

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: P596792

Luminaire Tested: **MSA-SA4C-827-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596792  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4C-827-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17230 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

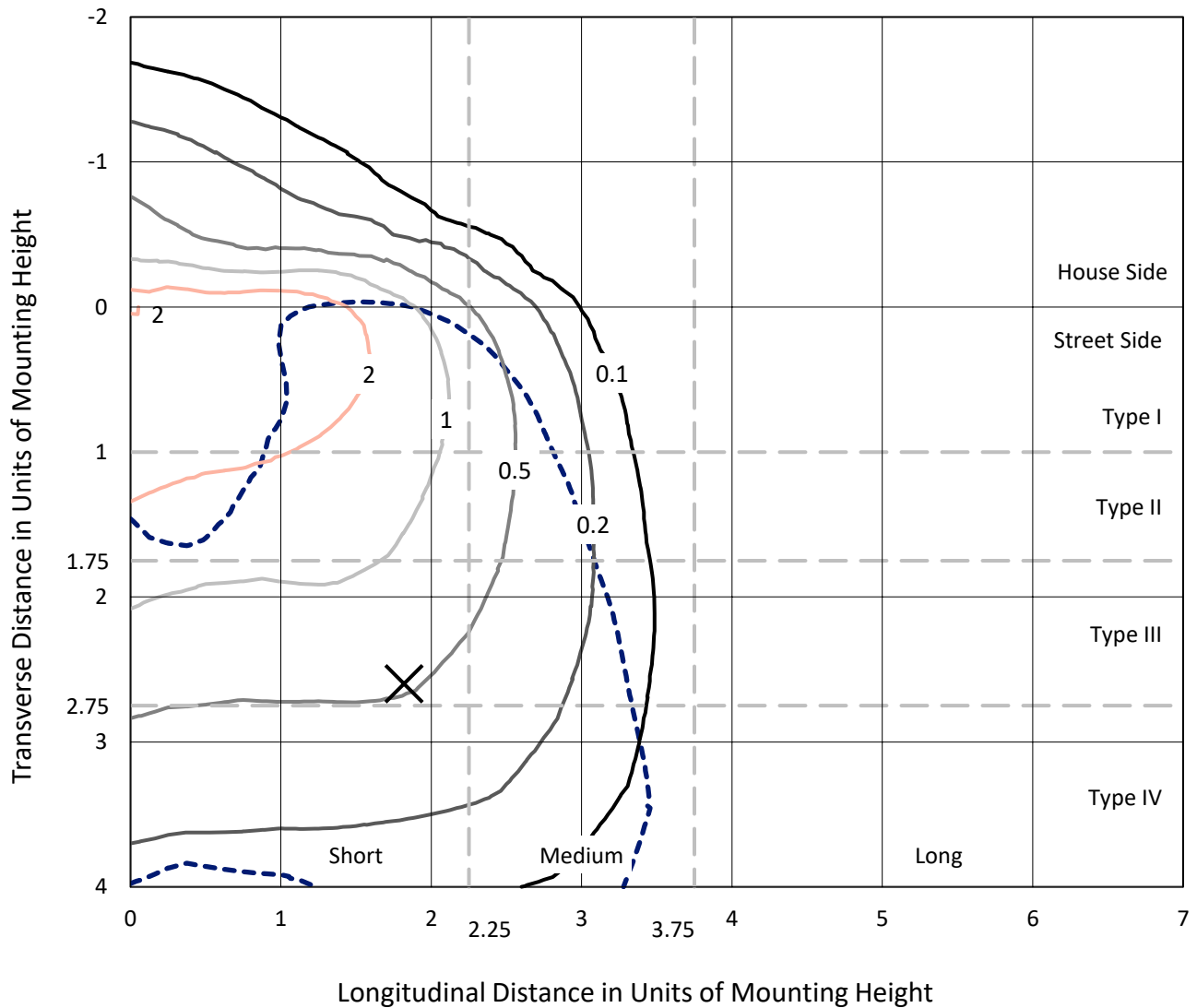
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

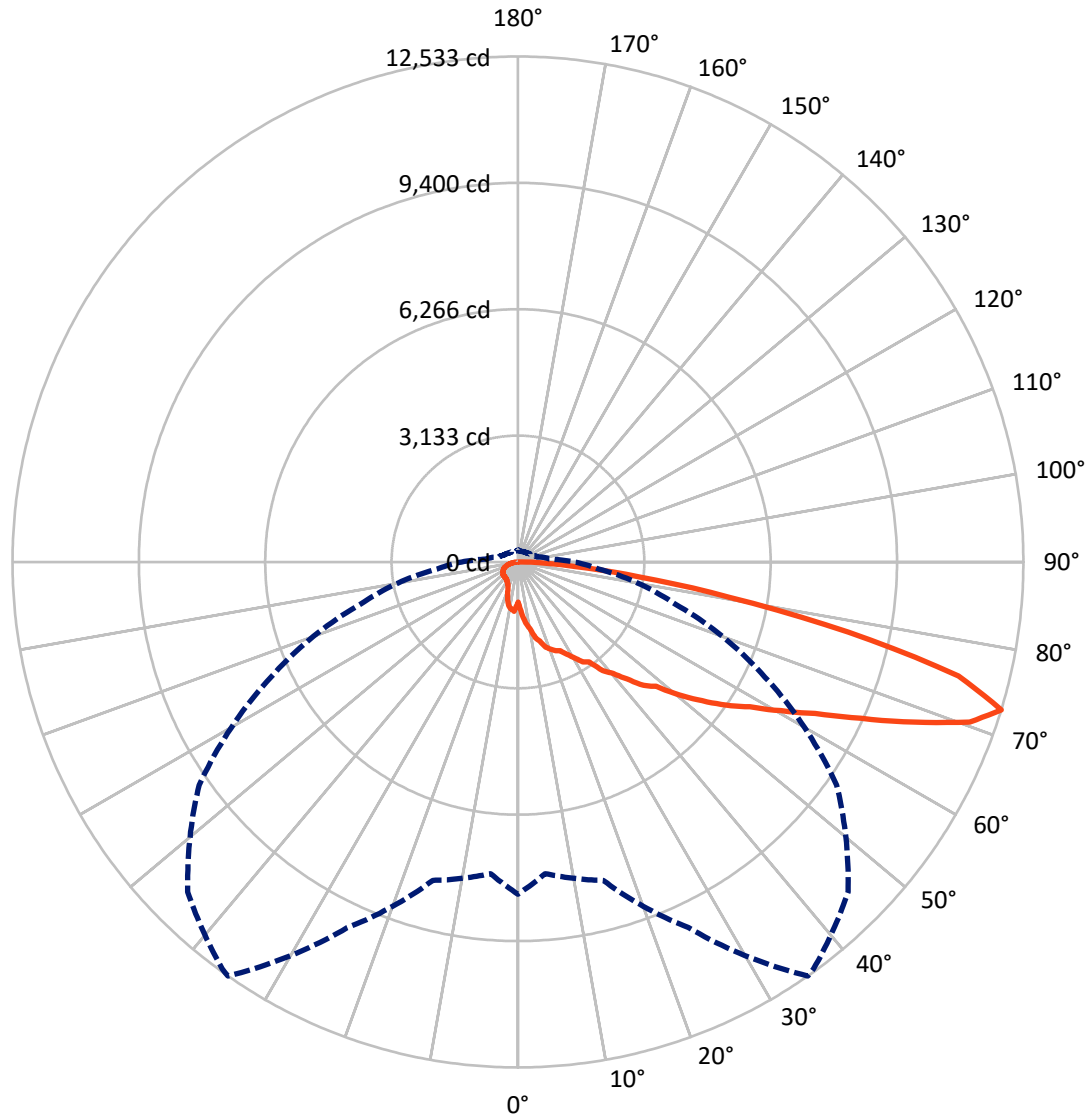
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 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	2312.2	0.0	2312.2
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	14917.8	0.0	14917.8
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	17230.0	0.0	17230.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.3	0.8
10°-20°	466.2	2.7
20°-30°	810.0	4.7
30°-40°	1353.8	7.9
40°-50°	2349.6	13.6
50°-60°	3552.0	20.6
60°-70°	4601.6	26.7
70°-80°	3395.5	19.7
80°-90°	569.1	3.3
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°	17230.0	100.0
0°-180°	17230.0	100.0

**Coefficient of Utilization**



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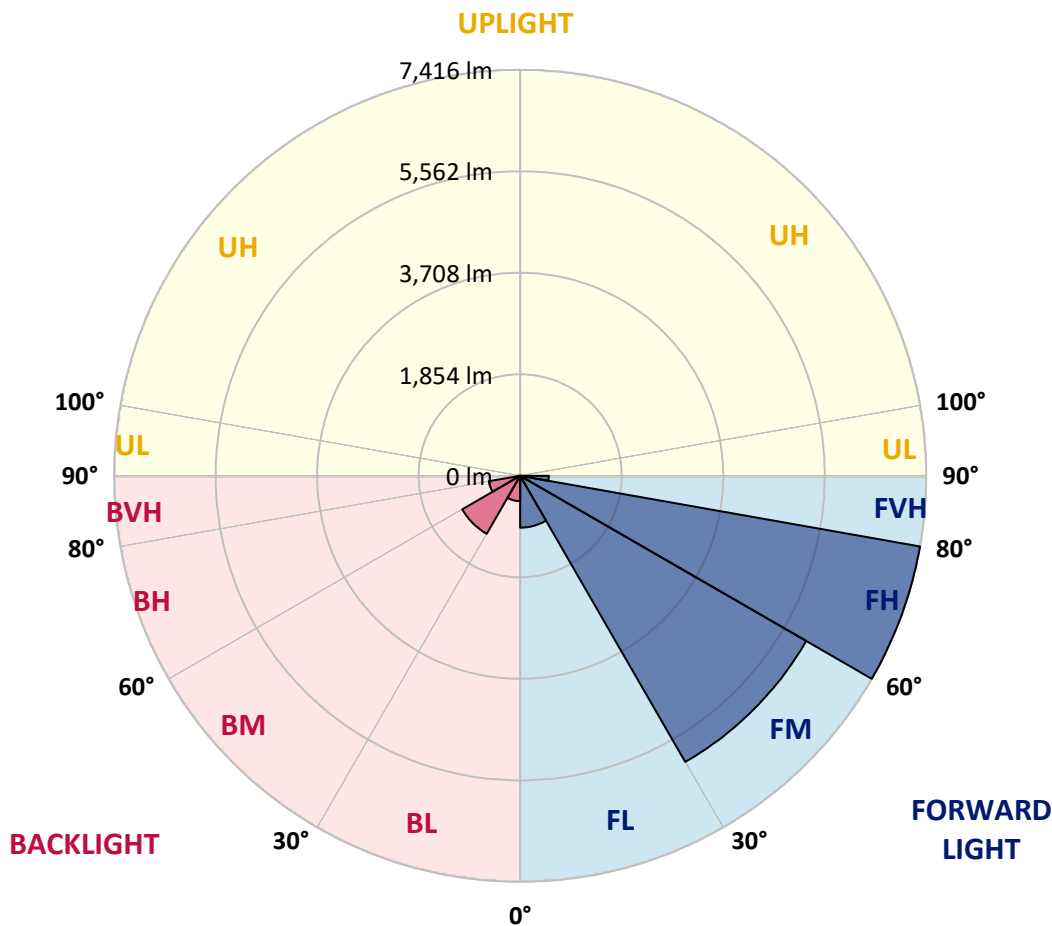
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	946.3	5.5			
FM (30°-60°)	6033.3	35.0			
FH (60°-80°)	7415.7	43.0			G3/7500
FVH (80°-90°)	522.5	3.0			G4/750
BL (0°-30°)	462.2	2.7	B1/500		
BM (30°-60°)	1222.0	7.1	B2/2500		
BH (60°-80°)	581.4	3.4	B2/1000		G2/1000
