

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: P366978

Luminaire Tested: **MSA-SA1C-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366978
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-SA1C-830-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: 4951 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

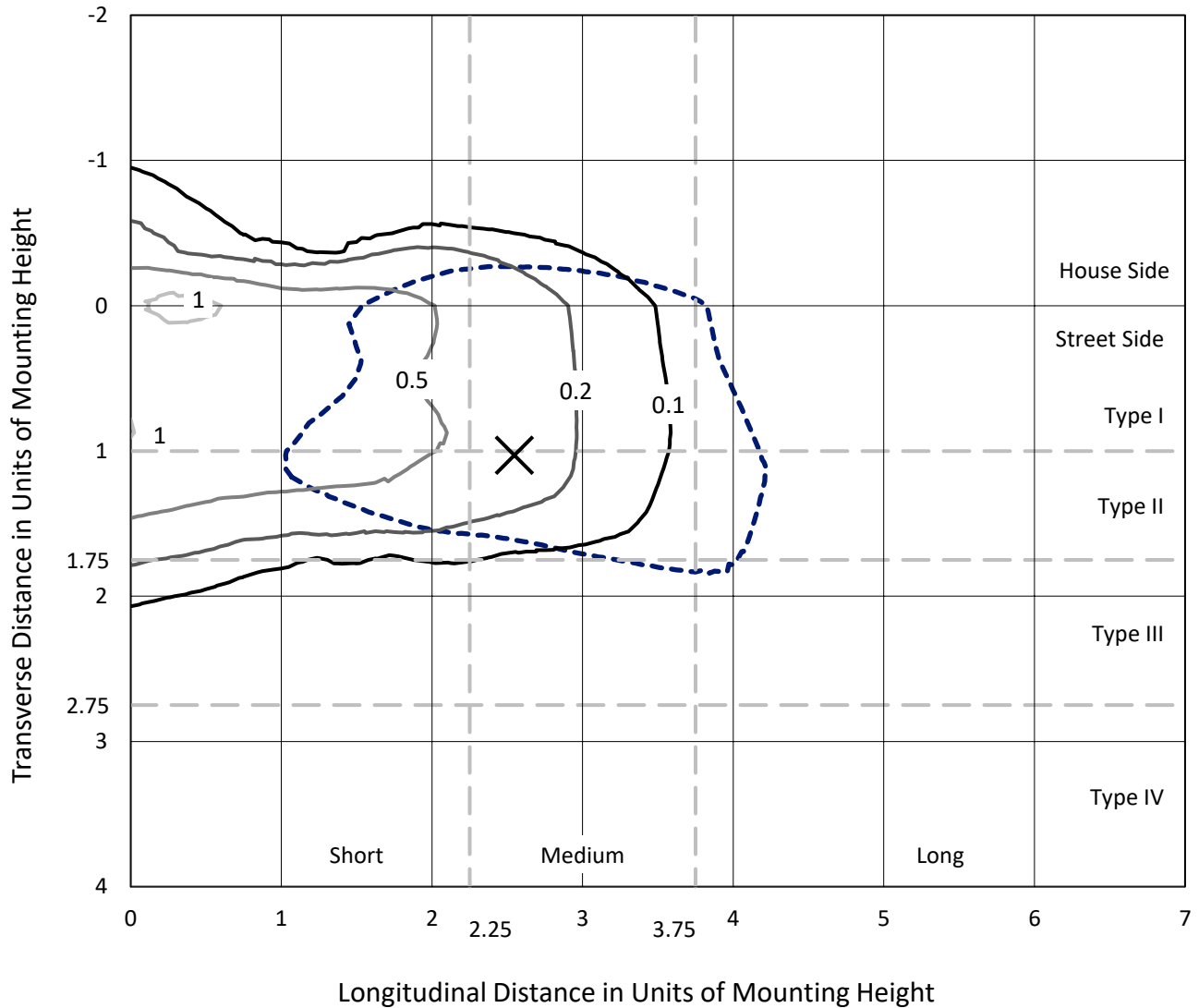
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366978
 CATALOG NUMBER: MSA-SA1C-830-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

