

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: P367685

Luminaire Tested: **MSA-SA3A-730-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367685  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-730-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: 8835 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

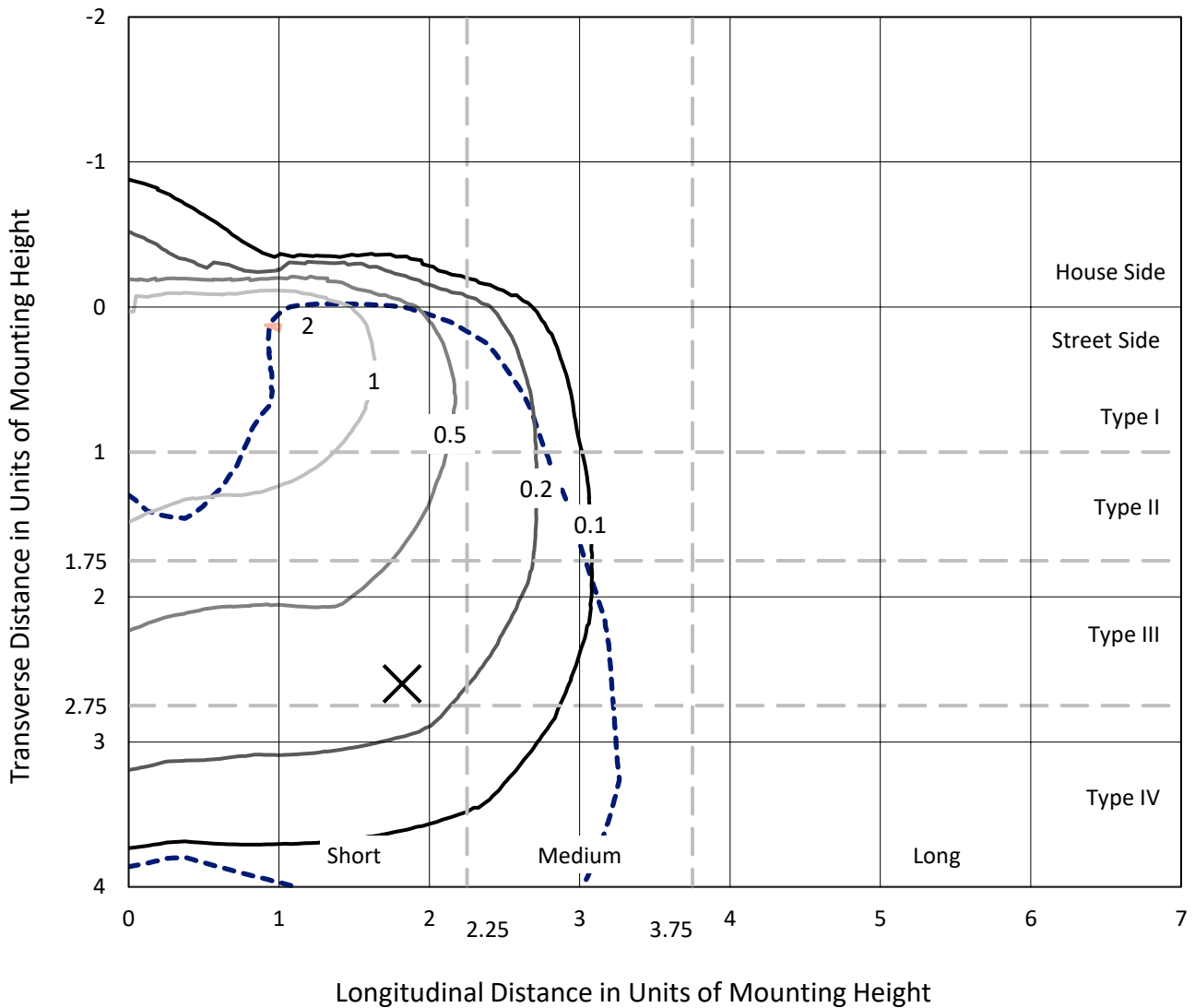
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

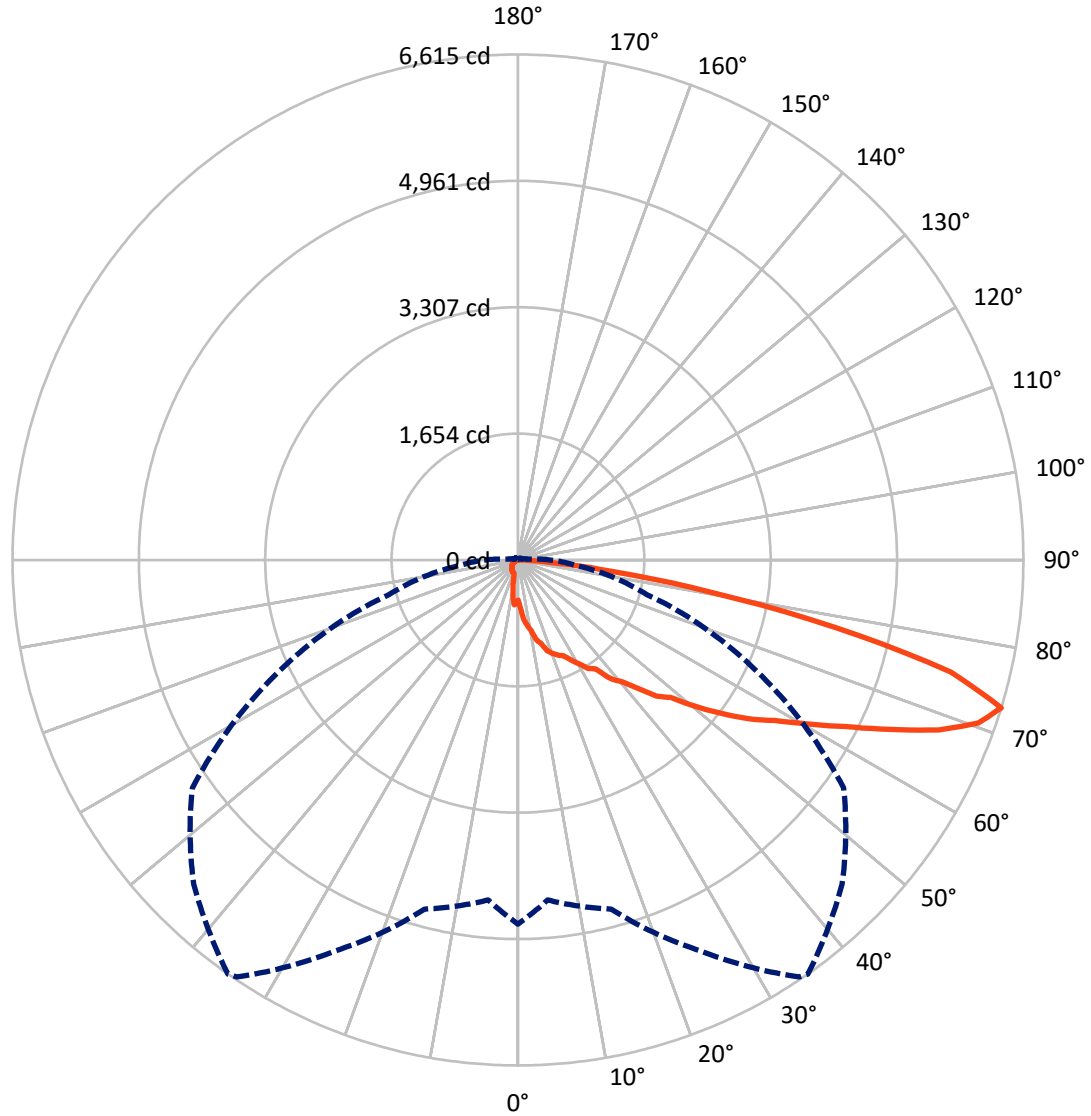
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 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
<b>House Side</b>	Lumens	689.1	0.0	689.1
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	8145.9	0.0	8145.9
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	8835.0	0.0	8835.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.1	0.8
10°-20°	226.1	2.6
20°-30°	411.8	4.7
30°-40°	710.2	8.0
40°-50°	1262.5	14.3
50°-60°	1884.0	21.3
60°-70°	2407.0	27.2
70°-80°	1674.7	19.0
80°-90°	191.6	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°	8835.0	100.0
0°-180°	8835.0	100.0

**Coefficient of Utilization**



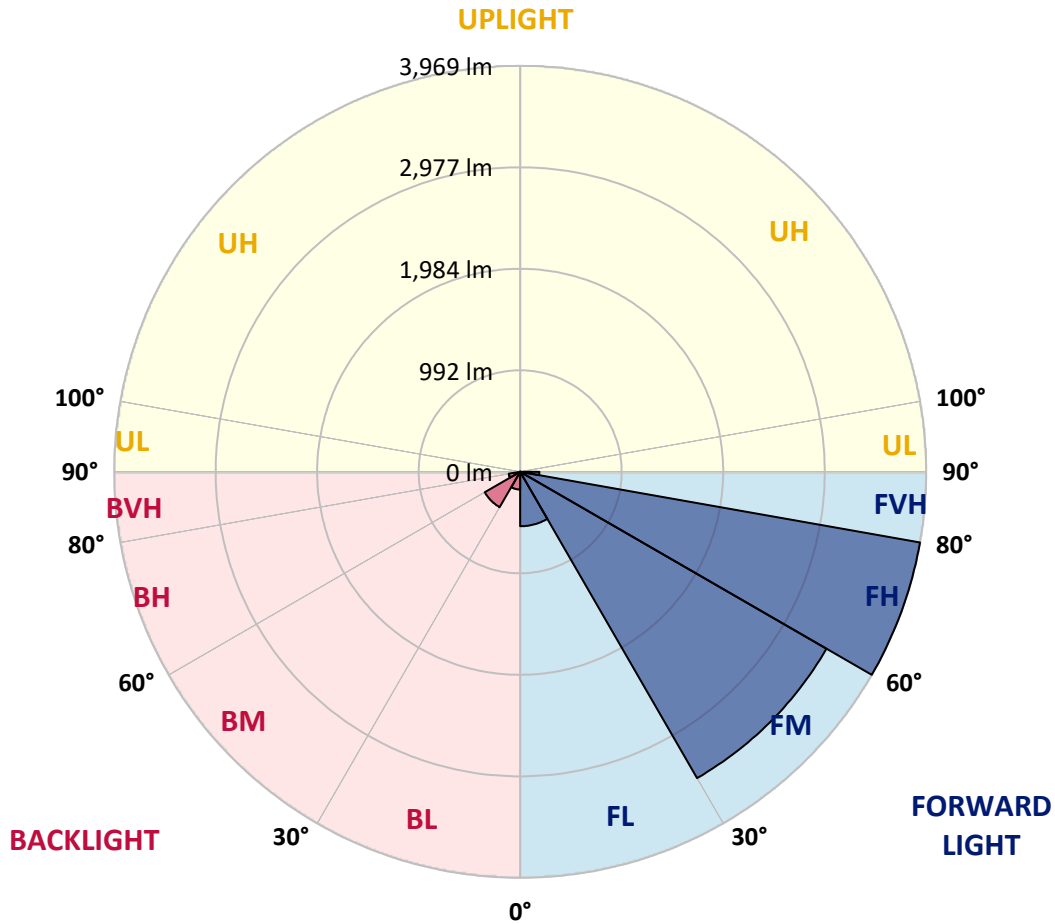
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	531.7	6.0			
FM (30°-60°)	3457.2	39.1			
FH (60°-80°)	3968.7	44.9			G2/5000
FVH (80°-90°)	188.3	2.1			G2/225
BL (0°-30°)	173.3	2.0	B1/500		
BM (30°-60°)	399.6	4.5	B1/1000		
