

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: P596955

Luminaire Tested: **MSA-SA2B-835-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596955  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-835-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6149 lumens  
Efficiency: N/A  
Efficacy: 72.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

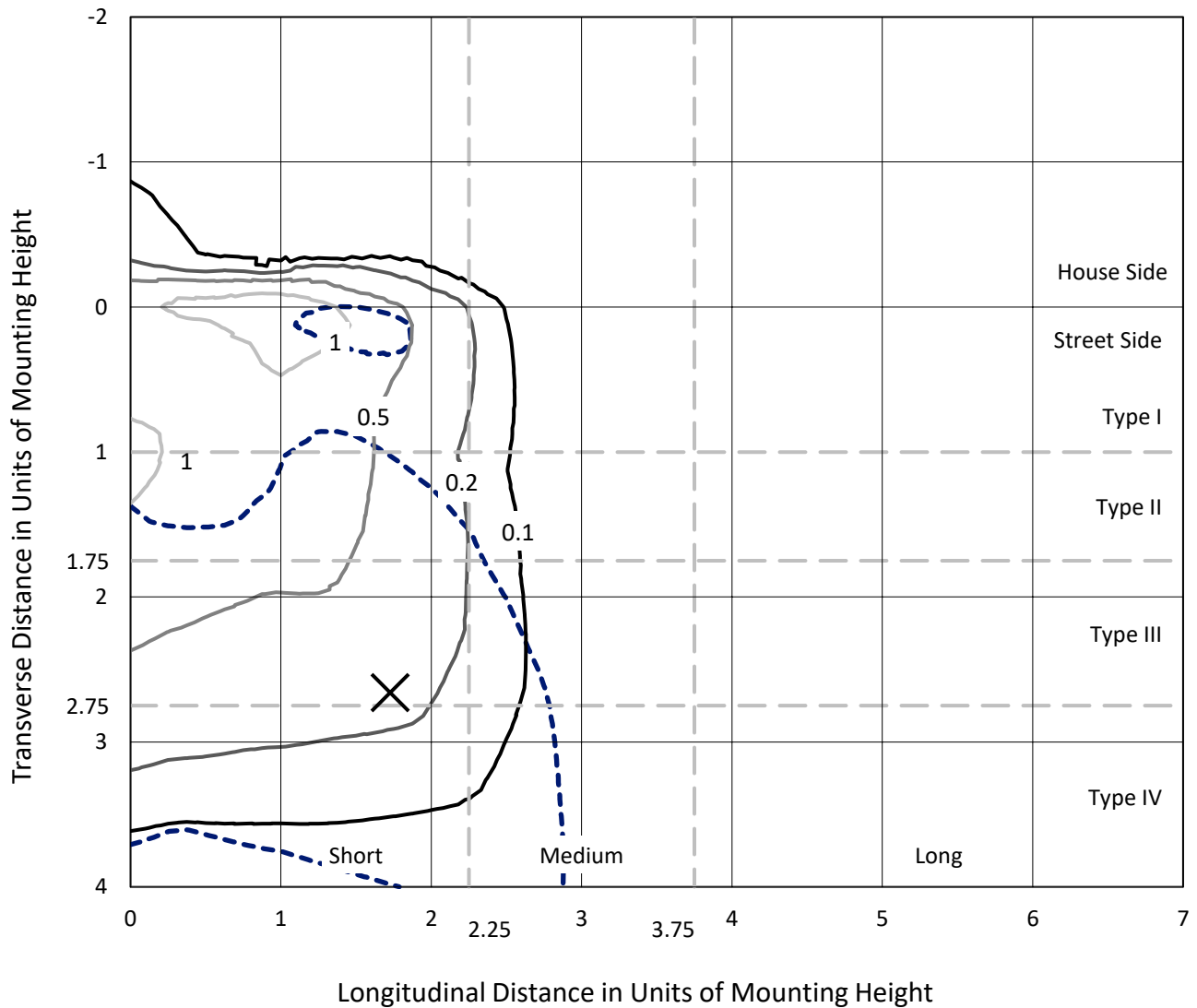
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

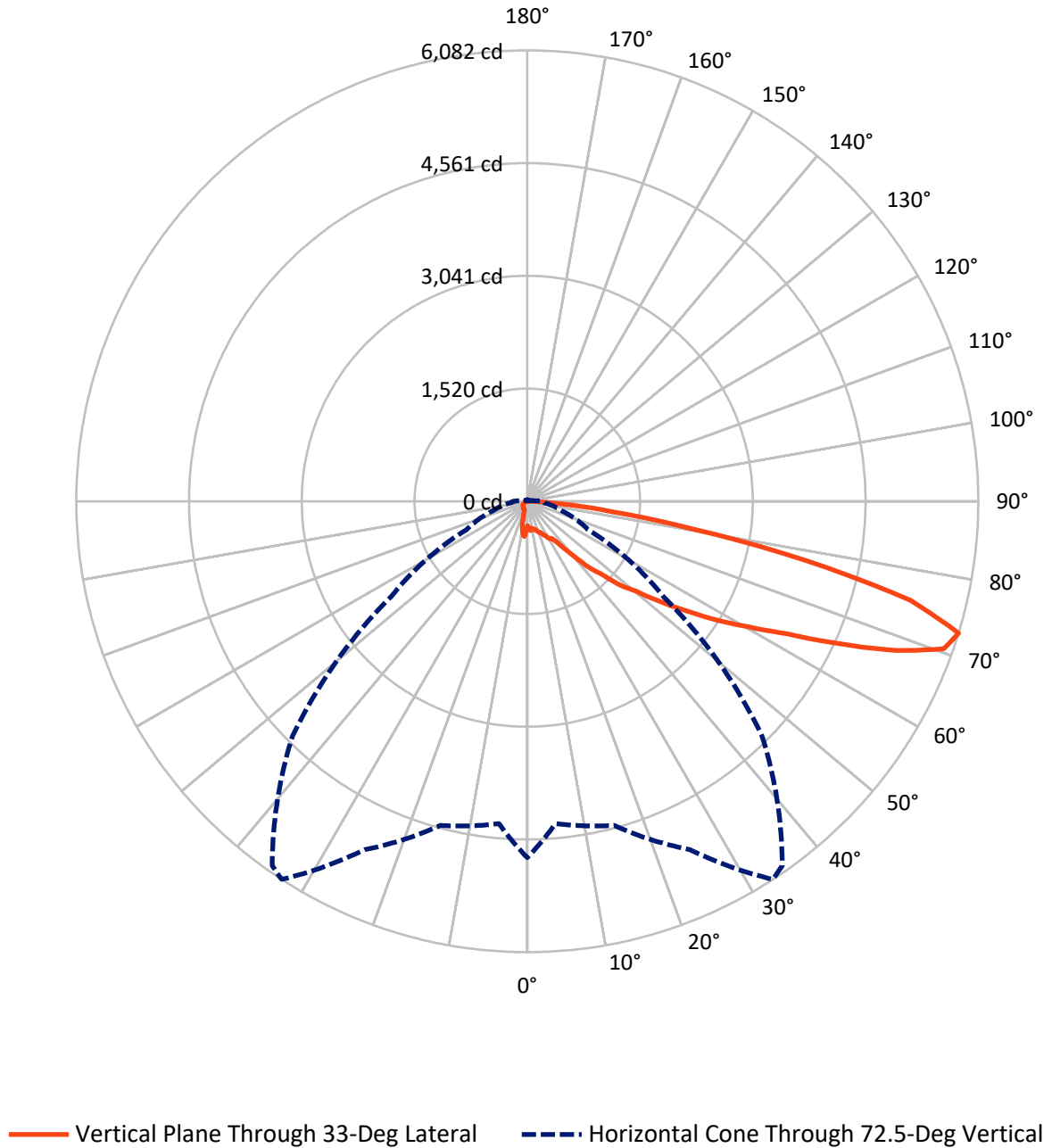
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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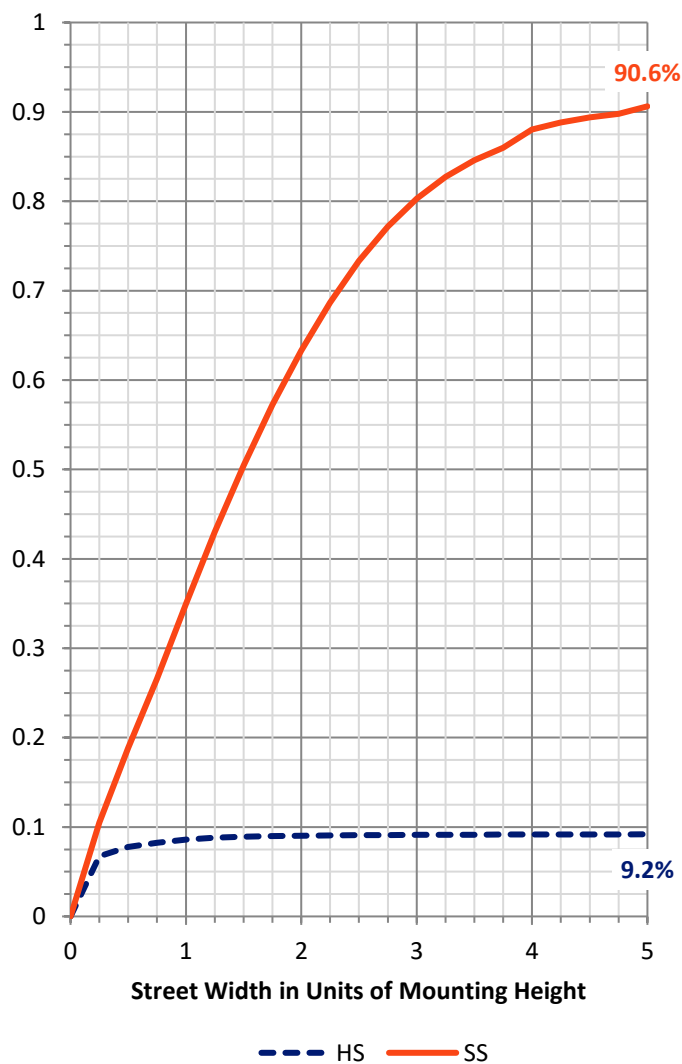
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	568.6	0.0	568.6
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	5580.4	0.0	5580.4
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	6149.0	0.0	6149.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.3	0.7
10°-20°	126.1	2.1
20°-30°	213.9	3.5
30°-40°	391.5	6.4
40°-50°	826.3	13.4
50°-60°	1382.4	22.5
60°-70°	1850.5	30.1
70°-80°	1208.7	19.7
80°-90°	107.2	1.7
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°	6149.0	100.0
