

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: P596097

Luminaire Tested: **MSA-SA3A-AMB-U-T4FT**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596097  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-13)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-AMB-U-T4FT  
Description: POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV FORWARD THROW OPTICS.  
Light Source: (48) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2409 lumens  
Efficiency: N/A  
Efficacy: 40.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1

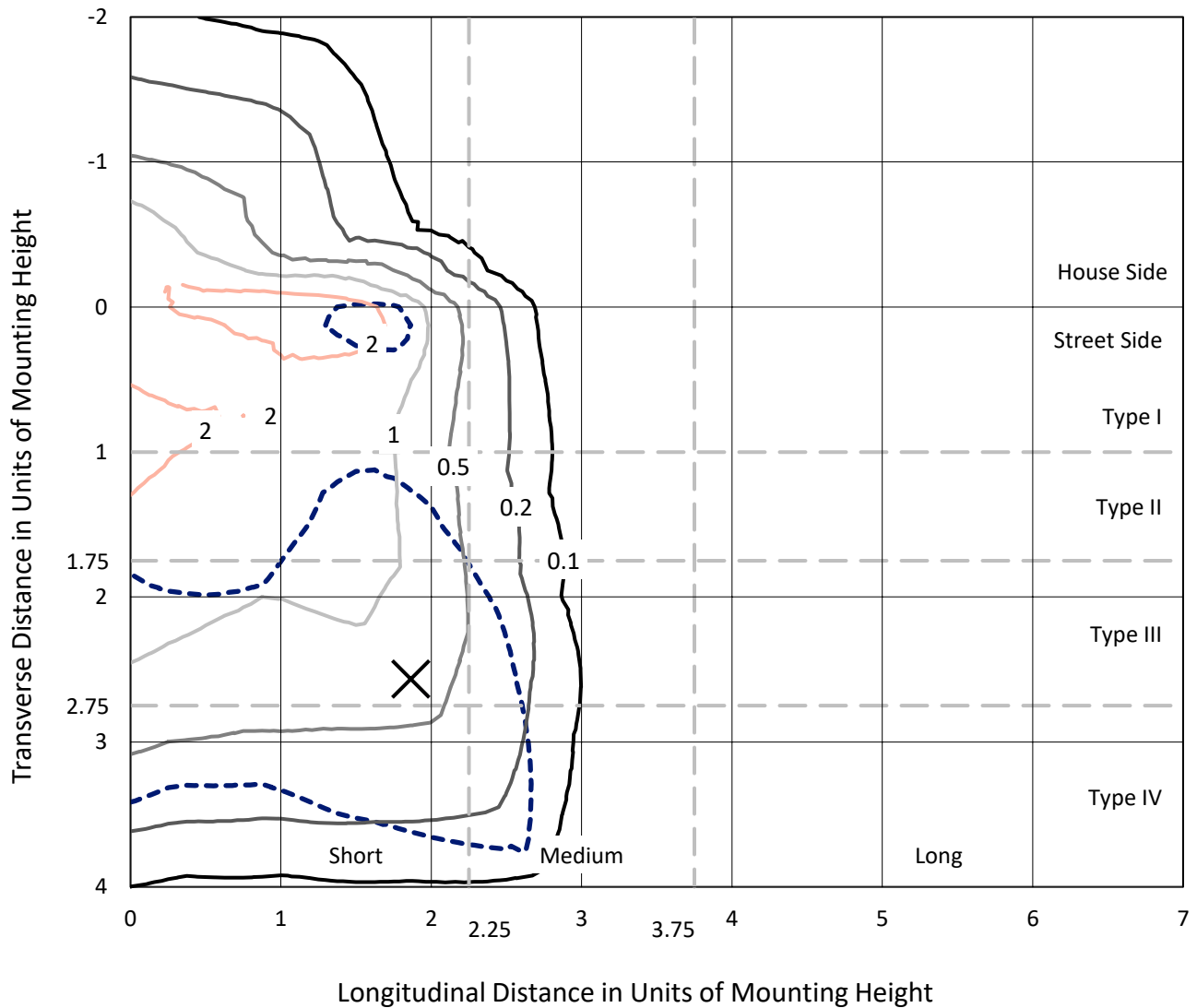
Input Watts (W): 59.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

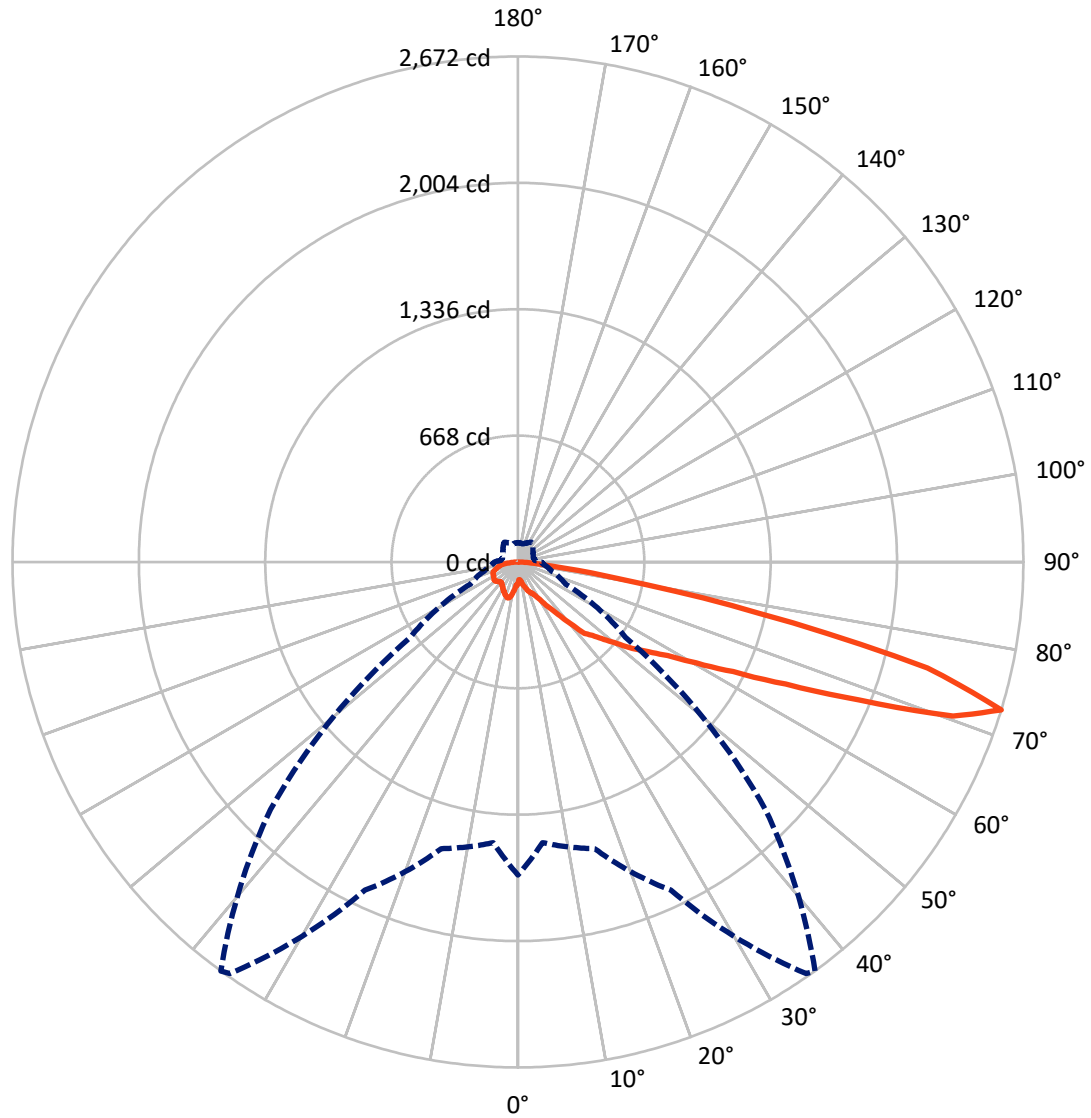
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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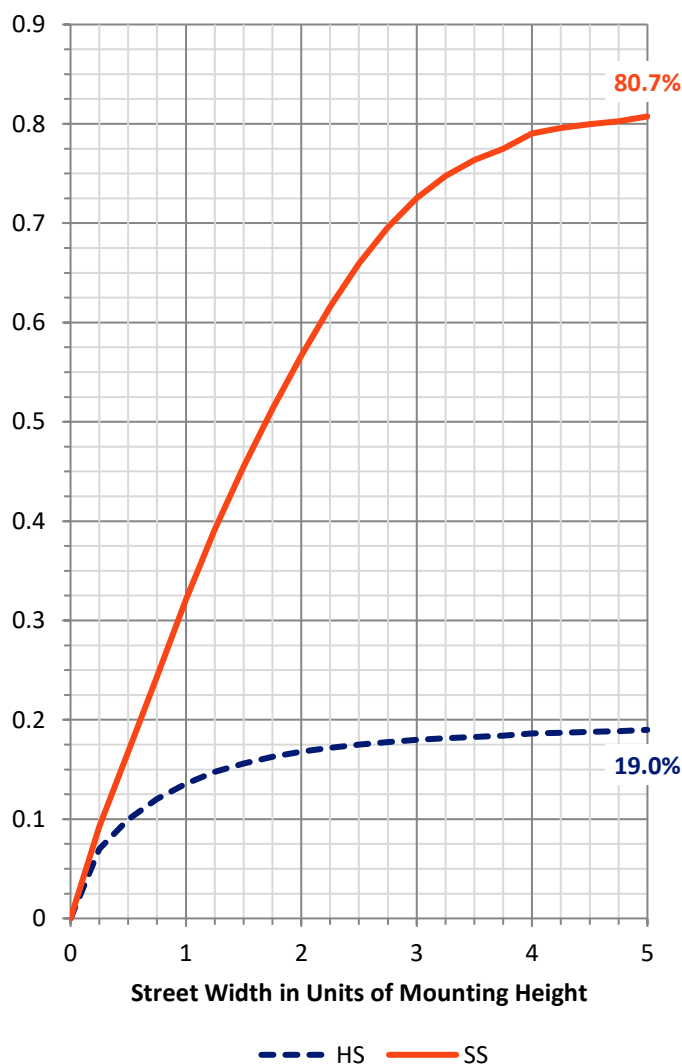
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	464.1	0.0	464.1
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	1944.9	0.0	1944.9
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	2409.0	0.0	2409.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.2	0.5
