

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: P596493

Luminaire Tested: **MSA-SA1A-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596493
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-827-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2225 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

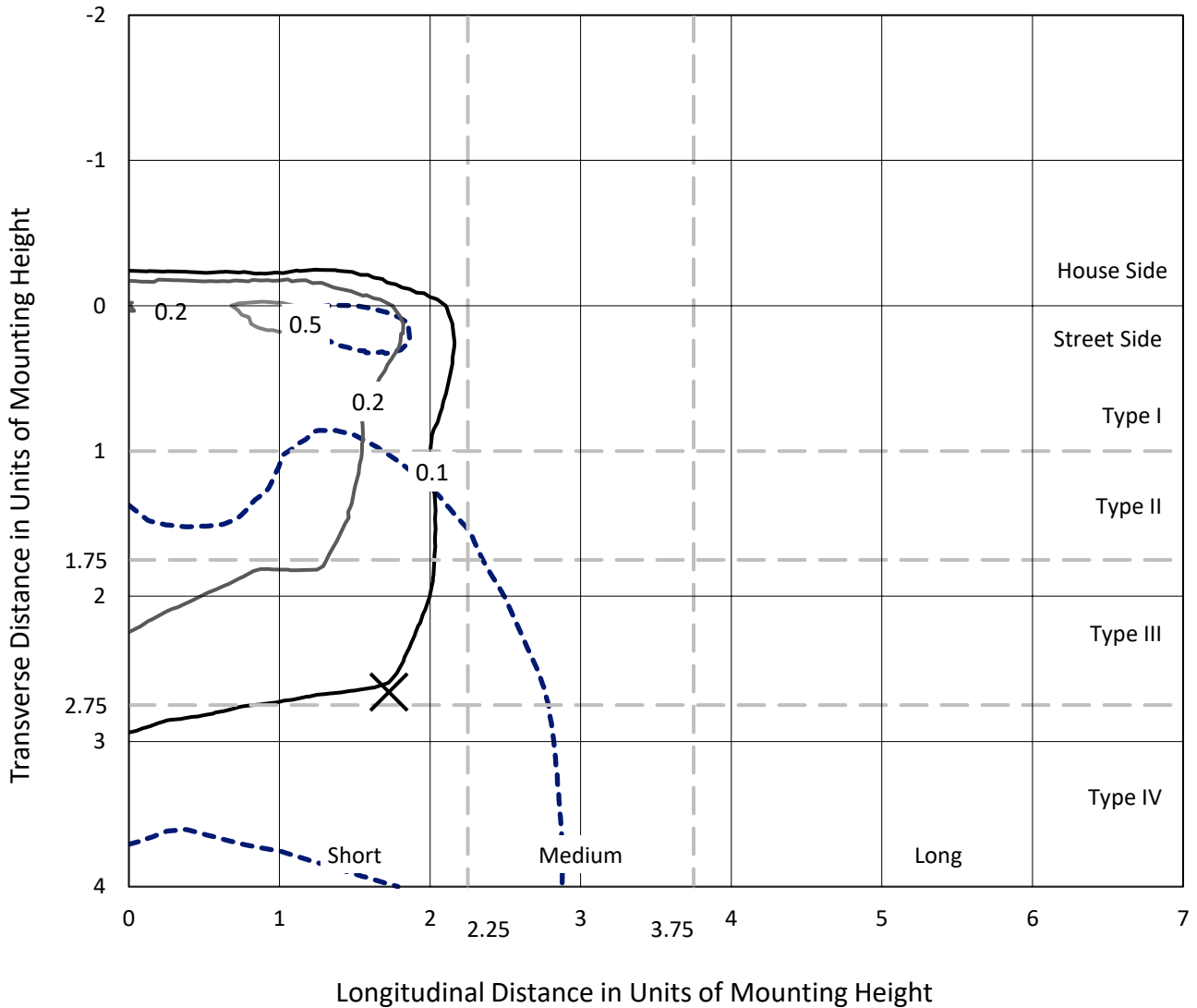
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

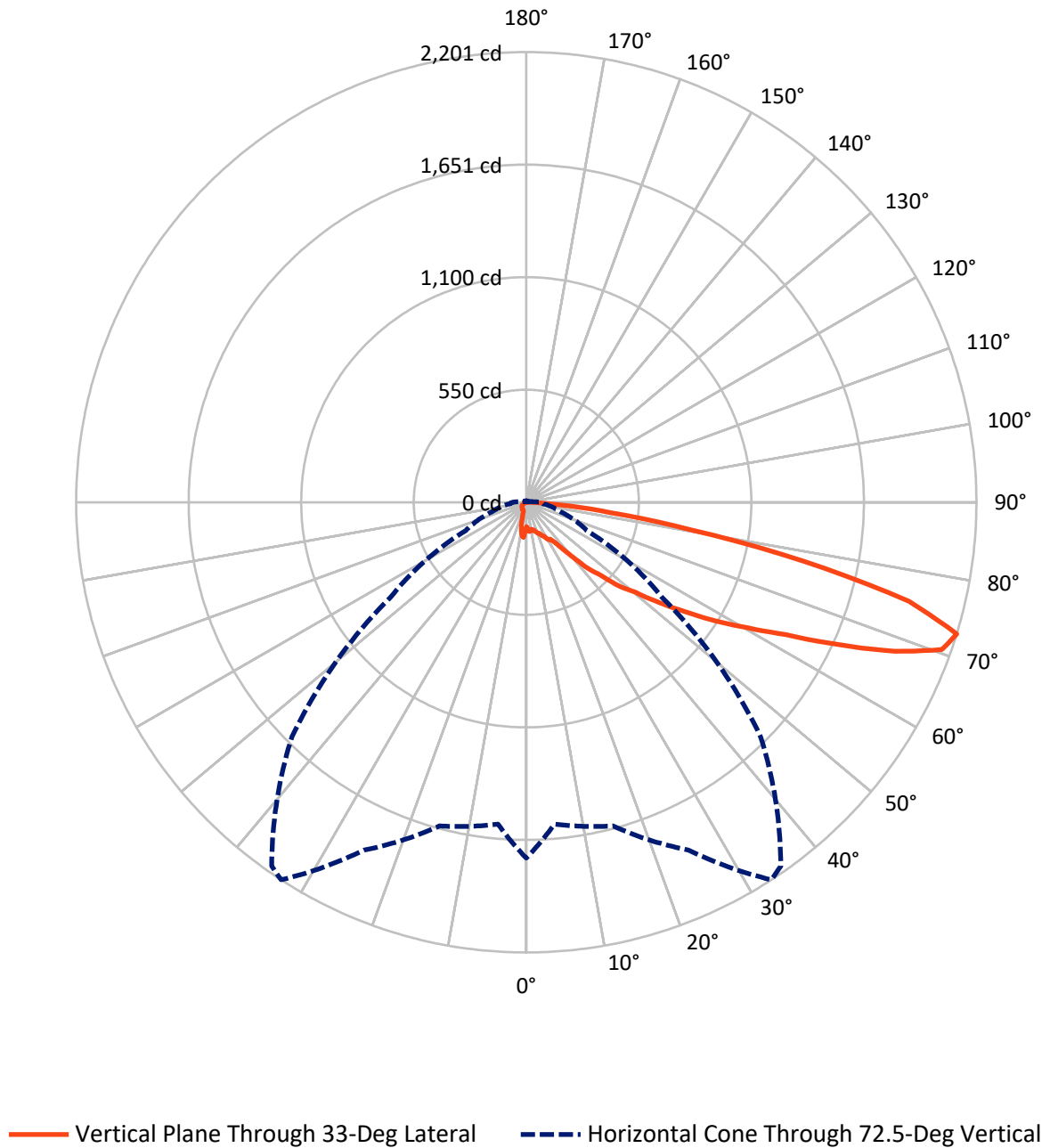
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	205.7	0.0	205.7
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	2019.3	0.0	2019.3
	% Fixture	90.8	0.0	90.8
Total	Lumens	2225.0	0.0	2225.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.3	0.7
10°-20°	45.6	2.1
20°-30°	77.4	3.5
30°-40°	141.7	6.4
40°-50°	299.0	13.4
50°-60°	500.2	22.5
60°-70°	669.6	30.1
70°-80°	437.4	19.7
80°-90°	38.8	1.7
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°	2225.0	100.0
0°-180°	2225.0	100.0

Coefficient of Utilization

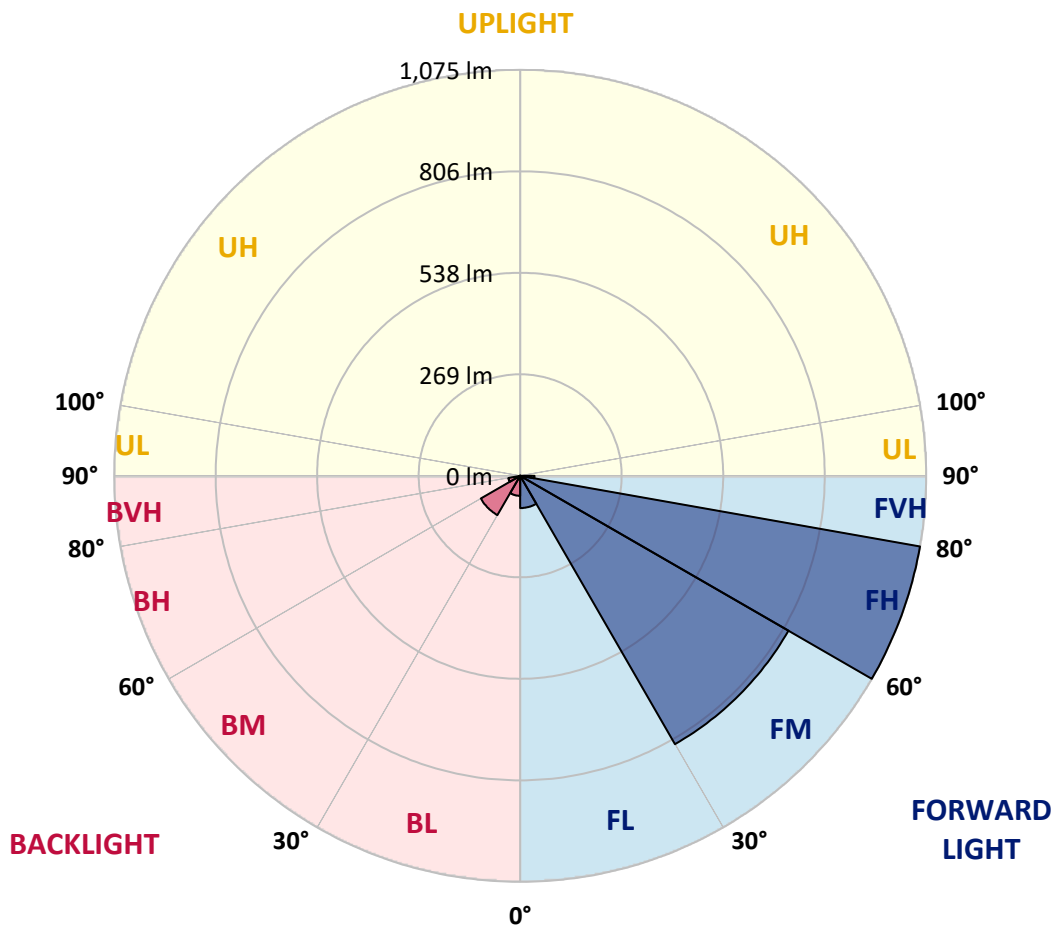


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	85.4	3.8			
FM (30°-60°)	820.6	36.9			
FH (60°-80°)	1075.2	48.3			G1/1800
FVH (80°-90°)	38.0	1.7			G1/100
BL (0°-30°)	53.0	2.4	B0/110		
