

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: P401047

Luminaire Tested: **ENV-SA1A-830-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401047
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1A-830-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1669 lumens
Efficiency: N/A
Efficacy: 83.0 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 - 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

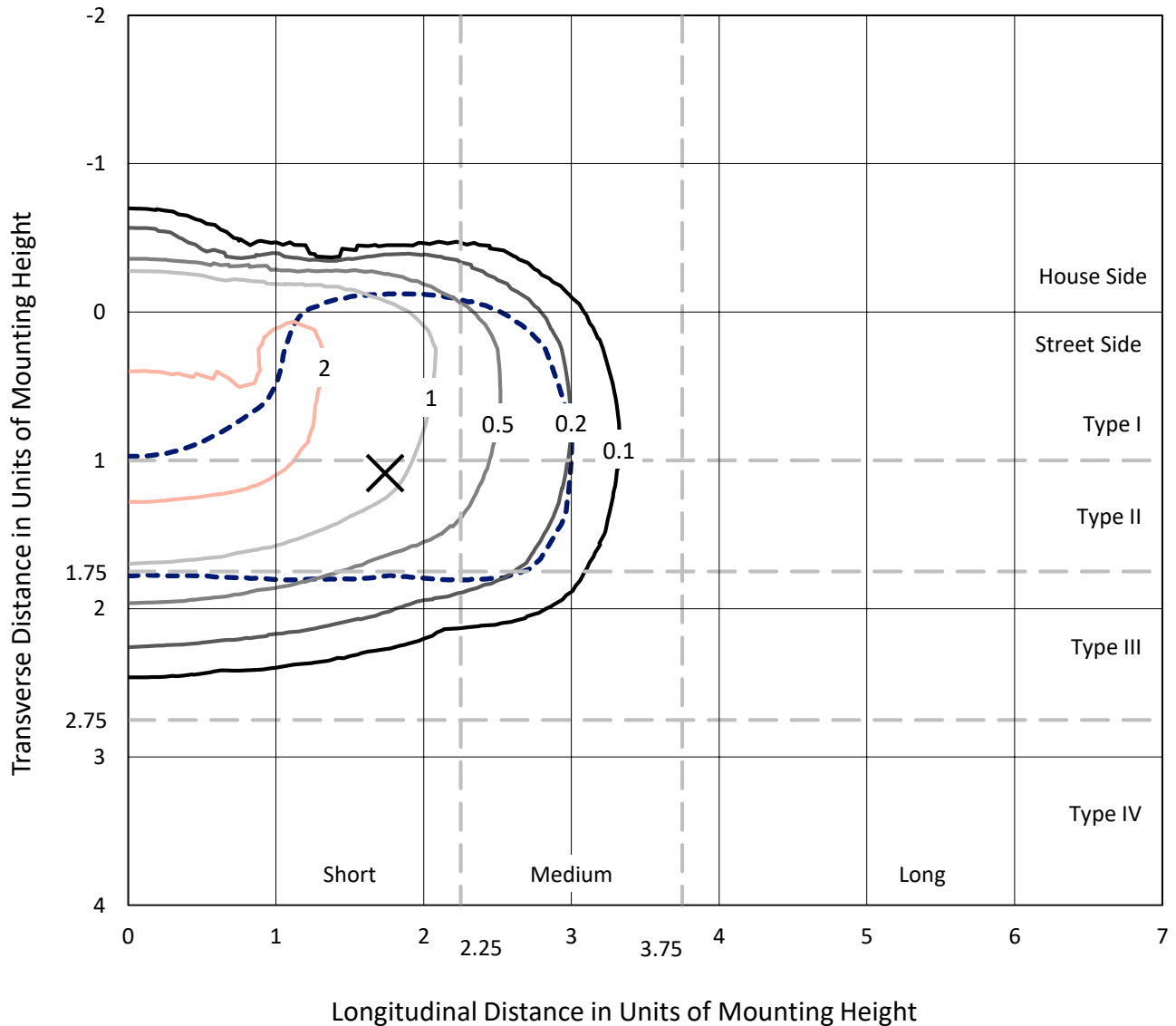


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

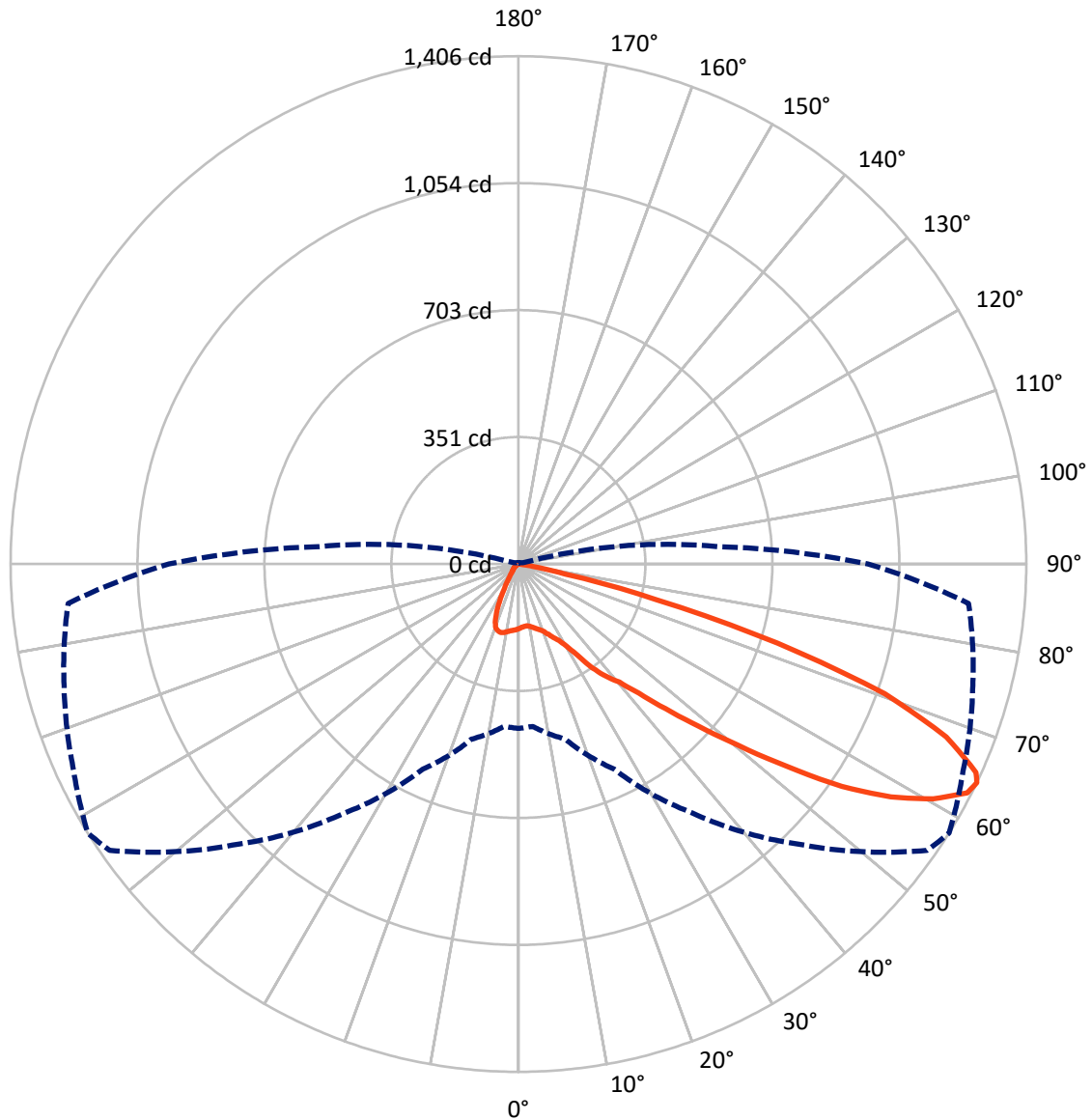


Based on 10 foot mounting height. Maximum calculated value = 2.6 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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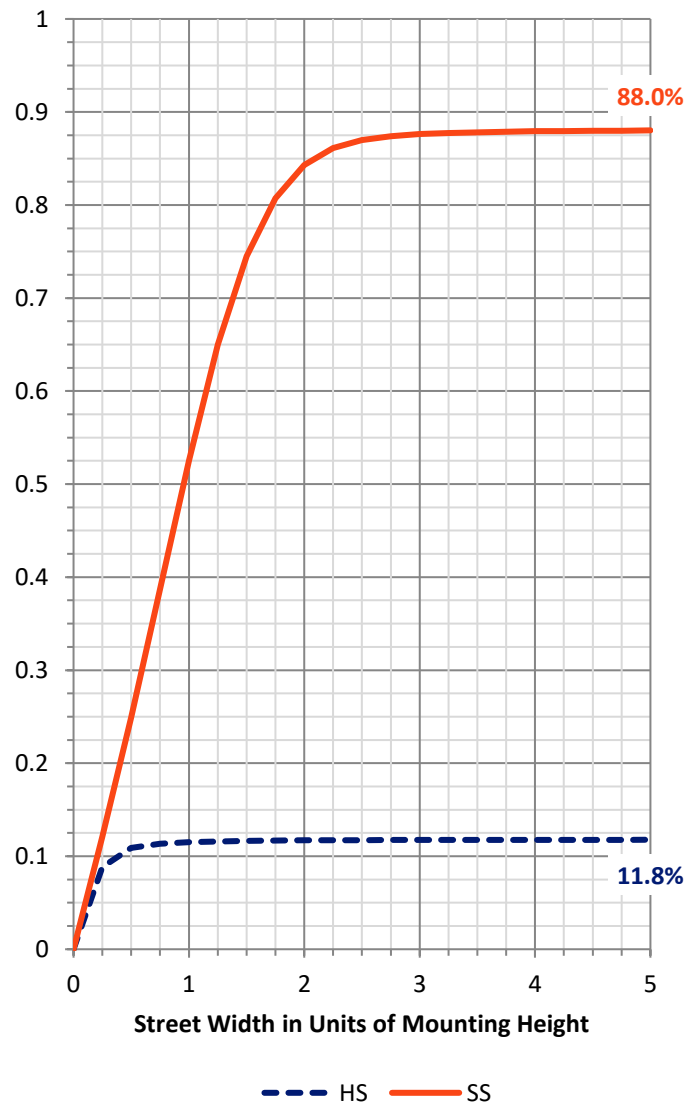
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	199.0	0.0	199.0
	% Fixture	11.9	0.0	11.9
Street Side	Lumens	1470.0	0.0	1470.0
	% Fixture	88.1	0.0	88.1
Total	Lumens	1669.0	0.0	1669.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.9	1.0
10°-20°	49.2	3.0
20°-30°	88.5	5.3
30°-40°	155.1	9.3
40°-50°	283.6	17.0
