

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: P883776

Luminaire Tested: **NAV-SB4B-740-U-T2-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4B-740-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 4000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

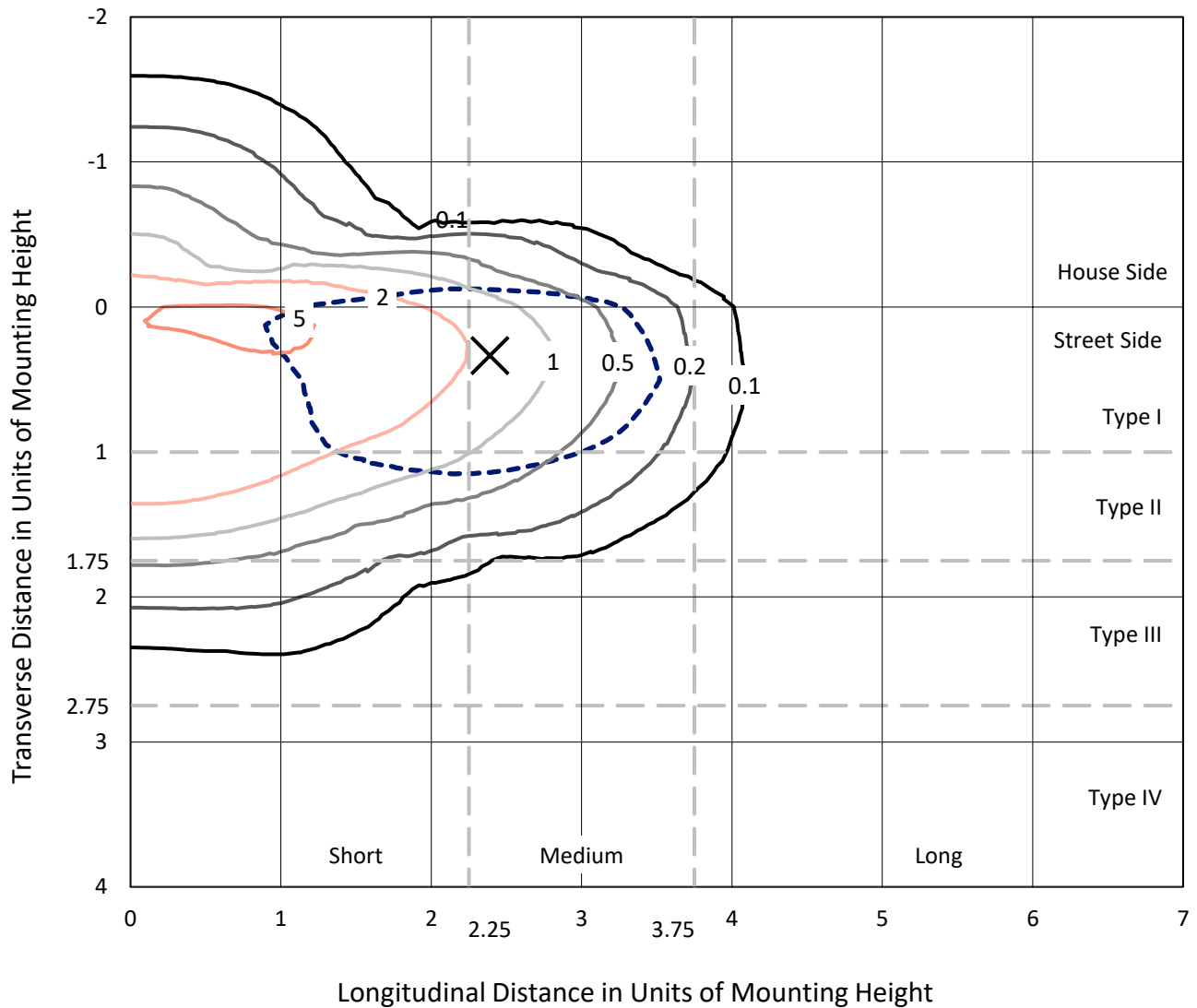
Lumens per Lamp: N/A  
Luminaire Lumens: 17966 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 147  
Input Voltage (V): 120.0  
Input Current (Ain): 1.255  
Voltage Rise (V): NR  
Power Factor: 0.988  
Total Harmonic Distortion (THDi): 13.593  
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

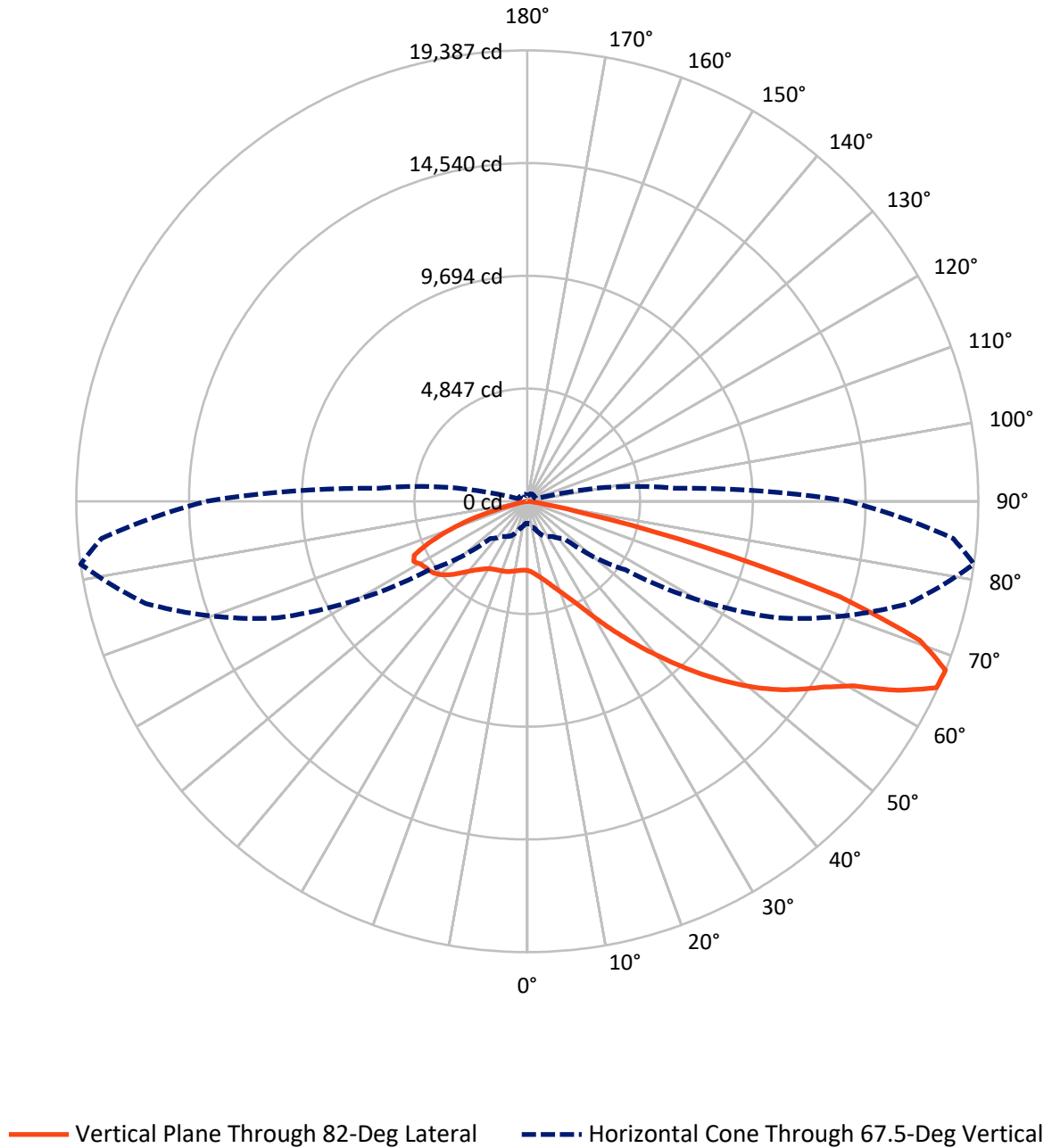
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc  
 Type II - 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    | 3254.4   | 0.0    | 3254.4  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 14711.6  | 0.0    | 14711.6 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 17966.0  | 0.0    | 17966.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 265.2   | 1.5       |
| 10°-20°   | 689.1   | 3.8       |
| 20°-30°   | 1103.7  | 6.1       |
| 30°-40°   | 1951.6  | 10.9      |
| 40°-50°   | 3419.5  | 19.0      |
| 50°-60°   | 4560.6  | 25.4      |
| 60°-70°   | 4245.7  | 23.6      |
| 70°-80°   | 1629.5  | 9.1       |
| 80°-90°   | 101.2   | 0.6       |
| 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°    | 17966.0 | 100.0     |
| 0°-180°   | 17966.0 | 100.0     |