BM (30°-60°)	120.3	5.4	B0/220		
BH (60°-80°)	31.8	1.4	B0/110		G0/110
BVH (80°-90°)	0.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3
2.5°	141.1	135.6	127.7	128.2	129.6	130.7	133.7	132.4	130.1	130.0	141.1
5°	149.5	143.4	142.9	143.7	143.3	145.3	142.8	150.8	157.6	165.8	178.9
7.5°	145.4	142.6	139.0	142.7	142.6	141.6	143.2	159.5	175.9	186.3	207.9
10°	133.7	130.5	133.2	134.4	133.5	137.9	148.6	162.0	181.6	203.3	213.8
12.5°	130.3	132.3	133.3	133.3	141.6	143.8	160.2	172.8	196.2	213.3	243.9
15°	143.3	147.1	140.3	138.9	141.4	142.7	161.0	176.2	206.1	237.4	263.0
17.5°	163.9	163.7	153.2	147.4	151.5	154.4	164.5	182.3	199.9	256.3	293.4
20°	178.1	178.4	159.5	147.4	160.8	162.6	173.8	188.0	201.9	265.8	313.3
22.5°	196.4	189.9	169.0	157.3	166.4	168.0	180.4	191.6	212.0	264.7	338.7
25°	211.4	207.2	180.9	172.7	180.9	178.6	189.9	206.8	222.9	282.4	353.7
27.5°	234.6	227.4	189.3	190.7	190.2	191.8	194.4	220.4	242.0	283.3	388.3
30°	256.2	252.0	208.0	208.0	212.8	209.8	211.6	243.0	260.5	303.3	427.2
32.5°	278.6	278.8	230.1	218.4	214.6	227.3	239.8	254.0	282.9	337.6	486.7
35°	337.7	332.8	272.5	243.2	240.1	239.4	259.4	297.8	322.5	382.3	566.9
37.5°	456.9	439.8	363.7	299.6	288.0	284.0	306.7	346.1	370.7	448.1	699.4
40°	579.2	547.7	463.2	391.0	353.3	336.3	362.7	396.2	439.9	520.7	822.1
