

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: P597121

Luminaire Tested: **MSA-SA4B-835-U-SL4-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597121  
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-SA4B-835-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 13247 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

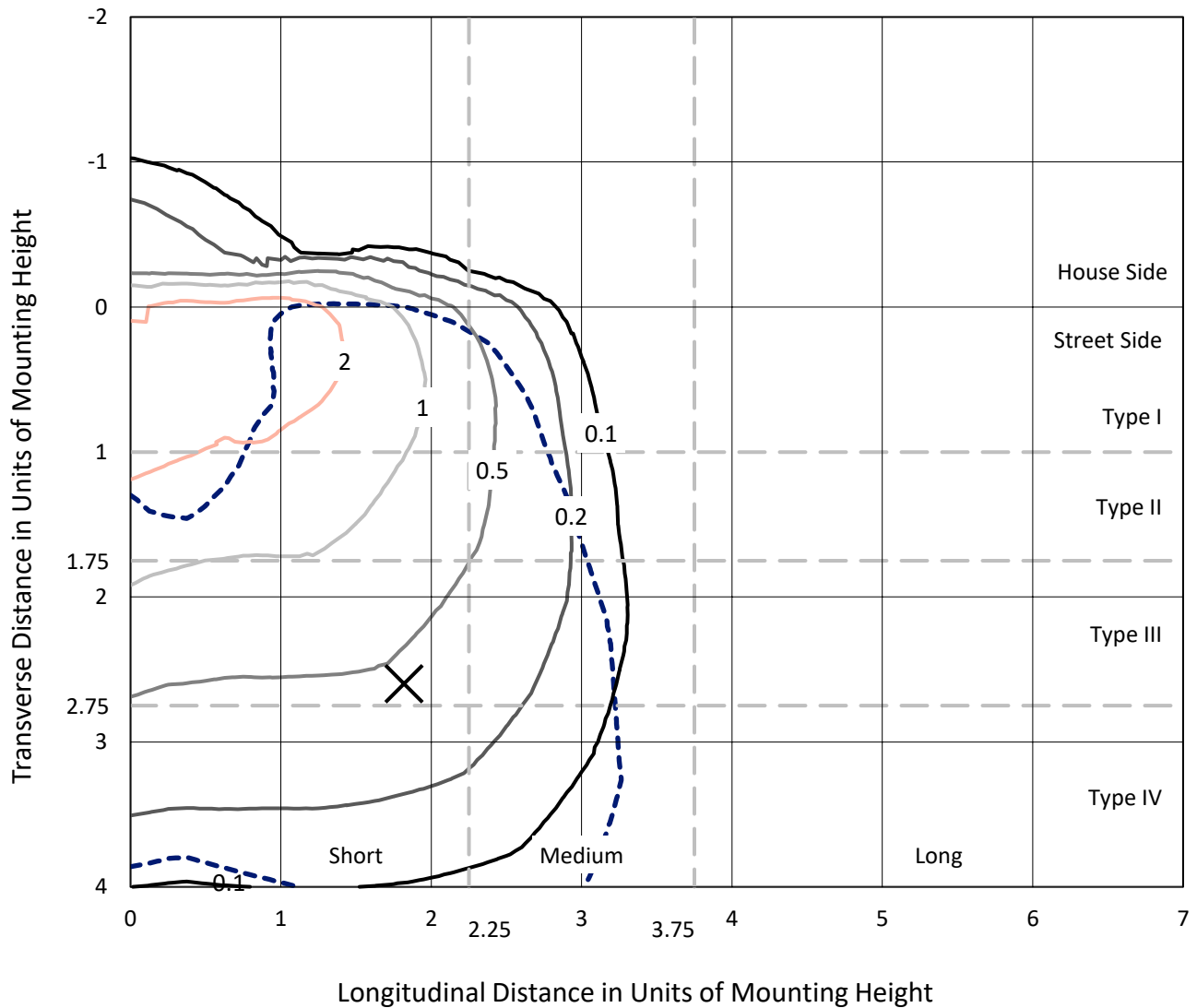
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

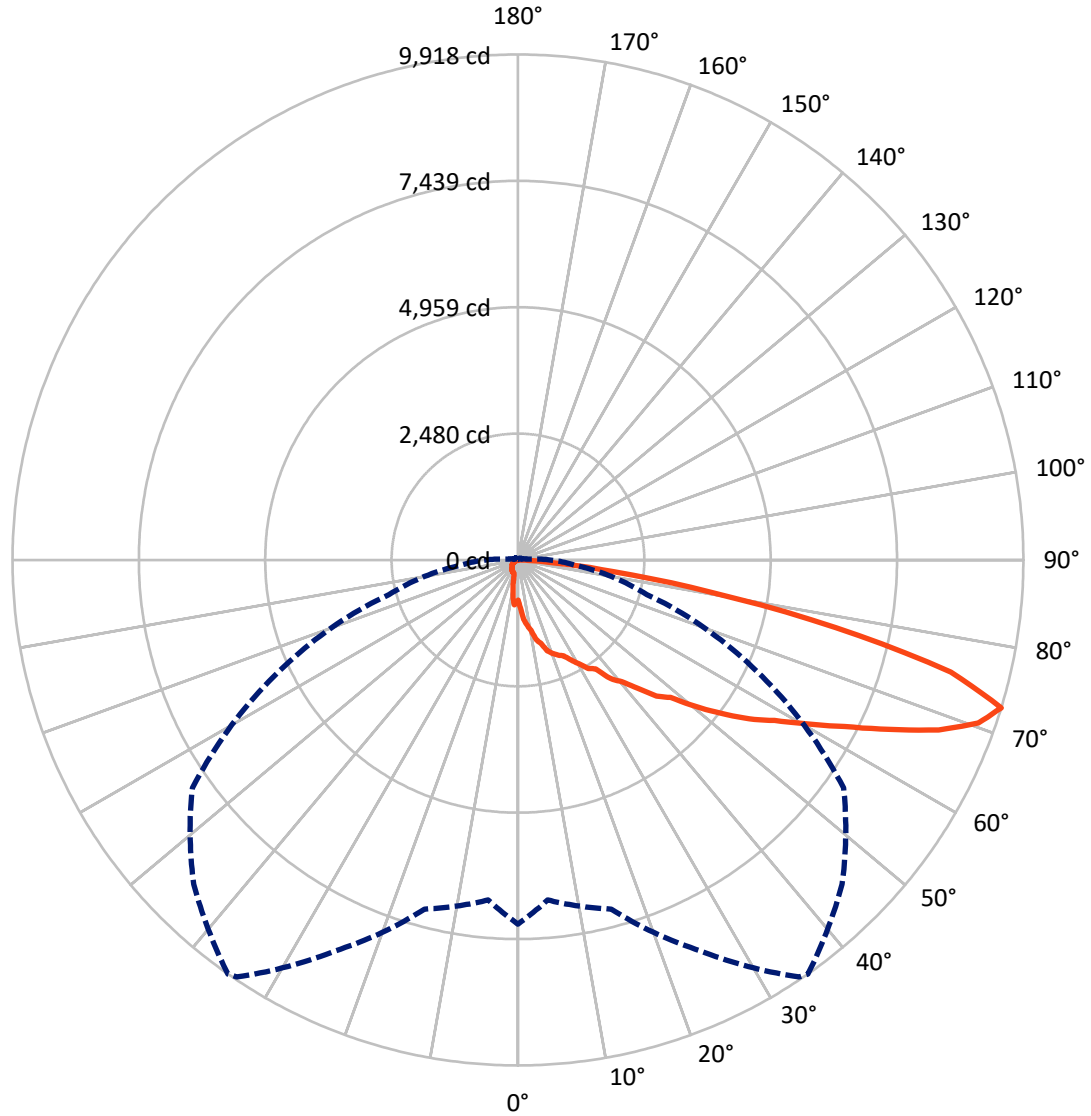
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	1033.2	0.0	1033.2
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	12213.8	0.0	12213.8
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	13247.0	0.0	13247.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.6	0.8
10°-20°	339.0	2.6
20°-30°	617.4	4.7
30°-40°	1064.9	8.0
40°-50°	1893.0	14.3
50°-60°	2824.8	21.3
60°-70°	3609.0	27.2
70°-80°	2510.9	19.0
80°-90°	287.2	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°	13247.0	100.0
0°-180°	13247.0	100.0

**Coefficient of Utilization**



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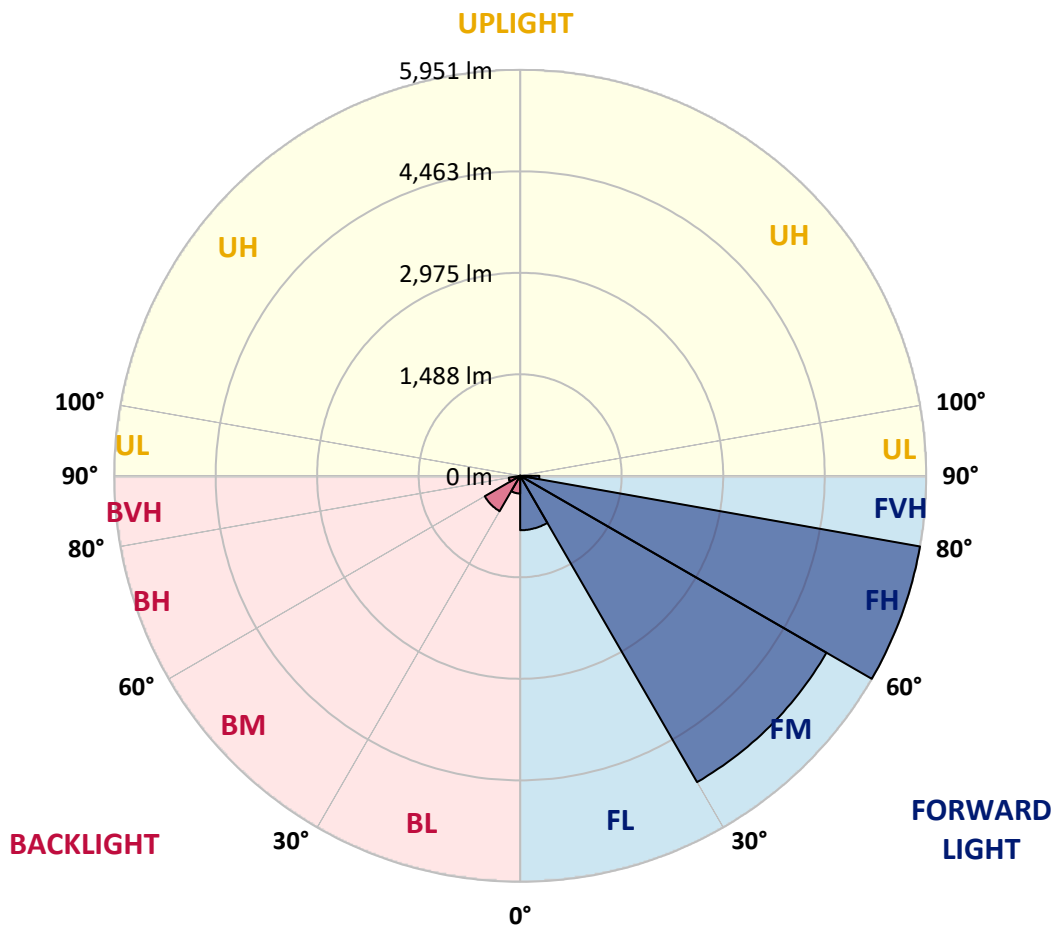
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	797.2	6.0			
FM (30°-60°)	5183.6	39.1			
FH (60°-80°)	5950.6	44.9			G3/7500
FVH (80°-90°)	282.4	2.1			G3/500
BL (0°-30°)	259.9	2.0	B1/500		
BM (30°-60°)	599.1	4.5	B1/1000		
