

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: P195456

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195456
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-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42083 lumens
Efficiency: N/A
Efficacy: 110.2 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): 382
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

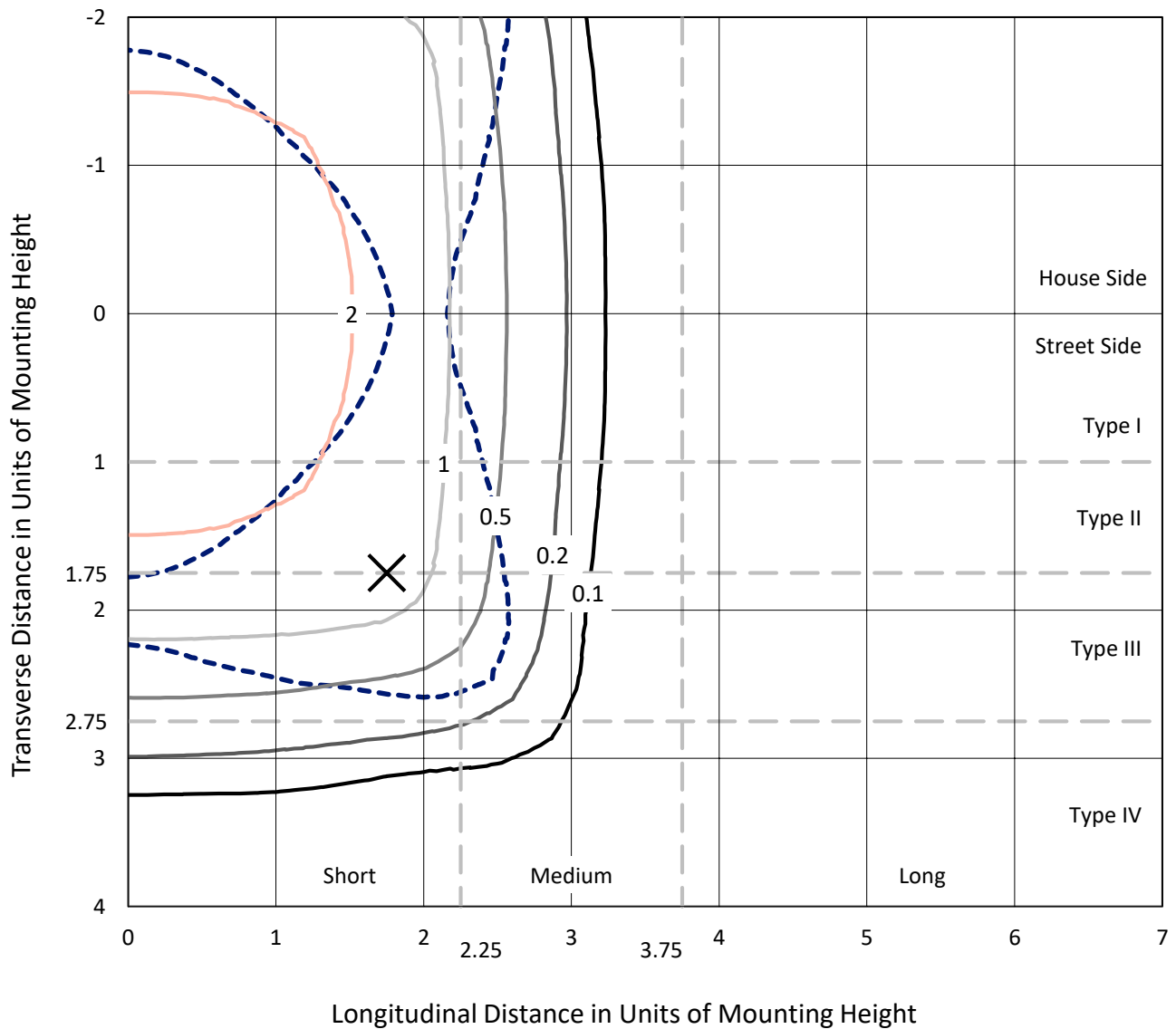


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

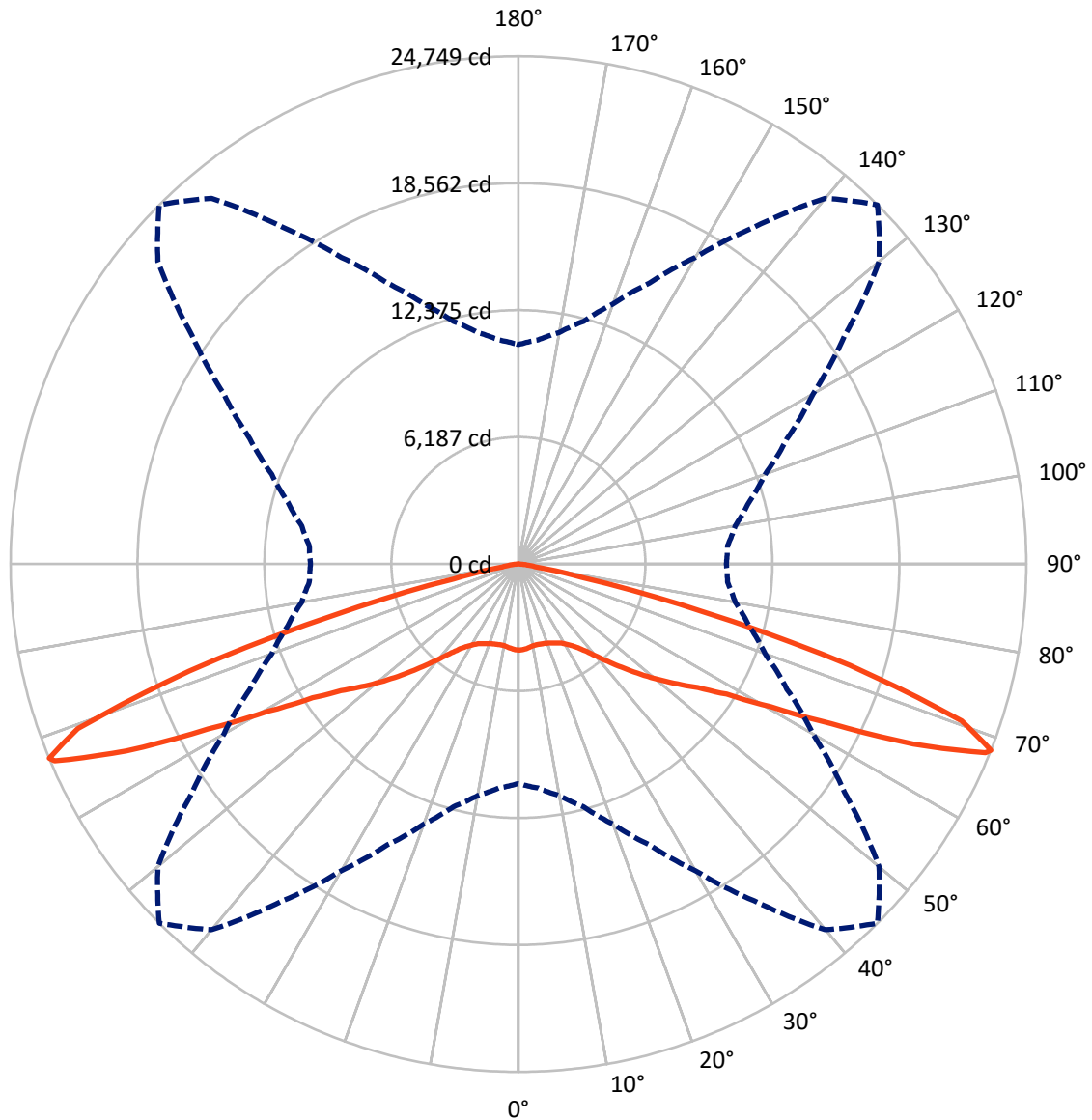


Based on 30 foot mounting height. Maximum calculated value = 4.7 fc
 Type V - Short - Full Cutoff

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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	21041.5	0.0	21041.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	21041.5	0.0	21041.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	42083.0	0.0	42083.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.8	0.9
10°-20°	1139.2	2.7
20°-30°	1936.8	4.6
30°-40°	3169.5	7.5
40°-50°	5664.4	13.5
50°-60°	9566.2	22.7
60°-70°	14833.7	35.2
70°-80°	5100.2	12.1
80°-90°	280.3	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°	42083.0	100.0
0°-180°	42083.0	100.0



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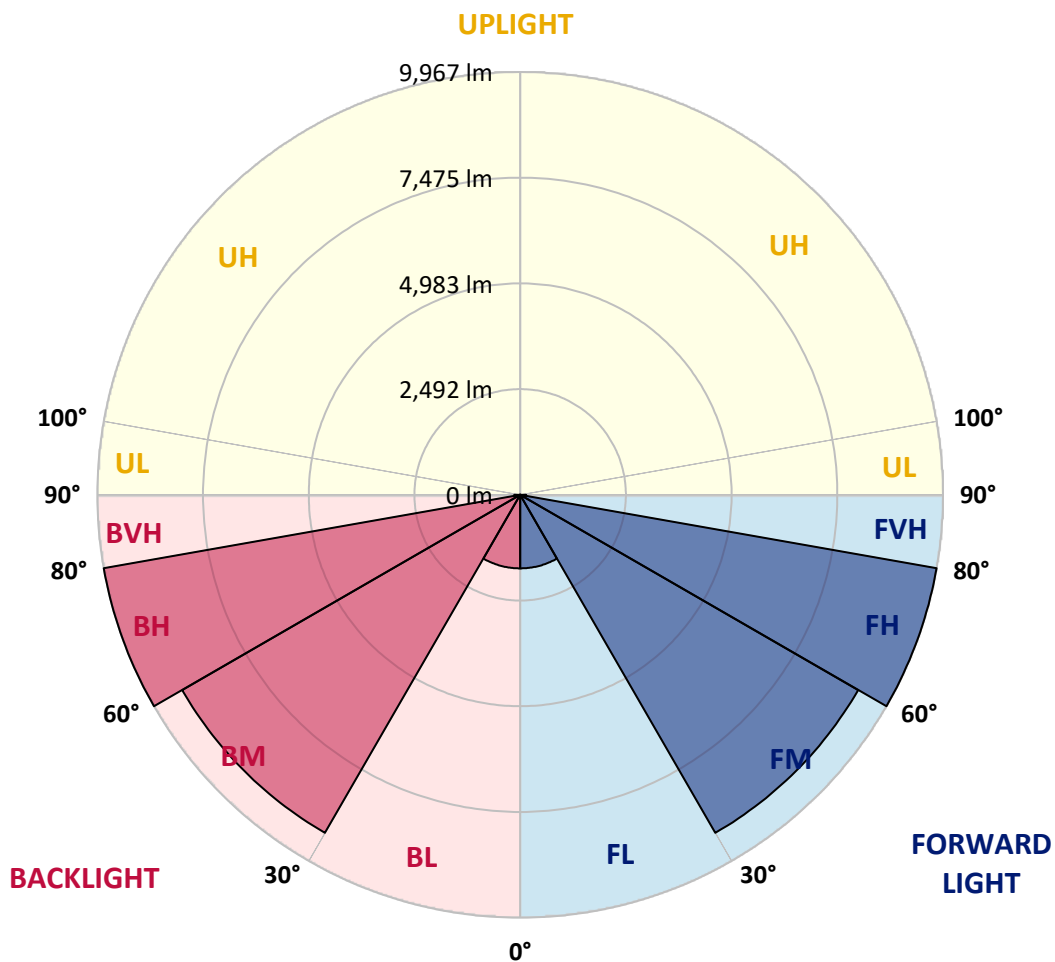
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1734.4	4.1			
FM	(30°-60°)	9200.0	21.9			
