

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: P367126

Luminaire Tested: **MSA-SA1D-830-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367126
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-SA1D-830-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5525 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

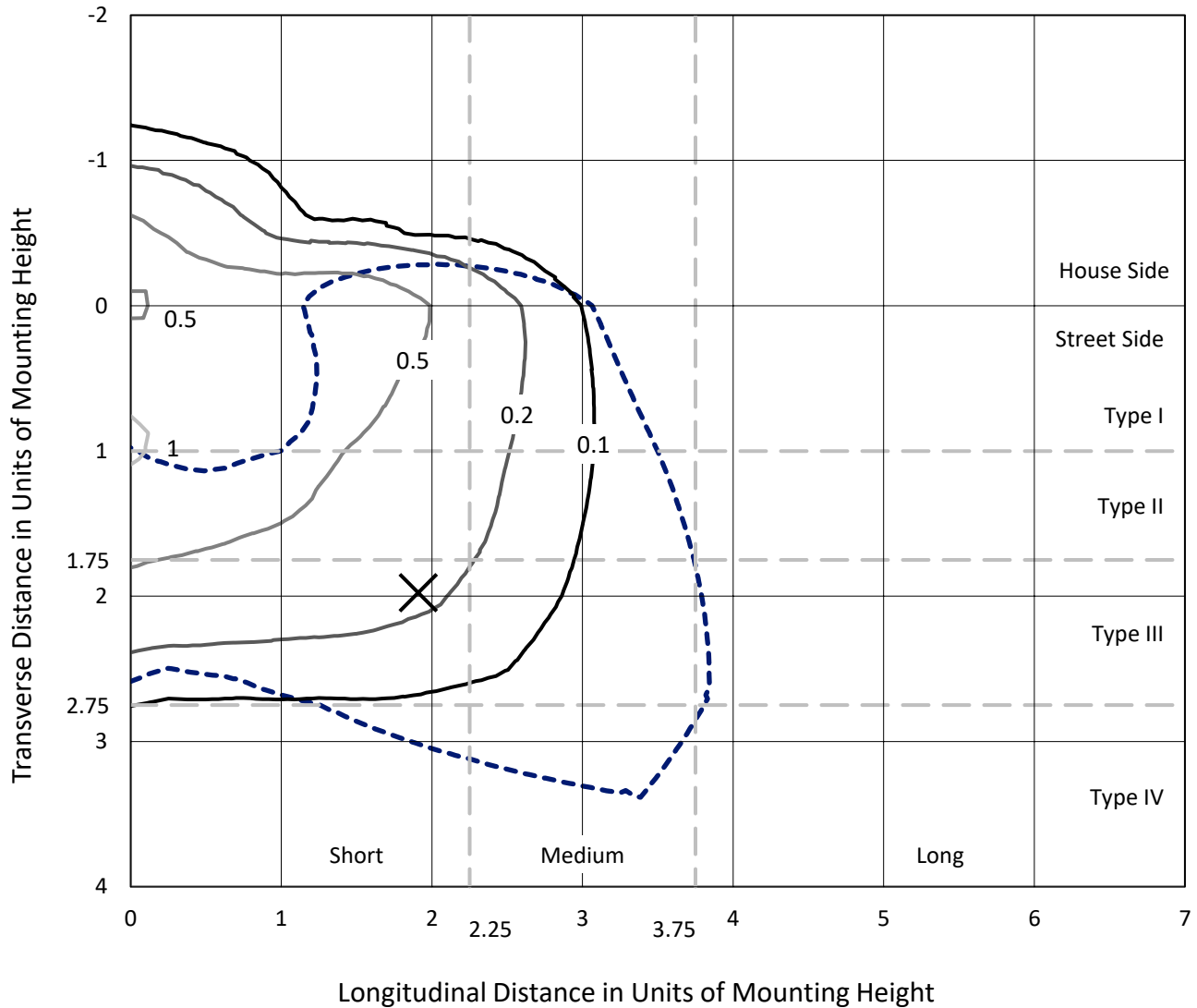
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367126
 CATALOG NUMBER: MSA-SA1D-830-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

