

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: P367295

Luminaire Tested: **MSA-SA2B-730-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367295  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-730-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6842 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

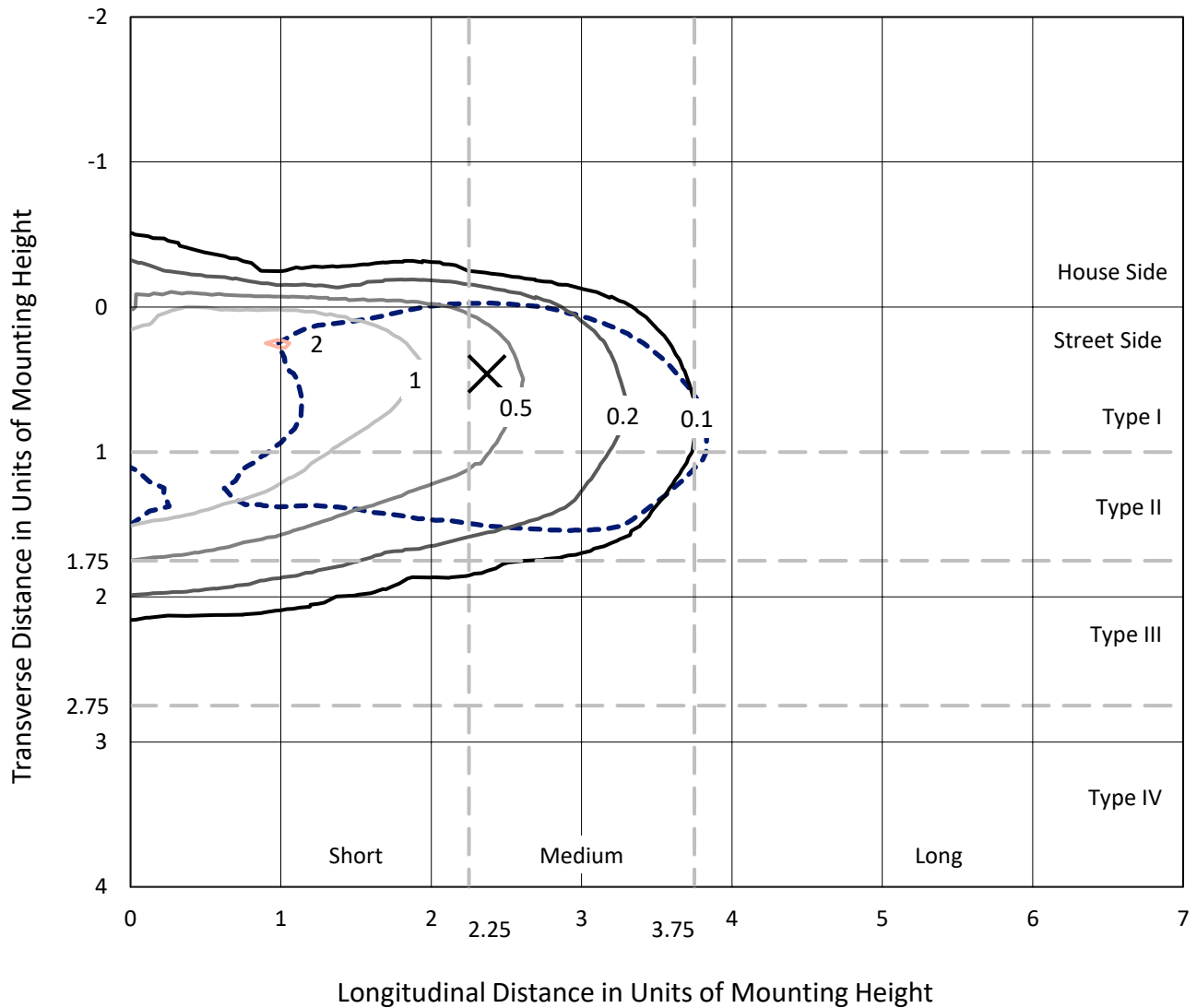
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

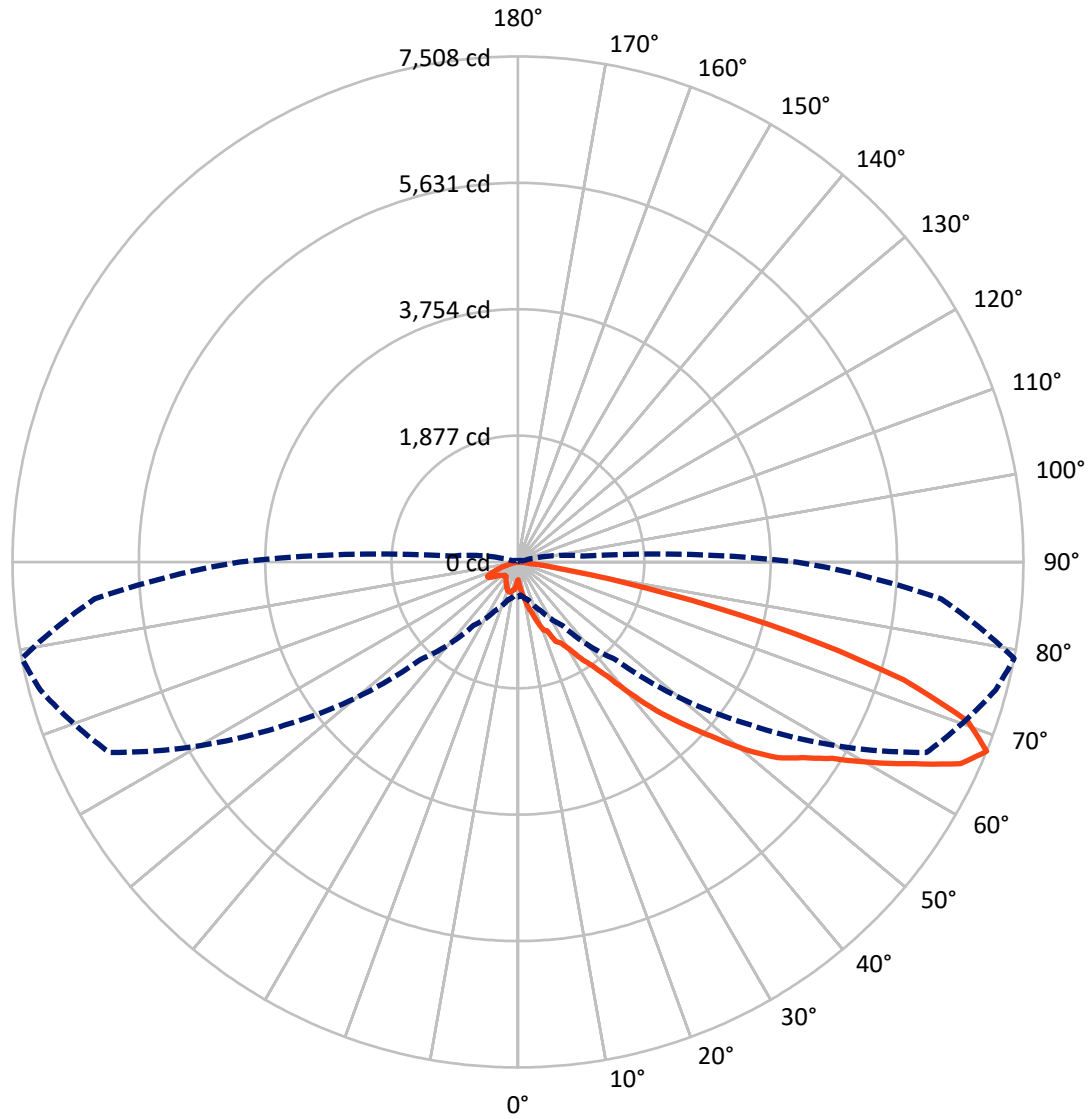
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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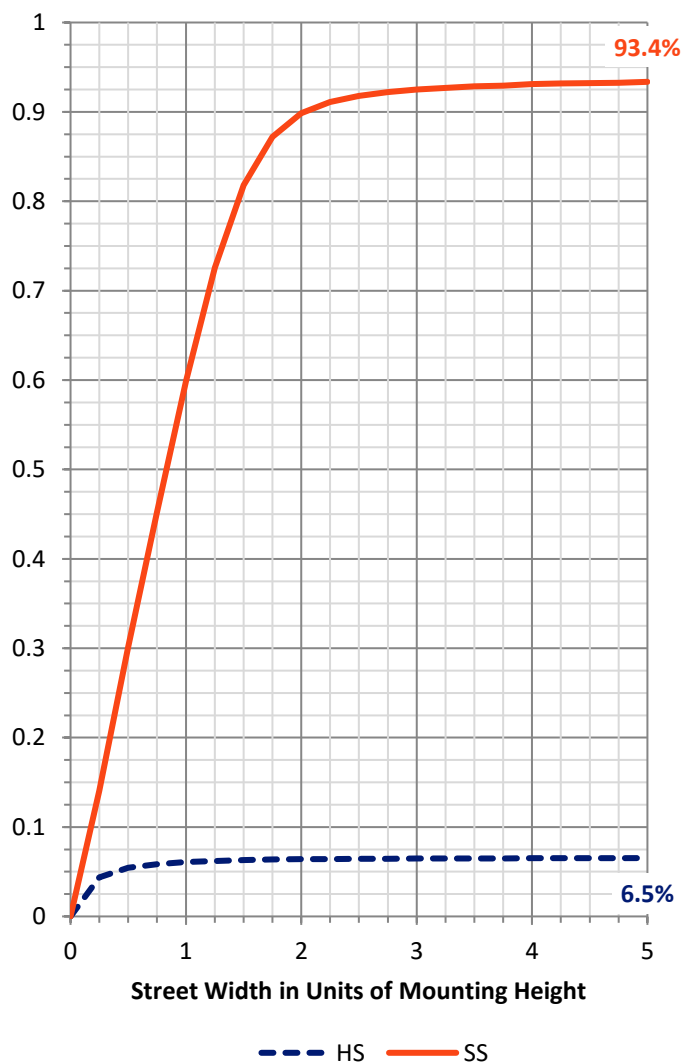
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	449.6	0.0	449.6
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	6392.4	0.0	6392.4
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	6842.0	0.0	6842.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.3	0.6
10°-20°	152.9	2.2
20°-30°	294.9	4.3
30°-40°	579.4	8.5
40°-50°	1160.6	17.0
50°-60°	1855.1	27.1
60°-70°	1866.6	27.3
70°-80°	842.1	12.3
80°-90°	52.1	0.8
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°	6842.0	100.0
