

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: 768803_450MP

Luminaire Tested: **GSM-AM-450-MP-MT-3V-FG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 768803_450MP
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GSM-AM-450-MP-MT-3V-FG
Description: MEDIUM ARCHITECTURAL AREA LUMINAIRE-VERTICAL LAMP-TYPE 3 DISTRIBUTION
Light Source: 450 WATT PULSE-START CLEAR ED-37 VBU BURN
Ballast/Driver: -

Summary

Lumens per Lamp: 50000 (1 lamp)
Luminaire Lumens: 36314.4 lumens
Efficiency: 72.6%
Efficacy: 71.5 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B5 - U0 - G4

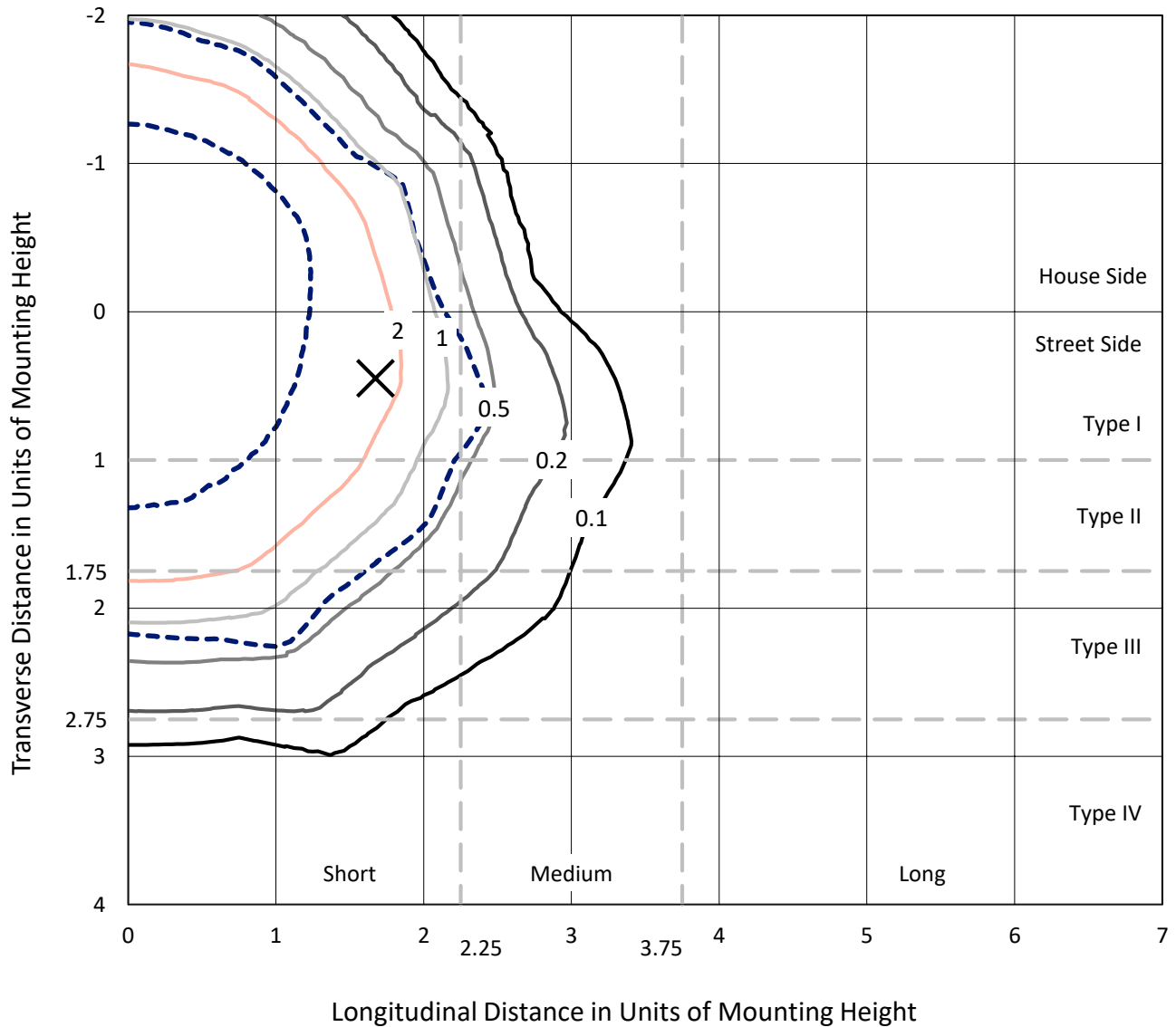
Input Watts (W): 508
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

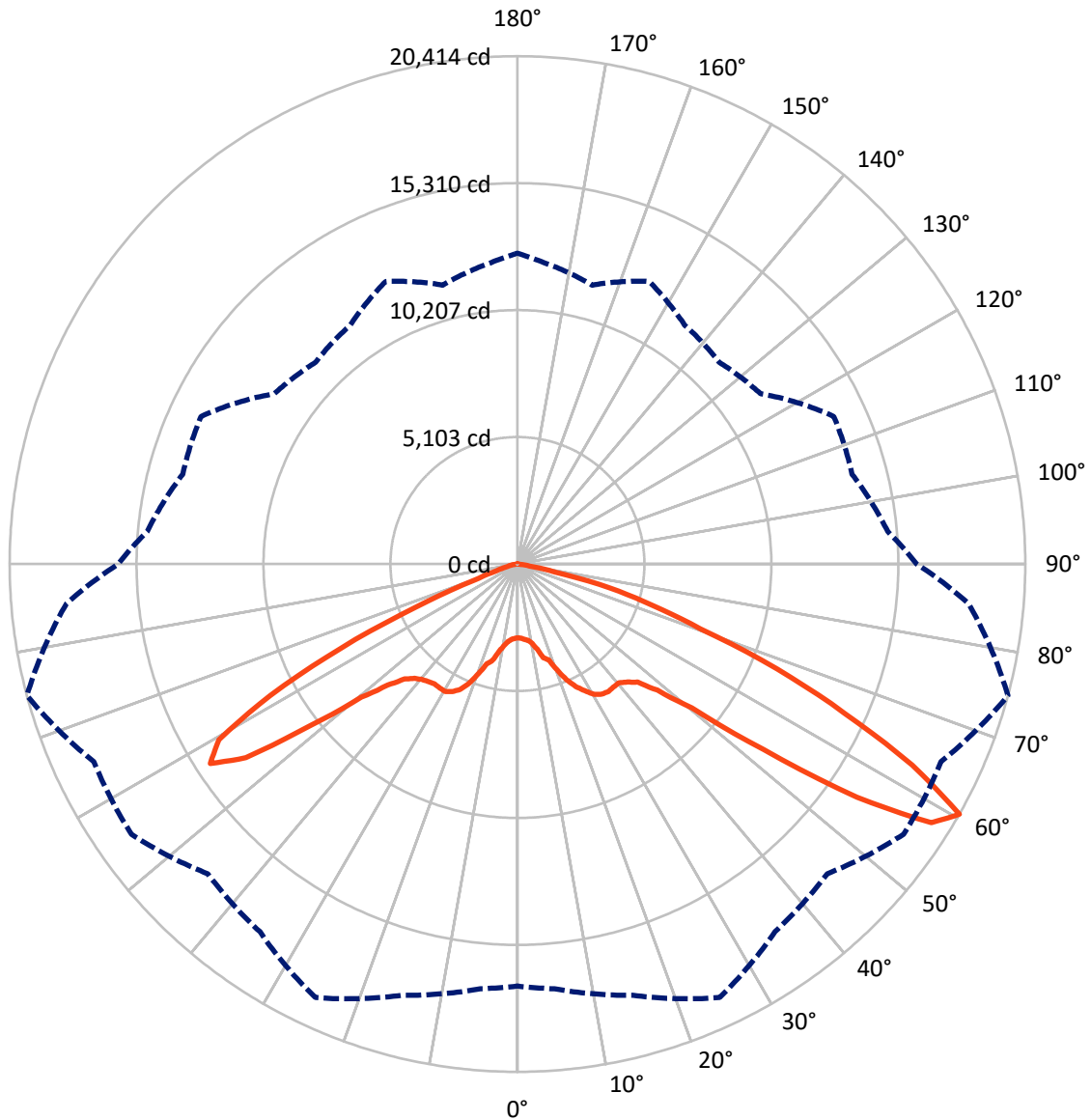
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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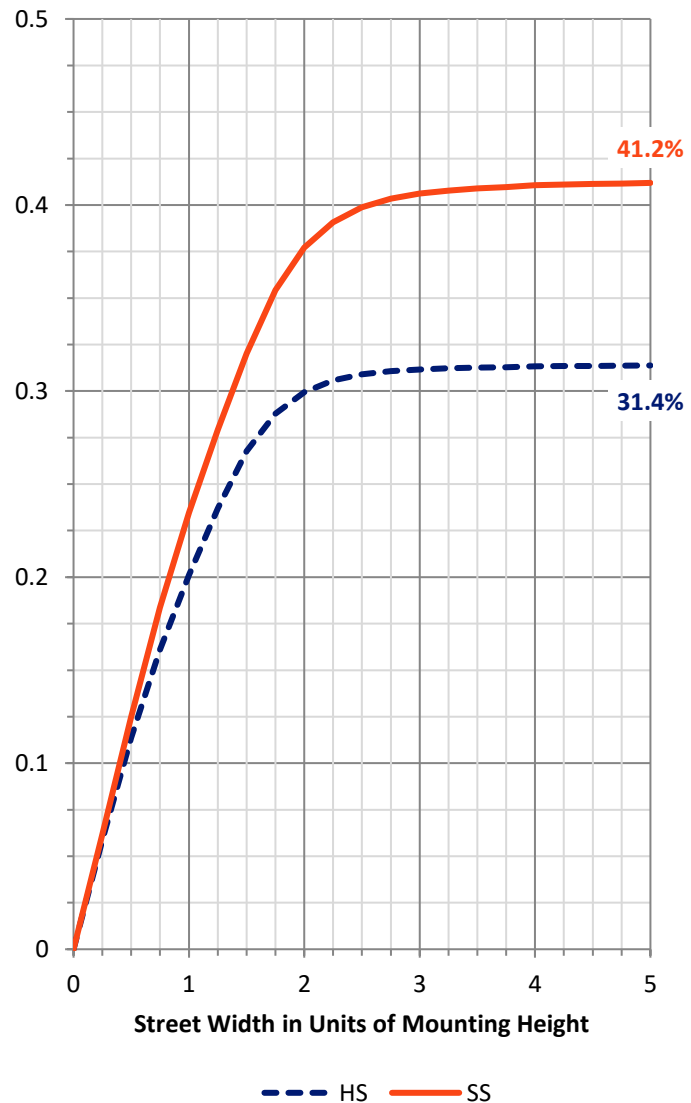
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15720.9	0.0	15720.9
	% Lamp	31.4	0.0	31.4
Street Side	Lumens	20593.5	0.0	20593.5
	% Lamp	41.2	0.0	41.2
Total	Lumens	36314.4	0.0	36314.4
	% Lamp	72.6	0.0	72.6

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	298.3	0.8	0.6
10°-20°	1098.6	3.0	2.2
20°-30°	2431.6	6.7	4.9
30°-40°	3754.3	10.3	7.5
