

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: P596516

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

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596516
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
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
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3732 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

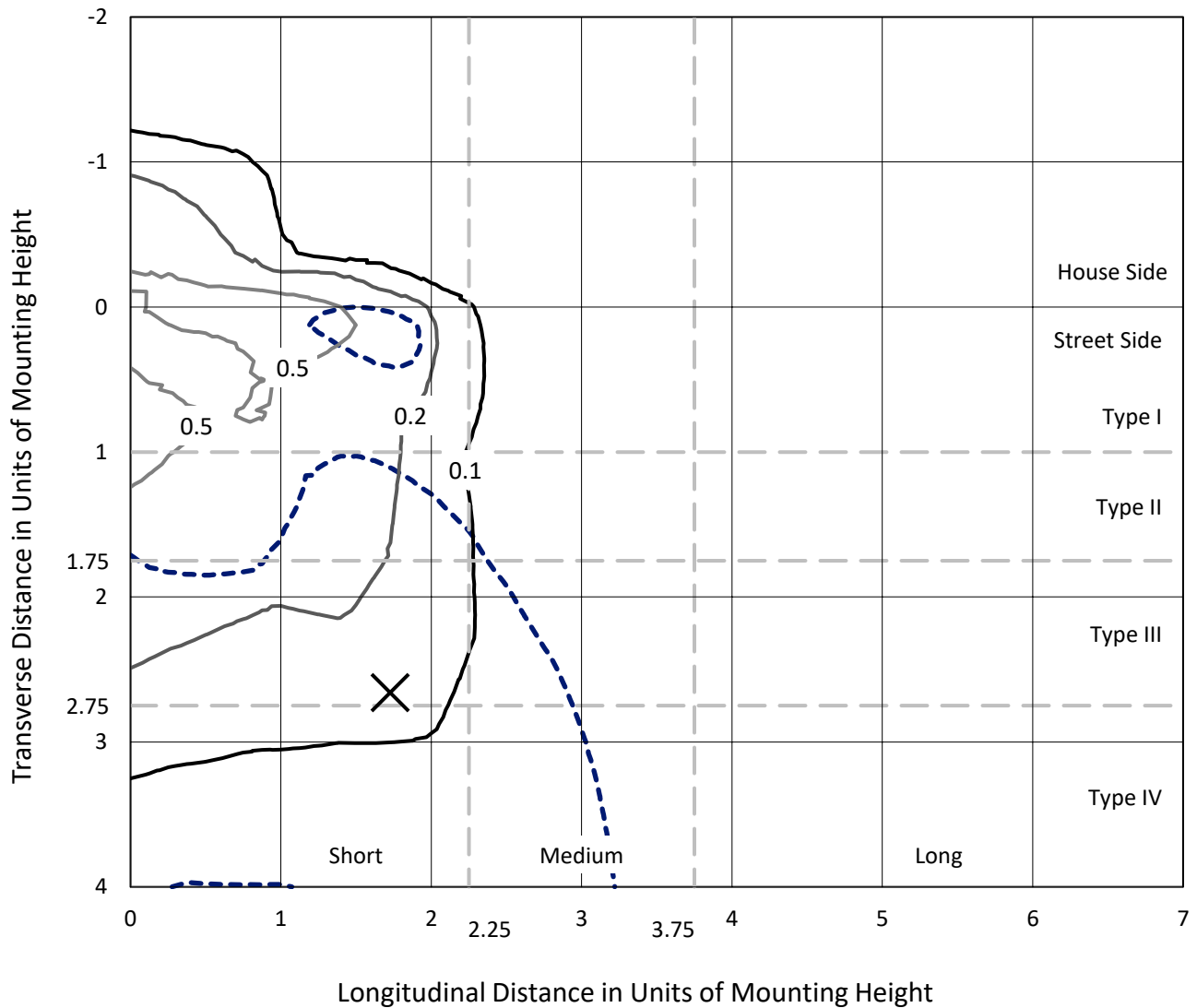
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

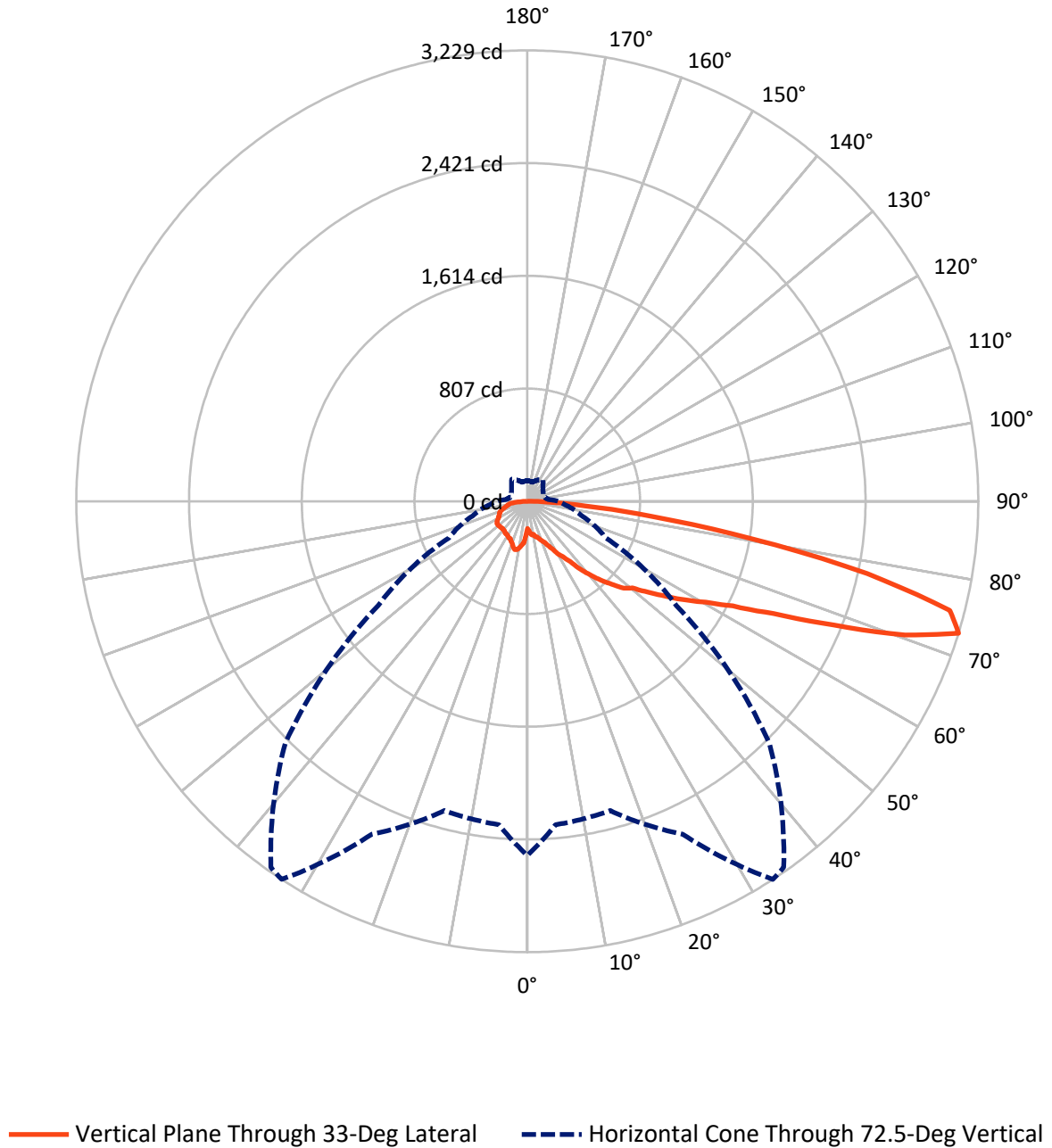
✕ Max cd
 - - - 1/2 Max cd



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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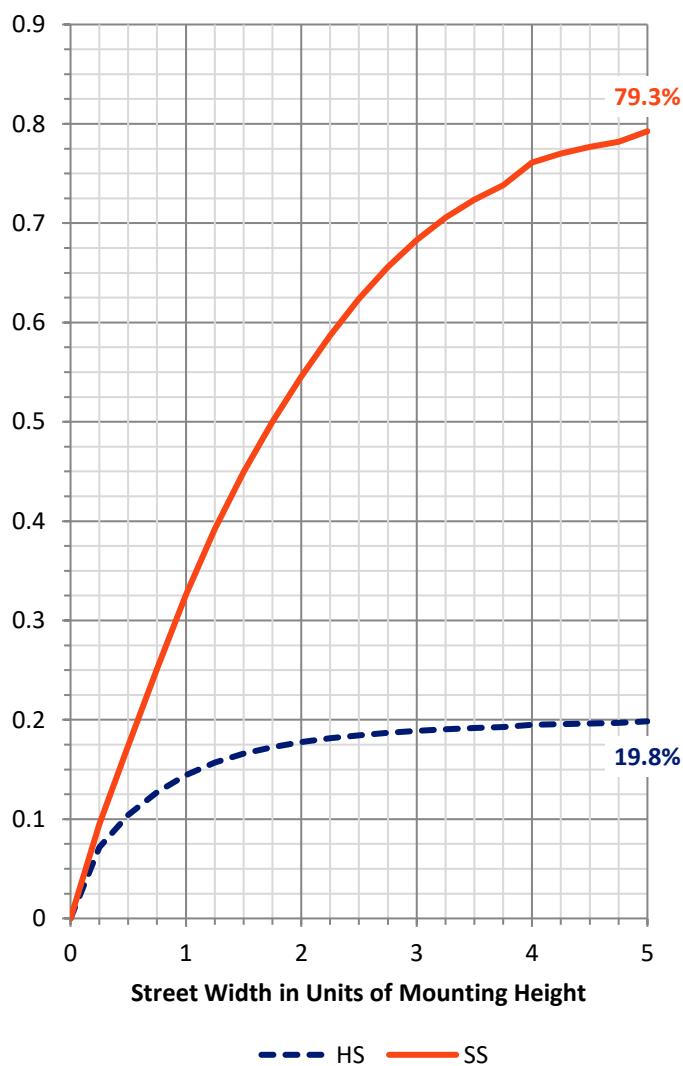
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	755.0	0.0	755.0
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	2977.0	0.0	2977.0
	% Fixture	79.8	0.0	79.8
Total	Lumens	3732.0	0.0	3732.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	0.7
10°-20°	99.4	2.7
20°-30°	181.3	4.9
30°-40°	306.8	8.2
40°-50°	510.3	13.7
50°-60°	748.9	20.1
60°-70°	958.1	25.7
70°-80°	779.5	20.9
80°-90°	120.7	3.2
