

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: P881696

Luminaire Tested: **NAV-SB1B-722-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881696
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-SB1B-722-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 2200K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE II OPTICS WITH
HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3279 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

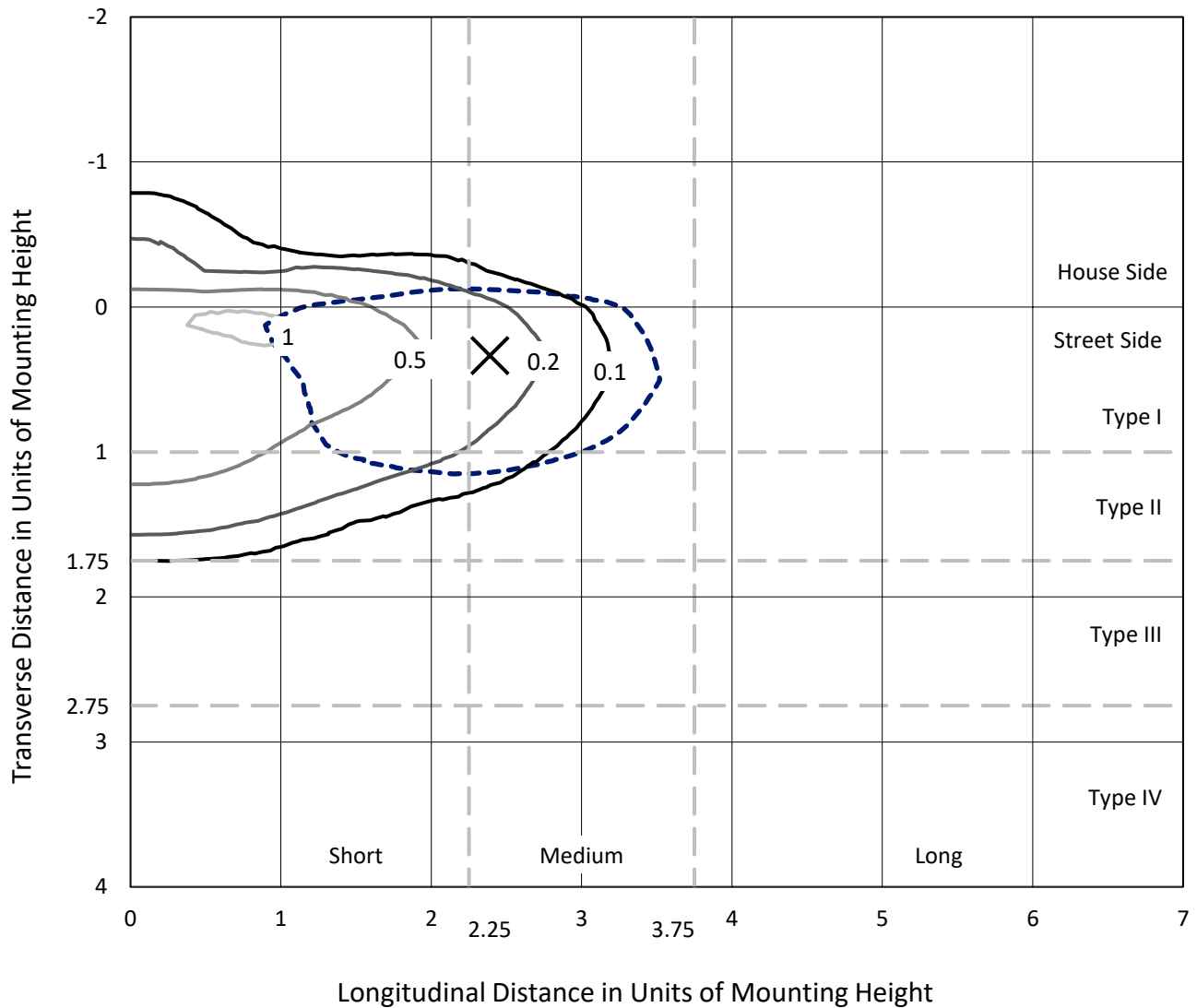
Input Watts (W): 39.8
Input Voltage (V): 120.0
Input Current (Ain): 0.33
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.305
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

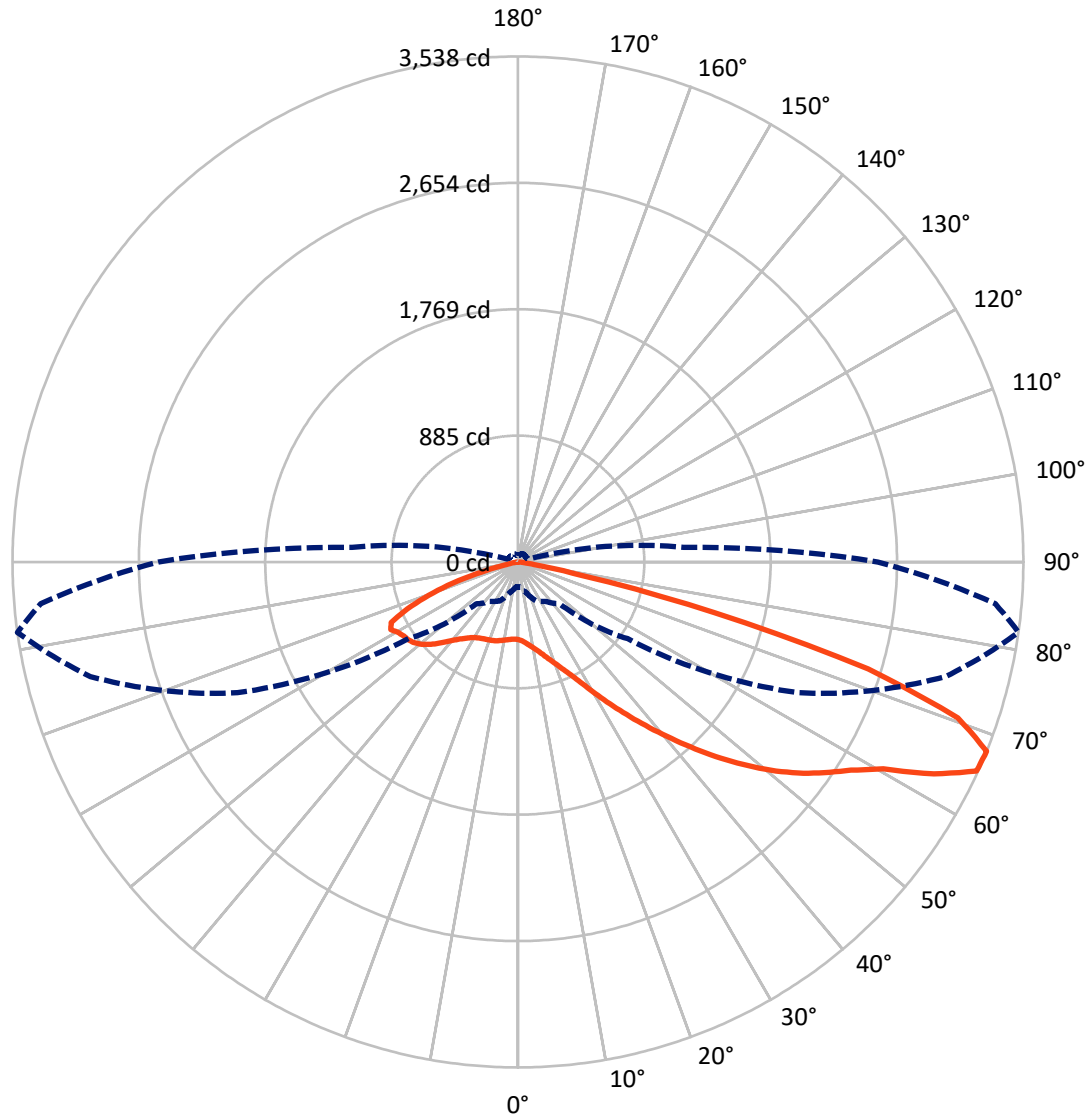
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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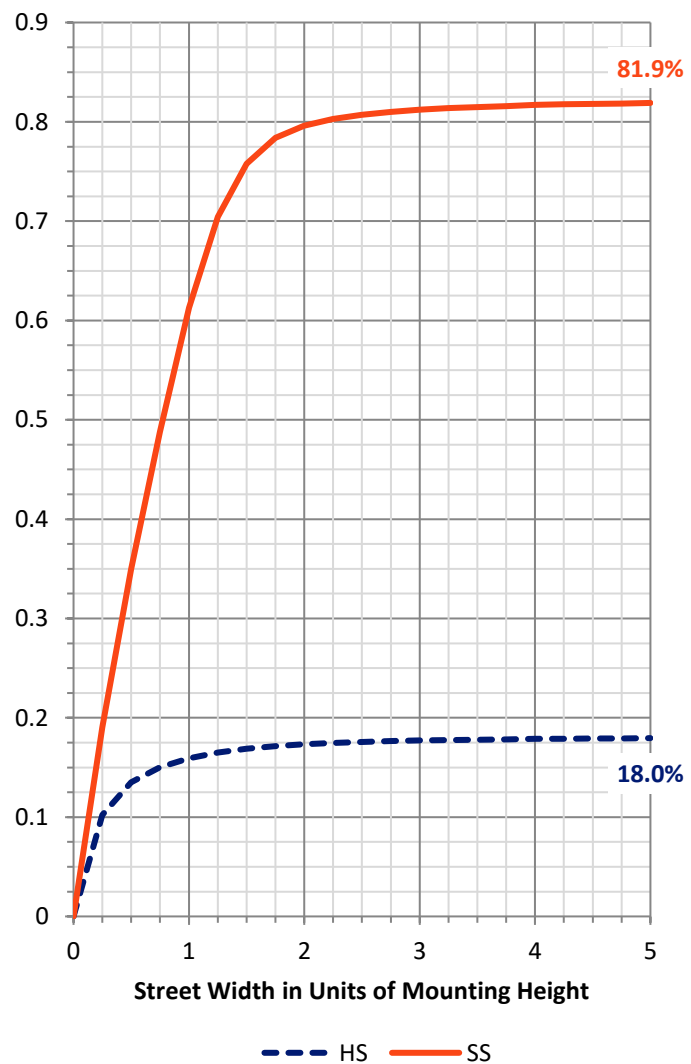
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 594.0 | 0.0 | 594.0 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 2685.0 | 0.0 | 2685.0 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 3279.0 | 0.0 | 3279.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 48.4 | 1.5 |
| 10°-20° | 125.8 | 3.8 |
| 20°-30° | 201.4 | 6.1 |
| 30°-40° | 356.2 | 10.9 |
| 40°-50° | 624.1 | 19.0 |
