

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: P367647

Luminaire Tested: **MSA-SA2D-830-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367647
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-830-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8084 lumens
Efficiency: N/A
Efficacy: 62.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

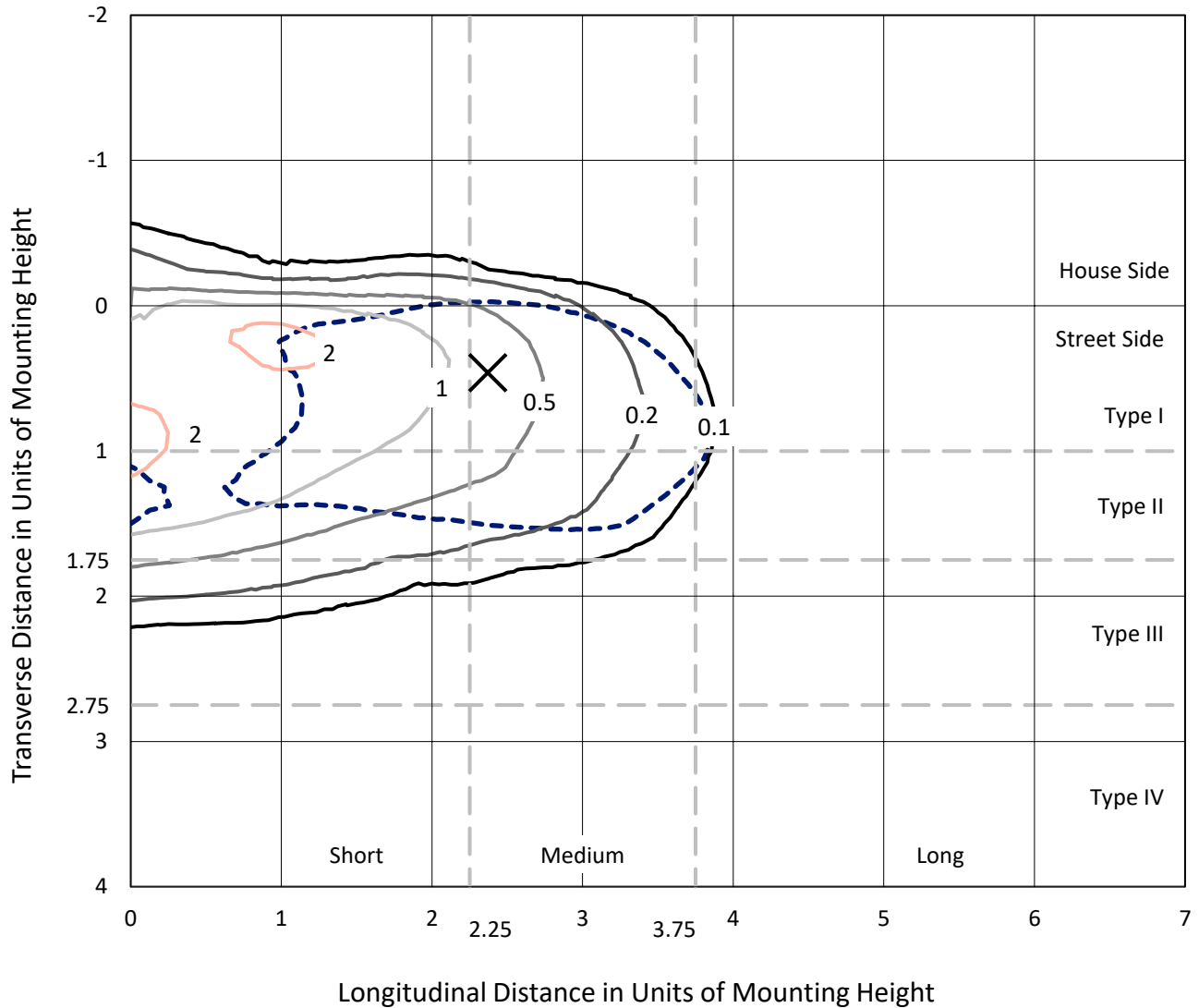
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367647
 CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

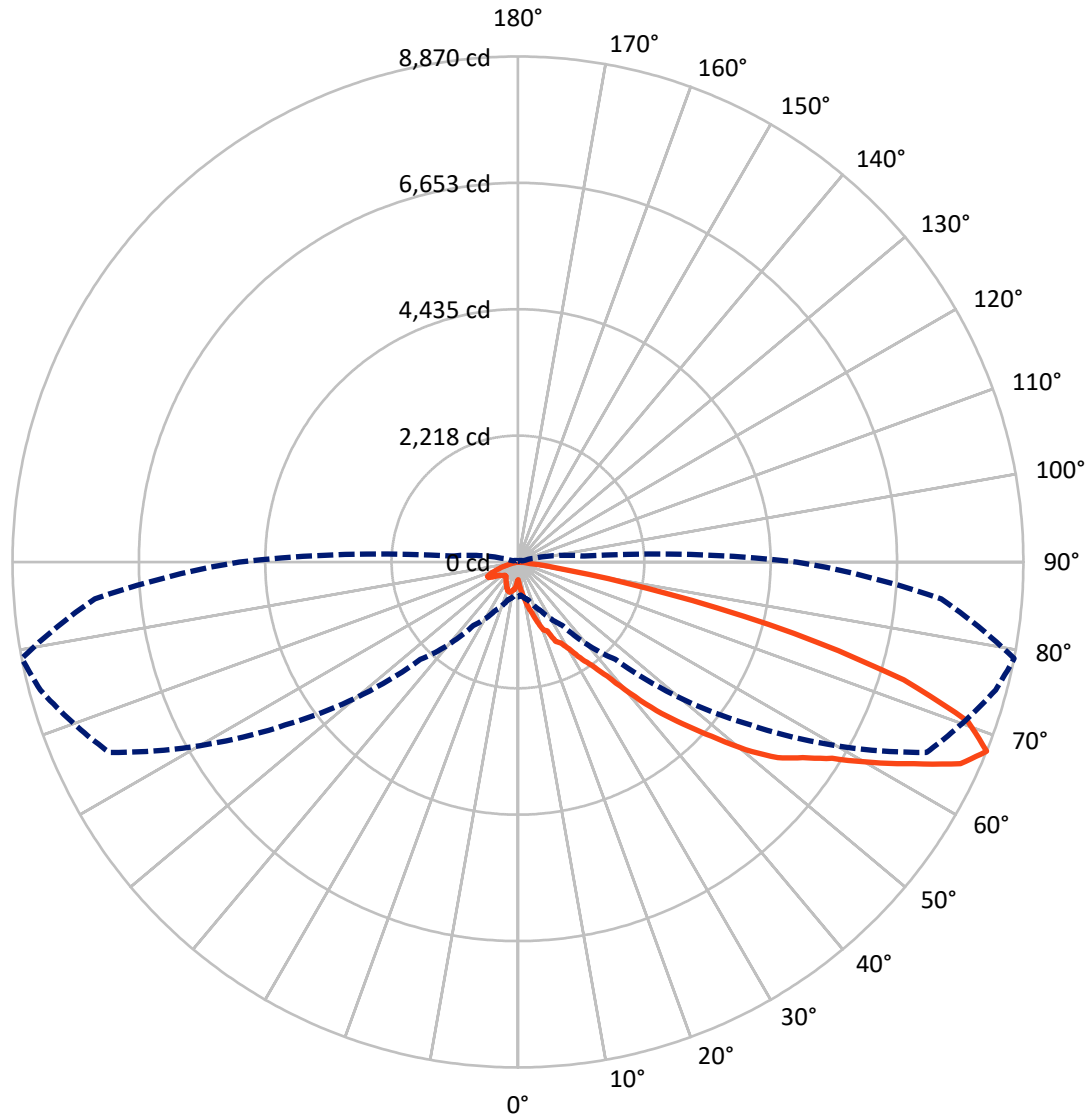
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type II - Medium - N/A

REPORT NUMBER: P367647
CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P367647

CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

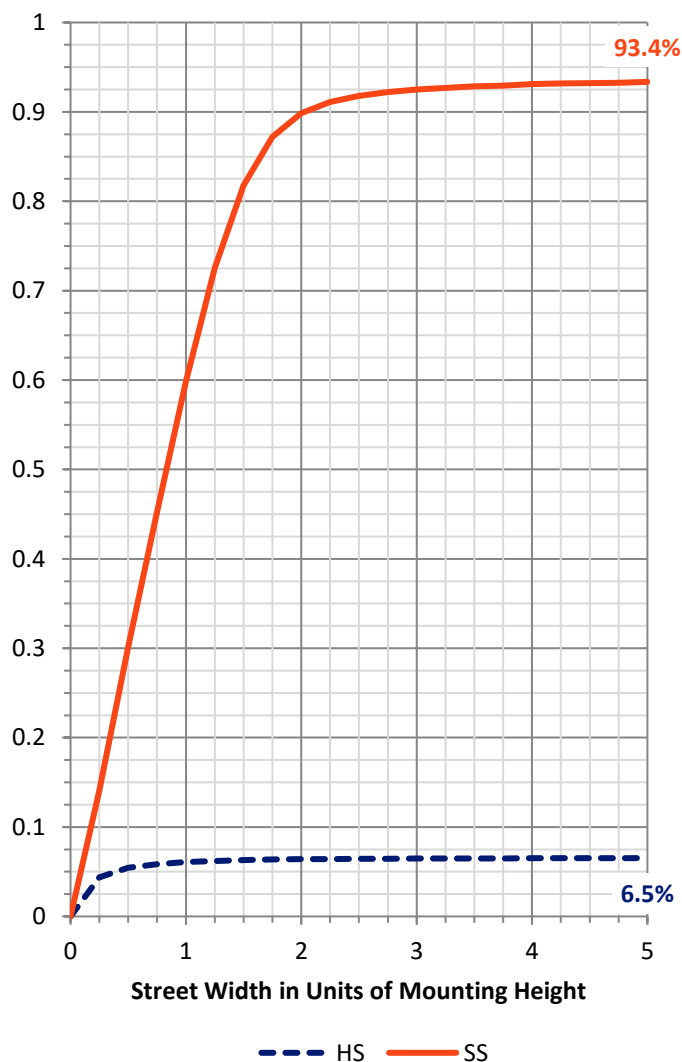
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	531.2	0.0	531.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	7552.8	0.0	7552.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	8084.0	0.0	8084.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.3	0.6
10°-20°	180.6	2.2
20°-30°	348.5	4.3
30°-40°	684.5	8.5
40°-50°	1371.3	17.0
