

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: P195449

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195449
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 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: 32023 lumens
Efficiency: N/A
Efficacy: 114.8 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

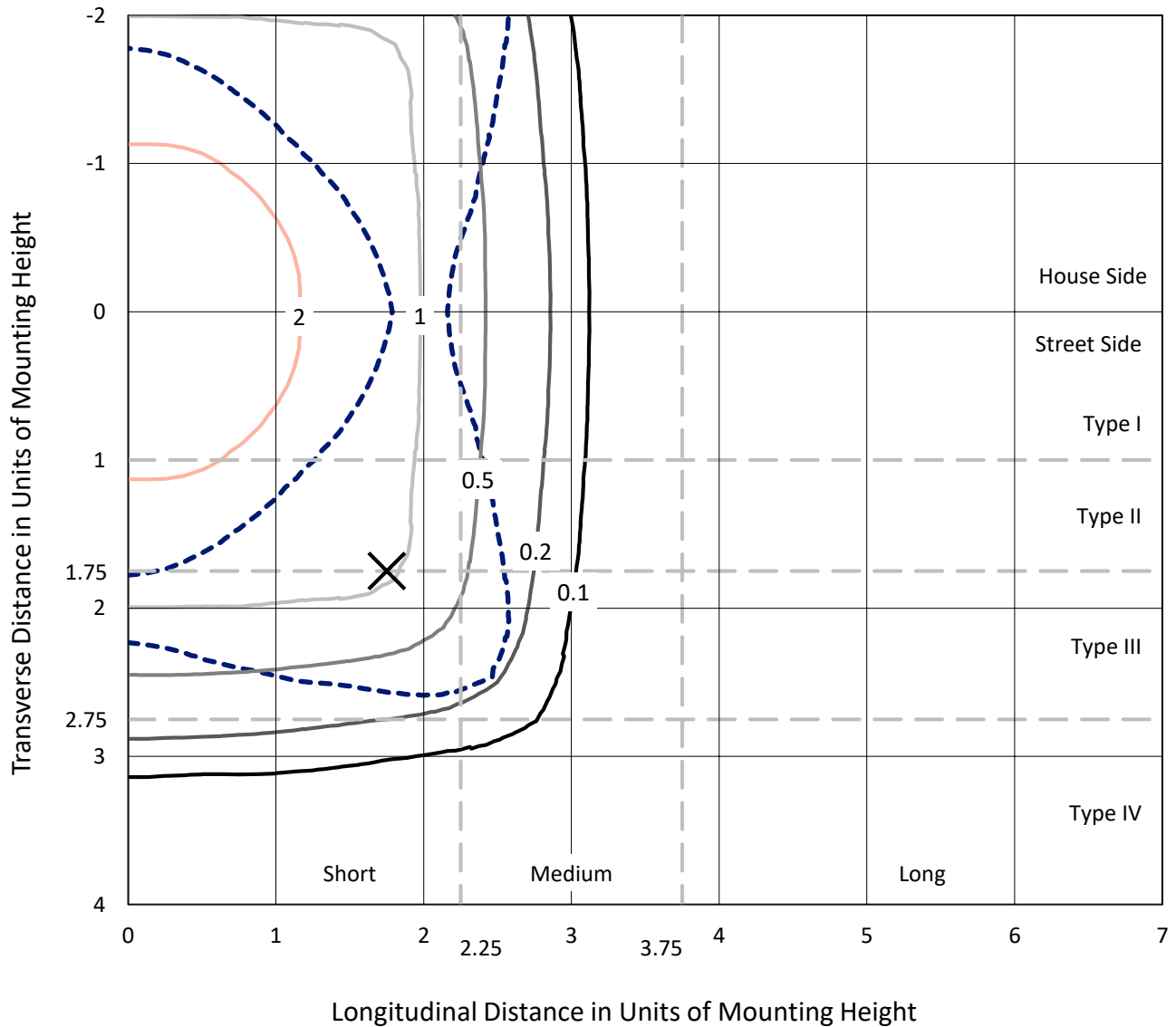
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

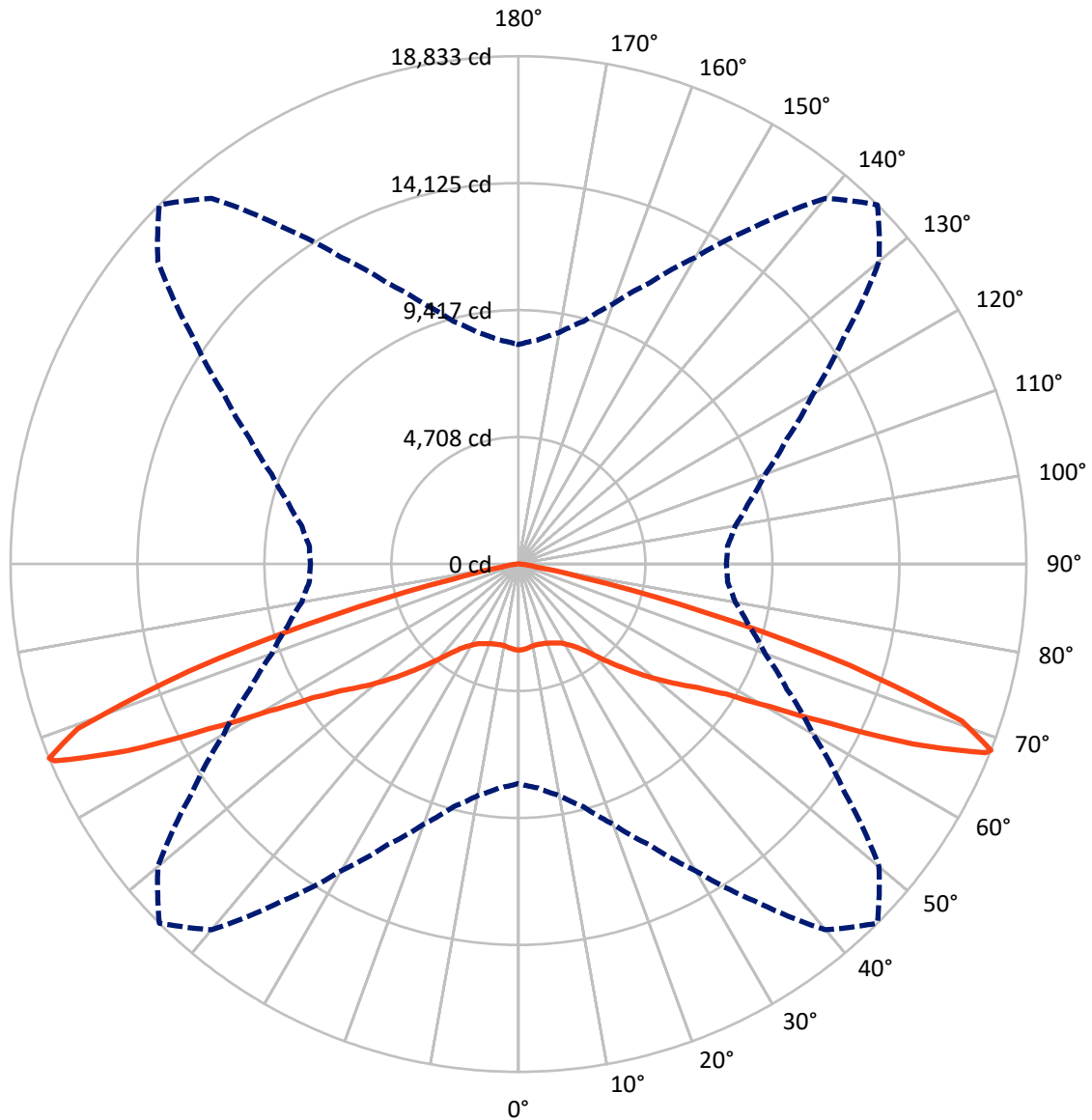


Based on 30 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - Full Cutoff

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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	16011.5	0.0	16011.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16011.5	0.0	16011.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	32023.0	0.0	32023.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.9	0.9
10°-20°	866.9	2.7
20°-30°	1473.8	4.6
30°-40°	2411.8	7.5
40°-50°	4310.3	13.5
50°-60°	7279.4	22.7
60°-70°	11287.7	35.2
70°-80°	3881.0	12.1
80°-90°	213.3	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°	32023.0	100.0
0°-180°	32023.0	100.0



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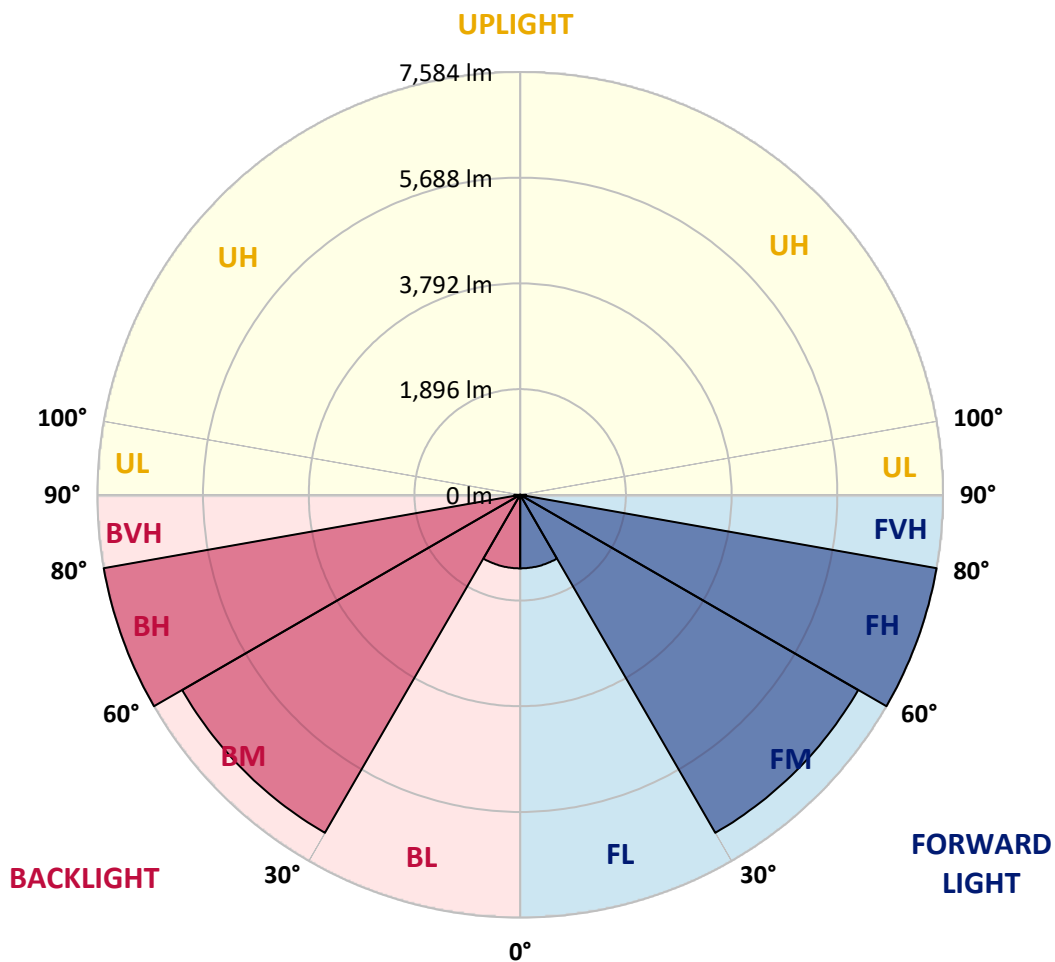
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1319.8	4.1			
FM	(30°-60°)	7000.8	21.9			
FH	(60°-80°)	7584.3	23.7			G4/12000
FVH	(80°-90°)	106.6	0.3			G2/225
