

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: P401021

Luminaire Tested: **ENV-SA1A-827-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401021  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1A-827-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1649 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: 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

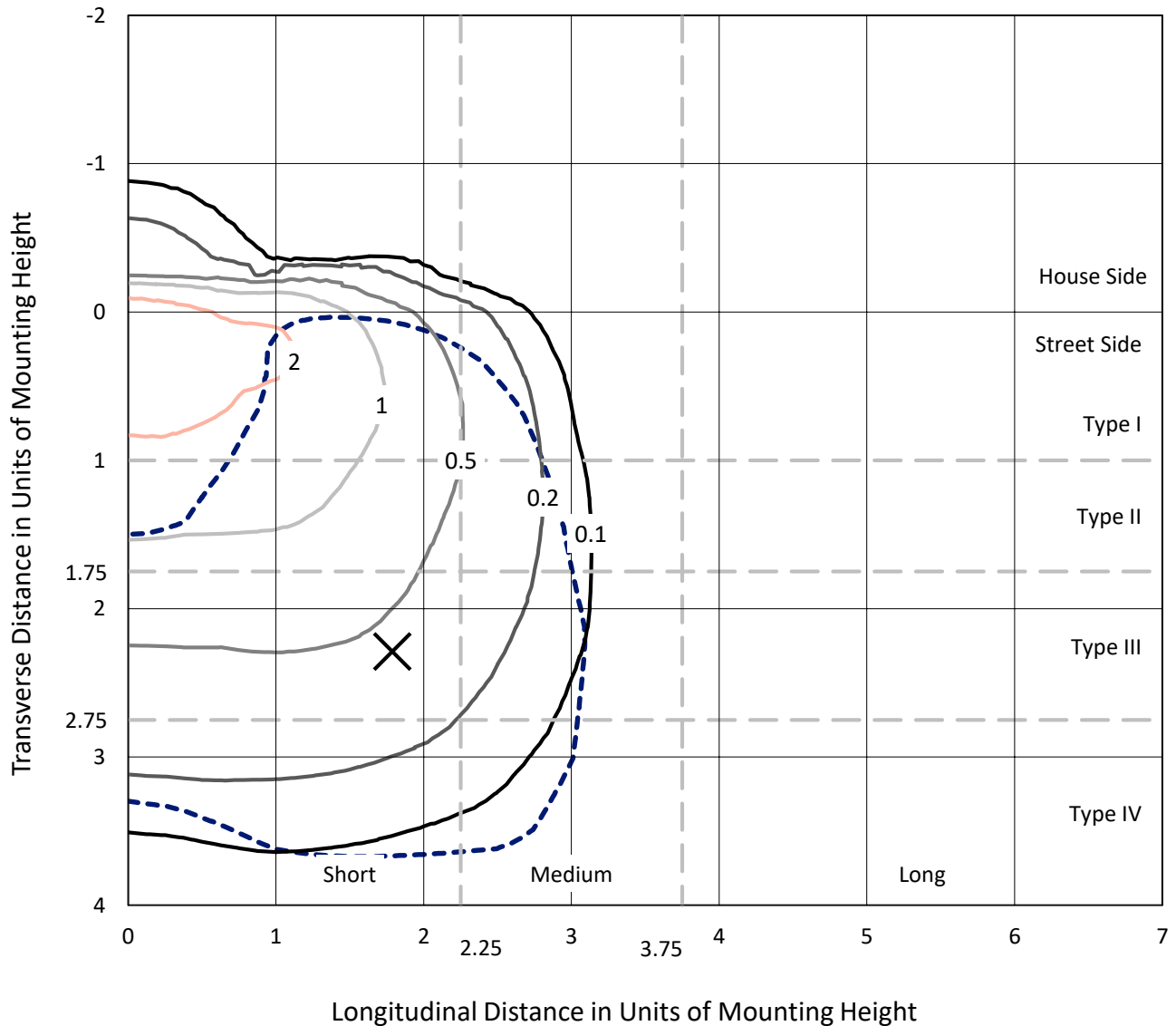


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

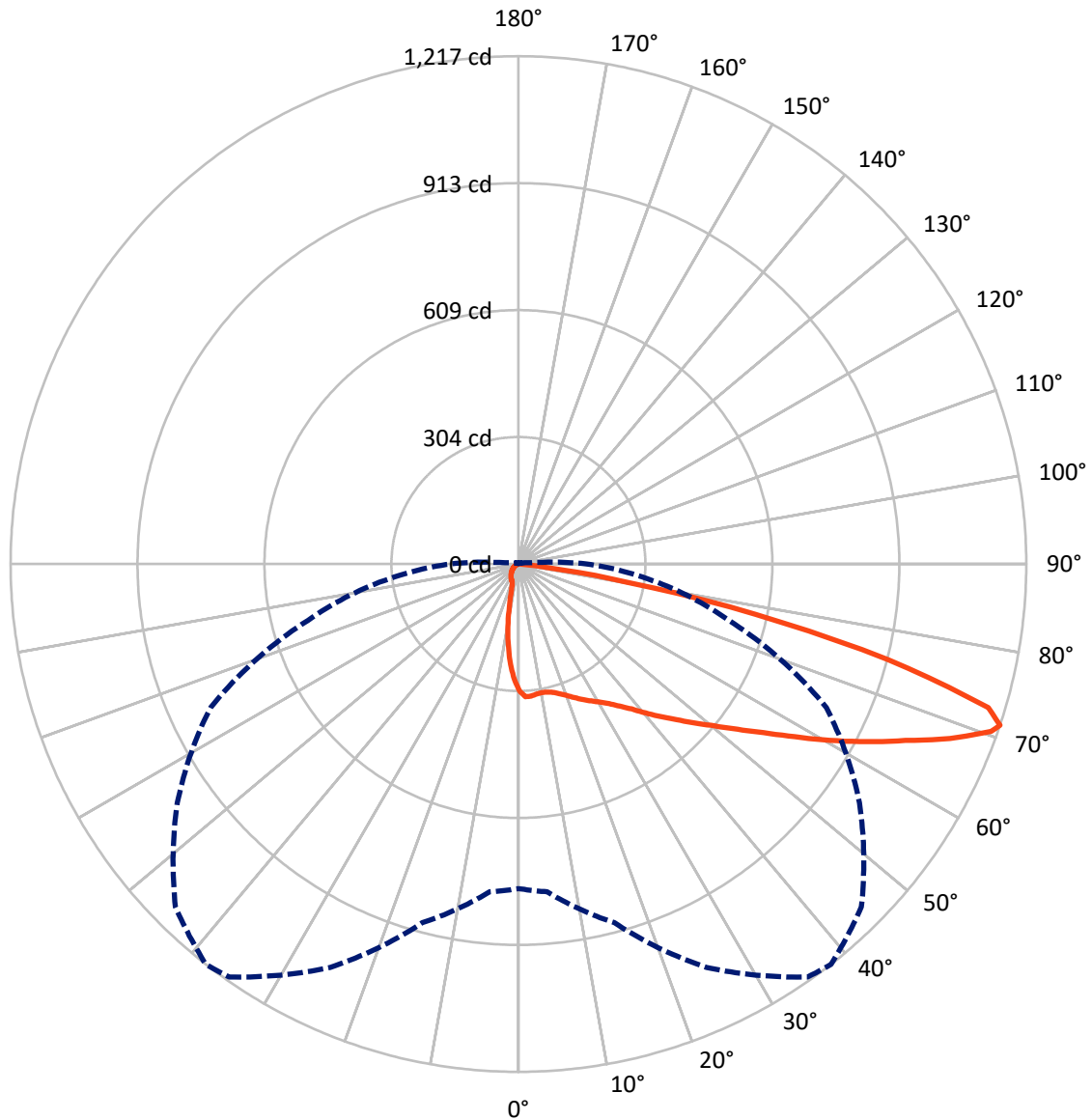


Based on 10 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	140.8	0.0	140.8
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	1508.1	0.0	1508.1
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	1649.0	0.0	1649.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.7	1.6
10°-20°	62.2	3.8
20°-30°	99.7	6.0
30°-40°	151.7	9.2
40°-50°	236.3	14.3
50°-60°	345.6	21.0
60°-70°	443.3	26.9
70°-80°	271.0	16.4
80°-90°	13.6	0.8
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°	1649.0	100.0
0°-180°	1649.0	100.0



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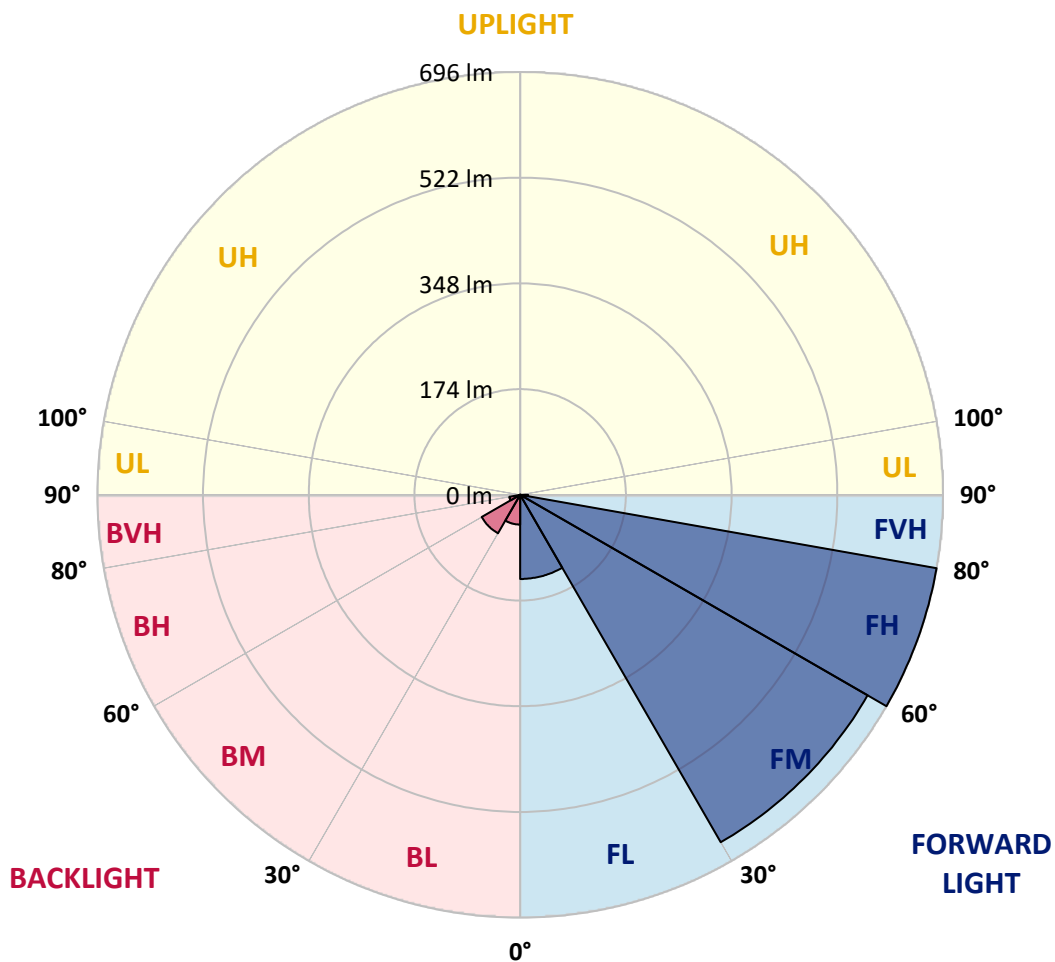
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	138.6	8.4			
FM	(30°-60°)	660.4	40.1			
FH	(60°-80°)	696.1	42.2			G1/1800
