

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: P196522

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196522  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-RW-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19482 lumens  
Efficiency: N/A  
Efficacy: 113.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

Input Watts (W): 171  
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: 25 FT

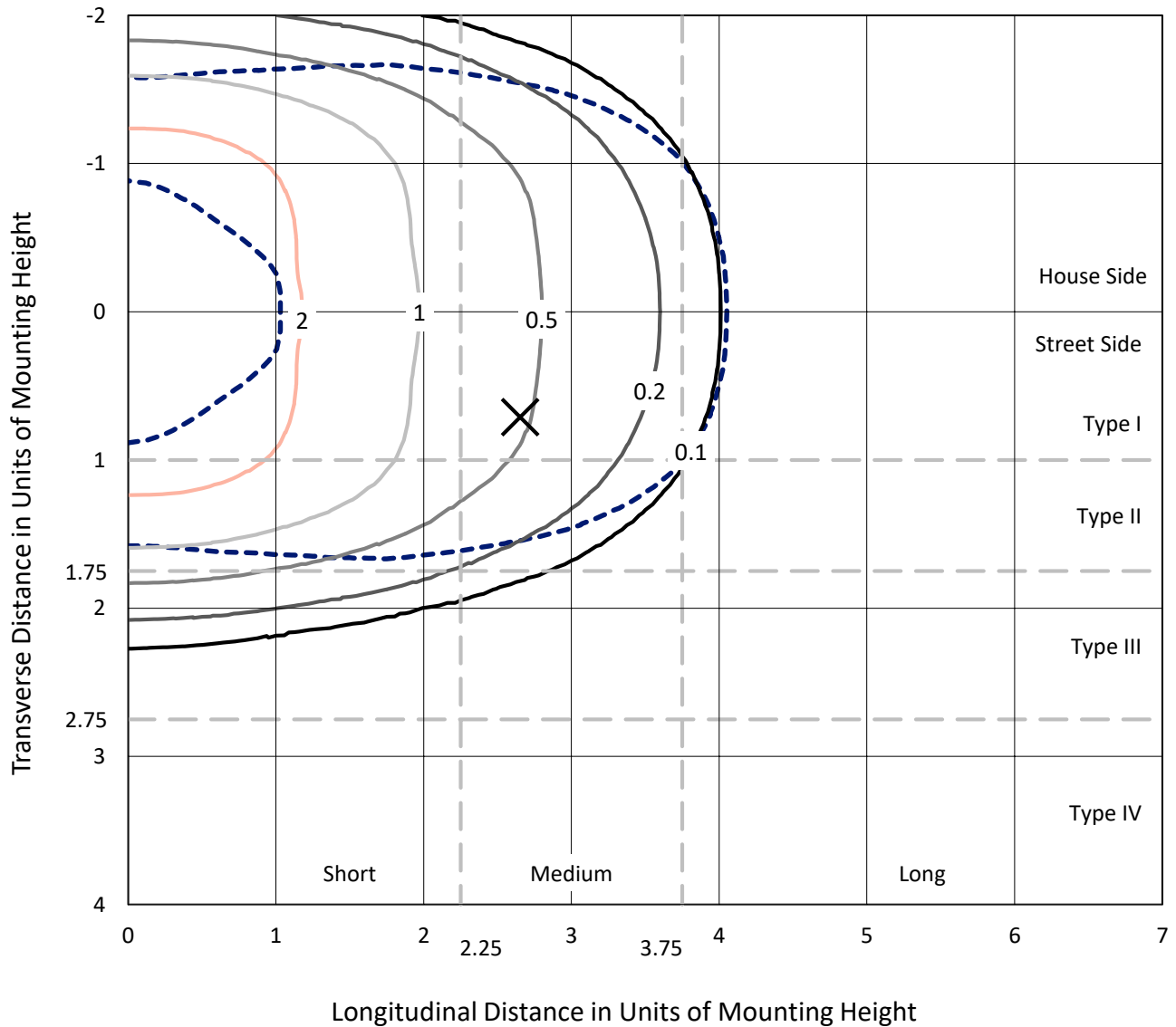


REPORT NUMBER: P196522

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

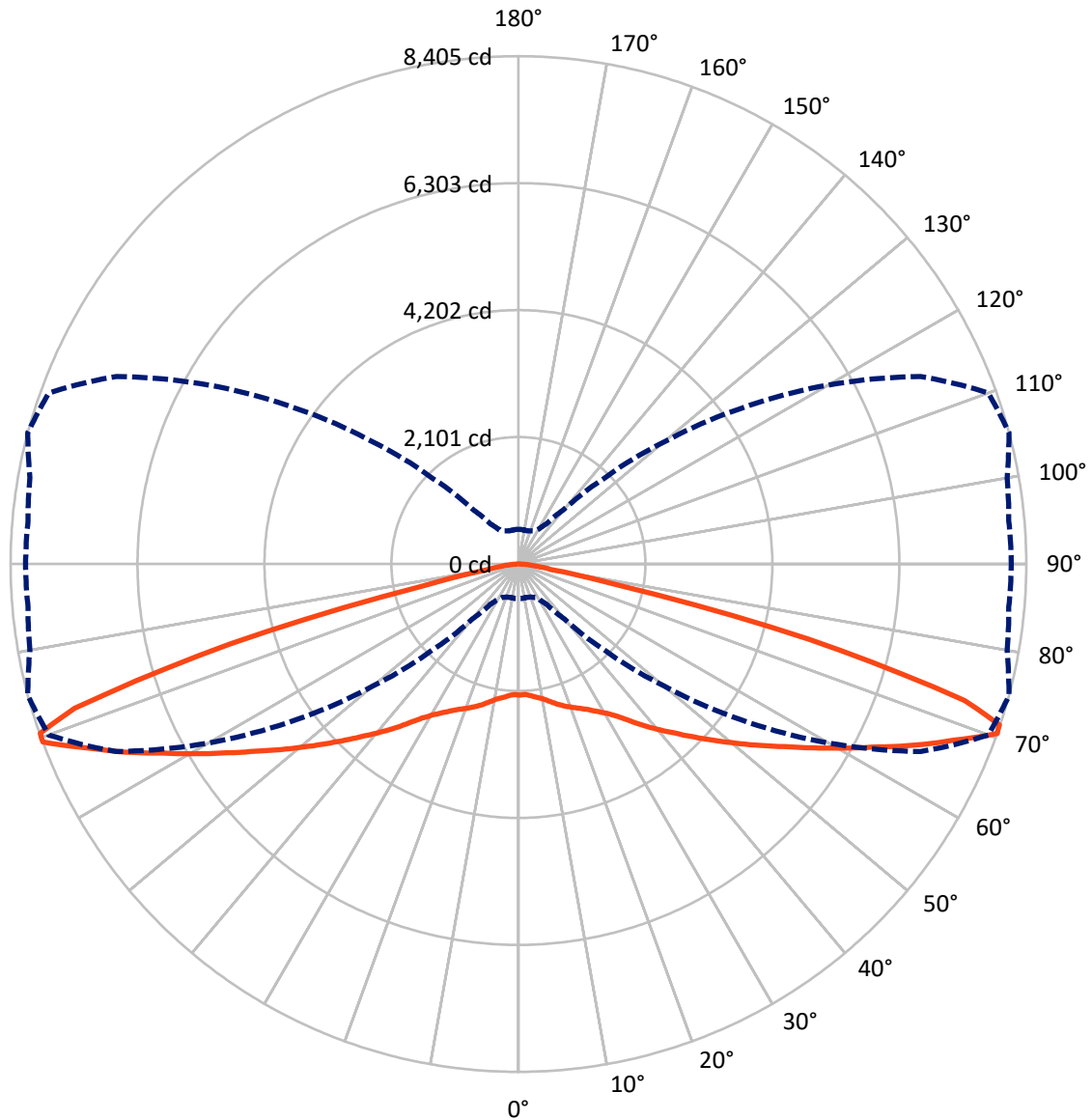


Based on 25 foot mounting height. Maximum calculated value = 3.5 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196522

