

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: P596892

Luminaire Tested: **MSA-SA1C-835-U-T4W**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596892  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-835-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5243 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

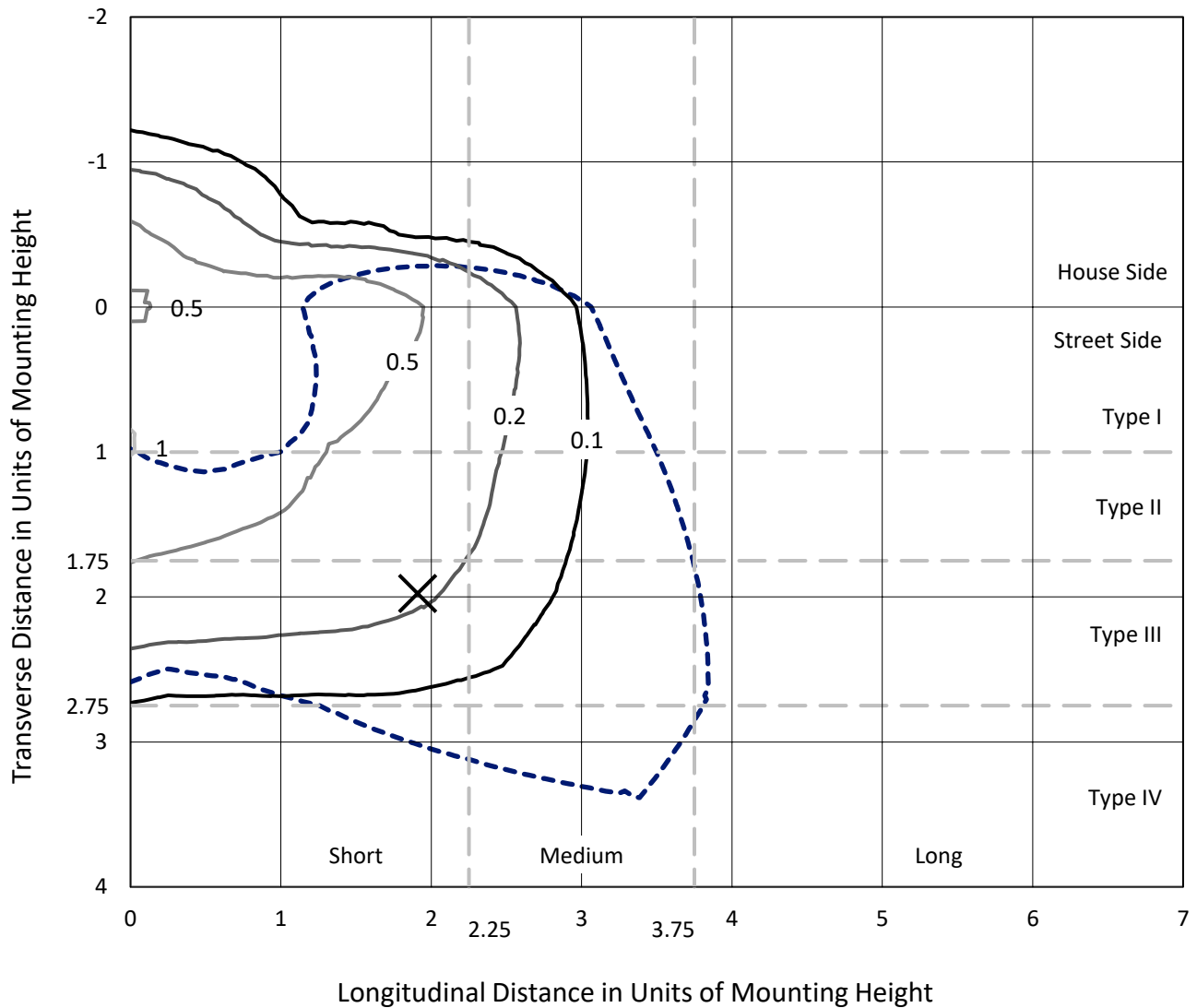
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

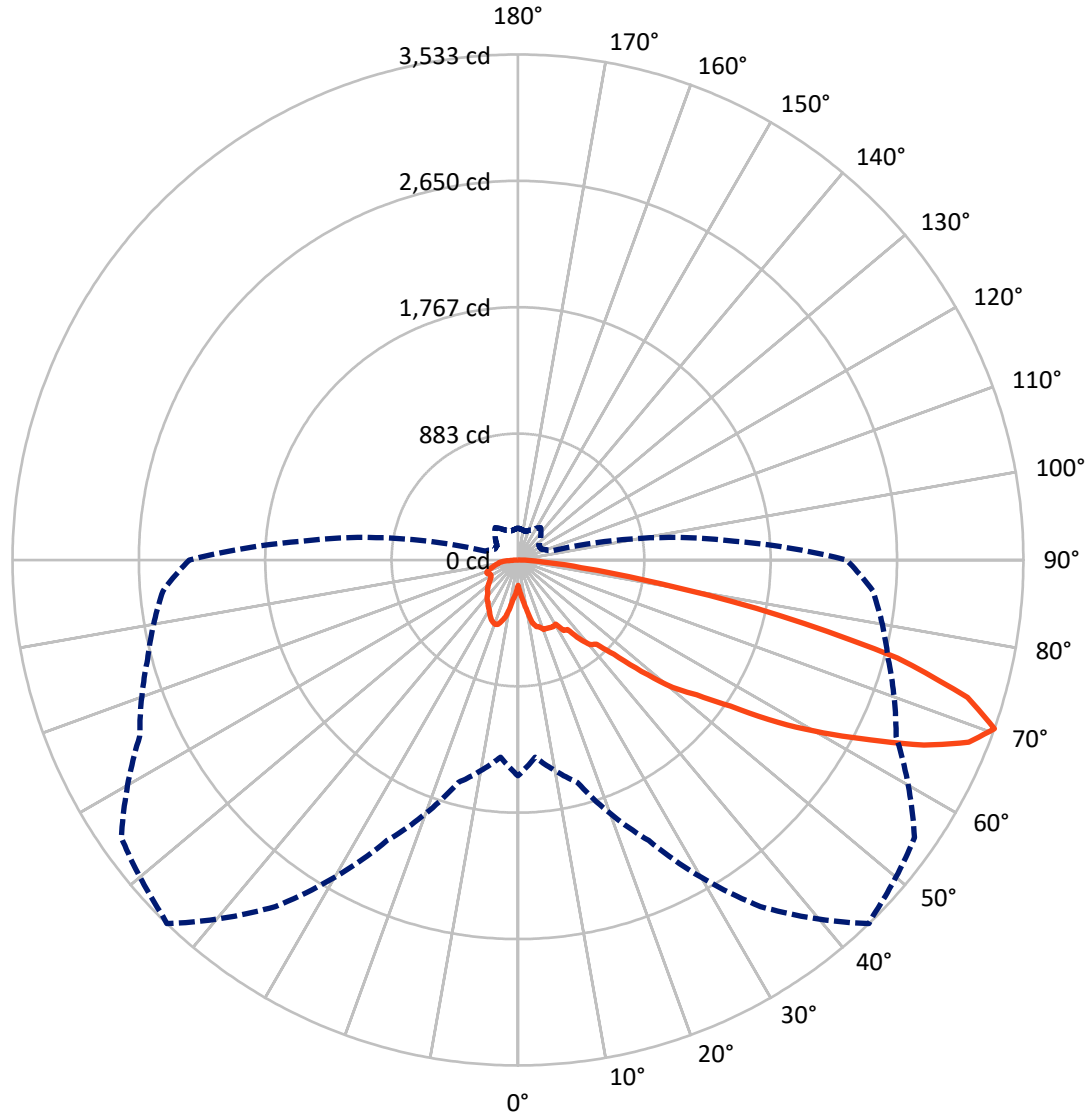
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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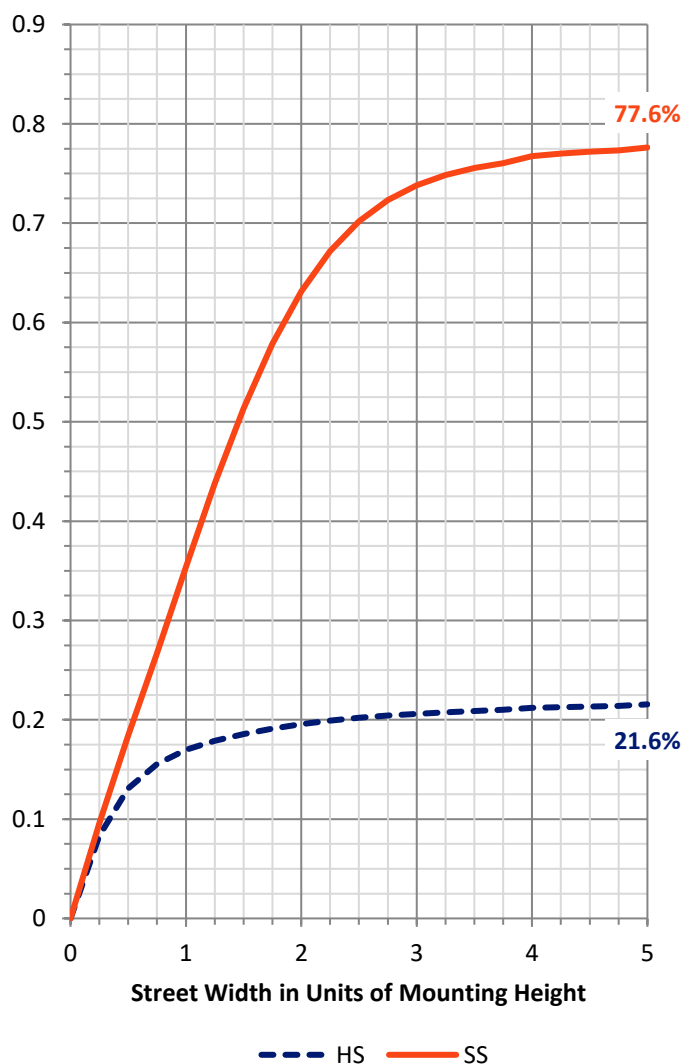
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1156.8	0.0	1156.8
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	4086.2	0.0	4086.2
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	5243.0	0.0	5243.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.9	0.5
10°-20°	128.7	2.5
20°-30°	240.5	4.6
30°-40°	386.0	7.4
40°-50°	651.5	12.4
50°-60°	1160.9	22.1
60°-70°	1588.0	30.3
70°-80°	933.8	17.8
80°-90°	125.7	2.4
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°	5243.0	100.0
0°-180°	5243.0	100.0