10°-20°	52.0	2.2
20°-30°	101.4	4.2
30°-40°	178.5	7.4
40°-50°	316.6	13.1
50°-60°	526.6	21.9
60°-70°	704.8	29.3
70°-80°	472.3	19.6
80°-90°	43.7	1.8
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°	2409.0	100.0
0°-180°	2409.0	100.0

**Coefficient of Utilization**

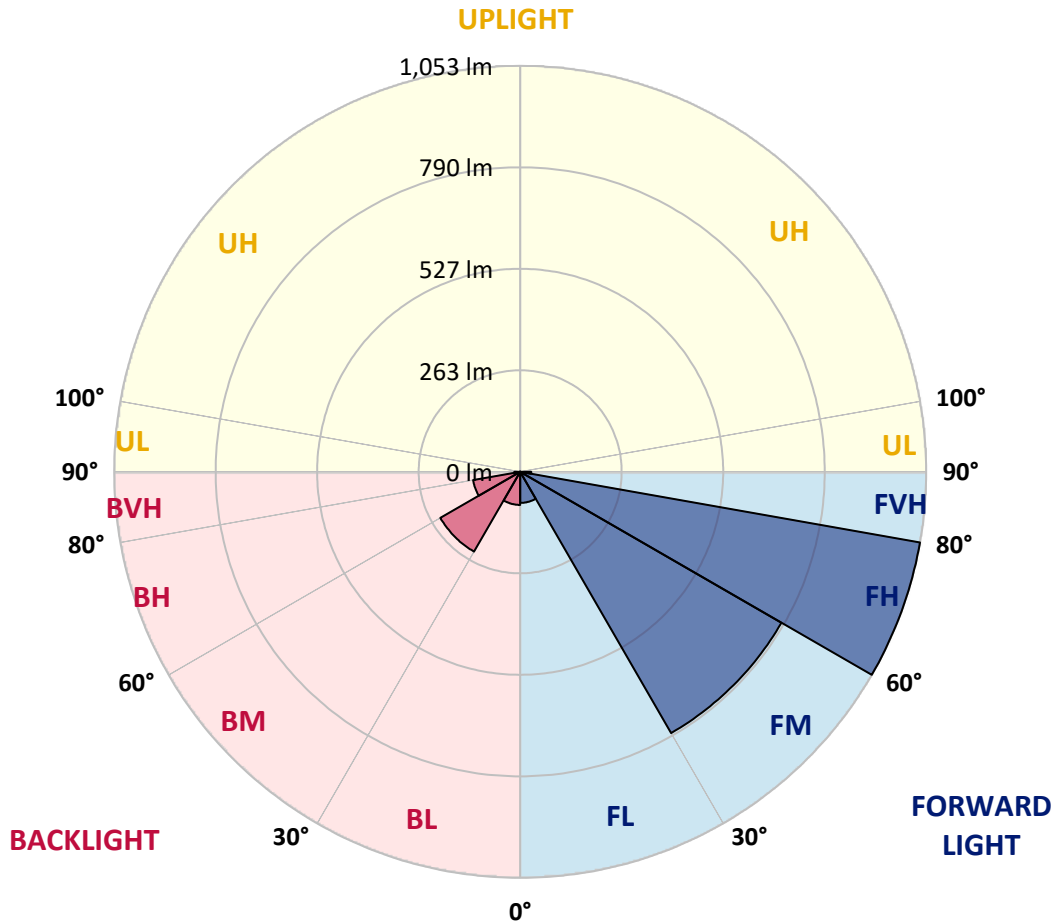


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	80.6	3.3			
FM (30°-60°)	782.6	32.5			
FH (60°-80°)	1053.1	43.7			G1/1800
FVH (80°-90°)	28.5	1.2			G1/100
BL (0°-30°)	85.9	3.6	B0/110		
BM (30°-60°)	239.0	9.9	B1/1000		
BH (60°-80°)	124.0	5.1	B1/500		G1/500
BVH (80°-90°)	15.2	0.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3
2.5°	124.5	114.1	109.4	96.6	96.6	94.2	99.8	103.8	107.8	119.7	130.1
5°	127.7	118.1	116.5	108.6	94.2	93.4	91.8	101.4	118.9	145.3	158.0
7.5°	124.5	118.9	118.9	109.4	99.0	98.2	102.2	115.7	134.1	155.7	173.2
10°	117.3	115.7	111.0	105.4	111.0	110.2	119.7	125.3	138.9	160.4	178.8
12.5°	117.3	116.5	118.1	116.5	125.3	127.7	135.7	145.3	158.0	175.6	195.6
15°	134.1	133.3	129.3	131.7	137.3	138.1	149.3	159.6	172.4	193.2	209.1
17.5°	154.9	155.7	146.9	148.5	152.5	153.3	162.0	170.0	182.0	207.5	240.3