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°	3732.0	100.0
0°-180°	3732.0	100.0

Coefficient of Utilization



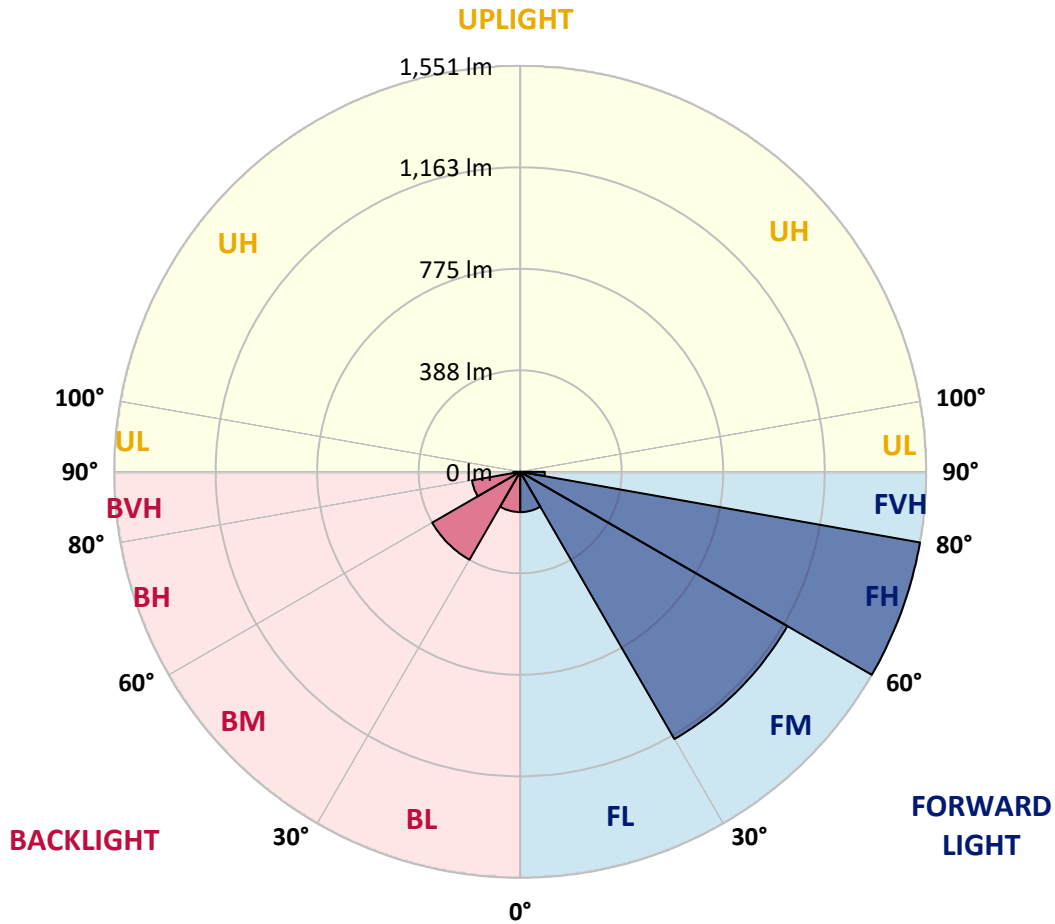
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	154.0	4.1			
FM (30°-60°)	1178.3	31.6			
FH (60°-80°)	1550.5	41.5			G1/1800
FVH (80°-90°)	94.2	2.5			G1/100
BL (0°-30°)	153.7	4.1	B1/500		
BM (30°-60°)	387.8	10.4	B1/1000		
BH (60°-80°)	187.1	5.0	B1/500		G1/500
BVH (80°-90°)	26.5	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7
2.5°	221.9	214.9	203.4	203.1	209.5	210.9	215.0	215.4	216.9	214.4	232.1
5°	244.8	237.3	232.8	234.4	231.5	235.0	235.0	245.2	258.9	274.6	297.1
7.5°	250.2	244.8	239.7	243.5	244.1	240.7	244.0	268.0	292.6	308.4	344.3
10°	239.4	233.9	237.8	239.0	238.9	246.6	263.5	282.7	310.1	339.2	358.6
12.5°	237.3	241.2	243.1	245.2	259.9	262.3	287.8	307.6	335.2	360.7	411.0
15°	267.2	272.3	260.9	260.1	264.9	267.1	293.5	313.5	353.8	396.6	441.9
17.5°	309.8	311.7	291.1	280.5	284.1	285.8	297.4	322.5	347.3	426.5	482.9
20°	351.0	352.2	313.5	290.0	302.5	304.4	315.2	329.6	349.1	443.2	510.6
22.5°	394.2	386.3	343.9	314.1	321.4	321.9	328.2	336.1	363.8	440.6	544.3
