

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: P596613

Luminaire Tested: **MSA-SA2C-827-U-SL3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-827-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7447 lumens  
Efficiency: N/A  
Efficacy: 65.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

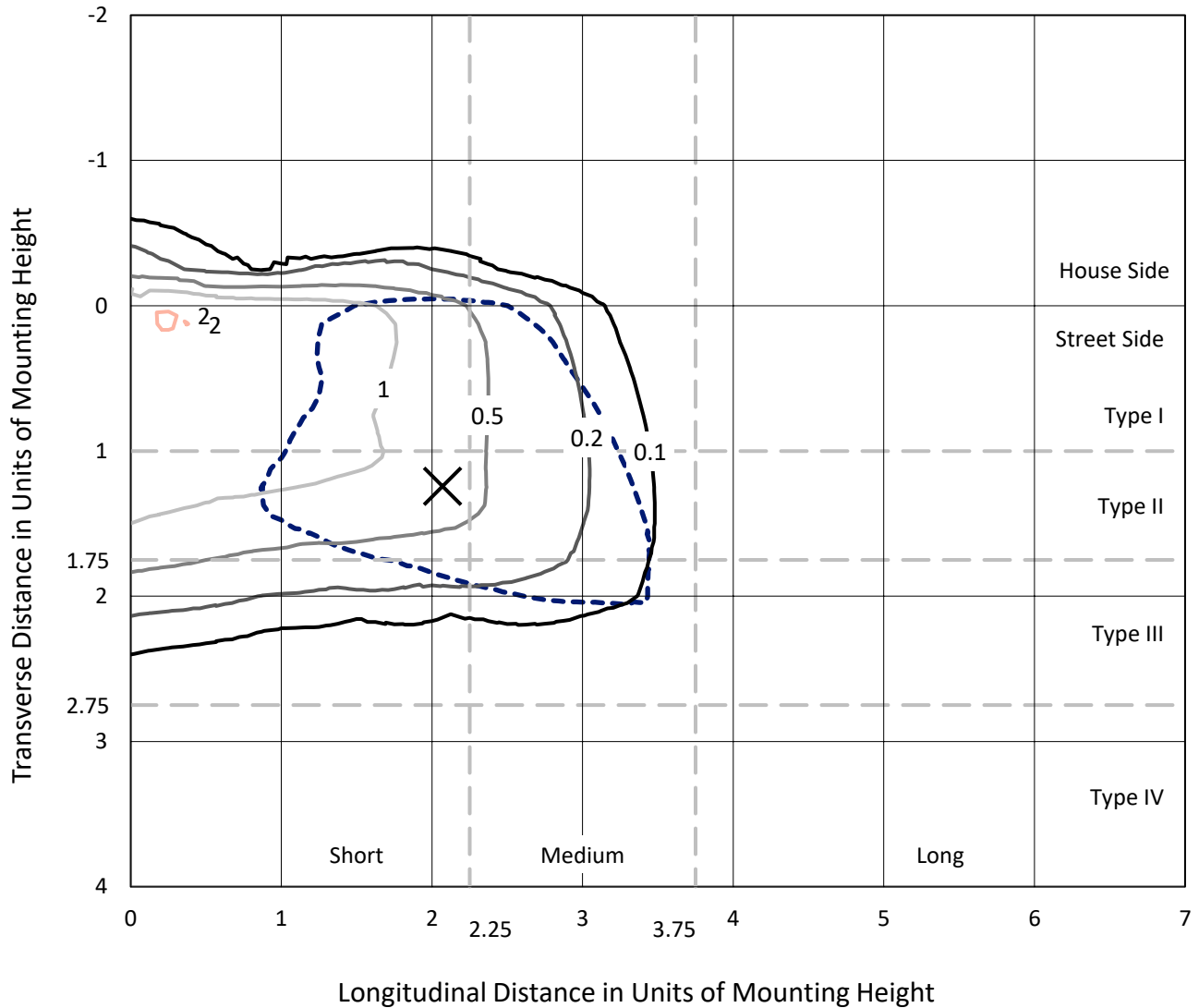
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

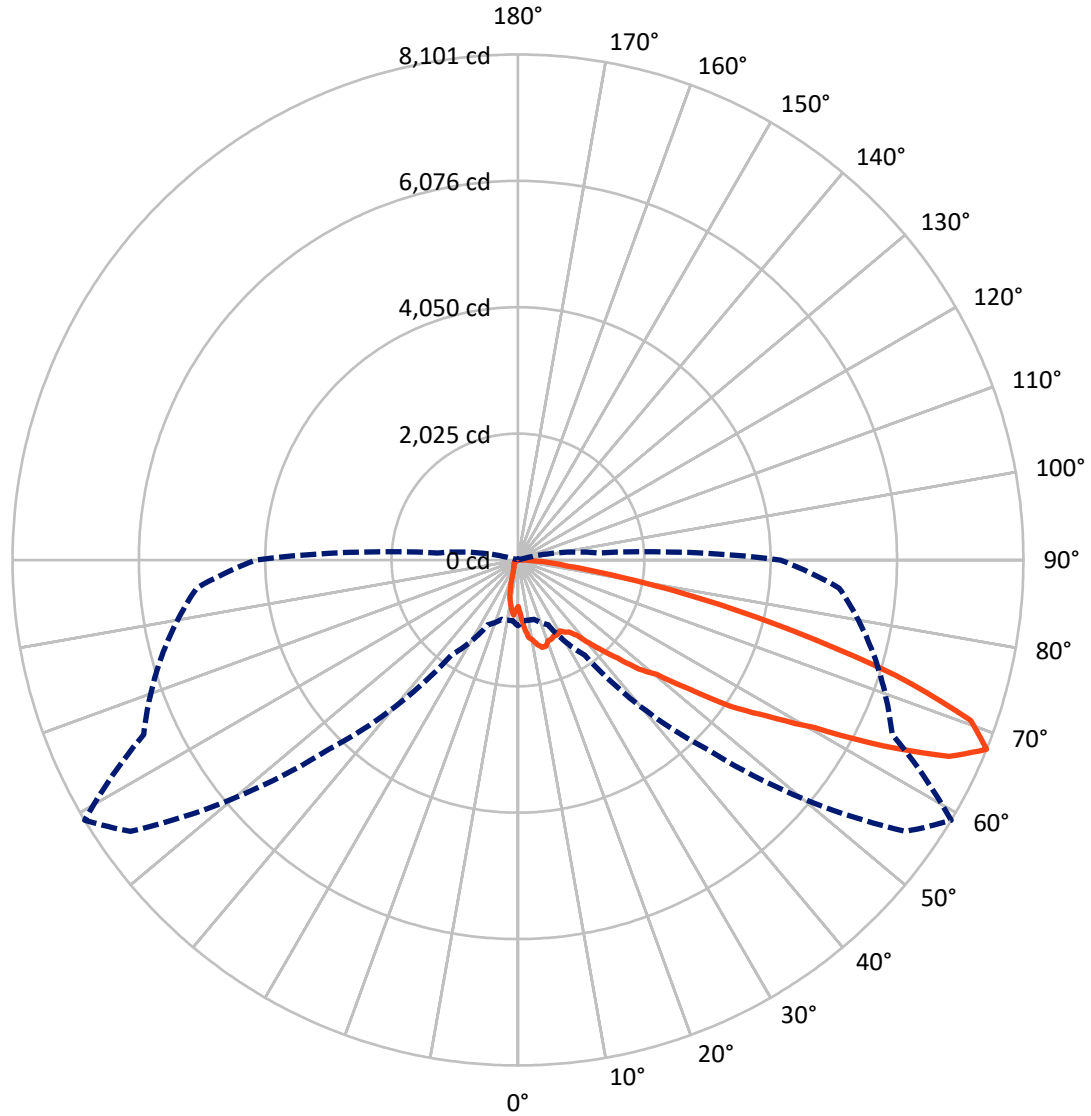
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	633.3	0.0	633.3
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	6813.7	0.0	6813.7
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	7447.0	0.0	7447.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	1.2
10°-20°	255.1	3.4
20°-30°	379.4	5.1
30°-40°	585.4	7.9
40°-50°	1044.7	14.0
50°-60°	1859.1	25.0
60°-70°	2165.2	29.1
70°-80°	962.9	12.9
80°-90°	104.6	1.4
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°	7447.0	100.0
0°-180°	7447.0	100.0

**Coefficient of Utilization**

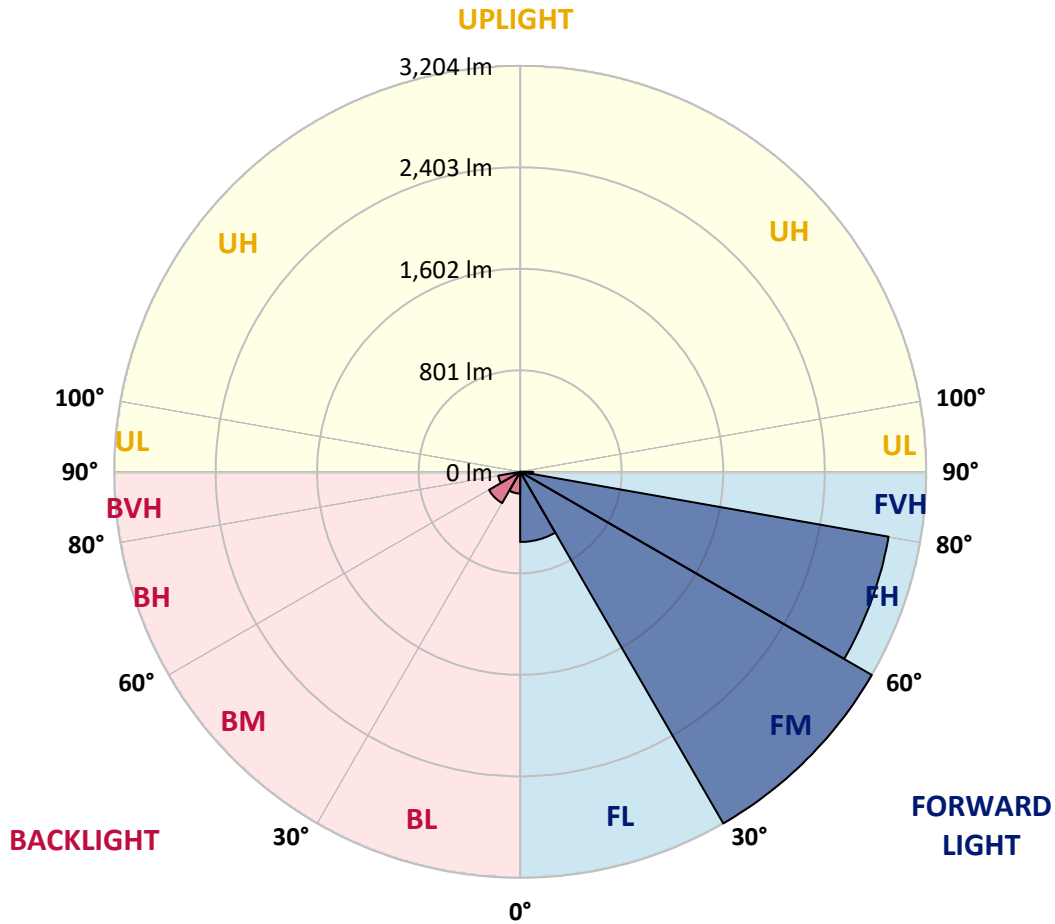


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	553.8	7.4			
FM (30°-60°)	3204.4	43.0			
FH (60°-80°)	2952.7	39.6			G2/5000
FVH (80°-90°)	102.7	1.4			G2/225
BL (0°-30°)	171.3	2.3	B1/500		
BM (30°-60°)	284.8	3.8	B1/1000		
BH (60°-80°)	175.4	2.4	B1/500		G1/500
