

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: P367431

Luminaire Tested: **MSA-SA2C-730-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367431
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-SA2C-730-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: 8413 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

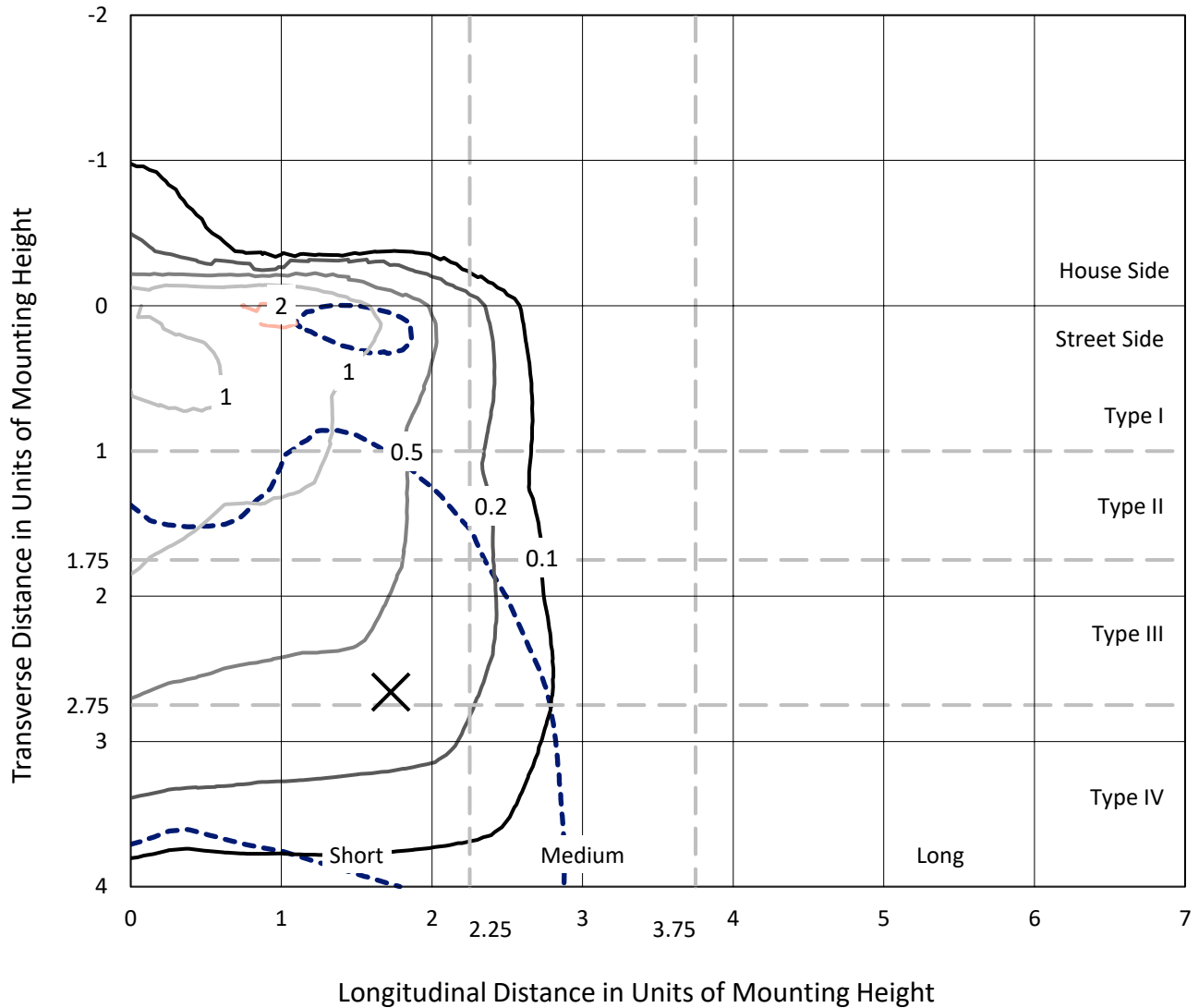
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

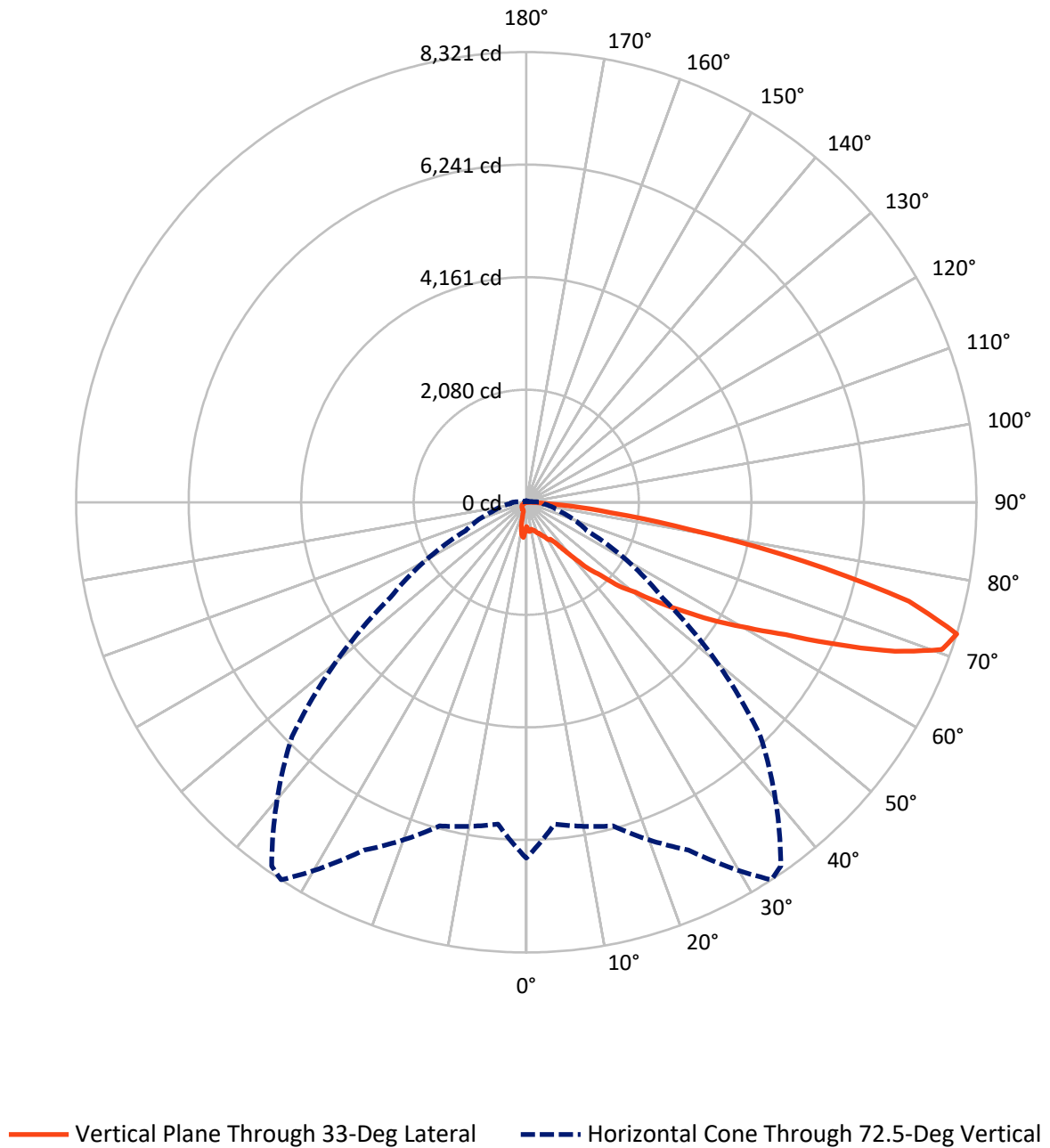
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	777.9	0.0	777.9
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	7635.1	0.0	7635.1
	% Fixture	90.8	0.0	90.8
Total	Lumens	8413.0	0.0	8413.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	0.7
10°-20°	172.6	2.1
20°-30°	292.7	3.5
30°-40°	535.6	6.4
40°-50°	1130.5	13.4
50°-60°	1891.4	22.5
60°-70°	2531.8	30.1
70°-80°	1653.8	19.7
80°-90°	146.6	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°	8413.0	100.0
0°-180°	8413.0	100.0

Coefficient of Utilization

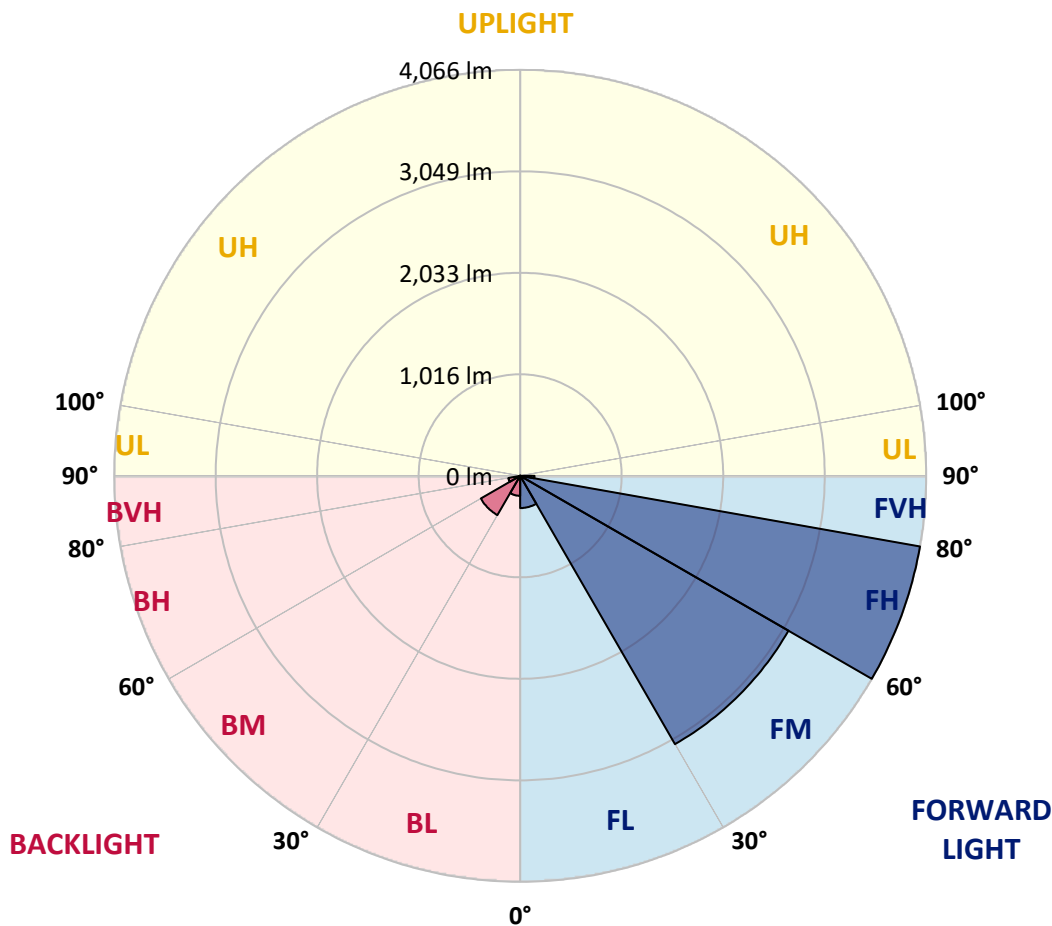


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	323.0	3.8			
FM (30°-60°)	3102.8	36.9			
FH (60°-80°)	4065.5	48.3			G2/5000
FVH (80°-90°)	143.8	1.7			G2/225
BL (0°-30°)	200.2	2.4	B1/500		
BM (30°-60°)	454.8	5.4	B1/1000		
BH (60°-80°)	120.1	1.4	B1/500		G1/500
