

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: P401040

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

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401040
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-830-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 2060 lumens
Efficiency: N/A
Efficacy: 102.5 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

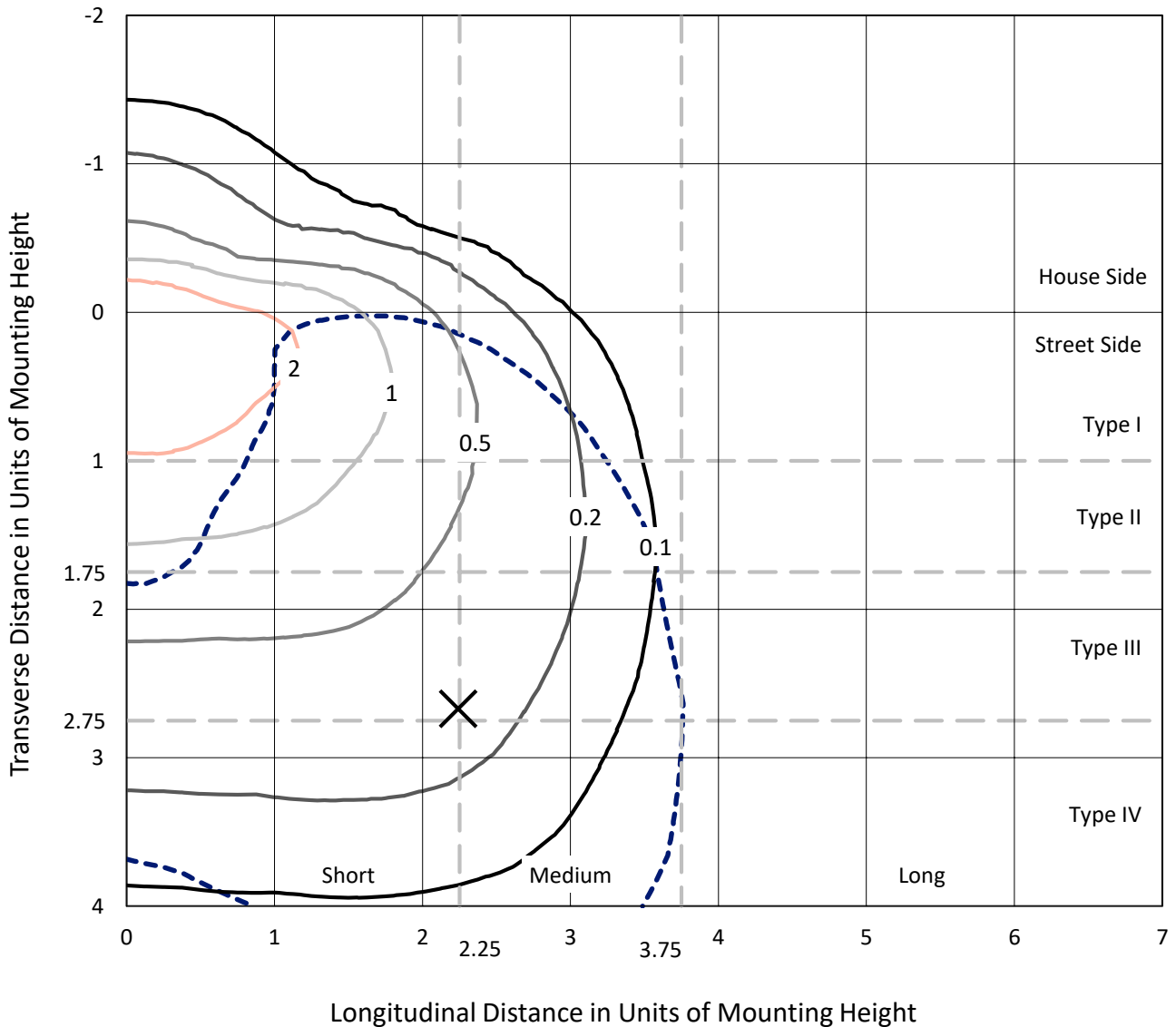
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

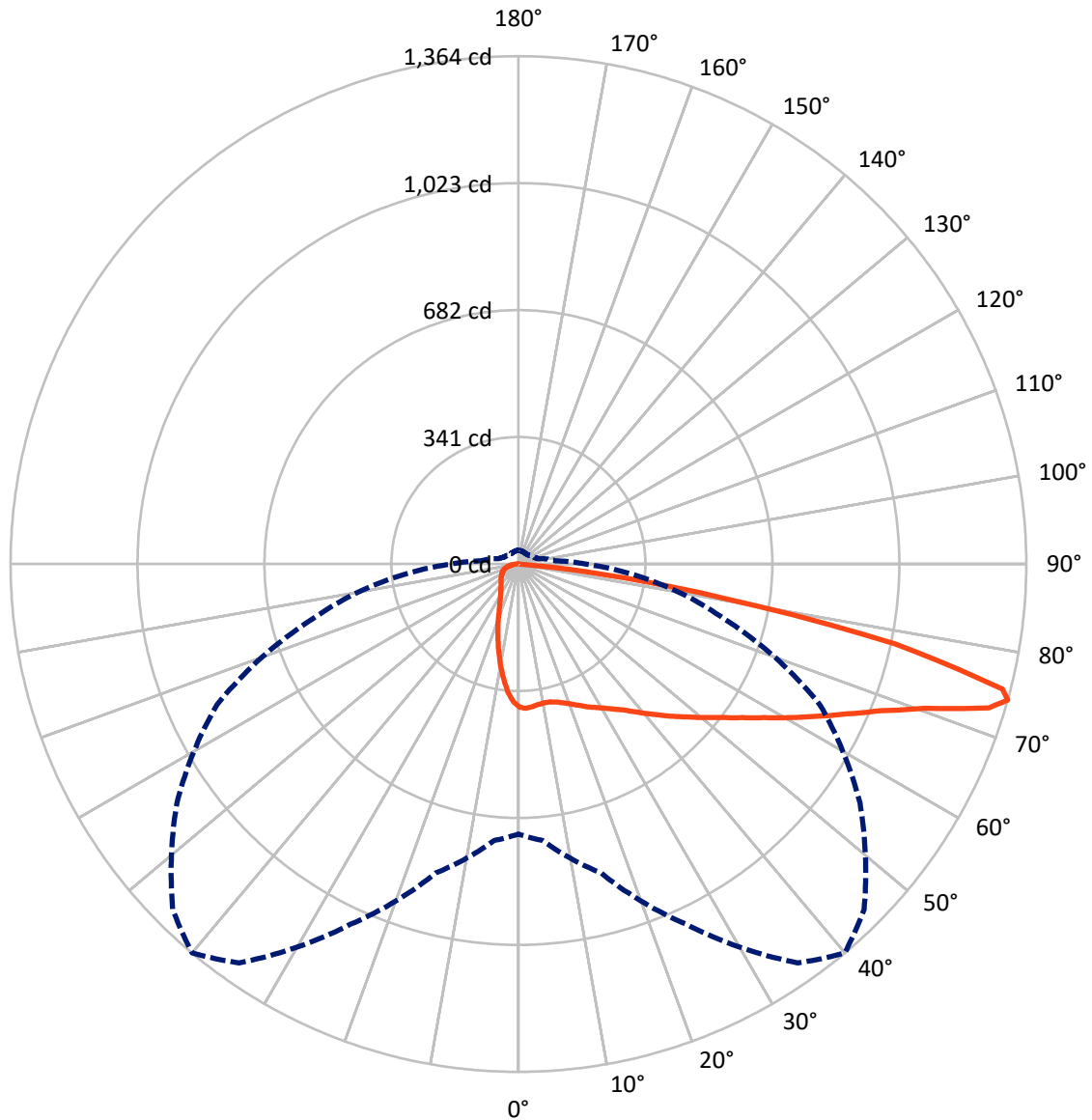
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 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	321.2	0.0	321.2
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	1738.8	0.0	1738.8
	% Fixture	84.4	0.0	84.4
Total	Lumens	2060.0	0.0	2060.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	1.6
10°-20°	87.4	4.2
20°-30°	134.1	6.5
30°-40°	193.6	9.4
40°-50°	278.6	13.5
50°-60°	384.7	18.7
60°-70°	485.0	23.5
70°-80°	420.6	20.4
80°-90°	42.1	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°	2060.0	100.0
0°-180°	2060.0	100.0



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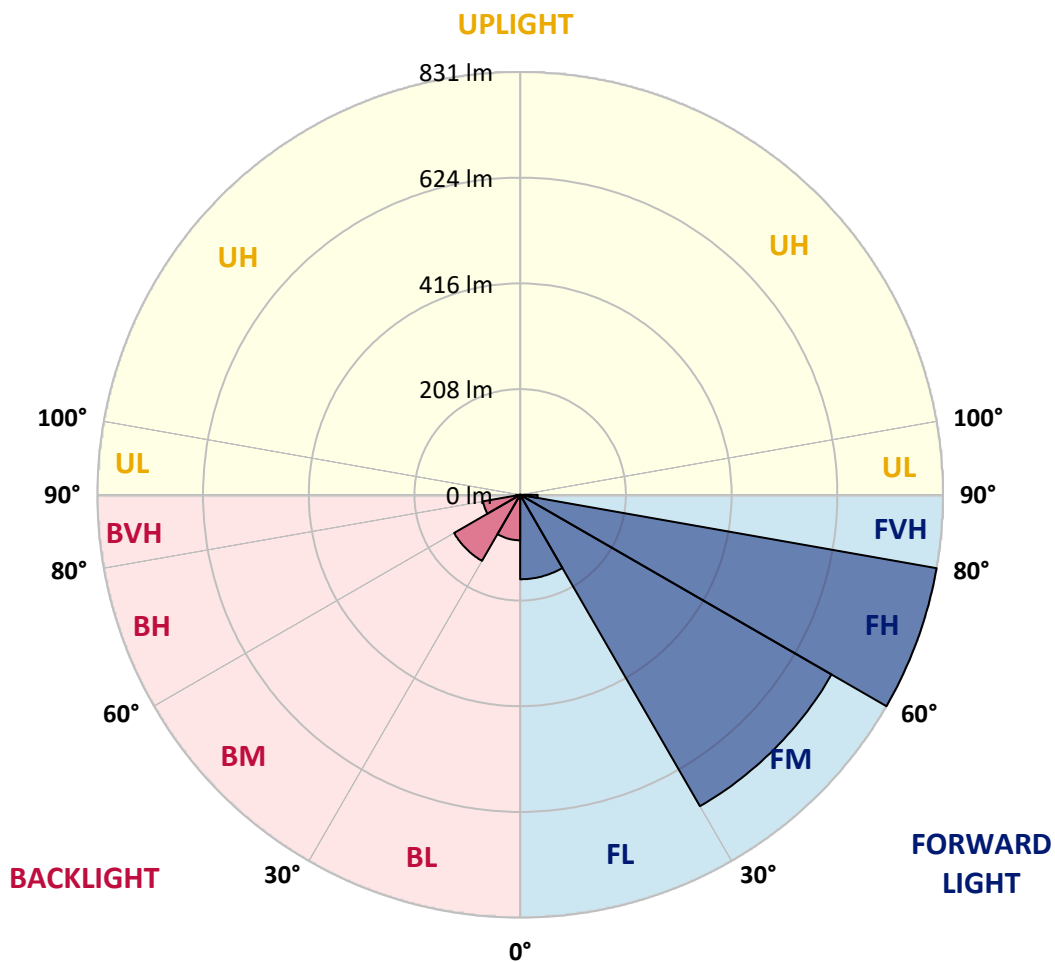
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	166.1	8.1			
FM	(30°-60°)	706.9	34.3			
FH	(60°-80°)	831.4	40.4			G1/1800
