

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: P366694

Luminaire Tested: **MSA-SA1A-760-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366694
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-760-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3965 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

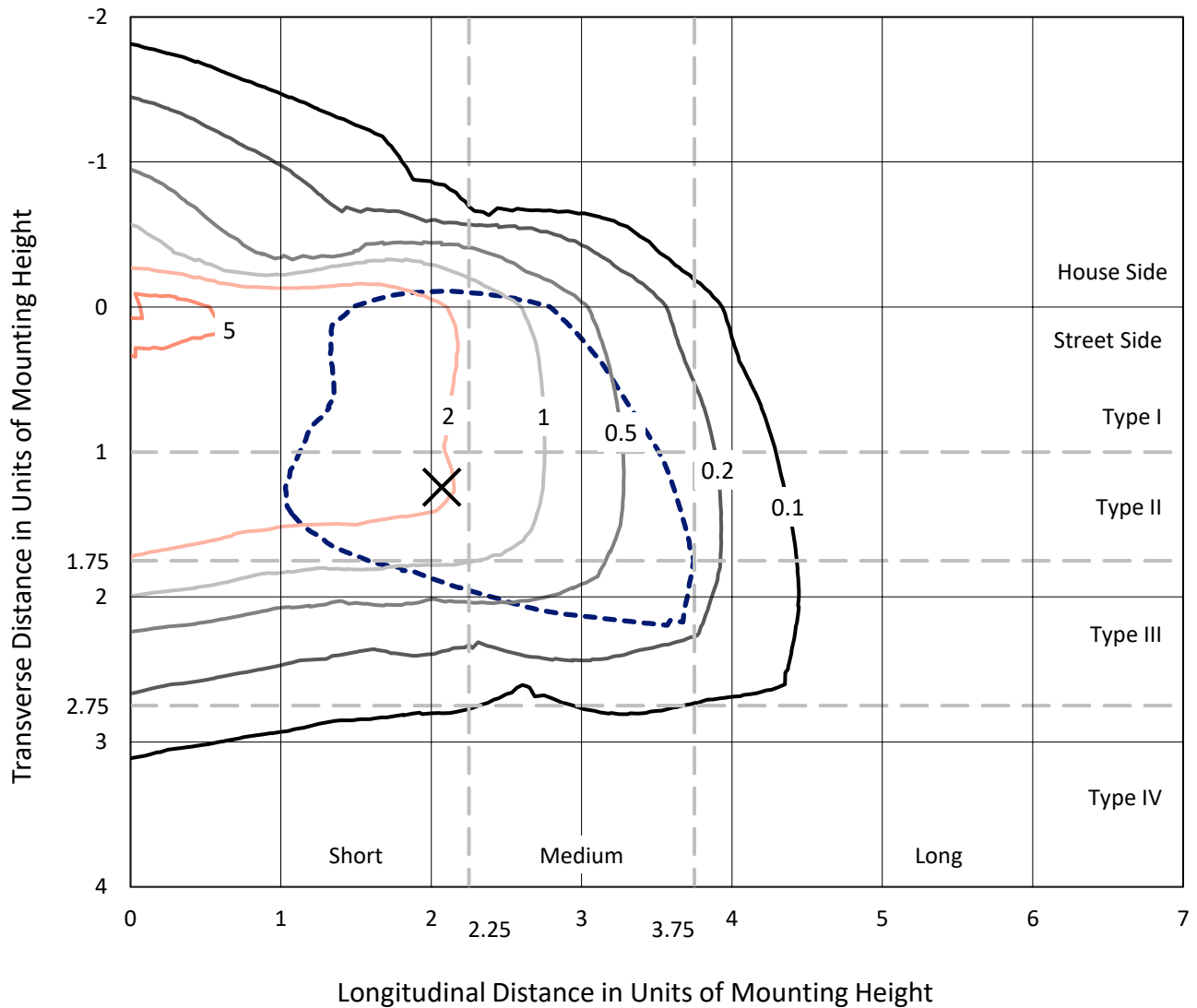
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

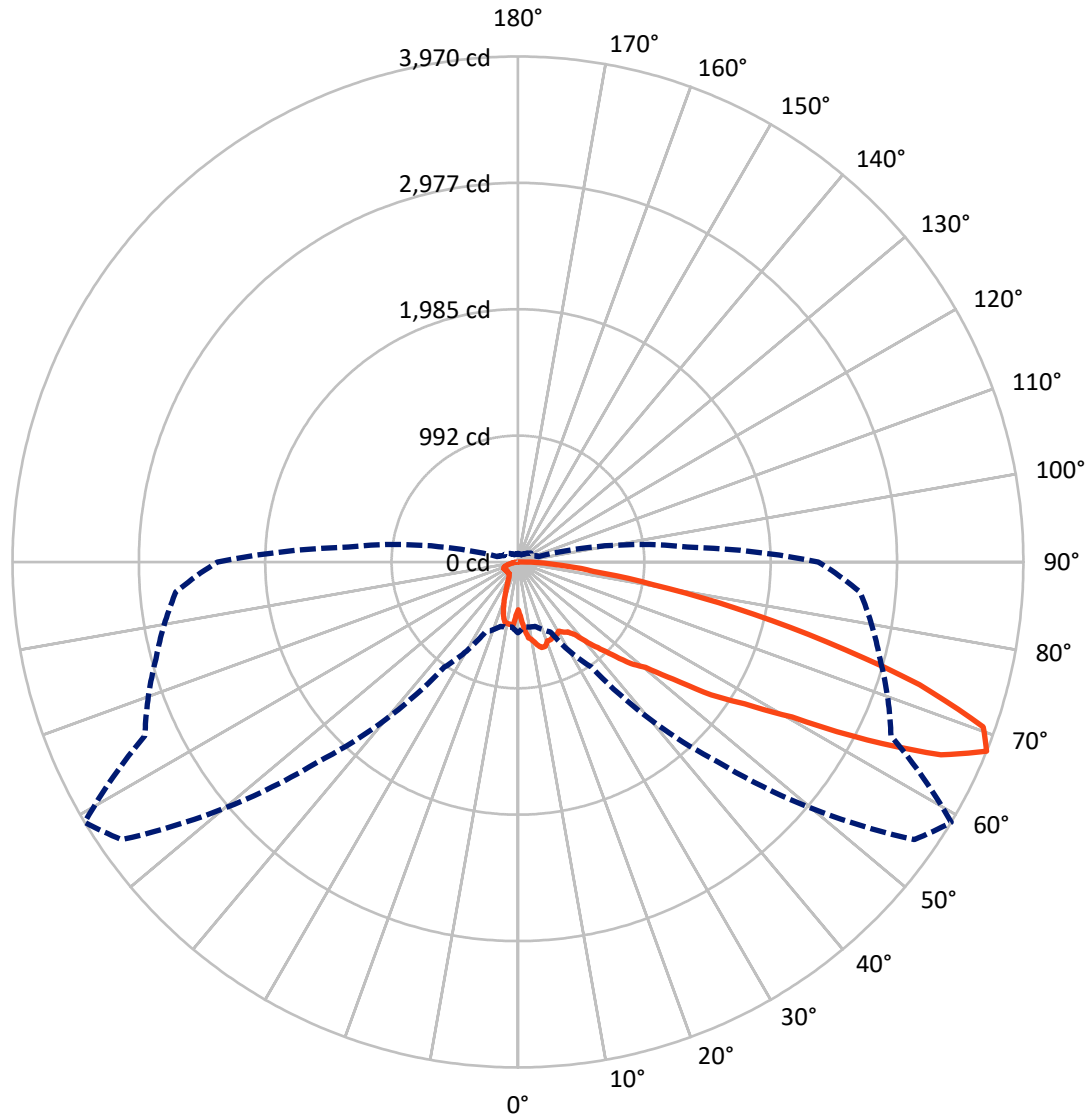
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	596.8	0.0	596.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	3368.2	0.0	3368.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	3965.0	0.0	3965.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	1.2
10°-20°	145.0	3.7
20°-30°	207.1	5.2
30°-40°	305.2	7.7
40°-50°	515.6	13.0
50°-60°	897.2	22.6
60°-70°	1143.3	28.8
70°-80°	605.4	15.3
80°-90°	97.4	2.5
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°	3965.0	100.0
0°-180°	3965.0	100.0

Coefficient of Utilization



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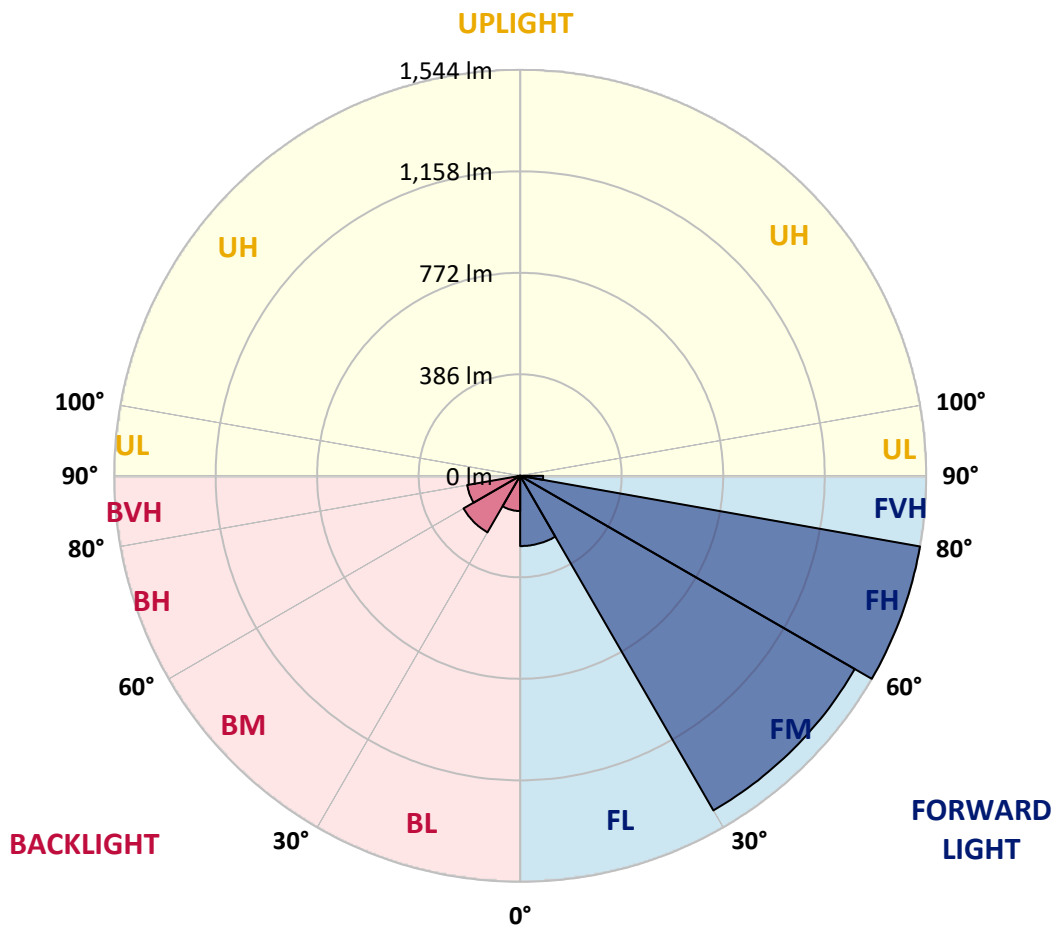
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	267.2	6.7			
FM (30°-60°)	1469.4	37.1			
FH (60°-80°)	1544.1	38.9			G1/1800
FVH (80°-90°)	87.5	2.2			G1/100
BL (0°-30°)	133.8	3.4	B1/500		
BM (30°-60°)	248.5	6.3	B1/1000		
