

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: P401231

Luminaire Tested: **ENT-SA1B-830-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401231  
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-830-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 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: 2032 lumens  
Efficiency: N/A  
Efficacy: 80.0 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

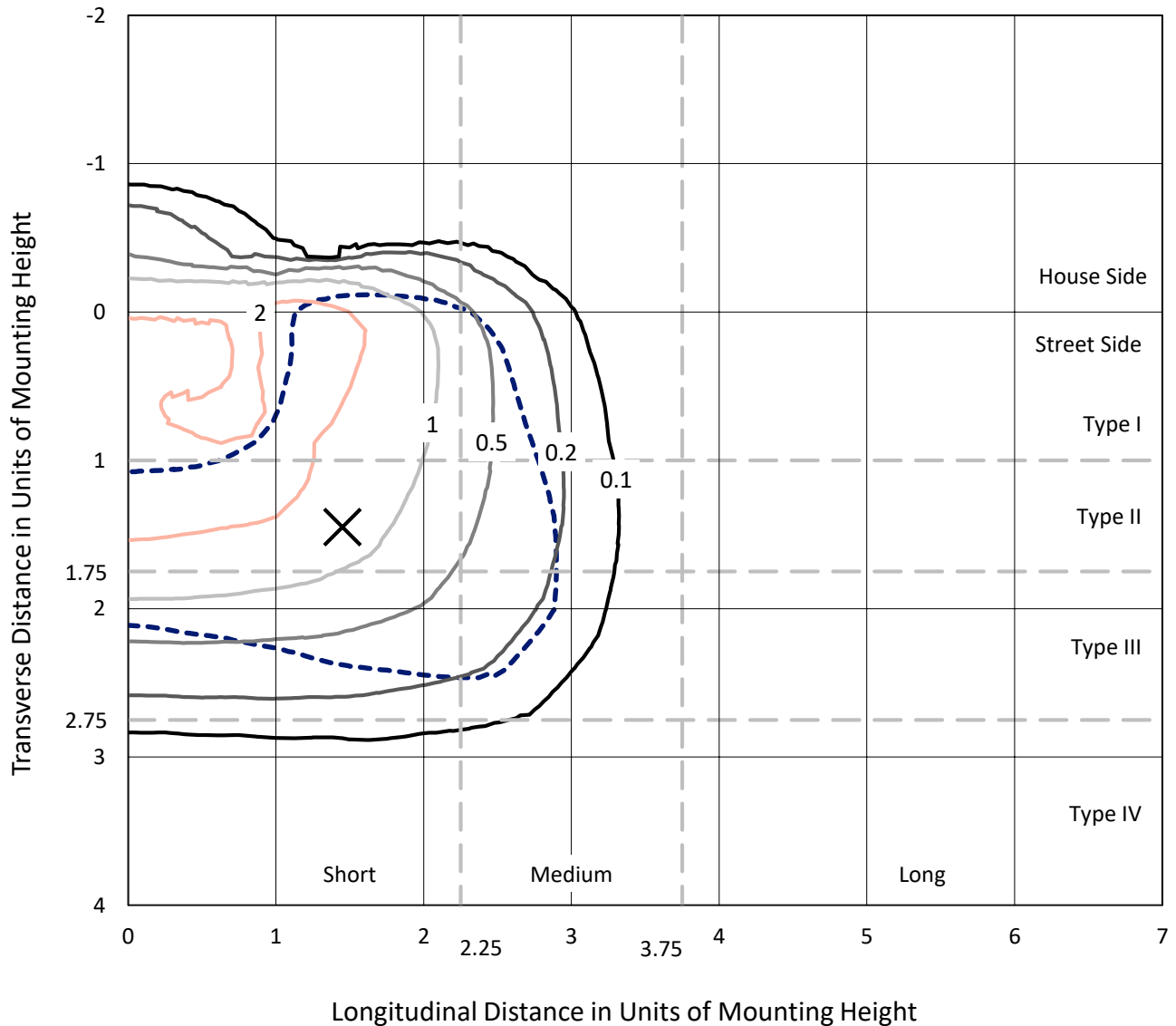
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

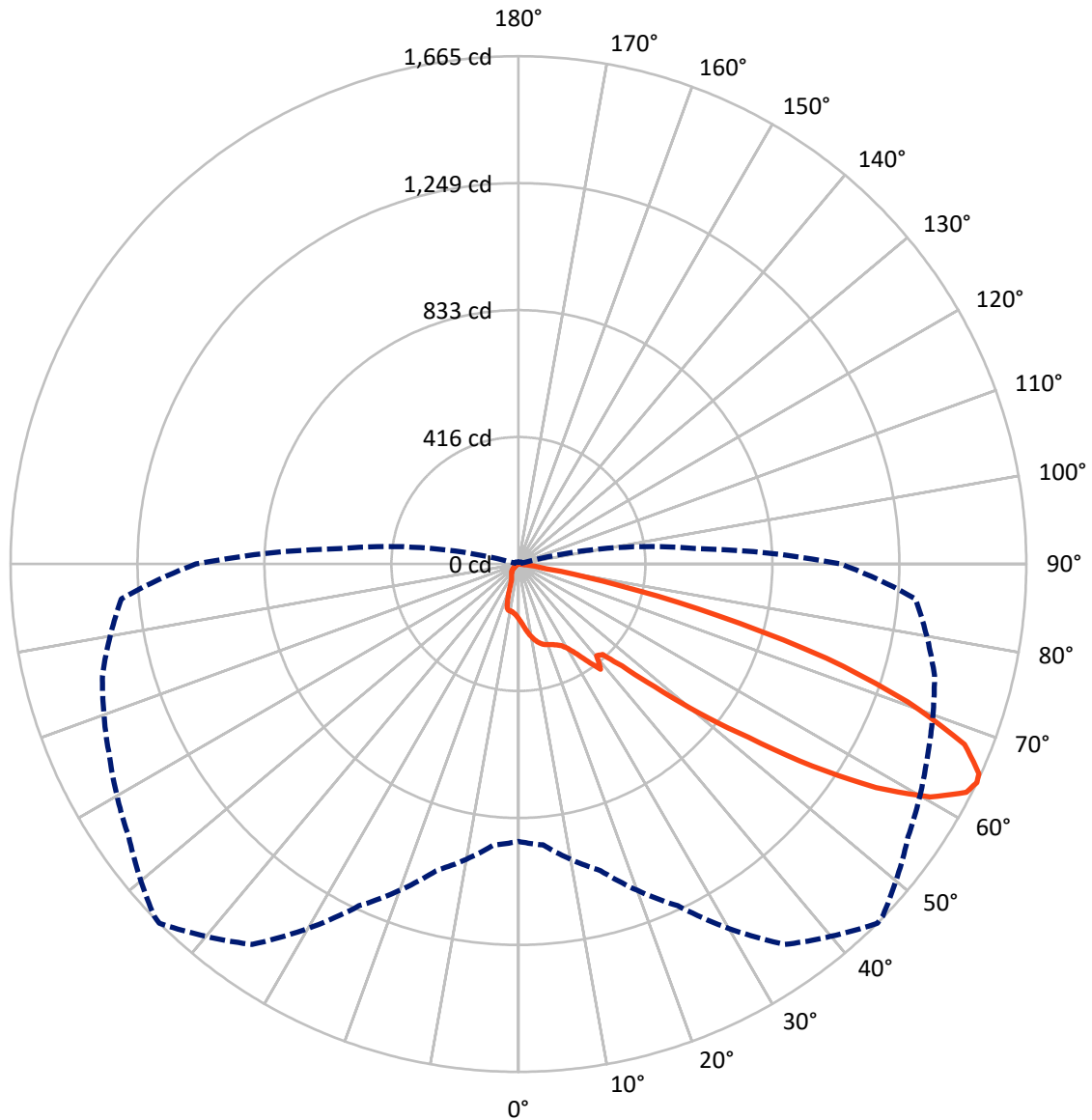
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 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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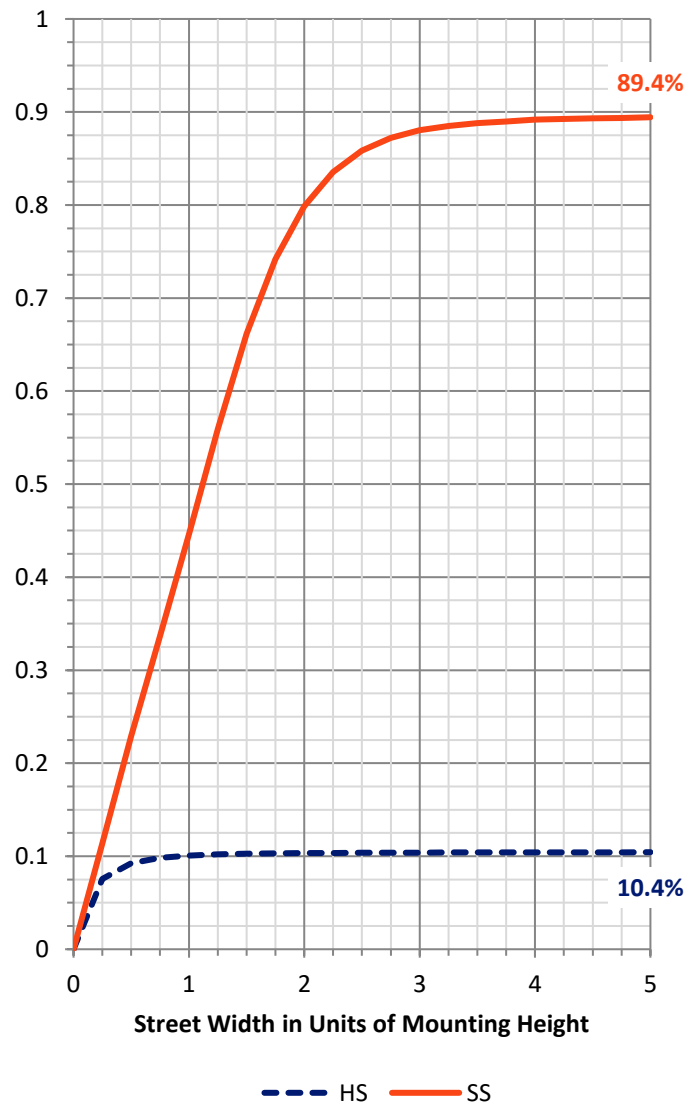
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	214.4	0.0	214.4
	% Fixture	10.6	0.0	10.6
<b>Street Side</b>	Lumens	1817.6	0.0	1817.6
	% Fixture	89.4	0.0	89.4
<b>Total</b>	Lumens	2032.0	0.0	2032.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.3	0.9
10°-20°	57.0	2.8
20°-30°	92.7	4.6
30°-40°	147.3	7.2
40°-50°	280.6	13.8
50°-60°	578.2	28.5
