

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: P366869

Luminaire Tested: **MSA-SA1C-727-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366869  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-727-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4307 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

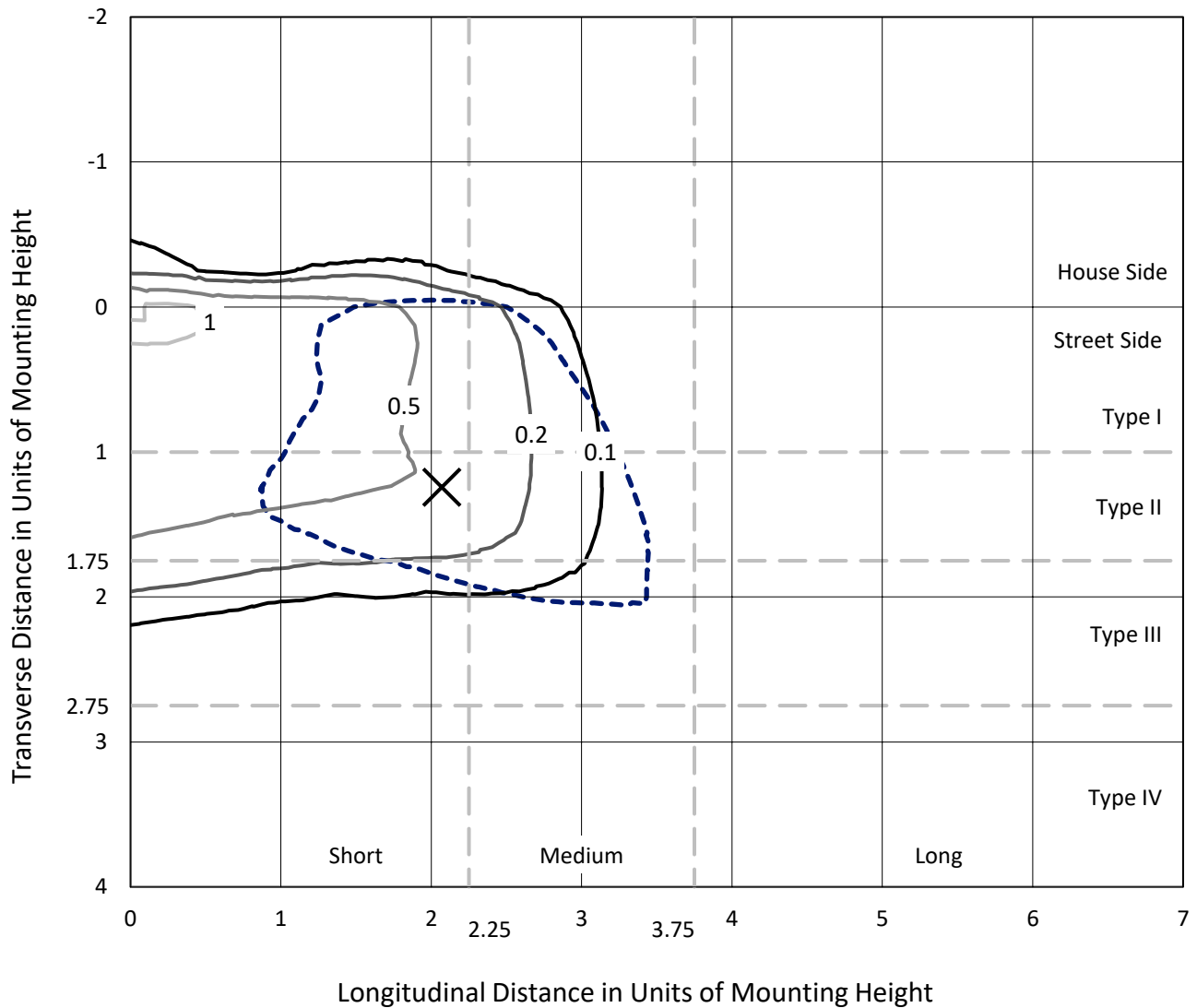
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

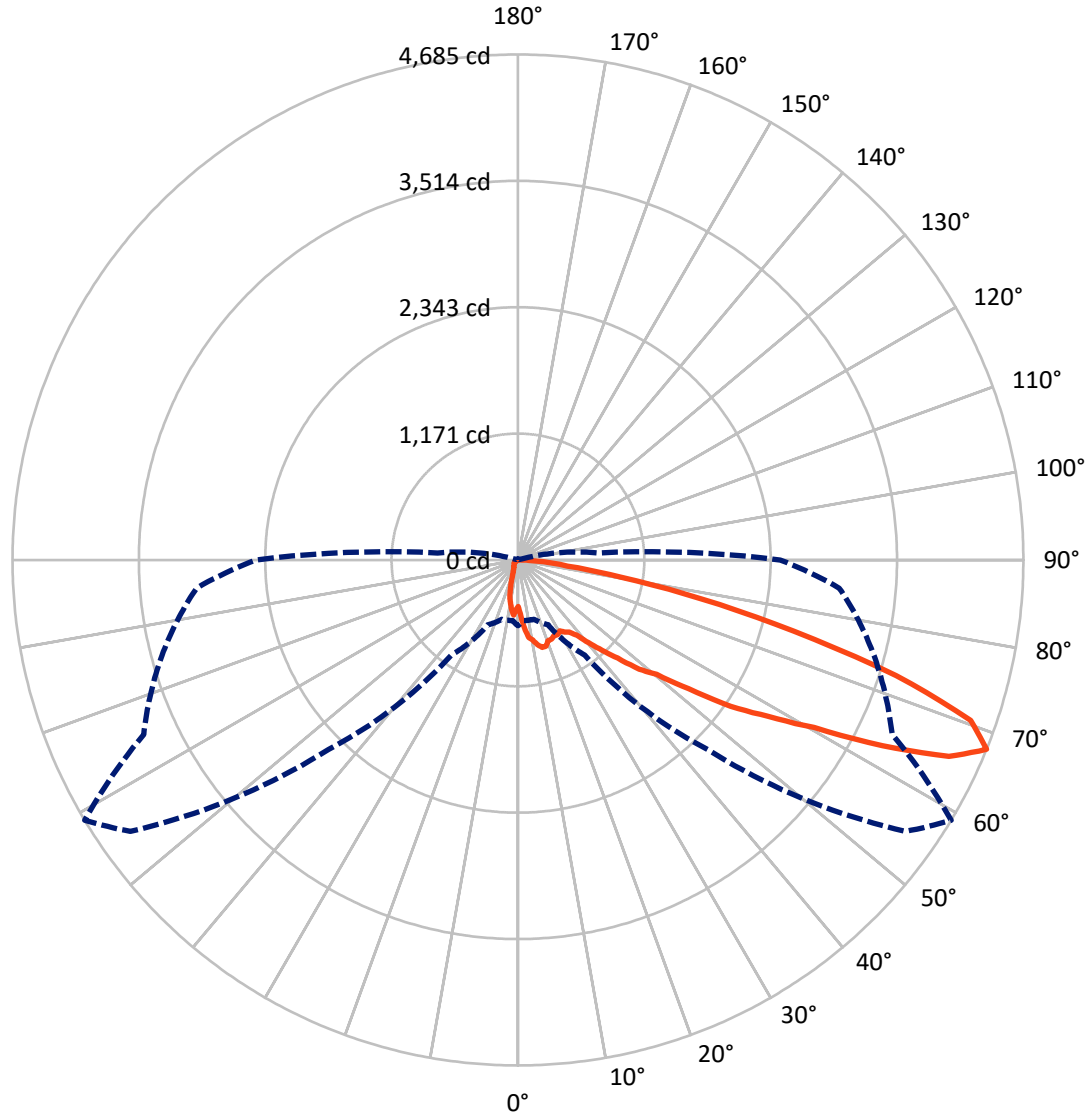
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 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
<b>House Side</b>	Lumens	366.3	0.0	366.3
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	3940.7	0.0	3940.7
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4307.0	0.0	4307.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.4	1.2
10°-20°	147.5	3.4
20°-30°	219.4	5.1
30°-40°	338.6	7.9
40°-50°	604.2	14.0
50°-60°	1075.2	25.0
60°-70°	1252.3	29.1
70°-80°	556.9	12.9
80°-90°	60.5	1.4
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°	4307.0	100.0
0°-180°	4307.0	100.0

**Coefficient of Utilization**



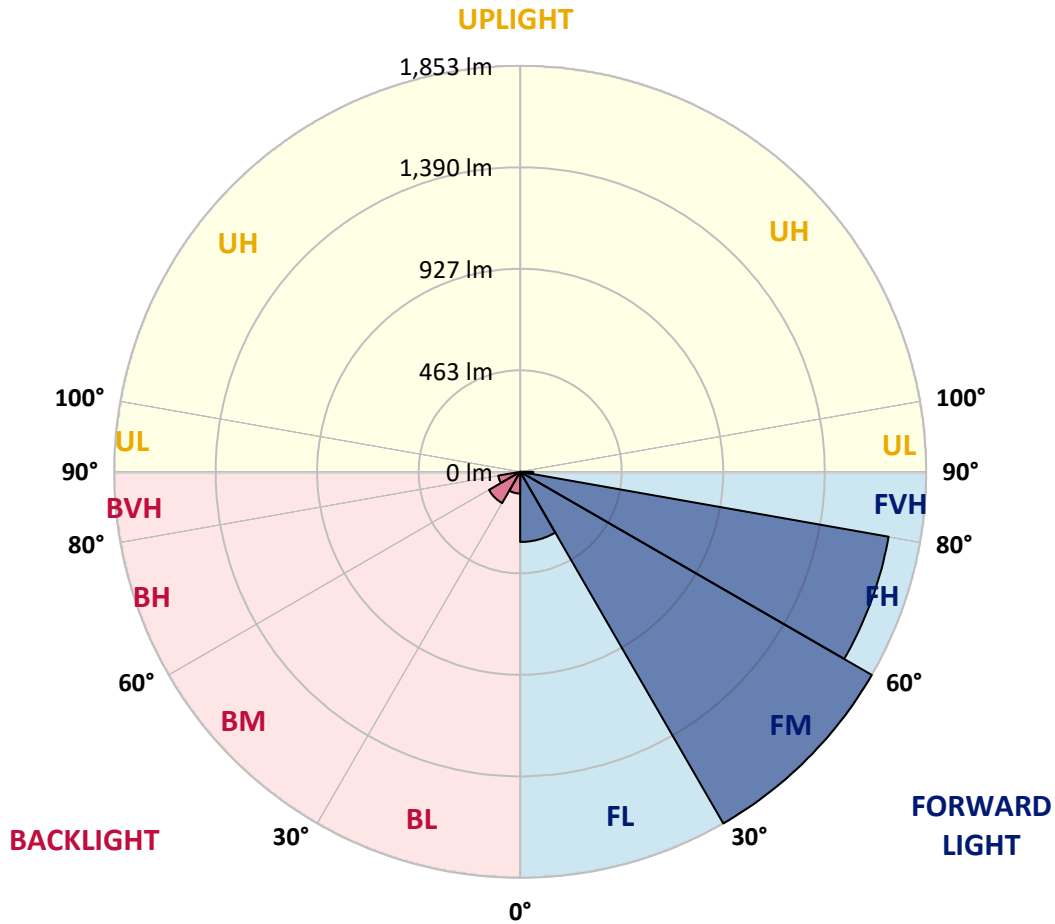
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	320.3	7.4			
FM (30°-60°)	1853.3	43.0			
FH (60°-80°)	1707.7	39.6			G1/1800
FVH (80°-90°)	59.4	1.4			G1/100
