

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: P596843

Luminaire Tested: **MSA-SA1A-835-U-T3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596843  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-835-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

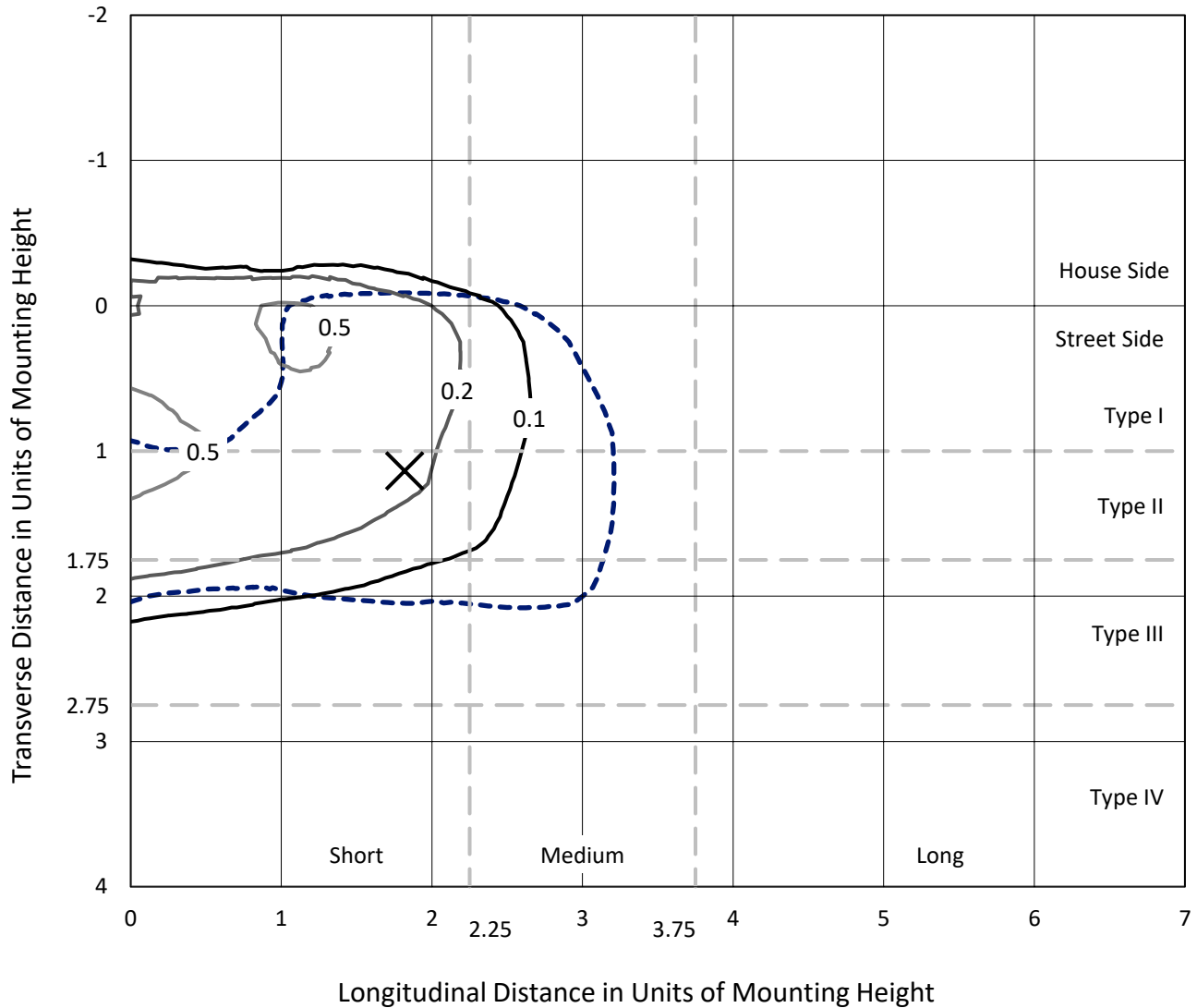
Lumens per Lamp: N/A  
Luminaire Lumens: 2460 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

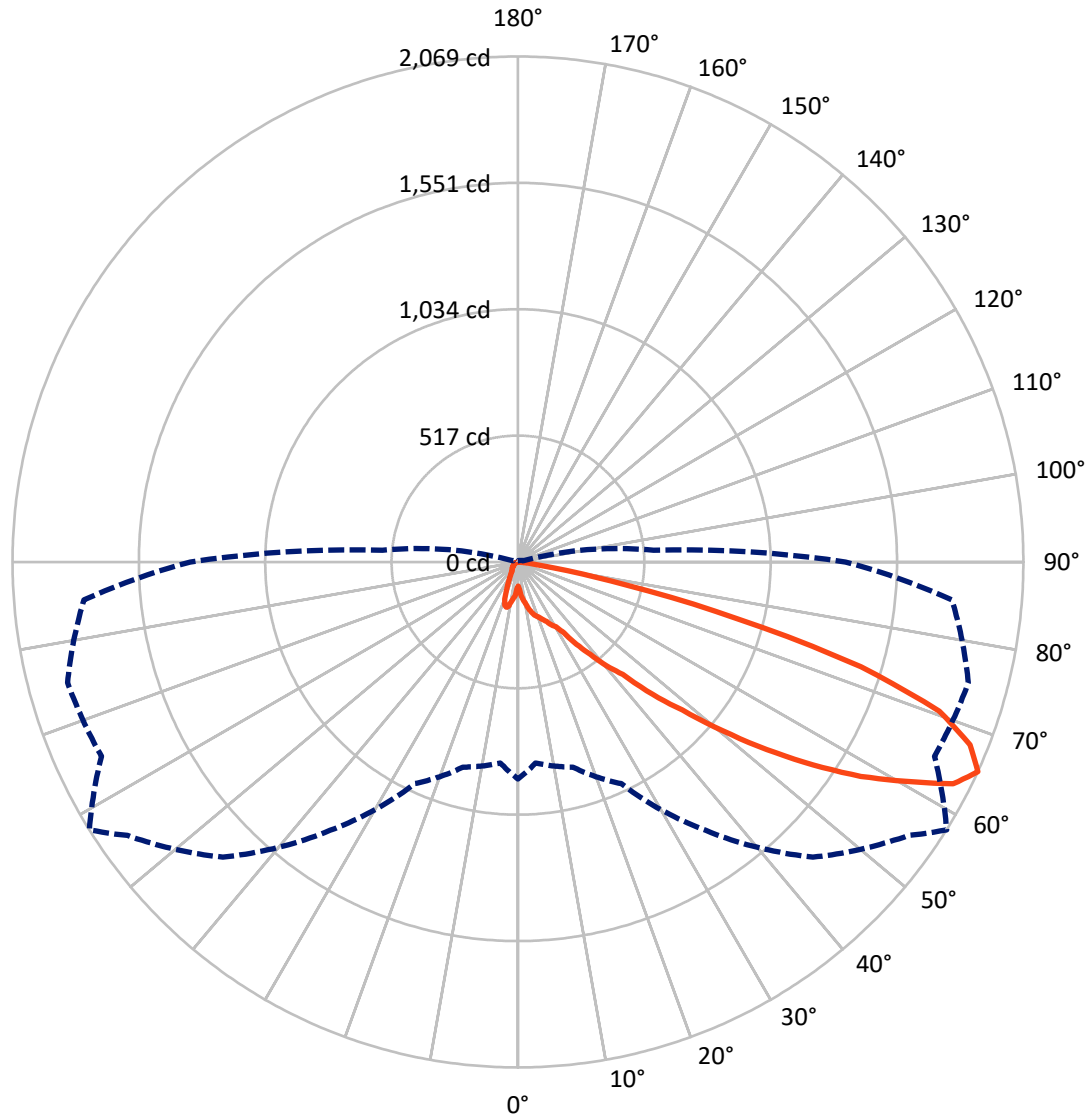
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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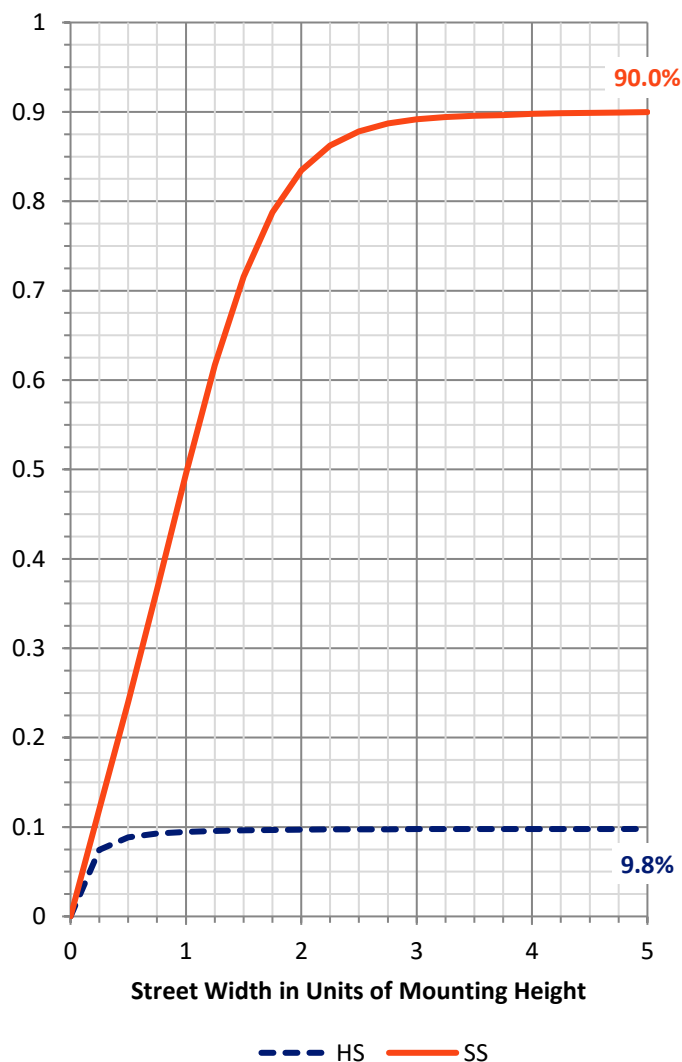
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	242.7	0.0	242.7
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	2217.3	0.0	2217.3
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	2460.0	0.0	2460.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.8	0.6
10°-20°	50.5	2.1
20°-30°	97.7	4.0
30°-40°	195.0	7.9
40°-50°	398.7	16.2
50°-60°	707.1	28.7
60°-70°	745.5	30.3
70°-80°	241.7	9.8
80°-90°	9.9	0.4
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°	2460.0	100.0
