

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: P882801

Luminaire Tested: **NAV-SB2D-830-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-830-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

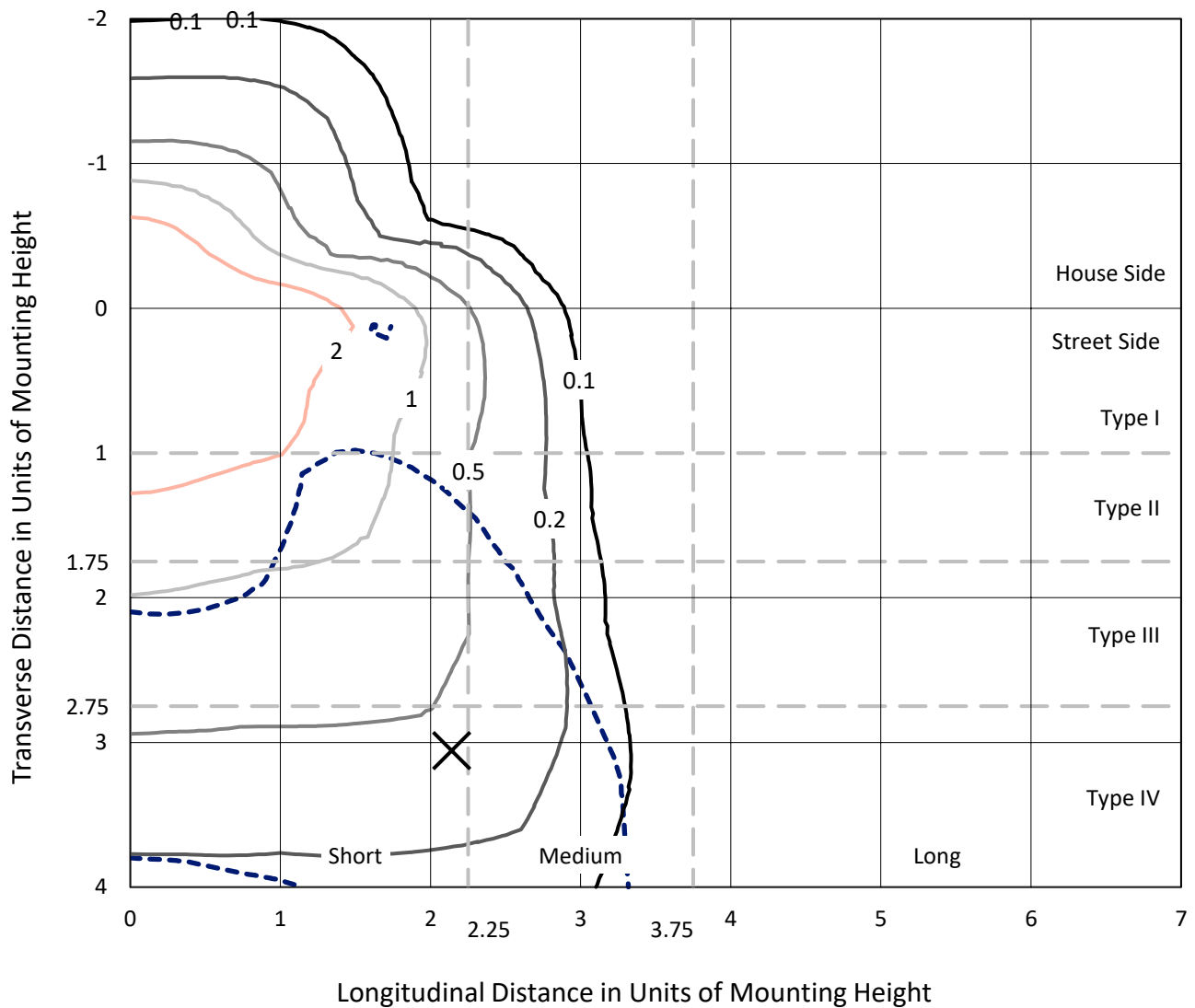
Lumens per Lamp: N/A  
Luminaire Lumens: 17936 lumens  
Efficiency: N/A  
Efficacy: 121.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 1.234  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 3.108  
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

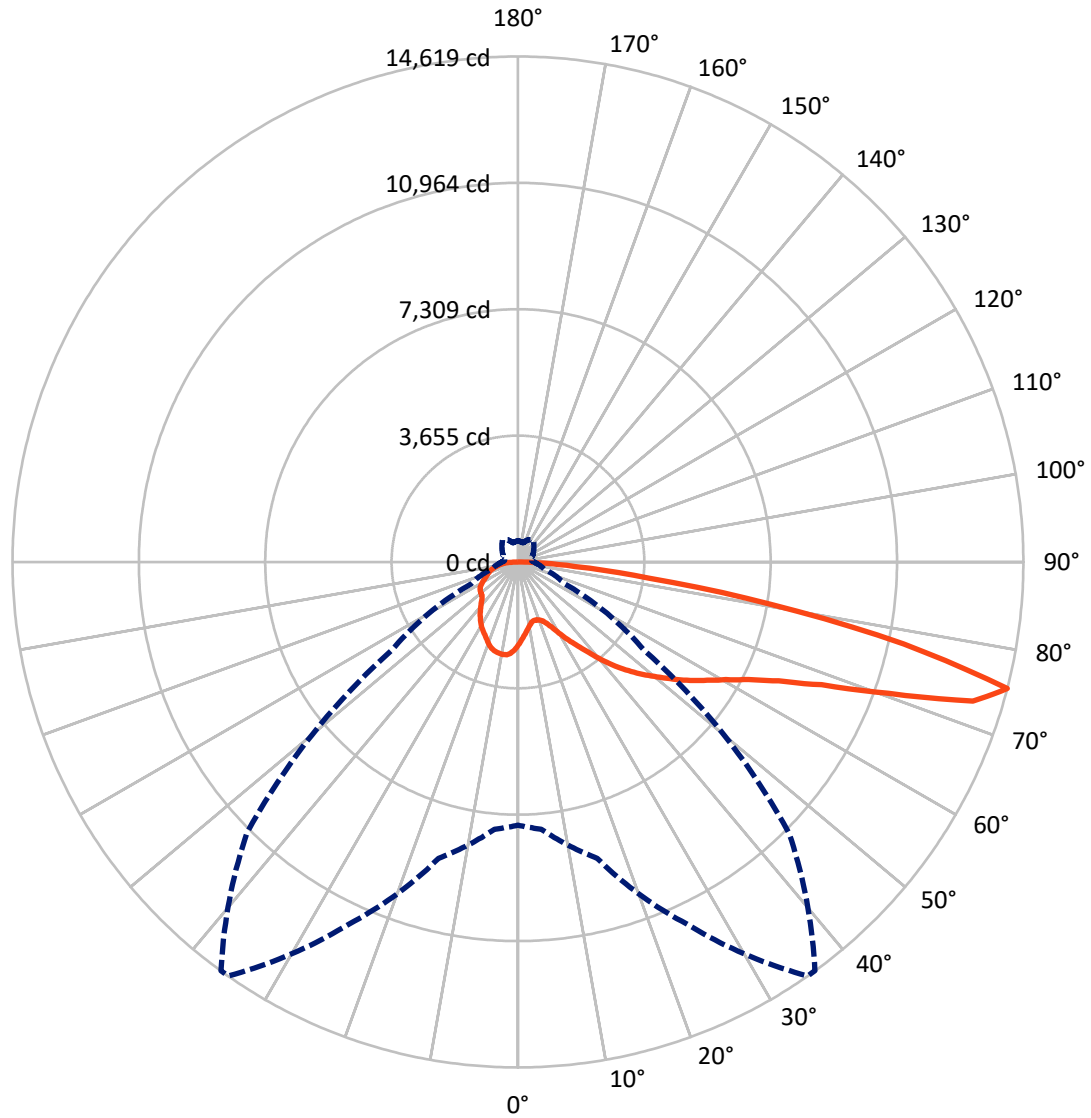
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4268.3	0.0	4268.3
	% Fixture	23.8	0.0	23.8
<b>Street Side</b>	Lumens	13667.7	0.0	13667.7
	% Fixture	76.2	0.0	76.2
<b>Total</b>	Lumens	17936.0	0.0	17936.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.3	1.3
10°-20°	652.7	3.6
20°-30°	1096.1	6.1
30°-40°	1703.5	9.5
40°-50°	2528.4	14.1
50°-60°	3490.7	19.5
60°-70°	4235.0	23.6
70°-80°	3499.9	19.5
80°-90°	503.4	2.8
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°	17936.0	100.0
0°-180°	17936.0	100.0

**Coefficient of Utilization**



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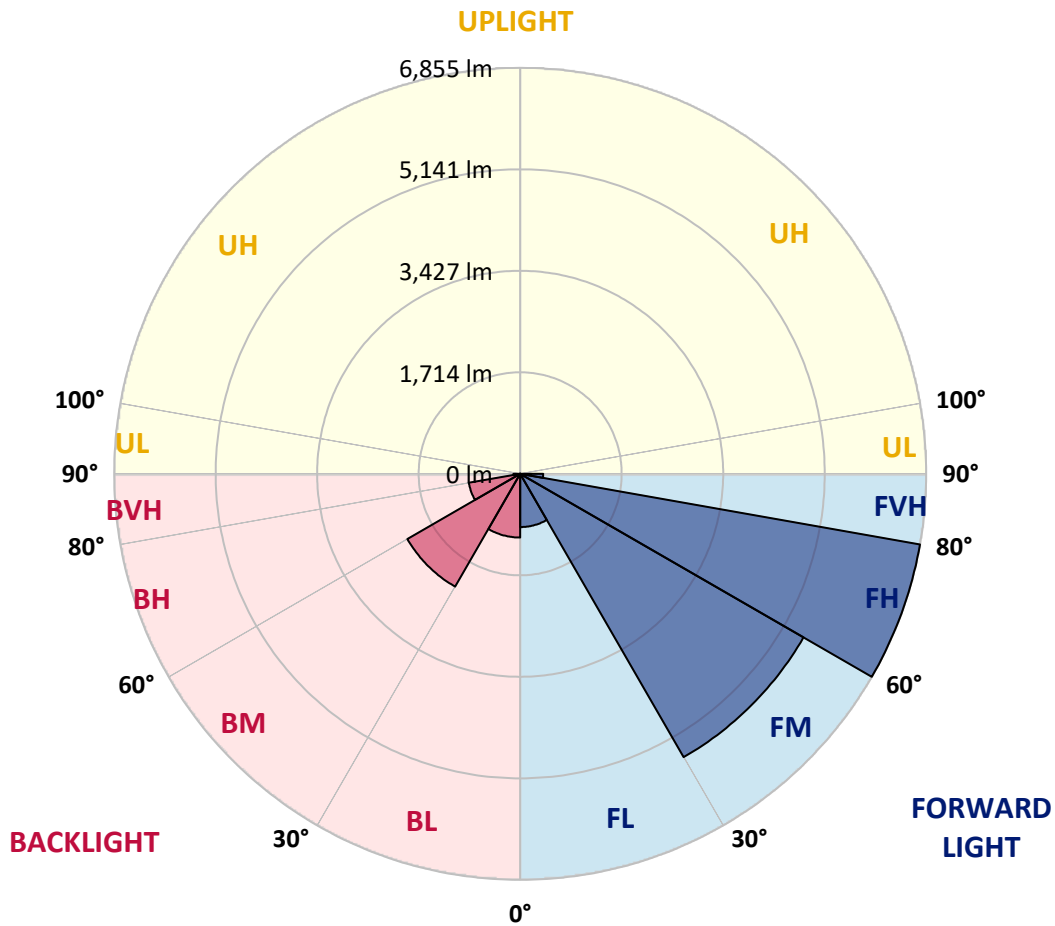
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	899.5	5.0			
FM (30°-60°)	5523.3	30.8			
FH (60°-80°)	6854.9	38.2			G3/7500
FVH (80°-90°)	390.0	2.2			G3/500
BL (0°-30°)	1075.7	6.0	B3/2500		
BM (30°-60°)	2199.3	12.3	B2/2500		
BH (60°-80°)	880.0	4.9	B2/1000		G2/1000
