

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: P400865

Luminaire Tested: **ENV-SA1-830-U-T2-HSS-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400865  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENV-SA1-830-U-T2-HSS-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 464 lumens  
Efficiency: N/A  
Efficacy: 35.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B0 - U0 - G0

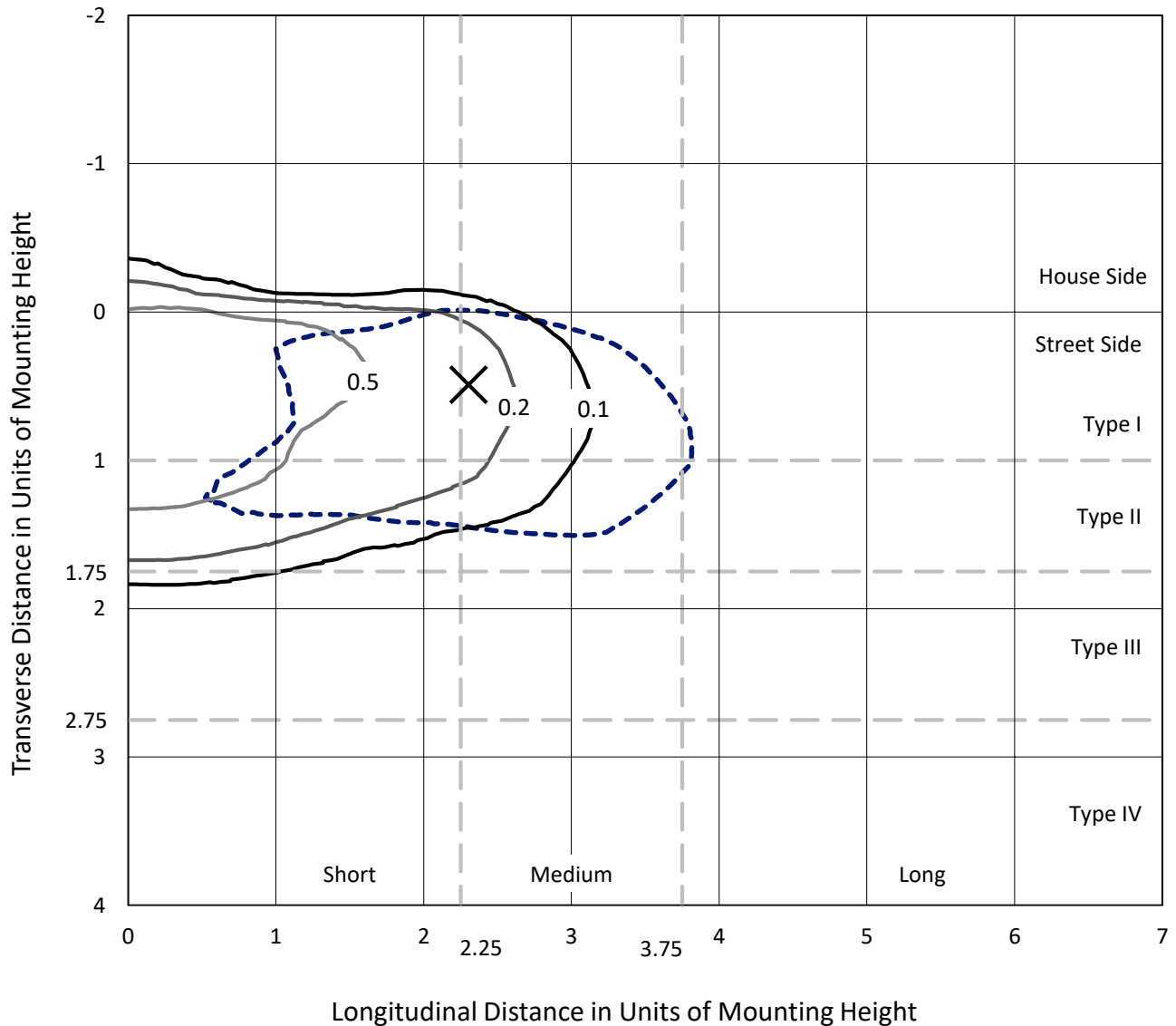
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P400865  
 CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