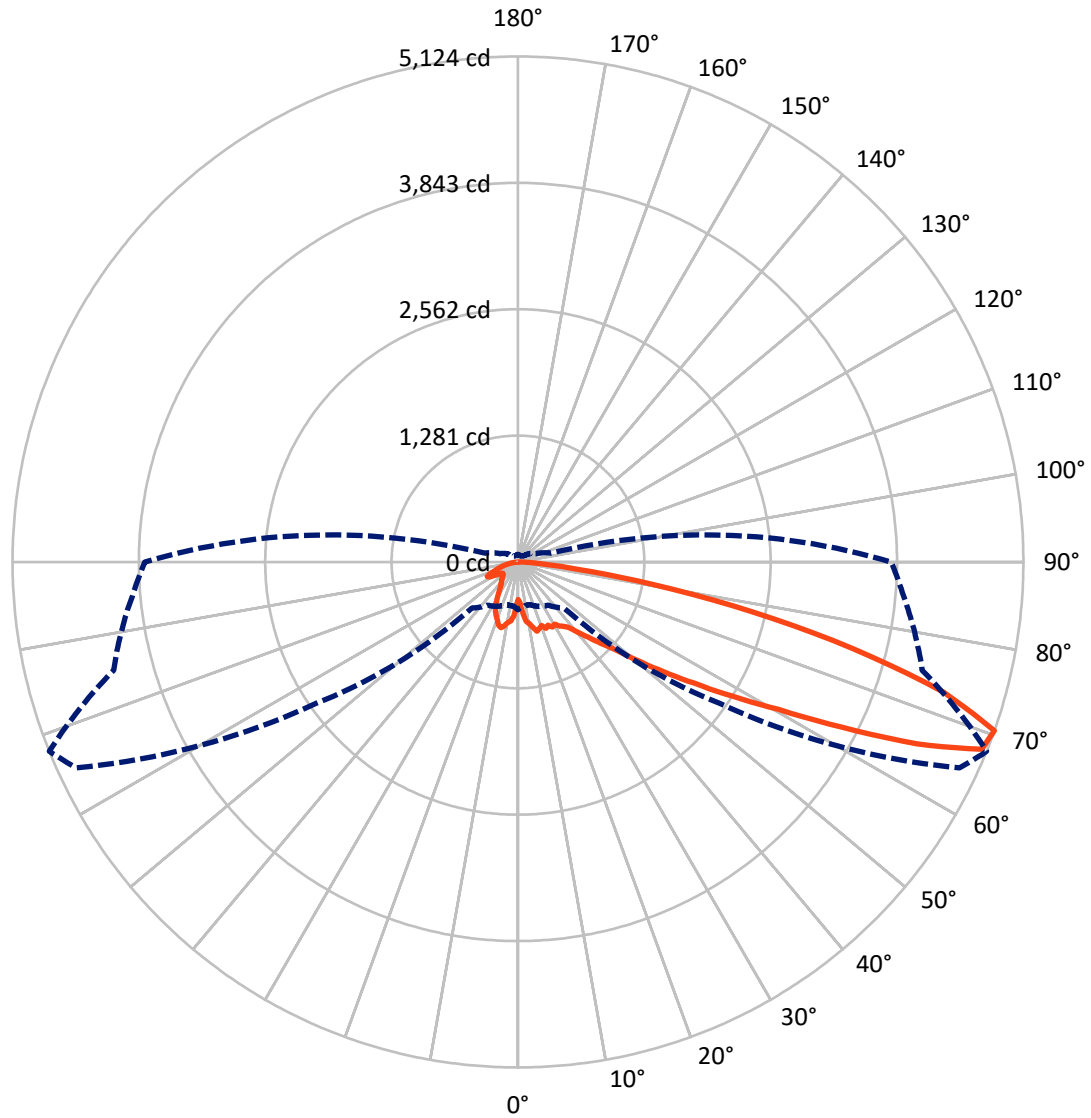
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type III - Medium - N/A

