

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: P299833

Luminaire Tested: **GLNA-AF-04-LED-E1-SL3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299833
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-SL3-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20791.5 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

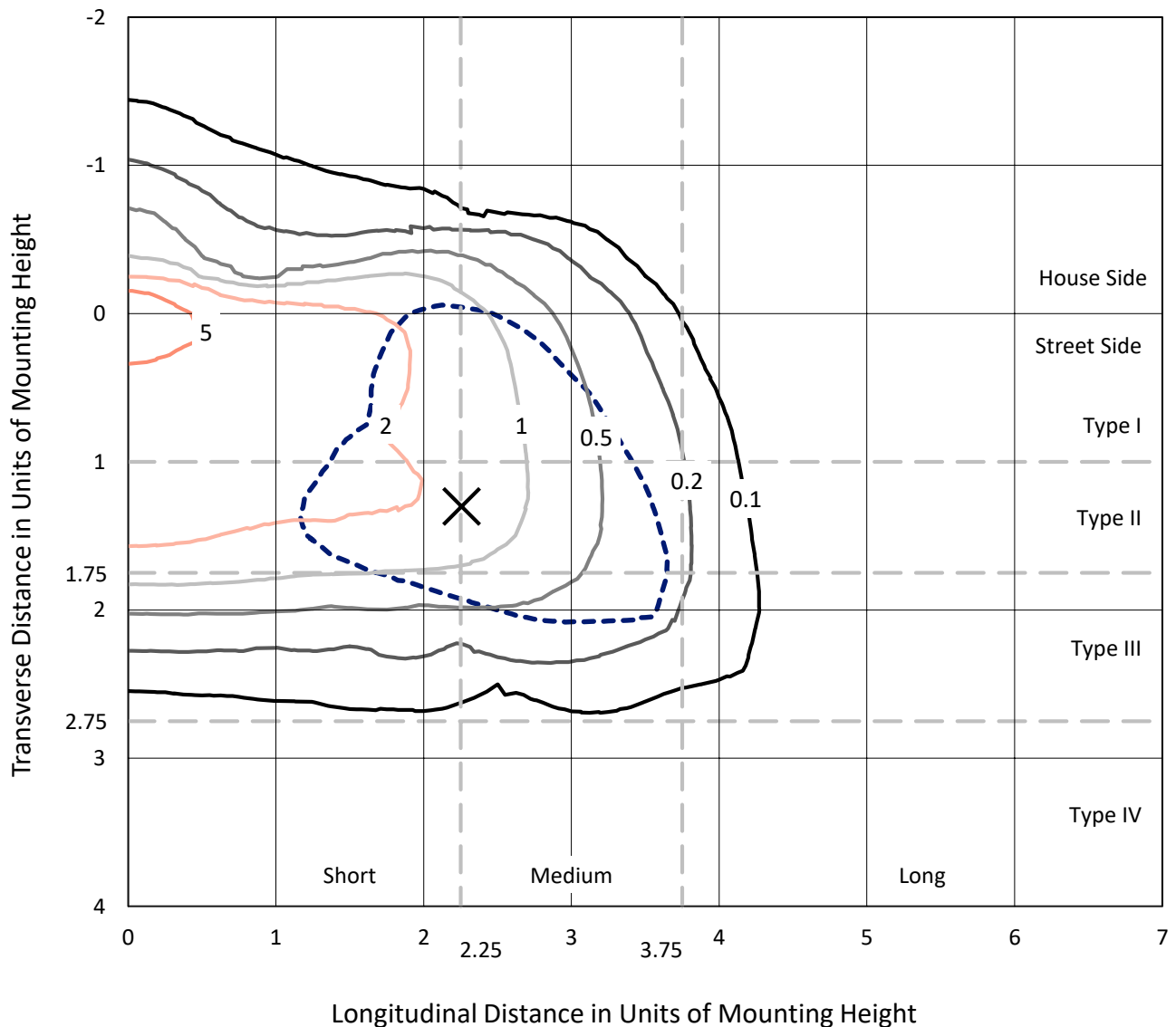
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

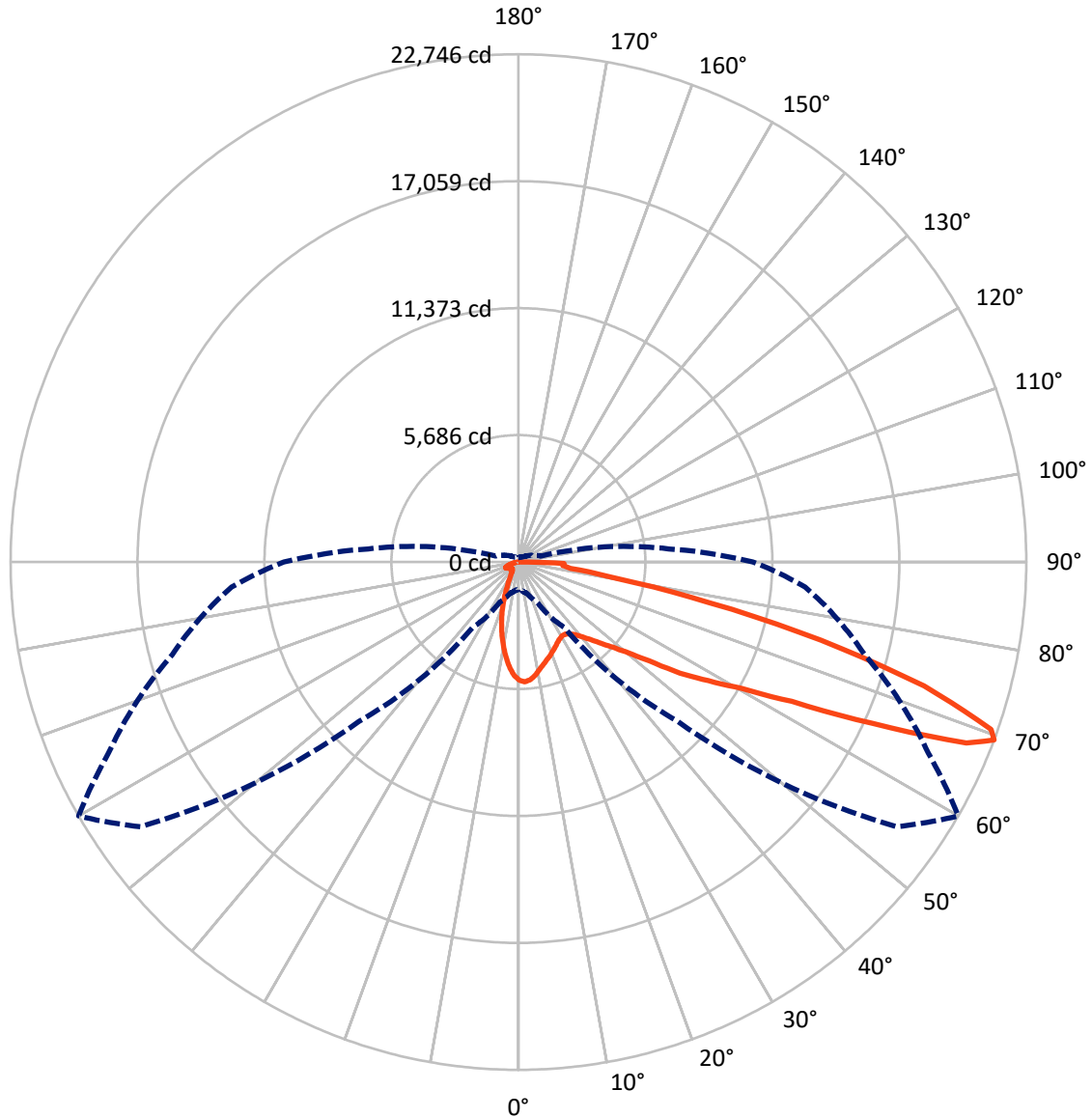
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2958.0	0.0	2958.0
	% Fixture	14.2	0.0	14.2
Street Side	Lumens	17833.5	0.0	17833.5
	% Fixture	85.8	0.0	85.8
Total	Lumens	20791.5	0.0	20791.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	448.0	2.2
10°-20°	954.4	4.6
20°-30°	1216.1	5.8
30°-40°	1671.8	8.0
40°-50°	2712.7	13.0
50°-60°	4350.5	20.9
60°-70°	5790.2	27.8
70°-80°	3126.2	15.0
80°-90°	521.6	2.5
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°	20791.5	100.0
0°-180°	20791.5	100.0



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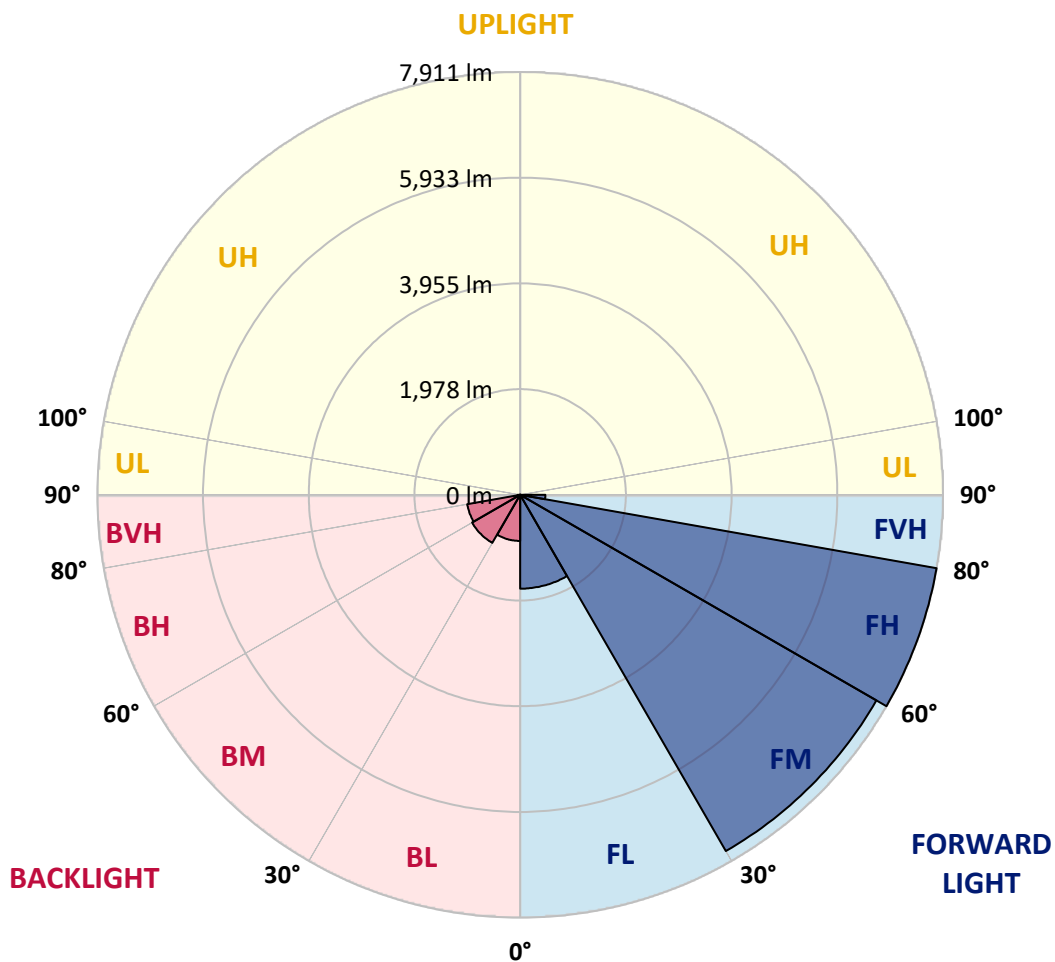
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1755.6	8.4			
FM (30°-60°)	7695.8	37.0			
FH (60°-80°)	7910.8	38.0			G4/12000
FVH (80°-90°)	471.4	2.3			G3/500
BL (0°-30°)	862.9	4.2	B2/1000		
BM (30°-60°)	1039.2	5.0	B2/2500		
BH (60°-80°)	1005.6	4.8	B3/2500		G3/2500
BVH (80°-90°)	50.2	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0
