

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: P196404

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196404
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-06-D-UNV-5MQ-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29977.4 lumens
Efficiency: N/A
Efficacy: 120.4 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

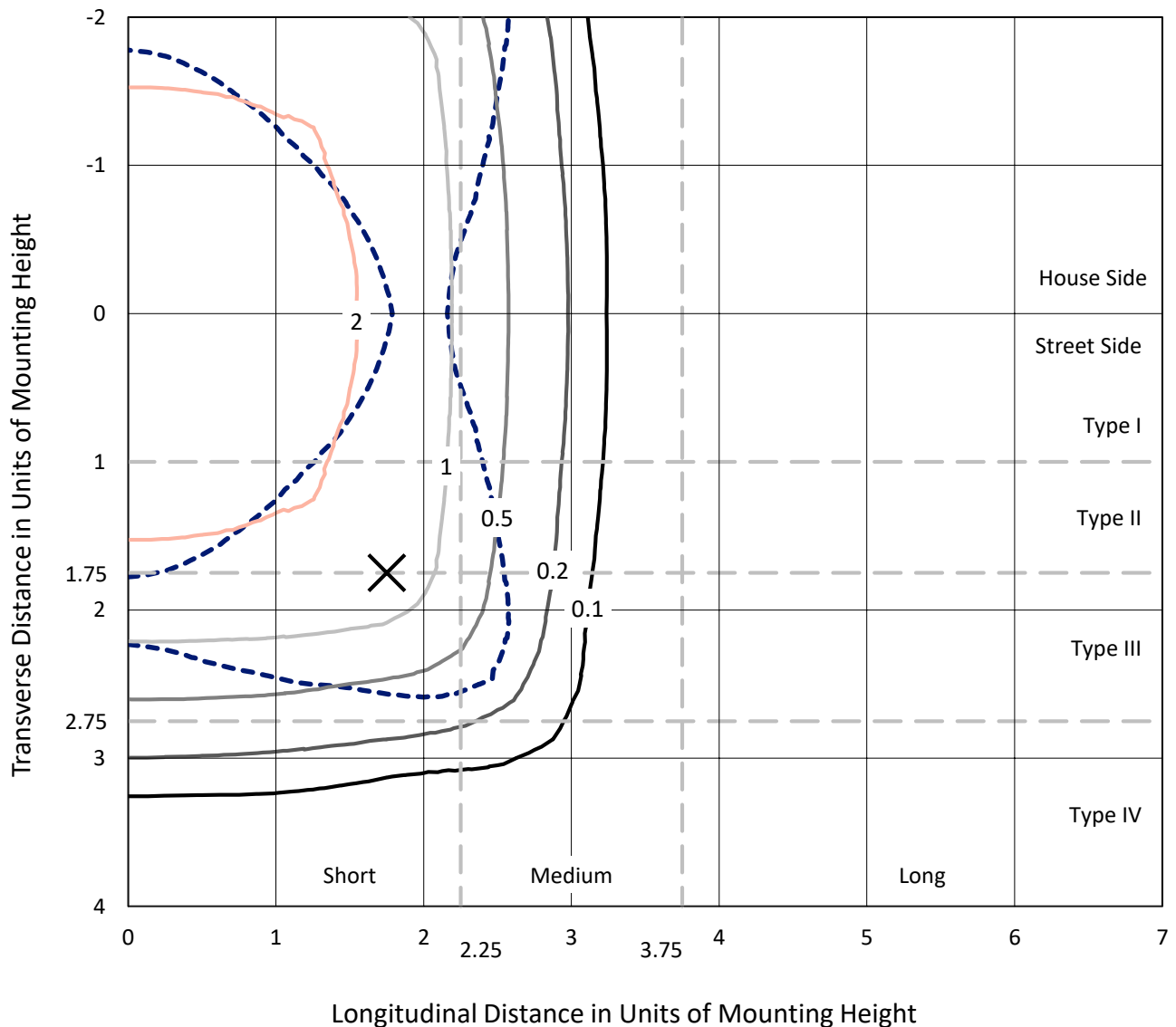
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

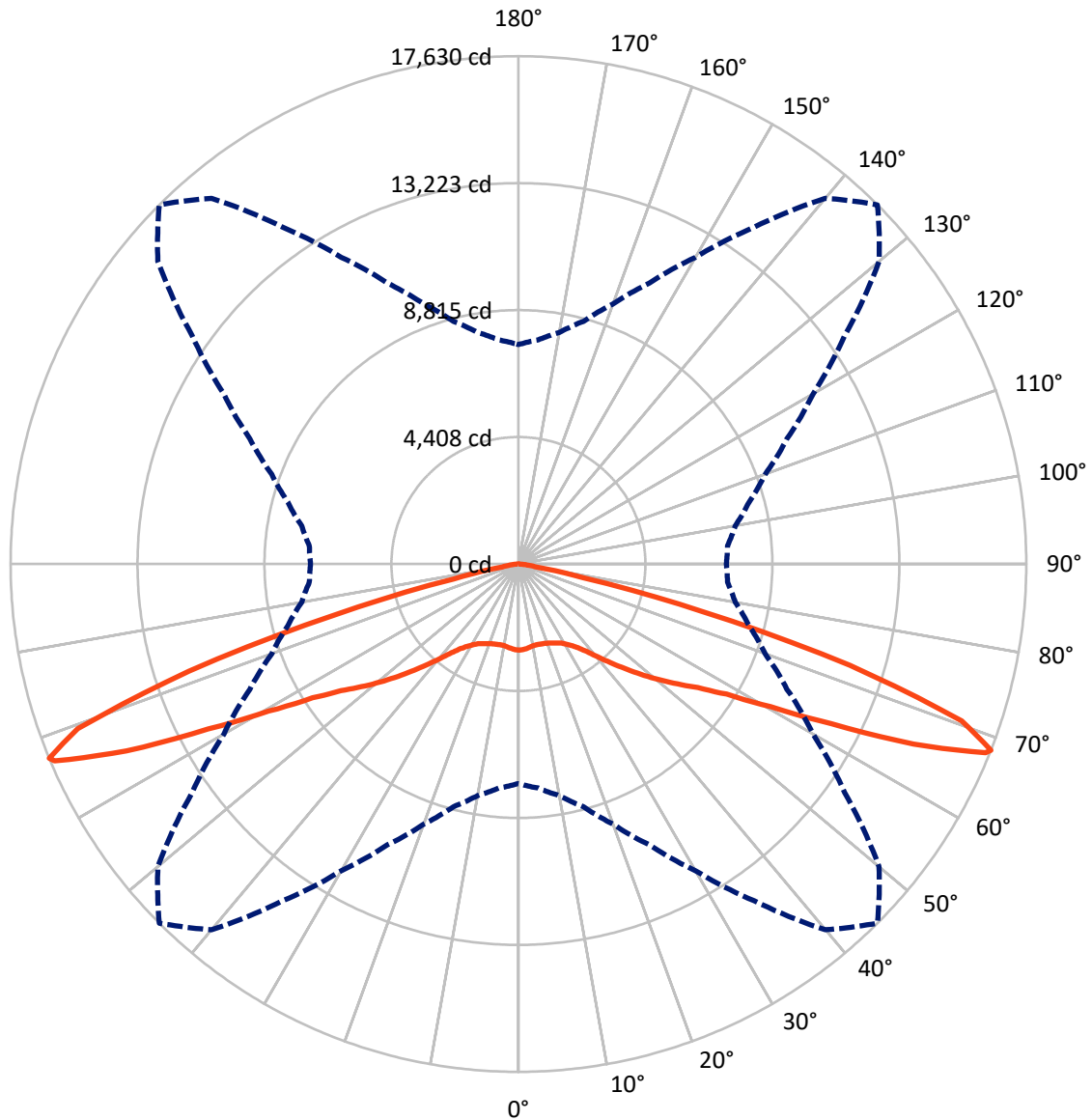
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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
House Side	Lumens	14988.7	0.0	14988.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14988.7	0.0	14988.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	29977.4	0.0	29977.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.8	0.9
10°-20°	811.5	2.7
20°-30°	1379.7	4.6
30°-40°	2257.8	7.5
40°-50°	4035.0	13.5
50°-60°	6814.4	22.7
60°-70°	10566.6	35.2
70°-80°	3633.1	12.1
80°-90°	199.6	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°	29977.4	100.0
0°-180°	29977.4	100.0



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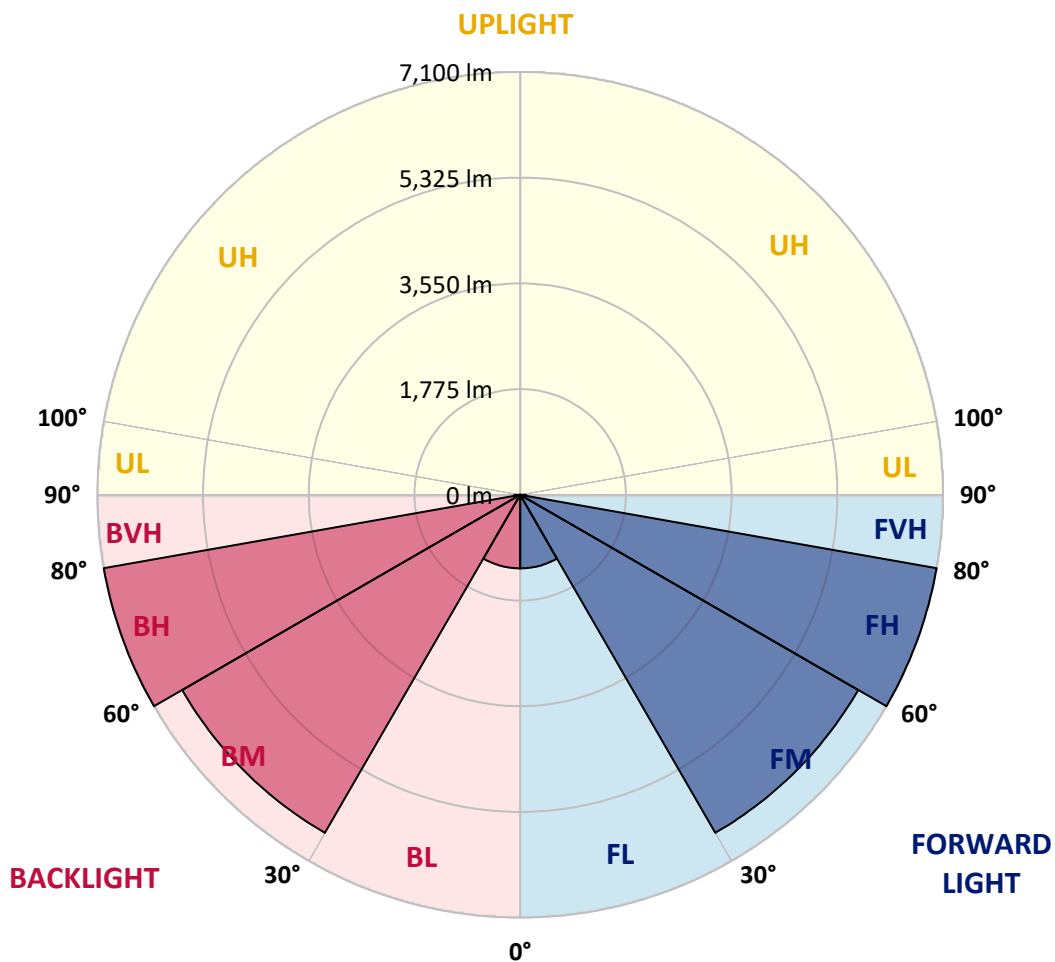
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1235.5	4.1			
FM	(30°-60°)	6553.6	21.9			
FH	(60°-80°)	7099.8	23.7			G3/7500
FVH	(80°-90°)	99.8	0.3			G1/100
BL	(0°-30°)	1235.5	4.1	B3/2500		
