

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: P969249

Luminaire Tested: **NAV-SB5D-727-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969249
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-SB5D-727-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 2700K, 900mA 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: 41378.2 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G4

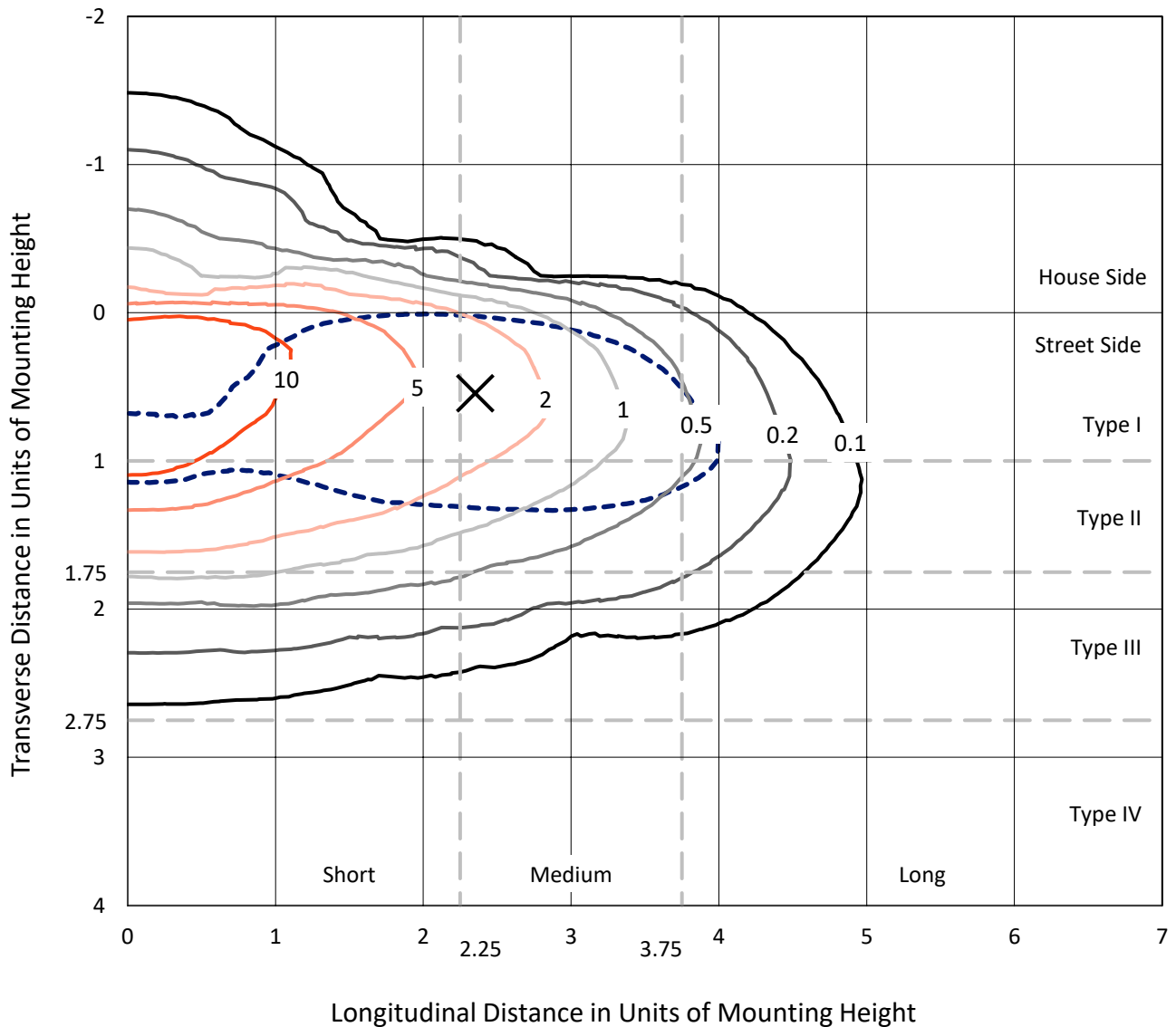
Input Watts (W): 364.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

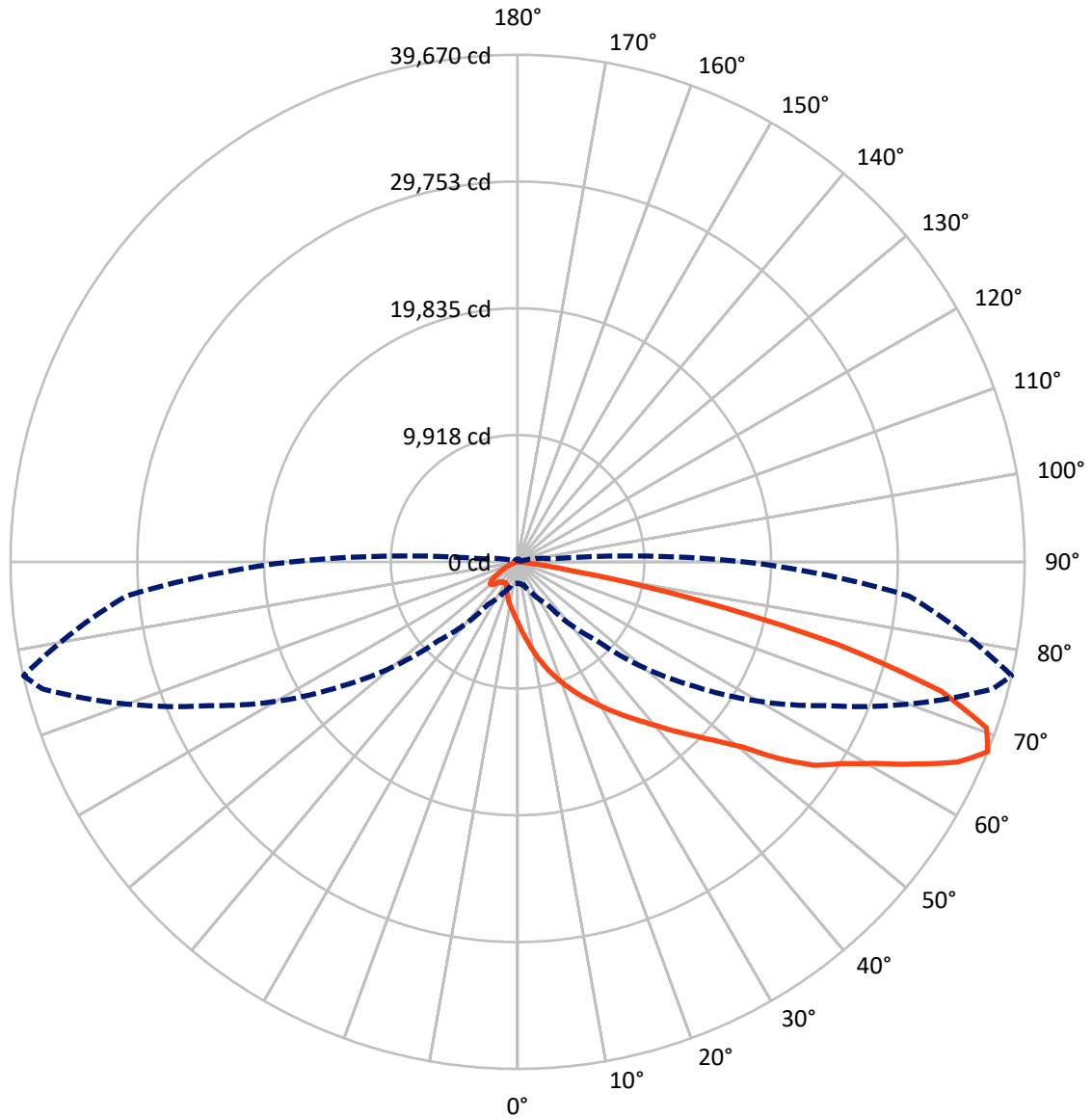
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17.8 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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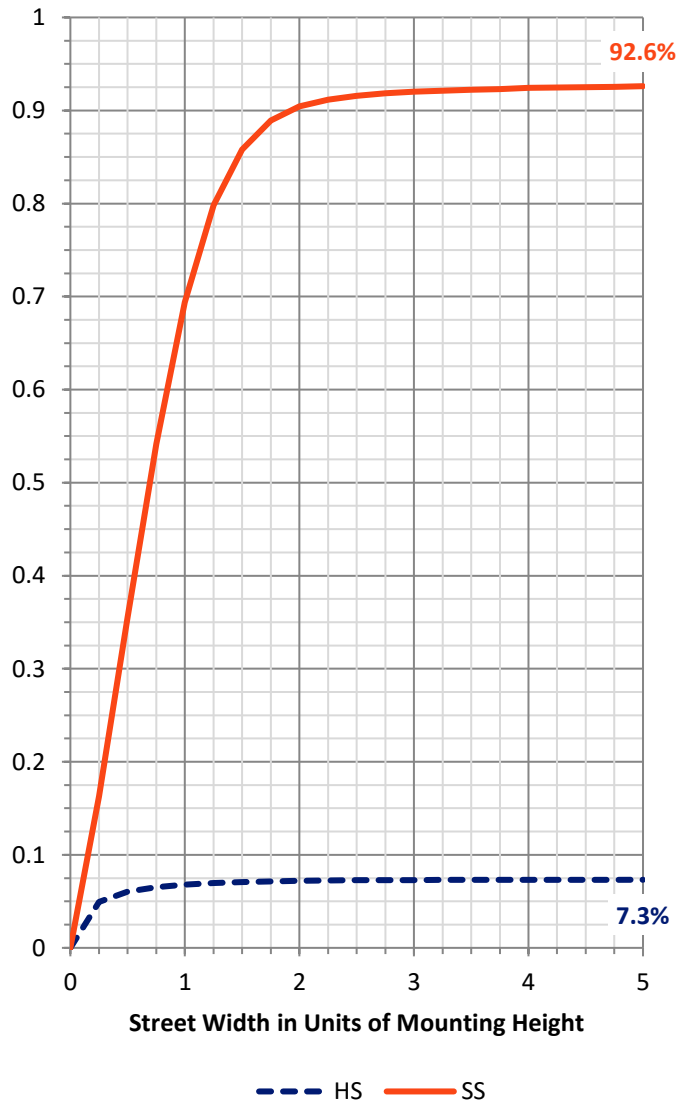
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3044.2 | 0.0 | 3044.2 |
| | % Fixture | 7.4 | 0.0 | 7.4 |
| Street Side | Lumens | 38334.0 | 0.0 | 38334.0 |
| | % Fixture | 92.6 | 0.0 | 92.6 |
| Total | Lumens | 41378.2 | 0.0 | 41378.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 487.0 | 1.2 |
| 10°-20° | 1705.5 | 4.1 |
| 20°-30° | 3291.1 | 8.0 |
| 30°-40° | 5713.5 | 13.8 |
| 40°-50° | 8295.7 | 20.0 |
| 50°-60° | 9526.5 | 23.0 |
| 60°-70° | 8270.8 | 20.0 |
| 70°-80° | 3895.6 | 9.4 |
| 80°-90° | 192.6 | 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° | 41378.2 | 100.0 |
