

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: 766461_450MP

Luminaire Tested: **GSM-XX-450-MP-XX-AS-SG-XX-X**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 766461_450MP
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GSM-XX-450-MP-XX-AS-SG-XX-X
Description: MEDIUM ARCHITECTURAL AREA LUMINAIRE-VERTICAL LAMP-SQUARE DISTRIBUTION
Light Source: 450 WATT PULSE-START CLEAR ED-37 VBU BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 50000 (1 lamp)
Luminaire Lumens: 34228.9 lumens
Efficiency: 68.5%
Efficacy: 67.4 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type V - Short - Cutoff
BUG Rating: B5 - U3 - G4

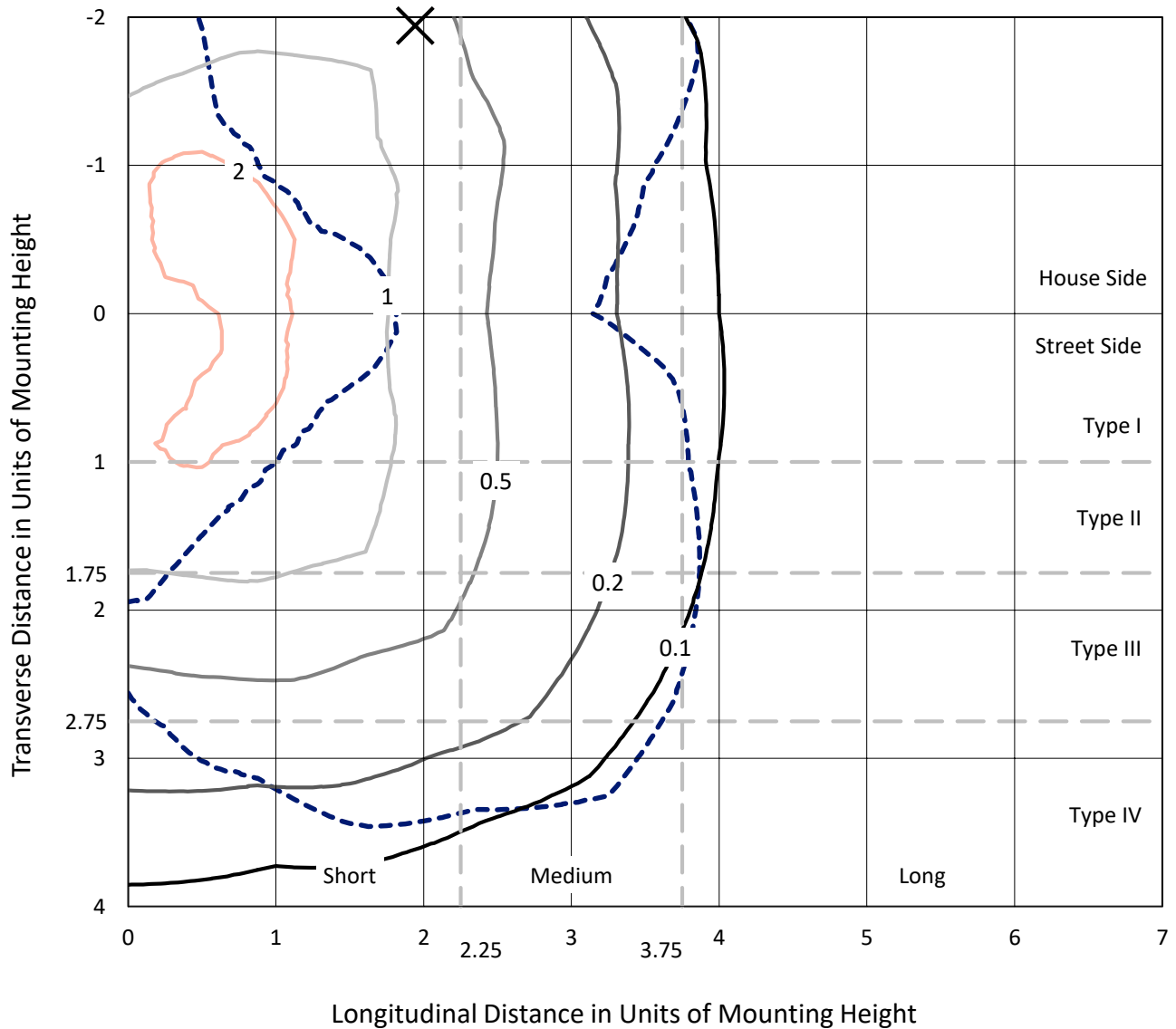
Input Watts (W): 508
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: 766461_450MP
 CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

