

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: P196523

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196523
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24010.8 lumens
Efficiency: N/A
Efficacy: 114.3 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

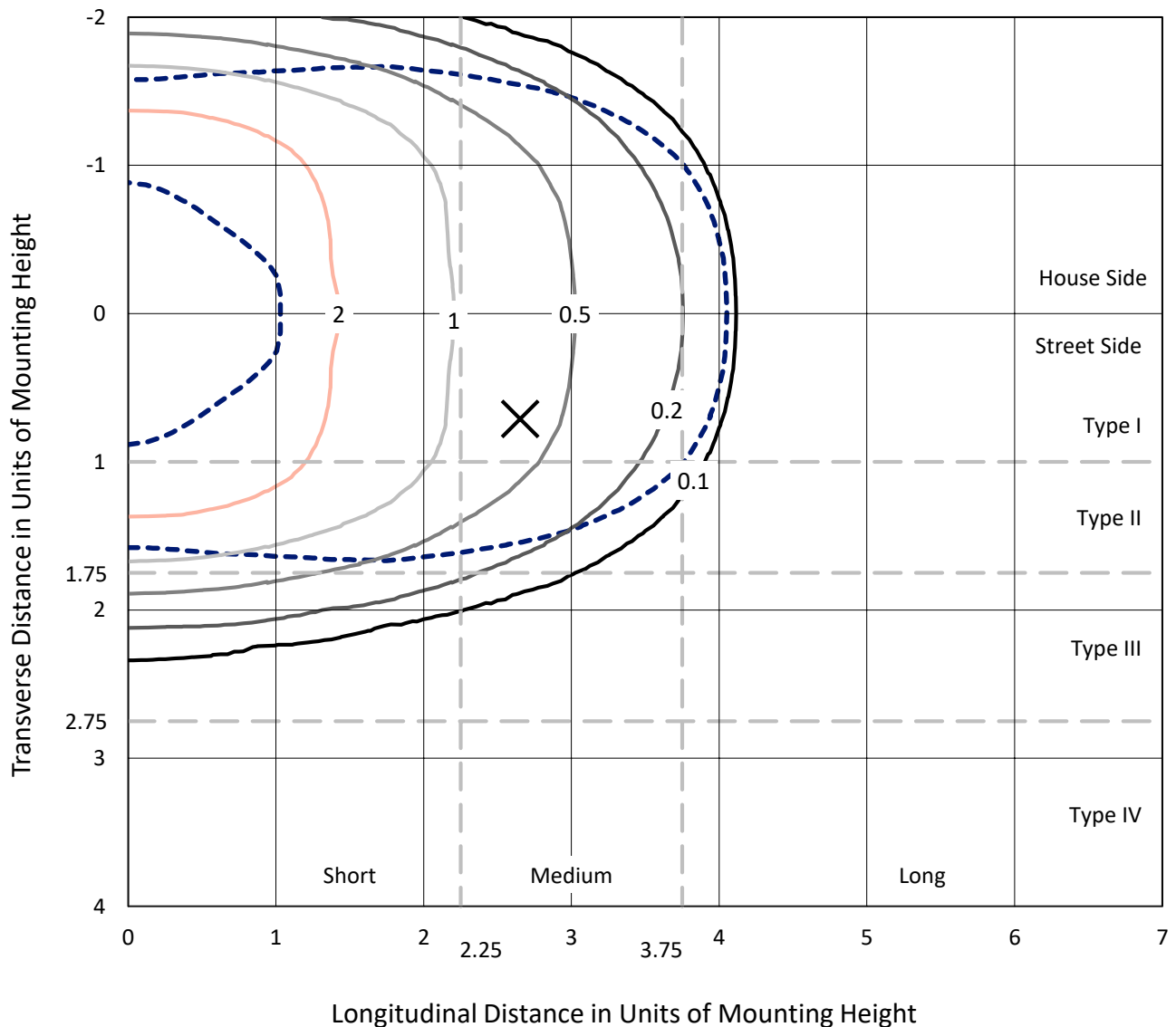


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

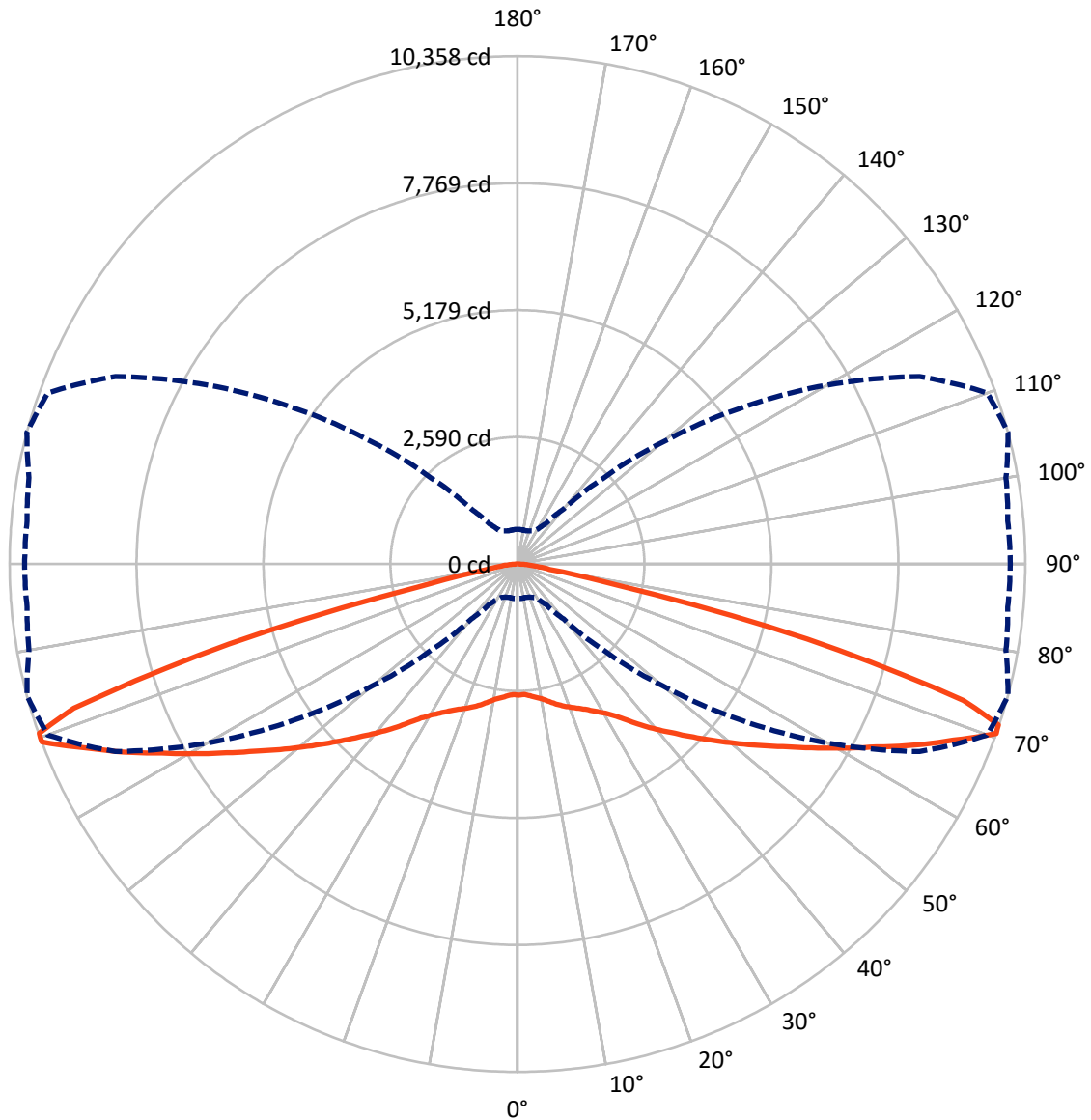


Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type II - Medium - Full Cutoff

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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
House Side	Lumens	12005.4	0.0	12005.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12005.4	0.0	12005.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	24010.8	0.0	24010.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.5	1.1
10°-20°	795.4	3.3
20°-30°	1493.9	6.2
30°-40°	2631.5	11.0
40°-50°	4361.3	18.2
50°-60°	6067.2	25.3
60°-70°	5727.6	23.9
70°-80°	2446.3	10.2
80°-90°	231.1	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°	24010.8	100.0
0°-180°	24010.8	100.0



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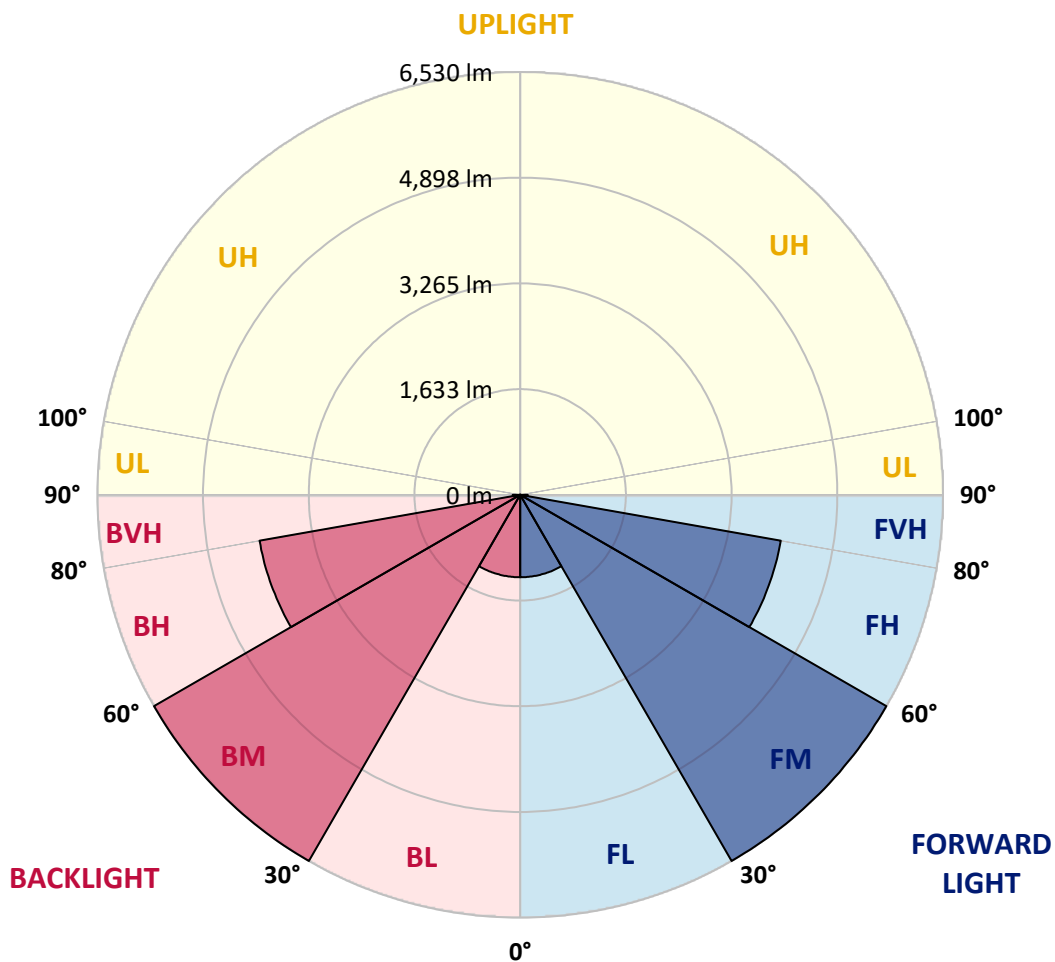
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1272.9	5.3			
FM	(30°-60°)	6530.0	27.2			
FH	(60°-80°)	4086.9	17.0			G2/5000
FVH	(80°-90°)	115.6	0.5			G2/225
