

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: P366979

Luminaire Tested: **MSA-SA1C-830-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366979  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-830-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4093 lumens  
Efficiency: N/A  
Efficacy: 69.4 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

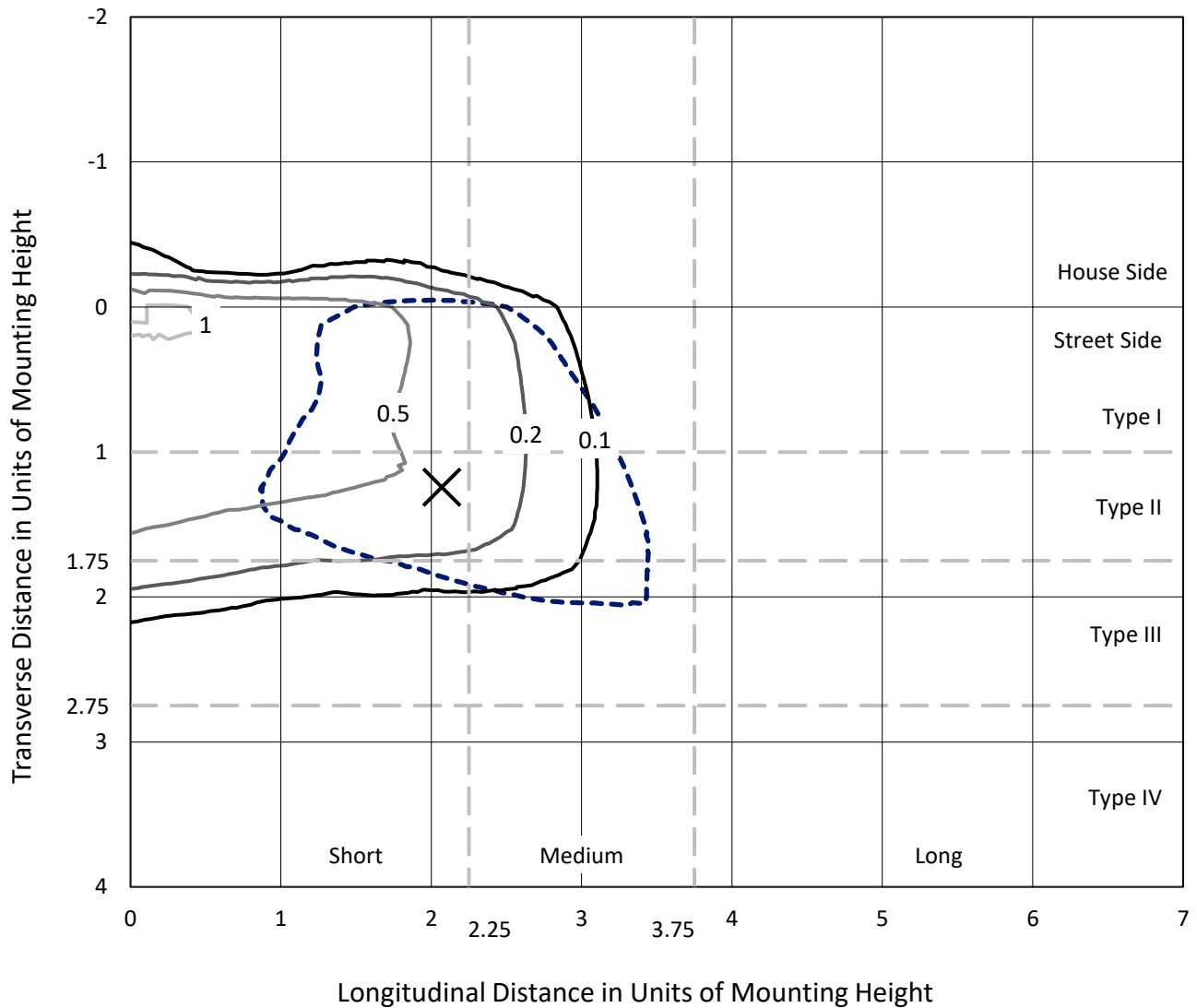
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

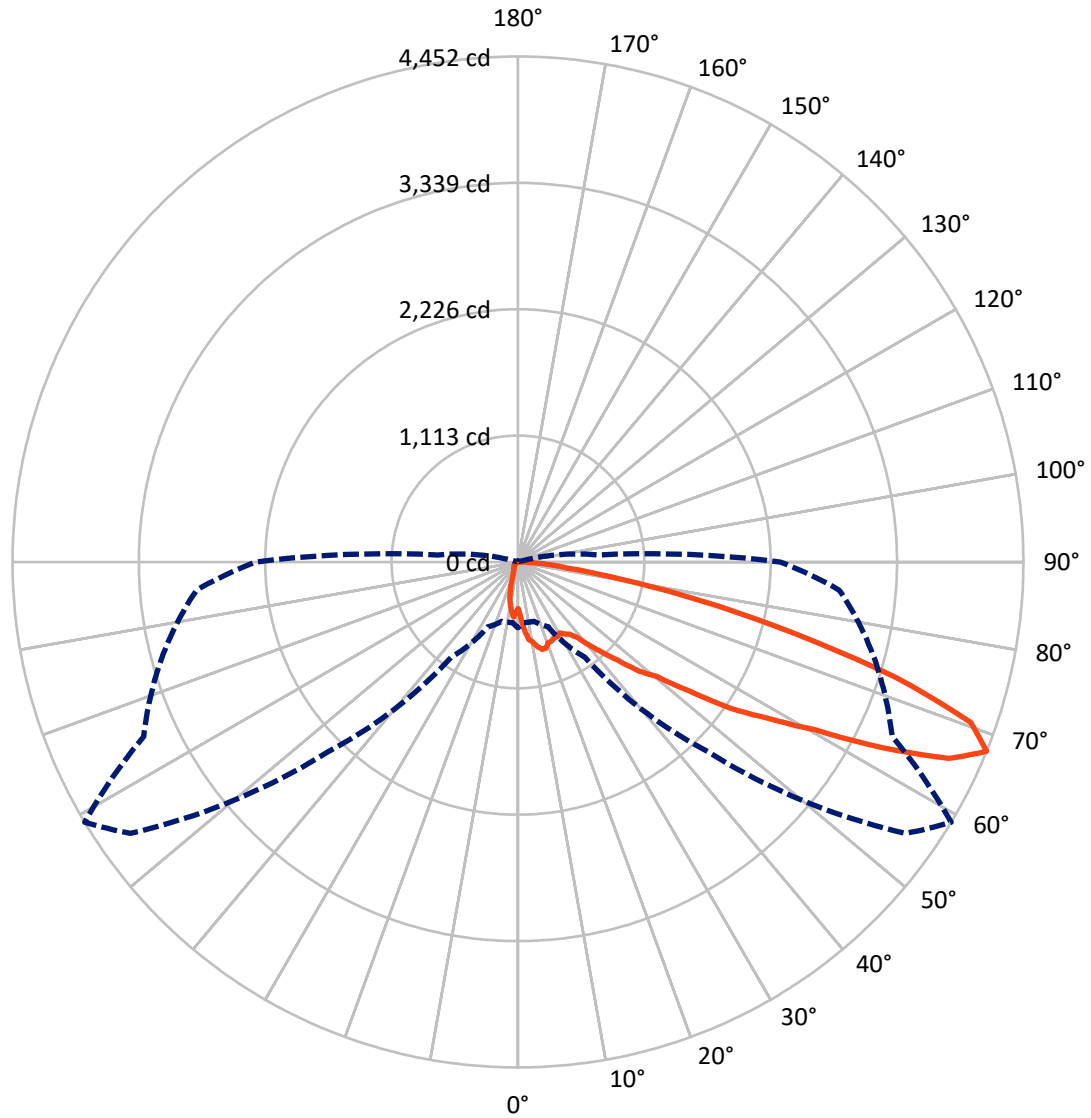
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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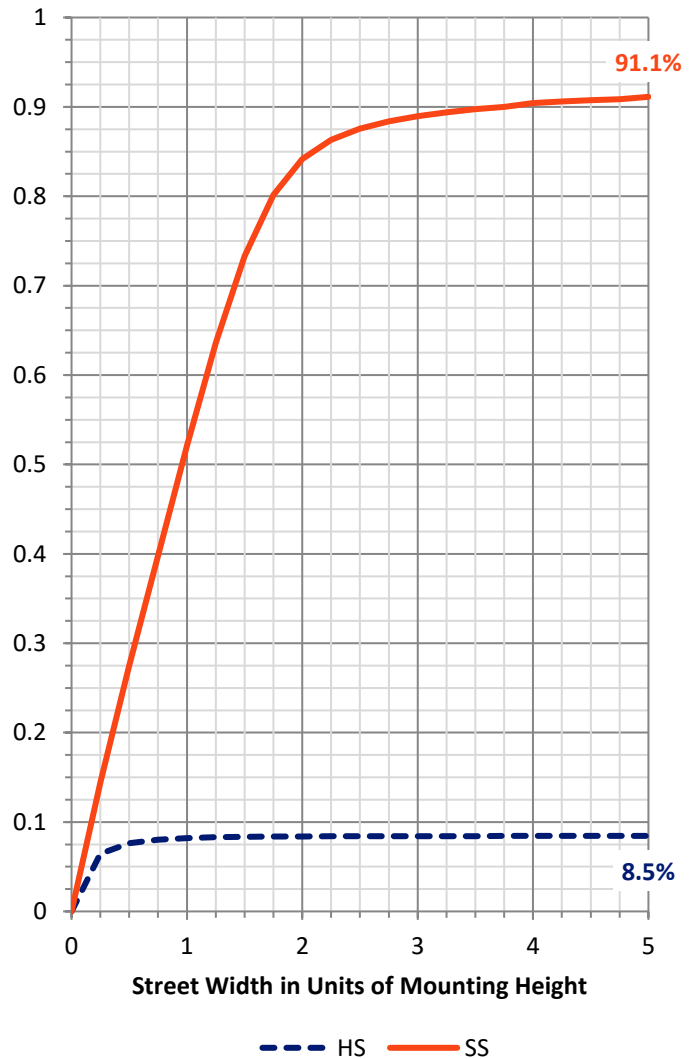
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	348.1	0.0	348.1
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	3744.9	0.0	3744.9
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4093.0	0.0	4093.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.8	1.2
10°-20°	140.2	3.4
20°-30°	208.5	5.1
30°-40°	321.7	7.9
40°-50°	574.2	14.0
50°-60°	1021.8	25.0
60°-70°	1190.0	29.1
70°-80°	529.2	12.9
80°-90°	57.5	1.4
