

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: P196409

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196409  
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-05-D-UNV-5MQ-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30971.7 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

Input Watts (W): 279  
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

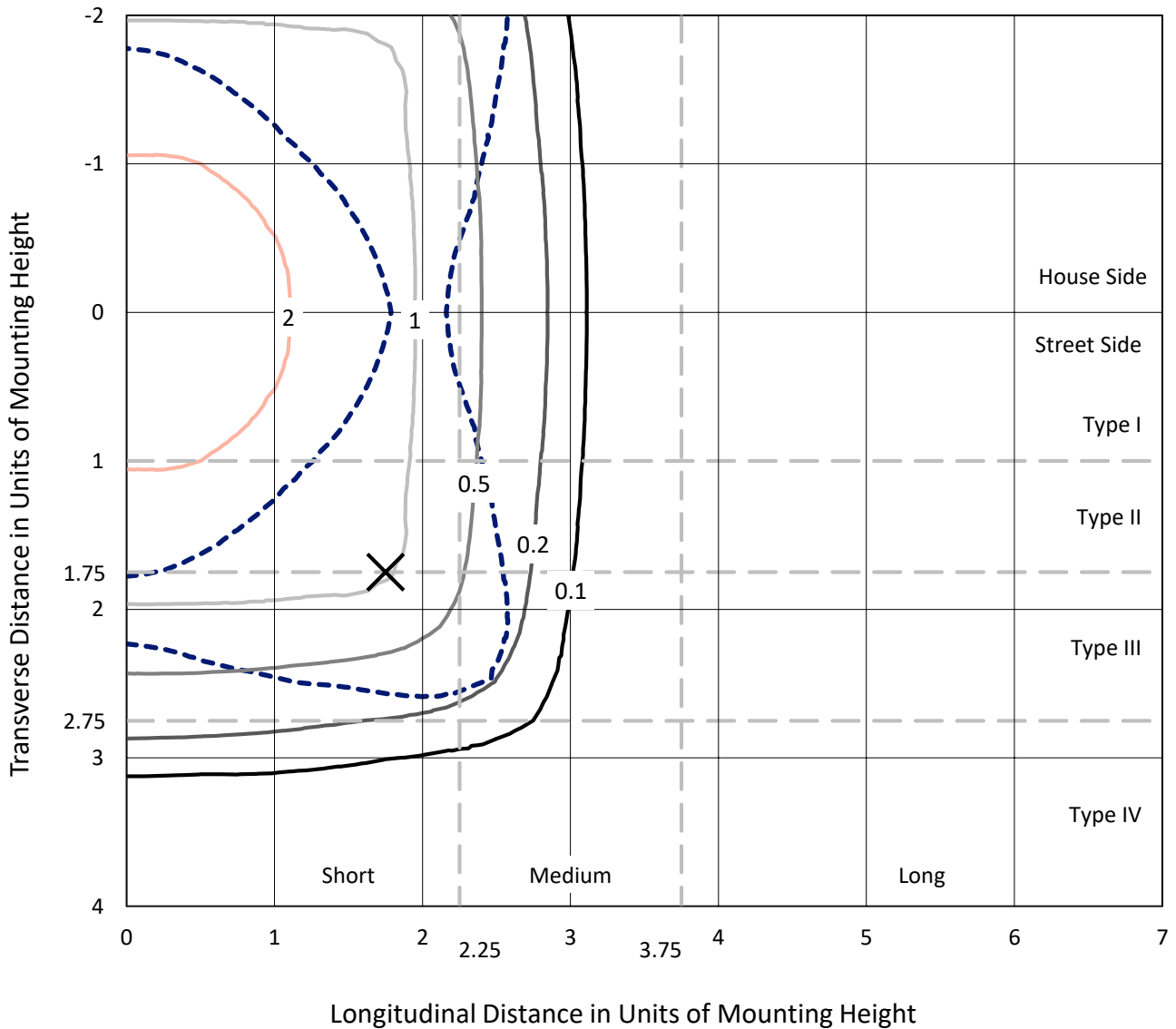


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### Iso-Footcandle Lines of Horizontal Illumination

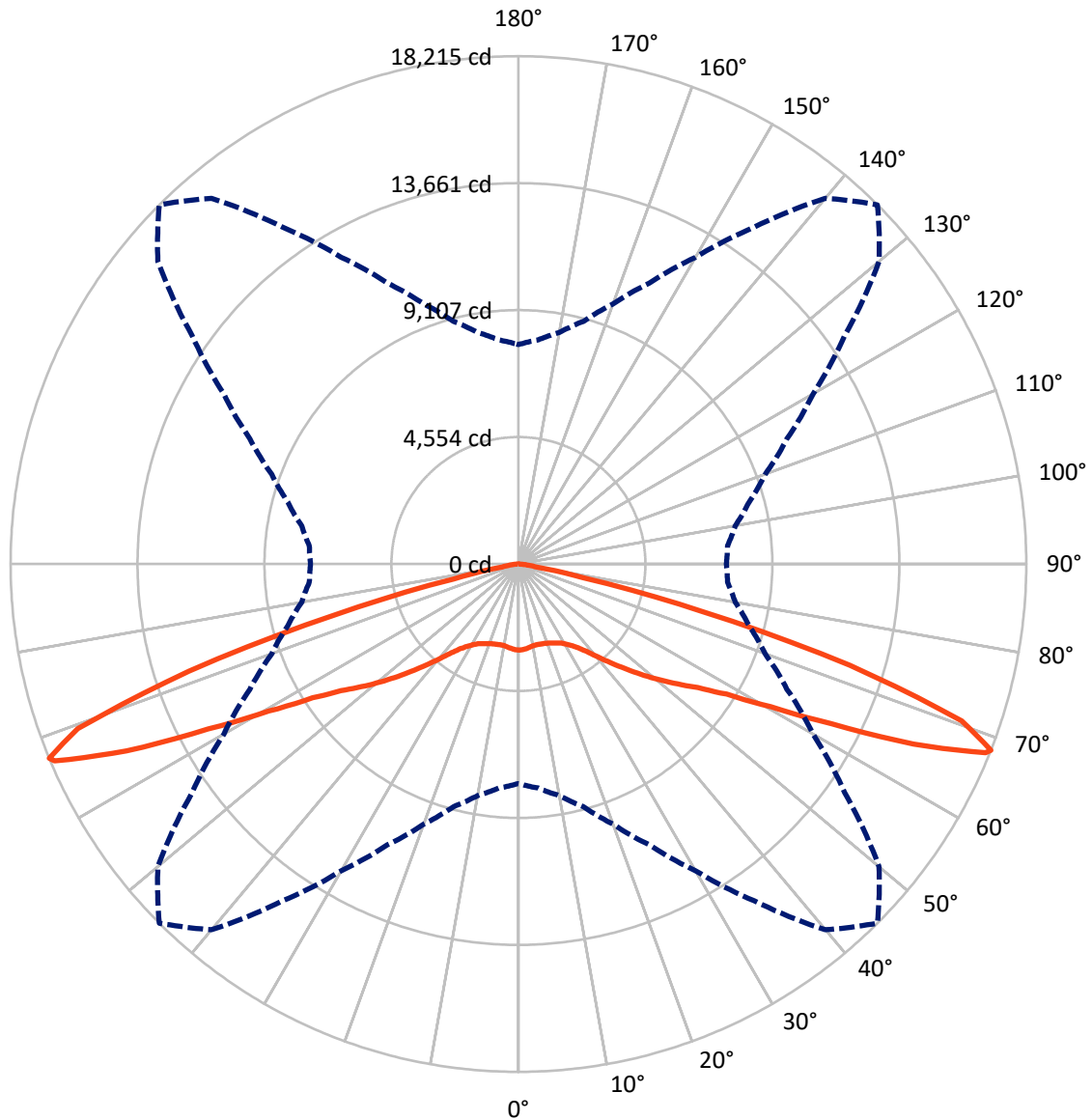
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.4 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	15485.9	0.0	15485.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	15485.9	0.0	15485.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	30971.7	0.0	30971.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	289.1	0.9
10°-20°	838.5	2.7
20°-30°	1425.4	4.6
30°-40°	2332.7	7.5
40°-50°	4168.8	13.5
50°-60°	7040.4	22.7
60°-70°	10917.1	35.2
70°-80°	3753.5	12.1
80°-90°	206.3	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°	30971.7	100.0
0°-180°	30971.7	100.0



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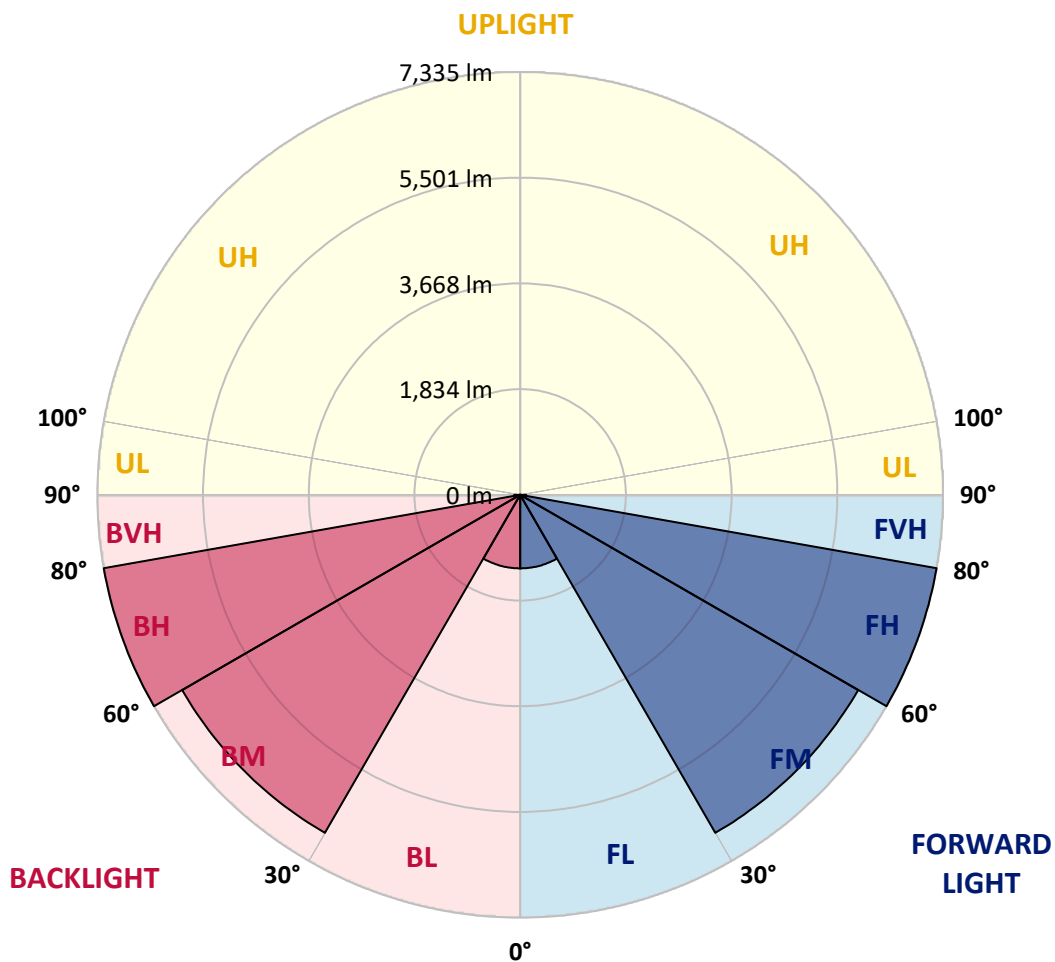
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1276.5	4.1			
FM	(30°-60°)	6770.9	21.9			
FH	(60°-80°)	7335.3	23.7			G3/7500
