

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: P367277

Luminaire Tested: **MSA-SA2B-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367277
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-SA2B-727-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: 6238 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

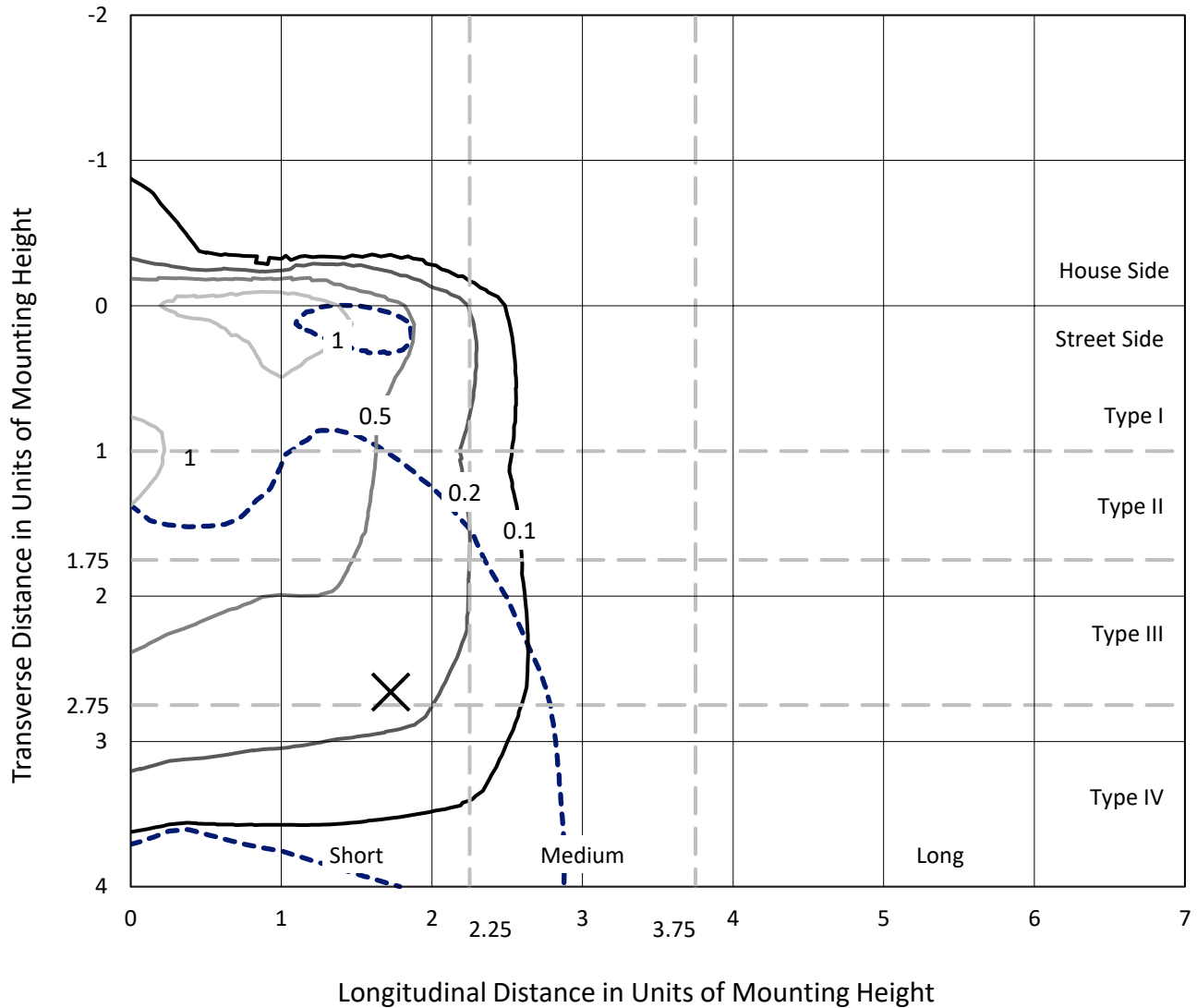
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

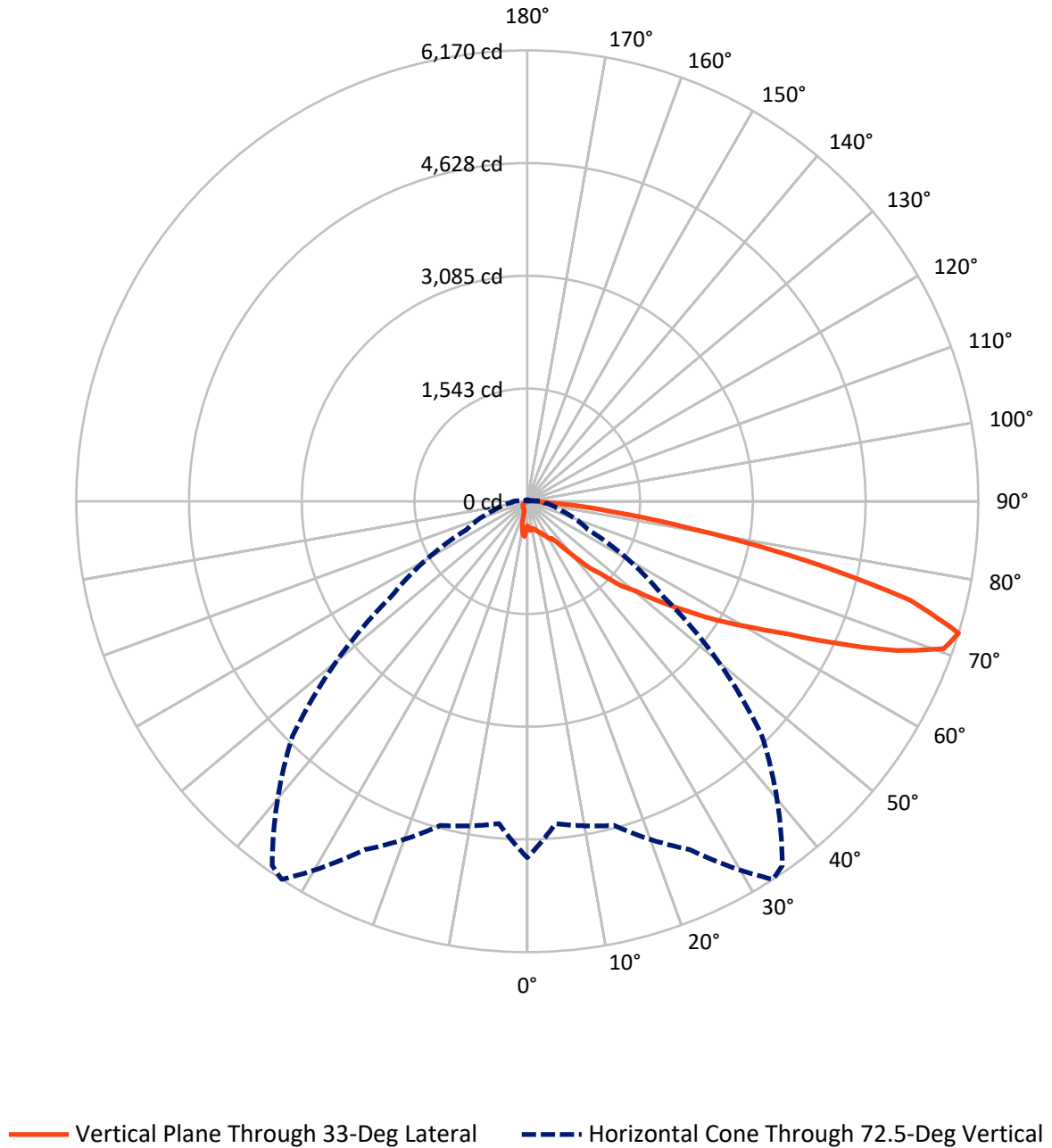
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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	576.8	0.0	576.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	5661.2	0.0	5661.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	6238.0	0.0	6238.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	0.7
10°-20°	128.0	2.1
20°-30°	217.0	3.5
30°-40°	397.2	6.4
40°-50°	838.2	13.4
50°-60°	1402.5	22.5
60°-70°	1877.3	30.1
70°-80°	1226.2	19.7
80°-90°	108.7	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°	6238.0	100.0
0°-180°	6238.0	100.0

Coefficient of Utilization



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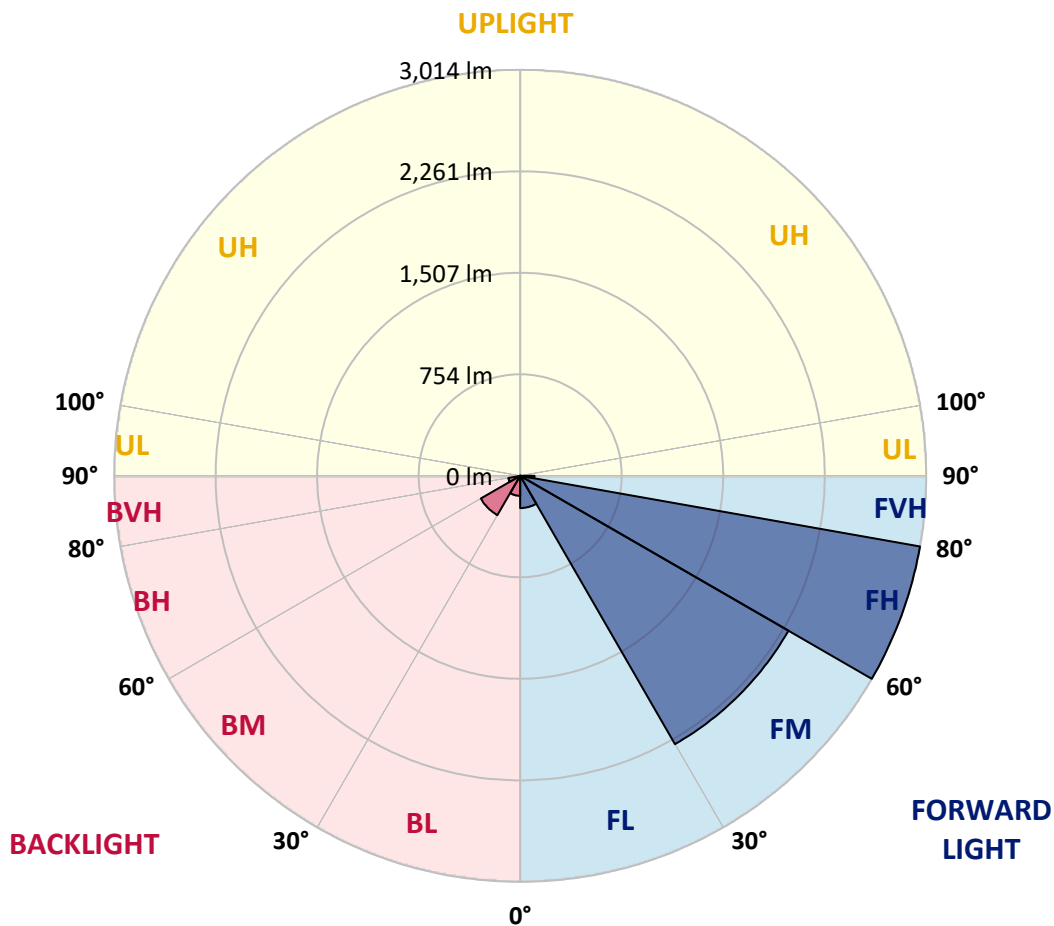
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	239.5	3.8			
FM (30°-60°)	2300.7	36.9			
FH (60°-80°)	3014.5	48.3			G2/5000
FVH (80°-90°)	106.6	1.7			G2/225
