

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: P366772

Luminaire Tested: **MSA-SA1B-730-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366772
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-730-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: 4623 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

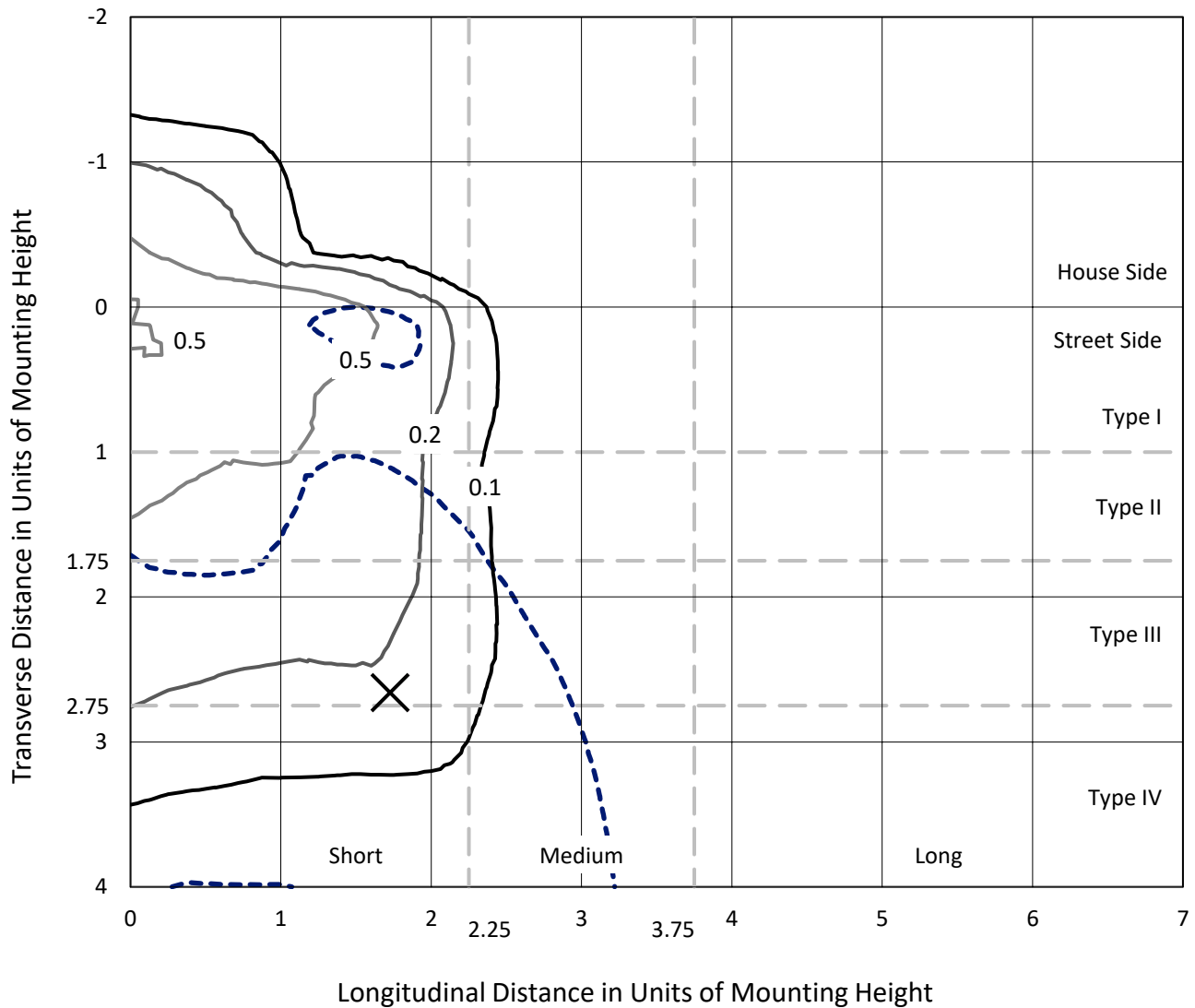
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

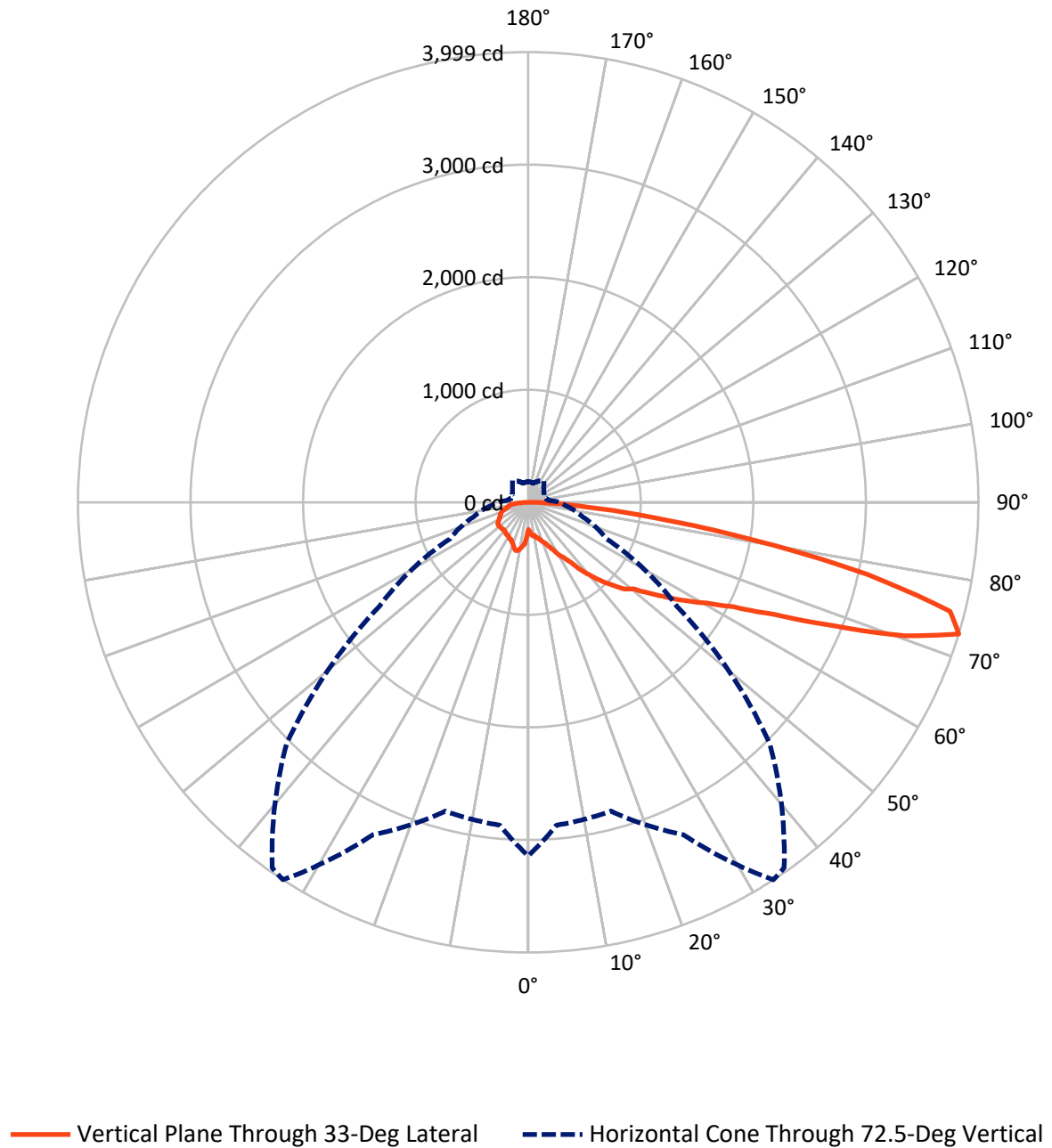
× Max cd
 --- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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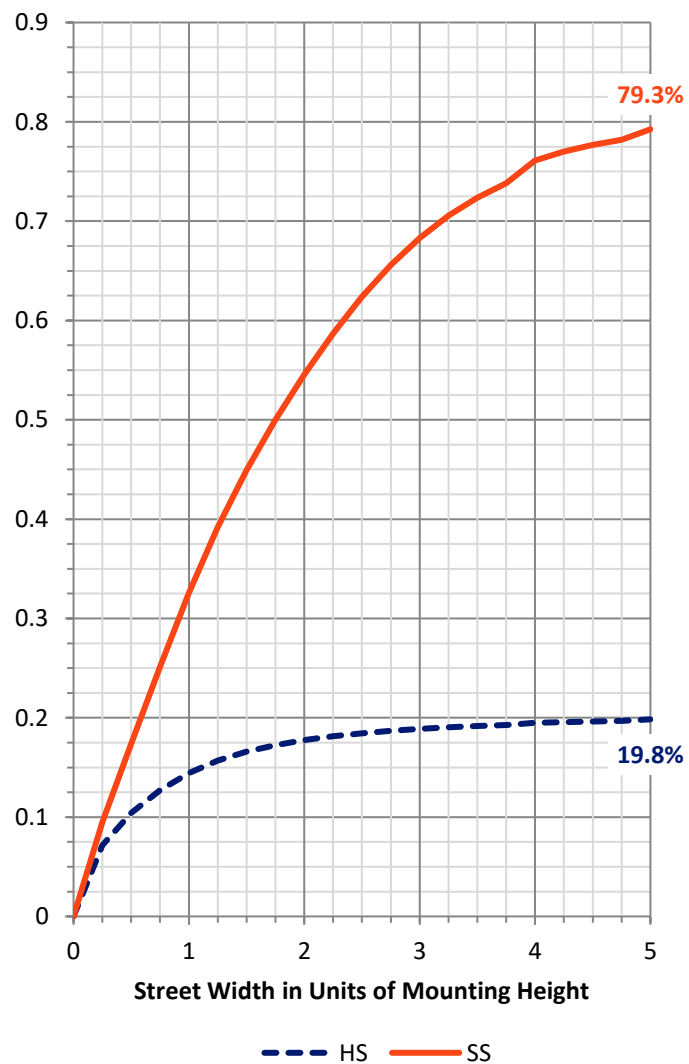
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	935.2	0.0	935.2
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	3687.8	0.0	3687.8
	% Fixture	79.8	0.0	79.8
Total	Lumens	4623.0	0.0	4623.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.3	0.7
10°-20°	123.2	2.7
20°-30°	224.6	4.9
30°-40°	380.0	8.2
40°-50°	632.2	13.7
50°-60°	927.8	20.1
60°-70°	1186.8	25.7
70°-80°	965.6	20.9
80°-90°	149.6	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°	4623.0	100.0
0°-180°	4623.0	100.0

Coefficient of Utilization



