

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: P596978

Luminaire Tested: **MSA-SA2C-835-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596978  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-835-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10194 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

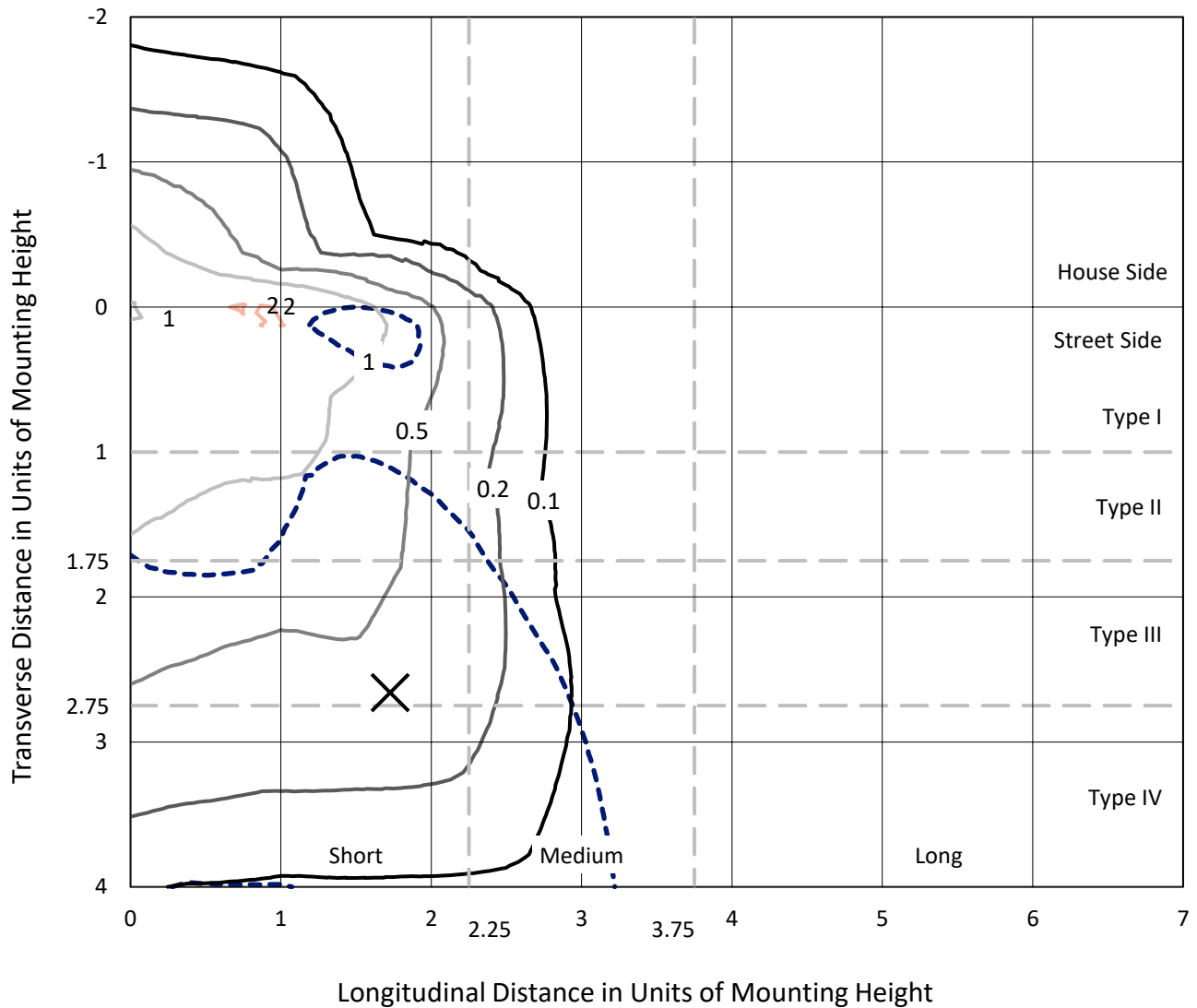
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

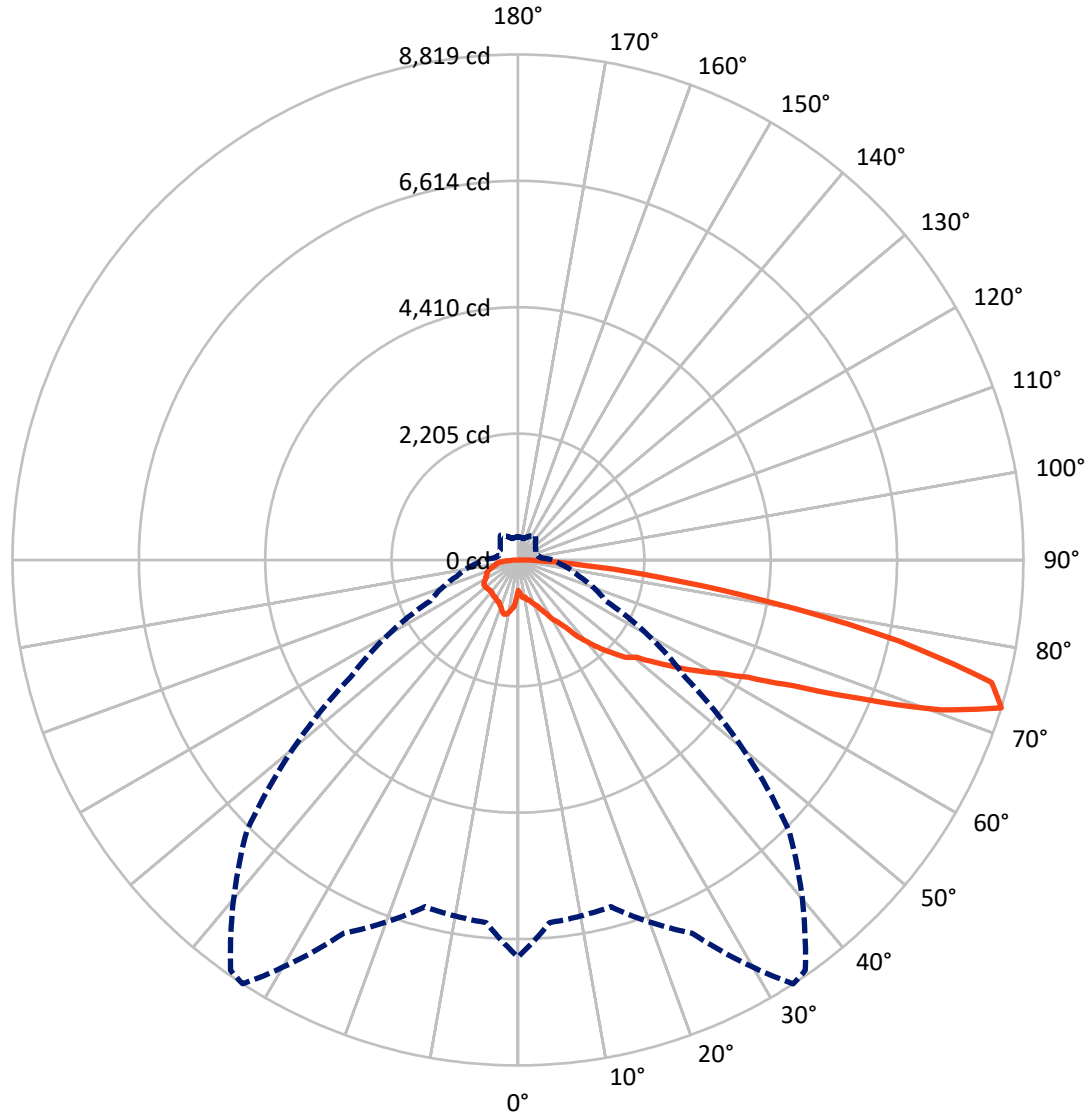
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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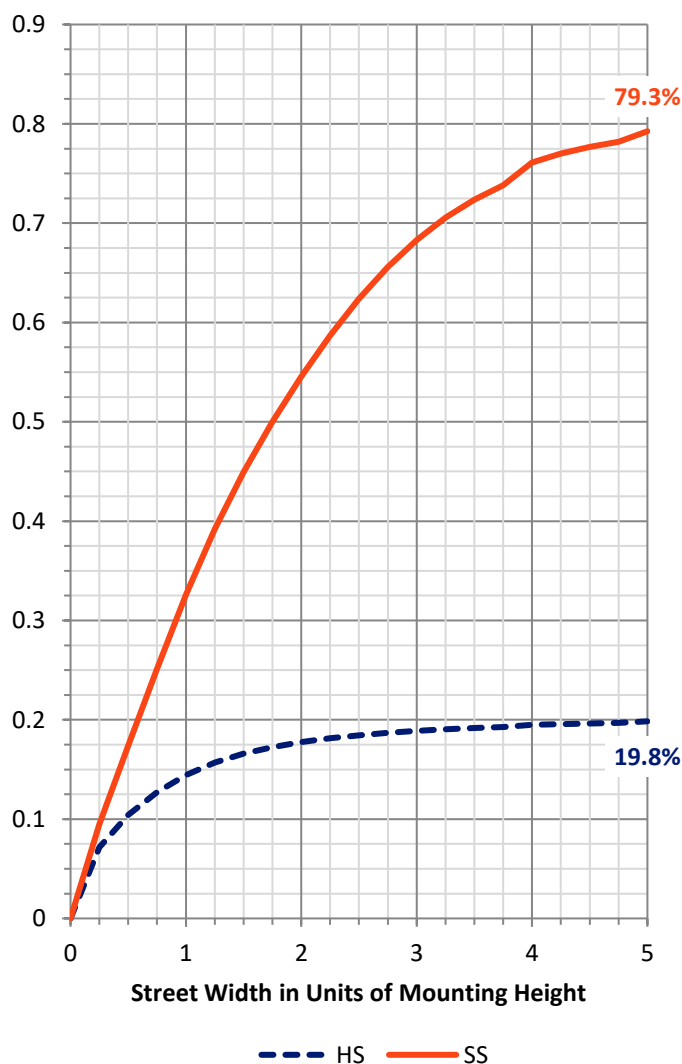
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2062.2	0.0	2062.2
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	8131.8	0.0	8131.8
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	10194.0	0.0	10194.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	0.7
10°-20°	271.6	2.7
20°-30°	495.3	4.9
30°-40°	837.9	8.2
40°-50°	1394.0	13.7
50°-60°	2045.8	20.1
60°-70°	2617.0	25.7
70°-80°	2129.2	20.9
80°-90°	329.8	3.2
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°	10194.0	100.0
0°-180°	10194.0	100.0

**Coefficient of Utilization**

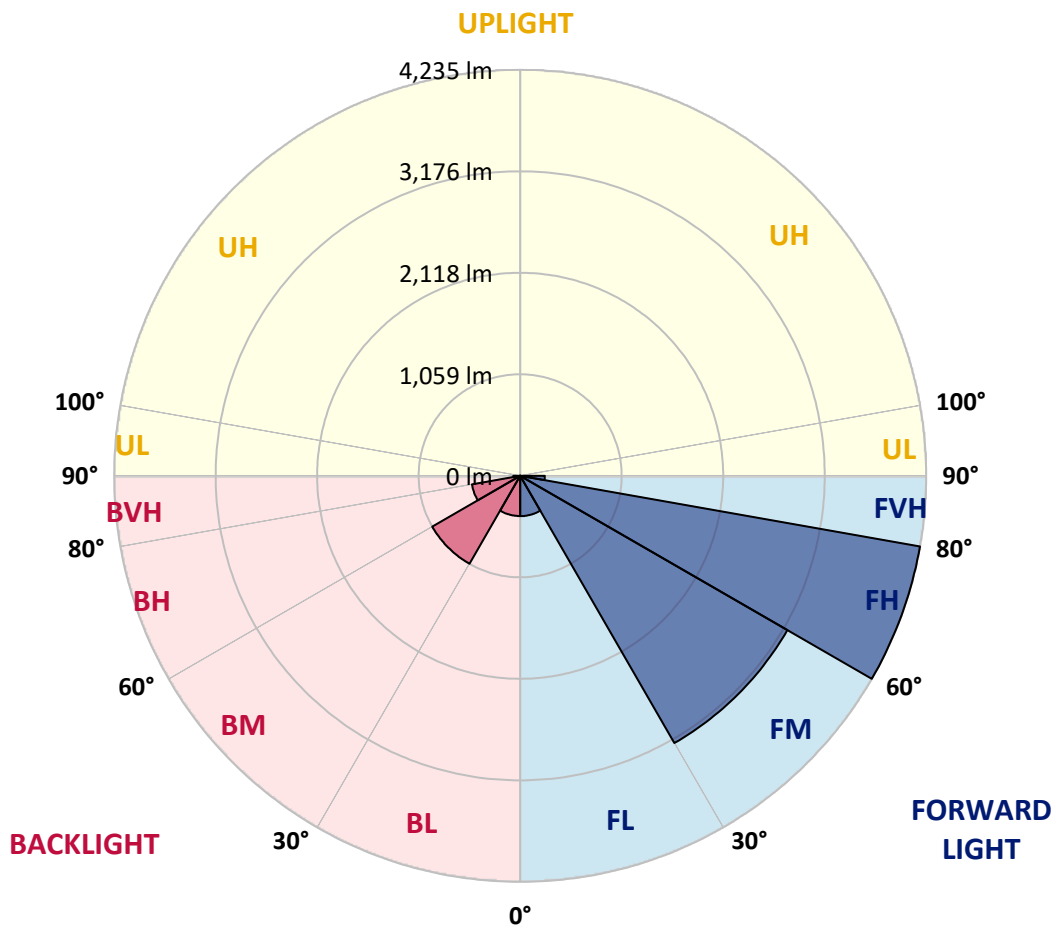


