

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: P401409

Luminaire Tested: **ENT-SA1C-830-U-T4FT-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401409  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1C-830-U-T4FT-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2539 lumens  
Efficiency: N/A  
Efficacy: 76.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 33.3  
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

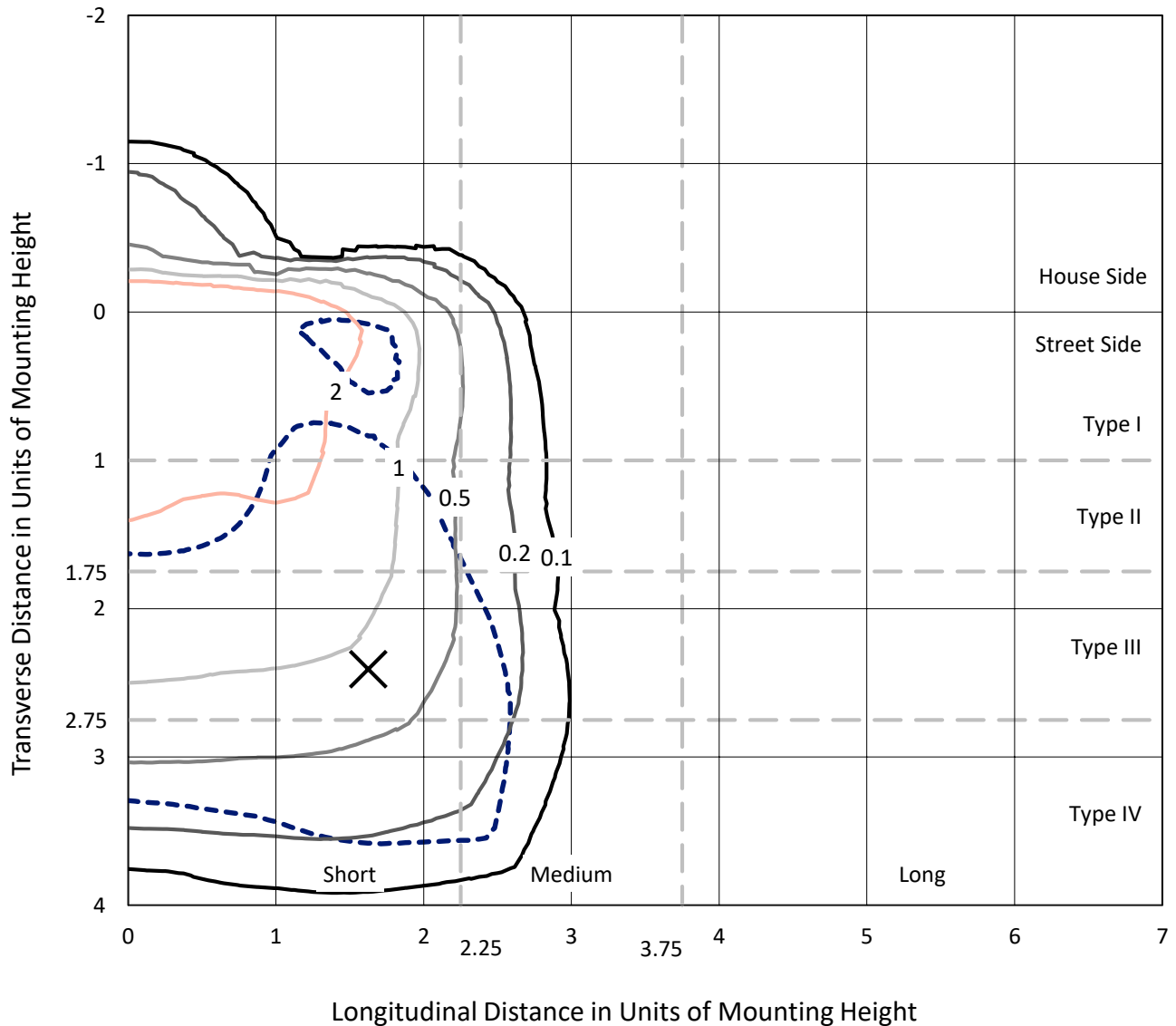


REPORT NUMBER: P401409

CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

### Iso-Footcandle Lines of Horizontal Illumination

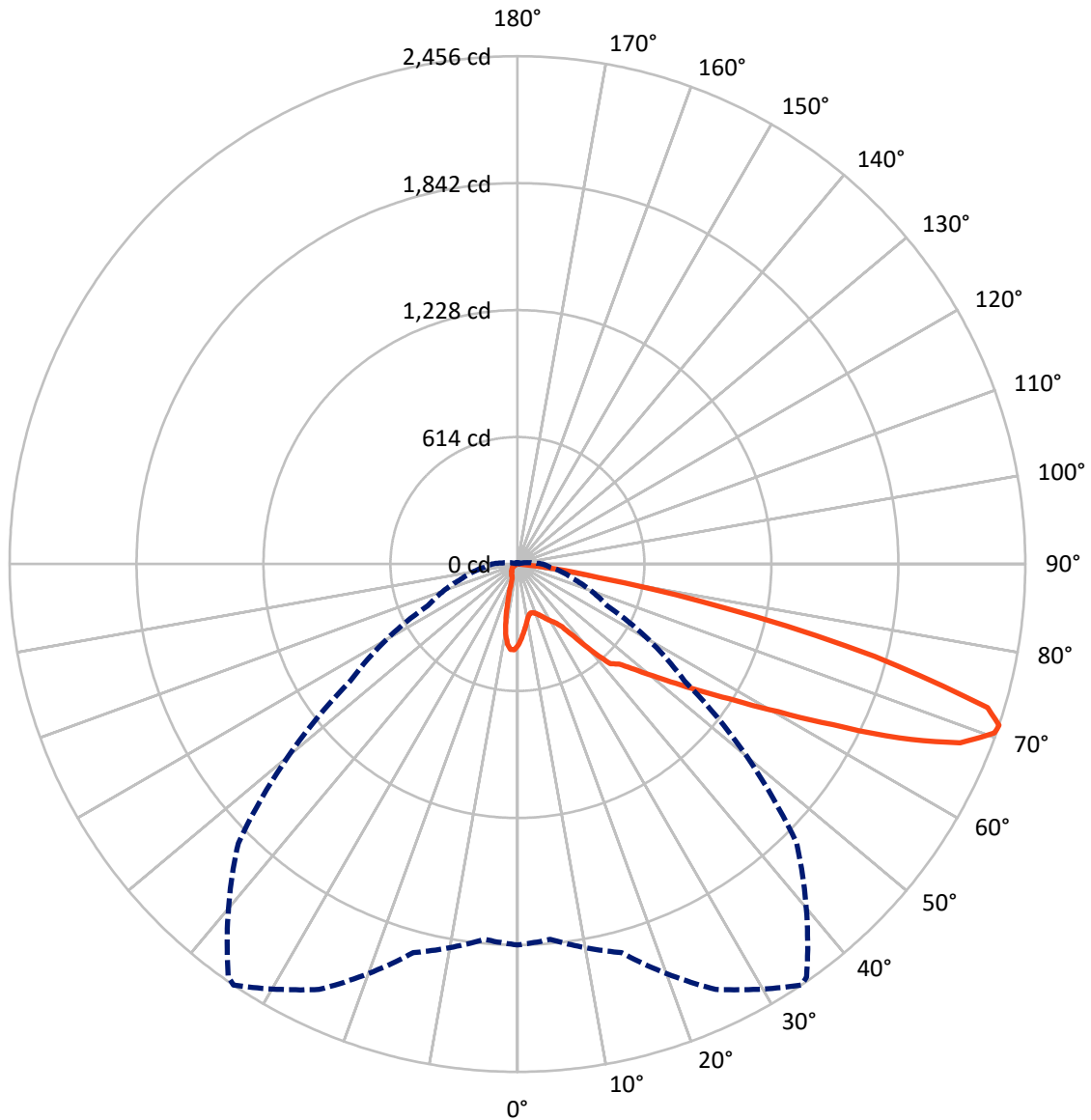
× Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P401409  
CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

REPORT NUMBER: P401409

CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	280.7	0.0	280.7
	% Fixture	11.1	0.0	11.1
<b>Street Side</b>	Lumens	2258.3	0.0	2258.3
	% Fixture	88.9	0.0	88.9
<b>Total</b>	Lumens	2539.0	0.0	2539.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.7	1.4
10°-20°	79.5	3.1
20°-30°	118.6	4.7
30°-40°	198.1	7.8
40°-50°	357.8	14.1
50°-60°	567.7	22.4
60°-70°	762.9	30.0
70°-80°	404.8	15.9
80°-90°	14.9	0.6
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°	2539.0	100.0
0°-180°	2539.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P401409

