

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: P366705

Luminaire Tested: **MSA-SA1A-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366705
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-SA1A-760-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: 3026 lumens
Efficiency: N/A
Efficacy: 89.0 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

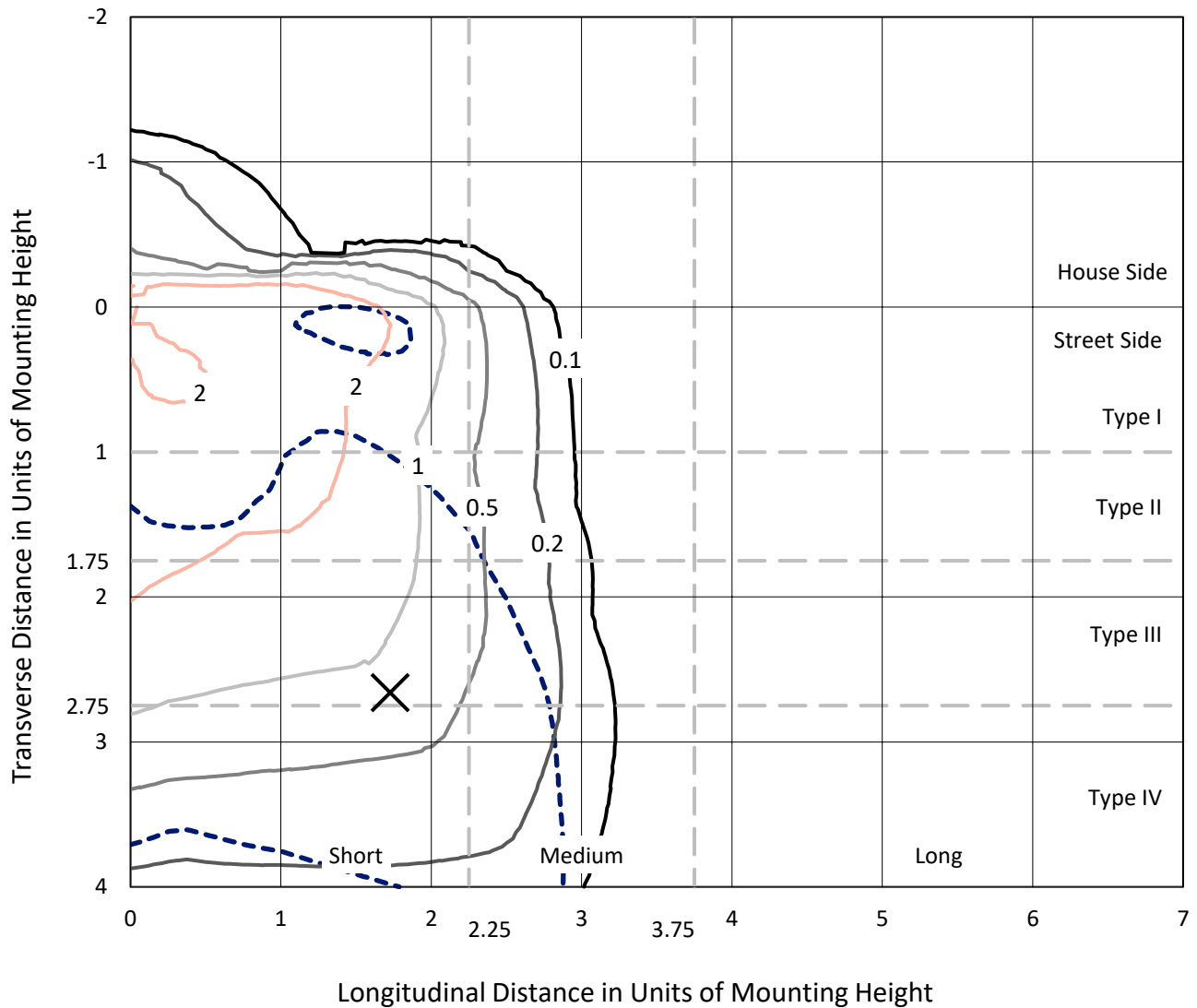
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

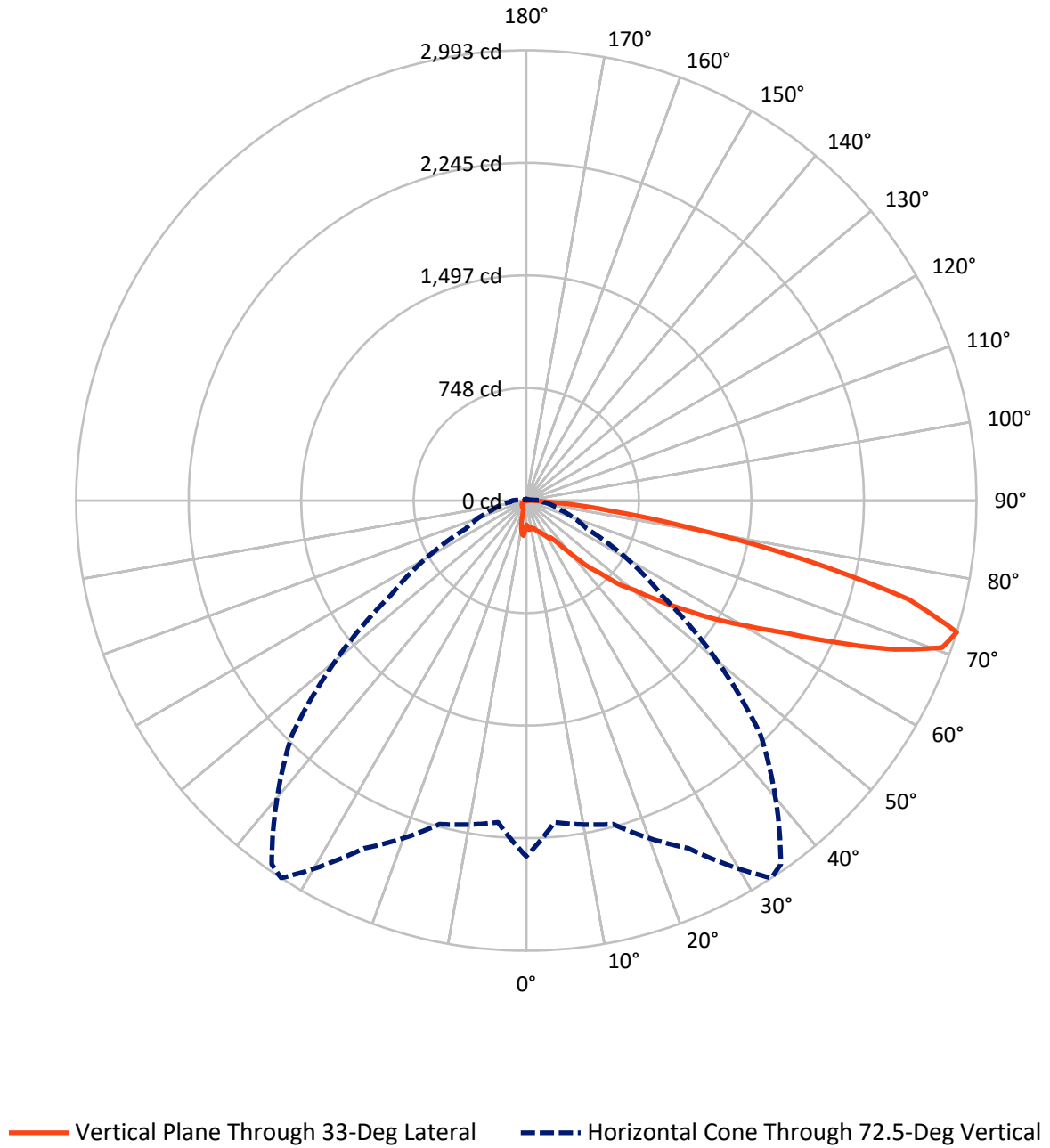
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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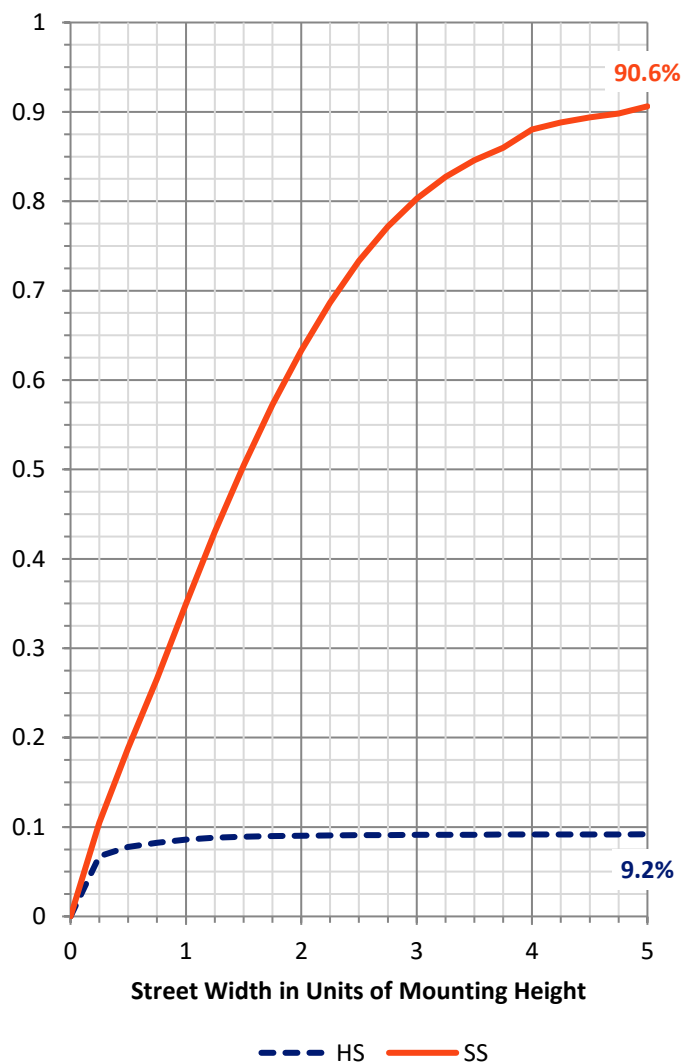
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	279.8	0.0	279.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2746.2	0.0	2746.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	3026.0	0.0	3026.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.8	0.7
10°-20°	62.1	2.1
20°-30°	105.3	3.5
30°-40°	192.7	6.4
40°-50°	406.6	13.4
50°-60°	680.3	22.5
60°-70°	910.6	30.1
70°-80°	594.8	19.7