FH	(60°-80°)	9966.9	23.7			G4/12000
FVH	(80°-90°)	140.1	0.3			G2/225
BL	(0°-30°)	1734.4	4.1	B3/2500		
BM	(30°-60°)	9200.0	21.9	B5		
BH	(60°-80°)	9966.9	23.7	B5		G4/12000
BVH	(80°-90°)	140.1	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°	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9
2.5°	4215.9	4215.9	4221.1	4218.5	4210.8	4203.1	4195.3	4187.6	4182.4	4177.3	4172.1
5°	4172.1	4172.1	4179.9	4174.7	4169.6	4161.8	4156.7	4148.9	4143.8	4138.6	4141.2
7.5°	4115.4	4120.6	4125.7	4123.2	4112.9	4110.3	4102.6	4100.0	4094.8	4087.1	4089.7
10°	4066.5	4069.1	4074.2	4071.6	4069.1	4061.3	4058.7	4056.2	4053.6	4043.3	4040.7
12.5°	4017.5	4022.7	4027.8	4030.4	4027.8	4030.4	4033.0	4035.6	4033.0	4027.8	4027.8
15°	3978.9	3984.0	3991.7	3999.5	4002.1	4017.5	4027.8	4038.1	4045.9	4048.4	4040.7
17.5°	3958.2	3966.0	3976.3	3991.7	4004.6	4022.7	4040.7	4056.2	4069.1	4071.6	4063.9
20°	3955.7	3963.4	3978.9	3996.9	4020.1	4043.3	4071.6	4094.8	4107.7	4115.4	4107.7
22.5°	3973.7	3984.0	4004.6	4027.8	4056.2	4087.1	4123.2	4148.9	4174.7	4185.0	4177.3
25°	4025.2	4035.6	4058.7	4087.1	4118.0	4156.7	4192.8	4226.3	4252.0	4264.9	4254.6
27.5°	4133.5	4136.1	4161.8	4192.8	4228.8	4262.3	4308.7	4324.2	4344.8	4357.7	4344.8
30°	4285.5	4290.7	4313.9	4362.8	4396.3	4440.1	4465.9	4481.4	4504.6	4517.5	4502.0
32.5°	4517.5	4522.6	4543.2	4589.6	4620.5	4654.0	4685.0	4695.3	4718.5	4733.9	4715.9
35°	4844.7	4855.0	4873.1	4904.0	4929.8	4955.5	4978.7	4971.0	4986.5	5007.1	4989.0
