

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: P596775

Luminaire Tested: **MSA-SA4B-827-U-T2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596775  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-827-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10772 lumens  
Efficiency: N/A  
Efficacy: 63.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

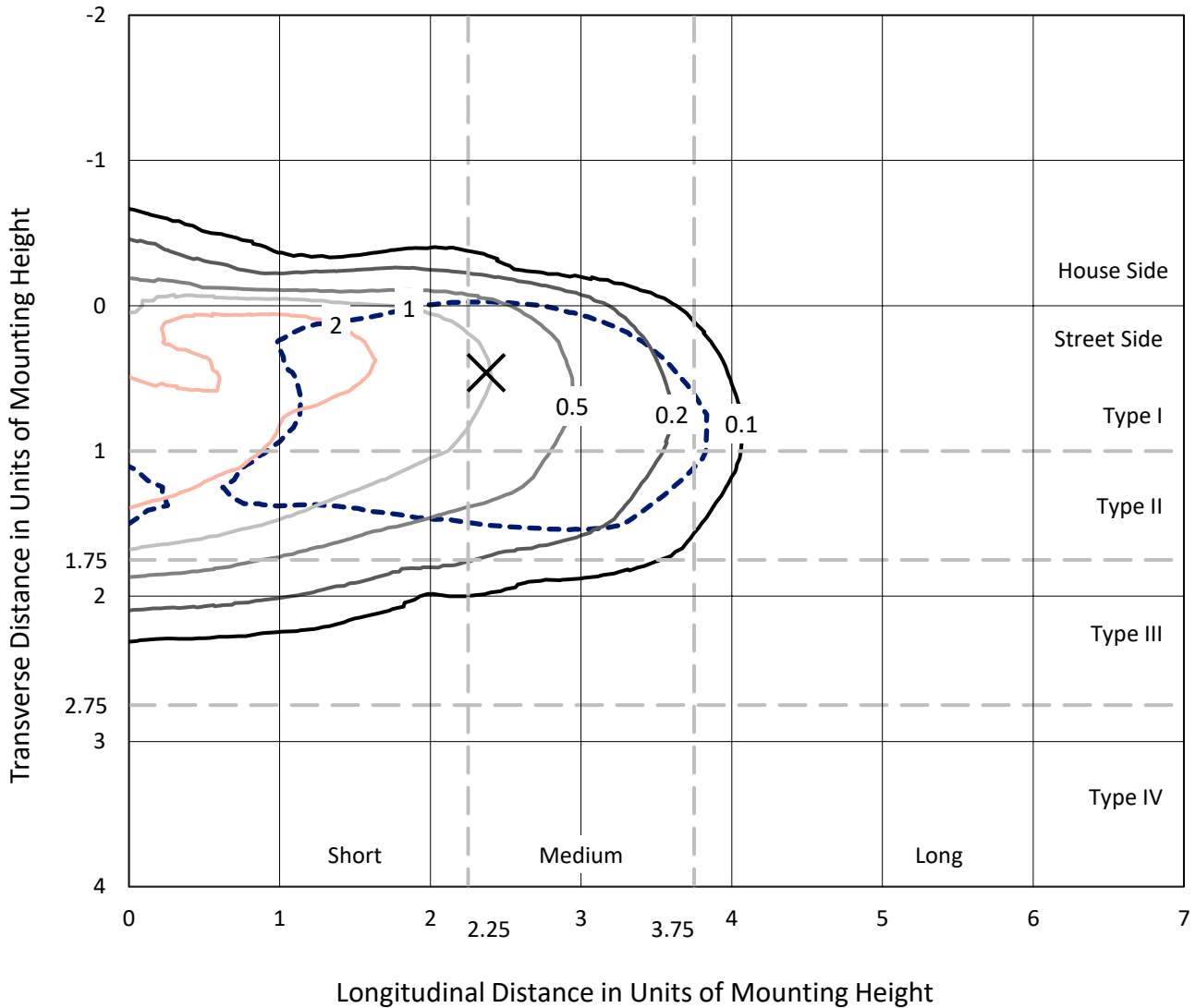
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

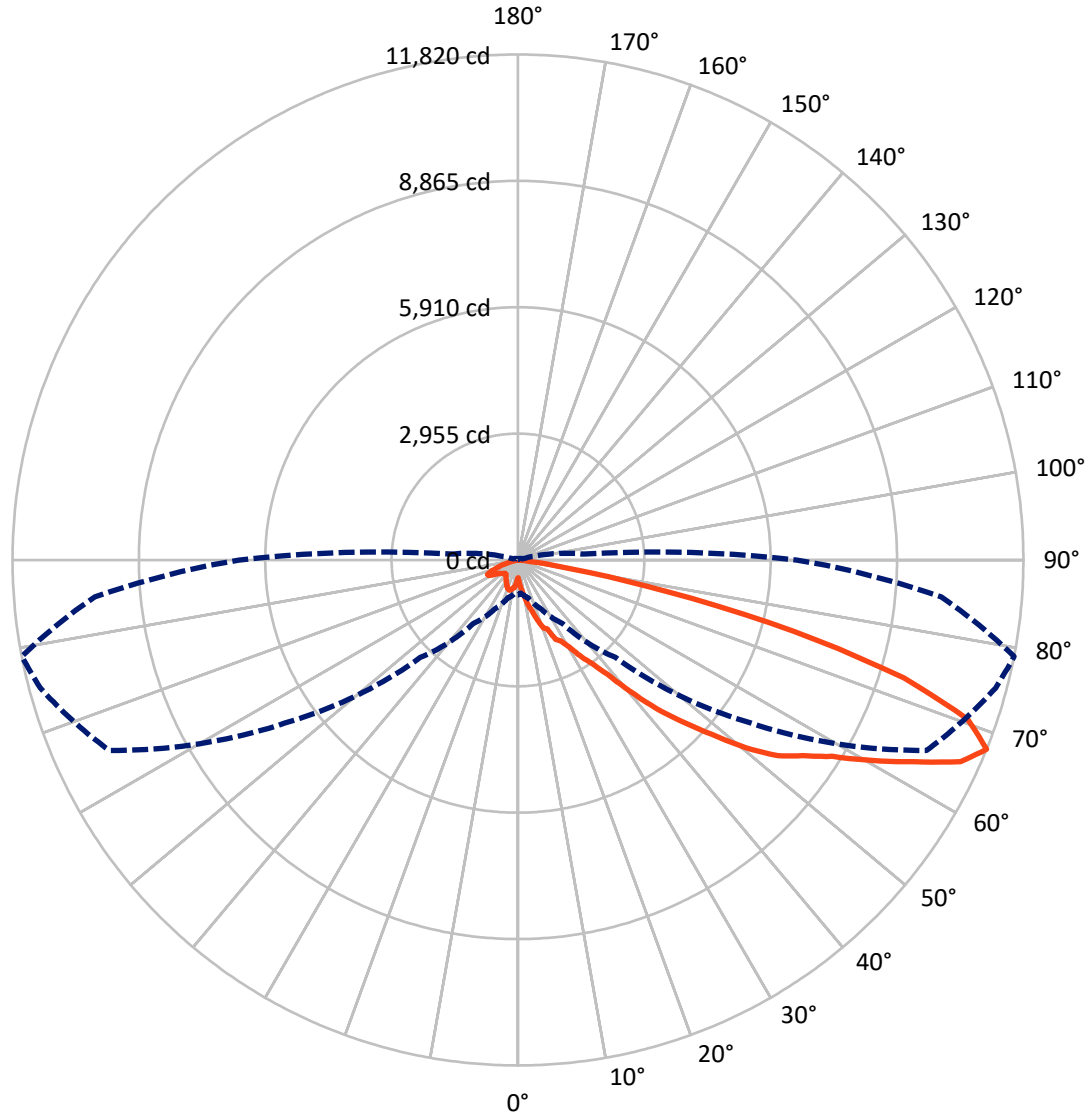
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	707.8	0.0	707.8
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	10064.2	0.0	10064.2
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	10772.0	0.0	10772.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.4	0.6
10°-20°	240.7	2.2
20°-30°	464.4	4.3
30°-40°	912.2	8.5
40°-50°	1827.3	17.0
50°-60°	2920.7	27.1
60°-70°	2938.7	27.3
70°-80°	1325.7	12.3
80°-90°	82.0	0.8
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°	10772.0	100.0
0°-180°	10772.0	100.0

**Coefficient of Utilization**

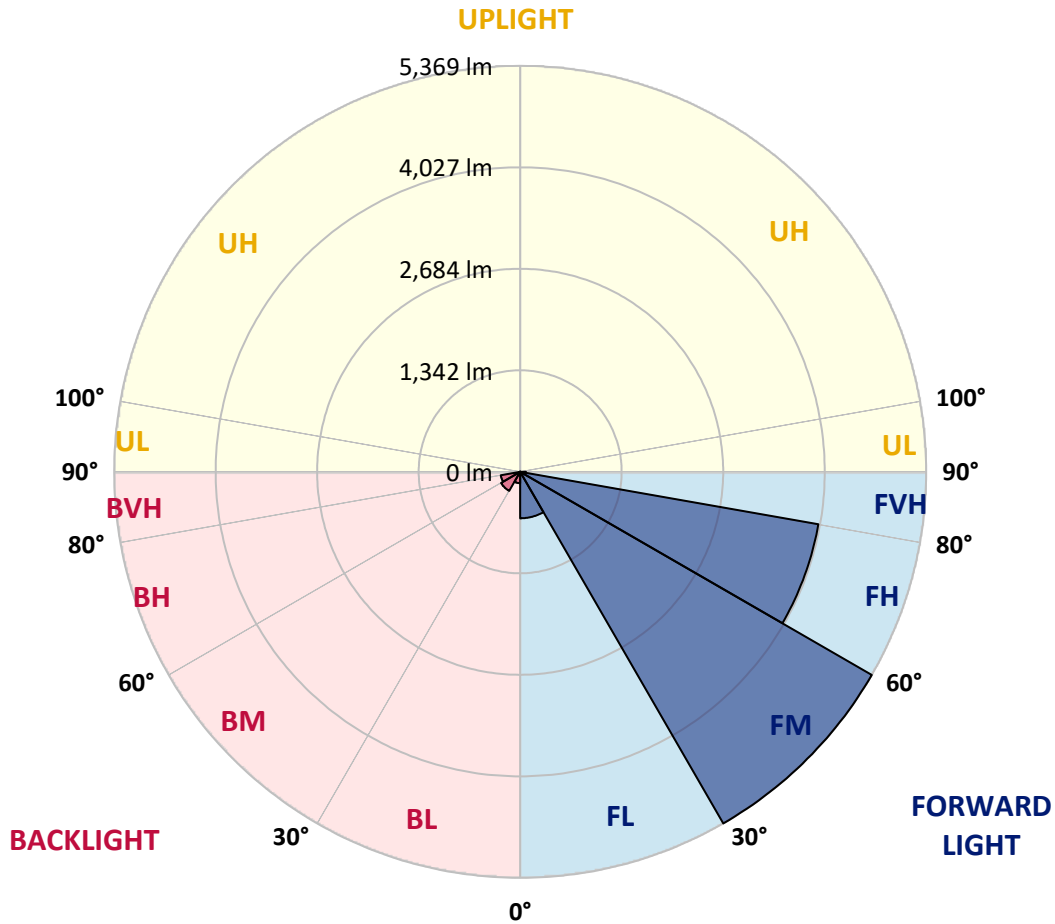


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	615.0	5.7			
FM (30°-60°)	5368.9	49.8			
FH (60°-80°)	4003.5	37.2			G2/5000
FVH (80°-90°)	76.8	0.7			G1/100
BL (0°-30°)	150.4	1.4	B1/500		
BM (30°-60°)	291.2	2.7	B1/1000		
