

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: P367289

Luminaire Tested: **MSA-SA2B-730-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367289  
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-SA2B-730-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7503 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

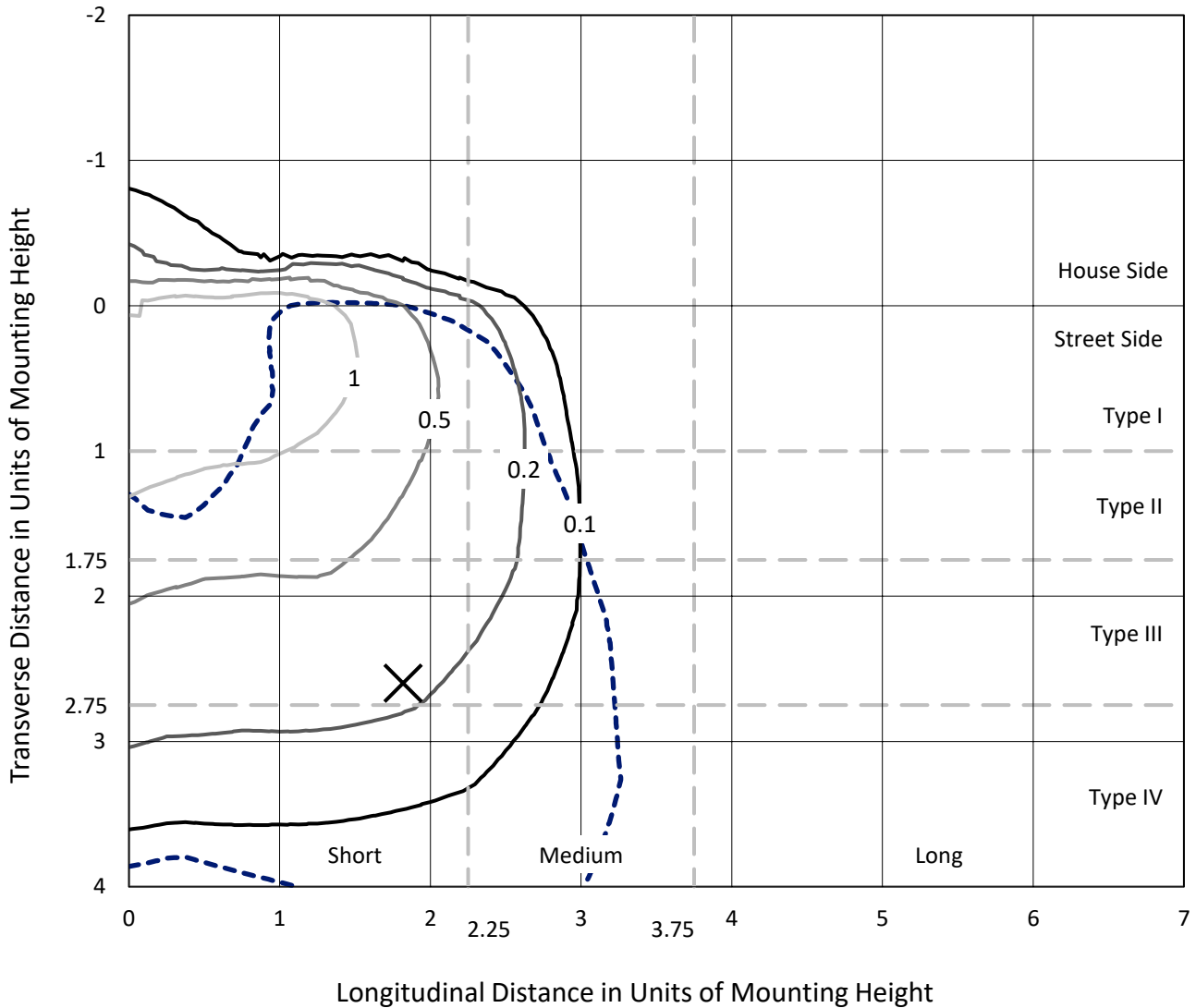
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

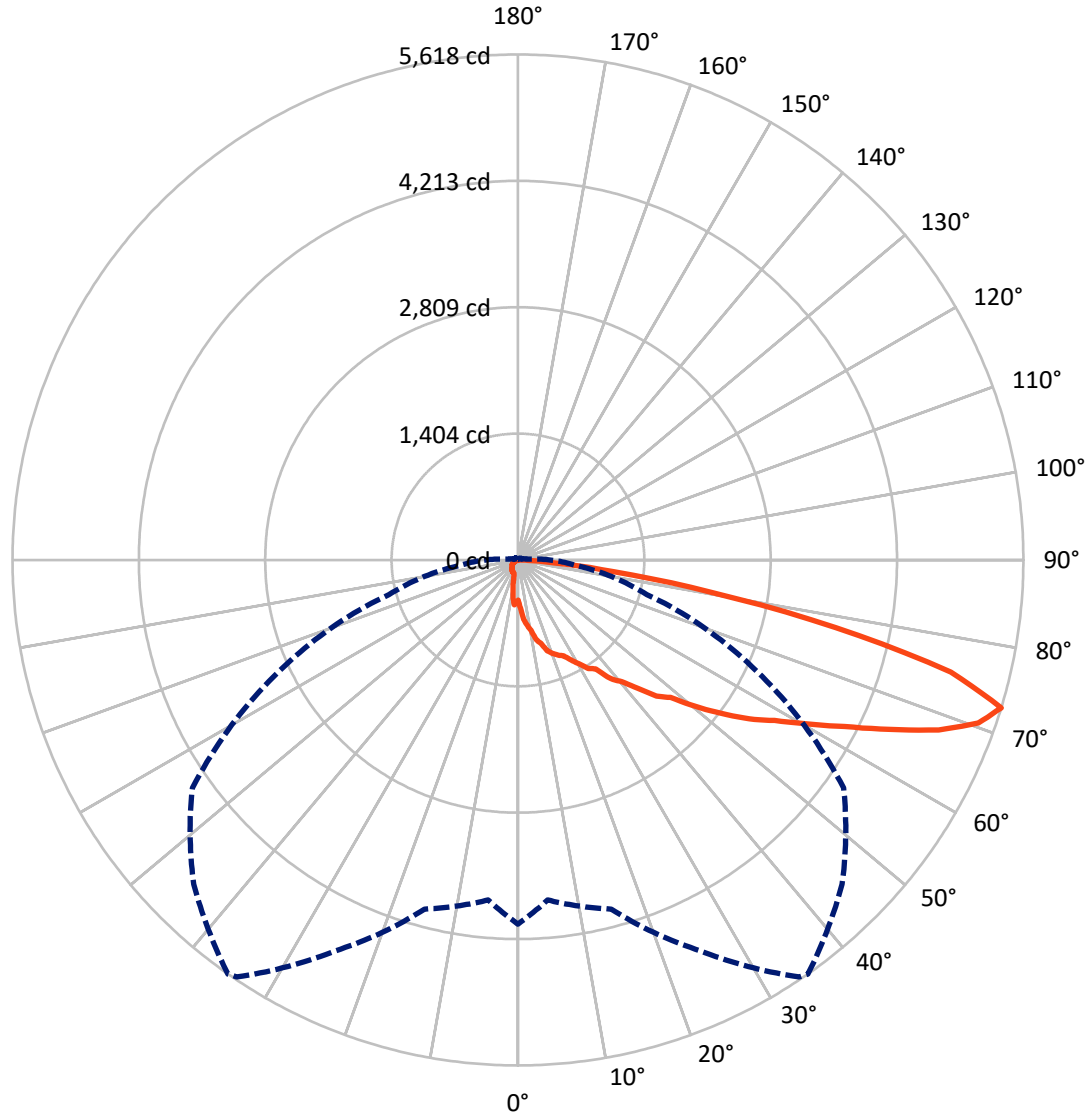
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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

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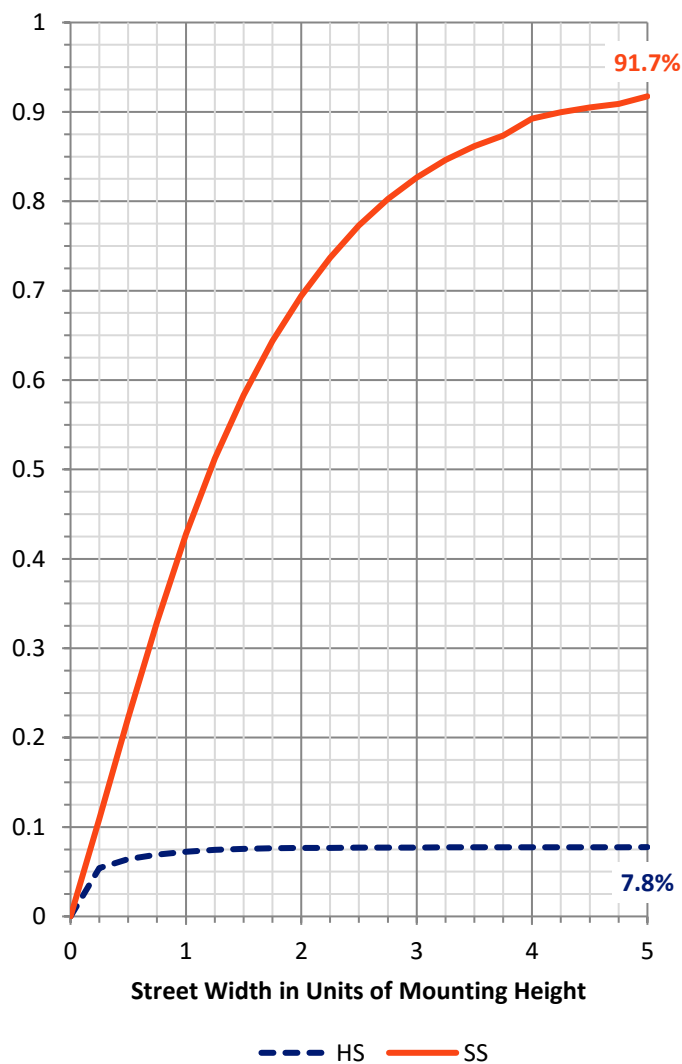
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	585.2	0.0	585.2
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	6917.8	0.0	6917.8
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	7503.0	0.0	7503.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.0	0.8
10°-20°	192.0	2.6
20°-30°	349.7	4.7
30°-40°	603.2	8.0
40°-50°	1072.2	14.3
50°-60°	1600.0	21.3
60°-70°	2044.1	27.2
70°-80°	1422.2	19.0
80°-90°	162.7	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°	7503.0	100.0
