

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: P596316

Luminaire Tested: **MSA-SA3A-722-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596316  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-722-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8611 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

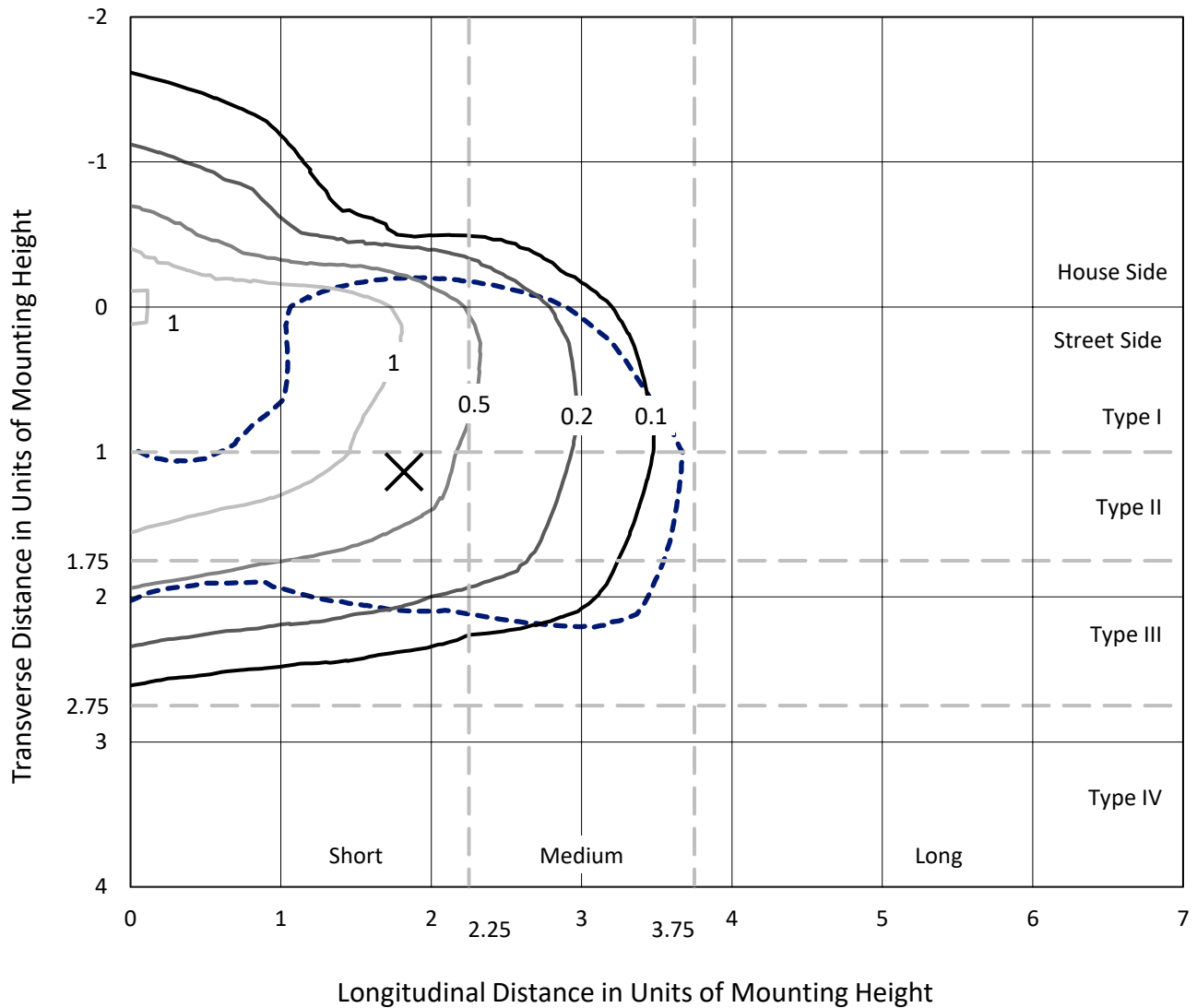
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

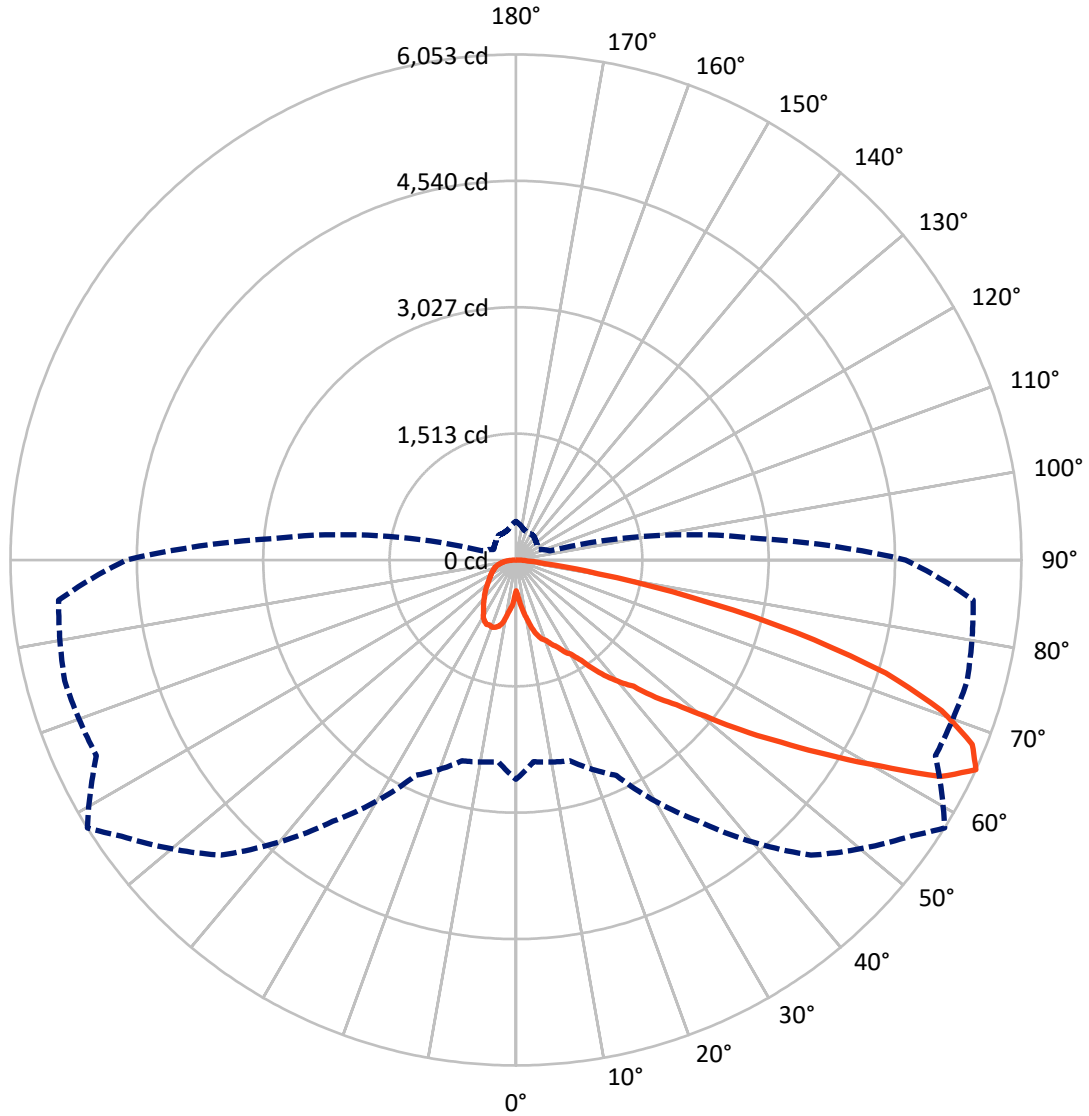
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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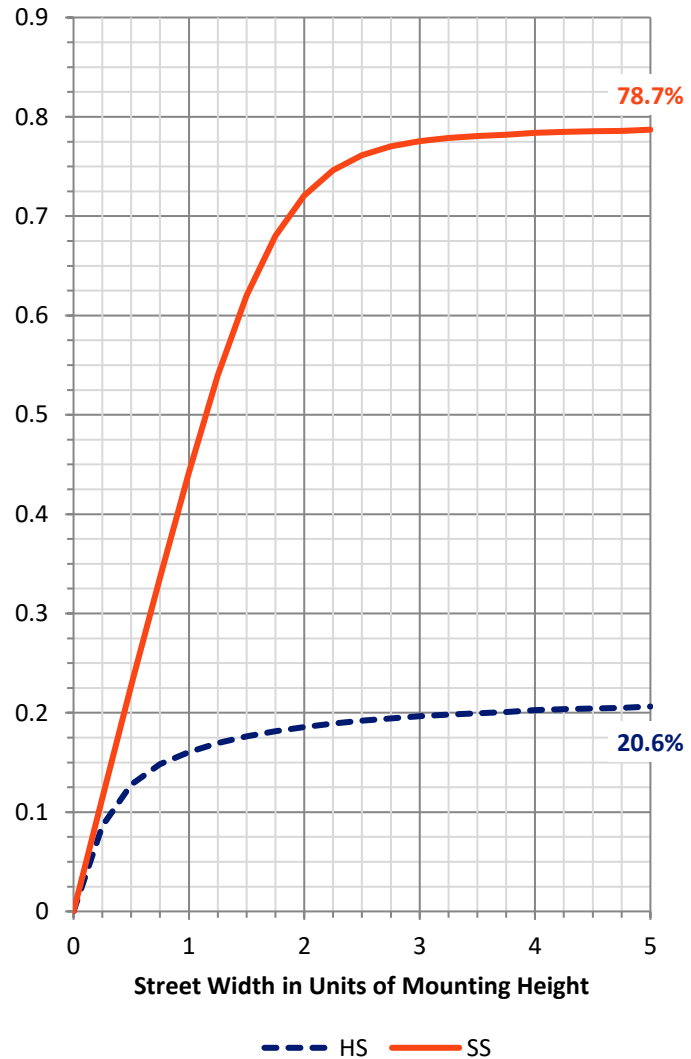
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1813.7	0.0	1813.7
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	6797.3	0.0	6797.3
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	8611.0	0.0	8611.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.3	0.7
10°-20°	245.7	2.9
20°-30°	471.6	5.5
30°-40°	778.5	9.0
40°-50°	1294.0	15.0
50°-60°	2137.0	24.8
60°-70°	2397.3	27.8
70°-80°	1090.0	12.7
80°-90°	140.6	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°	8611.0	100.0
0°-180°	8611.0	100.0

