

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: P367587

Luminaire Tested: **MSA-SA2D-740-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367587  
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-SA2D-740-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 10168 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

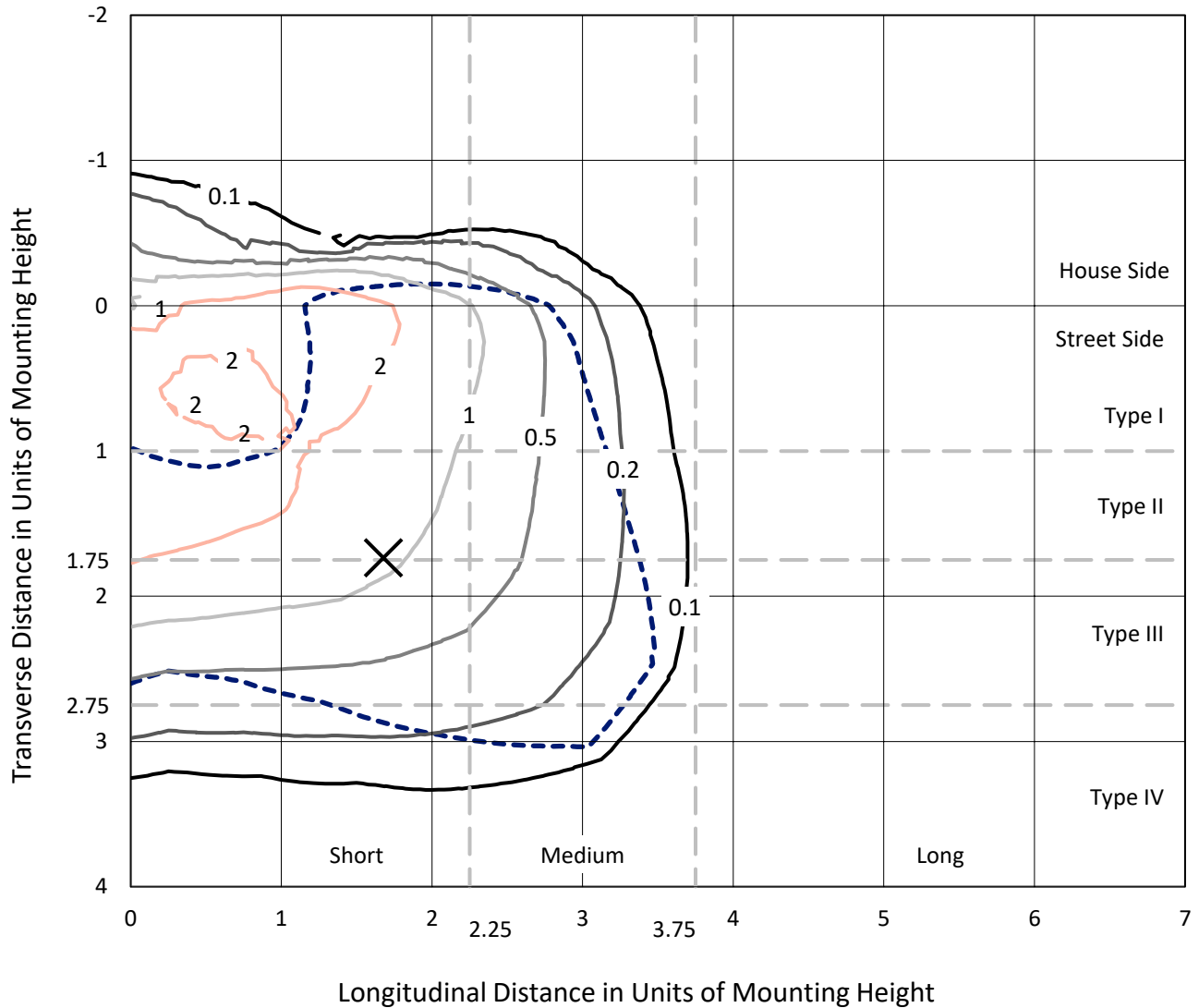
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

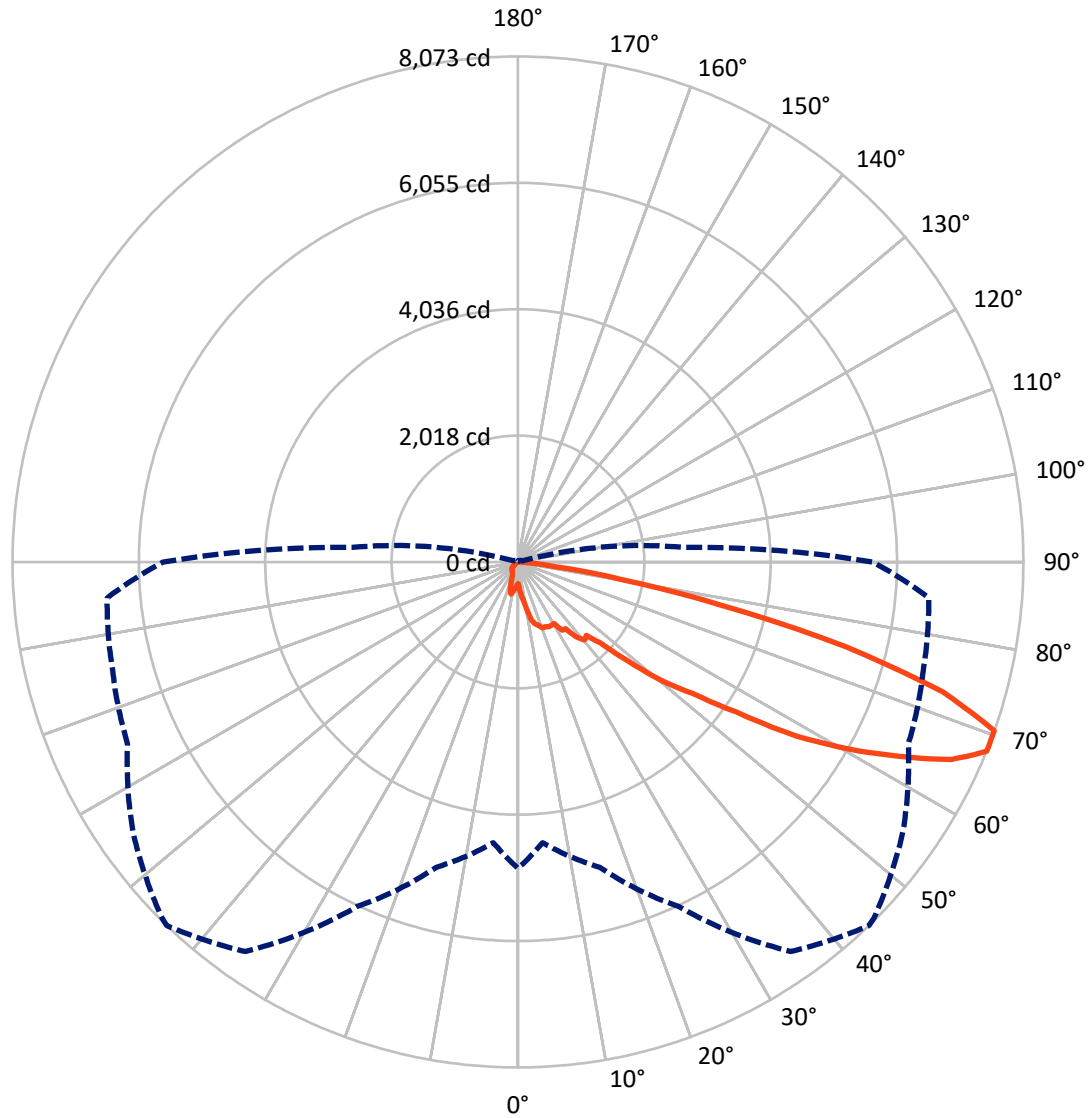
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.7 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
<b>House Side</b>	Lumens	1032.9	0.0	1032.9
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	9135.1	0.0	9135.1
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	10168.0	0.0	10168.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.8	0.5
10°-20°	212.6	2.1
20°-30°	376.6	3.7
30°-40°	612.1	6.0
40°-50°	1224.9	12.0
50°-60°	2512.8	24.7
60°-70°	3451.9	33.9
70°-80°	1622.4	16.0
80°-90°	103.9	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°	10168.0	100.0
0°-180°	10168.0	100.0

**Coefficient of Utilization**

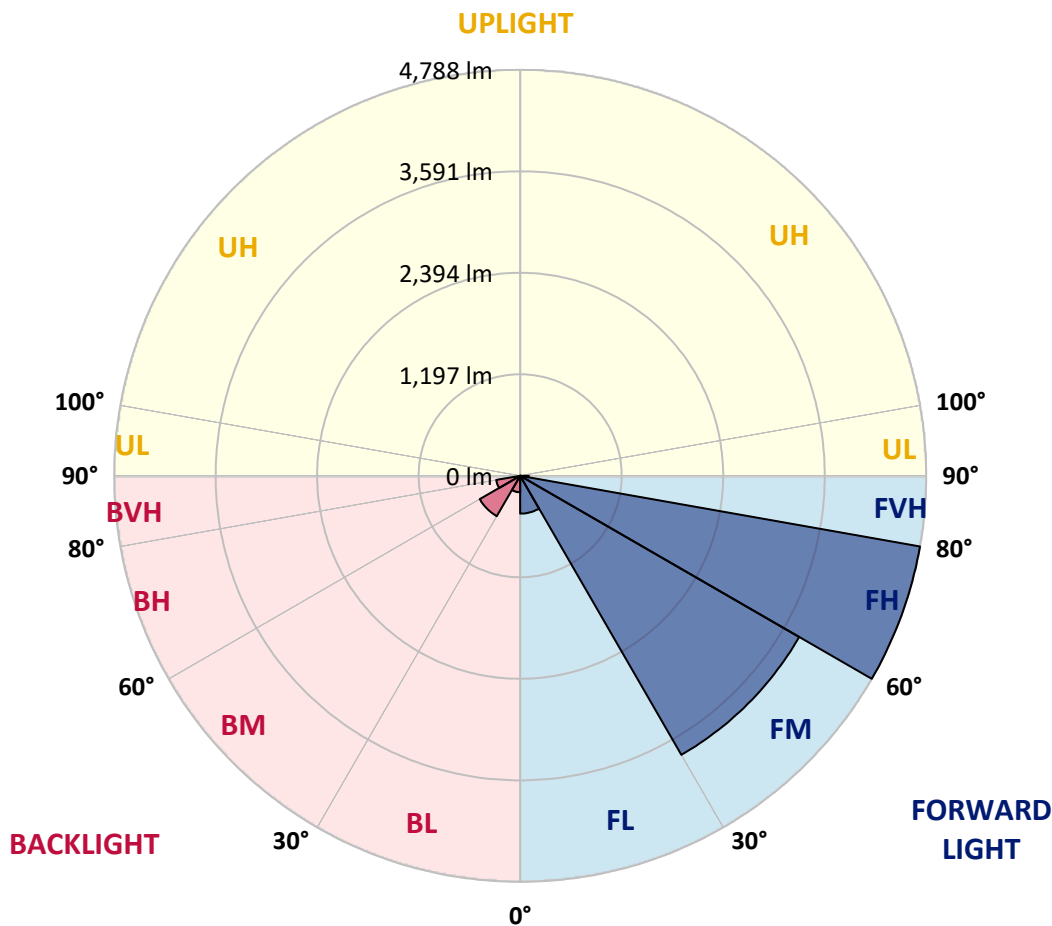


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	446.0	4.4			
FM (30°-60°)	3799.6	37.4			
FH (60°-80°)	4787.7	47.1			G2/5000
FVH (80°-90°)	101.8	1.0			G2/225
BL (0°-30°)	193.9	1.9	B1/500		