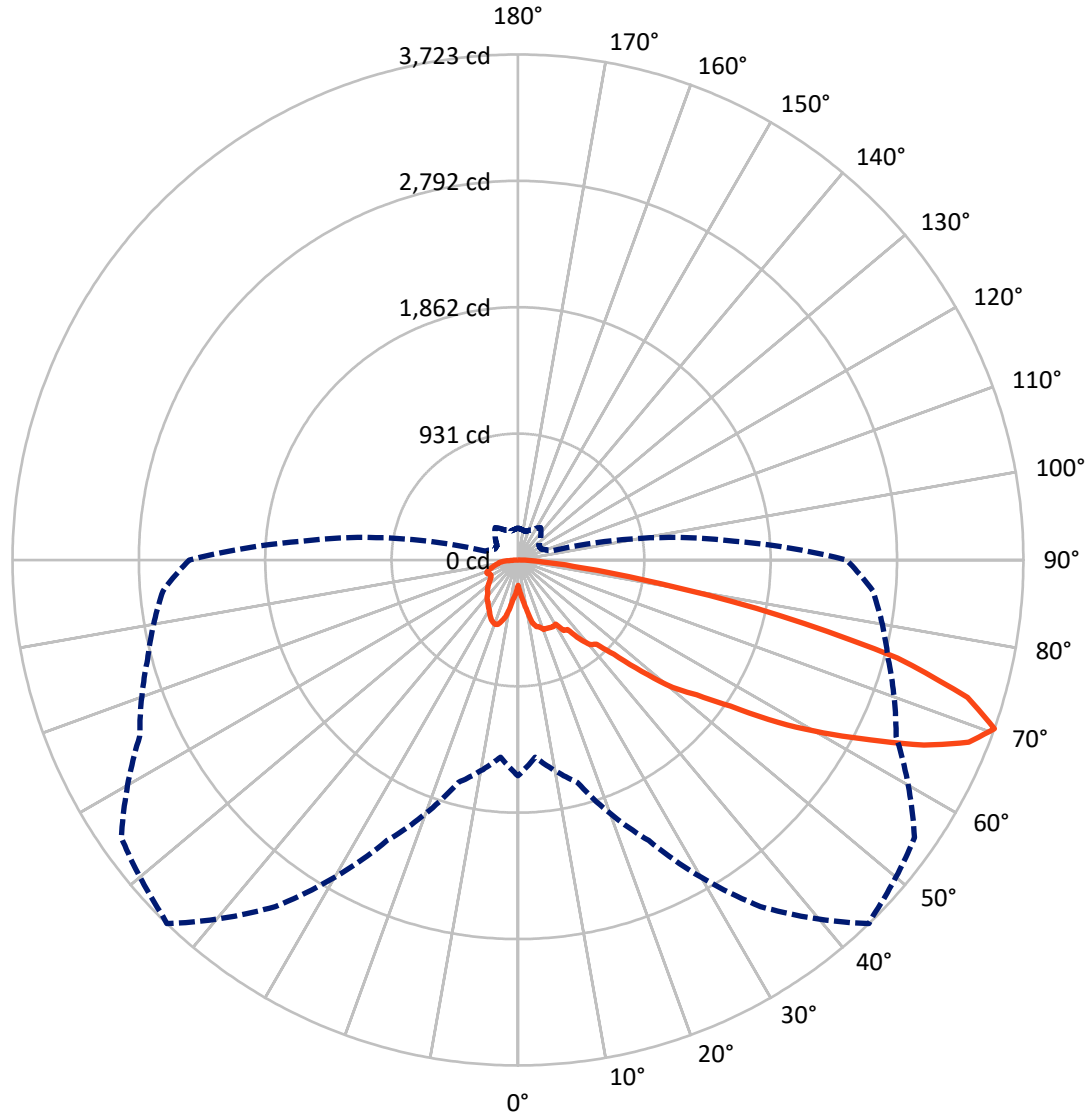
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P367126
CATALOG NUMBER: MSA-SA1D-830-U-T4W

Luminous Intensity Polar Plot



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

REPORT NUMBER: P367126
 CATALOG NUMBER: MSA-SA1D-830-U-T4W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1219.0	0.0	1219.0
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4306.0	0.0	4306.0
	% Fixture	77.9	0.0	77.9
Total	Lumens	5525.0	0.0	5525.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.4	0.5
10°-20°	135.6	2.5
20°-30°	253.4	4.6
30°-40°	406.7	7.4
40°-50°	686.5	12.4
50°-60°	1223.4	22.1
60°-70°	1673.4	30.3
70°-80°	984.1	17.8
80°-90°	132.5	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°	5525.0	100.0
0°-180°	5525.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367126

