

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: P401213

Luminaire Tested: **ENT-SA1B-827-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401213  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1B-827-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1879 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B0 - U0 - G1

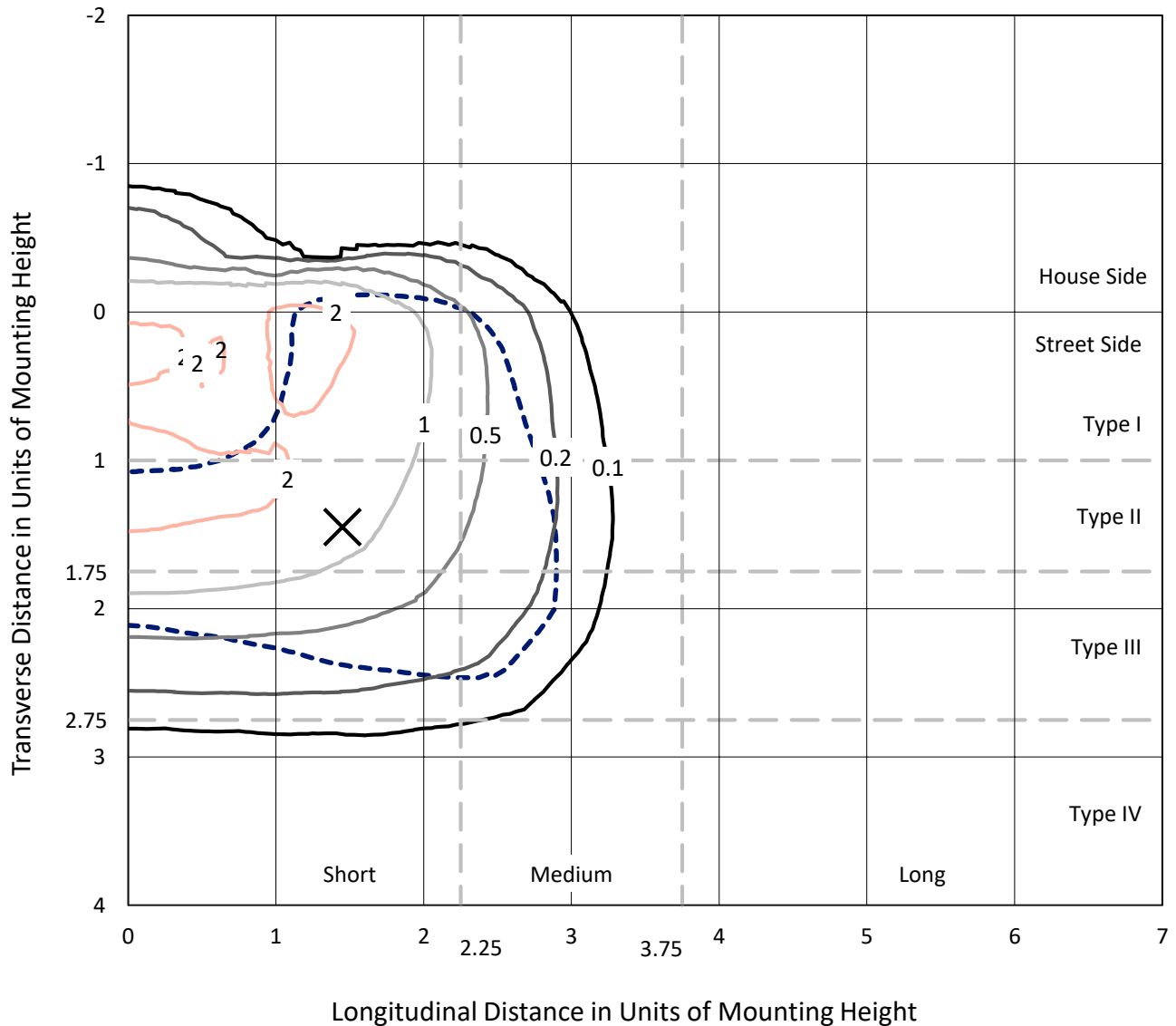
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

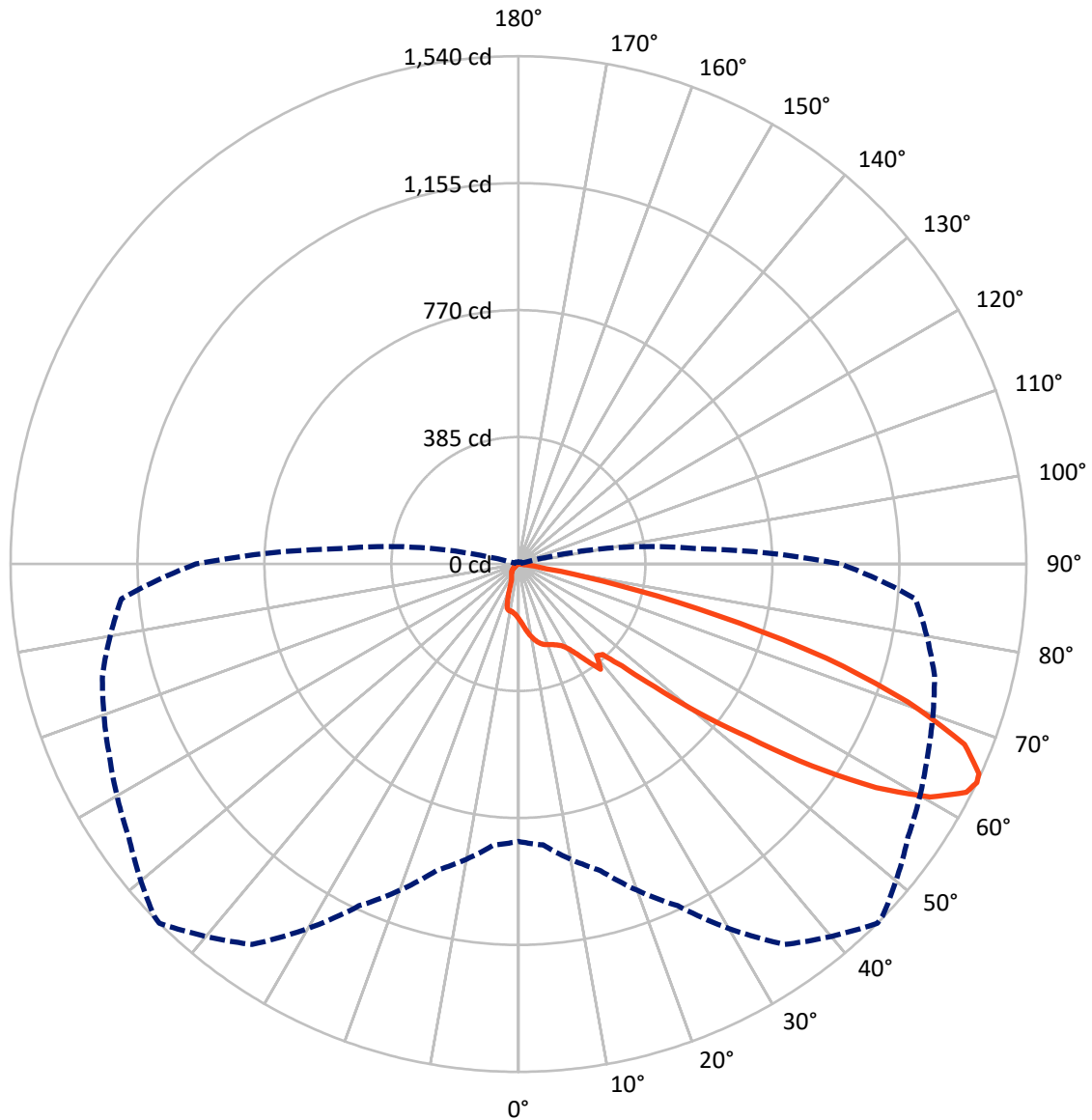
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.5 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 64-Deg Vertical

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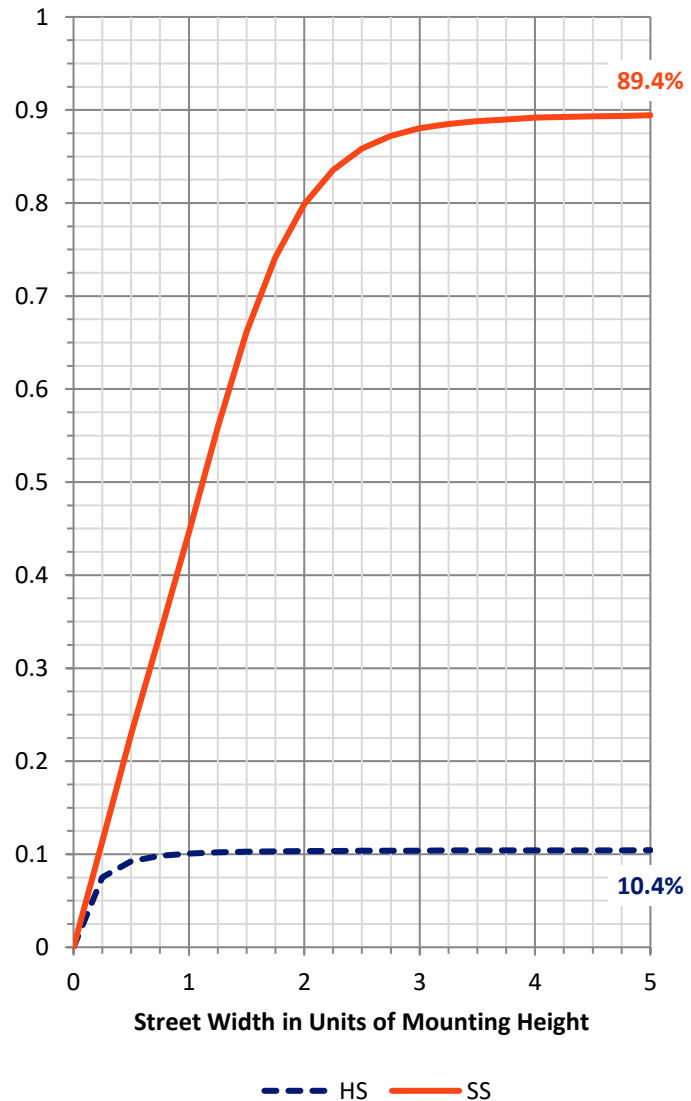
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	198.3	0.0	198.3
	% Fixture	10.6	0.0	10.6
<b>Street Side</b>	Lumens	1680.7	0.0	1680.7
	% Fixture	89.4	0.0	89.4
<b>Total</b>	Lumens	1879.0	0.0	1879.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.9	0.9
10°-20°	52.7	2.8
20°-30°	85.7	4.6
30°-40°	136.2	7.2
40°-50°	259.5	13.8
50°-60°	534.6	28.5
60°-70°	597.1	31.8
