

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: P366792

Luminaire Tested: **MSA-SA1B-740-U-T3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366792  
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-SA1B-740-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**

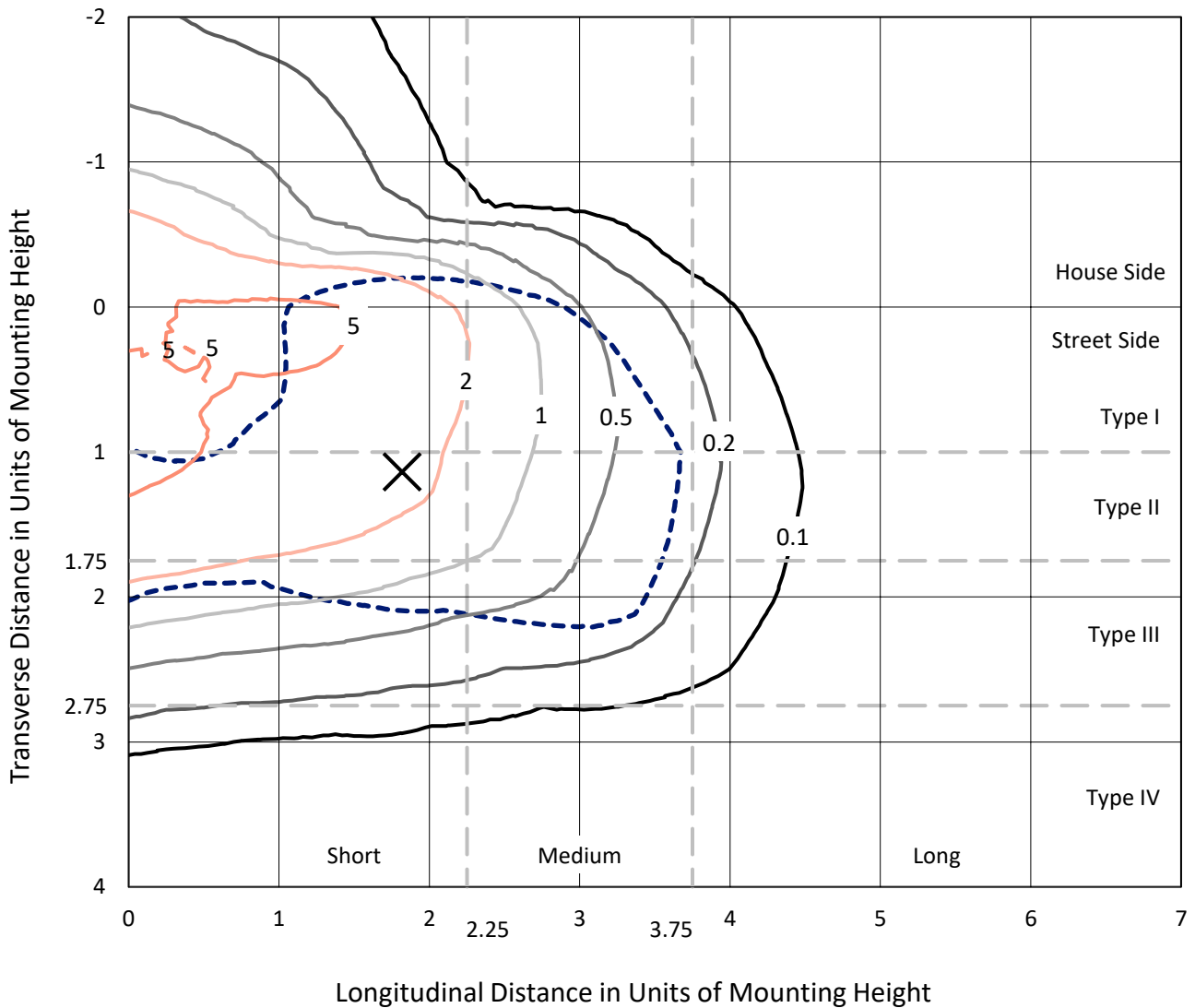
Lumens per Lamp: N/A  
Luminaire Lumens: 5057 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

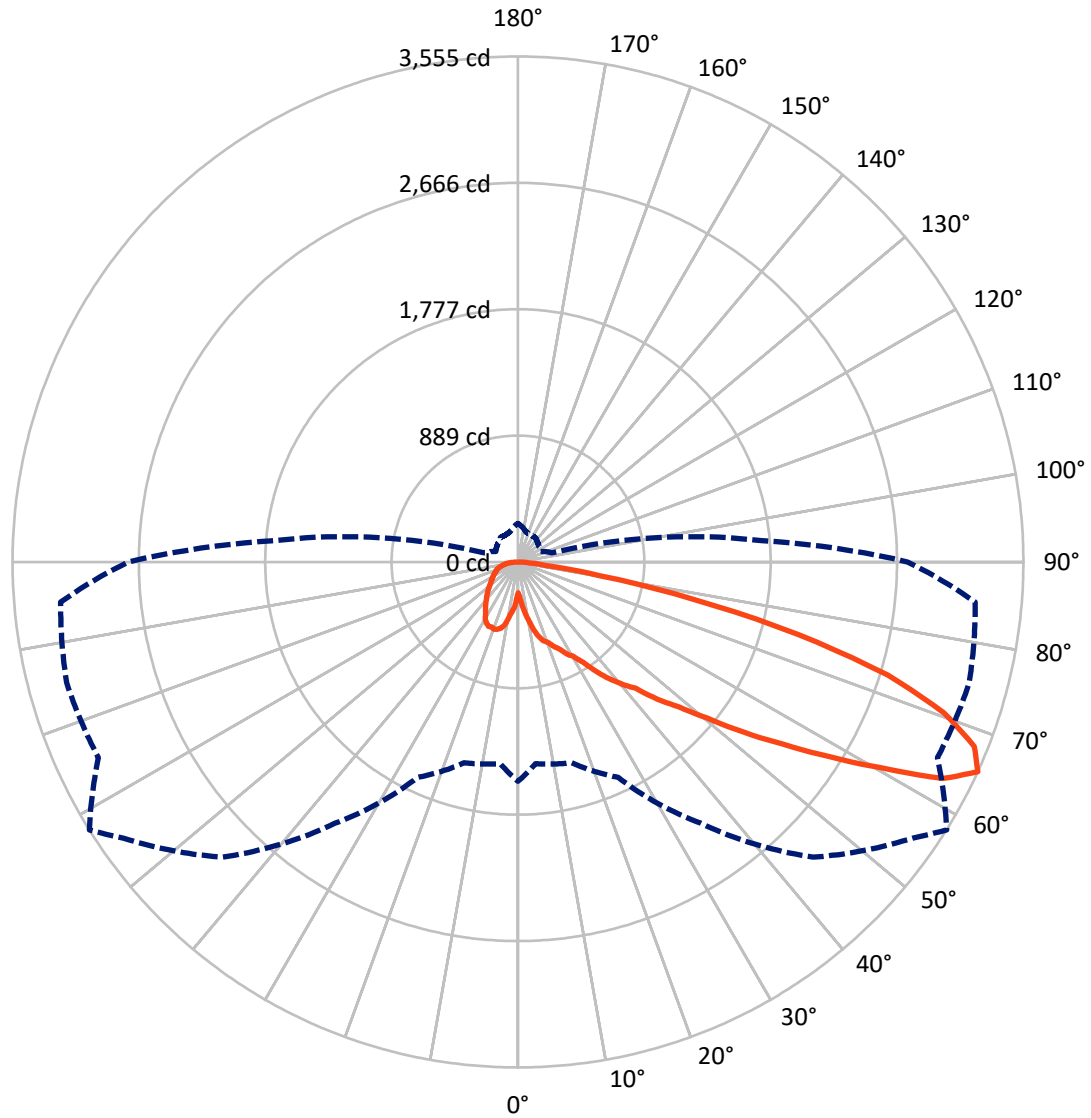
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 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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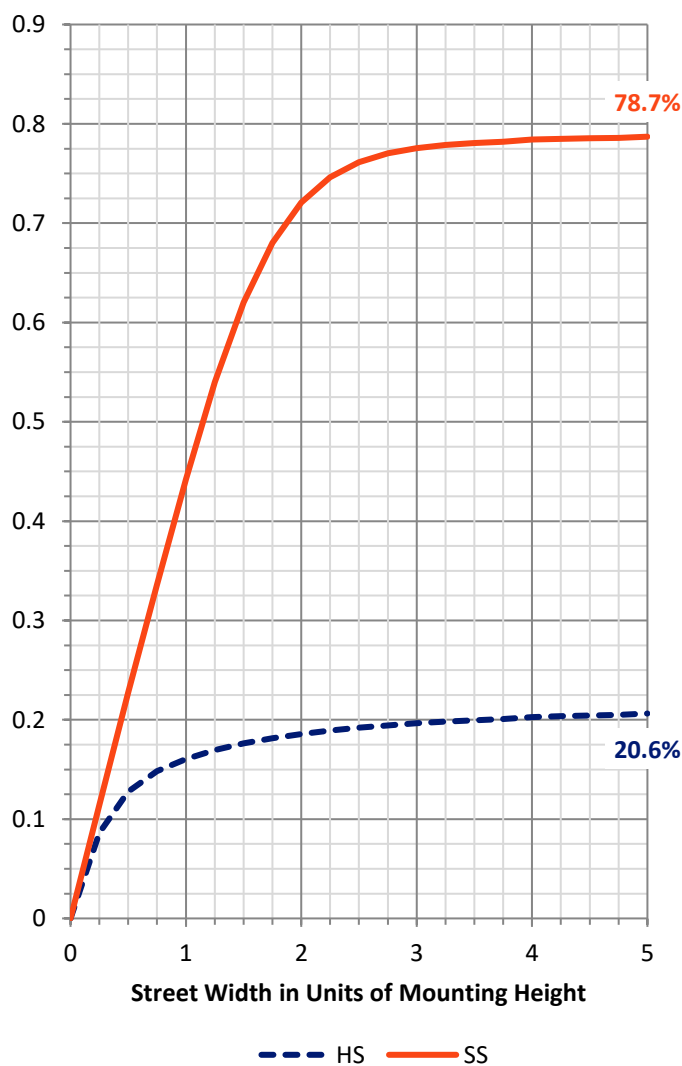
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1065.2	0.0	1065.2
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	3991.9	0.0	3991.9
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	5057.0	0.0	5057.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.1	0.7
10°-20°	144.3	2.9
20°-30°	276.9	5.5
30°-40°	457.2	9.0
40°-50°	759.9	15.0
50°-60°	1255.0	24.8
60°-70°	1407.9	27.8
70°-80°	640.1	12.7
80°-90°	82.6	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°	5057.0	100.0