**Coefficient of Utilization**



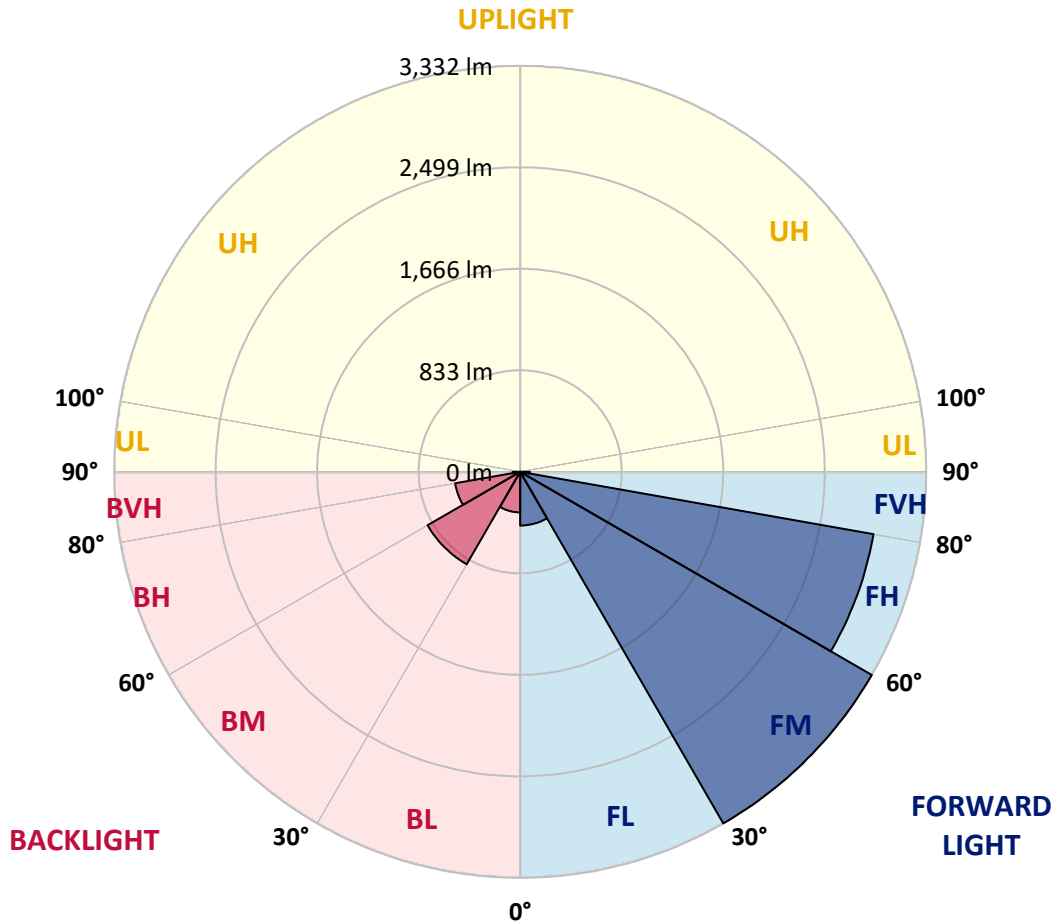
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	440.6	5.1			
FM (30°-60°)	3332.3	38.7			
FH (60°-80°)	2945.1	34.2			G2/5000
FVH (80°-90°)	79.2	0.9			G1/100
BL (0°-30°)	333.0	3.9	B1/500		
BM (30°-60°)	877.2	10.2	B1/1000		
BH (60°-80°)	542.2	6.3	B2/1000		G2/1000
BVH (80°-90°)	61.4	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7
2.5°	441.4	428.2	405.9	411.3	424.2	431.4	427.1	421.4	413.8	412.4	445.4
5°	571.6	546.1	535.7	531.4	515.7	506.3	522.5	520.3	528.9	544.7	577.0
7.5°	666.6	648.7	631.5	629.7	599.2	588.5	610.0	621.5	636.9	637.2	681.0
10°	717.6	702.1	701.8	685.6	683.1	703.6	703.9	712.5	714.3	732.6	724.0
12.5°	772.8	771.7	791.4	791.1	814.0	847.7	830.9	830.9	835.9	813.7	840.9
15°	904.4	915.9	878.9	885.0	885.0	918.0	916.9	923.4	938.8	933.1	920.9
17.5°	1041.4	1048.5	1007.7	969.7	972.5	965.4	991.2	993.7	979.0	1045.7	1031.0
20°	1129.6	1157.6	1071.5	1023.8	1033.1	1041.4	1042.5	1027.0	1019.5	1122.1	1102.0
22.5°	1238.6	1214.9	1136.0	1083.3	1097.3	1086.2	1084.0	1095.9	1106.3	1145.0	1177.6
25°	1311.4	1309.6	1214.9	1157.2	1141.8	1138.6	1160.4	1155.8	1180.5	1250.8	1230.4
