

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: P367010

Luminaire Tested: **MSA-SA1D-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367010
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-SA1D-727-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: 5720 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

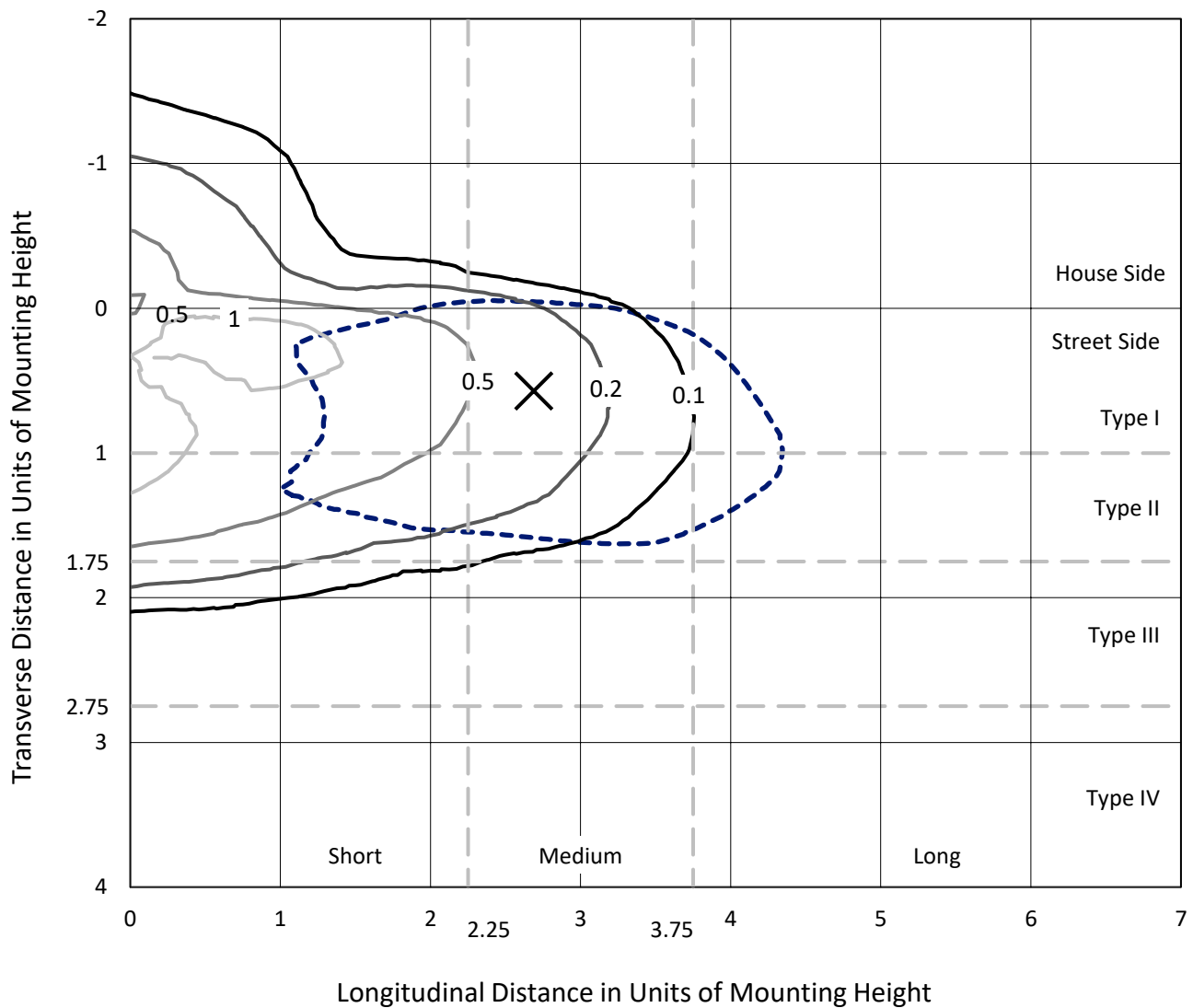
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

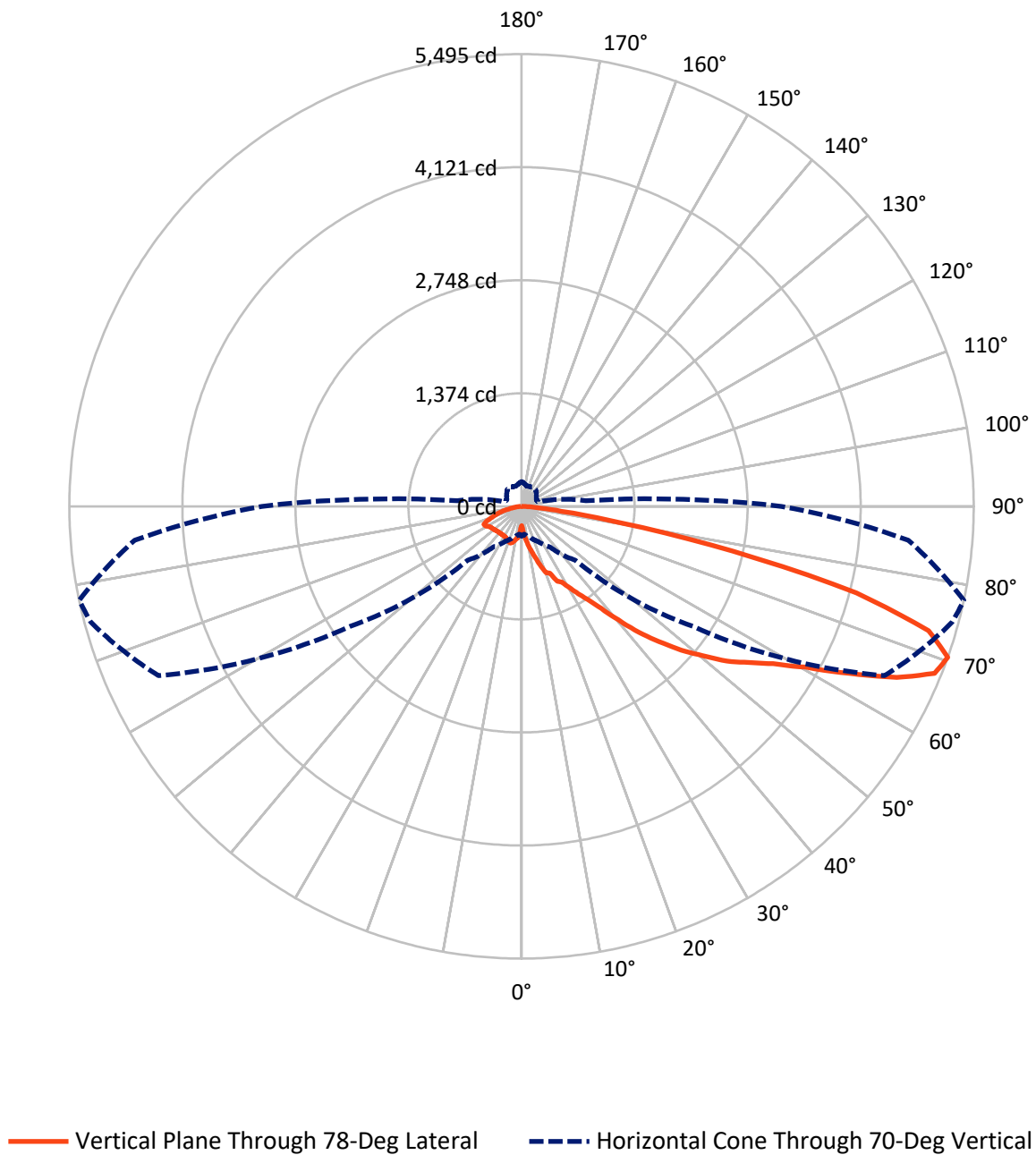
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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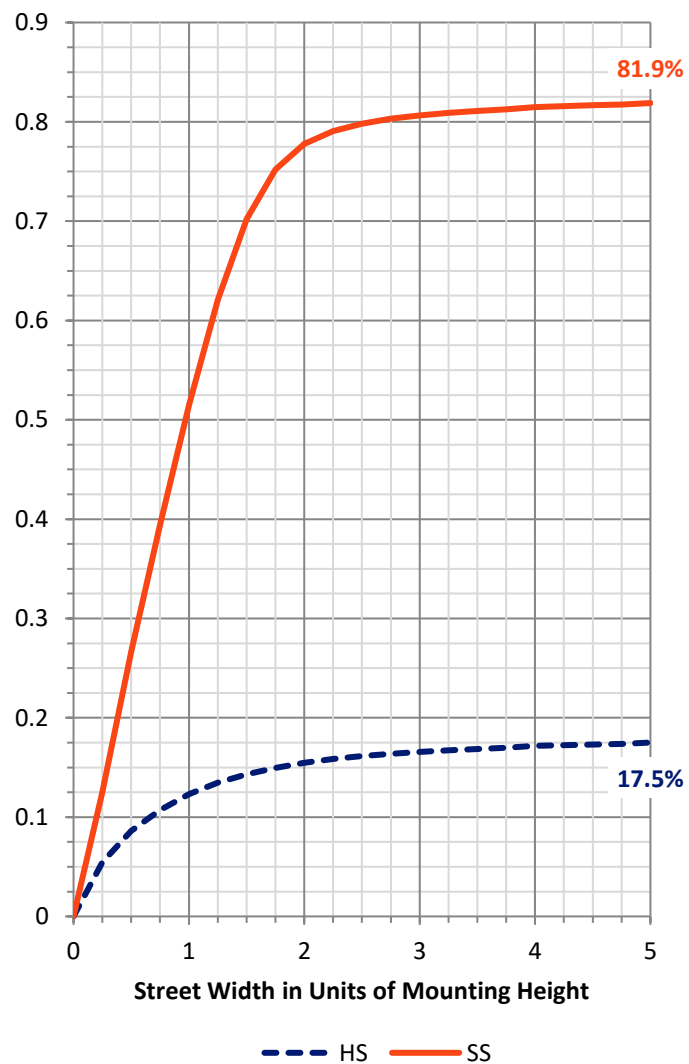
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1020.9	0.0	1020.9
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	4699.1	0.0	4699.1
	% Fixture	82.2	0.0	82.2
Total	Lumens	5720.0	0.0	5720.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.0	0.6
10°-20°	158.8	2.8
20°-30°	305.6	5.3
30°-40°	514.8	9.0
40°-50°	890.8	15.6
50°-60°	1344.9	23.5
60°-70°	1489.7	26.0
70°-80°	858.9	15.0
80°-90°	120.5	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°	5720.0	100.0
0°-180°	5720.0	100.0

Coefficient of Utilization



