

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: P366912

Luminaire Tested: **MSA-SA1C-740-U-SL2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366912  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-740-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6231 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

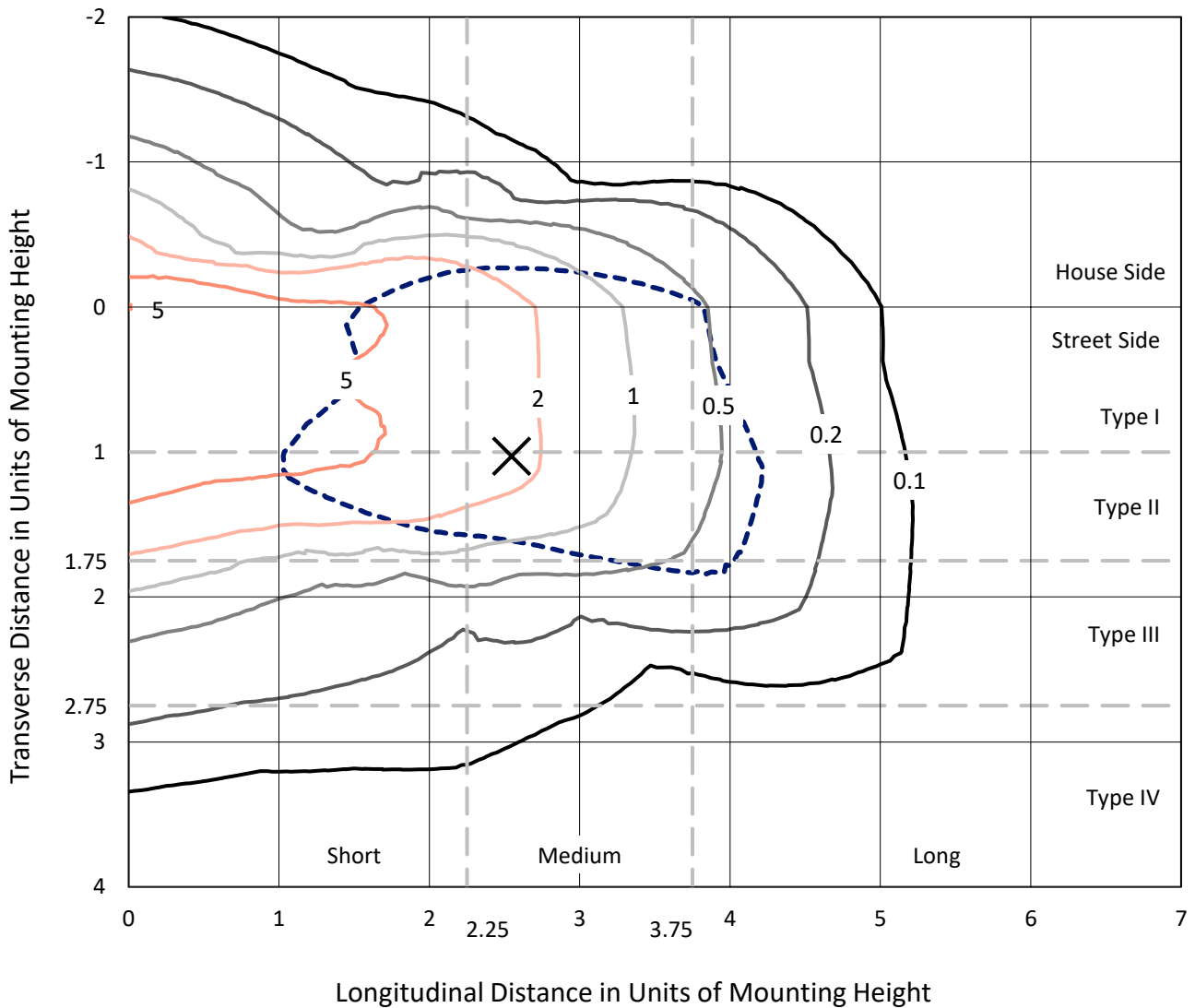
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

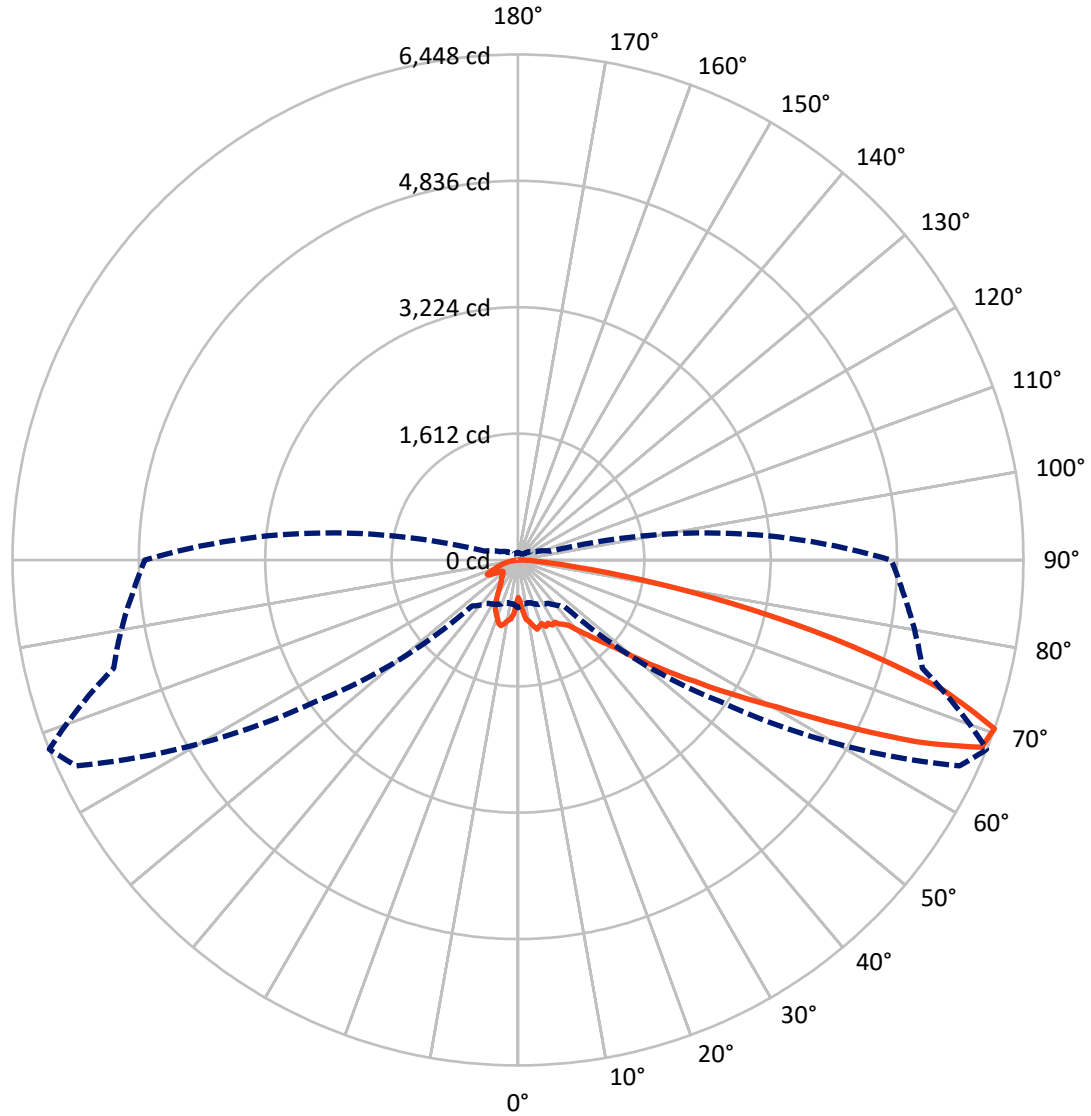
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.5 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1189.6	0.0	1189.6
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	5041.4	0.0	5041.4
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	6231.0	0.0	6231.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.8	1.0
10°-20°	208.0	3.3
20°-30°	316.4	5.1
30°-40°	483.2	7.8
40°-50°	830.9	13.3
50°-60°	1375.2	22.1
60°-70°	1695.5	27.2
70°-80°	1089.1	17.5
80°-90°	168.9	2.7
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°	6231.0	100.0
0°-180°	6231.0	100.0

**Coefficient of Utilization**



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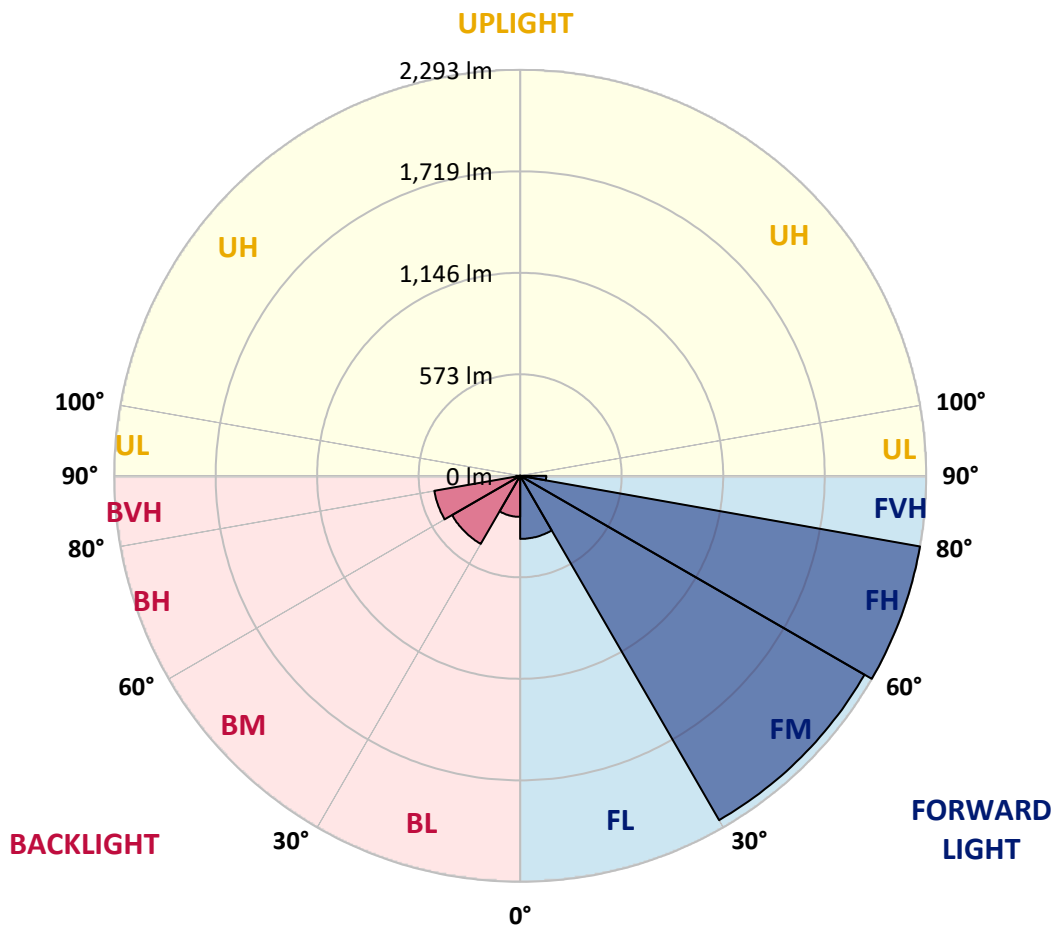
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	356.3	5.7			
FM (30°-60°)	2245.3	36.0			
FH (60°-80°)	2292.5	36.8			G2/5000
FVH (80°-90°)	147.3	2.4			G2/225
BL (0°-30°)	231.8	3.7	B1/500		
