

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: P368059

Luminaire Tested: **MSA-SA3D-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368059
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-SA3D-727-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: 13767 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

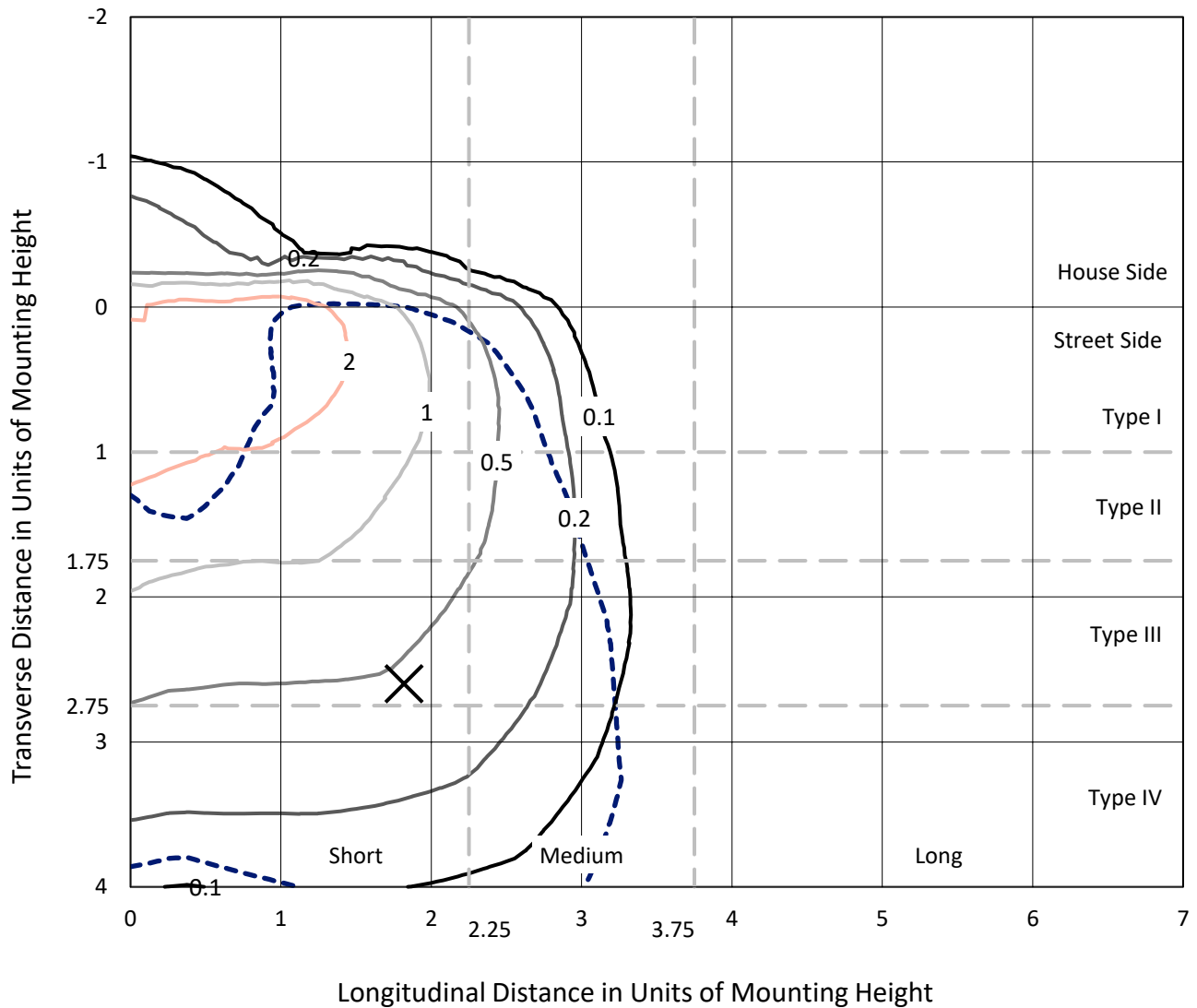
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

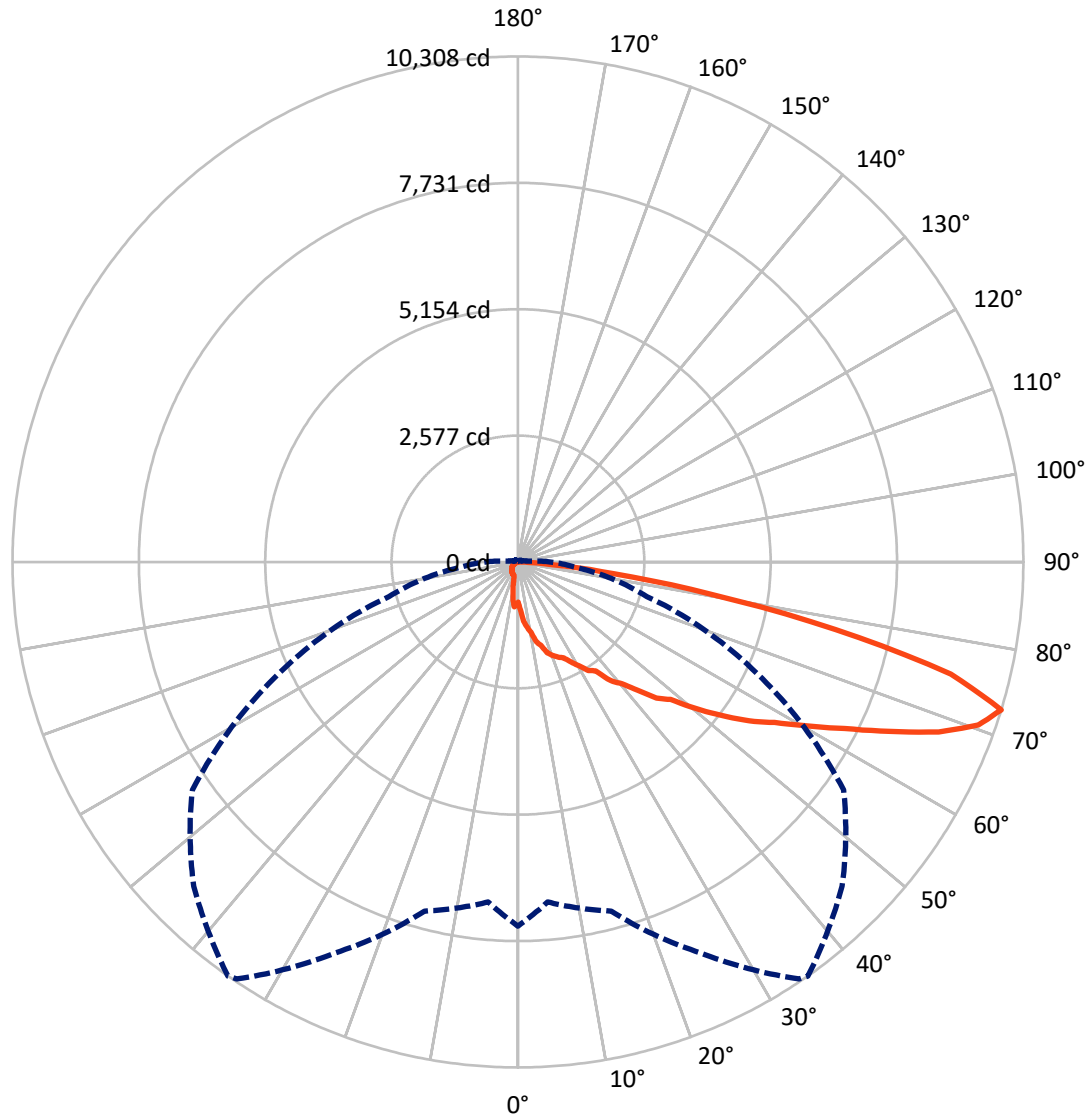
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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	1073.8	0.0	1073.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	12693.2	0.0	12693.2
	% Fixture	92.2	0.0	92.2
Total	Lumens	13767.0	0.0	13767.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	0.8
10°-20°	352.3	2.6
20°-30°	641.6	4.7
30°-40°	1106.7	8.0
40°-50°	1967.3	14.3
50°-60°	2935.7	21.3
60°-70°	3750.7	27.2
70°-80°	2609.5	19.0
80°-90°	298.5	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°	13767.0	100.0
0°-180°	13767.0	100.0

Coefficient of Utilization

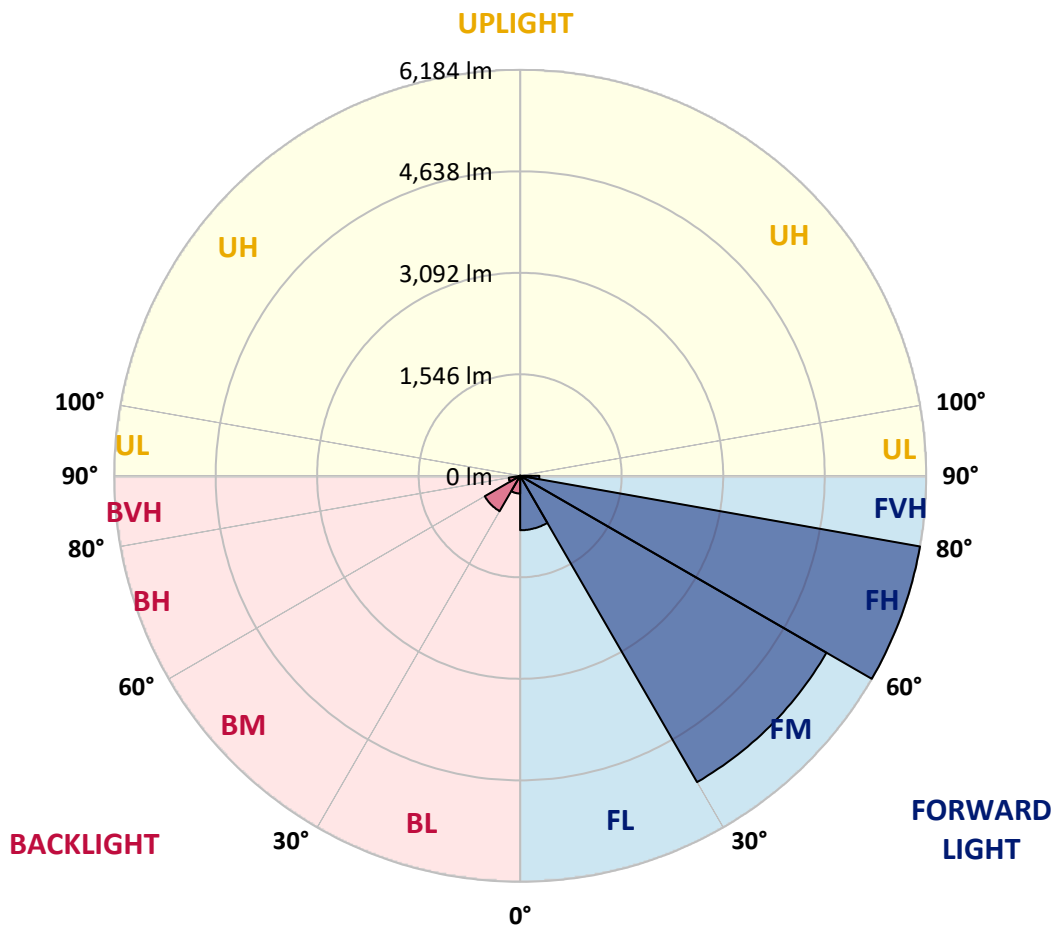


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	828.5	6.0			
FM (30°-60°)	5387.1	39.1			
FH (60°-80°)	6184.2	44.9			G3/7500
FVH (80°-90°)	293.5	2.1			G3/500
BL (0°-30°)	270.1	2.0	B1/500		
BM (30°-60°)	622.7	4.5	B1/1000		
BH (60°-80°)	176.0	1.3	B1/500		G1/500