0°-180°	5057.0	100.0

**Coefficient of Utilization**



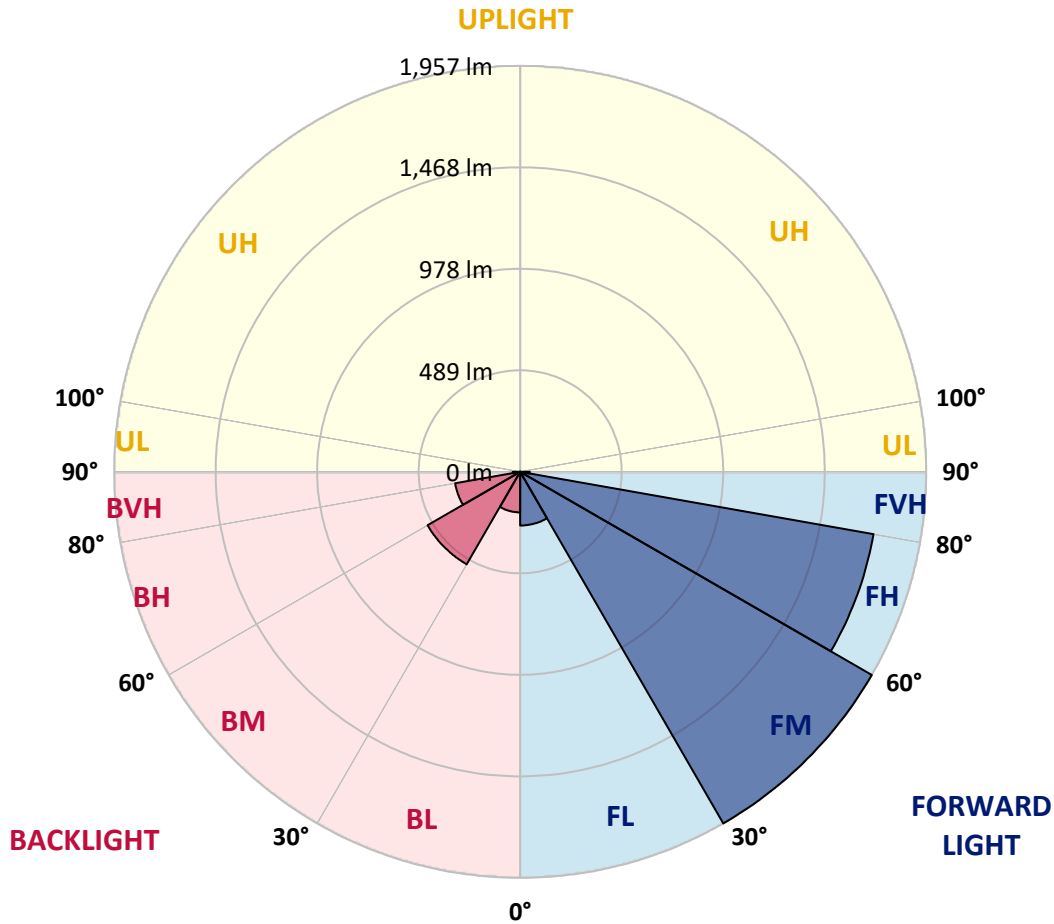
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	258.8	5.1			
FM (30°-60°)	1957.0	38.7			
FH (60°-80°)	1729.6	34.2			G1/1800
FVH (80°-90°)	46.5	0.9			G1/100
BL (0°-30°)	195.5	3.9	B1/500		
BM (30°-60°)	515.1	10.2	B1/1000		
BH (60°-80°)	318.4	6.3	B1/500		G1/500
BVH (80°-90°)	36.1	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°	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1
2.5°	259.2	251.5	238.4	241.6	249.1	253.3	250.8	247.5	243.0	242.2	261.6
5°	335.7	320.7	314.6	312.1	302.8	297.4	306.8	305.6	310.6	319.9	338.8
7.5°	391.5	381.0	370.9	369.8	351.9	345.6	358.2	365.0	374.0	374.2	399.9
10°	421.4	412.3	412.1	402.7	401.2	413.2	413.4	418.5	419.5	430.2	425.2
12.5°	453.8	453.2	464.8	464.6	478.1	497.8	488.0	488.0	490.9	477.8	493.8
15°	531.1	537.9	516.2	519.8	519.8	539.1	538.5	542.3	551.3	548.0	540.8
17.5°	611.6	615.8	591.8	569.5	571.1	566.9	582.1	583.6	574.9	614.1	605.5
20°	663.4	679.8	629.3	601.3	606.7	611.6	612.2	603.1	598.7	659.0	647.2
22.5°	727.4	713.5	667.2	636.2	644.4	637.9	636.6	643.6	649.7	672.4	691.6