BVH (80°-90°)	46.6	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-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7
2.5°	1242.1	1182.5	1131.0	1128.8	1176.6	1195.0	1187.7	1171.5	1152.4	1111.9	1200.2
5°	1556.1	1470.8	1454.6	1435.5	1392.1	1403.9	1333.3	1387.0	1403.9	1442.9	1501.7
7.5°	1741.4	1691.4	1652.4	1636.3	1561.3	1552.4	1500.2	1576.7	1609.1	1603.9	1691.4
10°	1814.2	1768.6	1771.6	1718.6	1694.4	1704.7	1710.5	1712.0	1731.9	1748.0	1703.9
12.5°	1851.7	1869.4	1934.1	1898.1	1928.9	1941.5	2003.2	1940.0	1942.2	1859.1	1904.7
15°	2040.7	2084.9	2047.3	2045.9	2036.3	2056.9	2109.9	2067.2	2100.3	2073.8	2015.0
17.5°	2268.7	2281.9	2209.9	2180.5	2218.7	2212.1	2198.8	2205.5	2123.1	2276.1	2204.0
20°	2338.6	2390.8	2295.9	2180.5	2306.9	2323.9	2320.9	2292.2	2151.0	2371.7	2301.8
22.5°	2541.5	2470.9	2395.9	2322.4	2387.1	2396.7	2380.5	2312.1	2265.0	2348.9	2404.0
25°	2633.5	2616.5	2520.9	2512.1	2440.8	2407.0	2434.9	2415.0	2368.7	2518.0	2457.0
27.5°	2843.8	2823.9	2604.0	2694.5	2590.8	2582.0	2434.2	2500.4	2546.7	2535.7	2626.8
30°	3082.1	3104.9	2783.5	2873.9	2754.1	2737.9	2589.3	2673.2	2704.8	2715.1	2829.1
32.5°	3346.8	3409.3	3090.1	3015.9	2951.9	2962.9	2837.2	2684.2	2807.0	3047.5	3096.8
35°	3633.6	3659.3	3324.7	3213.0	3046.0	3034.3	3036.5	3055.6	3179.9	3454.2	3492.4
37.5°	4163.8	4044.7	3751.3	3468.1	3412.2	3302.7	3376.9	3435.8	3560.1	3980.7	4141.0
40°	4490.3	4402.1	3955.0	3791.0	3636.5	3646.8	3785.8	3785.1	4078.5	4512.4	4757.3