27.5°	1417.2	1450.2	1282.4	1296.7	1228.9	1157.6	1227.8	1249.0	1293.5	1282.0	1327.5
30°	1622.3	1597.6	1422.2	1418.3	1341.5	1281.6	1330.4	1312.5	1392.4	1389.9	1423.6
32.5°	1789.8	1807.0	1586.4	1545.2	1488.2	1416.1	1383.8	1433.7	1476.7	1547.4	1566.4
35°	1966.9	1963.0	1754.6	1671.4	1577.1	1547.4	1587.2	1608.0	1699.4	1764.3	1719.1
37.5°	2242.3	2211.1	1972.7	1815.2	1744.6	1733.8	1802.0	1771.8	1870.8	1886.2	1911.7
40°	2498.4	2404.4	2172.0	1991.7	1879.4	1919.6	1921.7	1925.7	1978.8	2020.7	2146.6
42.5°	2741.9	2675.9	2374.7	2239.1	2073.8	2034.7	2059.1	2067.3	2201.4	2287.2	2461.4
45°	3074.6	2897.9	2665.8	2526.7	2341.7	2291.8	2274.6	2345.6	2475.1	2670.1	2819.7
47.5°	3356.1	3196.6	2975.3	2792.1	2585.2	2727.5	2630.0	2590.2	2764.1	3005.8	3243.9
50°	3589.6	3413.9	3196.9	3091.1	3058.1	3185.1	2931.9	2936.6	3095.8	3436.8	3709.7
52.5°	3770.3	3582.8	3390.6	3336.8	3521.1	3594.3	3411.4	3383.8	3499.9	3903.0	4230.8
55°	3939.2	3740.2	3591.7	3701.5	4012.0	4020.3	4007.4	3854.2	3994.1	4402.5	4770.1
57.5°	3982.6	3768.2	3669.6	3827.0	4246.9	4573.6	4702.0	4401.5	4543.8	4856.9	5232.0
60°	3759.2	3575.6	3536.2	3749.9	4373.8	4851.5	5186.8	5007.1	4953.7	5221.6	5555.4
62.5°	3301.6	3088.6	3120.5	3417.5	4240.1	4961.6	5569.8	5710.0	5386.5	5511.7	5696.7