BL	(0°-30°)	1319.8	4.1	B3/2500		
BM	(30°-60°)	7000.8	21.9	B4/8500		
BH	(60°-80°)	7584.3	23.7	B5		G4/12000
BVH	(80°-90°)	106.6	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°	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4
2.5°	3208.1	3208.1	3212.0	3210.1	3204.2	3198.3	3192.4	3186.5	3182.6	3178.7	3174.8
5°	3174.8	3174.8	3180.7	3176.7	3172.8	3166.9	3163.0	3157.1	3153.2	3149.3	3151.2
7.5°	3131.6	3135.6	3139.5	3137.5	3129.7	3127.7	3121.8	3119.9	3116.0	3110.1	3112.0
10°	3094.4	3096.3	3100.3	3098.3	3096.3	3090.5	3088.5	3086.5	3084.6	3076.7	3074.8
12.5°	3057.1	3061.0	3065.0	3066.9	3065.0	3066.9	3068.9	3070.8	3068.9	3065.0	3065.0
15°	3027.7	3031.6	3037.5	3043.4	3045.4	3057.1	3065.0	3072.8	3078.7	3080.7	3074.8
17.5°	3012.0	3017.9	3025.7	3037.5	3047.3	3061.0	3074.8	3086.5	3096.3	3098.3	3092.4
20°	3010.1	3015.9	3027.7	3041.4	3059.1	3076.7	3098.3	3116.0	3125.8	3131.6	3125.8
22.5°	3023.8	3031.6	3047.3	3065.0	3086.5	3110.1	3137.5	3157.1	3176.7	3184.6	3178.7
25°	3063.0	3070.8	3088.5	3110.1	3133.6	3163.0	3190.5	3216.0	3235.6	3245.4	3237.5
27.5°	3145.4	3147.3	3166.9	3190.5	3217.9	3243.4	3278.7	3290.5	3306.2	3316.0	3306.2
30°	3261.1	3265.0	3282.6	3319.9	3345.4	3378.7	3398.3	3410.1	3427.7	3437.5	3425.8
32.5°	3437.5	3441.5	3457.2	3492.5	3516.0	3541.5	3565.0	3572.9	3590.5	3602.3	3588.5
35°	3686.6	3694.4	3708.2	3731.7	3751.3	3770.9	3788.6	3782.7	3794.4	3810.1	3796.4
