

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: P367692

Luminaire Tested: **MSA-SA3A-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367692
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-SA3A-730-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10655 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

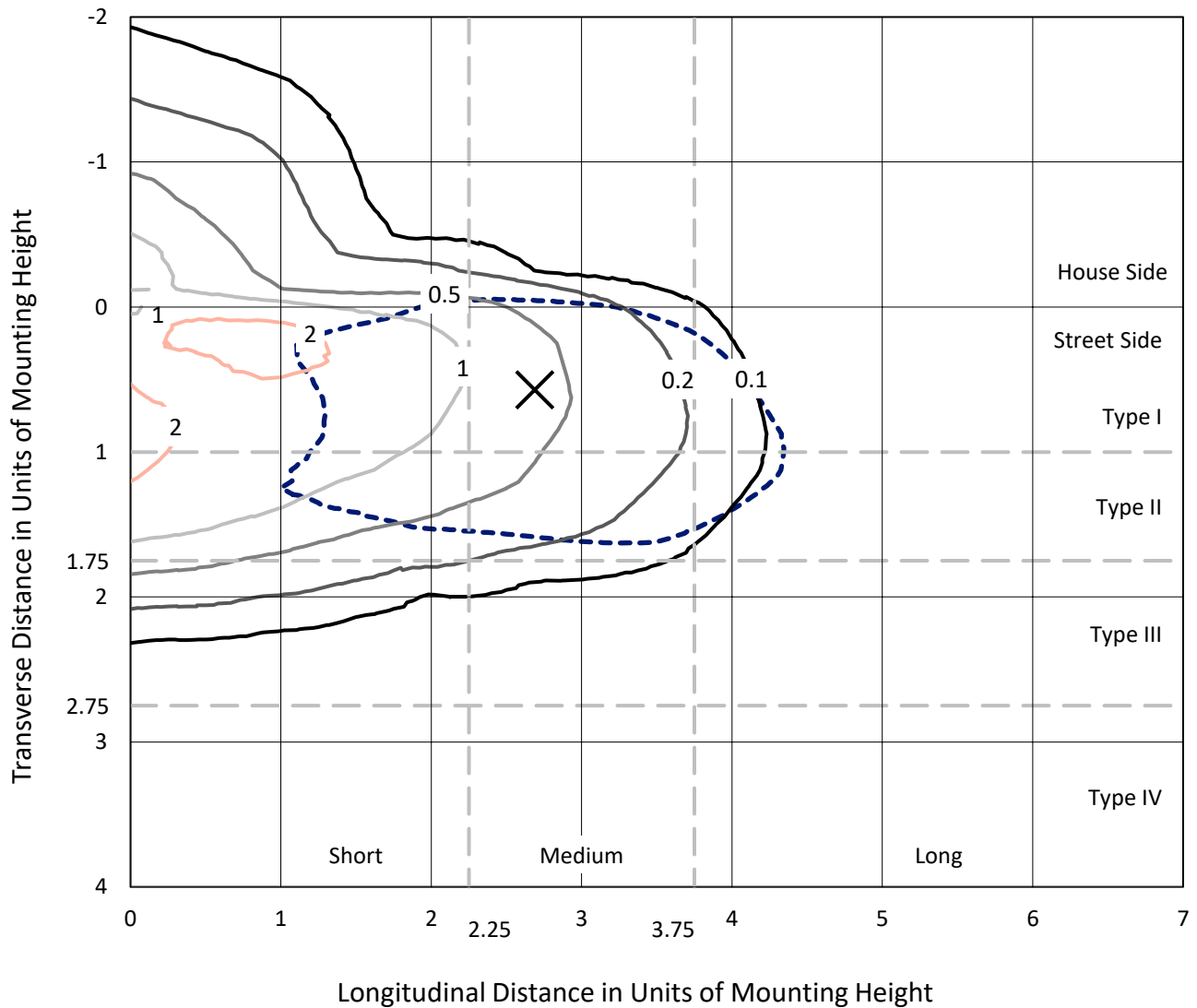
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

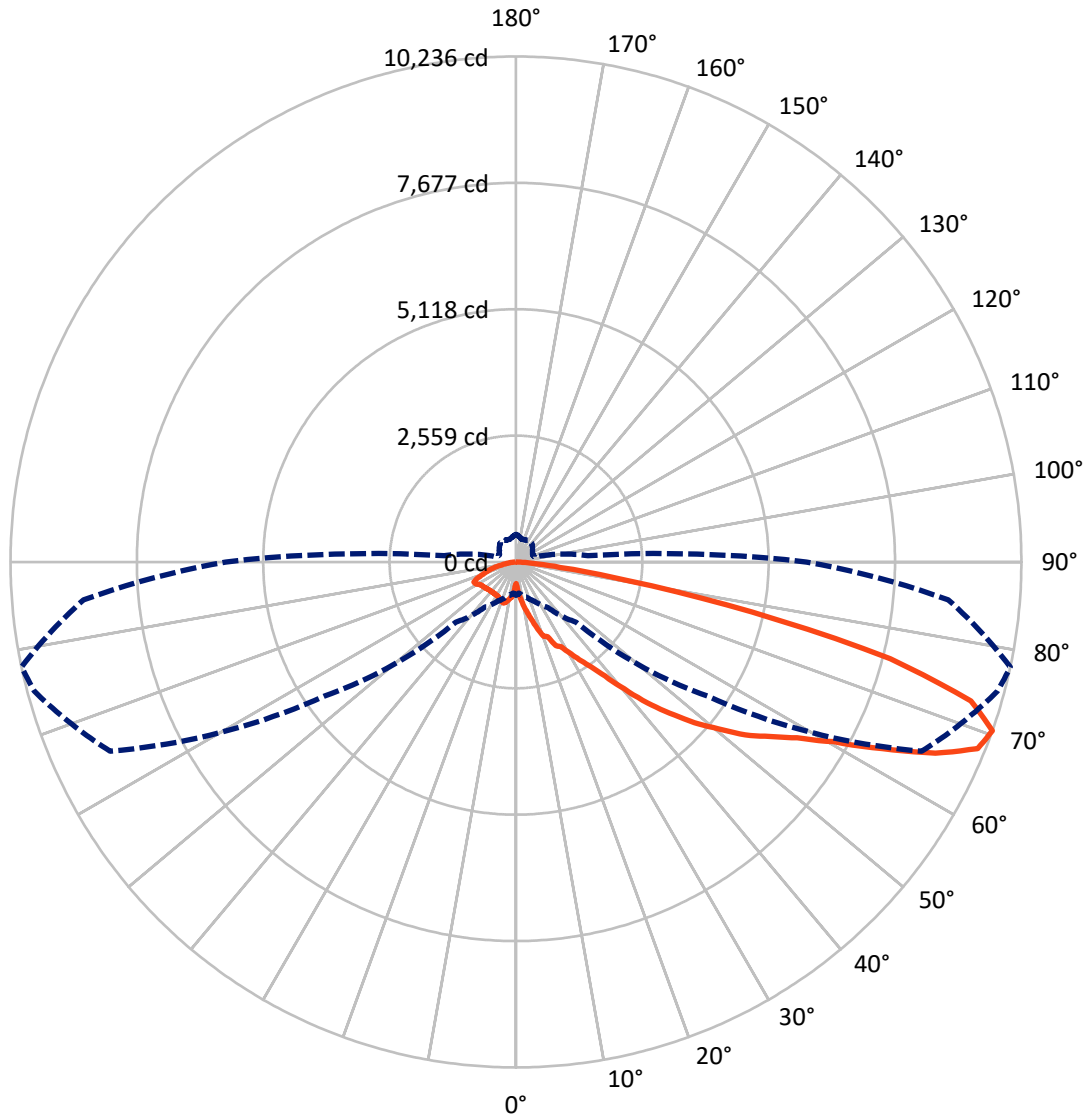
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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	1901.8	0.0	1901.8
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	8753.2	0.0	8753.2
	% Fixture	82.2	0.0	82.2
Total	Lumens	10655.0	0.0	10655.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.1	0.6
10°-20°	295.8	2.8
20°-30°	569.3	5.3
30°-40°	959.0	9.0
40°-50°	1659.3	15.6
50°-60°	2505.3	23.5
60°-70°	2774.9	26.0
70°-80°	1599.9	15.0
80°-90°	224.4	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°	10655.0	100.0
0°-180°	10655.0	100.0

Coefficient of Utilization



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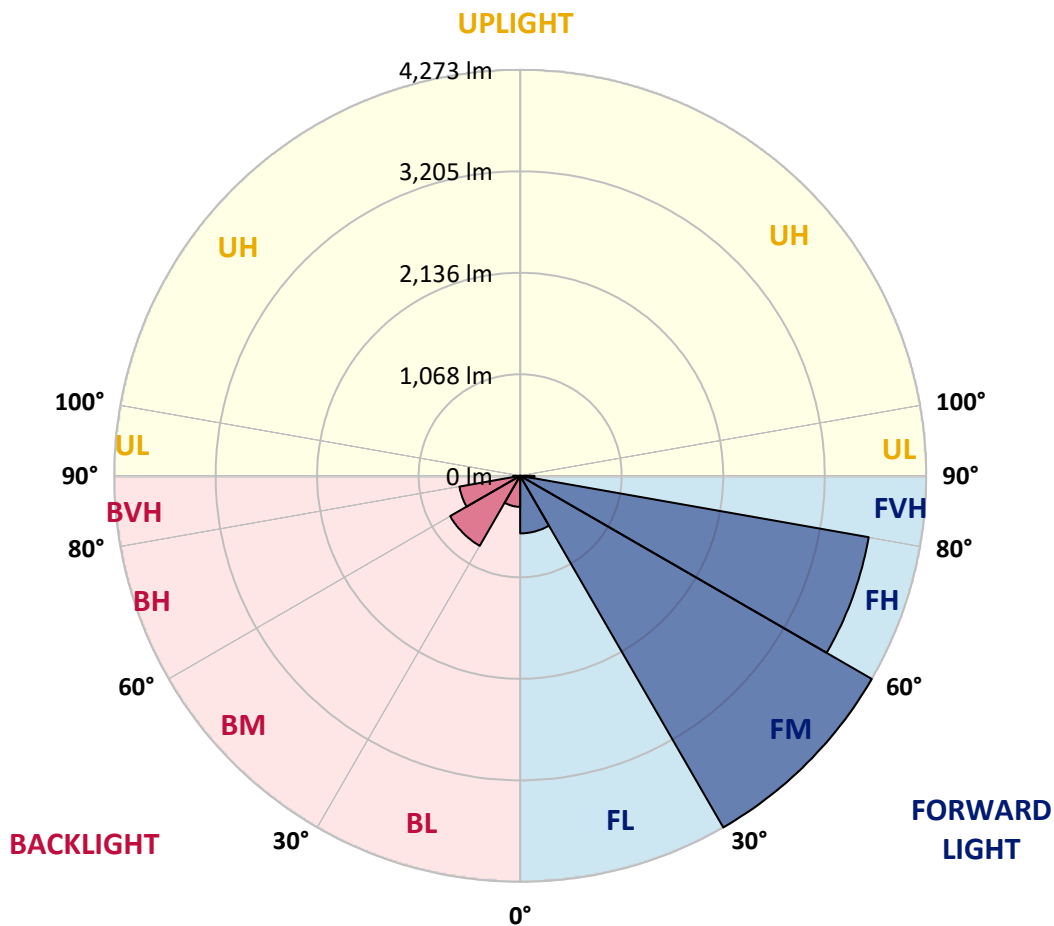
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	605.7	5.7			
FM (30°-60°)	4273.0	40.1			
FH (60°-80°)	3724.9	35.0			G2/5000
FVH (80°-90°)	149.7	1.4			G2/225
BL (0°-30°)	326.5	3.1	B1/500		
BM (30°-60°)	850.6	8.0	B1/1000		
BH (60°-80°)	649.9	6.1	B2/1000		G2/1000
