

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: P367230

Luminaire Tested: **MSA-SA2A-760-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367230
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-760-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: 7928 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

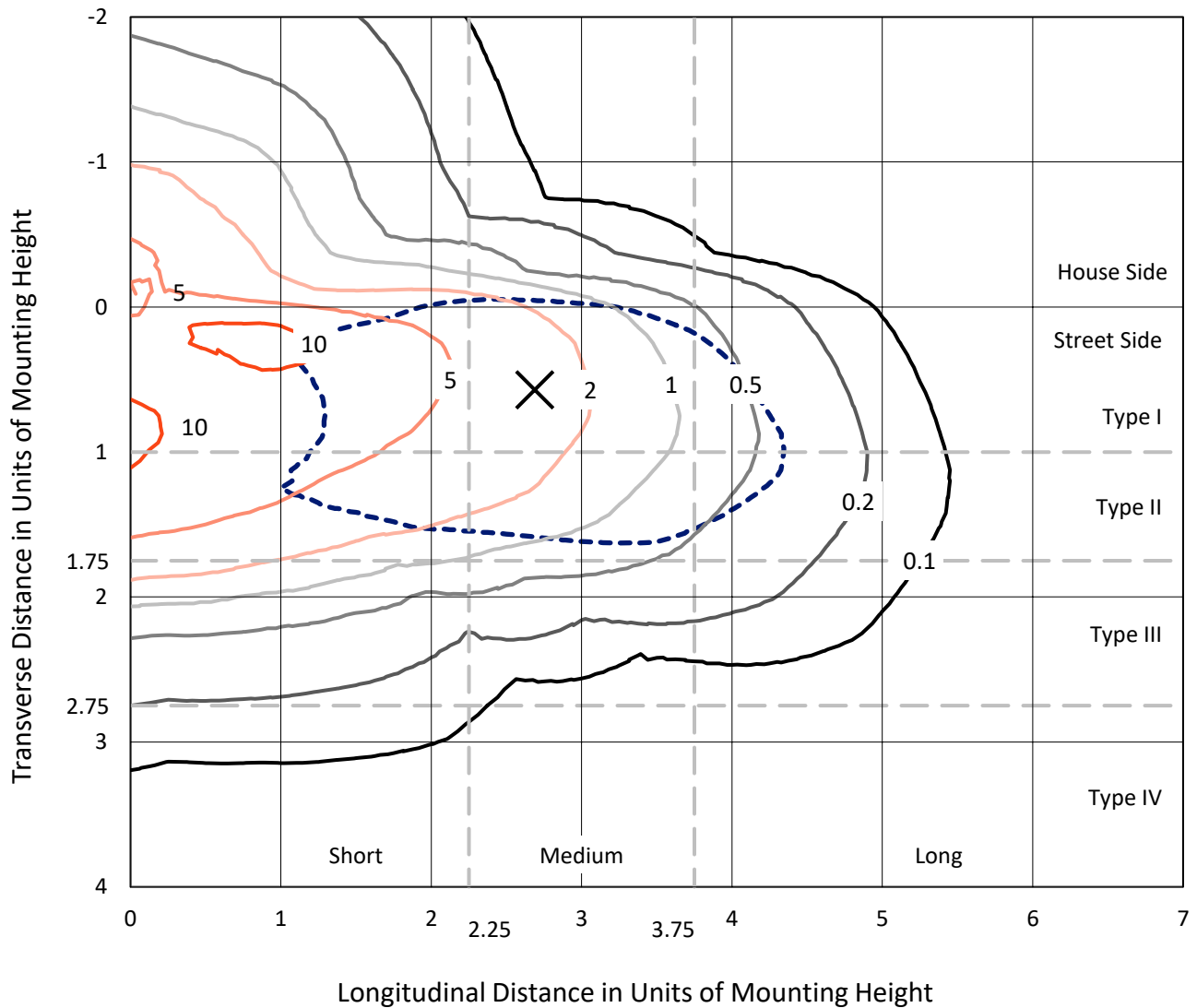
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

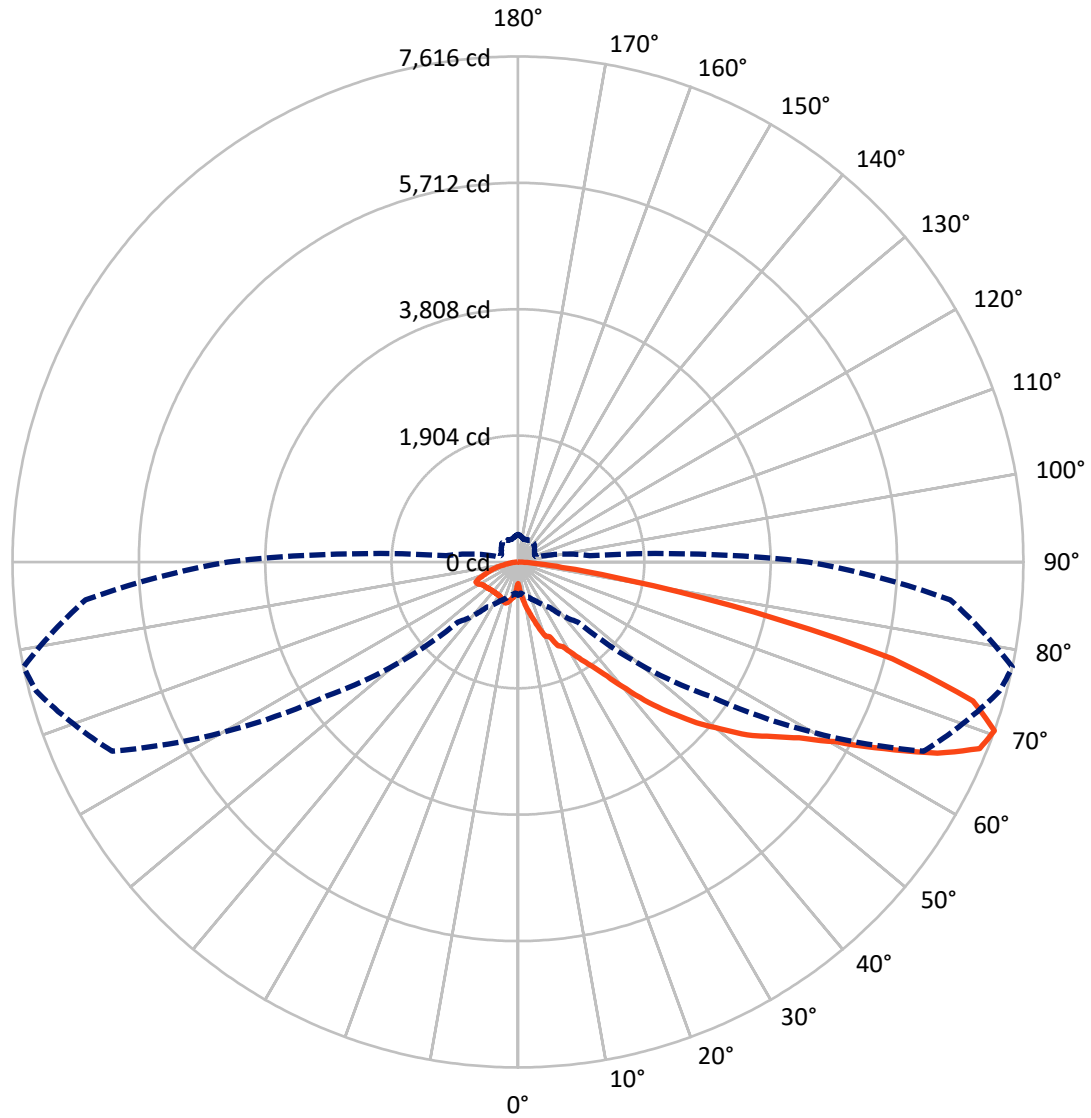
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.8 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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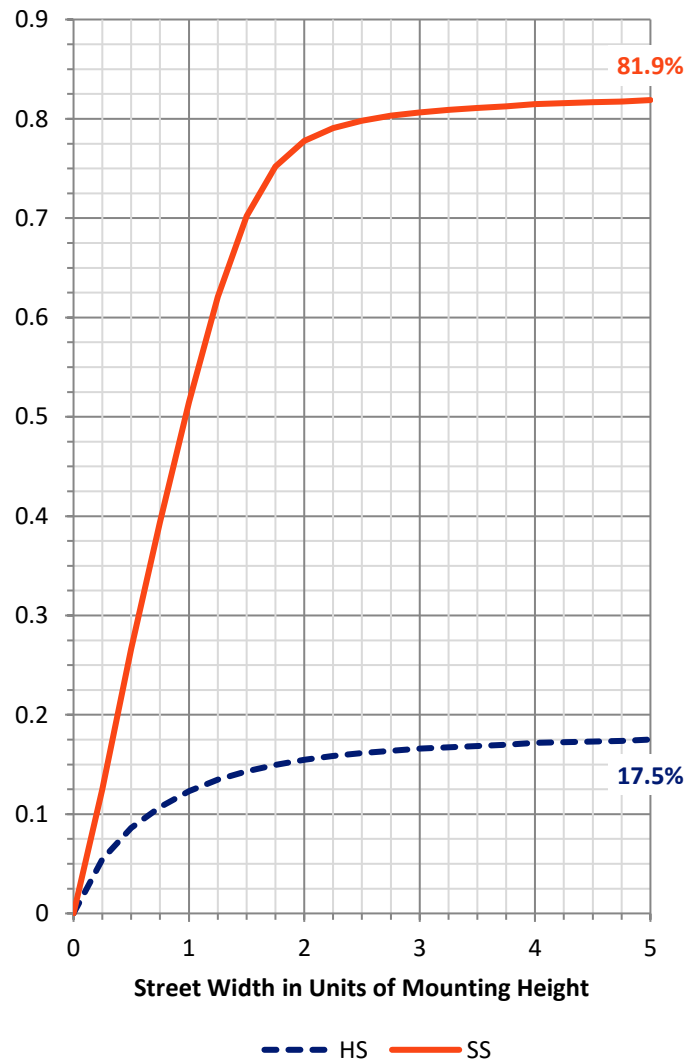
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1415.0	0.0	1415.0
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	6513.0	0.0	6513.0
	% Fixture	82.2	0.0	82.2
Total	Lumens	7928.0	0.0	7928.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	0.6
10°-20°	220.1	2.8
20°-30°	423.6	5.3
30°-40°	713.5	9.0
40°-50°	1234.6	15.6
50°-60°	1864.1	23.5
60°-70°	2064.7	26.0
70°-80°	1190.4	15.0
80°-90°	167.0	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°	7928.0	100.0
0°-180°	7928.0	100.0

