

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: P401034

Luminaire Tested: **ENT-SA1A-827-U-T4W**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401034  
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-827-U-T4W  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2009 lumens  
Efficiency: N/A  
Efficacy: 100.0 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

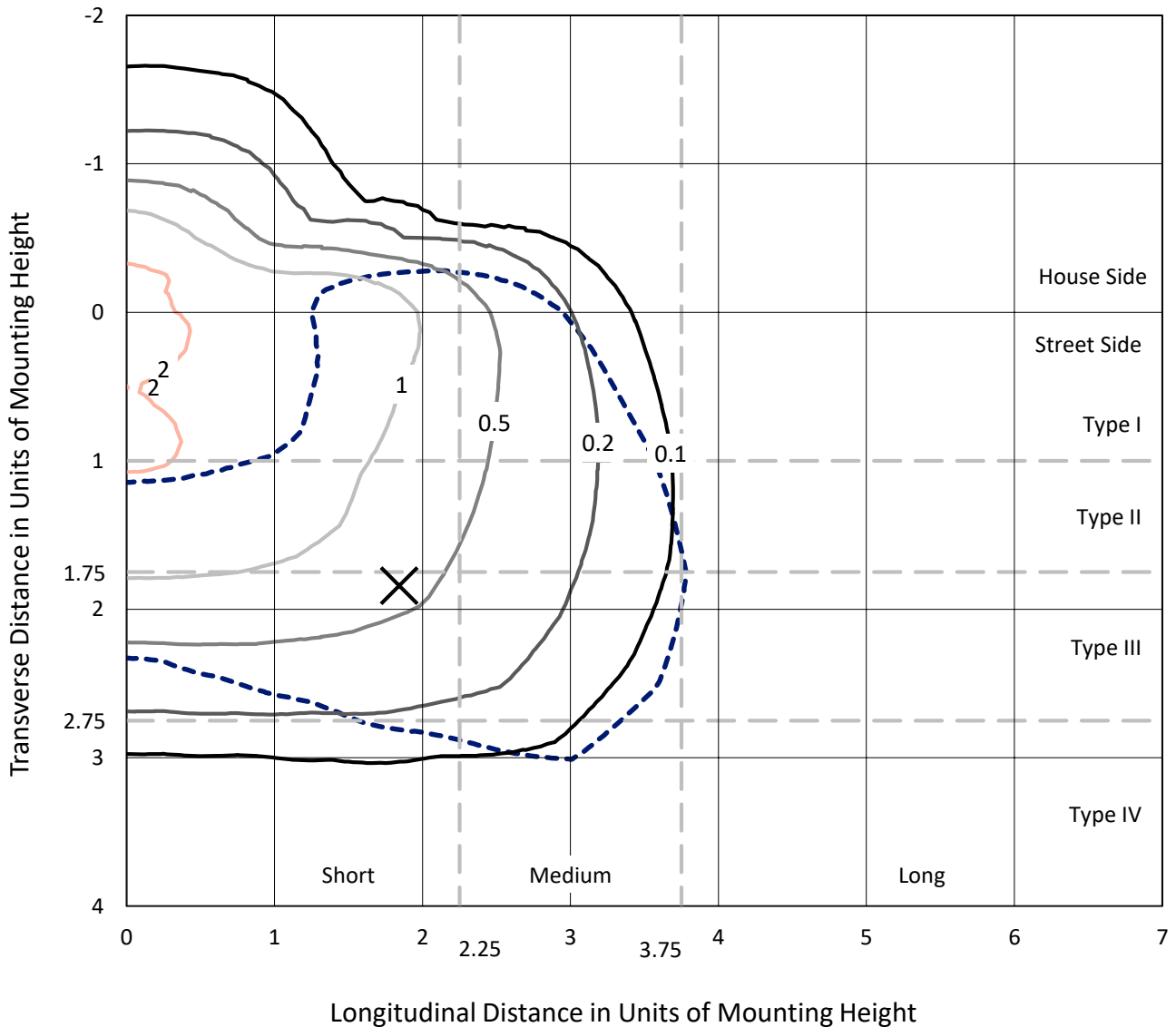


REPORT NUMBER: P401034

CATALOG NUMBER: ENT-SA1A-827-U-T4W

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

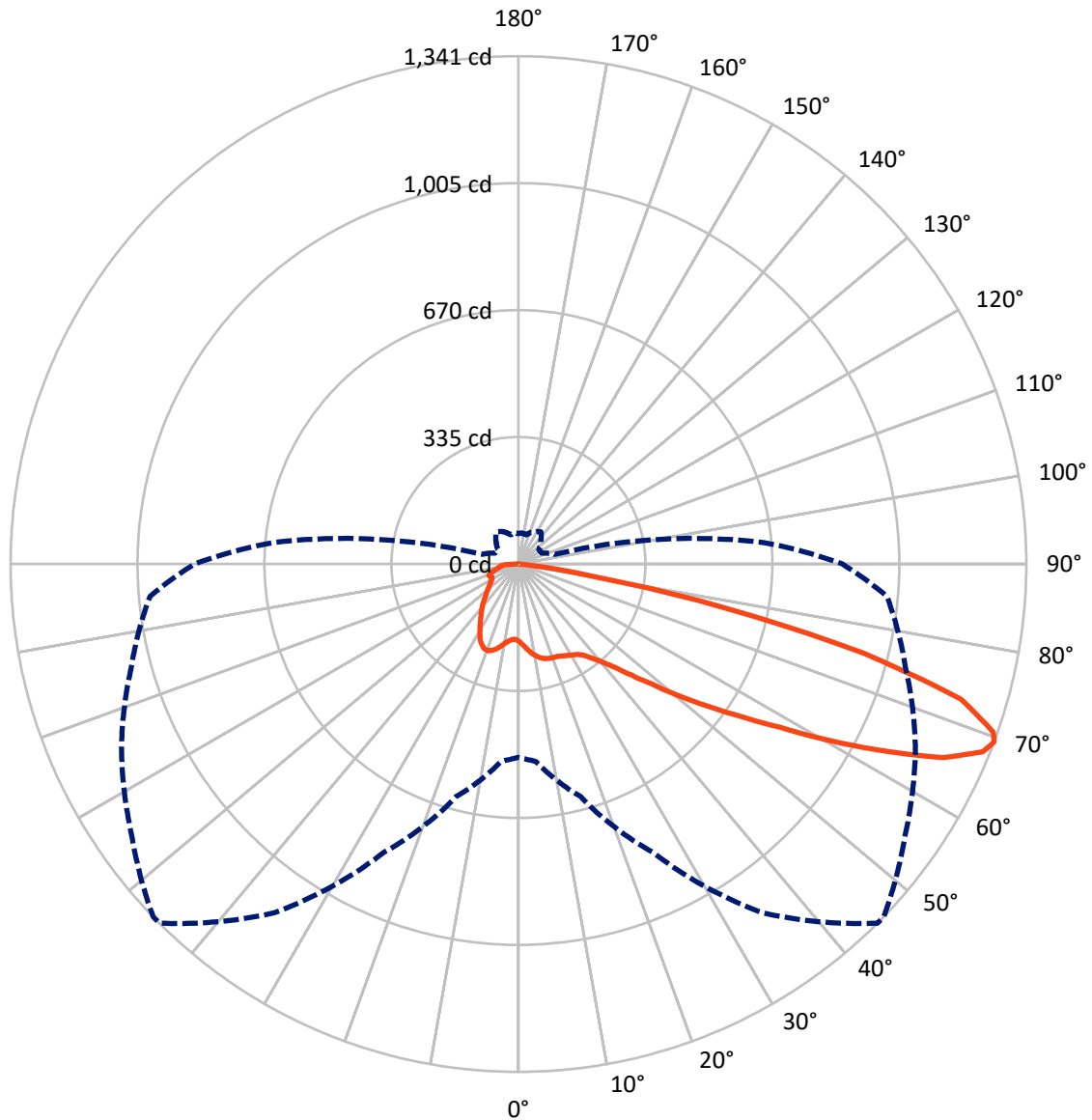


Based on 10 foot mounting height. Maximum calculated value = 2.5 fc  
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P401034

CATALOG NUMBER: ENT-SA1A-827-U-T4W

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P401034

CATALOG NUMBER: ENT-SA1A-827-U-T4W

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	473.0	0.0	473.0
	% Fixture	23.5	0.0	23.5
<b>Street Side</b>	Lumens	1536.0	0.0	1536.0
	% Fixture	76.5	0.0	76.5
<b>Total</b>	Lumens	2009.0	0.0	2009.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.8	1.0
10°-20°	68.9	3.4
20°-30°	116.3	5.8
30°-40°	168.3	8.4
40°-50°	254.2	12.7
50°-60°	428.6	21.3
60°-70°	589.6	29.3
70°-80°	326.7	16.3
80°-90°	35.6	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°	2009.0	100.0
0°-180°	2009.0	100.0