### Iso-Footcandle Lines of Horizontal Illumination

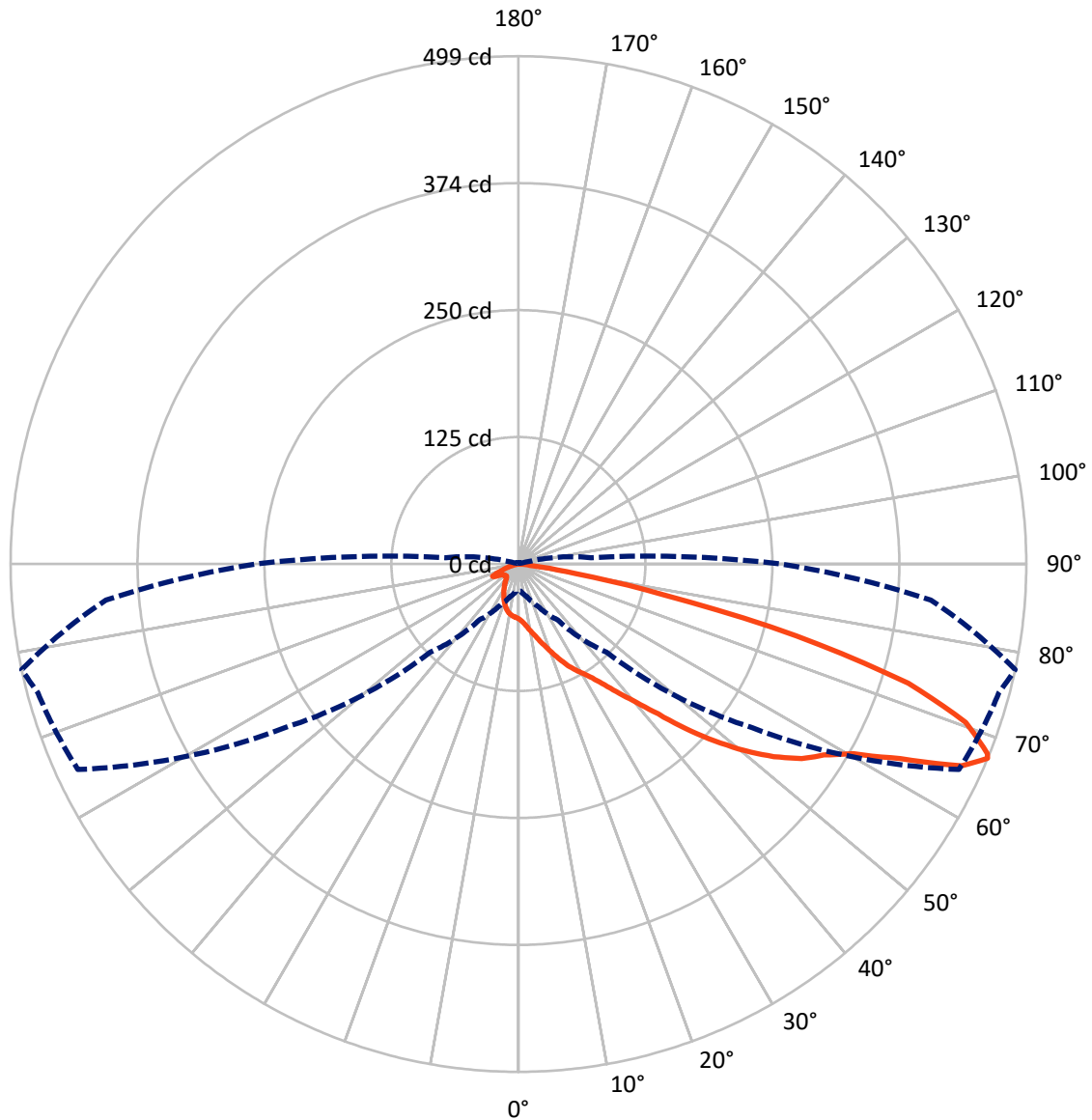
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.8 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P400865  
CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P400865

CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

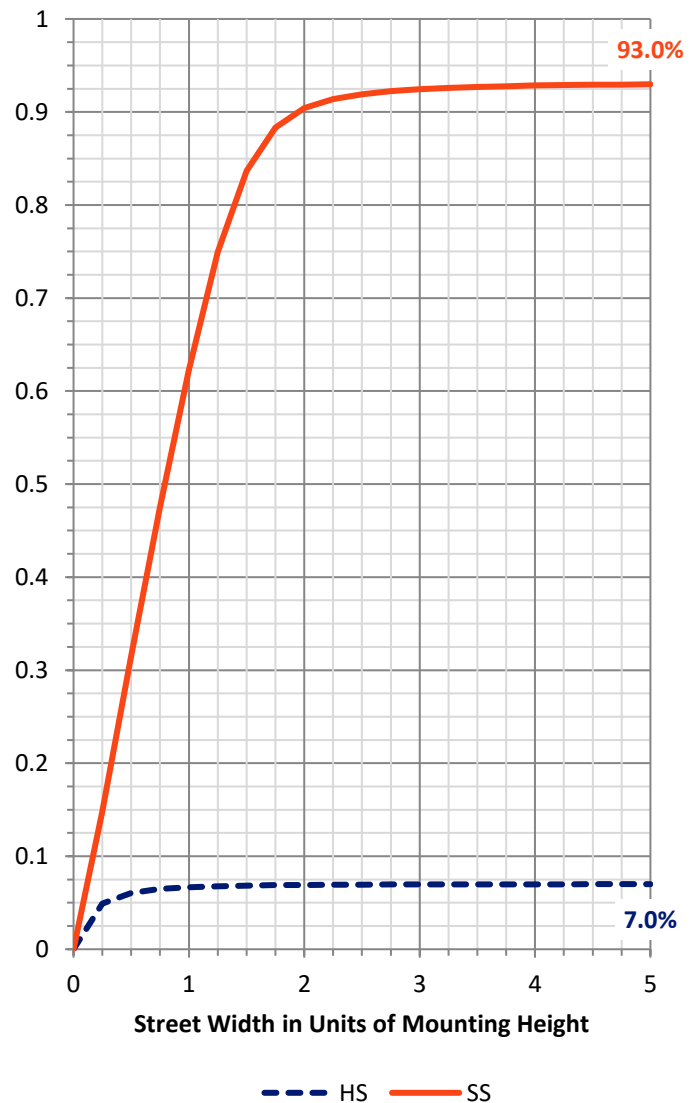
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	32.7	0.0	32.7
	% Fixture	7.1	0.0	7.1
<b>Street Side</b>	Lumens	431.3	0.0	431.3
	% Fixture	92.9	0.0	92.9
<b>Total</b>	Lumens	464.0	0.0	464.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.2	1.1
10°-20°	14.9	3.2
20°-30°	26.3	5.7
30°-40°	46.3	10.0
40°-50°	79.6	17.2
50°-60°	119.9	25.8
60°-70°	118.0	25.4
70°-80°	51.5	11.1
80°-90°	2.3	0.5
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°	464.0	100.0
0°-180°	464.0	100.0



