

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: P195450

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195450
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 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: 38362 lumens
Efficiency: N/A
Efficacy: 115.2 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

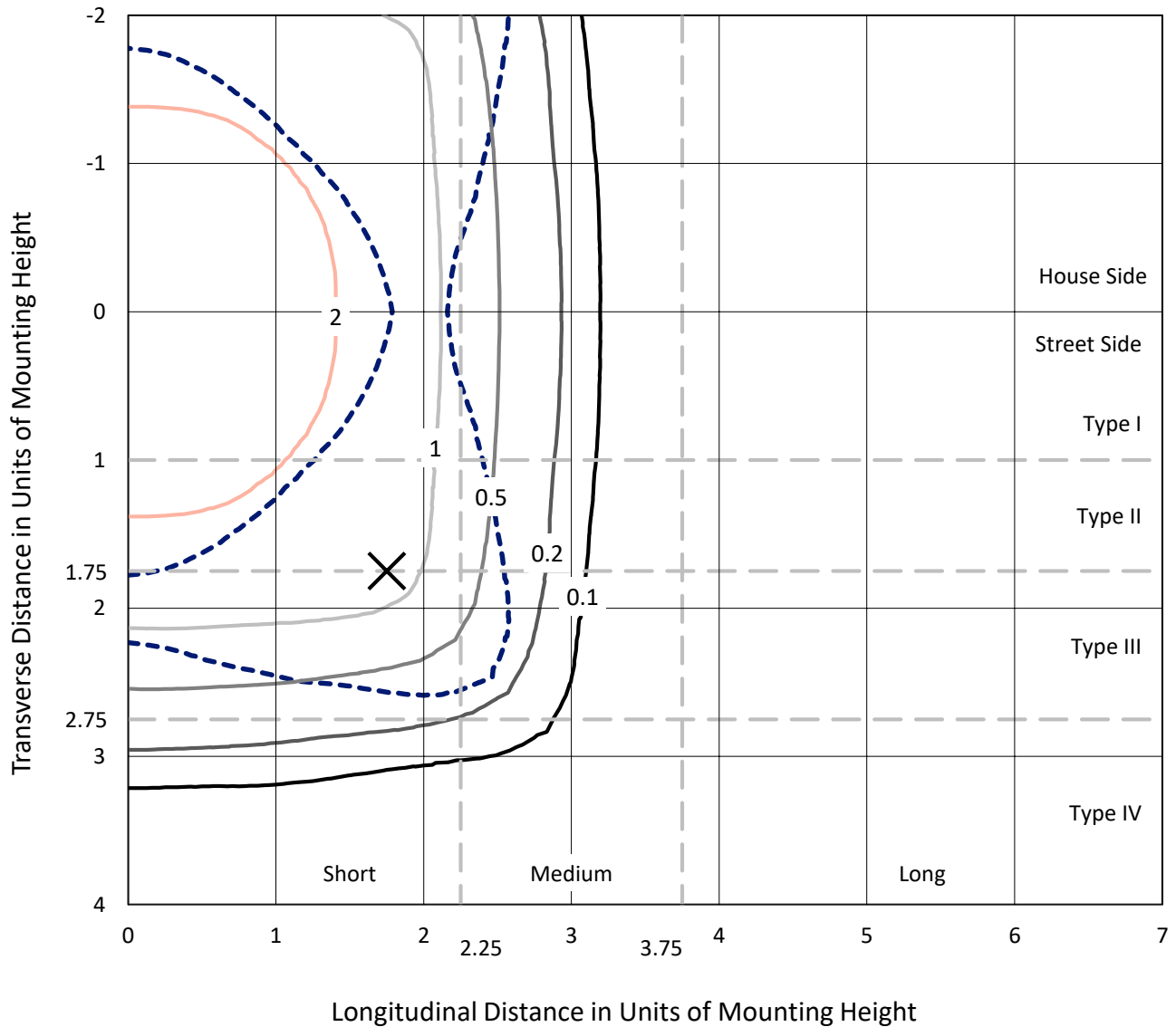
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

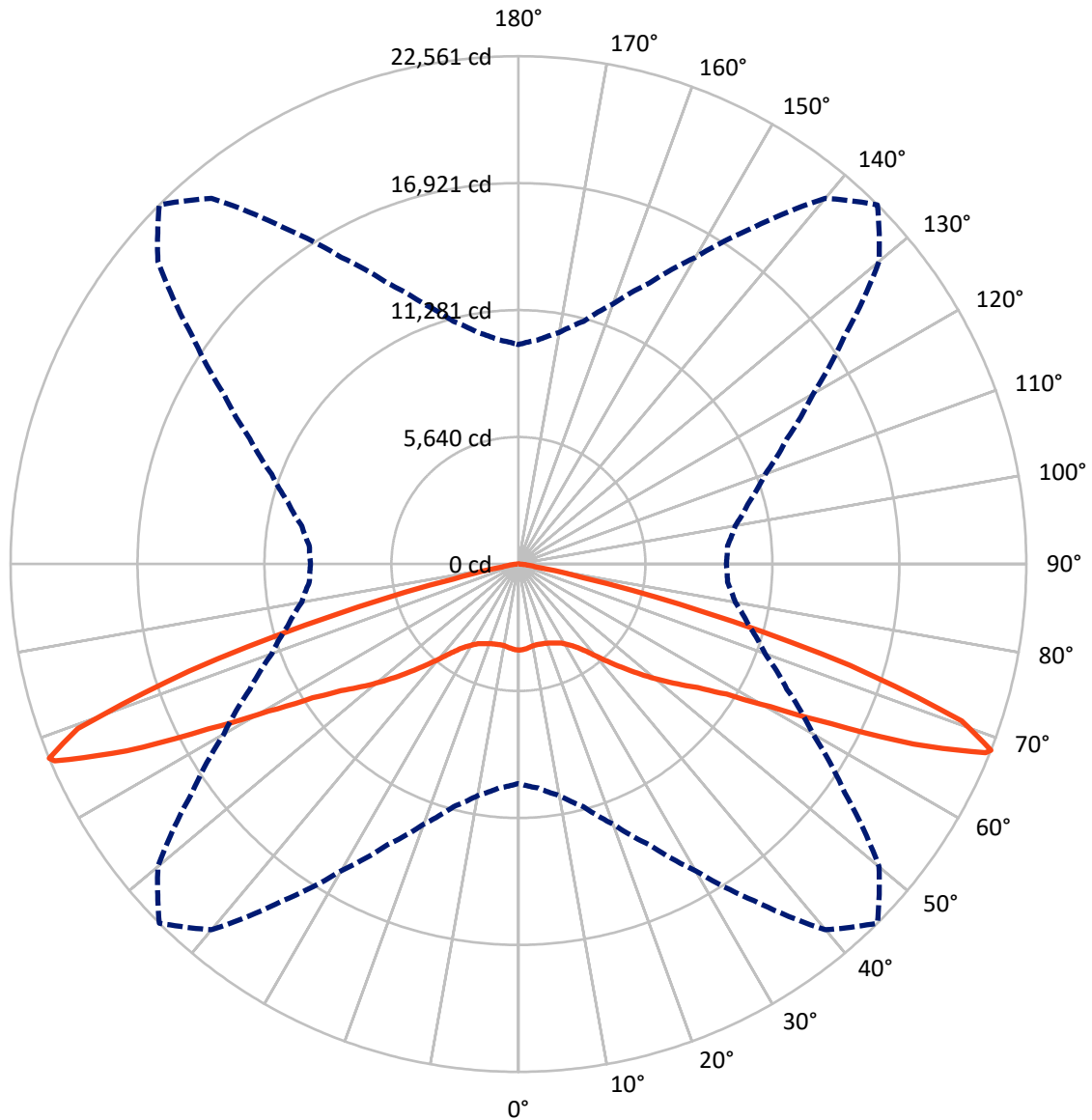
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.3 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	19181.0	0.0	19181.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	19181.0	0.0	19181.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	38362.0	0.0	38362.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.1	0.9
10°-20°	1038.5	2.7
20°-30°	1765.5	4.6
30°-40°	2889.3	7.5
40°-50°	5163.5	13.5
50°-60°	8720.4	22.7
60°-70°	13522.1	35.2
70°-80°	4649.2	12.1
80°-90°	255.5	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°	38362.0	100.0
0°-180°	38362.0	100.0



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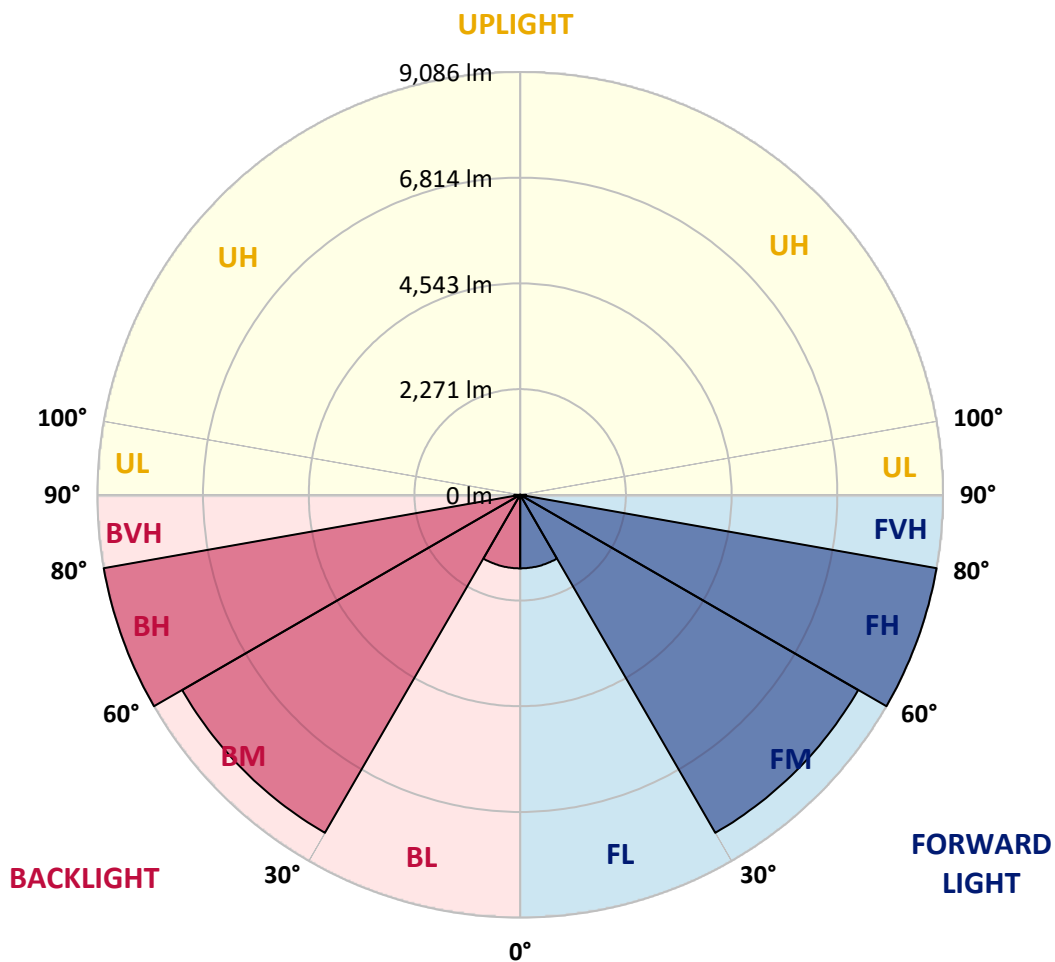
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1581.1	4.1			
FM	(30°-60°)	8386.6	21.9			
FH	(60°-80°)	9085.6	23.7			G4/12000
FVH	(80°-90°)	127.7	0.3			G2/225
BL	(0°-30°)	1581.1	4.1	B3/2500		
BM	(30°-60°)	8386.6	21.9	B4/8500		