65°	2627.8	2424.5	2489.0	2846.2	3820.2	4998.2	5765.6	6053.2	5542.9	5593.8	5496.6
67.5°	1853.2	1668.6	1750.0	2211.8	3177.9	4529.8	5799.3	5893.2	5376.5	5359.6	4950.1
70°	1050.0	934.2	1022.4	1407.5	2243.0	3608.6	5535.0	5411.3	5078.1	4839.3	4141.8
72.5°	481.6	441.8	484.1	716.5	1291.3	2401.2	4518.7	4631.0	4375.6	4076.9	3151.0
75°	256.0	242.1	260.0	357.9	604.2	1306.4	3210.5	3463.0	3327.1	3092.2	2055.5
77.5°	190.4	179.7	188.3	232.0	322.7	511.0	1824.2	2142.6	2194.3	1978.0	1141.4
80°	146.0	137.3	146.0	175.4	223.4	242.8	780.0	998.7	1137.5	919.1	453.6
82.5°	108.3	102.6	115.8	131.6	157.1	151.7	276.8	344.6	444.3	303.7	176.8
85°	86.1	78.9	83.9	89.3	100.4	83.2	126.6	141.6	149.9	125.5	65.3
87.5°	33.7	31.2	61.0	48.1	40.9	25.1	38.0	43.0	44.1	42.3	19.0
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°	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7	369.7
2.5°	449.0	445.4	424.2	431.0	442.2	444.3	449.0	436.1	429.6	453.3	454.3
5°	579.9	560.5	550.5	551.5	544.4	533.2	550.1	561.2	565.5	583.1	589.5
7.5°	681.3	658.0	641.2	621.8	594.6	577.0	606.4	627.9	639.4	676.0	690.3
10°	726.5	707.9	704.3	679.9	679.2	678.8	677.4	669.9	694.6	691.0	701.1
