

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: P400851

Luminaire Tested: **ENT-SA1-827-U-T4FT-HSS-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400851  
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-SA1-827-U-T4FT-HSS-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K LIGHTSQUARE IN BATTERY OPERATION 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: 402 lumens  
Efficiency: N/A  
Efficacy: 30.9 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 - 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

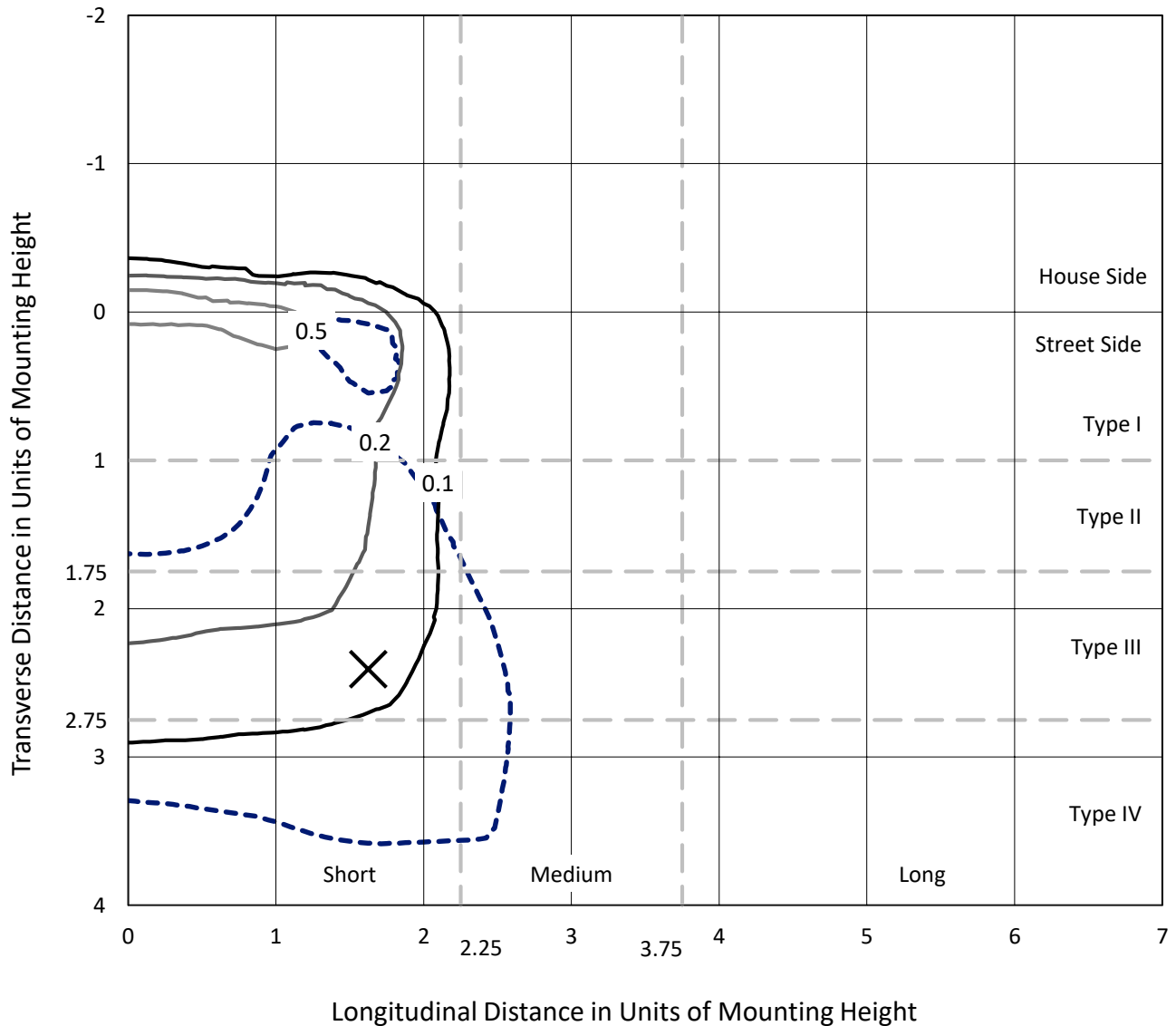


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### Iso-Footcandle Lines of Horizontal Illumination

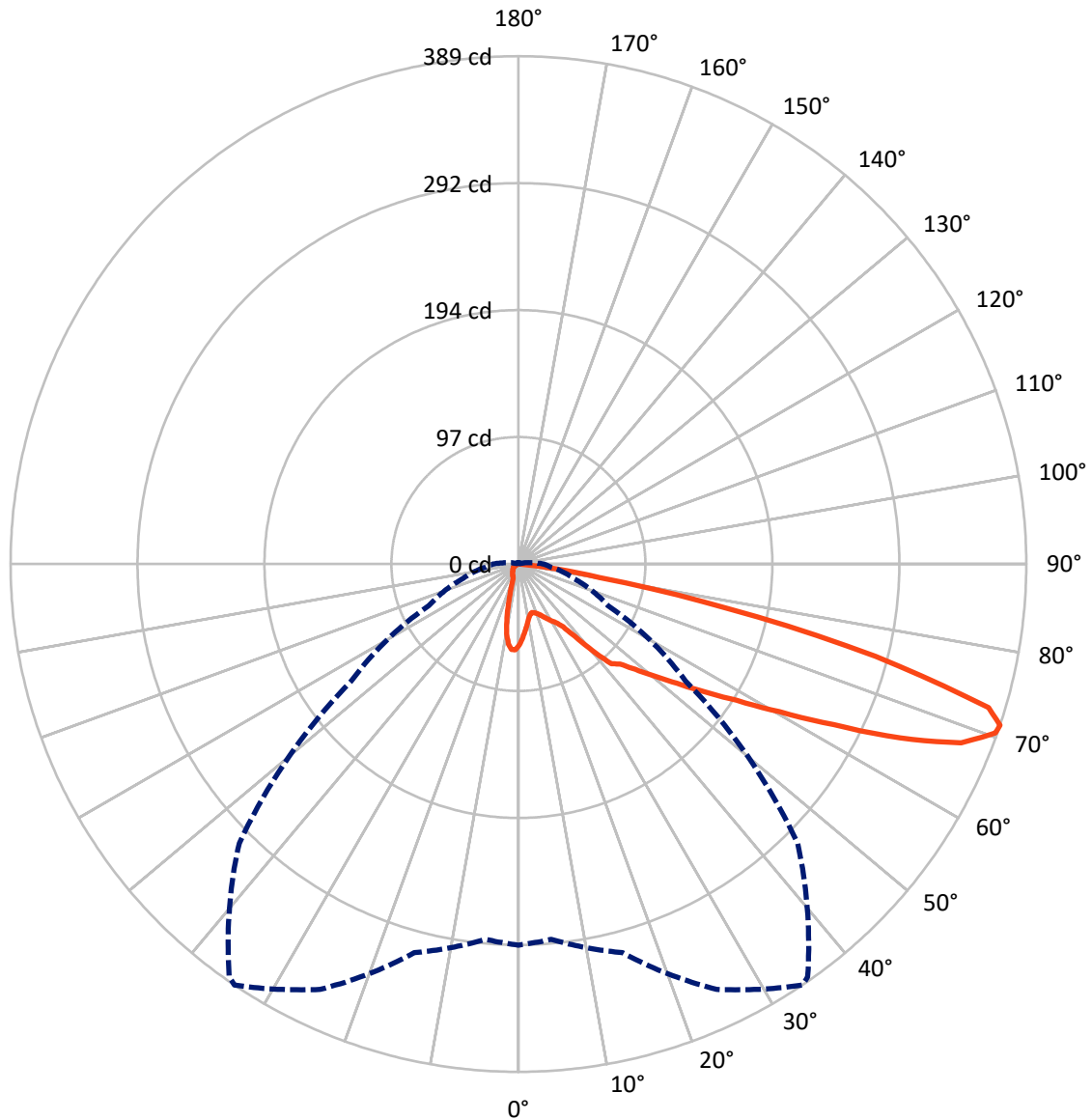
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.6 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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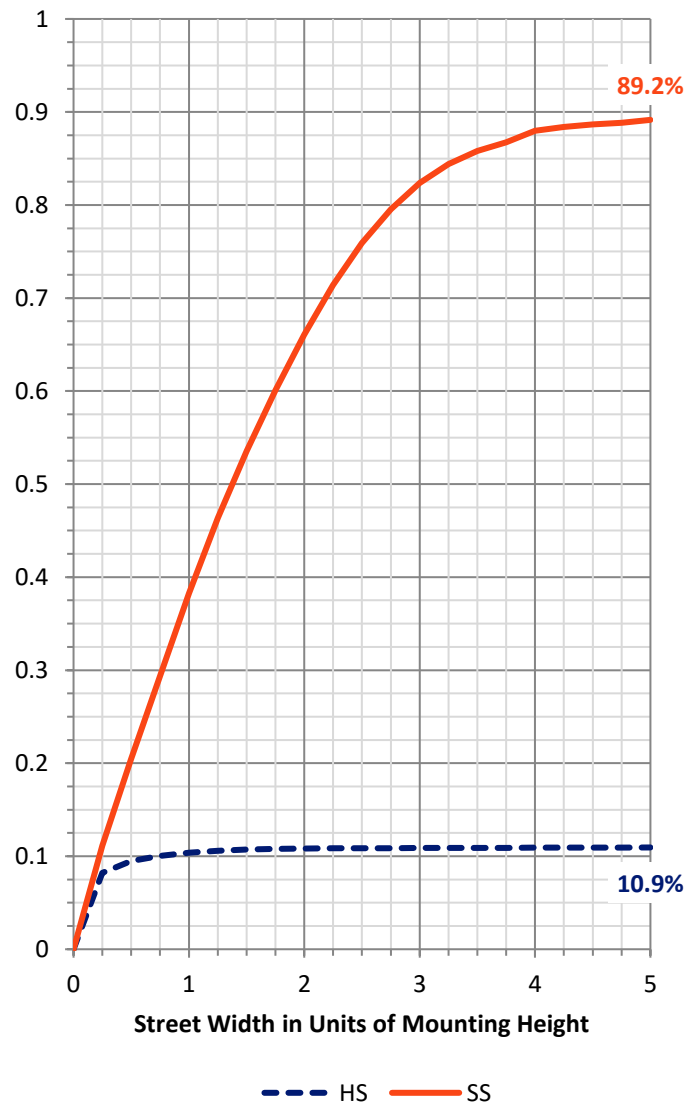
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	44.4	0.0	44.4
	% Fixture	11.1	0.0	11.1
