

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: P366769

Luminaire Tested: **MSA-SA1B-730-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366769  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-730-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3406 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

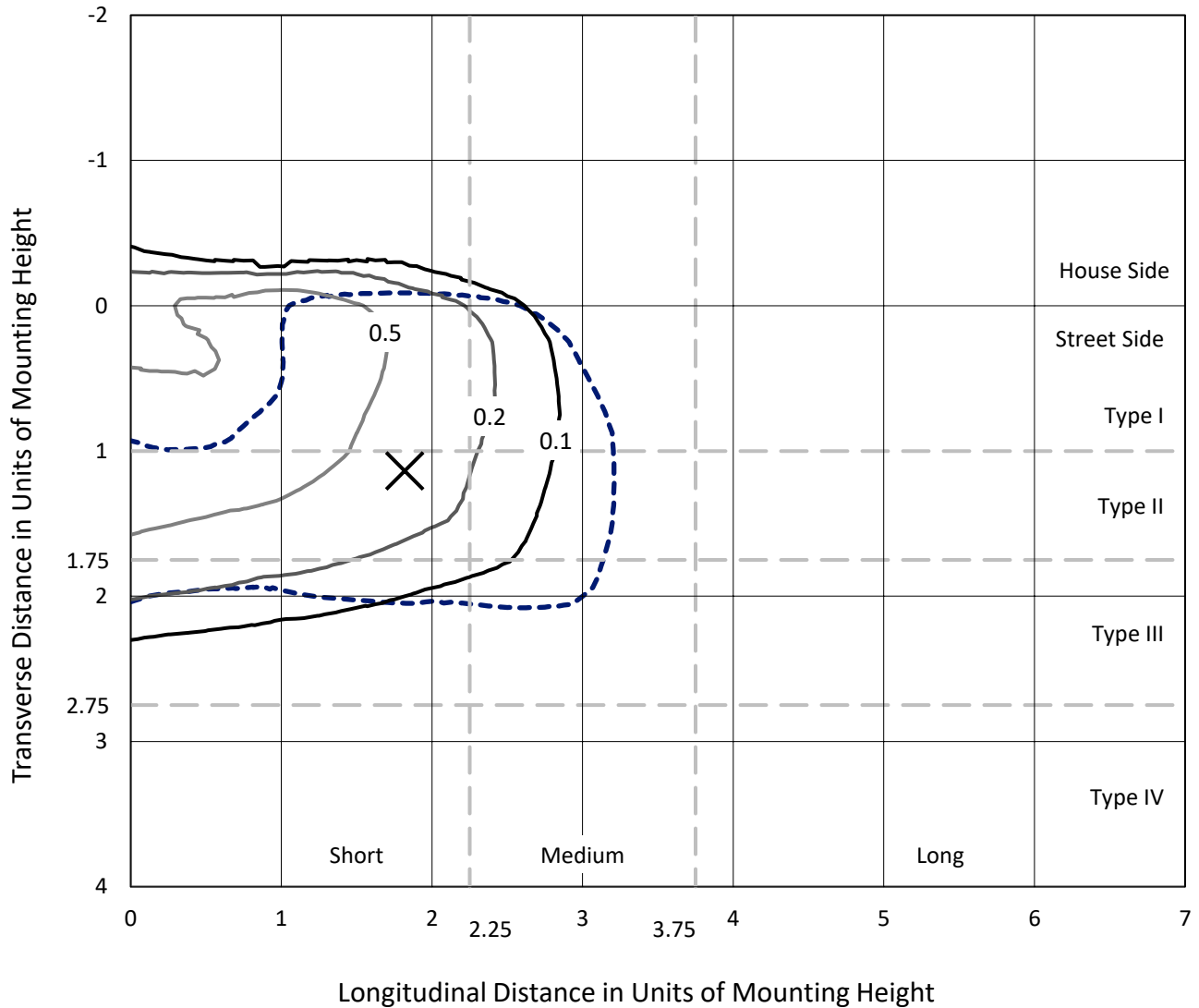
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

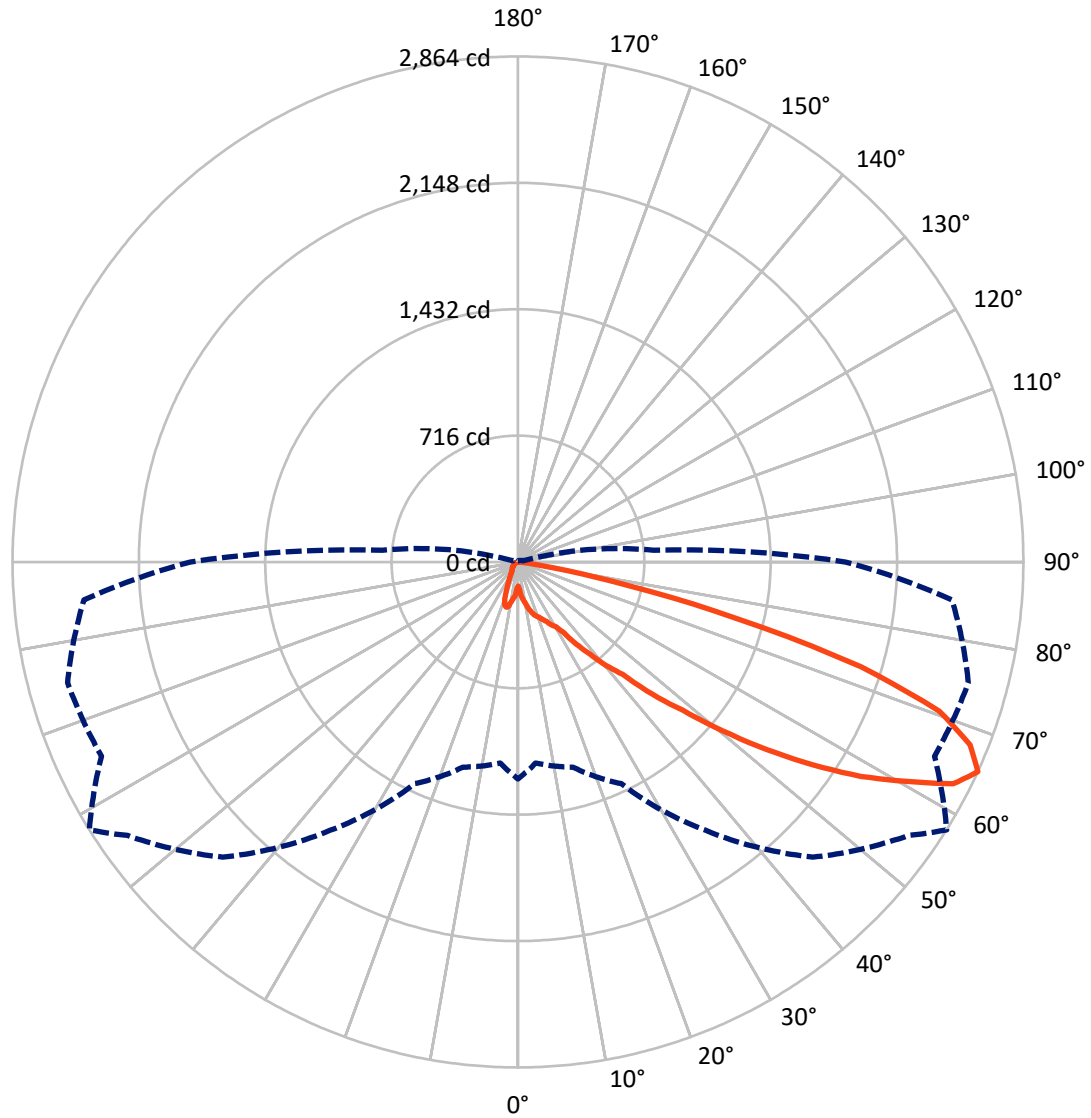
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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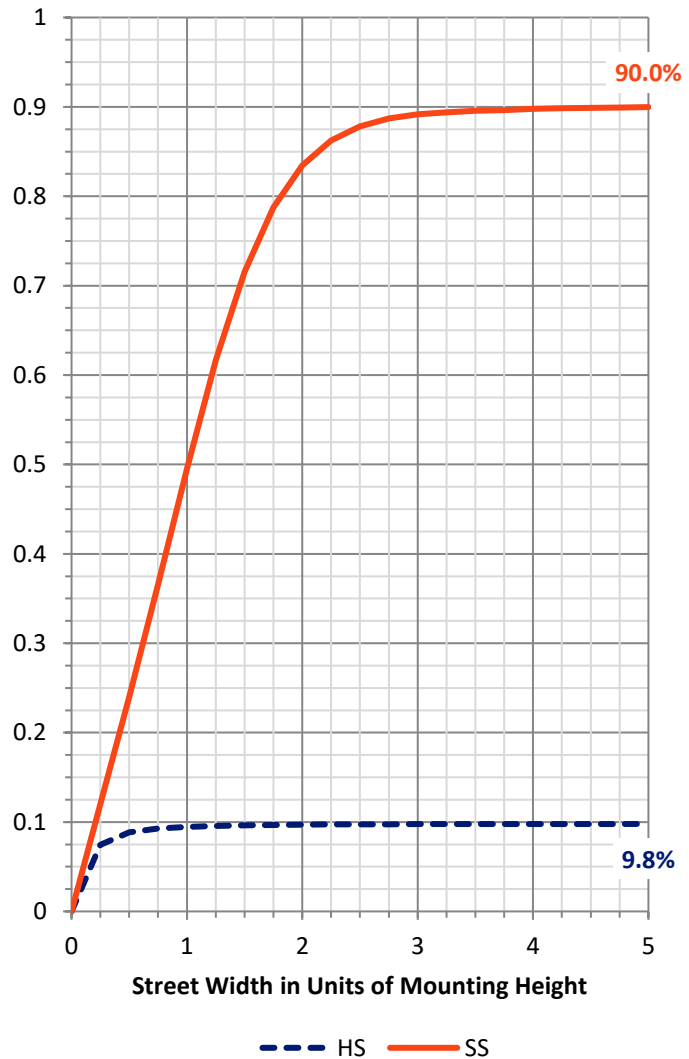
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	336.1	0.0	336.1
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	3069.9	0.0	3069.9
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	3406.0	0.0	3406.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.2	0.6
10°-20°	69.9	2.1
20°-30°	135.3	4.0
30°-40°	270.0	7.9
40°-50°	552.0	16.2
50°-60°	979.1	28.7
60°-70°	1032.2	30.3
70°-80°	334.6	9.8
80°-90°	13.7	0.4
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°	3406.0	100.0
