

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: P366880

Luminaire Tested: **MSA-SA1C-727-U-T3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366880  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-727-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5238 lumens  
Efficiency: N/A  
Efficacy: 88.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

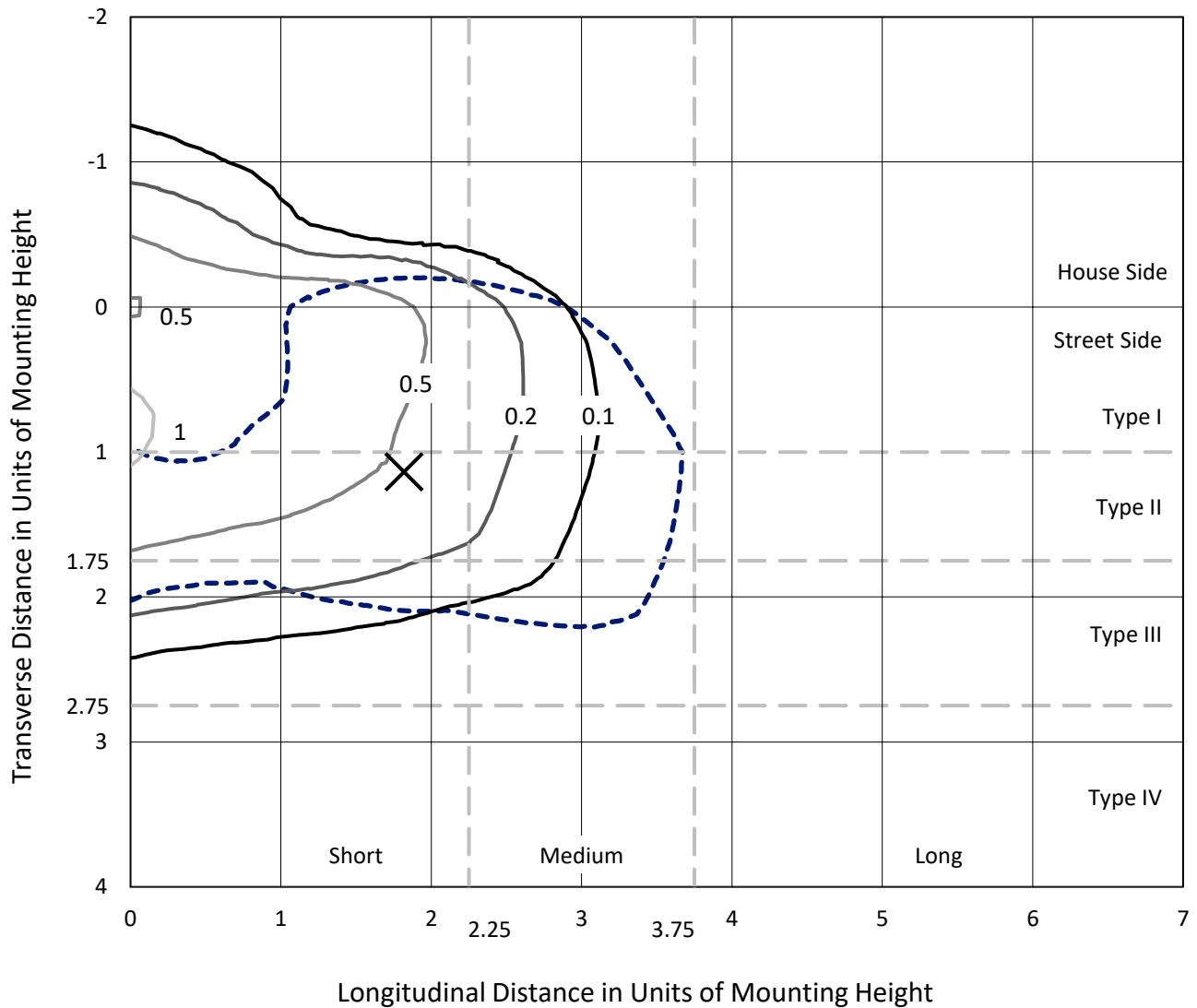
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

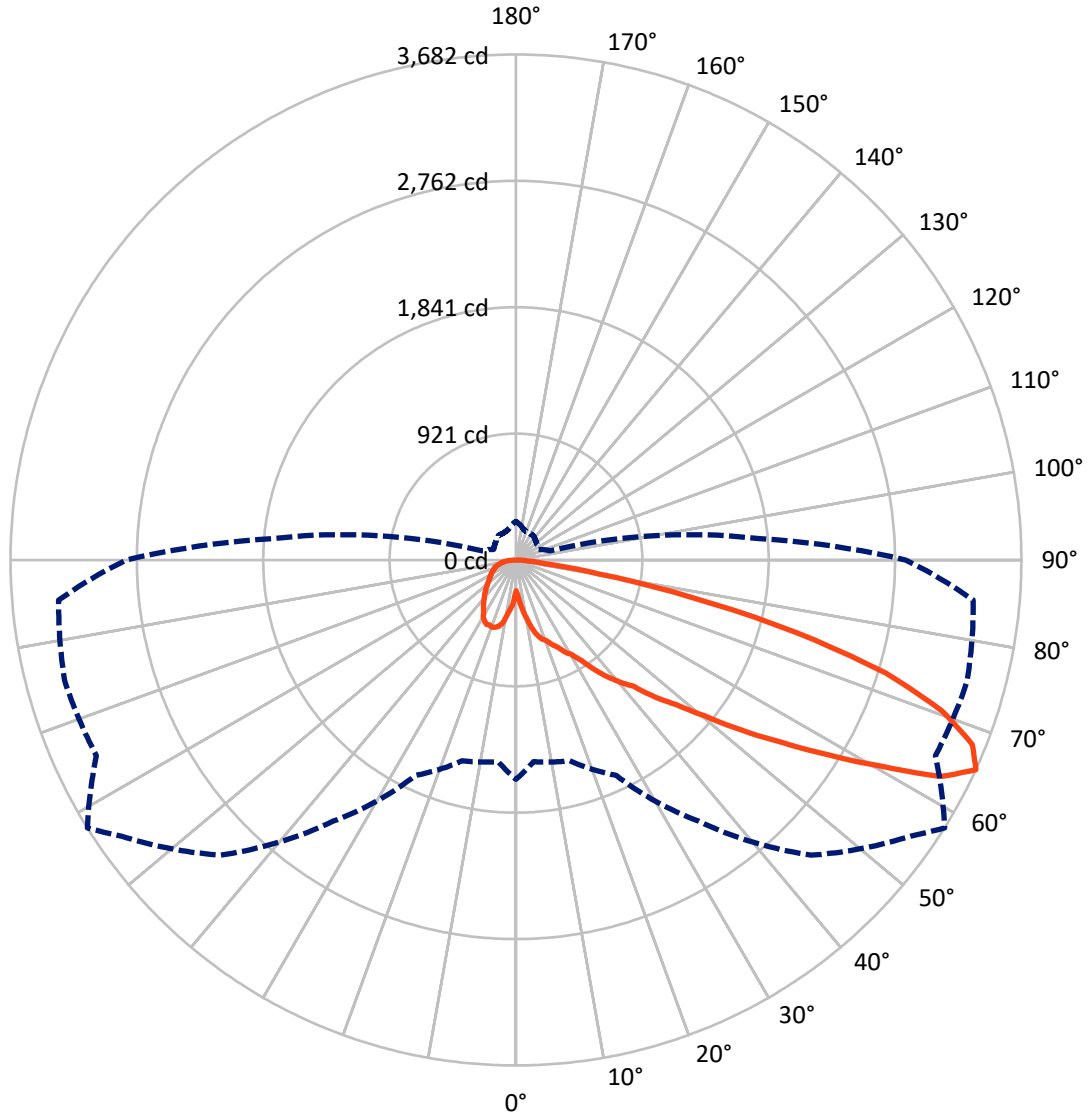
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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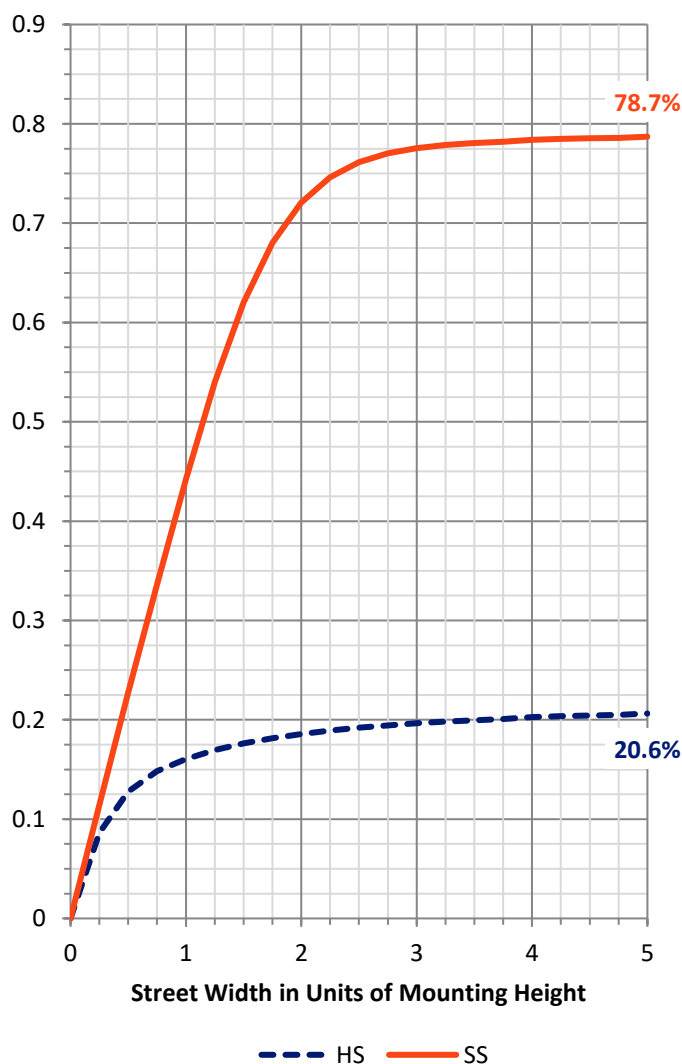
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1103.3	0.0	1103.3
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	4134.7	0.0	4134.7
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	5238.0	0.0	5238.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	0.7
10°-20°	149.5	2.9
20°-30°	286.8	5.5
30°-40°	473.6	9.0
40°-50°	787.1	15.0
50°-60°	1299.9	24.8
60°-70°	1458.3	27.8
70°-80°	663.0	12.7
80°-90°	85.5	1.6
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°	5238.0	100.0
