

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: P401028

Luminaire Tested: **ENT-SA1A-827-U-T2**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401028  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1A-827-U-T2  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2000 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

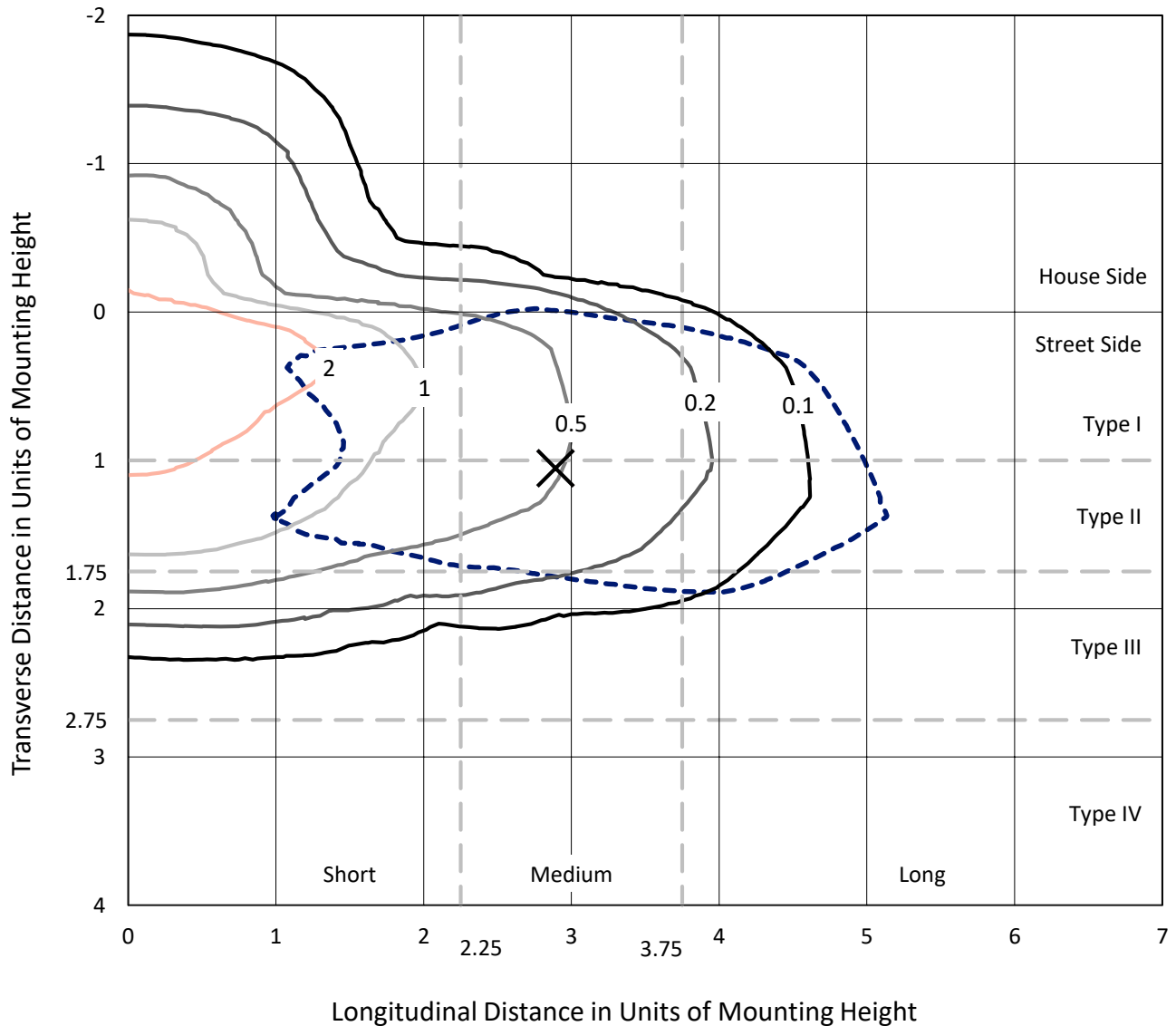
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

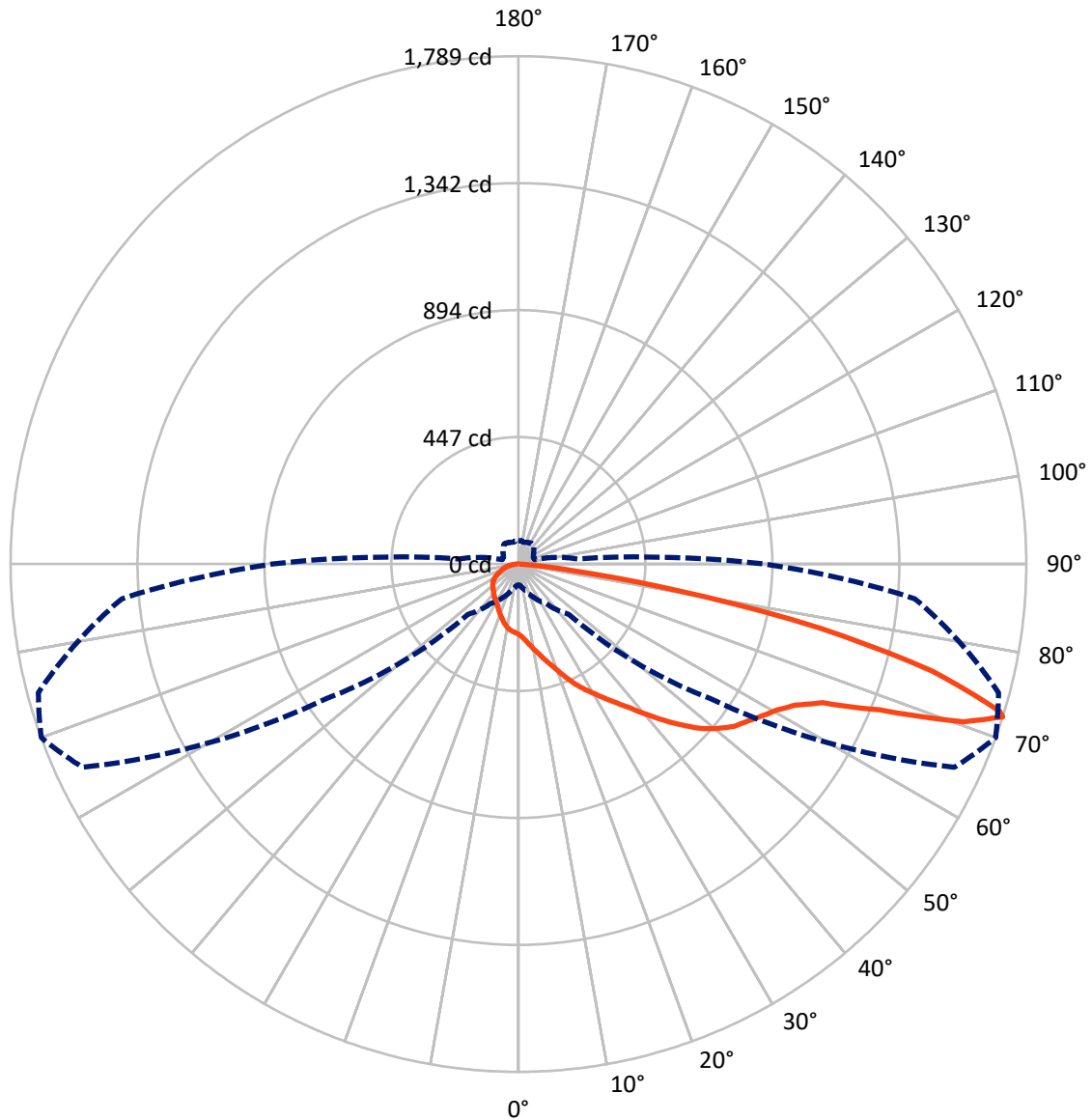
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	371.6	0.0	371.6
	% Fixture	18.6	0.0	18.6
<b>Street Side</b>	Lumens	1628.4	0.0	1628.4
	% Fixture	81.4	0.0	81.4
<b>Total</b>	Lumens	2000.0	0.0	2000.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	1.2
10°-20°	79.9	4.0
20°-30°	141.4	7.1
30°-40°	210.3	10.5
40°-50°	305.1	15.3
50°-60°	416.8	20.8
60°-70°	456.3	22.8
70°-80°	324.6	16.2
80°-90°	40.8	2.0
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°	2000.0	100.0
0°-180°	2000.0	100.0



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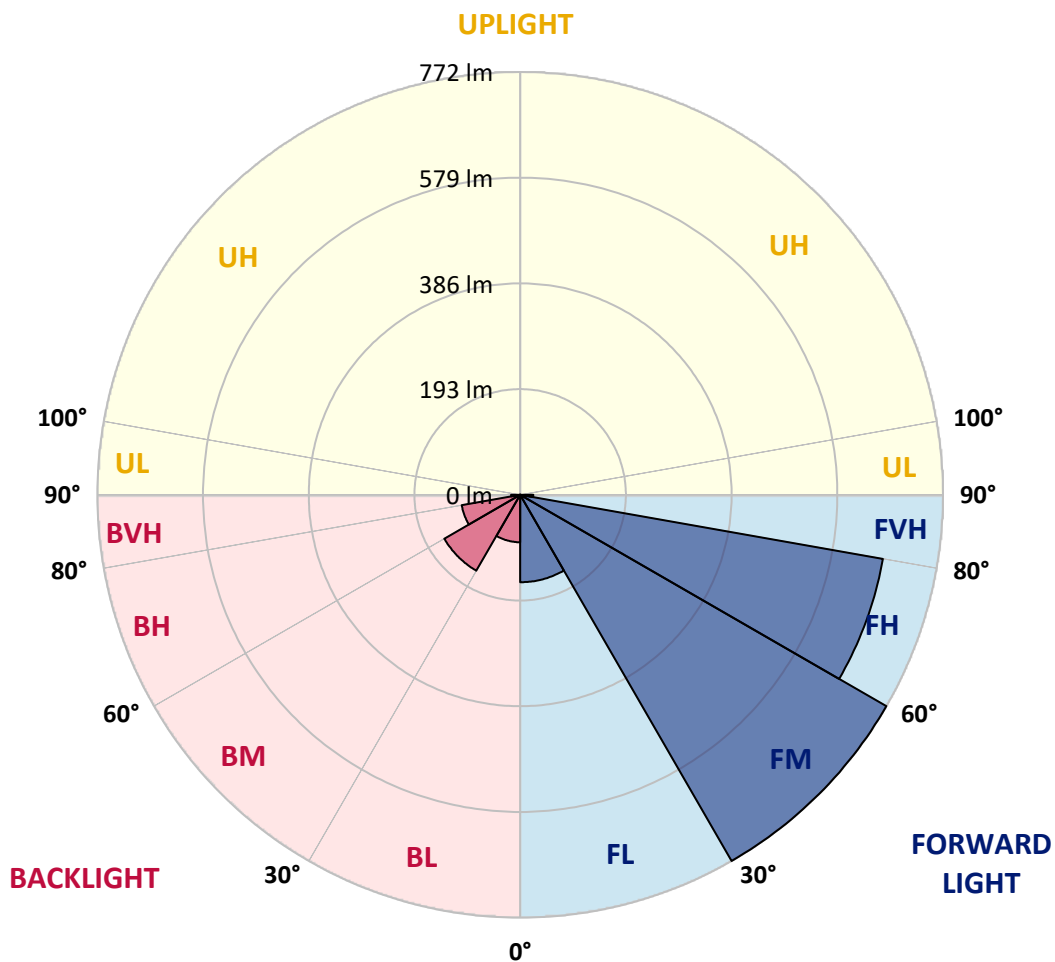
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	159.6	8.0			
FM	(30°-60°)	772.1	38.6			
FH	(60°-80°)	672.5	33.6			G1/1800
FVH	(80°-90°)	24.1	1.2			G1/100
BL	(0°-30°)	86.6	4.3	B0/110		
BM	(30°-60°)	160.0	8.0	B0/220		
