

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: P400905

Luminaire Tested: **ENV-SA1A-727-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400905
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: ENV-SA1A-727-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 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: 1619 lumens
Efficiency: N/A
Efficacy: 80.5 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 - G1

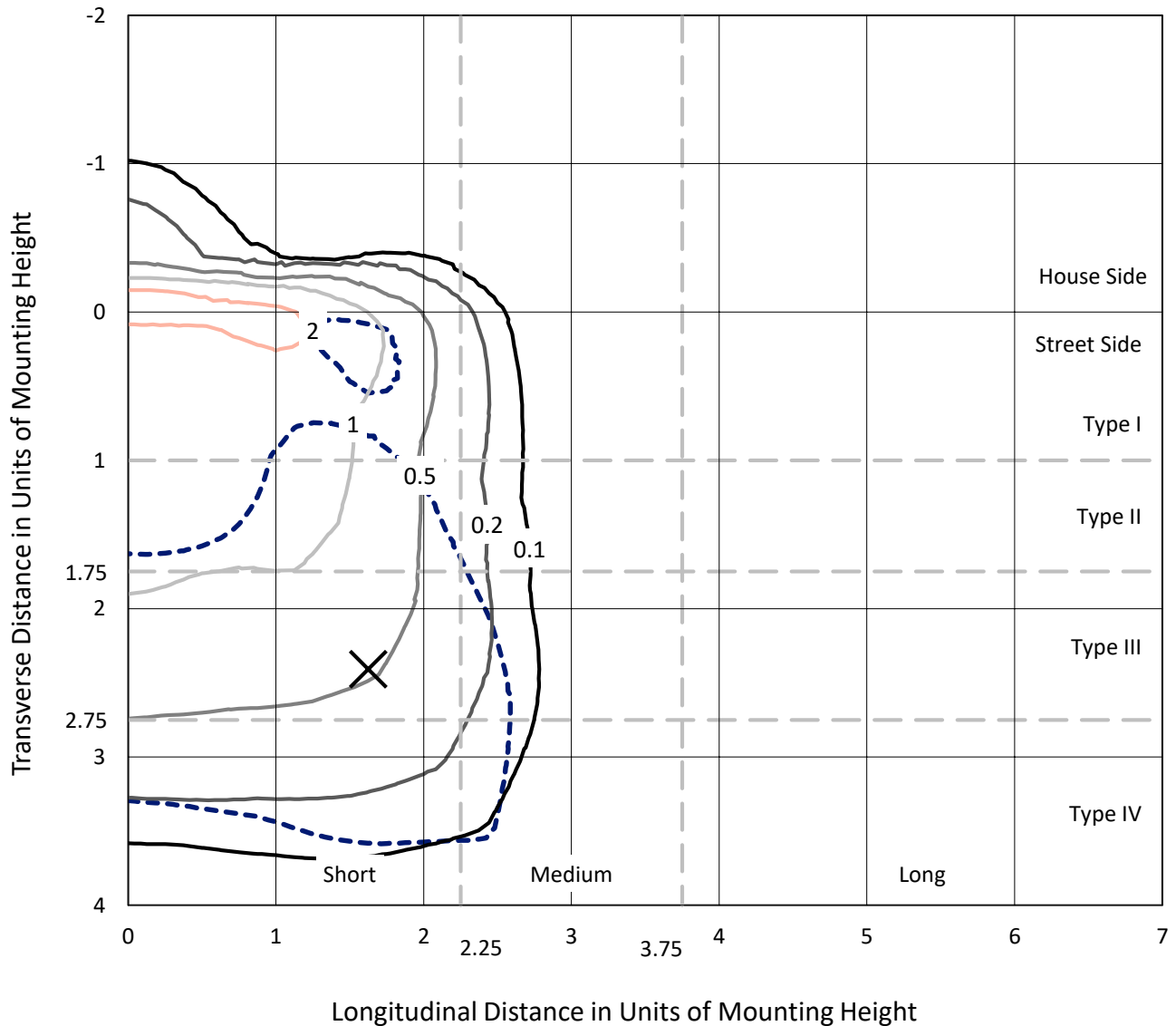
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

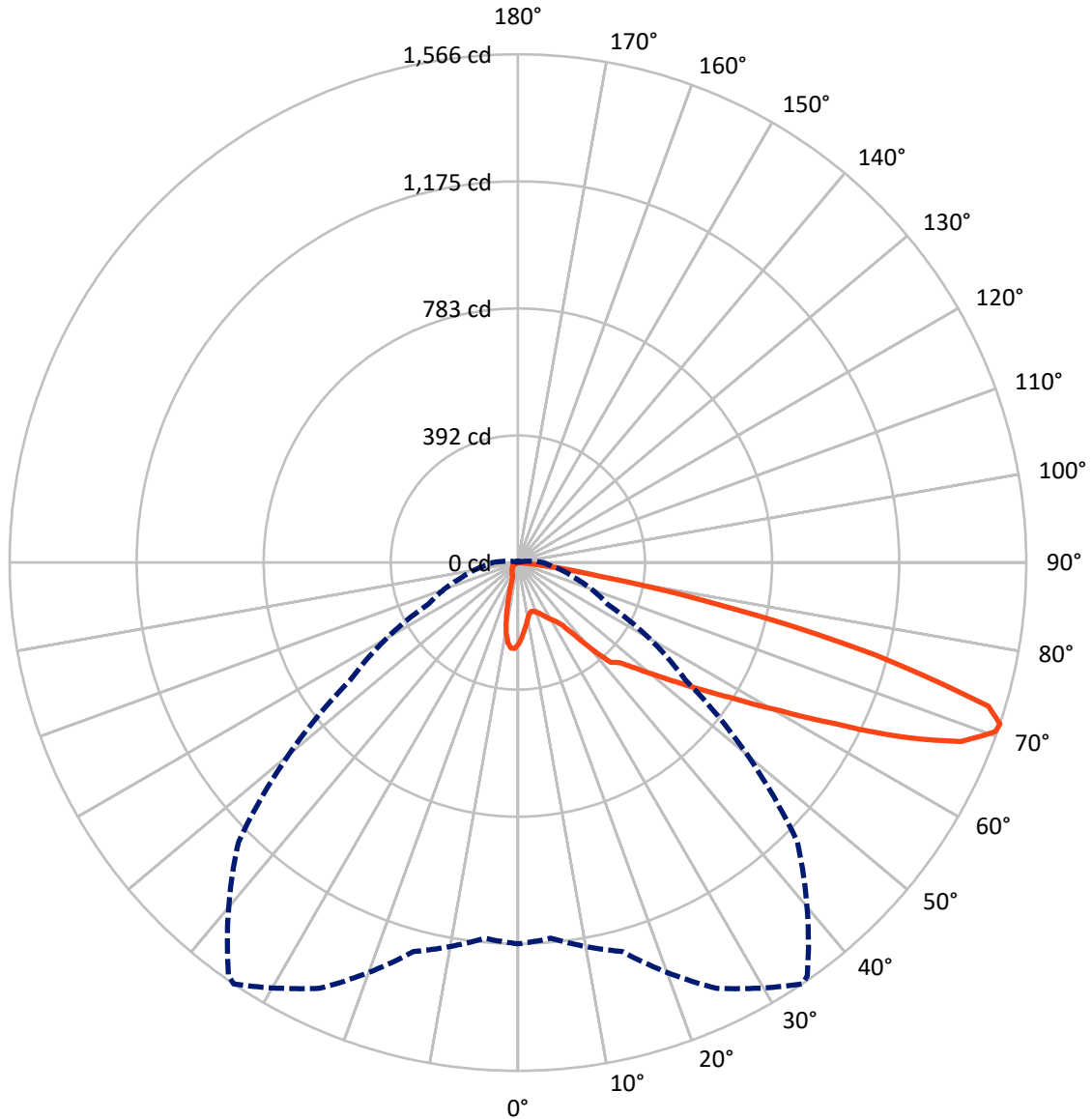
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.5 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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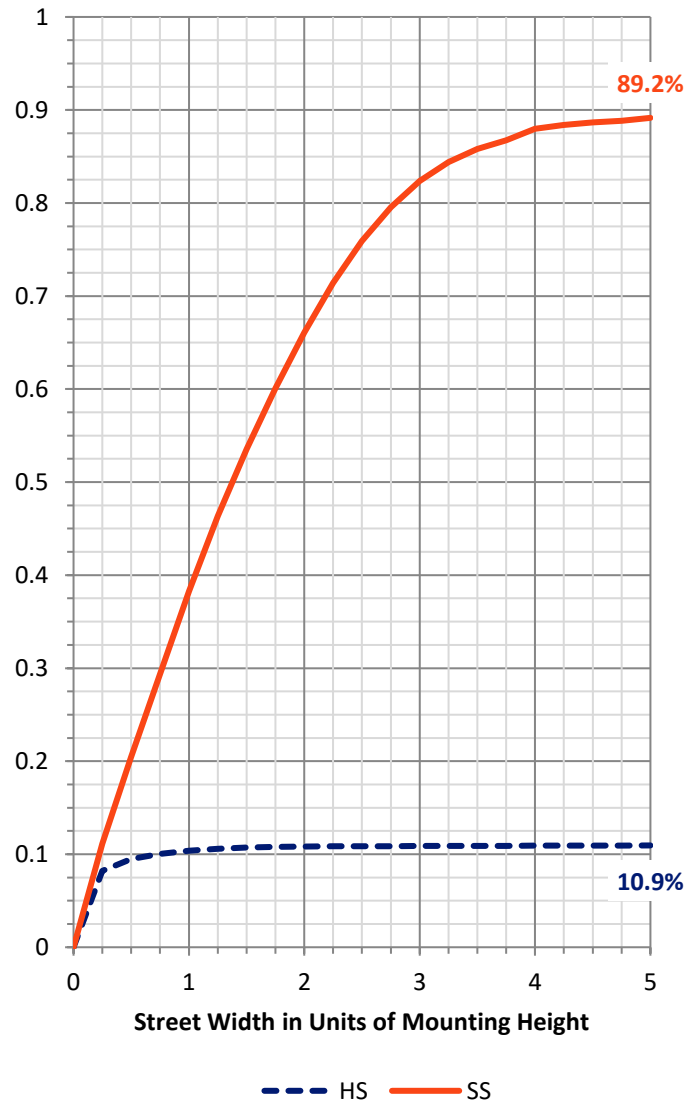
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	179.0	0.0	179.0
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	1440.0	0.0	1440.0
	% Fixture	88.9	0.0	88.9
Total	Lumens	1619.0	0.0	1619.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.1	1.4
10°-20°	50.7	3.1
20°-30°	75.6	4.7
30°-40°	126.3	7.8