REPORT NUMBER: P400865

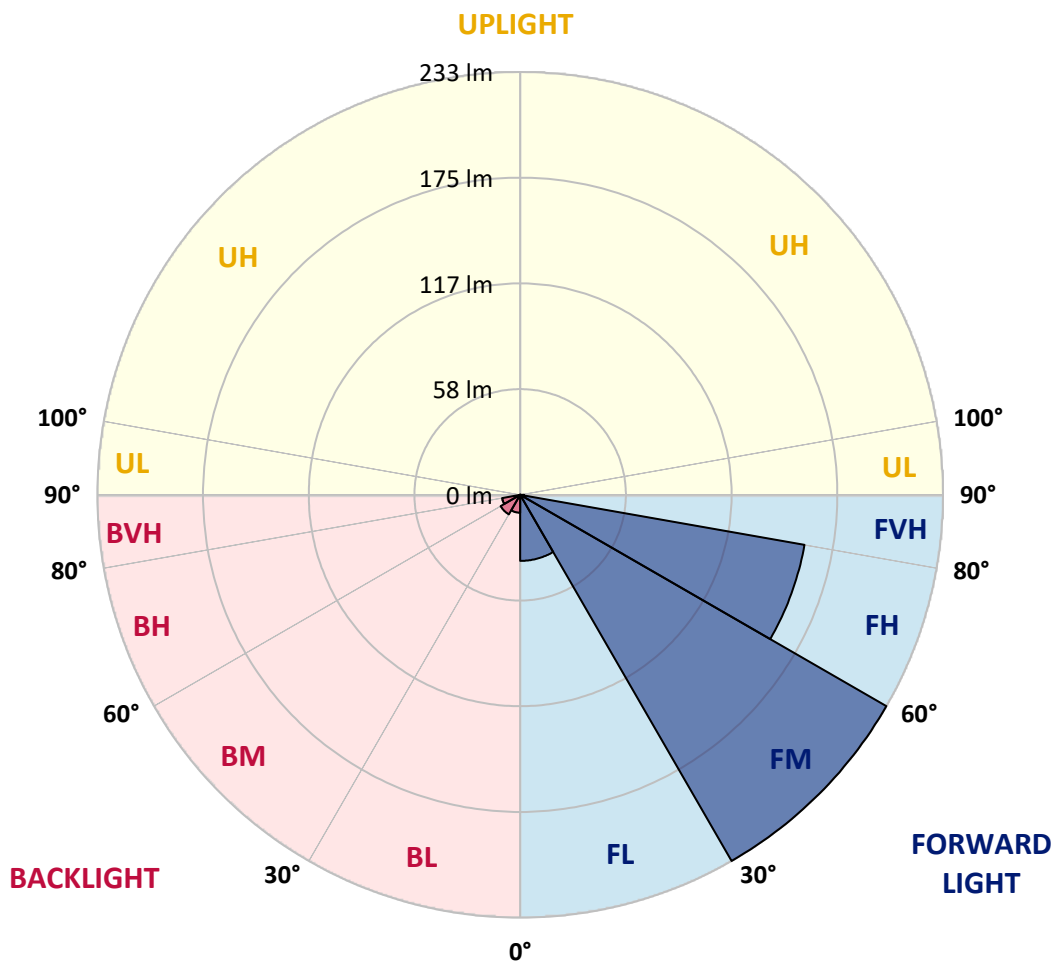
CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	36.5	7.9			
FM (30°-60°)	233.4	50.3			
FH (60°-80°)	159.3	34.3			G0/660
FVH (80°-90°)	2.1	0.4			G0/10
BL (0°-30°)	9.9	2.1	B0/110		
BM (30°-60°)	12.5	2.7	B0/220		
BH (60°-80°)	10.2	2.2	B0/110		G0/110
BVH (80°-90°)	0.2	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-G0**