**Coefficient of Utilization**



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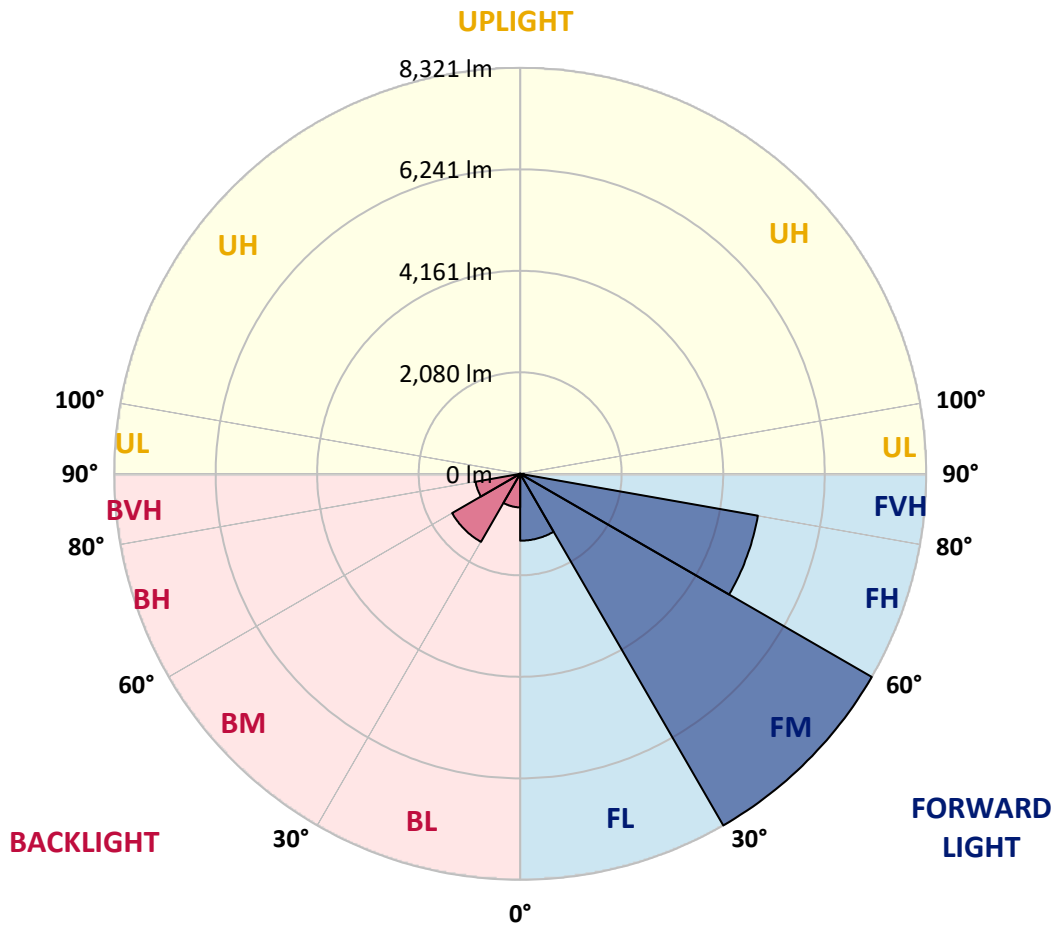
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1370.6 | 7.6       |                         |      |         |
| FM (30°-60°)   | 8321.1 | 46.3      |                         |      |         |
| FH (60°-80°)   | 4946.3 | 27.5      |                         |      | G2/5000 |
| FVH (80°-90°)  | 73.6   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 687.3  | 3.8       | B2/1000                 |      |         |
| BM (30°-60°)   | 1610.6 | 9.0       | B2/2500                 |      |         |
| BH (60°-80°)   | 928.9  | 5.2       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 27.6   | 0.2       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°     | 75°     | 82°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4  | 2976.4  | 2976.4  | 2976.4  |
| 2.5°  | 3145.8 | 3163.9 | 3153.6 | 3148.4 | 3139.3 | 3126.4 | 3116.1 | 3083.7  | 3050.1  | 3028.1  | 3020.3  |
| 5°    | 3209.2 | 3227.3 | 3226.0 | 3231.2 | 3237.6 | 3241.5 | 3238.9 | 3202.7  | 3154.9  | 3117.4  | 3095.4  |
| 7.5°  | 3154.9 | 3175.6 | 3192.4 | 3218.2 | 3263.5 | 3311.4 | 3334.7 | 3326.9  | 3277.7  | 3226.0  | 3198.8  |
| 10°   | 3000.9 | 3022.9 | 3063.0 | 3123.8 | 3219.5 | 3323.0 | 3409.7 | 3449.8  | 3418.7  | 3361.8  | 3324.3  |
| 12.5° | 2719.0 | 2740.9 | 2819.8 | 2951.8 | 3112.2 | 3292.0 | 3457.5 | 3564.9  | 3572.7  | 3515.8  | 3471.8  |
