

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: P368221

Luminaire Tested: **MSA-SA4A-730-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368221  
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-SA4A-730-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: 10427 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

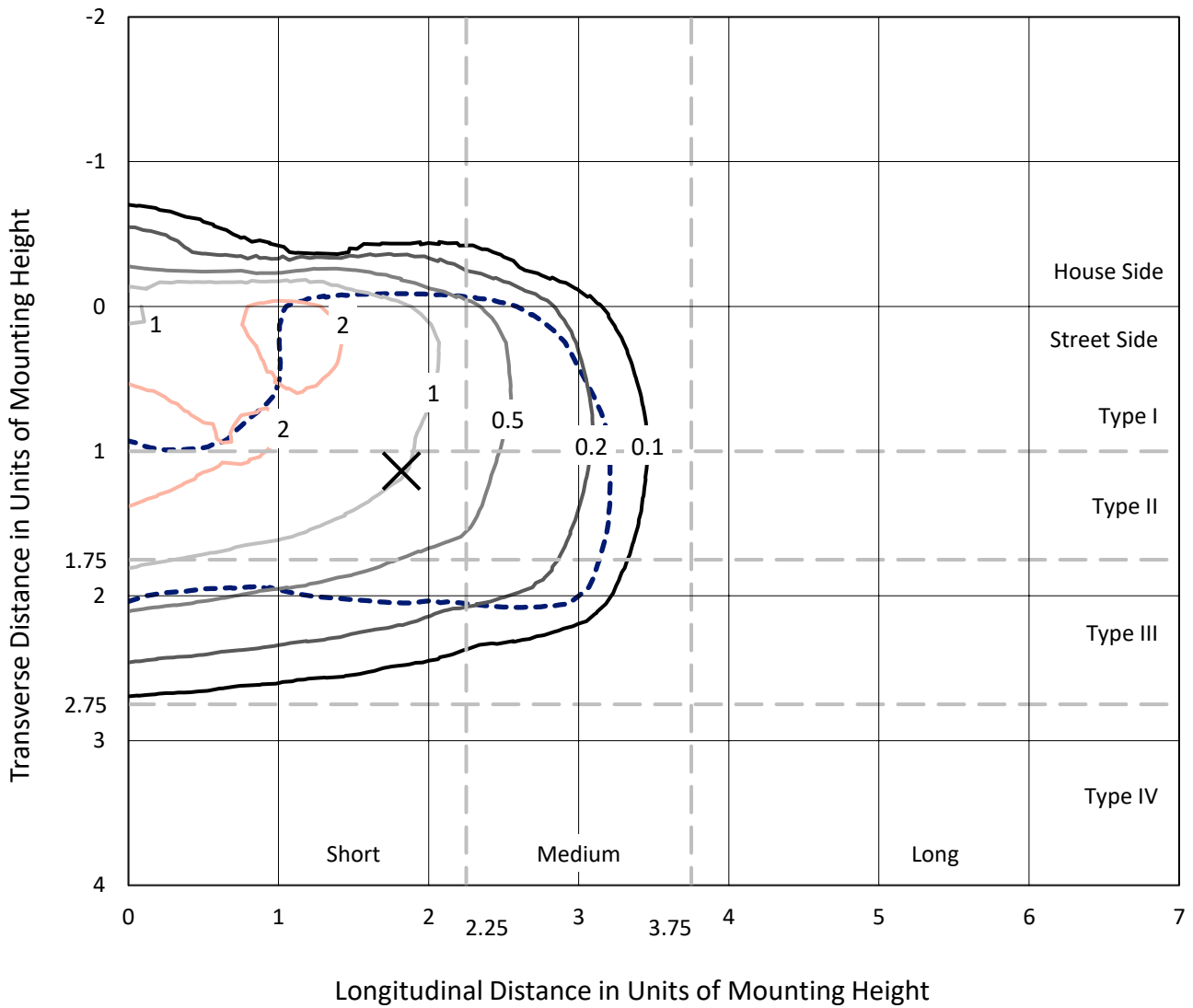
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

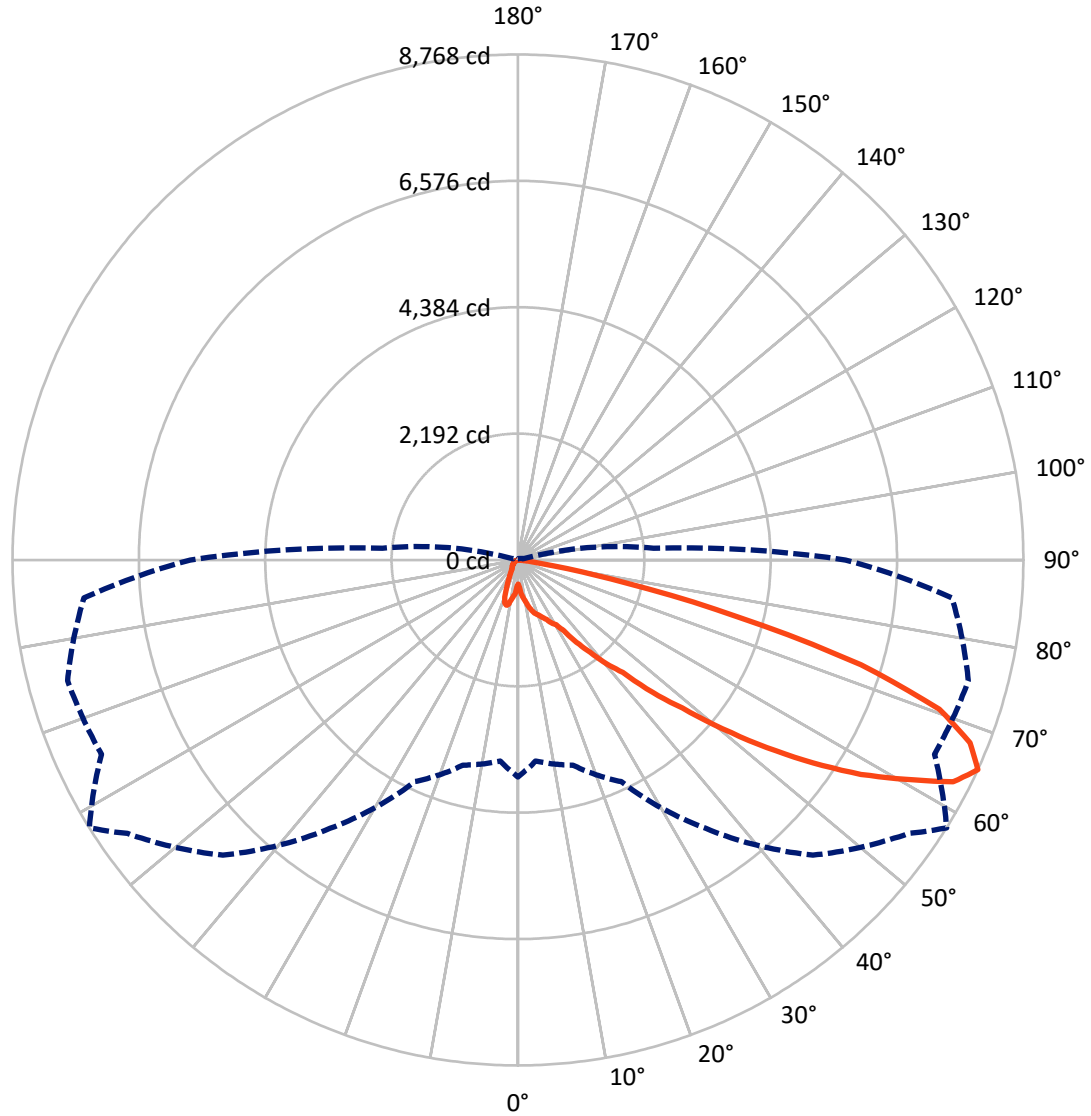
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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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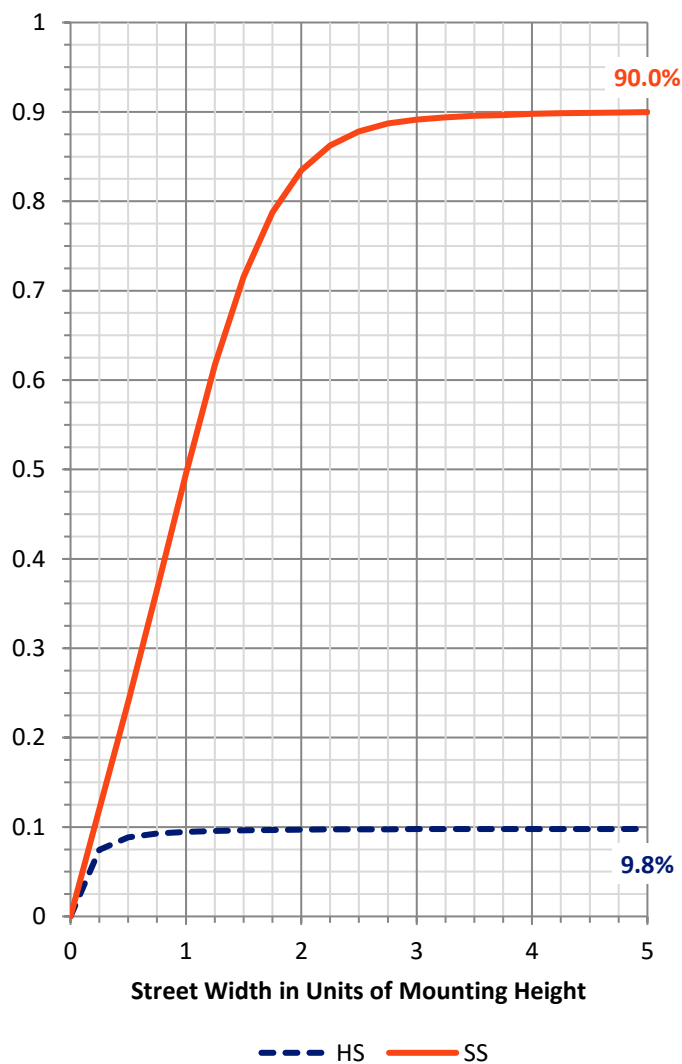
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1028.9	0.0	1028.9
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	9398.1	0.0	9398.1
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	10427.0	0.0	10427.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	0.6
10°-20°	214.0	2.1
20°-30°	414.3	4.0
30°-40°	826.6	7.9
40°-50°	1689.8	16.2
50°-60°	2997.3	28.7
60°-70°	3159.9	30.3
70°-80°	1024.5	9.8
80°-90°	41.9	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°	10427.0	100.0
