

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: P197015

Luminaire Tested: **NAV-AF-05-D-UNV-RW-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197015
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 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: 27505 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

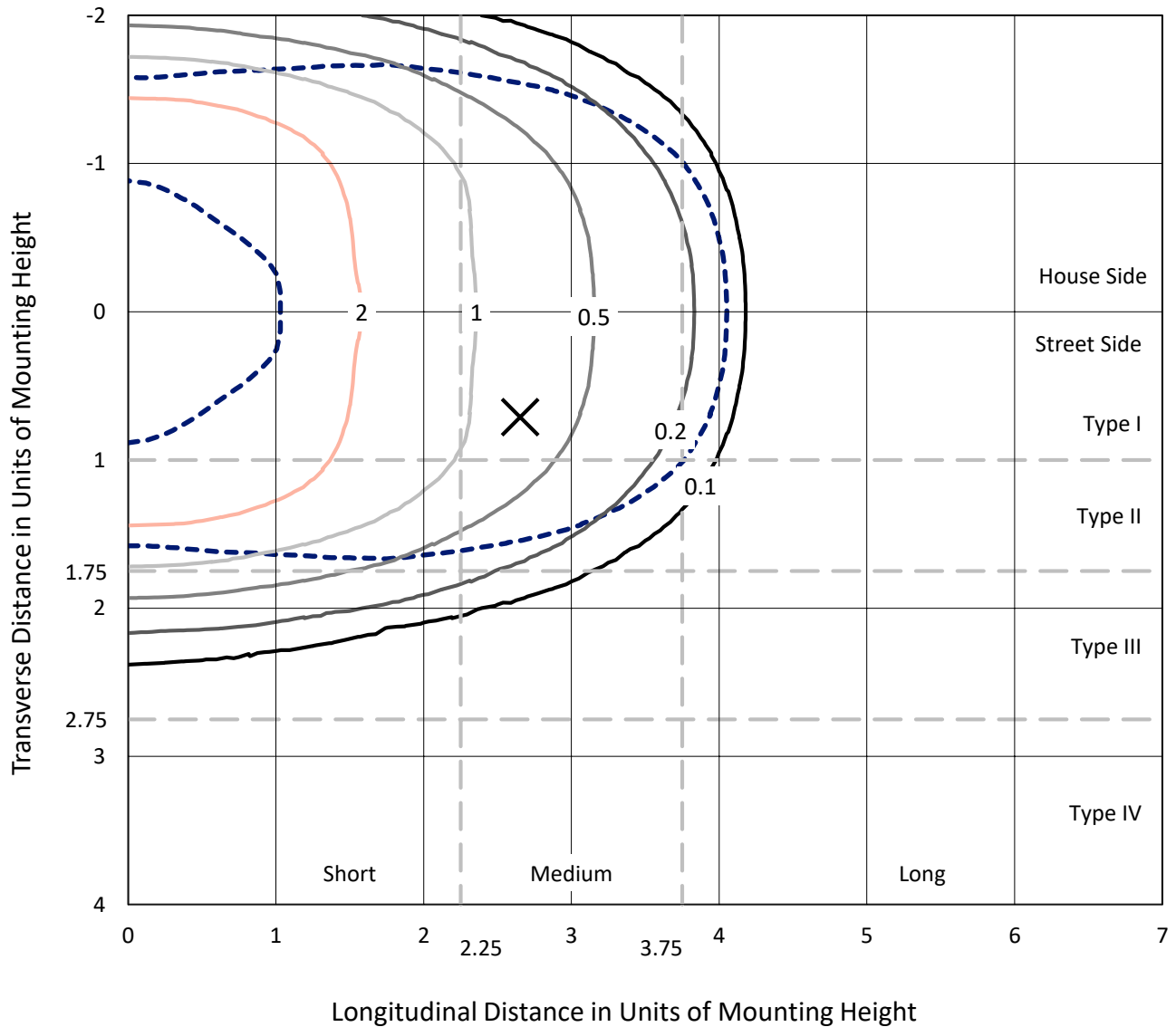
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

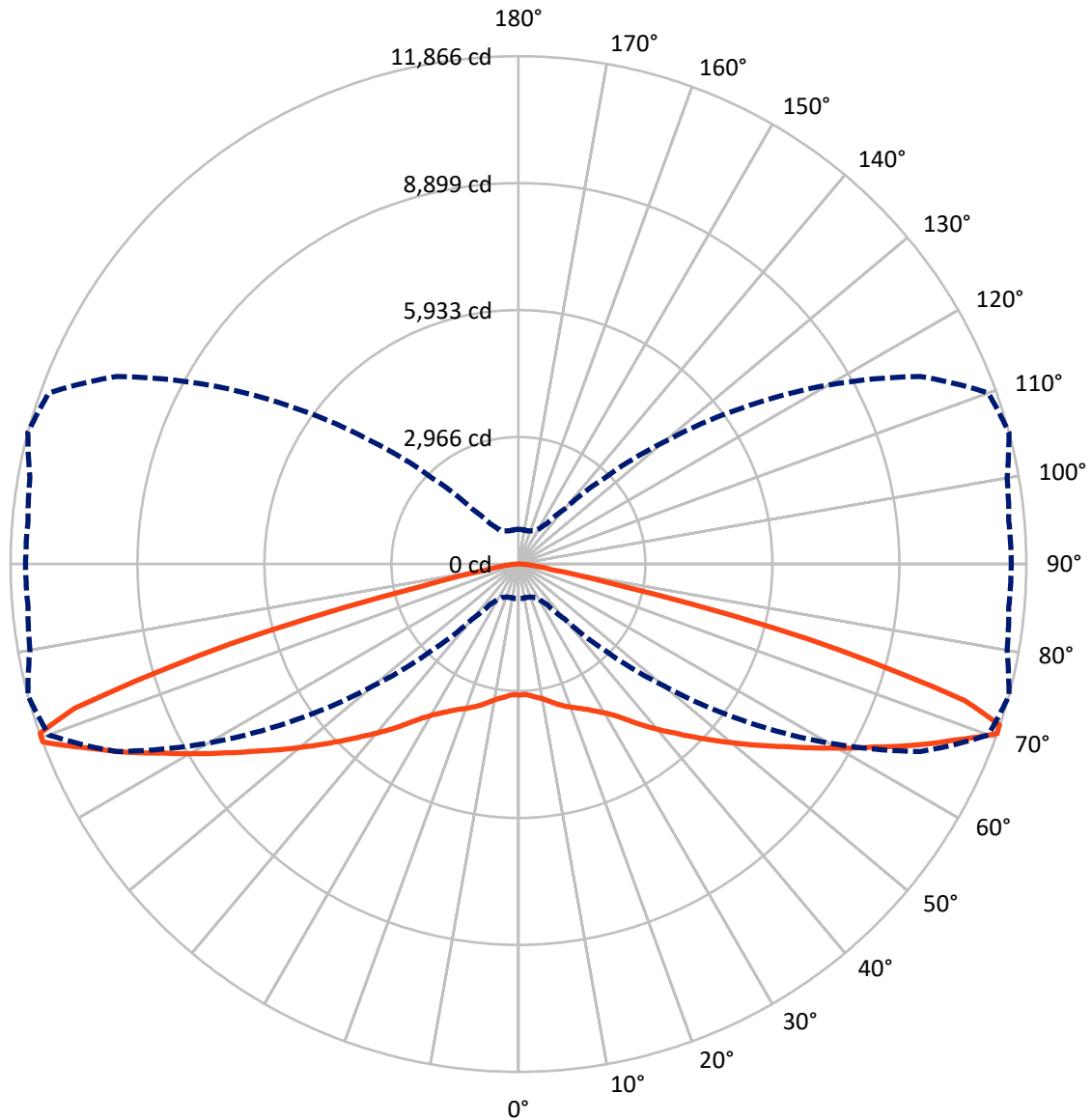
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 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	13752.5	0.0	13752.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13752.5	0.0	13752.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	27505.0	0.0	27505.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.8	1.1
10°-20°	911.2	3.3
20°-30°	1711.3	6.2
30°-40°	3014.5	11.0
40°-50°	4996.0	18.2
50°-60°	6950.1	25.3
60°-70°	6561.1	23.9
70°-80°	2802.3	10.2
80°-90°	264.8	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°	27505.0	100.0
0°-180°	27505.0	100.0



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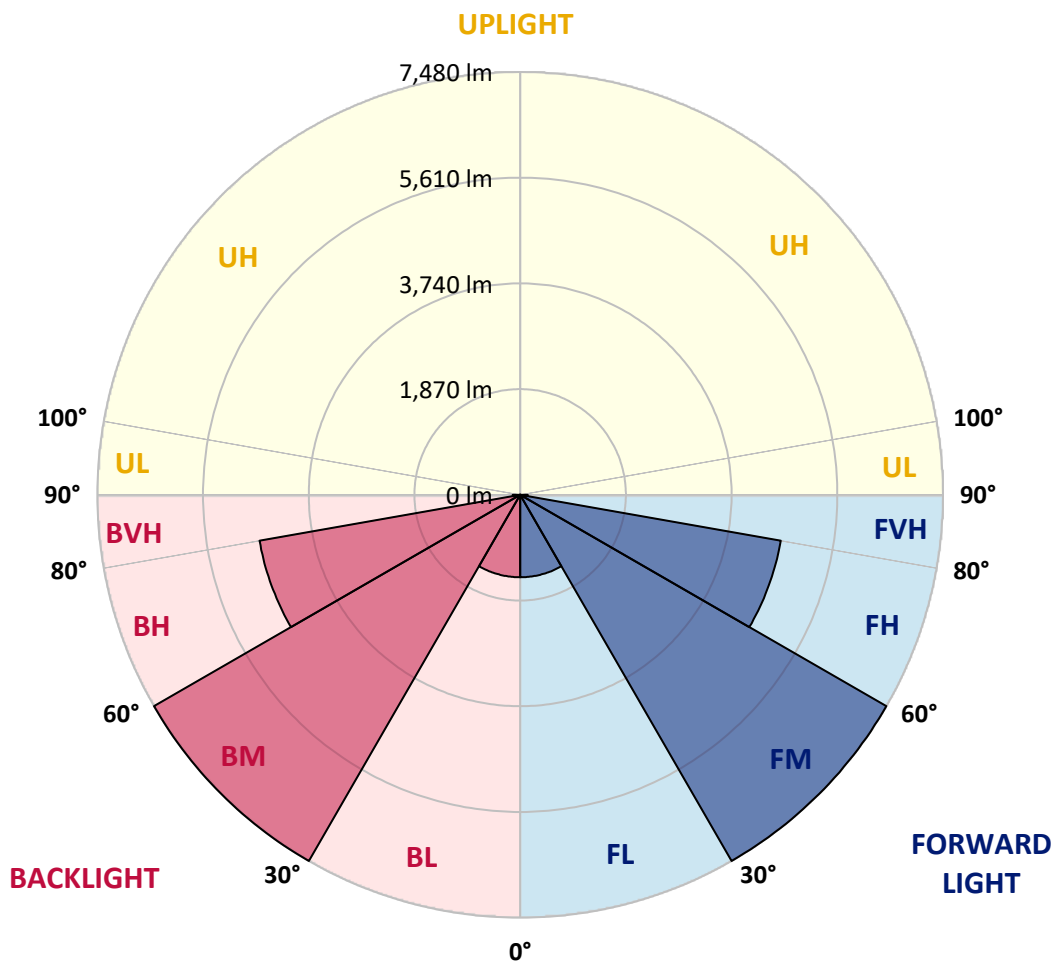
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1458.1	5.3			
FM	(30°-60°)	7480.3	27.2			
FH	(60°-80°)	4681.7	17.0			G2/5000
FVH	(80°-90°)	132.4	0.5			G2/225
BL	(0°-30°)	1458.1	5.3	B3/2500		
