

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: P196414

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196414  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27566.1 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

Input Watts (W): 258  
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

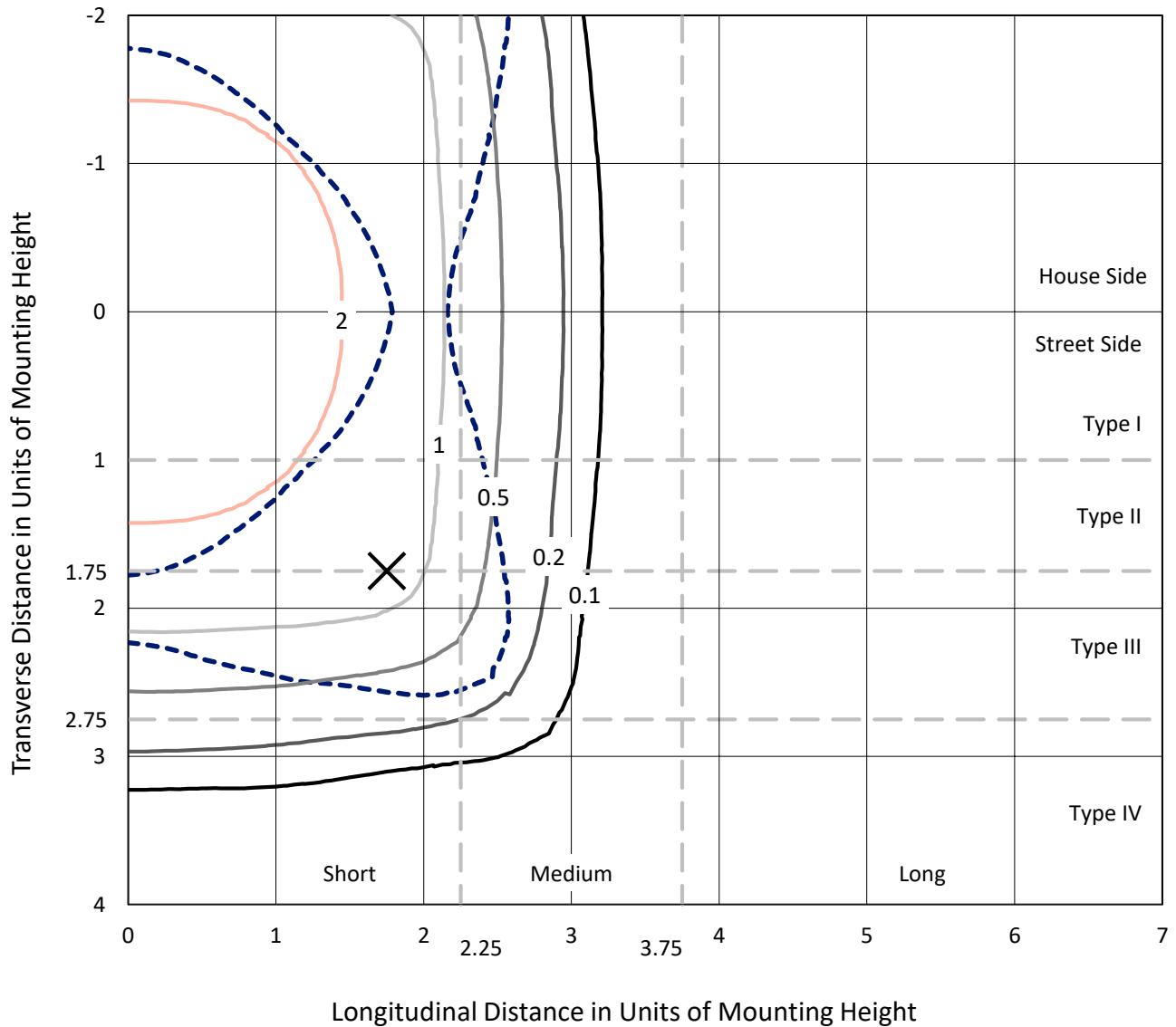


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### Iso-Footcandle Lines of Horizontal Illumination

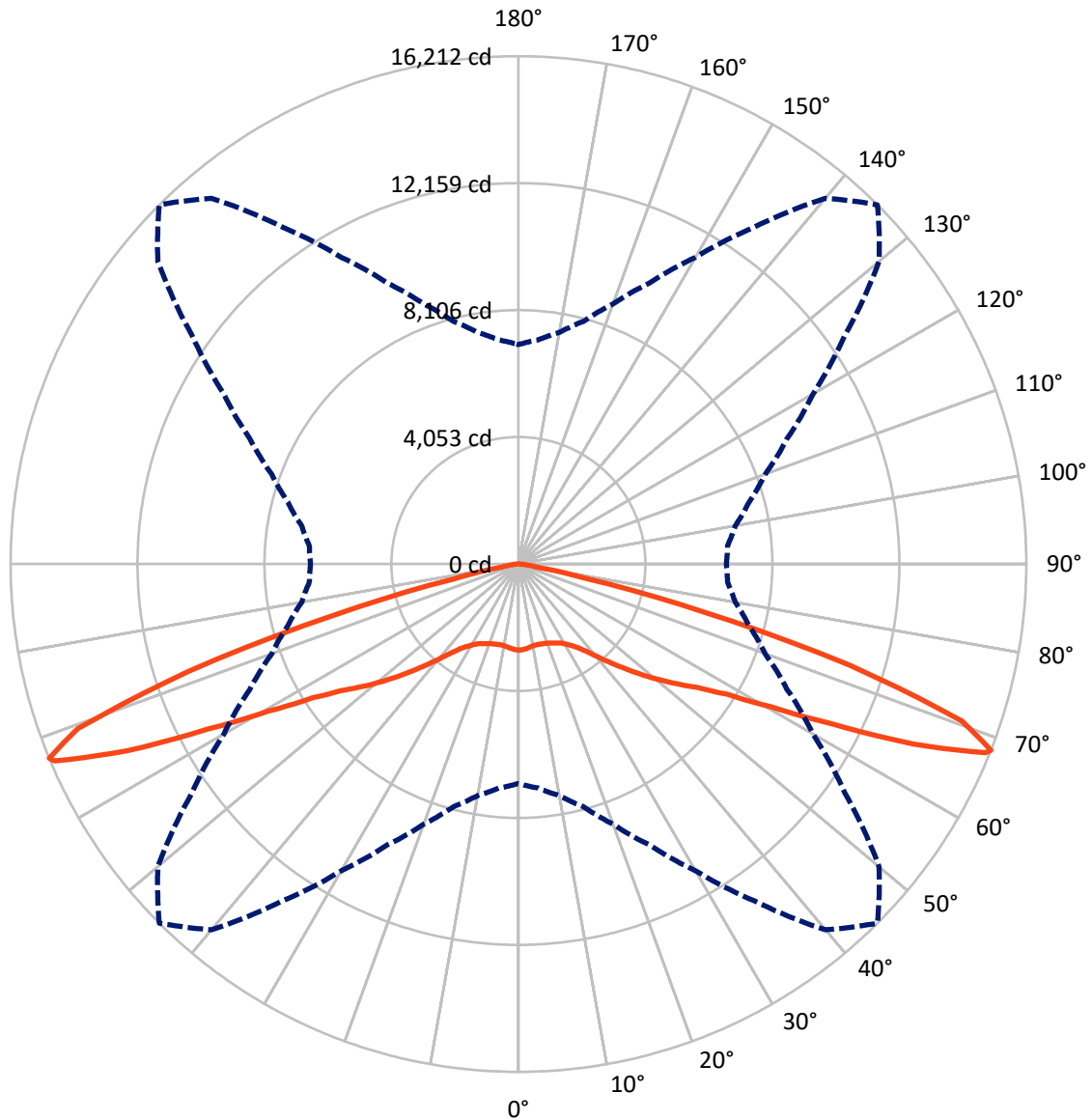
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13783.0	0.0	13783.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	13783.0	0.0	13783.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	27566.1	0.0	27566.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.3	0.9
10°-20°	746.3	2.7
20°-30°	1268.7	4.6
30°-40°	2076.2	7.5
40°-50°	3710.4	13.5
50°-60°	6266.3	22.7
60°-70°	9716.7	35.2
70°-80°	3340.8	12.1
80°-90°	183.6	0.7
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°	27566.1	100.0
0°-180°	27566.1	100.0



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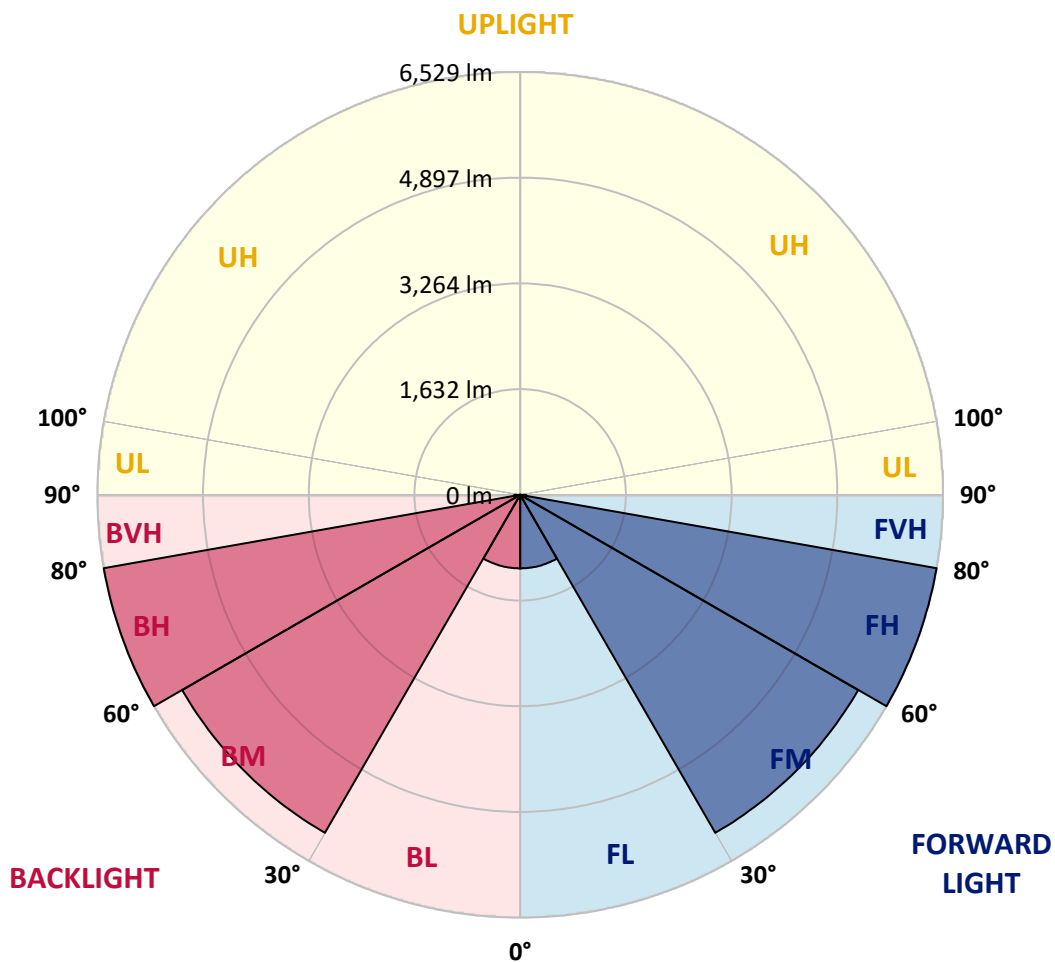
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1136.1	4.1			
FM	(30°-60°)	6026.4	21.9			
FH	(60°-80°)	6528.7	23.7			G3/7500
FVH	(80°-90°)	91.8	0.3			G1/100
BL	(0°-30°)	1136.1	4.1	B3/2500		
