

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: P368027

Luminaire Tested: **MSA-SA3C-760-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368027  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3C-760-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13725 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

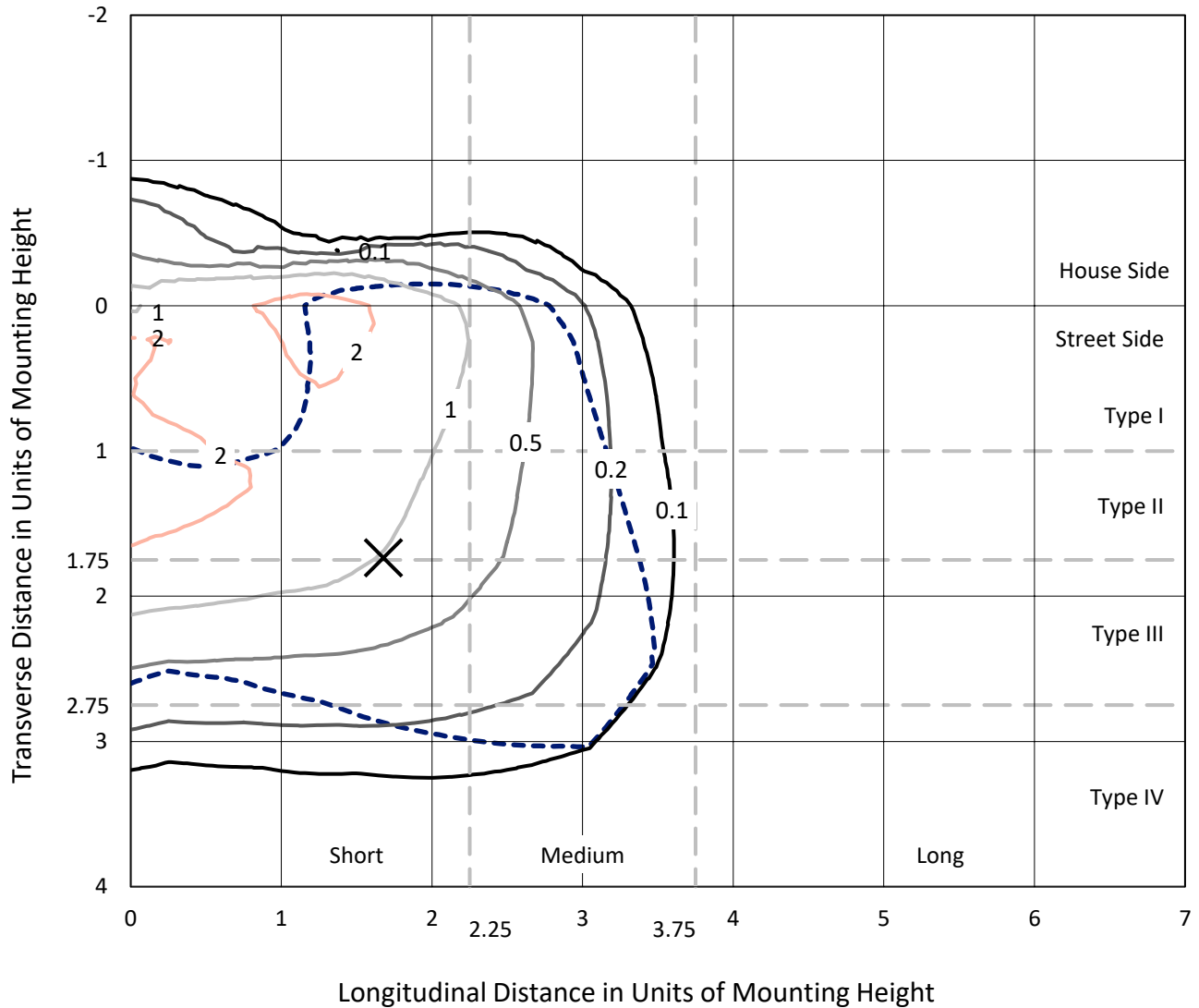
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

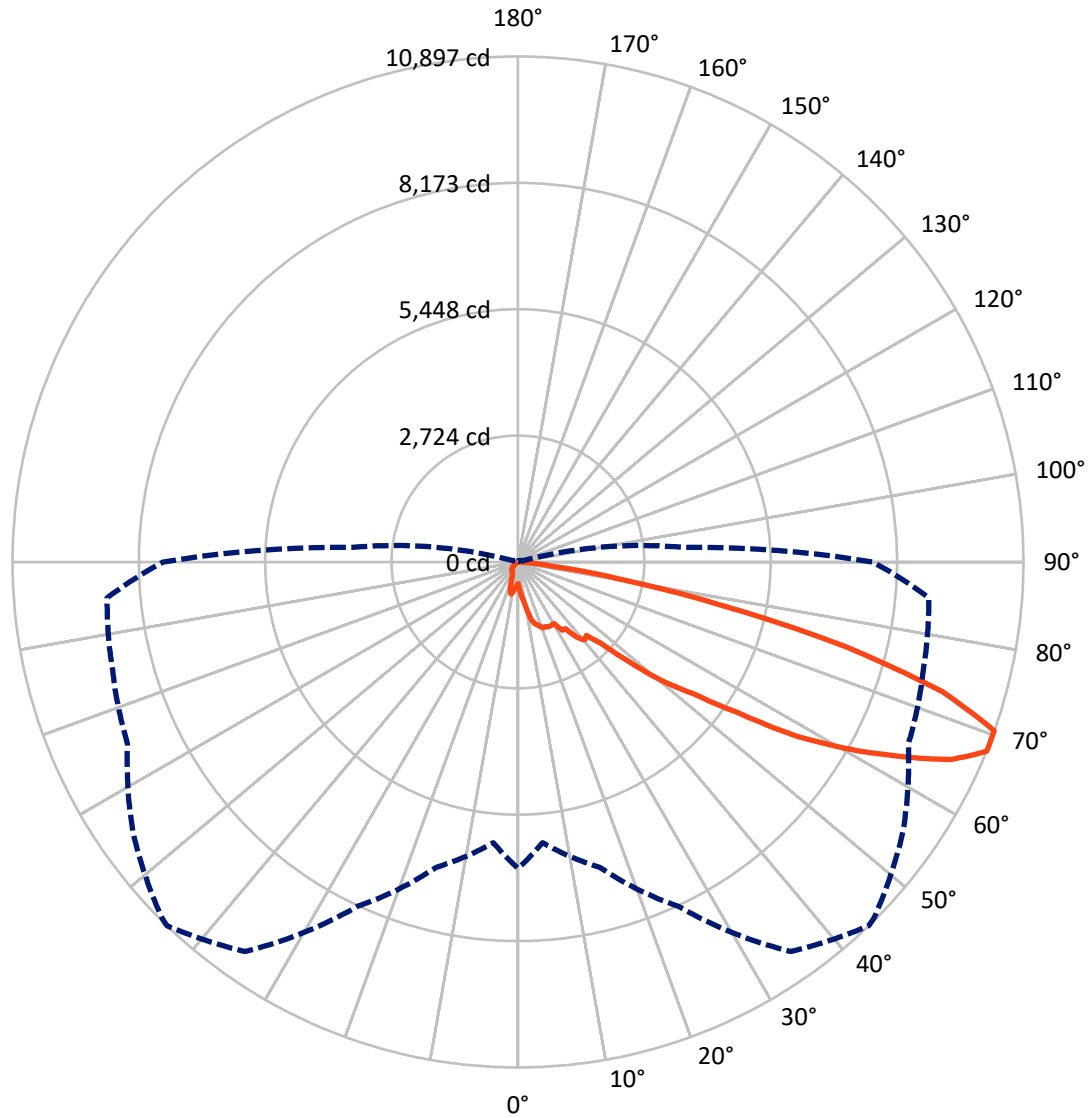
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1394.2	0.0	1394.2
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	12330.8	0.0	12330.8
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	13725.0	0.0	13725.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.5	0.5
10°-20°	286.9	2.1
20°-30°	508.3	3.7
30°-40°	826.2	6.0
40°-50°	1653.3	12.0
50°-60°	3391.9	24.7
60°-70°	4659.5	33.9
70°-80°	2190.0	16.0
80°-90°	140.3	1.0
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°	13725.0	100.0
0°-180°	13725.0	100.0

**Coefficient of Utilization**

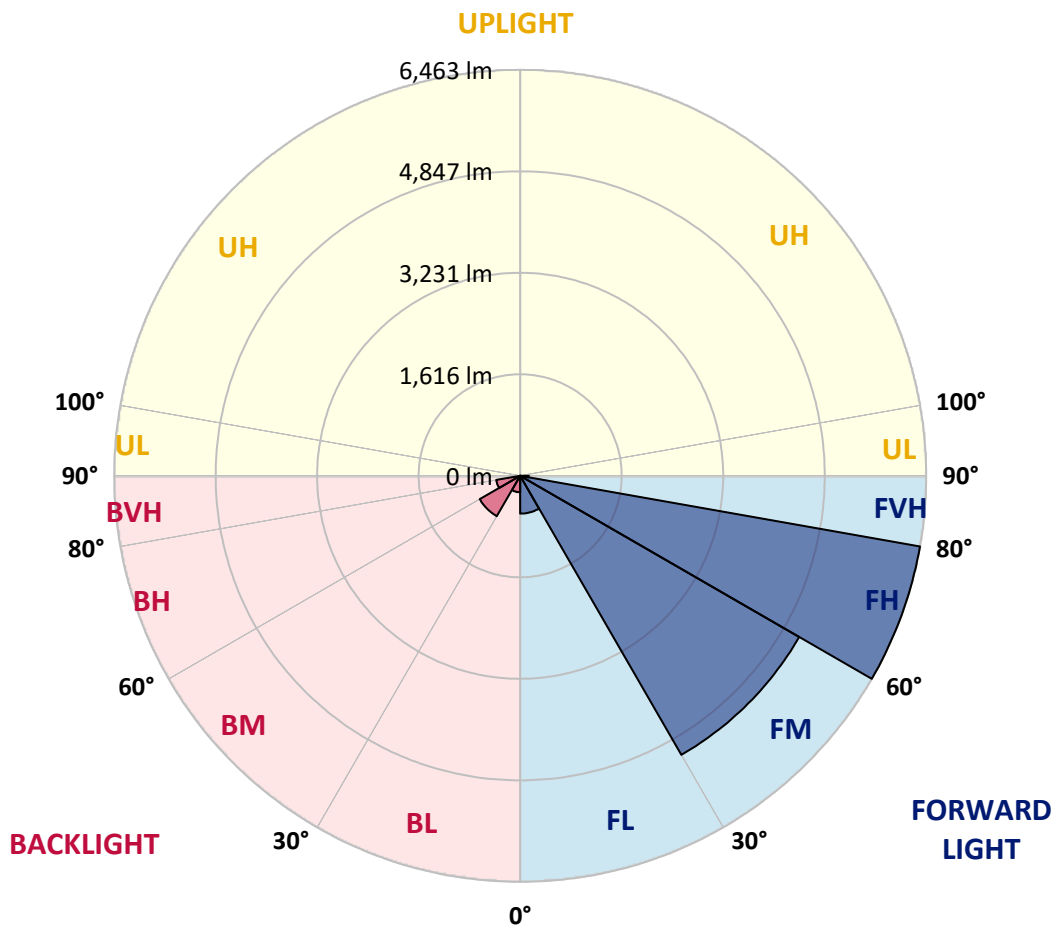


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	602.0	4.4			
FM (30°-60°)	5128.8	37.4			
FH (60°-80°)	6462.6	47.1			G3/7500
FVH (80°-90°)	137.4	1.0			G2/225
BL (0°-30°)	261.8	1.9	B1/500		
BM (30°-60°)	742.7	5.4	B1/1000		
BH (60°-80°)	386.9	2.8	B1/500		G1/500
