

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: P366749

Luminaire Tested: **MSA-SA1B-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366749
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-SA1B-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: 3172 lumens
Efficiency: N/A
Efficacy: 72.1 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

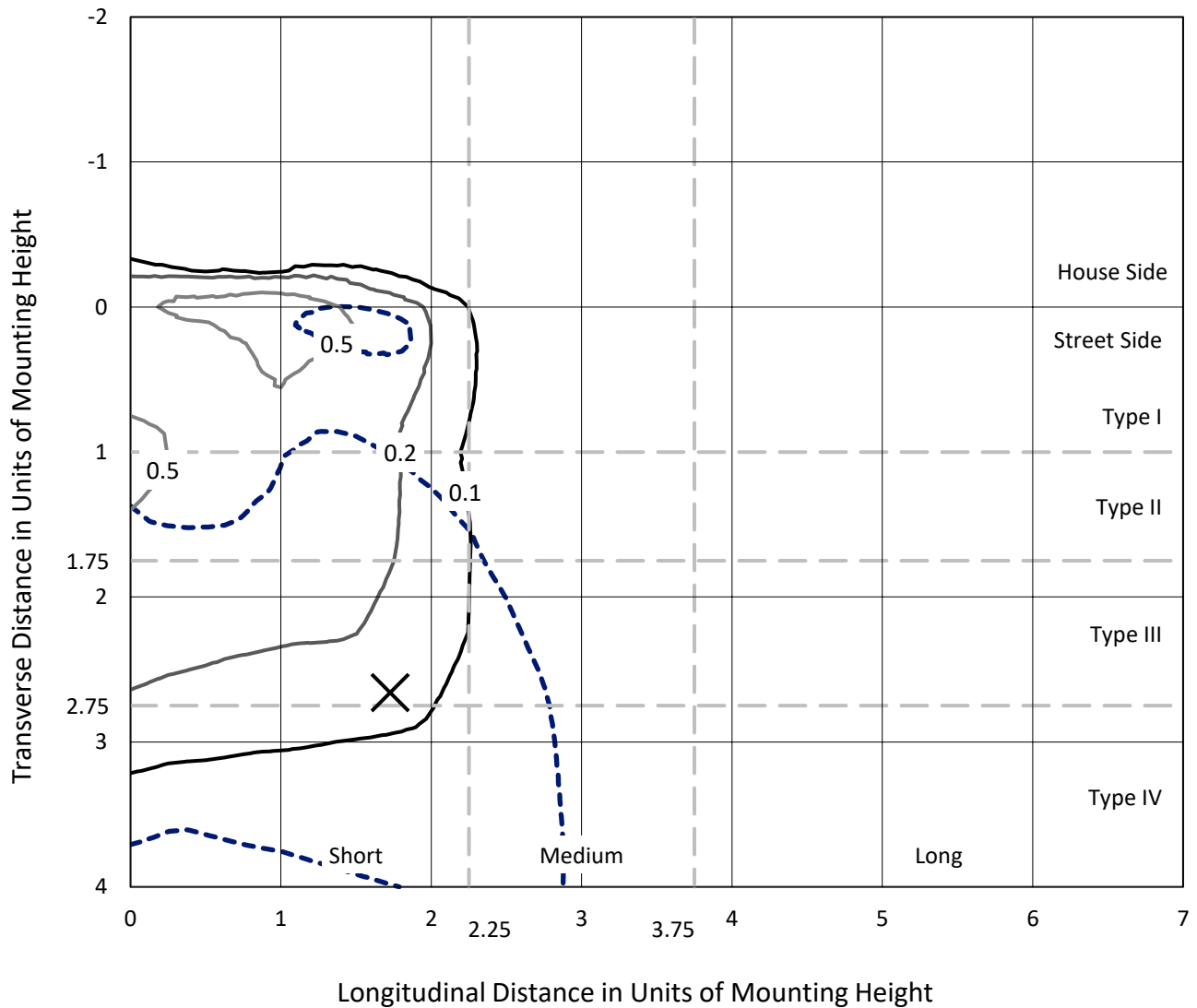
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

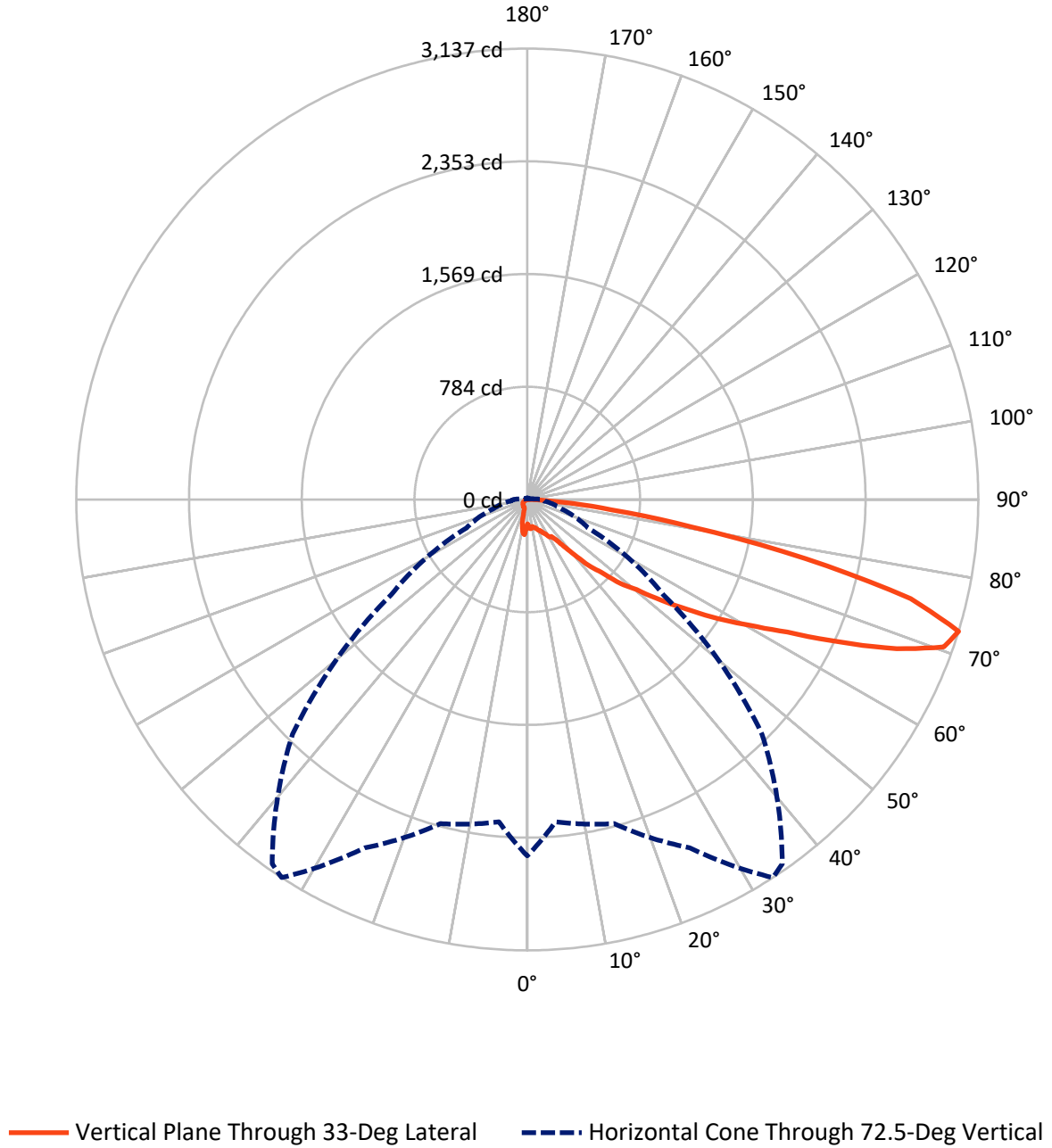
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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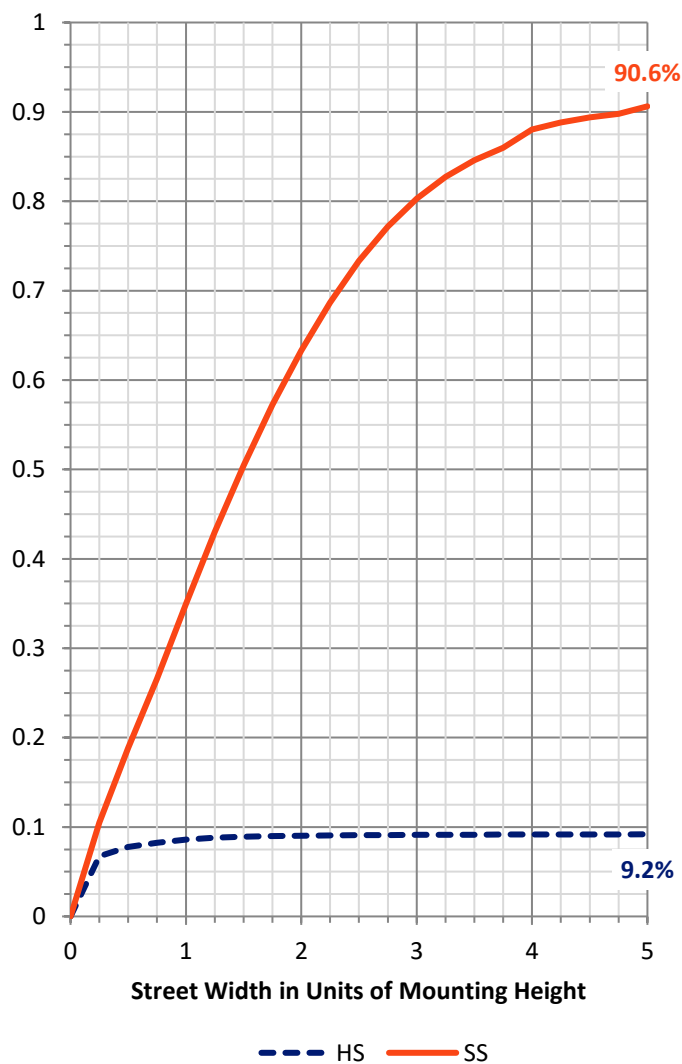
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	293.3	0.0	293.3
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2878.7	0.0	2878.7
	% Fixture	90.8	0.0	90.8
Total	Lumens	3172.0	0.0	3172.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.8	0.7
10°-20°	65.1	2.1
20°-30°	110.4	3.5
30°-40°	202.0	6.4
40°-50°	426.2	13.4
50°-60°	713.1	22.5
60°-70°	954.6	30.1
70°-80°	623.5	19.7
80°-90°	55.3	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°	3172.0	100.0
