

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: P367538

Luminaire Tested: **MSA-SA2D-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-727-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11250 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

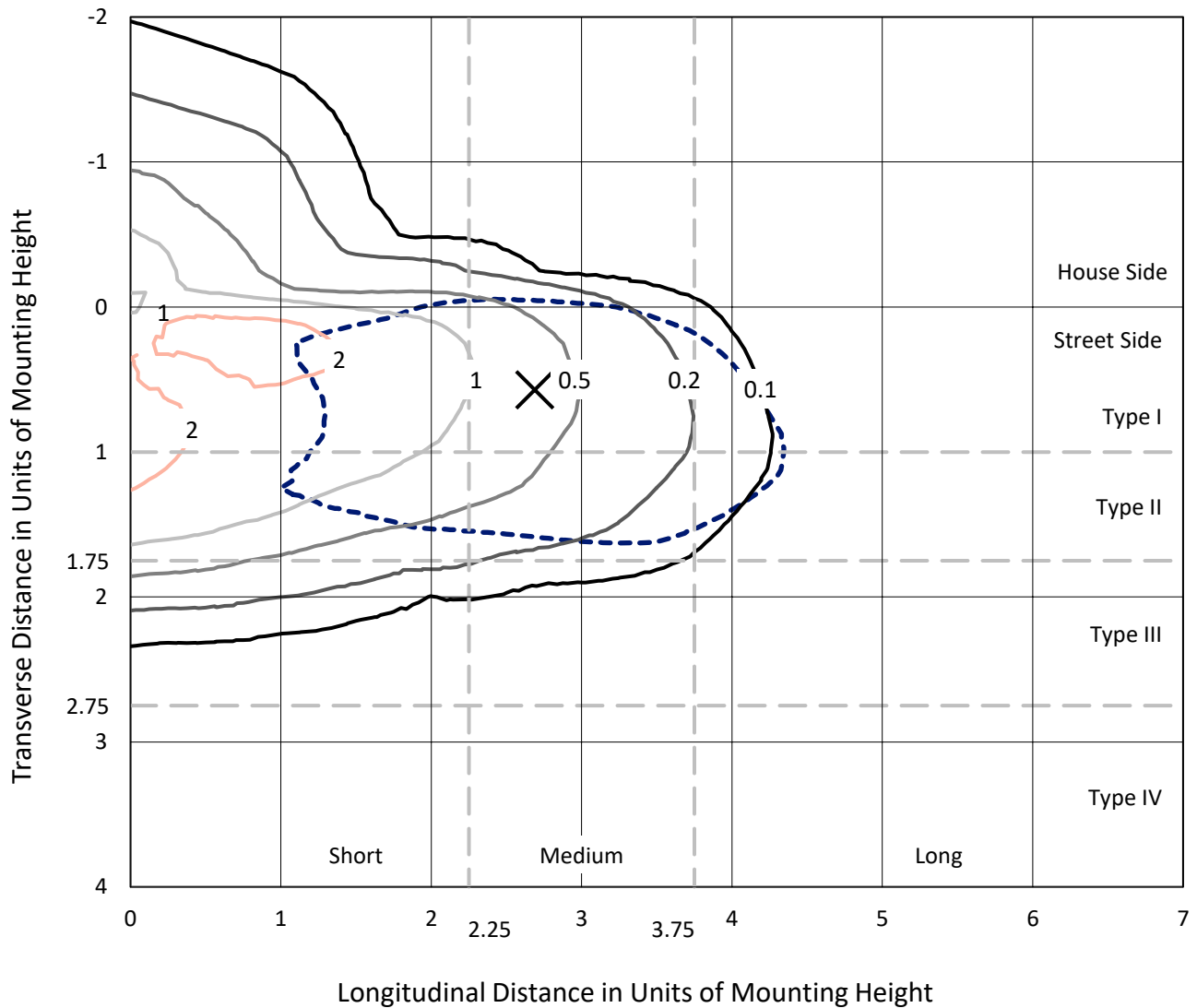
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

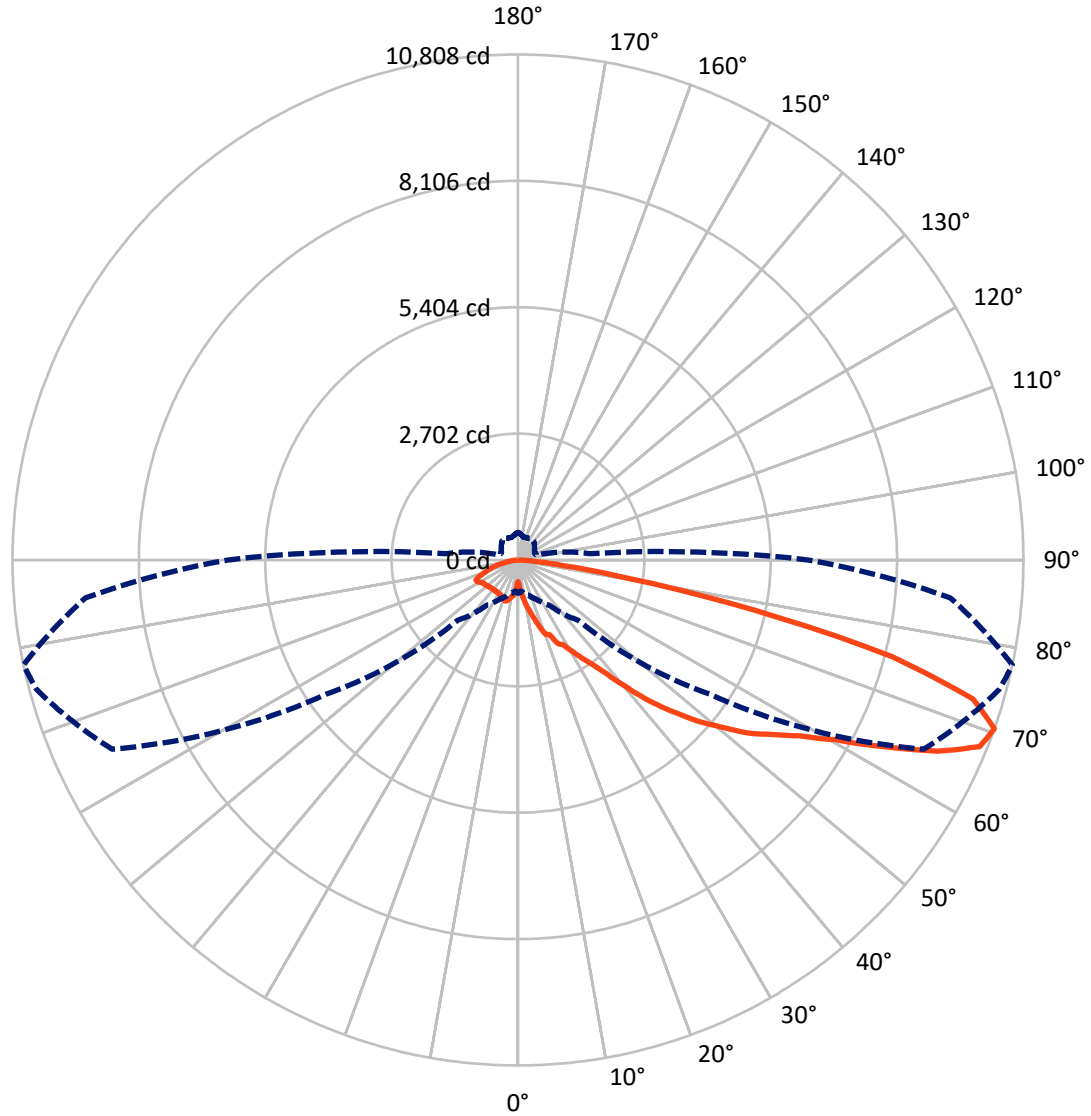
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2008.0	0.0	2008.0
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	9242.0	0.0	9242.0
	% Fixture	82.2	0.0	82.2
Total	Lumens	11250.0	0.0	11250.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	0.6
10°-20°	312.3	2.8
20°-30°	601.1	5.3
30°-40°	1012.5	9.0
40°-50°	1751.9	15.6
50°-60°	2645.2	23.5
60°-70°	2929.9	26.0
70°-80°	1689.2	15.0
80°-90°	236.9	2.1
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°	11250.0	100.0
0°-180°	11250.0	100.0

Coefficient of Utilization



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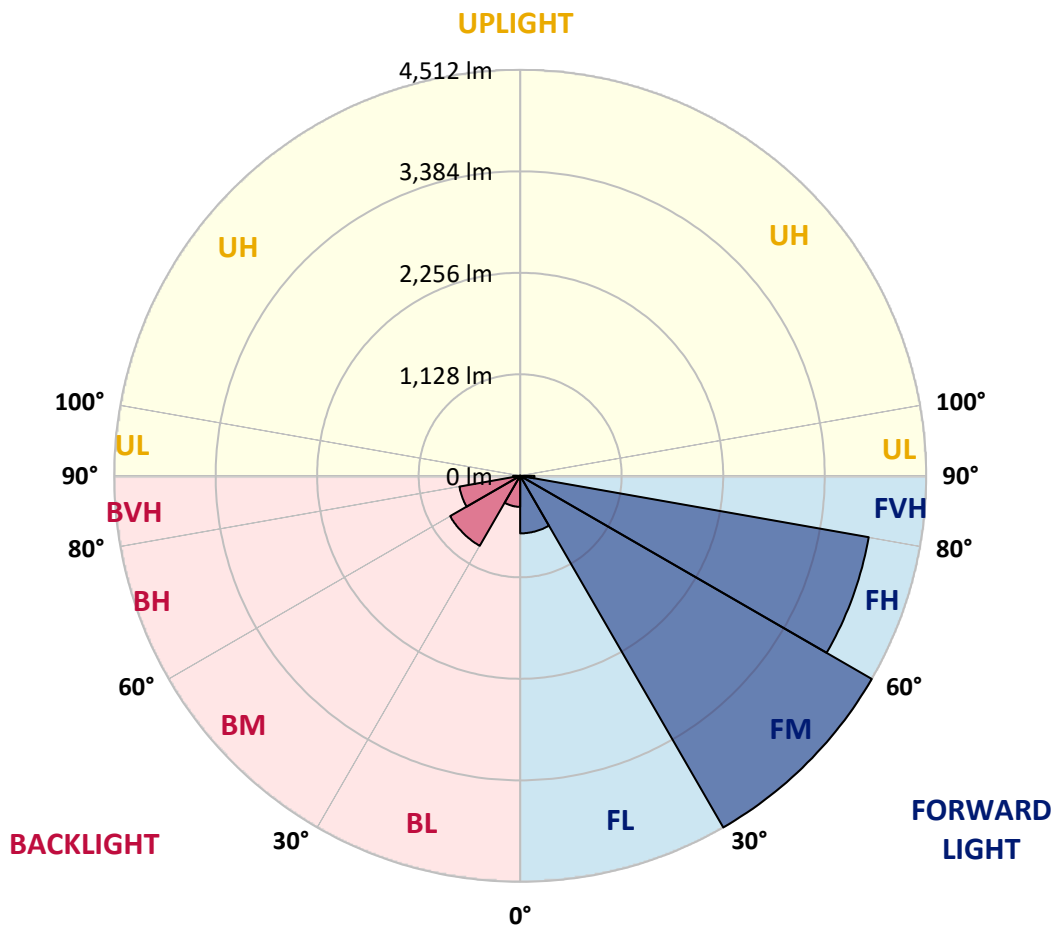
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	639.5	5.7			
FM (30°-60°)	4511.6	40.1			
FH (60°-80°)	3932.9	35.0			G2/5000
FVH (80°-90°)	158.0	1.4			G2/225
BL (0°-30°)	344.8	3.1	B1/500		
BM (30°-60°)	898.1	8.0	B1/1000		
BH (60°-80°)	686.2	6.1	B2/1000		G2/1000
BVH (80°-90°)	78.9	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7
