

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: P367252

Luminaire Tested: **MSA-SA2A-830-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367252  
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-830-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: 6300 lumens  
Efficiency: N/A  
Efficacy: 95.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

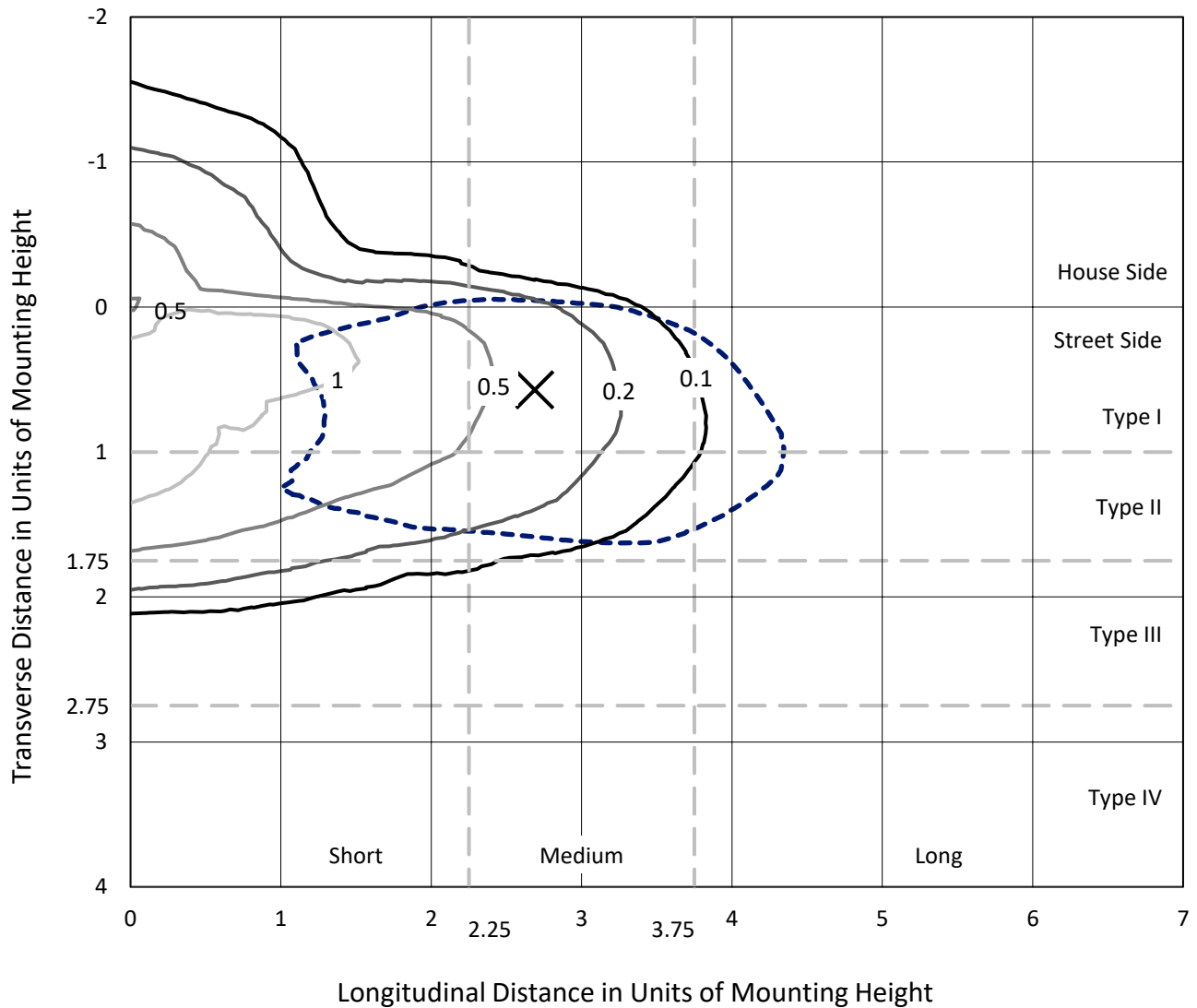
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

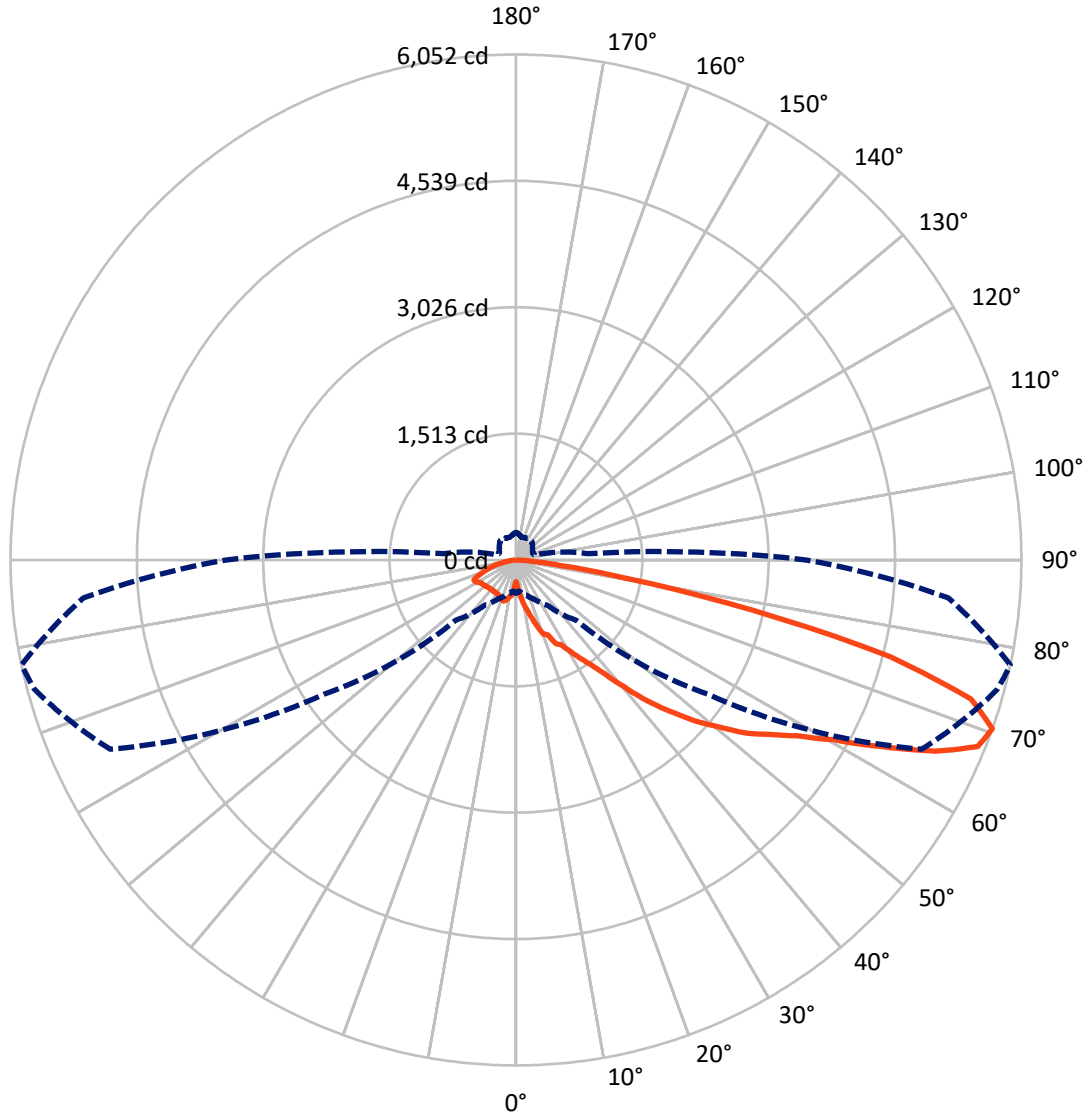
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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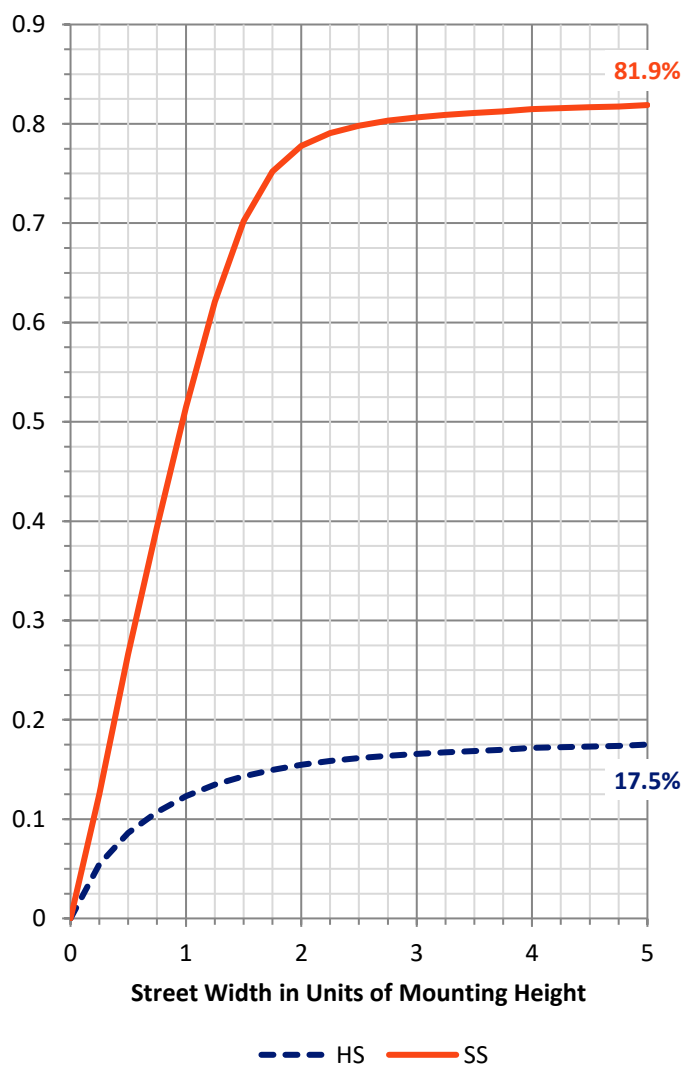
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1124.5	0.0	1124.5
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	5175.5	0.0	5175.5
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	6300.0	0.0	6300.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.7	0.6
10°-20°	174.9	2.8
20°-30°	336.6	5.3
30°-40°	567.0	9.0
40°-50°	981.1	15.6
50°-60°	1481.3	23.5
60°-70°	1640.7	26.0
70°-80°	945.9	15.0
80°-90°	132.7	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°	6300.0	100.0
0°-180°	6300.0	100.0

