

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: P401022

Luminaire Tested: **ENT-SA1A-827-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-827-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1905 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - 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

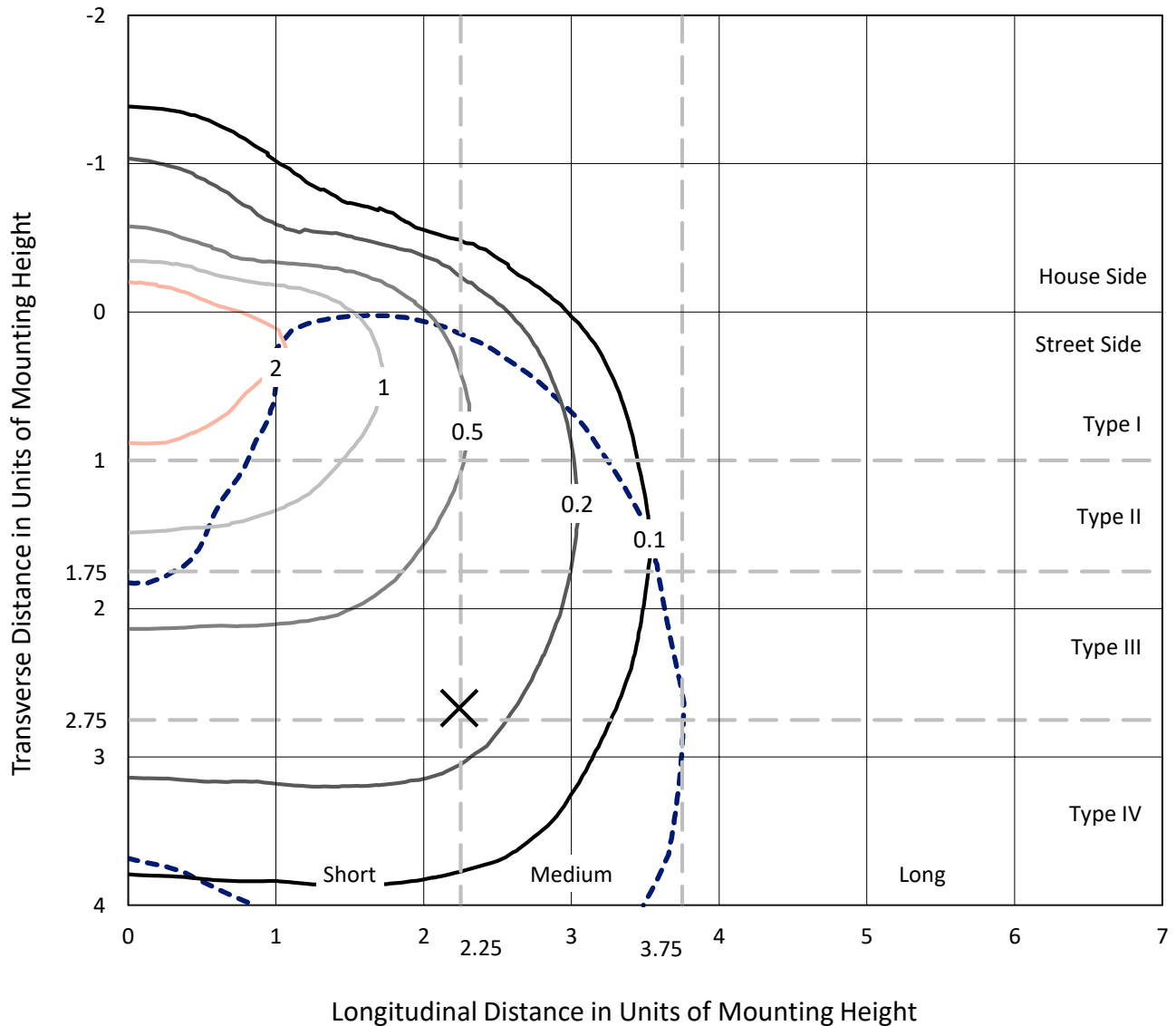


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Iso-Footcandle Lines of Horizontal Illumination

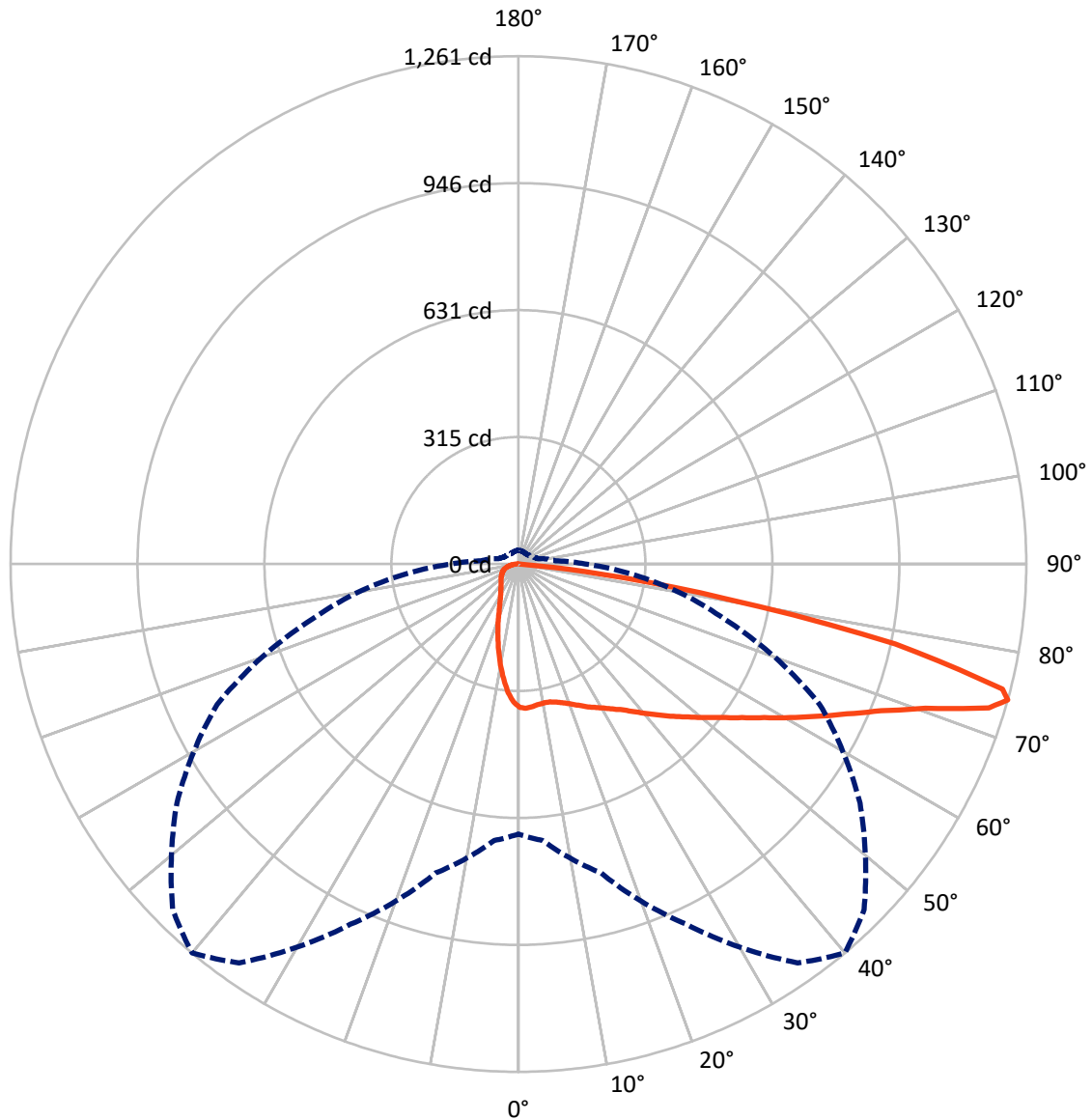
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	297.0	0.0	297.0
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	1608.0	0.0	1608.0
	% Fixture	84.4	0.0	84.4
Total	Lumens	1905.0	0.0	1905.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	1.6
10°-20°	80.8	4.2
20°-30°	124.0	6.5
30°-40°	179.1	9.4
40°-50°	257.6	13.5
50°-60°	355.7	18.7
60°-70°	448.5	23.5
70°-80°	388.9	20.4
80°-90°	38.9	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°	1905.0	100.0
0°-180°	1905.0	100.0



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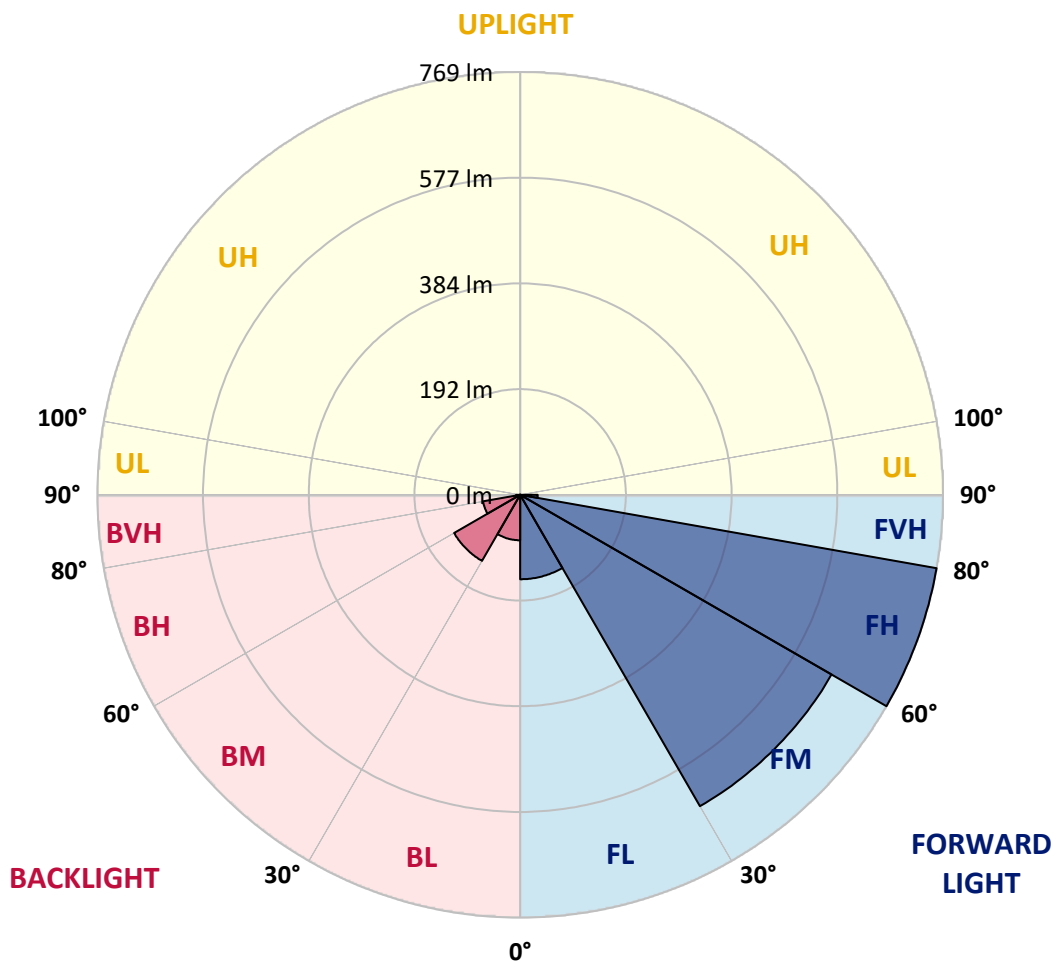
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	153.6	8.1			
FM (30°-60°)	653.7	34.3			
FH (60°-80°)	768.9	40.4			G1/1800
FVH (80°-90°)	31.8	1.7			G1/100
