

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: P367244

Luminaire Tested: **MSA-SA2A-830-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367244
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-830-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6197 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

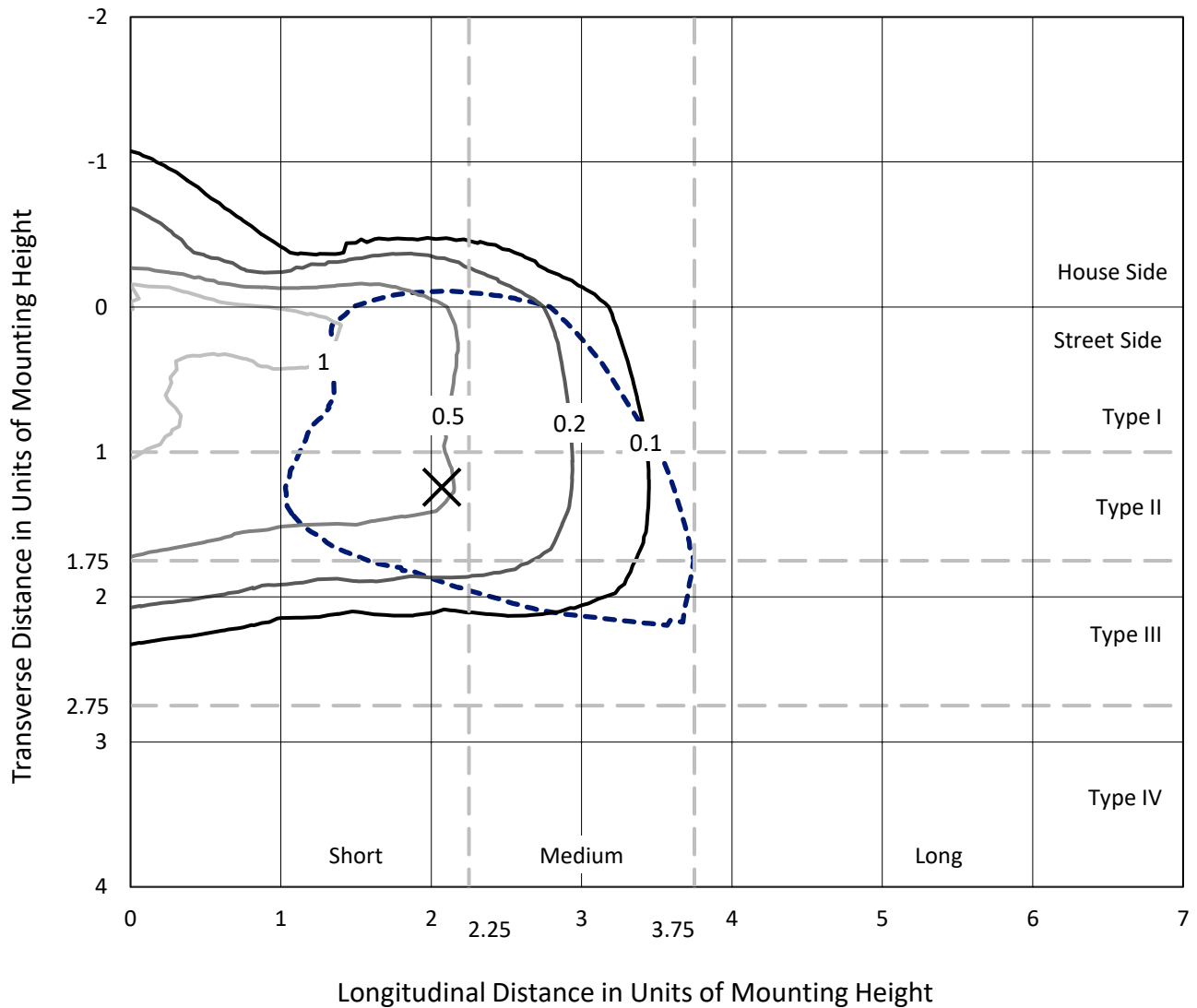
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367244
 CATALOG NUMBER: MSA-SA2A-830-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

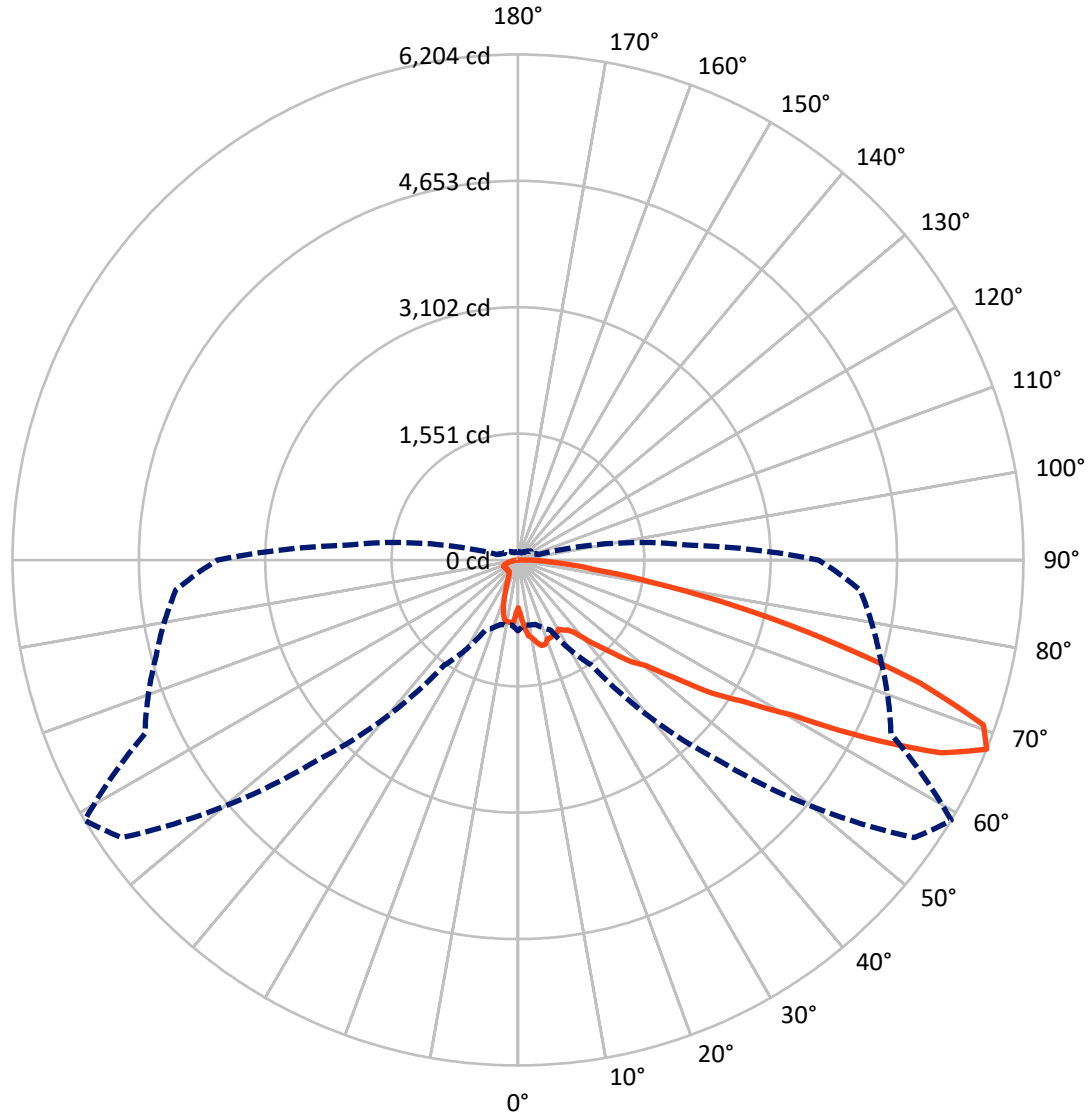
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type III - Short - N/A

REPORT NUMBER: P367244
CATALOG NUMBER: MSA-SA2A-830-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P367244

CATALOG NUMBER: MSA-SA2A-830-U-SL3

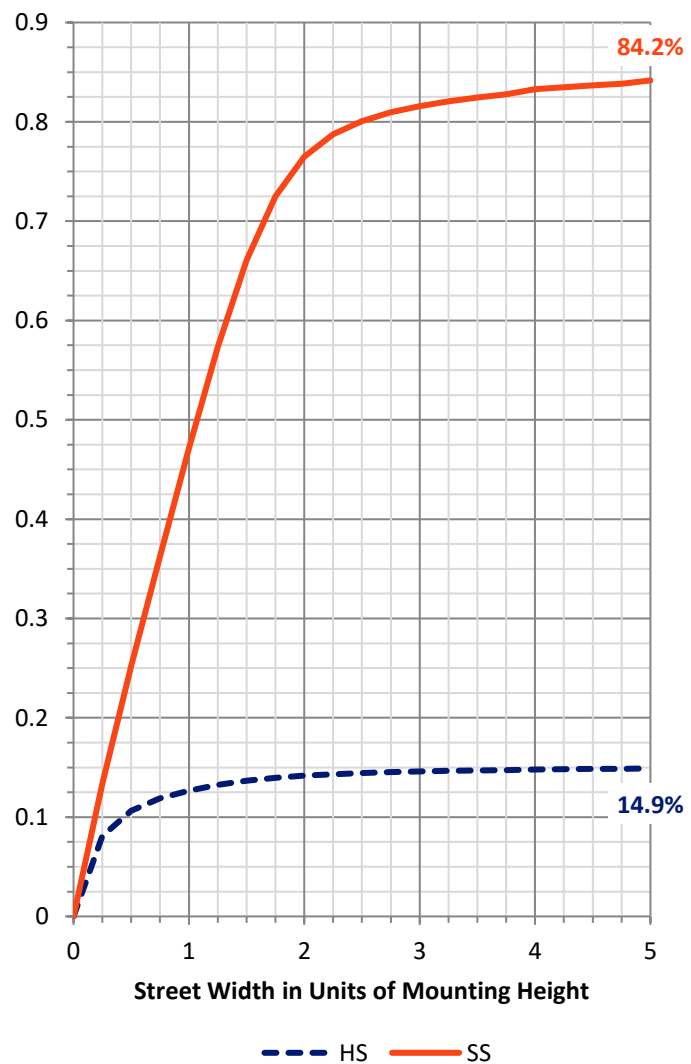
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	932.8	0.0	932.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	5264.2	0.0	5264.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	6197.0	0.0	6197.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.6	1.2
10°-20°	226.6	3.7
20°-30°	323.7	5.2
30°-40°	476.9	7.7
40°-50°	805.8	13.0
50°-60°	1402.2	22.6
60°-70°	1786.8	28.8
