

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: P961871

Luminaire Tested: **NAV-SB2B-727-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P961871
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2B-727-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9065.1 lumens
Efficiency: N/A
Efficacy: 122.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

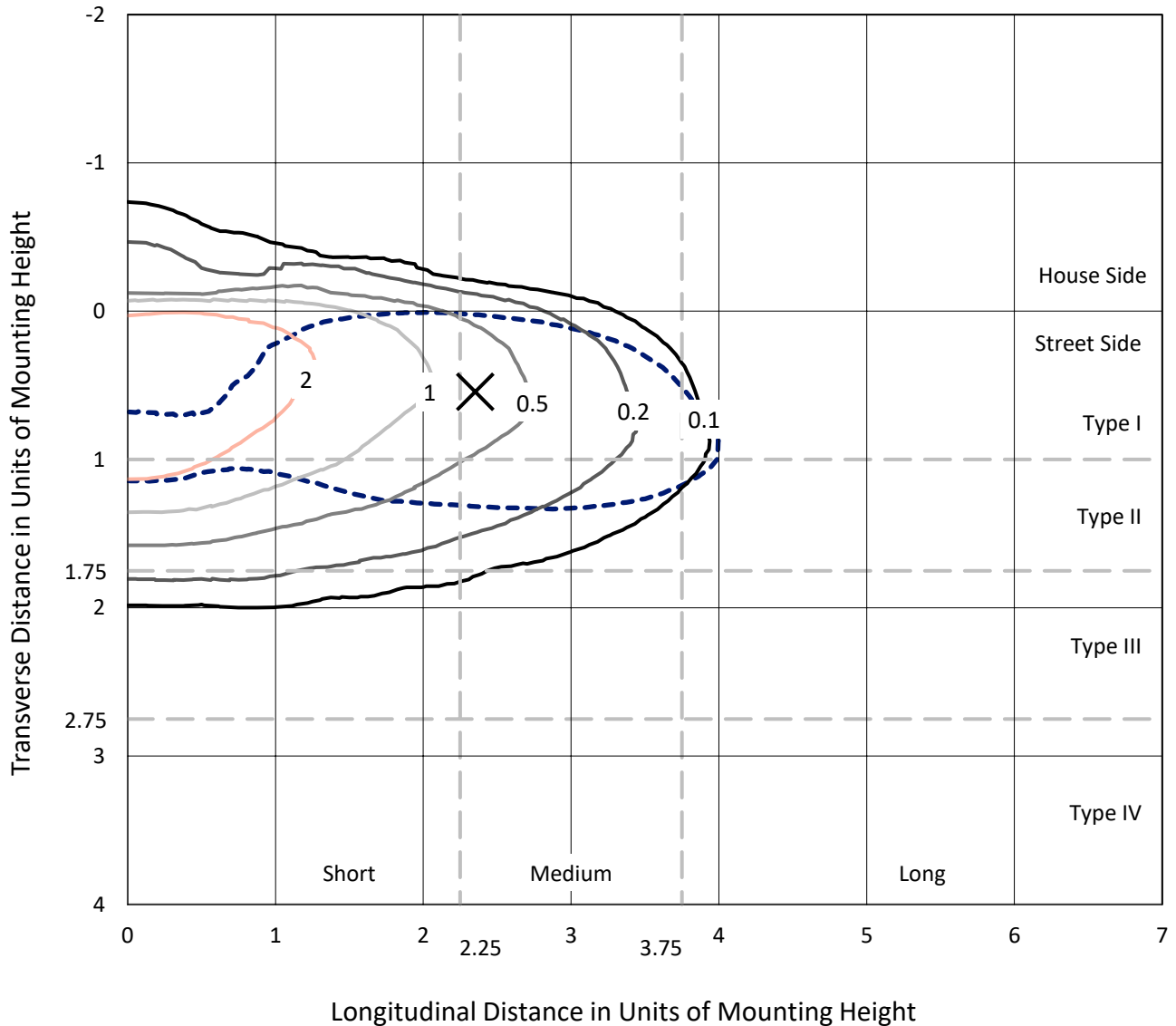
Input Watts (W): 73.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

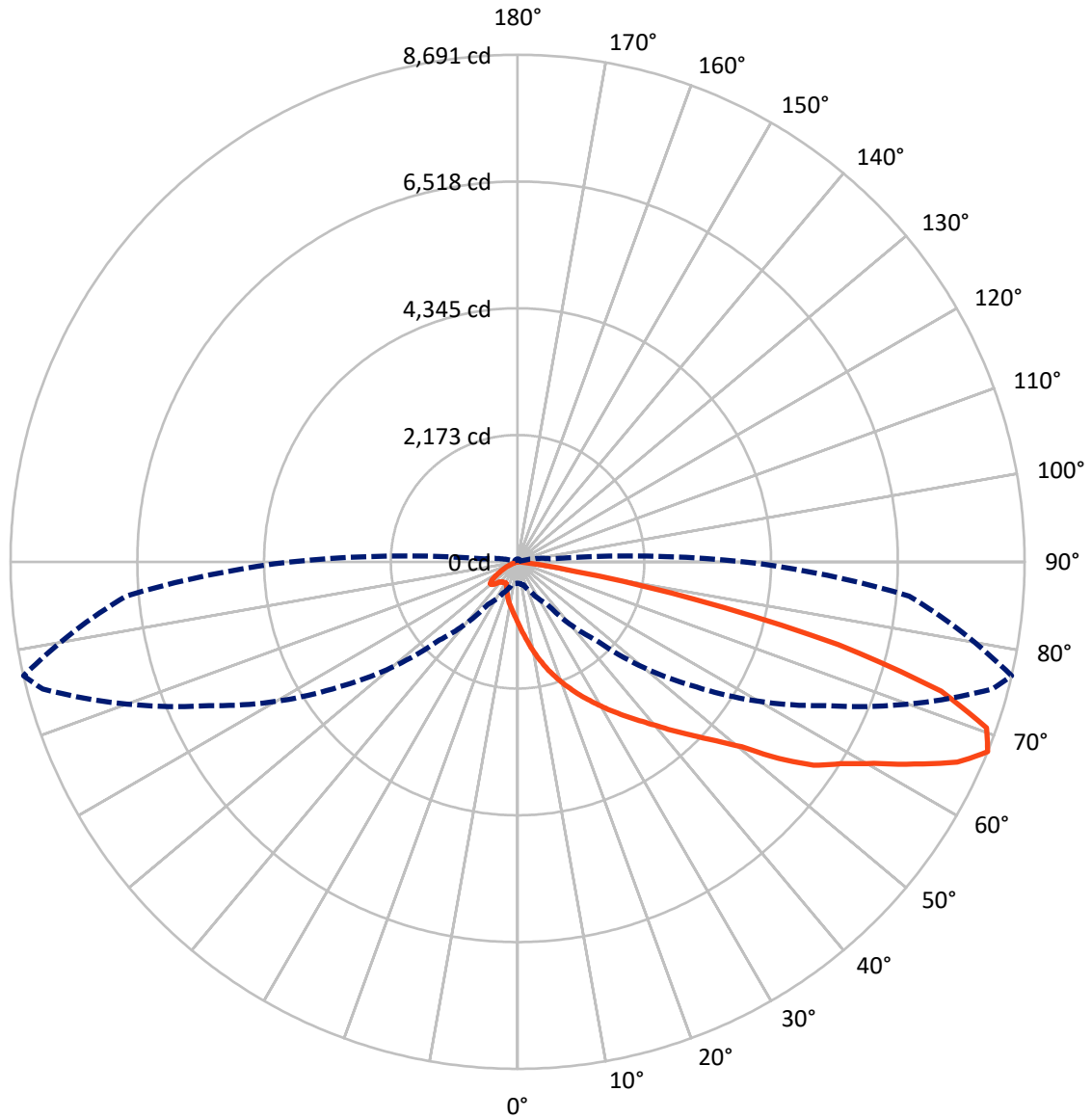
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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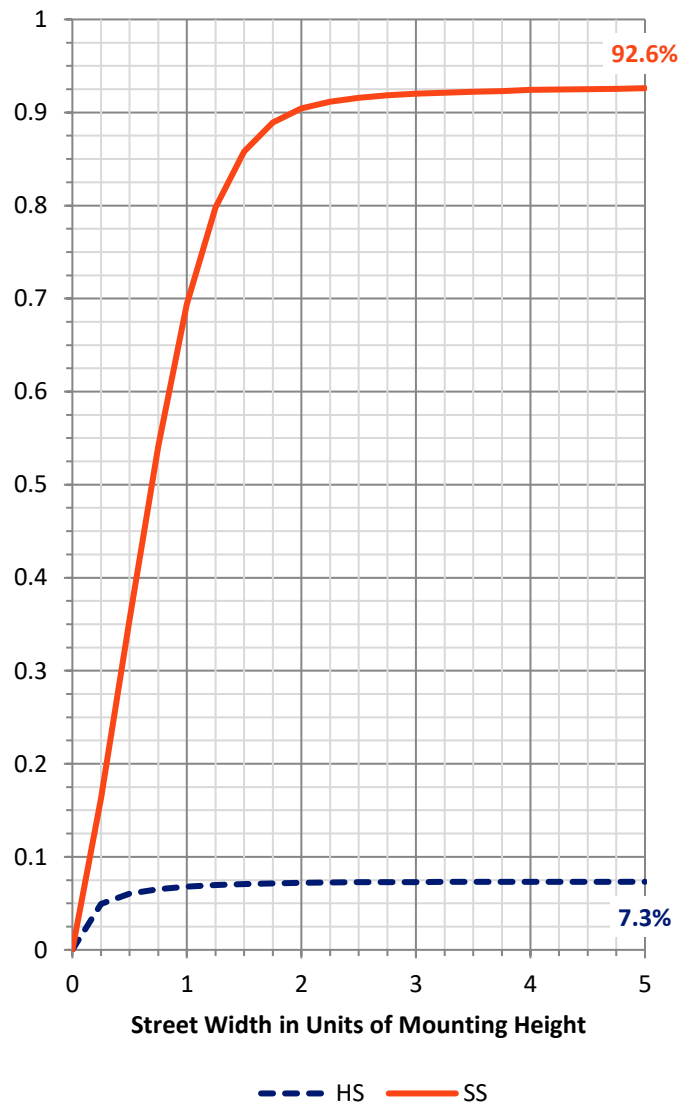
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 666.9 | 0.0 | 666.9 |
| | % Fixture | 7.4 | 0.0 | 7.4 |
| Street Side | Lumens | 8398.2 | 0.0 | 8398.2 |
| | % Fixture | 92.6 | 0.0 | 92.6 |
| Total | Lumens | 9065.1 | 0.0 | 9065.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 106.7 | 1.2 |
| 10°-20° | 373.6 | 4.1 |
| 20°-30° | 721.0 | 8.0 |
| 30°-40° | 1251.7 | 13.8 |
| 40°-50° | 1817.4 | 20.0 |
| 50°-60° | 2087.1 | 23.0 |
| 60°-70° | 1812.0 | 20.0 |
| 70°-80° | 853.4 | 9.4 |
| 80°-90° | 42.2 | 0.5 |
| 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° | 9065.1 | 100.0 |