**Coefficient of Utilization**



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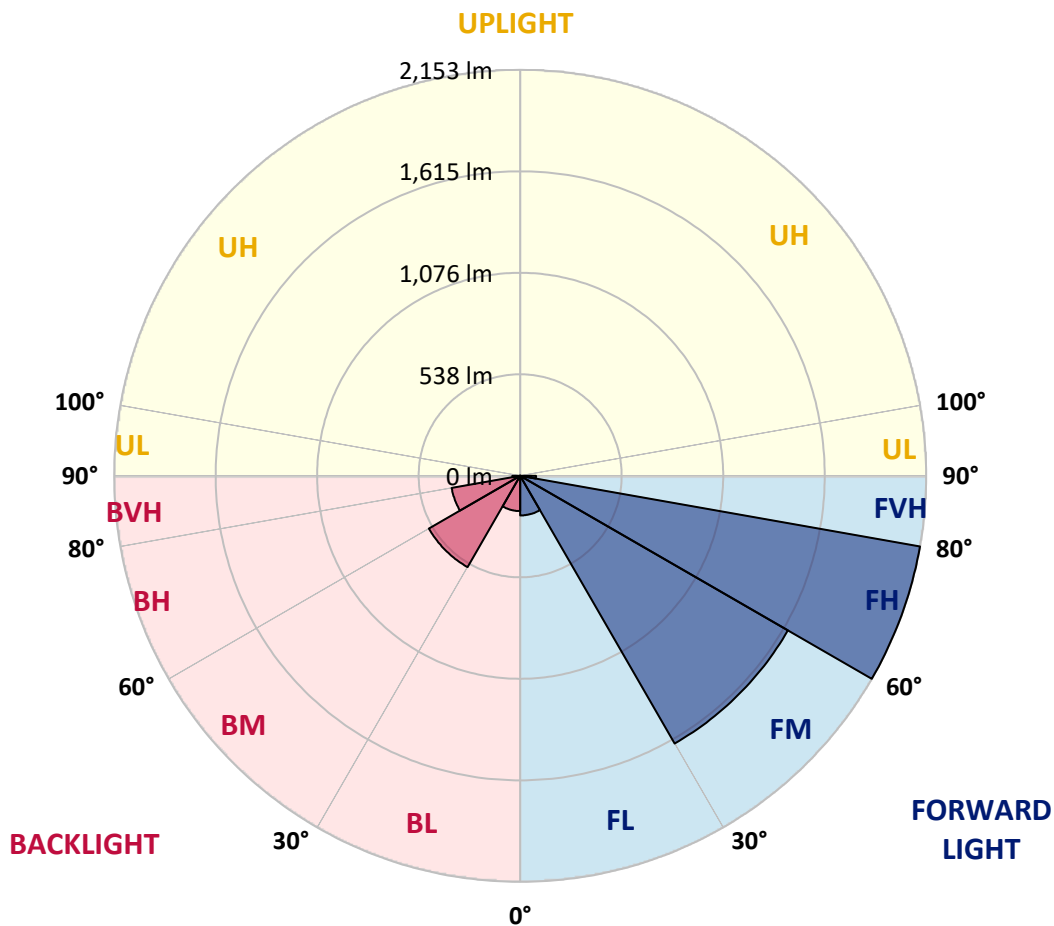
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	210.1	4.0			
FM (30°-60°)	1639.3	31.3			
FH (60°-80°)	2152.9	41.1			G2/5000
FVH (80°-90°)	83.8	1.6			G1/100
BL (0°-30°)	187.0	3.6	B1/500		
BM (30°-60°)	559.0	10.7	B1/1000		
BH (60°-80°)	368.9	7.0	B1/500		G1/500
BVH (80°-90°)	41.9	0.8			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2
2.5°	216.3	212.0	201.6	205.1	209.4	211.1	210.7	210.2	203.6	201.2	213.0
5°	293.9	284.4	276.9	273.9	264.0	256.3	251.5	264.0	262.1	265.3	273.5
7.5°	367.0	360.9	344.0	337.9	317.7	304.4	302.9	312.8	315.4	310.2	324.2
10°	414.0	403.7	400.3	385.9	371.9	369.8	368.5	364.0	357.7	357.3	344.8
12.5°	450.6	456.0	458.8	442.2	442.6	450.4	446.3	428.0	417.5	399.0	400.5
15°	516.2	523.9	501.8	491.2	471.0	482.6	481.1	465.9	464.4	452.3	438.3
17.5°	573.3	576.8	539.8	515.7	508.9	492.1	496.6	497.0	477.3	498.7	486.3
20°	578.1	590.3	547.8	499.8	520.5	518.3	519.0	514.7	488.6	524.1	519.4
22.5°	601.3	582.6	544.3	509.3	514.7	517.9	520.9	515.7	514.2	534.0	548.4
25°	597.0	591.0	552.3	522.6	523.3	523.9	525.4	540.9	539.2	566.0	573.6
