

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: P367926

Luminaire Tested: **MSA-SA3C-727-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367926  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3C-727-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14939 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

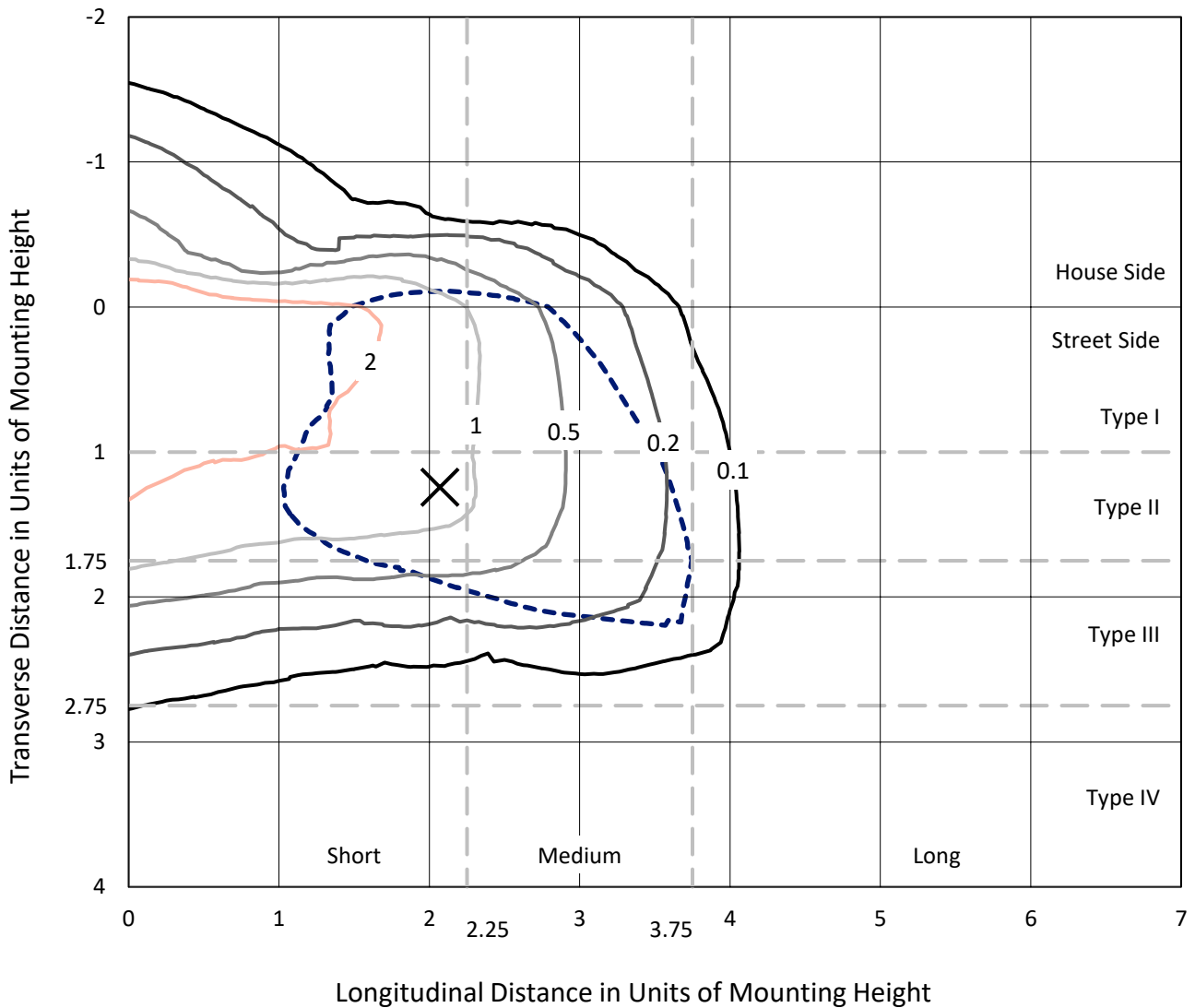
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

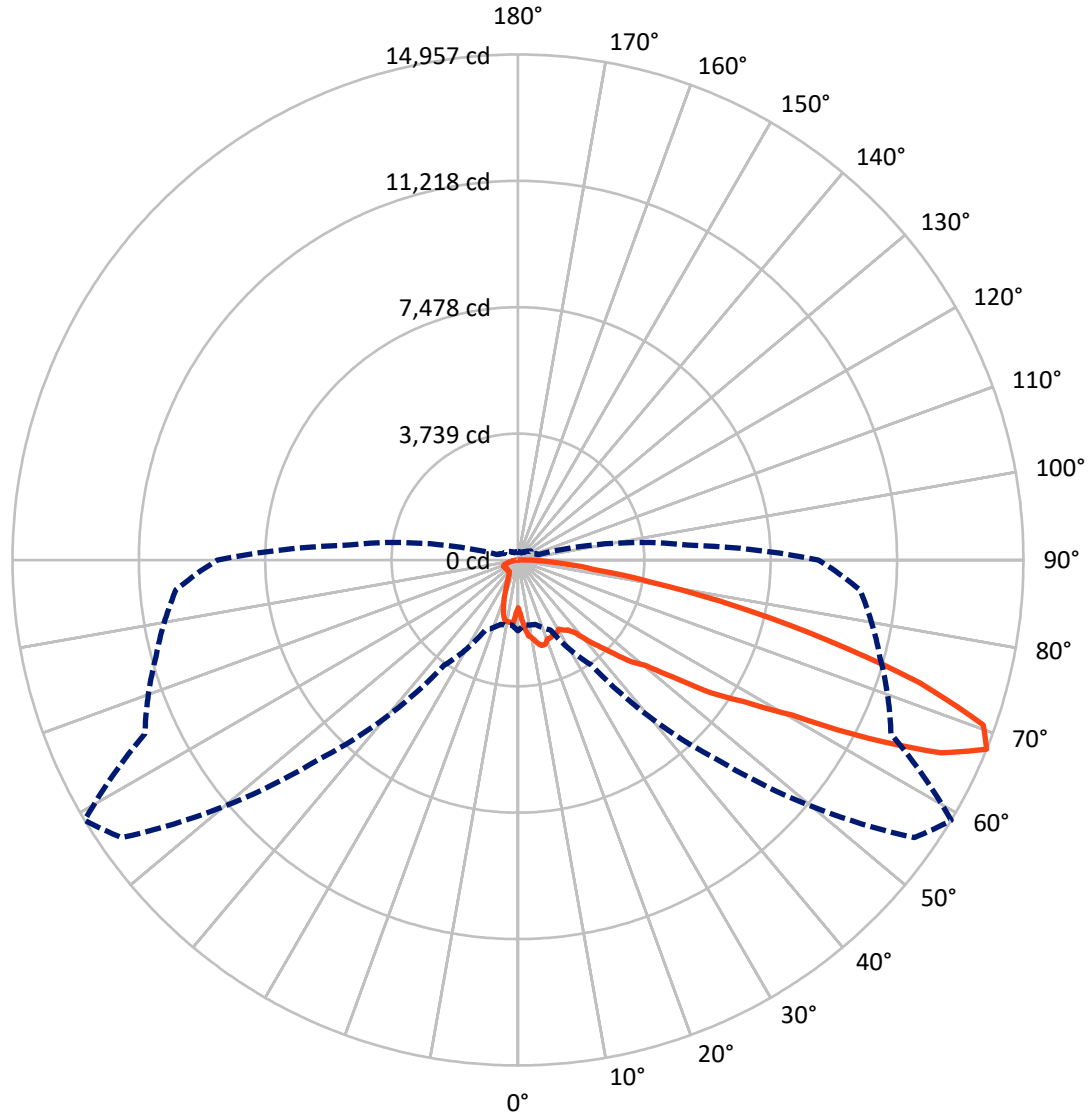
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2248.6	0.0	2248.6
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	12690.4	0.0	12690.4
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	14939.0	0.0	14939.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.6	1.2
10°-20°	546.3	3.7
20°-30°	780.2	5.2
30°-40°	1149.7	7.7
40°-50°	1942.5	13.0
50°-60°	3380.3	22.6
60°-70°	4307.5	28.8
70°-80°	2280.9	15.3
80°-90°	366.9	2.5
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°	14939.0	100.0
0°-180°	14939.0	100.0

**Coefficient of Utilization**



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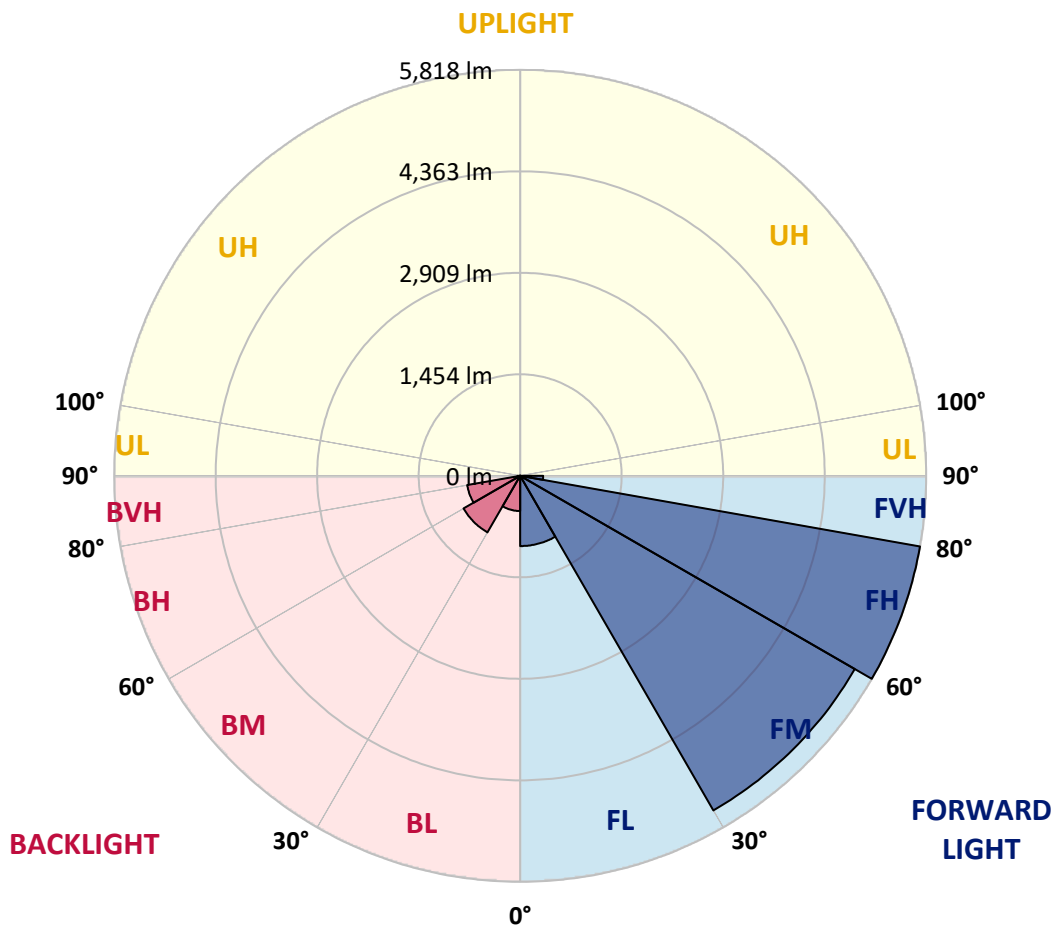
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1006.9	6.7			
FM (30°-60°)	5536.2	37.1			
FH (60°-80°)	5817.7	38.9			G3/7500
FVH (80°-90°)	329.6	2.2			G3/500
BL (0°-30°)	504.3	3.4	B2/1000		
BM (30°-60°)	936.3	6.3	B1/1000		
BH (60°-80°)	770.7	5.2	B2/1000		G2/1000
