

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: P367044

Luminaire Tested: **MSA-SA1D-740-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367044
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-740-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6812 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

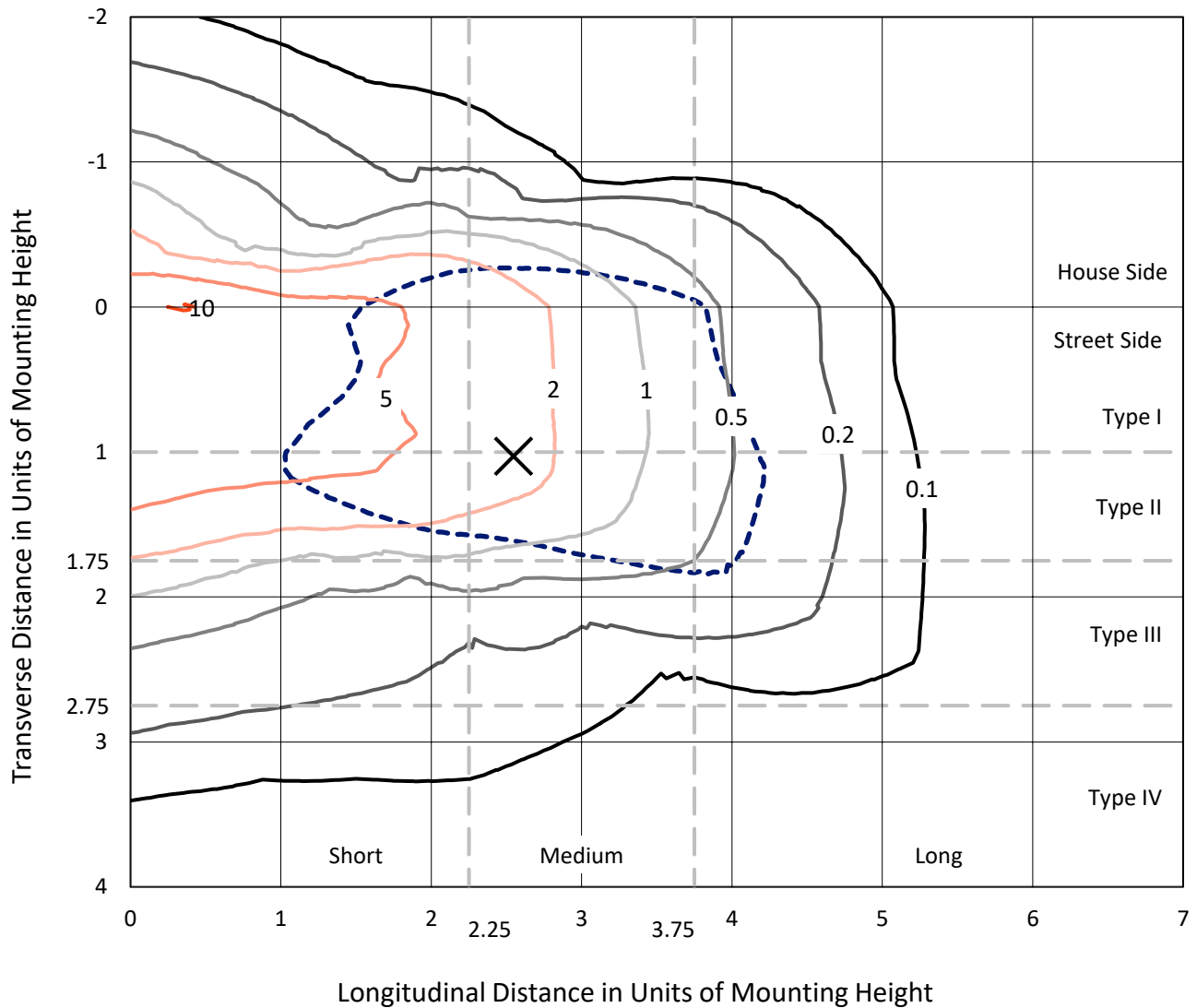
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

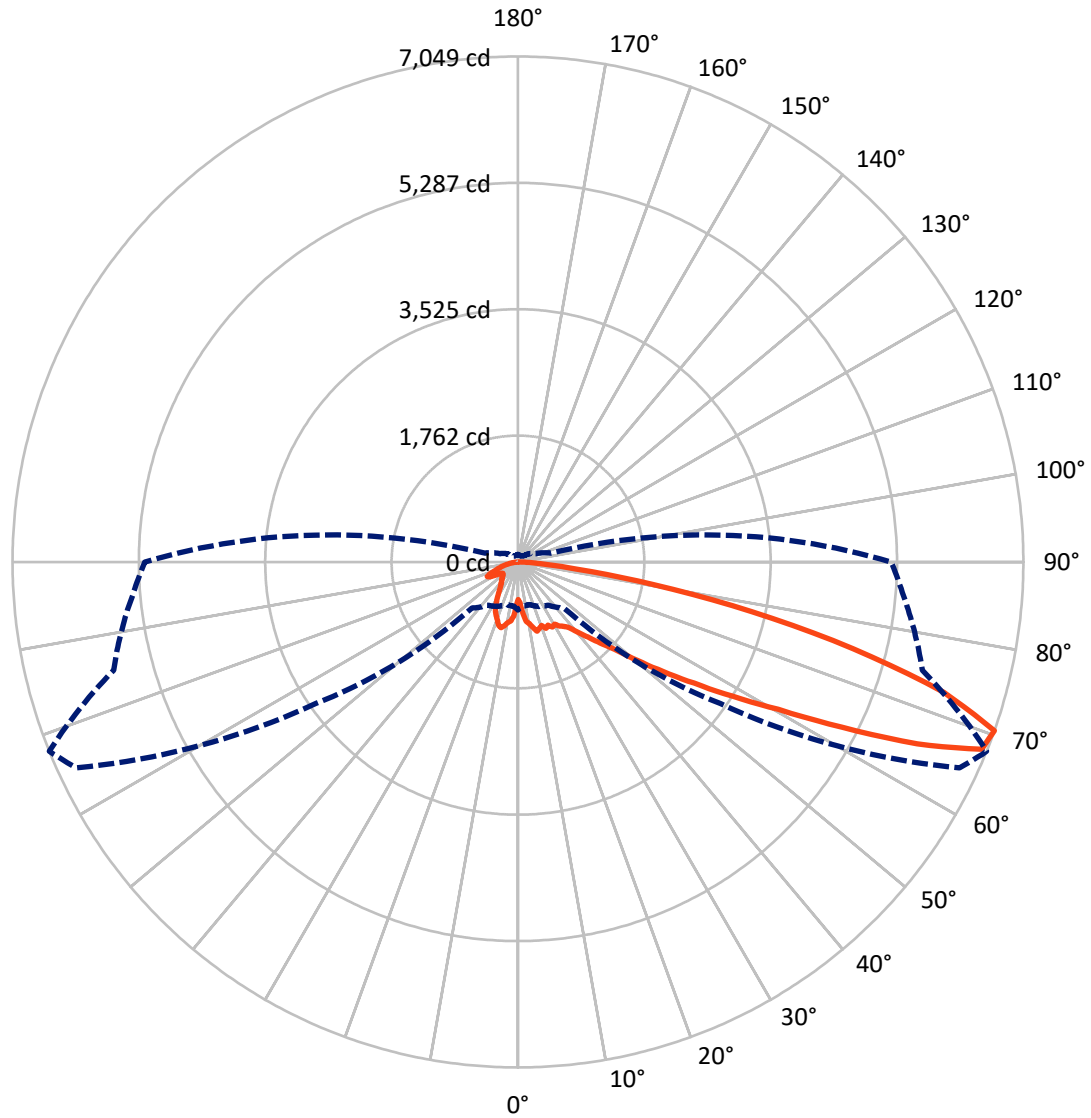
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.3 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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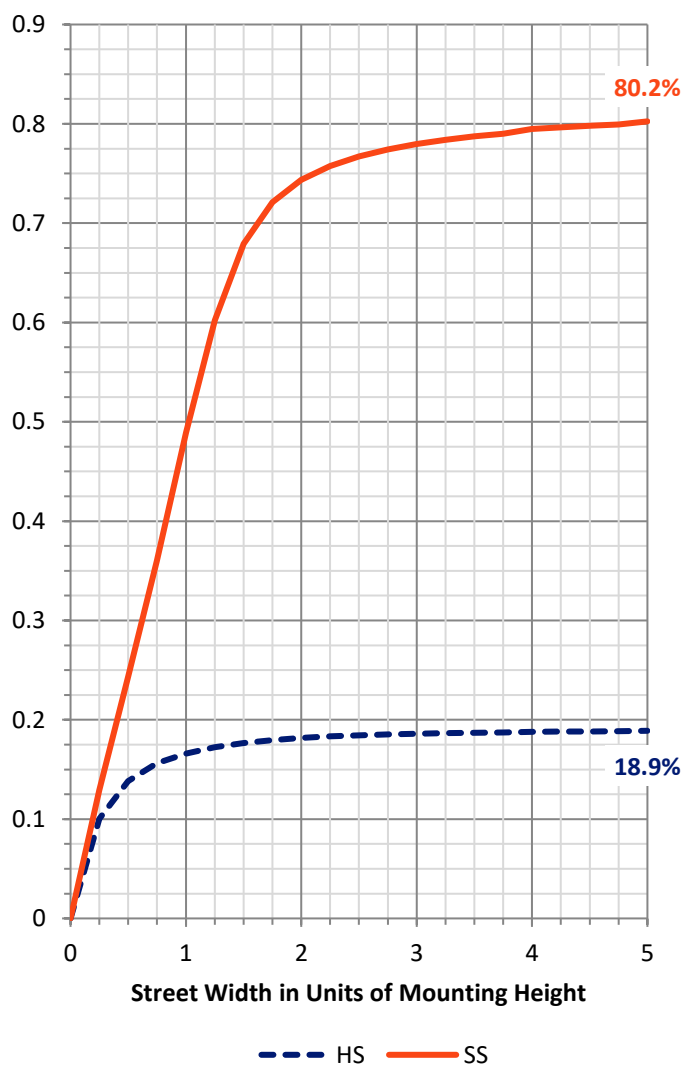
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1300.6	0.0	1300.6
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	5511.4	0.0	5511.4
	% Fixture	80.9	0.0	80.9
Total	Lumens	6812.0	0.0	6812.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	1.0
10°-20°	227.4	3.3
20°-30°	345.8	5.1
30°-40°	528.3	7.8
40°-50°	908.3	13.3
50°-60°	1503.5	22.1
60°-70°	1853.6	27.2
70°-80°	1190.7	17.5
80°-90°	184.7	2.7
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°	6812.0	100.0
0°-180°	6812.0	100.0

