

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: P368587

Luminaire Tested: **MSA-SA4D-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-727-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18196 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

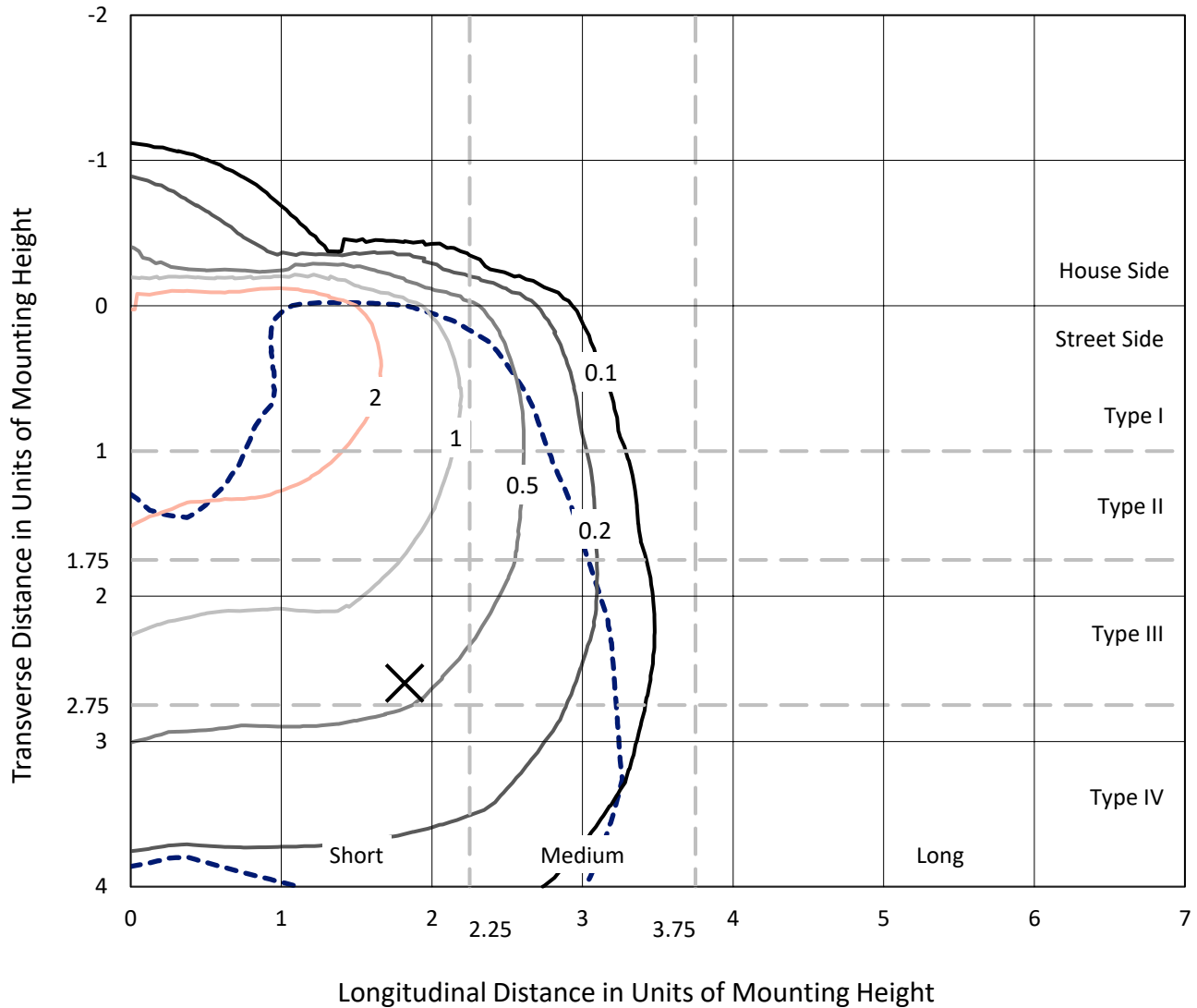
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368587
 CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

