

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: P270584

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270584
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29284.5 lumens
Efficiency: N/A
Efficacy: 91.5 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

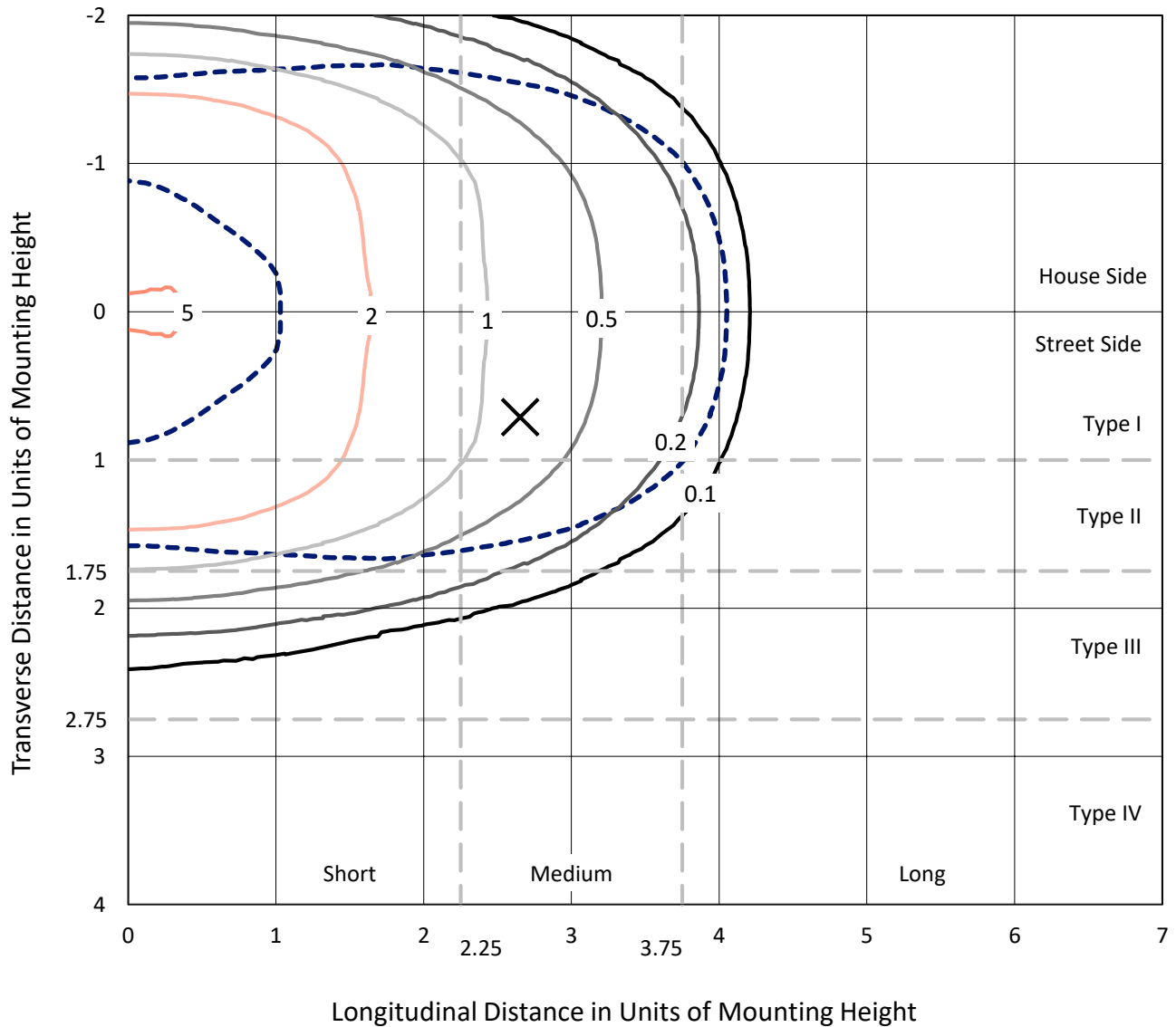
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

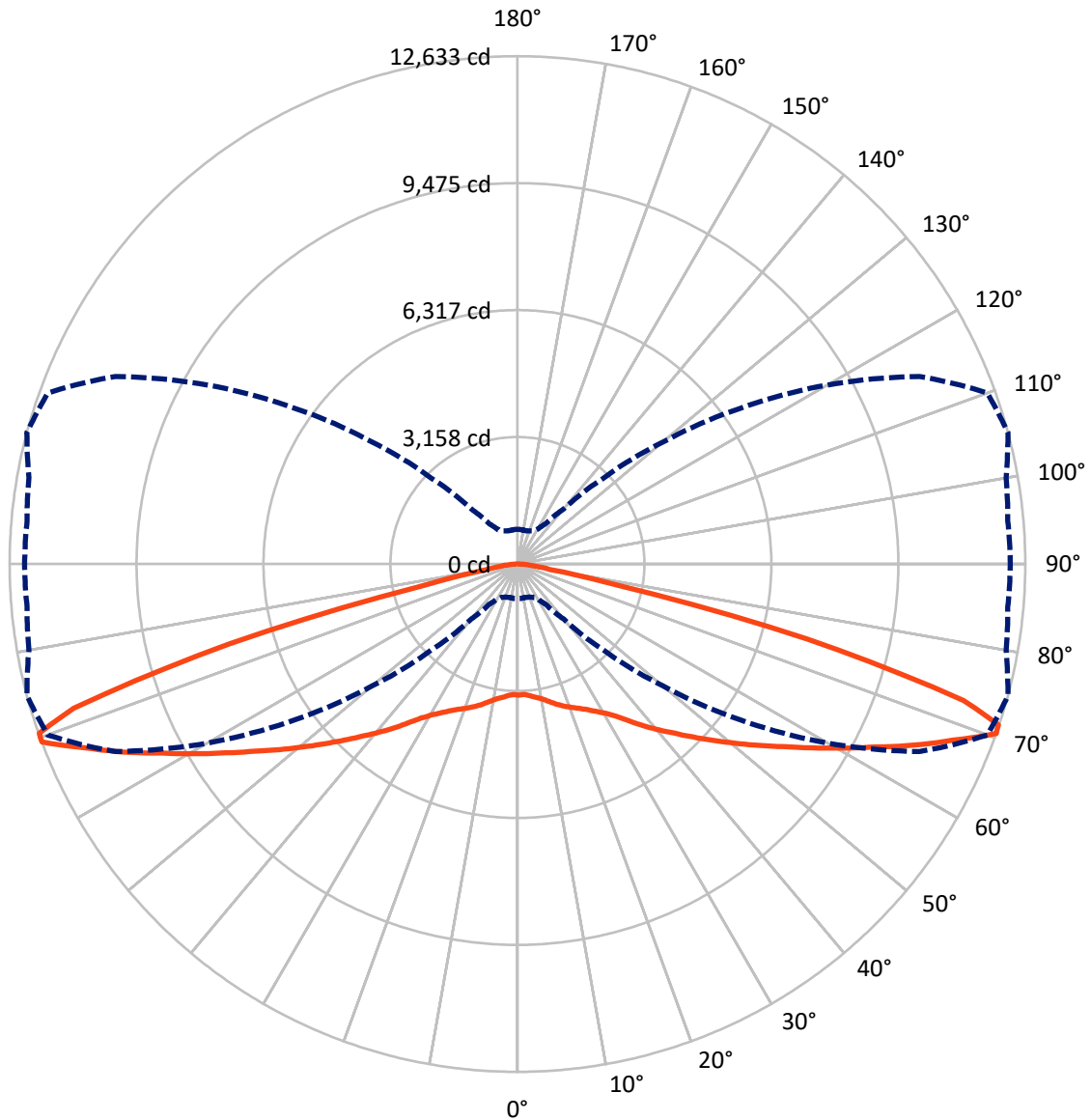
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 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	14642.2	0.0	14642.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14642.2	0.0	14642.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	29284.5	0.0	29284.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.8	1.1
10°-20°	970.1	3.3
20°-30°	1822.0	6.2
30°-40°	3209.5	11.0
40°-50°	5319.2	18.2
50°-60°	7399.8	25.3
60°-70°	6985.5	23.9
70°-80°	2983.6	10.2
80°-90°	281.9	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°	29284.5	100.0
0°-180°	29284.5	100.0



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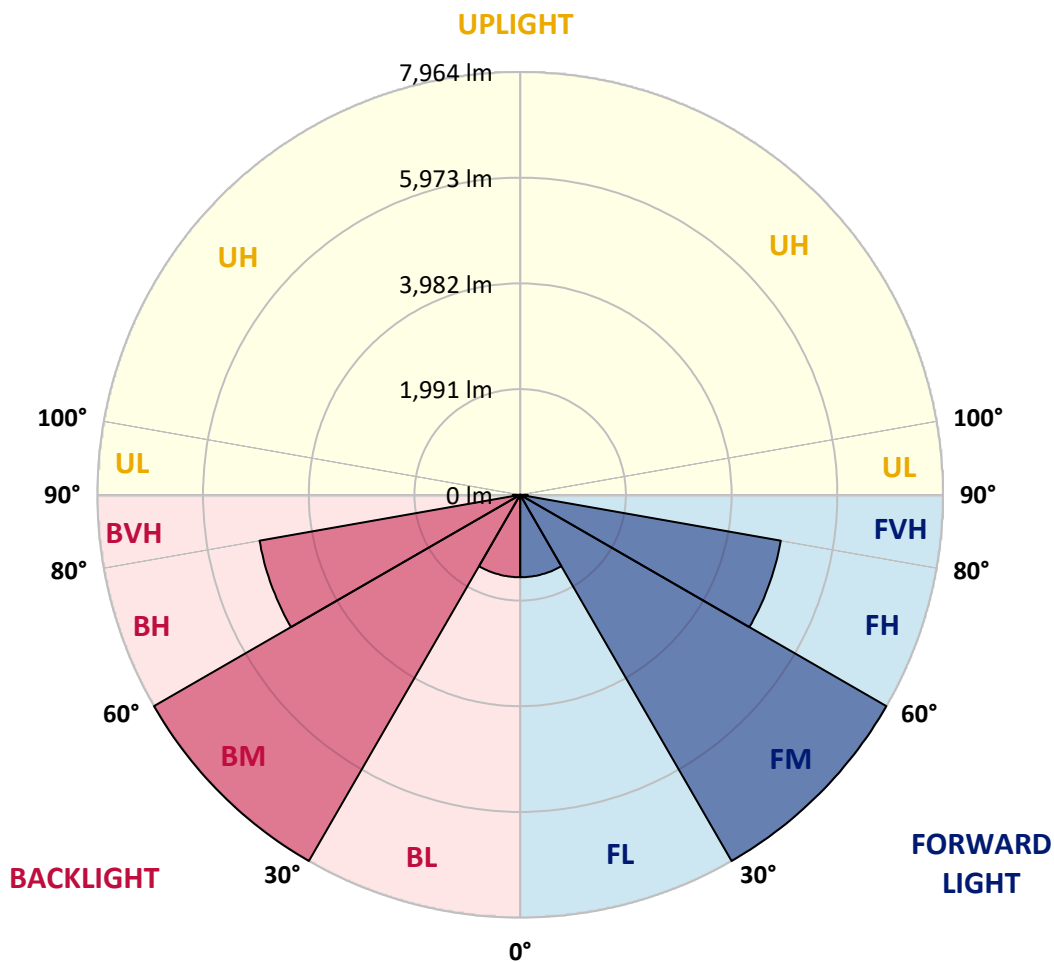
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1552.5	5.3			
FM	(30°-60°)	7964.2	27.2			
FH	(60°-80°)	4984.6	17.0			G2/5000
FVH	(80°-90°)	141.0	0.5			G2/225
BL	(0°-30°)	1552.5	5.3	B3/2500		
BM	(30°-60°)	7964.2	27.2	B4/8500		
BH	(60°-80°)	4984.6	17.0	B4/5000		G4/5000
