

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: P367054

Luminaire Tested: **MSA-SA1D-740-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367054  
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-740-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: 6840 lumens  
Efficiency: N/A  
Efficacy: 102.1 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

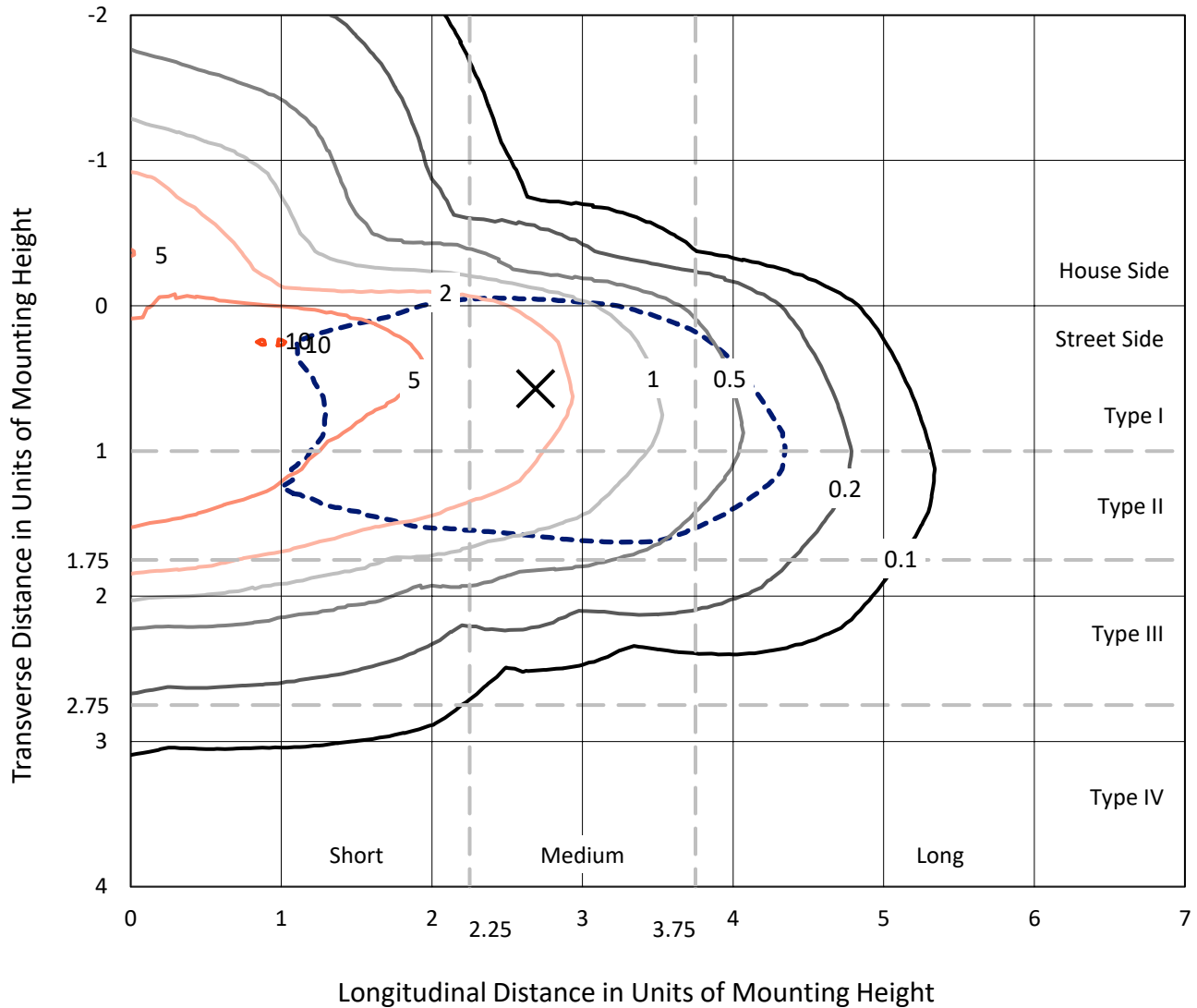
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P367054  
 CATALOG NUMBER: MSA-SA1D-740-U-T2