BH	(60°-80°)	9085.6	23.7	B5		G4/12000
BVH	(80°-90°)	127.7	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°	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7
2.5°	3843.2	3843.2	3847.9	3845.5	3838.5	3831.4	3824.4	3817.3	3812.6	3807.9	3803.2
5°	3803.2	3803.2	3810.3	3805.6	3800.9	3793.8	3789.1	3782.1	3777.4	3772.7	3775.0
7.5°	3751.6	3756.2	3760.9	3758.6	3749.2	3746.9	3739.8	3737.5	3732.8	3725.7	3728.1
10°	3706.9	3709.3	3714.0	3711.6	3709.3	3702.2	3699.9	3697.5	3695.2	3685.8	3683.4
12.5°	3662.3	3667.0	3671.7	3674.0	3671.7	3674.0	3676.4	3678.7	3676.4	3671.7	3671.7
15°	3627.0	3631.7	3638.8	3645.8	3648.2	3662.3	3671.7	3681.1	3688.1	3690.5	3683.4
17.5°	3608.3	3615.3	3624.7	3638.8	3650.5	3667.0	3683.4	3697.5	3709.3	3711.6	3704.6
20°	3605.9	3613.0	3627.0	3643.5	3664.6	3685.8	3711.6	3732.8	3744.5	3751.6	3744.5
22.5°	3622.3	3631.7	3650.5	3671.7	3697.5	3725.7	3758.6	3782.1	3805.6	3815.0	3807.9
25°	3669.3	3678.7	3699.9	3725.7	3753.9	3789.1	3822.0	3852.6	3876.1	3887.8	3878.4
27.5°	3768.0	3770.3	3793.8	3822.0	3854.9	3885.5	3927.7	3941.8	3960.6	3972.4	3960.6
30°	3906.6	3911.3	3932.4	3977.1	4007.6	4047.5	4071.0	4085.1	4106.3	4118.0	4103.9
32.5°	4118.0	4122.7	4141.5	4183.8	4212.0	4242.5	4270.7	4280.1	4301.2	4315.3	4298.9
35°	4416.4	4425.8	4442.2	4470.4	4493.9	4517.4	4538.5	4531.5	4545.6	4564.3	4547.9
37.5°	4825.1	4822.8	4827.5	4848.6	4872.1	4886.2	4919.1	4902.6	4916.7	4933.2	4923.8