BH (60°-80°)	260.9	2.4	B1/500		G1/500
BVH (80°-90°)	5.2	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1
2.5°	560.6	540.4	507.7	526.1	524.9	534.4	516.6	497.0	465.5	497.0	499.4
5°	807.0	769.6	745.8	741.1	714.9	690.6	685.3	665.1	649.6	621.7	646.7
7.5°	1005.3	988.1	945.9	941.2	877.1	841.4	852.7	843.8	785.0	755.9	780.3
10°	1089.6	1060.0	1065.9	1060.0	1032.6	1042.7	1019.6	992.9	945.9	897.8	837.3
12.5°	1122.3	1117.6	1166.8	1160.9	1225.0	1302.2	1250.6	1206.0	1097.4	1085.5	1002.9
15°	1192.4	1222.1	1214.9	1239.9	1280.8	1412.1	1410.9	1421.6	1306.4	1244.6	1125.3
17.5°	1254.7	1276.7	1241.1	1269.6	1381.2	1460.8	1567.1	1525.5	1538.6	1475.6	1290.9
20°	1228.0	1252.9	1217.3	1200.1	1396.6	1547.5	1689.4	1659.1	1737.5	1698.3	1443.6
22.5°	1394.9	1347.9	1258.3	1202.5	1349.1	1545.7	1732.7	1859.2	1845.6	1749.4	1585.5
25°	1600.9	1572.4	1464.9	1366.4	1379.4	1535.0	1869.3	2055.2	2095.6	2054.6	1720.3
27.5°	1878.8	1872.3	1652.6	1609.8	1482.7	1488.1	1890.7	2302.2	2210.2	2146.0	1877.6
30°	2241.6	2190.0	1929.3	1873.5	1685.8	1593.8	2021.3	2515.4	2447.7	2360.4	2025.5
32.5°	2631.8	2639.5	2307.0	2122.9	1972.0	1862.8	1969.7	2615.1	2741.6	2671.0	2210.2
35°	3074.7	3109.2	2702.4	2486.3	2192.9	2032.0	2191.8	2921.5	3148.4	2962.5	2457.8
37.5°	3757.0	3755.8	3280.8	2850.3	2637.1	2462.5	2561.7	3200.0	3648.4	3387.1	2901.9