0°-180°	3406.0	100.0

**Coefficient of Utilization**

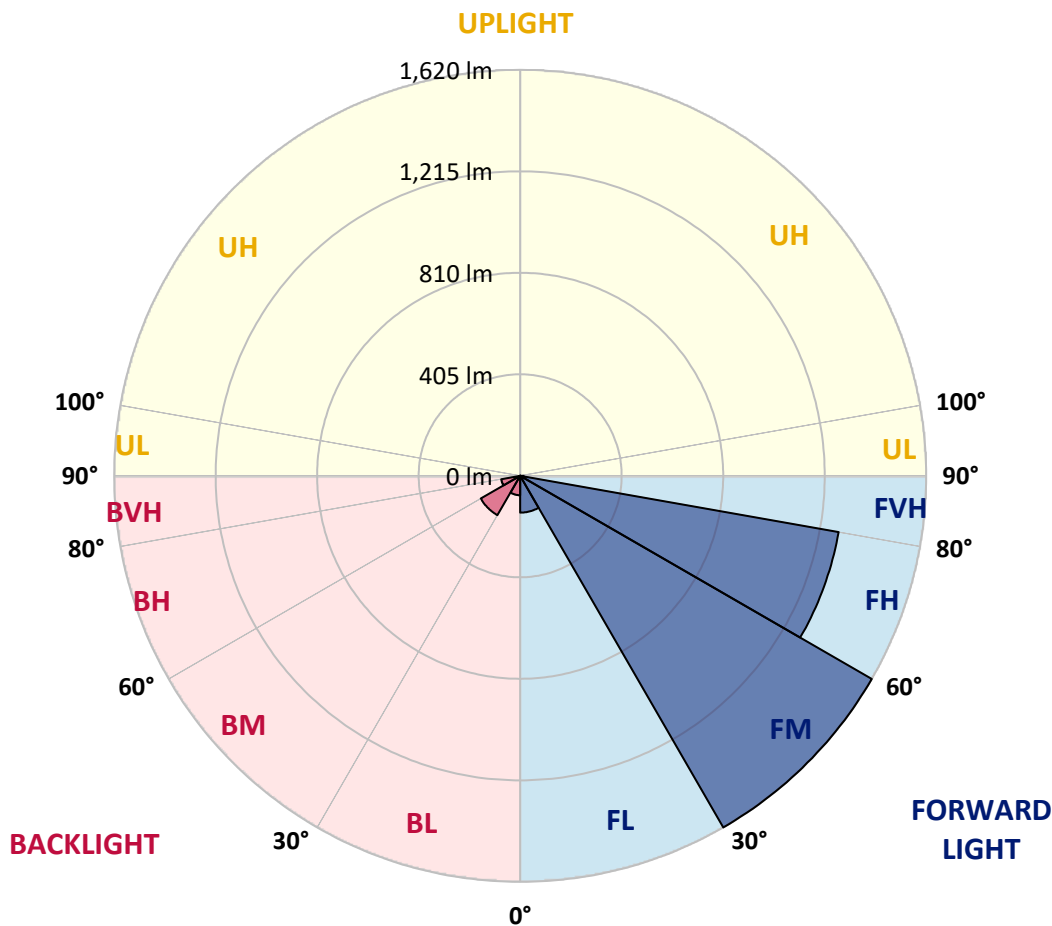


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	146.9	4.3			
FM (30°-60°)	1619.7	47.6			
FH (60°-80°)	1290.1	37.9			G1/1800
FVH (80°-90°)	13.1	0.4			G1/100
BL (0°-30°)	77.5	2.3	B0/110		
BM (30°-60°)	181.3	5.3	B0/220		
BH (60°-80°)	76.7	2.3	B0/110		G0/110
BVH (80°-90°)	0.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	166.5	161.5	153.6	154.9	156.5	159.6	157.1	154.8	152.3	149.0	161.5
5°	201.0	192.7	192.0	190.2	188.9	188.7	191.8	190.8	192.2	198.3	204.6
7.5°	213.6	210.2	203.7	206.3	202.1	198.9	212.5	216.9	225.3	228.2	244.7
10°	212.3	207.3	210.0	211.3	214.2	226.1	234.7	239.5	246.8	262.5	259.3
12.5°	218.4	222.8	225.7	225.9	240.7	262.5	268.7	272.7	285.7	291.9	308.0
15°	238.9	246.2	241.6	243.5	248.3	275.0	289.4	298.2	316.6	336.6	340.6
17.5°	268.3	272.9	263.3	256.4	269.6	284.2	310.3	319.5	331.2	377.8	386.4
20°	305.3	313.2	292.4	265.0	282.5	299.7	328.1	332.5	345.0	405.8	419.4
22.5°	391.8	380.1	348.4	305.7	300.5	308.2	335.2	352.5	373.6	421.5	453.1