40°-50°	5255.1	14.5	10.5
50°-60°	11755.8	32.4	23.5
60°-70°	9814.5	27.0	19.6
70°-80°	1825.9	5.0	3.7
80°-90°	80.3	0.2	0.2
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	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°	36314.4	100.0	72.6
0°-180°	36314.4	100.0	72.6

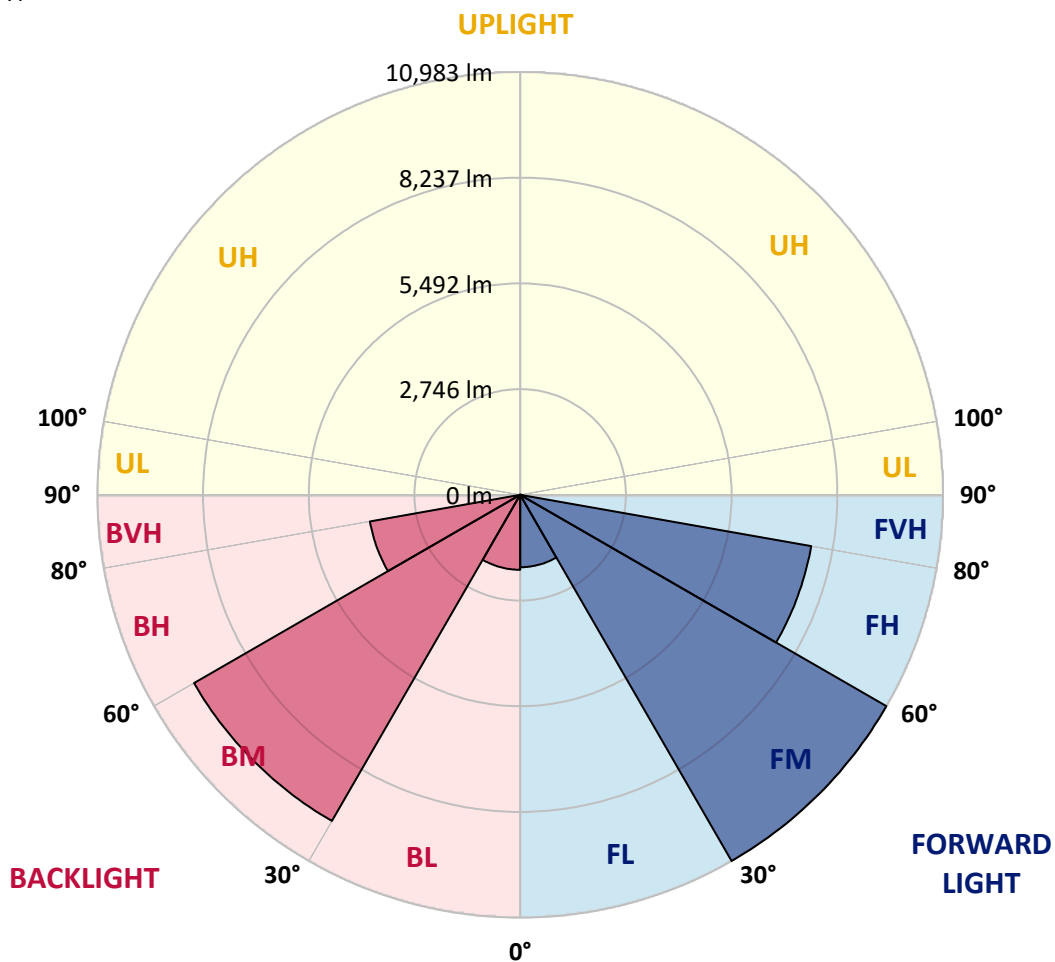


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1880.5	3.8			
FM (30°-60°)	10983.2	22.0			
FH (60°-80°)	7676.4	15.4			G4/12000
FVH (80°-90°)	53.5	0.1			G1/100
BL (0°-30°)	1948.1	3.9	B3/2500		
BM (30°-60°)	9782.0	19.6	B5		
BH (60°-80°)	3964.0	7.9	B4/5000		G4/5000
BVH (80°-90°)	26.8	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	
Trapped Light	13685.6	27.4			

BUG Rating: B5-U0-G4
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1
2.5°	2980.6	2980.6	2970.8	2980.6	2980.6	2980.6	2990.3	2990.3	2990.3	3000.0	2990.3
5°	3056.9	3027.8	3056.9	3047.2	3027.8	3027.8	3037.5	3027.8	3047.2	3047.2	3037.5
7.5°	3056.9	3076.4	3066.7	3076.4	3076.4	3076.4	3056.9	3086.1	3094.4	3104.2	3104.2
10°	3170.8	3180.6	3162.5	3170.8	3190.3	3190.3	3209.7	3247.2	3247.2	3247.2	3266.7
12.5°	3343.1	3352.8	3333.3	3343.1	3352.8	3401.4	3419.4	3468.1	3505.6	3534.7	3554.2
15°	3648.6	3658.3	3638.9	3630.6	3658.3	3648.6	3744.4	3859.7	3916.7	3936.1	3954.2