BVH (80°-90°)	113.4	0.6			G2/225
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 Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1
2.5°	2203.9	2217.5	2223.3	2220.4	2235.0	2233.0	2253.4	2278.6	2313.5	2347.4	2396.9
5°	2034.2	2048.8	2061.4	2073.0	2101.1	2109.9	2141.9	2190.4	2254.3	2319.3	2400.8
7.5°	1876.2	1888.8	1908.2	1929.5	1977.0	1985.8	2039.1	2114.7	2203.9	2298.9	2411.4
10°	1747.2	1759.8	1780.2	1804.4	1863.6	1874.3	1942.1	2043.0	2159.3	2279.6	2423.1
12.5°	1692.0	1695.9	1707.5	1731.7	1783.1	1789.9	1864.6	1979.9	2115.7	2265.0	2440.5
15°	1689.1	1696.8	1697.8	1710.4	1753.1	1756.0	1824.8	1939.2	2088.5	2262.1	2466.7
17.5°	1718.2	1724.0	1715.2	1723.0	1758.9	1763.7	1818.0	1919.8	2079.8	2274.7	2511.3
20°	1795.7	1800.6	1774.4	1763.7	1789.9	1793.8	1847.1	1932.4	2088.5	2300.9	2572.4
22.5°	1960.6	1963.5	1899.5	1855.8	1857.8	1859.7	1906.3	1983.8	2122.5	2348.4	2649.9
25°	2217.5	2215.6	2113.8	2029.4	1980.9	1970.3	2001.3	2067.2	2179.7	2411.4	2749.8
27.5°	2518.1	2503.5	2401.7	2275.7	2170.0	2154.5	2147.7	2175.8	2261.1	2494.8	2872.0
30°	2857.4	2843.9	2734.3	2569.5	2423.1	2397.9	2333.9	2319.3	2382.3	2608.3	3041.7
32.5°	3229.8	3221.1	3090.2	2890.4	2694.6	2665.5	2557.8	2519.1	2568.5	2779.9	3278.3
35°	3542.0	3534.2	3425.6	3220.1	2980.6	2944.7	2835.1	2791.5	2816.7	3000.0	3587.6
37.5°	3824.1	3820.3	3727.2	3565.3	3318.0	3274.4	3151.2	3136.7	3131.8	3289.9	3962.8
40°	4085.9	4076.2	3979.3	3894.0	3710.7	3671.0	3562.4	3549.7	3512.9	3646.7	4387.5