0°-180°	6842.0	100.0

**Coefficient of Utilization**



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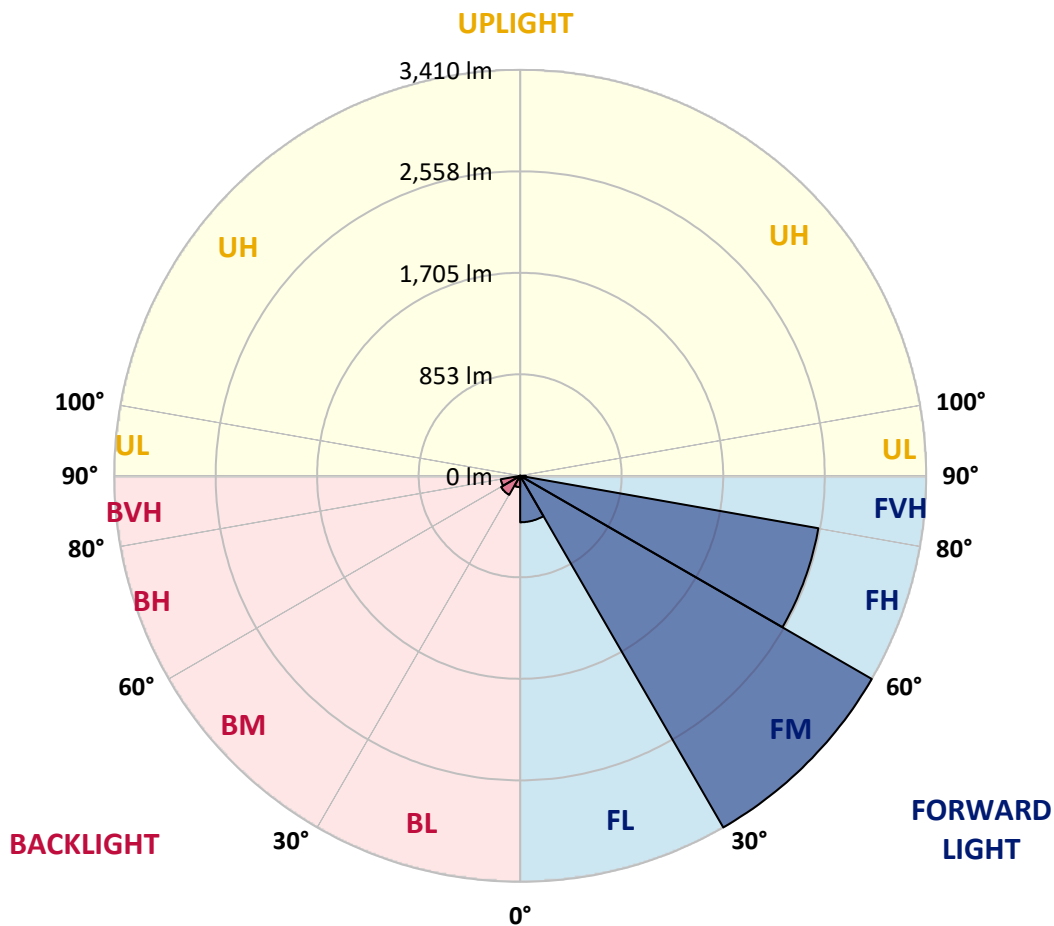
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	390.6	5.7			
FM (30°-60°)	3410.2	49.8			
FH (60°-80°)	2542.9	37.2			G2/5000
FVH (80°-90°)	48.8	0.7			G1/100
BL (0°-30°)	95.6	1.4	B0/110		
BM (30°-60°)	185.0	2.7	B0/220		
BH (60°-80°)	165.7	2.4	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6
2.5°	356.0	343.2	322.5	334.2	333.4	339.5	328.1	315.7	295.7	315.7	317.2
5°	512.6	488.8	473.7	470.7	454.1	438.6	435.3	422.4	412.6	394.9	410.7
7.5°	638.5	627.6	600.8	597.8	557.1	534.4	541.6	536.0	498.6	480.1	495.6
10°	692.1	673.2	677.0	673.2	655.9	662.3	647.6	630.6	600.8	570.3	531.8
12.5°	712.8	709.8	741.1	737.4	778.1	827.1	794.3	766.0	697.0	689.5	637.0
15°	757.4	776.2	771.7	787.5	813.6	896.9	896.1	902.9	829.8	790.5	714.7
17.5°	797.0	810.9	788.3	806.4	877.3	927.8	995.3	968.9	977.2	937.3	820.0
20°	780.0	795.8	773.2	762.3	887.1	982.9	1073.0	1053.8	1103.6	1078.7	916.9
22.5°	886.0	856.2	799.2	763.8	856.9	981.8	1100.6	1180.9	1172.2	1111.1	1007.0
