

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: P596495

Luminaire Tested: **MSA-SA1A-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596495
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-827-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: 2240 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

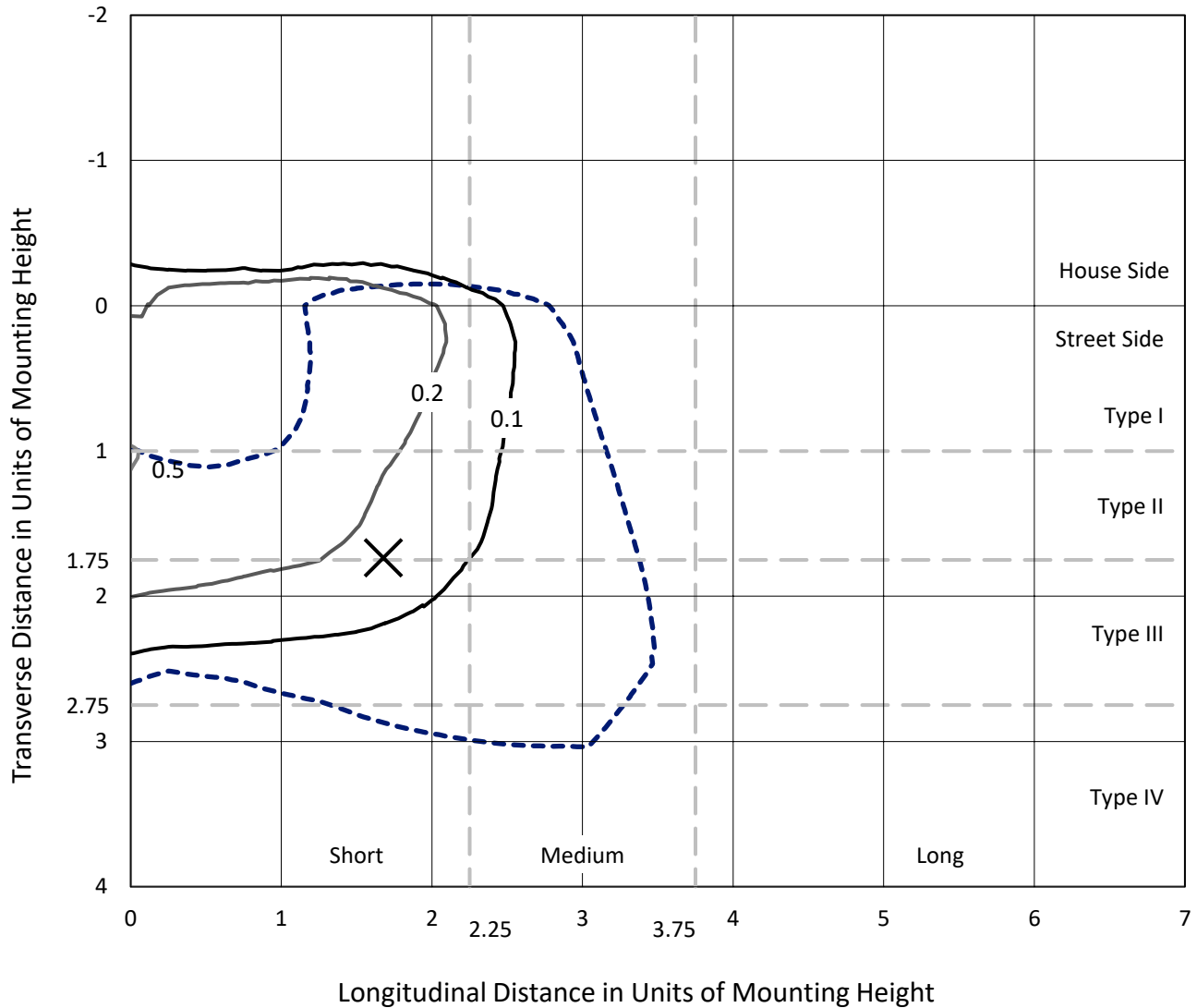
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

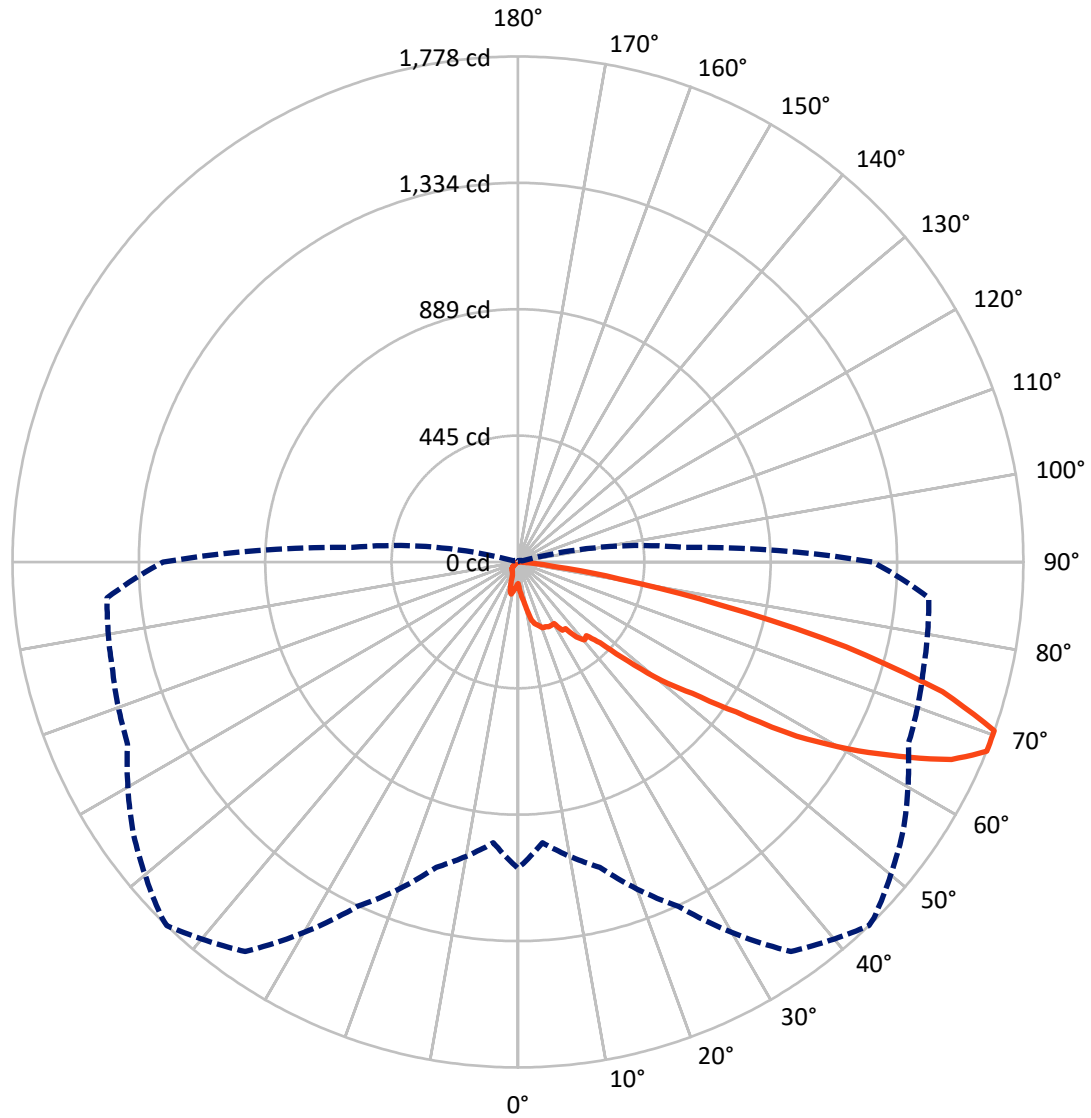
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.5 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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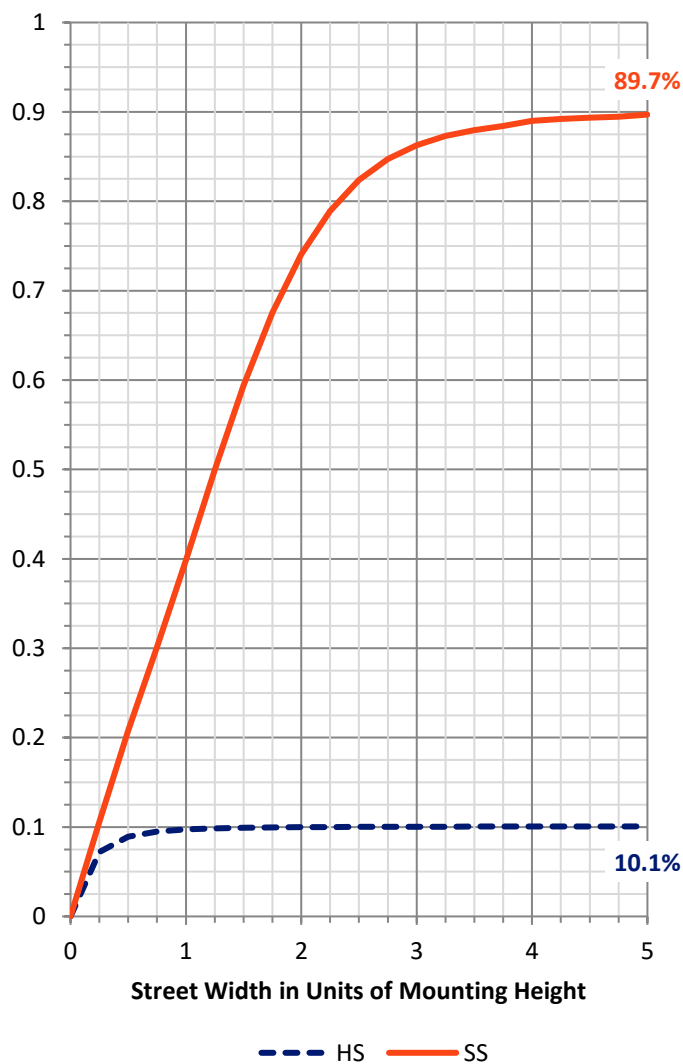
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	227.6	0.0	227.6
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2012.5	0.0	2012.5
	% Fixture	89.8	0.0	89.8
Total	Lumens	2240.0	0.0	2240.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.2	0.5
10°-20°	46.8	2.1
20°-30°	83.0	3.7
30°-40°	134.8	6.0
40°-50°	269.8	12.0
50°-60°	553.6	24.7
60°-70°	760.5	33.9
70°-80°	357.4	16.0
80°-90°	22.9	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°	2240.0	100.0
0°-180°	2240.0	100.0

Coefficient of Utilization

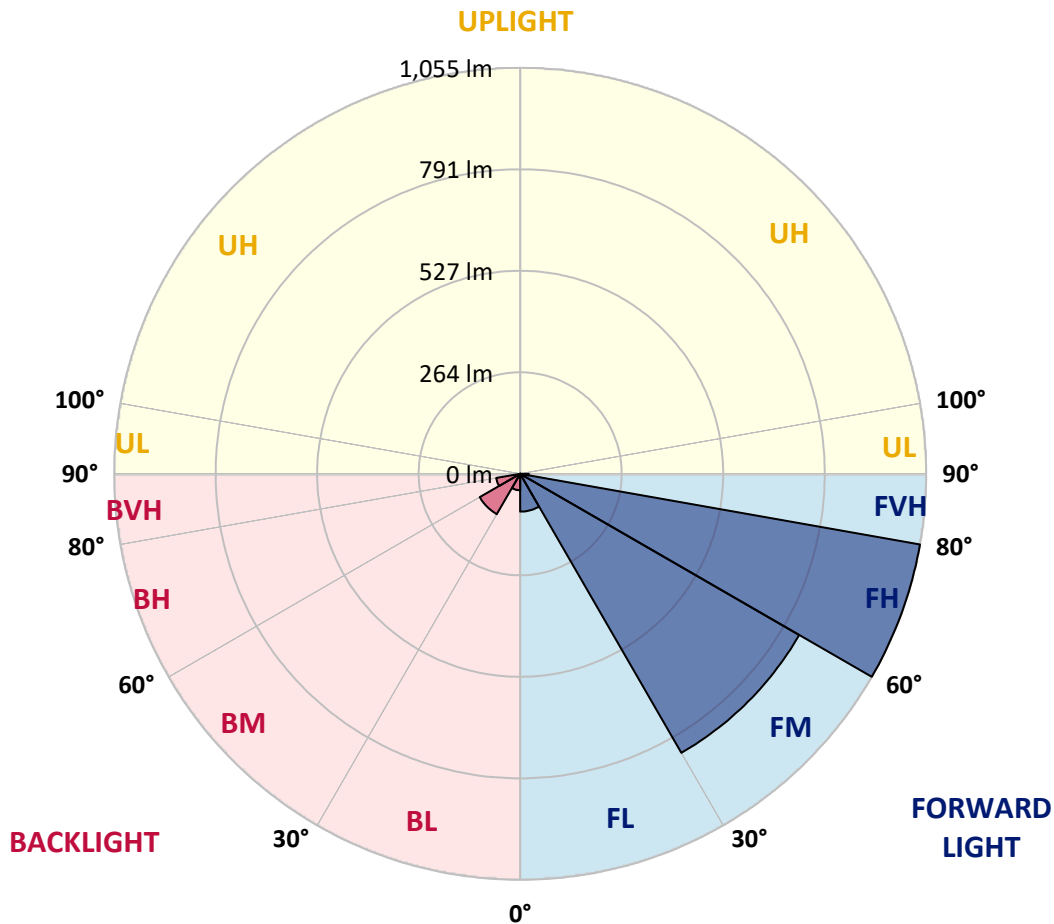


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	98.3	4.4			