BVH (80°-90°)	37.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6
2.5°	1765.0	1682.7	1595.3	1620.0	1670.0	1692.8	1668.1	1644.1	1613.0	1576.3	1701.7
5°	2140.4	2018.2	2000.5	1999.8	1982.1	1911.2	2002.4	1996.0	2032.8	2070.7	2168.2
7.5°	2247.4	2201.8	2152.4	2175.8	2086.6	2082.8	2224.6	2265.1	2336.0	2312.6	2443.6
10°	2192.3	2141.0	2167.0	2157.5	2165.7	2259.4	2346.1	2348.7	2424.6	2499.3	2415.1
12.5°	2095.4	2099.2	2202.4	2198.6	2331.6	2505.7	2531.6	2511.3	2635.4	2584.8	2657.0
15°	2164.4	2210.6	2184.7	2206.8	2259.4	2481.0	2553.1	2626.6	2744.3	2789.9	2717.7
17.5°	2274.6	2299.3	2182.8	2170.8	2279.0	2384.1	2563.3	2625.9	2644.3	2969.1	2867.1
20°	2227.7	2277.8	2163.8	2017.6	2197.4	2336.6	2513.2	2494.3	2583.5	2983.0	2898.1
22.5°	2360.7	2277.8	2132.8	2029.0	2092.3	2220.1	2370.2	2494.9	2600.6	2901.3	2943.1
25°	2386.0	2346.8	2211.3	2108.1	2086.6	2132.1	2346.1	2427.8	2606.3	3012.7	2919.0
27.5°	2540.5	2481.6	2205.6	2208.7	2101.8	2021.4	2270.2	2441.7	2670.9	2943.7	2977.9
30°	2732.3	2687.3	2341.1	2353.7	2205.6	2057.4	2322.1	2374.0	2708.2	3051.3	3052.0
32.5°	2876.0	2955.1	2607.6	2435.4	2382.8	2272.1	2242.3	2475.9	2664.5	3246.3	3178.6
35°	3134.9	3196.3	2812.7	2674.7	2496.8	2372.1	2458.8	2543.0	2846.2	3502.7	3366.6
37.5°	3614.1	3543.2	3193.8	2976.6	2910.2	2730.4	2778.5	2719.6	3043.8	3790.8	3735.1
40°	3891.4	3830.0	3462.2	3341.9	3078.6	3101.4	3041.2	3084.3	3307.7	4097.2	4079.4
42.5°	4164.9	4082.6	3771.8	3688.2	3425.5	3314.1	3324.8	3464.1	3714.8	4592.2	4533.3
