

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: P401039

Luminaire Tested: **ENT-SA1A-830-U-SL4-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401039
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-830-U-SL4-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1782 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-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

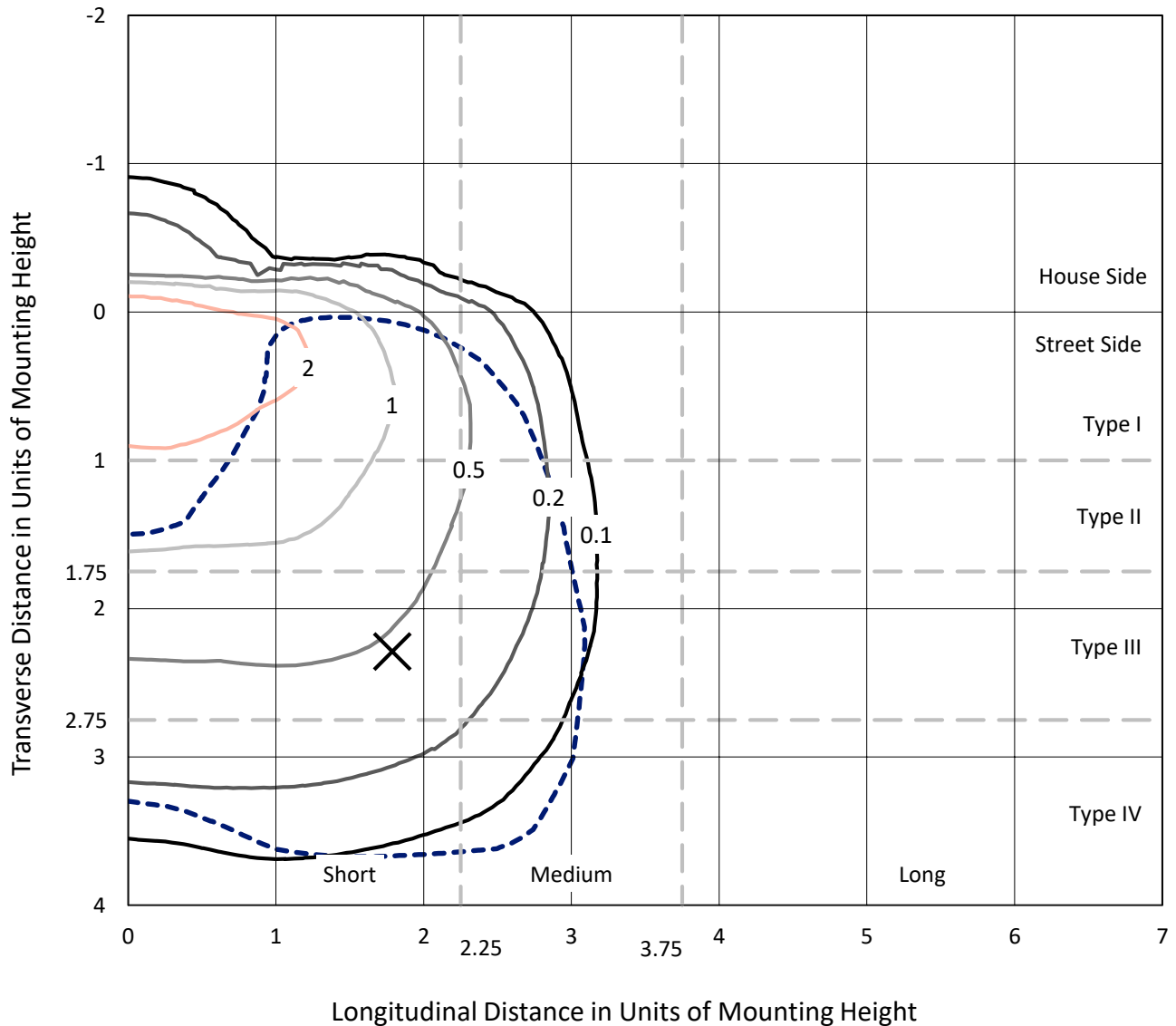


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

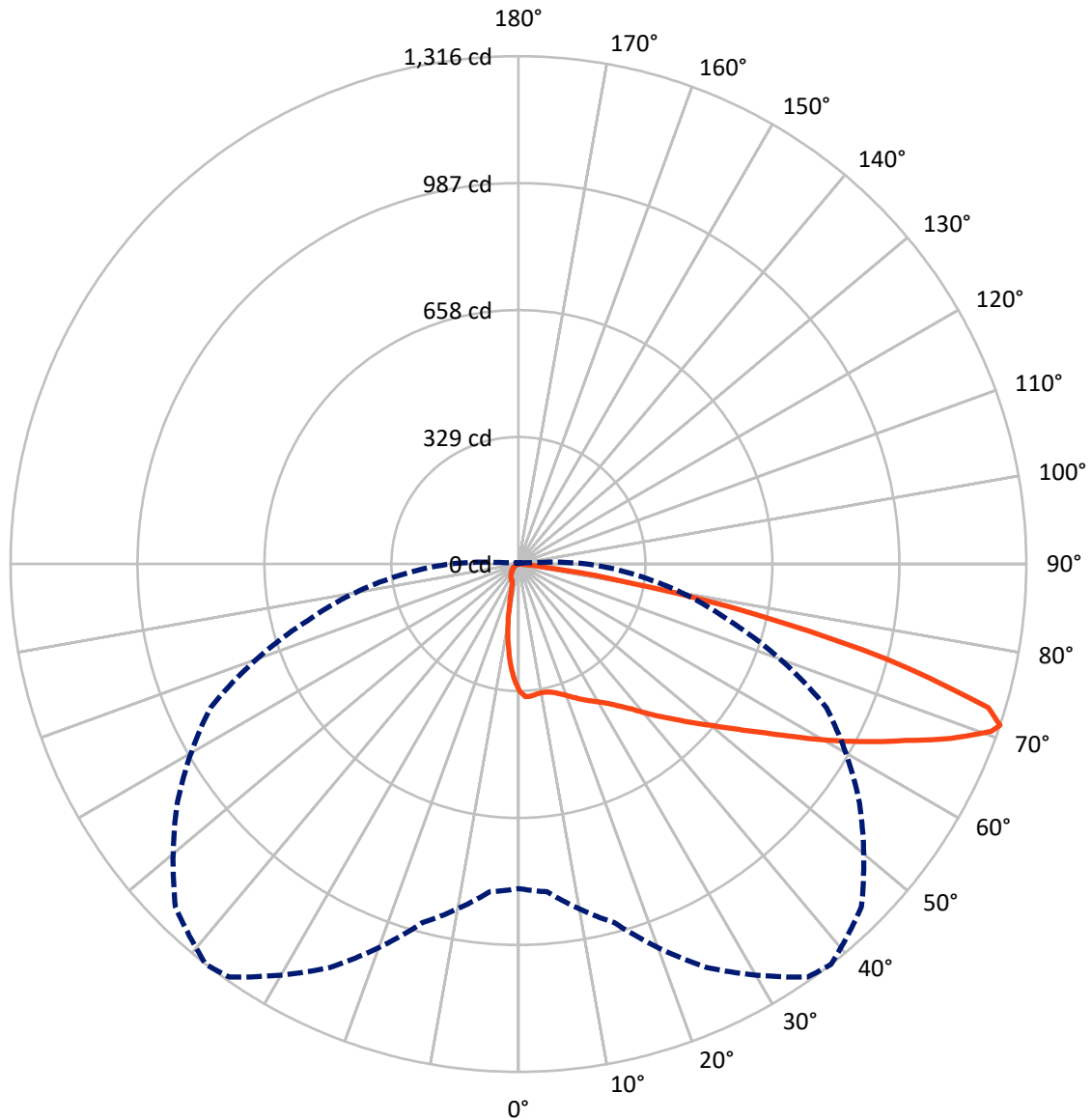


Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	152.2	0.0	152.2
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	1629.8	0.0	1629.8
	% Fixture	91.5	0.0	91.5
Total	Lumens	1782.0	0.0	1782.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.8	1.6
10°-20°	67.2	3.8
20°-30°	107.7	6.0
30°-40°	163.9	9.2
40°-50°	255.4	14.3
50°-60°	373.5	21.0
60°-70°	479.0	26.9
70°-80°	292.8	16.4
80°-90°	14.7	0.8
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°	1782.0	100.0
0°-180°	1782.0	100.0



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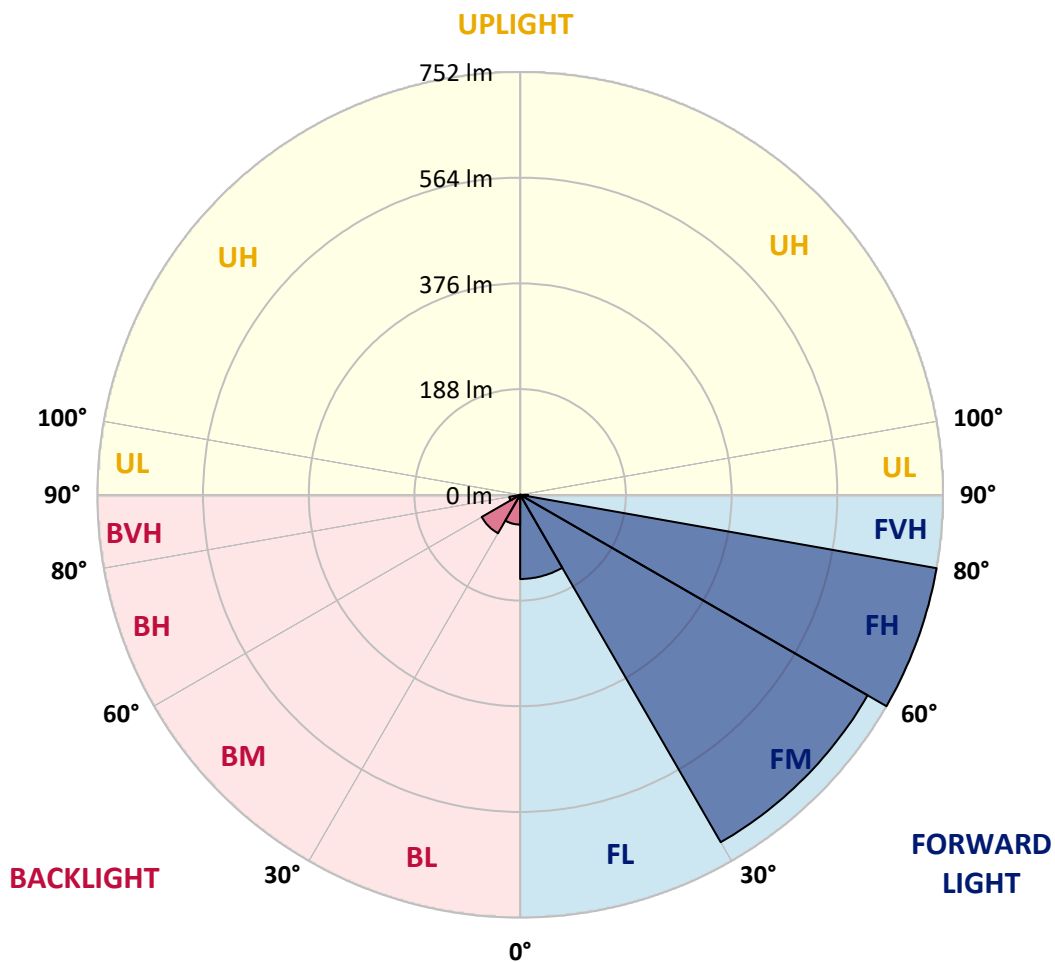
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	149.7	8.4			
FM (30°-60°)	713.7	40.1			
FH (60°-80°)	752.3	42.2			G1/1800