60°-70°	645.7	31.8
70°-80°	204.0	10.0
80°-90°	8.3	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°	2032.0	100.0
0°-180°	2032.0	100.0



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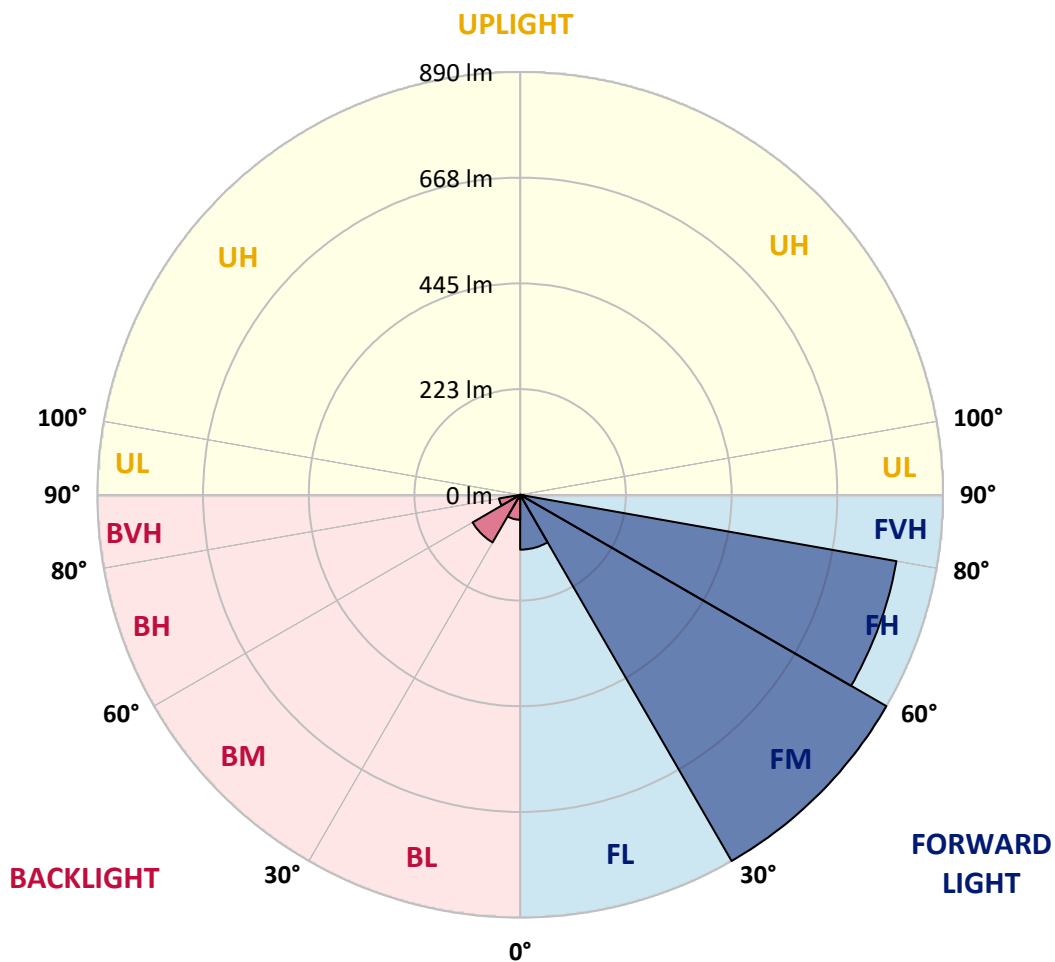
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	115.4	5.7			
FM (30°-60°)	890.3	43.8			
FH (60°-80°)	804.5	39.6			G1/1800
FVH (80°-90°)	7.3	0.4			G0/10
BL (0°-30°)	52.5	2.6	B0/110		
BM (30°-60°)	115.7	5.7	B0/220		
BH (60°-80°)	45.2	2.2	B0/110		G0/110
BVH (80°-90°)	1.0	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°	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1
2.5°	198.7	199.5	198.3	196.8	195.2	192.5	192.9	189.4	186.7	184.8	181.7
5°	223.9	223.5	221.2	217.7	214.2	209.2	208.4	203.0	197.2	191.0	185.1
7.5°	249.4	248.3	246.0	241.3	234.7	228.1	226.2	218.5	209.9	200.6	190.6
10°	270.4	269.6	266.9	261.8	254.1	244.0	244.0	233.2	221.9	210.7	198.7
12.5°	287.4	286.6	283.5	277.3	268.0	259.1	258.0	248.3	235.9	222.7	208.0
15°	297.9	297.1	293.6	286.6	278.5	270.4	269.2	259.9	248.7	233.6	216.5
17.5°	300.6	299.8	297.1	290.9	284.7	277.7	276.2	268.0	258.4	242.9	225.4
