

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: P367384

Luminaire Tested: **MSA-SA2B-830-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367384
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-SA2B-830-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: 7895 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

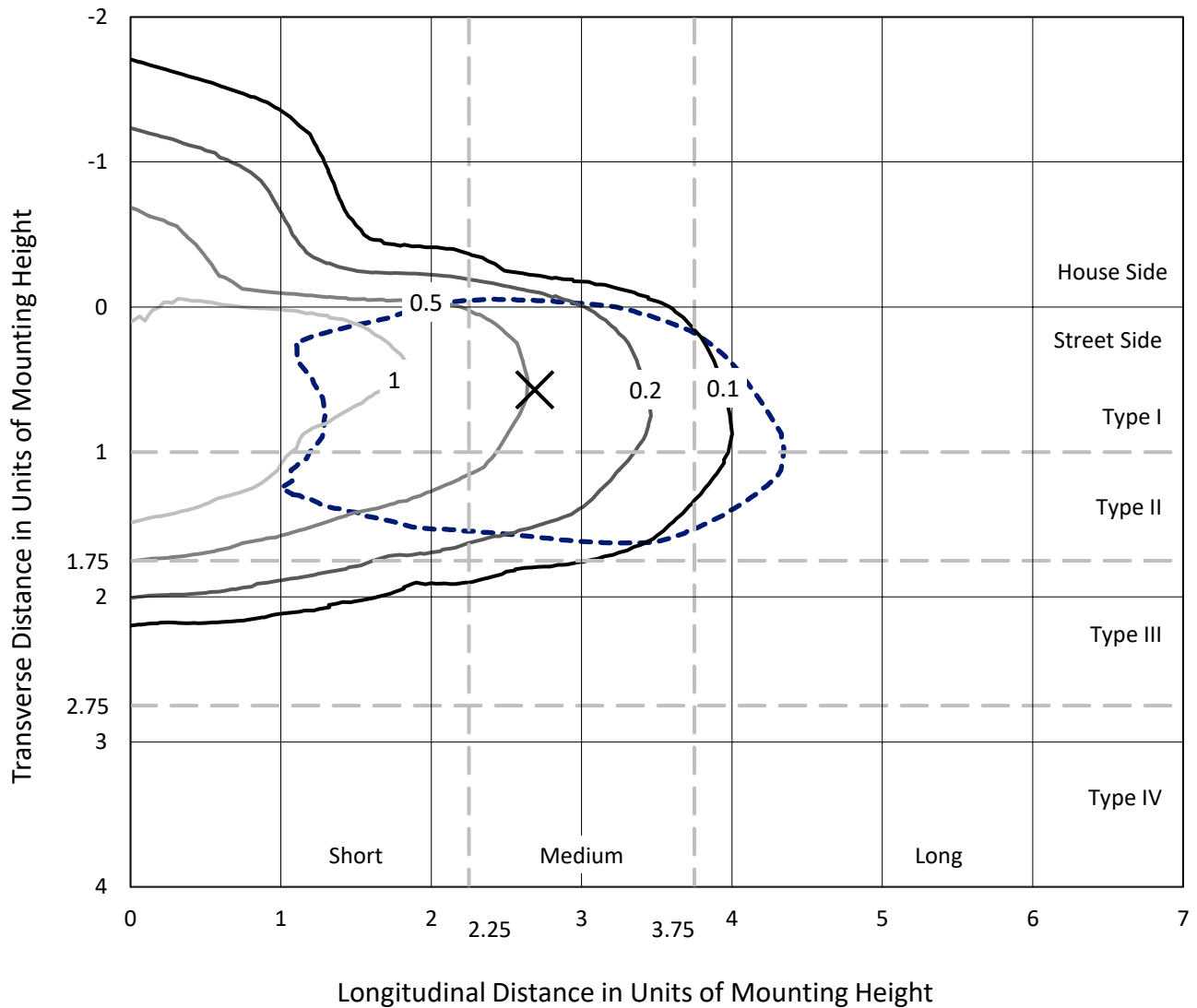
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367384
 CATALOG NUMBER: MSA-SA2B-830-U-T2