| 50°-60° | 832.4 | 25.4 |
| 60°-70° | 774.9 | 23.6 |
| 70°-80° | 297.4 | 9.1 |
| 80°-90° | 18.5 | 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° | 3279.0 | 100.0 |
| 0°-180° | 3279.0 | 100.0 |

Coefficient of Utilization



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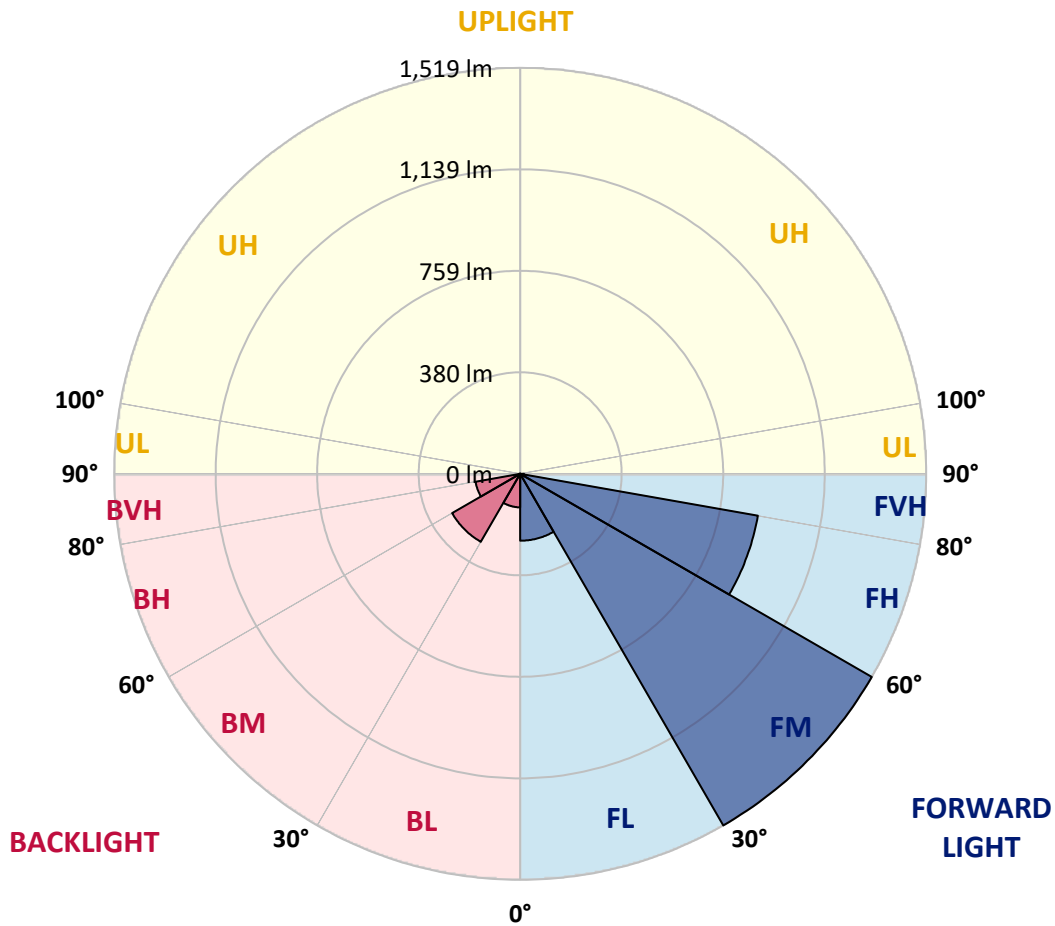
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 250.2 | 7.6 | | | |
| FM (30°-60°) | 1518.7 | 46.3 | | | |
| FH (60°-80°) | 902.8 | 27.5 | | | G1/1800 |
| FVH (80°-90°) | 13.4 | 0.4 | | | G1/100 |
| BL (0°-30°) | 125.4 | 3.8 | B1/500 | | |
| BM (30°-60°) | 294.0 | 9.0 | B1/1000 | | |
| BH (60°-80°) | 169.5 | 5.2 | B1/500 | | G1/500 |
| BVH (80°-90°) | 5.0 | 0.2 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 |
| 2.5° | 574.1 | 577.5 | 575.6 | 574.6 | 573.0 | 570.6 | 568.7 | 562.8 | 556.7 | 552.7 | 551.2 |
| 5° | 585.7 | 589.0 | 588.8 | 589.7 | 590.9 | 591.6 | 591.1 | 584.5 | 575.8 | 569.0 | 564.9 |
| 7.5° | 575.8 | 579.6 | 582.6 | 587.4 | 595.6 | 604.4 | 608.6 | 607.2 | 598.2 | 588.8 | 583.8 |
| 10° | 547.7 | 551.7 | 559.0 | 570.1 | 587.6 | 606.5 | 622.3 | 629.6 | 624.0 | 613.6 | 606.7 |
| 12.5° | 496.2 | 500.3 | 514.7 | 538.7 | 568.0 | 600.8 | 631.0 | 650.6 | 652.1 | 641.7 | 633.6 |