40°-50°	228.1	14.1
50°-60°	362.0	22.4
60°-70°	486.5	30.0
70°-80°	258.1	15.9
80°-90°	9.5	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°	1619.0	100.0
0°-180°	1619.0	100.0



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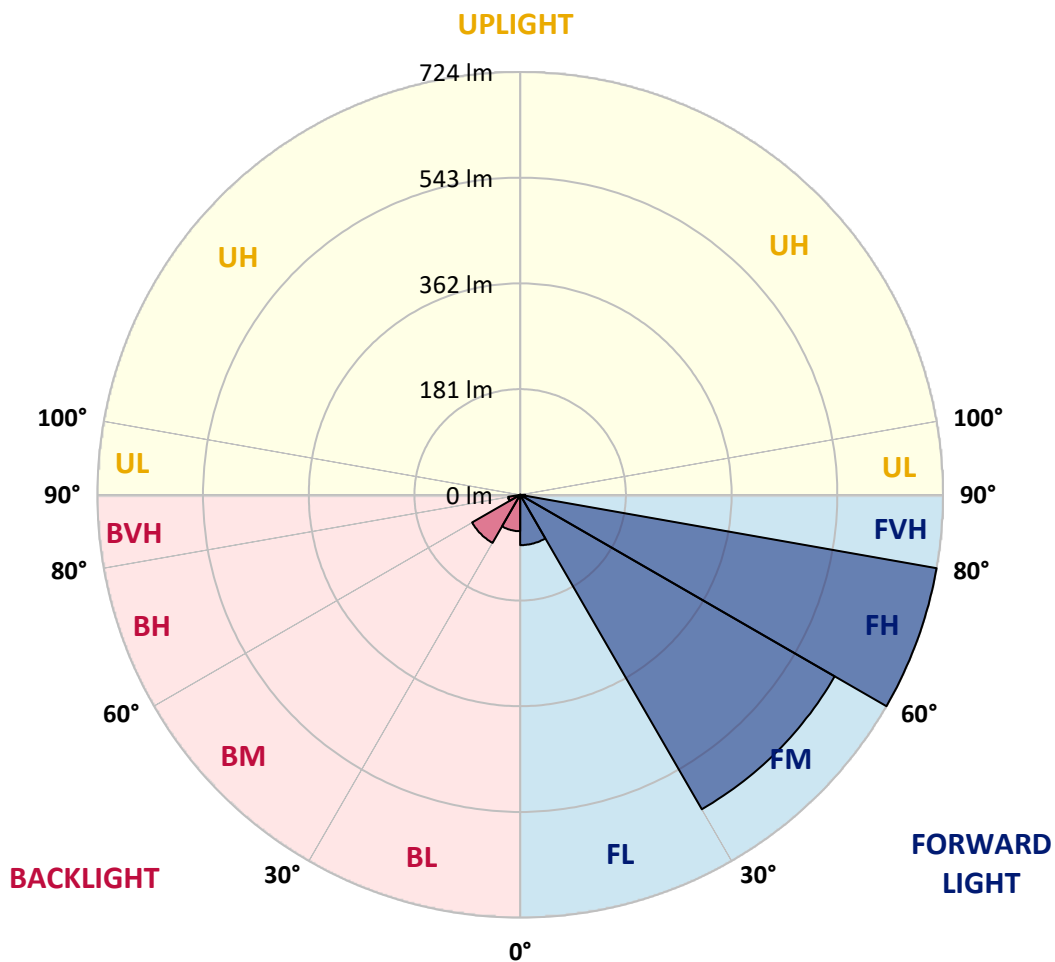
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	86.2	5.3			
FM	(30°-60°)	621.5	38.4			
FH	(60°-80°)	723.7	44.7			G1/1800
FVH	(80°-90°)	8.7	0.5			G0/10
BL	(0°-30°)	62.3	3.8	B0/110		
BM	(30°-60°)	95.0	5.9	B0/220		
BH	(60°-80°)	20.9	1.3	B0/110		G0/110
BVH	(80°-90°)	0.9	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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9
2.5°	228.4	225.5	228.1	229.4	230.4	231.7	233.6	237.2	241.1	245.7	248.3
5°	199.2	200.8	201.8	205.4	208.9	209.6	215.8	222.9	232.0	241.1	248.9
7.5°	175.5	175.5	178.4	183.9	189.8	190.4	201.1	210.6	223.6	237.5	250.2
10°	156.6	157.3	159.5	165.1	172.5	174.2	186.2	199.2	215.4	233.6	251.5
12.5°	150.4	150.1	149.8	153.7	159.9	161.5	174.8	190.4	209.6	231.7	254.8
15°	154.3	153.4	151.1	151.7	155.6	157.3	169.0	184.6	206.0	231.4	260.3