25°	1016.8	998.7	930.5	867.9	876.2	975.0	1187.3	1305.4	1331.0	1305.0	1092.7
27.5°	1193.4	1189.2	1049.7	1022.5	941.8	945.2	1200.9	1462.3	1403.8	1363.1	1192.6
30°	1423.8	1391.0	1225.4	1190.0	1070.8	1012.3	1283.9	1597.7	1554.7	1499.2	1286.5
32.5°	1671.6	1676.5	1465.3	1348.4	1252.6	1183.2	1251.1	1661.0	1741.4	1696.5	1403.8
35°	1953.0	1974.8	1716.5	1579.2	1392.9	1290.7	1392.1	1855.7	1999.7	1881.7	1561.1
37.5°	2386.3	2385.6	2083.9	1810.4	1675.0	1564.1	1627.1	2032.6	2317.3	2151.4	1843.2
40°	2767.7	2684.7	2404.1	2089.9	1878.7	1848.5	1802.9	2274.7	2656.4	2556.4	2094.0
42.5°	3052.4	2994.0	2654.9	2410.5	2148.7	2052.9	2036.7	2629.6	3156.9	3017.0	2452.0
45°	3393.0	3201.4	2951.7	2731.4	2464.8	2436.9	2398.8	2989.8	3739.2	3423.9	2763.1
47.5°	3698.1	3517.8	3281.7	2998.9	2692.6	2922.7	2776.3	3306.3	4162.8	3866.7	3106.4
50°	3955.0	3763.4	3499.0	3283.6	3152.4	3308.5	3064.5	3566.9	4620.3	4380.4	3427.3
52.5°	4085.9	3869.0	3664.6	3531.4	3611.8	3576.7	3455.2	3882.6	5010.3	4830.8	3711.7
55°	3978.4	3766.4	3680.8	3746.8	3990.8	3889.4	3899.2	4371.7	5378.4	5131.0	3959.1
57.5°	3501.6	3308.1	3346.2	3526.9	3994.6	4260.1	4405.3	4847.0	5673.7	5505.1	4340.8
