

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: McGRAW-EDISON

Report Number: P299689

Luminaire Tested: **GLNA-AF-10-LED-E1-5MQ-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-10-LED-E1-5MQ-7027-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(10) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 43295.5 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G4

Input Watts (W): 419  
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

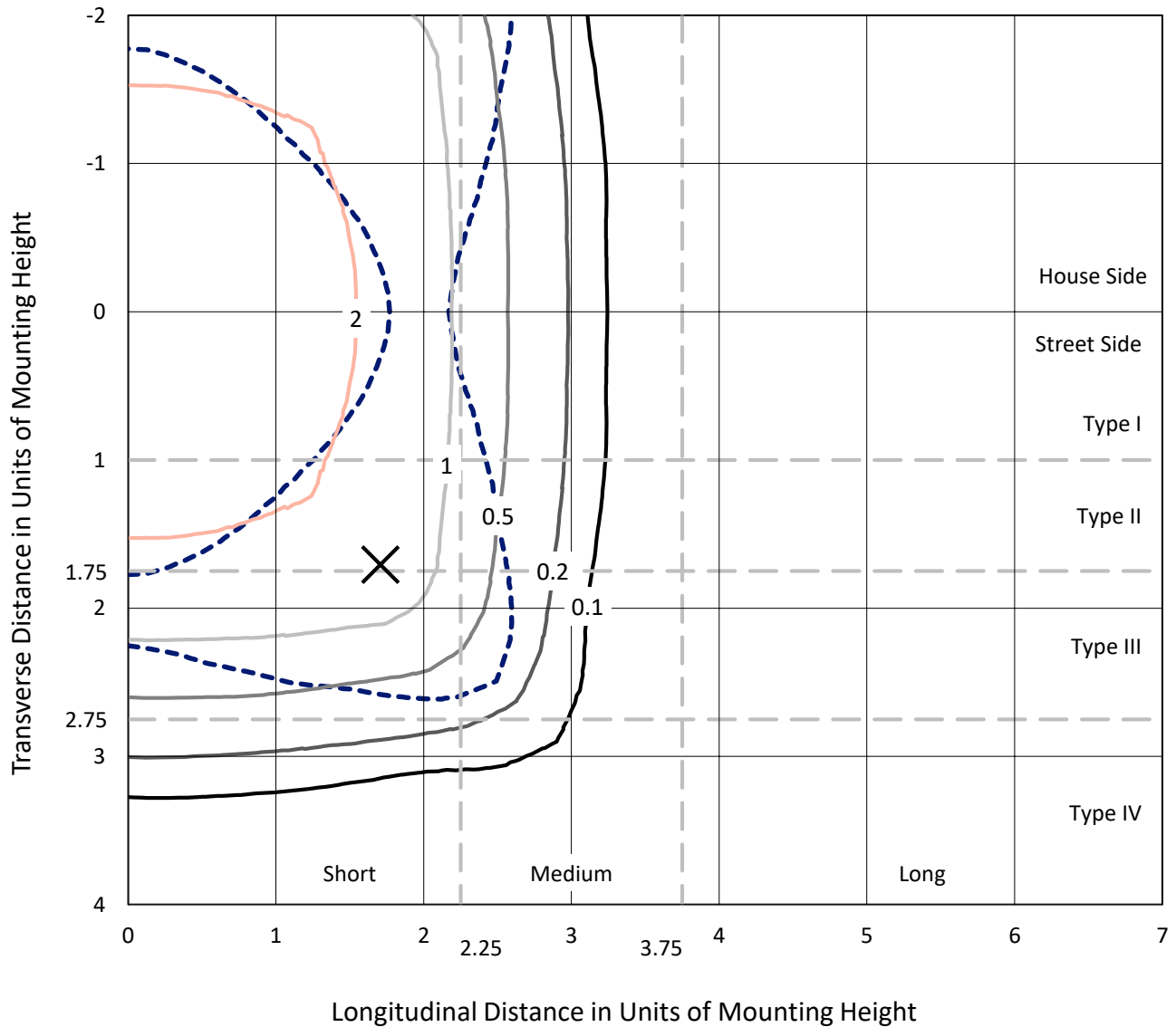


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### Iso-Footcandle Lines of Horizontal Illumination

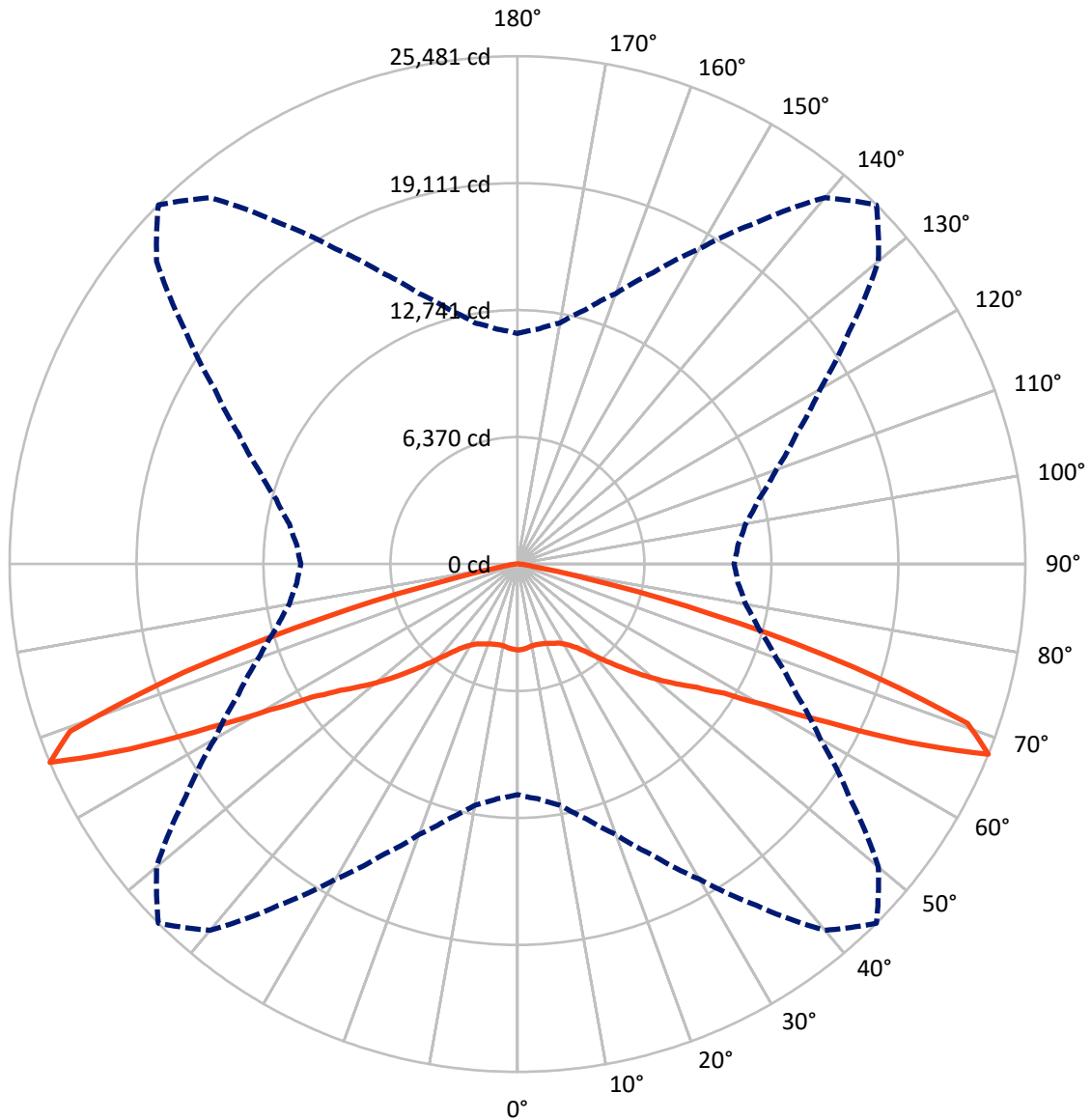
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.8 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	21647.7	0.0	21647.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	21647.7	0.0	21647.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	43295.5	0.0	43295.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.8	0.9
10°-20°	1171.8	2.7
20°-30°	1992.1	4.6
30°-40°	3256.4	7.5
40°-50°	5813.3	13.4
50°-60°	9801.4	22.6
60°-70°	15210.3	35.1
70°-80°	5344.2	12.3
80°-90°	302.0	0.7
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°	43295.5	100.0
0°-180°	43295.5	100.0



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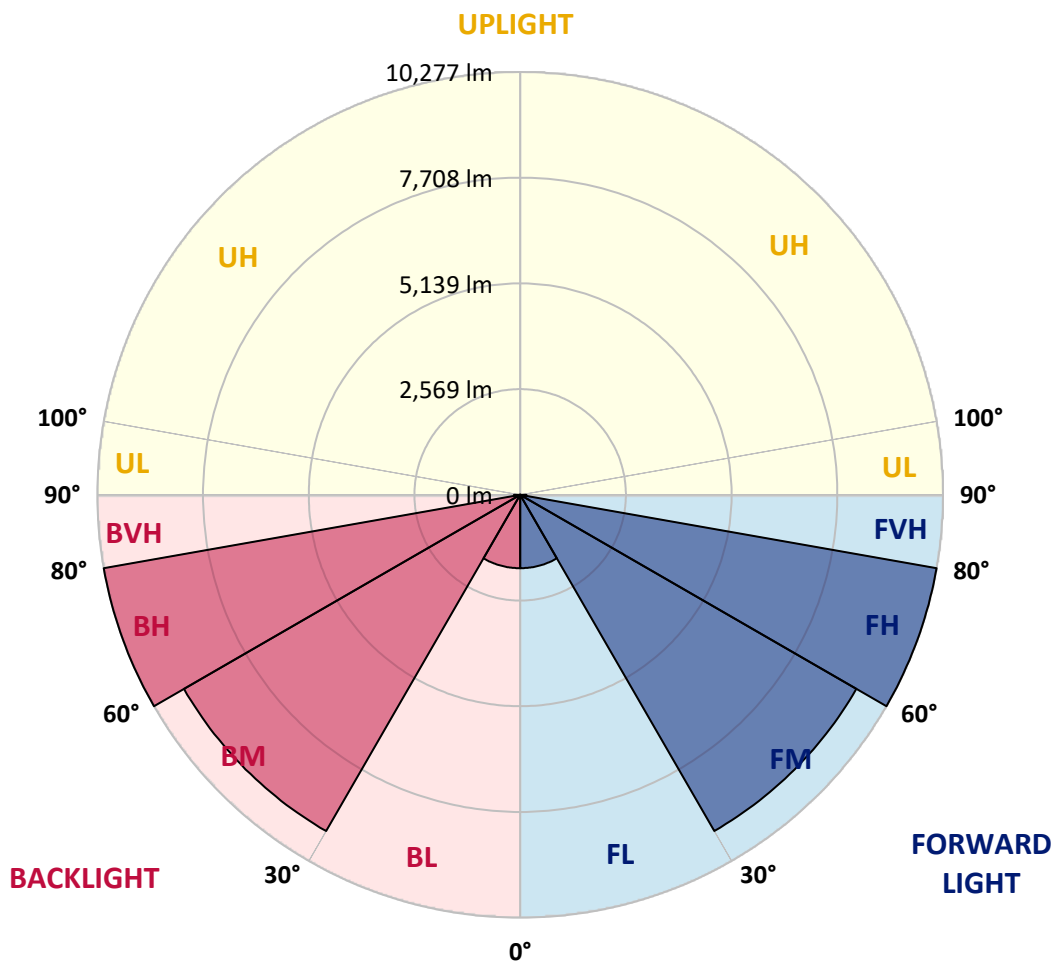
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1783.9	4.1			
