

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: P367021

Luminaire Tested: **MSA-SA1D-730-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367021  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-730-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

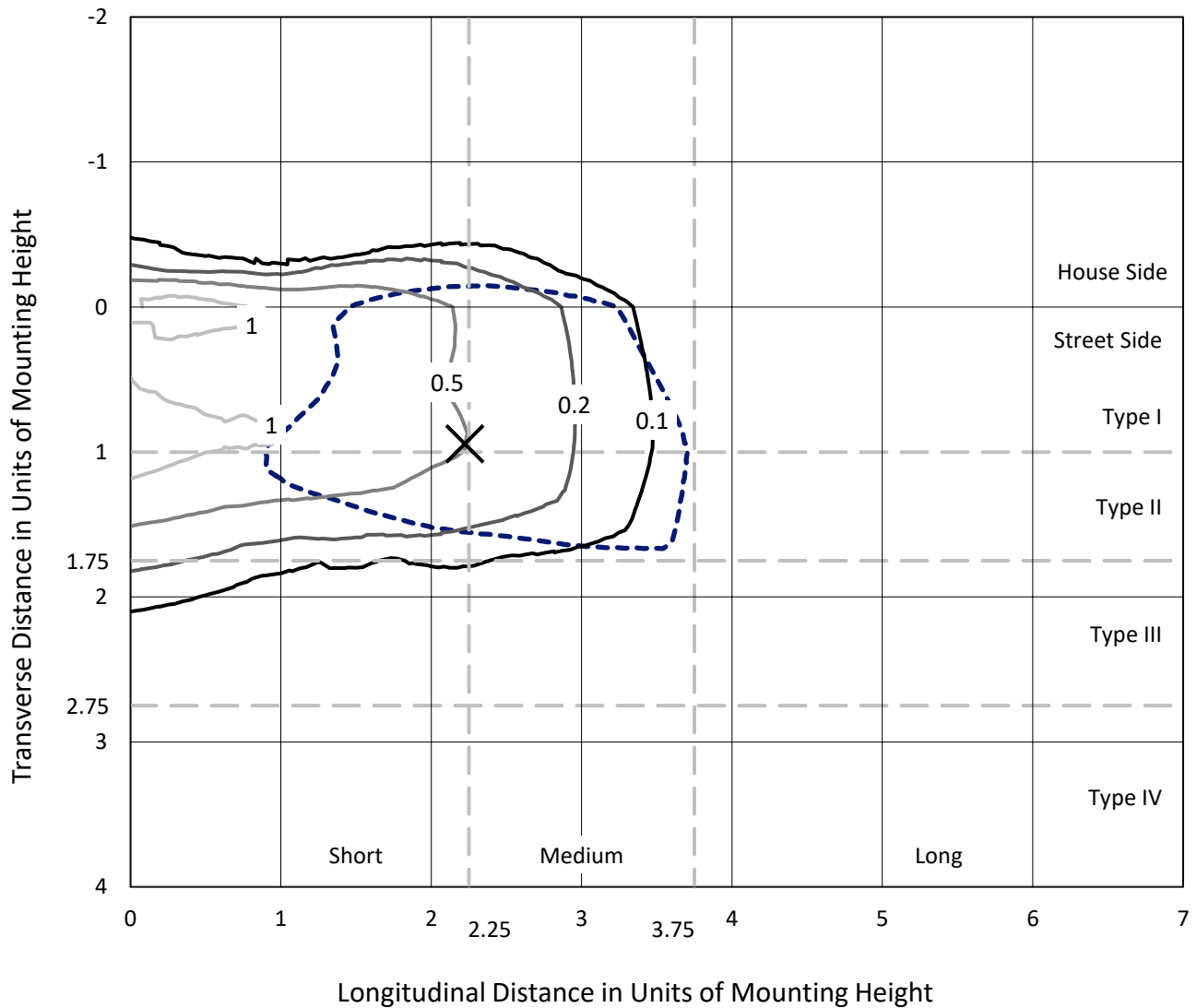
Lumens per Lamp: N/A  
Luminaire Lumens: 5119 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

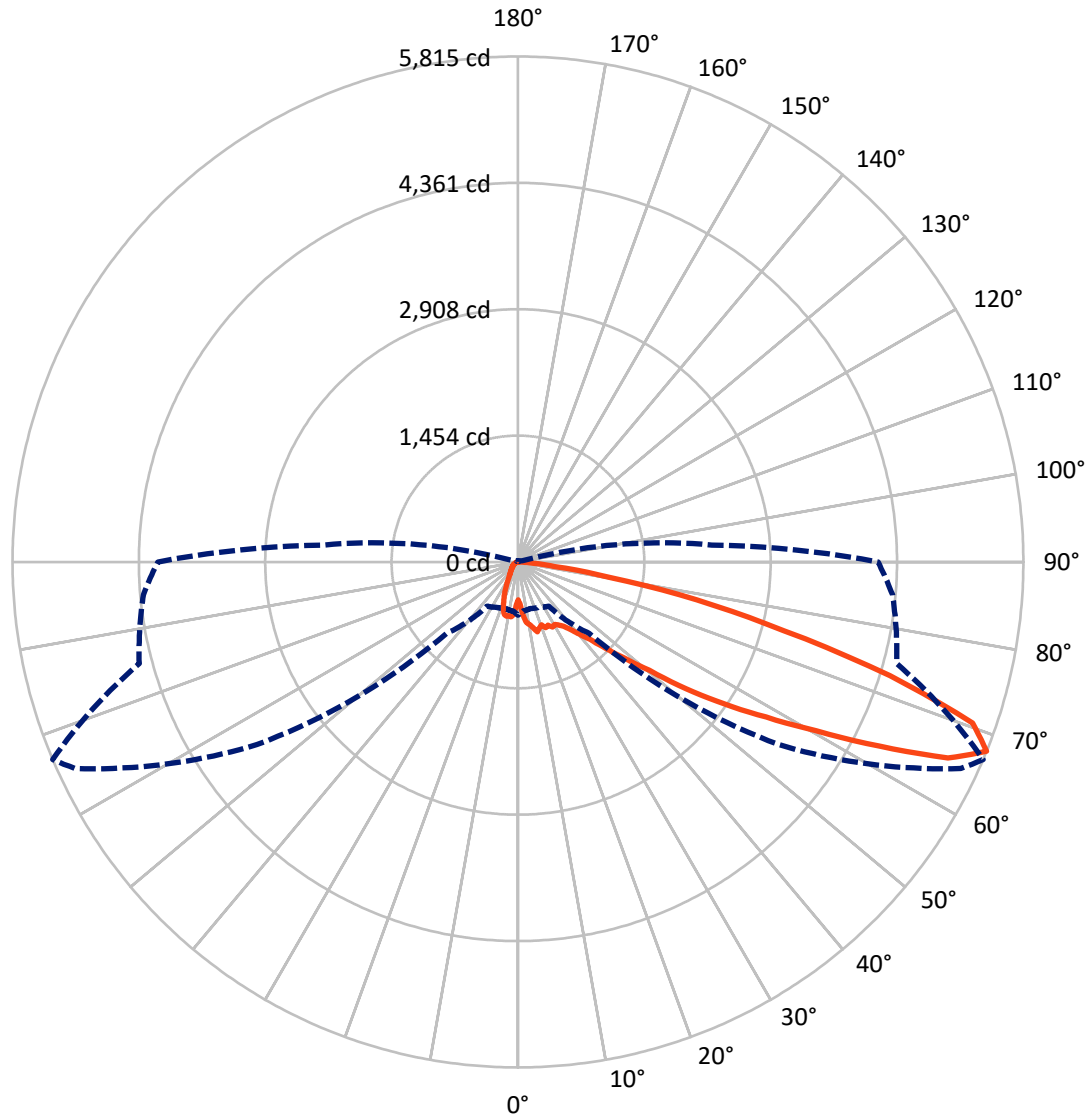
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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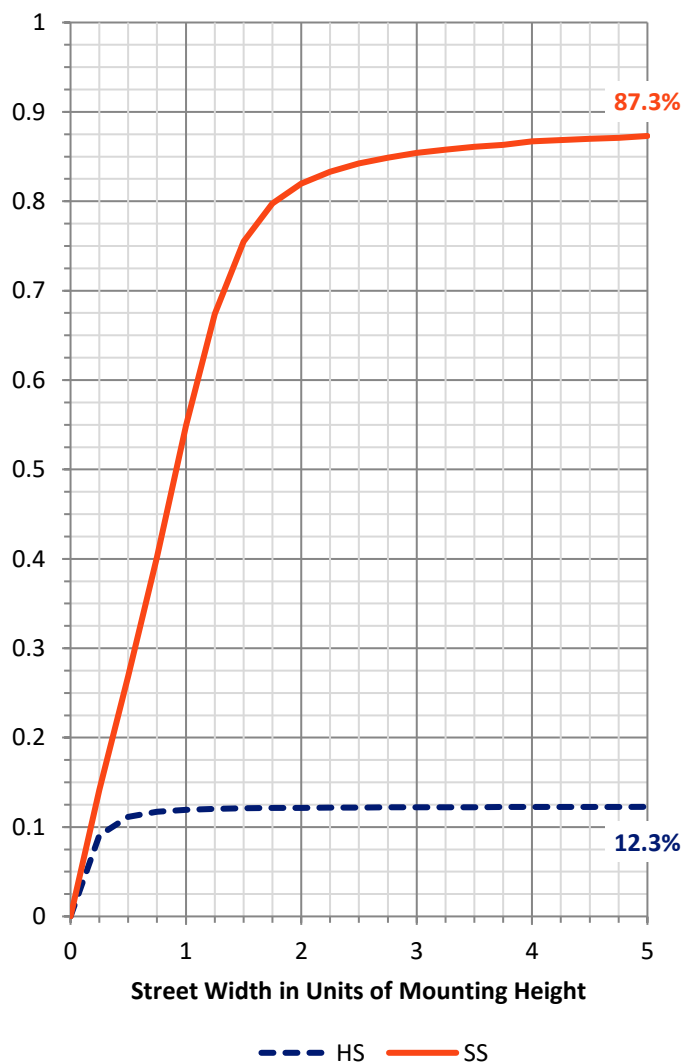
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	633.1	0.0	633.1
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	4485.9	0.0	4485.9
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	5119.0	0.0	5119.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.7	1.1
10°-20°	161.9	3.2
20°-30°	253.8	5.0
30°-40°	409.2	8.0
40°-50°	751.9	14.7
50°-60°	1269.9	24.8
60°-70°	1403.9	27.4
70°-80°	734.8	14.4
80°-90°	78.9	1.5
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°	5119.0	100.0