2.5°	5406.5	5418.5	5413.5	5410.5	5419.5	5405.5	5376.3	5367.3	5353.2	5320.1	5263.8
5°	5203.6	5239.7	5237.7	5264.8	5310.0	5322.1	5309.0	5311.0	5284.9	5243.8	5150.3
7.5°	4853.1	4868.1	4876.2	4935.4	5017.8	5084.1	5140.3	5158.4	5146.3	5111.2	4990.7
10°	4491.5	4503.5	4522.6	4591.9	4696.4	4787.8	4894.2	4955.5	4981.6	4975.6	4841.0
12.5°	4181.1	4193.2	4218.3	4296.6	4421.2	4533.7	4688.3	4764.7	4826.9	4864.1	4719.5
15°	3902.9	3929.0	3953.2	4043.5	4183.2	4330.8	4505.6	4602.0	4698.4	4781.7	4612.0
17.5°	3686.0	3712.1	3726.2	3808.5	3957.2	4138.0	4342.8	4456.3	4576.9	4713.5	4505.6
20°	3560.4	3572.5	3566.5	3612.7	3746.3	3938.1	4181.1	4312.7	4458.3	4649.2	4399.1
22.5°	3525.3	3526.3	3504.2	3499.2	3585.6	3747.3	4008.4	4168.1	4346.9	4607.0	4307.7
25°	3610.7	3607.7	3547.4	3498.2	3507.2	3601.6	3841.7	4027.5	4253.5	4598.0	4237.4
27.5°	3800.5	3809.5	3720.1	3627.7	3536.3	3533.3	3715.1	3911.0	4177.1	4639.1	4207.3
30°	4066.6	4081.7	3986.3	3868.8	3697.0	3555.4	3665.9	3841.7	4129.9	4724.5	4202.2
32.5°	4357.9	4374.0	4301.7	4178.1	3953.2	3692.0	3700.1	3847.7	4127.9	4844.0	4236.4
35°	4668.3	4686.3	4649.2	4544.7	4294.6	3944.1	3830.6	3945.1	4193.2	5026.8	4327.8
37.5°	5014.8	5042.9	5052.9	4953.5	4686.3	4276.6	4044.5	4129.9	4340.8	5280.9	4495.5
40°	5513.9	5553.1	5550.1	5407.5	5135.3	4725.5	4375.0	4397.1	4570.8	5620.4	4763.7
42.5°	6470.1	6478.1	6228.0	5917.7	5629.4	5197.6	4764.7	4746.6	4888.2	6050.3	5158.4
45°	7686.4	7653.2	7096.8	6497.2	6145.7	5739.9	5271.9	5183.5	5291.0	6574.5	5652.5