REPORT NUMBER: P401034

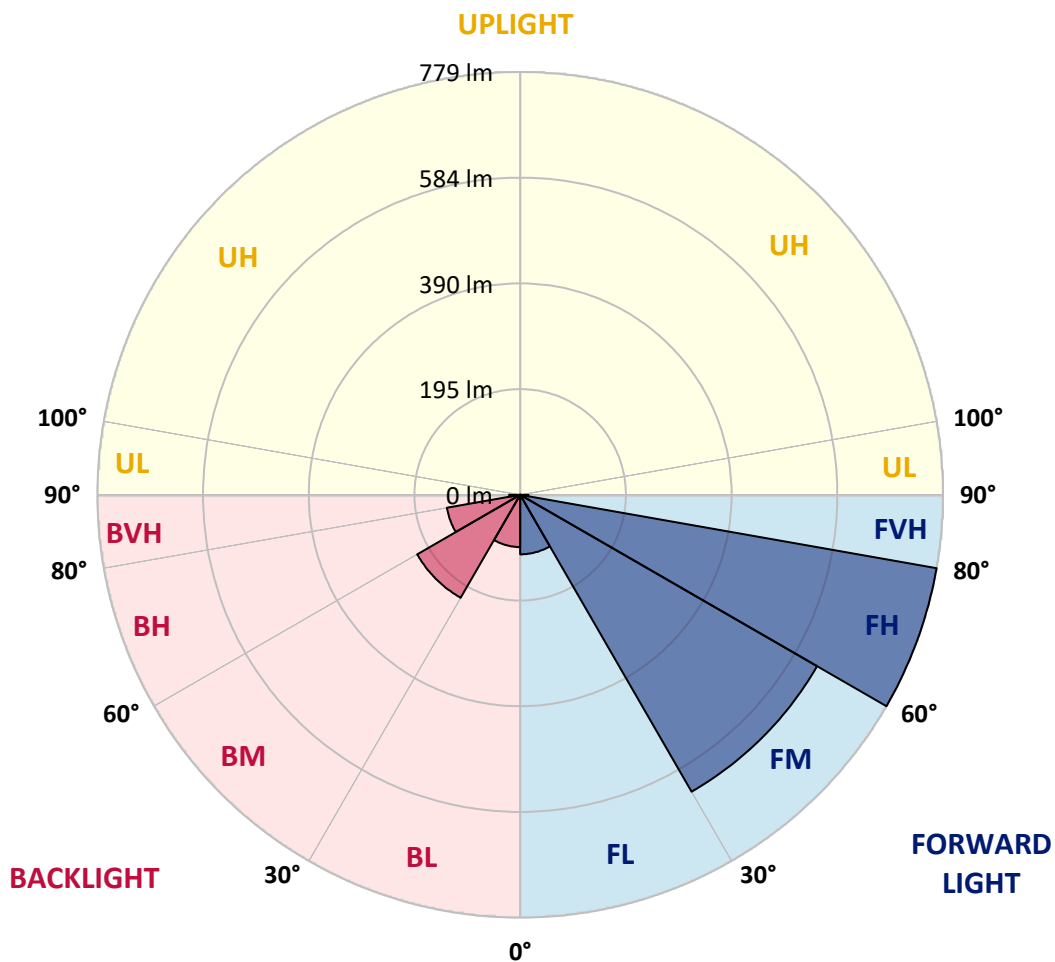
CATALOG NUMBER: ENT-SA1A-827-U-T4W

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	109.7	5.5			
FM (30°-60°)	631.9	31.5			
FH (60°-80°)	779.3	38.8			G1/1800
FVH (80°-90°)	15.2	0.8			G1/100
BL (0°-30°)	96.3	4.8	B0/110		
BM (30°-60°)	219.2	10.9	B0/220		
BH (60°-80°)	137.1	6.8	B1/500		G1/500
BVH (80°-90°)	20.3	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: P401034

