

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: P367037

Luminaire Tested: **MSA-SA1D-730-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367037  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-730-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

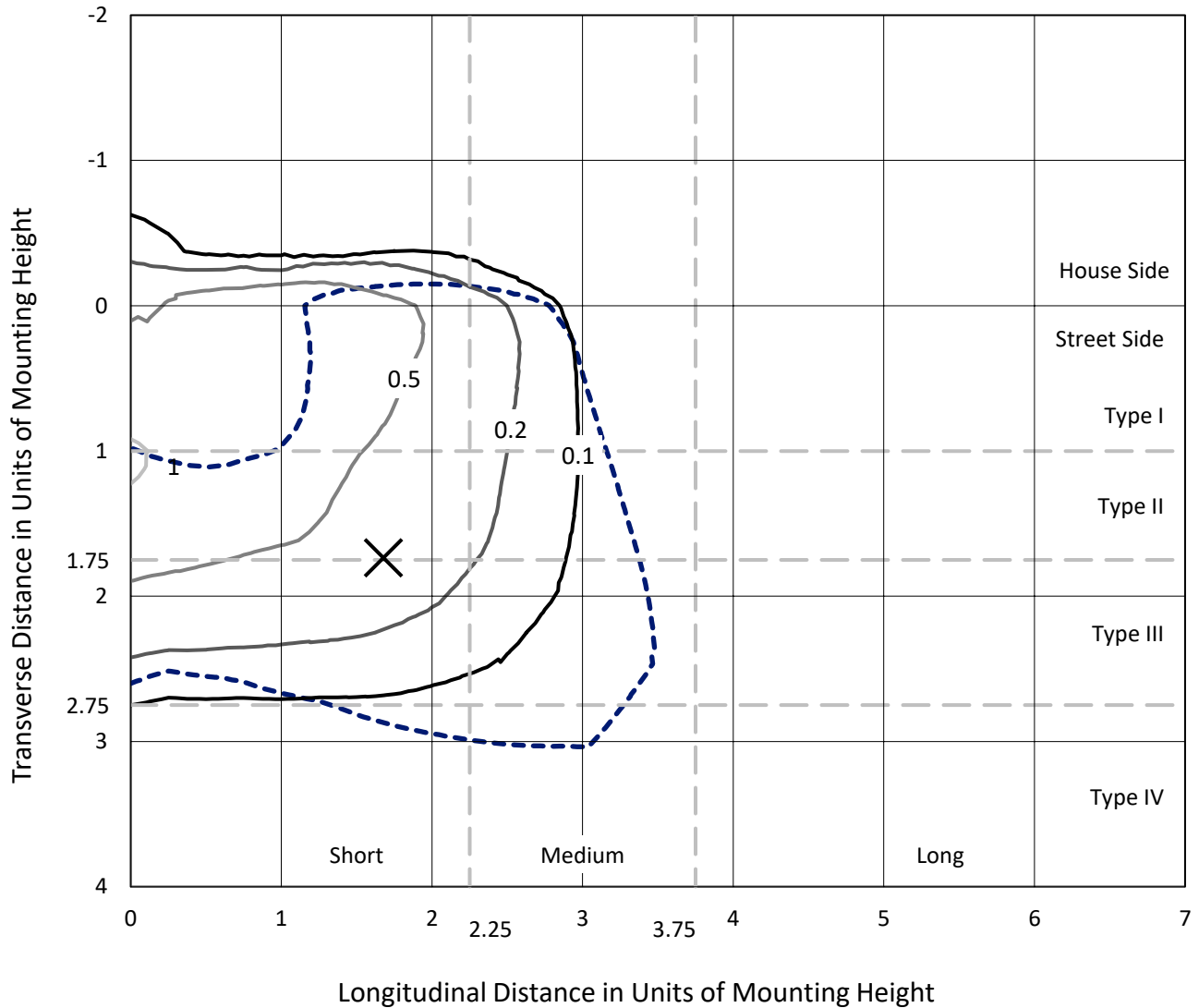
Lumens per Lamp: N/A  
Luminaire Lumens: 4708 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

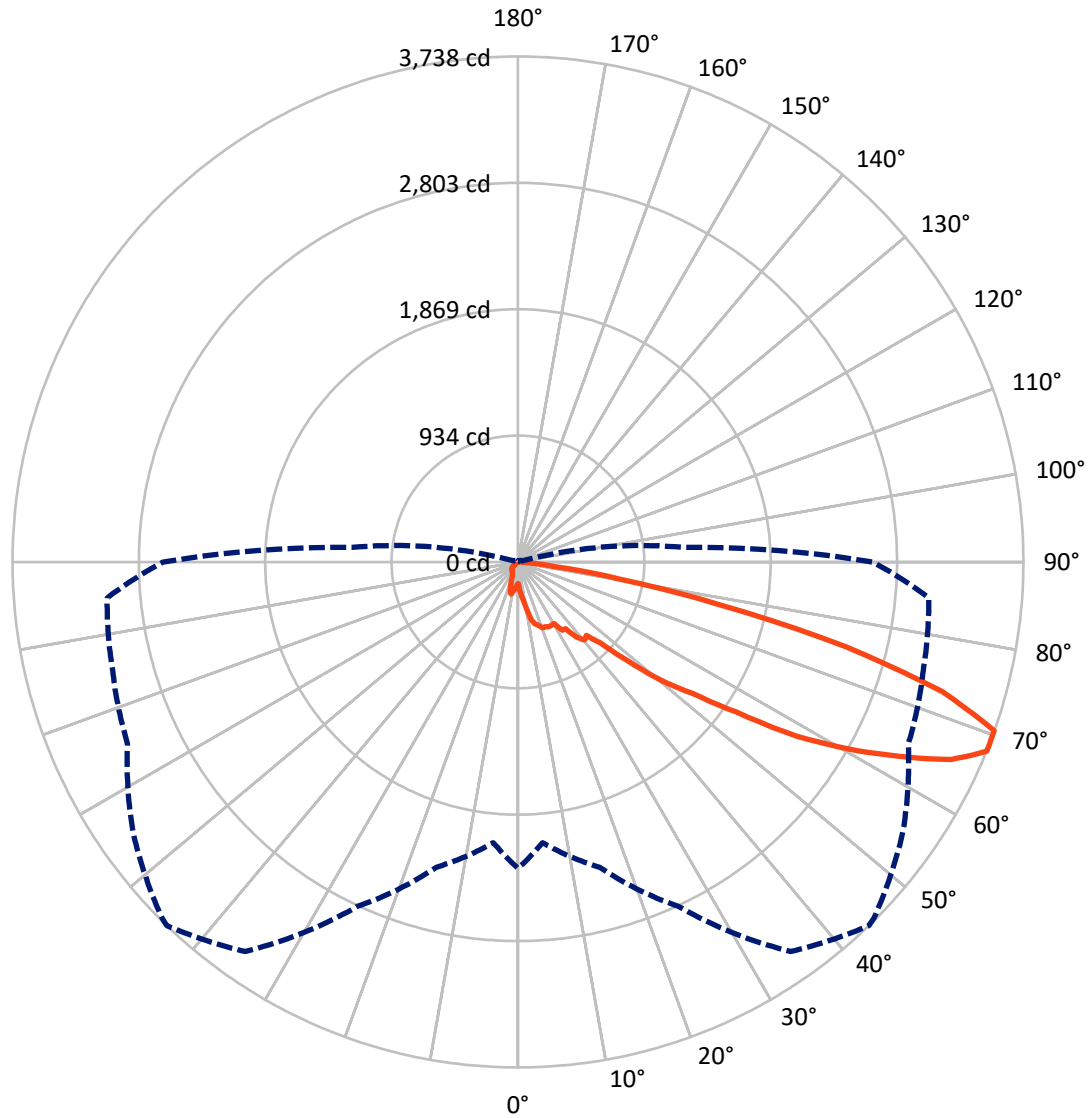
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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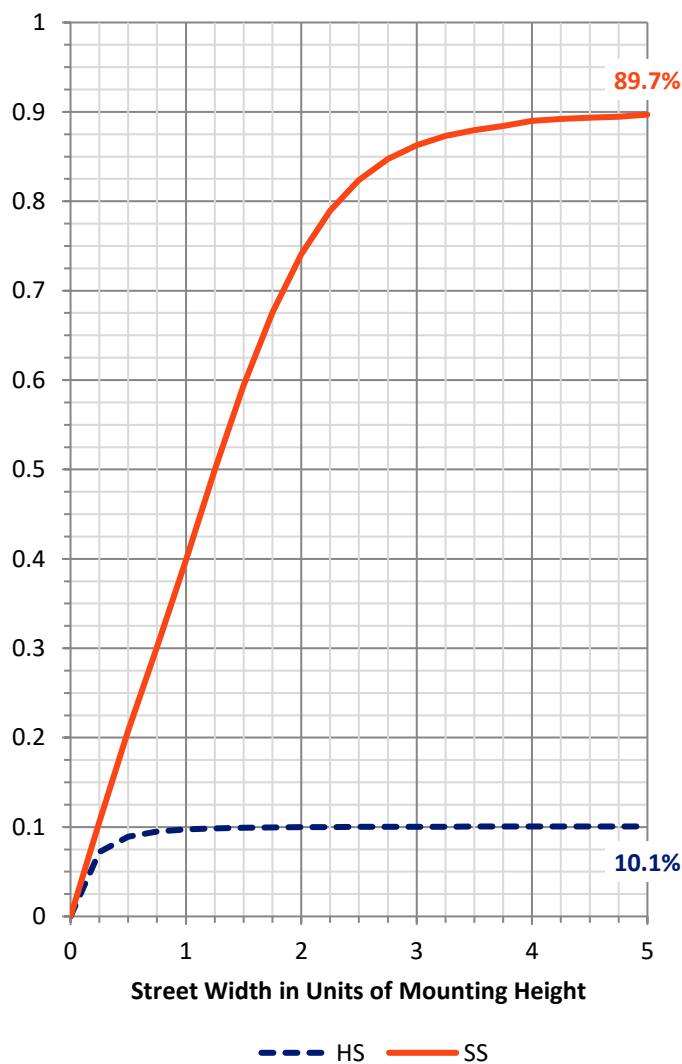
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	478.2	0.0	478.2
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	4229.8	0.0	4229.8
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	4708.0	0.0	4708.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	0.5
10°-20°	98.4	2.1
20°-30°	174.4	3.7
30°-40°	283.4	6.0
40°-50°	567.1	12.0
50°-60°	1163.5	24.7
60°-70°	1598.3	33.9
70°-80°	751.2	16.0
80°-90°	48.1	1.0
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°	4708.0	100.0