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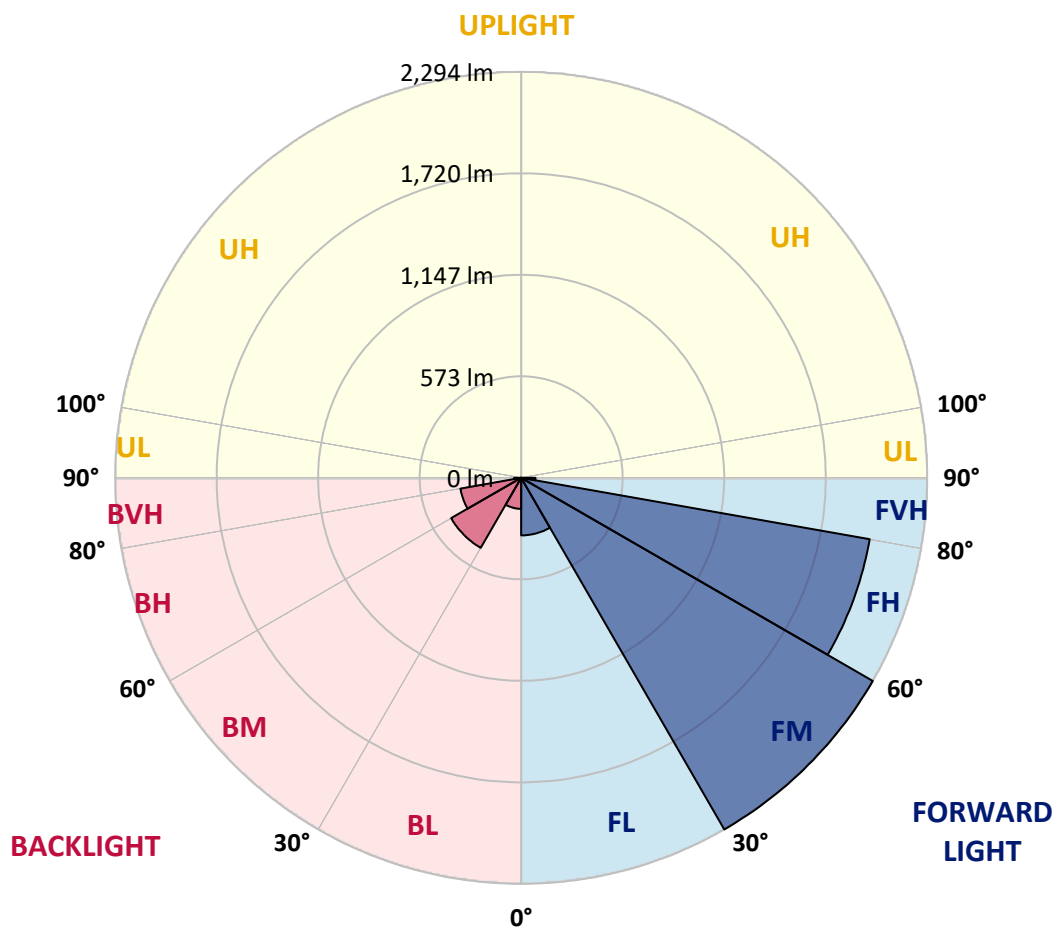
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	325.2	5.7			
FM	(30°-60°)	2293.9	40.1			
FH	(60°-80°)	1999.7	35.0			G2/5000
FVH	(80°-90°)	80.4	1.4			G1/100
BL	(0°-30°)	175.3	3.1	B1/500		
BM	(30°-60°)	456.6	8.0	B1/1000		
BH	(60°-80°)	348.9	6.1	B1/500		G1/500
BVH	(80°-90°)	40.1	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 II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2
2.5°	300.2	289.5	273.3	279.9	288.1	289.0	286.4	271.6	266.6	277.8	281.1
5°	420.6	402.5	391.5	388.0	375.8	350.5	368.6	359.3	361.3	355.8	366.5
7.5°	522.0	509.8	493.6	489.1	461.2	441.4	453.8	449.7	430.2	422.5	434.7
10°	573.5	560.1	560.8	551.1	543.7	545.6	539.4	521.5	507.0	496.7	467.4
12.5°	604.5	607.8	625.7	620.7	648.6	671.5	654.1	627.6	581.6	572.3	543.2
15°	678.2	690.6	673.9	681.5	693.4	737.3	730.1	724.4	675.8	657.7	604.0
17.5°	754.0	756.4	731.1	727.0	755.7	777.8	805.7	773.5	779.5	766.9	680.1
20°	770.2	786.7	750.4	725.4	784.3	828.1	862.7	828.6	860.1	863.4	742.8
22.5°	829.6	809.8	762.1	737.5	789.0	842.9	899.2	918.3	908.3	880.1	803.3
25°	870.8	860.3	811.7	784.5	804.1	853.7	952.4	1002.2	1011.0	1007.2	861.1
