

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: P196464

Luminaire Tested: **NAV-AF-06-D-UNV-5WQ-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196464
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39760.5 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 382
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

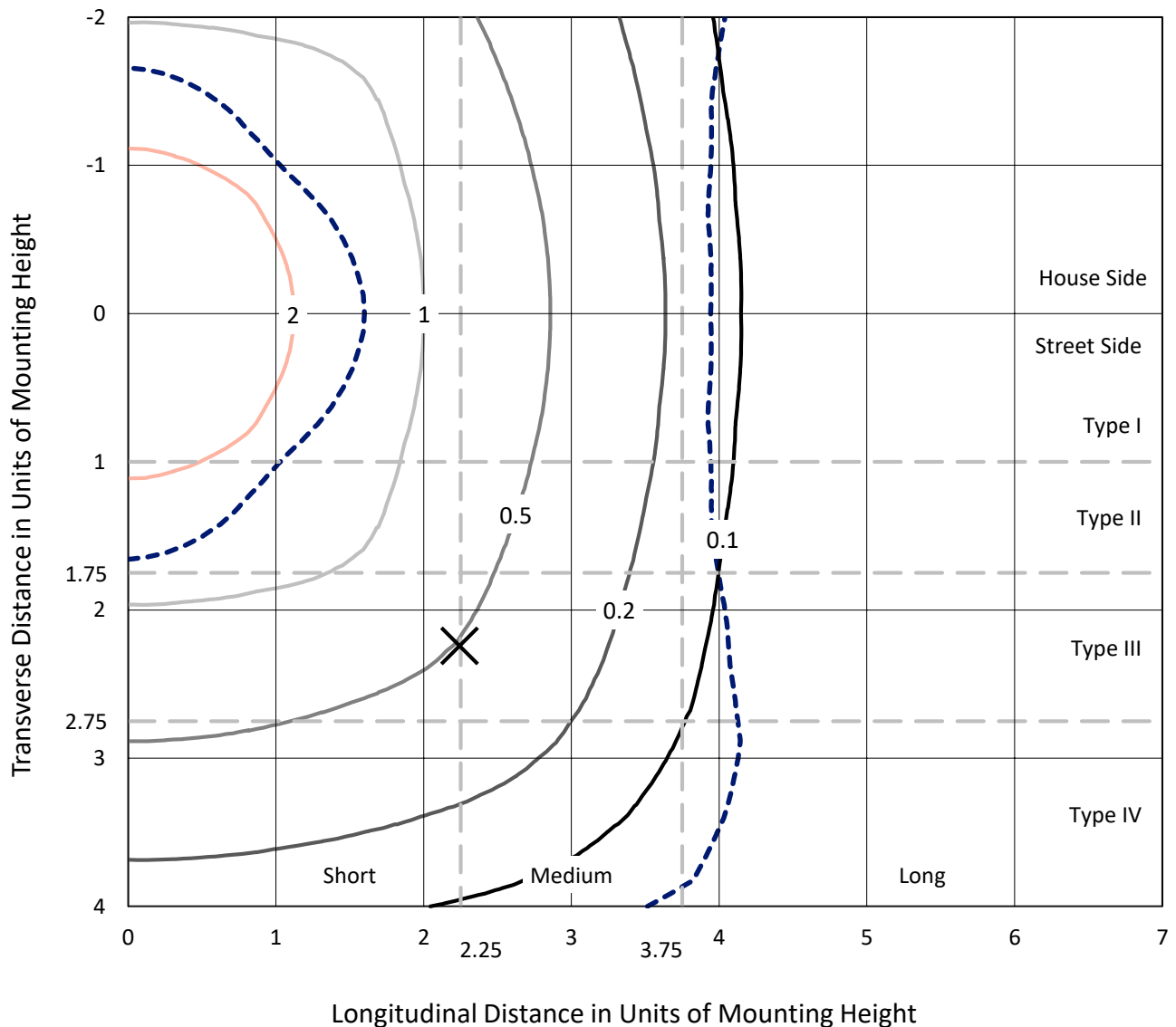


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

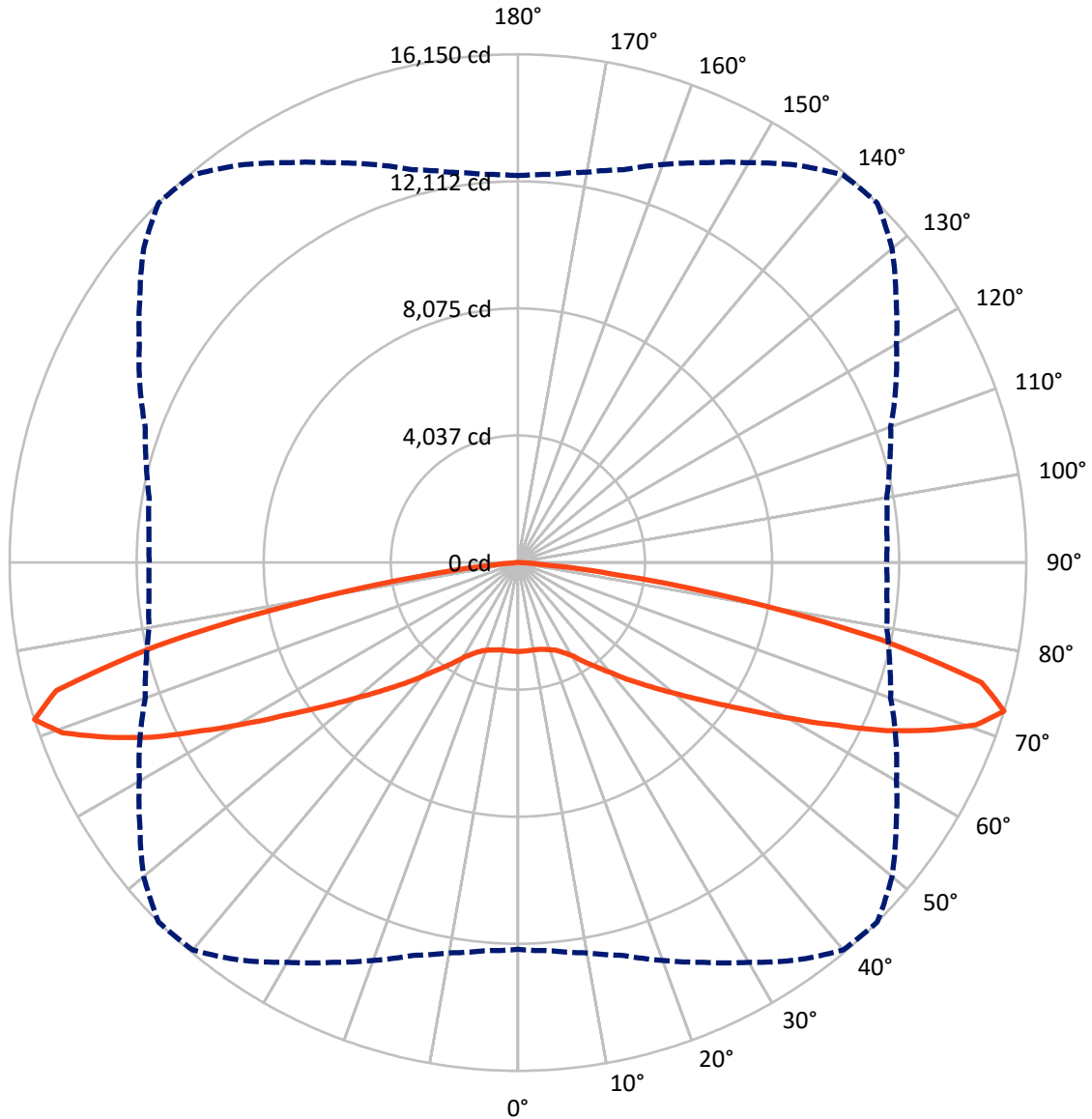


Based on 30 foot mounting height. Maximum calculated value = 3.1 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	19880.3	0.0	19880.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	19880.3	0.0	19880.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	39760.5	0.0	39760.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	269.8	0.7
10°-20°	816.5	2.1
20°-30°	1474.1	3.7
30°-40°	2514.4	6.3
40°-50°	4280.8	10.8
50°-60°	6889.2	17.3
60°-70°	11457.0	28.8
70°-80°	11083.3	27.9
80°-90°	975.5	2.5
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°	39760.5	100.0
0°-180°	39760.5	100.0



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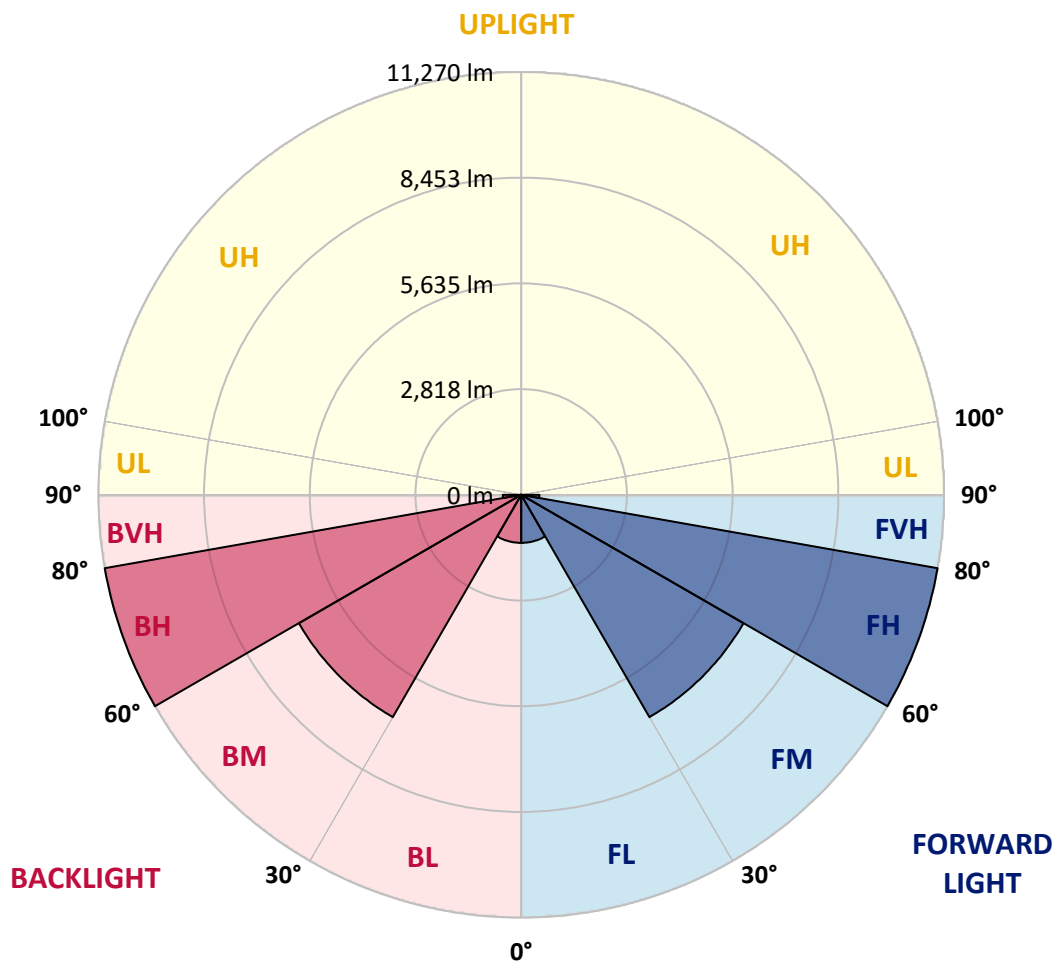
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1280.2	3.2			
FM	(30°-60°)	6842.2	17.2			
FH	(60°-80°)	11270.1	28.3			G4/12000
FVH	(80°-90°)	487.7	1.2			G3/500