70°-80°	946.2	15.3
80°-90°	152.2	2.5
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°	6197.0	100.0
0°-180°	6197.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367244

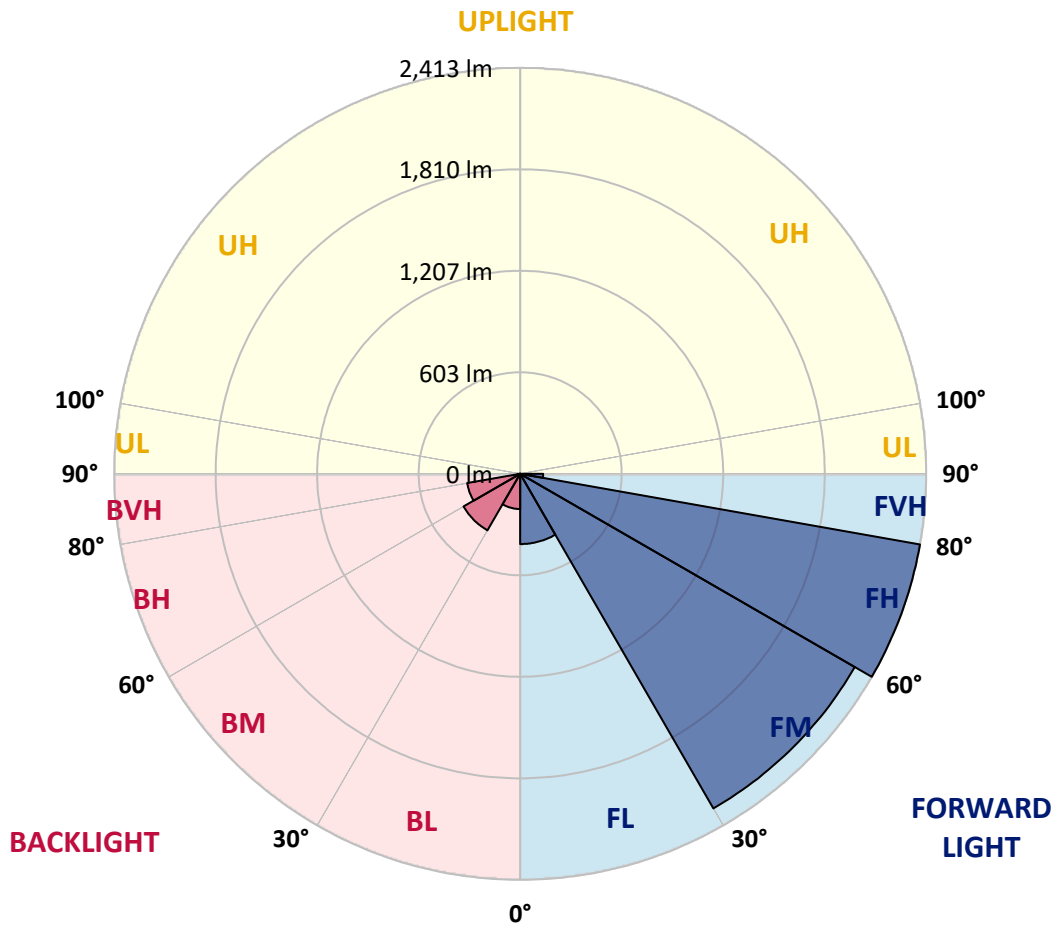
CATALOG NUMBER: MSA-SA2A-830-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	417.7	6.7			
FM (30°-60°)	2296.5	37.1			
FH (60°-80°)	2413.3	38.9			G2/5000
FVH (80°-90°)	136.7	2.2			G2/225
BL (0°-30°)	209.2	3.4	B1/500		
BM (30°-60°)	388.4	6.3	B1/1000		
BH (60°-80°)	319.7	5.2	B1/500		G1/500
BVH (80°-90°)	15.5	0.3			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





REPORT NUMBER: P367244
 CATALOG NUMBER: MSA-SA2A-830-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4
2.5°	732.1	698.0	661.8	672.0	692.8	702.2	692.0	682.0	669.1	653.9	705.9
5°	887.9	837.2	829.8	829.6	822.2	792.8	830.6	828.0	843.2	859.0	899.4
7.5°	932.3	913.3	892.9	902.6	865.5	864.0	922.8	939.6	969.0	959.3	1013.7
10°	909.4	888.1	898.9	895.0	898.4	937.2	973.2	974.3	1005.8	1036.8	1001.8
12.5°	869.2	870.8	913.6	912.0	967.2	1039.4	1050.2	1041.8	1093.2	1072.2	1102.2
15°	897.9	917.0	906.3	915.4	937.2	1029.2	1059.1	1089.6	1138.4	1157.3	1127.4
17.5°	943.5	953.8	905.5	900.5	945.4	989.0	1063.3	1089.3	1096.9	1231.6	1189.3