FVH	(80°-90°)	13.0	0.8			G1/100
BL	(0°-30°)	49.0	3.0	B0/110		
BM	(30°-60°)	73.2	4.4	B0/220		
BH	(60°-80°)	18.1	1.1	B0/110		G0/110
BVH	(80°-90°)	0.6	0.0			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°	38°	45°	55°	65°	75°	85°
0°	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0
2.5°	322.0	321.1	322.0	321.1	319.4	318.6	317.4	314.3	311.4	308.0	302.9
5°	322.6	322.0	322.0	320.9	318.9	318.0	316.9	313.7	310.0	304.9	297.1
7.5°	319.4	319.1	318.6	317.4	315.1	314.6	313.7	310.0	306.3	300.9	291.4
10°	314.3	314.9	314.6	314.6	313.7	313.1	312.6	308.3	304.3	298.0	288.0
12.5°	309.4	310.0	311.4	313.7	314.6	314.9	314.9	310.6	305.7	298.9	288.6
15°	306.3	307.4	311.4	316.0	318.6	319.4	320.3	315.7	310.0	302.6	291.7
17.5°	305.4	307.1	314.9	322.0	326.9	327.4	327.4	321.7	315.7	307.1	295.4
20°	308.3	310.6	320.6	330.6	336.6	337.1	336.0	328.6	321.4	312.0	298.6
22.5°	316.9	318.9	330.3	342.0	347.7	348.3	345.7	335.4	327.7	320.0	302.9
25°	331.7	332.9	345.1	356.3	359.4	360.3	356.0	343.7	334.9	327.7	308.9
27.5°	351.4	352.0	363.1	371.4	372.0	371.7	367.1	354.3	345.4	339.4	318.0
30°	372.0	372.9	382.0	387.4	385.1	384.0	380.0	366.3	358.3	353.7	331.1
32.5°	391.1	392.0	402.0	404.9	399.7	398.9	396.0	381.4	374.6	376.9	350.0
35°	410.0	410.0	421.4	422.9	418.3	418.3	418.3	400.9	399.7	407.4	376.3