BM (30°-60°)	550.2	5.4	B1/1000		
BH (60°-80°)	286.6	2.8	B1/500		G1/500
BVH (80°-90°)	2.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6
2.5°	435.7	421.6	401.5	405.9	408.2	414.3	414.9	407.1	384.6	378.5	405.9
5°	610.6	576.4	570.2	557.3	531.5	517.5	514.2	528.2	510.2	504.6	511.9
7.5°	779.9	750.8	718.8	701.4	647.6	614.5	612.8	618.4	621.8	602.2	612.3
10°	892.6	860.7	853.9	813.0	766.5	758.6	755.2	733.9	716.6	702.0	653.2
12.5°	994.7	994.1	1006.4	947.6	940.3	948.1	945.3	869.1	851.7	790.6	776.6
15°	1130.3	1164.0	1110.7	1061.4	998.6	1025.5	1018.2	969.4	957.7	916.2	856.2
17.5°	1271.1	1280.0	1190.9	1115.2	1098.9	1063.6	1070.9	1053.5	994.1	1027.2	967.7
20°	1274.4	1294.1	1198.7	1073.7	1123.6	1121.9	1122.5	1105.7	1027.2	1104.6	1050.2
22.5°	1321.5	1273.3	1184.7	1105.1	1114.1	1122.5	1131.5	1110.7	1093.9	1113.0	1123.1
25°	1302.5	1283.4	1198.2	1145.5	1137.1	1143.8	1146.0	1172.4	1161.7	1207.7	1182.5
27.5°	1351.8	1324.3	1171.8	1181.4	1151.7	1143.8	1130.3	1218.4	1249.8	1213.3	1280.6
30°	1436.5	1432.6	1217.3	1231.3	1208.3	1139.3	1175.2	1290.1	1329.4	1307.0	1388.8
32.5°	1568.8	1582.3	1350.1	1259.3	1271.1	1301.9	1288.5	1290.1	1389.4	1439.3	1504.3
35°	1756.6	1749.3	1479.7	1365.8	1304.2	1309.2	1328.3	1419.7	1548.1	1544.7	1613.7
37.5°	2125.6	2045.9	1709.0	1474.6	1493.1	1518.3	1504.3	1627.1	1639.4	1643.9	1808.8
