

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: P367444

Luminaire Tested: **MSA-SA2C-740-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-740-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12016 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

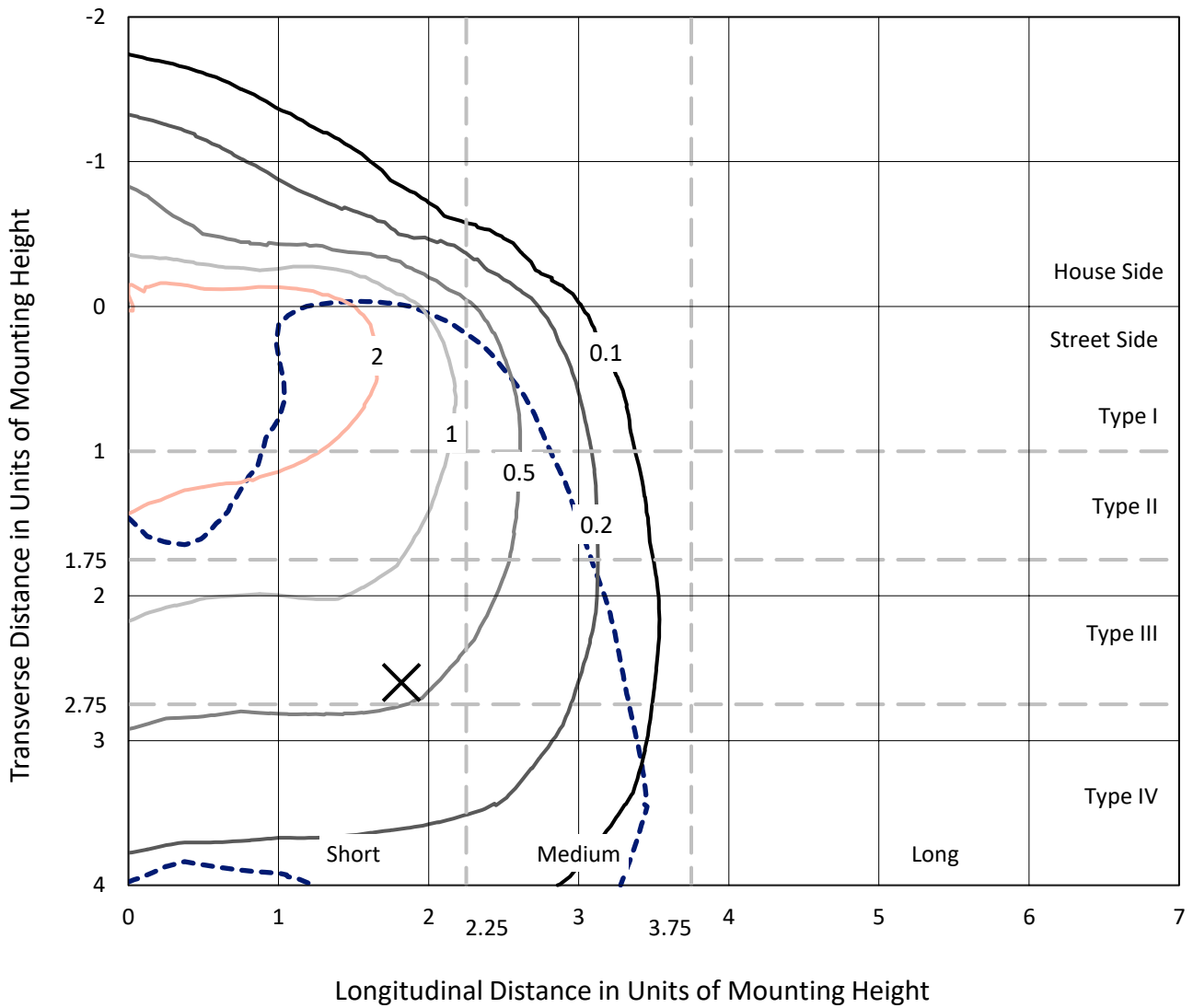
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

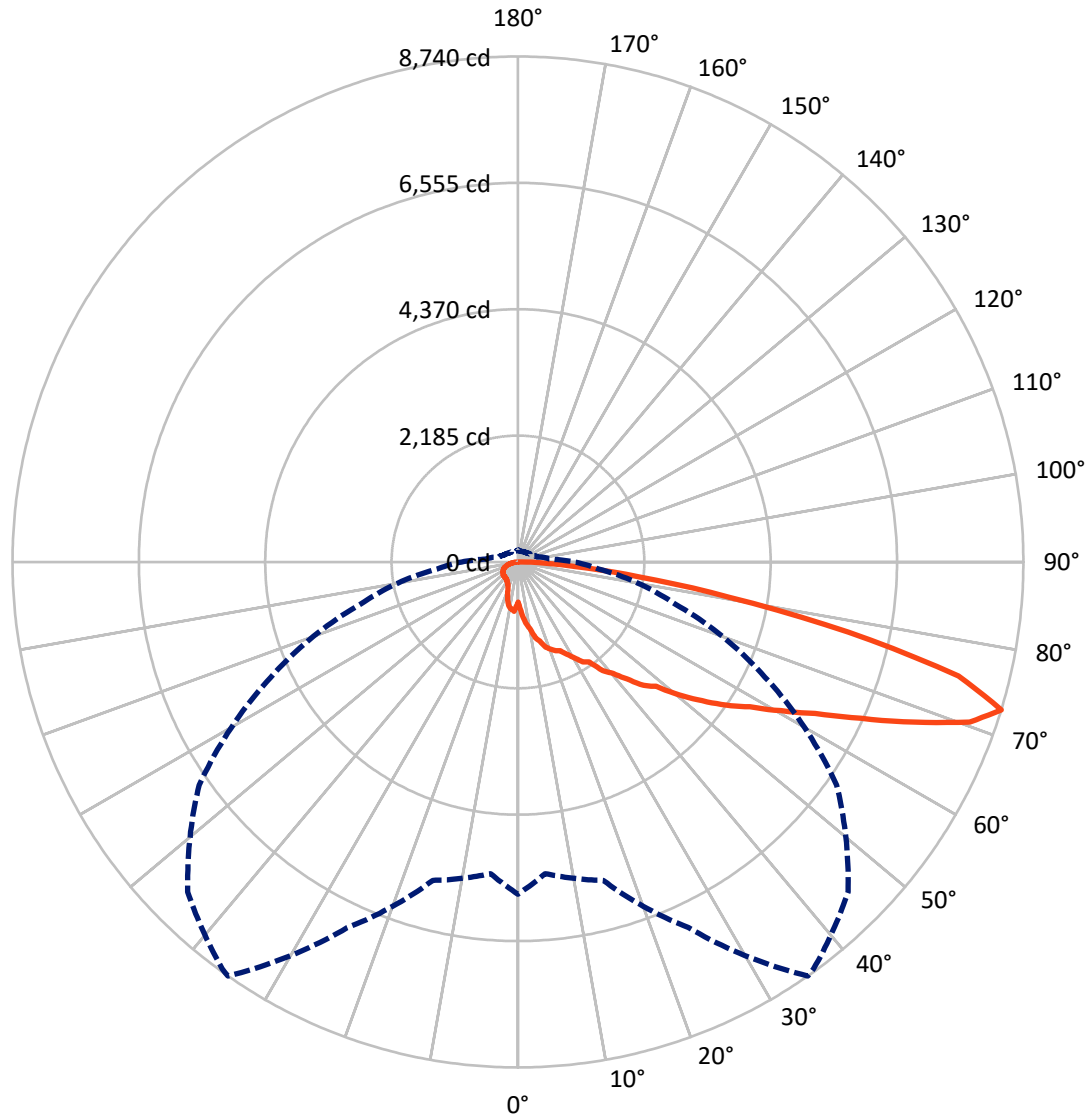
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1612.5	0.0	1612.5
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	10403.5	0.0	10403.5
	% Fixture	86.6	0.0	86.6
Total	Lumens	12016.0	0.0	12016.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	0.8
10°-20°	325.1	2.7
20°-30°	564.9	4.7
30°-40°	944.1	7.9
40°-50°	1638.6	13.6
50°-60°	2477.1	20.6
60°-70°	3209.1	26.7
70°-80°	2368.0	19.7
80°-90°	396.9	3.3
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°	12016.0	100.0
0°-180°	12016.0	100.0

Coefficient of Utilization



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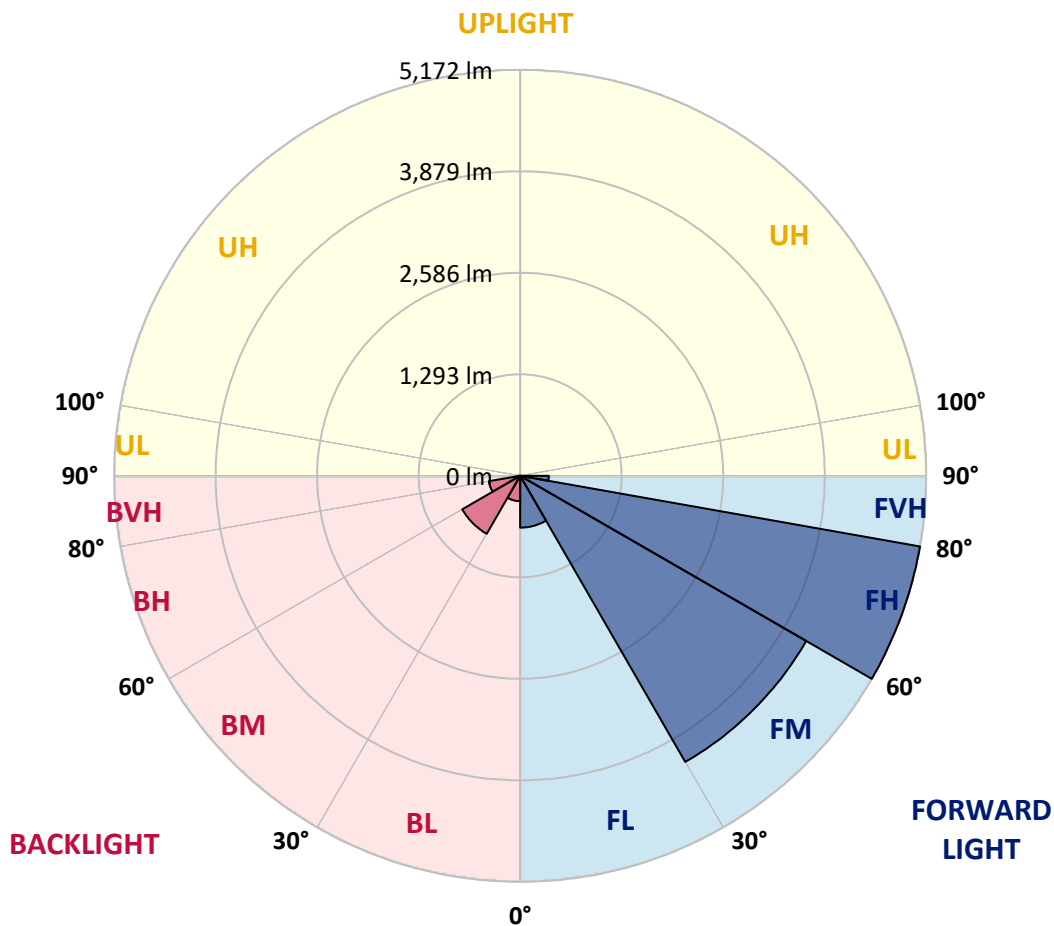
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	659.9	5.5			
FM (30°-60°)	4207.6	35.0			
FH (60°-80°)	5171.6	43.0			G3/7500
FVH (80°-90°)	364.4	3.0			G3/500
BL (0°-30°)	322.3	2.7	B1/500		
BM (30°-60°)	852.2	7.1	B1/1000		
BH (60°-80°)	405.5	3.4	B1/500		G1/500
BVH (80°-90°)	32.5	0.3			G1/100
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°	35°	36°	45°	55°	65°	75°	85°
