

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: P195575

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195575
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-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33707 lumens
Efficiency: N/A
Efficacy: 105.3 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

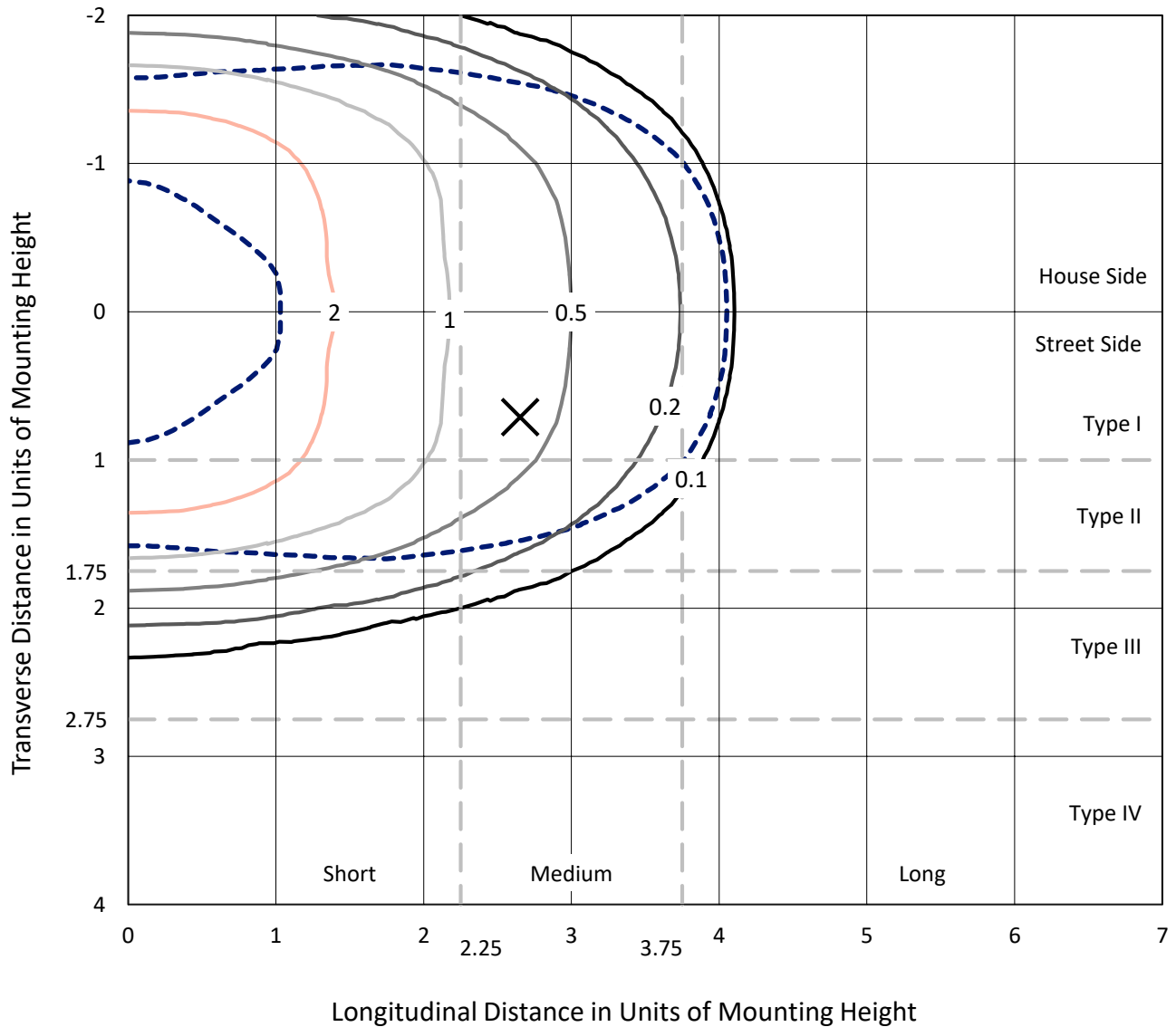


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Iso-Footcandle Lines of Horizontal Illumination

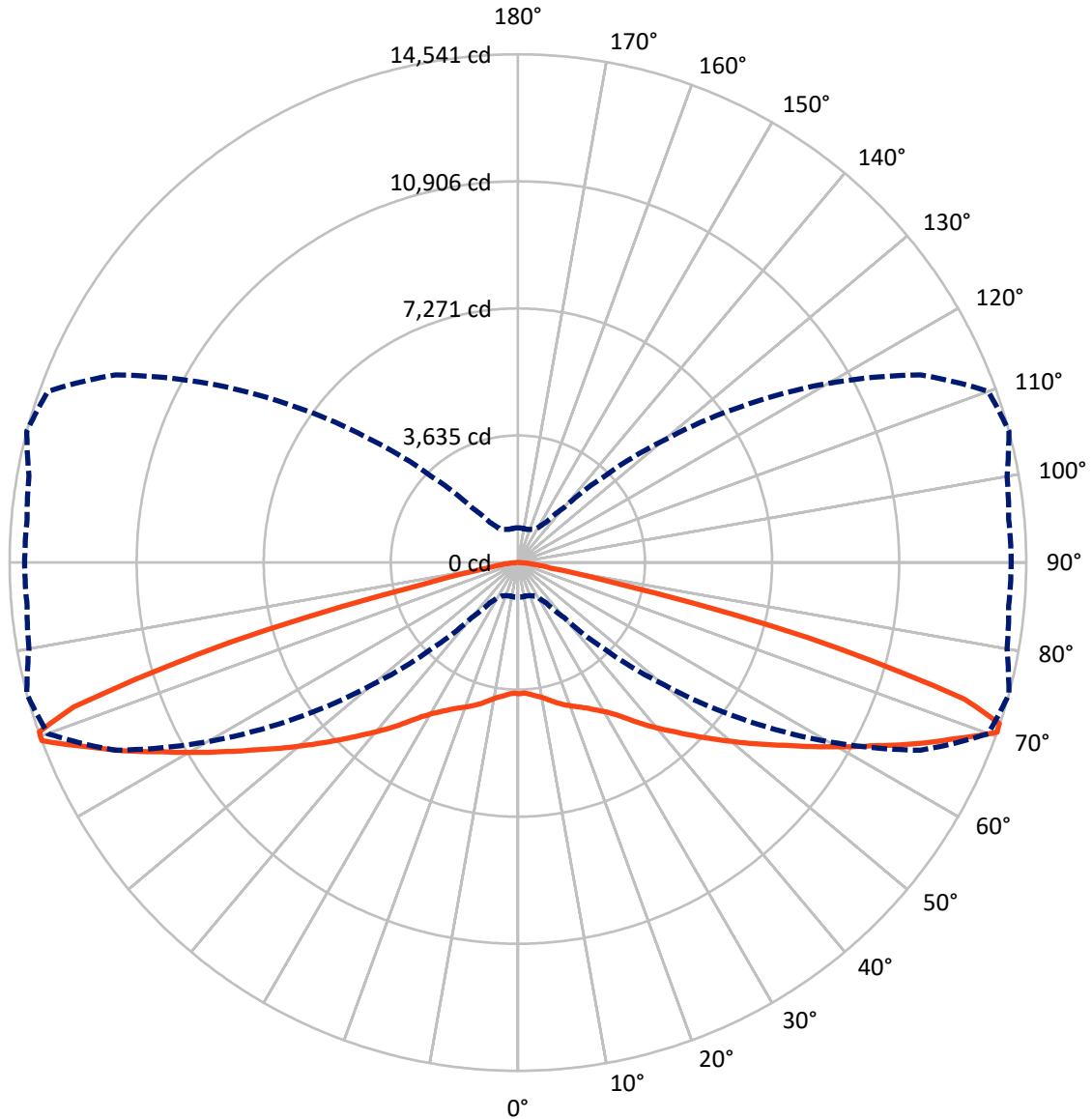
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.2 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	16853.5	0.0	16853.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16853.5	0.0	16853.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	33707.0	0.0	33707.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.0	1.1
10°-20°	1116.6	3.3
20°-30°	2097.2	6.2
30°-40°	3694.2	11.0
40°-50°	6122.5	18.2
50°-60°	8517.3	25.3
60°-70°	8040.5	23.9
70°-80°	3434.2	10.2
80°-90°	324.5	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°	33707.0	100.0
0°-180°	33707.0	100.0



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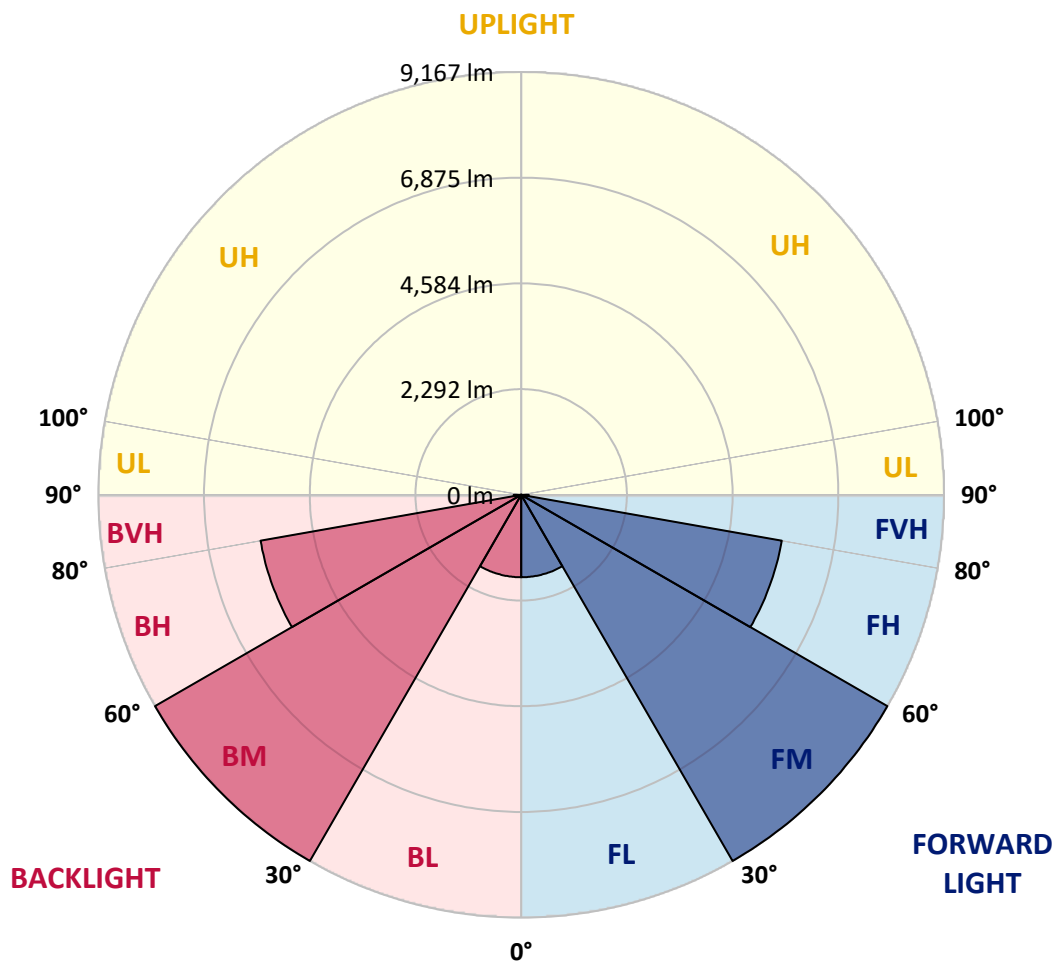
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1786.9	5.3			
FM	(30°-60°)	9167.0	27.2			
FH	(60°-80°)	5737.3	17.0			G3/7500
FVH	(80°-90°)	162.3	0.5			G2/225
