

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: P400980

Luminaire Tested: **ENT-SA1A-740-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400980
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-SA1A-740-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2733 lumens
Efficiency: N/A
Efficacy: 136.0 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): 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

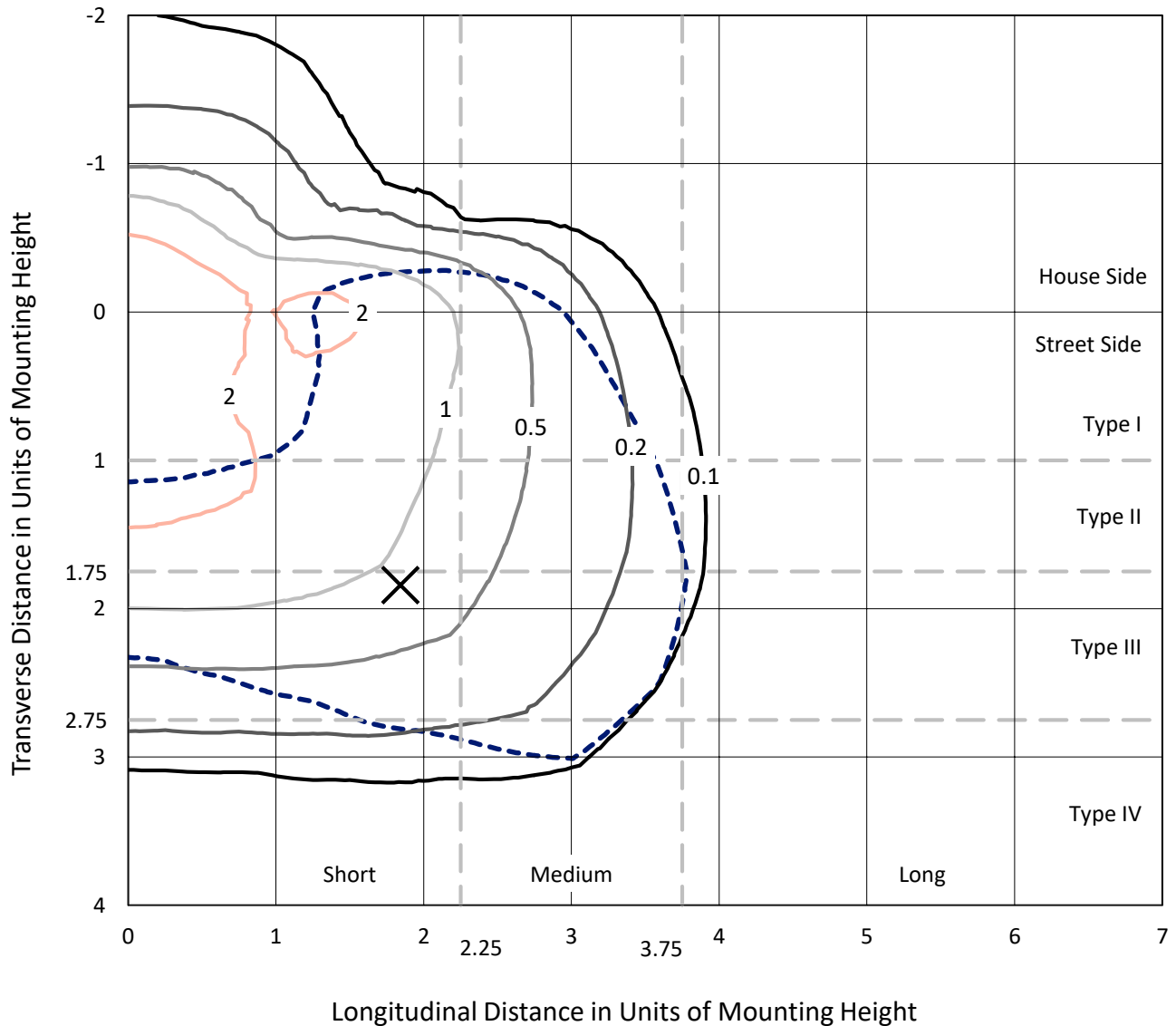


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Iso-Footcandle Lines of Horizontal Illumination

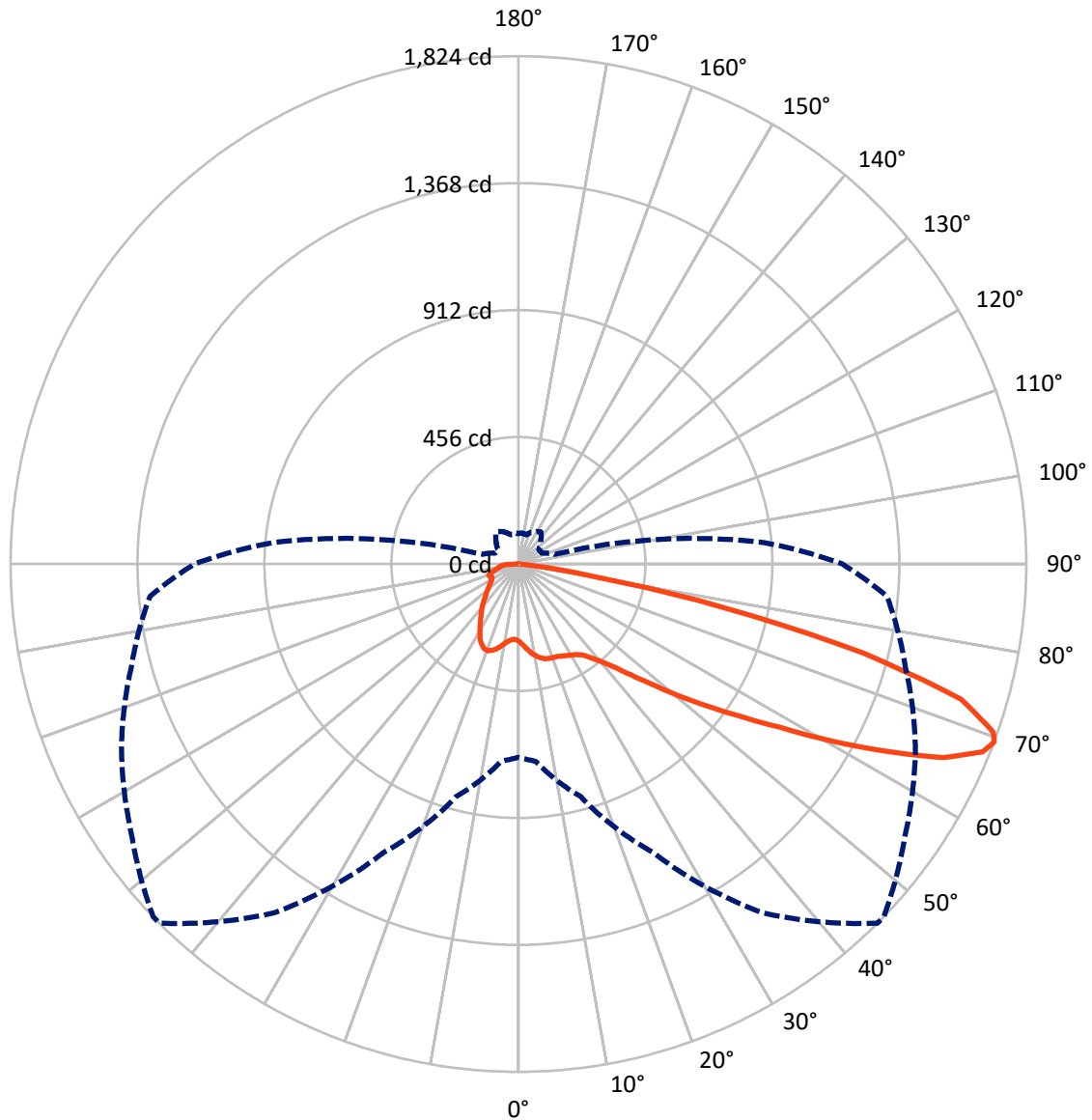
× Max cd
 - - - 1/2 Max cd



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	643.4	0.0	643.4
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	2089.6	0.0	2089.6
	% Fixture	76.5	0.0	76.5
Total	Lumens	2733.0	0.0	2733.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.2	1.0
10°-20°	93.7	3.4
20°-30°	158.3	5.8
30°-40°	229.0	8.4
40°-50°	345.8	12.7
50°-60°	583.0	21.3
60°-70°	802.1	29.3
70°-80°	444.5	16.3
80°-90°	48.4	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°	2733.0	100.0
0°-180°	2733.0	100.0



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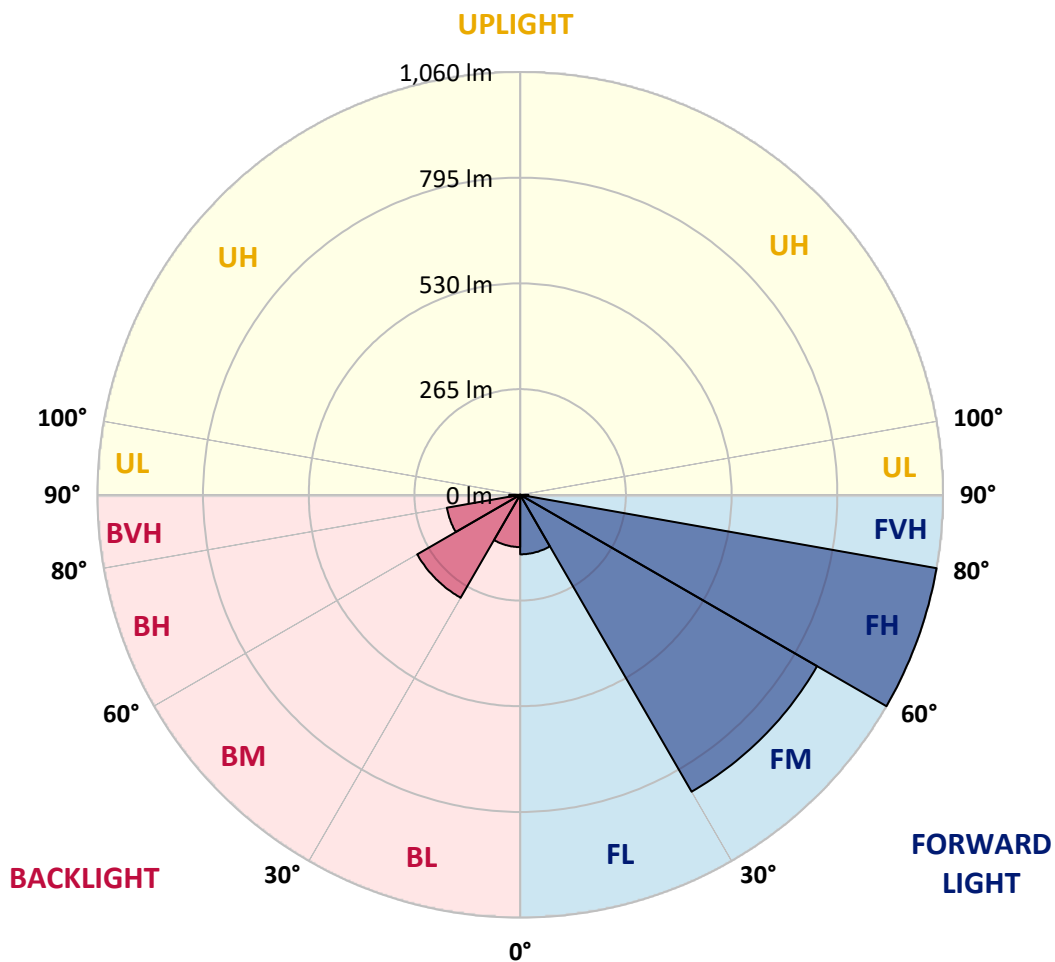
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	149.2	5.5			
FM	(30°-60°)	859.6	31.5			
FH	(60°-80°)	1060.1	38.8			G1/1800
