

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: P882924

Luminaire Tested: **NAV-SB3A-740-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-740-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 4000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14379 lumens
Efficiency: N/A
Efficacy: 169.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G3

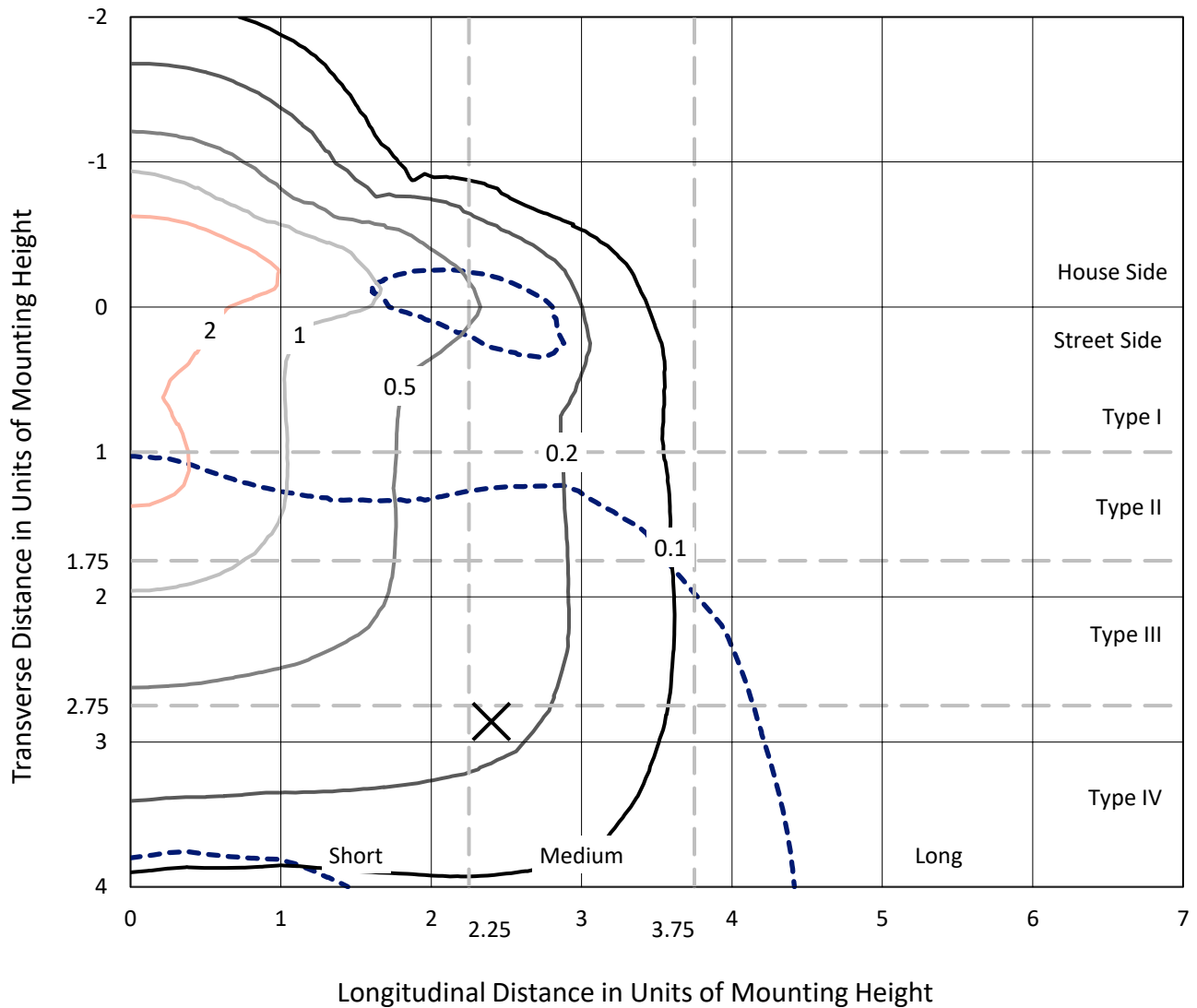
Input Watts (W): 84.7
Input Voltage (V): 120.0
Input Current (Ain): 0.717
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

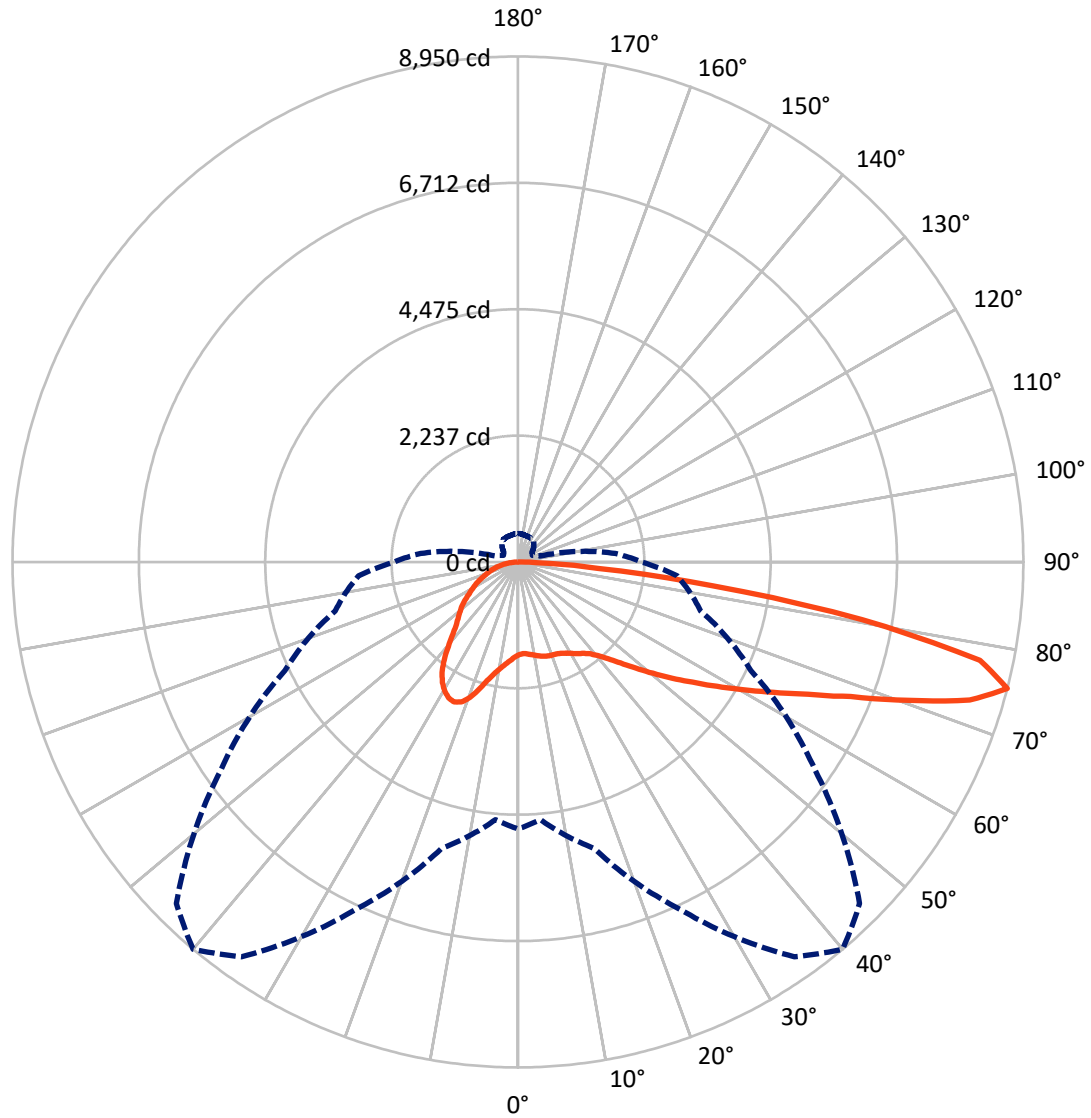
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4455.1 | 0.0 | 4455.1 |
| | % Fixture | 31.0 | 0.0 | 31.0 |
| Street Side | Lumens | 9923.9 | 0.0 | 9923.9 |
| | % Fixture | 69.0 | 0.0 | 69.0 |
| Total | Lumens | 14379.0 | 0.0 | 14379.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 164.1 | 1.1 |
| 10°-20° | 551.1 | 3.8 |
| 20°-30° | 1006.2 | 7.0 |
| 30°-40° | 1427.0 | 9.9 |
| 40°-50° | 1926.9 | 13.4 |
| 50°-60° | 2592.2 | 18.0 |
| 60°-70° | 3290.1 | 22.9 |
| 70°-80° | 2986.0 | 20.8 |
| 80°-90° | 435.3 | 3.0 |
| 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° | 14379.0 | 100.0 |
| 0°-180° | 14379.0 | 100.0 |

Coefficient of Utilization



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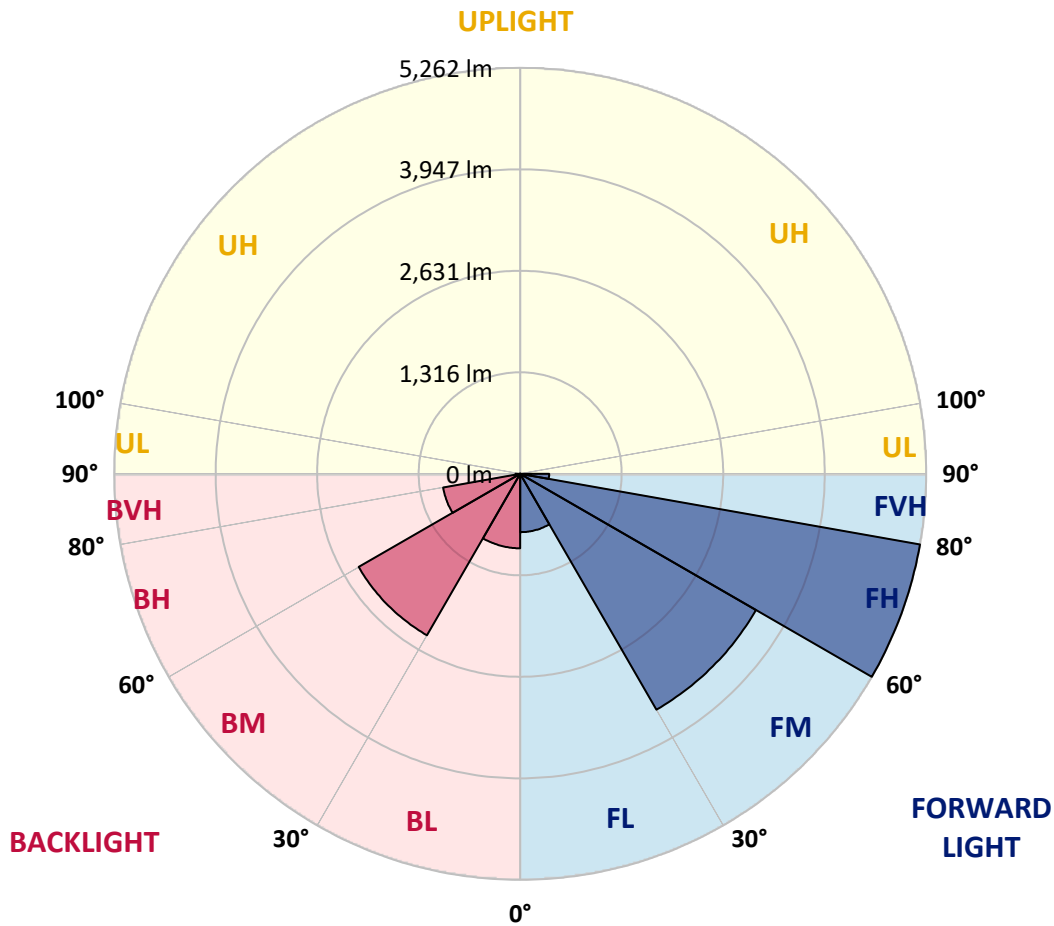