0°-180°	5119.0	100.0

**Coefficient of Utilization**

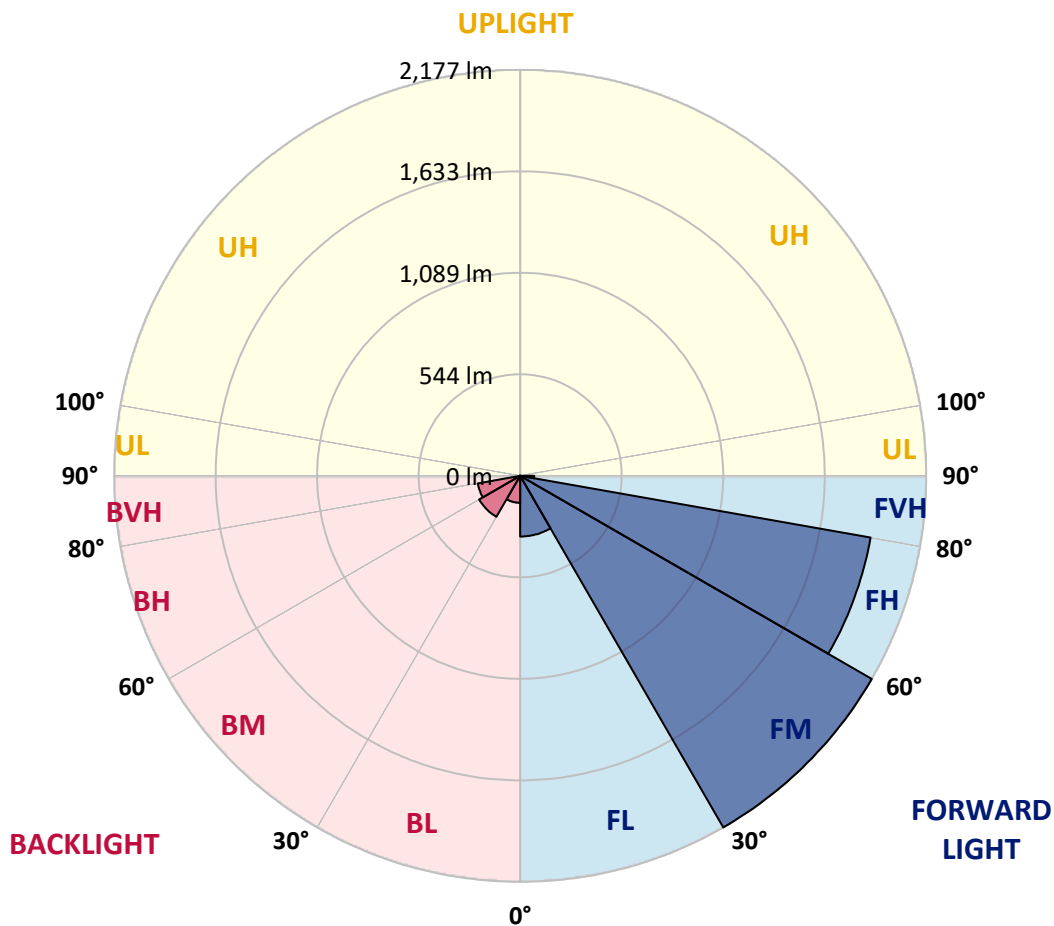


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	325.5	6.4			
FM (30°-60°)	2177.1	42.5			
FH (60°-80°)	1907.8	37.3			G2/5000
FVH (80°-90°)	75.5	1.5			G1/100
BL (0°-30°)	145.0	2.8	B1/500		
BM (30°-60°)	253.8	5.0	B1/1000		
BH (60°-80°)	230.9	4.5	B1/500		G1/500
BVH (80°-90°)	3.4	0.1			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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0
2.5°	514.7	497.3	467.7	476.2	493.4	507.7	500.9	487.7	487.9	474.4	523.0
5°	598.8	575.4	558.3	564.3	563.5	563.0	594.9	607.1	612.3	634.6	667.6
7.5°	623.0	614.7	596.7	602.2	584.3	585.6	641.7	694.6	702.9	716.7	775.4
10°	613.6	597.5	604.0	604.0	604.3	633.3	671.0	721.6	731.8	784.7	791.0
12.5°	603.5	604.3	630.0	625.3	660.6	712.8	725.5	782.4	777.5	823.4	891.7
15°	641.1	660.9	644.3	650.7	654.1	715.4	735.9	811.5	833.3	891.5	935.9
17.5°	705.8	708.4	673.9	664.5	688.9	706.3	747.6	784.0	798.5	951.2	1014.0
20°	717.5	734.1	699.0	645.0	696.7	720.6	749.4	766.8	773.1	969.6	1058.2
22.5°	787.9	769.4	713.3	672.3	687.1	713.1	731.0	783.4	820.8	934.8	1100.5