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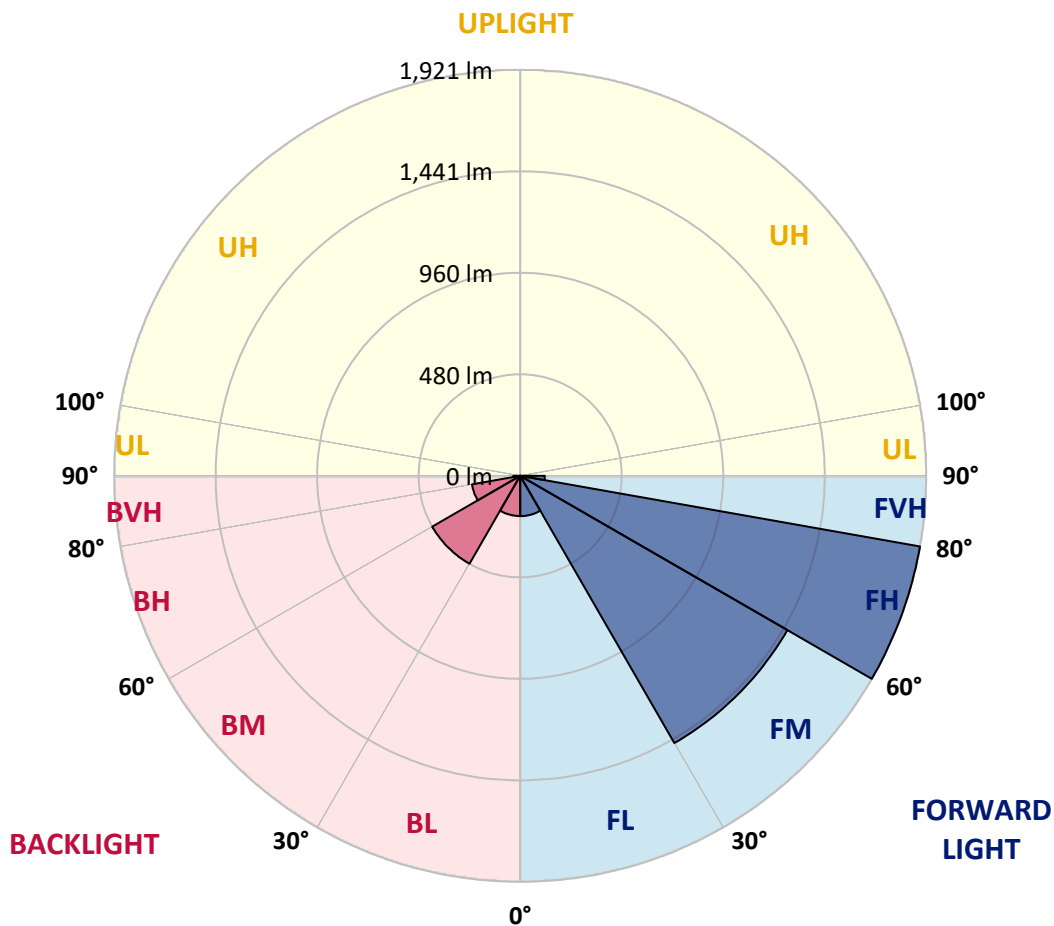
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	190.8	4.1			
FM	(30°-60°)	1459.6	31.6			
FH	(60°-80°)	1920.7	41.5			G2/5000
FVH	(80°-90°)	116.7	2.5			G2/225
BL	(0°-30°)	190.3	4.1	B1/500		
BM	(30°-60°)	480.3	10.4	B1/1000		
BH	(60°-80°)	231.7	5.0	B1/500		G1/500
BVH	(80°-90°)	32.8	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-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4
2.5°	274.8	266.2	252.0	251.6	259.5	261.2	266.4	266.8	268.7	265.6	287.5
5°	303.2	294.0	288.4	290.4	286.7	291.1	291.1	303.8	320.7	340.2	368.0
7.5°	309.9	303.2	296.9	301.7	302.4	298.2	302.2	332.0	362.5	382.0	426.5
10°	296.5	289.8	294.6	296.1	295.9	305.5	326.4	350.2	384.1	420.2	444.2
12.5°	294.0	298.8	301.1	303.8	322.0	324.9	356.5	381.1	415.2	446.9	509.2
15°	331.0	337.3	323.2	322.2	328.1	330.8	363.6	388.4	438.2	491.3	547.3
17.5°	383.8	386.1	360.5	347.5	351.9	354.0	368.4	399.5	430.2	528.4	598.2
20°	434.8	436.3	388.4	359.2	374.7	377.0	390.5	408.3	432.5	549.1	632.5
22.5°	488.3	478.5	425.9	389.1	398.1	398.7	406.6	416.4	450.7	545.8	674.3
