

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: P401031

Luminaire Tested: **ENT-SA1A-827-U-T4FT-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401031  
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-SA1A-827-U-T4FT-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 350mA 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: 1423 lumens  
Efficiency: N/A  
Efficacy: 70.8 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

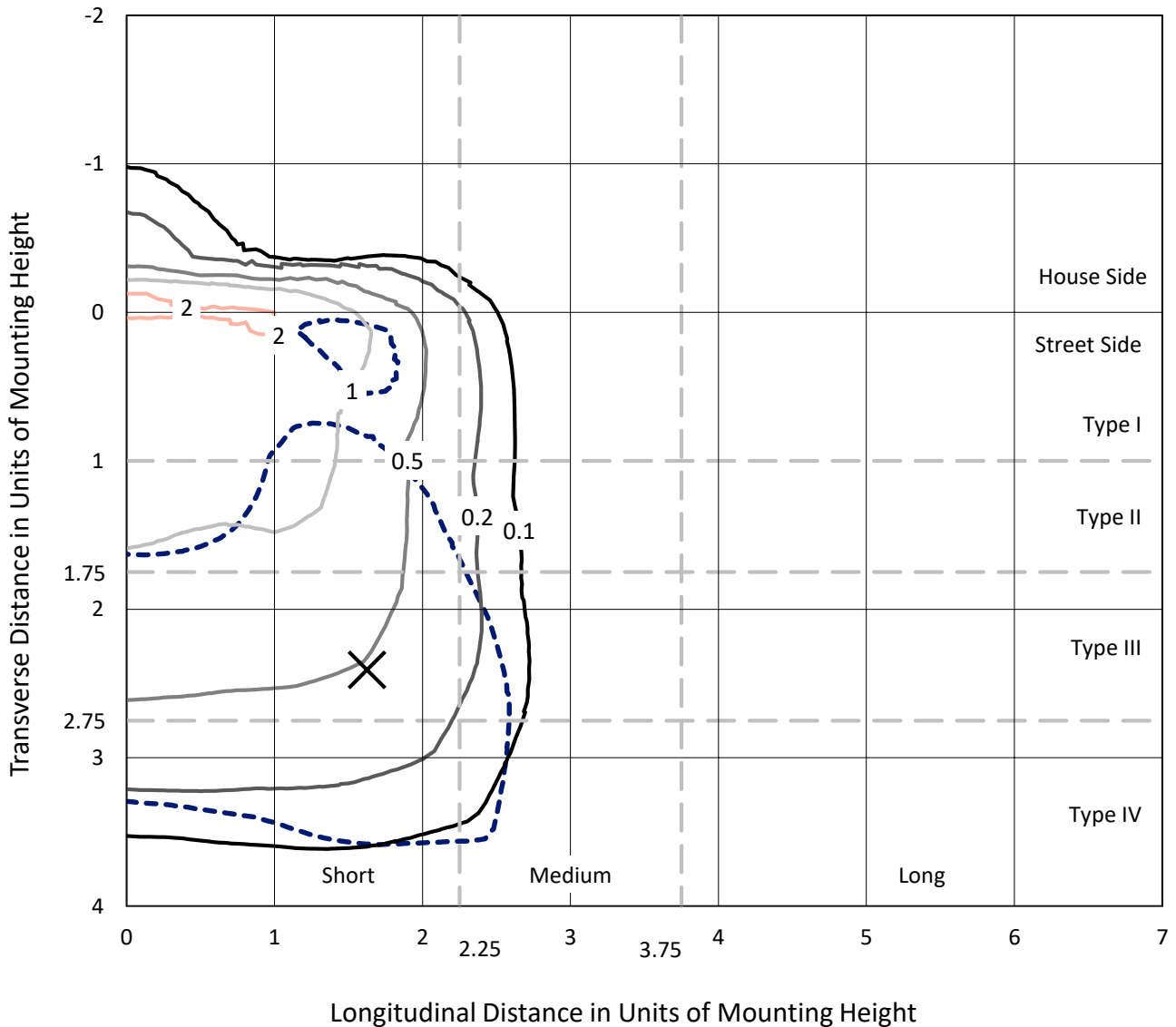
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

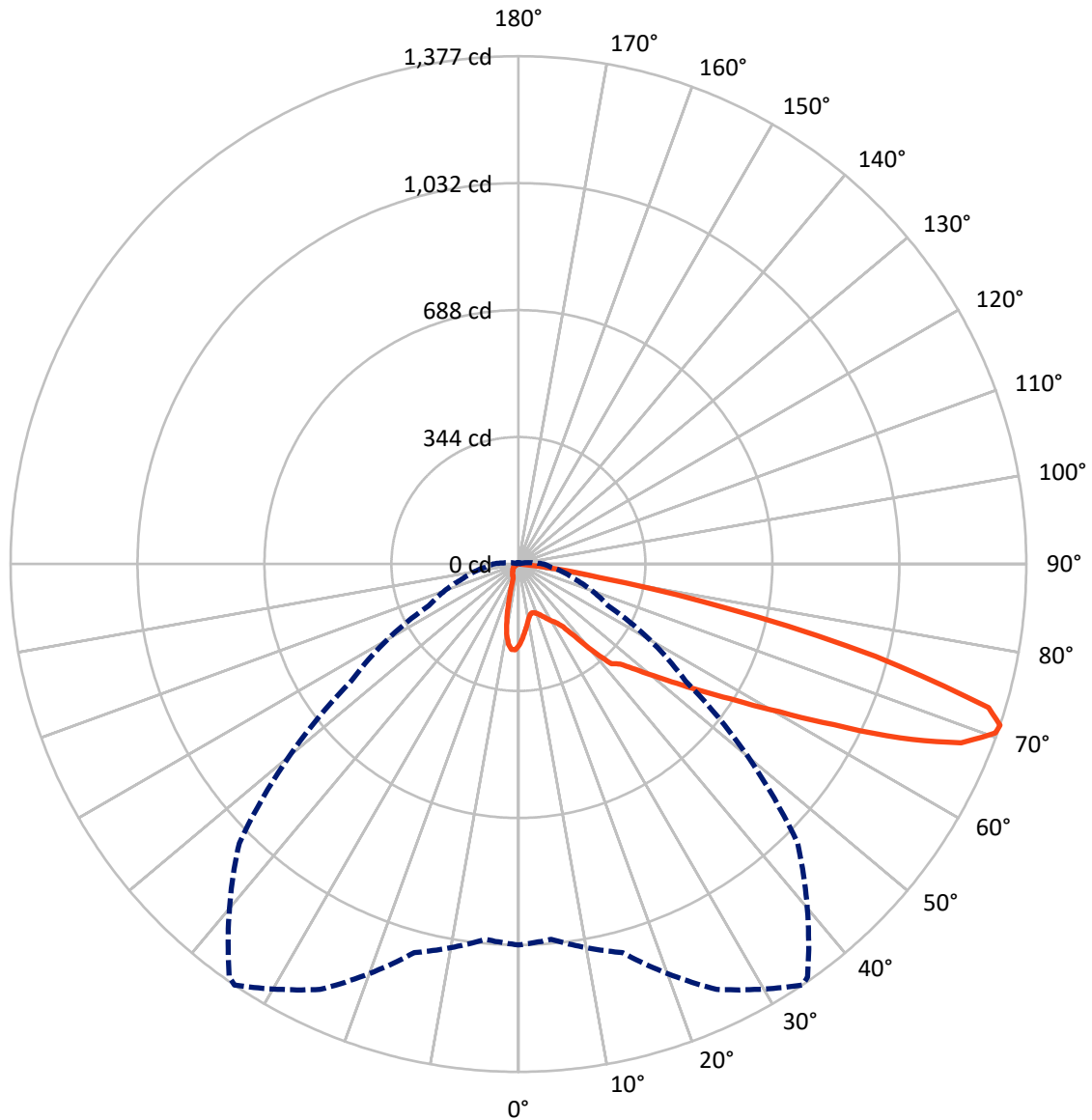
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.2 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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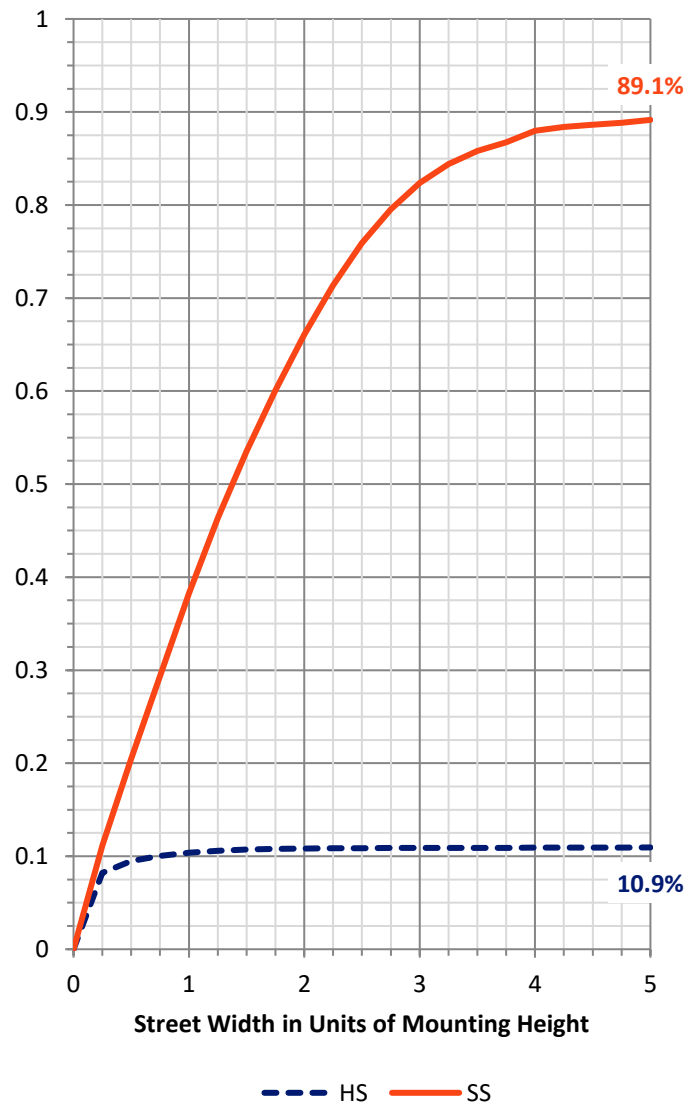
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	157.4	0.0	157.4
	% Fixture	11.1	0.0	11.1
<b>Street Side</b>	Lumens	1265.6	0.0	1265.6
	% Fixture	88.9	0.0	88.9
<b>Total</b>	Lumens	1423.0	0.0	1423.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.4	1.4
10°-20°	44.5	3.1
20°-30°	66.5	4.7