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	420.7	4.1			
FM (30°-60°)	3218.5	31.6			
FH (60°-80°)	4235.2	41.5			G2/5000
FVH (80°-90°)	257.4	2.5			G3/500
BL (0°-30°)	419.7	4.1	B1/500		
BM (30°-60°)	1059.2	10.4	B2/2500		
BH (60°-80°)	511.0	5.0	B2/1000		G2/1000
BVH (80°-90°)	72.4	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-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5
2.5°	606.0	587.0	555.7	554.8	572.2	576.0	587.4	588.2	592.5	585.7	633.9
5°	668.6	648.3	636.0	640.3	632.2	641.9	641.9	669.9	707.1	750.2	811.5
7.5°	683.4	668.6	654.6	665.2	666.9	657.6	666.5	732.0	799.3	842.4	940.5
10°	653.8	639.0	649.6	652.9	652.5	673.7	719.8	772.2	847.0	926.6	979.4
12.5°	648.3	658.9	663.9	669.9	710.0	716.4	786.2	840.3	915.6	985.3	1122.8
15°	729.9	743.9	712.6	710.5	723.6	729.5	801.8	856.4	966.3	1083.4	1206.9
17.5°	846.2	851.3	795.0	766.3	776.0	780.7	812.4	880.9	948.5	1165.1	1319.0
20°	958.7	962.1	856.4	792.1	826.3	831.4	861.0	900.3	953.6	1210.7	1394.7
22.5°	1076.7	1055.1	939.2	858.0	877.9	879.2	896.5	918.1	993.8	1203.5	1486.9
25°	1205.7	1192.1	1046.2	968.4	967.6	950.2	951.1	982.0	1036.5	1280.5	1547.4
