

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: P366724

Luminaire Tested: **MSA-SA1A-830-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366724
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-830-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3203 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - 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



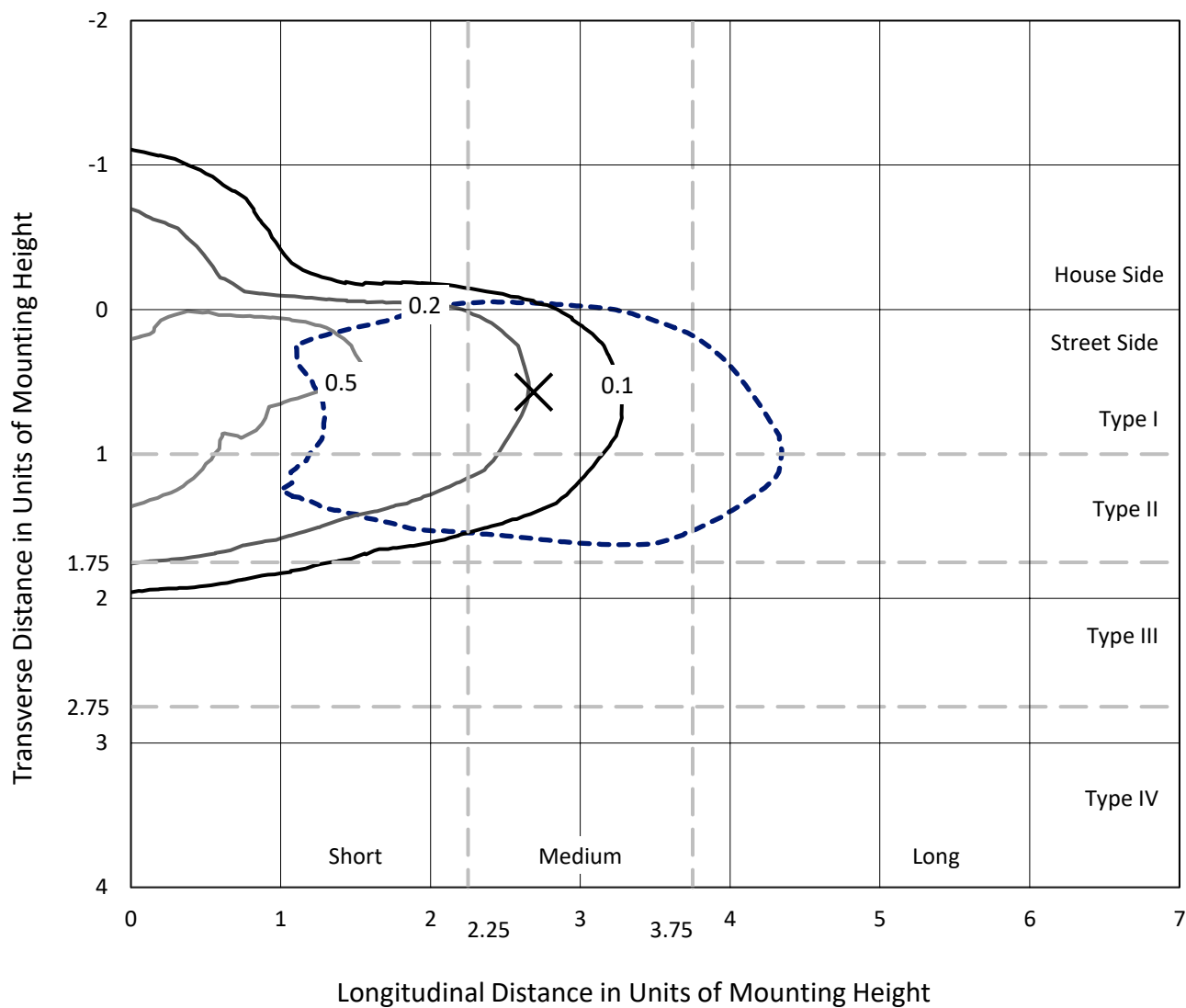
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

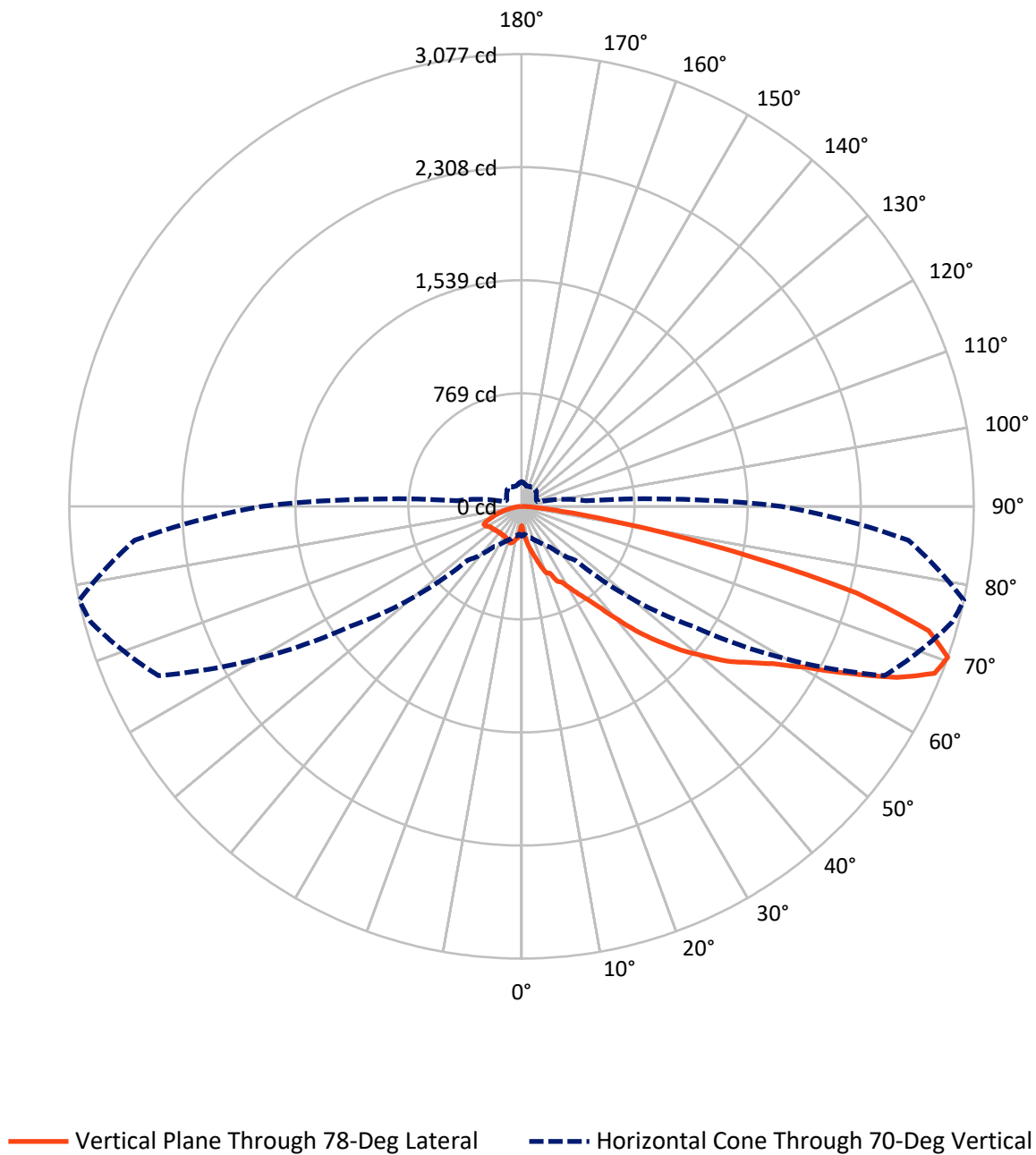


Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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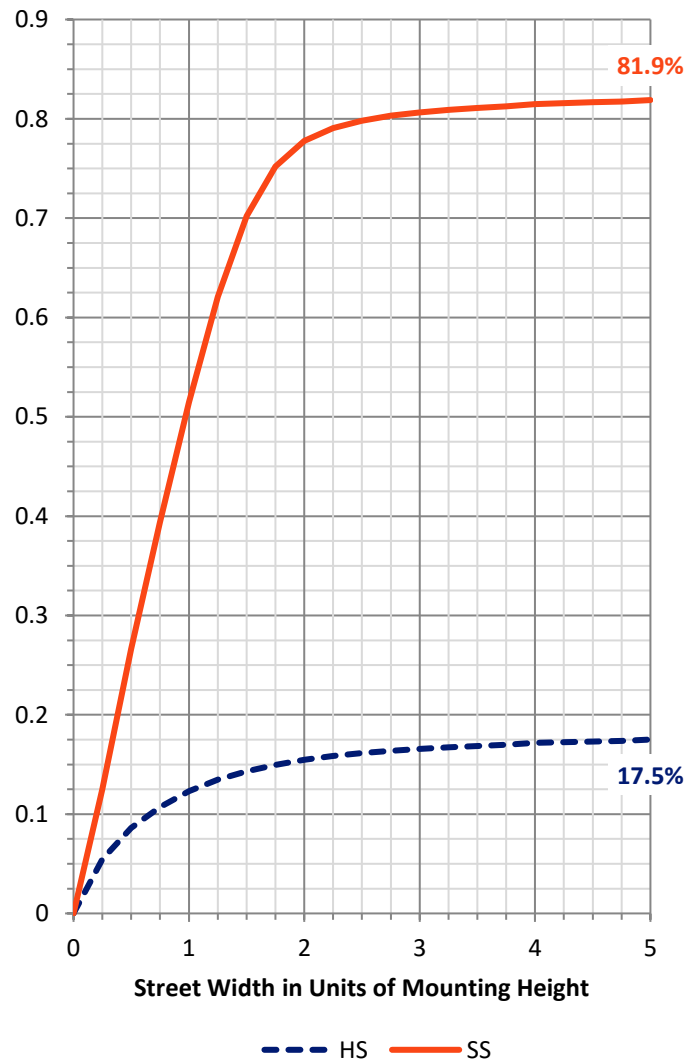
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	571.7	0.0	571.7
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	2631.3	0.0	2631.3
	% Fixture	82.2	0.0	82.2
Total	Lumens	3203.0	0.0	3203.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.2	0.6
10°-20°	88.9	2.8
20°-30°	171.1	5.3
30°-40°	288.3	9.0
40°-50°	498.8	15.6
50°-60°	753.1	23.5
60°-70°	834.2	26.0
70°-80°	480.9	15.0
80°-90°	67.5	2.1
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°	3203.0	100.0
