

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: P401212

Luminaire Tested: **ENT-SA1B-827-U-T4FT**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401212  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1B-827-U-T4FT  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2413 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

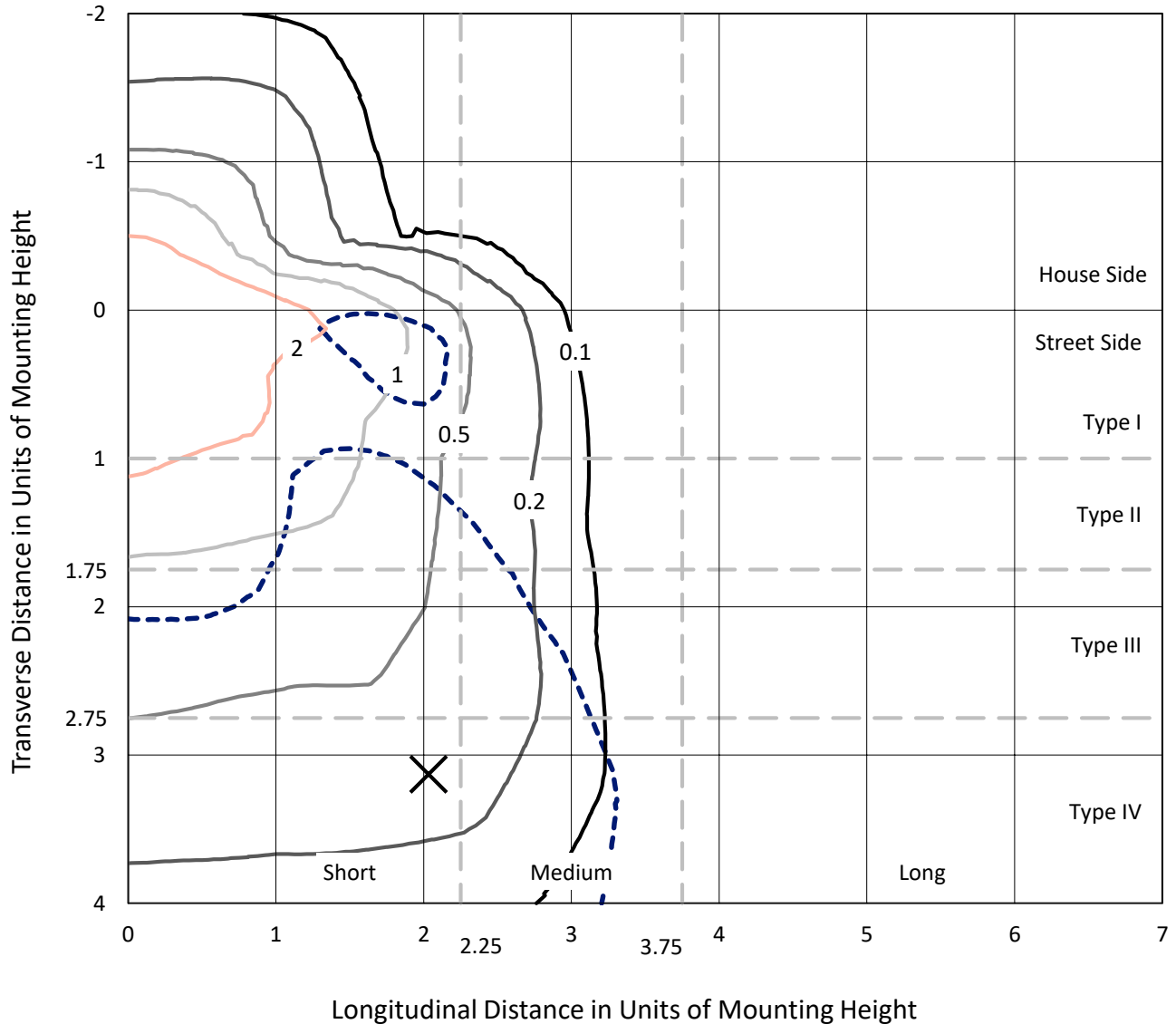
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

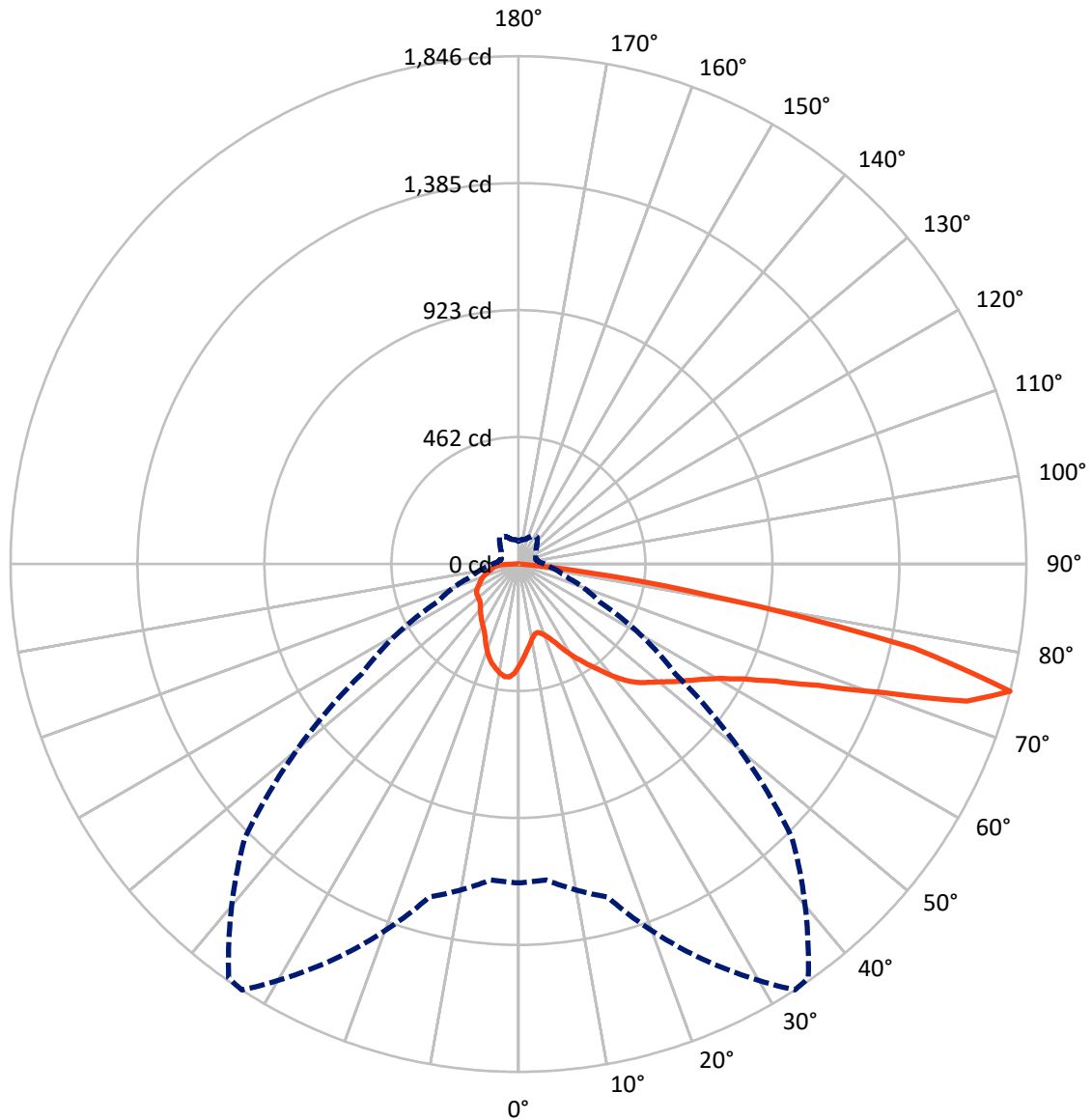
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	586.2	0.0	586.2
	% Fixture	24.3	0.0	24.3
<b>Street Side</b>	Lumens	1826.8	0.0	1826.8
	% Fixture	75.7	0.0	75.7
<b>Total</b>	Lumens	2413.0	0.0	2413.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.5	1.4
10°-20°	97.2	4.0
20°-30°	161.5	6.7
30°-40°	241.0	10.0
40°-50°	336.6	14.0
50°-60°	449.4	18.6
60°-70°	557.2	23.1
70°-80°	481.7	20.0
80°-90°	53.9	2.2
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°	2413.0	100.0
0°-180°	2413.0	100.0



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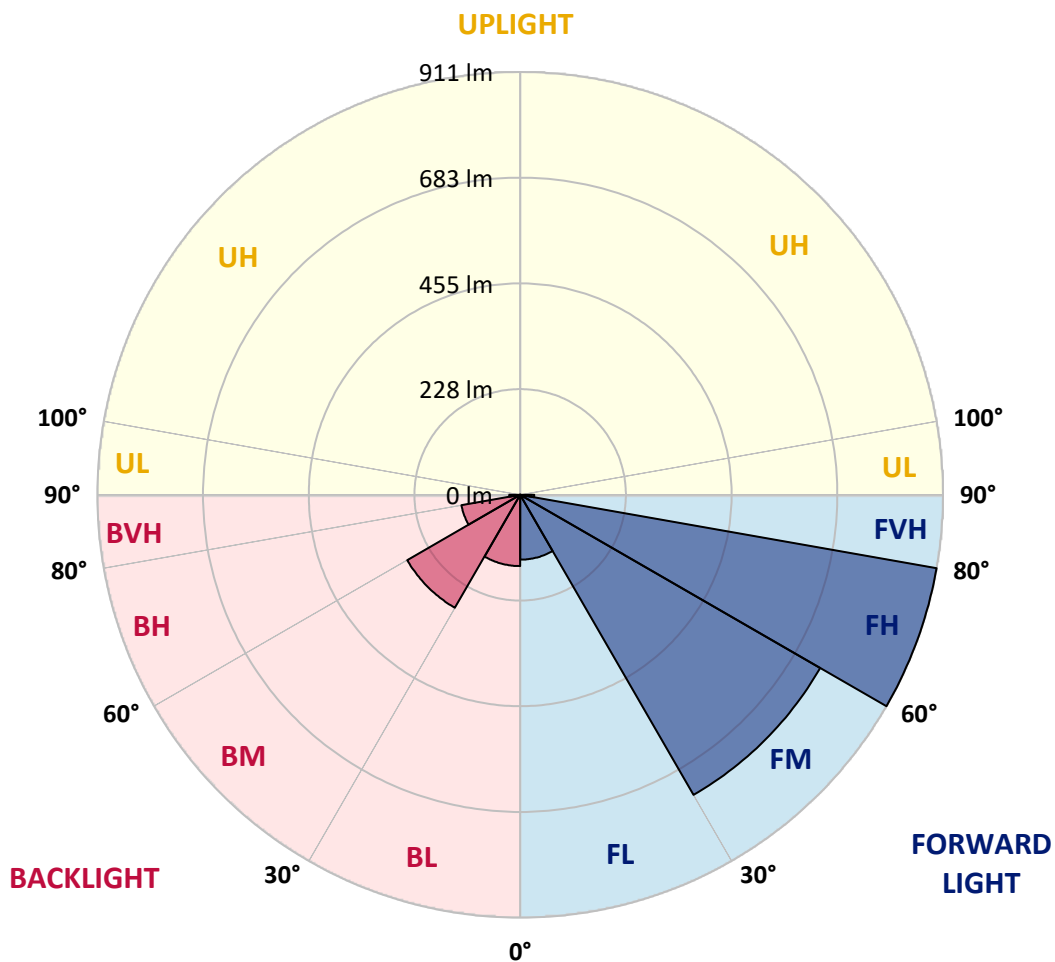
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	139.7	5.8			
FM	(30°-60°)	746.1	30.9			
FH	(60°-80°)	910.6	37.7			G1/1800
FVH	(80°-90°)	30.4	1.3			G1/100
BL	(0°-30°)	153.5	6.4	B1/500		
BM	(30°-60°)	280.9	11.6	B1/1000		