**Coefficient of Utilization**



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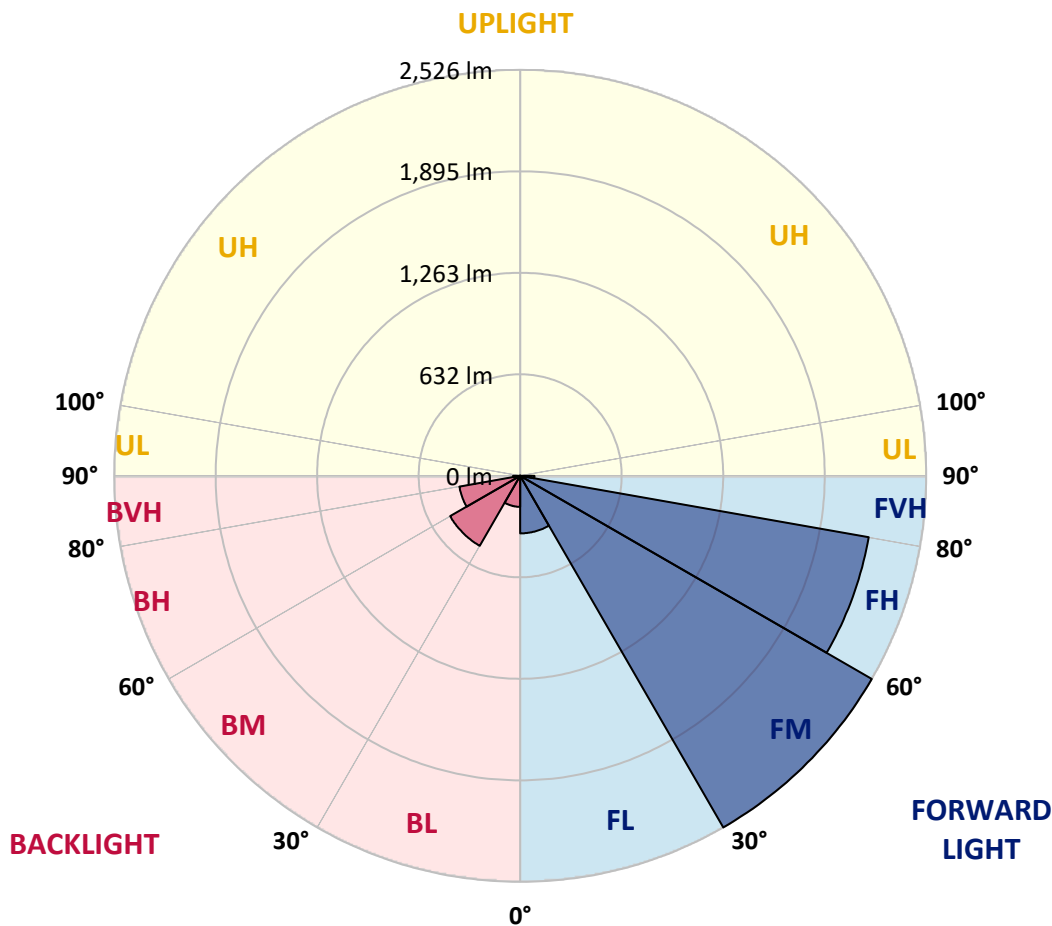
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	358.1	5.7			
FM (30°-60°)	2526.5	40.1			
FH (60°-80°)	2202.4	35.0			G2/5000
FVH (80°-90°)	88.5	1.4			G1/100
BL (0°-30°)	193.1	3.1	B1/500		
BM (30°-60°)	502.9	8.0	B1/1000		
BH (60°-80°)	384.3	6.1	B1/500		G1/500
BVH (80°-90°)	44.2	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°	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9
2.5°	330.7	318.8	301.0	308.3	317.3	318.3	315.4	299.1	293.6	306.0	309.6
5°	463.3	443.3	431.2	427.3	413.9	386.1	406.0	395.8	397.9	391.8	403.7
7.5°	574.9	561.5	543.6	538.7	507.9	486.1	499.8	495.3	473.8	465.4	478.8
10°	631.6	616.9	617.7	606.9	598.8	600.9	594.1	574.4	558.4	547.1	514.8
12.5°	665.8	669.4	689.1	683.6	714.4	739.6	720.4	691.2	640.6	630.3	598.3
15°	746.9	760.6	742.2	750.6	763.7	812.1	804.2	797.9	744.3	724.3	665.2
17.5°	830.4	833.1	805.2	800.8	832.3	856.7	887.4	852.0	858.5	844.6	749.0
20°	848.3	866.4	826.5	798.9	863.8	912.1	950.2	912.6	947.3	951.0	818.1
22.5°	913.7	891.9	839.4	812.3	869.0	928.4	990.4	1011.4	1000.4	969.4	884.8
