

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: P596076

Luminaire Tested: **MSA-SA2A-AMB-U-T4W**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596076
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-AMB-U-T4W
Description: POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE IV WIDE OPTICS.
Light Source: (32) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1776 lumens
Efficiency: N/A
Efficacy: 43.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

Input Watts (W): 41.2
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: 28.75 FT

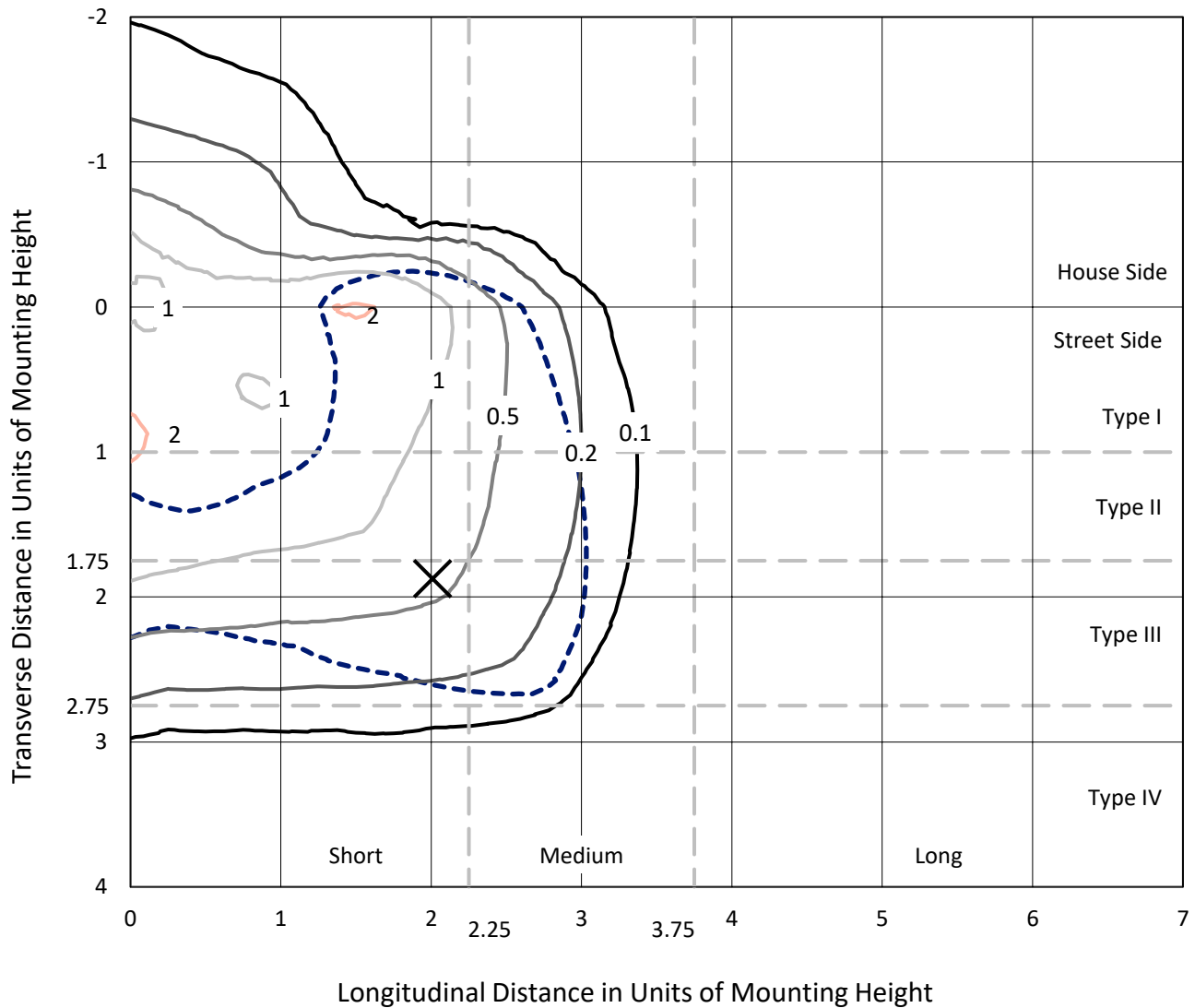


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
--- 1/2 Max cd

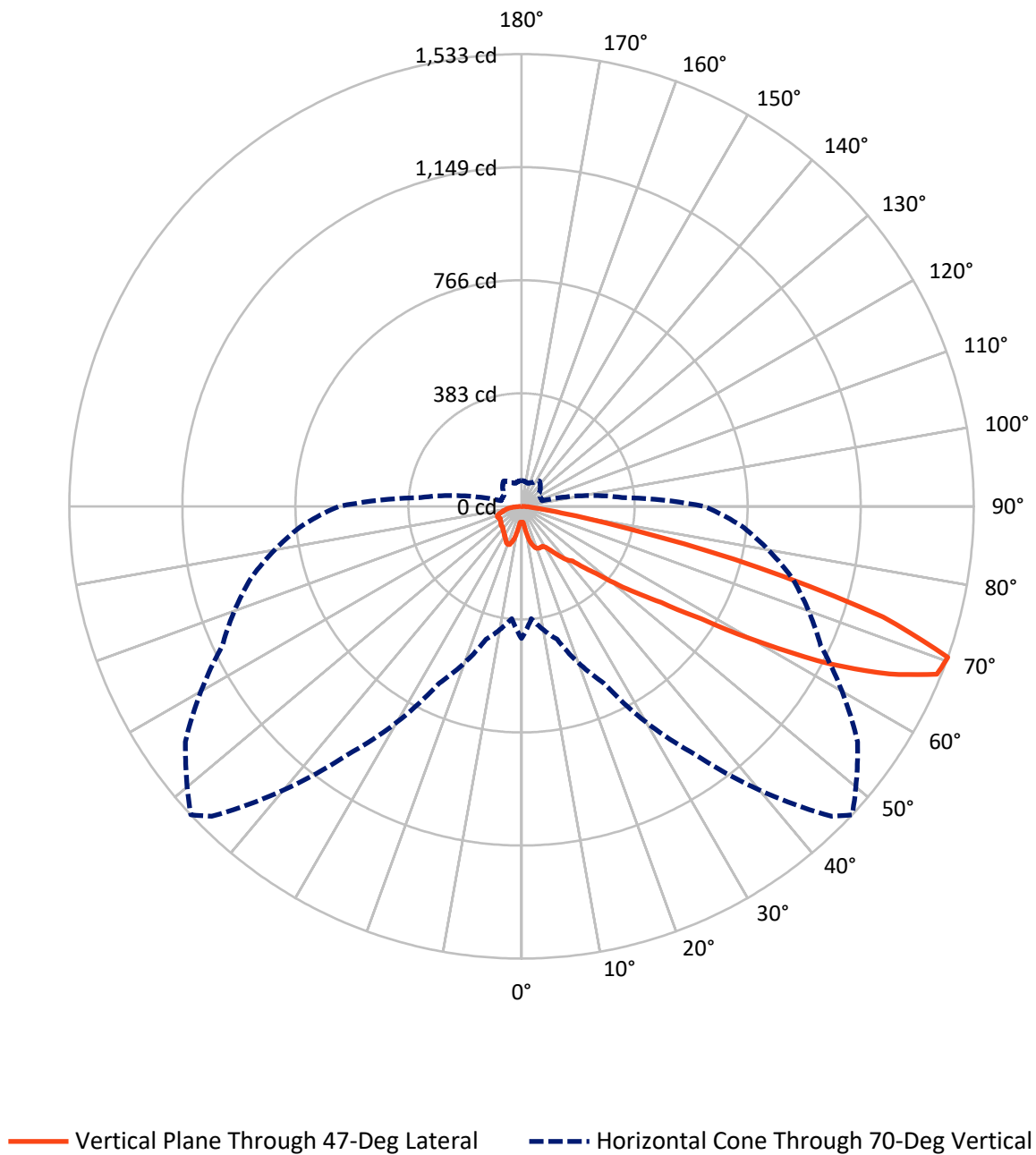


Based on 10 foot mounting height. Maximum calculated value = 2.2 fc
Type III - Short - N/A

