

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: P401232

Luminaire Tested: **ENT-SA1B-830-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401232
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-830-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2724 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 25.4
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

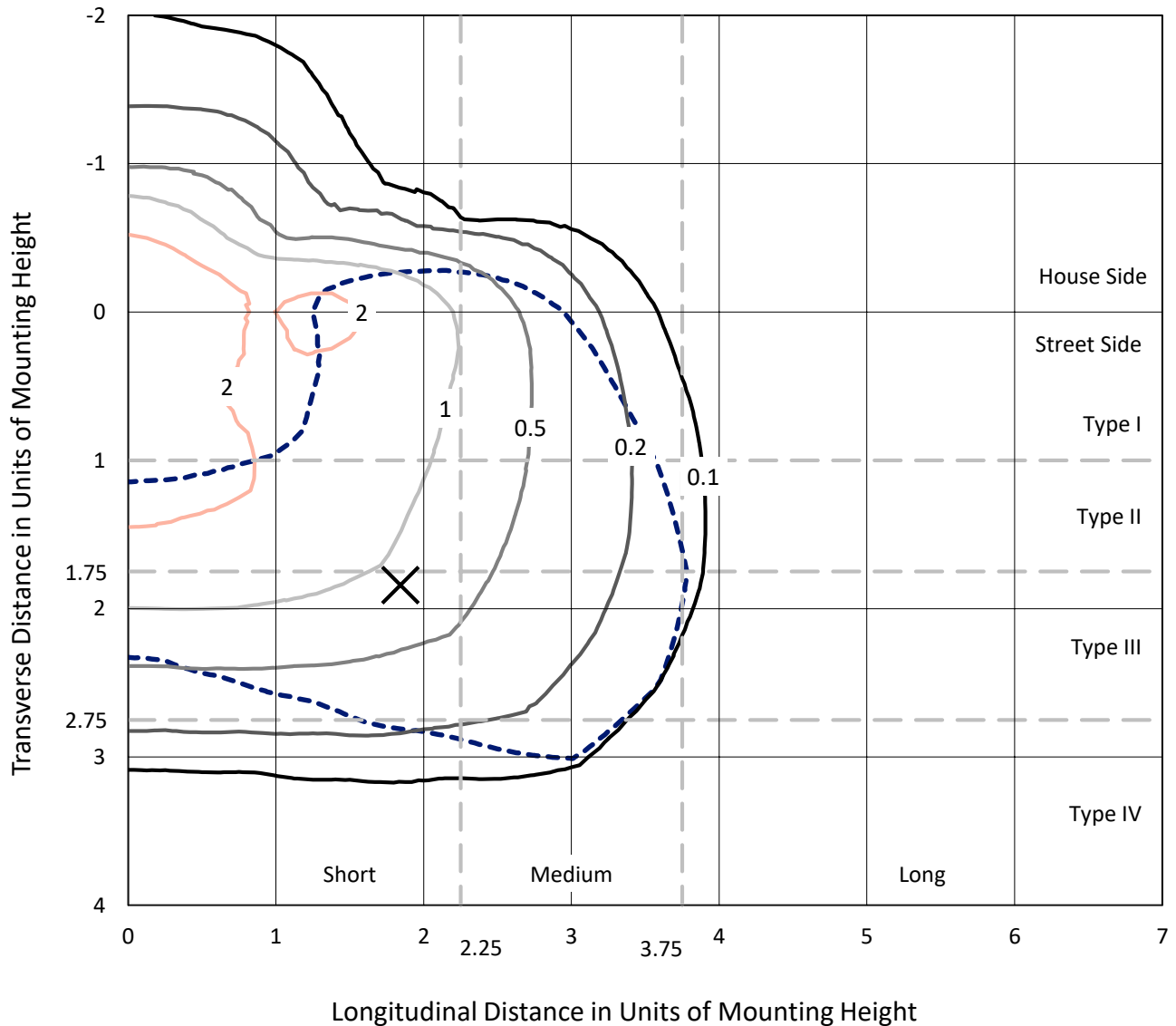


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

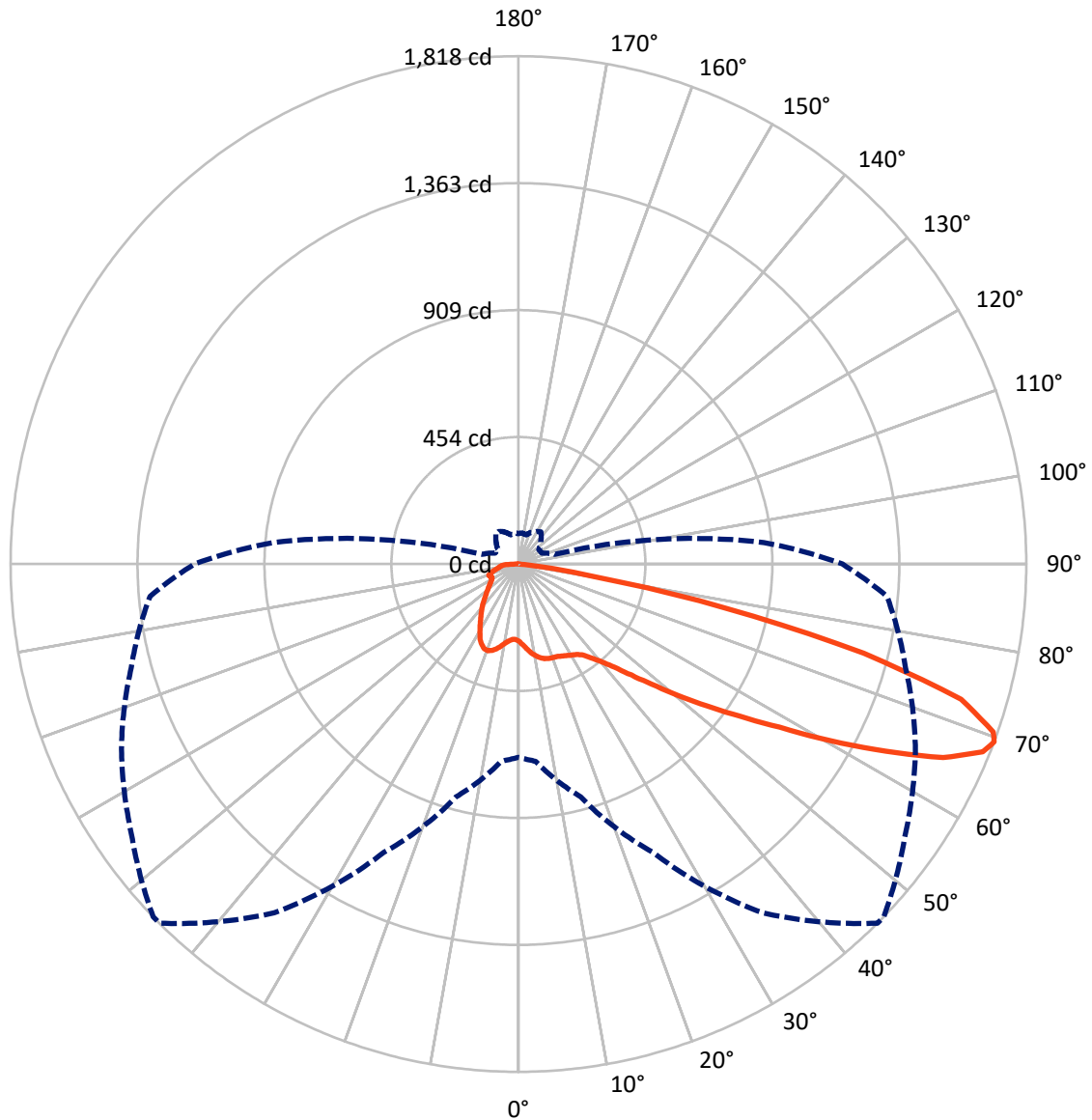


Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	641.3	0.0	641.3
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	2082.7	0.0	2082.7
	% Fixture	76.5	0.0	76.5
Total	Lumens	2724.0	0.0	2724.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.2	1.0
10°-20°	93.4	3.4
20°-30°	157.7	5.8
30°-40°	228.3	8.4
40°-50°	344.6	12.7
50°-60°	581.1	21.3
60°-70°	799.5	29.3
70°-80°	443.0	16.3
80°-90°	48.2	1.8
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°	2724.0	100.0
0°-180°	2724.0	100.0



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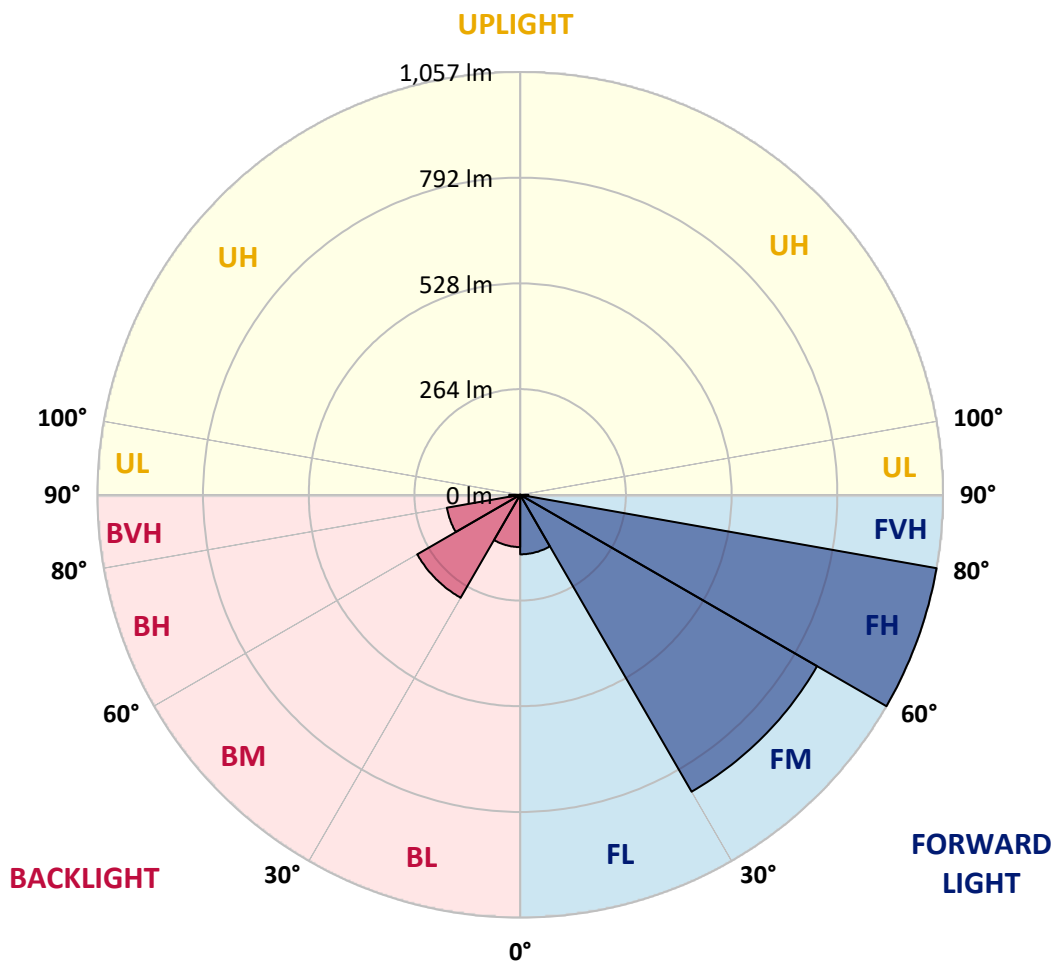
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	148.7	5.5			
FM	(30°-60°)	856.7	31.5			
FH	(60°-80°)	1056.6	38.8			G1/1800
FVH	(80°-90°)	20.7	0.8			G1/100
BL	(0°-30°)	130.6	4.8	B1/500		