REPORT NUMBER: P366978
CATALOG NUMBER: MSA-SA1C-830-U-SL2

Luminous Intensity Polar Plot



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

REPORT NUMBER: P366978

CATALOG NUMBER: MSA-SA1C-830-U-SL2

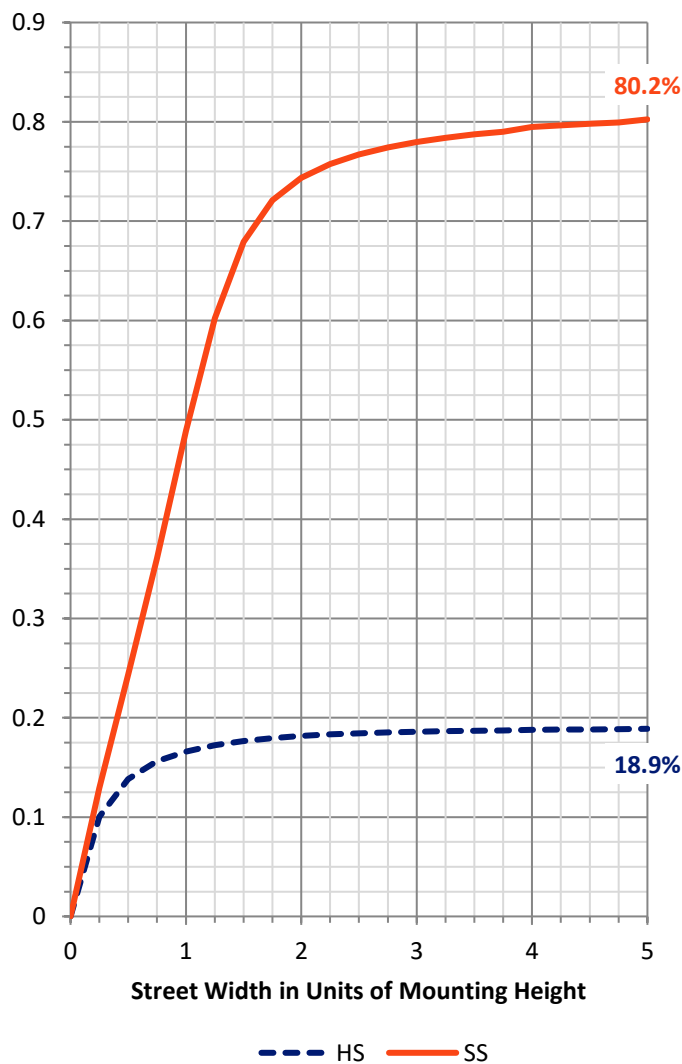
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	945.3	0.0	945.3
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	4005.7	0.0	4005.7
	% Fixture	80.9	0.0	80.9
Total	Lumens	4951.0	0.0	4951.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.7	1.0
10°-20°	165.2	3.3
20°-30°	251.4	5.1
30°-40°	384.0	7.8
40°-50°	660.2	13.3
50°-60°	1092.7	22.1
60°-70°	1347.2	27.2
70°-80°	865.4	17.5
80°-90°	134.2	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°	4951.0	100.0
0°-180°	4951.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366978

