

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: P270504

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270504
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-04-D-UNV-RW-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23760.7 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

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

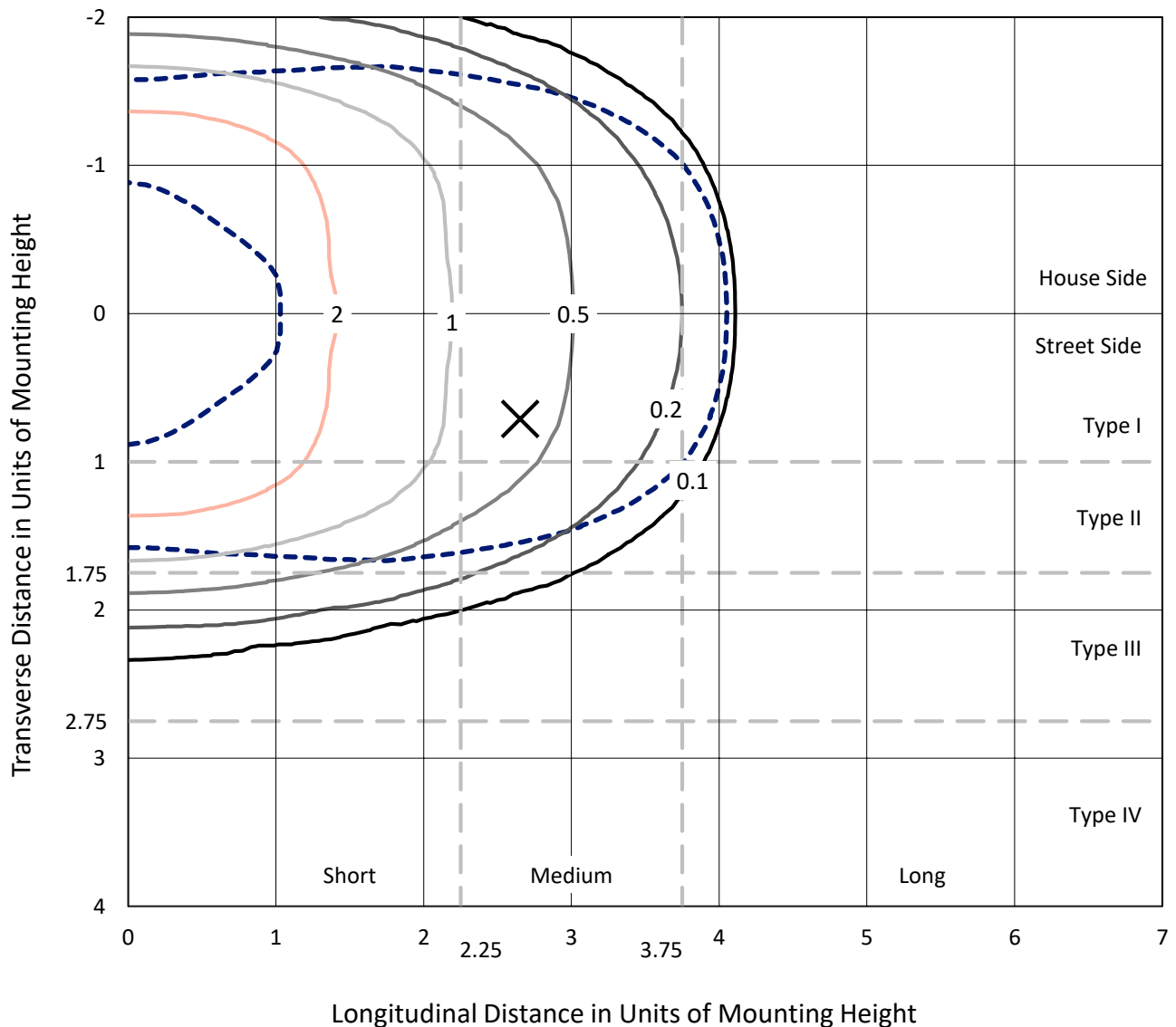


REPORT NUMBER: P270504

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

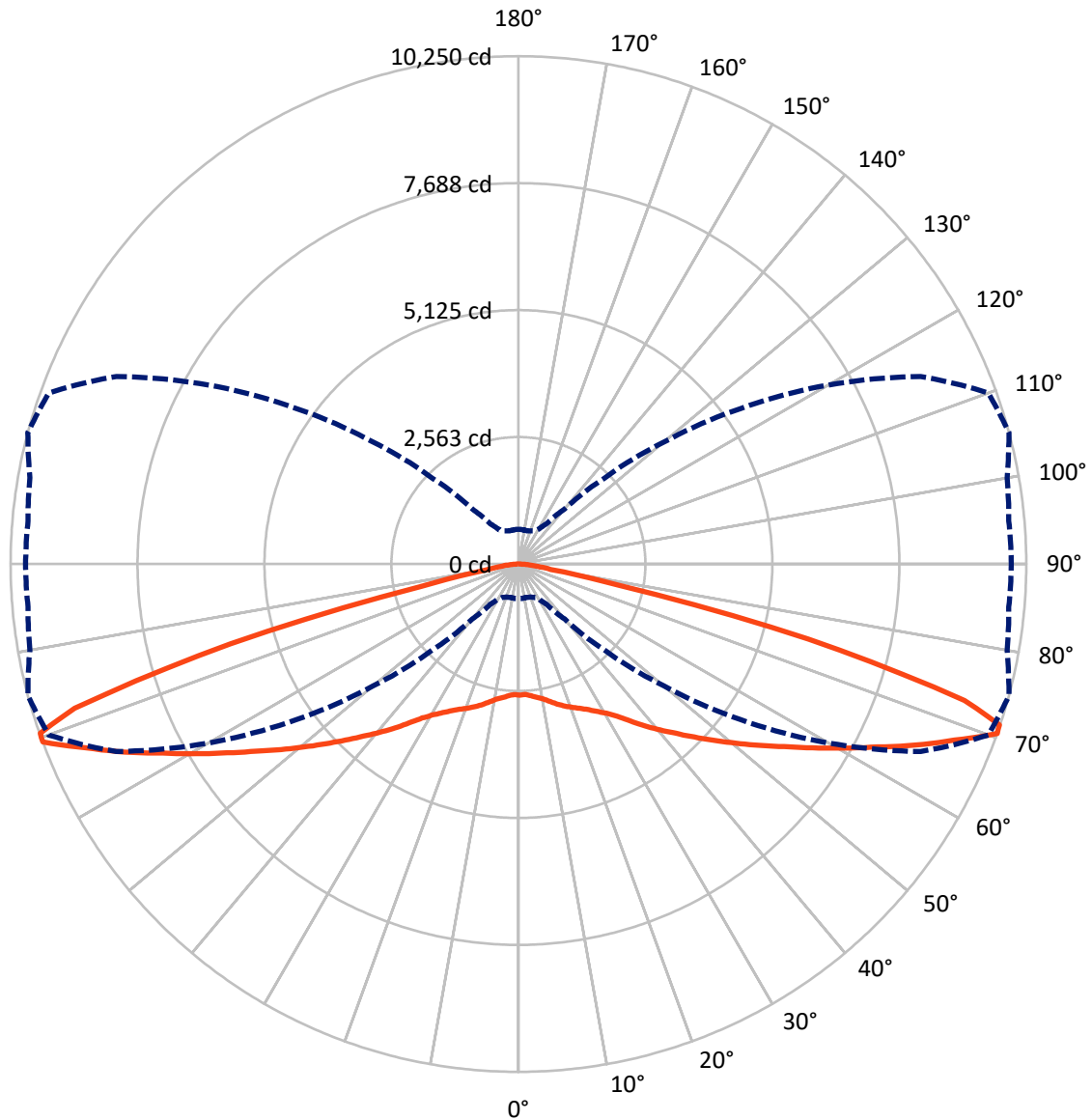
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P270504
CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270504

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11880.3	0.0	11880.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11880.3	0.0	11880.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	23760.7	0.0	23760.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.8	1.1
10°-20°	787.1	3.3
20°-30°	1478.3	6.2
30°-40°	2604.1	11.0
40°-50°	4315.9	18.2
50°-60°	6004.0	25.3
60°-70°	5667.9	23.9
70°-80°	2420.8	10.2
80°-90°	228.7	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°	23760.7	100.0
0°-180°	23760.7	100.0



