

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: P367918

Luminaire Tested: **MSA-SA3B-830-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367918  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-830-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11844 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

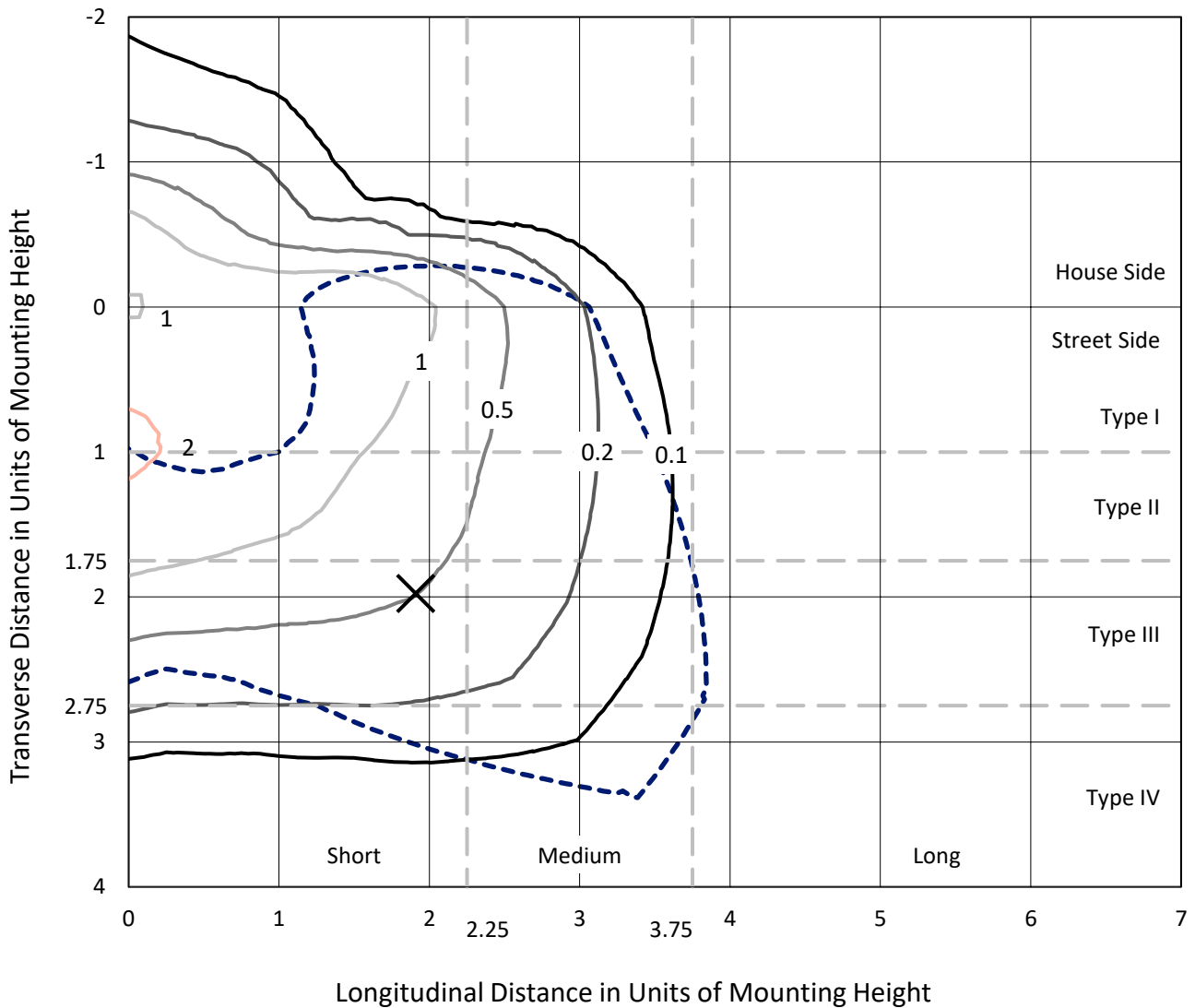
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

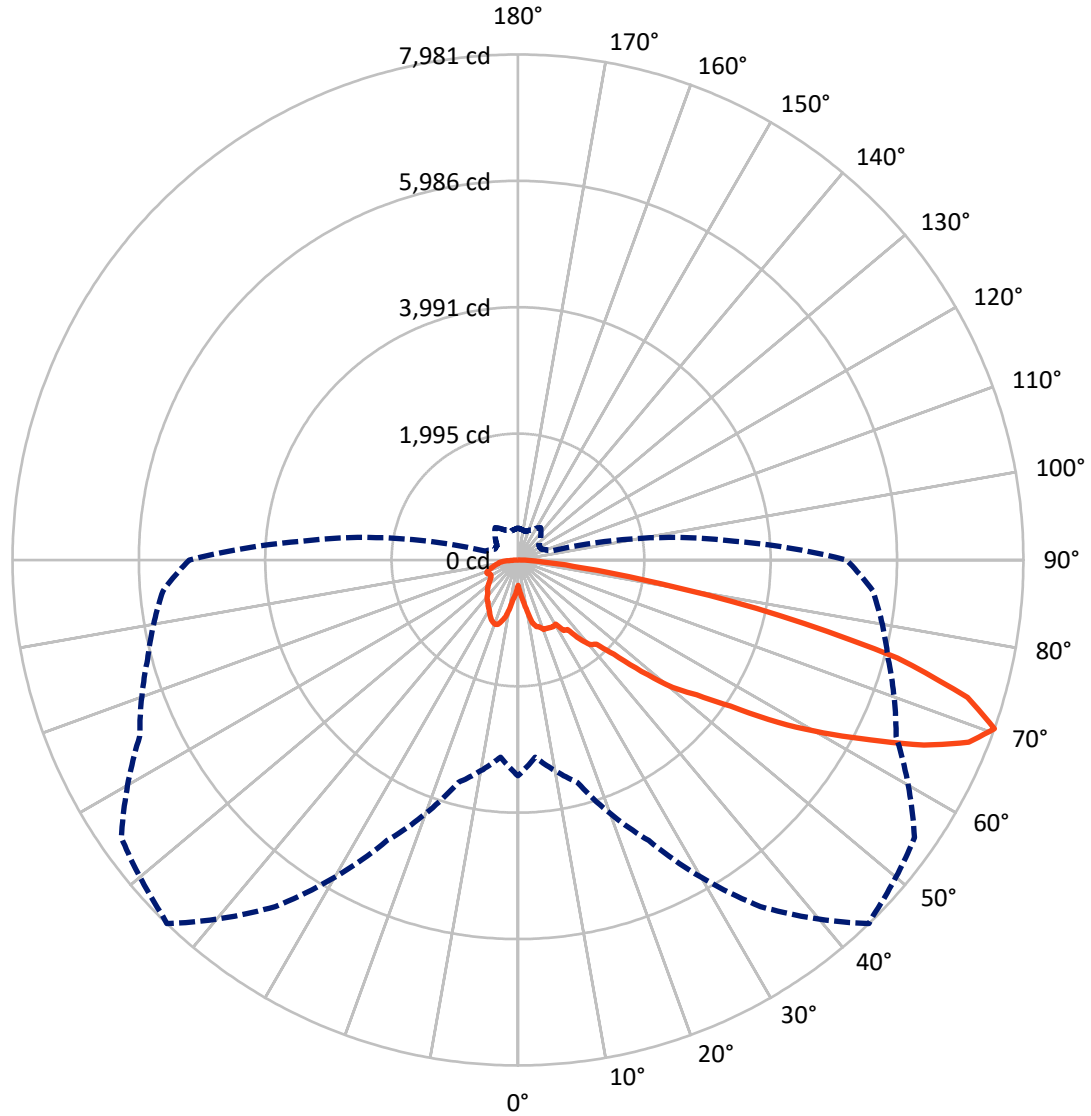
✕ Max cd  
 - - - 1/2 Max cd



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 44-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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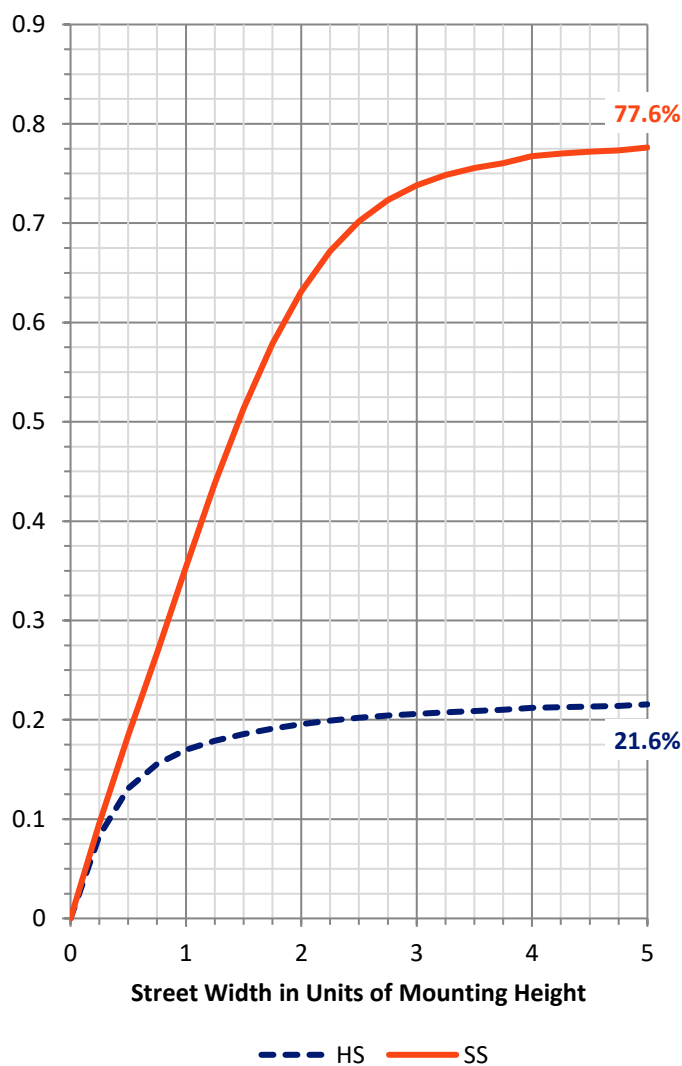
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2613.3	0.0	2613.3
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	9230.7	0.0	9230.7
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	11844.0	0.0	11844.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.1	0.5
10°-20°	290.7	2.5
20°-30°	543.2	4.6