0°-180°	5238.0	100.0

**Coefficient of Utilization**

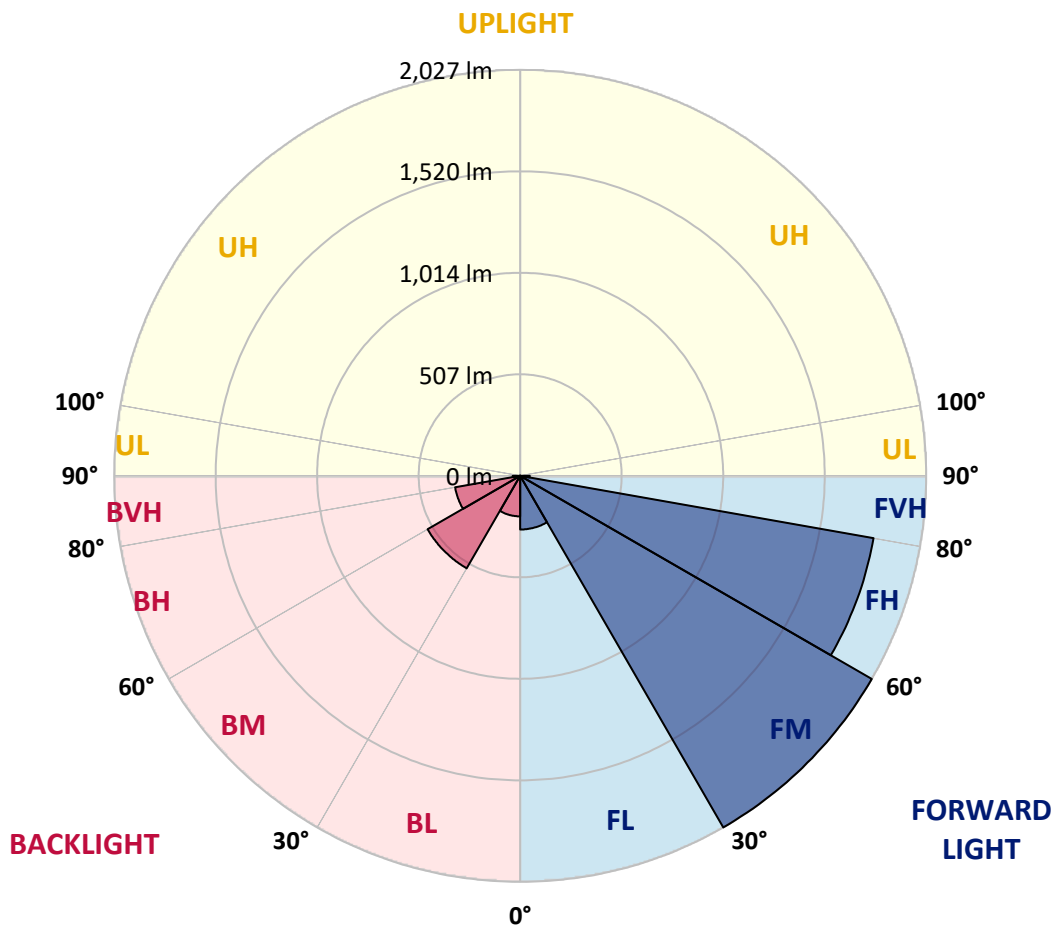


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	268.0	5.1			
FM (30°-60°)	2027.0	38.7			
FH (60°-80°)	1791.5	34.2			G1/1800
FVH (80°-90°)	48.2	0.9			G1/100
BL (0°-30°)	202.5	3.9	B1/500		
BM (30°-60°)	533.6	10.2	B1/1000		
BH (60°-80°)	329.8	6.3	B1/500		G1/500
BVH (80°-90°)	37.4	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9
2.5°	268.5	260.5	246.9	250.2	258.1	262.4	259.8	256.3	251.7	250.9	270.9
5°	347.7	332.2	325.9	323.3	313.7	308.0	317.8	316.5	321.7	331.3	351.0
7.5°	405.5	394.6	384.1	383.0	364.5	358.0	371.0	378.0	387.4	387.6	414.2
10°	436.5	427.1	426.9	417.1	415.5	428.0	428.2	433.4	434.5	445.6	440.4
12.5°	470.1	469.4	481.4	481.2	495.2	515.7	505.4	505.4	508.5	494.9	511.5
15°	550.1	557.1	534.6	538.4	538.4	558.4	557.8	561.7	571.1	567.6	560.2
17.5°	633.5	637.8	613.0	589.8	591.6	587.2	602.9	604.4	595.5	636.1	627.1
20°	687.1	704.1	651.8	622.8	628.4	633.5	634.1	624.7	620.2	682.5	670.3
22.5°	753.4	739.0	691.0	659.0	667.5	660.7	659.4	666.6	672.9	696.5	716.4
25°	797.7	796.6	739.0	703.9	694.5	692.6	705.9	703.0	718.1	760.9	748.4
