

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: P597107

Luminaire Tested: **MSA-SA4A-835-U-T3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597107  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-835-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9439 lumens  
Efficiency: N/A  
Efficacy: 73.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

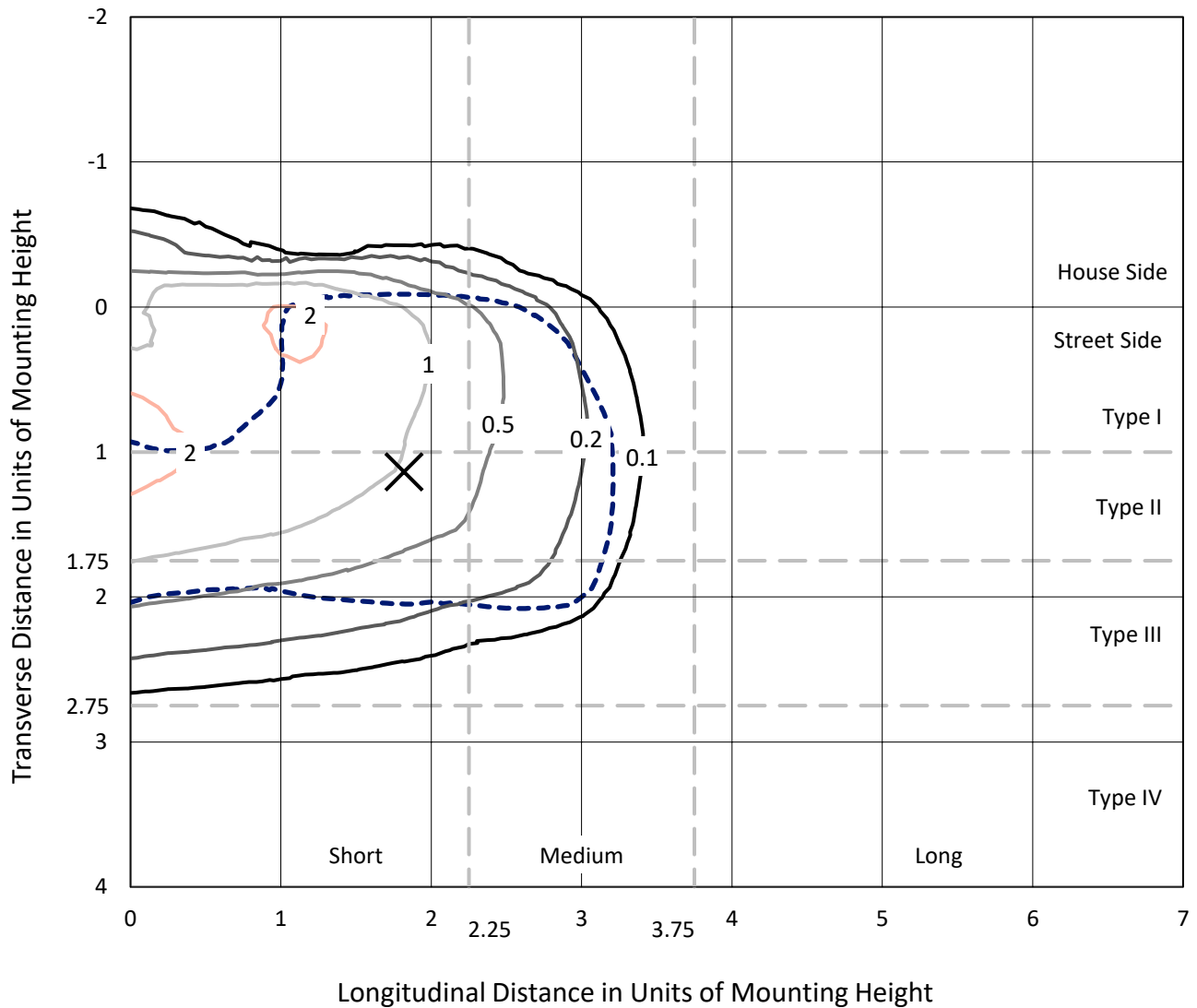
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

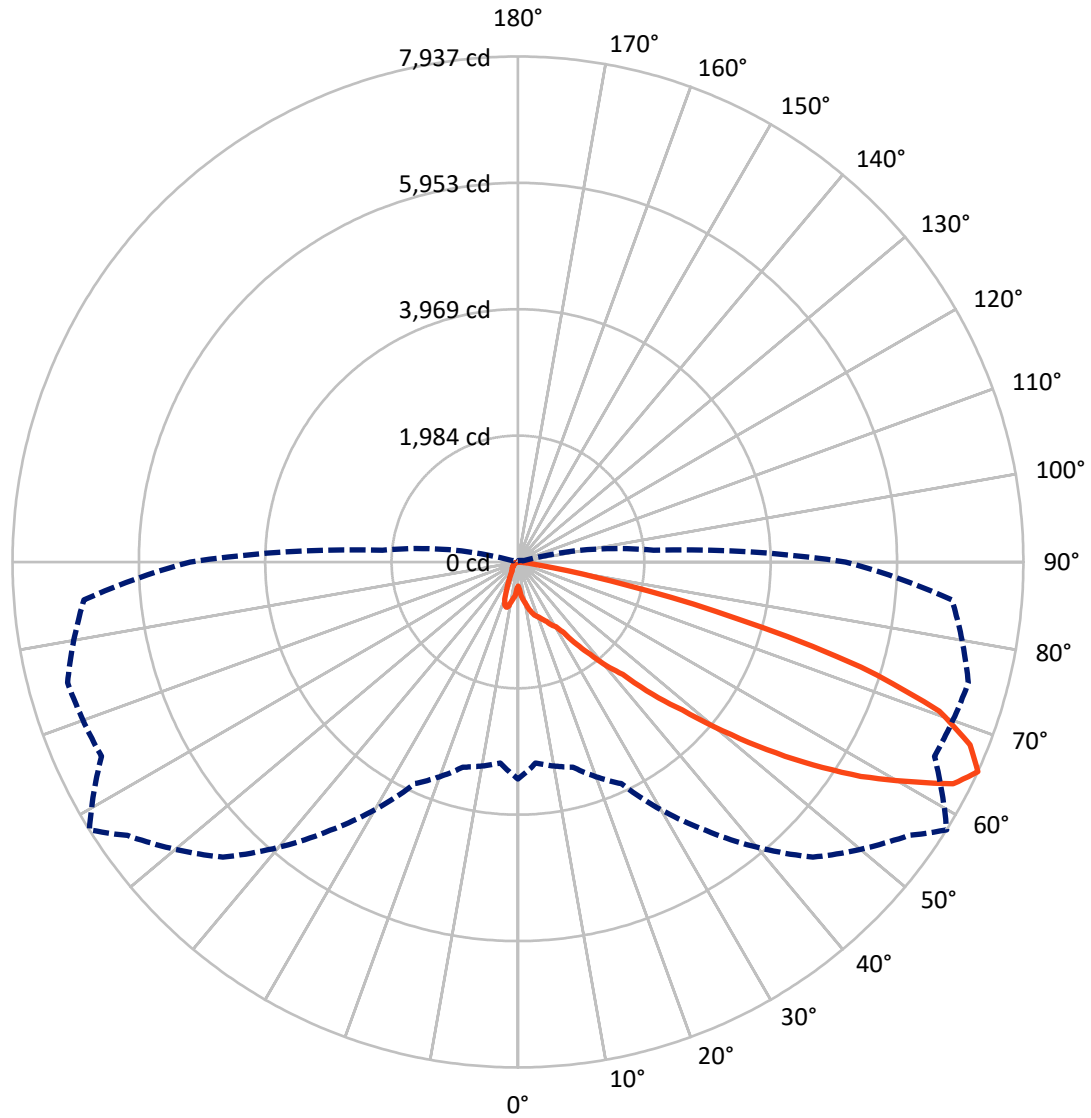
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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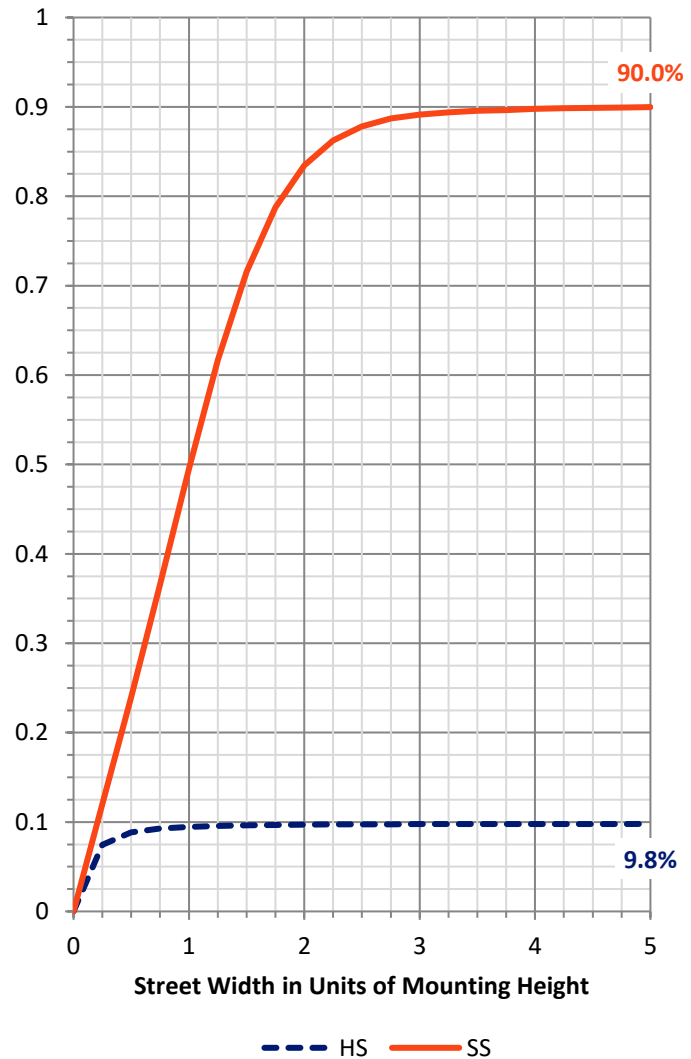
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	931.4	0.0	931.4
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	8507.6	0.0	8507.6
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	9439.0	0.0	9439.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.1	0.6
10°-20°	193.7	2.1
20°-30°	375.0	4.0
30°-40°	748.3	7.9
40°-50°	1529.7	16.2
50°-60°	2713.3	28.7
60°-70°	2860.5	30.3
70°-80°	927.4	9.8
80°-90°	37.9	0.4
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°	9439.0	100.0
