

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: P367319

Luminaire Tested: **MSA-SA2B-740-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367319  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-740-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

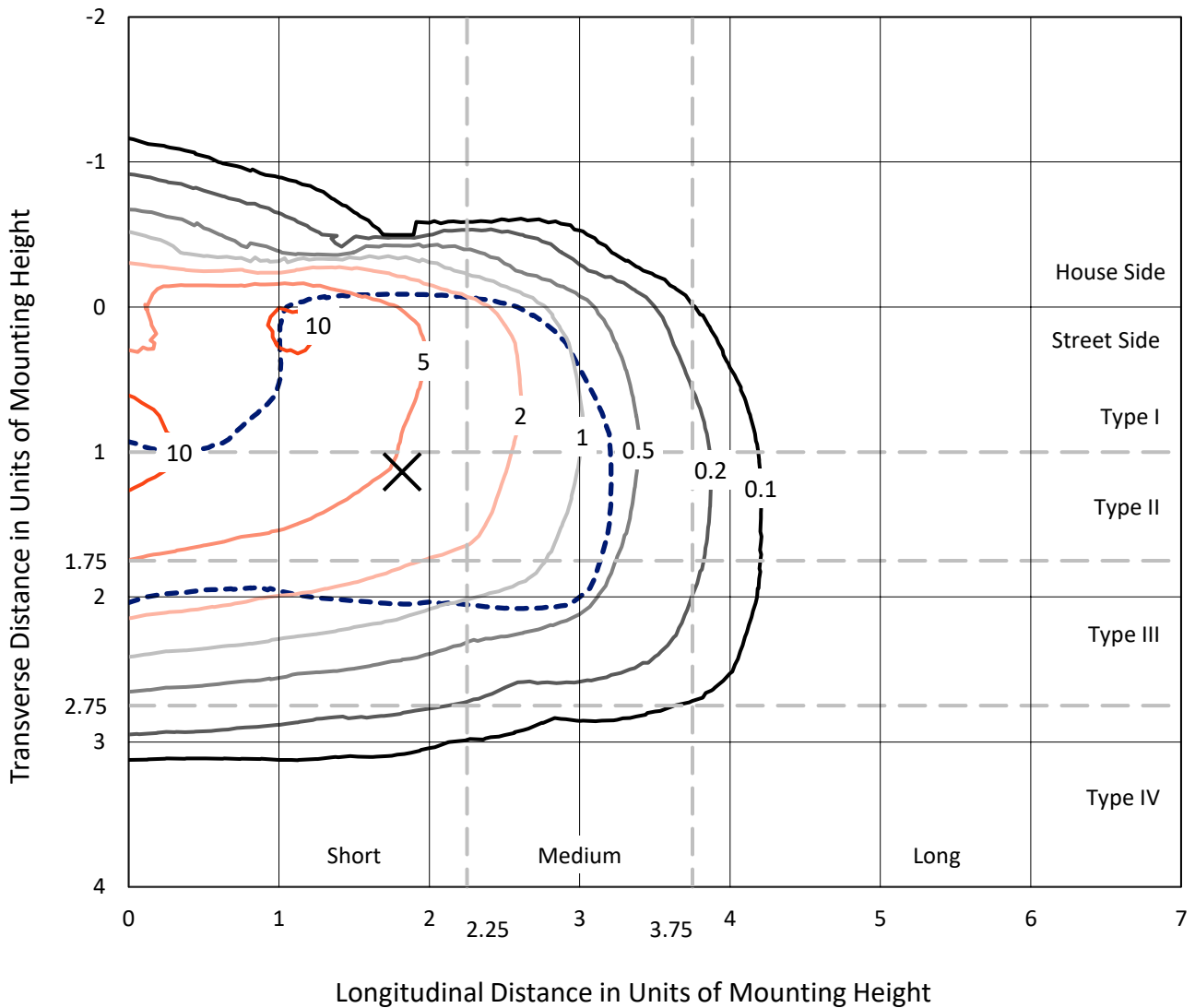
Lumens per Lamp: N/A  
Luminaire Lumens: 7356 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

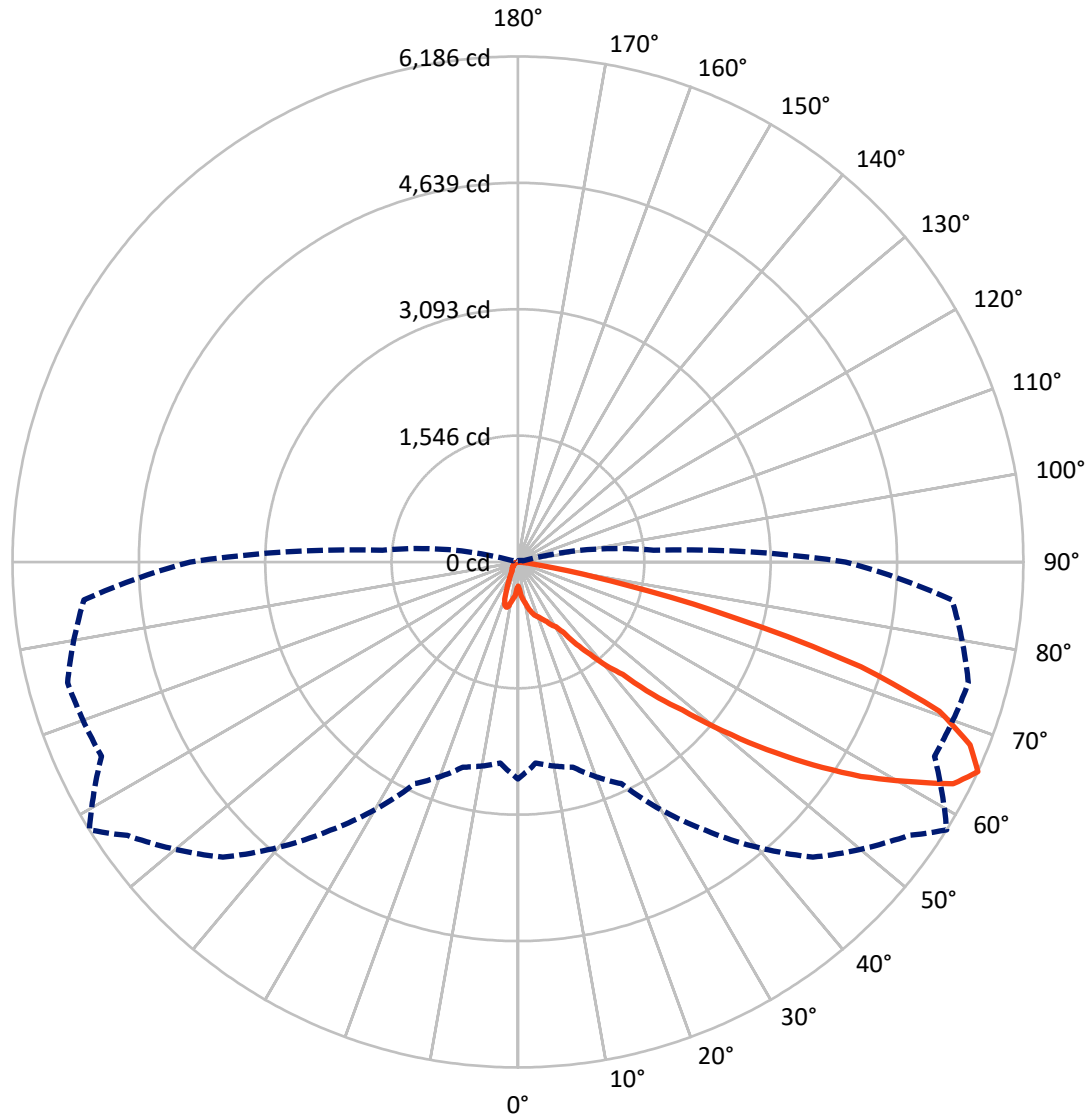
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.9 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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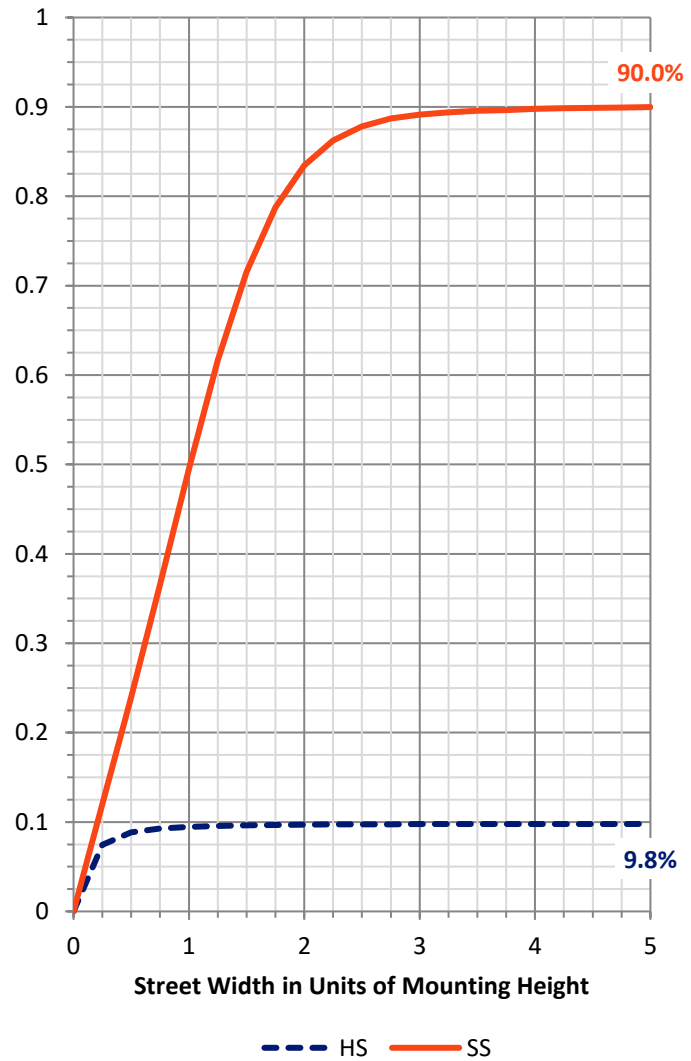
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	725.9	0.0	725.9
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	6630.2	0.0	6630.2
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	7356.0	0.0	7356.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.4	0.6
10°-20°	151.0	2.1
20°-30°	292.3	4.0
30°-40°	583.1	7.9
40°-50°	1192.1	16.2
50°-60°	2114.5	28.7
60°-70°	2229.3	30.3
70°-80°	722.8	9.8
80°-90°	29.5	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°	7356.0	100.0
