

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: P195924

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195924
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31706.4 lumens
Efficiency: N/A
Efficacy: 127.3 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 - G4

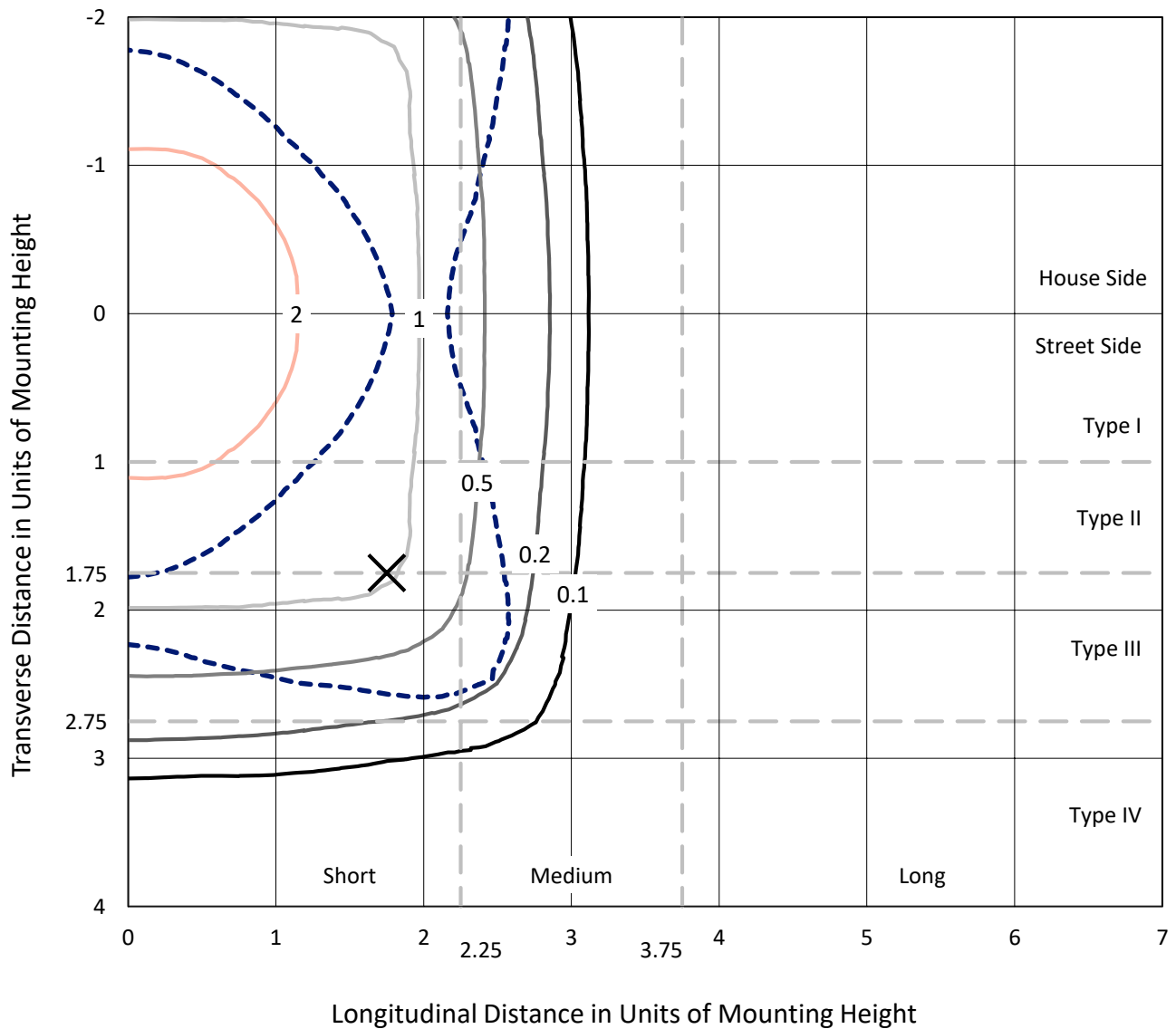
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

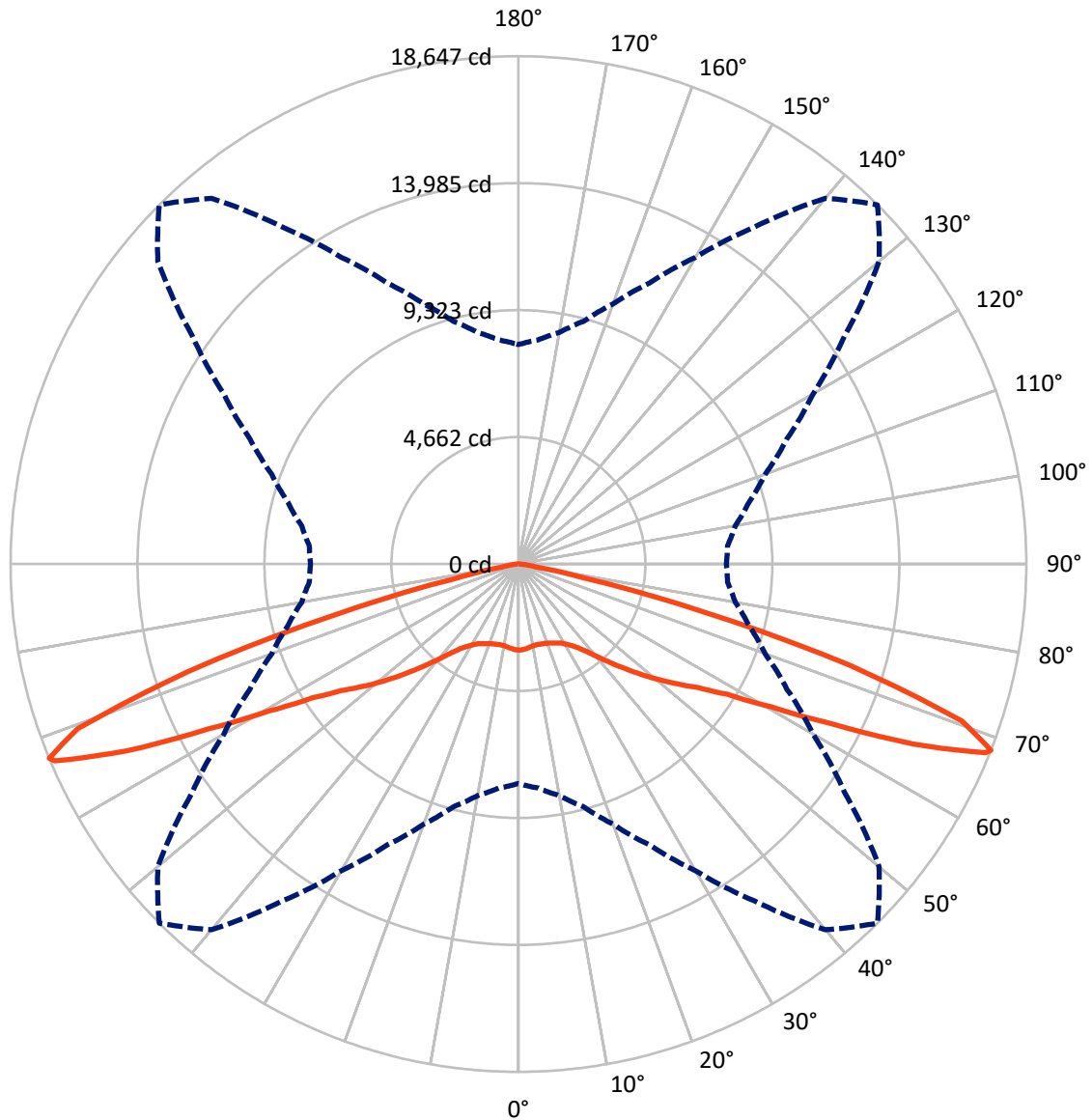
× Max cd
 - - - 1/2 Max cd



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	15853.2	0.0	15853.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15853.2	0.0	15853.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	31706.4	0.0	31706.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.9	0.9
10°-20°	858.3	2.7
20°-30°	1459.2	4.6
30°-40°	2388.0	7.5
40°-50°	4267.7	13.5
50°-60°	7207.4	22.7
60°-70°	11176.0	35.2
70°-80°	3842.6	12.1
80°-90°	211.2	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°	31706.4	100.0
0°-180°	31706.4	100.0



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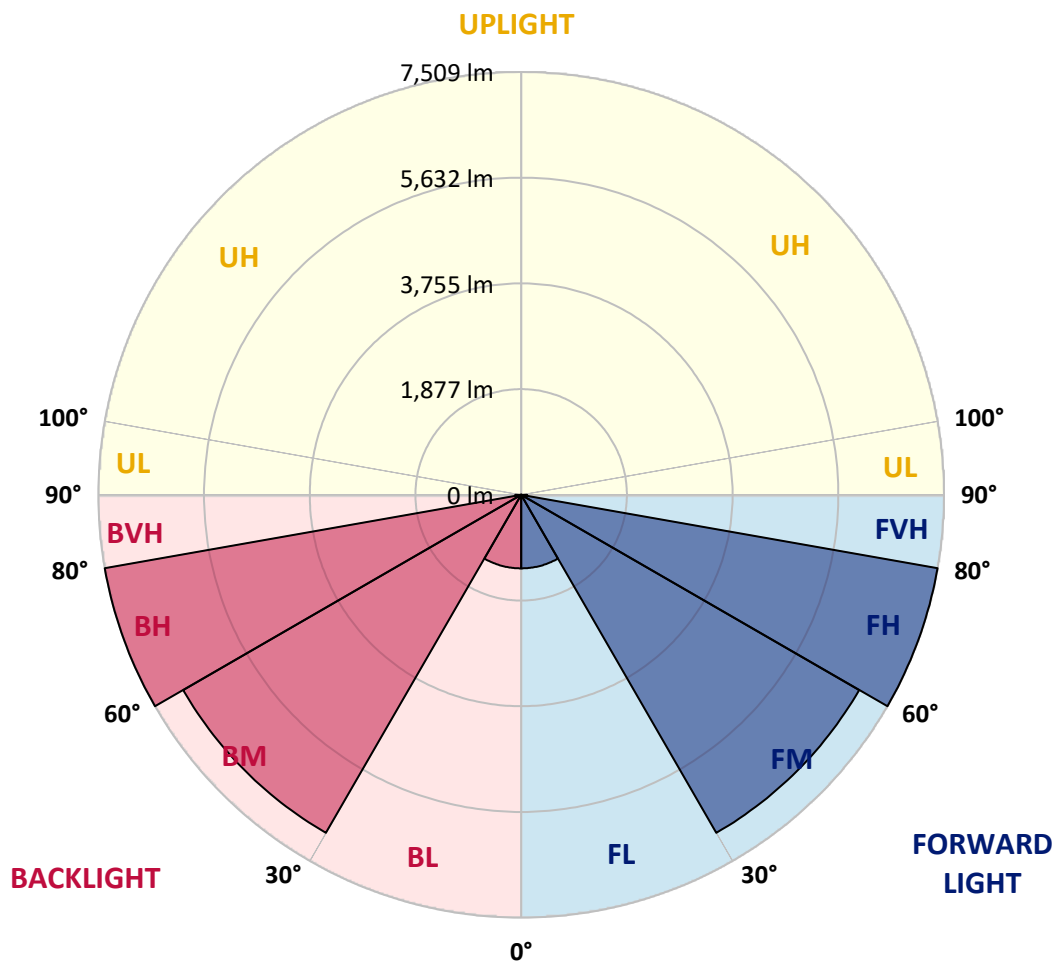
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1306.8	4.1			
FM	(30°-60°)	6931.5	21.9			
FH	(60°-80°)	7509.3	23.7			G4/12000
FVH	(80°-90°)	105.6	0.3			G2/225
BL	(0°-30°)	1306.8	4.1	B3/2500		
BM	(30°-60°)	6931.5	21.9	B4/8500		
BH	(60°-80°)	7509.3	23.7	B5		G4/12000