25°	441.4	436.4	383.0	354.5	354.2	347.9	348.2	359.5	379.5	468.8	566.5
27.5°	504.1	504.7	427.1	411.8	387.8	383.6	362.7	383.8	406.6	469.1	614.3
30°	585.4	570.4	488.6	463.8	440.2	431.3	403.0	421.0	430.9	495.9	666.3
32.5°	651.5	647.1	552.7	515.2	476.5	486.8	455.5	439.7	457.5	542.0	745.1
35°	714.8	700.6	620.5	571.7	531.0	524.8	504.6	507.2	518.0	600.4	848.1
37.5°	809.2	801.5	716.5	638.5	619.4	594.2	581.3	589.6	581.0	675.2	1002.5
40°	914.8	869.9	796.7	727.2	691.6	673.8	678.3	670.5	664.0	759.1	1140.9
42.5°	1015.9	975.1	850.0	818.7	772.2	779.7	755.1	760.5	778.9	878.1	1268.9
45°	1126.0	1037.6	906.5	878.9	845.6	855.1	874.7	868.8	899.0	1018.6	1389.5
47.5°	1181.0	1096.9	975.8	930.9	930.5	910.8	1030.5	1043.5	996.3	1122.6	1512.0
50°	1233.9	1151.2	1027.4	997.0	975.1	1017.2	1179.9	1150.0	1084.2	1242.0	1646.7
52.5°	1307.6	1213.3	1086.5	1054.2	1081.4	1120.4	1299.1	1293.2	1170.4	1364.7	1763.7
55°	1363.8	1268.6	1175.5	1145.5	1197.5	1235.8	1420.5	1385.0	1244.3	1454.8	1837.9
57.5°	1462.3	1364.6	1307.0	1240.3	1333.8	1333.1	1537.5	1510.1	1323.2	1528.8	1867.7
60°	1618.8	1504.1	1443.8	1366.9	1467.1	1502.8	1671.3	1592.3	1379.1	1575.6	1813.9