BL (0°-30°)	99.1	2.3	B0/110		
BM (30°-60°)	164.7	3.8	B0/220		
BH (60°-80°)	101.5	2.4	B0/110		G0/110
BVH (80°-90°)	1.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	561.8	540.6	510.5	519.5	527.5	535.2	522.5	515.3	511.8	480.9	519.7
5°	689.8	663.4	649.7	646.2	637.5	618.0	650.3	635.9	640.7	646.8	659.5
7.5°	728.8	716.8	697.0	704.4	671.3	668.4	713.1	725.6	741.9	730.8	746.1
10°	708.8	688.0	697.4	694.8	693.5	722.7	754.1	754.8	779.2	791.0	739.3
12.5°	669.1	671.5	705.1	702.4	746.1	804.5	811.7	804.1	844.0	823.5	815.6
15°	695.5	715.1	696.6	702.9	718.4	791.4	816.9	840.5	878.2	890.4	837.4
17.5°	727.3	729.3	695.5	687.6	726.6	760.7	820.9	840.3	844.0	951.1	886.5
20°	710.1	726.9	686.5	637.0	697.6	743.9	804.9	798.8	823.7	968.9	897.6
22.5°	755.9	731.9	680.2	642.9	663.4	705.5	757.2	797.1	834.4	926.2	912.0
25°	760.2	751.5	705.5	672.3	668.9	679.5	751.5	777.2	835.7	964.6	899.8
27.5°	809.3	799.3	705.1	708.3	675.6	642.7	724.0	784.4	859.5	941.2	925.8
30°	872.5	873.4	751.9	762.2	715.5	662.5	746.5	763.1	875.6	978.5	944.9
32.5°	936.7	963.0	844.6	790.3	775.7	737.8	718.6	795.1	857.9	1042.2	992.9
35°	1034.1	1052.0	921.0	872.3	815.0	771.8	794.5	821.9	921.4	1126.6	1056.0
37.5°	1199.2	1167.0	1057.9	973.3	959.6	895.9	907.2	882.6	986.2	1226.1	1180.7
