

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: P882797

Luminaire Tested: **NAV-SB2D-830-U-T2**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882797  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-830-U-T2  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

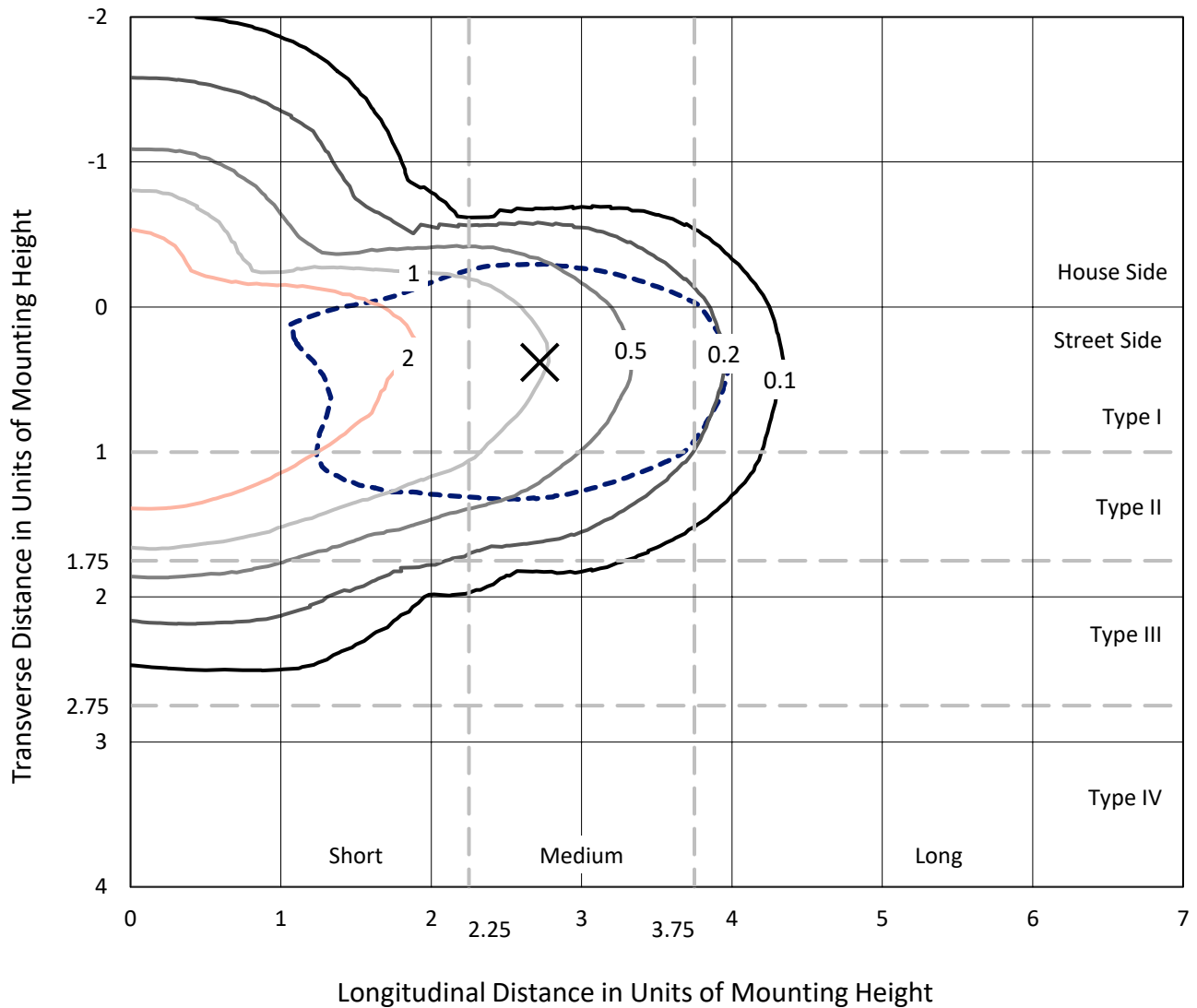
Lumens per Lamp: N/A  
Luminaire Lumens: 17981 lumens  
Efficiency: N/A  
Efficacy: 121.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 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

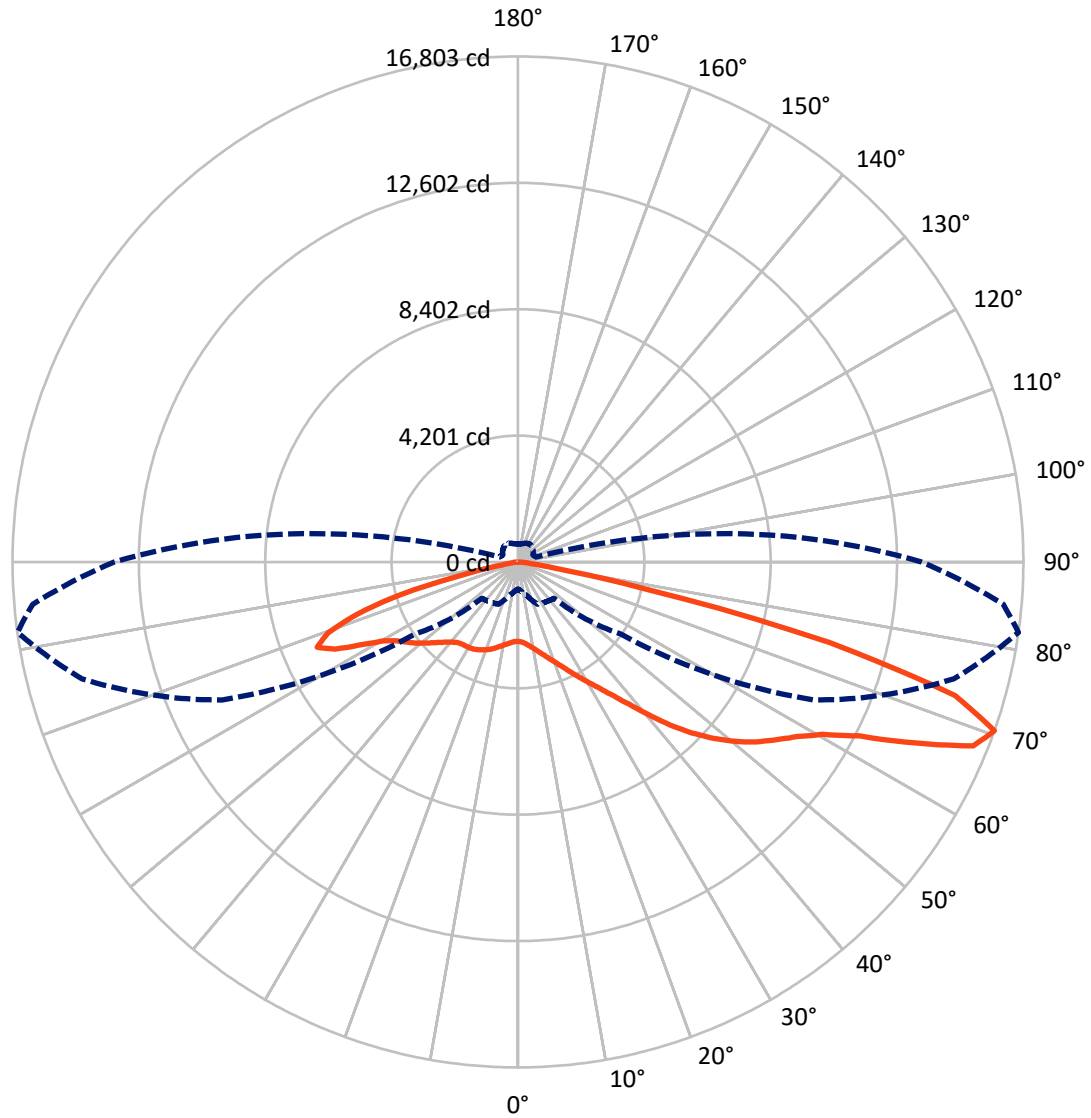
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4432.8	0.0	4432.8
	% Fixture	24.7	0.0	24.7
<b>Street Side</b>	Lumens	13548.2	0.0	13548.2
	% Fixture	75.3	0.0	75.3
<b>Total</b>	Lumens	17981.0	0.0	17981.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.9	1.4
10°-20°	715.1	4.0
20°-30°	1196.3	6.7
30°-40°	1869.0	10.4
40°-50°	2976.6	16.6
50°-60°	4142.3	23.0
60°-70°	4333.0	24.1
70°-80°	2264.7	12.6
80°-90°	235.2	1.3
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°	17981.0	100.0
0°-180°	17981.0	100.0



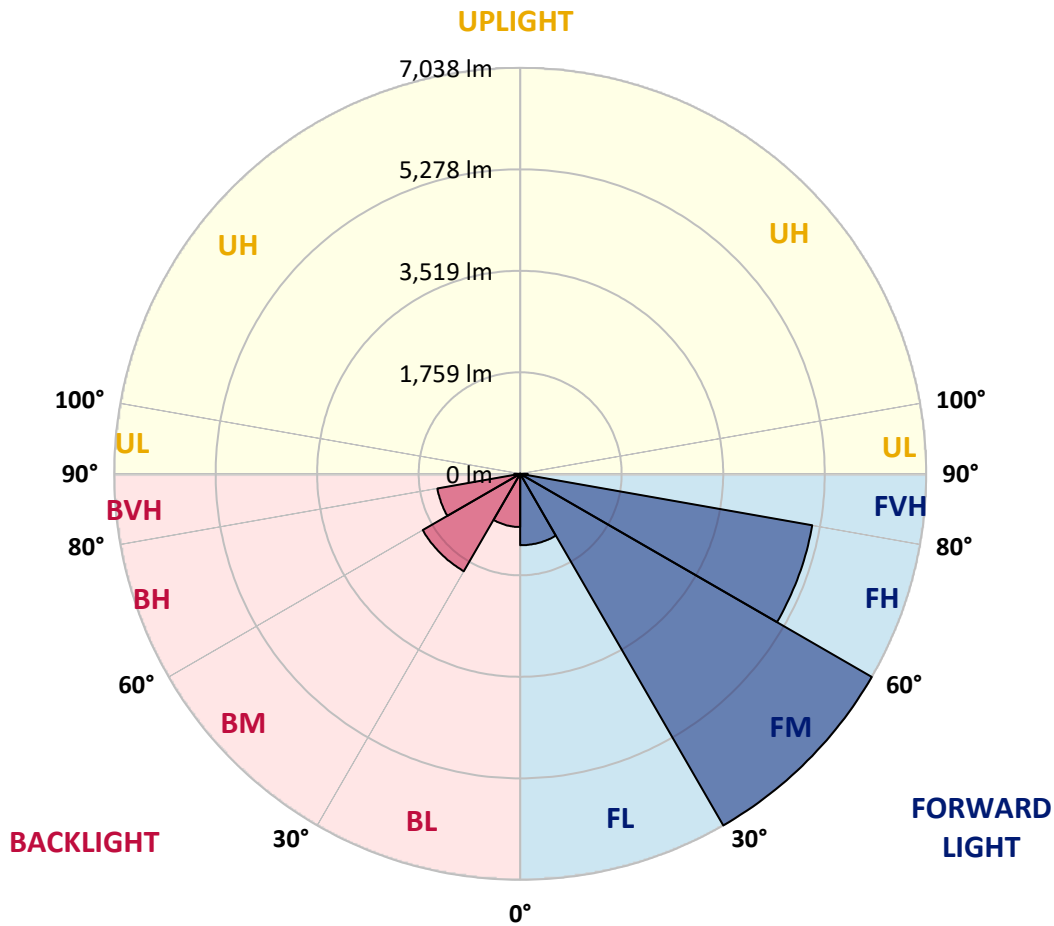
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1238.2	6.9			
FM (30°-60°)	7037.6	39.1			
FH (60°-80°)	5140.8	28.6			G3/7500
FVH (80°-90°)	131.6	0.7			G2/225
BL (0°-30°)	922.2	5.1	B2/1000		
BM (30°-60°)	1950.2	10.8	B2/2500		
BH (60°-80°)	1456.8	8.1	B3/2500		G3/2500
BVH (80°-90°)	103.5	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 II Medium



