

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: P366881

Luminaire Tested: **MSA-SA1C-727-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366881  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-727-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3928 lumens  
Efficiency: N/A  
Efficacy: 66.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G2

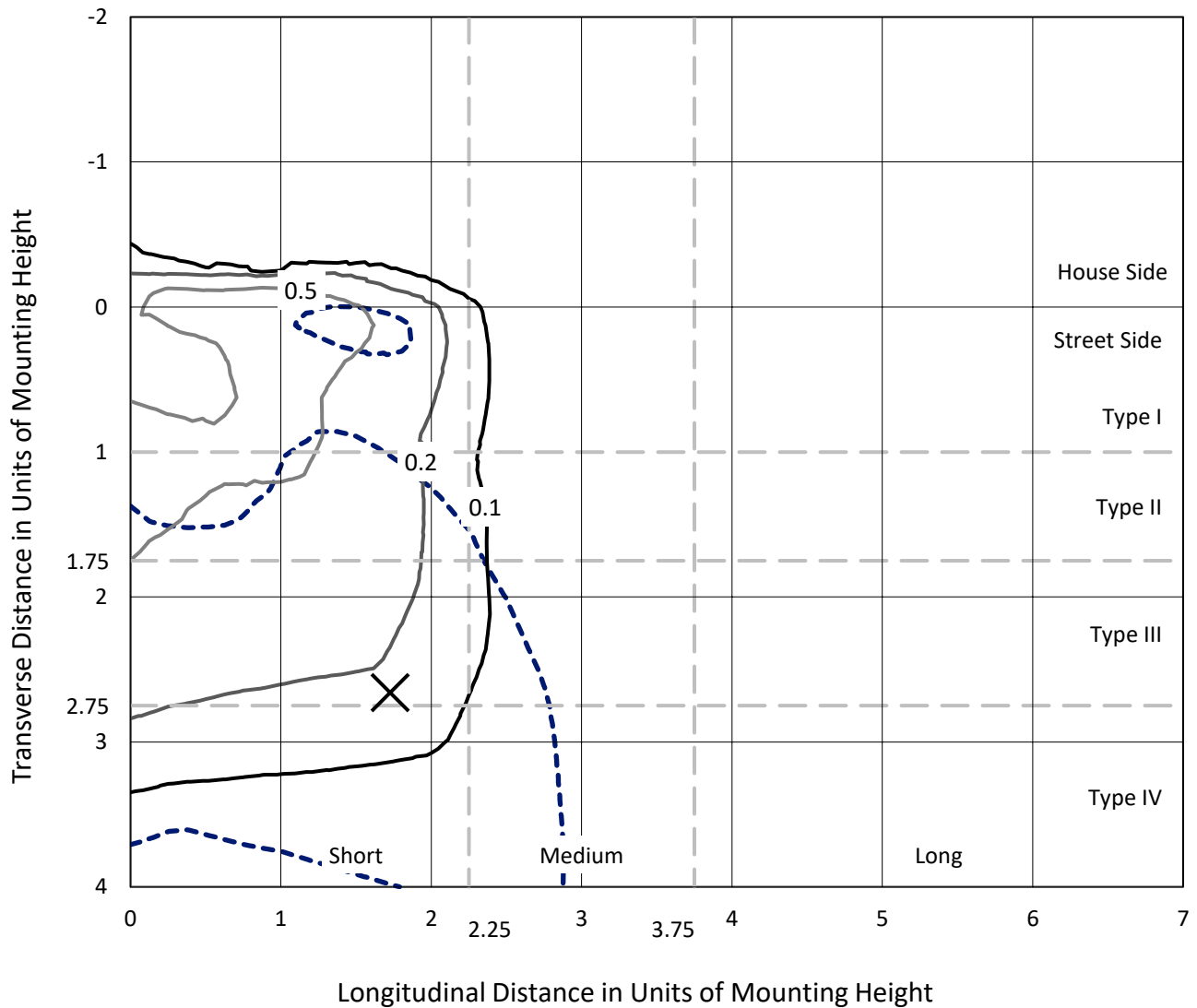
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P366881  
 CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

