

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: P881560

Luminaire Tested: **NAV-SB1A-735-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881560
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-SB1A-735-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 3500K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV FORWARD
THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3399 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

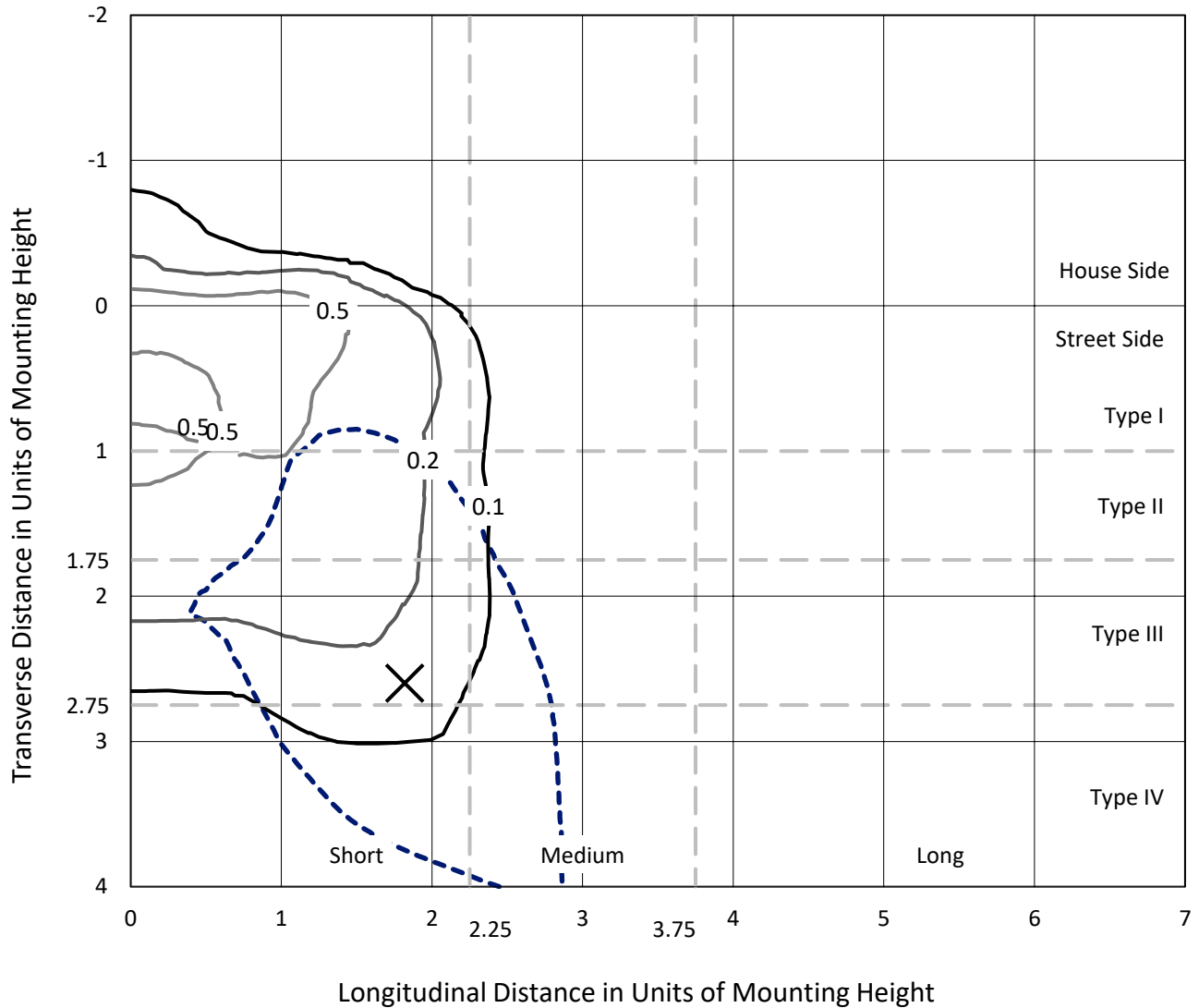
Input Watts (W): 30.9
Input Voltage (V): 120.0
Input Current (Ain): 0.263
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 6.356
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

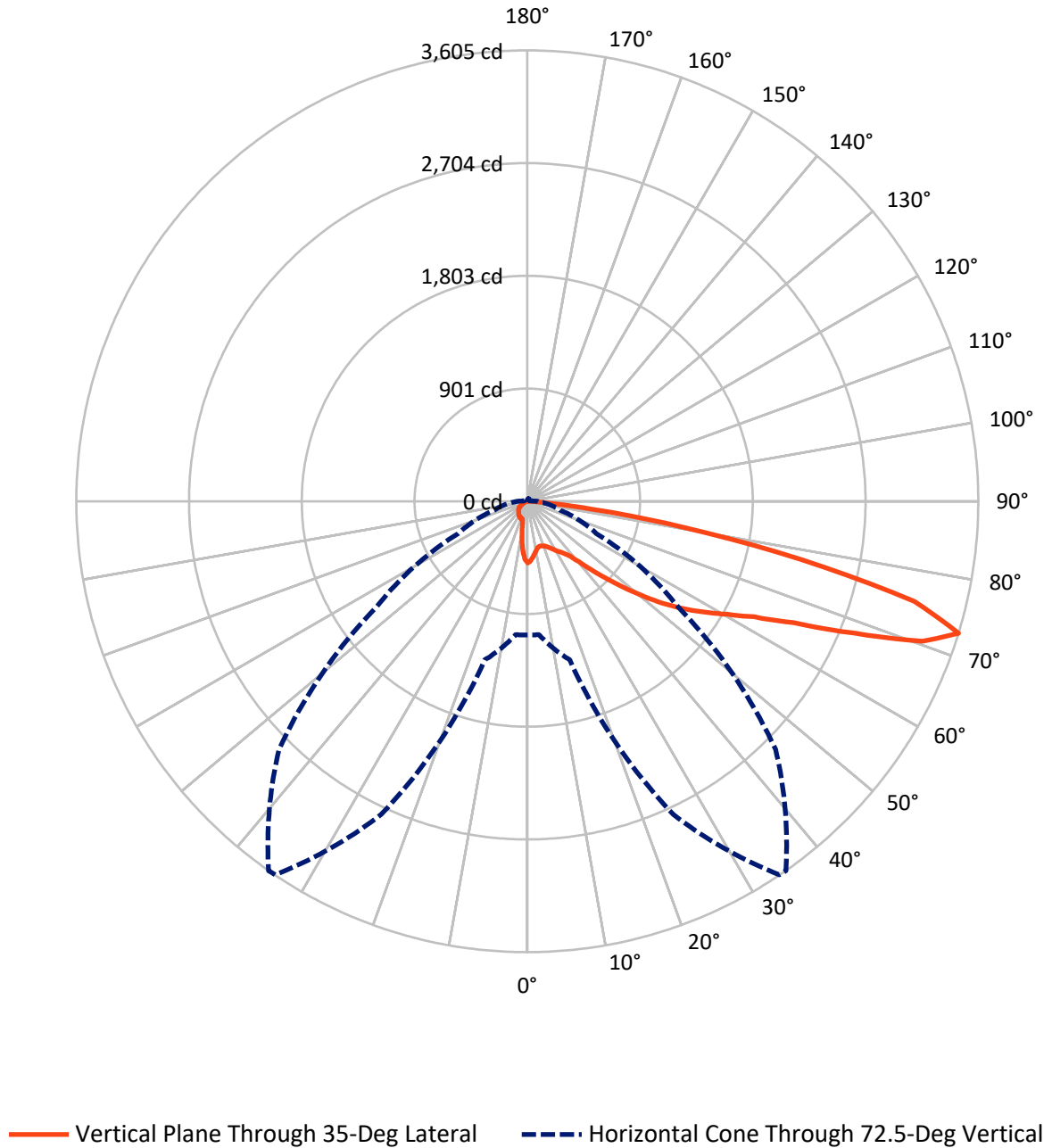
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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 | 382.5 | 0.0 | 382.5 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 3016.5 | 0.0 | 3016.5 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 3399.0 | 0.0 | 3399.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 40.5 | 1.2 |
| 10°-20° | 94.7 | 2.8 |
| 20°-30° | 153.8 | 4.5 |
| 30°-40° | 256.7 | 7.6 |
| 40°-50° | 485.6 | 14.3 |
| 50°-60° | 771.7 | 22.7 |
| 60°-70° | 954.6 | 28.1 |
| 70°-80° | 593.4 | 17.5 |
| 80°-90° | 47.9 | 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° | 3399.0 | 100.0 |
| 0°-180° | 3399.0 | 100.0 |

Coefficient of Utilization



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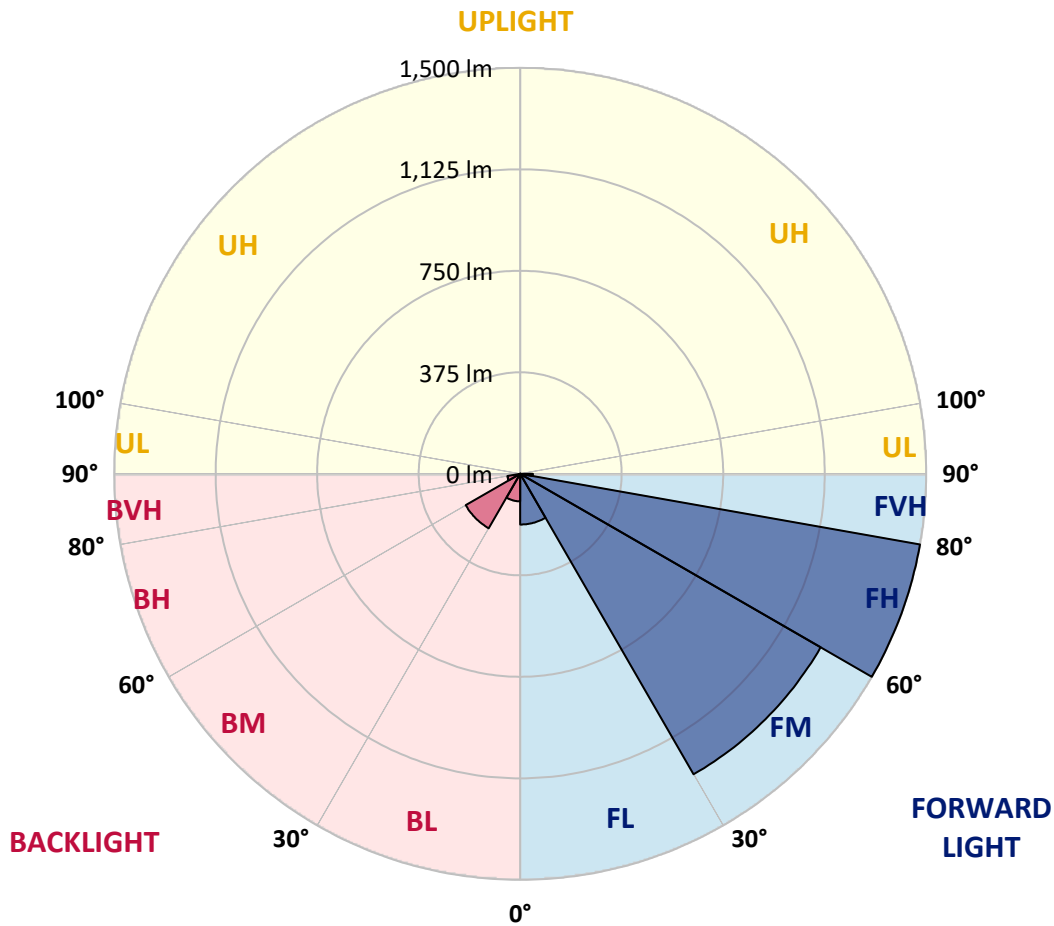