0°-180°	2460.0	100.0

**Coefficient of Utilization**



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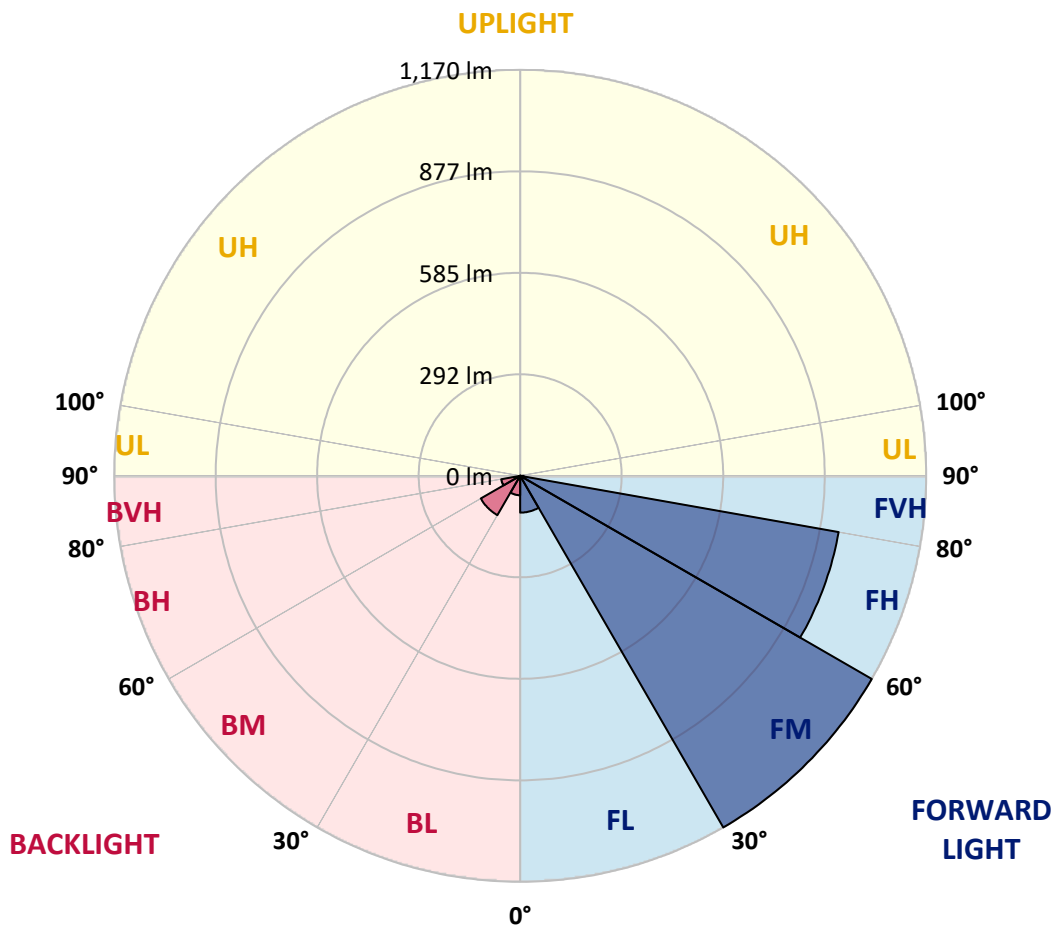
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	106.1	4.3			
FM (30°-60°)	1169.9	47.6			
FH (60°-80°)	931.8	37.9			G1/1800
FVH (80°-90°)	9.5	0.4			G0/10
BL (0°-30°)	56.0	2.3	B0/110		
BM (30°-60°)	131.0	5.3	B0/220		
BH (60°-80°)	55.4	2.3	B0/110		G0/110
BVH (80°-90°)	0.4	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°	58°	65°	75°	85°
0°	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5
2.5°	120.2	116.6	110.9	111.9	113.0	115.2	113.4	111.8	110.0	107.6	116.6
5°	145.2	139.2	138.6	137.4	136.4	136.3	138.5	137.8	138.8	143.2	147.8
7.5°	154.3	151.8	147.1	149.0	146.0	143.6	153.5	156.7	162.7	164.8	176.7
10°	153.3	149.7	151.7	152.6	154.7	163.3	169.5	173.0	178.3	189.6	187.3
12.5°	157.8	160.9	163.0	163.2	173.8	189.6	194.0	197.0	206.4	210.8	222.4
15°	172.6	177.8	174.5	175.9	179.4	198.6	209.0	215.4	228.7	243.1	246.0
17.5°	193.8	197.1	190.2	185.2	194.7	205.3	224.1	230.8	239.2	272.9	279.1