BH (60°-80°)	169.4	1.3	B1/500		G1/500
BVH (80°-90°)	4.8	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1
2.5°	1004.2	964.9	901.0	905.7	934.3	940.3	948.9	926.3	906.3	871.0	939.6
5°	1286.6	1230.0	1194.0	1182.7	1166.0	1167.4	1126.7	1141.4	1137.4	1163.4	1194.7
7.5°	1445.7	1414.4	1369.1	1356.5	1295.2	1288.6	1238.6	1305.9	1312.5	1303.2	1354.5
10°	1509.0	1467.7	1473.0	1425.7	1395.1	1403.1	1411.1	1416.4	1425.1	1433.7	1371.1
12.5°	1546.3	1553.6	1626.2	1576.9	1607.5	1607.5	1661.5	1604.2	1606.2	1543.6	1554.3
15°	1714.1	1754.7	1722.1	1721.4	1688.1	1696.8	1759.4	1714.1	1737.4	1718.8	1646.8
17.5°	1924.5	1932.5	1870.6	1843.3	1873.2	1873.9	1847.3	1845.3	1764.0	1901.2	1814.0
20°	1991.8	2037.1	1949.2	1842.6	1967.1	1961.2	1959.2	1927.9	1792.7	1983.1	1911.2
22.5°	2174.9	2110.3	2050.4	1980.5	2029.1	2029.1	2021.8	1953.2	1900.6	1975.8	2006.4
25°	2232.2	2240.2	2162.3	2139.6	2141.0	2081.0	2075.7	2046.4	1995.8	2124.3	2063.0
27.5°	2429.3	2426.0	2238.8	2302.1	2221.5	2222.2	2075.0	2141.0	2149.6	2131.6	2200.2
30°	2623.1	2677.0	2394.7	2474.6	2390.0	2364.7	2220.9	2279.5	2294.8	2274.1	2360.7
32.5°	2870.1	2949.4	2675.0	2596.4	2467.3	2539.2	2440.0	2301.4	2377.4	2561.8	2610.4
35°	3131.8	3170.5	2878.1	2768.3	2622.4	2621.7	2618.4	2629.7	2713.6	2921.4	2962.7
37.5°	3602.0	3510.8	3246.4	2994.7	3027.3	2954.7	2904.1	2957.4	3044.6	3386.9	3563.4
40°	3864.4	3798.4	3426.2	3277.0	3115.2	3141.8	3279.0	3273.0	3505.4	3863.7	4128.1
