

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: P596230

Luminaire Tested: **MSA-SA2A-722-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596230  
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-SA2A-722-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5857 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

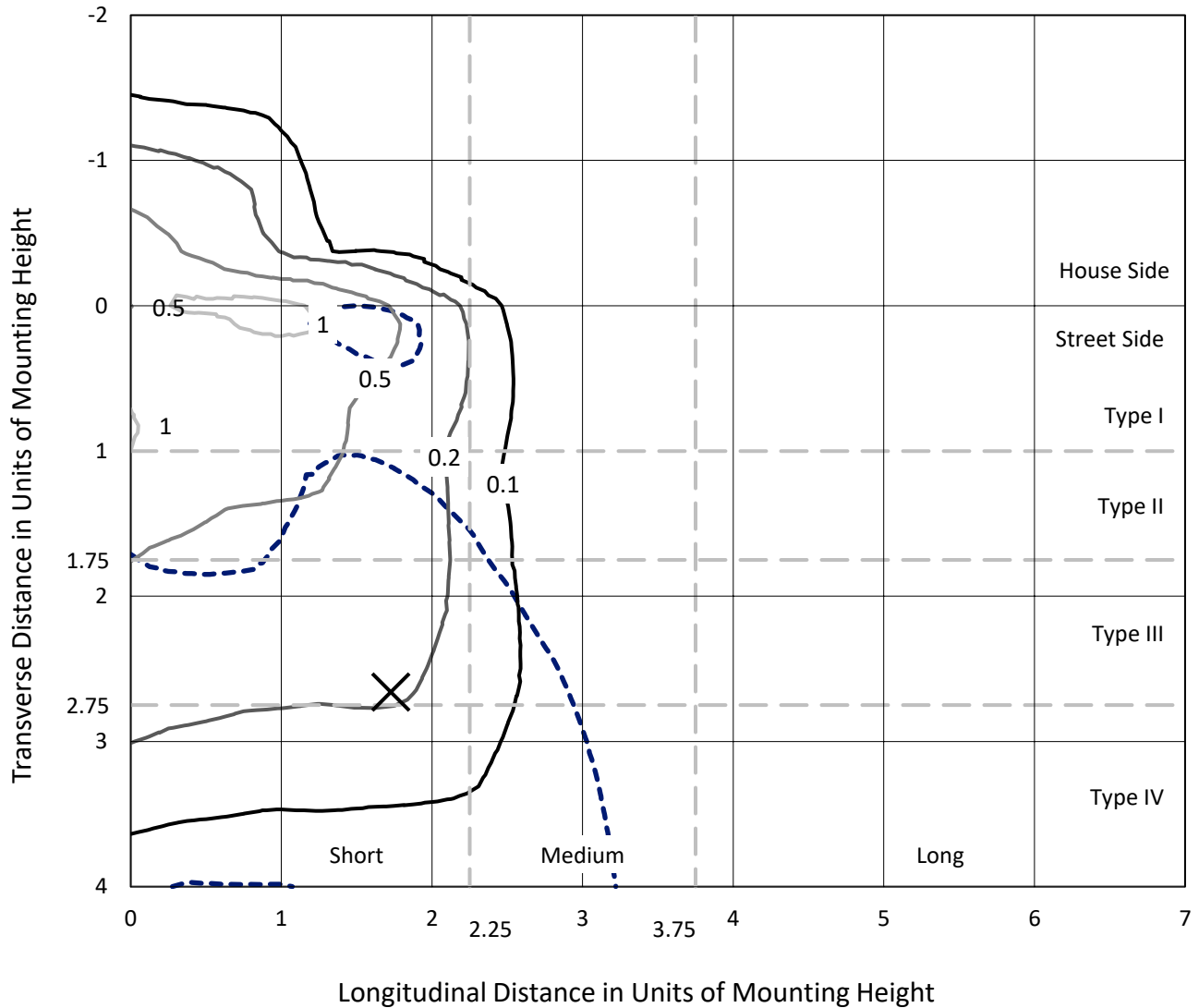
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

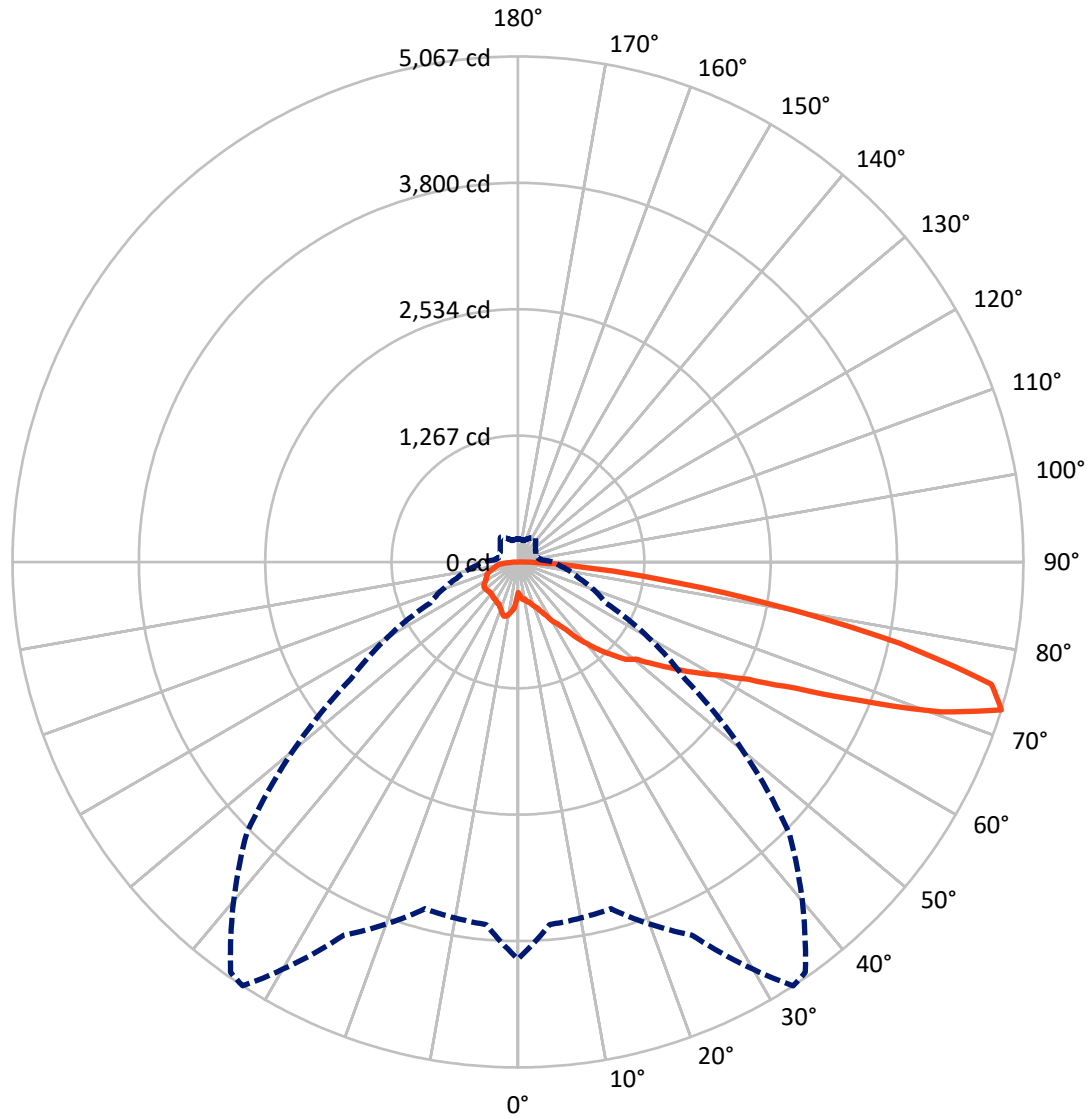
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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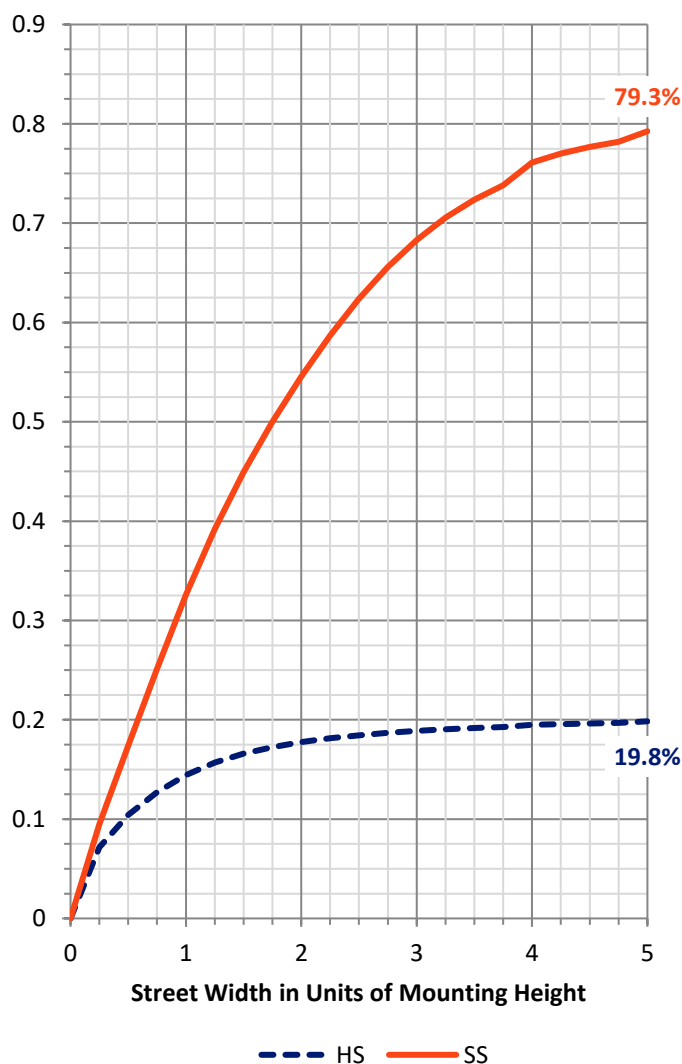
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1184.9	0.0	1184.9
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	4672.1	0.0	4672.1
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	5857.0	0.0	5857.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.2	0.7
10°-20°	156.1	2.7
20°-30°	284.6	4.9
30°-40°	481.4	8.2
40°-50°	800.9	13.7
50°-60°	1175.4	20.1
60°-70°	1503.6	25.7
70°-80°	1223.3	20.9
80°-90°	189.5	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°	5857.0	100.0
0°-180°	5857.0	100.0

