

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: P367167

Luminaire Tested: **MSA-SA2A-730-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367167
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-SA2A-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: 5421 lumens
Efficiency: N/A
Efficacy: 82.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

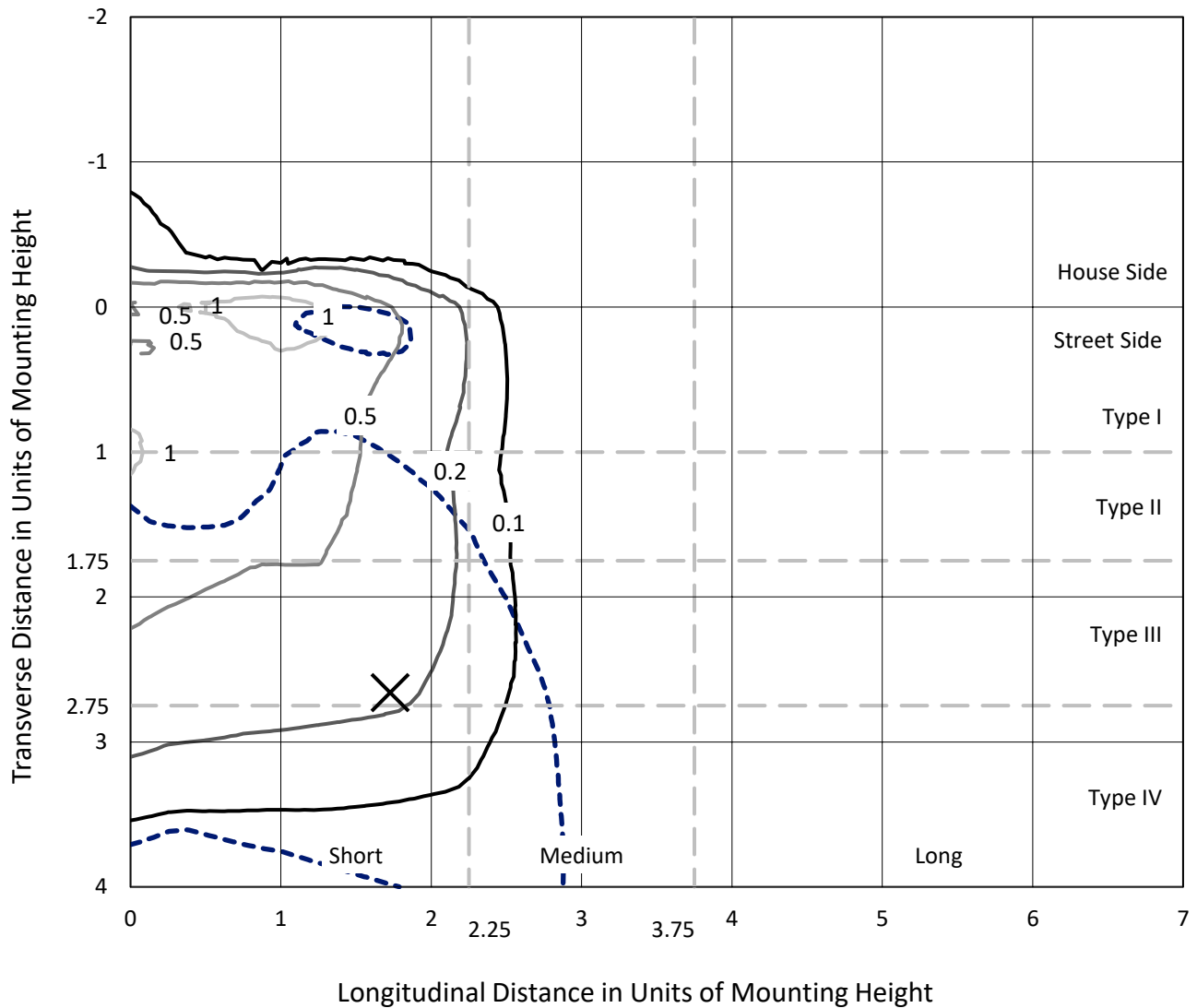
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

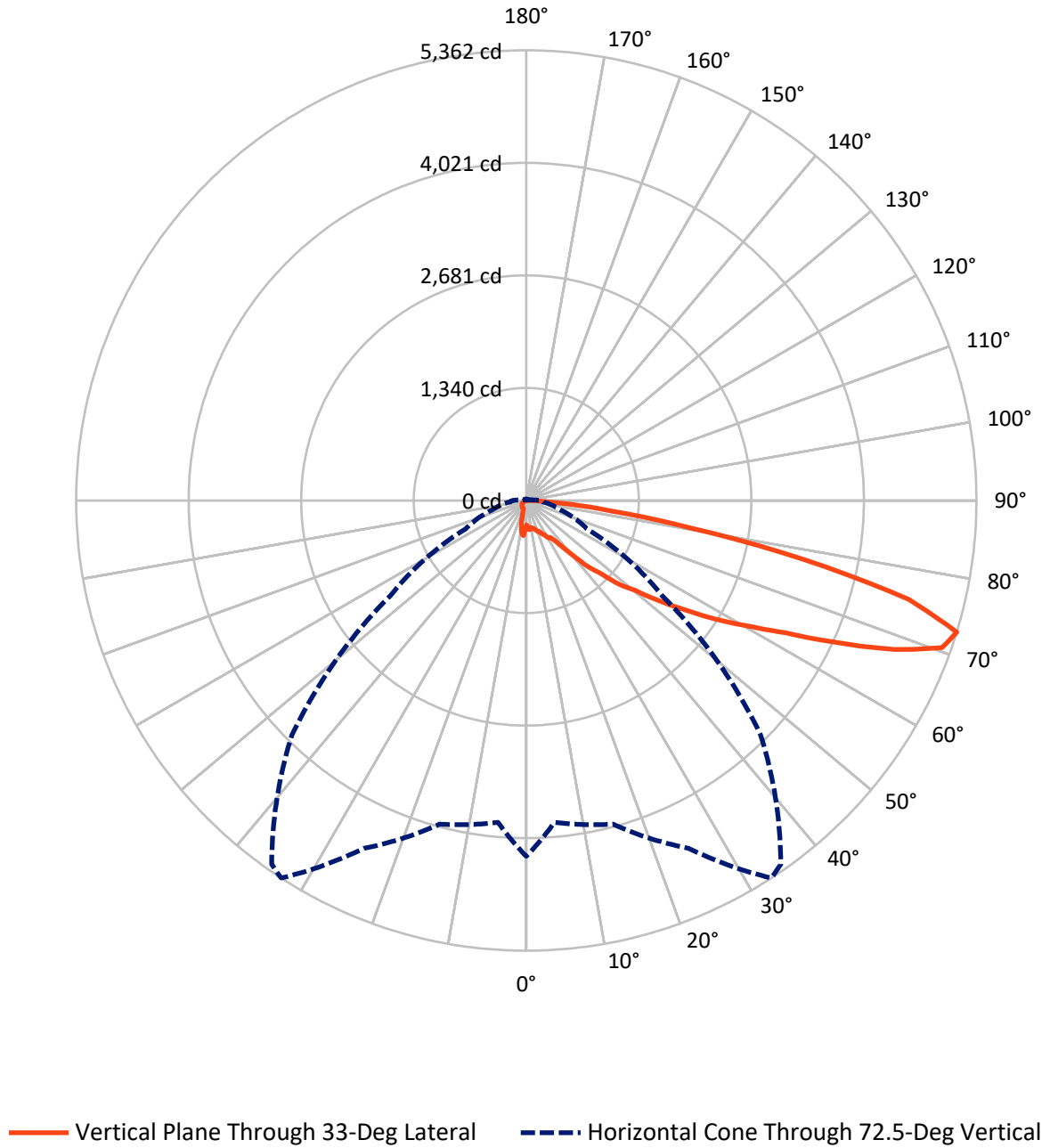
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	501.2	0.0	501.2
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	4919.8	0.0	4919.8
	% Fixture	90.8	0.0	90.8
Total	Lumens	5421.0	0.0	5421.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	0.7
10°-20°	111.2	2.1
20°-30°	188.6	3.5
30°-40°	345.1	6.4
40°-50°	728.5	13.4
50°-60°	1218.8	22.5
60°-70°	1631.4	30.1
70°-80°	1065.6	19.7
80°-90°	94.5	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°	5421.0	100.0
0°-180°	5421.0	100.0

Coefficient of Utilization



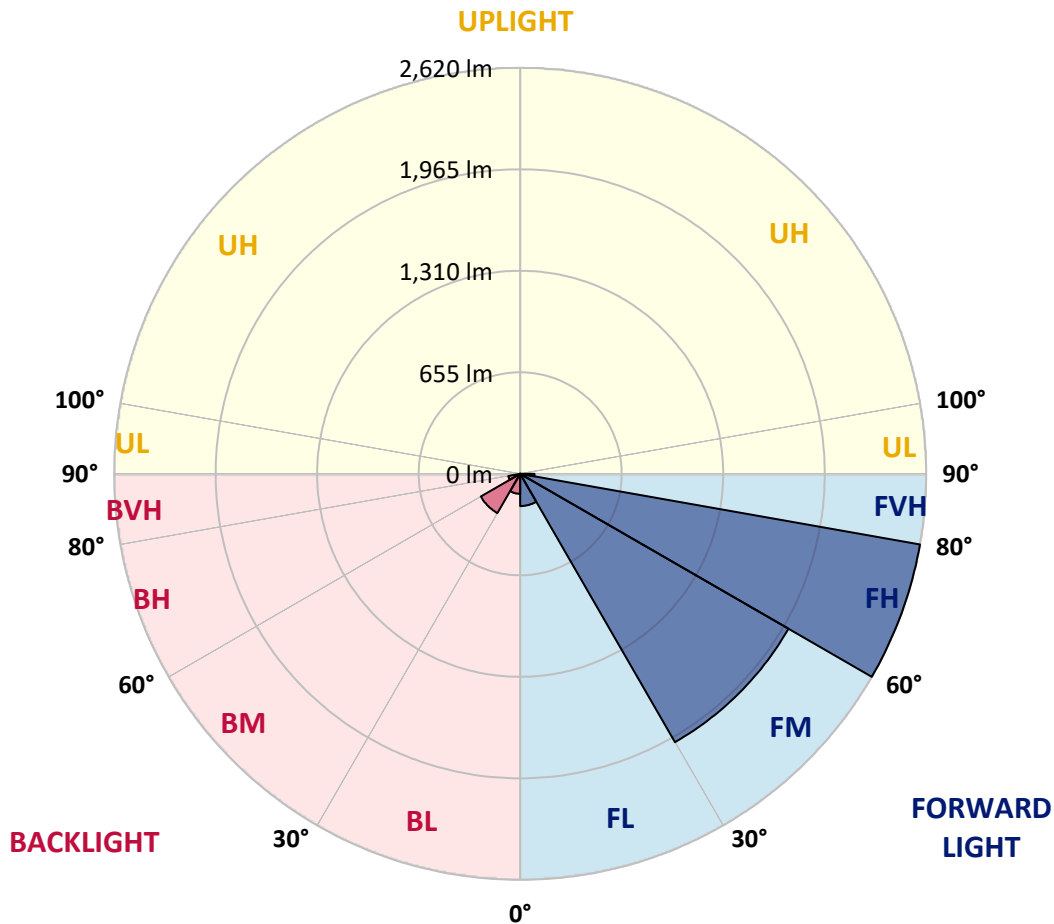
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	208.1	3.8			
FM (30°-60°)	1999.3	36.9			
FH (60°-80°)	2619.7	48.3			G2/5000
FVH (80°-90°)	92.6	1.7			G1/100
BL (0°-30°)	129.0	2.4	B1/500		
BM (30°-60°)	293.0	5.4	B1/1000		