50°-60°	2191.9	27.1
60°-70°	2205.4	27.3
70°-80°	994.9	12.3
80°-90°	61.6	0.8
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°	8084.0	100.0
0°-180°	8084.0	100.0

Coefficient of Utilization



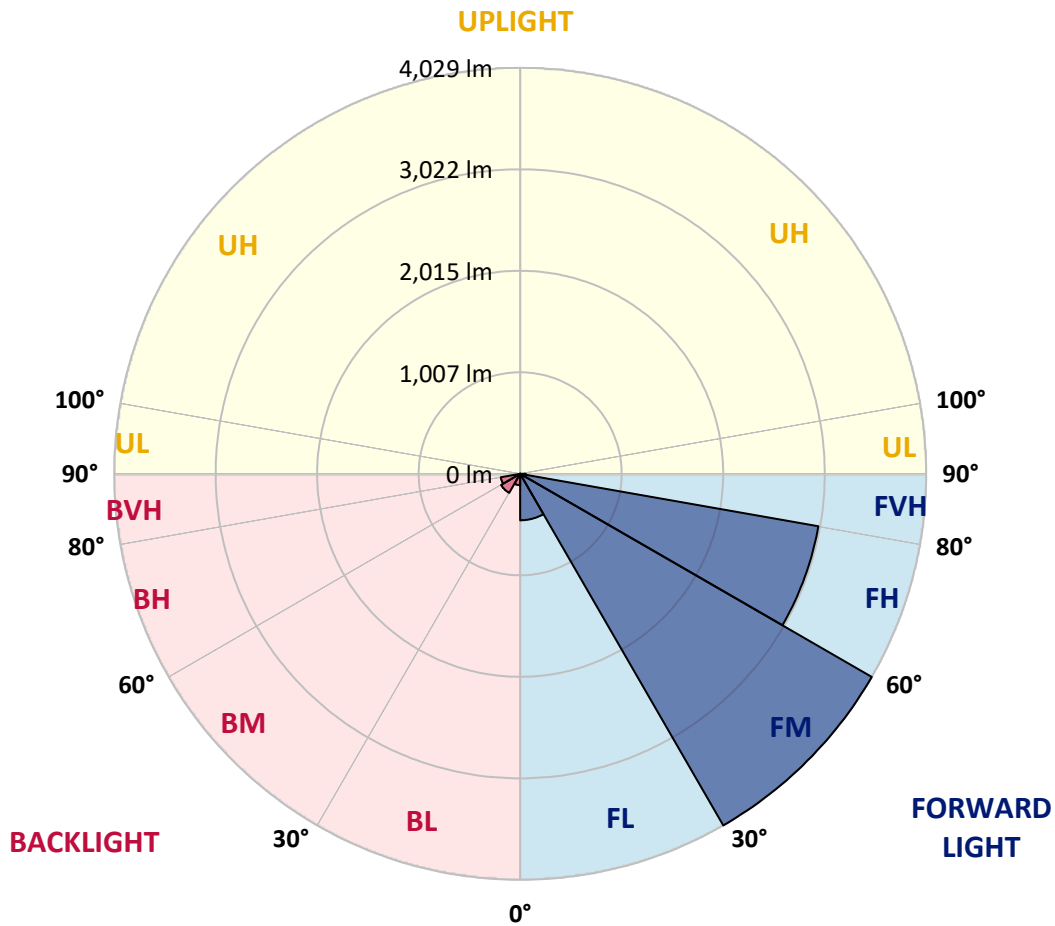
REPORT NUMBER: P367647
 CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	461.5	5.7			
FM (30°-60°)	4029.2	49.8			
FH (60°-80°)	3004.5	37.2			G2/5000
FVH (80°-90°)	57.6	0.7			G1/100
BL (0°-30°)	112.9	1.4	B1/500		
BM (30°-60°)	218.5	2.7	B0/220		
BH (60°-80°)	195.8	2.4	B1/500		G1/500
BVH (80°-90°)	3.9	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





REPORT NUMBER: P367647
 CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5
2.5°	420.7	405.5	381.0	394.8	393.9	401.1	387.7	373.0	349.4	373.0	374.8
5°	605.6	577.5	559.7	556.2	536.5	518.3	514.3	499.1	487.5	466.6	485.3
7.5°	754.5	741.5	709.9	706.3	658.2	631.5	639.9	633.2	589.1	567.3	585.6
10°	817.7	795.5	799.9	795.5	775.0	782.5	765.2	745.1	709.9	673.8	628.3
12.5°	842.2	838.7	875.7	871.2	919.3	977.3	938.5	905.1	823.5	814.6	752.7
15°	894.8	917.1	911.8	930.5	961.2	1059.7	1058.8	1066.8	980.4	934.0	844.5
17.5°	941.6	958.1	931.4	952.8	1036.5	1096.3	1176.0	1144.8	1154.6	1107.4	968.8