### Iso-Footcandle Lines of Horizontal Illumination

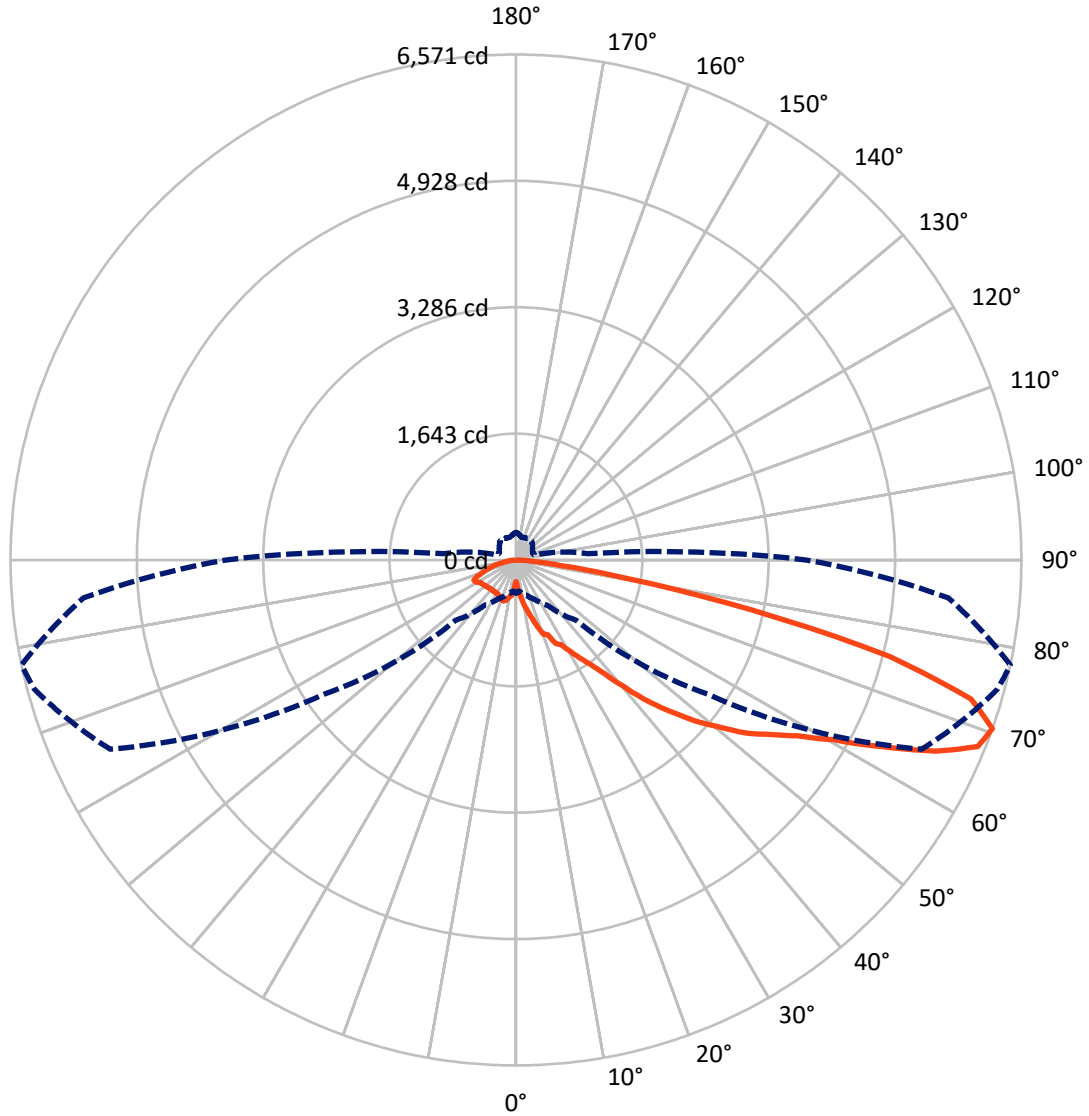
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc  
 Type II - Medium - N/A