12.5°	819.8	815.8	781.7	772.1	773.1	772.1	741.9	740.5	740.9	773.9	762.0
15°	906.5	907.3	876.1	840.9	809.4	799.7	787.8	782.5	790.4	809.0	797.5
17.5°	1013.8	1017.3	928.1	872.5	830.9	829.8	801.5	768.1	816.2	827.6	815.1
20°	1083.0	1067.9	958.2	864.9	853.1	820.8	785.7	739.8	781.4	809.4	817.3
22.5°	1148.6	1122.4	986.2	878.2	821.6	783.2	749.1	719.4	732.6	763.8	758.8
25°	1193.1	1185.9	1024.9	910.1	820.5	735.1	689.2	670.2	677.0	725.4	720.8
27.5°	1299.2	1221.8	1018.1	918.4	786.1	669.5	646.6	626.1	619.3	671.7	686.0
30°	1370.2	1338.3	1063.6	905.5	742.7	615.7	582.0	577.7	579.9	639.4	643.3
32.5°	1490.7	1407.9	1138.2	856.0	679.5	575.9	537.2	539.0	548.7	592.0	601.0
35°	1616.2	1566.7	1148.2	820.5	628.3	533.6	517.8	505.3	510.6	548.7	550.5
37.5°	1849.3	1678.3	1209.9	765.6	590.6	517.5	487.3	476.2	479.1	500.6	516.0
40°	2054.4	1902.4	1181.2	712.5	544.0	495.9	458.3	450.0	441.4	462.6	472.3
42.5°	2383.3	2062.3	1171.5	654.1	522.1	466.9	441.1	419.2	411.0	428.9	446.5
45°	2712.1	2231.9	1118.8	594.9	491.3	464.7	416.0	395.2	397.3	413.5	431.4
47.5°	3078.6	2459.6	1029.5	537.5	457.6	454.3	390.9	381.9	388.4	406.3	424.2
50°	3511.8	2701.3	955.7	485.9	433.5	423.1	387.6	376.9	383.0	404.1	421.7