Coefficient of Utilization



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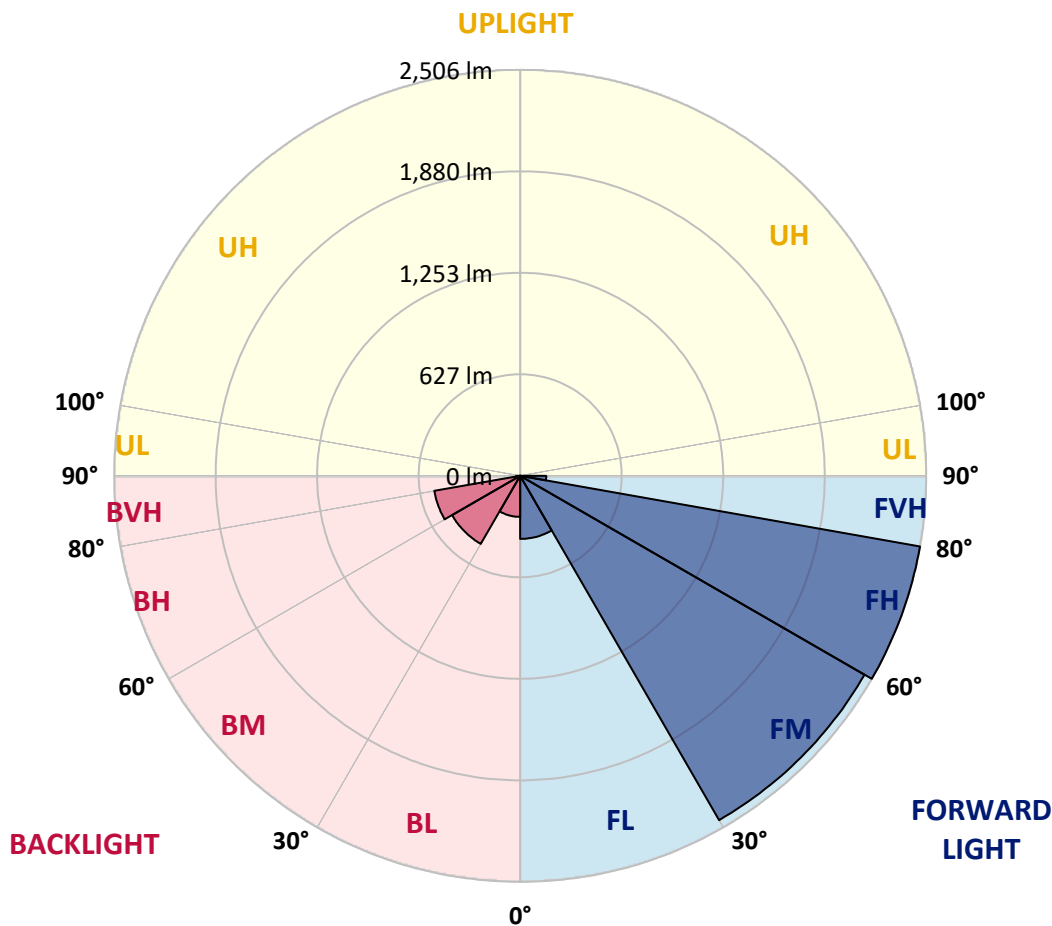
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	389.5	5.7			
FM (30°-60°)	2454.6	36.0			
FH (60°-80°)	2506.3	36.8			G2/5000
FVH (80°-90°)	161.0	2.4			G2/225
BL (0°-30°)	253.4	3.7	B1/500		
BM (30°-60°)	485.5	7.1	B1/1000		
BH (60°-80°)	538.0	7.9	B2/1000		G2/1000
BVH (80°-90°)	23.7	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3
2.5°	600.1	575.9	551.4	563.4	582.5	599.3	595.9	597.9	574.8	571.6	632.3
5°	707.0	665.4	664.6	665.1	666.8	647.5	694.8	719.3	724.7	749.8	809.4
7.5°	744.1	727.3	710.2	718.7	697.1	699.1	757.2	821.1	836.2	854.4	936.0
10°	736.4	720.4	725.6	727.0	731.0	763.2	800.6	861.9	874.7	932.8	953.9
12.5°	737.5	734.7	758.6	759.5	802.3	860.1	875.0	931.4	936.5	979.3	1067.4
15°	776.6	796.3	782.9	790.0	798.3	867.6	888.9	969.9	1000.7	1055.7	1121.9
17.5°	852.7	858.4	818.2	807.7	834.8	855.9	904.6	939.7	971.9	1125.6	1216.8
20°	870.4	885.8	837.9	783.5	840.8	870.1	904.0	920.0	945.1	1135.8	1265.3
22.5°	946.2	914.3	856.4	809.1	827.9	856.4	881.0	941.1	1007.0	1106.5	1313.7
25°	989.3	970.8	919.2	868.4	852.4	853.3	900.6	954.5	977.3	1149.5	1323.4