REPORT NUMBER: P270504

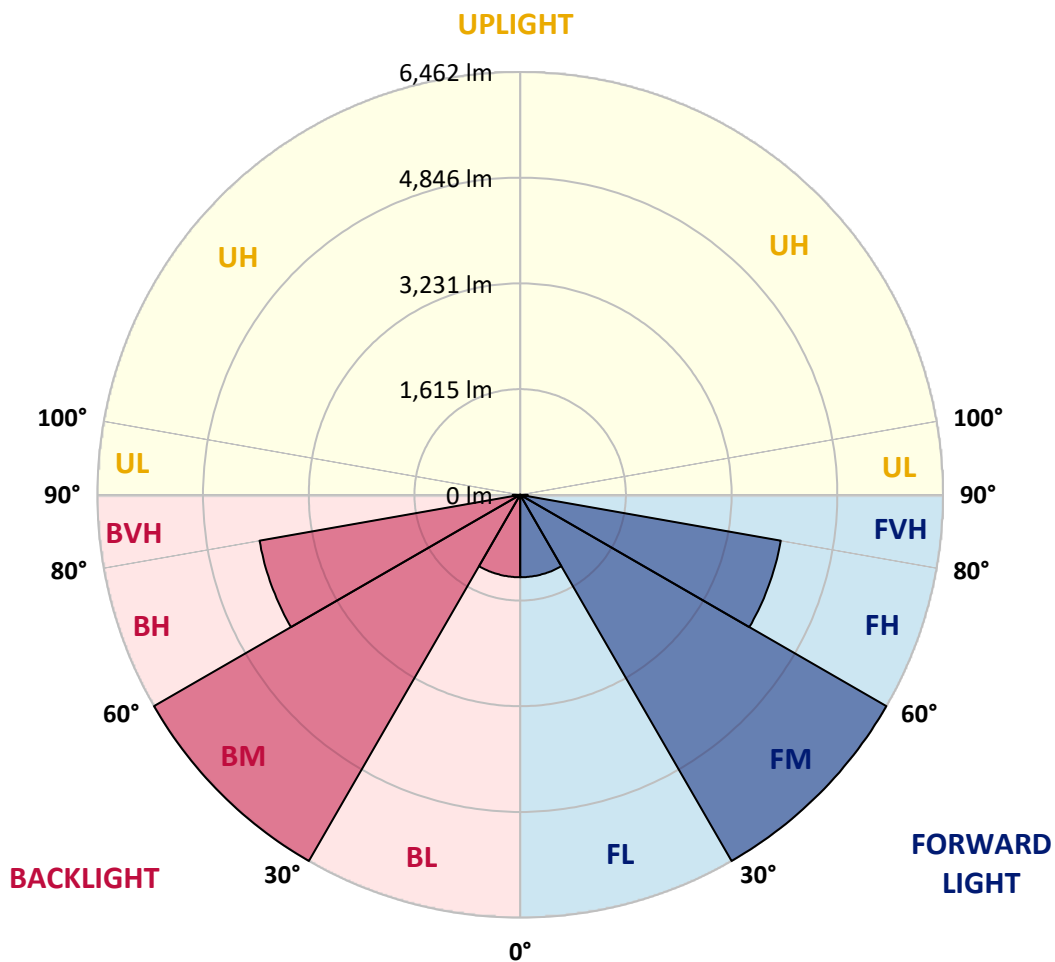
CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1259.6	5.3			
FM (30°-60°)	6462.0	27.2			
FH (60°-80°)	4044.4	17.0			G2/5000
FVH (80°-90°)	114.4	0.5			G2/225
BL (0°-30°)	1259.6	5.3	B3/2500		
BM (30°-60°)	6462.0	27.2	B4/8500		
BH (60°-80°)	4044.4	17.0	B4/5000		G4/5000
BVH (80°-90°)	114.4	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