42.5°	4375.9	4350.6	4210.1	4170.3	4120.9	4087.9	4022.9	4024.9	3943.4	4049.1	4837.4
45°	4612.4	4597.9	4453.4	4430.2	4483.5	4469.9	4526.1	4540.7	4382.6	4470.9	5304.7
47.5°	4866.5	4852.9	4730.7	4714.3	4858.7	4862.6	5061.4	5066.2	4811.2	4909.1	5773.1
50°	5179.7	5160.3	5039.1	5059.4	5221.4	5235.9	5599.5	5566.5	5205.8	5354.2	6237.5
52.5°	5386.2	5397.8	5371.6	5404.6	5625.7	5639.3	6128.9	6044.6	5596.6	5793.4	6693.2
55°	5538.4	5561.7	5643.1	5718.8	6052.3	6065.9	6628.3	6499.3	5920.5	6200.7	7121.8
57.5°	5734.3	5701.3	5853.5	6000.9	6457.6	6493.5	7114.0	6937.6	6207.5	6551.7	7415.6
60°	6015.5	5992.2	6110.5	6328.7	6911.4	6968.6	7627.9	7332.2	6417.9	6829.9	7472.8
62.5°	6585.6	6527.4	6545.8	6738.8	7483.5	7559.1	8207.8	7676.4	6522.6	6938.5	7166.4
65°	7437.9	7338.0	7244.9	7378.7	8289.2	8363.9	8862.3	7946.9	6483.8	6728.1	6352.9
67.5°	8511.3	8412.4	8297.9	8424.0	9476.0	9535.2	9669.9	8099.2	6178.4	5917.5	4915.0
70°	9396.5	9359.7	9496.4	10015.1	11371.6	11373.5	10705.5	7973.1	5341.6	4195.5	2843.9
72.5°	9279.2	9256.9	9977.3	11581.0	13760.7	13709.3	11685.8	7019.0	3598.2	1892.7	1065.6
75°	7612.4	7756.9	8872.9	11552.9	14618.8	14612.1	11085.6	4462.2	1488.4	784.4	550.7
77.5°	4082.1	4310.9	5760.5	8529.7	11412.3	11584.0	7793.7	1561.1	639.0	502.3	381.1
80°	1331.3	1531.0	2296.0	4342.9	7415.6	7383.6	3340.3	612.8	437.3	355.8	263.7
82.5°	565.3	588.6	1025.8	2050.7	3805.7	3746.6	1063.7	352.0	307.4	243.4	162.9
85°	221.1	247.3	452.8	948.3	1648.3	1612.5	384.0	174.5	196.8	159.0	97.0