2.5°	590.5	569.3	537.5	550.6	566.5	568.4	563.3	534.2	524.3	546.4	552.9
5°	827.3	791.6	770.1	763.0	739.1	689.4	725.1	706.8	710.5	699.7	720.8
7.5°	1026.6	1002.7	970.8	961.9	907.0	868.1	892.5	884.5	846.0	831.0	855.0
10°	1127.9	1101.6	1103.1	1083.8	1069.3	1073.0	1060.8	1025.7	997.1	976.9	919.2
12.5°	1188.9	1195.4	1230.6	1220.8	1275.6	1320.7	1286.4	1234.4	1143.9	1125.6	1068.3
15°	1333.8	1358.2	1325.4	1340.4	1363.8	1450.1	1436.0	1424.8	1329.1	1293.5	1187.9
17.5°	1482.9	1487.6	1437.9	1429.9	1486.2	1529.8	1584.7	1521.4	1533.1	1508.3	1337.5
20°	1514.8	1547.2	1475.9	1426.7	1542.5	1628.8	1696.8	1629.7	1691.6	1698.2	1460.9
22.5°	1631.6	1592.7	1498.9	1450.6	1551.9	1657.9	1768.5	1806.1	1786.4	1731.0	1580.0
25°	1712.7	1692.1	1596.4	1543.0	1581.4	1679.0	1873.1	1971.1	1988.5	1981.0	1693.5
27.5°	1863.3	1873.6	1676.6	1691.6	1638.2	1647.1	1936.0	2190.2	2081.8	2051.8	1834.2
30°	2101.1	2055.1	1834.2	1846.4	1757.8	1742.7	2068.7	2379.2	2282.1	2246.0	1950.0
32.5°	2349.1	2353.4	2085.1	1981.0	1933.6	1918.6	2042.4	2478.1	2535.3	2488.4	2125.0
35°	2699.0	2674.6	2357.1	2220.2	2049.0	2022.7	2229.6	2765.1	2870.2	2738.9	2332.7
37.5°	3231.8	3158.1	2788.6	2472.0	2345.4	2315.4	2496.9	3022.6	3259.0	3095.8	2672.3
40°	3659.5	3509.9	3174.1	2788.6	2574.3	2611.3	2686.8	3335.0	3662.3	3570.4	2986.5
42.5°	4000.4	3867.7	3447.0	3176.0	2884.7	2838.8	2921.3	3721.9	4211.0	4121.0	3378.6
