

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: P196422

Luminaire Tested: **NAV-AF-06-D-UNV-5NQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196422
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23596.7 lumens
Efficiency: N/A
Efficacy: 122.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

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

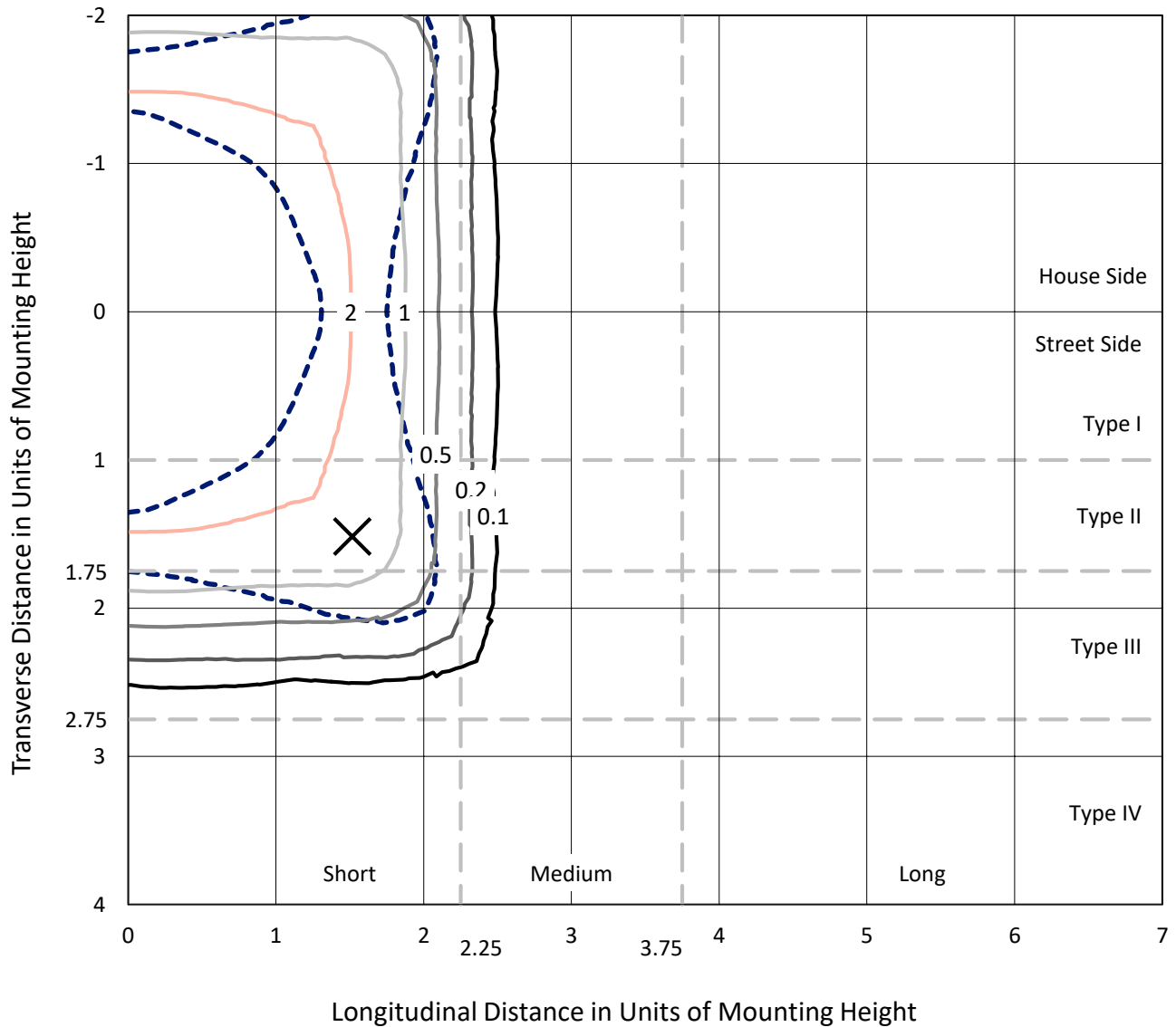


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Iso-Footcandle Lines of Horizontal Illumination

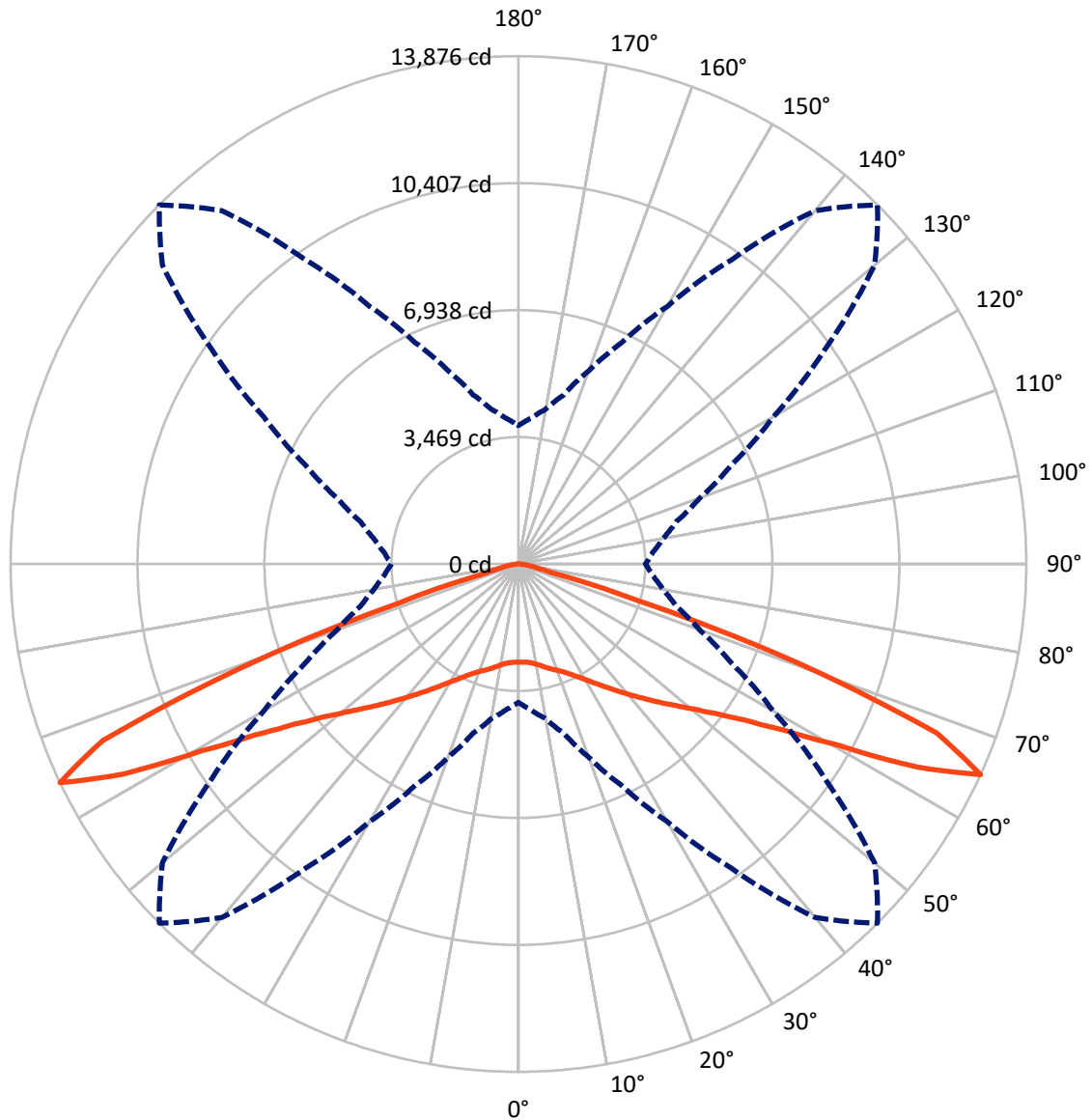
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11798.4	0.0	11798.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11798.4	0.0	11798.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	23596.7	0.0	23596.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.4	1.1
10°-20°	837.7	3.6
20°-30°	1562.8	6.6
30°-40°	2635.1	11.2
40°-50°	4280.1	18.1
50°-60°	6706.2	28.4
60°-70°	6330.3	26.8
70°-80°	853.1	3.6
80°-90°	130.0	0.6
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°	23596.7	100.0
0°-180°	23596.7	100.0



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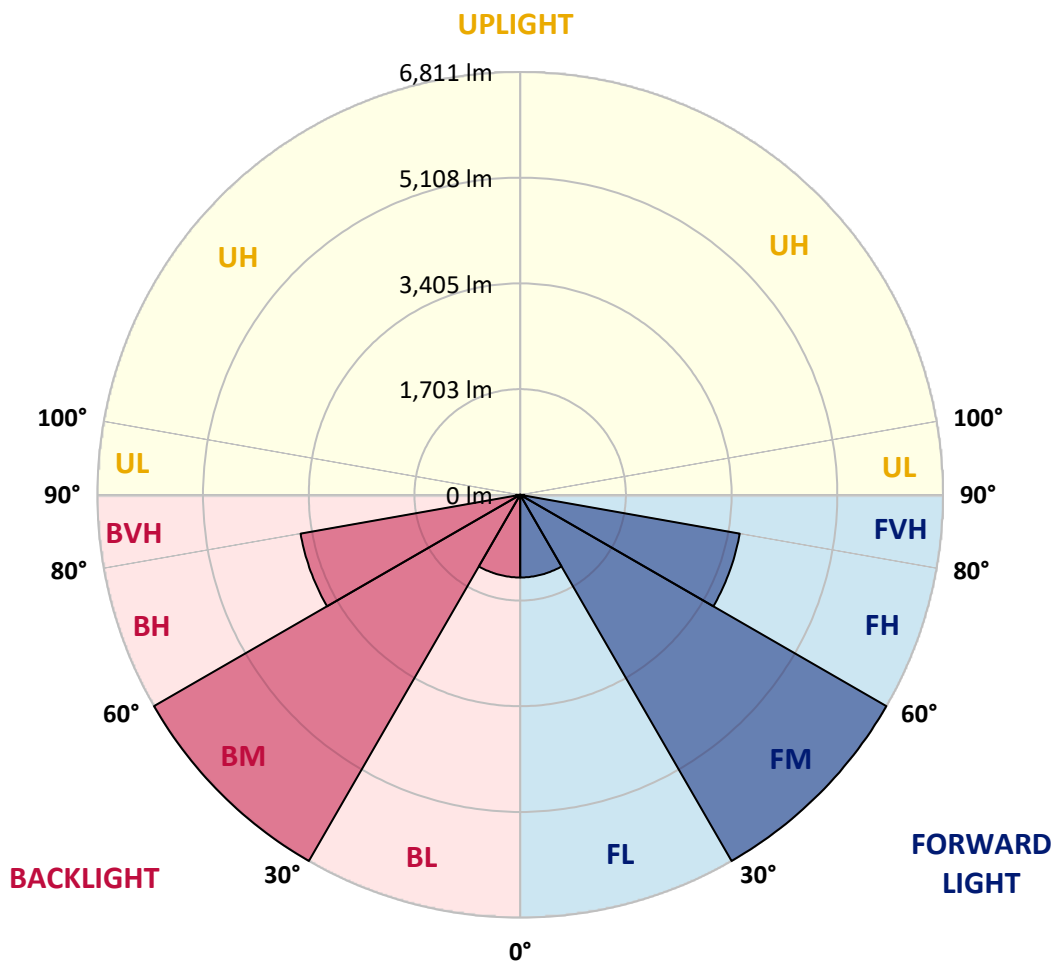
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1330.9	5.6			
FM	(30°-60°)	6810.7	28.9			
FH	(60°-80°)	3591.7	15.2			G2/5000
