

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: P596515

Luminaire Tested: **MSA-SA1B-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-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: 2788 lumens
Efficiency: N/A
Efficacy: 63.4 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

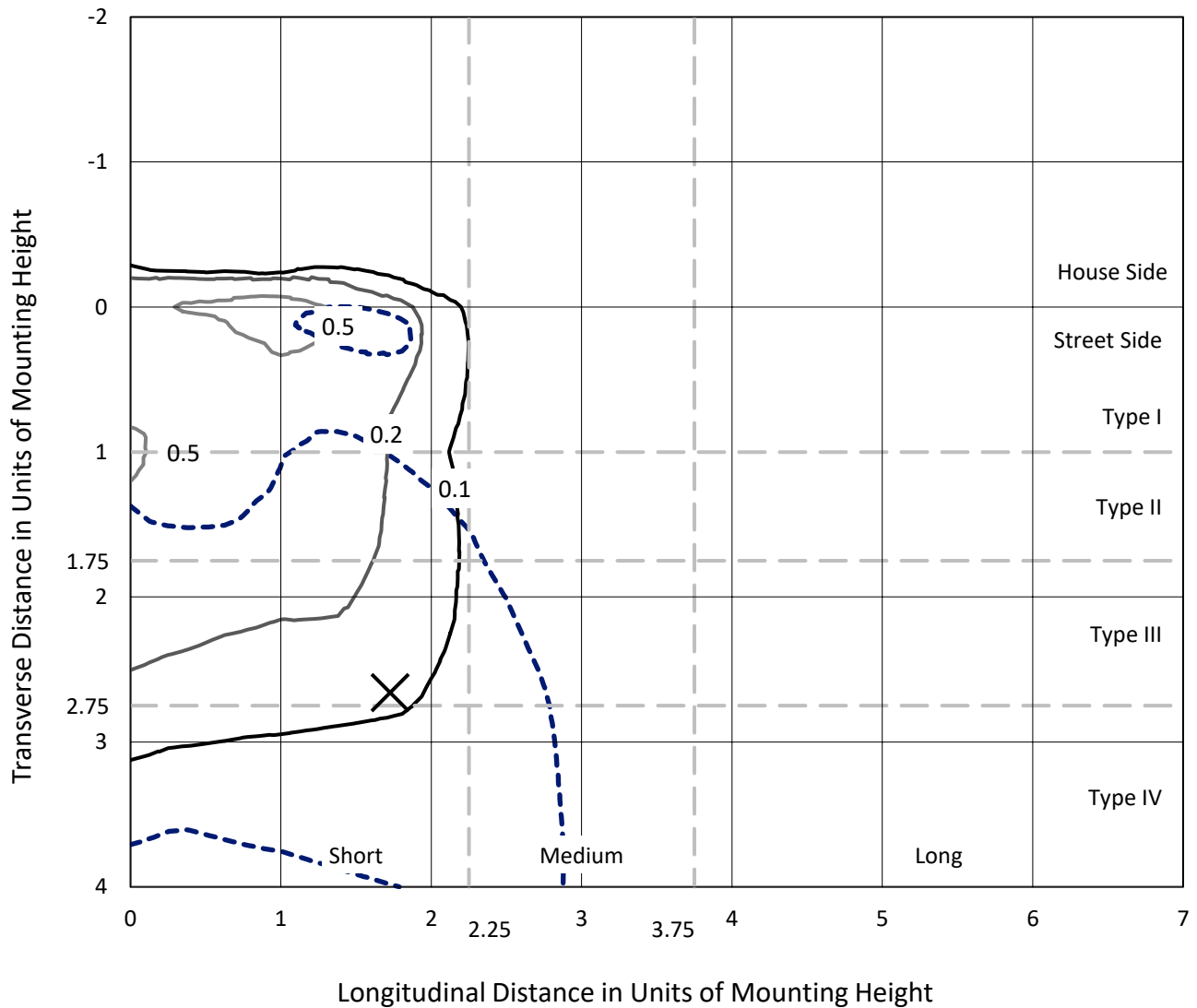
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

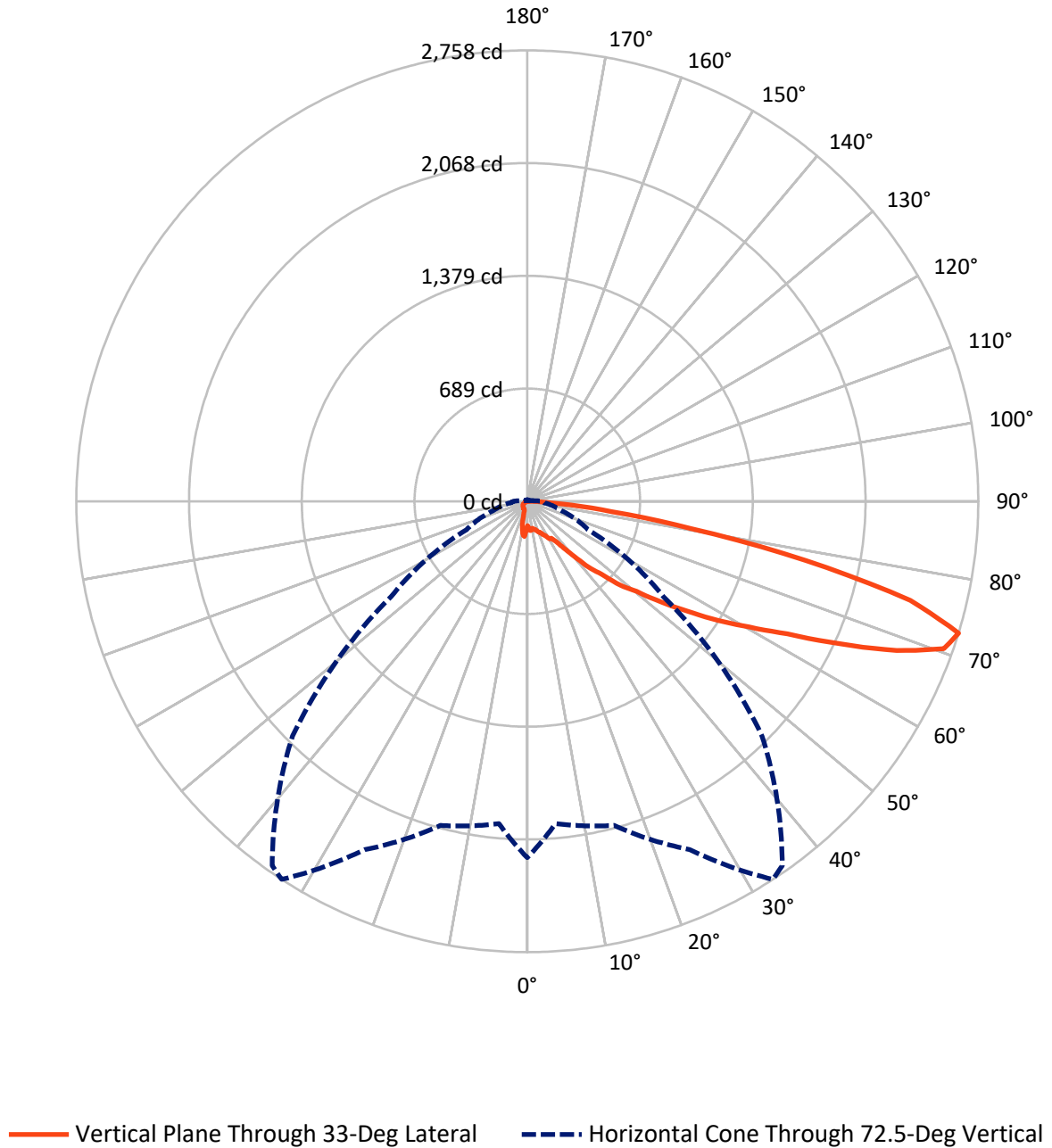
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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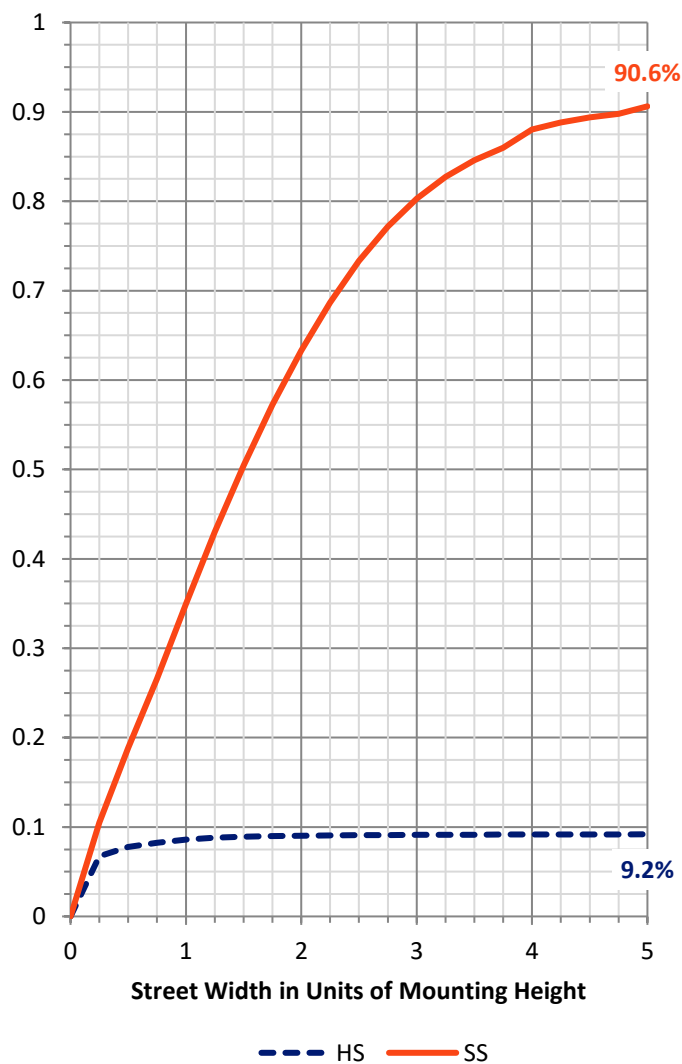
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	257.8	0.0	257.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2530.2	0.0	2530.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	2788.0	0.0	2788.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.2	0.7
10°-20°	57.2	2.1
20°-30°	97.0	3.5
30°-40°	177.5	6.4
40°-50°	374.6	13.4
50°-60°	626.8	22.5
60°-70°	839.0	30.1
70°-80°	548.0	19.7
80°-90°	48.6	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°	2788.0	100.0
