

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: P270561

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270561
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27822.1 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 279
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

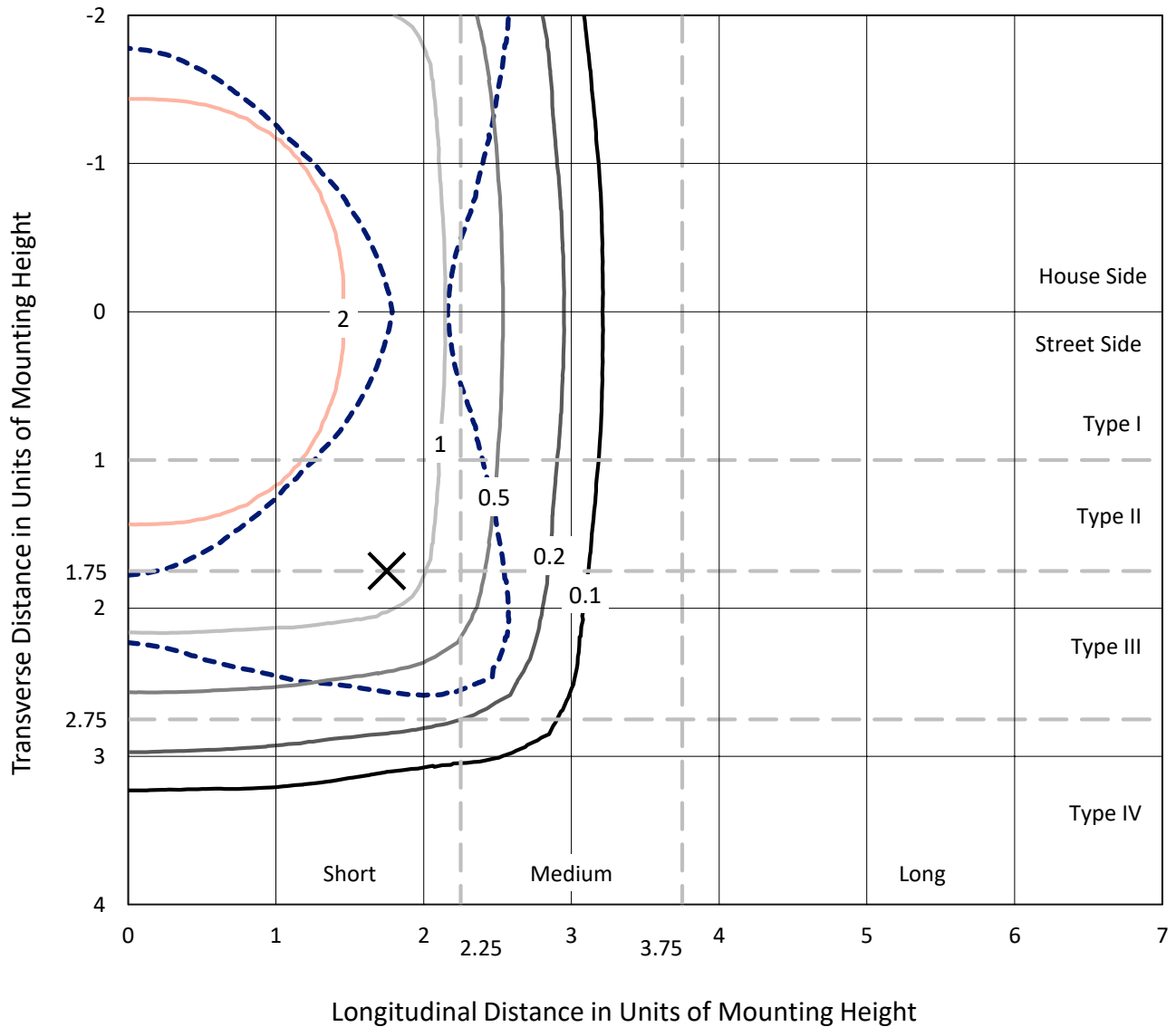


REPORT NUMBER: P270561

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

Iso-Footcandle Lines of Horizontal Illumination

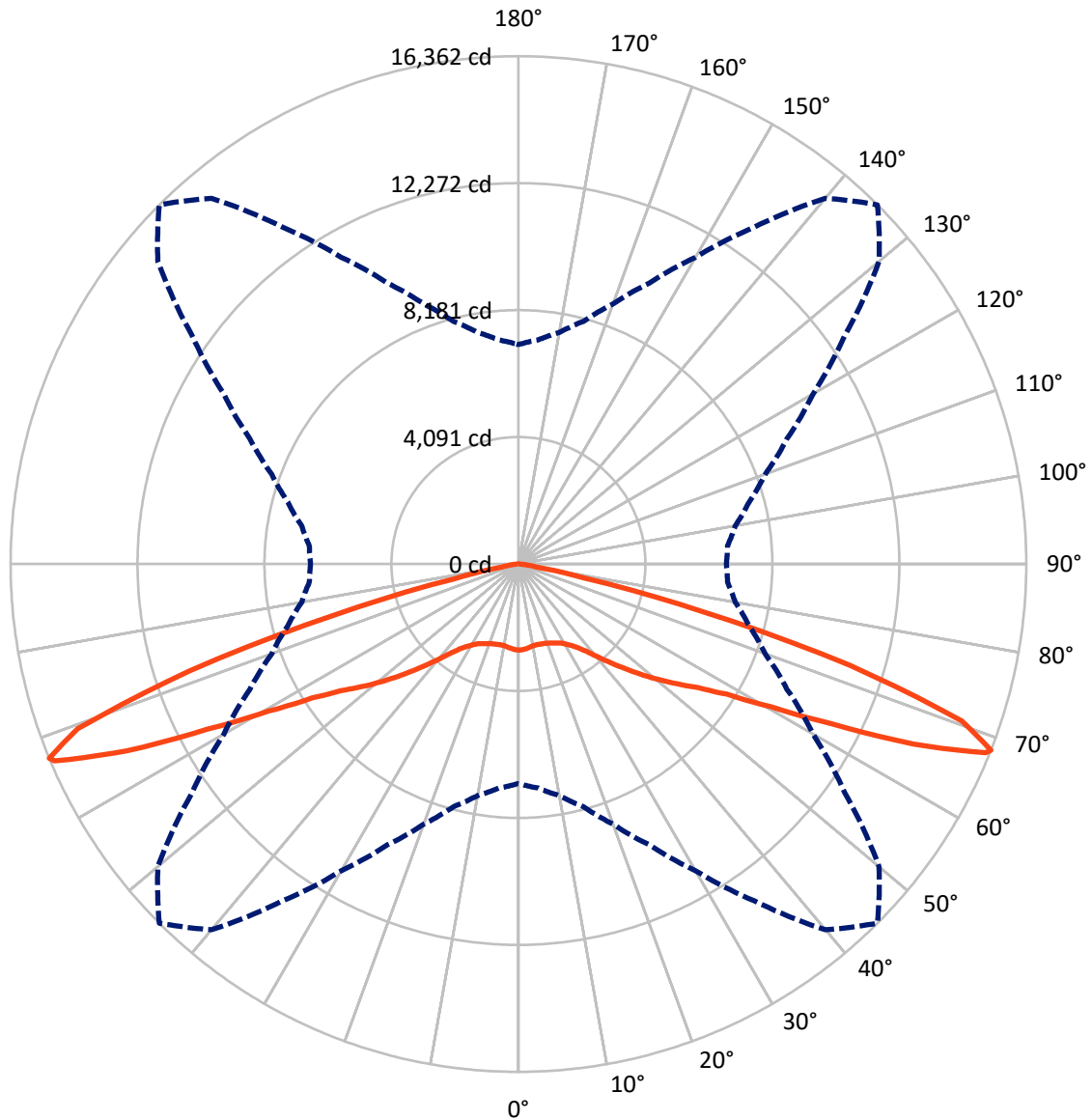
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P270561
CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P270561

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13911.0	0.0	13911.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13911.0	0.0	13911.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	27822.1	0.0	27822.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.7	0.9
10°-20°	753.2	2.7
20°-30°	1280.5	4.6
30°-40°	2095.4	7.5
40°-50°	3744.8	13.5
50°-60°	6324.5	22.7
60°-70°	9806.9	35.2
70°-80°	3371.8	12.1
80°-90°	185.3	0.7
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°	27822.1	100.0
0°-180°	27822.1	100.0



