

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: P401045

Luminaire Tested: **ENT-SA1A-830-U-T2-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-12)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-830-U-T2-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1644 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B0 - U0 - G0

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

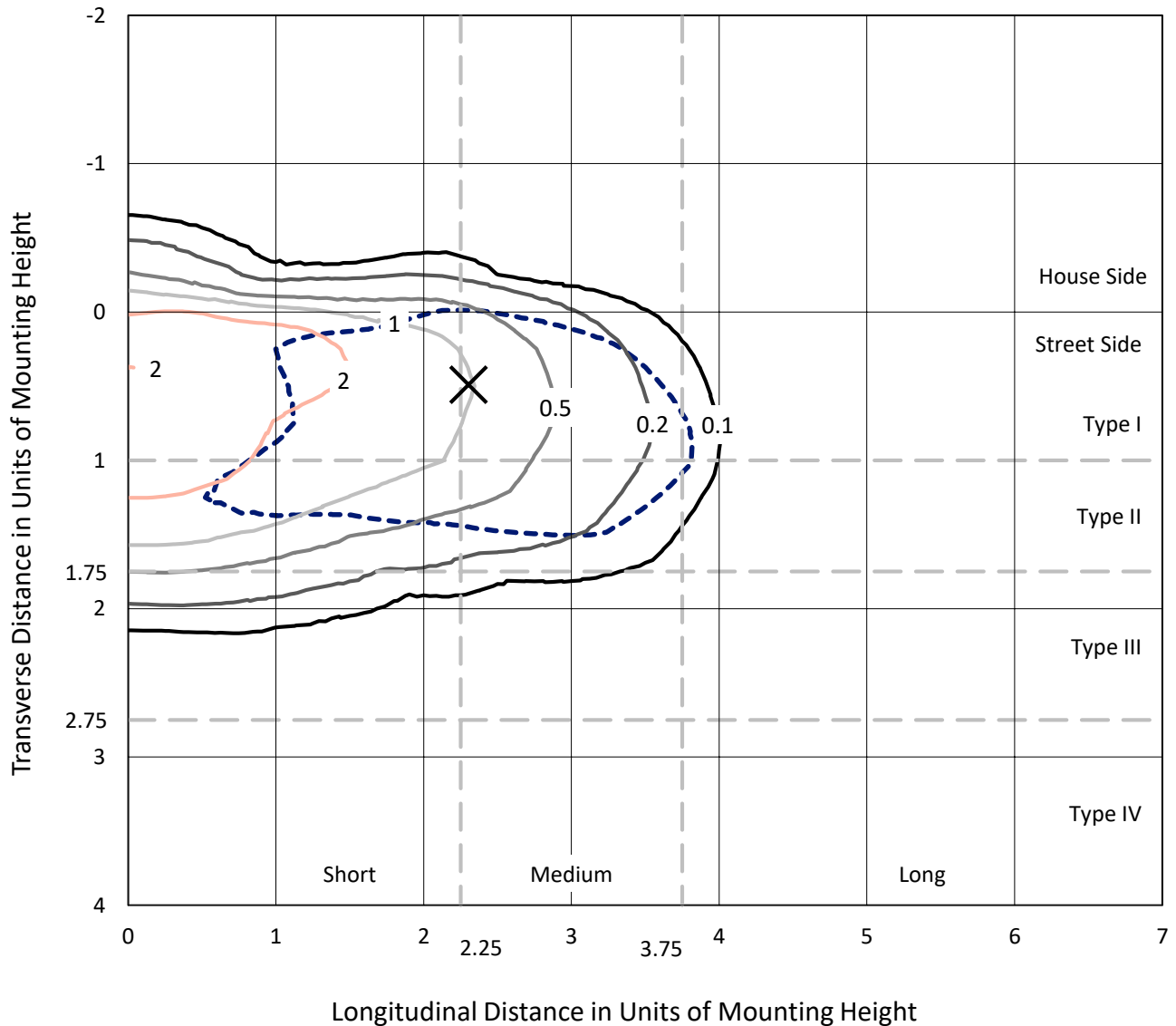


REPORT NUMBER: P401045

CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

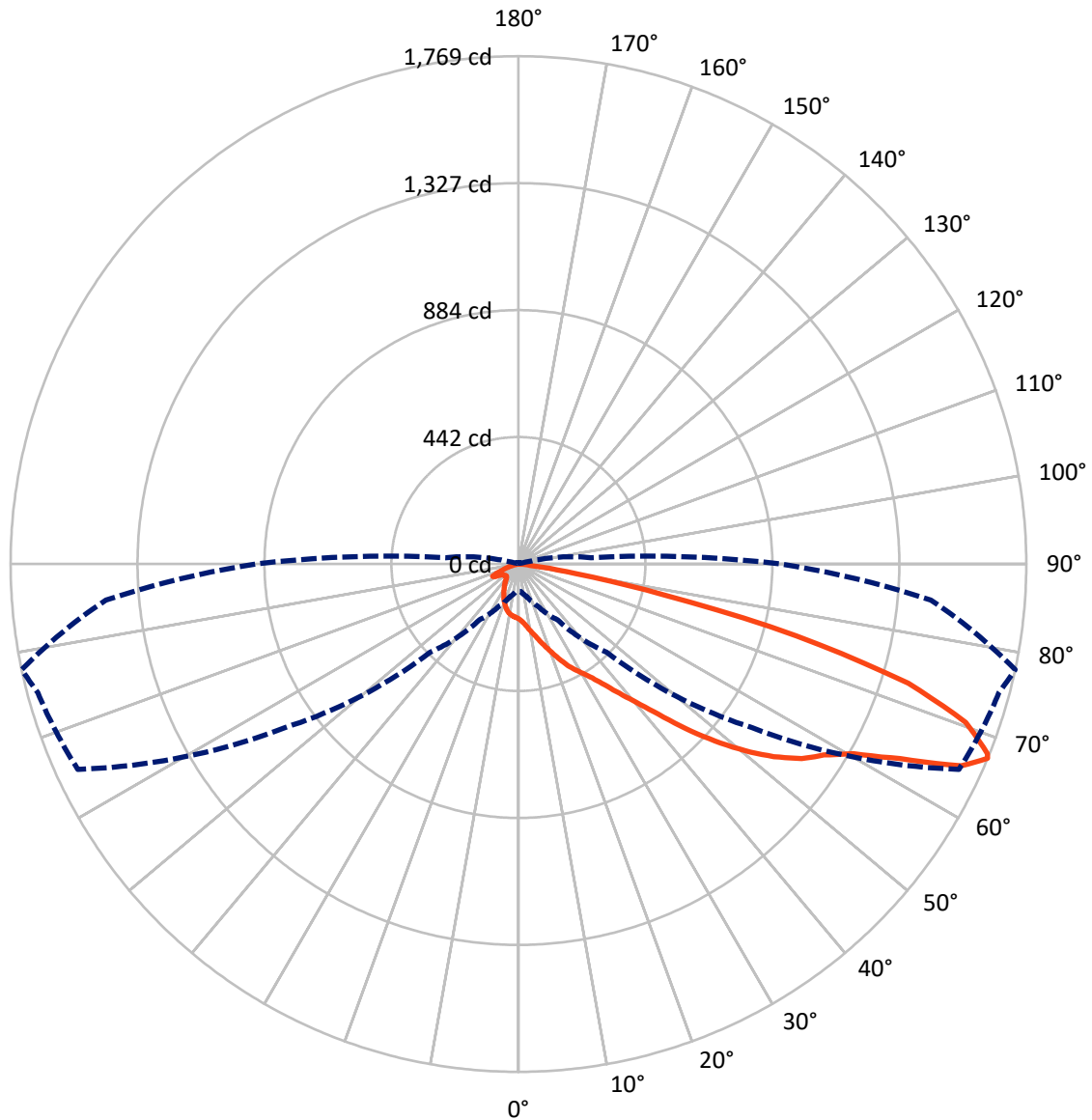


Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P401045

CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P401045

CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	116.0	0.0	116.0
	% Fixture	7.1	0.0	7.1
Street Side	Lumens	1528.0	0.0	1528.0
	% Fixture	92.9	0.0	92.9
Total	Lumens	1644.0	0.0	1644.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.4	1.1
10°-20°	52.7	3.2
20°-30°	93.1	5.7
30°-40°	164.2	10.0
40°-50°	282.2	17.2
50°-60°	424.7	25.8
60°-70°	418.0	25.4
70°-80°	182.6	11.1
80°-90°	8.1	0.5
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°	1644.0	100.0
0°-180°	1644.0	100.0