<b>Street Side</b>	Lumens	357.6	0.0	357.6
	% Fixture	88.9	0.0	88.9
<b>Total</b>	Lumens	402.0	0.0	402.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.5	1.4
10°-20°	12.6	3.1
20°-30°	18.8	4.7
30°-40°	31.4	7.8
40°-50°	56.6	14.1
50°-60°	89.9	22.4
60°-70°	120.8	30.0
70°-80°	64.1	15.9
80°-90°	2.4	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°	402.0	100.0
0°-180°	402.0	100.0



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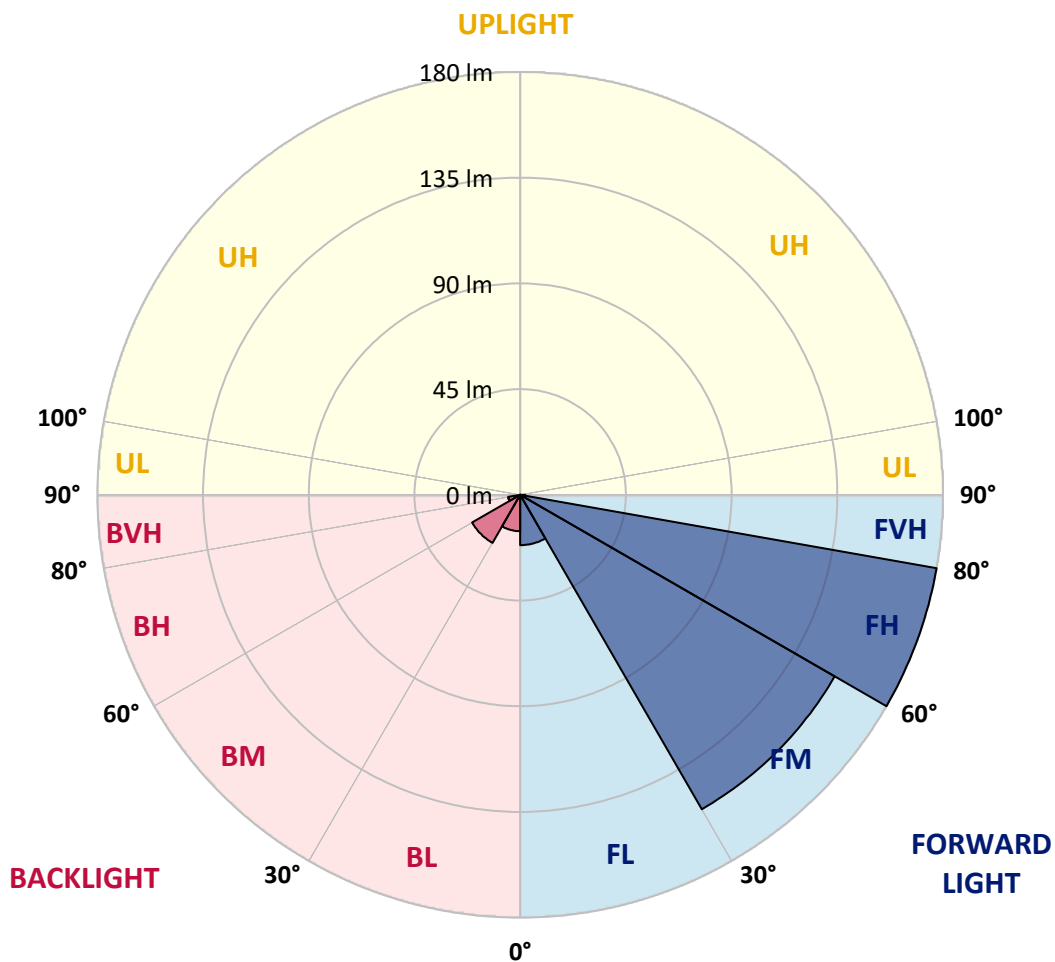
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	21.4	5.3			
FM	(30°-60°)	154.3	38.4			
FH	(60°-80°)	179.7	44.7			G0/660
FVH	(80°-90°)	2.2	0.5			G0/10
BL	(0°-30°)	15.5	3.8	B0/110		
BM	(30°-60°)	23.6	5.9	B0/220		
BH	(60°-80°)	5.2	1.3	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3
2.5°	56.7	56.0	56.6	57.0	57.2	57.5	58.0	58.9	59.9	61.0	61.6
5°	49.5	49.9	50.1	51.0	51.9	52.0	53.6	55.3	57.6	59.9	61.8
7.5°	43.6	43.6	44.3	45.7	47.1	47.3	49.9	52.3	55.5	59.0	62.1
10°	38.9	39.1	39.6	41.0	42.8	43.2	46.2	49.5	53.5	58.0	62.4
12.5°	37.4	37.3	37.2	38.2	39.7	40.1	43.4	47.3	52.0	57.5	63.3