40°	2669.4	2563.5	2070.6	1703.9	1525.6	1637.2	1630.5	1660.8	1743.2	1774.0	2014.5
42.5°	3386.0	3243.6	2707.0	2125.6	1682.6	1605.8	1647.3	1704.5	1981.5	2069.5	2333.0
45°	4177.7	3889.5	3341.7	2726.6	2076.2	1837.9	1869.3	1975.9	2359.9	2505.7	2796.7
47.5°	4690.7	4437.3	3970.2	3259.3	2486.6	2361.6	2364.4	2387.4	2804.6	3074.8	3465.0
50°	5136.5	4866.8	4433.4	3816.0	3212.7	2976.1	2922.3	2816.3	3370.9	3740.3	4173.2
52.5°	5765.5	5450.4	4896.5	4469.2	4040.9	3483.6	3464.5	3500.4	4038.6	4427.2	4899.3
55°	6333.0	5950.0	5421.3	5152.2	4985.1	4229.3	4245.5	4305.5	4895.9	5101.7	5545.2
57.5°	6583.6	6168.7	5896.7	5775.6	5686.5	5248.0	5193.1	5157.2	5572.1	5650.6	6221.9
60°	6747.9	6353.1	6229.8	6257.8	6528.1	6062.7	6012.8	5804.2	6131.7	6196.2	6828.6
62.5°	6644.1	6284.2	6310.5	6544.3	7144.3	6838.1	6694.0	6345.3	6589.2	6641.3	7264.3
65°	5990.9	5615.8	5954.5	6520.2	7614.1	7606.8	7540.1	6844.9	6842.6	6909.3	7297.9
67.5°	4893.7	4500.1	5047.9	6068.3	7594.5	8072.8	8041.4	7507.6	6879.1	6700.8	6585.8
70°	3402.3	3060.8	3682.0	5011.4	6917.8	8069.4	8018.9	7952.8	6590.9	5767.8	5106.2
72.5°	1767.8	1580.0	2158.6	3453.3	5514.4	7089.9	7256.4	7147.6	5627.6	4190.6	3007.0
75°	600.5	538.8	890.4	1832.9	3665.8	5414.0	5609.1	5498.7	3822.2	2248.4	1189.2
77.5°	232.7	216.4	319.0	744.0	1839.1	3299.1	3511.0	3398.3	2049.9	823.6	279.8
80°	132.3	127.8	176.1	335.3	810.8	1641.1	1790.3	1623.8	739.0	277.5	72.9
