

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: P196043

Luminaire Tested: **NAV-AF-05-D-UNV-RW-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196043  
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-05-D-UNV-RW-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25395.8 lumens  
Efficiency: N/A  
Efficacy: 120.9 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

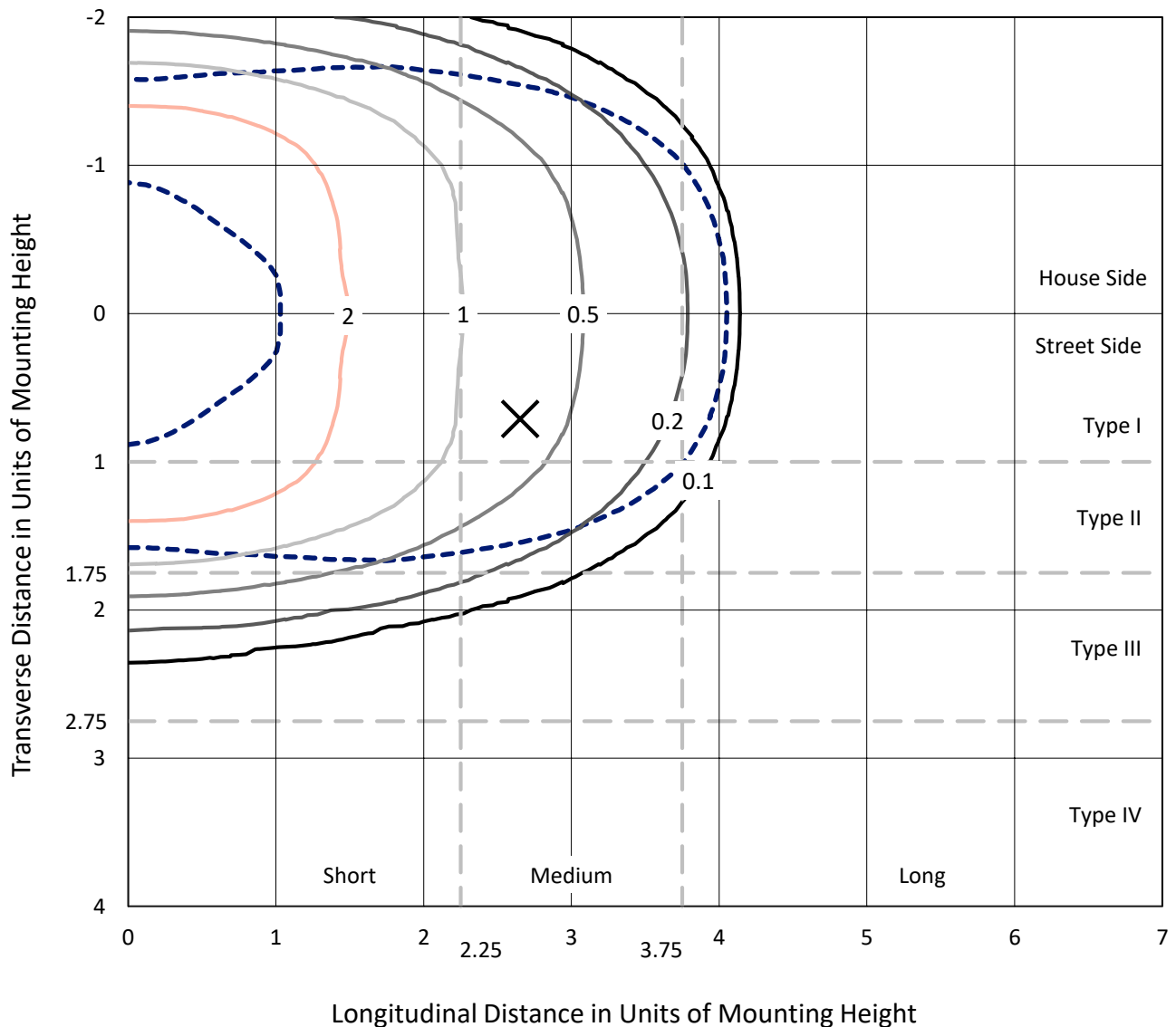
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

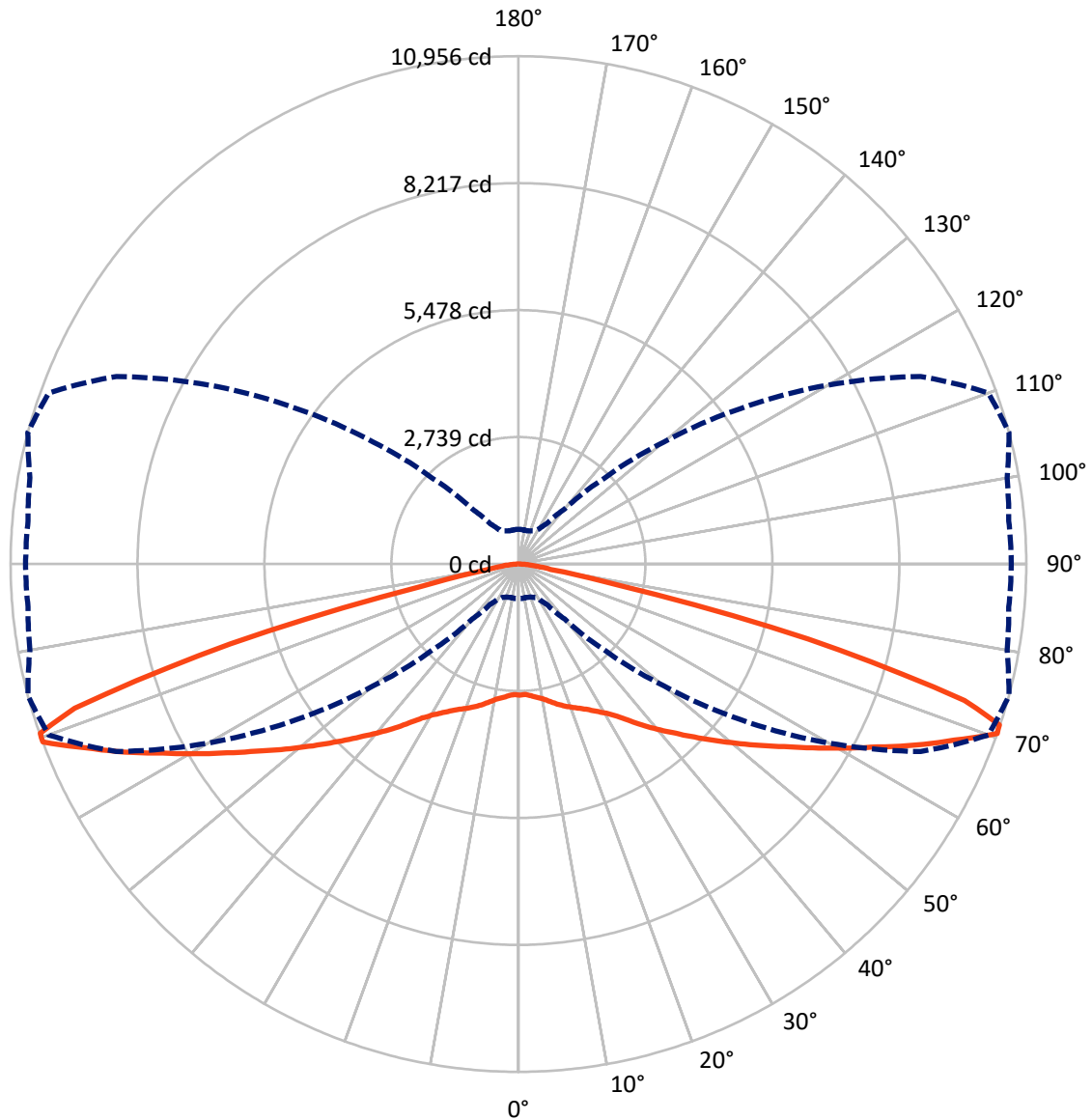
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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	12697.9	0.0	12697.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	12697.9	0.0	12697.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	25395.8	0.0	25395.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	271.3	1.1
10°-20°	841.3	3.3
20°-30°	1580.1	6.2
30°-40°	2783.3	11.0
40°-50°	4612.9	18.2
50°-60°	6417.2	25.3
60°-70°	6057.9	23.9
70°-80°	2587.4	10.2
80°-90°	244.5	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°	25395.8	100.0
0°-180°	25395.8	100.0



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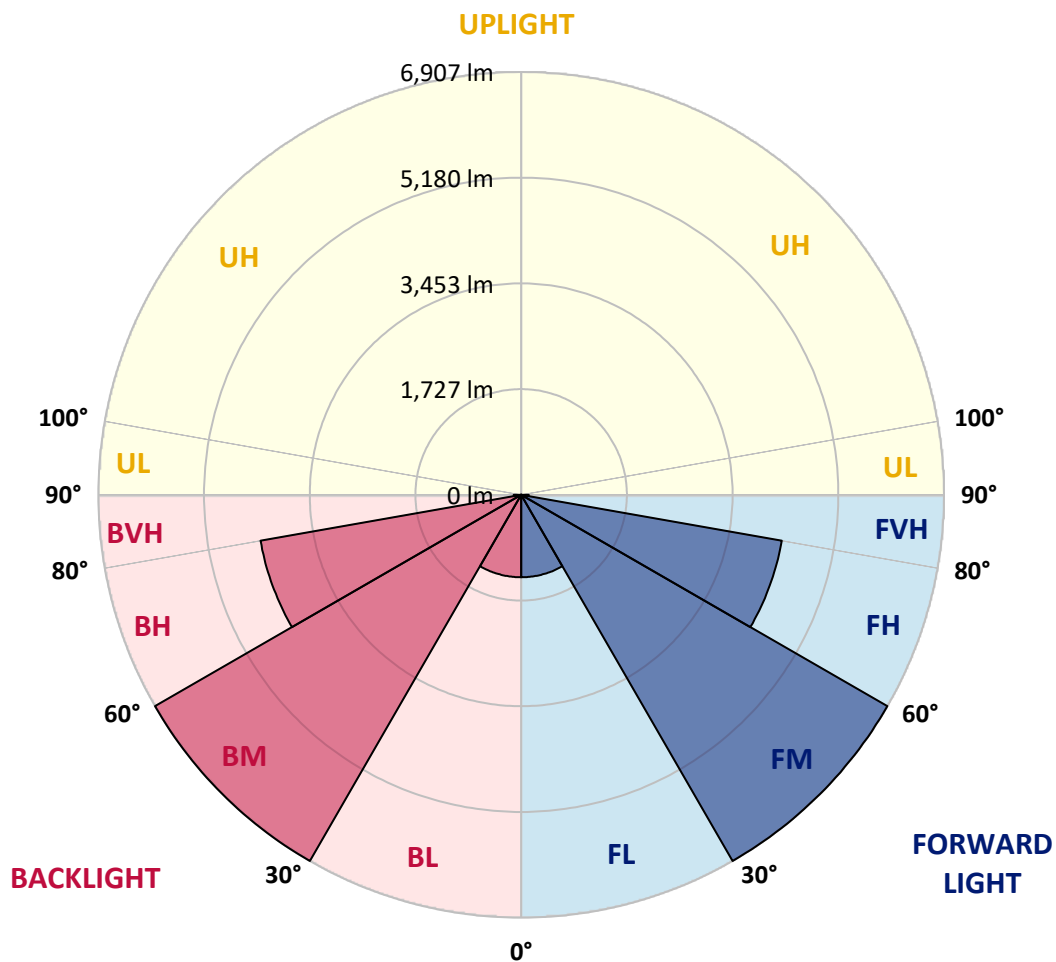
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1346.3	5.3			
FM	(30°-60°)	6906.7	27.2			
FH	(60°-80°)	4322.7	17.0			G2/5000
FVH	(80°-90°)	122.2	0.5			G2/225
