

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: P596930

Luminaire Tested: **MSA-SA2A-835-U-T2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596930  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-835-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: 6536 lumens  
Efficiency: N/A  
Efficacy: 99.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

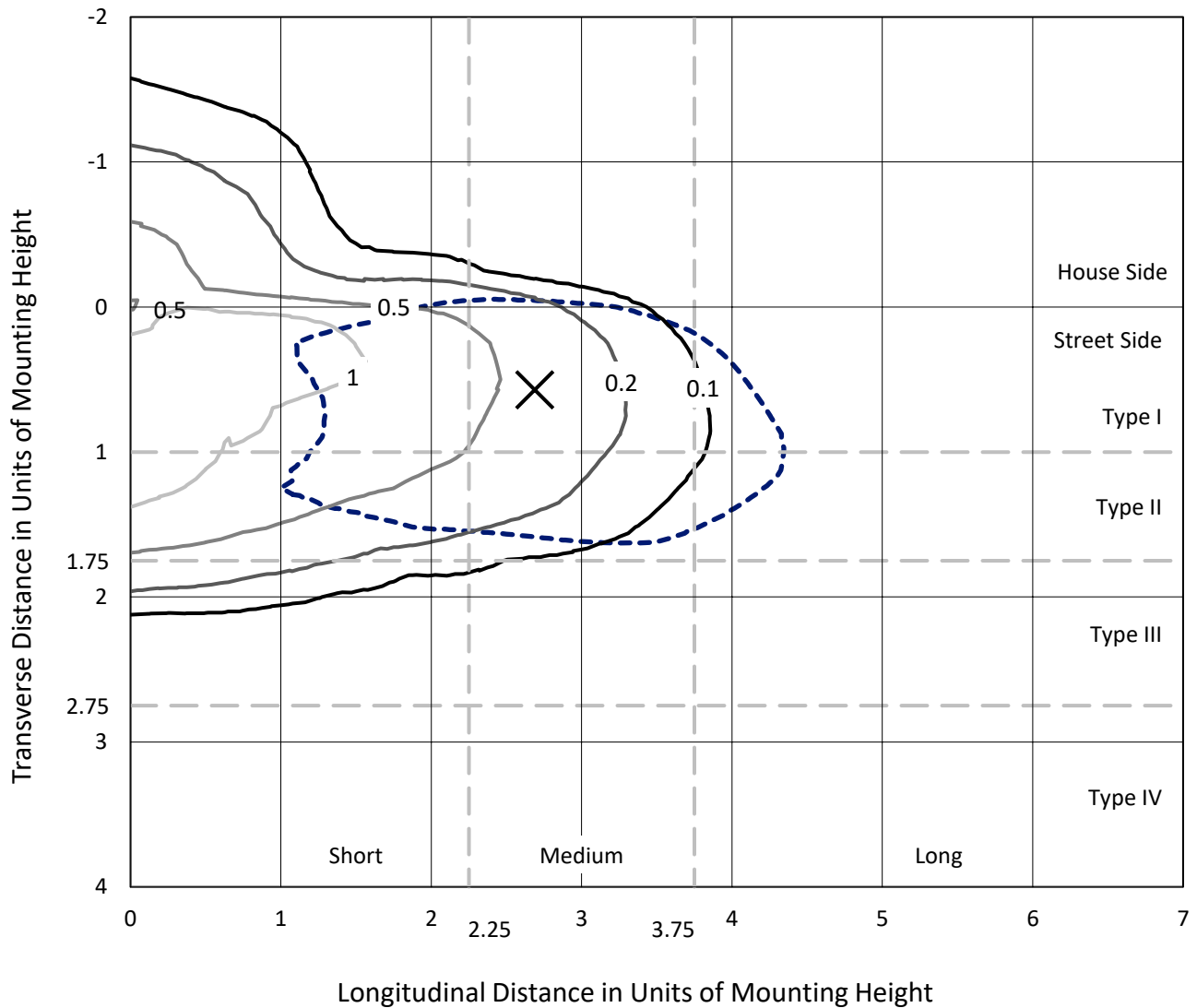
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

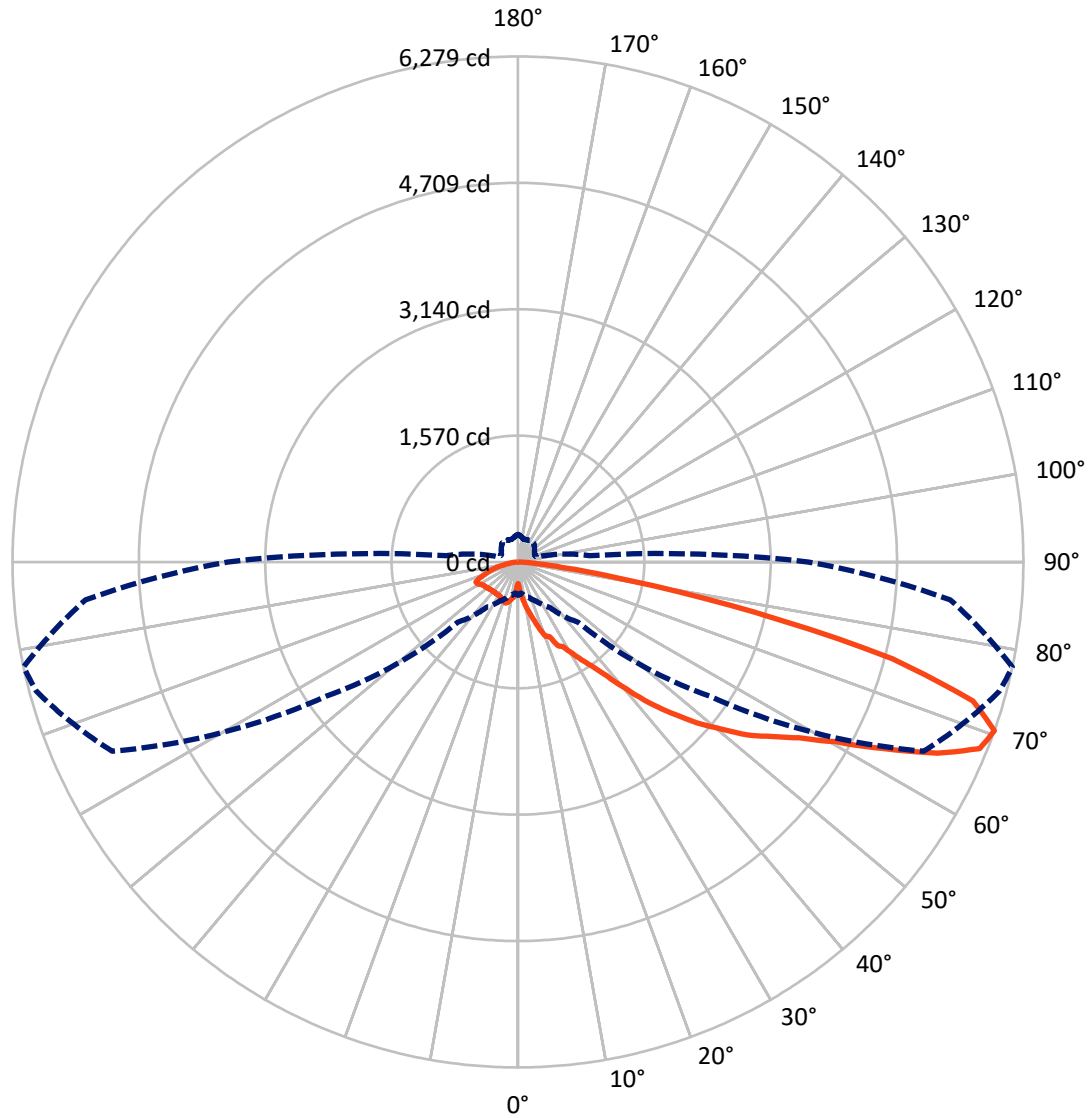
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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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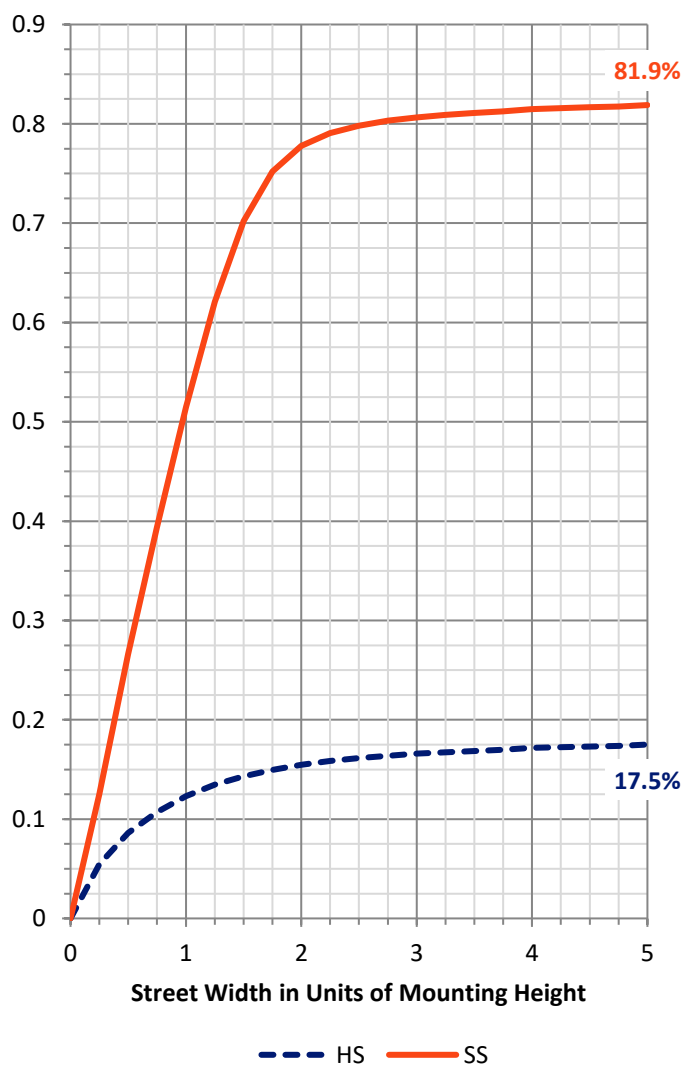
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1166.6	0.0	1166.6
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	5369.4	0.0	5369.4
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	6536.0	0.0	6536.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.2	0.6
10°-20°	181.4	2.8
20°-30°	349.2	5.3
30°-40°	588.3	9.0
40°-50°	1017.8	15.6
50°-60°	1536.8	23.5
60°-70°	1702.2	26.0
70°-80°	981.4	15.0
80°-90°	137.6	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°	6536.0	100.0