Iso-Footcandle Lines of Horizontal Illumination

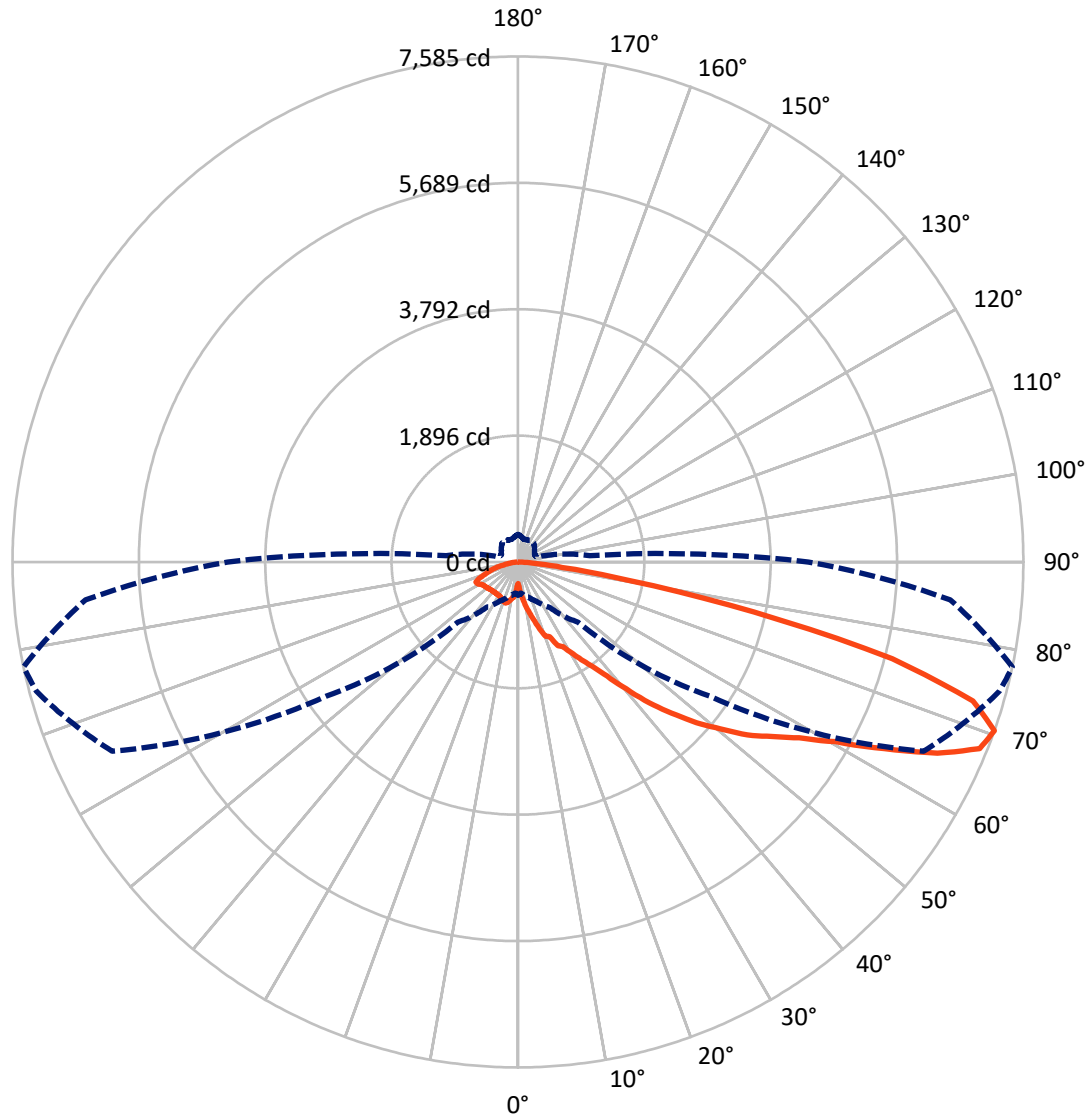
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type II - Medium - N/A

REPORT NUMBER: P367384
CATALOG NUMBER: MSA-SA2B-830-U-T2

Luminous Intensity Polar Plot



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

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 CATALOG NUMBER: MSA-SA2B-830-U-T2

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1409.2	0.0	1409.2
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	6485.9	0.0	6485.9
	% Fixture	82.2	0.0	82.2
Total	Lumens	7895.0	0.0	7895.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	0.6
10°-20°	219.2	2.8
20°-30°	421.9	5.3
30°-40°	710.6	9.0
40°-50°	1229.5	15.6
50°-60°	1856.3	23.5
60°-70°	2056.1	26.0
70°-80°	1185.4	15.0
80°-90°	166.3	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°	7895.0	100.0
0°-180°	7895.0	100.0