Iso-Footcandle Lines of Horizontal Illumination

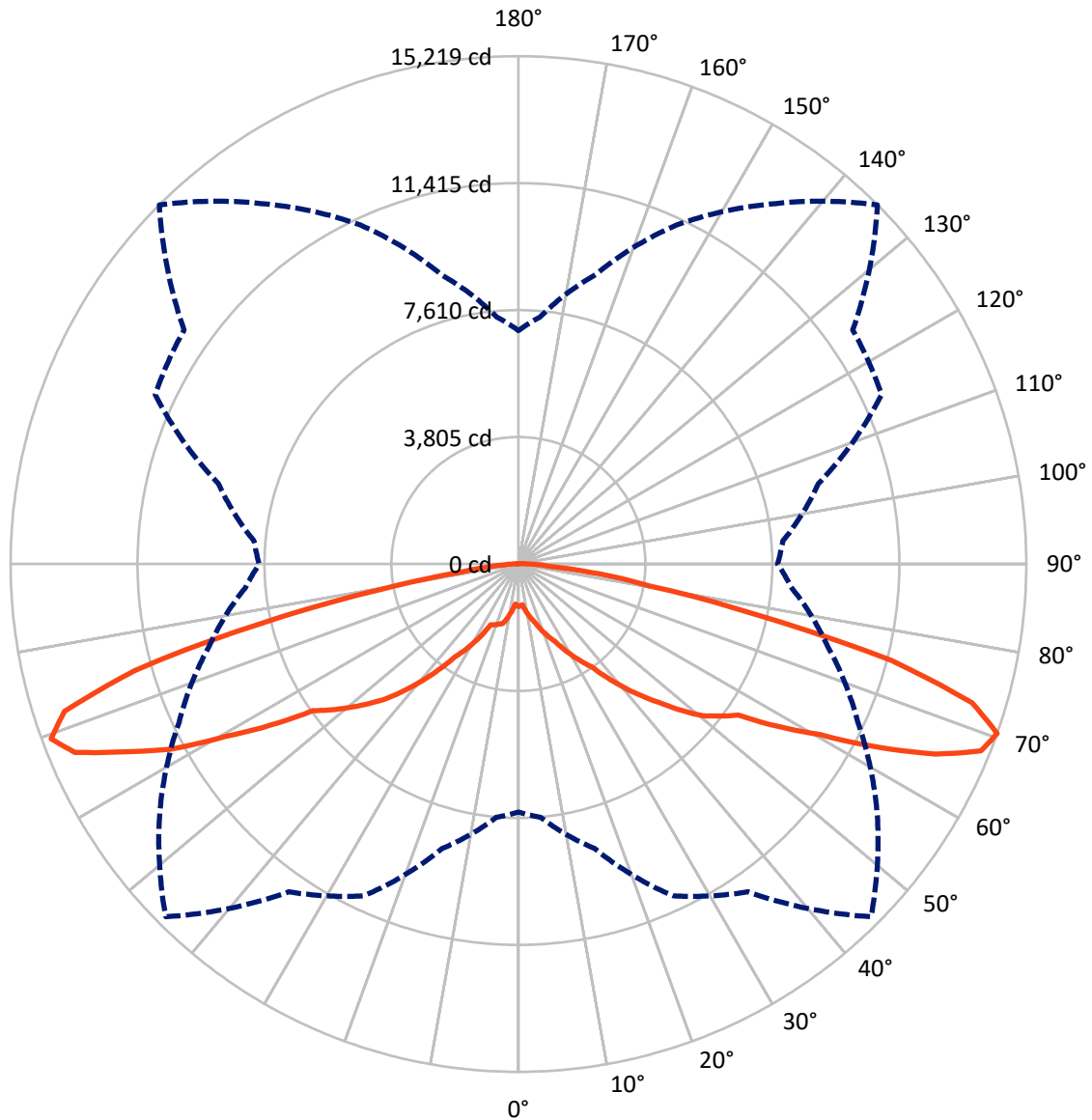
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Cutoff

REPORT NUMBER: 766461_450MP
CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

Luminous Intensity Polar Plot



— Vertical Plane Through 135-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: 766461_450MP
 CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