BVH (80°-90°)	2.8	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5
2.5°	533.4	512.9	483.0	484.8	490.0	494.2	505.4	500.7	491.8	491.4	533.4
5°	565.2	542.3	540.4	543.2	541.8	549.3	540.0	570.3	596.0	626.8	676.3
7.5°	549.8	539.0	525.5	539.5	539.0	535.3	541.4	603.0	665.1	704.4	786.1
10°	505.4	493.2	503.5	508.2	504.9	521.3	561.9	612.4	686.6	768.8	808.5
12.5°	492.8	500.3	504.0	504.0	535.3	543.7	605.8	653.5	741.7	806.7	922.0
15°	541.8	556.3	530.6	525.0	534.8	539.5	608.6	666.1	779.1	897.8	994.4
17.5°	619.8	618.9	579.2	557.2	572.7	583.9	622.2	689.4	755.8	969.2	1109.3
20°	673.5	674.5	603.0	557.2	608.2	614.7	657.2	710.9	763.2	1005.2	1184.5
22.5°	742.7	717.9	639.0	594.6	629.2	635.2	682.0	724.5	801.5	1001.0	1280.8
25°	799.2	783.3	683.8	653.0	683.8	675.4	717.9	781.9	842.6	1067.8	1337.3
27.5°	887.0	859.9	715.6	721.2	719.3	725.4	735.2	833.3	915.0	1071.0	1468.1
30°	968.7	952.9	786.6	786.6	804.8	793.1	800.1	918.8	985.1	1146.7	1615.2
32.5°	1053.3	1054.2	870.2	825.8	811.3	859.4	906.6	960.3	1069.6	1276.6	1840.3
35°	1277.0	1258.3	1030.4	919.7	908.0	905.2	980.9	1126.2	1219.6	1445.6	2143.5
37.5°	1727.8	1662.8	1375.1	1132.7	1088.8	1073.8	1159.8	1308.8	1401.7	1694.1	2644.7
40°	2190.2	2071.1	1751.6	1478.3	1335.9	1271.4	1371.4	1498.0	1663.3	1968.8	3108.5
42.5°	2596.1	2449.0	2035.1	1851.1	1665.6	1637.6	1543.7	1749.7	2037.0	2368.6	3563.0