25°	770.1	769.1	713.5	679.6	670.5	668.6	681.5	678.8	693.3	734.6	722.6
27.5°	832.3	851.7	753.1	761.5	721.7	679.8	721.1	733.5	759.6	752.9	779.6
30°	952.7	938.2	835.2	832.9	787.8	752.7	781.3	770.8	817.7	816.3	836.1
32.5°	1051.1	1061.2	931.7	907.5	874.0	831.6	812.7	842.0	867.2	908.7	919.9
35°	1155.1	1152.8	1030.4	981.6	926.2	908.7	932.1	944.3	998.0	1036.1	1009.6
37.5°	1316.9	1298.5	1158.5	1066.0	1024.5	1018.2	1058.2	1040.6	1098.7	1107.7	1122.7
40°	1467.2	1412.0	1275.6	1169.7	1103.7	1127.3	1128.6	1130.9	1162.1	1186.7	1260.6
42.5°	1610.2	1571.5	1394.6	1315.0	1217.9	1194.9	1209.2	1214.1	1292.8	1343.2	1445.5
45°	1805.7	1701.8	1565.6	1483.9	1375.2	1345.9	1335.8	1377.5	1453.5	1568.1	1655.9
47.5°	1971.0	1877.3	1747.3	1639.7	1518.2	1601.8	1544.5	1521.1	1623.3	1765.2	1905.1
50°	2108.1	2004.9	1877.5	1815.3	1796.0	1870.5	1721.8	1724.6	1818.1	2018.4	2178.6
52.5°	2214.2	2104.1	1991.2	1959.6	2067.8	2110.8	2003.4	1987.2	2055.4	2292.1	2484.6
55°	2313.4	2196.5	2109.3	2173.8	2356.1	2361.0	2353.4	2263.5	2345.6	2585.5	2801.3
57.5°	2338.9	2212.9	2155.0	2247.5	2494.1	2685.9	2761.3	2584.9	2668.5	2852.3	3072.6
60°	2207.7	2099.9	2076.7	2202.2	2568.6	2849.2	3046.1	2940.6	2909.2	3066.5	3262.6
