

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: P368014

Luminaire Tested: **MSA-SA3C-760-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368014  
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-760-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: 17863 lumens  
Efficiency: N/A  
Efficacy: 107.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G3

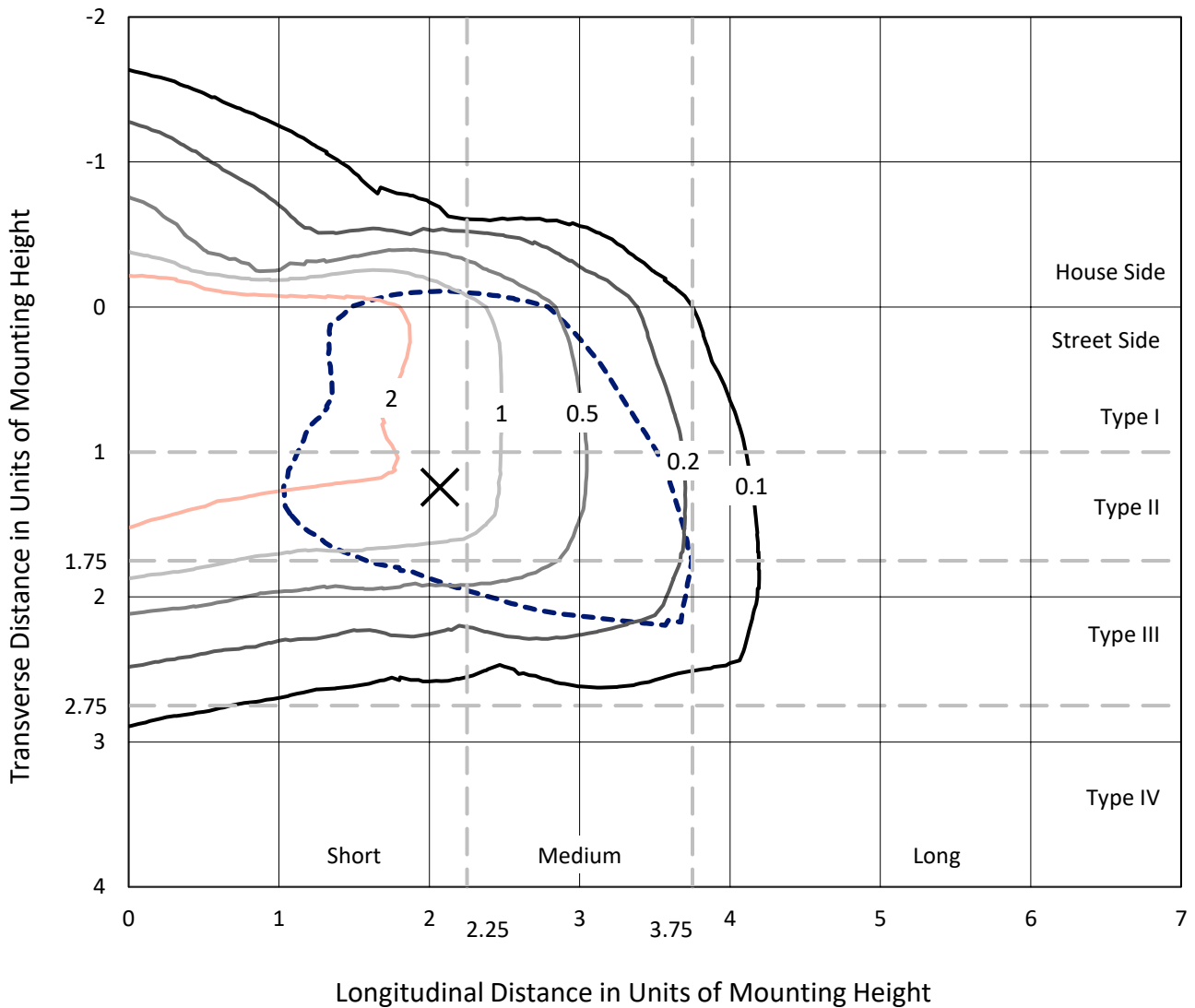
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

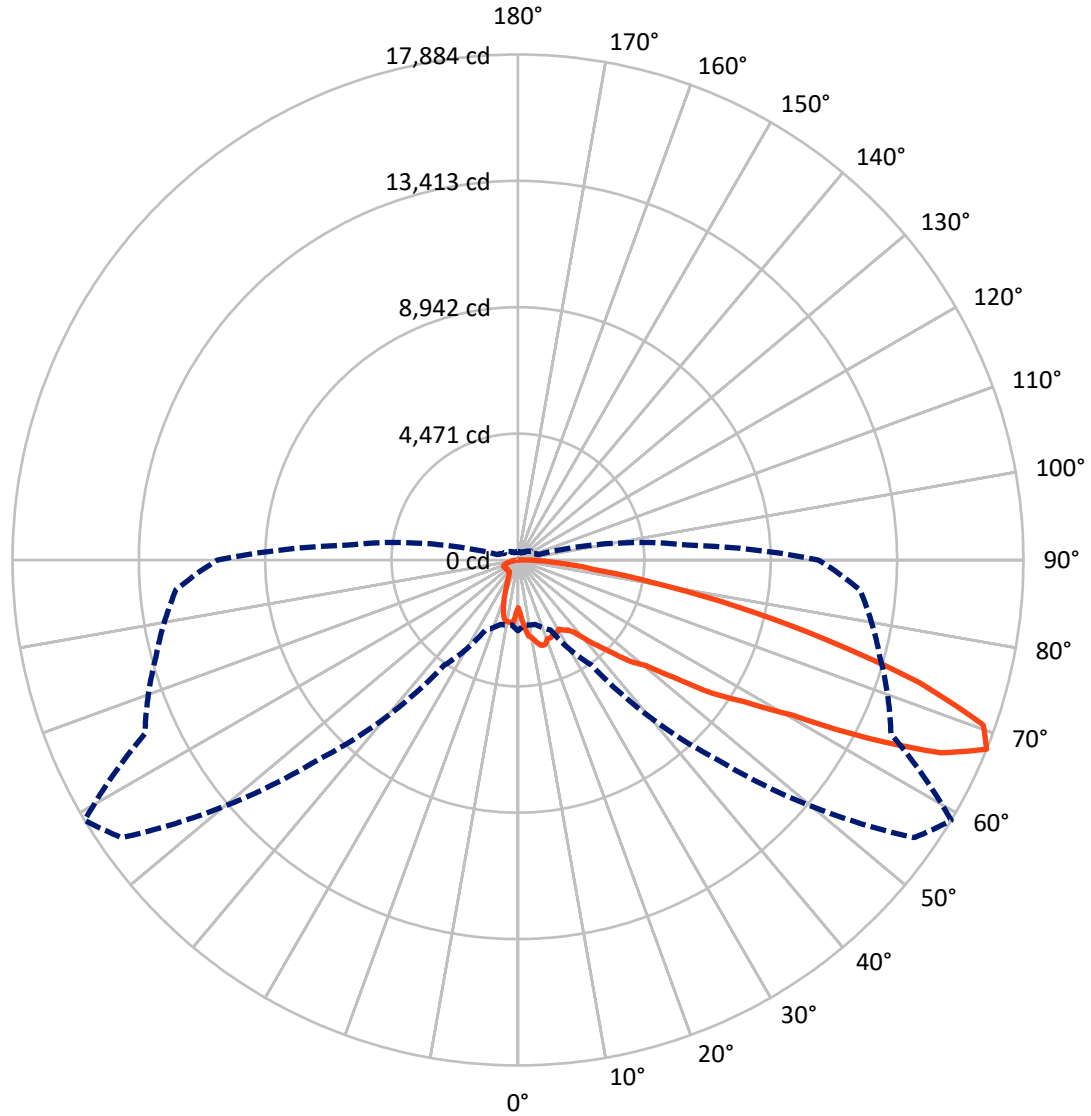
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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	2688.8	0.0	2688.8
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	15174.2	0.0	15174.2
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	17863.0	0.0	17863.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.8	1.2
10°-20°	653.3	3.7
20°-30°	932.9	5.2
30°-40°	1374.8	7.7
40°-50°	2322.7	13.0
50°-60°	4041.9	22.6
60°-70°	5150.6	28.8
70°-80°	2727.3	15.3
80°-90°	438.7	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°	17863.0	100.0
0°-180°	17863.0	100.0

**Coefficient of Utilization**



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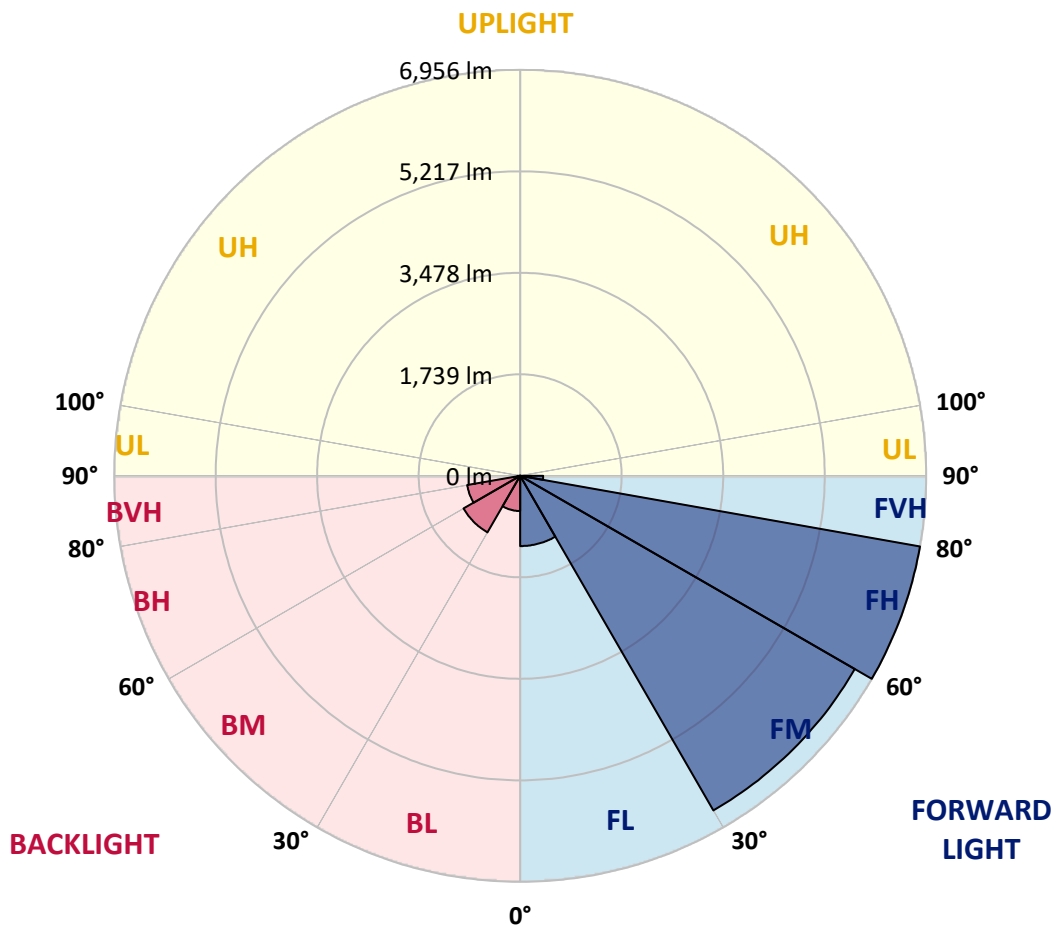
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1204.0	6.7			
FM (30°-60°)	6619.8	37.1			
FH (60°-80°)	6956.4	38.9			G3/7500
FVH (80°-90°)	394.1	2.2			G3/500
BL (0°-30°)	603.0	3.4	B2/1000		
BM (30°-60°)	1119.6	6.3	B2/2500		