37.5°	5293.1	5290.5	5295.7	5318.9	5344.7	5360.1	5396.2	5378.2	5393.6	5411.7	5401.4
40°	5816.2	5816.2	5813.7	5854.9	5865.2	5880.7	5919.3	5896.1	5916.8	5937.4	5919.3
42.5°	6411.5	6421.8	6434.7	6468.2	6496.6	6501.7	6519.8	6509.5	6535.2	6553.3	6535.2
45°	7097.0	7112.5	7127.9	7205.2	7218.1	7228.4	7241.3	7207.8	7236.2	7251.6	7246.5
47.5°	7808.3	7836.6	7870.1	7950.0	8001.5	8024.7	8035.0	7996.4	7999.0	8022.1	8024.7
50°	8612.3	8643.2	8676.7	8766.9	8815.9	8857.1	8870.0	8826.2	8831.3	8849.4	8854.5
52.5°	9354.4	9390.5	9462.7	9583.8	9653.4	9725.5	9730.7	9676.6	9699.8	9712.6	9702.3
55°	10052.8	10099.2	10194.5	10356.9	10483.2	10624.9	10689.3	10630.1	10630.1	10619.7	10614.6
57.5°	10867.1	10918.7	11016.6	11204.7	11380.0	11583.5	11758.8	11818.0	11926.3	11962.4	11905.7
60°	12093.8	12147.9	12248.4	12495.8	12717.4	13013.8	13302.4	13536.9	13918.3	14124.4	13938.9
62.5°	13214.8	13297.2	13534.3	13967.2	14446.6	14995.5	15632.0	16085.5	16778.7	17124.0	16657.6
65°	12959.6	13127.1	13591.0	14271.3	15260.9	16451.5	17747.7	18992.4	20425.2	21159.6	20211.3
67.5°	11320.7	11462.4	11962.4	12753.5	13987.9	15629.4	17644.6	20221.6	23177.4	24553.5	22875.9
68°	10694.5	10959.9	11457.3	12243.2	13487.9	15101.1	17252.9	20036.0	23262.4	24749.3	22937.7
70°	8200.0	8295.3	8772.0	9478.1	10820.7	12403.0	14575.4	17747.7	21394.1	22924.8	21061.7
72.5°	3896.4	3953.1	4262.3	4958.1	5811.1	7099.6	9016.9	12008.7	15294.4	16887.0	15029.0