70°-80°	188.6	10.0
80°-90°	7.7	0.4
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°	1879.0	100.0
0°-180°	1879.0	100.0



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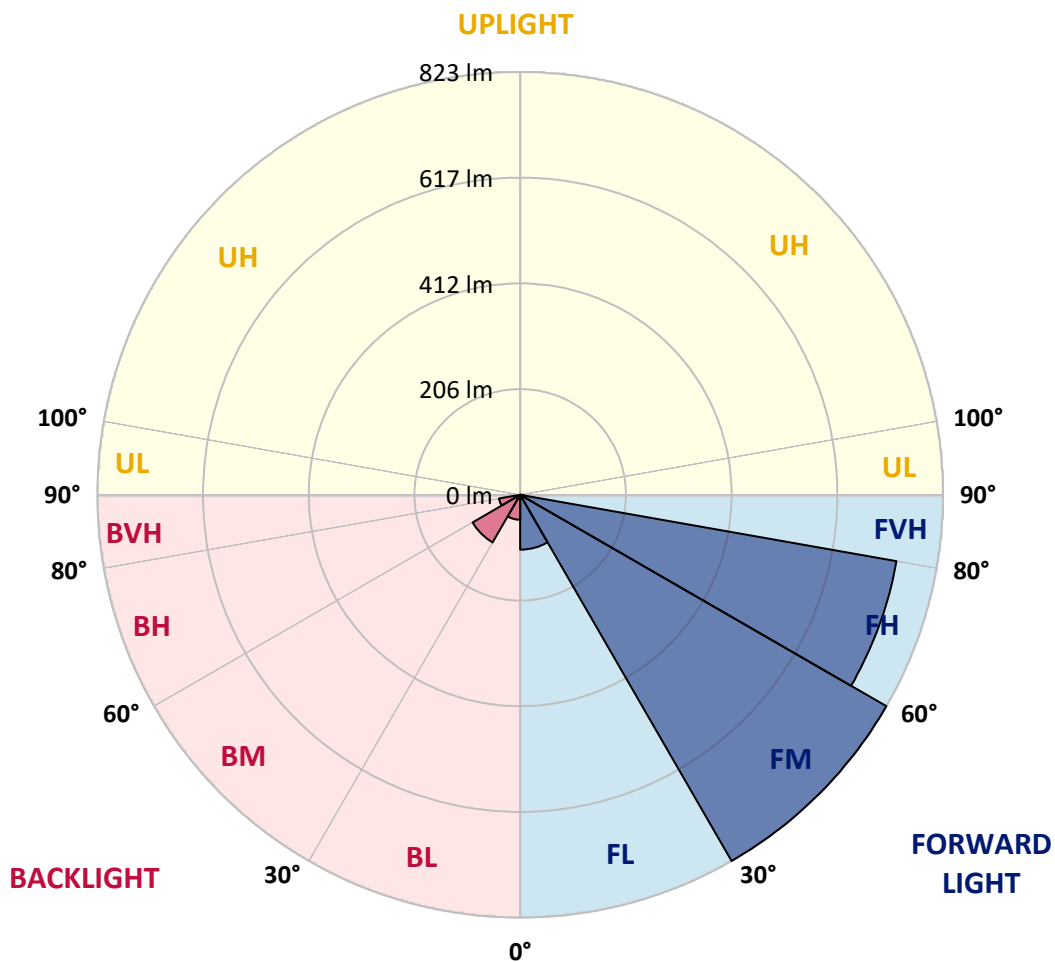
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	106.7	5.7			
FM	(30°-60°)	823.3	43.8			
FH	(60°-80°)	743.9	39.6			G1/1800
FVH	(80°-90°)	6.8	0.4			G0/10
BL	(0°-30°)	48.6	2.6	B0/110		
BM	(30°-60°)	107.0	5.7	B0/220		
BH	(60°-80°)	41.8	2.2	B0/110		G0/110
BVH	(80°-90°)	0.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5
2.5°	183.7	184.5	183.4	182.0	180.5	178.0	178.4	175.1	172.6	170.8	168.0
5°	207.0	206.7	204.5	201.3	198.1	193.4	192.7	187.7	182.3	176.6	171.2
7.5°	230.7	229.6	227.4	223.1	217.1	211.0	209.2	202.0	194.1	185.5	176.2
10°	250.0	249.3	246.8	242.1	235.0	225.6	225.6	215.6	205.2	194.8	183.7
12.5°	265.8	265.0	262.2	256.5	247.9	239.6	238.5	229.6	218.1	205.9	192.3
15°	275.4	274.7	271.5	265.0	257.5	250.0	248.9	240.3	229.9	216.0	200.2
17.5°	277.9	277.2	274.7	269.0	263.3	256.8	255.4	247.9	238.9	224.6	208.5
20°	276.9	275.4	274.0	269.3	264.7	260.4	259.7	254.3	246.4	234.2	217.1