BH	(60°-80°)	128.4	5.3	B1/500		G1/500
BVH	(80°-90°)	23.4	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°	33°	35°	45°	55°	65°	75°	85°
0°	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7
2.5°	335.3	336.1	338.2	340.7	342.2	342.2	346.1	350.8	356.5	361.5	366.9
5°	307.4	308.5	310.3	313.5	317.4	318.2	326.0	334.3	344.7	355.8	366.5
7.5°	279.8	282.0	285.5	289.8	295.9	297.4	308.5	319.6	333.9	350.8	368.3
10°	258.7	260.1	261.9	268.0	275.5	278.0	292.7	306.7	326.4	347.2	370.5
12.5°	252.9	252.9	252.9	255.8	261.9	264.1	279.5	297.4	319.6	344.7	373.7
15°	261.2	260.8	256.9	254.7	258.3	260.1	273.4	290.9	316.0	345.4	379.8
17.5°	279.8	278.7	269.4	262.3	264.8	265.8	274.4	289.5	314.9	348.2	388.7
20°	304.2	301.7	287.3	276.6	276.2	276.9	283.4	293.8	316.7	353.3	398.4
22.5°	336.4	335.0	313.9	297.4	294.5	294.5	297.4	303.8	321.4	359.0	411.7
25°	378.0	374.0	348.6	326.4	319.9	318.2	317.8	317.8	329.6	367.6	428.1
27.5°	420.6	416.0	390.2	360.1	351.5	348.2	342.5	338.2	340.4	376.9	447.8
30°	459.0	452.5	430.7	399.5	386.6	381.6	371.2	362.2	356.5	389.8	474.0
32.5°	480.1	477.6	462.5	434.2	419.5	417.4	400.2	388.4	378.3	406.6	509.1
35°	508.4	505.2	495.5	472.2	454.7	449.3	436.4	422.4	406.3	429.2	553.5
37.5°	534.6	532.8	529.2	513.1	494.4	489.1	477.2	462.5	440.7	462.5	603.3
40°	561.1	558.9	557.5	551.7	538.5	534.9	529.2	512.0	482.6	499.1	652.4