BH (60°-80°)	204.6	5.2	B1/500		G1/500
BVH (80°-90°)	9.9	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2
2.5°	468.4	446.6	423.4	430.0	443.2	449.3	442.7	436.4	428.1	418.4	451.6
5°	568.1	535.7	531.0	530.8	526.1	507.3	531.5	529.8	539.5	549.6	575.5
7.5°	596.5	584.4	571.3	577.5	553.8	552.8	590.4	601.2	620.0	613.8	648.6
10°	581.9	568.3	575.1	572.6	574.8	599.7	622.7	623.4	643.5	663.4	641.0
12.5°	556.2	557.2	584.5	583.5	618.8	665.0	671.9	666.5	699.5	686.0	705.2
15°	574.5	586.7	579.8	585.7	599.7	658.5	677.6	697.1	728.4	740.5	721.3
17.5°	603.7	610.3	579.3	576.1	604.9	632.8	680.3	697.0	701.8	788.0	761.0
20°	591.3	604.5	574.3	535.5	583.2	620.2	667.0	662.0	685.7	791.7	769.2
22.5°	626.6	604.5	566.1	538.5	555.3	589.3	629.1	662.2	690.2	770.0	781.1
25°	633.3	622.9	586.9	559.5	553.8	565.9	622.7	644.4	691.7	799.6	774.8
27.5°	674.3	658.6	585.4	586.2	557.8	536.5	602.5	648.1	708.9	781.3	790.4
30°	725.2	713.3	621.3	624.7	585.4	546.1	616.3	630.1	718.8	809.9	810.0
32.5°	763.3	784.3	692.1	646.4	632.4	603.0	595.1	657.1	707.2	861.6	843.6
35°	832.0	848.3	746.5	709.9	662.7	629.6	652.6	674.9	755.4	929.7	893.5
37.5°	959.2	940.4	847.7	790.0	772.4	724.7	737.4	721.8	807.9	1006.1	991.3
40°	1032.8	1016.5	918.9	887.0	817.1	823.1	807.2	818.6	877.9	1087.4	1082.7
42.5°	1105.4	1083.6	1001.1	978.9	909.2	879.6	882.5	919.4	986.0	1218.8	1203.2