BH (60°-80°)	113.0	1.3	B1/500		G1/500
BVH (80°-90°)	3.2	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°	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3
2.5°	669.8	643.6	600.9	604.0	623.1	627.1	632.9	617.8	604.5	580.9	626.7
5°	858.1	820.3	796.3	788.8	777.7	778.6	751.5	761.2	758.6	775.9	796.8
7.5°	964.2	943.3	913.1	904.7	863.8	859.4	826.1	870.9	875.4	869.2	903.4
10°	1006.4	978.9	982.4	950.9	930.5	935.8	941.1	944.7	950.4	956.2	914.5
12.5°	1031.3	1036.2	1084.6	1051.7	1072.1	1072.1	1108.1	1069.9	1071.3	1029.5	1036.6
15°	1143.2	1170.3	1148.5	1148.1	1125.9	1131.7	1173.4	1143.2	1158.7	1146.3	1098.3
17.5°	1283.5	1288.9	1247.6	1229.4	1249.4	1249.8	1232.0	1230.7	1176.5	1268.0	1209.8
20°	1328.4	1358.6	1300.0	1228.9	1312.0	1308.0	1306.6	1285.8	1195.6	1322.6	1274.7
22.5°	1450.5	1407.5	1367.5	1320.9	1353.3	1353.3	1348.4	1302.6	1267.6	1317.7	1338.2
25°	1488.7	1494.1	1442.1	1427.0	1427.9	1387.9	1384.4	1364.8	1331.1	1416.8	1375.9
27.5°	1620.2	1618.0	1493.2	1535.4	1481.6	1482.1	1383.9	1427.9	1433.7	1421.7	1467.4
30°	1749.4	1785.4	1597.1	1650.4	1594.0	1577.1	1481.2	1520.3	1530.5	1516.7	1574.5
32.5°	1914.2	1967.1	1784.1	1731.7	1645.5	1693.5	1627.3	1534.9	1585.6	1708.6	1741.0
35°	2088.8	2114.5	1919.6	1846.3	1749.0	1748.6	1746.3	1753.9	1809.8	1948.4	1976.0
37.5°	2402.3	2341.5	2165.2	1997.3	2019.0	1970.6	1936.9	1972.4	2030.6	2258.9	2376.6