| 0°-180° | 9065.1 | 100.0 |

Coefficient of Utilization

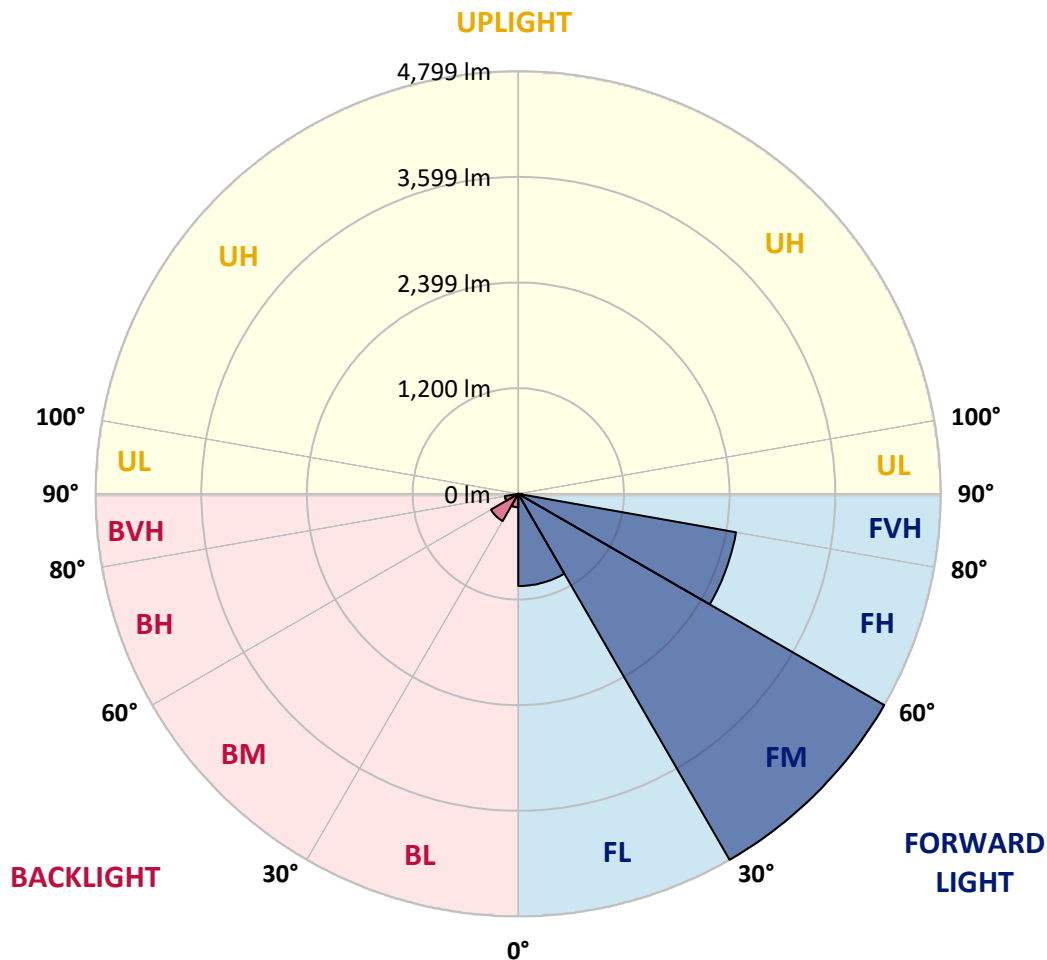


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1046.9 | 11.5 | | | |
| FM (30°-60°) | 4798.8 | 52.9 | | | |
| FH (60°-80°) | 2511.0 | 27.7 | | | G2/5000 |
| FVH (80°-90°) | 41.4 | 0.5 | | | G1/100 |
| BL (0°-30°) | 154.4 | 1.7 | B1/500 | | |
| BM (30°-60°) | 357.3 | 3.9 | B1/1000 | | |
| BH (60°-80°) | 154.4 | 1.7 | B1/500 | | G1/500 |
| BVH (80°-90°) | 0.8 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 |
| 2.5° | 1447.3 | 1456.3 | 1443.3 | 1418.6 | 1381.4 | 1357.2 | 1298.1 | 1242.4 | 1180.4 | 1160.7 | 1098.8 |
| 5° | 1764.2 | 1772.0 | 1757.5 | 1730.4 | 1680.9 | 1633.5 | 1555.9 | 1439.4 | 1318.4 | 1279.5 | 1169.7 |
| 7.5° | 1999.0 | 2003.5 | 1997.8 | 1973.0 | 1925.8 | 1872.3 | 1785.6 | 1647.7 | 1468.1 | 1425.3 | 1257.0 |
| 10° | 2167.8 | 2182.4 | 2180.8 | 2171.2 | 2139.7 | 2096.3 | 2004.0 | 1846.9 | 1635.8 | 1580.7 | 1355.5 |
| 12.5° | 2279.8 | 2296.1 | 2305.7 | 2327.1 | 2325.4 | 2297.8 | 2216.8 | 2050.7 | 1803.1 | 1738.3 | 1466.4 |
| 15° | 2312.5 | 2329.9 | 2366.5 | 2416.0 | 2460.0 | 2474.0 | 2417.2 | 2250.6 | 1987.1 | 1904.3 | 1580.1 |
| 17.5° | 2293.8 | 2320.9 | 2364.8 | 2443.1 | 2539.3 | 2602.9 | 2596.7 | 2443.6 | 2154.2 | 2059.7 | 1691.6 |