45°	4435.2	4224.4	4088.3	4110.5	3983.8	3755.3	3771.1	3902.2	4159.2	5158.2	5022.7
47.5°	4642.2	4468.1	4361.8	4334.6	4271.9	4577.7	4440.9	4494.1	4607.4	5662.1	5610.8
50°	5034.1	4830.9	4692.2	4653.0	4865.7	5291.1	5012.6	4898.0	5139.2	6313.5	6286.9
52.5°	5661.5	5408.2	5177.2	5174.6	5482.3	5758.3	5954.6	5757.0	5845.7	6980.8	7056.7
55°	6209.1	5915.9	5708.3	5822.9	6261.0	6430.0	7096.6	6942.1	6867.4	7654.3	7871.5
57.5°	6413.5	6071.0	5935.6	6104.6	6750.3	7618.9	8323.5	7917.0	7844.2	8416.5	8871.7
60°	5964.7	5602.6	5610.8	5929.2	7047.9	8491.9	9664.9	9319.9	8893.2	9365.5	9809.9
62.5°	4685.9	4358.6	4572.0	5056.3	6798.4	9340.2	11462.8	11608.4	10091.6	10152.4	10330.3
65°	3184.9	2958.3	3150.7	3624.9	5514.0	9802.9	13175.2	13758.9	11183.0	10667.7	10555.0
67.5°	2096.1	1935.9	1973.2	2288.5	3795.8	8357.0	14320.5	14956.7	12180.7	11090.6	10158.7
70°	1623.2	1494.0	1477.6	1642.8	2251.2	5805.8	13641.8	14609.1	12788.4	10694.3	8854.6
72.5°	1273.7	1175.6	1184.5	1343.4	1743.4	3221.0	10556.3	12423.2	11873.0	9223.1	6802.9
75°	993.3	912.9	957.8	1139.5	1612.4	2001.7	7283.4	9428.8	9179.4	6829.5	3880.0
77.5°	721.1	669.1	733.1	970.5	1515.5	1717.5	4534.0	6578.1	5880.5	3506.5	1331.3
80°	472.9	443.8	496.3	791.3	1374.4	1652.9	2801.9	4030.7	2905.7	985.0	503.9
82.5°	278.5	265.9	309.6	535.6	1104.7	1549.1	1868.8	2239.8	1188.9	416.6	267.8
85°	146.2	136.7	183.6	307.7	761.6	1414.3	1471.2	1340.8	574.2	181.1	127.9