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P196522

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

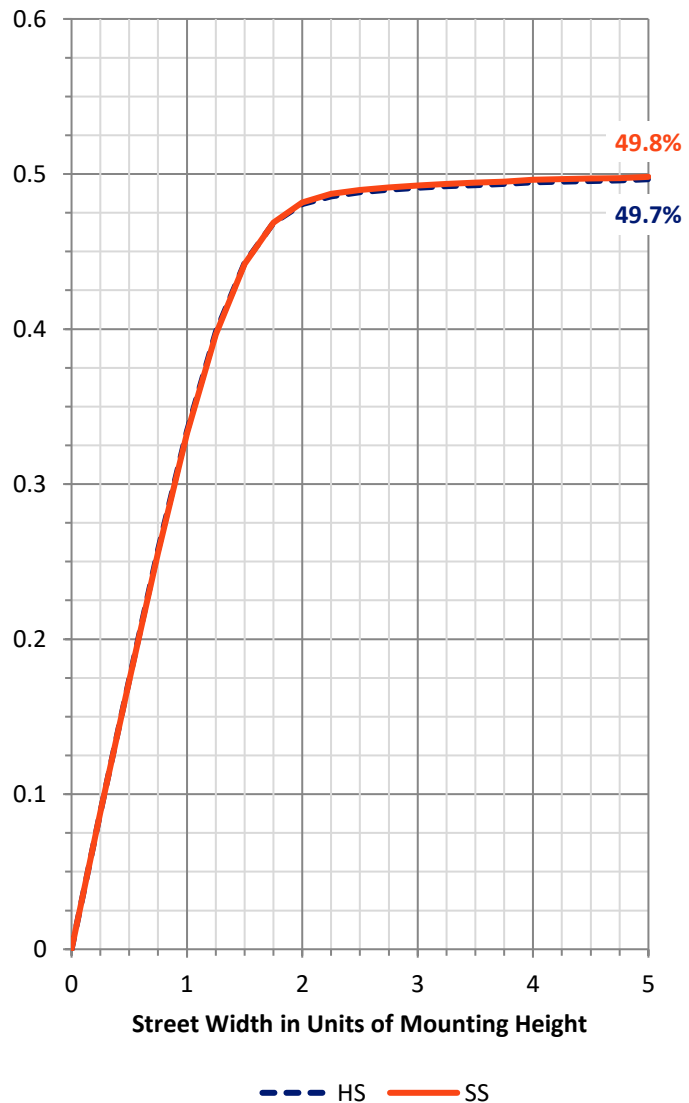
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 9741.0   | 0.0    | 9741.0  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 9741.0   | 0.0    | 9741.0  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 19482.0  | 0.0    | 19482.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 208.1   | 1.1       |
| 10°-20°   | 645.4   | 3.3       |
| 20°-30°   | 1212.1  | 6.2       |
| 30°-40°   | 2135.2  | 11.0      |
| 40°-50°   | 3538.7  | 18.2      |
| 50°-60°   | 4922.8  | 25.3      |
| 60°-70°   | 4647.3  | 23.9      |
| 70°-80°   | 1984.9  | 10.2      |
| 80°-90°   | 187.6   | 1.0       |
| 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°    | 19482.0 | 100.0     |
| 0°-180°   | 19482.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P196522

