

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: P367949

Luminaire Tested: **MSA-SA3C-730-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367949  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3C-730-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13712 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

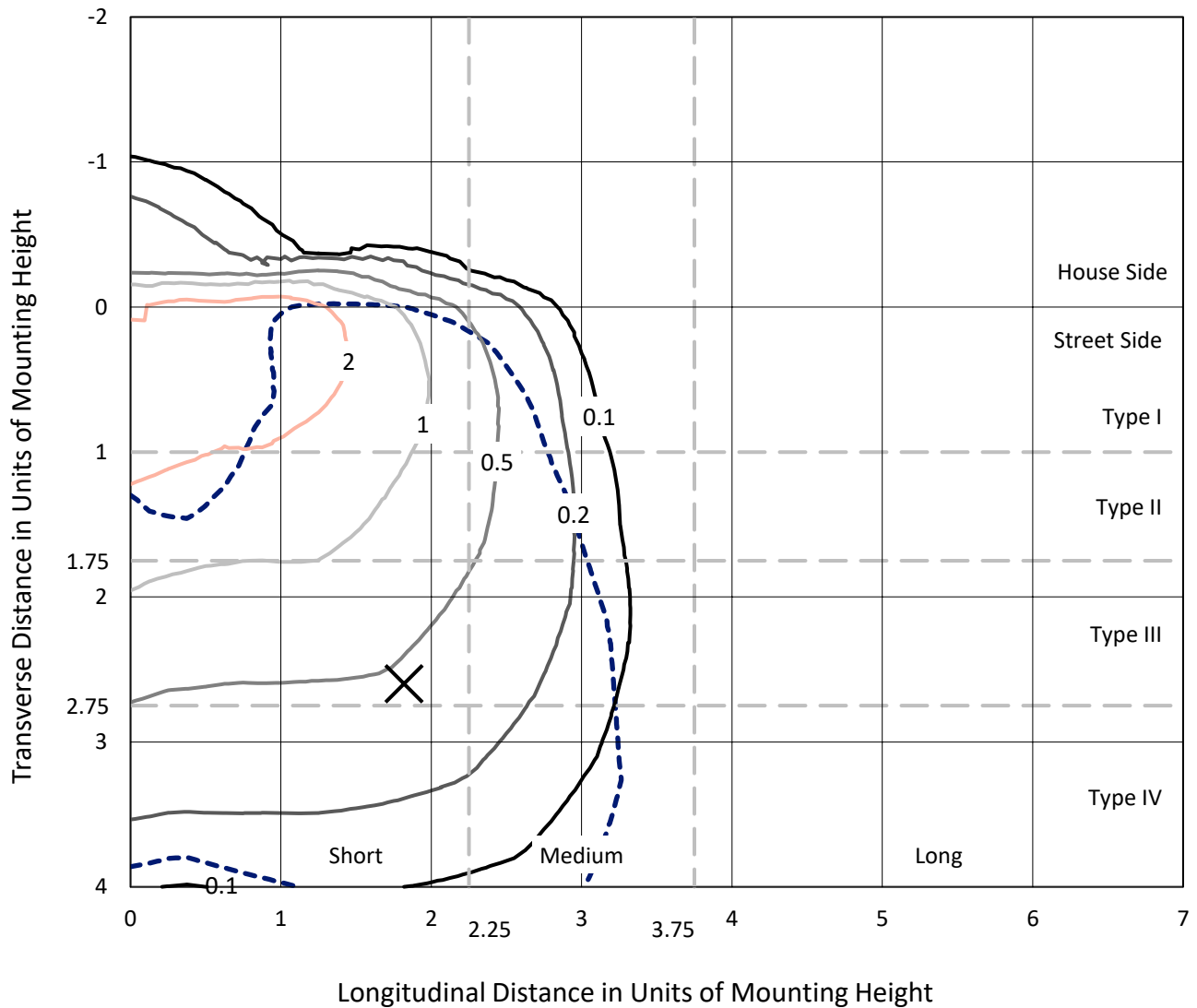
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

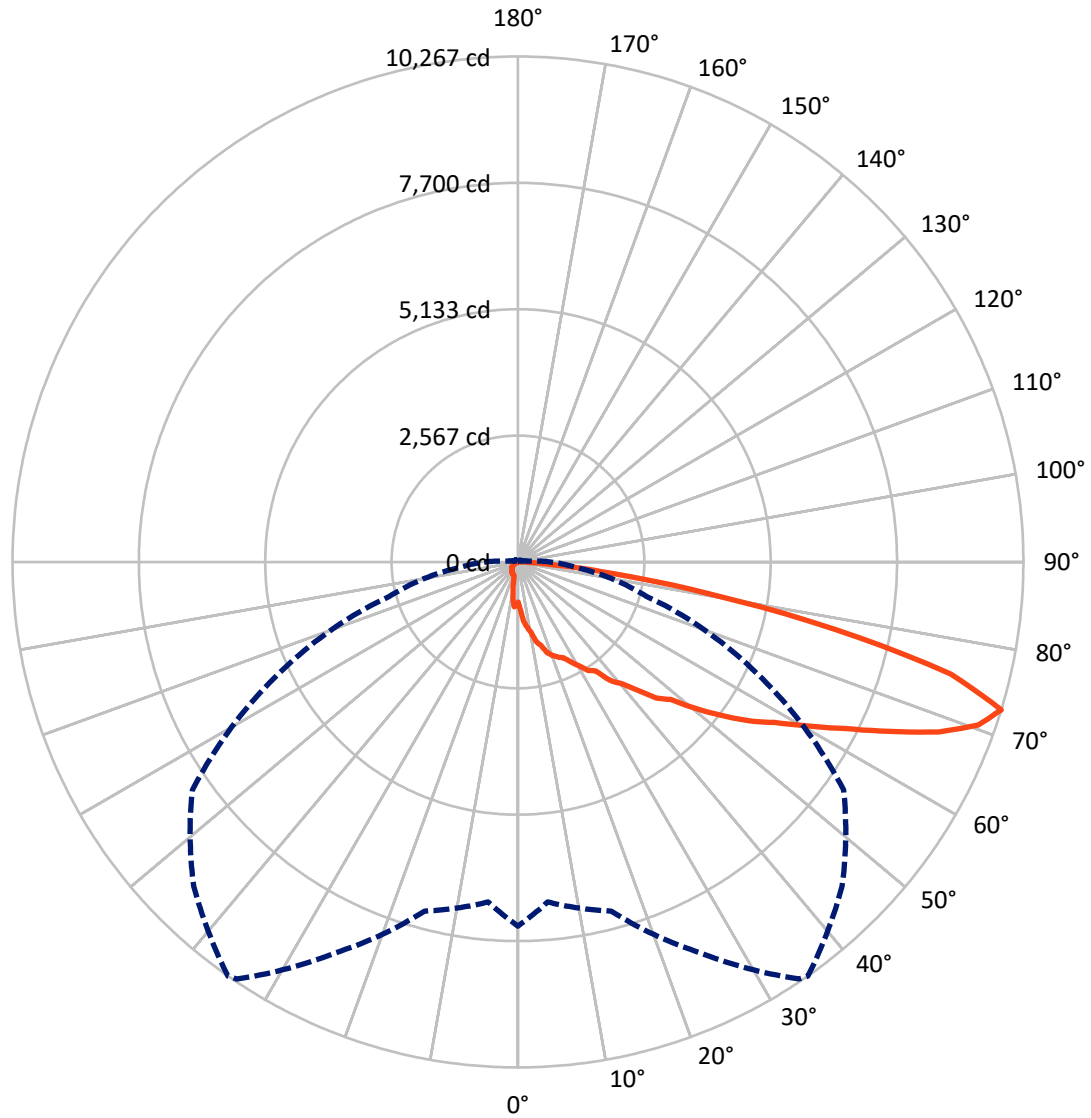
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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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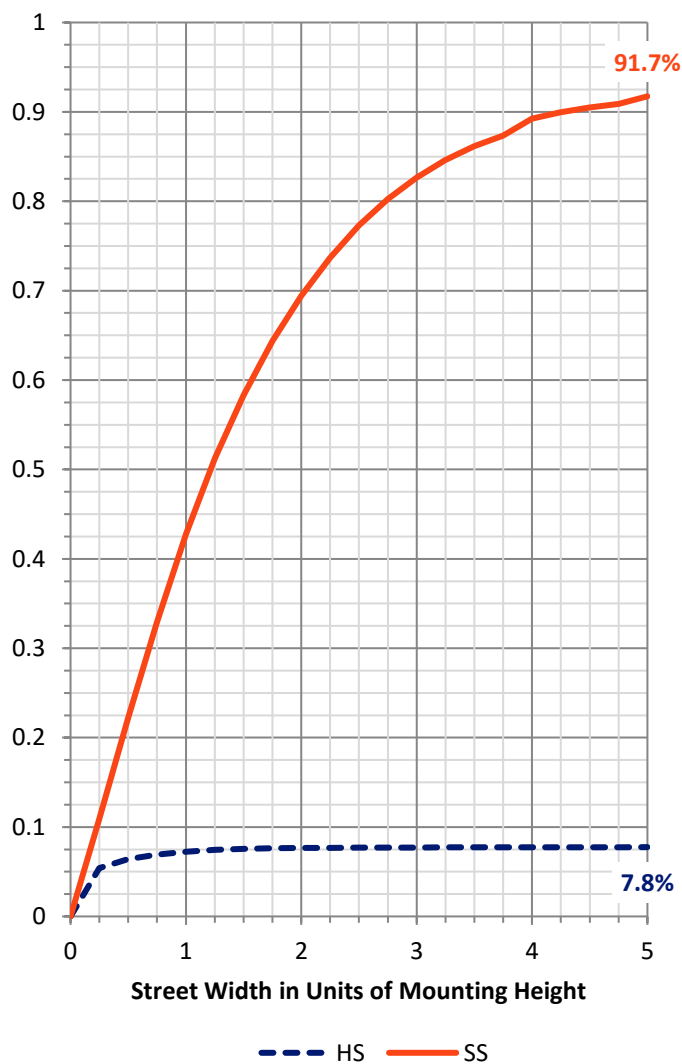
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1069.5	0.0	1069.5
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	12642.5	0.0	12642.5
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	13712.0	0.0	13712.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.2	0.8
10°-20°	350.9	2.6
20°-30°	639.0	4.7
30°-40°	1102.3	8.0
40°-50°	1959.5	14.3
50°-60°	2924.0	21.3
60°-70°	3735.7	27.2
70°-80°	2599.1	19.0
80°-90°	297.3	2.2
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°	13712.0	100.0