20°	299.4	297.9	296.3	291.3	286.2	281.6	280.8	275.0	266.5	253.3	234.7
22.5°	296.3	294.8	293.6	290.1	287.4	287.0	286.2	282.8	277.3	266.1	248.7
25°	295.1	294.0	292.8	290.5	290.1	294.0	293.6	293.2	290.9	281.2	263.0
27.5°	301.7	301.3	298.6	294.8	296.7	303.3	303.7	305.6	304.1	297.9	283.9
30°	325.0	323.0	316.8	308.3	313.4	321.9	323.4	329.6	330.0	330.8	311.8
32.5°	356.3	353.2	342.8	331.9	335.0	350.9	351.3	361.0	381.5	368.7	326.9
35°	378.0	374.2	358.3	352.5	368.0	393.1	396.6	416.4	417.9	371.5	325.7
37.5°	438.9	433.0	404.0	368.7	383.8	438.1	441.9	438.5	405.9	367.6	342.4
40°	520.2	514.8	488.8	429.6	386.9	395.1	397.0	407.5	413.7	394.7	395.9
42.5°	625.9	619.0	592.2	519.8	435.4	405.5	409.4	430.7	471.4	480.3	526.0
45°	734.0	730.1	703.0	624.8	523.7	476.8	478.7	504.7	577.5	633.7	672.4
47.5°	839.7	840.5	817.3	751.0	652.3	600.4	598.0	631.7	723.9	763.8	803.3
50°	988.9	988.1	946.6	905.6	828.5	766.9	763.1	782.0	870.7	885.4	946.6
52.5°	1158.5	1157.7	1095.4	1076.0	1043.5	944.3	954.8	938.5	1002.4	1028.8	1115.5
55°	1239.1	1232.1	1205.8	1230.2	1268.9	1169.4	1167.8	1105.8	1155.8	1178.3	1259.2