25°	959.1	947.6	894.0	864.1	885.6	940.2	1049.0	1103.8	1113.6	1109.4	948.4
27.5°	1043.4	1049.2	938.9	947.3	917.4	922.4	1084.1	1226.5	1165.8	1149.0	1027.2
30°	1176.6	1150.9	1027.2	1034.0	984.3	975.9	1158.5	1332.3	1278.0	1257.7	1092.0
32.5°	1315.5	1317.9	1167.7	1109.4	1082.8	1074.4	1143.8	1387.7	1419.8	1393.5	1190.0
35°	1511.4	1497.8	1320.0	1243.3	1147.4	1132.7	1248.6	1548.5	1607.3	1533.8	1306.3
37.5°	1809.8	1768.6	1561.6	1384.3	1313.4	1296.6	1398.3	1692.7	1825.0	1733.6	1496.5
40°	2049.3	1965.5	1777.5	1561.6	1441.6	1462.3	1504.6	1867.6	2050.9	1999.4	1672.4
42.5°	2240.2	2165.9	1930.3	1778.5	1615.4	1589.7	1635.9	2084.2	2358.2	2307.7	1892.0
45°	2423.3	2272.0	2102.1	1965.5	1808.7	1840.0	1833.2	2305.4	2735.0	2579.8	2086.1
47.5°	2604.0	2461.9	2284.1	2100.5	1942.7	2137.3	2064.5	2469.8	2989.3	2874.2	2290.4
50°	2836.2	2679.9	2477.4	2292.8	2198.2	2340.6	2218.5	2609.0	3274.0	3139.0	2483.2
52.5°	2990.3	2838.3	2660.7	2528.9	2520.2	2465.3	2434.1	2785.2	3523.5	3441.5	2687.5
55°	2972.2	2825.7	2745.3	2759.7	2866.9	2681.7	2656.3	3046.0	3783.7	3688.9	2908.1
57.5°	2745.0	2585.1	2602.2	2687.8	2975.6	3061.8	3018.4	3324.7	4015.9	3972.8	3181.0
60°	2138.3	2056.1	2195.1	2351.6	2830.1	3173.1	3477.8	3664.5	4301.6	4370.5	3609.6