0°-180°	9439.0	100.0

**Coefficient of Utilization**



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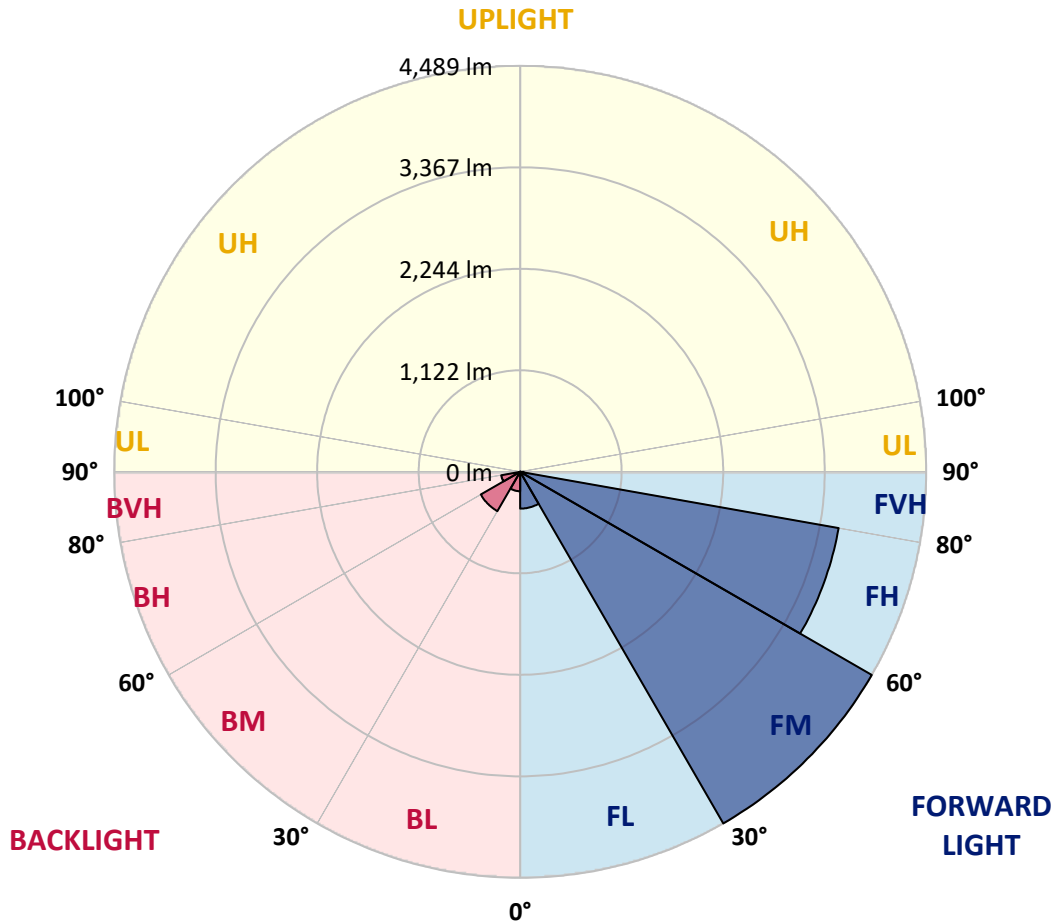
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	407.2	4.3			
FM (30°-60°)	4488.7	47.6			
FH (60°-80°)	3575.4	37.9			G2/5000
FVH (80°-90°)	36.3	0.4			G1/100
BL (0°-30°)	214.7	2.3	B1/500		
BM (30°-60°)	502.5	5.3	B1/1000		
BH (60°-80°)	212.6	2.3	B1/500		G1/500
BVH (80°-90°)	1.6	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9
2.5°	461.3	447.5	425.7	429.4	433.7	442.2	435.3	428.9	422.0	412.9	447.5
5°	557.0	534.1	532.0	527.2	523.5	522.9	531.4	528.8	532.5	549.5	567.1
7.5°	592.0	582.5	564.4	571.8	560.1	551.1	588.8	601.1	624.4	632.4	678.1
10°	588.3	574.5	581.9	585.7	593.6	626.6	650.5	663.8	684.0	727.5	718.5
12.5°	605.3	617.5	625.5	626.0	667.0	727.5	744.6	755.7	791.9	808.9	853.5
15°	662.2	682.4	669.6	674.9	688.2	762.1	802.0	826.4	877.4	932.7	943.8
17.5°	743.5	756.2	729.7	710.5	747.2	787.6	859.9	885.4	917.8	1046.9	1070.9
20°	846.1	867.9	810.5	734.5	782.8	830.6	909.3	921.5	956.1	1124.5	1162.3
22.5°	1085.7	1053.3	965.6	847.1	832.8	854.0	929.0	976.8	1035.3	1168.1	1255.8