| 0°-180° | 41378.2 | 100.0 |

Coefficient of Utilization

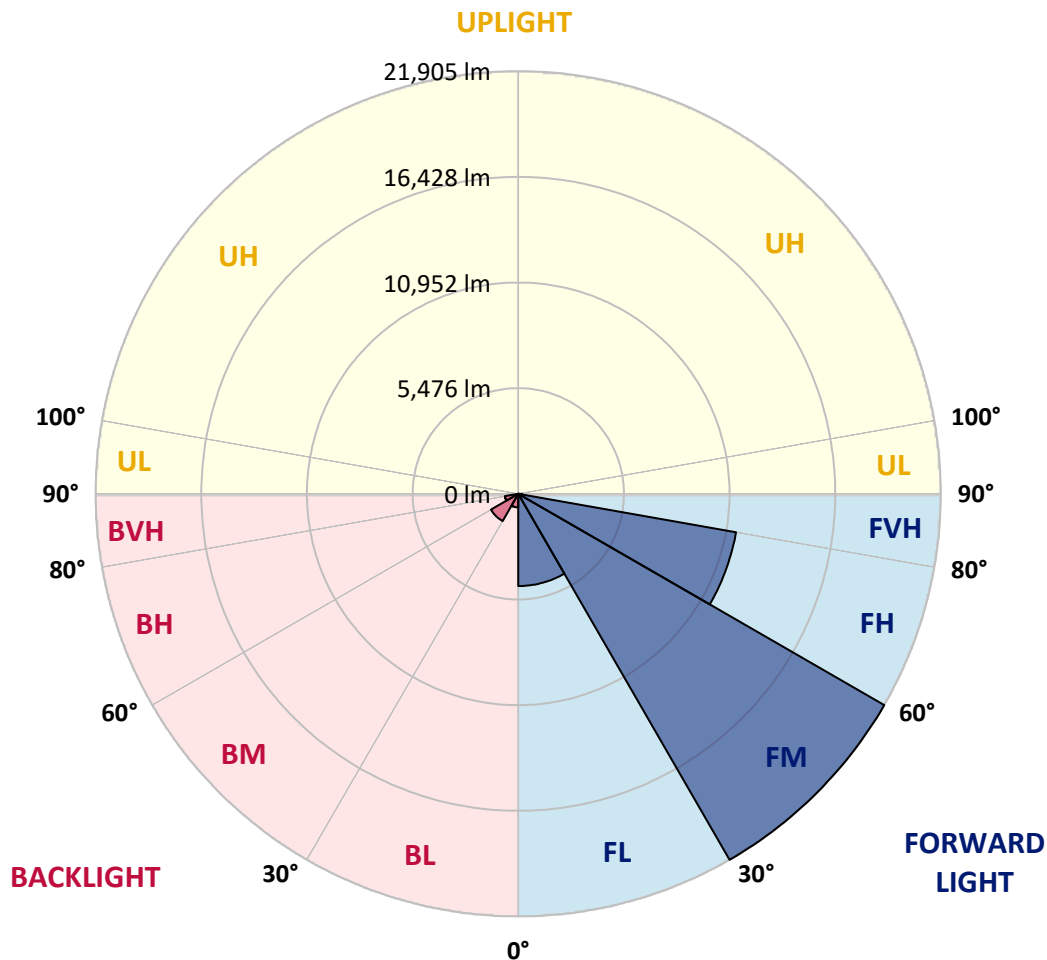


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 4778.7 | 11.5 | | | |
| FM (30°-60°) | 21904.5 | 52.9 | | | |
| FH (60°-80°) | 11461.6 | 27.7 | | | G4/12000 |
| FVH (80°-90°) | 189.1 | 0.5 | | | G2/225 |
| BL (0°-30°) | 704.8 | 1.7 | B2/1000 | | |
| BM (30°-60°) | 1631.1 | 3.9 | B2/2500 | | |
| BH (60°-80°) | 704.8 | 1.7 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 3.5 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 |
| 2.5° | 6606.1 | 6647.2 | 6588.2 | 6475.1 | 6305.5 | 6195.0 | 5925.2 | 5670.8 | 5388.2 | 5298.2 | 5015.6 |
| 5° | 8052.7 | 8088.7 | 8021.9 | 7898.5 | 7672.4 | 7456.7 | 7102.0 | 6570.1 | 6017.7 | 5840.4 | 5339.3 |
| 7.5° | 9124.2 | 9144.7 | 9119.1 | 9006.1 | 8790.2 | 8546.0 | 8150.4 | 7520.8 | 6701.2 | 6505.9 | 5737.6 |
| 10° | 9895.0 | 9961.9 | 9954.2 | 9910.5 | 9766.6 | 9568.7 | 9147.3 | 8430.4 | 7466.9 | 7215.1 | 6187.3 |
| 12.5° | 10406.4 | 10480.9 | 10524.6 | 10622.2 | 10614.5 | 10488.6 | 10118.6 | 9360.6 | 8230.0 | 7934.5 | 6693.5 |
| 15° | 10555.4 | 10635.1 | 10802.1 | 11028.2 | 11228.6 | 11292.8 | 11033.3 | 10272.8 | 9070.2 | 8692.5 | 7212.5 |
| 17.5° | 10470.6 | 10594.0 | 10794.4 | 11151.5 | 11590.9 | 11881.3 | 11853.0 | 11154.0 | 9833.3 | 9401.7 | 7721.3 |