40°	2577.3	2533.3	2285.1	2185.6	2077.7	2095.4	2186.9	2182.9	2337.9	2576.9	2753.2
42.5°	2747.4	2705.7	2461.4	2381.0	2242.4	2290.8	2330.8	2381.5	2699.0	3084.5	3181.3
45°	2898.9	2776.3	2604.0	2607.1	2535.1	2540.9	2611.5	2658.1	3117.4	3512.7	3580.6
47.5°	2990.4	2889.5	2724.3	2721.2	2716.8	2689.7	3022.3	3065.0	3450.9	3920.4	3926.6
50°	3119.2	2993.0	2848.2	2850.9	2953.5	3010.8	3407.8	3403.4	3772.9	4260.6	4117.1
52.5°	3279.5	3125.4	2965.9	3084.5	3243.1	3336.3	3658.8	3790.2	4118.9	4474.2	4191.7
55°	3484.7	3291.9	3138.3	3290.2	3636.1	3672.1	3904.4	4182.0	4496.0	4692.3	4215.7
57.5°	3725.4	3495.3	3371.0	3615.7	3960.8	3961.7	4261.9	4599.5	4727.4	4781.1	4188.6
60°	3984.8	3716.5	3591.3	3811.6	4318.8	4355.2	4659.4	4830.0	4962.3	4826.0	4140.2
62.5°	4213.1	3916.8	3819.6	4078.5	4711.4	4797.5	5005.8	4981.4	5132.0	4882.4	4017.2
65°	4484.9	4176.2	4112.2	4494.6	5223.9	5342.5	5394.9	5250.1	5188.8	4838.8	3697.0
67.5°	4754.0	4465.3	4463.6	4956.1	5895.9	5936.7	5881.7	5629.0	5122.7	4455.1	3110.3
70°	4943.7	4633.7	4750.5	5461.5	6506.6	6392.0	6160.1	5808.0	4644.8	3414.5	2031.9
72.5°	4765.6	4466.7	4730.0	5641.4	6582.1	6614.9	5998.9	5202.6	3450.9	1746.3	735.5
75°	3621.5	3438.5	4106.9	5005.0	5843.9	5851.5	5007.2	3669.4	1699.3	474.3	203.4
77.5°	1824.1	1765.9	2599.5	3553.1	4263.7	4251.3	3440.3	1965.7	546.7	157.7	102.6