42.5°	4792.6	4696.3	4274.9	4110.1	3963.8	3999.8	4039.5	4109.4	4672.0	5371.3	5483.1
45°	5036.0	4824.9	4522.0	4485.2	4364.6	4316.8	4485.2	4597.0	5381.6	6066.3	6131.0
47.5°	5201.5	5027.9	4731.6	4699.2	4610.2	4727.1	5186.8	5258.8	5931.7	6764.2	6759.0
50°	5453.0	5215.4	4947.8	4930.8	5181.6	5244.1	5804.5	5797.1	6467.1	7343.7	7222.3
52.5°	5742.7	5443.4	5152.9	5334.6	5717.0	5747.9	6234.0	6431.8	7051.7	7902.6	7585.6
55°	6075.9	5741.3	5460.3	5703.0	6272.2	6181.0	6673.0	7156.2	7783.5	8491.6	7848.2
57.5°	6488.4	6082.5	5855.2	6224.4	6778.9	6859.8	7301.8	7909.9	8372.5	8857.9	8039.4
60°	6923.8	6447.2	6239.1	6590.6	7488.6	7581.2	8013.6	8536.5	9032.9	9202.8	8003.3
62.5°	7339.3	6823.8	6635.5	7069.4	8275.4	8504.9	8824.0	9157.2	9582.2	9286.6	7567.2
65°	7801.8	7285.6	7167.2	7818.0	9342.5	9570.5	9987.4	9887.4	9770.5	8989.5	6845.8
67.5°	8291.6	7767.3	7789.3	8686.5	10600.8	10639.7	11280.3	10615.5	9549.1	8202.6	5634.6
70°	8554.9	8018.0	8245.3	9612.4	11881.1	11825.2	11956.1	10811.1	8646.8	6484.0	3883.6
72.5°	8235.7	7757.0	8173.2	10002.2	12532.7	12472.4	11576.6	9649.9	6760.5	4032.2	2013.5
75°	6973.0	6511.2	7148.1	8916.0	11282.5	11338.4	9852.1	7176.0	3870.4	1621.6	836.1
77.5°	4738.2	4499.9	5045.6	6645.8	8380.6	8574.0	7309.9	4196.2	1625.2	671.4	506.0
80°	2504.0	2390.8	2793.8	3828.5	5306.6	5450.8	4298.4	2090.0	832.5	434.6	361.1
82.5°	1360.5	1312.7	1528.9	1968.7	3015.1	3140.9	2229.0	1388.4	561.1	272.1	220.6