REPORT NUMBER: P367054  
CATALOG NUMBER: MSA-SA1D-740-U-T2

### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P367054  
 CATALOG NUMBER: MSA-SA1D-740-U-T2

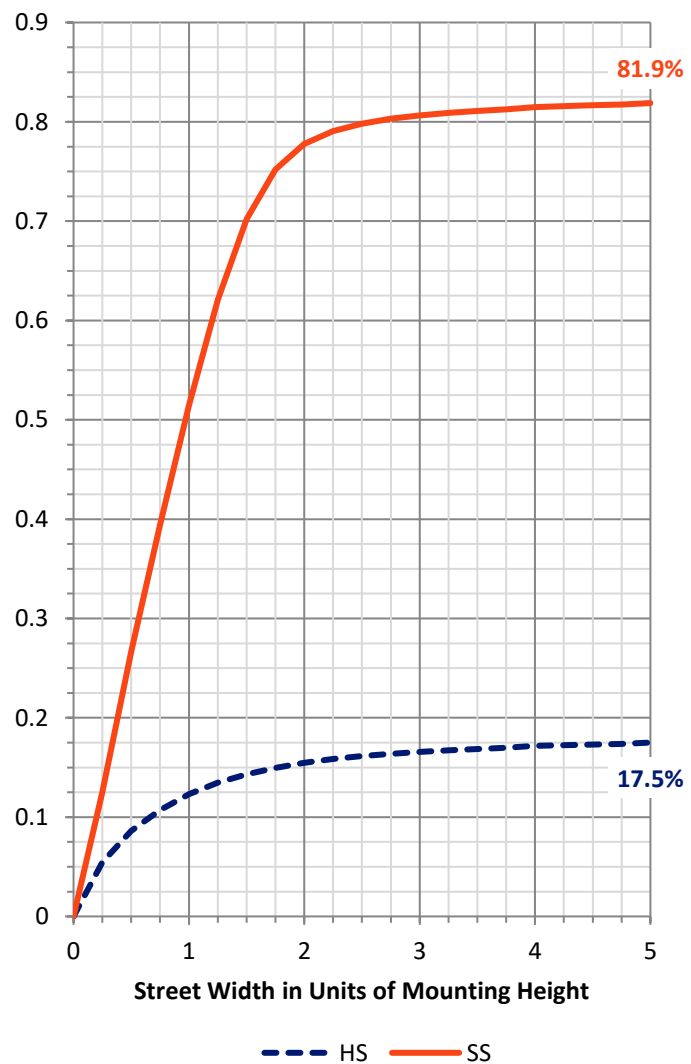
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1220.8	0.0	1220.8
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	5619.2	0.0	5619.2
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	6840.0	0.0	6840.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	0.6
10°-20°	189.9	2.8
20°-30°	365.5	5.3
30°-40°	615.6	9.0
40°-50°	1065.2	15.6
50°-60°	1608.3	23.5
60°-70°	1781.4	26.0
70°-80°	1027.0	15.0
80°-90°	144.0	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°	6840.0	100.0
0°-180°	6840.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P367054