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°	4093.0	100.0
0°-180°	4093.0	100.0

**Coefficient of Utilization**



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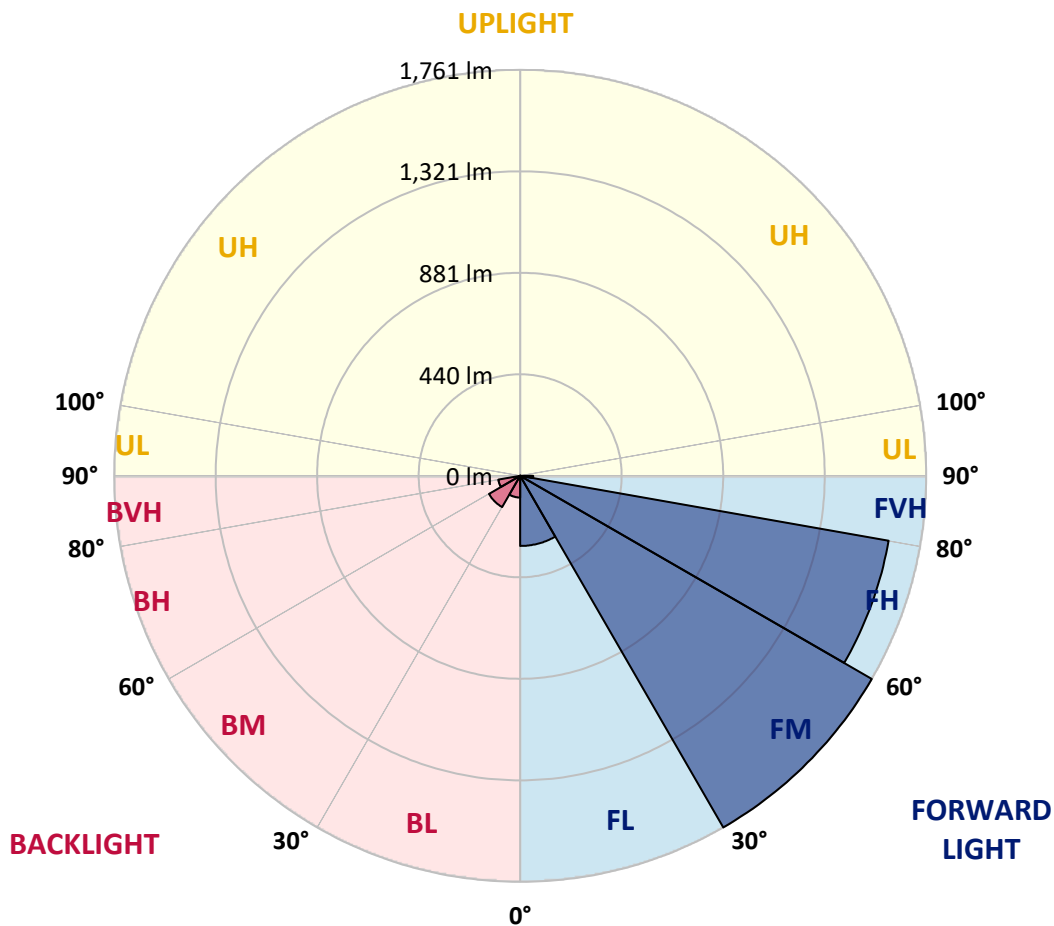
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	304.4	7.4			
FM (30°-60°)	1761.2	43.0			
FH (60°-80°)	1622.8	39.6			G1/1800
FVH (80°-90°)	56.5	1.4			G1/100
BL (0°-30°)	94.1	2.3	B0/110		
BM (30°-60°)	156.5	3.8	B0/220		
BH (60°-80°)	96.4	2.4	B0/110		G0/110
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: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5
2.5°	533.9	513.8	485.2	493.7	501.3	508.6	496.6	489.7	486.4	457.0	493.9
5°	655.5	630.4	617.4	614.1	605.8	587.3	618.0	604.3	608.9	614.7	626.7
7.5°	692.6	681.2	662.4	669.4	637.9	635.2	677.7	689.5	705.1	694.5	709.0
10°	673.5	653.9	662.8	660.3	659.0	686.8	716.7	717.3	740.5	751.7	702.6
12.5°	635.8	638.1	670.0	667.5	709.0	764.5	771.4	764.1	802.0	782.6	775.1
15°	660.9	679.6	661.9	668.0	682.7	752.1	776.3	798.7	834.6	846.2	795.8
17.5°	691.2	693.0	660.9	653.4	690.5	722.9	780.1	798.5	802.0	903.8	842.5