62.5°	1939.0	1813.9	1832.6	2007.0	2490.1	2913.8	3271.0	3353.3	3163.4	3236.9	3345.5
65°	1543.2	1423.8	1461.7	1671.5	2243.5	2935.3	3386.0	3554.9	3255.2	3285.1	3228.0
67.5°	1088.4	979.9	1027.7	1299.0	1866.3	2660.2	3405.8	3460.9	3157.5	3147.6	2907.1
70°	616.6	548.6	600.4	826.6	1317.3	2119.2	3250.5	3177.9	2982.3	2842.0	2432.4
72.5°	282.8	259.5	284.3	420.8	758.4	1410.2	2653.7	2719.6	2569.7	2394.3	1850.5
75°	150.4	142.2	152.7	210.2	354.9	767.2	1885.5	2033.7	1953.9	1816.0	1207.1
77.5°	111.8	105.5	110.6	136.3	189.5	300.1	1071.3	1258.3	1288.6	1161.6	670.3
80°	85.7	80.7	85.7	103.0	131.2	142.6	458.0	586.5	668.0	539.8	266.4
82.5°	63.6	60.2	68.0	77.3	92.2	89.1	162.6	202.4	260.9	178.4	103.8
85°	50.5	46.3	49.3	52.4	59.0	48.9	74.3	83.2	88.0	73.7	38.3
87.5°	19.8	18.3	35.8	28.2	24.0	14.7	22.3	25.3	25.9	24.9	11.2
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°	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1	217.1
2.5°	263.7	261.6	249.1	253.1	259.7	260.9	263.7	256.1	252.3	266.2	266.8
5°	340.5	329.2	323.3	323.9	319.7	313.2	323.1	329.6	332.1	342.4	346.2
7.5°	400.1	386.4	376.5	365.2	349.2	338.8	356.1	368.8	375.5	397.0	405.4
