

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: P368617

Luminaire Tested: **MSA-SA4D-730-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368617
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-SA4D-730-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 17693 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

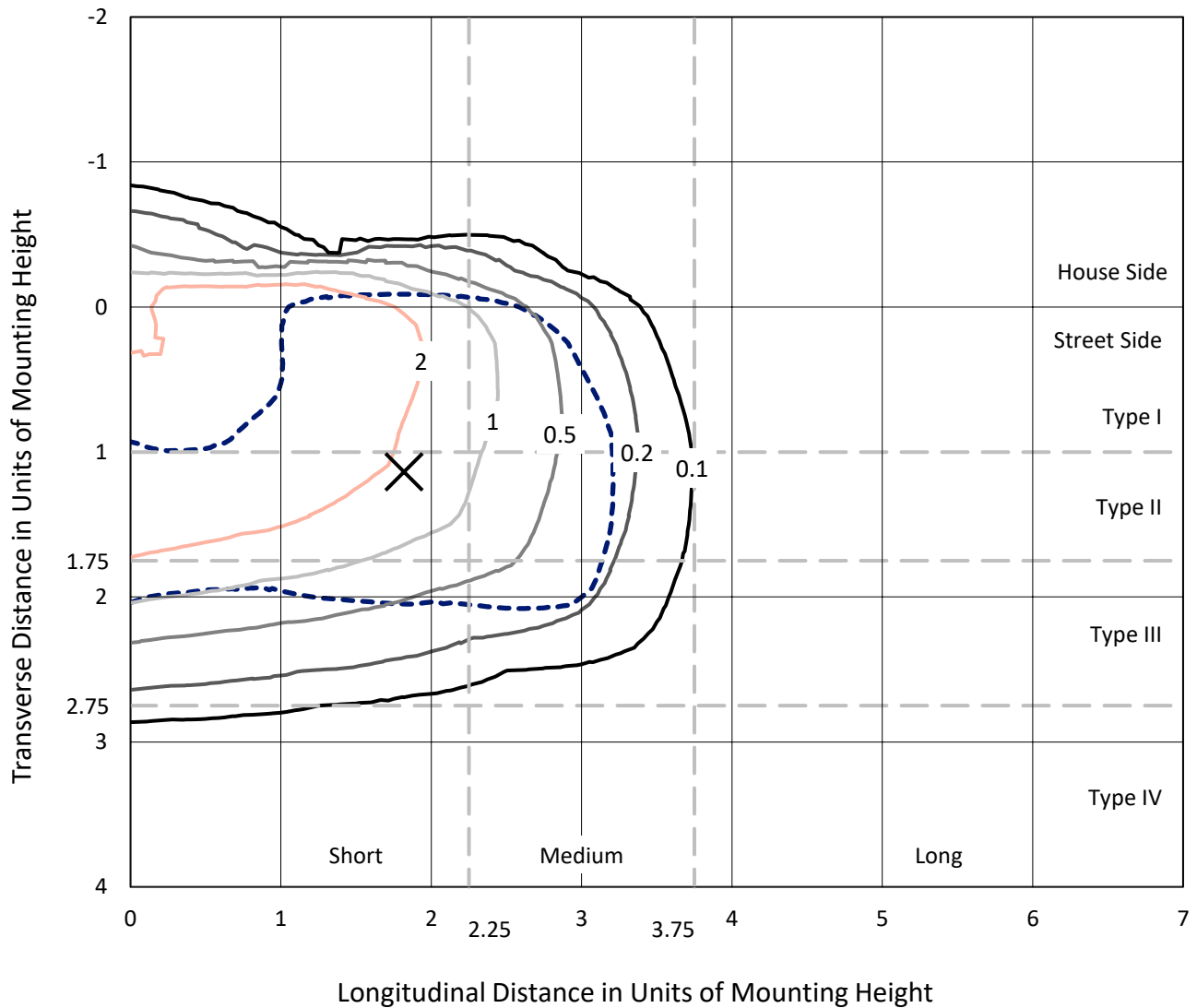
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

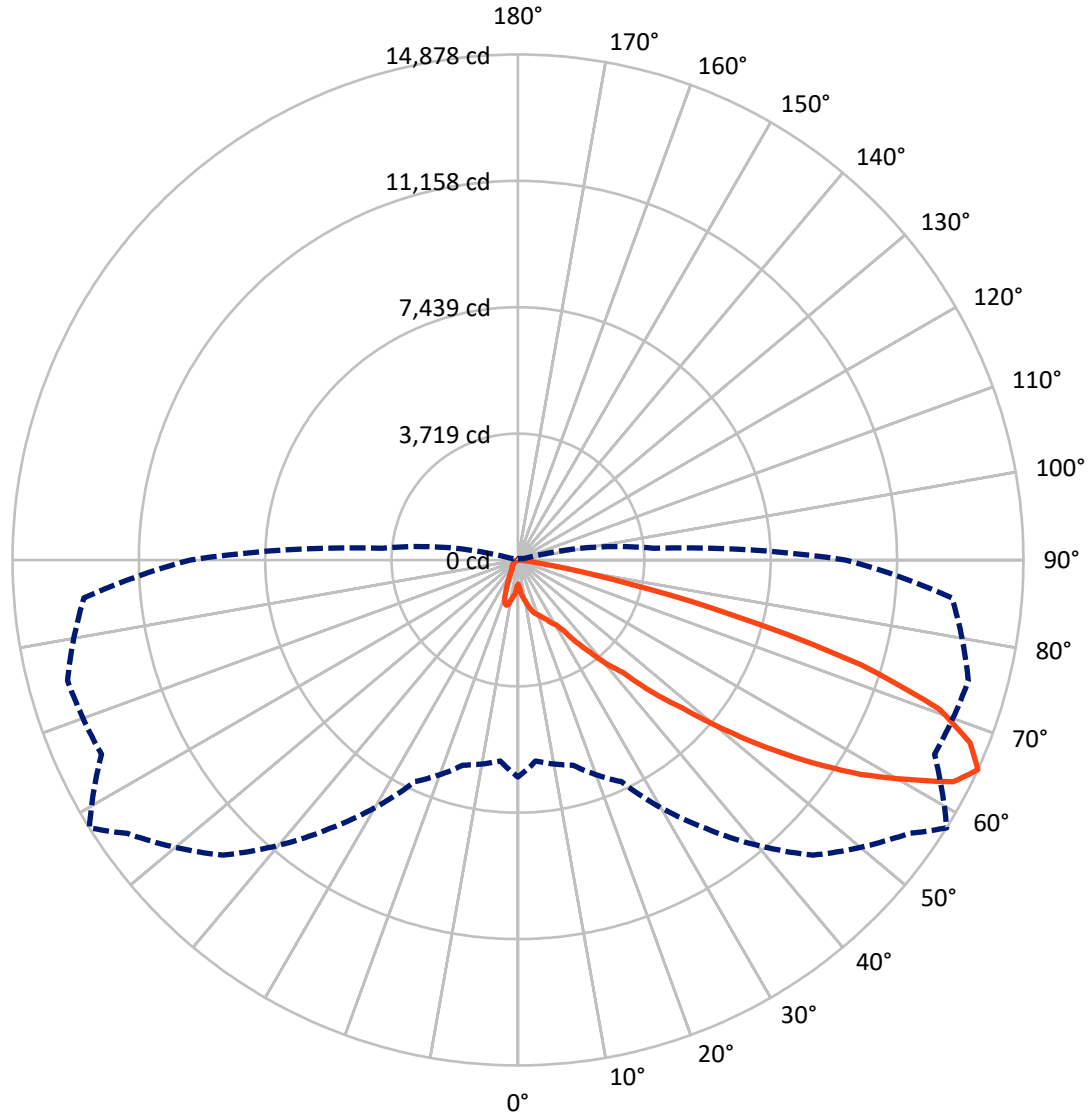
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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	1745.9	0.0	1745.9
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	15947.1	0.0	15947.1
	% Fixture	90.1	0.0	90.1
Total	Lumens	17693.0	0.0	17693.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	0.6
10°-20°	363.2	2.1
20°-30°	703.0	4.0
30°-40°	1402.6	7.9
40°-50°	2867.4	16.2
50°-60°	5085.9	28.7
60°-70°	5361.9	30.3
70°-80°	1738.4	9.8
80°-90°	71.1	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°	17693.0	100.0
0°-180°	17693.0	100.0

Coefficient of Utilization



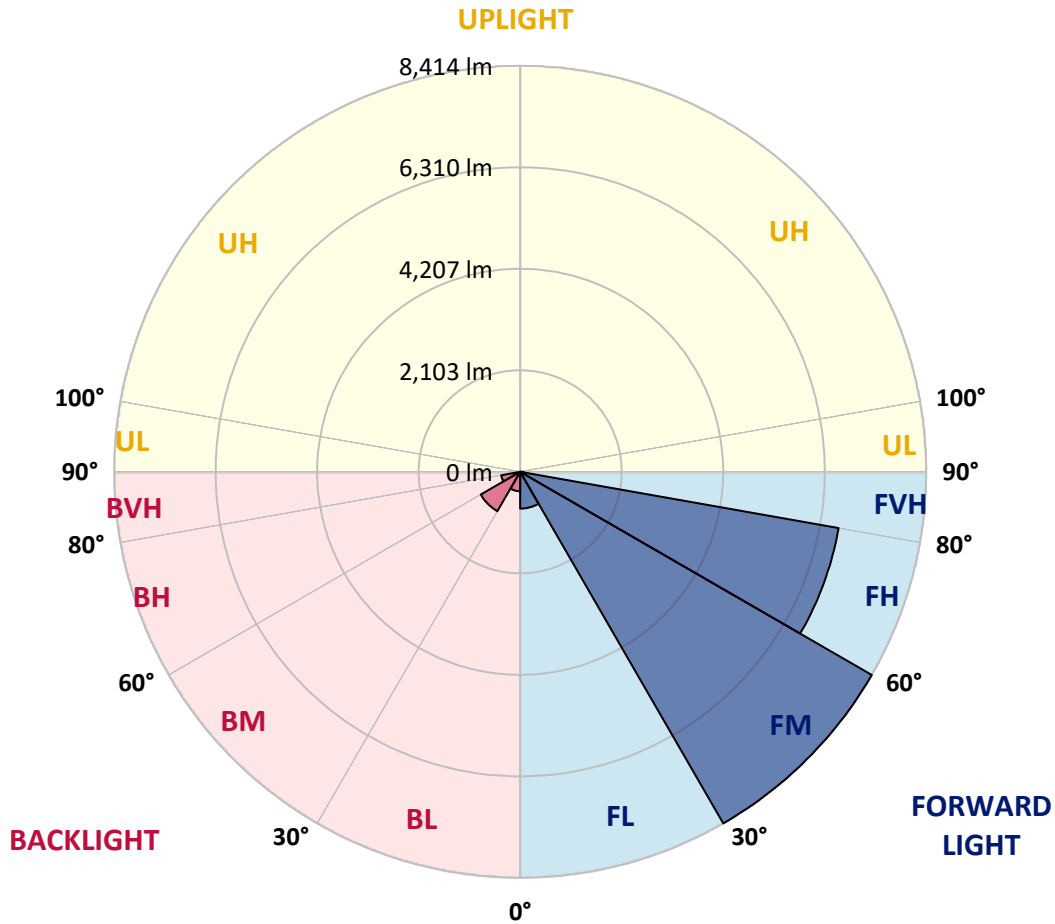
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	763.3	4.3			
FM (30°-60°)	8413.9	47.6			
FH (60°-80°)	6701.8	37.9			G3/7500
FVH (80°-90°)	68.1	0.4			G1/100
BL (0°-30°)	402.4	2.3	B1/500		
BM (30°-60°)	942.0	5.3	B1/1000		
BH (60°-80°)	398.5	2.3	B1/500		G1/500
