

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: P366617

Luminaire Tested: **MSA-SA1A-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366617
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-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: 2531 lumens
Efficiency: N/A
Efficacy: 74.4 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

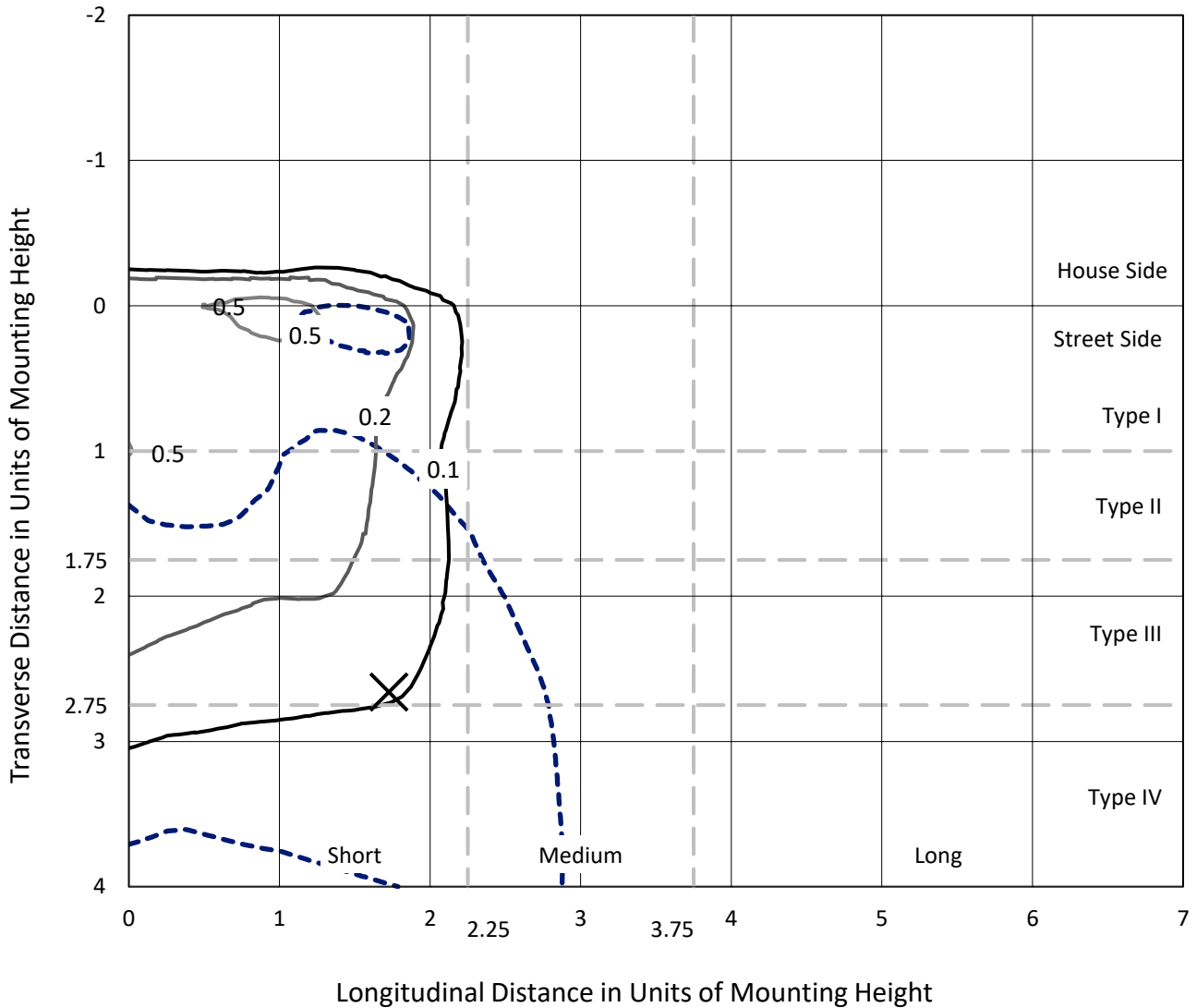
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366617
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

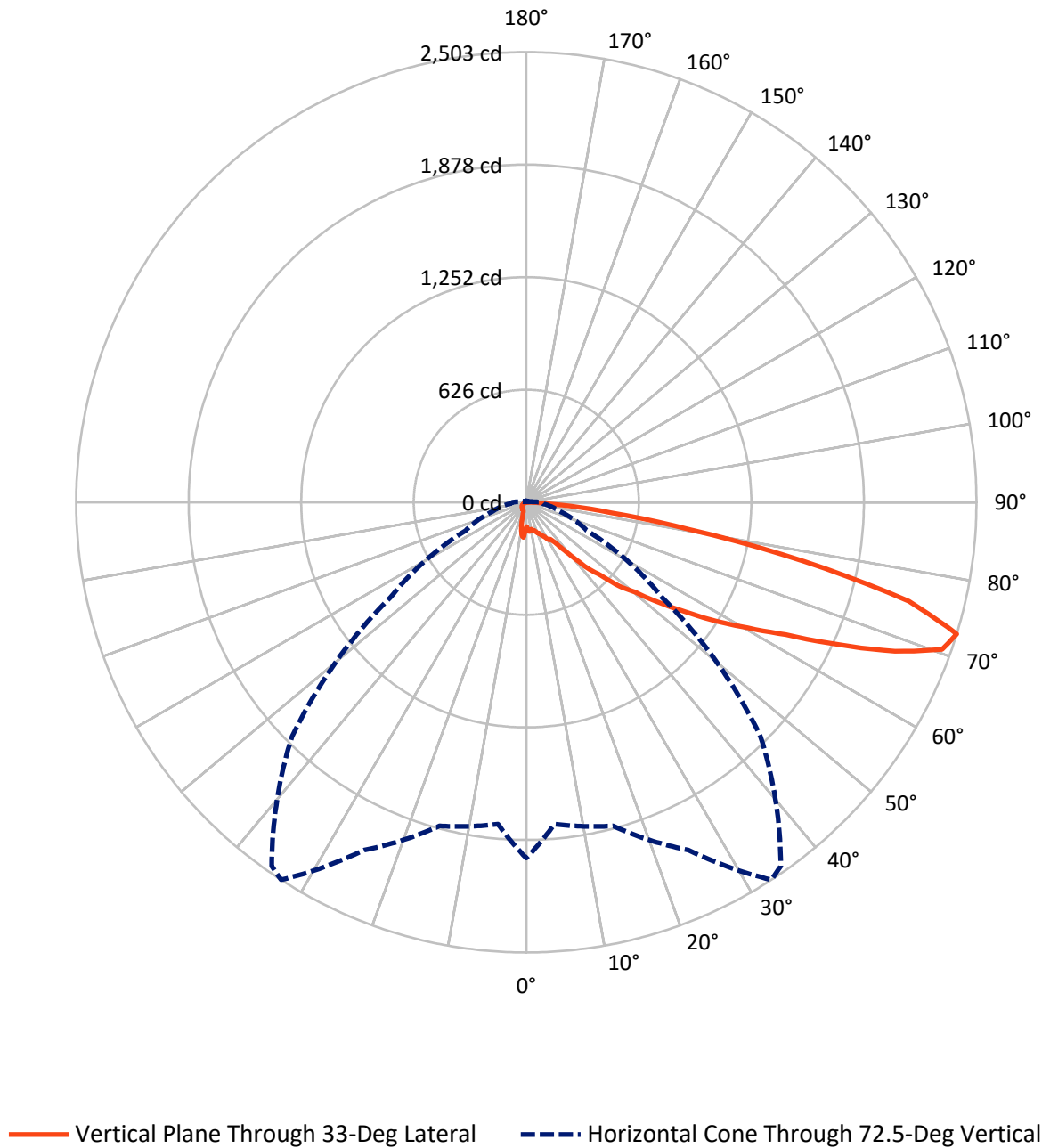
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366617
CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P366617
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

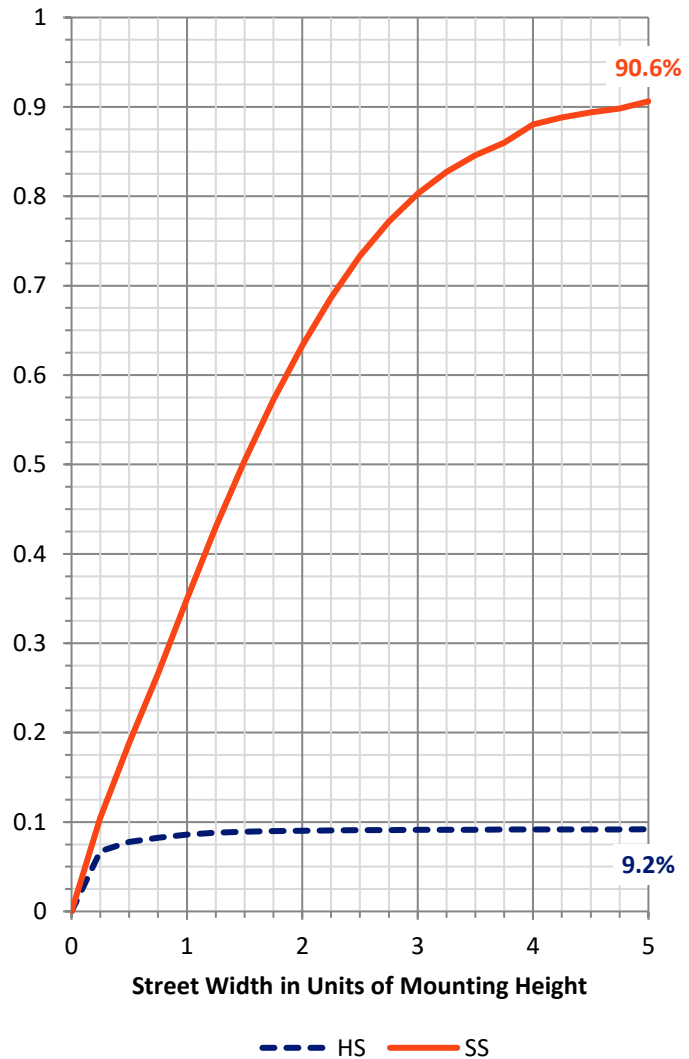
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	234.0	0.0	234.0
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2297.0	0.0	2297.0
	% Fixture	90.8	0.0	90.8
Total	Lumens	2531.0	0.0	2531.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.4	0.7
10°-20°	51.9	2.1
20°-30°	88.1	3.5
30°-40°	161.1	6.4
40°-50°	340.1	13.4