30°-40°	871.9	7.4
40°-50°	1471.7	12.4
50°-60°	2622.5	22.1
60°-70°	3587.3	30.3
70°-80°	2109.5	17.8
80°-90°	284.0	2.4
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°	11844.0	100.0
0°-180°	11844.0	100.0

**Coefficient of Utilization**

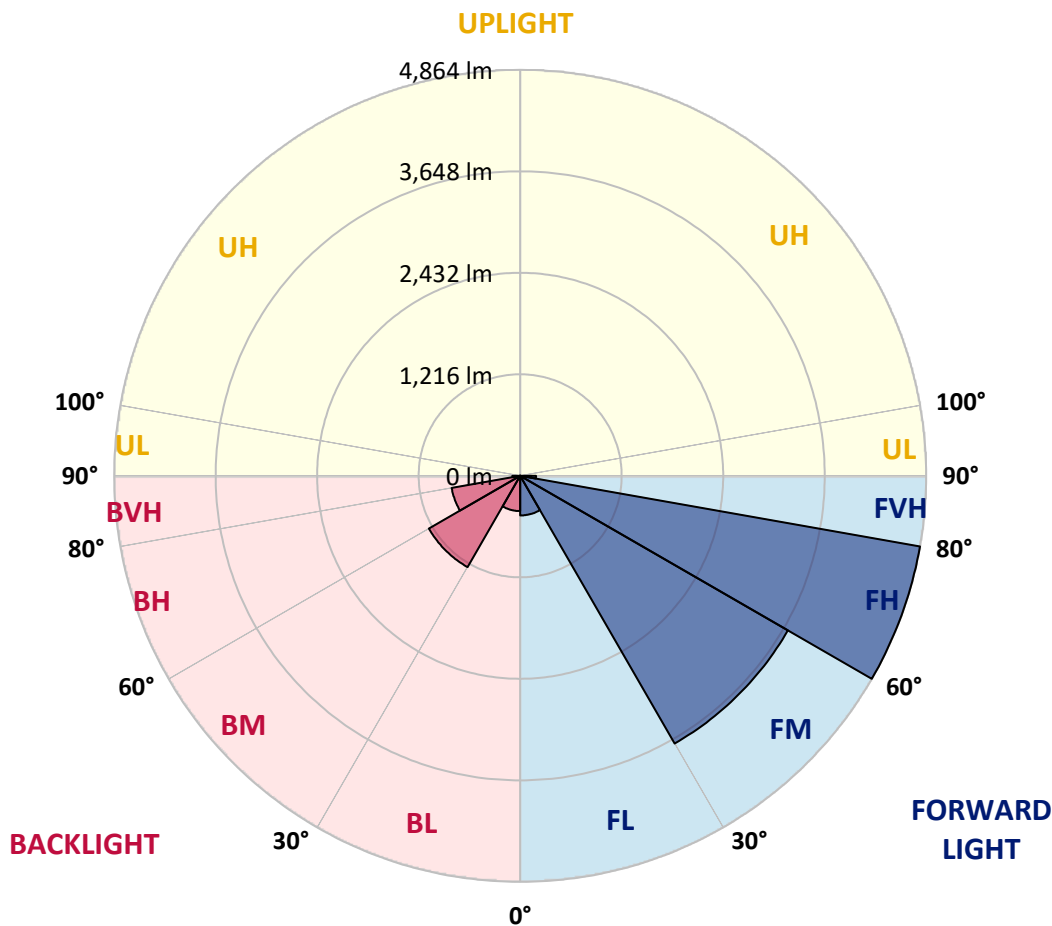


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	474.6	4.0			
FM (30°-60°)	3703.3	31.3			
FH (60°-80°)	4863.5	41.1			G2/5000
FVH (80°-90°)	189.3	1.6			G2/225
BL (0°-30°)	422.4	3.6	B1/500		
BM (30°-60°)	1262.9	10.7	B2/2500		
BH (60°-80°)	833.3	7.0	B2/1000		G2/1000
BVH (80°-90°)	94.7	0.8			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6
2.5°	488.6	478.8	455.5	463.3	473.0	476.9	475.9	475.0	459.9	454.6	481.3
5°	663.9	642.5	625.5	618.7	596.4	578.9	568.2	596.4	592.0	599.3	617.7
7.5°	829.0	815.4	777.0	763.4	717.8	687.7	684.3	706.6	712.4	700.8	732.3
10°	935.3	912.0	904.3	871.7	840.2	835.3	832.4	822.2	808.1	807.1	779.0
12.5°	1017.9	1030.0	1036.3	999.0	999.9	1017.4	1008.2	966.9	943.1	901.3	904.7