22.5°	274.0	272.6	271.5	268.3	265.8	265.4	264.7	261.5	256.5	246.1	229.9
25°	272.9	271.9	270.8	268.6	268.3	271.9	271.5	271.1	269.0	260.0	243.2
27.5°	279.0	278.7	276.1	272.6	274.4	280.4	280.8	282.6	281.2	275.4	262.5
30°	300.5	298.7	293.0	285.1	289.8	297.6	299.1	304.8	305.2	305.9	288.3
32.5°	329.5	326.7	317.0	307.0	309.8	324.5	324.9	333.8	352.8	341.0	302.3
35°	349.6	346.0	331.3	325.9	340.3	363.5	366.8	385.0	386.5	343.5	301.2
37.5°	405.8	400.4	373.6	341.0	354.9	405.1	408.7	405.4	375.4	339.9	316.6
40°	481.0	476.0	452.0	397.2	357.8	365.3	367.1	376.8	382.5	365.0	366.1
42.5°	578.8	572.4	547.6	480.7	402.6	375.0	378.6	398.3	435.9	444.1	486.4
45°	678.7	675.2	650.1	577.7	484.2	440.9	442.7	466.7	534.0	586.0	621.8
47.5°	776.5	777.2	755.7	694.5	603.2	555.2	553.0	584.2	669.4	706.3	742.8
50°	914.4	913.7	875.4	837.4	766.1	709.2	705.6	723.1	805.2	818.8	875.4
52.5°	1071.3	1070.6	1012.9	995.0	964.9	873.2	882.9	867.8	926.9	951.3	1031.5
55°	1145.8	1139.3	1115.0	1137.6	1173.4	1081.3	1079.9	1022.6	1068.8	1089.6	1164.4
57.5°	1138.3	1140.8	1164.1	1238.9	1356.4	1279.4	1281.5	1175.2	1202.0	1214.9	1269.7