62.5°	1389.1	1279.3	1498.8	1764.6	2396.0	3099.6	3945.5	4309.0	4769.7	4925.9	4260.9
65°	719.6	702.0	855.7	1099.9	1668.0	2642.9	4110.4	4985.0	5338.5	5520.5	4883.1
67.5°	523.2	490.6	561.8	705.4	1018.2	1802.2	3797.9	5502.1	5795.2	5962.0	5244.8
70°	398.4	374.3	428.6	517.6	665.0	1018.0	2803.6	5361.1	5971.5	6052.3	5196.7
72.5°	298.3	277.6	325.1	408.1	512.4	573.1	1657.2	4408.0	5670.7	5698.3	4664.1
75°	238.2	222.2	242.7	322.2	417.6	390.0	880.3	3193.6	4607.3	4631.0	3562.6
77.5°	195.4	181.7	190.1	241.6	324.9	293.4	436.8	2031.5	2925.2	2888.9	2004.4
80°	159.4	147.6	151.5	174.7	247.4	219.0	245.3	1059.7	1395.4	1339.2	833.6
82.5°	122.6	112.7	120.5	128.4	179.1	157.3	143.1	482.2	571.5	532.4	305.7
85°	82.2	73.0	104.8	96.4	117.1	96.6	78.3	192.0	213.0	198.5	107.4
87.5°	22.6	21.3	35.2	48.1	48.1	36.5	28.6	46.5	59.4	52.0	25.2
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°	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9	256.9
2.5°	311.2	305.4	290.2	288.9	292.6	293.1	290.7	285.2	282.3	298.1	295.7
5°	400.8	380.3	367.9	356.7	340.9	329.6	332.5	340.4	343.0	354.8	356.1
7.5°	470.4	443.3	416.3	380.0	356.1	340.9	352.5	360.9	367.4	384.2	391.1