27.5°	1376.9	1378.6	1166.8	1124.9	1059.3	1047.9	990.8	1048.3	1110.5	1281.4	1678.0
30°	1598.9	1557.9	1334.6	1267.0	1202.3	1178.2	1100.8	1149.8	1176.9	1354.5	1820.1
32.5°	1779.5	1767.7	1509.7	1407.4	1301.7	1329.6	1244.1	1201.0	1249.6	1480.5	2035.4
35°	1952.5	1913.6	1694.9	1561.7	1450.5	1433.6	1378.2	1385.4	1415.0	1640.0	2316.6
37.5°	2210.4	2189.3	1957.1	1744.0	1692.0	1623.1	1588.0	1610.4	1587.1	1844.2	2738.2
40°	2498.9	2376.2	2176.2	1986.3	1889.1	1840.4	1852.7	1831.5	1813.8	2073.4	3116.3
42.5°	2775.0	2663.4	2321.7	2236.2	2109.4	2129.7	2062.4	2077.2	2127.6	2398.6	3466.0
45°	3075.7	2834.2	2476.0	2400.7	2309.8	2335.6	2389.3	2373.3	2455.7	2782.2	3795.4
47.5°	3225.8	2996.2	2665.5	2542.8	2541.6	2487.9	2814.8	2850.3	2721.3	3066.4	4129.9
50°	3370.4	3144.6	2806.3	2723.4	2663.4	2778.4	3222.8	3141.2	2961.5	3392.4	4497.9
52.5°	3571.7	3314.2	2967.8	2879.5	2953.9	3060.5	3548.5	3532.4	3197.1	3727.8	4817.6
55°	3725.2	3465.2	3211.0	3129.0	3271.1	3375.5	3880.0	3783.2	3398.8	3973.9	5020.1
57.5°	3994.2	3727.4	3570.0	3387.8	3643.2	3641.5	4199.7	4124.9	3614.4	4176.0	5101.8
60°	4421.7	4108.4	3943.9	3733.7	4007.3	4105.0	4565.1	4349.4	3767.1	4303.8	4954.6
62.5°	5021.8	4649.7	4382.8	4174.8	4508.4	4685.2	5016.3	4513.1	3776.8	4267.4	4567.6
