

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: P596841

Luminaire Tested: **MSA-SA1A-835-U-T2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596841  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-835-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2513 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G1

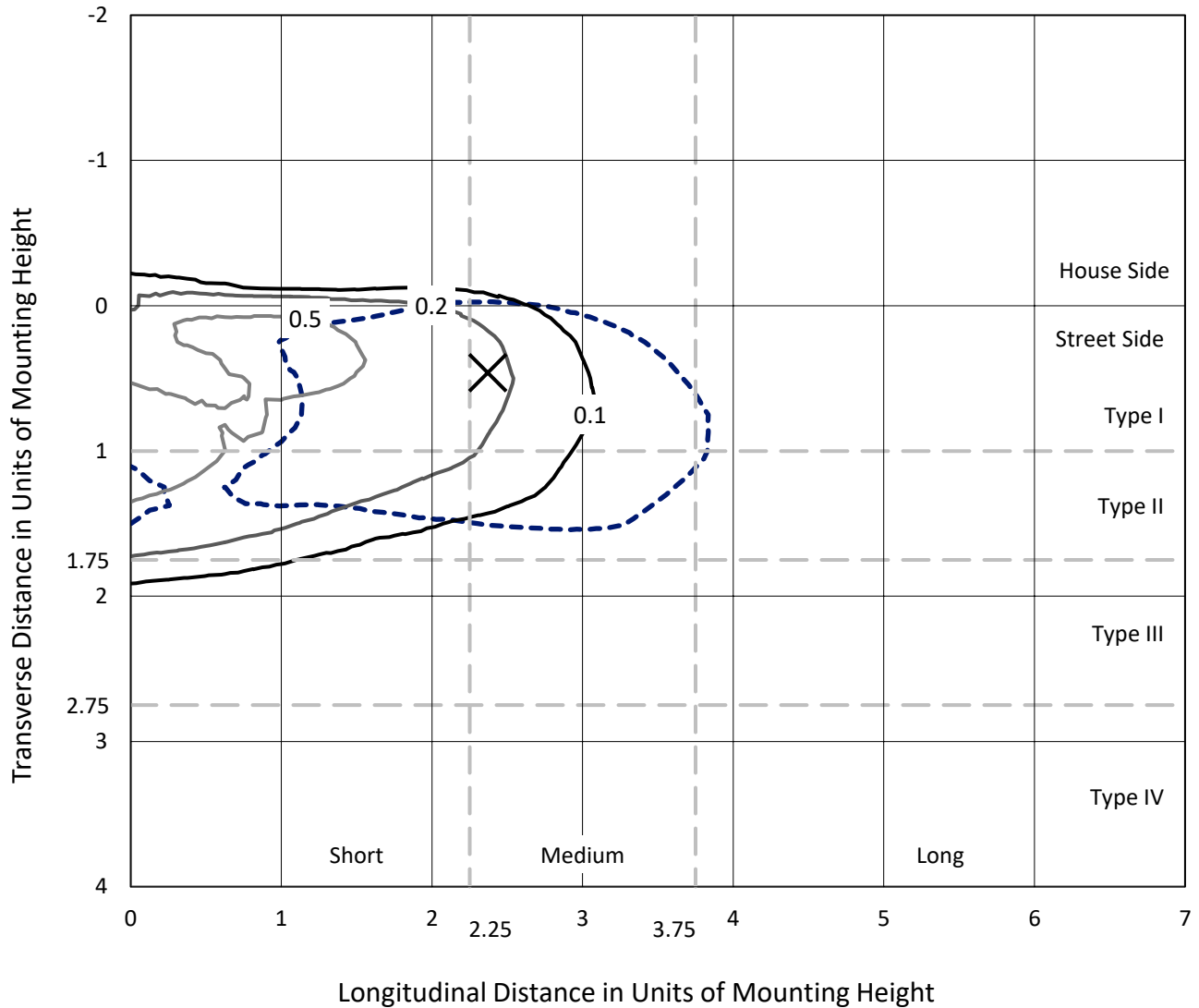
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

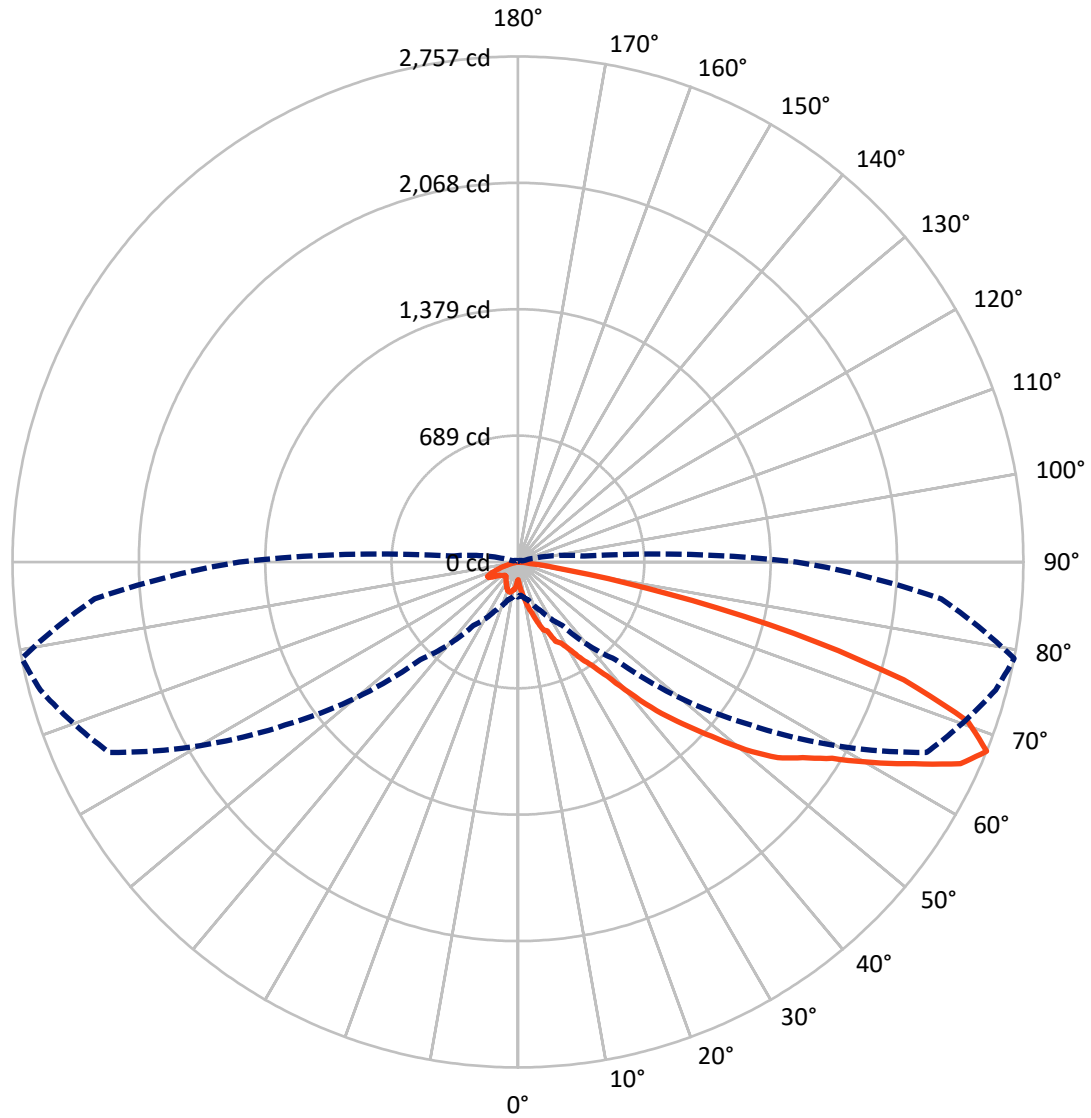
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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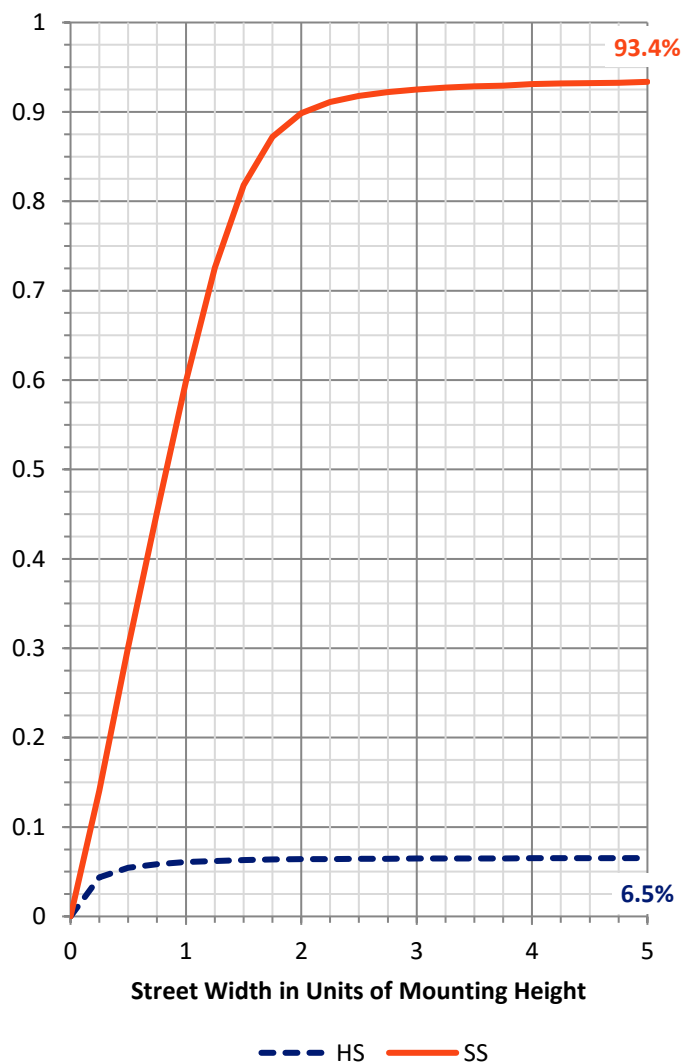
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	165.1	0.0	165.1
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	2347.9	0.0	2347.9
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	2513.0	0.0	2513.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	14.1	0.6
10°-20°	56.2	2.2
20°-30°	108.3	4.3
30°-40°	212.8	8.5
40°-50°	426.3	17.0
50°-60°	681.4	27.1
60°-70°	685.6	27.3
70°-80°	309.3	12.3
80°-90°	19.1	0.8
