

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: P597011

Luminaire Tested: **MSA-SA3A-835-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597011
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-835-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: 7998 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

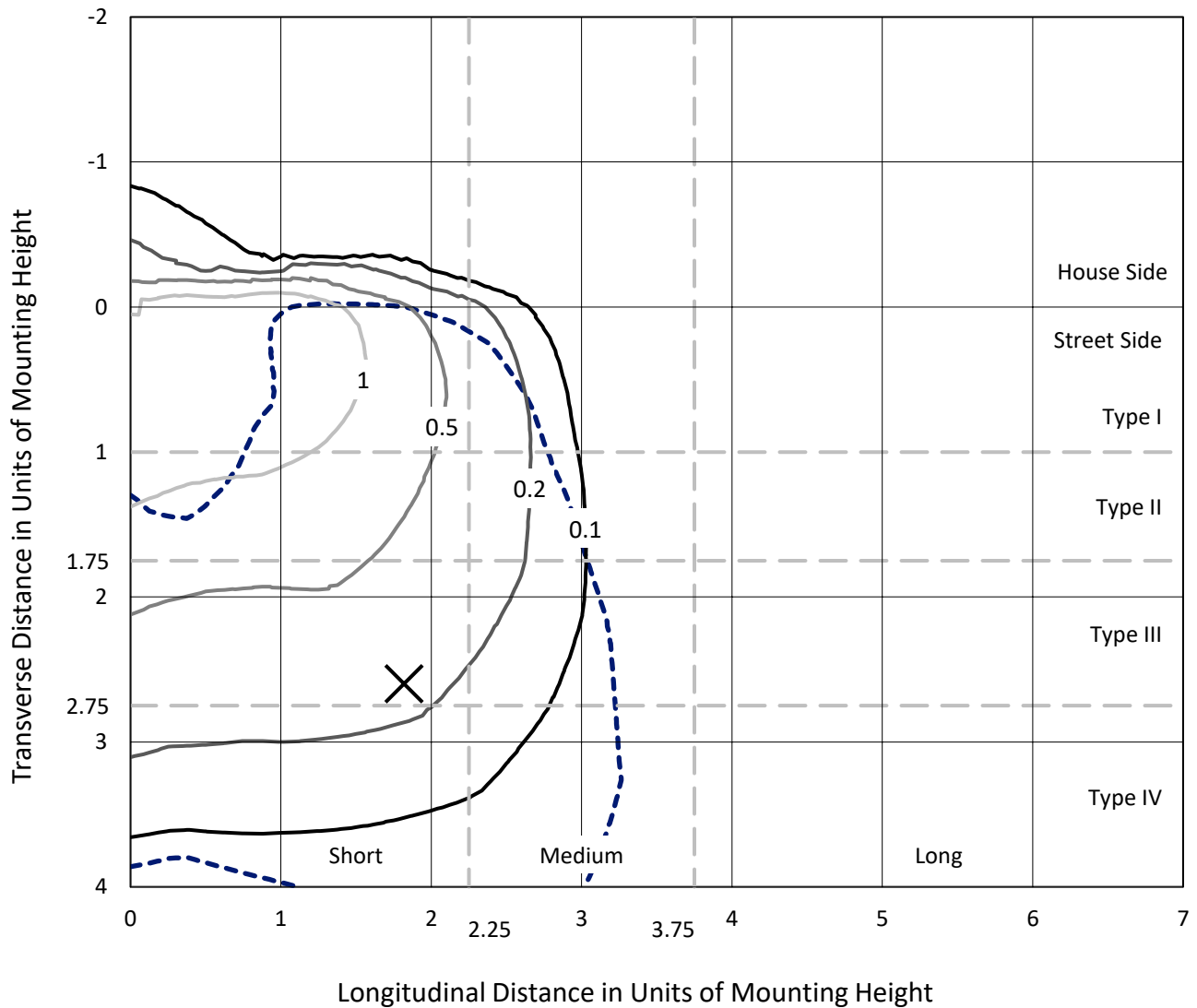
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

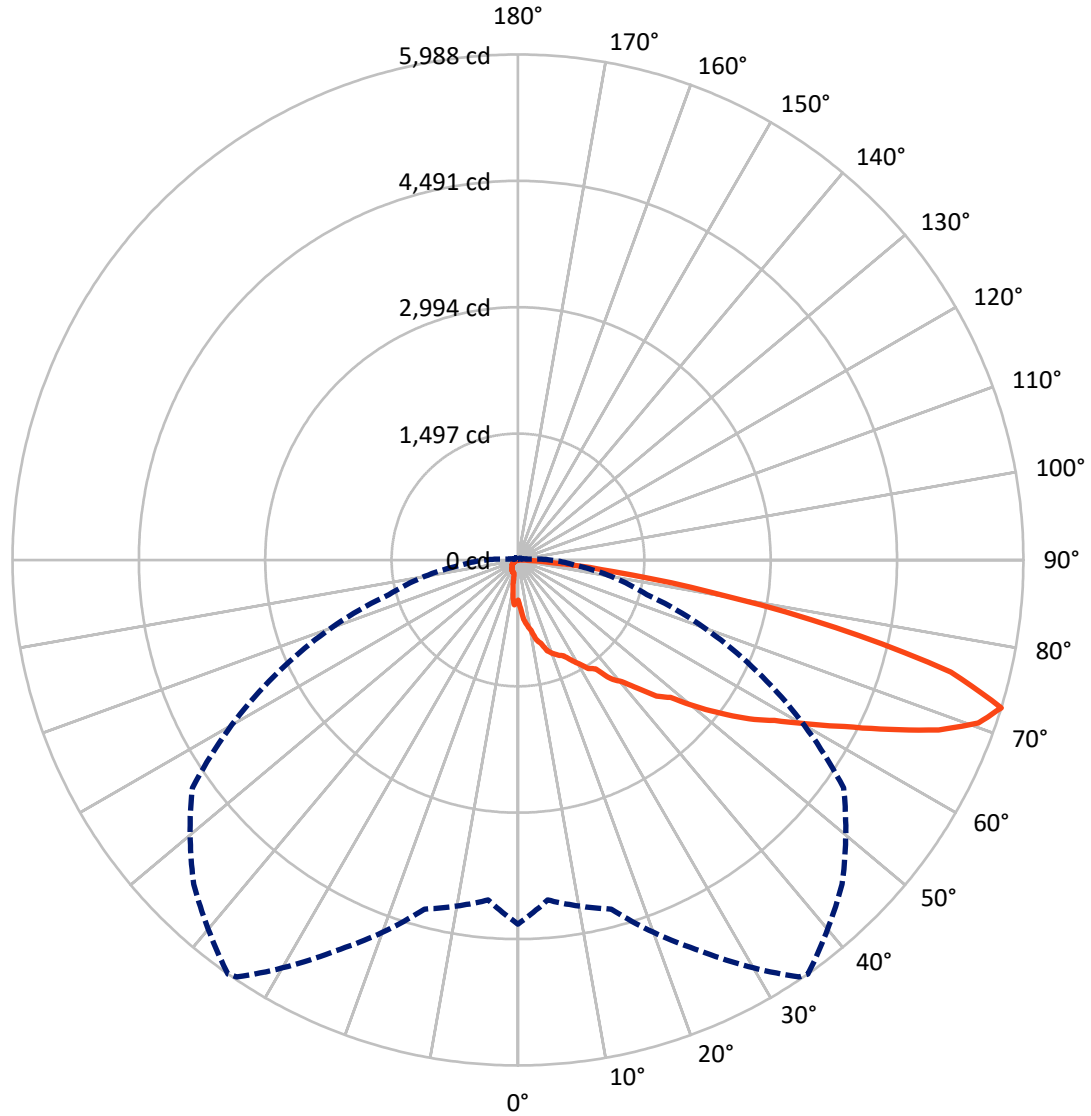
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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	623.8	0.0	623.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	7374.2	0.0	7374.2
	% Fixture	92.2	0.0	92.2
Total	Lumens	7998.0	0.0	7998.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	0.8
10°-20°	204.7	2.6
20°-30°	372.7	4.7
30°-40°	642.9	8.0
40°-50°	1142.9	14.3
50°-60°	1705.5	21.3
60°-70°	2179.0	27.2
70°-80°	1516.0	19.0
80°-90°	173.4	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°	7998.0	100.0
0°-180°	7998.0	100.0

Coefficient of Utilization



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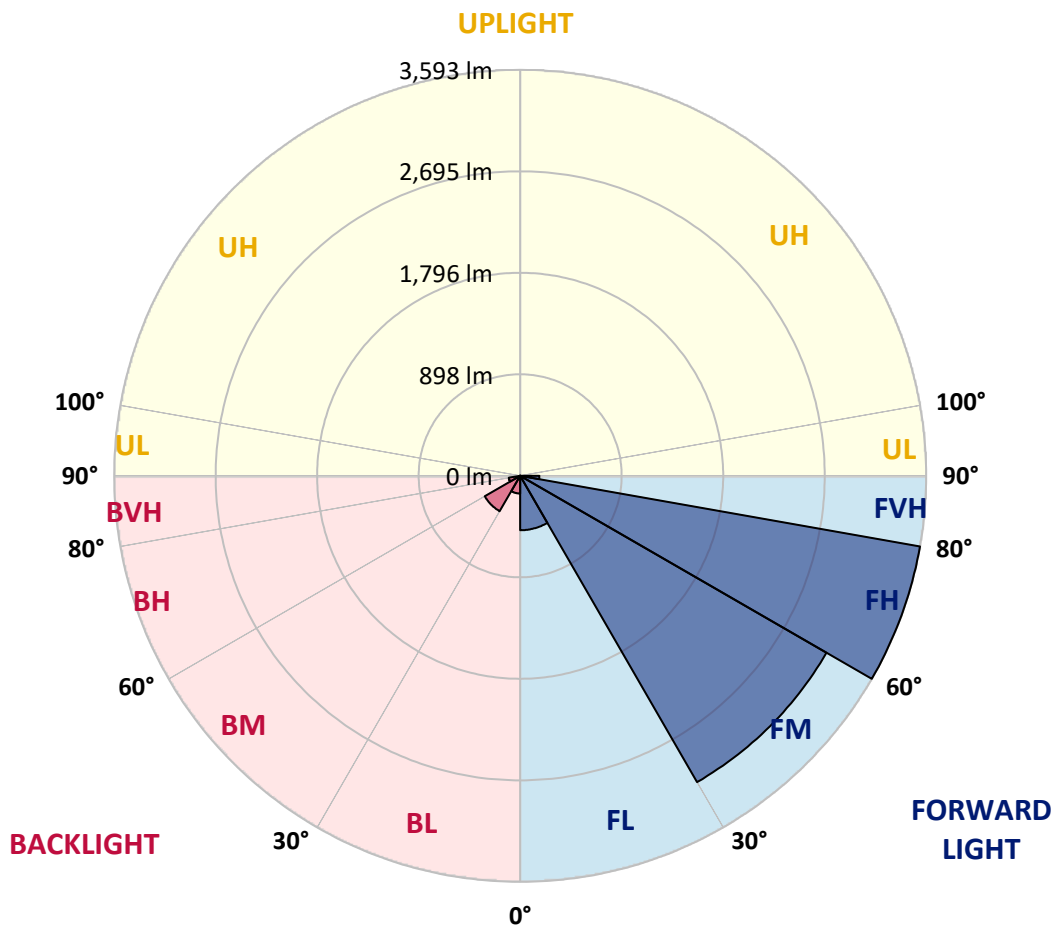
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	481.3	6.0			
FM (30°-60°)	3129.7	39.1			
FH (60°-80°)	3592.7	44.9			G2/5000
FVH (80°-90°)	170.5	2.1			G2/225
BL (0°-30°)	156.9	2.0	B1/500		
BM (30°-60°)	361.7	4.5	B1/1000		