60°	1095.6	1097.4	1151.5	1276.2	1447.7	1434.5	1427.0	1317.7	1300.2	1294.8	1320.9
62.5°	973.9	974.6	1062.3	1222.4	1447.0	1524.0	1516.9	1418.0	1363.2	1328.8	1281.2
64°	841.3	855.0	962.4	1143.3	1408.0	1539.8	1535.8	1442.4	1368.9	1305.9	1208.1
65°	732.5	752.9	882.9	1073.1	1363.9	1534.4	1529.7	1438.1	1361.0	1262.9	1132.5
67.5°	499.6	510.4	627.2	844.6	1195.9	1458.8	1457.4	1382.9	1275.4	1091.0	888.6
70°	294.8	302.7	389.0	589.5	919.1	1253.2	1272.2	1245.4	1058.8	783.7	565.9
72.5°	91.7	96.3	171.6	327.4	602.4	976.4	1001.1	981.7	770.8	489.6	313.8
75°	34.4	35.8	56.6	142.2	299.8	624.3	631.8	654.4	469.6	258.6	137.2
77.5°	19.0	19.3	27.9	53.4	131.8	306.6	313.8	310.9	249.6	122.1	43.7
80°	9.3	9.7	13.6	23.6	51.2	86.7	102.8	135.7	88.1	60.2	14.0
82.5°	3.2	2.9	6.1	10.7	17.2	23.3	26.1	37.6	36.9	33.0	5.0
85°	0.0	0.0	0.4	0.4	0.4	0.7	0.7	4.7	9.3	10.7	1.4
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.7
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°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5
2.5°	166.5	165.8	163.3	160.8	159.0	156.9	156.5	155.1	154.7	154.7	154.7
