

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: P965591

Luminaire Tested: **NAV-SB4A-730-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965591
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-SB4A-730-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3000K, 350mA 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: 15602.6 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

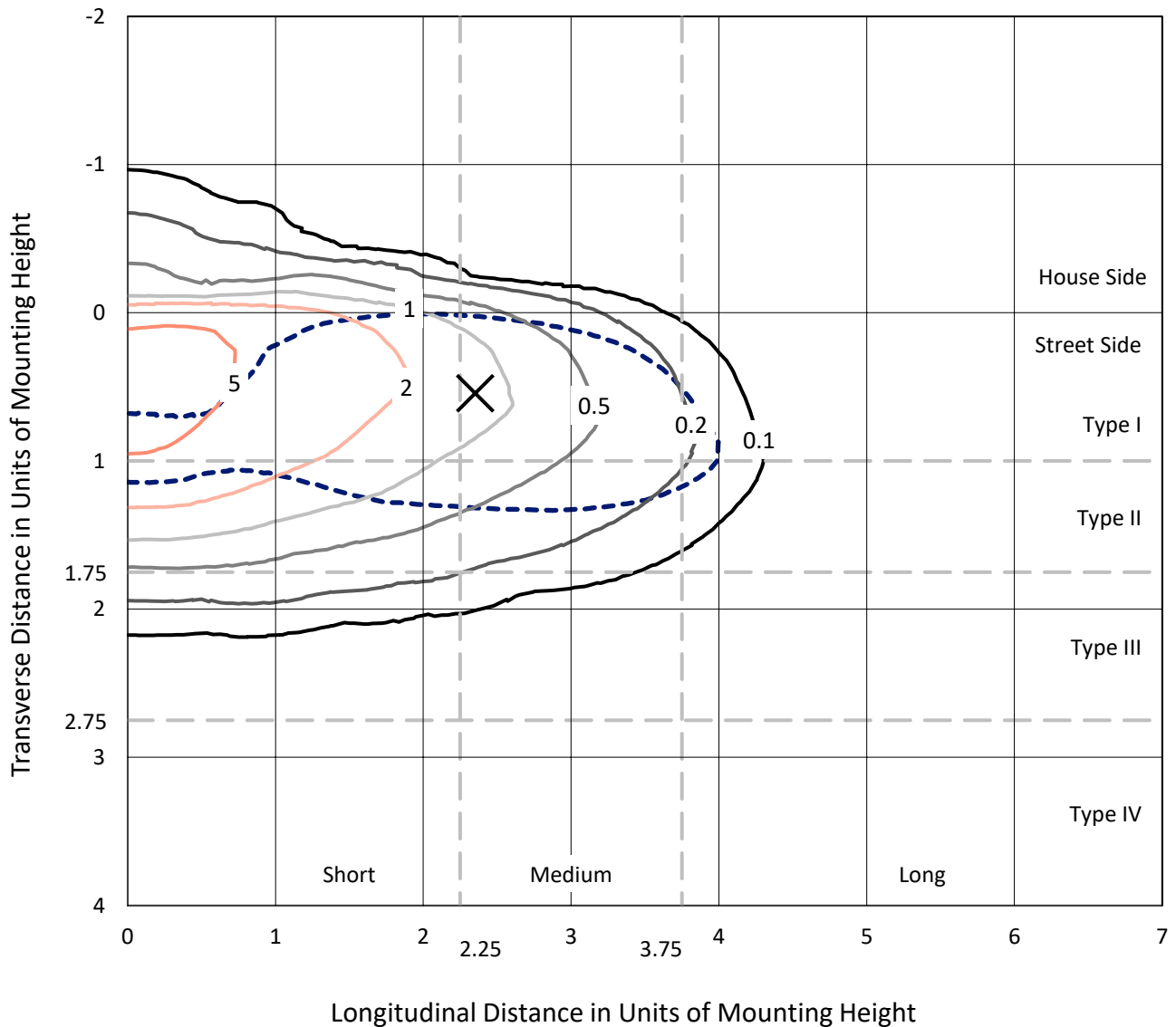
Input Watts (W): 114
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

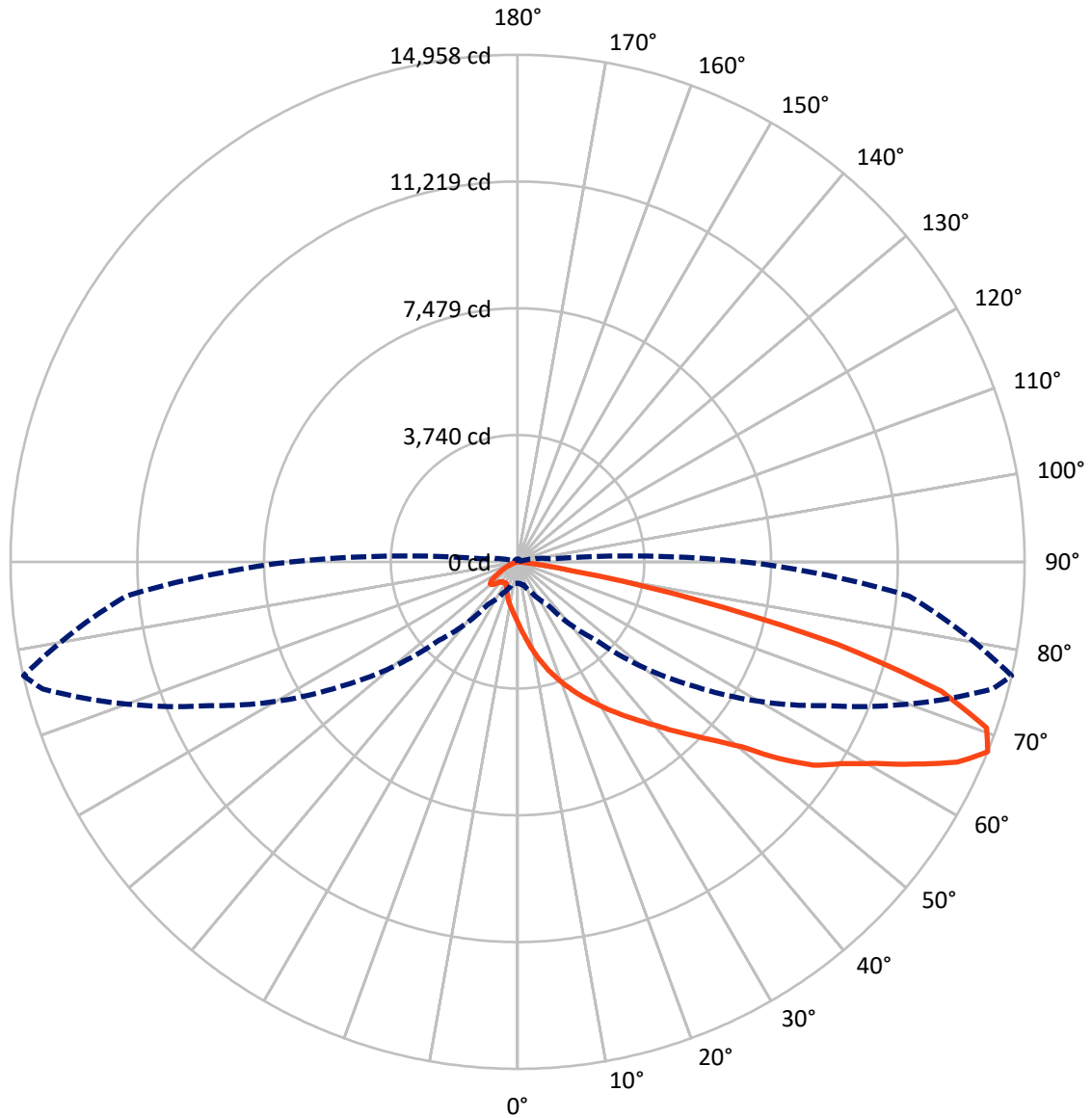
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 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 | 1147.9 | 0.0 | 1147.9 |
| | % Fixture | 7.4 | 0.0 | 7.4 |
| Street Side | Lumens | 14454.7 | 0.0 | 14454.7 |
| | % Fixture | 92.6 | 0.0 | 92.6 |
| Total | Lumens | 15602.6 | 0.0 | 15602.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 183.6 | 1.2 |
| 10°-20° | 643.1 | 4.1 |
| 20°-30° | 1241.0 | 8.0 |
| 30°-40° | 2154.4 | 13.8 |
| 40°-50° | 3128.1 | 20.0 |
| 50°-60° | 3592.2 | 23.0 |
| 60°-70° | 3118.7 | 20.0 |
| 70°-80° | 1468.9 | 9.4 |
| 80°-90° | 72.6 | 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° | 15602.6 | 100.0 |
| 0°-180° | 15602.6 | 100.0 |

Coefficient of Utilization

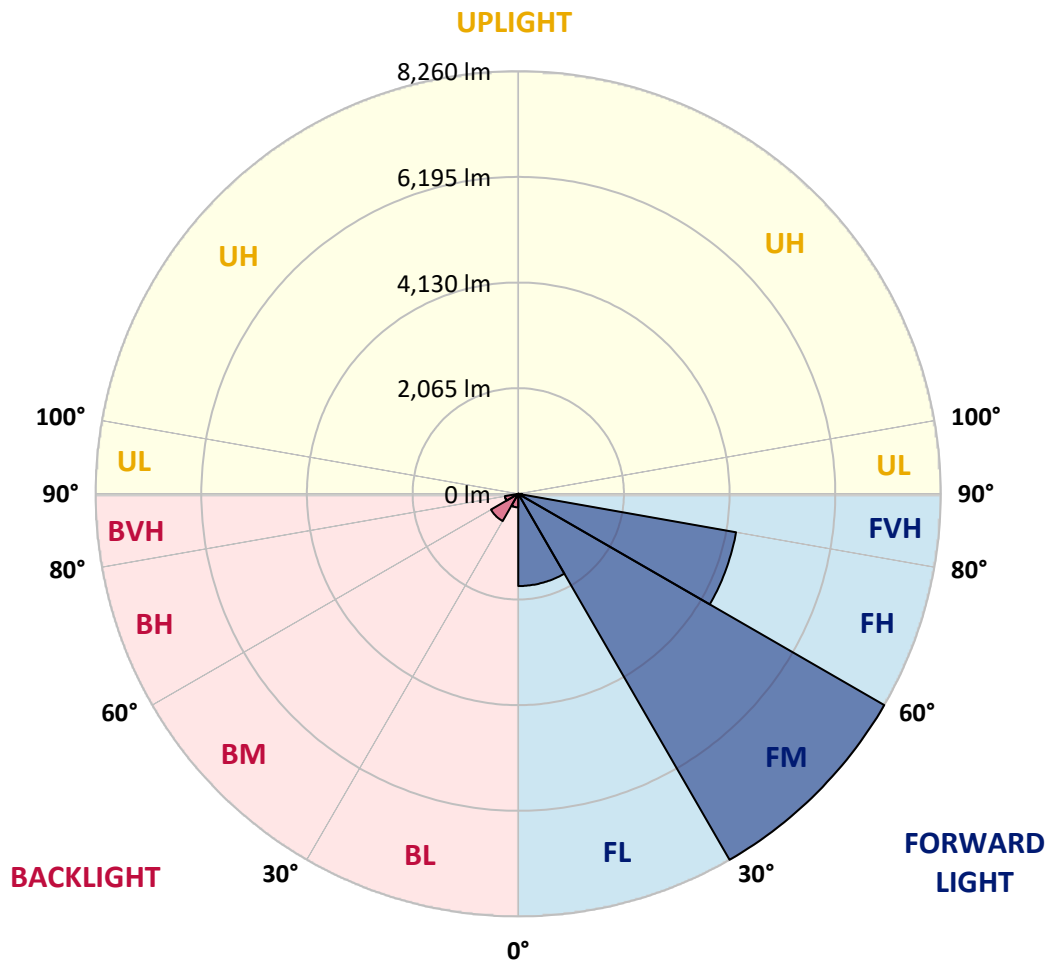


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1801.9 | 11.5 | | | |
| FM (30°-60°) | 8259.6 | 52.9 | | | |
| FH (60°-80°) | 4321.9 | 27.7 | | | G2/5000 |