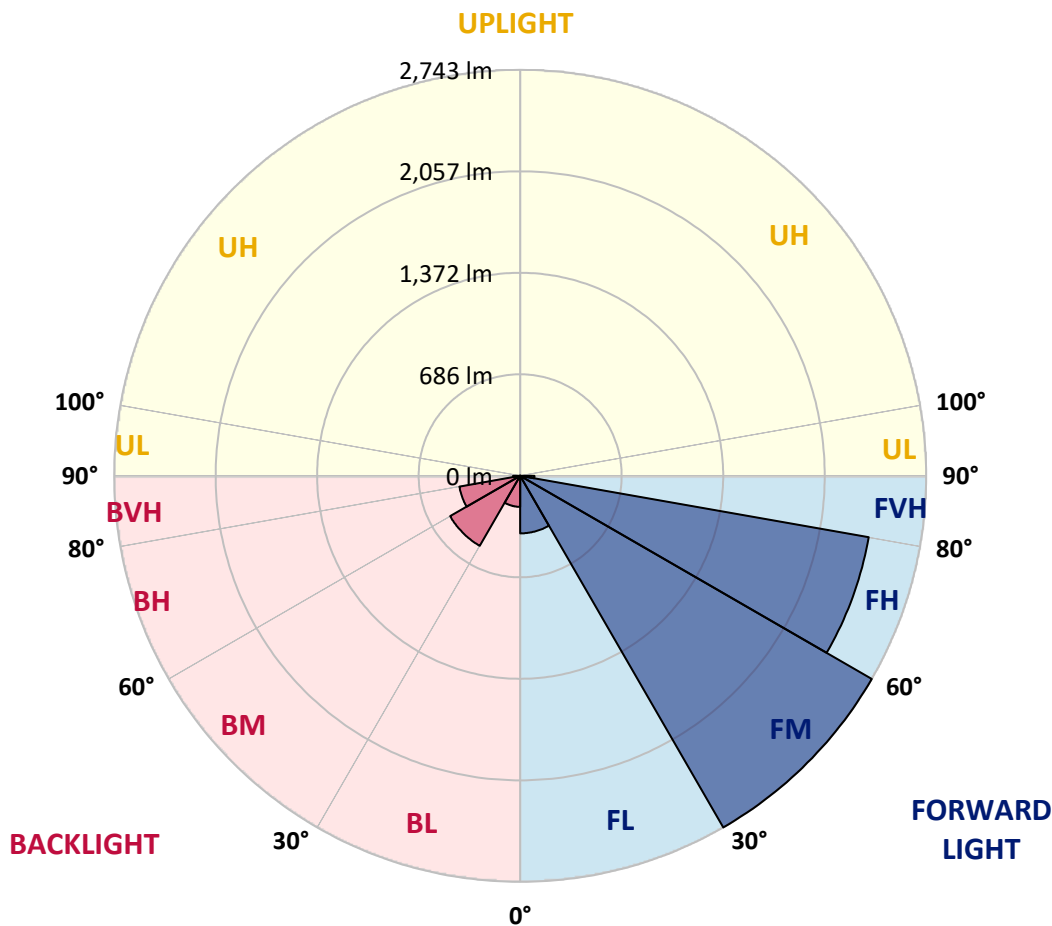
CATALOG NUMBER: MSA-SA1D-740-U-T2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	388.8	5.7			
FM (30°-60°)	2743.0	40.1			
FH (60°-80°)	2391.2	35.0			G2/5000
FVH (80°-90°)	96.1	1.4			G1/100
BL (0°-30°)	209.6	3.1	B1/500		
BM (30°-60°)	546.0	8.0	B1/1000		
BH (60°-80°)	417.2	6.1	B1/500		G1/500
BVH (80°-90°)	48.0	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





