

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: P366751

Luminaire Tested: **MSA-SA1B-727-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366751
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-727-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3193 lumens
Efficiency: N/A
Efficacy: 72.6 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

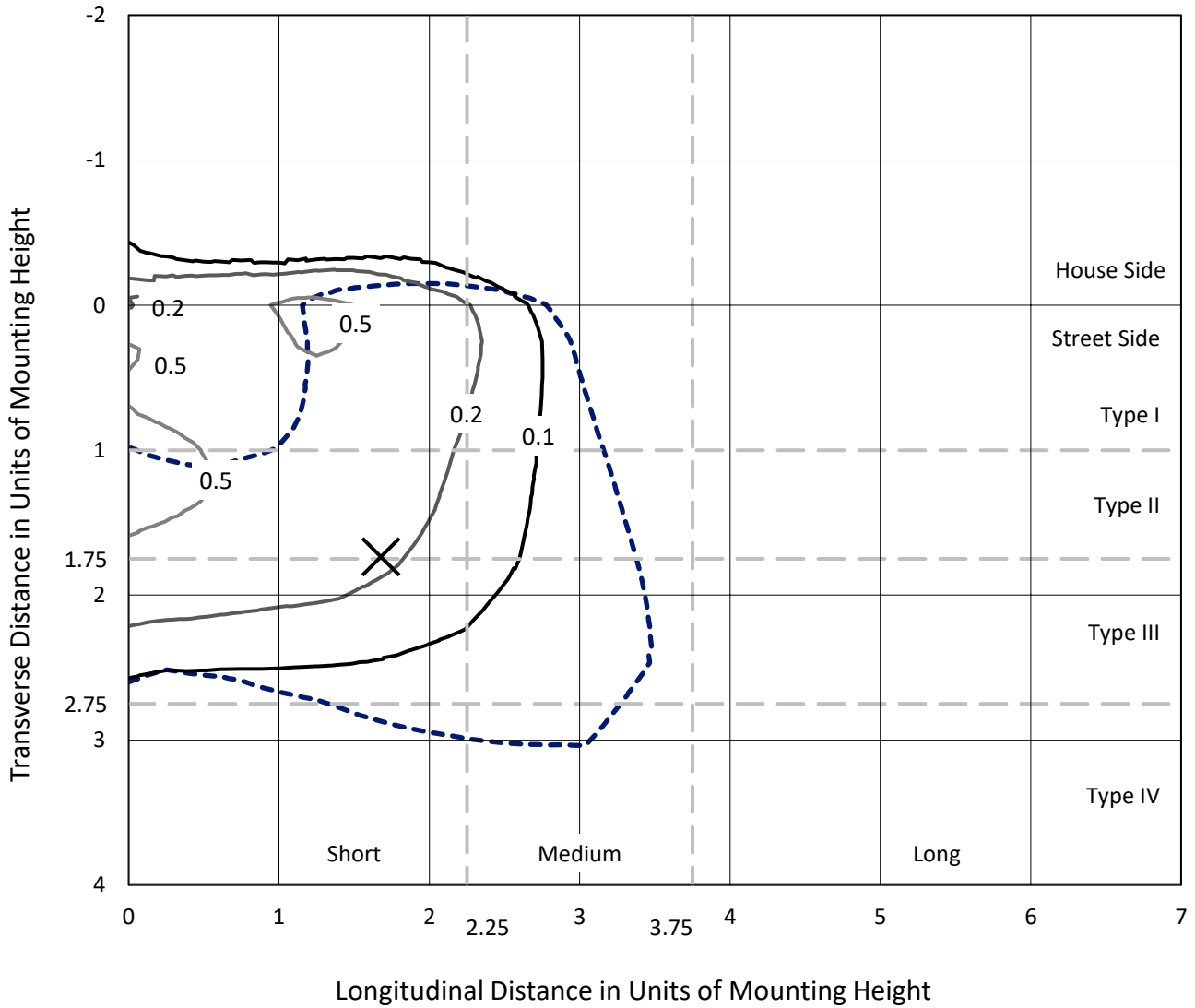
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

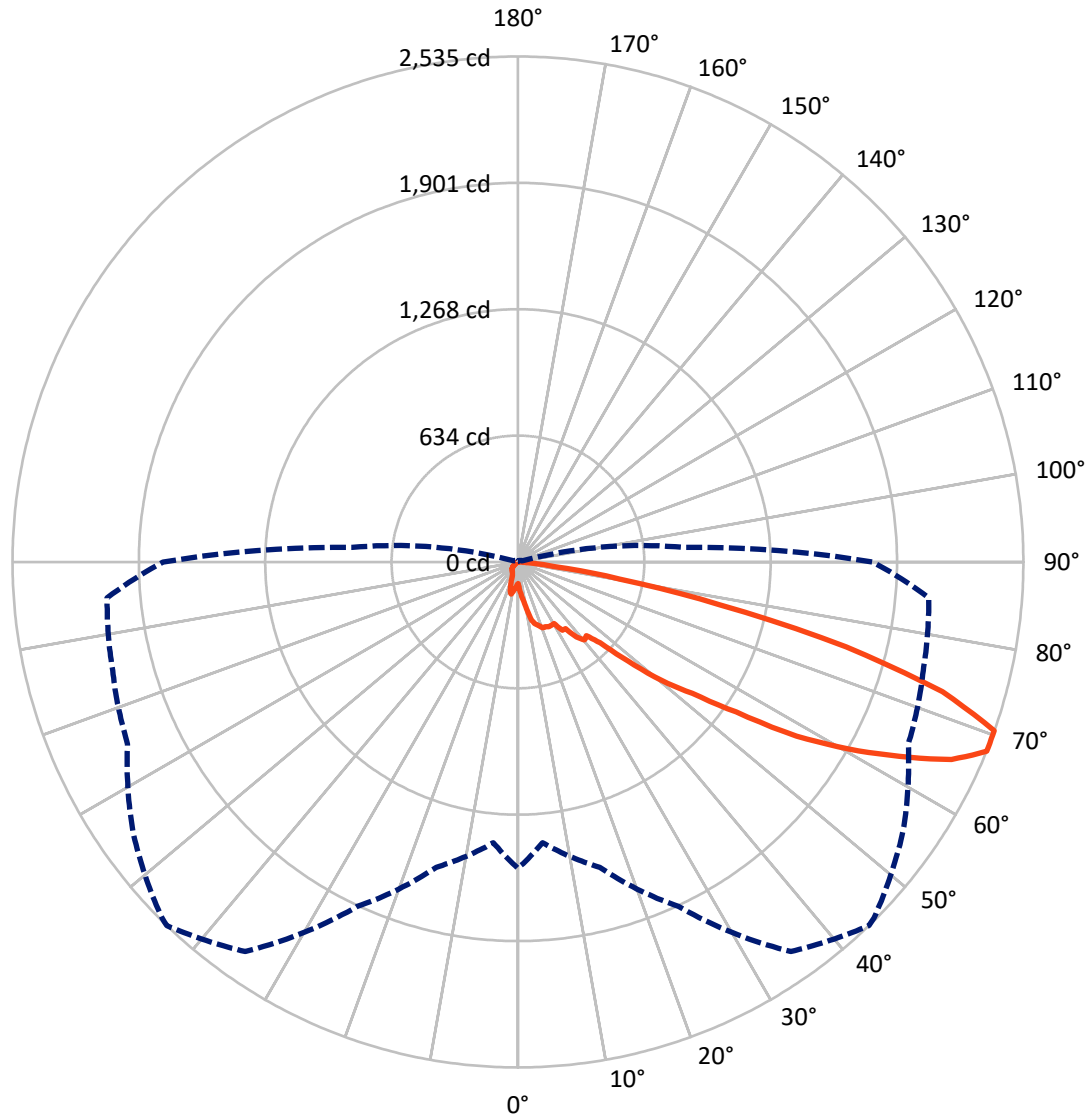
✕ Max cd
 - - - 1/2 Max cd



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 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	324.3	0.0	324.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	2868.7	0.0	2868.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	3193.0	0.0	3193.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.9	0.5
10°-20°	66.8	2.1
20°-30°	118.3	3.7
30°-40°	192.2	6.0
40°-50°	384.6	12.0
50°-60°	789.1	24.7
60°-70°	1084.0	33.9
70°-80°	509.5	16.0
80°-90°	32.6	1.0
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°	3193.0	100.0
0°-180°	3193.0	100.0

Coefficient of Utilization



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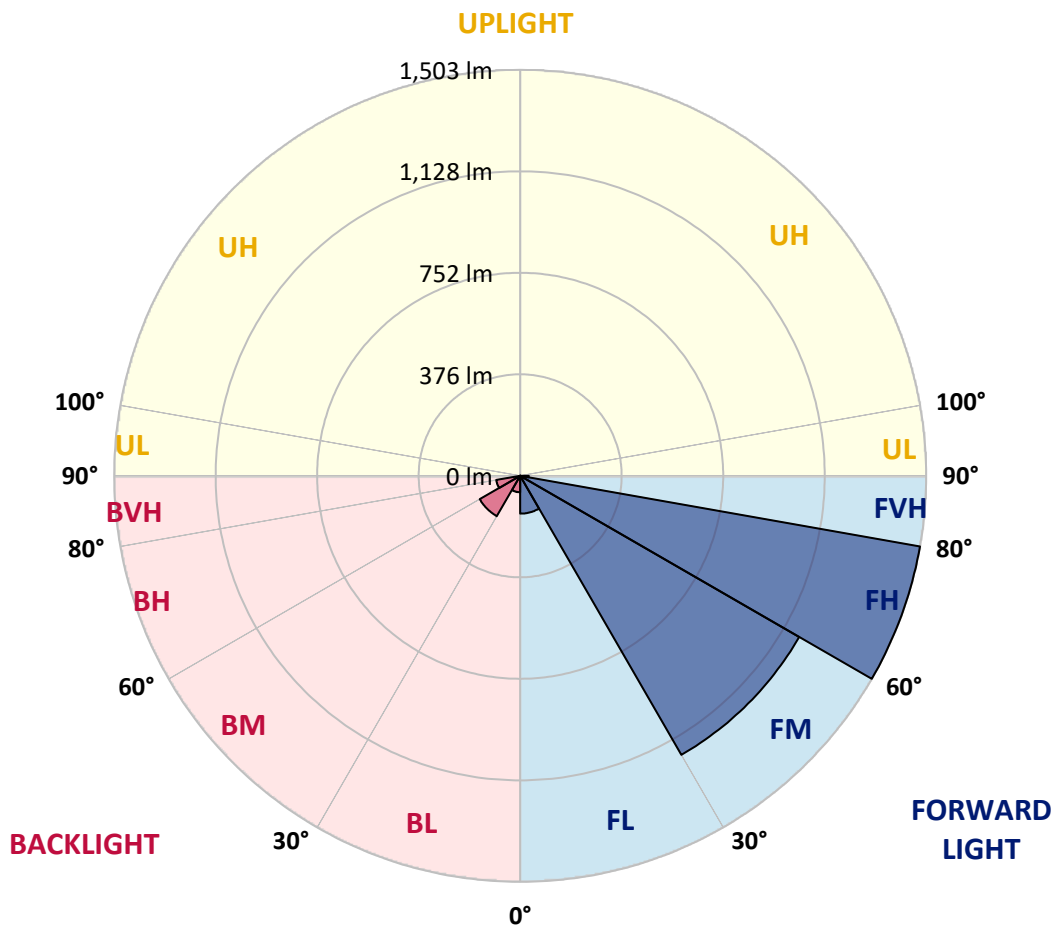
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	140.1	4.4			
FM (30°-60°)	1193.2	37.4			
