

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: P884820

Luminaire Tested: **NAV-SB5D-760-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884820
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-SB5D-760-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 5700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42151 lumens
Efficiency: N/A
Efficacy: 115.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

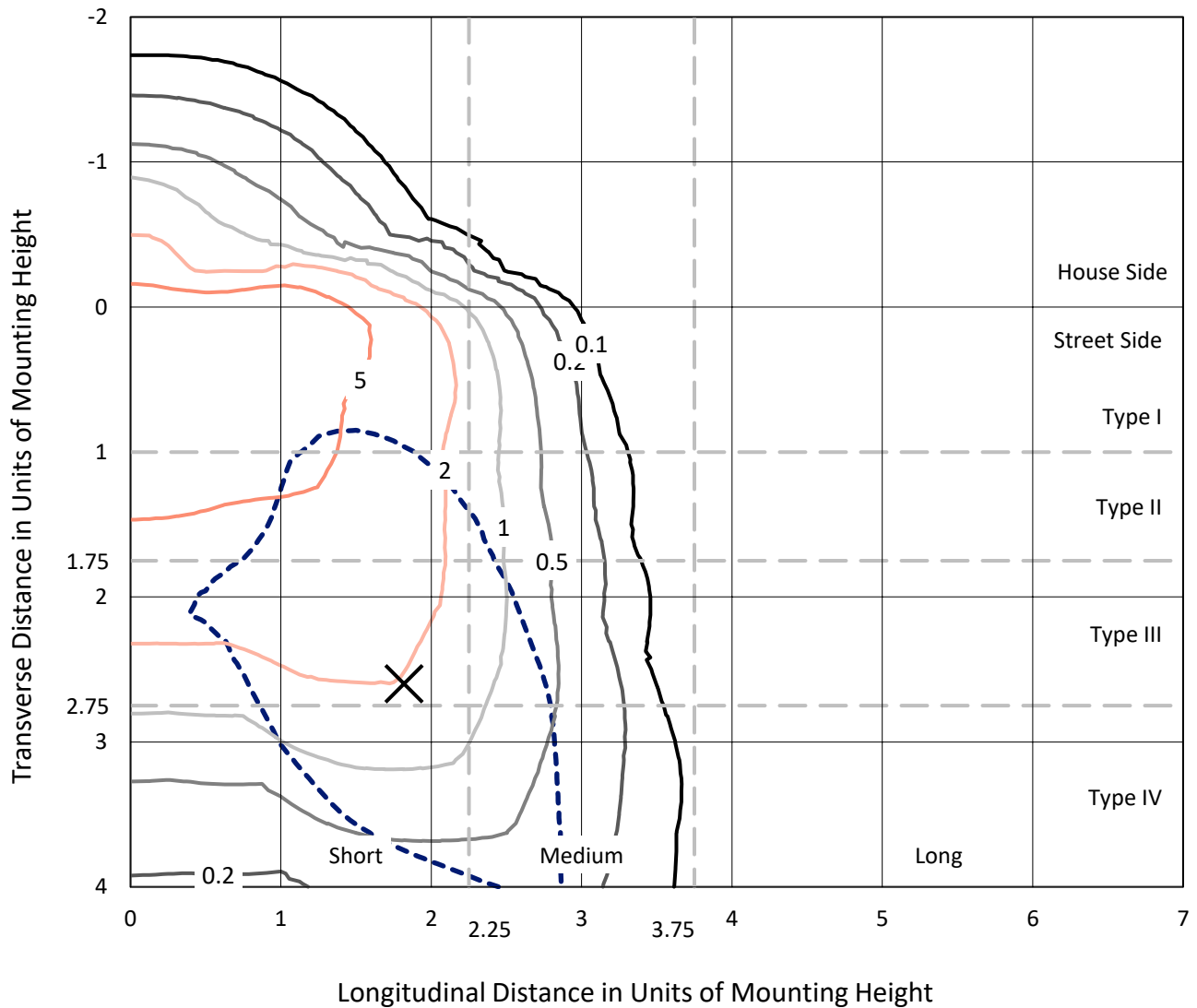
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

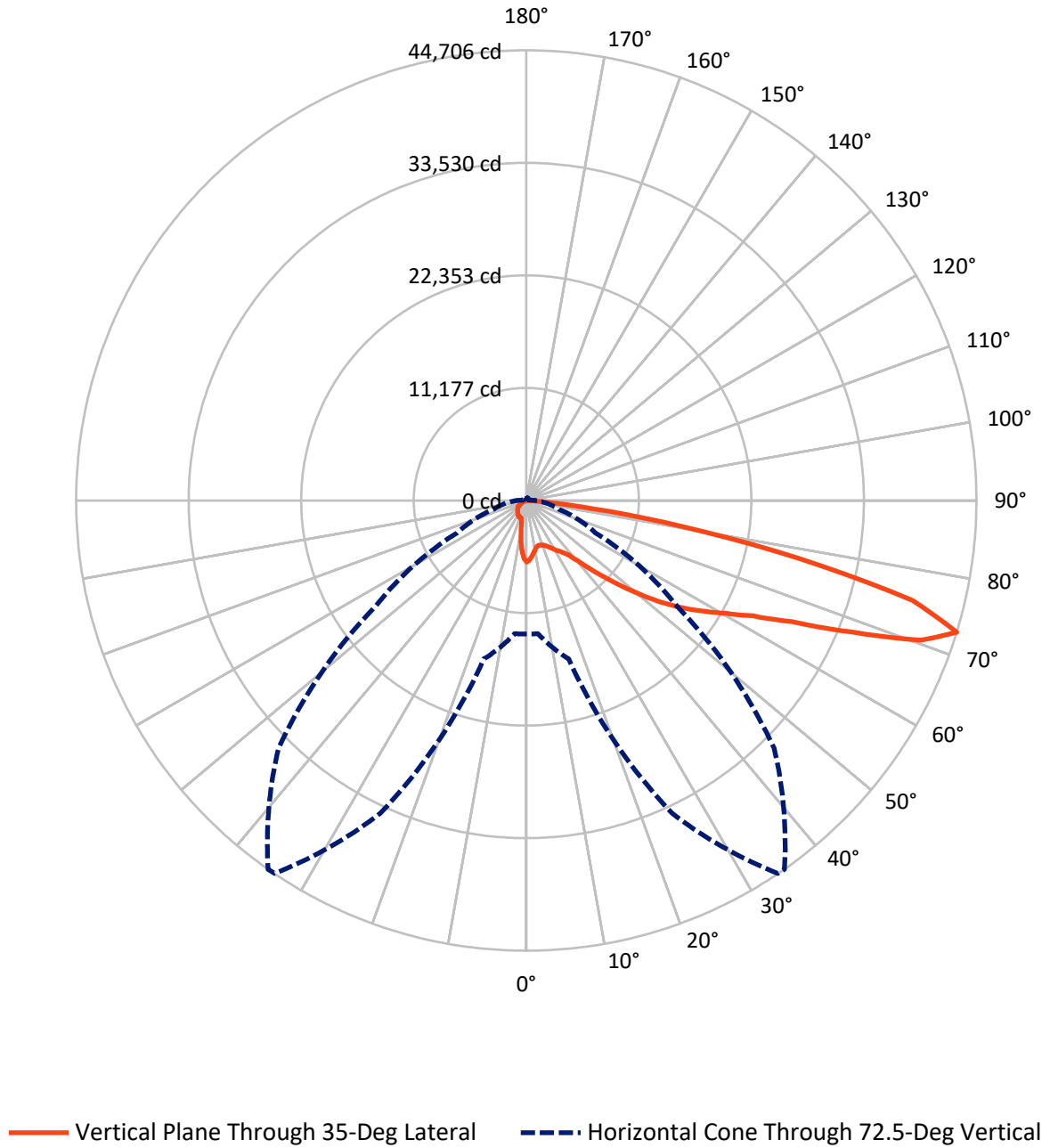
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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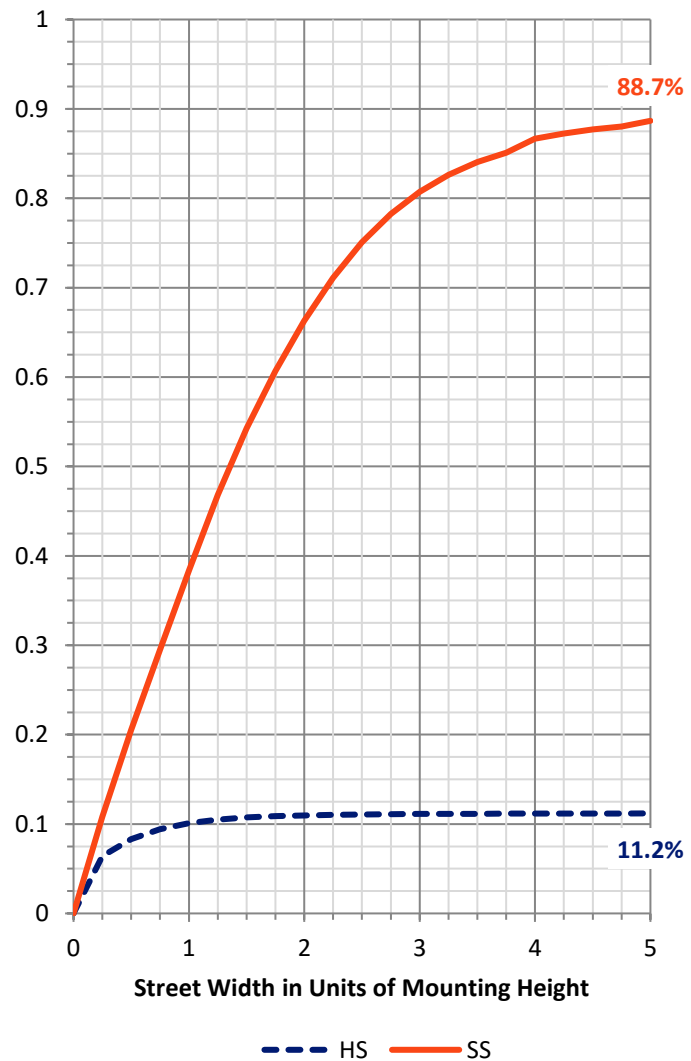
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4743.9 | 0.0 | 4743.9 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| Street Side | Lumens | 37407.1 | 0.0 | 37407.1 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| Total | Lumens | 42151.0 | 0.0 | 42151.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 502.0 | 1.2 |
| 10°-20° | 1174.4 | 2.8 |
| 20°-30° | 1907.8 | 4.5 |
| 30°-40° | 3183.1 | 7.6 |
| 40°-50° | 6022.4 | 14.3 |
| 50°-60° | 9569.6 | 22.7 |
| 60°-70° | 11838.3 | 28.1 |
| 70°-80° | 7358.8 | 17.5 |
| 80°-90° | 594.7 | 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° | 42151.0 | 100.0 |
| 0°-180° | 42151.0 | 100.0 |

