

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: P367695

Luminaire Tested: **MSA-SA3A-730-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367695  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-730-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 8000 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

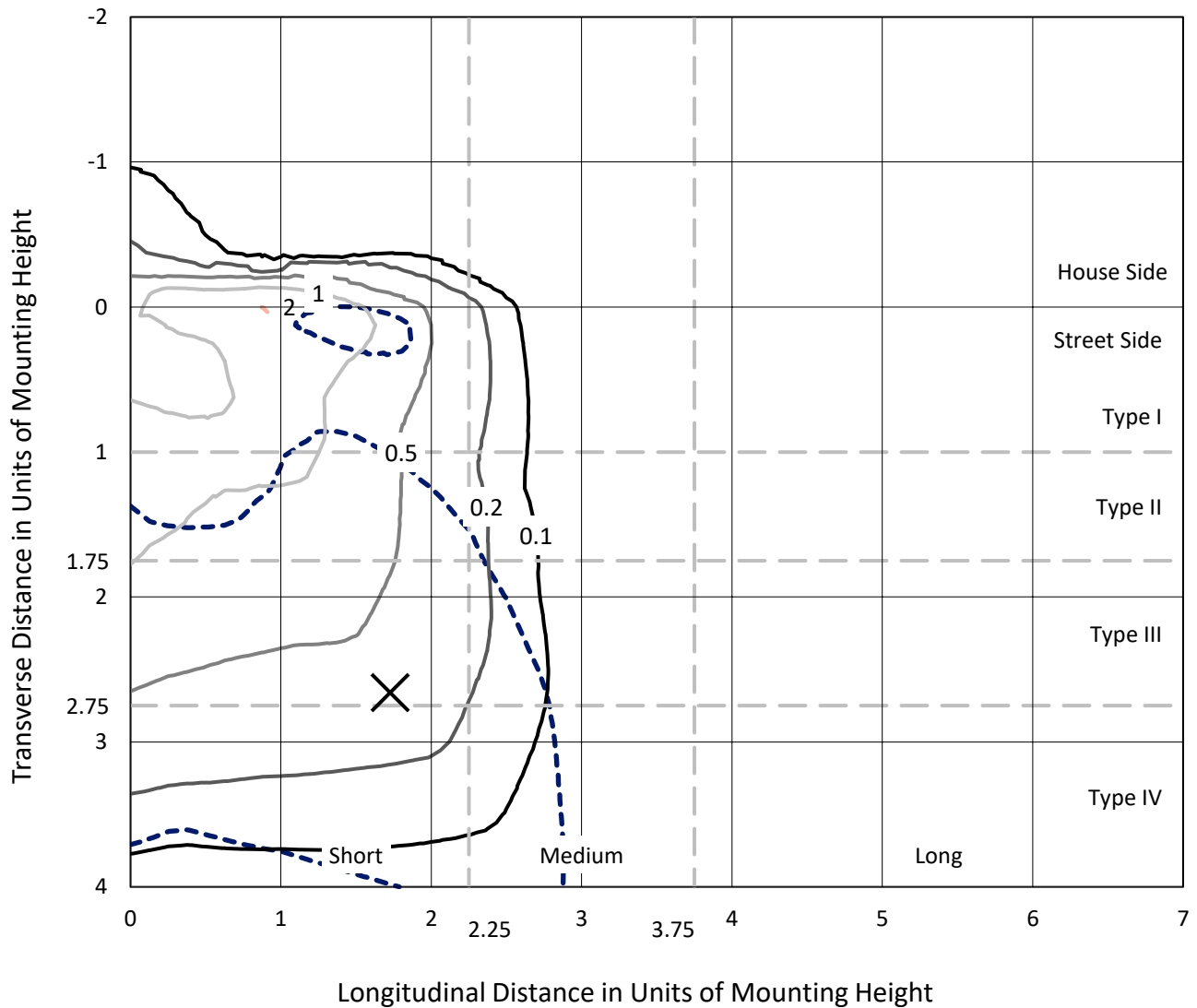
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

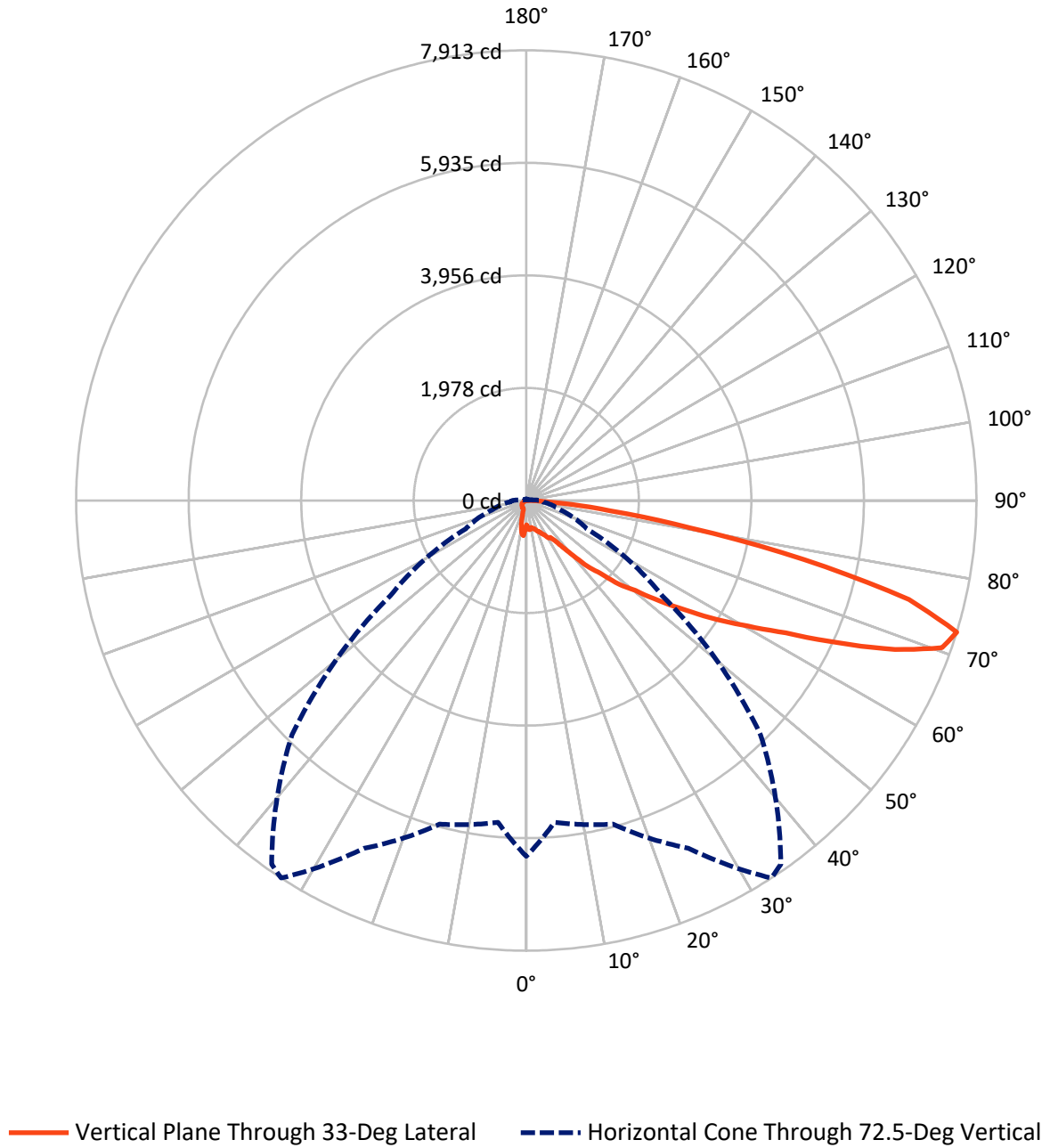
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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	739.7	0.0	739.7
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	7260.3	0.0	7260.3
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	8000.0	0.0	8000.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	0.7
10°-20°	164.1	2.1
20°-30°	278.3	3.5
30°-40°	509.4	6.4
40°-50°	1075.0	13.4
50°-60°	1798.6	22.5
60°-70°	2407.5	30.1
70°-80°	1572.6	19.7
80°-90°	139.4	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°	8000.0	100.0
0°-180°	8000.0	100.0

**Coefficient of Utilization**

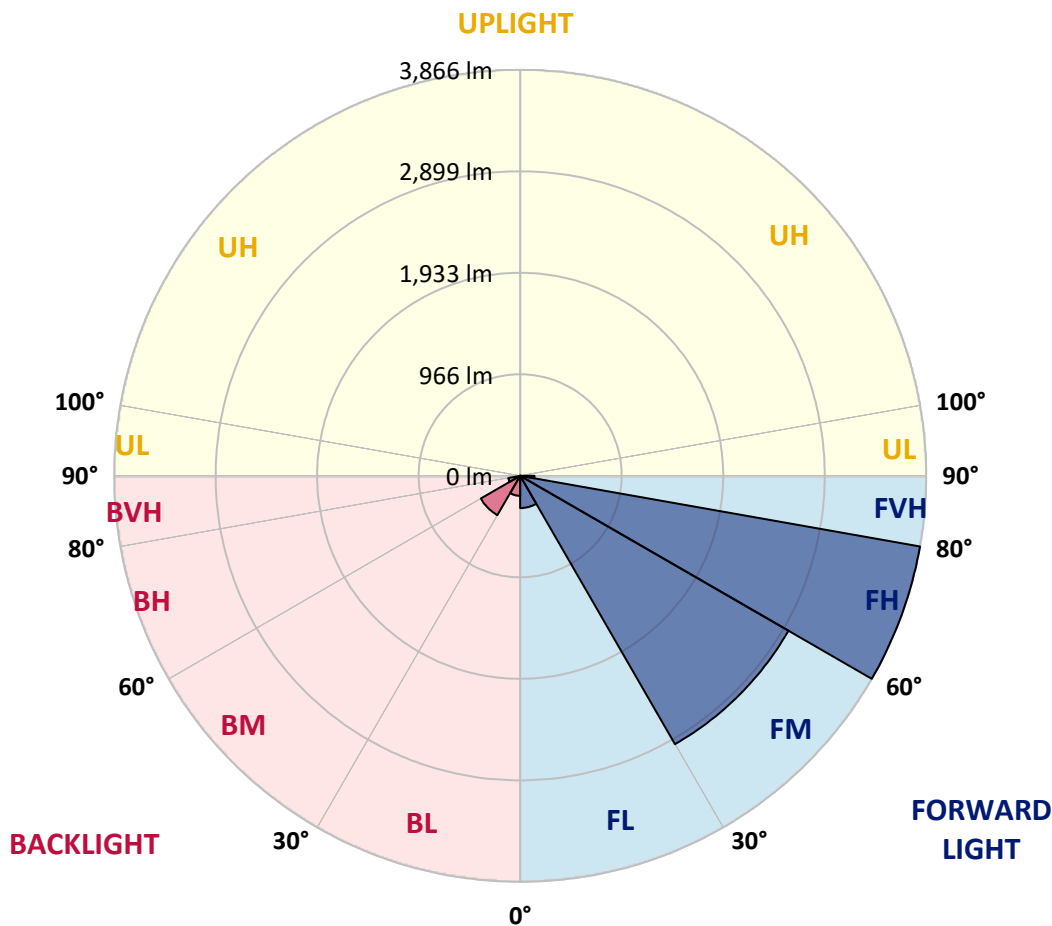


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	307.1	3.8			
FM (30°-60°)	2950.5	36.9			
FH (60°-80°)	3865.9	48.3			G2/5000
FVH (80°-90°)	136.7	1.7			G2/225
BL (0°-30°)	190.4	2.4	B1/500		
BM (30°-60°)	432.4	5.4	B1/1000		