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 187.4 | 5.5 | | | |
| FM (30°-60°) | 1281.8 | 37.7 | | | |
| FH (60°-80°) | 1500.0 | 44.1 | | | G1/1800 |
| FVH (80°-90°) | 47.3 | 1.4 | | | G1/100 |
| BL (0°-30°) | 101.6 | 3.0 | B0/110 | | |
| BM (30°-60°) | 232.2 | 6.8 | B1/1000 | | |
| BH (60°-80°) | 48.0 | 1.4 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.6 | 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-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 |
| 2.5° | 470.7 | 474.7 | 475.4 | 476.7 | 476.7 | 478.2 | 480.7 | 484.2 | 489.9 | 492.9 | 494.9 |
| 5° | 433.9 | 436.8 | 440.6 | 443.6 | 449.3 | 450.0 | 459.8 | 469.2 | 482.4 | 492.4 | 499.4 |
| 7.5° | 396.7 | 400.2 | 405.2 | 412.4 | 419.9 | 422.1 | 436.8 | 452.8 | 473.7 | 492.4 | 504.1 |
| 10° | 370.6 | 370.8 | 375.3 | 382.5 | 394.5 | 397.2 | 415.2 | 437.8 | 464.0 | 489.4 | 508.6 |
| 12.5° | 355.9 | 357.6 | 359.6 | 365.1 | 376.6 | 378.3 | 397.5 | 424.1 | 454.3 | 487.6 | 513.8 |
| 15° | 355.9 | 357.1 | 358.4 | 361.1 | 370.3 | 371.8 | 388.8 | 415.4 | 449.3 | 488.4 | 522.3 |
| 17.5° | 359.6 | 361.6 | 360.6 | 363.9 | 373.6 | 374.6 | 389.5 | 412.9 | 449.0 | 493.1 | 535.2 |
| 20° | 368.6 | 370.1 | 368.1 | 370.1 | 379.8 | 381.8 | 397.2 | 417.7 | 453.3 | 501.3 | 551.4 |
| 22.5° | 382.8 | 383.5 | 378.8 | 380.3 | 390.3 | 392.8 | 410.7 | 431.1 | 463.5 | 514.5 | 573.1 |
| 25° | 400.7 | 402.2 | 395.0 | 396.7 | 406.2 | 409.2 | 429.9 | 451.3 | 479.7 | 532.7 | 600.7 |