FVH	(80°-90°)	103.1	0.3			G2/225
BL	(0°-30°)	1276.5	4.1	B3/2500		
BM	(30°-60°)	6770.9	21.9	B4/8500		
BH	(60°-80°)	7335.3	23.7	B5		G3/7500
BVH	(80°-90°)	103.1	0.3			G2/225
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°	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6
2.5°	3102.8	3102.8	3106.6	3104.7	3099.0	3093.3	3087.6	3081.9	3078.2	3074.3	3070.5
5°	3070.5	3070.5	3076.2	3072.5	3068.6	3063.0	3059.2	3053.5	3049.7	3045.9	3047.8
7.5°	3028.8	3032.6	3036.5	3034.5	3026.9	3025.1	3019.4	3017.4	3013.7	3008.0	3009.9
10°	2992.8	2994.7	2998.5	2996.6	2994.7	2989.0	2987.1	2985.2	2983.4	2975.6	2973.8
12.5°	2956.8	2960.6	2964.3	2966.3	2964.3	2966.3	2968.1	2970.0	2968.1	2964.3	2964.3
15°	2928.3	2932.1	2937.8	2943.5	2945.4	2956.8	2964.3	2972.0	2977.7	2979.5	2973.8
17.5°	2913.2	2918.9	2926.4	2937.8	2947.3	2960.6	2973.8	2985.2	2994.7	2996.6	2990.9
20°	2911.2	2916.9	2928.3	2941.6	2958.6	2975.6	2996.6	3013.7	3023.1	3028.8	3023.1
22.5°	2924.6	2932.1	2947.3	2964.3	2985.2	3008.0	3034.5	3053.5	3072.5	3080.0	3074.3
25°	2962.4	2970.0	2987.1	3008.0	3030.8	3059.2	3085.7	3110.4	3129.4	3138.8	3131.3
27.5°	3042.1	3044.0	3063.0	3085.7	3112.2	3137.0	3171.0	3182.5	3197.6	3207.1	3197.6
30°	3154.0	3157.8	3174.8	3210.9	3235.6	3267.8	3286.7	3298.1	3315.3	3324.6	3313.3
32.5°	3324.6	3328.5	3343.7	3377.7	3400.5	3425.2	3448.0	3455.6	3472.6	3484.1	3470.7