| 15°   | 2402.0 | 2424.0 | 2508.1 | 2673.7 | 2918.2 | 3206.6 | 3483.4 | 3686.5  | 3755.0  | 3705.9  | 3652.9  |
| 17.5° | 2205.4 | 2224.8 | 2288.2 | 2421.4 | 2676.3 | 3035.9 | 3474.4 | 3815.8  | 3972.4  | 3933.6  | 3870.2  |
| 20°   | 2145.9 | 2162.7 | 2192.5 | 2285.6 | 2497.8 | 2858.6 | 3414.9 | 3937.4  | 4206.5  | 4184.5  | 4113.4  |
| 22.5° | 2209.3 | 2224.8 | 2233.9 | 2275.3 | 2408.5 | 2742.2 | 3339.8 | 4061.6  | 4478.1  | 4480.7  | 4394.0  |
| 25°   | 2355.5 | 2371.0 | 2360.6 | 2386.5 | 2444.7 | 2706.0 | 3311.4 | 4207.8  | 4819.6  | 4848.1  | 4749.8  |
| 27.5° | 2596.1 | 2597.4 | 2572.8 | 2571.5 | 2580.5 | 2760.3 | 3341.1 | 4364.3  | 5250.3  | 5303.4  | 5181.8  |
| 30°   | 3078.5 | 3059.1 | 2964.7 | 2862.5 | 2816.0 | 2923.3 | 3423.9 | 4549.3  | 5758.7  | 5853.1  | 5700.5  |
| 32.5° | 3822.3 | 3793.9 | 3620.5 | 3376.1 | 3130.3 | 3185.9 | 3572.7 | 4760.1  | 6312.3  | 6483.1  | 6296.8  |
| 35°   | 4629.5 | 4621.7 | 4440.6 | 4077.1 | 3647.7 | 3559.7 | 3814.6 | 5036.9  | 6916.4  | 7188.0  | 6966.8  |
| 37.5° | 5379.7 | 5375.8 | 5272.3 | 4844.2 | 4321.6 | 4081.0 | 4202.6 | 5399.1  | 7563.1  | 7956.4  | 7695.1  |
| 40°   | 6065.3 | 6076.9 | 5973.4 | 5590.5 | 5064.1 | 4749.8 | 4730.4 | 5846.6  | 8282.3  | 8793.3  | 8482.8  |
| 42.5° | 6657.7 | 6670.6 | 6565.8 | 6282.6 | 5797.5 | 5489.6 | 5378.4 | 6395.1  | 8984.7  | 9692.2  | 9324.9  |
| 45°   | 7060.0 | 7140.2 | 7124.6 | 6898.3 | 6550.3 | 6230.8 | 6157.1 | 7083.2  | 9785.4  | 10645.6 | 10214.8 |