FH (60°-80°)	1503.5	47.1			G1/1800
FVH (80°-90°)	32.0	1.0			G1/100
BL (0°-30°)	60.9	1.9	B0/110		
BM (30°-60°)	172.8	5.4	B0/220		
BH (60°-80°)	90.0	2.8	B0/110		G0/110
BVH (80°-90°)	0.7	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°	35°	44°	45°	55°	65°	75°	85°
0°	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6
2.5°	136.8	132.4	126.1	127.5	128.2	130.1	130.3	127.8	120.8	118.8	127.5
5°	191.7	181.0	179.1	175.0	166.9	162.5	161.5	165.9	160.2	158.5	160.8
7.5°	244.9	235.8	225.7	220.3	203.4	193.0	192.4	194.2	195.3	189.1	192.3
10°	280.3	270.3	268.2	255.3	240.7	238.2	237.2	230.5	225.0	220.4	205.1
12.5°	312.3	312.2	316.0	297.6	295.3	297.7	296.9	272.9	267.4	248.3	243.9
15°	355.0	365.5	348.8	333.3	313.6	322.0	319.7	304.4	300.7	287.7	268.9
17.5°	399.1	402.0	374.0	350.2	345.1	334.0	336.3	330.8	312.2	322.6	303.9
20°	400.2	406.4	376.4	337.2	352.8	352.3	352.5	347.2	322.6	346.9	329.8
22.5°	415.0	399.9	372.0	347.0	349.9	352.5	355.3	348.8	343.5	349.5	352.7
25°	409.0	403.0	376.3	359.7	357.1	359.2	359.9	368.2	364.8	379.3	371.3
27.5°	424.5	415.9	368.0	371.0	361.6	359.2	355.0	382.6	392.5	381.0	402.1
30°	451.1	449.9	382.2	386.6	379.4	357.8	369.0	405.1	417.5	410.4	436.1
32.5°	492.6	496.9	424.0	395.5	399.1	408.8	404.6	405.1	436.3	452.0	472.4
35°	551.6	549.3	464.6	428.9	409.5	411.1	417.1	445.8	486.1	485.1	506.7