| 27.5° | 421.4 | 422.1 | 415.9 | 415.7 | 427.9 | 432.1 | 453.0 | 476.2 | 501.3 | 555.6 | 635.6 |
| 30° | 445.1 | 447.3 | 441.3 | 440.3 | 455.8 | 459.3 | 479.9 | 506.8 | 533.2 | 590.0 | 685.1 |
| 32.5° | 463.7 | 465.5 | 462.0 | 464.5 | 480.2 | 482.9 | 512.6 | 550.2 | 583.3 | 638.8 | 752.6 |
| 35° | 490.6 | 491.6 | 483.7 | 488.1 | 506.1 | 513.1 | 557.1 | 610.9 | 646.3 | 700.1 | 840.8 |
| 37.5° | 588.0 | 588.0 | 554.1 | 532.0 | 549.2 | 555.4 | 618.2 | 687.4 | 724.0 | 782.3 | 951.9 |
| 40° | 722.8 | 720.5 | 671.0 | 625.6 | 623.4 | 635.6 | 705.1 | 783.8 | 824.4 | 880.9 | 1076.9 |
| 42.5° | 866.5 | 863.0 | 795.5 | 750.6 | 743.2 | 747.4 | 805.4 | 902.6 | 943.9 | 1001.2 | 1211.4 |
| 45° | 994.0 | 993.0 | 931.2 | 870.9 | 857.5 | 870.9 | 930.7 | 1041.5 | 1071.2 | 1131.5 | 1345.6 |
| 47.5° | 1100.8 | 1100.8 | 1055.7 | 1016.4 | 1009.4 | 1017.4 | 1100.3 | 1195.7 | 1193.0 | 1270.2 | 1476.4 |
| 50° | 1223.9 | 1222.9 | 1180.0 | 1163.1 | 1170.3 | 1181.5 | 1295.6 | 1358.1 | 1319.0 | 1406.4 | 1593.2 |
| 52.5° | 1310.0 | 1316.0 | 1301.3 | 1298.6 | 1335.4 | 1354.9 | 1493.8 | 1517.0 | 1431.8 | 1535.7 | 1680.6 |
| 55° | 1378.3 | 1385.2 | 1402.2 | 1421.4 | 1492.3 | 1517.7 | 1685.8 | 1667.7 | 1526.2 | 1647.7 | 1730.9 |
| 57.5° | 1474.9 | 1464.9 | 1491.1 | 1528.9 | 1643.8 | 1674.4 | 1871.9 | 1809.9 | 1602.2 | 1738.6 | 1736.4 |
| 60° | 1592.2 | 1593.7 | 1598.2 | 1646.0 | 1794.9 | 1834.3 | 2055.2 | 1944.4 | 1651.0 | 1794.4 | 1675.6 |