42.5°	686.6	647.7	538.2	489.6	440.5	433.1	408.3	462.8	538.7	626.4	942.3
45°	791.2	714.6	604.9	566.4	506.9	511.1	502.7	549.8	641.4	742.3	1048.9
47.5°	863.2	794.4	686.7	636.7	612.8	588.3	655.0	704.0	732.8	815.9	1141.1
50°	940.8	871.2	757.0	722.0	690.7	715.5	802.1	808.6	806.3	884.6	1203.8
52.5°	1041.0	958.9	837.7	798.1	815.9	840.6	940.6	941.8	871.6	942.4	1249.0
55°	1133.7	1042.6	945.1	907.8	945.0	965.9	1076.7	1036.1	909.7	981.7	1271.3
57.5°	1264.2	1158.9	1088.1	1022.4	1097.7	1077.7	1196.4	1136.0	952.4	1007.8	1263.1
60°	1429.3	1305.2	1234.3	1164.8	1245.6	1259.2	1313.3	1185.9	969.0	1016.3	1214.1
62.5°	1597.2	1472.4	1379.1	1331.9	1423.6	1468.3	1421.5	1210.7	949.1	999.6	1103.0
65°	1805.4	1645.7	1536.7	1509.1	1678.9	1744.6	1549.5	1216.8	910.7	907.8	886.8
67.5°	1948.1	1792.6	1692.6	1739.0	1944.2	1949.5	1664.4	1218.6	781.3	710.8	582.1
70°	1982.0	1815.4	1770.7	1907.1	2155.8	2088.9	1701.4	1124.8	579.5	421.9	266.1
72.5°	1739.8	1579.5	1637.7	1875.3	2200.7	2170.1	1619.5	811.5	326.2	168.7	81.7
75°	1067.2	970.2	1228.5	1590.0	1931.8	1912.0	1263.5	419.3	131.4	67.4	30.5
77.5°	464.1	431.0	641.1	1055.0	1388.1	1370.5	740.3	154.4	67.9	47.4	15.4
80°	153.6	149.0	242.9	499.6	813.1	797.5	311.9	64.2	48.4	38.0	8.6
