

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: P596681

Luminaire Tested: **MSA-SA3B-827-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596681
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-827-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8937 lumens
Efficiency: N/A
Efficacy: 70.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

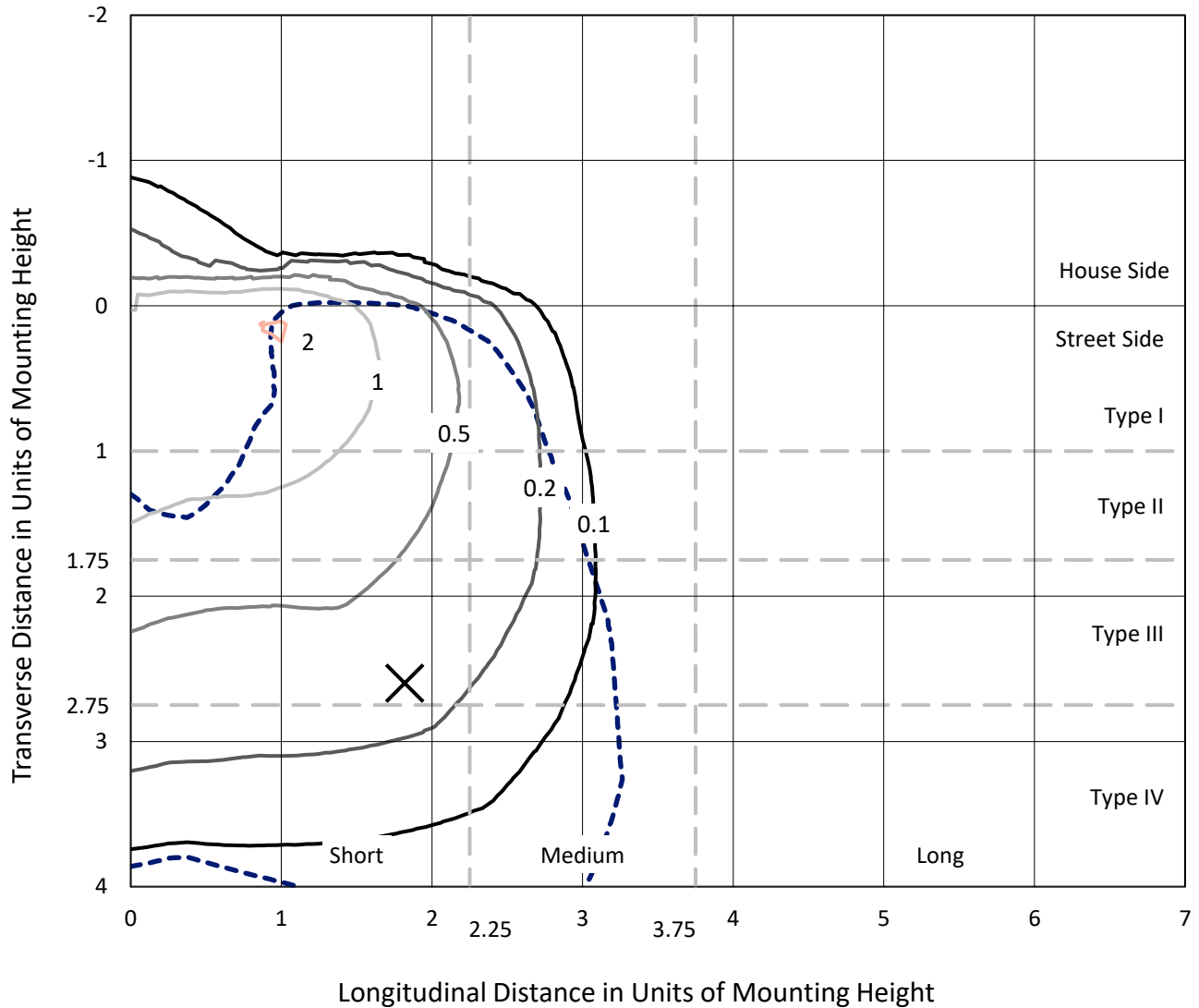
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

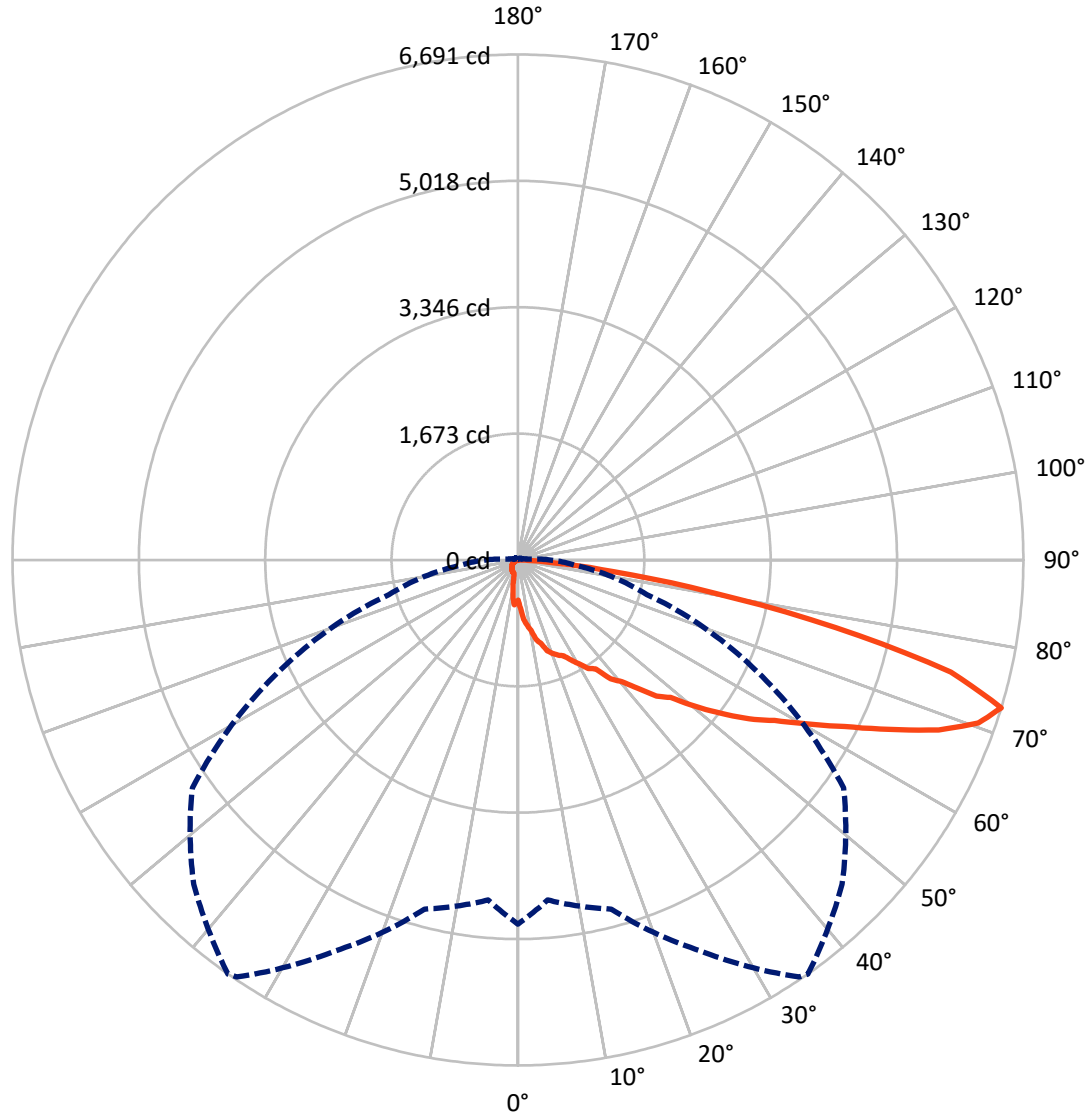
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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	697.1	0.0	697.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8239.9	0.0	8239.9
	% Fixture	92.2	0.0	92.2
Total	Lumens	8937.0	0.0	8937.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	0.8
10°-20°	228.7	2.6
20°-30°	416.5	4.7
30°-40°	718.4	8.0
40°-50°	1277.1	14.3
50°-60°	1905.8	21.3
60°-70°	2434.8	27.2
70°-80°	1694.0	19.0
80°-90°	193.8	2.2
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°	8937.0	100.0
0°-180°	8937.0	100.0

Coefficient of Utilization



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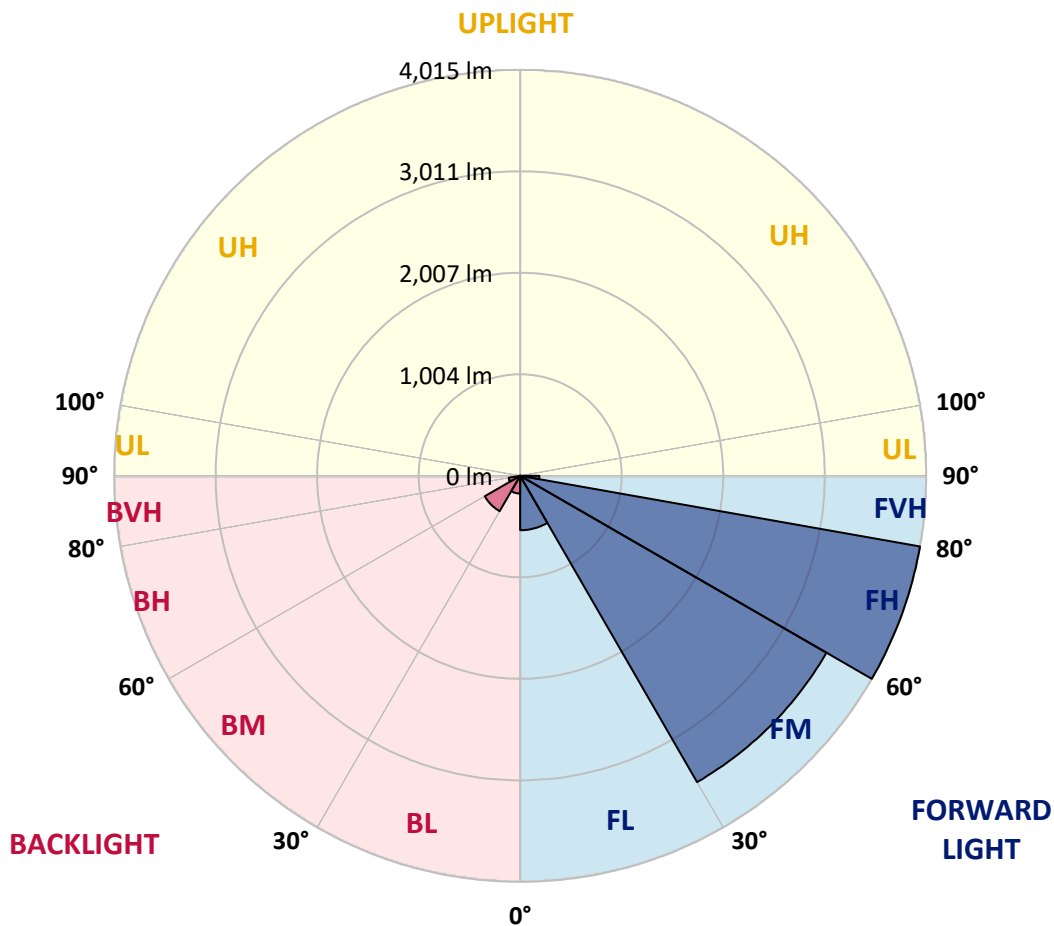
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	537.8	6.0			
FM (30°-60°)	3497.1	39.1			
FH (60°-80°)	4014.5	44.9			G2/5000
FVH (80°-90°)	190.5	2.1			G2/225
BL (0°-30°)	175.3	2.0	B1/500		