0°-180°	7503.0	100.0

**Coefficient of Utilization**

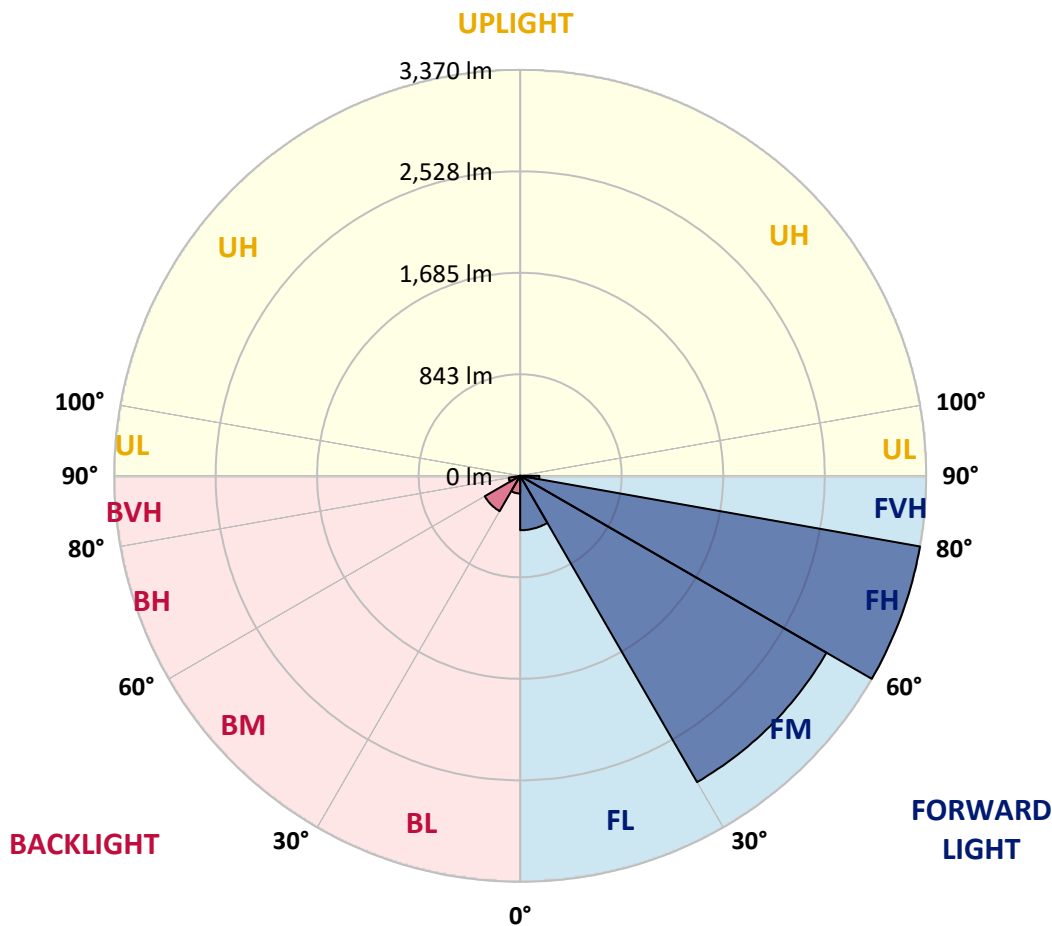


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	451.5	6.0			
FM (30°-60°)	2936.0	39.1			
FH (60°-80°)	3370.4	44.9			G2/5000
FVH (80°-90°)	160.0	2.1			G2/225
BL (0°-30°)	147.2	2.0	B1/500		
BM (30°-60°)	339.4	4.5	B1/1000		
BH (60°-80°)	95.9	1.3	B0/110		G0/110
BVH (80°-90°)	2.7	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0
2.5°	568.8	546.5	510.3	513.0	529.2	532.6	537.5	524.7	513.3	493.3	532.2
5°	728.7	696.6	676.3	669.9	660.4	661.2	638.2	646.5	644.2	658.9	676.7
7.5°	818.8	801.1	775.5	768.3	733.6	729.8	701.5	739.6	743.4	738.1	767.2
10°	854.7	831.3	834.3	807.5	790.2	794.7	799.2	802.3	807.2	812.1	776.6
12.5°	875.8	879.9	921.1	893.2	910.5	910.5	941.1	908.6	909.7	874.3	880.3
15°	970.8	993.9	975.4	975.0	956.1	961.0	996.5	970.8	984.1	973.5	932.8
17.5°	1090.0	1094.6	1059.5	1044.0	1061.0	1061.4	1046.3	1045.2	999.1	1076.8	1027.4
20°	1128.1	1153.8	1104.0	1043.6	1114.2	1110.8	1109.6	1091.9	1015.4	1123.2	1082.5
22.5°	1231.9	1195.3	1161.3	1121.7	1149.3	1149.3	1145.1	1106.3	1076.5	1119.1	1136.4