17.5°	3725.0	3725.0	3715.3	3725.0	3773.6	3830.6	3877.8	3983.3	4040.3	4069.4	4088.9
20°	4088.9	4088.9	4050.0	4088.9	4155.6	4155.6	4261.1	4431.9	4537.5	4584.7	4594.4
22.5°	4584.7	4566.7	4547.2	4604.2	4633.3	4604.2	4729.2	4938.9	5052.8	5091.7	5091.7
25°	5044.4	5034.7	5044.4	5072.2	5072.2	5044.4	5177.8	5377.8	5454.2	5483.3	5502.8
27.5°	5483.3	5473.6	5512.5	5569.4	5444.4	5377.8	5530.6	5702.8	5769.4	5788.9	5741.7
30°	5884.7	5836.1	5894.4	6008.3	5798.6	5693.1	5865.3	6047.2	6084.7	5998.6	5912.5
32.5°	6209.7	6123.6	6151.4	6276.4	6047.2	5961.1	6133.3	6286.1	6237.5	6113.9	6008.3
35°	6380.6	6343.1	6333.3	6380.6	6161.1	6123.6	6256.9	6409.7	6295.8	6123.6	6037.5
37.5°	6495.8	6456.9	6409.7	6362.5	6218.1	6084.7	6237.5	6333.3	6276.4	6161.1	6161.1
40°	6648.6	6609.7	6505.6	6380.6	6256.9	6094.4	6276.4	6343.1	6276.4	6247.2	6237.5
42.5°	6858.3	6820.8	6734.7	6533.3	6591.7	6362.5	6505.6	6715.3	6486.1	6486.1	6601.4
45°	7163.9	7116.7	6993.1	6897.2	6954.2	6734.7	6925.0	7069.4	6772.2	7059.7	7173.6
47.5°	7641.7	7604.2	7375.0	7212.5	7316.7	7250.0	7375.0	7508.3	7575.0	7995.8	7794.4
50°	7870.8	7794.4	7700.0	7651.4	7956.9	7966.7	8244.4	8702.8	9094.4	9065.3	9008.3
52.5°	8730.6	8806.9	8941.7	9400.0	9915.3	10259.7	10880.6	11930.6	12370.8	12045.8	11454.2