42.5°	599.8	595.1	580.1	579.7	580.8	583.6	584.0	565.0	528.5	544.6	695.4
45°	650.3	637.4	603.7	602.6	615.2	622.7	641.0	624.8	576.1	591.2	743.4
47.5°	676.1	662.8	628.1	625.9	642.4	653.5	698.6	682.9	625.6	643.5	793.2
50°	688.6	680.0	649.6	656.4	673.2	684.0	753.5	740.9	676.8	700.1	855.9
52.5°	706.2	691.8	670.3	684.7	709.8	720.9	802.5	800.4	720.1	761.7	924.7
55°	700.1	692.6	696.5	715.8	747.4	763.9	852.0	852.0	764.2	827.6	992.8
57.5°	705.1	700.1	732.7	749.9	789.6	813.3	911.5	895.7	801.5	882.8	1038.7
60°	747.7	733.4	758.8	792.9	844.1	867.0	979.5	941.6	831.9	930.5	1046.9
62.5°	823.0	811.5	814.0	853.1	919.3	945.9	1046.9	982.0	852.3	950.5	1016.1
65°	947.6	942.3	911.5	935.1	1026.5	1050.5	1131.1	1017.2	846.6	935.5	934.7
67.5°	1115.3	1093.8	1052.3	1073.4	1178.7	1203.1	1232.5	1030.4	809.4	845.5	751.3
70°	1254.3	1236.4	1217.4	1273.0	1394.1	1407.3	1338.2	1017.9	718.7	661.7	503.7
72.5°	1342.8	1329.9	1347.5	1510.9	1704.7	1679.6	1442.4	930.1	560.7	405.2	251.9
75°	1159.0	1152.9	1253.3	1584.7	1846.2	1836.9	1406.2	696.1	325.3	178.4	114.6
77.5°	582.9	649.2	754.9	1124.3	1468.9	1470.7	1024.7	334.6	136.9	100.0	78.8
80°	164.1	166.2	251.9	463.6	733.4	781.4	387.7	113.6	78.1	74.5	58.8
82.5°	39.1	36.2	64.5	137.2	246.1	256.2	116.4	40.8	43.7	46.6	36.2
85°	0.4	0.4	0.4	0.4	0.4	0.7	4.3	4.3	10.4	13.3	10.4