10°	426.7	415.7	413.6	399.3	398.9	398.7	397.8	393.4	407.9	405.8	411.7
12.5°	481.4	479.1	459.1	453.4	454.0	453.4	435.7	434.9	435.1	454.5	447.5
15°	532.4	532.8	514.5	493.8	475.3	469.6	462.7	459.5	464.2	475.1	468.4
17.5°	595.4	597.5	545.0	512.4	488.0	487.3	470.7	451.1	479.3	486.1	478.7
20°	636.0	627.2	562.7	508.0	501.0	482.1	461.4	434.5	458.9	475.3	479.9
22.5°	674.5	659.2	579.1	515.7	482.5	459.9	439.9	422.5	430.2	448.6	445.6
25°	700.7	696.4	601.9	534.5	481.8	431.7	404.8	393.6	397.6	426.0	423.3
27.5°	763.0	717.5	597.9	539.3	461.6	393.2	379.7	367.7	363.7	394.4	402.9
30°	804.7	785.9	624.6	531.8	436.1	361.6	341.8	339.3	340.5	375.5	377.8
32.5°	875.4	826.8	668.4	502.7	399.1	338.2	315.5	316.5	322.2	347.7	353.0
35°	949.2	920.1	674.3	481.8	369.0	313.4	304.1	296.7	299.9	322.2	323.3
37.5°	1086.0	985.6	710.6	449.6	346.9	303.9	286.2	279.7	281.4	294.0	303.0
40°	1206.5	1117.2	693.7	418.5	319.5	291.3	269.1	264.3	259.2	271.7	277.4
42.5°	1399.6	1211.1	688.0	384.1	306.6	274.2	259.0	246.2	241.3	251.9	262.2
45°	1592.7	1310.7	657.1	349.4	288.5	272.9	244.3	232.1	233.3	242.8	253.3
47.5°	1808.0	1444.5	604.6	315.7	268.7	266.8	229.5	224.3	228.1	238.6	249.1