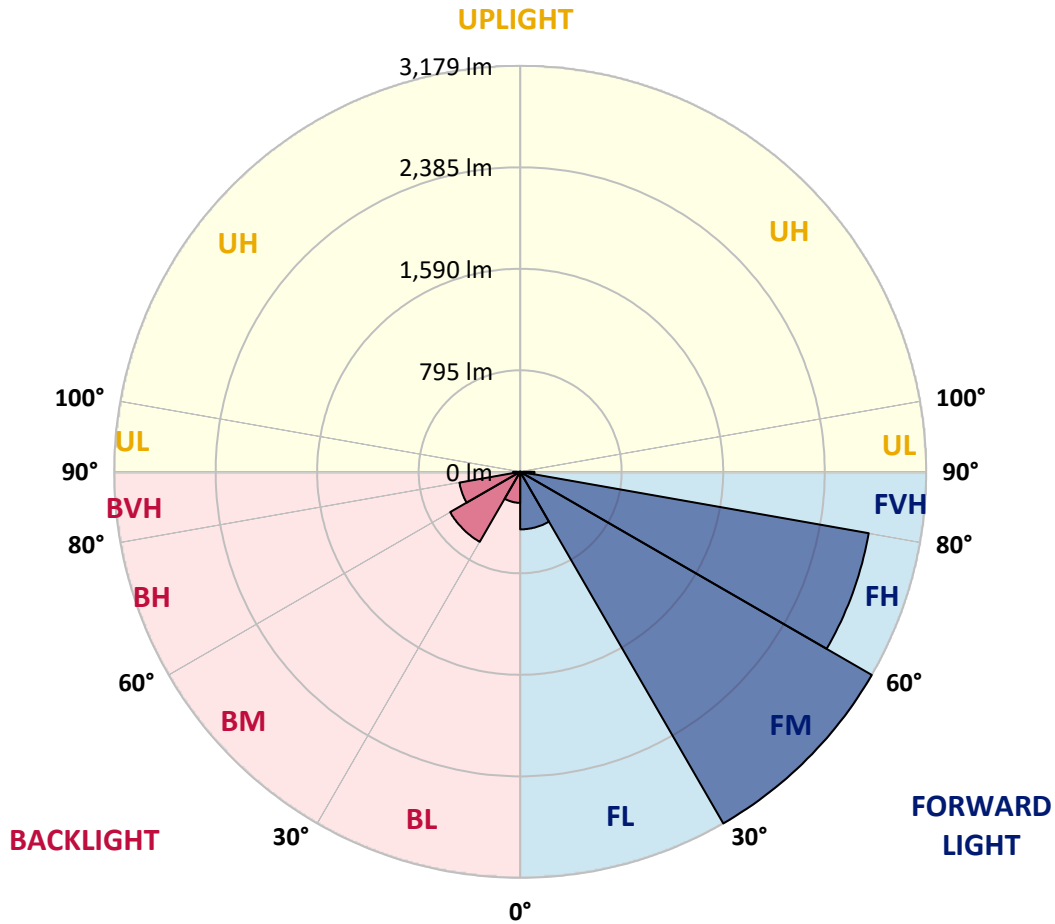


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	450.7	5.7			
FM (30°-60°)	3179.4	40.1			
FH (60°-80°)	2771.5	35.0			G2/5000
FVH (80°-90°)	111.4	1.4			G2/225
BL (0°-30°)	243.0	3.1	B1/500		
BM (30°-60°)	632.9	8.0	B1/1000		
BH (60°-80°)	483.6	6.1	B1/500		G1/500
BVH (80°-90°)	55.6	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°	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2
2.5°	416.1	401.2	378.8	388.0	399.2	400.6	396.9	376.4	369.5	385.0	389.7
5°	583.0	557.9	542.7	537.7	520.9	485.8	511.0	498.1	500.7	493.1	508.0
7.5°	723.5	706.6	684.1	677.9	639.2	611.8	628.9	623.3	596.2	585.6	602.5
10°	794.9	776.3	777.3	763.8	753.5	756.2	747.6	722.8	702.6	688.4	647.8
12.5°	837.8	842.4	867.2	860.3	899.0	930.7	906.6	869.9	806.1	793.2	752.9
15°	939.9	957.1	934.0	944.6	961.1	1021.9	1012.0	1004.1	936.6	911.5	837.2
17.5°	1045.0	1048.3	1013.3	1007.7	1047.4	1078.1	1116.8	1072.1	1080.4	1062.9	942.6
20°	1067.5	1090.3	1040.1	1005.4	1087.0	1147.8	1195.7	1148.5	1192.1	1196.7	1029.5
22.5°	1149.8	1122.4	1056.3	1022.2	1093.6	1168.3	1246.3	1272.8	1258.9	1219.9	1113.5
25°	1207.0	1192.4	1125.0	1087.3	1114.4	1183.2	1320.0	1389.1	1401.3	1396.0	1193.4