20°	181.2	180.4	165.2	158.8	166.8	166.8	173.2	178.0	186.0	217.9	262.6
22.5°	211.5	205.9	182.8	174.0	175.6	177.2	178.8	186.0	190.0	222.7	288.2
25°	240.3	237.1	208.3	194.0	189.2	186.8	192.4	196.4	206.7	236.3	300.1
27.5°	276.2	278.6	235.5	224.3	209.1	207.5	202.0	211.5	223.5	242.7	326.5
30°	331.3	322.5	275.4	257.8	237.9	233.1	221.1	235.5	242.7	258.6	364.8
32.5°	387.9	380.0	320.1	296.1	273.0	272.2	260.2	253.8	268.2	289.8	406.3
35°	443.8	437.4	386.3	344.8	307.3	308.1	296.9	300.9	302.5	317.7	448.6
37.5°	531.6	521.2	455.0	397.5	371.2	361.6	358.4	355.2	344.0	356.0	539.6
40°	603.5	573.9	509.3	469.4	434.2	427.0	432.6	401.5	387.1	410.3	643.4
42.5°	660.1	634.6	567.5	543.6	510.1	515.7	483.7	447.8	449.4	474.1	748.7
45°	715.2	665.7	585.1	573.1	556.4	553.2	557.2	536.4	534.0	554.0	844.5
47.5°	760.7	708.8	636.2	616.2	599.5	612.2	649.8	622.6	624.2	649.8	985.0
50°	816.6	756.7	686.5	660.9	676.9	675.3	764.7	726.4	708.0	747.9	1144.7
52.5°	880.4	805.4	736.0	728.8	753.5	759.1	838.9	841.3	795.0	863.7	1346.6
55°	954.7	866.1	808.6	791.8	843.7	837.3	937.9	991.4	913.2	982.6	1507.8
57.5°	1050.5	953.1	914.8	889.2	925.9	933.1	1071.2	1124.7	983.4	1082.4	1602.8