| 20° | 10658.2 | 10776.3 | 10933.2 | 11233.8 | 11745.1 | 12271.8 | 12482.6 | 11996.9 | 10591.4 | 10139.2 | 8255.8 |
| 22.5° | 11696.3 | 11675.7 | 11691.2 | 11739.9 | 12045.7 | 12567.3 | 13001.5 | 12762.6 | 11341.6 | 10879.1 | 8821.0 |
| 25° | 13340.7 | 13248.2 | 13091.5 | 12826.8 | 12749.8 | 13001.5 | 13453.7 | 13440.9 | 12133.0 | 11637.1 | 9399.1 |
| 27.5° | 15226.7 | 15211.3 | 14843.8 | 14206.6 | 13846.9 | 13749.2 | 13965.1 | 14101.3 | 12916.7 | 12387.4 | 9979.8 |
| 30° | 17033.0 | 17074.1 | 16578.2 | 15869.0 | 15208.7 | 14825.9 | 14630.6 | 14728.2 | 13713.3 | 13196.9 | 10578.5 |
| 32.5° | 18605.6 | 18649.3 | 18109.7 | 17279.8 | 16462.6 | 16000.1 | 15589.0 | 15347.5 | 14581.8 | 14019.0 | 11236.4 |
| 35° | 19934.0 | 19977.7 | 19358.5 | 18441.1 | 17570.0 | 17151.2 | 16686.2 | 16025.9 | 15455.4 | 14931.3 | 11968.6 |
| 37.5° | 21121.0 | 21108.2 | 20278.3 | 19353.3 | 18497.7 | 18166.2 | 17922.1 | 16860.9 | 16354.7 | 15848.6 | 12780.6 |
| 40° | 21822.6 | 21876.5 | 21167.4 | 20147.3 | 19317.4 | 19075.8 | 19060.4 | 17896.4 | 17392.8 | 16902.0 | 13669.6 |
| 42.5° | 22028.1 | 22123.2 | 21609.3 | 20771.6 | 20018.8 | 19756.7 | 20160.1 | 19016.7 | 18600.5 | 18122.5 | 14674.3 |
| 45° | 21658.1 | 21750.6 | 21516.8 | 20936.1 | 20496.7 | 20327.1 | 21105.7 | 20178.0 | 19890.3 | 19417.5 | 15807.4 |
