

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: P962916

Luminaire Tested: **NAV-SB2D-727-U-SL3**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962916
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-12)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-727-U-SL3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18909.2 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G4

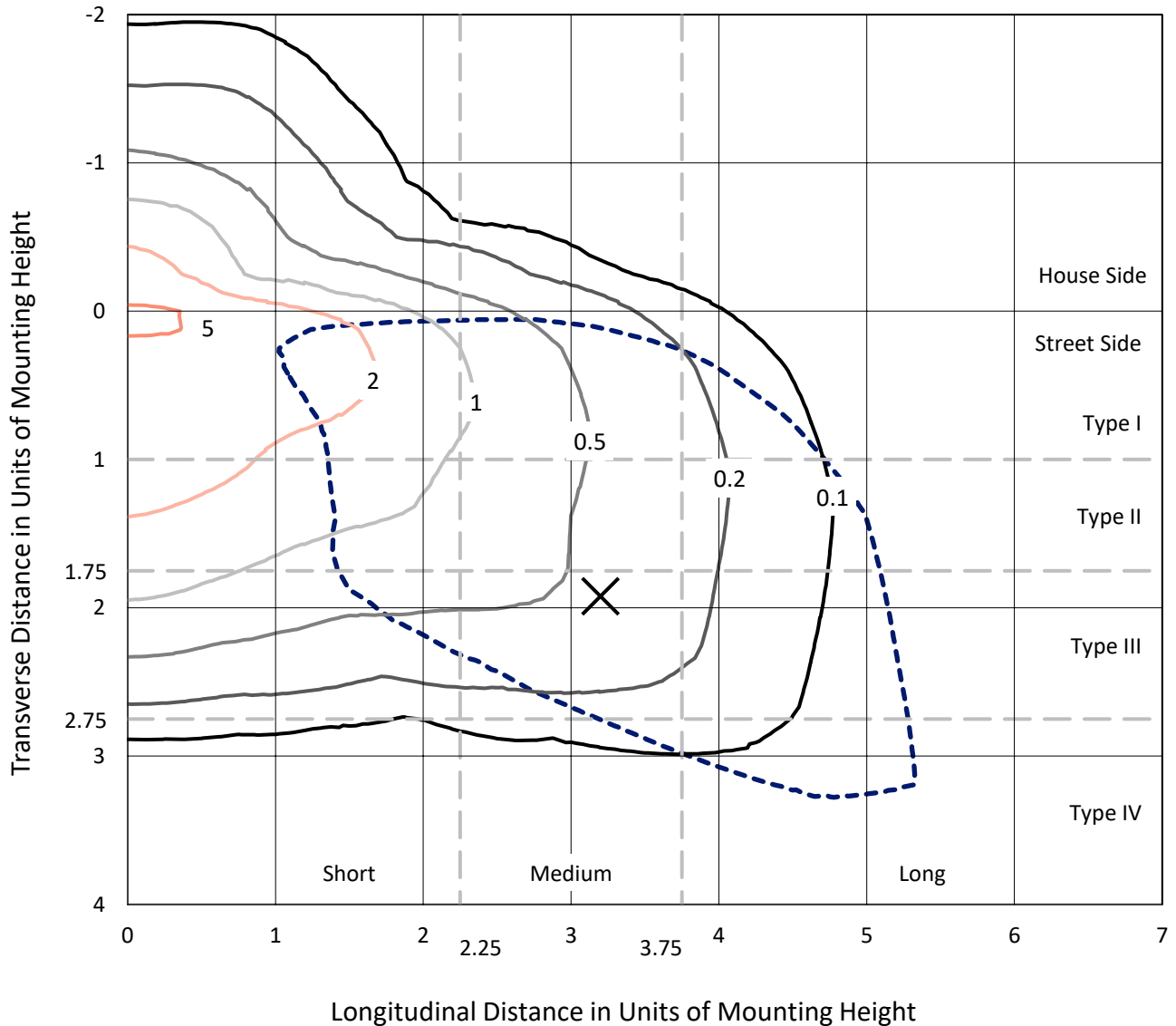
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

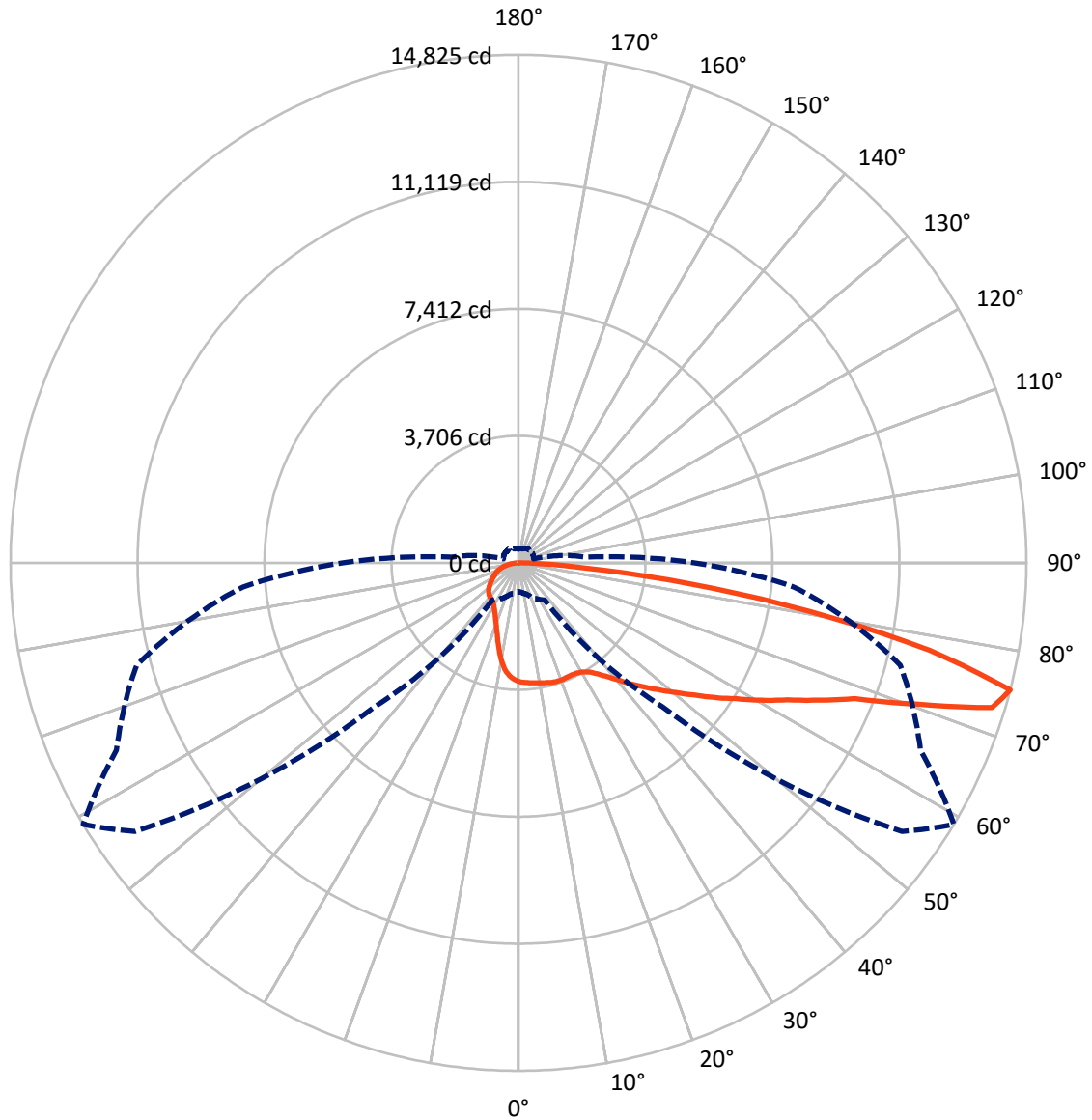
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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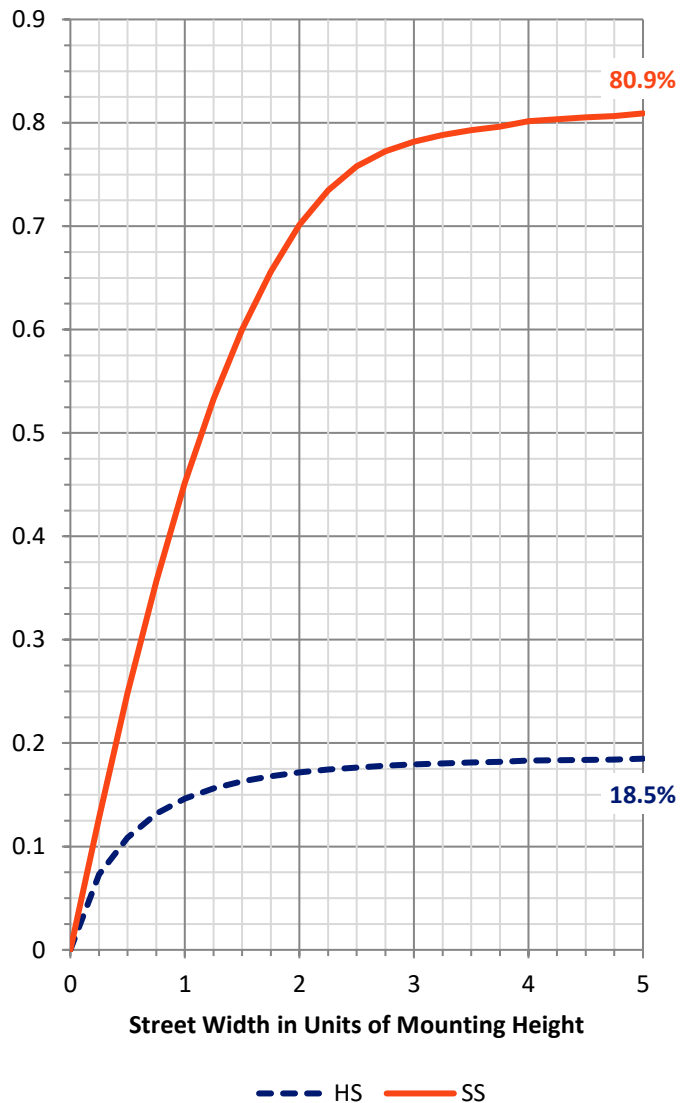
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3546.5 | 0.0 | 3546.5 |
| | % Fixture | 18.8 | 0.0 | 18.8 |
| Street Side | Lumens | 15362.6 | 0.0 | 15362.6 |
| | % Fixture | 81.2 | 0.0 | 81.2 |
| Total | Lumens | 18909.2 | 0.0 | 18909.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 311.2 | 1.6 |
| 10°-20° | 795.5 | 4.2 |
| 20°-30° | 1208.3 | 6.4 |
| 30°-40° | 1796.0 | 9.5 |
| 40°-50° | 2671.0 | 14.1 |
| 50°-60° | 3625.6 | 19.2 |
| 60°-70° | 4426.3 | 23.4 |
| 70°-80° | 3473.7 | 18.4 |
| 80°-90° | 601.7 | 3.2 |
| 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° | 18909.2 | 100.0 |
| 0°-180° | 18909.2 | 100.0 |

Coefficient of Utilization