BL	(0°-30°)	1272.9	5.3	B3/2500		
BM	(30°-60°)	6530.0	27.2	B4/8500		
BH	(60°-80°)	4086.9	17.0	B4/5000		G4/5000
BVH	(80°-90°)	115.6	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°	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8
2.5°	2690.4	2688.9	2690.4	2685.9	2687.3	2685.9	2685.9	2679.9	2679.9	2676.9	2672.4
5°	2660.3	2663.3	2663.3	2663.3	2667.8	2667.8	2673.8	2675.3	2679.9	2684.4	2687.3
7.5°	2610.6	2612.2	2616.6	2619.7	2628.7	2640.7	2652.9	2666.4	2678.4	2693.3	2709.9
10°	2568.4	2571.5	2579.1	2586.6	2603.1	2618.2	2639.2	2660.3	2681.3	2706.9	2732.6
12.5°	2546.0	2550.4	2562.4	2574.4	2600.2	2619.7	2648.2	2681.3	2709.9	2734.0	2762.6
15°	2548.9	2550.4	2567.0	2583.6	2619.7	2646.8	2687.3	2726.4	2761.1	2788.2	2821.3
17.5°	2592.6	2595.6	2612.2	2636.2	2670.9	2705.5	2749.1	2789.7	2836.4	2867.9	2907.1
20°	2678.4	2682.9	2700.9	2726.4	2764.2	2800.2	2845.3	2887.5	2935.7	2973.3	3012.4
22.5°	2789.7	2797.2	2816.8	2848.4	2886.0	2929.7	2976.3	3019.9	3065.0	3102.6	3135.7
25°	2938.6	2947.7	2968.8	3000.4	3038.0	3084.6	3132.8	3178.0	3224.6	3253.2	3280.2
27.5°	3138.8	3153.9	3176.3	3202.0	3235.0	3284.8	3329.9	3367.5	3412.6	3444.3	3462.3
30°	3408.2	3429.2	3447.2	3474.3	3498.4	3551.0	3587.2	3617.2	3651.9	3669.9	3674.5
32.5°	3737.6	3757.2	3775.2	3794.8	3827.9	3876.1	3910.7	3927.3	3945.4	3942.3	3925.8
35°	4109.3	4124.3	4134.9	4169.6	4223.6	4255.3	4280.9	4286.9	4289.8	4258.3	4226.7
