

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: P195090

Luminaire Tested: **NAV-AF-06-D-UNV-RW-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195090
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36809 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B5 - U0 - G5

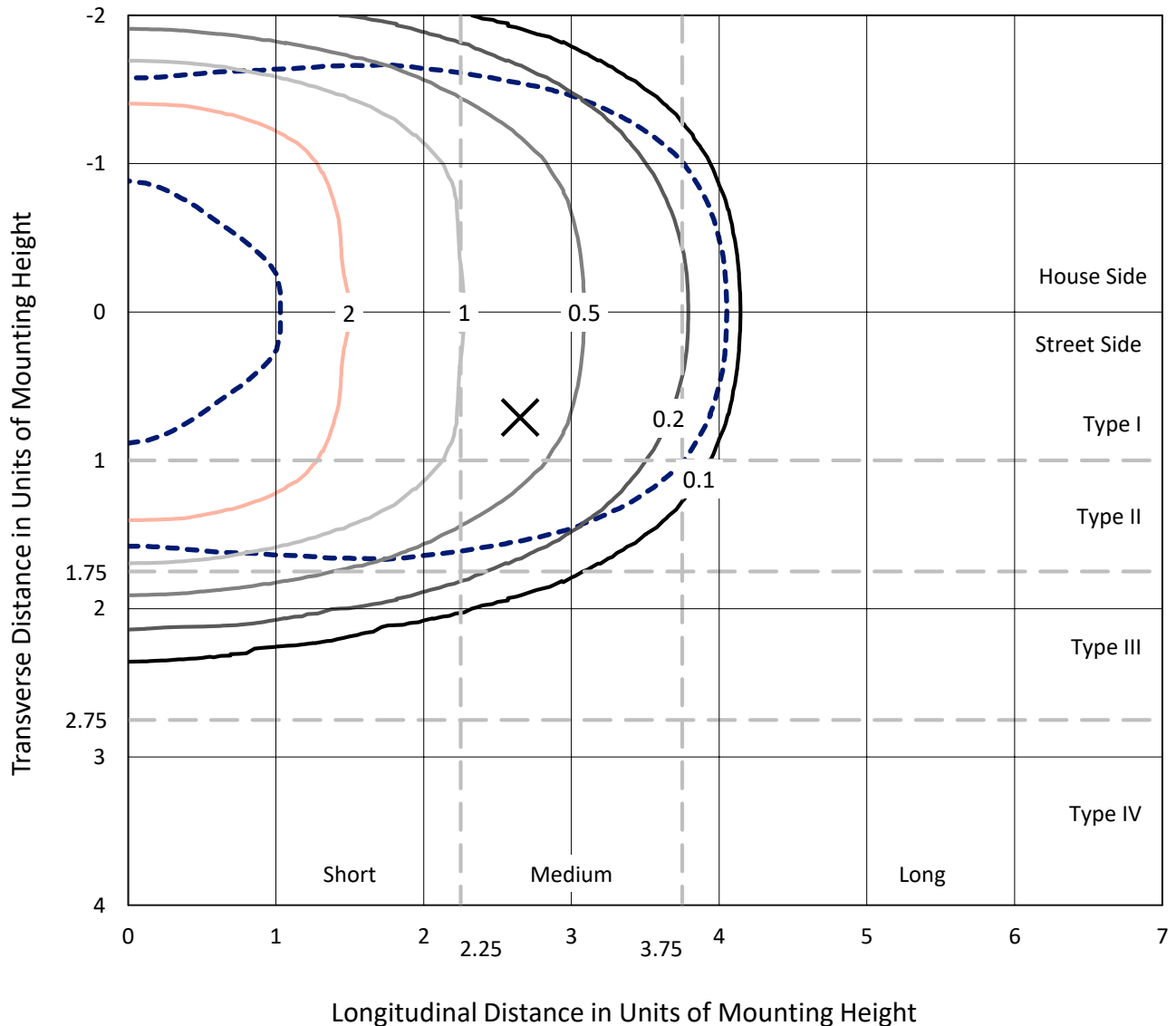
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

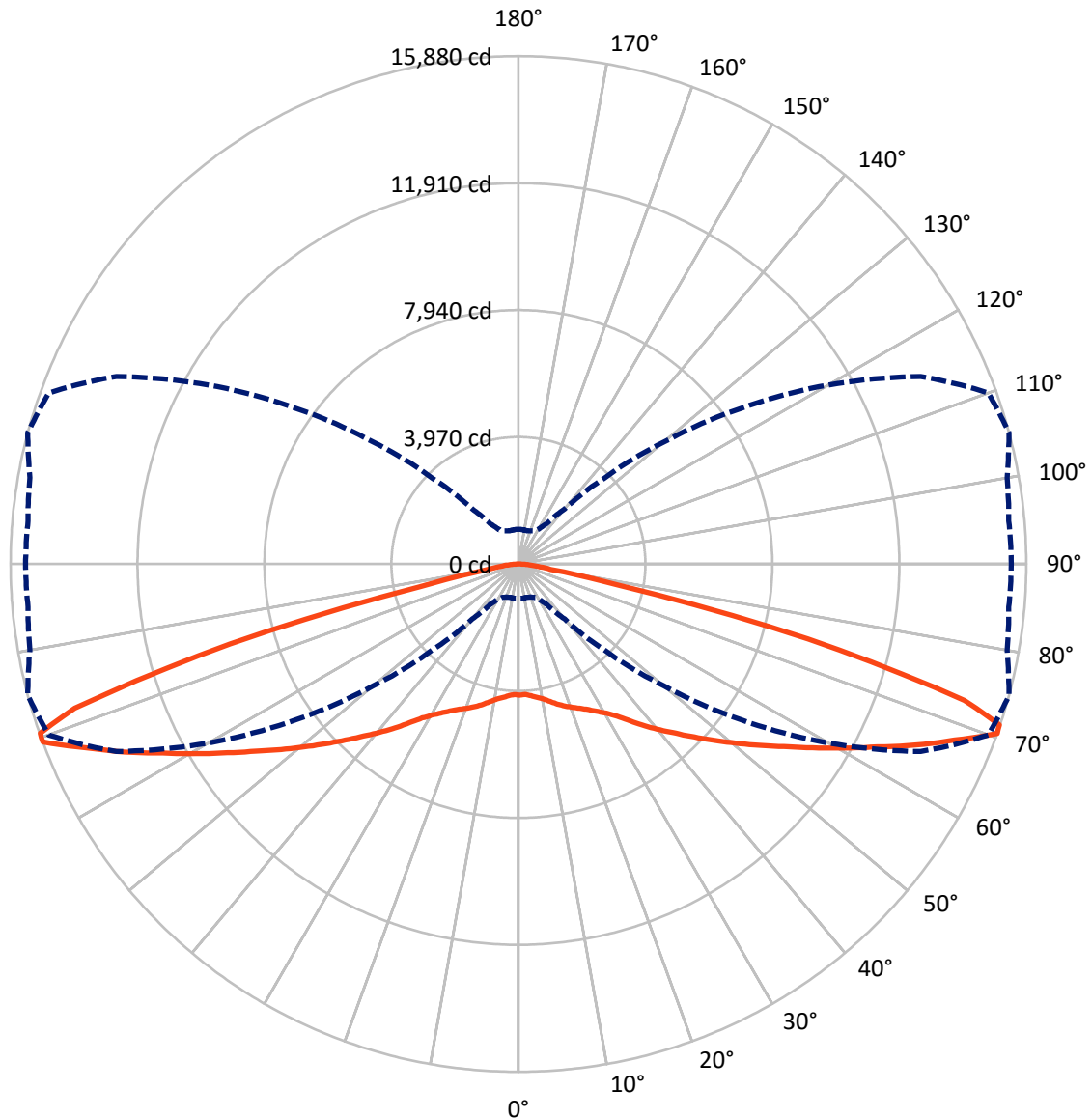
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18404.5	0.0	18404.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	18404.5	0.0	18404.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	36809.0	0.0	36809.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.2	1.1
10°-20°	1219.4	3.3
20°-30°	2290.2	6.2
30°-40°	4034.2	11.0
40°-50°	6686.0	18.2
50°-60°	9301.1	25.3
60°-70°	8780.4	23.9
70°-80°	3750.2	10.2
80°-90°	354.4	1.0
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°	36809.0	100.0
0°-180°	36809.0	100.0

Coefficient of Utilization



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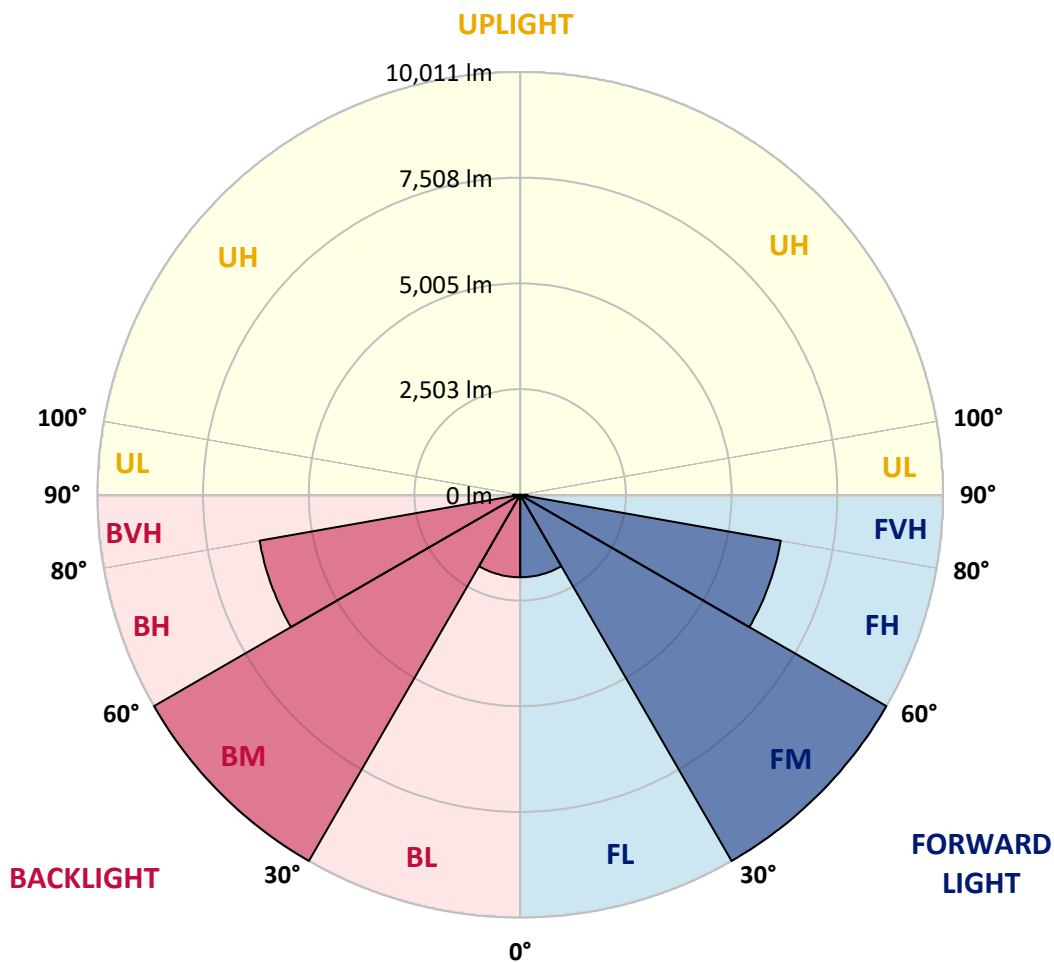
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1951.4	5.3			
FM	(30°-60°)	10010.6	27.2			
FH	(60°-80°)	6265.3	17.0			G3/7500
FVH	(80°-90°)	177.2	0.5			G2/225
BL	(0°-30°)	1951.4	5.3	B3/2500		
BM	(30°-60°)	10010.6	27.2	B5		
BH	(60°-80°)	6265.3	17.0	B5		G5