60°	1200.5	1082.4	1028.1	994.6	1067.2	1084.8	1223.7	1221.3	1031.3	1119.9	1550.1
62.5°	1389.7	1273.2	1172.6	1144.7	1277.2	1277.2	1422.4	1305.9	1029.7	1048.1	1272.4
65°	1646.7	1503.1	1384.9	1333.8	1536.6	1556.5	1689.8	1357.0	941.1	836.5	830.9
67.5°	1858.3	1705.8	1590.1	1623.6	1953.2	1946.1	1972.4	1346.6	764.7	584.3	462.2
70°	1911.7	1764.9	1687.4	1873.4	2452.9	2440.2	2095.3	1088.8	513.3	332.1	224.3
72.5°	1655.5	1489.5	1569.3	1914.9	2656.5	2672.4	1850.3	694.5	277.0	184.4	134.1
75°	921.1	822.2	996.2	1514.2	2245.4	2237.4	1190.9	344.0	154.9	122.9	103.0
77.5°	344.0	300.9	399.9	776.7	1372.1	1302.7	510.1	152.5	105.4	95.8	83.8
80°	102.2	93.4	134.1	295.3	546.0	540.4	163.6	89.4	81.4	75.8	63.1
82.5°	47.1	43.9	63.9	112.5	194.8	174.8	74.2	60.7	62.3	51.9	39.1
85°	21.6	20.8	33.5	51.1	77.4	69.4	34.3	31.1	35.9	30.3	20.8
87.5°	3.2	4.8	8.0	11.2	11.2	13.6	7.2	8.8	9.6	8.8	5.6
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°	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3
2.5°	136.5	122.9	130.1	119.7	114.9	123.7	122.9	122.1	130.1	127.7	136.5
5°	168.4	157.2	154.1	141.3	126.1	118.1	124.5	144.5	162.8	168.4	182.0
7.5°	190.0	179.6	182.8	161.2	136.5	128.5	147.7	161.2	177.2	186.0	198.8