BH (60°-80°)	102.3	1.3	B0/110		G0/110
BVH (80°-90°)	2.9	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°	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4
2.5°	606.3	582.6	544.0	546.8	564.1	567.7	572.9	559.3	547.2	525.9	567.3
5°	776.8	742.6	720.9	714.1	704.0	704.8	680.3	689.1	686.7	702.4	721.3
7.5°	872.9	854.0	826.6	819.0	782.0	778.0	747.8	788.4	792.5	786.8	817.8
10°	911.1	886.1	889.4	860.8	842.3	847.1	852.0	855.2	860.4	865.6	827.8
12.5°	933.6	938.0	981.8	952.1	970.6	970.6	1003.1	968.6	969.8	932.0	938.4
15°	1034.9	1059.4	1039.7	1039.3	1019.2	1024.4	1062.2	1034.9	1049.0	1037.7	994.3
17.5°	1162.0	1166.8	1129.4	1112.9	1131.0	1131.4	1115.3	1114.1	1065.1	1147.9	1095.2
20°	1202.6	1229.9	1176.8	1112.5	1187.7	1184.1	1182.9	1164.0	1082.3	1197.3	1153.9
22.5°	1313.1	1274.1	1237.9	1195.7	1225.1	1225.1	1220.7	1179.2	1147.5	1192.9	1211.4
25°	1347.7	1352.5	1305.5	1291.8	1292.6	1256.4	1253.2	1235.5	1205.0	1282.6	1245.6
27.5°	1466.7	1464.7	1351.7	1389.9	1341.3	1341.7	1252.8	1292.6	1297.8	1287.0	1328.4
30°	1583.7	1616.3	1445.8	1494.1	1443.0	1427.7	1340.9	1376.2	1385.5	1373.0	1425.3
32.5°	1732.9	1780.7	1615.1	1567.6	1489.6	1533.1	1473.1	1389.5	1435.4	1546.7	1576.1
35°	1890.9	1914.2	1737.7	1671.4	1583.3	1582.9	1580.9	1587.7	1638.4	1763.8	1788.8
37.5°	2174.7	2119.7	1960.0	1808.1	1827.8	1783.9	1753.4	1785.5	1838.2	2044.9	2151.4
