

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: P367785

Luminaire Tested: **MSA-SA3A-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367785
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-SA3A-830-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 7027 lumens
Efficiency: N/A
Efficacy: 73.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

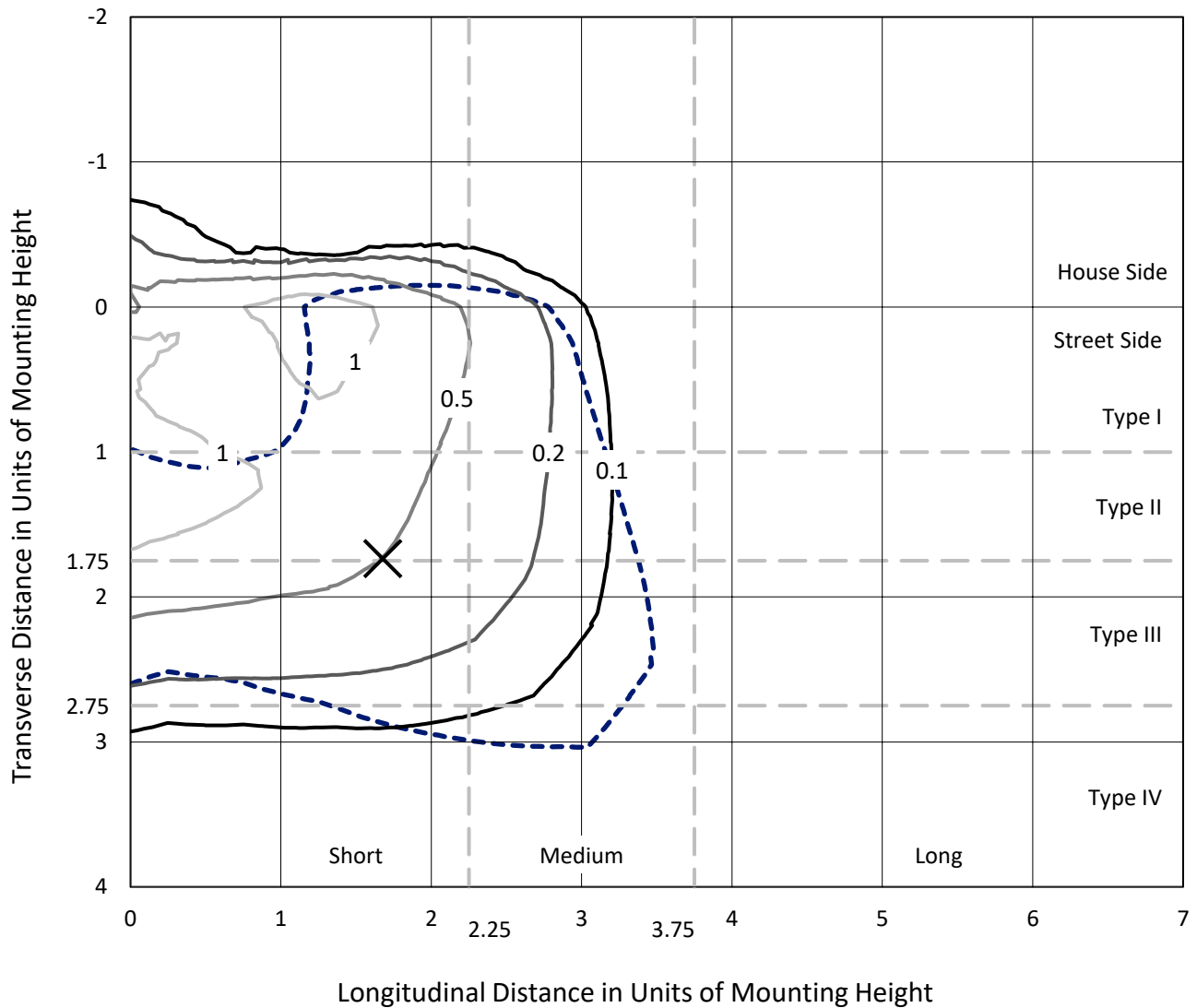
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

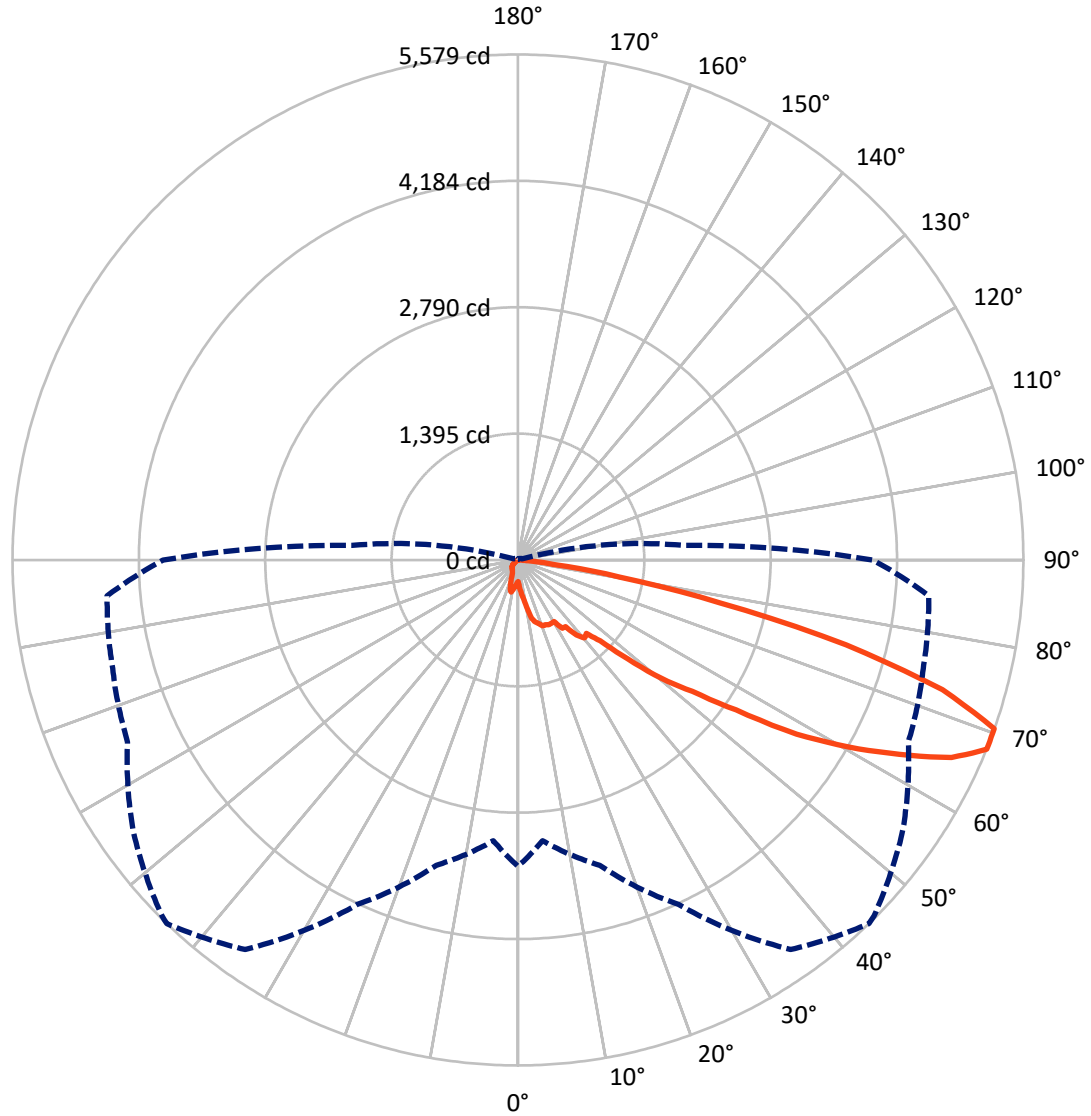
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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	713.8	0.0	713.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	6313.2	0.0	6313.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	7027.0	0.0	7027.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.1	0.5
10°-20°	146.9	2.1
20°-30°	260.3	3.7
30°-40°	423.0	6.0
40°-50°	846.5	12.0
50°-60°	1736.6	24.7
60°-70°	2385.6	33.9
70°-80°	1121.2	16.0
80°-90°	71.8	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°	7027.0	100.0
0°-180°	7027.0	100.0

Coefficient of Utilization



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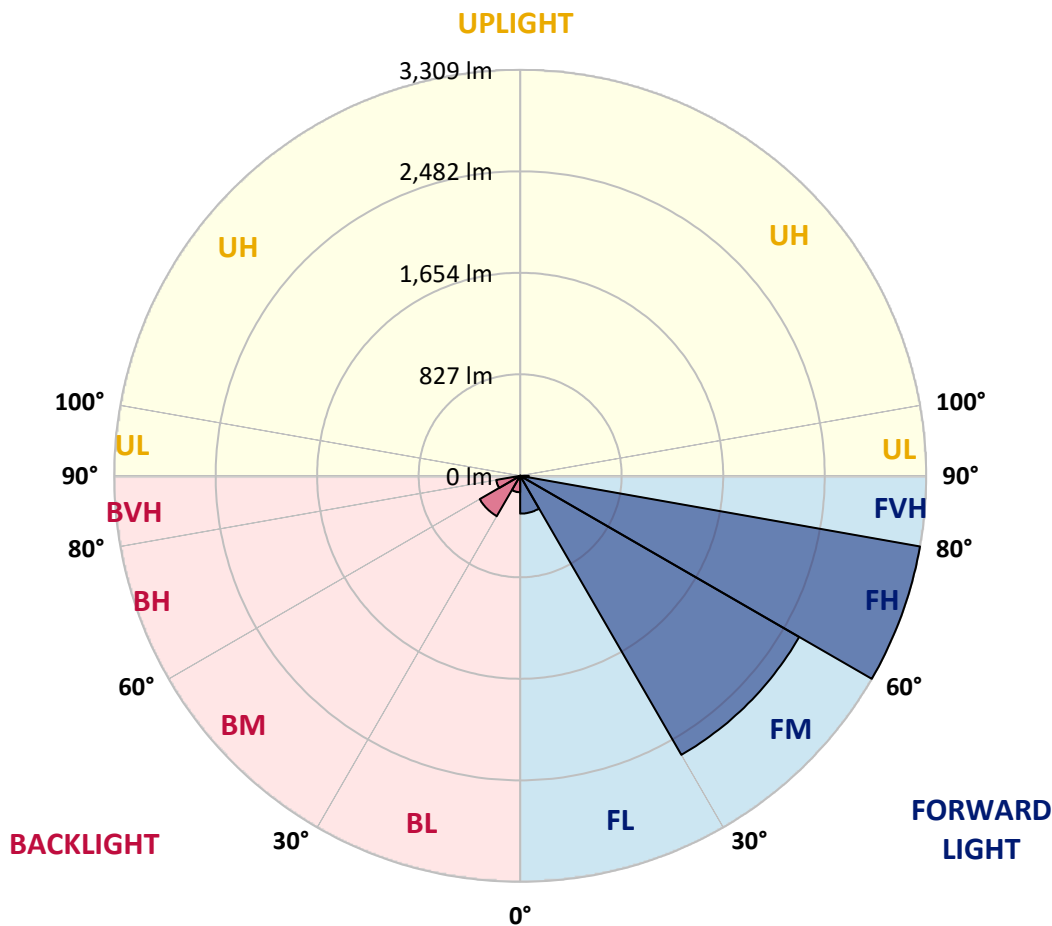
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	308.2	4.4			
FM (30°-60°)	2625.9	37.4			
FH (60°-80°)	3308.8	47.1			G2/5000
