

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: P596659

Luminaire Tested: **MSA-SA3A-827-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596659
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-SA3A-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: 7132 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

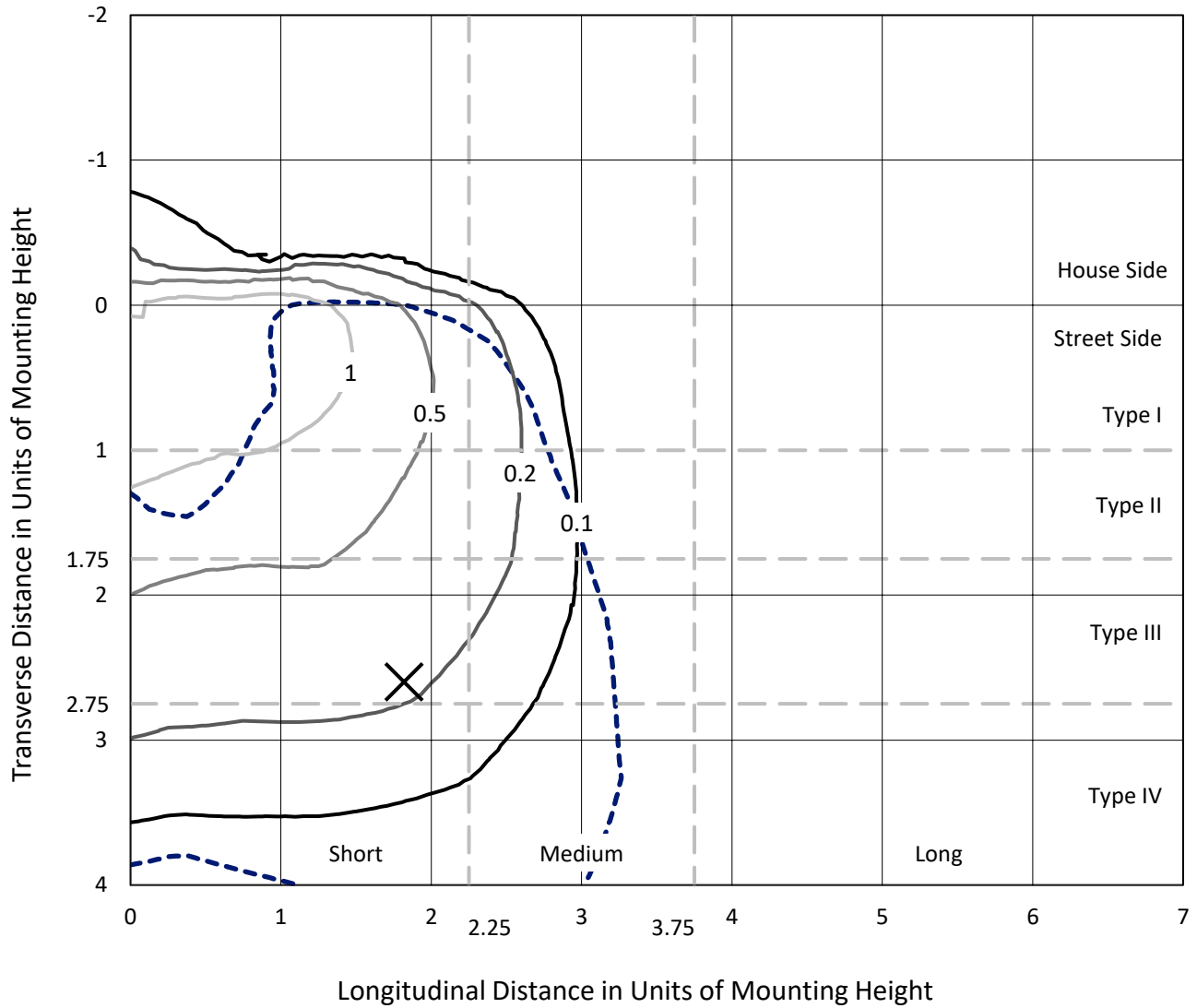
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

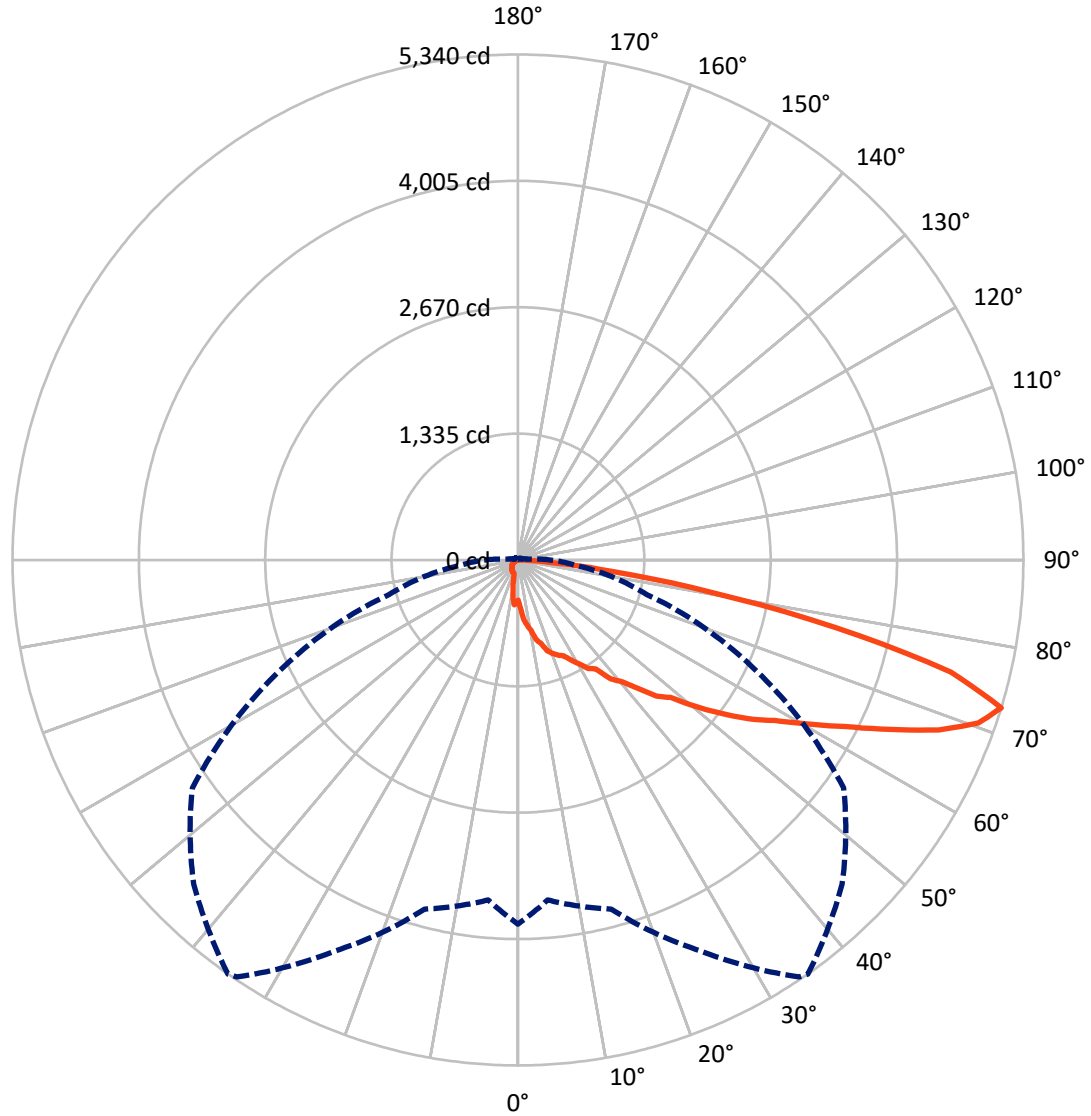
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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	556.3	0.0	556.3
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	6575.7	0.0	6575.7
	% Fixture	92.2	0.0	92.2
Total	Lumens	7132.0	0.0	7132.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	0.8
10°-20°	182.5	2.6
20°-30°	332.4	4.7
30°-40°	573.3	8.0
40°-50°	1019.2	14.3
50°-60°	1520.9	21.3
60°-70°	1943.1	27.2
70°-80°	1351.9	19.0
80°-90°	154.6	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°	7132.0	100.0
0°-180°	7132.0	100.0

Coefficient of Utilization



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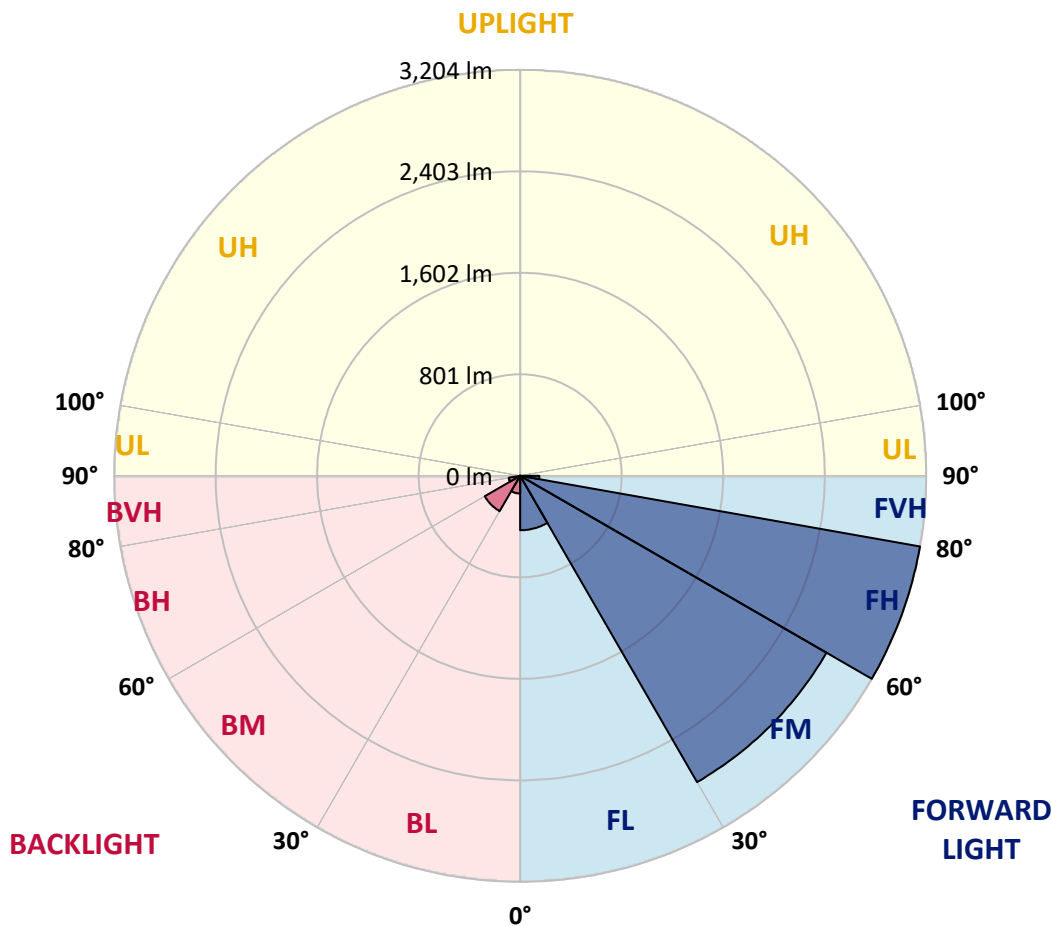
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	429.2	6.0			
FM (30°-60°)	2790.8	39.1			
FH (60°-80°)	3203.7	44.9			G2/5000
FVH (80°-90°)	152.0	2.1			G2/225
BL (0°-30°)	139.9	2.0	B1/500		