25°	1264.3	1268.8	1224.7	1211.9	1212.6	1178.7	1175.7	1159.1	1130.4	1203.2	1168.5
27.5°	1375.9	1374.0	1268.1	1303.9	1258.3	1258.6	1175.3	1212.6	1217.5	1207.3	1246.2
30°	1485.7	1516.2	1356.3	1401.6	1353.7	1339.3	1257.9	1291.1	1299.7	1288.1	1337.1
32.5°	1625.6	1670.5	1515.1	1470.6	1397.4	1438.2	1382.0	1303.5	1346.5	1451.0	1478.5
35°	1773.9	1795.7	1630.2	1567.9	1485.3	1484.9	1483.1	1489.5	1537.0	1654.7	1678.1
37.5°	2040.1	1988.5	1838.7	1696.2	1714.6	1673.5	1644.9	1675.0	1724.4	1918.3	2018.3
40°	2188.7	2151.4	1940.6	1856.1	1764.4	1779.5	1857.2	1853.8	1985.5	2188.4	2338.1
42.5°	2333.2	2297.8	2090.3	2022.0	1904.4	1945.5	1979.4	2022.4	2292.1	2619.5	2701.7
45°	2461.8	2357.7	2211.4	2214.0	2152.9	2157.8	2217.8	2257.4	2647.4	2983.1	3040.8
47.5°	2539.5	2453.9	2313.6	2311.0	2307.2	2284.2	2566.7	2602.9	2930.7	3329.3	3334.6
50°	2648.9	2541.8	2418.8	2421.1	2508.2	2556.9	2894.1	2890.3	3204.1	3618.2	3496.4
52.5°	2785.1	2654.2	2518.8	2619.5	2754.1	2833.3	3107.2	3218.8	3497.9	3799.7	3559.8
55°	2959.3	2795.6	2665.1	2794.1	3087.9	3118.5	3315.7	3551.5	3818.1	3984.9	3580.1
57.5°	3163.7	2968.4	2862.8	3070.6	3363.6	3364.4	3619.4	3906.0	4014.7	4060.3	3557.1