27.5°	947.4	952.6	852.5	860.1	832.9	837.4	984.3	1113.6	1058.5	1043.2	932.6
30°	1068.3	1044.9	932.6	938.8	893.7	886.1	1051.8	1209.7	1160.3	1142.0	991.5
32.5°	1194.4	1196.6	1060.2	1007.2	983.1	975.5	1038.5	1260.0	1289.1	1265.2	1080.4
35°	1372.3	1359.9	1198.5	1128.8	1041.8	1028.4	1133.6	1405.9	1459.3	1392.6	1186.1
37.5°	1643.2	1605.7	1417.8	1256.9	1192.5	1177.2	1269.5	1536.8	1657.0	1574.0	1358.7
40°	1860.6	1784.6	1613.8	1417.8	1308.9	1327.7	1366.1	1695.6	1862.1	1815.3	1518.5
42.5°	2034.0	1966.5	1752.6	1614.8	1466.7	1443.4	1485.3	1892.4	2141.1	2095.3	1717.8
45°	2200.2	2062.9	1908.6	1784.6	1642.2	1670.6	1664.4	2093.1	2483.2	2342.3	1894.0
47.5°	2364.3	2235.3	2073.8	1907.1	1763.8	1940.5	1874.5	2242.4	2714.1	2609.6	2079.5
50°	2575.1	2433.2	2249.3	2081.7	1995.9	2125.1	2014.2	2368.8	2972.6	2850.0	2254.6
52.5°	2715.0	2577.0	2415.8	2296.1	2288.2	2238.4	2210.0	2528.8	3199.1	3124.7	2440.1
55°	2698.6	2565.5	2492.5	2505.7	2603.0	2434.8	2411.7	2765.6	3435.4	3349.3	2640.4
57.5°	2492.3	2347.1	2362.6	2440.3	2701.7	2779.9	2740.5	3018.6	3646.2	3607.1	2888.1
60°	1941.5	1866.8	1993.0	2135.1	2569.6	2881.0	3157.6	3327.1	3905.6	3968.1	3277.3