BVH (80°-90°)	1.9	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°	59°	65°	75°	85°
0°	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1
2.5°	971.3	934.8	882.7	898.2	912.1	925.3	903.5	891.0	885.0	831.4	898.6
5°	1192.7	1147.1	1123.3	1117.3	1102.2	1068.6	1124.4	1099.5	1107.8	1118.4	1140.3
7.5°	1260.2	1239.4	1205.1	1217.9	1160.6	1155.7	1233.0	1254.5	1282.8	1263.6	1290.0
10°	1225.5	1189.7	1205.9	1201.4	1199.1	1249.6	1303.9	1305.0	1347.3	1367.6	1278.3
12.5°	1156.9	1161.0	1219.1	1214.6	1290.0	1391.0	1403.5	1390.3	1459.3	1423.8	1410.3
15°	1202.5	1236.4	1204.4	1215.3	1242.1	1368.4	1412.5	1453.2	1518.5	1539.6	1448.0
17.5°	1257.5	1260.9	1202.5	1188.9	1256.4	1315.2	1419.3	1452.9	1459.3	1644.4	1532.8
20°	1227.7	1256.8	1187.0	1101.4	1206.3	1286.2	1391.8	1381.2	1424.2	1675.3	1552.0
22.5°	1306.9	1265.5	1176.1	1111.6	1147.1	1219.8	1309.2	1378.2	1442.7	1601.4	1576.9
25°	1314.5	1299.4	1219.8	1162.5	1156.5	1175.0	1299.4	1343.9	1444.9	1667.8	1555.8
27.5°	1399.3	1382.0	1219.1	1224.7	1168.2	1111.2	1251.9	1356.3	1486.0	1627.4	1600.7
30°	1508.7	1510.2	1300.1	1317.9	1237.2	1145.5	1290.7	1319.4	1513.9	1691.9	1633.9
32.5°	1619.5	1665.2	1460.4	1366.5	1341.2	1275.6	1242.5	1374.8	1483.4	1802.0	1716.8
35°	1788.1	1819.0	1592.4	1508.3	1409.1	1334.5	1373.7	1421.2	1593.1	1948.0	1825.8
37.5°	2073.5	2017.7	1829.2	1682.9	1659.1	1549.0	1568.6	1526.0	1705.1	2119.9	2041.5