Coefficient of Utilization



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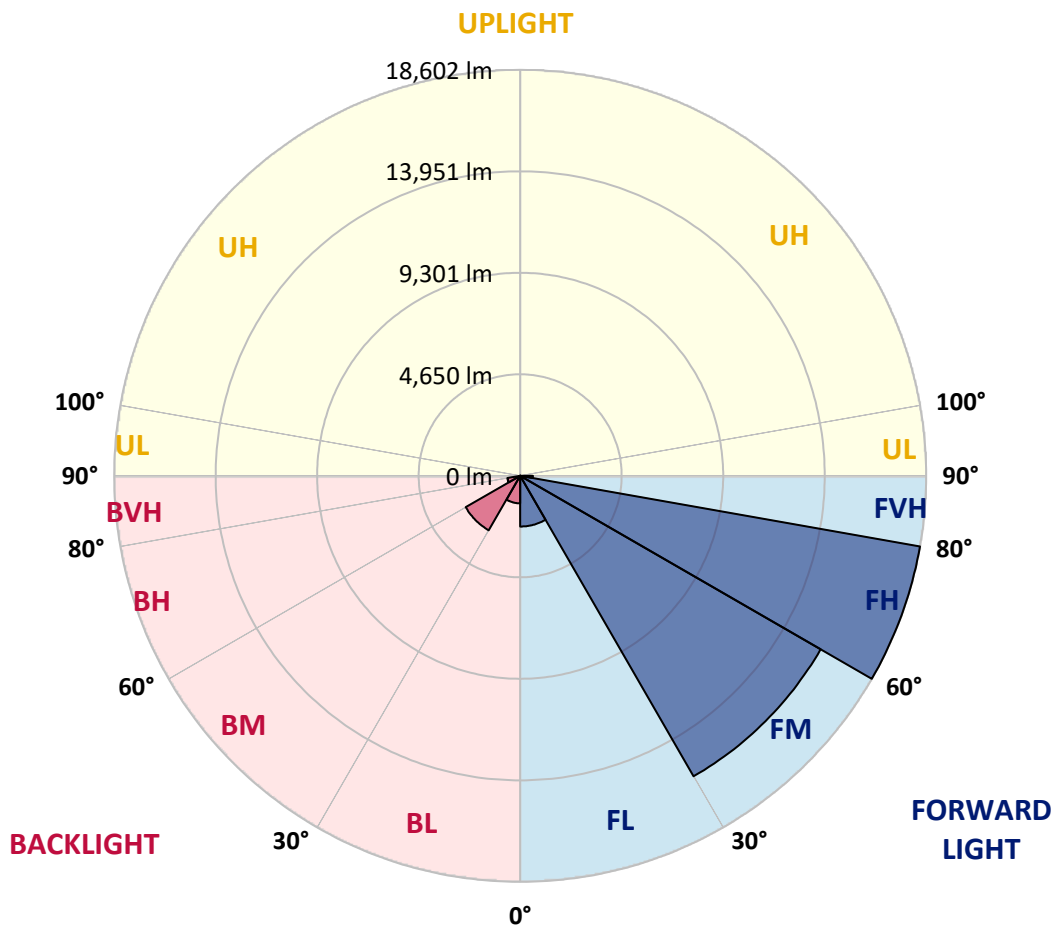
CATALOG NUMBER: NAV-SB5D-760-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2323.6 | 5.5 | | | |
| FM (30°-60°) | 15895.1 | 37.7 | | | |
| FH (60°-80°) | 18601.8 | 44.1 | | | G5 |
| FVH (80°-90°) | 586.6 | 1.4 | | | G4/750 |
| BL (0°-30°) | 1260.5 | 3.0 | B3/2500 | | |
| BM (30°-60°) | 2880.0 | 6.8 | B3/5000 | | |
| BH (60°-80°) | 595.3 | 1.4 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 8.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 |
| 2.5° | 5837.3 | 5886.7 | 5896.0 | 5911.4 | 5911.4 | 5930.0 | 5960.8 | 6004.1 | 6075.1 | 6112.2 | 6136.9 |
| 5° | 5380.2 | 5417.3 | 5463.6 | 5500.7 | 5571.7 | 5581.0 | 5701.4 | 5818.8 | 5982.5 | 6106.0 | 6192.5 |
| 7.5° | 4920.0 | 4963.3 | 5025.0 | 5114.6 | 5207.2 | 5235.0 | 5417.3 | 5614.9 | 5874.4 | 6106.0 | 6251.2 |
| 10° | 4595.7 | 4598.8 | 4654.4 | 4744.0 | 4892.2 | 4926.2 | 5148.6 | 5429.6 | 5753.9 | 6068.9 | 6306.8 |
| 12.5° | 4413.5 | 4435.1 | 4459.8 | 4527.8 | 4669.8 | 4691.5 | 4929.3 | 5259.8 | 5633.5 | 6047.3 | 6371.6 |
| 15° | 4413.5 | 4428.9 | 4444.4 | 4478.4 | 4592.6 | 4611.2 | 4821.2 | 5151.7 | 5571.7 | 6056.6 | 6476.6 |
| 17.5° | 4459.8 | 4484.5 | 4472.2 | 4512.3 | 4632.8 | 4645.1 | 4830.4 | 5120.8 | 5568.6 | 6115.3 | 6637.2 |