| 20° | 2335.0 | 2360.9 | 2395.2 | 2461.1 | 2573.1 | 2688.5 | 2734.7 | 2628.3 | 2320.4 | 2221.3 | 1808.6 |
| 22.5° | 2562.4 | 2557.9 | 2561.3 | 2571.9 | 2639.0 | 2753.3 | 2848.4 | 2796.0 | 2484.7 | 2383.4 | 1932.5 |
| 25° | 2922.7 | 2902.4 | 2868.1 | 2810.0 | 2793.2 | 2848.4 | 2947.5 | 2944.6 | 2658.1 | 2549.5 | 2059.1 |
| 27.5° | 3335.9 | 3332.5 | 3252.0 | 3112.4 | 3033.6 | 3012.2 | 3059.4 | 3089.2 | 2829.8 | 2713.8 | 2186.3 |
| 30° | 3731.6 | 3740.6 | 3632.0 | 3476.6 | 3331.9 | 3248.0 | 3205.3 | 3226.6 | 3004.3 | 2891.1 | 2317.5 |
| 32.5° | 4076.1 | 4085.6 | 3967.5 | 3785.6 | 3606.7 | 3505.3 | 3415.2 | 3362.3 | 3194.5 | 3071.3 | 2461.6 |
| 35° | 4367.1 | 4376.6 | 4241.0 | 4040.0 | 3849.3 | 3757.4 | 3655.6 | 3510.9 | 3386.0 | 3271.1 | 2622.1 |
| 37.5° | 4627.2 | 4624.4 | 4442.6 | 4239.9 | 4052.4 | 3979.9 | 3926.4 | 3693.9 | 3583.0 | 3472.1 | 2800.0 |
| 40° | 4780.9 | 4792.7 | 4637.3 | 4413.9 | 4232.0 | 4179.1 | 4175.7 | 3920.7 | 3810.4 | 3702.9 | 2994.7 |
| 42.5° | 4825.9 | 4846.7 | 4734.2 | 4550.6 | 4385.7 | 4328.3 | 4416.6 | 4166.1 | 4075.0 | 3970.2 | 3214.8 |
| 45° | 4744.8 | 4765.1 | 4713.9 | 4586.7 | 4490.4 | 4453.2 | 4623.8 | 4420.6 | 4357.6 | 4254.0 | 3463.1 |