BVH	(80°-90°)	177.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0
2.5°	4124.4	4122.1	4124.4	4117.5	4119.8	4117.5	4117.5	4108.3	4108.3	4103.7	4096.7
5°	4078.3	4082.9	4082.9	4082.9	4089.8	4089.8	4099.0	4101.3	4108.3	4115.2	4119.8
7.5°	4002.2	4004.5	4011.4	4016.0	4029.8	4048.3	4066.7	4087.5	4106.0	4129.0	4154.4
10°	3937.6	3942.2	3953.7	3965.3	3990.6	4013.7	4046.0	4078.3	4110.6	4149.8	4189.0
12.5°	3903.0	3909.9	3928.3	3946.8	3986.0	4016.0	4059.8	4110.6	4154.4	4191.3	4235.1
15°	3907.6	3909.9	3935.3	3960.6	4016.0	4057.5	4119.8	4179.8	4232.8	4274.4	4325.1
17.5°	3974.5	3979.1	4004.5	4041.4	4094.4	4147.5	4214.4	4276.7	4348.2	4396.6	4456.6
20°	4106.0	4112.9	4140.6	4179.8	4237.4	4292.8	4362.0	4426.6	4500.4	4558.1	4618.1
22.5°	4276.7	4288.2	4318.2	4366.6	4424.3	4491.2	4562.7	4629.6	4698.8	4756.5	4807.2
25°	4505.0	4518.9	4551.2	4599.6	4657.3	4728.8	4802.6	4871.8	4943.3	4987.1	5028.6
27.5°	4811.8	4834.9	4869.5	4908.7	4959.4	5035.6	5104.8	5162.4	5231.6	5280.1	5307.8
30°	5224.7	5257.0	5284.7	5326.2	5363.1	5443.9	5499.2	5545.4	5598.4	5626.1	5633.0
32.5°	5729.9	5759.9	5787.6	5817.5	5868.3	5942.1	5995.2	6020.5	6048.2	6043.6	6018.2
35°	6299.7	6322.7	6338.9	6391.9	6475.0	6523.4	6562.6	6571.8	6576.5	6528.0	6479.6
37.5°	6899.4	6927.1	6940.9	7024.0	7102.4	7157.8	7176.2	7197.0	7183.1	7102.4	7014.7
40°	7547.6	7577.6	7619.1	7690.6	7782.9	7835.9	7859.0	7856.7	7845.2	7750.6	7607.6
