

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: P401052

Luminaire Tested: **ENT-SA1A-830-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401052
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-830-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2172 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 20.1
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: 25 FT

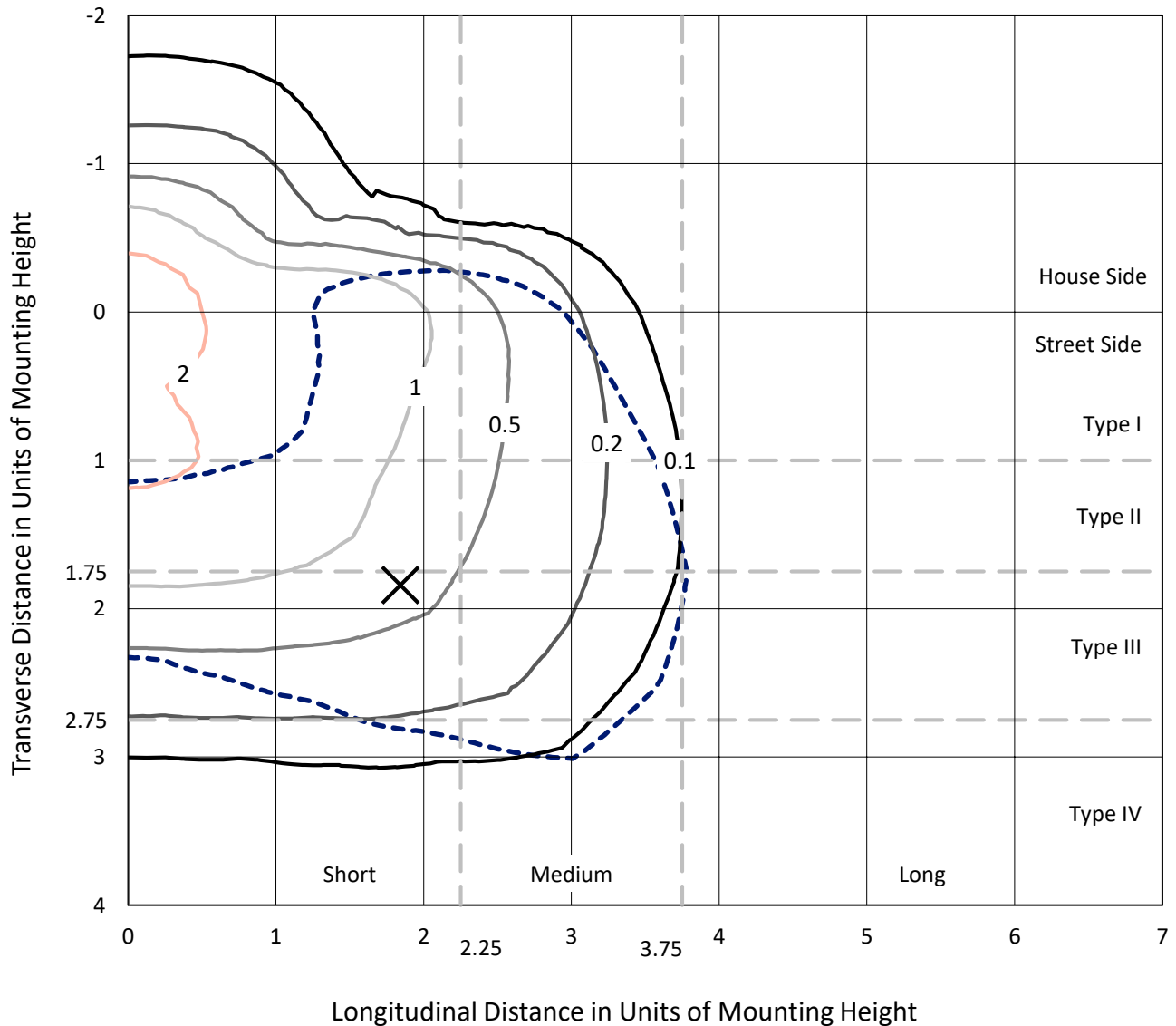


REPORT NUMBER: P401052

CATALOG NUMBER: ENT-SA1A-830-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