10°	190.0	190.0	188.4	171.6	174.8	174.8	165.2	163.6	177.2	176.4	182.0
12.5°	206.7	207.5	208.3	202.7	205.1	199.6	186.8	181.2	178.0	179.6	181.2
15°	221.9	225.9	234.7	224.3	220.3	208.3	194.8	181.2	183.6	181.2	177.2
17.5°	250.6	262.6	252.2	242.7	227.5	217.1	194.8	182.0	181.2	182.8	175.6
20°	273.8	283.4	265.8	244.3	225.1	204.3	186.8	176.4	179.6	188.4	191.6
22.5°	304.1	311.3	270.6	235.5	204.3	189.2	183.6	177.2	183.6	194.8	194.8
25°	323.3	331.3	277.8	232.3	192.4	170.8	174.0	177.2	182.0	201.2	199.6
27.5°	356.0	342.4	271.4	221.9	175.6	159.6	170.8	177.2	178.8	199.6	204.3
30°	377.6	384.7	270.6	202.7	162.8	152.5	161.2	170.0	177.2	201.2	200.4
32.5°	431.0	399.1	277.8	182.8	150.9	148.5	154.1	163.6	172.4	191.6	197.2
35°	476.5	447.0	265.0	165.2	145.3	142.1	149.3	154.9	162.8	189.2	190.8
37.5°	570.7	482.1	251.4	155.7	141.3	140.5	141.3	150.1	158.8	179.6	186.8
40°	664.1	526.0	229.1	147.7	138.1	139.7	138.9	146.1	150.9	169.2	176.4
42.5°	751.1	569.1	204.3	138.9	137.3	138.9	141.3	144.5	149.3	159.6	166.0
45°	838.1	577.1	179.6	130.1	133.3	148.5	145.3	146.1	146.9	148.5	154.1
47.5°	937.1	601.1	162.0	122.1	134.1	159.6	148.5	144.5	142.1	140.5	145.3
