

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: P883589

Luminaire Tested: **NAV-SB4A-730-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883589
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-730-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17907 lumens
Efficiency: N/A
Efficacy: 157.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

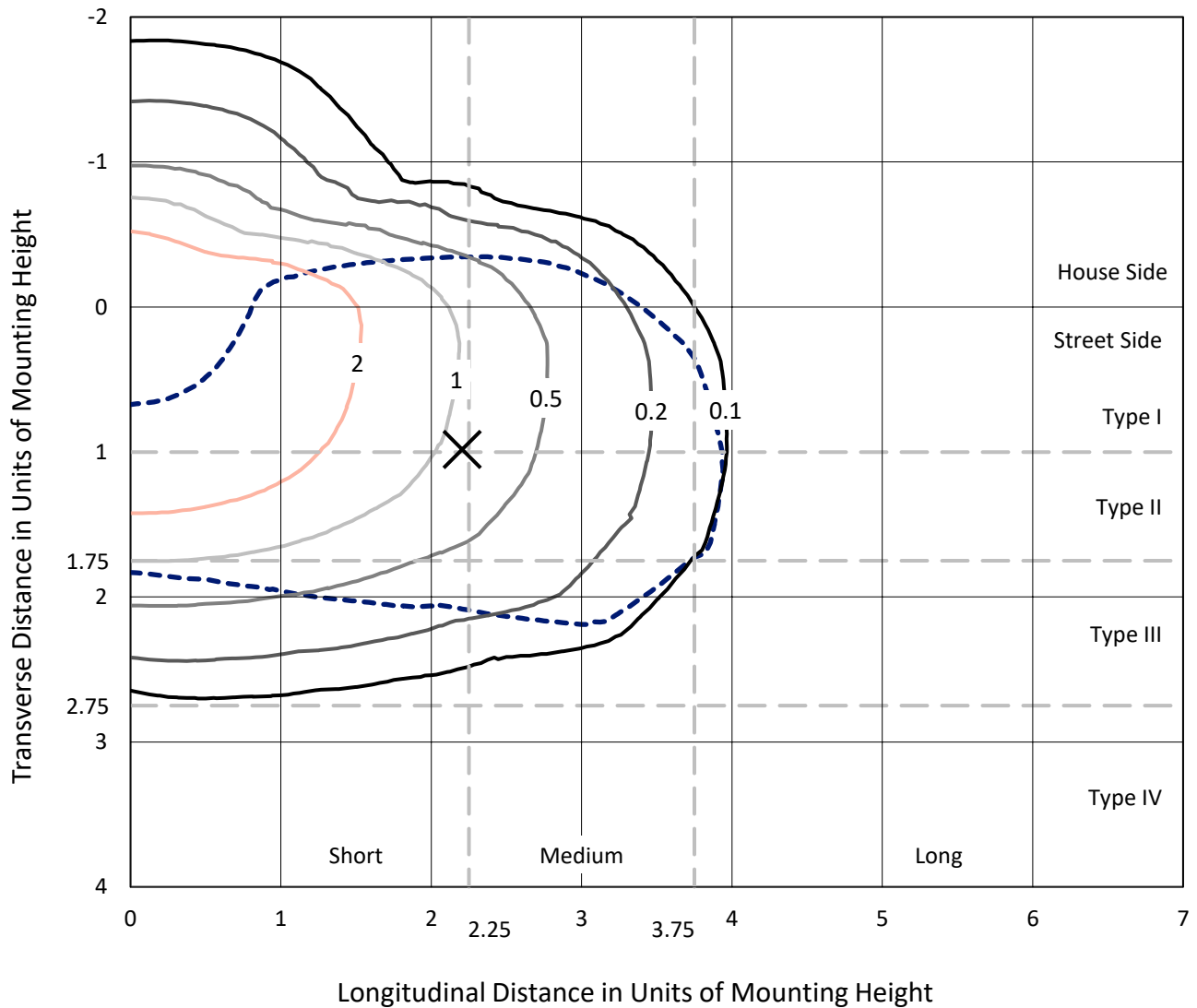
Input Watts (W): 114
Input Voltage (V): 120.0
Input Current (Ain): 0.952
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 8.206
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

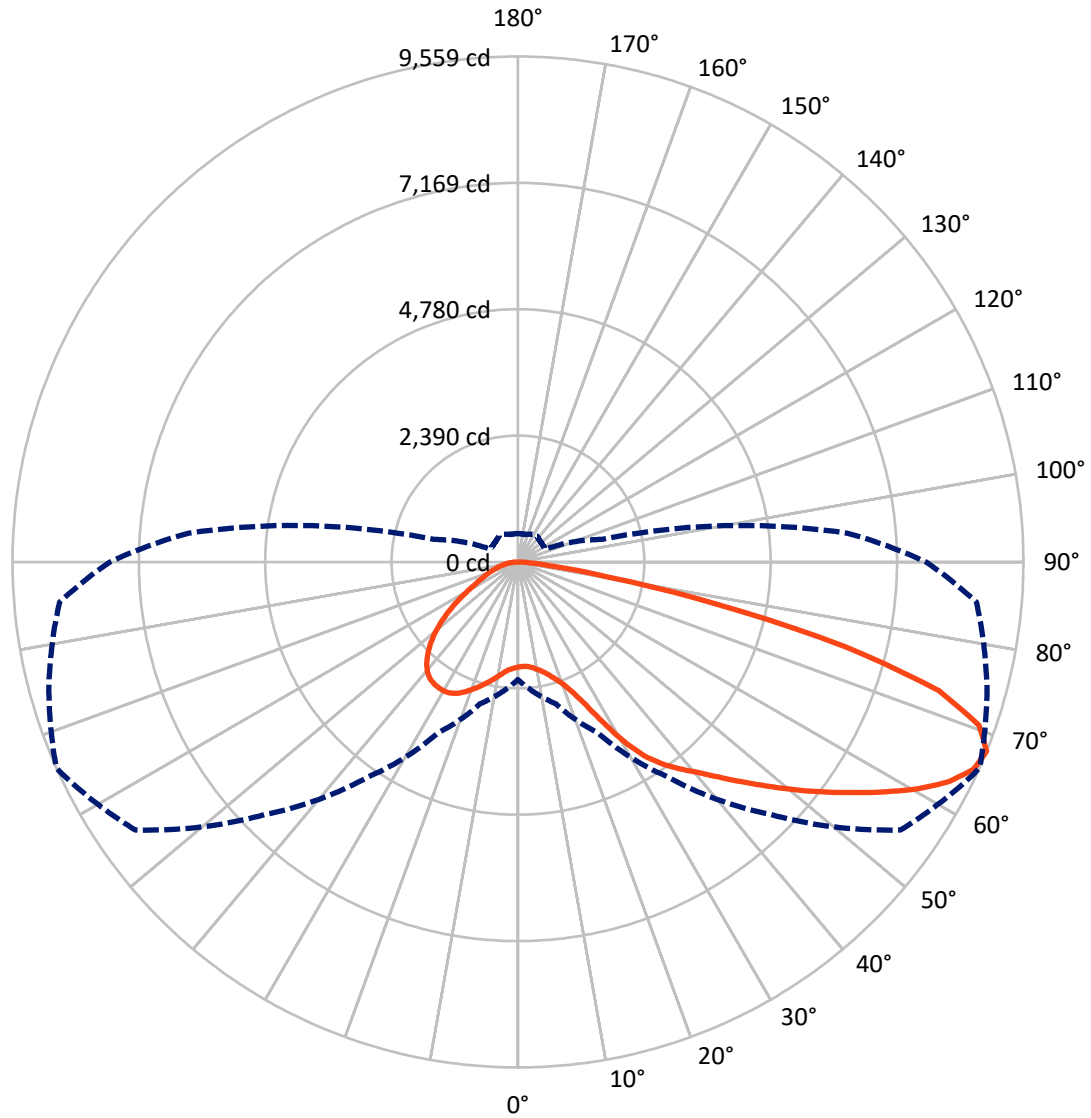
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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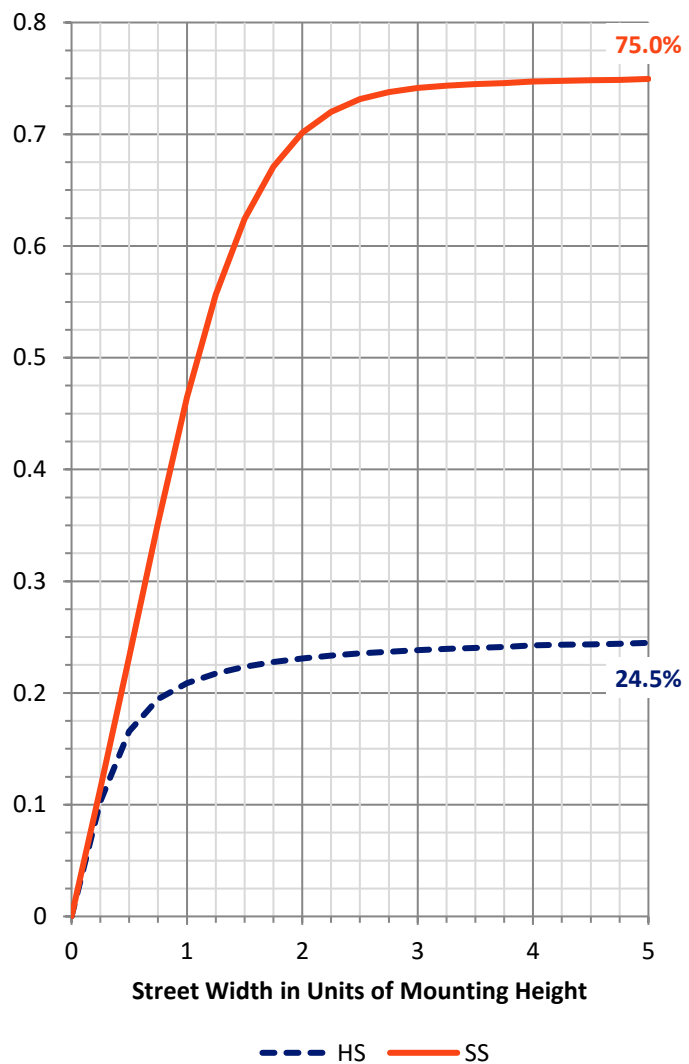
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4452.5 | 0.0 | 4452.5 |
| | % Fixture | 24.9 | 0.0 | 24.9 |
| Street Side | Lumens | 13454.5 | 0.0 | 13454.5 |
| | % Fixture | 75.1 | 0.0 | 75.1 |
| Total | Lumens | 17907.0 | 0.0 | 17907.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 196.9 | 1.1 |
| 10°-20° | 650.6 | 3.6 |
| 20°-30° | 1254.0 | 7.0 |
| 30°-40° | 2198.7 | 12.3 |
| 40°-50° | 3268.7 | 18.3 |
| 50°-60° | 4143.4 | 23.1 |
| 60°-70° | 4054.2 | 22.6 |
| 70°-80° | 1933.9 | 10.8 |
| 80°-90° | 206.7 | 1.2 |
