

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: P196038

Luminaire Tested: **NAV-AF-06-D-UNV-RW-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196038  
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-06-D-UNV-RW-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24808.6 lumens  
Efficiency: N/A  
Efficacy: 128.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B4 - U0 - G4

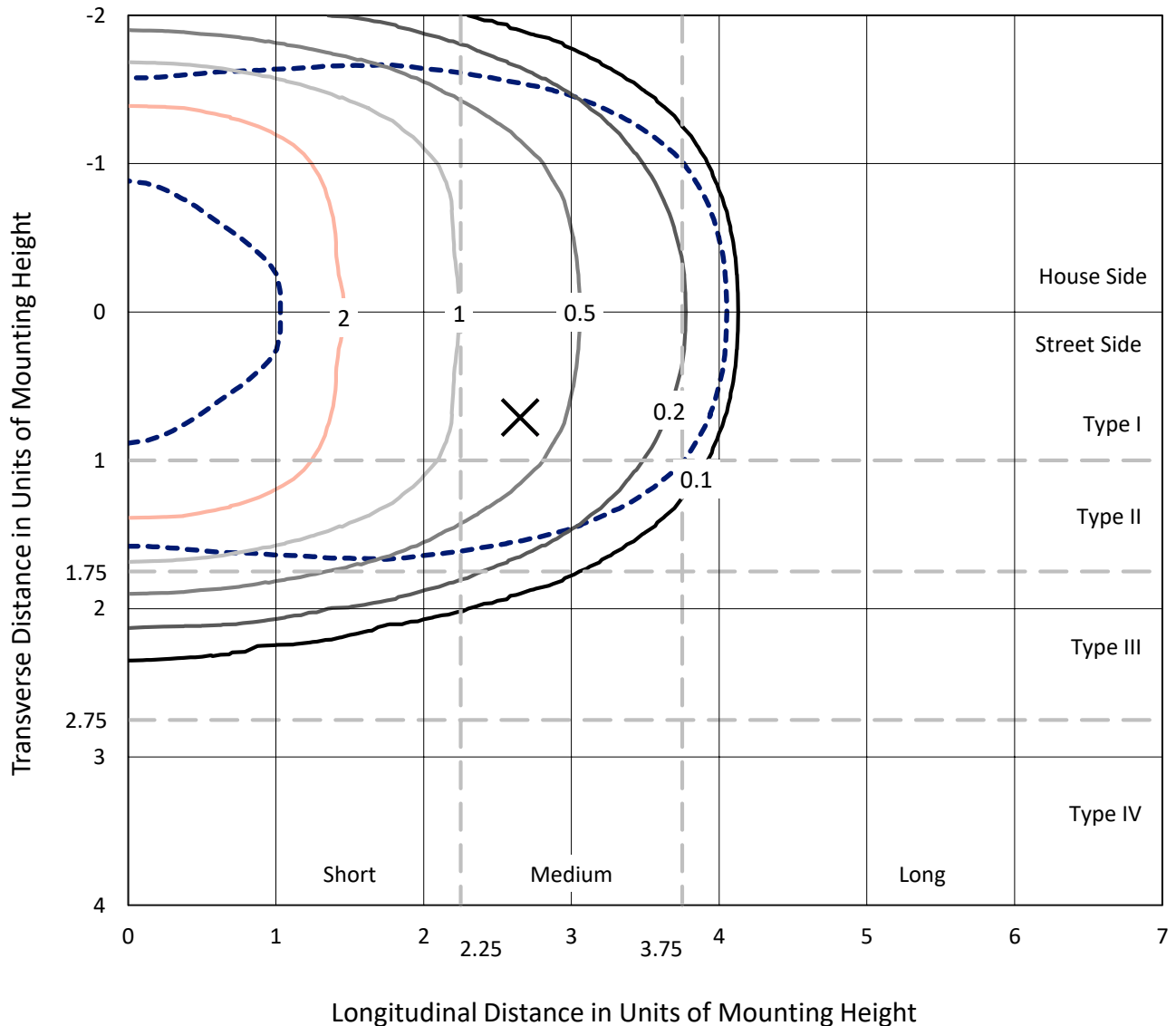
Input Watts (W): 193  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

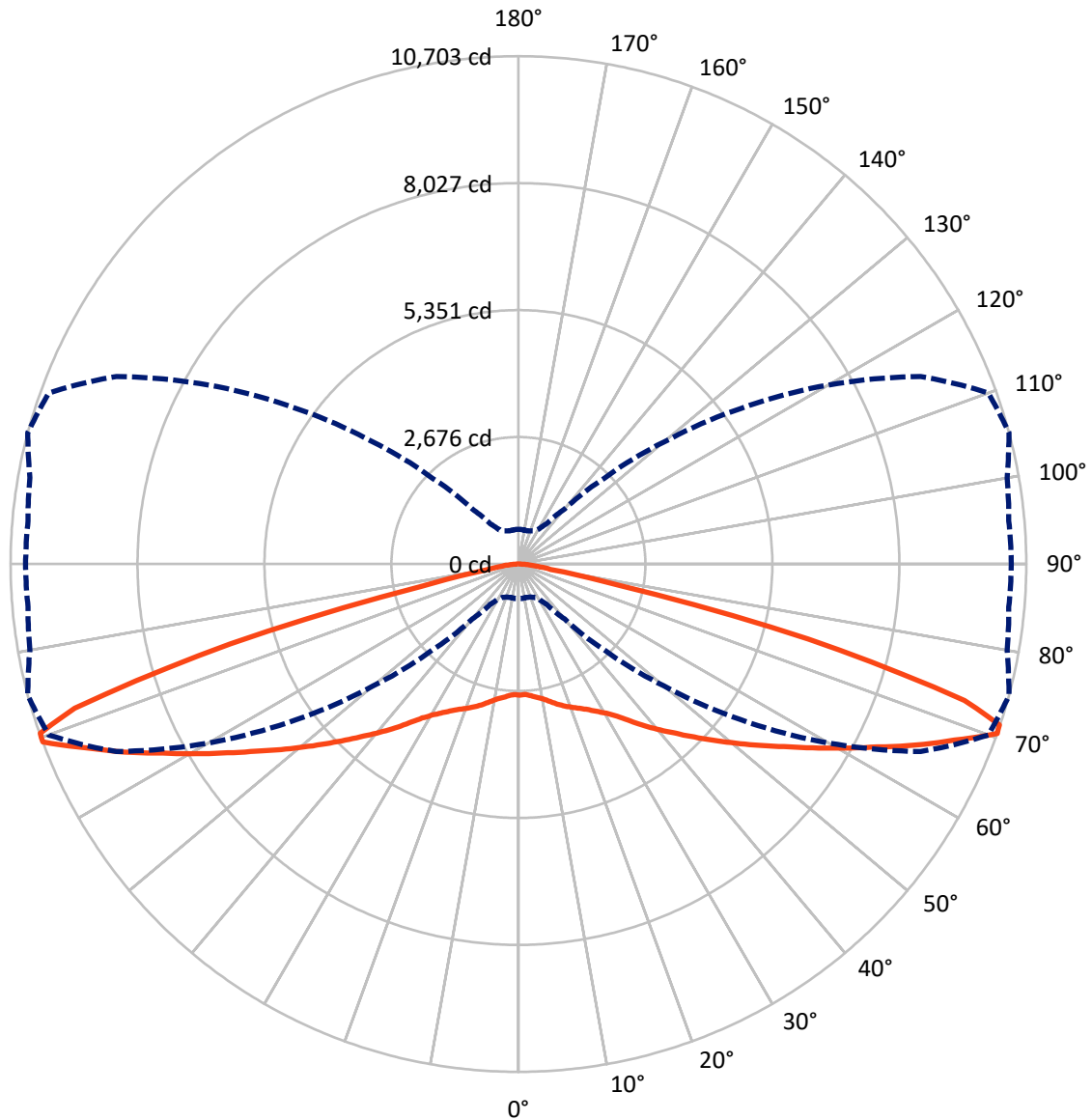
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12404.3	0.0	12404.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	12404.3	0.0	12404.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	24808.6	0.0	24808.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	265.0	1.1
10°-20°	821.8	3.3
20°-30°	1543.5	6.2
30°-40°	2719.0	11.0
40°-50°	4506.2	18.2
50°-60°	6268.8	25.3
60°-70°	5917.9	23.9
70°-80°	2527.6	10.2
80°-90°	238.8	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°	24808.6	100.0
0°-180°	24808.6	100.0



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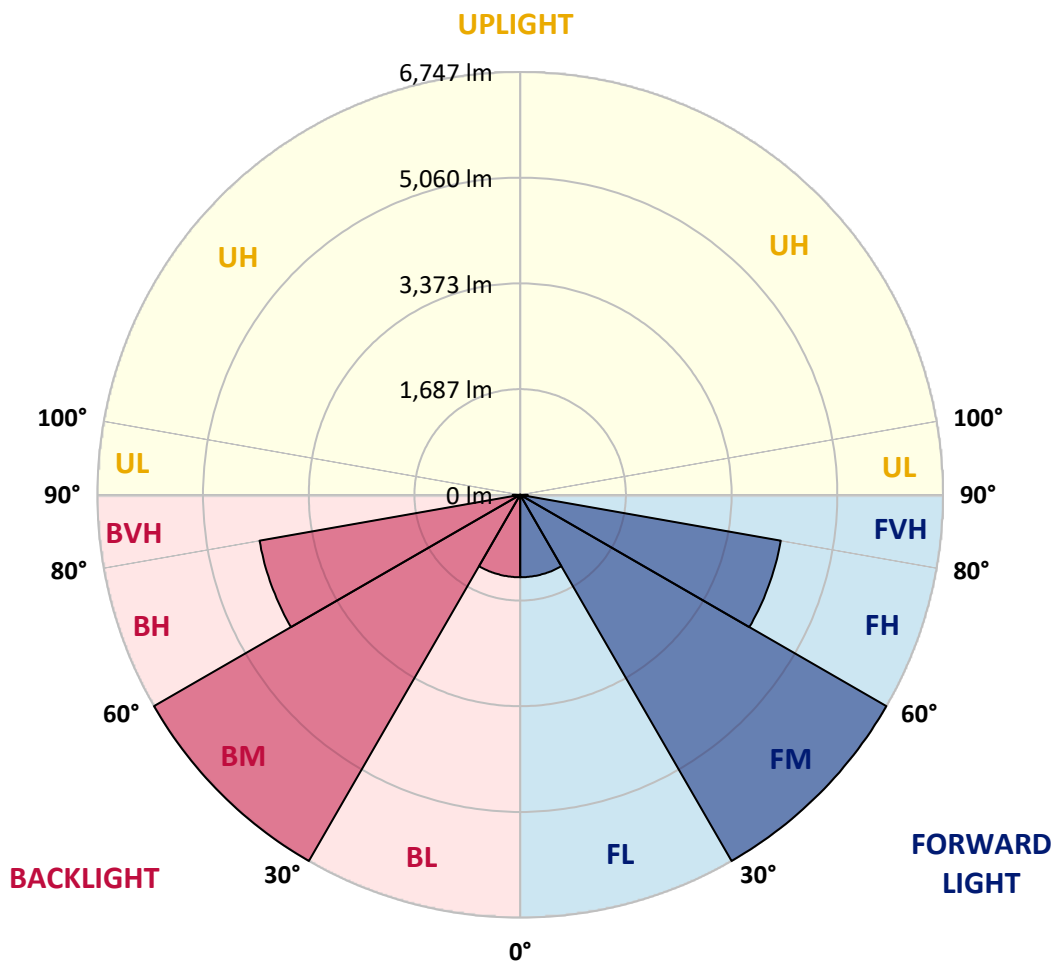
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1315.2	5.3			
FM (30°-60°)	6747.0	27.2			
FH (60°-80°)	4222.7	17.0			G2/5000
FVH (80°-90°)	119.4	0.5			G2/225