45°	4327.3	4057.2	3753.8	3509.9	3229.9	3285.7	3273.5	4116.8	4884.0	4606.8	3725.2
47.5°	4650.0	4396.3	4078.8	3750.9	3469.1	3816.6	3686.7	4410.3	5338.0	5132.6	4090.0
50°	5064.6	4785.5	4423.9	4094.2	3925.4	4179.6	3961.5	4658.9	5846.4	5605.3	4434.3
52.5°	5339.9	5068.3	4751.3	4515.9	4500.4	4402.4	4346.6	4973.6	6291.9	6145.6	4799.1
55°	5307.5	5045.8	4902.3	4928.1	5119.4	4788.8	4743.3	5439.3	6756.7	6587.4	5193.1
57.5°	4901.8	4616.2	4646.7	4799.6	5313.6	5467.4	5390.0	5936.9	7171.3	7094.3	5680.4
60°	3818.5	3671.7	3919.8	4199.3	5053.8	5666.3	6210.3	6543.8	7681.5	7804.4	6445.7
62.5°	2480.5	2284.4	2676.5	3151.1	4278.6	5535.0	7045.6	7694.6	8517.2	8796.3	7608.8
65°	1285.0	1253.6	1528.0	1964.1	2978.5	4719.4	7340.1	8901.8	9533.1	9858.1	8719.8
67.5°	934.2	876.1	1003.2	1259.7	1818.3	3218.2	6782.0	9825.2	10348.6	10646.4	9365.6
70°	711.5	668.3	765.4	924.4	1187.5	1817.8	5006.4	9573.4	10663.3	10807.8	9279.8
72.5°	532.8	495.7	580.6	728.8	915.0	1023.3	2959.3	7871.4	10126.3	10175.6	8328.7
75°	425.4	396.8	433.3	575.4	745.7	696.4	1572.0	5702.9	8227.4	8269.6	6361.8
77.5°	348.9	324.5	339.5	431.5	580.1	523.9	779.9	3627.6	5223.6	5158.8	3579.3
80°	284.7	263.6	270.6	311.9	441.8	391.1	438.0	1892.4	2491.7	2391.4	1488.6
82.5°	219.0	201.2	215.3	229.3	319.8	280.9	255.6	861.1	1020.5	950.6	545.9
85°	146.8	130.4	187.1	172.1	209.2	172.6	139.8	342.8	380.3	354.6	191.8