Coefficient of Utilization

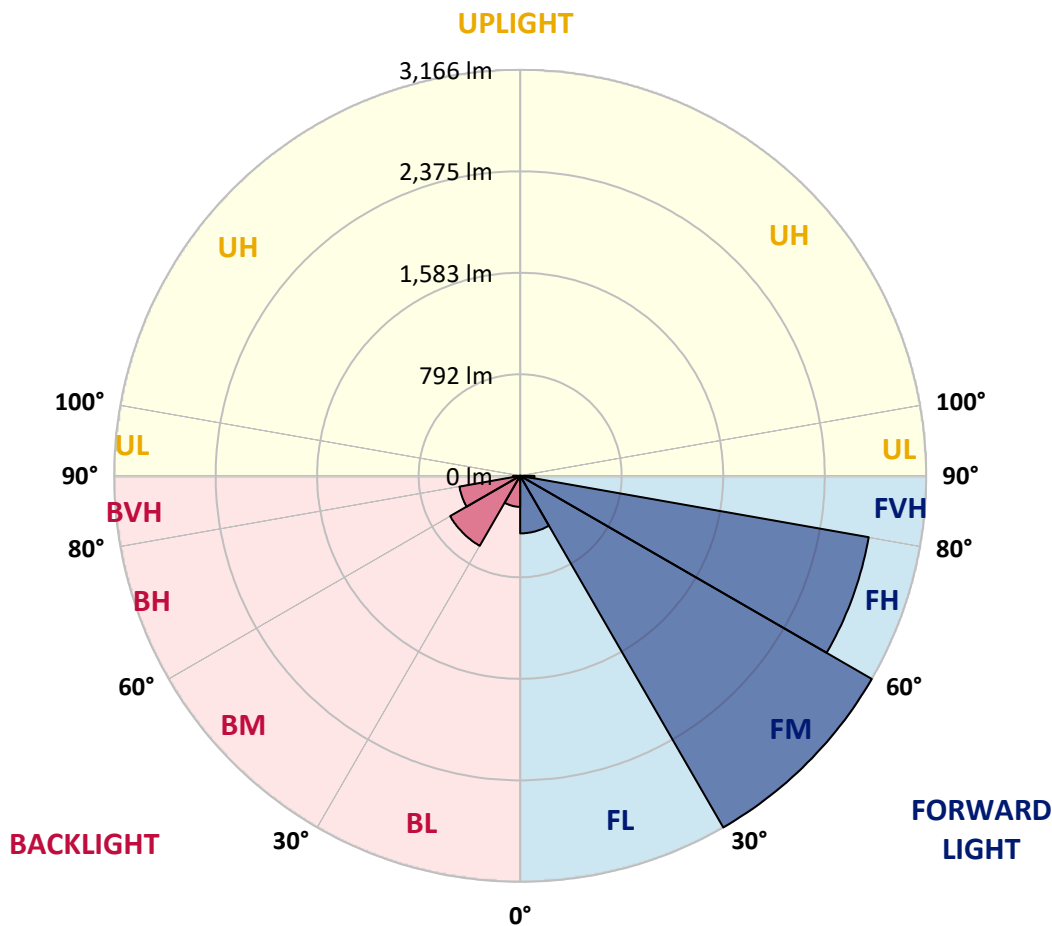


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 CATALOG NUMBER: MSA-SA2B-830-U-T2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	448.8	5.7			
FM (30°-60°)	3166.1	40.1			
FH (60°-80°)	2760.0	35.0			G2/5000
FVH (80°-90°)	110.9	1.4			G2/225
BL (0°-30°)	242.0	3.1	B1/500		
BM (30°-60°)	630.3	8.0	B1/1000		
BH (60°-80°)	481.6	6.1	B1/500		G1/500
BVH (80°-90°)	55.3	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
 Type II Medium





