

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: P366858

Luminaire Tested: **MSA-SA1B-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366858
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-830-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: 4019 lumens
Efficiency: N/A
Efficacy: 91.3 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

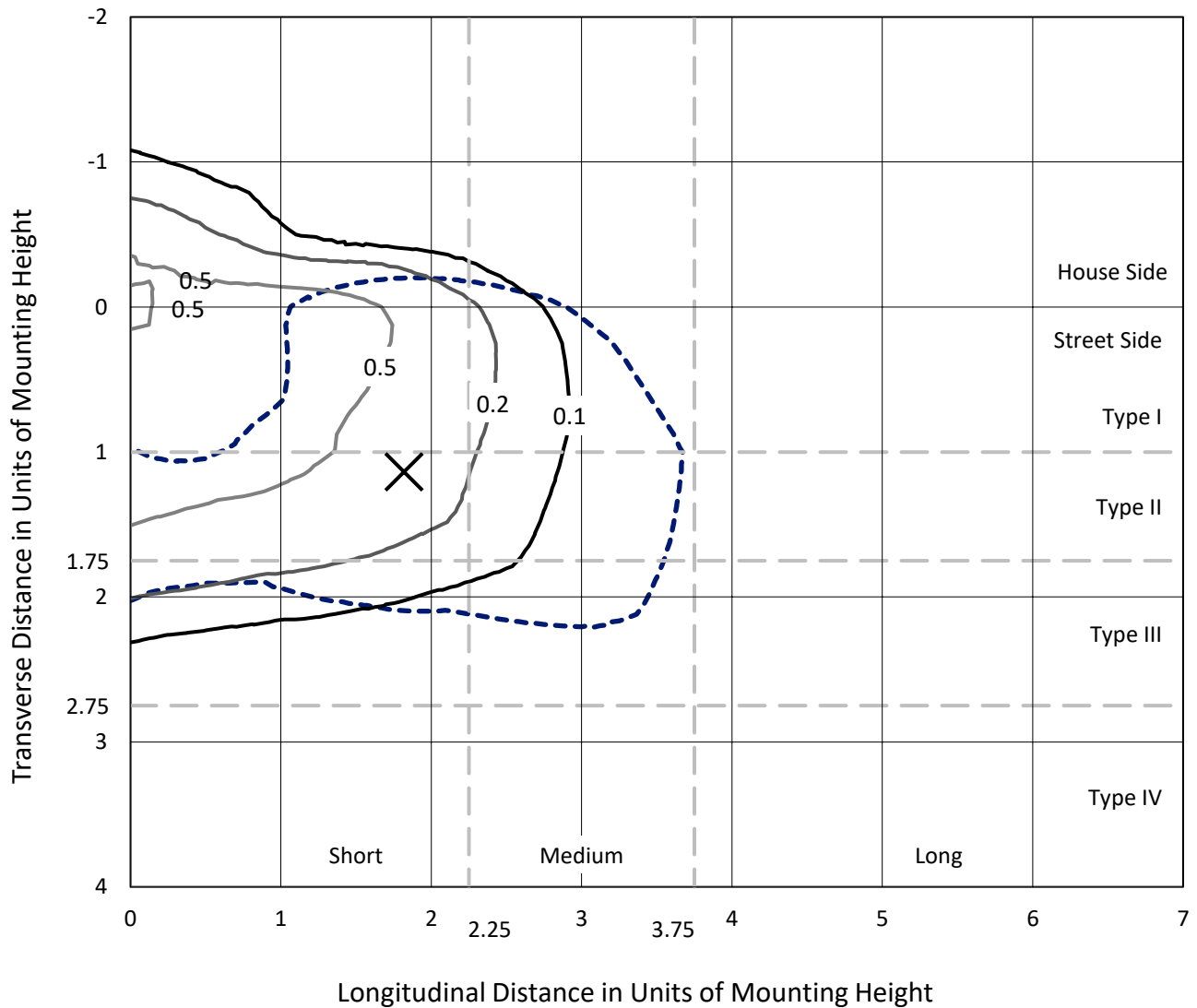
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

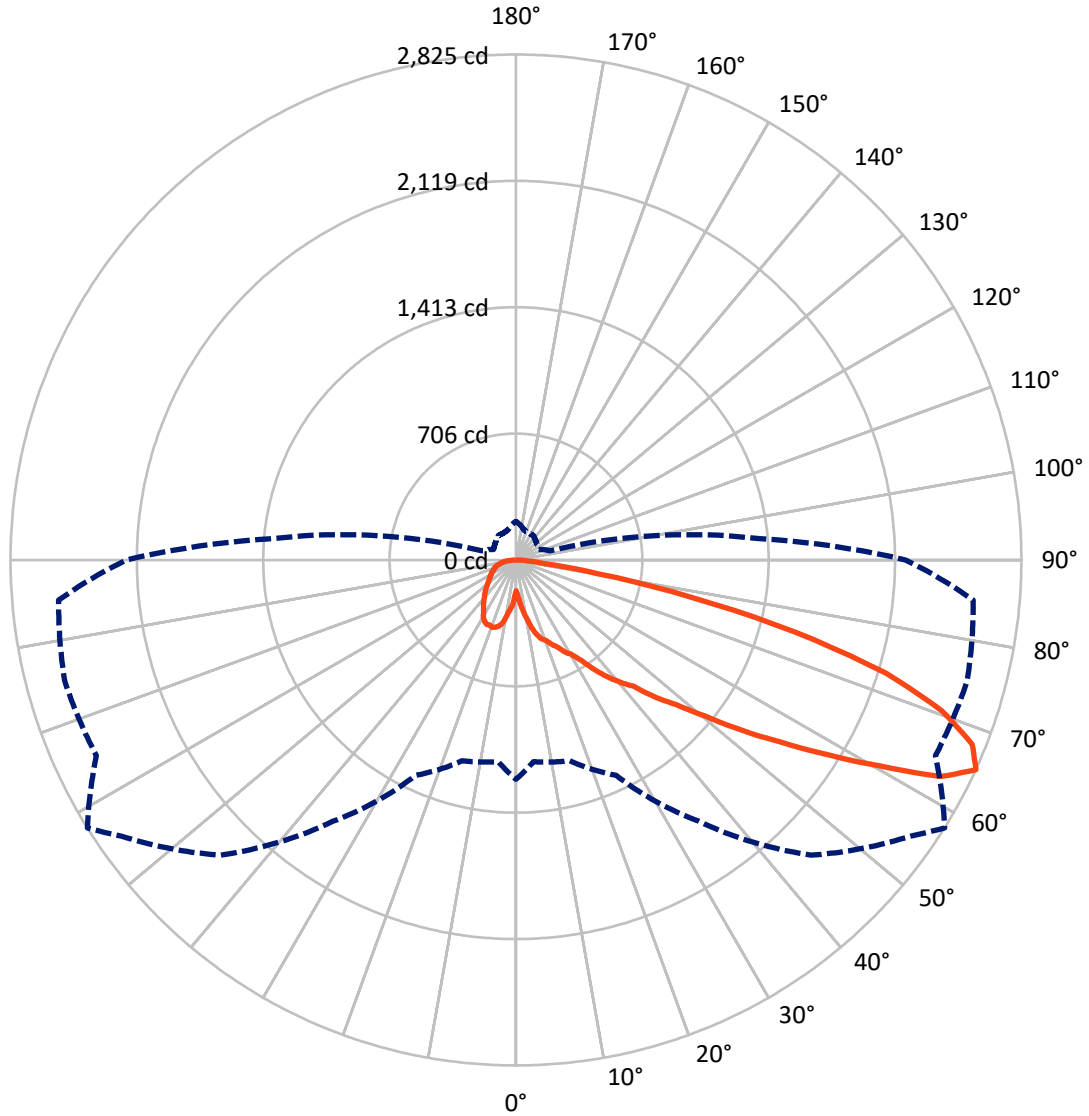
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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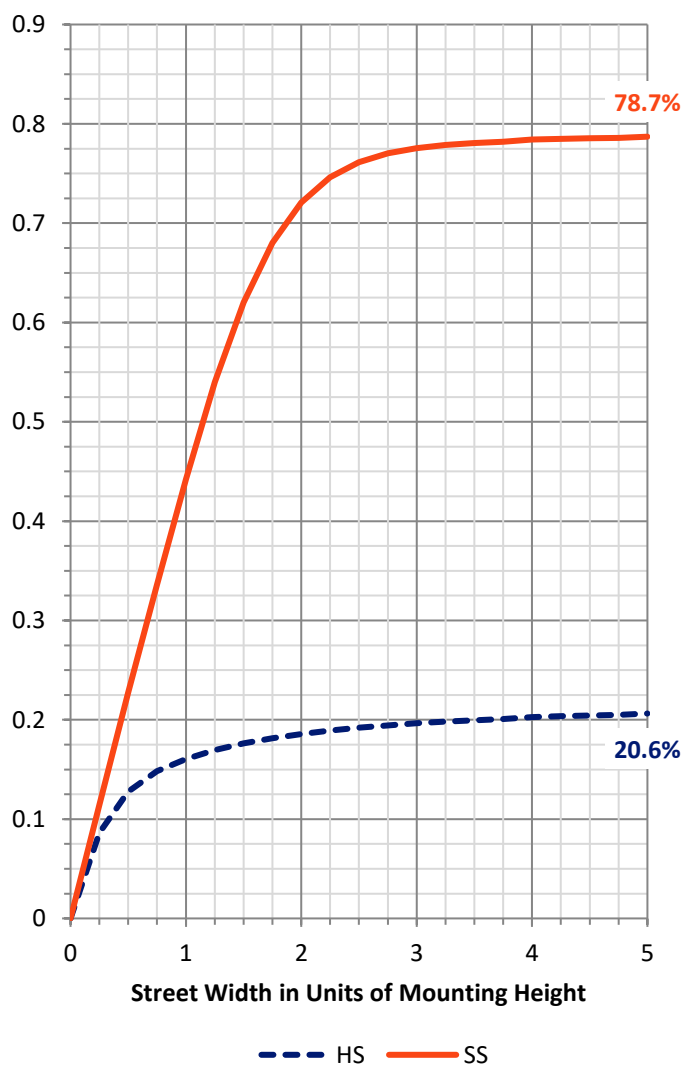
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	846.5	0.0	846.5
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	3172.5	0.0	3172.5
	% Fixture	78.9	0.0	78.9
Total	Lumens	4019.0	0.0	4019.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.3	0.7
10°-20°	114.7	2.9
20°-30°	220.1	5.5
30°-40°	363.3	9.0
40°-50°	603.9	15.0
50°-60°	997.4	24.8
60°-70°	1118.9	27.8
70°-80°	508.7	12.7
80°-90°	65.6	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°	4019.0	100.0
0°-180°	4019.0	100.0