50°-60°	569.0	22.5
60°-70°	761.7	30.1
70°-80°	497.5	19.7
80°-90°	44.1	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°	2531.0	100.0
0°-180°	2531.0	100.0

Coefficient of Utilization



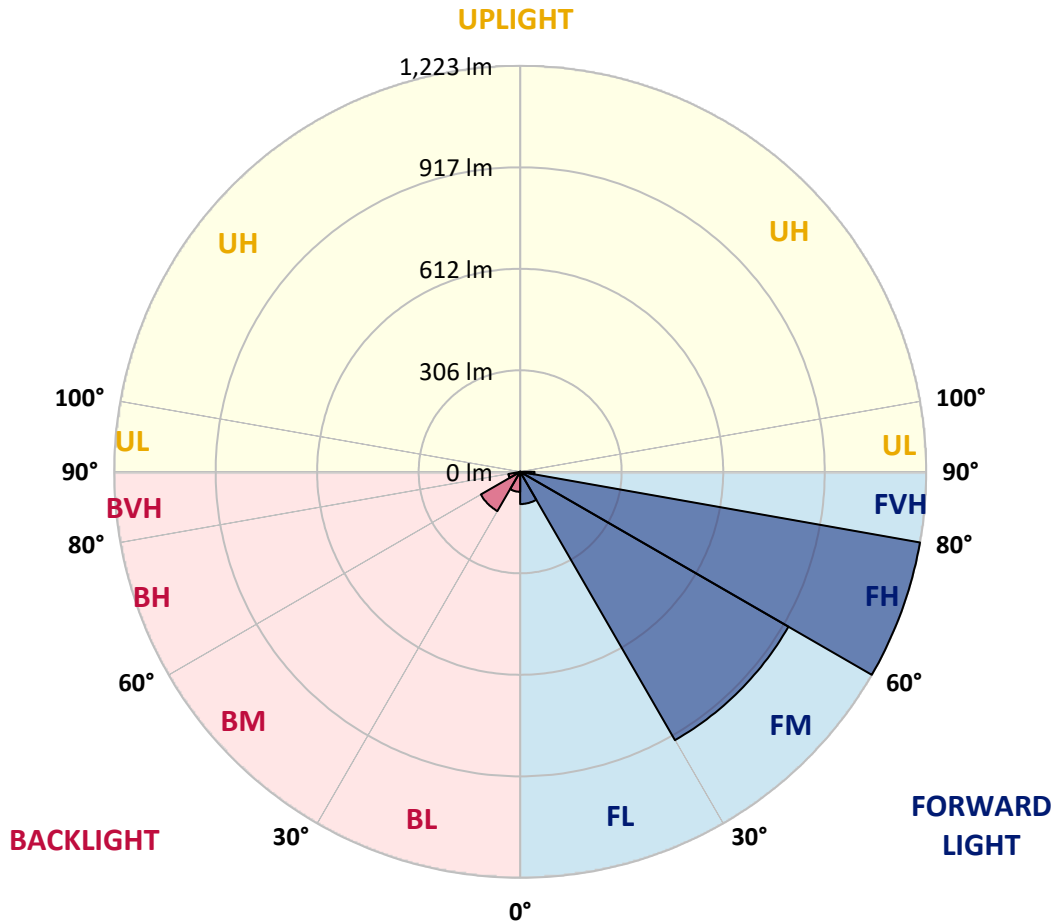
REPORT NUMBER: P366617
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	97.2	3.8			
FM (30°-60°)	933.5	36.9			
FH (60°-80°)	1223.1	48.3			G1/1800
FVH (80°-90°)	43.3	1.7			G1/100
BL (0°-30°)	60.2	2.4	B0/110		
BM (30°-60°)	136.8	5.4	B0/220		
BH (60°-80°)	36.1	1.4	B0/110		G0/110
BVH (80°-90°)	0.9	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





REPORT NUMBER: P366617

CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6
2.5°	160.5	154.3	145.3	145.9	147.4	148.7	152.0	150.6	148.0	147.8	160.5
5°	170.0	163.1	162.6	163.4	163.0	165.3	162.4	171.6	179.3	188.6	203.5
7.5°	165.4	162.2	158.1	162.3	162.2	161.0	162.9	181.4	200.1	211.9	236.5
10°	152.0	148.4	151.5	152.9	151.9	156.8	169.0	184.2	206.6	231.3	243.2
12.5°	148.3	150.5	151.6	151.6	161.0	163.6	182.3	196.6	223.1	242.7	277.4
15°	163.0	167.4	159.6	157.9	160.9	162.3	183.1	200.4	234.4	270.1	299.2