FVH (80°-90°)	14.0	0.8			G1/100
BL (0°-30°)	52.9	3.0	B0/110		
BM (30°-60°)	79.1	4.4	B0/220		
BH (60°-80°)	19.6	1.1	B0/110		G0/110
BVH (80°-90°)	0.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5
2.5°	348.0	347.0	348.0	347.0	345.2	344.3	343.0	339.6	336.5	332.8	327.3
5°	348.6	348.0	348.0	346.7	344.6	343.6	342.4	339.0	335.0	329.4	321.1
7.5°	345.2	344.9	344.3	343.0	340.6	339.9	339.0	335.0	331.0	325.1	314.9
10°	339.6	340.2	339.9	339.9	339.0	338.4	337.8	333.1	328.8	322.0	311.2
12.5°	334.4	335.0	336.5	339.0	339.9	340.2	340.2	335.6	330.4	323.0	311.8
15°	331.0	332.2	336.5	341.5	344.3	345.2	346.1	341.2	335.0	327.0	315.2
17.5°	330.1	331.9	340.2	348.0	353.2	353.8	353.8	347.7	341.2	331.9	319.3
20°	333.1	335.6	346.4	357.2	363.7	364.3	363.1	355.1	347.3	337.2	322.6
22.5°	342.4	344.6	356.9	369.6	375.8	376.4	373.6	362.5	354.1	345.8	327.3
25°	358.5	359.7	373.0	385.0	388.4	389.3	384.7	371.4	361.9	354.1	333.8
27.5°	379.8	380.4	392.4	401.4	402.0	401.7	396.8	382.9	373.3	366.8	343.6
30°	402.0	402.9	412.8	418.7	416.2	415.0	410.6	395.8	387.2	382.2	357.8
32.5°	422.7	423.6	434.4	437.5	431.9	431.0	427.9	412.2	404.8	407.2	378.2
35°	443.1	443.1	455.4	457.0	452.0	452.0	452.0	433.2	431.9	440.3	406.6
37.5°	461.3	464.4	477.3	476.7	475.8	476.4	478.3	464.1	468.4	482.6	444.0
