

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: P367781

Luminaire Tested: **MSA-SA3A-830-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-830-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6884 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

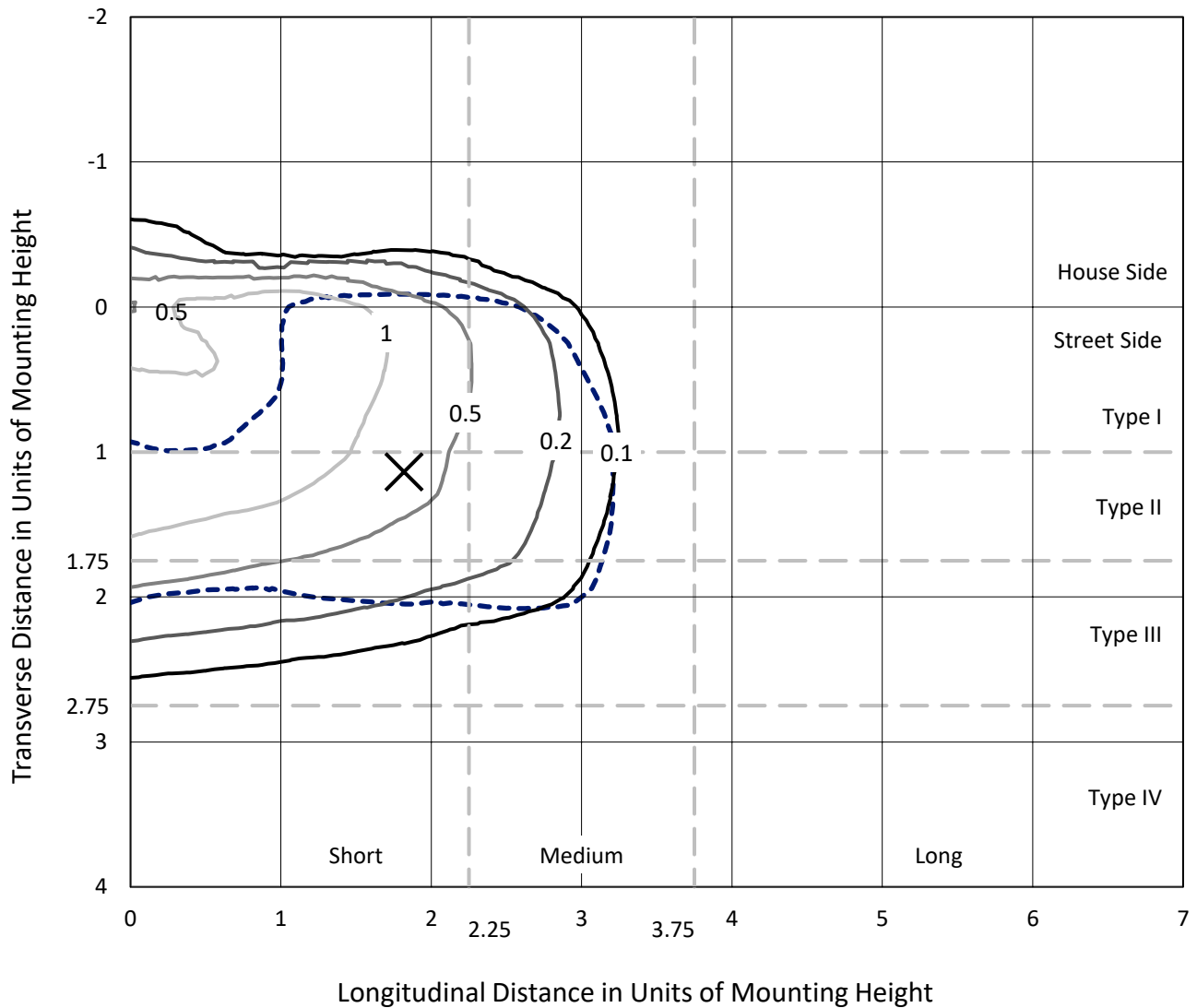
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

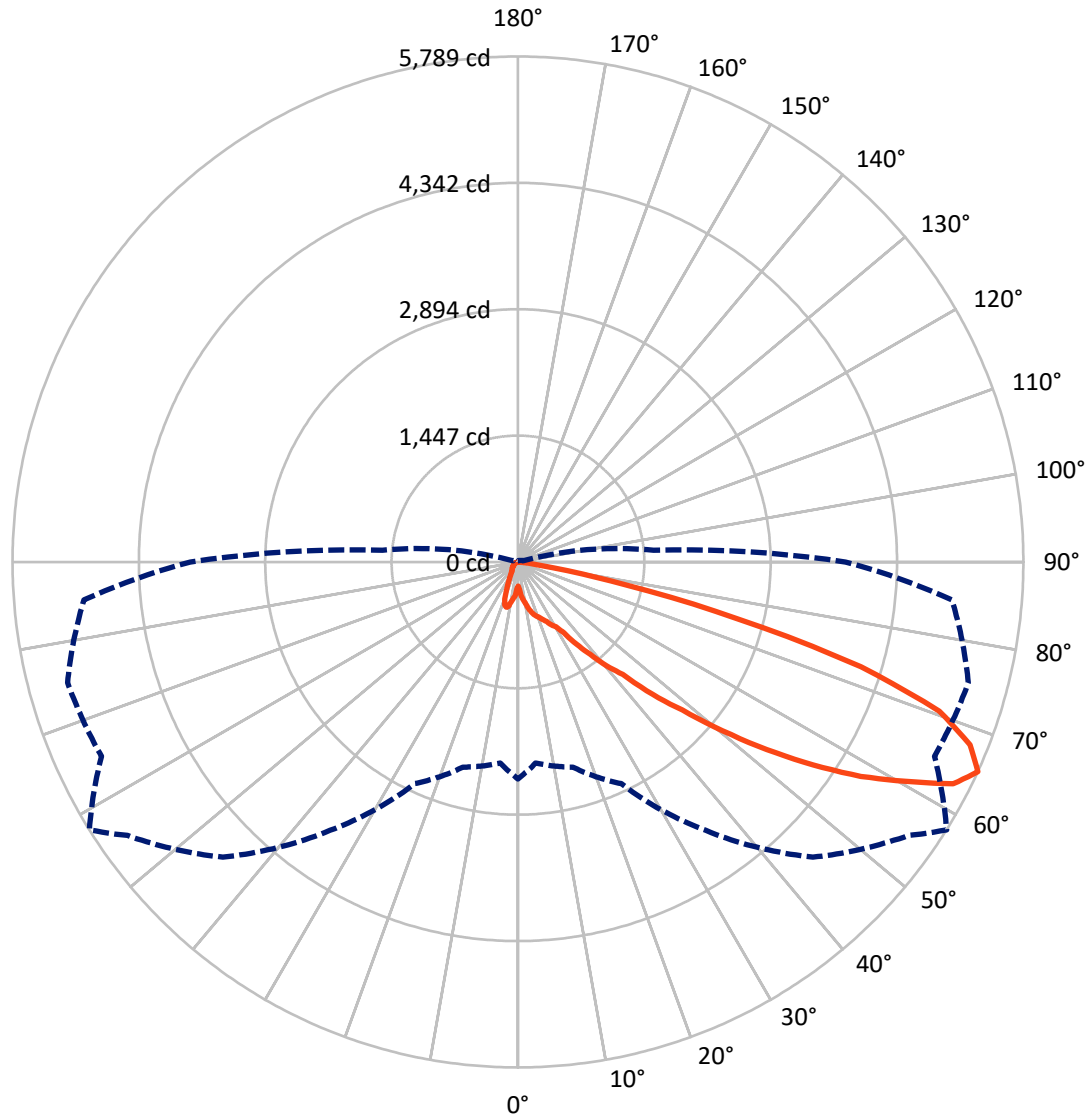
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	679.3	0.0	679.3
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	6204.7	0.0	6204.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	6884.0	0.0	6884.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.6
10°-20°	141.3	2.1
20°-30°	273.5	4.0
30°-40°	545.7	7.9
40°-50°	1115.6	16.2
50°-60°	1978.8	28.7
60°-70°	2086.2	30.3
70°-80°	676.4	9.8
80°-90°	27.7	0.4
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°	6884.0	100.0
0°-180°	6884.0	100.0

Coefficient of Utilization



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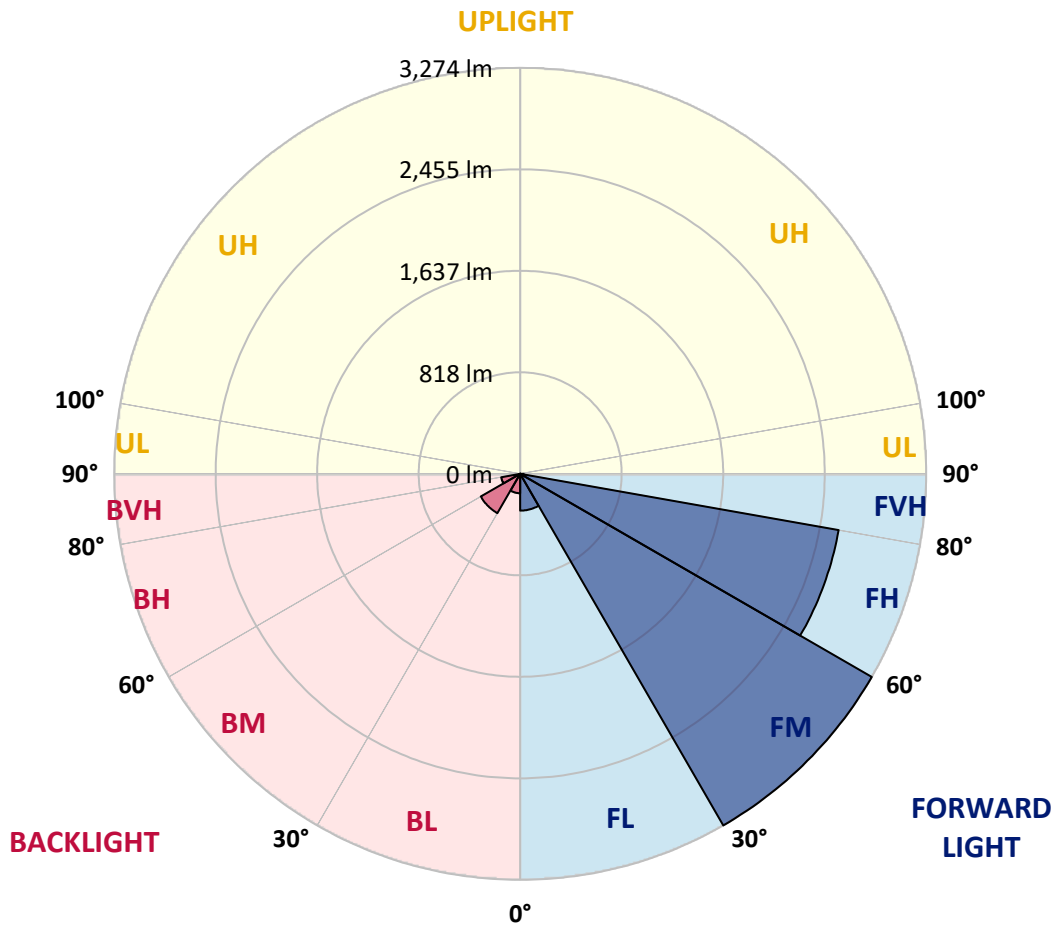
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	297.0	4.3			
FM (30°-60°)	3273.7	47.6			
FH (60°-80°)	2607.6	37.9			G2/5000
FVH (80°-90°)	26.5	0.4			G1/100
BL (0°-30°)	156.6	2.3	B1/500		
BM (30°-60°)	366.5	5.3	B1/1000		
BH (60°-80°)	155.0	2.3	B1/500		G1/500