BH (60°-80°)	114.2	1.4	B1/500		G1/500
BVH (80°-90°)	2.7	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°	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5
2.5°	507.2	487.7	459.3	461.0	465.9	469.9	480.6	476.1	467.7	467.3	507.2
5°	537.4	515.7	513.9	516.6	515.2	522.3	513.5	542.3	566.8	596.1	643.1
7.5°	522.8	512.6	499.7	513.0	512.6	509.0	514.8	573.4	632.5	669.8	747.5
10°	480.6	469.0	478.8	483.2	480.1	495.7	534.3	582.3	652.9	731.1	768.8
12.5°	468.6	475.7	479.3	479.3	509.0	517.0	576.1	621.4	705.3	767.1	876.8
15°	515.2	529.0	504.6	499.2	508.6	513.0	578.7	633.4	740.9	853.7	945.6
17.5°	589.4	588.5	550.8	529.9	544.5	555.2	591.6	655.6	718.7	921.6	1054.9
20°	640.5	641.4	573.4	529.9	578.3	584.5	624.9	676.0	725.8	955.8	1126.4
22.5°	706.2	682.7	607.6	565.4	598.3	604.1	648.5	688.9	762.2	951.8	1217.9
25°	760.0	744.9	650.3	620.9	650.3	642.3	682.7	743.5	801.3	1015.4	1271.6
27.5°	843.5	817.7	680.5	685.8	684.0	689.8	699.1	792.4	870.1	1018.5	1396.0
30°	921.2	906.1	748.0	748.0	765.3	754.2	760.8	873.7	936.7	1090.4	1535.9
32.5°	1001.6	1002.5	827.5	785.3	771.5	817.3	862.1	913.2	1017.1	1213.9	1750.0
35°	1214.3	1196.6	979.8	874.6	863.5	860.8	932.7	1070.9	1159.7	1374.7	2038.3
37.5°	1643.0	1581.2	1307.6	1077.1	1035.3	1021.1	1102.9	1244.5	1332.9	1611.0	2514.8
40°	2082.7	1969.4	1665.6	1405.8	1270.3	1209.0	1304.1	1424.4	1581.7	1872.1	2955.9