0°-180°	3172.0	100.0

Coefficient of Utilization

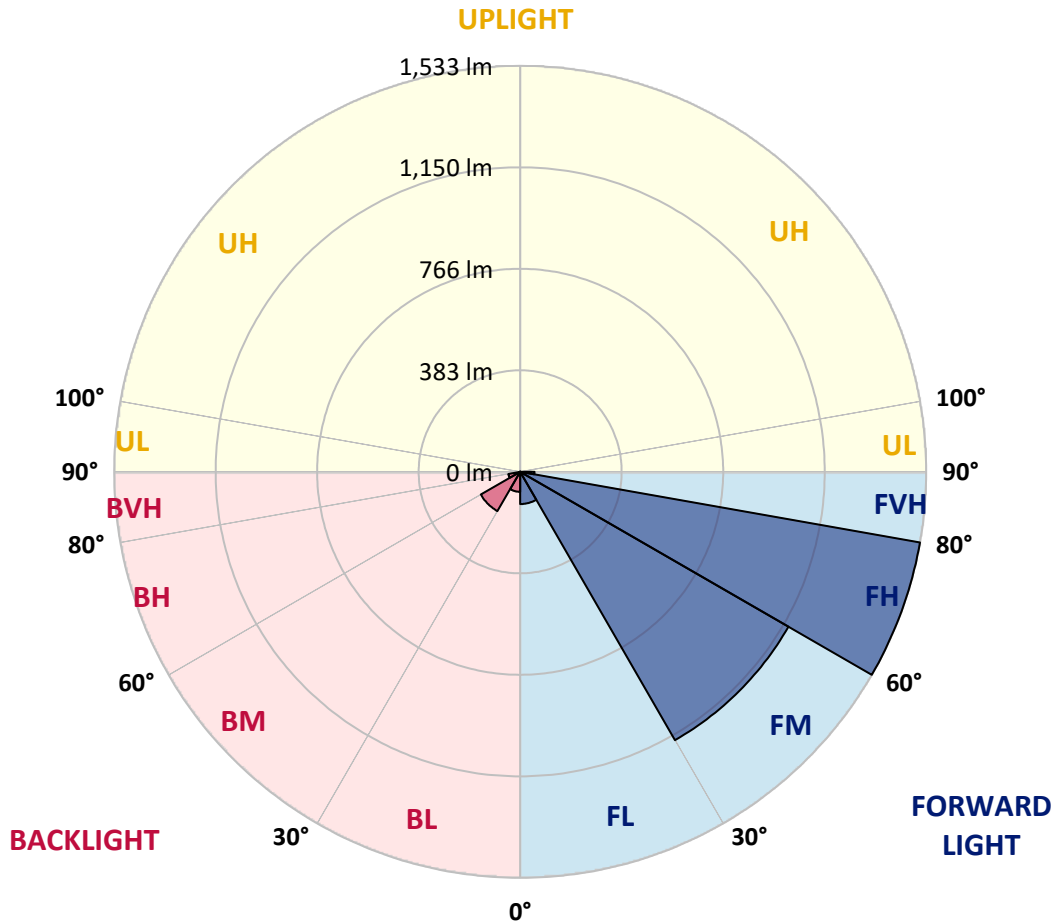


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	121.8	3.8			
FM (30°-60°)	1169.9	36.9			
FH (60°-80°)	1532.8	48.3			G1/1800
FVH (80°-90°)	54.2	1.7			G1/100
BL (0°-30°)	75.5	2.4	B0/110		
BM (30°-60°)	171.5	5.4	B0/220		
BH (60°-80°)	45.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.1	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°	33°	35°	45°	55°	65°	75°	85°
0°	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7
2.5°	201.1	193.4	182.1	182.8	184.7	186.3	190.6	188.8	185.4	185.3	201.1
5°	213.1	204.5	203.8	204.8	204.3	207.1	203.6	215.0	224.7	236.3	255.0
7.5°	207.3	203.2	198.1	203.4	203.2	201.8	204.1	227.4	250.8	265.6	296.4
10°	190.6	186.0	189.8	191.6	190.4	196.5	211.9	230.9	258.9	289.9	304.8
12.5°	185.8	188.6	190.0	190.0	201.8	205.0	228.4	246.4	279.7	304.1	347.6
15°	204.3	209.7	200.1	197.9	201.6	203.4	229.5	251.1	293.8	338.5	374.9
17.5°	233.7	233.3	218.4	210.1	215.9	220.1	234.6	259.9	284.9	365.4	418.3
20°	254.0	254.3	227.4	210.1	229.3	231.8	247.8	268.0	287.8	379.0	446.6