62.5°	1261.2	1161.5	1360.9	1602.2	2175.4	2814.2	3582.3	3912.3	4330.5	4472.4	3868.7
65°	653.4	637.4	776.9	998.6	1514.4	2399.6	3732.0	4526.1	4847.0	5012.3	4433.6
67.5°	475.0	445.4	510.1	640.5	924.5	1636.3	3448.3	4995.6	5261.7	5413.1	4761.9
70°	361.7	339.8	389.2	470.0	603.8	924.2	2545.5	4867.5	5421.7	5495.1	4718.3
72.5°	270.9	252.0	295.2	370.6	465.2	520.3	1504.6	4002.2	5148.7	5173.7	4234.7
75°	216.3	201.7	220.3	292.6	379.1	354.1	799.3	2899.6	4183.2	4204.6	3234.6
77.5°	177.4	165.0	172.6	219.4	295.0	266.4	396.5	1844.4	2655.9	2623.0	1819.9
80°	144.7	134.0	137.6	158.6	224.6	198.9	222.7	962.2	1266.9	1215.9	756.8
82.5°	111.4	102.3	109.4	116.6	162.6	142.8	130.0	437.8	518.9	483.3	277.6
85°	74.6	66.3	95.1	87.5	106.4	87.8	71.1	174.3	193.4	180.3	97.5
87.5°	20.5	19.3	32.0	43.6	43.6	33.1	26.0	42.2	53.9	47.2	22.9
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°	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2	233.2
2.5°	282.6	277.3	263.5	262.3	265.6	266.1	264.0	259.0	256.3	270.6	268.5
5°	363.9	345.3	334.1	323.8	309.5	299.3	301.9	309.0	311.4	322.1	323.3
7.5°	427.1	402.5	377.9	345.0	323.3	309.5	320.0	327.6	333.6	348.9	355.1