25°	824.0	819.0	765.5	730.5	715.4	713.3	754.4	794.1	806.0	970.9	1110.9
27.5°	910.4	899.3	795.6	791.2	741.6	698.0	755.1	826.5	848.9	936.9	1149.8
30°	1028.1	1023.9	886.0	883.2	804.2	725.8	797.2	846.5	833.0	954.3	1175.8
32.5°	1146.5	1180.2	1039.2	958.7	899.5	827.8	785.3	840.3	864.5	996.6	1223.6
35°	1289.5	1314.0	1170.4	1111.9	980.3	875.6	864.5	899.8	910.2	1047.0	1277.9
37.5°	1539.9	1503.0	1380.7	1281.2	1212.2	1046.2	991.2	963.1	987.3	1115.3	1388.7
40°	1724.8	1701.4	1550.8	1491.3	1332.4	1235.3	1091.4	1065.2	1092.2	1185.4	1465.9
42.5°	1947.8	1899.3	1757.5	1717.2	1553.6	1366.4	1220.5	1229.6	1212.7	1323.8	1601.2
45°	2149.6	2040.0	1961.1	1970.2	1882.9	1630.0	1435.7	1431.3	1417.3	1524.3	1743.5
47.5°	2285.4	2189.6	2112.7	2087.5	2077.1	2093.5	1746.8	1668.4	1658.0	1734.9	1967.6
50°	2358.4	2253.5	2158.4	2163.6	2374.5	2533.1	2067.8	1956.4	1960.3	2040.5	2274.0
52.5°	2309.3	2190.6	2090.4	2187.8	2605.1	2826.3	2599.1	2332.7	2423.0	2402.5	2685.0
55°	2082.6	1979.5	1908.4	2082.6	2630.3	3141.8	3253.2	2899.0	2878.8	2832.0	3104.2
57.5°	1701.1	1612.3	1568.4	1752.3	2354.7	3396.0	3910.2	3539.1	3366.4	3170.6	3452.1