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2
2.5°	2699.2	2714.5	2709.7	2704.9	2704.9	2698.3	2697.3	2687.8	2680.1	2667.7	2664.9
5°	2733.6	2749.8	2747.9	2751.7	2764.1	2767.0	2769.8	2764.1	2748.8	2733.6	2726.9
7.5°	2703.0	2721.2	2726.9	2749.8	2787.9	2822.3	2848.1	2858.5	2844.2	2822.3	2811.8
10°	2600.0	2620.0	2640.1	2694.4	2762.2	2843.3	2912.0	2953.0	2950.1	2929.2	2911.0
12.5°	2391.0	2412.0	2455.0	2560.9	2684.9	2828.0	2955.9	3041.7	3071.3	3056.1	3024.6
15°	2224.1	2242.2	2274.6	2383.4	2544.6	2762.2	2972.1	3139.1	3214.4	3205.9	3167.7
17.5°	2219.3	2226.9	2247.0	2298.5	2422.5	2659.1	2954.9	3234.5	3378.5	3377.6	3329.9
20°	2303.3	2306.1	2317.6	2328.1	2398.7	2580.9	2911.0	3313.7	3562.7	3562.7	3511.2
22.5°	2419.7	2417.7	2429.2	2419.7	2454.0	2574.2	2883.4	3383.3	3767.8	3783.1	3718.2
25°	2594.3	2584.7	2581.9	2559.9	2566.6	2636.2	2913.9	3462.5	4011.1	4042.6	3961.5
27.5°	2827.1	2811.8	2801.3	2750.7	2733.6	2764.1	3007.4	3557.9	4282.1	4336.5	4233.4
30°	3130.5	3102.8	3087.5	2999.8	2937.7	2942.5	3148.6	3684.8	4565.5	4653.3	4522.5
32.5°	3544.6	3501.6	3460.6	3316.5	3203.0	3165.8	3330.8	3860.4	4872.7	5013.0	4845.0
35°	4008.3	3973.9	3930.0	3707.7	3533.1	3447.2	3577.0	4105.6	5232.4	5454.7	5236.2
37.5°	4454.8	4425.2	4446.2	4146.6	3921.4	3796.5	3899.5	4434.8	5676.1	6004.3	5726.6
40°	4916.6	4893.7	4896.6	4610.3	4347.9	4207.7	4290.7	4847.9	6184.6	6657.9	6316.3
42.5°	5418.5	5401.3	5344.0	5090.2	4795.4	4664.7	4741.0	5325.0	6730.4	7402.1	6963.2
