

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: INVUE

Report Number: P368201

Luminaire Tested: **MSA-SA4A-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368201
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-727-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9709 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

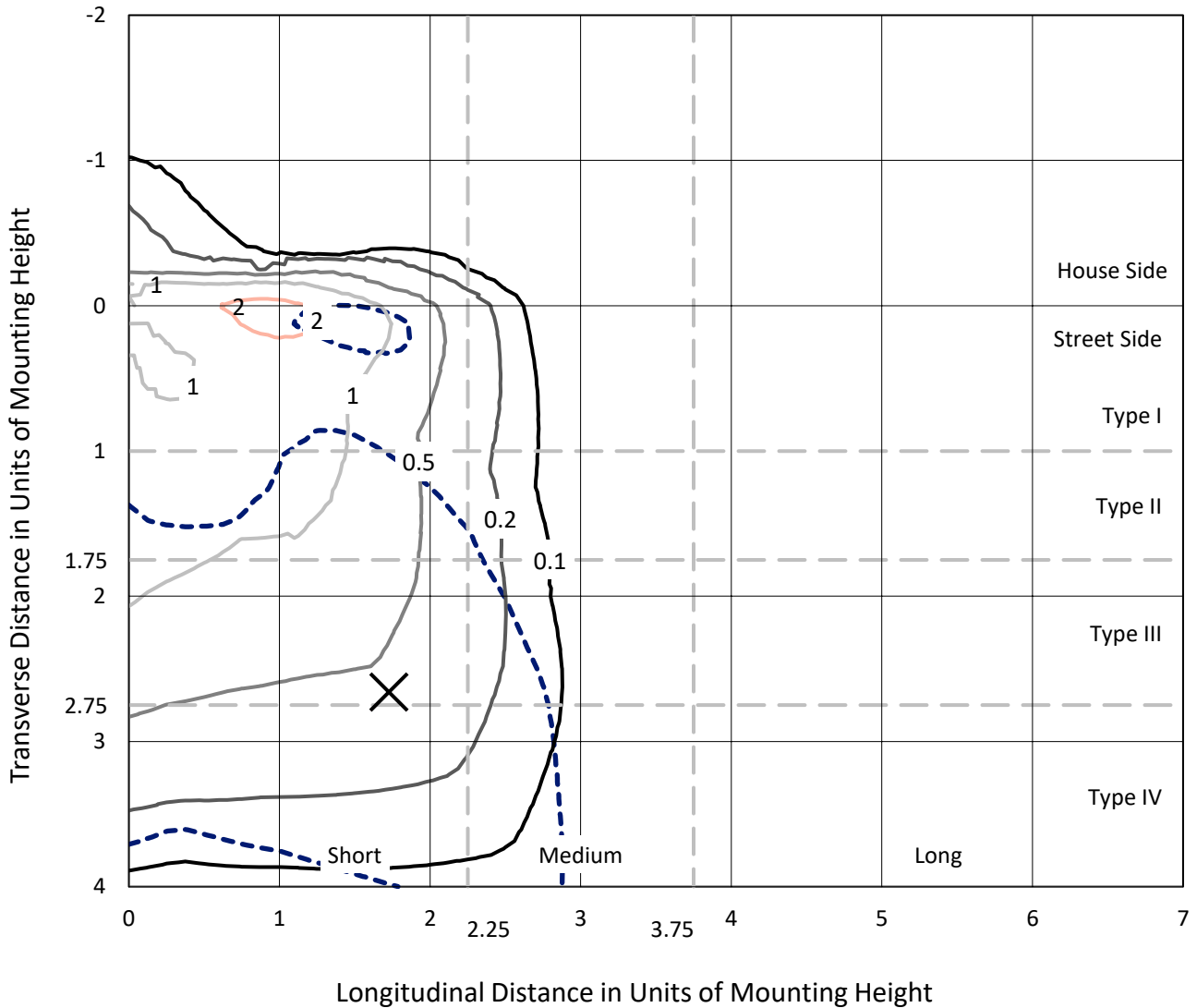
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368201
 CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