27.5°	637.2	627.9	554.6	547.3	530.6	526.9	516.6	548.8	574.0	573.3	614.8
30°	713.7	704.3	609.7	588.4	558.1	520.7	540.5	583.4	603.2	609.9	662.6
32.5°	833.3	848.7	718.0	632.2	594.6	586.5	584.3	580.0	629.0	661.9	709.9
35°	1004.8	992.6	845.7	726.2	633.1	598.1	602.8	629.0	687.3	708.6	752.9
37.5°	1201.3	1175.9	1009.3	832.6	744.0	700.2	684.5	709.9	722.8	739.5	830.0
40°	1401.0	1339.1	1169.9	972.6	810.7	777.6	763.8	732.6	763.0	796.9	911.9
42.5°	1593.8	1545.9	1344.7	1139.6	922.9	804.9	797.4	766.8	860.8	896.7	1030.2
45°	1795.9	1684.8	1523.8	1328.1	1086.9	938.8	927.6	872.8	993.2	1068.0	1197.0
47.5°	1931.8	1828.8	1687.8	1481.2	1224.3	1162.8	1141.5	1047.8	1157.0	1254.2	1454.8
50°	2060.3	1954.4	1806.2	1648.7	1473.0	1402.3	1356.9	1200.9	1361.0	1519.2	1785.2
52.5°	2244.4	2149.6	1943.8	1817.4	1740.2	1566.3	1532.6	1446.8	1599.6	1813.1	2146.3
55°	2441.1	2311.9	2125.5	2055.4	2024.2	1801.5	1774.0	1719.4	1917.4	2113.9	2497.4
57.5°	2527.9	2393.1	2290.4	2248.5	2245.9	2143.3	2111.7	2073.7	2242.2	2371.8	2827.8
60°	2596.9	2452.3	2411.2	2434.6	2519.8	2452.3	2411.2	2377.7	2506.6	2626.8	3097.4
62.5°	2584.2	2439.1	2460.2	2531.6	2748.9	2768.7	2737.1	2655.8	2768.7	2835.8	3252.0