0°-180°	2788.0	100.0

Coefficient of Utilization

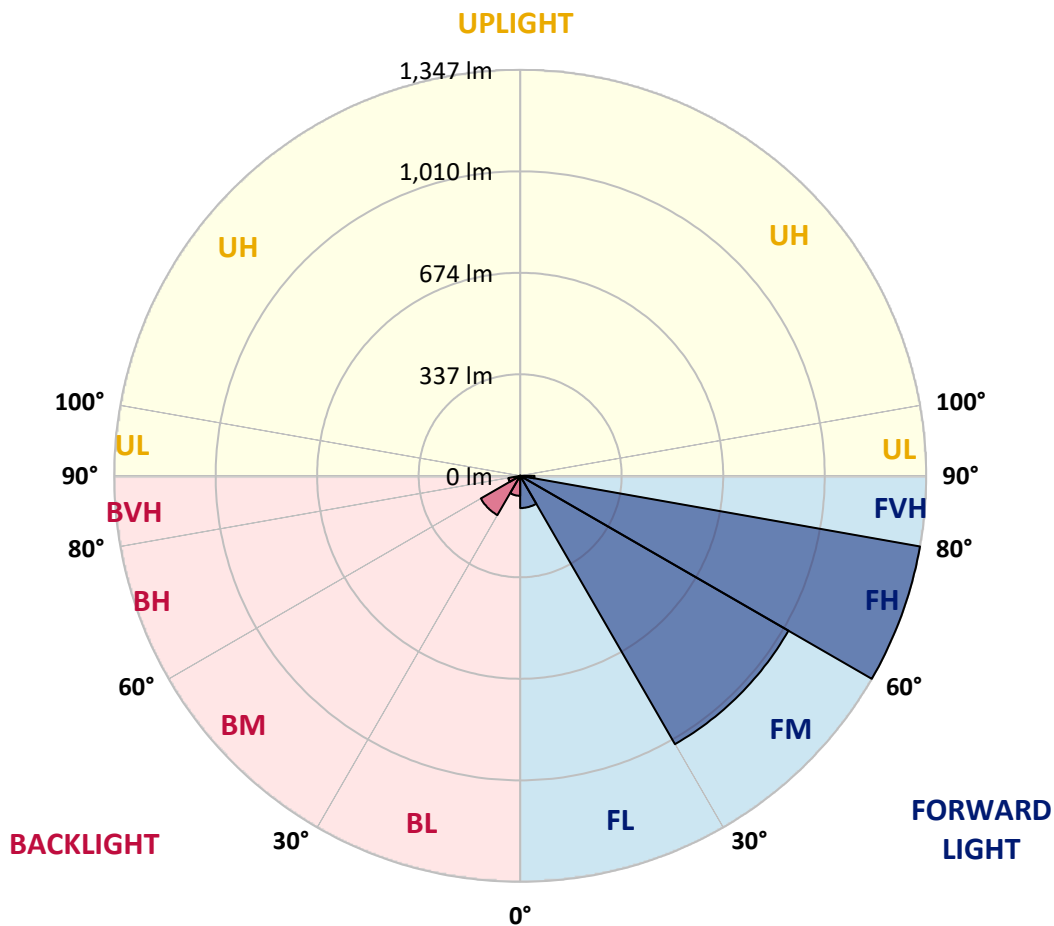


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	107.0	3.8			
FM (30°-60°)	1028.3	36.9			
FH (60°-80°)	1347.3	48.3			G1/1800
FVH (80°-90°)	47.7	1.7			G1/100
BL (0°-30°)	66.4	2.4	B0/110		
BM (30°-60°)	150.7	5.4	B0/220		
BH (60°-80°)	39.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3
2.5°	176.8	170.0	160.1	160.7	162.4	163.8	167.5	165.9	163.0	162.8	176.8
5°	187.3	179.7	179.1	180.0	179.6	182.0	178.9	189.0	197.5	207.7	224.1
7.5°	182.2	178.6	174.1	178.8	178.6	177.4	179.4	199.8	220.4	233.4	260.5
10°	167.5	163.5	166.9	168.4	167.3	172.7	186.2	202.9	227.5	254.8	267.9
12.5°	163.3	165.8	167.0	167.0	177.4	180.2	200.8	216.6	245.8	267.3	305.6
15°	179.6	184.4	175.8	174.0	177.2	178.8	201.7	220.7	258.2	297.5	329.5
17.5°	205.4	205.1	191.9	184.7	189.8	193.5	206.2	228.5	250.5	321.2	367.6
20°	223.2	223.5	199.8	184.7	201.5	203.7	217.8	235.6	252.9	333.1	392.5
22.5°	246.1	237.9	211.8	197.0	208.5	210.5	226.0	240.1	265.6	331.7	424.4
