

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: P299866

Luminaire Tested: **GLNA-AF-09-LED-E1-5WQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299866
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
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-E1-5WQ
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 55855.7 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G5

Input Watts (W): 501
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

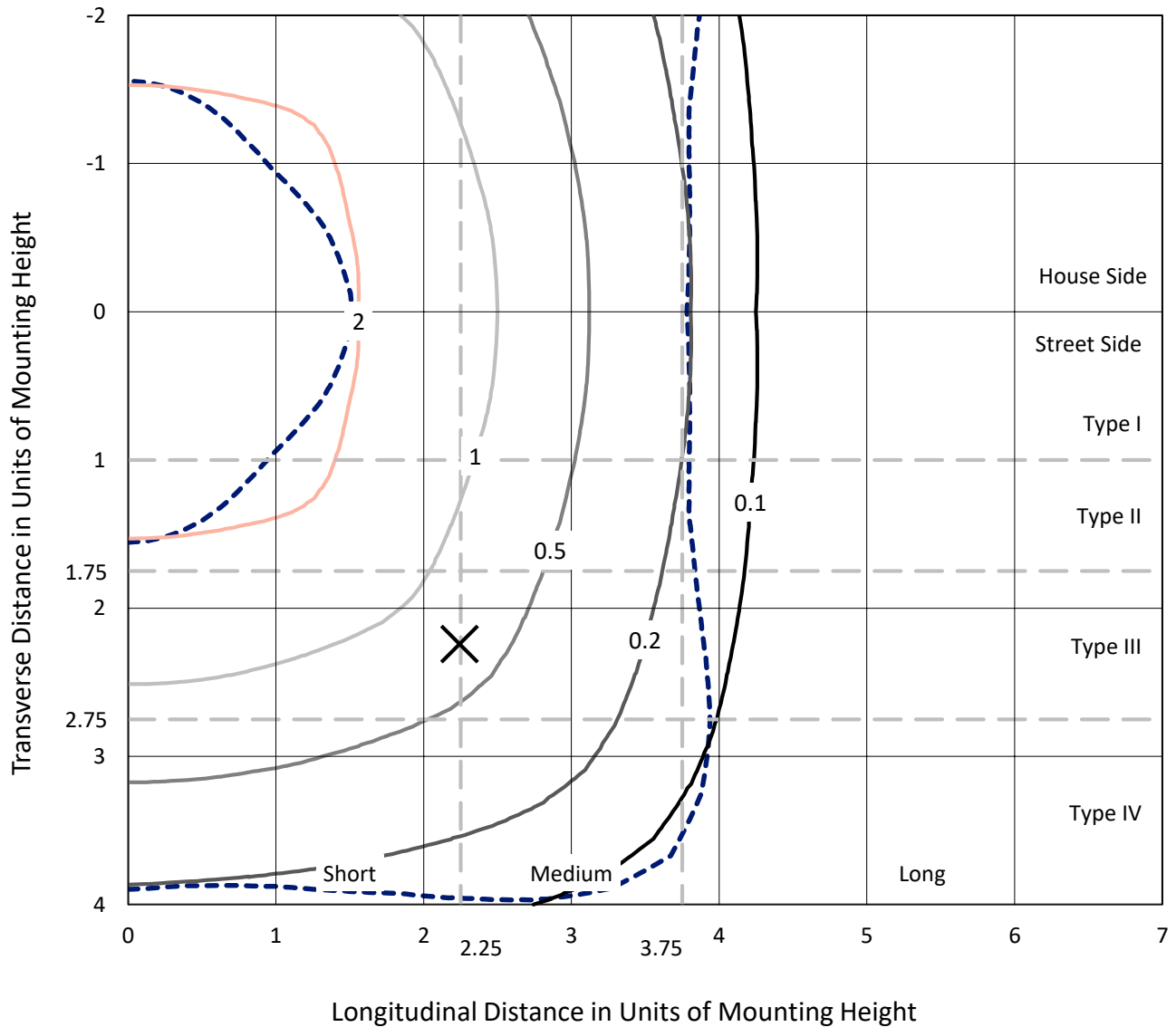


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

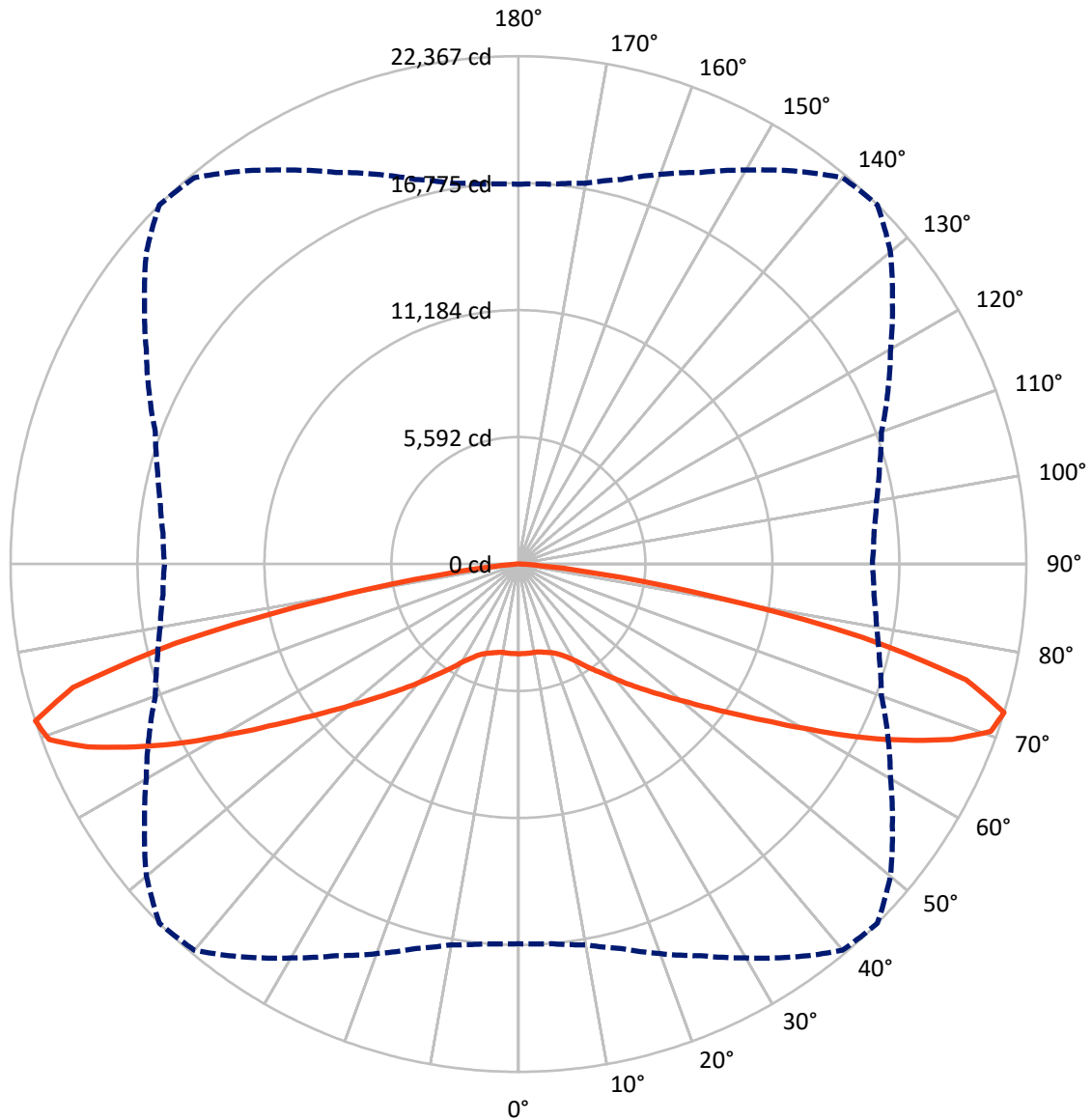


Based on 30 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	27927.8	0.0	27927.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	27927.8	0.0	27927.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	55855.7	0.0	55855.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.7	0.7
10°-20°	1147.1	2.1
20°-30°	2096.2	3.8
30°-40°	3614.3	6.5
40°-50°	6178.6	11.1
50°-60°	10014.7	17.9
60°-70°	16614.1	29.7
70°-80°	14633.1	26.2
80°-90°	1179.8	2.1
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°	55855.7	100.0
0°-180°	55855.7	100.0



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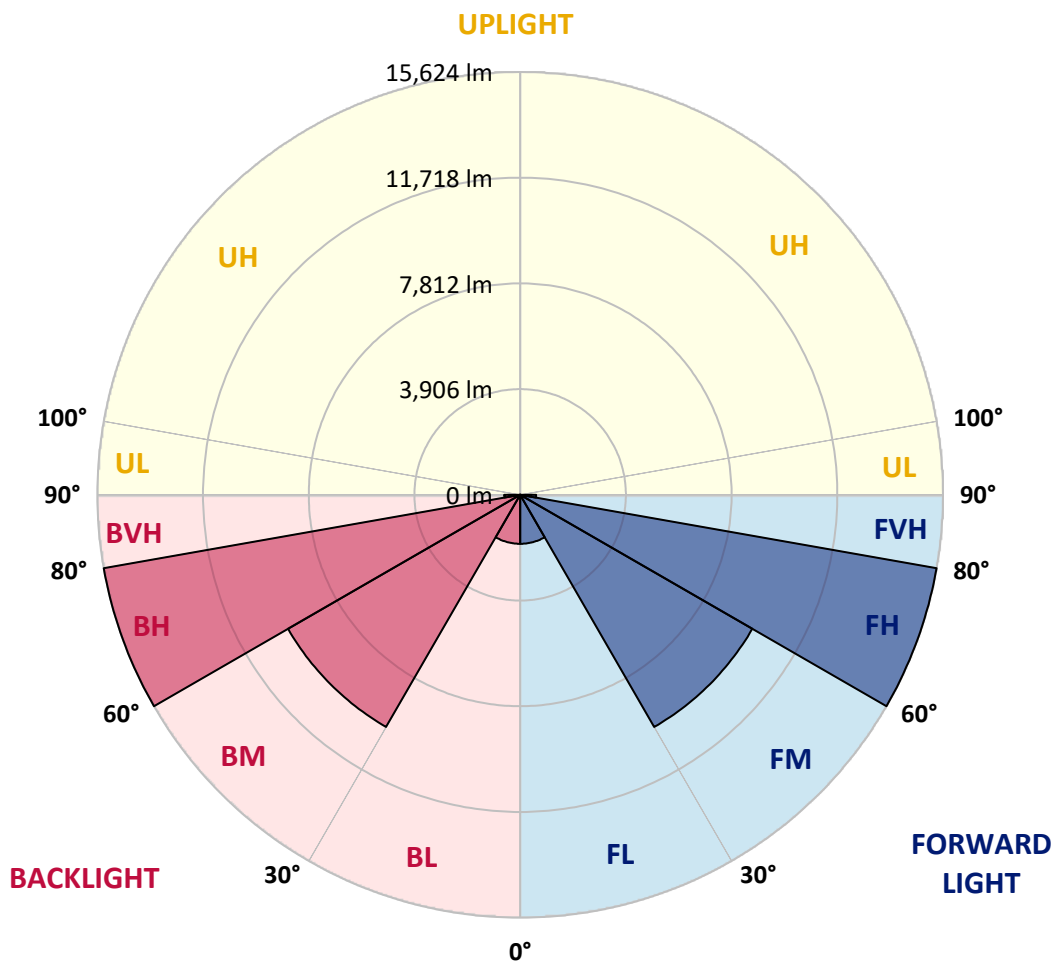
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1810.5	3.2			
FM	(30°-60°)	9903.8	17.7			
FH	(60°-80°)	15623.6	28.0			G5
