

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: P367432

Luminaire Tested: **MSA-SA2C-730-U-T4FT**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367432  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-730-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: 11261 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

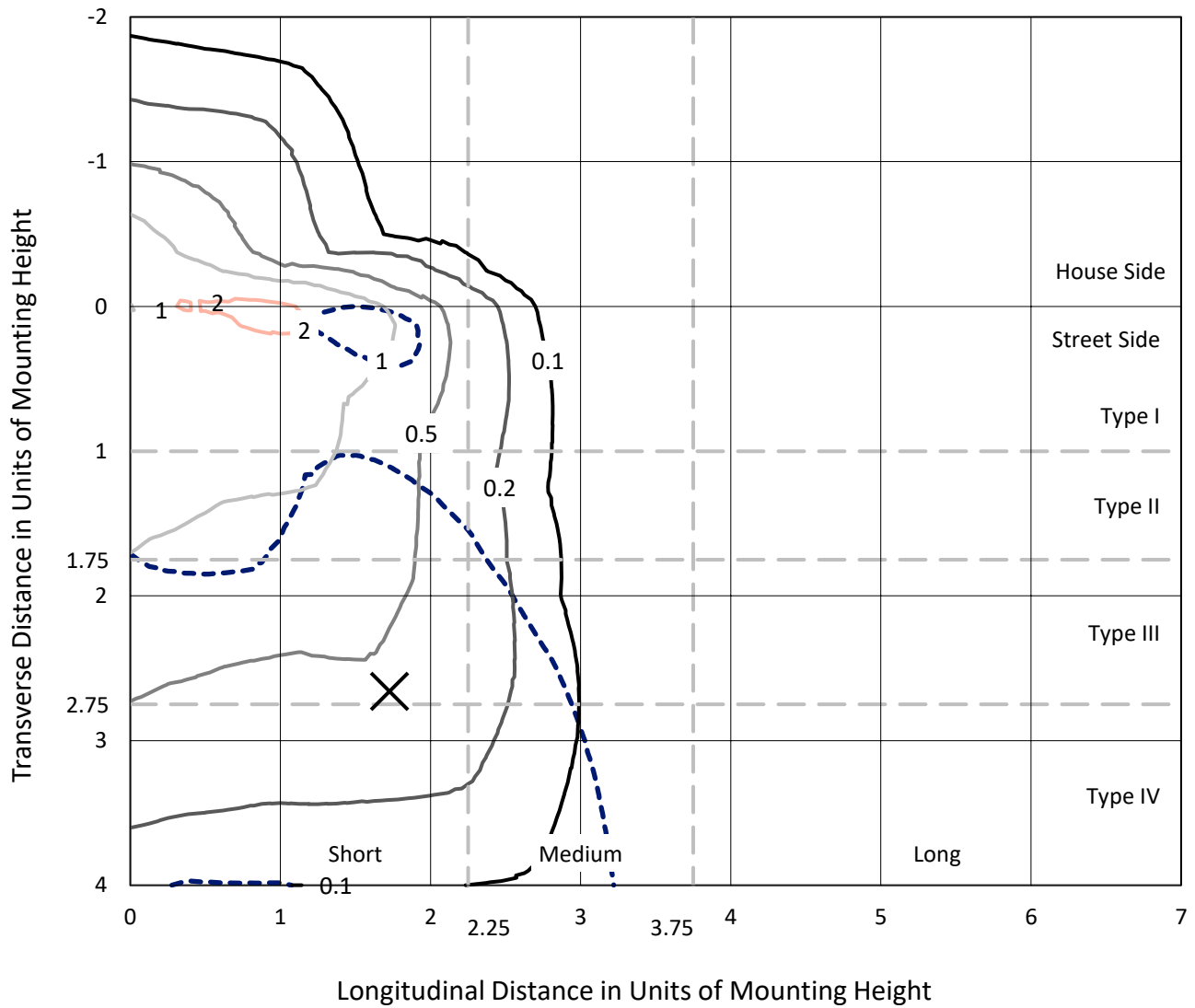
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

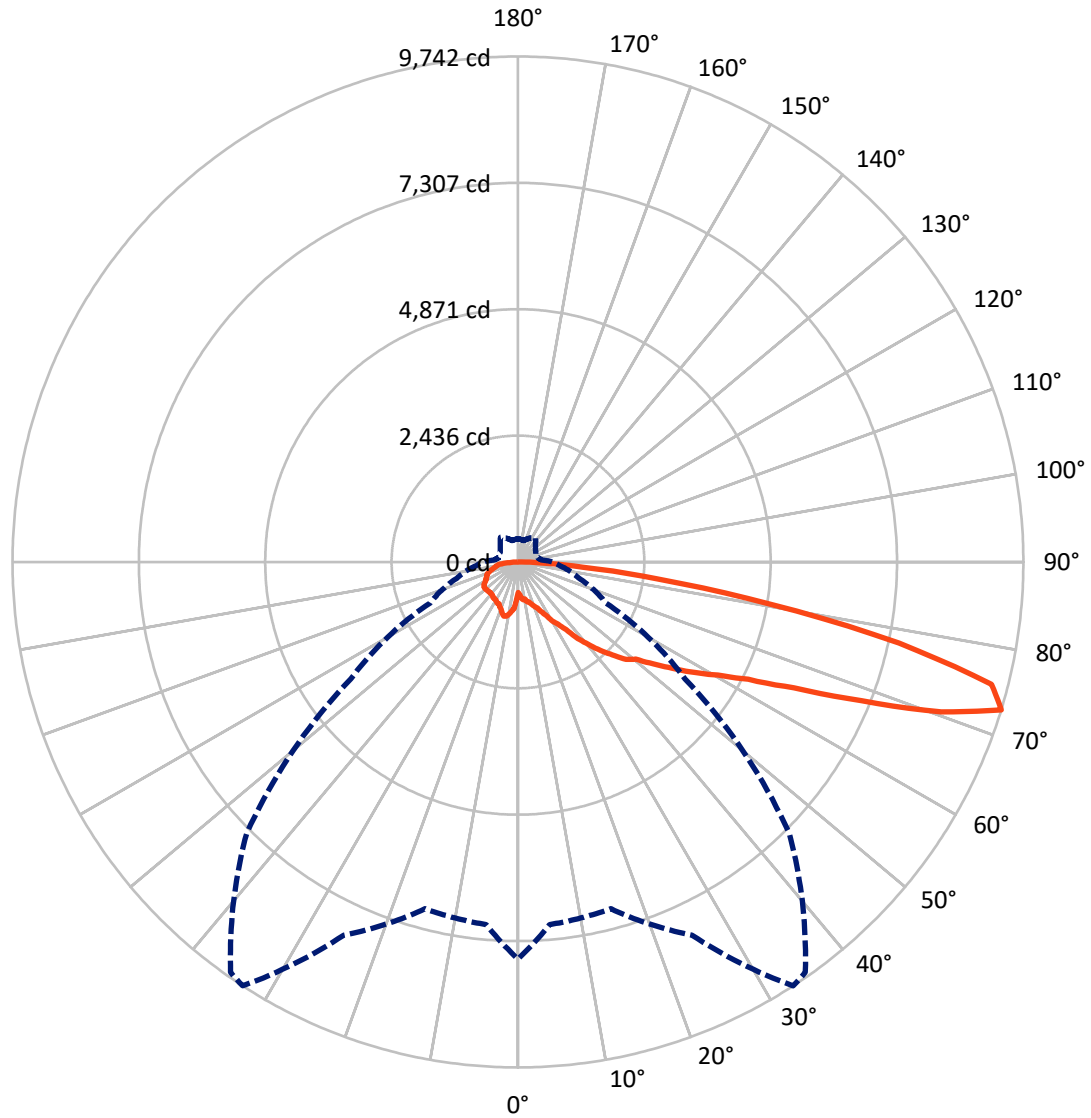
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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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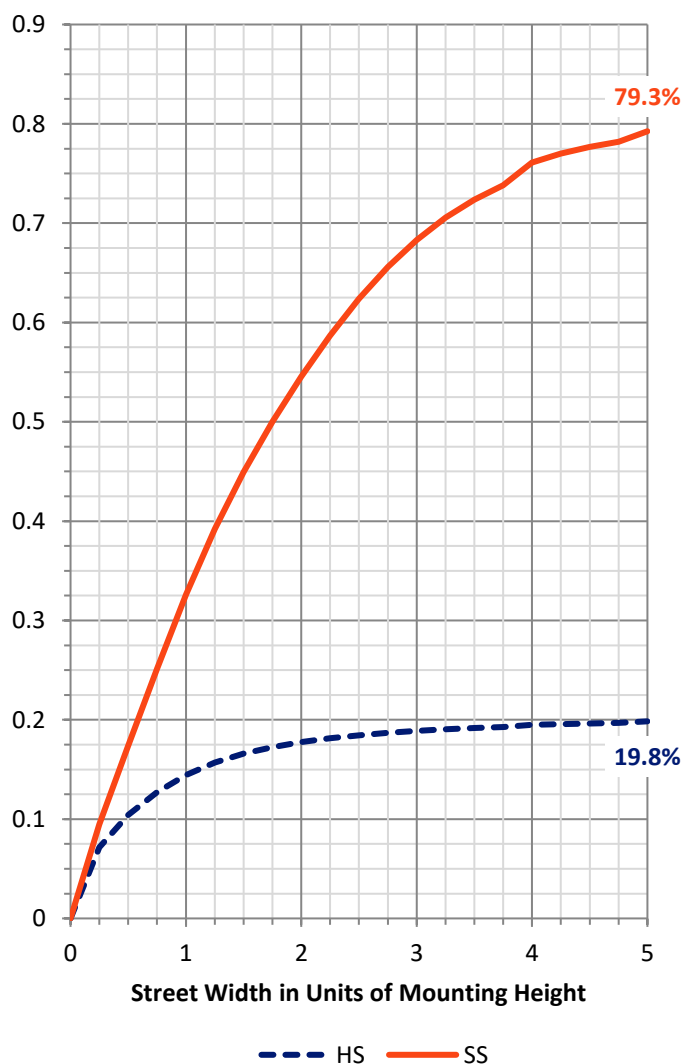
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2278.1	0.0	2278.1
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	8982.9	0.0	8982.9
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	11261.0	0.0	11261.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.2	0.7
10°-20°	300.0	2.7
20°-30°	547.1	4.9
30°-40°	925.6	8.2
40°-50°	1539.9	13.7
50°-60°	2259.9	20.1
60°-70°	2890.9	25.7
70°-80°	2352.0	20.9
80°-90°	364.3	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°	11261.0	100.0
0°-180°	11261.0	100.0

