

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: P400872

Luminaire Tested: **ENT-SA1-830-U-T4W-XXB**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P400872  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1-830-U-T4W-XXB  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 613 lumens  
Efficiency: N/A  
Efficacy: 47.2 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 - 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

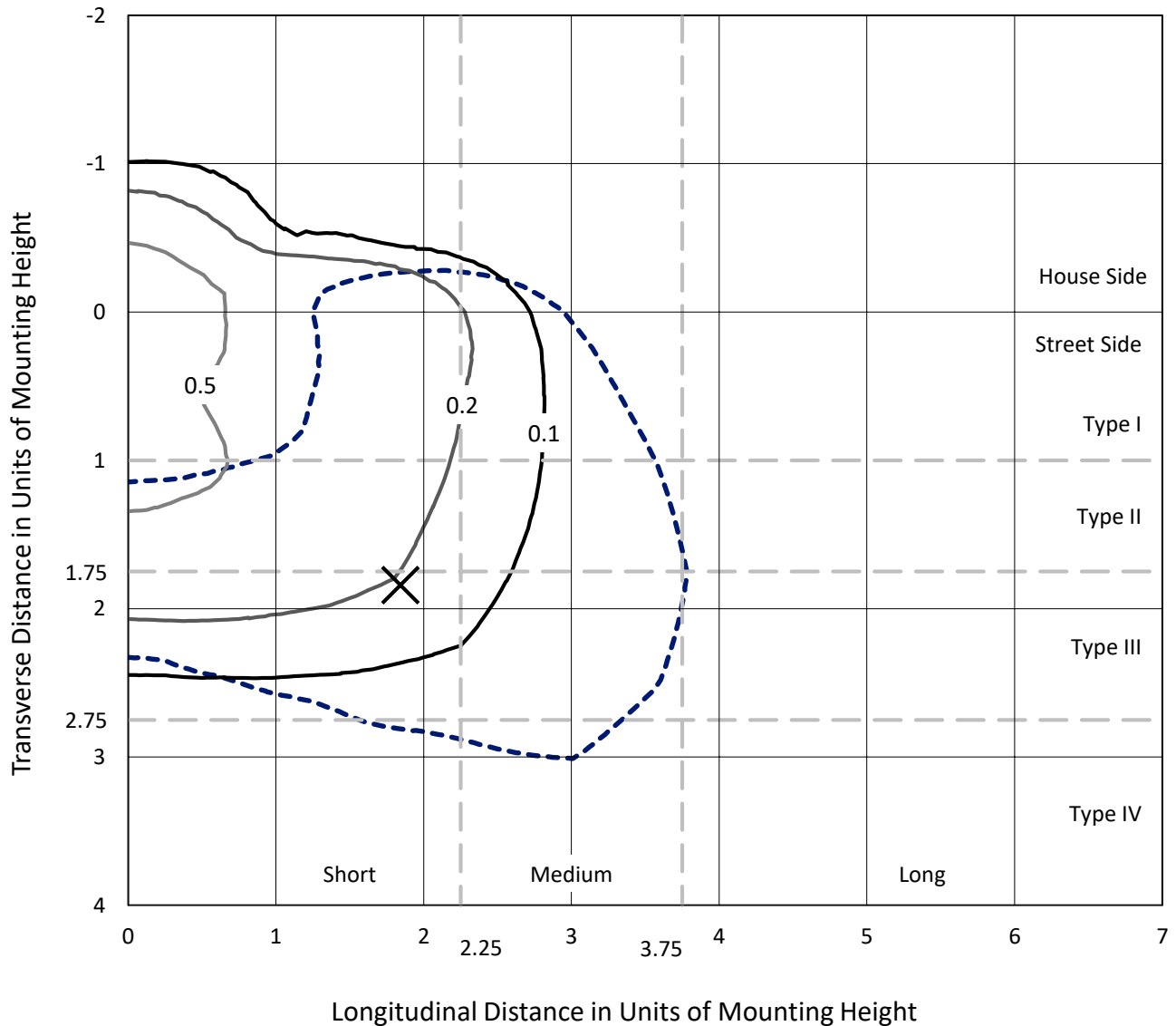


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

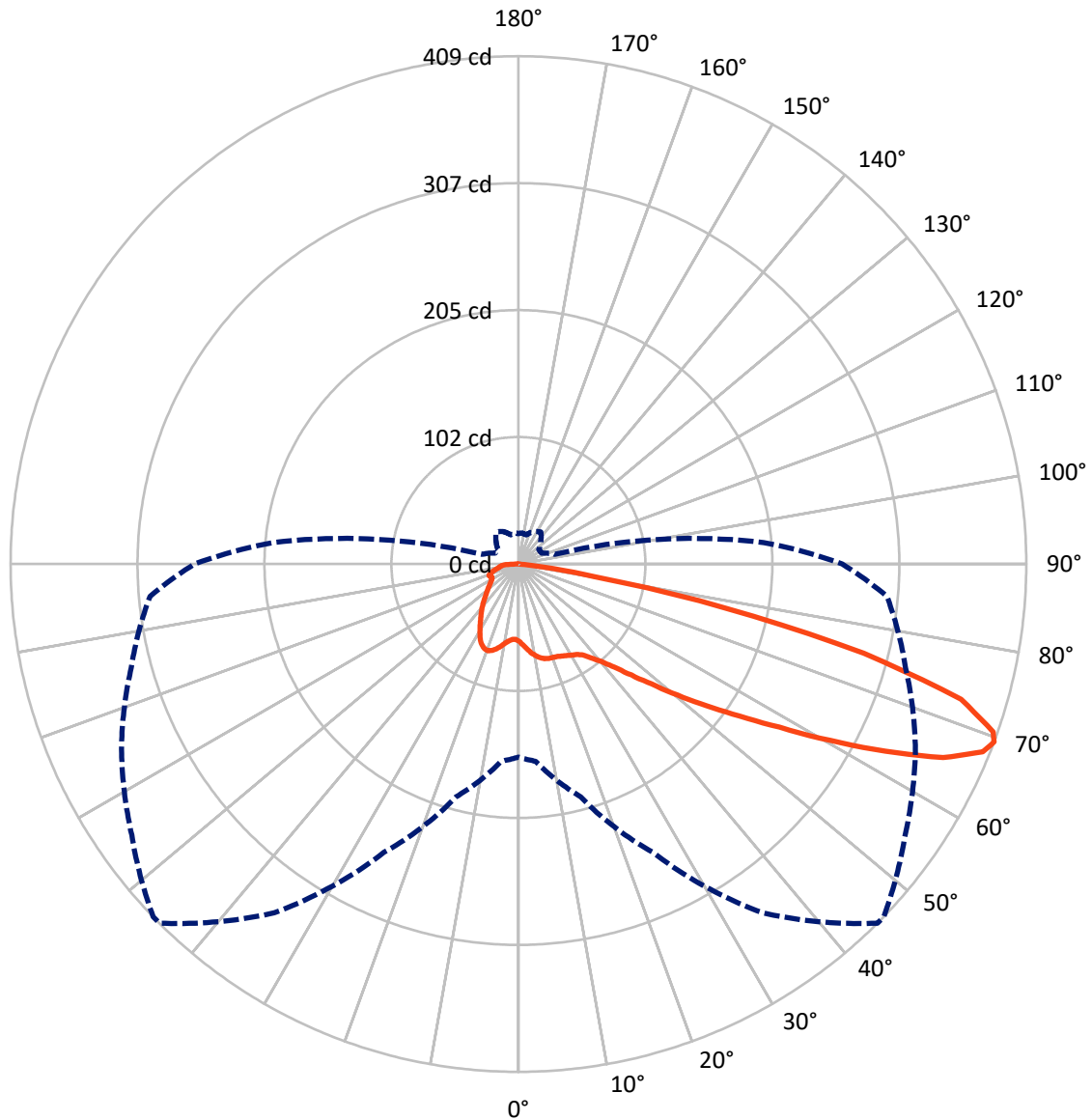


Based on 10 foot mounting height. Maximum calculated value = 0.8 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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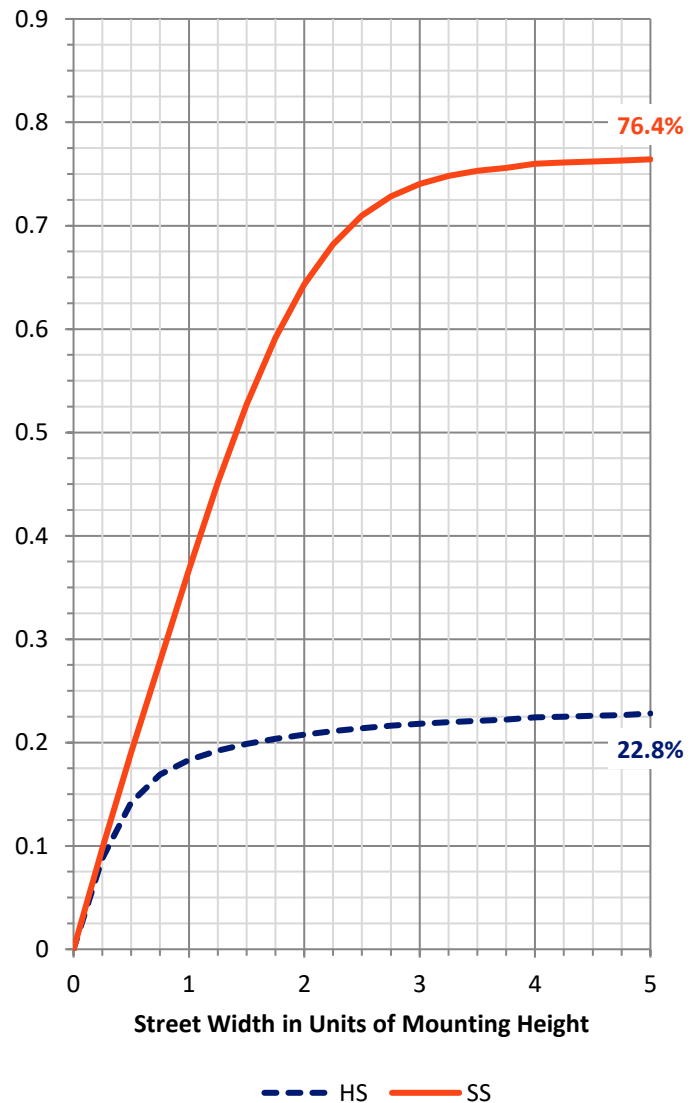
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	144.3	0.0	144.3
	% Fixture	23.5	0.0	23.5
<b>Street Side</b>	Lumens	468.7	0.0	468.7
	% Fixture	76.5	0.0	76.5
<b>Total</b>	Lumens	613.0	0.0	613.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	6.3	1.0