42.5°	2468.7	2328.7	1935.2	1760.2	1583.9	1557.2	1468.0	1663.8	1937.0	2252.3	3388.1
45°	2844.9	2569.5	2175.1	2036.5	1822.4	1837.5	1807.3	1977.0	2306.1	2669.0	3771.4
47.5°	3103.8	2856.4	2469.1	2289.2	2203.5	2115.1	2354.9	2531.3	2634.8	2933.7	4102.7
50°	3382.7	3132.2	2721.8	2596.1	2483.3	2572.6	2883.9	2907.5	2899.0	3180.6	4328.4
52.5°	3743.0	3447.6	3011.9	2869.7	2933.7	3022.5	3381.8	3386.3	3134.0	3388.5	4490.9
55°	4076.1	3748.7	3398.3	3264.1	3397.8	3472.9	3871.3	3725.2	3270.8	3529.8	4570.9
57.5°	4545.6	4166.7	3912.2	3675.9	3946.8	3874.9	4301.7	4084.5	3424.5	3623.5	4541.6
60°	5139.0	4693.0	4438.1	4188.0	4478.5	4527.3	4721.9	4264.0	3484.0	3654.1	4365.2
62.5°	5742.6	5294.0	4958.6	4789.0	5118.5	5279.3	5111.0	4353.2	3412.5	3594.2	3965.9
65°	6491.4	5917.1	5525.4	5425.9	6036.6	6272.9	5571.1	4375.0	3274.4	3264.1	3188.6
67.5°	7004.4	6445.2	6085.9	6252.5	6990.2	7009.3	5984.2	4381.7	2809.3	2555.7	2092.9
70°	7126.1	6527.4	6366.6	6857.0	7751.1	7510.8	6117.4	4044.1	2083.6	1516.8	956.7
72.5°	6255.6	5679.1	5888.3	6742.8	7912.7	7802.6	5823.0	2917.7	1173.0	606.7	293.6
75°	3837.1	3488.4	4417.2	5716.8	6945.8	6874.7	4542.9	1507.5	472.6	242.5	109.7
77.5°	1668.7	1549.7	2305.2	3793.1	4991.0	4927.5	2661.9	555.2	244.3	170.6	55.5
80°	552.1	535.7	873.2	1796.2	2923.5	2867.5	1121.5	231.0	174.1	136.8	31.1