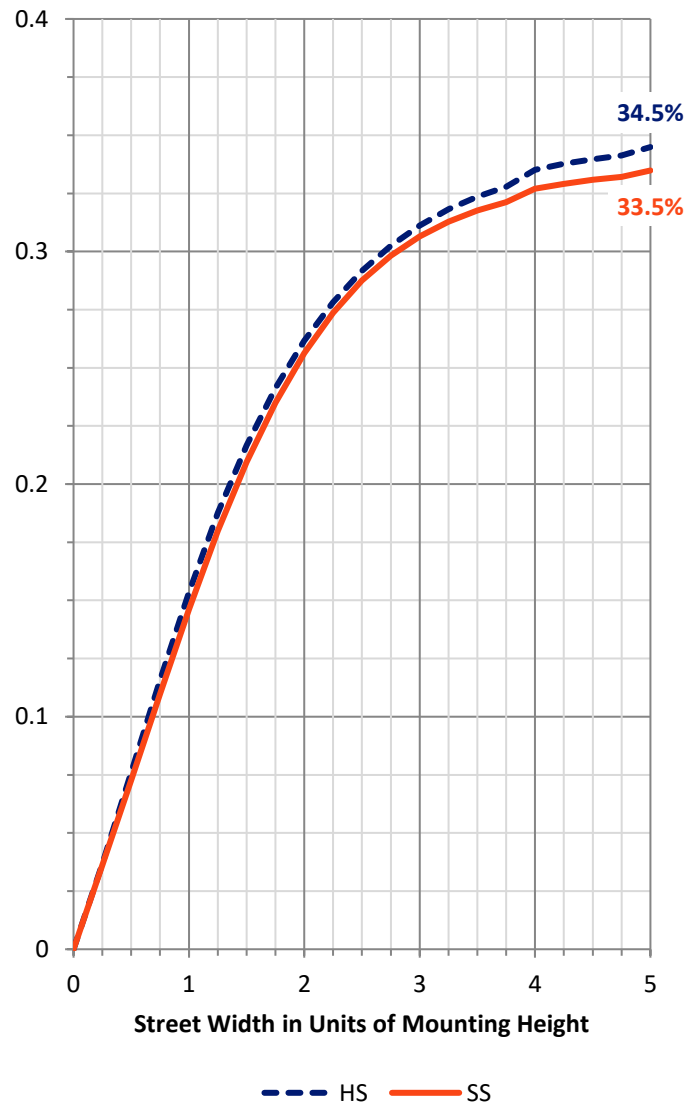
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17255.7	62.4	17318.1
	% Lamp	34.5	0.1	34.6
Street Side	Lumens	16852.7	58.0	16910.8
	% Lamp	33.7	0.1	33.8
Total	Lumens	34108.5	120.4	34228.9
	% Lamp	68.2	0.2	68.5

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	126.6	0.4	0.3
10°-20°	487.4	1.4	1.0
20°-30°	1091.2	3.2	2.2
30°-40°	2259.8	6.6	4.5
40°-50°	4239.2	12.4	8.5
50°-60°	6500.2	19.0	13.0
60°-70°	9813.6	28.7	19.6
70°-80°	8492.4	24.8	17.0
80°-90°	1188.1	3.5	2.4
90°-100°	101.6	0.3	0.2
100°-110°	25.5	0.1	0.1
110°-120°	2.8	0.0	0.0
120°-130°	0.6	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	34108.5	99.6	68.2
0°-180°	34228.9	100.0	68.5



