

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: P367056

Luminaire Tested: **MSA-SA1D-740-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367056
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-SA1D-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: 6848 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

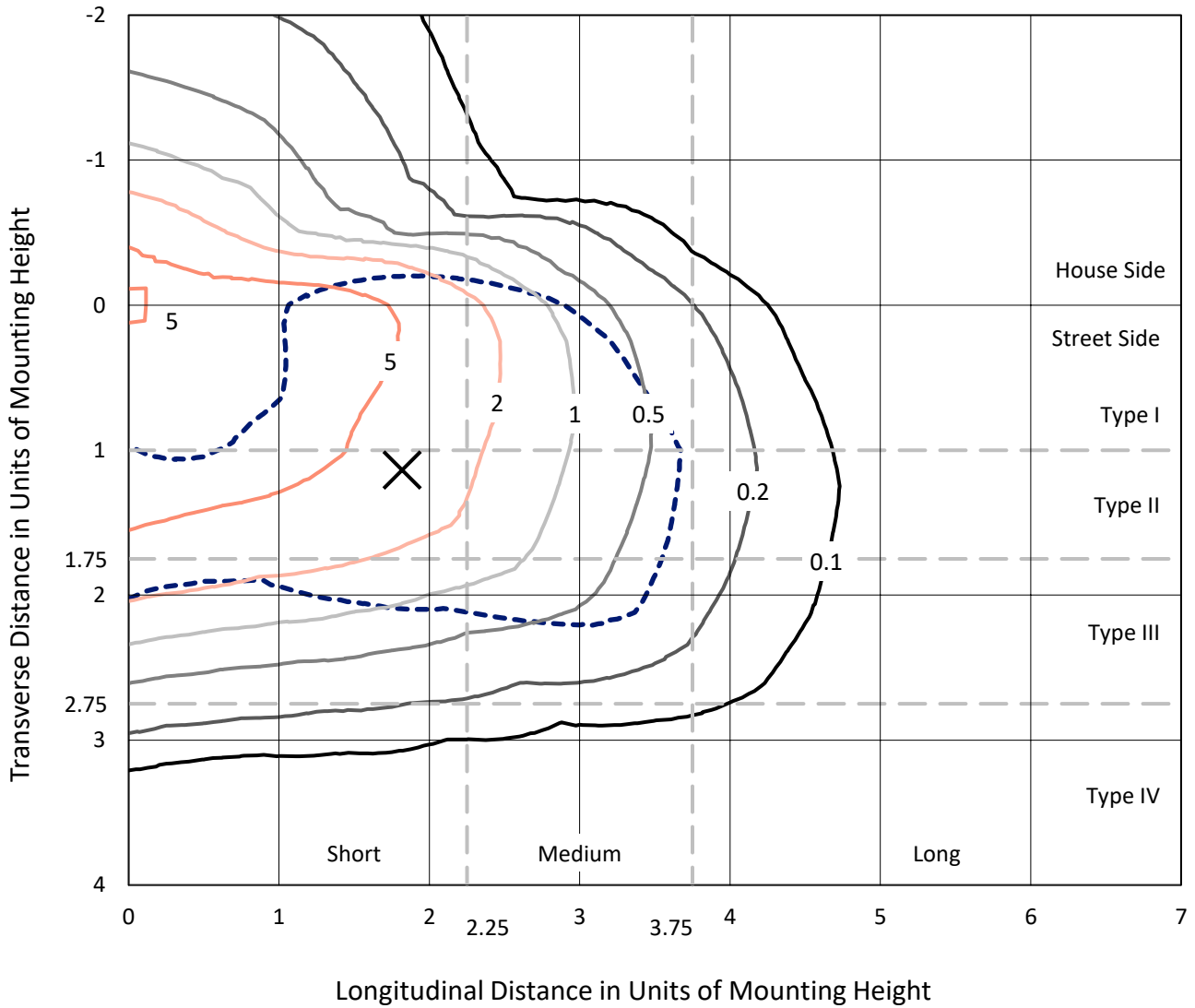
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

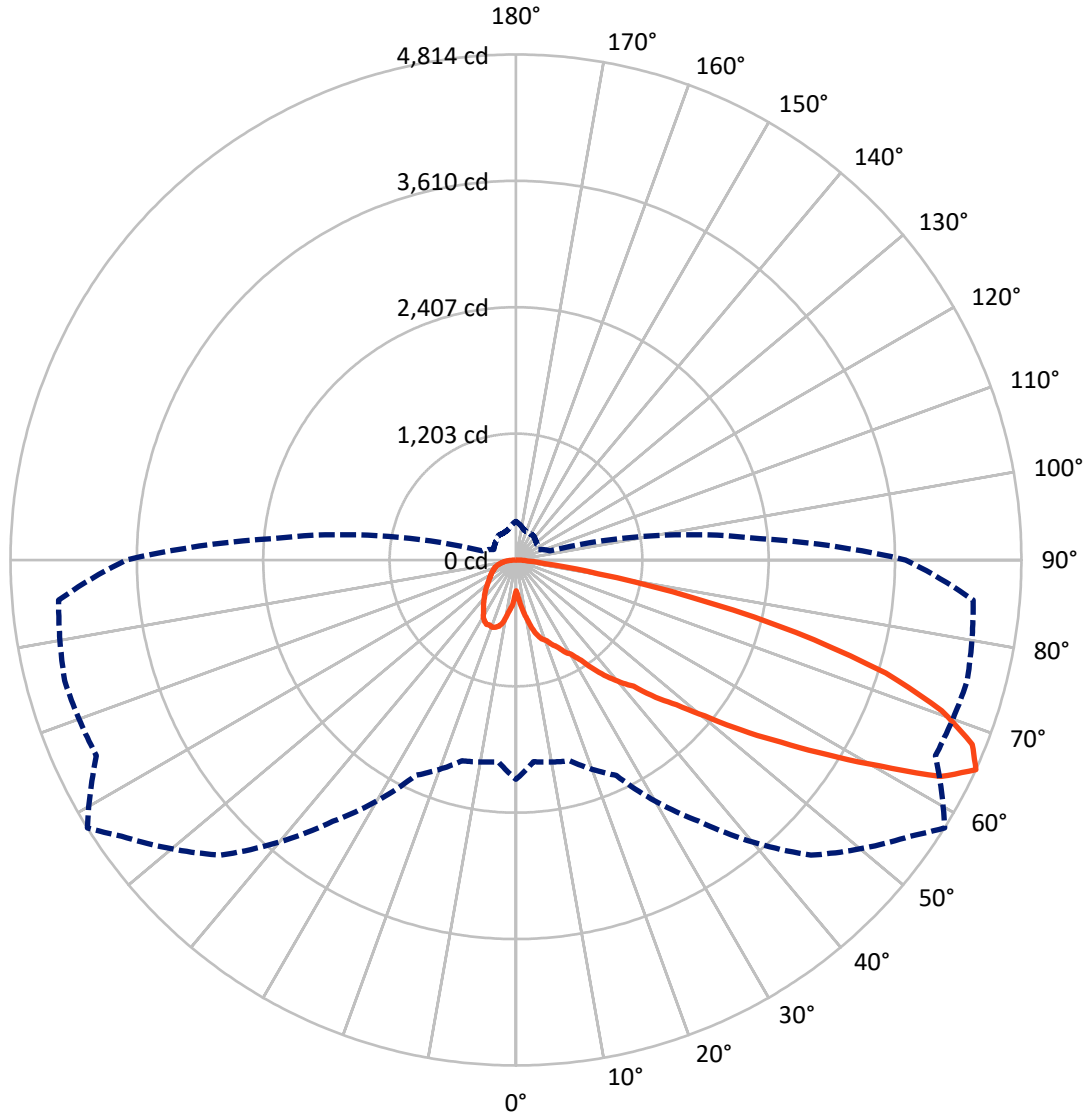
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.9 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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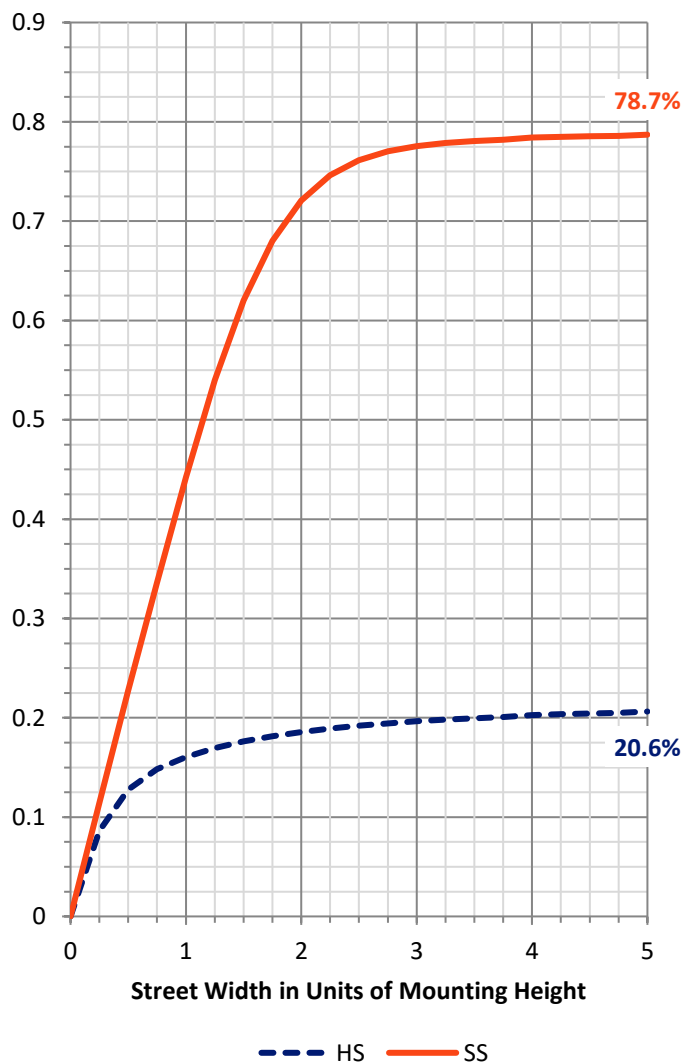
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1442.4	0.0	1442.4
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	5405.6	0.0	5405.6
	% Fixture	78.9	0.0	78.9
Total	Lumens	6848.0	0.0	6848.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	0.7
10°-20°	195.4	2.9
20°-30°	375.0	5.5
30°-40°	619.1	9.0
40°-50°	1029.1	15.0
50°-60°	1699.5	24.8
60°-70°	1906.5	27.8
70°-80°	866.8	12.7
80°-90°	111.8	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°	6848.0	100.0
0°-180°	6848.0	100.0

