

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: P366629

Luminaire Tested: **MSA-SA1A-730-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366629  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-730-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3044 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

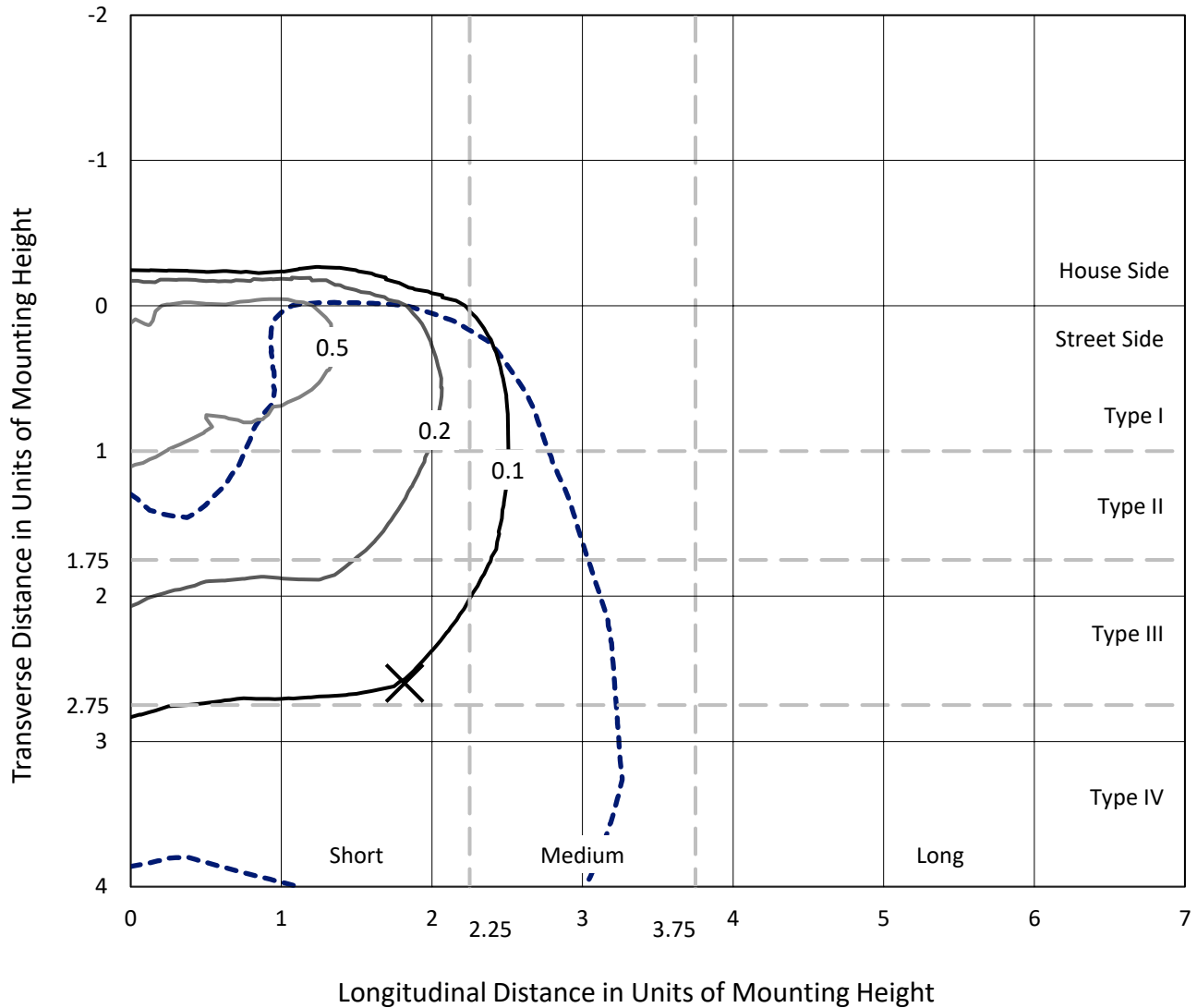
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

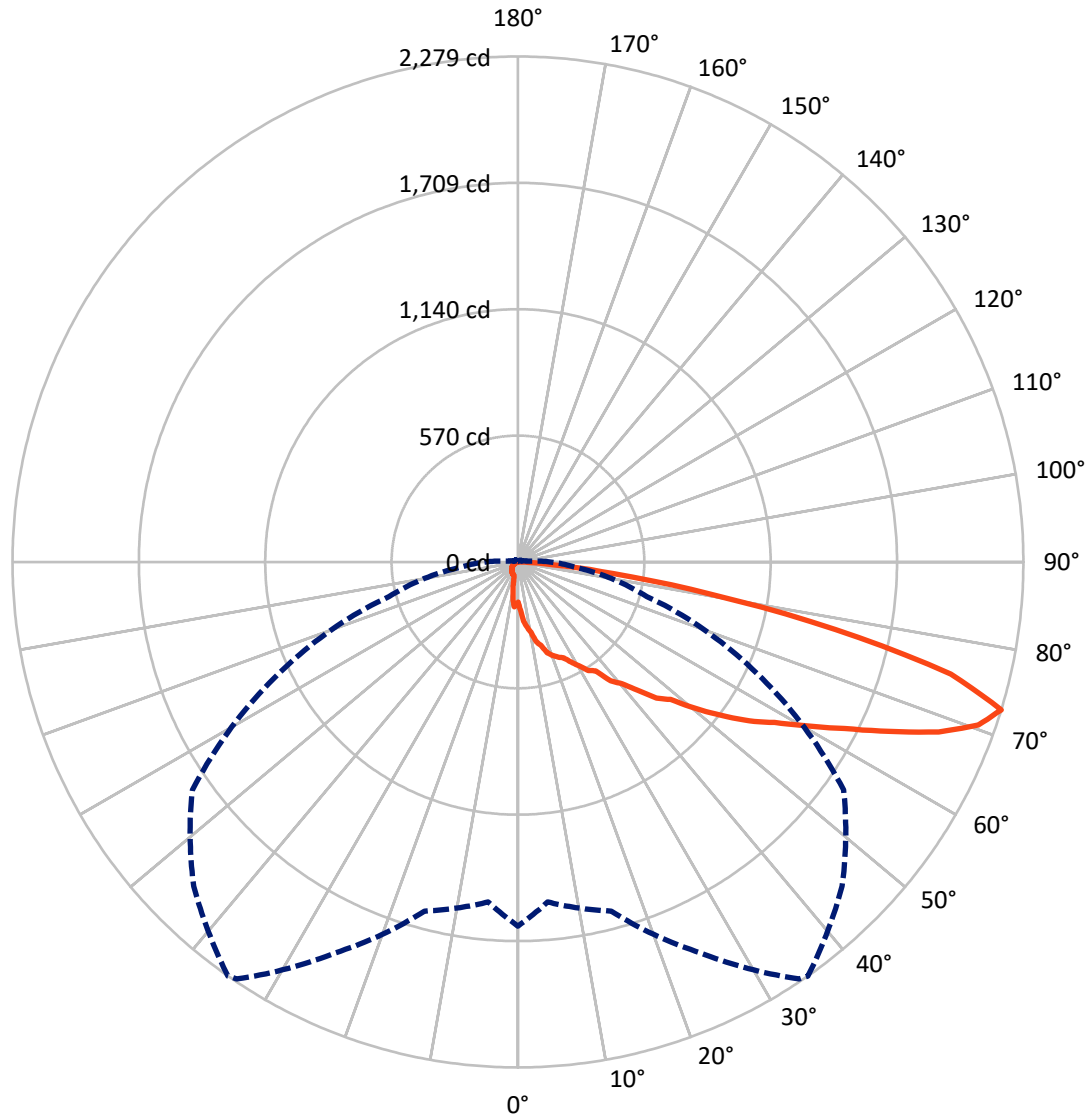
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	237.4	0.0	237.4
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	2806.6	0.0	2806.6
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	3044.0	0.0	3044.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.1	0.8
10°-20°	77.9	2.6
20°-30°	141.9	4.7
30°-40°	244.7	8.0
40°-50°	435.0	14.3
50°-60°	649.1	21.3
60°-70°	829.3	27.2
70°-80°	577.0	19.0
80°-90°	66.0	2.2
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°	3044.0	100.0
0°-180°	3044.0	100.0

**Coefficient of Utilization**



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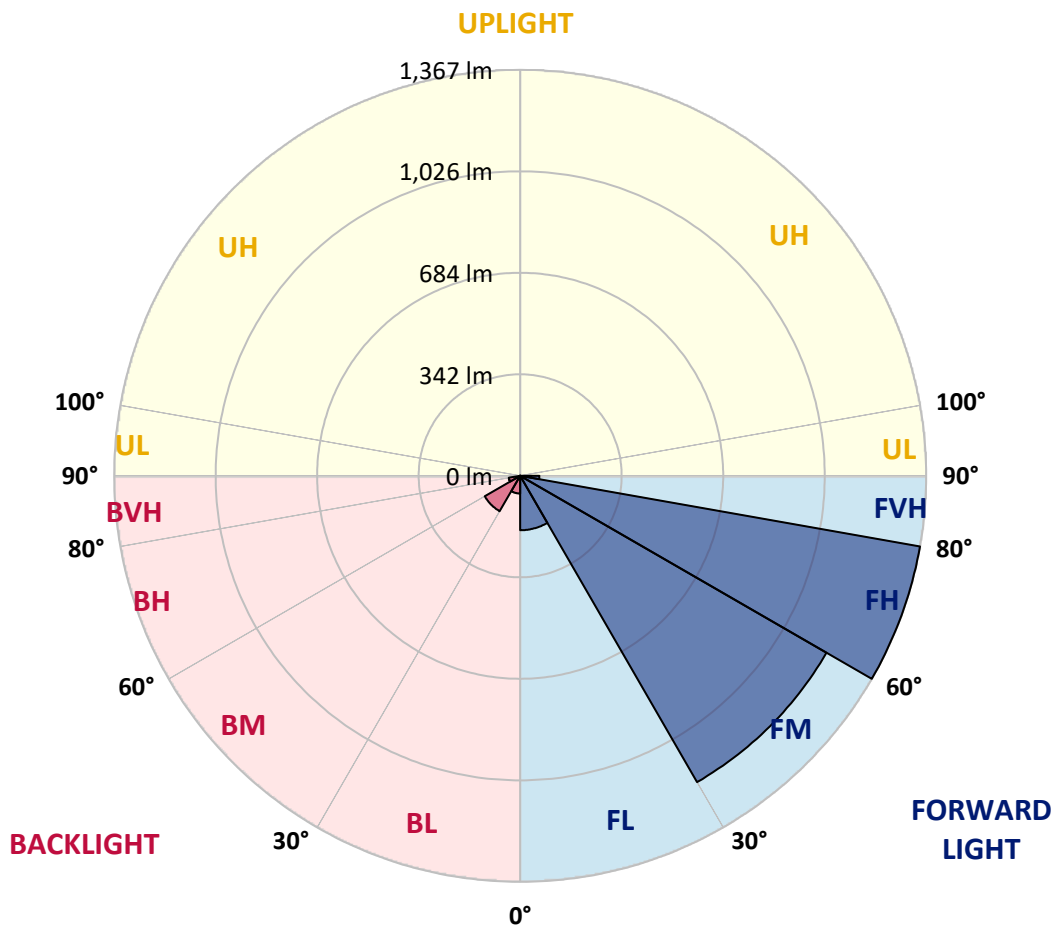
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	183.2	6.0			
FM (30°-60°)	1191.1	39.1			
FH (60°-80°)	1367.4	44.9			G1/1800
FVH (80°-90°)	64.9	2.1			G1/100