65°	5764.0	5311.5	4961.8	4741.9	5292.5	5544.9	5561.9	4614.2	3687.2	3891.4	3754.0
67.5°	6488.0	5979.2	5614.3	5656.2	6460.1	6579.8	6153.1	4698.7	3205.5	3124.7	2606.7
70°	6964.6	6413.1	6170.0	6614.0	7835.3	7712.7	6632.2	4475.9	2524.2	2025.6	1467.9
72.5°	6928.6	6351.4	6263.9	7183.2	8819.0	8742.4	6690.6	3559.5	1690.7	1107.6	732.0
75°	5644.7	5196.1	5394.8	6800.1	8535.6	8531.8	5808.8	2203.3	867.3	568.8	462.6
77.5°	3120.9	2946.7	3530.7	5148.7	6796.3	6831.0	3924.8	999.3	467.7	403.0	348.5
80°	1093.2	1077.1	1530.0	2778.4	4470.8	4479.3	1825.2	457.1	340.0	304.9	255.8
82.5°	399.6	396.2	634.3	1290.7	2461.6	2456.1	692.3	284.6	252.0	215.7	168.7
85°	159.4	156.0	290.1	573.0	1130.8	1112.6	269.0	161.5	164.9	128.6	82.9
87.5°	44.0	45.7	98.5	179.3	346.3	321.0	67.7	54.6	66.8	52.4	26.2
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°	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5	534.5
2.5°	642.4	646.6	604.7	619.5	638.6	648.7	653.8	632.2	639.4	669.9	668.6
5°	824.2	807.3	791.2	807.7	796.7	781.1	806.5	805.2	821.7	838.2	842.0
7.5°	960.0	938.0	930.4	893.1	855.9	818.3	850.9	871.2	875.4	916.4	933.7
10°	1009.0	1000.6	1003.5	954.5	949.8	953.6	923.6	891.0	910.9	894.0	906.7