25°	546.8	540.6	474.5	439.2	438.8	430.9	431.3	445.3	470.1	580.7	701.7
27.5°	624.4	625.2	529.1	510.1	480.4	475.2	449.3	475.4	503.6	581.1	761.0
30°	725.1	706.5	605.3	574.6	545.2	534.3	499.2	521.5	533.7	614.3	825.4
32.5°	807.0	801.6	684.7	638.2	590.3	603.0	564.2	544.7	566.7	671.4	923.0
35°	885.5	867.8	768.7	708.2	657.8	650.1	625.0	628.3	641.7	743.7	1050.6
37.5°	1002.4	992.9	887.6	790.9	767.3	736.1	720.1	730.3	719.8	836.4	1241.8
40°	1133.2	1077.6	986.9	900.8	856.7	834.6	840.2	830.6	822.6	940.3	1413.2
42.5°	1258.5	1207.8	1052.9	1014.1	956.6	965.8	935.3	942.0	964.9	1087.8	1571.8
45°	1394.8	1285.3	1122.9	1088.7	1047.5	1059.2	1083.6	1076.3	1113.7	1261.7	1721.2
47.5°	1462.9	1358.8	1208.8	1153.2	1152.6	1128.3	1276.5	1292.6	1234.1	1390.6	1872.9
50°	1528.5	1426.1	1272.7	1235.1	1207.8	1260.0	1461.6	1424.6	1343.0	1538.5	2039.8
52.5°	1619.8	1503.0	1345.9	1305.8	1339.6	1387.9	1609.2	1602.0	1449.9	1690.6	2184.8
55°	1689.4	1571.5	1456.2	1419.0	1483.4	1530.8	1759.6	1715.7	1541.3	1802.2	2276.6
57.5°	1811.4	1690.4	1619.0	1536.4	1652.2	1651.4	1904.6	1870.6	1639.2	1893.8	2313.7
60°	2005.3	1863.2	1788.6	1693.2	1817.3	1861.6	2070.3	1972.5	1708.4	1951.8	2246.9