45°	5980.4	5969.9	5916.5	5625.5	5287.7	5140.8	5243.9	5851.6	7279.0	8102.4	7612.9
47.5°	6466.1	6474.7	6468.0	6222.8	5872.6	5657.0	5780.1	6401.2	7789.5	8760.7	8236.0
50°	6699.8	6744.7	6810.5	6734.2	6516.7	6297.2	6321.1	6931.7	8276.1	9378.1	8833.3
52.5°	6577.7	6662.6	6842.0	6964.1	7048.1	7002.3	6938.4	7458.4	8734.0	9935.3	9398.1
55°	6122.6	6241.9	6539.6	6834.4	7262.8	7595.8	7679.7	8042.3	9180.6	10425.7	9932.4
57.5°	5293.5	5487.2	5754.3	6350.6	7072.0	7883.0	8544.2	8852.3	9653.8	10949.5	10491.5
60°	3871.8	4131.3	4463.4	5350.7	6404.1	7729.3	9279.8	10096.5	10326.5	11627.9	11219.5
62.5°	2477.9	2638.1	2943.5	3779.3	4990.1	6942.2	9505.0	11651.7	11466.6	12740.4	12311.0
65°	1696.4	1799.5	2079.0	2548.5	3225.9	5167.5	8902.0	12817.7	13277.6	14503.6	14177.3
67.5°	1232.7	1311.0	1549.5	1960.7	2101.9	3058.0	6907.8	12764.2	15037.9	16320.3	15812.7
70°	898.8	954.1	1154.5	1549.5	1617.2	1701.2	4184.8	10850.3	14999.8	16803.0	16195.3
72.5°	666.0	704.1	838.7	1202.2	1309.1	1148.8	2071.4	7885.8	12889.2	15198.2	14710.7
75°	481.8	510.5	609.7	919.8	1047.6	874.9	1033.3	4608.4	8990.7	10690.9	10776.8
77.5°	368.3	390.2	455.1	673.6	838.7	656.4	641.2	2120.1	4263.0	4284.0	4524.4
80°	295.8	310.1	345.4	474.2	643.1	491.4	417.9	855.8	1347.2	1140.2	1196.5
82.5°	217.5	241.4	292.0	333.0	459.9	338.7	254.8	432.2	512.4	440.8	444.6
85°	124.0	140.3	176.5	238.5	293.9	207.0	146.0	191.8	238.5	195.6	174.6
87.5°	43.9	57.2	62.0	93.5	127.9	85.9	56.3	55.3	78.2	58.2	48.7