50°-60°	485.1	29.1
60°-70°	470.6	28.2
70°-80°	116.6	7.0
80°-90°	3.3	0.2
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°	1669.0	100.0
0°-180°	1669.0	100.0



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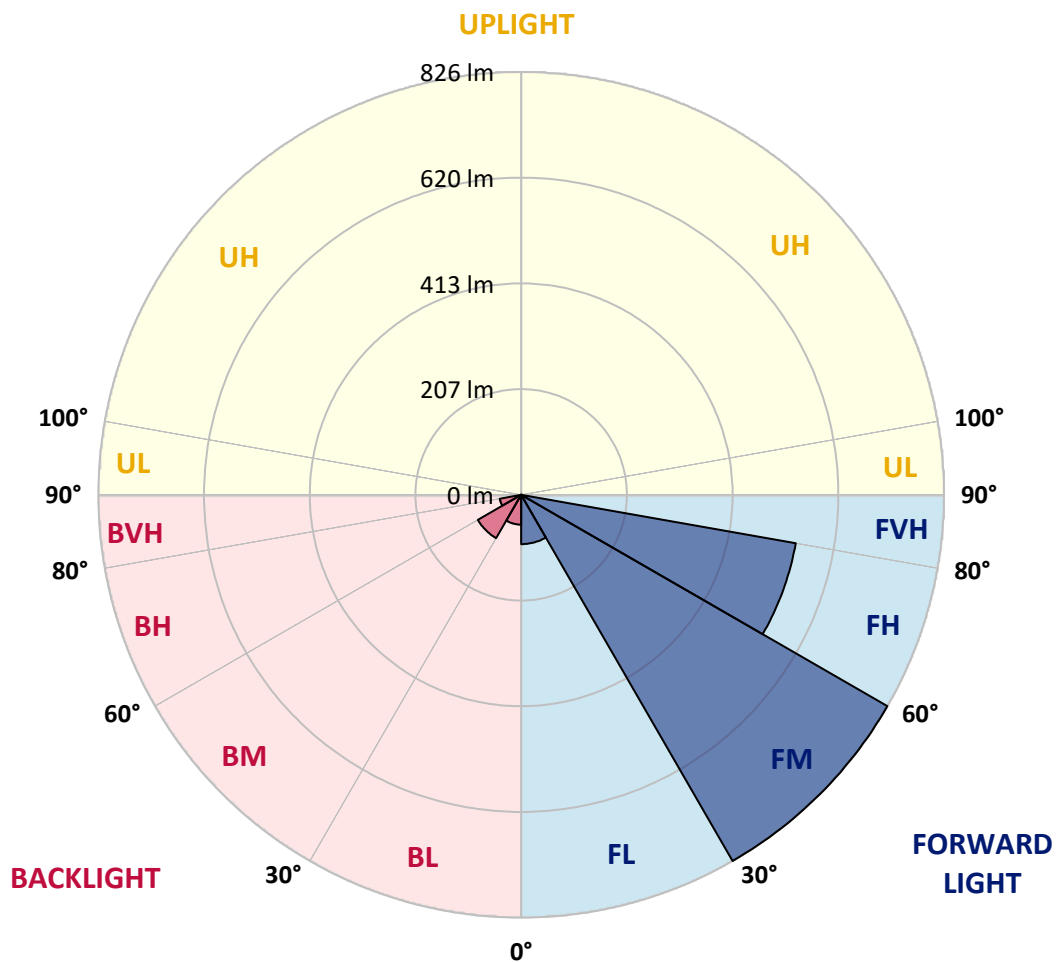
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	96.4	5.8			
FM (30°-60°)	826.1	49.5			
FH (60°-80°)	544.7	32.6			G0/660
FVH (80°-90°)	2.8	0.2			G0/10
BL (0°-30°)	58.3	3.5	B0/110		
BM (30°-60°)	97.7	5.9	B0/220		
BH (60°-80°)	42.5	2.5	B0/110		G0/110
BVH (80°-90°)	0.5	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-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8
2.5°	171.4	171.4	172.0	172.3	173.2	174.1	175.4	175.7	176.3	177.9	178.5
5°	162.1	162.4	163.0	164.6	166.7	169.2	172.3	173.2	175.7	178.8	180.9
7.5°	158.4	158.7	159.6	161.5	164.3	168.0	171.7	172.9	176.3	181.2	184.3
10°	157.8	157.8	159.0	161.8	165.2	169.8	173.8	175.4	180.0	185.9	190.8
12.5°	157.8	157.8	159.3	162.7	166.7	172.6	178.2	180.3	185.6	193.0	199.2
15°	160.6	161.2	162.1	164.3	168.9	175.4	183.1	185.6	192.1	201.0	208.7