| 47.5° | 7173.8 | 7247.5 | 7363.9 | 7395.0 | 7182.8 | 6868.5 | 6956.5 | 7912.4  | 10595.1 | 11600.2 | 11109.9 |
| 50°   | 6893.1 | 6961.7 | 7203.5 | 7525.6 | 7673.1 | 7576.1 | 7733.9 | 8801.0  | 11424.2 | 12552.2 | 11988.2 |
| 52.5° | 6339.5 | 6409.3 | 6714.6 | 7224.2 | 7825.7 | 8131.0 | 8513.9 | 9676.7  | 12227.5 | 13453.8 | 12819.9 |
| 55°   | 5538.8 | 5612.5 | 6004.5 | 6581.4 | 7534.7 | 8359.9 | 9164.5 | 10551.1 | 12963.5 | 14264.8 | 13570.2 |
| 57.5° | 4449.7 | 4504.0 | 4911.4 | 5718.6 | 6802.6 | 8132.3 | 9644.4 | 11505.7 | 13656.8 | 15061.6 | 14313.9 |
| 60°   | 2900.0 | 2947.9 | 3421.3 | 4321.6 | 5589.2 | 7371.7 | 9740.1 | 12570.3 | 14577.8 | 16097.7 | 15316.4 |
| 62.5° | 1928.6 | 1961.0 | 2241.6 | 2902.6 | 3936.1 | 5911.3 | 9180.0 | 13420.1 | 15928.2 | 17900.8 | 17035.5 |
| 65°   | 1323.3 | 1355.6 | 1636.3 | 2096.8 | 2543.0 | 3910.3 | 7569.6 | 13307.6 | 17151.9 | 19332.7 | 18309.6 |
| 67.5° | 944.3  | 971.4  | 1209.4 | 1644.0 | 1840.7 | 2271.4 | 5131.3 | 11869.2 | 16976.0 | 19387.1 | 18378.1 |
| 70°   | 676.5  | 692.0  | 888.6  | 1280.6 | 1463.0 | 1364.6 | 2853.5 | 9077.8  | 14863.7 | 17902.1 | 16978.6 |
| 72.5° | 473.4  | 478.6  | 617.0  | 975.3  | 1178.4 | 996.0  | 1358.2 | 6052.3  | 11241.9 | 14051.4 | 13162.7 |
| 75°   | 320.8  | 327.3  | 415.2  | 715.3  | 945.6  | 760.6  | 719.2  | 3245.4  | 6599.5  | 7777.9  | 6972.0  |
| 77.5° | 196.6  | 199.2  | 267.8  | 488.9  | 707.5  | 579.5  | 463.1  | 1375.0  | 2553.4  | 2506.8  | 2136.9  |