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6
2.5°	336.4	326.4	310.5	313.2	316.3	322.5	317.4	312.8	307.7	301.2	326.4
5°	406.2	389.5	388.0	384.5	381.8	381.4	387.6	385.7	388.4	400.8	413.6
7.5°	431.8	424.8	411.6	417.0	408.5	401.9	429.5	438.4	455.4	461.2	494.6
10°	429.1	419.0	424.4	427.1	432.9	457.0	474.4	484.1	498.8	530.6	524.0
12.5°	441.5	450.4	456.2	456.6	486.4	530.6	543.0	551.2	577.5	589.9	622.5
15°	482.9	497.7	488.4	492.2	501.9	555.8	584.9	602.7	639.9	680.2	688.4
17.5°	542.2	551.5	532.2	518.2	545.0	574.4	627.1	645.7	669.4	763.6	781.0
20°	617.0	632.9	591.1	535.7	570.9	605.8	663.2	672.1	697.3	820.1	847.7
22.5°	791.8	768.2	704.3	617.8	607.4	622.9	677.5	712.4	755.0	851.9	915.9
25°	964.3	956.2	862.0	765.5	695.7	660.8	733.3	752.7	822.5	927.5	962.8
27.5°	1156.2	1172.5	1015.1	956.6	819.8	705.8	768.2	816.7	899.2	955.0	1039.9
30°	1409.3	1383.3	1198.8	1140.3	984.1	829.4	858.5	861.6	982.9	1045.7	1126.3
32.5°	1607.7	1624.4	1392.6	1302.7	1177.9	1019.8	926.3	966.7	1053.5	1193.4	1269.7
35°	1822.5	1820.9	1594.9	1474.0	1310.8	1175.2	1127.5	1157.0	1265.9	1424.4	1444.6
37.5°	2143.4	2115.9	1849.2	1672.1	1533.3	1417.4	1381.0	1341.8	1454.2	1605.4	1681.0
40°	2446.1	2351.1	2104.6	1894.5	1717.0	1669.7	1538.0	1562.0	1595.3	1794.9	2003.8