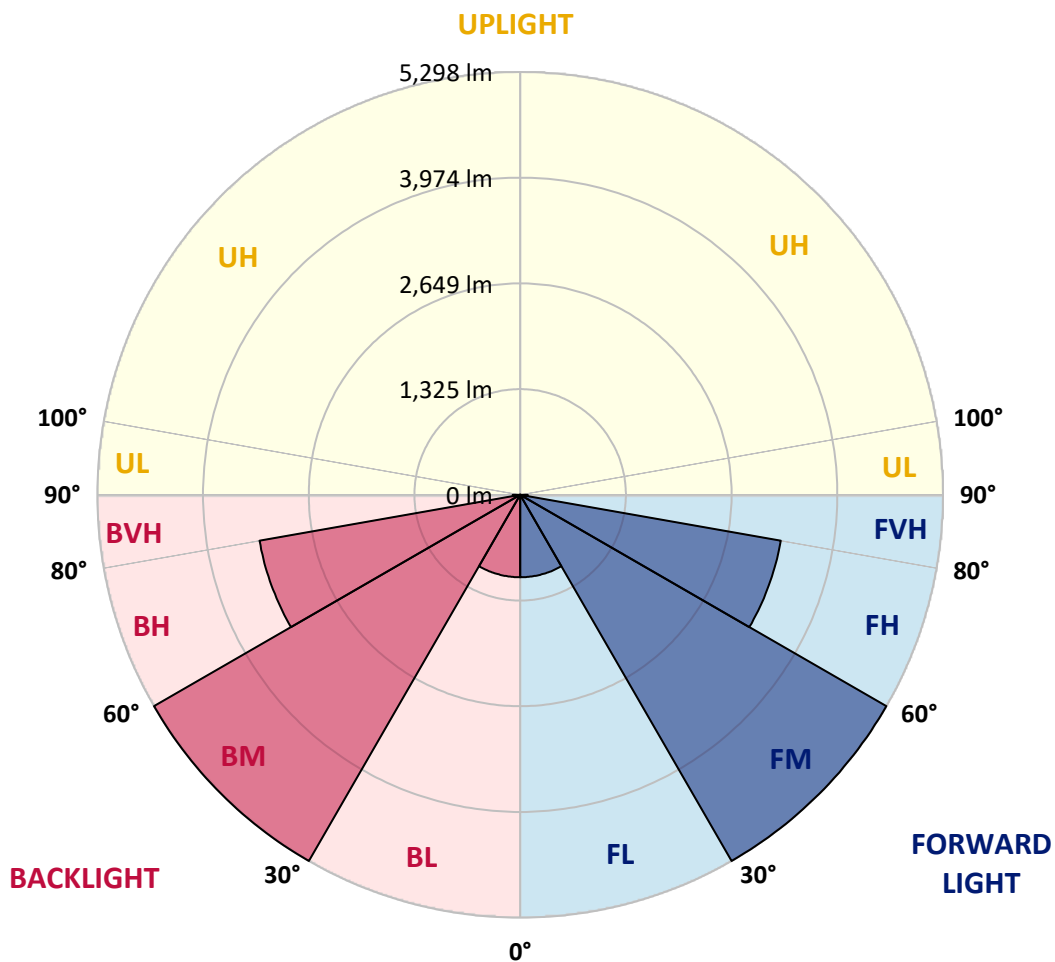
CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1032.8 | 5.3       |                         |      |         |
| FM   | (30°-60°)   | 5298.4 | 27.2      |                         |      |         |
| FH   | (60°-80°)   | 3316.1 | 17.0      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 93.8   | 0.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 1032.8 | 5.3       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 5298.4 | 27.2      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 3316.1 | 17.0      | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 93.8   | 0.5       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G4**