40°	476.7	480.7	498.0	499.6	503.6	507.0	509.8	502.3	512.5	535.7	491.8
42.5°	490.6	495.2	517.5	524.6	535.7	540.3	545.6	543.7	566.3	608.6	553.0
45°	508.5	513.5	536.3	553.3	568.7	574.9	586.6	594.7	632.0	680.2	619.1
47.5°	532.3	535.7	556.7	583.5	604.5	615.7	633.9	654.6	699.9	756.1	678.0
50°	564.7	565.0	580.8	615.7	646.8	658.9	690.4	717.2	774.0	823.1	720.6
52.5°	600.5	598.7	611.0	655.2	694.7	711.1	748.1	785.5	842.6	871.6	739.8
55°	634.5	635.4	643.1	697.2	754.9	770.7	817.6	855.6	905.3	901.3	750.3
57.5°	673.7	673.4	683.3	743.2	825.3	843.5	892.6	923.8	943.2	922.6	752.1
60°	710.8	709.8	725.0	798.1	900.3	927.2	971.3	970.1	981.2	936.1	750.6
62.5°	743.8	746.0	772.5	862.0	984.3	1013.3	1035.6	1020.1	1023.2	951.9	731.4
65°	783.9	787.9	830.9	939.5	1088.1	1101.9	1110.6	1085.6	1054.7	939.2	673.4
67.5°	834.6	846.6	907.1	1053.8	1196.1	1205.7	1206.0	1125.1	1053.5	875.3	566.3
70°	854.6	867.3	963.6	1144.2	1287.2	1299.2	1261.6	1118.9	970.4	685.4	382.2
71°	840.7	852.2	962.1	1152.9	1306.0	1315.6	1256.6	1078.5	880.0	564.7	296.1
72.5°	740.4	770.0	902.8	1098.5	1272.4	1272.7	1176.7	983.1	699.9	352.6	148.8
75°	399.8	435.7	661.7	836.1	981.5	989.3	905.3	682.7	338.7	91.4	36.1
77.5°	131.8	148.5	296.7	434.1	615.7	627.7	553.6	303.2	106.8	30.9	18.8