| 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° | 17907.0 | 100.0 |
| 0°-180° | 17907.0 | 100.0 |

Coefficient of Utilization



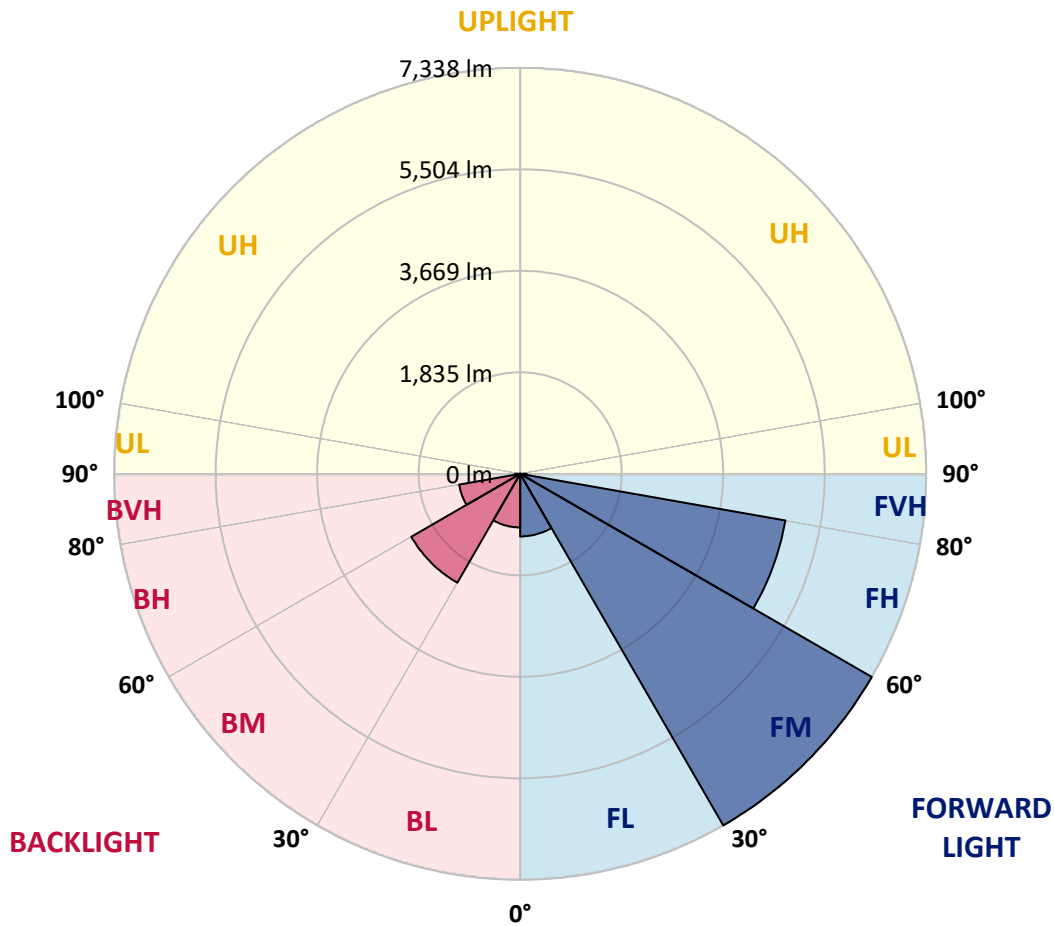
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1131.5 | 6.3 | | | |
| FM (30°-60°) | 7338.1 | 41.0 | | | |
| FH (60°-80°) | 4867.6 | 27.2 | | | G2/5000 |
| FVH (80°-90°) | 117.2 | 0.7 | | | G2/225 |
| BL (0°-30°) | 969.9 | 5.4 | B2/1000 | | |
| BM (30°-60°) | 2272.6 | 12.7 | B2/2500 | | |
| BH (60°-80°) | 1120.5 | 6.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 89.5 | 0.5 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 |
| 2.5° | 1965.4 | 1976.7 | 1973.9 | 1969.2 | 1968.2 | 1970.1 | 1973.0 | 1975.8 | 1974.8 | 1979.5 | 1987.1 |
| 5° | 1959.8 | 1971.1 | 1970.1 | 1970.1 | 1973.9 | 1981.4 | 1986.1 | 1990.8 | 1986.1 | 1991.8 | 2002.1 |
| 7.5° | 1963.5 | 1972.0 | 1975.8 | 1979.5 | 1988.9 | 2003.1 | 2014.3 | 2024.7 | 2019.1 | 2025.6 | 2038.8 |
| 10° | 2011.5 | 2018.1 | 2021.9 | 2021.9 | 2028.5 | 2044.5 | 2055.7 | 2074.6 | 2069.9 | 2080.2 | 2097.1 |
| 12.5° | 2099.0 | 2105.6 | 2105.6 | 2101.8 | 2106.6 | 2116.9 | 2120.7 | 2141.4 | 2132.9 | 2149.8 | 2166.8 |
| 15° | 2206.3 | 2219.5 | 2209.1 | 2202.5 | 2204.4 | 2214.7 | 2213.8 | 2229.8 | 2221.3 | 2235.4 | 2250.5 |
| 17.5° | 2324.8 | 2341.8 | 2324.8 | 2323.9 | 2320.1 | 2331.4 | 2332.4 | 2346.5 | 2331.4 | 2341.8 | 2352.1 |