27.5°	1093.4	1063.7	947.7	938.0	877.8	831.1	903.8	987.6	1027.5	1115.9	1370.8
30°	1223.6	1201.1	1048.9	1036.0	944.2	862.7	943.7	1012.1	1006.4	1137.8	1403.5
32.5°	1329.1	1366.8	1213.1	1111.9	1046.6	968.5	931.1	1007.8	1064.6	1188.9	1459.1
35°	1479.7	1515.0	1341.1	1272.7	1131.0	1017.5	1018.7	1066.6	1101.6	1248.4	1521.3
37.5°	1740.2	1709.2	1569.2	1461.1	1370.5	1201.1	1150.4	1133.6	1161.8	1321.4	1643.0
40°	1928.1	1901.9	1737.1	1675.5	1499.0	1400.7	1261.6	1245.6	1295.5	1396.7	1742.5
42.5°	2150.8	2104.0	1950.6	1899.9	1715.4	1538.1	1397.8	1407.0	1431.2	1538.7	1877.1
45°	2377.4	2264.0	2177.0	2173.0	2049.9	1805.0	1616.5	1609.1	1610.0	1747.7	2028.2
47.5°	2557.3	2455.3	2355.8	2308.4	2246.3	2266.5	1934.1	1847.2	1820.9	1958.1	2254.8
50°	2679.1	2561.6	2449.0	2437.9	2603.8	2713.0	2232.3	2139.4	2155.6	2259.1	2557.0
52.5°	2681.6	2542.2	2424.8	2502.6	2893.5	3049.7	2746.1	2486.3	2538.2	2608.6	2951.3
55°	2495.2	2350.6	2274.2	2451.6	3006.6	3449.1	3467.9	3042.3	2982.4	3008.4	3422.6
57.5°	2102.0	1956.1	1911.6	2124.0	2792.0	3834.3	4339.8	3706.6	3530.9	3422.6	3905.6
60°	1582.3	1456.0	1428.3	1563.8	2314.7	3721.1	5045.7	4533.3	4175.6	3885.3	4389.9