| 80°   | 111.2  | 111.2  | 170.7  | 304.0  | 482.5  | 373.8  | 324.7  | 584.7   | 808.4   | 710.1   | 626.1   |
| 82.5° | 62.1   | 63.4   | 124.2  | 188.9  | 319.5  | 221.2  | 178.5  | 270.3   | 349.2   | 309.1   | 269.0   |
| 85°   | 25.9   | 28.5   | 76.3   | 89.3   | 152.6  | 109.9  | 72.4   | 113.8   | 129.4   | 115.1   | 84.1    |
| 87.5° | 2.6    | 3.9    | 23.3   | 16.8   | 18.1   | 22.0   | 10.3   | 22.0    | 18.1    | 18.1    | 12.9    |
| 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°    | 2976.4  | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 | 2976.4 |
| 2.5°  | 2995.8  | 2976.4 | 2927.2 | 2870.3 | 2795.3 | 2759.0 | 2709.9 | 2676.3 | 2647.8 | 2650.4 | 2624.5 |
| 5°    | 3054.0  | 3004.8 | 2894.9 | 2757.8 | 2587.0 | 2465.4 | 2336.1 | 2246.8 | 2174.4 | 2158.9 | 2123.9 |
| 7.5°  | 3134.2  | 3056.6 | 2863.8 | 2616.8 | 2328.3 | 2109.7 | 1914.4 | 1788.9 | 1699.7 | 1671.2 | 1642.8 |
| 10°   | 3237.6  | 3125.1 | 2823.7 | 2439.6 | 2024.3 | 1746.2 | 1536.7 | 1438.4 | 1377.6 | 1356.9 | 1341.4 |
| 12.5° | 3357.9  | 3204.0 | 2770.7 | 2223.5 | 1711.3 | 1443.6 | 1310.3 | 1261.2 | 1241.8 | 1235.3 | 1231.4 |
| 15°   | 3509.3  | 3302.3 | 2690.5 | 1967.4 | 1446.1 | 1258.6 | 1201.7 | 1195.2 | 1197.8 | 1195.2 | 1193.9 |
| 17.5° | 3689.1  | 3409.7 | 2559.8 | 1703.5 | 1267.6 | 1164.2 | 1143.5 | 1148.6 | 1155.1 | 1153.8 | 1151.2 |
| 20°   | 3885.7  | 3515.8 | 2393.0 | 1469.4 | 1146.0 | 1096.9 | 1085.3 | 1090.4 | 1095.6 | 1093.0 | 1091.7 |