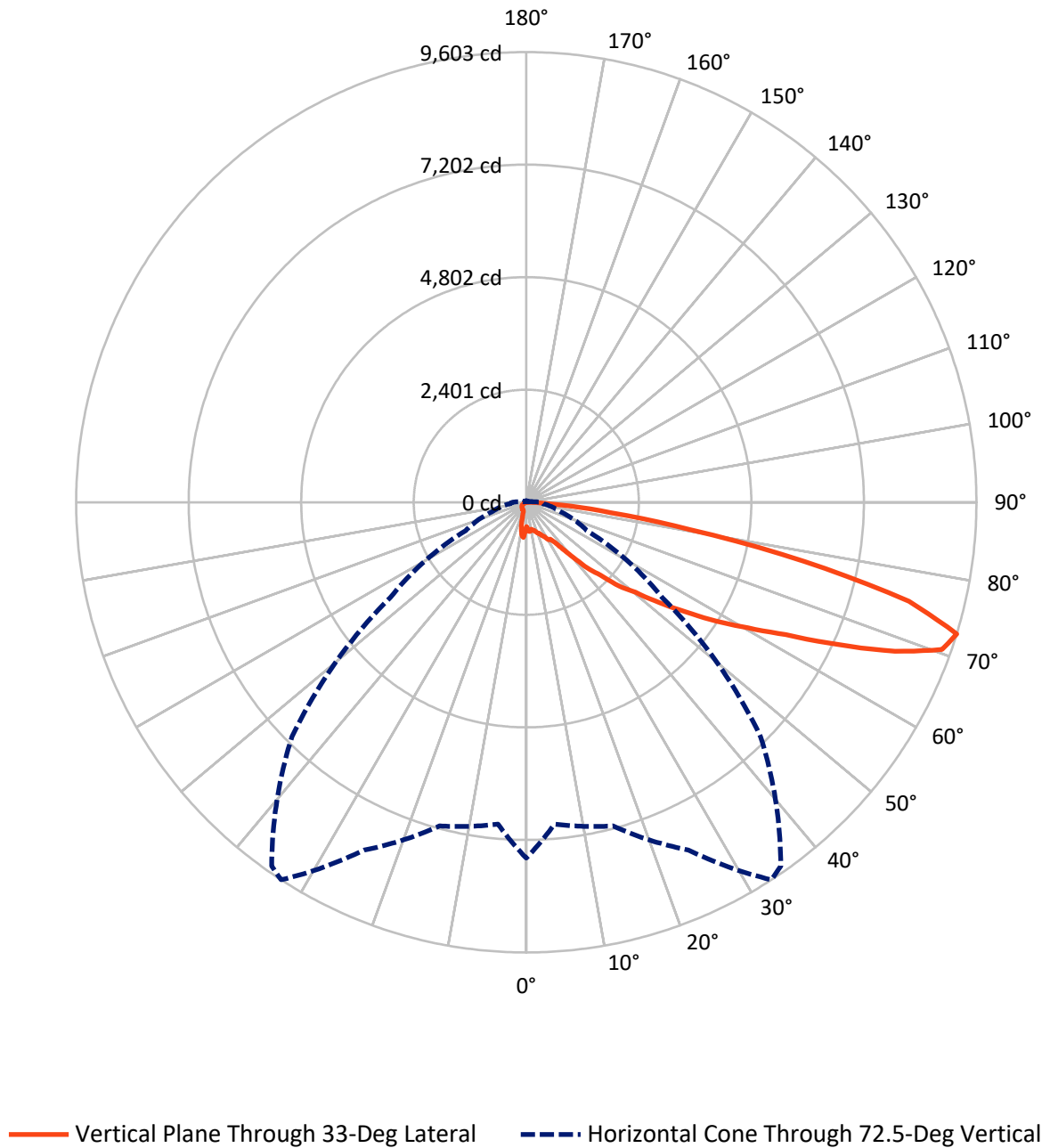
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type IV - Short - N/A