BM	(30°-60°)	6553.6	21.9	B4/8500		
BH	(60°-80°)	7099.8	23.7	B5		G3/7500
BVH	(80°-90°)	99.8	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°	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3
2.5°	3003.2	3003.2	3006.9	3005.0	2999.5	2994.0	2988.5	2983.0	2979.3	2975.6	2972.0
5°	2972.0	2972.0	2977.6	2973.8	2970.1	2964.6	2960.9	2955.5	2951.7	2948.2	2950.0
7.5°	2931.7	2935.2	2939.0	2937.1	2929.8	2927.9	2922.4	2920.6	2916.9	2911.4	2913.3
10°	2896.7	2898.5	2902.3	2900.4	2898.5	2893.0	2891.2	2889.4	2887.5	2880.2	2878.3
12.5°	2861.8	2865.6	2869.1	2871.0	2869.1	2871.0	2872.9	2874.7	2872.9	2869.1	2869.1
15°	2834.3	2838.0	2843.5	2849.1	2850.8	2861.8	2869.1	2876.6	2882.0	2883.9	2878.3
17.5°	2819.7	2825.1	2832.4	2843.5	2852.6	2865.6	2878.3	2889.4	2898.5	2900.4	2895.0
20°	2817.8	2823.3	2834.3	2847.2	2863.6	2880.2	2900.4	2916.9	2926.1	2931.7	2926.1
22.5°	2830.7	2838.0	2852.6	2869.1	2889.4	2911.4	2937.1	2955.5	2973.8	2981.1	2975.6
25°	2867.4	2874.7	2891.2	2911.4	2933.4	2960.9	2986.7	3010.5	3028.8	3038.1	3030.8
27.5°	2944.4	2946.2	2964.6	2986.7	3012.4	3036.2	3069.3	3080.2	3095.0	3104.2	3095.0
30°	3052.7	3056.4	3072.9	3107.9	3131.7	3162.9	3181.3	3192.2	3208.8	3218.0	3207.0
32.5°	3218.0	3221.6	3236.4	3269.4	3291.4	3315.3	3337.4	3344.7	3361.2	3372.2	3359.2
35°	3451.1	3458.5	3471.2	3493.3	3511.7	3530.0	3546.5	3541.1	3552.0	3566.8	3553.8