42.5°	2751.9	2693.0	2363.5	2187.6	1969.3	1856.9	1770.9	1759.7	1918.2	2154.6	2370.5
45°	3155.4	2975.1	2711.6	2556.9	2304.2	2191.4	2122.1	2163.5	2306.2	2651.5	2795.3
47.5°	3494.1	3328.2	3101.9	2867.0	2601.9	2728.6	2598.4	2532.9	2728.6	3085.6	3276.7
50°	3785.2	3600.3	3371.3	3197.2	3154.2	3275.9	3012.4	3036.4	3163.5	3582.9	3690.6
52.5°	3996.8	3802.3	3602.3	3518.2	3694.5	3755.8	3623.6	3570.5	3686.0	4006.9	4059.2
55°	4156.1	3956.9	3800.7	3916.6	4257.7	4237.5	4284.0	4102.7	4213.1	4449.2	4424.4
57.5°	4165.8	3929.8	3838.3	4024.7	4493.0	4805.0	4941.0	4632.5	4695.3	4794.9	4739.1
60°	3861.2	3626.3	3618.9	3883.7	4561.2	4951.9	5249.5	5099.1	5015.0	5089.1	4983.3
62.5°	3254.2	3089.9	3166.6	3459.2	4307.3	4870.9	5413.9	5594.9	5267.4	5284.0	5133.6
65°	2484.8	2312.4	2432.5	2801.1	3752.3	4780.2	5460.4	5788.7	5262.7	5339.5	4989.5
67.5°	1645.7	1545.7	1681.8	2088.0	2983.3	4219.7	5436.4	5585.2	5095.7	5122.8	4454.2
70°	849.6	825.2	935.3	1255.8	2005.8	3241.8	5200.3	5118.9	4756.5	4413.1	3435.6
72.5°	272.1	273.3	379.1	573.6	1081.4	1973.6	3997.2	4108.9	3806.1	3228.2	2097.6
75°	120.5	118.6	158.5	240.7	450.8	884.9	2483.3	2603.8	2369.7	1775.9	881.8
77.5°	86.8	84.1	101.5	140.7	223.3	300.0	1164.3	1256.6	1074.4	615.5	201.9
80°	61.2	60.9	73.6	98.8	139.5	133.3	367.8	412.4	330.2	149.2	59.3
82.5°	34.5	35.7	51.2	69.8	84.9	66.7	103.5	114.0	111.2	79.5	26.0