25°	264.8	259.6	226.6	216.4	226.6	223.8	237.9	259.1	279.2	353.9	443.2
27.5°	293.9	285.0	237.1	239.0	238.4	240.4	243.6	276.1	303.2	354.9	486.5
30°	321.0	315.8	260.7	260.7	266.7	262.8	265.2	304.5	326.5	380.0	535.3
32.5°	349.1	349.4	288.4	273.7	268.9	284.8	300.4	318.2	354.5	423.0	609.9
35°	423.2	417.0	341.5	304.8	300.9	300.0	325.1	373.2	404.2	479.1	710.3
37.5°	572.6	551.1	455.7	375.4	360.8	355.9	384.3	433.7	464.5	561.4	876.4
40°	725.8	686.3	580.5	489.9	442.7	421.3	454.5	496.4	551.2	652.4	1030.1
42.5°	860.3	811.6	674.4	613.4	552.0	542.7	511.6	579.8	675.0	784.9	1180.7
45°	991.4	895.5	758.0	709.7	635.1	640.4	629.8	689.0	803.7	930.1	1314.3
47.5°	1081.7	995.5	860.5	797.8	767.9	737.1	820.7	882.2	918.2	1022.4	1429.8
50°	1178.9	1091.6	948.6	904.7	865.4	896.5	1005.1	1013.3	1010.3	1108.5	1508.4
52.5°	1304.4	1201.5	1049.6	1000.1	1022.4	1053.3	1178.6	1180.1	1092.2	1180.9	1565.1
55°	1420.5	1306.4	1184.3	1137.6	1184.1	1210.3	1349.2	1298.2	1139.9	1230.1	1592.9
57.5°	1584.1	1452.1	1363.4	1281.0	1375.5	1350.4	1499.1	1423.5	1193.4	1262.8	1582.7