| 20° | 2465.0 | 2488.5 | 2474.4 | 2479.1 | 2470.7 | 2475.4 | 2480.1 | 2500.8 | 2477.2 | 2484.8 | 2481.9 |
| 22.5° | 2662.6 | 2690.8 | 2675.8 | 2693.6 | 2688.0 | 2684.2 | 2683.3 | 2720.0 | 2683.3 | 2686.1 | 2658.8 |
| 25° | 2950.5 | 2984.4 | 2958.0 | 2982.5 | 2982.5 | 2994.7 | 3008.8 | 3055.9 | 2994.7 | 2976.8 | 2906.3 |
| 27.5° | 3375.8 | 3409.6 | 3357.9 | 3372.9 | 3368.2 | 3398.3 | 3383.3 | 3499.9 | 3434.1 | 3404.9 | 3262.8 |
| 30° | 3887.6 | 3947.8 | 3849.9 | 3846.2 | 3841.5 | 3889.5 | 3911.1 | 3988.2 | 3921.4 | 3892.3 | 3721.0 |
| 32.5° | 4440.8 | 4503.8 | 4387.2 | 4353.3 | 4335.4 | 4364.6 | 4346.7 | 4408.8 | 4362.7 | 4317.5 | 4105.8 |
| 35° | 5026.0 | 5088.1 | 4977.1 | 4911.2 | 4839.7 | 4778.5 | 4714.6 | 4730.6 | 4687.3 | 4618.6 | 4399.4 |
| 37.5° | 5579.2 | 5693.1 | 5575.4 | 5504.9 | 5373.2 | 5253.7 | 5074.9 | 5000.6 | 4960.1 | 4897.1 | 4676.0 |
| 40° | 6142.8 | 6207.7 | 6118.3 | 6058.1 | 5915.1 | 5727.9 | 5441.8 | 5284.7 | 5230.2 | 5169.0 | 4981.8 |
| 42.5° | 6557.7 | 6619.8 | 6571.8 | 6530.4 | 6418.4 | 6201.1 | 5831.4 | 5634.7 | 5555.7 | 5487.0 | 5328.0 |
| 45° | 6887.0 | 6933.1 | 6903.0 | 6918.0 | 6870.0 | 6659.3 | 6235.0 | 6010.1 | 5928.3 | 5844.5 | 5719.4 |
| 47.5° | 7019.6 | 7068.6 | 7116.5 | 7205.9 | 7287.8 | 7132.5 | 6668.7 | 6416.6 | 6330.0 | 6244.4 | 6121.1 |
| 50° | 7004.6 | 7054.5 | 7193.7 | 7383.7 | 7637.8 | 7586.0 | 7126.0 | 6849.3 | 6769.4 | 6671.5 | 6557.7 |
