

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: P596093

Luminaire Tested: **MSA-SA3A-AMB-U-T2**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596093  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-AMB-U-T2  
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE II OPTICS.  
Light Source: (48) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2282 lumens  
Efficiency: N/A  
Efficacy: 38.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

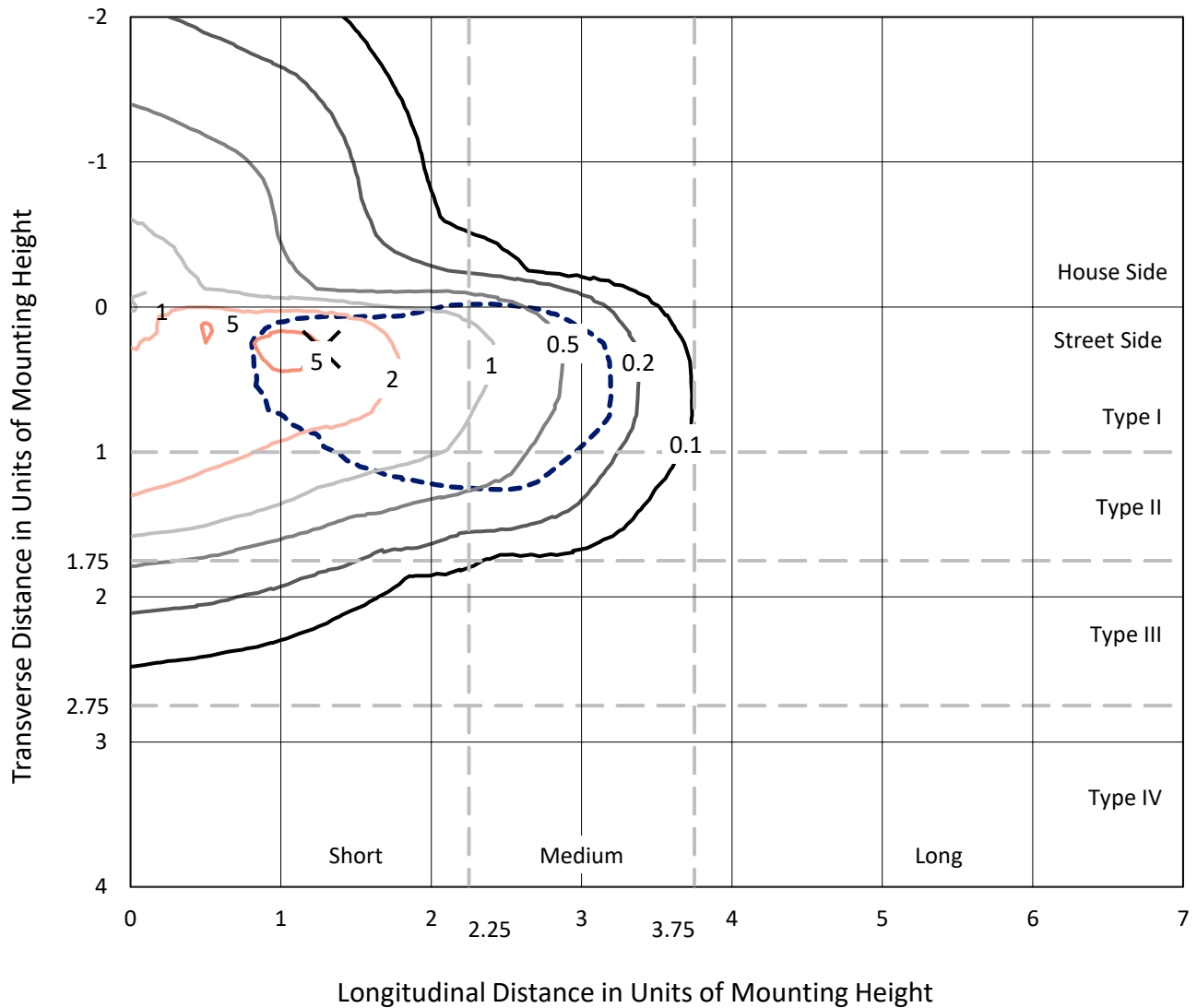
Input Watts (W): 59.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

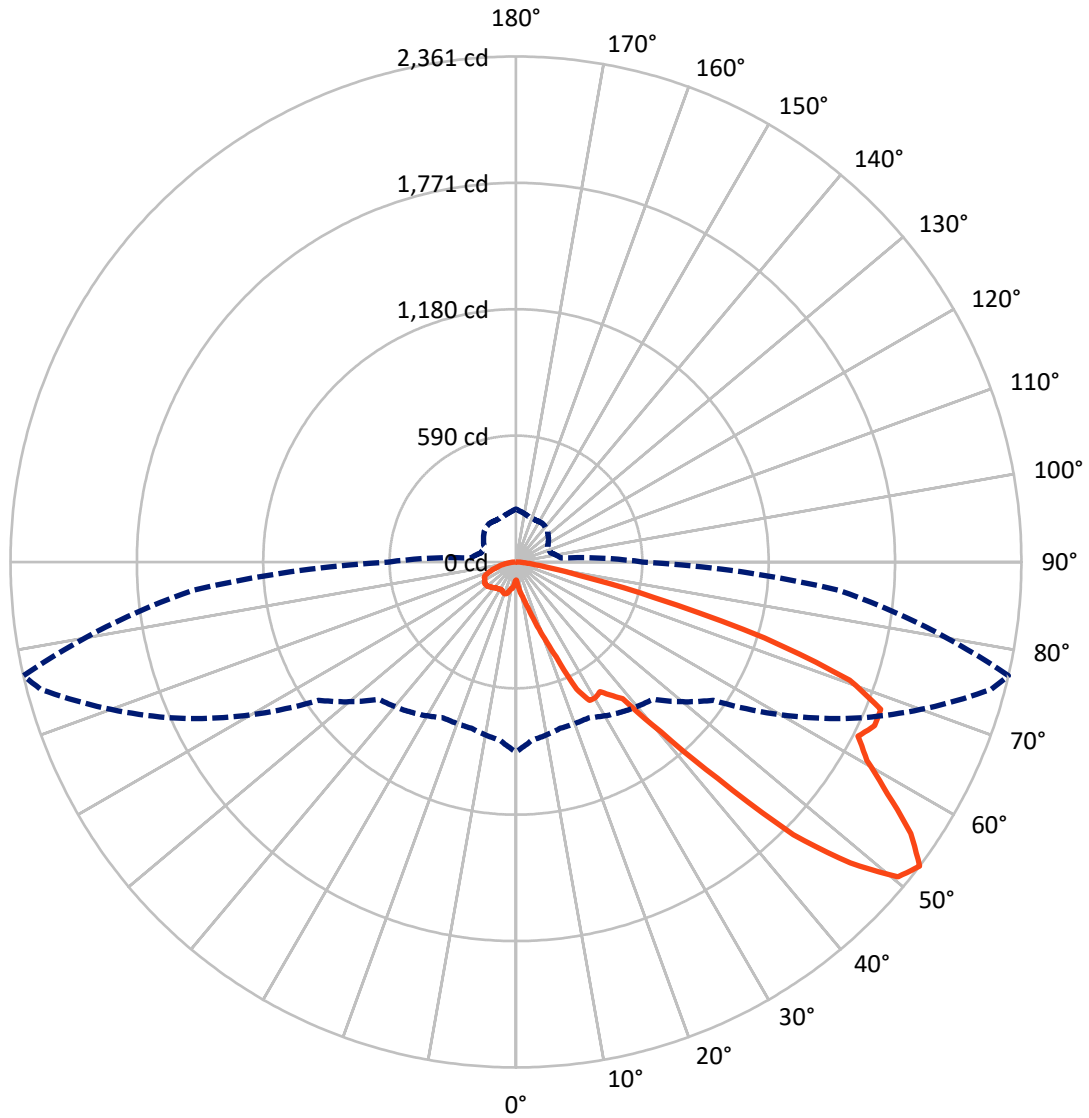
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral    - - - Horizontal Cone Through 52.5-Deg Vertical

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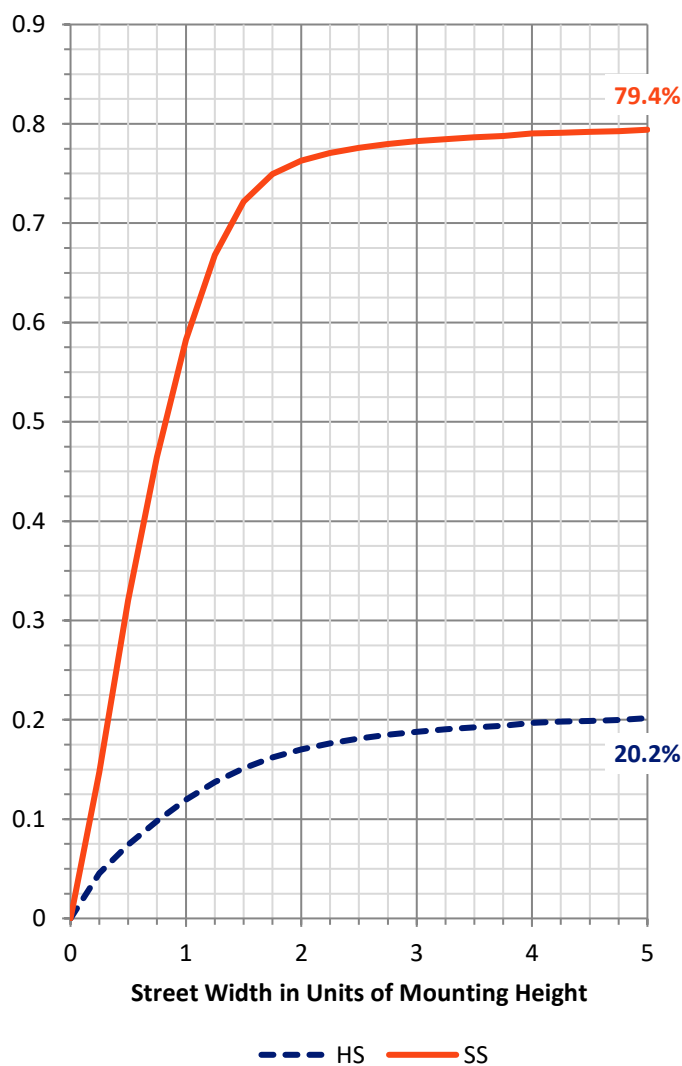
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	466.4	0.0	466.4
	% Fixture	20.4	0.0	20.4
<b>Street Side</b>	Lumens	1815.6	0.0	1815.6
	% Fixture	79.6	0.0	79.6
<b>Total</b>	Lumens	2282.0	0.0	2282.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	11.1	0.5
10°-20°	55.5	2.4
20°-30°	132.3	5.8
30°-40°	237.8	10.4