REPORT NUMBER: 766461_450MP

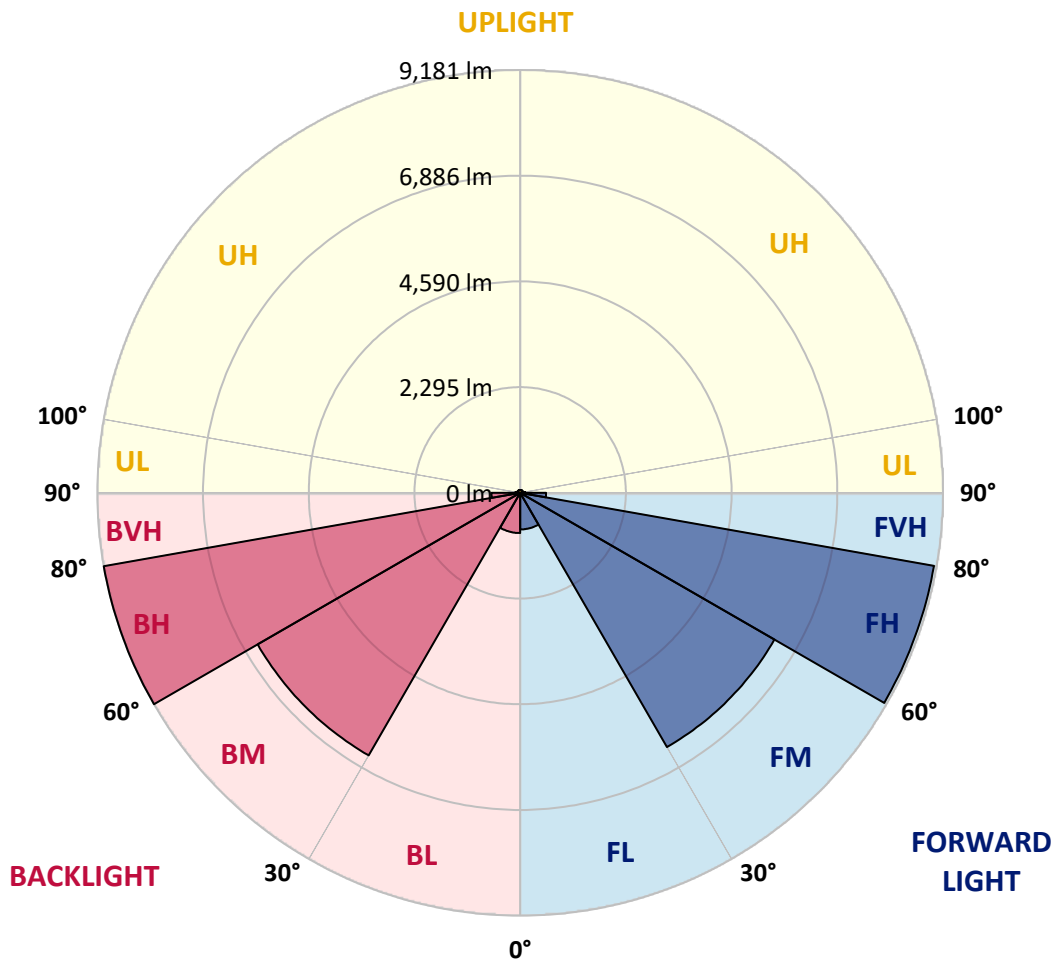
CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	795.6	1.6			
FM	(30°-60°)	6375.0	12.8			
FH	(60°-80°)	9125.1	18.3			G4/12000
FVH	(80°-90°)	563.0	1.1			G4/750
BL	(0°-30°)	874.1	1.7	B2/1000		
BM	(30°-60°)	6581.6	13.2	B4/8500		
BH	(60°-80°)	9180.9	18.4	B5		G4/12000
BVH	(80°-90°)	625.1	1.3			G4/750
UL	(90°-100°)	101.6	0.2		U3/500	
UH	(100°-180°)	62.4	0.1		U3/500	
Trapped Light		15771.1	31.5			

BUG Rating: B5-U3-G4

Type V Short





REPORT NUMBER: 766461_450MP
 CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2
5°	1152.8	1154.2	1173.6	1176.4	1200.0	1202.8	1226.4	1243.1	1269.4	1279.2	1273.6
15°	1418.1	1529.2	1619.4	1686.1	1855.6	1837.5	1884.7	1820.8	1797.2	1756.9	1715.3
25°	1720.8	1741.7	1913.9	1873.6	1905.6	2006.9	2080.6	2102.8	2108.3	2208.3	2227.8
35°	2734.7	2888.9	2898.6	3125.0	3143.1	3400.0	3218.1	3286.1	3209.7	3363.9	3294.4
45°	4768.1	4943.1	5041.7	5444.4	5283.3	5659.7	5569.4	5706.9	5380.6	5465.3	5551.4
50°	6031.9	5872.2	6190.3	6734.7	6384.7	6609.7	6662.5	6681.9	6461.1	6123.6	6338.9
55°	6047.2	6058.3	6631.9	7106.9	7358.3	7573.6	7448.6	7281.9	6661.1	6306.9	6431.9
60°	7220.8	7238.9	7908.3	8988.9	9676.4	10180.6	9572.2	9123.6	7777.8	7345.8	7406.9
62.5°	7529.2	7555.6	8427.8	9700.0	10620.8	11823.6	10748.6	9938.9	8383.3	7812.5	7783.3
65°	7884.7	7961.1	8940.3	10547.2	11351.4	13070.8	11611.1	10134.7	8913.9	8188.9	8147.2
67.5°	7693.1	8025.0	9330.6	11308.3	11966.7	14441.7	12694.4	10854.2	9397.2	8484.7	8173.6
70°	7433.3	7623.6	8829.2	10973.6	11993.1	14948.6	13129.2	11223.6	9604.2	8220.8	7768.1
72.5°	6955.6	7116.7	7733.3	9965.3	11354.2	14300.0	12673.6	11027.8	9356.9	8048.6	7570.8
75°	6105.6	6000.0	5970.8	7952.8	9243.1	11930.6	10981.9	9793.1	8311.1	7419.4	6965.3
77.5°	3652.8	4058.3	4412.5	5051.4	5861.1	7920.8	7597.2	6719.4	5704.2	5406.9	5263.9
80°	2187.5	2338.9	2498.6	2750.0	3265.3	4206.9	4441.7	3848.6	3169.4	3190.3	3629.2
82.5°	844.4	798.6	1470.8	1080.6	1356.9	1762.5	1844.4	1579.2	1147.2	1170.8	1587.5
85°	350.0	405.6	568.1	704.2	952.8	918.1	929.2	777.8	556.9	395.8	469.4
87.5°	133.3	198.6	268.1	347.2	762.5	411.1	443.1	381.9	204.2	143.1	195.8
90°	75.0	90.3	130.6	140.3	254.2	177.8	209.7	191.7	133.3	63.9	63.9
95°	20.8	31.9	84.7	101.4	101.4	79.2	90.3	140.3	75.0	31.9	29.2
105°	0.0	0.0	2.8	8.3	5.6	5.6	8.3	8.3	5.6	0.0	0.0
115°	0.0	0.0	2.8	2.8	5.6	2.8	2.8	2.8	2.8	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: 766461_450MP
 CATALOG NUMBER: GSM-XX-450-MP-XX-AS-SG-XX-X