REPORT NUMBER: P368201
CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P368201
 CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

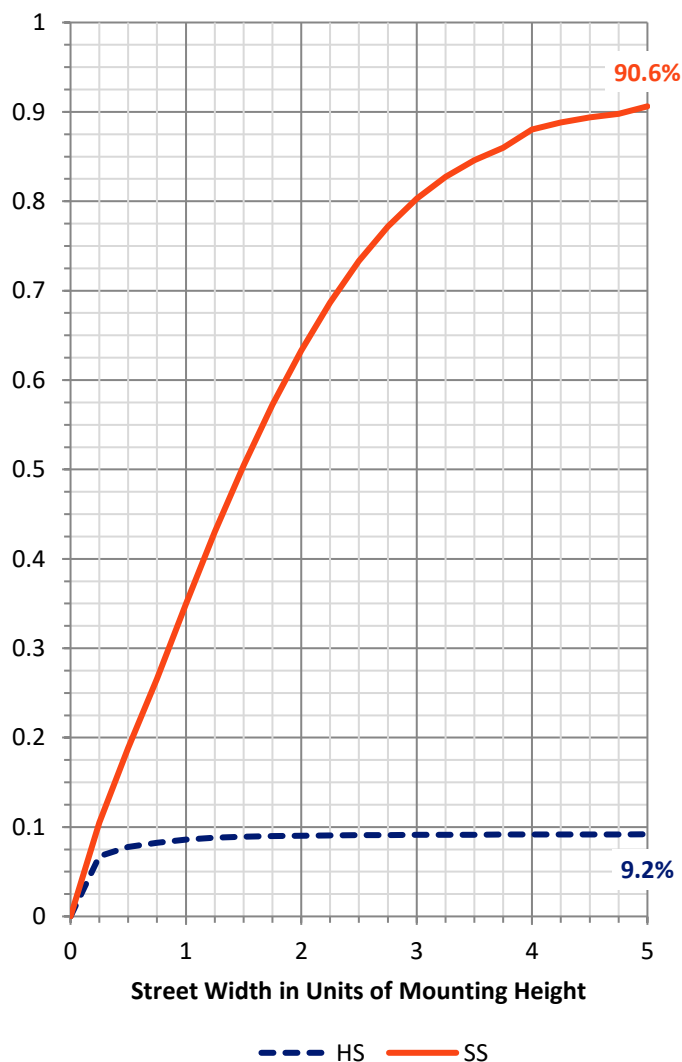
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	897.7	0.0	897.7
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	8811.3	0.0	8811.3
	% Fixture	90.8	0.0	90.8
Total	Lumens	9709.0	0.0	9709.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	0.7
10°-20°	199.2	2.1
20°-30°	337.8	3.5
30°-40°	618.2	6.4
40°-50°	1304.7	13.4
50°-60°	2182.8	22.5
60°-70°	2921.8	30.1
70°-80°	1908.6	19.7
80°-90°	169.2	1.7
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°	9709.0	100.0
0°-180°	9709.0	100.0