40°-50°	462.0	20.2
50°-60°	605.7	26.5
60°-70°	517.4	22.7
70°-80°	224.3	9.8
80°-90°	36.0	1.6
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°	2282.0	100.0
0°-180°	2282.0	100.0

**Coefficient of Utilization**



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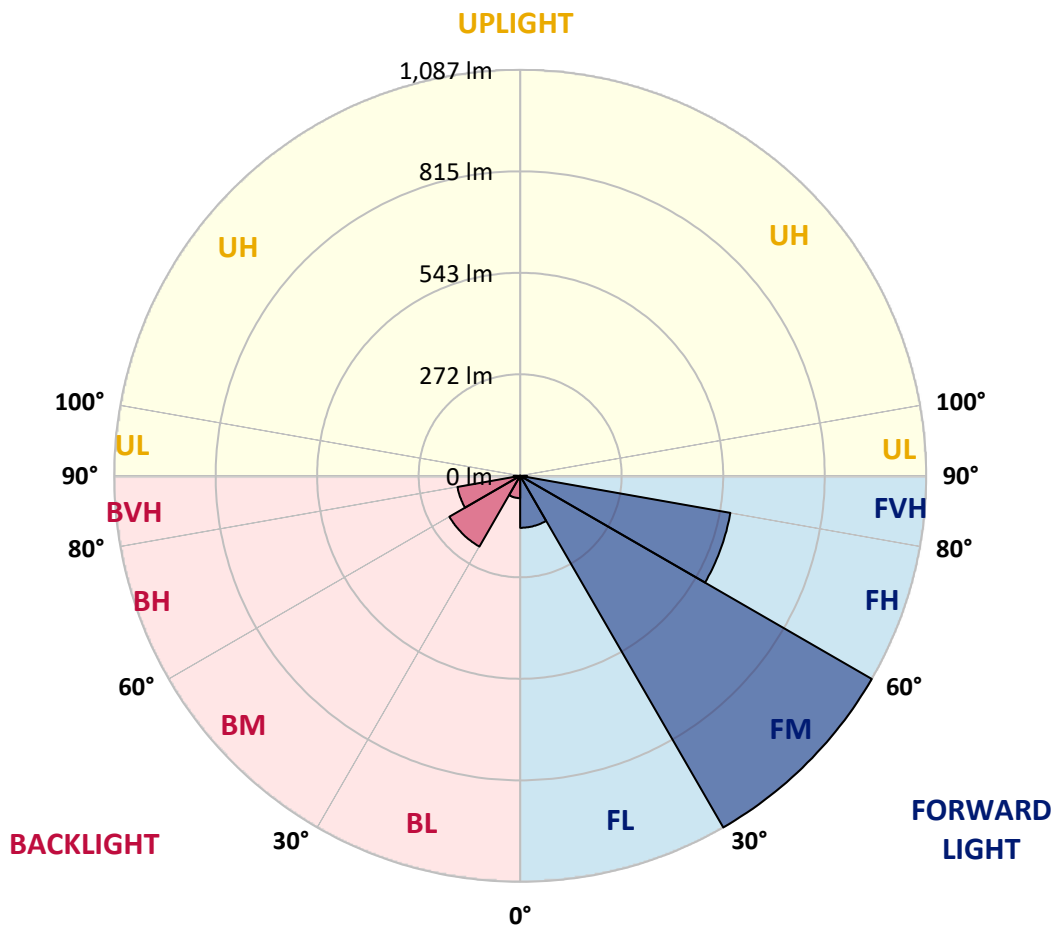
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	139.2	6.1			
FM (30°-60°)	1086.7	47.6			
FH (60°-80°)	571.3	25.0			G0/660
FVH (80°-90°)	18.4	0.8			G1/100
BL (0°-30°)	59.8	2.6	B0/110		
BM (30°-60°)	218.7	9.6	B0/220		
BH (60°-80°)	170.4	7.5	B1/500		G1/500
BVH (80°-90°)	17.6	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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8
2.5°	109.3	94.2	93.4	90.2	89.4	91.8	90.2	87.0	92.6	91.0	95.0
5°	150.0	130.9	128.5	113.3	98.2	95.8	95.0	103.8	119.7	118.1	121.3
7.5°	175.6	164.4	163.6	146.0	126.1	120.5	123.7	135.7	140.5	140.5	138.1
10°	189.1	185.2	175.6	163.6	164.4	166.8	166.8	162.0	165.2	162.0	154.0
12.5°	193.9	190.7	204.3	197.9	212.3	225.1	221.9	217.9	197.9	191.5	170.8
15°	216.3	219.5	218.7	227.5	245.8	267.4	277.7	273.7	248.2	236.2	201.1
17.5°	245.0	241.8	240.2	250.6	268.2	297.7	328.8	340.8	312.0	300.1	245.0