BVH (80°-90°)	3.0	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-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	864.7	838.8	797.9	804.9	812.9	828.8	815.9	803.9	791.0	774.0	838.8
5°	1044.0	1001.2	997.2	988.2	981.2	980.2	996.2	991.2	998.2	1030.0	1062.9
7.5°	1109.7	1091.8	1057.9	1071.9	1050.0	1033.0	1103.8	1126.7	1170.5	1185.4	1271.1
10°	1102.8	1076.9	1090.8	1097.8	1112.7	1174.5	1219.3	1244.2	1282.1	1363.8	1346.8
12.5°	1134.6	1157.6	1172.5	1173.5	1250.2	1363.8	1395.6	1416.6	1484.3	1516.2	1599.9
15°	1241.2	1279.1	1255.2	1265.1	1290.0	1428.5	1503.2	1549.0	1644.7	1748.3	1769.2
17.5°	1393.6	1417.6	1367.7	1331.9	1400.6	1476.3	1611.8	1659.6	1720.4	1962.5	2007.3
20°	1585.9	1626.7	1519.2	1376.7	1467.4	1557.0	1704.5	1727.4	1792.1	2107.9	2178.6
22.5°	2035.2	1974.4	1810.0	1587.9	1561.0	1600.8	1741.3	1831.0	1940.5	2189.6	2354.0
25°	2478.5	2457.6	2215.5	1967.4	1788.1	1698.5	1884.8	1934.6	2113.9	2383.8	2474.5
27.5°	2971.6	3013.4	2609.0	2458.6	2106.9	1814.0	1974.4	2098.9	2311.1	2454.6	2672.7
30°	3622.1	3555.3	3081.2	2930.7	2529.3	2131.8	2206.5	2214.5	2526.3	2687.7	2894.9
32.5°	4132.1	4175.0	3579.2	3348.1	3027.4	2620.9	2380.9	2484.5	2707.6	3067.2	3263.5
35°	4684.0	4680.0	4099.2	3788.4	3369.1	3020.4	2897.9	2973.6	3253.5	3660.9	3712.7
37.5°	5508.8	5438.1	4752.7	4297.5	3940.9	3643.0	3549.4	3448.7	3737.6	4126.1	4320.4
40°	6286.8	6042.8	5409.2	4869.3	4413.0	4291.5	3952.8	4014.6	4100.2	4613.3	5150.2
