

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: P597110

Luminaire Tested: **MSA-SA4A-835-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597110  
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-SA4A-835-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 12811 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

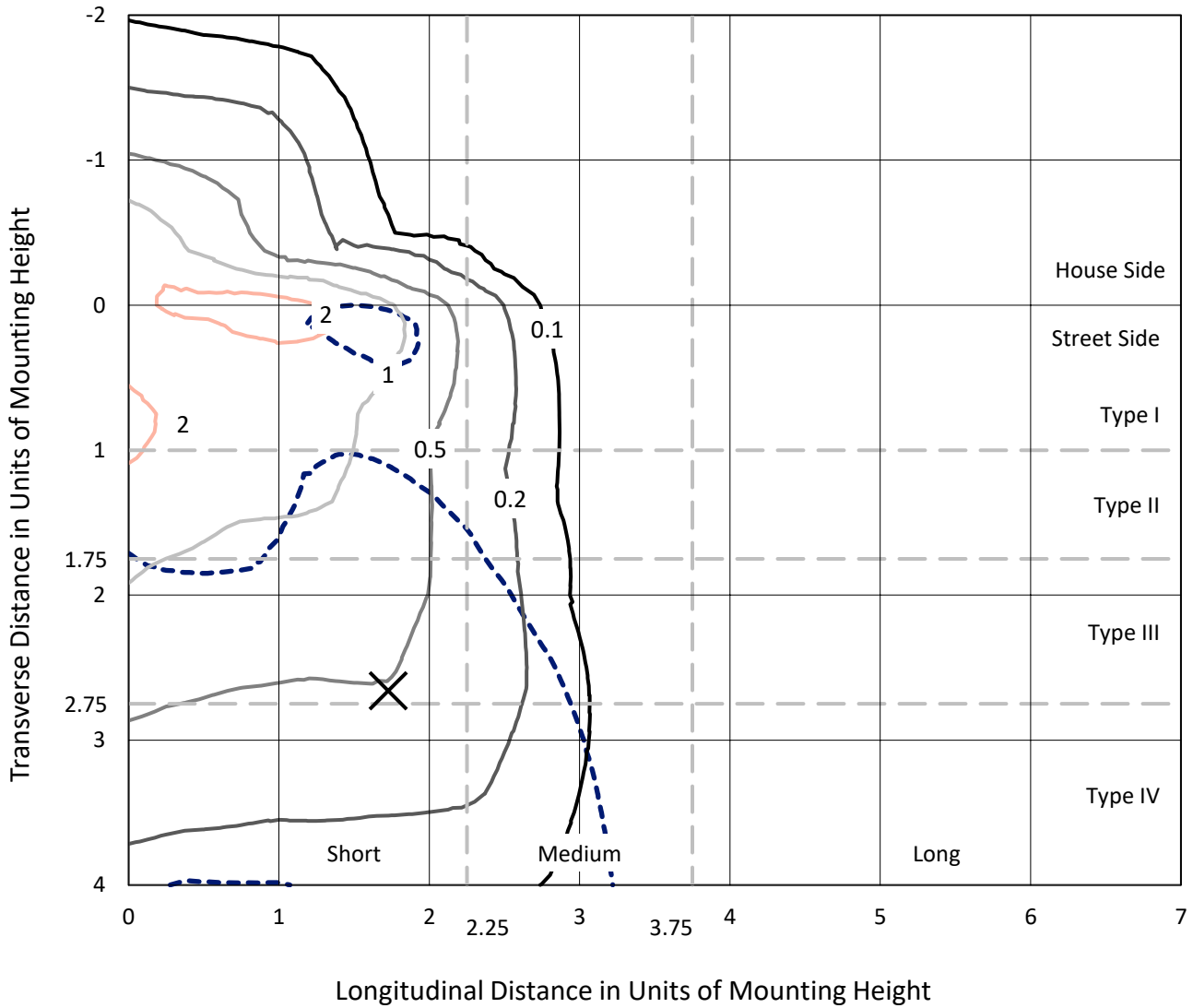
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

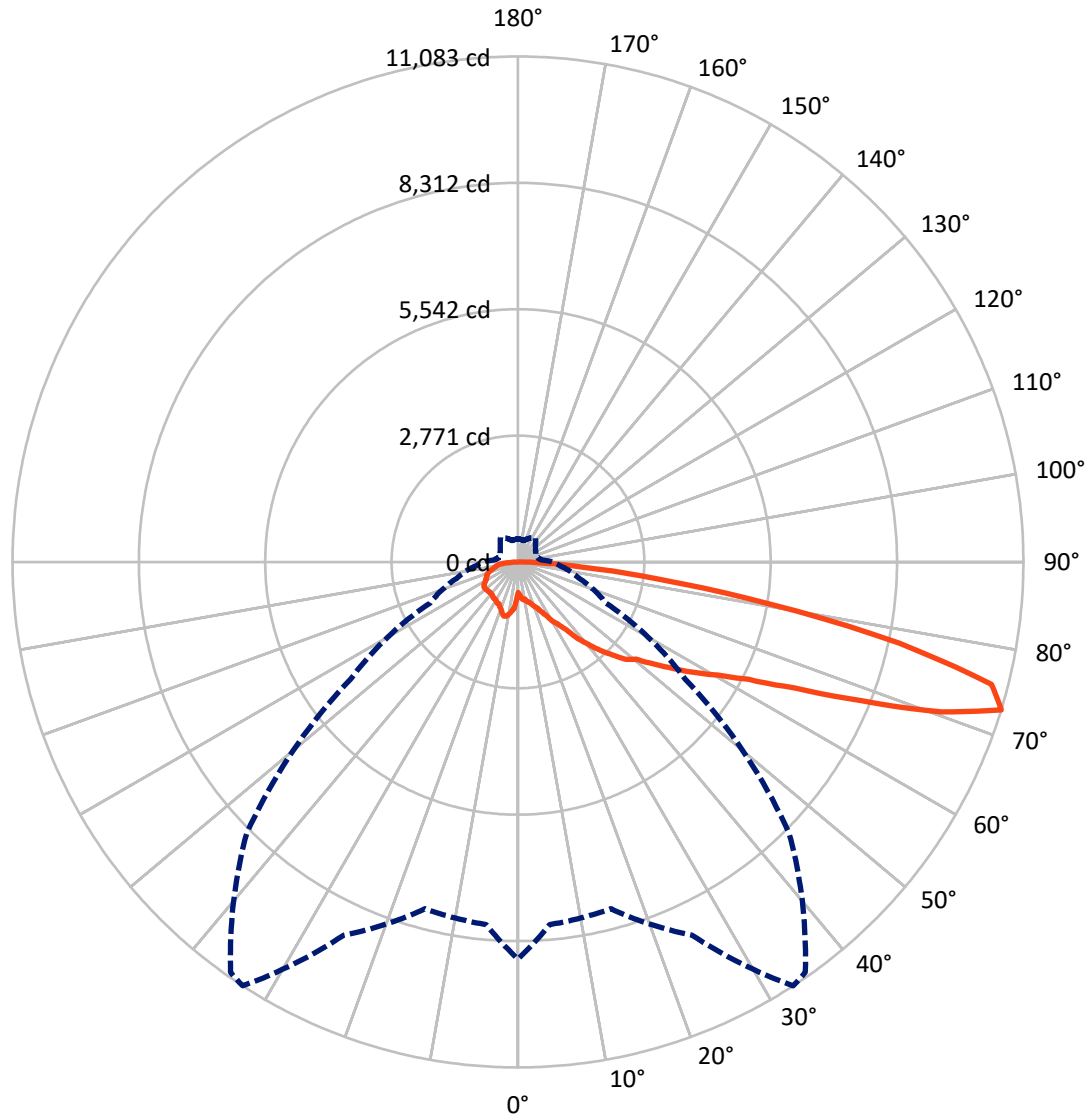
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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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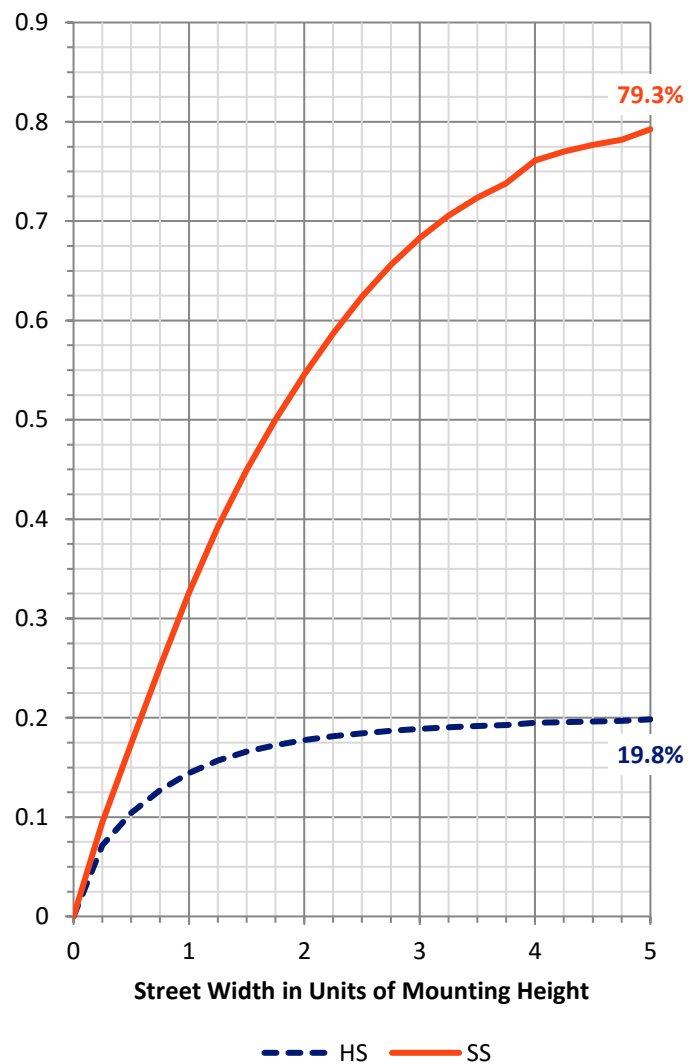
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2591.6	0.0	2591.6
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	10219.4	0.0	10219.4
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	12811.0	0.0	12811.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.4	0.7
10°-20°	341.3	2.7
20°-30°	622.4	4.9
30°-40°	1053.0	8.2
40°-50°	1751.8	13.7
50°-60°	2570.9	20.1
60°-70°	3288.9	25.7
70°-80°	2675.8	20.9
80°-90°	414.4	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°	12811.0	100.0
0°-180°	12811.0	100.0