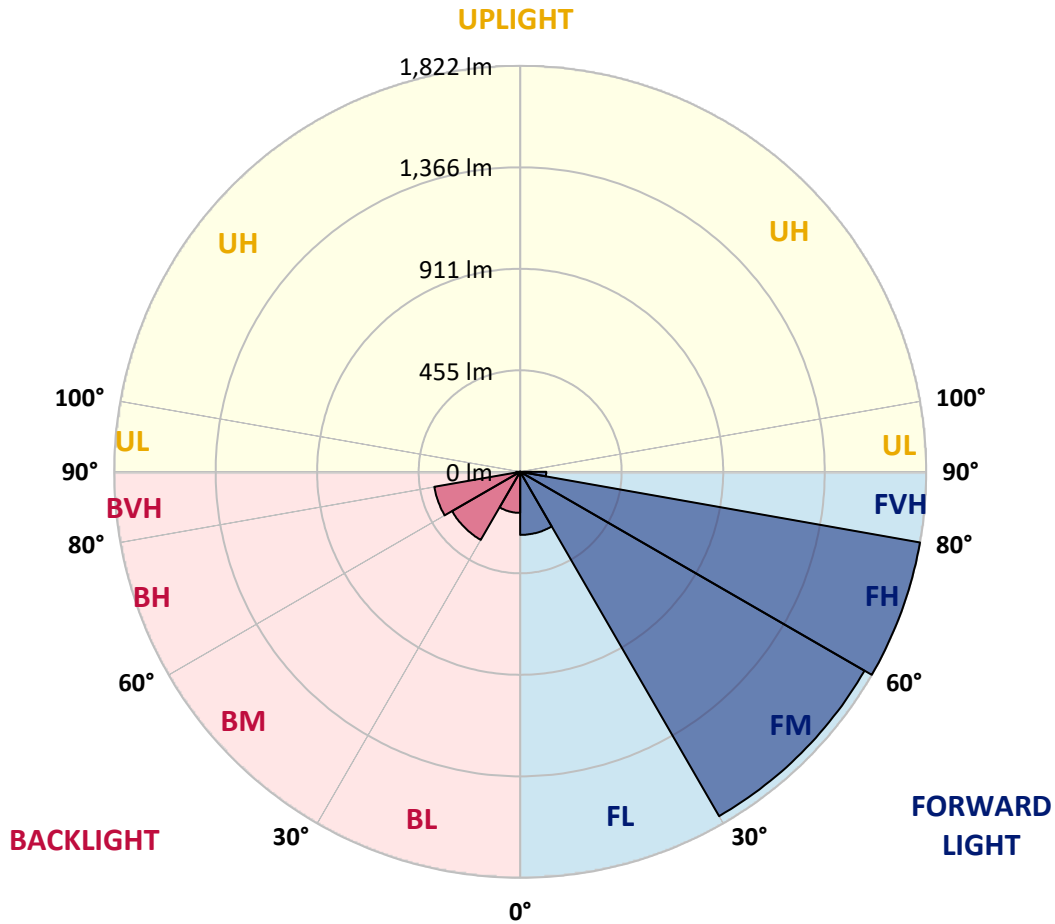
CATALOG NUMBER: MSA-SA1C-830-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	283.1	5.7			
FM (30°-60°)	1784.0	36.0			
FH (60°-80°)	1821.6	36.8			G2/5000
FVH (80°-90°)	117.0	2.4			G2/225
BL (0°-30°)	184.2	3.7	B1/500		
BM (30°-60°)	352.8	7.1	B1/1000		
BH (60°-80°)	391.0	7.9	B1/500		G1/500
BVH (80°-90°)	17.2	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 Medium





