

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: P401048

Luminaire Tested: **ENT-SA1A-830-U-T3**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401048  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1A-830-U-T3  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2212 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

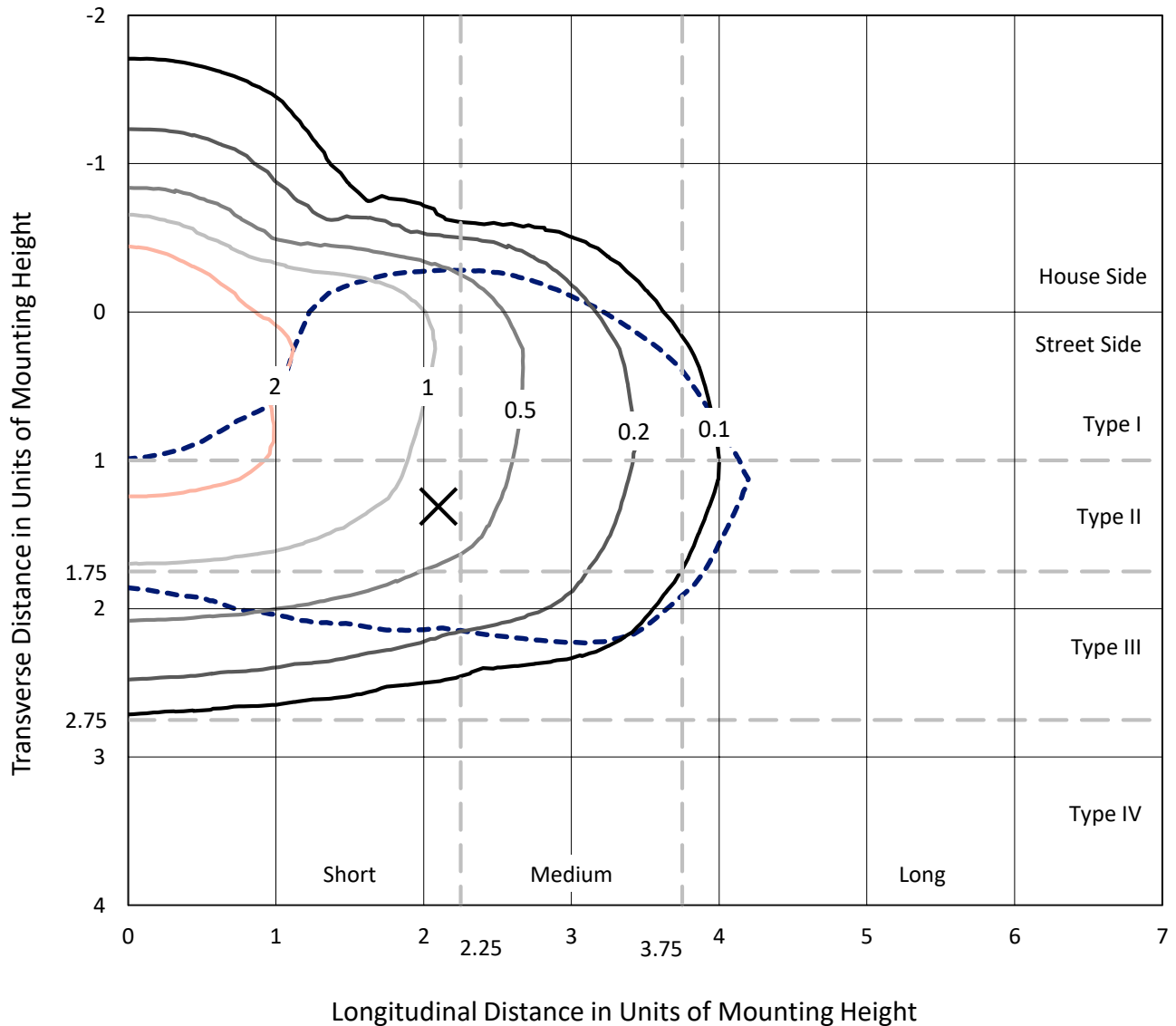
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

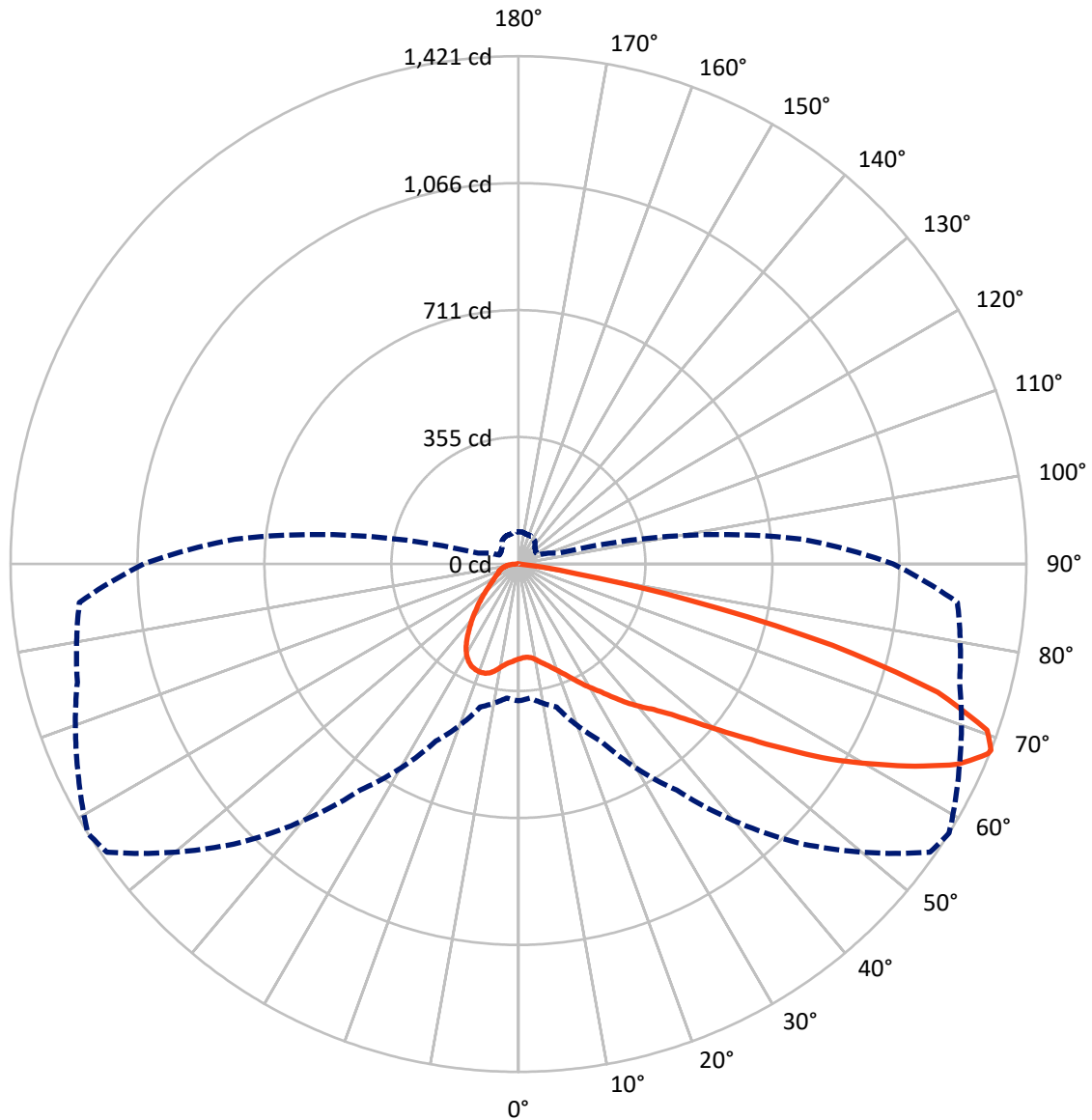
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.9 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	517.9	0.0	517.9
	% Fixture	23.4	0.0	23.4
<b>Street Side</b>	Lumens	1694.1	0.0	1694.1
	% Fixture	76.6	0.0	76.6
<b>Total</b>	Lumens	2212.0	0.0	2212.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.2	1.2
10°-20°	85.6	3.9
20°-30°	153.9	7.0
30°-40°	226.1	10.2
40°-50°	331.6	15.0
50°-60°	495.6	22.4
60°-70°	579.5	26.2
70°-80°	285.7	12.9
80°-90°	27.9	1.3
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°	2212.0	100.0
0°-180°	2212.0	100.0



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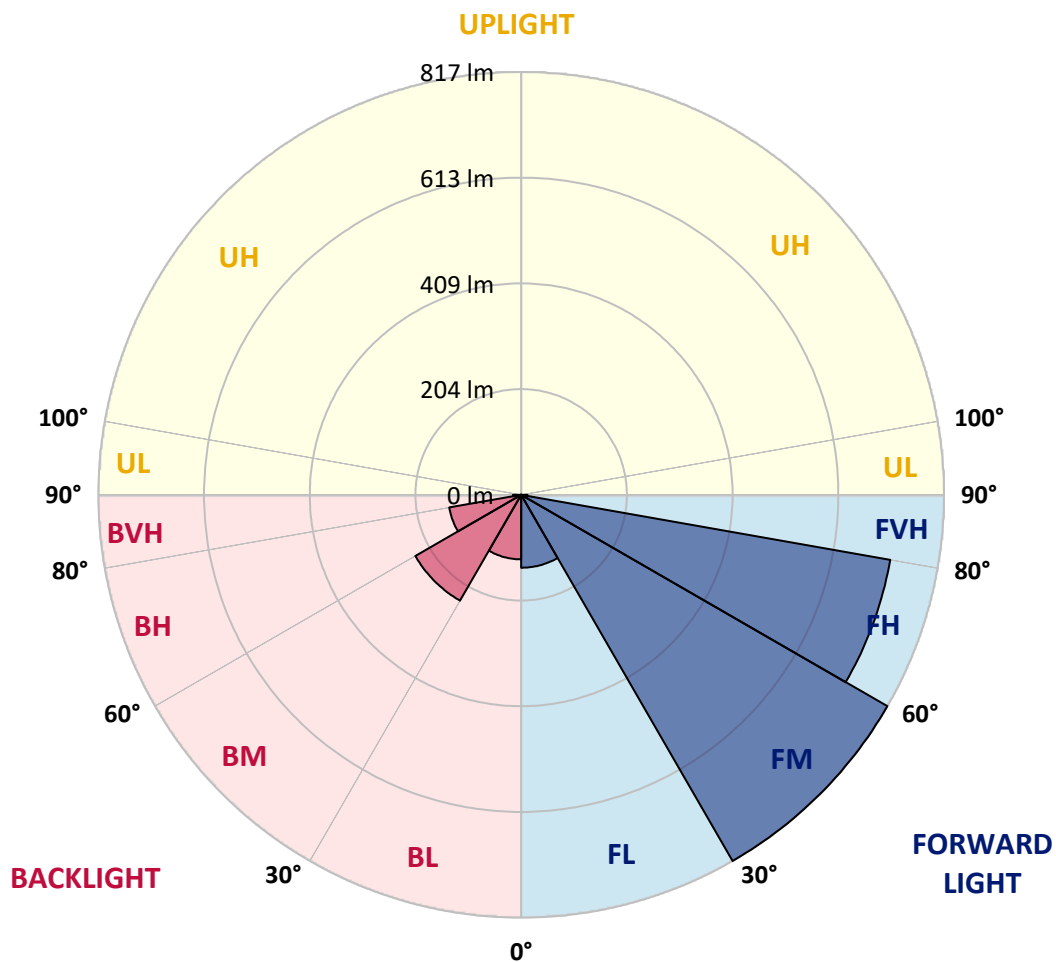
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	140.9	6.4			
FM (30°-60°)	817.0	36.9			
FH (60°-80°)	724.1	32.7			G1/1800
FVH (80°-90°)	12.0	0.5			G1/100
