

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: P400870

Luminaire Tested: **ENT-SA1-830-U-T4FT-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-830-U-T4FT-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 587 lumens
Efficiency: N/A
Efficacy: 45.2 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 - G0

Input Watts (W): 13
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

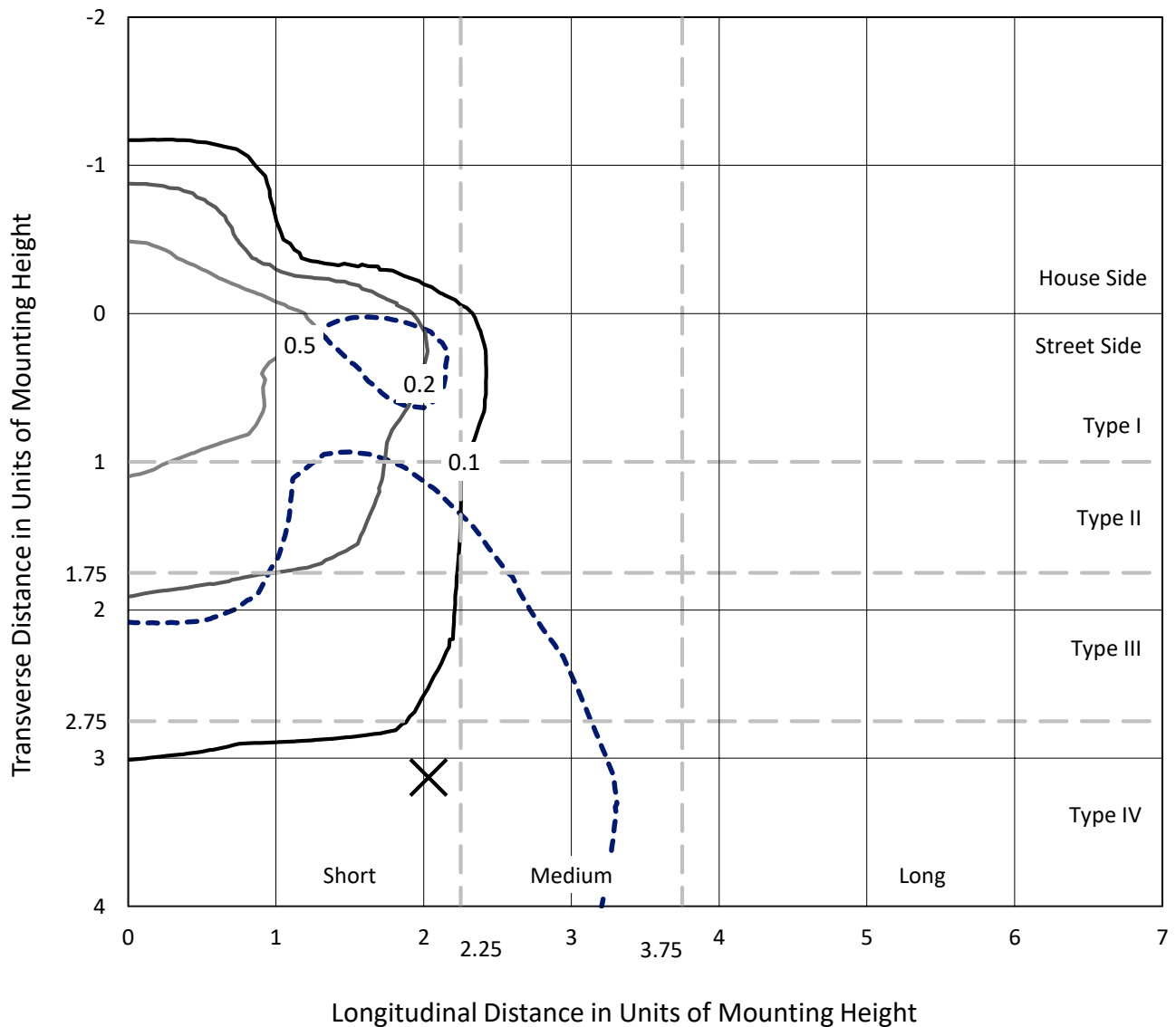


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Iso-Footcandle Lines of Horizontal Illumination

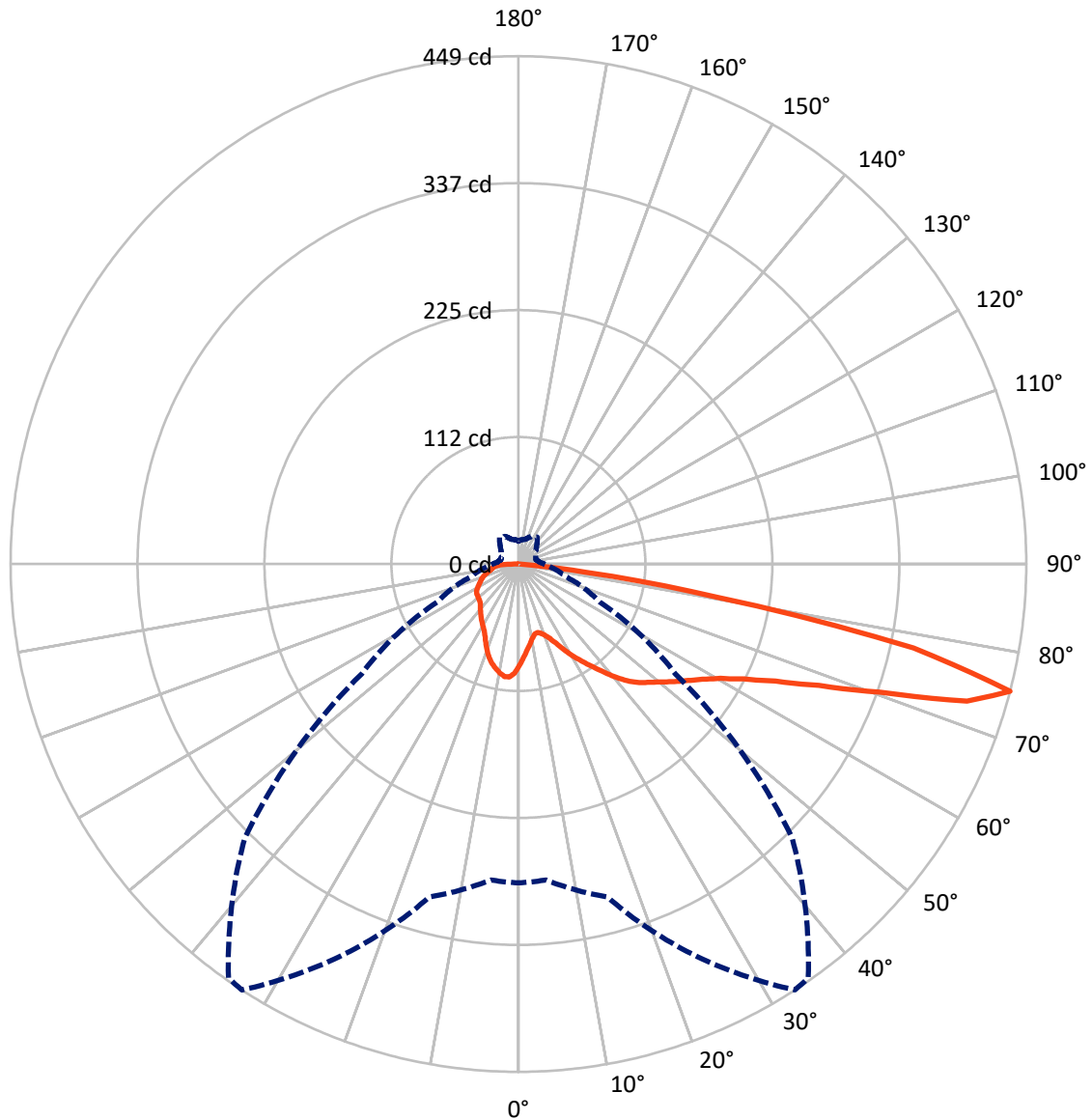
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	142.6	0.0	142.6
	% Fixture	24.3	0.0	24.3
Street Side	Lumens	444.4	0.0	444.4
	% Fixture	75.7	0.0	75.7
Total	Lumens	587.0	0.0	587.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	8.4	1.4
10°-20°	23.6	4.0
20°-30°	39.3	6.7
30°-40°	58.6	10.0
40°-50°	81.9	14.0
50°-60°	109.3	18.6
60°-70°	135.5	23.1
70°-80°	117.2	20.0
80°-90°	13.1	2.2
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°	587.0	100.0
0°-180°	587.0	100.0



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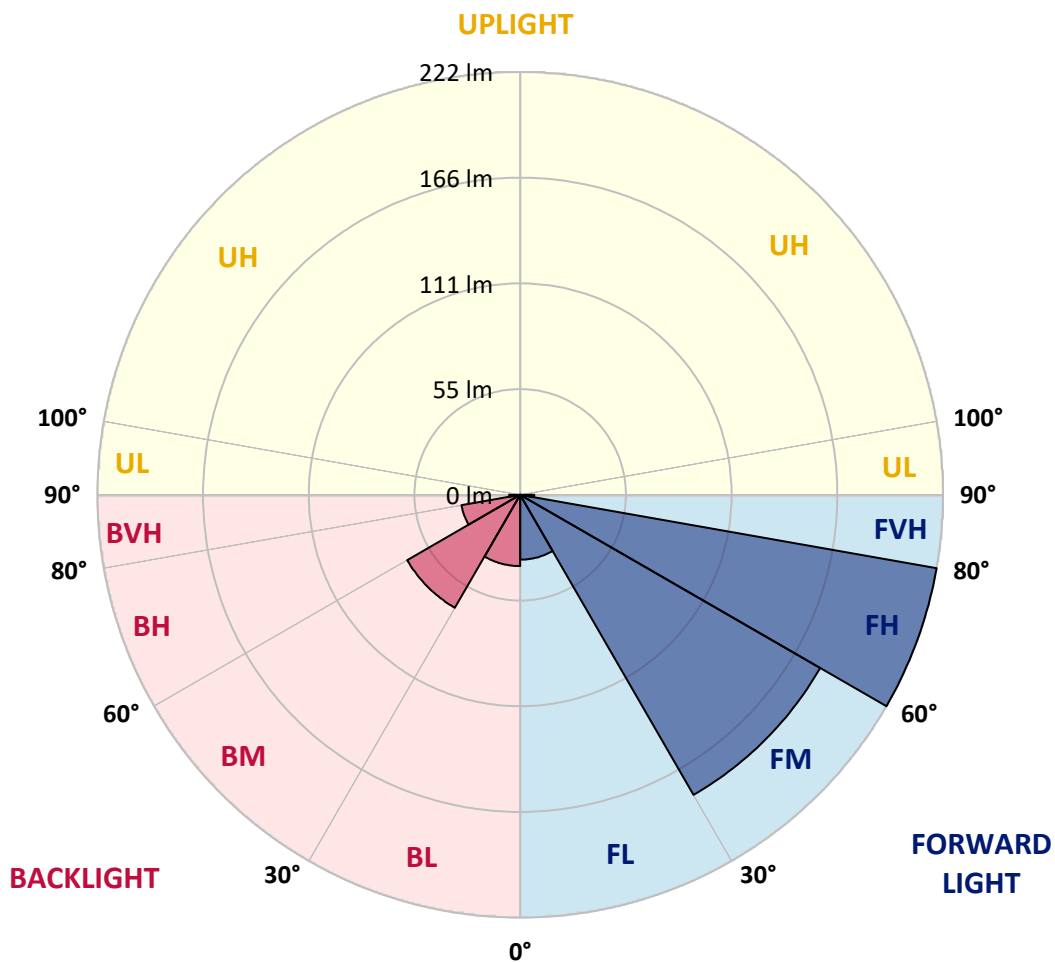
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	34.0	5.8			