BM	(30°-60°)	7480.3	27.2	B4/8500		
BH	(60°-80°)	4681.7	17.0	B4/5000		G4/5000
BVH	(80°-90°)	132.4	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0
2.5°	3081.9	3080.2	3081.9	3076.7	3078.5	3076.7	3076.7	3069.8	3069.8	3066.4	3061.2
5°	3047.4	3050.9	3050.9	3050.9	3056.1	3056.1	3063.0	3064.7	3069.8	3075.0	3078.5
7.5°	2990.6	2992.3	2997.5	3000.9	3011.2	3025.0	3038.8	3054.3	3068.1	3085.4	3104.3
10°	2942.3	2945.7	2954.4	2963.0	2981.9	2999.2	3023.3	3047.4	3071.6	3100.9	3130.2
12.5°	2916.4	2921.6	2935.4	2949.2	2978.5	3000.9	3033.6	3071.6	3104.3	3131.9	3164.6
15°	2919.9	2921.6	2940.6	2959.5	3000.9	3031.9	3078.5	3123.3	3162.9	3193.9	3231.9
17.5°	2969.9	2973.3	2992.3	3019.9	3059.5	3099.1	3149.1	3195.7	3249.1	3285.3	3330.1
20°	3068.1	3073.3	3094.0	3123.3	3166.4	3207.7	3259.4	3307.7	3362.9	3406.0	3450.8
22.5°	3195.7	3204.3	3226.7	3262.9	3306.0	3356.0	3409.4	3459.4	3511.1	3554.2	3592.1
25°	3366.3	3376.7	3400.8	3437.0	3480.1	3533.5	3588.7	3640.4	3693.8	3726.6	3757.6
27.5°	3595.6	3612.8	3638.7	3668.0	3705.9	3762.8	3814.5	3857.6	3909.3	3945.5	3966.1
30°	3904.1	3928.2	3948.9	3979.9	4007.5	4067.8	4109.2	4143.7	4183.3	4204.0	4209.2
32.5°	4281.6	4304.0	4324.7	4347.1	4385.0	4440.2	4479.8	4498.8	4519.4	4516.0	4497.0
35°	4707.3	4724.6	4736.6	4776.3	4838.3	4874.5	4903.8	4910.7	4914.2	4878.0	4841.8
37.5°	5155.5	5176.2	5186.5	5248.6	5307.2	5348.5	5362.3	5377.8	5367.5	5307.2	5241.7