BL (0°-30°)	148.5	2.4	B1/500		
BM (30°-60°)	337.2	5.4	B1/1000		
BH (60°-80°)	89.0	1.4	B0/110		G0/110
BVH (80°-90°)	2.1	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°	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8
2.5°	395.5	380.3	358.1	359.5	363.3	366.4	374.7	371.3	364.7	364.3	395.5
5°	419.1	402.1	400.7	402.8	401.7	407.3	400.4	422.9	441.9	464.8	501.5
7.5°	407.6	399.7	389.6	400.0	399.7	396.9	401.4	447.1	493.2	522.3	582.9
10°	374.7	365.7	373.3	376.8	374.4	386.5	416.6	454.0	509.1	570.1	599.5
12.5°	365.4	370.9	373.7	373.7	396.9	403.1	449.2	484.5	550.0	598.1	683.7
15°	401.7	412.5	393.4	389.3	396.6	400.0	451.3	493.9	577.7	665.7	737.3
17.5°	459.6	458.9	429.5	413.2	424.6	432.9	461.3	511.2	560.4	718.6	822.5
20°	499.4	500.1	447.1	413.2	450.9	455.8	487.3	527.1	565.9	745.3	878.3
22.5°	550.7	532.3	473.8	440.9	466.5	471.0	505.6	537.2	594.3	742.2	949.7
25°	592.6	580.8	507.0	484.2	507.0	500.8	532.3	579.8	624.8	791.7	991.6
27.5°	657.7	637.6	530.6	534.7	533.4	537.9	545.1	617.9	678.5	794.1	1088.5
30°	718.3	706.5	583.2	583.2	596.7	588.1	593.3	681.2	730.4	850.3	1197.6
32.5°	781.0	781.7	645.2	612.3	601.6	637.3	672.2	712.1	793.1	946.5	1364.6
35°	946.9	933.0	764.0	681.9	673.3	671.2	727.3	835.0	904.3	1071.9	1589.3
37.5°	1281.1	1233.0	1019.6	839.9	807.3	796.2	860.0	970.4	1039.4	1256.2	1961.0