65°	2379.6	2245.4	2368.2	2537.6	2962.0	3120.0	3118.3	2905.6	2944.8	2944.8	3235.6
67.5°	2021.0	1882.1	2083.1	2484.5	3109.2	3398.4	3398.8	3170.5	2960.9	2933.8	2982.8
70°	1509.1	1383.4	1609.3	2163.8	2957.2	3533.2	3513.6	3384.2	2916.6	2679.9	2491.6
72.5°	901.4	820.1	1028.0	1575.1	2522.5	3285.3	3337.3	3138.0	2670.0	2228.7	1781.1
75°	409.3	374.1	483.1	904.8	1800.9	2740.3	2796.9	2648.3	2120.8	1602.9	1029.3
77.5°	175.2	165.7	210.9	401.4	993.0	1874.0	1989.8	1892.7	1436.9	931.5	455.3
80°	112.6	106.6	129.6	193.0	461.1	1012.5	1112.3	1076.0	732.0	362.2	160.4
82.5°	67.3	65.4	86.6	121.2	251.5	445.6	502.2	515.5	304.0	162.5	91.8
85°	36.8	37.2	47.5	73.5	150.9	173.5	185.7	202.1	143.2	94.2	44.5
87.5°	12.3	14.2	19.1	29.9	53.7	49.0	49.2	57.2	60.4	39.1	14.2
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°	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2	178.2
2.5°	215.0	211.1	201.2	201.9	205.5	206.4	207.5	201.2	199.9	211.8	212.8
5°	274.7	262.1	256.3	254.3	248.7	246.8	257.1	261.8	266.6	275.8	280.3
7.5°	322.7	308.5	298.0	288.3	280.1	275.4	292.8	306.1	314.3	333.2	341.8