### Iso-Footcandle Lines of Horizontal Illumination

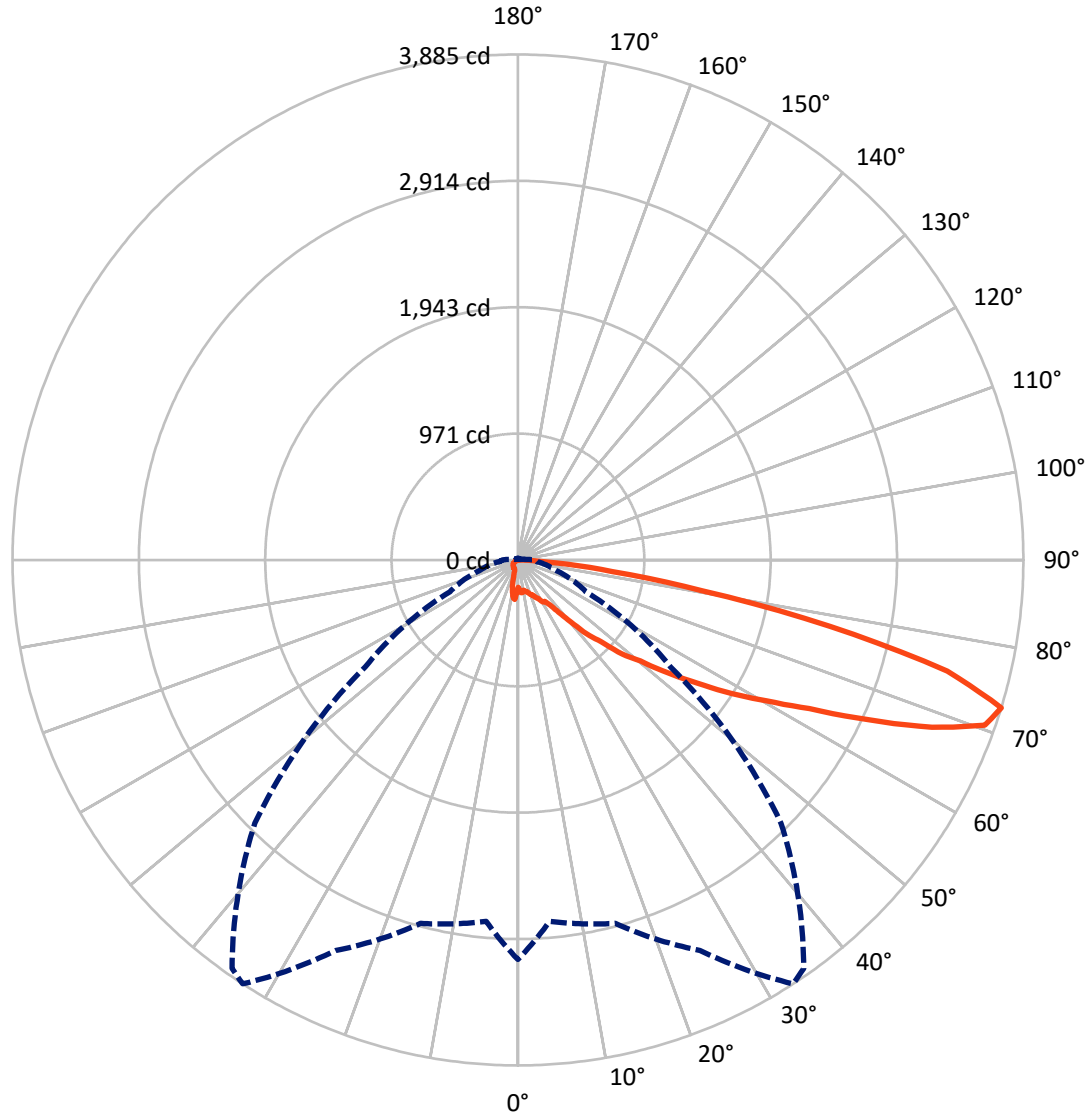
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc  
 Type IV - Short - N/A