20°	674.8	690.8	652.4	605.4	663.0	706.9	764.9	759.1	782.8	920.8	853.0
22.5°	718.3	695.5	646.4	611.0	630.4	670.4	719.6	757.5	792.9	880.2	866.7
25°	722.5	714.2	670.4	638.9	635.6	645.8	714.2	738.6	794.2	916.6	855.1
27.5°	769.1	759.6	670.0	673.1	642.0	610.8	688.1	745.5	816.8	894.5	879.8
30°	829.2	830.0	714.6	724.3	680.0	629.6	709.4	725.2	832.1	929.9	898.0
32.5°	890.1	915.2	802.7	751.1	737.2	701.1	682.9	755.6	815.3	990.4	943.6
35°	982.8	999.8	875.2	829.0	774.5	733.4	755.0	781.1	875.6	1070.6	1003.5
37.5°	1139.6	1109.0	1005.3	924.9	911.9	851.4	862.1	838.7	937.2	1165.1	1122.0
40°	1227.9	1200.2	1092.4	1053.2	969.9	979.2	945.2	958.9	1026.5	1263.6	1230.0
42.5°	1319.9	1293.4	1198.9	1171.1	1091.8	1053.2	1037.9	1087.0	1163.5	1427.5	1384.8
45°	1412.4	1345.0	1305.0	1318.9	1283.3	1207.0	1189.2	1232.9	1313.1	1629.0	1548.1
47.5°	1490.3	1433.5	1403.5	1397.0	1383.2	1489.1	1416.5	1435.8	1471.2	1807.2	1751.6
50°	1630.8	1574.9	1527.8	1514.8	1582.3	1732.6	1620.7	1583.4	1654.2	2022.5	1987.5
52.5°	1833.7	1762.4	1687.6	1687.8	1815.3	1897.8	1950.8	1885.3	1898.6	2259.4	2243.9
55°	1996.8	1906.2	1844.3	1893.2	2083.2	2129.5	2331.9	2274.5	2257.3	2479.1	2460.0