0°-180°	3203.0	100.0

Coefficient of Utilization



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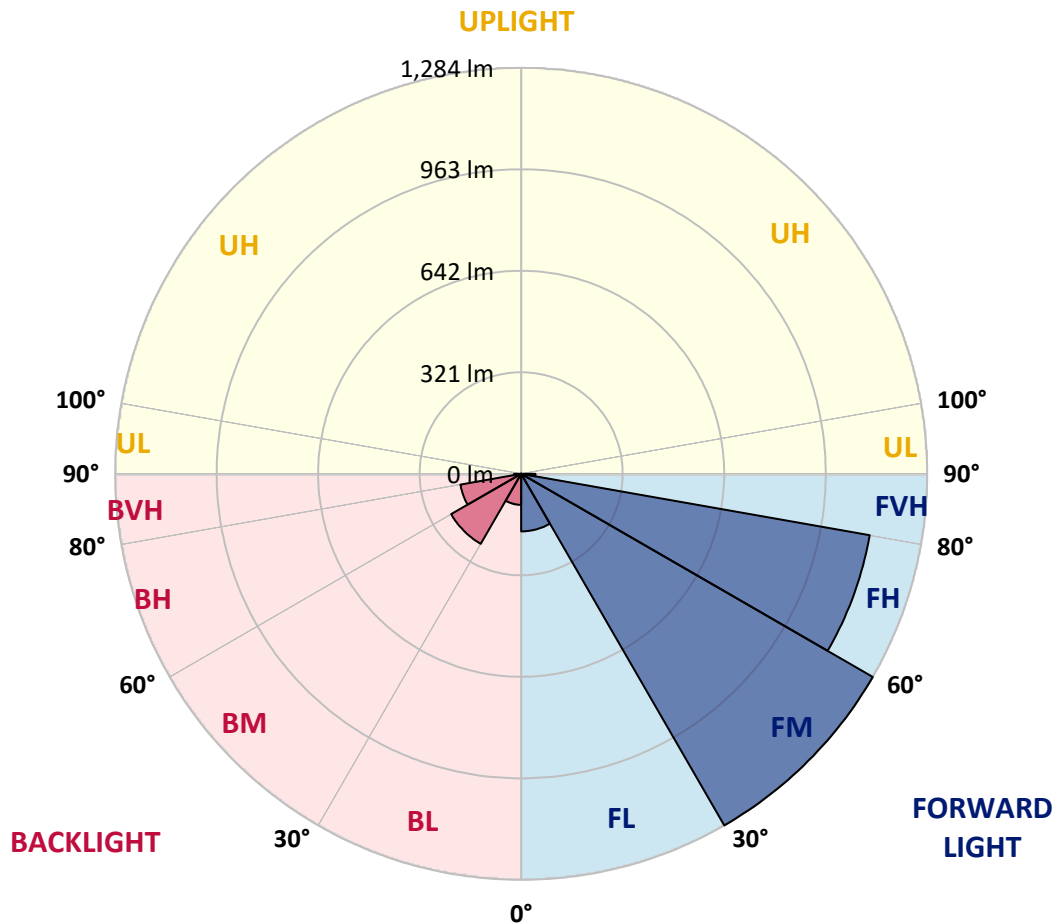
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	182.1	5.7			
FM	(30°-60°)	1284.5	40.1			
FH	(60°-80°)	1119.7	35.0			G1/1800
FVH	(80°-90°)	45.0	1.4			G1/100
BL	(0°-30°)	98.2	3.1	B0/110		
BM	(30°-60°)	255.7	8.0	B1/1000		
BH	(60°-80°)	195.4	6.1	B1/500		G1/500
BVH	(80°-90°)	22.5	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 II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6
2.5°	168.1	162.1	153.0	156.8	161.3	161.8	160.4	152.1	149.3	155.6	157.4
5°	235.5	225.4	219.2	217.2	210.4	196.3	206.4	201.2	202.3	199.2	205.2
7.5°	292.3	285.5	276.4	273.9	258.2	247.2	254.1	251.8	240.9	236.6	243.4
10°	321.1	313.7	314.1	308.6	304.4	305.5	302.0	292.0	283.9	278.1	261.7
12.5°	338.5	340.4	350.4	347.6	363.2	376.0	366.3	351.4	325.7	320.5	304.2
15°	379.7	386.7	377.3	381.6	388.3	412.9	408.9	405.6	378.4	368.3	338.2
17.5°	422.2	423.5	409.4	407.1	423.1	435.6	451.2	433.2	436.5	429.4	380.8
20°	431.3	440.5	420.2	406.2	439.2	463.7	483.1	464.0	481.6	483.5	415.9
22.5°	464.5	453.5	426.7	413.0	441.8	472.0	503.5	514.2	508.6	492.8	449.8