BM (30°-60°)	322.6	4.5	B1/1000		
BH (60°-80°)	91.2	1.3	B0/110		G0/110
BVH (80°-90°)	2.6	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°	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9
2.5°	540.7	519.5	485.1	487.6	503.0	506.2	510.9	498.7	488.0	469.0	505.9
5°	692.7	662.2	642.8	636.7	627.8	628.5	606.6	614.5	612.4	626.3	643.2
7.5°	778.4	761.5	737.1	730.3	697.3	693.7	666.9	703.1	706.7	701.6	729.2
10°	812.4	790.2	793.1	767.6	751.1	755.4	759.7	762.6	767.2	771.9	738.2
12.5°	832.5	836.4	875.5	849.0	865.5	865.5	894.5	863.7	864.8	831.1	836.8
15°	922.8	944.7	927.1	926.8	908.9	913.5	947.2	922.8	935.4	925.4	886.6
17.5°	1036.1	1040.4	1007.1	992.4	1008.5	1008.9	994.5	993.5	949.7	1023.6	976.6
20°	1072.3	1096.7	1049.4	992.0	1059.1	1055.9	1054.8	1037.9	965.1	1067.7	1029.0
22.5°	1170.9	1136.2	1103.9	1066.3	1092.4	1092.4	1088.5	1051.6	1023.2	1063.7	1080.2
25°	1201.8	1206.1	1164.1	1151.9	1152.7	1120.4	1117.5	1101.7	1074.5	1143.7	1110.7
27.5°	1307.9	1306.1	1205.4	1239.4	1196.0	1196.4	1117.2	1152.7	1157.3	1147.6	1184.6
30°	1412.2	1441.3	1289.3	1332.3	1286.7	1273.1	1195.7	1227.2	1235.5	1224.4	1271.0
32.5°	1545.2	1587.9	1440.2	1397.9	1328.3	1367.1	1313.6	1239.1	1279.9	1379.2	1405.4
35°	1686.1	1706.9	1549.5	1490.4	1411.9	1411.5	1409.7	1415.8	1461.0	1572.8	1595.1
37.5°	1939.3	1890.1	1747.8	1612.3	1629.9	1590.8	1563.5	1592.2	1639.2	1823.5	1918.5