BM (30°-60°)	404.2	4.5	B1/1000		
BH (60°-80°)	114.3	1.3	B1/500		G1/500
BVH (80°-90°)	3.3	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4
2.5°	677.5	651.0	607.9	611.0	630.3	634.4	640.2	624.9	611.4	587.6	633.9
5°	868.0	829.8	805.5	797.9	786.7	787.6	760.2	770.0	767.3	784.9	806.0
7.5°	975.3	954.2	923.7	915.1	873.8	869.3	835.6	881.0	885.5	879.2	913.8
10°	1018.0	990.2	993.8	961.9	941.2	946.6	952.0	955.6	961.4	967.3	925.0
12.5°	1043.2	1048.1	1097.1	1063.9	1084.5	1084.5	1120.9	1082.3	1083.6	1041.4	1048.6
15°	1156.4	1183.8	1161.8	1161.3	1138.9	1144.7	1187.0	1156.4	1172.1	1159.5	1111.0
17.5°	1298.4	1303.8	1262.0	1243.6	1263.8	1264.2	1246.3	1244.9	1190.1	1282.6	1223.8
20°	1343.7	1374.3	1315.0	1243.1	1327.1	1323.1	1321.7	1300.6	1209.4	1337.9	1289.4
22.5°	1467.3	1423.7	1383.3	1336.1	1368.9	1368.9	1364.0	1317.7	1282.2	1333.0	1353.6
25°	1505.9	1511.3	1458.8	1443.5	1444.4	1403.9	1400.4	1380.6	1346.4	1433.1	1391.8
27.5°	1638.9	1636.7	1510.4	1553.1	1498.7	1499.2	1399.9	1444.4	1450.2	1438.1	1484.4
30°	1769.6	1806.0	1615.5	1669.5	1612.4	1595.3	1498.3	1537.8	1548.2	1534.2	1592.6
32.5°	1936.3	1989.8	1804.7	1751.7	1664.5	1713.0	1646.1	1552.7	1603.9	1728.3	1761.1
35°	2112.9	2138.9	1941.7	1867.6	1769.2	1768.7	1766.5	1774.1	1830.7	1970.9	1998.8
37.5°	2430.1	2368.5	2190.2	2020.3	2042.3	1993.4	1959.2	1995.2	2054.0	2284.9	2404.0