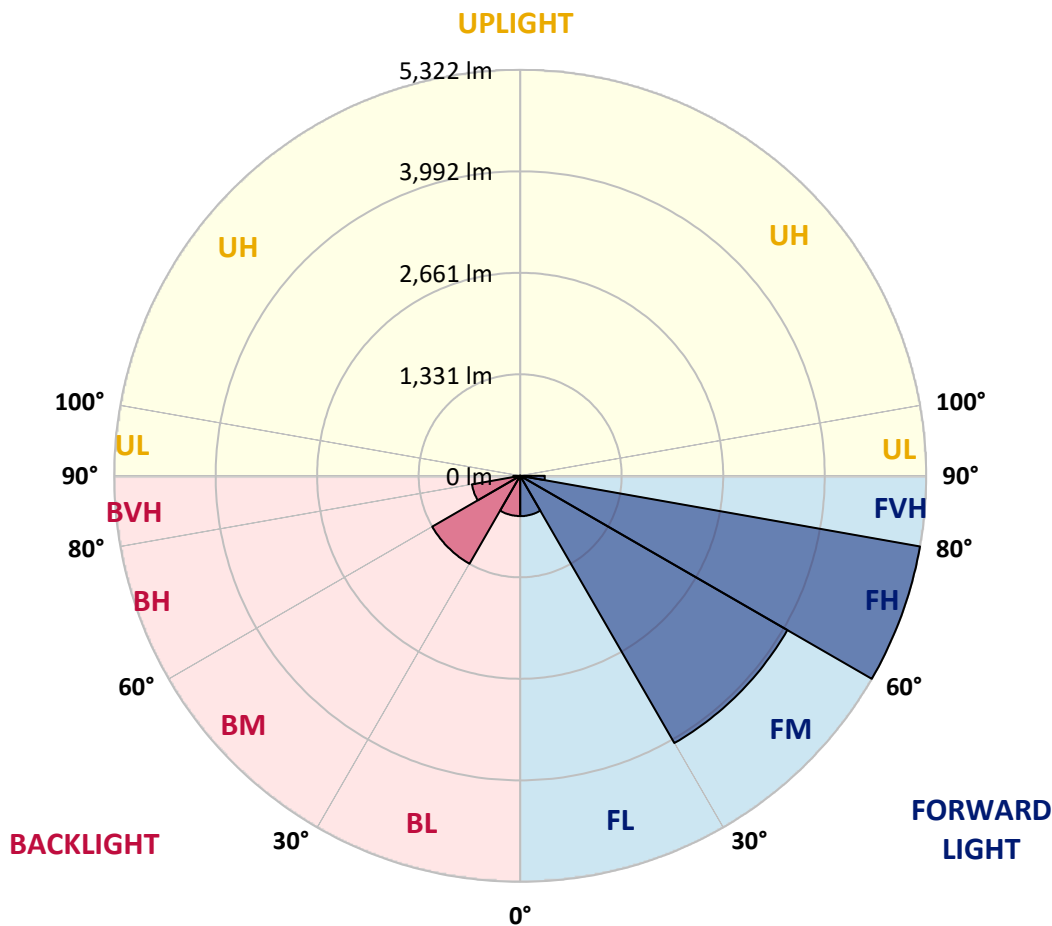


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	528.7	4.1			
FM (30°-60°)	4044.7	31.6			
FH (60°-80°)	5322.5	41.5			G3/7500
FVH (80°-90°)	323.4	2.5			G3/500
BL (0°-30°)	527.4	4.1	B2/1000		
BM (30°-60°)	1331.1	10.4	B2/2500		
BH (60°-80°)	642.2	5.0	B2/1000		G2/1000
BVH (80°-90°)	91.0	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°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	761.6	737.7	698.3	697.3	719.1	723.8	738.2	739.3	744.6	736.1	796.7
5°	840.2	814.7	799.3	804.6	794.5	806.7	806.7	841.8	888.6	942.8	1019.9
7.5°	858.8	840.2	822.7	836.0	838.1	826.4	837.6	919.9	1004.4	1058.7	1182.0
10°	821.6	803.0	816.3	820.6	820.0	846.6	904.5	970.4	1064.5	1164.4	1230.8
12.5°	814.7	828.0	834.4	841.8	892.3	900.3	988.0	1056.0	1150.6	1238.3	1411.0
15°	917.3	934.8	895.5	892.8	909.3	916.8	1007.6	1076.2	1214.4	1361.6	1516.8
17.5°	1063.4	1069.8	999.1	963.0	975.2	981.1	1020.9	1107.0	1192.1	1464.2	1657.6
20°	1204.8	1209.1	1076.2	995.4	1038.5	1044.8	1082.0	1131.5	1198.4	1521.6	1752.7
22.5°	1353.1	1326.0	1180.4	1078.3	1103.3	1104.9	1126.7	1153.8	1248.9	1512.5	1868.6
25°	1515.2	1498.2	1314.8	1217.0	1216.0	1194.2	1195.2	1234.0	1302.6	1609.2	1944.6