20°	220.5	226.2	211.2	191.4	204.0	216.5	237.0	240.2	249.2	293.1	302.9
22.5°	283.0	274.5	251.7	220.8	217.0	222.6	242.1	254.6	269.8	304.4	327.3
25°	344.6	341.7	308.0	273.5	248.6	236.2	262.1	269.0	293.9	331.4	344.0
27.5°	413.2	419.0	362.7	341.8	292.9	252.2	274.5	291.8	321.3	341.3	371.6
30°	503.6	494.3	428.4	407.5	351.7	296.4	306.8	307.9	351.3	373.7	402.5
32.5°	574.5	580.5	497.7	465.5	420.9	364.4	331.0	345.4	376.5	426.5	453.7
35°	651.3	650.7	570.0	526.7	468.4	419.9	402.9	413.4	452.4	509.0	516.2
37.5°	765.9	756.1	660.8	597.5	547.9	506.5	493.5	479.5	519.7	573.7	600.7
40°	874.1	840.2	752.1	677.0	613.6	596.7	549.6	558.2	570.1	641.4	716.1
42.5°	983.4	962.3	844.6	781.7	703.7	663.6	632.8	628.8	685.5	770.0	847.1
45°	1127.6	1063.2	969.0	913.7	823.4	783.1	758.3	773.1	824.1	947.5	998.9
47.5°	1248.6	1189.3	1108.5	1024.5	929.8	975.1	928.5	905.1	975.1	1102.6	1170.9
50°	1352.6	1286.6	1204.7	1142.5	1127.2	1170.7	1076.5	1085.1	1130.5	1280.3	1318.9
52.5°	1428.3	1358.7	1287.3	1257.2	1320.2	1342.1	1294.9	1275.9	1317.2	1431.9	1450.6
55°	1485.2	1414.0	1358.2	1399.6	1521.5	1514.3	1530.9	1466.1	1505.6	1589.9	1581.0