BL	(0°-30°)	1786.9	5.3	B3/2500		
BM	(30°-60°)	9167.0	27.2	B5		
BH	(60°-80°)	5737.3	17.0	B5		G5
BVH	(80°-90°)	162.3	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°	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6
2.5°	3776.8	3774.7	3776.8	3770.5	3772.6	3770.5	3770.5	3762.1	3762.1	3757.8	3751.5
5°	3734.6	3738.8	3738.8	3738.8	3745.2	3745.2	3753.6	3755.7	3762.1	3768.4	3772.6
7.5°	3664.9	3667.0	3673.3	3677.6	3690.2	3707.1	3724.0	3743.0	3759.9	3781.1	3804.3
10°	3605.7	3610.0	3620.5	3631.1	3654.3	3675.4	3705.0	3734.6	3764.2	3800.1	3836.0
12.5°	3574.1	3580.4	3597.3	3614.2	3650.1	3677.6	3717.7	3764.2	3804.3	3838.1	3878.2
15°	3578.3	3580.4	3603.6	3626.9	3677.6	3715.6	3772.6	3827.5	3876.1	3914.1	3960.6
17.5°	3639.5	3643.8	3667.0	3700.8	3749.4	3798.0	3859.2	3916.3	3981.7	4026.1	4081.0
20°	3759.9	3766.3	3791.6	3827.5	3880.3	3931.0	3994.4	4053.6	4121.1	4174.0	4228.9
22.5°	3916.3	3926.8	3954.3	3998.6	4051.4	4112.7	4178.2	4239.4	4302.8	4355.6	4402.1
25°	4125.4	4138.0	4167.6	4212.0	4264.8	4330.3	4397.9	4461.2	4526.7	4566.8	4604.9
27.5°	4406.3	4427.4	4459.1	4495.0	4541.5	4611.2	4674.6	4727.4	4790.8	4835.1	4860.5
30°	4784.4	4814.0	4839.3	4877.4	4911.2	4985.1	5035.8	5078.0	5126.6	5152.0	5158.3
32.5°	5247.0	5274.5	5299.8	5327.3	5373.8	5441.4	5489.9	5513.2	5538.5	5534.3	5511.1
35°	5768.8	5789.9	5804.7	5853.3	5929.3	5973.7	6009.6	6018.0	6022.2	5977.9	5933.5