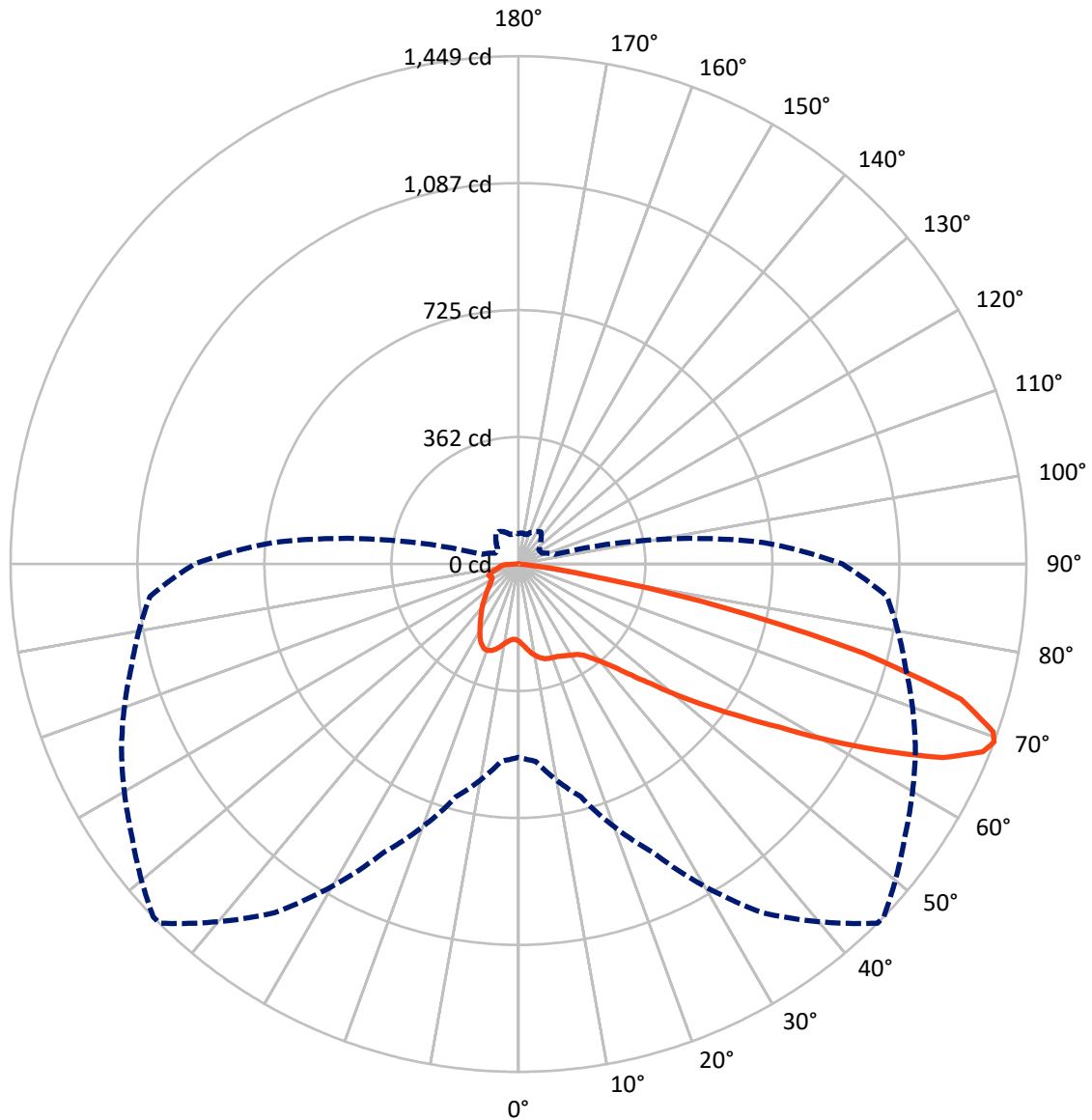


Based on 10 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P401052

CATALOG NUMBER: ENT-SA1A-830-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P401052

CATALOG NUMBER: ENT-SA1A-830-U-T4W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	511.4	0.0	511.4
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	1660.6	0.0	1660.6
	% Fixture	76.5	0.0	76.5
Total	Lumens	2172.0	0.0	2172.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.4	1.0
10°-20°	74.4	3.4
20°-30°	125.8	5.8
30°-40°	182.0	8.4
40°-50°	274.8	12.7
50°-60°	463.4	21.3
60°-70°	637.5	29.3
70°-80°	353.3	16.3
80°-90°	38.5	1.8
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°	2172.0	100.0
0°-180°	2172.0	100.0