30°-40°	111.0	7.8
40°-50°	200.5	14.1
50°-60°	318.2	22.4
60°-70°	427.6	30.0
70°-80°	226.9	15.9
80°-90°	8.4	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°	1423.0	100.0
0°-180°	1423.0	100.0



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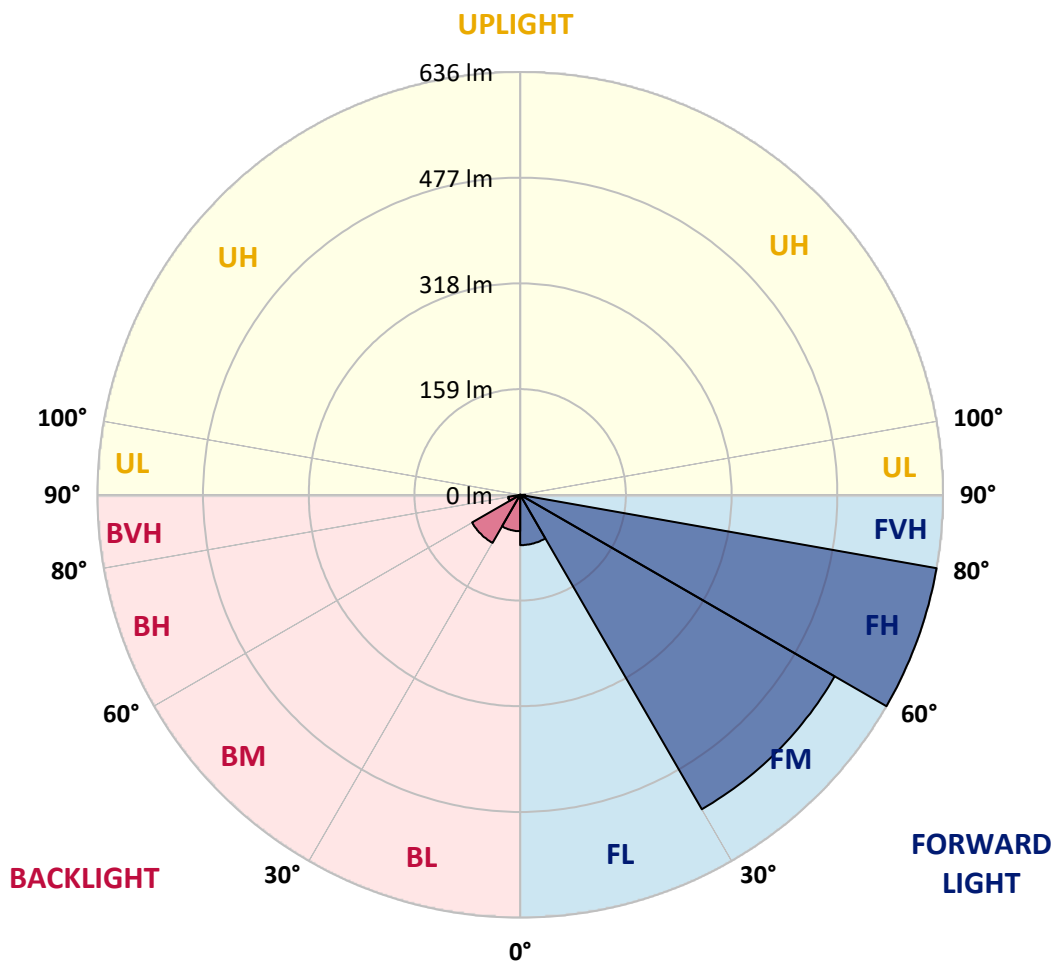
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	75.7	5.3			
FM	(30°-60°)	546.2	38.4			
FH	(60°-80°)	636.1	44.7			G0/660
FVH	(80°-90°)	7.6	0.5			G0/10
BL	(0°-30°)	54.7	3.8	B0/110		
BM	(30°-60°)	83.5	5.9	B0/220		
BH	(60°-80°)	18.4	1.3	B0/110		G0/110
BVH	(80°-90°)	0.8	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°	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5
2.5°	200.8	198.2	200.5	201.6	202.5	203.6	205.3	208.5	211.9	215.9	218.2
5°	175.1	176.5	177.4	180.5	183.6	184.2	189.6	195.9	203.9	211.9	218.8
7.5°	154.2	154.2	156.8	161.7	166.8	167.4	176.8	185.1	196.5	208.8	219.9
10°	137.7	138.2	140.2	145.1	151.7	153.1	163.7	175.1	189.4	205.3	221.1
12.5°	132.2	131.9	131.7	135.1	140.5	141.9	153.7	167.4	184.2	203.6	223.9
15°	135.7	134.8	132.8	133.4	136.8	138.2	148.5	162.2	181.1	203.3	228.8