55°	12762.5	13181.9	13173.6	13947.2	13870.8	14280.6	14911.1	15465.3	16554.2	15590.3	14252.8
57.5°	15915.3	16048.6	16268.1	17347.2	16679.2	16497.2	17558.3	17891.7	19620.8	18006.9	16172.2
60°	16965.3	17137.5	17950.0	19229.2	18044.4	17605.6	18943.1	18790.3	20413.9	18197.2	16048.6
62.5°	14730.6	14911.1	16076.4	17872.2	16076.4	15819.4	17012.5	16287.5	17815.3	15293.1	13154.2
65°	10297.2	10631.9	11873.6	14204.2	12475.0	12590.3	13755.6	12991.7	14443.1	11797.2	9915.3
67.5°	6840.3	7240.3	8262.5	10937.5	9313.9	9629.2	10651.4	10001.4	11262.5	8234.7	6419.4
70°	3744.4	3869.4	4404.2	7345.8	5998.6	6438.9	7269.4	6811.1	7794.4	5081.9	3247.2
72.5°	1204.2	1204.2	1500.0	4079.2	3638.9	4269.4	5320.8	4747.2	5673.6	3554.2	1938.9
75°	650.0	640.3	830.6	2675.0	2626.4	3094.4	3840.3	3276.4	3850.0	2445.8	1327.8
77.5°	381.9	381.9	534.7	1633.3	1527.8	1881.9	1825.0	1776.4	1519.4	1327.8	773.6
80°	172.2	181.9	229.2	401.4	534.7	763.9	477.8	515.3	487.5	506.9	352.8
82.5°	76.4	86.1	86.1	143.1	162.5	152.8	172.2	191.7	133.3	133.3	123.6
85°	19.4	19.4	9.7	29.2	19.4	19.4	47.2	56.9	29.2	9.7	19.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	9.7	0.0	0.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1	2961.1
2.5°	3000.0	2990.3	3000.0	3000.0	3009.7	2980.6	2990.3	2990.3	2980.6	2980.6