47.5°	8695.7	8619.4	7916.4	7088.8	6692.0	6329.5	5867.5	5712.8	5772.0	7169.1	6291.3
50°	9046.3	8989.0	8406.5	7580.9	7209.3	7048.6	6600.6	6381.7	6397.8	7878.2	7039.5
52.5°	8970.9	8962.9	8574.2	7905.3	7693.4	7803.9	7639.1	7342.9	7186.2	8665.6	7847.0
55°	8793.2	8810.2	8669.6	8282.9	8246.8	8533.0	8996.0	8777.1	8290.0	9460.0	8681.7
57.5°	8175.5	8219.7	8529.0	8758.0	9137.6	9563.5	10088.8	10026.5	9478.1	10318.8	9674.0
60°	6586.6	6689.0	7518.6	8665.6	10054.6	11386.4	11621.4	11476.8	10703.4	11384.4	10984.7
62.5°	4615.0	4721.5	5707.8	7502.6	9904.0	13445.3	14361.3	13737.6	12463.1	12954.2	12681.0
65°	2470.7	2521.9	3275.2	5205.6	8361.3	13870.2	18365.7	17416.6	15249.2	14889.6	14132.3
67.5°	1362.9	1391.0	1679.3	2628.4	5355.2	12214.0	20916.8	21633.9	18731.3	16178.2	13868.2
69°	1232.3	1258.5	1447.3	1990.6	3583.5	10098.8	20667.7	22745.7	20257.9	16050.6	12891.9
70°	1205.2	1229.3	1399.1	1835.0	2900.6	8324.1	19833.1	22461.5	20621.5	15593.7	12040.2
72.5°	1084.7	1110.8	1275.5	1648.2	2478.8	4150.0	15710.2	18991.4	18722.2	13520.7	9132.6
75°	1011.4	1035.5	1314.7	1614.0	2373.3	2626.4	10356.9	13996.7	13762.7	9458.0	4924.4
77.5°	432.9	430.9	609.6	1365.9	2408.5	2543.0	5565.1	8743.9	7977.6	4042.5	1414.1
80°	289.3	284.2	289.3	401.7	2208.6	2557.1	2915.7	4438.3	3352.5	1030.5	697.0
82.5°	249.1	245.1	254.1	245.1	776.4	2918.7	2478.8	2360.2	1593.9	585.5	345.5
85°	167.7	160.7	219.0	220.0	366.6	2593.3	2792.1	1993.7	1289.6	347.5	170.7