FM	(30°-60°)	9435.6	21.8			
FH	(60°-80°)	10277.3	23.7			G4/12000
FVH	(80°-90°)	151.0	0.3			G2/225
BL	(0°-30°)	1783.9	4.1	B3/2500		
BM	(30°-60°)	9435.6	21.8	B5		
BH	(60°-80°)	10277.3	23.7	B5		G4/12000
BVH	(80°-90°)	151.0	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G4**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6
2.5°	4298.6	4302.6	4302.6	4302.6	4300.6	4300.6	4296.7	4300.6	4298.6	4292.7	4294.7
5°	4262.8	4266.8	4266.8	4264.8	4270.8	4268.8	4262.8	4266.8	4264.8	4260.8	4262.8
7.5°	4211.0	4217.0	4217.0	4215.0	4221.0	4219.0	4215.0	4217.0	4217.0	4211.0	4211.0
10°	4153.3	4157.3	4157.3	4155.3	4165.2	4165.2	4163.3	4169.2	4171.2	4165.2	4161.3
12.5°	4099.5	4105.5	4105.5	4113.5	4123.4	4127.4	4137.4	4145.3	4153.3	4151.3	4143.3
15°	4067.7	4071.7	4079.6	4089.6	4105.5	4119.5	4135.4	4153.3	4169.2	4173.2	4161.3
17.5°	4047.8	4053.8	4065.7	4079.6	4101.5	4125.4	4149.3	4173.2	4195.1	4203.1	4189.1
20°	4041.8	4045.8	4057.7	4081.6	4111.5	4147.3	4181.2	4209.1	4238.9	4248.9	4238.9
22.5°	4053.8	4061.7	4075.7	4103.5	4143.3	4189.1	4229.0	4266.8	4304.6	4322.5	4308.6
25°	4107.5	4115.5	4133.4	4169.2	4213.0	4260.8	4306.6	4350.4	4384.3	4402.2	4392.2
27.5°	4207.1	4217.0	4238.9	4274.8	4322.5	4374.3	4424.1	4459.9	4487.8	4493.8	4481.8
30°	4356.4	4378.3	4404.2	4444.0	4499.7	4543.5	4593.3	4625.2	4659.0	4659.0	4649.1
32.5°	4589.3	4611.2	4639.1	4676.9	4720.7	4768.5	4812.3	4840.2	4876.0	4878.0	4854.1