60°	3384.0	3156.2	3049.8	3236.9	3667.7	3698.6	3956.9	4101.8	4214.2	4098.4	3516.0
62.5°	3577.9	3326.3	3243.7	3463.6	4001.1	4074.2	4251.1	4230.4	4358.3	4146.3	3411.6
65°	3808.7	3546.6	3492.3	3817.0	4436.3	4537.0	4581.5	4458.6	4406.5	4109.3	3139.6
67.5°	4037.3	3792.1	3790.6	4208.9	5007.0	5041.7	4994.9	4780.3	4350.3	3783.4	2641.4
70°	4198.3	3935.1	4034.3	4638.1	5525.6	5428.3	5231.4	4932.3	3944.5	2899.7	1725.6
72.5°	4047.1	3793.3	4016.9	4790.9	5589.7	5617.6	5094.5	4418.2	2930.7	1483.1	624.6
75°	3075.5	2920.1	3487.7	4250.4	4962.9	4969.3	4252.3	3116.2	1443.1	402.8	172.7
77.5°	1549.1	1499.6	2207.6	3017.4	3620.9	3610.3	2921.6	1669.4	464.3	133.9	87.1
80°	784.1	744.5	939.5	1627.9	2150.3	2166.1	1668.2	747.6	234.2	72.8	60.3
82.5°	481.7	457.1	514.1	736.6	1043.6	1068.9	632.9	473.4	145.2	43.0	55.1
85°	93.2	98.1	295.3	368.9	416.8	407.0	187.5	389.6	43.8	25.6	40.0
87.5°	0.0	1.5	68.3	120.3	120.7	107.1	42.6	86.4	6.0	7.2	4.9
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°	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0	447.0
2.5°	538.6	532.9	485.8	480.5	481.7	473.7	471.1	454.5	450.3	476.0	480.5