82.5°	36.4	36.2	84.7	229.9	414.2	401.2	95.7	35.5	35.1	30.0	4.6
85°	9.1	9.4	23.5	94.0	168.3	148.4	25.0	17.7	24.7	20.4	2.3
87.5°	0.0	0.0	6.1	13.5	25.4	15.9	2.7	4.7	6.9	7.3	1.2
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°	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3
2.5°	143.5	142.2	131.1	133.8	138.0	137.6	140.3	138.2	136.4	145.5	144.7
5°	182.6	175.2	171.7	176.5	173.9	167.9	172.9	172.1	170.6	173.7	176.0
7.5°	211.9	205.1	202.0	191.8	177.1	165.5	167.4	163.1	159.0	163.8	168.7
10°	221.5	217.8	217.4	197.7	183.8	167.0	147.1	130.0	125.4	119.3	122.1
12.5°	247.7	249.9	235.9	212.8	186.2	153.9	118.6	94.3	84.4	77.9	78.3
15°	269.2	277.0	256.7	215.2	163.8	117.4	78.9	57.1	50.9	49.3	48.8
17.5°	301.2	308.7	263.1	198.5	132.1	79.6	50.8	44.5	44.8	46.0	45.7
20°	324.9	323.8	257.6	169.0	97.3	52.1	42.5	41.6	43.6	46.8	46.1
22.5°	347.7	340.1	254.1	141.7	63.0	41.9	41.0	40.9	42.7	45.8	46.7
25°	364.1	365.3	248.3	110.9	45.8	38.9	39.7	40.8	42.6	46.0	45.5
27.5°	410.7	376.2	224.1	80.5	38.7	37.3	39.2	41.4	42.0	46.2	46.3
30°	441.0	417.2	208.3	54.2	35.7	34.5	38.2	41.1	41.9	47.3	47.7
32.5°	493.8	434.8	190.0	40.3	33.2	33.6	35.9	39.9	43.4	49.2	49.4
35°	559.4	491.5	156.9	36.2	32.4	31.7	32.9	37.4	43.1	49.4	50.6