40°	2607.1	2562.6	2311.5	2210.8	2101.6	2119.6	2212.2	2208.1	2364.9	2606.6	2785.0
42.5°	2779.1	2736.9	2489.8	2408.5	2268.3	2317.3	2357.7	2408.9	2730.2	3120.1	3218.1
45°	2932.3	2808.3	2634.0	2637.2	2564.4	2570.2	2641.7	2688.8	3153.4	3553.2	3622.0
47.5°	3024.9	2922.9	2755.8	2752.6	2748.1	2720.7	3057.2	3100.4	3490.8	3965.6	3971.9
50°	3155.2	3027.6	2881.1	2883.8	2987.6	3045.5	3447.2	3442.7	3816.5	4309.8	4164.7
52.5°	3317.4	3161.5	3000.2	3120.1	3280.5	3374.9	3701.0	3834.0	4166.5	4525.9	4240.1
55°	3524.9	3329.9	3174.5	3328.1	3678.1	3714.5	3949.5	4230.3	4547.9	4746.5	4264.4
57.5°	3768.4	3535.7	3409.9	3657.4	4006.5	4007.4	4311.1	4652.6	4781.9	4836.3	4237.0
60°	4030.8	3759.4	3632.7	3855.6	4368.6	4405.5	4713.2	4885.7	5019.6	4881.7	4188.0
62.5°	4261.7	3962.0	3863.7	4125.6	4765.8	4852.9	5063.6	5038.9	5191.2	4938.7	4063.6
65°	4536.7	4224.4	4159.7	4546.5	5284.2	5404.2	5457.2	5310.7	5248.7	4894.7	3739.7
67.5°	4808.9	4516.9	4515.1	5013.3	5964.0	6005.3	5949.6	5694.0	5181.8	4506.6	3146.2
70°	5000.7	4687.2	4805.3	5524.6	6581.7	6465.8	6231.3	5875.0	4698.4	3453.9	2055.4
72.5°	4820.6	4518.2	4784.6	5706.5	6658.1	6691.3	6068.2	5262.7	3490.8	1766.5	744.0
75°	3663.3	3478.2	4154.3	5062.7	5911.4	5919.0	5065.0	3711.8	1718.9	479.8	205.8
77.5°	1845.1	1786.3	2629.5	3594.1	4312.9	4300.3	3480.0	1988.4	553.0	159.5	103.8
80°	934.0	886.8	1119.1	1939.0	2561.2	2580.1	1987.1	890.4	279.0	86.7	71.9