15°	1166.0	1183.5	1133.5	1109.7	1064.0	1090.3	1086.9	1052.4	1049.0	1021.8	990.2
17.5°	1295.2	1303.0	1219.4	1165.0	1149.5	1111.6	1121.8	1122.8	1078.1	1126.7	1098.5
20°	1305.9	1333.6	1237.4	1129.1	1175.7	1170.9	1172.3	1162.6	1103.9	1184.0	1173.3
22.5°	1358.3	1316.1	1229.6	1150.5	1162.6	1169.9	1176.7	1165.0	1161.6	1206.3	1238.9
25°	1348.6	1335.0	1247.6	1180.6	1182.0	1183.5	1186.9	1221.9	1218.0	1278.7	1295.7
27.5°	1439.4	1418.5	1252.9	1236.4	1198.6	1190.3	1167.0	1239.8	1296.7	1295.2	1388.9
30°	1612.3	1590.9	1377.3	1329.2	1260.7	1176.2	1220.9	1318.0	1362.7	1377.8	1496.7
32.5°	1882.3	1917.3	1622.0	1428.3	1343.3	1324.8	1320.0	1310.2	1421.0	1495.3	1603.6
35°	2269.9	2242.2	1910.5	1640.5	1430.2	1351.0	1361.7	1421.0	1552.6	1600.7	1700.7
37.5°	2713.7	2656.4	2280.1	1880.9	1680.8	1581.7	1546.3	1603.6	1632.7	1670.6	1875.0
40°	3164.9	3025.0	2642.8	2197.0	1831.3	1756.5	1725.5	1655.1	1723.5	1800.3	2060.1
42.5°	3600.5	3492.2	3037.7	2574.4	2084.8	1818.2	1801.2	1732.3	1944.5	2025.6	2327.2
45°	4057.0	3805.9	3442.2	3000.3	2455.4	2120.8	2095.5	1971.7	2243.6	2412.6	2704.0