5°	168.3	166.2	161.5	157.6	154.0	150.8	149.4	147.9	146.8	146.5	146.5
7.5°	172.3	169.1	161.5	155.8	150.4	146.5	144.3	142.9	141.8	141.8	141.8
10°	178.0	173.0	163.7	155.8	149.4	144.3	141.1	139.0	137.5	137.2	137.5
12.5°	185.2	178.7	167.3	157.6	150.1	143.6	136.8	124.3	116.0	111.4	110.7
15°	192.0	184.5	171.2	160.1	151.1	136.8	112.1	92.8	79.9	75.9	75.2
17.5°	199.5	191.6	176.6	163.7	147.2	110.3	79.9	63.8	61.2	62.0	62.0
20°	208.8	199.5	182.3	167.3	126.8	78.4	58.4	56.2	56.9	58.4	58.4
22.5°	219.6	209.5	190.2	165.1	96.7	57.3	53.4	53.7	54.4	55.9	55.9
25°	233.5	223.1	198.8	149.0	67.3	50.1	50.5	50.9	51.9	53.4	53.7
27.5°	254.3	241.8	209.2	125.0	50.9	46.6	46.9	48.0	49.1	50.9	50.9
30°	276.5	261.1	218.5	96.3	44.4	42.6	43.0	44.1	45.8	47.3	48.0
32.5°	286.2	272.6	220.3	65.9	41.2	39.4	38.7	39.8	41.2	42.6	43.0
35°	291.6	285.8	211.7	47.6	38.7	36.5	35.1	34.7	35.1	36.2	36.2
37.5°	318.1	314.1	194.5	40.8	36.2	34.0	31.9	30.1	29.4	29.0	29.4
40°	368.9	360.3	171.9	37.6	34.0	31.5	28.7	25.8	23.3	22.2	22.2
42.5°	481.0	437.7	139.7	35.5	31.9	29.0	24.7	20.8	17.9	17.2	17.2