22.5°	280.0	270.7	240.9	224.2	237.2	239.5	257.1	273.1	302.2	377.4	482.9
25°	301.3	295.3	257.8	246.2	257.8	254.7	270.7	294.8	317.7	402.6	504.2
27.5°	334.4	324.2	269.8	271.9	271.2	273.5	277.2	314.2	345.0	403.8	553.5
30°	365.3	359.3	296.6	296.6	303.4	299.0	301.7	346.4	371.4	432.4	609.0
32.5°	397.1	397.5	328.1	311.4	305.9	324.0	341.8	362.1	403.3	481.3	693.9
35°	481.5	474.4	388.5	346.8	342.4	341.3	369.8	424.6	459.8	545.1	808.2
37.5°	651.4	627.0	518.5	427.1	410.5	404.9	437.3	493.5	528.5	638.8	997.1
40°	825.8	780.9	660.4	557.4	503.7	479.4	517.1	564.8	627.1	742.3	1172.0
42.5°	978.8	923.3	767.3	697.9	628.0	617.4	582.0	659.7	768.0	893.1	1343.4
45°	1128.0	1018.8	862.4	807.5	722.6	728.6	716.6	783.9	914.4	1058.2	1495.4
47.5°	1230.7	1132.6	979.0	907.7	873.7	838.6	933.7	1003.7	1044.7	1163.2	1626.7
50°	1341.3	1241.9	1079.2	1029.4	984.6	1020.0	1143.5	1152.8	1149.5	1261.1	1716.2
52.5°	1484.1	1367.0	1194.2	1137.8	1163.2	1198.4	1340.9	1342.7	1242.6	1343.5	1780.7
55°	1616.2	1486.4	1347.4	1294.2	1347.2	1377.0	1535.0	1477.0	1296.9	1399.5	1812.3