17.5°	141.1	139.9	136.2	135.1	138.8	140.2	148.8	160.8	179.9	204.8	234.5
20°	147.7	146.5	140.8	139.4	143.1	144.2	153.1	163.4	180.5	207.6	242.2
22.5°	157.1	155.7	147.4	145.7	149.4	150.5	159.9	169.4	183.9	212.8	252.8
25°	168.5	166.8	156.2	153.9	158.5	159.7	169.1	177.9	189.6	219.6	266.2
27.5°	181.1	179.1	167.9	163.4	168.5	170.2	179.1	188.8	197.9	228.2	283.9
30°	192.5	190.2	179.4	174.2	179.4	180.2	190.8	201.6	211.3	242.8	309.9
32.5°	224.2	218.5	201.6	186.8	190.2	191.9	204.8	221.9	236.5	260.2	343.3
35°	271.6	267.0	246.5	220.8	208.8	209.3	225.9	247.6	254.2	280.5	384.7
37.5°	317.3	313.3	295.3	271.6	248.8	249.6	252.5	273.3	281.0	315.6	435.3
40°	367.3	361.0	346.7	324.2	308.5	304.7	290.7	305.3	322.2	359.9	490.4
42.5°	390.4	384.4	369.6	371.0	369.3	362.7	335.0	355.3	374.1	424.1	551.2
45°	428.7	417.0	386.4	388.7	386.4	387.0	393.8	423.3	439.5	492.1	620.0
47.5°	464.1	450.7	418.7	416.4	426.4	431.5	468.4	504.1	505.5	551.2	674.0
50°	496.4	486.7	457.3	457.5	475.8	481.5	555.2	587.8	558.9	596.6	716.3
52.5°	539.2	525.5	499.2	508.7	537.2	542.4	641.8	661.2	597.5	637.8	749.4
55°	578.9	571.5	552.1	566.1	609.8	623.2	729.7	717.7	624.6	674.3	765.4