0°-180°	7356.0	100.0

**Coefficient of Utilization**



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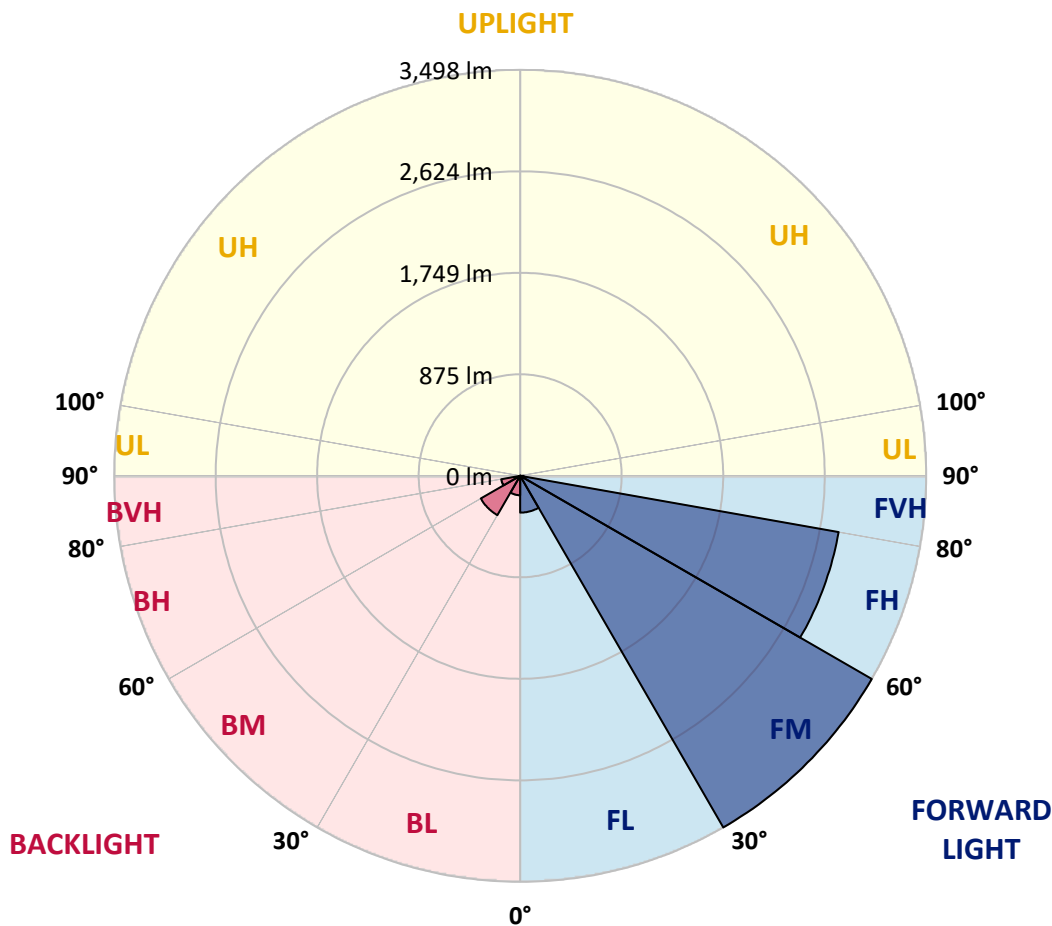
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	317.3	4.3			
FM (30°-60°)	3498.2	47.6			
FH (60°-80°)	2786.3	37.9			G2/5000
FVH (80°-90°)	28.3	0.4			G1/100
BL (0°-30°)	167.3	2.3	B1/500		
BM (30°-60°)	391.6	5.3	B1/1000		
BH (60°-80°)	165.7	2.3	B1/500		G1/500
BVH (80°-90°)	1.3	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°	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5
2.5°	359.5	348.7	331.7	334.6	338.0	344.6	339.2	334.2	328.8	321.8	348.7
5°	434.0	416.2	414.6	410.9	408.0	407.5	414.2	412.1	415.0	428.2	441.9
7.5°	461.4	453.9	439.8	445.6	436.5	429.5	458.9	468.4	486.6	492.9	528.5
10°	458.5	447.7	453.5	456.4	462.6	488.3	506.9	517.3	533.0	567.0	560.0
12.5°	471.7	481.3	487.5	487.9	519.8	567.0	580.2	588.9	617.1	630.4	665.2
15°	516.1	531.8	521.8	526.0	536.3	593.9	625.0	644.0	683.8	726.9	735.6
17.5°	579.4	589.4	568.7	553.7	582.3	613.8	670.1	690.0	715.3	815.9	834.5
20°	659.4	676.3	631.6	572.4	610.1	647.3	708.6	718.2	745.1	876.4	905.8