| 47.5° | 4508.5 | 4533.8 | 4546.1 | 4519.1 | 4518.0 | 4555.7 | 4809.6 | 4688.6 | 4693.1 | 4587.2 | 3750.7 |
| 50° | 4050.8 | 4093.5 | 4207.2 | 4303.0 | 4451.0 | 4636.8 | 4990.3 | 4979.0 | 5071.3 | 4980.2 | 4125.6 |
| 52.5° | 3218.8 | 3279.6 | 3671.3 | 3933.1 | 4265.8 | 4621.5 | 5189.0 | 5445.1 | 5735.0 | 5601.6 | 4654.2 |
| 55° | 2586.6 | 2586.6 | 2905.3 | 3395.0 | 3904.4 | 4521.4 | 5275.7 | 5748.0 | 6187.0 | 6155.5 | 5026.3 |
| 57.5° | 2108.7 | 2134.0 | 2337.2 | 2770.2 | 3381.5 | 4282.7 | 5329.2 | 5938.2 | 6551.3 | 6528.1 | 5390.0 |
| 60° | 1301.4 | 1356.1 | 1739.9 | 2167.3 | 2786.5 | 3857.7 | 5295.4 | 6130.7 | 6993.2 | 7011.7 | 5827.8 |
| 62.5° | 732.9 | 753.2 | 924.3 | 1559.3 | 2166.6 | 3286.4 | 5037.0 | 6238.3 | 7558.4 | 7637.1 | 6279.4 |
| 65° | 506.0 | 516.2 | 582.1 | 970.5 | 1501.8 | 2616.4 | 4532.0 | 6171.3 | 8124.6 | 8283.9 | 6662.1 |
| 67.5° | 367.6 | 372.7 | 413.8 | 592.8 | 891.1 | 1897.1 | 3740.6 | 5833.5 | 8424.7 | 8690.9 | 6735.3 |
| 70° | 282.6 | 286.0 | 315.8 | 389.5 | 526.3 | 1170.9 | 2716.7 | 5162.0 | 8207.4 | 8525.4 | 6360.4 |
| 72.5° | 229.7 | 233.1 | 256.1 | 288.2 | 349.0 | 692.4 | 1646.6 | 4192.0 | 7248.2 | 7591.6 | 5414.7 |
| 75° | 193.6 | 198.1 | 218.9 | 239.8 | 273.6 | 444.7 | 772.3 | 2919.3 | 5450.7 | 5675.9 | 3765.3 |
