

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: P366862

Luminaire Tested: **MSA-SA1B-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366862
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-830-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4080 lumens
Efficiency: N/A
Efficacy: 92.7 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

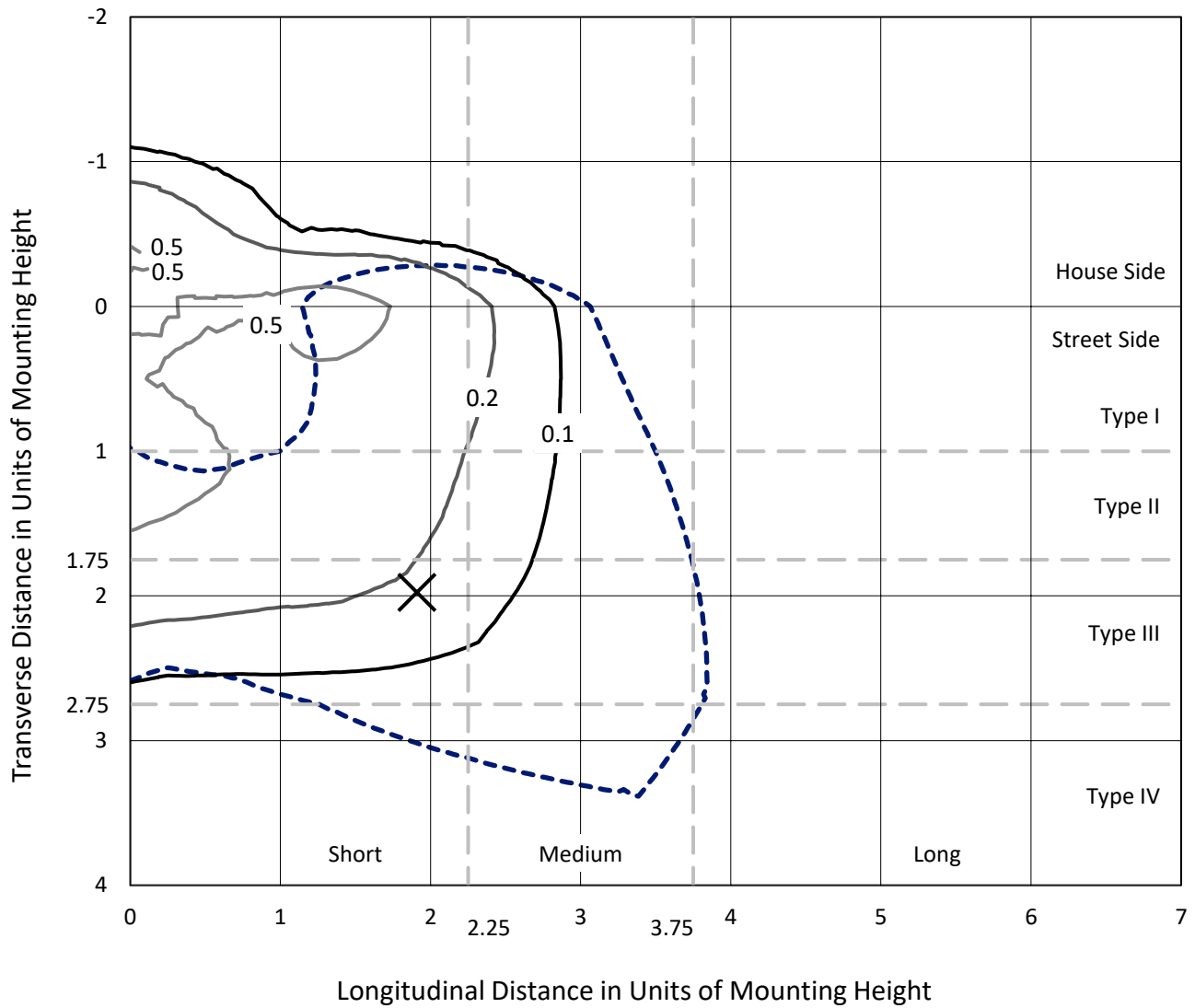
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366862
 CATALOG NUMBER: MSA-SA1B-830-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

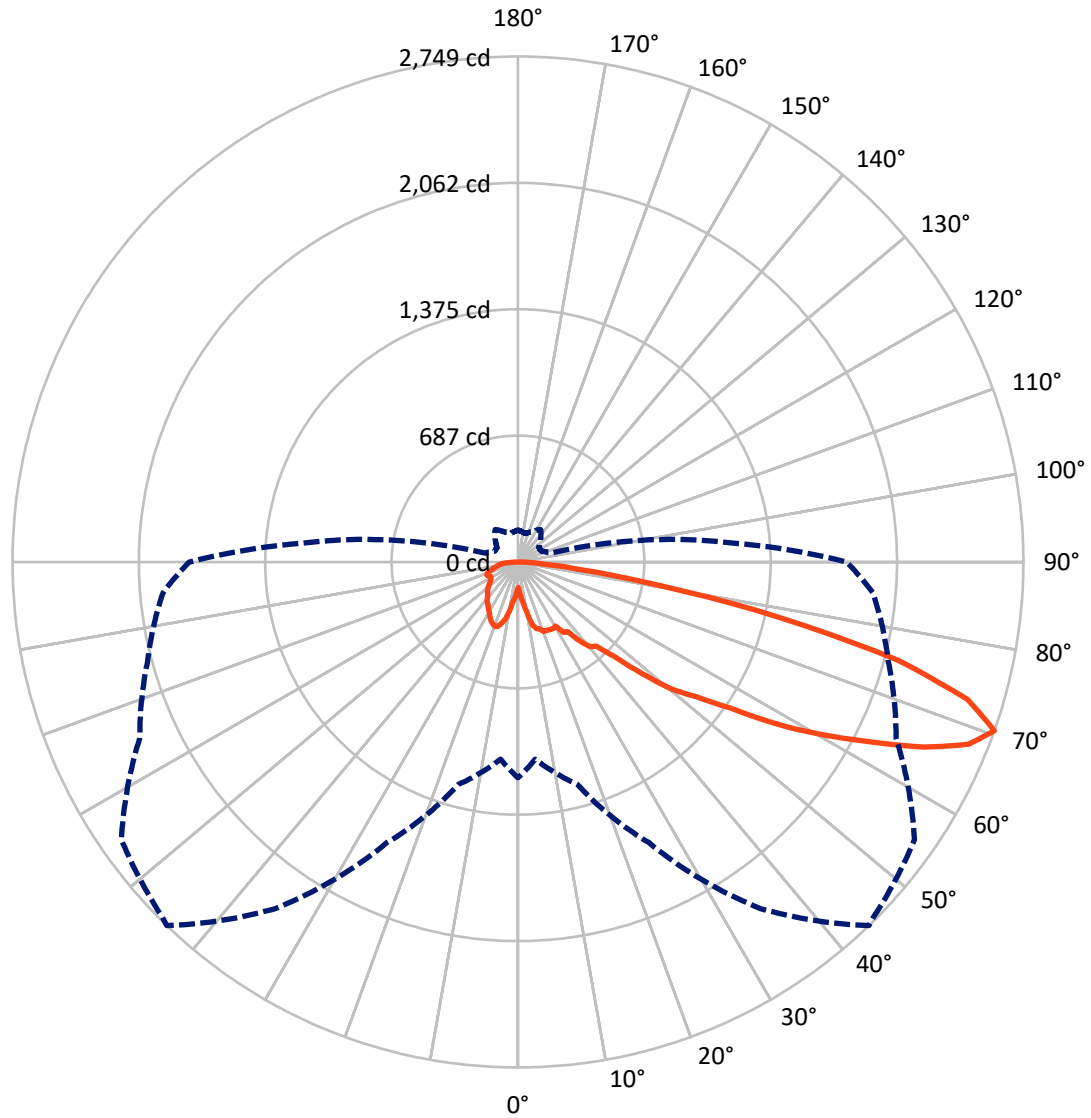
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P366862
CATALOG NUMBER: MSA-SA1B-830-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P366862
 CATALOG NUMBER: MSA-SA1B-830-U-T4W

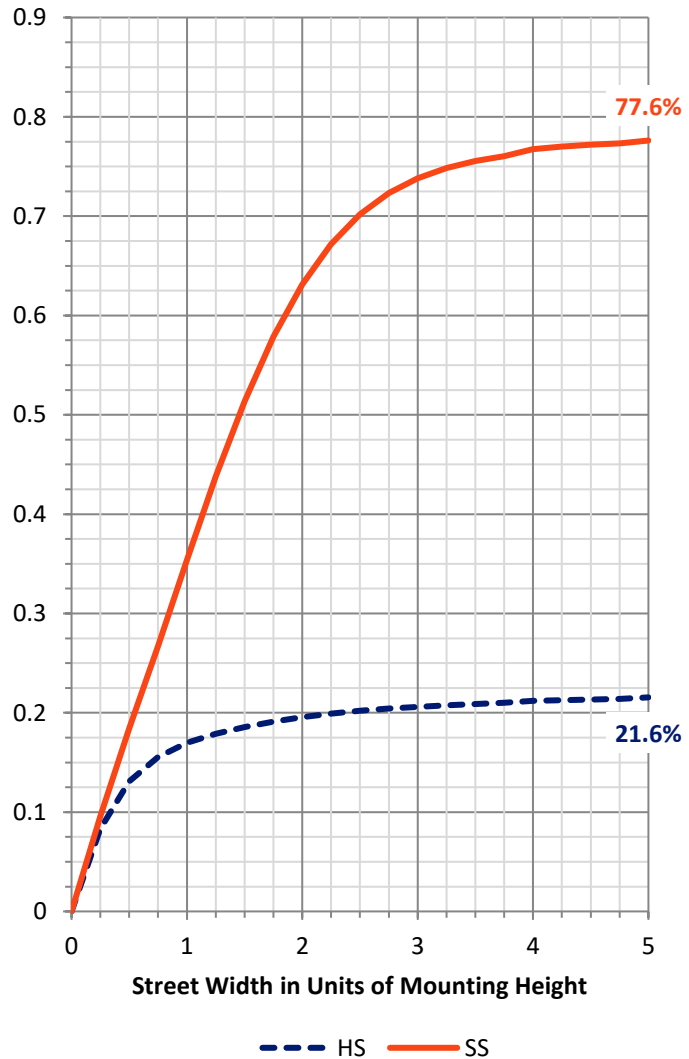
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	900.2	0.0	900.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3179.8	0.0	3179.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	4080.0	0.0	4080.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.7	0.5
10°-20°	100.1	2.5
20°-30°	187.1	4.6
30°-40°	300.4	7.4
40°-50°	507.0	12.4
50°-60°	903.4	22.1
60°-70°	1235.7	30.3