BL (0°-30°)	124.7	5.6	B1/500		
BM (30°-60°)	236.2	10.7	B1/1000		
BH (60°-80°)	141.1	6.4	B1/500		G1/500
BVH (80°-90°)	15.9	0.7			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6
2.5°	259.1	259.1	260.1	260.4	261.0	261.6	262.2	262.5	263.5	264.7	265.3
5°	257.0	257.3	257.9	258.2	259.1	260.4	261.3	261.9	263.5	265.9	267.5
7.5°	261.9	262.9	263.2	263.5	263.8	264.7	264.7	265.0	266.6	269.0	271.2
10°	270.0	270.6	271.5	272.4	273.4	274.0	272.1	272.4	273.0	275.5	278.6
12.5°	280.1	280.1	280.5	281.7	282.6	284.5	282.6	282.6	282.6	284.8	288.5
15°	291.6	291.0	291.0	292.2	292.5	293.7	292.8	292.8	294.0	296.2	299.9
17.5°	304.5	305.5	304.5	303.9	303.0	303.6	304.2	304.9	307.3	310.7	312.9
20°	323.4	324.9	324.3	321.8	317.8	316.0	318.1	319.4	324.3	328.3	328.6
22.5°	353.4	352.4	351.5	347.2	339.1	334.2	334.5	336.4	344.1	350.3	347.2
25°	381.1	382.1	382.1	375.9	365.4	355.2	356.1	357.1	364.8	370.3	362.0
27.5°	414.8	414.2	413.9	405.6	392.9	383.0	377.8	380.2	385.8	387.9	371.9
30°	449.7	452.2	449.7	438.0	425.9	413.3	402.8	402.2	404.9	404.6	383.6
32.5°	491.7	489.6	488.6	475.0	459.9	443.2	430.0	427.8	426.2	424.1	397.5
35°	524.2	526.9	526.9	515.2	497.3	480.9	460.2	458.4	454.7	447.6	415.7
37.5°	562.5	561.8	564.0	550.4	532.5	516.7	497.6	492.3	484.0	473.5	437.4
40°	599.8	601.4	606.3	589.9	573.6	561.2	534.0	524.5	511.8	502.2	468.9