20°	921.6	940.3	913.5	900.6	1048.1	1161.3	1267.8	1245.1	1303.9	1274.5	1083.3
22.5°	1046.8	1011.6	944.3	902.4	1012.5	1160.0	1300.4	1395.3	1385.0	1312.8	1189.8
25°	1201.4	1180.0	1099.4	1025.4	1035.2	1152.0	1402.9	1542.3	1572.6	1541.9	1291.0
27.5°	1410.0	1405.1	1240.2	1208.1	1112.7	1116.8	1418.9	1727.7	1658.6	1610.5	1409.1
30°	1682.3	1643.5	1447.9	1406.0	1265.2	1196.1	1516.9	1887.7	1836.9	1771.4	1520.1
32.5°	1975.0	1980.8	1731.3	1593.1	1479.9	1398.0	1478.2	1962.6	2057.5	2004.5	1658.6
35°	2307.5	2333.3	2028.1	1865.9	1645.7	1525.0	1644.8	2192.5	2362.7	2223.3	1844.5
37.5°	2819.5	2818.6	2462.1	2139.0	1979.1	1848.0	1922.5	2401.5	2738.0	2541.9	2177.8
40°	3270.1	3172.0	2840.5	2469.3	2219.7	2184.0	2130.1	2687.6	3138.6	3020.5	2474.2
42.5°	3606.5	3537.4	3136.8	2848.0	2538.8	2425.6	2406.4	3107.0	3729.9	3564.6	2897.1
45°	4008.9	3782.5	3487.5	3227.3	2912.2	2879.2	2834.2	3532.5	4418.0	4045.5	3264.7
47.5°	4369.4	4156.4	3877.5	3543.2	3181.4	3453.2	3280.3	3906.4	4918.5	4568.6	3670.2
50°	4672.9	4446.5	4134.1	3879.7	3724.6	3909.1	3620.8	4214.4	5459.0	5175.6	4049.5
52.5°	4827.5	4571.3	4329.8	4172.5	4267.4	4225.9	4082.4	4587.3	5919.8	5707.7	4385.5