BVH (80°-90°)	74.7	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°	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4
2.5°	559.2	539.2	509.0	521.5	536.6	538.3	533.5	505.9	496.6	517.5	523.7
5°	783.5	749.8	729.3	722.7	700.0	652.9	686.7	669.4	672.9	662.7	682.7
7.5°	972.3	949.7	919.5	911.0	859.0	822.2	845.3	837.7	801.3	787.1	809.7
10°	1068.3	1043.4	1044.7	1026.5	1012.7	1016.3	1004.7	971.4	944.3	925.2	870.6
12.5°	1126.0	1132.2	1165.5	1156.2	1208.2	1250.8	1218.4	1169.1	1083.4	1066.0	1011.8
15°	1263.3	1286.3	1255.3	1269.5	1291.7	1373.4	1360.1	1349.4	1258.8	1225.1	1125.1
17.5°	1404.5	1408.9	1361.9	1354.3	1407.6	1448.9	1500.9	1440.9	1452.0	1428.5	1266.8
20°	1434.7	1465.4	1397.8	1351.2	1460.9	1542.6	1607.0	1543.5	1602.2	1608.4	1383.6
22.5°	1545.3	1508.4	1419.6	1373.9	1469.8	1570.2	1675.0	1710.5	1691.9	1639.5	1496.4
25°	1622.1	1602.6	1512.0	1461.4	1497.8	1590.2	1774.1	1866.9	1883.3	1876.2	1603.9
27.5°	1764.7	1774.5	1587.9	1602.2	1551.5	1560.0	1833.6	2074.3	1971.7	1943.3	1737.2
30°	1989.9	1946.4	1737.2	1748.7	1664.8	1650.6	1959.3	2253.3	2161.4	2127.2	1846.9
32.5°	2224.9	2228.9	1974.8	1876.2	1831.4	1817.1	1934.4	2347.1	2401.2	2356.8	2012.6
35°	2556.3	2533.2	2232.5	2102.8	1940.6	1915.8	2111.6	2618.9	2718.4	2594.0	2209.4
37.5°	3060.9	2991.1	2641.1	2341.3	2221.4	2192.9	2364.8	2862.7	3086.6	2932.0	2530.9
40°	3465.9	3324.3	3006.2	2641.1	2438.1	2473.2	2544.7	3158.6	3468.6	3381.6	2828.5