0°-180°	10427.0	100.0

**Coefficient of Utilization**



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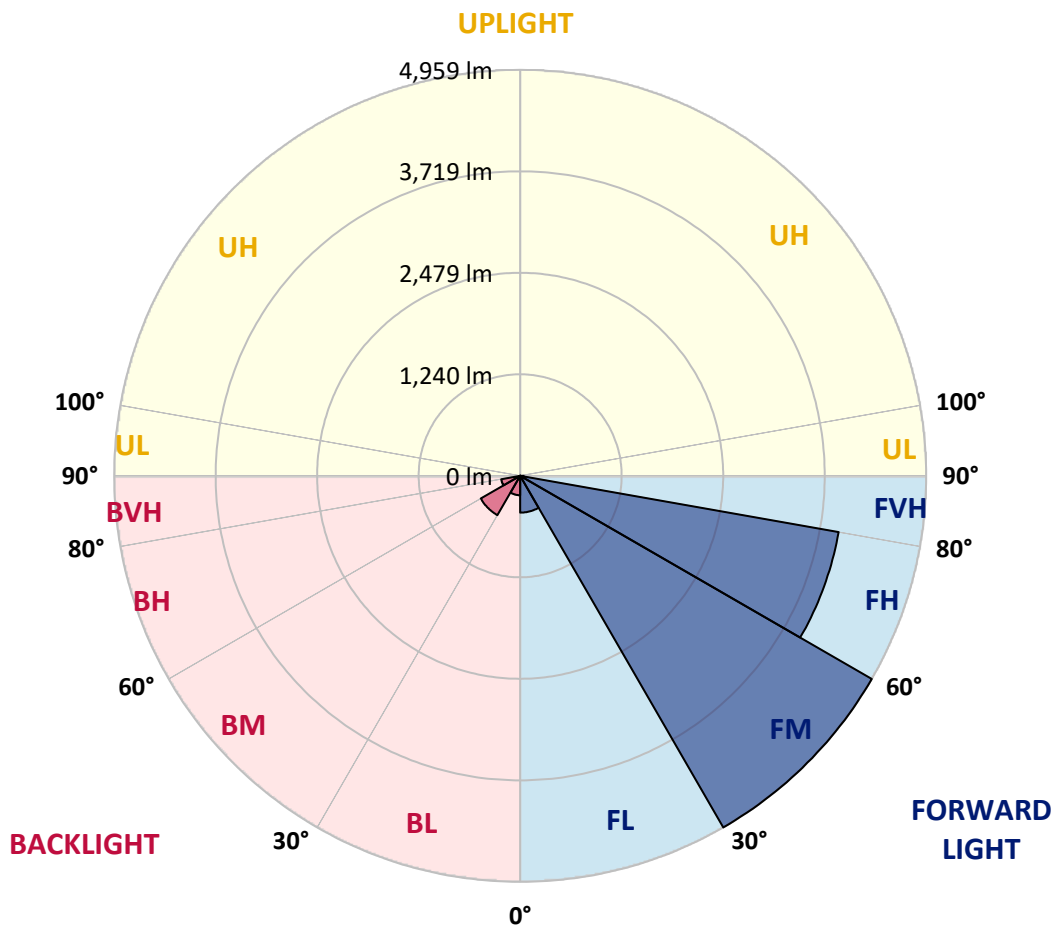
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	449.8	4.3			
FM (30°-60°)	4958.6	47.6			
FH (60°-80°)	3949.6	37.9			G2/5000
FVH (80°-90°)	40.1	0.4			G1/100
BL (0°-30°)	237.2	2.3	B1/500		
BM (30°-60°)	555.1	5.3	B1/1000		
BH (60°-80°)	234.8	2.3	B1/500		G1/500
BVH (80°-90°)	1.8	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°	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4
2.5°	509.6	494.3	470.2	474.4	479.1	488.4	480.8	473.8	466.1	456.2	494.3
5°	615.3	590.0	587.7	582.4	578.3	577.7	587.1	584.1	588.2	607.0	626.4
7.5°	654.0	643.4	623.5	631.7	618.8	608.8	650.5	664.0	689.8	698.6	749.1
10°	649.9	634.6	642.8	647.0	655.8	692.2	718.6	733.3	755.6	803.7	793.7
12.5°	668.7	682.2	691.0	691.6	736.8	803.7	822.5	834.8	874.7	893.5	942.8
15°	731.5	753.8	739.7	745.6	760.3	841.9	885.9	912.9	969.3	1030.3	1042.6
17.5°	821.3	835.4	806.1	784.9	825.4	870.0	949.9	978.1	1013.9	1156.5	1183.0
20°	934.6	958.7	895.3	811.3	864.8	917.6	1004.5	1018.0	1056.1	1242.2	1283.9