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°	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2	2636.2
2.5°	2655.3	2650.6	2631.5	2605.7	2579.0	2553.2	2544.6	2526.5	2514.1	2507.4	2515.1
5°	2708.8	2693.5	2648.6	2591.4	2531.3	2466.4	2420.6	2378.6	2348.1	2319.5	2330.9
7.5°	2785.1	2758.4	2681.1	2580.9	2474.0	2366.2	2286.1	2225.0	2184.0	2157.3	2163.0
10°	2873.8	2832.8	2714.5	2564.7	2399.6	2245.0	2150.6	2098.1	2072.4	2058.0	2061.9
12.5°	2975.9	2917.7	2748.8	2527.5	2286.1	2109.6	2044.7	2029.4	2030.4	2031.3	2033.2
15°	3101.9	3020.8	2776.5	2446.4	2138.2	2005.6	1994.1	2018.9	2044.7	2057.1	2056.1
17.5°	3244.0	3129.5	2781.3	2312.8	1993.2	1938.8	1975.0	2028.5	2067.6	2084.8	2088.6
20°	3396.7	3240.2	2746.9	2123.9	1873.9	1884.4	1949.3	2018.0	2060.9	2082.8	2088.6
22.5°	3571.3	3358.5	2664.9	1925.4	1776.6	1825.2	1901.6	1968.4	2013.2	2035.1	2040.9
25°	3770.7	3491.1	2536.1	1758.4	1692.6	1758.4	1834.8	1890.1	1926.4	1946.4	1952.1
27.5°	3992.0	3629.5	2364.3	1625.8	1619.1	1689.8	1752.7	1795.7	1814.7	1830.0	1835.7
30°	4214.4	3755.4	2156.3	1525.6	1555.2	1622.0	1666.9	1685.9	1691.7	1694.5	1701.2
32.5°	4454.8	3864.2	1937.8	1442.6	1494.2	1556.2	1582.9	1591.5	1564.8	1546.6	1552.4
35°	4745.8	3980.6	1724.1	1376.8	1434.0	1487.5	1496.1	1488.4	1456.9	1419.7	1421.6
37.5°	5105.5	4125.6	1553.3	1330.0	1377.8	1413.1	1402.6	1400.7	1403.5	1359.6	1362.5
40°	5546.3	4314.5	1428.3	1293.8	1332.0	1339.6	1310.0	1326.2	1340.5	1273.8	1275.7