FVH	(80°-90°)	34.4	1.7			G1/100
BL	(0°-30°)	89.4	4.3	B0/110		
BM	(30°-60°)	150.0	7.3	B0/220		
BH	(60°-80°)	74.1	3.6	B0/110		G0/110
BVH	(80°-90°)	7.7	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°	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5
2.5°	389.5	389.2	390.1	389.5	388.5	387.9	387.6	385.8	385.1	383.3	380.8
5°	387.9	387.9	387.9	387.3	385.5	384.8	384.2	381.4	379.6	376.5	371.9
7.5°	382.7	383.6	383.3	383.0	381.4	380.8	379.9	376.5	374.0	369.4	363.5
10°	377.7	377.7	378.0	379.3	378.7	379.0	378.7	375.0	371.6	365.7	358.3
12.5°	370.6	371.9	373.7	377.1	378.7	379.9	379.9	377.1	373.4	366.3	357.7
15°	366.3	367.8	372.5	378.7	382.4	384.5	385.1	381.7	377.1	370.0	360.4
17.5°	364.4	366.3	375.0	383.6	390.1	391.9	392.2	388.5	383.6	375.0	363.8
20°	366.3	368.5	379.9	391.6	399.4	400.9	401.5	396.3	390.1	381.7	367.2
22.5°	373.4	376.5	389.2	401.8	409.9	412.0	411.4	404.0	397.8	388.8	371.6
25°	388.8	390.7	402.1	415.7	421.9	424.4	422.8	414.5	406.5	397.5	377.7
27.5°	406.8	409.2	421.3	431.5	435.5	436.1	434.6	425.9	417.0	409.5	387.3
30°	428.4	430.5	440.4	448.1	448.5	448.8	447.8	438.0	430.5	424.7	401.2
32.5°	451.2	451.5	461.7	465.4	463.0	463.9	463.0	452.2	446.9	445.1	419.4
35°	472.2	472.5	483.1	484.3	480.3	480.6	482.4	469.8	469.8	474.1	446.6
37.5°	492.3	493.2	502.5	501.3	499.7	502.5	505.0	494.2	500.3	512.7	479.7