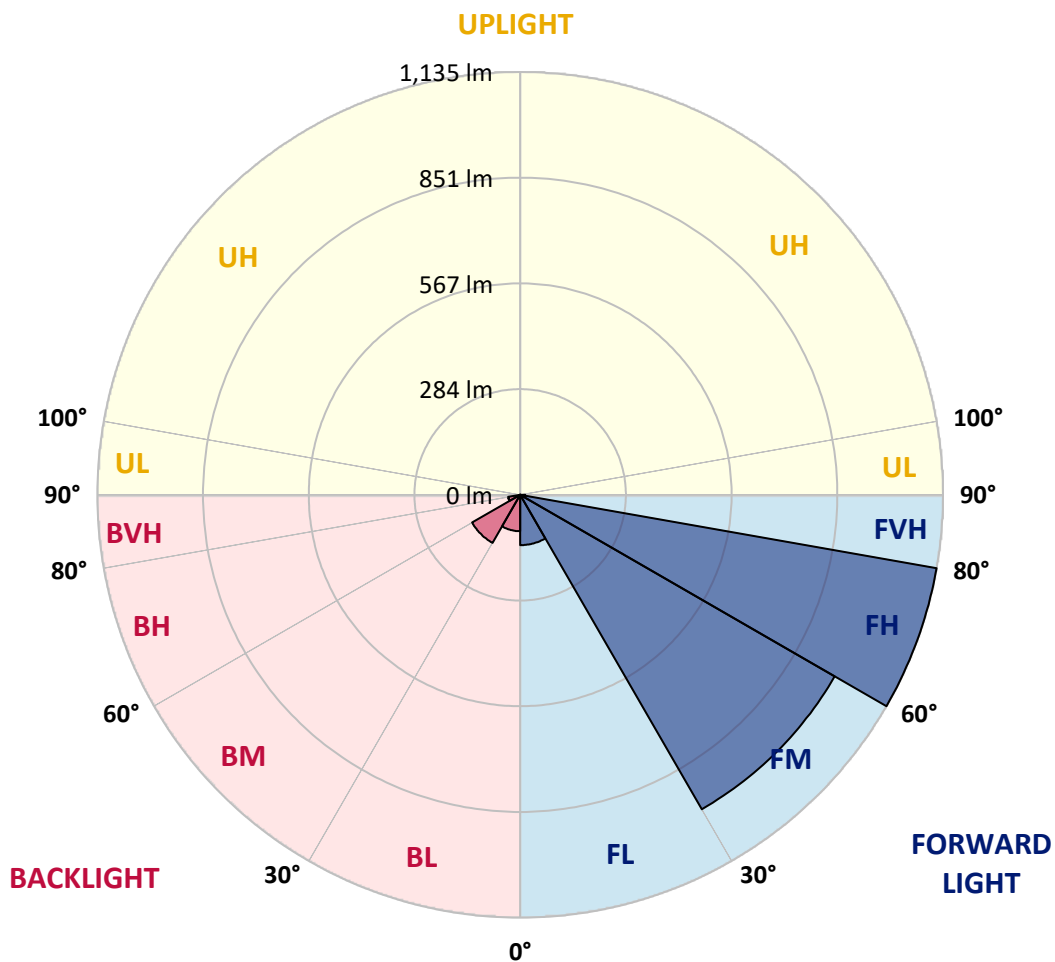
CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	135.1	5.3			
FM	(30°-60°)	974.6	38.4			
FH	(60°-80°)	1134.9	44.7			G1/1800
FVH	(80°-90°)	13.6	0.5			G1/100
BL	(0°-30°)	97.6	3.8	B0/110		
BM	(30°-60°)	149.0	5.9	B0/220		
BH	(60°-80°)	32.8	1.3	B0/110		G0/110
BVH	(80°-90°)	1.3	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-G1**