22.5°	846.1	820.9	752.5	660.2	649.0	665.6	724.0	761.2	806.8	910.3	978.7
25°	1030.4	1021.7	921.1	818.0	743.4	706.2	783.6	804.3	878.9	991.1	1028.8
27.5°	1235.5	1252.9	1084.7	1022.2	876.0	754.2	820.9	872.6	960.9	1020.5	1111.2
30°	1505.9	1478.2	1281.0	1218.5	1051.6	886.3	917.4	920.7	1050.3	1117.4	1203.6
32.5°	1718.0	1735.8	1488.1	1392.0	1258.7	1089.7	989.9	1032.9	1125.7	1275.2	1356.8
35°	1947.4	1945.8	1704.3	1575.1	1400.7	1255.8	1204.8	1236.3	1352.7	1522.1	1543.6
37.5°	2290.3	2260.9	1976.0	1786.7	1638.4	1514.6	1475.7	1433.8	1554.0	1715.5	1796.2
40°	2613.8	2512.3	2248.9	2024.4	1834.8	1784.2	1643.4	1669.1	1704.7	1918.0	2141.2
42.5°	2940.6	2877.6	2525.6	2337.6	2104.4	1984.3	1892.3	1880.3	2049.7	2302.3	2533.0
45°	3371.7	3179.1	2897.5	2732.3	2462.2	2341.7	2267.6	2311.9	2464.3	2833.3	2987.0
47.5°	3733.7	3556.4	3314.6	3063.6	2780.3	2915.7	2776.6	2706.6	2915.7	3297.2	3501.4
50°	4044.7	3847.2	3602.4	3416.5	3370.5	3500.5	3218.9	3244.6	3380.4	3828.6	3943.7
52.5°	4270.9	4063.0	3849.3	3759.4	3947.8	4013.3	3872.0	3815.3	3938.7	4281.6	4337.6
55°	4441.1	4228.2	4061.3	4185.1	4549.6	4528.1	4577.8	4383.9	4502.0	4754.2	4727.7