60°	2648.8	2493.1	2634.1	2954.7	3618.9	4186.2	4764.4	5322.2	6095.8	6043.0	4918.6
62.5°	1617.7	1533.2	1733.1	2132.9	2883.8	3823.7	4973.7	5955.9	6547.3	6603.4	5531.5
65°	825.2	787.1	953.9	1305.4	1948.4	3141.1	4822.5	6349.6	7013.8	7221.2	6115.8
67.5°	519.7	495.2	584.2	796.2	1149.6	2048.8	4222.4	6694.0	7343.5	7507.5	6310.8
70°	360.2	344.7	421.7	546.5	725.3	1103.6	3135.0	6372.6	7082.1	7089.6	5838.9
72.5°	228.6	216.5	291.6	404.7	535.2	569.9	1797.2	5000.5	6062.2	5992.4	4728.5
75°	148.2	142.2	185.2	296.5	411.1	351.5	888.2	3374.1	4346.9	4237.5	3140.7
77.5°	106.4	102.6	124.1	198.0	292.7	245.9	398.3	2011.1	2492.3	2253.2	1524.5
80°	64.1	63.7	89.8	124.1	208.2	173.5	184.1	913.1	966.3	787.9	465.8
82.5°	32.1	33.2	50.2	80.0	133.9	113.5	84.1	304.0	259.5	191.2	94.3
85°	7.5	9.4	26.4	55.1	67.1	45.3	40.0	79.6	71.3	53.9	27.5
87.5°	0.0	0.0	8.3	13.2	18.1	7.5	13.6	15.1	19.2	15.1	5.7
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°	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6	263.6
2.5°	317.6	313.0	285.5	278.3	277.6	269.7	271.6	264.0	264.4	281.4	281.4