25°	487.6	481.8	454.5	439.3	450.2	478.0	533.3	561.2	566.1	564.0	482.2
27.5°	530.5	533.4	477.4	481.6	466.4	468.9	551.2	623.6	592.7	584.2	522.2
30°	598.2	585.1	522.2	525.7	500.5	496.2	589.0	677.4	649.7	639.5	555.2
32.5°	668.8	670.0	593.7	564.0	550.5	546.3	581.5	705.5	721.8	708.5	605.0
35°	768.4	761.5	671.1	632.1	583.4	575.9	634.8	787.3	817.2	779.8	664.2
37.5°	920.1	899.2	793.9	703.8	667.8	659.2	710.9	860.6	927.9	881.4	760.8
40°	1041.9	999.3	903.7	793.9	732.9	743.5	765.0	949.5	1042.7	1016.5	850.3
42.5°	1139.0	1101.2	981.4	904.2	821.3	808.2	831.7	1059.7	1198.9	1173.3	961.9
45°	1232.0	1155.1	1068.7	999.3	919.6	935.5	932.0	1172.1	1390.5	1311.6	1060.6
47.5°	1323.9	1251.7	1161.3	1067.9	987.7	1086.6	1049.6	1255.7	1519.8	1461.3	1164.5
50°	1441.9	1362.5	1259.5	1165.7	1117.6	1190.0	1127.9	1326.4	1664.5	1595.9	1262.5
52.5°	1520.3	1443.0	1352.7	1285.7	1281.3	1253.4	1237.5	1416.0	1791.4	1749.7	1366.4
55°	1511.1	1436.6	1395.7	1403.1	1457.6	1363.4	1350.5	1548.6	1923.7	1875.5	1478.5
57.5°	1395.6	1314.3	1323.0	1366.5	1512.8	1556.6	1534.6	1690.3	2041.7	2019.8	1617.3
60°	1087.2	1045.4	1116.0	1195.6	1438.9	1613.3	1768.1	1863.1	2187.0	2222.0	1835.2