27.5°	1313.1	1320.3	1181.5	1192.1	1154.4	1160.7	1364.3	1543.4	1467.1	1445.9	1292.6
30°	1480.6	1448.2	1292.6	1301.2	1238.7	1228.1	1457.8	1676.6	1608.2	1582.8	1374.2
32.5°	1655.5	1658.4	1469.4	1396.0	1362.6	1352.1	1439.3	1746.4	1786.7	1753.6	1497.5
35°	1902.0	1884.8	1661.1	1564.6	1444.0	1425.4	1571.2	1948.6	2022.7	1930.1	1643.9
37.5°	2277.5	2225.6	1965.1	1742.1	1652.8	1631.7	1759.6	2130.1	2296.6	2181.6	1883.2
40°	2578.9	2473.5	2236.8	1965.1	1814.1	1840.2	1893.4	2350.2	2580.9	2516.1	2104.6
42.5°	2819.2	2725.6	2429.2	2238.1	2032.9	2000.5	2058.7	2622.8	2967.6	2904.1	2380.9
45°	3049.5	2859.1	2645.3	2473.5	2276.1	2315.5	2306.9	2901.1	3441.8	3246.5	2625.2
47.5°	3276.9	3098.1	2874.4	2643.3	2444.7	2689.6	2598.1	3108.0	3761.7	3617.0	2882.3
50°	3569.1	3372.4	3117.6	2885.3	2766.3	2945.4	2791.7	3283.2	4120.0	3950.1	3124.9
52.5°	3763.1	3571.7	3348.3	3182.4	3171.5	3102.4	3063.1	3504.9	4434.0	4330.9	3382.0
55°	3740.3	3555.8	3454.7	3472.9	3607.7	3374.7	3342.7	3833.1	4761.5	4642.2	3659.6
57.5°	3454.4	3253.1	3274.6	3382.3	3744.6	3853.0	3798.4	4183.8	5053.7	4999.5	4003.0
60°	2690.9	2587.5	2762.3	2959.3	3561.5	3993.1	4376.5	4611.5	5413.2	5499.8	4542.4