42.5°	4119.4	4056.8	3690.6	3570.0	3362.3	3434.8	3494.8	3570.7	4046.8	4624.9	4770.0
45°	4346.5	4162.7	3904.3	3909.0	3801.1	3809.8	3915.6	3985.6	4674.1	5266.8	5368.7
47.5°	4483.7	4332.5	4084.8	4080.1	4073.5	4032.8	4531.6	4595.6	5174.2	5878.1	5887.4
50°	4676.8	4487.7	4270.6	4274.6	4428.4	4514.3	5109.6	5103.0	5657.0	6388.2	6173.1
52.5°	4917.2	4686.1	4447.1	4624.9	4862.6	5002.4	5485.9	5683.0	6175.8	6708.5	6285.0
55°	5224.9	4935.8	4705.4	4933.2	5451.9	5505.9	5854.2	6270.4	6741.2	7035.5	6321.0
57.5°	5585.8	5240.8	5054.4	5421.3	5938.7	5940.1	6390.2	6896.3	7088.1	7168.7	6280.3
60°	5974.7	5572.5	5384.7	5715.0	6475.5	6530.1	6986.2	7241.9	7440.4	7235.9	6207.8
62.5°	6317.0	5872.8	5727.0	6115.2	7064.1	7193.3	7505.6	7469.0	7694.8	7320.5	6023.3
65°	6724.5	6261.7	6165.8	6739.2	7832.6	8010.4	8089.0	7871.9	7780.0	7255.3	5543.2
67.5°	7128.1	6695.2	6692.6	7431.1	8840.2	8901.4	8818.9	8439.9	7680.8	6679.9	4663.5
70°	7412.4	6947.6	7122.7	8188.9	9755.8	9584.0	9236.4	8708.3	6964.3	5119.6	3046.6
72.5°	7145.4	6697.2	7092.1	8458.6	9869.0	9918.3	8994.7	7800.7	5174.2	2618.4	1102.8
75°	5430.0	5155.6	6157.8	7504.3	8762.3	8773.6	7507.6	5501.9	2547.8	711.2	305.0
77.5°	2735.0	2647.7	3897.7	5327.4	6392.9	6374.2	5158.3	2947.4	819.8	236.4	153.8
80°	1384.5	1314.5	1658.8	2874.1	3796.4	3824.4	2945.4	1319.9	413.5	128.5	106.5