REPORT NUMBER: P367384

CATALOG NUMBER: MSA-SA2B-830-U-T2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9
2.5°	414.4	399.6	377.2	386.4	397.6	398.9	395.3	374.9	368.0	383.4	388.0
5°	580.6	555.6	540.4	535.5	518.7	483.8	508.8	496.0	498.6	491.1	505.9
7.5°	720.5	703.7	681.3	675.0	636.5	609.2	626.3	620.7	593.7	583.2	600.0
10°	791.5	773.1	774.1	760.6	750.4	753.0	744.5	719.8	699.7	685.6	645.1
12.5°	834.3	838.9	863.6	856.7	895.2	926.8	902.8	866.3	802.7	789.9	749.7
15°	936.0	953.1	930.1	940.6	957.1	1017.6	1007.8	999.9	932.7	907.7	833.7
17.5°	1040.7	1044.0	1009.1	1003.5	1043.0	1073.6	1112.1	1067.7	1075.9	1058.5	938.7
20°	1063.1	1085.8	1035.8	1001.2	1082.5	1143.0	1190.8	1143.7	1187.1	1191.8	1025.2
22.5°	1145.0	1117.7	1051.9	1018.0	1089.1	1163.5	1241.1	1267.5	1253.6	1214.8	1108.8
25°	1202.0	1187.5	1120.3	1082.8	1109.8	1178.3	1314.5	1383.3	1395.5	1390.2	1188.5
27.5°	1307.6	1314.8	1176.6	1187.1	1149.6	1155.9	1358.6	1537.0	1461.0	1439.9	1287.2
30°	1474.5	1442.2	1287.2	1295.8	1233.6	1223.0	1451.8	1669.6	1601.5	1576.2	1368.5
32.5°	1648.6	1651.5	1463.3	1390.2	1357.0	1346.4	1433.3	1739.1	1779.2	1746.3	1491.3
35°	1894.1	1877.0	1654.2	1558.1	1437.9	1419.5	1564.7	1940.5	2014.2	1922.1	1637.1
37.5°	2268.0	2216.3	1957.0	1734.8	1645.9	1624.9	1752.3	2121.2	2287.1	2172.5	1875.3
40°	2568.2	2463.2	2227.5	1957.0	1806.6	1832.6	1885.5	2340.4	2570.1	2505.6	2095.9
42.5°	2807.4	2714.3	2419.1	2228.8	2024.4	1992.2	2050.1	2611.9	2955.2	2892.0	2371.0
45°	3036.8	2847.2	2634.3	2463.2	2266.7	2305.8	2297.3	2889.0	3427.5	3233.0	2614.2
47.5°	3263.3	3085.2	2862.4	2632.3	2434.5	2678.4	2587.2	3095.1	3746.1	3601.9	2870.3
50°	3554.2	3358.4	3104.6	2873.2	2754.8	2933.1	2780.1	3269.5	4102.9	3933.7	3111.9
52.5°	3747.4	3556.8	3334.3	3169.1	3158.3	3089.5	3050.3	3490.4	4415.5	4312.8	3367.9
55°	3724.7	3541.0	3440.3	3458.4	3592.7	3360.7	3328.8	3817.2	4741.7	4622.9	3644.4
57.5°	3440.0	3239.6	3261.0	3368.2	3729.0	3836.9	3782.6	4166.4	5032.6	4978.7	3986.3
60°	2679.7	2576.7	2750.8	2947.0	3546.6	3976.5	4358.3	4592.3	5390.7	5476.9	4523.5
62.5°	1740.7	1603.2	1878.3	2211.4	3002.6	3884.3	4944.4	5399.9	5977.2	6173.0	5339.7
65°	901.8	879.7	1072.3	1378.4	2090.3	3312.0	5151.1	6247.1	6690.1	6918.2	6119.4
67.5°	655.6	614.8	704.0	884.0	1276.0	2258.4	4759.5	6895.1	7262.4	7471.4	6572.6
70°	499.3	469.0	537.1	648.7	833.3	1275.7	3513.4	6718.4	7483.3	7584.7	6512.4
72.5°	373.9	347.9	407.5	511.5	642.1	718.1	2076.8	5524.0	7106.4	7141.0	5844.9
75°	298.5	278.4	304.1	403.8	523.3	488.7	1103.2	4002.1	5773.8	5803.4	4464.6
77.5°	244.9	227.8	238.3	302.8	407.1	367.6	547.3	2545.8	3665.8	3620.4	2511.9
80°	199.8	185.0	189.9	218.9	310.0	274.5	307.4	1328.0	1748.6	1678.2	1044.6
82.5°	153.7	141.2	151.1	160.9	224.5	197.1	179.4	604.3	716.2	667.1	383.1
85°	103.0	91.5	131.3	120.8	146.8	121.1	98.1	240.6	266.9	248.8	134.6