FM	(30°-60°)	181.5	30.9			
FH	(60°-80°)	221.5	37.7			G0/660
FVH	(80°-90°)	7.4	1.3			G0/10
BL	(0°-30°)	37.3	6.4	B0/110		
BM	(30°-60°)	68.3	11.6	B0/220		
BH	(60°-80°)	31.2	5.3	B0/110		G0/110
BVH	(80°-90°)	5.7	1.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
2.5°	81.6	81.8	82.3	82.9	83.2	83.2	84.2	85.3	86.7	87.9	89.2
5°	74.8	75.0	75.5	76.3	77.2	77.4	79.3	81.3	83.8	86.5	89.2
7.5°	68.1	68.6	69.5	70.5	72.0	72.3	75.0	77.7	81.2	85.3	89.6
10°	62.9	63.3	63.7	65.2	67.0	67.6	71.2	74.6	79.4	84.5	90.1
12.5°	61.5	61.5	61.5	62.2	63.7	64.2	68.0	72.3	77.7	83.8	90.9
15°	63.5	63.5	62.5	62.0	62.8	63.3	66.5	70.8	76.9	84.0	92.4
17.5°	68.1	67.8	65.5	63.8	64.4	64.7	66.8	70.4	76.6	84.7	94.6
20°	74.0	73.4	69.9	67.3	67.2	67.4	68.9	71.5	77.0	85.9	96.9
22.5°	81.8	81.5	76.3	72.3	71.6	71.6	72.3	73.9	78.2	87.3	100.1
25°	92.0	91.0	84.8	79.4	77.8	77.4	77.3	77.3	80.2	89.4	104.2
27.5°	102.3	101.2	94.9	87.6	85.5	84.7	83.3	82.3	82.8	91.7	108.9
30°	111.6	110.1	104.8	97.2	94.0	92.8	90.3	88.1	86.7	94.8	115.3
32.5°	116.8	116.2	112.5	105.6	102.1	101.5	97.4	94.5	92.0	98.9	123.9
35°	123.7	122.9	120.5	114.9	110.6	109.3	106.2	102.8	98.8	104.4	134.7
37.5°	130.0	129.6	128.7	124.8	120.3	119.0	116.1	112.5	107.2	112.5	146.8