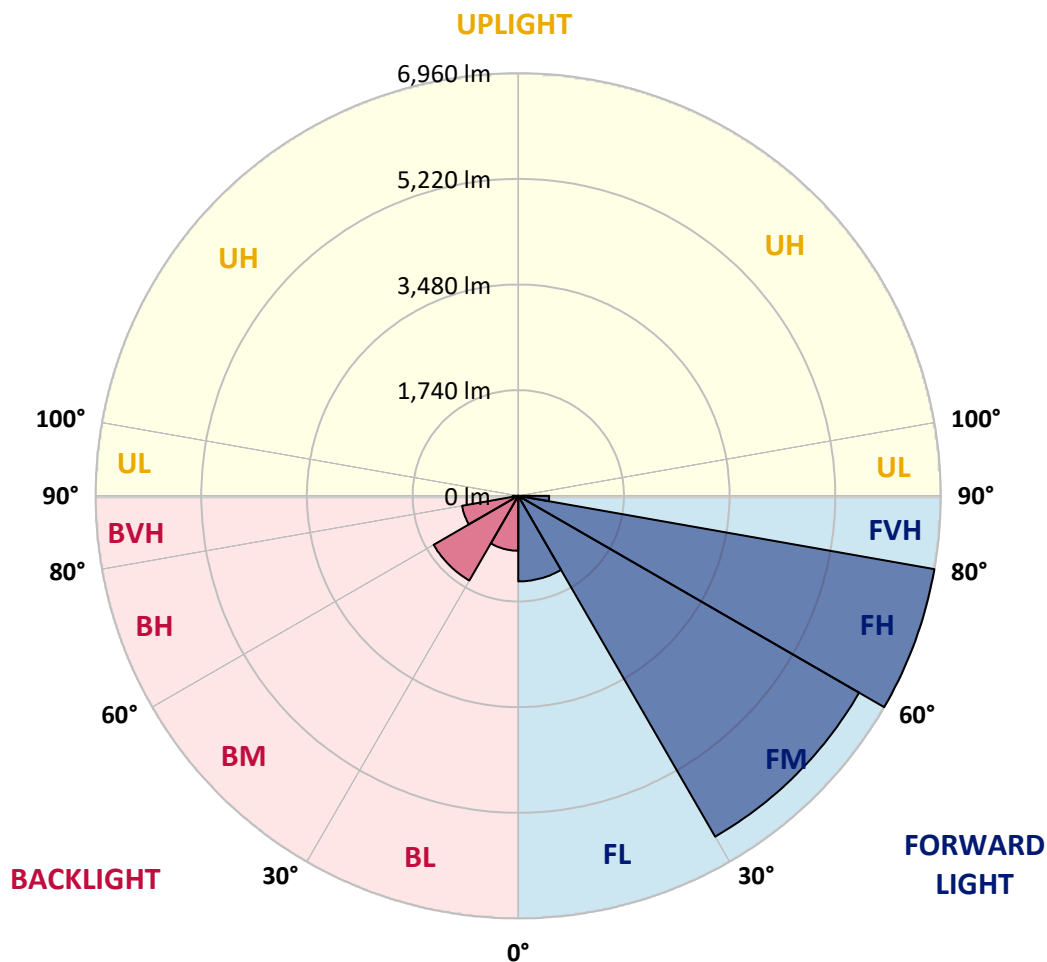


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1409.9 | 7.5 | | | |
| FM (30°-60°) | 6482.9 | 34.3 | | | |
| FH (60°-80°) | 6960.3 | 36.8 | | | G3/7500 |
| FVH (80°-90°) | 509.6 | 2.7 | | | G4/750 |
| BL (0°-30°) | 905.0 | 4.8 | B2/1000 | | |
| BM (30°-60°) | 1609.8 | 8.5 | B2/2500 | | |
| BH (60°-80°) | 939.6 | 5.0 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 92.1 | 0.5 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4
 Type IV Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0° | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 |
| 2.5° | 3500.3 | 3488.1 | 3500.3 | 3495.1 | 3493.1 | 3489.1 | 3490.0 | 3497.2 | 3493.1 | 3498.2 | 3480.9 |
| 5° | 3476.8 | 3469.7 | 3481.9 | 3478.8 | 3492.1 | 3494.1 | 3507.3 | 3515.5 | 3520.6 | 3521.6 | 3508.4 |
| 7.5° | 3438.2 | 3431.1 | 3448.4 | 3462.7 | 3491.0 | 3499.2 | 3526.7 | 3539.9 | 3547.0 | 3559.2 | 3539.9 |
| 10° | 3296.8 | 3293.7 | 3336.5 | 3390.4 | 3457.5 | 3499.2 | 3541.0 | 3563.3 | 3574.5 | 3607.1 | 3584.6 |
| 12.5° | 3046.6 | 3050.6 | 3106.6 | 3210.3 | 3344.6 | 3478.8 | 3557.2 | 3589.8 | 3607.1 | 3647.8 | 3637.5 |
| 15° | 2807.5 | 2806.4 | 2867.5 | 2978.4 | 3166.6 | 3389.4 | 3565.4 | 3621.3 | 3650.7 | 3710.8 | 3702.7 |
| 17.5° | 2669.2 | 2665.1 | 2707.8 | 2792.3 | 2967.2 | 3252.0 | 3545.0 | 3638.5 | 3701.7 | 3776.9 | 3769.8 |