BM	(30°-60°)	6026.4	21.9	B4/8500		
BH	(60°-80°)	6528.7	23.7	B5		G3/7500
BVH	(80°-90°)	91.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8
2.5°	2761.6	2761.6	2765.1	2763.2	2758.2	2753.3	2748.1	2743.1	2739.6	2736.3	2732.9
5°	2732.9	2732.9	2738.0	2734.6	2731.3	2726.1	2722.7	2717.8	2714.3	2710.9	2712.7
7.5°	2695.8	2699.1	2702.5	2700.9	2694.2	2692.3	2687.3	2685.7	2682.4	2677.2	2678.9
10°	2663.7	2665.4	2668.7	2667.1	2665.4	2660.4	2658.6	2656.9	2655.2	2648.6	2646.8
12.5°	2631.6	2635.0	2638.4	2640.0	2638.4	2640.0	2641.8	2643.4	2641.8	2638.4	2638.4
15°	2606.3	2609.6	2614.8	2619.8	2621.4	2631.6	2638.4	2645.1	2650.2	2651.9	2646.8
17.5°	2592.8	2597.8	2604.6	2614.8	2623.2	2635.0	2646.8	2656.9	2665.4	2667.1	2662.0
20°	2591.1	2596.2	2606.3	2618.2	2633.3	2648.6	2667.1	2682.4	2690.7	2695.8	2690.7
22.5°	2603.0	2609.6	2623.2	2638.4	2656.9	2677.2	2700.9	2717.8	2734.6	2741.4	2736.3
25°	2636.8	2643.4	2658.6	2677.2	2697.5	2722.7	2746.4	2768.4	2785.2	2793.6	2786.9
27.5°	2707.6	2709.3	2726.1	2746.4	2770.0	2792.0	2822.3	2832.5	2845.9	2854.5	2845.9
30°	2807.2	2810.5	2825.8	2857.7	2879.7	2908.5	2925.3	2935.5	2950.6	2959.1	2949.0
32.5°	2959.1	2962.4	2976.0	3006.4	3026.6	3048.6	3068.9	3075.5	3090.8	3100.9	3089.1
35°	3173.6	3180.2	3192.1	3212.3	3229.1	3246.1	3261.3	3256.3	3266.3	3279.9	3268.1
37.5°	3467.3	3465.4	3468.9	3484.1	3501.0	3511.1	3534.7	3522.9	3533.0	3544.9	3538.2
