

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: P367378

Luminaire Tested: **MSA-SA2B-830-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367378
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-830-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7710 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

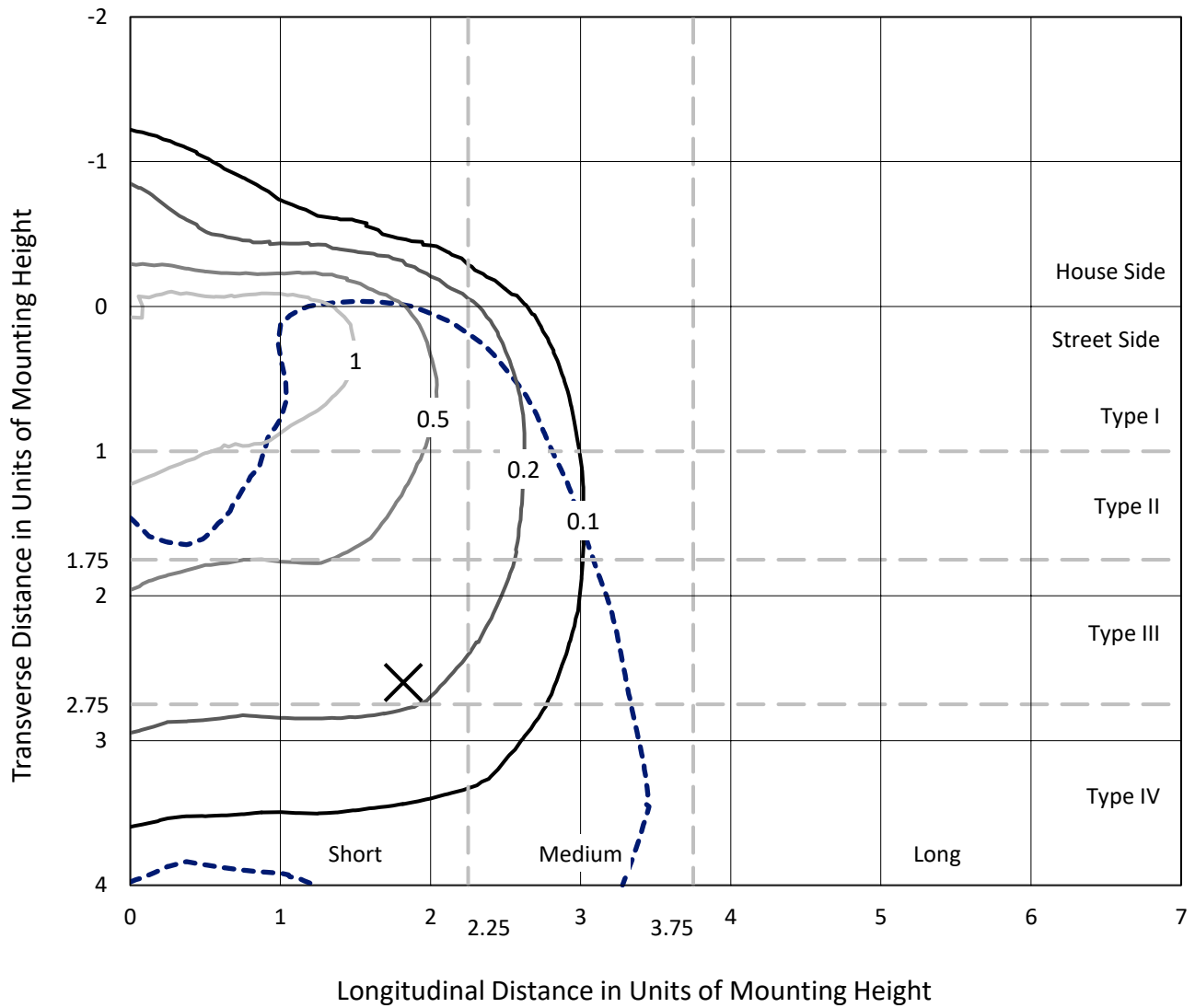
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

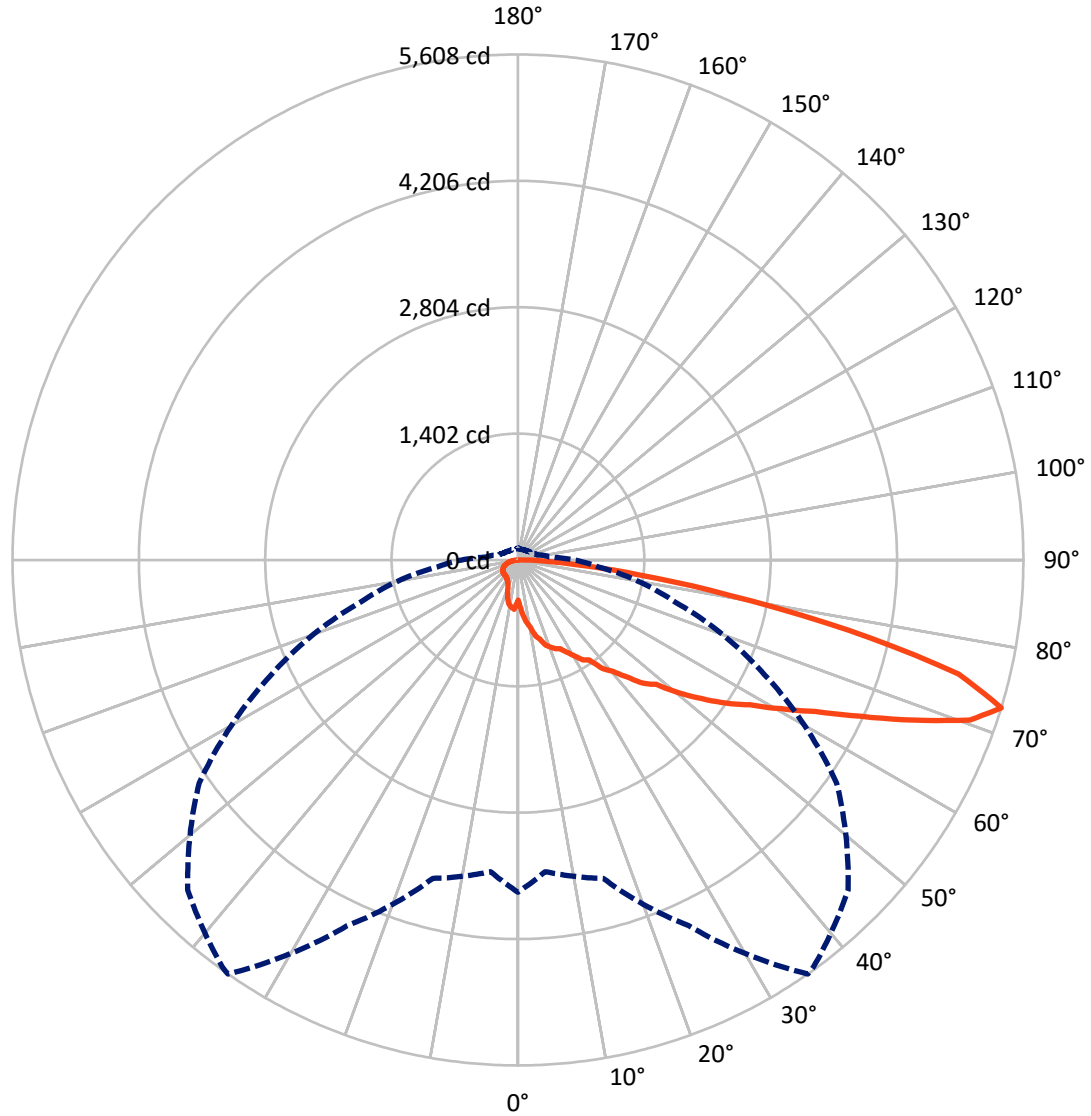
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1034.7	0.0	1034.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	6675.3	0.0	6675.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	7710.0	0.0	7710.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	0.8
10°-20°	208.6	2.7
20°-30°	362.4	4.7
30°-40°	605.8	7.9
40°-50°	1051.4	13.6
50°-60°	1589.4	20.6
60°-70°	2059.1	26.7
70°-80°	1519.4	19.7
80°-90°	254.7	3.3
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°	7710.0	100.0
0°-180°	7710.0	100.0

Coefficient of Utilization



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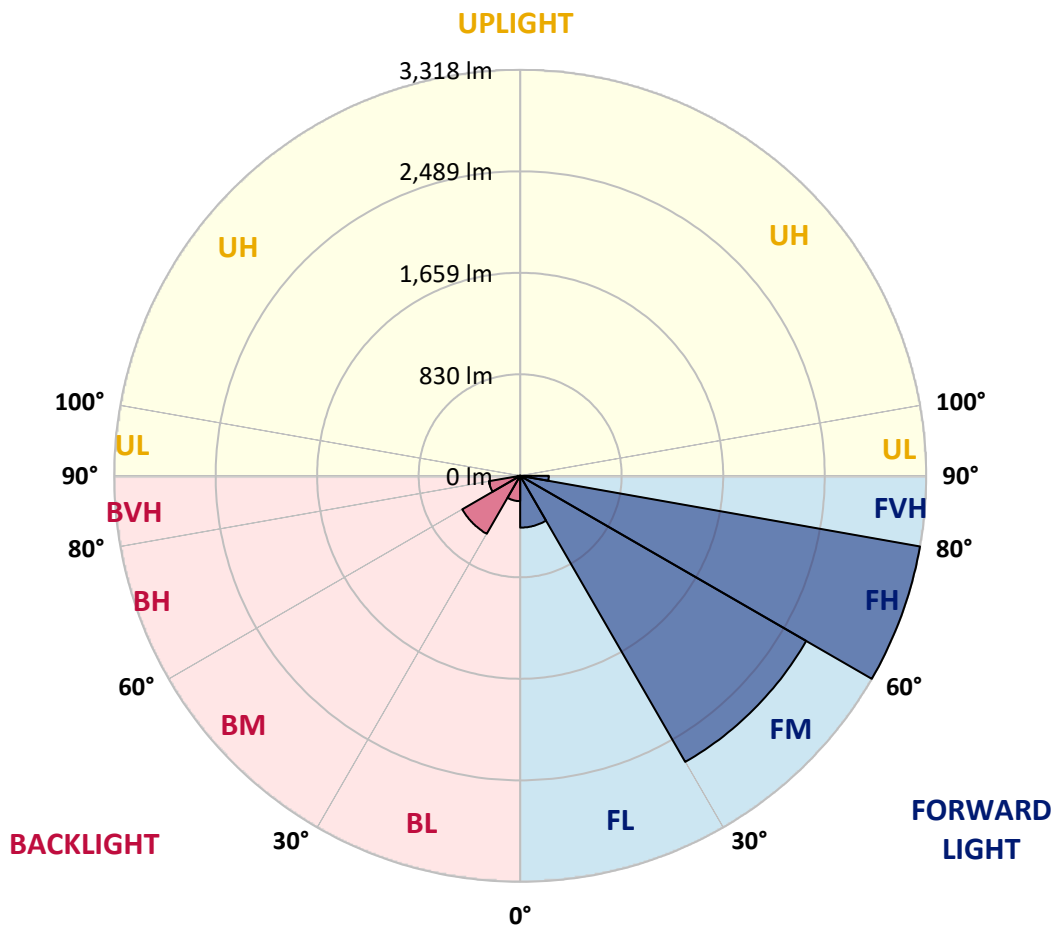
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	423.4	5.5			
FM (30°-60°)	2699.8	35.0			
FH (60°-80°)	3318.3	43.0			G2/5000
FVH (80°-90°)	233.8	3.0			G3/500
BL (0°-30°)	206.8	2.7	B1/500		
BM (30°-60°)	546.8	7.1	B1/1000		
BH (60°-80°)	260.2	3.4	B1/500		G1/500