0°-180°	6536.0	100.0

**Coefficient of Utilization**



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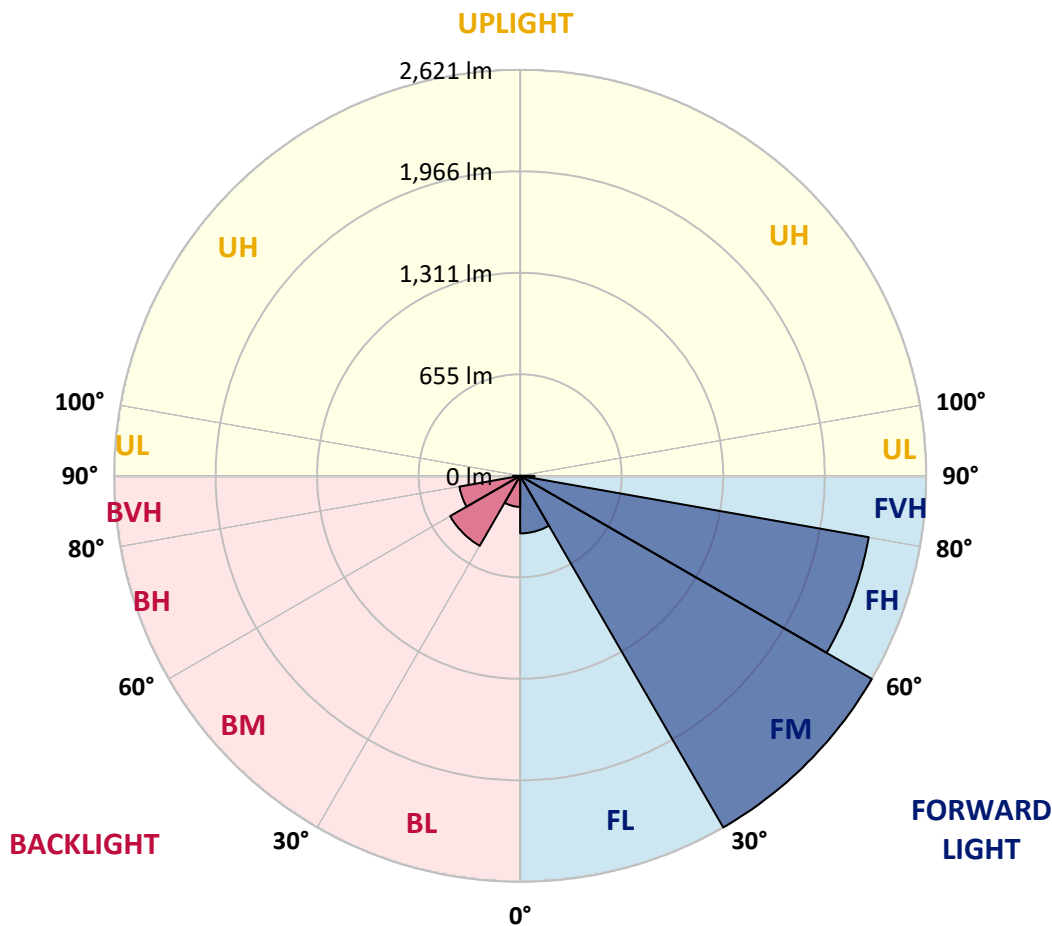
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	371.6	5.7			
FM (30°-60°)	2621.1	40.1			
FH (60°-80°)	2284.9	35.0			G2/5000
FVH (80°-90°)	91.8	1.4			G1/100
BL (0°-30°)	200.3	3.1	B1/500		
BM (30°-60°)	521.8	8.0	B1/1000		
BH (60°-80°)	398.7	6.1	B1/500		G1/500
BVH (80°-90°)	45.8	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°	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5
2.5°	343.0	330.8	312.3	319.9	329.1	330.2	327.2	310.3	304.6	317.4	321.2
5°	480.6	459.9	447.4	443.3	429.4	400.5	421.2	410.6	412.8	406.5	418.8
7.5°	596.4	582.5	564.0	558.8	527.0	504.3	518.5	513.9	491.5	482.8	496.7
10°	655.3	640.0	640.8	629.7	621.2	623.4	616.3	595.9	579.3	567.6	534.0
12.5°	690.7	694.5	715.0	709.2	741.1	767.3	747.4	717.1	664.6	653.9	620.7
15°	774.9	789.1	770.0	778.7	792.3	842.5	834.3	827.8	772.2	751.5	690.2
17.5°	861.6	864.3	835.4	830.8	863.5	888.8	920.7	883.9	890.7	876.3	777.1
20°	880.1	898.9	857.5	828.9	896.2	946.3	985.8	946.8	982.8	986.6	848.7
22.5°	947.9	925.3	870.8	842.7	901.6	963.2	1027.5	1049.3	1037.8	1005.7	918.0