35°	4937.8	4947.7	4971.6	4995.5	5035.3	5077.1	5115.0	5132.9	5162.8	5164.7	5142.8
37.5°	5397.7	5399.7	5415.6	5423.6	5459.4	5505.2	5541.1	5553.0	5580.9	5576.9	5555.0
40°	5933.3	5943.2	5949.2	5961.2	5999.0	6042.8	6080.6	6086.6	6116.5	6110.5	6082.6
42.5°	6552.5	6556.5	6590.3	6608.3	6644.1	6666.0	6713.8	6719.7	6755.6	6739.7	6707.8
45°	7247.4	7283.2	7315.1	7350.9	7388.7	7414.6	7452.5	7444.5	7468.4	7444.5	7426.6
47.5°	7978.1	8004.0	8075.6	8131.4	8193.1	8215.0	8268.8	8244.9	8268.8	8234.9	8229.0
50°	8782.5	8828.3	8890.0	8953.7	9019.4	9055.2	9124.9	9095.1	9126.9	9095.1	9077.1
52.5°	9574.9	9586.8	9722.2	9815.8	9907.4	9949.2	9991.0	9977.1	9979.1	9977.1	9959.2
55°	10327.5	10355.4	10490.8	10618.2	10777.5	10895.0	10966.6	10958.7	10940.7	10922.8	10893.0
57.5°	11175.7	11203.6	11358.9	11516.2	11697.3	11864.6	12009.9	12159.3	12217.0	12232.9	12167.2
60°	12322.5	12320.5	12527.6	12718.7	12977.6	13226.5	13545.0	13869.6	14241.9	14415.1	14186.1
62.5°	13489.3	13537.1	13835.7	14174.2	14707.8	15227.4	15814.8	16392.2	16981.6	17461.4	16951.7
65°	13349.9	13533.1	13977.1	14743.6	15729.2	16899.9	18166.2	19506.2	20716.7	21549.0	20615.2
67.5°	11569.9	11830.7	12282.7	13214.5	14447.0	16135.4	18261.8	20911.9	23992.0	25481.3	23635.6
70°	8386.2	8680.9	9154.8	10064.7	11285.2	12890.0	15199.6	18381.3	22458.9	23960.1	21927.3
72.5°	4173.2	4332.5	4625.2	5204.6	6128.4	7430.5	9525.1	12583.4	16191.1	17568.9	15711.3