BH	(60°-80°)	108.3	5.4	B0/110		G0/110
BVH	(80°-90°)	16.7	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7
2.5°	275.4	274.0	274.3	271.7	270.3	266.8	263.1	259.1	257.1	255.7	250.8
5°	302.3	302.3	303.4	301.4	296.0	290.3	283.7	274.8	271.1	266.0	256.3
7.5°	324.5	325.1	325.1	324.5	319.7	313.4	304.8	294.0	288.0	280.5	265.4
10°	336.0	337.4	338.5	339.4	338.8	335.1	325.4	314.2	306.0	296.3	276.0
12.5°	341.7	342.2	344.2	348.5	352.0	354.8	347.7	334.5	326.2	314.5	287.4
15°	348.0	348.0	350.0	355.4	362.0	369.7	368.8	358.5	349.7	335.1	302.0
17.5°	352.0	353.1	356.8	362.5	371.7	384.5	391.1	385.4	374.0	358.5	317.7
20°	349.7	350.5	358.0	369.1	380.8	397.4	414.0	414.0	403.1	385.4	335.1
22.5°	354.0	355.4	360.5	371.1	387.1	408.5	435.7	445.1	435.7	416.2	355.4
25°	370.5	370.0	374.2	378.5	392.2	418.8	454.2	478.5	469.9	448.5	375.1
27.5°	394.5	394.5	396.8	396.5	401.4	427.4	470.5	507.9	500.8	475.1	391.4
30°	422.2	422.8	422.2	422.0	421.1	439.1	485.1	534.2	530.5	505.1	406.2
32.5°	455.9	457.4	455.1	449.4	445.9	455.9	497.4	563.6	564.8	534.8	420.8
35°	498.2	500.5	491.9	483.7	475.1	479.7	511.7	591.4	602.8	568.5	438.5
37.5°	540.5	544.2	542.8	520.5	508.5	508.2	532.8	625.9	645.1	612.5	463.7
40°	576.2	579.4	581.1	560.8	544.2	543.7	563.9	661.9	697.1	663.1	493.4
42.5°	599.9	602.8	607.9	595.9	580.5	587.6	598.2	697.6	753.1	724.8	529.9