25°	995.1	983.1	927.5	896.4	918.8	975.4	1088.2	1145.2	1155.3	1150.9	983.9
27.5°	1082.5	1088.5	974.1	982.8	951.7	956.9	1124.8	1272.4	1209.5	1192.1	1065.6
30°	1220.7	1194.0	1065.6	1072.7	1021.2	1012.5	1201.9	1382.2	1325.8	1304.9	1132.9
32.5°	1364.8	1367.3	1211.4	1150.9	1123.4	1114.7	1186.6	1439.7	1473.0	1445.7	1234.6
35°	1568.1	1553.9	1369.4	1289.9	1190.4	1175.2	1295.3	1606.5	1667.5	1591.2	1355.3
37.5°	1877.6	1834.8	1620.1	1436.2	1362.6	1345.2	1450.6	1756.1	1893.4	1798.6	1552.5
40°	2126.1	2039.2	1844.1	1620.1	1495.6	1517.1	1561.0	1937.5	2127.7	2074.3	1735.1
42.5°	2324.2	2247.1	2002.7	1845.2	1676.0	1649.3	1697.2	2162.3	2446.5	2394.2	1962.9
45°	2514.1	2357.1	2180.9	2039.2	1876.5	1908.9	1901.8	2391.7	2837.5	2676.5	2164.2
47.5°	2701.5	2554.1	2369.7	2179.2	2015.5	2217.4	2141.9	2562.3	3101.3	2981.9	2376.2
50°	2942.4	2780.3	2570.2	2378.7	2280.6	2428.3	2301.6	2706.7	3396.6	3256.6	2576.2
52.5°	3102.3	2944.6	2760.4	2623.6	2614.6	2557.7	2525.3	2889.5	3655.5	3570.4	2788.2
55°	3083.5	2931.5	2848.1	2863.1	2974.3	2782.2	2755.8	3160.1	3925.5	3827.1	3017.1
57.5°	2847.9	2681.9	2699.6	2788.5	3087.1	3176.5	3131.5	3449.2	4166.3	4121.7	3300.2