| 15° | 438.4 | 442.4 | 457.8 | 488.0 | 532.6 | 585.2 | 635.8 | 672.8 | 685.3 | 676.4 | 666.7 |
| 17.5° | 402.5 | 406.1 | 417.6 | 441.9 | 488.4 | 554.1 | 634.1 | 696.4 | 725.0 | 717.9 | 706.4 |
| 20° | 391.7 | 394.7 | 400.2 | 417.2 | 455.9 | 521.7 | 623.3 | 718.6 | 767.7 | 763.7 | 750.7 |
| 22.5° | 403.2 | 406.1 | 407.7 | 415.3 | 439.6 | 500.5 | 609.6 | 741.3 | 817.3 | 817.8 | 802.0 |
| 25° | 429.9 | 432.7 | 430.8 | 435.6 | 446.2 | 493.9 | 604.4 | 768.0 | 879.6 | 884.8 | 866.9 |
| 27.5° | 473.8 | 474.0 | 469.6 | 469.3 | 471.0 | 503.8 | 609.8 | 796.5 | 958.2 | 967.9 | 945.7 |
| 30° | 561.9 | 558.3 | 541.1 | 522.4 | 513.9 | 533.5 | 624.9 | 830.3 | 1051.0 | 1068.3 | 1040.4 |
| 32.5° | 697.6 | 692.4 | 660.8 | 616.2 | 571.3 | 581.5 | 652.1 | 868.8 | 1152.1 | 1183.2 | 1149.2 |
| 35° | 844.9 | 843.5 | 810.5 | 744.1 | 665.7 | 649.7 | 696.2 | 919.3 | 1262.3 | 1311.9 | 1271.5 |
| 37.5° | 981.9 | 981.1 | 962.3 | 884.1 | 788.7 | 744.8 | 767.0 | 985.4 | 1380.4 | 1452.1 | 1404.4 |
| 40° | 1107.0 | 1109.1 | 1090.2 | 1020.3 | 924.3 | 866.9 | 863.3 | 1067.1 | 1511.6 | 1604.9 | 1548.2 |
| 42.5° | 1215.1 | 1217.5 | 1198.3 | 1146.6 | 1058.1 | 1001.9 | 981.6 | 1167.2 | 1639.8 | 1768.9 | 1701.9 |
| 45° | 1288.5 | 1303.2 | 1300.3 | 1259.0 | 1195.5 | 1137.2 | 1123.7 | 1292.8 | 1785.9 | 1942.9 | 1864.3 |