| 77.5° | 107.5 | 99.1 | 177.8 | 198.7 | 230.8 | 281.5 | 361.4 | 1718.0 | 3052.7 | 3115.2 | 1670.7 |
| 80° | 67.0 | 69.3 | 141.2 | 159.9 | 177.3 | 141.9 | 165.5 | 661.4 | 1058.3 | 1005.4 | 323.7 |
| 82.5° | 3.9 | 9.0 | 108.6 | 115.4 | 121.6 | 60.8 | 62.5 | 224.6 | 255.0 | 234.2 | 57.4 |
| 85° | 0.0 | 0.0 | 49.5 | 40.0 | 42.2 | 17.4 | 18.0 | 52.4 | 34.3 | 37.1 | 11.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 1.6 | 3.4 | 4.5 | 1.6 | 2.3 | 3.9 |
| 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° | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 | 1045.3 |
| 2.5° | 1059.4 | 1020.0 | 940.0 | 861.8 | 798.2 | 739.1 | 696.9 | 656.9 | 636.6 | 635.5 | 634.4 |
| 5° | 1091.5 | 1008.7 | 848.9 | 707.6 | 593.9 | 502.7 | 443.6 | 401.4 | 380.0 | 372.7 | 371.6 |
| 7.5° | 1136.5 | 1012.1 | 769.0 | 572.5 | 438.5 | 360.3 | 326.5 | 312.9 | 308.5 | 303.4 | 302.3 |
| 10° | 1193.4 | 1020.0 | 697.4 | 461.0 | 345.6 | 306.3 | 292.7 | 287.1 | 283.7 | 280.3 | 279.2 |
| 12.5° | 1257.0 | 1027.4 | 626.5 | 382.7 | 304.0 | 283.7 | 274.2 | 267.4 | 262.9 | 258.9 | 257.8 |
| 15° | 1318.9 | 1031.9 | 552.8 | 328.2 | 282.6 | 266.3 | 256.1 | 248.8 | 242.6 | 238.1 | 237.6 |
| 17.5° | 1380.3 | 1038.0 | 483.6 | 295.5 | 265.2 | 248.8 | 238.7 | 229.7 | 224.6 | 219.6 | 218.9 |
