

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: P299746

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299746
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-09-LED-E1-5MQ-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36700.8 lumens
Efficiency: N/A
Efficacy: 126.6 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): 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

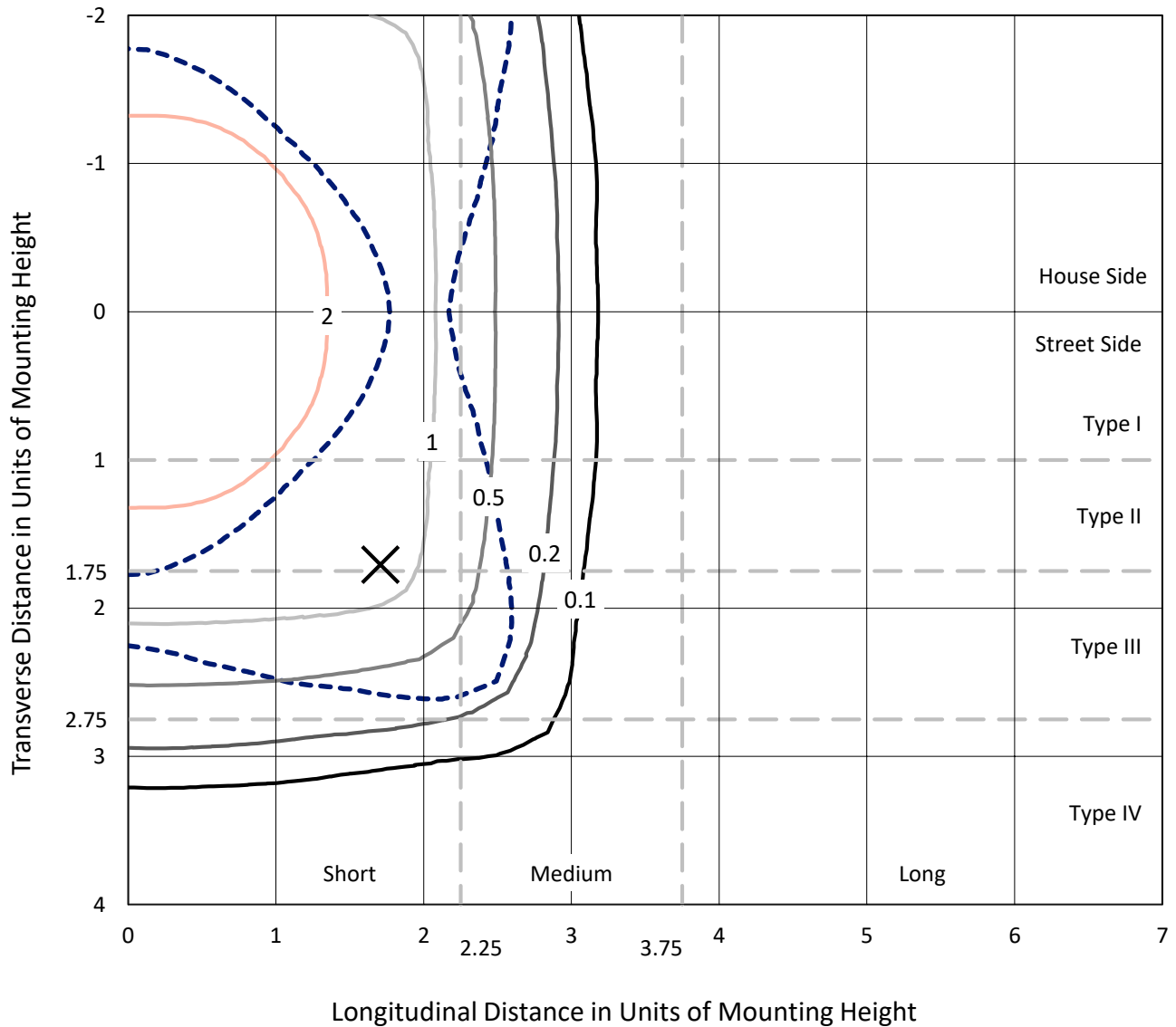


REPORT NUMBER: P299746

CATALOG NUMBER: GLNA-AF-09-LED-E1-5MQ-600

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

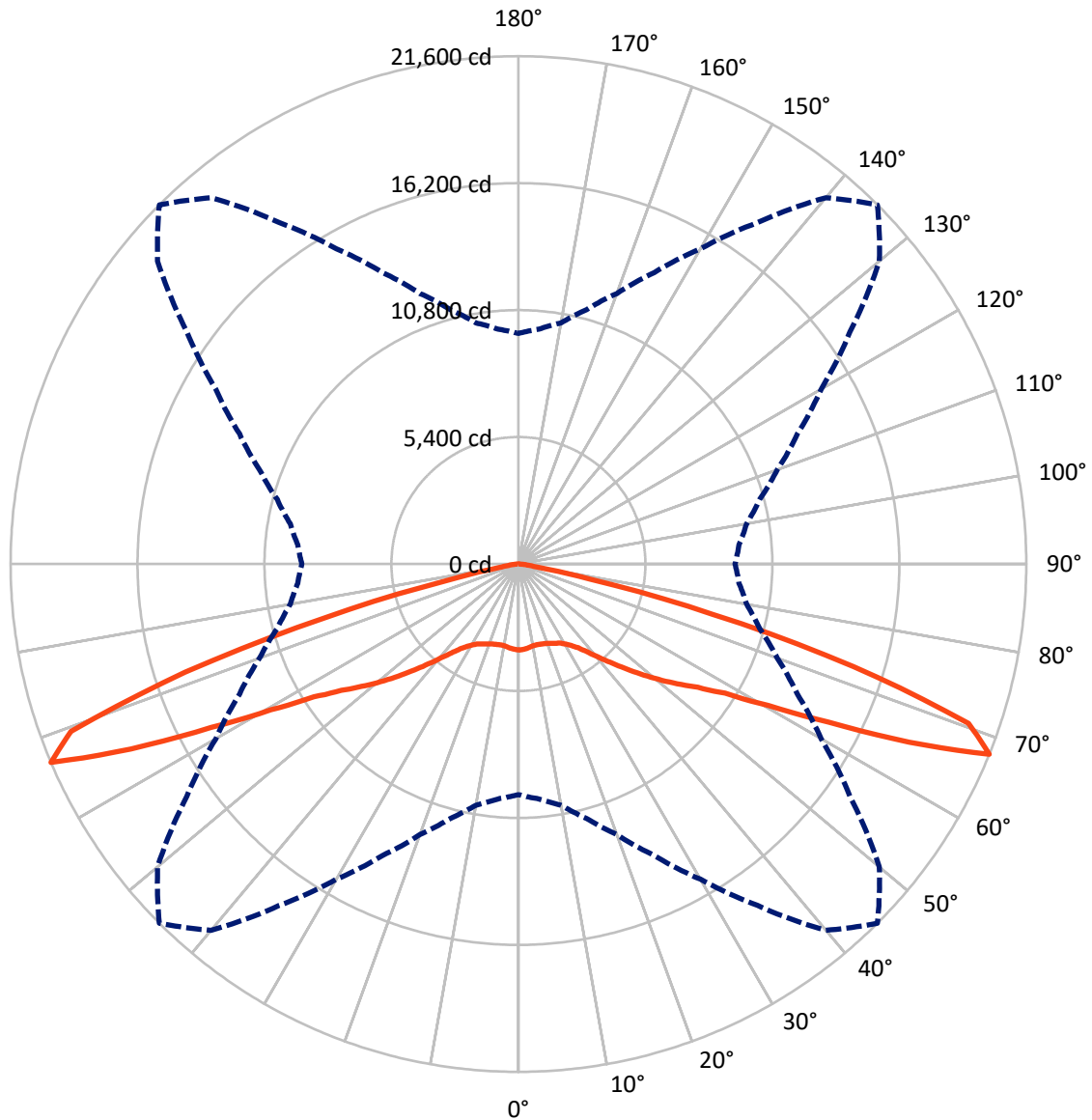


Based on 30 foot mounting height. Maximum calculated value = 4.1 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P299746

CATALOG NUMBER: GLNA-AF-09-LED-E1-5MQ-600

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
House Side	Lumens	18350.4	0.0	18350.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	18350.4	0.0	18350.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	36700.8	0.0	36700.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.3	0.9
10°-20°	993.3	2.7
20°-30°	1688.6	4.6
30°-40°	2760.4	7.5
40°-50°	4927.8	13.4
50°-60°	8308.5	22.6
60°-70°	12893.5	35.1
70°-80°	4530.2	12.3
80°-90°	256.0	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°	36700.8	100.0
0°-180°	36700.8	100.0