0°-180°	13712.0	100.0

**Coefficient of Utilization**



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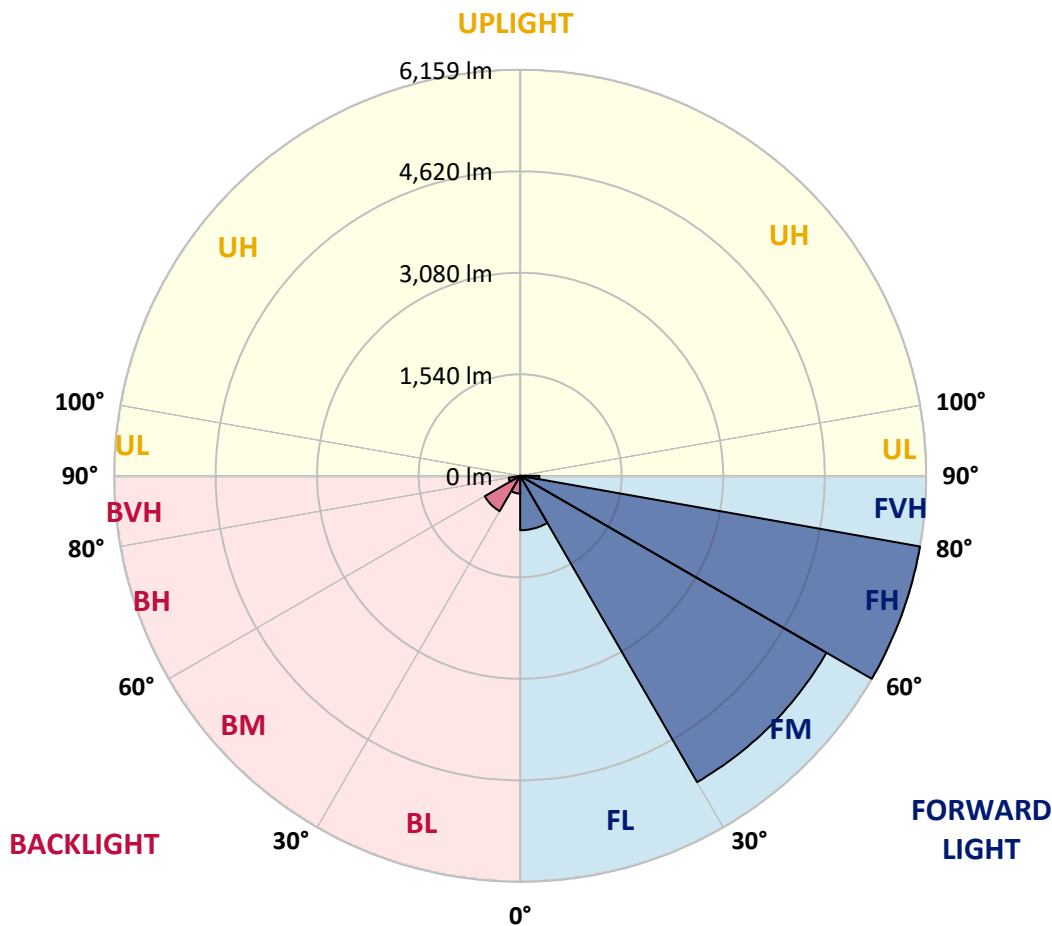
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	825.1	6.0			
FM (30°-60°)	5365.6	39.1			
FH (60°-80°)	6159.5	44.9			G3/7500
FVH (80°-90°)	292.3	2.1			G3/500
BL (0°-30°)	269.0	2.0	B1/500		
BM (30°-60°)	620.2	4.5	B1/1000		
BH (60°-80°)	175.3	1.3	B1/500		G1/500
BVH (80°-90°)	5.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8
2.5°	1039.5	998.8	932.6	937.4	967.1	973.3	982.3	958.8	938.1	901.6	972.6
5°	1331.7	1273.1	1235.9	1224.2	1207.0	1208.3	1166.3	1181.5	1177.3	1204.2	1236.6
7.5°	1496.5	1464.1	1417.2	1404.1	1340.7	1333.8	1282.1	1351.7	1358.6	1349.0	1402.0
10°	1562.0	1519.2	1524.7	1475.8	1444.1	1452.4	1460.6	1466.1	1475.1	1484.1	1419.3
12.5°	1600.6	1608.1	1683.3	1632.3	1664.0	1664.0	1719.8	1660.5	1662.6	1597.8	1608.8
15°	1774.3	1816.3	1782.5	1781.8	1747.4	1756.3	1821.1	1774.3	1798.4	1779.1	1704.6
17.5°	1992.1	2000.4	1936.2	1908.0	1939.0	1939.7	1912.1	1910.1	1826.0	1968.0	1877.7
20°	2061.7	2108.6	2017.6	1907.3	2036.2	2030.0	2027.9	1995.5	1855.6	2052.7	1978.3
22.5°	2251.3	2184.4	2122.4	2050.0	2100.3	2100.3	2092.7	2021.7	1967.3	2045.2	2076.9