87.5°	48.7	47.5	77.9	119.0	288.0	750.8	785.0	636.9	236.8	52.5	27.9
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°	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6	1413.6
2.5°	1718.8	1693.4	1547.8	1568.1	1587.1	1577.6	1571.9	1506.0	1499.7	1593.4	1585.8
5°	2165.7	2060.6	1936.5	1930.8	1849.2	1765.6	1782.1	1755.5	1763.1	1801.7	1805.5
7.5°	2401.8	2270.8	2152.4	1960.0	1796.6	1664.3	1685.2	1678.9	1661.8	1749.1	1772.6
10°	2397.4	2280.9	2147.3	1914.4	1804.2	1696.6	1567.5	1445.3	1409.2	1366.1	1369.9
12.5°	2555.7	2452.5	2161.3	1923.9	1774.5	1589.0	1347.2	1213.6	1085.7	1083.2	1050.9
15°	2605.0	2529.1	2191.0	1869.4	1566.2	1300.3	1050.2	905.3	812.8	794.5	767.3
17.5°	2729.8	2610.7	2100.5	1693.4	1324.4	1016.7	789.4	688.1	680.5	693.2	679.3
20°	2738.0	2544.9	1937.2	1433.2	1064.2	770.4	643.8	593.2	620.4	651.4	650.2
22.5°	2731.0	2462.0	1796.0	1211.7	799.6	619.1	564.1	552.7	578.0	624.2	629.9
25°	2660.1	2434.7	1619.4	995.2	648.9	530.5	515.3	522.3	553.9	608.4	608.4
27.5°	2734.2	2324.0	1397.8	809.7	545.7	472.3	483.0	500.8	524.2	586.2	597.6
30°	2710.1	2360.7	1219.3	652.1	481.1	431.7	455.8	473.5	500.1	564.7	570.4
32.5°	2774.7	2262.6	1069.2	548.2	438.7	415.9	421.6	445.7	480.5	531.1	541.3
35°	2873.5	2298.6	897.0	493.2	417.8	397.6	408.3	427.3	462.1	511.5	519.7
37.5°	3188.7	2296.7	778.0	462.8	414.0	393.8	398.8	412.1	452.6	497.6	516.6
40°	3391.3	2428.4	669.8	455.8	409.6	391.9	387.4	402.0	434.3	487.5	500.8