55°	4700.5	4450.1	4348.9	4426.9	4715.2	4595.4	4607.0	5165.3	6354.7	6062.4	4677.8
57.5°	4137.3	3908.6	3953.7	4167.1	4719.7	5033.4	5205.0	5726.8	6703.7	6504.5	5128.8
60°	3129.7	2945.6	3112.3	3491.1	4275.8	4946.1	5629.2	6288.3	7202.3	7139.9	5811.5
62.5°	1911.3	1811.5	2047.7	2520.1	3407.3	4517.8	5876.6	7037.0	7735.7	7802.1	6535.7
65°	975.0	930.0	1127.0	1542.3	2302.1	3711.2	5697.9	7502.2	8287.0	8532.1	7225.9
67.5°	614.1	585.1	690.3	940.7	1358.3	2420.7	4988.9	7909.1	8676.5	8870.3	7456.3
70°	425.6	407.3	498.2	645.7	857.0	1303.9	3704.1	7529.4	8367.7	8376.6	6898.8
72.5°	270.1	255.8	344.5	478.2	632.4	673.4	2123.4	5908.2	7162.7	7080.2	5586.9
75°	175.1	168.0	218.8	350.3	485.7	415.3	1049.5	3986.6	5135.9	5006.7	3710.8
77.5°	125.7	121.2	146.6	234.0	345.8	290.6	470.6	2376.1	2944.7	2662.2	1801.2
80°	75.8	75.3	106.1	146.6	246.0	205.0	217.5	1078.9	1141.7	930.9	550.4
82.5°	37.9	39.2	59.3	94.5	158.2	134.1	99.4	359.2	306.6	225.9	111.4
85°	8.9	11.1	31.2	65.1	79.3	53.5	47.2	94.0	84.2	63.7	32.5
87.5°	0.0	0.0	9.8	15.6	21.4	8.9	16.0	17.8	22.7	17.8	6.7
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: P367647
 CATALOG NUMBER: MSA-SA2D-830-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5	311.5