BM (30°-60°)	444.0	7.1	B1/1000		
BH (60°-80°)	492.1	7.9	B1/500		G1/500
BVH (80°-90°)	21.7	0.3			G1/100
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 Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8
2.5°	548.9	526.8	504.4	515.3	532.8	548.2	545.0	546.9	525.7	522.9	578.4
5°	646.7	608.7	607.9	608.4	610.0	592.2	635.5	658.0	662.9	685.9	740.4
7.5°	680.6	665.3	649.6	657.4	637.6	639.4	692.6	751.1	764.9	781.6	856.1
10°	673.6	659.0	663.7	665.0	668.6	698.1	732.3	788.3	800.1	853.3	872.6
12.5°	674.6	672.0	693.9	694.7	733.8	786.8	800.3	852.0	856.7	895.8	976.4
15°	710.4	728.4	716.1	722.6	730.2	793.6	813.1	887.2	915.3	965.7	1026.2
17.5°	780.0	785.2	748.4	738.8	763.6	782.9	827.5	859.5	889.0	1029.6	1113.0
20°	796.2	810.3	766.4	716.6	769.0	795.9	826.9	841.5	864.5	1039.0	1157.4
22.5°	865.5	836.3	783.4	740.1	757.3	783.4	805.8	860.8	921.1	1012.1	1201.7
25°	904.9	888.0	840.8	794.3	779.7	780.5	823.8	873.1	894.0	1051.5	1210.6
27.5°	1000.1	973.0	866.8	858.0	802.9	760.2	826.7	903.3	939.9	1020.7	1253.8
30°	1119.3	1098.7	959.4	947.7	863.7	789.1	863.2	925.8	920.6	1040.8	1283.8
32.5°	1215.8	1250.2	1109.6	1017.1	957.3	885.9	851.7	921.9	973.8	1087.5	1334.7
35°	1353.5	1385.8	1226.7	1164.1	1034.5	930.7	931.8	975.6	1007.7	1142.0	1391.5
37.5°	1591.8	1563.4	1435.3	1336.5	1253.6	1098.7	1052.3	1036.9	1062.7	1208.7	1502.9
40°	1763.7	1739.7	1588.9	1532.6	1371.2	1281.2	1154.0	1139.4	1185.0	1277.6	1593.9
