

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: P196535

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196535
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-05-D-UNV-RW-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32599.7 lumens
Efficiency: N/A
Efficacy: 101.9 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

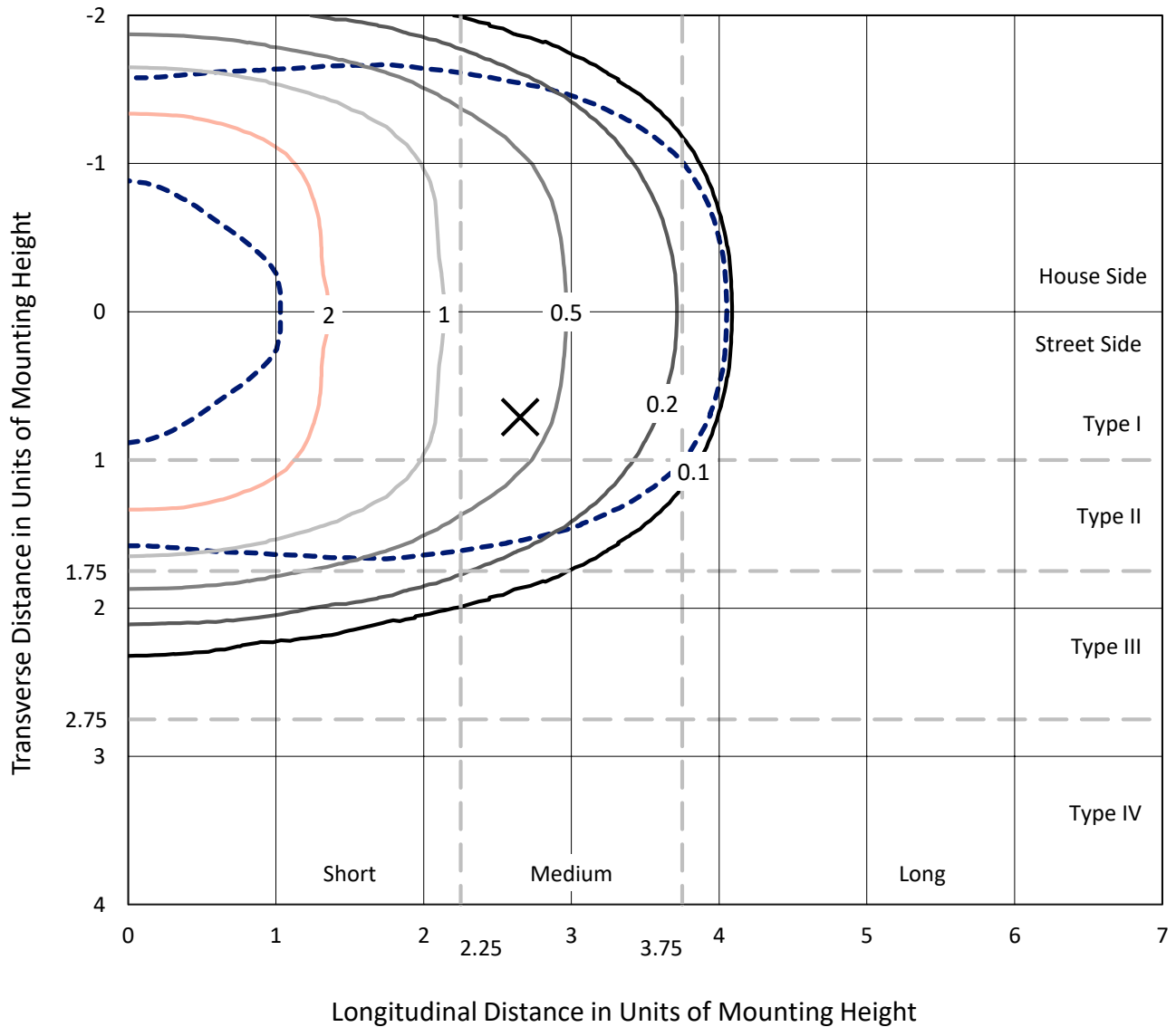
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

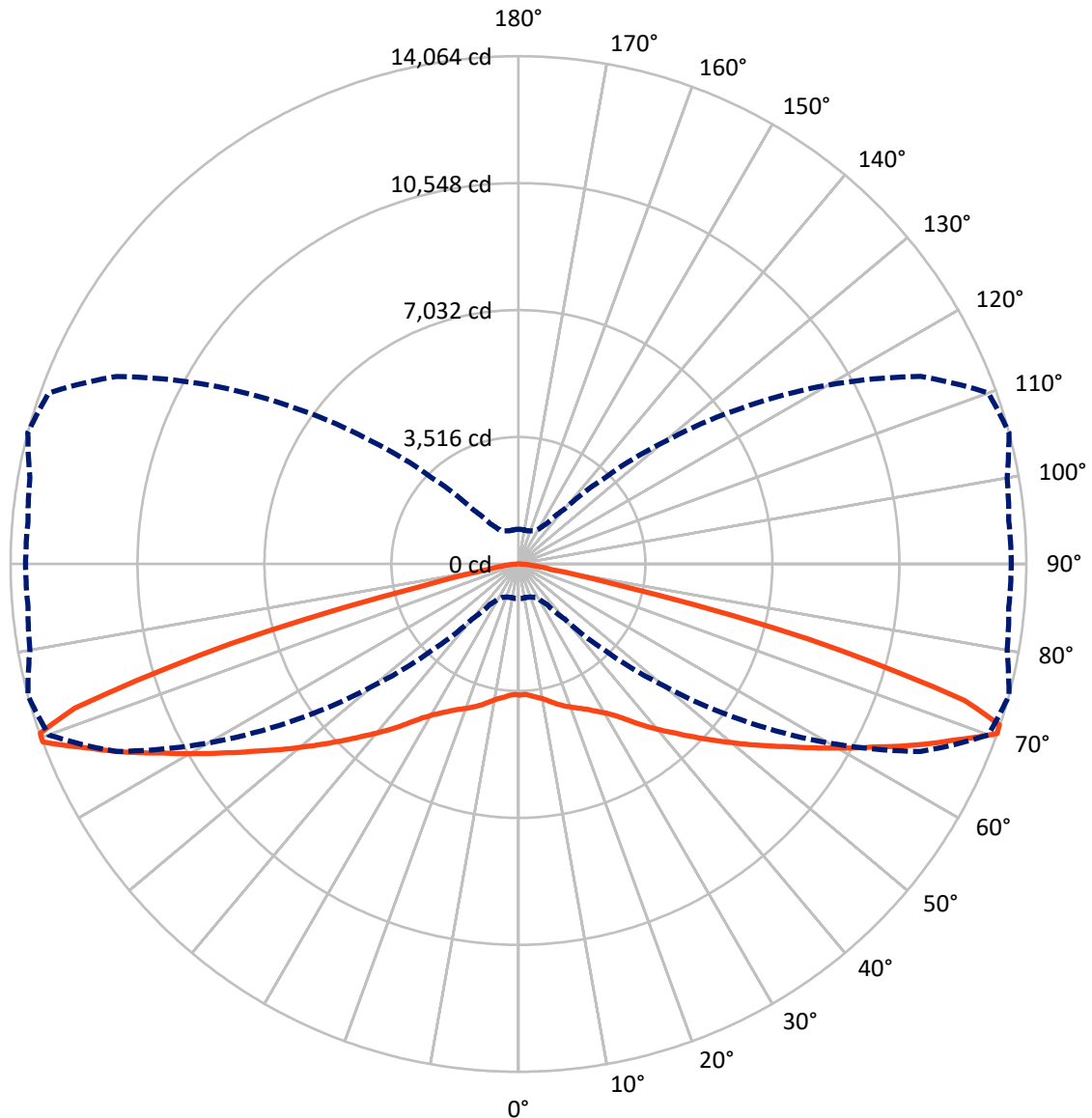
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.1 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	16299.8	0.0	16299.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16299.8	0.0	16299.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	32599.7	0.0	32599.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.2	1.1
10°-20°	1079.9	3.3
20°-30°	2028.3	6.2
30°-40°	3572.9	11.0
40°-50°	5921.4	18.2
50°-60°	8237.5	25.3
60°-70°	7776.4	23.9
70°-80°	3321.3	10.2
80°-90°	313.8	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°	32599.7	100.0
0°-180°	32599.7	100.0

Coefficient of Utilization



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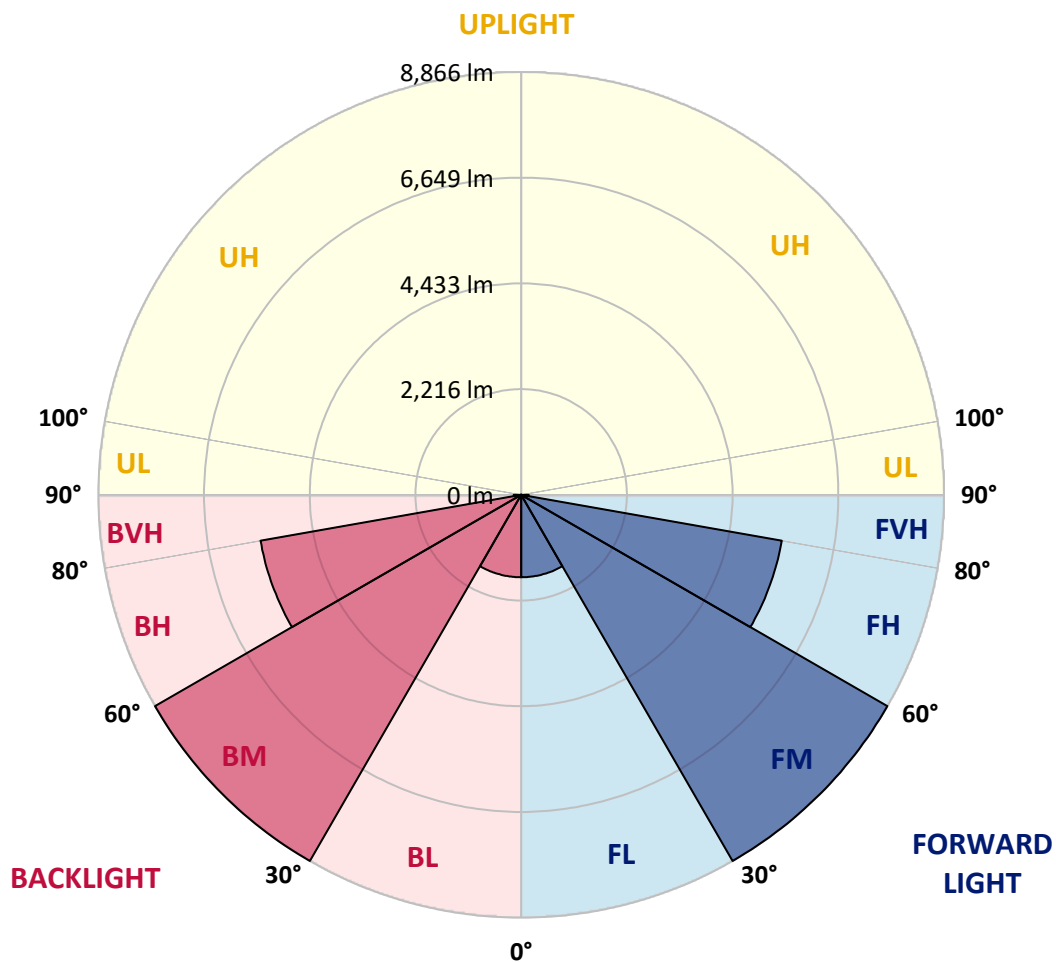
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1728.2	5.3			
FM	(30°-60°)	8865.9	27.2			
FH	(60°-80°)	5548.9	17.0			G3/7500
FVH	(80°-90°)	156.9	0.5			G2/225
BL	(0°-30°)	1728.2	5.3	B3/2500		