| 22.5° | 4109.5  | 3629.6 | 2208.0 | 1287.0 | 1064.6 | 1034.8 | 1021.9 | 1023.2 | 1023.2 | 1018.0 | 1015.4 |
| 25°   | 4377.2  | 3755.0 | 2014.0 | 1157.7 | 1002.5 | 979.2  | 963.7  | 958.5  | 950.7  | 935.2  | 932.6  |
| 27.5° | 4696.7  | 3888.3 | 1827.7 | 1067.1 | 953.3  | 931.3  | 913.2  | 900.3  | 880.9  | 855.0  | 852.4  |
| 30°   | 5056.3  | 4050.0 | 1669.9 | 1010.2 | 914.5  | 892.5  | 871.8  | 852.4  | 824.0  | 791.6  | 789.0  |
| 32.5° | 5479.3  | 4223.3 | 1554.8 | 972.7  | 879.6  | 856.3  | 831.7  | 808.4  | 777.4  | 745.1  | 746.4  |
| 35°   | 5983.8  | 4432.8 | 1487.5 | 946.8  | 852.4  | 821.4  | 794.2  | 768.3  | 745.1  | 716.6  | 714.0  |
| 37.5° | 6530.9  | 4655.3 | 1466.8 | 933.9  | 834.3  | 786.5  | 755.4  | 737.3  | 734.7  | 717.9  | 716.6  |
| 40°   | 7129.8  | 4919.2 | 1482.4 | 926.2  | 814.9  | 752.8  | 719.2  | 715.3  | 721.8  | 692.0  | 693.3  |
| 42.5° | 7763.6  | 5232.2 | 1508.2 | 917.1  | 787.7  | 719.2  | 686.9  | 686.9  | 681.7  | 640.3  | 640.3  |
| 45°   | 8449.2  | 5593.1 | 1534.1 | 895.1  | 755.4  | 685.6  | 661.0  | 651.9  | 629.9  | 589.8  | 588.5  |
| 47.5° | 9139.9  | 5960.5 | 1553.5 | 855.0  | 716.6  | 657.1  | 635.1  | 614.4  | 582.1  | 545.9  | 544.6  |
| 50°   | 9795.7  | 6290.3 | 1532.8 | 795.5  | 672.6  | 629.9  | 606.7  | 578.2  | 543.3  | 518.7  | 514.8  |
| 52.5° | 10381.7 | 6576.2 | 1444.8 | 725.7  | 626.1  | 601.5  | 580.8  | 551.0  | 522.6  | 496.7  | 494.1  |
| 55°   | 10891.3 | 6807.7 | 1289.6 | 659.7  | 584.7  | 576.9  | 556.2  | 518.7  | 479.9  | 457.9  | 455.3  |