10°-20°	21.0	3.4
20°-30°	35.5	5.8
30°-40°	51.4	8.4
40°-50°	77.6	12.7
50°-60°	130.8	21.3
60°-70°	179.9	29.3
70°-80°	99.7	16.3
80°-90°	10.9	1.8
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°	613.0	100.0
0°-180°	613.0	100.0



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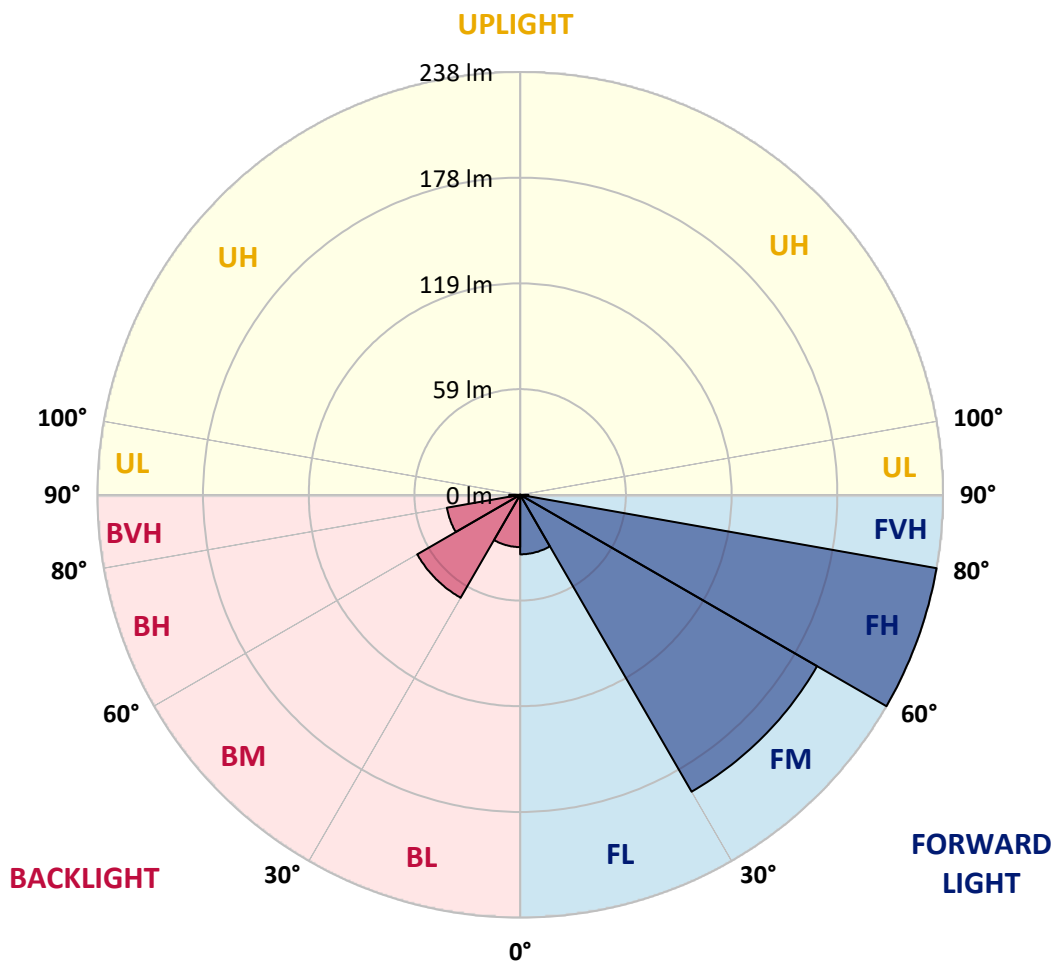
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	33.5	5.5			
FM	(30°-60°)	192.8	31.5			
FH	(60°-80°)	237.8	38.8			G0/660
FVH	(80°-90°)	4.7	0.8			G0/10
BL	(0°-30°)	29.4	4.8	B0/110		
BM	(30°-60°)	66.9	10.9	B0/220		
BH	(60°-80°)	41.8	6.8	B0/110		G0/110
BVH	(80°-90°)	6.2	1.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G0**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2
2.5°	66.1	66.1	66.1	65.8	65.4	64.9	64.7	64.1	63.7	63.1	62.6
5°	71.0	71.3	71.2	70.8	69.4	68.3	68.3	67.0	65.6	64.3	63.1
7.5°	76.3	76.3	75.8	74.9	73.5	72.0	71.8	70.1	68.1	66.2	64.3
10°	80.2	80.3	79.6	78.3	76.6	74.9	74.8	72.8	70.8	68.5	66.1
12.5°	82.9	82.9	82.2	81.0	79.0	77.4	77.2	75.4	73.4	70.9	68.2
15°	84.3	84.1	83.5	82.3	80.4	79.1	78.9	77.3	75.6	73.2	70.3
