

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: P368223

Luminaire Tested: **MSA-SA4A-730-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368223
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-SA4A-730-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 10573 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

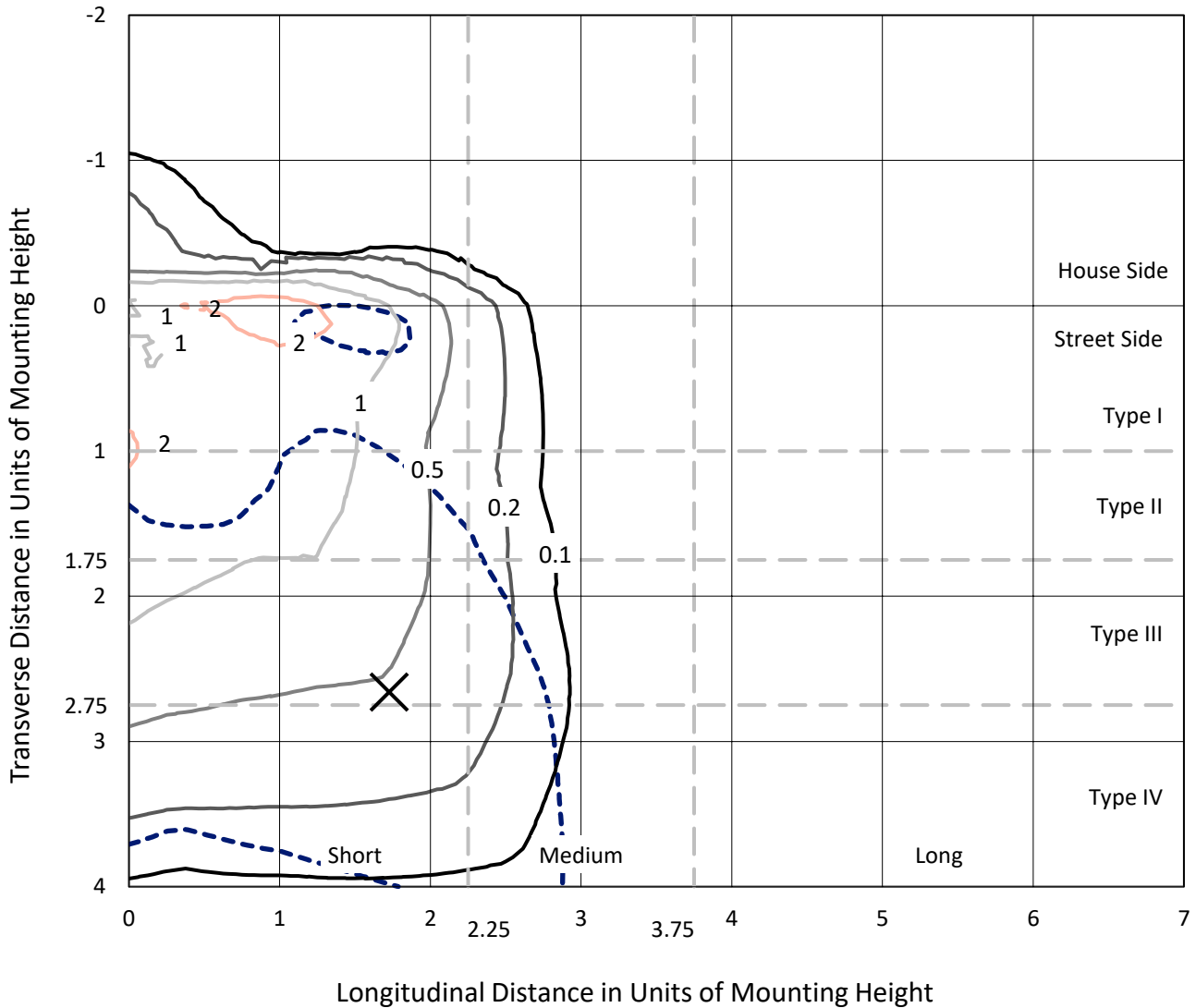
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

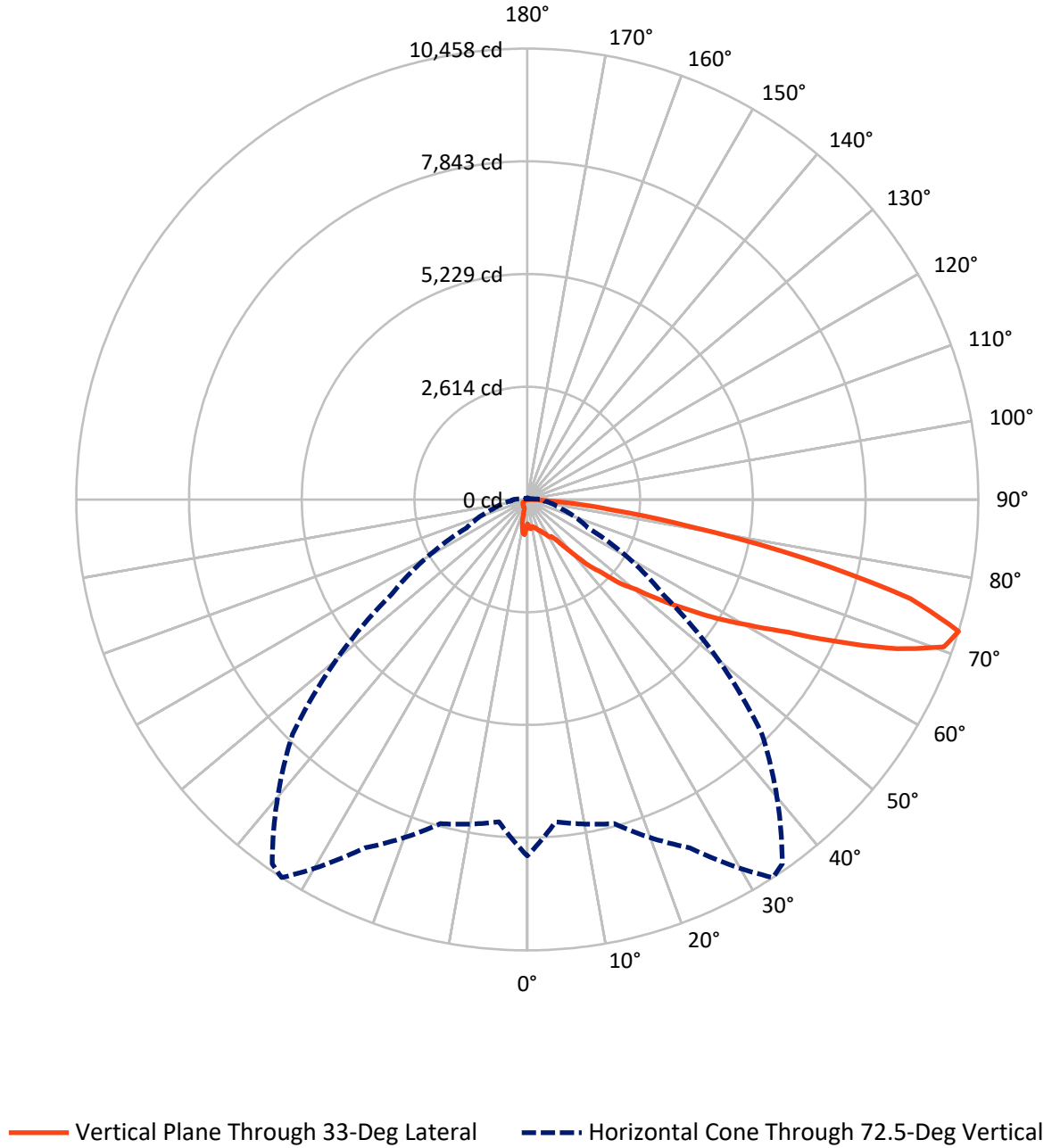
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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	977.6	0.0	977.6
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	9595.4	0.0	9595.4
	% Fixture	90.8	0.0	90.8
Total	Lumens	10573.0	0.0	10573.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	0.7
10°-20°	216.9	2.1
20°-30°	367.8	3.5
30°-40°	673.2	6.4
40°-50°	1420.8	13.4
50°-60°	2377.1	22.5
60°-70°	3181.8	30.1
70°-80°	2078.4	19.7
80°-90°	184.3	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°	10573.0	100.0
0°-180°	10573.0	100.0

Coefficient of Utilization

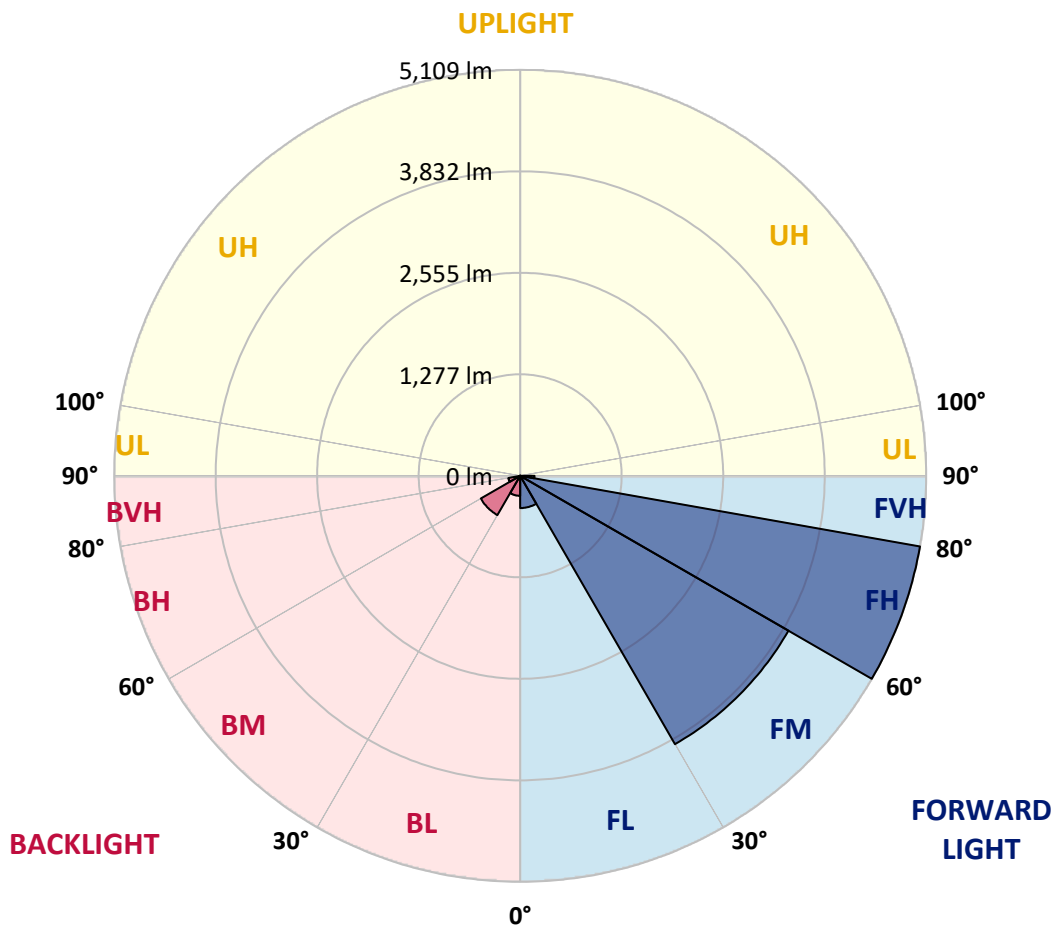


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	405.9	3.8			
FM (30°-60°)	3899.5	36.9			
FH (60°-80°)	5109.3	48.3			G3/7500
FVH (80°-90°)	180.7	1.7			G2/225
BL (0°-30°)	251.6	2.4	B1/500		
BM (30°-60°)	571.5	5.4	B1/1000		
BH (60°-80°)	150.9	1.4	B1/500		G1/500