**Coefficient of Utilization**



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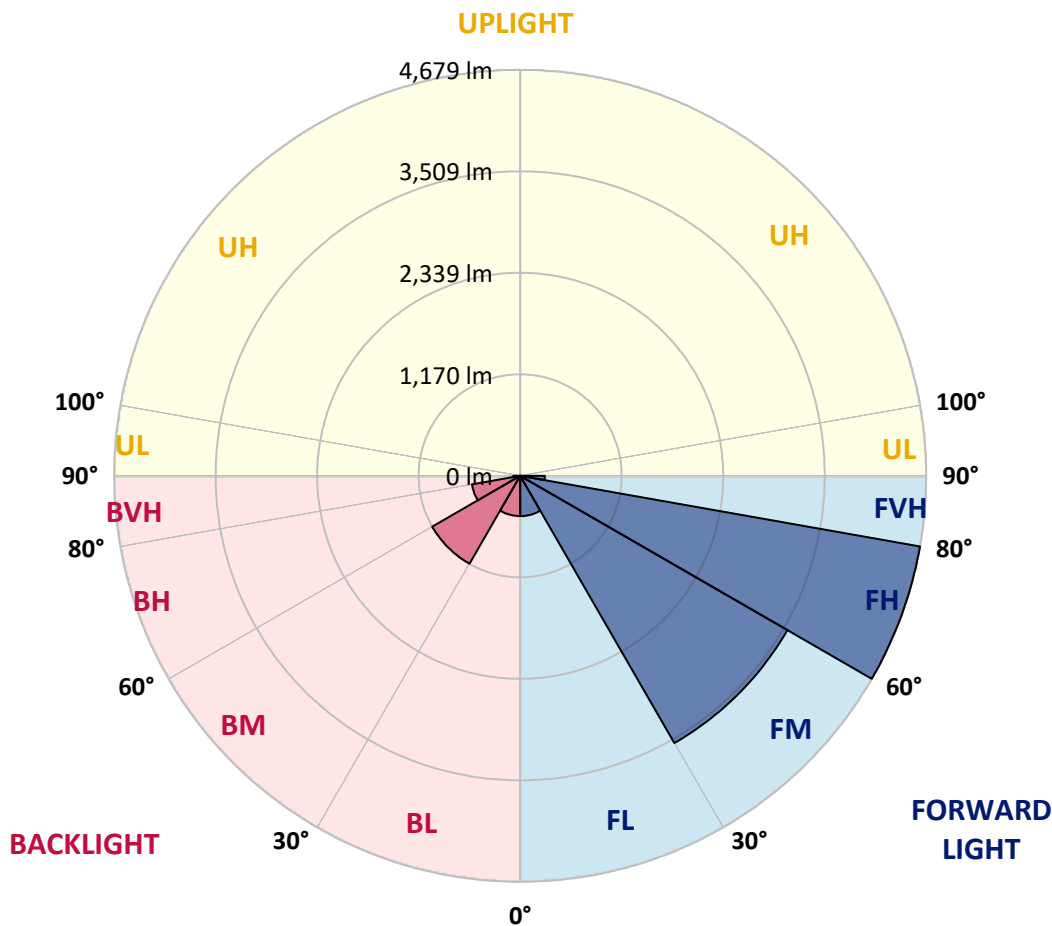
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	464.7	4.1			
FM (30°-60°)	3555.4	31.6			
FH (60°-80°)	4678.5	41.5			G2/5000
FVH (80°-90°)	284.3	2.5			G3/500
BL (0°-30°)	463.6	4.1	B1/500		
BM (30°-60°)	1170.0	10.4	B2/2500		
BH (60°-80°)	564.5	5.0	B2/1000		G2/1000
BVH (80°-90°)	80.0	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°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5
2.5°	669.4	648.4	613.8	612.9	632.1	636.3	648.9	649.8	654.5	647.0	700.3
5°	738.6	716.1	702.6	707.3	698.4	709.1	709.1	740.0	781.1	828.7	896.5
7.5°	754.9	738.6	723.2	734.8	736.7	726.4	736.2	808.6	882.9	930.6	1039.0
10°	722.2	705.9	717.5	721.3	720.8	744.2	795.1	853.0	935.7	1023.5	1081.9
12.5°	716.1	727.8	733.4	740.0	784.4	791.4	868.4	928.2	1011.4	1088.5	1240.3
15°	806.3	821.7	787.2	784.8	799.3	805.8	885.7	946.0	1067.4	1196.8	1333.3
17.5°	934.8	940.4	878.3	846.5	857.2	862.4	897.4	973.1	1047.8	1287.0	1457.1
20°	1059.0	1062.8	946.0	875.0	912.8	918.4	951.1	994.6	1053.4	1337.5	1540.7
22.5°	1189.4	1165.5	1037.5	947.9	969.8	971.2	990.4	1014.2	1097.8	1329.5	1642.5