82.5°	573.7	544.5	612.3	877.4	1243.1	1273.2	753.9	563.8	173.0	51.2	65.6
85°	111.0	116.8	351.8	439.4	496.4	484.8	223.3	464.1	52.1	30.5	47.6
87.5°	0.0	1.8	81.3	143.3	143.8	127.6	50.8	102.9	7.2	8.5	5.8
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°	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4	532.4
2.5°	641.5	634.8	578.6	572.4	573.7	564.3	561.1	541.4	536.4	567.0	572.4
5°	797.0	752.1	700.0	681.1	651.9	602.5	595.3	582.7	568.8	574.2	570.1
7.5°	892.2	832.5	776.8	677.5	595.3	523.4	511.7	490.1	468.6	469.0	483.0
10°	907.5	857.2	780.4	659.5	565.6	475.8	397.6	341.0	315.4	292.5	299.2
12.5°	996.0	949.3	807.8	654.1	522.5	382.3	279.9	224.6	200.4	192.3	191.4
15°	1067.0	1030.2	854.5	637.5	426.8	269.1	200.4	184.2	179.7	187.3	185.1
17.5°	1172.6	1106.1	849.6	568.8	325.3	204.4	184.6	182.4	187.8	192.3	193.6
20°	1218.8	1123.2	815.9	460.9	243.5	187.3	180.2	175.7	185.5	199.0	196.3
22.5°	1265.6	1152.4	776.3	377.4	195.9	179.3	175.2	171.6	179.3	192.3	195.4
25°	1286.7	1199.1	732.3	294.7	182.0	169.8	167.1	168.5	174.8	186.4	185.1
27.5°	1393.2	1204.5	648.3	232.7	176.1	163.1	163.1	166.2	166.2	182.0	180.6
30°	1459.7	1295.7	580.0	195.9	169.4	153.6	159.0	160.4	158.1	175.2	176.6
32.5°	1576.5	1320.8	513.5	179.7	158.6	152.3	151.4	152.3	154.1	170.7	171.2
35°	1756.2	1444.8	422.8	173.4	153.2	145.6	139.3	144.2	148.7	160.8	163.1