Type II Medium





REPORT NUMBER: P196522

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 |
| 2.5°  | 2182.9 | 2181.7 | 2182.9 | 2179.2 | 2180.5 | 2179.2 | 2179.2 | 2174.4 | 2174.4 | 2172.0 | 2168.2 |
| 5°    | 2158.5 | 2160.9 | 2160.9 | 2160.9 | 2164.7 | 2164.7 | 2169.6 | 2170.8 | 2174.4 | 2178.1 | 2180.5 |
| 7.5°  | 2118.2 | 2119.4 | 2123.1 | 2125.5 | 2132.8 | 2142.7 | 2152.4 | 2163.5 | 2173.1 | 2185.4 | 2198.9 |
| 10°   | 2084.0 | 2086.6 | 2092.7 | 2098.7 | 2112.1 | 2124.3 | 2141.5 | 2158.5 | 2175.6 | 2196.3 | 2217.1 |
| 12.5° | 2065.8 | 2069.4 | 2079.2 | 2088.9 | 2109.7 | 2125.5 | 2148.8 | 2175.6 | 2198.9 | 2218.4 | 2241.6 |
| 15°   | 2068.2 | 2069.4 | 2082.8 | 2096.2 | 2125.5 | 2147.5 | 2180.5 | 2212.3 | 2240.4 | 2262.3 | 2289.2 |
| 17.5° | 2103.6 | 2106.0 | 2119.4 | 2139.0 | 2167.0 | 2195.1 | 2230.5 | 2263.6 | 2301.3 | 2327.0 | 2358.8 |
| 20°   | 2173.1 | 2176.9 | 2191.5 | 2212.3 | 2242.8 | 2272.0 | 2308.6 | 2342.8 | 2382.0 | 2412.5 | 2444.2 |
| 22.5° | 2263.6 | 2269.7 | 2285.4 | 2311.2 | 2341.7 | 2377.1 | 2414.9 | 2450.3 | 2487.0 | 2517.5 | 2544.3 |
| 25°   | 2384.4 | 2391.6 | 2408.8 | 2434.4 | 2465.0 | 2502.8 | 2541.9 | 2578.5 | 2616.3 | 2639.6 | 2661.5 |
| 27.5° | 2546.8 | 2559.0 | 2577.3 | 2598.0 | 2625.0 | 2665.2 | 2701.9 | 2732.3 | 2768.9 | 2794.7 | 2809.3 |
| 30°   | 2765.4 | 2782.4 | 2797.0 | 2819.0 | 2838.5 | 2881.2 | 2910.5 | 2935.0 | 2963.1 | 2977.8 | 2981.3 |
| 32.5° | 3032.7 | 3048.6 | 3063.2 | 3079.0 | 3105.9 | 3145.0 | 3173.1 | 3186.5 | 3201.2 | 3198.7 | 3185.2 |
| 35°   | 3334.3 | 3346.4 | 3355.1 | 3383.1 | 3427.0 | 3452.7 | 3473.5 | 3478.3 | 3480.8 | 3455.1 | 3429.4 |
| 37.5° | 3651.7 | 3666.3 | 3673.7 | 3717.5 | 3759.1 | 3788.4 | 3798.2 | 3809.3 | 3801.7 | 3759.1 | 3712.7 |
| 40°   | 3994.7 | 4010.6 | 4032.5 | 4070.5 | 4119.3 | 4147.4 | 4159.6 | 4158.3 | 4152.2 | 4102.1 | 4026.5 |
| 42.5° | 4331.7 | 4351.2 | 4369.5 | 4435.5 | 4475.8 | 4523.4 | 4529.5 | 4528.2 | 4514.8 | 4457.4 | 4369.5 |
| 45°   | 4617.4 | 4640.6 | 4678.5 | 4751.6 | 4816.3 | 4873.7 | 4897.0 | 4905.5 | 4892.1 | 4831.0 | 4730.9 |