60°	1790.9	1635.5	1546.7	1459.5	1560.8	1577.8	1645.6	1486.0	1214.2	1273.5	1521.3
62.5°	2001.3	1844.9	1728.1	1669.0	1783.8	1839.8	1781.2	1517.1	1189.3	1252.6	1382.1
65°	2262.3	2062.1	1925.6	1890.9	2103.8	2186.1	1941.5	1524.7	1141.1	1137.6	1111.2
67.5°	2441.0	2246.2	2120.9	2179.0	2436.1	2442.7	2085.5	1527.0	979.0	890.7	729.4
70°	2483.5	2274.8	2218.8	2389.7	2701.2	2617.5	2131.9	1409.4	726.1	528.6	333.4
72.5°	2180.1	1979.2	2052.1	2349.9	2757.6	2719.2	2029.3	1016.8	408.8	211.4	102.3
75°	1337.2	1215.7	1539.4	1992.3	2420.6	2395.8	1583.2	525.4	164.7	84.5	38.2
77.5°	581.5	540.1	803.4	1321.9	1739.4	1717.2	927.7	193.5	85.1	59.4	19.3
80°	192.4	186.7	304.3	626.0	1018.8	999.3	390.8	80.5	60.7	47.7	10.8
82.5°	45.7	45.4	106.2	288.1	519.0	502.8	120.0	44.4	44.0	37.6	5.7
85°	11.5	11.8	29.4	117.8	210.8	185.9	31.3	22.1	31.0	25.5	2.9
87.5°	0.0	0.0	7.6	16.9	31.9	20.0	3.4	5.9	8.7	9.1	1.5
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°	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3	148.3
2.5°	179.9	178.2	164.2	167.6	172.9	172.4	175.8	173.2	170.9	182.3	181.3