FVH	(80°-90°)	589.9	1.1			G4/750
BL	(0°-30°)	1810.5	3.2	B3/2500		
BM	(30°-60°)	9903.8	17.7	B5		
BH	(60°-80°)	15623.6	28.0	B5		G5
BVH	(80°-90°)	589.9	1.1			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4
2.5°	3955.4	3958.0	3960.6	3958.0	3958.0	3955.4	3952.9	3955.4	3952.9	3947.8	3950.3
5°	3968.3	3973.4	3973.4	3968.3	3970.8	3968.3	3963.1	3965.7	3960.6	3952.9	3952.9
7.5°	3983.6	3986.2	3986.2	3981.1	3983.6	3978.5	3973.4	3970.8	3965.7	3955.4	3947.8
10°	4006.7	4009.2	4006.7	4001.6	4001.6	3993.9	3981.1	3975.9	3965.7	3950.3	3942.6
12.5°	4032.3	4034.9	4032.3	4027.2	4024.6	4011.8	4001.6	3993.9	3986.2	3973.4	3960.6
15°	4068.2	4073.3	4068.2	4057.9	4050.2	4040.0	4034.9	4037.4	4040.0	4029.7	4016.9
17.5°	4134.8	4137.3	4129.7	4106.6	4096.3	4086.1	4086.1	4091.2	4098.9	4093.8	4081.0
20°	4257.7	4250.1	4232.1	4203.9	4191.1	4173.2	4170.6	4173.2	4173.2	4170.6	4160.4
22.5°	4411.5	4406.3	4383.3	4347.4	4329.5	4319.2	4303.9	4291.0	4288.5	4280.8	4270.6
25°	4595.9	4593.3	4565.2	4534.4	4521.6	4508.8	4496.0	4478.1	4462.7	4444.8	4434.5
27.5°	4831.6	4821.3	4780.4	4765.0	4747.1	4739.4	4721.4	4700.9	4688.1	4665.1	4652.3
30°	5090.3	5090.3	5057.0	5051.9	5051.9	5034.0	5013.5	4977.6	4954.6	4931.5	4923.8
32.5°	5349.1	5351.6	5318.3	5328.6	5336.3	5349.1	5354.2	5341.4	5326.0	5323.5	5308.1
35°	5723.1	5712.9	5679.6	5687.2	5684.7	5682.1	5682.1	5710.3	5715.4	5720.5	5689.8