| 47.5° | 1309.3 | 1322.8 | 1344.0 | 1349.7 | 1311.0 | 1253.6 | 1269.6 | 1444.1 | 1933.7 | 2117.2 | 2027.7 |
| 50° | 1258.1 | 1270.6 | 1314.7 | 1373.5 | 1400.4 | 1382.7 | 1411.5 | 1606.3 | 2085.1 | 2290.9 | 2188.0 |
| 52.5° | 1157.0 | 1169.8 | 1225.5 | 1318.5 | 1428.3 | 1484.0 | 1553.9 | 1766.1 | 2231.7 | 2455.5 | 2339.8 |
| 55° | 1010.9 | 1024.3 | 1095.9 | 1201.2 | 1375.2 | 1525.8 | 1672.6 | 1925.7 | 2366.0 | 2603.5 | 2476.7 |
| 57.5° | 812.1 | 822.0 | 896.4 | 1043.7 | 1241.5 | 1484.2 | 1760.2 | 2099.9 | 2492.5 | 2748.9 | 2612.5 |
| 60° | 529.3 | 538.0 | 624.4 | 788.7 | 1020.1 | 1345.4 | 1777.7 | 2294.2 | 2660.6 | 2938.0 | 2795.4 |
| 62.5° | 352.0 | 357.9 | 409.1 | 529.8 | 718.4 | 1078.9 | 1675.5 | 2449.3 | 2907.1 | 3267.1 | 3109.2 |
| 65° | 241.5 | 247.4 | 298.6 | 382.7 | 464.1 | 713.7 | 1381.5 | 2428.8 | 3130.4 | 3528.4 | 3341.7 |
| 67.5° | 172.3 | 177.3 | 220.7 | 300.1 | 335.9 | 414.6 | 936.5 | 2166.3 | 3098.3 | 3538.4 | 3354.2 |
| 70° | 123.5 | 126.3 | 162.2 | 233.7 | 267.0 | 249.1 | 520.8 | 1656.8 | 2712.8 | 3267.3 | 3098.8 |
| 72.5° | 86.4 | 87.3 | 112.6 | 178.0 | 215.1 | 181.8 | 247.9 | 1104.6 | 2051.8 | 2564.5 | 2402.3 |
| 75° | 58.5 | 59.7 | 75.8 | 130.6 | 172.6 | 138.8 | 131.3 | 592.3 | 1204.5 | 1419.5 | 1272.5 |