60°	2218.5	2133.2	2277.3	2439.7	2936.1	3292.0	3608.0	3801.8	4462.8	4534.2	3744.8
62.5°	1441.1	1327.2	1555.0	1830.7	2485.7	3215.7	4093.3	4470.4	4948.3	5110.4	4420.6
65°	746.6	728.3	887.7	1141.1	1730.5	2741.9	4264.4	5171.8	5538.5	5727.3	5066.0
67.5°	542.8	509.0	582.8	731.9	1056.4	1869.7	3940.2	5708.2	6012.3	6185.3	5441.2
70°	413.3	388.3	444.7	537.0	689.9	1056.1	2908.6	5561.9	6195.2	6279.1	5391.4
72.5°	309.5	288.0	337.3	423.4	531.6	594.5	1719.3	4573.1	5883.2	5911.8	4838.8
75°	247.1	230.5	251.8	334.3	433.2	404.6	913.3	3313.2	4779.9	4804.5	3696.1
77.5°	202.7	188.5	197.3	250.7	337.0	304.3	453.1	2107.6	3034.8	2997.2	2079.5
80°	165.4	153.1	157.2	181.2	256.7	227.2	254.5	1099.4	1447.6	1389.3	864.8
82.5°	127.2	116.9	125.1	133.2	185.8	163.2	148.5	500.3	592.9	552.3	317.2
85°	85.3	75.7	108.7	100.0	121.5	100.3	81.2	199.2	221.0	206.0	111.4
87.5°	23.4	22.1	36.5	49.9	49.9	37.9	29.7	48.2	61.6	53.9	26.2
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°	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5	266.5
2.5°	322.9	316.9	301.1	299.7	303.5	304.1	301.6	295.9	292.9	309.3	306.8
5°	415.8	394.5	381.7	370.0	353.7	341.9	344.9	353.1	355.8	368.1	369.5
7.5°	488.0	459.9	431.9	394.3	369.5	353.7	365.7	374.4	381.2	398.6	405.7