BH (60°-80°)	921.5	5.2	B2/1000		G2/1000
BVH (80°-90°)	44.7	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°	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3
2.5°	2110.4	2012.0	1907.6	1937.1	1996.9	2024.1	1994.6	1965.8	1928.8	1884.9	2034.7
5°	2559.3	2413.2	2392.0	2391.3	2370.1	2285.3	2394.3	2386.7	2430.6	2476.0	2592.6
7.5°	2687.2	2632.7	2573.7	2601.7	2495.0	2490.4	2660.0	2708.4	2793.2	2765.2	2921.9
10°	2621.4	2560.1	2591.1	2579.7	2589.6	2701.6	2805.3	2808.4	2899.2	2988.5	2887.8
12.5°	2505.6	2510.1	2633.5	2629.0	2787.9	2996.1	3027.1	3002.9	3151.3	3090.7	3177.0
15°	2588.1	2643.3	2612.3	2638.8	2701.6	2966.6	3052.9	3140.7	3281.5	3336.0	3249.7
17.5°	2719.8	2749.3	2610.0	2595.6	2725.1	2850.7	3065.0	3139.9	3161.9	3550.2	3428.3
20°	2663.8	2723.6	2587.3	2412.5	2627.4	2794.0	3005.2	2982.5	3089.2	3566.8	3465.4
22.5°	2822.7	2723.6	2550.2	2426.1	2501.8	2654.7	2834.1	2983.2	3109.6	3469.2	3519.1
25°	2853.0	2806.1	2644.1	2520.7	2495.0	2549.5	2805.3	2903.0	3116.4	3602.4	3490.4
27.5°	3037.7	2967.3	2637.3	2641.1	2513.1	2417.0	2714.5	2919.6	3193.7	3519.9	3560.8
30°	3267.1	3213.3	2799.3	2814.4	2637.3	2460.1	2776.6	2838.6	3238.3	3648.6	3649.3
32.5°	3438.9	3533.5	3118.0	2912.1	2849.2	2716.8	2681.2	2960.5	3186.1	3881.7	3800.7
35°	3748.5	3821.9	3363.2	3198.2	2985.5	2836.4	2940.1	3040.7	3403.3	4188.3	4025.6
37.5°	4321.5	4236.8	3818.9	3559.3	3479.8	3264.8	3322.3	3251.9	3639.5	4532.7	4466.1
40°	4653.1	4579.7	4139.9	3996.0	3681.1	3708.4	3636.5	3688.0	3955.2	4899.1	4877.9