40°	507.5	509.6	522.0	521.3	524.7	527.5	529.7	524.1	534.0	558.1	520.4
42.5°	517.3	521.7	539.3	543.6	549.5	554.4	558.1	557.8	575.1	608.4	563.7
45°	527.5	531.8	555.3	565.8	575.7	583.4	590.5	594.2	621.7	661.6	614.0
47.5°	539.9	543.6	569.8	590.5	603.2	613.7	626.4	634.4	669.3	715.6	660.6
50°	558.7	561.2	584.7	616.8	632.8	647.4	663.1	679.5	720.6	770.9	701.4
52.5°	583.1	584.7	602.0	643.3	669.0	684.4	707.9	729.5	772.8	820.9	734.8
55°	610.9	609.7	623.0	675.2	705.1	728.3	757.3	779.2	827.7	864.5	761.3
57.5°	638.7	637.8	648.3	705.7	750.8	778.0	808.0	831.1	878.1	905.3	780.5
60°	665.3	661.9	676.7	741.6	806.1	837.3	864.2	885.5	925.6	934.6	790.7
62.5°	688.7	688.7	710.4	785.7	872.2	900.3	921.6	935.8	971.0	956.2	786.7
65°	710.4	713.1	744.0	835.1	940.8	969.5	988.0	993.6	1016.1	957.1	752.7
67.5°	734.8	739.1	782.6	892.9	1019.8	1050.4	1066.5	1064.6	1048.3	942.9	679.8
70°	758.6	765.7	830.5	967.3	1117.4	1158.8	1176.4	1140.0	1064.9	864.2	564.6
72.5°	775.8	787.9	869.7	1041.8	1257.4	1321.0	1313.9	1160.7	986.8	712.2	427.1
74°	725.2	745.3	858.9	1067.4	1307.7	1363.6	1312.6	1119.6	892.6	573.5	302.7
75°	666.2	685.7	804.3	1057.2	1317.3	1342.3	1249.0	1047.3	800.6	444.4	197.7
77.5°	493.2	508.4	617.7	833.6	1041.8	1034.4	930.0	709.8	394.4	134.0	83.4
80°	217.7	229.2	304.8	419.4	564.3	562.1	523.5	326.2	127.2	70.1	51.0