42.5°	3788.9	3663.2	3264.7	3008.0	2732.2	2688.6	2766.8	3525.0	3988.3	3903.0	3199.9
45°	4098.5	3842.6	3555.2	3324.3	3059.1	3111.9	3100.4	3899.0	4625.7	4363.2	3528.1
47.5°	4404.1	4163.8	3863.0	3552.6	3285.6	3614.7	3491.7	4177.1	5055.7	4861.1	3873.7
50°	4796.7	4532.4	4190.0	3877.7	3717.8	3958.5	3752.0	4412.5	5537.2	5308.9	4199.7
52.5°	5057.4	4800.3	4500.0	4277.0	4262.4	4169.5	4116.7	4710.5	5959.1	5820.6	4545.3
55°	5026.8	4778.9	4643.0	4667.5	4848.7	4535.5	4492.4	5151.6	6399.3	6239.0	4918.4
57.5°	4642.6	4372.1	4400.9	4545.8	5032.6	5178.3	5105.0	5622.9	6792.0	6719.1	5379.9
60°	3616.5	3477.5	3712.5	3977.2	4786.5	5366.6	5881.8	6197.7	7275.2	7391.6	6104.8
62.5°	2349.3	2163.6	2534.9	2984.5	4052.3	5242.2	6672.9	7287.7	8066.8	8331.1	7206.4
65°	1217.1	1187.3	1447.1	1860.2	2821.0	4469.8	6951.9	8431.0	9028.9	9336.7	8258.7
67.5°	884.8	829.7	950.1	1193.1	1722.1	3048.0	6423.3	9305.6	9801.3	10083.4	8870.3
70°	673.8	633.0	724.9	875.5	1124.7	1721.6	4741.6	9067.1	10099.3	10236.2	8789.0
72.5°	504.6	469.5	549.9	690.3	866.6	969.2	2802.8	7455.1	9590.8	9637.4	7888.2
75°	402.9	375.8	410.4	545.0	706.2	659.6	1488.9	5401.2	7792.3	7832.2	6025.3
77.5°	330.5	307.4	321.6	408.6	549.5	496.2	738.7	3435.7	4947.3	4886.0	3390.0
80°	269.6	249.6	256.3	295.4	418.4	370.4	414.9	1792.3	2359.9	2264.9	1409.8
82.5°	207.4	190.6	203.9	217.2	302.9	266.1	242.1	815.5	966.5	900.4	517.0