25°	2310.5	2318.8	2238.2	2214.7	2216.1	2154.1	2148.6	2118.2	2065.8	2198.9	2135.5
27.5°	2514.6	2511.1	2317.4	2382.9	2299.5	2300.2	2147.9	2216.1	2225.1	2206.5	2277.5
30°	2715.2	2771.0	2478.7	2561.4	2473.9	2447.7	2298.8	2359.5	2375.3	2354.0	2443.6
32.5°	2970.9	3052.9	2768.9	2687.6	2553.9	2628.3	2525.6	2382.2	2460.8	2651.7	2702.1
35°	3241.8	3281.8	2979.2	2865.4	2714.5	2713.8	2710.3	2722.1	2808.9	3024.0	3066.7
37.5°	3728.4	3634.0	3360.3	3099.8	3133.6	3058.4	3006.0	3061.2	3151.5	3505.8	3688.5
40°	4000.0	3931.8	3546.5	3392.1	3224.6	3252.1	3394.1	3387.9	3628.5	3999.3	4273.0
42.5°	4264.0	4199.2	3820.1	3695.3	3480.3	3555.4	3617.5	3696.0	4188.9	4787.2	4937.5
45°	4499.1	4308.8	4041.4	4046.2	3934.5	3943.5	4053.1	4125.5	4838.2	5451.7	5557.1
47.5°	4641.1	4484.6	4228.2	4223.3	4216.5	4174.4	4690.7	4756.9	5355.9	6084.5	6094.1
50°	4841.0	4645.2	4420.5	4424.6	4583.9	4672.8	5289.0	5282.1	5855.6	6612.5	6389.8
52.5°	5089.8	4850.6	4603.2	4787.2	5033.3	5178.0	5678.5	5882.5	6392.6	6944.0	6505.6
55°	5408.3	5109.1	4870.6	5106.3	5643.3	5699.1	6059.6	6490.5	6977.8	7282.5	6542.8
57.5°	5781.9	5424.8	5231.8	5611.6	6147.2	6148.6	6614.5	7138.4	7336.9	7420.3	6500.8
