

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: P367583

Luminaire Tested: **MSA-SA2D-740-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367583
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-SA2D-740-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9960 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

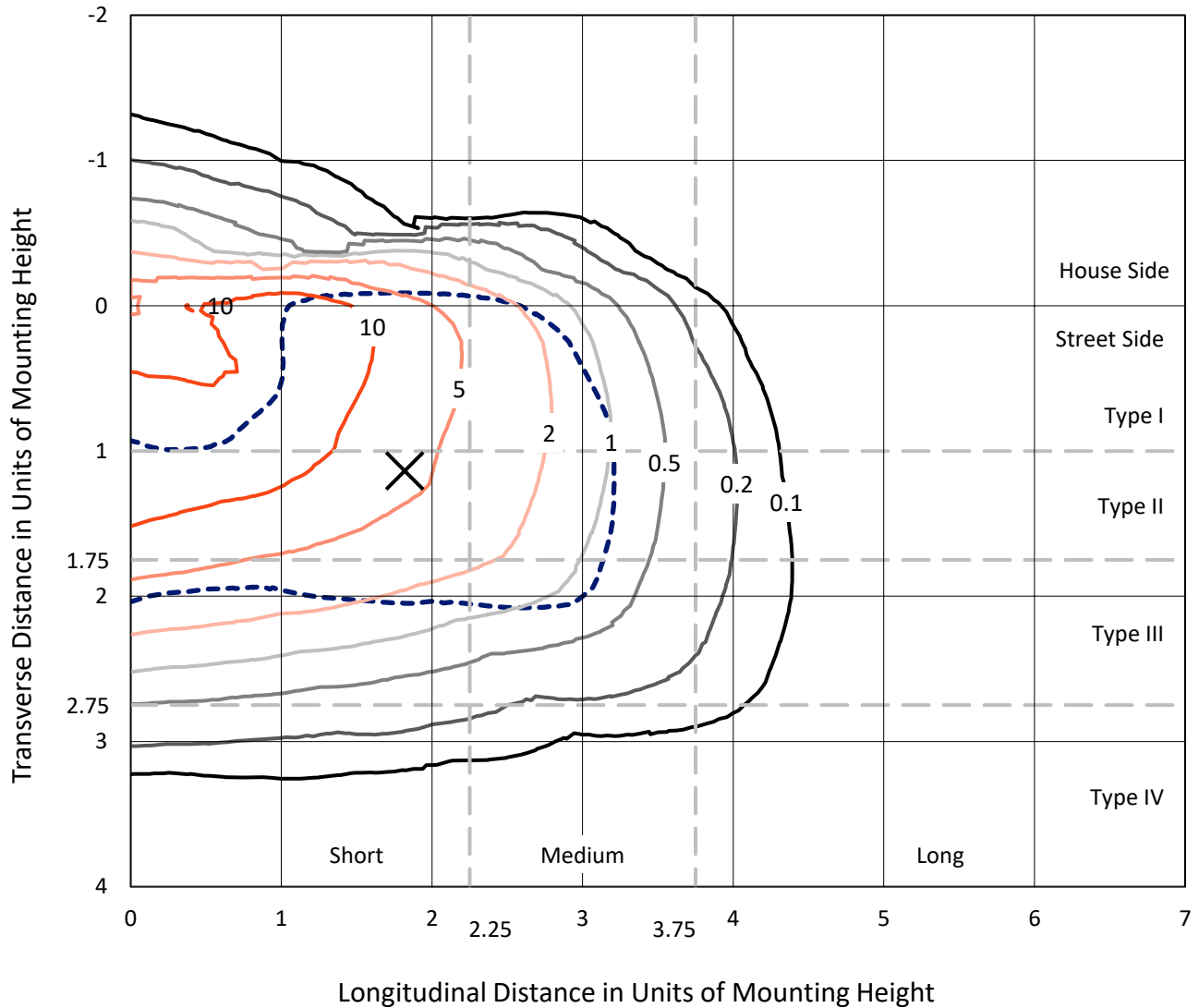
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

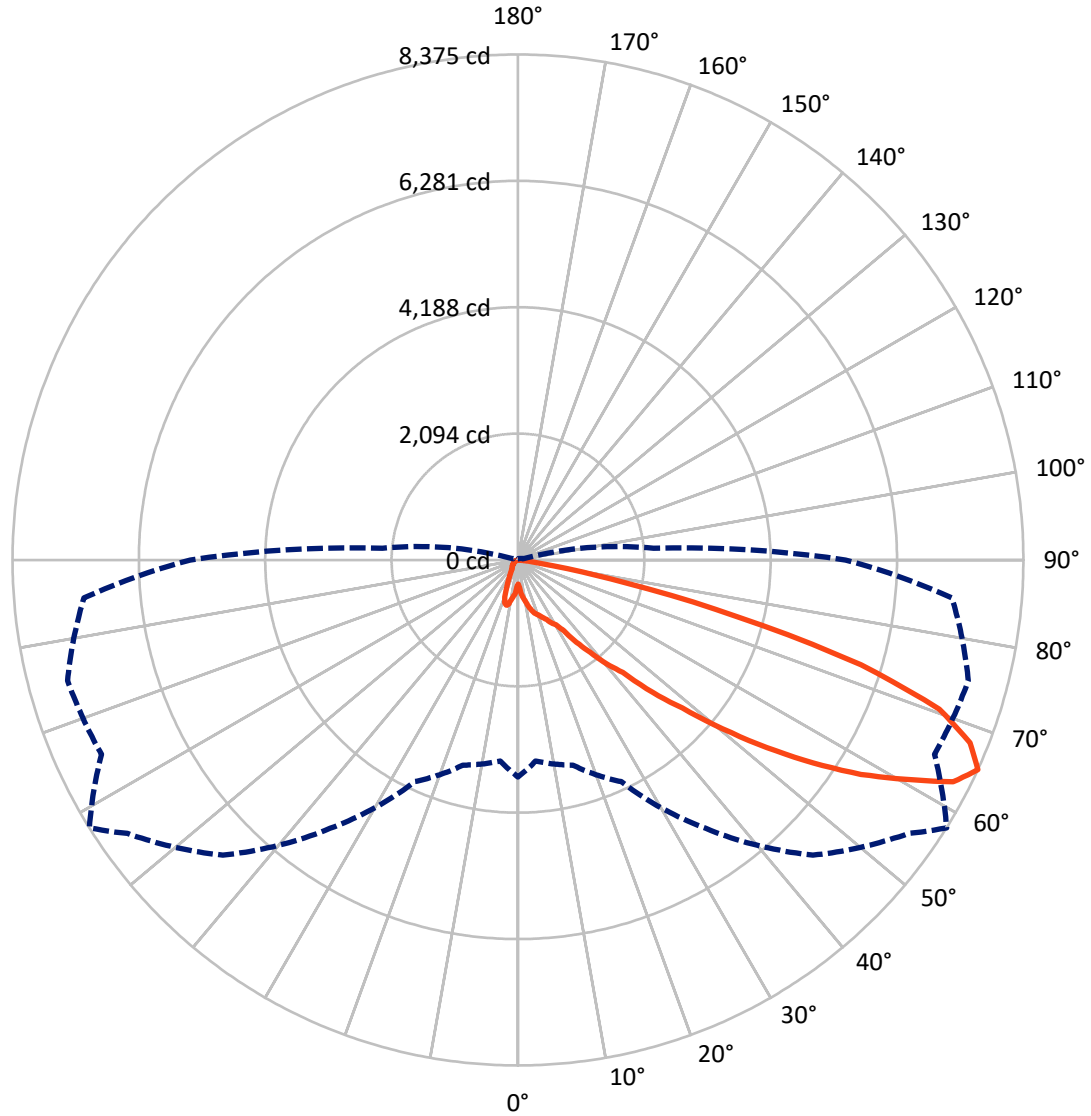
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.1 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	982.8	0.0	982.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	8977.2	0.0	8977.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	9960.0	0.0	9960.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	0.6
10°-20°	204.4	2.1
20°-30°	395.7	4.0
30°-40°	789.6	7.9
40°-50°	1614.2	16.2
50°-60°	2863.0	28.7
60°-70°	3018.4	30.3
70°-80°	978.6	9.8
80°-90°	40.0	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°	9960.0	100.0
0°-180°	9960.0	100.0

Coefficient of Utilization



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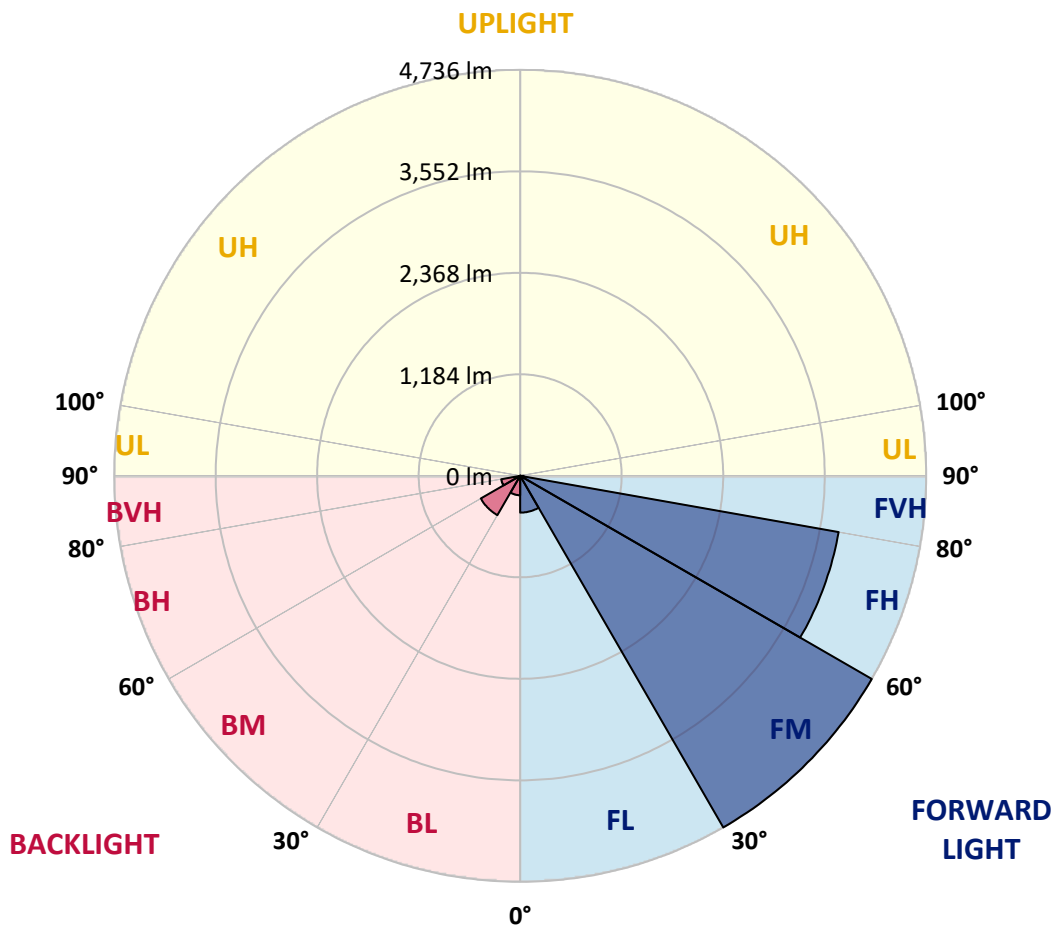
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	429.7	4.3			
FM (30°-60°)	4736.5	47.6			
FH (60°-80°)	3772.7	37.9			G2/5000
FVH (80°-90°)	38.3	0.4			G1/100
BL (0°-30°)	226.5	2.3	B1/500		