| 62.5° | 1733.2 | 1735.4 | 1744.6 | 1818.1 | 1997.9 | 2035.0 | 2250.5 | 2054.4 | 1673.4 | 1778.7 | 1518.7 |
| 65° | 1723.5 | 1732.9 | 1835.8 | 2087.1 | 2306.5 | 2343.1 | 2478.3 | 2131.7 | 1639.5 | 1635.3 | 1236.6 |
| 67.5° | 1570.0 | 1585.5 | 1757.6 | 2408.4 | 2771.7 | 2812.6 | 2753.8 | 2146.8 | 1493.3 | 1271.7 | 806.7 |
| 70° | 1368.8 | 1374.3 | 1581.2 | 2697.3 | 3310.4 | 3351.8 | 3000.4 | 1979.7 | 1133.2 | 709.3 | 361.4 |
| 72.5° | 1068.9 | 1070.2 | 1313.0 | 2764.3 | 3602.8 | 3605.1 | 2806.8 | 1469.7 | 609.4 | 272.5 | 125.5 |
| 75° | 763.6 | 756.1 | 879.4 | 2241.7 | 3169.7 | 3195.1 | 2104.3 | 689.4 | 232.9 | 128.8 | 62.5 |
| 77.5° | 409.4 | 417.7 | 497.6 | 1329.5 | 2189.7 | 2233.0 | 1148.1 | 198.7 | 118.5 | 87.7 | 41.3 |
| 80° | 126.5 | 133.5 | 204.0 | 608.7 | 1240.3 | 1266.4 | 425.6 | 88.4 | 82.7 | 62.5 | 27.1 |
| 82.5° | 39.8 | 41.3 | 95.1 | 255.8 | 514.8 | 526.7 | 123.3 | 50.1 | 56.5 | 41.3 | 15.9 |
| 85° | 11.5 | 11.7 | 42.3 | 95.4 | 127.3 | 129.8 | 34.6 | 19.4 | 32.4 | 25.7 | 8.2 |
| 87.5° | 1.2 | 4.0 | 15.9 | 15.9 | 11.2 | 11.0 | 3.7 | 4.2 | 9.2 | 3.2 | 1.5 |
| 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° | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 | 492.6 |
| 2.5° | 493.6 | 493.9 | 490.6 | 485.2 | 479.2 | 474.2 | 468.0 | 463.0 | 459.5 | 458.5 | 460.3 |
| 5° | 497.1 | 495.4 | 486.2 | 469.5 | 449.5 | 432.4 | 413.2 | 398.0 | 388.0 | 383.8 | 385.3 |
| 7.5° | 502.3 | 497.4 | 477.2 | 444.3 | 406.2 | 372.3 | 338.0 | 311.3 | 294.4 | 285.9 | 287.2 |