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-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4
2.5°	588.1	569.1	541.9	547.9	551.0	559.3	560.1	549.5	519.2	510.9	547.9
5°	824.2	778.0	769.7	752.3	717.5	698.6	694.0	712.9	688.7	681.1	691.0
7.5°	1052.7	1013.4	970.3	946.8	874.1	829.5	827.2	834.8	839.3	812.8	826.5
10°	1204.9	1161.7	1152.6	1097.4	1034.6	1024.0	1019.4	990.7	967.2	947.5	881.7
12.5°	1342.6	1341.9	1358.5	1279.0	1269.2	1279.8	1276.0	1173.1	1149.6	1067.1	1048.2
15°	1525.8	1571.2	1499.3	1432.7	1347.9	1384.2	1374.4	1308.6	1292.7	1236.7	1155.7
17.5°	1715.7	1727.8	1607.5	1505.3	1483.4	1435.7	1445.5	1422.1	1341.9	1386.5	1306.3
20°	1720.3	1746.8	1618.1	1449.3	1516.7	1514.4	1515.2	1492.5	1386.5	1491.0	1417.5
22.5°	1783.8	1718.8	1599.2	1491.7	1503.8	1515.2	1527.3	1499.3	1476.6	1502.3	1515.9
25°	1758.1	1732.4	1617.3	1546.2	1534.8	1543.9	1547.0	1582.5	1568.1	1630.2	1596.2
27.5°	1824.7	1787.6	1581.8	1594.6	1554.5	1543.9	1525.8	1644.6	1687.0	1637.8	1728.6
30°	1939.0	1933.7	1643.1	1662.0	1631.0	1537.9	1586.3	1741.5	1794.4	1764.2	1874.7
32.5°	2117.6	2135.8	1822.4	1699.8	1715.7	1757.4	1739.2	1741.5	1875.4	1942.8	2030.6
35°	2371.1	2361.3	1997.3	1843.6	1760.4	1767.2	1792.9	1916.3	2089.6	2085.1	2178.2
37.5°	2869.1	2761.7	2306.8	1990.5	2015.4	2049.5	2030.6	2196.3	2213.0	2219.0	2441.5
40°	3603.3	3460.2	2795.0	2300.0	2059.3	2209.9	2200.9	2241.7	2353.0	2394.6	2719.3