37.5°	2107.5	1572.0	344.6	168.5	150.5	139.3	137.0	136.1	144.2	158.1	162.6
40°	2391.9	1797.0	280.3	164.4	145.1	135.7	129.8	130.3	137.5	147.8	154.5
42.5°	2794.4	1959.7	237.7	158.1	137.5	128.0	121.3	125.3	128.5	139.3	143.8
45°	3130.5	2085.9	209.4	154.1	129.8	120.9	115.5	120.0	116.8	122.2	128.5
47.5°	3397.8	2196.0	188.2	144.2	124.9	116.8	110.1	108.7	103.3	104.7	110.5
50°	3544.7	2177.6	170.7	134.3	118.6	112.8	103.3	93.9	86.7	86.3	89.9
52.5°	3596.8	2079.2	156.3	125.8	111.0	103.8	93.0	80.0	72.8	70.5	73.7
55°	3611.2	1937.7	143.3	116.4	103.8	92.5	81.3	67.4	59.8	56.2	59.3
57.5°	3564.4	1719.8	130.7	107.4	95.2	81.8	69.6	55.3	48.1	43.6	46.3
60°	3449.0	1443.0	119.5	96.1	86.3	72.3	58.9	44.5	36.8	32.8	34.1
62.5°	3193.4	1131.2	107.4	85.8	76.8	63.3	49.4	35.0	27.9	24.3	24.7
65°	2804.3	843.3	93.4	75.9	68.3	54.8	39.5	27.0	21.1	18.0	17.5
67.5°	2234.2	571.5	79.5	65.6	60.7	46.3	31.4	21.1	16.6	14.4	13.5
70°	1313.2	288.0	66.0	56.6	52.1	38.6	24.7	17.1	15.3	13.5	12.6
72.5°	433.1	124.4	51.7	46.7	43.1	31.0	19.3	15.7	14.8	13.0	12.1
75°	151.0	71.9	38.2	35.9	34.1	23.4	16.2	14.4	14.4	12.6	11.2
77.5°	98.8	55.7	28.3	26.1	25.6	17.1	13.9	13.5	12.6	10.3	8.5
80°	82.2	31.4	19.8	18.4	18.0	10.8	11.2	9.9	7.6	4.5	1.8
82.5°	75.9	18.9	10.3	11.2	10.3	4.0	6.3	5.4	4.0	1.8	0.0
85°	44.5	8.5	5.8	5.8	4.5	0.9	3.1	3.1	1.8	0.4	0.0
87.5°	4.9	4.0	3.1	3.1	2.2	0.0	1.3	0.9	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)