

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: P299503

Luminaire Tested: **GLNA-AF-09-LED-E1-5NQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299503
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-5NQ-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31309.8 lumens
Efficiency: N/A
Efficacy: 108.0 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 - G2

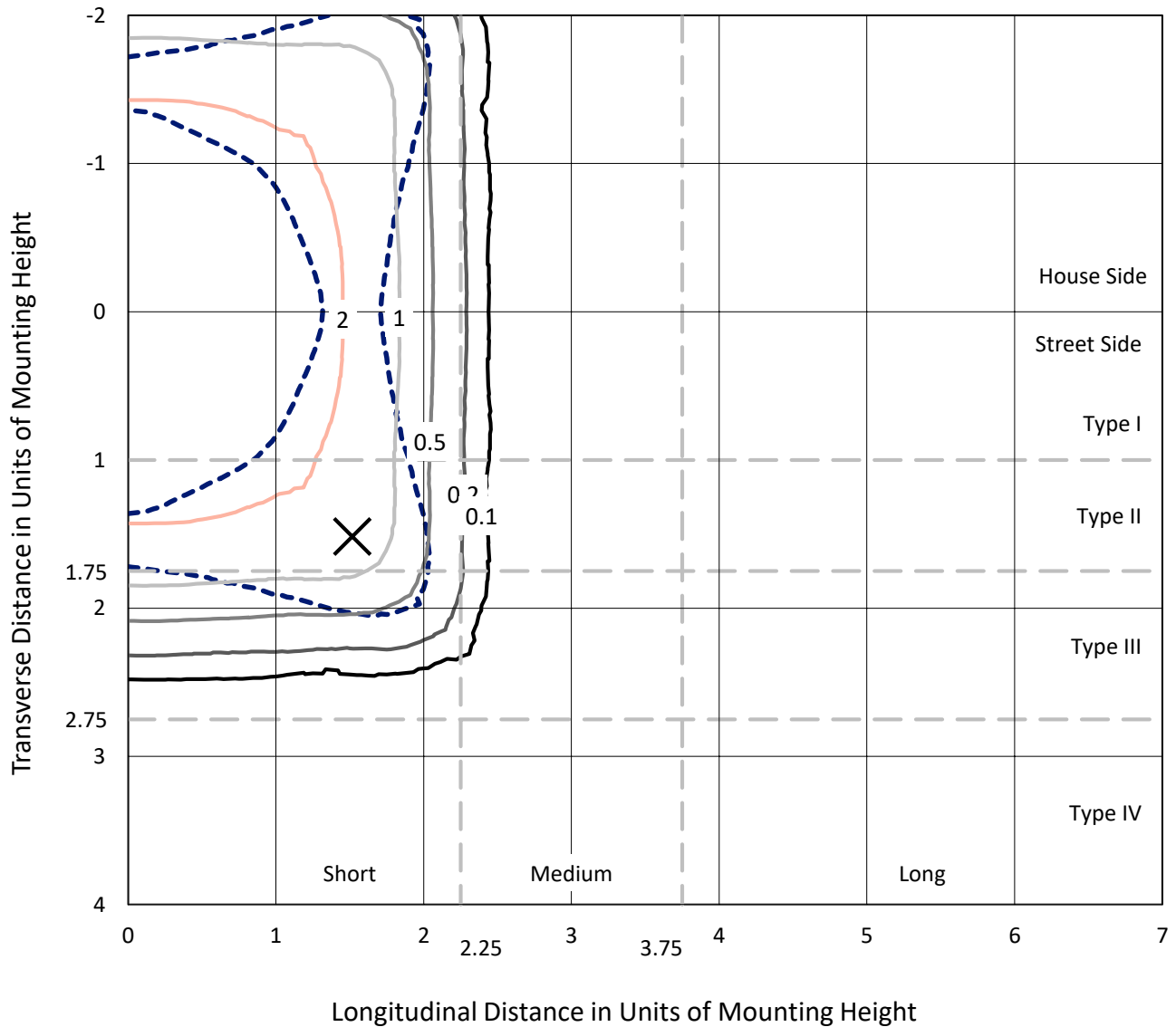
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

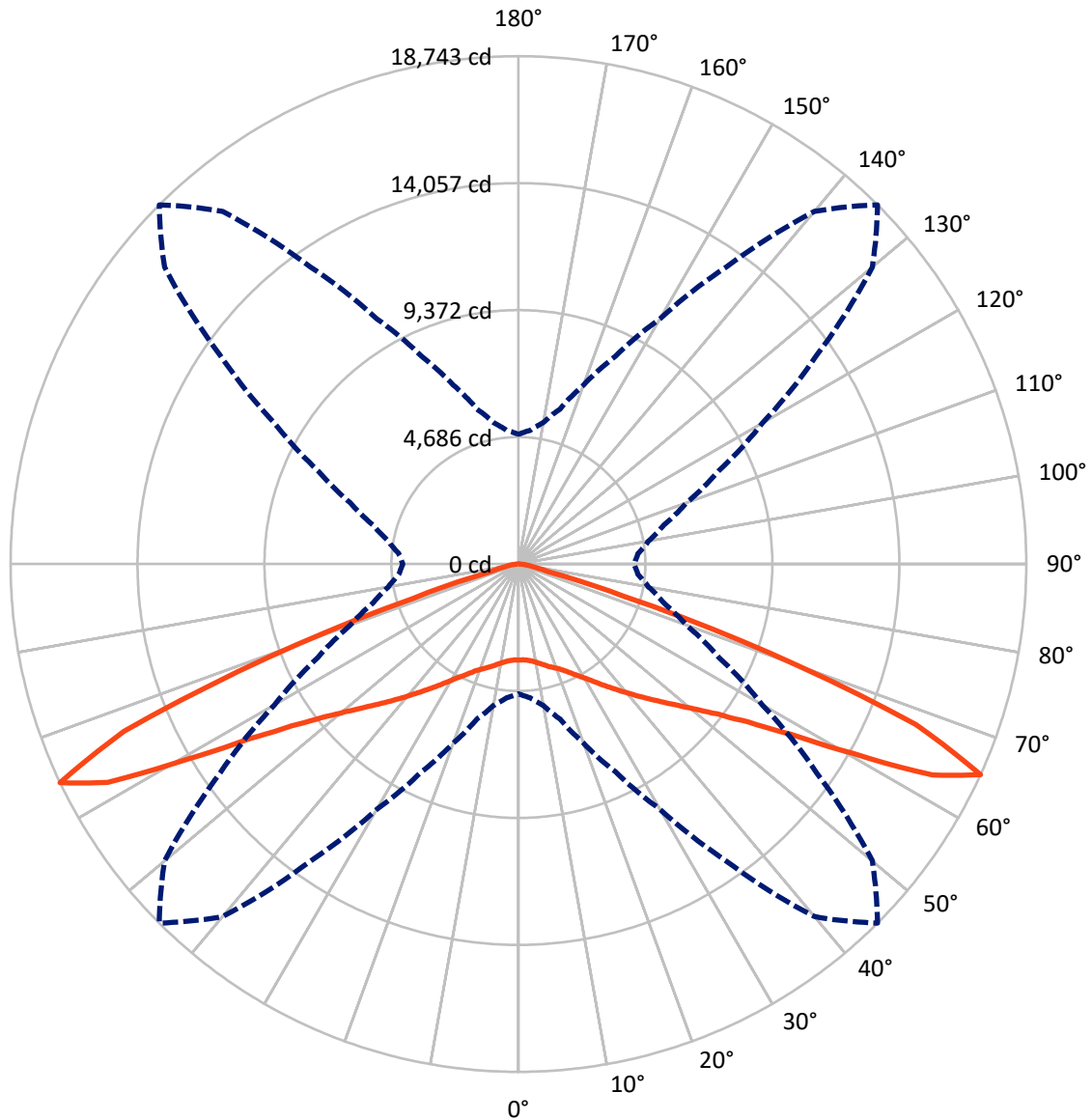
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15654.9	0.0	15654.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15654.9	0.0	15654.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	31309.8	0.0	31309.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.3	1.1
10°-20°	1107.4	3.5
20°-30°	2070.7	6.6
30°-40°	3502.1	11.2
40°-50°	5726.4	18.3
50°-60°	9105.9	29.1
60°-70°	8231.1	26.3
70°-80°	1041.7	3.3
80°-90°	179.2	0.6
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°	31309.8	100.0
0°-180°	31309.8	100.0



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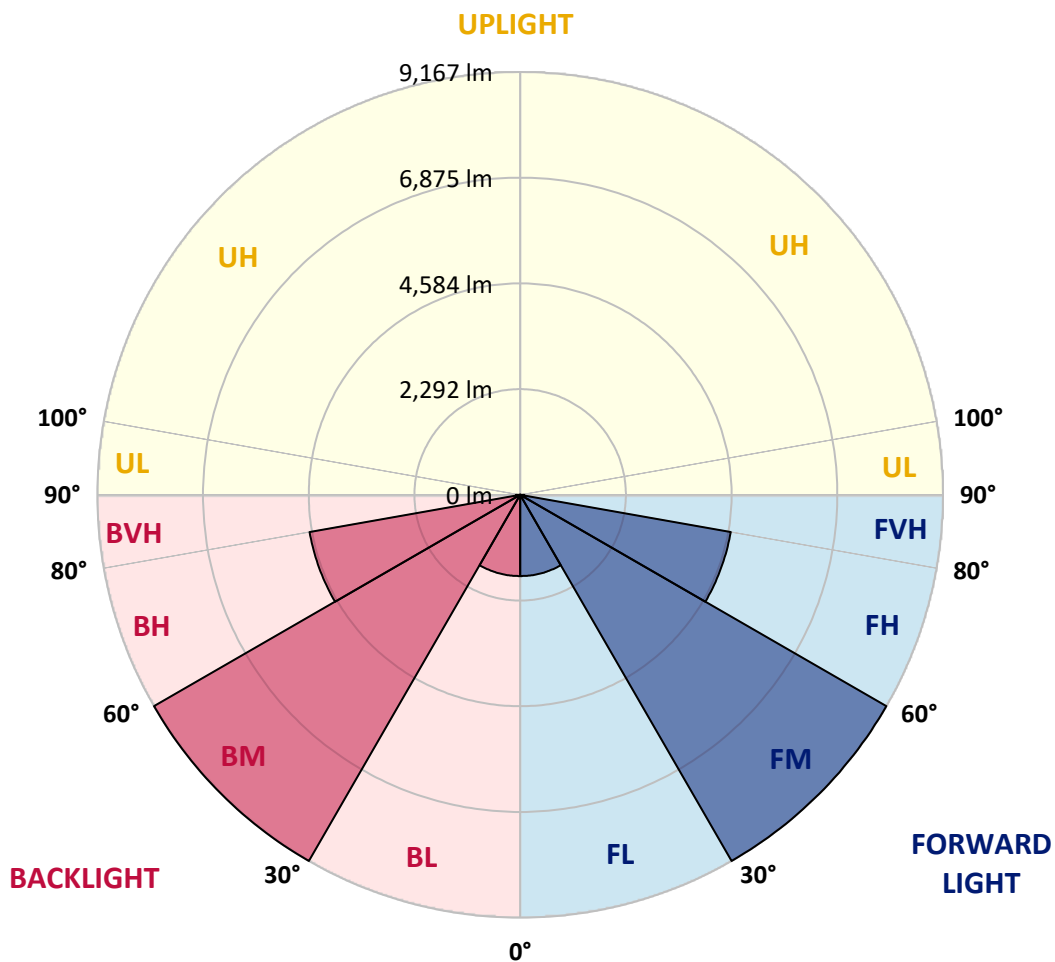
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1761.7	5.6			
FM	(30°-60°)	9167.2	29.3			
FH	(60°-80°)	4636.4	14.8			G2/5000
FVH	(80°-90°)	89.6	0.3			G1/100