57.5°	4451.5	4199.2	4101.5	4300.7	4801.0	5134.4	5279.8	4950.1	5017.2	5123.6	5064.0
60°	4125.9	3874.9	3867.1	4149.9	4873.9	5291.4	5609.5	5448.8	5358.9	5438.0	5324.9
62.5°	3477.3	3301.7	3383.7	3696.4	4602.6	5204.8	5785.1	5978.5	5628.5	5646.3	5485.6
65°	2655.2	2470.9	2599.3	2993.2	4009.5	5107.9	5834.8	6185.6	5623.5	5705.6	5331.6
67.5°	1758.5	1651.7	1797.1	2231.1	3187.8	4509.0	5809.1	5968.1	5445.0	5474.0	4759.6
70°	907.9	881.8	999.4	1341.9	2143.3	3464.1	5556.9	5469.9	5082.6	4715.7	3671.2
72.5°	290.7	292.0	405.1	613.0	1155.5	2108.9	4271.3	4390.6	4067.1	3449.6	2241.5
75°	128.8	126.7	169.4	257.2	481.7	945.5	2653.6	2782.4	2532.2	1897.7	942.2
77.5°	92.8	89.9	108.5	150.3	238.6	320.6	1244.2	1342.7	1148.1	657.7	215.8
80°	65.4	65.0	78.7	105.6	149.1	142.5	393.0	440.7	352.9	159.5	63.4
82.5°	36.9	38.1	54.7	74.5	90.7	71.2	110.6	121.8	118.9	84.9	27.7
85°	17.8	19.9	35.6	53.8	47.6	27.7	39.3	42.7	49.7	49.3	14.1
87.5°	0.0	0.0	14.5	24.4	12.8	4.1	12.0	13.7	13.3	15.7	3.3
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°	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5	294.5
2.5°	354.1	351.6	320.2	322.6	329.7	326.8	329.3	323.5	316.8	343.8	343.3