40°	4357.4	4226.7	3784.9	3290.3	2957.8	2910.3	2838.4	3581.3	4182.2	4024.8	3296.8
42.5°	4805.7	4713.7	4179.8	3795.0	3382.9	3232.1	3206.6	4140.0	4970.2	4749.9	3860.4
45°	5341.9	5040.3	4647.2	4300.4	3880.5	3836.6	3776.6	4707.1	5887.0	5390.6	4350.3
47.5°	5822.3	5538.5	5166.7	4721.4	4239.2	4601.4	4371.0	5205.3	6553.9	6087.7	4890.6
50°	6226.7	5925.0	5508.8	5169.7	4963.1	5208.9	4824.7	5615.7	7274.2	6896.5	5396.0
52.5°	6432.7	6091.3	5769.5	5559.8	5686.3	5631.1	5439.9	6112.7	7888.2	7605.5	5843.7
55°	6263.5	5929.8	5795.0	5898.9	6283.1	6123.4	6138.8	6882.9	8467.7	8078.2	6233.2
57.5°	5512.9	5208.3	5268.3	5552.7	6289.0	6707.1	6935.7	7631.1	8932.7	8667.3	6834.2
60°	4170.3	3925.1	4147.2	4651.9	5697.6	6590.7	7501.0	8379.3	9597.2	9514.0	7743.9
62.5°	2546.9	2413.8	2728.6	3358.0	4540.3	6020.0	7830.6	9376.9	10307.9	10396.4	8708.8
65°	1299.3	1239.3	1501.7	2055.2	3067.6	4945.2	7592.5	9996.8	11042.5	11369.1	9628.6
67.5°	818.3	779.7	919.8	1253.5	1809.9	3225.6	6647.7	10538.9	11561.5	11819.8	9935.6
70°	567.1	542.7	663.9	860.4	1141.9	1737.5	4935.7	10033.0	11150.0	11161.8	9192.8
72.5°	359.8	340.8	459.0	637.2	842.6	897.2	2829.5	7872.7	9544.3	9434.5	7444.6
75°	233.4	223.9	291.6	466.7	647.3	553.4	1398.4	5312.2	6843.7	6671.5	4944.7
77.5°	167.5	161.5	195.4	311.8	460.8	387.2	627.1	3166.2	3923.9	3547.4	2400.2
80°	100.9	100.4	141.3	195.4	327.8	273.2	289.8	1437.6	1521.3	1240.5	733.4