40°	5302.0	5302.0	5299.6	5337.2	5346.6	5360.7	5395.9	5374.8	5393.6	5412.4	5395.9
42.5°	5844.6	5854.0	5865.8	5896.3	5922.1	5926.8	5943.3	5933.9	5957.4	5973.8	5957.4
45°	6469.5	6483.6	6497.7	6568.2	6579.9	6589.3	6601.0	6570.5	6596.3	6610.4	6605.7
47.5°	7117.8	7143.7	7174.2	7247.0	7294.0	7315.2	7324.6	7289.3	7291.7	7312.8	7315.2
50°	7850.8	7879.0	7909.5	7991.7	8036.4	8073.9	8085.7	8045.8	8050.4	8066.9	8071.6
52.5°	8527.3	8560.2	8626.0	8736.4	8799.8	8865.6	8870.3	8821.0	8842.1	8853.8	8844.5
55°	9163.9	9206.2	9293.1	9441.1	9556.2	9685.4	9744.2	9690.1	9690.1	9680.7	9676.0
57.5°	9906.3	9953.2	10042.5	10214.0	10373.7	10559.3	10719.1	10773.1	10871.7	10904.6	10853.0
60°	11024.4	11073.8	11165.4	11390.9	11592.9	11863.1	12126.2	12340.0	12687.6	12875.6	12706.4
62.5°	12046.3	12121.5	12337.6	12732.3	13169.2	13669.6	14249.8	14663.2	15295.1	15609.9	15184.7
65°	11813.7	11966.4	12389.3	13009.5	13911.5	14996.8	16178.4	17313.0	18619.2	19288.7	18424.2
67.5°	10319.7	10448.9	10904.6	11625.8	12751.0	14247.4	16084.5	18433.6	21128.0	22382.5	20853.2
68°	9748.9	9990.8	10444.2	11160.7	12295.3	13765.9	15727.4	18264.4	21205.5	22561.0	20909.6
70°	7474.9	7561.8	7996.4	8640.1	9864.0	11306.3	13286.6	16178.4	19502.4	20897.8	19199.4
72.5°	3551.9	3603.6	3885.5	4519.7	5297.3	6471.8	8219.6	10946.9	13942.1	15393.8	13700.1
75°	1301.4	1313.2	1378.9	1529.3	1820.6	2262.2	3100.8	4796.9	7101.4	8468.6	7129.6