Coefficient of Utilization



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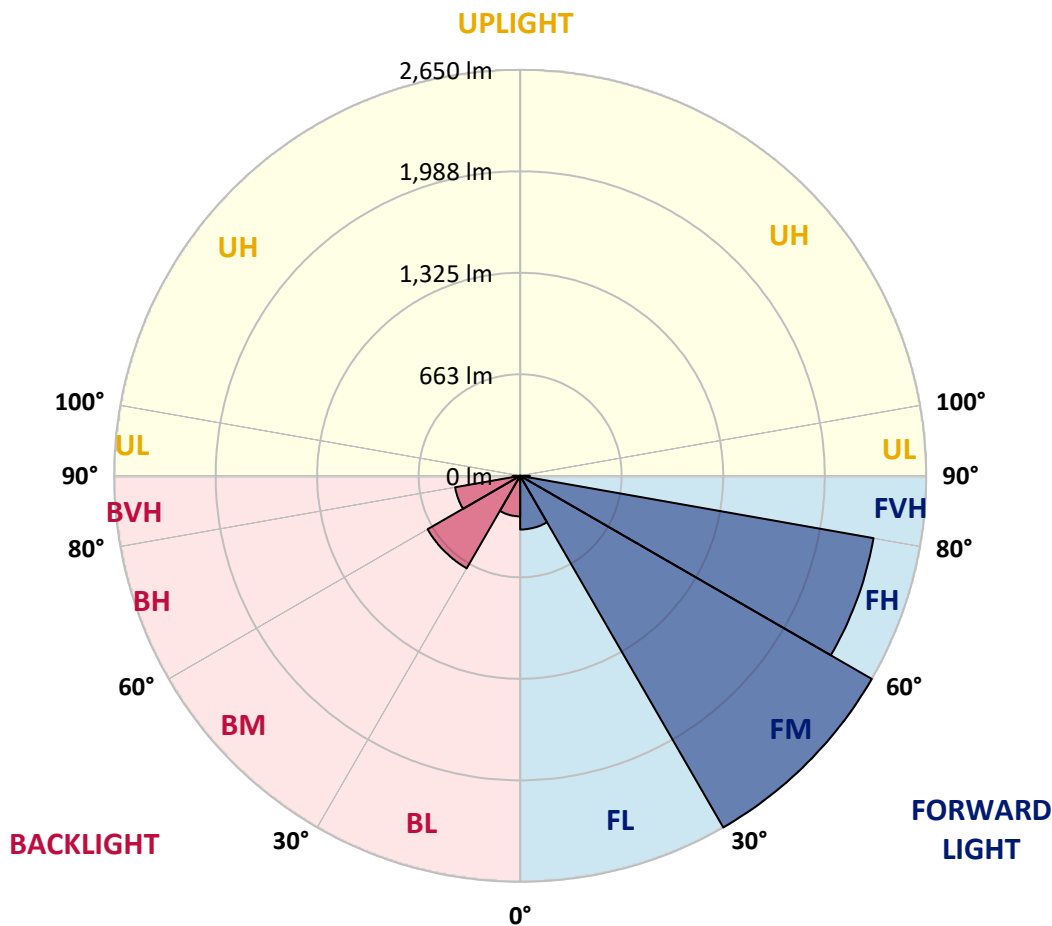
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	350.4	5.1			
FM (30°-60°)	2650.1	38.7			
FH (60°-80°)	2342.2	34.2			G2/5000
FVH (80°-90°)	63.0	0.9			G1/100
BL (0°-30°)	264.8	3.9	B1/500		
BM (30°-60°)	697.6	10.2	B1/1000		
BH (60°-80°)	431.2	6.3	B1/500		G1/500
BVH (80°-90°)	48.8	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0
2.5°	351.1	340.5	322.8	327.1	337.4	343.1	339.7	335.1	329.1	328.0	354.2
5°	454.6	434.3	426.1	422.6	410.1	402.7	415.5	413.8	420.6	433.2	458.9
7.5°	530.2	515.9	502.2	500.8	476.5	468.0	485.1	494.2	506.5	506.8	541.6
10°	570.6	558.4	558.1	545.3	543.3	559.5	559.8	566.7	568.1	582.6	575.8
12.5°	614.6	613.7	629.4	629.1	647.4	674.2	660.8	660.8	664.8	647.1	668.8
15°	719.2	728.4	699.0	703.8	703.8	730.1	729.2	734.3	746.6	742.0	732.3
17.5°	828.2	833.9	801.4	771.1	773.4	767.7	788.2	790.2	778.5	831.6	819.9
20°	898.3	920.6	852.1	814.2	821.6	828.2	829.0	816.8	810.8	892.3	876.4
22.5°	985.0	966.2	903.5	861.5	872.7	863.8	862.1	871.5	879.8	910.6	936.5
25°	1042.9	1041.5	966.2	920.3	908.0	905.5	922.8	919.1	938.8	994.7	978.5