15°	38.3	38.1	37.5	37.7	38.6	39.1	42.0	45.8	51.2	57.4	64.6
17.5°	39.9	39.5	38.5	38.2	39.2	39.6	42.0	45.4	50.8	57.9	66.2
20°	41.7	41.4	39.8	39.4	40.4	40.7	43.2	46.2	51.0	58.7	68.4
22.5°	44.4	44.0	41.6	41.1	42.2	42.5	45.2	47.8	52.0	60.1	71.4
25°	47.6	47.1	44.1	43.5	44.8	45.1	47.8	50.3	53.6	62.0	75.2
27.5°	51.2	50.6	47.4	46.2	47.6	48.1	50.6	53.3	55.9	64.5	80.2
30°	54.4	53.7	50.7	49.2	50.7	50.9	53.9	57.0	59.7	68.6	87.5
32.5°	63.3	61.7	57.0	52.8	53.7	54.2	57.9	62.7	66.8	73.5	97.0
35°	76.7	75.4	69.6	62.4	59.0	59.1	63.8	70.0	71.8	79.2	108.7
37.5°	89.6	88.5	83.4	76.7	70.3	70.5	71.3	77.2	79.4	89.2	123.0
40°	103.8	102.0	97.9	91.6	87.1	86.1	82.1	86.3	91.0	101.7	138.5
42.5°	110.3	108.6	104.4	104.8	104.3	102.5	94.6	100.4	105.7	119.8	155.7
45°	121.1	117.8	109.2	109.8	109.2	109.3	111.3	119.6	124.2	139.0	175.2
47.5°	131.1	127.3	118.3	117.6	120.5	121.9	132.3	142.4	142.8	155.7	190.4
50°	140.2	137.5	129.2	129.3	134.4	136.0	156.8	166.0	157.9	168.5	202.4
52.5°	152.3	148.5	141.0	143.7	151.8	153.2	181.3	186.8	168.8	180.2	211.7
