

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: P196890

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196890
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-06-D-UNV-5MQ-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 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: 31303 lumens
Efficiency: N/A
Efficacy: 94.0 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

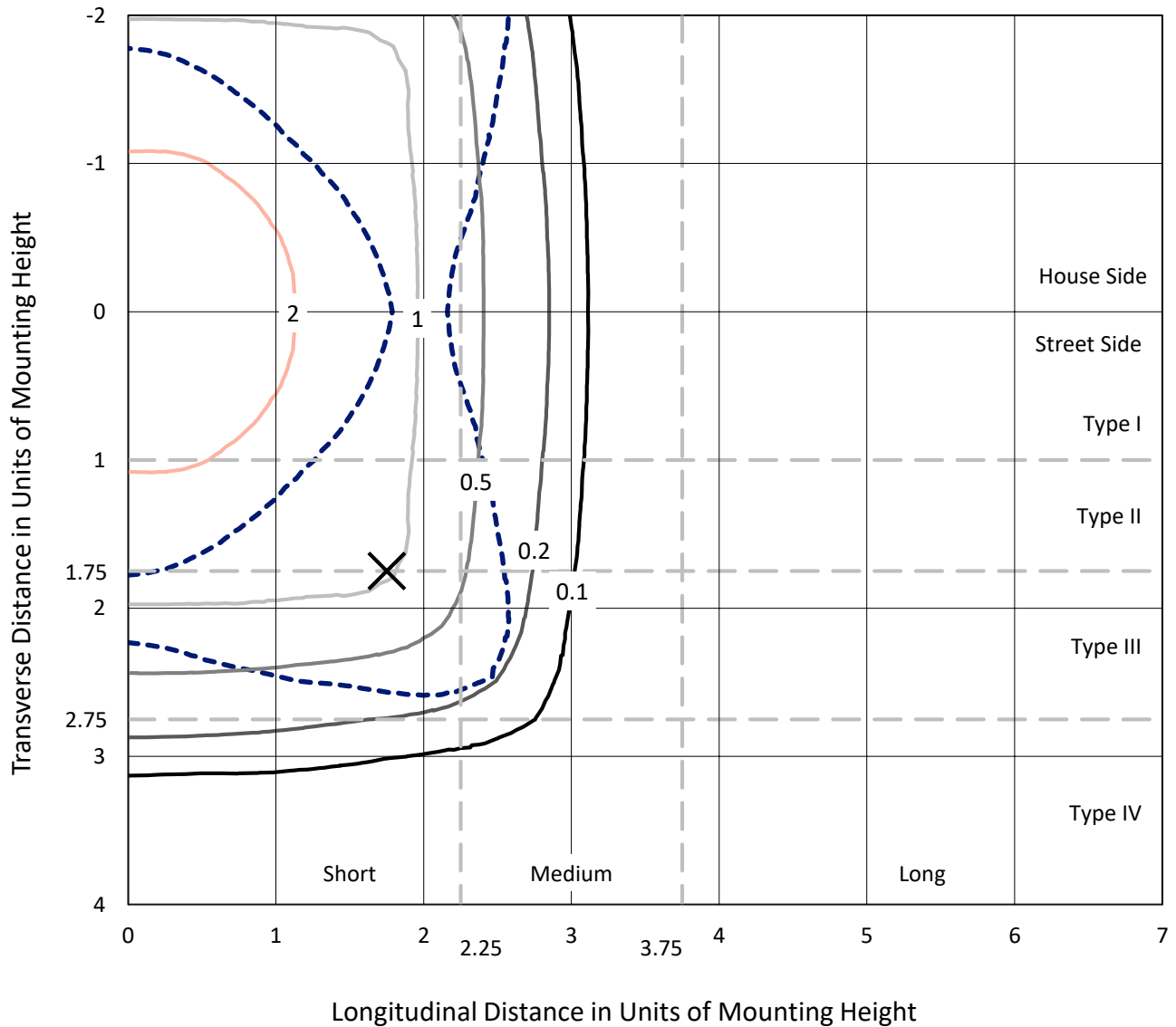
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

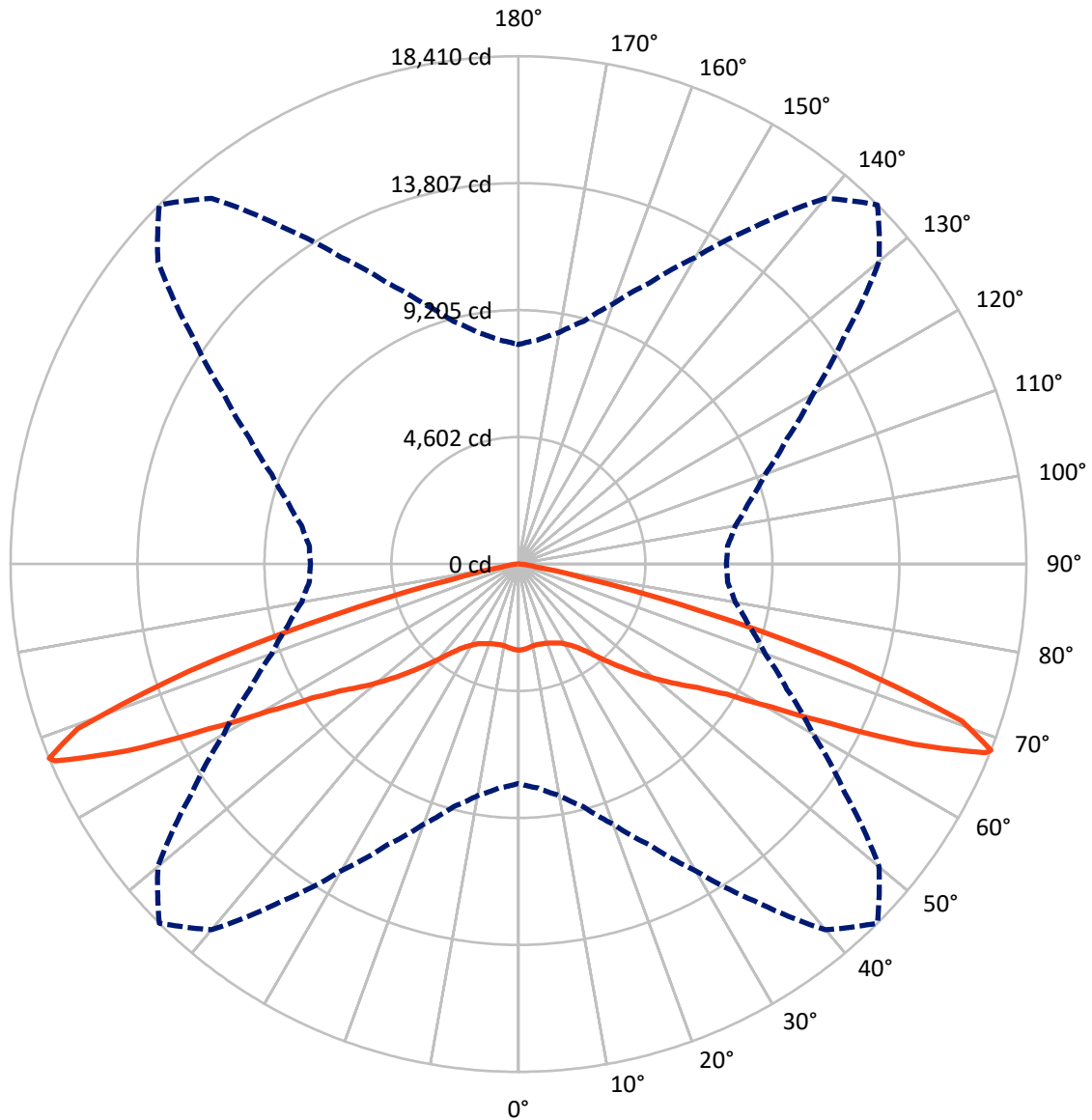
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15651.5	0.0	15651.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15651.5	0.0	15651.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	31303.0	0.0	31303.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.2	0.9
10°-20°	847.4	2.7
20°-30°	1440.7	4.6
30°-40°	2357.6	7.5
40°-50°	4213.4	13.5
50°-60°	7115.7	22.7
60°-70°	11033.9	35.2
70°-80°	3793.7	12.1
80°-90°	208.5	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°	31303.0	100.0
0°-180°	31303.0	100.0



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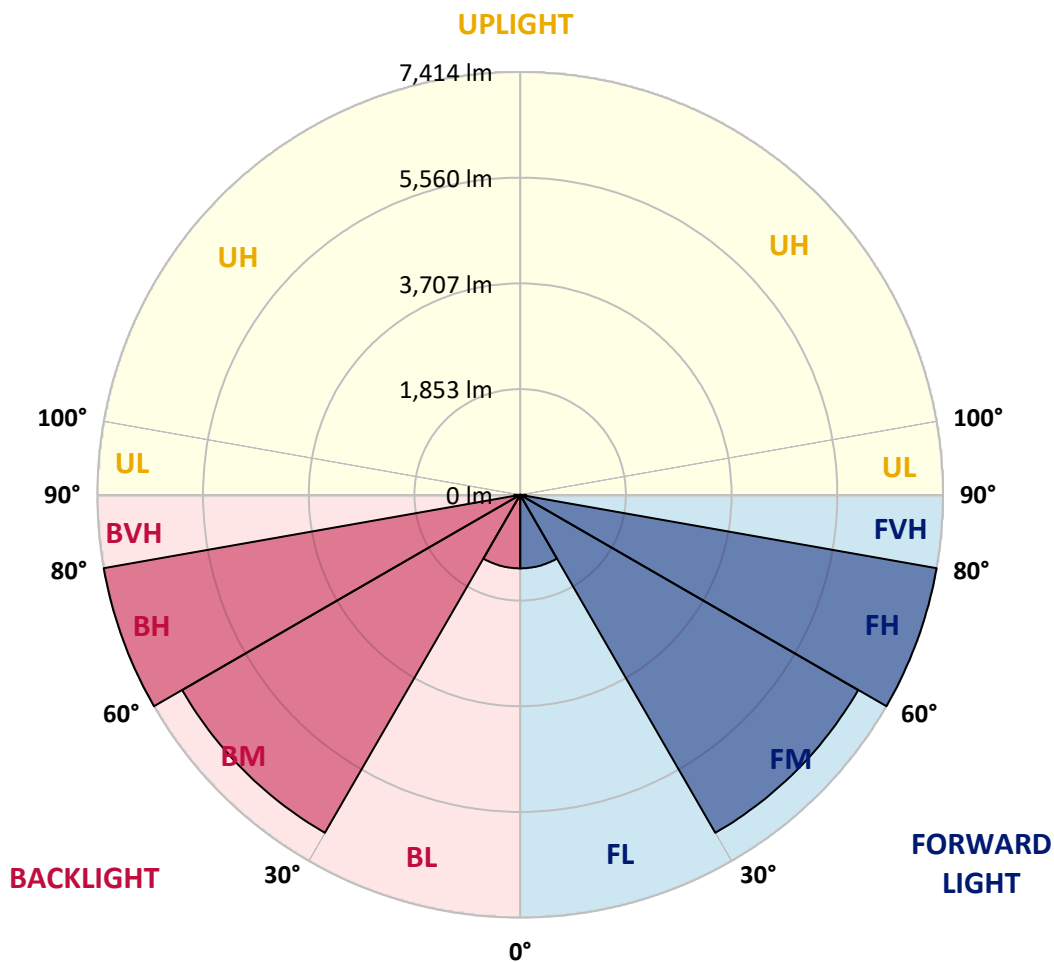
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1290.1	4.1			
FM	(30°-60°)	6843.4	21.9			
FH	(60°-80°)	7413.8	23.7			G3/7500
FVH	(80°-90°)	104.2	0.3			G2/225
BL	(0°-30°)	1290.1	4.1	B3/2500		