REPORT NUMBER: P401045

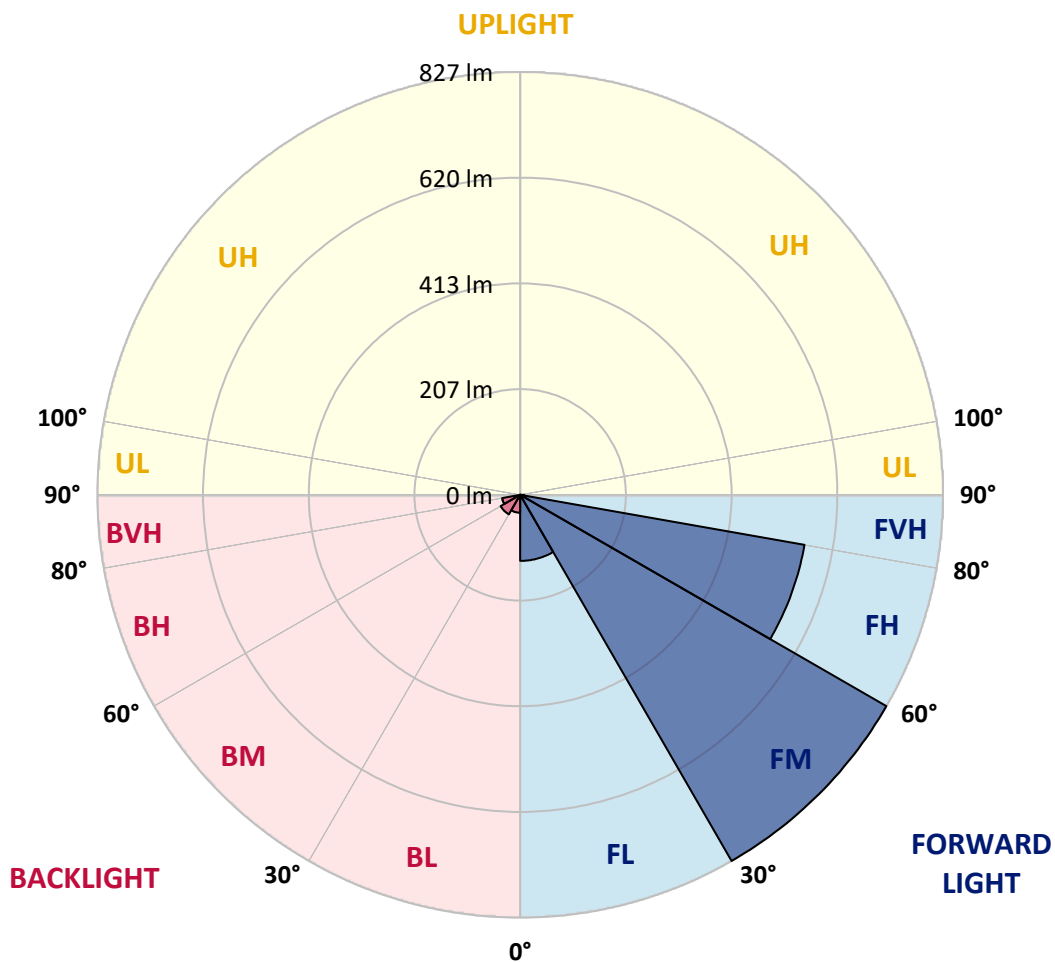
CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	129.2	7.9			
FM (30°-60°)	826.9	50.3			
FH (60°-80°)	564.6	34.3			G0/660
FVH (80°-90°)	7.3	0.4			G0/10
BL (0°-30°)	35.0	2.1	B0/110		
BM (30°-60°)	44.1	2.7	B0/220		
BH (60°-80°)	36.0	2.2	B0/110		G0/110
BVH (80°-90°)	0.8	0.1			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 II Medium