37.5°	3770.5	3768.7	3772.4	3788.9	3807.2	3818.3	3844.0	3831.0	3842.1	3855.0	3847.6
40°	4143.1	4143.1	4141.4	4170.7	4178.1	4189.0	4216.6	4200.0	4214.7	4229.4	4216.6
42.5°	4567.1	4574.5	4583.8	4607.6	4627.7	4631.5	4644.3	4637.0	4655.3	4668.2	4655.3
45°	5055.5	5066.5	5077.5	5132.6	5141.7	5149.1	5158.2	5134.4	5154.7	5165.7	5162.0
47.5°	5562.2	5582.4	5606.2	5663.1	5699.8	5716.3	5723.6	5696.1	5698.0	5714.5	5716.3
50°	6134.9	6156.9	6180.8	6245.0	6279.9	6309.2	6318.5	6287.3	6290.9	6303.7	6307.4
52.5°	6663.6	6689.3	6740.6	6826.9	6876.4	6927.9	6931.5	6893.0	6909.5	6918.8	6911.4
55°	7161.1	7194.0	7262.0	7377.6	7467.6	7568.6	7614.5	7572.2	7572.2	7564.9	7561.2
57.5°	7741.1	7777.8	7847.5	7981.6	8106.4	8251.5	8376.3	8418.4	8495.6	8521.2	8480.9
60°	8614.9	8653.5	8725.0	8901.3	9059.1	9270.2	9475.8	9642.9	9914.6	10061.4	9929.3
62.5°	9413.4	9472.1	9641.0	9949.4	10290.9	10681.8	11135.2	11458.3	11952.2	12198.1	11865.9
65°	9231.7	9351.1	9681.5	10166.0	10871.0	11719.0	12642.4	13529.0	14549.7	15072.9	14397.3
67.5°	8064.2	8165.2	8521.2	9084.8	9964.1	11133.5	12568.9	14404.6	16510.1	17490.4	16295.5
68°	7618.1	7807.2	8161.4	8721.4	9608.0	10757.1	12289.9	14272.5	16570.8	17630.0	16339.5
70°	5841.2	5909.1	6248.6	6751.6	7708.0	8835.1	10382.7	12642.4	15239.9	16330.3	15003.2
72.5°	2775.5	2815.9	3036.2	3532.0	4139.5	5057.3	6423.2	8554.4	10894.8	12029.3	10705.8