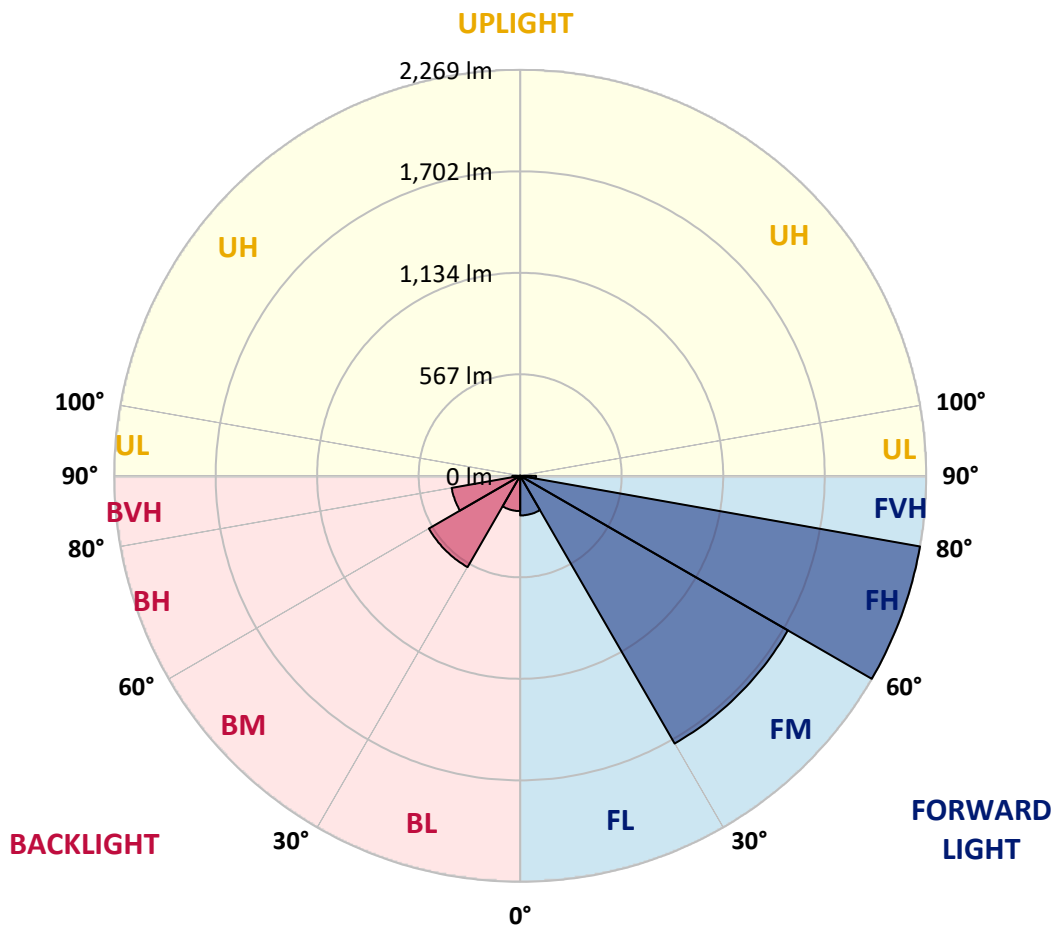
CATALOG NUMBER: MSA-SA1D-830-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	221.4	4.0			
FM (30°-60°)	1727.5	31.3			
FH (60°-80°)	2268.7	41.1			G2/5000
FVH (80°-90°)	88.3	1.6			G1/100
BL (0°-30°)	197.0	3.6	B1/500		
BM (30°-60°)	589.1	10.7	B1/1000		
BH (60°-80°)	388.7	7.0	B1/500		G1/500
BVH (80°-90°)	44.2	0.8			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 IV Short