20°	271.3	270.5	264.2	257.0	280.1	312.0	375.9	411.8	399.8	382.3	293.7
22.5°	311.3	308.1	283.3	273.7	285.7	317.6	408.6	529.9	503.6	481.2	350.4
25°	347.2	344.8	320.8	303.3	299.3	329.6	447.7	674.4	694.3	657.6	427.8
27.5°	386.3	389.5	348.0	341.6	328.0	337.6	482.8	824.4	802.1	732.6	461.3
30°	450.1	438.9	397.4	385.5	366.3	367.1	484.4	789.3	778.9	734.2	455.7
32.5°	531.5	532.3	470.1	431.8	414.2	412.6	491.6	734.2	782.9	721.5	474.9
35°	632.9	628.9	565.0	518.0	466.1	454.1	539.5	751.8	803.7	763.8	482.0
37.5°	782.9	763.8	676.0	617.7	569.0	559.5	608.1	797.3	861.1	810.8	535.5
40°	869.1	832.4	758.2	691.9	648.0	666.4	703.1	892.3	1066.2	1041.5	628.1
42.5°	892.3	863.5	796.5	759.0	726.3	755.0	842.0	1122.9	1407.8	1382.3	786.9
45°	893.8	850.8	796.5	786.1	759.0	874.7	996.0	1355.1	1774.9	1817.2	1014.4
47.5°	893.0	848.4	794.1	793.3	774.9	946.5	1090.2	1580.2	2102.9	2101.3	1217.1
50°	917.8	862.7	814.8	797.3	821.2	923.4	1121.3	1683.1	2285.7	2312.0	1415.8
52.5°	887.5	836.4	803.7	802.9	856.3	905.8	1125.3	1728.6	2297.7	2360.7	1512.4
55°	818.8	768.5	760.6	778.1	877.1	916.2	1104.5	1724.6	2154.8	2237.8	1486.8