BM	(30°-60°)	6843.4	21.9	B4/8500		
BH	(60°-80°)	7413.8	23.7	B5		G3/7500
BVH	(80°-90°)	104.2	0.3			G2/225
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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6
2.5°	3136.0	3136.0	3139.8	3137.9	3132.2	3126.4	3120.7	3114.9	3111.1	3107.2	3103.4
5°	3103.4	3103.4	3109.1	3105.3	3101.5	3095.7	3091.9	3086.1	3082.3	3078.5	3080.4
7.5°	3061.2	3065.1	3068.9	3067.0	3059.3	3057.4	3051.6	3049.7	3045.9	3040.1	3042.1
10°	3024.8	3026.7	3030.6	3028.6	3026.7	3021.0	3019.1	3017.1	3015.2	3007.6	3005.6
12.5°	2988.4	2992.2	2996.1	2998.0	2996.1	2998.0	2999.9	3001.8	2999.9	2996.1	2996.1
15°	2959.6	2963.5	2969.2	2975.0	2976.9	2988.4	2996.1	3003.7	3009.5	3011.4	3005.6
17.5°	2944.3	2950.0	2957.7	2969.2	2978.8	2992.2	3005.6	3017.1	3026.7	3028.6	3022.9
20°	2942.4	2948.1	2959.6	2973.1	2990.3	3007.6	3028.6	3045.9	3055.5	3061.2	3055.5
22.5°	2955.8	2963.5	2978.8	2996.1	3017.1	3040.1	3067.0	3086.1	3105.3	3113.0	3107.2
25°	2994.1	3001.8	3019.1	3040.1	3063.1	3091.9	3118.7	3143.7	3162.8	3172.4	3164.7
27.5°	3074.6	3076.6	3095.7	3118.7	3145.6	3170.5	3205.0	3216.5	3231.8	3241.4	3231.8
30°	3187.7	3191.6	3208.8	3245.2	3270.2	3302.8	3321.9	3333.4	3350.7	3360.3	3348.8
32.5°	3360.3	3364.1	3379.4	3413.9	3436.9	3461.9	3484.9	3492.5	3509.8	3521.3	3507.9
35°	3603.7	3611.4	3624.8	3647.8	3667.0	3686.1	3703.4	3697.6	3709.1	3724.5	3711.0