80°-90°	52.7	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°	3026.0	100.0
0°-180°	3026.0	100.0

Coefficient of Utilization

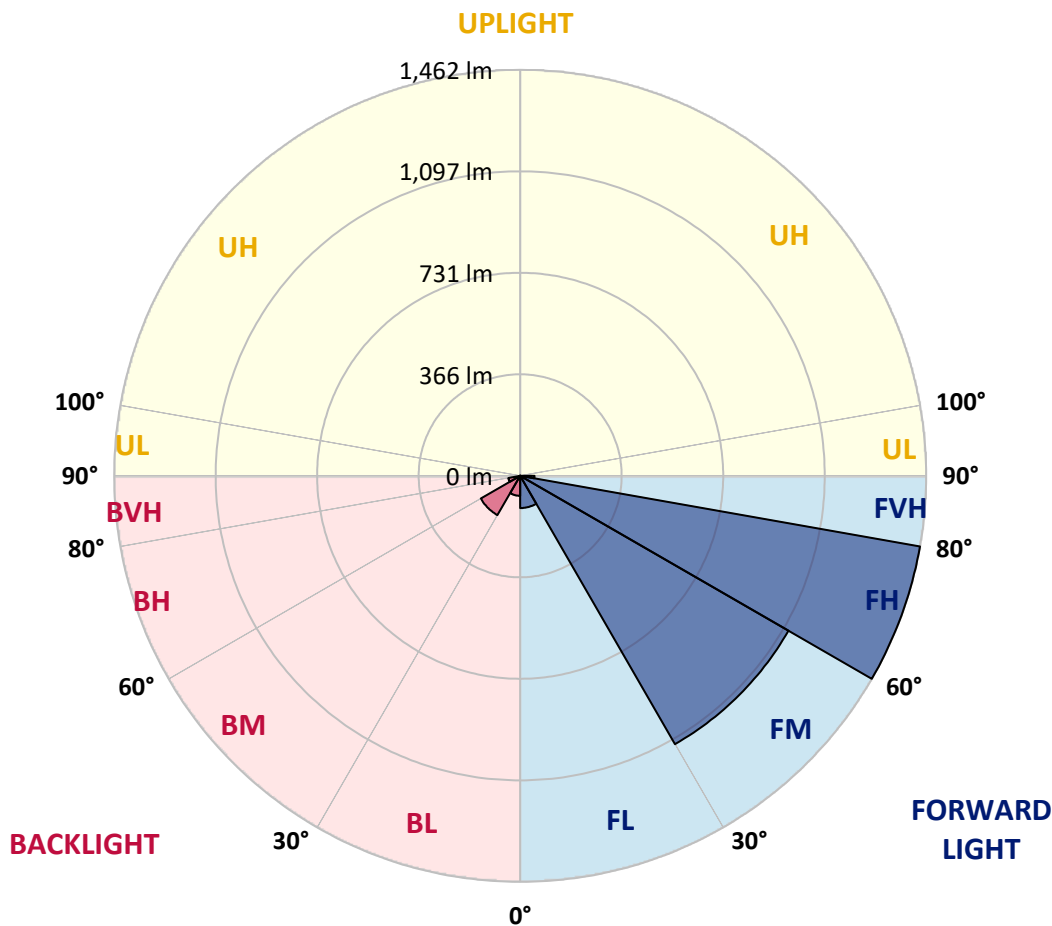


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	116.2	3.8			
FM (30°-60°)	1116.0	36.9			
FH (60°-80°)	1462.3	48.3			G1/1800
FVH (80°-90°)	51.7	1.7			G1/100
BL (0°-30°)	72.0	2.4	B0/110		
BM (30°-60°)	163.6	5.4	B0/220		
BH (60°-80°)	43.2	1.4	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9
2.5°	191.9	184.5	173.7	174.4	176.2	177.7	181.8	180.1	176.9	176.7	191.9
5°	203.3	195.1	194.4	195.4	194.9	197.6	194.2	205.1	214.4	225.5	243.3
7.5°	197.7	193.9	189.0	194.0	193.9	192.5	194.7	216.9	239.2	253.4	282.8
10°	181.8	177.4	181.1	182.8	181.6	187.5	202.1	220.3	247.0	276.5	290.8
12.5°	177.2	179.9	181.3	181.3	192.5	195.6	217.9	235.0	266.8	290.1	331.6
15°	194.9	200.1	190.9	188.8	192.4	194.0	218.9	239.6	280.2	322.9	357.7
17.5°	222.9	222.6	208.3	200.4	206.0	210.0	223.8	248.0	271.8	348.6	399.0
20°	242.3	242.6	216.9	200.4	218.7	221.1	236.4	255.7	274.5	361.5	426.1
22.5°	267.1	258.2	229.8	213.9	226.3	228.5	245.3	260.6	288.3	360.0	460.7