25°	477.1	473.1	426.5	378.7	344.2	327.0	362.8	372.4	406.9	458.9	476.4
27.5°	572.0	580.1	502.2	473.3	405.6	349.2	380.1	404.1	444.9	472.5	514.5
30°	697.3	684.4	593.1	564.2	486.9	410.4	424.8	426.3	486.3	517.4	557.3
32.5°	795.5	803.7	689.0	644.5	582.8	504.5	458.3	478.3	521.2	590.5	628.2
35°	901.7	900.9	789.1	729.3	648.6	581.4	557.9	572.4	626.3	704.7	714.7
37.5°	1060.5	1046.9	914.9	827.3	758.6	701.3	683.3	663.9	719.5	794.3	831.7
40°	1210.3	1163.3	1041.3	937.4	849.5	826.1	760.9	772.8	789.3	888.1	991.4
42.5°	1361.6	1332.4	1169.4	1082.3	974.4	918.8	876.2	870.6	949.1	1066.0	1172.9
45°	1561.2	1472.0	1341.6	1265.1	1140.1	1084.3	1049.9	1070.5	1141.0	1311.9	1383.0
47.5°	1728.8	1646.7	1534.7	1418.5	1287.3	1350.1	1285.6	1253.2	1350.1	1526.7	1621.2
50°	1872.8	1781.3	1668.0	1581.9	1560.6	1620.8	1490.4	1502.3	1565.2	1772.7	1826.0
52.5°	1977.5	1881.2	1782.3	1740.7	1827.9	1858.2	1792.8	1766.6	1823.7	1982.5	2008.4
55°	2056.3	1957.8	1880.5	1937.8	2106.6	2096.6	2119.6	2029.9	2084.5	2201.3	2189.0
57.5°	2061.1	1944.3	1899.1	1991.3	2223.0	2377.4	2444.7	2292.0	2323.1	2372.4	2344.8