FVH	(80°-90°)	65.0	0.3			G1/100
BL	(0°-30°)	1330.9	5.6	B3/2500		
BM	(30°-60°)	6810.7	28.9	B4/8500		
BH	(60°-80°)	3591.7	15.2	B4/5000		G2/5000
BVH	(80°-90°)	65.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1
2.5°	2706.2	2706.2	2710.5	2709.1	2703.2	2698.8	2694.5	2688.6	2685.6	2682.7	2681.1
5°	2720.9	2720.9	2725.3	2723.9	2719.4	2713.5	2710.5	2706.2	2701.8	2698.8	2700.3
7.5°	2757.6	2759.1	2760.6	2759.1	2754.7	2750.3	2744.4	2742.9	2737.1	2732.6	2735.6
10°	2813.4	2813.4	2814.9	2816.3	2813.4	2803.1	2803.1	2800.2	2794.3	2788.6	2789.9
12.5°	2875.1	2875.1	2876.7	2876.7	2876.7	2870.8	2872.2	2870.8	2863.4	2860.5	2863.4
15°	2935.5	2936.9	2936.9	2939.8	2939.8	2941.4	2947.3	2947.3	2944.3	2942.8	2942.8
17.5°	3006.0	3009.0	3010.4	3014.8	3016.3	3019.3	3025.2	3026.6	3028.0	3023.6	3025.2
20°	3100.1	3101.6	3106.0	3107.5	3113.4	3113.4	3116.3	3114.8	3111.8	3106.0	3106.0
22.5°	3205.8	3208.8	3217.6	3217.6	3225.0	3220.6	3222.0	3217.6	3210.4	3207.5	3204.5
25°	3344.1	3348.5	3355.9	3352.9	3355.9	3348.5	3348.5	3348.5	3344.1	3339.7	3338.2
27.5°	3519.0	3511.7	3519.0	3513.1	3511.7	3505.8	3507.2	3504.3	3499.9	3498.5	3492.6
30°	3701.2	3692.5	3696.9	3698.3	3695.3	3693.9	3688.0	3683.6	3676.3	3677.7	3673.4
32.5°	3910.1	3901.2	3905.6	3907.1	3904.2	3907.1	3905.6	3895.3	3886.5	3892.4	3892.4