20°	924.1	944.9	897.6	836.9	911.5	969.3	1042.5	1034.7	1071.7	1237.4	1202.2
22.5°	979.3	944.9	884.7	841.7	867.9	921.0	983.2	1034.9	1078.8	1203.5	1220.9
25°	989.8	973.5	917.3	874.5	865.5	884.5	973.2	1007.1	1081.1	1249.7	1210.9
27.5°	1053.8	1029.4	914.9	916.2	871.9	838.5	941.7	1012.9	1107.9	1221.1	1235.3
30°	1133.4	1114.8	971.1	976.4	914.9	853.5	963.2	984.8	1123.4	1265.8	1266.0
32.5°	1193.0	1225.8	1081.7	1010.2	988.4	942.5	930.2	1027.1	1105.3	1346.6	1318.5
35°	1300.4	1325.9	1166.8	1109.5	1035.7	984.0	1020.0	1054.9	1180.7	1453.0	1396.5
37.5°	1499.2	1469.8	1324.8	1234.8	1207.2	1132.6	1152.6	1128.2	1262.6	1572.5	1549.4
40°	1614.2	1588.8	1436.2	1386.3	1277.1	1286.5	1261.6	1279.4	1372.1	1699.6	1692.2
42.5°	1727.7	1693.5	1564.6	1529.9	1421.0	1374.7	1379.2	1437.0	1541.0	1904.9	1880.5
45°	1839.8	1752.4	1695.9	1705.1	1652.6	1557.8	1564.3	1618.7	1725.3	2139.7	2083.5
47.5°	1925.7	1853.5	1809.4	1798.1	1772.1	1898.9	1842.2	1864.2	1911.2	2348.7	2327.5
50°	2088.2	2003.9	1946.4	1930.2	2018.4	2194.9	2079.3	2031.8	2131.8	2619.0	2607.9
52.5°	2348.5	2243.4	2147.6	2146.5	2274.2	2388.7	2470.1	2388.1	2424.9	2895.8	2927.3
55°	2575.6	2454.1	2367.9	2415.5	2597.2	2667.3	2943.8	2879.7	2848.8	3175.2	3265.2