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°	2513.0	100.0
0°-180°	2513.0	100.0

**Coefficient of Utilization**



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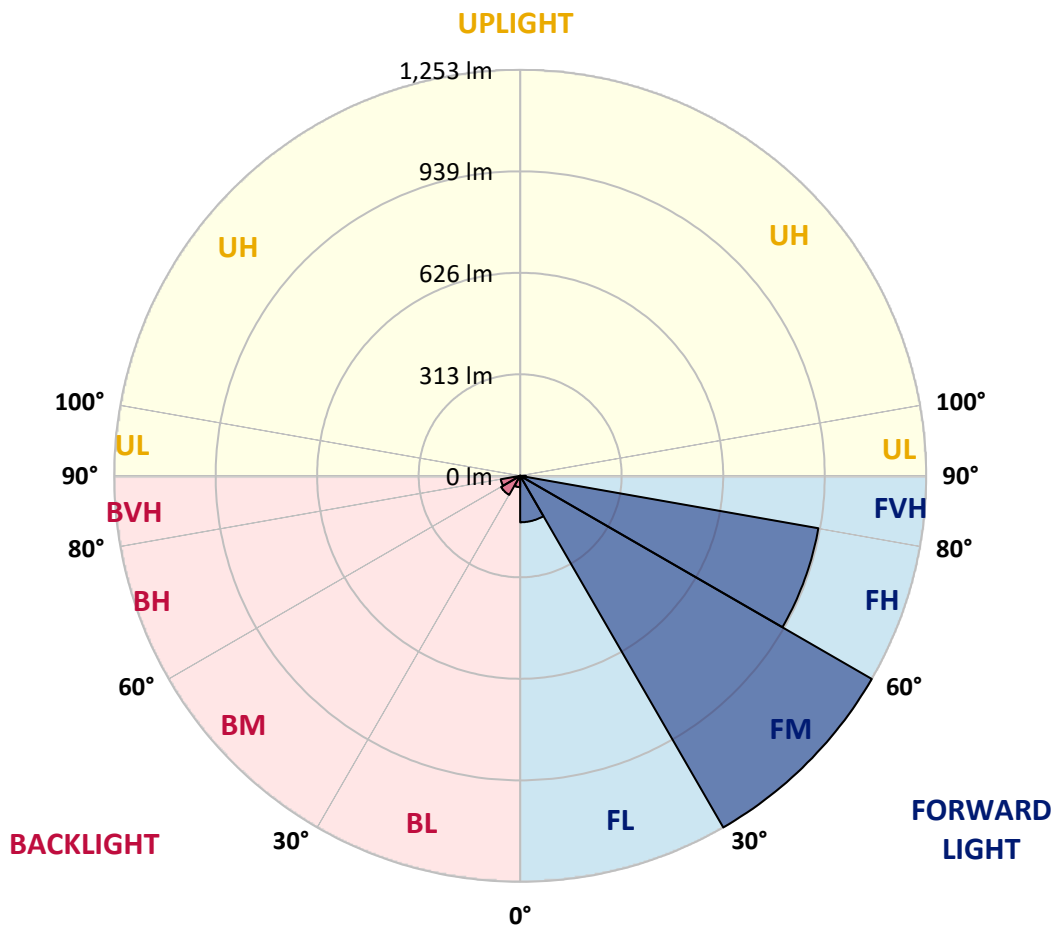
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	143.5	5.7			
FM (30°-60°)	1252.5	49.8			
FH (60°-80°)	934.0	37.2			G1/1800
FVH (80°-90°)	17.9	0.7			G1/100
BL (0°-30°)	35.1	1.4	B0/110		
BM (30°-60°)	67.9	2.7	B0/220		
BH (60°-80°)	60.9	2.4	B0/110		G0/110
BVH (80°-90°)	1.2	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	130.8	126.1	118.4	122.7	122.5	124.7	120.5	115.9	108.6	115.9	116.5
5°	188.3	179.5	174.0	172.9	166.8	161.1	159.9	155.2	151.6	145.0	150.9
7.5°	234.5	230.5	220.7	219.6	204.6	196.3	198.9	196.9	183.1	176.3	182.0
10°	254.2	247.3	248.7	247.3	240.9	243.3	237.9	231.6	220.7	209.5	195.3
12.5°	261.8	260.7	272.2	270.8	285.8	303.8	291.7	281.4	256.0	253.2	234.0
15°	278.2	285.1	283.4	289.3	298.8	329.4	329.1	331.6	304.8	290.4	262.5
17.5°	292.7	297.8	289.5	296.2	322.2	340.8	365.6	355.9	358.9	344.2	301.2
20°	286.5	292.3	284.0	280.0	325.8	361.0	394.1	387.1	405.3	396.2	336.8