85°	914.1	895.7	1039.1	1057.5	1425.9	1467.1	1167.8	1069.3	336.8	133.1	145.6
87.5°	457.4	439.0	547.1	483.2	544.2	544.9	535.4	682.4	85.3	44.1	26.5
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°	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7	995.7
2.5°	1201.6	1175.9	1086.9	1086.2	1099.4	1090.6	1097.2	1061.2	1045.7	1116.3	1112.7
5°	1493.6	1416.4	1342.1	1316.4	1286.2	1220.8	1224.4	1225.2	1214.1	1256.1	1259.0
7.5°	1664.9	1572.3	1503.9	1367.1	1259.7	1175.9	1186.9	1199.4	1186.9	1242.8	1263.4
10°	1689.9	1616.4	1534.8	1382.5	1311.2	1235.5	1159.0	1091.3	1083.2	1057.5	1065.6
12.5°	1838.5	1777.5	1606.8	1439.9	1356.8	1240.6	1100.9	1023.7	959.0	970.0	949.4
15°	1960.6	1917.2	1712.7	1494.3	1295.8	1151.6	1003.1	897.2	839.1	832.5	811.9
17.5°	2126.0	2064.3	1722.3	1456.8	1217.1	1044.3	876.6	756.7	731.7	721.4	711.1
20°	2205.5	2094.4	1687.7	1339.2	1125.2	916.3	751.6	648.6	641.3	659.7	656.0
22.5°	2274.6	2119.4	1656.9	1267.8	981.8	786.9	666.3	598.6	590.5	614.1	618.5
25°	2315.0	2190.8	1623.0	1195.0	892.8	690.5	602.3	564.1	565.5	596.4	592.7
27.5°	2497.4	2215.8	1537.7	1109.0	790.6	619.2	571.4	551.5	543.5	586.1	589.8
30°	2612.1	2379.0	1518.6	1017.8	714.8	567.0	543.5	535.4	533.9	585.4	589.1
32.5°	2825.4	2433.4	1527.4	918.5	646.4	550.8	522.9	522.1	536.8	586.1	592.0
35°	3121.0	2662.9	1484.8	861.9	608.9	525.8	506.7	512.6	537.6	591.3	599.3
37.5°	3697.6	2879.1	1498.0	808.9	596.4	517.7	502.3	506.0	546.4	604.5	626.6
40°	4154.3	3271.1	1477.4	782.5	579.5	516.2	492.7	507.4	545.7	611.9	631.7