BL (0°-30°)	59.7	2.0	B0/110		
BM (30°-60°)	137.7	4.5	B0/220		
BH (60°-80°)	38.9	1.3	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3
2.5°	230.8	221.7	207.0	208.1	214.7	216.1	218.1	212.9	208.3	200.2	215.9
5°	295.6	282.6	274.4	271.8	267.9	268.2	258.9	262.3	261.4	267.3	274.5
7.5°	332.2	325.0	314.6	311.7	297.6	296.1	284.6	300.1	301.6	299.5	311.2
10°	346.7	337.3	338.5	327.6	320.6	322.4	324.3	325.5	327.5	329.5	315.1
12.5°	355.3	357.0	373.7	362.4	369.4	369.4	381.8	368.6	369.1	354.7	357.2
15°	393.9	403.2	395.7	395.6	387.9	389.9	404.3	393.9	399.2	394.9	378.4
17.5°	442.2	444.1	429.8	423.6	430.4	430.6	424.5	424.0	405.4	436.9	416.8
20°	457.7	468.1	447.9	423.4	452.0	450.6	450.2	443.0	411.9	455.7	439.2
22.5°	499.8	484.9	471.2	455.1	466.3	466.3	464.6	448.8	436.7	454.0	461.1
25°	512.9	514.8	496.9	491.7	492.0	478.2	477.0	470.2	458.6	488.1	474.1
27.5°	558.2	557.5	514.5	529.0	510.5	510.6	476.8	492.0	494.0	489.8	505.6
30°	602.8	615.1	550.3	568.6	549.2	543.4	510.3	523.8	527.3	522.6	542.5
32.5°	659.5	677.7	614.7	596.6	566.9	583.5	560.7	528.8	546.3	588.7	599.8
35°	719.7	728.5	661.4	636.1	602.6	602.4	601.7	604.3	623.6	671.3	680.8
37.5°	827.7	806.7	746.0	688.1	695.6	679.0	667.3	679.6	699.6	778.3	818.8
40°	888.0	872.8	787.3	753.0	715.8	722.0	753.5	752.1	805.5	887.8	948.6