25°	1331.9	1316.9	1155.7	1069.8	1068.8	1049.7	1050.6	1084.7	1145.0	1414.5	1709.3
27.5°	1521.1	1522.9	1288.9	1242.6	1170.2	1157.6	1094.5	1158.1	1226.7	1415.5	1853.7
30°	1766.3	1721.0	1474.3	1399.6	1328.1	1301.5	1216.0	1270.2	1300.1	1496.3	2010.6
32.5°	1965.8	1952.7	1667.7	1554.7	1437.9	1468.7	1374.4	1326.7	1380.4	1635.5	2248.4
35°	2156.9	2113.9	1872.4	1725.2	1602.3	1583.7	1522.5	1530.4	1563.1	1811.6	2559.1
37.5°	2441.8	2418.5	2162.0	1926.5	1869.1	1792.9	1754.2	1778.9	1753.2	2037.3	3024.8
40°	2760.4	2624.9	2404.0	2194.2	2086.8	2033.1	2046.6	2023.2	2003.6	2290.5	3442.5
42.5°	3065.5	2942.1	2564.7	2470.3	2330.2	2352.6	2278.3	2294.7	2350.3	2649.7	3828.8
45°	3397.6	3130.9	2735.2	2652.0	2551.6	2580.1	2639.4	2621.7	2712.8	3073.4	4192.7
47.5°	3563.5	3309.8	2944.5	2809.0	2807.6	2748.3	3109.4	3148.6	3006.1	3387.3	4562.2
50°	3723.2	3473.8	3100.0	3008.5	2942.1	3069.2	3560.2	3470.0	3271.5	3747.5	4968.7
52.5°	3945.6	3661.1	3278.5	3180.9	3263.1	3380.8	3919.9	3902.1	3531.7	4118.0	5321.8
55°	4115.2	3827.9	3547.1	3456.5	3613.4	3728.8	4286.1	4179.2	3754.5	4389.8	5545.6
57.5°	4412.3	4117.5	3943.7	3742.4	4024.5	4022.7	4639.3	4556.6	3992.8	4613.1	5635.7
60°	4884.6	4538.4	4356.7	4124.5	4426.8	4534.7	5042.9	4804.7	4161.4	4754.2	5473.2