5°	228.8	219.5	215.2	221.2	217.9	210.4	216.7	215.6	213.8	217.6	220.6
7.5°	265.5	257.0	253.1	240.4	222.0	207.4	209.7	204.3	199.2	205.3	211.4
10°	277.5	272.9	272.4	247.7	230.3	209.3	184.4	162.8	157.1	149.5	152.9
12.5°	310.4	313.1	295.6	266.7	233.3	192.9	148.6	118.1	105.7	97.7	98.1
15°	337.3	347.0	321.7	269.6	205.3	147.1	98.9	71.5	63.8	61.8	61.1
17.5°	377.4	386.8	329.7	248.7	165.5	99.7	63.6	55.7	56.2	57.6	57.3
20°	407.1	405.7	322.7	211.8	122.0	65.3	53.2	52.2	54.6	58.7	57.7
22.5°	435.7	426.1	318.4	177.5	78.9	52.5	51.4	51.2	53.6	57.4	58.5
25°	456.2	457.7	311.1	139.0	57.4	48.8	49.7	51.1	53.4	57.6	57.0
27.5°	514.7	471.3	280.8	100.9	48.4	46.7	49.1	51.9	52.6	57.9	58.0
30°	552.6	522.7	261.0	68.0	44.7	43.2	47.8	51.5	52.5	59.3	59.7
32.5°	618.7	544.9	238.1	50.5	41.6	42.1	45.0	50.0	54.3	61.6	61.9
35°	700.9	615.9	196.6	45.4	40.6	39.8	41.2	46.9	54.0	61.9	63.5
37.5°	857.4	658.5	155.9	44.0	40.6	39.2	40.6	44.0	53.1	65.0	68.3
40°	962.2	745.2	112.4	43.7	39.8	38.5	39.0	42.4	50.5	63.2	68.0
42.5°	1091.3	781.7	82.8	42.9	39.0	37.1	37.5	41.8	47.8	59.3	62.8