REPORT NUMBER: P367054

CATALOG NUMBER: MSA-SA1D-740-U-T2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9
2.5°	359.0	346.2	326.8	334.8	344.5	345.6	342.5	324.8	318.8	332.2	336.2
5°	503.0	481.3	468.2	463.9	449.4	419.2	440.8	429.7	432.0	425.4	438.3
7.5°	624.2	609.6	590.2	584.8	551.5	527.8	542.6	537.8	514.4	505.3	519.8
10°	685.8	669.8	670.7	659.0	650.1	652.4	645.0	623.6	606.2	594.0	558.9
12.5°	722.8	726.8	748.2	742.2	775.6	803.0	782.1	750.5	695.5	684.3	649.6
15°	810.9	825.8	805.8	814.9	829.2	881.7	873.1	866.3	808.1	786.4	722.3
17.5°	901.6	904.5	874.2	869.4	903.6	930.1	963.5	925.0	932.1	917.0	813.2
20°	921.0	940.7	897.3	867.4	937.8	990.3	1031.6	990.9	1028.5	1032.5	888.2
22.5°	992.0	968.3	911.3	881.9	943.5	1008.0	1075.3	1098.1	1086.1	1052.5	960.6
25°	1041.3	1028.8	970.6	938.1	961.5	1020.8	1138.9	1198.5	1209.0	1204.4	1029.7
27.5°	1132.9	1139.1	1019.4	1028.5	996.0	1001.4	1177.1	1331.6	1265.8	1247.5	1115.2
30°	1277.4	1249.5	1115.2	1122.6	1068.7	1059.6	1257.8	1446.5	1387.5	1365.6	1185.6
32.5°	1428.3	1430.8	1267.7	1204.4	1175.6	1166.5	1241.8	1506.7	1541.5	1513.0	1292.0
35°	1641.0	1626.2	1433.1	1349.9	1245.8	1229.8	1355.6	1681.2	1745.1	1665.2	1418.3
37.5°	1964.9	1920.2	1695.5	1503.0	1426.0	1407.8	1518.1	1837.7	1981.5	1882.2	1624.7
40°	2225.0	2134.0	1929.8	1695.5	1565.2	1587.7	1633.6	2027.7	2226.7	2170.8	1815.8
42.5°	2432.3	2351.6	2095.8	1931.0	1753.9	1726.0	1776.2	2262.9	2560.3	2505.6	2054.2
45°	2631.0	2466.8	2282.3	2134.0	1963.8	1997.7	1990.3	2503.0	2969.5	2801.0	2264.9
47.5°	2827.2	2672.9	2479.9	2280.6	2109.2	2320.5	2241.5	2681.5	3245.5	3120.6	2486.7
50°	3079.3	2909.6	2689.8	2489.3	2386.6	2541.2	2408.6	2832.6	3554.6	3408.0	2696.0
52.5°	3246.6	3081.5	2888.8	2745.6	2736.2	2676.6	2642.7	3023.9	3825.5	3736.5	2917.9
55°	3227.0	3067.9	2980.6	2996.3	3112.6	2911.6	2883.9	3307.1	4108.1	4005.1	3157.4
57.5°	2980.3	2806.7	2825.2	2918.2	3230.7	3324.2	3277.1	3609.6	4360.1	4313.4	3453.7
60°	2321.6	2232.4	2383.2	2553.2	3072.7	3445.1	3775.9	3978.6	4670.4	4745.1	3919.0
62.5°	1508.1	1388.9	1627.3	1915.9	2601.4	3365.3	4283.7	4678.3	5178.5	5348.1	4626.2
65°	781.3	762.2	929.0	1194.2	1810.9	2869.4	4462.8	5412.3	5796.1	5993.7	5301.7
67.5°	568.0	532.6	609.9	765.9	1105.5	1956.7	4123.5	5973.7	6292.0	6473.0	5694.3
70°	432.6	406.3	465.4	562.0	722.0	1105.2	3043.9	5820.6	6483.3	6571.1	5642.1
72.5°	323.9	301.4	353.0	443.1	556.3	622.2	1799.3	4785.8	6156.8	6186.7	5063.9
75°	258.6	241.2	263.5	349.9	453.4	423.4	955.8	3467.3	5002.3	5027.9	3868.0
77.5°	212.1	197.3	206.4	262.3	352.7	318.5	474.2	2205.6	3175.9	3136.6	2176.2
80°	173.1	160.3	164.5	189.6	268.6	237.8	266.3	1150.6	1515.0	1453.9	905.0
82.5°	133.2	122.3	130.9	139.4	194.5	170.8	155.4	523.5	620.5	578.0	331.9
85°	89.2	79.3	113.8	104.6	127.2	104.9	85.0	208.4	231.3	215.6	116.6