| 47.5° | 20578.9 | 20694.5 | 20751.1 | 20627.7 | 20622.6 | 20794.8 | 21953.7 | 21401.2 | 21421.7 | 20938.7 | 17120.4 |
| 50° | 18490.0 | 18685.2 | 19204.3 | 19641.0 | 20316.8 | 21164.8 | 22778.4 | 22727.0 | 23148.4 | 22732.1 | 18831.7 |
| 52.5° | 14692.2 | 14969.8 | 16758.1 | 17953.0 | 19471.5 | 21095.4 | 23685.4 | 24854.5 | 26177.8 | 25568.8 | 21244.5 |
| 55° | 11806.8 | 11806.8 | 13261.0 | 15496.5 | 17821.9 | 20638.1 | 24081.1 | 26236.9 | 28241.1 | 28097.2 | 22942.9 |
| 57.5° | 9625.3 | 9740.9 | 10668.5 | 12644.4 | 15434.9 | 19548.6 | 24325.2 | 27105.4 | 29903.6 | 29798.2 | 24602.8 |
| 60° | 5940.6 | 6189.9 | 7942.2 | 9892.5 | 12718.9 | 17608.6 | 24171.0 | 27984.1 | 31920.7 | 32005.4 | 26601.8 |
| 62.5° | 3345.5 | 3438.0 | 4219.1 | 7117.5 | 9889.9 | 15000.6 | 22991.7 | 28474.9 | 34500.4 | 34860.0 | 28662.5 |
| 65° | 2309.9 | 2356.2 | 2656.8 | 4429.7 | 6855.4 | 11942.9 | 20686.9 | 28169.2 | 37085.2 | 37812.5 | 30409.8 |
| 67.5° | 1677.8 | 1701.0 | 1888.6 | 2705.7 | 4067.5 | 8659.1 | 17074.1 | 26627.4 | 38454.8 | 39670.2 | 30743.7 |
| 70° | 1289.9 | 1305.3 | 1441.5 | 1778.1 | 2402.5 | 5344.6 | 12400.2 | 23562.1 | 37462.9 | 38914.7 | 29032.5 |
| 72.5° | 1048.4 | 1063.7 | 1169.1 | 1315.6 | 1593.1 | 3160.5 | 7515.7 | 19134.9 | 33084.5 | 34652.0 | 24715.8 |
| 75° | 883.9 | 904.5 | 999.5 | 1094.6 | 1248.8 | 2029.9 | 3525.3 | 13325.3 | 24880.2 | 25908.0 | 17187.2 |