17.5°	186.5	186.2	174.2	167.6	172.3	175.7	187.2	207.4	227.4	291.6	333.7
20°	202.6	202.9	181.4	167.6	183.0	184.9	197.7	213.9	229.6	302.4	356.4
22.5°	223.4	216.0	192.2	178.9	189.3	191.1	205.2	217.9	241.1	301.1	385.3
25°	240.4	235.7	205.7	196.4	205.7	203.2	216.0	235.2	253.5	321.2	402.3
27.5°	266.9	258.7	215.3	217.0	216.4	218.2	221.2	250.7	275.3	322.2	441.7
30°	291.4	286.7	236.6	236.6	242.1	238.6	240.7	276.4	296.4	345.0	485.9
32.5°	316.9	317.2	261.8	248.4	244.1	258.6	272.8	288.9	321.8	384.0	553.7
35°	384.2	378.6	310.0	276.7	273.2	272.3	295.1	338.8	366.9	434.9	644.9
37.5°	519.8	500.3	413.7	340.8	327.6	323.1	348.9	393.7	421.7	509.7	795.6
40°	658.9	623.1	527.0	444.8	401.9	382.5	412.6	450.7	500.4	592.3	935.2
42.5°	781.0	736.8	612.3	556.9	501.1	492.7	464.4	526.4	612.8	712.6	1071.9
45°	900.0	812.9	688.1	644.3	576.6	581.3	571.8	625.5	729.6	844.4	1193.2
47.5°	982.0	903.7	781.2	724.2	697.1	669.2	745.0	800.8	833.6	928.1	1298.0
50°	1070.2	991.0	861.1	821.3	785.7	813.9	912.4	919.9	917.2	1006.3	1369.4
52.5°	1184.2	1090.7	952.9	907.9	928.1	956.3	1069.9	1071.3	991.5	1072.0	1420.8
55°	1289.6	1186.0	1075.1	1032.7	1075.0	1098.7	1224.8	1178.6	1034.8	1116.7	1446.1