| 47.5° | 4853.0 | 4868.9 | 4916.5 | 5005.6 | 5088.6 | 5172.9 | 5219.4 | 5252.2 | 5251.0 | 5207.1 | 5100.9 |
| 50°   | 5014.1 | 5032.5 | 5091.1 | 5191.2 | 5295.0 | 5393.9 | 5485.5 | 5559.8 | 5595.2 | 5563.6 | 5464.7 |
| 52.5° | 5060.6 | 5083.8 | 5160.7 | 5280.3 | 5401.2 | 5534.3 | 5671.0 | 5802.9 | 5882.2 | 5901.7 | 5824.8 |
| 55°   | 4865.2 | 4890.9 | 5003.2 | 5169.3 | 5368.2 | 5564.8 | 5772.3 | 5960.3 | 6124.0 | 6199.7 | 6169.1 |
| 57.5° | 4296.3 | 4314.6 | 4457.4 | 4672.4 | 4956.8 | 5302.4 | 5651.4 | 5995.8 | 6276.6 | 6473.2 | 6507.3 |
| 60°   | 3397.8 | 3420.9 | 3577.1 | 3804.3 | 4127.9 | 4564.9 | 5053.2 | 5617.3 | 6167.9 | 6618.4 | 6841.9 |
| 62.5° | 2292.8 | 2308.6 | 2458.9 | 2666.4 | 3020.5 | 3441.6 | 3986.3 | 4700.5 | 5485.5 | 6289.9 | 6919.9 |
| 65°   | 1203.8 | 1203.8 | 1305.1 | 1450.4 | 1732.5 | 2109.7 | 2667.7 | 3400.1 | 4334.1 | 5339.0 | 6392.5 |
| 67.5° | 698.3  | 697.1  | 720.3  | 753.3  | 842.4  | 995.1  | 1302.7 | 1841.1 | 2725.0 | 3894.6 | 5093.5 |
| 70°   | 576.3  | 572.6  | 568.9  | 568.9  | 582.4  | 605.6  | 664.2  | 811.9  | 1187.8 | 2008.4 | 3134.0 |
| 71°   | 550.6  | 548.2  | 538.4  | 534.8  | 540.9  | 553.1  | 578.7  | 647.1  | 843.6  | 1369.8 | 2340.5 |
| 72.5° | 520.1  | 513.9  | 499.4  | 493.2  | 494.5  | 499.4  | 506.6  | 533.5  | 593.4  | 778.9  | 1334.4 |
| 75°   | 473.7  | 459.1  | 440.8  | 432.2  | 428.6  | 427.3  | 427.3  | 434.7  | 448.1  | 470.1  | 547.0  |
| 77.5° | 420.0  | 399.3  | 379.6  | 371.2  | 365.0  | 361.4  | 358.9  | 354.1  | 351.6  | 361.4  | 389.5  |
| 80°   | 355.3  | 333.3  | 317.4  | 312.6  | 308.8  | 301.5  | 291.8  | 282.0  | 275.9  | 280.8  | 297.9  |
| 82.5° | 274.7  | 252.7  | 255.1  | 256.4  | 250.3  | 238.0  | 228.4  | 217.3  | 206.3  | 203.9  | 212.4  |
| 85°   | 218.5  | 207.6  | 200.3  | 216.2  | 202.6  | 188.0  | 174.6  | 156.2  | 130.7  | 107.4  | 117.2  |
| 87.5° | 94.0   | 95.3   | 136.8  | 206.3  | 180.8  | 145.4  | 120.8  | 97.7   | 62.3   | 46.4   | 47.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P196522