BVH (80°-90°)	3.6	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-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4
2.5°	670.4	644.5	607.0	609.3	615.8	621.1	635.2	629.3	618.1	617.5	670.4
5°	710.3	681.5	679.2	682.7	680.9	690.3	678.6	716.7	749.0	787.8	850.0
7.5°	690.9	677.4	660.4	678.0	677.4	672.7	680.4	757.8	835.9	885.2	987.9
10°	635.2	619.9	632.8	638.7	634.6	655.1	706.2	769.6	862.9	966.2	1016.1
12.5°	619.3	628.7	633.4	633.4	672.7	683.3	761.4	821.2	932.2	1013.8	1158.8
15°	680.9	699.1	666.8	659.8	672.1	678.0	764.9	837.1	979.1	1128.2	1249.8
17.5°	779.0	777.8	727.9	700.3	719.7	733.8	781.9	866.4	949.8	1218.1	1394.2
20°	846.5	847.7	757.8	700.3	764.3	772.5	825.9	893.4	959.2	1263.3	1488.7
22.5°	933.4	902.2	803.0	747.3	790.7	798.3	857.0	910.5	1007.3	1258.0	1609.6
25°	1004.4	984.4	859.4	820.6	859.4	848.8	902.2	982.7	1059.0	1341.9	1680.6
27.5°	1114.7	1080.7	899.3	906.4	904.0	911.6	924.0	1047.2	1150.0	1346.0	1845.0
30°	1217.5	1197.5	988.5	988.5	1011.4	996.8	1005.6	1154.7	1238.0	1441.1	2029.9
32.5°	1323.7	1324.9	1093.6	1037.8	1019.6	1080.1	1139.4	1206.9	1344.3	1604.3	2312.8
35°	1604.9	1581.4	1295.0	1155.8	1141.2	1137.6	1232.7	1415.3	1532.7	1816.8	2693.8
37.5°	2171.4	2089.8	1728.2	1423.5	1368.3	1349.5	1457.6	1644.8	1761.6	2129.1	3323.7
40°	2752.5	2602.8	2201.3	1857.9	1678.9	1597.9	1723.5	1882.6	2090.4	2474.3	3906.6