42.5°	4570.5	4378.3	3654.0	2869.1	2271.2	2167.6	2223.6	2300.8	2674.6	2793.5	3149.2
45°	5639.1	5250.1	4510.7	3680.5	2802.5	2480.9	2523.3	2667.1	3185.5	3382.3	3775.1
47.5°	6331.6	5989.5	5359.1	4399.4	3356.5	3187.8	3191.5	3222.6	3785.7	4150.4	4677.2
50°	6933.3	6569.3	5984.2	5151.0	4336.6	4017.2	3944.6	3801.6	4550.1	5048.8	5633.1
52.5°	7782.5	7357.1	6609.4	6032.7	5454.5	4702.2	4676.4	4724.9	5451.4	5975.9	6613.2
55°	8548.4	8031.5	7317.8	6954.5	6729.0	5708.8	5730.7	5811.7	6608.6	6886.4	7485.0
57.5°	8886.7	8326.6	7959.6	7796.1	7675.8	7083.9	7009.7	6961.3	7521.4	7627.3	8398.5
60°	9108.4	8575.6	8409.1	8447.0	8811.8	8183.6	8116.2	7834.7	8276.7	8363.7	9217.4
62.5°	8968.4	8482.5	8518.1	8833.7	9643.5	9230.3	9035.8	8565.0	8894.2	8964.6	9805.5
65°	8086.7	7580.4	8037.5	8801.2	10277.7	10267.9	10177.8	9239.4	9236.3	9326.4	9850.9
67.5°	6605.6	6074.3	6813.7	8191.2	10251.2	10896.8	10854.4	10133.9	9285.5	9044.9	8889.7
70°	4592.4	4131.5	4970.1	6764.5	9337.8	10892.3	10824.2	10734.9	8896.5	7785.5	6892.4
72.5°	2386.3	2132.7	2913.8	4661.3	7443.4	9570.1	9794.9	9648.1	7596.3	5656.5	4058.9
75°	810.6	727.3	1201.8	2474.1	4948.1	7307.9	7571.3	7422.2	5159.3	3034.9	1605.2
77.5°	314.1	292.1	430.6	1004.3	2482.4	4453.2	4739.3	4587.1	2767.0	1111.8	377.7
80°	178.6	172.6	237.6	452.6	1094.4	2215.2	2416.6	2191.8	997.5	374.6	98.4