55°	163.5	161.4	156.0	159.9	172.3	176.1	206.1	202.8	176.5	190.5	216.2
57.5°	181.9	179.9	178.5	180.5	197.0	201.8	231.3	214.1	182.4	197.4	214.1
60°	212.6	210.6	206.2	208.1	229.6	232.0	251.1	225.5	184.8	199.3	205.9
62.5°	250.4	247.9	240.9	249.5	271.1	271.0	271.6	231.6	181.8	193.6	184.2
65°	284.6	281.1	277.5	294.9	321.2	317.6	293.4	232.3	172.3	165.9	142.5
67.5°	309.4	308.1	310.1	337.3	365.6	361.9	314.5	222.3	143.5	119.7	88.0
70°	308.5	305.6	318.5	361.9	387.6	384.6	313.6	182.7	95.7	63.4	36.9
71°	291.8	288.5	308.1	359.4	388.9	386.1	302.3	156.3	75.7	44.8	24.3
72.5°	225.4	235.2	266.3	333.5	376.5	372.8	271.6	119.7	47.9	25.9	12.2
75°	95.4	100.7	158.1	238.1	282.4	280.5	183.1	55.3	22.0	11.7	4.7
77.5°	24.5	24.2	48.4	102.1	164.4	167.3	84.4	19.0	11.5	8.3	2.7
80°	4.8	5.2	13.8	35.5	62.8	64.5	27.5	8.3	7.7	6.5	1.4
82.5°	0.5	0.6	2.4	11.0	21.1	20.3	6.1	3.1	4.7	4.4	0.6
85°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	1.1	1.2	0.2
87.5°	0.0	0.0	0.1	0.1	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3