42.5°	3262.6	3077.7	2557.6	2326.3	2093.3	2058.1	1940.1	2199.0	2560.0	2976.8	4477.8
45°	3759.8	3395.9	2874.6	2691.5	2408.5	2428.5	2388.6	2612.8	3047.8	3527.4	4984.3
47.5°	4102.1	3775.1	3263.2	3025.5	2912.2	2795.4	3112.4	3345.4	3482.2	3877.2	5422.3
50°	4470.7	4139.6	3597.2	3431.1	3282.0	3400.0	3811.5	3842.6	3831.4	4203.6	5720.5
52.5°	4946.8	4556.4	3980.6	3792.7	3877.2	3994.6	4469.5	4475.4	4142.0	4478.3	5935.3
55°	5387.0	4954.4	4491.3	4314.0	4490.7	4589.9	5116.4	4923.3	4322.8	4665.0	6041.0
57.5°	6007.5	5506.8	5170.4	4858.1	5216.2	5121.1	5685.2	5398.2	4525.9	4788.9	6002.2
60°	6791.8	6202.4	5865.5	5535.0	5918.9	5983.4	6240.6	5635.3	4604.5	4829.4	5769.2
62.5°	7589.5	6996.6	6553.4	6329.2	6764.8	6977.3	6754.8	5753.3	4510.0	4750.1	5241.5
65°	8579.2	7820.2	7302.5	7171.0	7978.1	8290.4	7362.9	5782.1	4327.5	4314.0	4214.2
67.5°	9257.2	8518.2	8043.3	8263.4	9238.4	9263.7	7908.9	5790.9	3712.9	3377.7	2766.0
70°	9418.1	8626.8	8414.3	9062.3	10244.0	9926.4	8085.0	5344.8	2753.7	2004.7	1264.4
72.5°	8267.5	7505.6	7782.1	8911.5	10457.7	10312.1	7695.8	3856.1	1550.3	801.9	388.0
75°	5071.2	4610.4	5837.9	7555.5	9179.7	9085.8	6004.0	1992.3	624.6	320.5	145.0
77.5°	2205.4	2048.1	3046.6	5013.1	6596.3	6512.3	3518.0	733.8	322.9	225.4	73.4
80°	729.7	707.9	1154.1	2373.9	3863.7	3789.8	1482.2	305.2	230.1	180.8	41.1
82.5°	173.2	172.0	402.7	1092.4	1968.3	1906.6	454.9	168.5	166.7	142.6	21.7