REPORT NUMBER: P367126
 CATALOG NUMBER: MSA-SA1D-830-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8
2.5°	227.9	223.4	212.5	216.1	220.7	222.5	222.0	221.6	214.5	212.0	224.5
5°	309.7	299.7	291.8	288.6	278.2	270.0	265.1	278.2	276.2	279.6	288.2
7.5°	386.7	380.4	362.5	356.1	334.8	320.8	319.2	329.6	332.3	326.9	341.6
10°	436.3	425.4	421.8	406.6	391.9	389.6	388.3	383.5	377.0	376.5	363.4
12.5°	474.8	480.5	483.4	466.0	466.4	474.6	470.3	451.0	439.9	420.5	422.0
15°	543.9	552.1	528.7	517.6	496.4	508.6	507.0	490.9	489.3	476.6	461.9
17.5°	604.2	607.8	568.8	543.5	536.2	518.6	523.3	523.8	502.9	525.6	512.4
20°	609.2	622.1	577.2	526.7	548.5	546.2	546.9	542.3	514.9	552.3	547.3
22.5°	633.6	613.9	573.6	536.7	542.3	545.7	548.9	543.5	541.9	562.7	577.9
25°	629.1	622.8	582.0	550.7	551.4	552.1	553.7	570.0	568.2	596.5	604.4
27.5°	671.5	661.7	584.5	576.8	559.1	555.3	544.4	578.4	604.9	604.2	647.9
30°	752.1	742.1	642.5	620.0	588.1	548.7	569.5	614.8	635.7	642.7	698.2
32.5°	878.1	894.4	756.6	666.3	626.6	618.0	615.7	611.2	662.9	697.5	748.0
35°	1058.9	1045.9	891.2	765.3	667.2	630.2	635.2	662.9	724.2	746.7	793.3
37.5°	1265.9	1239.2	1063.6	877.4	784.1	737.8	721.3	748.0	761.6	779.3	874.7
40°	1476.4	1411.1	1232.8	1024.9	854.3	819.4	804.9	772.0	804.0	839.8	961.0
42.5°	1679.6	1629.1	1417.0	1200.9	972.5	848.2	840.2	808.1	907.1	944.9	1085.6
45°	1892.5	1775.4	1605.7	1399.6	1145.4	989.3	977.5	919.8	1046.6	1125.5	1261.4
47.5°	2035.7	1927.2	1778.6	1560.9	1290.1	1225.4	1202.9	1104.2	1219.2	1321.6	1533.0
50°	2171.2	2059.5	1903.4	1737.3	1552.3	1477.7	1429.9	1265.5	1434.2	1601.0	1881.2
52.5°	2365.1	2265.2	2048.4	1915.2	1833.8	1650.6	1615.0	1524.6	1685.7	1910.6	2261.8
55°	2572.4	2436.2	2239.8	2166.0	2133.1	1898.4	1869.4	1811.9	2020.5	2227.6	2631.7
57.5°	2663.9	2521.8	2413.6	2369.4	2366.7	2258.6	2225.3	2185.2	2362.8	2499.4	2979.9
60°	2736.6	2584.1	2540.9	2565.6	2655.3	2584.1	2540.9	2505.5	2641.5	2768.1	3264.0
62.5°	2723.2	2570.3	2592.5	2667.7	2896.8	2917.6	2884.3	2798.7	2917.6	2988.3	3426.9
65°	2507.6	2366.2	2495.6	2674.1	3121.3	3287.8	3286.0	3061.9	3103.2	3103.2	3409.7
67.5°	2129.7	1983.4	2195.2	2618.1	3276.5	3581.2	3581.6	3341.0	3120.1	3091.6	3143.2
70°	1590.3	1457.8	1695.9	2280.1	3116.3	3723.2	3702.6	3566.2	3073.5	2824.1	2625.6
72.5°	949.9	864.3	1083.3	1659.9	2658.2	3462.0	3516.8	3306.8	2813.6	2348.5	1876.9
75°	431.3	394.2	509.0	953.5	1897.7	2887.7	2947.3	2790.8	2234.8	1689.1	1084.7
77.5°	184.6	174.7	222.2	423.0	1046.4	1974.8	2096.9	1994.5	1514.2	981.6	479.8
80°	118.7	112.4	136.6	203.4	485.9	1067.0	1172.1	1133.8	771.4	381.7	169.0
82.5°	70.9	68.9	91.3	127.8	265.1	469.6	529.2	543.2	320.3	171.3	96.7
85°	38.7	39.2	50.1	77.5	159.0	182.8	195.7	212.9	150.9	99.2	46.9
87.5°	12.9	15.0	20.2	31.5	56.6	51.7	51.9	60.3	63.7	41.2	15.0