| 77.5° | 35.9 | 36.4 | 48.9 | 89.2 | 129.1 | 105.8 | 84.5 | 251.0 | 466.0 | 457.5 | 390.0 |
| 80° | 20.3 | 20.3 | 31.2 | 55.5 | 88.1 | 68.2 | 59.3 | 106.7 | 147.5 | 129.6 | 114.3 |
| 82.5° | 11.3 | 11.6 | 22.7 | 34.5 | 58.3 | 40.4 | 32.6 | 49.3 | 63.7 | 56.4 | 49.1 |
| 85° | 4.7 | 5.2 | 13.9 | 16.3 | 27.9 | 20.1 | 13.2 | 20.8 | 23.6 | 21.0 | 15.3 |
| 87.5° | 0.5 | 0.7 | 4.2 | 3.1 | 3.3 | 4.0 | 1.9 | 4.0 | 3.3 | 3.3 | 2.4 |
| 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° | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 | 543.2 |
| 2.5° | 546.8 | 543.2 | 534.2 | 523.9 | 510.2 | 503.6 | 494.6 | 488.4 | 483.3 | 483.7 | 479.0 |
| 5° | 557.4 | 548.4 | 528.3 | 503.3 | 472.2 | 450.0 | 426.4 | 410.1 | 396.8 | 394.0 | 387.6 |
| 7.5° | 572.0 | 557.9 | 522.7 | 477.6 | 424.9 | 385.0 | 349.4 | 326.5 | 310.2 | 305.0 | 299.8 |
| 10° | 590.9 | 570.4 | 515.4 | 445.2 | 369.5 | 318.7 | 280.5 | 262.5 | 251.4 | 247.6 | 244.8 |
| 12.5° | 612.9 | 584.8 | 505.7 | 405.8 | 312.3 | 263.5 | 239.1 | 230.2 | 226.6 | 225.5 | 224.7 |
| 15° | 640.5 | 602.7 | 491.0 | 359.1 | 263.9 | 229.7 | 219.3 | 218.1 | 218.6 | 218.1 | 217.9 |
| 17.5° | 673.3 | 622.3 | 467.2 | 310.9 | 231.4 | 212.5 | 208.7 | 209.6 | 210.8 | 210.6 | 210.1 |
| 20° | 709.2 | 641.7 | 436.7 | 268.2 | 209.2 | 200.2 | 198.1 | 199.0 | 200.0 | 199.5 | 199.3 |