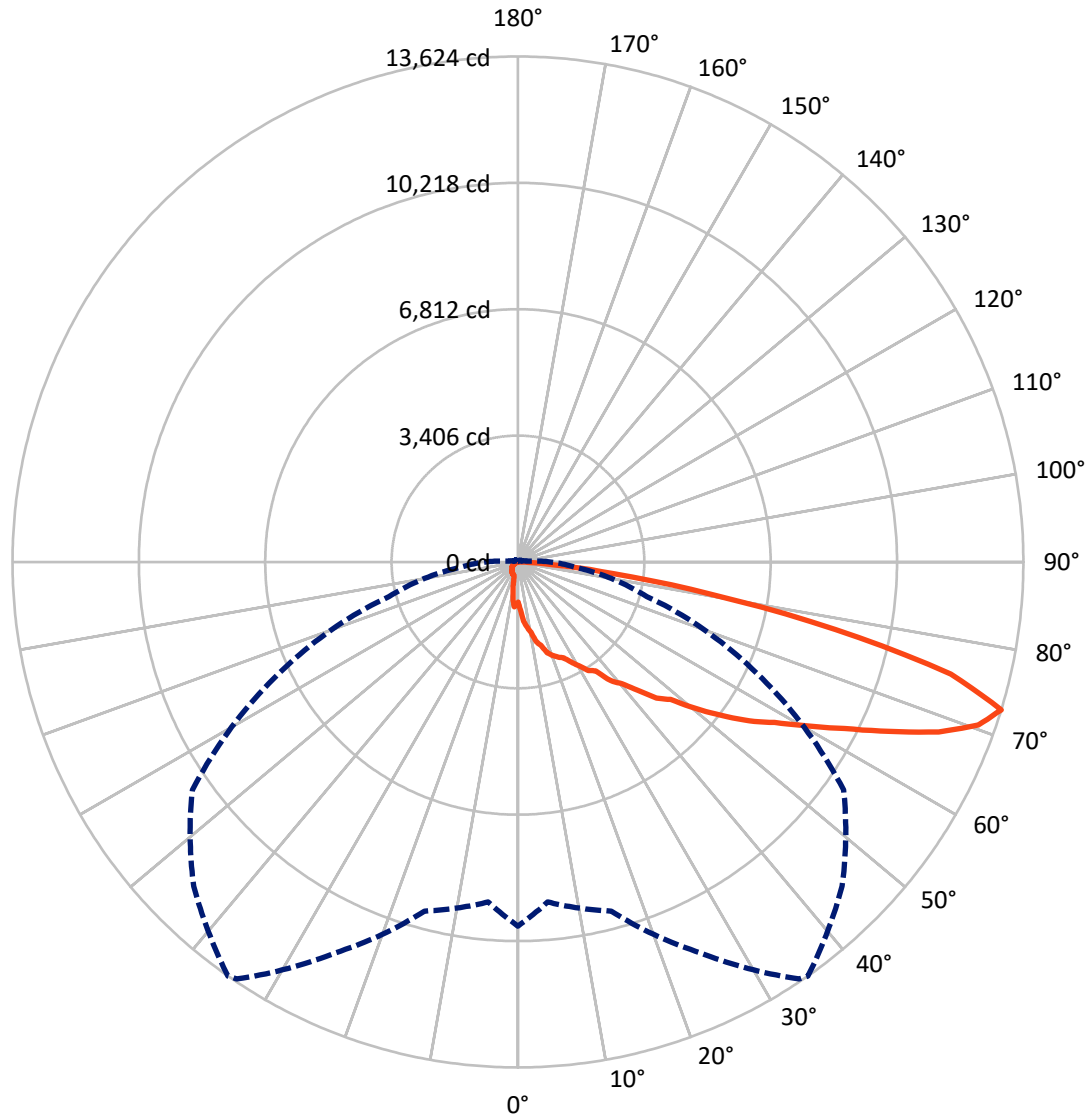
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P368587
CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P368587
 CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