BM (30°-60°)	530.3	5.3	B1/1000		
BH (60°-80°)	224.3	2.3	B1/500		G1/500
BVH (80°-90°)	1.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7
2.5°	486.8	472.2	449.2	453.1	457.6	466.6	459.3	452.5	445.3	435.7	472.2
5°	587.7	563.6	561.3	556.3	552.4	551.8	560.8	558.0	561.9	579.8	598.4
7.5°	624.7	614.6	595.5	603.4	591.1	581.5	621.3	634.2	658.9	667.3	715.6
10°	620.8	606.2	614.1	618.0	626.4	661.2	686.4	700.4	721.7	767.7	758.2
12.5°	638.7	651.6	660.0	660.6	703.8	767.7	785.7	797.4	835.6	853.5	900.6
15°	698.7	720.0	706.6	712.2	726.2	804.2	846.2	872.0	925.8	984.2	995.9
17.5°	784.5	798.0	770.0	749.8	788.5	831.1	907.3	934.3	968.5	1104.7	1130.0
20°	892.8	915.8	855.2	775.0	826.0	876.5	959.5	972.4	1008.8	1186.6	1226.4
22.5°	1145.7	1111.5	1018.9	893.9	878.7	901.2	980.2	1030.7	1092.4	1232.6	1325.1
25°	1395.2	1383.4	1247.2	1107.5	1006.6	956.1	1061.0	1089.0	1190.0	1341.9	1393.0
27.5°	1672.8	1696.4	1468.7	1384.0	1186.0	1021.2	1111.5	1181.6	1301.0	1381.8	1504.6
30°	2039.0	2001.4	1734.5	1649.8	1423.8	1200.1	1242.1	1246.6	1422.1	1513.0	1629.6
32.5°	2326.1	2350.2	2014.9	1884.8	1704.2	1475.4	1340.3	1398.6	1524.2	1726.6	1837.1
35°	2636.8	2634.5	2307.6	2132.6	1896.6	1700.3	1631.3	1673.9	1831.5	2060.9	2090.0
37.5°	3101.1	3061.3	2675.5	2419.2	2218.4	2050.8	1998.1	1941.4	2104.0	2322.7	2432.1