BVH	(80°-90°)	141.0	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°	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0
2.5°	3281.2	3279.4	3281.2	3275.8	3277.6	3275.8	3275.8	3268.5	3268.5	3264.8	3259.3
5°	3244.6	3248.4	3248.4	3248.4	3253.8	3253.8	3261.0	3263.0	3268.5	3274.0	3277.6
7.5°	3184.0	3185.8	3191.4	3195.0	3206.1	3220.8	3235.4	3252.0	3266.6	3284.9	3305.1
10°	3132.7	3136.3	3145.4	3154.7	3174.9	3193.2	3218.8	3244.6	3270.3	3301.5	3332.7
12.5°	3105.1	3110.7	3125.4	3139.9	3171.1	3195.0	3229.9	3270.3	3305.1	3334.5	3369.5
15°	3108.8	3110.7	3130.9	3151.1	3195.0	3228.1	3277.6	3325.3	3367.6	3400.5	3441.0
17.5°	3162.0	3165.6	3185.8	3215.3	3257.4	3299.7	3352.8	3402.4	3459.4	3497.8	3545.6
20°	3266.6	3272.2	3294.2	3325.3	3371.2	3415.3	3470.3	3521.7	3580.5	3626.3	3674.0
22.5°	3402.4	3411.7	3435.5	3473.9	3519.9	3573.1	3630.1	3683.2	3738.2	3784.1	3824.5
25°	3584.1	3595.0	3620.8	3659.3	3705.1	3762.1	3820.9	3875.8	3932.8	3967.6	4000.7
27.5°	3828.1	3846.5	3874.1	3905.2	3945.6	4006.3	4061.2	4107.1	4162.1	4200.7	4222.8
30°	4156.6	4182.4	4204.3	4237.5	4266.8	4331.0	4375.0	4411.8	4453.9	4476.1	4481.6
32.5°	4558.5	4582.4	4604.4	4628.2	4668.8	4727.4	4769.6	4789.9	4811.9	4808.2	4788.0
35°	5011.9	5030.1	5043.1	5085.2	5151.3	5189.9	5221.0	5228.4	5232.1	5193.6	5155.1
37.5°	5489.1	5511.0	5522.1	5588.1	5650.5	5694.5	5709.3	5725.7	5714.7	5650.5	5580.8