62.5°	1838.5	1702.2	1604.5	1528.4	1650.5	1715.2	1836.5	1652.2	1382.7	1562.3	1672.2
65°	2110.2	1944.5	1816.5	1736.0	1937.6	2030.0	2036.2	1689.2	1349.9	1424.6	1374.3
67.5°	2375.2	2189.0	2055.4	2070.7	2365.0	2408.8	2252.6	1720.2	1173.5	1144.0	954.3
70°	2549.7	2347.8	2258.8	2421.4	2868.5	2823.6	2428.0	1638.6	924.1	741.6	537.4
72.5°	2536.6	2325.2	2293.2	2629.8	3228.6	3200.6	2449.4	1303.1	619.0	405.5	268.0
75°	2066.5	1902.3	1975.0	2489.5	3124.9	3123.5	2126.6	806.6	317.5	208.2	169.4
77.5°	1142.6	1078.8	1292.6	1884.9	2488.1	2500.8	1436.9	365.8	171.2	147.5	127.6
80°	400.2	394.3	560.1	1017.2	1636.7	1639.8	668.2	167.4	124.5	111.6	93.7
82.5°	146.3	145.1	232.2	472.5	901.2	899.2	253.4	104.2	92.3	79.0	61.8
85°	58.4	57.1	106.2	209.8	414.0	407.3	98.5	59.1	60.4	47.1	30.3
87.5°	16.1	16.7	36.1	65.6	126.8	117.5	24.8	20.0	24.5	19.2	9.6
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°	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7
2.5°	235.2	236.7	221.4	226.8	233.8	237.5	239.4	231.5	234.1	245.2	244.8
5°	301.7	295.5	289.7	295.7	291.7	286.0	295.2	294.8	300.8	306.9	308.2
7.5°	351.4	343.4	340.6	327.0	313.4	299.6	311.5	318.9	320.5	335.5	341.8