40°	3539.1	3401.7	3045.0	2741.1	2484.3	2415.8	2225.2	2259.9	2308.2	2597.0	2899.2
42.5°	3981.5	3896.3	3419.6	3165.0	2849.3	2686.7	2562.2	2545.9	2775.3	3117.4	3429.7
45°	4565.3	4304.5	3923.2	3699.5	3333.8	3170.6	3070.3	3130.3	3336.6	3836.3	4044.3
47.5°	5055.4	4815.4	4487.9	4148.1	3764.5	3947.9	3759.5	3664.7	3947.9	4464.4	4740.8
50°	5476.6	5209.1	4877.7	4625.9	4563.6	4739.7	4358.4	4393.1	4577.1	5183.8	5339.7
52.5°	5782.8	5501.2	5211.9	5090.2	5345.4	5434.0	5242.7	5165.9	5333.0	5797.3	5873.0
55°	6013.2	5725.0	5499.0	5666.7	6160.2	6131.0	6198.3	5935.9	6095.7	6437.2	6401.3
57.5°	6027.3	5685.7	5553.4	5823.1	6500.6	6952.0	7148.8	6702.4	6793.3	6937.4	6856.7
60°	5586.5	5246.7	5236.0	5619.0	6599.3	7164.5	7595.2	7377.6	7255.9	7363.0	7209.9
62.5°	4708.3	4470.5	4581.6	5005.0	6231.9	7047.3	7833.0	8094.9	7621.0	7645.1	7427.5
65°	3595.2	3345.6	3519.5	4052.8	5428.9	6916.1	7900.3	8375.2	7614.3	7725.3	7218.9
67.5°	2381.1	2236.4	2433.2	3020.9	4316.3	6105.2	7865.5	8080.8	7372.6	7411.8	6444.5
70°	1229.2	1193.9	1353.2	1816.9	2902.0	4690.4	7524.0	7406.2	6881.9	6385.0	4970.7
72.5°	393.7	395.3	548.4	830.0	1564.6	2855.5	5783.3	5944.8	5506.9	4670.7	3034.9
75°	174.4	171.6	229.4	348.2	652.2	1280.3	3592.9	3767.3	3428.6	2569.5	1275.8
77.5°	125.6	121.7	146.9	203.6	323.0	434.0	1684.6	1818.0	1554.5	890.5	292.2
80°	88.6	88.0	106.5	143.0	201.9	192.9	532.2	596.7	477.8	215.9	85.8
