

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: P596602

Luminaire Tested: **MSA-SA2B-827-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596602  
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-SA2B-827-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7312 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

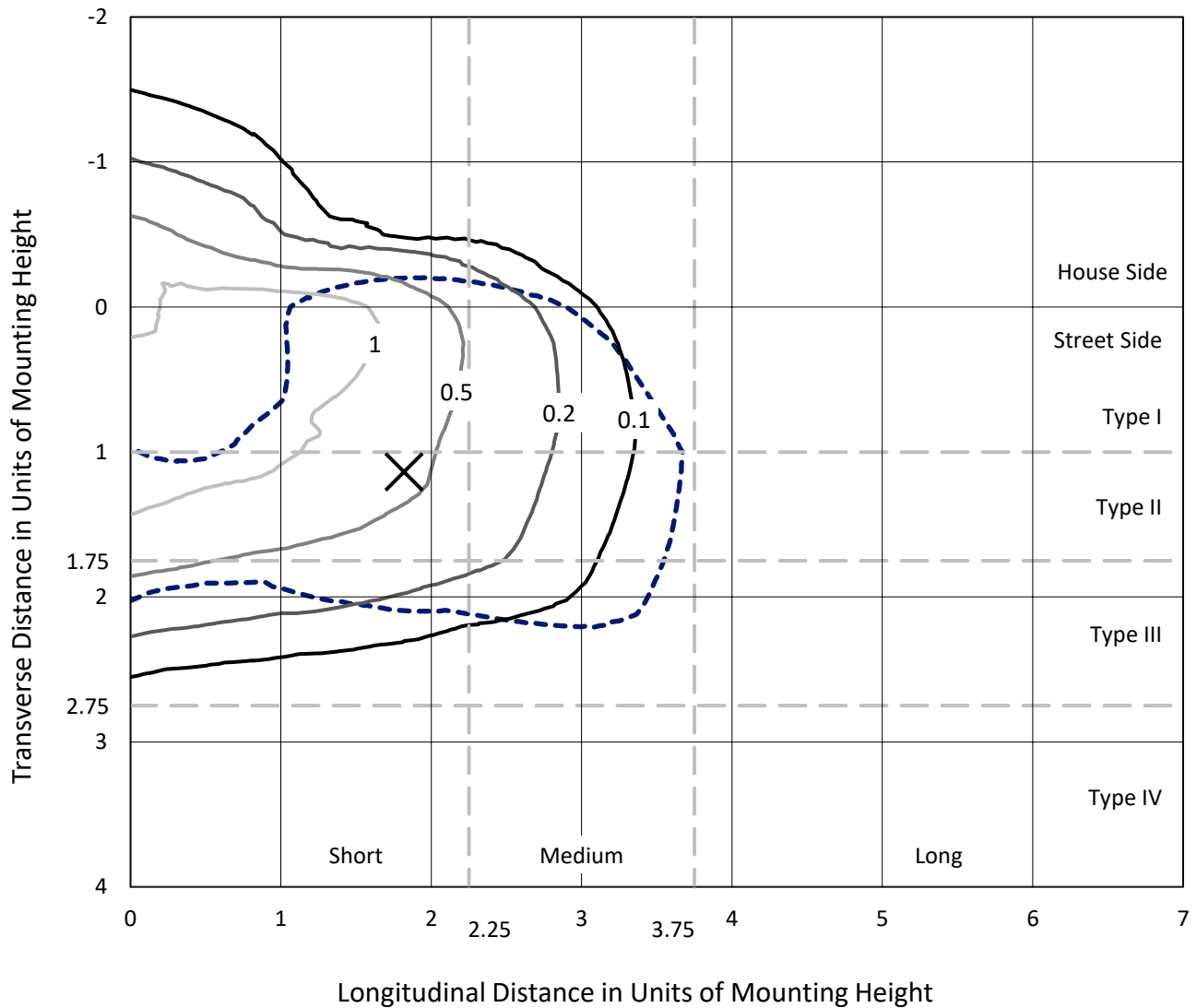
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

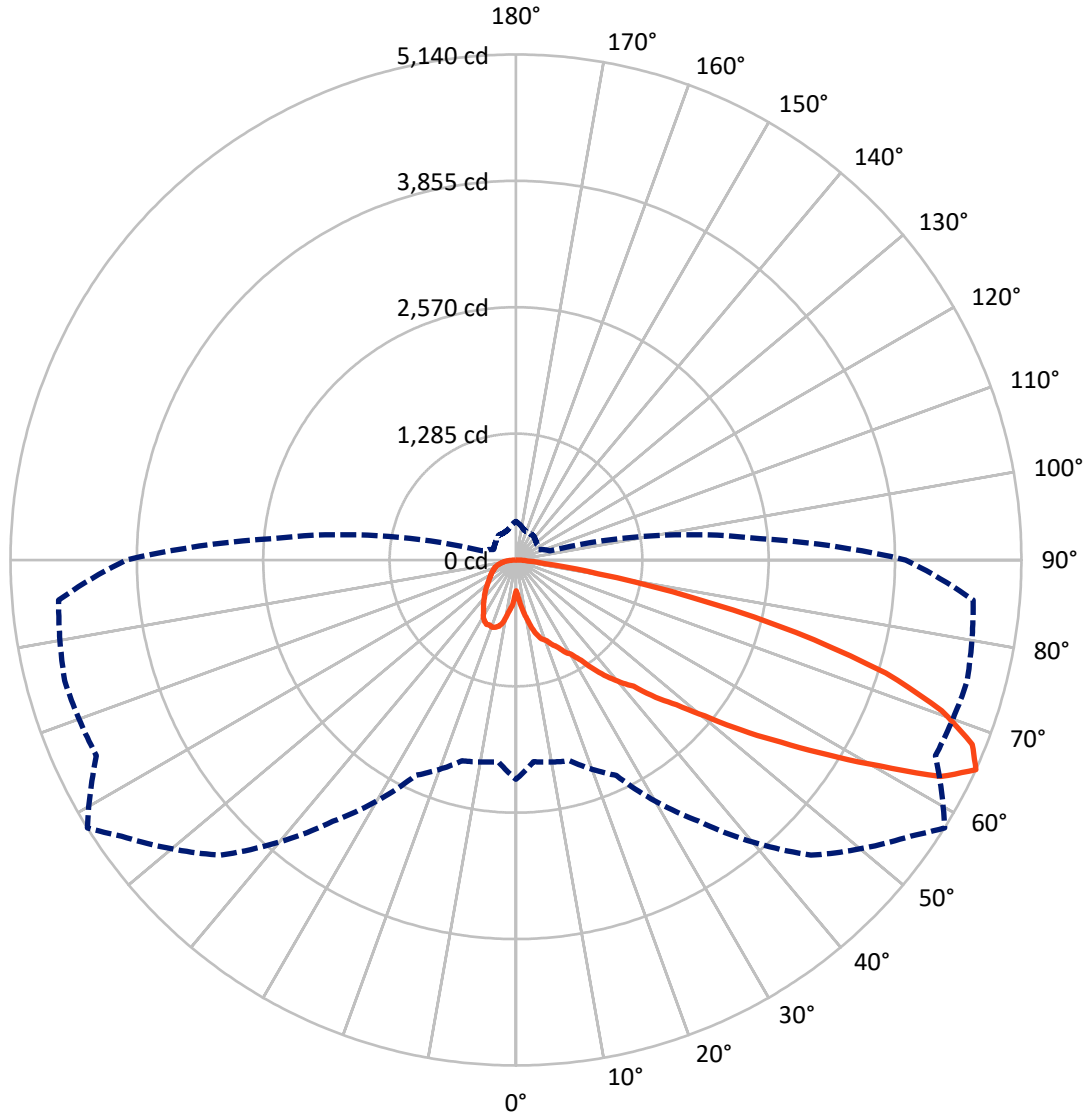
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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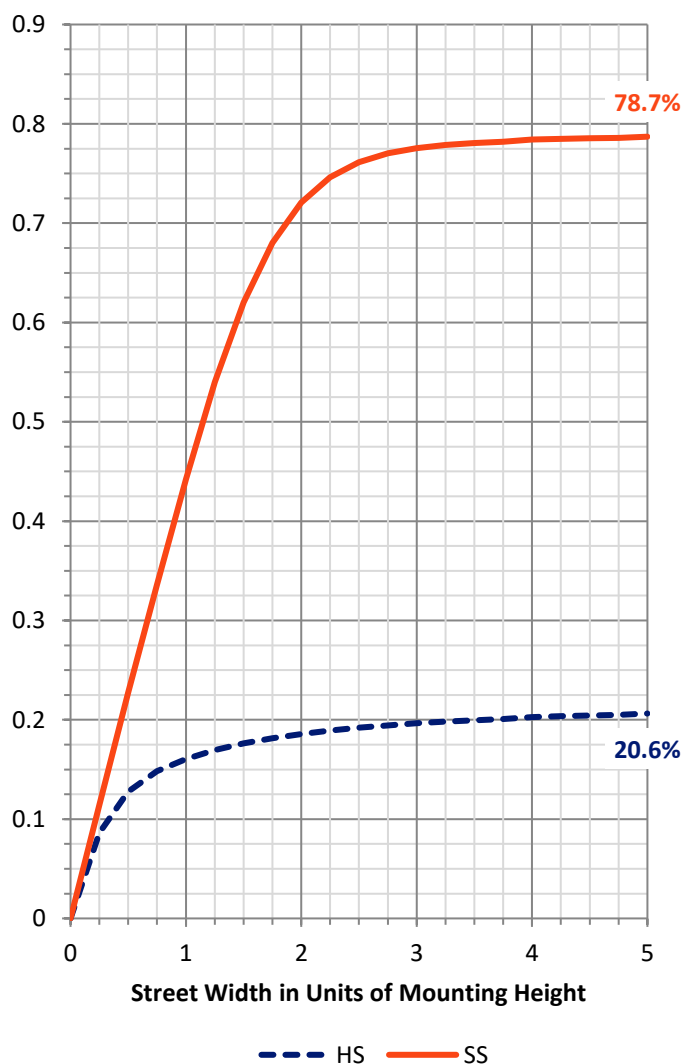
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1540.1	0.0	1540.1
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	5771.9	0.0	5771.9
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	7312.0	0.0	7312.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.8	0.7
10°-20°	208.7	2.9
20°-30°	400.4	5.5
30°-40°	661.1	9.0
40°-50°	1098.8	15.0
50°-60°	1814.6	24.8
60°-70°	2035.7	27.8
70°-80°	925.6	12.7
80°-90°	119.4	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°	7312.0	100.0
0°-180°	7312.0	100.0