| 20° | 4571.0 | 4589.5 | 4564.8 | 4589.5 | 4710.0 | 4734.7 | 4926.2 | 5179.4 | 5621.1 | 6217.2 | 6838.0 |
| 22.5° | 4747.1 | 4756.3 | 4697.6 | 4716.2 | 4839.7 | 4870.6 | 5093.0 | 5346.2 | 5747.7 | 6380.9 | 7106.7 |
| 25° | 4969.4 | 4988.0 | 4898.4 | 4920.0 | 5037.4 | 5074.4 | 5330.8 | 5596.4 | 5948.5 | 6606.3 | 7449.5 |
| 27.5° | 5225.8 | 5235.0 | 5157.8 | 5154.7 | 5306.1 | 5358.6 | 5618.0 | 5905.3 | 6217.2 | 6890.5 | 7881.9 |
| 30° | 5519.2 | 5547.0 | 5472.9 | 5460.5 | 5652.0 | 5695.2 | 5951.6 | 6285.1 | 6612.5 | 7316.7 | 8496.5 |
| 32.5° | 5750.8 | 5772.4 | 5729.2 | 5760.1 | 5954.7 | 5988.6 | 6356.2 | 6822.5 | 7233.3 | 7922.1 | 9333.5 |
| 35° | 6084.4 | 6096.7 | 5997.9 | 6053.5 | 6275.9 | 6362.4 | 6909.0 | 7576.1 | 8014.7 | 8681.8 | 10426.8 |
| 37.5° | 7292.0 | 7292.0 | 6872.0 | 6597.1 | 6810.2 | 6887.4 | 7665.7 | 8524.3 | 8978.3 | 9701.0 | 11804.3 |
| 40° | 8962.9 | 8935.1 | 8320.5 | 7758.4 | 7730.6 | 7881.9 | 8743.6 | 9719.6 | 10223.0 | 10924.1 | 13354.8 |
| 42.5° | 10745.0 | 10701.7 | 9864.7 | 9308.8 | 9216.1 | 9268.6 | 9988.3 | 11192.8 | 11705.5 | 12415.9 | 15022.6 |
| 45° | 12326.3 | 12313.9 | 11548.0 | 10800.6 | 10633.8 | 10800.6 | 11541.8 | 12916.2 | 13283.7 | 14031.1 | 16687.3 |
| 47.5° | 13651.3 | 13651.3 | 13092.2 | 12604.3 | 12517.8 | 12616.6 | 13645.1 | 14828.0 | 14794.0 | 15751.5 | 18308.7 |