40°	5639.8	5662.2	5693.3	5746.7	5815.6	5855.3	5872.5	5870.8	5862.2	5791.5	5684.6
42.5°	6115.6	6143.1	6169.0	6262.1	6319.0	6386.2	6394.8	6393.1	6374.1	6293.1	6169.0
45°	6518.9	6551.6	6605.1	6708.5	6799.9	6880.9	6913.6	6925.7	6906.7	6820.5	6679.2
47.5°	6851.6	6874.0	6941.2	7067.0	7184.2	7303.2	7368.7	7415.2	7413.5	7351.4	7201.5
50°	7079.1	7104.9	7187.7	7329.0	7475.5	7615.1	7744.4	7849.6	7899.5	7854.7	7715.1
52.5°	7144.6	7177.3	7285.9	7454.8	7625.5	7813.4	8006.4	8192.6	8304.6	8332.2	8223.6
55°	6868.8	6905.0	7063.6	7298.0	7578.9	7856.5	8149.5	8414.9	8645.9	8752.8	8709.7
57.5°	6065.6	6091.4	6293.1	6596.5	6998.1	7485.9	7978.8	8464.9	8861.4	9138.9	9187.1
60°	4797.0	4829.7	5050.3	5370.9	5827.7	6444.8	7134.2	7930.6	8707.9	9344.0	9659.4
62.5°	3237.0	3259.4	3471.5	3764.5	4264.3	4859.0	5627.8	6636.1	7744.4	8880.3	9769.7
65°	1699.5	1699.5	1842.6	2047.7	2445.9	2978.5	3766.2	4800.4	6119.0	7537.6	9025.1
67.5°	985.9	984.2	1017.0	1063.5	1189.3	1404.8	1839.1	2599.3	3847.2	5498.5	7191.1
70°	813.6	808.4	803.2	803.2	822.2	854.9	937.7	1146.2	1677.1	2835.4	4424.6
71°	777.4	773.9	760.1	755.0	763.6	780.8	817.0	913.5	1191.1	1934.0	3304.3
72.5°	734.3	725.7	705.0	696.4	698.1	705.0	715.3	753.2	837.7	1099.7	1884.0
75°	668.8	648.1	622.2	610.2	605.0	603.3	603.3	613.6	632.6	663.6	772.2