**Coefficient of Utilization**



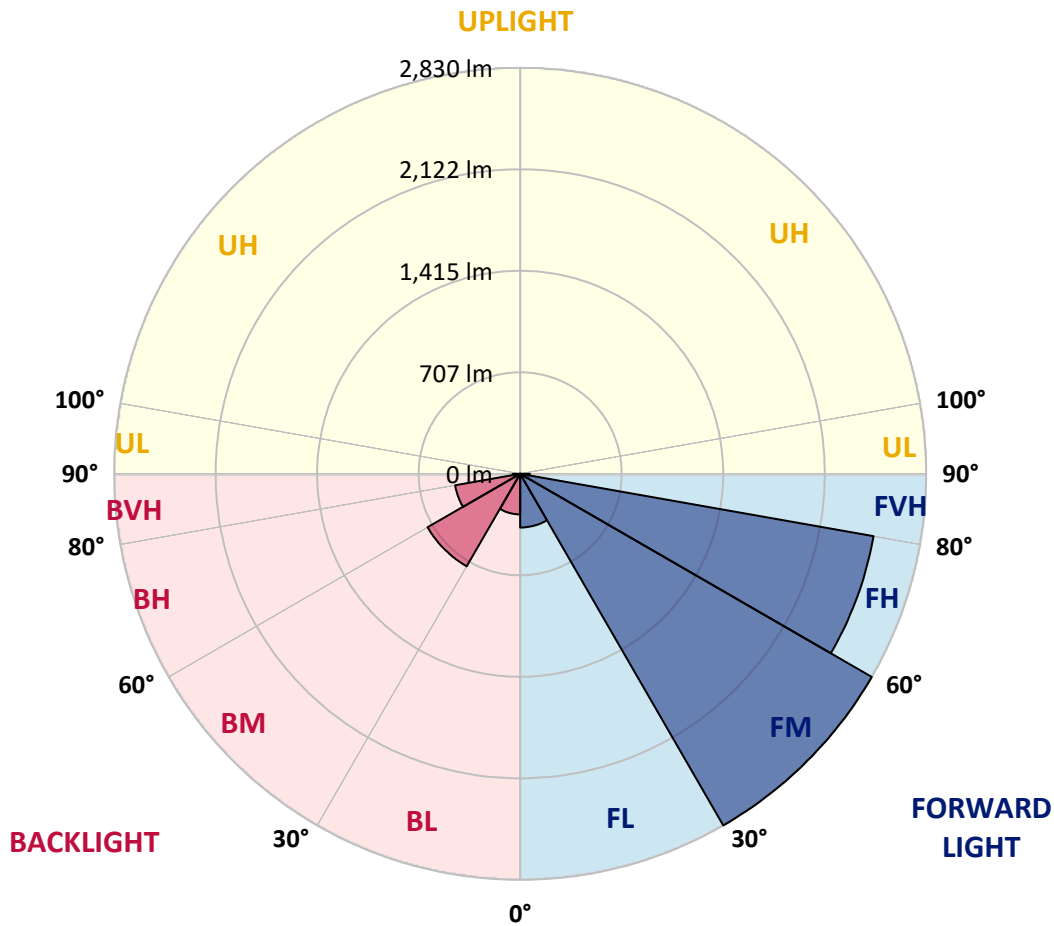
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	374.2	5.1			
FM (30°-60°)	2829.6	38.7			
FH (60°-80°)	2500.9	34.2			G2/5000
FVH (80°-90°)	67.2	0.9			G1/100
BL (0°-30°)	282.7	3.9	B1/500		
BM (30°-60°)	744.8	10.2	B1/1000		
BH (60°-80°)	460.4	6.3	B1/500		G1/500
BVH (80°-90°)	52.1	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

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

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9
2.5°	374.8	363.6	344.7	349.3	360.2	366.3	362.7	357.8	351.4	350.2	378.2
5°	485.4	463.8	454.9	451.3	437.9	430.0	443.7	441.8	449.1	462.5	489.9
7.5°	566.1	550.8	536.2	534.7	508.8	499.7	518.0	527.7	540.8	541.1	578.3
10°	609.3	596.2	595.9	582.2	580.1	597.4	597.7	605.1	606.6	622.1	614.8
12.5°	656.2	655.3	672.0	671.7	691.2	719.8	705.5	705.5	709.8	690.9	714.1
15°	768.0	777.7	746.3	751.5	751.5	779.5	778.6	784.1	797.2	792.3	782.0
17.5°	884.3	890.4	855.7	823.4	825.8	819.7	841.6	843.8	831.3	887.9	875.4
20°	959.2	982.9	909.9	869.4	877.3	884.3	885.2	872.1	865.7	952.8	935.7
22.5°	1051.8	1031.7	964.7	919.9	931.8	922.3	920.5	930.6	939.4	972.3	1000.0
25°	1113.6	1112.0	1031.7	982.6	969.5	966.8	985.4	981.4	1002.4	1062.1	1044.8