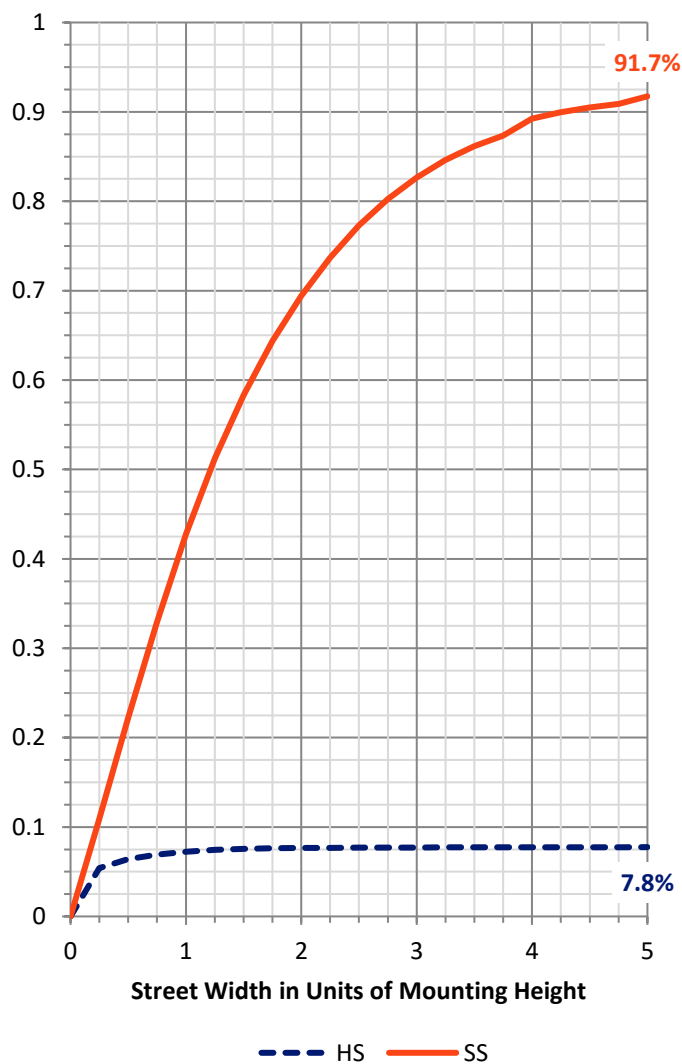
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1419.3	0.0	1419.3
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	16776.7	0.0	16776.7
	% Fixture	92.2	0.0	92.2
Total	Lumens	18196.0	0.0	18196.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.2	0.8
10°-20°	465.7	2.6
20°-30°	848.0	4.7
30°-40°	1462.7	8.0
40°-50°	2600.2	14.3
50°-60°	3880.2	21.3
60°-70°	4957.4	27.2
70°-80°	3449.0	19.0
80°-90°	394.6	2.2
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°	18196.0	100.0
0°-180°	18196.0	100.0

