

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: P367280

Luminaire Tested: **MSA-SA2B-727-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367280
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-727-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8446 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

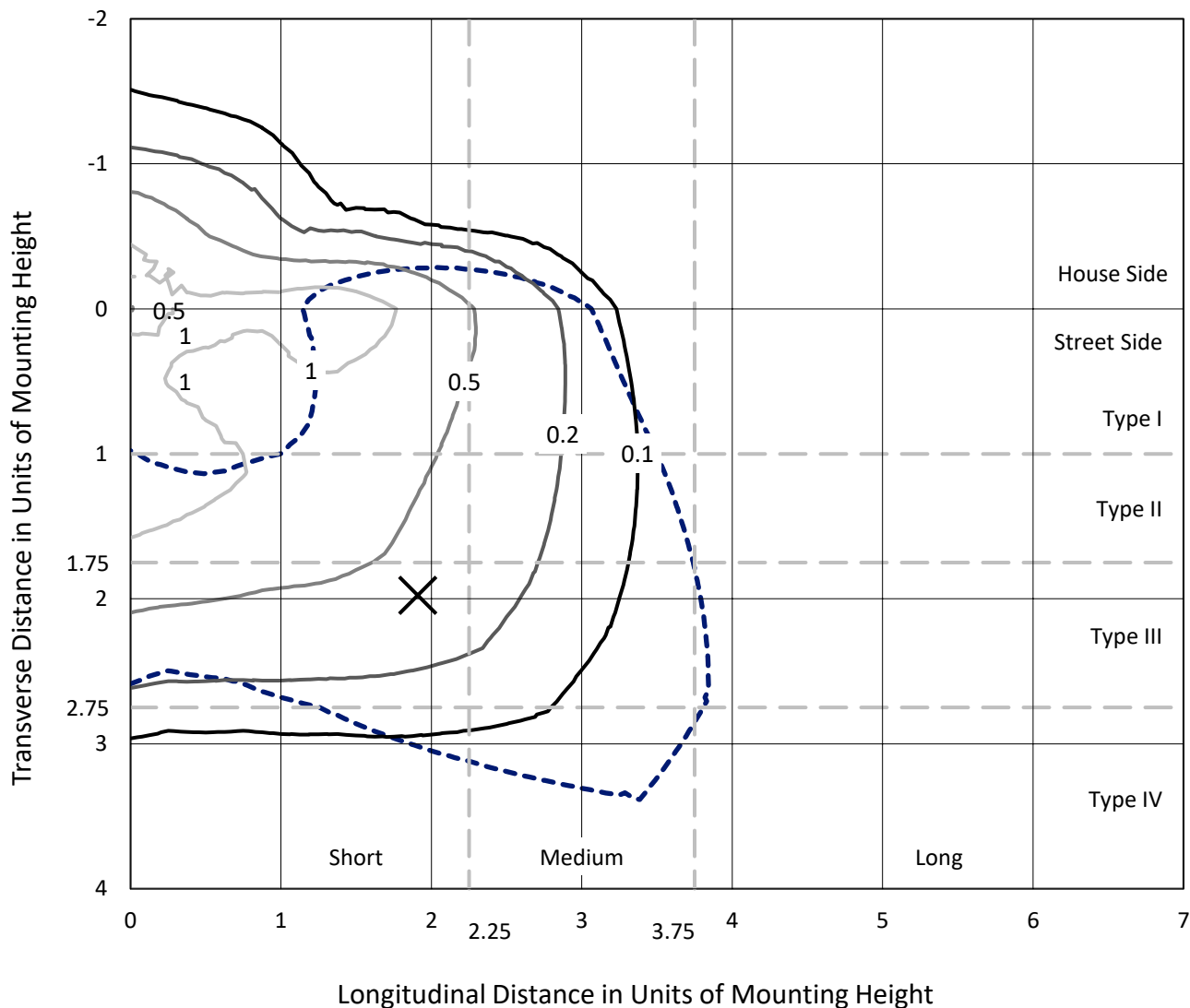
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