42.5°	1967.3	1924.6	1784.3	1737.9	1569.1	1406.9	1278.6	1287.0	1309.1	1407.4	1717.0
45°	2174.7	2070.9	1991.3	1987.7	1875.0	1651.0	1478.6	1471.9	1472.6	1598.6	1855.2
47.5°	2339.2	2245.9	2154.8	2111.6	2054.7	2073.2	1769.1	1689.6	1665.6	1791.1	2062.5
50°	2450.6	2343.1	2240.1	2229.9	2381.7	2481.6	2041.9	1956.9	1971.8	2066.4	2339.0
52.5°	2452.9	2325.4	2218.0	2289.1	2646.7	2789.6	2511.9	2274.3	2321.7	2386.2	2699.6
55°	2282.4	2150.1	2080.3	2242.5	2750.2	3154.9	3172.2	2782.8	2728.0	2751.8	3130.7
57.5°	1922.7	1789.2	1748.5	1942.8	2553.8	3507.3	3969.6	3390.4	3229.8	3130.7	3572.5
60°	1447.3	1331.8	1306.5	1430.4	2117.3	3403.7	4615.3	4146.7	3819.4	3553.9	4015.5
62.5°	1085.4	1002.4	964.4	982.1	1465.1	3067.1	5039.4	5102.2	4638.8	4016.0	4448.4
65°	882.0	814.9	781.0	758.1	911.2	2371.6	4962.7	5906.5	5595.9	4501.4	4785.4
67.5°	736.7	677.3	661.6	684.0	720.3	1375.9	4362.9	6356.3	6377.4	4980.2	4982.2
70°	611.5	567.5	561.7	625.4	673.1	830.3	3151.3	6215.0	6448.1	5339.3	4936.1
72.5°	472.5	448.8	448.0	547.9	668.6	707.8	1876.6	5369.0	5682.2	5224.5	4484.4
75°	327.8	311.4	323.9	450.4	653.3	717.9	1071.0	4181.9	4416.3	4445.8	3592.3
77.5°	225.6	211.8	225.3	325.7	583.4	735.1	749.2	3023.8	3049.8	2981.3	2057.6
80°	157.0	147.3	157.8	230.5	454.0	727.6	637.9	1903.7	1746.7	1330.5	658.7
82.5°	97.3	94.4	105.9	164.3	319.7	661.9	604.5	982.4	750.0	367.2	235.2