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: P367126
 CATALOG NUMBER: MSA-SA1D-830-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8	187.8
2.5°	226.5	222.5	212.0	212.7	216.6	217.5	218.6	212.0	210.7	223.1	224.3
5°	289.5	276.2	270.0	268.0	262.1	260.1	270.9	275.9	280.9	290.7	295.4
7.5°	340.0	325.1	314.0	303.8	295.2	290.2	308.5	322.6	331.2	351.1	360.2
10°	363.1	350.2	346.2	338.0	344.6	359.5	362.9	363.4	382.4	381.9	385.8
12.5°	409.1	400.8	387.4	390.3	407.5	423.0	418.6	425.2	432.0	448.3	440.8
15°	451.0	448.8	436.3	438.4	441.8	461.0	463.5	470.1	480.5	493.4	484.6
17.5°	502.7	501.8	471.4	468.7	476.6	495.4	489.6	478.0	512.4	526.3	522.6
20°	537.8	531.0	492.0	480.5	500.7	503.1	496.4	478.0	507.9	538.0	546.2
22.5°	567.0	559.1	519.0	496.4	492.3	493.4	493.4	490.0	504.7	529.4	529.2
25°	590.6	598.1	547.1	525.3	503.6	476.4	473.0	476.0	484.3	531.9	530.3
27.5°	649.7	629.1	556.6	540.3	495.7	452.9	462.1	466.7	469.4	521.5	530.1
30°	688.2	694.6	590.6	549.1	484.1	426.6	429.7	442.9	458.7	520.4	522.9
32.5°	740.1	726.5	643.6	534.4	453.3	410.7	404.8	422.5	446.1	502.0	508.8
35°	788.4	804.4	666.0	531.7	431.8	386.9	393.3	399.4	423.9	481.6	489.6
37.5°	901.6	864.9	729.0	518.6	413.9	374.9	368.1	377.4	398.3	442.9	461.2
40°	987.7	990.0	742.6	502.0	379.7	357.7	343.2	352.5	361.3	396.9	404.8
42.5°	1149.2	1099.9	775.9	465.8	358.2	331.9	323.7	327.8	329.2	344.1	357.3
45°	1354.7	1238.9	789.0	417.1	329.8	321.2	304.7	302.7	295.2	297.2	308.8
47.5°	1639.0	1456.0	779.5	365.2	304.7	307.4	283.6	274.3	263.9	266.4	277.3
50°	2006.7	1733.3	778.8	321.2	287.5	289.3	269.8	253.0	242.6	247.8	257.3
52.5°	2419.2	2011.5	782.0	291.1	268.7	267.8	260.7	240.4	232.0	237.4	248.3
55°	2813.9	2250.7	805.6	272.1	249.2	250.8	253.5	236.3	227.0	232.0	243.3
57.5°	3157.3	2439.6	796.7	251.9	231.1	238.3	245.6	230.6	223.6	230.8	242.2
60°	3397.4	2527.3	727.0	232.7	217.7	227.7	241.7	229.9	229.0	244.7	258.3
62.5°	3485.1	2494.9	591.0	217.5	209.8	226.3	250.6	244.9	245.8	265.1	283.9
65°	3357.1	2324.5	440.8	207.7	203.7	232.9	270.9	253.7	241.3	257.1	274.3
67.5°	2993.1	2021.6	322.1	199.4	196.6	243.3	289.7	252.8	229.7	245.8	259.8
70°	2421.5	1595.8	249.4	188.7	187.3	236.3	291.6	246.0	217.3	227.7	235.6
72.5°	1659.2	1092.6	206.6	178.5	171.3	209.3	276.8	230.8	202.3	208.4	215.0
75°	927.2	613.2	173.8	165.8	150.0	186.4	259.6	221.8	191.2	193.0	202.1
77.5°	416.2	265.3	147.5	149.1	130.7	164.9	237.2	207.3	174.2	170.1	179.2
80°	157.4	129.4	119.6	126.0	109.9	142.9	213.9	194.1	156.3	151.1	156.3
82.5°	91.3	78.4	88.8	97.0	87.2	131.4	204.1	182.1	137.7	124.6	129.1
85°	42.4	40.6	53.2	63.0	60.9	102.4	174.7	137.1	98.1	82.9	91.7
87.5°	11.1	12.5	18.8	22.2	22.7	35.1	67.3	51.0	38.3	29.0	27.9
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)