17.5°	160.5	159.2	155.0	153.7	157.9	159.5	169.3	182.9	204.7	233.0	266.8
20°	168.0	166.7	160.2	158.6	162.8	164.1	174.2	185.9	205.4	236.2	275.6
22.5°	178.7	177.1	167.7	165.7	169.9	171.2	182.0	192.7	209.3	242.1	287.6
25°	191.7	189.8	177.7	175.1	180.3	181.6	192.4	202.4	215.8	249.9	302.8
27.5°	206.0	203.7	191.1	185.9	191.7	193.7	203.7	214.8	225.2	259.6	323.0
30°	219.0	216.4	204.1	198.2	204.1	205.0	217.1	229.4	240.5	276.2	352.6
32.5°	255.1	248.6	229.4	212.5	216.4	218.4	233.0	252.5	269.1	296.0	390.6
35°	309.0	303.8	280.4	251.2	237.5	238.2	257.0	281.7	289.2	319.1	437.7
37.5°	361.0	356.5	336.0	309.0	283.0	284.0	287.2	311.0	319.7	359.1	495.2
40°	417.9	410.7	394.5	368.8	350.9	346.7	330.8	347.4	366.5	409.4	557.9
42.5°	444.2	437.4	420.5	422.1	420.2	412.7	381.2	404.2	425.7	482.5	627.1
45°	487.7	474.4	439.6	442.2	439.6	440.3	448.1	481.6	500.1	559.9	705.4
47.5°	528.0	512.8	476.4	473.8	485.1	491.0	532.9	573.5	575.1	627.1	766.9
50°	564.7	553.7	520.2	520.6	541.4	547.9	631.7	668.7	635.9	678.8	815.0
52.5°	613.5	597.9	568.0	578.7	611.2	617.1	730.1	752.2	679.8	725.6	852.6
55°	658.7	650.2	628.1	644.0	693.8	709.0	830.2	816.6	710.6	767.2	870.8