75°	1427.6	1440.5	1512.7	1677.6	1997.2	2481.6	3401.6	5262.2	7790.2	9290.0	7821.1
77.5°	770.5	773.1	801.4	842.7	899.4	963.8	1102.9	1479.2	2386.3	3247.0	2520.3
80°	484.5	481.9	510.2	543.7	582.4	613.3	626.2	670.0	755.1	883.9	811.7
82.5°	247.4	270.6	335.0	371.1	427.8	438.1	425.2	422.6	448.4	484.5	499.9
85°	136.6	121.1	177.8	237.1	257.7	265.4	268.0	252.5	247.4	242.2	255.1
87.5°	69.6	64.4	77.3	118.5	126.3	103.1	105.7	90.2	61.8	61.8	64.4
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°	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9	4197.9
2.5°	4167.0	4169.6	4164.4	4164.4	4164.4	4167.0	4164.4	4161.8
5°	4133.5	4138.6	4138.6	4141.2	4143.8	4143.8	4143.8	4143.8
7.5°	4084.5	4087.1	4092.2	4092.2	4092.2	4092.2	4092.2	4092.2
10°	4038.1	4033.0	4030.4	4025.2	4025.2	4017.5	4020.1	4022.7
12.5°	4014.9	4004.6	3999.5	3991.7	3986.6	3978.9	3978.9	3981.4
15°	4025.2	4009.8	3994.3	3989.2	3984.0	3978.9	3973.7	3976.3
17.5°	4045.9	4027.8	4009.8	3999.5	3989.2	3981.4	3978.9	3981.4
20°	4089.7	4063.9	4035.6	4017.5	3996.9	3991.7	3984.0	3991.7
22.5°	4148.9	4118.0	4081.9	4048.4	4025.2	4014.9	4004.6	4012.4
25°	4221.1	4187.6	4151.5	4112.9	4087.1	4079.4	4066.5	4066.5
27.5°	4321.6	4293.3	4262.3	4226.3	4200.5	4192.8	4172.1	4172.1
30°	4481.4	4453.0	4424.7	4393.8	4368.0	4360.3	4334.5	4334.5
32.5°	4692.7	4661.8	4643.7	4618.0	4597.3	4584.5	4553.5	4551.0
35°	4976.2	4947.8	4945.2	4927.2	4906.6	4909.2	4878.2	4873.1