37.5°	6318.0	6343.3	6356.0	6432.0	6503.9	6554.5	6571.4	6590.5	6577.8	6503.9	6423.6
40°	6911.5	6939.0	6977.0	7042.5	7127.0	7175.6	7196.7	7194.6	7184.0	7097.4	6966.5
42.5°	7494.5	7528.3	7560.0	7674.1	7743.8	7826.2	7836.7	7834.6	7811.4	7712.1	7560.0
45°	7988.8	8029.0	8094.4	8221.2	8333.1	8432.4	8472.5	8487.3	8464.1	8358.5	8185.3
47.5°	8396.5	8424.0	8506.3	8660.5	8804.2	8949.9	9030.2	9087.2	9085.1	9009.1	8825.3
50°	8675.3	8707.0	8808.4	8981.6	9161.2	9332.3	9490.7	9619.5	9680.8	9625.9	9454.8
52.5°	8755.6	8795.7	8928.8	9135.8	9344.9	9575.2	9811.8	10039.9	10177.2	10211.0	10077.9
55°	8417.6	8462.0	8656.3	8943.6	9287.9	9628.0	9987.1	10312.4	10595.4	10726.4	10673.6
57.5°	7433.3	7465.0	7712.1	8083.9	8576.0	9173.8	9778.0	10373.6	10859.5	11199.6	11258.7
60°	5878.6	5918.7	6189.1	6582.0	7141.8	7898.0	8742.9	9718.8	10671.5	11450.9	11837.5
62.5°	3966.9	3994.4	4254.2	4613.3	5225.9	5954.6	6896.7	8132.5	9490.7	10882.7	11972.7
65°	2082.8	2082.8	2258.1	2509.4	2997.4	3650.1	4615.4	5882.8	7498.8	9237.2	11060.1
67.5°	1208.3	1206.1	1246.3	1303.3	1457.5	1721.5	2253.9	3185.4	4714.7	6738.3	8812.6
70°	997.0	990.7	984.3	984.3	1007.6	1047.7	1149.1	1404.7	2055.3	3474.8	5422.3
71°	952.7	948.4	931.5	925.2	935.8	956.9	1001.2	1119.5	1459.6	2370.0	4049.3
72.5°	899.9	889.3	863.9	853.4	855.5	863.9	876.6	923.1	1026.6	1347.7	2308.8
75°	819.6	794.2	762.5	747.8	741.4	739.3	739.3	752.0	775.2	813.2	946.3