BL	(0°-30°)	1761.7	5.6	B3/2500		
BM	(30°-60°)	9167.2	29.3	B5		
BH	(60°-80°)	4636.4	14.8	B4/5000		G2/5000
BVH	(80°-90°)	89.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7
2.5°	3545.7	3548.6	3551.5	3548.6	3551.5	3547.1	3544.2	3548.6	3544.2	3539.8	3542.7
5°	3576.4	3577.9	3577.9	3573.5	3577.9	3575.0	3570.6	3576.4	3572.1	3567.7	3570.6
7.5°	3627.8	3633.6	3629.2	3624.8	3627.8	3624.8	3621.9	3623.4	3621.9	3617.5	3619.0
10°	3696.7	3701.1	3698.2	3696.7	3699.6	3698.2	3695.2	3693.8	3695.2	3690.8	3690.8
12.5°	3780.3	3778.8	3777.3	3778.8	3783.2	3783.2	3781.7	3783.2	3786.1	3787.6	3784.7
15°	3862.4	3865.3	3865.3	3865.3	3874.1	3881.5	3885.9	3888.8	3894.6	3896.1	3890.3
17.5°	3965.0	3965.0	3963.6	3965.0	3973.8	3985.6	3990.0	3995.8	4001.7	4006.1	3998.8
20°	4079.4	4082.3	4082.3	4085.3	4097.0	4110.2	4110.2	4113.1	4110.2	4113.1	4108.7
22.5°	4218.7	4227.5	4227.5	4229.0	4240.7	4256.8	4252.4	4256.8	4249.5	4255.4	4249.5
25°	4400.5	4413.7	4410.8	4410.8	4419.6	4429.9	4431.3	4440.1	4438.7	4446.0	4441.6
27.5°	4605.8	4626.4	4632.2	4630.8	4636.6	4646.9	4649.8	4660.1	4654.2	4660.1	4657.2
30°	4852.2	4861.0	4872.7	4877.1	4884.4	4894.7	4894.7	4896.2	4888.8	4897.6	4902.0
32.5°	5107.3	5123.5	5135.2	5161.6	5174.8	5182.1	5180.6	5183.6	5176.2	5188.0	5196.8
35°	5444.6	5456.3	5475.4	5495.9	5513.5	5512.0	5507.6	5509.1	5509.1	5519.4	5528.2