57.5°	2019.2	1910.6	1881.2	1967.0	2227.1	2522.2	2740.0	2596.6	2570.3	2662.9	2700.8
60°	1810.3	1695.1	1717.2	1855.3	2273.9	2761.6	3114.7	2997.6	2830.4	2878.2	2904.3
62.5°	1350.2	1258.2	1320.4	1503.2	2093.4	2922.0	3548.5	3602.8	3132.1	3039.9	3034.3
65°	876.0	818.4	859.2	1009.1	1584.2	2903.7	3936.0	4171.4	3369.8	3171.7	3075.1
67.5°	579.5	535.7	541.5	630.2	1024.4	2361.6	4167.7	4452.3	3637.2	3246.5	2841.1
70°	431.9	397.5	399.6	447.7	608.1	1557.5	3844.6	4230.7	3734.8	2987.2	2293.2
72.5°	311.5	288.5	307.8	361.2	484.5	823.6	2865.6	3484.2	3256.7	2356.2	1545.0
75°	215.7	200.6	232.1	302.2	442.3	511.3	1893.6	2508.1	2282.6	1478.3	698.4
77.5°	119.6	115.0	160.4	246.2	401.4	419.1	1160.0	1648.0	1266.1	529.9	166.2
80°	52.2	50.6	77.7	184.9	337.4	378.6	653.0	913.7	498.0	94.5	53.7
82.5°	22.4	21.6	33.2	111.3	245.2	316.7	402.7	439.8	171.4	29.2	30.5
85°	3.9	4.4	13.3	58.7	149.2	160.8	291.6	260.3	86.2	13.9	21.8
87.5°	0.0	0.0	2.1	11.4	28.0	46.0	126.4	91.2	16.4	4.6	3.7
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°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5