Coefficient of Utilization



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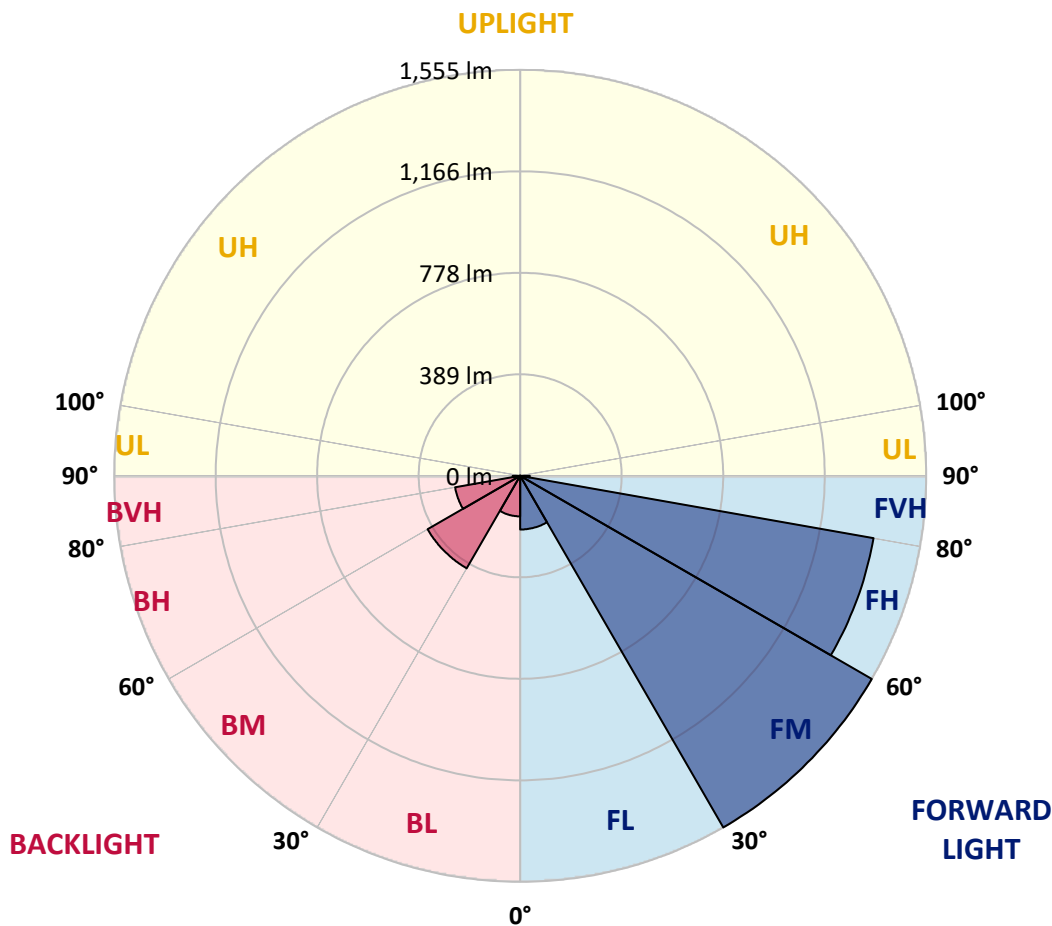
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	205.7	5.1			
FM (30°-60°)	1555.3	38.7			
FH (60°-80°)	1374.6	34.2			G1/1800
FVH (80°-90°)	36.9	0.9			G1/100
BL (0°-30°)	155.4	3.9	B1/500		
BM (30°-60°)	409.4	10.2	B1/1000		
BH (60°-80°)	253.0	6.3	B1/500		G1/500
BVH (80°-90°)	28.7	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°	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6
2.5°	206.0	199.8	189.5	192.0	198.0	201.3	199.3	196.7	193.1	192.5	207.9
5°	266.8	254.9	250.0	248.0	240.7	236.3	243.9	242.9	246.9	254.2	269.3
7.5°	311.1	302.8	294.7	293.9	279.7	274.7	284.7	290.1	297.2	297.4	317.8
10°	334.9	327.7	327.5	320.0	318.8	328.4	328.5	332.6	333.4	341.9	337.9
12.5°	360.7	360.2	369.4	369.2	379.9	395.7	387.8	387.8	390.1	379.8	392.5
15°	422.1	427.5	410.2	413.1	413.1	428.5	428.0	431.0	438.2	435.5	429.8
17.5°	486.0	489.4	470.3	452.6	453.9	450.6	462.6	463.8	456.9	488.0	481.2
20°	527.2	540.3	500.1	477.8	482.2	486.0	486.5	479.3	475.8	523.7	514.3
22.5°	578.1	567.0	530.2	505.6	512.1	507.0	506.0	511.5	516.3	534.4	549.6