REPORT NUMBER: P401045

CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9
2.5°	219.0	219.9	218.7	217.7	215.3	212.2	209.1	204.5	199.5	197.7	194.6
5°	245.9	245.9	245.9	243.4	241.2	235.4	228.3	221.1	211.9	208.5	201.4
7.5°	260.1	260.4	261.3	261.3	260.1	256.0	248.3	240.3	226.4	221.8	210.3
10°	261.6	262.8	265.3	269.0	271.8	274.0	269.3	260.7	244.0	238.4	221.8
12.5°	257.6	258.2	262.2	269.0	278.0	286.9	287.2	282.0	263.5	255.7	235.7
15°	248.3	249.3	255.1	265.9	279.8	295.9	305.2	303.6	286.3	277.4	251.1
17.5°	233.5	234.4	241.8	257.9	278.3	301.8	321.5	329.2	308.9	300.2	266.9
20°	232.9	233.2	236.0	248.0	272.1	305.2	337.6	355.8	336.4	327.1	285.4
22.5°	272.4	269.9	263.8	256.0	266.5	304.2	352.1	383.9	370.3	355.8	306.7
25°	316.6	317.5	310.7	292.5	279.2	302.7	363.2	415.7	402.1	387.6	328.6
27.5°	362.9	361.4	355.5	338.8	316.6	313.8	371.3	441.4	432.7	415.1	348.1
30°	408.0	406.8	402.4	385.5	361.4	342.5	377.4	464.5	461.8	442.3	363.8
32.5°	459.6	461.8	456.2	434.0	404.6	381.4	390.7	488.9	497.0	473.2	380.2
35°	519.5	519.5	508.1	487.7	457.4	425.0	417.3	515.8	541.7	516.1	406.2
37.5°	568.9	572.9	566.1	536.8	508.4	474.4	457.7	548.9	597.0	571.1	441.1
40°	607.8	614.6	614.9	585.9	559.7	537.4	514.3	595.5	666.5	633.2	482.8
42.5°	644.0	645.2	650.5	633.8	607.5	601.7	577.9	650.8	753.3	714.1	538.3
45°	690.0	692.5	689.4	677.0	654.5	662.2	648.9	720.9	850.9	817.9	603.8
47.5°	757.6	763.5	758.9	736.6	709.2	723.7	714.1	790.7	961.2	921.0	674.9
50°	821.0	825.6	830.5	823.4	795.9	782.0	770.3	864.5	1055.7	1021.7	744.7
52.5°	827.8	832.1	859.3	884.3	902.5	866.1	829.3	939.3	1143.1	1114.7	808.6
55°	783.6	786.4	831.8	881.2	964.9	977.2	916.1	1013.1	1216.3	1196.8	851.5
57.5°	660.7	672.4	736.9	812.6	949.4	1043.3	1039.3	1098.9	1263.9	1254.9	906.8
60°	434.0	446.9	524.1	638.7	835.8	1025.7	1174.6	1227.7	1330.6	1340.5	1003.8
62.5°	224.9	240.0	307.9	409.6	605.7	893.2	1220.6	1439.3	1458.5	1492.1	1176.8
65°	128.5	131.6	165.6	240.0	375.0	639.7	1165.3	1648.7	1626.8	1695.0	1397.6
67°	95.4	95.4	119.2	163.1	237.5	434.9	993.9	1692.9	1732.7	1768.9	1442.1
67.5°	85.6	90.2	110.6	150.4	213.1	385.8	930.0	1681.1	1739.5	1762.1	1426.6
70°	58.7	61.8	79.4	107.8	143.6	200.8	609.7	1486.9	1675.9	1653.0	1292.9
72.5°	35.2	36.4	52.5	77.5	107.2	107.5	332.6	1128.6	1420.2	1419.8	1056.0
75°	21.9	23.2	30.9	51.9	75.1	67.3	153.8	767.8	1019.9	1000.1	707.6
77.5°	12.4	14.2	18.5	28.4	47.6	42.9	64.9	430.2	551.0	517.0	351.5
80°	4.9	5.9	10.5	13.6	26.9	25.6	26.6	151.3	223.0	201.1	117.7
82.5°	1.2	1.5	3.7	6.5	10.5	10.5	8.3	41.4	52.8	49.1	30.3
85°	0.0	0.0	0.3	0.3	0.3	0.6	2.2	4.6	5.6	6.5	4.9
87.5°	0.0	0.0	0.0	0.3	0.3	0.3	0.6	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P401045