62.5°	1748.0	1609.9	1886.2	2220.6	3015.1	3900.6	4965.1	5422.5	6002.2	6198.8	5362.0
65°	905.6	883.4	1076.8	1384.1	2099.0	3325.8	5172.6	6273.2	6718.1	6947.1	6145.0
67.5°	658.4	617.4	706.9	887.7	1281.3	2267.9	4779.3	6924.0	7292.8	7502.7	6600.1
70°	501.4	471.0	539.4	651.4	836.8	1281.0	3528.1	6746.5	7514.6	7616.4	6539.6
72.5°	375.4	349.3	409.2	513.6	644.8	721.1	2085.4	5547.1	7136.1	7170.8	5869.3
75°	299.8	279.6	305.4	405.5	525.5	490.8	1107.8	4018.9	5797.9	5827.7	4483.2
77.5°	245.9	228.7	239.3	304.1	408.8	369.2	549.6	2556.4	3681.1	3635.5	2522.4
80°	200.6	185.7	190.7	219.8	311.3	275.6	308.7	1333.6	1755.9	1685.2	1049.0
82.5°	154.3	141.8	151.7	161.6	225.4	198.0	180.1	606.8	719.2	669.9	384.7
85°	103.4	91.9	131.9	121.3	147.4	121.6	98.5	241.6	268.0	249.9	135.2
87.5°	28.4	26.8	44.3	60.5	60.5	45.9	36.0	58.5	74.7	65.4	31.7
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°	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2	323.2
2.5°	391.6	384.4	365.2	363.5	368.2	368.8	365.9	358.9	355.3	375.1	372.1
5°	504.3	478.6	463.0	448.8	429.0	414.8	418.4	428.3	431.6	446.5	448.2
7.5°	591.9	557.9	523.8	478.2	448.2	429.0	443.5	454.1	462.4	483.5	492.1
