | 627.2 | 532.9 | 505.8 | 488.6 | 458.6 | 444.3 | 445.8 |
| 52.5° | 8111.0 | 5555.0 | 1103.0 | 644.4 | 575.8 | 498.6 | 460.1 | 432.9 | 395.8 | 382.9 | 381.5 |
| 55° | 7953.8 | 4936.3 | 881.5 | 587.2 | 504.3 | 452.9 | 410.0 | 374.3 | 344.3 | 328.6 | 328.6 |
| 57.5° | 7569.5 | 4149.1 | 697.2 | 520.1 | 428.6 | 401.5 | 358.6 | 322.9 | 297.2 | 281.5 | 278.6 |
| 60° | 6932.3 | 3294.7 | 551.5 | 440.1 | 365.8 | 345.8 | 301.5 | 278.6 | 255.7 | 237.2 | 232.9 |
| 62.5° | 5965.0 | 2351.7 | 432.9 | 348.6 | 305.8 | 282.9 | 257.2 | 240.0 | 212.9 | 187.2 | 182.9 |
| 65° | 4654.9 | 1438.7 | 334.3 | 255.7 | 245.7 | 234.3 | 218.6 | 202.9 | 170.0 | 144.3 | 140.0 |
| 67.5° | 2936.1 | 681.5 | 238.6 | 192.9 | 194.3 | 188.6 | 181.5 | 168.6 | 144.3 | 121.4 | 118.6 |
| 70° | 1293.0 | 330.0 | 157.2 | 147.2 | 144.3 | 144.3 | 150.0 | 145.7 | 122.9 | 101.4 | 97.2 |
| 72.5° | 440.1 | 177.2 | 117.2 | 111.4 | 104.3 | 102.9 | 125.7 | 121.4 | 98.6 | 78.6 | 74.3 |
| 75° | 230.0 | 118.6 | 85.7 | 80.0 | 62.9 | 75.7 | 100.0 | 94.3 | 70.0 | 51.4 | 47.1 |
| 77.5° | 150.0 | 84.3 | 58.6 | 51.4 | 35.7 | 50.0 | 74.3 | 65.7 | 41.4 | 25.7 | 22.9 |
| 80° | 94.3 | 55.7 | 34.3 | 24.3 | 17.1 | 27.1 | 40.0 | 28.6 | 15.7 | 5.7 | 4.3 |
| 82.5° | 50.0 | 28.6 | 12.9 | 8.6 | 7.1 | 8.6 | 10.0 | 7.1 | 2.9 | 0.0 | 0.0 |
| 85° | 20.0 | 10.0 | 4.3 | 2.9 | 1.4 | 0.0 | 2.9 | 1.4 | 0.0 | 0.0 | 0.0 |
| 87.5° | 7.1 | 1.4 | 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)