10°	344.6	332.4	328.5	320.7	327.0	341.2	344.4	344.8	362.9	362.5	366.1
12.5°	388.2	380.3	367.6	370.4	386.7	401.4	397.3	403.5	410.0	425.4	418.3
15°	428.0	425.9	414.0	416.0	419.2	437.5	439.8	446.1	456.0	468.2	459.8
17.5°	477.0	476.2	447.4	444.8	452.3	470.2	464.6	453.6	486.3	499.4	496.0
20°	510.4	503.9	466.9	456.0	475.1	477.5	471.0	453.6	482.0	510.6	518.3
22.5°	538.1	530.6	492.5	471.0	467.1	468.2	468.2	465.0	479.0	502.4	502.2
25°	560.4	567.5	519.2	498.5	477.9	452.1	448.9	451.7	459.6	504.8	503.3
27.5°	616.6	597.0	528.2	512.7	470.4	429.7	438.6	442.9	445.4	494.9	503.0
30°	653.1	659.1	560.4	521.1	459.4	404.8	407.8	420.3	435.3	493.8	496.2
32.5°	702.3	689.4	610.8	507.1	430.2	389.8	384.2	400.9	423.3	476.4	482.8
35°	748.1	763.4	632.0	504.6	409.7	367.2	373.2	379.0	402.2	457.0	464.6
37.5°	855.6	820.8	691.8	492.1	392.8	355.8	349.3	358.2	377.9	420.3	437.7
40°	937.3	939.5	704.7	476.4	360.3	339.4	325.7	334.5	342.9	376.6	384.2
42.5°	1090.6	1043.7	736.3	442.0	339.9	314.9	307.2	311.1	312.4	326.6	339.0
45°	1285.6	1175.7	748.8	395.8	313.0	304.8	289.1	287.2	280.1	282.1	293.0
47.5°	1555.4	1381.7	739.7	346.5	289.1	291.7	269.2	260.3	250.4	252.8	263.1
50°	1904.3	1644.8	739.1	304.8	272.8	274.5	256.0	240.1	230.2	235.2	244.2