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Luminous Intensity Polar Plot



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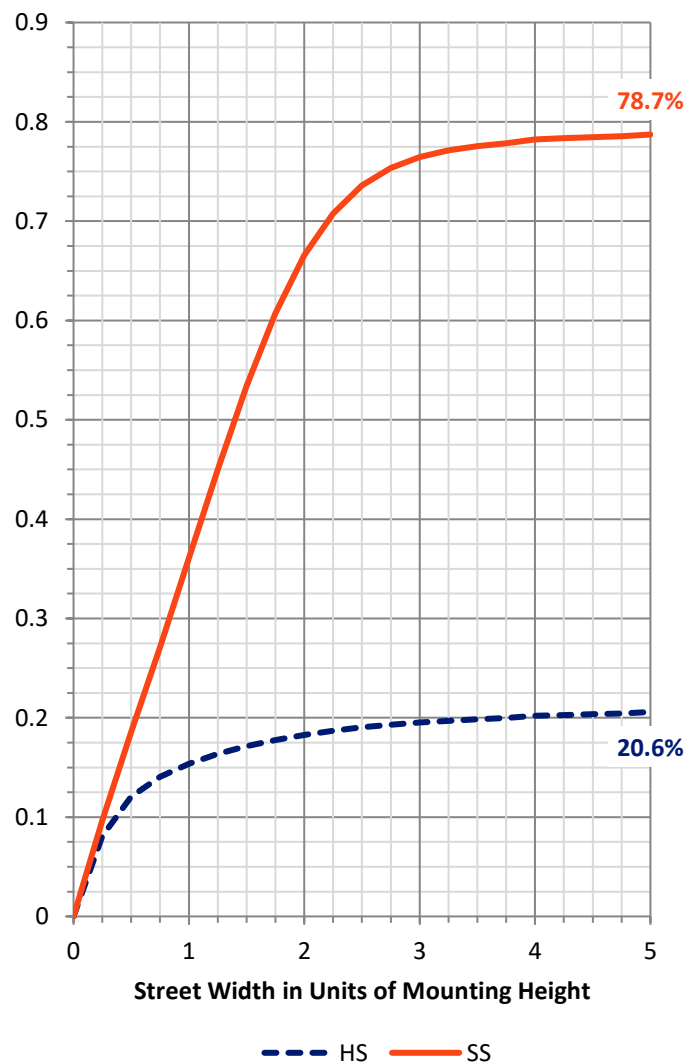
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	372.8	0.0	372.8
	% Fixture	21.0	0.0	21.0
Street Side	Lumens	1403.2	0.0	1403.2
	% Fixture	79.0	0.0	79.0
Total	Lumens	1776.0	0.0	1776.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	7.2	0.4
10°-20°	35.5	2.0
20°-30°	69.4	3.9
30°-40°	118.3	6.7
40°-50°	203.2	11.4
50°-60°	420.4	23.7
60°-70°	626.6	35.3
70°-80°	265.2	14.9
80°-90°	30.1	1.7
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°	1776.0	100.0
0°-180°	1776.0	100.0