FM (30°-60°)	837.1	37.4			
FH (60°-80°)	1054.7	47.1			G1/1800
FVH (80°-90°)	22.4	1.0			G1/100
BL (0°-30°)	42.7	1.9	B0/110		
BM (30°-60°)	121.2	5.4	B0/220		
BH (60°-80°)	63.1	2.8	B0/110		G0/110
BVH (80°-90°)	0.5	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5
2.5°	96.0	92.9	88.4	89.4	89.9	91.3	91.4	89.7	84.7	83.4	89.4
5°	134.5	127.0	125.6	122.8	117.1	114.0	113.3	116.4	112.4	111.2	112.8
7.5°	171.8	165.4	158.4	154.5	142.7	135.4	135.0	136.2	137.0	132.7	134.9
10°	196.6	189.6	188.1	179.1	168.9	167.1	166.4	161.7	157.9	154.6	143.9
12.5°	219.1	219.0	221.7	208.7	207.1	208.9	208.3	191.5	187.6	174.2	171.1
15°	249.0	256.4	244.7	233.8	220.0	225.9	224.3	213.6	211.0	201.8	188.6
17.5°	280.0	282.0	262.4	245.7	242.1	234.3	235.9	232.1	219.0	226.3	213.2
20°	280.8	285.1	264.1	236.5	247.5	247.2	247.3	243.6	226.3	243.3	231.4
22.5°	291.1	280.5	261.0	243.5	245.4	247.3	249.3	244.7	241.0	245.2	247.4
25°	286.9	282.7	264.0	252.3	250.5	252.0	252.5	258.3	255.9	266.1	260.5
27.5°	297.8	291.8	258.2	260.3	253.7	252.0	249.0	268.4	275.3	267.3	282.1
30°	316.5	315.6	268.2	271.2	266.2	251.0	258.9	284.2	292.9	287.9	306.0
32.5°	345.6	348.6	297.4	277.4	280.0	286.8	283.8	284.2	306.1	317.1	331.4
35°	387.0	385.4	326.0	300.9	287.3	288.4	292.6	312.7	341.0	340.3	355.5