37.5°	4027.8	4025.8	4029.8	4047.4	4067.0	4078.8	4106.2	4092.5	4104.3	4118.0	4110.2
40°	4425.9	4425.9	4423.9	4455.3	4463.1	4474.9	4504.3	4486.7	4502.3	4518.0	4504.3
42.5°	4878.8	4886.7	4896.5	4922.0	4943.6	4947.5	4961.2	4953.4	4973.0	4986.7	4973.0
45°	5400.5	5412.2	5424.0	5482.8	5492.6	5500.5	5510.3	5484.8	5506.4	5518.1	5514.2
47.5°	5941.7	5963.3	5988.7	6049.5	6088.8	6106.4	6114.2	6084.8	6086.8	6104.4	6106.4
50°	6553.5	6577.0	6602.5	6671.2	6708.4	6739.8	6749.6	6716.3	6720.2	6733.9	6737.8
52.5°	7118.3	7145.7	7200.6	7292.8	7345.7	7400.6	7404.6	7363.4	7381.0	7390.8	7383.0
55°	7649.7	7685.0	7757.5	7881.1	7977.1	8085.0	8134.0	8088.9	8088.9	8081.1	8077.2
57.5°	8269.3	8308.6	8383.1	8526.2	8659.6	8814.5	8947.8	8992.9	9075.3	9102.7	9059.6
60°	9202.7	9243.9	9320.4	9508.7	9677.3	9902.8	10122.4	10300.9	10591.1	10748.0	10606.8
62.5°	10055.8	10118.5	10298.9	10628.4	10993.1	11410.8	11895.1	12240.3	12767.8	13030.5	12675.6
65°	9861.6	9989.1	10342.1	10859.7	11612.8	12518.7	13505.1	14452.2	15542.5	16101.4	15379.7
67.5°	8614.5	8722.3	9102.7	9704.7	10644.0	11893.2	13426.6	15387.6	17636.8	18683.9	17407.4
68°	8137.9	8339.9	8718.4	9316.5	10263.6	11491.2	13128.6	15246.4	17701.5	18833.0	17454.4
70°	6239.7	6312.3	6675.1	7212.4	8234.0	9438.1	11091.1	13505.1	16279.8	17444.6	16026.9
72.5°	2965.0	3008.1	3243.4	3772.9	4421.9	5402.4	6861.4	9138.0	11638.2	12850.1	11436.3