Type IV Short





REPORT NUMBER: P401409

CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4
2.5°	358.2	353.7	357.7	359.8	361.3	363.3	366.4	372.0	378.1	385.3	389.3
5°	312.4	314.9	316.5	322.1	327.7	328.7	338.4	349.6	363.8	378.1	390.3
7.5°	275.2	275.2	279.8	288.4	297.6	298.6	315.4	330.2	350.6	372.5	392.4
10°	245.6	246.6	250.2	258.9	270.6	273.1	292.0	312.4	337.9	366.4	394.4
12.5°	235.9	235.4	234.9	241.0	250.7	253.3	274.2	298.6	328.7	363.3	399.5
15°	242.1	240.5	237.0	238.0	244.1	246.6	265.0	289.4	323.1	362.8	408.2
17.5°	251.7	249.7	243.1	241.0	247.7	250.2	265.5	286.9	321.0	365.4	418.4
20°	263.5	261.4	251.2	248.7	255.3	257.3	273.1	291.5	322.1	370.5	432.1
22.5°	280.3	277.7	262.9	259.9	266.5	268.6	285.4	302.2	328.2	379.6	451.0
25°	300.7	297.6	278.7	274.7	282.8	284.9	301.7	317.5	338.4	391.9	474.9
27.5°	323.1	319.5	299.6	291.5	300.7	303.7	319.5	336.8	353.1	407.2	506.5
30°	343.5	339.4	320.0	310.9	320.0	321.6	340.4	359.8	377.1	433.2	552.9
32.5°	400.0	389.8	359.8	333.3	339.4	342.4	365.4	396.0	421.9	464.2	612.5
35°	484.6	476.5	439.8	393.9	372.5	373.5	403.1	441.8	453.5	500.4	686.4
37.5°	566.2	559.0	526.9	484.6	443.9	445.4	450.5	487.7	501.4	563.1	776.6
40°	655.3	644.1	618.6	578.4	550.4	543.7	518.8	544.8	574.8	642.1	875.0
42.5°	696.6	685.9	659.4	662.0	658.9	647.2	597.8	633.9	667.6	756.7	983.5
45°	764.9	744.0	689.5	693.6	689.5	690.5	702.7	755.2	784.3	878.0	1106.3
47.5°	828.1	804.1	747.1	743.0	760.8	770.0	835.7	899.4	902.0	983.5	1202.6
50°	885.7	868.3	815.9	816.4	849.0	859.2	990.6	1048.7	997.3	1064.5	1278.1
52.5°	962.1	937.6	890.8	907.6	958.5	967.7	1145.1	1179.7	1066.1	1137.9	1337.2
55°	1032.9	1019.7	985.0	1010.0	1088.0	1111.9	1302.0	1280.6	1114.5	1203.1	1365.7
57.5°	1149.1	1136.4	1127.2	1140.0	1244.4	1274.5	1461.0	1351.9	1152.2	1246.5	1352.5
60°	1342.8	1330.0	1302.5	1314.2	1450.3	1465.6	1585.8	1424.3	1167.0	1258.7	1300.5
62.5°	1581.8	1566.0	1521.6	1575.7	1712.2	1711.7	1715.3	1462.5	1148.1	1222.5	1163.4
65°	1797.3	1775.4	1752.5	1862.6	2028.7	2005.8	1852.9	1467.1	1088.5	1047.7	899.9
67.5°	1954.3	1945.6	1958.4	2130.1	2309.0	2286.0	1986.4	1403.9	906.1	756.2	556.0
70°	1948.2	1930.3	2011.4	2285.5	2448.1	2429.2	1980.8	1153.7	604.4	400.5	232.9
71°	1842.7	1822.3	1945.6	2270.2	2456.2	2438.4	1909.4	987.1	478.0	282.8	153.4
72.5°	1423.8	1485.5	1681.7	2106.7	2377.8	2354.8	1715.3	755.7	302.7	163.6	76.9
75°	602.3	636.0	998.3	1503.8	1783.6	1771.8	1156.3	349.1	139.1	73.9	29.6
77.5°	154.9	152.9	305.8	645.1	1038.5	1056.9	533.0	119.8	72.4	52.5	16.8
80°	30.1	32.6	87.1	224.2	396.5	407.2	173.8	52.5	48.4	41.3	8.7
82.5°	3.1	3.6	15.3	69.3	133.0	128.4	38.2	19.9	29.6	28.0	4.1
85°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	2.0	7.1	7.6	1.0
87.5°	0.0	0.0	0.5	0.5	0.0	0.0	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