REPORT NUMBER: P366978
 CATALOG NUMBER: MSA-SA1C-830-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6
2.5°	436.2	418.6	400.7	409.4	423.3	435.6	433.1	434.5	417.7	415.5	459.6
5°	513.9	483.6	483.0	483.4	484.7	470.6	505.0	522.8	526.7	545.0	588.3
7.5°	540.8	528.6	516.2	522.4	506.6	508.1	550.4	596.8	607.8	621.0	680.3
10°	535.2	523.6	527.4	528.4	531.3	554.7	581.8	626.4	635.7	678.0	693.3
12.5°	536.1	534.0	551.4	552.0	583.1	625.2	635.9	677.0	680.7	711.8	775.8
15°	564.4	578.7	569.0	574.2	580.2	630.5	646.1	704.9	727.3	767.3	815.4
17.5°	619.8	623.9	594.7	587.0	606.7	622.0	657.5	683.0	706.4	818.1	884.4
20°	632.6	643.8	609.0	569.4	611.1	632.4	657.1	668.7	686.9	825.5	919.6
22.5°	687.7	664.5	622.5	588.1	601.7	622.5	640.3	684.0	731.9	804.2	954.8
25°	719.0	705.6	668.0	631.2	619.6	620.2	654.6	693.7	710.3	835.5	961.9
27.5°	794.7	773.1	688.8	681.7	638.0	604.0	656.9	717.8	746.8	811.0	996.3
30°	889.3	873.0	762.3	753.0	686.3	627.0	685.9	735.6	731.5	827.0	1020.1
32.5°	966.0	993.4	881.7	808.1	760.7	703.9	676.8	732.5	773.7	864.1	1060.5
35°	1075.4	1101.1	974.7	925.0	822.0	739.5	740.4	775.2	800.7	907.4	1105.7
37.5°	1264.8	1242.2	1140.5	1062.0	996.1	873.0	836.1	823.9	844.4	960.4	1194.2
40°	1401.4	1382.3	1262.5	1217.8	1089.5	1018.0	916.9	905.3	941.6	1015.1	1266.5
42.5°	1563.2	1529.2	1417.7	1380.9	1246.8	1117.9	1016.0	1022.6	1040.2	1118.3	1364.3
45°	1727.9	1645.5	1582.3	1579.4	1489.8	1311.9	1174.9	1169.5	1170.1	1270.2	1474.1
47.5°	1858.7	1784.5	1712.2	1677.8	1632.6	1647.3	1405.7	1342.5	1323.5	1423.1	1638.8
50°	1947.2	1861.8	1779.9	1771.9	1892.5	1971.8	1622.5	1554.9	1566.7	1641.9	1858.5
52.5°	1949.0	1847.7	1762.3	1818.9	2103.0	2216.5	1995.9	1807.1	1844.8	1896.0	2145.0
55°	1813.5	1708.5	1652.9	1781.8	2185.2	2506.8	2520.5	2211.1	2167.6	2186.5	2487.6
57.5°	1527.8	1421.7	1389.4	1543.7	2029.2	2786.8	3154.2	2694.0	2566.3	2487.6	2838.6
60°	1150.0	1058.2	1038.1	1136.6	1682.3	2704.5	3667.2	3294.9	3034.8	2823.9	3190.6
62.5°	862.4	796.5	766.3	780.4	1164.1	2437.0	4004.1	4054.1	3685.9	3191.1	3534.6
65°	700.8	647.5	620.6	602.4	724.0	1884.4	3943.2	4693.1	4446.3	3576.7	3802.3
67.5°	585.4	538.1	525.7	543.5	572.3	1093.2	3466.6	5050.6	5067.3	3957.1	3958.8
70°	485.9	450.9	446.3	496.9	534.8	659.8	2503.9	4938.3	5123.5	4242.4	3922.1
72.5°	375.5	356.6	356.0	435.4	531.3	562.4	1491.1	4266.1	4514.9	4151.3	3563.2
75°	260.5	247.4	257.4	357.9	519.1	570.5	851.0	3322.8	3509.1	3532.5	2854.3
77.5°	179.2	168.3	179.0	258.8	463.5	584.1	595.3	2402.6	2423.3	2368.8	1634.9
80°	124.7	117.1	125.4	183.2	360.8	578.1	506.8	1512.6	1387.9	1057.2	523.4
82.5°	77.3	75.0	84.1	130.5	254.0	525.9	480.3	780.6	595.9	291.8	186.9
85°	40.6	37.3	48.9	85.2	158.9	412.8	450.1	356.2	230.0	103.6	75.0