BM	(30°-60°)	8865.9	27.2	B5		
BH	(60°-80°)	5548.9	17.0	B5		G5
BVH	(80°-90°)	156.9	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°	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2
2.5°	3652.7	3650.7	3652.7	3646.6	3648.7	3646.6	3646.6	3638.5	3638.5	3634.4	3628.3
5°	3611.9	3616.1	3616.1	3616.1	3622.2	3622.2	3630.2	3632.4	3638.5	3644.6	3648.7
7.5°	3544.5	3546.5	3552.7	3556.7	3569.0	3585.4	3601.7	3620.1	3636.4	3656.8	3679.3
10°	3487.3	3491.4	3501.5	3511.8	3534.3	3554.7	3583.2	3611.9	3640.5	3675.3	3710.0
12.5°	3456.6	3462.8	3479.2	3495.4	3530.1	3556.7	3595.6	3640.5	3679.3	3712.0	3750.9
15°	3460.7	3462.8	3485.3	3507.8	3556.7	3593.5	3648.7	3701.8	3748.8	3785.5	3830.5
17.5°	3520.0	3524.0	3546.5	3579.3	3626.2	3673.2	3732.4	3787.6	3851.0	3893.8	3947.0
20°	3636.4	3642.6	3667.1	3701.8	3752.8	3801.9	3863.2	3920.4	3985.8	4036.8	4089.9
22.5°	3787.6	3797.9	3824.4	3867.2	3918.4	3977.6	4041.0	4100.2	4161.4	4212.5	4257.5
25°	3989.8	4002.0	4030.7	4073.6	4124.6	4188.0	4253.4	4314.6	4378.0	4416.8	4453.6
27.5°	4261.5	4282.0	4312.7	4347.3	4392.3	4459.8	4521.0	4572.1	4633.3	4676.3	4700.8
30°	4627.2	4655.9	4680.3	4717.2	4749.8	4821.3	4870.3	4911.2	4958.1	4982.8	4988.9
32.5°	5074.6	5101.2	5125.7	5152.2	5197.3	5262.6	5309.6	5332.1	5356.6	5352.5	5330.0
35°	5579.3	5599.6	5614.0	5660.9	5734.5	5777.4	5812.1	5820.3	5824.4	5781.5	5738.7