57.5°	674.4	639.3	670.4	707.1	820.4	932.2	1106.9	1644.8	1984.0	2047.1	1471.7
60°	472.5	447.7	472.5	532.3	696.7	853.9	1137.3	1619.3	1794.1	1883.5	1489.2
62.5°	324.8	312.0	330.4	363.9	487.6	718.3	1113.3	1662.4	1736.6	1793.3	1596.2
65°	243.4	231.4	237.8	261.8	311.3	492.4	1000.0	1682.3	1766.9	1841.2	1790.1
67.5°	197.9	189.1	193.1	208.3	224.3	293.7	734.2	1609.7	1780.5	1838.0	1822.8
70°	165.2	156.4	161.2	172.4	183.6	179.6	415.0	1308.0	1585.8	1652.8	1612.1
72.5°	138.1	130.1	134.1	140.5	156.4	132.5	211.5	866.7	1162.0	1214.7	1118.9
75°	115.7	107.7	109.3	115.7	127.7	109.3	124.5	450.1	644.8	672.0	565.0
77.5°	91.0	88.6	87.8	94.2	103.0	88.6	91.8	197.1	280.1	299.3	237.8
80°	67.8	66.2	67.8	70.2	76.6	69.4	67.8	109.3	138.9	133.3	94.2
82.5°	43.1	42.3	50.3	51.1	55.1	47.9	47.9	68.6	74.2	69.4	54.3
85°	24.7	23.9	32.7	31.1	31.9	27.1	26.3	34.3	37.5	35.1	27.1
87.5°	4.0	4.8	6.4	8.8	9.6	7.2	10.4	10.4	12.8	11.2	9.6
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°	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8
2.5°	96.6	90.2	90.2	83.8	79.0	78.2	78.2	79.8	86.2	87.8	89.4
5°	122.9	114.1	107.7	95.0	81.4	76.6	81.4	92.6	102.2	106.1	108.5
7.5°	142.1	130.9	119.7	99.0	87.8	86.2	93.4	99.8	110.9	117.3	121.3