77.5°	726.6	690.7	656.9	642.1	631.6	625.2	621.0	612.6	608.3	625.2	673.8
80°	614.7	576.7	549.2	540.8	534.4	521.7	504.8	487.9	477.4	485.8	515.4
82.5°	475.3	437.3	441.5	443.6	433.0	411.9	395.0	376.0	357.0	352.8	367.5
85°	378.1	359.1	346.4	373.9	350.6	325.3	302.1	270.4	226.0	185.9	202.8
87.5°	162.6	164.8	236.6	357.0	312.6	251.4	209.1	169.0	107.7	80.3	82.4
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°	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6	3753.6
2.5°	3749.4	3749.4	3743.0	3738.8	3738.8	3738.8	3734.6	3736.7
5°	3774.7	3779.0	3783.2	3781.1	3787.4	3793.7	3791.6	3789.5
7.5°	3817.0	3829.6	3842.3	3848.7	3857.1	3865.6	3867.7	3861.3
10°	3859.2	3884.6	3903.6	3920.5	3931.0	3939.5	3945.8	3943.7
12.5°	3912.0	3947.9	3981.7	4015.5	4038.8	4051.4	4064.1	4059.9
15°	3998.6	4038.8	4081.0	4125.4	4161.3	4180.3	4199.3	4195.1
17.5°	4116.9	4152.8	4186.6	4231.0	4275.3	4296.5	4317.6	4315.5
20°	4264.8	4292.2	4311.3	4336.6	4378.9	4402.1	4421.1	4414.8
22.5°	4433.8	4442.2	4444.3	4452.8	4486.6	4514.0	4539.4	4545.7
25°	4617.5	4611.2	4598.5	4592.2	4615.4	4645.0	4676.7	4685.1
27.5°	4845.7	4824.6	4792.9	4767.5	4773.9	4811.9	4847.8	4856.2
30°	5133.0	5084.4	5016.8	4968.2	4959.7	4999.9	5037.9	5050.6
32.5°	5460.4	5394.9	5301.9	5228.0	5196.3	5232.2	5266.0	5285.0
35°	5849.0	5777.2	5665.3	5570.2	5519.5	5542.7	5601.9	5623.0
37.5°	6309.5	6210.2	6085.6	5965.2	5880.7	5884.9	5948.3	5973.7