70°-80°	726.7	17.8
80°-90°	97.8	2.4
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°	4080.0	100.0
0°-180°	4080.0	100.0

Coefficient of Utilization



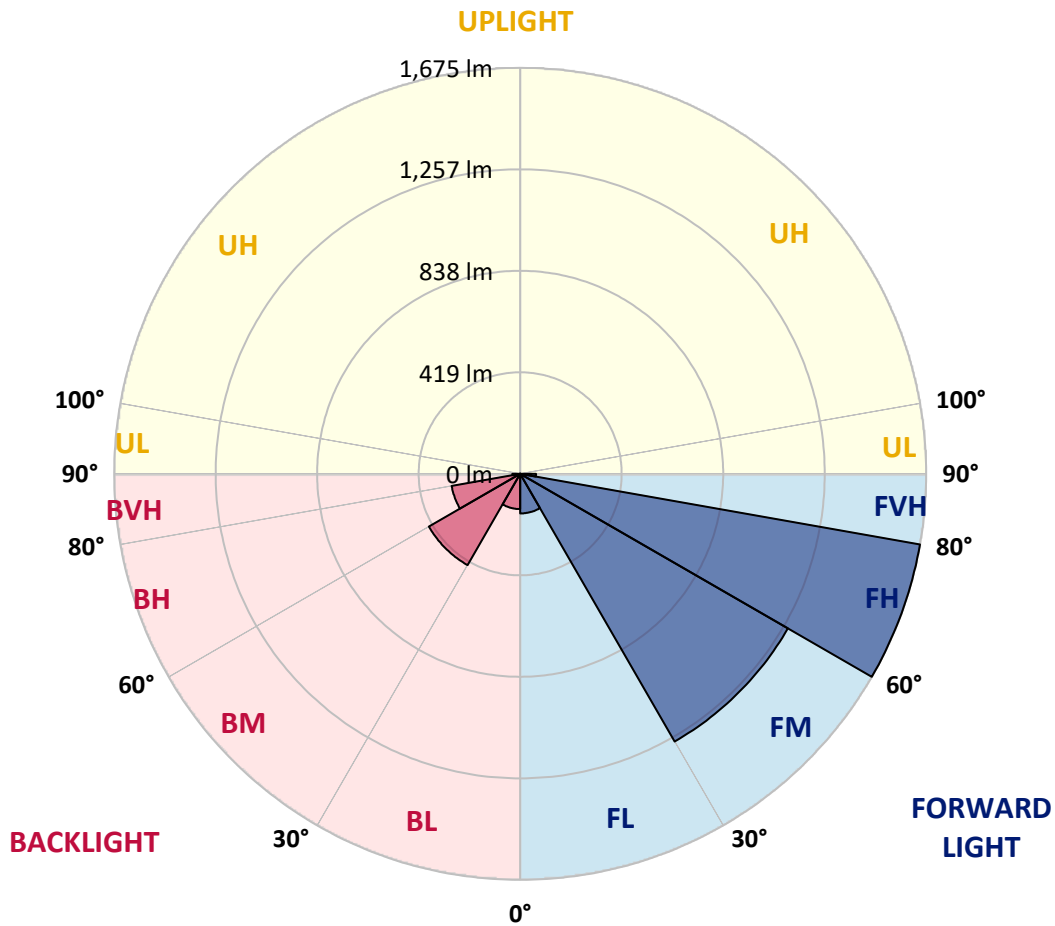
REPORT NUMBER: P366862
 CATALOG NUMBER: MSA-SA1B-830-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	163.5	4.0			
FM (30°-60°)	1275.7	31.3			
FH (60°-80°)	1675.4	41.1			G1/1800
FVH (80°-90°)	65.2	1.6			G1/100
BL (0°-30°)	145.5	3.6	B1/500		
BM (30°-60°)	435.0	10.7	B1/1000		
BH (60°-80°)	287.1	7.0	B1/500		G1/500
BVH (80°-90°)	32.6	0.8			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





REPORT NUMBER: P366862
 CATALOG NUMBER: MSA-SA1B-830-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
2.5°	168.3	164.9	156.9	159.6	162.9	164.3	163.9	163.6	158.4	156.6	165.8
5°	228.7	221.3	215.5	213.1	205.4	199.4	195.7	205.4	203.9	206.4	212.8
7.5°	285.6	280.9	267.7	263.0	247.3	236.9	235.7	243.4	245.4	241.4	252.3
10°	322.2	314.2	311.5	300.3	289.4	287.7	286.7	283.2	278.4	278.0	268.3
12.5°	350.6	354.8	357.0	344.1	344.5	350.5	347.3	333.1	324.9	310.5	311.7
15°	401.7	407.7	390.5	382.3	366.5	375.6	374.4	362.5	361.3	352.0	341.1
17.5°	446.2	448.8	420.1	401.3	396.0	382.9	386.4	386.8	371.4	388.1	378.4