40°	2080.5	2045.0	1844.6	1764.3	1677.2	1691.5	1765.4	1762.2	1887.3	2080.2	2222.5
42.5°	2217.8	2184.1	1986.9	1922.1	1810.2	1849.3	1881.5	1922.4	2178.8	2490.0	2568.1
45°	2340.1	2241.1	2102.0	2104.5	2046.5	2051.1	2108.1	2145.8	2516.5	2835.6	2890.4
47.5°	2413.9	2332.6	2199.2	2196.7	2193.1	2171.2	2439.8	2474.2	2785.7	3164.7	3169.7
50°	2517.9	2416.1	2299.2	2301.4	2384.2	2430.4	2751.0	2747.4	3045.7	3439.3	3323.5
52.5°	2647.3	2522.9	2394.2	2490.0	2618.0	2693.2	2953.5	3059.7	3325.0	3611.8	3383.8
55°	2813.0	2657.4	2533.3	2656.0	2935.2	2964.3	3151.8	3375.9	3629.3	3787.8	3403.1
57.5°	3007.3	2821.6	2721.2	2918.8	3197.3	3198.0	3440.4	3712.9	3816.1	3859.5	3381.3
60°	3216.7	3000.1	2899.0	3076.9	3486.3	3515.7	3761.3	3899.0	4005.8	3895.7	3342.2
62.5°	3401.0	3161.8	3083.3	3292.3	3803.2	3872.8	4040.9	4021.2	4142.8	3941.3	3242.9
65°	3620.4	3371.2	3319.6	3628.3	4217.0	4312.7	4355.0	4238.1	4188.6	3906.1	2984.4
67.5°	3837.7	3604.6	3603.2	4000.8	4759.4	4792.4	4747.9	4543.9	4135.2	3596.4	2510.8
70°	3990.7	3740.5	3834.8	4408.8	5252.4	5159.9	4972.7	4688.4	3749.5	2756.3	1640.3
72.5°	3847.0	3605.7	3818.3	4554.0	5313.3	5339.9	4842.6	4199.8	2785.7	1409.7	593.7
75°	2923.4	2775.7	3315.3	4040.2	4717.5	4723.6	4042.0	2962.1	1371.7	382.9	164.2
77.5°	1472.5	1425.5	2098.4	2868.2	3441.8	3431.8	2777.1	1586.8	441.3	127.3	82.8
80°	745.4	707.7	893.1	1547.4	2044.0	2059.0	1585.8	710.6	222.6	69.2	57.4