77.5°	592.9	563.6	536.1	524.0	515.4	510.2	506.8	499.9	496.4	510.2	549.8
80°	501.6	470.6	448.2	441.3	436.1	425.7	412.0	398.2	389.5	396.4	420.6
82.5°	387.8	356.8	360.2	362.0	353.4	336.1	322.3	306.8	291.3	287.9	299.9
85°	308.5	293.0	282.7	305.1	286.1	265.4	246.5	220.6	184.4	151.7	165.5
87.5°	132.7	134.4	193.1	291.3	255.1	205.1	170.6	137.9	87.9	65.5	67.2
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°	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0	3063.0
2.5°	3059.5	3059.5	3054.3	3050.9	3050.9	3050.9	3047.4	3049.2
5°	3080.2	3083.6	3087.1	3085.4	3090.5	3095.7	3094.0	3092.3
7.5°	3114.7	3125.0	3135.3	3140.5	3147.4	3154.3	3156.0	3150.9
10°	3149.1	3169.8	3185.3	3199.1	3207.7	3214.6	3219.8	3218.1
12.5°	3192.2	3221.5	3249.1	3276.7	3295.6	3306.0	3316.3	3312.9
15°	3262.9	3295.6	3330.1	3366.3	3395.6	3411.1	3426.6	3423.2
17.5°	3359.4	3388.7	3416.3	3452.5	3488.7	3505.9	3523.2	3521.4
20°	3480.1	3502.5	3518.0	3538.7	3573.2	3592.1	3607.6	3602.5
22.5°	3618.0	3624.9	3626.6	3633.5	3661.1	3683.5	3704.2	3709.3
25°	3767.9	3762.8	3752.4	3747.2	3766.2	3790.3	3816.2	3823.1
27.5°	3954.1	3936.8	3911.0	3890.3	3895.5	3926.5	3955.8	3962.7
30°	4188.5	4148.9	4093.7	4054.1	4047.2	4079.9	4110.9	4121.3
32.5°	4455.7	4402.2	4326.4	4266.1	4240.2	4269.5	4297.1	4312.6
35°	4772.8	4714.2	4622.9	4545.3	4503.9	4522.9	4571.2	4588.4
37.5°	5148.6	5067.6	4965.9	4867.6	4798.7	4802.1	4853.8	4874.5