77.5°	702.4	704.7	730.6	768.2	819.8	878.6	1005.4	1348.4	2175.3	2959.9	2297.4
80°	441.6	439.3	465.1	495.7	530.9	559.1	570.8	610.8	688.3	805.7	740.0
82.5°	225.5	246.7	305.4	338.3	390.0	399.4	387.6	385.3	408.7	441.6	455.7
85°	124.5	110.4	162.1	216.1	234.9	242.0	244.3	230.2	225.5	220.8	232.6
87.5°	63.4	58.7	70.5	108.1	115.1	94.0	96.3	82.2	56.4	56.4	58.7
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°	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7	3826.7
2.5°	3798.5	3800.9	3796.2	3796.2	3796.2	3798.5	3796.2	3793.8
5°	3768.0	3772.7	3772.7	3775.0	3777.4	3777.4	3777.4	3777.4
7.5°	3723.4	3725.7	3730.4	3730.4	3730.4	3730.4	3730.4	3730.4
10°	3681.1	3676.4	3674.0	3669.3	3669.3	3662.3	3664.6	3667.0
12.5°	3659.9	3650.5	3645.8	3638.8	3634.1	3627.0	3627.0	3629.4
15°	3669.3	3655.2	3641.1	3636.4	3631.7	3627.0	3622.3	3624.7
17.5°	3688.1	3671.7	3655.2	3645.8	3636.4	3629.4	3627.0	3629.4
20°	3728.1	3704.6	3678.7	3662.3	3643.5	3638.8	3631.7	3638.8
22.5°	3782.1	3753.9	3721.0	3690.5	3669.3	3659.9	3650.5	3657.6
25°	3847.9	3817.3	3784.4	3749.2	3725.7	3718.7	3706.9	3706.9
27.5°	3939.5	3913.6	3885.5	3852.6	3829.1	3822.0	3803.2	3803.2
30°	4085.1	4059.3	4033.4	4005.3	3981.8	3974.7	3951.2	3951.2
32.5°	4277.8	4249.6	4233.1	4209.6	4190.8	4179.1	4150.9	4148.6
35°	4536.2	4510.3	4508.0	4491.5	4472.7	4475.1	4446.9	4442.2
