

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: P597017

Luminaire Tested: **MSA-SA3A-835-U-T2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597017  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-835-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7294 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

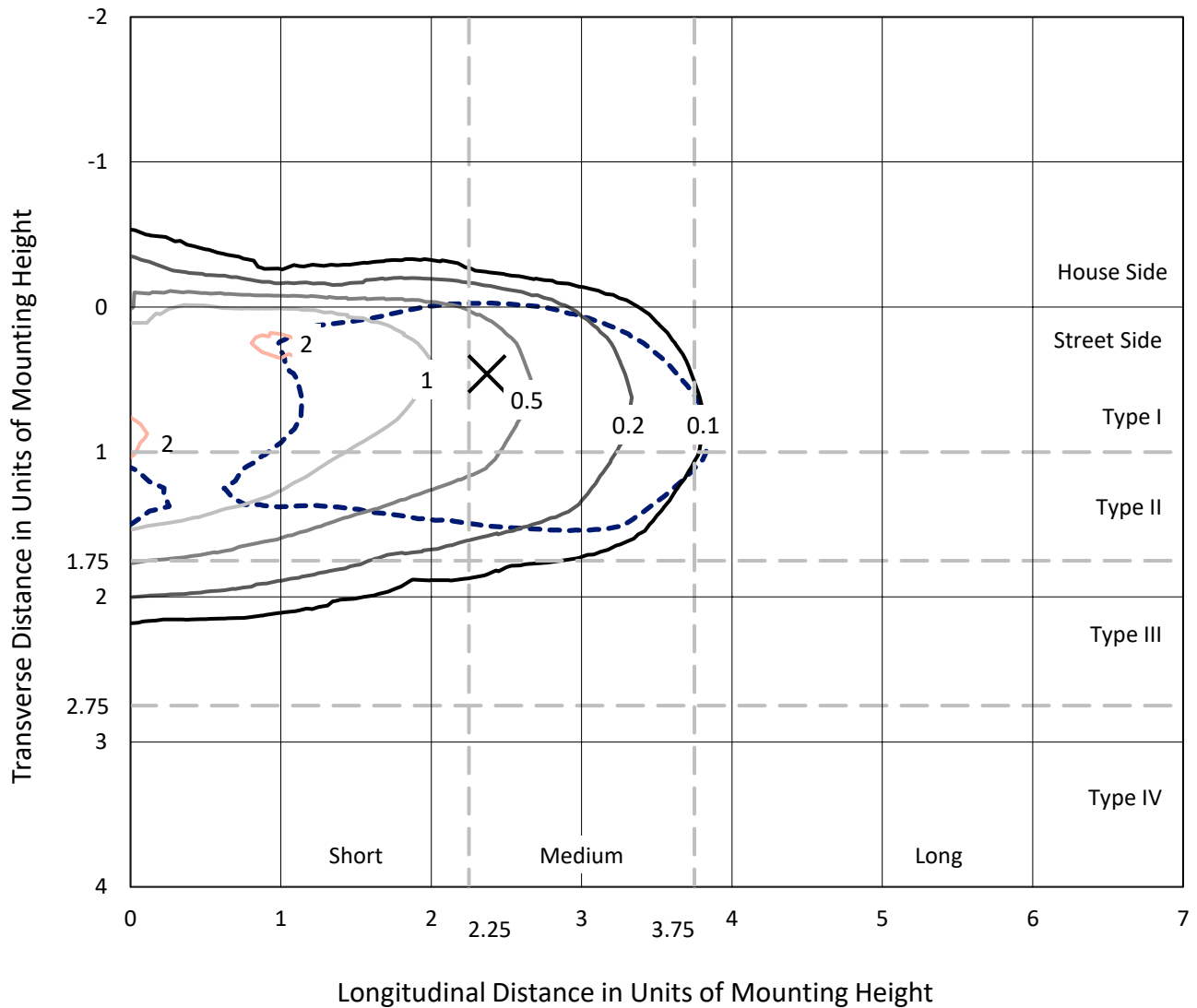
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

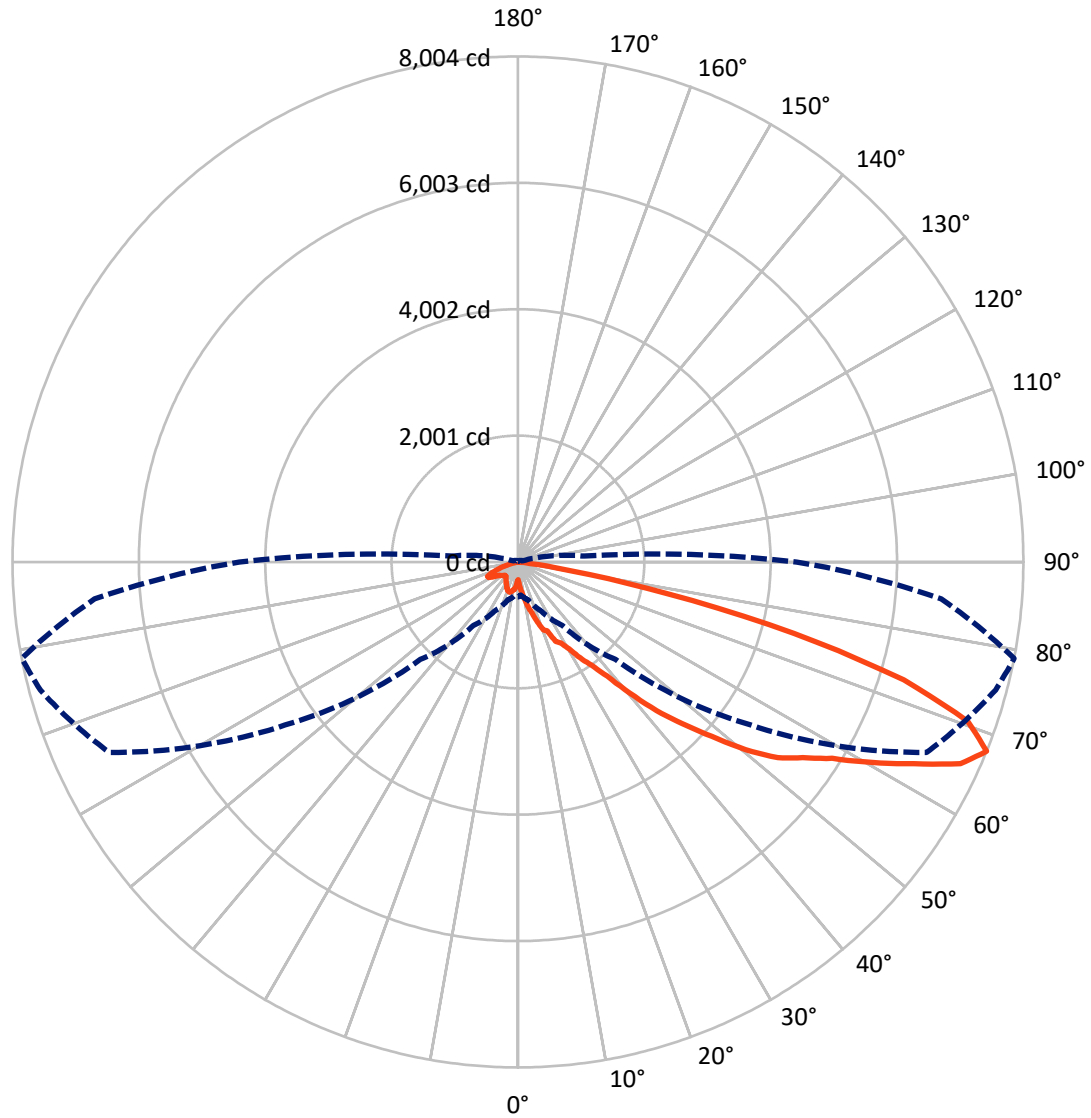
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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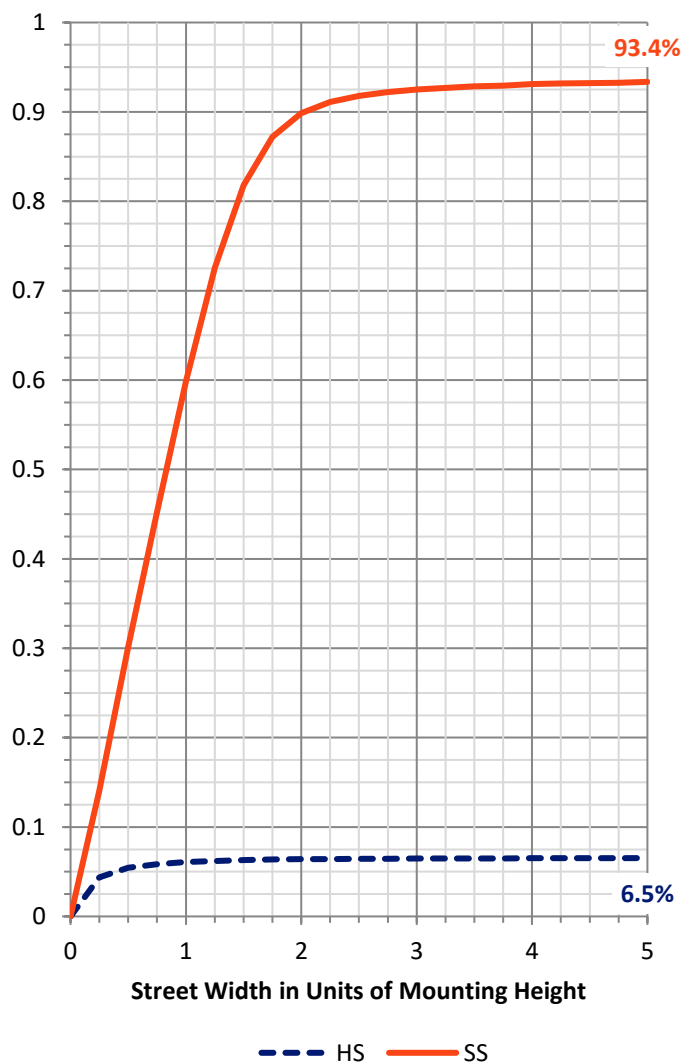
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	479.3	0.0	479.3
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	6814.7	0.0	6814.7
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	7294.0	0.0	7294.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.9	0.6
10°-20°	163.0	2.2
20°-30°	314.4	4.3
30°-40°	617.6	8.5
40°-50°	1237.3	17.0
50°-60°	1977.7	27.1
60°-70°	1989.9	27.3
70°-80°	897.7	12.3
80°-90°	55.5	0.8
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°	7294.0	100.0
