

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: P596776

Luminaire Tested: **MSA-SA4B-827-U-T2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-827-U-T2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14245 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2

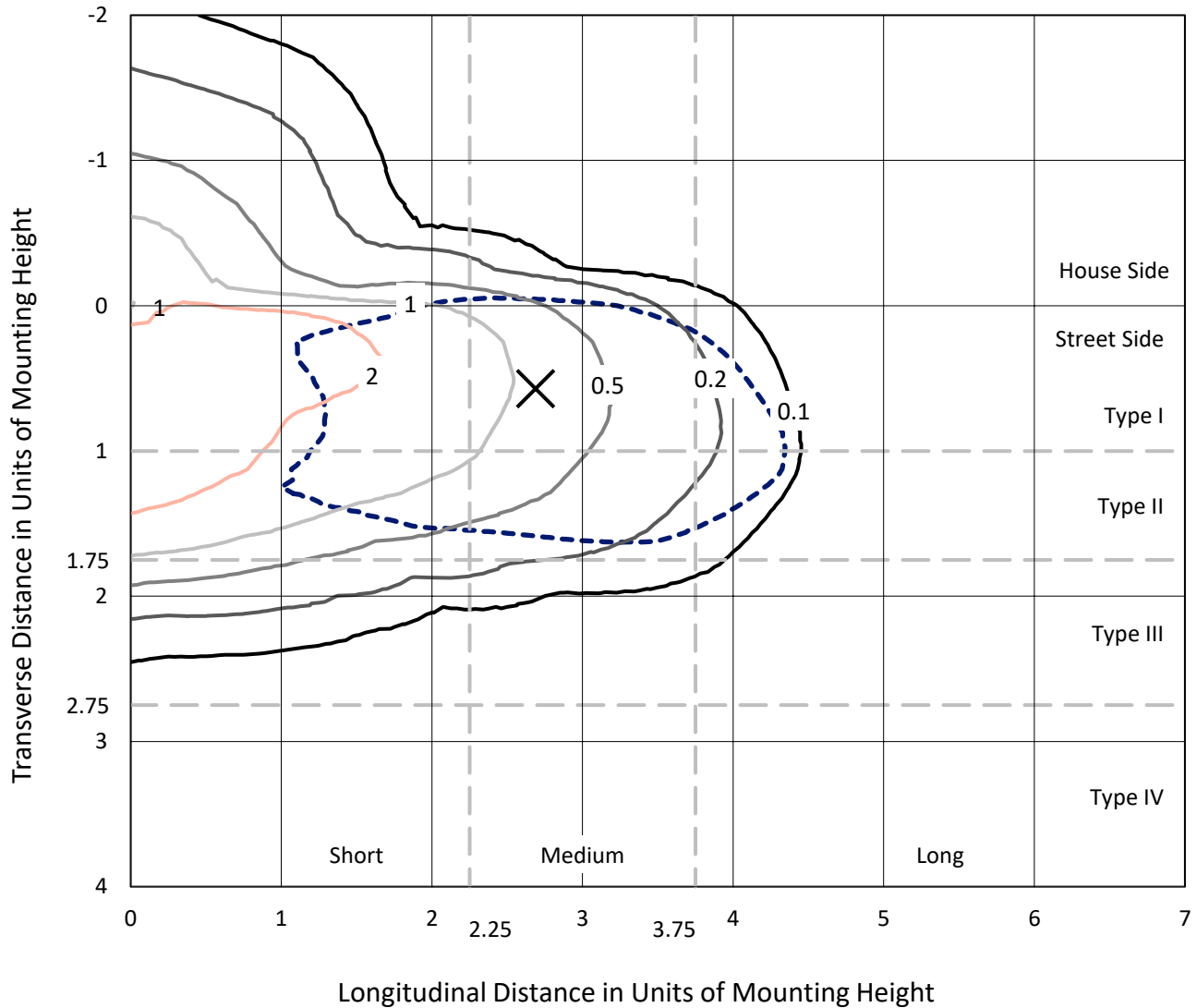
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

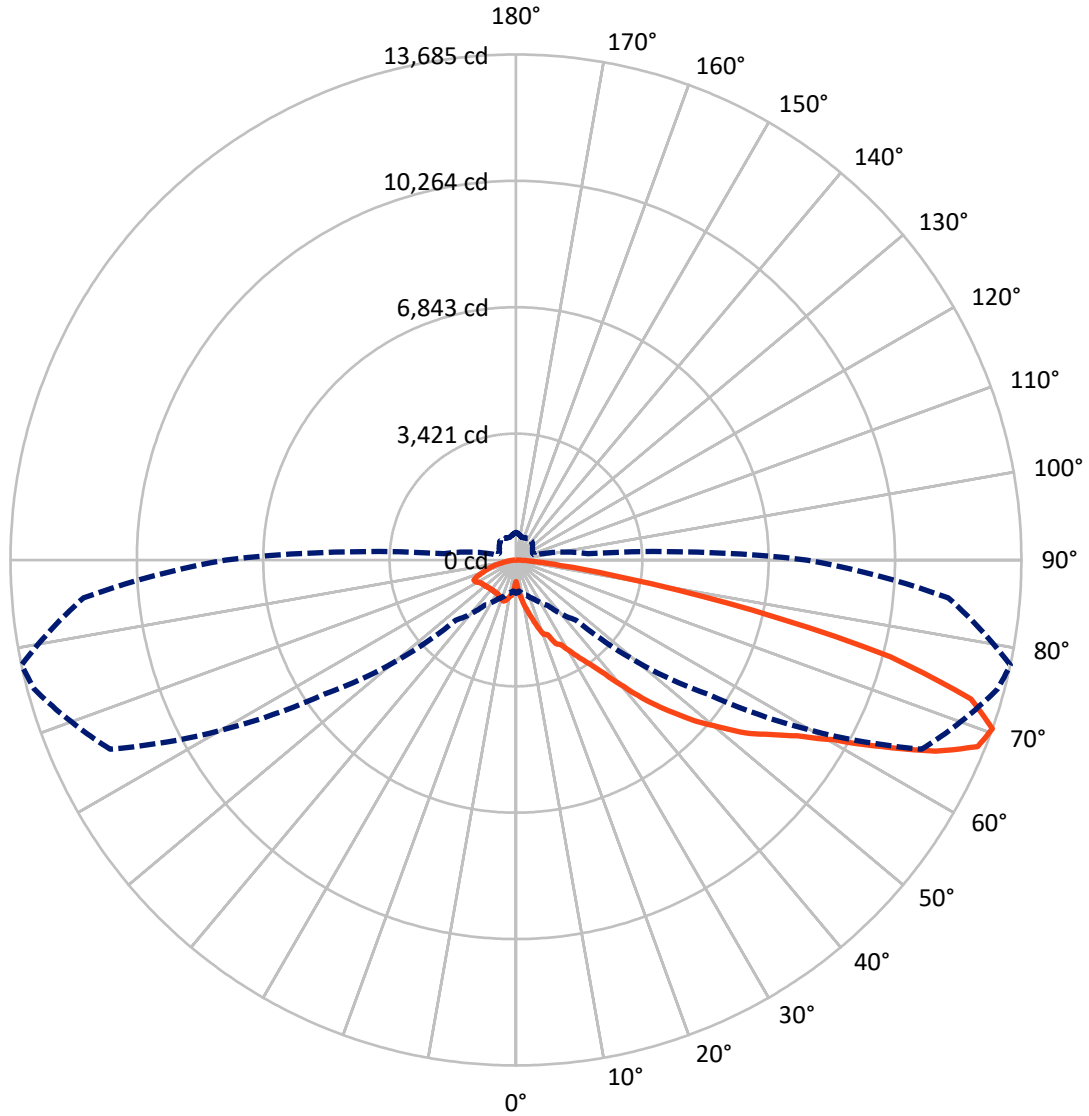
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type II - Medium - N/A

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CATALOG NUMBER: MSA-SA4B-827-U-T2

### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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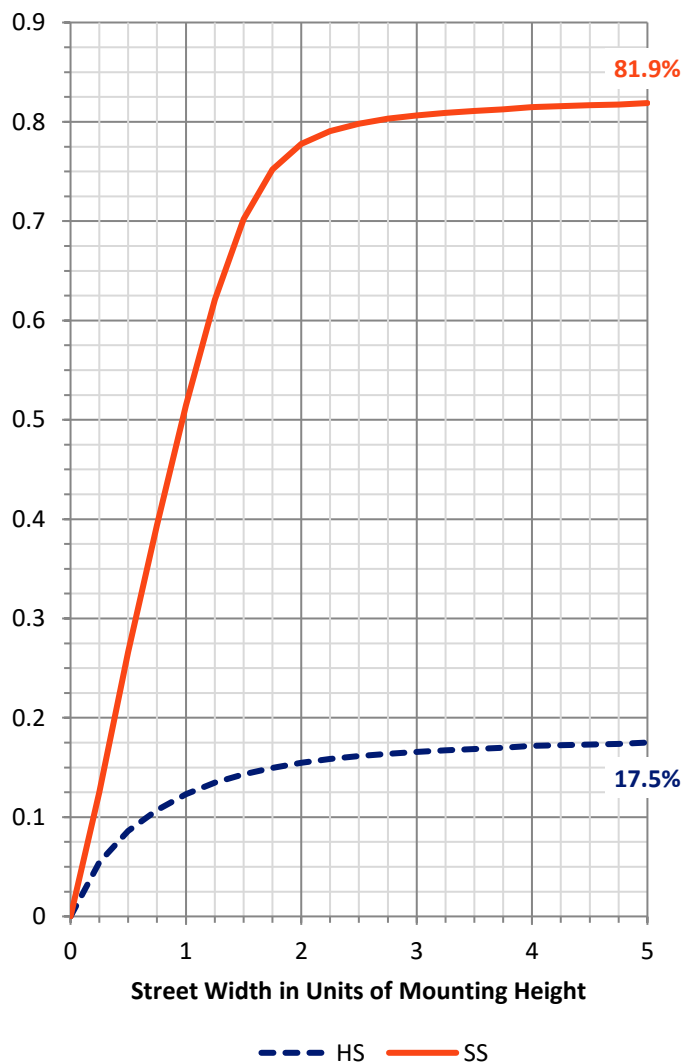
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2542.5	0.0	2542.5
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	11702.5	0.0	11702.5
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	14245.0	0.0	14245.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.8	0.6
10°-20°	395.4	2.8
20°-30°	761.2	5.3
30°-40°	1282.1	9.0
40°-50°	2218.4	15.6
50°-60°	3349.4	23.5
60°-70°	3709.9	26.0
70°-80°	2138.9	15.0
80°-90°	300.0	2.1
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°	14245.0	100.0