5°	669.1	631.4	587.6	571.8	547.3	505.8	499.8	489.2	477.5	482.0	478.6
7.5°	749.1	698.9	652.1	568.8	499.8	439.4	429.6	411.5	393.4	393.8	405.5
10°	761.9	719.7	655.2	553.7	474.9	399.4	333.8	286.3	264.8	245.5	251.2
12.5°	836.2	797.0	678.2	549.2	438.7	321.0	235.0	188.6	168.2	161.4	160.7
15°	895.8	864.9	717.4	535.2	358.3	225.9	168.2	154.6	150.9	157.3	155.4
17.5°	984.4	928.6	713.2	477.5	273.1	171.6	155.0	153.1	157.7	161.4	162.6
20°	1023.3	942.9	685.0	387.0	204.4	157.3	151.2	147.5	155.8	167.1	164.8
22.5°	1062.5	967.5	651.8	316.8	164.4	150.5	147.1	144.1	150.5	161.4	164.1
25°	1080.2	1006.7	614.8	247.4	152.8	142.6	140.3	141.4	146.7	156.5	155.4
27.5°	1169.6	1011.2	544.3	195.4	147.9	136.9	136.9	139.6	139.6	152.8	151.6
30°	1225.4	1087.8	486.9	164.4	142.2	129.0	133.5	134.7	132.8	147.1	148.2
32.5°	1323.5	1108.9	431.1	150.9	133.1	127.9	127.1	127.9	129.4	143.3	143.7
35°	1474.4	1213.0	354.9	145.6	128.6	122.2	116.9	121.1	124.8	135.0	136.9
37.5°	1769.3	1319.7	289.3	141.4	126.4	116.9	115.0	114.3	121.1	132.8	136.5
40°	2008.1	1508.7	235.4	138.0	121.8	113.9	109.0	109.4	115.4	124.1	129.7
42.5°	2346.0	1645.2	199.5	132.8	115.4	107.5	101.8	105.2	107.9	116.9	120.7