0°-180°	7294.0	100.0

**Coefficient of Utilization**



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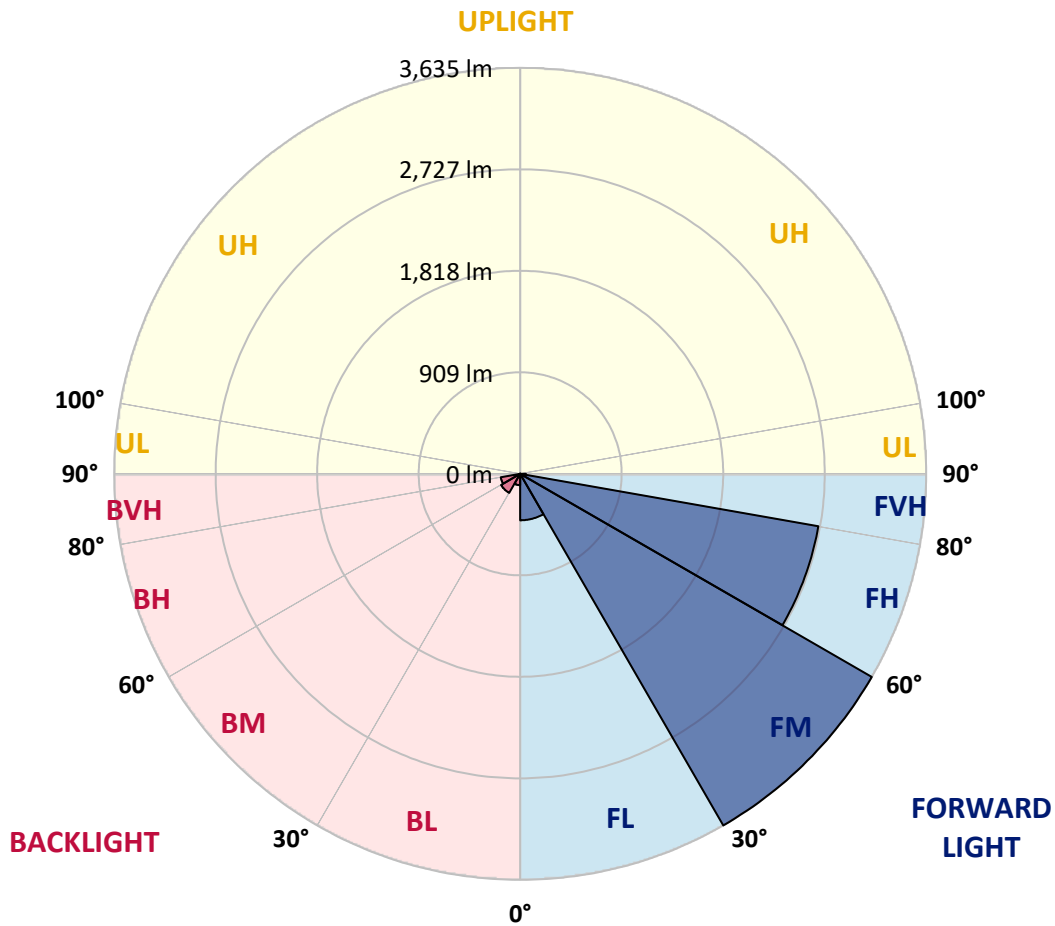
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	416.4	5.7			
FM (30°-60°)	3635.4	49.8			
FH (60°-80°)	2710.9	37.2			G2/5000
FVH (80°-90°)	52.0	0.7			G1/100
BL (0°-30°)	101.9	1.4	B0/110		
BM (30°-60°)	197.2	2.7	B0/220		
BH (60°-80°)	176.7	2.4	B1/500		G1/500
BVH (80°-90°)	3.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1
2.5°	379.6	365.9	343.8	356.2	355.4	361.9	349.8	336.5	315.2	336.5	338.2
5°	546.4	521.1	505.0	501.8	484.1	467.6	464.0	450.3	439.9	421.0	437.9
7.5°	680.7	669.1	640.5	637.3	593.9	569.8	577.4	571.4	531.6	511.9	528.3
10°	737.8	717.7	721.7	717.7	699.2	706.1	690.4	672.3	640.5	608.0	566.9
12.5°	759.9	756.7	790.1	786.1	829.5	881.8	846.8	816.6	743.1	735.0	679.1
15°	807.4	827.5	822.7	839.6	867.3	956.2	955.4	962.6	884.6	842.8	761.9
17.5°	849.6	864.5	840.4	859.7	935.2	989.1	1061.1	1033.0	1041.8	999.2	874.1
20°	831.5	848.4	824.3	812.6	945.7	1047.8	1143.9	1123.4	1176.5	1150.0	977.5
22.5°	944.5	912.7	852.0	814.2	913.5	1046.6	1173.3	1258.9	1249.7	1184.5	1073.6