37.5°	6110.5	6134.9	6147.2	6220.7	6290.2	6339.2	6355.6	6373.9	6361.7	6290.2	6212.6
40°	6684.5	6711.0	6747.9	6811.1	6892.8	6939.8	6960.3	6958.2	6948.1	6864.2	6737.6
42.5°	7248.4	7281.0	7311.6	7422.0	7489.4	7569.1	7579.4	7577.2	7554.7	7458.8	7311.6
45°	7726.4	7765.2	7828.5	7951.2	8059.4	8155.4	8194.2	8208.5	8186.0	8083.9	7916.4
47.5°	8120.7	8147.3	8226.9	8376.1	8514.9	8655.9	8733.5	8788.7	8786.6	8713.1	8535.4
50°	8390.3	8420.9	8519.1	8686.5	8860.2	9025.7	9178.9	9303.5	9362.8	9309.7	9144.1
52.5°	8467.9	8506.8	8635.6	8835.7	9037.9	9260.6	9489.3	9710.1	9842.8	9875.5	9746.8
55°	8141.1	8183.9	8372.0	8649.7	8982.8	9311.7	9658.9	9973.6	10247.3	10374.0	10323.0
57.5°	7189.0	7219.8	7458.8	7818.3	8294.3	8872.5	9456.7	10032.8	10502.8	10831.6	10888.9
60°	5685.6	5724.3	5985.8	6365.8	6907.2	7638.6	8455.7	9399.6	10320.8	11074.7	11448.6
62.5°	3836.6	3863.2	4114.4	4461.8	5054.3	5759.0	6670.2	7865.2	9178.9	10525.2	11579.3
65°	2014.3	2014.3	2183.9	2426.9	2898.9	3530.1	4463.8	5689.5	7252.4	8933.8	10696.8
67.5°	1168.5	1166.6	1205.3	1260.6	1409.7	1665.0	2179.8	3080.8	4559.8	6517.0	8523.1
70°	964.2	958.1	951.9	951.9	974.5	1013.3	1111.3	1358.5	1987.8	3360.6	5244.2
71°	921.4	917.2	901.0	894.9	905.0	925.4	968.4	1082.8	1411.6	2292.2	3916.3
72.5°	870.2	860.1	835.5	825.4	827.4	835.5	847.9	892.7	992.8	1303.4	2232.9
75°	792.6	768.1	737.5	723.2	717.1	715.0	715.0	727.3	749.7	786.5	915.3