85°	43.4	44.6	111.5	446.7	799.5	705.0	118.6	83.9	117.4	96.9	11.2
87.5°	0.0	0.0	28.8	64.0	120.9	75.7	12.9	22.3	32.9	34.6	5.9
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°	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4	562.4
2.5°	682.1	675.7	622.8	635.7	655.7	653.9	666.8	656.9	648.1	691.5	687.4
5°	867.6	832.4	816.0	838.8	826.5	797.8	821.8	817.7	810.7	825.3	836.5
7.5°	1006.7	974.4	959.8	911.6	841.8	786.6	795.4	774.9	755.5	778.4	801.9
10°	1052.5	1034.9	1033.1	939.2	873.5	793.6	699.1	617.5	595.8	567.1	580.0
12.5°	1177.0	1187.5	1121.2	1011.4	884.6	731.4	563.5	447.9	400.9	370.4	372.2
15°	1279.1	1316.1	1219.8	1022.6	778.4	557.7	375.1	271.2	241.9	234.2	231.9
17.5°	1431.1	1467.0	1250.3	943.3	627.5	378.0	241.3	211.3	213.1	218.4	217.2
20°	1543.9	1538.6	1223.9	803.0	462.6	247.7	201.9	197.8	207.2	222.5	219.0
22.5°	1652.4	1616.1	1207.5	673.3	299.4	199.0	194.9	194.3	203.1	217.8	221.9
25°	1729.9	1735.8	1179.9	527.1	217.8	184.9	188.4	193.7	202.5	218.4	216.0
27.5°	1951.8	1787.5	1064.8	382.7	183.7	177.3	186.1	196.7	199.6	219.5	220.1
30°	2095.6	1982.4	989.7	257.7	169.6	163.8	181.4	195.5	199.0	224.8	226.6
32.5°	2346.3	2066.3	902.8	191.4	157.9	159.7	170.8	189.6	206.0	233.6	234.8
35°	2658.0	2335.7	745.5	172.0	153.8	150.9	156.1	177.9	204.9	234.8	240.7
37.5°	3251.5	2497.2	591.1	166.7	153.8	148.5	153.8	166.7	201.3	246.5	258.9