20°	449.8	459.4	426.3	389.0	405.0	403.3	403.8	400.5	380.3	407.9	404.2
22.5°	467.9	453.4	423.6	396.3	400.5	403.0	405.3	401.3	400.2	415.6	426.8
25°	464.6	459.9	429.8	406.7	407.2	407.7	408.9	420.9	419.6	440.5	446.3
27.5°	495.9	488.7	431.6	425.9	412.9	410.0	402.0	427.1	446.7	446.2	478.5
30°	555.4	548.0	474.4	457.9	434.3	405.2	420.6	454.0	469.4	474.6	515.6
32.5°	648.4	660.5	558.8	492.0	462.7	456.4	454.7	451.4	489.5	515.1	552.4
35°	781.9	772.4	658.1	565.1	492.7	465.4	469.1	489.5	534.8	551.4	585.9
37.5°	934.8	915.1	785.4	647.9	579.0	544.9	532.7	552.4	562.4	575.5	645.9
40°	1090.2	1042.1	910.4	756.8	630.9	605.1	594.4	570.1	593.7	620.1	709.7
42.5°	1240.3	1203.0	1046.4	886.8	718.2	626.3	620.5	596.7	669.8	697.8	801.7
45°	1397.6	1311.1	1185.8	1033.5	845.8	730.6	721.9	679.2	772.9	831.1	931.5
47.5°	1503.3	1423.1	1313.4	1152.6	952.7	904.9	888.3	815.4	900.4	976.0	1132.1
50°	1603.3	1520.8	1405.6	1283.0	1146.3	1091.2	1055.9	934.5	1059.1	1182.2	1389.2
52.5°	1746.5	1672.7	1512.6	1414.3	1354.2	1218.9	1192.6	1125.9	1244.8	1410.9	1670.2
55°	1899.6	1799.1	1654.0	1599.5	1575.2	1401.9	1380.5	1338.0	1492.1	1645.0	1943.4
57.5°	1967.2	1862.3	1782.3	1749.7	1747.7	1667.9	1643.3	1613.7	1744.8	1845.7	2200.6