17.5°	84.0	84.0	83.5	82.3	81.0	79.9	79.7	78.6	77.4	75.0	72.2
20°	82.9	82.8	82.6	81.7	80.8	80.3	80.2	79.6	78.9	76.9	74.2
22.5°	81.8	81.7	81.5	80.9	80.5	80.8	80.8	80.7	80.6	79.0	76.4
25°	82.4	82.4	81.8	81.0	80.9	82.1	82.2	82.4	82.6	81.3	78.6
27.5°	86.7	86.4	85.0	82.7	81.9	83.5	83.7	84.4	84.3	82.9	80.5
30°	95.1	95.2	91.8	87.0	84.4	85.1	85.1	86.0	85.7	84.6	82.7
32.5°	107.7	107.7	102.3	94.9	88.3	86.9	86.6	87.4	88.5	87.0	85.1
35°	123.7	123.3	116.8	105.4	95.0	90.0	89.8	89.5	91.3	89.9	87.1
37.5°	139.9	138.3	131.9	119.4	104.4	96.1	95.4	94.4	95.4	92.5	90.0
40°	152.9	152.6	147.4	134.6	115.6	103.5	103.0	98.4	99.1	96.7	95.8
42.5°	167.1	167.3	163.8	151.0	128.9	113.5	112.2	105.0	107.0	106.1	105.7
45°	182.8	182.7	180.0	166.6	145.2	127.5	125.7	116.9	121.0	120.5	123.0
47.5°	194.9	195.8	194.3	184.8	164.5	144.4	143.1	132.4	138.6	142.7	147.4
50°	211.2	211.2	207.1	203.2	187.0	166.0	164.7	152.8	161.7	167.8	176.2
52.5°	231.5	230.8	222.6	221.2	214.4	189.6	188.5	176.0	188.8	194.1	211.2
55°	244.3	244.2	239.9	242.3	242.5	215.9	214.5	203.5	217.9	224.0	249.9