2.5°	62.1	62.9	63.7	64.2	64.8	64.9	65.7	65.5	65.8	65.8	65.8
5°	62.9	63.8	65.4	66.2	66.5	65.9	65.8	64.9	64.5	64.1	63.7
7.5°	63.7	64.9	66.6	67.0	65.9	63.8	62.1	59.9	57.9	56.6	56.8
10°	64.5	66.1	67.5	66.5	63.6	59.5	54.7	49.9	45.6	44.0	44.5
12.5°	65.7	67.5	68.2	65.3	59.6	51.3	42.7	35.3	30.9	28.2	27.9
15°	67.4	69.2	68.5	63.3	53.3	40.3	29.6	22.2	17.9	16.5	15.8
17.5°	69.5	71.2	68.5	59.9	44.4	28.9	18.0	13.5	12.1	11.8	11.9
20°	72.1	73.7	68.2	54.6	34.2	17.8	12.0	11.1	11.1	11.1	11.1
22.5°	75.5	76.4	67.7	47.7	23.6	12.0	10.7	10.6	10.7	10.7	10.7
25°	79.7	79.6	66.8	39.4	14.8	10.2	10.2	10.2	10.2	10.3	10.3
27.5°	85.3	83.6	65.3	29.4	10.5	9.5	9.7	9.8	10.0	10.2	10.2
30°	93.0	88.9	62.8	19.9	8.9	8.8	9.1	9.6	9.8	10.0	10.0
32.5°	101.3	94.4	58.5	12.7	8.1	8.1	8.4	9.1	9.8	9.9	9.9
35°	111.8	100.3	52.1	9.2	7.7	7.5	7.8	8.5	9.4	9.9	9.9
37.5°	122.9	106.6	42.8	7.7	7.2	7.0	7.3	7.7	8.9	9.8	9.8
40°	134.7	112.2	32.2	7.2	6.7	6.6	6.7	7.2	8.1	9.3	9.5
42.5°	146.5	116.8	22.5	6.6	6.3	6.1	6.3	6.6	7.4	8.5	8.6
45°	159.6	122.0	15.0	6.1	6.0	5.8	6.0	6.2	6.8	7.3	7.4