35°	4158.4	4152.6	4164.3	4168.7	4159.9	4155.4	4149.6	4137.8	4124.6	4133.5	4134.9
37.5°	4456.8	4449.5	4458.4	4470.1	4454.0	4445.1	4421.6	4403.9	4395.1	4399.6	4405.5
40°	4767.0	4768.5	4793.4	4796.4	4778.8	4768.5	4744.9	4718.5	4693.4	4693.4	4700.9
42.5°	5093.3	5097.7	5127.1	5137.4	5131.6	5112.5	5080.1	5047.8	5015.4	5021.3	5030.1
45°	5462.3	5456.4	5487.2	5512.2	5507.9	5502.0	5471.0	5412.2	5382.8	5381.4	5396.1
47.5°	5850.3	5862.1	5894.4	5937.0	5935.6	5920.9	5881.2	5826.8	5772.3	5776.9	5794.4
50°	6303.0	6319.2	6373.6	6416.2	6422.2	6417.8	6370.7	6307.5	6231.0	6235.4	6259.0
52.5°	6708.7	6732.3	6795.5	6883.7	6938.1	6963.1	6932.2	6873.4	6795.5	6799.9	6824.9
55°	7076.2	7113.0	7207.1	7327.6	7436.4	7537.8	7583.3	7581.9	7524.5	7537.8	7570.1
57.5°	7307.0	7358.5	7501.0	7695.1	7911.1	8115.4	8291.9	8458.0	8494.8	8563.8	8563.8
60°	6996.9	7117.3	7307.0	7639.3	8064.1	8522.7	9019.5	9503.2	9814.8	10060.3	9928.0
62.5°	5842.9	6020.8	6286.9	6724.9	7386.4	8205.2	9203.2	10327.7	11500.7	12218.1	11691.9
65°	3780.7	4004.2	4293.7	4786.1	5619.5	6673.4	8127.2	10148.4	12603.2	13876.2	12700.2
67.5°	1497.8	1649.3	1825.6	2175.5	2898.7	3933.6	5565.1	8058.2	11128.8	12329.8	11011.2
70°	715.8	740.9	774.6	849.6	1030.5	1390.6	2235.8	3970.3	6824.9	8090.5	6661.7
72.5°	517.5	521.8	538.0	563.0	615.9	689.4	837.9	1214.2	2353.3	3422.0	2356.2