42.5°	946.6	932.2	848.0	820.3	772.6	789.3	803.1	820.5	929.9	1062.7	1096.1
45°	998.8	956.5	897.2	898.2	873.4	875.4	899.8	915.8	1074.1	1210.2	1233.7
47.5°	1030.3	995.6	938.6	937.6	936.0	926.7	1041.3	1056.0	1189.0	1350.7	1352.9
50°	1074.7	1031.2	981.3	982.2	1017.6	1037.3	1174.1	1172.6	1299.9	1467.9	1418.5
52.5°	1129.9	1076.8	1021.9	1062.7	1117.4	1149.5	1260.6	1305.9	1419.1	1541.5	1444.2
55°	1200.6	1134.2	1081.3	1133.6	1252.8	1265.2	1345.2	1440.9	1549.0	1616.7	1452.5
57.5°	1283.5	1204.3	1161.4	1245.7	1364.6	1365.0	1468.4	1584.7	1628.8	1647.3	1443.1
60°	1372.9	1280.5	1237.3	1313.2	1488.0	1500.5	1605.4	1664.1	1709.7	1662.7	1426.5
62.5°	1451.6	1349.5	1316.0	1405.2	1623.3	1652.9	1724.7	1716.3	1768.2	1682.2	1384.1
65°	1545.2	1438.9	1416.8	1548.6	1799.8	1840.7	1858.8	1808.9	1787.8	1667.2	1273.8
67.5°	1637.9	1538.5	1537.9	1707.6	2031.4	2045.4	2026.5	1939.4	1765.0	1535.0	1071.6
70°	1703.3	1596.5	1636.7	1881.7	2241.8	2202.3	2122.4	2001.1	1600.3	1176.4	700.1
72.5°	1641.9	1538.9	1629.7	1943.7	2267.8	2279.1	2066.9	1792.5	1189.0	601.7	253.4
75°	1247.7	1184.7	1415.0	1724.4	2013.5	2016.1	1725.2	1264.3	585.5	163.4	70.1
77.5°	628.5	608.4	895.6	1224.2	1469.0	1464.7	1185.3	677.3	188.4	54.3	35.3
80°	318.1	302.1	381.2	660.4	872.4	878.8	676.8	303.3	95.0	29.5	24.5