REPORT NUMBER: P270504

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0
2.5°	2662.3	2660.9	2662.3	2657.8	2659.4	2657.8	2657.8	2651.9	2651.9	2648.9	2644.5
5°	2632.7	2635.5	2635.5	2635.5	2639.9	2639.9	2646.0	2647.5	2651.9	2656.4	2659.4
7.5°	2583.4	2585.0	2589.5	2592.4	2601.3	2613.2	2625.1	2638.5	2650.4	2665.4	2681.7
10°	2541.8	2544.7	2552.2	2559.6	2576.0	2590.9	2611.7	2632.7	2653.5	2678.7	2704.1
12.5°	2519.4	2523.9	2535.7	2547.8	2573.0	2592.4	2620.6	2653.5	2681.7	2705.5	2733.8
15°	2522.4	2523.9	2540.2	2556.7	2592.4	2619.2	2659.4	2698.1	2732.4	2759.1	2791.9
17.5°	2565.6	2568.6	2585.0	2608.8	2643.1	2677.3	2720.4	2760.6	2806.8	2838.0	2876.8
20°	2650.4	2654.9	2672.7	2698.1	2735.2	2771.0	2815.7	2857.4	2905.1	2942.3	2981.0
22.5°	2760.6	2768.0	2787.4	2818.7	2855.9	2899.1	2945.3	2988.4	3033.1	3070.3	3103.1
25°	2908.1	2916.9	2937.8	2969.1	3006.3	3052.5	3100.1	3144.7	3191.0	3219.3	3246.0
27.5°	3106.1	3121.0	3143.3	3168.6	3201.4	3250.5	3295.3	3332.4	3377.1	3408.3	3426.2
30°	3372.6	3393.4	3411.4	3438.2	3462.0	3514.1	3549.8	3579.6	3613.8	3631.7	3636.2
32.5°	3698.7	3718.1	3736.0	3755.4	3788.1	3835.8	3870.0	3886.3	3904.3	3901.2	3884.8
35°	4066.4	4081.4	4091.8	4126.1	4179.6	4211.0	4236.2	4242.2	4245.2	4213.9	4182.7
37.5°	4453.6	4471.6	4480.4	4534.0	4584.7	4620.4	4632.3	4645.8	4636.8	4584.7	4528.0
40°	4872.0	4891.5	4918.2	4964.5	5024.0	5058.1	5073.1	5071.7	5064.1	5003.1	4910.8
42.5°	5283.0	5306.8	5329.1	5409.7	5458.7	5516.9	5524.2	5522.8	5506.4	5436.5	5329.1
45°	5631.5	5659.7	5705.9	5795.2	5874.1	5944.2	5972.4	5982.9	5966.5	5892.1	5770.0
47.5°	5918.8	5938.2	5996.2	6105.1	6206.2	6308.9	6365.6	6405.8	6404.2	6350.7	6221.1
50°	6115.4	6137.7	6209.3	6331.3	6457.8	6578.5	6690.1	6780.9	6824.2	6785.4	6664.9
52.5°	6172.0	6200.3	6294.1	6439.9	6587.5	6749.8	6916.5	7077.2	7174.0	7197.8	7104.1
55°	5933.8	5965.0	6101.9	6304.6	6547.1	6787.0	7040.0	7269.4	7468.9	7561.3	7524.1
57.5°	5239.9	5262.2	5436.5	5698.5	6045.5	6466.8	6892.6	7312.6	7655.0	7894.8	7936.4
60°	4143.9	4172.2	4362.8	4639.7	5034.5	5567.4	6163.0	6851.0	7522.5	8072.0	8344.4
62.5°	2796.3	2815.7	2998.9	3252.0	3683.8	4197.5	4861.6	5732.8	6690.1	7671.4	8439.8
65°	1468.2	1468.2	1591.7	1768.9	2113.0	2573.0	3253.5	4146.9	5285.9	6511.5	7796.5
67.5°	851.8	850.2	878.5	918.7	1027.4	1213.5	1588.8	2245.5	3323.5	4750.0	6212.1
70°	702.8	698.3	693.9	693.9	710.3	738.5	810.0	990.2	1448.8	2449.4	3822.3
71°	671.6	668.6	656.7	652.2	659.6	674.5	705.8	789.3	1028.9	1670.7	2854.5
72.5°	634.4	626.8	609.1	601.5	603.0	609.1	617.9	650.7	723.7	950.0	1627.5
75°	577.7	559.9	537.5	527.1	522.6	521.1	521.1	530.1	546.4	573.3	667.1
77.5°	512.3	486.9	463.0	452.7	445.2	440.8	437.7	431.8	428.9	440.8	475.1
80°	433.3	406.6	387.1	381.2	376.7	367.8	355.9	344.1	336.5	342.4	363.4
82.5°	335.1	308.2	311.3	312.7	305.2	290.3	278.5	265.0	251.6	248.7	259.2
85°	266.5	253.1	244.2	263.6	247.2	229.2	212.9	190.6	159.3	131.1	142.9
87.5°	114.7	116.2	166.7	251.6	220.4	177.1	147.4	119.1	75.9	56.7	58.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270504