17.5°	180.3	179.7	176.6	173.8	172.9	178.5	187.7	191.1	200.7	212.1	220.5
20°	218.6	218.3	212.7	199.2	187.1	184.0	194.8	198.8	212.7	227.9	234.0
22.5°	264.9	266.5	257.8	239.6	214.9	199.2	205.3	210.9	228.8	247.0	250.7
25°	310.9	312.8	304.8	281.9	251.6	224.2	219.8	224.8	245.2	263.4	261.8
27.5°	365.3	363.7	355.7	329.8	294.6	257.8	239.3	240.2	256.0	276.3	271.4
30°	405.1	402.9	395.2	377.6	344.6	302.6	267.1	264.3	268.9	291.5	286.2
32.5°	441.5	443.1	437.2	413.8	382.6	348.6	308.8	301.4	299.5	318.7	310.0
35°	477.7	477.4	475.2	454.5	423.9	391.8	358.5	353.2	352.6	371.1	347.7
37.5°	520.9	518.7	514.7	493.7	469.3	438.8	403.3	394.9	393.4	397.1	369.6
40°	567.2	570.0	563.5	541.6	515.0	492.2	442.5	429.8	419.3	430.1	412.5
42.5°	636.1	638.2	626.8	611.7	577.4	556.1	505.8	488.5	483.5	499.9	480.1
45°	722.5	718.5	710.8	700.3	671.9	639.5	587.0	570.6	565.4	593.5	561.0
47.5°	789.8	789.2	789.5	787.4	783.0	744.1	681.8	670.6	665.4	705.8	670.0
50°	832.4	834.9	845.4	872.3	892.0	875.7	802.5	788.9	784.9	826.9	778.4
52.5°	864.6	870.4	888.0	941.1	1004.4	1010.0	949.5	930.3	921.1	932.8	865.5