10°	629.9	592.9	544.7	496.7	488.5	491.8	483.5	486.2	499.1	500.0	504.3
12.5°	700.7	658.7	571.8	528.5	526.2	533.1	530.1	542.3	551.3	575.4	565.2
15°	768.4	714.9	592.3	548.0	538.4	552.3	568.5	588.9	608.1	630.9	619.4
17.5°	850.7	770.1	593.2	539.0	540.7	570.4	587.3	598.5	655.7	687.1	671.2
20°	902.6	775.7	571.1	516.9	540.7	567.5	590.9	603.2	667.3	714.5	725.4
22.5°	949.5	777.7	553.9	505.0	520.2	555.6	590.9	618.0	659.0	704.3	705.9
25°	975.3	776.0	531.8	506.0	519.9	537.4	568.8	593.6	624.0	687.1	688.8
27.5°	1041.4	754.5	510.0	510.0	517.2	517.9	557.9	572.4	576.7	634.2	644.5
30°	1060.6	759.2	507.3	509.3	512.9	506.3	523.8	533.4	539.7	589.3	590.9
32.5°	1091.3	722.1	515.2	503.4	498.7	497.7	502.0	510.6	513.3	543.7	549.3
35°	1128.7	707.3	517.9	501.7	492.4	487.5	500.4	489.8	498.1	533.8	537.7
37.5°	1250.3	686.8	531.4	501.7	489.8	484.2	477.9	482.9	512.3	546.6	567.8
40°	1327.9	693.1	528.1	506.7	480.9	475.6	465.0	483.2	528.8	589.6	605.5
42.5°	1464.1	696.7	532.1	504.3	483.9	463.4	470.3	490.1	538.1	572.8	597.2
45°	1604.9	707.9	529.5	497.4	477.2	486.8	477.2	495.1	517.9	518.9	537.4
47.5°	1743.1	753.2	523.8	483.2	475.6	500.7	476.2	479.2	480.9	486.8	508.6