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7030-800

**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 | 2169.6 |
| 2.5°  | 2167.0 | 2167.0 | 2163.5 | 2160.9 | 2160.9 | 2160.9 | 2158.5 | 2159.7 |
| 5°    | 2181.7 | 2184.2 | 2186.6 | 2185.4 | 2189.0 | 2192.8 | 2191.5 | 2190.3 |
| 7.5°  | 2206.2 | 2213.5 | 2220.8 | 2224.4 | 2229.3 | 2234.3 | 2235.5 | 2231.7 |
| 10°   | 2230.5 | 2245.2 | 2256.2 | 2265.9 | 2272.0 | 2277.0 | 2280.6 | 2279.3 |
| 12.5° | 2261.1 | 2281.9 | 2301.3 | 2320.8 | 2334.4 | 2341.7 | 2349.0 | 2346.6 |
| 15°   | 2311.2 | 2334.4 | 2358.8 | 2384.4 | 2405.2 | 2416.2 | 2427.0 | 2424.7 |
| 17.5° | 2379.5 | 2400.2 | 2419.8 | 2445.4 | 2471.1 | 2483.3 | 2495.5 | 2494.3 |
| 20°   | 2465.0 | 2480.8 | 2491.8 | 2506.5 | 2530.9 | 2544.3 | 2555.3 | 2551.6 |
| 22.5° | 2562.6 | 2567.5 | 2568.8 | 2573.6 | 2593.2 | 2609.0 | 2623.7 | 2627.3 |
| 25°   | 2668.8 | 2665.2 | 2657.8 | 2654.2 | 2667.7 | 2684.7 | 2703.1 | 2707.9 |
| 27.5° | 2800.8 | 2788.6 | 2770.2 | 2755.5 | 2759.3 | 2781.2 | 2802.0 | 2806.8 |
| 30°   | 2966.7 | 2938.6 | 2899.6 | 2871.6 | 2866.6 | 2889.8 | 2911.8 | 2919.2 |
| 32.5° | 3156.0 | 3118.2 | 3064.4 | 3021.7 | 3003.4 | 3024.1 | 3043.6 | 3054.7 |
| 35°   | 3380.6 | 3339.1 | 3274.4 | 3219.5 | 3190.2 | 3203.6 | 3237.8 | 3250.0 |
| 37.5° | 3646.7 | 3589.3 | 3517.4 | 3447.7 | 3398.9 | 3401.3 | 3438.1 | 3452.7 |
| 40°   | 3941.0 | 3858.0 | 3766.3 | 3679.8 | 3609.0 | 3604.0 | 3637.0 | 3648.0 |
| 42.5° | 4247.5 | 4141.3 | 4033.9 | 3920.2 | 3832.4 | 3816.5 | 3859.2 | 3860.4 |
| 45°   | 4577.1 | 4440.4 | 4307.3 | 4175.5 | 4083.9 | 4055.8 | 4097.3 | 4102.1 |
| 47.5° | 4928.6 | 4757.8 | 4600.3 | 4457.4 | 4358.6 | 4314.6 | 4354.8 | 4362.1 |
| 50°   | 5295.0 | 5117.9 | 4934.8 | 4776.0 | 4660.1 | 4606.4 | 4654.0 | 4659.0 |
| 52.5° | 5657.6 | 5490.3 | 5308.4 | 5126.5 | 4986.0 | 4925.1 | 4981.2 | 4998.3 |
| 55°   | 6022.6 | 5861.4 | 5690.6 | 5508.7 | 5331.7 | 5277.9 | 5339.0 | 5357.2 |
| 57.5° | 6402.4 | 6247.2 | 6092.2 | 5909.1 | 5736.9 | 5655.2 | 5721.1 | 5746.7 |
| 60°   | 6821.0 | 6684.4 | 6537.8 | 6353.5 | 6183.7 | 6088.6 | 6144.7 | 6174.0 |
| 62.5° | 7232.5 | 7204.4 | 7071.4 | 6879.7 | 6664.9 | 6569.5 | 6617.2 | 6637.9 |
| 65°   | 7266.8 | 7722.1 | 7716.0 | 7525.6 | 7225.2 | 7065.2 | 7078.7 | 7088.4 |
| 67.5° | 6342.5 | 7387.6 | 8055.3 | 8115.2 | 7780.7 | 7530.3 | 7501.0 | 7507.2 |
| 70°   | 4490.4 | 5924.9 | 7342.4 | 8272.7 | 8404.6 | 8210.5 | 8146.9 | 8156.7 |
| 71°   | 3597.9 | 5083.8 | 6644.0 | 7895.5 | 8394.8 | 8338.6 | 8303.2 | 8328.9 |
| 72.5° | 2296.5 | 3745.6 | 5264.4 | 6761.3 | 7719.6 | 7994.4 | 8034.6 | 8050.6 |
| 75°   | 833.8  | 1611.6 | 2727.4 | 3908.1 | 4953.2 | 5672.2 | 6067.8 | 6099.5 |
| 77.5° | 448.1  | 577.4  | 892.4  | 1333.2 | 1675.1 | 1858.2 | 1880.2 | 1888.6 |
| 80°   | 329.6  | 382.2  | 437.0  | 499.4  | 538.4  | 545.8  | 532.3  | 504.2  |
| 82.5° | 233.2  | 263.8  | 285.7  | 307.7  | 323.5  | 310.1  | 257.7  | 196.5  |
| 85°   | 135.5  | 148.9  | 161.1  | 172.2  | 174.6  | 164.9  | 108.7  | 89.1   |
| 87.5° | 53.7   | 58.6   | 57.4   | 64.7   | 62.3   | 57.4   | 42.7   | 36.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)