12.5°	1122.4	1143.5	1091.1	1057.6	1054.7	1031.4	971.4	950.2	927.8	951.1	939.2
15°	1213.3	1252.6	1196.4	1137.6	1071.2	1035.2	984.1	951.9	937.1	942.2	927.8
17.5°	1346.5	1383.3	1240.3	1150.3	1081.8	1028.9	950.7	882.1	918.5	921.5	905.0
20°	1434.9	1437.4	1255.1	1119.0	1057.2	965.5	889.3	829.3	871.2	913.9	932.5
22.5°	1521.1	1502.1	1273.3	1094.0	968.0	879.2	842.0	838.2	869.5	905.4	909.6
25°	1585.8	1588.8	1283.9	1084.7	915.6	794.6	794.6	822.1	849.6	935.0	930.8
27.5°	1742.7	1627.3	1242.9	1042.0	842.8	745.1	795.0	831.8	844.9	937.5	946.9
30°	1856.9	1781.6	1251.3	968.8	769.2	721.9	762.9	809.0	845.4	952.3	949.0
32.5°	2048.5	1845.9	1271.2	866.1	714.3	713.0	749.4	798.0	841.6	936.3	941.4
35°	2260.4	2035.4	1215.8	787.8	701.2	707.9	754.9	774.3	825.5	929.9	934.6
37.5°	2652.4	2134.3	1180.7	727.4	692.7	712.1	729.9	759.9	811.5	898.2	928.7
40°	2882.4	2338.2	1050.5	692.3	674.9	708.8	717.6	743.0	770.9	860.2	879.6
42.5°	3185.2	2402.4	939.2	653.4	666.1	694.8	721.5	727.8	746.4	800.1	835.6
45°	3437.7	2450.7	821.3	622.1	636.0	725.7	727.4	724.4	721.0	740.9	770.1
47.5°	3699.0	2580.1	712.6	587.4	624.6	751.1	730.3	703.3	689.3	691.8	718.9