BH (60°-80°)	77.4	1.4	B0/110		G0/110
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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3
2.5°	343.7	330.5	311.2	312.4	315.7	318.4	325.7	322.6	316.9	316.6	343.7
5°	364.2	349.4	348.2	350.0	349.1	353.9	347.9	367.5	384.0	403.9	435.8
7.5°	354.2	347.3	338.6	347.6	347.3	344.9	348.8	388.6	428.6	453.9	506.5
10°	325.7	317.8	324.5	327.5	325.4	335.9	362.1	394.6	442.4	495.4	521.0
12.5°	317.5	322.3	324.8	324.8	344.9	350.3	390.4	421.1	477.9	519.8	594.1
15°	349.1	358.5	341.9	338.3	344.6	347.6	392.2	429.2	502.0	578.5	640.8
17.5°	399.4	398.8	373.2	359.1	369.0	376.2	400.9	444.2	487.0	624.5	714.8
20°	434.0	434.6	388.6	359.1	391.9	396.1	423.5	458.1	491.8	647.7	763.3
22.5°	478.6	462.6	411.7	383.1	405.4	409.3	439.4	466.8	516.5	645.0	825.3
25°	515.0	504.7	440.6	420.8	440.6	435.2	462.6	503.8	543.0	688.0	861.7
27.5°	571.6	554.1	461.1	464.7	463.5	467.4	473.7	536.9	589.6	690.1	946.0
30°	624.2	614.0	506.8	506.8	518.6	511.1	515.6	592.0	634.8	738.9	1040.8
32.5°	678.7	679.3	560.7	532.1	522.8	553.8	584.2	618.8	689.2	822.6	1185.8
35°	822.9	810.8	664.0	592.6	585.1	583.3	632.0	725.7	785.8	931.5	1381.2
37.5°	1113.3	1071.5	886.1	729.9	701.6	691.9	747.3	843.3	903.2	1091.6	1704.1
40°	1411.3	1334.5	1128.7	952.6	860.8	819.3	883.7	965.2	1071.8	1268.6	2003.0