22.5°	1199.4	1163.6	1066.7	935.8	919.9	943.4	1026.2	1079.0	1143.6	1290.4	1387.3
25°	1460.6	1448.3	1305.7	1159.5	1053.8	1001.0	1110.7	1140.1	1245.8	1404.9	1458.3
27.5°	1751.2	1775.9	1537.5	1448.9	1241.7	1069.1	1163.6	1237.0	1362.0	1446.5	1575.1
30°	2134.6	2095.3	1815.8	1727.2	1490.6	1256.3	1300.4	1305.1	1488.8	1583.9	1706.0
32.5°	2435.2	2460.4	2109.4	1973.2	1784.1	1544.6	1403.1	1464.2	1595.7	1807.6	1923.3
35°	2760.4	2758.1	2415.8	2232.6	1985.5	1780.0	1707.8	1752.4	1917.4	2157.5	2188.0
37.5°	3246.5	3204.8	2800.9	2532.6	2322.5	2146.9	2091.7	2032.4	2202.7	2431.7	2546.1
40°	3705.0	3561.2	3187.8	2869.6	2600.7	2529.1	2329.5	2365.9	2416.4	2718.7	3035.2
42.5°	4168.2	4079.0	3580.0	3313.4	2982.9	2812.7	2682.3	2665.3	2905.4	3263.5	3590.5
45°	4779.4	4506.4	4107.2	3872.9	3490.1	3319.3	3214.2	3277.0	3493.1	4016.2	4234.0
47.5°	5292.5	5041.2	4698.3	4342.6	3941.0	4133.0	3935.7	3836.5	4133.0	4673.7	4963.1
50°	5733.4	5453.3	5106.4	4842.8	4777.6	4961.9	4562.7	4599.1	4791.7	5426.9	5590.1
52.5°	6053.9	5759.2	5456.3	5328.9	5596.0	5688.7	5488.5	5408.1	5583.1	6069.2	6148.4
55°	6295.2	5993.4	5756.8	5932.4	6449.0	6418.5	6488.9	6214.2	6381.5	6739.0	6701.4