62.5°	2277.4	2108.6	1987.6	1893.3	2044.6	2124.7	2274.9	2046.7	1712.8	1935.3	2071.4
65°	2614.0	2408.8	2250.2	2150.4	2400.1	2514.6	2522.3	2092.5	1672.1	1764.8	1702.4
67.5°	2942.3	2711.6	2546.1	2565.1	2929.7	2983.9	2790.4	2130.9	1453.7	1417.1	1182.1
70°	3158.5	2908.4	2798.1	2999.5	3553.3	3497.7	3007.7	2029.8	1144.7	918.6	665.7
72.5°	3142.2	2880.4	2840.7	3257.6	3999.4	3964.7	3034.2	1614.2	766.7	502.3	332.0
75°	2559.9	2356.4	2446.6	3083.9	3870.9	3869.2	2634.3	999.2	393.3	257.9	209.8
77.5°	1415.3	1336.3	1601.2	2334.9	3082.1	3097.9	1779.9	453.2	212.1	182.8	158.0
80°	495.8	488.5	693.9	1260.0	2027.5	2031.4	827.7	207.3	154.2	138.3	116.0
82.5°	181.2	179.7	287.7	585.3	1116.4	1113.9	313.9	129.1	114.3	97.8	76.5
85°	72.3	70.8	131.6	259.9	512.8	504.6	122.0	73.3	74.8	58.3	37.6
87.5°	19.9	20.7	44.7	81.3	157.1	145.6	30.7	24.7	30.3	23.8	11.9
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°	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4	242.4
2.5°	291.3	293.2	274.2	281.0	289.6	294.2	296.5	286.7	290.0	303.8	303.2
5°	373.8	366.1	358.8	366.3	361.3	354.2	365.7	365.2	372.6	380.1	381.8
7.5°	435.3	425.4	421.9	405.0	388.2	371.1	385.9	395.1	397.0	415.6	423.5