BVH (80°-90°)	5.0	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°	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1
2.5°	1043.6	1002.8	936.4	941.2	971.0	977.2	986.2	962.7	941.9	905.2	976.5
5°	1337.1	1278.2	1240.9	1229.1	1211.8	1213.2	1171.0	1186.2	1182.0	1209.0	1241.6
7.5°	1502.5	1469.9	1422.9	1409.7	1346.1	1339.1	1287.2	1357.1	1364.1	1354.4	1407.7
10°	1568.2	1525.3	1530.9	1481.7	1449.9	1458.2	1466.5	1472.0	1481.0	1490.0	1425.0
12.5°	1607.0	1614.6	1690.0	1638.8	1670.6	1670.6	1726.7	1667.2	1669.3	1604.2	1615.3
15°	1781.4	1823.6	1789.7	1789.0	1754.4	1763.4	1828.4	1781.4	1805.6	1786.2	1711.5
17.5°	2000.1	2008.4	1944.0	1915.6	1946.8	1947.5	1919.8	1917.7	1833.3	1975.8	1885.2
20°	2070.0	2117.0	2025.7	1914.9	2044.4	2038.1	2036.1	2003.5	1863.0	2061.0	1986.2
22.5°	2260.3	2193.2	2130.9	2058.2	2108.7	2108.7	2101.1	2029.8	1975.2	2053.4	2085.2
25°	2319.8	2328.1	2247.1	2223.6	2225.0	2162.7	2157.2	2126.7	2074.1	2207.7	2144.0
27.5°	2524.7	2521.2	2326.7	2392.5	2308.7	2309.4	2156.5	2225.0	2234.0	2215.3	2286.6
30°	2726.0	2782.1	2488.7	2571.7	2483.8	2457.5	2308.0	2368.9	2384.9	2363.4	2453.4
32.5°	2982.8	3065.2	2780.0	2698.4	2564.1	2638.8	2535.7	2391.8	2470.7	2662.4	2712.9
35°	3254.8	3294.9	2991.1	2876.9	2725.4	2724.7	2721.2	2733.0	2820.2	3036.1	3079.0
37.5°	3743.4	3648.6	3373.8	3112.2	3146.1	3070.7	3018.1	3073.5	3164.1	3519.8	3703.2
40°	4016.1	3947.5	3560.7	3405.7	3237.5	3265.2	3407.7	3401.5	3643.0	4015.4	4290.1