42.5°	7072.8	6921.4	6074.7	5622.4	5061.5	4772.7	4551.5	4522.6	4930.1	5537.7	6092.6
45°	8109.8	7646.6	6969.2	6571.7	5922.2	5632.4	5454.0	5560.6	5927.2	6814.8	7184.4
47.5°	8980.5	8554.1	7972.4	7368.7	6687.3	7013.0	6678.3	6510.0	7013.0	7930.5	8421.6
50°	9728.6	9253.4	8664.7	8217.4	8106.8	8419.6	7742.2	7804.0	8130.8	9208.6	9485.5
52.5°	10272.5	9772.4	9258.4	9042.3	9495.5	9652.9	9313.2	9176.7	9473.6	10298.4	10432.9
55°	10682.0	10169.9	9768.5	10066.3	10942.9	10891.1	11010.7	10544.5	10828.4	11435.1	11371.3
57.5°	10706.9	10100.2	9865.1	10344.2	11547.6	12349.5	12699.2	11906.2	12067.6	12323.6	12180.2
60°	9923.9	9320.2	9301.3	9981.6	11723.0	12727.1	13492.2	13105.6	12889.5	13079.7	12807.8
62.5°	8363.9	7941.5	8138.7	8890.8	11070.5	12518.9	13914.5	14379.7	13538.0	13580.8	13194.3
65°	6386.5	5943.2	6252.0	7199.3	9643.9	12285.8	14034.1	14877.8	13526.0	13723.3	12823.7
67.5°	4229.7	3972.7	4322.4	5366.4	7667.5	10845.3	13972.3	14354.8	13096.7	13166.4	11448.0
70°	2183.6	2120.8	2403.8	3227.6	5155.2	8332.0	13365.6	13156.4	12225.0	11342.4	8830.1
72.5°	699.3	702.3	974.3	1474.3	2779.3	5072.5	10273.5	10560.4	9782.4	8297.1	5391.3
75°	309.8	304.8	407.4	618.6	1158.5	2274.3	6382.5	6692.3	6090.6	4564.5	2266.3
77.5°	223.1	216.2	261.0	361.6	573.8	771.0	2992.5	3229.6	2761.4	1581.9	519.0
80°	157.4	156.4	189.3	254.0	358.6	342.7	945.4	1059.9	848.7	383.5	152.4