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 756.3 | 5.3 | | | |
| FM (30°-60°) | 3529.7 | 24.5 | | | |
| FH (60°-80°) | 5262.5 | 36.6 | | | G3/7500 |
| FVH (80°-90°) | 375.3 | 2.6 | | | G3/500 |
| BL (0°-30°) | 965.0 | 6.7 | B2/1000 | | |
| BM (30°-60°) | 2416.5 | 16.8 | B2/2500 | | |
| BH (60°-80°) | 1013.7 | 7.0 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 59.9 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type IV Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 |
| 2.5° | 1619.1 | 1628.2 | 1626.0 | 1622.9 | 1622.9 | 1623.7 | 1622.9 | 1628.2 | 1633.6 | 1638.9 | 1647.3 |
| 5° | 1635.9 | 1645.0 | 1640.4 | 1636.6 | 1633.6 | 1632.8 | 1630.5 | 1629.8 | 1632.8 | 1639.7 | 1651.1 |
| 7.5° | 1668.7 | 1677.8 | 1671.0 | 1664.1 | 1658.0 | 1654.9 | 1651.9 | 1647.3 | 1645.0 | 1648.8 | 1664.8 |
| 10° | 1705.3 | 1714.4 | 1706.0 | 1693.8 | 1683.9 | 1680.1 | 1677.1 | 1672.5 | 1669.4 | 1671.7 | 1689.3 |
| 12.5° | 1741.9 | 1751.0 | 1739.6 | 1722.8 | 1709.8 | 1707.6 | 1703.7 | 1702.2 | 1701.5 | 1700.7 | 1718.2 |
| 15° | 1776.2 | 1783.8 | 1769.3 | 1749.5 | 1735.8 | 1732.0 | 1728.1 | 1730.4 | 1734.2 | 1738.8 | 1758.7 |
| 17.5° | 1802.9 | 1810.5 | 1789.2 | 1763.2 | 1750.3 | 1748.7 | 1746.5 | 1754.1 | 1764.8 | 1776.2 | 1800.6 |
| 20° | 1827.3 | 1834.9 | 1807.5 | 1772.4 | 1757.1 | 1757.1 | 1757.9 | 1773.9 | 1789.2 | 1805.9 | 1839.5 |