52.5°	2295.7	1908.8	742.1	276.2	255.0	254.1	247.4	228.1	220.1	225.3	235.6
55°	2670.2	2135.8	764.5	258.2	236.5	238.0	240.6	224.2	215.4	220.1	230.9
57.5°	2996.1	2315.1	756.1	239.1	219.3	226.2	233.0	218.8	212.2	219.1	229.8
60°	3224.0	2398.3	689.9	220.8	206.6	216.1	229.4	218.2	217.3	232.2	245.1
62.5°	3307.2	2367.5	560.9	206.4	199.1	214.8	237.8	232.4	233.3	251.5	269.4
65°	3185.8	2205.9	418.3	197.1	193.3	221.0	257.1	240.8	229.0	244.0	260.3
67.5°	2840.3	1918.5	305.7	189.2	186.6	230.9	275.0	239.9	218.0	233.3	246.6
70°	2297.9	1514.3	236.7	179.1	177.8	224.2	276.7	233.5	206.2	216.1	223.6
72.5°	1574.5	1036.8	196.1	169.4	162.5	198.6	262.7	219.1	192.0	197.8	204.0
75°	879.9	581.9	164.9	157.4	142.3	176.9	246.4	210.5	181.4	183.2	191.8
77.5°	394.9	251.7	140.0	141.5	124.0	156.5	225.1	196.7	165.3	161.4	170.0
80°	149.4	122.8	113.5	119.5	104.3	135.7	202.9	184.2	148.3	143.4	148.3
82.5°	86.6	74.4	84.3	92.0	82.8	124.7	193.7	172.8	130.7	118.2	122.5
85°	40.2	38.5	50.5	59.8	57.8	97.2	165.7	130.1	93.1	78.7	87.1
87.5°	10.5	11.8	17.8	21.1	21.5	33.3	63.8	48.4	36.3	27.5	26.4
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)