25°	1084.0	1064.7	991.9	925.2	934.0	1039.4	1265.8	1391.6	1419.0	1391.2	1164.8
27.5°	1272.2	1267.8	1119.0	1090.1	1004.0	1007.6	1280.2	1558.9	1496.6	1453.1	1271.4
30°	1517.9	1482.9	1306.4	1268.6	1141.5	1079.2	1368.7	1703.2	1657.4	1598.3	1371.5
32.5°	1782.0	1787.3	1562.1	1437.5	1335.3	1261.3	1333.7	1770.8	1856.4	1808.6	1496.6
35°	2082.0	2105.3	1829.9	1683.5	1484.9	1375.9	1484.1	1978.3	2131.9	2006.0	1664.2
37.5°	2544.0	2543.2	2221.5	1930.0	1785.7	1667.4	1734.6	2166.8	2470.4	2293.5	1965.0
40°	2950.5	2862.0	2562.9	2227.9	2002.8	1970.6	1922.0	2425.0	2831.9	2725.3	2232.4
42.5°	3254.1	3191.7	2830.3	2569.7	2290.7	2188.5	2171.3	2803.3	3365.4	3216.3	2613.9
45°	3617.1	3412.9	3146.7	2911.9	2627.6	2597.9	2557.3	3187.3	3986.3	3650.1	2945.7
47.5°	3942.4	3750.2	3498.5	3197.0	2870.5	3115.7	2959.7	3524.7	4437.8	4122.2	3311.6
50°	4216.3	4012.0	3730.1	3500.5	3360.6	3527.1	3266.9	3802.5	4925.5	4669.8	3653.7
52.5°	4355.8	4124.6	3906.6	3764.7	3850.4	3813.0	3683.5	4139.1	5341.3	5149.9	3956.9
55°	4241.2	4015.2	3923.9	3994.3	4254.5	4146.3	4156.7	4660.6	5733.7	5470.0	4220.7