57.5°	254.9	255.0	258.6	267.1	272.8	247.9	247.4	233.9	248.4	257.0	287.7
60°	263.1	264.8	274.9	294.4	304.0	288.7	286.4	272.2	281.9	285.3	316.5
62.5°	259.8	262.0	281.7	310.5	335.2	331.9	331.1	310.5	310.4	308.7	338.0
65°	233.6	238.5	269.5	309.9	355.7	375.9	374.7	346.7	336.9	328.2	344.5
67.5°	191.2	192.2	229.6	286.2	355.5	403.5	402.3	373.0	353.4	332.0	325.6
69°	155.6	159.5	194.1	256.2	343.0	409.1	409.1	380.3	352.8	322.9	297.9
70°	134.6	134.8	168.2	232.3	325.9	405.7	406.5	380.3	347.8	310.9	273.3
72.5°	63.1	67.0	88.1	151.6	263.3	373.0	374.9	355.2	318.9	267.9	205.1
75°	18.9	19.6	29.4	71.9	150.8	287.3	291.6	295.5	259.8	197.2	126.3
77.5°	11.2	11.2	14.2	24.4	69.8	170.4	172.3	189.0	168.5	109.6	57.3
80°	5.5	5.7	7.6	11.9	26.1	61.9	68.1	88.4	74.7	42.9	21.0
82.5°	1.8	2.0	3.1	4.8	11.1	20.0	22.0	27.7	23.9	15.6	9.0
85°	0.0	0.0	0.1	0.2	0.6	1.5	1.5	3.3	5.0	5.5	3.0
87.5°	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2
2.5°	62.3	62.1	61.8	61.4	61.3	60.8	60.9	60.7	60.7	60.7	60.7
5°	62.5	62.2	61.7	61.3	61.0	60.8	61.3	61.4	61.6	61.6	61.7