62.5°	5547.5	5136.4	4841.6	4611.7	4980.3	5175.6	5541.4	4985.5	4172.2	4714.1	5045.7
65°	6367.3	5867.5	5481.1	5238.2	5846.4	6125.3	6144.0	5097.1	4073.1	4298.8	4146.9
67.5°	7167.1	6605.1	6201.9	6248.2	7136.2	7268.5	6797.1	5190.6	3541.0	3451.8	2879.5
70°	7693.6	7084.4	6815.8	7306.3	8655.4	8520.0	7326.4	4944.4	2788.4	2237.7	1621.5
72.5°	7653.9	7016.2	6919.5	7935.1	9742.0	9657.5	7390.8	3932.0	1867.7	1223.5	808.6
75°	6235.6	5739.9	5959.5	7511.8	9429.0	9424.8	6416.8	2433.9	958.1	628.3	511.1
77.5°	3447.6	3255.1	3900.3	5687.6	7507.6	7545.9	4335.7	1103.9	516.7	445.2	384.9
80°	1207.6	1189.8	1690.2	3069.2	4938.8	4948.1	2016.2	505.0	375.6	336.8	282.6
82.5°	441.5	437.7	700.7	1425.8	2719.3	2713.2	764.7	314.4	278.4	238.2	186.4
85°	176.1	172.4	320.5	633.0	1249.2	1229.1	297.1	178.5	182.2	142.0	91.6
87.5°	48.6	50.5	108.8	198.1	382.6	354.6	74.7	60.3	73.8	57.9	29.0
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°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5
2.5°	709.6	714.3	668.0	684.4	705.4	716.6	722.2	698.4	706.3	740.0	738.6
5°	910.5	891.8	874.0	892.3	880.1	862.8	890.9	889.5	907.7	925.9	930.1
7.5°	1060.4	1036.1	1027.7	986.6	945.5	903.9	939.9	962.3	967.0	1012.3	1031.5