37.5°	468.3	450.7	376.5	324.9	328.9	334.5	331.4	358.5	361.2	362.2	398.5
40°	588.1	564.7	456.2	375.4	336.1	360.7	359.2	365.9	384.0	390.8	443.8
42.5°	745.9	714.6	596.3	468.3	370.7	353.8	362.9	375.5	436.5	455.9	514.0
45°	920.3	856.9	736.2	600.7	457.4	404.9	411.8	435.3	519.9	552.0	616.1
47.5°	1033.4	977.5	874.6	718.0	547.8	520.3	520.9	525.9	617.8	677.4	763.3
50°	1131.6	1072.1	976.7	840.7	707.8	655.6	643.8	620.4	742.6	824.0	919.4
52.5°	1270.1	1200.7	1078.7	984.6	890.2	767.4	763.2	771.1	889.7	975.3	1079.3
55°	1395.1	1310.8	1194.3	1135.0	1098.2	931.7	935.3	948.5	1078.6	1123.9	1221.6
57.5°	1450.4	1359.0	1299.0	1272.4	1252.7	1156.1	1144.0	1136.1	1227.5	1244.8	1370.7
60°	1486.5	1399.6	1372.4	1378.6	1438.1	1335.6	1324.6	1278.7	1350.8	1365.0	1504.3
62.5°	1463.7	1384.4	1390.2	1441.7	1573.9	1506.4	1474.7	1397.9	1451.6	1463.1	1600.3
65°	1319.8	1237.2	1311.8	1436.4	1677.4	1675.8	1661.1	1507.9	1507.4	1522.1	1607.7
67.5°	1078.1	991.4	1112.0	1336.8	1673.1	1778.4	1771.5	1653.9	1515.5	1476.2	1450.9
70°	749.5	674.3	811.1	1104.0	1524.0	1777.7	1766.6	1752.0	1452.0	1270.6	1124.9
72.5°	389.5	348.1	475.5	760.8	1214.8	1561.9	1598.6	1574.6	1239.8	923.2	662.4
75°	132.3	118.7	196.1	403.8	807.6	1192.7	1235.7	1211.3	842.0	495.3	262.0
