

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: P367164

Luminaire Tested: **MSA-SA2A-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367164
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-SA2A-730-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7220 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

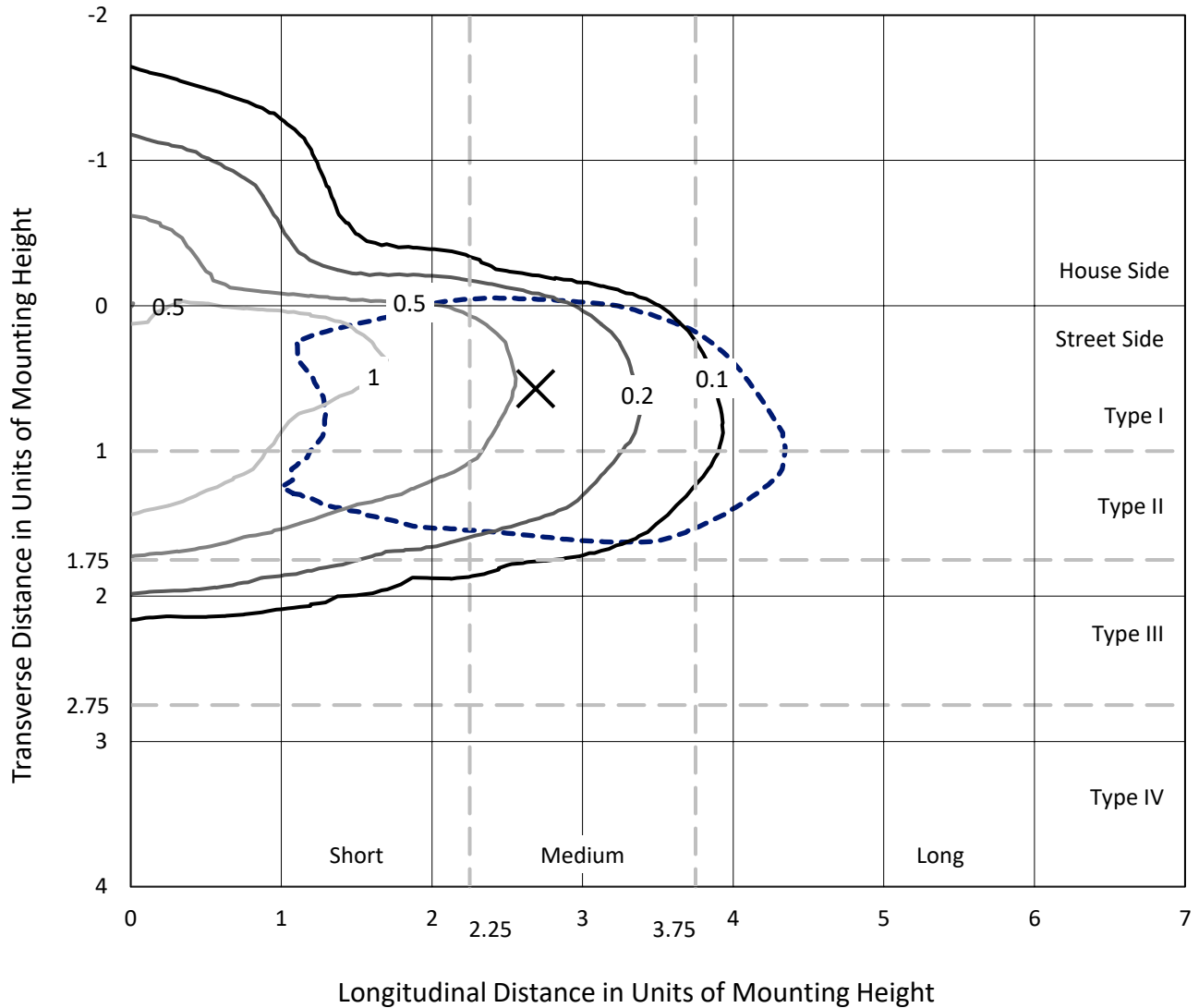
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

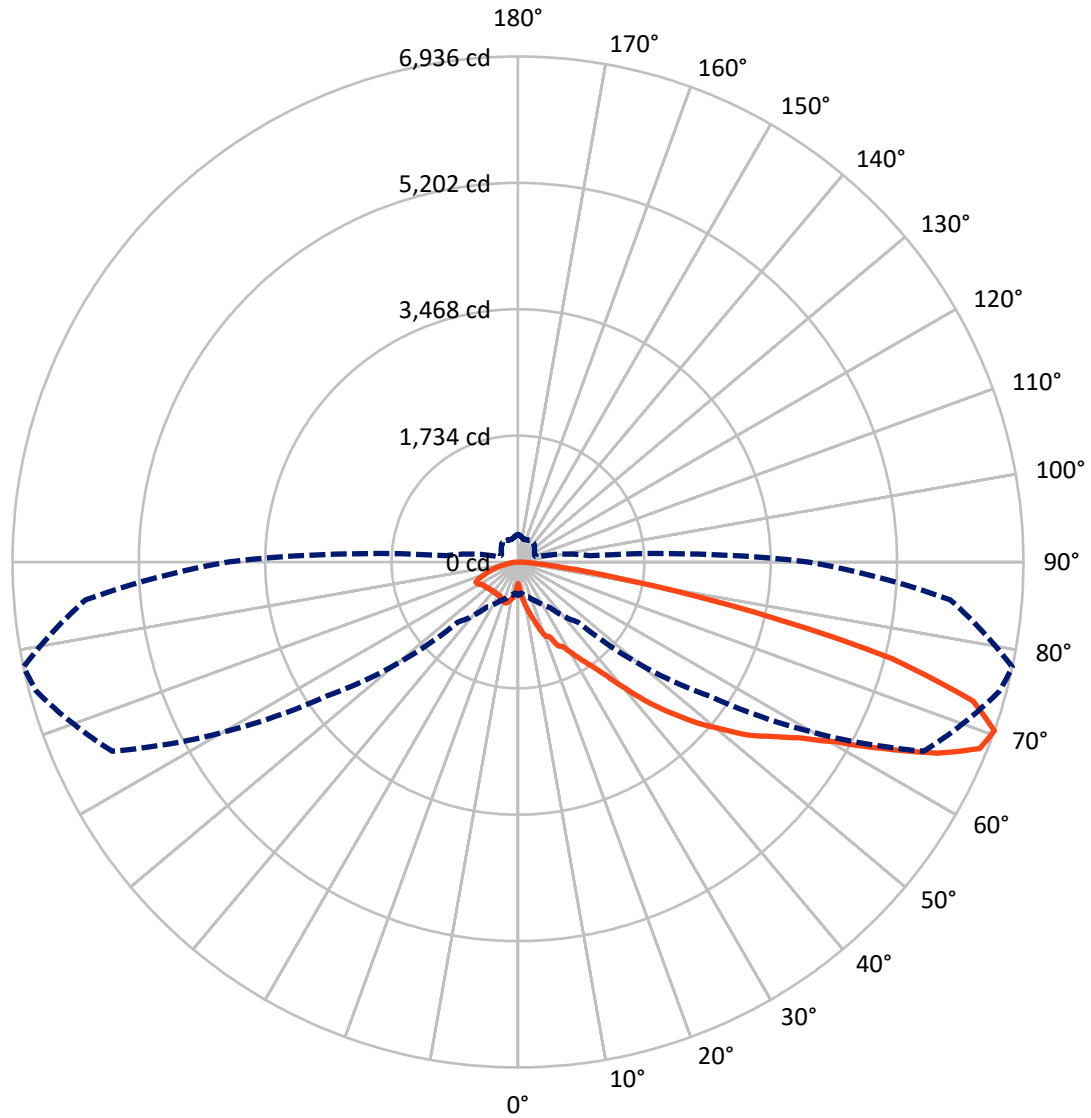
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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

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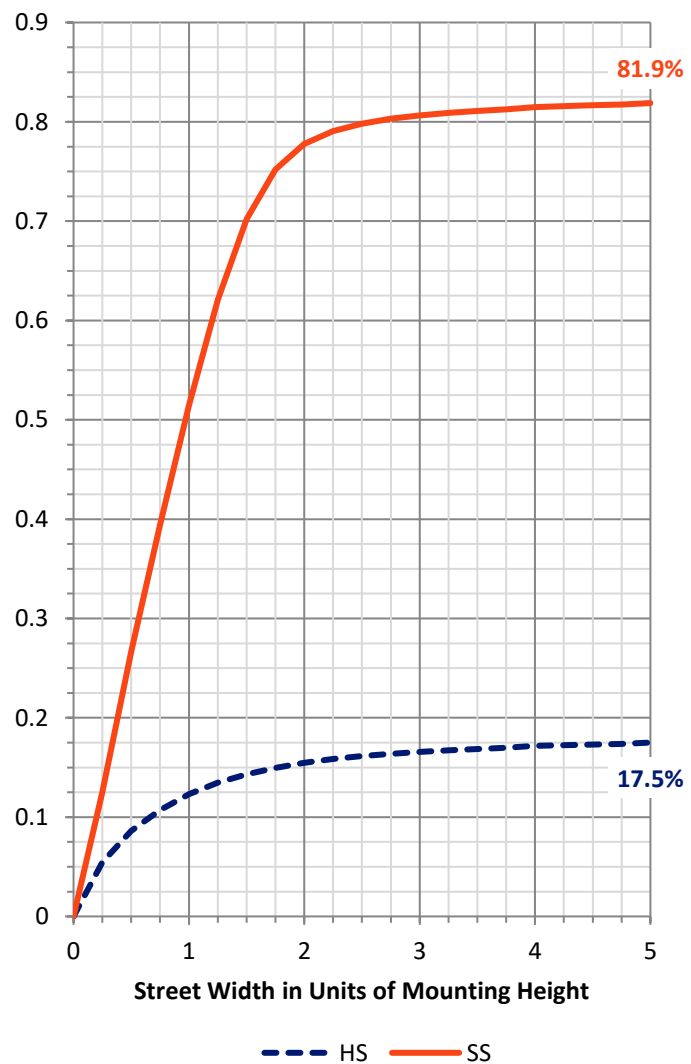
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1288.7	0.0	1288.7
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	5931.3	0.0	5931.3
	% Fixture	82.2	0.0	82.2
Total	Lumens	7220.0	0.0	7220.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	0.6
10°-20°	200.4	2.8
20°-30°	385.8	5.3
30°-40°	649.8	9.0
40°-50°	1124.4	15.6
50°-60°	1697.6	23.5
60°-70°	1880.3	26.0
70°-80°	1084.1	15.0
80°-90°	152.0	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°	7220.0	100.0
0°-180°	7220.0	100.0