BVH (80°-90°)	20.8	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6
2.5°	555.8	529.1	506.1	505.1	526.5	534.7	531.5	524.2	515.7	497.6	537.0
5°	696.3	658.1	650.9	642.3	622.9	628.2	596.6	620.6	628.2	645.6	672.0
7.5°	779.2	756.9	739.4	732.2	698.6	694.7	671.3	705.5	720.0	717.7	756.9
10°	811.8	791.4	792.7	769.0	758.2	762.8	765.4	766.1	775.0	782.2	762.5
12.5°	828.6	836.5	865.5	849.3	863.2	868.8	896.4	868.1	869.1	831.9	852.3
15°	913.2	932.9	916.1	915.5	911.2	920.4	944.1	925.0	939.8	928.0	901.7
17.5°	1015.2	1021.1	988.9	975.7	992.8	989.9	983.9	986.9	950.0	1018.5	986.2
20°	1046.5	1069.8	1027.4	975.7	1032.3	1039.9	1038.6	1025.7	962.5	1061.3	1030.0
22.5°	1137.3	1105.7	1072.1	1039.2	1068.2	1072.4	1065.2	1034.6	1013.5	1051.1	1075.7
25°	1178.4	1170.8	1128.1	1124.1	1092.2	1077.1	1089.6	1080.7	1059.9	1126.7	1099.4
27.5°	1272.5	1263.6	1165.2	1205.7	1159.3	1155.4	1089.2	1118.8	1139.6	1134.6	1175.4
30°	1379.1	1389.3	1245.5	1286.0	1232.4	1225.1	1158.7	1196.2	1210.3	1214.9	1265.9
32.5°	1497.6	1525.6	1382.8	1349.5	1320.9	1325.8	1269.6	1201.1	1256.1	1363.7	1385.7
35°	1625.9	1637.5	1487.7	1437.7	1363.0	1357.8	1358.7	1367.3	1422.9	1545.7	1562.8
37.5°	1863.2	1809.9	1678.6	1551.9	1526.9	1477.9	1511.1	1537.4	1593.0	1781.3	1853.0
40°	2009.3	1969.8	1769.8	1696.4	1627.3	1631.9	1694.1	1693.7	1825.0	2019.2	2128.8
42.5°	2144.6	2101.5	1912.9	1839.2	1773.7	1789.8	1807.6	1838.9	2090.6	2403.5	2453.6