82.5°	850.4	807.1	907.7	1300.6	1842.6	1887.2	1117.4	835.7	256.4	75.9	97.2
85°	164.5	173.1	521.4	651.3	735.8	718.5	331.0	687.9	77.2	45.3	70.6
87.5°	0.0	2.7	120.5	212.4	213.1	189.1	75.2	152.5	10.7	12.7	8.7
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°	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1
2.5°	950.9	941.0	857.7	848.4	850.4	836.4	831.7	802.4	795.1	840.4	848.4
5°	1181.4	1114.8	1037.5	1009.5	966.3	893.0	882.4	863.7	843.1	851.1	845.1
7.5°	1322.5	1234.0	1151.4	1004.2	882.4	775.8	758.5	726.5	694.6	695.2	715.9
10°	1345.2	1270.6	1156.7	977.6	838.4	705.2	589.3	505.4	467.5	433.5	443.5
12.5°	1476.4	1407.1	1197.3	969.6	774.5	566.7	414.9	333.0	297.0	285.0	283.7
15°	1581.6	1527.0	1266.6	944.9	632.6	398.9	297.0	273.0	266.4	277.7	274.4
17.5°	1738.1	1639.5	1259.3	843.1	482.1	303.0	273.7	270.4	278.4	285.0	287.0
20°	1806.7	1664.8	1209.3	683.2	360.9	277.7	267.0	260.4	275.0	295.0	291.0
22.5°	1875.9	1708.1	1150.7	559.4	290.3	265.7	259.7	254.4	265.7	285.0	289.7
25°	1907.2	1777.4	1085.5	436.8	269.7	251.7	247.7	249.7	259.0	276.4	274.4
27.5°	2065.0	1785.3	960.9	344.9	261.0	241.7	241.7	246.4	246.4	269.7	267.7
30°	2163.6	1920.5	859.7	290.3	251.1	227.7	235.7	237.7	234.4	259.7	261.7
32.5°	2336.7	1957.8	761.2	266.4	235.1	225.7	224.4	225.7	228.4	253.1	253.7
35°	2603.1	2141.6	626.6	257.0	227.1	215.8	206.4	213.8	220.4	238.4	241.7
37.5°	3123.9	2330.1	510.8	249.7	223.1	206.4	203.1	201.8	213.8	234.4	241.1