Type II Medium





REPORT NUMBER: P400865

CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
2.5°	61.8	62.1	61.7	61.5	60.8	59.9	59.0	57.7	56.3	55.8	54.9
5°	69.4	69.4	69.4	68.7	68.1	66.4	64.4	62.4	59.8	58.8	56.8
7.5°	73.4	73.5	73.7	73.7	73.4	72.3	70.1	67.8	63.9	62.6	59.4
10°	73.8	74.2	74.9	75.9	76.7	77.3	76.0	73.6	68.9	67.3	62.6
12.5°	72.7	72.9	74.0	75.9	78.5	81.0	81.1	79.6	74.4	72.2	66.5
15°	70.1	70.3	72.0	75.1	79.0	83.5	86.1	85.7	80.8	78.3	70.9
17.5°	65.9	66.2	68.3	72.8	78.5	85.2	90.7	92.9	87.2	84.7	75.3
20°	65.7	65.8	66.6	70.0	76.8	86.1	95.3	100.4	94.9	92.3	80.5
22.5°	76.9	76.2	74.4	72.3	75.2	85.9	99.4	108.4	104.5	100.4	86.6
25°	89.4	89.6	87.7	82.6	78.8	85.4	102.5	117.3	113.5	109.4	92.8
27.5°	102.4	102.0	100.3	95.6	89.4	88.6	104.8	124.6	122.1	117.2	98.2
30°	115.2	114.8	113.6	108.8	102.0	96.7	106.5	131.1	130.3	124.8	102.7
32.5°	129.7	130.3	128.8	122.5	114.2	107.7	110.3	138.0	140.3	133.5	107.3
35°	146.6	146.6	143.4	137.6	129.1	120.0	117.8	145.6	152.9	145.7	114.6
37.5°	160.6	161.7	159.8	151.5	143.5	133.9	129.2	154.9	168.5	161.2	124.5
40°	171.6	173.5	173.6	165.4	158.0	151.7	145.1	168.1	188.1	178.7	136.3
42.5°	181.8	182.1	183.6	178.9	171.5	169.8	163.1	183.7	212.6	201.5	151.9
45°	194.7	195.4	194.6	191.1	184.7	186.9	183.2	203.5	240.2	230.8	170.4
47.5°	213.8	215.5	214.2	207.9	200.1	204.2	201.5	223.2	271.3	260.0	190.5
50°	231.7	233.0	234.4	232.4	224.6	220.7	217.4	244.0	298.0	288.4	210.2
52.5°	233.6	234.8	242.5	249.6	254.7	244.4	234.1	265.1	322.6	314.6	228.2
55°	221.2	221.9	234.8	248.7	272.3	275.8	258.6	285.9	343.3	337.8	240.3
57.5°	186.5	189.8	208.0	229.4	268.0	294.5	293.3	310.2	356.7	354.2	255.9
60°	122.5	126.1	147.9	180.3	235.9	289.5	331.5	346.5	375.5	378.3	283.3
62.5°	63.5	67.7	86.9	115.6	170.9	252.1	344.5	406.2	411.6	421.1	332.1
65°	36.3	37.1	46.7	67.7	105.8	180.5	328.9	465.3	459.1	478.4	394.5
67°	26.9	26.9	33.6	46.0	67.0	122.7	280.5	477.8	489.0	499.2	407.0
67.5°	24.1	25.5	31.2	42.5	60.1	108.9	262.5	474.5	491.0	497.3	402.7
70°	16.6	17.4	22.4	30.4	40.5	56.7	172.1	419.7	473.0	466.6	364.9
72.5°	9.9	10.3	14.8	21.9	30.2	30.3	93.9	318.5	400.8	400.7	298.0
75°	6.2	6.5	8.7	14.6	21.2	19.0	43.4	216.7	287.8	282.3	199.7
77.5°	3.5	4.0	5.2	8.0	13.4	12.1	18.3	121.4	155.5	145.9	99.2
80°	1.4	1.7	3.0	3.8	7.6	7.2	7.5	42.7	62.9	56.7	33.2
82.5°	0.3	0.4	1.0	1.8	3.0	3.0	2.4	11.7	14.9	13.9	8.5
85°	0.0	0.0	0.1	0.1	0.1	0.2	0.6	1.3	1.6	1.8	1.4
87.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3
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: P400865