27.5°	1730.4	1732.5	1466.3	1413.7	1331.3	1316.9	1245.2	1317.5	1395.6	1610.3	2108.8
30°	2009.4	1957.9	1677.3	1592.2	1510.9	1480.6	1383.4	1445.0	1479.0	1702.2	2287.4
32.5°	2236.4	2221.5	1897.3	1768.7	1635.8	1670.9	1563.5	1509.3	1570.4	1860.6	2557.9
35°	2453.7	2404.8	2130.1	1962.7	1822.9	1801.6	1732.0	1741.0	1778.2	2061.0	2911.3
37.5°	2777.9	2751.3	2459.6	2191.7	2126.4	2039.7	1995.6	2023.8	1994.6	2317.7	3441.2
40°	3140.4	2986.2	2734.9	2496.2	2374.0	2312.9	2328.3	2301.7	2279.4	2605.7	3916.3
42.5°	3487.4	3347.1	2917.7	2810.3	2650.9	2676.4	2591.9	2610.5	2673.7	3014.4	4355.8
45°	3865.3	3561.8	3111.7	3017.1	2902.8	2935.2	3002.7	2982.5	3086.2	3496.4	4769.8
47.5°	4053.9	3765.4	3349.8	3195.6	3194.0	3126.5	3537.4	3582.0	3419.9	3853.6	5190.2
50°	4235.7	3951.9	3526.7	3422.6	3347.1	3491.7	4050.2	3947.6	3721.8	4263.3	5652.6
52.5°	4488.7	4165.0	3729.8	3618.7	3712.2	3846.1	4459.4	4439.2	4017.8	4684.8	6054.3
55°	4681.6	4354.7	4035.3	3932.2	4110.8	4242.1	4876.1	4754.4	4271.3	4994.1	6308.9
57.5°	5019.6	4684.2	4486.5	4257.5	4578.5	4576.4	5277.9	5183.8	4542.3	5248.1	6411.5
60°	5556.9	5163.1	4956.3	4692.2	5036.1	5158.8	5737.1	5466.0	4734.2	5408.6	6226.5
62.5°	6311.0	5843.3	5508.0	5246.5	5665.8	5888.0	6304.1	5671.7	4746.4	5362.9	5740.2