27.5°	1203.4	1231.4	1088.9	1101.1	1043.5	982.9	1042.6	1060.6	1098.3	1088.6	1127.3
30°	1377.6	1356.6	1207.7	1204.3	1139.2	1088.3	1129.7	1114.5	1182.4	1180.3	1208.9
32.5°	1519.8	1534.4	1347.1	1312.1	1263.7	1202.5	1175.1	1217.4	1253.9	1313.9	1330.1
35°	1670.2	1666.9	1489.9	1419.3	1339.2	1313.9	1347.7	1365.4	1443.0	1498.2	1459.8
37.5°	1904.1	1877.6	1675.1	1541.4	1481.4	1472.3	1530.1	1504.6	1588.6	1601.7	1623.3
40°	2121.5	2041.7	1844.4	1691.2	1595.9	1630.0	1631.8	1635.2	1680.3	1715.9	1822.8
42.5°	2328.2	2272.2	2016.4	1901.3	1760.9	1727.8	1748.5	1755.5	1869.4	1942.1	2090.1
45°	2610.8	2460.7	2263.7	2145.5	1988.4	1946.1	1931.5	1991.8	2101.7	2267.3	2394.3
47.5°	2849.9	2714.4	2526.5	2370.9	2195.2	2316.1	2233.2	2199.4	2347.1	2552.4	2754.5
50°	3048.1	2898.9	2714.7	2624.8	2596.8	2704.6	2489.6	2493.6	2628.8	2918.4	3150.1
52.5°	3201.6	3042.3	2879.1	2833.4	2989.9	3052.0	2896.7	2873.3	2972.0	3314.2	3592.5
55°	3345.0	3176.0	3049.9	3143.1	3406.8	3413.8	3402.8	3272.8	3391.6	3738.4	4050.5
57.5°	3381.8	3199.7	3116.0	3249.7	3606.2	3883.6	3992.7	3737.5	3858.4	4124.2	4442.7
60°	3192.1	3036.2	3002.7	3184.2	3714.0	4119.6	4404.4	4251.8	4206.4	4433.9	4717.4