REPORT NUMBER: P401052

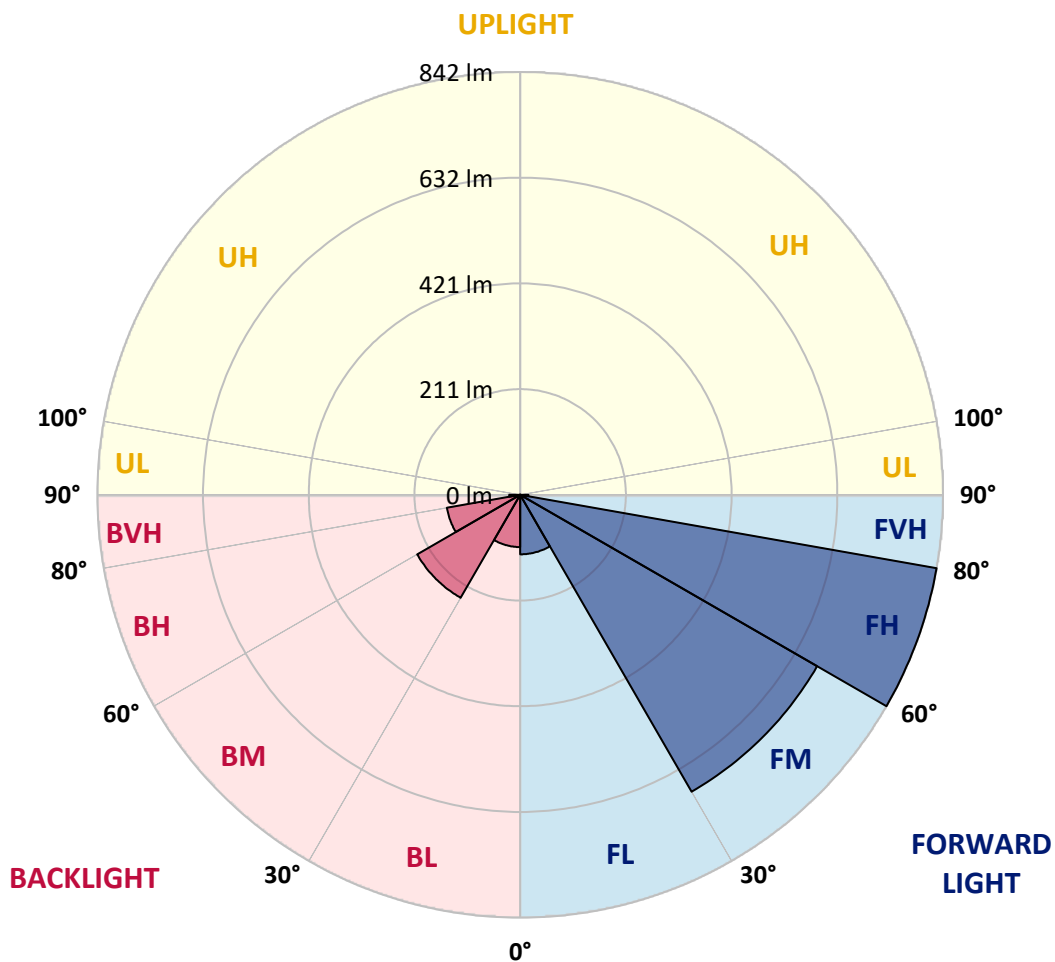
CATALOG NUMBER: ENT-SA1A-830-U-T4W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	118.5	5.5			
FM	(30°-60°)	683.1	31.5			
FH	(60°-80°)	842.5	38.8			G1/1800
FVH	(80°-90°)	16.5	0.8			G1/100
BL	(0°-30°)	104.1	4.8	B0/110		
BM	(30°-60°)	237.0	10.9	B1/1000		
BH	(60°-80°)	148.2	6.8	B1/500		G1/500
BVH	(80°-90°)	22.0	1.0			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 IV Short