57.5°	1802.3	1652.1	1551.2	1457.5	1564.9	1536.4	1705.6	1619.5	1357.8	1436.7	1800.7
60°	2037.6	1860.8	1759.7	1660.5	1775.7	1795.1	1872.2	1690.7	1381.4	1448.9	1730.8
62.5°	2276.9	2099.1	1966.1	1898.8	2029.5	2093.2	2026.5	1726.1	1353.1	1425.1	1572.5
65°	2573.9	2346.1	2190.8	2151.4	2393.5	2487.2	2209.0	1734.7	1298.3	1294.2	1264.3
67.5°	2777.3	2555.5	2413.1	2479.1	2771.6	2779.2	2372.7	1737.3	1113.9	1013.3	829.8
70°	2825.5	2588.1	2524.4	2718.8	3073.3	2978.0	2425.6	1603.5	826.1	601.4	379.3
72.5°	2480.3	2251.7	2334.7	2673.5	3137.4	3093.7	2308.8	1156.9	465.1	240.6	116.4
75°	1521.4	1383.2	1751.4	2266.7	2754.0	2725.8	1801.3	597.7	187.4	96.2	43.5
77.5°	661.6	614.4	914.0	1504.0	1979.0	1953.8	1055.4	220.1	96.9	67.6	22.0
80°	218.9	212.4	346.2	712.2	1159.2	1137.0	444.7	91.6	69.0	54.2	12.3
82.5°	52.0	51.6	120.8	327.7	590.5	572.0	136.5	50.5	50.0	42.8	6.5
85°	13.0	13.4	33.5	134.0	239.9	211.5	35.6	25.2	35.2	29.1	3.3
87.5°	0.0	0.0	8.6	19.2	36.3	22.7	3.9	6.7	9.9	10.4	1.8
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°	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7	168.7