40°	6818.6	6675.0	6516.5	6366.6	6244.0	6235.6	6292.6	6311.6
42.5°	7348.8	7165.0	6979.1	6782.7	6630.6	6603.1	6677.1	6679.2
45°	7919.1	7682.5	7452.3	7224.2	7065.7	7017.1	7089.0	7097.4
47.5°	8527.5	8231.7	7959.2	7712.1	7541.0	7465.0	7534.7	7547.3
50°	9161.2	8854.9	8538.0	8263.4	8062.7	7969.8	8052.2	8060.6
52.5°	9788.5	9499.1	9184.4	8869.7	8626.7	8521.1	8618.3	8647.9
55°	10420.1	10141.3	9845.6	9530.8	9224.5	9131.6	9237.2	9268.9
57.5°	11077.0	10808.8	10540.5	10223.7	9925.8	9784.3	9898.4	9942.7
60°	11801.6	11565.0	11311.5	10992.5	10698.9	10534.2	10631.3	10682.0
62.5°	12513.4	12464.8	12234.6	11903.0	11531.2	11366.4	11448.8	11484.7
65°	12572.6	13360.5	13349.9	13020.4	12500.7	12224.0	12247.3	12264.2
67.5°	10973.5	12781.7	13937.1	14040.6	13461.9	13028.8	12978.1	12988.7
70°	7769.1	10251.1	12703.5	14313.1	14541.3	14205.4	14095.6	14112.4
71°	6225.0	8795.7	11495.3	13660.4	14524.4	14427.2	14365.9	14410.3
72.5°	3973.3	6480.6	9108.3	11698.1	13356.2	13831.5	13901.2	13928.7
75°	1442.7	2788.3	4718.9	6761.6	8569.7	9813.9	10498.3	10553.2
77.5°	775.2	999.1	1544.1	2306.7	2898.1	3215.0	3253.0	3267.8
80°	570.3	661.2	756.2	863.9	931.5	944.2	921.0	872.4
82.5°	403.5	456.3	494.3	532.3	559.8	536.5	445.7	340.1
85°	234.5	257.7	278.8	297.8	302.1	285.2	188.0	154.2
87.5°	92.9	101.4	99.3	112.0	107.7	99.3	73.9	63.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)