BL (0°-30°)	1315.2	5.3	B3/2500		
BM (30°-60°)	6747.0	27.2	B4/8500		
BH (60°-80°)	4222.7	17.0	B4/5000		G4/5000
BVH (80°-90°)	119.4	0.5			G2/225
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7
2.5°	2779.8	2778.2	2779.8	2775.2	2776.7	2775.2	2775.2	2768.9	2768.9	2765.8	2761.1
5°	2748.7	2751.8	2751.8	2751.8	2756.4	2756.4	2762.7	2764.2	2768.9	2773.5	2776.7
7.5°	2697.4	2699.0	2703.6	2706.7	2716.0	2728.5	2740.9	2754.9	2767.4	2782.9	2800.0
10°	2653.8	2656.9	2664.7	2672.5	2689.6	2705.2	2726.9	2748.7	2770.5	2796.8	2823.3
12.5°	2630.5	2635.2	2647.6	2660.1	2686.5	2706.7	2736.3	2770.5	2800.0	2824.9	2854.4
15°	2633.7	2635.2	2652.3	2669.4	2706.7	2734.7	2776.7	2817.1	2852.8	2880.8	2915.0
17.5°	2678.7	2681.9	2699.0	2723.8	2759.6	2795.3	2840.4	2882.4	2930.5	2963.3	3003.7
20°	2767.4	2772.0	2790.7	2817.1	2856.0	2893.3	2940.0	2983.4	3033.2	3072.0	3112.5
22.5°	2882.4	2890.1	2910.4	2943.0	2981.9	3027.0	3075.2	3120.3	3166.9	3205.7	3240.0
25°	3036.3	3045.6	3067.4	3100.1	3138.9	3187.1	3236.8	3283.5	3331.6	3361.2	3389.2
27.5°	3243.1	3258.6	3281.9	3308.3	3342.6	3393.8	3440.5	3479.4	3526.0	3558.6	3577.4
30°	3521.4	3543.1	3561.8	3589.7	3614.7	3669.0	3706.4	3737.5	3773.3	3791.9	3796.6
32.5°	3861.8	3882.1	3900.7	3921.0	3955.1	4004.9	4040.7	4057.7	4076.4	4073.3	4056.2
35°	4245.9	4261.4	4272.3	4308.1	4364.0	4396.6	4423.1	4429.3	4432.4	4399.8	4367.1