40°	1292.1	1262.9	1149.5	1108.3	1020.6	1030.4	994.7	1009.1	1080.2	1329.6	1294.3
42.5°	1389.0	1361.0	1261.6	1232.4	1148.9	1108.3	1092.2	1143.8	1224.3	1502.1	1457.2
45°	1486.2	1415.3	1373.3	1387.9	1350.4	1270.1	1251.4	1297.4	1381.8	1714.1	1629.1
47.5°	1568.2	1508.5	1476.8	1470.1	1455.5	1566.9	1490.6	1510.9	1548.2	1901.7	1843.2
50°	1716.1	1657.2	1607.7	1594.0	1665.1	1823.2	1705.4	1666.1	1740.7	2128.3	2091.4
52.5°	1929.6	1854.6	1775.8	1776.1	1910.2	1997.0	2052.8	1983.9	1997.8	2377.5	2361.2
55°	2101.2	2005.9	1940.7	1992.2	2192.2	2240.8	2453.9	2393.4	2375.3	2608.7	2588.6
57.5°	2124.8	2010.5	1979.5	2069.8	2343.5	2654.1	2883.3	2732.3	2704.6	2802.1	2842.0
60°	1904.9	1783.7	1807.0	1952.3	2392.8	2905.9	3277.5	3154.3	2978.3	3028.7	3056.2
62.5°	1420.8	1324.0	1389.4	1581.7	2202.8	3074.7	3734.0	3791.1	3295.9	3198.8	3192.9
65°	921.8	861.2	904.2	1061.8	1667.0	3055.5	4141.8	4389.5	3546.0	3337.5	3235.9
67.5°	609.8	563.7	569.8	663.2	1078.0	2485.0	4385.6	4685.0	3827.3	3416.2	2989.7
70°	454.5	418.3	420.5	471.1	639.9	1638.9	4045.6	4451.9	3930.0	3143.4	2413.1
72.5°	327.8	303.6	323.9	380.1	509.9	866.7	3015.4	3666.4	3426.9	2479.4	1625.8
75°	227.0	211.1	244.3	318.0	465.4	538.0	1992.6	2639.2	2402.0	1555.6	734.9
77.5°	125.8	121.0	168.8	259.1	422.4	441.0	1220.6	1734.2	1332.3	557.6	174.9
80°	55.0	53.2	81.8	194.5	355.0	398.4	687.2	961.5	524.0	99.4	56.5