27.5°	1127.0	1153.3	1019.8	1031.2	977.3	920.6	976.5	993.3	1028.6	1019.5	1055.7
30°	1290.2	1270.5	1131.0	1127.9	1066.9	1019.2	1058.0	1043.8	1107.4	1105.4	1132.2
32.5°	1423.3	1437.0	1261.6	1228.8	1183.5	1126.2	1100.5	1140.2	1174.4	1230.6	1245.7
35°	1564.2	1561.1	1395.4	1329.2	1254.2	1230.6	1262.2	1278.8	1351.5	1403.1	1367.2
37.5°	1783.2	1758.4	1568.8	1443.6	1387.4	1378.9	1433.0	1409.1	1487.8	1500.1	1520.3
40°	1986.9	1912.1	1727.3	1583.9	1494.6	1526.6	1528.3	1531.4	1573.6	1607.0	1707.1
42.5°	2180.5	2128.0	1888.5	1780.7	1649.2	1618.1	1637.5	1644.1	1750.7	1818.9	1957.5
45°	2445.1	2304.5	2120.0	2009.4	1862.2	1822.6	1808.9	1865.4	1968.3	2123.5	2242.4
47.5°	2669.0	2542.1	2366.1	2220.4	2055.9	2169.1	2091.5	2059.9	2198.2	2390.4	2579.7
50°	2854.7	2714.9	2542.4	2458.3	2432.0	2533.0	2331.6	2335.3	2462.0	2733.2	2950.2
52.5°	2998.4	2849.2	2696.4	2653.6	2800.2	2858.4	2712.9	2691.0	2783.4	3103.9	3364.6
55°	3132.7	2974.4	2856.4	2943.6	3190.6	3197.2	3186.9	3065.1	3176.3	3501.2	3793.5
57.5°	3167.2	2996.7	2918.3	3043.5	3377.4	3637.2	3739.3	3500.3	3613.5	3862.5	4160.8
60°	2989.6	2843.5	2812.2	2982.1	3478.4	3858.2	4124.9	3982.0	3939.5	4152.5	4418.0