57.5°	732.7	724.6	718.8	726.9	793.5	812.7	931.6	862.1	734.7	794.8	862.4
60°	856.2	848.1	830.6	838.0	924.8	934.5	1011.2	908.2	744.1	802.6	829.3
62.5°	1008.6	998.5	970.3	1004.7	1091.8	1091.5	1093.8	932.6	732.1	779.5	741.8
65°	1146.1	1132.1	1117.5	1187.7	1293.6	1279.0	1181.5	935.5	694.1	668.1	573.8
67.5°	1246.2	1240.6	1248.8	1358.3	1472.3	1457.7	1266.6	895.2	577.7	482.2	354.5
70°	1242.3	1230.9	1282.5	1457.4	1561.0	1549.0	1263.1	735.7	385.4	255.4	148.5
71°	1175.0	1162.0	1240.6	1447.6	1566.2	1554.8	1217.6	629.4	304.8	180.3	97.8
72.5°	907.9	947.2	1072.3	1343.3	1516.2	1501.6	1093.8	481.9	193.0	104.3	49.1
75°	384.1	405.5	636.6	958.9	1137.3	1129.8	737.3	222.6	88.7	47.1	18.8
77.5°	98.8	97.5	195.0	411.4	662.2	673.9	339.9	76.4	46.1	33.5	10.7
80°	19.2	20.8	55.6	143.0	252.8	259.6	110.8	33.5	30.9	26.3	5.5
82.5°	1.9	2.3	9.7	44.2	84.8	81.9	24.4	12.7	18.8	17.9	2.6
85°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	1.3	4.5	4.9	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°	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9	250.9