60°	2020.9	1908.3	1876.3	1894.6	1960.8	1908.3	1876.3	1850.2	1950.6	2044.1	2410.3
62.5°	2011.0	1898.1	1914.5	1970.0	2139.2	2154.5	2130.0	2066.7	2154.5	2206.7	2530.6
65°	1851.7	1747.4	1842.9	1974.7	2304.9	2427.9	2426.6	2261.1	2291.6	2291.6	2517.9
67.5°	1572.7	1464.6	1621.1	1933.4	2419.5	2644.5	2644.9	2467.2	2304.1	2283.0	2321.2
70°	1174.4	1076.5	1252.3	1683.8	2301.3	2749.4	2734.2	2633.5	2269.6	2085.5	1938.9
72.5°	701.5	638.2	800.0	1225.7	1963.0	2556.5	2597.0	2442.0	2077.8	1734.3	1386.0
75°	318.5	291.1	375.9	704.1	1401.4	2132.5	2176.5	2060.9	1650.3	1247.3	801.0
77.5°	136.3	129.0	164.1	312.3	772.7	1458.3	1548.4	1472.8	1118.2	724.9	354.3
80°	87.7	83.0	100.9	150.2	358.8	787.9	865.6	837.3	569.6	281.9	124.8
82.5°	52.4	50.9	67.4	94.4	195.7	346.8	390.8	401.2	236.6	126.5	71.4
85°	28.6	28.9	37.0	57.2	117.4	135.0	144.5	157.3	111.4	73.3	34.6
87.5°	9.5	11.0	14.9	23.3	41.8	38.1	38.3	44.5	47.0	30.4	11.0
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: P366862
 CATALOG NUMBER: MSA-SA1B-830-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
2.5°	167.3	164.3	156.6	157.1	159.9	160.6	161.4	156.6	155.6	164.8	165.6
5°	213.8	203.9	199.4	197.9	193.6	192.1	200.1	203.8	207.4	214.6	218.1