0°-180°	4708.0	100.0

**Coefficient of Utilization**

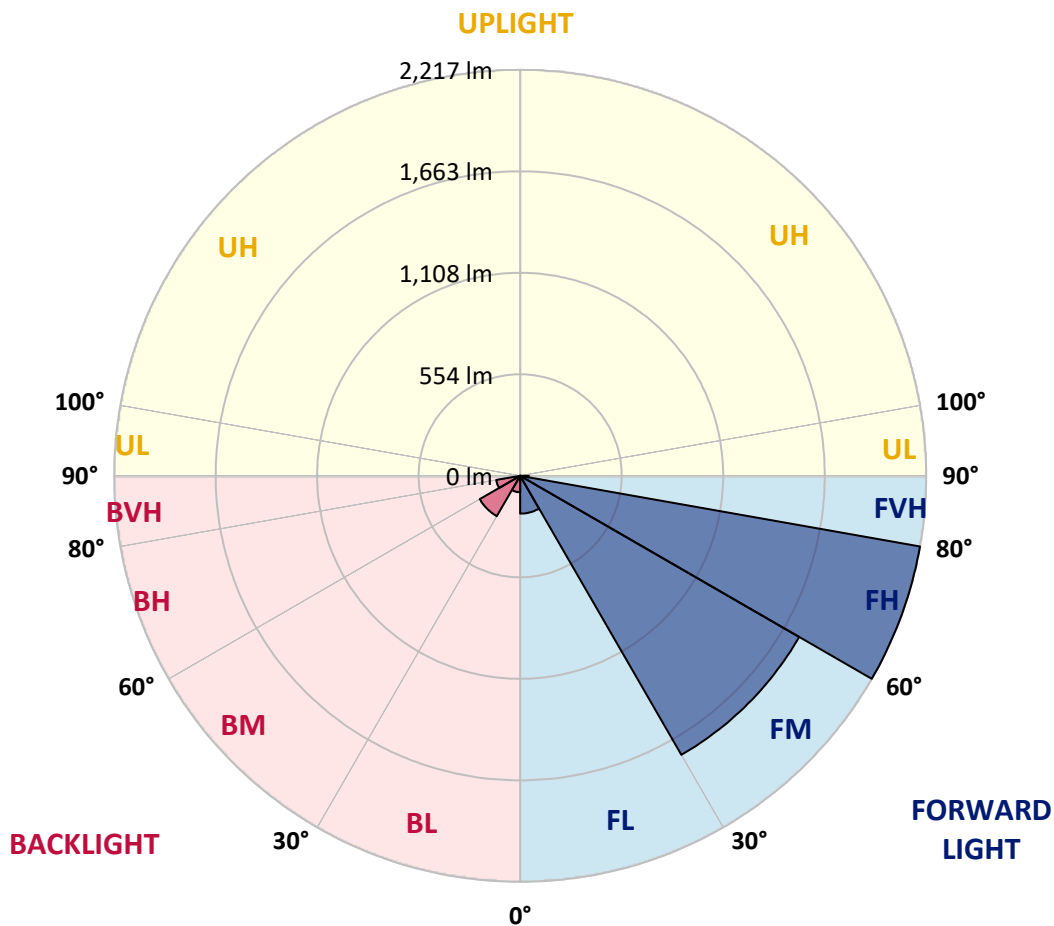


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	206.5	4.4			
FM (30°-60°)	1759.3	37.4			
FH (60°-80°)	2216.8	47.1			G2/5000
FVH (80°-90°)	47.1	1.0			G1/100
BL (0°-30°)	89.8	1.9	B0/110		
BM (30°-60°)	254.8	5.4	B1/1000		
BH (60°-80°)	132.7	2.8	B1/500		G1/500
BVH (80°-90°)	1.0	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°	35°	44°	45°	55°	65°	75°	85°
0°	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6
2.5°	201.7	195.2	185.9	188.0	189.0	191.9	192.1	188.5	178.1	175.2	188.0
5°	282.7	266.9	264.0	258.1	246.1	239.6	238.1	244.6	236.2	233.6	237.0
7.5°	361.1	347.6	332.8	324.8	299.8	284.5	283.8	286.3	287.9	278.8	283.5
10°	413.3	398.5	395.4	376.4	354.9	351.3	349.7	339.8	331.8	325.0	302.4
12.5°	460.5	460.3	466.0	438.7	435.4	439.0	437.7	402.4	394.3	366.1	359.6
15°	523.4	539.0	514.3	491.4	462.4	474.8	471.5	448.9	443.4	424.2	396.4
17.5°	588.5	592.7	551.4	516.4	508.8	492.5	495.9	487.8	460.3	475.6	448.1
20°	590.1	599.2	555.0	497.2	520.3	519.5	519.7	512.0	475.6	511.4	486.2