45°	625.6	627.9	631.1	624.2	616.2	636.8	641.6	737.3	809.0	791.1	572.8
47.5°	653.1	655.4	657.1	651.9	649.1	677.9	684.2	777.9	865.6	859.6	614.5
50°	683.3	684.2	685.9	683.3	684.2	715.3	719.3	813.6	910.5	931.0	657.9
52.5°	735.3	736.5	737.1	724.8	720.5	739.1	747.6	851.6	949.9	990.5	696.2
55°	776.5	780.5	798.5	790.5	780.2	755.9	771.1	882.2	977.9	1045.9	736.2
57.5°	742.8	751.9	796.8	834.5	863.3	805.3	798.8	913.6	1010.2	1093.6	782.8
60°	644.8	658.2	723.3	801.9	895.3	918.8	855.6	952.7	1045.3	1143.3	832.8
62.5°	447.1	460.8	550.8	676.2	841.3	983.6	1011.3	1022.2	1094.2	1194.1	897.9
65°	214.3	228.3	302.5	434.8	664.5	941.9	1192.7	1166.2	1176.4	1258.7	993.9
67.5°	136.3	143.7	172.8	236.8	386.5	733.6	1257.9	1453.0	1371.3	1407.6	1185.0
70°	99.7	101.4	126.6	164.0	229.4	428.5	1110.7	1727.5	1663.5	1659.5	1415.6
72°	73.7	76.6	96.0	130.8	169.7	250.5	826.5	1694.1	1788.7	1750.7	1401.8
72.5°	69.4	71.7	88.6	123.7	160.3	220.0	740.5	1655.2	1773.2	1753.2	1375.6
75°	50.6	52.3	60.6	88.0	124.0	127.4	395.4	1270.4	1505.8	1673.8	1247.0
77.5°	34.9	36.0	40.3	54.0	84.8	86.3	167.7	867.3	1086.7	1338.4	959.0
80°	21.1	21.7	24.3	29.4	54.0	51.1	69.1	453.4	567.1	727.6	444.8
82.5°	8.9	9.1	10.6	11.7	22.9	24.3	28.0	148.0	187.7	227.4	128.3
85°	0.0	0.0	0.3	0.3	0.6	2.6	4.0	18.3	27.7	33.1	23.1
87.5°	0.0	0.0	0.3	0.3	0.3	0.6	0.6	0.9	1.1	1.1	1.7