Coefficient of Utilization



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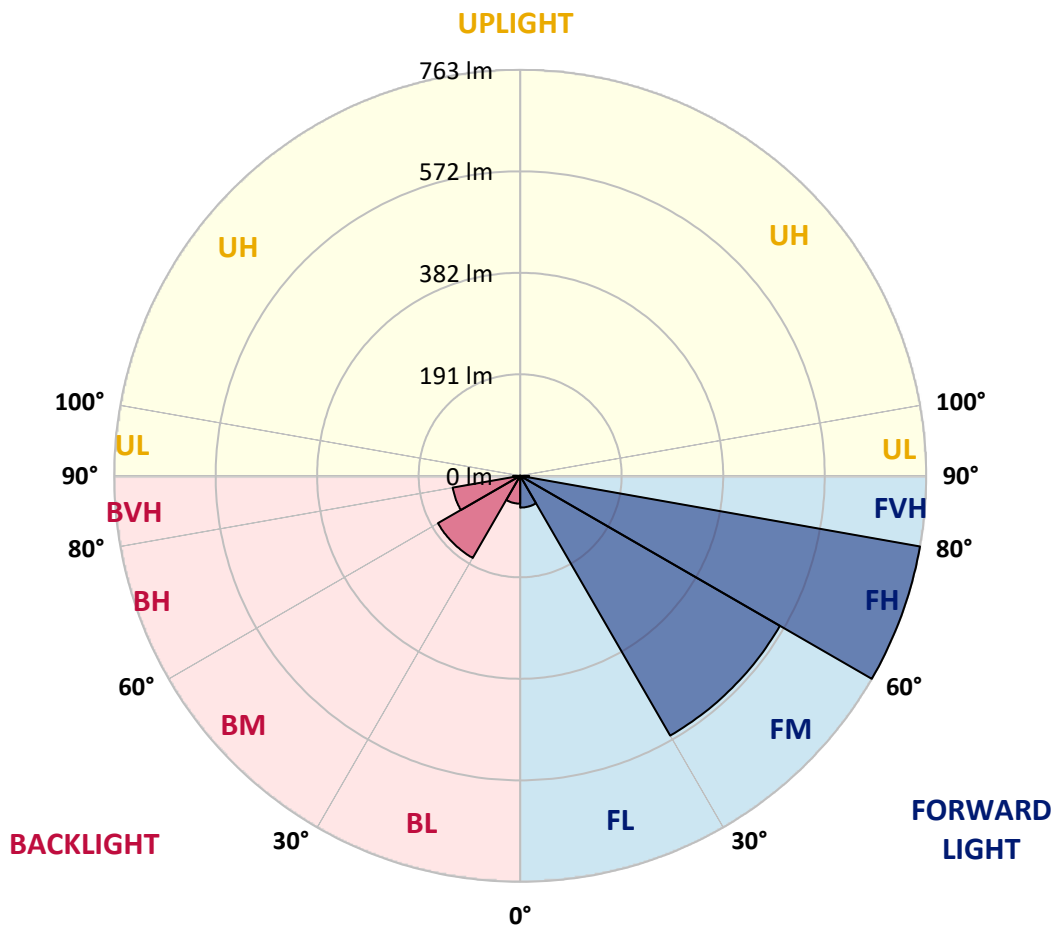
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	59.7	3.4			
FM	(30°-60°)	563.7	31.7			
FH	(60°-80°)	763.0	43.0			G1/1800
FVH	(80°-90°)	16.7	0.9			G1/100
BL	(0°-30°)	52.4	3.0	B0/110		
BM	(30°-60°)	178.3	10.0	B0/220		
BH	(60°-80°)	128.7	7.2	B1/500		G1/500
BVH	(80°-90°)	13.4	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7
2.5°	66.1	59.6	57.8	54.9	54.9	54.9	55.5	54.3	53.1	57.2	59.0
5°	89.7	77.3	79.1	68.4	59.0	56.1	53.7	56.1	62.0	72.6	72.6
7.5°	109.8	101.5	99.7	85.0	73.2	69.6	66.7	69.6	77.3	84.4	85.0
10°	119.2	115.1	108.0	95.0	94.4	94.4	93.8	90.3	88.5	93.8	93.2
12.5°	124.5	123.9	128.0	118.0	119.2	119.8	119.2	116.2	112.1	106.8	102.1
15°	139.9	139.3	136.9	133.4	133.4	137.5	133.9	133.4	127.5	123.3	115.1
17.5°	152.2	152.8	146.3	145.2	146.3	146.9	146.3	144.6	139.9	136.3	131.6
20°	160.5	159.9	152.8	142.8	149.9	152.8	151.7	151.7	145.2	146.9	145.2
22.5°	168.8	164.6	150.5	144.6	147.5	152.8	154.0	152.8	149.3	153.4	159.9
25°	174.7	169.9	157.6	149.3	151.1	155.2	152.8	157.6	159.3	164.6	167.0
27.5°	187.1	184.7	162.3	159.3	155.2	151.7	152.8	161.7	168.8	168.2	181.2
30°	223.1	216.0	184.7	172.9	164.0	157.0	160.5	171.1	180.0	182.9	203.6
32.5°	283.8	279.7	227.2	194.1	178.2	176.4	174.7	177.6	196.5	212.4	224.2
35°	344.6	334.0	284.4	238.4	198.9	189.4	194.7	200.6	225.4	230.1	231.3
37.5°	418.4	401.8	334.0	273.2	241.3	223.1	216.6	234.3	241.3	235.4	250.2
40°	484.5	450.2	393.0	317.5	262.0	250.2	239.6	232.5	240.2	253.7	277.3
42.5°	540.5	520.5	450.2	374.1	298.0	250.8	253.1	234.9	262.6	280.3	308.6
45°	594.2	561.8	497.4	437.8	351.1	296.2	293.3	262.6	297.4	316.9	344.6
47.5°	636.1	598.9	556.5	489.8	403.6	357.0	338.1	303.3	341.7	372.3	408.9