37.5°	426.9	429.7	441.7	441.1	440.3	440.9	442.6	429.4	433.4	446.6	410.9
40°	441.1	444.9	460.9	462.3	466.0	469.1	471.7	464.9	474.3	495.7	455.1
42.5°	454.0	458.3	478.9	485.4	495.7	500.0	504.9	503.1	524.0	563.1	511.7
45°	470.6	475.1	496.3	512.0	526.3	532.0	542.9	550.3	584.9	629.4	572.9
47.5°	492.6	495.7	515.1	540.0	559.4	569.7	586.6	605.7	647.7	699.7	627.4
50°	522.6	522.9	537.4	569.7	598.6	609.7	638.8	663.7	716.3	761.7	666.8
52.5°	555.7	554.0	565.4	606.3	642.8	658.0	692.3	726.8	779.7	806.6	684.6
55°	587.1	588.0	595.1	645.1	698.6	713.1	756.6	791.7	837.7	834.0	694.3
57.5°	623.4	623.1	632.3	687.7	763.7	780.6	826.0	854.8	872.8	853.7	696.0
60°	657.7	656.8	670.8	738.6	833.1	858.0	898.8	897.7	908.0	866.3	694.6
62.5°	688.3	690.3	714.8	797.7	910.8	937.7	958.3	944.0	946.8	880.8	676.8
65°	725.4	729.1	768.8	869.4	1006.8	1019.7	1027.7	1004.6	976.0	869.1	623.1
67.5°	772.3	783.4	839.4	975.1	1106.8	1115.7	1116.0	1041.1	974.8	810.0	524.0
70°	790.8	802.6	891.7	1058.8	1191.1	1202.3	1167.4	1035.4	898.0	634.3	353.7
71°	778.0	788.6	890.3	1066.8	1208.6	1217.4	1162.8	998.0	814.3	522.6	274.0
72.5°	685.1	712.6	835.4	1016.6	1177.4	1177.7	1088.8	909.7	647.7	326.3	137.7
75°	370.0	403.1	612.3	773.7	908.3	915.4	837.7	631.7	313.4	84.6	33.4
77.5°	122.0	137.4	274.6	401.7	569.7	580.9	512.3	280.6	98.9	28.6	17.4