7.5°	251.1	240.1	231.9	224.3	218.0	214.3	227.9	238.2	244.6	259.3	266.0
10°	268.2	258.6	255.6	249.6	254.5	265.5	268.0	268.3	282.4	282.1	284.9
12.5°	302.1	295.9	286.1	288.2	301.0	312.3	309.2	314.0	319.0	331.1	325.5
15°	333.1	331.4	322.2	323.7	326.2	340.4	342.3	347.1	354.8	364.4	357.8
17.5°	371.2	370.6	348.1	346.1	352.0	365.9	361.5	353.0	378.4	388.6	385.9
20°	397.1	392.1	363.4	354.8	369.7	371.6	366.5	353.0	375.1	397.3	403.3
22.5°	418.7	412.9	383.3	366.5	363.5	364.4	364.4	361.9	372.7	391.0	390.8
25°	436.1	441.6	404.0	387.9	371.9	351.8	349.3	351.5	357.7	392.8	391.6
27.5°	479.8	464.6	411.0	399.0	366.0	334.4	341.3	344.6	346.6	385.1	391.5
30°	508.2	512.9	436.1	405.5	357.5	315.0	317.4	327.1	338.8	384.3	386.1
32.5°	546.5	536.5	475.3	394.6	334.8	303.3	298.9	312.0	329.4	370.7	375.7
35°	582.2	594.1	491.8	392.6	318.9	285.7	290.4	294.9	313.0	355.7	361.5
37.5°	665.8	638.7	538.3	382.9	305.6	276.9	271.8	278.7	294.1	327.1	340.6
40°	729.4	731.1	548.4	370.7	280.4	264.2	253.4	260.3	266.8	293.1	298.9
42.5°	848.7	812.2	573.0	344.0	264.5	245.1	239.1	242.1	243.1	254.1	263.8
45°	1000.4	914.9	582.7	308.0	243.6	237.2	225.0	223.5	218.0	219.5	228.0
47.5°	1210.4	1075.2	575.6	269.7	225.0	227.0	209.4	202.6	194.9	196.7	204.8