BL	(0°-30°)	1280.2	3.2	B3/2500		
BM	(30°-60°)	6842.2	17.2	B4/8500		
BH	(60°-80°)	11270.1	28.3	B5		G4/12000
BVH	(80°-90°)	487.7	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6
2.5°	2848.7	2848.7	2851.1	2848.7	2843.8	2841.4	2833.9	2829.2	2824.3	2821.7	2816.9
5°	2851.1	2851.1	2853.7	2851.1	2846.2	2841.4	2836.5	2829.2	2824.3	2819.3	2816.9
7.5°	2861.0	2863.3	2865.9	2863.3	2853.7	2848.7	2841.4	2833.9	2824.3	2819.3	2814.4
10°	2880.5	2880.5	2880.5	2878.1	2870.7	2861.0	2851.1	2843.8	2831.6	2819.3	2812.0
12.5°	2895.2	2897.7	2897.7	2892.7	2883.0	2870.7	2861.0	2853.7	2843.8	2833.9	2826.6
15°	2917.2	2917.2	2914.8	2904.9	2890.4	2880.5	2875.6	2873.2	2870.7	2865.9	2858.4
17.5°	2961.3	2958.8	2951.5	2936.8	2919.6	2912.3	2907.4	2907.4	2907.4	2904.9	2900.1
20°	3025.0	3025.0	3015.1	2990.7	2976.0	2968.6	2961.3	2961.3	2961.3	2954.0	2946.6
22.5°	3127.6	3130.2	3115.4	3086.1	3066.5	3051.8	3042.0	3034.6	3027.3	3022.4	3010.2
25°	3267.2	3264.7	3247.6	3210.9	3196.3	3181.5	3162.0	3149.7	3139.9	3132.6	3117.9
27.5°	3414.1	3411.6	3392.1	3360.2	3350.4	3328.4	3313.8	3296.6	3284.4	3272.1	3257.4
30°	3602.5	3590.3	3575.5	3551.0	3546.2	3529.1	3509.5	3485.1	3465.4	3445.8	3428.8
32.5°	3771.3	3771.3	3749.3	3737.1	3746.8	3739.5	3742.0	3727.3	3715.1	3707.7	3690.6
35°	4006.3	4006.3	3996.4	3981.9	3984.2	3967.1	3964.7	3967.1	3976.9	3976.9	3957.4