40°	3809.9	3809.9	3808.2	3835.2	3842.0	3852.1	3877.4	3862.2	3875.8	3889.2	3877.4
42.5°	4199.8	4206.6	4215.0	4237.0	4255.5	4258.9	4270.7	4264.0	4280.9	4292.7	4280.9
45°	4648.9	4659.0	4669.0	4719.8	4728.2	4735.0	4743.4	4721.4	4740.0	4750.1	4746.8
47.5°	5114.8	5133.3	5155.3	5207.7	5241.3	5256.6	5263.2	5238.0	5239.6	5254.9	5256.6
50°	5641.4	5661.7	5683.5	5742.6	5774.8	5801.7	5810.2	5781.5	5784.8	5796.8	5800.0
52.5°	6127.6	6151.2	6198.5	6277.8	6323.4	6370.6	6373.9	6338.5	6353.8	6362.1	6355.4
55°	6585.0	6615.4	6677.8	6784.2	6867.0	6959.7	7002.0	6963.1	6963.1	6956.4	6953.0
57.5°	7118.5	7152.2	7216.3	7339.6	7454.3	7587.7	7702.4	7741.3	7812.2	7835.8	7798.7
60°	7922.0	7957.4	8023.2	8185.2	8330.5	8524.5	8713.7	8867.3	9117.0	9252.1	9130.6
62.5°	8656.2	8710.2	8865.6	9149.2	9463.1	9822.6	10239.6	10536.6	10990.7	11217.0	10911.4
65°	8489.1	8598.8	8902.7	9348.3	9996.5	10776.4	11625.5	12440.8	13379.4	13860.4	13239.3
67.5°	7415.5	7508.4	7835.8	8354.1	9162.6	10237.9	11558.0	13245.9	15182.1	16083.5	14984.7
68°	7005.3	7179.2	7505.0	8019.8	8835.1	9891.9	11301.3	13124.4	15237.9	16211.9	15025.2
70°	5371.3	5433.8	5746.1	6208.5	7088.0	8124.5	9547.5	11625.5	14014.0	15016.7	13796.2
72.5°	2552.3	2589.5	2792.0	3247.7	3806.5	4650.5	5906.4	7866.2	10018.4	11061.6	9844.6