42.5°	4281.1	4216.1	3835.4	3710.2	3494.2	3569.7	3632.0	3710.9	4205.7	4806.4	4957.3
45°	4517.1	4326.1	4057.6	4062.4	3950.3	3959.3	4069.3	4142.0	4857.6	5473.6	5579.4
47.5°	4659.7	4502.6	4245.1	4240.3	4233.4	4191.2	4709.5	4775.9	5377.4	6108.9	6118.6
50°	4860.4	4663.8	4438.2	4442.4	4602.2	4691.5	5310.2	5303.3	5879.1	6639.0	6415.5
52.5°	5110.2	4870.1	4621.6	4806.4	5053.5	5198.8	5701.2	5906.1	6418.2	6971.9	6531.7
55°	5430.0	5129.6	4890.1	5126.8	5665.9	5722.0	6084.0	6516.5	7005.8	7311.7	6569.1
57.5°	5805.1	5446.6	5252.8	5634.1	6171.8	6173.2	6641.1	7167.0	7366.4	7450.1	6526.9
60°	6209.2	5791.2	5596.0	5939.3	6729.7	6786.4	7260.5	7526.2	7732.5	7520.0	6451.4
62.5°	6564.9	6103.3	5951.8	6355.2	7341.4	7475.7	7800.3	7762.2	7996.8	7607.9	6259.7
65°	6988.5	6507.5	6407.8	7003.7	8140.1	8324.9	8406.5	8180.9	8085.4	7540.1	5760.8
67.5°	7407.9	6958.0	6955.3	7722.8	9187.2	9250.8	9165.0	8771.2	7982.3	6942.1	4846.5
70°	7703.4	7220.3	7402.3	8510.3	10138.8	9960.2	9599.0	9050.1	7237.6	5320.6	3166.2
72.5°	7425.9	6960.1	7370.5	8790.6	10256.4	10307.6	9347.7	8106.9	5377.4	2721.2	1146.1
75°	5643.1	5358.0	6399.5	7798.9	9106.2	9118.0	7802.4	5717.9	2647.8	739.1	317.0
77.5°	2842.3	2751.7	4050.7	5536.5	6643.8	6624.5	5360.7	3063.1	851.9	245.7	159.9
80°	1438.8	1366.1	1723.9	2987.0	3945.5	3974.5	3061.0	1371.7	429.8	133.6	110.7