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	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°	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7
2.5°	369.4	373.0	378.7	383.7	388.0	391.2	396.3	397.0	398.4	399.1	399.8
5°	372.6	379.4	390.2	399.5	405.9	407.7	412.0	411.7	412.0	412.0	411.7
7.5°	376.9	386.2	401.3	411.7	415.2	414.2	413.1	409.2	405.9	404.5	402.7
10°	382.3	393.0	410.6	418.1	416.3	410.6	403.8	396.6	390.9	388.0	387.3
12.5°	387.7	401.6	418.1	420.3	413.1	402.7	391.2	383.4	375.8	371.9	371.9
15°	396.6	412.0	424.2	419.9	407.0	393.7	378.0	367.2	358.6	353.3	352.9
17.5°	407.4	423.8	430.7	418.1	399.5	380.9	361.9	347.9	336.8	331.4	328.2
20°	420.6	436.0	433.9	412.4	388.4	365.4	341.8	325.0	313.5	307.8	306.7
22.5°	435.7	448.6	435.0	403.1	373.3	343.9	318.2	301.3	293.8	289.5	289.8
25°	453.9	464.0	435.3	392.0	351.8	315.6	293.1	285.2	284.1	282.3	283.0
27.5°	476.9	480.1	433.9	376.9	324.2	285.9	272.7	275.9	278.7	277.7	278.4
30°	504.1	499.4	430.7	355.1	290.2	258.7	259.4	266.6	270.5	269.4	269.8
32.5°	536.0	518.8	424.6	328.5	258.0	242.2	247.9	255.1	259.0	259.0	259.4
35°	571.8	542.1	412.7	294.1	235.4	232.2	237.2	242.9	245.4	244.0	245.1
37.5°	609.4	562.1	393.7	255.8	218.6	224.3	227.1	228.6	228.2	226.1	225.0
40°	644.5	577.9	359.7	217.8	204.6	216.0	217.5	213.5	208.9	204.9	202.4