Coefficient of Utilization



REPORT NUMBER: P299746

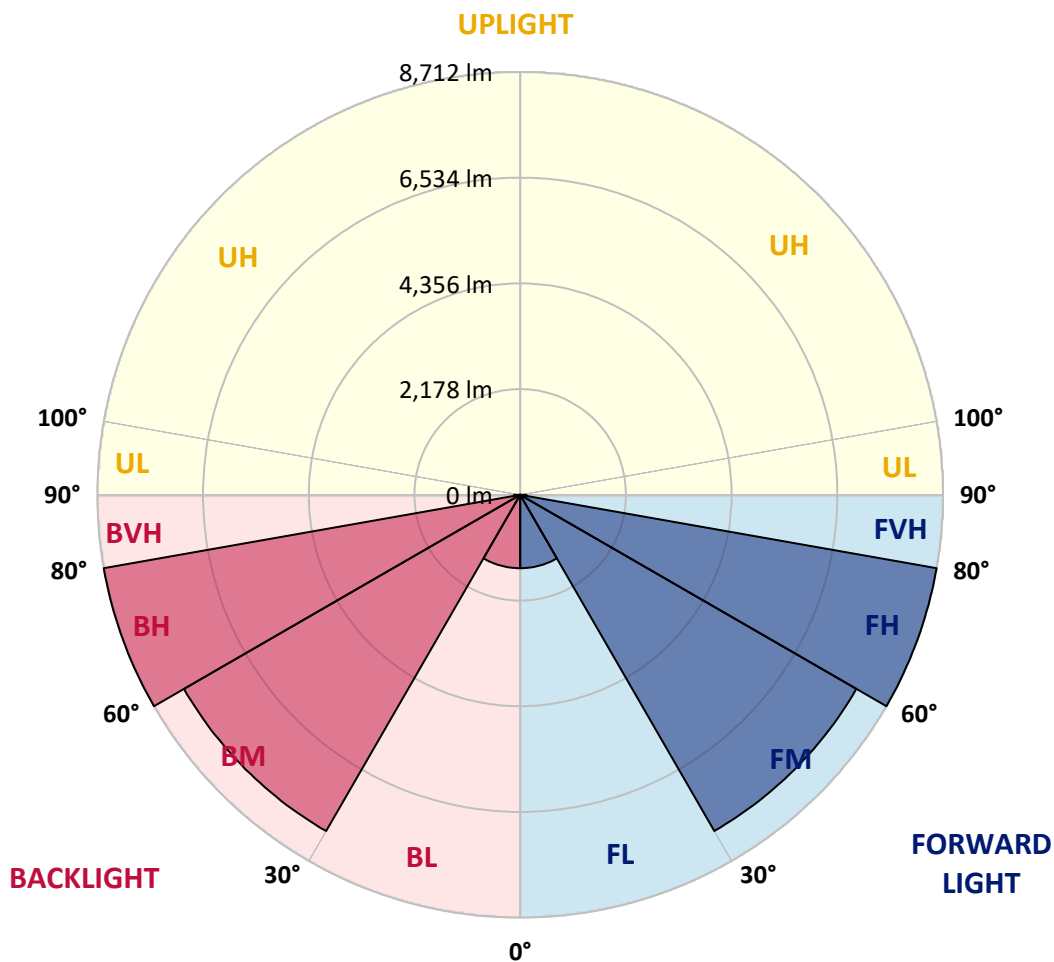
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1512.1	4.1			
FM	(30°-60°)	7998.4	21.8			
FH	(60°-80°)	8711.9	23.7			G4/12000
FVH	(80°-90°)	128.0	0.3			G2/225
BL	(0°-30°)	1512.1	4.1	B3/2500		
BM	(30°-60°)	7998.4	21.8	B4/8500		
BH	(60°-80°)	8711.9	23.7	B5		G4/12000
BVH	(80°-90°)	128.0	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