0°-180°	14245.0	100.0

**Coefficient of Utilization**

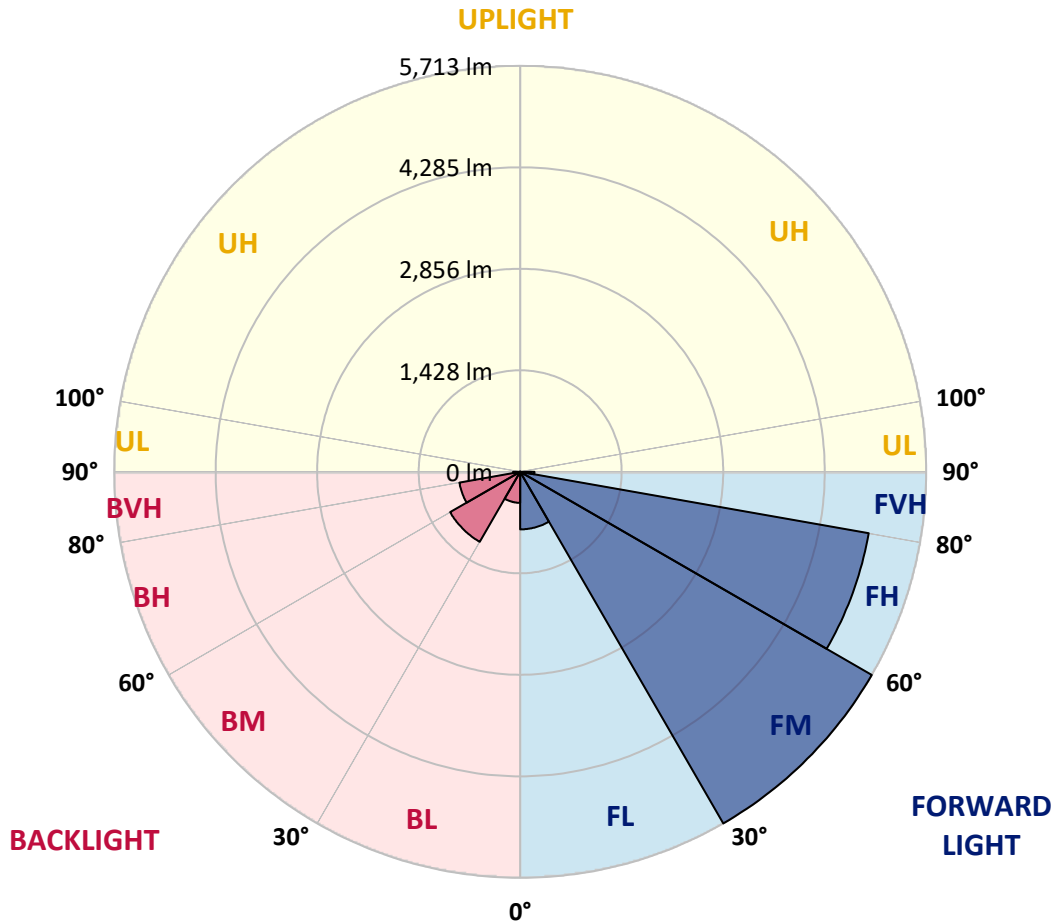


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 CATALOG NUMBER: MSA-SA4B-827-U-T2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	809.8	5.7			
FM (30°-60°)	5712.7	40.1			
FH (60°-80°)	4979.9	35.0			G2/5000
FVH (80°-90°)	200.1	1.4			G2/225
BL (0°-30°)	436.6	3.1	B1/500		
BM (30°-60°)	1137.2	8.0	B2/2500		
BH (60°-80°)	868.9	6.1	B2/1000		G2/1000
BVH (80°-90°)	99.9	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8
2.5°	747.6	720.9	680.5	697.2	717.4	719.7	713.2	676.4	663.9	691.8	700.1
5°	1047.5	1002.4	975.1	966.2	935.9	872.9	918.1	894.9	899.7	886.0	912.7
7.5°	1299.9	1269.6	1229.2	1218.0	1148.5	1099.2	1130.1	1120.0	1071.3	1052.3	1082.6
10°	1428.2	1394.9	1396.7	1372.4	1354.0	1358.7	1343.3	1298.7	1262.5	1237.0	1163.9
12.5°	1505.4	1513.7	1558.2	1545.8	1615.2	1672.3	1628.9	1563.0	1448.4	1425.2	1352.8
15°	1688.9	1719.8	1678.2	1697.2	1726.9	1836.2	1818.3	1804.1	1682.9	1637.8	1504.2
17.5°	1877.7	1883.7	1820.7	1810.6	1881.9	1937.1	2006.6	1926.4	1941.3	1909.8	1693.6
20°	1918.1	1959.1	1868.8	1806.5	1953.1	2062.4	2148.5	2063.6	2142.0	2150.3	1849.8
22.5°	2066.0	2016.7	1897.9	1836.7	1965.0	2099.2	2239.4	2286.9	2261.9	2191.9	2000.6