82.5°	49.9	51.6	74.0	100.9	122.8	96.5	149.7	164.9	160.9	115.0	37.6
85°	24.1	26.9	48.2	72.9	64.5	37.6	53.3	57.8	67.3	66.7	19.1
87.5°	0.0	0.0	19.6	33.1	17.4	5.6	16.3	18.5	17.9	21.3	4.5
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°	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7	398.7
2.5°	479.5	476.1	433.5	436.8	446.4	442.5	445.8	438.0	429.0	465.4	464.9
5°	606.2	581.0	567.5	555.2	557.4	532.2	546.8	553.5	552.4	573.1	578.7
7.5°	717.2	683.6	656.7	630.9	591.6	556.3	578.2	592.2	601.7	637.6	651.6
10°	769.4	741.9	731.3	680.8	652.7	630.9	604.5	585.5	593.3	583.8	593.3
12.5°	883.8	865.3	824.3	773.3	739.7	694.8	596.7	514.8	464.3	464.9	461.5
15°	988.1	987.0	925.8	841.2	743.6	615.7	462.6	359.5	311.8	298.3	293.8
17.5°	1124.4	1107.5	995.9	870.9	695.4	476.7	315.2	246.2	241.7	249.5	246.2
20°	1211.3	1186.6	1030.7	827.7	573.1	322.4	237.8	218.1	231.6	242.8	240.0
22.5°	1298.2	1261.2	1057.1	775.0	407.7	236.1	214.8	211.4	219.8	233.8	236.1
25°	1345.9	1338.6	1108.7	676.3	279.3	206.9	206.9	205.8	208.6	218.7	217.0
27.5°	1484.4	1385.7	1070.0	527.7	215.9	190.1	192.9	191.8	181.7	191.8	192.3
30°	1570.7	1525.3	1072.8	375.7	190.1	168.2	175.5	166.6	151.4	159.8	158.1
32.5°	1744.6	1631.3	1064.4	253.5	173.3	160.4	149.2	136.3	125.1	128.4	125.6
35°	1947.0	1860.7	950.5	203.6	161.5	141.9	123.9	111.0	99.3	102.1	101.5