27.5°	862.1	882.1	780.0	788.8	747.5	704.1	746.9	759.8	786.8	779.8	807.5
30°	986.8	971.8	865.1	862.7	816.0	779.6	809.3	798.4	847.0	845.5	866.0
32.5°	1088.7	1099.2	965.0	939.9	905.3	861.4	841.8	872.1	898.3	941.2	952.8
35°	1196.5	1194.1	1067.3	1016.7	959.4	941.2	965.5	978.1	1033.7	1073.2	1045.7
37.5°	1364.0	1345.0	1200.0	1104.2	1061.2	1054.7	1096.1	1077.8	1138.0	1147.4	1162.9
40°	1519.7	1462.6	1321.2	1211.5	1143.2	1167.7	1169.0	1171.4	1203.7	1229.2	1305.7
42.5°	1667.9	1627.7	1444.5	1362.0	1261.5	1237.7	1252.5	1257.5	1339.1	1391.3	1497.3
45°	1870.3	1762.7	1621.6	1537.0	1424.4	1394.1	1383.6	1426.8	1505.6	1624.2	1715.2
47.5°	2041.5	1944.4	1809.9	1698.4	1572.5	1659.1	1599.8	1575.6	1681.4	1828.4	1973.2
50°	2183.5	2076.6	1944.7	1880.3	1860.2	1937.5	1783.5	1786.3	1883.1	2090.6	2256.6
52.5°	2293.5	2179.4	2062.5	2029.7	2141.9	2186.4	2075.1	2058.3	2129.0	2374.2	2573.5
55°	2396.2	2275.1	2184.8	2251.6	2440.5	2445.5	2437.6	2344.5	2429.6	2678.0	2901.6
57.5°	2422.6	2292.1	2232.2	2327.9	2583.4	2782.1	2860.2	2677.4	2764.0	2954.4	3182.6
60°	2286.7	2175.0	2151.0	2281.0	2660.6	2951.1	3155.1	3045.8	3013.3	3176.2	3379.3