FVH	(80°-90°)	20.7	0.8			G1/100
BL	(0°-30°)	131.0	4.8	B1/500		
BM	(30°-60°)	298.3	10.9	B1/1000		
BH	(60°-80°)	186.5	6.8	B1/500		G1/500
BVH	(80°-90°)	27.7	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°	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4
2.5°	294.9	294.5	294.9	293.3	291.8	289.5	288.7	286.0	284.0	281.3	279.0
5°	316.6	317.8	317.4	315.5	309.3	304.6	304.6	298.8	292.6	286.7	281.3
7.5°	340.3	340.3	338.0	334.1	327.9	320.9	320.1	312.4	303.4	295.3	286.7
10°	357.4	358.2	354.7	349.3	341.5	334.1	333.4	324.4	315.9	305.4	294.9
12.5°	369.5	369.5	366.4	361.3	352.0	345.0	344.2	336.1	327.1	316.3	304.2
15°	375.7	374.9	372.2	366.8	358.6	352.8	351.6	344.6	337.2	326.4	313.5
17.5°	374.5	374.5	372.2	366.8	360.9	356.3	355.5	350.4	345.0	334.5	321.7
20°	369.5	369.1	368.3	364.0	360.2	358.2	357.4	355.1	351.6	342.7	330.6
22.5°	364.8	364.4	363.3	360.5	359.0	360.2	360.2	359.8	359.4	352.4	340.7
25°	367.5	367.2	364.8	360.9	360.5	366.0	366.4	367.5	368.3	362.5	350.4
27.5°	386.6	385.4	378.8	368.7	365.2	372.2	373.0	376.5	375.7	369.5	359.0
30°	423.9	424.3	409.5	387.7	376.1	379.2	379.6	383.5	382.3	377.3	368.7
32.5°	480.2	480.2	456.1	423.1	393.6	387.4	386.2	389.7	394.4	387.7	379.2
35°	551.7	549.8	520.6	469.7	423.5	401.3	400.6	399.0	407.2	401.0	388.5
37.5°	623.6	616.6	588.2	532.3	465.5	428.5	425.4	420.8	425.4	412.2	401.3
40°	681.5	680.3	657.0	600.3	515.2	461.6	459.2	438.6	441.8	431.3	427.0