85°	51.1	46.9	61.5	107.2	200.0	519.5	566.4	448.3	289.5	130.4	94.4
87.5°	15.1	13.6	23.7	43.3	84.8	232.9	324.2	190.1	108.0	38.3	29.5
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°	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8	477.8
2.5°	582.3	579.5	540.9	545.8	554.2	556.2	556.0	541.9	527.0	568.5	567.2
5°	741.7	715.8	696.5	692.4	668.6	644.9	653.3	650.4	646.7	665.5	667.9
7.5°	856.4	820.7	798.3	740.6	685.9	638.4	653.5	658.2	648.8	682.7	692.9
10°	886.7	858.5	834.2	760.2	729.9	702.3	661.3	614.7	608.4	588.8	591.2
12.5°	964.6	960.7	878.1	812.9	773.5	718.5	630.0	573.5	525.0	527.3	513.2
15°	1026.2	1028.3	928.9	837.6	732.0	648.0	544.0	473.6	423.8	413.9	403.7
17.5°	1108.8	1104.7	933.1	807.9	674.1	551.0	423.5	353.6	345.3	351.0	342.1
20°	1144.8	1108.1	906.5	734.1	583.6	418.6	320.0	282.9	299.1	322.1	322.6
22.5°	1177.2	1114.3	892.7	674.6	463.1	304.3	256.9	250.1	269.1	300.2	302.8
25°	1175.9	1143.3	867.9	614.7	359.1	237.6	223.2	228.2	250.9	283.2	285.0
27.5°	1235.1	1121.1	803.5	535.9	270.4	203.4	207.1	216.2	226.9	257.7	263.7
30°	1234.5	1162.3	771.1	440.2	217.2	186.5	195.8	203.7	212.5	240.7	244.1
32.5°	1263.8	1135.4	751.6	342.4	194.8	182.3	184.6	192.5	205.2	224.3	226.6
35°	1299.0	1166.0	689.0	272.0	186.5	178.6	180.5	184.9	196.6	214.1	216.4
37.5°	1411.9	1171.7	664.2	229.2	185.9	177.1	176.8	179.2	192.5	208.4	215.4
40°	1455.9	1224.1	592.0	214.1	184.1	177.1	173.4	174.7	185.7	206.0	211.5