87.5°	72.7	88.2	161.9	324.8	512.9	494.5	94.1	60.1	85.3	72.7	34.9
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°	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1	2390.1
2.5°	2410.5	2426.0	2444.4	2471.5	2494.8	2514.2	2534.6	2547.2	2552.0	2566.6	2565.6
5°	2427.9	2461.8	2507.4	2552.0	2595.7	2621.8	2645.1	2656.7	2667.4	2675.2	2677.1
7.5°	2457.0	2500.6	2572.4	2630.6	2667.4	2688.7	2704.2	2700.4	2704.2	2706.2	2709.1
10°	2482.2	2543.3	2628.6	2683.9	2712.0	2713.0	2709.1	2695.5	2688.7	2689.7	2691.6
12.5°	2512.3	2580.1	2672.3	2718.8	2726.5	2705.2	2688.7	2665.5	2656.7	2652.9	2650.9
15°	2553.0	2630.6	2719.8	2737.2	2717.8	2690.7	2662.6	2624.7	2605.3	2589.8	2594.7
17.5°	2602.4	2687.8	2756.6	2744.0	2702.3	2657.7	2612.1	2554.9	2515.2	2498.7	2499.7
20°	2671.3	2747.9	2784.7	2729.5	2666.4	2598.6	2521.0	2451.2	2414.3	2397.9	2395.9
22.5°	2754.7	2828.4	2811.9	2704.2	2615.0	2506.4	2409.5	2358.1	2339.7	2328.0	2330.0
25°	2854.5	2917.6	2831.3	2667.4	2530.7	2384.3	2309.6	2293.1	2284.4	2275.7	2275.7
27.5°	2984.5	3018.4	2845.8	2613.1	2398.8	2254.3	2227.2	2230.1	2227.2	2212.7	2215.6
30°	3156.1	3149.3	2859.4	2524.9	2247.6	2137.0	2139.0	2151.6	2153.5	2143.8	2148.7
32.5°	3382.0	3313.2	2866.2	2410.5	2103.1	2034.2	2036.2	2049.8	2059.5	2043.0	2050.7
35°	3655.4	3504.2	2855.5	2267.0	1991.6	1936.3	1921.8	1925.6	1928.6	1913.0	1923.7
37.5°	3974.4	3718.5	2808.0	2107.9	1899.5	1840.3	1809.3	1783.1	1767.6	1753.1	1762.8
40°	4324.5	3952.1	2720.7	1952.8	1796.7	1738.5	1692.0	1642.5	1590.2	1570.8	1579.5