82.5°	883.8	838.8	943.3	1351.6	1914.9	1961.3	1161.3	868.5	266.4	78.9	101.0
85°	170.9	179.9	541.9	676.8	764.7	746.7	344.0	714.9	80.3	47.1	73.4
87.5°	0.0	2.8	125.3	220.8	221.5	196.5	78.2	158.5	11.1	13.1	9.0
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°	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1	820.1
2.5°	988.3	977.9	891.4	881.7	883.8	869.2	864.4	833.9	826.3	873.4	881.7
5°	1227.7	1158.5	1078.2	1049.2	1004.2	928.1	917.0	897.6	876.2	884.5	878.2
7.5°	1374.4	1282.4	1196.6	1043.6	917.0	806.3	788.3	755.0	721.8	722.5	744.0
10°	1398.0	1320.5	1202.1	1016.0	871.3	732.9	612.5	525.3	485.8	450.5	460.9
12.5°	1534.3	1462.3	1244.3	1007.6	804.9	588.9	431.2	346.0	308.7	296.2	294.8
15°	1643.7	1586.9	1316.3	982.0	657.5	414.5	308.7	283.7	276.8	288.6	285.1
17.5°	1806.3	1703.9	1308.7	876.2	501.1	314.9	284.4	281.0	289.3	296.2	298.3
20°	1877.6	1730.2	1256.8	710.1	375.1	288.6	277.5	270.6	285.8	306.6	302.4
22.5°	1949.6	1775.1	1195.9	581.3	301.7	276.1	269.9	264.4	276.1	296.2	301.0
25°	1982.1	1847.1	1128.1	454.0	280.3	261.6	257.4	259.5	269.2	287.2	285.1
27.5°	2146.1	1855.4	998.7	358.5	271.3	251.2	251.2	256.1	256.1	280.3	278.2
30°	2248.5	1995.9	893.5	301.7	260.9	236.7	245.0	247.1	243.6	269.9	272.0
32.5°	2428.5	2034.7	791.0	276.8	244.3	234.6	233.2	234.6	237.4	263.0	263.7
35°	2705.3	2225.7	651.2	267.1	236.0	224.2	214.5	222.2	229.1	247.8	251.2
37.5°	3246.5	2421.5	530.8	259.5	231.8	214.5	211.1	209.7	222.2	243.6	250.5