57.5°	1438.1	1318.2	1237.7	1163.0	1248.7	1225.9	1361.0	1292.2	1083.4	1146.4	1436.8
60°	1625.8	1484.8	1404.1	1325.0	1416.9	1432.3	1493.9	1349.0	1102.3	1156.1	1381.0
62.5°	1816.8	1674.9	1568.8	1515.1	1619.4	1670.2	1617.0	1377.3	1079.6	1137.1	1254.7
65°	2053.7	1872.0	1748.1	1716.6	1909.8	1984.6	1762.6	1384.1	1035.9	1032.7	1008.8
67.5°	2216.0	2039.1	1925.4	1978.1	2211.5	2217.6	1893.2	1386.2	888.8	808.6	662.1
70°	2254.5	2065.1	2014.2	2169.4	2452.2	2376.2	1935.4	1279.5	659.2	479.9	302.7
72.5°	1979.1	1796.7	1862.9	2133.3	2503.4	2468.5	1842.2	923.1	371.1	192.0	92.9
75°	1214.0	1103.7	1397.5	1808.7	2197.5	2175.0	1437.3	476.9	149.5	76.7	34.7
77.5°	527.9	490.3	729.3	1200.1	1579.0	1558.9	842.1	175.7	77.3	54.0	17.6
80°	174.7	169.5	276.3	568.3	924.9	907.2	354.8	73.1	55.1	43.3	9.8
82.5°	41.5	41.2	96.4	261.5	471.2	456.4	108.9	40.3	39.9	34.1	5.2
85°	10.4	10.7	26.7	106.9	191.4	168.8	28.4	20.1	28.1	23.2	2.7
87.5°	0.0	0.0	6.9	15.3	28.9	18.1	3.1	5.3	7.9	8.3	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P366617
 CATALOG NUMBER: MSA-SA1A-727-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6	134.6
