

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: P883639

Luminaire Tested: **NAV-SB4A-827-U-T3**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P883639  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-827-U-T3  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14781 lumens  
Efficiency: N/A  
Efficacy: 129.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

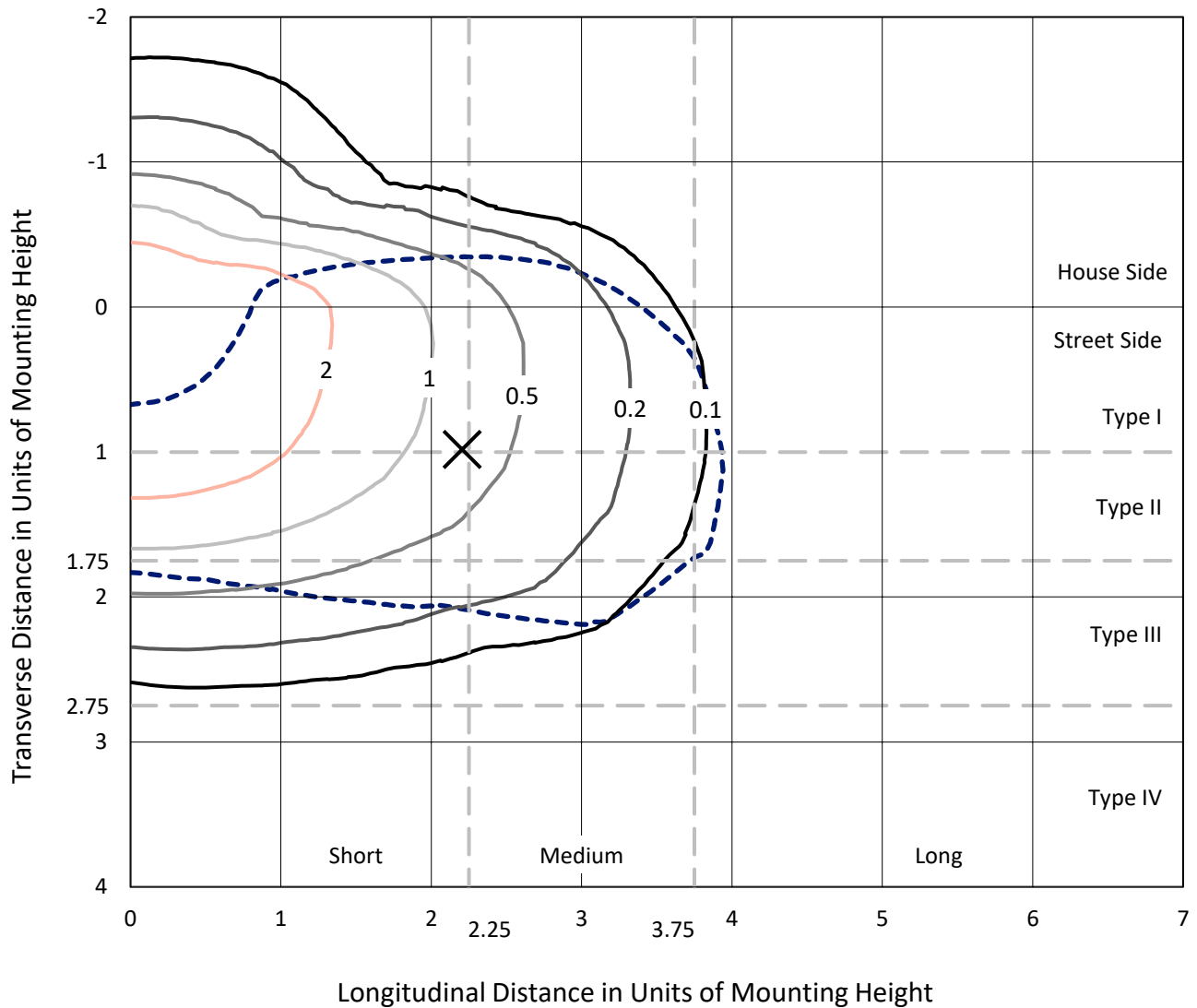
Input Watts (W): 114  
Input Voltage (V): 120.0  
Input Current (Ain): 0.952  
Voltage Rise (V): NR  
Power Factor: 0.995  
Total Harmonic Distortion (THDi): 8.206  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

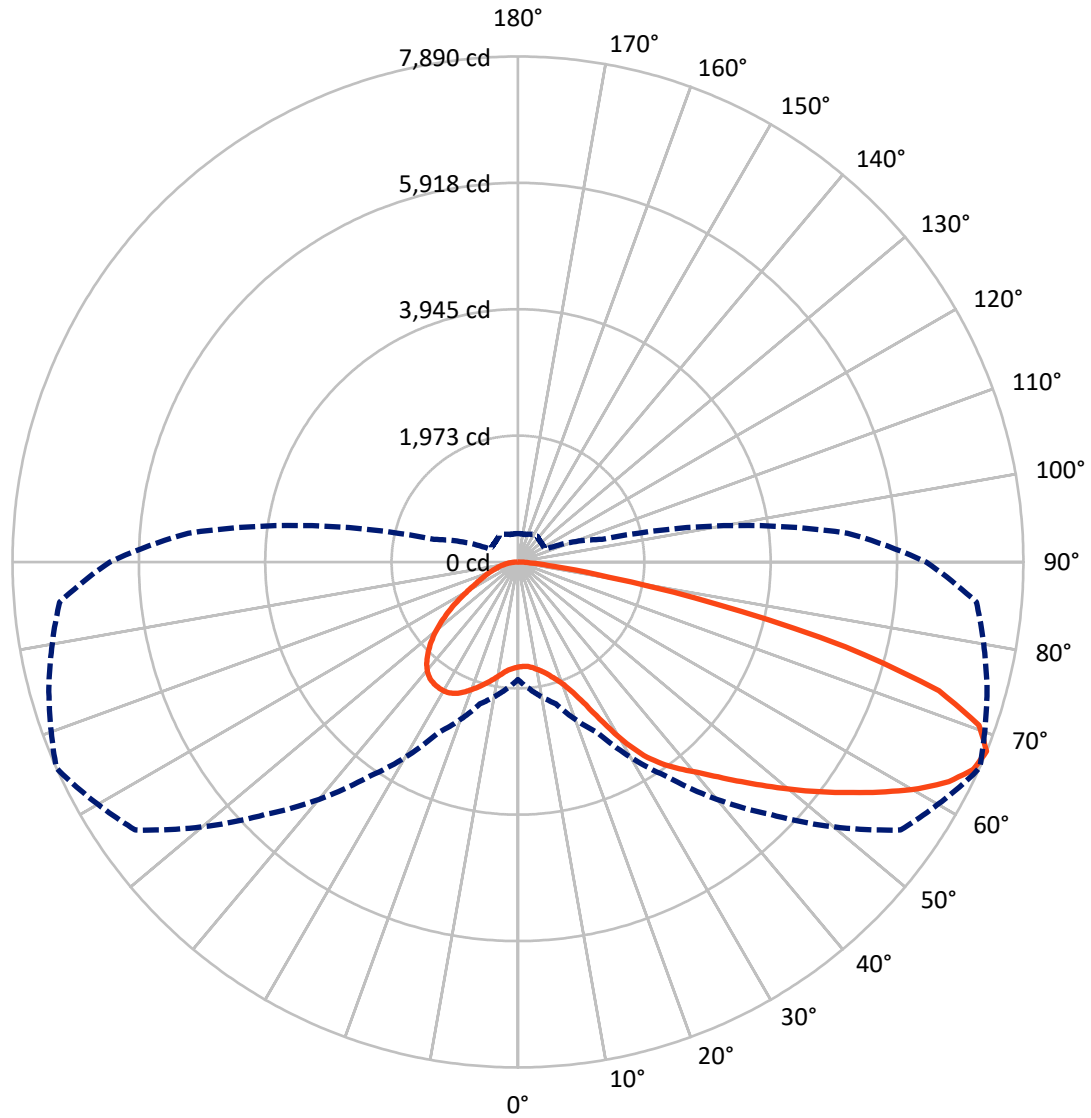
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3675.2	0.0	3675.2
	% Fixture	24.9	0.0	24.9
<b>Street Side</b>	Lumens	11105.7	0.0	11105.7
	% Fixture	75.1	0.0	75.1
<b>Total</b>	Lumens	14781.0	0.0	14781.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.5	1.1
10°-20°	537.0	3.6
20°-30°	1035.1	7.0
30°-40°	1814.9	12.3
40°-50°	2698.1	18.3
50°-60°	3420.1	23.1
60°-70°	3346.5	22.6
70°-80°	1596.3	10.8
80°-90°	170.6	1.2
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°	14781.0	100.0
0°-180°	14781.0	100.0

**Coefficient of Utilization**



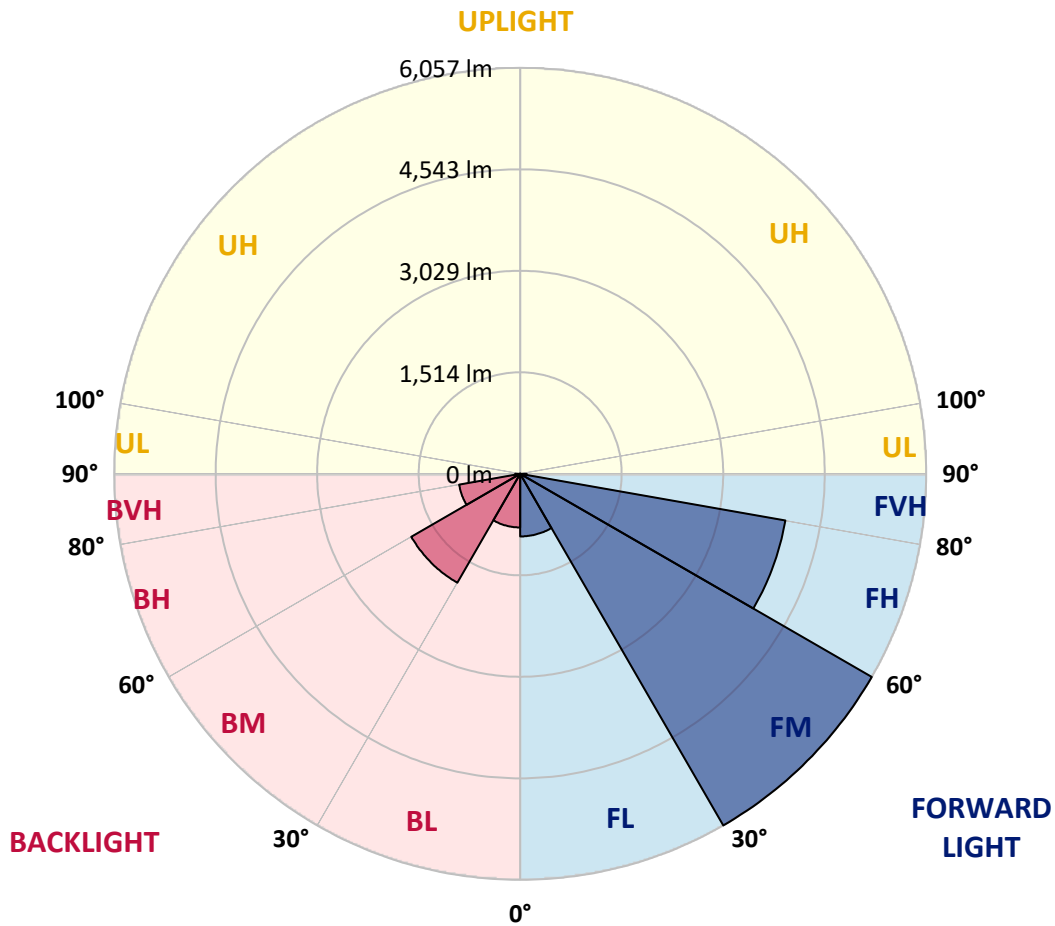
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	934.0	6.3			
FM (30°-60°)	6057.1	41.0			
FH (60°-80°)	4017.9	27.2			G2/5000
FVH (80°-90°)	96.7	0.7			G1/100
BL (0°-30°)	800.6	5.4	B2/1000		