5°	404.7	378.3	351.9	328.5	312.7	290.0	281.7	278.3	275.3	282.1	286.3
7.5°	475.2	436.4	388.9	337.9	290.8	258.4	253.8	245.5	242.5	249.3	254.6
10°	506.5	458.3	393.0	318.7	274.6	248.2	226.3	214.6	212.3	212.0	213.9
12.5°	572.9	512.9	397.5	311.5	263.6	234.6	209.7	190.1	172.0	173.9	172.0
15°	626.1	555.2	397.5	294.2	237.2	208.2	164.4	154.6	152.0	156.1	152.8
17.5°	706.4	597.1	377.5	263.3	214.6	161.8	145.2	144.5	149.7	155.8	152.0
20°	754.7	602.7	344.0	227.8	176.1	140.3	134.3	128.2	135.8	140.7	138.8
22.5°	804.9	603.1	310.4	209.0	141.8	127.9	118.1	113.2	114.3	118.8	119.6
25°	826.4	588.4	279.1	184.1	128.6	114.3	104.1	98.8	96.9	99.2	98.4
27.5°	884.8	560.1	245.2	156.9	122.2	101.5	92.0	85.6	80.0	83.7	84.5
30°	893.1	551.0	226.7	139.6	113.9	89.8	81.5	74.7	70.5	75.8	75.8
32.5°	919.5	501.3	217.2	132.4	105.2	83.0	71.7	66.8	66.0	69.4	69.8
35°	960.3	479.4	203.3	126.7	97.3	75.1	64.5	62.2	61.5	64.1	64.1
37.5°	1098.3	452.2	187.8	121.8	90.5	70.9	62.6	58.8	59.2	61.5	63.0
40°	1190.0	455.6	164.8	115.8	82.6	67.1	58.8	56.2	55.8	57.0	58.1
42.5°	1360.1	458.3	154.6	109.4	76.6	62.6	55.1	53.2	51.7	52.8	53.9
45°	1550.2	472.2	149.4	104.1	73.2	60.0	51.7	50.5	47.1	47.9	49.4