10°	1114.6	1105.3	1108.6	1054.4	1049.2	1053.4	1020.3	984.3	1006.3	987.6	1001.6
12.5°	1239.8	1263.2	1205.3	1168.4	1165.1	1139.4	1073.1	1049.7	1024.9	1050.6	1037.5
15°	1340.3	1383.7	1321.6	1256.6	1183.3	1143.6	1087.1	1051.6	1035.2	1040.8	1024.9
17.5°	1487.4	1528.1	1370.2	1270.7	1195.0	1136.6	1050.2	974.5	1014.7	1017.9	999.7
20°	1585.1	1587.9	1386.5	1236.1	1167.9	1066.5	982.4	916.1	962.3	1009.5	1030.1
22.5°	1680.4	1659.3	1406.6	1208.5	1069.3	971.2	930.1	925.9	960.5	1000.2	1004.8
25°	1751.8	1755.1	1418.3	1198.3	1011.4	877.8	877.8	908.1	938.5	1032.9	1028.2
27.5°	1925.1	1797.6	1373.0	1151.1	931.0	823.1	878.3	918.9	933.4	1035.7	1046.0
30°	2051.3	1968.1	1382.3	1070.3	849.8	797.4	842.7	893.7	933.8	1052.0	1048.3
32.5°	2262.9	2039.1	1404.3	956.7	789.0	787.6	827.8	881.5	929.6	1034.3	1039.9
35°	2496.9	2248.4	1343.1	870.3	774.5	782.0	833.9	855.4	911.9	1027.3	1032.4
37.5°	2930.0	2357.7	1304.3	803.5	765.2	786.7	806.3	839.5	896.5	992.2	1025.9
40°	3184.1	2582.9	1160.4	764.7	745.6	783.0	792.8	820.8	851.6	950.2	971.7
42.5°	3518.6	2653.9	1037.5	721.8	735.8	767.5	797.0	804.0	824.5	883.9	923.1
45°	3797.5	2707.2	907.2	687.2	702.6	801.6	803.5	800.2	796.5	818.5	850.7
47.5°	4086.2	2850.1	787.2	648.9	690.0	829.7	806.8	776.9	761.5	764.3	794.2