BVH	(80°-90°)	105.6	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-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8
2.5°	3176.4	3176.4	3180.3	3178.3	3172.5	3166.6	3160.8	3155.1	3151.2	3147.3	3143.4
5°	3143.4	3143.4	3149.3	3145.4	3141.5	3135.7	3131.8	3125.9	3122.0	3118.2	3120.1
7.5°	3100.7	3104.6	3108.4	3106.5	3098.7	3096.8	3090.9	3089.0	3085.1	3079.3	3081.2
10°	3063.7	3065.7	3069.6	3067.6	3065.7	3059.9	3058.0	3056.1	3054.1	3046.3	3044.4
12.5°	3026.9	3030.8	3034.7	3036.6	3034.7	3036.6	3038.6	3040.5	3038.6	3034.7	3034.7
15°	2997.8	3001.6	3007.5	3013.3	3015.2	3026.9	3034.7	3042.5	3048.3	3050.2	3044.4
17.5°	2982.2	2988.0	2995.8	3007.5	3017.2	3030.8	3044.4	3056.1	3065.7	3067.6	3061.8
20°	2980.3	2986.1	2997.8	3011.4	3028.9	3046.3	3067.6	3085.1	3094.8	3100.7	3094.8
22.5°	2993.9	3001.6	3017.2	3034.7	3056.1	3079.3	3106.5	3125.9	3145.4	3153.1	3147.3
25°	3032.7	3040.5	3058.0	3079.3	3102.6	3131.8	3158.9	3184.1	3203.6	3213.3	3205.5
27.5°	3114.3	3116.2	3135.7	3158.9	3186.1	3211.3	3246.3	3257.9	3273.4	3283.2	3273.4
30°	3228.8	3232.7	3250.2	3287.0	3312.3	3345.4	3364.7	3376.4	3393.8	3403.6	3391.9
32.5°	3403.6	3407.4	3423.0	3457.9	3481.2	3506.5	3529.8	3537.6	3555.0	3566.6	3553.0
35°	3650.1	3657.9	3671.5	3694.8	3714.2	3733.7	3751.1	3745.2	3756.9	3772.4	3758.8
37.5°	3988.0	3986.0	3989.9	4007.4	4026.8	4038.4	4065.6	4052.0	4063.7	4077.3	4069.5