45°	2991.7	2702.1	2287.3	2141.6	1916.5	1932.4	1900.6	2079.0	2425.1	2806.8	3966.1
47.5°	3264.0	3003.9	2596.6	2407.4	2317.2	2224.3	2476.5	2662.0	2770.8	3085.1	4314.5
50°	3557.4	3293.9	2862.3	2730.2	2611.5	2705.4	3032.8	3057.6	3048.7	3344.8	4551.8
52.5°	3936.2	3625.6	3167.3	3017.9	3085.1	3178.6	3556.4	3561.1	3295.8	3563.4	4722.8
55°	4286.5	3942.3	3573.7	3432.7	3573.3	3652.2	4071.2	3917.5	3439.7	3712.0	4806.8
57.5°	4780.2	4381.8	4114.1	3865.7	4150.6	4074.9	4523.8	4295.4	3601.3	3810.5	4776.0
60°	5404.3	4935.3	4667.2	4404.2	4709.7	4761.1	4965.7	4484.1	3663.9	3842.8	4590.6
62.5°	6039.0	5567.3	5214.6	5036.2	5382.8	5551.9	5374.8	4578.0	3588.7	3779.7	4170.7
65°	6826.5	6222.6	5810.6	5706.0	6348.2	6596.7	5858.7	4600.9	3443.4	3432.7	3353.3
67.5°	7366.0	6778.0	6400.1	6575.3	7351.1	7371.2	6293.1	4607.9	2954.4	2687.6	2200.9
70°	7494.0	6864.4	6695.3	7211.0	8151.2	7898.5	6433.3	4252.9	2191.1	1595.1	1006.1
72.5°	6578.5	5972.2	6192.2	7090.9	8321.2	8205.4	6123.6	3068.3	1233.6	638.0	308.7
75°	4035.2	3668.5	4645.2	6011.9	7304.4	7229.6	4777.4	1585.3	497.0	255.0	115.4
77.5°	1754.9	1629.7	2424.2	3989.0	5248.7	5181.9	2799.3	583.9	256.9	179.4	58.4
80°	580.6	563.3	918.3	1888.9	3074.4	3015.5	1179.4	242.9	183.1	143.9	32.7
82.5°	137.8	136.9	320.4	869.3	1566.2	1517.1	362.0	134.1	132.7	113.5	17.3