37.5°	6186.8	6186.8	6153.5	6153.5	6138.1	6122.7	6102.3	6120.2	6148.4	6156.1	6135.6
40°	6717.1	6735.0	6694.0	6691.5	6696.6	6647.9	6624.9	6653.0	6671.0	6701.7	6678.7
42.5°	7342.2	7329.4	7288.4	7283.3	7255.1	7239.7	7219.2	7242.3	7270.4	7290.9	7298.6
45°	7941.6	7931.4	7885.3	7885.3	7857.1	7844.3	7854.5	7893.0	7905.8	7934.0	7962.1
47.5°	8533.4	8520.6	8489.9	8502.7	8505.2	8528.3	8561.6	8597.5	8633.3	8671.8	8684.6
50°	9138.0	9140.6	9107.3	9138.0	9176.4	9240.5	9330.1	9389.1	9463.4	9512.0	9527.4
52.5°	9688.8	9699.0	9734.9	9806.6	9883.5	10009.0	10162.7	10306.2	10429.2	10511.1	10506.0
55°	10349.7	10365.1	10452.2	10575.2	10700.7	10890.3	11118.3	11371.9	11576.9	11694.7	11620.4
57.5°	11195.1	11228.5	11325.8	11492.3	11679.3	11925.3	12237.8	12619.5	12937.2	13096.0	12975.6
60°	12355.7	12376.1	12494.0	12678.4	12903.9	13208.7	13626.3	14138.7	14587.0	14797.1	14658.7
62.5°	13885.1	13923.5	14018.3	14205.3	14435.9	14781.7	15291.5	15932.0	16490.4	16782.5	16469.9
65°	15711.6	15834.6	15914.0	16103.6	16318.8	16685.1	17218.0	17904.6	18504.0	18696.2	18334.9
67.5°	17520.3	17627.9	17766.2	17984.0	18201.7	18614.2	19108.6	19774.7	20433.1	20607.3	20046.2
70°	18311.9	18373.4	18588.6	18885.7	19303.3	19790.1	20361.3	21109.4	21924.0	22067.5	21355.3
72.5°	16726.1	16787.6	17028.4	17533.1	18260.6	19034.3	20030.9	21129.9	22205.8	22367.2	21386.1
75°	12650.3	12550.4	12906.4	13575.1	14556.3	15634.8	17028.4	18603.9	20159.0	20361.3	19190.6