| 20° | 2643.8 | 2635.6 | 2658.0 | 2699.6 | 2823.8 | 3101.4 | 3492.1 | 3638.5 | 3742.4 | 3840.0 | 3836.0 |
| 22.5° | 2736.3 | 2723.1 | 2713.9 | 2708.9 | 2763.8 | 2977.4 | 3432.1 | 3626.3 | 3802.3 | 3930.6 | 3923.4 |
| 25° | 2922.5 | 2902.1 | 2855.3 | 2809.5 | 2793.2 | 2921.5 | 3379.2 | 3623.4 | 3891.8 | 4052.5 | 4026.1 |
| 27.5° | 3223.5 | 3198.1 | 3103.5 | 2993.7 | 2895.0 | 2950.0 | 3355.7 | 3641.6 | 3990.5 | 4181.8 | 4128.9 |
| 30° | 3596.8 | 3569.5 | 3450.4 | 3281.5 | 3104.5 | 3055.7 | 3385.3 | 3695.5 | 4116.7 | 4353.7 | 4250.0 |
| 32.5° | 3931.5 | 3901.0 | 3799.3 | 3627.4 | 3388.3 | 3238.8 | 3478.8 | 3798.2 | 4315.0 | 4592.7 | 4432.0 |
| 35° | 4228.5 | 4193.0 | 4101.4 | 3942.8 | 3736.2 | 3496.2 | 3647.8 | 3980.4 | 4596.8 | 4981.3 | 4679.2 |
| 37.5° | 4519.5 | 4477.8 | 4378.1 | 4210.3 | 4065.8 | 3838.9 | 3880.6 | 4214.3 | 4971.1 | 5453.3 | 5006.7 |
| 40° | 4845.0 | 4785.0 | 4664.0 | 4498.1 | 4357.8 | 4240.7 | 4186.8 | 4501.2 | 5351.5 | 5980.3 | 5415.7 |
| 42.5° | 5160.4 | 5103.4 | 4959.0 | 4817.5 | 4641.5 | 4608.0 | 4541.9 | 4836.9 | 5767.6 | 6559.0 | 5830.7 |
| 45° | 5500.0 | 5431.9 | 5257.0 | 5078.0 | 4967.0 | 4852.1 | 4885.7 | 5172.6 | 6175.5 | 7149.0 | 6266.0 |
| 47.5° | 5818.5 | 5742.2 | 5535.7 | 5336.4 | 5275.3 | 5057.6 | 5201.1 | 5541.8 | 6599.7 | 7747.2 | 6697.4 |
| 50° | 5990.4 | 5915.1 | 5743.2 | 5563.2 | 5515.3 | 5310.9 | 5542.8 | 5947.7 | 7044.2 | 8343.2 | 7111.3 |