77.5°	702.7	668.0	635.4	621.0	610.9	604.8	600.6	592.4	588.4	604.8	651.7
80°	594.5	557.8	531.1	523.1	516.9	504.6	488.3	471.9	461.7	470.0	498.4
82.5°	459.7	422.9	426.9	429.1	418.8	398.4	382.1	363.7	345.3	341.2	355.4
85°	365.7	347.3	335.0	361.6	339.1	314.5	292.2	261.4	218.6	179.7	196.1
87.5°	157.4	159.3	228.8	345.3	302.3	243.1	202.2	163.5	104.3	77.7	79.6
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°	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2	3630.2
2.5°	3626.2	3626.2	3620.1	3616.1	3616.1	3616.1	3611.9	3614.0
5°	3650.7	3654.8	3658.9	3656.8	3663.0	3669.2	3667.1	3665.0
7.5°	3691.6	3703.9	3716.1	3722.3	3730.4	3738.6	3740.6	3734.5
10°	3732.4	3757.0	3775.4	3791.8	3801.9	3810.1	3816.2	3814.1
12.5°	3783.5	3818.3	3851.0	3883.6	3906.1	3918.4	3930.6	3926.6
15°	3867.2	3906.1	3947.0	3989.8	4024.6	4042.9	4061.3	4057.3
17.5°	3981.6	4016.4	4049.1	4092.0	4134.9	4155.3	4175.8	4173.7
20°	4124.6	4151.2	4169.7	4194.1	4235.0	4257.5	4275.9	4269.8
22.5°	4288.1	4296.3	4298.4	4306.5	4339.2	4365.8	4390.2	4396.4
25°	4465.9	4459.8	4447.5	4441.4	4463.8	4492.4	4523.0	4531.2
27.5°	4686.4	4666.0	4635.5	4610.8	4617.1	4653.8	4688.6	4696.7
30°	4964.3	4917.3	4851.9	4805.0	4796.8	4835.6	4872.4	4884.7
32.5°	5280.9	5217.6	5127.7	5056.3	5025.6	5060.4	5093.0	5111.3
35°	5656.9	5587.4	5479.2	5387.2	5338.2	5360.7	5417.8	5438.3
37.5°	6102.2	6006.2	5885.7	5769.2	5687.5	5691.7	5752.9	5777.4