FVH (80°-90°)	70.3	1.0			G1/100
BL (0°-30°)	134.0	1.9	B1/500		
BM (30°-60°)	380.2	5.4	B1/1000		
BH (60°-80°)	198.1	2.8	B1/500		G1/500
BVH (80°-90°)	1.5	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8
2.5°	301.1	291.4	277.4	280.5	282.1	286.4	286.7	281.3	265.8	261.6	280.5
5°	422.0	398.3	394.1	385.2	367.3	357.6	355.3	365.0	352.6	348.7	353.8
7.5°	539.0	518.8	496.8	484.7	447.5	424.7	423.5	427.4	429.7	416.2	423.1
10°	616.9	594.8	590.1	561.9	529.7	524.3	521.9	507.2	495.2	485.1	451.4
12.5°	687.4	687.0	695.5	654.9	649.8	655.2	653.3	600.6	588.6	546.4	536.7
15°	781.2	804.4	767.6	733.5	690.1	708.7	703.7	670.0	661.8	633.2	591.7
17.5°	878.4	884.6	823.0	770.7	759.5	735.1	740.1	728.1	687.0	709.9	668.8
20°	880.8	894.3	828.4	742.0	776.5	775.4	775.7	764.1	709.9	763.3	725.8
22.5°	913.3	880.0	818.8	763.7	769.9	775.7	781.9	767.6	756.0	769.2	776.1
25°	900.1	887.0	828.1	791.6	785.8	790.5	792.0	810.2	802.9	834.6	817.2
27.5°	934.2	915.2	809.8	816.4	795.9	790.5	781.2	842.0	863.7	838.5	885.0
30°	992.7	990.0	841.2	850.9	835.0	787.4	812.2	891.6	918.7	903.2	959.8
32.5°	1084.2	1093.5	933.1	870.3	878.4	899.7	890.4	891.6	960.2	994.7	1039.6
35°	1214.0	1209.0	1022.6	943.9	901.3	904.8	918.0	981.1	1069.8	1067.5	1115.2
37.5°	1469.0	1413.9	1181.1	1019.1	1031.9	1049.3	1039.6	1124.5	1133.0	1136.1	1250.0