REPORT NUMBER: P299746

CATALOG NUMBER: GLNA-AF-09-LED-E1-5MQ-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4
2.5°	3643.9	3647.3	3647.3	3647.3	3645.6	3645.6	3642.2	3645.6	3643.9	3638.8	3640.5
5°	3613.5	3616.9	3616.9	3615.2	3620.3	3618.6	3613.5	3616.9	3615.2	3611.8	3613.5
7.5°	3569.6	3574.7	3574.7	3573.0	3578.1	3576.4	3573.0	3574.7	3574.7	3569.6	3569.6
10°	3520.7	3524.1	3524.1	3522.4	3530.8	3530.8	3529.1	3534.2	3535.9	3530.8	3527.4
12.5°	3475.1	3480.2	3480.2	3486.9	3495.4	3498.7	3507.2	3513.9	3520.7	3519.0	3512.2
15°	3448.1	3451.5	3458.2	3466.7	3480.2	3492.0	3505.5	3520.7	3534.2	3537.6	3527.4
17.5°	3431.2	3436.3	3446.4	3458.2	3476.8	3497.1	3517.3	3537.6	3556.1	3562.9	3551.1
20°	3426.2	3429.5	3439.7	3459.9	3485.2	3515.6	3544.3	3567.9	3593.3	3601.7	3593.3
22.5°	3436.3	3443.0	3454.9	3478.5	3512.2	3551.1	3584.8	3616.9	3648.9	3664.1	3652.3
25°	3481.9	3488.6	3503.8	3534.2	3571.3	3611.8	3650.6	3687.8	3716.5	3731.6	3723.2
27.5°	3566.2	3574.7	3593.3	3623.6	3664.1	3708.0	3750.2	3780.6	3804.2	3809.3	3799.2
30°	3692.8	3711.4	3733.3	3767.1	3814.4	3851.5	3893.7	3920.7	3949.4	3949.4	3940.9
32.5°	3890.3	3908.9	3932.5	3964.6	4001.7	4042.2	4079.3	4103.0	4133.3	4135.0	4114.8
35°	4185.7	4194.1	4214.4	4234.6	4268.4	4303.8	4335.9	4351.1	4376.4	4378.1	4359.5
37.5°	4575.5	4577.2	4590.7	4597.5	4627.9	4666.7	4697.1	4707.2	4730.8	4727.4	4708.9
40°	5029.5	5038.0	5043.0	5053.2	5085.2	5122.4	5154.4	5159.5	5184.8	5179.8	5156.1
42.5°	5554.4	5557.8	5586.5	5601.7	5632.1	5650.6	5691.1	5696.2	5726.6	5713.1	5686.1
45°	6143.5	6173.8	6200.9	6231.2	6263.3	6285.2	6317.3	6310.6	6330.8	6310.6	6295.4
47.5°	6762.9	6784.8	6845.6	6892.8	6945.2	6963.7	7009.3	6989.0	7009.3	6980.6	6975.5
50°	7444.7	7483.6	7535.9	7589.9	7645.6	7676.0	7735.0	7709.7	7736.7	7709.7	7694.5
52.5°	8116.5	8126.6	8241.4	8320.7	8398.3	8433.8	8469.2	8457.4	8459.1	8457.4	8442.2
55°	8754.4	8778.1	8892.8	9000.9	9135.9	9235.5	9296.2	9289.5	9274.3	9259.1	9233.8
57.5°	9473.4	9497.1	9628.7	9762.0	9915.6	10057.4	10180.6	10307.2	10356.1	10369.6	10313.9
60°	10445.6	10443.9	10619.4	10781.4	11000.9	11211.8	11481.9	11757.0	12072.6	12219.4	12025.3
62.5°	11434.6	11475.1	11728.3	12015.2	12467.5	12908.0	13405.9	13895.4	14395.0	14801.7	14369.6
65°	11316.5	11471.7	11848.1	12497.9	13333.3	14325.8	15399.2	16535.0	17561.2	18266.7	17475.1
67.5°	9807.6	10028.7	10411.8	11201.7	12246.4	13677.7	15480.2	17726.6	20337.6	21600.0	20035.5
70°	7108.9	7358.7	7760.3	8531.7	9566.3	10926.6	12884.4	15581.5	19038.0	20310.6	18587.4
72.5°	3537.6	3672.6	3920.7	4411.8	5194.9	6298.7	8074.3	10666.7	13724.9	14892.8	13318.2
75°	1201.7	1264.1	1306.3	1466.7	1714.8	2148.5	3031.2	4663.3	7113.9	8528.3	7012.7
77.5°	693.7	695.4	724.1	752.7	794.9	842.2	960.3	1260.8	2180.6	3097.0	2256.5
80°	448.9	447.3	470.9	492.8	521.5	545.1	551.9	584.0	673.4	798.3	713.9
82.5°	232.9	261.6	313.9	342.6	396.6	406.8	393.2	381.4	403.4	418.6	428.7
85°	128.3	111.4	167.1	216.0	239.7	243.0	243.0	229.5	238.0	232.9	253.2
87.5°	59.1	54.0	65.8	106.3	113.1	96.2	101.3	89.5	64.1	62.4	70.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299746