80°	82.7	84.6	100.3	182.5	273.9	284.1	227.9	122.9	48.2	17.0	13.0
82.5°	13.9	16.7	47.2	53.7	96.6	76.6	51.9	62.7	22.5	7.7	11.1
85°	0.0	0.0	0.3	0.3	1.5	0.3	0.3	12.7	1.2	1.2	5.9
87.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	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°	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5	328.5
2.5°	324.8	322.3	317.4	312.2	305.7	300.1	298.3	294.2	292.4	290.8	290.8
5°	315.9	311.5	301.0	290.2	279.7	268.6	258.4	248.9	244.2	237.7	240.8
7.5°	308.4	301.0	286.2	269.2	247.6	225.7	208.7	193.9	181.5	177.5	174.8
10°	303.2	293.9	272.3	246.4	214.9	183.7	157.5	133.1	118.9	110.2	110.2
12.5°	302.6	290.8	262.8	222.9	177.5	135.2	102.8	79.7	68.2	63.0	62.7
15°	304.7	290.5	254.1	201.6	143.3	93.9	64.2	54.0	51.3	50.6	50.6
17.5°	306.6	290.2	243.9	177.5	105.6	61.8	50.9	49.1	48.5	48.2	48.2
20°	308.4	288.7	232.2	150.4	74.7	50.3	47.5	46.6	46.3	46.0	46.0
22.5°	310.9	287.1	220.1	119.5	55.3	46.9	45.4	44.5	44.2	44.2	44.2
25°	314.3	286.2	205.3	90.5	47.5	44.5	42.9	42.3	42.3	42.0	42.0
27.5°	320.8	287.1	189.3	64.8	44.5	42.0	41.1	40.4	40.4	40.1	40.1
30°	329.8	289.9	169.2	50.6	42.0	39.5	38.6	38.3	38.0	38.0	38.0
32.5°	342.4	294.2	147.3	43.2	38.9	37.1	36.1	35.8	35.8	35.8	35.5
35°	361.9	303.2	120.4	39.5	36.1	34.3	33.3	33.3	33.3	33.0	33.3