60°	1267.5	1202.0	1156.3	1253.5	1855.4	3149.1	4340.5	4142.3	3942.4	3497.1	3764.8
62.5°	938.7	885.5	836.9	845.8	1277.6	2708.4	4505.6	4781.4	4666.6	3841.6	4059.8
65°	749.2	700.6	666.6	647.1	791.2	2037.7	4275.8	5305.2	5437.6	4166.2	4272.7
67.5°	611.8	570.8	553.9	576.2	620.6	1161.5	3661.9	5623.0	5815.2	4510.6	4325.2
70°	497.8	464.0	462.2	522.5	571.5	708.1	2693.6	5403.6	5548.2	4569.3	4010.7
72.5°	346.9	332.1	355.8	441.2	566.4	589.7	1546.9	4471.6	4476.8	4035.6	3298.9
75°	196.3	194.0	231.4	351.9	551.6	583.8	862.4	3160.0	3162.3	3052.2	2285.4
77.5°	108.0	101.0	134.8	237.9	473.6	570.2	556.2	2157.6	2102.3	1698.5	1043.9
80°	49.9	47.0	73.0	152.4	346.4	539.3	445.9	1185.9	1069.3	553.4	254.7
82.5°	20.5	19.5	33.5	97.9	218.9	434.4	375.8	526.1	422.2	105.2	78.7
85°	3.6	3.9	13.8	59.2	122.6	200.2	304.6	249.8	183.6	29.1	43.1
87.5°	0.0	0.0	2.9	14.3	29.6	54.8	123.6	69.9	48.0	8.6	12.7
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°	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0	436.0
2.5°	532.6	528.2	483.5	485.6	488.7	485.9	485.3	472.9	461.4	499.1	498.6