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4	3657.4
2.5°	3640.5	3642.2	3642.2	3647.3	3648.9	3652.3	3655.7	3657.4
5°	3611.8	3616.9	3613.5	3618.6	3618.6	3621.9	3621.9	3623.6
7.5°	3569.6	3574.7	3574.7	3574.7	3573.0	3578.1	3578.1	3578.1
10°	3525.7	3529.1	3527.4	3524.1	3520.7	3525.7	3524.1	3522.4
12.5°	3512.2	3503.8	3497.1	3493.7	3486.9	3488.6	3483.5	3483.5
15°	3520.7	3505.5	3493.7	3488.6	3481.9	3478.5	3475.1	3476.8
17.5°	3542.6	3524.1	3508.9	3500.4	3492.0	3486.9	3480.2	3481.9
20°	3581.4	3559.5	3537.6	3520.7	3505.5	3497.1	3492.0	3490.3
22.5°	3638.8	3606.8	3574.7	3549.4	3529.1	3517.3	3512.2	3508.9
25°	3704.6	3669.2	3632.1	3603.4	3583.1	3567.9	3557.8	3557.8
27.5°	3787.3	3758.7	3724.9	3691.1	3672.6	3657.4	3650.6	3647.3
30°	3925.7	3898.7	3871.7	3839.7	3816.0	3800.8	3789.0	3778.9
32.5°	4103.0	4081.0	4059.1	4035.4	4013.5	3993.3	3974.7	3966.2
35°	4352.7	4335.9	4320.7	4293.7	4285.2	4273.4	4263.3	4254.9
37.5°	4697.1	4690.3	4690.3	4661.6	4654.9	4649.8	4639.7	4641.4
40°	5149.4	5156.1	5147.7	5137.6	5132.5	5119.0	5119.0	5130.8
42.5°	5684.4	5689.5	5708.0	5691.1	5709.7	5692.8	5682.7	5691.1
45°	6305.5	6324.1	6361.2	6344.3	6356.1	6327.4	6292.0	6293.7
47.5°	7002.5	7019.4	7034.6	7022.8	7024.5	6977.2	6930.0	6918.2
50°	7726.6	7733.3	7741.8	7724.9	7728.3	7676.0	7621.9	7623.6
52.5°	8442.2	8474.3	8508.0	8462.5	8452.3	8393.3	8317.3	8286.9
55°	9260.8	9306.3	9267.5	9188.2	9108.9	9029.5	8930.0	8913.1
57.5°	10270.1	10192.4	10070.9	9920.7	9811.0	9699.6	9598.3	9556.1
60°	11674.3	11382.3	11162.9	10940.1	10800.0	10663.3	10530.0	10509.7
62.5°	13659.1	13154.4	12717.3	12256.6	11880.2	11586.5	11351.9	11286.1
65°	16146.9	14953.6	13919.0	12953.6	12114.8	11481.9	11083.6	10908.0
67.5°	17216.9	14860.8	13086.9	11716.5	10619.4	9853.2	9422.8	9208.4
70°	15129.1	12324.1	10394.9	9022.8	8023.6	7206.8	6816.9	6587.3
72.5°	10408.5	7839.7	6199.2	5059.9	4261.6	3578.1	3308.0	3287.8
75°	4673.4	3095.4	2133.3	1643.9	1384.0	1203.4	1147.7	1105.5
77.5°	1308.0	967.1	862.4	806.8	752.7	690.3	666.7	671.7
80°	636.3	600.8	577.2	541.8	492.8	440.5	416.9	427.0
82.5°	421.9	416.9	432.1	406.8	335.9	285.2	239.7	219.4
85°	256.5	259.9	265.0	266.7	226.2	158.6	108.0	121.5
87.5°	101.3	116.5	126.6	131.6	123.2	75.9	60.8	62.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)