60°	1910.4	1794.2	1790.5	1921.5	2256.7	2450.0	2597.3	2522.9	2481.3	2517.9	2465.6
62.5°	1610.1	1528.8	1566.7	1711.5	2131.1	2410.0	2678.6	2768.2	2606.1	2614.4	2540.0
65°	1229.4	1144.1	1203.5	1385.9	1856.5	2365.1	2701.6	2864.1	2603.8	2641.8	2468.6
67.5°	814.2	764.8	832.1	1033.1	1476.0	2087.8	2689.7	2763.4	2521.2	2534.6	2203.8
70°	420.4	408.3	462.7	621.3	992.4	1604.0	2573.0	2532.7	2353.4	2183.5	1699.8
72.5°	134.6	135.2	187.5	283.8	535.0	976.5	1977.7	2032.9	1883.2	1597.2	1037.9
75°	59.6	58.7	78.4	119.1	223.0	437.8	1228.7	1288.3	1172.5	878.7	436.3
77.5°	43.0	41.6	50.2	69.6	110.5	148.4	576.1	621.7	531.6	304.5	99.9
80°	30.3	30.1	36.4	48.9	69.0	66.0	182.0	204.0	163.4	73.8	29.3
82.5°	17.1	17.6	25.3	34.5	42.0	33.0	51.2	56.4	55.0	39.3	12.8
85°	8.2	9.2	16.5	24.9	22.1	12.8	18.2	19.8	23.0	22.8	6.5
87.5°	0.0	0.0	6.7	11.3	5.9	1.9	5.6	6.3	6.1	7.3	1.5
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°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	164.0	162.8	148.2	149.4	152.6	151.3	152.5	149.8	146.7	159.2	159.0