87.5°	24.5	23.1	38.2	52.2	52.2	39.6	31.1	50.5	64.4	56.5	27.4
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: P367054  
 CATALOG NUMBER: MSA-SA1D-740-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9	278.9
2.5°	337.9	331.6	315.1	313.7	317.6	318.2	315.7	309.7	306.5	323.6	321.1
5°	435.1	412.9	399.5	387.2	370.1	357.9	361.0	369.5	372.4	385.2	386.7
7.5°	510.7	481.3	452.0	412.6	386.7	370.1	382.7	391.8	398.9	417.2	424.6
10°	543.5	511.5	469.9	428.6	421.4	424.3	417.2	419.4	430.6	431.4	435.1
12.5°	604.5	568.3	493.3	455.9	453.9	459.9	457.4	467.9	475.6	496.4	487.6
15°	663.0	616.8	511.0	472.8	464.5	476.5	490.4	508.1	524.7	544.3	534.4
17.5°	734.0	664.4	511.8	465.1	466.5	492.2	506.7	516.4	565.7	592.8	579.1
20°	778.7	669.2	492.7	446.0	466.5	489.6	509.8	520.4	575.7	616.5	625.9
22.5°	819.2	670.9	477.9	435.7	448.8	479.3	509.8	533.2	568.6	607.6	609.1
25°	841.5	669.5	458.8	436.6	448.5	463.6	490.7	512.1	538.4	592.8	594.2
27.5°	898.5	651.0	440.0	440.0	446.2	446.8	481.3	493.9	497.6	547.2	556.0
30°	915.0	655.0	437.7	439.4	442.5	436.8	452.0	460.2	465.6	508.4	509.8
32.5°	941.5	623.0	444.5	434.3	430.3	429.4	433.1	440.5	442.8	469.1	473.9
35°	973.8	610.2	446.8	432.8	424.9	420.6	431.7	422.6	429.7	460.5	463.9
37.5°	1078.7	592.5	458.5	432.8	422.6	417.7	412.3	416.6	442.0	471.6	489.9
40°	1145.7	597.9	455.7	437.1	414.9	410.3	401.2	416.9	456.2	508.7	522.4
42.5°	1263.2	601.1	459.1	435.1	417.4	399.8	405.8	422.9	464.2	494.2	515.3
45°	1384.7	610.8	456.8	429.1	411.7	420.0	411.7	427.1	446.8	447.7	463.6
47.5°	1503.8	649.8	452.0	416.9	410.3	432.0	410.9	413.5	414.9	420.0	438.8
50°	1643.8	691.5	445.1	399.8	412.3	432.6	414.0	401.5	400.1	416.9	438.0
52.5°	1803.0	738.5	436.3	383.2	400.6	427.1	424.9	402.3	390.1	406.3	427.4
55°	1990.3	792.1	426.0	366.7	387.8	427.7	430.9	396.3	390.4	408.0	430.6
57.5°	2239.2	869.7	406.0	342.7	372.1	418.9	415.5	389.5	383.8	402.6	426.0
60°	2664.1	1018.8	377.5	319.1	355.3	397.2	402.9	377.2	371.5	392.4	416.9
62.5°	3233.0	1198.2	343.0	296.0	334.8	373.8	387.2	359.6	359.0	385.5	411.2
65°	3762.5	1300.0	307.4	274.9	313.7	352.2	369.5	343.0	344.2	377.5	403.2
67.5°	3982.6	1180.2	275.4	256.1	289.4	327.3	355.0	330.2	326.5	366.7	390.4
70°	3775.9	937.6	247.8	236.1	262.0	300.5	334.8	313.1	304.5	341.0	359.6
72.5°	3341.0	781.6	221.8	212.7	238.1	272.3	307.4	290.0	278.9	306.8	323.4
75°	2611.6	641.3	192.2	189.6	210.7	246.6	278.9	266.9	252.6	270.3	286.9
77.5°	1487.0	405.8	161.4	163.1	178.2	216.1	244.7	235.2	220.7	228.1	247.2
80°	595.1	204.7	129.7	130.9	143.7	177.6	202.7	199.3	184.2	190.2	203.3
82.5°	222.4	112.3	95.8	96.4	109.2	140.6	173.1	171.4	157.1	152.8	160.3
85°	88.4	55.6	58.7	61.3	73.6	101.2	138.9	123.2	106.4	93.2	97.8
87.5°	21.1	17.7	20.5	21.7	24.0	31.7	50.8	40.8	41.9	33.6	25.1
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)