77.5°	51.3	47.7	70.3	163.9	405.1	726.8	773.5	748.6	451.6	181.4	61.6
80°	29.2	28.2	38.8	73.9	178.6	361.5	394.4	357.7	162.8	61.1	16.1
82.5°	12.4	12.7	21.6	39.9	89.8	127.6	142.3	129.8	68.2	41.9	5.9
85°	2.7	3.3	10.3	22.2	37.7	36.4	38.2	42.4	41.9	30.8	2.6
87.5°	0.0	0.0	3.2	6.1	9.0	5.9	4.7	8.3	12.8	12.4	1.1
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°	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5	75.5
2.5°	90.5	89.3	81.5	81.0	81.5	80.2	80.0	77.2	77.4	83.9	84.4
5°	112.8	106.6	99.9	97.8	95.9	91.4	93.9	93.9	93.9	98.0	99.2
7.5°	132.9	124.6	115.2	107.3	99.7	94.1	98.0	100.7	102.3	107.6	110.1
10°	142.0	133.9	125.5	114.3	108.3	106.2	101.8	99.4	102.3	101.2	102.5
12.5°	161.6	154.2	139.7	128.1	123.6	116.5	103.4	94.2	88.2	87.2	87.0
15°	180.6	176.0	156.6	141.1	125.6	109.1	86.7	74.6	68.2	67.1	67.2
17.5°	204.7	198.1	169.6	147.2	121.0	91.3	66.9	56.6	56.1	58.8	59.0
20°	220.7	210.0	176.1	142.2	106.0	69.0	52.4	49.9	53.9	58.8	58.3
22.5°	236.0	224.4	184.8	137.7	82.1	52.4	48.2	48.4	51.8	57.1	58.4
25°	246.2	242.0	195.4	127.3	62.6	45.3	46.1	47.9	50.8	55.8	55.8
27.5°	276.7	257.0	194.2	107.2	48.2	42.2	44.0	46.3	47.8	53.9	54.5
30°	295.2	288.8	200.6	86.7	42.2	38.3	41.6	43.7	44.7	51.6	51.9
32.5°	317.9	303.7	208.4	64.0	39.3	38.0	37.3	38.9	41.7	47.8	48.2