5°	207.3	198.7	194.1	189.9	190.6	182.0	187.0	189.3	188.9	196.0	197.9
7.5°	245.3	233.8	224.6	215.7	202.3	190.2	197.7	202.5	205.8	218.0	222.8
10°	263.1	253.7	250.1	232.8	223.2	215.7	206.7	200.2	202.9	199.6	202.9
12.5°	302.2	295.9	281.9	264.4	252.9	237.6	204.0	176.0	158.8	159.0	157.8
15°	337.9	337.5	316.6	287.7	254.3	210.6	158.2	122.9	106.6	102.0	100.5
17.5°	384.5	378.7	340.6	297.8	237.8	163.0	107.8	84.2	82.7	85.3	84.2
20°	414.2	405.8	352.5	283.1	196.0	110.3	81.3	74.6	79.2	83.0	82.1
22.5°	443.9	431.3	361.5	265.0	139.4	80.7	73.4	72.3	75.2	80.0	80.7
25°	460.2	457.8	379.1	231.3	95.5	70.8	70.8	70.4	71.3	74.8	74.2
27.5°	507.6	473.9	365.9	180.5	73.8	65.0	66.0	65.6	62.1	65.6	65.8
30°	537.1	521.6	366.9	128.5	65.0	57.5	60.0	57.0	51.8	54.7	54.1
32.5°	596.6	557.9	364.0	86.7	59.3	54.8	51.0	46.6	42.8	43.9	43.0
35°	665.8	636.3	325.0	69.6	55.2	48.5	42.4	38.0	33.9	34.9	34.7
37.5°	803.5	709.7	292.8	62.7	52.5	44.5	37.4	31.3	29.1	29.7	30.3
40°	931.0	832.3	232.8	59.6	47.9	39.7	30.9	26.5	25.1	25.5	26.1
42.5°	1121.7	929.7	175.9	56.6	43.3	33.6	25.7	22.8	21.5	22.2	22.6
45°	1306.1	1012.5	131.4	53.9	39.5	29.0	21.7	19.8	18.2	18.8	19.6