45°	601.7	533.7	104.9	33.7	29.7	26.1	20.8	16.5	14.0	13.3	13.3
47.5°	717.8	604.6	73.4	31.5	27.2	22.9	17.2	13.3	11.5	11.1	11.1
50°	839.6	666.2	51.2	29.0	24.7	19.7	14.0	10.7	9.7	9.7	9.7
52.5°	958.1	711.7	37.6	26.5	21.5	16.5	11.8	9.7	9.0	9.0	9.0
55°	1047.6	729.2	28.7	23.3	18.3	14.0	10.7	9.3	8.6	8.2	8.2
57.5°	1107.5	714.6	23.3	19.3	15.4	12.2	9.7	8.6	7.9	7.5	7.5
60°	1106.0	665.8	18.6	15.8	12.5	10.4	9.0	7.9	7.2	6.8	6.8
62.5°	1041.2	586.7	14.7	12.5	10.4	9.0	7.9	7.2	6.4	6.1	5.7
64°	977.8	537.6	12.5	10.7	9.3	8.2	7.2	6.4	5.7	5.0	5.0
65°	909.0	491.1	11.5	9.7	8.2	7.5	6.8	6.1	5.0	4.3	4.3
67.5°	691.3	363.5	9.3	7.5	6.4	6.1	5.4	4.7	3.6	2.9	2.9
70°	448.8	235.3	7.9	6.1	5.4	5.4	5.0	3.9	2.9	2.5	2.1
72.5°	229.9	117.1	6.4	5.0	4.7	4.7	4.3	3.2	2.5	2.1	1.8
75°	97.4	47.6	5.4	4.3	3.9	3.6	3.2	2.9	2.1	1.8	1.8
77.5°	34.0	17.9	5.0	4.3	3.2	2.9	2.9	2.9	2.9	2.5	2.1
80°	11.5	6.8	3.2	3.2	3.6	3.9	3.9	3.6	3.9	3.2	2.5
82.5°	4.7	2.5	1.1	1.4	2.5	2.9	3.2	3.2	3.2	2.5	2.1
85°	1.1	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	1.1	0.7	1.1	1.1	1.1
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)