57.5°	1231.0	1233.7	1258.8	1339.8	1466.8	1383.6	1385.9	1270.8	1299.9	1313.8	1373.1
60°	1184.9	1186.8	1245.3	1380.1	1565.6	1551.3	1543.1	1425.0	1406.0	1400.2	1428.5
62.5°	1053.2	1053.9	1148.8	1322.0	1564.8	1648.1	1640.4	1533.5	1474.2	1437.0	1385.5
64°	909.9	924.6	1040.8	1236.4	1522.6	1665.2	1660.9	1559.8	1480.4	1412.2	1306.5
65°	792.1	814.2	954.8	1160.5	1475.0	1659.3	1654.3	1555.2	1471.9	1365.7	1224.8
67.5°	540.3	552.0	678.2	913.3	1293.3	1577.6	1576.1	1495.5	1379.3	1179.8	961.0
70°	318.8	327.3	420.6	637.6	993.9	1355.3	1375.8	1346.8	1145.0	847.5	612.0
72.5°	99.2	104.2	185.5	354.0	651.5	1055.9	1082.6	1061.7	833.5	529.5	339.3
75°	37.2	38.7	61.2	153.8	324.2	675.1	683.3	707.7	507.8	279.7	148.3
77.5°	20.5	20.9	30.2	57.7	142.5	331.6	339.3	336.2	270.0	132.1	47.3
80°	10.1	10.5	14.7	25.6	55.4	93.7	111.2	146.8	95.3	65.1	15.1
82.5°	3.5	3.1	6.6	11.6	18.6	25.2	28.3	40.7	39.9	35.6	5.4
85°	0.0	0.0	0.4	0.4	0.4	0.8	0.8	5.0	10.1	11.6	1.5
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8
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°	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1