60°	6184.4	5768.1	5573.7	5915.6	6702.8	6759.3	7231.5	7496.2	7701.6	7489.9	6425.7
62.5°	6538.7	6078.9	5928.0	6329.9	7312.1	7445.8	7769.1	7731.2	7964.9	7577.5	6234.7
65°	6960.6	6481.5	6382.2	6975.7	8107.6	8291.6	8372.9	8148.2	8053.1	7509.9	5737.7
67.5°	7378.3	6930.2	6927.5	7691.9	9150.5	9213.9	9128.4	8736.2	7950.4	6914.4	4827.2
70°	7672.6	7191.5	7372.8	8476.3	10098.3	9920.4	9560.6	9014.0	7208.7	5299.3	3153.6
72.5°	7396.2	6932.3	7341.1	8755.5	10215.4	10266.5	9310.4	8074.5	5355.9	2710.3	1141.5
75°	5620.6	5336.6	6374.0	7767.7	9069.8	9081.5	7771.2	5695.0	2637.3	736.2	315.7
77.5°	2831.0	2740.7	4034.5	5514.4	6617.3	6598.0	5339.3	3050.8	848.5	244.7	159.2
80°	1433.1	1360.7	1717.0	2975.0	3929.7	3958.7	3048.8	1366.2	428.1	133.0	110.3
82.5°	880.2	835.4	939.5	1346.2	1907.3	1953.5	1156.6	865.1	265.4	78.6	100.6
85°	170.3	179.2	539.7	674.1	761.7	743.8	342.6	712.0	80.0	46.9	73.1
87.5°	0.0	2.8	124.8	219.9	220.6	195.8	77.9	157.8	11.0	13.1	9.0
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°	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8	816.8
2.5°	984.3	974.0	887.8	878.2	880.2	865.8	860.9	830.6	823.0	869.9	878.2
5°	1222.8	1153.9	1073.9	1045.0	1000.2	924.4	913.3	894.0	872.7	880.9	874.7