37.5°	3937.2	3935.3	3939.2	3956.4	3975.6	3987.1	4013.9	4000.5	4012.0	4025.4	4017.7
40°	4326.4	4326.4	4324.4	4355.1	4362.8	4374.3	4403.0	4385.8	4401.1	4416.4	4403.0
42.5°	4769.2	4776.8	4786.4	4811.3	4832.4	4836.2	4849.7	4842.0	4861.2	4874.6	4861.2
45°	5279.0	5290.5	5302.0	5359.5	5369.1	5376.8	5386.4	5361.5	5382.5	5394.0	5390.2
47.5°	5808.1	5829.2	5854.1	5913.5	5951.9	5969.1	5976.8	5948.0	5949.9	5967.2	5969.1
50°	6406.2	6429.2	6454.1	6521.2	6557.6	6588.3	6597.8	6565.3	6569.1	6582.5	6586.3
52.5°	6958.2	6985.0	7038.7	7128.8	7180.6	7234.2	7238.1	7197.8	7215.1	7224.7	7217.0
55°	7477.7	7512.2	7583.1	7703.9	7797.8	7903.2	7951.1	7907.1	7907.1	7899.4	7895.6
57.5°	8083.4	8121.7	8194.6	8334.5	8464.9	8616.3	8746.6	8790.7	8871.2	8898.1	8855.9
60°	8995.8	9036.1	9110.8	9294.9	9459.7	9680.2	9894.8	10069.3	10353.0	10506.3	10368.3
62.5°	9829.7	9891.0	10067.4	10389.4	10745.9	11154.2	11627.7	11965.0	12480.7	12737.5	12390.6
65°	9639.9	9764.5	10109.5	10615.6	11351.7	12237.2	13201.4	14127.3	15193.0	15739.4	15033.9
67.5°	8420.8	8526.2	8898.1	9486.5	10404.7	11625.8	13124.8	15041.6	17240.3	18263.9	17016.0
68°	7955.0	8152.4	8522.4	9107.0	10032.9	11232.8	12833.4	14903.6	17303.5	18409.5	17062.0
70°	6099.5	6170.4	6525.0	7050.2	8048.9	9225.9	10841.8	13201.4	15913.8	17052.4	15666.5
72.5°	2898.3	2940.5	3170.5	3688.0	4322.5	5281.0	6707.1	8932.6	11376.6	12561.2	11179.1