80°	923.4	876.7	1106.3	1916.9	2532.0	2550.7	1964.4	880.3	275.8	85.7	71.1
82.5°	567.2	538.3	605.4	867.4	1228.9	1258.7	745.3	557.4	171.0	50.6	64.8
85°	109.7	115.5	347.8	434.4	490.8	479.2	220.7	458.8	51.5	30.2	47.1
87.5°	0.0	1.8	80.4	141.7	142.1	126.1	50.2	101.7	7.1	8.4	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°	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3	526.3
2.5°	634.2	627.6	572.0	565.8	567.2	557.8	554.7	535.2	530.3	560.5	565.8
5°	787.9	743.5	692.0	673.3	644.4	595.6	588.5	576.0	562.3	567.6	563.6
7.5°	882.1	823.0	767.9	669.8	588.5	517.4	505.9	484.6	463.2	463.7	477.4
10°	897.2	847.4	771.5	652.0	559.2	470.3	393.1	337.1	311.8	289.1	295.8
12.5°	984.6	938.5	798.6	646.7	516.5	378.0	276.7	222.1	198.1	190.1	189.2
15°	1054.8	1018.4	844.7	630.2	421.9	266.0	198.1	182.1	177.7	185.2	183.0
17.5°	1159.2	1093.5	839.9	562.3	321.6	202.1	182.5	180.3	185.6	190.1	191.4
20°	1204.9	1110.3	806.5	455.7	240.7	185.2	178.1	173.7	183.4	196.8	194.1
22.5°	1251.1	1139.2	767.5	373.1	193.6	177.2	173.2	169.7	177.2	190.1	193.2
25°	1272.0	1185.4	723.9	291.4	179.9	167.9	165.2	166.6	172.8	184.3	183.0
27.5°	1377.3	1190.7	640.9	230.1	174.1	161.2	161.2	164.3	164.3	179.9	178.5
30°	1443.0	1280.9	573.4	193.6	167.4	151.9	157.2	158.6	156.3	173.2	174.5
32.5°	1558.5	1305.8	507.6	177.7	156.8	150.6	149.7	150.6	152.3	168.8	169.2
35°	1736.1	1428.3	417.9	171.4	151.4	143.9	137.7	142.6	147.0	159.0	161.2