CATALOG NUMBER: ENT-SA1A-830-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9
2.5°	192.1	190.0	185.6	181.0	176.4	172.7	169.6	165.2	164.6	164.6	164.6
5°	196.1	191.2	181.3	171.4	161.5	152.6	146.1	140.8	136.2	134.7	135.9
7.5°	202.0	193.0	175.7	158.4	143.0	130.3	121.1	113.7	110.3	108.4	106.9
10°	209.7	195.8	168.3	143.0	123.5	108.4	98.5	91.4	88.0	85.9	86.2
12.5°	218.1	198.0	159.1	126.3	104.7	90.8	82.5	76.6	71.0	67.6	68.6
15°	226.4	199.5	147.6	110.9	90.2	77.8	66.1	55.6	51.9	51.3	51.0
17.5°	235.7	199.2	135.0	96.4	77.8	60.5	48.8	47.6	47.3	47.3	46.9
20°	245.2	197.7	120.5	84.3	65.5	46.0	44.2	43.5	42.6	42.3	42.0
22.5°	255.7	194.9	107.2	73.8	48.8	42.0	39.5	37.7	36.1	35.2	35.5
25°	265.3	189.6	94.2	63.9	41.7	37.7	34.3	31.5	30.0	28.7	29.0
27.5°	271.8	180.4	83.1	51.6	38.3	33.4	29.3	26.6	24.4	23.5	23.5
30°	272.4	167.1	73.2	42.3	34.9	29.3	25.0	21.9	20.7	20.1	19.8
32.5°	271.8	153.5	65.8	38.9	31.8	25.6	21.3	19.1	17.9	17.3	17.3
35°	274.9	139.6	59.0	35.8	28.4	22.5	18.8	16.7	15.8	15.1	15.1
37.5°	284.2	130.0	51.9	32.7	25.3	19.8	17.0	15.1	14.2	13.6	13.6
40°	296.8	122.0	43.2	29.7	22.2	17.9	15.4	13.9	12.7	12.0	12.0
42.5°	319.1	118.9	36.1	26.6	19.5	16.1	14.2	12.4	11.1	10.5	10.5
45°	352.1	120.5	33.0	23.8	17.6	14.5	12.7	10.8	9.6	9.3	9.3
47.5°	388.6	126.9	30.9	21.3	16.1	13.6	11.4	9.6	8.3	8.0	8.0
50°	429.3	137.1	29.0	18.8	14.5	12.4	10.2	8.3	7.4	7.1	7.1
52.5°	468.2	150.1	27.2	17.0	13.6	11.1	9.0	7.4	6.8	6.5	6.5
55°	497.9	158.4	25.6	15.8	12.7	10.2	8.0	7.1	6.2	5.9	5.9
57.5°	539.3	172.3	23.8	14.2	11.4	9.3	7.4	6.5	5.6	5.6	5.6
60°	623.3	209.7	21.0	13.0	10.2	8.3	7.1	5.9	5.3	4.9	4.9
62.5°	774.6	271.5	18.2	12.0	9.0	7.4	6.2	5.3	4.6	4.0	4.0
65°	920.4	297.1	15.4	10.5	8.0	6.5	5.6	4.6	3.4	2.8	2.8
67°	912.4	254.2	13.0	9.0	6.8	5.9	4.6	3.7	2.5	1.5	1.5
67.5°	890.8	236.6	12.7	8.6	6.5	5.6	4.6	3.4	2.2	1.2	1.2
70°	757.0	165.6	9.9	6.8	5.6	4.9	3.7	2.5	1.2	0.6	0.6
72.5°	614.9	131.3	7.7	5.6	4.6	3.7	3.1	1.5	0.9	0.3	0.3
75°	434.9	80.6	6.8	4.9	3.7	2.8	2.5	1.5	0.9	0.6	0.3
77.5°	214.7	37.1	5.6	4.3	3.4	2.8	2.2	1.9	1.5	1.2	0.6
80°	63.0	12.0	3.7	3.1	3.1	2.8	2.5	2.2	1.9	1.5	0.9
82.5°	14.2	4.3	1.2	1.5	2.2	2.2	2.2	1.5	1.2	0.6	0.3
85°	1.9	0.9	0.9	0.9	1.2	1.2	0.9	0.6	0.6	0.0	0.0
87.5°	0.6	0.6	0.6	0.9	0.9	0.9	0.6	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

(END OF REPORT)