10°	369.4	366.3	367.4	349.4	347.7	349.1	338.1	326.2	333.5	327.3	331.9
12.5°	410.9	418.6	399.4	387.2	386.1	377.6	355.6	347.9	339.7	348.2	343.9
15°	444.2	458.6	438.0	416.5	392.2	379.0	360.3	348.5	343.1	344.9	339.7
17.5°	492.9	506.4	454.1	421.1	396.0	376.7	348.0	323.0	336.3	337.4	331.3
20°	525.3	526.2	459.5	409.7	387.0	353.5	325.6	303.6	318.9	334.6	341.4
22.5°	556.9	549.9	466.2	400.5	354.4	321.9	308.2	306.9	318.3	331.5	333.0
25°	580.6	581.7	470.0	397.1	335.2	290.9	290.9	301.0	311.0	342.3	340.8
27.5°	638.0	595.7	455.0	381.5	308.6	272.8	291.1	304.5	309.3	343.2	346.6
30°	679.8	652.3	458.1	354.7	281.6	264.3	279.3	296.2	309.5	348.7	347.4
32.5°	749.9	675.8	465.4	317.1	261.5	261.0	274.3	292.1	308.1	342.8	344.6
35°	827.5	745.1	445.1	288.4	256.7	259.2	276.4	283.5	302.2	340.4	342.2
37.5°	971.0	781.4	432.3	266.3	253.6	260.7	267.2	278.2	297.1	328.8	340.0
40°	1055.2	856.0	384.6	253.4	247.1	259.5	262.7	272.0	282.2	314.9	322.0
42.5°	1166.1	879.5	343.9	239.2	243.8	254.4	264.1	266.4	273.3	292.9	305.9
45°	1258.5	897.2	300.7	227.7	232.8	265.7	266.3	265.2	264.0	271.2	281.9
47.5°	1354.2	944.6	260.9	215.0	228.7	275.0	267.4	257.5	252.4	253.3	263.2