82.5°	88.7	91.6	131.5	179.3	218.2	171.3	266.0	292.9	285.9	204.2	66.7
85°	42.8	47.8	85.7	129.5	114.6	66.7	94.6	102.6	119.5	118.5	33.9
87.5°	0.0	0.0	34.9	58.8	30.9	10.0	28.9	32.9	31.9	37.9	8.0
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°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	851.7	845.7	770.0	776.0	793.0	786.0	792.0	778.0	762.1	826.8	825.8
5°	1076.9	1032.0	1008.1	986.2	990.2	945.4	971.3	983.2	981.2	1018.1	1028.0
7.5°	1274.1	1214.3	1166.5	1120.7	1051.0	988.2	1027.1	1052.0	1068.9	1132.6	1157.6
10°	1366.7	1317.9	1299.0	1209.4	1159.5	1120.7	1073.9	1040.0	1053.9	1037.0	1053.9
12.5°	1570.0	1537.1	1464.4	1373.7	1314.0	1234.3	1059.9	914.5	824.8	825.8	819.8
15°	1755.3	1753.3	1644.7	1494.3	1320.9	1093.8	821.8	638.5	553.9	530.0	522.0
17.5°	1997.3	1967.4	1769.2	1547.1	1235.3	846.7	559.8	437.3	429.4	443.3	437.3
20°	2151.7	2107.9	1831.0	1470.3	1018.1	572.8	422.4	387.5	411.4	431.3	426.4
22.5°	2306.1	2240.4	1877.8	1376.7	724.2	419.4	381.5	375.6	390.5	415.4	419.4
25°	2390.8	2377.9	1969.4	1201.4	496.1	367.6	367.6	365.6	370.6	388.5	385.5
27.5°	2636.9	2461.5	1900.7	937.4	383.5	337.7	342.7	340.7	322.8	340.7	341.7
30°	2790.3	2709.6	1905.7	667.4	337.7	298.9	311.8	295.9	269.0	283.9	280.9
32.5°	3099.1	2897.9	1890.7	450.3	307.8	284.9	265.0	242.1	222.1	228.1	223.1
35°	3458.7	3305.3	1688.5	361.6	286.9	252.0	220.2	197.2	176.3	181.3	180.3