25°	612.1	611.2	567.0	540.1	532.9	531.4	541.6	539.4	551.0	583.8	574.2
27.5°	661.4	676.8	598.5	605.2	573.6	540.3	573.1	582.9	603.7	598.3	619.6
30°	757.2	745.6	663.8	661.9	626.1	598.2	620.9	612.6	649.9	648.7	664.5
32.5°	835.3	843.4	740.4	721.2	694.6	660.9	645.9	669.1	689.2	722.2	731.1
35°	918.0	916.2	818.9	780.1	736.1	722.2	740.8	750.5	793.2	823.5	802.4
37.5°	1046.6	1032.0	920.7	847.2	814.3	809.2	841.0	827.0	873.2	880.4	892.2
40°	1166.1	1122.2	1013.8	929.6	877.2	895.9	896.9	898.8	923.5	943.1	1001.9
42.5°	1279.7	1248.9	1108.3	1045.1	967.9	949.7	961.0	964.9	1027.5	1067.5	1148.8
45°	1435.0	1352.5	1244.2	1179.3	1092.9	1069.7	1061.6	1094.8	1155.2	1246.2	1316.0
47.5°	1566.4	1491.9	1388.7	1303.1	1206.6	1273.0	1227.5	1208.9	1290.1	1402.9	1514.0
50°	1675.4	1593.4	1492.1	1442.7	1427.3	1486.6	1368.4	1370.6	1444.9	1604.1	1731.4
52.5°	1759.7	1672.2	1582.5	1557.4	1643.4	1677.5	1592.2	1579.3	1633.5	1821.6	1974.6
55°	1838.5	1745.7	1676.4	1727.6	1872.5	1876.4	1870.3	1798.9	1864.2	2054.8	2226.3
57.5°	1858.8	1758.7	1712.7	1786.2	1982.2	2134.6	2194.5	2054.3	2120.7	2266.8	2441.9
60°	1754.5	1668.8	1650.4	1750.2	2041.4	2264.3	2420.8	2337.0	2312.0	2437.1	2592.9