| 10° | 506.8 | 496.9 | 462.2 | 408.0 | 349.7 | 298.4 | 252.0 | 219.9 | 202.0 | 193.5 | 193.8 |
| 12.5° | 511.1 | 496.6 | 442.8 | 364.9 | 285.9 | 223.2 | 180.1 | 164.1 | 159.1 | 157.4 | 156.9 |
| 15° | 519.0 | 497.4 | 418.4 | 315.6 | 222.4 | 168.6 | 152.9 | 152.7 | 153.7 | 153.2 | 152.9 |
| 17.5° | 530.0 | 498.1 | 390.8 | 263.3 | 171.6 | 148.7 | 147.9 | 150.2 | 151.7 | 150.9 | 150.7 |
| 20° | 544.2 | 501.1 | 361.4 | 211.4 | 147.4 | 143.7 | 145.4 | 147.4 | 148.7 | 147.4 | 147.2 |
| 22.5° | 564.1 | 506.3 | 329.2 | 169.9 | 139.7 | 140.7 | 142.2 | 144.5 | 145.7 | 144.0 | 143.7 |
| 25° | 588.5 | 514.5 | 297.6 | 147.7 | 136.0 | 137.2 | 139.5 | 142.0 | 143.5 | 141.7 | 141.5 |
| 27.5° | 620.1 | 527.7 | 268.5 | 142.7 | 132.2 | 133.0 | 136.2 | 140.0 | 142.0 | 139.7 | 139.7 |
| 30° | 666.0 | 549.4 | 243.3 | 144.9 | 130.0 | 128.3 | 132.7 | 138.0 | 140.2 | 138.2 | 138.0 |
| 32.5° | 726.7 | 580.0 | 227.9 | 148.4 | 129.0 | 122.8 | 127.0 | 133.7 | 137.5 | 136.2 | 136.2 |
| 35° | 806.4 | 626.6 | 221.9 | 152.4 | 128.3 | 117.1 | 120.0 | 127.3 | 133.7 | 135.0 | 135.0 |
| 37.5° | 903.1 | 691.4 | 223.7 | 154.2 | 126.0 | 112.3 | 113.8 | 120.0 | 128.5 | 132.5 | 133.5 |
| 40° | 1012.9 | 766.8 | 233.6 | 152.4 | 123.5 | 108.3 | 108.6 | 113.3 | 120.8 | 126.8 | 128.8 |
| 42.5° | 1126.2 | 855.0 | 252.0 | 145.9 | 121.3 | 104.9 | 104.1 | 107.3 | 112.3 | 116.6 | 118.3 |
| 45° | 1234.1 | 945.7 | 270.2 | 137.0 | 118.5 | 101.4 | 99.6 | 100.9 | 101.9 | 103.6 | 104.6 |