42.5°	650.8	653.0	654.8	641.2	621.8	610.6	568.6	556.6	549.5	547.6	510.6
45°	712.6	716.3	717.8	705.5	694.3	667.8	612.2	601.1	593.3	601.4	567.4
47.5°	771.9	770.0	777.1	776.8	778.1	746.2	674.9	658.2	650.8	671.2	632.6
50°	805.2	808.0	823.5	839.2	861.1	838.3	747.5	730.8	722.1	747.5	709.2
52.5°	822.5	826.2	846.9	891.1	937.7	926.9	834.9	816.4	808.9	833.6	791.3
55°	824.1	826.2	854.0	922.6	996.1	999.5	934.7	917.0	906.9	922.9	880.9
57.5°	798.4	792.0	839.8	927.2	1033.5	1075.2	1044.3	1031.6	1002.9	1020.2	992.1
60°	752.7	759.2	806.2	908.1	1049.2	1134.2	1154.3	1135.1	1101.8	1108.9	1111.9
62.5°	683.5	691.9	740.7	863.6	1036.6	1184.2	1255.9	1246.3	1201.5	1197.8	1203.4
65°	585.0	580.1	634.4	766.3	976.7	1200.9	1355.6	1351.6	1298.2	1254.6	1256.8
67.5°	421.9	417.3	455.3	591.5	814.5	1138.8	1408.8	1417.7	1356.6	1279.7	1246.3
68°	383.0	376.5	414.5	546.7	772.8	1103.0	1406.0	1421.4	1360.9	1278.1	1233.3
70°	220.5	210.0	246.8	356.7	568.9	928.5	1349.2	1391.8	1350.7	1248.2	1148.4
72.5°	69.2	69.2	95.4	144.2	279.2	587.5	1154.3	1226.8	1235.5	1134.5	954.4
75°	43.2	43.2	49.7	68.3	111.2	249.3	796.3	906.9	981.6	955.0	695.9
77.5°	29.3	28.7	33.0	42.3	62.1	80.0	399.7	491.1	600.5	652.0	407.1
80°	16.1	16.4	20.4	25.3	35.2	37.1	117.4	165.9	264.4	309.8	154.4
82.5°	9.3	9.0	9.9	11.1	15.4	16.1	33.7	41.4	69.2	64.2	41.4