40°	2333.1	2293.3	2068.6	1978.5	1880.8	1896.9	1979.7	1976.1	2116.4	2332.7	2492.4
42.5°	2487.1	2449.3	2228.2	2155.4	2030.0	2073.8	2110.0	2155.8	2443.3	2792.3	2879.9
45°	2624.2	2513.3	2357.3	2360.1	2295.0	2300.2	2364.1	2406.3	2822.1	3179.9	3241.4
47.5°	2707.1	2615.8	2466.2	2463.4	2459.4	2434.9	2736.0	2774.6	3124.0	3549.0	3554.6
50°	2823.7	2709.5	2578.4	2580.8	2673.7	2725.6	3085.0	3081.0	3415.5	3857.0	3727.1
52.5°	2968.8	2829.3	2684.9	2792.3	2935.8	3020.3	3312.2	3431.2	3728.7	4050.3	3794.6
55°	3154.6	2980.1	2840.9	2978.5	3291.7	3324.2	3534.5	3785.8	4070.0	4247.8	3816.3
57.5°	3372.5	3164.2	3051.6	3273.2	3585.6	3586.4	3858.2	4163.7	4279.5	4328.2	3791.8
60°	3607.3	3364.4	3251.0	3450.5	3909.6	3942.6	4218.0	4372.4	4492.2	4368.8	3748.0
62.5°	3813.9	3545.8	3457.7	3692.1	4265.0	4343.0	4531.6	4509.5	4645.8	4419.8	3636.6
65°	4060.0	3780.6	3722.7	4068.8	4729.0	4836.4	4883.8	4752.7	4697.3	4380.4	3346.7
67.5°	4303.6	4042.3	4040.7	4486.6	5337.3	5374.3	5324.5	5095.7	4637.3	4033.1	2815.6
70°	4475.3	4194.7	4300.4	4944.1	5890.2	5786.4	5576.6	5257.7	4204.7	3091.0	1839.4
72.5°	4314.1	4043.5	4281.9	5107.0	5958.5	5988.3	5430.6	4709.7	3124.0	1580.9	665.8
75°	3278.4	3112.7	3717.8	4530.8	5290.3	5297.1	4532.8	3321.8	1538.3	429.4	184.1
77.5°	1651.3	1598.6	2353.3	3216.5	3859.8	3848.5	3114.3	1779.5	494.9	142.7	92.9
80°	835.9	793.7	1001.5	1735.3	2292.1	2309.0	1778.3	796.9	249.7	77.6	64.3