37.5°	4907.3	4886.2	4893.2	4879.1	4862.7	4876.8	4860.3	4860.3
40°	5381.8	5374.8	5381.8	5372.4	5374.8	5377.1	5363.1	5367.7
42.5°	5955.0	5936.2	5978.5	5973.8	5966.8	5985.6	5952.7	5929.2
45°	6615.1	6608.1	6650.4	6657.4	6643.3	6655.1	6596.3	6594.0
47.5°	7331.6	7331.6	7369.2	7364.5	7350.4	7352.8	7282.3	7237.7
50°	8078.6	8073.9	8111.5	8102.1	8083.3	8081.0	8008.2	7963.5
52.5°	8856.2	8856.2	8910.2	8884.4	8839.8	8818.6	8729.3	8670.6
55°	9716.0	9704.2	9720.7	9636.1	9549.2	9485.8	9375.4	9330.7
57.5°	10803.6	10667.4	10549.9	10441.9	10319.7	10244.5	10115.3	10068.3
60°	12347.0	11982.9	11825.5	11609.4	11407.3	11306.3	11134.8	11043.2
62.5°	14484.7	13881.0	13453.4	12976.6	12516.1	12192.0	11931.2	11816.1
65°	16956.0	15640.5	14552.8	13531.0	12664.1	11975.8	11592.9	11473.1
67.5°	17895.6	15480.7	13603.8	12137.9	11085.5	10265.7	9807.6	9711.3
68°	17696.0	15114.3	13164.5	11663.4	10606.3	9779.4	9323.7	9236.8
70°	15609.9	12751.0	10693.2	9199.2	8212.5	7425.6	7103.8	6965.2
72.5°	10641.5	8189.0	6281.6	5024.8	4287.2	3789.1	3493.1	3392.1
75°	4897.9	3309.9	2210.5	1651.4	1402.4	1282.6	1191.0	1167.5
77.5°	1428.3	1038.3	892.7	826.9	777.6	735.3	704.7	702.4
80°	678.9	636.6	617.8	575.5	530.9	491.0	462.8	467.5
82.5°	455.7	444.0	444.0	401.7	331.2	284.2	234.9	211.4
85°	242.0	251.4	265.5	251.4	218.5	162.1	105.7	115.1
87.5°	82.2	94.0	98.7	96.3	86.9	65.8	49.3	49.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)