5°	3056.9	3037.5	3056.9	3076.4	3076.4	3104.2	3123.6	3143.1	3143.1	3133.3
7.5°	3123.6	3143.1	3180.6	3190.3	3209.7	3219.4	3229.2	3229.2	3219.4	3229.2
10°	3286.1	3333.3	3372.2	3372.2	3372.2	3372.2	3362.5	3352.8	3343.1	3362.5
12.5°	3572.2	3601.4	3658.3	3677.8	3658.3	3668.1	3668.1	3658.3	3648.6	3648.6
15°	3983.3	4002.8	4012.5	3983.3	4012.5	4002.8	3983.3	4002.8	3963.9	3973.6
17.5°	4126.4	4193.1	4251.4	4241.7	4241.7	4184.7	4155.6	4155.6	4155.6	4145.8
20°	4623.6	4661.1	4709.7	4661.1	4643.1	4584.7	4556.9	4556.9	4547.2	4547.2
22.5°	5120.8	5158.3	5158.3	5091.7	5062.5	5015.3	4929.2	4909.7	4881.9	4872.2
25°	5520.8	5540.3	5530.6	5436.1	5426.4	5340.3	5254.2	5177.8	5138.9	5120.8
27.5°	5741.7	5750.0	5722.2	5616.7	5606.9	5512.5	5436.1	5377.8	5254.2	5254.2
30°	5855.6	5884.7	5826.4	5741.7	5731.9	5636.1	5559.7	5416.7	5234.7	5234.7
32.5°	5894.4	5884.7	5875.0	5759.7	5779.2	5673.6	5655.6	5426.4	5263.9	5311.1
35°	5951.4	5855.6	5865.3	5722.2	5750.0	5655.6	5616.7	5512.5	5397.2	5426.4
37.5°	6027.8	5922.2	5922.2	5779.2	5808.3	5722.2	5655.6	5616.7	5530.6	5540.3
40°	6113.9	6018.1	5941.7	5884.7	5894.4	5836.1	5722.2	5741.7	5655.6	5673.6
42.5°	6495.8	6180.6	6065.3	6018.1	5970.8	5980.6	5855.6	5931.9	5827.8	5845.8
45°	6906.9	6476.4	6276.4	6151.4	6075.0	6084.7	6018.1	6084.7	6037.5	5980.6