2.5°	375.2	369.9	337.3	328.9	328.0	318.6	320.9	311.9	312.4	332.4	332.4
5°	478.2	447.0	415.8	388.1	369.4	342.7	332.9	328.9	325.3	333.3	338.2
7.5°	561.5	515.6	459.4	399.3	343.6	305.3	299.9	290.1	286.5	294.6	300.8
10°	598.5	541.4	464.3	376.6	324.4	293.2	267.4	253.6	250.9	250.4	252.7
12.5°	676.9	606.1	469.7	368.1	311.5	277.2	247.8	224.6	203.2	205.4	203.2
15°	739.8	656.0	469.7	347.6	280.3	246.0	194.3	182.7	179.6	184.5	180.5
17.5°	834.7	705.4	446.1	311.1	253.6	191.2	171.6	170.7	176.9	184.0	179.6
20°	891.7	712.1	406.4	269.2	208.1	165.8	158.6	151.5	160.4	166.2	164.0
22.5°	951.0	712.6	366.8	246.9	167.6	151.1	139.5	133.7	135.0	140.4	141.3
25°	976.4	695.2	329.8	217.5	152.0	135.0	123.0	116.8	114.5	117.2	116.3
27.5°	1045.5	661.8	289.7	185.4	144.4	119.9	108.7	101.2	94.5	98.9	99.8
30°	1055.3	651.1	267.8	164.9	134.6	106.1	96.3	88.2	83.3	89.6	89.6
32.5°	1086.5	592.2	256.7	156.4	124.3	98.0	84.7	78.9	78.0	82.0	82.4
35°	1134.6	566.4	240.2	149.7	115.0	88.7	76.2	73.5	72.6	75.8	75.8
37.5°	1297.7	534.3	221.9	143.9	107.0	83.8	74.0	69.5	70.0	72.6	74.4
40°	1406.0	538.3	194.7	136.8	97.6	79.3	69.5	66.4	66.0	67.3	68.6
42.5°	1607.0	541.4	182.7	129.2	90.5	74.0	65.1	62.8	61.1	62.4	63.7