BL	(0°-30°)	1346.3	5.3	B3/2500		
BM	(30°-60°)	6906.7	27.2	B4/8500		
BH	(60°-80°)	4322.7	17.0	B4/5000		G4/5000
BVH	(80°-90°)	122.2	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°	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0
2.5°	2845.5	2844.0	2845.5	2840.8	2842.4	2840.8	2840.8	2834.4	2834.4	2831.2	2826.5
5°	2813.7	2816.9	2816.9	2816.9	2821.7	2821.7	2828.0	2829.7	2834.4	2839.2	2842.4
7.5°	2761.3	2762.8	2767.6	2770.8	2780.3	2793.1	2805.7	2820.1	2832.9	2848.7	2866.3
10°	2716.7	2719.8	2727.8	2735.8	2753.3	2769.2	2791.4	2813.7	2836.0	2863.0	2890.1
12.5°	2692.8	2697.5	2710.3	2723.0	2750.1	2770.8	2801.0	2836.0	2866.3	2891.7	2922.0
15°	2696.0	2697.5	2715.1	2732.6	2770.8	2799.4	2842.4	2883.8	2920.4	2949.1	2984.0
17.5°	2742.1	2745.3	2762.8	2788.3	2824.9	2861.5	2907.6	2950.6	2999.9	3033.4	3074.8
20°	2832.9	2837.7	2856.7	2883.8	2923.6	2961.7	3009.5	3054.0	3105.0	3144.8	3186.2
22.5°	2950.6	2958.6	2979.2	3012.7	3052.5	3098.6	3147.9	3194.1	3241.8	3281.6	3316.6
25°	3108.1	3117.7	3139.9	3173.4	3213.2	3262.5	3313.4	3361.2	3410.5	3440.8	3469.4
27.5°	3319.9	3335.7	3359.6	3386.7	3421.7	3474.2	3521.9	3561.7	3609.5	3642.9	3662.0
30°	3604.7	3627.0	3646.1	3674.7	3700.2	3755.9	3794.1	3825.9	3862.6	3881.6	3886.4
32.5°	3953.3	3974.0	3993.0	4013.8	4048.7	4099.7	4136.3	4153.8	4172.8	4169.6	4152.2
35°	4346.3	4362.3	4373.4	4410.0	4467.3	4500.7	4527.8	4534.1	4537.3	4504.0	4470.5