2.5°	250.2	253.1	256.4	258.7	260.9	261.3	264.5	263.9	264.8	265.2	264.8
5°	253.1	257.0	263.2	266.5	267.8	265.5	264.8	261.3	260.0	258.3	256.7
7.5°	256.4	261.3	268.4	270.0	265.5	257.0	250.2	241.4	233.3	228.1	228.8
10°	260.0	266.1	272.0	267.8	256.1	239.5	220.3	200.8	183.6	177.1	179.4
12.5°	264.5	272.0	274.6	262.9	240.1	206.7	171.9	142.3	124.5	113.7	112.4
15°	271.3	278.8	275.9	255.1	214.8	162.5	119.3	89.4	72.1	66.6	63.7
17.5°	279.8	286.9	275.9	241.1	178.7	116.3	72.5	54.3	48.7	47.4	47.8
20°	290.2	297.0	274.6	220.0	137.8	71.5	48.4	44.8	44.8	44.8	44.5
22.5°	304.1	307.7	272.6	192.0	94.9	48.4	42.9	42.6	42.9	42.9	42.9
25°	321.0	320.4	269.1	158.6	59.8	41.3	40.9	40.9	41.3	41.6	41.6
27.5°	343.5	336.6	262.9	118.6	42.2	38.3	39.0	39.6	40.3	40.9	40.9
30°	374.7	358.1	252.8	80.3	35.7	35.4	36.7	38.7	39.6	40.3	40.3
32.5°	408.1	380.2	235.6	51.3	32.8	32.5	33.8	36.7	39.3	40.0	40.0
35°	450.4	403.9	209.9	37.0	30.9	30.2	31.5	34.1	38.0	40.0	40.0
37.5°	494.9	429.2	172.5	31.2	28.9	28.3	29.2	31.2	35.7	39.3	39.6
40°	542.3	451.7	129.7	28.9	27.0	26.6	27.0	28.9	32.5	37.4	38.3
42.5°	590.1	470.5	90.7	26.6	25.3	24.7	25.3	26.6	29.9	34.1	34.8