57.5°	3732.9	3526.7	3567.3	3759.9	4258.5	4541.5	4696.3	5167.2	6048.6	5868.8	4627.6
60°	2823.8	2657.8	2808.2	3149.9	3858.0	4462.7	5079.1	5673.8	6498.5	6442.2	5243.6
62.5°	1724.5	1634.5	1847.6	2273.8	3074.3	4076.3	5302.3	6349.3	6979.8	7039.7	5897.0
65°	879.8	839.1	1016.9	1391.6	2077.2	3348.6	5141.0	6769.1	7477.2	7698.3	6519.8
67.5°	554.1	527.9	622.8	848.8	1225.6	2184.1	4501.3	7136.2	7828.6	8003.5	6727.7
70°	384.0	367.5	449.5	582.6	773.2	1176.5	3342.1	6793.6	7549.9	7558.0	6224.7
72.5°	243.7	230.8	310.8	431.4	570.6	607.5	1915.9	5330.8	6462.7	6388.3	5040.9
75°	158.0	151.6	197.4	316.0	438.3	374.7	946.9	3597.0	4634.0	4517.4	3348.2
77.5°	113.4	109.4	132.3	211.1	312.0	262.2	424.6	2143.9	2657.0	2402.1	1625.2
80°	68.4	68.0	95.7	132.3	222.0	185.0	196.2	973.4	1030.1	840.0	496.6
82.5°	34.2	35.4	53.5	85.2	142.7	121.0	89.7	324.1	276.6	203.9	100.5
85°	8.0	10.1	28.1	58.7	71.6	48.3	42.6	84.8	76.0	57.5	29.4
87.5°	0.0	0.0	8.8	14.1	19.3	8.0	14.5	16.1	20.5	16.1	6.0
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°	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1
2.5°	338.6	333.7	304.4	296.7	295.9	287.5	289.5	281.5	281.9	300.0	300.0