Coefficient of Utilization



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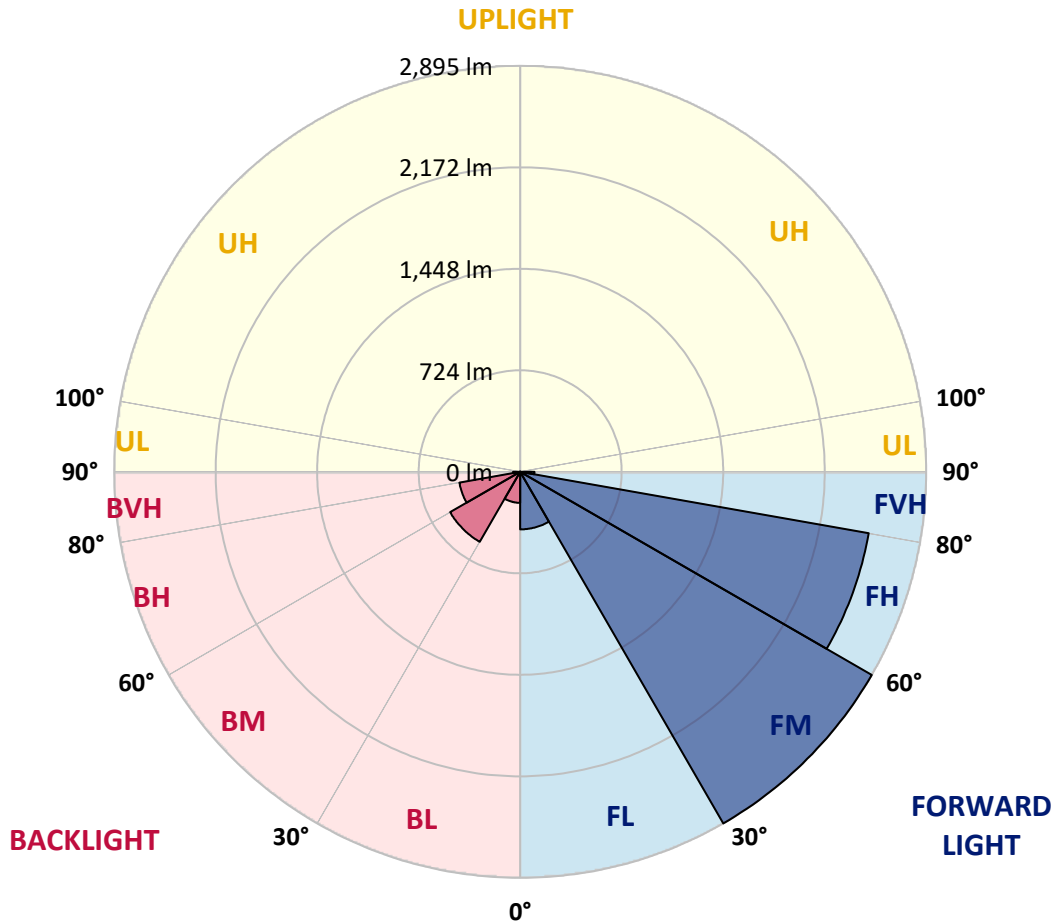
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	410.4	5.7			
FM (30°-60°)	2895.4	40.1			
FH (60°-80°)	2524.0	35.0			G2/5000
FVH (80°-90°)	101.4	1.4			G2/225
BL (0°-30°)	221.3	3.1	B1/500		
BM (30°-60°)	576.4	8.0	B1/1000		
BH (60°-80°)	440.4	6.1	B1/500		G1/500
BVH (80°-90°)	50.6	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4
2.5°	378.9	365.4	344.9	353.4	363.6	364.8	361.5	342.8	336.5	350.6	354.9
5°	530.9	508.1	494.2	489.7	474.4	442.4	465.3	453.6	456.0	449.1	462.6
7.5°	658.9	643.5	623.0	617.3	582.1	557.1	572.8	567.7	543.0	533.3	548.7
10°	723.9	707.0	707.9	695.6	686.2	688.7	680.8	658.3	639.9	627.0	589.9
12.5°	763.0	767.2	789.8	783.5	818.7	847.6	825.6	792.2	734.1	722.4	685.6
15°	856.0	871.7	850.6	860.2	875.3	930.6	921.6	914.4	853.0	830.1	762.4
17.5°	951.7	954.7	922.8	917.7	953.8	981.8	1017.0	976.4	983.9	968.0	858.4
20°	972.2	992.9	947.2	915.6	989.9	1045.3	1089.0	1045.9	1085.7	1089.9	937.6
22.5°	1047.1	1022.1	961.9	930.9	996.0	1064.0	1135.0	1159.1	1146.4	1110.9	1014.0
25°	1099.2	1086.0	1024.6	990.2	1014.9	1077.5	1202.1	1265.0	1276.2	1271.4	1086.9