50°	687.4	647.9	598.9	552.3	489.8	434.9	408.3	358.2	399.5	461.4	541.7
52.5°	778.9	733.5	657.9	620.2	587.7	506.9	485.6	443.7	494.5	609.6	760.6
55°	868.0	812.5	744.1	717.5	707.5	597.8	574.2	567.7	678.6	792.5	1008.5
57.5°	942.4	881.6	835.6	822.6	828.5	752.4	720.5	744.1	866.2	982.5	1243.3
60°	983.1	920.5	892.8	918.8	977.8	950.6	944.7	938.8	1043.3	1151.3	1416.2
62.5°	979.5	916.4	922.3	970.1	1097.0	1171.3	1179.0	1135.9	1180.2	1267.5	1465.8
65°	882.2	810.2	871.6	969.5	1192.6	1368.4	1370.2	1305.3	1265.7	1263.4	1347.2
67.5°	659.1	615.5	717.5	868.0	1196.7	1519.5	1518.3	1436.9	1265.1	1154.2	1105.8
70°	447.9	381.8	466.8	661.5	1026.7	1485.2	1532.5	1390.2	1118.8	951.8	746.5
72.5°	199.4	184.7	243.7	394.2	717.0	1211.4	1281.7	1110.0	869.2	647.3	410.7
75°	96.8	90.3	113.9	202.4	391.2	790.7	833.2	727.0	527.5	355.8	182.3
77.5°	54.3	50.2	60.8	92.6	180.6	367.6	390.6	352.3	239.0	155.8	83.8
80°	37.2	34.2	41.3	57.2	98.5	114.5	137.5	154.6	117.4	82.0	50.7
82.5°	21.2	19.5	26.0	36.0	63.7	54.9	57.2	74.9	68.4	53.7	31.3
85°	11.2	10.6	14.8	20.1	33.6	28.3	26.6	35.4	40.7	36.0	18.3
87.5°	3.0	3.0	4.7	6.5	8.3	6.5	7.7	8.9	11.8	11.8	5.9
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°	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7
2.5°	60.8	56.6	57.2	52.5	51.9	54.3	54.3	54.9	58.4	59.0	62.5
5°	77.9	72.0	69.0	62.5	56.1	53.7	57.8	67.9	75.5	77.9	82.0
7.5°	89.7	84.4	81.4	72.6	64.3	64.9	70.2	79.1	88.5	94.4	100.9
10°	93.2	90.3	87.3	81.4	84.4	85.6	85.6	89.1	98.0	100.3	103.3
12.5°	103.9	99.1	98.0	99.7	104.4	108.6	106.8	108.0	110.9	112.7	113.9
15°	112.1	110.3	112.1	112.7	120.4	122.1	121.6	120.4	124.5	123.3	122.1
17.5°	127.5	129.2	122.7	127.5	132.2	135.7	131.6	129.2	131.6	133.9	130.4
20°	141.6	140.4	134.5	135.7	138.1	137.5	132.2	128.0	132.2	138.7	140.4