57.5°	644.0	636.9	631.8	638.9	697.4	714.3	818.8	757.7	645.8	698.6	758.0
60°	752.6	745.4	730.0	736.6	812.8	821.4	888.8	798.3	654.0	705.4	728.9
62.5°	886.5	877.7	852.8	883.1	959.6	959.3	961.3	819.7	643.5	685.2	652.0
65°	1007.3	995.0	982.2	1043.9	1137.0	1124.1	1038.5	822.3	610.0	587.2	504.4
67.5°	1095.3	1090.4	1097.6	1193.8	1294.1	1281.2	1113.3	786.8	507.8	423.8	311.6
70°	1091.9	1081.9	1127.3	1280.9	1372.0	1361.5	1110.1	646.6	338.7	224.5	130.5
71°	1032.7	1021.3	1090.4	1272.4	1376.6	1366.6	1070.2	553.2	267.9	158.5	86.0
72.5°	798.0	832.5	942.5	1180.7	1332.6	1319.8	961.3	423.6	169.6	91.7	43.1
75°	337.6	356.4	559.5	842.8	999.6	993.0	648.0	195.6	78.0	41.4	16.6
77.5°	86.8	85.7	171.4	361.6	582.1	592.3	298.7	67.1	40.6	29.4	9.4
80°	16.9	18.3	48.8	125.7	222.2	228.2	97.4	29.4	27.1	23.1	4.9
82.5°	1.7	2.0	8.6	38.8	74.5	72.0	21.4	11.1	16.6	15.7	2.3
85°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	1.1	4.0	4.3	0.6
87.5°	0.0	0.0	0.3	0.3	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°	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5	220.5