0°-180°	6149.0	100.0

**Coefficient of Utilization**

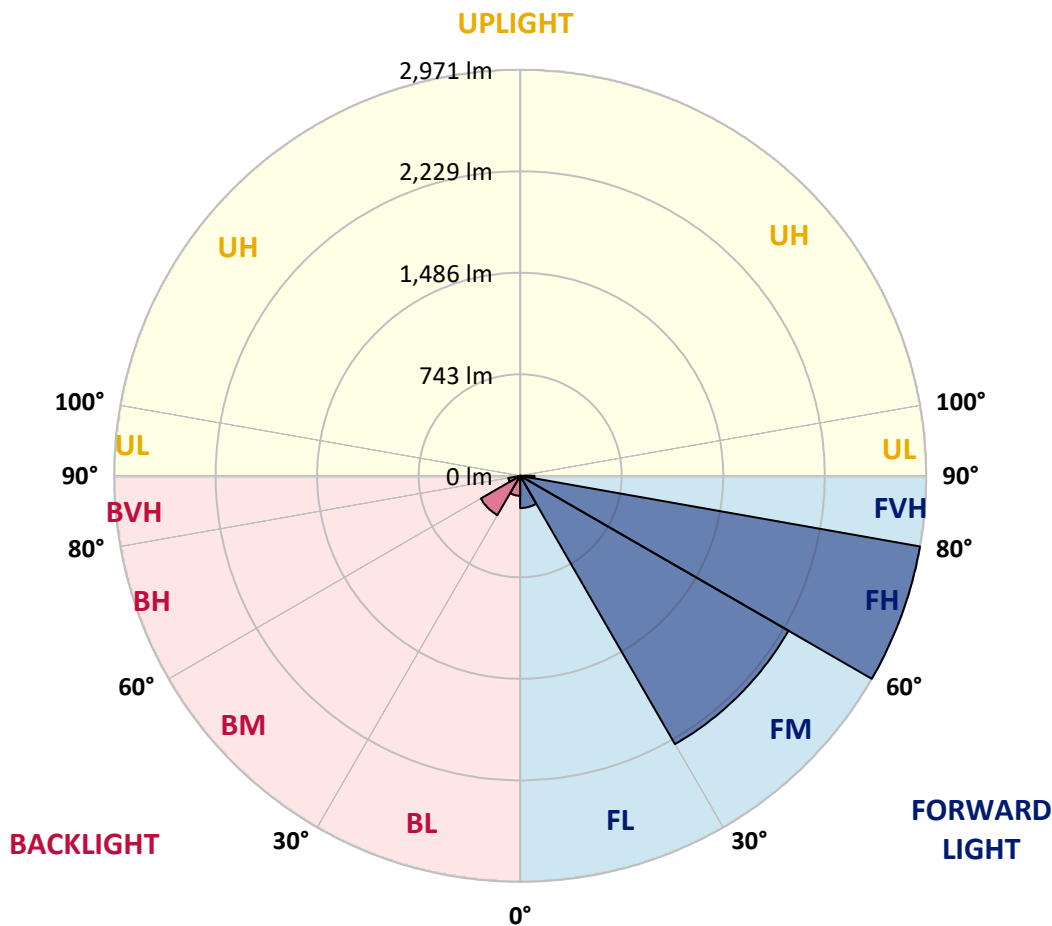


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	236.0	3.8			
FM (30°-60°)	2267.8	36.9			
FH (60°-80°)	2971.5	48.3			G2/5000
FVH (80°-90°)	105.1	1.7			G2/225
BL (0°-30°)	146.3	2.4	B1/500		
BM (30°-60°)	332.4	5.4	B1/1000		
BH (60°-80°)	87.8	1.4	B0/110		G0/110
BVH (80°-90°)	2.1	0.0			G0/10
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°	33°	35°	45°	55°	65°	75°	85°
0°	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1
2.5°	389.9	374.9	353.0	354.4	358.1	361.2	369.4	366.0	359.5	359.1	389.9
5°	413.1	396.4	395.0	397.0	396.0	401.5	394.7	416.8	435.6	458.2	494.3
7.5°	401.8	394.0	384.1	394.3	394.0	391.2	395.7	440.7	486.1	514.8	574.6
10°	369.4	360.5	368.0	371.4	369.0	381.0	410.7	447.6	501.8	561.9	591.0
12.5°	360.2	365.6	368.4	368.4	391.2	397.4	442.8	477.6	542.1	589.6	673.9
15°	396.0	406.6	387.8	383.7	390.9	394.3	444.8	486.8	569.4	656.2	726.8
17.5°	453.0	452.3	423.3	407.3	418.5	426.7	454.7	503.9	552.4	708.4	810.8
20°	492.3	493.0	440.7	407.3	444.5	449.3	480.3	519.6	557.8	734.7	865.8