BL (0°-30°)	82.7	4.3	B0/110		
BM (30°-60°)	138.7	7.3	B0/220		
BH (60°-80°)	68.6	3.6	B0/110		G0/110
BVH (80°-90°)	7.1	0.4			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6
2.5°	360.2	359.9	360.7	360.2	359.3	358.7	358.4	356.7	356.2	354.5	352.2
5°	358.7	358.7	358.7	358.2	356.4	355.9	355.3	352.7	351.0	348.2	343.9
7.5°	353.9	354.7	354.5	354.2	352.7	352.2	351.3	348.2	345.9	341.6	336.2
10°	349.3	349.3	349.6	350.7	350.2	350.5	350.2	346.7	343.6	338.2	331.3
12.5°	342.7	343.9	345.6	348.7	350.2	351.3	351.3	348.7	345.3	338.7	330.7
15°	338.7	340.2	344.5	350.2	353.6	355.6	356.2	353.0	348.7	342.2	333.3
17.5°	337.0	338.7	346.7	354.7	360.7	362.4	362.7	359.3	354.7	346.7	336.5
20°	338.7	340.7	351.3	362.2	369.3	370.7	371.3	366.4	360.7	353.0	339.6
22.5°	345.3	348.2	359.9	371.6	379.0	381.0	380.4	373.6	367.9	359.6	343.6
25°	359.6	361.3	371.9	384.4	390.2	392.4	391.0	383.3	375.9	367.6	349.3
27.5°	376.2	378.4	389.6	399.0	402.7	403.3	401.9	393.9	385.6	378.7	358.2
30°	396.2	398.1	407.3	414.4	414.7	415.0	414.1	405.0	398.1	392.7	371.0
32.5°	417.3	417.6	427.0	430.4	428.1	429.0	428.1	418.1	413.3	411.6	387.9
35°	436.7	437.0	446.7	447.8	444.1	444.4	446.1	434.4	434.4	438.4	413.0
37.5°	455.3	456.1	464.7	463.6	462.1	464.7	467.0	457.0	462.7	474.1	443.6
40°	469.3	471.3	482.7	482.1	485.3	487.8	489.8	484.7	493.8	516.1	481.3