82.5°	457.8	434.5	488.7	700.2	992.0	1016.1	601.6	449.9	138.0	40.9	52.3
85°	88.6	93.2	280.7	350.6	396.2	386.8	178.2	370.4	41.6	24.4	38.0
87.5°	0.0	1.4	64.9	114.4	114.7	101.8	40.5	82.1	5.7	6.8	4.7
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°	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9
2.5°	512.0	506.6	461.8	456.8	457.8	450.3	447.8	432.0	428.1	452.5	456.8
5°	636.0	600.2	558.6	543.5	520.2	480.8	475.0	465.0	453.9	458.2	455.0
7.5°	712.0	664.3	619.9	540.7	475.0	417.7	408.4	391.2	373.9	374.3	385.4
10°	724.2	684.1	622.8	526.3	451.4	379.7	317.3	272.1	251.7	233.4	238.8
12.5°	794.9	757.6	644.6	522.0	417.0	305.1	223.4	179.3	159.9	153.4	152.7
15°	851.5	822.1	681.9	508.7	340.6	214.8	159.9	147.0	143.4	149.5	147.7
17.5°	935.8	882.7	678.0	453.9	259.6	163.1	147.4	145.6	149.9	153.4	154.5
20°	972.7	896.3	651.1	367.8	194.3	149.5	143.8	140.2	148.1	158.8	156.7
22.5°	1010.0	919.6	619.5	301.2	156.3	143.1	139.8	137.0	143.1	153.4	156.0
25°	1026.8	956.9	584.4	235.2	145.2	135.5	133.4	134.4	139.5	148.8	147.7
27.5°	1111.8	961.2	517.4	185.7	140.5	130.1	130.1	132.7	132.7	145.2	144.1
30°	1164.8	1034.0	462.9	156.3	135.2	122.6	126.9	128.0	126.2	139.8	140.9
32.5°	1258.1	1054.1	409.8	143.4	126.6	121.5	120.8	121.5	123.0	136.2	136.6
35°	1401.5	1153.0	337.4	138.4	122.3	116.2	111.1	115.1	118.7	128.4	130.1