22.5°	325.4	314.5	293.5	280.5	314.7	360.6	404.2	433.7	430.6	408.1	369.9
25°	373.5	366.8	341.8	318.8	321.8	358.1	436.1	479.5	488.9	479.3	401.3
27.5°	438.3	436.8	385.5	375.6	345.9	347.2	441.1	537.1	515.6	500.6	438.0
30°	523.0	510.9	450.1	437.1	393.3	371.8	471.6	586.8	571.0	550.7	472.5
32.5°	614.0	615.8	538.2	495.2	460.1	434.6	459.5	610.1	639.6	623.1	515.6
35°	717.3	725.3	630.4	580.0	511.6	474.0	511.3	681.6	734.5	691.1	573.4
37.5°	876.5	876.2	765.4	664.9	615.2	574.5	597.6	746.5	851.1	790.2	677.0
40°	1016.5	986.1	883.0	767.6	690.0	678.9	662.2	835.5	975.7	939.0	769.1
42.5°	1121.1	1099.7	975.1	885.3	789.2	754.0	748.1	965.8	1159.5	1108.1	900.6
45°	1246.2	1175.8	1084.1	1003.2	905.3	895.0	881.1	1098.1	1373.4	1257.6	1014.9
47.5°	1358.3	1292.1	1205.3	1101.5	989.0	1073.5	1019.7	1214.4	1529.0	1420.2	1140.9
50°	1452.6	1382.3	1285.1	1206.0	1157.8	1215.2	1125.6	1310.1	1697.0	1608.9	1258.8
52.5°	1500.7	1421.0	1346.0	1297.1	1326.6	1313.7	1269.1	1426.0	1840.2	1774.3	1363.3
55°	1461.2	1383.4	1351.9	1376.2	1465.8	1428.5	1432.1	1605.7	1975.4	1884.6	1454.1