37.5°	667.5	642.5	536.7	463.1	468.9	476.8	472.4	511.0	514.8	516.2	568.0
40°	838.3	805.0	650.2	535.1	479.1	514.1	512.0	521.5	547.4	557.1	632.6
42.5°	1063.3	1018.6	850.1	667.5	528.4	504.3	517.3	535.3	622.2	649.9	732.6
45°	1311.9	1221.4	1049.4	856.2	652.0	577.2	587.0	620.5	741.1	786.9	878.2
47.5°	1473.0	1393.4	1246.7	1023.5	780.9	741.6	742.5	749.7	880.7	965.6	1088.1
50°	1613.0	1528.3	1392.2	1198.3	1008.9	934.6	917.7	884.4	1058.5	1174.6	1310.5
52.5°	1810.5	1711.6	1537.6	1403.4	1268.9	1093.9	1087.9	1099.2	1268.2	1390.2	1538.5
55°	1988.7	1868.4	1702.4	1617.9	1565.4	1328.1	1333.2	1352.0	1537.4	1602.1	1741.3
57.5°	2067.4	1937.1	1851.7	1813.7	1785.7	1648.0	1630.8	1619.5	1749.8	1774.4	1953.8
60°	2119.0	1995.0	1956.3	1965.1	2050.0	1903.8	1888.2	1822.7	1925.5	1945.7	2144.4
62.5°	2086.4	1973.4	1981.7	2055.1	2243.5	2147.3	2102.1	1992.6	2069.2	2085.5	2281.2
65°	1881.3	1763.5	1869.9	2047.5	2391.0	2388.7	2367.8	2149.5	2148.8	2169.7	2291.7
67.5°	1536.7	1413.1	1585.2	1905.6	2384.9	2535.0	2525.2	2357.6	2160.2	2104.2	2068.1
70°	1068.4	961.2	1156.2	1573.7	2172.3	2534.0	2518.1	2497.4	2069.7	1811.2	1603.5
72.5°	555.1	496.2	677.9	1084.4	1731.6	2226.4	2278.7	2244.5	1767.2	1315.9	944.3
75°	188.6	169.2	279.6	575.6	1151.1	1700.1	1761.4	1726.7	1200.3	706.0	373.4