77.5°	6537.8	6525.0	6793.9	7624.0	8794.7	10021.8	11556.4	13336.8	14858.6	15473.4	14520.4
80°	1841.9	1862.4	1990.5	2403.0	3087.0	3973.4	5172.3	6840.1	8085.1	8720.4	8187.6
82.5°	722.4	778.8	827.5	904.3	994.0	1124.6	1501.2	2233.9	2997.3	3581.4	2933.3
85°	258.7	276.7	392.0	463.7	471.4	497.0	566.2	660.9	796.7	950.4	781.4
87.5°	97.3	107.6	125.5	207.5	204.9	187.0	228.0	238.2	179.3	164.0	202.4
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°	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4	3955.4
2.5°	3945.2	3947.8	3947.8	3950.3	3952.9	3952.9	3958.0	3958.0
5°	3947.8	3947.8	3942.6	3945.2	3942.6	3942.6	3945.2	3945.2
7.5°	3942.6	3940.1	3935.0	3932.4	3927.3	3927.3	3927.3	3927.3
10°	3935.0	3932.4	3927.3	3924.7	3922.1	3922.1	3922.1	3922.1
12.5°	3955.4	3947.8	3942.6	3940.1	3940.1	3940.1	3940.1	3940.1
15°	4009.2	3991.3	3978.5	3978.5	3981.1	3986.2	3986.2	3991.3
17.5°	4075.9	4055.4	4042.6	4032.3	4037.4	4045.1	4050.2	4055.4
20°	4155.3	4145.0	4127.1	4116.8	4116.8	4127.1	4132.2	4134.8
22.5°	4265.4	4257.7	4250.1	4237.2	4237.2	4242.4	4252.6	4252.6
25°	4429.4	4424.3	4419.1	4408.9	4406.3	4406.3	4411.5	4416.6
27.5°	4634.3	4636.9	4631.8	4629.2	4621.5	4619.0	4626.6	4624.1
30°	4908.4	4921.3	4934.1	4923.8	4911.0	4903.3	4895.6	4885.4
32.5°	5279.9	5264.5	5254.3	5236.4	5213.3	5192.8	5177.4	5159.5
35°	5630.9	5605.3	5595.0	5610.4	5607.8	5595.0	5577.1	5561.7