0°	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4
2.5°	866.2	824.7	788.8	787.2	820.6	833.4	828.3	817.0	803.6	775.4	837.0
5°	1085.2	1025.7	1014.4	1001.1	970.8	979.0	929.8	967.3	979.0	1006.2	1047.3
7.5°	1214.4	1179.6	1152.4	1141.1	1088.8	1082.6	1046.2	1099.6	1122.1	1118.5	1179.6
10°	1265.2	1233.4	1235.5	1198.5	1181.6	1188.8	1192.9	1193.9	1207.8	1219.1	1188.3
12.5°	1291.4	1303.7	1348.8	1323.7	1345.2	1353.9	1397.0	1352.9	1354.5	1296.5	1328.3
15°	1423.2	1454.0	1427.8	1426.8	1420.1	1434.5	1471.4	1441.6	1464.7	1446.3	1405.2
17.5°	1582.2	1591.4	1541.1	1520.6	1547.3	1542.7	1533.4	1538.1	1480.6	1587.3	1537.0
20°	1630.9	1667.3	1601.1	1520.6	1608.8	1620.6	1618.6	1598.6	1500.1	1654.0	1605.2
22.5°	1772.4	1723.2	1670.9	1619.6	1664.7	1671.4	1660.1	1612.4	1579.6	1638.1	1676.5
25°	1836.5	1824.7	1758.1	1751.9	1702.2	1678.6	1698.1	1684.2	1651.9	1756.0	1713.5
27.5°	1983.2	1969.4	1816.0	1879.1	1806.8	1800.6	1697.6	1743.7	1776.0	1768.3	1831.9
30°	2149.4	2165.3	1941.2	2004.2	1920.7	1909.4	1805.8	1864.2	1886.3	1893.5	1973.0
32.5°	2334.0	2377.6	2155.0	2103.2	2058.6	2066.3	1978.6	1871.9	1957.6	2125.3	2159.6
35°	2534.0	2552.0	2318.6	2240.7	2124.3	2116.1	2117.6	2130.9	2217.6	2408.9	2435.6
37.5°	2903.8	2820.7	2616.1	2418.6	2379.7	2303.2	2355.0	2396.1	2482.7	2776.1	2887.9
40°	3131.5	3070.0	2758.2	2643.8	2536.1	2543.3	2640.2	2639.7	2844.3	3146.9	3317.7