82.5°	65.8	65.5	87.7	122.3	214.3	218.4	185.6	112.4	60.8	29.0	24.7
85°	0.3	0.3	0.3	0.3	0.9	8.0	6.8	21.6	11.1	5.3	9.0
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°	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5	384.5
2.5°	379.3	379.0	378.0	375.9	374.3	369.7	371.2	368.2	367.8	367.2	366.9
5°	369.7	368.5	364.8	360.4	355.5	347.8	345.3	340.7	337.9	337.0	337.6
7.5°	359.8	357.0	349.9	340.7	330.8	319.4	311.0	304.5	299.9	298.4	296.2
10°	353.6	349.0	337.0	321.5	305.5	289.4	275.5	265.9	258.8	253.3	253.3
12.5°	351.5	345.3	327.7	305.1	282.0	259.1	239.1	226.4	214.3	208.5	207.6
15°	352.7	344.1	320.0	290.3	259.4	229.8	205.1	186.9	175.4	168.3	170.8
17.5°	353.9	343.1	311.9	274.6	237.5	203.2	174.5	153.8	139.9	136.2	134.7
20°	355.5	341.3	301.8	257.6	215.0	177.6	147.3	126.3	115.8	111.2	111.2
22.5°	357.7	338.8	291.3	238.7	191.8	152.6	124.5	108.7	100.4	97.6	97.6
25°	360.7	337.3	280.4	219.9	169.9	132.8	109.3	97.0	92.7	90.8	90.5
27.5°	366.6	337.6	269.9	200.8	148.3	116.1	98.5	90.5	87.1	86.2	85.9
30°	375.6	340.7	258.8	180.4	129.1	103.5	91.1	85.6	83.4	82.8	82.8
32.5°	387.9	346.2	249.6	162.1	114.9	93.3	84.9	81.2	80.0	79.4	79.7
35°	407.1	355.8	238.4	145.5	101.6	86.2	80.0	77.2	76.3	76.3	76.6
37.5°	432.1	370.6	227.6	130.0	92.7	80.0	75.4	73.8	72.9	73.5	73.8
40°	463.6	388.2	217.4	116.1	85.2	75.1	71.3	70.1	69.8	70.4	71.0