Coefficient of Utilization

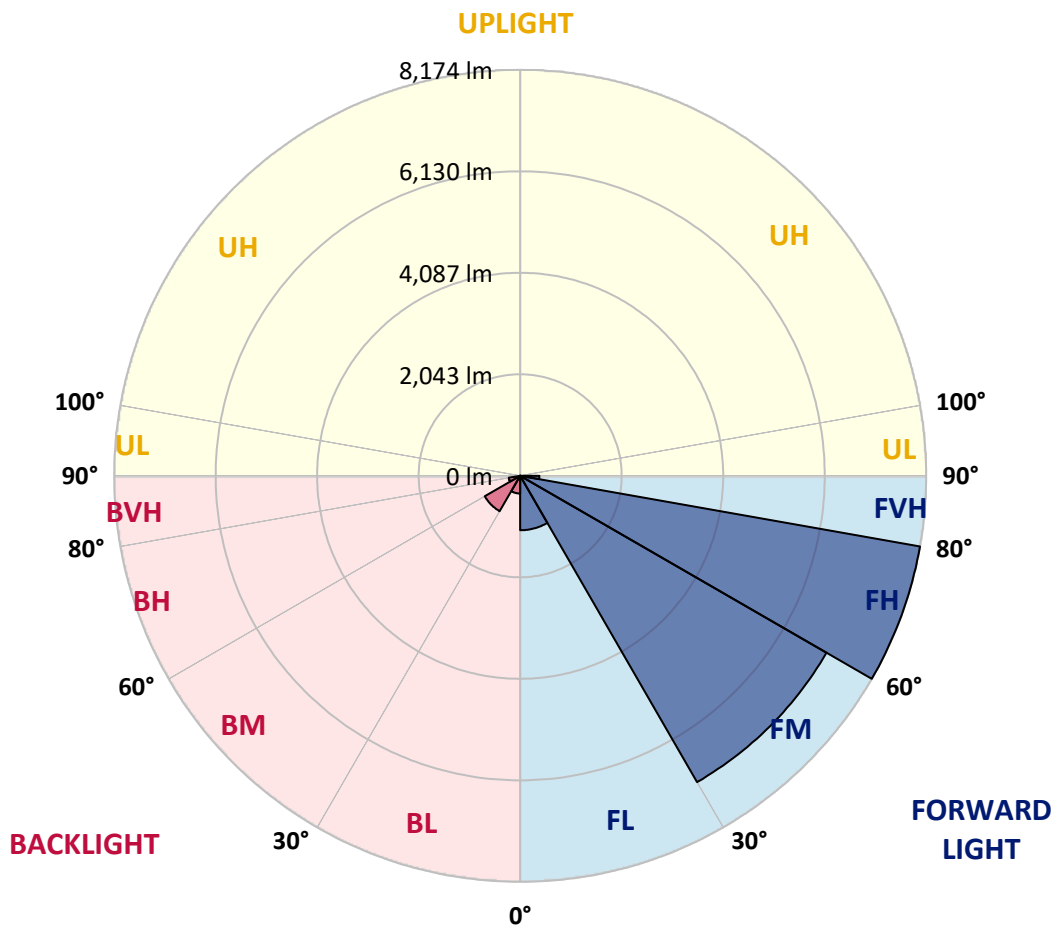


REPORT NUMBER: P368587
 CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1095.0	6.0			
FM (30°-60°)	7120.2	39.1			
FH (60°-80°)	8173.7	44.9			G4/12000
FVH (80°-90°)	387.9	2.1			G3/500
BL (0°-30°)	357.0	2.0	B1/500		
BM (30°-60°)	823.0	4.5	B1/1000		
BH (60°-80°)	232.7	1.3	B1/500		G1/500
BVH (80°-90°)	6.6	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-G4
 Type IV Short