45°	1831.6	557.9	176.5	123.0	86.5	70.9	61.1	59.7	55.7	56.6	58.4
47.5°	2048.1	618.1	168.9	114.1	82.9	69.1	57.0	53.9	51.2	50.8	52.6
50°	2294.1	676.5	160.4	104.3	79.3	66.4	53.0	48.1	46.3	46.3	47.7
52.5°	2514.3	732.2	152.4	97.6	76.6	61.5	49.5	44.6	43.2	43.2	45.0
55°	2746.0	790.6	145.3	91.4	73.1	56.6	46.3	41.9	41.4	40.6	41.9
57.5°	3155.1	918.0	136.4	86.0	68.2	52.6	43.7	39.2	38.3	37.0	38.3
60°	3750.9	1113.6	124.8	80.7	62.4	49.9	41.4	36.1	34.8	32.5	33.0
62.5°	4333.3	1271.8	111.4	74.0	57.0	47.2	37.9	32.5	30.3	27.6	28.1
65°	4832.4	1334.2	97.1	66.0	51.7	41.0	33.0	28.5	25.4	21.8	21.4
67.5°	4891.3	1178.3	83.3	58.4	46.3	34.8	28.1	25.4	20.5	17.4	16.5
70°	4402.0	877.9	69.5	51.7	40.1	29.4	24.1	22.3	19.2	16.5	15.2
72.5°	3505.4	648.0	58.4	45.9	35.2	25.0	20.5	20.9	19.2	16.0	14.3
75°	2318.2	370.8	47.7	38.3	29.4	20.1	18.7	18.7	18.3	15.2	13.4
77.5°	1115.4	160.0	36.5	30.3	23.6	15.2	16.9	16.9	17.4	13.8	11.1
80°	316.4	48.1	22.7	20.5	17.4	10.2	13.4	12.9	11.6	8.0	4.9
82.5°	56.6	18.7	10.2	10.7	9.8	4.0	7.6	7.1	5.8	3.1	0.4
85°	15.6	7.1	5.8	6.2	4.9	1.3	3.1	4.0	3.1	1.8	0.0
87.5°	4.0	3.1	4.0	4.5	3.6	0.4	1.3	0.4	1.3	0.4	0.0
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)