| 77.5° | 490.8 | 452.2 | 812.0 | 907.0 | 1053.5 | 1284.7 | 1649.6 | 7842.1 | 13934.3 | 14219.5 | 7626.2 |
| 80° | 305.8 | 316.0 | 644.9 | 729.7 | 809.3 | 647.5 | 755.4 | 3019.1 | 4830.6 | 4589.1 | 1477.4 |
| 82.5° | 17.9 | 41.1 | 495.9 | 526.7 | 555.0 | 277.5 | 285.3 | 1025.2 | 1164.0 | 1068.9 | 262.1 |
| 85° | 0.0 | 0.0 | 226.1 | 182.4 | 192.7 | 79.6 | 82.2 | 238.9 | 156.7 | 169.5 | 51.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 7.7 | 15.4 | 20.6 | 7.7 | 10.2 | 17.9 |
| 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° | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 | 4771.5 |
| 2.5° | 4835.7 | 4655.9 | 4291.1 | 3933.8 | 3643.6 | 3373.7 | 3181.0 | 2998.5 | 2906.1 | 2901.0 | 2895.8 |
| 5° | 4982.2 | 4604.5 | 3874.8 | 3229.9 | 2710.8 | 2294.6 | 2024.8 | 1832.1 | 1734.4 | 1701.0 | 1695.9 |
| 7.5° | 5187.7 | 4619.9 | 3509.9 | 2613.1 | 2001.6 | 1644.5 | 1490.2 | 1428.6 | 1408.0 | 1385.0 | 1379.9 |
| 10° | 5447.3 | 4655.9 | 3183.5 | 2104.4 | 1577.7 | 1397.8 | 1336.1 | 1310.5 | 1295.0 | 1279.6 | 1274.5 |
| 12.5° | 5737.6 | 4689.3 | 2859.9 | 1747.2 | 1387.5 | 1295.0 | 1251.3 | 1220.5 | 1200.0 | 1181.9 | 1176.8 |
| 15° | 6020.2 | 4709.9 | 2523.2 | 1498.0 | 1289.9 | 1215.3 | 1169.1 | 1135.7 | 1107.4 | 1086.9 | 1084.3 |
| 17.5° | 6300.4 | 4738.2 | 2207.1 | 1349.0 | 1210.2 | 1135.7 | 1089.5 | 1048.4 | 1025.2 | 1002.1 | 999.5 |