REPORT NUMBER: P368587

CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9
2.5°	1379.4	1325.4	1237.6	1244.0	1283.3	1291.6	1303.5	1272.4	1244.9	1196.4	1290.7
5°	1767.2	1689.5	1640.1	1624.5	1601.7	1603.5	1547.7	1567.8	1562.3	1598.0	1641.0
7.5°	1985.8	1942.8	1880.6	1863.3	1779.1	1770.0	1701.4	1793.7	1802.9	1790.1	1860.5
10°	2072.7	2016.0	2023.3	1958.4	1916.3	1927.3	1938.3	1945.6	1957.5	1969.4	1883.4
12.5°	2124.0	2134.0	2233.7	2166.0	2208.1	2208.1	2282.2	2203.5	2206.3	2120.3	2134.9
15°	2354.5	2410.3	2365.4	2364.5	2318.8	2330.7	2416.7	2354.5	2386.5	2360.9	2262.1
17.5°	2643.5	2654.5	2569.4	2531.9	2573.1	2574.0	2537.4	2534.7	2423.1	2611.5	2491.7
20°	2735.9	2798.1	2677.4	2531.0	2702.1	2693.8	2691.1	2648.1	2462.4	2724.0	2625.2
22.5°	2987.4	2898.7	2816.4	2720.4	2787.1	2787.1	2777.1	2682.8	2610.6	2713.9	2756.0
25°	3066.1	3077.1	2970.1	2939.0	2940.8	2858.5	2851.2	2810.9	2741.4	2917.9	2833.8
27.5°	3336.9	3332.3	3075.3	3162.2	3051.5	3052.4	2850.2	2940.8	2952.7	2928.0	3022.2
30°	3603.0	3677.1	3289.3	3399.1	3282.9	3248.1	3050.6	3131.1	3152.1	3123.7	3242.7
32.5°	3942.4	4051.3	3674.4	3566.5	3389.0	3487.8	3351.5	3161.2	3265.5	3518.9	3585.7
35°	4301.9	4354.9	3953.4	3802.5	3602.1	3601.2	3596.6	3612.2	3727.4	4012.8	4069.6
37.5°	4947.7	4822.4	4459.2	4113.5	4158.3	4058.6	3989.1	4062.2	4182.1	4652.2	4894.6
40°	5308.1	5217.5	4706.2	4501.3	4279.0	4315.6	4504.0	4495.8	4815.0	5307.2	5670.3
42.5°	5658.4	5572.4	5069.3	4903.8	4618.4	4718.1	4800.4	4904.7	5558.7	6352.7	6552.1
45°	5970.3	5717.9	5363.0	5369.4	5221.2	5233.1	5378.5	5474.5	6420.4	7234.5	7374.4
47.5°	6158.8	5951.1	5610.8	5604.4	5595.3	5539.5	6224.6	6312.4	7107.3	8074.2	8087.0
50°	6424.0	6164.2	5866.0	5871.5	6082.8	6200.8	7018.6	7009.4	7770.5	8774.8	8479.4
52.5°	6754.2	6436.8	6108.4	6352.7	6679.2	6871.3	7535.4	7806.1	8483.0	9214.8	8633.0
55°	7176.8	6779.8	6463.4	6776.2	7488.7	7562.8	8041.2	8612.9	9259.6	9663.9	8682.4
57.5°	7672.6	7198.8	6942.7	7446.7	8157.4	8159.2	8777.6	9472.8	9736.2	9846.9	8626.6
60°	8206.8	7654.3	7396.4	7850.1	8894.7	8969.7	9596.2	9947.5	10220.1	9939.3	8526.9
62.5°	8677.0	8066.8	7866.5	8399.8	9703.3	9880.7	10309.7	10259.4	10569.5	10055.4	8273.6
65°	9236.8	8601.0	8469.3	9256.9	10758.8	11003.1	11111.0	10812.8	10686.6	9965.8	7614.1
67.5°	9791.1	9196.5	9192.9	10207.3	12142.8	12226.9	12113.5	11593.1	10550.3	9175.5	6405.7
70°	10181.7	9543.2	9783.8	11248.2	13400.5	13164.5	12687.0	11961.7	9566.1	7032.3	4184.8
72.5°	9814.9	9199.3	9741.7	11618.7	13556.0	13623.7	12355.0	10714.9	7107.3	3596.6	1514.8
75°	7458.6	7081.7	8458.3	10307.9	12035.8	12051.3	10312.5	7557.3	3499.7	976.9	418.9
77.5°	3756.7	3636.9	5353.8	7317.7	8781.2	8755.6	7085.4	4048.5	1126.0	324.7	211.3
80°	1901.7	1805.6	2278.5	3947.9	5214.8	5253.2	4045.8	1813.0	568.0	176.5	146.4
82.5°	1168.1	1108.6	1246.8	1786.4	2531.0	2592.3	1534.9	1148.0	352.2	104.3	133.5
85°	225.9	237.8	716.2	894.6	1010.8	987.0	454.6	944.9	106.1	62.2	97.0
87.5°	0.0	3.7	165.6	291.8	292.7	259.8	103.4	209.5	14.6	17.4	11.9
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: P368587