55°	880.9	883.7	910.6	989.0	1088.1	1127.9	1102.6	1086.6	1049.2	1027.0	967.7
57.5°	842.6	838.3	884.6	984.4	1131.3	1223.0	1233.8	1215.6	1155.7	1138.4	1091.8
60°	742.3	740.4	792.6	912.4	1093.7	1245.3	1331.1	1319.7	1264.7	1223.7	1179.8
62.5°	566.3	569.4	624.6	746.6	959.3	1181.4	1385.1	1394.4	1336.0	1274.9	1245.0
64°	454.8	451.1	501.8	625.9	841.7	1096.1	1381.1	1405.5	1357.7	1301.8	1250.8
65°	381.9	373.9	422.4	534.8	742.3	1034.4	1352.7	1391.9	1359.2	1308.3	1229.5
67.5°	201.0	205.3	226.0	324.8	501.1	782.1	1218.1	1277.4	1290.7	1219.6	1071.4
70°	90.2	90.8	104.1	165.8	277.3	507.3	979.7	1075.8	1083.2	1002.0	776.2
72.5°	30.0	30.3	46.0	66.4	116.4	235.0	661.7	749.1	765.1	649.7	421.2
75°	18.5	19.1	24.4	35.8	54.0	82.1	335.3	394.6	398.0	288.1	153.1
77.5°	11.7	12.4	14.8	21.3	29.6	31.2	109.9	133.1	150.7	103.7	47.6
80°	7.4	7.4	9.6	13.0	15.4	13.3	30.0	39.5	47.6	34.9	16.1
82.5°	2.8	2.8	4.9	7.1	6.5	4.6	8.0	10.5	18.2	17.3	7.7
85°	0.0	0.0	0.3	0.6	0.3	0.6	1.5	2.2	3.4	4.9	2.5
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.6	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8	178.8
2.5°	179.4	180.0	181.2	181.6	181.9	180.9	181.9	180.9	181.6	181.6	181.6