40°	6004.7	6028.5	6061.7	6118.4	6191.8	6234.1	6252.5	6250.6	6241.5	6166.1	6052.4
42.5°	6511.3	6540.6	6568.0	6667.2	6727.8	6799.4	6808.6	6806.6	6786.4	6700.3	6568.0
45°	6940.7	6975.5	7032.4	7142.6	7239.8	7326.0	7360.9	7373.7	7353.5	7261.8	7111.3
47.5°	7294.9	7318.8	7390.3	7524.3	7649.0	7775.6	7845.3	7894.9	7893.0	7827.0	7667.4
50°	7537.0	7564.5	7652.8	7803.1	7959.2	8107.8	8245.5	8357.4	8410.7	8363.0	8214.2
52.5°	7606.8	7641.7	7757.4	7937.2	8118.8	8318.8	8524.3	8722.6	8841.8	8871.2	8755.6
55°	7313.2	7351.6	7520.6	7770.1	8069.3	8364.7	8676.6	8959.3	9205.2	9319.0	9273.2
57.5°	6457.9	6485.6	6700.3	7023.2	7450.8	7970.2	8495.0	9012.5	9434.7	9730.1	9781.6
60°	5107.4	5142.2	5377.1	5718.4	6204.8	6861.8	7595.8	8443.7	9271.2	9948.5	10284.3
62.5°	3446.4	3470.3	3696.0	4008.1	4540.3	5173.3	5991.9	7065.3	8245.5	9454.8	10401.7
65°	1809.5	1809.5	1961.8	2180.1	2604.1	3171.1	4009.9	5110.9	6514.9	8025.3	9609.0
67.5°	1049.7	1048.0	1082.7	1132.4	1266.3	1495.7	1958.1	2767.5	4096.1	5854.3	7656.3
70°	866.1	860.7	855.1	855.1	875.4	910.3	998.3	1220.3	1785.7	3018.8	4710.9
71°	827.7	823.9	809.4	803.9	813.0	831.3	869.9	972.7	1268.0	2059.1	3518.0
72.5°	781.7	772.6	750.5	741.5	743.3	750.5	761.7	801.9	891.8	1170.9	2005.8
75°	712.0	690.0	662.5	649.7	644.2	642.3	642.3	653.3	673.5	706.5	822.2