REPORT NUMBER: P270561

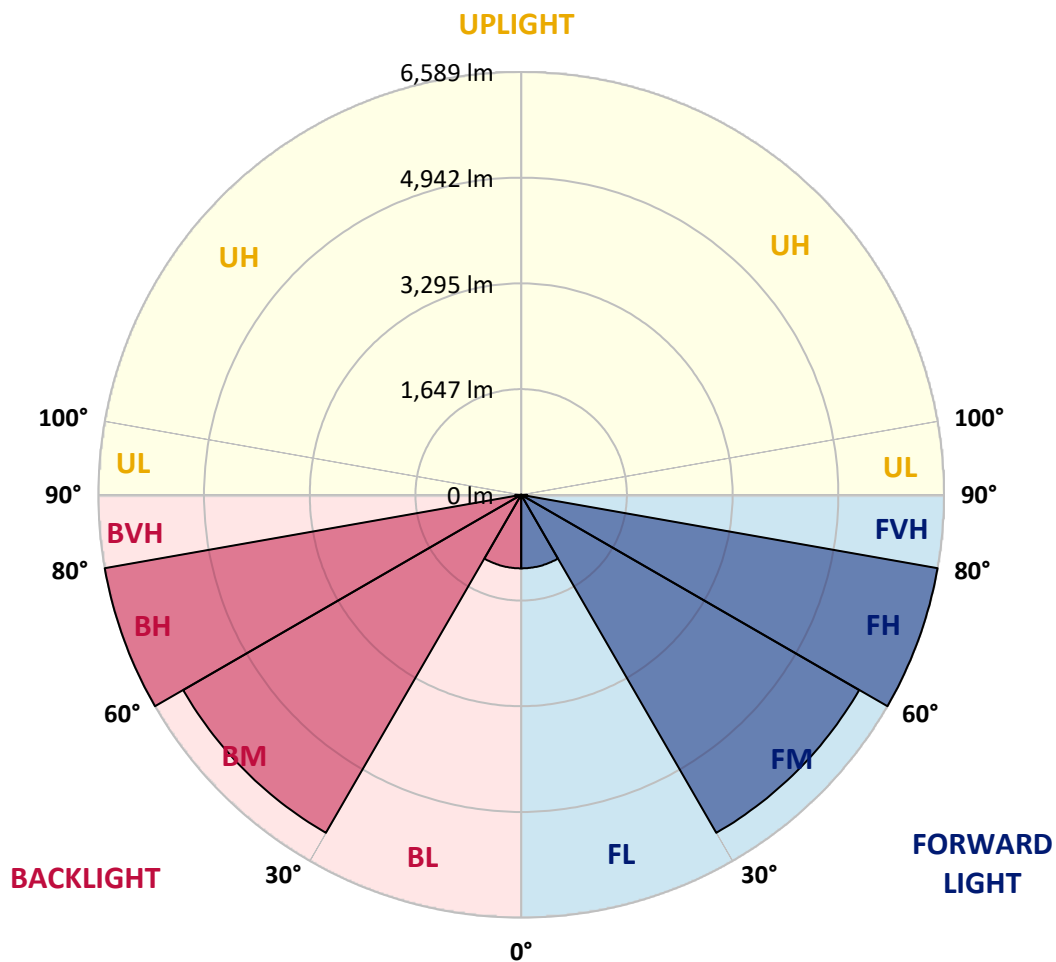
CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1146.7	4.1			
FM	(30°-60°)	6082.4	21.9			
FH	(60°-80°)	6589.4	23.7			G3/7500
FVH	(80°-90°)	92.6	0.3			G1/100
BL	(0°-30°)	1146.7	4.1	B3/2500		
BM	(30°-60°)	6082.4	21.9	B4/8500		
BH	(60°-80°)	6589.4	23.7	B5		G3/7500
BVH	(80°-90°)	92.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