5°	673.6	642.2	611.3	599.3	573.6	539.9	540.1	529.5	518.6	533.9	533.9
7.5°	774.1	730.7	691.5	621.7	553.6	492.1	486.6	472.1	455.5	475.5	479.4
10°	797.5	759.8	709.2	606.6	542.2	482.2	416.3	362.0	336.8	325.1	323.0
12.5°	869.4	841.3	728.1	614.7	521.9	420.4	312.4	248.0	204.1	200.7	196.1
15°	917.4	897.7	746.8	594.7	436.3	302.3	196.3	150.6	133.0	131.4	129.1
17.5°	992.0	957.7	728.9	531.0	341.2	199.4	131.9	118.9	121.0	125.7	122.0
20°	1022.3	955.3	690.0	438.9	239.7	133.7	114.5	107.5	113.0	117.4	115.3
22.5°	1053.5	962.1	655.4	361.7	156.6	110.6	102.1	98.4	98.9	103.4	103.6
25°	1053.2	980.8	615.4	281.7	116.6	98.4	92.2	87.5	85.7	88.8	88.0
27.5°	1104.4	959.2	542.5	209.0	102.6	88.0	82.1	76.3	69.9	73.0	73.0
30°	1104.7	994.3	491.6	150.1	94.0	78.4	73.2	64.4	56.9	59.5	59.7
32.5°	1134.0	963.9	444.6	114.8	87.3	72.7	61.3	53.2	48.8	50.4	50.4
35°	1167.5	989.9	372.4	101.3	80.5	64.7	52.5	46.0	42.6	43.9	43.9
37.5°	1278.1	984.4	322.3	94.3	76.1	58.4	47.8	40.5	39.0	39.7	40.8
40°	1318.1	1023.1	254.2	90.1	68.8	52.7	42.1	36.6	34.5	35.1	35.3
42.5°	1419.9	1031.7	203.1	86.7	62.3	45.7	37.4	33.5	30.9	30.9	31.7