85°	0.0	0.3	0.3	0.3	0.6	1.5	4.3	6.5	10.5	14.5	10.2
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6	265.6
2.5°	265.9	266.9	268.4	269.6	270.3	269.6	271.8	271.5	272.1	272.1	272.7
5°	268.7	270.0	272.7	274.3	275.8	276.4	278.9	279.5	280.8	281.4	281.1
7.5°	272.7	274.3	277.7	280.5	282.6	284.2	288.2	290.0	291.9	292.5	293.1
10°	280.1	282.3	286.0	289.4	292.5	294.7	298.1	300.5	302.4	303.0	303.6
12.5°	290.0	292.5	297.1	301.8	305.2	306.4	306.1	305.5	305.5	305.2	305.5
15°	301.5	303.9	309.8	314.1	314.4	310.4	304.9	302.1	301.5	301.5	301.8
17.5°	314.7	317.8	321.5	324.0	318.1	308.3	301.8	299.0	298.4	298.1	297.4
20°	329.9	331.7	333.0	329.9	316.9	305.5	298.1	294.0	291.0	290.6	289.4
22.5°	345.9	345.3	343.8	332.7	313.5	299.0	288.8	281.4	277.4	277.1	275.8
25°	357.7	355.2	350.6	333.3	307.3	288.5	274.0	262.2	257.0	254.5	255.1
27.5°	365.4	360.1	352.1	330.2	296.5	272.4	252.0	236.6	228.9	227.6	228.6
30°	374.7	366.3	353.4	322.5	281.1	249.9	223.3	207.9	203.5	201.4	202.0
32.5°	385.8	375.0	357.4	310.7	261.6	223.6	194.9	184.1	179.1	175.1	176.4
35°	400.3	386.7	363.9	294.0	236.9	195.8	174.5	164.6	155.7	151.3	151.7
37.5°	417.3	401.8	369.4	274.6	210.0	174.8	156.9	145.2	134.1	125.7	124.2
40°	444.5	431.8	374.0	253.0	184.4	157.5	139.6	126.3	115.8	107.5	106.6