57.5°	6309.9	5952.3	5813.8	6096.2	6805.4	7277.9	7484.0	7016.7	7111.8	7262.7	7178.1
60°	5848.4	5492.7	5481.5	5882.5	6908.7	7500.4	7951.3	7723.5	7596.1	7708.3	7548.0
62.5°	4929.1	4680.1	4796.4	5239.6	6524.1	7377.7	8200.2	8474.4	7978.3	8003.6	7775.8
65°	3763.7	3502.5	3684.5	4242.8	5683.5	7240.4	8270.7	8767.9	7971.3	8087.5	7557.4
67.5°	2492.7	2341.2	2547.3	3162.6	4518.7	6391.5	8234.3	8459.7	7718.2	7759.3	6746.6
70°	1286.9	1249.9	1416.6	1902.1	3038.1	4910.3	7876.8	7753.5	7204.6	6684.4	5203.8
72.5°	412.1	413.9	574.2	868.9	1637.9	2989.4	6054.5	6223.6	5765.1	4889.7	3177.2
75°	182.6	179.6	240.1	364.6	682.8	1340.3	3761.4	3944.0	3589.4	2690.0	1335.6
77.5°	131.5	127.4	153.8	213.1	338.2	454.4	1763.6	1903.3	1627.4	932.3	305.9
80°	92.8	92.2	111.5	149.7	211.3	202.0	557.1	624.6	500.2	226.0	89.8
82.5°	52.2	54.0	77.5	105.7	128.6	101.0	156.7	172.6	168.5	120.3	39.3
85°	25.2	28.2	50.5	76.3	67.5	39.3	55.8	60.5	70.4	69.9	20.0
87.5°	0.0	0.0	20.5	34.6	18.2	5.9	17.0	19.4	18.8	22.3	4.7
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°	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4	417.4
2.5°	501.9	498.4	453.8	457.3	467.3	463.2	466.7	458.5	449.1	487.3	486.7