| 50° | 15177.0 | 15164.6 | 14633.4 | 14423.4 | 14513.0 | 14651.9 | 16066.5 | 16841.7 | 16356.8 | 17440.9 | 19757.3 |
| 52.5° | 16245.6 | 16319.7 | 16137.5 | 16103.5 | 16560.6 | 16801.6 | 18524.9 | 18812.2 | 17755.9 | 19043.8 | 20841.3 |
| 55° | 17091.9 | 17178.3 | 17388.4 | 17626.2 | 18506.4 | 18821.4 | 20906.2 | 20680.7 | 18926.5 | 20433.7 | 21465.2 |
| 57.5° | 18290.2 | 18166.7 | 18491.0 | 18960.4 | 20384.2 | 20764.1 | 23213.3 | 22444.3 | 19868.5 | 21561.0 | 21533.2 |
| 60° | 19744.9 | 19763.4 | 19819.0 | 20412.0 | 22259.0 | 22747.0 | 25486.5 | 24112.1 | 20473.8 | 22252.8 | 20779.6 |
| 62.5° | 21493.0 | 21520.8 | 21635.1 | 22546.2 | 24776.1 | 25236.3 | 27907.9 | 25477.2 | 20751.8 | 22058.2 | 18833.8 |
| 65° | 21372.6 | 21489.9 | 22765.5 | 25881.8 | 28602.8 | 29056.8 | 30733.9 | 26434.6 | 20331.7 | 20279.2 | 15334.5 |
| 67.5° | 19470.0 | 19661.5 | 21795.7 | 29866.0 | 34372.1 | 34878.7 | 34149.8 | 26623.0 | 18518.8 | 15770.0 | 10003.7 |
| 70° | 16974.5 | 17042.5 | 19609.0 | 33448.7 | 41052.6 | 41565.3 | 37207.4 | 24550.6 | 14052.8 | 8796.1 | 4481.4 |
| 72.5° | 13255.9 | 13271.4 | 16282.7 | 34279.5 | 44678.5 | 44706.3 | 34807.6 | 18225.4 | 7557.6 | 3378.8 | 1556.6 |
| 75° | 9469.4 | 9376.7 | 10905.6 | 27799.8 | 39307.6 | 39622.6 | 26094.9 | 8549.0 | 2887.8 | 1596.8 | 775.2 |
| 77.5° | 5077.5 | 5179.4 | 6170.9 | 16486.5 | 27154.3 | 27691.7 | 14238.1 | 2464.6 | 1470.1 | 1087.2 | 512.7 |