62.5°	2008.4	1878.8	1898.2	2078.8	2579.2	3018.1	3388.1	3473.3	3276.6	3352.7	3465.3
65°	1598.5	1474.8	1514.1	1731.3	2323.8	3040.3	3507.2	3682.1	3371.7	3402.7	3343.6
67.5°	1127.3	1015.0	1064.5	1345.4	1933.1	2755.5	3527.7	3584.8	3270.5	3260.2	3011.1
70°	638.7	568.2	621.9	856.2	1364.4	2195.1	3366.9	3291.6	3089.0	2943.7	2519.4
72.5°	293.0	268.7	294.5	435.8	785.5	1460.6	2748.7	2817.0	2661.7	2480.0	1916.7
75°	155.7	147.2	158.1	217.7	367.6	794.7	1953.0	2106.5	2023.8	1881.0	1250.3
77.5°	115.8	109.3	114.5	141.1	196.3	310.8	1109.6	1303.3	1334.8	1203.2	694.3
80°	88.8	83.5	88.8	106.7	135.9	147.7	474.4	607.5	691.9	559.1	275.9
82.5°	65.9	62.4	70.5	80.1	95.5	92.3	168.4	209.6	270.3	184.8	107.5
85°	52.4	48.0	51.0	54.3	61.1	50.6	77.0	86.2	91.2	76.3	39.7
87.5°	20.5	19.0	37.1	29.2	24.9	15.3	23.1	26.2	26.8	25.7	11.6
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°	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9
2.5°	273.1	270.9	258.1	262.2	269.0	270.3	273.1	265.3	261.3	275.7	276.4
5°	352.7	340.9	334.8	335.5	331.1	324.4	334.6	341.4	344.0	354.7	358.6
7.5°	414.5	400.3	390.0	378.2	361.7	351.0	368.9	382.0	388.9	411.2	419.9
10°	441.9	430.6	428.4	413.6	413.1	412.9	412.1	407.5	422.5	420.3	426.5