5°	634.6	608.2	594.1	581.2	583.6	557.1	572.4	579.4	578.3	600.0	605.9
7.5°	750.9	715.6	687.5	660.5	619.4	582.4	605.3	619.9	629.9	667.5	682.2
10°	805.5	776.7	765.5	712.7	683.4	660.5	632.9	612.9	621.1	611.1	621.1
12.5°	925.2	905.9	863.0	809.6	774.3	727.4	624.6	538.9	486.1	486.7	483.2
15°	1034.4	1033.2	969.3	880.6	778.5	644.6	484.3	376.3	326.4	312.3	307.6
17.5°	1177.1	1159.5	1042.6	911.7	728.0	499.0	329.9	257.7	253.0	261.2	257.7
20°	1268.1	1242.2	1079.0	866.5	600.0	337.6	248.9	228.4	242.5	254.2	251.3
22.5°	1359.1	1320.3	1106.6	811.3	426.8	247.2	224.8	221.3	230.1	244.8	247.2
25°	1409.0	1401.3	1160.6	708.0	292.4	216.6	216.6	215.5	218.4	229.0	227.2
27.5°	1554.0	1450.7	1120.1	552.4	226.0	199.0	202.0	200.8	190.2	200.8	201.4
30°	1644.4	1596.8	1123.1	393.3	199.0	176.1	183.8	174.4	158.5	167.3	165.6
32.5°	1826.4	1707.8	1114.3	265.4	181.4	167.9	156.2	142.7	130.9	134.4	131.5
35°	2038.3	1947.9	995.1	213.1	169.1	148.5	129.7	116.2	103.9	106.8	106.3
37.5°	2459.8	2172.8	896.5	192.0	160.9	136.2	114.5	95.7	89.2	91.0	92.8
40°	2850.2	2547.9	712.7	182.6	146.8	121.5	94.5	81.0	76.9	78.1	79.8
42.5°	3433.8	2846.1	538.3	173.2	132.7	102.7	78.7	69.9	65.8	68.1	69.3