| 52.5° | 6884.2 | 6940.6 | 7119.4 | 7435.5 | 7840.1 | 7925.7 | 7591.7 | 7296.2 | 7221.0 | 7104.3 | 6990.5 |
| 55° | 6568.0 | 6601.9 | 6870.0 | 7317.9 | 7888.0 | 8162.8 | 8048.0 | 7772.3 | 7697.0 | 7534.3 | 7410.1 |
| 57.5° | 5981.9 | 6030.8 | 6421.3 | 7000.8 | 7767.6 | 8323.7 | 8448.8 | 8272.8 | 8200.4 | 7966.1 | 7836.3 |
| 60° | 5217.0 | 5295.1 | 5742.0 | 6468.3 | 7460.9 | 8322.7 | 8812.9 | 8764.9 | 8704.7 | 8391.4 | 8255.9 |
| 62.5° | 4351.4 | 4441.7 | 4871.7 | 5715.6 | 6924.6 | 8086.6 | 9040.6 | 9177.0 | 9146.0 | 8783.7 | 8610.6 |
| 65° | 3341.9 | 3404.0 | 3832.1 | 4741.9 | 6090.1 | 7579.4 | 9066.9 | 9458.3 | 9464.0 | 9082.0 | 8796.0 |
| 67.5° | 2225.1 | 2403.9 | 2775.5 | 3558.3 | 4972.4 | 6750.6 | 8835.5 | 9504.4 | 9559.0 | 9184.5 | 8702.8 |
| 70° | 1085.7 | 1320.9 | 1685.1 | 2312.6 | 3558.3 | 5479.5 | 8230.5 | 9126.2 | 9247.6 | 8885.3 | 8147.7 |
| 72.5° | 450.7 | 526.9 | 725.4 | 1141.2 | 2042.6 | 3697.5 | 7014.9 | 8100.7 | 8325.5 | 7873.0 | 6850.3 |
| 75° | 303.9 | 329.3 | 414.9 | 585.2 | 930.5 | 1823.4 | 5058.9 | 6040.2 | 6402.4 | 5946.1 | 4860.4 |
| 77.5° | 234.3 | 250.3 | 302.0 | 409.3 | 553.2 | 689.6 | 2707.8 | 3640.1 | 3827.4 | 3543.2 | 2529.0 |
| 80° | 184.4 | 196.6 | 225.8 | 298.2 | 392.3 | 368.8 | 923.0 | 1649.3 | 1757.5 | 1474.3 | 812.9 |