27.5°	1195.8	1202.4	1076.0	1085.7	1051.3	1057.1	1242.5	1405.6	1336.1	1316.8	1177.1
30°	1348.4	1318.9	1177.1	1185.0	1128.1	1118.5	1327.6	1526.9	1464.6	1441.4	1251.5
32.5°	1507.6	1510.3	1338.2	1271.4	1241.0	1231.3	1310.8	1590.4	1627.1	1597.0	1363.8
35°	1732.2	1716.5	1512.7	1424.9	1315.0	1298.1	1430.9	1774.6	1842.0	1757.7	1497.1
37.5°	2074.1	2026.8	1789.7	1586.5	1505.2	1486.0	1602.4	1939.8	2091.5	1986.8	1715.0
40°	2348.6	2252.6	2037.1	1789.7	1652.1	1675.9	1724.3	2140.3	2350.4	2291.4	1916.7
42.5°	2567.4	2482.2	2212.2	2038.3	1851.4	1821.9	1874.8	2388.6	2702.5	2644.7	2168.3
45°	2777.2	2603.8	2409.1	2252.6	2072.9	2108.7	2100.9	2642.0	3134.5	2956.6	2390.7
47.5°	2984.3	2821.4	2617.7	2407.3	2226.4	2449.4	2366.0	2830.5	3425.8	3294.0	2624.9
50°	3250.3	3071.2	2839.2	2627.6	2519.2	2682.4	2542.4	2990.0	3752.1	3597.4	2845.8
52.5°	3427.0	3252.7	3049.3	2898.2	2888.2	2825.3	2789.5	3191.9	4038.0	3944.1	3080.0
55°	3406.2	3238.3	3146.2	3162.7	3285.5	3073.4	3044.2	3490.8	4336.3	4227.6	3332.8
57.5°	3145.9	2962.6	2982.2	3080.3	3410.2	3508.9	3459.2	3810.2	4602.4	4553.0	3645.5
60°	2450.6	2356.4	2515.6	2695.0	3243.4	3636.5	3985.6	4199.6	4929.8	5008.7	4136.7