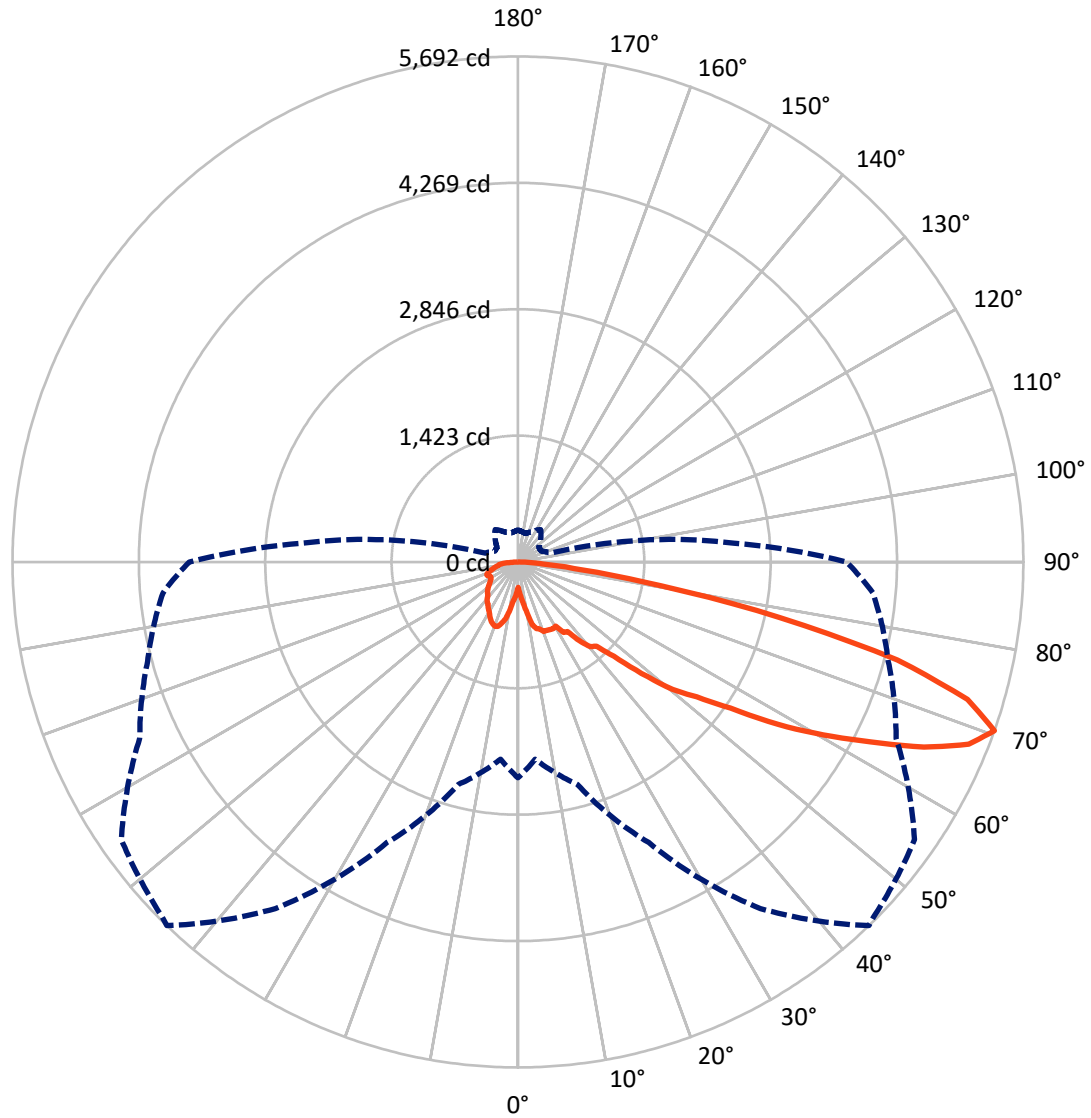
× Max cd
 - - - 1/2 Max cd



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



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1863.5	0.0	1863.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	6582.5	0.0	6582.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	8446.0	0.0	8446.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.0	0.5
10°-20°	207.3	2.5
20°-30°	387.4	4.6
30°-40°	621.8	7.4
40°-50°	1049.5	12.4
50°-60°	1870.1	22.1
60°-70°	2558.1	30.3
70°-80°	1504.3	17.8
80°-90°	202.5	2.4
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°	8446.0	100.0
0°-180°	8446.0	100.0