| 82.5° | 159.9 | 164.6 | 161.8 | 202.3 | 260.6 | 215.5 | 303.0 | 608.7 | 671.8 | 487.4 | 265.3 |
| 85° | 115.7 | 128.9 | 134.5 | 125.1 | 138.3 | 109.1 | 124.2 | 215.5 | 237.1 | 211.7 | 149.6 |
| 87.5° | 47.0 | 69.6 | 85.6 | 80.9 | 50.8 | 31.0 | 38.6 | 63.0 | 72.4 | 79.0 | 48.9 |
| 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° | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 | 1986.1 |
| 2.5° | 1988.0 | 1994.6 | 1999.3 | 2004.9 | 2008.7 | 2014.3 | 2025.6 | 2032.2 | 2033.2 | 2037.9 | 2036.9 |
| 5° | 2005.9 | 2015.3 | 2025.6 | 2040.7 | 2057.6 | 2071.7 | 2093.4 | 2108.4 | 2114.1 | 2118.8 | 2117.8 |
| 7.5° | 2044.5 | 2057.6 | 2076.4 | 2102.8 | 2127.2 | 2146.1 | 2172.4 | 2190.3 | 2208.2 | 2214.7 | 2215.7 |
| 10° | 2101.8 | 2120.7 | 2147.9 | 2183.7 | 2210.0 | 2234.5 | 2261.8 | 2276.8 | 2294.7 | 2302.2 | 2306.0 |
| 12.5° | 2173.4 | 2193.1 | 2228.9 | 2278.7 | 2303.2 | 2320.1 | 2329.5 | 2325.8 | 2329.5 | 2336.1 | 2338.0 |
| 15° | 2255.2 | 2276.8 | 2317.3 | 2370.9 | 2387.9 | 2372.8 | 2352.1 | 2333.3 | 2330.5 | 2332.4 | 2338.9 |
| 17.5° | 2352.1 | 2368.1 | 2415.1 | 2460.3 | 2448.1 | 2386.0 | 2340.8 | 2310.7 | 2295.7 | 2291.0 | 2297.5 |
| 20° | 2487.6 | 2487.6 | 2526.2 | 2554.4 | 2472.5 | 2367.2 | 2296.6 | 2247.7 | 2216.6 | 2203.5 | 2200.6 |
| 22.5° | 2652.2 | 2637.2 | 2661.6 | 2641.9 | 2467.8 | 2314.5 | 2216.6 | 2132.0 | 2084.9 | 2066.1 | 2063.3 |