5°	182.2	183.1	184.0	184.3	184.0	181.9	182.5	180.9	180.6	180.6	180.6
7.5°	185.9	186.8	188.3	187.4	185.6	182.5	182.2	180.0	179.1	179.1	179.4
10°	192.7	193.6	194.2	192.4	188.7	184.0	180.6	176.0	173.8	172.9	172.9
12.5°	201.3	202.2	201.9	198.8	192.1	182.5	172.9	164.0	157.5	155.0	152.5
15°	210.6	211.8	211.2	204.7	191.7	174.8	156.2	135.2	122.3	113.9	112.4
17.5°	221.4	222.6	219.5	207.8	187.1	158.4	123.2	94.8	76.0	68.9	68.5
20°	234.7	234.0	226.6	208.1	178.8	128.1	82.4	59.3	51.3	49.4	49.1
22.5°	249.8	247.0	233.4	206.3	155.9	87.1	53.1	46.9	46.0	45.4	45.4
25°	258.4	253.5	235.9	201.0	120.1	55.6	45.1	43.8	42.6	41.4	41.1
27.5°	265.2	257.8	236.8	183.7	80.0	42.6	40.8	39.5	37.7	35.8	35.5
30°	277.6	266.5	238.4	153.5	49.1	36.4	35.5	33.3	30.6	28.7	28.1
32.5°	299.8	283.8	244.5	114.9	35.8	32.1	29.6	26.9	23.8	21.9	21.9
35°	323.6	300.1	247.6	75.6	31.2	28.1	24.4	21.0	18.2	16.7	16.4
37.5°	345.5	323.6	246.7	46.3	27.8	24.1	20.1	16.7	14.2	13.0	13.0
40°	390.3	364.7	234.0	31.8	24.4	20.4	16.4	13.0	11.4	10.5	10.5
42.5°	454.2	409.7	205.9	27.2	21.3	17.0	13.0	10.8	9.6	8.6	8.6