45°	1177.2	1121.2	1085.1	1091.0	1057.4	996.7	1000.9	1035.7	1103.9	1369.0	1333.1
47.5°	1232.1	1185.9	1157.7	1150.4	1133.8	1215.0	1178.7	1192.8	1222.9	1502.8	1489.2
50°	1336.1	1282.2	1245.4	1235.0	1291.4	1404.3	1330.4	1300.0	1364.0	1675.7	1668.6
52.5°	1502.6	1435.4	1374.1	1373.4	1455.1	1528.3	1580.4	1528.0	1551.5	1852.8	1872.9
55°	1648.0	1570.2	1515.1	1545.5	1661.7	1706.6	1883.5	1842.5	1822.7	2031.6	2089.2
57.5°	1702.2	1611.3	1575.4	1620.2	1791.6	2022.1	2209.2	2101.3	2082.0	2233.9	2354.7
60°	1583.1	1487.0	1489.2	1573.7	1870.6	2253.8	2565.2	2473.6	2360.4	2485.7	2603.7
62.5°	1243.7	1156.8	1213.5	1342.0	1804.4	2479.0	3042.4	3081.0	2678.4	2694.6	2741.8
65°	845.3	785.2	836.2	962.1	1463.5	2601.8	3496.9	3651.8	2968.1	2831.3	2801.4
67.5°	556.3	513.8	523.7	607.4	1007.5	2218.1	3800.8	3969.7	3232.9	2943.6	2696.3
70°	430.8	396.5	392.2	436.0	597.5	1540.9	3620.7	3877.4	3394.2	2838.4	2350.1
72.5°	338.1	312.0	314.4	356.5	462.7	854.9	2801.8	3297.3	3151.3	2447.9	1805.6
75°	263.6	242.3	254.2	302.4	428.0	531.3	1933.1	2502.5	2436.3	1812.6	1029.8
77.5°	191.4	177.6	194.6	257.6	402.2	455.8	1203.4	1745.9	1560.8	930.7	353.4
80°	125.5	117.8	131.7	210.0	364.8	438.7	743.7	1069.8	771.2	261.4	133.7
82.5°	73.9	70.6	82.2	142.1	293.2	411.2	496.0	594.5	315.5	110.6	71.1
85°	38.8	36.3	48.7	81.7	202.1	375.4	390.5	355.9	152.4	48.1	33.9