42.5°	4691.0	4192.6	2615.0	1804.4	1678.4	1630.9	1581.4	1509.7	1431.1	1391.4	1396.2
45°	5071.1	4438.9	2511.3	1658.0	1557.2	1536.8	1479.6	1393.3	1308.0	1257.6	1253.7
47.5°	5443.4	4671.6	2359.1	1510.7	1443.8	1466.1	1421.5	1341.9	1246.9	1167.4	1158.7
50°	5799.2	4889.8	2109.9	1361.3	1351.6	1444.7	1402.1	1287.6	1179.0	1077.2	1068.5
52.5°	6152.2	5066.2	1790.9	1225.6	1302.2	1438.9	1376.8	1250.8	1118.0	1011.3	999.7
55°	6451.8	5157.4	1483.5	1109.2	1230.4	1389.5	1346.8	1207.2	1031.7	918.2	908.5
57.5°	6622.4	5083.7	1227.5	994.8	1131.5	1308.0	1295.4	1114.1	928.9	841.6	830.0
60°	6548.8	4785.0	1018.1	895.0	1037.5	1219.8	1206.2	1022.0	850.3	767.9	756.3
62.5°	6142.5	4215.9	852.3	807.7	952.2	1129.6	1117.0	951.2	790.2	710.7	698.1
65°	5324.1	3429.5	723.3	735.0	865.9	1021.0	1039.4	892.0	742.7	665.2	652.5
67.5°	4060.7	2484.1	622.5	671.9	781.5	914.3	967.7	849.4	703.0	629.3	617.6
70°	2314.5	1410.8	537.2	610.9	706.8	815.4	912.4	815.4	660.3	599.2	591.5
72.5°	877.5	647.7	464.4	549.8	635.1	732.1	851.3	762.1	610.9	565.3	557.5
75°	468.3	394.6	390.8	478.0	552.7	650.6	774.7	709.8	574.0	597.3	616.7
77.5°	319.0	279.2	326.8	409.2	462.5	560.4	693.3	630.2	497.4	495.5	456.7
80°	221.1	197.8	265.7	329.7	357.8	471.2	605.0	541.0	405.3	378.1	361.7
82.5°	132.8	129.0	198.8	246.3	253.1	363.6	501.3	453.8	331.6	288.9	290.9
85°	72.7	76.6	127.0	144.5	147.4	254.0	392.7	351.0	255.0	214.3	216.2
87.5°	20.4	26.2	46.5	57.2	70.8	131.9	233.7	208.5	128.0	89.2	89.2
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)