87.5°	40.3	38.0	62.8	85.8	85.8	65.2	51.1	83.0	106.0	92.9	45.0
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°	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7	458.7
2.5°	555.7	545.4	518.2	515.9	522.4	523.4	519.2	509.3	504.2	532.3	528.1
5°	715.7	679.1	657.0	636.9	608.7	588.6	593.7	607.8	612.5	633.6	635.9
7.5°	840.0	791.6	743.3	678.6	635.9	608.7	629.4	644.4	656.1	686.1	698.3
10°	893.9	841.4	772.9	704.9	693.2	697.9	686.1	689.9	708.2	709.6	715.7
12.5°	994.2	934.7	811.3	749.9	746.6	756.5	752.3	769.6	782.3	816.5	802.0
15°	1090.4	1014.4	840.4	777.6	764.0	783.7	806.7	835.7	862.9	895.3	878.9
17.5°	1207.2	1092.7	841.8	764.9	767.3	809.5	833.4	849.3	930.5	975.0	952.5
20°	1280.8	1100.7	810.4	733.5	767.3	805.2	838.5	855.9	946.9	1013.9	1029.4
22.5°	1347.4	1103.5	786.0	716.6	738.2	788.4	838.5	877.0	935.2	999.4	1001.8
25°	1384.0	1101.2	754.6	718.0	737.7	762.6	807.1	842.3	885.4	975.0	977.4
27.5°	1477.8	1070.7	723.6	723.6	734.0	734.9	791.6	812.3	818.4	900.0	914.5
30°	1505.0	1077.3	719.9	722.7	727.9	718.5	743.3	756.9	765.9	836.2	838.5
32.5°	1548.6	1024.7	731.1	714.3	707.7	706.3	712.4	724.6	728.3	771.5	779.5
35°	1601.6	1003.6	734.9	711.9	698.8	691.8	710.0	695.0	706.8	757.4	763.0
37.5°	1774.2	974.6	754.1	711.9	695.0	687.1	678.2	685.2	726.9	775.7	805.7
40°	1884.4	983.5	749.4	719.0	682.4	674.9	659.9	685.7	750.4	836.7	859.2
42.5°	2077.6	988.6	755.1	715.7	686.6	657.5	667.4	695.5	763.5	812.8	847.5