87.5°	28.3	26.7	44.1	60.2	60.2	45.7	35.9	58.3	74.4	65.2	31.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367384
 CATALOG NUMBER: MSA-SA2B-830-U-T2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9	321.9
2.5°	390.0	382.8	363.7	362.0	366.6	367.3	364.3	357.4	353.8	373.6	370.6
5°	502.2	476.6	461.1	446.9	427.2	413.0	416.7	426.5	429.8	444.6	446.3
7.5°	589.5	555.6	521.7	476.2	446.3	427.2	441.7	452.2	460.4	481.5	490.1
10°	627.3	590.4	542.4	494.7	486.4	489.7	481.5	484.1	497.0	498.0	502.2
12.5°	697.7	655.9	569.4	526.3	524.0	530.9	527.9	540.1	549.0	573.0	562.8
15°	765.2	711.9	589.8	545.7	536.1	550.0	566.1	586.5	605.6	628.3	616.8
17.5°	847.2	766.9	590.8	536.8	538.4	568.1	584.9	596.0	653.0	684.2	668.4
20°	898.8	772.5	568.7	514.7	538.4	565.1	588.5	600.7	664.5	711.6	722.4
22.5°	945.6	774.4	551.6	502.9	518.0	553.3	588.5	615.5	656.3	701.4	703.0
25°	971.2	772.8	529.6	503.9	517.7	535.2	566.4	591.1	621.4	684.2	685.9
27.5°	1037.1	751.4	507.8	507.8	515.1	515.7	555.6	570.0	574.3	631.6	641.8
30°	1056.2	756.0	505.2	507.2	510.8	504.2	521.7	531.2	537.5	586.8	588.5
32.5°	1086.8	719.1	513.1	501.3	496.6	495.7	499.9	508.5	511.1	541.4	547.0
35°	1124.0	704.3	515.7	499.6	490.4	485.5	498.3	487.8	496.0	531.5	535.5
37.5°	1245.1	683.9	529.2	499.6	487.8	482.2	475.9	480.8	510.1	544.4	565.4
40°	1322.4	690.2	525.9	504.5	478.9	473.6	463.1	481.2	526.6	587.2	603.0
42.5°	1458.0	693.8	529.9	502.2	481.8	461.4	468.3	488.1	535.8	570.4	594.7
45°	1598.2	705.0	527.3	495.3	475.3	484.8	475.3	493.0	515.7	516.7	535.2
47.5°	1735.8	750.1	521.7	481.2	473.6	498.6	474.3	477.2	478.9	484.8	506.5
50°	1897.4	798.1	513.8	461.4	475.9	499.3	477.9	463.4	461.8	481.2	505.5
52.5°	2081.0	852.4	503.6	442.3	462.4	493.0	490.4	464.4	450.2	469.0	493.4
55°	2297.3	914.3	491.7	423.3	447.6	493.7	497.3	457.5	450.6	471.0	497.0
57.5°	2584.6	1003.8	468.7	395.6	429.5	483.5	479.5	449.6	443.0	464.7	491.7
60°	3075.0	1176.0	435.8	368.3	410.1	458.5	465.1	435.4	428.8	452.9	481.2
62.5°	3731.6	1383.0	395.9	341.6	386.4	431.5	446.9	415.0	414.4	445.0	474.6
65°	4342.8	1500.5	354.8	317.3	362.0	406.5	426.5	395.9	397.3	435.8	465.4
67.5°	4596.9	1362.2	317.9	295.6	334.1	377.8	409.8	381.1	376.8	423.3	450.6
70°	4358.3	1082.2	286.0	272.5	302.5	346.9	386.4	361.4	351.5	393.6	415.0
72.5°	3856.3	902.1	256.1	245.5	274.8	314.3	354.8	334.7	321.9	354.1	373.2
75°	3014.4	740.2	221.8	218.9	243.2	284.7	321.9	308.1	291.6	312.0	331.1
77.5°	1716.4	468.3	186.3	188.3	205.7	249.5	282.4	271.5	254.7	263.3	285.4
80°	686.9	236.3	149.8	151.1	165.9	205.0	234.0	230.1	212.6	219.5	234.7
82.5°	256.7	129.7	110.6	111.2	126.1	162.3	199.8	197.8	181.3	176.4	185.0
85°	102.0	64.2	67.8	70.8	84.9	116.8	160.3	142.2	122.8	107.6	112.9
87.5°	24.4	20.4	23.7	25.0	27.6	36.5	58.6	47.1	48.4	38.8	29.0
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)