40°	3648.9	2825.9	426.2	165.5	150.9	146.2	147.9	160.8	191.4	239.5	257.7
42.5°	4138.5	2964.4	314.1	162.6	147.9	140.9	142.1	158.5	181.4	224.8	238.3
45°	4539.4	3065.4	247.1	161.4	140.9	138.5	140.9	156.7	172.0	193.1	205.5
47.5°	4844.1	3182.8	198.4	153.8	139.1	138.5	135.6	146.8	156.1	161.4	169.6
50°	5067.1	3156.4	164.4	142.1	133.3	136.8	131.5	133.3	135.6	132.7	142.1
52.5°	5203.9	3061.3	136.8	128.0	126.2	129.1	122.7	117.4	113.3	110.9	116.8
55°	5253.8	2870.5	116.2	109.8	113.9	115.1	109.8	100.4	93.3	89.8	94.5
57.5°	5159.3	2579.9	101.0	91.0	100.4	100.4	93.3	83.4	75.1	69.3	74.0
60°	4919.8	2258.8	89.8	75.7	85.7	86.3	78.1	67.5	61.0	55.2	58.1
62.5°	4473.6	1909.0	78.7	65.7	74.0	74.6	64.6	54.6	49.9	43.4	45.8
65°	3581.4	1459.9	66.9	58.1	64.0	62.2	53.4	46.4	40.5	34.6	35.8
67.5°	2324.6	901.1	58.1	52.8	54.0	52.2	45.2	40.5	34.0	29.4	29.9
70°	1040.8	388.0	51.1	47.5	47.0	44.0	38.2	37.6	33.5	29.4	29.4
72.5°	321.1	146.2	44.0	42.9	40.5	37.0	33.5	35.8	32.9	28.2	27.6
75°	126.8	66.9	36.4	36.4	35.2	30.5	29.9	32.3	30.5	25.8	24.7
77.5°	66.3	42.3	29.9	31.1	30.5	23.5	27.0	29.4	28.2	21.7	18.2
80°	39.3	25.8	22.3	25.2	24.7	16.4	20.5	18.8	13.5	6.5	1.8
82.5°	21.7	11.7	10.0	14.7	14.7	5.9	10.6	9.4	5.3	0.0	0.0
85°	10.6	8.2	7.6	8.2	5.9	1.8	5.3	5.3	2.9	0.0	0.0
87.5°	5.3	4.7	3.5	2.9	2.3	0.0	1.8	2.3	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)