40°	2234.2	2183.6	1987.6	1916.3	1764.7	1781.7	1719.8	1744.7	1867.6	2299.0	2237.9
42.5°	2401.6	2353.3	2181.4	2130.8	1986.4	1916.3	1888.4	1977.7	2116.9	2597.3	2519.6
45°	2569.8	2447.2	2374.4	2399.7	2334.8	2196.1	2163.6	2243.2	2389.1	2963.8	2816.7
47.5°	2711.5	2608.2	2553.5	2541.8	2516.6	2709.3	2577.3	2612.4	2676.8	3288.1	3187.0
50°	2967.2	2865.4	2779.8	2756.0	2879.0	3152.3	2948.7	2880.8	3009.8	3679.9	3616.1
52.5°	3336.3	3206.6	3070.5	3070.9	3302.8	3452.9	3549.4	3430.2	3454.4	4110.8	4082.6
55°	3633.1	3468.3	3355.6	3444.6	3790.3	3874.4	4242.8	4138.4	4107.1	4510.5	4475.9
57.5°	3673.8	3476.2	3422.7	3578.8	4052.0	4589.0	4985.3	4724.3	4676.5	4845.0	4914.0
60°	3293.7	3084.1	3124.4	3375.6	4137.2	5024.5	5667.0	5454.0	5149.7	5236.8	5284.3
62.5°	2456.6	2289.2	2402.3	2734.9	3808.8	5316.4	6456.2	6555.0	5698.7	5530.9	5520.7
65°	1593.9	1489.1	1563.3	1836.0	2882.3	5283.2	7161.4	7589.7	6131.2	5770.7	5595.0
67.5°	1054.3	974.7	985.3	1146.7	1863.9	4296.7	7582.9	8100.7	6617.6	5906.8	5169.3
70°	785.8	723.2	727.0	814.5	1106.3	2833.7	6995.1	7697.6	6795.2	5435.1	4172.3
72.5°	566.7	524.9	560.0	657.2	881.6	1498.5	5213.8	6339.4	5925.3	4286.9	2811.1
75°	392.5	365.0	422.3	549.8	804.7	930.2	3445.3	4563.3	4153.1	2689.7	1270.7
77.5°	217.6	209.3	291.9	448.0	730.4	762.4	2110.5	2998.5	2303.5	964.2	302.4