37.5°	5850.8	5853.7	5878.6	5908.0	5916.8	5908.0	5881.6	5875.7	5862.5	5875.7	5890.4
40°	6280.4	6290.7	6340.5	6359.6	6364.0	6347.9	6309.7	6287.7	6258.4	6274.6	6295.1
42.5°	6730.6	6751.1	6796.6	6830.3	6845.0	6834.7	6781.9	6748.2	6710.1	6718.9	6739.4
45°	7229.2	7254.1	7318.6	7350.9	7378.7	7362.6	7311.3	7259.9	7199.8	7204.2	7236.5
47.5°	7786.4	7811.3	7894.9	7949.1	7963.8	7960.9	7903.7	7833.3	7751.2	7748.2	7776.1
50°	8411.0	8436.0	8540.1	8623.7	8666.2	8661.8	8594.3	8494.6	8394.9	8396.4	8431.6
52.5°	9021.0	9051.8	9160.3	9304.0	9387.6	9447.8	9406.7	9312.8	9191.1	9194.1	9226.3
55°	9592.9	9644.2	9768.9	9963.9	10119.3	10288.0	10336.4	10333.4	10260.1	10280.6	10312.9
57.5°	9870.1	9946.3	10138.4	10446.3	10763.1	11106.2	11396.5	11613.6	11705.9	11845.2	11813.0
60°	9345.1	9466.8	9749.8	10202.9	10829.1	11544.6	12311.6	13060.9	13700.2	14182.6	13905.5
62.5°	7651.5	7809.8	8153.0	8733.6	9680.9	10826.1	12294.0	14065.3	15995.0	17159.3	16327.9
65°	4787.7	4951.9	5300.9	5922.6	7031.2	8455.0	10446.3	13382.0	16987.8	18743.0	17050.8
67.5°	1866.7	1956.1	2145.3	2542.7	3375.6	4642.5	6641.1	9972.7	14285.3	15823.5	14019.9
70°	935.5	944.3	979.5	1052.8	1231.7	1599.8	2434.2	4623.4	8192.5	9895.0	7897.8
72.5°	676.0	677.5	695.1	727.3	784.5	866.6	1025.0	1415.0	2664.4	4072.1	2497.2
75°	517.6	523.5	533.8	551.4	582.1	623.2	680.4	815.3	1010.3	1171.6	985.4