82.5°	75.7	78.0	132.4	244.5	550.2	781.8	871.9	795.4	417.8	256.6	36.3
85°	16.7	20.4	62.8	136.2	230.8	223.3	233.9	259.6	256.6	188.5	15.9
87.5°	0.0	0.0	19.7	37.1	55.2	36.3	28.8	50.7	78.7	75.7	6.8
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°	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4	462.4
2.5°	554.8	547.2	499.5	496.5	499.5	491.2	490.4	473.0	474.5	513.9	516.9
5°	691.0	653.1	612.3	599.4	587.3	560.1	575.2	575.2	575.2	600.2	607.7
7.5°	814.3	763.6	706.1	657.7	610.8	576.7	600.2	616.8	626.7	659.2	674.3
10°	870.4	820.4	768.9	700.1	663.7	650.9	623.6	609.2	626.7	619.8	628.2
12.5°	989.9	944.5	856.0	784.8	757.6	713.7	633.5	577.5	540.4	534.3	532.8
15°	1106.5	1078.5	959.7	864.3	769.7	668.3	531.3	457.1	417.8	411.0	411.7
17.5°	1254.1	1214.0	1039.1	902.1	741.7	559.3	410.2	346.6	343.6	360.3	361.8
20°	1352.5	1286.6	1079.2	871.1	649.4	423.1	320.9	305.8	330.0	360.3	357.2
22.5°	1446.3	1375.2	1132.2	843.9	503.3	320.9	295.2	296.7	317.1	349.7	358.0
25°	1508.4	1482.6	1197.3	780.3	383.7	277.8	282.3	293.6	311.1	342.1	342.1
27.5°	1695.3	1575.0	1189.7	656.9	295.2	258.8	269.4	283.8	292.9	330.0	333.8
30°	1808.8	1769.5	1229.1	531.3	258.8	234.6	255.1	267.9	274.0	316.4	317.9
32.5°	1948.1	1861.0	1276.8	392.0	240.7	233.1	228.6	238.4	255.8	292.9	295.2
35°	2117.6	2091.9	1208.7	308.0	234.6	218.0	208.9	214.2	225.5	250.5	255.8
37.5°	2463.5	2310.6	1167.8	264.1	234.6	212.7	202.8	189.2	190.7	208.1	218.0