45°	2277.4	1004.6	751.3	705.8	677.2	690.8	677.2	702.5	734.9	736.3	762.6
47.5°	2473.4	1068.8	743.3	685.7	674.9	710.5	675.8	680.0	682.4	690.8	721.8
50°	2703.7	1137.3	732.1	657.5	678.2	711.5	681.0	660.3	658.0	685.7	720.4
52.5°	2965.4	1214.7	717.5	630.3	658.9	702.5	698.8	661.7	641.6	668.3	703.0
55°	3273.5	1302.8	700.7	603.1	637.8	703.5	708.6	651.9	642.0	671.1	708.2
57.5°	3682.9	1430.4	667.8	563.7	612.0	688.9	683.3	640.6	631.3	662.2	700.7
60°	4381.7	1675.7	620.9	524.8	584.4	653.3	662.7	620.5	611.1	645.3	685.7
62.5°	5317.4	1970.7	564.2	486.8	550.6	614.8	636.9	591.4	590.5	634.1	676.3
65°	6188.3	2138.1	505.6	452.1	515.9	579.2	607.8	564.2	566.1	620.9	663.1
67.5°	6550.3	1941.1	453.0	421.1	476.0	538.4	583.9	543.1	537.0	603.1	642.0
70°	6210.3	1542.0	407.5	388.3	431.0	494.3	550.6	514.9	500.9	560.9	591.4
72.5°	5495.1	1285.5	364.9	349.9	391.6	447.9	505.6	477.0	458.7	504.6	531.8
75°	4295.4	1054.7	316.1	311.9	346.6	405.7	458.7	439.0	415.5	444.6	471.8
77.5°	2445.8	667.4	265.4	268.3	293.1	355.5	402.4	386.9	363.0	375.2	406.6
80°	978.8	336.7	213.4	215.3	236.4	292.2	333.4	327.8	303.0	312.8	334.4
82.5°	365.8	184.8	157.6	158.5	179.6	231.2	284.7	281.9	258.4	251.4	263.6
85°	145.4	91.5	96.6	100.8	121.0	166.5	228.4	202.6	174.9	153.4	160.9
87.5°	34.7	29.1	33.8	35.6	39.4	52.1	83.5	67.1	68.9	55.3	41.3
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)