62.5°	706.2	650.4	762.0	897.2	1218.2	1575.9	2006.0	2190.8	2425.0	2504.4	2166.3
65°	365.9	356.9	435.0	559.2	848.0	1343.7	2089.8	2534.4	2714.2	2806.7	2482.6
67.5°	266.0	249.4	285.6	358.6	517.7	916.3	1930.9	2797.4	2946.4	3031.2	2666.5
70°	202.6	190.3	217.9	263.2	338.1	517.5	1425.4	2725.7	3036.0	3077.1	2642.1
72.5°	151.7	141.1	165.3	207.5	260.5	291.4	842.5	2241.1	2883.1	2897.1	2371.3
75°	121.1	113.0	123.4	163.8	212.3	198.3	447.6	1623.7	2342.4	2354.5	1811.3
77.5°	99.3	92.4	96.7	122.8	165.2	149.1	222.1	1032.8	1487.2	1468.8	1019.1
80°	81.0	75.0	77.0	88.8	125.8	111.4	124.7	538.8	709.4	680.8	423.8
82.5°	62.4	57.3	61.3	65.3	91.1	80.0	72.8	245.2	290.6	270.7	155.4
85°	41.8	37.1	53.3	49.0	59.6	49.1	39.8	97.6	108.3	100.9	54.6
87.5°	11.5	10.8	17.9	24.4	24.4	18.6	14.6	23.6	30.2	26.4	12.8
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°	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6	130.6
2.5°	158.2	155.3	147.5	146.9	148.7	149.0	147.8	145.0	143.5	151.6	150.3
5°	203.8	193.3	187.1	181.3	173.3	167.6	169.0	173.0	174.4	180.4	181.1
7.5°	239.1	225.4	211.6	193.2	181.1	173.3	179.2	183.5	186.8	195.3	198.8