77.5°	398.8	410.6	417.9	434.0	453.1	481.0	497.1	548.4	637.9	671.6	661.3
80°	303.5	313.8	329.9	343.1	356.3	369.5	363.7	387.1	434.0	461.9	447.2
82.5°	193.6	205.3	252.2	263.9	269.8	278.6	268.3	269.8	290.3	307.9	290.3
85°	124.6	132.0	159.8	174.5	176.0	181.8	177.4	167.2	167.2	152.5	171.6
87.5°	57.2	58.7	71.9	85.0	88.0	79.2	77.7	74.8	60.1	57.2	61.6
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°	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7	3542.7
2.5°	3541.3	3544.2	3545.7	3550.1	3551.5	3551.5	3553.0	3555.9
5°	3569.1	3573.5	3575.0	3580.8	3582.3	3580.8	3583.8	3585.2
7.5°	3619.0	3626.3	3629.2	3635.1	3630.7	3636.6	3638.0	3638.0
10°	3692.3	3699.6	3701.1	3707.0	3704.0	3707.0	3707.0	3704.0
12.5°	3789.1	3790.5	3786.1	3790.5	3784.7	3787.6	3783.2	3780.3
15°	3896.1	3891.7	3881.5	3881.5	3872.7	3874.1	3872.7	3871.2
17.5°	4000.2	3991.4	3984.1	3981.2	3973.8	3972.4	3968.0	3968.0
20°	4114.6	4110.2	4105.8	4099.9	4092.6	4085.3	4083.8	4086.7
22.5°	4252.4	4251.0	4251.0	4248.0	4237.8	4230.4	4226.0	4226.0
25°	4437.2	4424.0	4424.0	4422.5	4418.1	4413.7	4404.9	4409.3
27.5°	4645.4	4638.1	4644.0	4642.5	4638.1	4638.1	4632.2	4632.2
30°	4902.0	4899.1	4907.9	4900.6	4885.9	4884.4	4878.6	4871.2
32.5°	5198.2	5195.3	5208.5	5199.7	5176.2	5163.1	5151.3	5145.5
35°	5528.2	5529.6	5545.8	5539.9	5513.5	5504.7	5484.2	5481.3