7.5°	1369.0	1277.3	1191.8	1039.5	913.3	803.0	785.1	752.0	718.9	719.6	741.0
10°	1392.4	1315.2	1197.3	1011.9	867.8	730.0	610.0	523.2	483.9	448.7	459.1
12.5°	1528.2	1456.5	1239.4	1003.6	801.7	586.6	429.4	344.7	307.4	295.0	293.6
15°	1637.1	1580.6	1311.1	978.1	654.8	412.9	307.4	282.6	275.7	287.4	284.0
17.5°	1799.1	1697.1	1303.5	872.7	499.1	313.6	283.3	279.9	288.1	295.0	297.1
20°	1870.1	1723.3	1251.8	707.2	373.6	287.4	276.4	269.5	284.7	305.4	301.2
22.5°	1941.8	1768.1	1191.1	579.0	300.5	275.0	268.8	263.3	275.0	295.0	299.8
25°	1974.2	1839.7	1123.6	452.2	279.2	260.6	256.4	258.5	268.1	286.1	284.0
27.5°	2137.5	1848.0	994.7	357.1	270.2	250.2	250.2	255.0	255.0	279.2	277.1
30°	2239.5	1987.9	889.9	300.5	259.9	235.7	244.0	246.1	242.6	268.8	270.9
32.5°	2418.8	2026.5	787.9	275.7	243.3	233.7	232.3	233.7	236.4	261.9	262.6
35°	2694.5	2216.8	648.6	266.1	235.1	223.3	213.7	221.3	228.2	246.8	250.2
37.5°	3233.5	2411.9	528.7	258.5	230.9	213.7	210.2	208.9	221.3	242.6	249.5
40°	3669.8	2757.2	430.1	252.3	222.6	208.2	199.2	199.9	210.9	226.8	237.1
42.5°	4287.5	3006.7	364.6	242.6	210.9	196.5	186.1	192.3	197.1	213.7	220.6
45°	4803.1	3200.4	321.2	236.4	199.2	185.4	177.2	184.0	179.2	187.5	197.1