CATALOG NUMBER: ENT-SA1A-827-U-T4W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9
2.5°	216.8	216.5	216.8	215.6	214.5	212.8	212.2	210.2	208.8	206.8	205.1
5°	232.8	233.6	233.3	231.9	227.3	223.9	223.9	219.6	215.1	210.8	206.8
7.5°	250.2	250.2	248.5	245.6	241.0	235.9	235.3	229.6	223.1	217.1	210.8
10°	262.8	263.3	260.8	256.8	251.0	245.6	245.0	238.5	232.2	224.5	216.8
12.5°	271.6	271.6	269.3	265.6	258.8	253.6	253.0	247.0	240.5	232.5	223.6
15°	276.2	275.6	273.6	269.6	263.6	259.3	258.5	253.3	247.9	239.9	230.5
17.5°	275.3	275.3	273.6	269.6	265.3	261.9	261.3	257.6	253.6	245.9	236.5
20°	271.6	271.3	270.7	267.6	264.8	263.3	262.8	261.0	258.5	251.9	243.0
22.5°	268.2	267.9	267.0	265.0	263.9	264.8	264.8	264.5	264.2	259.0	250.5
25°	270.2	269.9	268.2	265.3	265.0	269.0	269.3	270.2	270.7	266.5	257.6
27.5°	284.2	283.3	278.5	271.0	268.5	273.6	274.2	276.7	276.2	271.6	263.9
30°	311.6	311.9	301.0	285.0	276.5	278.7	279.0	281.9	281.0	277.3	271.0
32.5°	353.0	353.0	335.3	311.0	289.3	284.7	283.9	286.5	289.9	285.0	278.7
35°	405.6	404.1	382.7	345.3	311.3	295.0	294.5	293.3	299.3	294.7	285.6
37.5°	458.4	453.2	432.4	391.3	342.1	315.0	312.7	309.3	312.7	303.0	295.0
40°	500.9	500.1	482.9	441.3	378.7	339.3	337.6	322.4	324.7	317.0	313.9
42.5°	547.8	548.4	536.9	494.9	422.4	372.1	367.6	344.1	350.7	347.9	346.4
45°	599.2	598.6	590.0	546.1	475.8	417.8	412.1	383.3	396.7	395.0	403.0
47.5°	638.6	641.7	636.9	605.8	539.2	473.2	469.0	433.8	454.1	467.8	482.9
50°	692.3	692.0	678.9	666.0	612.9	544.1	539.8	500.7	529.8	549.8	577.5
52.5°	758.8	756.6	729.4	724.9	702.6	621.5	617.8	576.9	618.6	636.0	692.3
55°	800.5	800.3	786.3	794.3	794.8	707.7	703.1	666.9	714.0	734.0	819.1
57.5°	835.4	835.7	847.4	875.4	894.2	812.5	810.8	766.5	814.2	842.2	942.8
60°	862.2	867.9	900.8	964.8	996.2	946.2	938.8	891.9	923.9	935.1	1037.3
62.5°	851.4	858.8	923.3	1017.6	1098.4	1087.8	1085.3	1017.6	1017.3	1011.6	1107.8
65°	765.7	781.7	883.4	1015.6	1165.8	1231.8	1228.1	1136.1	1104.1	1075.6	1129.0
67.5°	626.6	630.0	752.6	937.9	1165.2	1322.3	1318.3	1222.4	1158.1	1088.1	1067.0
69°	510.1	522.6	636.0	839.7	1124.1	1340.6	1340.6	1246.4	1156.1	1058.1	976.2
70°	441.3	441.8	551.2	761.4	1068.1	1329.8	1332.3	1246.4	1139.8	1019.0	895.6
72.5°	206.8	219.6	288.7	496.9	862.8	1222.4	1228.6	1164.1	1045.3	877.9	672.0
75°	62.0	64.3	96.2	235.6	494.4	941.6	955.6	968.5	851.4	646.3	413.8
77.5°	36.8	36.6	46.6	80.0	228.8	558.3	564.6	619.5	552.3	359.3	187.9
80°	18.0	18.6	24.8	38.8	85.7	202.8	223.1	289.6	244.8	140.5	68.8
82.5°	6.0	6.6	10.3	15.7	36.3	65.4	72.3	90.8	78.3	51.1	29.4
85°	0.0	0.0	0.3	0.6	2.0	4.9	4.9	10.9	16.3	18.0	9.7
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: P401034