**Coefficient of Utilization**

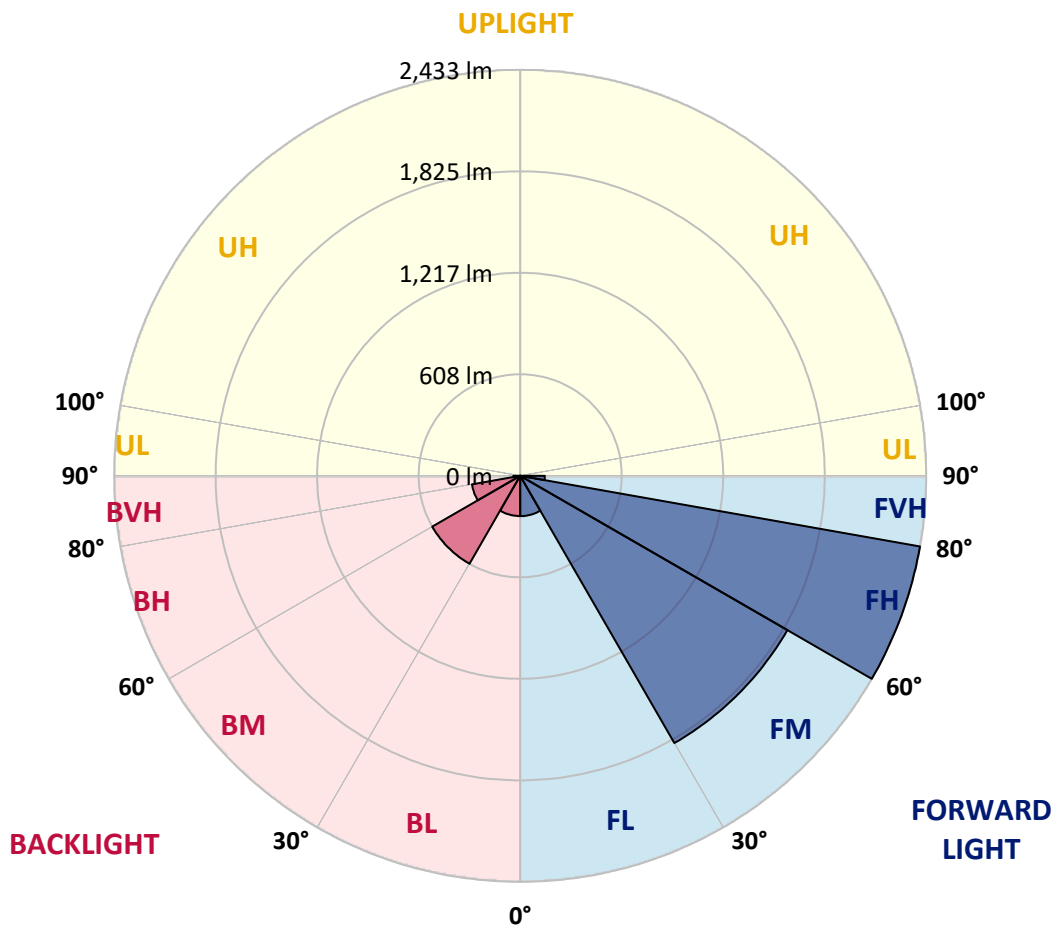


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	241.7	4.1			
FM (30°-60°)	1849.2	31.6			
FH (60°-80°)	2433.4	41.5			G2/5000
FVH (80°-90°)	147.9	2.5			G2/225
BL (0°-30°)	241.1	4.1	B1/500		
BM (30°-60°)	608.5	10.4	B1/1000		
BH (60°-80°)	293.6	5.0	B1/500		G1/500
BVH (80°-90°)	41.6	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°	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1
2.5°	348.2	337.2	319.3	318.8	328.7	330.9	337.5	338.0	340.4	336.5	364.2
5°	384.1	372.5	365.4	367.9	363.2	368.8	368.8	384.9	406.3	431.0	466.3
7.5°	392.6	384.1	376.1	382.2	383.2	377.8	382.9	420.6	459.2	484.0	540.4
10°	375.6	367.1	373.2	375.2	374.9	387.1	413.5	443.7	486.7	532.4	562.7
12.5°	372.5	378.6	381.5	384.9	408.0	411.6	451.7	482.8	526.0	566.1	645.1
15°	419.4	427.4	409.4	408.2	415.7	419.1	460.7	492.0	555.2	622.5	693.4
17.5°	486.2	489.1	456.8	440.3	445.9	448.5	466.8	506.1	545.0	669.4	757.8
20°	550.8	552.8	492.0	455.1	474.8	477.7	494.7	517.3	547.9	695.6	801.3
22.5°	618.6	606.2	539.6	493.0	504.4	505.1	515.1	527.5	571.0	691.5	854.3
25°	692.7	684.9	601.1	556.4	555.9	546.0	546.4	564.2	595.5	735.7	889.0