| 52.5° | 6133.8 | 6052.4 | 5827.6 | 5727.9 | 5713.7 | 5586.6 | 5964.0 | 6411.5 | 7488.8 | 8870.1 | 7511.1 |
| 55° | 6286.4 | 6195.8 | 5909.0 | 5819.5 | 5884.6 | 5895.8 | 6463.3 | 6937.4 | 7958.7 | 9383.8 | 7888.5 |
| 57.5° | 6462.4 | 6347.4 | 5987.3 | 5896.8 | 6051.4 | 6257.9 | 7037.1 | 7482.6 | 8420.5 | 9859.9 | 8224.2 |
| 60° | 6628.2 | 6512.2 | 6137.9 | 6019.9 | 6231.5 | 6678.0 | 7695.3 | 8142.8 | 8943.3 | 10284.0 | 8541.5 |
| 62.5° | 6660.8 | 6565.1 | 6257.9 | 6256.9 | 6475.6 | 7168.3 | 8474.4 | 8809.1 | 9400.1 | 10703.2 | 8826.4 |
| 65° | 6097.2 | 6037.1 | 5855.1 | 6247.8 | 6825.5 | 7874.3 | 9342.2 | 9661.5 | 9980.9 | 11069.4 | 9076.6 |
| 67.5° | 4640.6 | 4648.7 | 4635.5 | 5393.2 | 6542.8 | 8888.4 | 10598.4 | 10574.0 | 10698.0 | 11480.3 | 9364.5 |
| 70° | 2122.0 | 2169.7 | 2481.0 | 3723.0 | 5241.7 | 9005.4 | 12675.6 | 12359.1 | 11598.3 | 12012.3 | 9613.7 |
| 72.5° | 1146.4 | 1183.1 | 1310.2 | 1803.5 | 3151.4 | 8006.5 | 14227.8 | 14452.6 | 12795.6 | 12370.3 | 9340.1 |
| 75° | 841.2 | 861.6 | 950.1 | 1146.4 | 1323.4 | 5950.7 | 13671.3 | 14824.9 | 12945.1 | 11535.2 | 8065.5 |
| 77.5° | 629.7 | 638.8 | 711.0 | 908.4 | 677.4 | 3137.1 | 10923.8 | 12277.8 | 11081.6 | 9477.4 | 5957.8 |
| 80° | 456.7 | 466.9 | 520.8 | 681.5 | 475.1 | 1147.4 | 7500.9 | 8617.9 | 7589.4 | 6041.2 | 2969.2 |