BM (30°-60°)	1875.9	12.7	B2/2500		
BH (60°-80°)	924.9	6.3	B2/1000		G2/1000
BVH (80°-90°)	73.9	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-G2**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4
2.5°	1622.3	1631.6	1629.3	1625.4	1624.7	1626.2	1628.5	1630.9	1630.1	1634.0	1640.2
5°	1617.7	1627.0	1626.2	1626.2	1629.3	1635.5	1639.4	1643.3	1639.4	1644.1	1652.6
7.5°	1620.8	1627.8	1630.9	1634.0	1641.7	1653.4	1662.7	1671.2	1666.6	1672.0	1682.9
10°	1660.4	1665.8	1668.9	1668.9	1674.4	1687.6	1696.9	1712.4	1708.5	1717.1	1731.0
12.5°	1732.6	1738.0	1738.0	1734.9	1738.8	1747.4	1750.5	1767.5	1760.6	1774.5	1788.5
15°	1821.1	1832.0	1823.5	1818.0	1819.6	1828.1	1827.3	1840.5	1833.6	1845.2	1857.6
17.5°	1919.0	1933.0	1919.0	1918.2	1915.1	1924.4	1925.2	1936.8	1924.4	1933.0	1941.5
20°	2034.7	2054.1	2042.5	2046.3	2039.4	2043.2	2047.1	2064.2	2044.8	2051.0	2048.7
22.5°	2197.8	2221.1	2208.7	2223.4	2218.8	2215.6	2214.9	2245.2	2214.9	2217.2	2194.7
25°	2435.4	2463.4	2441.6	2461.8	2461.8	2471.9	2483.6	2522.4	2471.9	2457.2	2398.9
27.5°	2786.5	2814.4	2771.7	2784.1	2780.2	2805.1	2792.7	2889.0	2834.6	2810.5	2693.3
30°	3208.9	3258.6	3177.9	3174.8	3170.9	3210.5	3228.3	3292.0	3236.9	3212.8	3071.5
32.5°	3665.6	3717.6	3621.3	3593.3	3578.6	3602.7	3587.9	3639.2	3601.1	3563.8	3389.1
35°	4148.6	4199.9	4108.2	4053.9	3994.8	3944.4	3891.6	3904.8	3869.0	3812.3	3631.4
37.5°	4605.3	4699.2	4602.1	4543.9	4435.2	4336.5	4189.0	4127.6	4094.2	4042.2	3859.7