82.5°	513.4	487.3	548.0	785.2	1112.5	1139.4	674.7	504.6	154.8	45.8	58.7
85°	99.3	104.5	314.8	393.2	444.3	433.8	199.8	415.3	46.6	27.3	42.6
87.5°	0.0	1.6	72.8	128.3	128.7	114.2	45.4	92.1	6.4	7.6	5.2
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°	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4	476.4
2.5°	574.1	568.1	517.9	512.2	513.4	505.0	502.2	484.5	480.1	507.4	512.2
5°	713.3	673.0	626.4	609.5	583.4	539.2	532.7	521.5	509.0	513.8	510.2
7.5°	798.5	745.0	695.2	606.3	532.7	468.4	457.9	438.6	419.3	419.7	432.2
10°	812.2	767.1	698.4	590.2	506.2	425.8	355.8	305.2	282.2	261.7	267.8
12.5°	891.4	849.6	722.9	585.4	467.6	342.2	250.5	201.0	179.3	172.1	171.3
15°	954.9	921.9	764.7	570.5	382.0	240.8	179.3	164.8	160.8	167.7	165.6
17.5°	1049.4	989.9	760.3	509.0	291.1	182.9	165.2	163.2	168.1	172.1	173.3
20°	1090.8	1005.1	730.1	412.5	217.9	167.7	161.2	157.2	166.1	178.1	175.7
22.5°	1132.6	1031.3	694.8	337.7	175.3	160.4	156.8	153.6	160.4	172.1	174.9
25°	1151.5	1073.1	655.4	263.8	162.8	152.0	149.6	150.8	156.4	166.9	165.6
27.5°	1246.8	1077.9	580.2	208.3	157.6	145.9	145.9	148.8	148.8	162.8	161.6
30°	1306.3	1159.5	519.1	175.3	151.6	137.5	142.3	143.5	141.5	156.8	158.0
32.5°	1410.8	1182.1	459.6	160.8	141.9	136.3	135.5	136.3	137.9	152.8	153.2
35°	1571.6	1293.0	378.3	155.2	137.1	130.3	124.6	129.1	133.1	143.9	145.9