2.5°	204.6	202.7	186.9	190.7	196.7	196.2	200.1	197.1	194.4	207.5	206.2
5°	260.3	249.7	244.8	251.7	248.0	239.3	246.6	245.3	243.2	247.6	251.0
7.5°	302.0	292.3	287.9	273.5	252.5	236.0	238.6	232.5	226.7	233.5	240.6
10°	315.8	310.5	310.0	281.8	262.1	238.1	209.7	185.3	178.8	170.1	174.0
12.5°	353.1	356.3	336.4	303.4	265.4	219.4	169.1	134.4	120.3	111.1	111.7
15°	383.7	394.8	366.0	306.8	233.5	167.3	112.5	81.4	72.6	70.3	69.6
17.5°	429.4	440.1	375.1	283.0	188.3	113.4	72.4	63.4	63.9	65.5	65.2
20°	463.2	461.6	367.2	240.9	138.8	74.3	60.6	59.3	62.2	66.7	65.7
22.5°	495.8	484.8	362.3	202.0	89.8	59.7	58.5	58.3	60.9	65.3	66.6
25°	519.0	520.8	354.0	158.1	65.3	55.5	56.5	58.1	60.8	65.5	64.8
27.5°	585.6	536.3	319.5	114.8	55.1	53.2	55.8	59.0	59.9	65.9	66.0
30°	628.7	594.7	296.9	77.3	50.9	49.1	54.4	58.6	59.7	67.5	68.0
32.5°	703.9	619.9	270.9	57.4	47.4	47.9	51.2	56.9	61.8	70.1	70.4
35°	797.4	700.7	223.7	51.6	46.1	45.3	46.8	53.4	61.5	70.4	72.2
37.5°	975.5	749.2	177.3	50.0	46.1	44.6	46.1	50.0	60.4	74.0	77.7
40°	1094.7	847.8	127.9	49.7	45.3	43.9	44.4	48.3	57.4	71.9	77.3
42.5°	1241.6	889.4	94.2	48.8	44.4	42.3	42.6	47.5	54.4	67.5	71.5