62.5°	2625.7	2456.3	2481.6	2717.8	3372.0	3945.8	4429.4	4540.9	4283.7	4383.2	4530.4
65°	2089.8	1928.1	1979.4	2263.5	3038.0	3974.9	4585.1	4813.9	4408.0	4448.5	4371.3
67.5°	1473.8	1326.9	1391.7	1759.0	2527.3	3602.4	4612.0	4686.7	4275.7	4262.3	3936.6
70°	835.0	742.9	813.1	1119.3	1783.8	2869.8	4401.8	4303.4	4038.5	3848.5	3293.8
72.5°	383.0	351.3	385.0	569.8	1026.9	1909.6	3593.6	3682.8	3479.8	3242.2	2505.9
75°	203.6	192.5	206.8	284.6	480.5	1038.9	2553.2	2754.0	2645.9	2459.1	1634.7
77.5°	151.4	142.9	149.7	184.5	256.7	406.4	1450.7	1704.0	1745.0	1573.1	907.7
80°	116.1	109.2	116.1	139.5	177.7	193.1	620.3	794.2	904.6	730.9	360.8
82.5°	86.1	81.6	92.1	104.7	124.9	120.6	220.2	274.1	353.3	241.5	140.6
85°	68.4	62.7	66.7	71.0	79.9	66.2	100.7	112.6	119.2	99.8	51.9
87.5°	26.8	24.8	48.5	38.2	32.5	20.0	30.2	34.2	35.1	33.7	15.1
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°	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0	294.0
2.5°	357.0	354.2	337.4	342.8	351.6	353.3	357.0	346.8	341.6	360.5	361.3
5°	461.1	445.7	437.8	438.6	432.9	424.1	437.5	446.3	449.7	463.7	468.8
7.5°	541.8	523.3	509.9	494.5	472.8	458.9	482.2	499.4	508.5	537.6	549.0