62.5°	1541.0	1441.5	1456.4	1595.0	1979.0	2315.7	2599.6	2665.0	2514.1	2572.5	2658.8
65°	1226.5	1131.6	1161.7	1328.4	1783.0	2332.8	2691.0	2825.2	2587.0	2610.8	2565.4
67.5°	865.0	778.8	816.8	1032.3	1483.2	2114.2	2706.7	2750.5	2509.4	2501.5	2310.4
70°	490.1	436.0	477.2	656.9	1046.9	1684.2	2583.3	2525.6	2370.1	2258.6	1933.1
72.5°	224.8	206.2	225.9	334.4	602.7	1120.7	2109.0	2161.4	2042.2	1902.8	1470.7
75°	119.5	113.0	121.3	167.0	282.0	609.7	1498.5	1616.3	1552.9	1443.2	959.4
77.5°	88.9	83.9	87.9	108.3	150.6	238.5	851.4	1000.0	1024.1	923.2	532.7
80°	68.1	64.1	68.1	81.8	104.3	113.3	364.0	466.1	530.9	429.0	211.7
82.5°	50.5	47.9	54.1	61.4	73.3	70.8	129.2	160.8	207.4	141.8	82.5
85°	40.2	36.8	39.2	41.7	46.9	38.8	59.1	66.1	70.0	58.6	30.5
87.5°	15.7	14.6	28.5	22.4	19.1	11.7	17.7	20.1	20.6	19.7	8.9
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°	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6	172.6
2.5°	209.5	207.9	198.0	201.2	206.4	207.4	209.5	203.5	200.5	211.6	212.1
5°	270.6	261.6	256.9	257.4	254.1	248.9	256.7	261.9	263.9	272.1	275.2
7.5°	318.0	307.1	299.3	290.2	277.5	269.3	283.0	293.1	298.4	315.5	322.2