2.5°	163.3	161.7	149.1	152.2	157.0	156.5	159.6	157.2	155.1	165.5	164.6
5°	207.7	199.3	195.3	200.8	197.9	191.0	196.7	195.7	194.1	197.6	200.2
7.5°	241.0	233.3	229.8	218.2	201.5	188.3	190.4	185.5	180.9	186.3	192.0
10°	252.0	247.7	247.3	224.8	209.1	190.0	167.4	147.8	142.6	135.7	138.8
12.5°	281.7	284.3	268.4	242.1	211.8	175.1	134.9	107.2	96.0	88.7	89.1
15°	306.2	315.0	292.0	244.8	186.3	133.5	89.8	64.9	57.9	56.1	55.5
17.5°	342.6	351.2	299.3	225.8	150.2	90.5	57.8	50.6	51.0	52.3	52.0
20°	369.6	368.3	293.0	192.2	110.7	59.3	48.3	47.4	49.6	53.3	52.4
22.5°	395.6	386.9	289.1	161.2	71.7	47.6	46.7	46.5	48.6	52.1	53.1
25°	414.1	415.5	282.4	126.2	52.1	44.3	45.1	46.4	48.5	52.3	51.7
27.5°	467.2	427.9	254.9	91.6	44.0	42.4	44.5	47.1	47.8	52.6	52.7
30°	501.7	474.5	236.9	61.7	40.6	39.2	43.4	46.8	47.6	53.8	54.2
32.5°	561.7	494.6	216.1	45.8	37.8	38.2	40.9	45.4	49.3	55.9	56.2
35°	636.3	559.1	178.5	41.2	36.8	36.1	37.4	42.6	49.0	56.2	57.6
37.5°	778.3	597.8	141.5	39.9	36.8	35.6	36.8	39.9	48.2	59.0	62.0
40°	873.5	676.5	102.0	39.6	36.1	35.0	35.4	38.5	45.8	57.3	61.7