2.5°	499.0	487.4	443.3	437.7	431.7	422.8	419.5	400.4	397.9	422.4	422.4
5°	621.1	579.7	537.6	504.4	474.8	433.8	422.2	410.1	400.4	397.9	405.6
7.5°	685.6	635.0	568.9	484.5	416.1	356.7	331.8	314.4	294.9	300.7	303.8
10°	682.0	628.4	544.0	435.6	359.8	294.1	230.9	194.0	173.5	163.3	162.1
12.5°	716.7	666.1	527.2	396.7	299.9	209.1	145.3	119.0	103.8	104.0	102.8
15°	736.8	681.6	507.8	347.3	211.2	134.5	100.7	94.9	92.8	95.1	93.9
17.5°	772.2	698.0	463.6	273.8	145.3	101.6	92.6	90.4	93.1	97.8	96.6
20°	769.5	669.6	400.8	192.9	107.4	91.4	87.7	84.1	89.7	94.7	93.9
22.5°	767.0	641.8	341.7	142.4	89.7	83.3	80.2	78.8	81.7	87.5	88.7
25°	745.0	628.2	281.9	106.9	81.2	75.6	74.2	73.0	74.0	78.8	78.5
27.5°	772.0	593.6	217.6	89.7	75.2	68.6	67.4	65.3	63.2	67.4	68.0
30°	766.4	598.3	170.6	79.0	69.2	60.3	60.7	56.4	52.6	56.4	56.4
32.5°	786.7	563.5	136.6	71.7	63.2	56.8	51.6	47.0	44.4	46.6	47.0
35°	816.3	565.0	106.9	67.1	58.0	50.6	44.4	39.8	37.3	38.3	39.0
37.5°	915.6	555.0	89.3	63.6	56.2	46.8	40.4	34.4	32.7	34.0	34.6
40°	980.3	581.5	78.8	61.8	51.4	43.1	34.6	30.3	28.8	29.4	30.5
42.5°	1102.1	596.2	73.6	59.7	47.0	36.9	29.6	27.1	25.1	25.9	26.7