35°	3565.5	3573.1	3586.4	3609.2	3628.2	3647.1	3664.2	3658.5	3669.9	3685.1	3671.7
37.5°	3895.5	3893.7	3897.5	3914.5	3933.6	3945.0	3971.5	3958.1	3969.5	3982.8	3975.2
40°	4280.6	4280.6	4278.7	4308.9	4316.7	4328.0	4356.3	4339.3	4354.5	4369.8	4356.3
42.5°	4718.7	4726.2	4735.8	4760.4	4781.3	4785.0	4798.3	4790.8	4809.7	4823.0	4809.7
45°	5223.1	5234.5	5246.0	5302.8	5312.3	5320.0	5329.3	5304.7	5325.7	5337.0	5333.2
47.5°	5746.6	5767.5	5792.2	5851.0	5888.8	5905.9	5913.5	5885.0	5887.0	5904.1	5905.9
50°	6338.3	6361.1	6385.7	6452.2	6488.2	6518.5	6528.0	6495.8	6499.7	6512.8	6516.7
52.5°	6884.5	6911.0	6964.1	7053.3	7104.6	7157.7	7161.5	7121.6	7138.7	7148.2	7140.6
55°	7398.5	7432.7	7502.9	7622.4	7715.3	7819.5	7867.0	7823.4	7823.4	7815.8	7812.0
57.5°	7997.9	8035.8	8107.9	8246.4	8375.3	8525.1	8654.1	8697.7	8777.4	8803.9	8762.1
60°	8900.6	8940.4	9014.4	9196.5	9359.5	9577.6	9790.1	9962.7	10243.4	10395.2	10258.6
62.5°	9725.6	9786.4	9960.8	10279.4	10632.2	11036.2	11504.7	11838.5	12348.6	12602.7	12259.4
65°	9537.9	9661.1	10002.5	10503.2	11231.6	12107.8	13061.7	13977.7	15032.2	15572.8	14874.9
67.5°	8331.7	8436.0	8803.9	9386.1	10294.6	11502.7	12985.9	14882.4	17057.8	18070.6	16835.9
68°	7870.8	8066.2	8432.2	9010.6	9926.6	11114.0	12697.6	14745.8	17120.4	18214.7	16881.4
70°	6034.9	6105.1	6455.9	6975.6	7963.7	9128.2	10727.1	13061.7	15745.4	16872.0	15500.7