| 20° | 6611.2 | 4732.9 | 1909.2 | 1243.6 | 1130.6 | 1056.1 | 1007.3 | 968.7 | 945.6 | 919.8 | 917.3 |
| 22.5° | 6899.1 | 4707.3 | 1647.1 | 1153.7 | 1048.4 | 976.4 | 922.4 | 883.9 | 860.8 | 840.2 | 837.6 |
| 25° | 7230.6 | 4686.7 | 1428.6 | 1071.4 | 971.3 | 899.3 | 840.2 | 804.2 | 778.6 | 760.6 | 758.0 |
| 27.5° | 7549.1 | 4655.9 | 1269.4 | 996.9 | 896.8 | 827.4 | 770.8 | 729.7 | 706.6 | 693.7 | 693.7 |
| 30° | 7862.6 | 4648.2 | 1210.2 | 925.1 | 829.9 | 760.6 | 704.1 | 665.5 | 647.5 | 642.4 | 639.8 |
| 32.5° | 8240.3 | 4668.8 | 1235.9 | 899.3 | 768.2 | 698.9 | 644.9 | 616.6 | 598.7 | 598.7 | 598.7 |
| 35° | 8643.7 | 4663.6 | 1274.5 | 922.4 | 727.1 | 637.2 | 596.1 | 578.1 | 560.2 | 560.2 | 560.2 |
| 37.5° | 9149.9 | 4671.3 | 1305.3 | 960.9 | 711.8 | 585.9 | 562.7 | 539.6 | 529.3 | 529.3 | 529.3 |
| 40° | 9905.3 | 4925.6 | 1289.9 | 994.4 | 706.6 | 549.9 | 503.6 | 495.9 | 488.2 | 488.2 | 488.2 |
| 42.5° | 10830.4 | 5478.1 | 1310.5 | 996.9 | 704.1 | 524.2 | 462.5 | 478.0 | 459.9 | 457.4 | 454.8 |
| 45° | 11842.7 | 6081.9 | 1441.5 | 943.0 | 701.5 | 511.4 | 442.0 | 459.9 | 431.6 | 431.6 | 431.6 |
| 47.5° | 12847.3 | 6680.6 | 1575.1 | 865.9 | 693.7 | 508.7 | 423.9 | 413.7 | 406.0 | 408.6 | 408.6 |
| 50° | 14232.3 | 7168.8 | 1626.5 | 760.6 | 675.8 | 503.6 | 390.5 | 393.1 | 388.0 | 393.1 | 393.1 |