5°	431.4	403.3	375.1	350.2	333.3	309.2	300.4	296.7	293.5	300.8	305.2
7.5°	506.6	465.2	414.5	360.3	310.0	275.4	270.6	261.8	258.5	265.8	271.4
10°	540.0	488.5	419.0	339.8	292.7	264.6	241.3	228.8	226.4	226.0	228.0
12.5°	610.8	546.8	423.8	332.1	281.1	250.1	223.6	202.7	183.4	185.4	183.4
15°	667.5	591.9	423.8	313.6	252.9	222.0	175.3	164.9	162.0	166.5	162.8
17.5°	753.1	636.5	402.5	280.7	228.8	172.5	154.8	154.0	159.6	166.1	162.0
20°	804.6	642.5	366.7	242.9	187.8	149.6	143.1	136.7	144.8	150.0	148.0
22.5°	858.0	642.9	330.9	222.8	151.2	136.3	125.9	120.6	121.8	126.7	127.5
25°	881.0	627.3	297.5	196.2	137.1	121.8	111.0	105.3	103.3	105.7	104.9
27.5°	943.3	597.1	261.4	167.3	130.3	108.2	98.1	91.3	85.2	89.3	90.1
30°	952.1	587.4	241.7	148.8	121.4	95.7	86.9	79.6	75.2	80.8	80.8
32.5°	980.3	534.4	231.6	141.1	112.2	88.5	76.4	71.2	70.4	74.0	74.4
35°	1023.7	511.0	216.7	135.1	103.7	80.0	68.8	66.3	65.5	68.4	68.4
37.5°	1170.9	482.1	200.2	129.9	96.5	75.6	66.7	62.7	63.1	65.5	67.1
40°	1268.6	485.7	175.7	123.4	88.1	71.6	62.7	59.9	59.5	60.7	61.9
42.5°	1449.9	488.5	164.9	116.6	81.6	66.7	58.7	56.7	55.1	56.3	57.5
45°	1652.6	503.4	159.2	111.0	78.0	63.9	55.1	53.9	50.3	51.1	52.7