37.5°	4500.5	4518.6	4527.6	4581.8	4632.9	4669.0	4681.1	4694.7	4685.6	4632.9	4575.8
40°	4923.3	4942.9	4969.9	5016.6	5076.8	5111.4	5126.5	5125.1	5117.4	5055.8	4962.4
42.5°	5338.6	5362.8	5385.3	5466.6	5516.2	5574.9	5582.4	5580.9	5564.3	5493.7	5385.3
45°	5690.8	5719.2	5765.9	5856.3	5936.0	6006.7	6035.4	6045.9	6029.3	5954.1	5830.7
47.5°	5981.2	6000.7	6059.4	6169.3	6271.6	6375.4	6432.5	6473.2	6471.7	6417.6	6286.6
50°	6179.8	6202.3	6274.5	6398.0	6525.8	6647.8	6760.6	6852.4	6896.0	6856.9	6735.0
52.5°	6236.9	6265.6	6360.3	6507.8	6656.7	6820.7	6989.4	7151.8	7249.6	7273.7	7178.9
55°	5996.1	6027.9	6166.3	6370.9	6616.0	6858.4	7114.2	7345.9	7547.5	7640.8	7603.3
57.5°	5295.0	5317.5	5493.7	5758.5	6109.0	6534.9	6965.2	7389.5	7735.7	7977.9	8019.9
60°	4187.6	4216.1	4408.7	4688.7	5087.3	5626.1	6227.9	6923.1	7601.7	8157.0	8432.3
62.5°	2825.8	2845.3	3030.5	3286.3	3722.6	4241.8	4912.9	5793.0	6760.6	7752.2	8528.6
65°	1483.6	1483.6	1608.6	1787.6	2135.2	2600.2	3287.7	4190.5	5341.6	6580.0	7878.5
67.5°	860.6	859.3	887.7	928.3	1038.3	1226.3	1605.4	2269.1	3358.5	4800.0	6277.6
70°	710.1	705.7	701.2	701.2	717.8	746.4	818.6	1000.6	1464.1	2475.3	3862.6
71°	678.6	675.7	663.5	659.1	666.6	681.7	713.3	797.5	1039.7	1688.3	2884.5
72.5°	641.1	633.4	615.4	607.9	609.4	615.4	624.4	657.5	731.3	960.0	1644.7
75°	583.8	565.8	543.2	532.6	528.2	526.6	526.6	535.7	552.2	579.3	674.1