57.5°	1286.1	1215.0	1229.0	1295.4	1467.2	1564.7	1618.0	1780.2	2083.9	2022.0	1594.3
60°	972.9	915.7	967.5	1085.2	1329.2	1537.5	1749.9	1954.8	2238.9	2219.5	1806.6
62.5°	594.2	563.1	636.5	783.4	1059.2	1404.4	1826.8	2187.5	2404.7	2425.4	2031.7
65°	303.1	289.1	350.3	479.5	715.6	1153.7	1771.2	2332.2	2576.1	2652.3	2246.3
67.5°	190.9	181.9	214.6	292.4	422.2	752.5	1550.8	2458.6	2697.2	2757.4	2317.9
70°	132.3	126.6	154.9	200.7	266.4	405.3	1151.5	2340.6	2601.2	2603.9	2144.6
72.5°	83.9	79.5	107.1	148.6	196.6	209.3	660.1	1836.6	2226.6	2201.0	1736.7
75°	54.4	52.2	68.0	108.9	151.0	129.1	326.2	1239.3	1596.6	1556.4	1153.5
77.5°	39.1	37.7	45.6	72.7	107.5	90.3	146.3	738.6	915.4	827.6	559.9
80°	23.6	23.4	33.0	45.6	76.5	63.7	67.6	335.4	354.9	289.4	171.1
82.5°	11.8	12.2	18.4	29.4	49.2	41.7	30.9	111.7	95.3	70.2	34.6
85°	2.8	3.5	9.7	20.2	24.7	16.6	14.7	29.2	26.2	19.8	10.1
87.5°	0.0	0.0	3.0	4.8	6.6	2.8	5.0	5.5	7.1	5.5	2.1
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°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	116.6	115.0	104.9	102.2	102.0	99.0	99.7	97.0	97.1	103.3	103.3