45°	2253.5	2159.0	2023.5	2007.0	1953.0	1931.7	2007.0	2057.0	2408.2	2714.5	2743.5
47.5°	2327.5	2249.9	2117.3	2102.8	2063.0	2115.3	2320.9	2353.2	2654.3	3026.8	3024.5
50°	2440.1	2333.8	2214.0	2206.4	2318.6	2346.6	2597.4	2594.1	2893.9	3286.1	3231.8
52.5°	2569.7	2435.8	2305.8	2387.1	2558.2	2572.0	2789.5	2878.1	3155.5	3536.2	3394.4
55°	2718.8	2569.1	2443.4	2552.0	2806.7	2765.9	2986.0	3202.2	3482.9	3799.8	3511.9
57.5°	2903.4	2721.8	2620.1	2785.3	3033.4	3069.6	3267.4	3539.5	3746.5	3963.7	3597.4
60°	3098.2	2885.0	2791.9	2949.1	3350.9	3392.4	3585.9	3819.9	4042.0	4118.0	3581.3
62.5°	3284.1	3053.5	2969.2	3163.4	3703.1	3805.7	3948.5	4097.6	4287.8	4155.5	3386.2
65°	3491.1	3260.1	3207.1	3498.4	4180.5	4282.6	4469.1	4424.4	4372.1	4022.6	3063.3
67.5°	3710.3	3475.7	3485.5	3887.0	4743.6	4761.0	5047.6	4750.2	4273.0	3670.5	2521.4
70°	3828.1	3587.9	3689.6	4301.3	5316.5	5291.5	5350.1	4837.7	3869.2	2901.4	1737.8
72.5°	3685.3	3471.1	3657.3	4475.7	5608.1	5581.1	5180.3	4318.1	3025.2	1804.3	901.0
75°	3120.3	2913.6	3198.6	3989.7	5048.6	5073.6	4408.6	3211.1	1731.9	725.6	374.2
77.5°	2120.2	2013.6	2257.8	2973.8	3750.1	3836.7	3271.0	1877.7	727.3	300.4	226.4
80°	1120.5	1069.8	1250.1	1713.2	2374.6	2439.1	1923.4	935.2	372.5	194.5	161.6
82.5°	608.8	587.4	684.1	880.9	1349.2	1405.5	997.4	621.3	251.1	121.8	98.7
85°	409.0	400.8	465.0	473.2	638.1	656.5	522.6	478.5	150.7	59.6	65.2