25°	287.5	281.7	246.0	234.9	246.0	242.9	258.2	281.2	303.1	384.1	481.0
27.5°	319.0	309.3	257.4	259.4	258.7	260.9	264.4	299.7	329.1	385.2	528.0
30°	348.4	342.7	282.9	282.9	289.5	285.3	287.8	330.5	354.3	412.5	581.0
32.5°	378.8	379.2	313.0	297.0	291.8	309.1	326.1	345.4	384.7	459.2	661.9
35°	459.3	452.6	370.6	330.8	326.6	325.6	352.8	405.1	438.7	520.0	771.0
37.5°	621.4	598.1	494.6	407.4	391.6	386.2	417.2	470.7	504.2	609.4	951.2
40°	787.8	744.9	630.0	531.7	480.5	457.3	493.3	538.8	598.3	708.1	1118.1
42.5°	933.8	880.8	732.0	665.8	599.1	589.0	555.3	629.3	732.7	851.9	1281.5
45°	1076.1	971.9	822.7	770.3	689.3	695.0	683.6	747.8	872.3	1009.5	1426.5
47.5°	1174.0	1080.4	933.9	865.9	833.5	800.0	890.8	957.5	996.6	1109.7	1551.9
50°	1279.5	1184.8	1029.5	982.0	939.3	973.1	1090.9	1099.8	1096.6	1203.1	1637.2
52.5°	1415.8	1304.0	1139.2	1085.5	1109.7	1143.3	1279.2	1280.9	1185.4	1281.7	1698.7
55°	1541.8	1418.0	1285.4	1234.7	1285.2	1313.6	1464.3	1409.1	1237.2	1335.1	1728.9
57.5°	1719.4	1576.0	1479.8	1390.4	1492.9	1465.7	1627.1	1545.0	1295.3	1370.6	1717.8