42.5°	8184.2	8221.1	8255.8	8380.3	8456.4	8546.4	8557.9	8555.6	8530.3	8421.8	8255.8
45°	8724.0	8767.8	8839.4	8977.8	9100.0	9208.4	9252.3	9268.4	9243.0	9127.7	8938.5
47.5°	9169.2	9199.2	9289.2	9457.6	9614.4	9773.6	9861.2	9923.5	9921.2	9838.2	9637.5
50°	9473.7	9508.3	9619.0	9808.2	10004.2	10191.1	10364.1	10504.8	10571.7	10511.7	10324.9
52.5°	9561.4	9605.2	9750.5	9976.6	10204.9	10456.4	10714.7	10963.8	11113.8	11150.7	11005.4
55°	9192.3	9240.7	9452.9	9766.7	10142.6	10514.0	10906.2	11261.4	11570.5	11713.5	11655.9
57.5°	8117.3	8151.9	8421.8	8827.8	9365.3	10018.1	10677.8	11328.3	11858.8	12230.2	12294.8
60°	6419.6	6463.4	6758.7	7187.7	7799.0	8624.8	9547.5	10613.2	11653.5	12504.7	12926.9
62.5°	4332.0	4362.0	4645.7	5037.9	5706.8	6502.6	7531.4	8880.9	10364.1	11884.2	13074.5
65°	2274.4	2274.4	2465.9	2740.4	3273.2	3986.0	5040.2	6424.2	8188.9	10087.3	12078.0
67.5°	1319.4	1317.1	1361.0	1423.2	1591.6	1880.0	2461.3	3478.5	5148.6	7358.4	9623.6
70°	1088.8	1081.9	1074.9	1074.9	1100.3	1144.1	1254.9	1534.0	2244.4	3794.6	5921.3
71°	1040.3	1035.7	1017.3	1010.3	1021.9	1044.9	1093.4	1222.6	1593.9	2588.1	4422.0
72.5°	982.7	971.1	943.4	931.9	934.2	943.4	957.3	1008.0	1121.1	1471.7	2521.2
75°	895.0	867.3	832.7	816.6	809.7	807.4	807.4	821.2	846.6	888.1	1033.4
77.5°	793.5	754.3	717.4	701.2	689.7	682.8	678.2	668.9	664.3	682.8	735.8