| 57.5° | 11380.3 | 6983.6 | 1095.6 | 605.4  | 547.2  | 549.7  | 518.7  | 485.1  | 448.8  | 425.6  | 423.0  |
| 60°   | 12030.9 | 7219.1 | 899.0  | 554.9  | 507.1  | 514.8  | 481.2  | 456.6  | 411.3  | 381.6  | 377.7  |
| 62.5° | 13070.9 | 7585.1 | 714.0  | 492.8  | 460.5  | 463.1  | 448.8  | 419.1  | 364.8  | 329.8  | 327.3  |
| 65°   | 13896.1 | 7450.6 | 562.7  | 425.6  | 407.5  | 411.3  | 411.3  | 379.0  | 320.8  | 280.7  | 276.8  |
| 67.5° | 13803.0 | 6379.6 | 448.8  | 359.6  | 357.0  | 359.6  | 368.6  | 341.5  | 284.6  | 252.2  | 247.1  |
| 70°   | 12715.2 | 5074.4 | 359.6  | 298.8  | 310.4  | 304.0  | 329.8  | 311.7  | 256.1  | 223.8  | 219.9  |
| 72.5° | 10375.2 | 3655.4 | 274.2  | 247.1  | 238.0  | 248.4  | 297.5  | 280.7  | 213.4  | 177.2  | 173.3  |
| 75°   | 6062.7  | 1950.6 | 204.4  | 195.3  | 172.0  | 207.0  | 263.9  | 239.3  | 163.0  | 130.6  | 126.8  |
| 77.5° | 1973.9  | 680.4  | 150.0  | 143.6  | 128.1  | 166.9  | 225.1  | 201.8  | 133.2  | 103.5  | 99.6   |
| 80°   | 529.0   | 205.7  | 102.2  | 94.4   | 82.8   | 124.2  | 178.5  | 160.4  | 95.7   | 67.3   | 66.0   |
| 82.5° | 212.1   | 86.7   | 59.5   | 53.0   | 45.3   | 85.4   | 141.0  | 129.4  | 71.1   | 42.7   | 42.7   |
| 85°   | 68.6    | 28.5   | 22.0   | 16.8   | 20.7   | 53.0   | 84.1   | 88.0   | 50.4   | 22.0   | 16.8   |
| 87.5° | 9.1     | 3.9    | 3.9    | 5.2    | 3.9    | 9.1    | 25.9   | 24.6   | 14.2   | 2.6    | 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)