| 22.5° | 1861.6 | 1867.7 | 1834.2 | 1786.1 | 1764.0 | 1765.5 | 1771.6 | 1787.6 | 1806.7 | 1829.6 | 1876.1 |
| 25° | 1912.7 | 1917.3 | 1876.1 | 1812.0 | 1786.9 | 1791.4 | 1796.8 | 1804.4 | 1822.7 | 1849.4 | 1911.9 |
| 27.5° | 1995.1 | 1998.9 | 1944.7 | 1857.8 | 1819.7 | 1827.3 | 1834.9 | 1829.6 | 1838.0 | 1860.8 | 1940.9 |
| 30° | 2111.0 | 2113.3 | 2044.6 | 1929.5 | 1875.3 | 1879.2 | 1880.7 | 1858.6 | 1842.5 | 1860.8 | 1961.5 |
| 32.5° | 2248.3 | 2247.5 | 2165.9 | 2016.4 | 1938.6 | 1934.8 | 1921.9 | 1878.4 | 1841.0 | 1857.0 | 1979.8 |
| 35° | 2461.0 | 2452.7 | 2347.4 | 2138.5 | 2010.3 | 1986.7 | 1956.2 | 1900.5 | 1848.6 | 1853.2 | 1995.8 |
| 37.5° | 2813.4 | 2787.5 | 2641.8 | 2338.3 | 2117.1 | 2056.8 | 2011.9 | 1936.3 | 1865.4 | 1851.7 | 2014.9 |
| 40° | 3210.7 | 3177.9 | 3017.8 | 2612.1 | 2277.3 | 2180.4 | 2107.9 | 1987.4 | 1892.9 | 1858.6 | 2043.1 |
| 42.5° | 3682.0 | 3635.5 | 3463.2 | 2934.6 | 2480.1 | 2339.8 | 2230.7 | 2052.3 | 1933.3 | 1880.7 | 2081.3 |
| 45° | 4260.9 | 4199.1 | 3955.1 | 3298.4 | 2735.6 | 2548.8 | 2403.1 | 2150.7 | 1995.1 | 1923.4 | 2138.5 |
| 47.5° | 4845.8 | 4861.1 | 4514.1 | 3714.8 | 3042.2 | 2806.5 | 2618.9 | 2298.6 | 2085.1 | 1992.0 | 2230.7 |
| 50° | 5467.4 | 5478.1 | 5070.0 | 4176.2 | 3389.9 | 3097.9 | 2861.4 | 2464.1 | 2210.1 | 2089.6 | 2368.8 |