50°	3987.4	2673.9	635.6	559.1	627.1	751.1	744.7	681.7	653.8	646.6	674.9
52.5°	4241.2	2684.9	577.2	536.2	616.6	725.3	754.4	668.2	621.2	603.9	630.5
55°	4379.5	2545.8	535.0	515.5	589.5	702.0	749.4	660.6	581.9	568.8	592.5
57.5°	4376.5	2314.9	499.0	486.7	558.6	669.4	721.0	619.1	557.8	550.2	573.4
60°	4218.8	2044.3	471.5	463.1	526.9	622.1	670.3	592.0	534.5	530.7	556.1
62.5°	3861.0	1764.7	444.9	438.1	497.3	588.7	646.2	562.0	510.4	510.0	534.1
65°	3162.0	1416.7	419.9	418.2	469.8	555.7	623.3	536.6	485.5	493.9	518.5
67.5°	2178.7	995.5	393.3	398.4	444.5	524.0	606.0	519.7	459.3	476.6	498.6
70°	1195.5	615.7	363.7	373.8	412.3	487.2	578.9	492.2	425.0	451.6	466.9
72.5°	608.1	410.6	326.9	343.0	373.0	433.0	528.2	452.5	388.2	398.4	406.4
75°	408.5	309.1	285.9	303.6	325.2	381.4	468.6	415.3	353.1	351.8	360.7
77.5°	308.7	241.5	242.7	263.0	277.0	335.4	421.2	384.0	323.5	320.6	333.7
80°	225.8	183.1	195.4	216.5	229.2	301.1	390.3	349.3	283.3	271.5	282.5
82.5°	149.7	129.8	144.6	165.8	175.9	251.6	354.4	296.4	230.9	200.9	202.6
85°	70.6	68.1	86.3	96.4	109.5	156.0	265.2	205.1	147.2	121.8	127.3
87.5°	16.1	21.6	28.3	27.9	32.6	41.9	82.5	57.5	42.7	29.2	19.5
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)