60°	1943.8	1775.1	1678.7	1584.1	1694.0	1712.5	1786.1	1612.8	1317.8	1382.2	1651.1
62.5°	2172.1	2002.4	1875.6	1811.4	1936.1	1996.9	1933.2	1646.6	1290.8	1359.5	1500.1
65°	2455.4	2238.2	2090.0	2052.3	2283.3	2372.7	2107.3	1654.8	1238.5	1234.7	1206.1
67.5°	2649.4	2437.9	2302.0	2365.0	2644.1	2651.3	2263.5	1657.4	1062.6	966.7	791.6
70°	2695.5	2469.0	2408.2	2593.6	2931.8	2841.0	2313.9	1529.7	788.1	573.7	361.9
72.5°	2366.2	2148.1	2227.2	2550.5	2993.0	2951.3	2202.5	1103.6	443.7	229.5	111.1
75°	1451.4	1319.5	1670.8	2162.4	2627.3	2600.4	1718.3	570.2	178.8	91.7	41.5
77.5°	631.2	586.2	871.9	1434.8	1887.9	1863.8	1006.8	210.0	92.4	64.5	21.0
80°	208.8	202.6	330.3	679.4	1105.8	1084.6	424.2	87.4	65.9	51.7	11.8
82.5°	49.6	49.2	115.3	312.7	563.3	545.7	130.2	48.2	47.7	40.8	6.2
85°	12.4	12.8	31.9	127.9	228.8	201.8	33.9	24.0	33.6	27.7	3.2
87.5°	0.0	0.0	8.2	18.3	34.6	21.7	3.7	6.4	9.4	9.9	1.7
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°	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9	160.9
2.5°	195.2	193.4	178.3	181.9	187.7	187.2	190.9	188.0	185.5	197.9	196.7