| FVH (80°-90°) | 71.3 | 0.5 | | | G1/100 |
| BL (0°-30°) | 265.8 | 1.7 | B1/500 | | |
| BM (30°-60°) | 615.1 | 3.9 | B1/1000 | | |
| BH (60°-80°) | 265.7 | 1.7 | B1/500 | | G1/500 |
| BVH (80°-90°) | 1.3 | 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° | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 |
| 2.5° | 2491.0 | 2506.4 | 2484.2 | 2441.5 | 2377.6 | 2336.0 | 2234.2 | 2138.4 | 2031.8 | 1997.8 | 1891.2 |
| 5° | 3036.5 | 3050.0 | 3024.9 | 2978.3 | 2893.1 | 2811.7 | 2678.0 | 2477.4 | 2269.1 | 2202.2 | 2013.3 |
| 7.5° | 3440.5 | 3448.2 | 3438.6 | 3395.9 | 3314.5 | 3222.5 | 3073.3 | 2835.9 | 2526.8 | 2453.2 | 2163.5 |
| 10° | 3731.1 | 3756.3 | 3753.4 | 3736.9 | 3682.7 | 3608.1 | 3449.2 | 3178.8 | 2815.6 | 2720.6 | 2333.1 |
| 12.5° | 3923.9 | 3952.1 | 3968.5 | 4005.3 | 4002.4 | 3955.0 | 3815.5 | 3529.6 | 3103.3 | 2991.9 | 2524.0 |
| 15° | 3980.2 | 4010.2 | 4073.1 | 4158.4 | 4234.0 | 4258.3 | 4160.4 | 3873.6 | 3420.1 | 3277.7 | 2719.6 |
| 17.5° | 3948.2 | 3994.6 | 4070.3 | 4205.0 | 4370.6 | 4480.1 | 4469.4 | 4205.9 | 3707.9 | 3545.2 | 2911.5 |
| 20° | 4018.9 | 4063.5 | 4122.5 | 4235.9 | 4428.7 | 4627.4 | 4706.8 | 4523.6 | 3993.7 | 3823.1 | 3113.0 |
| 22.5° | 4410.4 | 4402.6 | 4408.4 | 4426.8 | 4542.1 | 4738.8 | 4902.5 | 4812.4 | 4276.6 | 4102.3 | 3326.1 |
| 25° | 5030.4 | 4995.5 | 4936.4 | 4836.7 | 4807.6 | 4902.5 | 5073.0 | 5068.2 | 4575.0 | 4388.0 | 3544.1 |
| 27.5° | 5741.5 | 5735.8 | 5597.2 | 5357.0 | 5221.2 | 5184.4 | 5265.8 | 5317.2 | 4870.5 | 4670.9 | 3763.1 |