10°	454.5	427.8	393.0	358.4	352.4	354.8	348.9	350.8	360.1	360.8	363.9
12.5°	505.5	475.2	412.5	381.3	379.6	384.6	382.5	391.3	397.7	415.1	407.8
15°	554.4	515.8	427.3	395.4	388.4	398.5	410.1	424.9	438.8	455.2	446.9
17.5°	613.8	555.6	428.0	388.9	390.1	411.6	423.7	431.8	473.1	495.7	484.3
20°	651.2	559.6	412.0	372.9	390.1	409.4	426.4	435.2	481.4	515.5	523.4
22.5°	685.1	561.1	399.6	364.4	375.3	400.8	426.4	445.9	475.5	508.1	509.3
25°	703.7	559.9	383.7	365.1	375.1	387.7	410.4	428.3	450.2	495.7	496.9
27.5°	751.4	544.4	367.9	367.9	373.2	373.7	402.5	413.0	416.1	457.6	465.0
30°	765.2	547.7	366.0	367.5	370.1	365.3	377.9	384.9	389.4	425.2	426.4
32.5°	787.4	521.0	371.7	363.2	359.8	359.1	362.2	368.4	370.3	392.3	396.3
35°	814.3	510.3	373.7	362.0	355.3	351.7	361.0	353.4	359.3	385.1	388.0
37.5°	902.1	495.5	383.4	362.0	353.4	349.3	344.8	348.4	369.6	394.4	409.7
40°	958.1	500.0	381.0	365.5	346.9	343.1	335.5	348.6	381.5	425.4	436.8
42.5°	1056.3	502.7	383.9	363.9	349.1	334.3	339.3	353.6	388.2	413.2	430.9
45°	1157.9	510.8	382.0	358.9	344.3	351.2	344.3	357.2	373.7	374.4	387.7
47.5°	1257.6	543.4	377.9	348.6	343.1	361.3	343.6	345.8	346.9	351.2	367.0