37.5°	4760.1	4779.2	4788.7	4846.0	4900.1	4938.4	4951.1	4965.4	4955.9	4900.1	4839.7
40°	5207.3	5228.0	5256.6	5306.0	5369.7	5406.3	5422.2	5420.6	5412.6	5347.4	5248.8
42.5°	5646.6	5672.1	5695.9	5781.8	5834.4	5896.5	5904.4	5902.8	5885.3	5810.5	5695.9
45°	6019.0	6049.2	6098.5	6194.1	6278.4	6353.2	6383.4	6394.6	6377.1	6297.5	6167.0
47.5°	6326.1	6346.8	6408.9	6525.1	6633.3	6743.1	6803.6	6846.6	6845.0	6787.7	6649.2
50°	6536.2	6560.1	6636.5	6767.0	6902.3	7031.2	7150.5	7247.6	7293.7	7252.4	7123.5
52.5°	6596.7	6627.0	6727.2	6883.1	7040.8	7214.2	7392.5	7564.3	7667.7	7693.2	7593.0
55°	6342.1	6375.4	6521.9	6738.4	6997.8	7253.9	7524.5	7769.6	7982.9	8081.5	8041.7
57.5°	5600.5	5624.3	5810.5	6090.6	6461.5	6911.8	7367.0	7815.8	8181.9	8438.0	8482.6
60°	4429.1	4459.3	4663.0	4959.1	5380.8	5950.6	6587.2	7322.4	8040.2	8627.5	8918.7
62.5°	2988.9	3009.5	3205.2	3475.8	3937.3	4486.4	5196.2	6127.2	7150.5	8199.4	9020.5
65°	1569.2	1569.2	1701.3	1890.7	2258.3	2750.1	3477.4	4432.2	5649.8	6959.5	8333.1
67.5°	910.3	908.7	939.0	981.9	1098.1	1297.1	1698.1	2399.9	3552.2	5076.8	6639.7
70°	751.2	746.4	741.6	741.6	759.1	789.4	865.7	1058.3	1548.5	2618.0	4085.4
71°	717.8	714.5	701.8	697.0	705.0	721.0	754.3	843.5	1099.7	1785.7	3050.8
72.5°	678.0	670.0	650.9	642.9	644.6	650.9	660.4	695.5	773.5	1015.4	1739.5
75°	617.5	598.4	574.5	563.3	558.6	557.0	557.0	566.6	584.1	612.7	713.0
