

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: P301974

Luminaire Tested: **GLNA-AF-10-LED-E1-SL4-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301974
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-7027-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24867.1 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 323
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

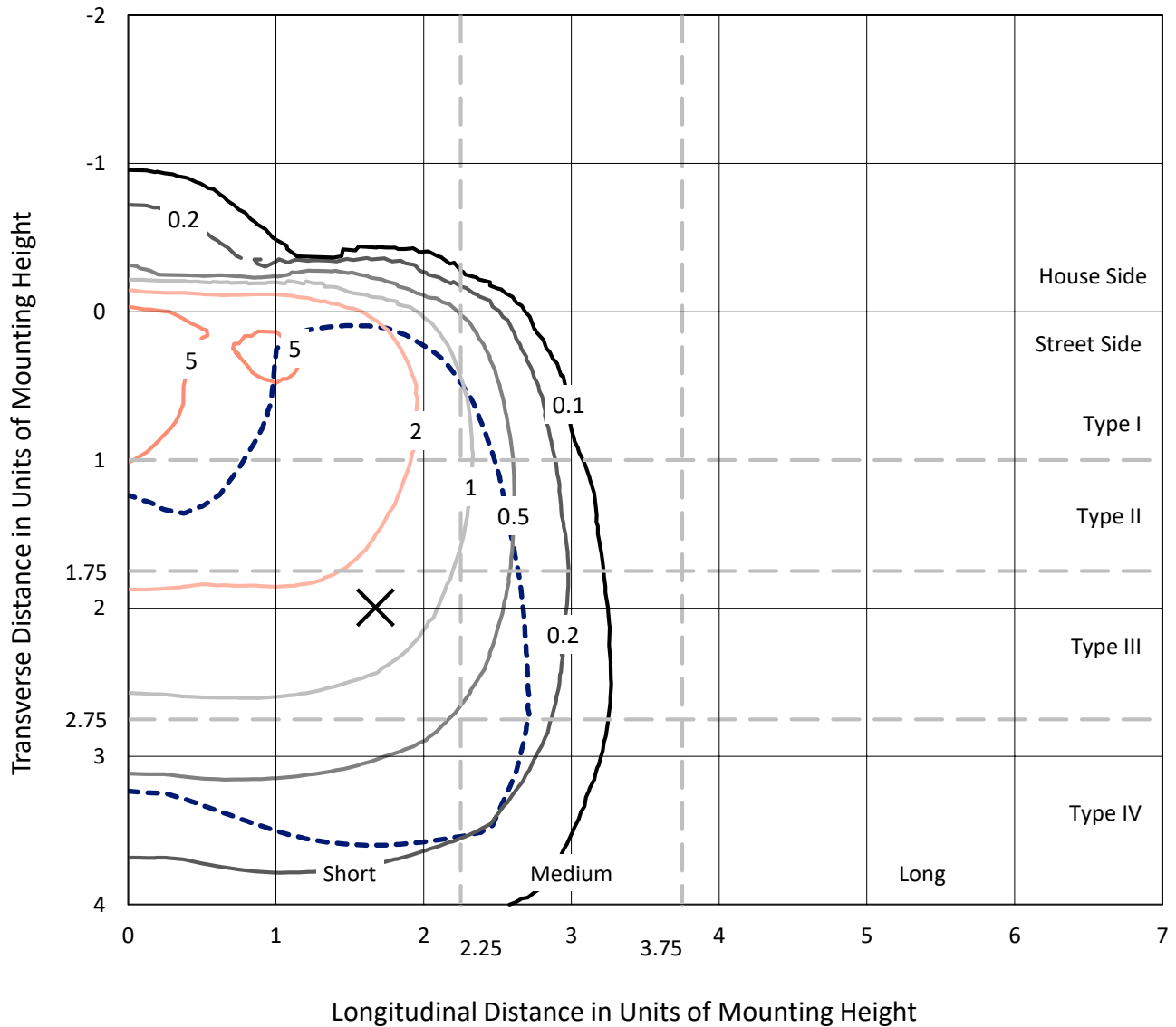


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

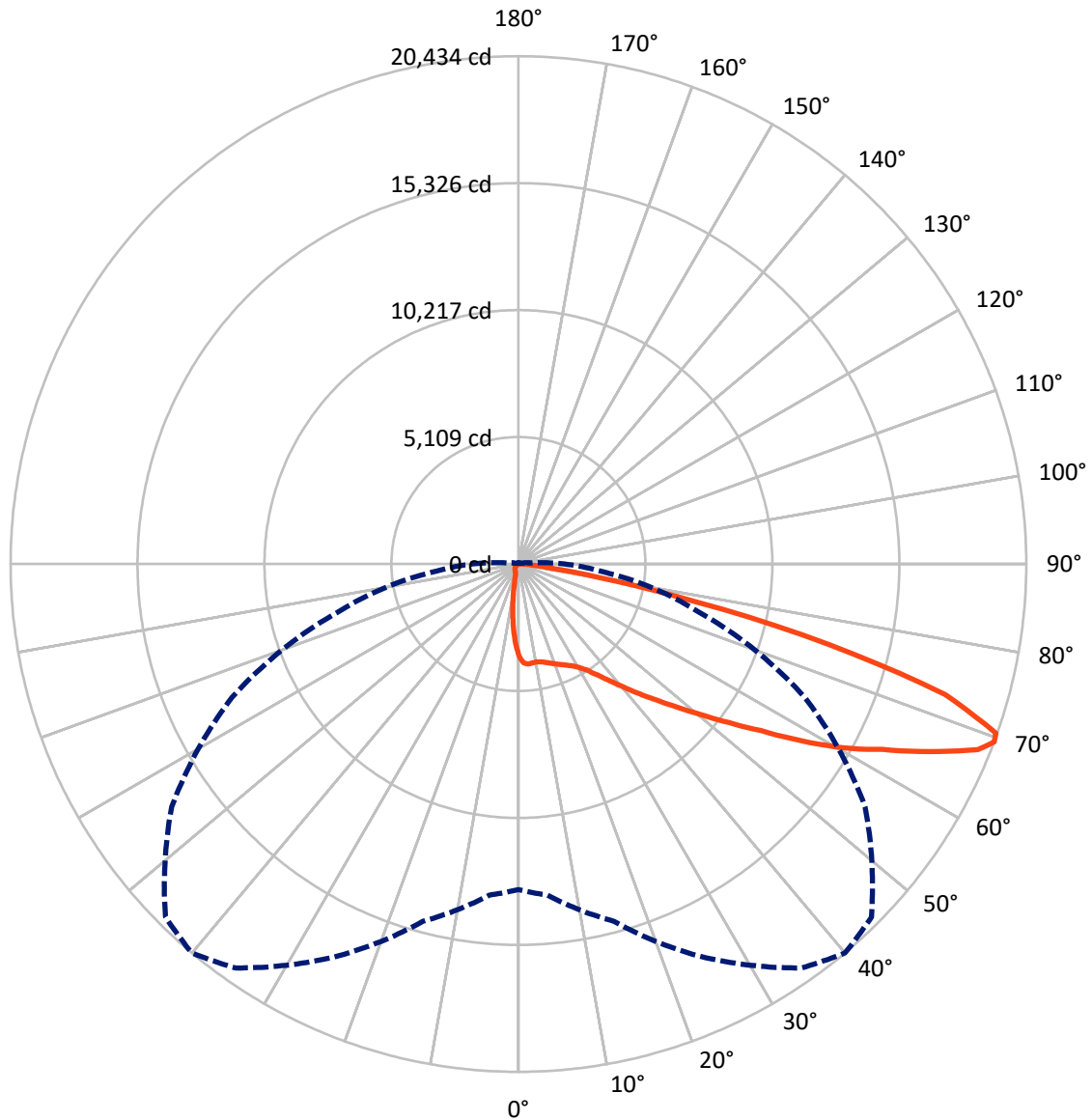


Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1454.9	0.0	1454.9
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	23412.2	0.0	23412.2
	% Fixture	94.1	0.0	94.1
Total	Lumens	24867.1	0.0	24867.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.2	1.2
10°-20°	740.8	3.0
20°-30°	1247.8	5.0
30°-40°	2042.6	8.2
40°-50°	3536.7	14.2
50°-60°	5570.7	22.4
60°-70°	7275.1	29.3
70°-80°	3747.0	15.1
80°-90°	405.3	1.6
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°	24867.1	100.0
0°-180°	24867.1	100.0



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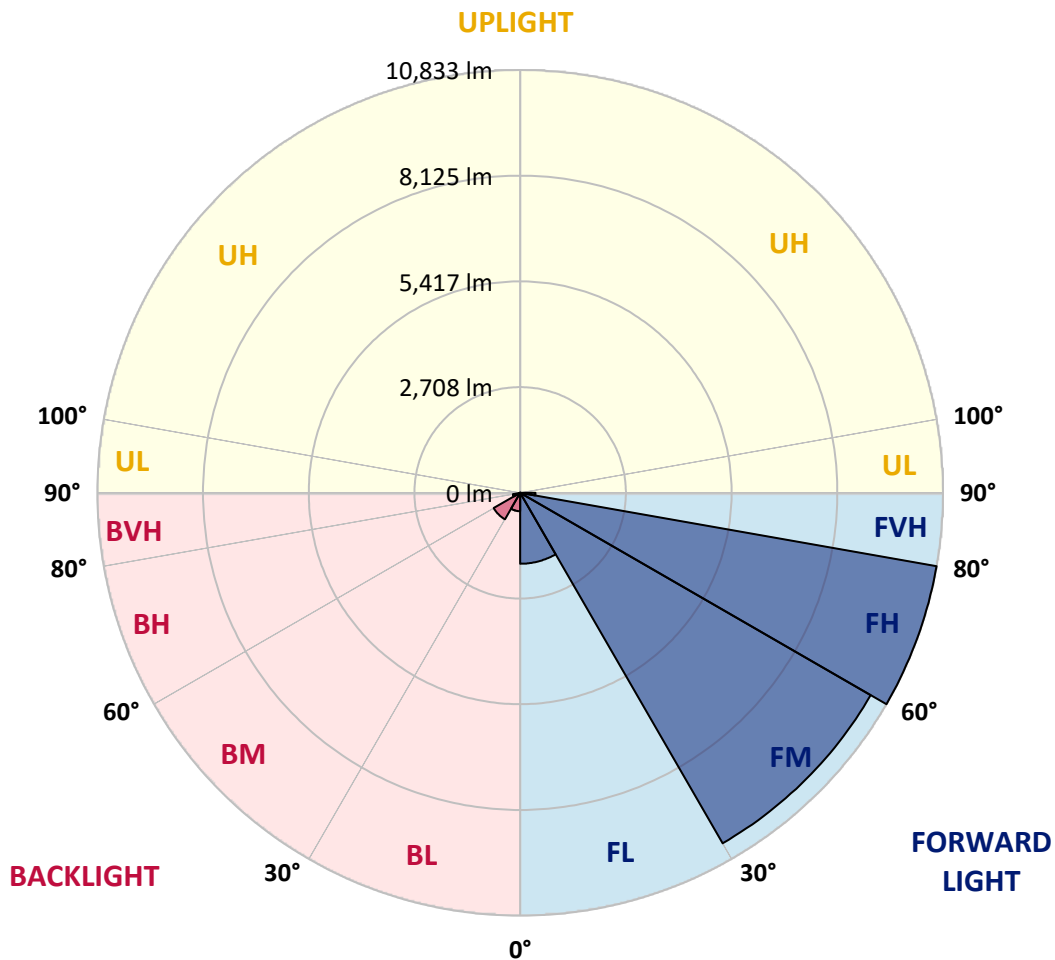
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1818.5	7.3			
FM	(30°-60°)	10368.0	41.7			
FH	(60°-80°)	10833.1	43.6			G4/12000
FVH	(80°-90°)	392.6	1.6			G3/500
BL	(0°-30°)	471.3	1.9	B1/500		
BM	(30°-60°)	782.0	3.1	B1/1000		
BH	(60°-80°)	188.9	0.8	B1/500		G1/500