57.5°	1488.7	1404.3	1371.6	1438.2	1605.6	1717.1	1765.7	1655.4	1677.9	1713.5	1693.5
60°	1379.8	1295.9	1293.2	1387.8	1629.9	1769.5	1875.9	1822.2	1792.1	1818.6	1780.8
62.5°	1162.9	1104.2	1131.6	1236.2	1539.2	1740.6	1934.6	1999.3	1882.3	1888.2	1834.5
65°	888.0	826.3	869.3	1001.0	1340.9	1708.2	1951.3	2068.6	1880.6	1908.1	1783.0
67.5°	588.1	552.4	601.0	746.1	1066.1	1507.9	1942.7	1995.9	1820.9	1830.6	1591.7
70°	303.6	294.9	334.2	448.8	716.8	1158.5	1858.3	1829.2	1699.7	1577.0	1227.7
72.5°	97.2	97.6	135.5	205.0	386.4	705.3	1428.4	1468.3	1360.1	1153.6	749.6
75°	43.1	42.4	56.6	86.0	161.1	316.2	887.4	930.5	846.8	634.6	315.1
77.5°	31.0	30.1	36.3	50.3	79.8	107.2	416.1	449.0	383.9	219.9	72.2
80°	21.9	21.7	26.3	35.3	49.9	47.6	131.4	147.4	118.0	53.3	21.2
82.5°	12.3	12.7	18.3	24.9	30.3	23.8	37.0	40.7	39.8	28.4	9.3
85°	6.0	6.6	11.9	18.0	15.9	9.3	13.2	14.3	16.6	16.5	4.7
87.5°	0.0	0.0	4.8	8.2	4.3	1.4	4.0	4.6	4.4	5.3	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°	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5