25°	1322.2	1311.1	1181.9	1049.6	953.9	906.1	1005.5	1032.1	1127.7	1271.7	1320.1
27.5°	1585.3	1607.6	1391.9	1311.6	1124.0	967.8	1053.3	1119.8	1233.0	1309.5	1425.9
30°	1932.3	1896.7	1643.8	1563.5	1349.3	1137.3	1177.2	1181.4	1347.7	1433.8	1544.4
32.5°	2204.4	2227.3	1909.5	1786.2	1615.1	1398.2	1270.2	1325.4	1444.5	1636.3	1741.0
35°	2498.9	2496.7	2186.9	2021.1	1797.3	1611.3	1546.0	1586.4	1735.7	1953.1	1980.7
37.5°	2938.9	2901.2	2535.5	2292.7	2102.4	1943.5	1893.5	1839.9	1994.0	2201.2	2304.9
40°	3354.0	3223.7	2885.7	2597.7	2354.3	2289.5	2108.8	2141.7	2187.4	2461.1	2747.6
42.5°	3773.3	3692.5	3240.8	2999.5	2700.3	2546.2	2428.2	2412.8	2630.1	2954.3	3250.3
45°	4326.5	4079.4	3718.0	3505.9	3159.4	3004.8	2909.7	2966.5	3162.1	3635.6	3832.8
47.5°	4791.0	4563.5	4253.2	3931.1	3567.6	3741.4	3562.8	3473.0	3741.4	4230.8	4492.8
50°	5190.1	4936.6	4622.5	4383.9	4324.9	4491.8	4130.4	4163.3	4337.7	4912.7	5060.4
52.5°	5480.3	5213.5	4939.3	4823.9	5065.7	5149.7	4968.5	4895.7	5054.0	5494.1	5565.8
55°	5698.7	5425.5	5211.4	5370.3	5837.9	5810.3	5874.1	5625.4	5776.8	6100.5	6066.5
57.5°	5712.0	5388.3	5262.9	5518.5	6160.5	6588.3	6774.9	6351.8	6437.9	6574.5	6498.0