37.5°	4319.6	4324.5	4292.6	4287.8	4275.6	4251.1	4238.8	4243.7	4265.7	4277.9	4251.1
40°	4708.6	4718.5	4708.6	4676.9	4662.2	4620.6	4596.1	4596.1	4613.3	4625.5	4615.6
42.5°	5092.9	5110.0	5092.9	5068.4	5056.2	5024.4	5012.2	5022.0	5044.0	5058.6	5044.0
45°	5521.2	5533.4	5511.4	5482.1	5467.4	5450.2	5442.9	5450.2	5474.7	5489.4	5484.5
47.5°	5942.2	5959.2	5932.3	5920.1	5920.1	5902.9	5922.5	5942.2	5964.1	5998.5	5983.7
50°	6353.3	6375.3	6358.3	6360.6	6380.2	6412.0	6448.7	6488.0	6527.0	6563.7	6568.6
52.5°	6720.4	6754.6	6757.1	6801.2	6862.3	6911.3	7014.1	7099.7	7192.7	7224.6	7209.9
55°	7107.1	7153.5	7214.7	7283.3	7381.1	7481.5	7655.2	7809.5	7931.7	8007.7	7995.5
57.5°	7660.1	7706.7	7770.3	7882.8	8029.7	8166.8	8404.1	8644.0	8830.0	8945.0	8888.8
60°	8377.2	8426.2	8509.4	8629.3	8820.2	9006.2	9331.8	9676.8	9965.5	10097.7	9994.9
62.5°	9326.8	9373.4	9427.1	9586.2	9799.1	10039.0	10447.7	10890.6	11257.7	11385.1	11240.6
65°	10680.2	10736.5	10753.7	10883.4	11091.4	11314.1	11754.5	12253.9	12672.3	12880.3	12591.6
67.5°	12205.0	12226.8	12295.4	12447.2	12660.1	12860.8	13208.3	13680.6	14082.0	14197.0	13888.6
70°	13098.1	13142.2	13262.1	13472.6	13727.2	14042.9	14422.1	14931.3	15386.4	15440.3	15048.8
72.5°	12290.6	12381.0	12594.0	12922.0	13455.5	14015.9	14669.3	15420.7	16074.1	16149.9	15521.1
75°	9857.9	9960.6	10215.2	10574.9	11206.4	12038.4	12983.2	14111.4	15090.3	15215.1	14383.0