62.5°	1186.6	1095.9	1054.3	1073.7	1601.7	3353.0	5509.2	5577.9	5071.3	4390.5	4863.2
65°	964.2	890.9	853.9	828.8	996.1	2592.7	5425.4	6457.2	6117.6	4921.1	5231.6
67.5°	805.4	740.4	723.3	747.8	787.4	1504.2	4769.7	6949.0	6972.1	5444.5	5446.8
70°	668.6	620.4	614.1	683.7	735.8	907.8	3445.1	6794.5	7049.3	5837.1	5396.3
72.5°	516.6	490.7	489.8	599.0	731.0	773.8	2051.6	5869.6	6212.0	5711.7	4902.6
75°	358.4	340.4	354.1	492.4	714.2	784.9	1170.9	4571.8	4828.1	4860.4	3927.2
77.5°	246.6	231.5	246.3	356.1	637.8	803.7	819.1	3305.7	3334.2	3259.2	2249.4
80°	171.6	161.1	172.5	252.0	496.4	795.4	697.4	2081.2	1909.6	1454.6	720.2
82.5°	106.3	103.2	115.7	179.6	349.5	723.6	660.9	1074.0	819.9	401.4	257.2
85°	55.9	51.3	67.3	117.2	218.7	567.9	619.2	490.1	316.5	142.5	103.2
87.5°	16.5	14.8	25.9	47.3	92.7	254.6	354.4	207.8	118.0	41.9	32.2
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°	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3	522.3
2.5°	636.6	633.5	591.3	596.7	605.8	608.1	607.8	592.4	576.2	621.5	620.1
5°	810.8	782.6	761.5	756.9	731.0	705.0	714.2	711.0	707.0	727.6	730.1
7.5°	936.3	897.2	872.7	809.7	749.8	697.9	714.5	719.6	709.3	746.4	757.5