82.5°	131.0	130.1	304.7	826.6	1489.3	1442.6	344.2	127.5	126.1	107.9	16.4
85°	32.9	33.8	84.4	338.0	604.9	533.4	89.7	63.5	88.8	73.3	8.4
87.5°	0.0	0.0	21.8	48.4	91.5	57.3	9.8	16.9	24.9	26.2	4.4
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°	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5	425.5
2.5°	516.1	511.2	471.3	481.0	496.1	494.8	504.6	497.0	490.4	523.2	520.1
5°	656.5	629.8	617.4	634.7	625.4	603.6	621.8	618.7	613.4	624.5	632.9
7.5°	761.7	737.3	726.2	689.8	636.9	595.2	601.8	586.3	571.6	589.0	606.7
10°	796.4	783.1	781.7	710.7	660.9	600.5	529.0	467.3	450.8	429.1	438.8
12.5°	890.5	898.5	848.3	765.3	669.4	553.4	426.4	338.9	303.4	280.3	281.6
15°	967.8	995.8	923.0	773.7	589.0	422.0	283.8	205.2	183.0	177.2	175.4
17.5°	1082.9	1110.0	946.1	713.8	474.8	286.0	182.6	159.9	161.2	165.2	164.3
20°	1168.1	1164.1	926.1	607.6	350.0	187.4	152.8	149.7	156.8	168.3	165.7
22.5°	1250.3	1222.8	913.6	509.5	226.5	150.6	147.5	147.0	153.7	164.8	167.9
25°	1308.9	1313.4	892.8	398.9	164.8	139.9	142.6	146.6	153.2	165.2	163.5
27.5°	1476.8	1352.5	805.7	289.6	139.0	134.1	140.8	148.8	151.0	166.1	166.6
30°	1585.7	1499.9	748.9	195.0	128.4	123.9	137.2	147.9	150.6	170.1	171.4
32.5°	1775.3	1563.4	683.1	144.8	119.5	120.8	129.3	143.5	155.9	176.8	177.7
35°	2011.2	1767.3	564.1	130.1	116.4	114.1	118.1	134.6	155.0	177.7	182.1
37.5°	2460.2	1889.5	447.3	126.1	116.4	112.4	116.4	126.1	152.3	186.5	195.9