7.5°	63.5	63.0	62.4	62.0	62.0	62.3	63.0	63.5	63.8	64.0	64.1
10°	65.3	64.7	63.8	63.7	63.9	64.6	65.5	66.3	67.0	67.4	67.4
12.5°	67.1	66.3	65.6	65.8	66.6	67.6	68.6	69.5	70.1	70.5	70.6
15°	69.1	68.3	67.6	68.1	69.4	70.6	71.5	71.8	72.1	72.5	72.6
17.5°	70.9	70.2	69.6	70.8	71.9	72.9	73.1	72.9	72.6	72.9	73.0
20°	72.9	72.2	71.9	73.1	73.9	74.0	73.3	72.5	71.6	71.6	71.7
22.5°	75.2	74.4	74.2	74.9	74.6	73.5	71.8	70.6	69.4	69.2	69.5
25°	77.5	76.7	76.6	76.2	73.9	71.2	68.8	67.4	66.5	66.6	67.1
27.5°	79.7	79.2	79.3	76.9	71.9	67.8	64.7	63.5	63.8	64.0	64.5
30°	82.0	82.0	82.4	76.9	69.1	63.0	60.0	60.0	60.7	61.2	61.8
32.5°	84.6	85.4	84.8	76.0	65.4	58.1	55.8	55.9	56.7	57.6	58.1
35°	87.1	89.0	87.2	73.8	60.2	53.7	51.8	51.5	52.1	52.9	53.2
37.5°	91.2	94.1	89.3	70.4	54.9	49.8	47.8	47.1	46.5	47.1	47.1
40°	98.1	101.7	90.9	64.7	49.8	46.1	44.1	42.8	41.3	40.0	40.0
42.5°	109.3	111.6	91.8	57.9	44.6	42.4	40.4	38.5	36.3	33.9	33.9
45°	127.5	128.0	92.1	50.5	39.9	38.8	36.7	34.9	31.9	29.5	29.0
47.5°	151.8	149.5	93.0	43.5	35.8	35.6	33.8	31.7	28.5	26.3	26.1