47.5°	169.1	123.8	10.3	5.6	5.5	5.6	5.6	5.8	6.1	6.2	6.1
50°	175.4	122.9	7.4	5.0	5.1	5.3	5.3	5.4	5.4	5.2	5.1
52.5°	180.0	119.3	5.7	4.3	4.8	5.0	5.0	4.8	4.7	4.4	4.3
55°	180.5	111.3	4.5	3.7	4.3	4.7	4.6	4.3	4.0	3.6	3.6
57.5°	174.4	99.2	3.7	3.1	3.7	4.1	4.0	3.6	3.2	3.0	3.0
60°	164.4	86.8	3.1	2.7	3.1	3.5	3.2	3.0	2.6	2.3	2.3
62.5°	146.1	74.6	2.6	2.2	2.5	2.7	2.7	2.4	2.0	1.9	1.8
65°	112.0	56.7	1.9	1.7	1.9	2.3	2.1	1.9	1.6	1.4	1.3
67.5°	67.3	34.1	1.5	1.3	1.5	1.8	1.6	1.4	1.1	1.0	1.0
70°	28.5	14.6	1.2	1.0	1.1	1.4	1.3	1.1	0.9	0.8	0.8
71°	19.4	10.4	1.0	0.9	1.0	1.3	1.2	1.0	0.9	0.8	0.8
72.5°	9.9	5.3	0.9	0.7	1.0	1.1	1.1	1.0	0.8	0.8	0.8
75°	3.6	2.3	0.7	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.8
77.5°	2.0	1.4	0.6	0.6	0.6	0.7	0.9	1.0	1.0	1.0	1.0
80°	1.1	0.7	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.1	1.0
82.5°	0.6	0.2	0.1	0.2	0.4	0.6	0.7	0.8	1.0	0.9	0.9
85°	0.1	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.8	0.8	0.7
87.5°	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.6	0.6	0.6
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)