37.5°	2349.7	2075.4	856.3	183.4	153.7	130.1	109.4	91.4	85.2	86.9	88.6
40°	2722.6	2433.8	680.8	174.4	140.2	116.1	90.3	77.4	73.5	74.6	76.3
42.5°	3280.0	2718.7	514.2	165.4	126.7	98.1	75.1	66.7	62.8	65.1	66.2
45°	3819.5	2960.9	384.1	157.6	115.5	84.7	63.4	57.8	53.3	55.0	57.2
47.5°	4358.4	3230.1	286.6	145.2	103.2	72.9	54.4	50.5	47.7	48.2	51.0
50°	4840.6	3355.7	225.4	130.1	93.1	63.4	49.3	45.4	44.3	44.9	47.1
52.5°	5195.1	3356.8	190.1	116.6	83.6	56.1	46.5	42.1	41.5	42.6	44.9
55°	5515.3	3267.1	164.9	104.9	75.1	51.0	44.3	40.4	40.4	41.5	43.7
57.5°	5727.8	3102.2	143.0	92.5	67.9	48.2	42.6	38.7	38.1	37.6	39.3
60°	5831.5	2877.4	121.1	81.3	61.1	46.5	41.5	34.2	33.6	32.5	33.6
62.5°	5765.9	2595.8	101.5	70.1	54.4	44.3	36.5	29.7	28.6	26.4	28.0
65°	5430.6	2253.8	85.8	60.0	47.1	37.6	30.8	25.2	22.4	19.6	19.1
67.5°	4744.8	1830.9	71.8	51.6	40.4	30.8	25.2	22.4	17.4	15.1	14.6
70°	3555.9	1250.0	59.4	44.3	33.6	26.4	21.3	20.2	16.3	14.6	13.5
72.5°	2086.1	674.6	49.9	38.7	28.6	21.9	17.4	18.5	16.3	13.5	12.3
75°	833.3	224.3	39.8	30.8	23.0	15.7	14.6	15.1	14.6	12.3	10.1
77.5°	190.1	70.7	30.8	24.1	17.9	10.1	11.8	12.9	12.9	10.1	7.3
80°	59.4	28.0	17.9	15.1	12.9	5.6	8.4	9.0	6.2	2.8	0.0
82.5°	19.1	7.9	6.2	6.2	5.6	1.1	1.7	1.1	0.0	0.0	0.0
85°	7.3	5.0	3.9	3.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.8	2.2	1.7	2.2	1.1	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)