REPORT NUMBER: P401409

CATALOG NUMBER: ENT-SA1C-830-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4
2.5°	392.4	397.0	402.1	405.6	409.2	409.7	414.8	413.8	415.3	415.8	415.3
5°	397.0	403.1	412.8	417.9	419.9	416.3	415.3	409.7	407.7	405.1	402.6
7.5°	402.1	409.7	420.9	423.5	416.3	403.1	392.4	378.6	365.9	357.7	358.8
10°	407.7	417.4	426.5	419.9	401.6	375.6	345.5	314.9	287.9	277.7	281.3
12.5°	414.8	426.5	430.6	412.3	376.6	324.1	269.6	223.2	195.2	178.4	176.3
15°	425.5	437.2	432.6	400.0	336.8	254.8	187.0	140.1	113.1	104.5	99.9
17.5°	438.8	450.0	432.6	378.1	280.3	182.4	113.6	85.1	76.4	74.4	74.9
20°	455.1	465.8	430.6	345.0	216.1	112.1	75.9	70.3	70.3	70.3	69.8
22.5°	477.0	482.6	427.5	301.2	148.8	75.9	67.3	66.8	67.3	67.3	67.3
25°	503.5	502.5	421.9	248.7	93.8	64.7	64.2	64.2	64.7	65.2	65.2
27.5°	538.6	527.9	412.3	186.0	66.2	60.1	61.2	62.2	63.2	64.2	64.2
30°	587.6	561.6	396.5	125.9	56.1	55.5	57.6	60.6	62.2	63.2	63.2
32.5°	640.0	596.2	369.5	80.5	51.5	51.0	53.0	57.6	61.7	62.7	62.7
35°	706.3	633.4	329.2	58.1	48.4	47.4	49.4	53.5	59.6	62.7	62.7
37.5°	776.1	673.2	270.6	48.9	45.4	44.3	45.9	48.9	56.1	61.7	62.2
40°	850.5	708.3	203.3	45.4	42.3	41.8	42.3	45.4	51.0	58.6	60.1
42.5°	925.4	737.9	142.2	41.8	39.7	38.7	39.7	41.8	46.9	53.5	54.5
45°	1008.0	770.5	94.8	38.7	37.7	36.7	37.7	39.2	42.8	46.4	46.9
47.5°	1068.1	782.2	65.2	35.2	34.7	35.2	35.7	36.7	38.7	39.2	38.7
50°	1107.9	776.1	46.9	31.6	32.1	33.6	33.6	34.1	34.1	32.6	32.1
52.5°	1136.9	753.7	36.2	27.0	30.1	31.6	31.6	30.6	29.6	27.5	27.0
55°	1140.0	703.2	28.5	23.4	27.0	29.6	29.0	27.0	25.0	22.9	22.9
57.5°	1101.2	626.8	23.4	19.9	23.4	26.0	25.0	22.9	20.4	18.9	18.9
60°	1038.5	548.3	19.9	16.8	19.4	21.9	20.4	18.9	16.3	14.8	14.8
62.5°	922.9	470.9	16.3	13.8	15.8	17.3	16.8	15.3	12.7	11.7	11.2
65°	707.3	358.2	12.2	10.7	12.2	14.3	13.2	11.7	10.2	8.7	8.2
67.5°	425.0	215.6	9.7	8.2	9.7	11.2	10.2	8.7	7.1	6.1	6.1
70°	179.9	92.2	7.6	6.1	7.1	8.7	8.2	7.1	5.6	5.1	5.1
71°	122.3	65.7	6.6	5.6	6.6	8.2	7.6	6.6	5.6	5.1	5.1
72.5°	62.7	33.6	5.6	4.6	6.1	7.1	7.1	6.1	5.1	5.1	5.1
75°	22.4	14.3	4.6	4.1	5.1	5.1	5.6	5.6	5.6	5.6	5.1
77.5°	12.7	8.7	4.1	4.1	4.1	4.6	5.6	6.1	6.6	6.6	6.1
80°	7.1	4.6	2.5	3.1	4.1	4.6	5.6	6.1	7.1	7.1	6.6
82.5°	3.6	1.5	0.5	1.5	2.5	4.1	4.6	5.1	6.1	5.6	5.6
85°	0.5	0.0	0.0	0.5	1.5	2.0	3.1	4.1	5.1	5.1	4.6
87.5°	0.0	0.0	0.0	0.0	0.5	1.0	1.5	2.5	3.6	4.1	3.6
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)