87.5°	12.9	12.6	20.7	31.6	76.5	199.3	208.3	169.0	62.8	13.9	7.4
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°	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2	375.2
2.5°	456.2	449.5	410.8	416.2	421.2	418.7	417.2	399.7	398.0	422.9	420.9
5°	574.8	546.9	514.0	512.5	490.8	468.6	473.0	465.9	467.9	478.2	479.2
7.5°	637.5	602.7	571.3	520.2	476.8	441.7	447.3	445.6	441.1	464.2	470.5
10°	636.3	605.4	569.9	508.1	478.9	450.3	416.0	383.6	374.0	362.6	363.6
12.5°	678.3	650.9	573.6	510.6	471.0	421.7	357.6	322.1	288.2	287.5	278.9
15°	691.4	671.2	581.5	496.2	415.7	345.1	278.7	240.3	215.7	210.9	203.6
17.5°	724.5	692.9	557.5	449.5	351.5	269.8	209.5	182.6	180.6	184.0	180.3
20°	726.7	675.4	514.1	380.4	282.4	204.5	170.9	157.4	164.7	172.9	172.6
22.5°	724.8	653.4	476.7	321.6	212.2	164.3	149.7	146.7	153.4	165.7	167.2
25°	706.0	646.2	429.8	264.1	172.2	140.8	136.8	138.6	147.0	161.5	161.5
27.5°	725.7	616.8	371.0	214.9	144.8	125.3	128.2	132.9	139.1	155.6	158.6
30°	719.3	626.6	323.6	173.1	127.7	114.6	121.0	125.7	132.7	149.9	151.4
32.5°	736.4	600.5	283.8	145.5	116.4	110.4	111.9	118.3	127.5	141.0	143.7
35°	762.7	610.1	238.1	130.9	110.9	105.5	108.4	113.4	122.7	135.8	137.9
37.5°	846.3	609.6	206.5	122.8	109.9	104.5	105.9	109.4	120.1	132.1	137.1
40°	900.1	644.5	177.8	121.0	108.7	104.0	102.8	106.7	115.3	129.4	132.9