75°	935.1	943.6	990.9	1098.9	1308.3	1625.6	2228.3	3446.9	5103.0	6085.3	5123.1
77.5°	504.7	506.4	525.0	552.0	589.1	631.3	722.5	968.9	1563.1	2127.0	1650.9
80°	317.4	315.6	334.3	356.1	381.6	401.7	410.2	438.9	494.6	579.0	531.8
82.5°	162.0	177.2	219.4	243.1	280.2	287.0	278.5	276.9	293.7	317.4	327.4
85°	89.5	79.3	116.5	155.2	168.8	173.8	175.6	165.4	162.0	158.7	167.1
87.5°	45.6	42.2	50.6	77.7	82.7	67.5	69.2	59.1	40.5	40.5	42.2
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8	2749.8
2.5°	2729.6	2731.3	2727.8	2727.8	2727.8	2729.6	2727.8	2726.1
5°	2707.6	2710.9	2710.9	2712.7	2714.3	2714.3	2714.3	2714.3
7.5°	2675.5	2677.2	2680.5	2680.5	2680.5	2680.5	2680.5	2680.5
10°	2645.1	2641.8	2640.0	2636.8	2636.8	2631.6	2633.3	2635.0
12.5°	2630.0	2623.2	2619.8	2614.8	2611.4	2606.3	2606.3	2608.0
15°	2636.8	2626.6	2616.4	2613.1	2609.6	2606.3	2603.0	2604.6
17.5°	2650.2	2638.4	2626.6	2619.8	2613.1	2608.0	2606.3	2608.0
20°	2678.9	2662.0	2643.4	2631.6	2618.2	2614.8	2609.6	2614.8
22.5°	2717.8	2697.5	2673.8	2651.9	2636.8	2630.0	2623.2	2628.2
25°	2765.1	2743.1	2719.5	2694.2	2677.2	2672.2	2663.7	2663.7
27.5°	2830.8	2812.3	2792.0	2768.4	2751.4	2746.4	2732.9	2732.9
30°	2935.5	2916.9	2898.3	2878.1	2861.2	2856.1	2839.3	2839.3
32.5°	3073.9	3053.7	3041.8	3025.0	3011.4	3003.0	2982.8	2981.0
35°	3259.6	3241.0	3239.3	3227.5	3214.0	3215.7	3195.4	3192.1