50°	2062.4	1586.4	561.2	285.4	254.6	248.5	227.7	221.3	224.9	237.3	247.7
52.5°	2340.6	1742.1	529.6	257.3	238.6	234.0	230.2	224.1	228.3	239.0	249.8
55°	2617.1	1884.2	508.2	238.2	224.9	227.9	235.4	231.0	233.1	241.1	251.9
57.5°	2822.2	1959.2	465.0	217.8	213.8	224.3	236.1	228.7	230.0	241.1	252.7
60°	2941.4	1973.5	394.0	201.1	204.9	217.1	229.5	220.1	219.2	237.6	252.1
62.5°	2928.3	1890.3	312.5	186.0	194.8	206.4	219.7	210.6	212.9	238.0	253.3
65°	2741.3	1720.4	248.5	173.1	182.6	194.6	211.4	207.9	219.0	254.8	271.5
67.5°	2412.8	1472.1	199.6	161.1	171.2	186.6	217.1	226.6	231.4	272.1	289.1
70°	1955.4	1143.7	166.4	150.6	162.2	190.4	233.6	231.7	227.7	263.9	277.4
72.5°	1412.7	784.0	146.4	140.3	151.0	179.0	234.0	223.9	218.8	240.9	250.6
75°	883.9	467.7	127.8	127.2	133.9	160.5	223.4	214.4	200.7	211.6	224.3
77.5°	504.8	239.4	107.6	113.3	117.3	139.2	200.1	191.9	179.6	184.3	196.7
80°	192.7	115.8	90.8	100.7	99.6	117.9	169.5	167.6	153.7	155.2	162.8
82.5°	90.8	64.9	75.4	86.6	80.9	93.9	137.7	137.1	124.9	113.1	119.2
85°	33.7	34.5	55.2	65.9	56.2	60.7	99.6	96.9	85.1	71.8	79.4
87.5°	7.6	12.4	27.2	34.3	19.6	18.7	40.2	35.0	33.7	20.0	21.1
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)