80°	95.0	92.0	141.4	336.3	613.9	688.9	1188.2	1662.5	906.1	171.9	97.7
82.5°	40.7	39.2	60.3	202.5	446.1	576.2	732.7	800.1	311.8	53.2	55.4
85°	7.2	7.9	24.1	106.7	271.5	292.6	530.5	473.6	156.9	25.3	39.6
87.5°	0.0	0.0	3.8	20.7	50.9	83.7	230.0	165.9	29.8	8.3	6.8
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°	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1	745.1
2.5°	908.0	886.9	806.6	796.4	785.4	769.2	763.2	728.5	724.0	768.5	768.5
5°	1130.1	1054.7	978.1	917.8	863.9	789.2	768.1	746.2	728.5	724.0	737.9
7.5°	1247.4	1155.4	1035.1	881.6	757.2	648.9	603.7	572.0	536.6	547.1	552.8
10°	1240.9	1143.3	989.8	792.6	654.6	535.1	420.1	352.9	315.6	297.1	294.9
12.5°	1303.9	1211.9	959.3	721.7	545.6	380.5	264.3	216.4	188.9	189.3	187.0
15°	1340.5	1240.2	923.8	632.0	384.2	244.7	183.3	172.7	168.9	173.1	170.8
17.5°	1405.0	1270.0	843.5	498.1	264.3	184.8	168.6	164.4	169.3	178.0	175.7
20°	1400.1	1218.3	729.3	351.1	195.3	166.3	159.5	153.1	163.3	172.3	170.8
22.5°	1395.5	1167.8	621.8	259.0	163.3	151.6	145.9	143.3	148.6	159.1	161.4
25°	1355.6	1142.9	512.8	194.6	147.8	137.6	135.0	132.7	134.6	143.3	142.9
27.5°	1404.6	1079.9	395.9	163.3	136.9	124.8	122.5	118.8	115.0	122.5	123.7
30°	1394.4	1088.6	310.3	143.7	125.9	109.7	110.5	102.6	95.8	102.6	102.6
32.5°	1431.4	1025.3	248.5	130.5	115.0	103.3	93.9	85.6	80.7	84.8	85.6
35°	1485.3	1027.9	194.6	122.2	105.6	92.0	80.7	72.4	67.9	69.8	70.9