10°	457.6	453.8	455.1	432.9	430.7	432.5	418.9	404.1	413.1	405.4	411.2
12.5°	509.0	518.6	494.8	479.6	478.3	467.8	440.5	430.9	420.8	431.3	425.9
15°	550.2	568.1	542.6	515.9	485.8	469.5	446.3	431.7	425.0	427.3	420.8
17.5°	610.6	627.3	562.5	521.6	490.6	466.6	431.1	400.1	416.5	417.9	410.4
20°	650.7	651.9	569.2	507.5	479.5	437.8	403.3	376.1	395.1	414.4	422.9
22.5°	689.8	681.2	577.5	496.1	439.0	398.7	381.8	380.1	394.3	410.6	412.5
25°	719.2	720.5	582.2	491.9	415.2	360.4	360.4	372.8	385.3	424.0	422.1
27.5°	790.3	738.0	563.6	472.6	382.2	337.9	360.5	377.2	383.2	425.2	429.4
30°	842.1	808.0	567.5	439.4	348.9	327.4	346.0	366.9	383.4	431.9	430.4
32.5°	929.0	837.1	576.5	392.8	323.9	323.3	339.8	361.9	381.6	424.6	426.9
35°	1025.1	923.0	551.4	357.3	318.0	321.0	342.3	351.2	374.4	421.7	423.8
37.5°	1202.9	967.9	535.5	329.9	314.1	323.0	331.0	344.6	368.0	407.3	421.2
40°	1307.2	1060.4	476.4	313.9	306.1	321.4	325.5	337.0	349.6	390.1	398.9
42.5°	1444.5	1089.5	425.9	296.3	302.1	315.1	327.2	330.1	338.5	362.9	379.0
45°	1559.0	1111.4	372.4	282.1	288.4	329.1	329.9	328.5	327.0	336.0	349.2
47.5°	1677.5	1170.1	323.2	266.4	283.3	340.6	331.2	318.9	312.6	313.8	326.0