| 25° | 2861.1 | 2843.2 | 2836.6 | 2714.3 | 2434.0 | 2230.7 | 2071.7 | 1969.2 | 1927.8 | 1917.4 | 1919.3 |
| 27.5° | 3176.3 | 3131.1 | 3045.5 | 2753.9 | 2371.9 | 2099.0 | 1902.4 | 1807.4 | 1783.8 | 1784.8 | 1787.6 |
| 30° | 3595.9 | 3505.6 | 3295.8 | 2760.4 | 2270.3 | 1912.7 | 1729.3 | 1661.5 | 1650.2 | 1654.9 | 1670.9 |
| 32.5° | 3984.5 | 3898.9 | 3551.7 | 2730.3 | 2114.1 | 1730.2 | 1574.0 | 1528.9 | 1511.9 | 1517.6 | 1525.1 |
| 35° | 4289.3 | 4265.8 | 3788.8 | 2688.0 | 1922.1 | 1559.0 | 1434.8 | 1396.2 | 1363.3 | 1355.8 | 1361.4 |
| 37.5° | 4577.2 | 4567.8 | 3966.6 | 2628.7 | 1732.1 | 1437.6 | 1322.8 | 1272.0 | 1224.0 | 1197.7 | 1198.6 |
| 40° | 4893.3 | 4883.9 | 4083.3 | 2537.5 | 1563.7 | 1332.2 | 1222.2 | 1155.4 | 1096.1 | 1048.1 | 1052.8 |
| 42.5° | 5249.0 | 5193.5 | 4138.8 | 2406.7 | 1420.7 | 1242.9 | 1140.3 | 1050.0 | 971.9 | 927.7 | 930.5 |
| 45° | 5637.5 | 5512.4 | 4137.8 | 2240.2 | 1300.2 | 1161.0 | 1052.8 | 924.9 | 852.4 | 811.0 | 809.1 |
| 47.5° | 6049.6 | 5817.2 | 4087.0 | 2055.7 | 1183.6 | 1070.7 | 917.3 | 819.5 | 771.5 | 746.1 | 740.4 |
| 50° | 6474.9 | 6102.3 | 4000.5 | 1844.1 | 1064.1 | 968.1 | 832.6 | 765.8 | 729.2 | 705.6 | 697.2 |
| 52.5° | 6874.8 | 6361.1 | 3896.0 | 1604.1 | 942.7 | 868.4 | 795.0 | 743.3 | 704.7 | 678.3 | 667.1 |
| 55° | 7246.4 | 6584.0 | 3748.3 | 1358.6 | 843.9 | 801.6 | 777.1 | 733.9 | 689.6 | 658.6 | 646.4 |