82.5°	56.1	57.8	98.1	181.1	407.6	579.2	645.9	589.3	309.5	190.1	26.9
85°	12.3	15.1	46.5	100.9	171.0	165.4	173.3	192.3	190.1	139.6	11.8
87.5°	0.0	0.0	14.6	27.5	40.9	26.9	21.3	37.6	58.3	56.1	5.0
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°	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6	342.6
2.5°	411.0	405.4	370.1	367.8	370.1	363.9	363.3	350.4	351.6	380.7	382.9
5°	511.9	483.9	453.6	444.1	435.1	414.9	426.1	426.1	426.1	444.6	450.2
7.5°	603.3	565.7	523.1	487.2	452.5	427.2	444.6	457.0	464.2	488.4	499.6
10°	644.8	607.8	569.7	518.6	491.7	482.2	462.0	451.4	464.2	459.2	465.4
12.5°	733.4	699.7	634.1	581.4	561.2	528.7	469.3	427.8	400.3	395.8	394.7
15°	819.7	799.0	711.0	640.3	570.2	495.1	393.6	338.7	309.5	304.5	305.0
17.5°	929.1	899.3	769.8	668.3	549.5	414.3	303.9	256.8	254.6	266.9	268.0
20°	1001.9	953.2	799.5	645.4	481.1	313.4	237.7	226.5	244.5	266.9	264.6
22.5°	1071.5	1018.8	838.8	625.2	372.9	237.7	218.7	219.8	234.9	259.0	265.2
25°	1117.4	1098.4	887.0	578.1	284.3	205.8	209.1	217.5	230.4	253.4	253.4
27.5°	1255.9	1166.8	881.4	486.7	218.7	191.8	199.6	210.3	217.0	244.5	247.3
30°	1340.0	1310.9	910.6	393.6	191.8	173.8	189.0	198.5	203.0	234.4	235.5
32.5°	1443.2	1378.7	945.9	290.4	178.3	172.7	169.3	176.6	189.5	217.0	218.7
35°	1568.8	1549.7	895.4	228.2	173.8	161.5	154.7	158.7	167.1	185.6	189.5