82.5°	50.5	52.3	79.0	125.9	210.8	178.7	132.4	478.6	408.5	301.1	148.5
85°	11.9	14.8	41.6	86.7	105.7	71.3	62.9	125.3	112.2	84.9	43.3
87.5°	0.0	0.0	13.1	20.8	28.5	11.9	21.4	23.8	30.3	23.8	8.9
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°	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1	415.1
2.5°	500.0	492.9	449.5	438.2	437.0	424.6	427.5	415.7	416.3	443.0	443.0
5°	637.2	595.6	554.0	517.2	492.3	456.6	443.6	438.2	433.5	444.2	450.7
7.5°	748.2	687.0	612.2	532.1	457.8	406.8	399.6	386.6	381.8	392.5	400.8
10°	797.5	721.5	618.8	501.8	432.3	390.7	356.3	337.9	334.3	333.7	336.7
12.5°	902.0	807.6	625.9	490.5	415.1	369.3	330.2	299.3	270.8	273.7	270.8
15°	985.7	874.1	625.9	463.2	373.5	327.8	258.9	243.5	239.3	245.8	240.5
17.5°	1112.2	940.0	594.4	414.5	337.9	254.7	228.6	227.4	235.7	245.2	239.3
20°	1188.2	948.9	541.6	358.7	277.3	220.9	211.4	201.9	213.8	221.5	218.5
22.5°	1267.2	949.5	488.7	329.0	223.3	201.3	185.9	178.1	179.9	187.1	188.2
25°	1301.0	926.3	439.4	289.8	202.5	179.9	163.9	155.6	152.6	156.2	155.0
27.5°	1393.1	881.8	386.0	247.0	192.4	159.7	144.9	134.8	125.9	131.8	133.0
30°	1406.1	867.6	356.9	219.7	179.3	141.3	128.3	117.6	111.0	119.4	119.4
32.5°	1447.7	789.2	342.0	208.4	165.7	130.6	112.8	105.1	103.9	109.3	109.9
35°	1511.8	754.7	320.1	199.5	153.2	118.2	101.5	98.0	96.8	100.9	100.9
37.5°	1729.2	712.0	295.7	191.8	142.5	111.6	98.6	92.6	93.2	96.8	99.2