| 82.5° | 315.3 | 319.4 | 342.8 | 463.8 | 331.6 | 445.6 | 4256.0 | 5053.6 | 4236.7 | 2119.9 | 801.6 |
| 85° | 190.2 | 195.3 | 205.5 | 270.6 | 188.2 | 211.6 | 1837.1 | 1900.1 | 1266.4 | 506.6 | 249.2 |
| 87.5° | 78.3 | 83.4 | 91.5 | 113.9 | 74.2 | 59.0 | 303.1 | 380.5 | 237.0 | 148.5 | 77.3 |
| 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° | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 | 3470.8 |
| 2.5° | 3475.9 | 3468.7 | 3449.3 | 3422.9 | 3398.5 | 3368.0 | 3354.8 | 3343.6 | 3333.4 | 3314.1 | 3304.9 |
| 5° | 3497.2 | 3477.8 | 3426.0 | 3358.8 | 3282.6 | 3199.1 | 3117.7 | 3061.8 | 3014.0 | 2978.4 | 2948.9 |
| 7.5° | 3529.7 | 3493.1 | 3398.5 | 3261.2 | 3086.3 | 2907.2 | 2745.5 | 2630.6 | 2544.0 | 2512.5 | 2457.6 |
| 10° | 3563.3 | 3519.5 | 3354.8 | 3112.7 | 2810.5 | 2534.9 | 2320.3 | 2202.3 | 2133.1 | 2110.7 | 2076.1 |
| 12.5° | 3603.0 | 3538.9 | 3286.7 | 2906.2 | 2502.3 | 2200.3 | 2013.1 | 1943.9 | 1908.3 | 1896.0 | 1899.1 |
| 15° | 3661.0 | 3555.2 | 3183.9 | 2647.8 | 2208.4 | 1956.1 | 1835.1 | 1787.3 | 1768.9 | 1767.9 | 1772.0 |
| 17.5° | 3704.7 | 3558.2 | 3024.2 | 2371.1 | 1982.6 | 1808.6 | 1708.9 | 1690.6 | 1702.8 | 1721.2 | 1728.3 |
| 20° | 3753.6 | 3530.7 | 2814.6 | 2118.9 | 1823.9 | 1679.5 | 1637.7 | 1649.9 | 1679.5 | 1705.9 | 1715.0 |
| 22.5° | 3788.1 | 3480.9 | 2561.4 | 1922.5 | 1686.5 | 1605.1 | 1603.1 | 1628.5 | 1644.8 | 1658.0 | 1665.2 |