60°	5294.3	4972.2	4962.1	5325.1	6254.1	6789.7	7197.9	6991.7	6876.4	6977.9	6832.8
62.5°	4462.0	4236.7	4341.9	4743.2	5906.0	6678.7	7423.2	7671.4	7222.3	7245.2	7039.0
65°	3407.1	3170.6	3335.4	3840.8	5144.9	6554.3	7487.0	7937.1	7216.0	7321.2	6841.3
67.5°	2256.5	2119.4	2305.9	2862.9	4090.5	5785.8	7454.1	7658.1	6986.9	7024.1	6107.4
70°	1164.9	1131.4	1282.4	1721.9	2750.2	4445.0	7130.4	7018.8	6521.9	6051.0	4710.7
72.5°	373.1	374.7	519.8	786.5	1482.7	2706.1	5480.8	5633.9	5218.8	4426.4	2876.2
75°	165.3	162.6	217.4	330.0	618.1	1213.3	3405.0	3570.3	3249.3	2435.1	1209.0
77.5°	119.0	115.3	139.2	192.9	306.1	411.3	1596.5	1722.9	1473.2	843.9	276.9
80°	84.0	83.4	101.0	135.5	191.3	182.8	504.3	565.5	452.8	204.6	81.3
82.5°	47.3	48.9	70.2	95.7	116.4	91.4	141.9	156.2	152.5	108.9	35.6
85°	22.9	25.5	45.7	69.1	61.1	35.6	50.5	54.7	63.8	63.2	18.1
87.5°	0.0	0.0	18.6	31.4	16.5	5.3	15.4	17.5	17.0	20.2	4.3
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°	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9	377.9
2.5°	454.4	451.2	410.8	414.0	423.0	419.3	422.5	415.1	406.6	441.1	440.6