25°	2168.7	2142.6	2021.4	1953.7	2002.4	2125.9	2371.8	2495.9	2517.9	2508.4	2144.4
27.5°	2359.3	2372.4	2123.0	2142.0	2074.3	2085.6	2451.4	2773.2	2636.1	2598.0	2322.5
30°	2660.4	2602.2	2322.5	2337.9	2225.7	2206.7	2619.4	3012.5	2889.6	2843.9	2469.2
32.5°	2974.5	2979.9	2640.2	2508.4	2448.4	2429.4	2586.2	3137.8	3210.3	3150.9	2690.7
35°	3417.5	3386.7	2984.6	2811.2	2594.5	2561.2	2823.1	3501.3	3634.3	3468.0	2953.8
37.5°	4092.1	3998.9	3531.0	3130.1	2969.8	2931.8	3161.6	3827.3	4126.6	3919.9	3383.7
40°	4633.7	4444.3	4019.1	3531.0	3259.6	3306.5	3402.1	4222.8	4637.3	4520.9	3781.6
42.5°	5065.5	4897.4	4364.7	4021.5	3652.7	3594.5	3699.0	4712.7	5332.1	5218.1	4278.0
45°	5479.4	5137.3	4753.1	4444.3	4089.8	4160.4	4145.0	5212.7	6184.2	5833.3	4716.9
47.5°	5887.9	5566.7	5164.6	4749.5	4392.6	4832.7	4668.2	5584.5	6759.1	6499.0	5178.9
50°	6412.9	6059.5	5601.7	5184.2	4970.4	5292.3	5016.2	5899.2	7402.8	7097.6	5614.8
52.5°	6761.5	6417.6	6016.2	5718.1	5698.5	5574.4	5503.7	6297.7	7967.0	7781.7	6076.8
55°	6720.5	6389.1	6207.4	6240.1	6482.4	6063.7	6006.1	6887.4	8555.4	8341.1	6575.6
57.5°	6206.8	5845.2	5883.8	6077.4	6728.2	6923.0	6825.0	7517.4	9080.4	8983.0	7192.6
60°	4835.0	4649.2	4963.3	5317.2	6399.2	7174.8	7863.6	8285.8	9726.5	9882.1	8161.7