10°	577.8	562.9	560.1	540.7	540.1	539.8	538.7	532.7	552.4	549.5	557.5
12.5°	651.9	648.8	621.7	614.0	614.9	614.0	590.0	588.9	589.2	615.4	606.0
15°	720.9	721.5	696.7	668.8	643.7	636.0	626.5	622.3	628.5	643.4	634.2
17.5°	806.2	809.1	738.0	693.8	660.8	659.9	637.4	610.9	649.1	658.2	648.2
20°	861.2	849.3	762.0	687.9	678.4	652.8	624.8	588.3	621.4	643.7	649.9
22.5°	913.4	892.6	784.2	698.4	653.4	622.8	595.7	572.1	582.6	607.4	603.4
25°	948.8	943.1	815.0	723.8	652.5	584.6	548.1	533.0	538.4	576.9	573.2
27.5°	1033.2	971.6	809.6	730.3	625.1	532.4	514.2	497.9	492.5	534.1	545.6
30°	1089.7	1064.3	845.8	720.1	590.6	489.7	462.8	459.4	461.1	508.5	511.6
32.5°	1185.5	1119.6	905.2	680.7	540.4	458.0	427.2	428.6	436.3	470.8	478.0
35°	1285.3	1246.0	913.2	652.5	499.6	424.3	411.8	401.8	406.1	436.3	437.8
37.5°	1470.7	1334.6	962.2	608.9	469.7	411.5	387.6	378.7	381.0	398.1	410.4
40°	1633.8	1512.9	939.4	566.7	432.6	394.4	364.5	357.9	351.1	367.9	375.6
42.5°	1895.3	1640.1	931.7	520.2	415.2	371.3	350.8	333.4	326.8	341.1	355.1
45°	2156.8	1775.0	889.8	473.1	390.7	369.6	330.8	314.3	316.0	328.8	343.1
47.5°	2448.3	1956.1	818.8	427.5	363.9	361.3	310.8	303.7	308.9	323.1	337.4