42.5°	1672.8	1578.0	1311.3	1192.8	1073.3	1055.2	994.7	1127.5	1312.6	1526.2	2295.8
45°	1927.7	1741.1	1473.9	1380.0	1234.9	1245.1	1224.7	1339.6	1562.7	1808.6	2555.6
47.5°	2103.2	1935.6	1673.1	1551.2	1493.1	1433.2	1595.8	1715.3	1785.4	1987.9	2780.1
50°	2292.2	2122.5	1844.4	1759.2	1682.8	1743.2	1954.2	1970.2	1964.5	2155.3	2933.0
52.5°	2536.3	2336.2	2040.9	1944.6	1987.9	2048.1	2291.6	2294.6	2123.7	2296.1	3043.2
55°	2762.0	2540.2	2302.8	2211.9	2302.5	2353.3	2623.3	2524.3	2216.4	2391.8	3097.3
57.5°	3080.2	2823.4	2651.0	2490.9	2674.5	2625.7	2914.9	2767.8	2320.5	2455.4	3077.5
60°	3482.3	3180.1	3007.3	2837.9	3034.7	3067.8	3199.7	2889.4	2360.8	2476.1	2958.0
62.5°	3891.3	3587.3	3360.1	3245.1	3468.4	3577.4	3463.3	2949.9	2312.4	2435.5	2687.4
65°	4398.8	4009.6	3744.1	3676.7	4090.6	4250.7	3775.1	2964.6	2218.8	2211.9	2160.7
67.5°	4746.4	4367.5	4124.0	4236.8	4736.7	4749.7	4055.0	2969.1	1903.7	1731.8	1418.2
70°	4828.8	4423.1	4314.2	4646.5	5252.3	5089.5	4145.3	2740.4	1411.9	1027.8	648.3
72.5°	4238.9	3848.3	3990.0	4569.1	5361.9	5287.2	3945.8	1977.1	794.9	411.1	198.9
75°	2600.1	2363.9	2993.2	3873.9	4706.7	4658.5	3078.4	1021.5	320.2	164.3	74.3
77.5°	1130.8	1050.1	1562.1	2570.3	3382.1	3339.0	1803.7	376.2	165.5	115.6	37.6
80°	374.1	363.0	591.7	1217.1	1981.0	1943.1	760.0	156.5	118.0	92.7	21.1