62.5°	1591.9	1466.1	1717.7	2022.3	2745.9	3552.2	4521.7	4938.3	5466.2	5645.3	4883.2
65°	824.7	804.5	980.6	1260.5	1911.6	3028.8	4710.7	5713.0	6118.1	6326.7	5596.2
67.5°	599.6	562.2	643.8	808.4	1166.9	2065.4	4352.5	6305.6	6641.5	6832.6	6010.7
70°	456.6	428.9	491.2	593.2	762.1	1166.6	3213.0	6144.0	6843.5	6936.2	5955.6
72.5°	341.9	318.1	372.6	467.7	587.2	656.7	1899.2	5051.7	6498.9	6530.5	5345.2
75°	273.0	254.6	278.1	369.3	478.6	447.0	1008.9	3660.0	5280.2	5307.3	4082.9
77.5°	223.9	208.3	217.9	276.9	372.3	336.2	500.5	2328.1	3352.4	3310.8	2297.1
80°	182.7	169.2	173.7	200.2	283.5	251.0	281.1	1214.5	1599.1	1534.7	955.3
82.5°	140.6	129.1	138.2	147.2	205.3	180.3	164.0	552.6	654.9	610.1	350.3
85°	94.2	83.7	120.1	110.5	134.2	110.8	89.7	220.0	244.1	227.5	123.1
87.5°	25.9	24.4	40.3	55.1	55.1	41.8	32.8	53.3	68.0	59.6	28.9
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°	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4	294.4
2.5°	356.7	350.0	332.6	331.1	335.3	335.9	333.2	326.9	323.6	341.6	338.9
5°	459.3	435.8	421.7	408.7	390.7	377.7	381.0	390.1	393.1	406.6	408.1
7.5°	539.1	508.1	477.1	435.5	408.1	390.7	403.9	413.6	421.1	440.3	448.2