37.5°	1825.0	1711.8	865.1	195.7	173.8	157.6	150.3	140.2	141.3	154.2	161.5
40°	2040.9	2006.1	780.5	190.1	166.0	151.9	134.0	121.7	113.3	117.2	120.0
42.5°	2437.3	2276.4	671.1	187.3	158.7	137.4	113.8	100.9	88.0	89.1	93.6
45°	2918.4	2571.3	573.6	184.5	153.6	122.8	95.9	80.7	67.3	67.8	72.3
47.5°	3560.9	3001.4	455.3	176.1	144.7	109.3	77.4	61.7	53.8	55.5	59.4
50°	4290.9	3378.7	360.0	163.2	134.0	96.4	62.8	49.9	47.1	48.8	53.3
52.5°	4943.0	3656.8	297.2	151.4	118.9	78.5	52.7	44.3	43.2	44.3	47.7
55°	5522.8	3818.3	248.4	137.9	102.0	63.4	47.7	40.9	40.4	39.8	42.1
57.5°	6066.6	3864.8	194.0	116.6	83.0	54.9	44.3	38.1	37.0	35.3	37.0
60°	6463.0	3785.2	142.4	93.6	67.8	49.9	41.5	34.2	32.5	29.7	30.8
62.5°	6654.2	3567.1	107.7	75.1	57.8	45.4	37.0	29.7	27.5	24.1	24.7
65°	6472.6	3207.7	84.7	63.4	49.3	38.1	31.4	25.2	22.4	19.1	19.1
67.5°	5668.0	2661.0	71.8	54.9	41.5	32.5	25.8	23.0	18.5	15.7	15.1
70°	4160.3	1914.2	61.7	48.2	35.9	28.0	21.9	20.7	17.9	15.1	14.0
72.5°	2348.2	1083.2	52.7	42.6	30.3	23.5	18.5	19.1	17.4	14.0	12.9
75°	896.0	365.0	43.7	35.3	24.7	17.9	15.7	15.7	15.7	11.8	10.1
77.5°	222.0	93.1	34.8	28.6	19.6	11.8	12.9	13.5	13.5	10.1	7.3
80°	61.1	31.4	20.7	20.7	14.0	6.7	9.0	9.0	7.3	3.4	0.0
82.5°	22.4	11.8	7.3	9.0	6.2	2.2	3.4	2.2	1.7	0.0	0.0
85°	9.5	6.2	4.5	5.0	2.8	0.0	0.6	1.1	0.0	0.0	0.0
87.5°	3.9	2.8	2.2	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)