75°	1016.9	1026.2	1077.6	1195.1	1422.7	1767.9	2423.2	3748.4	5549.3	6617.7	5571.3
77.5°	548.9	550.6	570.9	600.3	640.7	686.5	785.7	1053.7	1699.8	2313.0	1795.3
80°	345.2	343.3	363.5	387.4	414.8	436.9	446.1	477.3	537.9	629.7	578.2
82.5°	176.2	192.8	238.6	264.3	304.8	312.1	302.8	301.0	319.4	345.2	356.0
85°	97.2	86.4	126.6	169.0	183.5	189.1	190.8	180.0	176.2	172.5	181.7
87.5°	49.6	45.9	55.0	84.4	89.9	73.4	75.3	64.3	44.0	44.0	45.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3	2990.3
2.5°	2968.3	2970.1	2966.5	2966.5	2966.5	2968.3	2966.5	2964.6
5°	2944.4	2948.2	2948.2	2950.0	2951.7	2951.7	2951.7	2951.7
7.5°	2909.6	2911.4	2915.0	2915.0	2915.0	2915.0	2915.0	2915.0
10°	2876.6	2872.9	2871.0	2867.4	2867.4	2861.8	2863.6	2865.6
12.5°	2860.0	2852.6	2849.1	2843.5	2839.8	2834.3	2834.3	2836.2
15°	2867.4	2856.4	2845.3	2841.7	2838.0	2834.3	2830.7	2832.4
17.5°	2882.0	2869.1	2856.4	2849.1	2841.7	2836.2	2834.3	2836.2
20°	2913.3	2895.0	2874.7	2861.8	2847.2	2843.5	2838.0	2843.5
22.5°	2955.5	2933.4	2907.7	2883.9	2867.4	2860.0	2852.6	2858.2
25°	3006.9	2983.0	2957.3	2929.8	2911.4	2905.9	2896.7	2896.7
27.5°	3078.5	3058.2	3036.2	3010.5	2992.2	2986.7	2972.0	2972.0
30°	3192.2	3172.2	3151.9	3129.8	3111.4	3106.0	3087.6	3087.6
32.5°	3342.8	3320.7	3308.0	3289.6	3274.8	3265.6	3243.7	3241.8
35°	3544.7	3524.4	3522.7	3509.9	3495.2	3497.0	3475.0	3471.2