REPORT NUMBER: P366881  
CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P366881  
 CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

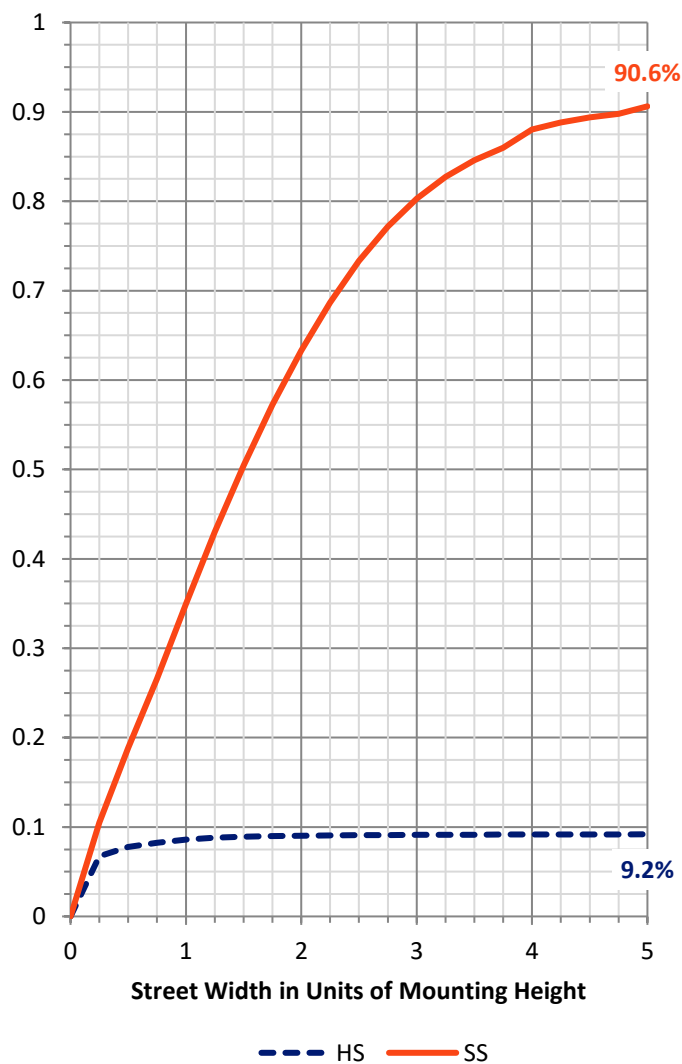
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	363.2	0.0	363.2
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	3564.8	0.0	3564.8
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	3928.0	0.0	3928.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.0	0.7
10°-20°	80.6	2.1
20°-30°	136.7	3.5
30°-40°	250.1	6.4
40°-50°	527.8	13.4
50°-60°	883.1	22.5
60°-70°	1182.1	30.1
70°-80°	772.2	19.7
80°-90°	68.5	1.7
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°	3928.0	100.0
0°-180°	3928.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P366881