40°	1844.8	1771.6	1431.0	1177.6	1054.3	1131.5	1126.8	1147.7	1204.7	1226.0	1392.2
42.5°	2340.0	2241.6	1870.8	1469.0	1162.8	1109.8	1138.4	1178.0	1369.4	1430.2	1612.3
45°	2887.2	2688.0	2309.4	1884.3	1434.9	1270.2	1291.9	1365.5	1630.9	1731.7	1932.8
47.5°	3241.7	3066.6	2743.8	2252.5	1718.5	1632.1	1634.0	1649.9	1938.2	2125.0	2394.7
50°	3549.8	3363.4	3063.8	2637.2	2220.3	2056.8	2019.6	1946.3	2329.6	2584.9	2884.1
52.5°	3984.5	3766.7	3383.9	3088.6	2792.6	2407.4	2394.3	2419.1	2791.1	3059.6	3385.8
55°	4376.6	4112.0	3746.6	3560.6	3445.1	2922.8	2934.0	2975.5	3383.5	3525.7	3832.2
57.5°	4549.9	4263.1	4075.2	3991.5	3929.9	3626.9	3588.9	3564.1	3850.8	3905.1	4299.9
60°	4663.4	4390.6	4305.3	4324.7	4511.5	4189.9	4155.4	4011.2	4237.5	4282.1	4719.2
62.5°	4591.7	4342.9	4361.1	4522.7	4937.3	4725.8	4626.2	4385.2	4553.7	4589.8	5020.3
65°	4140.3	3881.1	4115.1	4506.1	5262.0	5257.0	5210.9	4730.4	4728.9	4775.0	5043.5
67.5°	3382.0	3110.0	3488.5	4193.8	5248.5	5579.0	5557.3	5188.4	4754.1	4630.8	4551.4
70°	2351.3	2115.3	2544.6	3463.3	4780.8	5576.7	5541.8	5496.1	4554.9	3986.1	3528.8
72.5°	1221.7	1091.9	1491.8	2386.5	3810.9	4899.8	5014.8	4939.7	3889.2	2896.1	2078.1
75°	415.0	372.4	615.3	1266.7	2533.4	3741.6	3876.4	3800.1	2641.5	1553.8	821.9
77.5°	160.8	149.6	220.5	514.2	1271.0	2280.0	2426.4	2348.5	1416.6	569.2	193.4
80°	91.4	88.3	121.7	231.7	560.3	1134.2	1237.2	1122.2	510.7	191.8	50.4