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2	1272.2
5°	1269.4	1269.4	1261.1	1243.1	1229.2	1218.1	1223.6	1183.3	1237.5	1156.9
15°	1654.2	1648.6	1844.4	1869.4	1802.8	1765.3	1730.6	1643.1	1541.7	1523.6
25°	2277.8	2330.6	2293.1	2500.0	2583.3	2534.7	2481.9	2266.7	2056.9	1995.8
35°	3425.0	3637.5	3530.6	3756.9	3786.1	3766.7	3541.7	3300.0	2831.9	2744.4
45°	5269.4	5575.0	6084.7	6166.7	5930.6	6180.6	6097.2	5434.7	4616.7	4077.8
50°	6302.8	6370.8	7206.9	7031.9	7148.6	6918.1	6936.1	6184.7	5391.7	4836.1
55°	6391.7	6580.6	7677.8	7716.7	7993.1	7611.1	7438.9	6187.5	5359.7	4890.3
60°	7390.3	7852.8	9068.1	9295.8	10381.9	9562.5	8688.9	6947.2	5852.8	5531.9
62.5°	7826.4	8423.6	9904.2	10247.2	12097.2	10570.8	9450.0	7469.4	6238.9	5904.2
65°	8173.6	8988.9	10711.1	11034.7	13734.7	11627.8	9976.4	7995.8	6583.3	6222.2
67.5°	8406.9	9565.3	11622.2	11637.5	14945.8	12530.6	10623.6	8415.3	6970.8	6583.3
70°	7955.6	9306.9	12009.7	12230.6	15219.4	13166.7	11208.3	8988.9	7427.8	6997.2
72.5°	7730.6	8686.1	11276.4	11640.3	14209.7	12779.2	10952.8	8927.8	7552.8	7320.8
75°	6880.6	7348.6	9476.4	10072.2	11541.7	12044.4	9312.5	7908.3	6897.2	6615.3
77.5°	5404.2	5365.3	6877.8	6652.8	7218.1	8104.2	6090.3	5165.3	4919.4	4538.9
80°	3175.0	3070.8	4165.3	3880.6	4002.8	4534.7	3493.1	2825.0	2726.4	2441.7
82.5°	1240.3	1141.7	1943.1	1736.1	2450.0	2304.2	1640.3	1186.1	1354.2	827.8
85°	433.3	509.7	775.0	886.1	947.2	1016.7	743.1	501.4	379.2	259.7
87.5°	175.0	313.9	430.6	483.3	620.8	644.4	445.8	252.8	177.8	90.3
90°	72.2	130.6	172.2	247.2	254.2	294.4	204.2	130.6	61.1	58.3
95°	40.3	90.3	95.8	101.4	84.7	104.2	105.6	95.8	29.2	20.8
105°	2.8	5.6	8.3	8.3	5.6	8.3	11.1	8.3	5.6	5.6
115°	0.0	2.8	2.8	2.8	5.6	2.8	2.8	2.8	2.8	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)