75°	1086.4	1096.2	1151.1	1276.6	1519.7	1888.4	2588.5	4004.3	5928.0	7069.2	5951.5
77.5°	586.3	588.3	609.9	641.2	684.4	733.4	839.3	1125.6	1815.8	2470.8	1917.8
80°	368.7	366.7	388.3	413.8	443.2	466.7	476.5	509.8	574.6	672.6	617.7
82.5°	188.3	205.9	254.9	282.4	325.5	333.4	323.6	321.6	341.2	368.7	380.4
85°	103.9	92.2	135.3	180.4	196.1	202.0	203.9	192.2	188.3	184.3	194.1
87.5°	52.9	49.0	58.8	90.2	96.1	78.4	80.4	68.6	47.1	47.1	49.0
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°	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4	3194.4
2.5°	3170.9	3172.8	3168.9	3168.9	3168.9	3170.9	3168.9	3166.9
5°	3145.4	3149.3	3149.3	3151.2	3153.2	3153.2	3153.2	3153.2
7.5°	3108.1	3110.1	3114.0	3114.0	3114.0	3114.0	3114.0	3114.0
10°	3072.8	3068.9	3066.9	3063.0	3063.0	3057.1	3059.1	3061.0
12.5°	3055.2	3047.3	3043.4	3037.5	3033.6	3027.7	3027.7	3029.7
15°	3063.0	3051.2	3039.5	3035.6	3031.6	3027.7	3023.8	3025.7
17.5°	3078.7	3065.0	3051.2	3043.4	3035.6	3029.7	3027.7	3029.7
20°	3112.0	3092.4	3070.8	3057.1	3041.4	3037.5	3031.6	3037.5
22.5°	3157.1	3133.6	3106.1	3080.7	3063.0	3055.2	3047.3	3053.2
25°	3212.0	3186.5	3159.1	3129.7	3110.1	3104.2	3094.4	3094.4
27.5°	3288.5	3266.9	3243.4	3216.0	3196.4	3190.5	3174.8	3174.8
30°	3410.1	3388.5	3367.0	3343.4	3323.8	3317.9	3298.3	3298.3
32.5°	3570.9	3547.4	3533.6	3514.0	3498.3	3488.5	3465.0	3463.0
35°	3786.6	3765.0	3763.1	3749.3	3733.7	3735.6	3712.1	3708.2