| 30° | 6422.6 | 6438.2 | 6251.2 | 5983.7 | 5734.8 | 5590.5 | 5516.8 | 5553.6 | 5170.9 | 4976.2 | 3988.9 |
| 32.5° | 7015.6 | 7032.1 | 6828.7 | 6515.7 | 6207.6 | 6033.2 | 5878.2 | 5787.0 | 5498.4 | 5286.2 | 4236.9 |
| 35° | 7516.5 | 7533.0 | 7299.5 | 6953.6 | 6625.2 | 6467.2 | 6291.9 | 6042.9 | 5827.7 | 5630.1 | 4513.1 |
| 37.5° | 7964.1 | 7959.3 | 7646.4 | 7297.6 | 6974.9 | 6850.0 | 6757.9 | 6357.8 | 6166.9 | 5976.1 | 4819.1 |
| 40° | 8228.7 | 8249.0 | 7981.6 | 7597.0 | 7284.1 | 7192.9 | 7187.1 | 6748.2 | 6558.4 | 6373.2 | 5154.4 |
| 42.5° | 8306.2 | 8342.1 | 8148.2 | 7832.4 | 7548.5 | 7449.7 | 7601.8 | 7170.7 | 7013.7 | 6833.5 | 5533.3 |
| 45° | 8166.7 | 8201.5 | 8113.4 | 7894.4 | 7728.7 | 7664.7 | 7958.3 | 7608.6 | 7500.0 | 7321.8 | 5960.5 |
| 47.5° | 7759.8 | 7803.3 | 7824.6 | 7778.1 | 7776.2 | 7841.1 | 8278.1 | 8069.7 | 8077.5 | 7895.4 | 6455.7 |
| 50° | 6972.0 | 7045.6 | 7241.4 | 7406.1 | 7661.0 | 7980.6 | 8589.1 | 8569.7 | 8728.6 | 8571.7 | 7100.9 |
| 52.5° | 5540.0 | 5644.7 | 6319.0 | 6769.5 | 7342.2 | 7954.5 | 8931.1 | 9372.0 | 9871.0 | 9641.3 | 8010.7 |
| 55° | 4452.0 | 4452.0 | 5000.4 | 5843.3 | 6720.1 | 7782.0 | 9080.3 | 9893.2 | 10648.9 | 10594.7 | 8651.1 |
| 57.5° | 3629.4 | 3673.0 | 4022.8 | 4767.9 | 5820.1 | 7371.2 | 9172.3 | 10220.7 | 11275.8 | 11236.0 | 9277.0 |
| 60° | 2240.0 | 2334.0 | 2994.8 | 3730.2 | 4796.0 | 6639.7 | 9114.2 | 10552.1 | 12036.4 | 12068.3 | 10030.8 |
| 62.5° | 1261.5 | 1296.3 | 1590.9 | 2683.8 | 3729.2 | 5656.3 | 8669.6 | 10737.1 | 13009.1 | 13144.7 | 10807.8 |