40°	4382.1	4382.1	4380.2	4411.3	4419.0	4430.6	4459.8	4442.3	4457.8	4473.4	4459.8
42.5°	4830.6	4838.4	4848.1	4873.3	4894.7	4898.6	4912.1	4904.4	4923.8	4937.4	4923.8
45°	5347.1	5358.7	5370.4	5428.6	5438.3	5446.1	5455.8	5430.5	5451.9	5463.6	5459.7
47.5°	5882.9	5904.3	5929.5	5989.7	6028.6	6046.0	6053.8	6024.7	6026.6	6044.1	6046.0
50°	6488.7	6512.0	6537.3	6605.2	6642.1	6673.1	6682.8	6649.9	6653.7	6667.3	6671.2
52.5°	7047.8	7075.0	7129.5	7220.7	7273.1	7327.5	7331.4	7290.6	7308.1	7317.8	7310.0
55°	7574.0	7609.0	7680.8	7803.2	7898.3	8005.1	8053.6	8009.0	8009.0	8001.2	7997.3
57.5°	8187.6	8226.4	8300.2	8441.9	8574.0	8727.3	8859.4	8904.0	8985.5	9012.7	8970.1
60°	9111.7	9152.5	9228.2	9414.6	9581.6	9804.9	10022.4	10199.0	10486.4	10641.7	10501.9
62.5°	9956.3	10018.5	10197.1	10523.3	10884.4	11298.0	11777.5	12119.2	12641.5	12901.7	12550.3
65°	9764.1	9890.3	10239.8	10752.3	11498.0	12394.9	13371.5	14309.3	15388.9	15942.2	15227.6
67.5°	8529.3	8636.1	9012.7	9608.8	10538.7	11775.6	13293.9	15235.4	17462.4	18499.2	17235.3
68°	8057.5	8257.5	8632.2	9224.4	10162.1	11377.6	12998.7	15095.7	17526.5	18646.8	17281.8
70°	6178.0	6249.9	6609.1	7141.0	8152.6	9344.8	10981.5	13371.5	16118.8	17272.1	15868.4
72.5°	2935.7	2978.3	3211.3	3735.6	4378.2	5349.0	6793.5	9047.7	11523.1	12723.1	11323.1
75°	1075.6	1085.4	1139.7	1264.0	1504.8	1869.7	2562.9	3964.7	5869.4	6999.3	5892.6