40°	1624.0	1535.7	1298.8	1096.2	990.5	942.7	1016.8	1110.7	1233.3	1459.8	2304.9
42.5°	1924.9	1815.8	1509.0	1372.5	1235.0	1214.3	1144.6	1297.4	1510.4	1756.3	2641.8
45°	2218.3	2003.5	1696.0	1587.9	1421.0	1432.8	1409.2	1541.5	1798.2	2081.1	2940.7
47.5°	2420.2	2227.3	1925.3	1785.0	1718.2	1649.2	1836.3	1973.8	2054.5	2287.5	3199.1
50°	2637.7	2442.4	2122.3	2024.3	1936.4	2006.0	2248.8	2267.1	2260.5	2480.1	3375.0
52.5°	2918.6	2688.3	2348.5	2237.7	2287.5	2356.8	2637.0	2640.5	2443.7	2642.2	3501.8
55°	3178.3	2923.1	2649.8	2545.2	2649.5	2708.0	3018.7	2904.7	2550.4	2752.3	3564.1
57.5°	3544.4	3249.0	3050.5	2866.3	3077.5	3021.4	3354.3	3184.9	2670.2	2825.4	3541.3
60°	4007.1	3659.4	3460.6	3265.6	3492.1	3530.2	3681.9	3324.8	2716.7	2849.3	3403.8
62.5°	4477.8	4128.0	3866.5	3734.2	3991.2	4116.5	3985.3	3394.4	2660.9	2802.5	3092.4
65°	5061.7	4613.9	4308.4	4230.8	4707.0	4891.3	4344.1	3411.4	2553.2	2545.2	2486.3
67.5°	5461.7	5025.7	4745.5	4875.4	5450.6	5465.5	4666.2	3416.6	2190.6	1992.8	1631.9
70°	5556.6	5089.7	4964.4	5346.7	6043.9	5856.5	4770.1	3153.4	1624.7	1182.7	746.0
72.5°	4877.8	4428.2	4591.4	5257.7	6170.0	6084.1	4540.5	2275.1	914.7	473.1	228.9
75°	2992.0	2720.1	3444.3	4457.7	5416.0	5360.6	3542.3	1175.5	368.5	189.1	85.5
77.5°	1301.2	1208.4	1797.5	2957.7	3891.8	3842.2	2075.6	432.9	190.5	133.0	43.3
80°	430.5	417.7	680.9	1400.6	2279.6	2235.9	874.5	180.1	135.8	106.7	24.2