45°	1361.9	919.6	74.1	48.4	42.3	41.6	42.3	47.0	51.6	57.9	61.6
47.5°	1453.3	954.9	59.5	46.1	41.7	41.6	40.7	44.0	46.8	48.4	50.9
50°	1520.2	946.9	49.3	42.6	40.0	41.0	39.4	40.0	40.7	39.8	42.6
52.5°	1561.2	918.4	41.0	38.4	37.9	38.7	36.8	35.2	34.0	33.3	35.0
55°	1576.2	861.2	34.9	32.9	34.2	34.5	32.9	30.1	28.0	26.9	28.4
57.5°	1547.8	774.0	30.3	27.3	30.1	30.1	28.0	25.0	22.5	20.8	22.2
60°	1476.0	677.7	26.9	22.7	25.7	25.9	23.4	20.3	18.3	16.6	17.4
62.5°	1342.1	572.7	23.6	19.7	22.2	22.4	19.4	16.4	15.0	13.0	13.7
65°	1074.4	438.0	20.1	17.4	19.2	18.7	16.0	13.9	12.2	10.4	10.7
67.5°	697.4	270.3	17.4	15.8	16.2	15.7	13.6	12.2	10.2	8.8	9.0
70°	312.2	116.4	15.3	14.3	14.1	13.2	11.4	11.3	10.0	8.8	8.8
72.5°	96.3	43.9	13.2	12.9	12.2	11.1	10.0	10.7	9.9	8.5	8.3
75°	38.0	20.1	10.9	10.9	10.6	9.2	9.0	9.7	9.2	7.7	7.4
77.5°	19.9	12.7	9.0	9.3	9.2	7.0	8.1	8.8	8.5	6.5	5.5
80°	11.8	7.7	6.7	7.6	7.4	4.9	6.2	5.6	4.1	1.9	0.5
82.5°	6.5	3.5	3.0	4.4	4.4	1.8	3.2	2.8	1.6	0.0	0.0
85°	3.2	2.5	2.3	2.5	1.8	0.5	1.6	1.6	0.9	0.0	0.0
87.5°	1.6	1.4	1.1	0.9	0.7	0.0	0.5	0.7	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)