62.5°	3140.8	2892.6	3389.0	3990.0	5417.6	7008.5	8921.3	9743.1	10784.7	11138.1	9634.5
65°	1627.1	1587.3	1934.7	2487.0	3771.5	5975.8	9294.2	11271.7	12071.0	12482.5	11041.3
67.5°	1182.9	1109.3	1270.2	1595.1	2302.3	4074.9	8587.5	12440.9	13103.7	13480.8	11859.0
70°	900.9	846.2	969.1	1170.5	1503.6	2301.7	6339.2	12122.0	13502.1	13685.0	11750.3
72.5°	674.6	627.7	735.2	922.8	1158.6	1295.8	3747.1	9967.0	12822.2	12884.5	10546.0
75°	538.6	502.4	548.7	728.6	944.2	881.9	1990.6	7221.1	10417.7	10471.2	8055.4
77.5°	441.8	410.9	429.9	546.3	734.6	663.3	987.6	4593.3	6614.2	6532.2	4532.2
80°	360.5	333.7	342.6	394.9	559.4	495.3	554.6	2396.1	3155.1	3028.0	1884.8
82.5°	277.3	254.8	272.6	290.4	405.0	355.7	323.6	1090.3	1292.2	1203.7	691.2
85°	185.9	165.1	236.9	217.9	264.9	218.5	177.0	434.1	481.6	448.9	242.9
87.5°	51.1	48.1	79.6	108.7	108.7	82.5	64.7	105.1	134.2	117.6	57.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596776  
 CATALOG NUMBER: MSA-SA4B-827-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8	580.8
2.5°	703.7	690.6	656.2	653.2	661.5	662.7	657.4	644.9	638.4	674.0	668.7
5°	906.2	859.9	832.0	806.4	770.8	745.3	751.8	769.6	775.6	802.3	805.2
7.5°	1063.6	1002.4	941.2	859.3	805.2	770.8	796.9	815.9	830.8	868.8	884.2