22.5°	157.0	152.8	144.0	138.7	133.9	134.5	131.0	127.5	132.8	142.2	142.8
25°	167.6	164.0	154.6	146.3	136.3	125.7	125.1	126.3	131.0	144.6	144.0
27.5°	182.3	175.8	159.3	151.7	133.4	116.8	121.0	123.3	124.5	139.9	143.4
30°	198.9	200.6	169.9	152.8	126.9	112.1	112.1	115.1	119.2	136.9	138.7
32.5°	220.1	210.1	186.5	148.1	118.6	109.2	107.4	109.8	113.3	127.5	129.8
35°	228.4	231.9	195.3	141.6	112.7	103.9	103.3	102.1	105.0	118.0	121.0
37.5°	262.0	257.3	207.1	138.1	108.0	100.9	95.6	96.2	99.1	107.4	110.3
40°	289.7	289.7	213.0	129.2	103.3	98.0	91.5	91.5	92.1	98.0	100.9
42.5°	325.7	331.0	218.9	119.8	101.5	92.6	88.5	87.3	87.3	89.7	93.2
45°	378.8	369.4	214.2	108.0	96.2	93.8	86.2	85.0	83.8	85.6	88.5
47.5°	460.9	423.1	205.9	98.5	92.1	94.4	85.0	82.0	81.4	83.8	87.3
50°	609.6	522.2	187.6	91.5	89.1	91.5	85.6	82.0	80.8	83.8	86.7
52.5°	856.8	678.0	172.3	86.7	85.0	89.7	87.9	82.6	80.8	84.4	87.3
55°	1111.1	846.2	158.1	83.8	82.0	88.5	88.5	84.4	82.0	85.0	89.1
57.5°	1337.1	968.9	152.8	81.4	79.7	86.7	88.5	84.4	83.2	89.7	93.2
60°	1481.1	1022.0	139.9	79.1	78.5	85.0	90.9	85.6	86.7	96.8	103.3
62.5°	1467.5	970.1	117.4	76.7	77.3	86.2	94.4	90.9	90.3	101.5	108.0
65°	1295.8	797.2	95.0	75.5	75.5	89.7	102.1	92.1	87.9	98.5	103.3
67.5°	977.2	571.2	79.7	73.8	73.8	93.2	108.0	92.1	85.0	95.0	98.0
70°	618.4	342.8	72.6	70.8	70.8	90.9	105.6	89.1	80.8	86.7	86.7
72.5°	347.0	165.8	66.7	68.4	66.1	80.3	99.7	84.4	76.1	79.1	80.3
75°	143.4	85.6	61.4	63.7	59.0	70.8	94.4	79.7	71.4	71.4	73.8
77.5°	69.0	56.6	54.3	57.8	51.9	62.0	85.0	73.2	63.1	62.0	63.1
80°	47.2	40.7	44.3	49.0	44.3	53.1	75.5	67.3	54.3	51.9	51.3
82.5°	28.9	26.0	33.0	35.4	33.0	45.4	67.3	55.5	41.3	36.0	38.9
85°	14.8	15.3	19.5	21.8	20.1	28.9	44.8	33.0	23.6	21.2	23.0
87.5°	3.5	5.3	6.5	7.1	5.3	3.0	3.5	4.1	4.1	3.5	1.8
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)