10°	339.1	330.4	328.7	317.3	317.0	316.8	316.2	312.6	324.2	322.5	327.2
12.5°	382.6	380.8	364.9	360.3	360.8	360.3	346.3	345.6	345.8	361.2	355.7
15°	423.1	423.4	408.9	392.5	377.8	373.2	367.7	365.2	368.9	377.6	372.2
17.5°	473.2	474.8	433.2	407.2	387.8	387.3	374.1	358.5	380.9	386.3	380.4
20°	505.5	498.4	447.2	403.7	398.2	383.1	366.7	345.3	364.7	377.8	381.4
22.5°	536.1	523.9	460.3	409.9	383.4	365.5	349.6	335.7	341.9	356.5	354.2
25°	556.8	553.5	478.3	424.8	382.9	343.1	321.7	312.8	316.0	338.6	336.4
27.5°	606.4	570.2	475.2	428.6	366.9	312.5	301.8	292.2	289.0	313.5	320.2
30°	639.5	624.6	496.4	422.6	346.6	287.4	271.6	269.6	270.6	298.4	300.3
32.5°	695.8	657.1	531.2	399.5	317.2	268.8	250.7	251.6	256.1	276.3	280.5
35°	754.3	731.2	535.9	382.9	293.2	249.0	241.7	235.8	238.3	256.1	256.9
37.5°	863.1	783.3	564.7	357.3	275.7	241.5	227.5	222.3	223.6	233.6	240.8
40°	958.9	887.9	551.3	332.6	253.9	231.5	213.9	210.0	206.0	215.9	220.4
42.5°	1112.3	962.5	546.8	305.3	243.7	217.9	205.9	195.7	191.8	200.2	208.4
45°	1265.8	1041.7	522.2	277.7	229.3	216.9	194.1	184.4	185.4	193.0	201.3
47.5°	1436.9	1148.0	480.5	250.9	213.6	212.1	182.4	178.2	181.3	189.6	198.0