77.5°	517.6	492.0	467.9	457.5	449.9	445.3	442.4	436.4	433.3	445.3	479.9
80°	437.9	410.9	391.2	385.2	380.7	371.7	359.6	347.6	340.1	346.2	367.1
82.5°	338.6	311.5	314.4	316.0	308.4	293.4	281.4	267.8	254.2	251.3	261.7
85°	269.4	255.7	246.8	266.4	249.7	231.7	215.1	192.7	161.0	132.4	144.4
87.5°	115.9	117.4	168.5	254.2	222.7	179.0	148.9	120.4	76.7	57.2	58.7
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°	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8	2673.8
2.5°	2670.9	2670.9	2666.4	2663.3	2663.3	2663.3	2660.3	2661.8
5°	2688.9	2691.9	2694.9	2693.3	2697.9	2702.4	2700.9	2699.5
7.5°	2719.0	2727.9	2737.1	2741.6	2747.6	2753.6	2755.1	2750.6
10°	2749.1	2767.1	2780.6	2792.6	2800.2	2806.3	2810.8	2809.3
12.5°	2786.6	2812.3	2836.4	2860.4	2877.1	2886.0	2895.1	2892.0
15°	2848.4	2877.1	2907.1	2938.6	2964.2	2977.8	2991.3	2988.3
17.5°	2932.6	2958.2	2982.3	3013.9	3045.5	3060.6	3075.5	3074.1
20°	3038.0	3057.5	3071.1	3089.1	3119.3	3135.7	3149.3	3144.8
22.5°	3158.3	3164.3	3165.9	3171.9	3196.0	3215.5	3233.6	3238.1
25°	3289.2	3284.8	3275.7	3271.2	3287.7	3308.8	3331.5	3337.5
27.5°	3451.7	3436.7	3414.2	3396.1	3400.5	3427.7	3453.2	3459.2
30°	3656.4	3621.8	3573.7	3539.0	3533.0	3561.7	3588.7	3597.7
32.5°	3889.6	3842.9	3776.8	3724.1	3701.6	3727.2	3751.2	3764.7
35°	4166.5	4115.4	4035.6	3967.9	3931.8	3948.3	3990.4	4005.5