45°	525.8	459.4	164.3	24.4	18.5	14.2	10.8	9.0	7.7	7.4	7.4
47.5°	619.7	519.7	120.7	21.9	16.1	12.0	9.0	7.4	6.8	6.5	6.5
50°	701.8	568.4	82.4	19.1	14.2	10.2	7.7	6.8	6.2	5.9	5.9
52.5°	776.6	602.4	54.3	16.7	12.7	8.3	7.1	6.2	5.9	5.6	5.6
55°	864.6	628.3	36.7	14.5	11.1	7.7	6.8	6.2	5.6	5.6	5.2
57.5°	939.3	643.8	26.2	12.4	9.9	7.1	6.5	5.9	5.2	4.9	4.9
60°	982.8	625.6	19.1	10.8	8.6	6.5	5.9	5.2	4.9	4.6	4.6
62.5°	994.9	590.4	14.8	9.3	7.4	5.9	5.2	4.6	4.3	4.0	4.0
64°	967.1	552.7	12.7	8.0	6.5	5.2	4.9	4.3	3.7	3.1	3.1
65°	927.9	517.8	11.4	7.4	5.9	4.9	4.6	4.0	3.1	2.5	2.5
67.5°	773.2	412.8	9.3	6.2	4.6	4.3	3.7	3.1	2.2	1.5	1.5
70°	549.0	288.7	7.1	4.9	4.0	4.0	3.4	2.5	1.2	0.6	0.6
72.5°	290.6	150.1	5.9	4.0	3.1	3.1	2.8	1.5	0.9	0.6	0.3
75°	101.6	49.4	4.9	3.4	2.8	2.2	1.9	1.2	0.9	0.6	0.3
77.5°	30.9	16.4	4.3	3.4	2.5	1.9	2.2	1.9	1.9	1.2	0.9
80°	9.9	5.9	2.5	2.2	2.5	2.5	2.2	1.9	2.2	1.5	1.2
82.5°	3.7	2.2	0.9	1.2	1.2	1.5	1.5	1.2	0.9	0.3	0.0
85°	1.2	0.9	0.6	0.9	0.9	0.9	0.6	0.6	0.3	0.0	0.0
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.3	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

(END OF REPORT)