85°	34.6	35.5	88.7	355.5	636.2	561.0	94.4	66.8	93.4	77.1	8.9
87.5°	0.0	0.0	22.9	50.9	96.2	60.3	10.3	17.7	26.2	27.6	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°	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5	447.5
2.5°	542.8	537.6	495.6	505.9	521.7	520.3	530.6	522.7	515.7	550.2	547.0
5°	690.4	662.3	649.3	667.5	657.7	634.8	653.9	650.7	645.1	656.7	665.6
7.5°	801.1	775.4	763.7	725.4	669.8	625.9	632.9	616.6	601.1	619.4	638.0
10°	837.5	823.5	822.1	747.3	695.0	631.5	556.3	491.4	474.1	451.2	461.5
12.5°	936.5	944.9	892.1	804.8	703.9	582.0	448.4	356.4	319.0	294.7	296.1
15°	1017.8	1047.2	970.6	813.7	619.4	443.7	298.5	215.8	192.4	186.4	184.5
17.5°	1138.8	1167.3	994.9	750.6	499.3	300.8	192.0	168.2	169.6	173.8	172.8
20°	1228.5	1224.2	973.9	639.0	368.1	197.1	160.7	157.4	164.9	177.0	174.2
22.5°	1314.9	1285.9	960.8	535.8	238.2	158.3	155.1	154.6	161.6	173.3	176.6
25°	1376.5	1381.2	938.9	419.4	173.3	147.1	149.9	154.1	161.1	173.8	171.9
27.5°	1553.1	1422.3	847.3	304.5	146.2	141.1	148.1	156.5	158.8	174.7	175.2
30°	1667.5	1577.4	787.5	205.1	135.0	130.3	144.3	155.5	158.3	178.9	180.3
32.5°	1867.0	1644.2	718.4	152.3	125.6	127.0	135.9	150.9	163.9	185.9	186.8
35°	2115.0	1858.6	593.2	136.9	122.4	120.0	124.2	141.5	163.0	186.8	191.5
37.5°	2587.2	1987.0	470.4	132.7	122.4	118.2	122.4	132.7	160.2	196.2	206.0