| 80° | 1569.0 | 1655.4 | 2529.5 | 7548.3 | 15380.8 | 15705.1 | 5278.3 | 1096.4 | 1025.4 | 775.2 | 336.6 |
| 82.5° | 494.2 | 512.7 | 1179.8 | 3171.9 | 6384.0 | 6532.2 | 1528.8 | 620.8 | 701.1 | 512.7 | 197.7 |
| 85° | 142.1 | 145.2 | 525.0 | 1182.9 | 1578.2 | 1609.1 | 429.3 | 240.9 | 401.5 | 318.1 | 101.9 |
| 87.5° | 15.4 | 49.4 | 197.7 | 197.7 | 139.0 | 135.9 | 46.3 | 52.5 | 114.3 | 40.2 | 18.5 |
| 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° | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 | 6109.1 |
| 2.5° | 6121.4 | 6124.5 | 6084.4 | 6016.4 | 5942.3 | 5880.5 | 5803.3 | 5741.6 | 5698.3 | 5686.0 | 5707.6 |
| 5° | 6164.7 | 6143.1 | 6028.8 | 5821.9 | 5574.8 | 5361.7 | 5123.9 | 4935.5 | 4811.9 | 4759.4 | 4777.9 |
| 7.5° | 6229.5 | 6167.8 | 5917.6 | 5509.9 | 5037.4 | 4617.3 | 4191.1 | 3860.7 | 3650.6 | 3545.6 | 3561.1 |
| 10° | 6285.1 | 6161.6 | 5732.3 | 5059.0 | 4336.3 | 3700.0 | 3125.6 | 2727.2 | 2504.8 | 2399.8 | 2402.9 |
| 12.5° | 6337.6 | 6158.5 | 5491.4 | 4524.7 | 3545.6 | 2767.3 | 2233.0 | 2035.3 | 1973.6 | 1951.9 | 1945.8 |
| 15° | 6436.5 | 6167.8 | 5188.7 | 3913.2 | 2758.0 | 2090.9 | 1896.4 | 1893.3 | 1905.6 | 1899.4 | 1896.4 |
| 17.5° | 6572.4 | 6177.0 | 4845.9 | 3264.6 | 2128.0 | 1843.8 | 1834.6 | 1862.4 | 1880.9 | 1871.6 | 1868.6 |
| 20° | 6748.4 | 6214.1 | 4481.4 | 2622.2 | 1828.4 | 1782.1 | 1803.7 | 1828.4 | 1843.8 | 1828.4 | 1825.3 |