2.5°	219.9	222.5	225.3	227.3	229.3	229.6	232.5	231.9	232.8	233.1	232.8
5°	222.5	225.9	231.3	234.2	235.3	233.3	232.8	229.6	228.5	227.1	225.6
7.5°	225.3	229.6	235.9	237.3	233.3	225.9	219.9	212.2	205.1	200.5	201.1
10°	228.5	233.9	239.1	235.3	225.1	210.5	193.6	176.5	161.4	155.7	157.7
12.5°	232.5	239.1	241.3	231.1	211.1	181.6	151.1	125.1	109.4	100.0	98.8
15°	238.5	245.0	242.5	224.2	188.8	142.8	104.8	78.5	63.4	58.5	56.0
17.5°	245.9	252.2	242.5	211.9	157.1	102.2	63.7	47.7	42.8	41.7	42.0
20°	255.0	261.0	241.3	193.4	121.1	62.8	42.6	39.4	39.4	39.4	39.1
22.5°	267.3	270.5	239.6	168.8	83.4	42.6	37.7	37.4	37.7	37.7	37.7
25°	282.2	281.6	236.5	139.4	52.6	36.3	36.0	36.0	36.3	36.6	36.6
27.5°	301.9	295.9	231.1	104.2	37.1	33.7	34.3	34.8	35.4	36.0	36.0
30°	329.3	314.7	222.2	70.5	31.4	31.1	32.3	34.0	34.8	35.4	35.4
32.5°	358.7	334.2	207.1	45.1	28.8	28.6	29.7	32.3	34.6	35.1	35.1
35°	395.8	355.0	184.5	32.6	27.1	26.6	27.7	30.0	33.4	35.1	35.1
37.5°	435.0	377.3	151.7	27.4	25.4	24.8	25.7	27.4	31.4	34.6	34.8
40°	476.7	397.0	114.0	25.4	23.7	23.4	23.7	25.4	28.6	32.8	33.7
42.5°	518.7	413.6	79.7	23.4	22.3	21.7	22.3	23.4	26.3	30.0	30.6