42.5°	3342.3	3275.1	2981.2	2866.4	2764.3	2789.4	2817.1	2865.9	3258.2	3745.9	3823.9
45°	3512.1	3364.9	3153.6	3127.9	3043.8	3010.5	3127.9	3205.9	3753.1	4230.6	4275.7
47.5°	3627.4	3506.4	3299.7	3277.2	3215.1	3296.7	3617.2	3667.4	4136.7	4717.3	4713.7
50°	3802.8	3637.2	3450.5	3438.7	3613.6	3657.2	4048.0	4042.9	4510.1	5121.4	5036.8
52.5°	4004.9	3796.2	3593.6	3720.3	3987.0	4008.5	4347.5	4485.5	4917.8	5511.2	5290.1
55°	4237.2	4003.9	3808.0	3977.2	4374.2	4310.6	4653.7	4990.6	5428.1	5922.0	5473.2
57.5°	4524.9	4241.8	4083.4	4340.8	4727.5	4783.9	5092.2	5516.3	5838.9	6177.4	5606.6
60°	4828.6	4496.2	4351.1	4596.2	5222.4	5287.1	5588.6	5953.3	6299.4	6417.9	5581.4
62.5°	5118.3	4758.8	4627.5	4930.1	5771.2	5931.2	6153.8	6386.1	6682.5	6476.4	5277.3
65°	5440.9	5080.9	4998.3	5452.2	6515.3	6674.3	6965.1	6895.4	6813.8	6269.2	4774.2
67.5°	5782.5	5416.8	5432.2	6057.9	7392.8	7420.0	7866.7	7403.1	6659.5	5720.4	3929.5
70°	5966.1	5591.7	5750.2	6703.6	8285.7	8246.8	8338.0	7539.5	6030.2	4521.9	2708.4
72.5°	5743.5	5409.6	5699.9	6975.4	8740.1	8698.1	8073.4	6729.7	4714.7	2812.0	1404.2
75°	4862.9	4540.8	4985.0	6217.9	7868.3	7907.2	6870.8	5004.5	2699.2	1130.9	583.1
77.5°	3304.3	3138.2	3518.7	4634.7	5844.5	5979.4	5097.8	2926.4	1133.4	468.2	352.8
80°	1746.3	1667.3	1948.3	2669.9	3700.8	3801.3	2997.7	1457.5	580.6	303.1	251.8
82.5°	948.8	915.5	1066.2	1372.9	2102.7	2190.4	1554.5	968.3	391.3	189.8	153.9
85°	637.5	624.7	724.7	737.5	994.4	1023.2	814.4	745.7	234.9	92.8	101.5