42.5°	478.4	482.4	498.7	502.7	508.1	512.7	516.1	515.8	531.8	562.7	521.3
45°	487.8	491.8	513.5	523.2	532.4	539.5	546.1	549.5	574.9	611.8	567.8
47.5°	499.3	502.7	527.0	546.1	557.8	567.5	579.2	586.7	618.9	661.8	610.9
50°	516.7	519.0	540.7	570.4	585.2	598.7	613.2	628.4	666.3	712.9	648.6
52.5°	539.2	540.7	556.7	594.9	618.6	632.9	654.6	674.6	714.6	759.2	679.5
55°	564.9	563.8	576.1	624.4	652.1	673.5	700.3	720.6	765.5	799.4	704.0
57.5°	590.7	589.8	599.5	652.6	694.3	719.5	747.2	768.6	812.0	837.1	721.8
60°	615.2	612.1	625.8	685.8	745.5	774.3	799.2	818.9	856.0	864.3	731.2
62.5°	636.9	636.9	656.9	726.6	806.6	832.6	852.3	865.4	898.0	884.3	727.5
65°	656.9	659.5	688.1	772.3	870.0	896.6	913.7	918.8	939.7	885.1	696.0
67.5°	679.5	683.5	723.8	825.7	943.1	971.4	986.2	984.5	969.4	872.0	628.6
70°	701.5	708.0	768.0	894.6	1033.4	1071.6	1087.9	1054.2	984.8	799.2	522.1
72.5°	717.5	728.6	804.3	963.4	1162.7	1221.6	1215.0	1073.3	912.5	658.6	395.0
74°	670.6	689.2	794.3	987.1	1209.3	1261.0	1213.9	1035.4	825.4	530.4	279.9
75°	616.1	634.1	743.7	977.7	1218.2	1241.3	1155.0	968.5	740.3	411.0	182.8
77.5°	456.1	470.1	571.2	770.9	963.4	956.5	860.0	656.3	364.7	124.0	77.1
80°	201.4	211.9	281.9	387.9	521.8	519.8	484.1	301.6	117.7	64.8	47.1