50°	1374.7	578.2	372.2	334.3	344.8	361.7	346.2	335.7	334.5	348.6	366.3
52.5°	1507.7	617.6	364.8	320.5	335.0	357.2	355.3	336.5	326.2	339.8	357.4
55°	1664.4	662.4	356.2	306.7	324.3	357.7	360.3	331.4	326.4	341.2	360.1
57.5°	1872.6	727.3	339.6	286.6	311.2	350.3	347.4	325.7	321.0	336.7	356.2
60°	2227.9	852.0	315.7	266.8	297.1	332.2	336.9	315.5	310.7	328.1	348.6
62.5°	2703.6	1002.0	286.9	247.5	279.9	312.6	323.8	300.7	300.2	322.4	343.8
65°	3146.4	1087.1	257.1	229.9	262.3	294.5	309.0	286.9	287.8	315.7	337.2
67.5°	3330.5	987.0	230.3	214.1	242.0	273.7	296.9	276.1	273.0	306.7	326.4
70°	3157.6	784.0	207.2	197.4	219.1	251.3	279.9	261.8	254.7	285.2	300.7
72.5°	2794.0	653.6	185.5	177.9	199.1	227.7	257.1	242.5	233.2	256.6	270.4
75°	2184.0	536.3	160.7	158.6	176.2	206.3	233.2	223.2	211.3	226.1	239.9
77.5°	1243.5	339.3	135.0	136.4	149.0	180.7	204.6	196.7	184.6	190.8	206.7
80°	497.7	171.2	108.5	109.4	120.2	148.6	169.5	166.7	154.0	159.0	170.0
82.5°	186.0	94.0	80.1	80.6	91.3	117.6	144.7	143.3	131.4	127.8	134.0
85°	73.9	46.5	49.1	51.3	61.5	84.7	116.1	103.0	88.9	78.0	81.8
87.5°	17.6	14.8	17.2	18.1	20.0	26.5	42.4	34.1	35.1	28.1	21.0
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)