45°	564.9	431.8	53.1	21.7	21.1	20.6	21.1	22.0	24.0	26.0	26.3
47.5°	598.6	438.4	36.6	19.7	19.4	19.7	20.0	20.6	21.7	22.0	21.7
50°	620.9	435.0	26.3	17.7	18.0	18.8	18.8	19.1	19.1	18.3	18.0
52.5°	637.2	422.4	20.3	15.1	16.9	17.7	17.7	17.1	16.6	15.4	15.1
55°	638.9	394.1	16.0	13.1	15.1	16.6	16.3	15.1	14.0	12.9	12.9
57.5°	617.2	351.3	13.1	11.1	13.1	14.6	14.0	12.9	11.4	10.6	10.6
60°	582.1	307.3	11.1	9.4	10.9	12.3	11.4	10.6	9.1	8.3	8.3
62.5°	517.2	263.9	9.1	7.7	8.9	9.7	9.4	8.6	7.1	6.6	6.3
65°	396.4	200.8	6.9	6.0	6.9	8.0	7.4	6.6	5.7	4.9	4.6
67.5°	238.2	120.8	5.4	4.6	5.4	6.3	5.7	4.9	4.0	3.4	3.4
70°	100.8	51.7	4.3	3.4	4.0	4.9	4.6	4.0	3.1	2.9	2.9
71°	68.5	36.8	3.7	3.1	3.7	4.6	4.3	3.7	3.1	2.9	2.9
72.5°	35.1	18.8	3.1	2.6	3.4	4.0	4.0	3.4	2.9	2.9	2.9
75°	12.6	8.0	2.6	2.3	2.9	2.9	3.1	3.1	3.1	3.1	2.9
77.5°	7.1	4.9	2.3	2.3	2.3	2.6	3.1	3.4	3.7	3.7	3.4
80°	4.0	2.6	1.4	1.7	2.3	2.6	3.1	3.4	4.0	4.0	3.7
82.5°	2.0	0.9	0.3	0.9	1.4	2.3	2.6	2.9	3.4	3.1	3.1
85°	0.3	0.0	0.0	0.3	0.9	1.1	1.7	2.3	2.9	2.9	2.6
87.5°	0.0	0.0	0.0	0.0	0.3	0.6	0.9	1.4	2.0	2.3	2.0
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)