50°	1905.3	801.5	515.9	463.4	477.9	501.4	479.9	465.3	463.7	483.2	507.6
52.5°	2089.7	856.0	505.7	444.2	464.4	495.1	492.4	466.3	452.1	471.0	495.4
55°	2306.9	918.1	493.8	425.0	449.5	495.7	499.4	459.4	452.5	472.9	499.1
57.5°	2595.4	1008.0	470.6	397.3	431.3	485.5	481.5	451.5	444.9	466.7	493.8
60°	3087.9	1180.9	437.6	369.8	411.8	460.4	467.0	437.3	430.6	454.8	483.2
62.5°	3747.2	1388.8	397.6	343.1	388.0	433.3	448.8	416.8	416.1	446.8	476.6
65°	4360.9	1506.7	356.3	318.6	363.5	408.2	428.3	397.6	398.9	437.6	467.3
67.5°	4616.1	1367.9	319.3	296.8	335.5	379.4	411.5	382.7	378.4	425.0	452.5
70°	4376.5	1086.7	287.2	273.7	303.7	348.3	388.0	362.9	353.0	395.3	416.8
72.5°	3872.5	905.9	257.1	246.6	276.0	315.6	356.3	336.1	323.2	355.6	374.8
75°	3027.0	743.3	222.8	219.8	244.2	285.9	323.2	309.3	292.8	313.3	332.5
77.5°	1723.6	470.3	187.1	189.0	206.6	250.5	283.6	272.7	255.8	264.4	286.5
80°	689.8	237.3	150.4	151.7	166.6	205.9	235.0	231.0	213.5	220.4	235.6
82.5°	257.8	130.2	111.0	111.7	126.6	162.9	200.6	198.6	182.1	177.1	185.7
85°	102.5	64.4	68.1	71.1	85.3	117.3	161.0	142.8	123.3	108.1	113.4
87.5°	24.5	20.5	23.8	25.1	27.8	36.7	58.8	47.3	48.6	39.0	29.1
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)