10°	146.8	137.3	122.1	105.3	106.9	109.3	108.5	110.1	118.9	121.3	122.1
12.5°	161.2	147.6	130.9	121.3	125.3	126.9	126.1	126.9	130.1	133.3	134.1
15°	181.2	164.4	142.9	133.3	134.1	135.7	138.1	139.7	144.5	145.3	144.5
17.5°	206.7	184.4	147.6	139.7	139.7	145.3	146.8	149.2	154.8	159.6	155.6
20°	236.2	192.3	149.2	138.1	140.5	144.5	146.8	149.2	157.2	166.8	167.6
22.5°	254.6	194.7	146.0	134.1	135.7	140.5	146.0	148.4	156.4	167.6	167.6
25°	269.8	189.1	141.3	133.3	133.3	134.9	140.5	145.3	150.0	163.6	163.6
27.5°	283.3	182.8	136.5	133.3	132.5	131.7	138.9	142.1	144.5	155.6	158.0
30°	284.9	185.2	136.5	134.1	132.5	130.9	134.9	138.1	142.9	155.6	157.2
32.5°	290.5	180.4	141.3	134.9	133.3	133.3	135.7	141.3	148.4	159.6	162.0
35°	282.5	177.2	144.5	138.1	137.3	137.3	142.9	146.8	158.8	173.2	175.6
37.5°	286.5	174.8	147.6	142.9	142.1	147.6	147.6	156.4	174.0	189.1	197.9
40°	311.3	176.4	150.8	148.4	149.2	154.0	156.4	167.6	186.8	206.7	211.5
42.5°	337.6	181.2	155.6	153.2	160.4	162.8	171.6	179.6	196.3	209.1	215.5
45°	389.5	185.2	158.8	158.0	166.0	182.0	183.6	190.7	201.9	210.7	218.7
47.5°	466.1	190.7	163.6	161.2	174.8	194.7	190.7	196.3	206.7	218.7	226.7