77.5°	631.2	600.1	570.8	557.8	548.8	543.3	539.5	532.2	528.6	543.3	585.4
80°	534.0	501.1	477.1	469.9	464.3	453.3	438.6	423.9	414.7	422.2	447.7
82.5°	413.0	379.9	383.5	385.5	376.2	357.9	343.2	326.7	310.2	306.5	319.3
85°	328.5	312.0	300.9	324.8	304.6	282.5	262.5	234.8	196.4	161.4	176.2
87.5°	141.4	143.1	205.5	310.2	271.6	218.4	181.6	146.9	93.7	69.8	71.5
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°	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0	3261.0
2.5°	3257.4	3257.4	3252.0	3248.4	3248.4	3248.4	3244.6	3246.5
5°	3279.4	3283.1	3286.8	3284.9	3290.5	3296.1	3294.2	3292.3
7.5°	3316.2	3327.2	3338.2	3343.8	3351.0	3358.4	3360.2	3354.7
10°	3352.8	3374.9	3391.5	3406.2	3415.3	3422.6	3428.1	3426.2
12.5°	3398.7	3430.0	3459.4	3488.7	3508.9	3519.9	3530.9	3527.3
15°	3473.9	3508.9	3545.6	3584.1	3615.3	3631.8	3648.3	3644.7
17.5°	3576.7	3608.0	3637.3	3675.9	3714.4	3732.7	3751.1	3749.3
20°	3705.1	3729.0	3745.7	3767.6	3804.3	3824.5	3841.1	3835.6
22.5°	3852.0	3859.4	3861.3	3868.6	3897.9	3921.8	3943.7	3949.3
25°	4011.7	4006.3	3995.2	3989.7	4009.9	4035.5	4063.0	4070.4
27.5°	4209.8	4191.5	4164.1	4141.9	4147.6	4180.5	4211.8	4219.1
30°	4459.5	4417.2	4358.5	4316.4	4309.0	4343.8	4376.9	4388.0
32.5°	4743.9	4687.0	4606.2	4542.1	4514.5	4545.8	4575.1	4591.5
35°	5081.6	5019.2	4922.0	4839.3	4795.3	4815.5	4866.8	4885.3
37.5°	5481.6	5395.4	5287.2	5182.5	5109.1	5112.9	5167.9	5189.9