| 57.5° | 7576.6 | 6728.9 | 3493.4 | 1128.1 | 773.4 | 755.5 | 758.3 | 717.9 | 667.1 | 640.7 | 623.8 |
| 60° | 7851.3 | 6835.2 | 3116.1 | 914.5 | 716.0 | 710.3 | 729.2 | 687.8 | 628.5 | 598.4 | 585.2 |
| 62.5° | 8016.0 | 6833.4 | 2653.2 | 748.9 | 667.1 | 668.9 | 690.6 | 650.1 | 589.9 | 561.7 | 553.2 |
| 65° | 8001.9 | 6665.9 | 2145.1 | 640.7 | 620.0 | 621.9 | 650.1 | 608.7 | 557.9 | 541.0 | 540.0 |
| 67.5° | 7718.7 | 6257.6 | 1645.5 | 570.2 | 568.3 | 576.7 | 609.7 | 580.5 | 538.2 | 536.3 | 539.1 |
| 70° | 6951.9 | 5409.9 | 1185.5 | 513.7 | 514.6 | 526.9 | 570.2 | 562.6 | 527.8 | 531.6 | 530.6 |
| 72.5° | 5574.5 | 4124.7 | 796.0 | 454.4 | 455.4 | 475.1 | 532.5 | 548.5 | 517.5 | 567.3 | 574.9 |
| 75° | 3712.6 | 2572.3 | 511.8 | 391.4 | 392.3 | 417.7 | 499.6 | 521.2 | 489.2 | 565.4 | 570.2 |
| 77.5° | 1783.8 | 1156.3 | 370.7 | 329.3 | 329.3 | 352.8 | 431.8 | 466.7 | 416.8 | 439.4 | 402.7 |
| 80° | 616.3 | 434.7 | 291.7 | 265.3 | 259.7 | 275.7 | 364.1 | 404.6 | 359.4 | 331.2 | 310.5 |
| 82.5° | 242.7 | 225.8 | 234.3 | 206.0 | 187.2 | 197.6 | 283.2 | 334.0 | 264.4 | 239.0 | 238.0 |
| 85° | 139.2 | 146.8 | 165.6 | 136.4 | 108.2 | 121.4 | 207.9 | 239.9 | 199.5 | 175.9 | 179.7 |
| 87.5° | 37.6 | 51.7 | 76.2 | 70.6 | 48.9 | 51.7 | 98.8 | 132.7 | 114.8 | 88.4 | 91.3 |
| 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)