82.5°	195.4	185.5	208.6	298.9	423.4	433.7	256.8	192.0	58.9	17.4	22.3
85°	37.8	39.8	119.8	149.7	169.1	165.1	76.1	158.1	17.8	10.4	16.2
87.5°	0.0	0.6	27.7	48.8	49.0	43.5	17.3	35.0	2.4	2.9	2.0
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°	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3	181.3
2.5°	218.5	216.2	197.1	194.9	195.4	192.2	191.1	184.4	182.7	193.1	194.9
5°	271.5	256.2	238.4	232.0	222.0	205.2	202.8	198.5	193.7	195.6	194.2
7.5°	303.9	283.5	264.6	230.8	202.8	178.3	174.3	166.9	159.6	159.8	164.5
10°	309.1	292.0	265.8	224.6	192.7	162.0	135.4	116.1	107.4	99.6	101.9
12.5°	339.2	323.3	275.1	222.8	178.0	130.2	95.3	76.5	68.2	65.5	65.2
15°	363.4	350.9	291.0	217.1	145.4	91.7	68.2	62.7	61.2	63.8	63.0
17.5°	399.4	376.7	289.4	193.7	110.8	69.6	62.9	62.1	64.0	65.5	66.0
20°	415.1	382.6	277.9	157.0	82.9	63.8	61.4	59.8	63.2	67.8	66.9
22.5°	431.1	392.5	264.4	128.5	66.7	61.1	59.7	58.5	61.1	65.5	66.6
25°	438.3	408.4	249.4	100.4	62.0	57.8	56.9	57.4	59.5	63.5	63.0
27.5°	474.5	410.3	220.8	79.3	60.0	55.5	55.5	56.6	56.6	62.0	61.5
30°	497.2	441.3	197.6	66.7	57.7	52.3	54.2	54.6	53.9	59.7	60.1
32.5°	537.0	449.9	174.9	61.2	54.0	51.9	51.6	51.9	52.5	58.1	58.3
35°	598.2	492.1	144.0	59.1	52.2	49.6	47.4	49.1	50.7	54.8	55.5