22.5°	542.8	524.7	467.0	434.6	459.9	464.3	498.4	529.5	585.8	731.6	936.1
25°	584.1	572.5	499.8	477.3	499.8	493.7	524.7	571.5	615.9	780.4	977.4
27.5°	648.3	628.5	523.0	527.1	525.7	530.2	537.4	609.0	668.8	782.8	1073.0
30°	708.1	696.4	574.9	574.9	588.2	579.7	584.8	671.5	720.0	838.1	1180.5
32.5°	769.8	770.5	636.0	603.6	593.0	628.2	662.6	701.9	781.8	933.0	1345.1
35°	933.4	919.7	753.1	672.2	663.7	661.6	716.9	823.1	891.4	1056.6	1566.7
37.5°	1262.8	1215.4	1005.1	827.9	795.8	784.9	847.7	956.6	1024.5	1238.2	1933.0
40°	1600.8	1513.7	1280.2	1080.5	976.4	929.3	1002.3	1094.9	1215.7	1439.0	2272.0
42.5°	1897.5	1789.9	1487.5	1352.9	1217.4	1196.9	1128.3	1278.9	1488.8	1731.2	2604.2
45°	2186.6	1975.0	1671.8	1565.3	1400.7	1412.3	1389.1	1519.5	1772.5	2051.4	2898.8
47.5°	2385.7	2195.5	1897.8	1759.5	1693.7	1625.7	1810.1	1945.6	2025.1	2254.9	3153.5
50°	2600.1	2407.5	2092.1	1995.4	1908.7	1977.4	2216.7	2234.8	2228.3	2444.7	3326.9
52.5°	2876.9	2649.9	2315.0	2205.7	2254.9	2323.2	2599.4	2602.8	2408.9	2604.5	3451.8
55°	3133.0	2881.4	2612.0	2508.9	2611.7	2669.4	2975.6	2863.3	2514.0	2713.1	3513.3
57.5°	3493.8	3202.6	3007.0	2825.4	3033.6	2978.3	3306.4	3139.5	2632.1	2785.1	3490.8