75°	1061.9	1071.5	1125.2	1247.9	1485.6	1845.9	2530.3	3914.2	5794.7	6910.3	5817.7
77.5°	573.1	575.1	596.1	626.8	669.0	716.9	820.4	1100.3	1775.0	2415.2	1874.7
80°	360.4	358.5	379.5	404.5	433.2	456.2	465.8	498.4	561.6	657.5	603.8
82.5°	184.0	201.3	249.2	276.0	318.2	325.9	316.3	314.4	333.5	360.4	371.9
85°	101.6	90.1	132.3	176.4	191.7	197.4	199.4	187.9	184.0	180.2	189.8
87.5°	51.8	47.9	57.5	88.2	93.9	76.7	78.6	67.1	46.0	46.0	47.9
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°	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6	3122.6
2.5°	3099.6	3101.5	3097.6	3097.6	3097.6	3099.6	3097.6	3095.7
5°	3074.6	3078.5	3078.5	3080.4	3082.3	3082.3	3082.3	3082.3
7.5°	3038.2	3040.1	3044.0	3044.0	3044.0	3044.0	3044.0	3044.0
10°	3003.7	2999.9	2998.0	2994.1	2994.1	2988.4	2990.3	2992.2
12.5°	2986.5	2978.8	2975.0	2969.2	2965.4	2959.6	2959.6	2961.6
15°	2994.1	2982.6	2971.1	2967.3	2963.5	2959.6	2955.8	2957.7
17.5°	3009.5	2996.1	2982.6	2975.0	2967.3	2961.6	2959.6	2961.6
20°	3042.1	3022.9	3001.8	2988.4	2973.1	2969.2	2963.5	2969.2
22.5°	3086.1	3063.1	3036.3	3011.4	2994.1	2986.5	2978.8	2984.6
25°	3139.8	3114.9	3088.1	3059.3	3040.1	3034.4	3024.8	3024.8
27.5°	3214.6	3193.5	3170.5	3143.7	3124.5	3118.7	3103.4	3103.4
30°	3333.4	3312.3	3291.3	3268.2	3249.1	3243.3	3224.2	3224.2
32.5°	3490.6	3467.6	3454.2	3435.0	3419.7	3410.1	3387.1	3385.2
35°	3701.5	3680.4	3678.5	3665.0	3649.7	3651.6	3628.6	3624.8