40°	1873.5	717.3	259.5	182.3	130.0	105.7	92.6	88.5	87.9	89.7	91.4
42.5°	2141.3	721.5	243.5	172.2	120.5	98.6	86.7	83.7	81.4	83.1	84.9
45°	2440.6	743.5	235.1	163.9	115.2	94.4	81.4	79.6	74.2	75.4	77.8
47.5°	2729.2	823.6	225.1	152.0	110.4	92.0	76.0	71.9	68.3	67.7	70.1
50°	3056.9	901.4	213.8	139.0	105.7	88.5	70.7	64.1	61.8	61.8	63.5
52.5°	3350.3	975.6	203.1	130.0	102.1	81.9	65.9	59.4	57.6	57.6	60.0
55°	3659.1	1053.4	193.6	121.7	97.4	75.4	61.8	55.8	55.2	54.0	55.8
57.5°	4204.2	1223.2	181.7	114.6	90.9	70.1	58.2	52.3	51.1	49.3	51.1
60°	4998.1	1483.9	166.3	107.5	83.1	66.5	55.2	48.1	46.3	43.3	43.9
62.5°	5774.2	1694.7	148.5	98.6	76.0	62.9	50.5	43.3	40.4	36.8	37.4
65°	6439.3	1777.9	129.5	87.9	68.9	54.6	43.9	38.0	33.8	29.1	28.5
67.5°	6517.7	1570.0	111.0	77.8	61.8	46.3	37.4	33.8	27.3	23.2	22.0
70°	5865.7	1169.8	92.6	68.9	53.4	39.2	32.1	29.7	25.5	22.0	20.2
72.5°	4670.9	863.4	77.8	61.2	46.9	33.3	27.3	27.9	25.5	21.4	19.0
75°	3089.0	494.0	63.5	51.1	39.2	26.7	24.9	24.9	24.3	20.2	17.8
77.5°	1486.3	213.2	48.7	40.4	31.5	20.2	22.6	22.6	23.2	18.4	14.8
80°	421.6	64.1	30.3	27.3	23.2	13.7	17.8	17.2	15.4	10.7	6.5
82.5°	75.4	24.9	13.7	14.3	13.1	5.3	10.1	9.5	7.7	4.2	0.6
85°	20.8	9.5	7.7	8.3	6.5	1.8	4.2	5.3	4.2	2.4	0.0
87.5°	5.3	4.2	5.3	5.9	4.8	0.6	1.8	0.6	1.8	0.6	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)