2.5°	118.4	117.6	107.1	107.9	110.3	109.3	110.1	108.2	106.0	115.0	114.8
5°	149.7	143.5	140.2	137.1	137.7	131.4	135.0	136.7	136.4	141.6	142.9
7.5°	177.1	168.8	162.2	155.8	146.1	137.4	142.8	146.3	148.6	157.5	160.9
10°	190.0	183.2	180.6	168.1	161.2	155.8	149.3	144.6	146.5	144.2	146.5
12.5°	218.3	213.7	203.6	191.0	182.7	171.6	147.4	127.1	114.7	114.8	114.0
15°	244.0	243.8	228.7	207.8	183.7	152.1	114.3	88.8	77.0	73.7	72.6
17.5°	277.7	273.5	246.0	215.1	171.7	117.7	77.8	60.8	59.7	61.6	60.8
20°	299.2	293.1	254.6	204.4	141.6	79.6	58.7	53.9	57.2	60.0	59.3
22.5°	320.6	311.5	261.1	191.4	100.7	58.3	53.0	52.2	54.3	57.8	58.3
25°	332.4	330.6	273.8	167.0	69.0	51.1	51.1	50.8	51.5	54.0	53.6
27.5°	366.6	342.2	264.3	130.3	53.3	47.0	47.6	47.4	44.9	47.4	47.5
30°	388.0	376.7	265.0	92.8	47.0	41.6	43.4	41.1	37.4	39.5	39.1
32.5°	430.9	402.9	262.9	62.6	42.8	39.6	36.8	33.7	30.9	31.7	31.0
35°	480.9	459.6	234.8	50.3	39.9	35.0	30.6	27.4	24.5	25.2	25.1
37.5°	580.3	512.6	211.5	45.3	38.0	32.1	27.0	22.6	21.1	21.5	21.9
40°	672.4	601.1	168.1	43.1	34.6	28.7	22.3	19.1	18.1	18.4	18.8
42.5°	810.1	671.5	127.0	40.9	31.3	24.2	18.6	16.5	15.5	16.1	16.3