37.5°	717.8	535.4	117.4	57.4	51.3	47.4	46.7	46.4	49.1	53.9	55.4
40°	814.7	612.1	95.5	56.0	49.4	46.2	44.2	44.4	46.8	50.3	52.6
42.5°	951.8	667.5	80.9	53.9	46.8	43.6	41.3	42.7	43.8	47.4	49.0
45°	1066.3	710.5	71.3	52.5	44.2	41.2	39.3	40.9	39.8	41.6	43.8
47.5°	1157.3	748.0	64.1	49.1	42.5	39.8	37.5	37.0	35.2	35.7	37.6
50°	1207.3	741.7	58.1	45.8	40.4	38.4	35.2	32.0	29.5	29.4	30.6
52.5°	1225.1	708.2	53.3	42.8	37.8	35.3	31.7	27.2	24.8	24.0	25.1
55°	1230.0	660.0	48.8	39.6	35.3	31.5	27.7	23.0	20.4	19.1	20.2
57.5°	1214.1	585.8	44.5	36.6	32.4	27.8	23.7	18.8	16.4	14.8	15.8
60°	1174.7	491.5	40.7	32.7	29.4	24.6	20.0	15.1	12.5	11.2	11.6
62.5°	1087.7	385.3	36.6	29.2	26.2	21.6	16.8	11.9	9.5	8.3	8.4
65°	955.2	287.2	31.8	25.9	23.3	18.7	13.5	9.2	7.2	6.1	6.0
67.5°	761.0	194.6	27.1	22.3	20.7	15.8	10.7	7.2	5.7	4.9	4.6
70°	447.3	98.1	22.5	19.3	17.8	13.2	8.4	5.8	5.2	4.6	4.3
72.5°	147.5	42.4	17.6	15.9	14.7	10.6	6.6	5.4	5.0	4.4	4.1
75°	51.4	24.5	13.0	12.2	11.6	8.0	5.5	4.9	4.9	4.3	3.8
77.5°	33.7	19.0	9.6	8.9	8.7	5.8	4.7	4.6	4.3	3.5	2.9
80°	28.0	10.7	6.7	6.3	6.1	3.7	3.8	3.4	2.6	1.5	0.6
82.5°	25.9	6.4	3.5	3.8	3.5	1.4	2.1	1.8	1.4	0.6	0.0
85°	15.1	2.9	2.0	2.0	1.5	0.3	1.1	1.1	0.6	0.2	0.0
87.5°	1.7	1.4	1.1	1.1	0.8	0.0	0.5	0.3	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)