22.5°	611.9	589.6	548.6	511.7	515.8	519.7	523.9	514.3	506.5	515.3	520.0
25°	603.1	594.2	554.8	530.4	526.5	529.6	530.6	542.8	537.9	559.2	547.5
27.5°	625.9	613.2	542.6	547.0	533.2	529.6	523.4	564.1	578.7	561.8	592.9
30°	665.1	663.3	563.6	570.1	559.5	527.5	544.1	597.4	615.5	605.2	643.1
32.5°	726.4	732.6	625.1	583.1	588.5	602.8	596.6	597.4	643.3	666.4	696.5
35°	813.4	810.0	685.1	632.4	603.9	606.2	615.0	657.3	716.8	715.2	747.2
37.5°	984.2	947.3	791.3	682.8	691.3	703.0	696.5	753.4	759.1	761.2	837.5
40°	1236.0	1186.9	958.7	789.0	706.4	758.1	754.9	769.0	807.1	821.4	932.8
42.5°	1567.8	1501.8	1253.4	984.2	779.1	743.5	762.7	789.2	917.5	958.2	1080.2
45°	1934.4	1800.9	1547.3	1262.5	961.3	851.0	865.5	914.9	1092.7	1160.2	1294.9
47.5°	2171.9	2054.6	1838.3	1509.1	1151.4	1093.5	1094.8	1105.4	1298.6	1423.7	1604.4
50°	2378.3	2253.4	2052.7	1766.9	1487.6	1378.0	1353.1	1304.0	1560.8	1731.9	1932.3
52.5°	2669.6	2523.7	2267.2	2069.4	1871.0	1613.0	1604.1	1620.7	1870.0	2049.9	2268.5
55°	2932.3	2755.0	2510.2	2385.6	2308.2	1958.2	1965.8	1993.5	2266.9	2362.2	2567.5
57.5°	3048.3	2856.2	2730.3	2674.2	2633.0	2430.0	2404.5	2387.9	2580.0	2616.4	2880.9