Coefficient of Utilization



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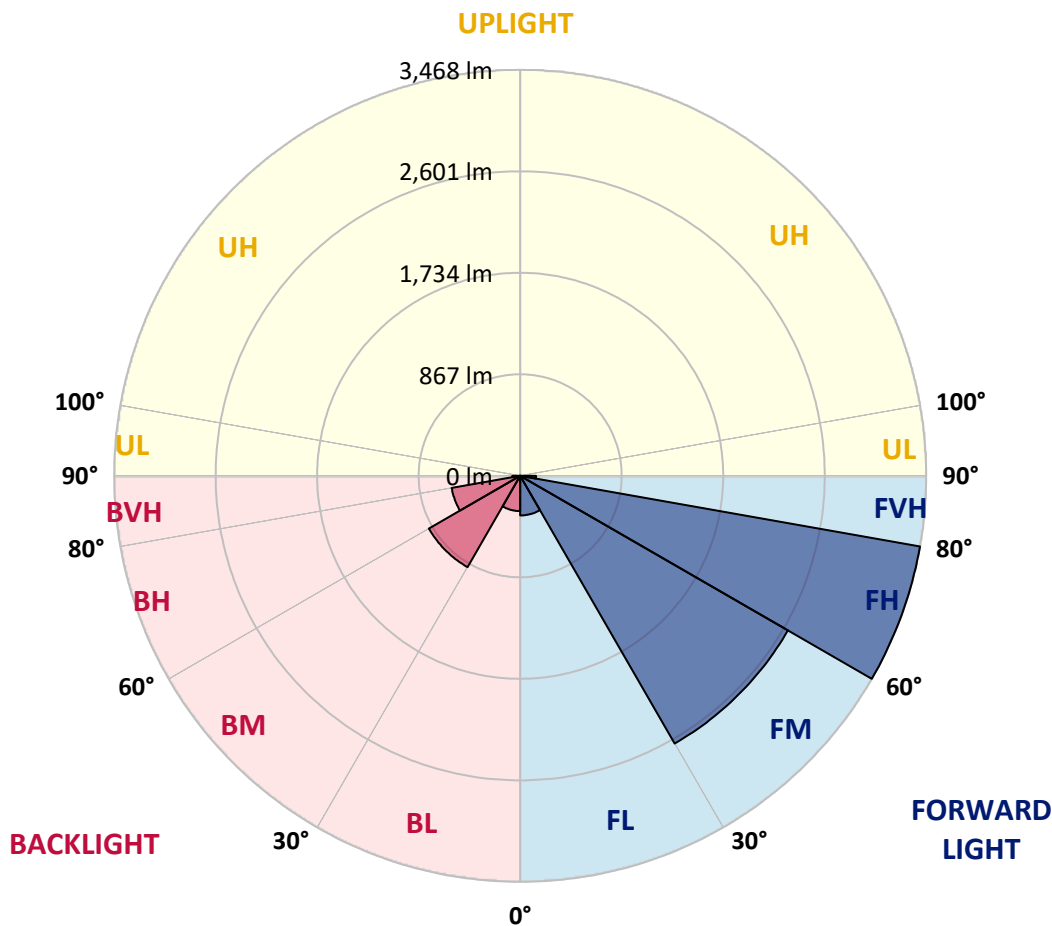
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	338.5	4.0			
FM (30°-60°)	2640.8	31.3			
FH (60°-80°)	3468.2	41.1			G2/5000
FVH (80°-90°)	135.0	1.6			G2/225
BL (0°-30°)	301.2	3.6	B1/500		
BM (30°-60°)	900.5	10.7	B1/1000		
BH (60°-80°)	594.2	7.0	B2/1000		G2/1000
BVH (80°-90°)	67.6	0.8			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1
2.5°	348.4	341.5	324.8	330.4	337.3	340.1	339.4	338.7	328.0	324.1	343.2
5°	473.4	458.2	446.0	441.2	425.3	412.8	405.2	425.3	422.2	427.3	440.5
7.5°	591.2	581.5	554.1	544.4	511.8	490.4	488.0	503.9	508.0	499.7	522.2
10°	667.0	650.4	644.8	621.6	599.1	595.7	593.6	586.3	576.3	575.6	555.5
12.5°	725.9	734.5	739.0	712.4	713.1	725.5	718.9	689.5	672.5	642.8	645.2
15°	831.5	844.0	808.3	791.3	758.8	777.5	775.0	750.5	748.0	728.6	706.1
17.5°	923.6	929.1	869.6	830.8	819.7	792.7	800.0	800.7	768.8	803.4	783.4
20°	931.2	951.0	882.4	805.2	838.4	835.0	836.0	829.1	787.2	844.3	836.7
22.5°	968.6	938.5	876.9	820.4	829.1	834.3	839.1	830.8	828.4	860.2	883.4
25°	961.7	952.0	889.7	841.9	842.9	844.0	846.4	871.3	868.5	911.8	924.0
27.5°	1026.5	1011.6	893.5	881.7	854.7	848.8	832.2	884.1	924.6	923.6	990.4
30°	1149.7	1134.5	982.1	947.8	899.0	838.8	870.6	939.9	971.7	982.5	1067.3
32.5°	1342.3	1367.2	1156.7	1018.5	957.9	944.7	941.3	934.3	1013.3	1066.3	1143.5
35°	1618.7	1598.9	1362.4	1169.8	1019.9	963.4	971.1	1013.3	1107.2	1141.4	1212.8
37.5°	1935.2	1894.3	1625.9	1341.3	1198.6	1127.9	1102.6	1143.5	1164.3	1191.3	1337.1
40°	2256.9	2157.2	1884.6	1566.7	1305.9	1252.6	1230.4	1180.2	1229.1	1283.8	1469.0
42.5°	2567.5	2490.3	2166.2	1835.8	1486.7	1296.6	1284.5	1235.3	1386.6	1444.5	1659.5
45°	2893.1	2714.0	2454.6	2139.5	1750.9	1512.3	1494.3	1406.0	1600.0	1720.5	1928.3
47.5°	3111.9	2946.1	2718.9	2386.1	1972.2	1873.2	1838.9	1687.9	1863.8	2020.4	2343.5
50°	3319.0	3148.3	2909.7	2655.8	2372.9	2259.0	2185.9	1934.5	2192.5	2447.4	2875.8