40°	3684.6	2768.3	431.8	253.3	223.5	209.0	200.0	200.7	211.8	227.7	238.1
42.5°	4304.7	3018.8	366.1	243.6	211.8	197.2	186.9	193.1	197.9	214.5	221.5
45°	4822.3	3213.3	322.5	237.4	200.0	186.2	177.9	184.8	179.9	188.2	197.9
47.5°	5234.1	3382.8	290.0	222.2	192.4	179.9	169.6	167.5	159.2	161.3	170.2
50°	5460.4	3354.4	263.0	206.9	182.7	173.7	159.2	144.6	133.6	132.9	138.4
52.5°	5540.7	3202.9	240.8	193.8	170.9	159.9	143.3	123.2	112.1	108.7	113.5
55°	5562.8	2984.9	220.8	179.2	159.9	142.6	125.3	103.8	92.0	86.5	91.4
57.5°	5490.9	2649.2	201.4	165.4	146.7	126.0	107.3	85.1	74.1	67.1	71.3
60°	5313.0	2222.9	184.1	148.1	132.9	111.4	90.7	68.5	56.7	50.5	52.6
62.5°	4919.2	1742.6	165.4	132.2	118.3	97.6	76.1	54.0	42.9	37.4	38.1
65°	4319.9	1299.0	143.9	117.0	105.2	84.4	60.9	41.5	32.5	27.7	27.0
67.5°	3441.6	880.3	122.5	101.0	93.4	71.3	48.4	32.5	25.6	22.1	20.8
70°	2022.9	443.6	101.7	87.2	80.3	59.5	38.1	26.3	23.5	20.8	19.4
72.5°	667.2	191.7	79.6	72.0	66.4	47.8	29.8	24.2	22.8	20.1	18.7
75°	232.5	110.7	58.8	55.4	52.6	36.0	24.9	22.1	22.1	19.4	17.3
77.5°	152.3	85.8	43.6	40.1	39.4	26.3	21.5	20.8	19.4	15.9	13.1
80°	126.6	48.4	30.5	28.4	27.7	16.6	17.3	15.2	11.8	6.9	2.8
82.5°	117.0	29.1	15.9	17.3	15.9	6.2	9.7	8.3	6.2	2.8	0.0
85°	68.5	13.1	9.0	9.0	6.9	1.4	4.8	4.8	2.8	0.7	0.0
87.5°	7.6	6.2	4.8	4.8	3.5	0.0	2.1	1.4	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)