5°	447.7	429.1	419.1	410.0	411.7	393.0	403.8	408.8	408.0	423.3	427.4
7.5°	529.7	504.9	485.0	465.9	436.9	410.9	427.0	437.4	444.4	470.9	481.3
10°	568.2	547.9	540.1	502.8	482.1	465.9	446.5	432.4	438.2	431.1	438.2
12.5°	652.7	639.1	608.8	571.1	546.3	513.2	440.7	380.2	342.9	343.3	340.9
15°	729.8	728.9	683.8	621.2	549.2	454.8	341.7	265.5	230.3	220.3	217.0
17.5°	830.4	818.0	735.6	643.2	513.6	352.0	232.8	181.8	178.5	184.3	181.8
20°	894.6	876.4	761.2	611.3	423.3	238.1	175.6	161.1	171.1	179.3	177.3
22.5°	958.8	931.5	780.7	572.4	301.1	174.4	158.6	156.1	162.4	172.7	174.4
25°	994.0	988.6	818.8	499.5	206.3	152.8	152.8	152.0	154.1	161.5	160.3
27.5°	1096.3	1023.4	790.2	389.7	159.5	140.4	142.5	141.6	134.2	141.6	142.1
30°	1160.1	1126.5	792.3	277.5	140.4	124.2	129.6	123.0	111.8	118.0	116.8
32.5°	1288.5	1204.8	786.1	187.2	128.0	118.5	110.2	100.6	92.4	94.8	92.8
35°	1438.0	1374.2	702.0	150.3	119.3	104.8	91.5	82.0	73.3	75.4	75.0
37.5°	1735.4	1532.8	632.4	135.4	113.5	96.1	80.8	67.5	63.0	64.2	65.4
40°	2010.8	1797.5	502.8	128.8	103.5	85.7	66.7	57.2	54.3	55.1	56.3
42.5°	2422.5	2007.9	379.8	122.2	93.6	72.5	55.5	49.3	46.4	48.0	48.9