40°	5070.4	5124.0	5050.2	5000.5	4882.5	4728.0	4491.9	4362.2	4317.1	4266.7	4112.1
42.5°	5412.9	5464.2	5424.6	5390.4	5298.0	5118.6	4813.4	4651.1	4585.8	4529.1	4397.9
45°	5684.7	5722.8	5697.9	5710.4	5670.8	5496.8	5146.5	4960.9	4893.4	4824.3	4721.0
47.5°	5794.2	5834.6	5874.2	5948.0	6015.6	5887.4	5504.6	5296.4	5225.0	5154.3	5052.6
50°	5781.8	5823.0	5937.9	6094.8	6304.5	6261.7	5882.0	5653.7	5587.7	5506.9	5412.9
52.5°	5682.4	5729.0	5876.6	6137.5	6471.4	6542.1	6266.4	6022.6	5960.4	5864.1	5770.2
55°	5421.5	5449.4	5670.8	6040.4	6511.0	6737.8	6643.1	6415.5	6353.4	6219.0	6116.5
57.5°	4937.6	4978.0	5300.3	5778.7	6411.6	6870.6	6973.9	6828.7	6768.9	6575.5	6468.3
60°	4306.3	4370.7	4739.6	5339.1	6158.5	6869.8	7274.4	7234.8	7185.1	6926.5	6814.7
62.5°	3591.8	3666.3	4021.2	4717.9	5715.8	6674.9	7462.4	7575.0	7549.4	7250.4	7107.5
65°	2758.5	2809.7	3163.1	3914.1	5026.9	6256.3	7484.1	7807.2	7811.8	7496.5	7260.5
67.5°	1836.7	1984.2	2291.0	2937.1	4104.3	5572.1	7293.1	7845.2	7890.3	7581.2	7183.6
70°	896.2	1090.4	1390.9	1908.9	2937.1	4522.9	6793.7	7533.0	7633.2	7334.2	6725.4
72.5°	372.0	434.9	598.8	942.0	1686.0	3052.0	5790.3	6686.5	6872.2	6498.6	5654.4
75°	250.8	271.8	342.5	483.0	768.1	1505.1	4175.8	4985.8	5284.8	4908.1	4011.9
77.5°	193.4	206.6	249.3	337.8	456.6	569.2	2235.1	3004.7	3159.2	2924.7	2087.5
80°	152.2	162.3	186.4	246.2	323.8	304.4	761.8	1361.4	1450.7	1216.9	671.0
82.5°	132.0	135.9	133.6	167.0	215.1	177.8	250.1	502.5	554.5	402.3	219.0
85°	95.5	106.4	111.1	103.3	114.2	90.1	102.5	177.8	195.7	174.7	123.5