45°	1532.3	1053.2	161.5	83.9	56.9	41.0	33.8	30.6	26.7	26.2	27.3
47.5°	1695.2	1135.8	131.7	78.2	50.4	38.2	31.2	26.5	23.4	22.3	23.4
50°	1967.6	1276.0	116.3	71.2	45.7	35.8	27.5	22.6	20.3	19.0	19.7
52.5°	2351.9	1518.3	108.3	64.7	41.5	32.2	24.7	19.7	17.4	16.4	16.9
55°	2778.8	1796.2	104.4	58.2	37.9	28.3	21.6	17.4	15.3	14.0	14.3
57.5°	3173.5	2057.4	100.5	51.9	34.3	25.2	19.0	15.3	13.2	11.9	12.2
60°	3562.5	2265.9	91.1	44.7	30.9	22.6	16.6	13.2	11.9	10.4	10.4
62.5°	3906.6	2390.6	77.6	38.7	27.8	20.0	14.8	11.9	10.9	9.3	9.3
65°	4140.8	2396.3	62.6	33.2	24.4	17.1	13.0	11.2	10.1	8.3	8.0
67.5°	4144.2	2240.5	50.1	29.6	21.6	15.1	11.7	10.6	9.3	7.8	7.3
70°	3709.2	1851.0	41.8	26.0	18.7	13.2	10.1	10.1	9.1	7.5	6.8
72.5°	2967.1	1414.5	35.1	22.6	16.6	11.4	9.3	9.6	8.8	7.5	6.8
75°	1994.3	811.2	29.1	19.2	14.5	9.6	9.1	9.3	9.1	7.5	6.5
77.5°	918.5	258.4	22.6	15.8	12.5	8.0	8.8	8.8	8.3	6.8	5.7
80°	207.0	63.6	16.4	11.7	10.1	6.0	8.0	7.3	6.5	4.7	3.4
82.5°	75.3	19.5	9.9	7.3	6.2	2.3	5.2	5.2	4.7	3.4	2.1
85°	43.1	10.1	5.5	4.7	3.4	1.0	2.9	3.1	2.6	2.3	1.0
87.5°	14.0	2.3	2.6	2.9	2.6	0.5	1.0	1.0	0.8	0.5	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)