REPORT NUMBER: P270561

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4
2.5°	2787.3	2787.3	2790.7	2789.0	2783.8	2778.7	2773.6	2768.5	2765.2	2761.7	2758.2
5°	2758.2	2758.2	2763.4	2760.0	2756.5	2751.5	2748.1	2743.0	2739.6	2736.1	2737.9
7.5°	2720.8	2724.2	2727.7	2725.9	2719.1	2717.5	2712.3	2710.5	2707.2	2702.1	2703.8
10°	2688.4	2690.2	2693.6	2691.9	2690.2	2685.0	2683.3	2681.6	2680.0	2673.0	2671.4
12.5°	2656.1	2659.5	2662.8	2664.6	2662.8	2664.6	2666.3	2668.0	2666.3	2662.8	2662.8
15°	2630.5	2633.9	2639.0	2644.2	2645.9	2656.1	2662.8	2669.8	2674.9	2676.5	2671.4
17.5°	2616.9	2622.1	2628.8	2639.0	2647.6	2659.5	2671.4	2681.6	2690.2	2691.9	2686.7
20°	2615.1	2620.3	2630.5	2642.5	2657.7	2673.0	2691.9	2707.2	2715.7	2720.8	2715.7
22.5°	2627.2	2633.9	2647.6	2662.8	2681.6	2702.1	2725.9	2743.0	2760.0	2766.8	2761.7
25°	2661.1	2668.0	2683.3	2702.1	2722.6	2748.1	2771.9	2794.1	2811.2	2819.6	2812.9
27.5°	2732.7	2734.4	2751.5	2771.9	2795.7	2818.0	2848.5	2858.9	2872.4	2881.0	2872.4
30°	2833.3	2836.7	2851.9	2884.4	2906.6	2935.5	2952.5	2962.7	2978.2	2986.5	2976.4
32.5°	2986.5	2990.0	3003.7	3034.2	3054.7	3076.9	3097.4	3104.2	3119.5	3129.8	3117.7
35°	3202.9	3209.7	3221.7	3242.2	3259.2	3276.2	3291.6	3286.4	3296.7	3310.3	3298.3
37.5°	3499.3	3497.7	3501.1	3516.4	3533.6	3543.8	3567.6	3555.6	3565.8	3577.8	3570.9
40°	3845.3	3845.3	3843.6	3870.7	3877.7	3887.9	3913.3	3898.0	3911.7	3925.4	3913.3
42.5°	4238.8	4245.6	4254.2	4276.3	4295.1	4298.4	4310.3	4303.6	4320.6	4332.5	4320.6
45°	4691.9	4702.2	4712.5	4763.5	4772.1	4779.0	4787.3	4765.2	4784.1	4794.3	4790.8
47.5°	5162.2	5181.0	5203.2	5256.0	5289.9	5305.3	5312.1	5286.5	5288.3	5303.7	5305.3
50°	5693.7	5714.2	5736.3	5796.0	5828.4	5855.6	5864.1	5835.2	5838.7	5850.5	5854.0
52.5°	6184.4	6208.2	6255.9	6336.0	6382.1	6429.8	6433.2	6397.4	6412.7	6421.3	6414.4
55°	6646.1	6676.8	6739.9	6847.2	6930.7	7024.3	7067.0	7027.8	7027.8	7021.0	7017.6
57.5°	7184.6	7218.6	7283.4	7407.8	7523.6	7658.1	7774.0	7813.2	7884.8	7908.6	7871.0
60°	7995.5	8031.2	8097.7	8261.3	8407.7	8603.6	8794.5	8949.5	9201.7	9338.1	9215.4
62.5°	8736.6	8791.2	8947.8	9234.0	9551.0	9913.9	10334.7	10634.6	11092.8	11321.1	11012.7
65°	8567.9	8678.6	8985.3	9435.1	10089.4	10876.5	11733.4	12556.2	13503.5	13989.1	13362.2
67.5°	7484.4	7578.1	7908.6	8431.6	9247.7	10332.9	11665.3	13368.9	15323.1	16232.9	15123.8
68°	7070.4	7245.9	7574.7	8094.3	8917.1	9983.8	11406.3	13246.2	15379.3	16362.4	15164.6
70°	5421.2	5484.2	5799.4	6266.2	7153.8	8199.9	9636.2	11733.4	14144.2	15156.2	13924.4
72.5°	2576.0	2613.4	2818.0	3277.9	3841.8	4693.7	5961.2	7939.3	10111.5	11164.3	9936.1
75°	943.8	952.4	1000.1	1109.0	1320.4	1640.7	2248.8	3479.0	5150.3	6141.8	5170.7
77.5°	509.3	511.1	529.8	557.0	594.6	637.2	729.2	978.0	1577.7	2146.7	1666.3
80°	320.2	318.5	337.4	359.5	385.1	405.5	413.9	443.0	499.2	584.3	536.6
82.5°	163.5	178.9	221.5	245.3	282.8	289.7	281.1	279.5	296.4	320.2	330.5
85°	90.3	80.0	117.6	156.8	170.4	175.4	177.1	166.9	163.5	160.2	168.6
87.5°	46.1	42.6	51.2	78.3	83.5	68.1	69.9	59.6	41.0	41.0	42.6
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: P270561