65°	7243.7	6675.1	6235.6	5959.2	6651.2	6968.4	6989.7	5798.7	4633.8	4890.4	4717.7
67.5°	8153.6	7514.2	7055.6	7108.2	8118.5	8268.9	7732.7	5905.0	4028.4	3926.9	3275.9
70°	8752.5	8059.5	7753.9	8312.0	9846.8	9692.7	8334.8	5624.9	3172.3	2545.7	1844.7
72.5°	8707.4	7981.9	7871.9	9027.3	11083.0	10986.8	8408.1	4473.3	2124.8	1391.9	919.9
75°	7093.9	6530.0	6779.8	8545.8	10726.9	10722.1	7300.1	2768.9	1090.0	714.8	581.4
77.5°	3922.1	3703.2	4437.1	6470.5	8541.0	8584.6	4932.4	1255.8	587.8	506.5	437.9
80°	1373.8	1353.6	1922.8	3491.7	5618.5	5629.2	2293.8	574.5	427.3	383.2	321.5
82.5°	502.2	498.0	797.2	1622.0	3093.6	3086.7	870.0	357.7	316.7	271.0	212.1
85°	200.4	196.1	364.6	720.1	1421.1	1398.3	338.0	203.0	207.3	161.6	104.2
87.5°	55.3	57.4	123.8	225.3	435.3	403.4	85.0	68.6	84.0	65.9	33.0
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°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	807.3	812.6	760.0	778.6	802.5	815.3	821.6	794.5	803.6	841.8	840.2
5°	1035.8	1014.5	994.4	1015.1	1001.3	981.6	1013.5	1011.9	1032.6	1053.3	1058.1
7.5°	1206.4	1178.8	1169.2	1122.4	1075.7	1028.4	1069.3	1094.8	1100.1	1151.7	1173.5
10°	1268.1	1257.4	1261.1	1199.5	1193.6	1198.4	1160.7	1119.8	1144.8	1123.5	1139.4