87.5°	80.3	78.3	127.6	155.7	214.9	1053.6	3132.6	2042.9	1300.6	177.8	81.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0	5298.0
2.5°	5246.8	5205.6	5165.4	5117.2	5067.0	5010.7	4982.6	4954.5	4947.5	4939.4	4911.3
5°	5102.1	5043.9	4943.5	4833.0	4716.5	4603.0	4516.6	4462.4	4421.2	4400.1	4362.9
7.5°	4915.3	4830.0	4654.2	4463.4	4267.5	4088.7	3934.1	3836.6	3744.2	3701.1	3651.8
10°	4737.6	4610.0	4336.8	4055.6	3774.4	3504.2	3250.1	3070.3	2910.6	2821.2	2758.0
12.5°	4584.9	4410.1	4031.5	3650.8	3265.2	2880.5	2499.8	2200.5	1950.5	1818.9	1751.6
15°	4436.2	4225.3	3741.2	3258.1	2763.0	2239.7	1739.5	1400.1	1193.2	1110.8	1082.7
17.5°	4301.7	4031.5	3450.0	2862.4	2244.7	1612.0	1169.1	982.3	902.9	875.8	866.8
20°	4156.0	3835.6	3147.7	2448.6	1704.4	1126.9	913.0	830.6	798.5	790.4	786.4
22.5°	4015.4	3642.8	2858.4	2005.7	1224.3	869.8	784.4	750.3	745.2	752.3	752.3
25°	3895.9	3470.1	2546.0	1542.7	898.9	732.2	702.0	694.0	713.1	739.2	744.2
27.5°	3806.5	3328.4	2213.6	1138.9	716.1	636.8	635.8	648.8	696.0	746.2	756.3
30°	3745.3	3193.9	1858.1	821.6	600.6	560.4	576.5	604.6	673.9	745.2	764.3
32.5°	3714.1	3094.4	1487.5	635.8	514.2	492.1	519.3	553.4	621.7	688.0	713.1
35°	3738.2	3021.1	1137.9	530.3	454.0	436.9	465.0	498.2	538.3	566.5	585.5
37.5°	3828.6	2992.0	858.7	475.1	412.8	396.7	418.8	437.9	454.0	462.0	471.0
40°	4023.5	3023.1	688.0	446.9	389.7	369.6	378.6	385.7	395.7	403.8	407.8
42.5°	4310.7	3116.5	616.7	435.9	377.6	348.5	346.5	349.5	362.6	377.6	380.7