45°	1197.0	808.3	65.2	42.6	37.1	36.5	37.1	41.3	45.4	50.9	54.2
47.5°	1277.3	839.3	52.3	40.6	36.7	36.5	35.8	38.7	41.2	42.6	44.7
50°	1336.2	832.3	43.3	37.5	35.1	36.1	34.7	35.1	35.8	35.0	37.5
52.5°	1372.2	807.2	36.1	33.7	33.3	34.1	32.4	31.0	29.9	29.3	30.8
55°	1385.4	756.9	30.6	28.9	30.0	30.3	28.9	26.5	24.6	23.7	24.9
57.5°	1360.5	680.3	26.6	24.0	26.5	26.5	24.6	22.0	19.8	18.3	19.5
60°	1297.3	595.6	23.7	20.0	22.6	22.8	20.6	17.8	16.1	14.6	15.3
62.5°	1179.7	503.4	20.7	17.3	19.5	19.7	17.0	14.4	13.2	11.5	12.1
65°	944.4	385.0	17.6	15.3	16.9	16.4	14.1	12.2	10.7	9.1	9.4
67.5°	613.0	237.6	15.3	13.9	14.2	13.8	11.9	10.7	9.0	7.7	7.9
70°	274.4	102.3	13.5	12.5	12.4	11.6	10.1	9.9	8.8	7.7	7.7
72.5°	84.7	38.5	11.6	11.3	10.7	9.8	8.8	9.4	8.7	7.4	7.3
75°	33.4	17.6	9.6	9.6	9.3	8.0	7.9	8.5	8.0	6.8	6.5
77.5°	17.5	11.1	7.9	8.2	8.0	6.2	7.1	7.7	7.4	5.7	4.8
80°	10.4	6.8	5.9	6.7	6.5	4.3	5.4	5.0	3.6	1.7	0.5
82.5°	5.7	3.1	2.6	3.9	3.9	1.5	2.8	2.5	1.4	0.0	0.0
85°	2.8	2.2	2.0	2.2	1.5	0.5	1.4	1.4	0.8	0.0	0.0
87.5°	1.4	1.2	0.9	0.8	0.6	0.0	0.5	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)