37.5°	1886.1	1406.8	308.4	150.8	134.7	124.6	122.6	121.8	129.1	141.5	145.5
40°	2140.6	1608.2	250.9	147.2	129.9	121.4	116.2	116.6	123.0	132.3	138.3
42.5°	2500.8	1753.8	212.7	141.5	123.0	114.6	108.6	112.2	115.0	124.6	128.7
45°	2801.5	1866.8	187.4	137.9	116.2	108.2	103.3	107.3	104.5	109.4	115.0
47.5°	3040.8	1965.3	168.5	129.1	111.8	104.5	98.5	97.3	92.5	93.7	98.9
50°	3172.2	1948.8	152.8	120.2	106.1	100.9	92.5	84.0	77.6	77.2	80.4
52.5°	3218.9	1860.7	139.9	112.6	99.3	92.9	83.2	71.6	65.1	63.1	65.9
55°	3231.7	1734.1	128.3	104.1	92.9	82.8	72.8	60.3	53.5	50.3	53.1
57.5°	3189.9	1539.1	117.0	96.1	85.2	73.2	62.3	49.5	43.0	39.0	41.4
60°	3086.6	1291.4	106.9	86.0	77.2	64.7	52.7	39.8	33.0	29.4	30.6
62.5°	2857.8	1012.4	96.1	76.8	68.8	56.7	44.2	31.4	24.9	21.7	22.1
65°	2509.7	754.7	83.6	67.9	61.1	49.1	35.4	24.1	18.9	16.1	15.7
67.5°	1999.4	511.4	71.2	58.7	54.3	41.4	28.1	18.9	14.9	12.9	12.1
70°	1175.2	257.7	59.1	50.7	46.6	34.6	22.1	15.3	13.7	12.1	11.3
72.5°	387.6	111.4	46.2	41.8	38.6	27.7	17.3	14.1	13.3	11.7	10.9
75°	135.1	64.3	34.2	32.2	30.6	20.9	14.5	12.9	12.9	11.3	10.1
77.5°	88.5	49.9	25.3	23.3	22.9	15.3	12.5	12.1	11.3	9.2	7.6
80°	73.6	28.1	17.7	16.5	16.1	9.6	10.1	8.8	6.8	4.0	1.6
82.5°	67.9	16.9	9.2	10.1	9.2	3.6	5.6	4.8	3.6	1.6	0.0
85°	39.8	7.6	5.2	5.2	4.0	0.8	2.8	2.8	1.6	0.4	0.0
87.5°	4.4	3.6	2.8	2.8	2.0	0.0	1.2	0.8	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)