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°	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7	247.7
2.5°	248.5	247.4	244.0	241.1	238.8	235.1	234.8	232.0	232.0	231.1	230.5
5°	252.5	248.8	242.0	235.7	231.1	225.7	223.1	220.0	218.0	216.8	217.1
7.5°	257.7	251.4	239.7	229.1	220.5	213.7	209.7	207.1	205.7	205.1	205.1
10°	264.8	255.1	236.0	220.0	209.1	204.0	202.0	201.7	202.0	202.3	202.5
12.5°	272.8	257.7	229.1	209.1	200.5	198.5	199.7	202.3	204.5	205.4	205.4
15°	281.1	259.4	219.7	199.1	194.0	196.0	200.0	204.8	208.5	210.8	211.4
17.5°	289.7	259.7	209.7	190.0	188.3	193.4	200.5	208.3	214.3	218.0	218.5
20°	298.8	259.1	198.0	181.7	182.6	191.1	201.1	211.7	219.7	224.5	225.1
22.5°	308.8	256.8	186.5	173.7	177.7	188.8	200.5	212.8	221.4	227.1	228.3
25°	318.5	252.3	175.1	166.6	174.3	186.5	197.7	208.3	216.5	222.0	223.4
27.5°	323.7	242.5	164.3	161.1	171.7	183.1	191.1	198.3	202.8	206.3	207.7
30°	324.5	228.8	155.4	157.4	168.8	178.3	182.8	184.0	183.1	184.3	182.8
32.5°	322.8	214.0	148.3	154.6	164.3	171.4	172.6	169.1	164.0	156.8	157.1
35°	321.7	197.7	142.6	150.6	158.3	162.8	160.8	155.4	145.7	137.1	136.6
37.5°	323.7	182.8	137.7	145.4	150.6	152.6	149.7	142.6	134.0	126.6	125.7
40°	329.4	172.0	133.1	139.7	142.3	143.7	140.3	134.0	130.6	125.1	124.3
42.5°	340.5	164.6	128.8	133.4	134.6	136.0	132.6	128.3	131.4	130.3	130.3