85°	16.7	18.6	33.3	50.4	44.6	26.0	36.8	39.9	46.5	46.1	13.2
87.5°	0.0	0.0	13.6	22.9	12.0	3.9	11.2	12.8	12.4	14.7	3.1
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°	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6
2.5°	331.4	329.1	299.6	301.9	308.5	305.8	308.1	302.7	296.5	321.7	321.3
5°	419.0	401.5	392.2	383.7	385.3	367.8	377.9	382.6	381.8	396.1	400.0
7.5°	495.7	472.5	453.9	436.0	408.9	384.5	399.6	409.3	415.9	440.7	450.4
10°	531.8	512.8	505.4	470.5	451.2	436.0	417.8	404.6	410.1	403.5	410.1
12.5°	610.8	598.1	569.8	534.5	511.2	480.2	412.4	355.8	320.9	321.3	319.0
15°	682.9	682.2	639.9	581.4	513.9	425.6	319.8	248.4	215.5	206.2	203.1
17.5°	777.1	765.5	688.4	601.9	480.6	329.5	217.8	170.2	167.1	172.5	170.2
20°	837.2	820.1	712.4	572.1	396.1	222.9	164.3	150.8	160.1	167.8	165.9
22.5°	897.3	871.7	730.6	535.7	281.8	163.2	148.4	146.1	151.9	161.6	163.2
25°	930.2	925.2	766.3	467.4	193.0	143.0	143.0	142.2	144.2	151.2	150.0
27.5°	1026.0	957.7	739.5	364.7	149.2	131.4	133.3	132.6	125.6	132.6	132.9
30°	1085.6	1054.2	741.5	259.7	131.4	116.3	121.3	115.1	104.6	110.5	109.3
32.5°	1205.8	1127.5	735.6	175.2	119.8	110.9	103.1	94.2	86.4	88.8	86.8
35°	1345.7	1286.0	657.0	140.7	111.6	98.1	85.7	76.7	68.6	70.5	70.2
37.5°	1624.0	1434.5	591.9	126.7	106.2	89.9	75.6	63.2	58.9	60.1	61.2