| 22.5° | 750.0 | 662.4 | 403.0 | 234.9 | 194.3 | 188.9 | 186.5 | 186.7 | 186.7 | 185.8 | 185.3 |
| 25° | 798.9 | 685.3 | 367.6 | 211.3 | 183.0 | 178.7 | 175.9 | 174.9 | 173.5 | 170.7 | 170.2 |
| 27.5° | 857.2 | 709.7 | 333.6 | 194.8 | 174.0 | 170.0 | 166.7 | 164.3 | 160.8 | 156.0 | 155.6 |
| 30° | 922.8 | 739.2 | 304.8 | 184.4 | 166.9 | 162.9 | 159.1 | 155.6 | 150.4 | 144.5 | 144.0 |
| 32.5° | 1000.0 | 770.8 | 283.8 | 177.5 | 160.5 | 156.3 | 151.8 | 147.5 | 141.9 | 136.0 | 136.2 |
| 35° | 1092.1 | 809.0 | 271.5 | 172.8 | 155.6 | 149.9 | 145.0 | 140.2 | 136.0 | 130.8 | 130.3 |
| 37.5° | 1192.0 | 849.7 | 267.7 | 170.4 | 152.3 | 143.5 | 137.9 | 134.6 | 134.1 | 131.0 | 130.8 |
| 40° | 1301.3 | 897.8 | 270.5 | 169.0 | 148.7 | 137.4 | 131.3 | 130.6 | 131.7 | 126.3 | 126.5 |
| 42.5° | 1417.0 | 954.9 | 275.3 | 167.4 | 143.8 | 131.3 | 125.4 | 125.4 | 124.4 | 116.9 | 116.9 |
| 45° | 1542.1 | 1020.8 | 280.0 | 163.4 | 137.9 | 125.1 | 120.6 | 119.0 | 115.0 | 107.7 | 107.4 |
| 47.5° | 1668.1 | 1087.9 | 283.5 | 156.0 | 130.8 | 119.9 | 115.9 | 112.1 | 106.2 | 99.6 | 99.4 |
| 50° | 1787.8 | 1148.1 | 279.8 | 145.2 | 122.8 | 115.0 | 110.7 | 105.5 | 99.2 | 94.7 | 94.0 |
| 52.5° | 1894.8 | 1200.2 | 263.7 | 132.4 | 114.3 | 109.8 | 106.0 | 100.6 | 95.4 | 90.7 | 90.2 |