77.5°	73.1	68.0	100.2	233.6	577.5	1036.0	1102.5	1067.2	643.7	258.6	87.9
80°	41.6	40.1	55.3	105.3	254.6	515.4	562.2	509.9	232.1	87.2	22.9
82.5°	17.6	18.1	30.8	56.9	128.0	181.9	202.8	185.0	97.2	59.7	8.5
85°	3.9	4.8	14.6	31.7	53.7	51.9	54.4	60.4	59.7	43.8	3.7
87.5°	0.0	0.0	4.6	8.6	12.9	8.5	6.7	11.8	18.3	17.6	1.6
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°	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6
2.5°	129.1	127.3	116.2	115.5	116.2	114.3	114.1	110.0	110.4	119.6	120.3
5°	160.8	151.9	142.4	139.4	136.6	130.3	133.8	133.8	133.8	139.6	141.4
7.5°	189.5	177.7	164.3	153.0	142.1	134.2	139.6	143.5	145.8	153.4	156.9
10°	202.5	190.9	178.9	162.9	154.4	151.4	145.1	141.7	145.8	144.2	146.1
12.5°	230.3	219.7	199.1	182.6	176.2	166.0	147.4	134.3	125.7	124.3	124.0
15°	257.4	250.9	223.3	201.1	179.1	155.5	123.6	106.3	97.2	95.6	95.8
17.5°	291.7	282.4	241.7	209.9	172.5	130.1	95.4	80.6	79.9	83.8	84.2
20°	314.6	299.3	251.1	202.7	151.1	98.4	74.7	71.1	76.8	83.8	83.1
22.5°	336.5	319.9	263.4	196.3	117.1	74.7	68.7	69.0	73.8	81.3	83.3
25°	350.9	344.9	278.5	181.5	89.3	64.6	65.7	68.3	72.4	79.6	79.6
27.5°	394.4	366.4	276.8	152.8	68.7	60.2	62.7	66.0	68.1	76.8	77.6
30°	420.8	411.7	285.9	123.6	60.2	54.6	59.3	62.3	63.7	73.6	73.9
32.5°	453.2	433.0	297.0	91.2	56.0	54.2	53.2	55.5	59.5	68.1	68.7