45°	642.7	491.3	60.4	24.7	24.0	23.4	24.0	25.0	27.3	29.6	29.9
47.5°	681.1	498.8	41.6	22.4	22.1	22.4	22.7	23.4	24.7	25.0	24.7
50°	706.4	494.9	29.9	20.1	20.5	21.4	21.4	21.8	21.8	20.8	20.5
52.5°	724.9	480.6	23.1	17.2	19.2	20.1	20.1	19.5	18.8	17.5	17.2
55°	726.9	448.4	18.2	14.9	17.2	18.8	18.5	17.2	15.9	14.6	14.6
57.5°	702.2	399.7	14.9	12.7	14.9	16.6	15.9	14.6	13.0	12.0	12.0
60°	662.2	349.6	12.7	10.7	12.3	14.0	13.0	12.0	10.4	9.4	9.4
62.5°	588.5	300.2	10.4	8.8	10.1	11.0	10.7	9.7	8.1	7.5	7.1
65°	451.0	228.4	7.8	6.8	7.8	9.1	8.4	7.5	6.5	5.5	5.2
67.5°	271.0	137.5	6.2	5.2	6.2	7.1	6.5	5.5	4.5	3.9	3.9
70°	114.7	58.8	4.9	3.9	4.5	5.5	5.2	4.5	3.6	3.2	3.2
71°	78.0	41.9	4.2	3.6	4.2	5.2	4.9	4.2	3.6	3.2	3.2
72.5°	40.0	21.4	3.6	2.9	3.9	4.5	4.5	3.9	3.2	3.2	3.2
75°	14.3	9.1	2.9	2.6	3.2	3.2	3.6	3.6	3.6	3.6	3.2
77.5°	8.1	5.5	2.6	2.6	2.6	2.9	3.6	3.9	4.2	4.2	3.9
80°	4.5	2.9	1.6	1.9	2.6	2.9	3.6	3.9	4.5	4.5	4.2
82.5°	2.3	1.0	0.3	1.0	1.6	2.6	2.9	3.2	3.9	3.6	3.6
85°	0.3	0.0	0.0	0.3	1.0	1.3	1.9	2.6	3.2	3.2	2.9
87.5°	0.0	0.0	0.0	0.0	0.3	0.6	1.0	1.6	2.3	2.6	2.3
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)