42.5°	745.2	746.0	730.4	673.3	574.6	506.2	500.0	468.2	477.1	473.2	471.3
45°	815.1	814.3	802.7	742.9	647.3	568.4	560.6	521.4	539.7	537.3	548.2
47.5°	868.7	873.0	866.4	824.1	733.5	643.8	638.0	590.2	617.8	636.4	657.0
50°	941.8	941.4	923.5	906.0	833.8	740.1	734.3	681.1	720.7	747.9	785.6
52.5°	1032.3	1029.2	992.3	986.1	955.8	845.4	840.4	784.8	841.5	865.2	941.8
55°	1089.0	1088.6	1069.6	1080.5	1081.3	962.8	956.5	907.2	971.3	998.5	1114.3
57.5°	1136.4	1136.8	1152.7	1190.8	1216.5	1105.3	1103.0	1042.8	1107.7	1145.8	1282.5
60°	1173.0	1180.7	1225.4	1312.4	1355.2	1287.2	1277.1	1213.4	1256.9	1272.0	1411.1
62.5°	1158.2	1168.3	1256.1	1384.3	1494.3	1479.9	1476.4	1384.3	1383.9	1376.2	1507.1
65°	1041.6	1063.4	1201.7	1381.6	1586.0	1675.7	1670.7	1545.5	1502.0	1463.2	1535.8
67.5°	852.4	857.1	1023.8	1275.9	1585.2	1798.9	1793.4	1662.9	1575.5	1480.3	1451.5
69°	693.9	711.0	865.2	1142.3	1529.2	1823.7	1823.7	1695.5	1572.7	1439.5	1328.0
70°	600.3	601.0	749.9	1035.8	1453.1	1809.0	1812.5	1695.5	1550.6	1386.3	1218.4
72.5°	281.3	298.8	392.8	676.0	1173.7	1662.9	1671.4	1583.6	1422.0	1194.3	914.2
75°	84.3	87.4	130.9	320.5	672.5	1281.0	1300.0	1317.5	1158.2	879.2	563.0
77.5°	50.1	49.7	63.3	108.8	311.2	759.6	768.1	842.7	751.4	488.8	255.6
80°	24.5	25.3	33.8	52.8	116.6	275.9	303.4	394.0	333.0	191.2	93.6
82.5°	8.2	8.9	14.0	21.4	49.3	89.0	98.3	123.6	106.5	69.5	40.0