BM	(30°-60°)	297.3	10.9	B1/1000		
BH	(60°-80°)	185.9	6.8	B1/500		G1/500
BVH	(80°-90°)	27.6	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5
2.5°	293.9	293.5	293.9	292.4	290.8	288.5	287.7	285.0	283.1	280.4	278.0
5°	315.6	316.8	316.4	314.4	308.2	303.6	303.6	297.8	291.6	285.8	280.4
7.5°	339.2	339.2	336.9	333.0	326.8	319.9	319.1	311.3	302.4	294.3	285.8
10°	356.3	357.0	353.6	348.1	340.4	333.0	332.3	323.3	314.8	304.4	293.9
12.5°	368.3	368.3	365.2	360.1	350.8	343.9	343.1	335.0	326.1	315.2	303.2
15°	374.5	373.7	371.0	365.6	357.4	351.6	350.5	343.5	336.1	325.3	312.5
17.5°	373.3	373.3	371.0	365.6	359.7	355.1	354.3	349.3	343.9	333.4	320.6
20°	368.3	367.9	367.1	362.8	359.0	357.0	356.3	353.9	350.5	341.5	329.5
22.5°	363.6	363.2	362.1	359.4	357.8	359.0	359.0	358.6	358.2	351.2	339.6
25°	366.3	365.9	363.6	359.7	359.4	364.8	365.2	366.3	367.1	361.3	349.3
27.5°	385.3	384.1	377.6	367.5	364.0	371.0	371.8	375.2	374.5	368.3	357.8
30°	422.5	422.9	408.2	386.5	374.9	378.0	378.3	382.2	381.0	376.0	367.5
32.5°	478.6	478.6	454.6	421.7	392.3	386.1	384.9	388.4	393.1	386.5	378.0
35°	549.9	548.0	518.9	468.2	422.1	400.0	399.2	397.7	405.8	399.6	387.2
37.5°	621.5	614.6	586.3	530.5	463.9	427.1	424.0	419.4	424.0	410.9	400.0
40°	679.2	678.1	654.8	598.3	513.5	460.0	457.7	437.2	440.3	429.8	425.6
42.5°	742.7	743.5	728.0	671.1	572.7	504.6	498.4	466.6	475.5	471.7	469.7