77.5°	547.5	520.4	494.9	483.9	475.9	471.1	467.9	461.6	458.4	471.1	507.7
80°	463.1	434.4	413.8	407.4	402.6	393.1	380.3	367.6	359.7	366.0	388.3
82.5°	358.1	329.4	332.7	334.2	326.2	310.4	297.6	283.3	268.9	265.8	276.9
85°	284.9	270.6	261.0	281.7	264.2	245.1	227.6	203.7	170.3	140.0	152.8
87.5°	122.5	124.2	178.2	268.9	235.6	189.3	157.5	127.4	81.1	60.5	62.1
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°	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0	2828.0
2.5°	2824.9	2824.9	2820.1	2816.9	2816.9	2816.9	2813.7	2815.4
5°	2844.0	2847.2	2850.4	2848.7	2853.5	2858.3	2856.7	2855.2
7.5°	2875.8	2885.3	2895.0	2899.7	2906.1	2912.4	2914.0	2909.3
10°	2907.6	2926.8	2941.1	2953.8	2961.7	2968.1	2972.9	2971.3
12.5°	2947.4	2974.4	2999.9	3025.4	3042.9	3052.5	3062.0	3058.8
15°	3012.7	3042.9	3074.8	3108.1	3135.2	3149.6	3163.9	3160.7
17.5°	3101.8	3128.9	3154.4	3187.7	3221.2	3237.1	3253.0	3251.4
20°	3213.2	3233.9	3248.2	3267.3	3299.1	3316.6	3330.9	3326.2
22.5°	3340.5	3346.9	3348.5	3354.9	3380.3	3401.0	3420.1	3424.8
25°	3479.0	3474.2	3464.6	3459.9	3477.4	3499.7	3523.6	3529.9
27.5°	3650.9	3635.0	3611.1	3592.0	3596.8	3625.4	3652.4	3658.8
30°	3867.3	3830.7	3779.8	3743.2	3736.8	3767.0	3795.7	3805.3
32.5°	4114.0	4064.7	3994.6	3939.0	3915.0	3942.1	3967.6	3981.9
35°	4406.8	4352.8	4268.4	4196.8	4158.5	4176.1	4220.6	4236.6