42.5°	1001.1	665.9	165.3	120.3	108.5	101.1	100.0	104.5	112.9	126.0	131.4
45°	1107.8	696.3	155.4	120.0	108.0	100.6	97.1	102.8	109.9	122.5	128.7
47.5°	1233.3	760.6	149.9	118.8	107.0	101.3	96.1	99.0	106.9	119.5	125.7
50°	1397.6	845.8	151.1	117.1	108.5	101.5	94.6	95.9	103.2	115.4	121.8
52.5°	1597.4	977.7	158.6	117.8	109.6	100.6	93.9	93.3	99.5	110.2	116.6
55°	1838.2	1164.9	181.3	121.0	109.6	100.5	92.9	89.9	94.6	103.3	109.6
57.5°	2128.7	1381.6	225.7	122.5	108.7	99.5	90.7	85.4	88.2	95.4	101.3
60°	2378.2	1556.6	271.4	123.5	110.4	97.1	86.4	79.6	81.5	87.0	92.2
62.5°	2505.4	1605.6	285.1	122.7	114.9	95.6	81.2	73.6	73.8	78.5	83.2
65°	2529.2	1540.3	229.9	121.8	120.8	95.4	77.5	68.4	67.2	70.6	74.6
67.5°	2359.2	1337.0	165.8	120.0	121.5	94.4	74.9	64.2	61.2	63.5	66.9
70°	2003.2	1076.7	139.3	116.3	113.4	89.4	70.6	59.8	55.8	57.5	60.0
72.5°	1493.4	796.6	121.5	108.4	98.8	76.5	63.8	54.9	50.7	51.9	53.8
75°	829.7	424.9	101.7	94.3	80.7	61.8	54.4	48.7	45.0	45.5	47.6
77.5°	275.6	156.8	74.6	74.8	61.0	47.7	44.9	41.7	38.8	39.0	40.7
80°	124.8	86.7	53.4	53.8	42.5	34.6	34.4	33.4	31.6	31.1	32.3
82.5°	72.4	52.6	36.6	34.9	27.4	22.5	25.0	24.5	24.0	22.2	22.5
85°	35.6	28.2	19.2	18.1	15.1	11.3	13.4	13.9	13.4	11.4	11.3
87.5°	8.7	9.2	4.7	4.4	2.5	1.2	2.0	2.0	2.5	1.7	0.8
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)