10°	519.3	488.8	449.0	409.5	402.7	405.4	398.6	400.8	411.4	412.2	415.8
12.5°	577.6	543.0	471.4	435.7	433.8	439.5	437.0	447.1	454.5	474.4	465.9
15°	633.5	589.4	488.3	451.8	443.9	455.3	468.6	485.5	501.3	520.1	510.6
17.5°	701.3	634.9	489.1	444.4	445.8	470.3	484.2	493.4	540.6	566.5	553.4
20°	744.1	639.5	470.8	426.1	445.8	467.8	487.2	497.3	550.1	589.1	598.1
22.5°	782.8	641.1	456.7	416.3	428.9	458.0	487.2	509.5	543.3	580.6	582.0
25°	804.1	639.8	438.4	417.2	428.6	443.0	468.9	489.4	514.4	566.5	567.8
27.5°	858.6	622.0	420.4	420.4	426.4	427.0	459.9	471.9	475.5	522.9	531.3
30°	874.4	625.9	418.2	419.9	422.9	417.4	431.9	439.8	444.9	485.8	487.2
32.5°	899.7	595.3	424.8	415.0	411.2	410.3	413.9	421.0	423.1	448.2	452.8
35°	930.5	583.1	427.0	413.6	406.0	401.9	412.5	403.8	410.6	440.0	443.3
37.5°	1030.8	566.2	438.1	413.6	403.8	399.2	394.0	398.1	422.3	450.7	468.1
40°	1094.8	571.4	435.4	417.7	396.4	392.1	383.4	398.4	436.0	486.1	499.2
42.5°	1207.0	574.4	438.7	415.8	398.9	382.0	387.7	404.1	443.6	472.2	492.4
45°	1323.1	583.6	436.5	410.1	393.4	401.3	393.4	408.2	427.0	427.8	443.0
47.5°	1437.0	621.0	431.9	398.4	392.1	412.8	392.6	395.1	396.4	401.3	419.3