50°	1808.3	1212.6	288.2	253.5	284.4	340.6	337.7	309.2	296.5	293.2	306.1
52.5°	1923.4	1217.6	261.8	243.2	279.6	328.9	342.1	303.0	281.7	273.9	285.9
55°	1986.1	1154.5	242.6	233.8	267.3	318.4	339.8	299.6	263.9	257.9	268.7
57.5°	1984.7	1049.8	226.3	220.7	253.3	303.6	327.0	280.8	253.0	249.5	260.1
60°	1913.2	927.1	213.8	210.0	239.0	282.1	304.0	268.5	242.4	240.7	252.2
62.5°	1751.0	800.3	201.8	198.7	225.5	267.0	293.0	254.9	231.5	231.3	242.2
65°	1434.0	642.5	190.4	189.7	213.1	252.0	282.7	243.4	220.2	224.0	235.1
67.5°	988.1	451.5	178.4	180.7	201.6	237.6	274.8	235.7	208.3	216.1	226.1
70°	542.2	279.2	164.9	169.5	187.0	220.9	262.5	223.2	192.7	204.8	211.7
72.5°	275.8	186.2	148.2	155.5	169.2	196.4	239.5	205.2	176.1	180.7	184.3
75°	185.3	140.2	129.6	137.7	147.5	173.0	212.5	188.3	160.1	159.6	163.6
77.5°	140.0	109.5	110.1	119.3	125.6	152.1	191.0	174.1	146.7	145.4	151.3
80°	102.4	83.0	88.6	98.2	103.9	136.5	177.0	158.4	128.5	123.1	128.1
82.5°	67.9	58.9	65.6	75.2	79.8	114.1	160.7	134.4	104.7	91.1	91.9
85°	32.0	30.9	39.1	43.7	49.7	70.8	120.2	93.0	66.7	55.2	57.7
87.5°	7.3	9.8	12.8	12.7	14.8	19.0	37.4	26.1	19.4	13.2	8.8
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)