75°	1417.6	1491.3	1541.1	1730.2	2022.9	2534.6	3575.9	5501.2	8392.2	10060.7	8272.8
77.5°	818.3	820.3	854.2	888.0	937.8	993.5	1132.9	1487.3	2572.4	3653.6	2662.0
80°	529.6	527.6	555.5	581.4	615.2	643.1	651.1	688.9	794.4	941.8	842.2
82.5°	274.8	308.6	370.3	404.2	467.9	479.8	463.9	450.0	475.9	493.8	505.7
85°	151.3	131.4	197.1	254.9	282.7	286.7	286.7	270.8	280.7	274.8	298.7
87.5°	69.7	63.7	77.7	125.4	133.4	113.5	119.5	105.5	75.7	73.7	83.6
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°	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6	4314.6
2.5°	4294.7	4296.7	4296.7	4302.6	4304.6	4308.6	4312.6	4314.6
5°	4260.8	4266.8	4262.8	4268.8	4268.8	4272.8	4272.8	4274.8
7.5°	4211.0	4217.0	4217.0	4217.0	4215.0	4221.0	4221.0	4221.0
10°	4159.3	4163.3	4161.3	4157.3	4153.3	4159.3	4157.3	4155.3
12.5°	4143.3	4133.4	4125.4	4121.4	4113.5	4115.5	4109.5	4109.5
15°	4153.3	4135.4	4121.4	4115.5	4107.5	4103.5	4099.5	4101.5
17.5°	4179.2	4157.3	4139.4	4129.4	4119.5	4113.5	4105.5	4107.5
20°	4225.0	4199.1	4173.2	4153.3	4135.4	4125.4	4119.5	4117.5
22.5°	4292.7	4254.8	4217.0	4187.2	4163.3	4149.3	4143.3	4139.4
25°	4370.3	4328.5	4284.7	4250.9	4227.0	4209.1	4197.1	4197.1
27.5°	4467.9	4434.0	4394.2	4354.4	4332.5	4314.6	4306.6	4302.6
30°	4631.2	4599.3	4567.4	4529.6	4501.7	4483.8	4469.9	4457.9
32.5°	4840.2	4814.3	4788.4	4760.6	4734.7	4710.8	4688.9	4678.9