37.5°	3526.4	3511.1	3516.2	3506.0	3494.2	3504.4	3492.6	3492.6
40°	3867.2	3862.2	3867.2	3860.5	3862.2	3864.0	3853.8	3857.2
42.5°	4279.1	4265.7	4296.1	4292.7	4287.6	4301.1	4277.5	4260.6
45°	4753.6	4748.4	4778.8	4783.9	4773.7	4782.2	4740.0	4738.3
47.5°	5268.4	5268.4	5295.4	5292.0	5281.8	5283.6	5232.9	5200.8
50°	5805.2	5801.7	5828.8	5822.0	5808.6	5806.8	5754.4	5722.5
52.5°	6364.0	6364.0	6402.7	6384.1	6352.0	6336.8	6272.7	6230.5
55°	6981.6	6973.3	6985.1	6924.3	6861.8	6816.2	6736.9	6704.8
57.5°	7763.2	7665.3	7581.0	7503.3	7415.5	7361.5	7268.7	7234.9
60°	8872.3	8610.6	8497.5	8342.3	8197.0	8124.5	8001.3	7935.4
62.5°	10408.4	9974.6	9667.4	9324.7	8993.7	8760.9	8573.5	8490.7
65°	12184.1	11239.0	10457.3	9723.1	9100.2	8605.6	8330.5	8244.3
67.5°	12859.4	11124.1	9775.4	8722.0	7965.8	7376.6	7047.6	6978.3
68°	12715.9	10860.8	9459.7	8381.1	7621.5	7027.2	6699.8	6637.3
70°	11217.0	9162.6	7683.8	6610.3	5901.3	5335.9	5104.6	5005.0
72.5°	7646.7	5884.4	4513.8	3610.7	3080.7	2722.7	2510.1	2437.5
75°	3519.6	2378.5	1588.4	1186.7	1007.8	921.7	855.8	839.0
77.5°	1026.3	746.1	641.5	594.2	558.8	528.4	506.4	504.7
80°	487.9	457.5	443.9	413.5	381.6	352.8	332.5	336.0
82.5°	327.4	319.0	319.0	288.7	237.9	204.2	168.8	151.9
85°	173.8	180.6	190.7	180.6	157.0	116.5	75.9	82.7
87.5°	59.1	67.5	70.9	69.2	62.5	47.3	35.4	35.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)