37.5°	684.2	525.5	124.4	35.1	32.4	31.3	32.4	35.1	42.4	51.9	54.5
40°	767.9	594.7	89.7	34.8	31.7	30.8	31.1	33.8	40.3	50.4	54.2
42.5°	870.9	623.8	66.1	34.2	31.1	29.6	29.9	33.4	38.2	47.3	50.2
45°	955.3	645.1	52.0	34.0	29.6	29.2	29.6	33.0	36.2	40.6	43.2
47.5°	1019.4	669.8	41.8	32.4	29.3	29.2	28.5	30.9	32.9	34.0	35.7
50°	1066.3	664.2	34.6	29.9	28.0	28.8	27.7	28.0	28.5	27.9	29.9
52.5°	1095.1	644.2	28.8	26.9	26.6	27.2	25.8	24.7	23.8	23.3	24.6
55°	1105.6	604.1	24.5	23.1	24.0	24.2	23.1	21.1	19.6	18.9	19.9
57.5°	1085.7	542.9	21.2	19.1	21.1	21.1	19.6	17.5	15.8	14.6	15.6
60°	1035.3	475.4	18.9	15.9	18.0	18.2	16.4	14.2	12.8	11.6	12.2
62.5°	941.4	401.7	16.6	13.8	15.6	15.7	13.6	11.5	10.5	9.1	9.6
65°	753.7	307.2	14.1	12.2	13.5	13.1	11.2	9.8	8.5	7.3	7.5
67.5°	489.2	189.6	12.2	11.1	11.4	11.0	9.5	8.5	7.2	6.2	6.3
70°	219.0	81.7	10.7	10.0	9.9	9.3	8.0	7.9	7.0	6.2	6.2
72.5°	67.6	30.8	9.3	9.0	8.5	7.8	7.0	7.5	6.9	5.9	5.8
75°	26.7	14.1	7.7	7.7	7.4	6.4	6.3	6.8	6.4	5.4	5.2
77.5°	14.0	8.9	6.3	6.5	6.4	4.9	5.7	6.2	5.9	4.6	3.8
80°	8.3	5.4	4.7	5.3	5.2	3.5	4.3	4.0	2.8	1.4	0.4
82.5°	4.6	2.5	2.1	3.1	3.1	1.2	2.2	2.0	1.1	0.0	0.0
85°	2.2	1.7	1.6	1.7	1.2	0.4	1.1	1.1	0.6	0.0	0.0
87.5°	1.1	1.0	0.7	0.6	0.5	0.0	0.4	0.5	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)