47.5°	1733.5	523.1	142.9	96.6	70.2	58.5	48.3	45.6	43.4	43.0	44.5
50°	1941.7	572.5	135.8	88.3	67.1	56.2	44.9	40.7	39.2	39.2	40.4
52.5°	2128.0	619.7	129.0	82.6	64.9	52.0	41.9	37.7	36.6	36.6	38.1
55°	2324.1	669.1	123.0	77.3	61.9	47.9	39.2	35.5	35.1	34.3	35.5
57.5°	2670.3	777.0	115.4	72.8	57.7	44.5	37.0	33.2	32.4	31.3	32.4
60°	3174.6	942.5	105.6	68.3	52.8	42.2	35.1	30.6	29.4	27.5	27.9
62.5°	3667.6	1076.4	94.3	62.6	48.3	40.0	32.1	27.5	25.6	23.4	23.8
65°	4090.0	1129.2	82.2	55.8	43.8	34.7	27.9	24.1	21.5	18.5	18.1
67.5°	4139.8	997.2	70.5	49.4	39.2	29.4	23.8	21.5	17.3	14.7	14.0
70°	3725.7	743.0	58.8	43.8	33.9	24.9	20.4	18.9	16.2	14.0	12.8
72.5°	2966.8	548.4	49.4	38.8	29.8	21.1	17.3	17.7	16.2	13.6	12.1
75°	1962.0	313.8	40.4	32.4	24.9	17.0	15.8	15.8	15.5	12.8	11.3
77.5°	944.1	135.4	30.9	25.6	20.0	12.8	14.3	14.3	14.7	11.7	9.4
80°	267.8	40.7	19.2	17.3	14.7	8.7	11.3	10.9	9.8	6.8	4.1
82.5°	47.9	15.8	8.7	9.1	8.3	3.4	6.4	6.0	4.9	2.6	0.4
85°	13.2	6.0	4.9	5.3	4.1	1.1	2.6	3.4	2.6	1.5	0.0
87.5°	3.4	2.6	3.4	3.8	3.0	0.4	1.1	0.4	1.1	0.4	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)