85°	139.0	123.5	177.2	163.0	198.1	163.5	132.4	324.7	360.2	335.8	181.7
87.5°	38.2	36.0	59.5	81.3	81.3	61.7	48.4	78.6	100.4	87.9	42.6
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°	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4	434.4
2.5°	526.4	516.6	490.8	488.6	494.8	495.7	491.7	482.4	477.5	504.1	500.1
5°	677.8	643.2	622.3	603.2	576.5	557.4	562.3	575.7	580.1	600.1	602.3
7.5°	795.5	749.8	704.0	642.7	602.3	576.5	596.1	610.3	621.4	649.8	661.4
10°	846.6	796.9	732.0	667.6	656.5	660.9	649.8	653.4	670.7	672.0	677.8
12.5°	941.7	885.3	768.4	710.2	707.1	716.5	712.5	728.9	740.9	773.3	759.5
15°	1032.7	960.8	796.0	736.5	723.6	742.2	764.0	791.5	817.3	847.9	832.4
17.5°	1143.3	1034.9	797.3	724.5	726.7	766.7	789.3	804.4	881.3	923.5	902.1
20°	1213.1	1042.5	767.5	694.7	726.7	762.7	794.2	810.6	896.8	960.3	975.0
22.5°	1276.1	1045.2	744.4	678.7	699.1	746.7	794.2	830.6	885.7	946.6	948.8
25°	1310.8	1042.9	714.7	680.0	698.7	722.2	764.4	797.7	838.6	923.5	925.7
27.5°	1399.6	1014.1	685.4	685.4	695.1	696.0	749.8	769.3	775.1	852.4	866.2
30°	1425.4	1020.3	681.8	684.5	689.4	680.5	704.0	716.9	725.3	792.0	794.2
32.5°	1466.7	970.5	692.5	676.5	670.3	668.9	674.7	686.3	689.8	730.7	738.2
35°	1516.9	950.5	696.0	674.3	661.8	655.2	672.5	658.3	669.4	717.4	722.7
37.5°	1680.3	923.0	714.2	674.3	658.3	650.7	642.3	648.9	688.5	734.7	763.1
40°	1784.7	931.4	709.8	680.9	646.3	639.2	625.0	649.4	710.7	792.4	813.7