77.5°	5254.4	5381.7	5751.3	6235.9	7136.5	8237.7	9375.7	10663.0	11495.1	11776.6	11177.0
80°	1324.0	1392.5	1571.1	1855.1	2464.5	3352.8	4334.2	5719.4	6752.2	7190.3	6752.2
82.5°	513.9	565.3	614.2	648.6	707.2	829.6	1145.4	1867.4	2515.9	3098.4	2682.4
85°	198.2	210.5	303.5	345.0	345.0	379.3	435.6	513.9	636.3	695.0	582.5
87.5°	78.3	85.7	105.2	161.4	166.4	146.9	156.7	176.2	134.6	112.5	127.3
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°	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6	2826.6
2.5°	2814.4	2812.0	2807.1	2809.5	2807.1	2807.1	2807.1	2807.1
5°	2812.0	2812.0	2807.1	2807.1	2807.1	2809.5	2807.1	2807.1
7.5°	2809.5	2807.1	2802.2	2799.8	2799.8	2797.2	2797.2	2797.2
10°	2804.6	2799.8	2794.9	2792.4	2792.4	2787.5	2787.5	2787.5
12.5°	2816.9	2809.5	2804.6	2802.2	2802.2	2802.2	2804.6	2804.6
15°	2851.1	2836.5	2829.2	2826.6	2829.2	2833.9	2836.5	2838.9
17.5°	2887.8	2873.2	2861.0	2856.0	2858.4	2865.9	2873.2	2878.1
20°	2934.3	2922.1	2907.4	2902.6	2902.6	2912.3	2917.2	2924.6
22.5°	3000.5	2990.7	2978.4	2971.1	2966.2	2978.4	2985.7	2990.7
25°	3105.7	3095.9	3086.1	3078.7	3076.3	3088.5	3093.4	3095.9
27.5°	3245.2	3235.3	3230.5	3228.1	3220.8	3225.6	3233.0	3230.5
30°	3426.3	3433.6	3426.3	3426.3	3414.1	3418.9	3414.1	3409.1
32.5°	3668.6	3661.2	3639.2	3624.4	3607.4	3607.4	3600.0	3592.7
35°	3910.8	3886.4	3874.2	3881.4	3874.2	3879.0	3866.8	3854.5