37.5°	4096.4	4078.8	4084.7	4072.9	4059.2	4070.9	4057.2	4057.2
40°	4492.5	4486.7	4492.5	4484.7	4486.7	4488.6	4476.9	4480.8
42.5°	4971.0	4955.3	4990.6	4986.7	4980.8	4996.5	4969.1	4949.4
45°	5522.0	5516.2	5551.5	5557.3	5545.6	5555.4	5506.4	5504.4
47.5°	6120.1	6120.1	6151.5	6147.6	6135.8	6137.8	6078.9	6041.7
50°	6743.7	6739.8	6771.2	6763.3	6747.6	6745.7	6684.9	6647.6
52.5°	7392.8	7392.8	7437.9	7416.3	7379.1	7361.4	7286.9	7237.9
55°	8110.5	8100.7	8114.4	8043.8	7971.3	7918.3	7826.2	7788.9
57.5°	9018.4	8904.7	8806.6	8716.4	8614.5	8551.7	8443.9	8404.6
60°	10306.8	10002.8	9871.4	9691.0	9522.4	9438.1	9294.9	9218.4
62.5°	12091.2	11587.3	11230.4	10832.3	10447.9	10177.3	9959.7	9863.6
65°	14154.1	13056.0	12148.1	11295.1	10571.5	9996.9	9677.3	9577.3
67.5°	14938.5	12922.7	11355.9	10132.2	9253.7	8569.4	8187.0	8106.6
68°	14771.8	12616.8	10989.2	9736.1	8853.7	8163.4	7783.0	7710.5
70°	13030.5	10644.0	8926.3	7679.1	6855.5	6198.6	5929.9	5814.2
72.5°	8883.1	6835.9	5243.6	4194.5	3578.7	3163.0	2915.9	2831.6
75°	4088.6	2763.0	1845.3	1378.5	1170.7	1070.7	994.2	974.6
77.5°	1192.3	866.7	745.2	690.3	649.1	613.8	588.3	586.3
80°	566.7	531.4	515.7	480.4	443.2	409.8	386.3	390.2
82.5°	380.4	370.6	370.6	335.3	276.5	237.3	196.1	176.5
85°	202.0	209.8	221.6	209.8	182.4	135.3	88.2	96.1
87.5°	68.6	78.4	82.4	80.4	72.6	54.9	41.2	41.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)