| 65° | 871.0 | 888.5 | 1001.8 | 1670.3 | 2584.9 | 4503.3 | 7800.5 | 10621.8 | 13983.8 | 14258.0 | 11466.7 |
| 67.5° | 632.6 | 641.4 | 712.2 | 1020.2 | 1533.7 | 3265.1 | 6438.2 | 10040.5 | 14500.2 | 14958.4 | 11592.6 |
| 70° | 486.4 | 492.2 | 543.6 | 670.5 | 905.9 | 2015.3 | 4675.8 | 8884.6 | 14126.2 | 14673.6 | 10947.3 |
| 72.5° | 395.3 | 401.1 | 440.9 | 496.1 | 600.8 | 1191.8 | 2833.9 | 7215.2 | 12475.3 | 13066.3 | 9319.6 |
| 75° | 333.3 | 341.0 | 376.9 | 412.8 | 470.9 | 765.4 | 1329.3 | 5024.5 | 9381.6 | 9769.2 | 6480.8 |
| 77.5° | 185.0 | 170.6 | 306.2 | 342.0 | 397.3 | 484.4 | 622.0 | 2957.0 | 5254.3 | 5361.8 | 2875.6 |
| 80° | 115.3 | 119.2 | 243.2 | 275.1 | 305.2 | 244.2 | 284.8 | 1138.5 | 1821.5 | 1730.4 | 557.1 |
| 82.5° | 6.8 | 15.5 | 187.0 | 198.6 | 209.3 | 104.7 | 107.5 | 386.6 | 438.9 | 403.0 | 98.8 |
| 85° | 0.0 | 0.0 | 85.3 | 68.8 | 72.7 | 30.0 | 31.0 | 90.1 | 59.1 | 64.0 | 19.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 | 2.9 | 5.8 | 7.8 | 2.9 | 3.9 | 6.8 |
| 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° | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 | 1799.2 |
| 2.5° | 1823.5 | 1755.6 | 1618.1 | 1483.4 | 1373.9 | 1272.1 | 1199.5 | 1130.7 | 1095.8 | 1093.9 | 1091.9 |
| 5° | 1878.6 | 1736.2 | 1461.0 | 1217.9 | 1022.1 | 865.2 | 763.5 | 690.8 | 653.9 | 641.4 | 639.5 |
| 7.5° | 1956.2 | 1742.1 | 1323.5 | 985.3 | 754.7 | 620.1 | 561.9 | 538.7 | 530.9 | 522.2 | 520.3 |