| 20° | 1448.4 | 1036.9 | 418.2 | 272.4 | 247.6 | 231.3 | 220.7 | 212.2 | 207.2 | 201.5 | 201.0 |
| 22.5° | 1511.5 | 1031.3 | 360.8 | 252.8 | 229.7 | 213.9 | 202.1 | 193.6 | 188.6 | 184.1 | 183.5 |
| 25° | 1584.0 | 1026.7 | 312.9 | 234.7 | 212.8 | 197.0 | 184.1 | 176.2 | 170.6 | 166.7 | 166.0 |
| 27.5° | 1653.8 | 1020.0 | 278.1 | 218.4 | 196.5 | 181.2 | 168.9 | 159.9 | 154.8 | 152.0 | 152.0 |
| 30° | 1722.5 | 1018.3 | 265.2 | 202.6 | 181.8 | 166.7 | 154.3 | 145.8 | 141.9 | 140.7 | 140.1 |
| 32.5° | 1805.2 | 1022.8 | 270.8 | 197.0 | 168.3 | 153.1 | 141.2 | 135.1 | 131.2 | 131.2 | 131.2 |
| 35° | 1893.7 | 1021.7 | 279.2 | 202.1 | 159.3 | 139.6 | 130.6 | 126.7 | 122.7 | 122.7 | 122.7 |
| 37.5° | 2004.6 | 1023.4 | 286.0 | 210.5 | 155.9 | 128.3 | 123.3 | 118.2 | 115.9 | 115.9 | 115.9 |
| 40° | 2170.0 | 1079.1 | 282.6 | 217.8 | 154.8 | 120.4 | 110.3 | 108.6 | 106.9 | 106.9 | 106.9 |
| 42.5° | 2372.7 | 1200.2 | 287.1 | 218.4 | 154.3 | 114.8 | 101.4 | 104.7 | 100.8 | 100.2 | 99.6 |
| 45° | 2594.5 | 1332.4 | 315.8 | 206.6 | 153.6 | 112.0 | 96.9 | 100.8 | 94.6 | 94.6 | 94.6 |
| 47.5° | 2814.5 | 1463.6 | 345.1 | 189.7 | 152.0 | 111.4 | 92.9 | 90.6 | 89.0 | 89.5 | 89.5 |
| 50° | 3118.0 | 1570.5 | 356.3 | 166.7 | 148.0 | 110.3 | 85.6 | 86.1 | 85.0 | 86.1 | 86.1 |