2.5°	180.1	179.3	176.6	173.9	172.0	169.7	169.3	167.7	167.3	167.3	167.3
5°	182.0	179.7	174.7	170.4	166.6	163.1	161.5	160.0	158.8	158.4	158.4
7.5°	186.3	182.8	174.7	168.5	162.7	158.4	156.1	154.5	153.4	153.4	153.4
10°	192.5	187.1	177.0	168.5	161.5	156.1	152.6	150.3	148.7	148.3	148.7
12.5°	200.3	193.3	180.9	170.4	162.3	155.3	148.0	134.4	125.5	120.5	119.7
15°	207.6	199.5	185.1	173.1	163.5	148.0	121.2	100.3	86.4	82.1	81.3
17.5°	215.7	207.2	191.0	177.0	159.2	119.3	86.4	68.9	66.2	67.0	67.0
20°	225.8	215.7	197.2	180.9	137.1	84.8	63.1	60.8	61.6	63.1	63.1
22.5°	237.4	226.6	205.7	178.6	104.6	62.0	57.7	58.1	58.9	60.4	60.4
25°	252.5	241.3	215.0	161.1	72.8	54.2	54.6	55.0	56.2	57.7	58.1
27.5°	275.0	261.5	226.2	135.2	55.0	50.4	50.7	51.9	53.1	55.0	55.0
30°	299.0	282.4	236.3	104.2	48.0	46.1	46.5	47.6	49.6	51.1	51.9
32.5°	309.5	294.8	238.2	71.3	44.5	42.6	41.8	43.0	44.5	46.1	46.5
35°	315.3	309.1	228.9	51.5	41.8	39.5	38.0	37.6	38.0	39.1	39.1
37.5°	344.0	339.7	210.3	44.2	39.1	36.8	34.5	32.5	31.8	31.4	31.8
40°	399.0	389.7	185.9	40.7	36.8	34.1	31.0	27.9	25.2	24.0	24.0
42.5°	520.2	473.3	151.1	38.3	34.5	31.4	26.7	22.5	19.4	18.6	18.6