45°	943.4	731.3	94.9	38.9	28.5	20.9	15.7	14.3	13.2	13.6	14.1
47.5°	1076.5	797.8	70.8	35.9	25.5	18.0	13.4	12.5	11.8	11.9	12.6
50°	1195.6	828.8	55.7	32.1	23.0	15.7	12.2	11.2	10.9	11.1	11.6
52.5°	1283.1	829.1	47.0	28.8	20.6	13.9	11.5	10.4	10.2	10.5	11.1
55°	1362.2	806.9	40.7	25.9	18.6	12.6	10.9	10.0	10.0	10.2	10.8
57.5°	1414.7	766.2	35.3	22.9	16.8	11.9	10.5	9.6	9.4	9.3	9.7
60°	1440.3	710.7	29.9	20.1	15.1	11.5	10.2	8.4	8.3	8.0	8.3
62.5°	1424.1	641.1	25.1	17.3	13.4	10.9	9.0	7.3	7.1	6.5	6.9
65°	1341.3	556.7	21.2	14.8	11.6	9.3	7.6	6.2	5.5	4.8	4.7
67.5°	1171.9	452.2	17.7	12.7	10.0	7.6	6.2	5.5	4.3	3.7	3.6
70°	878.3	308.7	14.7	10.9	8.3	6.5	5.3	5.0	4.0	3.6	3.3
72.5°	515.2	166.6	12.3	9.6	7.1	5.4	4.3	4.6	4.0	3.3	3.0
75°	205.8	55.4	9.8	7.6	5.7	3.9	3.6	3.7	3.6	3.0	2.5
77.5°	47.0	17.5	7.6	6.0	4.4	2.5	2.9	3.2	3.2	2.5	1.8
80°	14.7	6.9	4.4	3.7	3.2	1.4	2.1	2.2	1.5	0.7	0.0
82.5°	4.7	1.9	1.5	1.5	1.4	0.3	0.4	0.3	0.0	0.0	0.0
85°	1.8	1.2	1.0	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.7	0.6	0.4	0.6	0.3	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)