45°	2628.2	1751.2	175.8	129.4	109.0	101.5	96.9	100.7	98.1	102.6	107.9
47.5°	2852.6	1843.6	158.0	121.1	104.9	98.1	92.4	91.3	86.8	87.9	92.8
50°	2975.9	1828.2	143.3	112.8	99.6	94.7	86.8	78.8	72.8	72.4	75.4
52.5°	3019.7	1745.6	131.3	105.6	93.2	87.1	78.1	67.1	61.1	59.2	61.9
55°	3031.7	1626.8	120.3	97.7	87.1	77.7	68.3	56.6	50.2	47.1	49.8
57.5°	2992.5	1443.8	109.8	90.1	80.0	68.6	58.5	46.4	40.4	36.6	38.8
60°	2895.6	1211.5	100.3	80.7	72.4	60.7	49.4	37.3	30.9	27.5	28.7
62.5°	2681.0	949.7	90.1	72.0	64.5	53.2	41.5	29.4	23.4	20.4	20.7
65°	2354.3	708.0	78.5	63.7	57.3	46.0	33.2	22.6	17.7	15.1	14.7
67.5°	1875.7	479.8	66.8	55.1	50.9	38.8	26.4	17.7	14.0	12.1	11.3
70°	1102.5	241.8	55.4	47.5	43.8	32.4	20.7	14.3	12.8	11.3	10.6
72.5°	363.6	104.5	43.4	39.2	36.2	26.0	16.2	13.2	12.4	10.9	10.2
75°	126.7	60.3	32.1	30.2	28.7	19.6	13.6	12.1	12.1	10.6	9.4
77.5°	83.0	46.8	23.8	21.9	21.5	14.3	11.7	11.3	10.6	8.7	7.2
80°	69.0	26.4	16.6	15.5	15.1	9.1	9.4	8.3	6.4	3.8	1.5
82.5°	63.7	15.8	8.7	9.4	8.7	3.4	5.3	4.5	3.4	1.5	0.0
85°	37.3	7.2	4.9	4.9	3.8	0.8	2.6	2.6	1.5	0.4	0.0
87.5°	4.1	3.4	2.6	2.6	1.9	0.0	1.1	0.8	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)