45°	650.7	577.1	113.5	36.4	32.1	28.3	22.5	17.8	15.1	14.3	14.3
47.5°	776.2	653.8	79.4	34.1	29.4	24.8	18.6	14.3	12.4	12.0	12.0
50°	907.9	720.4	55.4	31.4	26.7	21.3	15.1	11.6	10.5	10.5	10.5
52.5°	1036.1	769.6	40.7	28.7	23.2	17.8	12.8	10.5	9.7	9.7	9.7
55°	1133.0	788.6	31.0	25.2	19.8	15.1	11.6	10.1	9.3	8.9	8.9
57.5°	1197.6	772.7	25.2	20.9	16.7	13.2	10.5	9.3	8.5	8.1	8.1
60°	1196.1	720.1	20.1	17.0	13.6	11.2	9.7	8.5	7.7	7.4	7.4
62.5°	1126.0	634.5	15.9	13.6	11.2	9.7	8.5	7.7	7.0	6.6	6.2
64°	1057.4	581.4	13.6	11.6	10.1	8.9	7.7	7.0	6.2	5.4	5.4
65°	983.1	531.0	12.4	10.5	8.9	8.1	7.4	6.6	5.4	4.6	4.6
67.5°	747.6	393.1	10.1	8.1	7.0	6.6	5.8	5.0	3.9	3.1	3.1
70°	485.3	254.5	8.5	6.6	5.8	5.8	5.4	4.3	3.1	2.7	2.3
72.5°	248.7	126.7	7.0	5.4	5.0	5.0	4.6	3.5	2.7	2.3	1.9
75°	105.4	51.5	5.8	4.6	4.3	3.9	3.5	3.1	2.3	1.9	1.9
77.5°	36.8	19.4	5.4	4.6	3.5	3.1	3.1	3.1	3.1	2.7	2.3
80°	12.4	7.4	3.5	3.5	3.9	4.3	4.3	3.9	4.3	3.5	2.7
82.5°	5.0	2.7	1.2	1.5	2.7	3.1	3.5	3.5	3.5	2.7	2.3
85°	1.2	0.8	0.8	1.2	1.2	1.5	1.5	1.9	1.9	1.5	1.5
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	1.2	0.8	1.2	1.2	1.2
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)