45°	3998.6	3099.7	402.1	165.0	120.9	88.6	66.3	60.5	55.8	57.5	59.9
47.5°	4562.7	3381.5	300.0	152.1	108.0	76.3	56.9	52.8	49.9	50.5	53.4
50°	5067.6	3513.0	236.0	136.2	97.5	66.3	51.7	47.6	46.4	47.0	49.3
52.5°	5438.6	3514.2	199.0	122.1	87.5	58.7	48.7	44.0	43.4	44.6	47.0
55°	5773.9	3420.3	172.6	109.8	78.7	53.4	46.4	42.3	42.3	43.4	45.8
57.5°	5996.4	3247.7	149.7	96.9	71.0	50.5	44.6	40.5	39.9	39.3	41.1
60°	6105.0	3012.3	126.8	85.1	64.0	48.7	43.4	35.8	35.2	34.1	35.2
62.5°	6036.3	2717.6	106.3	73.4	56.9	46.4	38.2	31.1	29.9	27.6	29.4
65°	5685.2	2359.4	89.8	62.8	49.3	39.3	32.3	26.4	23.5	20.5	20.0
67.5°	4967.2	1916.8	75.1	54.0	42.3	32.3	26.4	23.5	18.2	15.9	15.3
70°	3722.6	1308.6	62.2	46.4	35.2	27.6	22.3	21.1	17.0	15.3	14.1
72.5°	2183.9	706.2	52.2	40.5	29.9	22.9	18.2	19.4	17.0	14.1	12.9
75°	872.4	234.8	41.7	32.3	24.1	16.4	15.3	15.9	15.3	12.9	10.6
77.5°	199.0	74.0	32.3	25.2	18.8	10.6	12.3	13.5	13.5	10.6	7.6
80°	62.2	29.4	18.8	15.9	13.5	5.9	8.8	9.4	6.5	2.9	0.0
82.5°	20.0	8.2	6.5	6.5	5.9	1.2	1.8	1.2	0.0	0.0	0.0
85°	7.6	5.3	4.1	4.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.9	2.3	1.8	2.3	1.2	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)