40°	6594.6	6455.7	6302.4	6157.5	6038.9	6030.8	6085.8	6104.4
42.5°	7107.4	6929.7	6749.8	6559.8	6412.8	6386.2	6457.7	6459.7
45°	7659.0	7430.1	7207.5	6986.8	6833.6	6786.6	6856.1	6864.2
47.5°	8247.3	7961.2	7697.8	7458.8	7293.3	7219.8	7287.1	7299.4
50°	8860.2	8564.0	8257.5	7992.0	7797.9	7708.0	7787.7	7795.8
52.5°	9467.0	9187.1	8882.7	8578.3	8343.4	8241.2	8335.2	8363.8
55°	10077.7	9808.1	9522.2	9217.7	8921.4	8831.7	8933.8	8964.4
57.5°	10713.2	10453.7	10194.2	9887.8	9599.7	9462.8	9573.2	9616.1
60°	11413.9	11185.1	10939.9	10631.5	10347.5	10188.1	10282.1	10331.1
62.5°	12102.3	12055.3	11832.7	11511.9	11152.4	10993.0	11072.7	11107.4
65°	12159.6	12921.5	12911.3	12592.6	12090.1	11822.5	11844.9	11861.3
67.5°	10613.0	12361.8	13479.4	13579.4	13019.7	12600.8	12551.8	12562.0
70°	7513.9	9914.4	12286.2	13842.9	14063.6	13738.7	13632.5	13648.8
71°	6020.5	8506.8	11117.6	13211.6	14047.3	13953.3	13894.0	13936.9
72.5°	3842.7	6267.7	8809.1	11313.8	12917.5	13377.1	13444.6	13471.1
75°	1395.4	2696.6	4563.9	6539.3	8288.2	9491.5	10153.4	10206.5
77.5°	749.7	966.3	1493.3	2230.8	2802.9	3109.3	3146.1	3160.5
80°	551.5	639.3	731.4	835.5	901.0	913.2	890.7	843.7
82.5°	390.2	441.3	478.0	514.8	541.4	518.9	431.0	328.9
85°	226.7	249.2	269.7	288.0	292.2	275.8	181.8	149.1
87.5°	89.9	98.2	96.0	108.2	104.3	96.0	71.4	61.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)