62.5°	2803.6	2622.7	2649.8	2901.9	3600.5	4213.1	4729.6	4848.6	4574.0	4680.2	4837.4
65°	2231.4	2058.8	2113.6	2416.9	3243.9	4244.2	4895.8	5140.0	4706.7	4750.0	4667.4
67.5°	1573.7	1416.9	1486.0	1878.2	2698.5	3846.5	4924.4	5004.2	4565.4	4551.1	4203.4
70°	891.6	793.2	868.1	1195.2	1904.7	3064.2	4700.0	4595.0	4312.1	4109.3	3517.0
72.5°	408.9	375.1	411.1	608.4	1096.5	2039.0	3837.1	3932.4	3715.6	3461.9	2675.7
75°	217.4	205.5	220.8	303.9	513.1	1109.3	2726.2	2940.6	2825.2	2625.7	1745.4
77.5°	161.7	152.6	159.9	197.0	274.1	433.9	1549.0	1819.4	1863.3	1679.6	969.2
80°	123.9	116.6	123.9	148.9	189.7	206.1	662.3	848.0	965.9	780.4	385.2
82.5°	92.0	87.1	98.4	111.8	133.4	128.8	235.1	292.6	377.3	257.9	150.1
85°	73.1	67.0	71.3	75.8	85.3	70.6	107.5	120.3	127.3	106.6	55.4
87.5°	28.6	26.5	51.8	40.8	34.7	21.3	32.3	36.5	37.5	35.9	16.1
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°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9
2.5°	381.2	378.2	360.2	366.0	375.5	377.3	381.2	370.3	364.8	384.9	385.8
5°	492.4	475.9	467.4	468.3	462.2	452.8	467.1	476.5	480.2	495.1	500.6
7.5°	578.6	558.8	544.5	528.0	504.9	489.9	514.9	533.2	542.9	574.0	586.2