52.5°	3615.5	3462.7	3131.3	2927.7	2803.4	2523.2	2468.8	2330.7	2576.9	2920.8	3457.6
55°	3932.3	3724.2	3424.0	3311.1	3260.9	2902.1	2857.7	2769.8	3088.7	3405.3	4023.1
57.5°	4072.3	3855.1	3689.6	3622.1	3617.9	3452.7	3401.8	3340.5	3612.0	3820.8	4555.4
60°	4183.4	3950.4	3884.2	3922.0	4059.1	3950.4	3884.2	3830.2	4038.0	4231.6	4989.6
62.5°	4163.0	3929.2	3963.2	4078.1	4428.3	4460.1	4409.2	4278.3	4460.1	4568.2	5238.6
65°	3833.3	3617.2	3814.9	4087.8	4771.5	5026.0	5023.2	4680.7	4743.7	4743.7	5212.3
67.5°	3255.7	3031.9	3355.7	4002.3	5008.7	5474.5	5475.2	5107.4	4769.7	4726.1	4805.0
70°	2431.1	2228.5	2592.5	3485.6	4763.8	5691.6	5660.1	5451.6	4698.4	4317.1	4013.7
72.5°	1452.1	1321.2	1656.1	2537.4	4063.6	5292.3	5376.1	5055.1	4301.2	3590.2	2869.2
75°	659.4	602.6	778.2	1457.6	2901.0	4414.4	4505.5	4266.2	3416.3	2582.1	1658.1
77.5°	282.2	267.0	339.7	646.6	1599.6	3018.8	3205.4	3048.9	2314.7	1500.6	733.5
80°	181.5	171.8	208.8	311.0	742.8	1631.1	1791.8	1733.3	1179.2	583.5	258.3
82.5°	108.4	105.3	139.6	195.3	405.2	717.9	809.0	830.5	489.7	261.8	147.9
85°	59.2	59.9	76.5	118.4	243.1	279.5	299.2	325.5	230.6	151.7	71.7
87.5°	19.7	22.9	30.8	48.1	86.6	79.0	79.3	92.1	97.3	63.0	22.9
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°	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1	287.1
2.5°	346.3	340.1	324.1	325.2	331.1	332.5	334.2	324.1	322.1	341.1	342.8
5°	442.6	422.2	412.8	409.7	400.7	397.6	414.2	421.8	429.4	444.3	451.6
7.5°	519.8	497.0	480.0	464.4	451.2	443.6	471.7	493.1	506.3	536.8	550.6
10°	555.1	535.4	529.2	516.7	526.7	549.6	554.8	555.5	584.6	583.9	589.8
12.5°	625.4	612.6	592.2	596.7	623.0	646.6	640.0	650.0	660.4	685.3	673.9
15°	689.5	686.0	667.0	670.1	675.3	704.7	708.5	718.6	734.5	754.3	740.8
17.5°	768.5	767.1	720.7	716.5	728.6	757.4	748.4	730.7	783.4	804.5	798.9
20°	822.1	811.7	752.2	734.5	765.3	769.2	758.8	730.7	776.4	822.5	835.0
22.5°	866.8	854.7	793.4	758.8	752.5	754.3	754.3	749.1	771.6	809.3	809.0