50°	2792.8	2148.3	760.0	386.4	344.8	336.5	308.3	299.7	304.6	321.4	335.4
52.5°	3169.5	2359.0	717.2	348.5	323.1	316.8	311.7	303.4	309.1	323.7	338.2
55°	3543.9	2551.5	688.1	322.5	304.6	308.6	318.8	312.8	315.7	326.5	341.1
57.5°	3821.7	2653.0	629.7	294.9	289.5	303.7	319.7	309.7	311.4	326.5	342.2
60°	3983.1	2672.4	533.6	272.3	277.5	294.0	310.8	298.0	296.9	321.7	341.4
62.5°	3965.4	2559.8	423.2	251.8	263.8	279.5	297.4	285.2	288.3	322.3	343.1
65°	3712.2	2329.6	336.5	234.4	247.3	263.5	286.3	281.5	296.6	345.1	367.6
67.5°	3267.3	1993.4	270.4	218.2	231.9	252.7	294.0	306.9	313.4	368.5	391.6
70°	2647.9	1548.8	225.3	203.9	219.6	257.8	316.3	313.7	308.3	357.3	375.6
72.5°	1913.0	1061.7	198.2	189.9	204.5	242.4	316.8	303.1	296.3	326.2	339.4
75°	1196.9	633.4	173.1	172.2	181.4	217.3	302.6	290.3	271.8	286.6	303.7
77.5°	683.6	324.3	145.7	153.4	158.8	188.5	270.9	259.8	243.3	249.5	266.4
80°	260.9	156.8	122.9	136.3	134.9	159.7	229.6	227.0	208.2	210.2	220.4
82.5°	122.9	87.8	102.1	117.2	109.5	127.2	186.5	185.7	169.1	153.1	161.4
85°	45.6	46.8	74.7	89.3	76.1	82.1	134.9	131.2	115.2	97.2	107.5
87.5°	10.3	16.8	36.8	46.5	26.5	25.4	54.5	47.3	45.6	27.1	28.5
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)