10°	573.7	540.0	496.0	452.4	444.9	447.9	440.3	442.7	454.5	455.4	459.3
12.5°	638.1	599.9	520.7	481.3	479.2	485.5	482.8	493.9	502.0	524.0	514.7
15°	699.8	651.0	539.4	499.0	490.3	502.9	517.7	536.4	553.8	574.6	564.0
17.5°	774.7	701.3	540.3	490.9	492.4	519.5	534.8	545.1	597.2	625.7	611.3
20°	822.0	706.4	520.1	470.7	492.4	516.8	538.2	549.3	607.7	650.7	660.7
22.5°	864.7	708.2	504.4	459.9	473.7	506.0	538.2	562.8	600.2	641.4	642.9
25°	888.2	706.7	484.3	460.8	473.4	489.4	518.0	540.6	568.3	625.7	627.3
27.5°	948.4	687.1	464.4	464.4	471.0	471.6	508.1	521.3	525.2	577.6	586.9
30°	965.9	691.4	462.0	463.8	467.1	461.1	477.1	485.8	491.5	536.7	538.2
32.5°	993.9	657.7	469.2	458.4	454.2	453.3	457.2	465.0	467.4	495.1	500.2
35°	1027.9	644.1	471.6	456.9	448.5	444.0	455.7	446.1	453.6	486.1	489.7
37.5°	1138.6	625.4	484.0	456.9	446.1	440.9	435.2	439.7	466.5	497.8	517.1
40°	1209.4	631.2	481.0	461.4	437.9	433.1	423.5	440.0	481.6	537.0	551.4
42.5°	1333.4	634.5	484.6	459.3	440.6	422.0	428.3	446.4	490.0	521.6	543.9
45°	1461.6	644.7	482.2	453.0	434.6	443.3	434.6	450.9	471.6	472.5	489.4
47.5°	1587.4	685.9	477.1	440.0	433.1	456.0	433.7	436.4	437.9	443.3	463.2