87.5°	204.7	196.5	244.8	216.2	243.5	243.8	239.6	305.4	38.2	19.7	11.8
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°	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6	445.6
2.5°	537.7	526.2	486.4	486.0	492.0	488.0	491.0	474.9	467.9	499.5	497.9
5°	668.3	633.8	600.6	589.0	575.5	546.3	547.9	548.2	543.3	562.1	563.4
7.5°	745.0	703.6	673.0	611.7	563.7	526.2	531.1	536.7	531.1	556.1	565.3
10°	756.2	723.3	686.8	618.7	586.7	552.8	518.6	488.3	484.7	473.2	476.8
12.5°	822.7	795.4	719.0	644.3	607.1	555.1	492.6	458.1	429.1	434.0	424.8
15°	877.3	857.9	766.4	668.7	579.8	515.3	448.9	401.5	375.5	372.5	363.3
17.5°	951.3	923.7	770.7	651.9	544.6	467.3	392.3	338.6	327.4	322.8	318.2
20°	986.9	937.2	755.2	599.2	503.5	410.0	336.3	290.2	287.0	295.2	293.5
22.5°	1017.8	948.4	741.4	567.3	439.3	352.1	298.1	267.9	264.2	274.8	276.8
25°	1035.9	980.3	726.3	534.7	399.5	309.0	269.5	252.4	253.1	266.9	265.2
27.5°	1117.5	991.5	688.1	496.2	353.8	277.1	255.7	246.8	243.2	262.3	263.9
30°	1168.9	1064.5	679.5	455.4	319.9	253.7	243.2	239.6	238.9	261.9	263.6
32.5°	1264.3	1088.9	683.5	411.0	289.3	246.5	234.0	233.6	240.2	262.3	264.9
35°	1396.6	1191.6	664.4	385.7	272.5	235.3	226.7	229.4	240.6	264.6	268.2
37.5°	1654.6	1288.3	670.3	362.0	266.9	231.7	224.8	226.4	244.5	270.5	280.4
40°	1858.9	1463.7	661.1	350.1	259.3	231.0	220.5	227.1	244.2	273.8	282.7