40°	136.5	136.0	135.6	134.2	131.0	130.1	128.7	124.5	117.4	121.4	158.7
42.5°	145.9	144.8	141.1	141.0	141.3	142.0	142.1	137.4	128.6	132.5	169.2
45°	158.2	155.1	146.9	146.6	149.6	151.5	155.9	152.0	140.1	143.8	180.9
47.5°	164.5	161.2	152.8	152.3	156.3	159.0	170.0	166.1	152.2	156.5	193.0
50°	167.5	165.4	158.0	159.7	163.8	166.4	183.3	180.2	164.6	170.3	208.2
52.5°	171.8	168.3	163.1	166.6	172.7	175.4	195.2	194.7	175.2	185.3	225.0
55°	170.3	168.5	169.4	174.1	181.8	185.8	207.3	207.3	185.9	201.3	241.5
57.5°	171.5	170.3	178.2	182.4	192.1	197.8	221.7	217.9	195.0	214.8	252.7
60°	181.9	178.4	184.6	192.9	205.3	210.9	238.3	229.0	202.4	226.3	254.7
62.5°	200.2	197.4	198.0	207.5	223.6	230.1	254.7	238.9	207.3	231.2	247.2
65°	230.5	229.2	221.7	227.5	249.7	255.5	275.2	247.4	206.0	227.6	227.4
67.5°	271.3	266.1	256.0	261.1	286.7	292.7	299.8	250.7	196.9	205.7	182.8
70°	305.1	300.8	296.2	309.7	339.1	342.4	325.5	247.6	174.8	161.0	122.5
72.5°	326.7	323.5	327.8	367.5	414.7	408.6	350.9	226.3	136.4	98.6	61.3
75°	282.0	280.5	304.9	385.5	449.1	446.9	342.1	169.3	79.1	43.4	27.9
77.5°	141.8	157.9	183.6	273.5	357.3	357.8	249.3	81.4	33.3	24.3	19.2
80°	39.9	40.4	61.3	112.8	178.4	190.1	94.3	27.6	19.0	18.1	14.3
82.5°	9.5	8.8	15.7	33.4	59.9	62.3	28.3	9.9	10.6	11.3	8.8