Coefficient of Utilization



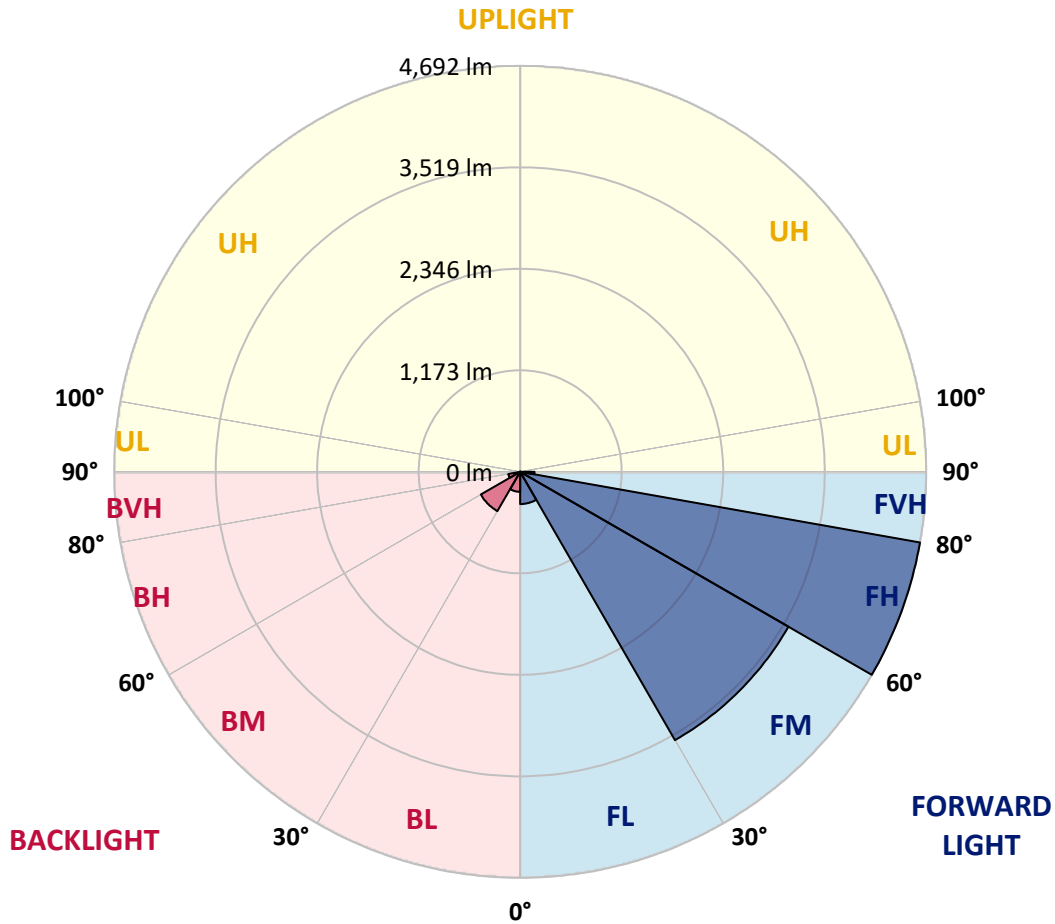
REPORT NUMBER: P368201
 CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	372.7	3.8			
FM (30°-60°)	3580.8	36.9			
FH (60°-80°)	4691.8	48.3			G2/5000
FVH (80°-90°)	165.9	1.7			G2/225
BL (0°-30°)	231.1	2.4	B1/500		
BM (30°-60°)	524.8	5.4	B1/1000		
BH (60°-80°)	138.6	1.4	B1/500		G1/500
BVH (80°-90°)	3.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