82.5°	102.2	101.5	237.6	644.5	1161.3	1124.9	268.4	99.4	98.4	84.2	12.8
85°	25.6	26.3	65.8	263.6	471.7	415.9	70.0	49.5	69.3	57.1	6.6
87.5°	0.0	0.0	17.0	37.8	71.3	44.7	7.6	13.2	19.4	20.4	3.5
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°	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8	331.8
2.5°	402.4	398.6	367.5	375.1	386.9	385.8	393.4	387.5	382.4	408.0	405.6
5°	511.9	491.1	481.4	494.9	487.6	470.7	484.9	482.4	478.3	486.9	493.5
7.5°	594.0	574.9	566.3	537.9	496.6	464.1	469.3	457.2	445.7	459.2	473.1
10°	621.0	610.6	609.6	554.1	515.3	468.2	412.5	364.3	351.5	334.6	342.2
12.5°	694.4	700.6	661.5	596.7	521.9	431.5	332.5	264.3	236.5	218.5	219.6
15°	754.7	776.5	719.7	603.3	459.2	329.0	221.3	160.0	142.7	138.2	136.8
17.5°	844.4	865.5	737.7	556.6	370.2	223.0	142.3	124.7	125.7	128.8	128.1
20°	910.9	907.7	722.1	473.8	272.9	146.2	119.1	116.7	122.3	131.3	129.2
22.5°	974.9	953.5	712.4	397.2	176.6	117.4	115.0	114.6	119.8	128.5	130.9
25°	1020.6	1024.1	696.1	311.0	128.5	109.1	111.2	114.3	119.5	128.8	127.5
27.5°	1151.6	1054.6	628.3	225.8	108.4	104.6	109.8	116.0	117.8	129.5	129.9
30°	1236.4	1169.6	583.9	152.0	100.1	96.6	107.0	115.3	117.4	132.6	133.7
32.5°	1384.3	1219.1	532.7	112.9	93.2	94.2	100.8	111.9	121.6	137.8	138.5
35°	1568.2	1378.1	439.8	101.5	90.7	89.0	92.1	104.9	120.9	138.5	142.0