5°	148.6	138.9	129.2	120.7	114.8	106.5	103.5	102.2	101.1	103.6	105.1
7.5°	174.5	160.3	142.8	124.1	106.8	94.9	93.2	90.2	89.1	91.6	93.5
10°	186.0	168.3	144.3	117.1	100.8	91.2	83.1	78.8	78.0	77.9	78.5
12.5°	210.4	188.4	146.0	114.4	96.8	86.2	77.0	69.8	63.2	63.9	63.2
15°	230.0	203.9	146.0	108.1	87.1	76.5	60.4	56.8	55.8	57.4	56.1
17.5°	259.5	219.3	138.7	96.7	78.8	59.4	53.3	53.1	55.0	57.2	55.8
20°	277.2	221.4	126.3	83.7	64.7	51.5	49.3	47.1	49.9	51.7	51.0
22.5°	295.6	221.5	114.0	76.7	52.1	47.0	43.4	41.6	42.0	43.6	43.9
25°	303.5	216.1	102.5	67.6	47.2	42.0	38.2	36.3	35.6	36.4	36.2
27.5°	325.0	205.7	90.0	57.6	44.9	37.3	33.8	31.4	29.4	30.8	31.0
30°	328.0	202.4	83.3	51.3	41.8	33.0	29.9	27.4	25.9	27.8	27.8
32.5°	337.7	184.1	79.8	48.6	38.6	30.5	26.3	24.5	24.2	25.5	25.6
35°	352.7	176.1	74.7	46.5	35.7	27.6	23.7	22.9	22.6	23.6	23.6
37.5°	403.4	166.1	69.0	44.7	33.2	26.0	23.0	21.6	21.7	22.6	23.1
40°	437.1	167.3	60.5	42.5	30.3	24.7	21.6	20.6	20.5	20.9	21.3
42.5°	499.5	168.3	56.8	40.2	28.1	23.0	20.2	19.5	19.0	19.4	19.8