47.5°	4363.9	4131.3	3812.7	3346.0	2765.7	2626.8	2578.7	2367.0	2613.7	2833.2	3286.3
50°	4654.3	4414.9	4080.3	3724.4	3327.6	3167.8	3065.3	2712.8	3074.6	3432.0	4032.7
52.5°	5070.1	4855.9	4391.1	4105.6	3931.2	3538.4	3462.1	3268.3	3613.6	4095.9	4848.6
55°	5514.4	5222.5	4801.5	4643.2	4572.8	4069.6	4007.5	3884.1	4331.4	4775.3	5641.6
57.5°	5710.6	5406.1	5174.0	5079.3	5073.5	4841.8	4770.4	4684.5	5065.2	5358.0	6388.1
60°	5866.5	5539.7	5446.9	5499.8	5692.2	5539.7	5446.9	5371.1	5662.5	5934.0	6997.1
62.5°	5837.8	5510.0	5557.6	5718.9	6209.8	6254.5	6183.1	5999.6	6254.5	6406.0	7346.2
65°	5375.5	5072.5	5349.8	5732.5	6691.1	7048.1	7044.2	6563.9	6652.3	6652.3	7309.3
67.5°	4565.5	4251.8	4705.8	5612.5	7023.8	7677.0	7677.9	7162.2	6688.7	6627.5	6738.2
70°	3409.2	3125.1	3635.5	4887.9	6680.4	7981.4	7937.3	7644.9	6588.6	6054.0	5628.5
72.5°	2036.3	1852.7	2322.3	3558.3	5698.5	7421.5	7539.0	7088.8	6031.6	5034.6	4023.5
75°	924.7	845.0	1091.2	2044.0	4068.2	6190.4	6318.1	5982.6	4790.8	3620.9	2325.2