50°	1639.0	1260.8	446.0	226.8	202.3	197.5	180.9	175.9	178.8	188.6	196.8
52.5°	1860.1	1384.5	420.9	204.5	189.6	185.9	182.9	178.1	181.4	190.0	198.5
55°	2079.9	1497.5	403.9	189.3	178.8	181.1	187.1	183.6	185.3	191.6	200.2
57.5°	2242.9	1557.0	369.6	173.1	169.9	178.2	187.6	181.8	182.8	191.6	200.8
60°	2337.6	1568.4	313.1	159.8	162.9	172.6	182.4	174.9	174.2	188.8	200.3
62.5°	2327.3	1502.3	248.4	147.8	154.8	164.0	174.6	167.4	169.2	189.1	201.3
65°	2178.6	1367.2	197.5	137.6	145.1	154.6	168.0	165.2	174.1	202.5	215.7
67.5°	1917.5	1169.9	158.7	128.0	136.1	148.3	172.6	180.1	183.9	216.2	229.8
70°	1554.0	909.0	132.2	119.7	128.9	151.3	185.6	184.1	180.9	209.7	220.4
72.5°	1122.7	623.1	116.3	111.5	120.0	142.3	185.9	177.9	173.9	191.5	199.2
75°	702.4	371.7	101.6	101.1	106.4	127.5	177.6	170.4	159.5	168.2	178.2
77.5°	401.2	190.3	85.5	90.0	93.2	110.6	159.0	152.5	142.8	146.4	156.3
80°	153.1	92.1	72.1	80.0	79.2	93.7	134.7	133.2	122.2	123.4	129.4
82.5°	72.1	51.5	59.9	68.8	64.3	74.6	109.5	109.0	99.2	89.9	94.7
85°	26.8	27.4	43.9	52.4	44.7	48.2	79.2	77.0	67.6	57.1	63.1
87.5°	6.0	9.9	21.6	27.3	15.6	14.9	32.0	27.8	26.8	15.9	16.7
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)