77.5°	580.5	582.5	603.8	634.8	677.6	726.2	830.9	1114.5	1797.8	2446.4	1898.8
80°	365.0	363.0	384.4	409.7	438.7	462.1	471.8	504.8	568.9	665.9	611.6
82.5°	186.4	203.9	252.4	279.6	322.3	330.1	320.4	318.4	337.9	365.0	376.7
85°	102.9	91.2	134.0	178.6	194.2	200.0	201.9	190.3	186.4	182.5	192.2
87.5°	52.4	48.6	58.2	89.3	95.1	77.6	79.6	67.9	46.6	46.6	48.6
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°	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8	3162.8
2.5°	3139.5	3141.5	3137.6	3137.6	3137.6	3139.5	3137.6	3135.7
5°	3114.3	3118.2	3118.2	3120.1	3122.0	3122.0	3122.0	3122.0
7.5°	3077.3	3079.3	3083.2	3083.2	3083.2	3083.2	3083.2	3083.2
10°	3042.5	3038.6	3036.6	3032.7	3032.7	3026.9	3028.9	3030.8
12.5°	3025.0	3017.2	3013.3	3007.5	3003.6	2997.8	2997.8	2999.7
15°	3032.7	3021.1	3009.4	3005.5	3001.6	2997.8	2993.9	2995.8
17.5°	3048.3	3034.7	3021.1	3013.3	3005.5	2999.7	2997.8	2999.7
20°	3081.2	3061.8	3040.5	3026.9	3011.4	3007.5	3001.6	3007.5
22.5°	3125.9	3102.6	3075.4	3050.2	3032.7	3025.0	3017.2	3023.0
25°	3180.3	3155.1	3127.9	3098.7	3079.3	3073.5	3063.7	3063.7
27.5°	3256.0	3234.7	3211.3	3184.1	3164.7	3158.9	3143.4	3143.4
30°	3376.4	3355.0	3333.7	3310.4	3290.9	3285.1	3265.7	3265.7
32.5°	3535.6	3512.3	3498.7	3479.3	3463.7	3454.0	3430.8	3428.8
35°	3749.1	3727.8	3725.9	3712.3	3696.7	3698.7	3675.4	3671.5