42.5°	497.6	409.5	208.2	104.7	79.4	71.0	67.9	67.3	67.0	67.3	68.3
45°	537.1	433.9	200.4	96.1	75.1	67.6	64.9	64.2	63.9	64.6	65.2
47.5°	573.5	455.9	194.3	90.2	71.3	65.2	62.4	61.5	61.5	61.5	62.1
50°	603.2	473.2	190.6	86.2	68.3	62.4	59.9	59.0	58.7	58.4	58.7
52.5°	628.8	486.1	189.3	83.7	65.8	59.9	57.4	56.8	56.2	55.6	55.9
55°	645.8	492.6	186.9	81.5	63.6	57.1	55.0	54.4	53.7	52.8	52.8
57.5°	655.7	492.0	181.3	80.3	62.4	54.7	52.5	52.5	51.9	50.3	50.7
60°	656.6	481.2	167.7	78.8	61.5	52.2	49.7	50.3	50.3	49.1	49.1
62.5°	640.9	452.8	141.5	74.7	60.2	50.3	47.6	49.1	49.7	48.5	48.5
65°	592.4	385.8	113.7	68.9	57.1	48.2	45.1	48.2	50.0	49.1	48.8
67.5°	499.4	305.5	93.9	62.4	53.7	45.4	42.6	46.6	49.1	49.1	48.8
70°	400.9	232.0	77.2	55.3	48.5	42.0	39.8	43.2	45.4	46.0	46.0
72.5°	276.1	141.8	62.7	47.6	42.6	38.0	36.1	38.3	39.5	40.8	40.5
74°	178.2	99.5	55.0	43.2	38.9	34.9	34.0	34.9	35.5	36.8	37.1
75°	119.2	81.2	51.3	40.2	36.8	32.7	32.1	33.0	33.7	34.6	34.6
77.5°	68.6	58.1	41.4	33.4	30.6	28.1	27.8	28.1	29.0	30.0	29.7
80°	47.6	44.2	32.7	25.9	24.1	22.9	23.2	23.5	25.0	25.3	25.0
82.5°	28.7	31.8	23.2	19.5	18.2	17.9	18.8	19.5	20.7	21.0	20.7
85°	11.4	15.1	11.4	10.8	12.0	13.3	14.8	15.8	16.4	16.4	16.4
87.5°	0.0	2.2	2.8	4.3	6.8	8.0	10.5	11.4	12.0	11.7	11.4
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)