42.5°	4980.1	4881.7	4510.0	4410.1	4096.0	3962.7	3975.6	4142.1	4441.9	5491.0	5420.7
45°	5303.3	5051.3	4888.5	4915.0	4763.6	4490.3	4509.3	4666.0	4973.3	6167.8	6005.8
47.5°	5550.9	5342.7	5215.5	5183.0	5108.0	5473.6	5310.1	5373.7	5509.2	6770.3	6709.0
50°	6019.4	5776.4	5610.7	5563.7	5818.1	6326.7	5993.7	5856.7	6145.1	7549.2	7517.5
52.5°	6769.6	6466.8	6190.5	6187.5	6555.3	6885.4	7120.0	6883.9	6989.8	8347.1	8437.9
55°	7424.3	7073.9	6825.6	6962.6	7486.4	7688.5	8485.6	8300.9	8211.6	9152.5	9412.1
57.5°	7668.8	7259.3	7097.3	7299.4	8071.6	9110.1	9952.6	9466.6	9379.6	10063.9	10608.2
60°	7132.2	6699.2	6709.0	7089.8	8427.3	10154.0	11556.6	11144.1	10633.9	11198.6	11730.0
62.5°	5603.1	5211.7	5466.8	6045.9	8129.1	11168.3	13706.4	13880.5	12066.8	12139.5	12352.2
65°	3808.3	3537.3	3767.4	4334.4	6593.2	11721.7	15754.0	16452.0	13371.8	12755.7	12620.9
67.5°	2506.3	2314.8	2359.5	2736.4	4538.8	9992.7	17123.4	17884.1	14564.8	13261.3	12147.1
70°	1940.9	1786.4	1766.8	1964.3	2691.8	6942.2	16311.9	17468.6	15291.5	12787.5	10587.7
72.5°	1523.0	1405.7	1416.3	1606.3	2084.7	3851.5	12622.5	14854.8	14196.9	11028.3	8134.4
75°	1187.7	1091.5	1145.3	1362.5	1928.0	2393.5	8708.9	11274.3	10976.0	8166.2	4639.5
77.5°	862.2	800.1	876.6	1160.4	1812.2	2053.7	5421.4	7865.7	7031.5	4192.8	1591.9
80°	565.5	530.6	593.5	946.2	1643.4	1976.4	3350.3	4819.6	3474.5	1177.8	602.5
82.5°	333.1	317.9	370.2	640.4	1320.9	1852.3	2234.6	2678.2	1421.6	498.1	320.2