60°	3949.9	3607.2	3411.2	3219.0	3442.3	3479.8	3629.4	3277.4	2677.9	2808.6	3355.2
62.5°	4413.9	4069.1	3811.3	3680.9	3934.2	4057.8	3928.4	3346.0	2622.9	2762.6	3048.3
65°	4989.5	4548.0	4246.9	4170.5	4639.9	4821.5	4282.1	3362.7	2516.8	2508.9	2450.9
67.5°	5383.8	4954.0	4677.8	4805.8	5372.9	5387.5	4599.6	3367.9	2159.3	1964.4	1608.6
70°	5477.3	5017.1	4893.5	5270.4	5957.7	5773.0	4702.0	3108.4	1601.5	1165.9	735.4
72.5°	4808.2	4365.1	4525.9	5182.7	6081.9	5997.3	4475.7	2242.6	901.6	466.3	225.7
75°	2949.3	2681.3	3395.2	4394.1	5338.7	5284.1	3491.8	1158.7	363.2	186.4	84.3
77.5°	1282.6	1191.1	1771.8	2915.5	3836.2	3787.4	2046.0	426.7	187.8	131.1	42.7
80°	424.4	411.7	671.2	1380.6	2247.1	2204.0	862.0	177.5	133.8	105.1	23.9
82.5°	100.7	100.0	234.2	635.3	1144.7	1108.8	264.6	98.0	97.0	83.0	12.6
85°	25.3	25.9	64.9	259.8	465.0	410.0	69.0	48.8	68.3	56.3	6.5
87.5°	0.0	0.0	16.7	37.2	70.3	44.0	7.5	13.0	19.1	20.1	3.4
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°	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1	327.1
2.5°	396.7	392.9	362.2	369.7	381.3	380.3	387.8	382.0	376.9	402.2	399.8