87.5°	38.8	57.5	70.7	66.8	41.9	25.6	31.8	52.0	59.8	65.2	40.4
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°	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4
2.5°	1641.0	1646.4	1650.3	1654.9	1658.0	1662.7	1672.0	1677.5	1678.2	1682.1	1681.3
5°	1655.7	1663.5	1672.0	1684.5	1698.4	1710.1	1727.9	1740.4	1745.0	1748.9	1748.1
7.5°	1687.6	1698.4	1714.0	1735.7	1755.9	1771.4	1793.2	1807.9	1822.7	1828.1	1828.9
10°	1734.9	1750.5	1773.0	1802.5	1824.2	1844.4	1867.0	1879.4	1894.1	1900.3	1903.5
12.5°	1794.0	1810.3	1839.8	1880.9	1901.1	1915.1	1922.9	1919.8	1922.9	1928.3	1929.9
15°	1861.5	1879.4	1912.8	1957.0	1971.0	1958.6	1941.5	1926.0	1923.6	1925.2	1930.6
17.5°	1941.5	1954.7	1993.5	2030.8	2020.7	1969.5	1932.2	1907.3	1894.9	1891.0	1896.5
20°	2053.3	2053.3	2085.2	2108.5	2040.9	1953.9	1895.7	1855.3	1829.7	1818.8	1816.5
22.5°	2189.2	2176.8	2197.0	2180.7	2037.0	1910.4	1829.7	1759.8	1721.0	1705.4	1703.1
25°	2361.6	2346.9	2341.5	2240.5	2009.1	1841.3	1710.1	1625.4	1591.3	1582.7	1584.3
27.5°	2621.8	2584.5	2513.9	2273.1	1957.8	1732.6	1570.3	1491.9	1472.4	1473.2	1475.5
30°	2968.2	2893.6	2720.4	2278.6	1873.9	1578.8	1427.4	1371.5	1362.2	1366.0	1379.2
32.5°	3288.9	3218.2	2931.7	2253.7	1745.0	1428.2	1299.3	1262.0	1248.0	1252.7	1258.9
35°	3540.5	3521.1	3127.4	2218.8	1586.6	1286.8	1184.3	1152.5	1125.3	1119.1	1123.7
37.5°	3778.2	3770.4	3274.2	2169.8	1429.7	1186.6	1091.9	1050.0	1010.4	988.6	989.4
40°	4039.1	4031.3	3370.5	2094.5	1290.7	1099.7	1008.8	953.7	904.7	865.1	869.0