45°	812.4	811.7	800.0	740.4	645.1	566.5	558.8	519.7	537.9	535.6	546.4
47.5°	865.9	870.1	863.6	821.3	731.1	641.7	635.9	588.2	615.7	634.3	654.8
50°	938.7	938.3	920.5	903.1	831.0	737.7	731.9	678.8	718.3	745.4	783.0
52.5°	1028.9	1025.8	989.0	982.8	952.6	842.6	837.6	782.2	838.8	862.4	938.7
55°	1085.4	1085.1	1066.1	1076.9	1077.7	959.6	953.4	904.2	968.1	995.2	1110.6
57.5°	1132.7	1133.1	1149.0	1186.9	1212.5	1101.7	1099.4	1039.4	1104.0	1142.0	1278.3
60°	1169.1	1176.8	1221.4	1308.1	1350.7	1282.9	1272.9	1209.4	1252.7	1267.8	1406.5
62.5°	1154.4	1164.4	1252.0	1379.8	1489.3	1475.0	1471.5	1379.8	1379.4	1371.6	1502.1
65°	1038.2	1059.9	1197.7	1377.0	1580.7	1670.2	1665.2	1540.5	1497.1	1458.4	1530.8
67.5°	849.6	854.3	1020.4	1271.7	1580.0	1792.9	1787.5	1657.4	1570.3	1475.4	1446.7
69°	691.6	708.7	862.4	1138.5	1524.2	1817.7	1817.7	1689.9	1567.6	1434.7	1323.6
70°	598.3	599.1	747.4	1032.4	1448.3	1803.0	1806.5	1689.9	1545.5	1381.7	1214.4
72.5°	280.4	297.8	391.5	673.8	1169.9	1657.4	1665.9	1578.4	1417.3	1190.4	911.2
75°	84.0	87.1	130.5	319.5	670.3	1276.7	1295.7	1313.1	1154.4	876.3	561.1
77.5°	50.0	49.6	63.1	108.4	310.2	757.1	765.6	839.9	748.9	487.2	254.8
80°	24.4	25.2	33.7	52.7	116.2	274.9	302.4	392.7	331.9	190.5	93.3
82.5°	8.1	8.9	13.9	21.3	49.2	88.7	98.0	123.1	106.1	69.3	39.9