50°	184.5	174.7	96.8	37.8	32.5	32.8	31.5	29.0	26.0	24.4	24.1
52.5°	221.3	206.5	99.8	33.3	29.6	30.4	29.5	27.1	24.5	23.2	22.9
55°	261.4	237.1	99.1	30.2	27.5	28.3	28.0	26.0	23.6	22.5	22.2
57.5°	294.2	258.6	93.0	27.5	25.3	26.5	26.8	25.3	23.1	22.0	21.8
60°	318.8	270.4	80.4	25.3	23.5	25.0	26.0	24.8	23.0	22.4	22.1
62.5°	329.9	269.4	64.1	23.5	22.2	24.0	26.1	25.5	24.3	24.7	24.8
65°	323.7	256.2	48.1	22.2	21.4	24.1	27.5	27.5	25.7	26.5	26.6
67.5°	291.5	221.8	35.0	21.3	20.7	25.0	30.3	28.6	25.1	25.7	25.4
69°	260.9	198.4	30.1	20.7	20.0	25.4	31.5	28.8	24.4	25.1	24.4
70°	238.4	177.3	27.0	20.3	19.8	25.4	31.9	28.6	24.1	24.6	23.8
72.5°	169.7	123.1	22.2	19.4	18.8	23.5	31.3	27.6	23.1	22.5	21.0
75°	98.6	68.1	18.9	18.5	16.6	20.7	29.7	26.6	22.1	21.0	20.0
77.5°	41.4	30.4	16.1	16.8	14.7	18.4	27.8	25.5	21.0	19.4	18.9
80°	16.8	15.2	13.4	14.6	12.8	16.2	25.6	23.8	19.3	17.8	17.0
82.5°	8.8	8.4	10.3	11.8	10.6	14.9	24.1	22.6	18.0	16.4	15.4
85°	2.6	3.5	5.8	8.0	8.1	13.4	23.4	20.9	15.6	13.5	13.3
87.5°	0.2	0.7	2.0	4.2	5.3	10.3	19.0	17.2	12.6	10.6	10.7
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)