42.5°	990.7	709.6	75.2	38.9	35.4	33.7	34.0	37.9	43.4	53.8	57.1
45°	1086.7	733.8	59.2	38.6	33.7	33.2	33.7	37.5	41.2	46.2	49.2
47.5°	1159.6	761.9	47.5	36.8	33.3	33.2	32.5	35.1	37.4	38.6	40.6
50°	1213.0	755.6	39.3	34.0	31.9	32.7	31.5	31.9	32.5	31.8	34.0
52.5°	1245.7	732.8	32.7	30.6	30.2	30.9	29.4	28.1	27.1	26.6	28.0
55°	1257.7	687.2	27.8	26.3	27.3	27.5	26.3	24.0	22.3	21.5	22.6
57.5°	1235.0	617.6	24.2	21.8	24.0	24.0	22.3	20.0	18.0	16.6	17.7
60°	1177.7	540.7	21.5	18.1	20.5	20.7	18.7	16.2	14.6	13.2	13.9
62.5°	1070.9	457.0	18.8	15.7	17.7	17.8	15.5	13.1	11.9	10.4	11.0
65°	857.3	349.5	16.0	13.9	15.3	14.9	12.8	11.1	9.7	8.3	8.6
67.5°	556.5	215.7	13.9	12.6	12.9	12.5	10.8	9.7	8.2	7.0	7.2
70°	249.1	92.9	12.2	11.4	11.2	10.5	9.1	9.0	8.0	7.0	7.0
72.5°	76.9	35.0	10.5	10.3	9.7	8.9	8.0	8.6	7.9	6.7	6.6
75°	30.4	16.0	8.7	8.7	8.4	7.3	7.2	7.7	7.3	6.2	5.9
77.5°	15.9	10.1	7.2	7.4	7.3	5.6	6.5	7.0	6.7	5.2	4.4
80°	9.4	6.2	5.3	6.0	5.9	3.9	4.9	4.5	3.2	1.5	0.4
82.5°	5.2	2.8	2.4	3.5	3.5	1.4	2.5	2.2	1.3	0.0	0.0
85°	2.5	2.0	1.8	2.0	1.4	0.4	1.3	1.3	0.7	0.0	0.0
87.5°	1.3	1.1	0.8	0.7	0.6	0.0	0.4	0.6	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)