40°	1881.8	1682.1	470.5	120.5	96.9	80.2	62.4	53.5	50.8	51.5	52.7
42.5°	2267.0	1879.0	355.4	114.3	87.6	67.8	51.9	46.1	43.4	45.0	45.7
45°	2639.9	2046.5	265.5	108.9	79.8	58.5	43.8	39.9	36.8	38.0	39.5
47.5°	3012.4	2232.5	198.1	100.4	71.3	50.4	37.6	34.9	32.9	33.3	35.3
50°	3345.7	2319.3	155.8	89.9	64.3	43.8	34.1	31.4	30.6	31.0	32.6
52.5°	3590.6	2320.1	131.4	80.6	57.8	38.8	32.2	29.1	28.7	29.5	31.0
55°	3812.0	2258.1	114.0	72.5	51.9	35.3	30.6	27.9	27.9	28.7	30.2
57.5°	3958.9	2144.2	98.8	64.0	46.9	33.3	29.5	26.7	26.4	26.0	27.1
60°	4030.6	1988.7	83.7	56.2	42.2	32.2	28.7	23.6	23.3	22.5	23.3
62.5°	3985.2	1794.2	70.2	48.4	37.6	30.6	25.2	20.5	19.8	18.2	19.4
65°	3753.4	1557.7	59.3	41.5	32.6	26.0	21.3	17.4	15.5	13.6	13.2
67.5°	3279.4	1265.5	49.6	35.7	27.9	21.3	17.4	15.5	12.0	10.5	10.1
70°	2457.7	863.9	41.1	30.6	23.3	18.2	14.7	14.0	11.2	10.1	9.3
72.5°	1441.8	466.3	34.5	26.7	19.8	15.1	12.0	12.8	11.2	9.3	8.5
75°	576.0	155.0	27.5	21.3	15.9	10.9	10.1	10.5	10.1	8.5	7.0
77.5°	131.4	48.8	21.3	16.7	12.4	7.0	8.1	8.9	8.9	7.0	5.0
80°	41.1	19.4	12.4	10.5	8.9	3.9	5.8	6.2	4.3	1.9	0.0
82.5°	13.2	5.4	4.3	4.3	3.9	0.8	1.2	0.8	0.0	0.0	0.0
85°	5.0	3.5	2.7	2.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.9	1.6	1.2	1.6	0.8	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)