60°	3124.4	2941.6	2884.5	2897.5	3022.6	2807.2	2784.1	2687.5	2839.1	2869.0	3161.8
62.5°	3076.4	2909.7	2921.9	3030.2	3308.0	3166.2	3099.5	2938.0	3050.9	3075.1	3363.5
65°	2773.9	2600.3	2757.1	3019.0	3525.5	3522.1	3491.2	3169.3	3168.3	3199.2	3379.1
67.5°	2265.9	2083.6	2337.3	2809.8	3516.4	3737.9	3723.3	3476.2	3185.2	3102.6	3049.4
70°	1575.3	1417.2	1704.9	2320.4	3203.1	3736.3	3712.9	3682.3	3051.7	2670.6	2364.3
72.5°	818.6	731.6	999.5	1598.9	2553.3	3282.8	3359.9	3309.5	2605.7	1940.3	1392.3
75°	278.0	249.5	412.3	848.7	1697.3	2506.8	2597.1	2546.0	1769.8	1041.0	550.6
77.5°	107.7	100.2	147.7	344.5	851.5	1527.5	1625.7	1573.5	949.1	381.4	129.5
80°	61.3	59.2	81.5	155.2	375.4	759.9	828.9	751.8	342.2	128.5	33.7
82.5°	26.0	26.7	45.4	83.9	188.7	268.2	299.1	272.9	143.3	88.0	12.5
85°	5.7	7.0	21.5	46.7	79.2	76.6	80.2	89.0	88.0	64.6	5.5
87.5°	0.0	0.0	6.7	12.7	19.0	12.5	9.9	17.4	27.0	26.0	2.3
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°	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6	158.6
2.5°	190.3	187.7	171.3	170.3	171.3	168.5	168.2	162.3	162.8	176.3	177.3