5°	248.3	238.2	233.5	240.1	236.5	228.3	235.2	234.0	232.0	236.2	239.4
7.5°	288.1	278.9	274.7	260.9	240.9	225.1	227.6	221.8	216.2	222.8	229.5
10°	301.2	296.2	295.7	268.8	250.0	227.1	200.1	176.7	170.5	162.3	166.0
12.5°	336.8	339.9	320.9	289.5	253.2	209.3	161.3	128.2	114.7	106.0	106.5
15°	366.1	376.7	349.1	292.7	222.8	159.6	107.4	77.6	69.2	67.0	66.4
17.5°	409.6	419.8	357.8	270.0	179.6	108.2	69.0	60.5	61.0	62.5	62.2
20°	441.9	440.3	350.3	229.8	132.4	70.9	57.8	56.6	59.3	63.7	62.7
22.5°	472.9	462.5	345.6	192.7	85.7	57.0	55.8	55.6	58.1	62.3	63.5
25°	495.1	496.8	337.7	150.9	62.3	52.9	53.9	55.4	58.0	62.5	61.8
27.5°	558.6	511.6	304.8	109.5	52.6	50.7	53.3	56.3	57.1	62.8	63.0
30°	599.8	567.4	283.3	73.8	48.6	46.9	51.9	55.9	57.0	64.3	64.8
32.5°	671.5	591.4	258.4	54.8	45.2	45.7	48.9	54.3	59.0	66.9	67.2
35°	760.7	668.5	213.4	49.2	44.0	43.2	44.7	50.9	58.6	67.2	68.9
37.5°	930.6	714.7	169.2	47.7	44.0	42.5	44.0	47.7	57.6	70.6	74.1
40°	1044.3	808.8	122.0	47.4	43.2	41.8	42.3	46.0	54.8	68.5	73.8
42.5°	1184.4	848.4	89.9	46.5	42.3	40.3	40.7	45.4	51.9	64.3	68.2