37.5°	4650.0	4668.7	4678.1	4734.0	4786.9	4824.2	4836.6	4850.6	4841.3	4786.9	4727.8
40°	5086.9	5107.2	5135.1	5183.3	5245.5	5281.3	5296.8	5295.3	5287.5	5223.8	5127.3
42.5°	5516.1	5540.9	5564.2	5648.2	5699.5	5760.1	5767.9	5766.4	5749.2	5676.1	5564.2
45°	5879.8	5909.4	5957.6	6050.9	6133.2	6206.3	6235.8	6246.8	6229.7	6151.9	6024.5
47.5°	6179.9	6200.1	6260.8	6374.2	6480.0	6587.2	6646.3	6688.3	6686.7	6630.8	6495.5
50°	6385.1	6408.4	6483.1	6610.5	6742.7	6868.6	6985.2	7080.0	7125.2	7084.8	6958.8
52.5°	6444.2	6473.7	6571.6	6724.1	6877.9	7047.4	7221.5	7389.4	7490.5	7515.3	7417.4
55°	6195.4	6228.0	6371.1	6582.6	6836.0	7086.3	7350.5	7590.0	7798.4	7894.7	7855.9
57.5°	5470.9	5494.3	5676.1	5949.8	6312.0	6752.0	7196.7	7635.1	7992.6	8242.9	8286.5
60°	4326.7	4356.2	4555.2	4844.4	5256.4	5813.0	6434.9	7153.1	7854.3	8428.0	8712.5
62.5°	2919.7	2940.0	3131.2	3395.5	3846.3	4382.6	5076.1	5985.6	6985.2	8009.7	8812.0
65°	1532.9	1532.9	1662.0	1846.9	2206.1	2686.5	3397.0	4329.8	5519.1	6798.6	8140.3
67.5°	889.3	887.7	917.3	959.2	1072.8	1267.0	1658.8	2344.5	3470.1	4959.5	6486.1
70°	733.8	729.2	724.5	724.5	741.5	771.1	845.8	1033.9	1512.7	2557.5	3990.8
71°	701.1	698.1	685.6	681.0	688.8	704.3	736.9	824.0	1074.3	1744.3	2980.4
72.5°	662.3	654.5	635.9	628.1	629.6	635.9	645.2	679.4	755.6	991.9	1699.2