BVH	(80°-90°)	12.7	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3
2.5°	4079.4	4057.2	4043.9	4026.1	4003.9	3984.7	3977.3	3922.5	3870.7	3799.6	3718.2
5°	4154.9	4147.5	4123.8	4100.1	4073.5	4043.9	4027.6	3962.5	3888.5	3784.8	3642.7
7.5°	4162.3	4153.4	4123.8	4091.2	4054.2	4018.7	3990.6	3925.5	3857.4	3752.3	3579.1
10°	4150.4	4140.1	4117.9	4082.4	4036.5	4002.4	3974.3	3912.1	3854.4	3759.7	3567.3
12.5°	4137.1	4126.8	4116.4	4098.6	4058.7	4035.0	4011.3	3952.1	3900.3	3820.4	3610.2
15°	4150.4	4144.5	4156.4	4149.0	4126.8	4106.0	4082.4	4029.1	3981.7	3915.1	3688.6
17.5°	4206.7	4206.7	4243.7	4248.1	4227.4	4197.8	4163.8	4110.5	4070.5	4014.3	3781.9
20°	4338.4	4334.0	4381.4	4390.2	4339.9	4294.0	4243.7	4178.6	4147.5	4112.0	3873.7
22.5°	4564.9	4544.2	4572.3	4563.4	4464.2	4393.2	4331.0	4251.1	4234.8	4218.5	3975.8
25°	4859.5	4847.6	4866.9	4779.5	4604.9	4508.7	4434.6	4344.4	4344.4	4360.6	4091.2
27.5°	5287.2	5242.8	5177.7	5023.8	4761.8	4638.9	4559.0	4462.8	4487.9	4548.6	4243.7
30°	5725.4	5676.5	5527.0	5290.2	4952.7	4823.9	4730.7	4630.0	4689.2	4800.3	4448.0
32.5°	6157.6	6102.8	5891.2	5592.2	5226.5	5097.8	5007.5	4896.5	4995.6	5182.1	4747.0
35°	6576.5	6527.6	6283.4	5931.1	5590.7	5484.1	5401.2	5305.0	5432.3	5692.8	5168.8
37.5°	7047.2	6993.9	6696.4	6314.5	6033.2	5956.3	5895.6	5799.4	6021.4	6403.3	5756.5
40°	7625.9	7535.6	7134.5	6754.1	6545.4	6508.4	6466.9	6453.6	6798.5	7326.9	6539.5
42.5°	8289.1	8141.0	7593.4	7217.4	7107.9	7134.5	7124.1	7183.4	7771.0	8475.6	7492.7