37.5°	4004.3	3987.1	3992.8	3981.3	3967.9	3979.4	3966.0	3966.0
40°	4391.5	4385.8	4391.5	4383.9	4385.8	4387.7	4376.2	4380.0
42.5°	4859.2	4843.9	4878.4	4874.6	4868.8	4884.2	4857.3	4838.2
45°	5397.9	5392.1	5426.6	5432.4	5420.9	5430.5	5382.5	5380.6
47.5°	5982.5	5982.5	6013.2	6009.4	5997.9	5999.8	5942.3	5905.9
50°	6592.1	6588.3	6618.9	6611.3	6595.9	6594.0	6534.6	6498.2
52.5°	7226.6	7226.6	7270.7	7249.6	7213.1	7195.9	7123.1	7075.1
55°	7928.1	7918.6	7932.0	7863.0	7792.0	7740.3	7650.2	7613.8
57.5°	8815.6	8704.5	8608.6	8520.4	8420.8	8359.4	8254.0	8215.7
60°	10075.0	9777.9	9649.5	9473.1	9308.3	9225.9	9085.9	9011.2
62.5°	11819.4	11326.7	10977.9	10588.7	10213.0	9948.5	9735.7	9641.8
65°	13835.9	12762.5	11875.0	11041.1	10333.8	9772.2	9459.7	9362.0
67.5°	14602.7	12632.1	11100.5	9904.4	9045.7	8376.7	8002.9	7924.3
68°	14439.7	12333.1	10742.1	9517.2	8654.6	7979.9	7608.0	7537.1
70°	12737.5	10404.7	8725.6	7506.4	6701.3	6059.2	5796.6	5683.5
72.5°	8683.4	6682.2	5125.7	4100.2	3498.3	3091.9	2850.4	2767.9
75°	3996.7	2700.9	1803.8	1347.6	1144.4	1046.6	971.8	952.7
77.5°	1165.5	847.3	728.4	674.7	634.5	600.0	575.1	573.1
80°	554.0	519.5	504.1	469.6	433.2	400.6	377.6	381.5
82.5°	371.9	362.3	362.3	327.8	270.3	231.9	191.7	172.5
85°	197.4	205.1	216.6	205.1	178.3	132.3	86.3	93.9
87.5°	67.1	76.7	80.5	78.6	70.9	53.7	40.3	40.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)