37.5°	4174.0	3686.8	1521.2	325.7	273.0	231.1	194.3	162.4	151.4	154.4	157.4
40°	4836.4	4323.4	1209.4	309.8	249.0	206.2	160.4	137.5	130.5	132.5	135.5
42.5°	5826.6	4829.4	913.5	293.9	225.1	174.3	133.5	118.5	111.6	115.6	117.5
45°	6784.9	5259.8	682.4	279.9	205.2	150.4	112.6	102.6	94.6	97.6	101.6
47.5°	7742.2	5737.9	509.0	258.0	183.3	129.5	96.6	89.7	84.7	85.7	90.7
50°	8599.0	5961.1	400.5	231.1	165.4	112.6	87.7	80.7	78.7	79.7	83.7
52.5°	9228.5	5963.1	337.7	207.2	148.4	99.6	82.7	74.7	73.7	75.7	79.7
55°	9797.4	5803.7	292.9	186.3	133.5	90.7	78.7	71.7	71.7	73.7	77.7
57.5°	10174.9	5510.8	254.0	164.4	120.5	85.7	75.7	68.7	67.7	66.7	69.7
60°	10359.2	5111.4	215.2	144.4	108.6	82.7	73.7	60.8	59.8	57.8	59.8
62.5°	10242.6	4611.3	180.3	124.5	96.6	78.7	64.8	52.8	50.8	46.8	49.8
65°	9646.9	4003.6	152.4	106.6	83.7	66.7	54.8	44.8	39.8	34.9	33.9
67.5°	8428.6	3252.5	127.5	91.6	71.7	54.8	44.8	39.8	30.9	26.9	25.9
70°	6316.7	2220.5	105.6	78.7	59.8	46.8	37.9	35.9	28.9	25.9	23.9
72.5°	3705.8	1198.4	88.7	68.7	50.8	38.9	30.9	32.9	28.9	23.9	21.9
75°	1480.3	398.5	70.7	54.8	40.8	27.9	25.9	26.9	25.9	21.9	17.9
77.5°	337.7	125.5	54.8	42.8	31.9	17.9	20.9	22.9	22.9	17.9	13.0
80°	105.6	49.8	31.9	26.9	22.9	10.0	14.9	15.9	11.0	5.0	0.0
82.5°	33.9	13.9	11.0	11.0	10.0	2.0	3.0	2.0	0.0	0.0	0.0
85°	13.0	9.0	7.0	7.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.0	4.0	3.0	4.0	2.0	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)