37.5°	1918.4	1473.3	348.8	98.4	90.7	87.6	90.7	98.4	118.8	145.5	152.7
40°	2152.8	1667.3	251.4	97.7	89.0	86.2	87.3	94.9	112.9	141.3	152.0
42.5°	2441.7	1749.0	185.3	95.9	87.3	83.1	83.8	93.5	107.0	132.6	140.6
45°	2678.2	1808.6	145.8	95.2	83.1	81.7	83.1	92.5	101.5	113.9	121.2
47.5°	2858.0	1877.8	117.1	90.7	82.1	81.7	80.0	86.6	92.1	95.2	100.1
50°	2989.6	1862.2	97.0	83.8	78.6	80.7	77.6	78.6	80.0	78.3	83.8
52.5°	3070.3	1806.1	80.7	75.5	74.5	76.2	72.4	69.3	66.8	65.5	68.9
55°	3099.7	1693.6	68.6	64.8	67.2	67.9	64.8	59.2	55.1	53.0	55.8
57.5°	3043.9	1522.1	59.6	53.7	59.2	59.2	55.1	49.2	44.3	40.9	43.6
60°	2902.6	1332.7	53.0	44.7	50.6	50.9	46.1	39.8	36.0	32.6	34.3
62.5°	2639.4	1126.3	46.4	38.8	43.6	44.0	38.1	32.2	29.4	25.6	27.0
65°	2113.0	861.3	39.5	34.3	37.8	36.7	31.5	27.4	23.9	20.4	21.1
67.5°	1371.5	531.6	34.3	31.2	31.9	30.8	26.7	23.9	20.1	17.3	17.7
70°	614.1	228.9	30.1	28.1	27.7	26.0	22.5	22.2	19.7	17.3	17.3
72.5°	189.4	86.2	26.0	25.3	23.9	21.8	19.7	21.1	19.4	16.6	16.3
75°	74.8	39.5	21.5	21.5	20.8	18.0	17.7	19.0	18.0	15.2	14.5
77.5°	39.1	24.9	17.7	18.4	18.0	13.9	15.9	17.3	16.6	12.8	10.7
80°	23.2	15.2	13.2	14.9	14.5	9.7	12.1	11.1	8.0	3.8	1.0
82.5°	12.8	6.9	5.9	8.7	8.7	3.5	6.2	5.5	3.1	0.0	0.0
85°	6.2	4.8	4.5	4.8	3.5	1.0	3.1	3.1	1.7	0.0	0.0
87.5°	3.1	2.8	2.1	1.7	1.4	0.0	1.0	1.4	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)