27.5°	791.1	792.1	670.4	646.3	608.6	602.1	569.3	602.3	638.0	736.2	964.1
30°	918.7	895.1	766.8	727.9	690.8	676.9	632.5	660.6	676.2	778.2	1045.8
32.5°	1022.4	1015.6	867.4	808.6	747.9	763.9	714.8	690.0	718.0	850.6	1169.4
35°	1121.8	1099.5	973.8	897.3	833.4	823.7	791.9	796.0	813.0	942.3	1331.0
37.5°	1270.0	1257.9	1124.5	1002.0	972.1	932.5	912.4	925.2	911.9	1059.6	1573.3
40°	1435.7	1365.3	1250.3	1141.2	1085.4	1057.4	1064.5	1052.3	1042.1	1191.3	1790.5
42.5°	1594.4	1530.2	1333.9	1284.8	1212.0	1223.6	1185.0	1193.5	1222.4	1378.1	1991.4
45°	1767.1	1628.4	1422.6	1379.4	1327.1	1341.9	1372.8	1363.6	1410.9	1598.5	2180.7
47.5°	1853.4	1721.5	1531.5	1461.0	1460.3	1429.4	1617.2	1637.6	1563.5	1761.8	2372.9
50°	1936.5	1806.7	1612.4	1564.7	1530.2	1596.3	1851.7	1804.8	1701.5	1949.1	2584.3
52.5°	2052.2	1904.2	1705.2	1654.4	1697.2	1758.4	2038.8	2029.6	1836.9	2141.8	2768.0
55°	2140.4	1990.9	1844.9	1797.8	1879.4	1939.4	2229.3	2173.6	1952.8	2283.2	2884.3
57.5°	2294.9	2141.6	2051.2	1946.5	2093.2	2092.2	2413.0	2370.0	2076.7	2399.4	2931.2
60°	2540.5	2360.5	2266.0	2145.2	2302.4	2358.5	2622.9	2499.0	2164.4	2472.7	2846.7
62.5°	2885.3	2671.5	2518.2	2398.6	2590.3	2691.9	2882.1	2593.0	2170.0	2451.8	2624.4