42.5°	1967.7	936.3	715.1	677.8	650.3	622.7	632.1	658.7	723.1	769.8	802.6
45°	2156.9	951.4	711.6	668.5	641.4	654.3	641.4	665.4	696.0	697.4	722.2
47.5°	2342.6	1012.3	704.0	649.4	639.2	672.9	640.1	644.1	646.3	654.3	683.6
50°	2560.7	1077.1	693.4	622.7	642.3	673.8	645.0	625.4	623.2	649.4	682.3
52.5°	2808.6	1150.4	679.6	597.0	624.1	665.4	661.8	626.7	607.6	633.0	665.8
55°	3100.4	1233.9	663.6	571.2	604.1	666.3	671.2	617.4	608.1	635.6	670.7
57.5°	3488.2	1354.8	632.5	533.9	579.7	652.5	647.2	606.8	597.9	627.2	663.6
60°	4150.0	1587.1	588.1	497.0	553.4	618.7	627.6	587.7	578.8	611.2	649.4
62.5°	5036.1	1866.4	534.3	461.1	521.5	582.3	603.2	560.1	559.2	600.5	640.5
65°	5861.0	2025.0	478.8	428.2	488.6	548.6	575.7	534.3	536.1	588.1	628.1
67.5°	6203.9	1838.5	429.1	398.9	450.8	509.9	553.0	514.4	508.6	571.2	608.1
70°	5881.8	1460.5	386.0	367.8	408.2	468.2	521.5	487.7	474.4	531.2	560.1
72.5°	5204.5	1217.5	345.6	331.4	370.9	424.2	478.8	451.7	434.4	477.9	503.7
75°	4068.3	999.0	299.4	295.4	328.2	384.2	434.4	415.8	393.5	421.1	446.8
77.5°	2316.4	632.1	251.4	254.1	277.6	336.7	381.1	366.4	343.8	355.3	385.1
80°	927.0	318.9	202.1	203.9	223.9	276.7	315.8	310.5	286.9	296.3	316.7
82.5°	346.5	175.0	149.2	150.1	170.1	219.0	269.6	267.0	244.7	238.1	249.6
85°	137.7	86.6	91.5	95.5	114.6	157.7	216.3	191.9	165.7	145.2	152.4
87.5°	32.9	27.5	32.0	33.8	37.3	49.3	79.1	63.5	65.3	52.4	39.1
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)