CATALOG NUMBER: ENV-SA1-830-U-T2-HSS-XXB

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
2.5°	54.2	53.6	52.4	51.1	49.8	48.7	47.9	46.6	46.5	46.5	46.5
5°	55.4	54.0	51.2	48.4	45.6	43.1	41.2	39.8	38.4	38.0	38.4
7.5°	57.0	54.5	49.6	44.7	40.4	36.8	34.2	32.1	31.1	30.6	30.2
10°	59.2	55.3	47.5	40.4	34.9	30.6	27.8	25.8	24.8	24.2	24.3
12.5°	61.5	55.9	44.9	35.7	29.6	25.6	23.3	21.6	20.0	19.1	19.4
15°	63.9	56.3	41.7	31.3	25.5	22.0	18.7	15.7	14.6	14.5	14.4
17.5°	66.5	56.2	38.1	27.2	22.0	17.1	13.8	13.4	13.3	13.3	13.3
20°	69.2	55.8	34.0	23.8	18.5	13.0	12.5	12.3	12.0	11.9	11.9
22.5°	72.2	55.0	30.2	20.8	13.8	11.9	11.2	10.6	10.2	9.9	10.0
25°	74.9	53.5	26.6	18.0	11.8	10.6	9.7	8.9	8.5	8.1	8.2
27.5°	76.7	50.9	23.4	14.6	10.8	9.4	8.3	7.5	6.9	6.6	6.6
30°	76.9	47.2	20.7	11.9	9.9	8.3	7.1	6.2	5.8	5.7	5.6
32.5°	76.7	43.3	18.6	11.0	9.0	7.2	6.0	5.4	5.1	4.9	4.9
35°	77.6	39.4	16.7	10.1	8.0	6.4	5.3	4.7	4.4	4.3	4.3
37.5°	80.2	36.7	14.6	9.2	7.1	5.6	4.8	4.3	4.0	3.8	3.8
40°	83.8	34.4	12.2	8.4	6.3	5.1	4.4	3.9	3.6	3.4	3.4
42.5°	90.0	33.6	10.2	7.5	5.5	4.5	4.0	3.5	3.1	3.0	3.0
45°	99.4	34.0	9.3	6.7	5.0	4.1	3.6	3.1	2.7	2.6	2.6
47.5°	109.7	35.8	8.7	6.0	4.5	3.8	3.2	2.7	2.4	2.3	2.3
50°	121.2	38.7	8.2	5.3	4.1	3.5	2.9	2.4	2.1	2.0	2.0
52.5°	132.2	42.4	7.7	4.8	3.8	3.1	2.5	2.1	1.9	1.8	1.8
55°	140.5	44.7	7.2	4.4	3.6	2.9	2.3	2.0	1.7	1.7	1.7
57.5°	152.2	48.6	6.7	4.0	3.2	2.6	2.1	1.8	1.6	1.6	1.6
60°	175.9	59.2	5.9	3.7	2.9	2.4	2.0	1.7	1.5	1.4	1.4
62.5°	218.6	76.6	5.1	3.4	2.5	2.1	1.7	1.5	1.3	1.1	1.1
65°	259.8	83.9	4.4	3.0	2.3	1.8	1.6	1.3	1.0	0.8	0.8
67°	257.5	71.7	3.7	2.5	1.9	1.7	1.3	1.0	0.7	0.4	0.4
67.5°	251.4	66.8	3.6	2.4	1.8	1.6	1.3	1.0	0.6	0.3	0.3
70°	213.7	46.7	2.8	1.9	1.6	1.4	1.0	0.7	0.3	0.2	0.2
72.5°	173.6	37.0	2.2	1.6	1.3	1.0	0.9	0.4	0.3	0.1	0.1
75°	122.7	22.8	1.9	1.4	1.0	0.8	0.7	0.4	0.3	0.2	0.1
77.5°	60.6	10.5	1.6	1.2	1.0	0.8	0.6	0.5	0.4	0.3	0.2
80°	17.8	3.4	1.0	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.3
82.5°	4.0	1.2	0.3	0.4	0.6	0.6	0.6	0.4	0.3	0.2	0.1
85°	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.0	0.0
87.5°	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	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

(END OF REPORT)