45°	8952.2	8761.2	8104.0	7711.8	7726.6	7819.8	7877.6	8114.4	8989.2	9792.9	8518.5
47.5°	9514.7	9326.7	8594.0	8246.1	8423.8	8607.3	8764.2	9212.7	10241.4	11089.6	9316.3
50°	9995.7	9818.1	9113.5	8833.8	9233.4	9529.5	9784.0	10448.7	11588.4	12076.9	9875.8
52.5°	10389.4	10271.0	9652.3	9507.3	10158.5	10592.2	10965.2	11761.6	12781.4	12879.1	10311.0
55°	10772.8	10688.4	10231.1	10308.0	11245.0	11835.6	12307.8	13154.4	13808.7	13548.2	10728.4
57.5°	11213.9	11136.9	10891.2	11323.4	12673.4	13416.4	13931.5	14388.9	14713.1	14232.0	11122.1
60°	11663.9	11619.5	11625.4	12451.3	14313.4	15026.9	15311.1	15429.5	15601.2	14875.9	11144.3
62.5°	12093.1	12177.5	12464.7	13706.5	15883.9	16431.6	16575.2	16692.1	16490.8	14978.0	10296.2
65°	12819.9	12957.6	13642.9	15386.6	17611.3	18197.4	18345.5	17944.3	16631.4	13657.7	8374.9
67.5°	13175.2	13426.8	14649.4	16952.6	19286.9	19938.1	19883.4	18025.7	14924.7	10414.6	5374.6
69°	13101.1	13369.1	14881.8	17432.2	19843.4	20434.0	20086.2	17029.6	12714.8	7544.5	3299.3
70°	12808.1	13078.9	14761.9	17414.4	19914.5	20382.2	19710.2	15799.5	10750.6	5516.7	2063.4
72.5°	10695.8	10929.7	13105.6	15740.3	18345.5	17965.0	16489.3	10946.0	5238.4	1502.4	464.8
75°	6583.9	6714.1	9403.6	11857.8	13856.0	12879.1	10986.0	5445.6	1561.6	424.8	257.6
77.5°	3478.4	3537.7	5148.1	6989.5	8783.4	7267.7	5630.6	2124.1	719.4	266.4	186.5
80°	2056.0	2100.4	2772.4	3195.7	3801.1	3175.0	2251.4	1304.0	515.1	167.3	165.8