| 47.5° | 1328.2 | 1009.4 | 265.0 | 128.8 | 114.8 | 97.4 | 94.4 | 93.9 | 90.9 | 90.7 | 90.4 |
| 50° | 1393.2 | 1023.4 | 235.4 | 120.5 | 109.3 | 92.9 | 88.2 | 85.2 | 79.9 | 77.5 | 77.7 |
| 52.5° | 1413.9 | 968.3 | 192.3 | 112.3 | 100.4 | 86.9 | 80.2 | 75.5 | 69.0 | 66.7 | 66.5 |
| 55° | 1386.5 | 860.5 | 153.7 | 102.4 | 87.9 | 79.0 | 71.5 | 65.3 | 60.0 | 57.3 | 57.3 |
| 57.5° | 1319.5 | 723.3 | 121.5 | 90.7 | 74.7 | 70.0 | 62.5 | 56.3 | 51.8 | 49.1 | 48.6 |
| 60° | 1208.4 | 574.3 | 96.1 | 76.7 | 63.8 | 60.3 | 52.6 | 48.6 | 44.6 | 41.3 | 40.6 |
| 62.5° | 1039.8 | 409.9 | 75.5 | 60.8 | 53.3 | 49.3 | 44.8 | 41.8 | 37.1 | 32.6 | 31.9 |
| 65° | 811.4 | 250.8 | 58.3 | 44.6 | 42.8 | 40.8 | 38.1 | 35.4 | 29.6 | 25.2 | 24.4 |
| 67.5° | 511.8 | 118.8 | 41.6 | 33.6 | 33.9 | 32.9 | 31.6 | 29.4 | 25.2 | 21.2 | 20.7 |
| 70° | 225.4 | 57.5 | 27.4 | 25.7 | 25.2 | 25.2 | 26.2 | 25.4 | 21.4 | 17.7 | 16.9 |
| 72.5° | 76.7 | 30.9 | 20.4 | 19.4 | 18.2 | 17.9 | 21.9 | 21.2 | 17.2 | 13.7 | 13.0 |
| 75° | 40.1 | 20.7 | 14.9 | 13.9 | 11.0 | 13.2 | 17.4 | 16.4 | 12.2 | 9.0 | 8.2 |
| 77.5° | 26.2 | 14.7 | 10.2 | 9.0 | 6.2 | 8.7 | 13.0 | 11.5 | 7.2 | 4.5 | 4.0 |
| 80° | 16.4 | 9.7 | 6.0 | 4.2 | 3.0 | 4.7 | 7.0 | 5.0 | 2.7 | 1.0 | 0.7 |
| 82.5° | 8.7 | 5.0 | 2.2 | 1.5 | 1.2 | 1.5 | 1.7 | 1.2 | 0.5 | 0.0 | 0.0 |
| 85° | 3.5 | 1.7 | 0.7 | 0.5 | 0.2 | 0.0 | 0.5 | 0.2 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.2 | 0.2 | 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)