| 25° | 3818.6 | 3396.4 | 2292.8 | 1757.8 | 1573.7 | 1560.5 | 1582.8 | 1574.6 | 1563.4 | 1574.6 | 1581.8 |
| 27.5° | 3841.0 | 3263.2 | 2052.8 | 1613.4 | 1494.2 | 1529.9 | 1516.7 | 1498.3 | 1497.3 | 1503.5 | 1513.6 |
| 30° | 3833.9 | 3085.2 | 1855.4 | 1476.0 | 1438.4 | 1472.9 | 1441.4 | 1438.4 | 1435.3 | 1438.4 | 1449.6 |
| 32.5° | 3833.9 | 2882.8 | 1703.9 | 1381.4 | 1402.7 | 1389.5 | 1386.4 | 1379.3 | 1367.1 | 1366.1 | 1379.3 |
| 35° | 3855.2 | 2680.4 | 1573.7 | 1330.6 | 1373.2 | 1341.7 | 1343.8 | 1326.5 | 1301.0 | 1288.8 | 1301.0 |
| 37.5° | 3899.0 | 2517.6 | 1444.4 | 1306.1 | 1321.3 | 1320.3 | 1312.2 | 1282.7 | 1238.0 | 1199.2 | 1212.5 |
| 40° | 4004.8 | 2469.8 | 1356.0 | 1294.9 | 1296.9 | 1309.1 | 1287.8 | 1230.8 | 1129.1 | 1066.0 | 1074.2 |
| 42.5° | 4170.6 | 2550.2 | 1336.6 | 1267.4 | 1280.6 | 1292.8 | 1251.2 | 1118.9 | 1046.7 | 1009.1 | 1009.1 |
| 45° | 4381.2 | 2690.5 | 1378.3 | 1227.7 | 1242.0 | 1263.4 | 1139.3 | 1076.2 | 1043.7 | 1044.7 | 1049.8 |
| 47.5° | 4647.7 | 2838.0 | 1455.6 | 1193.2 | 1186.0 | 1198.3 | 1065.0 | 1026.3 | 981.6 | 992.8 | 1021.3 |
| 50° | 4955.9 | 2987.6 | 1528.9 | 1146.4 | 1124.0 | 1084.3 | 1017.2 | 980.6 | 923.6 | 897.2 | 904.3 |
| 52.5° | 5289.5 | 3132.0 | 1558.4 | 1089.5 | 1056.9 | 1011.2 | 984.6 | 939.9 | 870.7 | 827.0 | 825.9 |
| 55° | 5605.8 | 3263.2 | 1525.8 | 1021.3 | 989.7 | 954.2 | 950.1 | 922.6 | 848.4 | 787.3 | 787.3 |