75°	603.2	584.5	561.3	550.3	545.7	544.1	544.1	553.5	570.6	598.5	696.5
77.5°	534.8	508.4	483.5	472.6	464.8	460.2	457.1	450.8	447.7	460.2	495.9
80°	452.5	424.4	404.2	398.0	393.3	384.0	371.5	359.2	351.4	357.6	379.3
82.5°	349.8	321.8	324.9	326.5	318.8	303.2	290.7	276.7	262.7	259.6	270.5
85°	278.2	264.3	254.9	275.2	258.1	239.5	222.3	199.0	166.3	136.8	149.2
87.5°	119.7	121.2	174.1	262.7	230.1	185.1	154.0	124.4	79.3	59.1	60.7
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7	2762.7
2.5°	2759.6	2759.6	2754.9	2751.8	2751.8	2751.8	2748.7	2750.2
5°	2778.2	2781.3	2784.5	2782.9	2787.5	2792.2	2790.7	2789.1
7.5°	2809.3	2818.6	2827.9	2832.7	2838.9	2845.0	2846.7	2842.0
10°	2840.4	2859.0	2873.1	2885.5	2893.3	2899.5	2904.2	2902.6
12.5°	2879.3	2905.7	2930.5	2955.5	2972.6	2981.9	2991.2	2988.1
15°	2943.0	2972.6	3003.7	3036.3	3062.7	3076.7	3090.7	3087.6
17.5°	3030.1	3056.5	3081.4	3114.1	3146.7	3162.2	3177.8	3176.3
20°	3138.9	3159.1	3173.1	3191.8	3222.9	3240.0	3254.0	3249.3
22.5°	3263.3	3269.6	3271.1	3277.3	3302.2	3322.3	3341.1	3345.7
25°	3398.5	3393.8	3384.5	3379.9	3397.0	3418.8	3442.1	3448.3
27.5°	3566.4	3550.9	3527.5	3508.9	3513.6	3541.6	3568.1	3574.2
30°	3777.9	3742.2	3692.3	3656.6	3650.4	3680.0	3707.9	3717.3
32.5°	4018.9	3970.7	3902.3	3847.8	3824.5	3851.0	3875.9	3889.9
35°	4304.9	4252.1	4169.6	4099.7	4062.4	4079.5	4123.0	4138.6
37.5°	4643.9	4570.7	4479.1	4390.4	4328.2	4331.4	4378.0	4396.6