37.5°	5888.9	5912.4	5940.2	5946.1	5924.1	5918.2	5896.2	5884.5
40°	6312.7	6343.5	6386.0	6396.3	6372.8	6368.4	6337.6	6321.5
42.5°	6764.3	6817.1	6869.9	6878.7	6855.2	6831.8	6802.4	6790.7
45°	7268.7	7331.8	7400.7	7418.3	7383.1	7355.3	7317.1	7317.1
47.5°	7834.8	7913.9	7991.7	8040.0	8007.8	7978.5	7933.0	7903.7
50°	8503.4	8611.9	8713.1	8763.0	8711.6	8655.9	8576.7	8550.3
52.5°	9342.2	9459.5	9547.5	9521.1	9441.9	9364.2	9277.7	9242.5
55°	10412.6	10452.2	10452.2	10352.5	10194.1	10063.6	9927.3	9881.8
57.5°	11751.4	11598.9	11364.3	11066.6	10692.7	10367.2	10147.2	10043.1
60°	13324.8	12591.6	11763.1	10949.3	10280.6	9729.3	9402.3	9252.7
62.5°	14373.3	12455.3	10795.3	9488.8	8526.9	7862.6	7411.0	7235.0
65°	13433.3	10387.7	8164.7	6601.5	5553.1	4877.1	4429.9	4265.6
67.5°	9839.3	6509.2	4347.8	3116.0	2283.1	1821.2	1637.9	1561.7
70°	4416.7	2291.9	1404.8	1096.8	945.8	868.1	834.4	822.6
72.5°	1331.5	963.4	812.4	733.2	673.1	634.9	607.1	604.1
75°	803.6	668.7	593.9	547.0	508.8	478.0	463.4	459.0
77.5°	561.6	491.2	456.0	422.3	393.0	369.5	356.3	346.1
80°	394.5	360.7	344.6	325.5	306.5	284.5	265.4	256.6
82.5°	263.9	256.6	256.6	244.9	228.8	208.2	170.1	161.3
85°	170.1	168.6	171.6	167.2	155.4	133.4	110.0	104.1
87.5°	79.2	80.6	89.4	88.0	85.0	70.4	55.7	52.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)