37.5°	4494.5	4423.8	4335.0	4249.2	4189.1	4192.1	4237.2	4255.3
40°	4857.1	4754.9	4642.0	4535.2	4447.8	4441.8	4482.5	4496.0
42.5°	5234.8	5103.9	4971.6	4831.6	4723.3	4703.7	4756.4	4757.8
45°	5641.0	5472.6	5308.6	5146.0	5033.2	4998.6	5049.8	5055.8
47.5°	6074.5	5863.8	5669.7	5493.7	5371.7	5317.5	5367.3	5376.3
50°	6525.8	6307.6	6081.9	5886.4	5743.4	5677.2	5735.9	5741.9
52.5°	6972.7	6766.7	6542.5	6318.3	6145.2	6069.9	6139.2	6160.2
55°	7422.6	7224.0	7013.4	6789.2	6571.0	6504.7	6580.0	6602.5
57.5°	7890.6	7699.5	7508.4	7282.6	7070.6	6969.7	7050.9	7082.6
60°	8406.7	8238.1	8057.7	7830.4	7621.3	7503.9	7573.1	7609.3
62.5°	8913.8	8879.2	8715.2	8478.9	8214.1	8096.7	8155.4	8181.0
65°	8956.0	9517.1	9509.7	9274.9	8904.7	8707.6	8724.3	8736.3
67.5°	7816.9	9104.9	9928.0	10001.7	9589.3	9280.9	9244.9	9252.4
70°	5534.3	7302.3	9049.2	10195.7	10358.4	10119.0	10040.8	10052.8
71°	4434.3	6265.6	8188.6	9730.8	10346.3	10277.0	10233.4	10265.0
72.5°	2830.4	4616.4	6488.3	8332.9	9514.2	9852.7	9902.3	9922.0
75°	1027.7	1986.3	3361.5	4816.4	6104.6	6990.9	7478.4	7517.5
77.5°	552.2	711.8	1099.9	1643.2	2064.5	2290.2	2317.3	2327.8
80°	406.2	471.0	538.6	615.4	663.5	672.6	656.0	621.4
82.5°	287.4	325.0	352.2	379.1	398.8	382.2	317.5	242.2
85°	167.0	183.5	198.7	212.2	215.1	203.1	134.0	109.8
87.5°	66.2	72.2	70.7	79.8	76.7	70.7	52.7	45.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)