CATALOG NUMBER: MSA-SA4D-727-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9	1083.9
2.5°	1306.2	1292.5	1178.1	1165.3	1168.1	1148.9	1142.5	1102.2	1092.2	1154.4	1165.3
5°	1622.7	1531.2	1425.1	1386.7	1327.2	1226.6	1212.0	1186.4	1158.0	1169.0	1160.8
7.5°	1816.6	1695.0	1581.5	1379.4	1212.0	1065.6	1041.9	998.0	954.0	955.0	983.3
10°	1847.7	1745.3	1588.9	1342.8	1151.6	968.7	809.5	694.3	642.1	595.5	609.2
12.5°	2027.9	1932.8	1644.7	1331.8	1063.8	778.4	569.9	457.4	408.0	391.5	389.7
15°	2172.4	2097.4	1739.8	1298.0	869.0	547.9	408.0	375.0	365.9	381.4	376.9
17.5°	2387.4	2252.0	1729.7	1158.0	662.3	416.2	375.9	371.4	382.3	391.5	394.2
20°	2481.6	2286.8	1661.1	938.5	495.8	381.4	366.8	357.7	377.8	405.2	399.7
22.5°	2576.7	2346.2	1580.6	768.4	398.8	365.0	356.7	349.4	365.0	391.5	397.9
25°	2619.7	2441.4	1491.0	600.1	370.5	345.8	340.3	343.0	355.8	379.6	376.9
27.5°	2836.5	2452.3	1319.9	473.8	358.6	332.0	332.0	338.4	338.4	370.5	367.7
30°	2971.9	2638.0	1180.9	398.8	344.8	312.8	323.8	326.6	322.0	356.7	359.5
32.5°	3209.7	2689.3	1045.5	365.9	322.9	310.1	308.3	310.1	313.7	347.6	348.5
35°	3575.6	2941.7	860.7	353.1	311.9	296.4	283.6	293.6	302.8	327.5	332.0
37.5°	4290.9	3200.6	701.6	343.0	306.4	283.6	279.0	277.2	293.6	322.0	331.1
40°	4869.9	3658.8	570.8	334.8	295.5	276.2	264.4	265.3	279.9	300.9	314.7
42.5°	5689.5	3990.0	483.9	322.0	279.9	260.7	247.0	255.2	261.6	283.6	292.7
45°	6373.7	4247.0	426.3	313.7	264.4	246.1	235.1	244.2	237.8	248.8	261.6
47.5°	6918.0	4471.1	383.3	293.6	254.3	237.8	224.1	221.4	210.4	213.1	225.0
50°	7217.1	4433.6	347.6	273.5	241.5	229.6	210.4	191.2	176.5	175.6	182.9
52.5°	7323.2	4233.3	318.3	256.1	225.9	211.3	189.3	162.8	148.2	143.6	150.0
55°	7352.5	3945.2	291.8	236.9	211.3	188.4	165.6	137.2	121.7	114.3	120.7
57.5°	7257.3	3501.5	266.2	218.6	193.9	166.5	141.8	112.5	97.9	88.7	94.2
60°	7022.2	2938.1	243.3	195.7	175.6	147.3	119.8	90.6	75.0	66.8	69.5
62.5°	6501.8	2303.2	218.6	174.7	156.4	129.0	100.6	71.3	56.7	49.4	50.3
65°	5709.6	1716.9	190.3	154.6	139.0	111.6	80.5	54.9	43.0	36.6	35.7
67.5°	4548.9	1163.5	161.9	133.5	123.5	94.2	64.0	43.0	33.8	29.3	27.4
70°	2673.7	586.3	134.5	115.3	106.1	78.7	50.3	34.8	31.1	27.4	25.6
72.5°	881.8	253.4	105.2	95.1	87.8	63.1	39.3	32.0	30.2	26.5	24.7
75°	307.3	146.4	77.8	73.2	69.5	47.6	32.9	29.3	29.3	25.6	22.9
77.5°	201.2	113.4	57.6	53.1	52.1	34.8	28.4	27.4	25.6	21.0	17.4
80°	167.4	64.0	40.2	37.5	36.6	22.0	22.9	20.1	15.6	9.1	3.7
82.5°	154.6	38.4	21.0	22.9	21.0	8.2	12.8	11.0	8.2	3.7	0.0
85°	90.6	17.4	11.9	11.9	9.1	1.8	6.4	6.4	3.7	0.9	0.0
87.5°	10.1	8.2	6.4	6.4	4.6	0.0	2.7	1.8	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)