72.5°	2867.6	2909.3	3137.0	3649.0	4276.7	5225.1	6636.1	8838.1	11256.2	12428.2	11060.9
75°	1050.7	1060.2	1113.3	1234.6	1469.9	1826.4	2503.4	3872.8	5733.4	6837.1	5756.1
77.5°	567.0	569.0	589.8	620.1	661.9	709.3	811.7	1088.7	1756.3	2389.7	1854.9
80°	356.5	354.6	375.6	400.2	428.7	451.4	460.8	493.1	555.7	650.5	597.4
82.5°	182.0	199.2	246.6	273.1	314.8	322.5	312.9	311.1	330.0	356.5	367.9
85°	100.5	89.1	130.9	174.5	189.7	195.3	197.2	185.8	182.0	178.3	187.7
87.5°	51.3	47.4	57.0	87.2	93.0	75.8	77.8	66.4	45.6	45.6	47.4
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6	3089.6
2.5°	3066.8	3068.6	3064.8	3064.8	3064.8	3066.8	3064.8	3063.0
5°	3042.1	3045.9	3045.9	3047.8	3049.7	3049.7	3049.7	3049.7
7.5°	3006.0	3008.0	3011.7	3011.7	3011.7	3011.7	3011.7	3011.7
10°	2972.0	2968.1	2966.3	2962.4	2962.4	2956.8	2958.6	2960.6
12.5°	2954.9	2947.3	2943.5	2937.8	2934.0	2928.3	2928.3	2930.3
15°	2962.4	2951.1	2939.7	2935.9	2932.1	2928.3	2924.6	2926.4
17.5°	2977.7	2964.3	2951.1	2943.5	2935.9	2930.3	2928.3	2930.3
20°	3009.9	2990.9	2970.0	2956.8	2941.6	2937.8	2932.1	2937.8
22.5°	3053.5	3030.8	3004.2	2979.5	2962.4	2954.9	2947.3	2953.0
25°	3106.6	3081.9	3055.4	3026.9	3008.0	3002.2	2992.8	2992.8
27.5°	3180.5	3159.7	3137.0	3110.4	3091.4	3085.7	3070.5	3070.5
30°	3298.1	3277.2	3256.5	3233.6	3214.7	3209.1	3190.1	3190.1
32.5°	3453.6	3431.0	3417.6	3398.6	3383.5	3374.0	3351.2	3349.4
35°	3662.3	3641.4	3639.5	3626.2	3611.1	3612.9	3590.3	3586.4