47.5°	7594.4	7136.1	6648.6	6390.3	6343.1	6429.2	6362.5	6448.6	6390.3	6380.6
50°	8883.3	8244.4	7441.7	7365.3	7584.7	7756.9	7947.2	8109.7	7651.4	7623.6
52.5°	11319.4	10498.6	9562.5	10144.4	10555.6	10737.5	11100.0	11281.9	11129.2	11215.3
55°	14186.1	13412.5	12341.7	12962.5	13258.3	13144.4	13784.7	13994.4	13870.8	14004.2
57.5°	15694.4	14720.8	14080.6	13975.0	13650.0	13402.8	14127.8	13163.9	13908.3	14386.1
60°	14940.3	13927.8	14033.3	11930.6	11472.2	11720.8	12533.3	11606.9	12161.1	12494.4
62.5°	12179.2	11252.8	11950.0	8912.5	8673.6	9065.3	9925.0	9715.3	10297.2	10431.9
65°	8788.9	7861.1	8568.1	5616.7	5665.3	6170.8	6705.6	7259.7	7708.3	7756.9
67.5°	5244.4	4441.7	4805.6	3152.8	3391.7	3773.6	4116.7	4480.6	4661.1	4719.4
70°	2197.2	1834.7	1977.8	1586.1	1758.3	1901.4	2034.7	2150.0	2120.8	2158.3
72.5°	1088.9	879.2	888.9	840.3	879.2	916.7	945.8	1002.8	965.3	955.6
75°	736.1	591.7	534.7	525.0	563.9	544.4	544.4	544.4	554.2	515.3
77.5°	468.1	401.4	334.7	352.8	352.8	352.8	325.0	295.8	286.1	286.1
80°	295.8	258.3	209.7	219.4	219.4	191.7	209.7	172.2	152.8	152.8
82.5°	133.3	115.3	76.4	66.7	86.1	86.1	66.7	66.7	56.9	56.9
85°	0.0	9.7	0.0	9.7	9.7	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	9.7	9.7	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)