42.5°	4816.1	3583.6	1479.6	756.0	578.8	510.4	491.2	508.9	544.2	605.2	632.4
45°	5383.9	3863.8	1511.2	740.5	571.4	519.9	489.0	511.1	534.6	581.7	611.9
47.5°	5849.4	4176.3	1543.6	725.8	568.5	528.8	486.8	495.7	518.5	555.2	582.4
50°	6228.8	4396.2	1584.8	722.9	568.5	524.3	481.0	480.2	499.3	528.8	554.5
52.5°	6524.5	4551.4	1612.7	726.6	568.5	507.4	473.6	467.7	479.5	500.8	526.5
55°	6738.5	4599.2	1589.9	736.1	567.7	492.0	460.4	455.2	461.1	475.8	500.1
57.5°	6824.5	4473.4	1453.9	719.2	567.7	481.0	444.2	438.3	444.2	455.2	479.5
60°	6609.0	4069.0	1257.5	675.8	556.7	466.2	425.8	422.1	430.9	440.5	464.0
62.5°	6068.5	3531.4	1047.9	624.4	533.9	453.7	408.1	408.9	422.9	436.1	459.6
65°	5228.7	2881.3	873.7	572.1	505.2	433.9	389.8	394.9	414.8	432.4	455.9
67.5°	4114.6	2134.9	735.4	521.4	464.8	401.5	369.2	370.6	384.6	401.5	424.3
70°	2750.4	1358.3	604.5	461.8	411.8	359.6	337.5	332.4	328.7	343.4	363.3
72.5°	1395.1	802.3	496.4	394.9	354.5	314.0	297.1	283.9	273.6	282.4	297.8
75°	731.0	561.1	400.8	328.0	292.7	266.9	254.4	236.8	229.4	234.6	245.6
77.5°	517.0	439.0	324.3	259.6	238.3	211.8	214.0	195.6	189.7	192.7	204.4
80°	397.1	347.8	249.3	196.4	183.8	158.1	165.5	154.4	147.1	145.6	154.4
82.5°	270.6	261.8	177.2	137.5	128.7	110.3	120.6	116.2	106.6	100.7	105.2
85°	182.4	173.6	108.1	79.4	75.7	57.4	73.5	70.6	62.5	53.7	54.4
87.5°	31.6	58.1	30.9	19.9	18.4	6.6	16.9	16.2	14.7	7.4	5.9
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)