| 10° | 2054.0 | 1755.6 | 1200.5 | 793.6 | 594.9 | 527.1 | 503.8 | 494.2 | 488.3 | 482.5 | 480.5 |
| 12.5° | 2163.5 | 1768.2 | 1078.4 | 658.9 | 523.2 | 488.3 | 471.8 | 460.2 | 452.4 | 445.7 | 443.7 |
| 15° | 2270.1 | 1775.9 | 951.4 | 564.9 | 486.4 | 458.3 | 440.9 | 428.2 | 417.6 | 409.8 | 408.9 |
| 17.5° | 2375.6 | 1786.6 | 832.3 | 508.7 | 456.3 | 428.2 | 410.8 | 395.3 | 386.6 | 377.8 | 376.9 |
| 20° | 2492.9 | 1784.6 | 719.9 | 468.9 | 426.3 | 398.2 | 379.8 | 365.3 | 356.6 | 346.9 | 345.9 |
| 22.5° | 2601.4 | 1775.0 | 621.0 | 435.0 | 395.3 | 368.2 | 347.8 | 333.3 | 324.6 | 316.8 | 315.8 |
| 25° | 2726.4 | 1767.2 | 538.7 | 404.1 | 366.2 | 339.1 | 316.8 | 303.3 | 293.6 | 286.8 | 285.8 |
| 27.5° | 2846.5 | 1755.6 | 478.7 | 376.0 | 338.1 | 312.0 | 290.7 | 275.1 | 266.4 | 261.6 | 261.6 |
| 30° | 2964.8 | 1752.6 | 456.3 | 348.8 | 312.9 | 286.8 | 265.5 | 250.9 | 244.2 | 242.2 | 241.3 |
| 32.5° | 3107.2 | 1760.4 | 466.1 | 339.1 | 289.7 | 263.5 | 243.2 | 232.6 | 225.7 | 225.7 | 225.7 |
| 35° | 3259.3 | 1758.5 | 480.5 | 347.8 | 274.2 | 240.3 | 224.8 | 218.0 | 211.3 | 211.3 | 211.3 |
| 37.5° | 3450.2 | 1761.5 | 492.2 | 362.3 | 268.3 | 220.9 | 212.2 | 203.5 | 199.6 | 199.6 | 199.6 |
| 40° | 3735.0 | 1857.3 | 486.4 | 374.9 | 266.4 | 207.4 | 189.9 | 187.0 | 184.1 | 184.1 | 184.1 |
| 42.5° | 4083.8 | 2065.7 | 494.2 | 376.0 | 265.5 | 197.6 | 174.4 | 180.2 | 173.4 | 172.5 | 171.5 |
| 45° | 4465.5 | 2293.3 | 543.6 | 355.6 | 264.6 | 192.8 | 166.7 | 173.4 | 162.8 | 162.8 | 162.8 |