82.5°	1176.7	1204.9	2010.1	1776.2	1498.0	1278.9	1120.5	1236.0	309.4	112.5	171.7
85°	432.2	438.1	1130.9	1351.4	891.1	529.9	556.6	1024.3	82.9	71.0	134.7
87.5°	201.3	196.9	581.7	827.4	521.0	336.0	433.7	225.0	32.6	45.9	37.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3	3715.3
2.5°	3670.9	3616.1	3516.9	3414.8	3311.2	3231.3	3152.8	3090.6	3069.9	3031.4	3034.4
5°	3558.4	3457.7	3250.5	3040.3	2821.2	2640.7	2470.4	2332.8	2266.2	2198.1	2198.1
7.5°	3460.7	3314.1	2990.0	2648.1	2294.3	1996.8	1728.9	1527.6	1416.5	1327.7	1326.2
10°	3423.7	3225.3	2772.4	2282.5	1789.5	1384.0	1065.7	861.5	756.4	688.3	685.3
12.5°	3440.0	3194.2	2605.1	1945.0	1326.2	889.6	617.2	485.5	441.1	420.4	420.4
15°	3487.3	3185.4	2437.9	1614.9	937.0	556.6	410.0	374.5	371.5	371.5	371.5
17.5°	3545.1	3188.3	2266.2	1293.7	638.0	398.2	353.8	349.3	352.3	352.3	352.3
20°	3604.3	3189.8	2081.1	996.2	450.0	346.4	333.0	331.6	334.5	334.5	336.0
22.5°	3676.8	3197.2	1896.1	744.5	371.5	327.1	316.8	316.8	318.2	318.2	316.8
25°	3759.7	3212.0	1703.7	552.1	339.0	313.8	304.9	303.4	304.9	303.4	302.0
27.5°	3863.3	3232.7	1489.1	432.2	324.2	300.5	293.1	293.1	291.6	290.1	288.6
30°	3993.5	3256.4	1247.8	367.1	309.4	288.6	281.2	279.8	278.3	275.3	275.3
32.5°	4191.9	3308.2	1009.5	333.0	293.1	272.4	266.4	266.4	263.5	260.5	259.0
35°	4496.8	3410.4	796.3	312.3	275.3	254.6	247.2	247.2	244.2	242.8	241.3
37.5°	4918.7	3565.8	618.7	293.1	257.6	235.3	227.9	226.5	223.5	220.5	219.1