10°	254.5	239.5	220.0	200.7	197.4	198.7	195.3	196.4	201.6	202.0	203.8
12.5°	283.1	266.1	231.0	213.5	212.6	215.4	214.2	219.1	222.7	232.5	228.3
15°	310.4	288.8	239.3	221.4	217.5	223.1	229.7	237.9	245.7	254.9	250.2
17.5°	343.7	311.1	239.7	217.8	218.4	230.5	237.3	241.8	264.9	277.6	271.2
20°	364.7	313.4	230.7	208.8	218.4	229.3	238.7	243.7	269.6	288.7	293.1
22.5°	383.6	314.2	223.8	204.0	210.2	224.5	238.7	249.7	266.2	284.5	285.2
25°	394.0	313.5	214.8	204.4	210.0	217.1	229.8	239.8	252.1	277.6	278.3
27.5°	420.7	304.8	206.0	206.0	209.0	209.2	225.4	231.3	233.0	256.2	260.4
30°	428.5	306.7	205.0	205.8	207.2	204.6	211.6	215.5	218.0	238.1	238.7
32.5°	440.9	291.8	208.2	203.4	201.5	201.1	202.8	206.3	207.4	219.6	221.9
35°	456.0	285.7	209.2	202.7	199.0	196.9	202.2	197.9	201.2	215.6	217.2
37.5°	505.1	277.5	214.7	202.7	197.9	195.6	193.1	195.1	207.0	220.9	229.4
40°	536.5	280.0	213.4	204.7	194.3	192.1	187.9	195.2	213.6	238.2	244.6
42.5°	591.5	281.5	215.0	203.8	195.5	187.2	190.0	198.0	217.4	231.4	241.3
45°	648.4	286.0	213.9	201.0	192.8	196.7	192.8	200.0	209.2	209.6	217.1
47.5°	704.2	304.3	211.6	195.2	192.1	202.3	192.4	193.6	194.3	196.7	205.5