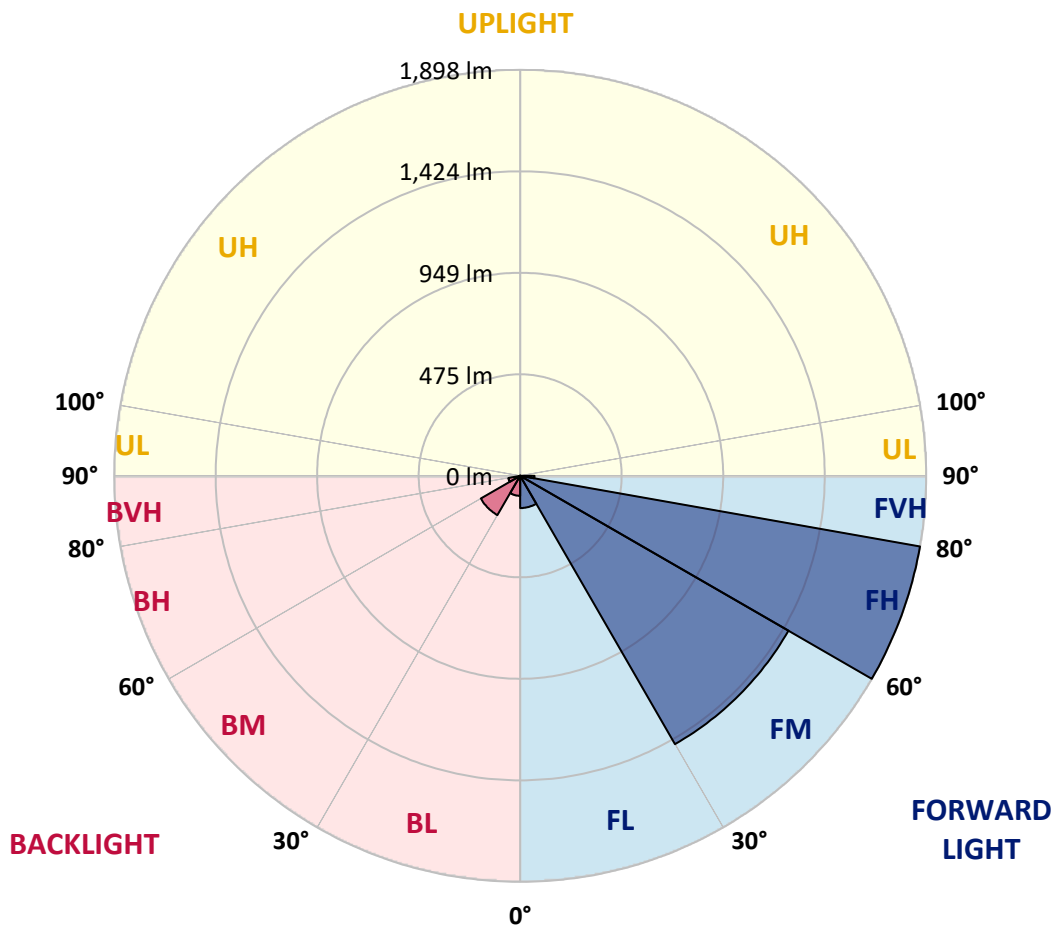
CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	150.8	3.8			
FM (30°-60°)	1448.7	36.9			
FH (60°-80°)	1898.2	48.3			G2/5000
FVH (80°-90°)	67.1	1.7			G1/100
BL (0°-30°)	93.5	2.4	B0/110		
BM (30°-60°)	212.3	5.4	B0/220		
BH (60°-80°)	56.1	1.4	B0/110		G0/110
BVH (80°-90°)	1.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type IV Short