45°	569.4	173.4	54.9	38.2	26.9	22.0	19.0	18.6	17.3	17.6	18.1
47.5°	636.7	192.1	52.5	35.5	25.8	21.5	17.7	16.8	15.9	15.8	16.3
50°	713.2	210.3	49.9	32.4	24.7	20.6	16.5	15.0	14.4	14.4	14.8
52.5°	781.6	227.6	47.4	30.3	23.8	19.1	15.4	13.9	13.4	13.4	14.0
55°	853.6	245.8	45.2	28.4	22.7	17.6	14.4	13.0	12.9	12.6	13.0
57.5°	980.8	285.4	42.4	26.7	21.2	16.3	13.6	12.2	11.9	11.5	11.9
60°	1166.0	346.2	38.8	25.1	19.4	15.5	12.9	11.2	10.8	10.1	10.3
62.5°	1347.1	395.4	34.6	23.0	17.7	14.7	11.8	10.1	9.4	8.6	8.7
65°	1502.2	414.8	30.2	20.5	16.1	12.7	10.3	8.9	7.9	6.8	6.6
67.5°	1520.5	366.3	25.9	18.1	14.4	10.8	8.7	7.9	6.4	5.4	5.1
70°	1368.4	272.9	21.6	16.1	12.5	9.1	7.5	6.9	6.0	5.1	4.7
72.5°	1089.7	201.4	18.1	14.3	10.9	7.8	6.4	6.5	6.0	5.0	4.4
75°	720.6	115.3	14.8	11.9	9.1	6.2	5.8	5.8	5.7	4.7	4.2
77.5°	346.7	49.7	11.4	9.4	7.3	4.7	5.3	5.3	5.4	4.3	3.5
80°	98.4	15.0	7.1	6.4	5.4	3.2	4.2	4.0	3.6	2.5	1.5
82.5°	17.6	5.8	3.2	3.3	3.0	1.2	2.4	2.2	1.8	1.0	0.1
85°	4.8	2.2	1.8	1.9	1.5	0.4	1.0	1.2	1.0	0.6	0.0
87.5°	1.2	1.0	1.2	1.4	1.1	0.1	0.4	0.1	0.4	0.1	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)