12.5°	1410.5	1437.1	1371.2	1329.2	1325.4	1296.2	1220.8	1194.2	1166.0	1195.2	1180.4
15°	1524.7	1574.2	1503.5	1429.6	1346.2	1301.0	1236.7	1196.3	1177.7	1184.1	1166.0
17.5°	1692.2	1738.4	1558.8	1445.6	1359.5	1293.0	1194.7	1108.6	1154.3	1158.0	1137.3
20°	1803.2	1806.4	1577.4	1406.2	1328.6	1213.3	1117.6	1042.2	1094.8	1148.5	1171.9
22.5°	1911.6	1887.7	1600.2	1374.9	1216.5	1104.9	1058.1	1053.3	1092.7	1137.8	1143.2
25°	1993.0	1996.7	1613.5	1363.2	1150.6	998.6	998.6	1033.1	1067.7	1175.0	1169.7
27.5°	2190.1	2045.0	1561.9	1309.5	1059.2	936.4	999.1	1045.4	1061.8	1178.2	1189.9
30°	2333.6	2239.0	1572.6	1217.6	966.7	907.2	958.7	1016.7	1062.4	1196.8	1192.6
32.5°	2574.4	2319.8	1597.6	1088.4	897.6	896.0	941.7	1002.9	1057.6	1176.6	1183.0
35°	2840.6	2557.9	1527.9	990.1	881.2	889.7	948.6	973.1	1037.4	1168.7	1174.5
37.5°	3333.3	2682.3	1483.8	914.1	870.5	895.0	917.3	955.0	1019.9	1128.8	1167.1
40°	3622.4	2938.4	1320.1	870.0	848.2	890.7	901.9	933.8	968.8	1081.0	1105.4
42.5°	4002.9	3019.2	1180.4	821.1	837.0	873.2	906.7	914.6	938.0	1005.5	1050.2
45°	4320.2	3079.8	1032.1	781.8	799.3	912.0	914.1	910.4	906.1	931.1	967.8
47.5°	4648.6	3242.4	895.5	738.2	785.0	943.9	917.8	883.8	866.3	869.5	903.5