10°	500.6	471.2	432.8	394.7	388.2	390.8	384.2	386.3	396.6	397.4	400.8
12.5°	556.8	523.4	454.4	419.9	418.1	423.6	421.3	431.0	438.1	457.2	449.1
15°	610.6	568.1	470.6	435.4	427.8	438.9	451.7	468.0	483.2	501.4	492.2
17.5°	676.0	611.9	471.4	428.4	429.7	453.3	466.7	475.6	521.1	546.0	533.4
20°	717.2	616.4	453.8	410.8	429.7	450.9	469.6	479.3	530.3	567.8	576.5
22.5°	754.5	618.0	440.2	401.3	413.4	441.5	469.6	491.1	523.7	559.7	561.0
25°	775.0	616.7	422.6	402.1	413.1	427.0	452.0	471.7	495.8	546.0	547.3
27.5°	827.6	599.6	405.2	405.2	411.0	411.5	443.3	454.9	458.3	504.0	512.1
30°	842.8	603.3	403.1	404.7	407.6	402.4	416.3	423.9	428.9	468.3	469.6
32.5°	867.2	573.9	409.4	400.0	396.3	395.5	398.9	405.8	407.9	432.0	436.5
35°	896.9	562.0	411.5	398.7	391.3	387.4	397.6	389.2	395.8	424.2	427.3
37.5°	993.5	545.7	422.3	398.7	389.2	384.8	379.8	383.7	407.1	434.4	451.2
40°	1055.3	550.7	419.7	402.6	382.1	377.9	369.5	384.0	420.2	468.5	481.1
42.5°	1163.5	553.6	422.8	400.8	384.5	368.2	373.7	389.5	427.6	455.1	474.6
45°	1275.3	562.6	420.7	395.3	379.2	386.9	379.2	393.4	411.5	412.3	427.0
47.5°	1385.1	598.5	416.3	384.0	377.9	397.9	378.5	380.8	382.1	386.9	404.2