5°	574.5	550.6	537.8	526.1	528.3	504.3	518.2	524.5	523.5	543.1	548.5
7.5°	679.7	647.8	622.3	597.9	560.7	527.2	547.9	561.2	570.2	604.3	617.5
10°	729.1	703.1	693.0	645.2	618.6	597.9	572.9	554.8	562.3	553.2	562.3
12.5°	837.6	820.0	781.2	732.9	701.0	658.5	565.5	487.9	440.0	440.6	437.4
15°	936.4	935.3	877.4	797.2	704.7	583.5	438.4	340.7	295.5	282.7	278.5
17.5°	1065.5	1049.6	943.8	825.3	659.0	451.7	298.7	233.3	229.1	236.5	233.3
20°	1147.9	1124.5	976.8	784.4	543.1	305.6	225.3	206.7	219.5	230.1	227.5
22.5°	1230.3	1195.2	1001.8	734.5	386.4	223.7	203.5	200.4	208.3	221.6	223.7
25°	1275.5	1268.6	1050.7	640.9	264.7	196.1	196.1	195.0	197.7	207.3	205.7
27.5°	1406.7	1313.2	1014.0	500.1	204.6	180.2	182.8	181.8	172.2	181.8	182.3
30°	1488.6	1445.5	1016.7	356.1	180.2	159.4	166.3	157.8	143.5	151.5	149.9
32.5°	1653.3	1546.0	1008.7	240.2	164.2	152.0	141.4	129.1	118.5	121.7	119.0
35°	1845.2	1763.3	900.8	192.9	153.1	134.5	117.4	105.2	94.1	96.7	96.2
37.5°	2226.8	1966.9	811.5	173.8	145.6	123.3	103.6	86.6	80.8	82.4	84.0
40°	2580.2	2306.5	645.2	165.3	132.9	110.0	85.6	73.3	69.6	70.7	72.3
42.5°	3108.4	2576.4	487.3	156.8	120.1	93.0	71.2	63.2	59.5	61.6	62.7