45°	4712.4	3281.2	611.7	442.9	371.6	331.4	322.4	326.4	346.5	369.6	373.6
47.5°	5225.7	3532.3	651.8	464.0	376.6	322.4	307.3	312.4	337.5	368.6	373.6
50°	5847.4	3882.8	719.1	495.1	398.7	324.4	302.3	305.3	331.4	365.6	370.6
52.5°	6581.6	4380.0	792.4	525.3	421.8	337.5	306.3	299.3	323.4	353.5	359.6
55°	7398.1	5017.8	867.8	552.4	433.9	353.5	314.4	291.3	308.3	333.4	338.5
57.5°	8400.5	5909.6	998.3	578.5	441.9	364.6	322.4	283.2	289.3	307.3	311.4
60°	9757.3	7171.1	1228.3	621.7	460.0	368.6	321.4	276.2	270.2	280.2	282.2
62.5°	11383.4	8541.1	1420.2	675.9	490.1	371.6	315.4	271.2	254.1	254.1	256.1
65°	12348.6	8907.7	1313.7	721.1	515.2	368.6	308.3	266.2	242.1	231.0	232.0
67.5°	11530.0	7834.0	1125.9	730.2	514.2	354.5	297.3	257.1	230.0	212.9	211.9
69°	10504.6	6759.3	1041.5	706.1	490.1	336.5	283.2	247.1	221.0	202.9	201.9
70°	9678.0	6103.5	986.3	680.0	464.0	323.4	272.2	238.0	213.9	196.9	194.8
72.5°	7036.5	3999.4	842.7	584.5	382.7	271.2	235.0	208.9	190.8	180.8	178.8
75°	3516.3	1907.3	684.0	474.1	293.3	216.9	192.8	174.8	165.7	163.7	162.7
77.5°	1155.0	873.8	489.1	353.5	217.9	169.7	155.7	142.6	140.6	146.6	144.6
80°	634.8	508.2	310.3	234.0	148.6	124.5	122.5	115.5	118.5	128.6	126.5
82.5°	323.4	264.1	191.8	140.6	100.4	89.4	97.4	93.4	97.4	106.5	105.5
85°	159.7	144.6	121.5	85.4	66.3	57.2	69.3	72.3	74.3	81.4	81.4
87.5°	92.4	85.4	64.3	40.2	33.1	30.1	40.2	39.2	46.2	50.2	49.2
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)