85°	174.9	163.5	219.5	367.9	910.6	1691.1	1759.2	1603.3	686.6	216.5	152.9
87.5°	58.3	56.8	93.1	142.3	344.4	897.8	938.6	761.5	283.1	62.8	33.3
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°	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3	1690.3
2.5°	2055.2	2024.9	1850.8	1875.0	1897.7	1886.4	1879.6	1800.8	1793.3	1905.3	1896.2
5°	2589.6	2463.9	2315.6	2308.8	2211.1	2111.2	2130.9	2099.1	2108.2	2154.3	2158.9
7.5°	2871.9	2715.2	2573.7	2343.6	2148.3	1990.1	2015.1	2007.5	1987.0	2091.5	2119.5
10°	2866.6	2727.4	2567.6	2289.1	2157.4	2028.7	1874.3	1728.2	1685.0	1633.5	1638.1
12.5°	3055.9	2932.5	2584.3	2300.4	2121.8	1900.0	1610.8	1451.1	1298.2	1295.2	1256.6
15°	3114.9	3024.1	2619.9	2235.3	1872.7	1554.8	1255.8	1082.5	971.9	950.0	917.4
17.5°	3264.0	3121.7	2511.6	2024.9	1583.6	1215.7	943.9	822.8	813.7	828.9	812.2
20°	3273.9	3043.0	2316.3	1713.8	1272.5	921.2	769.8	709.3	741.8	778.9	777.4
22.5°	3265.6	2943.9	2147.5	1448.8	956.1	740.3	674.5	660.8	691.1	746.4	753.2
25°	3180.8	2911.3	1936.3	1190.0	775.9	634.3	616.2	624.5	662.3	727.4	727.4
27.5°	3269.3	2778.8	1671.4	968.2	652.5	564.7	577.6	598.8	626.8	701.0	714.6
30°	3240.6	2822.7	1457.9	779.7	575.3	516.3	545.0	566.2	598.0	675.2	682.0
32.5°	3317.8	2705.4	1278.5	655.5	524.6	497.3	504.1	532.9	574.5	635.1	647.2
35°	3435.9	2748.6	1072.6	589.7	499.6	475.4	488.2	511.0	552.6	611.6	621.5
37.5°	3812.9	2746.3	930.3	553.3	495.1	470.8	476.9	492.8	541.2	595.0	617.7
40°	4055.1	2903.7	800.9	545.0	489.8	468.6	463.3	480.7	519.3	582.9	598.8