85°	0.1	0.1	0.1	0.1	0.1	0.2	1.0	1.0	2.5	3.2	2.5
87.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	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°	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
2.5°	89.9	90.7	92.1	93.3	94.4	95.2	96.4	96.6	96.9	97.1	97.3
5°	90.6	92.3	94.9	97.2	98.7	99.2	100.2	100.1	100.2	100.2	100.1
7.5°	91.7	94.0	97.6	100.1	101.0	100.8	100.5	99.5	98.7	98.4	98.0
10°	93.0	95.6	99.9	101.7	101.3	99.9	98.2	96.5	95.1	94.4	94.2
12.5°	94.3	97.7	101.7	102.2	100.5	98.0	95.2	93.3	91.4	90.5	90.5
15°	96.5	100.2	103.2	102.1	99.0	95.8	92.0	89.3	87.2	85.9	85.8
17.5°	99.1	103.1	104.8	101.7	97.2	92.6	88.0	84.6	81.9	80.6	79.8
20°	102.3	106.1	105.5	100.3	94.5	88.9	83.1	79.1	76.3	74.9	74.6
22.5°	106.0	109.1	105.8	98.1	90.8	83.7	77.4	73.3	71.5	70.4	70.5
25°	110.4	112.9	105.9	95.3	85.6	76.8	71.3	69.4	69.1	68.7	68.9
27.5°	116.0	116.8	105.5	91.7	78.9	69.6	66.3	67.1	67.8	67.5	67.7
30°	122.6	121.5	104.8	86.4	70.6	62.9	63.1	64.8	65.8	65.5	65.6
32.5°	130.4	126.2	103.3	79.9	62.8	58.9	60.3	62.1	63.0	63.0	63.1
35°	139.1	131.9	100.4	71.6	57.3	56.5	57.7	59.1	59.7	59.4	59.6
37.5°	148.3	136.7	95.8	62.2	53.2	54.6	55.3	55.6	55.5	55.0	54.7
40°	156.8	140.6	87.5	53.0	49.8	52.6	52.9	51.9	50.8	49.9	49.2