82.5°	23.6	22.7	34.9	117.1	258.0	333.2	423.7	462.8	180.4	30.7	32.1
85°	4.1	4.6	14.0	61.7	157.0	169.2	306.8	273.9	90.7	14.6	22.9
87.5°	0.0	0.0	2.2	12.0	29.4	48.4	133.0	96.0	17.2	4.8	3.9
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°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	525.1	512.9	466.5	460.6	454.3	444.9	441.4	421.3	418.7	444.5	444.5
5°	653.6	610.0	565.7	530.8	499.6	456.4	444.2	431.6	421.3	418.7	426.8
7.5°	721.4	668.2	598.6	509.9	437.9	375.3	349.1	330.8	310.3	316.4	319.7
10°	717.7	661.2	572.5	458.4	378.6	309.5	242.9	204.1	182.5	171.8	170.5
12.5°	754.1	700.9	554.8	417.4	315.6	220.0	152.9	125.2	109.3	109.5	108.2
15°	775.3	717.3	534.3	365.5	222.2	141.5	106.0	99.9	97.7	100.1	98.8
17.5°	812.6	734.5	487.8	288.1	152.9	106.9	97.5	95.1	97.9	102.9	101.6
20°	809.7	704.6	421.8	203.0	113.0	96.2	92.2	88.5	94.4	99.7	98.8
22.5°	807.1	675.4	359.6	149.8	94.4	87.7	84.4	82.9	85.9	92.0	93.3
25°	784.0	661.0	296.6	112.5	85.5	79.6	78.1	76.8	77.9	82.9	82.7
27.5°	812.4	624.6	229.0	94.4	79.2	72.2	70.9	68.7	66.5	70.9	71.5
30°	806.5	629.6	179.5	83.1	72.8	63.5	63.9	59.3	55.4	59.3	59.3
32.5°	827.8	593.0	143.7	75.5	66.5	59.8	54.3	49.5	46.7	49.1	49.5
35°	859.0	594.5	112.5	70.7	61.1	53.2	46.7	41.9	39.3	40.3	41.0
37.5°	963.5	584.0	94.0	67.0	59.1	49.3	42.5	36.2	34.5	35.8	36.4