37.5°	6061.3	6056.1	6061.3	6089.4	6084.3	6097.1	6061.3	6058.7
40°	6604.4	6609.5	6645.4	6678.7	6696.6	6714.5	6694.0	6673.5
42.5°	7234.6	7232.0	7244.8	7290.9	7321.7	7342.2	7298.6	7293.5
45°	7900.7	7882.7	7893.0	7931.4	7962.1	7985.2	7936.5	7936.5
47.5°	8633.3	8602.6	8569.3	8612.8	8630.8	8646.1	8607.7	8594.9
50°	9450.6	9386.5	9314.8	9332.7	9332.7	9327.6	9278.9	9276.3
52.5°	10388.2	10270.3	10139.7	10091.0	10062.8	10032.1	9947.5	9906.6
55°	11466.7	11289.9	11085.0	10959.5	10892.9	10808.3	10667.4	10629.0
57.5°	12727.1	12450.4	12096.9	11943.2	11794.6	11656.3	11500.0	11456.5
60°	14220.7	13813.3	13344.5	13060.2	12898.8	12765.5	12604.2	12596.5
62.5°	15885.8	15242.8	14712.5	14456.3	14338.5	14220.7	14066.9	14087.4
65°	17579.2	16908.0	16411.0	16203.5	16093.3	15996.0	15842.3	15865.3
67.5°	19249.5	18632.1	18086.4	17873.8	17750.8	17627.9	17489.5	17512.6
70°	20448.4	19682.5	19067.6	18596.2	18301.6	17968.6	17753.4	17699.6
72.5°	20105.2	18924.2	17948.1	17013.0	16464.8	16019.1	15716.8	15586.1
75°	17399.9	15785.9	14530.6	13382.9	12737.4	12212.2	11830.5	11592.2
77.5°	12921.8	11108.0	9624.8	8302.9	7257.6	6555.7	6061.3	5741.0
80°	7073.2	5379.8	3932.4	2764.2	2031.5	1688.2	1491.0	1396.2
82.5°	2203.2	1421.8	1047.8	904.3	840.3	804.4	745.5	650.7
85°	701.9	614.8	571.3	545.7	520.0	453.4	312.5	284.4
87.5°	271.6	279.2	276.7	261.3	266.4	192.1	153.7	135.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)