50°	1514.1	636.9	410.0	368.2	379.8	398.4	381.3	369.8	368.5	384.0	403.4
52.5°	1660.6	680.2	401.8	353.0	369.0	393.4	391.3	370.6	359.3	374.3	393.7
55°	1833.2	729.6	392.4	337.7	357.2	393.9	396.8	365.1	359.5	375.8	396.6
57.5°	2062.4	801.0	374.0	315.7	342.7	385.8	382.7	358.8	353.5	370.8	392.4
60°	2453.8	938.4	347.7	293.9	327.2	365.8	371.1	347.5	342.2	361.4	384.0
62.5°	2977.7	1103.6	315.9	272.6	308.3	344.3	356.7	331.2	330.7	355.1	378.7
65°	3465.4	1197.3	283.1	253.2	288.9	324.4	340.4	315.9	317.0	347.7	371.4
67.5°	3668.2	1087.0	253.7	235.8	266.6	301.5	327.0	304.1	300.7	337.7	359.5
70°	3477.8	863.5	228.2	217.5	241.4	276.8	308.3	288.4	280.5	314.1	331.2
72.5°	3077.3	719.9	204.3	195.9	219.3	250.8	283.1	267.1	256.9	282.6	297.8
75°	2405.4	590.7	177.0	174.7	194.1	227.2	256.9	245.8	232.7	249.0	264.2
77.5°	1369.6	373.7	148.6	150.2	164.1	199.1	225.3	216.7	203.3	210.1	227.7
80°	548.1	188.6	119.5	120.5	132.4	163.6	186.7	183.6	169.7	175.2	187.3
82.5°	204.9	103.5	88.2	88.8	100.6	129.5	159.4	157.8	144.7	140.8	147.6
85°	81.4	51.2	54.1	56.5	67.8	93.2	127.9	113.5	98.0	85.9	90.1
87.5°	19.4	16.3	18.9	20.0	22.1	29.2	46.7	37.6	38.6	31.0	23.1
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)