82.5°	38.7	39.9	67.8	125.2	281.7	400.3	446.4	407.2	213.9	131.4	18.6
85°	8.5	10.5	32.2	69.7	118.2	114.3	119.7	132.9	131.4	96.5	8.1
87.5°	0.0	0.0	10.1	19.0	28.3	18.6	14.7	26.0	40.3	38.7	3.5
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°	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8	236.8
2.5°	284.0	280.2	255.7	254.2	255.7	251.5	251.1	242.2	243.0	263.1	264.7
5°	353.8	334.4	313.5	306.9	300.7	286.7	294.5	294.5	294.5	307.3	311.2
7.5°	416.9	391.0	361.5	336.7	312.7	295.3	307.3	315.8	320.8	337.5	345.2
10°	445.6	420.0	393.7	358.4	339.8	333.2	319.3	311.9	320.8	317.4	321.6
12.5°	506.8	483.6	438.2	401.8	387.9	365.4	324.3	295.7	276.7	273.6	272.8
15°	566.5	552.2	491.3	442.5	394.1	342.1	272.0	234.0	213.9	210.4	210.8
17.5°	642.1	621.5	532.0	461.9	379.7	286.4	210.0	177.5	175.9	184.4	185.2
20°	692.4	658.7	552.6	446.0	332.5	216.6	164.3	156.5	168.9	184.4	182.9
22.5°	740.5	704.1	579.7	432.0	257.7	164.3	151.1	151.9	162.4	179.0	183.3
25°	772.3	759.1	613.0	399.5	196.5	142.2	144.5	150.3	159.3	175.1	175.1
27.5°	868.0	806.4	609.1	336.3	151.1	132.5	137.9	145.3	150.0	168.9	170.9
30°	926.1	905.9	629.3	272.0	132.5	120.1	130.6	137.2	140.3	162.0	162.7
32.5°	997.4	952.8	653.7	200.7	123.2	119.3	117.0	122.1	131.0	150.0	151.1
35°	1084.2	1071.0	618.8	157.7	120.1	111.6	106.9	109.7	115.5	128.3	131.0