REPORT NUMBER: P401052

CATALOG NUMBER: ENT-SA1A-830-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5
2.5°	234.4	234.0	234.4	233.1	231.9	230.0	229.4	227.3	225.7	223.6	221.7
5°	251.6	252.6	252.3	250.7	245.8	242.1	242.1	237.4	232.5	227.9	223.6
7.5°	270.5	270.5	268.6	265.5	260.6	255.0	254.4	248.3	241.2	234.7	227.9
10°	284.1	284.7	281.9	277.6	271.4	265.5	264.9	257.8	251.0	242.7	234.4
12.5°	293.6	293.6	291.2	287.2	279.7	274.2	273.6	267.1	260.0	251.3	241.8
15°	298.6	298.0	295.8	291.5	285.0	280.4	279.4	273.9	268.0	259.4	249.2
17.5°	297.7	297.7	295.8	291.5	286.8	283.1	282.5	278.5	274.2	265.9	255.7
20°	293.6	293.3	292.7	289.3	286.2	284.7	284.1	282.2	279.4	272.3	262.8
22.5°	289.9	289.6	288.7	286.5	285.3	286.2	286.2	285.9	285.6	280.1	270.8
25°	292.1	291.8	289.9	286.8	286.5	290.9	291.2	292.1	292.7	288.1	278.5
27.5°	307.2	306.3	301.1	293.0	290.2	295.8	296.4	299.2	298.6	293.6	285.3
30°	336.9	337.2	325.4	308.2	298.9	301.4	301.7	304.8	303.8	299.8	293.0
32.5°	381.6	381.6	362.5	336.3	312.8	307.8	306.9	309.7	313.4	308.2	301.4
35°	438.5	436.9	413.8	373.3	336.6	319.0	318.3	317.1	323.6	318.7	308.8
37.5°	495.6	490.0	467.5	423.0	369.9	340.6	338.1	334.4	338.1	327.6	319.0
40°	541.6	540.7	522.1	477.1	409.4	366.8	365.0	348.6	351.1	342.7	339.3
42.5°	592.2	592.8	580.5	535.1	456.7	402.3	397.4	372.1	379.2	376.1	374.5
45°	647.8	647.2	637.9	590.4	514.4	451.7	445.6	414.4	428.9	427.0	435.7
47.5°	690.4	693.8	688.6	654.9	583.0	511.6	507.0	469.0	490.9	505.8	522.1
50°	748.5	748.2	734.0	720.1	662.6	588.2	583.6	541.3	572.8	594.4	624.3
52.5°	820.4	817.9	788.6	783.7	759.6	671.9	667.9	623.7	668.8	687.6	748.5
55°	865.5	865.2	850.0	858.7	859.3	765.1	760.2	721.0	771.9	793.5	885.6
57.5°	903.2	903.5	916.1	946.4	966.8	878.5	876.6	828.7	880.3	910.6	1019.3
60°	932.2	938.4	973.9	1043.0	1077.0	1023.0	1014.9	964.3	998.9	1010.9	1121.5
62.5°	920.4	928.5	998.3	1100.2	1187.5	1176.1	1173.3	1100.2	1099.8	1093.7	1197.7
65°	827.8	845.1	955.0	1098.0	1260.4	1331.7	1327.7	1228.3	1193.7	1162.8	1220.6
67.5°	677.4	681.2	813.6	1014.0	1259.8	1429.6	1425.3	1321.5	1252.1	1176.4	1153.6
69°	551.5	565.1	687.6	907.8	1215.3	1449.4	1449.4	1347.5	1249.9	1144.0	1055.4
70°	477.1	477.7	595.9	823.2	1154.8	1437.6	1440.4	1347.5	1232.3	1101.7	968.3
72.5°	223.6	237.4	312.2	537.3	932.8	1321.5	1328.3	1258.6	1130.1	949.2	726.5
75°	67.0	69.5	104.1	254.7	534.5	1018.0	1033.2	1047.0	920.4	698.8	447.4
77.5°	39.8	39.5	50.3	86.5	247.3	603.6	610.4	669.7	597.2	388.4	203.2
80°	19.5	20.1	26.9	42.0	92.6	219.2	241.2	313.1	264.6	151.9	74.4
82.5°	6.5	7.1	11.1	17.0	39.2	70.7	78.1	98.2	84.6	55.3	31.8
85°	0.0	0.0	0.3	0.6	2.2	5.2	5.2	11.7	17.6	19.5	10.5
87.5°	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.9
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: P401052