| 55° | 1987.8 | 1242.5 | 235.4 | 120.4 | 106.7 | 105.3 | 101.5 | 94.7 | 87.6 | 83.6 | 83.1 |
| 57.5° | 2077.0 | 1274.6 | 200.0 | 110.5 | 99.9 | 100.3 | 94.7 | 88.5 | 81.9 | 77.7 | 77.2 |
| 60° | 2195.8 | 1317.6 | 164.1 | 101.3 | 92.5 | 94.0 | 87.8 | 83.3 | 75.1 | 69.6 | 68.9 |
| 62.5° | 2385.6 | 1384.4 | 130.3 | 89.9 | 84.0 | 84.5 | 81.9 | 76.5 | 66.6 | 60.2 | 59.7 |
| 65° | 2536.2 | 1359.8 | 102.7 | 77.7 | 74.4 | 75.1 | 75.1 | 69.2 | 58.5 | 51.2 | 50.5 |
| 67.5° | 2519.2 | 1164.3 | 81.9 | 65.6 | 65.2 | 65.6 | 67.3 | 62.3 | 51.9 | 46.0 | 45.1 |
| 70° | 2320.7 | 926.1 | 65.6 | 54.5 | 56.7 | 55.5 | 60.2 | 56.9 | 46.7 | 40.8 | 40.1 |
| 72.5° | 1893.6 | 667.2 | 50.0 | 45.1 | 43.4 | 45.3 | 54.3 | 51.2 | 39.0 | 32.3 | 31.6 |
| 75° | 1106.5 | 356.0 | 37.3 | 35.6 | 31.4 | 37.8 | 48.2 | 43.7 | 29.7 | 23.8 | 23.1 |
| 77.5° | 360.3 | 124.2 | 27.4 | 26.2 | 23.4 | 30.5 | 41.1 | 36.8 | 24.3 | 18.9 | 18.2 |
| 80° | 96.6 | 37.5 | 18.7 | 17.2 | 15.1 | 22.7 | 32.6 | 29.3 | 17.5 | 12.3 | 12.0 |
| 82.5° | 38.7 | 15.8 | 10.9 | 9.7 | 8.3 | 15.6 | 25.7 | 23.6 | 13.0 | 7.8 | 7.8 |
| 85° | 12.5 | 5.2 | 4.0 | 3.1 | 3.8 | 9.7 | 15.3 | 16.1 | 9.2 | 4.0 | 3.1 |
| 87.5° | 1.7 | 0.7 | 0.7 | 0.9 | 0.7 | 1.7 | 4.7 | 4.5 | 2.6 | 0.5 | 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)