82.5°	60.8	60.6	81.1	113.1	198.2	201.9	171.7	104.0	56.3	26.8	22.8
85°	0.3	0.3	0.3	0.3	0.9	7.4	6.3	20.0	10.3	4.9	8.3
87.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6	355.6
2.5°	350.7	350.5	349.6	347.6	346.2	341.9	343.3	340.5	340.2	339.6	339.3
5°	341.9	340.7	337.3	333.3	328.7	321.6	319.3	315.0	312.5	311.6	312.2
7.5°	332.7	330.2	323.6	315.0	305.9	295.3	287.6	281.6	277.3	275.9	273.9
10°	327.0	322.7	311.6	297.3	282.5	267.6	254.8	245.9	239.3	234.2	234.2
12.5°	325.0	319.3	303.0	282.2	260.8	239.6	221.1	209.4	198.2	192.8	191.9
15°	326.2	318.2	295.9	268.5	239.9	212.5	189.6	172.8	162.2	155.7	157.9
17.5°	327.3	317.3	288.5	253.9	219.6	187.9	161.4	142.2	129.4	126.0	124.5
20°	328.7	315.6	279.0	238.2	198.8	164.2	136.2	116.8	107.1	102.8	102.8
22.5°	330.7	313.3	269.3	220.8	177.4	141.1	115.1	100.5	92.8	90.3	90.3
25°	333.6	311.9	259.3	203.4	157.1	122.8	101.1	89.7	85.7	84.0	83.7
27.5°	339.0	312.2	249.6	185.7	137.1	107.4	91.1	83.7	80.5	79.7	79.4
30°	347.3	315.0	239.3	166.8	119.4	95.7	84.3	79.1	77.1	76.5	76.5
32.5°	358.7	320.2	230.8	149.9	106.2	86.3	78.5	75.1	74.0	73.4	73.7
35°	376.4	329.0	220.5	134.5	94.0	79.7	74.0	71.4	70.5	70.5	70.8
37.5°	399.6	342.7	210.5	120.2	85.7	74.0	69.7	68.3	67.4	68.0	68.3
40°	428.7	359.0	201.1	107.4	78.8	69.4	66.0	64.8	64.5	65.1	65.7