50°	1481.9	1279.9	575.1	237.2	212.3	213.6	199.2	186.9	179.2	183.0	190.0
52.5°	1786.5	1485.4	577.5	215.0	198.4	197.7	192.6	177.5	171.3	175.3	183.4
55°	2077.9	1662.0	594.9	200.9	184.0	185.2	187.2	174.5	167.6	171.3	179.7
57.5°	2331.5	1801.6	588.4	186.0	170.6	176.0	181.3	170.3	165.1	170.5	178.8
60°	2508.9	1866.3	536.8	171.8	160.8	168.1	178.5	169.8	169.1	180.7	190.7
62.5°	2573.6	1842.4	436.5	160.6	154.9	167.1	185.0	180.8	181.5	195.7	209.6
65°	2479.1	1716.6	325.5	153.4	150.4	172.0	200.1	187.4	178.2	189.9	202.6
67.5°	2210.3	1492.9	237.9	147.2	145.2	179.7	214.0	186.7	169.6	181.5	191.9
70°	1788.2	1178.4	184.2	139.4	138.3	174.5	215.3	181.7	160.4	168.1	174.0
72.5°	1225.2	806.8	152.6	131.8	126.5	154.6	204.4	170.5	149.4	153.9	158.8
75°	684.7	452.9	128.3	122.5	110.7	137.7	191.7	163.8	141.2	142.5	149.2
77.5°	307.3	195.9	108.9	110.1	96.5	121.8	175.2	153.1	128.6	125.6	132.3
80°	116.3	95.5	88.3	93.0	81.1	105.6	157.9	143.4	115.4	111.6	115.4
82.5°	67.4	57.9	65.6	71.6	64.4	97.0	150.7	134.5	101.7	92.0	95.4
85°	31.3	29.9	39.3	46.5	45.0	75.6	129.0	101.2	72.4	61.2	67.8
87.5°	8.2	9.2	13.9	16.4	16.7	25.9	49.7	37.6	28.3	21.4	20.6
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)