65°	3311.7	3051.7	2850.8	2724.5	3040.8	3185.9	3195.6	2651.1	2118.5	2235.8	2156.9
67.5°	3727.7	3435.4	3225.7	3249.8	3711.7	3780.4	3535.3	2699.7	1841.7	1795.3	1497.7
70°	4001.5	3684.7	3545.0	3800.1	4501.8	4431.3	3810.6	2571.6	1450.3	1163.8	843.4
72.5°	3980.9	3649.2	3598.9	4127.1	5067.0	5023.0	3844.1	2045.1	971.4	636.3	420.6
75°	3243.2	2985.4	3099.6	3907.0	4904.2	4902.0	3337.5	1265.9	498.3	326.8	265.8
77.5°	1793.1	1693.0	2028.6	2958.2	3904.8	3924.7	2255.0	574.1	268.7	231.6	200.2
80°	628.1	618.9	879.1	1596.3	2568.7	2573.6	1048.7	262.7	195.4	175.2	147.0
82.5°	229.6	227.7	364.5	741.6	1414.3	1411.2	397.7	163.5	144.8	123.9	96.9
85°	91.6	89.7	166.7	329.2	649.7	639.3	154.5	92.8	94.8	73.9	47.6
87.5°	25.3	26.2	56.6	103.0	199.0	184.4	38.9	31.3	38.4	30.1	15.1
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°	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1	307.1
2.5°	369.1	371.5	347.5	356.0	366.9	372.7	375.6	363.2	367.4	384.9	384.1
5°	473.6	463.8	454.6	464.1	457.8	448.8	463.4	462.6	472.1	481.6	483.8
7.5°	551.5	538.9	534.5	513.2	491.8	470.2	488.9	500.5	503.0	526.5	536.5