5°	237.0	224.0	210.0	205.6	201.5	192.1	197.3	197.3	197.3	205.9	208.5
7.5°	279.3	261.9	242.2	225.6	209.5	197.8	205.9	211.6	215.0	226.1	231.3
10°	298.6	281.4	263.8	240.1	227.7	223.3	213.9	209.0	215.0	212.6	215.5
12.5°	339.6	324.0	293.6	269.2	259.9	244.8	217.3	198.1	185.4	183.3	182.8
15°	379.6	369.9	329.2	296.5	264.0	229.2	182.2	156.8	143.3	141.0	141.2
17.5°	430.2	416.4	356.4	309.5	254.4	191.9	140.7	118.9	117.9	123.6	124.1
20°	463.9	441.3	370.2	298.8	222.7	145.1	110.1	104.9	113.2	123.6	122.5
22.5°	496.1	471.7	388.4	289.5	172.6	110.1	101.2	101.8	108.8	119.9	122.8
25°	517.4	508.6	410.7	267.7	131.6	95.3	96.8	100.7	106.7	117.3	117.3
27.5°	581.5	540.2	408.1	225.3	101.2	88.8	92.4	97.4	100.5	113.2	114.5
30°	620.5	607.0	421.6	182.2	88.8	80.5	87.5	91.9	94.0	108.5	109.0
32.5°	668.2	638.4	438.0	134.5	82.6	80.0	78.4	81.8	87.7	100.5	101.2
35°	726.4	717.6	414.6	105.7	80.5	74.8	71.7	73.5	77.4	85.9	87.7
37.5°	845.0	792.6	400.6	90.6	80.5	73.0	69.6	64.9	65.4	71.4	74.8
40°	945.0	928.9	361.4	88.0	76.8	70.4	62.0	56.3	52.4	54.3	55.6
42.5°	1128.5	1054.0	310.8	86.7	73.5	63.6	52.7	46.7	40.8	41.3	43.4