REPORT NUMBER: P366881

CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9
2.5°	249.1	239.5	225.5	226.4	228.8	230.7	236.0	233.8	229.6	229.4	249.1
5°	263.9	253.2	252.3	253.6	253.0	256.5	252.1	266.3	278.3	292.7	315.8
7.5°	256.7	251.7	245.3	251.9	251.7	249.9	252.8	281.5	310.6	328.9	367.0
10°	236.0	230.3	235.1	237.3	235.7	243.4	262.4	285.9	320.6	359.0	377.5
12.5°	230.1	233.6	235.3	235.3	249.9	253.8	282.9	305.1	346.3	376.6	430.5
15°	253.0	259.7	247.7	245.1	249.7	251.9	284.2	311.0	363.8	419.2	464.3
17.5°	289.4	289.0	270.4	260.2	267.4	272.6	290.5	321.9	352.9	452.5	517.9
20°	314.5	314.9	281.5	260.2	283.9	287.0	306.8	331.9	356.3	469.3	553.1
22.5°	346.8	335.2	298.3	277.6	293.8	296.6	318.4	338.2	374.2	467.4	598.0
25°	373.1	365.7	319.3	304.9	319.3	315.3	335.2	365.1	393.4	498.5	624.4
27.5°	414.1	401.5	334.1	336.7	335.8	338.7	343.3	389.1	427.2	500.1	685.4
30°	452.3	444.9	367.3	367.3	375.8	370.3	373.6	429.0	459.9	535.4	754.1
32.5°	491.8	492.2	406.3	385.6	378.8	401.3	423.3	448.4	499.4	596.0	859.2
35°	596.2	587.5	481.1	429.4	424.0	422.6	458.0	525.8	569.4	675.0	1000.8
37.5°	806.7	776.4	642.0	528.9	508.4	501.4	541.5	611.1	654.5	791.0	1234.8
40°	1022.6	967.0	817.8	690.2	623.7	593.6	640.3	699.4	776.6	919.2	1451.3
42.5°	1212.1	1143.4	950.2	864.3	777.7	764.6	720.8	816.9	951.1	1105.9	1663.5
45°	1396.8	1261.6	1068.0	999.9	894.8	902.2	887.4	970.7	1132.3	1310.5	1851.7
47.5°	1524.0	1402.5	1212.3	1124.0	1081.9	1038.5	1156.3	1242.9	1293.7	1440.4	2014.4
50°	1660.9	1537.9	1336.4	1274.7	1219.3	1263.1	1416.0	1427.6	1423.4	1561.7	2125.2
52.5°	1837.8	1692.8	1478.8	1409.0	1440.4	1484.1	1660.5	1662.7	1538.8	1663.8	2205.0
55°	2001.4	1840.6	1668.6	1602.7	1668.3	1705.2	1900.8	1829.1	1606.0	1733.1	2244.3
57.5°	2231.9	2045.8	1920.9	1804.9	1937.9	1902.6	2112.1	2005.5	1681.4	1779.1	2229.9
60°	2523.2	2304.3	2179.1	2056.3	2198.9	2222.9	2318.4	2093.6	1710.6	1794.2	2143.3
62.5°	2819.6	2599.3	2434.7	2351.4	2513.2	2592.1	2509.5	2137.4	1675.5	1764.7	1947.3
65°	3187.3	2905.3	2713.0	2664.1	2964.0	3080.0	2735.4	2148.1	1607.7	1602.7	1565.6
67.5°	3439.2	3164.6	2988.2	3070.0	3432.2	3441.6	2938.2	2151.4	1379.4	1254.9	1027.6
70°	3498.9	3205.0	3126.0	3366.8	3805.8	3687.8	3003.7	1985.7	1023.0	744.8	469.8
72.5°	3071.5	2788.4	2891.1	3310.7	3885.2	3831.1	2859.1	1432.6	576.0	297.9	144.2
75°	1884.0	1712.8	2168.8	2807.0	3410.4	3375.5	2230.6	740.2	232.0	119.1	53.9
77.5°	819.3	760.9	1131.9	1862.4	2450.6	2419.4	1307.0	272.6	119.9	83.7	27.3
80°	271.1	263.0	428.8	881.9	1435.4	1407.9	550.7	113.4	85.5	67.2	15.3
82.5°	64.3	63.9	149.6	405.9	731.2	708.3	169.0	62.6	61.9	53.0	8.1
85°	16.1	16.6	41.4	166.0	297.0	261.9	44.1	31.2	43.6	36.0	4.1
87.5°	0.0	0.0	10.7	23.8	44.9	28.1	4.8	8.3	12.2	12.9	2.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P366881