40°	5018.5	4912.8	4796.2	4685.8	4595.6	4589.5	4631.4	4645.4
42.5°	5408.8	5273.5	5136.6	4992.1	4880.2	4859.9	4914.4	4915.9
45°	5828.6	5654.4	5485.0	5317.0	5200.5	5164.7	5217.6	5223.8
47.5°	6276.3	6058.6	5858.0	5676.1	5550.2	5494.3	5545.6	5554.9
50°	6742.7	6517.2	6284.1	6082.0	5934.2	5865.8	5926.5	5932.7
52.5°	7204.4	6991.5	6759.8	6528.2	6349.4	6271.6	6343.1	6364.9
55°	7669.3	7464.1	7246.4	7014.8	6789.3	6720.9	6798.6	6822.0
57.5°	8152.8	7955.4	7757.9	7524.7	7305.5	7201.3	7285.3	7317.9
60°	8686.1	8511.9	8325.4	8090.6	7874.5	7753.3	7824.8	7862.1
62.5°	9209.9	9174.2	9004.7	8760.7	8487.0	8365.8	8426.5	8452.8
65°	9253.5	9833.4	9825.6	9583.1	9200.6	8997.0	9014.0	9026.5
67.5°	8076.6	9407.5	10257.8	10334.1	9908.0	9589.3	9552.0	9559.8
70°	5718.1	7544.9	9349.9	10534.6	10702.5	10455.3	10374.5	10386.8
71°	4581.7	6473.7	8460.6	10054.2	10690.0	10618.5	10573.4	10606.1
72.5°	2924.4	4769.8	6703.8	8609.9	9830.3	10180.1	10231.3	10251.6
75°	1061.8	2052.1	3473.1	4976.6	6307.4	7223.1	7726.8	7767.3
77.5°	570.6	735.4	1136.5	1697.7	2133.1	2366.2	2394.2	2405.1
80°	419.7	486.6	556.6	635.9	685.6	695.0	677.8	642.1
82.5°	297.0	335.8	363.8	391.8	411.9	394.9	328.1	250.3
85°	172.6	189.7	205.2	219.2	222.3	209.9	138.4	113.4
87.5°	68.4	74.7	73.0	82.3	79.3	73.0	54.4	46.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)