| 22.5° | 6995.5 | 6279.0 | 4083.0 | 2106.4 | 1732.7 | 1745.0 | 1763.5 | 1791.3 | 1806.8 | 1785.2 | 1782.1 |
| 25° | 7298.2 | 6380.9 | 3690.8 | 1831.5 | 1686.3 | 1701.8 | 1729.6 | 1760.5 | 1779.0 | 1757.4 | 1754.3 |
| 27.5° | 7690.4 | 6544.6 | 3329.4 | 1769.7 | 1640.0 | 1649.3 | 1689.4 | 1735.7 | 1760.5 | 1732.7 | 1732.7 |
| 30° | 8258.7 | 6813.3 | 3017.5 | 1797.5 | 1612.2 | 1590.6 | 1646.2 | 1711.0 | 1738.8 | 1714.1 | 1711.0 |
| 32.5° | 9012.3 | 7193.2 | 2826.0 | 1840.8 | 1599.9 | 1522.6 | 1575.1 | 1658.5 | 1704.9 | 1689.4 | 1689.4 |
| 35° | 10000.6 | 7770.7 | 2751.9 | 1890.2 | 1590.6 | 1451.6 | 1488.7 | 1578.2 | 1658.5 | 1674.0 | 1674.0 |
| 37.5° | 11199.0 | 8573.7 | 2773.5 | 1911.8 | 1562.8 | 1392.9 | 1411.5 | 1488.7 | 1593.7 | 1643.1 | 1655.4 |
| 40° | 12561.0 | 9509.6 | 2897.0 | 1890.2 | 1531.9 | 1343.5 | 1346.6 | 1405.3 | 1497.9 | 1572.1 | 1596.8 |
| 42.5° | 13966.3 | 10602.9 | 3125.6 | 1809.9 | 1504.1 | 1300.3 | 1291.0 | 1331.2 | 1392.9 | 1445.4 | 1467.0 |
| 45° | 15303.6 | 11727.1 | 3351.0 | 1698.7 | 1470.1 | 1257.0 | 1235.4 | 1250.9 | 1263.2 | 1284.8 | 1297.2 |
| 47.5° | 16471.1 | 12517.8 | 3286.2 | 1596.8 | 1423.8 | 1207.6 | 1170.5 | 1164.4 | 1127.3 | 1124.2 | 1121.1 |
| 50° | 17277.2 | 12690.7 | 2918.7 | 1494.8 | 1355.9 | 1152.0 | 1093.3 | 1056.3 | 991.4 | 960.5 | 963.6 |
| 52.5° | 17533.5 | 12008.2 | 2384.3 | 1392.9 | 1244.7 | 1077.9 | 994.5 | 935.8 | 855.5 | 827.7 | 824.6 |