42.5°	4510.0	2999.9	744.9	542.0	489.0	455.7	450.4	470.8	508.7	567.7	591.9
45°	4990.7	3136.9	700.2	540.5	486.7	453.4	437.5	463.3	495.1	551.8	579.8
47.5°	5556.1	3426.8	675.2	535.2	482.2	456.5	433.0	445.9	481.4	538.2	566.2
50°	6296.5	3810.6	680.5	527.6	489.0	457.2	426.2	432.2	464.8	520.0	548.8
52.5°	7196.5	4404.8	714.6	530.6	493.5	453.4	423.1	420.1	448.1	496.6	525.3
55°	8281.2	5248.1	816.8	545.0	493.5	452.7	418.6	405.0	426.2	465.5	493.5
57.5°	9590.0	6224.6	1016.6	551.8	489.8	448.1	408.8	384.5	397.4	430.0	456.5
60°	10714.1	7012.6	1222.5	556.4	497.3	437.5	389.1	358.8	367.1	392.1	415.6
62.5°	11287.2	7233.6	1284.6	552.6	517.8	430.7	365.6	331.6	332.3	353.5	374.7
65°	11394.6	6939.1	1035.5	548.8	544.3	430.0	349.0	308.1	302.8	317.9	336.1
67.5°	10628.6	6023.2	747.1	540.5	547.3	425.4	337.6	289.2	275.5	286.1	301.3
70°	9024.6	4850.7	627.5	523.8	511.0	402.7	317.9	269.5	251.3	258.9	270.2
72.5°	6727.9	3588.8	547.3	488.2	445.1	344.4	287.6	247.5	228.6	233.9	242.2
75°	3737.9	1914.4	458.0	424.7	363.3	278.6	245.3	219.5	202.9	205.1	214.2
77.5°	1241.4	706.3	336.1	336.9	274.8	215.0	202.1	187.7	174.9	175.6	183.2
80°	562.4	390.6	240.7	242.2	191.5	155.9	155.2	150.6	142.3	140.0	145.3
82.5°	326.3	236.9	165.0	157.4	123.4	101.4	112.8	110.5	108.2	99.9	101.4
85°	160.5	127.2	86.3	81.8	68.1	50.7	60.6	62.8	60.6	51.5	50.7
87.5°	39.4	41.6	21.2	19.7	11.4	5.3	9.1	9.1	11.4	7.6	3.8
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)