45°	1232.5	621.3	69.6	57.4	43.7	32.3	26.1	24.0	21.3	21.6	22.4
47.5°	1392.7	681.0	65.1	53.5	39.2	29.4	23.2	20.1	17.6	17.4	18.4
50°	1607.8	760.8	60.9	48.5	36.3	26.9	20.3	16.4	14.3	13.7	14.5
52.5°	1837.4	864.0	56.6	45.0	32.7	23.6	17.4	13.3	11.4	11.0	11.6
55°	2065.0	963.1	52.4	42.7	29.0	20.3	14.7	11.0	9.3	8.9	9.3
57.5°	2324.3	1070.2	47.0	38.1	25.5	17.6	12.2	9.1	7.7	7.3	7.5
60°	2519.5	1107.9	42.5	33.2	22.2	15.5	10.4	7.3	6.2	5.8	6.0
62.5°	2612.1	1046.4	38.1	28.8	19.5	13.5	8.7	6.0	5.2	4.8	4.8
65°	2588.1	910.0	33.8	24.7	16.8	11.2	6.8	5.2	4.6	3.9	3.7
67.5°	2310.4	712.1	28.8	20.7	14.1	9.1	5.8	5.0	4.1	3.7	3.1
70°	1832.3	515.6	23.4	17.2	11.8	7.5	4.6	4.6	3.9	3.7	2.9
72.5°	1201.0	324.5	19.1	13.9	9.7	5.8	3.5	4.1	3.7	3.7	2.7
75°	520.4	116.1	15.3	11.2	8.1	3.9	3.1	3.7	3.9	3.7	3.1
77.5°	121.9	36.1	12.0	8.9	6.6	2.7	3.1	3.7	3.9	3.5	2.7
80°	45.8	15.3	7.9	5.8	5.2	1.7	2.7	2.3	2.1	1.5	0.4
82.5°	27.8	6.4	4.1	2.9	2.5	0.4	1.2	0.8	0.4	0.4	0.0
85°	19.7	3.1	2.3	2.1	1.2	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	2.7	0.8	1.0	1.0	0.8	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)