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-7027

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4
2.5°	2754.9	2756.5	2753.1	2753.1	2753.1	2754.9	2753.1	2751.5
5°	2732.7	2736.1	2736.1	2737.9	2739.6	2739.6	2739.6	2739.6
7.5°	2700.3	2702.1	2705.4	2705.4	2705.4	2705.4	2705.4	2705.4
10°	2669.8	2666.3	2664.6	2661.1	2661.1	2656.1	2657.7	2659.5
12.5°	2654.4	2647.6	2644.2	2639.0	2635.6	2630.5	2630.5	2632.3
15°	2661.1	2651.0	2640.7	2637.3	2633.9	2630.5	2627.2	2628.8
17.5°	2674.9	2662.8	2651.0	2644.2	2637.3	2632.3	2630.5	2632.3
20°	2703.8	2686.7	2668.0	2656.1	2642.5	2639.0	2633.9	2639.0
22.5°	2743.0	2722.6	2698.7	2676.5	2661.1	2654.4	2647.6	2652.7
25°	2790.7	2768.5	2744.7	2719.1	2702.1	2696.9	2688.4	2688.4
27.5°	2857.1	2838.4	2818.0	2794.1	2777.0	2771.9	2758.2	2758.2
30°	2962.7	2943.9	2925.3	2904.8	2887.8	2882.8	2865.7	2865.7
32.5°	3102.4	3082.1	3070.0	3053.0	3039.4	3030.9	3010.4	3008.8
35°	3289.9	3271.1	3269.4	3257.4	3243.9	3245.5	3225.2	3221.7
37.5°	3559.1	3543.8	3548.8	3538.7	3526.7	3536.8	3524.9	3524.9
40°	3903.1	3898.0	3903.1	3896.4	3898.0	3899.8	3889.5	3893.0
42.5°	4319.0	4305.2	4335.8	4332.5	4327.4	4341.0	4317.2	4300.1
45°	4797.7	4792.5	4823.2	4828.3	4818.1	4826.7	4784.1	4782.2
47.5°	5317.2	5317.2	5344.6	5341.1	5330.9	5332.6	5281.4	5249.2
50°	5859.0	5855.6	5882.9	5876.1	5862.5	5860.7	5807.9	5775.6
52.5°	6422.9	6422.9	6462.1	6443.5	6411.1	6395.8	6331.0	6288.3
55°	7046.6	7038.0	7049.9	6988.6	6925.6	6879.6	6799.5	6767.1
57.5°	7835.3	7736.6	7651.4	7572.9	7484.4	7429.8	7336.2	7302.1
60°	8954.7	8690.7	8576.5	8419.8	8273.2	8199.9	8075.6	8009.1
62.5°	10505.0	10067.1	9757.1	9411.3	9077.4	8842.2	8653.2	8569.7
65°	12297.3	11343.3	10554.5	9813.4	9184.7	8685.5	8407.7	8320.9
67.5°	12978.8	11227.3	9866.2	8803.0	8039.8	7445.2	7113.0	7043.2
68°	12833.9	10961.7	9547.5	8458.9	7692.2	7092.5	6762.0	6699.0
70°	11321.1	9247.7	7755.2	6671.7	5956.1	5385.3	5152.0	5051.4
72.5°	7717.8	5939.1	4555.8	3644.2	3109.3	2748.1	2533.4	2460.2
75°	3552.2	2400.5	1603.1	1197.7	1017.2	930.3	863.8	846.7
77.5°	1035.8	753.0	647.4	599.7	564.0	533.2	511.1	509.3
80°	492.5	461.6	448.1	417.4	385.1	356.1	335.6	339.0
82.5°	330.5	322.0	322.0	291.3	240.2	206.2	170.4	153.3
85°	175.4	182.3	192.5	182.3	158.5	117.6	76.6	83.5
87.5°	59.6	68.1	71.5	69.9	63.1	47.7	35.8	35.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)