40°	2754.9	2707.9	1053.5	256.6	224.0	205.1	180.9	164.2	152.9	158.2	162.0
42.5°	3289.9	3072.7	905.9	252.8	214.2	185.4	153.6	136.2	118.8	120.3	126.4
45°	3939.3	3470.8	774.2	249.0	207.4	165.7	129.4	109.0	90.8	91.6	97.6
47.5°	4806.6	4051.3	614.5	237.6	195.3	147.6	104.4	83.3	72.7	74.9	80.2
50°	5792.0	4560.6	485.9	220.2	180.9	130.2	84.8	67.4	63.6	65.8	71.9
52.5°	6672.2	4936.0	401.1	204.3	160.4	106.0	71.1	59.8	58.3	59.8	64.3
55°	7454.8	5154.0	335.3	186.2	137.7	85.5	64.3	55.2	54.5	53.7	56.8
57.5°	8188.9	5216.8	261.9	157.4	112.0	74.2	59.8	51.5	50.0	47.7	50.0
60°	8724.0	5109.3	192.2	126.4	91.6	67.4	56.0	46.2	43.9	40.1	41.6
62.5°	8982.0	4814.9	145.3	101.4	78.0	61.3	50.0	40.1	37.1	32.5	33.3
65°	8736.8	4329.8	114.3	85.5	66.6	51.5	42.4	34.1	30.3	25.7	25.7
67.5°	7650.8	3591.9	96.9	74.2	56.0	43.9	34.8	31.0	25.0	21.2	20.4
70°	5615.7	2583.8	83.3	65.1	48.4	37.8	29.5	28.0	24.2	20.4	18.9
72.5°	3169.6	1462.2	71.1	57.5	40.9	31.8	25.0	25.7	23.5	18.9	17.4
75°	1209.4	492.7	59.0	47.7	33.3	24.2	21.2	21.2	21.2	15.9	13.6
77.5°	299.7	125.6	46.9	38.6	26.5	15.9	17.4	18.2	18.2	13.6	9.8
80°	82.5	42.4	28.0	28.0	18.9	9.1	12.1	12.1	9.8	4.5	0.0
82.5°	30.3	15.9	9.8	12.1	8.3	3.0	4.5	3.0	2.3	0.0	0.0
85°	12.9	8.3	6.1	6.8	3.8	0.0	0.8	1.5	0.0	0.0	0.0
87.5°	5.3	3.8	3.0	3.0	1.5	0.0	0.0	0.0	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)