10°	1131.9	1065.3	978.6	892.5	877.7	883.6	868.8	873.5	896.7	898.5	906.2
12.5°	1258.9	1183.5	1027.3	949.5	945.4	957.9	952.5	974.5	990.5	1033.9	1015.5
15°	1380.7	1284.5	1064.2	984.6	967.4	992.3	1021.4	1058.2	1092.7	1133.6	1112.9
17.5°	1528.5	1383.6	1065.9	968.6	971.5	1025.0	1055.3	1075.4	1178.2	1234.6	1206.1
20°	1621.8	1393.7	1026.2	928.8	971.5	1019.6	1061.8	1083.8	1199.0	1283.9	1303.5
22.5°	1706.1	1397.3	995.3	907.4	934.7	998.2	1061.8	1110.5	1184.1	1265.5	1268.4
25°	1752.4	1394.3	955.5	909.2	934.1	965.6	1022.0	1066.5	1121.2	1234.6	1237.6
27.5°	1871.2	1355.7	916.3	916.3	929.4	930.5	1002.4	1028.5	1036.3	1139.6	1158.0
30°	1905.6	1364.0	911.5	915.1	921.6	909.8	941.2	958.5	969.7	1058.8	1061.8
32.5°	1960.9	1297.5	925.8	904.4	896.1	894.3	902.0	917.5	922.2	976.9	987.0
35°	2028.0	1270.8	930.5	901.4	884.8	875.9	899.1	880.1	894.9	959.1	966.2
37.5°	2246.5	1234.0	954.9	901.4	880.1	870.0	858.7	867.6	920.5	982.2	1020.2
40°	2386.0	1245.3	949.0	910.4	864.0	854.5	835.5	868.2	950.1	1059.4	1087.9
42.5°	2630.7	1251.8	956.1	906.2	869.4	832.6	845.0	880.7	966.8	1029.1	1073.1
45°	2883.7	1272.0	951.3	893.7	857.5	874.7	857.5	889.6	930.5	932.3	965.6
47.5°	3131.9	1353.4	941.2	868.2	854.5	899.7	855.7	861.1	864.0	874.7	913.9