10°	579.7	574.9	576.6	548.4	545.7	547.9	530.7	511.9	523.4	513.6	520.9
12.5°	644.9	657.0	626.9	607.7	606.0	592.6	558.1	546.0	533.1	546.4	539.6
15°	697.1	719.7	687.4	653.6	615.5	594.8	565.4	546.9	538.4	541.3	533.1
17.5°	773.6	794.8	712.6	660.9	621.5	591.2	546.2	506.8	527.7	529.4	520.0
20°	824.4	825.9	721.1	642.9	607.4	554.7	511.0	476.5	500.5	525.1	535.8
22.5°	874.0	863.0	731.6	628.6	556.2	505.1	483.8	481.6	499.6	520.2	522.6
25°	911.1	912.9	737.7	623.2	526.0	456.5	456.5	472.3	488.1	537.2	534.8
27.5°	1001.3	935.0	714.1	598.7	484.2	428.1	456.8	477.9	485.5	538.7	544.0
30°	1066.9	1023.6	719.0	556.7	442.0	414.8	438.3	464.8	485.7	547.2	545.2
32.5°	1177.0	1060.6	730.4	497.6	410.4	409.7	430.5	458.5	483.5	537.9	540.9
35°	1298.7	1169.4	698.5	452.7	402.8	406.7	433.7	444.9	474.3	534.3	537.0
37.5°	1523.9	1226.3	678.4	417.9	398.0	409.2	419.4	436.6	466.3	516.1	533.6
40°	1656.1	1343.4	603.5	397.7	387.8	407.2	412.3	426.9	442.9	494.2	505.4
42.5°	1830.1	1380.3	539.6	375.4	382.7	399.2	414.5	418.2	428.8	459.7	480.1
45°	1975.1	1408.0	471.9	357.4	365.4	416.9	417.9	416.2	414.3	425.7	442.5
47.5°	2125.3	1482.4	409.4	337.5	358.9	431.5	419.6	404.1	396.0	397.5	413.1