37.5°	4055.9	4038.4	4044.2	4032.6	4019.1	4030.6	4017.1	4017.1
40°	4448.1	4442.3	4448.1	4440.3	4442.3	4444.2	4432.5	4436.4
42.5°	4921.8	4906.3	4941.3	4937.4	4931.5	4947.1	4919.9	4900.5
45°	5467.5	5461.6	5496.5	5502.4	5490.7	5500.4	5451.9	5450.0
47.5°	6059.7	6059.7	6090.6	6086.8	6075.1	6077.0	6018.8	5981.9
50°	6677.0	6673.1	6704.2	6696.4	6680.9	6678.9	6618.8	6581.9
52.5°	7319.7	7319.7	7364.3	7342.9	7306.1	7288.6	7214.9	7166.3
55°	8030.3	8020.5	8034.2	7964.3	7892.5	7840.0	7748.8	7711.9
57.5°	8929.2	8816.6	8719.5	8630.2	8529.3	8467.2	8360.4	8321.5
60°	10204.9	9903.9	9773.8	9595.2	9428.2	9344.8	9203.0	9127.3
62.5°	11971.7	11472.7	11119.4	10725.2	10344.6	10076.7	9861.1	9766.0
65°	14014.2	12926.9	12028.0	11183.4	10466.9	9898.1	9581.6	9482.5
67.5°	14790.8	12794.9	11243.6	10032.1	9162.3	8484.7	8106.1	8026.4
68°	14625.7	12492.0	10880.5	9639.9	8766.2	8082.7	7706.1	7634.2
70°	12901.7	10538.7	8838.0	7603.2	6787.7	6137.3	5871.3	5756.8
72.5°	8795.2	6768.3	5191.8	4153.0	3543.4	3131.8	2887.1	2803.6
75°	4048.1	2735.7	1827.0	1364.9	1159.1	1060.1	984.4	964.9
77.5°	1180.5	858.2	737.8	683.4	642.6	607.7	582.5	580.5
80°	561.1	526.2	510.7	475.7	438.7	405.8	382.5	386.4
82.5°	376.7	366.9	366.9	332.0	273.7	235.0	194.2	174.7
85°	200.0	207.8	219.4	207.8	180.6	134.0	87.4	95.1
87.5°	67.9	77.6	81.5	79.6	71.8	54.3	40.8	40.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)