| 52.5° | 5952.4 | 5954.0 | 5574.9 | 4659.0 | 3752.2 | 3418.2 | 3123.0 | 2653.2 | 2355.0 | 2219.3 | 2552.6 |
| 55° | 6256.0 | 6252.1 | 5928.8 | 5115.8 | 4168.6 | 3754.5 | 3412.8 | 2868.3 | 2532.0 | 2371.8 | 2783.6 |
| 57.5° | 6476.4 | 6464.9 | 6172.8 | 5508.6 | 4612.5 | 4151.8 | 3740.8 | 3112.3 | 2740.9 | 2553.3 | 3087.9 |
| 60° | 6560.3 | 6553.4 | 6338.3 | 5847.9 | 5079.2 | 4591.1 | 4119.0 | 3385.4 | 2978.1 | 2767.6 | 3479.2 |
| 62.5° | 6592.3 | 6605.2 | 6500.8 | 6176.6 | 5578.7 | 5077.7 | 4534.7 | 3711.8 | 3245.0 | 3010.2 | 3891.8 |
| 65° | 6705.2 | 6728.8 | 6707.4 | 6606.8 | 6143.1 | 5647.4 | 5086.1 | 4100.0 | 3536.4 | 3270.2 | 4322.7 |
| 67.5° | 6928.6 | 6952.3 | 6961.4 | 7121.6 | 6832.5 | 6357.4 | 5774.0 | 4583.5 | 3877.3 | 3540.2 | 4646.8 |
| 70° | 6923.3 | 6916.4 | 7078.1 | 7531.1 | 7695.8 | 7340.4 | 6701.3 | 5178.3 | 4283.8 | 3764.4 | 4688.0 |
| 72.5° | 6301.7 | 6246.8 | 6628.9 | 7526.5 | 8414.2 | 8367.0 | 7833.9 | 5945.6 | 4634.6 | 3791.9 | 4067.9 |
| 75° | 4727.6 | 4581.2 | 5256.1 | 6782.9 | 8534.0 | 8949.6 | 8553.8 | 6421.5 | 4551.5 | 3350.3 | 2830.9 |
| 77.5° | 2021.8 | 1874.6 | 2670.0 | 5021.2 | 7637.9 | 8366.2 | 7893.4 | 5602.4 | 3633.2 | 2215.5 | 1390.3 |
| 80° | 529.3 | 528.5 | 806.9 | 2276.5 | 5194.4 | 6178.2 | 5420.1 | 3618.0 | 2075.9 | 791.6 | 383.6 |
| 82.5° | 218.9 | 213.5 | 296.7 | 885.4 | 2538.1 | 3467.0 | 2829.4 | 1613.8 | 749.7 | 214.3 | 127.4 |