42.5°	3771.8	2508.8	622.9	453.3	409.0	381.1	376.7	393.8	425.4	474.8	495.1
45°	4173.8	2623.4	585.6	452.0	407.1	379.2	365.9	387.4	414.0	461.5	484.9
47.5°	4646.7	2865.9	564.7	447.6	403.3	381.7	362.1	372.9	402.6	450.1	473.5
50°	5265.8	3186.8	569.1	441.2	409.0	382.4	356.4	361.5	388.7	434.9	459.0
52.5°	6018.5	3683.8	597.6	443.8	412.8	379.2	353.9	351.3	374.8	415.3	439.3
55°	6925.7	4389.0	683.1	455.8	412.8	378.6	350.1	338.7	356.4	389.3	412.8
57.5°	8020.2	5205.7	850.2	461.5	409.6	374.8	341.9	321.6	332.4	359.6	381.7
60°	8960.3	5864.7	1022.4	465.3	415.9	365.9	325.4	300.1	307.0	327.9	347.5
62.5°	9439.6	6049.5	1074.3	462.1	433.0	360.2	305.8	277.3	277.9	295.6	313.4
65°	9529.5	5803.3	866.0	459.0	455.2	359.6	291.8	257.7	253.2	265.9	281.1
67.5°	8888.8	5037.3	624.8	452.0	457.7	355.8	282.3	241.8	230.4	239.3	252.0
70°	7547.3	4056.6	524.8	438.1	427.3	336.8	265.9	225.4	210.2	216.5	226.0
72.5°	5626.6	3001.3	457.7	408.3	372.2	288.0	240.6	207.0	191.2	195.6	202.6
75°	3126.1	1601.0	383.0	355.1	303.9	233.0	205.1	183.6	169.7	171.6	179.2
77.5°	1038.2	590.6	281.1	281.7	229.8	179.8	169.0	157.0	146.2	146.9	153.2
80°	470.4	326.7	201.3	202.6	160.2	130.4	129.8	126.0	119.0	117.1	121.5
82.5°	272.8	198.1	138.0	131.7	103.2	84.8	94.3	92.4	90.5	83.6	84.8
85°	134.2	106.4	72.2	68.4	57.0	42.4	50.6	52.5	50.6	43.0	42.4
87.5°	32.9	34.8	17.7	16.5	9.5	4.4	7.6	7.6	9.5	6.3	3.2
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)