37.5°	1681.8	1254.5	275.0	134.4	120.1	111.1	109.4	108.6	115.1	126.2	129.8
40°	1908.8	1434.1	223.7	131.2	115.8	108.3	103.6	104.0	109.7	118.0	123.3
42.5°	2230.0	1563.9	189.7	126.2	109.7	102.2	96.8	100.0	102.5	111.1	114.7
45°	2498.2	1664.6	167.1	123.0	103.6	96.4	92.1	95.7	93.2	97.5	102.5
47.5°	2711.5	1752.5	150.2	115.1	99.7	93.2	87.8	86.8	82.5	83.5	88.2
50°	2828.8	1737.8	136.2	107.2	94.7	90.0	82.5	74.9	69.2	68.8	71.7
52.5°	2870.4	1659.3	124.8	100.4	88.6	82.8	74.2	63.8	58.1	56.3	58.8
55°	2881.8	1546.3	114.4	92.9	82.8	73.9	64.9	53.8	47.7	44.8	47.3
57.5°	2844.5	1372.4	104.3	85.7	76.0	65.3	55.6	44.1	38.4	34.8	36.9
60°	2752.4	1151.6	95.4	76.7	68.8	57.7	47.0	35.5	29.4	26.2	27.2
62.5°	2548.4	902.8	85.7	68.5	61.3	50.6	39.4	28.0	22.2	19.4	19.7
65°	2237.9	673.0	74.6	60.6	54.5	43.7	31.6	21.5	16.9	14.3	14.0
67.5°	1782.9	456.0	63.5	52.3	48.4	36.9	25.1	16.9	13.3	11.5	10.8
70°	1048.0	229.8	52.7	45.2	41.6	30.8	19.7	13.6	12.2	10.8	10.0
72.5°	345.6	99.3	41.2	37.3	34.4	24.7	15.4	12.5	11.8	10.4	9.7
75°	120.5	57.4	30.5	28.7	27.2	18.6	12.9	11.5	11.5	10.0	9.0
77.5°	78.9	44.5	22.6	20.8	20.4	13.6	11.1	10.8	10.0	8.2	6.8
80°	65.6	25.1	15.8	14.7	14.3	8.6	9.0	7.9	6.1	3.6	1.4
82.5°	60.6	15.1	8.2	9.0	8.2	3.2	5.0	4.3	3.2	1.4	0.0
85°	35.5	6.8	4.7	4.7	3.6	0.7	2.5	2.5	1.4	0.4	0.0
87.5°	3.9	3.2	2.5	2.5	1.8	0.0	1.1	0.7	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)