50°	1459.8	978.9	232.7	204.7	229.6	275.0	272.6	249.6	239.4	236.7	247.1
52.5°	1552.7	982.9	211.3	196.3	225.7	265.5	276.2	244.6	227.4	221.1	230.8
55°	1603.3	932.0	195.8	188.7	215.8	257.0	274.3	241.8	213.0	208.2	216.9
57.5°	1602.2	847.5	182.7	178.2	204.5	245.1	264.0	226.7	204.2	201.4	209.9
60°	1544.5	748.4	172.6	169.5	192.9	227.7	245.4	216.7	195.7	194.3	203.6
62.5°	1413.5	646.1	162.9	160.4	182.1	215.5	236.6	205.8	186.9	186.7	195.5
65°	1157.6	518.6	153.7	153.1	172.0	203.4	228.2	196.5	177.7	180.8	189.8
67.5°	797.6	364.4	144.0	145.8	162.7	191.8	221.9	190.3	168.1	174.5	182.5
70°	437.7	225.4	133.1	136.9	150.9	178.4	211.9	180.2	155.6	165.3	170.9
72.5°	222.6	150.3	119.7	125.6	136.6	158.5	193.4	165.7	142.1	145.8	148.8
75°	149.6	113.2	104.7	111.2	119.1	139.6	171.5	152.0	129.3	128.8	132.1
77.5°	113.0	88.4	88.9	96.3	101.4	122.8	154.2	140.6	118.4	117.4	122.2
80°	82.7	67.0	71.5	79.3	83.9	110.2	142.9	127.9	103.7	99.4	103.4
82.5°	54.8	47.5	52.9	60.7	64.4	92.1	129.7	108.5	84.5	73.5	74.2
85°	25.9	24.9	31.6	35.3	40.1	57.1	97.1	75.1	53.9	44.6	46.6
87.5°	5.9	7.9	10.4	10.2	11.9	15.3	30.2	21.1	15.6	10.7	7.1
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)