45°	2820.9	2186.8	283.7	116.4	85.3	62.5	46.8	42.7	39.3	40.6	42.2
47.5°	3218.9	2385.6	211.6	107.3	76.2	53.8	40.2	37.3	35.2	35.6	37.7
50°	3575.1	2478.4	166.5	96.1	68.8	46.8	36.4	33.5	32.7	33.1	34.8
52.5°	3836.8	2479.2	140.4	86.1	61.7	41.4	34.4	31.1	30.6	31.5	33.1
55°	4073.3	2412.9	121.8	77.4	55.5	37.7	32.7	29.8	29.8	30.6	32.3
57.5°	4230.3	2291.2	105.6	68.3	50.1	35.6	31.5	28.6	28.2	27.7	29.0
60°	4306.9	2125.1	89.5	60.1	45.1	34.4	30.6	25.3	24.8	24.0	24.8
62.5°	4258.5	1917.2	75.0	51.8	40.2	32.7	26.9	22.0	21.1	19.5	20.7
65°	4010.8	1664.5	63.4	44.3	34.8	27.7	22.8	18.6	16.6	14.5	14.1
67.5°	3504.3	1352.3	53.0	38.1	29.8	22.8	18.6	16.6	12.8	11.2	10.8
70°	2626.2	923.2	43.9	32.7	24.8	19.5	15.7	14.9	12.0	10.8	9.9
72.5°	1540.7	498.2	36.9	28.6	21.1	16.2	12.8	13.7	12.0	9.9	9.1
75°	615.5	165.7	29.4	22.8	17.0	11.6	10.8	11.2	10.8	9.1	7.5
77.5°	140.4	52.2	22.8	17.8	13.3	7.5	8.7	9.5	9.5	7.5	5.4
80°	43.9	20.7	13.3	11.2	9.5	4.1	6.2	6.6	4.6	2.1	0.0
82.5°	14.1	5.8	4.6	4.6	4.1	0.8	1.2	0.8	0.0	0.0	0.0
85°	5.4	3.7	2.9	2.9	1.7	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.1	1.7	1.2	1.7	0.8	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)