37.5°	2083.4	1554.0	340.7	166.6	148.8	137.7	135.5	134.6	142.6	156.3	160.8
40°	2364.6	1776.5	277.1	162.6	143.5	134.1	128.4	128.8	135.9	146.1	152.8
42.5°	2762.5	1937.3	234.9	156.3	135.9	126.6	119.9	123.9	127.0	137.7	142.1
45°	3094.7	2062.1	207.0	152.3	128.4	119.5	114.1	118.6	115.5	120.8	127.0
47.5°	3359.0	2170.9	186.1	142.6	123.5	115.5	108.8	107.5	102.2	103.5	109.3
50°	3504.2	2152.7	168.8	132.8	117.3	111.5	102.2	92.8	85.7	85.3	88.8
52.5°	3555.7	2055.5	154.6	124.4	109.7	102.6	91.9	79.1	71.9	69.7	72.8
55°	3570.0	1915.6	141.7	115.0	102.6	91.5	80.4	66.6	59.1	55.5	58.6
57.5°	3523.8	1700.1	129.2	106.1	94.2	80.8	68.8	54.6	47.5	43.1	45.7
60°	3409.6	1426.6	118.1	95.0	85.3	71.5	58.2	44.0	36.4	32.4	33.8
62.5°	3156.9	1118.3	106.1	84.8	75.9	62.6	48.9	34.6	27.5	24.0	24.4
65°	2772.3	833.6	92.4	75.1	67.5	54.2	39.1	26.6	20.9	17.8	17.3
67.5°	2208.7	564.9	78.6	64.8	60.0	45.7	31.1	20.9	16.4	14.2	13.3
70°	1298.2	284.7	65.3	56.0	51.5	38.2	24.4	16.9	15.1	13.3	12.4
72.5°	428.1	123.0	51.1	46.2	42.6	30.6	19.1	15.5	14.7	12.9	12.0
75°	149.2	71.1	37.8	35.5	33.8	23.1	16.0	14.2	14.2	12.4	11.1
77.5°	97.7	55.1	28.0	25.8	25.3	16.9	13.8	13.3	12.4	10.2	8.4
80°	81.3	31.1	19.5	18.2	17.8	10.7	11.1	9.8	7.6	4.4	1.8
82.5°	75.1	18.7	10.2	11.1	10.2	4.0	6.2	5.3	4.0	1.8	0.0
85°	44.0	8.4	5.8	5.8	4.4	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)