42.5°	489.9	467.9	374.4	227.0	162.5	142.7	125.4	110.9	99.1	92.0	91.7
45°	543.3	509.3	367.9	199.2	143.3	127.9	112.7	96.4	89.6	84.9	84.3
47.5°	606.6	556.9	353.7	173.3	126.9	113.4	99.8	89.9	84.9	81.5	81.5
50°	678.9	612.8	339.5	151.0	111.2	101.6	92.4	87.1	83.4	80.3	80.0
52.5°	760.4	678.9	334.8	128.5	98.2	90.8	89.9	84.9	81.9	79.7	79.1
55°	857.7	753.0	339.1	110.9	88.0	86.5	88.3	84.3	82.2	78.8	77.8
57.5°	970.2	825.3	334.5	96.1	80.9	82.5	86.5	84.3	82.5	78.1	76.9
60°	1076.1	889.9	303.0	83.7	74.1	77.5	84.0	81.5	78.8	77.8	77.2
62.5°	1132.9	910.9	241.5	74.1	68.9	72.6	80.0	76.9	75.1	77.2	77.5
65°	1133.6	887.1	177.6	67.0	64.6	68.3	76.0	75.1	76.3	81.2	82.2
67.5°	1070.6	814.8	125.4	60.5	60.2	64.9	77.8	84.0	84.9	89.9	89.9
68°	1048.9	796.9	116.4	59.6	59.3	64.9	79.4	85.6	86.2	90.8	90.5
70°	930.3	673.7	84.3	55.9	57.8	69.5	87.7	89.9	86.2	91.4	91.1
72.5°	727.1	498.2	63.0	51.9	55.0	68.6	88.3	86.2	80.6	81.9	80.3
75°	491.4	317.5	51.9	47.6	48.8	58.1	80.3	81.2	74.7	73.5	71.7
77.5°	257.3	148.9	42.0	42.3	43.6	50.3	71.7	73.8	68.0	64.2	63.6
80°	94.8	59.0	34.3	37.4	38.0	44.2	61.5	64.9	59.3	56.5	55.9
82.5°	34.6	29.3	28.4	32.7	32.1	37.7	53.7	56.2	50.3	47.6	46.0
85°	9.6	10.8	17.9	25.6	25.0	29.3	43.2	45.4	40.5	33.4	32.4
87.5°	0.6	2.2	7.1	15.1	15.8	18.2	31.2	34.3	30.0	24.7	24.4
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)