57.5°	2660.5	2518.4	2462.2	2532.3	2800.2	3160.5	3452.7	3284.2	3254.0	3491.3	3680.2
60°	2474.3	2324.1	2327.5	2459.6	2923.6	3522.6	4009.2	3866.1	3689.1	3885.0	4069.3
62.5°	1943.8	1808.0	1896.5	2097.4	2820.1	3874.5	4755.0	4815.4	4186.2	4211.4	4285.2
65°	1321.2	1227.2	1307.0	1503.7	2287.3	4066.5	5465.4	5707.5	4638.9	4425.2	4378.4
67.5°	869.5	803.0	818.5	949.3	1574.6	3466.7	5940.4	6204.3	5052.8	4600.6	4214.0
70°	673.3	619.8	612.9	681.5	933.8	2408.4	5658.9	6060.2	5304.9	4436.2	3673.1
72.5°	528.4	487.7	491.3	557.3	723.2	1336.1	4379.0	5153.4	4925.2	3825.9	2822.0
75°	412.0	378.7	397.3	472.7	668.9	830.4	3021.3	3911.3	3807.8	2833.0	1609.5
77.5°	299.1	277.6	304.1	402.6	628.7	712.5	1880.8	2728.7	2439.3	1454.6	552.3
80°	196.2	184.1	205.9	328.3	570.1	685.7	1162.3	1672.0	1205.4	408.6	209.0
82.5°	115.5	110.3	128.4	222.2	458.2	642.6	775.2	929.1	493.2	172.8	111.1
85°	60.7	56.7	76.2	127.6	315.9	586.7	610.3	556.2	238.2	75.1	53.0
87.5°	20.2	19.7	32.3	49.4	119.5	311.5	325.6	264.2	98.2	21.8	11.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367244
 CATALOG NUMBER: MSA-SA2A-830-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4	586.4
2.5°	713.0	702.5	642.1	650.5	658.4	654.4	652.1	624.7	622.1	661.0	657.8