CATALOG NUMBER: ENT-SA1A-827-U-T4W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9	203.9
2.5°	204.2	203.6	202.5	201.3	200.8	199.3	199.6	199.1	198.8	198.8	199.1
5°	204.8	203.9	202.2	201.1	199.9	199.3	200.8	201.3	201.9	201.9	202.2
7.5°	208.2	206.5	204.5	203.1	203.3	204.2	206.5	208.2	209.1	209.6	210.2
10°	213.9	211.9	209.1	208.8	209.3	211.6	214.8	217.3	219.6	221.1	221.1
12.5°	219.9	217.3	215.1	215.6	218.2	221.6	224.8	227.6	229.6	231.1	231.3
15°	226.5	223.9	221.6	223.1	227.3	231.3	234.2	235.3	236.2	237.6	237.9
17.5°	232.5	230.2	228.2	231.9	235.6	238.8	239.6	239.0	237.9	238.8	239.3
20°	238.8	236.8	235.6	239.6	242.2	242.5	240.2	237.6	234.8	234.8	235.0
22.5°	246.5	243.9	243.3	245.3	244.5	241.0	235.3	231.3	227.3	226.8	227.6
25°	253.9	251.3	251.0	249.6	242.2	233.3	225.6	221.1	217.9	218.2	219.9
27.5°	261.3	259.6	259.9	252.2	235.6	222.2	211.9	208.2	209.1	209.6	211.3
30°	268.7	268.7	269.9	252.2	226.5	206.5	196.8	196.5	198.8	200.5	202.5
32.5°	277.3	279.9	277.9	249.0	214.2	190.5	182.8	183.4	185.9	188.8	190.5
35°	285.6	291.6	285.9	241.9	197.3	175.9	169.6	168.8	170.8	173.4	174.2
37.5°	298.7	308.4	292.7	230.8	179.9	163.1	156.8	154.5	152.5	154.5	154.2
40°	321.6	333.3	297.9	212.2	163.1	151.1	144.5	140.2	135.4	131.1	131.1
42.5°	358.1	365.9	300.7	189.6	146.2	139.1	132.5	126.2	118.8	111.1	111.1
45°	417.8	419.5	301.9	165.6	130.8	127.1	120.2	114.2	104.5	96.8	95.1
47.5°	497.5	490.1	304.7	142.5	117.4	116.5	110.8	104.0	93.4	86.3	85.4
50°	604.6	572.6	317.3	124.0	106.5	107.4	103.1	95.1	85.1	80.0	78.8
52.5°	725.1	676.9	327.0	109.1	97.1	99.7	96.5	88.8	80.3	76.0	75.1
55°	856.8	777.1	324.7	99.1	90.0	92.8	91.7	85.1	77.4	73.7	72.8
57.5°	964.2	847.7	304.7	90.2	82.8	86.8	88.0	82.8	75.7	72.3	71.4
60°	1044.7	886.2	263.6	82.8	77.1	82.0	85.1	81.4	75.4	73.4	72.5
62.5°	1081.3	882.8	210.2	77.1	72.8	78.5	85.4	83.7	79.7	81.1	81.4
65°	1060.7	839.7	157.7	72.8	70.3	79.1	90.2	90.2	84.3	86.8	87.1
67.5°	955.3	726.9	114.8	69.7	67.7	82.0	99.4	93.7	82.3	84.3	83.4
69°	855.1	650.3	98.5	68.0	65.7	83.4	103.4	94.2	80.0	82.3	80.0
70°	781.4	581.2	88.5	66.5	64.8	83.4	104.5	93.7	78.8	80.5	78.0
72.5°	556.1	403.6	72.8	63.7	61.7	77.1	102.5	90.5	75.7	73.7	68.8
75°	323.3	223.1	62.0	60.5	54.5	67.7	97.4	87.1	72.5	68.8	65.4
77.5°	135.7	99.7	52.8	55.1	48.3	60.3	91.1	83.7	68.8	63.7	62.0
80°	55.1	49.7	44.0	47.7	42.0	53.1	84.0	78.0	63.4	58.3	55.7
82.5°	28.8	27.4	33.7	38.6	34.8	48.8	79.1	74.0	58.8	53.7	50.6
85°	8.6	11.4	19.1	26.3	26.6	44.0	76.8	68.5	51.1	44.3	43.7
87.5°	0.6	2.3	6.6	13.7	17.4	33.7	62.3	56.3	41.4	34.8	35.1
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)