| 85° | 81.6 | 80.8 | 144.1 | 305.8 | 895.3 | 1430.0 | 1034.9 | 412.6 | 186.8 | 104.5 | 57.2 |
| 87.5° | 22.9 | 22.1 | 31.3 | 106.0 | 218.1 | 331.0 | 176.9 | 67.9 | 52.6 | 41.2 | 16.8 |
| 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° | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 | 1644.3 |
| 2.5° | 1649.6 | 1653.4 | 1660.3 | 1665.6 | 1672.5 | 1680.1 | 1690.8 | 1697.6 | 1704.5 | 1709.1 | 1706.0 |
| 5° | 1656.5 | 1664.8 | 1682.4 | 1699.9 | 1720.5 | 1739.6 | 1761.7 | 1777.7 | 1790.7 | 1794.5 | 1796.0 |
| 7.5° | 1671.7 | 1685.4 | 1715.2 | 1744.9 | 1777.7 | 1809.0 | 1841.0 | 1868.5 | 1890.6 | 1899.0 | 1899.7 |
| 10° | 1698.4 | 1716.7 | 1758.7 | 1800.6 | 1844.1 | 1892.1 | 1933.3 | 1973.0 | 2004.2 | 2017.2 | 2018.0 |
| 12.5° | 1732.0 | 1754.8 | 1809.8 | 1867.7 | 1928.0 | 1994.3 | 2047.7 | 2096.5 | 2135.4 | 2152.9 | 2152.9 |
| 15° | 1775.4 | 1805.2 | 1875.3 | 1953.1 | 2041.6 | 2133.9 | 2201.7 | 2255.9 | 2299.4 | 2320.7 | 2319.2 |
| 17.5° | 1822.7 | 1862.4 | 1950.8 | 2068.3 | 2194.9 | 2316.1 | 2395.5 | 2435.1 | 2480.1 | 2500.7 | 2499.9 |
| 20° | 1868.5 | 1917.3 | 2043.9 | 2214.7 | 2383.3 | 2512.1 | 2576.2 | 2586.9 | 2589.9 | 2592.2 | 2598.3 |
| 22.5° | 1915.8 | 1981.3 | 2160.6 | 2399.3 | 2580.0 | 2669.2 | 2678.4 | 2632.6 | 2568.6 | 2538.8 | 2547.2 |