87.5°	319.0	306.2	381.6	336.9	379.5	380.0	373.4	475.9	59.5	30.8	18.5
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°	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4	694.4
2.5°	838.0	820.1	758.0	757.5	766.7	760.6	765.2	740.1	729.3	778.5	776.0
5°	1041.6	987.8	936.0	918.0	897.0	851.3	853.9	854.4	846.7	876.0	878.0
7.5°	1161.1	1096.5	1048.8	953.4	878.5	820.1	827.8	836.5	827.8	866.7	881.1
10°	1178.5	1127.3	1070.3	964.2	914.4	861.6	808.3	761.1	755.4	737.5	743.1
12.5°	1282.1	1239.6	1120.6	1004.2	946.2	865.2	767.7	713.9	668.8	676.5	662.1
15°	1367.3	1337.0	1194.4	1042.1	903.7	803.1	699.5	625.7	585.2	580.6	566.2
17.5°	1482.7	1439.6	1201.1	1016.0	848.8	728.3	611.3	527.7	510.3	503.1	495.9
20°	1538.1	1460.6	1177.0	933.9	784.7	639.0	524.1	452.3	447.2	460.0	457.5
22.5°	1586.3	1478.1	1155.5	884.2	684.7	548.8	464.6	417.5	411.8	428.2	431.3
25°	1614.5	1527.8	1131.9	833.4	622.6	481.6	420.0	393.4	394.4	415.9	413.4
27.5°	1741.7	1545.2	1072.4	773.4	551.3	431.8	398.5	384.6	379.0	408.7	411.3
30°	1821.7	1659.1	1059.1	709.8	498.5	395.4	379.0	373.4	372.3	408.2	410.8
32.5°	1970.4	1697.0	1065.2	640.6	450.8	384.1	364.6	364.1	374.4	408.7	412.9
35°	2176.6	1857.1	1035.5	601.1	424.6	366.7	353.4	357.5	374.9	412.3	418.0
37.5°	2578.7	2007.8	1044.7	564.1	415.9	361.1	350.3	352.8	381.1	421.6	437.0
40°	2897.1	2281.2	1030.3	545.7	404.1	360.0	343.6	353.9	380.5	426.7	440.5