35°	492.6	486.7	281.2	71.7	54.6	50.7	48.6	49.8	52.5	58.3	59.5
37.5°	573.1	537.5	271.7	61.4	54.6	49.5	47.2	44.0	44.4	48.4	50.7
40°	640.9	630.0	245.1	59.7	52.1	47.7	42.1	38.2	35.6	36.8	37.7
42.5°	765.4	714.8	210.8	58.8	49.8	43.1	35.7	31.7	27.6	28.0	29.4
45°	916.4	807.5	180.1	57.9	48.2	38.6	30.1	25.4	21.1	21.3	22.7
47.5°	1118.2	942.5	143.0	55.3	45.4	34.3	24.3	19.4	16.9	17.4	18.7
50°	1347.5	1061.0	113.0	51.2	42.1	30.3	19.7	15.7	14.8	15.3	16.7
52.5°	1552.2	1148.3	93.3	47.5	37.3	24.6	16.6	13.9	13.6	13.9	15.0
55°	1734.3	1199.0	78.0	43.3	32.0	19.9	15.0	12.9	12.7	12.5	13.2
57.5°	1905.1	1213.6	60.9	36.6	26.1	17.3	13.9	12.0	11.6	11.1	11.6
60°	2029.6	1188.6	44.7	29.4	21.3	15.7	13.0	10.7	10.2	9.3	9.7
62.5°	2089.6	1120.2	33.8	23.6	18.1	14.3	11.6	9.3	8.6	7.6	7.7
65°	2032.5	1007.3	26.6	19.9	15.5	12.0	9.9	7.9	7.0	6.0	6.0
67.5°	1779.9	835.6	22.5	17.3	13.0	10.2	8.1	7.2	5.8	4.9	4.8
70°	1306.4	601.1	19.4	15.1	11.3	8.8	6.9	6.5	5.6	4.8	4.4
72.5°	737.4	340.2	16.6	13.4	9.5	7.4	5.8	6.0	5.5	4.4	4.0
75°	281.4	114.6	13.7	11.1	7.7	5.6	4.9	4.9	4.9	3.7	3.2
77.5°	69.7	29.2	10.9	9.0	6.2	3.7	4.0	4.2	4.2	3.2	2.3
80°	19.2	9.9	6.5	6.5	4.4	2.1	2.8	2.8	2.3	1.1	0.0
82.5°	7.0	3.7	2.3	2.8	1.9	0.7	1.1	0.7	0.5	0.0	0.0
85°	3.0	1.9	1.4	1.6	0.9	0.0	0.2	0.4	0.0	0.0	0.0
87.5°	1.2	0.9	0.7	0.7	0.4	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)