45°	3619.7	2806.0	364.0	149.3	109.5	80.2	60.1	54.7	50.5	52.1	54.2
47.5°	4130.4	3061.1	271.6	137.6	97.8	69.1	51.6	47.8	45.2	45.7	48.4
50°	4587.4	3180.2	213.6	123.3	88.2	60.1	46.8	43.0	42.0	42.5	44.6
52.5°	4923.3	3181.2	180.2	110.5	79.2	53.1	44.1	39.9	39.3	40.4	42.5
55°	5226.8	3096.2	156.2	99.4	71.2	48.4	42.0	38.3	38.3	39.3	41.5
57.5°	5428.2	2940.0	135.5	87.7	64.3	45.7	40.4	36.7	36.1	35.6	37.2
60°	5526.5	2726.8	114.8	77.1	57.9	44.1	39.3	32.4	31.9	30.8	31.9
62.5°	5464.3	2460.1	96.2	66.4	51.6	42.0	34.5	28.2	27.1	25.0	26.6
65°	5146.5	2135.9	81.3	56.9	44.6	35.6	29.2	23.9	21.3	18.6	18.1
67.5°	4496.6	1735.2	68.0	48.9	38.3	29.2	23.9	21.3	16.5	14.3	13.8
70°	3369.9	1184.6	56.3	42.0	31.9	25.0	20.2	19.1	15.4	13.8	12.8
72.5°	1977.0	639.3	47.3	36.7	27.1	20.7	16.5	17.5	15.4	12.8	11.7
75°	789.7	212.6	37.7	29.2	21.8	14.9	13.8	14.3	13.8	11.7	9.6
77.5°	180.2	67.0	29.2	22.9	17.0	9.6	11.2	12.2	12.2	9.6	6.9
80°	56.3	26.6	17.0	14.3	12.2	5.3	8.0	8.5	5.8	2.7	0.0
82.5°	18.1	7.4	5.8	5.8	5.3	1.1	1.6	1.1	0.0	0.0	0.0
85°	6.9	4.8	3.7	3.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.7	2.1	1.6	2.1	1.1	0.0	0.0	0.0	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)