50°	4404.8	2953.8	702.1	617.6	692.8	829.7	822.7	753.1	722.2	714.3	745.6
52.5°	4685.1	2966.0	637.7	592.4	681.1	801.2	833.4	738.1	686.2	667.1	696.5
55°	4837.8	2812.3	591.0	569.5	651.2	775.5	827.8	729.7	642.8	628.3	654.5
57.5°	4834.6	2557.2	551.2	537.7	617.1	739.5	796.5	683.9	616.2	607.8	633.5
60°	4660.3	2258.2	520.9	511.5	582.1	687.2	740.4	654.0	590.5	586.3	614.3
62.5°	4265.1	1949.4	491.4	484.0	549.4	650.3	713.8	620.8	563.9	563.4	590.0
65°	3492.9	1565.0	463.9	462.0	519.0	613.8	688.6	592.8	536.3	545.6	572.7
67.5°	2406.8	1099.7	434.5	440.1	491.0	578.8	669.4	574.1	507.3	526.5	550.8
70°	1320.6	680.2	401.8	413.0	455.5	538.2	639.5	543.8	469.5	498.9	515.7
72.5°	671.8	453.6	361.1	378.9	412.0	478.4	583.5	499.9	428.8	440.1	448.9
75°	451.3	341.5	315.8	335.4	359.2	421.4	517.6	458.7	390.1	388.7	398.5
77.5°	341.0	266.7	268.1	290.6	306.0	370.5	465.3	424.2	357.4	354.1	368.6
80°	249.5	202.3	215.8	239.2	253.2	332.6	431.2	385.9	313.0	299.9	312.1
82.5°	165.4	143.4	159.8	183.1	194.3	278.0	391.5	327.5	255.1	221.9	223.8
85°	78.0	75.2	95.3	106.5	121.0	172.4	292.9	226.6	162.6	134.5	140.6
87.5°	17.8	23.8	31.3	30.8	36.0	46.2	91.1	63.5	47.2	32.2	21.5
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)