85°	0.0	0.0	0.4	0.8	2.7	6.6	6.6	14.8	22.1	24.5	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°	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4
2.5°	277.8	277.0	275.5	273.9	273.1	271.2	271.6	270.8	270.4	270.4	270.8
5°	278.6	277.4	275.1	273.5	272.0	271.2	273.1	273.9	274.7	274.7	275.1
7.5°	283.2	280.9	278.2	276.2	276.6	277.8	280.9	283.2	284.4	285.2	286.0
10°	291.0	288.3	284.4	284.0	284.8	287.9	292.2	295.7	298.8	300.7	300.7
12.5°	299.2	295.7	292.6	293.3	296.8	301.5	305.8	309.7	312.4	314.3	314.7
15°	308.1	304.6	301.5	303.4	309.3	314.7	318.6	320.1	321.3	323.3	323.6
17.5°	316.3	313.2	310.4	315.5	320.5	324.8	326.0	325.2	323.6	324.8	325.6
20°	324.8	322.1	320.5	326.0	329.5	329.9	326.7	323.3	319.4	319.4	319.8
22.5°	335.3	331.8	331.0	333.7	332.6	327.9	320.1	314.7	309.3	308.5	309.7
25°	345.4	341.9	341.5	339.6	329.5	317.4	306.9	300.7	296.4	296.8	299.2
27.5°	355.5	353.2	353.6	343.1	320.5	302.3	288.3	283.2	284.4	285.2	287.5
30°	365.6	365.6	367.2	343.1	308.1	280.9	267.7	267.3	270.4	272.7	275.5
32.5°	377.3	380.8	378.0	338.8	291.4	259.1	248.7	249.4	252.9	256.8	259.1
35°	388.5	396.7	388.9	329.1	268.5	239.3	230.8	229.6	232.3	235.8	237.0
37.5°	406.4	419.6	398.2	313.9	244.8	221.8	213.3	210.2	207.5	210.2	209.8
40°	437.5	453.4	405.2	288.7	221.8	205.5	196.6	190.8	184.2	178.3	178.3
42.5°	487.2	497.7	409.1	258.0	198.9	189.2	180.3	171.7	161.6	151.1	151.1