42.5°	2155.1	1603.6	662.1	338.3	259.0	228.4	219.8	227.7	243.5	270.8	283.0
45°	2409.1	1728.9	676.2	331.4	255.7	232.7	218.8	228.7	239.2	260.3	273.8
47.5°	2617.4	1868.8	690.7	324.8	254.4	236.6	217.8	221.8	232.0	248.4	260.6
50°	2787.2	1967.2	709.2	323.5	254.4	234.6	215.2	214.9	223.4	236.6	248.1
52.5°	2919.5	2036.6	721.7	325.1	254.4	227.1	211.9	209.3	214.6	224.1	235.6
55°	3015.3	2058.0	711.5	329.4	254.0	220.1	206.0	203.7	206.3	212.9	223.8
57.5°	3053.8	2001.7	650.6	321.8	254.0	215.2	198.8	196.1	198.8	203.7	214.6
60°	2957.4	1820.8	562.7	302.4	249.1	208.6	190.5	188.9	192.8	197.1	207.6
62.5°	2715.5	1580.2	468.9	279.4	238.9	203.0	182.6	183.0	189.2	195.1	205.7
65°	2339.7	1289.3	390.9	256.0	226.1	194.2	174.4	176.7	185.6	193.5	204.0
67.5°	1841.2	955.3	329.1	233.3	208.0	179.7	165.2	165.9	172.1	179.7	189.9
70°	1230.7	607.8	270.5	206.7	184.3	160.9	151.0	148.7	147.1	153.7	162.6
72.5°	624.3	359.0	222.1	176.7	158.6	140.5	132.9	127.0	122.4	126.4	133.3
75°	327.1	251.1	179.3	146.8	131.0	119.5	113.9	106.0	102.7	105.0	109.9
77.5°	231.3	196.5	145.1	116.2	106.6	94.8	95.8	87.5	84.9	86.2	91.5
80°	177.7	155.7	111.6	87.9	82.3	70.8	74.0	69.1	65.8	65.2	69.1
82.5°	121.1	117.1	79.3	61.5	57.6	49.4	54.0	52.0	47.7	45.1	47.1
85°	81.6	77.7	48.4	35.5	33.9	25.7	32.9	31.6	28.0	24.0	24.4
87.5°	14.2	26.0	13.8	8.9	8.2	3.0	7.6	7.2	6.6	3.3	2.6
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)