42.5°	3358.7	2499.2	1031.9	527.2	403.6	355.9	342.6	354.9	379.5	422.1	441.1
45°	3754.6	2694.6	1053.9	516.4	398.5	362.6	341.1	356.4	372.8	405.7	426.7
47.5°	4079.3	2912.5	1076.5	506.2	396.4	368.7	339.5	345.7	361.6	387.2	406.2
50°	4343.9	3065.9	1105.2	504.1	396.4	365.7	335.4	334.9	348.2	368.7	386.7
52.5°	4550.1	3174.1	1124.7	506.7	396.4	353.9	330.3	326.2	334.4	349.3	367.2
55°	4699.3	3207.4	1108.8	513.4	395.9	343.1	321.0	317.5	321.6	331.8	348.7
57.5°	4759.3	3119.7	1013.9	501.6	395.9	335.4	309.8	305.7	309.8	317.5	334.4
60°	4609.1	2837.6	877.0	471.3	388.2	325.2	296.9	294.4	300.5	307.2	323.6
62.5°	4232.1	2462.7	730.8	435.4	372.3	316.4	284.6	285.1	294.9	304.1	320.5
65°	3646.4	2009.4	609.3	399.0	352.3	302.6	271.8	275.4	289.3	301.6	318.0
67.5°	2869.4	1488.8	512.9	363.6	324.1	280.0	257.5	258.5	268.2	280.0	295.9
70°	1918.1	947.2	421.6	322.1	287.2	250.8	235.4	231.8	229.2	239.5	253.4
72.5°	972.9	559.5	346.2	275.4	247.2	219.0	207.2	198.0	190.8	196.9	207.7
75°	509.8	391.3	279.5	228.7	204.1	186.2	177.4	165.1	160.0	163.6	171.3
77.5°	360.5	306.2	226.2	181.0	166.2	147.7	149.2	136.4	132.3	134.4	142.6
80°	276.9	242.6	173.9	136.9	128.2	110.3	115.4	107.7	102.6	101.5	107.7
82.5°	188.7	182.6	123.6	95.9	89.8	76.9	84.1	81.0	74.4	70.3	73.3
85°	127.2	121.0	75.4	55.4	52.8	40.0	51.3	49.2	43.6	37.4	38.0
87.5°	22.1	40.5	21.5	13.8	12.8	4.6	11.8	11.3	10.3	5.1	4.1
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)