85°	0.0	0.0	0.4	0.8	2.7	6.6	6.6	14.7	22.1	24.4	13.2
87.5°	0.0	0.0	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5
2.5°	276.9	276.1	274.6	273.0	272.2	270.3	270.7	269.9	269.5	269.5	269.9
5°	277.7	276.5	274.2	272.6	271.1	270.3	272.2	273.0	273.8	273.8	274.2
7.5°	282.3	280.0	277.3	275.3	275.7	276.9	280.0	282.3	283.5	284.2	285.0
10°	290.0	287.3	283.5	283.1	283.9	286.9	291.2	294.7	297.8	299.7	299.7
12.5°	298.2	294.7	291.6	292.4	295.9	300.5	304.8	308.6	311.3	313.3	313.7
15°	307.1	303.6	300.5	302.4	308.2	313.7	317.5	319.1	320.3	322.2	322.6
17.5°	315.2	312.1	309.4	314.4	319.5	323.7	324.9	324.1	322.6	323.7	324.5
20°	323.7	321.0	319.5	324.9	328.4	328.8	325.7	322.2	318.3	318.3	318.7
22.5°	334.2	330.7	329.9	332.6	331.5	326.8	319.1	313.7	308.2	307.5	308.6
25°	344.3	340.8	340.4	338.5	328.4	316.4	305.9	299.7	295.5	295.9	298.2
27.5°	354.3	352.0	352.4	341.9	319.5	301.3	287.3	282.3	283.5	284.2	286.6
30°	364.4	364.4	365.9	341.9	307.1	280.0	266.8	266.4	269.5	271.8	274.6
32.5°	376.0	379.5	376.8	337.7	290.4	258.3	247.8	248.6	252.1	256.0	258.3
35°	387.2	395.4	387.6	328.0	267.6	238.5	230.0	228.9	231.6	235.1	236.2
37.5°	405.1	418.2	396.9	312.9	244.0	221.1	212.6	209.5	206.8	209.5	209.1
40°	436.0	451.9	403.9	287.7	221.1	204.9	195.9	190.1	183.6	177.7	177.7
42.5°	485.6	496.1	407.8	257.1	198.3	188.6	179.7	171.2	161.1	150.6	150.6