45°	1351.3	1190.6	265.6	85.4	71.1	56.9	44.4	37.4	31.2	31.4	33.5
47.5°	1648.8	1389.7	210.8	81.5	67.0	50.6	35.8	28.6	24.9	25.7	27.5
50°	1986.8	1564.4	166.7	75.5	62.0	44.7	29.1	23.1	21.8	22.6	24.7
52.5°	2288.7	1693.2	137.6	70.1	55.0	36.3	24.4	20.5	20.0	20.5	22.1
55°	2557.2	1767.9	115.0	63.9	47.2	29.3	22.1	19.0	18.7	18.4	19.5
57.5°	2809.0	1789.5	89.8	54.0	38.4	25.4	20.5	17.7	17.1	16.4	17.1
60°	2992.5	1752.6	65.9	43.4	31.4	23.1	19.2	15.8	15.1	13.8	14.3
62.5°	3081.1	1651.6	49.8	34.8	26.7	21.0	17.1	13.8	12.7	11.2	11.4
65°	2996.9	1485.2	39.2	29.3	22.8	17.7	14.5	11.7	10.4	8.8	8.8
67.5°	2624.4	1232.1	33.2	25.4	19.2	15.1	11.9	10.6	8.6	7.3	7.0
70°	1926.3	886.3	28.6	22.3	16.6	13.0	10.1	9.6	8.3	7.0	6.5
72.5°	1087.2	501.6	24.4	19.7	14.0	10.9	8.6	8.8	8.0	6.5	6.0
75°	414.9	169.0	20.2	16.4	11.4	8.3	7.3	7.3	7.3	5.5	4.7
77.5°	102.8	43.1	16.1	13.2	9.1	5.5	6.0	6.2	6.2	4.7	3.4
80°	28.3	14.5	9.6	9.6	6.5	3.1	4.2	4.2	3.4	1.6	0.0
82.5°	10.4	5.5	3.4	4.2	2.9	1.0	1.6	1.0	0.8	0.0	0.0
85°	4.4	2.9	2.1	2.3	1.3	0.0	0.3	0.5	0.0	0.0	0.0
87.5°	1.8	1.3	1.0	1.0	0.5	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)