37.5°	3834.8	3818.3	3823.7	3812.7	3799.9	3810.9	3798.1	3798.1
40°	4205.6	4200.0	4205.6	4198.2	4200.0	4201.9	4190.8	4194.6
42.5°	4653.5	4638.8	4671.8	4668.2	4662.6	4677.4	4651.6	4633.2
45°	5169.3	5163.8	5196.8	5202.4	5191.4	5200.5	5154.7	5152.7
47.5°	5729.2	5729.2	5758.5	5754.9	5743.9	5745.7	5690.7	5655.8
50°	6312.9	6309.2	6338.6	6331.2	6316.6	6314.7	6257.9	6223.0
52.5°	6920.6	6920.6	6962.8	6942.6	6907.7	6891.2	6821.4	6775.5
55°	7592.4	7583.2	7596.1	7530.0	7462.1	7412.4	7326.3	7291.4
57.5°	8442.4	8335.8	8244.0	8159.7	8064.2	8005.4	7904.5	7867.8
60°	9648.3	9363.8	9240.8	9072.1	8914.1	8835.1	8701.2	8629.7
62.5°	11318.8	10847.1	10513.0	10140.4	9780.6	9527.2	9323.5	9233.5
65°	13250.0	12222.1	11372.1	10573.6	9896.1	9358.4	9059.1	8965.5
67.5°	13984.3	12097.1	10630.5	9485.1	8662.6	8022.0	7664.0	7588.7
68°	13828.3	11810.8	10287.2	9114.2	8288.2	7642.0	7285.9	7217.8
70°	12198.1	9964.1	8356.0	7188.6	6417.6	5802.6	5551.1	5442.9
72.5°	8315.7	6399.2	4908.7	3926.6	3350.1	2960.9	2729.7	2650.7
75°	3827.5	2586.5	1727.4	1290.5	1095.9	1002.2	930.7	912.4
77.5°	1116.1	811.4	697.5	646.2	607.6	574.6	550.6	548.9
80°	530.6	497.4	482.8	449.7	414.8	383.6	361.6	365.3
82.5°	356.0	346.9	346.9	313.9	258.8	222.2	183.5	165.2
85°	189.1	196.4	207.5	196.4	170.8	126.6	82.6	89.9
87.5°	64.3	73.4	77.1	75.3	68.0	51.4	38.6	38.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)