35°	5134.9	5115.0	5097.1	5065.2	5055.2	5041.3	5029.4	5019.4
37.5°	5541.1	5533.1	5533.1	5499.2	5491.3	5485.3	5473.4	5475.4
40°	6074.7	6082.6	6072.7	6060.7	6054.7	6038.8	6038.8	6052.8
42.5°	6705.8	6711.8	6733.7	6713.8	6735.7	6715.8	6703.8	6713.8
45°	7438.5	7460.4	7504.2	7484.3	7498.2	7464.4	7422.6	7424.6
47.5°	8260.8	8280.7	8298.6	8284.7	8286.7	8230.9	8175.2	8161.3
50°	9115.0	9122.9	9132.9	9113.0	9117.0	9055.2	8991.5	8993.5
52.5°	9959.2	9997.0	10036.8	9983.1	9971.1	9901.4	9811.8	9776.0
55°	10924.8	10978.6	10932.8	10839.2	10745.6	10652.0	10534.6	10514.7
57.5°	12115.5	12023.9	11880.5	11703.3	11573.9	11442.5	11323.0	11273.2
60°	13772.0	13427.6	13168.7	12905.9	12740.6	12579.4	12422.1	12398.2
62.5°	16113.5	15518.1	15002.5	14458.9	14014.9	13668.5	13391.7	13314.1
65°	19048.2	17640.6	16420.1	15281.2	14291.7	13545.0	13075.1	12868.1
67.5°	20310.6	17531.1	15438.5	13821.8	12527.6	11623.7	11116.0	10863.1
70°	17847.7	14538.5	12262.8	10644.1	9465.4	8501.7	8041.8	7771.0
72.5°	12278.7	9248.4	7313.1	5969.1	5027.4	4221.0	3902.4	3878.5
75°	5513.2	3651.6	2516.7	1939.3	1632.7	1419.6	1353.9	1304.1
77.5°	1543.1	1140.9	1017.4	951.7	888.0	814.3	786.5	792.4
80°	750.6	708.8	680.9	639.1	581.4	519.7	491.8	503.7
82.5°	497.8	491.8	509.7	479.8	396.2	336.5	282.7	258.8
85°	302.6	306.6	312.6	314.6	266.8	187.2	127.4	143.4
87.5°	119.5	137.4	149.3	155.3	145.3	89.6	71.7	73.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)