| 52.5° | 3448.4 | 1593.1 | 342.9 | 140.7 | 136.8 | 106.9 | 80.5 | 82.7 | 82.2 | 83.3 | 83.3 |
| 55° | 3654.4 | 1568.9 | 283.1 | 117.1 | 119.3 | 93.5 | 75.4 | 79.9 | 79.9 | 79.9 | 79.9 |
| 57.5° | 3867.2 | 1465.9 | 201.0 | 95.1 | 99.1 | 76.6 | 70.9 | 77.1 | 76.6 | 76.0 | 76.0 |
| 60° | 4020.4 | 1299.2 | 132.3 | 78.2 | 78.8 | 63.0 | 65.9 | 72.6 | 72.1 | 69.3 | 69.3 |
| 62.5° | 4134.6 | 1115.1 | 85.0 | 66.4 | 60.3 | 56.9 | 60.3 | 65.9 | 63.7 | 57.4 | 56.3 |
| 65° | 4121.7 | 860.2 | 65.3 | 56.9 | 49.5 | 49.5 | 52.4 | 57.4 | 50.6 | 40.5 | 39.4 |
| 67.5° | 3881.4 | 582.1 | 54.0 | 47.9 | 41.6 | 41.1 | 43.4 | 47.9 | 43.4 | 34.3 | 33.2 |
| 70° | 3451.8 | 380.6 | 43.4 | 37.1 | 33.2 | 30.4 | 34.8 | 41.1 | 36.6 | 27.6 | 26.4 |
| 72.5° | 2801.6 | 232.0 | 32.7 | 27.1 | 24.2 | 19.7 | 27.6 | 33.8 | 29.3 | 20.3 | 19.2 |
| 75° | 1812.6 | 118.2 | 22.5 | 17.4 | 12.9 | 11.8 | 20.3 | 25.3 | 20.3 | 12.4 | 10.7 |
| 77.5° | 693.5 | 49.5 | 12.4 | 7.9 | 6.8 | 5.6 | 11.3 | 15.2 | 8.4 | 2.8 | 2.3 |
| 80° | 133.5 | 20.8 | 6.1 | 3.9 | 3.4 | 2.3 | 1.6 | 1.1 | 0.0 | 0.0 | 0.0 |
| 82.5° | 23.1 | 6.8 | 2.3 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 7.9 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.8 | 0.0 | 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)