CATALOG NUMBER: ENT-SA1A-830-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5
2.5°	220.8	220.2	218.9	217.7	217.1	215.5	215.8	215.2	214.9	214.9	215.2
5°	221.4	220.5	218.6	217.4	216.1	215.5	217.1	217.7	218.3	218.3	218.6
7.5°	225.1	223.2	221.1	219.5	219.8	220.8	223.2	225.1	226.0	226.6	227.3
10°	231.3	229.1	226.0	225.7	226.3	228.8	232.2	235.0	237.4	239.0	239.0
12.5°	237.8	235.0	232.5	233.1	235.9	239.6	243.0	246.1	248.3	249.8	250.1
15°	244.9	242.1	239.6	241.2	245.8	250.1	253.2	254.4	255.4	256.9	257.2
17.5°	251.3	248.9	246.7	250.7	254.7	258.1	259.1	258.4	257.2	258.1	258.8
20°	258.1	256.0	254.7	259.1	261.8	262.1	259.7	256.9	253.8	253.8	254.1
22.5°	266.5	263.7	263.1	265.2	264.3	260.6	254.4	250.1	245.8	245.2	246.1
25°	274.5	271.7	271.4	269.9	261.8	252.3	243.9	239.0	235.6	235.9	237.8
27.5°	282.5	280.7	281.0	272.6	254.7	240.2	229.1	225.1	226.0	226.6	228.5
30°	290.6	290.6	291.8	272.6	244.9	223.2	212.7	212.4	214.9	216.8	218.9
32.5°	299.8	302.6	300.4	269.2	231.6	206.0	197.6	198.2	201.0	204.1	206.0
35°	308.8	315.3	309.1	261.5	213.4	190.2	183.4	182.5	184.6	187.4	188.4
37.5°	323.0	333.5	316.5	249.5	194.5	176.3	169.5	167.0	164.9	167.0	166.7
40°	347.7	360.3	322.0	229.4	176.3	163.3	156.2	151.6	146.4	141.7	141.7
42.5°	387.2	395.5	325.1	205.0	158.1	150.4	143.3	136.5	128.4	120.1	120.1
45°	451.7	453.6	326.4	179.1	141.4	137.4	130.0	123.5	113.0	104.7	102.8
47.5°	537.9	529.9	329.5	154.1	126.9	126.0	119.8	112.4	101.0	93.2	92.3
50°	653.7	619.1	343.0	134.0	115.2	116.1	111.5	102.8	92.0	86.5	85.2
52.5°	784.0	731.8	353.5	118.0	105.0	107.8	104.4	96.0	86.8	82.1	81.2
55°	926.3	840.2	351.1	107.1	97.3	100.4	99.1	92.0	83.7	79.7	78.7
57.5°	1042.4	916.4	329.5	97.6	89.5	93.9	95.1	89.5	81.8	78.1	77.2
60°	1129.5	958.1	285.0	89.5	83.4	88.6	92.0	88.0	81.5	79.4	78.4
62.5°	1169.0	954.4	227.3	83.4	78.7	84.9	92.3	90.5	86.1	87.7	88.0
65°	1146.8	907.8	170.4	78.7	76.0	85.5	97.6	97.6	91.1	93.9	94.2
67.5°	1032.8	785.8	124.1	75.3	73.2	88.6	107.5	101.3	88.9	91.1	90.2
69°	924.5	703.1	106.5	73.5	71.0	90.2	111.8	101.9	86.5	88.9	86.5
70°	844.8	628.4	95.7	71.9	70.1	90.2	113.0	101.3	85.2	87.1	84.3
72.5°	601.2	436.3	78.7	68.9	66.7	83.4	110.8	97.9	81.8	79.7	74.4
75°	349.5	241.2	67.0	65.5	59.0	73.2	105.3	94.2	78.4	74.4	70.7
77.5°	146.7	107.8	57.1	59.6	52.2	65.2	98.5	90.5	74.4	68.9	67.0
80°	59.6	53.7	47.6	51.6	45.4	57.4	90.8	84.3	68.5	63.0	60.2
82.5°	31.2	29.6	36.4	41.7	37.7	52.8	85.5	80.0	63.6	58.0	54.7
85°	9.3	12.4	20.7	28.4	28.7	47.6	83.1	74.1	55.3	47.9	47.2
87.5°	0.6	2.5	7.1	14.8	18.8	36.4	67.3	60.8	44.8	37.7	38.0
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)