80°	671.3	629.7	599.7	590.5	583.6	569.8	551.3	532.9	521.3	530.5	562.8
82.5°	519.0	477.5	482.1	484.4	472.9	449.8	431.4	410.6	389.8	385.2	401.4
85°	412.9	392.1	378.3	408.3	382.9	355.2	329.9	295.3	246.8	203.0	221.4
87.5°	177.6	179.9	258.4	389.8	341.4	274.5	228.4	184.5	117.6	87.7	90.0
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°	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0	4099.0
2.5°	4094.4	4094.4	4087.5	4082.9	4082.9	4082.9	4078.3	4080.6
5°	4122.1	4126.7	4131.3	4129.0	4135.9	4142.9	4140.6	4138.3
7.5°	4168.2	4182.1	4195.9	4202.8	4212.1	4221.3	4223.6	4216.7
10°	4214.4	4242.1	4262.8	4281.3	4292.8	4302.0	4309.0	4306.6
12.5°	4272.0	4311.3	4348.2	4385.1	4410.4	4424.3	4438.1	4433.5
15°	4366.6	4410.4	4456.6	4505.0	4544.2	4565.0	4585.8	4581.1
17.5°	4495.8	4535.0	4571.9	4620.4	4668.8	4691.9	4714.9	4712.6
20°	4657.3	4687.3	4708.0	4735.7	4781.8	4807.2	4828.0	4821.0
22.5°	4841.8	4851.0	4853.3	4862.6	4899.5	4929.5	4957.1	4964.1
25°	5042.5	5035.6	5021.7	5014.8	5040.2	5072.5	5107.1	5116.3
27.5°	5291.6	5268.5	5233.9	5206.3	5213.2	5254.7	5293.9	5303.1
30°	5605.3	5552.3	5478.5	5425.4	5416.2	5460.0	5501.5	5515.4
32.5°	5962.9	5891.4	5789.9	5709.1	5674.5	5713.7	5750.7	5771.4
35°	6387.3	6308.9	6186.6	6082.8	6027.5	6052.8	6117.4	6140.5
37.5°	6890.2	6781.8	6645.7	6514.2	6421.9	6426.5	6495.7	6523.4