82.5°	88.8	88.2	206.5	560.1	1009.2	977.6	233.3	86.4	85.5	73.1	11.1
85°	22.3	22.9	57.2	229.0	409.9	361.5	60.8	43.0	60.2	49.7	5.7
87.5°	0.0	0.0	14.7	32.8	62.0	38.8	6.6	11.4	16.9	17.8	3.0
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°	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3	288.3
2.5°	349.7	346.4	319.3	326.0	336.2	335.3	341.9	336.8	332.3	354.5	352.4
5°	444.8	426.8	418.4	430.1	423.8	409.0	421.4	419.3	415.6	423.2	428.9
7.5°	516.2	499.6	492.1	467.4	431.6	403.3	407.8	397.3	387.4	399.1	411.1
10°	539.6	530.6	529.7	481.6	447.9	406.9	358.5	316.6	305.5	290.7	297.4
12.5°	603.5	608.9	574.9	518.6	453.6	375.0	288.9	229.6	205.6	189.9	190.8
15°	655.8	674.8	625.4	524.3	399.1	285.9	192.3	139.1	124.0	120.1	118.9
17.5°	733.8	752.1	641.1	483.7	321.7	193.8	123.7	108.4	109.3	112.0	111.4
20°	791.6	788.9	627.5	411.7	237.2	127.0	103.5	101.4	106.2	114.1	112.3
22.5°	847.2	828.6	619.1	345.2	153.5	102.0	99.9	99.6	104.1	111.7	113.8
25°	887.0	890.0	605.0	270.3	111.7	94.8	96.6	99.3	103.8	112.0	110.8
27.5°	1000.7	916.5	546.0	196.2	94.2	90.9	95.4	100.8	102.3	112.6	112.9
30°	1074.5	1016.4	507.4	132.1	87.0	84.0	93.0	100.2	102.0	115.3	116.2
32.5°	1203.0	1059.4	462.9	98.1	81.0	81.9	87.6	97.2	105.6	119.8	120.4
35°	1362.8	1197.6	382.2	88.2	78.9	77.4	80.1	91.2	105.0	120.4	123.4