80°	76.6	78.3	92.9	168.9	253.4	262.9	210.9	113.7	44.6	15.7	12.0
82.5°	12.9	15.4	43.7	49.7	89.4	70.9	48.0	58.0	20.9	7.1	10.3
85°	0.0	0.0	0.3	0.3	1.4	0.3	0.3	11.7	1.1	1.1	5.4
87.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	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°	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0	304.0
2.5°	300.6	298.3	293.7	288.9	282.9	277.7	276.0	272.3	270.6	269.1	269.1
5°	292.3	288.3	278.6	268.6	258.9	248.6	239.1	230.3	226.0	220.0	222.9
7.5°	285.4	278.6	264.9	249.1	229.1	208.9	193.1	179.4	168.0	164.3	161.7
10°	280.6	272.0	252.0	228.0	198.9	170.0	145.7	123.1	110.0	102.0	102.0
12.5°	280.0	269.1	243.1	206.3	164.3	125.1	95.1	73.7	63.1	58.3	58.0
15°	282.0	268.9	235.1	186.6	132.6	86.9	59.4	50.0	47.4	46.9	46.9
17.5°	283.7	268.6	225.7	164.3	97.7	57.1	47.1	45.4	44.9	44.6	44.6
20°	285.4	267.1	214.9	139.1	69.1	46.6	44.0	43.1	42.9	42.6	42.6
22.5°	287.7	265.7	203.7	110.6	51.1	43.4	42.0	41.1	40.9	40.9	40.9
25°	290.9	264.9	190.0	83.7	44.0	41.1	39.7	39.1	39.1	38.9	38.9
27.5°	296.9	265.7	175.1	60.0	41.1	38.9	38.0	37.4	37.4	37.1	37.1
30°	305.1	268.3	156.6	46.9	38.9	36.6	35.7	35.4	35.1	35.1	35.1
32.5°	316.9	272.3	136.3	40.0	36.0	34.3	33.4	33.1	33.1	33.1	32.9
35°	334.9	280.6	111.4	36.6	33.4	31.7	30.9	30.9	30.9	30.6	30.9