37.5°	4753.8	4679.0	4585.1	4494.3	4430.7	4433.9	4481.6	4500.7
40°	5137.4	5029.1	4909.8	4796.7	4704.4	4698.1	4741.1	4755.4
42.5°	5536.8	5398.3	5258.3	5110.3	4995.7	4975.0	5030.7	5032.3
45°	5966.5	5788.3	5614.8	5442.9	5323.5	5286.9	5341.0	5347.4
47.5°	6424.8	6202.0	5996.7	5810.5	5681.6	5624.3	5676.9	5686.4
50°	6902.3	6671.5	6432.8	6225.9	6074.7	6004.6	6066.7	6073.1
52.5°	7375.0	7156.9	6919.8	6682.6	6499.6	6420.0	6493.3	6515.6
55°	7850.8	7640.7	7417.9	7180.8	6950.0	6880.0	6959.5	6983.5
57.5°	8345.7	8143.6	7941.5	7702.8	7478.4	7371.8	7457.7	7491.1
60°	8891.6	8713.4	8522.4	8282.1	8060.9	7936.8	8009.9	8048.2
62.5°	9427.9	9391.3	9217.9	8968.0	8687.9	8563.7	8625.8	8652.9
65°	9472.5	10066.1	10058.2	9809.9	9418.4	9209.9	9227.4	9240.1
67.5°	8267.8	9630.1	10500.6	10578.6	10142.6	9816.2	9778.1	9786.1
70°	5853.5	7723.5	9571.1	10783.9	10955.8	10702.7	10620.0	10632.8
71°	4690.1	6627.0	8660.8	10292.1	10943.0	10869.9	10823.6	10857.1
72.5°	2993.6	4882.6	6862.5	8813.6	10063.0	10421.0	10473.6	10494.2
75°	1087.0	2100.7	3555.4	5094.3	6456.7	7394.0	7909.7	7951.1
77.5°	584.1	752.8	1163.4	1737.9	2183.5	2422.2	2450.9	2462.0
80°	429.7	498.2	569.8	650.9	701.8	711.4	693.9	657.2
82.5°	304.0	343.7	372.5	401.1	421.8	404.3	335.8	256.2
85°	176.7	194.2	210.1	224.4	227.6	214.8	141.7	116.2
87.5°	70.1	76.4	74.8	84.4	81.1	74.8	55.8	47.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)