40°	2903.4	2248.6	339.1	131.7	120.0	116.3	117.7	128.0	152.3	190.6	205.1
42.5°	3293.0	2358.8	249.9	129.4	117.7	112.1	113.0	126.1	144.3	178.9	189.6
45°	3612.0	2439.2	196.6	128.5	112.1	110.2	112.1	124.7	136.9	153.7	163.5
47.5°	3854.4	2532.6	157.9	122.4	110.7	110.2	107.9	116.8	124.2	128.5	135.0
50°	4031.9	2511.6	130.8	113.0	106.0	108.8	104.6	106.0	107.9	105.6	113.0
52.5°	4140.8	2435.9	108.8	101.8	100.4	102.8	97.6	93.4	90.1	88.3	93.0
55°	4180.5	2284.1	92.5	87.3	90.6	91.5	87.3	79.9	74.3	71.5	75.2
57.5°	4105.3	2052.9	80.3	72.4	79.9	79.9	74.3	66.3	59.8	55.1	58.9
60°	3914.7	1797.4	71.5	60.3	68.2	68.7	62.1	53.7	48.6	43.9	46.2
62.5°	3559.7	1519.0	62.6	52.3	58.9	59.3	51.4	43.4	39.7	34.6	36.4
65°	2849.7	1161.7	53.2	46.2	50.9	49.5	42.5	36.9	32.2	27.6	28.5
67.5°	1849.7	717.0	46.2	42.0	43.0	41.6	36.0	32.2	27.1	23.4	23.8
70°	828.2	308.7	40.6	37.8	37.4	35.0	30.4	29.9	26.6	23.4	23.4
72.5°	255.5	116.3	35.0	34.1	32.2	29.4	26.6	28.5	26.2	22.4	22.0
75°	100.9	53.2	29.0	29.0	28.0	24.3	23.8	25.7	24.3	20.6	19.6
77.5°	52.8	33.6	23.8	24.8	24.3	18.7	21.5	23.4	22.4	17.3	14.5
80°	31.3	20.6	17.7	20.1	19.6	13.1	16.3	14.9	10.7	5.1	1.4
82.5°	17.3	9.3	7.9	11.7	11.7	4.7	8.4	7.5	4.2	0.0	0.0
85°	8.4	6.5	6.1	6.5	4.7	1.4	4.2	4.2	2.3	0.0	0.0
87.5°	4.2	3.7	2.8	2.3	1.9	0.0	1.4	1.9	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)