40°	5479.7	3758.2	487.0	275.3	239.8	216.1	210.2	207.2	201.3	196.9	196.9
42.5°	6184.2	3977.3	395.2	256.1	219.1	198.3	193.9	189.5	179.1	174.7	173.2
45°	6921.4	4174.1	334.5	233.9	198.3	180.6	177.6	170.2	156.9	152.5	152.5
47.5°	7452.7	4220.0	294.6	213.1	179.1	161.3	159.9	146.5	134.7	131.7	130.3
50°	7784.3	4129.7	262.0	192.4	161.3	143.6	139.1	122.9	115.5	112.5	111.0
52.5°	8007.8	3968.4	235.3	174.7	145.1	127.3	116.9	105.1	99.2	96.2	96.2
55°	8186.9	3740.4	208.7	158.4	131.7	114.0	99.2	90.3	84.4	81.4	81.4
57.5°	8237.2	3431.1	182.1	145.1	118.4	100.7	84.4	78.4	71.0	69.6	69.6
60°	7871.6	2873.0	161.3	128.8	106.6	87.3	74.0	66.6	59.2	57.7	56.2
62.5°	6908.0	2223.2	142.1	114.0	93.3	75.5	63.6	54.8	48.8	48.8	48.8
65°	5269.5	1490.5	124.3	99.2	81.4	63.6	54.8	44.4	41.4	41.4	42.9
67.5°	3154.3	811.1	106.6	84.4	69.6	53.3	45.9	38.5	37.0	38.5	38.5
69°	1848.8	476.6	96.2	75.5	60.7	47.4	40.0	34.0	37.0	38.5	38.5
70°	1141.2	321.2	88.8	68.1	54.8	42.9	37.0	32.6	35.5	37.0	37.0
72.5°	318.2	165.8	71.0	53.3	44.4	35.5	29.6	29.6	34.0	35.5	35.5
75°	207.2	122.9	54.8	40.0	34.0	28.1	25.2	28.1	32.6	34.0	34.0
77.5°	171.7	100.7	44.4	32.6	28.1	26.6	23.7	25.2	29.6	31.1	31.1
80°	156.9	71.0	35.5	29.6	25.2	23.7	22.2	20.7	26.6	28.1	28.1
82.5°	149.5	56.2	31.1	26.6	23.7	20.7	19.2	20.7	23.7	25.2	26.6
85°	93.3	37.0	28.1	25.2	20.7	19.2	19.2	19.2	22.2	23.7	23.7
87.5°	34.0	29.6	25.2	20.7	17.8	17.8	17.8	17.8	19.2	22.2	22.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)