42.5°	6035.8	4542.6	1349.1	1269.0	1293.8	1275.7	1229.9	1248.0	1246.1	1158.3	1157.4
45°	6534.8	4790.6	1321.5	1250.9	1258.5	1222.2	1171.7	1176.4	1136.4	1057.2	1060.0
47.5°	7030.9	5056.8	1338.6	1235.6	1214.6	1173.6	1134.5	1113.5	1054.3	995.1	995.1
50°	7517.5	5336.4	1401.6	1205.1	1154.5	1130.6	1102.0	1064.8	1001.8	951.3	947.4
52.5°	7968.8	5617.9	1472.2	1154.5	1079.1	1093.4	1075.3	1032.4	970.3	918.8	919.8
55°	8396.3	5899.3	1499.9	1084.8	1008.5	1061.0	1050.5	971.3	896.9	854.9	851.1
57.5°	8861.9	6238.1	1469.3	996.1	951.3	1023.8	983.7	895.9	853.0	821.5	818.6
60°	9506.9	6769.5	1403.5	886.4	896.9	968.4	899.7	863.5	816.7	781.4	779.5
62.5°	10578.4	7760.8	1297.6	777.6	832.9	886.4	859.7	823.4	775.7	741.4	741.4
65°	12162.2	9138.6	1098.2	692.7	761.4	806.2	816.7	780.5	730.9	694.6	696.5
67.5°	13498.0	10003.0	831.0	622.1	687.9	741.4	770.9	735.6	683.2	647.8	648.8
70°	13424.5	9375.2	634.5	552.4	623.0	677.4	715.6	687.9	631.6	598.2	601.1
72.5°	11923.7	7842.9	513.3	481.8	557.2	610.6	656.4	635.4	578.2	545.8	545.8
75°	8759.8	5567.3	410.3	410.3	475.2	541.0	591.6	578.2	525.7	502.8	496.1
77.5°	3692.5	2335.7	321.5	340.6	395.0	464.7	527.6	532.4	486.6	515.2	467.5
80°	981.8	644.0	245.2	268.1	310.1	383.6	458.9	457.0	407.4	380.7	354.0
82.5°	374.0	253.8	174.6	188.9	224.2	293.9	363.5	375.0	325.4	281.5	281.5
85°	144.1	108.8	107.8	113.5	130.7	194.6	274.8	284.3	245.2	208.0	214.7
87.5°	37.2	32.4	40.1	38.2	60.1	104.0	157.4	163.2	149.8	86.8	124.0
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)