40°	7446.1	7289.2	7116.2	6952.5	6818.7	6809.4	6871.7	6892.5
42.5°	8025.1	7824.4	7621.4	7406.9	7240.8	7210.8	7291.5	7293.8
45°	8647.9	8389.5	8138.1	7889.0	7716.0	7662.9	7741.4	7750.6
47.5°	9312.2	8989.3	8691.7	8421.8	8235.0	8151.9	8228.1	8241.9
50°	10004.2	9669.8	9323.8	9023.9	8804.7	8703.3	8793.2	8802.4
52.5°	10689.3	10373.3	10029.6	9685.9	9420.6	9305.3	9411.4	9443.7
55°	11379.0	11074.6	10751.6	10407.9	10073.4	9971.9	10087.3	10121.9
57.5°	12096.4	11803.5	11510.5	11164.5	10839.3	10684.7	10809.3	10857.7
60°	12887.6	12629.3	12352.5	12004.2	11683.5	11503.6	11609.7	11665.1
62.5°	13665.0	13612.0	13360.5	12998.4	12592.4	12412.5	12502.4	12541.6
65°	13729.6	14590.0	14578.5	14218.6	13651.2	13349.0	13374.4	13392.8
67.5°	11983.4	13958.0	15219.7	15332.8	14700.7	14227.8	14172.5	14184.0
70°	8484.1	11194.5	13872.6	15630.3	15879.5	15512.7	15392.7	15411.2
71°	6797.9	9605.2	12553.2	14917.6	15861.0	15754.9	15688.0	15736.4
72.5°	4338.9	7077.0	9946.6	12774.6	14585.4	15104.4	15180.5	15210.5
75°	1575.5	3044.9	5153.2	7383.8	9358.4	10717.0	11464.4	11524.4
77.5°	846.6	1091.1	1686.2	2518.9	3164.8	3510.8	3552.3	3568.5
80°	622.8	722.0	825.8	943.4	1017.3	1031.1	1005.7	952.7
82.5°	440.6	498.3	539.8	581.3	611.3	585.9	486.7	371.4
85°	256.0	281.4	304.5	325.2	329.9	311.4	205.3	168.4
87.5°	101.5	110.7	108.4	122.3	117.6	108.4	80.7	69.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)