10°	616.9	601.1	598.0	577.3	576.7	576.4	575.2	568.8	589.8	586.8	595.3
12.5°	696.1	692.7	663.8	655.6	656.5	655.6	630.0	628.8	629.1	657.1	647.1
15°	769.8	770.4	743.9	714.1	687.3	679.0	669.0	664.4	671.1	687.0	677.2
17.5°	860.8	863.9	788.1	740.9	705.5	704.6	680.6	652.2	693.1	702.8	692.1
20°	919.6	906.8	813.6	734.5	724.4	697.0	667.2	628.2	663.5	687.3	694.0
22.5°	975.3	953.1	837.4	745.7	697.6	665.0	636.1	610.8	622.1	648.6	644.3
25°	1013.1	1007.0	870.3	772.8	696.7	624.2	585.3	569.1	574.9	616.0	612.1
27.5°	1103.2	1037.4	864.5	779.8	667.5	568.5	549.0	531.7	525.9	570.3	582.5
30°	1163.5	1136.4	903.2	768.9	630.6	522.8	494.2	490.6	492.4	542.9	546.3
32.5°	1265.8	1195.5	966.5	726.9	577.0	489.0	456.1	457.7	465.9	502.7	510.3
35°	1372.4	1330.4	975.0	696.7	533.5	453.1	439.7	429.0	433.6	465.9	467.4
37.5°	1570.3	1425.1	1027.4	650.1	501.5	439.4	413.8	404.4	406.8	425.1	438.2
40°	1744.5	1615.4	1003.0	605.1	461.9	421.1	389.2	382.2	374.8	392.8	401.0
42.5°	2023.7	1751.2	994.8	555.4	443.4	396.5	374.5	356.0	349.0	364.2	379.1
45°	2303.0	1895.2	950.1	505.2	417.2	394.6	353.2	335.6	337.4	351.1	366.3
47.5°	2614.2	2088.6	874.2	456.5	388.5	385.8	331.9	324.3	329.8	345.0	360.2