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-7027-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0	2646.0
2.5°	2643.1	2643.1	2638.5	2635.5	2635.5	2635.5	2632.7	2634.1
5°	2660.9	2663.8	2666.8	2665.4	2669.9	2674.3	2672.7	2671.3
7.5°	2690.7	2699.5	2708.5	2713.1	2718.9	2724.9	2726.4	2722.0
10°	2720.4	2738.4	2751.7	2763.6	2771.0	2777.0	2781.5	2780.0
12.5°	2757.6	2782.9	2806.8	2830.6	2847.0	2855.9	2864.9	2861.9
15°	2818.7	2847.0	2876.8	2908.1	2933.3	2946.8	2960.2	2957.2
17.5°	2902.2	2927.3	2951.2	2982.6	3013.8	3028.6	3043.5	3042.1
20°	3006.3	3025.8	3039.1	3056.9	3086.8	3103.1	3116.5	3112.1
22.5°	3125.5	3131.4	3132.8	3138.9	3162.7	3182.1	3199.9	3204.3
25°	3255.0	3250.5	3241.7	3237.1	3253.5	3274.3	3296.7	3302.7
27.5°	3415.9	3401.0	3378.5	3360.6	3365.2	3392.0	3417.3	3423.3
30°	3618.4	3584.1	3536.4	3502.1	3496.3	3524.5	3551.3	3560.3
32.5°	3849.1	3803.0	3737.5	3685.3	3663.0	3688.4	3712.2	3725.5
35°	4123.1	4072.5	3993.5	3926.5	3890.7	3907.2	3948.9	3963.9
37.5°	4447.7	4377.7	4289.9	4205.0	4145.4	4148.5	4193.1	4211.0
40°	4806.6	4705.3	4593.7	4487.9	4401.5	4395.5	4435.8	4449.1
42.5°	5180.3	5050.7	4919.7	4781.1	4674.1	4654.7	4706.8	4708.2
45°	5582.3	5415.5	5253.3	5092.4	4980.7	4946.4	4997.1	5003.1
47.5°	6011.2	5802.7	5610.6	5436.5	5315.8	5262.2	5311.3	5320.2
50°	6457.8	6242.0	6018.6	5825.0	5683.5	5618.1	5676.1	5682.0
52.5°	6900.2	6696.1	6474.3	6252.5	6081.2	6006.6	6075.1	6096.1
55°	7345.4	7148.8	6940.3	6718.5	6502.6	6437.1	6511.5	6533.8
57.5°	7808.3	7619.3	7430.2	7206.8	6996.9	6897.1	6977.6	7008.8
60°	8319.2	8152.4	7973.6	7748.9	7541.9	7425.7	7494.2	7530.0
62.5°	8820.9	8786.7	8624.4	8390.6	8128.6	8012.4	8070.5	8095.7
65°	8862.7	9418.0	9410.6	9178.3	8812.1	8616.9	8633.3	8645.3
67.5°	7735.5	9010.0	9824.6	9897.4	9489.5	9184.2	9148.5	9156.0
70°	5476.5	7226.1	8954.9	10089.7	10250.4	10013.6	9936.2	9948.1
71°	4388.1	6200.3	8103.3	9629.6	10238.5	10170.0	10126.9	10158.0
72.5°	2800.8	4568.3	6420.6	8246.3	9415.0	9750.2	9799.3	9818.6
75°	1017.1	1965.5	3326.5	4766.3	6040.9	6917.9	7400.3	7439.1
77.5°	546.4	704.4	1088.4	1626.0	2042.9	2266.2	2293.2	2303.6
80°	402.0	466.1	533.1	609.1	656.7	665.6	649.3	615.0
82.5°	284.5	321.7	348.5	375.2	394.5	378.1	314.1	239.8
85°	165.3	181.6	196.5	209.9	212.9	201.0	132.5	108.7
87.5°	65.5	71.4	70.0	79.0	75.9	70.0	52.1	44.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)