12.5°	498.7	496.3	475.5	469.6	470.3	469.6	451.3	450.4	450.7	470.7	463.5
15°	551.4	551.9	532.9	511.5	492.3	486.4	479.2	476.0	480.8	492.1	485.1
17.5°	616.7	618.8	564.5	530.7	505.4	504.8	487.5	467.2	496.5	503.5	495.8
20°	658.8	649.6	582.9	526.1	518.9	499.3	477.9	450.0	475.3	492.3	497.1
22.5°	698.7	682.8	599.9	534.2	499.7	476.4	455.7	437.6	445.6	464.6	461.6
25°	725.7	721.4	623.4	553.6	499.1	447.2	419.3	407.7	411.8	441.3	438.4
27.5°	790.3	743.2	619.3	558.6	478.1	407.3	393.3	380.9	376.7	408.6	417.3
30°	833.5	814.1	647.0	550.8	451.8	374.5	354.0	351.4	352.7	388.9	391.3
32.5°	906.8	856.4	692.4	520.7	413.4	350.3	326.8	327.9	333.7	360.1	365.6
35°	983.1	953.0	698.5	499.1	382.2	324.6	315.0	307.4	310.6	333.7	334.8
37.5°	1124.9	1020.9	736.0	465.7	359.3	314.8	296.4	289.7	291.4	304.5	313.9
40°	1249.7	1157.2	718.5	433.4	330.9	301.7	278.8	273.8	268.5	281.4	287.3
42.5°	1449.7	1254.5	712.6	397.9	317.6	284.0	268.3	255.0	250.0	260.9	271.6
45°	1649.7	1357.7	680.6	361.9	298.8	282.7	253.0	240.4	241.7	251.5	262.4
47.5°	1872.7	1496.2	626.3	327.0	278.3	276.4	237.8	232.3	236.2	247.1	258.1
50°	2136.2	1643.2	581.3	295.6	263.7	257.4	235.8	229.3	233.0	245.8	256.5