50°	1735.2	729.9	469.8	422.0	435.2	456.6	437.0	423.8	422.3	440.0	462.3
52.5°	1903.1	779.5	460.5	404.5	422.9	450.9	448.5	424.7	411.7	428.9	451.2
55°	2100.9	836.1	449.7	387.1	409.3	451.5	454.8	418.4	412.0	430.7	454.5
57.5°	2363.6	918.0	428.6	361.8	392.8	442.1	438.5	411.1	405.1	425.0	449.7
60°	2812.1	1075.4	398.5	336.8	375.0	419.3	425.3	398.2	392.2	414.2	440.0
62.5°	3412.6	1264.7	362.1	312.4	353.4	394.6	408.7	379.5	378.9	406.9	434.0
65°	3971.5	1372.2	324.5	290.1	331.1	371.7	390.1	362.1	363.3	398.5	425.6
67.5°	4203.8	1245.8	290.8	270.3	305.5	345.5	374.7	348.5	344.6	387.1	412.0
70°	3985.6	989.6	261.6	249.2	276.6	317.2	353.4	330.5	321.5	360.0	379.5
72.5°	3526.6	825.0	234.2	224.5	251.3	287.4	324.5	306.1	294.4	323.9	341.3
75°	2756.7	676.9	202.9	200.2	222.4	260.4	294.4	281.7	266.7	285.3	302.8
77.5°	1569.6	428.3	170.4	172.2	188.1	228.1	258.2	248.3	233.0	240.8	261.0
80°	628.2	216.1	136.9	138.2	151.7	187.5	214.0	210.4	194.4	200.8	214.6
82.5°	234.8	118.6	101.1	101.7	115.3	148.4	182.7	180.9	165.8	161.3	169.2
85°	93.3	58.7	62.0	64.7	77.7	106.8	146.6	130.0	112.3	98.4	103.2
87.5°	22.3	18.7	21.7	22.9	25.3	33.4	53.6	43.0	44.2	35.5	26.5
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)