37.5°	362.3	294.0	86.3	33.7	30.6	29.1	28.6	28.3	28.3	28.3	28.3
40°	396.9	315.7	62.9	31.1	28.0	26.6	26.0	25.7	25.4	25.4	25.4
42.5°	441.4	339.7	45.7	28.3	25.7	24.3	23.7	23.1	22.6	22.3	22.3
45°	487.7	368.3	35.7	26.0	23.4	22.3	21.7	20.9	20.0	19.1	19.1
47.5°	532.6	390.3	30.6	23.4	21.4	20.3	19.7	18.6	17.1	16.3	16.3
50°	560.9	397.1	27.4	21.1	19.4	18.6	17.7	16.3	14.3	13.4	13.4
52.5°	569.7	384.6	24.6	19.1	17.7	16.9	15.7	13.7	11.7	10.6	10.6
55°	573.1	360.3	21.7	17.7	16.0	14.9	13.4	11.4	9.4	8.3	8.3
57.5°	568.9	326.0	19.4	16.0	14.3	13.1	11.4	9.1	7.1	6.3	6.3
60°	554.3	276.3	17.4	14.3	12.6	11.1	9.4	7.1	5.4	4.3	4.6
62.5°	514.9	213.7	15.1	12.0	10.9	9.4	7.4	5.4	3.4	2.9	2.9
65°	452.0	148.0	12.9	10.0	9.1	7.7	5.7	3.7	2.0	1.7	1.7
67.5°	367.1	95.7	10.0	8.3	7.7	6.3	4.3	2.3	1.1	1.1	0.9
70°	230.6	47.4	8.0	6.3	6.3	4.9	3.1	1.4	0.9	0.9	0.9
71°	163.1	32.3	7.1	5.7	5.7	4.6	2.9	1.1	0.9	0.9	0.9
72.5°	73.7	20.3	6.0	5.1	4.9	3.7	2.6	1.1	1.1	1.1	1.1
75°	23.1	11.1	4.3	4.0	4.0	3.1	2.3	1.4	1.4	1.4	1.4
77.5°	15.4	8.6	2.9	2.6	3.1	3.1	2.3	1.7	1.7	1.7	1.7
80°	12.6	4.6	1.7	1.7	2.3	2.9	2.3	1.7	2.0	1.7	1.7
82.5°	12.3	2.3	0.6	0.9	1.4	1.7	1.7	1.4	1.7	1.7	1.7
85°	5.1	0.6	0.3	0.6	0.6	0.9	0.9	1.1	1.4	1.4	1.4
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	0.9	1.1	1.1
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)