10°	969.3	938.5	912.0	831.1	798.0	767.8	723.0	672.0	665.1	643.8	646.3
12.5°	1054.6	1050.3	959.9	888.7	845.6	785.4	688.8	626.9	573.9	576.5	561.1
15°	1121.9	1124.1	1015.5	915.7	800.3	708.5	594.7	517.7	463.3	452.5	441.3
17.5°	1212.2	1207.7	1020.1	883.2	737.0	602.4	463.0	386.6	377.5	383.7	374.0
20°	1251.6	1211.4	991.0	802.6	638.1	457.6	349.8	309.3	327.0	352.1	352.7
22.5°	1286.9	1218.2	975.9	737.5	506.3	332.7	280.8	273.4	294.2	328.1	331.0
25°	1285.5	1249.9	948.8	672.0	392.6	259.7	244.0	249.5	274.3	309.6	311.6
27.5°	1350.2	1225.6	878.4	585.9	295.6	222.4	226.4	236.3	248.0	281.7	288.2
30°	1349.7	1270.7	843.0	481.2	237.5	203.8	214.1	222.7	232.4	263.1	266.9
32.5°	1381.6	1241.3	821.7	374.3	213.0	199.3	201.8	210.4	224.4	245.2	247.8
35°	1420.1	1274.7	753.2	297.4	203.8	195.3	197.3	202.1	215.0	234.1	236.6
37.5°	1543.5	1280.9	726.1	250.6	203.3	193.6	193.3	195.9	210.4	227.8	235.5
40°	1591.7	1338.3	647.2	234.1	201.3	193.6	189.6	191.0	203.0	225.2	231.2
42.5°	1707.2	1357.4	588.7	228.4	201.3	190.2	183.9	186.2	200.1	219.8	229.2
45°	1826.1	1384.4	519.2	227.2	201.0	189.9	177.9	183.0	194.4	211.0	221.2
47.5°	1995.4	1481.9	449.6	223.8	198.7	191.3	176.5	176.2	186.2	200.4	210.1