REPORT NUMBER: P368201

CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4
2.5°	615.6	591.9	557.4	559.5	565.5	570.3	583.2	577.9	567.6	567.1	615.6
5°	652.2	625.8	623.7	626.9	625.3	633.9	623.1	658.2	687.8	723.4	780.5
7.5°	634.5	622.1	606.4	622.6	622.1	617.7	624.8	695.9	767.6	812.9	907.2
10°	583.2	569.2	581.1	586.5	582.7	601.6	648.5	706.7	792.4	887.3	933.1
12.5°	568.7	577.3	581.6	581.6	617.7	627.4	699.1	754.1	856.0	930.9	1064.1
15°	625.3	642.0	612.4	605.9	617.2	622.6	702.4	768.7	899.1	1036.0	1147.6
17.5°	715.3	714.2	668.4	643.1	660.9	673.8	718.0	795.6	872.2	1118.5	1280.2
20°	777.3	778.4	695.9	643.1	701.8	709.4	758.4	820.4	880.8	1160.0	1367.0
22.5°	857.1	828.5	737.4	686.2	726.1	733.1	787.0	836.1	925.0	1155.2	1478.1
25°	922.3	904.0	789.2	753.6	789.2	779.5	828.5	902.4	972.4	1232.3	1543.3
27.5°	1023.6	992.4	825.8	832.3	830.1	837.1	848.5	961.7	1056.0	1236.0	1694.2
30°	1118.0	1099.7	907.8	907.8	928.8	915.3	923.4	1060.3	1136.8	1323.4	1864.0
32.5°	1215.5	1216.6	1004.2	953.0	936.3	991.8	1046.3	1108.3	1234.4	1473.2	2123.8
35°	1473.8	1452.2	1189.1	1061.4	1047.9	1044.7	1132.0	1299.6	1407.4	1668.3	2473.7
37.5°	1993.9	1919.0	1587.0	1307.2	1256.5	1239.3	1338.5	1510.4	1617.7	1955.1	3052.1
40°	2527.6	2390.1	2021.4	1706.1	1541.7	1467.3	1582.6	1728.7	1919.5	2272.1	3587.4
42.5°	2996.0	2826.2	2348.6	2136.2	1922.2	1889.9	1781.5	2019.3	2350.8	2733.5	4111.8
45°	3452.6	3118.4	2639.7	2471.5	2211.7	2230.0	2193.4	2399.3	2798.7	3239.1	4577.0
47.5°	3766.9	3466.6	2996.6	2778.2	2674.2	2566.9	2858.0	3072.0	3197.6	3560.4	4979.2
50°	4105.4	3801.4	3303.3	3150.7	3013.8	3122.2	3500.0	3528.6	3518.4	3860.1	5253.0
52.5°	4542.5	4184.1	3655.3	3482.8	3560.4	3668.2	4104.3	4109.7	3803.5	4112.4	5450.3
55°	4946.8	4549.5	4124.2	3961.4	4123.7	4214.8	4698.3	4521.0	3969.5	4283.8	5547.3
57.5°	5516.6	5056.8	4747.9	4461.1	4790.0	4702.6	5220.7	4957.1	4156.0	4397.5	5511.7
60°	6236.8	5695.6	5386.1	5082.7	5435.2	5494.5	5730.6	5174.8	4228.3	4434.7	5297.7
62.5°	6969.3	6424.9	6017.9	5812.0	6212.0	6407.1	6202.8	5283.2	4141.5	4362.0	4813.1
65°	7878.2	7181.2	6705.7	6585.0	7326.2	7612.9	6761.3	5309.6	3973.8	3961.4	3869.8
67.5°	8500.8	7822.1	7386.0	7588.2	8483.5	8506.7	7262.6	5317.7	3409.5	3101.7	2540.0
70°	8648.5	7921.8	7726.7	8321.8	9406.9	9115.3	7424.3	4908.0	2528.7	1840.8	1161.1
72.5°	7591.9	6892.2	7146.1	8183.3	9603.1	9469.4	7066.9	3541.0	1423.6	736.3	356.3
75°	4656.8	4233.7	5360.8	6938.1	8429.6	8343.4	5513.4	1829.5	573.5	294.3	133.1
77.5°	2025.2	1880.7	2797.6	4603.5	6057.3	5980.2	3230.5	673.8	296.5	207.0	67.4
80°	670.0	650.1	1059.8	2179.9	3548.0	3480.1	1361.1	280.3	211.3	166.0	37.7
82.5°	159.0	157.9	369.8	1003.2	1807.4	1750.8	417.8	154.7	153.1	131.0	19.9
85°	39.9	41.0	102.4	410.2	734.2	647.4	108.9	77.1	107.8	88.9	10.2
87.5°	0.0	0.0	26.4	58.8	111.0	69.5	11.9	20.5	30.2	31.8	5.4
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: P368201