50°	1063.2	654.5	142.9	118.9	137.3	161.2	154.1	142.9	136.5	134.9	141.3
52.5°	1230.9	706.4	131.7	115.7	136.5	160.4	157.2	141.3	131.7	129.3	135.7
55°	1367.4	723.2	125.3	114.9	131.7	158.0	156.5	138.1	126.9	126.9	131.7
57.5°	1441.6	696.0	121.3	112.5	126.9	153.3	151.7	132.5	125.3	126.1	131.7
60°	1390.5	596.3	114.9	110.2	122.9	146.9	148.5	130.1	122.9	125.3	130.9
62.5°	1111.1	432.6	108.6	106.2	117.3	141.3	147.7	127.7	120.5	122.9	129.3
65°	715.2	275.4	102.2	102.2	112.5	136.5	146.9	124.5	116.5	122.1	127.7
67.5°	391.1	173.2	97.4	99.8	109.4	129.3	143.7	122.9	111.8	120.5	124.5
70°	202.0	115.7	91.8	95.0	103.8	122.1	138.1	118.1	106.2	113.3	114.1
72.5°	123.7	91.8	83.8	89.4	95.8	111.0	126.9	111.0	99.0	101.4	102.2
75°	94.2	76.6	73.4	80.6	85.4	99.0	115.7	103.0	91.8	90.2	91.8
77.5°	75.0	61.5	63.1	70.2	72.6	87.8	104.6	95.0	82.2	79.8	80.6
80°	55.1	47.9	51.1	58.3	59.1	77.4	94.2	81.4	67.8	63.9	64.7
82.5°	34.3	30.3	36.7	41.5	41.5	57.5	76.6	59.1	48.7	39.9	39.9
85°	16.0	16.0	20.8	22.4	21.6	27.1	43.1	34.3	26.3	20.8	20.8
87.5°	2.4	4.8	5.6	5.6	4.8	1.6	4.0	4.8	4.8	4.0	1.6
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)