75°	392.5	398.4	407.2	420.4	448.3	483.6	539.4	646.9	805.6	929.0	804.0
77.5°	298.4	304.3	311.6	324.8	339.6	364.6	385.1	427.7	495.4	521.8	518.9
80°	217.5	227.8	239.6	251.4	261.6	273.3	274.9	295.4	333.7	358.7	351.3
82.5°	138.2	147.0	177.9	191.1	192.6	195.5	194.1	195.5	216.2	233.7	227.8
85°	88.2	94.1	110.3	125.0	122.1	127.9	127.9	125.0	116.2	100.0	119.1
87.5°	44.1	45.6	52.9	66.1	63.3	55.8	54.4	54.4	39.7	33.8	36.7
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°	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1	2684.1
2.5°	2676.8	2679.7	2675.3	2675.3	2673.8	2676.8	2672.4	2672.4
5°	2697.3	2701.8	2700.3	2700.3	2703.2	2706.2	2704.7	2703.2
7.5°	2734.1	2737.1	2740.0	2741.5	2744.4	2742.9	2745.8	2744.4
10°	2789.9	2786.9	2791.3	2786.9	2788.6	2785.6	2786.9	2786.9
12.5°	2860.5	2856.0	2853.1	2850.2	2850.2	2844.3	2844.3	2845.7
15°	2941.4	2933.9	2928.1	2925.2	2922.2	2922.2	2917.8	2920.7
17.5°	3020.7	3013.4	3003.1	3003.1	2998.6	2995.7	2992.8	3000.2
20°	3104.5	3097.2	3091.3	3089.9	3081.0	3078.1	3079.5	3088.3
22.5°	3201.6	3197.2	3197.2	3194.2	3188.3	3184.0	3184.0	3194.2
25°	3332.3	3323.5	3325.0	3326.5	3323.5	3323.5	3320.6	3327.9
27.5°	3492.6	3485.3	3489.6	3492.6	3489.6	3494.0	3489.6	3495.5
30°	3680.7	3676.3	3680.7	3685.1	3677.7	3677.7	3674.8	3679.2
32.5°	3905.6	3899.7	3902.6	3902.6	3892.4	3883.5	3871.8	3880.7