37.5°	4197.2	4182.6	4180.0	4202.1	4197.2	4202.1	4202.1	4184.9
40°	4576.6	4566.7	4583.9	4620.6	4635.3	4632.8	4637.7	4615.6
42.5°	5012.2	4995.0	5002.3	5034.1	5051.3	5056.2	5053.8	5034.1
45°	5447.7	5452.7	5452.7	5486.9	5504.1	5513.9	5496.8	5489.4
47.5°	5939.7	5947.0	5929.9	5951.9	5956.9	5974.0	5959.2	5947.0
50°	6507.5	6480.6	6441.4	6448.7	6448.7	6443.9	6426.7	6412.0
52.5°	7141.3	7080.1	7006.7	6982.2	6955.3	6928.4	6894.2	6867.3
55°	7863.3	7758.1	7625.9	7564.7	7513.3	7452.1	7373.8	7346.9
57.5°	8700.4	8519.2	8342.9	8232.8	8100.7	8019.9	7919.5	7914.7
60°	9693.9	9449.2	9138.3	8974.3	8842.3	8746.8	8671.0	8641.6
62.5°	10841.7	10420.8	10085.5	9909.3	9755.1	9696.3	9600.9	9613.1
65°	12018.8	11590.6	11265.0	11123.1	10978.8	10939.6	10851.5	10883.4
67.5°	13293.9	12941.5	12584.3	12452.1	12319.8	12280.7	12190.2	12217.2
70°	14436.9	13989.0	13582.7	13323.3	13098.1	12917.0	12802.0	12755.6
72.5°	14664.4	13888.6	13249.9	12601.3	12226.8	11899.0	11764.4	11712.9
75°	13176.4	11972.4	11062.0	10300.9	9879.9	9402.7	9351.3	9280.3
77.5°	10249.5	8879.0	7777.6	6798.6	6233.3	5650.9	5450.2	5298.5
80°	6113.5	4698.9	3641.6	2552.7	2082.7	1676.5	1576.1	1470.8
82.5°	2187.9	1402.4	944.6	736.6	658.3	606.9	567.8	516.4
85°	528.6	445.4	420.9	381.8	377.0	320.5	227.6	203.1
87.5°	169.0	154.2	156.7	149.2	156.7	117.5	95.5	85.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)