5°	898.4	854.8	803.3	800.9	767.1	732.4	739.2	728.2	731.4	747.4	749.0
7.5°	996.3	942.0	892.9	813.0	745.3	690.4	699.1	696.4	689.3	725.6	735.3
10°	994.5	946.2	890.8	794.1	748.4	703.8	650.2	599.5	584.6	566.7	568.3
12.5°	1060.1	1017.3	896.5	798.1	736.1	659.1	558.8	503.4	450.4	449.3	435.9
15°	1080.6	1049.1	908.9	775.5	649.7	539.4	435.7	375.5	337.2	329.6	318.3
17.5°	1132.4	1083.0	871.3	702.5	549.4	421.7	327.5	285.5	282.3	287.6	281.8
20°	1135.8	1055.7	803.6	594.5	441.4	319.6	267.1	246.1	257.4	270.2	269.7
22.5°	1132.9	1021.3	745.0	502.6	331.7	256.8	234.0	229.3	239.8	258.9	261.3
25°	1103.5	1010.0	671.7	412.8	269.2	220.1	213.8	216.7	229.8	252.4	252.4
27.5°	1134.2	964.0	579.8	335.9	226.4	195.9	200.4	207.7	217.4	243.2	247.9
30°	1124.2	979.3	505.8	270.5	199.6	179.1	189.1	196.4	207.5	234.2	236.6
32.5°	1151.0	938.6	443.5	227.4	182.0	172.5	174.9	184.9	199.3	220.3	224.5
35°	1192.0	953.5	372.1	204.6	173.3	164.9	169.4	177.3	191.7	212.2	215.6
37.5°	1322.7	952.7	322.7	192.0	171.7	163.3	165.4	171.0	187.8	206.4	214.3
40°	1406.8	1007.4	277.8	189.1	169.9	162.6	160.7	166.8	180.1	202.2	207.7
42.5°	1564.6	1040.7	258.4	188.0	169.6	158.1	156.3	163.3	176.5	197.0	205.4
45°	1731.4	1088.2	242.9	187.5	168.9	157.3	151.8	160.7	171.7	191.4	201.2