37.5°	391.5	317.7	93.2	36.4	33.0	31.5	30.9	30.6	30.6	30.6	30.6
40°	428.9	341.2	67.9	33.7	30.3	28.7	28.1	27.8	27.5	27.5	27.5
42.5°	477.0	367.1	49.4	30.6	27.8	26.2	25.6	25.0	24.4	24.1	24.1
45°	527.0	398.0	38.6	28.1	25.3	24.1	23.5	22.5	21.6	20.7	20.7
47.5°	575.5	421.8	33.0	25.3	23.2	21.9	21.3	20.1	18.5	17.6	17.6
50°	606.1	429.2	29.6	22.8	21.0	20.1	19.1	17.6	15.4	14.5	14.5
52.5°	615.7	415.6	26.6	20.7	19.1	18.2	17.0	14.8	12.7	11.4	11.4
55°	619.4	389.3	23.5	19.1	17.3	16.1	14.5	12.4	10.2	9.0	9.0
57.5°	614.7	352.3	21.0	17.3	15.4	14.2	12.4	9.9	7.7	6.8	6.8
60°	599.0	298.6	18.8	15.4	13.6	12.0	10.2	7.7	5.9	4.6	4.9
62.5°	556.4	230.9	16.4	13.0	11.7	10.2	8.0	5.9	3.7	3.1	3.1
65°	488.5	159.9	13.9	10.8	9.9	8.3	6.2	4.0	2.2	1.9	1.9
67.5°	396.8	103.4	10.8	9.0	8.3	6.8	4.6	2.5	1.2	1.2	0.9
70°	249.2	51.3	8.6	6.8	6.8	5.2	3.4	1.5	0.9	0.9	0.9
71°	176.3	34.9	7.7	6.2	6.2	4.9	3.1	1.2	0.9	0.9	0.9
72.5°	79.7	21.9	6.5	5.6	5.2	4.0	2.8	1.2	1.2	1.2	1.2
75°	25.0	12.0	4.6	4.3	4.3	3.4	2.5	1.5	1.5	1.5	1.5
77.5°	16.7	9.3	3.1	2.8	3.4	3.4	2.5	1.9	1.9	1.9	1.9
80°	13.6	4.9	1.9	1.9	2.5	3.1	2.5	1.9	2.2	1.9	1.9
82.5°	13.3	2.5	0.6	0.9	1.5	1.9	1.9	1.5	1.9	1.9	1.9
85°	5.6	0.6	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.9	1.2	1.2
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)