CATALOG NUMBER: MSA-SA1C-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9	208.9
2.5°	253.4	251.0	231.4	236.2	243.6	242.9	247.7	244.0	240.8	256.9	255.4
5°	322.3	309.2	303.1	311.6	307.1	296.4	305.3	303.8	301.2	306.6	310.8
7.5°	374.0	362.0	356.6	338.7	312.7	292.2	295.5	287.9	280.7	289.2	297.9
10°	391.0	384.5	383.8	348.9	324.5	294.8	259.7	229.4	221.4	210.7	215.5
12.5°	437.3	441.2	416.5	375.8	328.7	271.7	209.4	166.4	149.0	137.6	138.3
15°	475.2	488.9	453.2	379.9	289.2	207.2	139.4	100.8	89.9	87.0	86.1
17.5°	531.7	545.0	464.5	350.5	233.1	140.4	89.6	78.5	79.2	81.1	80.7
20°	573.6	571.6	454.7	298.3	171.8	92.0	75.0	73.5	77.0	82.7	81.3
22.5°	613.9	600.4	448.6	250.1	111.2	73.9	72.4	72.2	75.5	80.9	82.4
25°	642.7	644.9	438.3	195.8	80.9	68.7	70.0	72.0	75.2	81.1	80.3
27.5°	725.1	664.1	395.6	142.2	68.3	65.9	69.1	73.1	74.1	81.6	81.8
30°	778.6	736.5	367.7	95.7	63.0	60.8	67.4	72.6	73.9	83.5	84.2
32.5°	871.7	767.7	335.4	71.1	58.7	59.3	63.5	70.4	76.5	86.8	87.2
35°	987.5	867.8	277.0	63.9	57.1	56.0	58.0	66.1	76.1	87.2	89.4
37.5°	1208.0	927.7	219.6	61.9	57.1	55.2	57.1	61.9	74.8	91.6	96.2
40°	1355.6	1049.9	158.3	61.5	56.0	54.3	55.0	59.8	71.1	89.0	95.7
42.5°	1537.5	1101.3	116.7	60.4	55.0	52.3	52.8	58.9	67.4	83.5	88.5
45°	1686.4	1138.8	91.8	60.0	52.3	51.5	52.3	58.2	63.9	71.7	76.3
47.5°	1799.6	1182.4	73.7	57.1	51.7	51.5	50.4	54.5	58.0	60.0	63.0
50°	1882.5	1172.6	61.1	52.8	49.5	50.8	48.9	49.5	50.4	49.3	52.8
52.5°	1933.3	1137.3	50.8	47.5	46.9	48.0	45.6	43.6	42.1	41.2	43.4
55°	1951.8	1066.4	43.2	40.8	42.3	42.7	40.8	37.3	34.7	33.4	35.1
57.5°	1916.7	958.5	37.5	33.8	37.3	37.3	34.7	31.0	27.9	25.7	27.5
60°	1827.8	839.2	33.4	28.1	31.8	32.1	29.0	25.1	22.7	20.5	21.6
62.5°	1662.0	709.2	29.2	24.4	27.5	27.7	24.0	20.3	18.5	16.1	17.0
65°	1330.5	542.4	24.9	21.6	23.8	23.1	19.8	17.2	15.0	12.9	13.3
67.5°	863.6	334.8	21.6	19.6	20.1	19.4	16.8	15.0	12.6	10.9	11.1
70°	386.7	144.2	19.0	17.7	17.4	16.4	14.2	14.0	12.4	10.9	10.9
72.5°	119.3	54.3	16.4	15.9	15.0	13.7	12.4	13.3	12.2	10.5	10.2
75°	47.1	24.9	13.5	13.5	13.1	11.3	11.1	12.0	11.3	9.6	9.2
77.5°	24.6	15.7	11.1	11.6	11.3	8.7	10.0	10.9	10.5	8.1	6.8
80°	14.6	9.6	8.3	9.4	9.2	6.1	7.6	7.0	5.0	2.4	0.7
82.5°	8.1	4.4	3.7	5.5	5.5	2.2	3.9	3.5	2.0	0.0	0.0
85°	3.9	3.1	2.8	3.1	2.2	0.7	2.0	2.0	1.1	0.0	0.0
87.5°	2.0	1.7	1.3	1.1	0.9	0.0	0.7	0.9	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)