50°	2271.7	1634.2	395.7	219.5	199.0	190.2	173.6	169.6	176.2	188.7	198.1
52.5°	2656.3	1893.6	374.6	217.2	196.7	185.6	168.8	162.5	166.2	176.2	185.3
55°	3102.7	2244.0	395.4	217.2	192.2	178.5	161.9	154.5	156.5	163.4	172.2
57.5°	3624.5	2679.4	496.1	214.1	186.5	169.9	153.7	145.1	145.7	151.7	159.7
60°	4169.3	3165.7	721.6	211.5	182.5	160.5	144.0	135.1	134.3	140.0	147.1
62.5°	4715.0	3614.5	958.8	217.5	181.3	152.5	133.7	124.9	124.6	129.7	135.7
65°	5148.9	3921.2	1017.8	241.8	188.7	143.4	123.2	114.9	114.3	118.6	125.2
67.5°	5361.8	3965.7	773.2	272.0	204.4	134.9	112.9	105.2	104.6	109.2	114.9
70°	5204.2	3661.8	477.3	275.1	203.6	124.9	102.4	95.8	94.7	99.5	103.8
72.5°	4620.9	3203.1	362.6	243.5	176.2	110.6	91.8	86.1	84.4	88.7	92.7
75°	3708.8	2543.1	290.5	196.4	138.8	93.2	81.3	75.8	73.8	77.8	81.3
77.5°	2160.5	1430.6	212.4	153.4	104.9	76.1	69.3	64.4	62.2	66.4	69.0
80°	702.5	476.7	133.4	110.0	76.7	59.6	56.2	52.7	50.5	53.3	54.2
82.5°	252.3	177.3	73.8	67.6	51.0	42.8	42.5	40.5	37.6	38.8	38.8
85°	111.8	81.0	43.9	36.2	30.5	22.8	26.8	25.4	22.5	22.0	21.1
87.5°	31.4	26.8	16.0	12.3	10.0	3.7	8.6	7.7	6.3	5.7	4.0
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)