42.5°	671.4	586.1	312.4	190.2	191.3	206.7	207.8	199.9	191.0	184.9	183.4
45°	699.0	589.0	265.5	168.0	177.0	197.4	200.3	189.5	177.3	170.2	169.1
47.5°	730.5	596.2	219.3	152.6	164.8	191.0	195.6	182.4	168.7	158.0	156.2
50°	772.8	609.8	184.5	140.8	156.2	187.7	194.2	176.6	159.4	147.6	146.2
52.5°	826.5	629.9	152.3	131.5	149.4	182.7	192.0	170.9	152.6	138.3	136.1
55°	872.8	637.4	131.5	123.6	142.2	176.6	190.2	168.7	145.1	129.0	126.5
57.5°	893.9	615.9	116.8	115.7	134.7	169.1	186.7	161.6	136.9	124.3	122.2
60°	884.2	562.5	105.7	108.6	126.1	159.4	177.3	154.4	131.1	120.7	118.6
62.5°	841.2	500.9	97.5	101.8	116.4	147.3	166.6	148.0	126.1	116.8	113.9
65°	765.6	433.2	91.4	95.7	107.8	135.4	158.0	140.4	120.4	111.1	108.6
67.5°	624.8	344.7	84.9	89.6	100.7	125.8	150.1	134.4	113.9	107.8	105.7
70°	413.5	231.8	78.8	83.5	93.5	116.4	141.9	127.9	107.8	103.9	101.0
72.5°	189.9	124.7	72.4	77.0	85.3	106.1	131.5	118.2	99.6	97.1	92.8
75°	93.9	76.7	64.5	68.8	75.2	93.5	119.3	110.0	92.1	87.8	82.8
77.5°	68.4	57.3	55.5	59.8	65.2	82.8	106.4	101.4	84.6	78.5	75.6
80°	50.9	44.4	46.6	50.9	55.9	74.9	99.6	94.9	78.1	72.0	69.9
82.5°	31.2	29.7	35.8	40.8	46.9	68.8	94.9	86.7	70.2	64.5	62.0
85°	9.0	10.7	18.3	26.5	33.3	55.5	88.5	76.0	59.1	49.4	47.7
87.5°	0.0	1.1	5.7	12.2	19.7	36.9	68.1	59.5	45.1	36.5	35.1
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)