50°	769.8	323.8	208.4	187.2	193.1	202.6	193.9	188.0	187.3	195.2	205.1
52.5°	844.3	345.8	204.3	179.5	187.6	200.0	199.0	188.4	182.7	190.3	200.2
55°	932.0	370.9	199.5	171.7	181.6	200.3	201.8	185.6	182.8	191.1	201.6
57.5°	1048.6	407.3	190.1	160.5	174.3	196.1	194.5	182.4	179.7	188.5	199.5
60°	1247.5	477.1	176.8	149.4	166.4	186.0	188.7	176.7	174.0	183.7	195.2
62.5°	1513.9	561.1	160.6	138.6	156.8	175.1	181.3	168.4	168.1	180.5	192.5
65°	1761.9	608.7	143.9	128.7	146.9	164.9	173.0	160.6	161.2	176.8	188.8
67.5°	1864.9	552.7	129.0	119.9	135.5	153.3	166.2	154.6	152.9	171.7	182.8
70°	1768.1	439.0	116.0	110.6	122.7	140.7	156.8	146.6	142.6	159.7	168.4
72.5°	1564.5	366.0	103.9	99.6	111.5	127.5	143.9	135.8	130.6	143.7	151.4
75°	1223.0	300.3	90.0	88.8	98.7	115.5	130.6	125.0	118.3	126.6	134.3
77.5°	696.3	190.0	75.6	76.4	83.5	101.2	114.6	110.2	103.3	106.8	115.8
80°	278.7	95.9	60.8	61.3	67.3	83.2	94.9	93.3	86.3	89.1	95.2
82.5°	104.1	52.6	44.9	45.1	51.1	65.8	81.0	80.2	73.6	71.6	75.0
85°	41.4	26.0	27.5	28.7	34.4	47.4	65.0	57.7	49.8	43.7	45.8
87.5°	9.9	8.3	9.6	10.1	11.2	14.8	23.8	19.1	19.6	15.8	11.8
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)