25°	902.8	914.3	836.3	803.1	769.8	728.3	723.1	727.6	740.4	813.1	810.7
27.5°	993.2	961.7	850.9	825.9	757.7	692.3	706.5	713.4	717.6	797.2	810.4
30°	1052.1	1061.8	902.8	839.5	740.1	652.1	656.9	677.0	701.3	795.5	799.3
32.5°	1131.4	1110.6	983.9	816.9	693.0	627.9	618.9	645.9	681.9	767.4	777.8
35°	1205.2	1229.7	1018.2	812.8	660.1	591.5	601.2	610.5	647.9	736.3	748.4
37.5°	1378.3	1322.2	1114.4	792.7	632.7	573.1	562.8	577.0	608.8	677.0	705.1
40°	1509.9	1513.4	1135.2	767.4	580.4	546.8	524.7	538.9	552.4	606.7	618.9
42.5°	1756.8	1681.3	1186.1	712.0	547.5	507.3	494.9	501.1	503.2	526.0	546.1
45°	2070.9	1894.0	1206.2	637.6	504.2	491.1	465.8	462.7	451.2	454.4	472.0
47.5°	2505.6	2225.7	1191.7	558.3	465.8	469.9	433.6	419.4	403.5	407.3	423.9
50°	3067.6	2649.6	1190.6	491.1	439.5	442.2	412.5	386.8	370.9	378.9	393.4
52.5°	3698.2	3074.9	1195.5	445.0	410.7	409.3	398.6	367.4	354.6	362.9	379.6
55°	4301.5	3440.6	1231.5	415.9	380.9	383.4	387.5	361.2	347.0	354.6	371.9
57.5°	4826.5	3729.4	1218.0	385.1	353.2	364.3	375.4	352.5	341.8	352.9	370.2
60°	5193.6	3863.4	1111.3	355.7	332.8	348.0	369.5	351.5	350.1	374.0	394.8
62.5°	5327.6	3813.9	903.5	332.5	320.7	346.0	383.0	374.4	375.7	405.2	433.9
65°	5132.0	3553.5	673.9	317.6	311.3	356.0	414.2	387.9	368.8	393.1	419.4
67.5°	4575.4	3090.5	492.5	304.8	300.6	371.9	442.9	386.5	351.2	375.7	397.2
70°	3701.7	2439.4	381.3	288.5	286.4	361.2	445.7	376.1	332.1	348.0	360.2
72.5°	2536.4	1670.3	315.8	272.9	261.8	320.0	423.2	352.9	309.3	318.6	328.6
75°	1417.4	937.5	265.6	253.5	229.3	285.0	396.9	339.0	292.3	295.1	308.9
77.5°	636.2	405.5	225.4	227.9	199.8	252.1	362.6	316.9	266.3	260.1	273.9
80°	240.7	197.7	182.9	192.5	168.0	218.5	326.9	296.8	239.0	231.0	239.0
82.5°	139.6	119.8	135.8	148.2	133.3	200.9	312.0	278.4	210.6	190.5	197.4
85°	64.8	62.0	81.4	96.3	93.2	156.5	267.0	209.5	150.0	126.7	140.3
87.5°	17.0	19.0	28.7	33.9	34.6	53.7	102.9	77.9	58.5	44.3	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

(END OF REPORT)