50°	5011.1	3360.4	798.8	702.6	788.1	943.9	935.9	856.7	821.6	812.6	848.2
52.5°	5330.0	3374.2	725.4	673.9	774.9	911.4	948.1	839.7	780.7	758.9	792.4
55°	5503.7	3199.4	672.3	647.8	740.8	882.2	941.7	830.1	731.3	714.8	744.6
57.5°	5500.0	2909.2	627.1	611.7	702.1	841.3	906.1	778.0	701.0	691.4	720.7
60°	5301.8	2569.1	592.6	581.9	662.2	781.8	842.4	744.0	671.8	667.0	698.9
62.5°	4852.2	2217.8	559.1	550.6	625.0	739.8	812.1	706.3	641.5	640.9	671.2
65°	3973.7	1780.4	527.7	525.6	590.4	698.3	783.4	674.4	610.1	620.7	651.6
67.5°	2738.1	1251.0	494.3	500.6	558.6	658.5	761.6	653.2	577.2	598.9	626.6
70°	1502.4	773.8	457.1	469.8	518.2	612.2	727.6	618.6	534.1	567.6	586.7
72.5°	764.2	516.0	410.8	431.0	468.7	544.2	663.8	568.7	487.9	500.6	510.7
75°	513.4	388.5	359.3	381.6	408.7	479.4	588.9	521.9	443.8	442.2	453.3
77.5°	388.0	303.5	305.1	330.6	348.1	421.4	529.3	482.6	406.6	402.8	419.3
80°	283.8	230.1	245.5	272.1	288.0	378.4	490.5	439.0	356.1	341.2	355.0
82.5°	188.1	163.2	181.8	208.3	221.1	316.2	445.4	372.5	290.2	252.4	254.6
85°	88.8	85.6	108.4	121.2	137.6	196.1	333.2	257.8	184.9	153.1	160.0
87.5°	20.2	27.1	35.6	35.1	40.9	52.6	103.6	72.3	53.7	36.7	24.4
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)