87.5°	12.0	10.8	18.9	34.4	67.3	185.0	257.6	151.1	85.8	30.5	23.4
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: P366978
 CATALOG NUMBER: MSA-SA1C-830-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6	379.6
2.5°	462.7	460.4	429.8	433.7	440.3	442.0	441.8	430.6	418.8	451.7	450.7
5°	589.3	568.8	553.5	550.1	531.3	512.4	519.1	516.8	513.9	528.8	530.7
7.5°	680.5	652.1	634.3	588.5	545.0	507.3	519.3	523.0	515.5	542.5	550.6
10°	704.5	682.1	662.9	604.0	580.0	558.0	525.5	488.4	483.4	467.9	469.7
12.5°	766.5	763.4	697.7	645.9	614.6	570.9	500.6	455.7	417.1	419.0	407.8
15°	815.4	817.0	738.1	665.6	581.6	514.9	432.2	376.3	336.7	328.8	320.8
17.5°	881.1	877.7	741.4	641.9	535.6	437.8	336.5	281.0	274.3	278.9	271.9
20°	909.7	880.4	720.3	583.3	463.7	332.6	254.2	224.8	237.7	255.9	256.3
22.5°	935.4	885.4	709.3	536.1	368.0	241.8	204.1	198.7	213.8	238.5	240.6
25°	934.3	908.4	689.6	488.4	285.3	188.8	177.4	181.3	199.3	225.0	226.5
27.5°	981.4	890.8	638.4	425.8	214.9	161.6	164.5	171.8	180.3	204.7	209.5
30°	980.9	923.5	612.7	349.8	172.6	148.2	155.6	161.8	168.9	191.3	193.9
32.5°	1004.1	902.2	597.2	272.1	154.8	144.8	146.7	152.9	163.1	178.2	180.1
35°	1032.1	926.4	547.5	216.1	148.2	141.9	143.4	146.9	156.2	170.1	172.0
37.5°	1121.8	931.0	527.8	182.1	147.7	140.7	140.5	142.4	152.9	165.6	171.2
40°	1156.9	972.6	470.4	170.1	146.3	140.7	137.8	138.8	147.5	163.7	168.0
42.5°	1240.8	986.5	427.9	166.0	146.3	138.2	133.7	135.3	145.5	159.8	166.6
45°	1327.2	1006.2	377.3	165.1	146.1	138.0	129.3	133.0	141.3	153.3	160.8
47.5°	1450.3	1077.1	326.8	162.7	144.4	139.0	128.3	128.1	135.3	145.7	152.7
50°	1651.1	1187.7	287.6	159.6	144.6	138.2	126.2	123.3	128.1	137.2	144.0
52.5°	1930.6	1376.3	272.3	157.9	143.0	134.9	122.7	118.1	120.8	128.1	134.7
55°	2255.1	1631.0	287.4	157.9	139.7	129.7	117.7	112.3	113.8	118.7	125.2
57.5°	2634.3	1947.4	360.5	155.6	135.5	123.5	111.7	105.5	105.9	110.2	116.0
60°	3030.3	2300.9	524.5	153.8	132.6	116.7	104.6	98.2	97.6	101.7	106.9
62.5°	3426.9	2627.0	696.9	158.1	131.8	110.9	97.2	90.8	90.6	94.3	98.6
65°	3742.2	2850.0	739.7	175.7	137.2	104.2	89.5	83.5	83.1	86.2	91.0
67.5°	3897.0	2882.3	562.0	197.7	148.6	98.0	82.1	76.5	76.0	79.4	83.5
70°	3782.4	2661.4	346.9	200.0	147.9	90.8	74.4	69.6	68.8	72.3	75.4
72.5°	3358.5	2328.0	263.6	177.0	128.1	80.4	66.7	62.6	61.3	64.4	67.3
75°	2695.6	1848.3	211.1	142.8	100.9	67.8	59.1	55.1	53.7	56.6	59.1
77.5°	1570.2	1039.8	154.4	111.5	76.3	55.3	50.4	46.8	45.2	48.3	50.1
80°	510.6	346.5	97.0	80.0	55.7	43.3	40.8	38.3	36.7	38.7	39.4
82.5°	183.4	128.9	53.7	49.1	37.1	31.1	30.9	29.4	27.4	28.2	28.2
85°	81.2	58.8	31.9	26.3	22.2	16.6	19.5	18.4	16.4	16.0	15.3
87.5°	22.8	19.5	11.6	8.9	7.3	2.7	6.2	5.6	4.6	4.1	2.9
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)