35°	345.6	341.4	197.3	50.3	38.3	35.6	34.1	35.0	36.8	40.9	41.7
37.5°	402.1	377.1	190.6	43.1	38.3	34.7	33.1	30.9	31.1	34.0	35.6
40°	449.6	442.0	171.9	41.9	36.6	33.5	29.5	26.8	25.0	25.8	26.4
42.5°	536.9	501.5	147.9	41.3	35.0	30.3	25.1	22.2	19.4	19.6	20.6
45°	642.9	566.5	126.4	40.6	33.8	27.1	21.1	17.8	14.8	14.9	15.9
47.5°	784.5	661.2	100.3	38.8	31.9	24.1	17.0	13.6	11.9	12.2	13.1
50°	945.3	744.3	79.3	35.9	29.5	21.2	13.8	11.0	10.4	10.7	11.7
52.5°	1088.9	805.6	65.5	33.4	26.2	17.3	11.6	9.8	9.5	9.8	10.5
55°	1216.7	841.2	54.7	30.4	22.5	14.0	10.5	9.0	8.9	8.8	9.3
57.5°	1336.5	851.4	42.7	25.7	18.3	12.1	9.8	8.4	8.2	7.8	8.2
60°	1423.8	833.9	31.4	20.6	14.9	11.0	9.1	7.5	7.2	6.5	6.8
62.5°	1465.9	785.8	23.7	16.6	12.7	10.0	8.2	6.5	6.1	5.3	5.4
65°	1425.9	706.7	18.7	14.0	10.9	8.4	6.9	5.6	4.9	4.2	4.2
67.5°	1248.7	586.2	15.8	12.1	9.1	7.2	5.7	5.1	4.1	3.5	3.3
70°	916.5	421.7	13.6	10.6	7.9	6.2	4.8	4.6	4.0	3.3	3.1
72.5°	517.3	238.6	11.6	9.4	6.7	5.2	4.1	4.2	3.8	3.1	2.8
75°	197.4	80.4	9.6	7.8	5.4	4.0	3.5	3.5	3.5	2.6	2.2
77.5°	48.9	20.5	7.7	6.3	4.3	2.6	2.8	3.0	3.0	2.2	1.6
80°	13.5	6.9	4.6	4.6	3.1	1.5	2.0	2.0	1.6	0.7	0.0
82.5°	4.9	2.6	1.6	2.0	1.4	0.5	0.7	0.5	0.4	0.0	0.0
85°	2.1	1.4	1.0	1.1	0.6	0.0	0.1	0.2	0.0	0.0	0.0
87.5°	0.9	0.6	0.5	0.5	0.2	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)