| 47.5° | 4844.4 | 2519.0 | 593.9 | 326.5 | 261.6 | 191.9 | 159.9 | 156.0 | 153.0 | 154.1 | 154.1 |
| 50° | 5366.6 | 2703.1 | 613.3 | 286.8 | 254.8 | 189.9 | 147.3 | 148.2 | 146.3 | 148.2 | 148.2 |
| 52.5° | 5935.4 | 2741.9 | 590.1 | 242.2 | 235.4 | 184.1 | 138.6 | 142.5 | 141.4 | 143.4 | 143.4 |
| 55° | 6289.9 | 2700.3 | 487.4 | 201.5 | 205.4 | 160.8 | 129.9 | 137.6 | 137.6 | 137.6 | 137.6 |
| 57.5° | 6656.1 | 2522.9 | 345.9 | 163.7 | 170.6 | 131.8 | 122.1 | 132.7 | 131.8 | 130.8 | 130.8 |
| 60° | 6919.7 | 2236.1 | 227.7 | 134.7 | 135.6 | 108.5 | 113.4 | 124.9 | 124.0 | 119.2 | 119.2 |
| 62.5° | 7116.4 | 1919.3 | 146.3 | 114.3 | 103.6 | 97.9 | 103.6 | 113.4 | 109.5 | 98.8 | 96.9 |
| 65° | 7094.1 | 1480.4 | 112.3 | 97.9 | 85.3 | 85.3 | 90.1 | 98.8 | 87.2 | 69.8 | 67.9 |
| 67.5° | 6680.4 | 1001.8 | 93.0 | 82.3 | 71.6 | 70.7 | 74.6 | 82.3 | 74.6 | 59.1 | 57.2 |
| 70° | 5941.1 | 655.0 | 74.6 | 64.0 | 57.2 | 52.3 | 60.1 | 70.7 | 62.9 | 47.5 | 45.5 |
| 72.5° | 4822.1 | 399.1 | 56.2 | 46.5 | 41.6 | 33.9 | 47.5 | 58.1 | 50.4 | 34.8 | 32.9 |
| 75° | 3119.8 | 203.5 | 38.7 | 30.0 | 22.2 | 20.4 | 34.8 | 43.6 | 34.8 | 21.3 | 18.4 |
| 77.5° | 1193.6 | 85.3 | 21.3 | 13.5 | 11.6 | 9.7 | 19.4 | 26.1 | 14.6 | 4.8 | 3.9 |
| 80° | 229.6 | 35.9 | 10.7 | 6.8 | 5.8 | 3.9 | 2.9 | 1.9 | 0.0 | 0.0 | 0.0 |
| 82.5° | 39.8 | 11.6 | 3.9 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 13.5 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 4.8 | 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)