40°	5924.0	5799.2	5661.5	5531.3	5424.8	5417.5	5466.9	5483.6
42.5°	6384.6	6225.0	6063.4	5892.7	5760.7	5736.8	5801.0	5802.8
45°	6880.1	6674.5	6474.5	6276.3	6138.7	6096.4	6158.9	6166.1
47.5°	7408.6	7151.6	6915.0	6700.3	6551.6	6485.6	6546.0	6557.1
50°	7959.2	7693.1	7417.8	7179.3	7004.9	6924.1	6995.7	7003.0
52.5°	8504.3	8252.8	7979.4	7705.9	7494.9	7403.1	7487.6	7513.2
55°	9052.8	8810.7	8553.8	8280.3	8014.1	7933.6	8025.3	8052.8
57.5°	9623.7	9390.6	9157.5	8882.3	8623.5	8500.5	8599.7	8638.2
60°	10253.2	10047.6	9827.4	9550.3	9295.2	9152.0	9236.5	9280.5
62.5°	10871.6	10829.3	10629.4	10341.2	10018.3	9875.1	9946.7	9977.8
65°	10923.0	11607.4	11598.3	11312.0	10860.6	10620.2	10640.3	10655.1
67.5°	9533.7	11104.7	12108.6	12198.4	11695.7	11319.4	11275.3	11284.5
70°	6749.8	8906.2	11036.8	12435.1	12633.4	12341.5	12246.1	12260.8
71°	5408.2	7641.7	9987.0	11868.0	12618.8	12534.3	12481.1	12519.6
72.5°	3451.9	5630.3	7913.3	10163.2	11603.9	12016.7	12077.4	12101.2
75°	1253.5	2422.4	4099.8	5874.3	7445.3	8526.3	9120.9	9168.6
77.5°	673.5	868.0	1341.4	2003.9	2517.9	2793.1	2826.2	2839.1
80°	495.4	574.3	657.0	750.5	809.4	820.3	800.1	757.9
82.5°	350.5	396.4	429.4	462.4	486.3	466.1	387.2	295.5
85°	203.6	223.9	242.3	258.7	262.5	247.8	163.3	133.9
87.5°	80.8	88.2	86.2	97.2	93.7	86.2	64.1	55.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)