| 25° | 1967.6 | 2054.6 | 2313.1 | 2602.9 | 2749.3 | 2760.0 | 2689.8 | 2578.5 | 2457.2 | 2401.6 | 2410.0 |
| 27.5° | 2018.0 | 2139.2 | 2496.1 | 2797.4 | 2871.4 | 2777.5 | 2626.5 | 2468.7 | 2322.2 | 2263.5 | 2270.4 |
| 30° | 2068.3 | 2236.1 | 2698.2 | 2967.4 | 2927.0 | 2734.1 | 2526.6 | 2350.5 | 2203.3 | 2141.5 | 2148.4 |
| 32.5° | 2119.4 | 2348.9 | 2930.8 | 3090.2 | 2917.1 | 2641.8 | 2402.3 | 2217.8 | 2088.1 | 2023.3 | 2031.7 |
| 35° | 2177.3 | 2487.7 | 3151.2 | 3157.3 | 2850.8 | 2506.0 | 2238.4 | 2059.1 | 1946.3 | 1894.4 | 1905.8 |
| 37.5° | 2252.8 | 2663.9 | 3345.7 | 3174.1 | 2734.8 | 2307.0 | 2034.7 | 1871.5 | 1778.5 | 1754.8 | 1771.6 |
| 40° | 2346.7 | 2875.9 | 3494.4 | 3147.4 | 2563.2 | 2065.2 | 1812.0 | 1681.6 | 1629.0 | 1634.3 | 1652.6 |
| 42.5° | 2468.7 | 3113.1 | 3598.9 | 3078.8 | 2324.5 | 1815.9 | 1616.8 | 1558.8 | 1584.0 | 1605.4 | 1625.2 |
| 45° | 2627.3 | 3359.4 | 3663.7 | 2962.1 | 2054.6 | 1604.6 | 1501.6 | 1515.4 | 1534.4 | 1536.7 | 1552.0 |
| 47.5° | 2830.2 | 3608.8 | 3706.4 | 2785.9 | 1779.2 | 1455.9 | 1428.4 | 1431.5 | 1427.7 | 1411.7 | 1423.9 |
| 50° | 3083.4 | 3851.3 | 3744.6 | 2552.6 | 1545.1 | 1362.8 | 1326.2 | 1315.6 | 1262.9 | 1211.1 | 1217.9 |
| 52.5° | 3371.6 | 4074.0 | 3760.6 | 2262.8 | 1362.8 | 1285.1 | 1225.6 | 1158.5 | 1060.1 | 1044.1 | 1049.4 |
| 55° | 3692.0 | 4280.0 | 3719.4 | 1906.6 | 1209.6 | 1185.1 | 1095.2 | 1014.3 | 1003.6 | 989.9 | 992.2 |