CATALOG NUMBER: MSA-SA4A-727-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4	516.4
2.5°	626.4	620.4	571.9	583.8	602.1	600.5	612.4	603.2	595.1	635.0	631.2
5°	796.7	764.4	749.3	770.3	759.0	732.6	754.7	750.9	744.4	757.9	768.1
7.5°	924.5	894.8	881.3	837.1	773.0	722.3	730.4	711.5	693.8	714.8	736.3
10°	966.5	950.3	948.7	862.5	802.1	728.8	642.0	567.1	547.1	520.7	532.6
12.5°	1080.8	1090.5	1029.6	928.8	812.3	671.7	517.5	411.3	368.2	340.1	341.8
15°	1174.6	1208.5	1120.1	939.0	714.8	512.1	344.5	249.0	222.1	215.1	212.9
17.5°	1314.2	1347.1	1148.2	866.2	576.2	347.1	221.5	194.1	195.7	200.5	199.4
20°	1417.7	1412.8	1123.9	737.4	424.8	227.5	185.4	181.7	190.3	204.3	201.1
22.5°	1517.4	1484.0	1108.8	618.3	274.9	182.7	179.0	178.4	186.5	200.0	203.8
25°	1588.6	1594.0	1083.5	484.1	200.0	169.8	173.0	177.9	186.0	200.5	198.4
27.5°	1792.3	1641.4	977.8	351.5	168.7	162.8	170.9	180.6	183.3	201.6	202.1
30°	1924.4	1820.4	908.8	236.6	155.8	150.4	166.6	179.5	182.7	206.5	208.1
32.5°	2154.6	1897.4	829.1	175.7	145.0	146.6	156.9	174.1	189.2	214.5	215.6
35°	2440.8	2144.9	684.6	157.9	141.2	138.5	143.4	163.3	188.1	215.6	221.0
37.5°	2985.8	2293.1	542.8	153.1	141.2	136.4	141.2	153.1	184.9	226.4	237.7
40°	3350.7	2595.0	391.3	152.0	138.5	134.2	135.8	147.7	175.7	219.9	236.6
42.5°	3800.3	2722.2	288.4	149.3	135.8	129.4	130.4	145.5	166.6	206.5	218.9
45°	4168.4	2814.9	226.9	148.2	129.4	127.2	129.4	143.9	157.9	177.3	188.7
47.5°	4448.2	2922.7	182.2	141.2	127.8	127.2	124.5	134.8	143.4	148.2	155.8
50°	4653.0	2898.5	150.9	130.4	122.4	125.6	120.7	122.4	124.5	121.8	130.4
52.5°	4778.6	2811.1	125.6	117.5	115.9	118.6	112.7	107.8	104.0	101.9	107.3
55°	4824.5	2635.9	106.7	100.8	104.6	105.7	100.8	92.2	85.7	82.5	86.8
57.5°	4737.7	2369.1	92.7	83.6	92.2	92.2	85.7	76.5	69.0	63.6	67.9
60°	4517.7	2074.2	82.5	69.5	78.7	79.2	71.7	62.0	56.1	50.7	53.4
62.5°	4108.1	1753.0	72.2	60.4	67.9	68.5	59.3	50.1	45.8	39.9	42.0
65°	3288.7	1340.6	61.5	53.4	58.8	57.1	49.1	42.6	37.2	31.8	32.9
67.5°	2134.6	827.4	53.4	48.5	49.6	48.0	41.5	37.2	31.3	27.0	27.5
70°	955.7	356.3	46.9	43.7	43.1	40.4	35.0	34.5	30.7	27.0	27.0
72.5°	294.9	134.2	40.4	39.4	37.2	34.0	30.7	32.9	30.2	25.9	25.3
75°	116.4	61.5	33.4	33.4	32.3	28.0	27.5	29.6	28.0	23.7	22.6
77.5°	60.9	38.8	27.5	28.6	28.0	21.6	24.8	27.0	25.9	19.9	16.7
80°	36.1	23.7	20.5	23.2	22.6	15.1	18.9	17.2	12.4	5.9	1.6
82.5°	19.9	10.8	9.2	13.5	13.5	5.4	9.7	8.6	4.9	0.0	0.0
85°	9.7	7.5	7.0	7.5	5.4	1.6	4.9	4.9	2.7	0.0	0.0
87.5°	4.9	4.3	3.2	2.7	2.2	0.0	1.6	2.2	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	0.0

(END OF REPORT)