50°	2291.0	1536.3	365.2	321.2	360.3	431.5	427.9	391.7	375.6	371.5	387.8
52.5°	2436.8	1542.6	331.7	308.1	354.3	416.7	433.5	383.9	356.9	347.0	362.3
55°	2516.2	1462.7	307.4	296.2	338.7	403.3	430.5	379.5	334.3	326.8	340.4
57.5°	2514.5	1330.0	286.7	279.7	321.0	384.6	414.3	355.7	320.5	316.1	329.5
60°	2423.9	1174.5	270.9	266.1	302.7	357.4	385.1	340.2	307.1	304.9	319.5
62.5°	2218.3	1013.9	255.6	251.7	285.7	338.2	371.3	322.9	293.3	293.0	306.9
65°	1816.7	814.0	241.3	240.3	269.9	319.3	358.1	308.3	278.9	283.8	297.9
67.5°	1251.8	572.0	226.0	228.9	255.4	301.0	348.2	298.6	263.9	273.8	286.5
70°	686.9	353.8	209.0	214.8	236.9	279.9	332.6	282.8	244.2	259.5	268.2
72.5°	349.4	235.9	187.8	197.1	214.3	248.8	303.5	260.0	223.0	228.9	233.5
75°	234.7	177.6	164.2	174.5	186.8	219.2	269.2	238.6	202.9	202.2	207.3
77.5°	177.4	138.7	139.5	151.1	159.1	192.7	242.0	220.6	185.9	184.2	191.7
80°	129.7	105.2	112.3	124.4	131.7	173.0	224.3	200.7	162.8	156.0	162.3
82.5°	86.0	74.6	83.1	95.2	101.1	144.6	203.6	170.3	132.7	115.4	116.4
85°	40.6	39.1	49.6	55.4	62.9	89.7	152.3	117.8	84.6	70.0	73.1
87.5°	9.2	12.4	16.3	16.0	18.7	24.1	47.4	33.0	24.5	16.8	11.2
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)