42.5°	1561.6	1241.6	538.5	208.9	184.1	173.9	168.2	170.3	183.1	201.1	209.7
45°	1670.3	1266.4	474.9	207.8	183.9	173.7	162.7	167.4	177.9	193.0	202.4
47.5°	1825.2	1355.5	411.3	204.7	181.8	175.0	161.4	161.2	170.3	183.3	192.2
50°	2077.9	1494.8	362.0	200.8	182.0	173.9	158.8	155.2	161.2	172.6	181.2
52.5°	2429.7	1732.1	342.7	198.7	179.9	169.8	154.4	148.6	152.0	161.2	169.5
55°	2838.1	2052.6	361.7	198.7	175.8	163.2	148.1	141.3	143.2	149.4	157.5
57.5°	3315.3	2450.8	453.8	195.8	170.6	155.4	140.6	132.7	133.3	138.7	146.0
60°	3813.7	2895.7	660.0	193.5	166.9	146.8	131.7	123.6	122.8	128.0	134.6
62.5°	4312.8	3306.2	877.0	199.0	165.9	139.5	122.3	114.2	114.0	118.7	124.1
65°	4709.7	3586.8	931.0	221.1	172.6	131.2	112.7	105.1	104.6	108.5	114.5
67.5°	4904.5	3627.5	707.2	248.8	187.0	123.3	103.3	96.2	95.7	99.9	105.1
70°	4760.3	3349.5	436.5	251.7	186.2	114.2	93.6	87.6	86.6	91.0	94.9
72.5°	4226.8	2929.9	331.7	222.7	161.2	101.2	84.0	78.8	77.2	81.1	84.8
75°	3392.5	2326.2	265.7	179.7	127.0	85.3	74.3	69.4	67.5	71.2	74.3
77.5°	1976.2	1308.6	194.3	140.3	96.0	69.6	63.4	58.9	56.9	60.8	63.1
80°	642.6	436.0	122.0	100.7	70.2	54.5	51.4	48.2	46.2	48.8	49.5
82.5°	230.8	162.2	67.5	61.8	46.7	39.1	38.9	37.0	34.4	35.5	35.5
85°	102.2	74.1	40.2	33.1	27.9	20.9	24.5	23.2	20.6	20.1	19.3
87.5°	28.7	24.5	14.6	11.2	9.1	3.4	7.8	7.0	5.7	5.2	3.7
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)