35°	4152.6	4145.2	4151.1	4155.4	4143.7	4134.9	4117.3	4124.6
37.5°	4424.5	4427.4	4434.9	4454.0	4451.0	4436.3	4423.1	4429.0
40°	4728.7	4743.5	4775.8	4789.1	4786.1	4771.4	4753.8	4756.7
42.5°	5072.7	5091.8	5125.7	5147.8	5137.4	5116.8	5094.8	5103.6
45°	5447.5	5476.9	5521.1	5543.2	5529.9	5507.9	5476.9	5493.1
47.5°	5844.5	5903.3	5962.1	5991.4	5987.1	5956.2	5916.5	5920.9
50°	6319.2	6397.1	6472.1	6501.5	6479.5	6432.4	6376.6	6375.1
52.5°	6910.2	6993.9	7055.6	7048.4	6993.9	6920.5	6857.2	6854.3
55°	7648.0	7676.0	7667.2	7604.0	7508.4	7393.8	7312.9	7299.7
57.5°	8540.4	8446.3	8308.1	8117.0	7902.4	7684.9	7537.8	7483.3
60°	9630.9	9206.1	8712.4	8191.9	7717.2	7361.5	7136.5	6999.8
62.5°	10532.0	9301.8	8197.8	7293.8	6554.5	6114.9	5807.6	5618.1
65°	10223.4	8036.1	6436.8	5271.2	4464.3	4010.1	3685.1	3469.1
67.5°	7898.0	5369.6	3736.5	2590.0	1963.8	1662.5	1452.3	1315.6
70°	3982.1	2059.4	1248.0	880.5	752.6	699.7	664.4	643.9
72.5°	1168.6	780.5	648.2	573.3	527.7	495.4	474.8	464.5
75°	646.9	527.7	466.0	423.4	394.0	371.9	358.7	349.8
77.5°	445.3	383.6	352.8	324.8	301.3	285.1	274.9	266.0
80°	311.6	280.8	267.5	252.8	235.2	221.9	207.3	201.4
82.5°	207.3	194.1	191.1	179.3	169.1	154.4	127.9	119.1
85°	122.1	120.5	120.5	116.2	108.8	95.5	76.5	76.5
87.5°	42.6	44.1	45.6	48.5	47.1	39.7	32.3	30.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)