45°	1299.2	877.3	70.7	46.2	40.3	39.6	40.3	44.9	49.2	55.3	58.8
47.5°	1386.4	910.9	56.8	44.0	39.8	39.6	38.8	42.0	44.7	46.2	48.6
50°	1450.2	903.4	47.0	40.7	38.1	39.1	37.6	38.1	38.8	38.0	40.7
52.5°	1489.4	876.1	39.1	36.6	36.1	37.0	35.1	33.6	32.4	31.8	33.4
55°	1503.6	821.5	33.3	31.4	32.6	32.9	31.4	28.7	26.7	25.7	27.0
57.5°	1476.6	738.4	28.9	26.0	28.7	28.7	26.7	23.9	21.5	19.8	21.2
60°	1408.0	646.5	25.7	21.7	24.5	24.7	22.3	19.3	17.5	15.8	16.6
62.5°	1280.4	546.3	22.5	18.8	21.2	21.3	18.5	15.6	14.3	12.4	13.1
65°	1025.0	417.8	19.2	16.6	18.3	17.8	15.3	13.3	11.6	9.9	10.2
67.5°	665.3	257.9	16.6	15.1	15.5	15.0	12.9	11.6	9.7	8.4	8.6
70°	297.9	111.1	14.6	13.6	13.4	12.6	10.9	10.8	9.6	8.4	8.4
72.5°	91.9	41.8	12.6	12.3	11.6	10.6	9.6	10.2	9.4	8.1	7.9
75°	36.3	19.2	10.4	10.4	10.1	8.7	8.6	9.2	8.7	7.4	7.1
77.5°	19.0	12.1	8.6	8.9	8.7	6.7	7.7	8.4	8.1	6.2	5.2
80°	11.3	7.4	6.4	7.2	7.1	4.7	5.9	5.4	3.9	1.8	0.5
82.5°	6.2	3.4	2.9	4.2	4.2	1.7	3.0	2.7	1.5	0.0	0.0
85°	3.0	2.4	2.2	2.4	1.7	0.5	1.5	1.5	0.8	0.0	0.0
87.5°	1.5	1.3	1.0	0.8	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)