37.5°	1665.9	1009.8	162.5	115.8	102.2	85.2	73.5	62.6	59.6	61.8	63.0
40°	1783.6	1058.1	143.3	112.4	93.5	78.4	63.0	55.1	52.4	53.5	55.4
42.5°	2005.3	1084.8	133.9	108.6	85.6	67.1	53.9	49.4	45.6	47.1	48.6
45°	2242.5	1130.5	126.7	104.4	79.6	58.8	47.5	43.7	38.8	39.2	40.7
47.5°	2533.9	1239.1	118.4	97.3	71.3	53.5	42.2	36.6	32.1	31.7	33.6
50°	2925.3	1384.2	110.9	88.2	66.0	49.0	37.0	29.8	26.0	24.9	26.4
52.5°	3343.1	1572.0	102.9	81.8	59.6	43.0	31.7	24.1	20.7	20.0	21.1
55°	3757.2	1752.3	95.4	77.7	52.8	37.0	26.8	20.0	17.0	16.2	17.0
57.5°	4228.9	1947.2	85.6	69.4	46.4	32.1	22.2	16.6	14.0	13.2	13.6
60°	4584.1	2015.8	77.3	60.3	40.3	28.3	18.9	13.2	11.3	10.6	10.9
62.5°	4752.6	1903.8	69.4	52.4	35.4	24.5	15.8	10.9	9.4	8.7	8.7
65°	4708.9	1655.7	61.5	44.9	30.5	20.4	12.4	9.4	8.3	7.2	6.8
67.5°	4203.6	1295.6	52.4	37.7	25.6	16.6	10.6	9.0	7.5	6.8	5.7
70°	3333.7	938.2	42.6	31.3	21.5	13.6	8.3	8.3	7.2	6.8	5.3
72.5°	2185.1	590.5	34.7	25.3	17.7	10.6	6.4	7.5	6.8	6.8	4.9
75°	946.8	211.2	27.9	20.4	14.7	7.2	5.7	6.8	7.2	6.8	5.7
77.5°	221.7	65.6	21.9	16.2	12.1	4.9	5.7	6.8	7.2	6.4	4.9
80°	83.3	27.9	14.3	10.6	9.4	3.0	4.9	4.1	3.8	2.6	0.8
82.5°	50.5	11.7	7.5	5.3	4.5	0.8	2.3	1.5	0.8	0.8	0.0
85°	35.8	5.7	4.1	3.8	2.3	0.0	0.4	0.0	0.0	0.4	0.0
87.5°	4.9	1.5	1.9	1.9	1.5	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)