47.5°	1927.5	1188.8	234.2	185.7	167.3	158.4	150.2	154.7	167.0	186.7	196.4
50°	2184.4	1322.0	236.1	183.0	169.6	158.6	147.8	149.9	161.2	180.4	190.4
52.5°	2496.6	1528.1	247.9	184.1	171.2	157.3	146.8	145.7	155.5	172.3	182.2
55°	2872.9	1820.6	283.4	189.1	171.2	157.0	145.2	140.5	147.8	161.5	171.2
57.5°	3327.0	2159.4	352.7	191.4	169.9	155.5	141.8	133.4	137.9	149.2	158.4
60°	3716.9	2432.8	424.1	193.0	172.5	151.8	135.0	124.5	127.4	136.0	144.2
62.5°	3915.7	2509.5	445.6	191.7	179.6	149.4	126.8	115.0	115.3	122.6	130.0
65°	3953.0	2407.3	359.2	190.4	188.8	149.2	121.1	106.9	105.0	110.3	116.6
67.5°	3687.3	2089.6	259.2	187.5	189.9	147.6	117.1	100.3	95.6	99.3	104.5
70°	3130.8	1682.8	217.7	181.7	177.3	139.7	110.3	93.5	87.2	89.8	93.8
72.5°	2334.0	1245.0	189.9	169.4	154.4	119.5	99.8	85.9	79.3	81.1	84.0
75°	1296.7	664.1	158.9	147.3	126.1	96.6	85.1	76.2	70.4	71.2	74.3
77.5°	430.7	245.0	116.6	116.9	95.3	74.6	70.1	65.1	60.7	60.9	63.6
80°	195.1	135.5	83.5	84.0	66.4	54.1	53.8	52.3	49.4	48.6	50.4
82.5°	113.2	82.2	57.2	54.6	42.8	35.2	39.1	38.3	37.6	34.7	35.2
85°	55.7	44.1	29.9	28.4	23.6	17.6	21.0	21.8	21.0	17.9	17.6
87.5°	13.7	14.4	7.4	6.8	3.9	1.8	3.2	3.2	3.9	2.6	1.3
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)