5°	504.6	484.1	474.5	487.9	480.7	464.0	478.0	475.6	471.5	480.0	486.5
7.5°	585.5	566.7	558.2	530.2	489.6	457.5	462.6	450.6	439.4	452.7	466.3
10°	612.1	601.9	600.9	546.2	508.0	461.6	406.6	359.1	346.5	329.8	337.3
12.5°	684.5	690.6	652.1	588.2	514.5	425.4	327.7	260.5	233.2	215.4	216.4
15°	743.9	765.4	709.4	594.7	452.7	324.3	218.2	157.7	140.7	136.2	134.9
17.5°	832.3	853.1	727.2	548.6	365.0	219.9	140.3	122.9	123.9	127.0	126.3
20°	897.9	894.8	711.8	467.0	269.0	144.1	117.4	115.0	120.5	129.4	127.3
22.5°	961.0	939.9	702.2	391.6	174.1	115.7	113.3	113.0	118.1	126.7	129.0
25°	1006.1	1009.5	686.2	306.6	126.7	107.5	109.6	112.7	117.8	127.0	125.6
27.5°	1135.1	1039.5	619.3	222.6	106.9	103.1	108.2	114.4	116.1	127.7	128.0
30°	1218.8	1152.9	575.6	149.9	98.7	95.2	105.5	113.7	115.7	130.8	131.8
32.5°	1364.6	1201.7	525.1	111.3	91.8	92.9	99.3	110.3	119.8	135.9	136.6
35°	1545.8	1358.4	433.6	100.0	89.4	87.7	90.8	103.4	119.1	136.6	140.0
37.5°	1891.0	1452.3	343.8	97.0	89.4	86.4	89.4	97.0	117.1	143.4	150.6
40°	2122.1	1643.5	247.9	96.3	87.7	85.0	86.0	93.5	111.3	139.3	149.9
42.5°	2406.8	1724.0	182.6	94.6	86.0	81.9	82.6	92.2	105.5	130.8	138.6