47.5°	5213.2	3369.3	288.8	221.3	191.6	179.2	168.9	166.8	158.5	160.6	169.6
50°	5438.6	3341.0	261.9	206.1	182.0	173.0	158.5	144.1	133.0	132.3	137.9
52.5°	5518.5	3190.1	239.9	193.0	170.3	159.2	142.7	122.7	111.7	108.2	113.0
55°	5540.6	2973.0	219.9	178.5	159.2	142.0	124.8	103.4	91.7	86.2	91.0
57.5°	5468.9	2638.6	200.6	164.7	146.1	125.5	106.8	84.8	73.8	66.9	71.0
60°	5291.8	2214.0	183.4	147.5	132.3	111.0	90.3	68.2	56.5	50.3	52.4
62.5°	4899.6	1735.7	164.7	131.7	117.9	97.2	75.8	53.8	42.7	37.2	37.9
65°	4302.6	1293.8	143.4	116.5	104.8	84.1	60.7	41.4	32.4	27.6	26.9
67.5°	3427.9	876.8	122.0	100.6	93.1	71.0	48.3	32.4	25.5	22.1	20.7
70°	2014.8	441.8	101.3	86.9	80.0	59.3	37.9	26.2	23.4	20.7	19.3
72.5°	664.5	190.9	79.3	71.7	66.2	47.6	29.6	24.1	22.7	20.0	18.6
75°	231.6	110.3	58.6	55.1	52.4	35.8	24.8	22.1	22.1	19.3	17.2
77.5°	151.6	85.5	43.4	40.0	39.3	26.2	21.4	20.7	19.3	15.9	13.1
80°	126.1	48.3	30.3	28.3	27.6	16.5	17.2	15.2	11.7	6.9	2.8
82.5°	116.5	29.0	15.9	17.2	15.9	6.2	9.7	8.3	6.2	2.8	0.0
85°	68.2	13.1	9.0	9.0	6.9	1.4	4.8	4.8	2.8	0.7	0.0
87.5°	7.6	6.2	4.8	4.8	3.4	0.0	2.1	1.4	0.0	0.0	0.0
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)