37.5°	5383.3	5360.1	5367.9	5352.4	5334.4	5349.8	5331.8	5331.8
40°	5903.9	5896.1	5903.9	5893.6	5896.1	5898.7	5883.3	5888.4
42.5°	6532.7	6512.0	6558.4	6553.3	6545.5	6566.2	6530.1	6504.3
45°	7256.8	7249.1	7295.4	7303.2	7287.7	7300.6	7236.2	7233.6
47.5°	8042.8	8042.8	8084.0	8078.8	8063.4	8066.0	7988.6	7939.7
50°	8862.2	8857.1	8898.3	8888.0	8867.4	8864.8	8784.9	8736.0
52.5°	9715.2	9715.2	9774.5	9746.1	9697.2	9674.0	9576.1	9511.6
55°	10658.4	10645.5	10663.6	10570.8	10475.4	10405.9	10284.7	10235.8
57.5°	11851.5	11702.1	11573.2	11454.7	11320.7	11238.2	11096.5	11044.9
60°	13544.6	13145.2	12972.5	12735.4	12513.8	12403.0	12214.9	12114.4
62.5°	15889.7	15227.4	14758.4	14235.3	13730.2	13374.5	13088.5	12962.2
65°	18600.7	17157.5	15964.4	14843.4	13892.5	13137.5	12717.4	12586.0
67.5°	19631.5	16982.3	14923.3	13315.3	12160.8	11261.4	10758.9	10653.2
68°	19412.4	16580.3	14441.4	12794.7	11635.1	10728.0	10228.0	10132.7
70°	17124.0	13987.9	11730.4	10091.5	9009.1	8145.8	7792.8	7640.8
72.5°	11673.7	8983.4	6890.9	5512.2	4703.0	4156.7	3832.0	3721.2
75°	5373.0	3631.0	2424.9	1811.6	1538.5	1407.0	1306.5	1280.8
77.5°	1566.8	1139.0	979.3	907.1	853.0	806.6	773.1	770.5
80°	744.7	698.4	677.7	631.4	582.4	538.6	507.7	512.8
82.5°	499.9	487.0	487.0	440.7	363.4	311.8	257.7	231.9
85°	265.4	275.7	291.2	275.7	239.7	177.8	116.0	126.3
87.5°	90.2	103.1	108.2	105.7	95.3	72.2	54.1	54.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)