50°	529.9	202.7	166.8	162.8	182.0	201.1	205.9	206.7	214.7	227.5	237.8
52.5°	592.2	210.7	167.6	162.8	185.2	207.5	218.7	215.5	221.1	237.0	247.4
55°	656.8	217.9	166.8	159.6	182.8	213.1	224.3	221.1	227.5	245.8	256.2
57.5°	703.9	221.1	162.8	156.4	181.2	209.1	221.1	217.9	227.5	247.4	259.4
60°	787.7	228.3	154.0	150.8	177.2	201.1	217.1	213.1	221.9	245.8	257.8
62.5°	961.7	253.0	142.9	142.9	166.8	192.3	209.1	202.7	212.3	238.6	251.4
65°	1170.8	288.9	132.5	135.7	158.0	178.8	200.3	191.5	201.1	229.8	242.6
67.5°	1191.5	269.8	122.9	126.9	144.5	165.2	189.1	180.4	186.8	214.7	226.7
70°	1050.3	220.3	110.9	116.5	131.7	150.0	171.6	165.2	170.0	195.5	207.5
72.5°	729.4	161.2	99.8	105.3	118.9	132.5	154.0	149.2	151.6	174.8	183.6
75°	356.7	105.3	87.0	93.4	103.0	115.7	135.7	130.9	130.9	148.4	159.6
77.5°	150.0	79.0	74.2	80.6	87.0	97.4	114.9	112.5	109.3	121.3	126.1
80°	73.4	57.5	58.3	65.4	68.6	76.6	92.6	88.6	86.2	92.6	95.0
82.5°	45.5	38.3	41.5	45.5	47.9	56.7	71.0	65.4	60.7	59.1	58.3
85°	22.3	21.5	25.5	27.1	24.7	28.7	43.1	35.9	32.7	29.5	29.5
87.5°	5.6	7.2	8.8	8.8	7.2	4.0	8.0	6.4	6.4	5.6	3.2
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)