50°	1570.8	660.7	425.3	382.0	394.0	413.3	395.6	383.6	382.3	398.4	418.5
52.5°	1722.8	705.7	416.9	366.2	382.8	408.2	406.0	384.5	372.7	388.3	408.4
55°	1901.8	756.9	407.1	350.4	370.6	408.7	411.7	378.7	373.0	389.9	411.4
57.5°	2139.7	831.0	388.0	327.5	355.6	400.3	397.0	372.2	366.7	384.7	407.1
60°	2545.7	973.5	360.8	304.9	339.5	379.6	385.0	360.5	355.0	374.9	398.4
62.5°	3089.3	1144.9	327.8	282.8	319.9	357.2	370.0	343.6	343.0	368.4	392.9
65°	3595.2	1242.2	293.7	262.7	299.7	336.5	353.1	327.8	328.9	360.8	385.3
67.5°	3805.6	1127.8	263.2	244.7	276.6	312.8	339.2	315.5	312.0	350.4	373.0
70°	3608.0	895.9	236.8	225.6	250.4	287.2	319.9	299.2	291.0	325.9	343.6
72.5°	3192.5	746.8	212.0	203.3	227.5	260.2	293.7	277.1	266.5	293.2	309.0
75°	2495.6	612.8	183.6	181.2	201.4	235.7	266.5	255.0	241.4	258.3	274.1
77.5°	1420.9	387.7	154.2	155.9	170.3	206.5	233.8	224.8	210.9	218.0	236.2
80°	568.6	195.6	124.0	125.1	137.3	169.7	193.7	190.5	176.0	181.7	194.3
82.5°	212.5	107.4	91.5	92.1	104.4	134.3	165.4	163.8	150.1	146.0	153.1
85°	84.5	53.1	56.1	58.6	70.3	96.7	132.7	117.7	101.6	89.1	93.5
87.5°	20.2	16.9	19.6	20.7	22.9	30.2	48.5	39.0	40.1	32.2	24.0
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)