40°	2760.9	2138.2	322.5	125.3	114.1	110.6	111.9	121.7	144.8	181.2	195.0
42.5°	3131.3	2243.0	237.6	123.0	111.9	106.6	107.5	119.9	137.2	170.1	180.3
45°	3434.7	2319.4	187.0	122.1	106.6	104.8	106.6	118.6	130.1	146.1	155.5
47.5°	3665.2	2408.2	150.1	116.4	105.3	104.8	102.6	111.0	118.1	122.1	128.4
50°	3834.0	2388.3	124.4	107.5	100.8	103.5	99.5	100.8	102.6	100.4	107.5
52.5°	3937.5	2316.3	103.5	96.8	95.5	97.7	92.8	88.8	85.7	83.9	88.4
55°	3975.2	2172.0	87.9	83.1	86.2	87.1	83.1	76.0	70.6	68.0	71.5
57.5°	3903.7	1952.1	76.4	68.8	76.0	76.0	70.6	63.1	56.9	52.4	56.0
60°	3722.5	1709.1	68.0	57.3	64.8	65.3	59.1	51.1	46.2	41.8	44.0
62.5°	3385.0	1444.4	59.5	49.7	56.0	56.4	48.9	41.3	37.8	32.9	34.6
65°	2709.8	1104.6	50.6	44.0	48.4	47.1	40.4	35.1	30.6	26.2	27.1
67.5°	1758.9	681.8	44.0	40.0	40.9	39.5	34.2	30.6	25.8	22.2	22.7
70°	787.5	293.6	38.6	36.0	35.5	33.3	28.9	28.4	25.3	22.2	22.2
72.5°	243.0	110.6	33.3	32.4	30.6	28.0	25.3	27.1	24.9	21.3	20.9
75°	95.9	50.6	27.5	27.5	26.6	23.1	22.7	24.4	23.1	19.5	18.7
77.5°	50.2	32.0	22.7	23.5	23.1	17.8	20.4	22.2	21.3	16.4	13.8
80°	29.8	19.5	16.9	19.1	18.7	12.4	15.5	14.2	10.2	4.9	1.3
82.5°	16.4	8.9	7.6	11.1	11.1	4.4	8.0	7.1	4.0	0.0	0.0
85°	8.0	6.2	5.8	6.2	4.4	1.3	4.0	4.0	2.2	0.0	0.0
87.5°	4.0	3.6	2.7	2.2	1.8	0.0	1.3	1.8	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)