45°	356.0	161.1	125.1	127.4	128.6	130.8	128.8	125.1	128.6	122.0	120.8
47.5°	376.0	162.3	122.6	121.4	124.8	128.8	126.6	122.0	120.8	109.1	107.1
50°	397.1	168.3	120.0	116.6	120.8	126.3	123.4	116.3	109.4	103.4	102.3
52.5°	422.0	178.3	117.7	111.1	116.3	123.4	121.4	113.7	106.6	102.3	101.4
55°	449.4	188.0	114.8	104.8	110.3	122.6	122.0	112.0	102.6	100.6	100.0
57.5°	480.2	196.0	111.4	97.7	104.3	120.0	119.4	108.0	101.4	99.7	99.4
60°	518.8	205.4	105.4	89.4	98.3	115.1	114.6	106.0	98.8	97.4	96.8
62.5°	571.4	222.8	95.1	81.7	92.0	106.6	110.0	102.0	95.1	94.8	94.8
65°	657.9	256.5	84.6	75.1	84.8	98.3	104.0	97.4	91.7	93.1	93.1
67.5°	821.6	302.0	73.7	68.8	78.0	90.3	98.8	92.8	88.0	90.8	90.8
70°	947.9	285.1	65.1	62.8	71.1	83.1	92.3	88.0	83.4	88.3	87.7
72°	864.8	208.8	59.4	58.0	65.4	77.1	86.6	83.4	78.6	82.6	81.4
72.5°	830.2	189.7	57.7	56.6	63.7	76.0	85.4	82.3	77.1	81.1	79.4
75°	724.2	160.0	50.3	49.7	56.6	68.3	78.0	76.3	71.1	73.4	71.7
77.5°	599.4	134.8	42.3	43.4	48.3	60.9	70.3	68.6	63.7	63.4	63.1
80°	281.1	75.1	34.9	35.7	40.6	52.0	60.6	59.4	54.9	54.3	53.4
82.5°	81.4	36.0	26.9	27.4	32.6	42.6	52.0	51.4	48.0	47.1	45.1
85°	15.1	11.7	14.6	17.1	23.7	35.4	47.4	46.3	41.1	37.4	34.6
87.5°	0.9	2.3	4.9	8.3	15.1	26.6	38.3	37.4	32.9	28.3	28.6
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)