42.5°	4332.7	4286.8	3416.3	1986.5	1172.7	1025.9	941.2	866.7	802.2	765.7	768.1
45°	4653.4	4550.1	3415.5	1849.1	1073.3	958.3	869.0	763.4	703.6	669.4	667.9
47.5°	4993.6	4801.7	3373.6	1696.9	977.0	883.8	757.2	676.4	636.8	615.8	611.2
50°	5344.6	5037.0	3302.1	1522.1	878.3	799.1	687.3	632.2	601.9	582.5	575.5
52.5°	5674.6	5250.6	3215.9	1324.1	778.2	716.8	656.2	613.5	581.7	559.9	550.6
55°	5981.4	5434.7	3094.0	1121.4	696.6	661.7	641.5	605.8	569.2	543.6	533.5
57.5°	6254.0	5554.3	2883.5	931.1	638.4	623.6	625.9	592.5	550.6	528.9	514.9
60°	6480.7	5642.0	2572.1	754.9	591.0	586.3	601.9	567.7	518.8	493.9	483.0
62.5°	6616.7	5640.5	2190.0	618.2	550.6	552.2	570.0	536.6	486.9	463.6	456.6
65°	6605.0	5502.2	1770.7	528.9	511.8	513.3	536.6	502.5	460.5	446.5	445.8
67.5°	6371.2	5165.2	1358.3	470.6	469.1	476.1	503.2	479.2	444.2	442.7	445.0
70°	5738.3	4465.5	978.5	424.0	424.8	434.9	470.6	464.4	435.7	438.8	438.0
72.5°	4601.4	3404.6	657.0	375.1	375.9	392.2	439.6	452.8	427.1	468.3	474.5
75°	3064.5	2123.2	422.5	323.1	323.8	344.8	412.4	430.2	403.8	466.7	470.6
77.5°	1472.4	954.4	306.0	271.8	271.8	291.2	356.5	385.2	344.0	362.7	332.4
80°	508.7	358.8	240.7	219.0	214.3	227.5	300.5	333.9	296.7	273.4	256.3
82.5°	200.4	186.4	193.4	170.1	154.5	163.1	233.8	275.7	218.2	197.3	196.5
85°	114.9	121.2	136.7	112.6	89.3	100.2	171.6	198.0	164.6	145.2	148.3
87.5°	31.1	42.7	62.9	58.2	40.4	42.7	81.5	109.5	94.7	73.0	75.3
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)