40°	3545.4	2663.7	415.5	243.7	215.1	201.1	192.5	193.1	203.8	219.1	229.1
42.5°	4142.1	2904.8	352.3	234.4	203.8	189.8	179.8	185.8	190.5	206.4	213.1
45°	4640.2	3091.9	310.3	228.4	192.5	179.1	171.1	177.8	173.1	181.1	190.5
47.5°	5036.4	3255.0	279.0	213.8	185.1	173.1	163.2	161.2	153.2	155.2	163.8
50°	5254.2	3227.7	253.1	199.1	175.8	167.1	153.2	139.2	128.5	127.9	133.2
52.5°	5331.4	3081.9	231.7	186.5	164.5	153.8	137.8	118.5	107.9	104.6	109.2
55°	5352.7	2872.1	212.4	172.5	153.8	137.2	120.5	99.9	88.6	83.2	87.9
57.5°	5283.5	2549.2	193.8	159.2	141.2	121.2	103.2	81.9	71.3	64.6	68.6
60°	5112.3	2139.0	177.1	142.5	127.9	107.2	87.2	65.9	54.6	48.6	50.6
62.5°	4733.4	1676.8	159.2	127.2	113.9	93.9	73.3	51.9	41.3	36.0	36.6
65°	4156.7	1249.9	138.5	112.5	101.2	81.2	58.6	40.0	31.3	26.6	26.0
67.5°	3311.6	847.1	117.9	97.2	89.9	68.6	46.6	31.3	24.6	21.3	20.0
70°	1946.5	426.9	97.9	83.9	77.2	57.3	36.6	25.3	22.6	20.0	18.6
72.5°	642.0	184.5	76.6	69.3	63.9	45.9	28.6	23.3	22.0	19.3	18.0
75°	223.8	106.5	56.6	53.3	50.6	34.6	24.0	21.3	21.3	18.6	16.6
77.5°	146.5	82.6	42.0	38.6	38.0	25.3	20.6	20.0	18.6	15.3	12.7
80°	121.9	46.6	29.3	27.3	26.6	16.0	16.6	14.7	11.3	6.7	2.7
82.5°	112.5	28.0	15.3	16.6	15.3	6.0	9.3	8.0	6.0	2.7	0.0
85°	65.9	12.7	8.7	8.7	6.7	1.3	4.7	4.7	2.7	0.7	0.0
87.5°	7.3	6.0	4.7	4.7	3.3	0.0	2.0	1.3	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)