37.5°	1261.3	1183.0	597.9	135.2	120.1	108.9	103.8	96.9	97.6	106.6	111.6
40°	1410.4	1386.4	539.4	131.4	114.7	105.0	92.6	84.1	78.3	81.0	82.9
42.5°	1684.4	1573.2	463.8	129.4	109.7	94.9	78.7	69.7	60.8	61.6	64.7
45°	2016.9	1777.0	396.4	127.5	106.2	84.9	66.3	55.8	46.5	46.9	50.0
47.5°	2460.9	2074.2	314.6	121.7	100.0	75.6	53.5	42.6	37.2	38.4	41.1
50°	2965.4	2335.0	248.8	112.8	92.6	66.6	43.4	34.5	32.5	33.7	36.8
52.5°	3416.1	2527.2	205.4	104.6	82.1	54.2	36.4	30.6	29.8	30.6	32.9
55°	3816.7	2638.8	171.7	95.3	70.5	43.8	32.9	28.3	27.9	27.5	29.1
57.5°	4192.6	2670.9	134.1	80.6	57.3	38.0	30.6	26.3	25.6	24.4	25.6
60°	4466.5	2615.9	98.4	64.7	46.9	34.5	28.7	23.6	22.5	20.5	21.3
62.5°	4598.7	2465.2	74.4	51.9	39.9	31.4	25.6	20.5	19.0	16.7	17.0
65°	4473.1	2216.8	58.5	43.8	34.1	26.3	21.7	17.4	15.5	13.2	13.2
67.5°	3917.1	1839.0	49.6	38.0	28.7	22.5	17.8	15.9	12.8	10.8	10.5
70°	2875.1	1322.9	42.6	33.3	24.8	19.4	15.1	14.3	12.4	10.5	9.7
72.5°	1622.8	748.6	36.4	29.4	20.9	16.3	12.8	13.2	12.0	9.7	8.9
75°	619.2	252.3	30.2	24.4	17.0	12.4	10.8	10.8	10.8	8.1	7.0
77.5°	153.4	64.3	24.0	19.8	13.6	8.1	8.9	9.3	9.3	7.0	5.0
80°	42.2	21.7	14.3	14.3	9.7	4.6	6.2	6.2	5.0	2.3	0.0
82.5°	15.5	8.1	5.0	6.2	4.3	1.5	2.3	1.5	1.2	0.0	0.0
85°	6.6	4.3	3.1	3.5	1.9	0.0	0.4	0.8	0.0	0.0	0.0
87.5°	2.7	1.9	1.5	1.5	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)