50°	3423.5	1440.1	927.0	832.6	858.7	900.9	862.3	836.1	833.2	868.2	912.1
52.5°	3754.8	1538.0	908.6	798.1	834.3	889.6	884.8	837.9	812.4	846.2	890.2
55°	4145.0	1649.7	887.2	763.7	807.6	890.8	897.3	825.4	813.0	849.8	896.7
57.5°	4663.4	1811.2	845.6	713.8	775.0	872.4	865.2	811.2	799.3	838.5	887.2
60°	5548.2	2121.8	786.2	664.5	739.9	827.2	839.1	785.6	773.8	817.1	868.2
62.5°	6733.0	2495.3	714.4	616.4	697.2	778.5	806.4	748.8	747.6	802.9	856.3
65°	7835.7	2707.3	640.2	572.5	653.2	733.4	769.6	714.4	716.8	786.2	839.7
67.5°	8294.2	2457.9	573.6	533.3	602.7	681.7	739.3	687.7	679.9	763.7	813.0
70°	7863.6	1952.5	516.0	491.7	545.7	625.9	697.2	652.0	634.2	710.2	748.8
72.5°	6958.0	1627.7	462.0	443.0	495.9	567.1	640.2	603.9	580.8	639.0	673.4
75°	5439.0	1335.5	400.2	394.9	438.8	513.7	580.8	555.8	526.1	563.0	597.4
77.5°	3096.9	845.0	336.1	339.7	371.1	450.1	509.5	489.9	459.6	475.1	514.9
80°	1239.3	426.4	270.2	272.6	299.3	370.0	422.2	415.1	383.6	396.1	423.4
82.5°	463.2	234.0	199.5	200.7	227.4	292.8	360.5	356.9	327.2	318.3	333.7
85°	184.1	115.8	122.3	127.7	153.2	210.8	289.2	256.5	221.5	194.2	203.7
87.5°	43.9	36.8	42.8	45.1	49.9	65.9	105.7	84.9	87.3	70.1	52.3
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)