| 57.5° | 4074.8 | 4501.9 | 3635.5 | 1509.3 | 1052.4 | 1068.5 | 980.8 | 989.9 | 970.8 | 949.5 | 945.7 |
| 60° | 4493.5 | 4731.4 | 3488.3 | 1147.0 | 890.0 | 922.8 | 951.0 | 950.3 | 944.9 | 927.4 | 921.3 |
| 62.5° | 4870.2 | 4882.4 | 3198.5 | 878.6 | 747.4 | 809.9 | 887.0 | 886.2 | 881.6 | 871.7 | 867.9 |
| 65° | 5094.5 | 4859.6 | 2715.0 | 691.7 | 629.9 | 716.9 | 800.0 | 806.1 | 806.9 | 806.1 | 806.1 |
| 67.5° | 5054.8 | 4591.9 | 2051.5 | 550.6 | 533.1 | 622.3 | 713.8 | 722.2 | 728.3 | 729.8 | 731.4 |
| 70° | 4606.4 | 4003.9 | 1337.7 | 439.3 | 446.9 | 539.2 | 632.2 | 640.6 | 646.0 | 652.1 | 655.1 |
| 72.5° | 3590.5 | 2943.8 | 765.7 | 355.4 | 371.4 | 467.5 | 551.4 | 561.3 | 564.4 | 575.8 | 580.4 |
| 75° | 2188.0 | 1731.2 | 413.4 | 279.9 | 305.1 | 399.6 | 471.3 | 482.8 | 488.1 | 501.8 | 503.3 |
| 77.5° | 1040.2 | 749.7 | 235.7 | 218.1 | 245.6 | 326.4 | 398.1 | 411.1 | 396.6 | 404.2 | 398.1 |
| 80° | 351.6 | 278.4 | 148.7 | 166.3 | 187.6 | 254.7 | 318.8 | 331.7 | 301.2 | 299.7 | 296.7 |
| 82.5° | 122.8 | 112.9 | 94.6 | 110.6 | 121.3 | 182.3 | 241.0 | 257.8 | 224.2 | 223.5 | 212.8 |
| 85° | 48.0 | 45.8 | 52.6 | 60.2 | 72.5 | 112.1 | 158.6 | 167.0 | 138.0 | 111.3 | 109.8 |
| 87.5° | 9.9 | 10.7 | 13.0 | 13.7 | 22.1 | 38.9 | 57.2 | 70.2 | 55.7 | 47.3 | 43.5 |
| 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)