| 55° | 17193.8 | 10670.8 | 1905.6 | 1269.4 | 1090.2 | 979.1 | 886.4 | 809.2 | 744.3 | 710.4 | 710.4 |
| 57.5° | 16363.0 | 8969.1 | 1507.2 | 1124.2 | 926.6 | 867.9 | 775.2 | 698.0 | 642.4 | 608.4 | 602.3 |
| 60° | 14985.5 | 7122.1 | 1192.2 | 951.3 | 790.7 | 747.4 | 651.7 | 602.3 | 552.8 | 512.7 | 503.4 |
| 62.5° | 12894.6 | 5083.7 | 935.8 | 753.6 | 660.9 | 611.5 | 555.9 | 518.9 | 460.2 | 404.6 | 395.3 |
| 65° | 10062.4 | 3110.1 | 722.7 | 552.8 | 531.2 | 506.5 | 472.5 | 438.6 | 367.5 | 311.9 | 302.7 |
| 67.5° | 6346.9 | 1473.2 | 515.8 | 417.0 | 420.0 | 407.7 | 392.2 | 364.4 | 311.9 | 262.5 | 256.3 |
| 70° | 2795.1 | 713.4 | 339.7 | 318.1 | 311.9 | 311.9 | 324.3 | 315.0 | 265.6 | 219.3 | 210.0 |
| 72.5° | 951.3 | 383.0 | 253.3 | 240.9 | 225.5 | 222.4 | 271.8 | 262.5 | 213.1 | 169.9 | 160.6 |
| 75° | 497.3 | 256.3 | 185.3 | 173.0 | 135.9 | 163.7 | 216.2 | 203.8 | 151.3 | 111.2 | 101.9 |
| 77.5° | 324.3 | 182.2 | 126.6 | 111.2 | 77.2 | 108.1 | 160.6 | 142.1 | 89.6 | 55.6 | 49.4 |
| 80° | 203.8 | 120.5 | 74.1 | 52.5 | 37.1 | 58.7 | 86.5 | 61.8 | 34.0 | 12.4 | 9.3 |
| 82.5° | 108.1 | 61.8 | 27.8 | 18.5 | 15.4 | 18.5 | 21.6 | 15.4 | 6.2 | 0.0 | 0.0 |
| 85° | 43.2 | 21.6 | 9.3 | 6.2 | 3.1 | 0.0 | 6.2 | 3.1 | 0.0 | 0.0 | 0.0 |
| 87.5° | 15.4 | 3.1 | 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)