| 57.5° | 5904.9 | 3373.1 | 1444.4 | 952.1 | 921.6 | 900.3 | 927.7 | 914.5 | 820.9 | 742.6 | 738.5 |
| 60° | 6158.2 | 3448.4 | 1326.5 | 881.9 | 860.6 | 849.4 | 891.0 | 887.0 | 782.3 | 694.7 | 691.7 |
| 62.5° | 6359.6 | 3477.8 | 1196.3 | 814.8 | 809.7 | 789.4 | 840.2 | 840.2 | 733.4 | 648.0 | 644.9 |
| 65° | 6517.3 | 3449.3 | 1064.1 | 748.7 | 758.8 | 728.4 | 778.2 | 772.0 | 681.5 | 606.3 | 602.2 |
| 67.5° | 6656.7 | 3355.7 | 917.6 | 683.6 | 706.9 | 668.3 | 713.1 | 698.8 | 624.5 | 564.6 | 560.5 |
| 70° | 6718.7 | 3138.1 | 750.7 | 618.5 | 647.0 | 609.4 | 648.0 | 621.6 | 560.5 | 519.8 | 511.7 |
| 72.5° | 6220.3 | 2608.1 | 591.0 | 550.3 | 574.7 | 544.2 | 577.8 | 547.2 | 491.3 | 473.0 | 457.8 |
| 75° | 5146.1 | 1957.1 | 454.7 | 476.0 | 494.4 | 471.0 | 493.3 | 471.0 | 420.1 | 433.4 | 395.6 |
| 77.5° | 3737.3 | 1321.3 | 347.9 | 397.7 | 405.9 | 393.7 | 413.0 | 387.6 | 341.7 | 338.8 | 323.5 |
| 80° | 1858.4 | 774.1 | 272.6 | 314.4 | 311.3 | 303.1 | 325.5 | 313.3 | 274.6 | 290.9 | 287.9 |
| 82.5° | 538.1 | 331.6 | 198.3 | 220.8 | 214.6 | 216.7 | 233.0 | 239.0 | 358.0 | 355.0 | 363.2 |
| 85° | 168.8 | 130.2 | 119.0 | 123.1 | 117.0 | 120.0 | 137.4 | 272.6 | 252.3 | 147.5 | 159.7 |
| 87.5° | 43.8 | 44.8 | 29.5 | 31.6 | 32.6 | 38.6 | 43.8 | 165.8 | 79.3 | 51.9 | 54.9 |
| 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)