42.5°	460.1	378.7	192.5	96.8	73.4	65.7	62.8	62.3	62.0	62.3	63.1
45°	496.7	401.3	185.4	88.8	69.4	62.6	60.0	59.4	59.1	59.7	60.3
47.5°	530.4	421.6	179.7	83.4	66.0	60.3	57.7	56.8	56.8	56.8	57.4
50°	557.8	437.6	176.2	79.7	63.1	57.7	55.4	54.6	54.3	54.0	54.3
52.5°	581.5	449.6	175.1	77.4	60.8	55.4	53.1	52.6	52.0	51.4	51.7
55°	597.2	455.6	172.8	75.4	58.8	52.8	50.8	50.3	49.7	48.8	48.8
57.5°	606.4	455.0	167.7	74.3	57.7	50.6	48.6	48.6	48.0	46.6	46.8
60°	607.2	445.0	155.1	72.8	56.8	48.3	46.0	46.6	46.6	45.4	45.4
62.5°	592.7	418.7	130.8	69.1	55.7	46.6	44.0	45.4	46.0	44.8	44.8
65°	547.8	356.7	105.1	63.7	52.8	44.6	41.7	44.6	46.3	45.4	45.1
67.5°	461.8	282.5	86.8	57.7	49.7	42.0	39.4	43.1	45.4	45.4	45.1
70°	370.7	214.5	71.4	51.1	44.8	38.8	36.8	40.0	42.0	42.6	42.6
72.5°	255.3	131.1	58.0	44.0	39.4	35.1	33.4	35.4	36.6	37.7	37.4
74°	164.8	92.0	50.8	40.0	36.0	32.3	31.4	32.3	32.8	34.0	34.3
75°	110.2	75.1	47.4	37.1	34.0	30.3	29.7	30.6	31.1	32.0	32.0
77.5°	63.4	53.7	38.3	30.8	28.3	26.0	25.7	26.0	26.8	27.7	27.4
80°	44.0	40.8	30.3	24.0	22.3	21.1	21.4	21.7	23.1	23.4	23.1
82.5°	26.6	29.4	21.4	18.0	16.9	16.6	17.4	18.0	19.1	19.4	19.1
85°	10.6	14.0	10.6	10.0	11.1	12.3	13.7	14.6	15.1	15.1	15.1
87.5°	0.0	2.0	2.6	4.0	6.3	7.4	9.7	10.6	11.1	10.9	10.6
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)