| 52.5° | 15740.6 | 7271.7 | 1564.8 | 642.4 | 624.4 | 488.2 | 367.5 | 377.7 | 375.2 | 380.3 | 380.3 |
| 55° | 16681.1 | 7161.2 | 1292.4 | 534.4 | 544.7 | 426.5 | 344.3 | 364.9 | 364.9 | 364.9 | 364.9 |
| 57.5° | 17652.3 | 6690.9 | 917.3 | 434.3 | 452.2 | 349.4 | 323.8 | 352.0 | 349.4 | 346.9 | 346.9 |
| 60° | 18351.2 | 5930.3 | 603.8 | 357.1 | 359.8 | 287.8 | 300.6 | 331.5 | 328.9 | 316.0 | 316.0 |
| 62.5° | 18872.8 | 5090.2 | 388.0 | 303.2 | 274.9 | 259.5 | 274.9 | 300.6 | 290.4 | 262.1 | 257.0 |
| 65° | 18813.7 | 3926.2 | 298.1 | 259.5 | 226.1 | 226.1 | 238.9 | 262.1 | 231.2 | 185.0 | 179.9 |
| 67.5° | 17716.5 | 2656.8 | 246.7 | 218.4 | 190.1 | 187.6 | 197.8 | 218.4 | 197.8 | 156.7 | 151.6 |
| 70° | 15756.0 | 1737.0 | 197.8 | 169.5 | 151.6 | 138.8 | 159.3 | 187.6 | 167.0 | 125.9 | 120.7 |
| 72.5° | 12788.3 | 1058.6 | 149.0 | 123.3 | 110.5 | 89.9 | 125.9 | 154.2 | 133.7 | 92.5 | 87.3 |
| 75° | 8273.7 | 539.6 | 102.8 | 79.6 | 59.1 | 53.9 | 92.5 | 115.6 | 92.5 | 56.5 | 48.8 |
| 77.5° | 3165.6 | 226.1 | 56.5 | 36.0 | 30.9 | 25.7 | 51.4 | 69.4 | 38.5 | 12.8 | 10.2 |
| 80° | 609.0 | 95.1 | 28.3 | 17.9 | 15.4 | 10.2 | 7.7 | 5.1 | 0.0 | 0.0 | 0.0 |
| 82.5° | 105.4 | 30.9 | 10.2 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 36.0 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 12.8 | 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)