47.5°	1490.4	1104.6	98.0	49.7	35.3	24.9	18.6	17.3	16.3	16.5	17.5
50°	1655.3	1147.5	77.1	44.5	31.8	21.7	16.9	15.5	15.1	15.3	16.1
52.5°	1776.5	1147.9	65.0	39.9	28.6	19.2	15.9	14.4	14.2	14.6	15.3
55°	1886.0	1117.2	56.4	35.9	25.7	17.5	15.1	13.8	13.8	14.2	15.0
57.5°	1958.7	1060.9	48.9	31.6	23.2	16.5	14.6	13.2	13.0	12.8	13.4
60°	1994.2	984.0	41.4	27.8	20.9	15.9	14.2	11.7	11.5	11.1	11.5
62.5°	1971.8	887.7	34.7	24.0	18.6	15.1	12.5	10.2	9.8	9.0	9.6
65°	1857.1	770.7	29.3	20.5	16.1	12.8	10.5	8.6	7.7	6.7	6.5
67.5°	1622.6	626.1	24.5	17.6	13.8	10.5	8.6	7.7	5.9	5.2	5.0
70°	1216.0	427.5	20.3	15.1	11.5	9.0	7.3	6.9	5.6	5.0	4.6
72.5°	713.4	230.7	17.1	13.2	9.8	7.5	5.9	6.3	5.6	4.6	4.2
75°	285.0	76.7	13.6	10.5	7.9	5.4	5.0	5.2	5.0	4.2	3.5
77.5°	65.0	24.2	10.5	8.2	6.1	3.5	4.0	4.4	4.4	3.5	2.5
80°	20.3	9.6	6.1	5.2	4.4	1.9	2.9	3.1	2.1	1.0	0.0
82.5°	6.5	2.7	2.1	2.1	1.9	0.4	0.6	0.4	0.0	0.0	0.0
85°	2.5	1.7	1.3	1.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	0.8	0.6	0.8	0.4	0.0	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	0.0

(END OF REPORT)