40°	5564.0	5446.8	5317.5	5195.1	5095.1	5088.3	5134.8	5150.3
42.5°	5996.6	5846.7	5695.0	5534.7	5410.6	5388.2	5448.5	5450.2
45°	6462.0	6269.0	6081.1	5894.9	5765.7	5726.0	5784.6	5791.5
47.5°	6958.4	6717.1	6494.8	6293.1	6153.5	6091.4	6148.3	6158.6
50°	7475.5	7225.6	6967.0	6743.0	6579.2	6503.4	6570.6	6577.5
52.5°	7987.5	7751.3	7494.5	7237.7	7039.4	6953.3	7032.5	7056.7
55°	8502.8	8275.3	8034.0	7777.2	7527.2	7451.4	7537.6	7563.4
57.5°	9038.9	8820.0	8601.1	8342.5	8099.5	7984.0	8077.1	8113.3
60°	9630.1	9437.1	9230.2	8969.9	8730.4	8595.9	8675.2	8716.6
62.5°	10211.0	10171.3	9983.5	9712.8	9409.5	9275.0	9342.3	9371.6
65°	10259.2	10902.2	10893.6	10624.7	10200.6	9974.8	9993.8	10007.6
67.5°	8954.4	10429.9	11372.7	11457.2	10984.9	10631.6	10590.2	10598.8
70°	6339.6	8364.9	10366.1	11679.5	11865.7	11591.6	11502.0	11515.8
71°	5079.6	7177.3	9380.2	11146.9	11851.9	11772.6	11722.6	11758.8
72.5°	3242.2	5288.2	7432.4	9545.6	10898.7	11286.5	11343.4	11365.8
75°	1177.3	2275.2	3850.7	5517.4	6992.9	8008.1	8566.6	8611.4
77.5°	632.6	815.3	1260.0	1882.2	2364.9	2623.4	2654.4	2666.5
80°	465.4	539.5	617.1	705.0	760.1	770.5	751.5	711.9
82.5°	329.2	372.3	403.3	434.4	456.8	437.8	363.7	277.5
85°	191.3	210.3	227.5	243.0	246.5	232.7	153.4	125.8
87.5°	75.8	82.7	81.0	91.4	87.9	81.0	60.3	51.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)