45°	568.4	570.7	410.7	225.3	177.9	172.9	163.6	155.4	142.2	131.7	129.4
47.5°	676.8	666.7	414.6	193.9	159.7	158.5	150.7	141.4	127.0	117.3	116.2
50°	822.5	779.0	431.6	168.6	144.9	146.1	140.3	129.4	115.8	108.8	107.2
52.5°	986.5	920.8	444.9	148.4	132.1	135.6	131.3	120.8	109.2	103.3	102.2
55°	1165.6	1057.2	441.8	134.8	122.4	126.3	124.7	115.8	105.3	100.2	99.1
57.5°	1311.7	1153.1	414.6	122.8	112.7	118.1	119.7	112.7	103.0	98.3	97.1
60°	1421.2	1205.6	358.6	112.7	104.9	111.5	115.8	110.7	102.6	99.9	98.7
62.5°	1471.0	1200.9	286.0	104.9	99.1	106.8	116.2	113.8	108.4	110.3	110.7
65°	1443.0	1142.3	214.5	99.1	95.6	107.6	122.8	122.8	114.6	118.1	118.5
67.5°	1299.6	988.8	156.2	94.8	92.1	111.5	135.2	127.4	111.9	114.6	113.4
69°	1163.2	884.7	134.0	92.5	89.4	113.4	140.6	128.2	108.8	111.9	108.8
70°	1063.0	790.6	120.4	90.5	88.2	113.4	142.2	127.4	107.2	109.6	106.1
72.5°	756.5	549.0	99.1	86.6	83.9	104.9	139.5	123.2	103.0	100.2	93.6
75°	439.8	303.4	84.3	82.4	74.2	92.1	132.5	118.5	98.7	93.6	89.0
77.5°	184.5	135.6	71.9	75.0	65.7	82.0	123.9	113.8	93.6	86.6	84.3
80°	75.0	67.6	59.8	64.9	57.1	72.3	114.2	106.1	86.3	79.3	75.8
82.5°	39.2	37.3	45.8	52.5	47.4	66.4	107.6	100.6	80.0	73.0	68.8
85°	11.7	15.5	26.0	35.7	36.1	59.8	104.5	93.2	69.5	60.2	59.4
87.5°	0.8	3.1	8.9	18.6	23.7	45.8	84.7	76.5	56.3	47.4	47.8
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)