52.5°	3985.5	2966.3	901.9	438.2	406.3	398.4	392.0	381.6	388.7	407.0	425.3
55°	4456.3	3208.4	865.3	405.6	383.0	388.0	400.9	393.4	397.0	410.6	428.9
57.5°	4805.6	3336.1	791.8	370.8	364.0	381.9	402.0	389.4	391.6	410.6	430.3
60°	5008.6	3360.4	670.9	342.5	348.9	369.7	390.9	374.7	373.3	404.5	429.2
62.5°	4986.3	3218.8	532.2	316.6	331.7	351.4	374.0	358.6	362.5	405.2	431.4
65°	4667.9	2929.4	423.1	294.8	310.9	331.3	360.0	353.9	372.9	433.9	462.2
67.5°	4108.5	2506.6	340.0	274.3	291.5	317.7	369.7	385.9	394.1	463.3	492.4
70°	3329.6	1947.6	283.3	256.4	276.1	324.2	397.7	394.5	387.6	449.3	472.3
72.5°	2405.5	1335.1	249.2	238.8	257.1	304.8	398.4	381.2	372.6	410.2	426.7
75°	1505.0	796.5	217.7	216.6	228.1	273.3	380.5	365.1	341.7	360.4	381.9
77.5°	859.6	407.7	183.2	192.9	199.7	237.0	340.7	326.7	305.9	313.8	334.9
80°	328.1	197.2	154.6	171.4	169.6	200.8	288.7	285.4	261.8	264.3	277.2
82.5°	154.6	110.4	128.4	147.4	137.7	159.9	234.5	233.4	212.7	192.6	203.0
85°	57.4	58.8	94.0	112.2	95.7	103.3	169.6	165.0	144.9	122.3	135.2
87.5°	12.9	21.2	46.3	58.5	33.3	31.9	68.5	59.5	57.4	34.1	35.9
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)