40°	1031.5	611.9	82.9	65.0	54.1	45.4	36.4	31.8	30.3	31.0	32.1
42.5°	1159.8	627.4	77.4	62.8	49.5	38.8	31.2	28.6	26.4	27.3	28.1
45°	1296.9	653.8	73.3	60.4	46.0	34.0	27.5	25.3	22.5	22.7	23.6
47.5°	1465.5	716.6	68.5	56.3	41.2	31.0	24.4	21.2	18.5	18.3	19.4
50°	1691.9	800.6	64.1	51.0	38.2	28.4	21.4	17.2	15.0	14.4	15.3
52.5°	1933.5	909.2	59.5	47.3	34.5	24.9	18.3	14.0	12.0	11.6	12.2
55°	2173.0	1013.4	55.2	44.9	30.5	21.4	15.5	11.6	9.8	9.4	9.8
57.5°	2445.8	1126.2	49.5	40.1	26.8	18.5	12.9	9.6	8.1	7.6	7.9
60°	2651.2	1165.9	44.7	34.9	23.3	16.4	10.9	7.6	6.5	6.1	6.3
62.5°	2748.7	1101.1	40.1	30.3	20.5	14.2	9.2	6.3	5.5	5.0	5.0
65°	2723.4	957.6	35.5	26.0	17.7	11.8	7.2	5.5	4.8	4.1	3.9
67.5°	2431.2	749.3	30.3	21.8	14.8	9.6	6.1	5.2	4.4	3.9	3.3
70°	1928.1	542.6	24.6	18.1	12.4	7.9	4.8	4.8	4.1	3.9	3.1
72.5°	1263.8	341.5	20.1	14.6	10.2	6.1	3.7	4.4	3.9	3.9	2.8
75°	547.6	122.1	16.1	11.8	8.5	4.1	3.3	3.9	4.1	3.9	3.3
77.5°	128.2	37.9	12.6	9.4	7.0	2.8	3.3	3.9	4.1	3.7	2.8
80°	48.2	16.1	8.3	6.1	5.5	1.7	2.8	2.4	2.2	1.5	0.4
82.5°	29.2	6.8	4.4	3.1	2.6	0.4	1.3	0.9	0.4	0.4	0.0
85°	20.7	3.3	2.4	2.2	1.3	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	2.8	0.9	1.1	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0
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)