47.5°	1848.0	557.7	152.4	102.9	74.8	62.3	51.5	48.7	46.2	45.8	47.4
50°	2069.9	610.4	144.8	94.1	71.6	59.9	47.8	43.4	41.8	41.8	43.0
52.5°	2268.6	660.6	137.5	88.1	69.2	55.5	44.6	40.2	39.0	39.0	40.6
55°	2477.6	713.3	131.1	82.4	65.9	51.1	41.8	37.8	37.4	36.6	37.8
57.5°	2846.8	828.3	123.0	77.6	61.5	47.4	39.4	35.4	34.6	33.4	34.6
60°	3384.3	1004.8	112.6	72.8	56.3	45.0	37.4	32.6	31.4	29.4	29.8
62.5°	3909.9	1147.5	100.5	66.7	51.5	42.6	34.2	29.4	27.3	24.9	25.3
65°	4360.2	1203.8	87.7	59.5	46.6	37.0	29.8	25.7	22.9	19.7	19.3
67.5°	4413.3	1063.1	75.2	52.7	41.8	31.4	25.3	22.9	18.5	15.7	14.9
70°	3971.8	792.1	62.7	46.6	36.2	26.5	21.7	20.1	17.3	14.9	13.7
72.5°	3162.8	584.6	52.7	41.4	31.8	22.5	18.5	18.9	17.3	14.5	12.9
75°	2091.6	334.5	43.0	34.6	26.5	18.1	16.9	16.9	16.5	13.7	12.1
77.5°	1006.4	144.3	33.0	27.3	21.3	13.7	15.3	15.3	15.7	12.5	10.1
80°	285.5	43.4	20.5	18.5	15.7	9.2	12.1	11.7	10.5	7.2	4.4
82.5°	51.1	16.9	9.2	9.7	8.8	3.6	6.8	6.4	5.2	2.8	0.4
85°	14.1	6.4	5.2	5.6	4.4	1.2	2.8	3.6	2.8	1.6	0.0
87.5°	3.6	2.8	3.6	4.0	3.2	0.4	1.2	0.4	1.2	0.4	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)