37.5°	3962.0	3945.0	3950.6	3939.3	3925.9	3937.2	3924.0	3924.0
40°	4345.0	4339.3	4345.0	4337.5	4339.3	4341.3	4329.8	4333.7
42.5°	4807.9	4792.6	4826.7	4823.0	4817.3	4832.4	4805.9	4786.9
45°	5340.8	5335.0	5369.2	5374.9	5363.5	5373.1	5325.7	5323.6
47.5°	5919.2	5919.2	5949.6	5945.8	5934.4	5936.3	5879.3	5843.4
50°	6522.3	6518.5	6548.9	6541.3	6526.2	6524.2	6465.4	6429.4
52.5°	7150.0	7150.0	7193.7	7172.9	7136.9	7119.8	7047.7	7000.2
55°	7844.3	7834.8	7848.0	7779.8	7709.6	7658.4	7569.3	7533.2
57.5°	8722.3	8612.4	8517.6	8430.2	8331.7	8270.9	8166.7	8128.7
60°	9968.4	9674.5	9547.4	9373.0	9209.8	9128.2	8989.8	8915.8
62.5°	11694.2	11206.8	10861.7	10476.7	10105.0	9843.2	9632.8	9539.8
65°	13689.5	12627.4	11749.3	10924.3	10224.5	9668.8	9359.5	9262.9
67.5°	14448.1	12498.3	10983.1	9799.6	8950.0	8288.1	7918.2	7840.5
68°	14286.8	12202.6	10628.4	9416.5	8563.0	7895.4	7527.5	7457.4
70°	12602.7	10294.6	8633.2	7427.0	6630.4	5995.0	5735.2	5623.3
72.5°	8591.5	6611.5	5071.5	4056.8	3461.3	3059.2	2820.2	2738.7
75°	3954.3	2672.3	1784.6	1333.3	1132.3	1035.6	961.6	942.6
77.5°	1153.1	838.2	720.7	667.6	627.8	593.6	569.0	567.0
80°	548.2	513.9	498.8	464.7	428.7	396.4	373.6	377.4
82.5°	367.9	358.5	358.5	324.3	267.4	229.5	189.7	170.7
85°	195.3	202.9	214.3	202.9	176.4	130.9	85.3	93.0
87.5°	66.4	75.8	79.6	77.8	70.2	53.1	39.9	39.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)