45°	566.5	568.9	409.3	224.6	177.4	172.3	163.0	154.9	141.7	131.3	129.0
47.5°	674.6	664.5	413.2	193.2	159.2	158.0	150.3	141.0	126.6	116.9	115.8
50°	819.8	776.4	430.2	168.1	144.4	145.6	139.8	129.0	115.4	108.4	106.9
52.5°	983.2	917.8	443.4	147.9	131.7	135.1	130.9	120.4	108.8	103.0	101.8
55°	1161.7	1053.7	440.3	134.4	122.0	125.9	124.3	115.4	104.9	99.9	98.7
57.5°	1307.3	1149.3	413.2	122.4	112.3	117.7	119.3	112.3	102.6	98.0	96.8
60°	1416.5	1201.6	357.4	112.3	104.6	111.1	115.4	110.4	102.2	99.5	98.4
62.5°	1466.1	1197.0	285.0	104.6	98.7	106.5	115.8	113.5	108.0	110.0	110.4
65°	1438.2	1138.5	213.8	98.7	95.3	107.3	122.4	122.4	114.2	117.7	118.1
67.5°	1295.3	985.5	155.7	94.5	91.8	111.1	134.8	127.0	111.5	114.2	113.1
69°	1159.4	881.8	133.6	92.2	89.1	113.1	140.2	127.8	108.4	111.5	108.4
70°	1059.5	788.0	120.0	90.2	87.9	113.1	141.7	127.0	106.9	109.2	105.7
72.5°	754.0	547.2	98.7	86.4	83.6	104.6	139.0	122.8	102.6	99.9	93.3
75°	438.4	302.4	84.0	82.1	74.0	91.8	132.1	118.1	98.4	93.3	88.7
77.5°	183.9	135.1	71.6	74.7	65.4	81.7	123.5	113.5	93.3	86.4	84.0
80°	74.7	67.4	59.6	64.7	56.9	72.0	113.8	105.7	86.0	79.0	75.5
82.5°	39.1	37.2	45.7	52.3	47.2	66.2	107.3	100.3	79.8	72.8	68.5
85°	11.6	15.5	25.9	35.6	36.0	59.6	104.2	92.9	69.3	60.0	59.2
87.5°	0.8	3.1	8.9	18.6	23.6	45.7	84.4	76.3	56.2	47.2	47.6
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)