52.5°	2424.3	1804.4	548.6	266.6	247.1	242.3	238.4	232.1	236.5	247.6	258.7
55°	2710.7	1951.6	526.4	246.7	233.0	236.0	243.9	239.3	241.5	249.8	260.9
57.5°	2923.2	2029.3	481.6	225.6	221.4	232.3	244.5	236.9	238.2	249.8	261.8
60°	3046.7	2044.1	408.1	208.3	212.2	224.9	237.8	227.9	227.1	246.1	261.1
62.5°	3033.1	1958.0	323.7	192.6	201.8	213.8	227.5	218.1	220.5	246.5	262.4
65°	2839.4	1781.9	257.4	179.3	189.1	201.6	219.0	215.3	226.9	263.9	281.2
67.5°	2499.2	1524.8	206.8	166.9	177.3	193.3	224.9	234.7	239.7	281.8	299.5
70°	2025.4	1184.7	172.3	156.0	168.0	197.2	241.9	239.9	235.8	273.3	287.3
72.5°	1463.2	812.1	151.6	145.3	156.4	185.4	242.3	231.9	226.6	249.5	259.6
75°	915.5	484.5	132.4	131.8	138.7	166.2	231.4	222.1	207.9	219.2	232.3
77.5°	522.9	248.0	111.5	117.4	121.5	144.2	207.2	198.7	186.1	190.9	203.7
80°	199.6	120.0	94.0	104.3	103.2	122.2	175.6	173.6	159.2	160.8	168.6
82.5°	94.0	67.2	78.1	89.7	83.8	97.3	142.7	142.0	129.4	117.1	123.5
85°	34.9	35.8	57.2	68.3	58.2	62.8	103.2	100.3	88.1	74.4	82.2
87.5°	7.9	12.9	28.1	35.6	20.3	19.4	41.7	36.2	34.9	20.7	21.8
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)