50°	2982.0	2293.8	811.5	412.6	368.1	359.3	329.2	320.0	325.2	343.2	358.1
52.5°	3384.3	2518.9	765.8	372.1	345.0	338.3	332.8	324.0	330.1	345.6	361.1
55°	3784.1	2724.4	734.8	344.4	325.2	329.5	340.4	334.0	337.1	348.7	364.2
57.5°	4080.7	2832.8	672.3	314.9	309.1	324.3	341.3	330.7	332.5	348.7	365.4
60°	4253.0	2853.5	569.7	290.8	296.3	313.9	331.9	318.2	317.0	343.5	364.5
62.5°	4234.1	2733.2	451.9	268.9	281.7	298.4	317.6	304.5	307.9	344.1	366.3
65°	3963.7	2487.5	359.3	250.3	264.0	281.4	305.7	300.5	316.7	368.5	392.5
67.5°	3488.7	2128.5	288.7	232.9	247.6	269.8	313.9	327.6	334.7	393.4	418.1
70°	2827.3	1653.8	240.6	217.7	234.5	275.3	337.7	335.0	329.2	381.5	401.0
72.5°	2042.6	1133.7	211.6	202.8	218.3	258.8	338.3	323.7	316.4	348.4	362.4
75°	1278.0	676.3	184.8	183.9	193.7	232.0	323.1	310.0	290.2	306.0	324.3
77.5°	729.9	346.2	155.6	163.8	169.6	201.3	289.3	277.4	259.7	266.4	284.4
80°	278.6	167.5	131.2	145.6	144.0	170.5	245.1	242.4	222.3	224.4	235.4
82.5°	131.2	93.8	109.0	125.2	116.9	135.8	199.1	198.2	180.6	163.5	172.3
85°	48.7	49.9	79.8	95.3	81.3	87.7	144.0	140.1	123.0	103.8	114.8
87.5°	11.0	18.0	39.3	49.6	28.3	27.1	58.2	50.5	48.7	28.9	30.5
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)