45°	2640.0	1782.8	143.7	93.9	81.9	80.6	81.9	91.2	100.0	112.3	119.5
47.5°	2817.2	1851.0	115.4	89.4	80.9	80.6	78.9	85.3	90.8	93.9	98.7
50°	2946.9	1835.7	95.6	82.6	77.5	79.5	76.5	77.5	78.9	77.2	82.6
52.5°	3026.5	1780.4	79.5	74.4	73.4	75.1	71.4	68.3	65.9	64.5	67.9
55°	3055.5	1669.4	67.6	63.8	66.2	66.9	63.8	58.4	54.3	52.2	55.0
57.5°	3000.5	1500.4	58.7	52.9	58.4	58.4	54.3	48.5	43.7	40.3	43.0
60°	2861.2	1313.7	52.2	44.0	49.8	50.2	45.4	39.3	35.5	32.1	33.8
62.5°	2601.8	1110.2	45.7	38.2	43.0	43.4	37.6	31.7	29.0	25.3	26.6
65°	2082.8	849.0	38.9	33.8	37.2	36.2	31.1	27.0	23.6	20.1	20.8
67.5°	1351.9	524.0	33.8	30.7	31.4	30.4	26.3	23.6	19.8	17.1	17.4
70°	605.3	225.7	29.7	27.7	27.3	25.6	22.2	21.8	19.5	17.1	17.1
72.5°	186.7	85.0	25.6	24.9	23.6	21.5	19.5	20.8	19.1	16.4	16.0
75°	73.7	38.9	21.2	21.2	20.5	17.8	17.4	18.8	17.8	15.0	14.3
77.5°	38.6	24.6	17.4	18.1	17.8	13.7	15.7	17.1	16.4	12.6	10.6
80°	22.9	15.0	13.0	14.7	14.3	9.6	11.9	10.9	7.9	3.8	1.0
82.5°	12.6	6.8	5.8	8.5	8.5	3.4	6.1	5.5	3.1	0.0	0.0
85°	6.1	4.8	4.4	4.8	3.4	1.0	3.1	3.1	1.7	0.0	0.0
87.5°	3.1	2.7	2.0	1.7	1.4	0.0	1.0	1.4	0.0	0.0	0.0
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)