37.5°	1667.1	1280.3	303.1	85.5	78.9	76.1	78.9	85.5	103.2	126.4	132.7
40°	1870.9	1448.9	218.5	84.9	77.4	74.9	75.8	82.5	98.1	122.8	132.1
42.5°	2121.9	1519.9	161.0	83.4	75.8	72.2	72.8	81.3	93.0	115.3	122.2
45°	2327.4	1571.7	126.7	82.8	72.2	71.0	72.2	80.4	88.2	99.0	105.3
47.5°	2483.6	1631.9	101.7	78.9	71.3	71.0	69.5	75.2	80.1	82.8	87.0
50°	2598.0	1618.3	84.3	72.8	68.3	70.1	67.4	68.3	69.5	68.0	72.8
52.5°	2668.1	1569.6	70.1	65.6	64.7	66.2	62.9	60.2	58.1	56.9	59.9
55°	2693.7	1471.8	59.6	56.3	58.4	59.0	56.3	51.5	47.9	46.0	48.5
57.5°	2645.3	1322.8	51.8	46.7	51.5	51.5	47.9	42.7	38.5	35.5	37.9
60°	2522.5	1158.2	46.0	38.8	43.9	44.2	40.0	34.6	31.3	28.3	29.8
62.5°	2293.7	978.8	40.3	33.7	37.9	38.2	33.1	28.0	25.6	22.3	23.5
65°	1836.2	748.5	34.3	29.8	32.8	31.9	27.4	23.8	20.8	17.8	18.4
67.5°	1191.9	462.0	29.8	27.1	27.7	26.8	23.2	20.8	17.5	15.0	15.3
70°	533.6	198.9	26.2	24.4	24.1	22.6	19.6	19.3	17.2	15.0	15.0
72.5°	164.6	74.9	22.6	22.0	20.8	19.0	17.2	18.4	16.9	14.4	14.1
75°	65.0	34.3	18.7	18.7	18.1	15.7	15.3	16.6	15.7	13.2	12.6
77.5°	34.0	21.7	15.3	16.0	15.7	12.0	13.8	15.0	14.4	11.1	9.3
80°	20.2	13.2	11.4	12.9	12.6	8.4	10.5	9.6	6.9	3.3	0.9
82.5°	11.1	6.0	5.1	7.5	7.5	3.0	5.4	4.8	2.7	0.0	0.0
85°	5.4	4.2	3.9	4.2	3.0	0.9	2.7	2.7	1.5	0.0	0.0
87.5°	2.7	2.4	1.8	1.5	1.2	0.0	0.9	1.2	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)