42.5°	163.3	142.6	76.0	46.3	46.5	50.3	50.6	48.6	46.5	45.0	44.6
45°	170.0	143.3	64.6	40.9	43.1	48.0	48.7	46.1	43.1	41.4	41.1
47.5°	177.7	145.0	53.3	37.1	40.1	46.5	47.6	44.4	41.1	38.4	38.0
50°	188.0	148.3	44.9	34.3	38.0	45.7	47.2	43.0	38.8	35.9	35.6
52.5°	201.1	153.2	37.0	32.0	36.3	44.5	46.7	41.6	37.1	33.6	33.1
55°	212.3	155.1	32.0	30.1	34.6	43.0	46.3	41.1	35.3	31.4	30.8
57.5°	217.5	149.8	28.4	28.2	32.8	41.1	45.4	39.3	33.3	30.2	29.7
60°	215.1	136.8	25.7	26.4	30.7	38.8	43.1	37.6	31.9	29.4	28.8
62.5°	204.6	121.8	23.7	24.8	28.3	35.8	40.5	36.0	30.7	28.4	27.7
65°	186.3	105.4	22.2	23.3	26.2	32.9	38.4	34.2	29.3	27.0	26.4
67.5°	152.0	83.8	20.7	21.8	24.5	30.6	36.5	32.7	27.7	26.2	25.7
70°	100.6	56.4	19.2	20.3	22.7	28.3	34.5	31.1	26.2	25.3	24.6
72.5°	46.2	30.3	17.6	18.7	20.7	25.8	32.0	28.8	24.2	23.6	22.6
75°	22.8	18.7	15.7	16.7	18.3	22.7	29.0	26.8	22.4	21.4	20.1
77.5°	16.6	13.9	13.5	14.6	15.9	20.1	25.9	24.7	20.6	19.1	18.4
80°	12.4	10.8	11.3	12.4	13.6	18.2	24.2	23.1	19.0	17.5	17.0
82.5°	7.6	7.2	8.7	9.9	11.4	16.7	23.1	21.1	17.1	15.7	15.1
85°	2.2	2.6	4.4	6.4	8.1	13.5	21.5	18.5	14.4	12.0	11.6
87.5°	0.0	0.3	1.4	3.0	4.8	9.0	16.6	14.5	11.0	8.9	8.5
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)