77.5°	395.8	374.4	476.4	906.7	2243.2	4233.3	4495.1	4275.5	3246.0	2104.3	1028.6
80°	254.5	240.9	292.8	436.1	1041.7	2287.4	2512.7	2430.6	1653.6	818.3	362.3
82.5°	152.0	147.6	195.7	273.9	568.2	1006.7	1134.4	1164.6	686.7	367.1	207.4
85°	83.0	84.0	107.3	166.1	340.9	391.9	419.6	456.5	323.4	212.7	100.5
87.5°	27.7	32.1	43.2	67.5	121.4	110.7	111.2	129.2	136.5	88.4	32.1
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°	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6	402.6
2.5°	485.6	476.9	454.6	456.0	464.3	466.2	468.6	454.6	451.6	478.4	480.8
5°	620.6	592.0	578.9	574.5	561.9	557.5	580.8	591.5	602.2	623.1	633.3
7.5°	728.9	696.9	673.1	651.2	632.8	622.1	661.4	691.5	710.0	752.7	772.2
10°	778.5	750.8	742.1	724.6	738.7	770.7	778.0	779.0	819.8	818.8	827.0
12.5°	877.1	859.1	830.4	836.8	873.7	906.7	897.5	911.5	926.1	961.1	945.0
15°	966.9	962.0	935.3	939.7	947.0	988.3	993.6	1007.7	1030.0	1057.7	1038.8
17.5°	1077.6	1075.7	1010.6	1004.8	1021.8	1062.1	1049.5	1024.7	1098.5	1128.1	1120.4
20°	1152.9	1138.3	1054.8	1030.0	1073.3	1078.6	1064.0	1024.7	1088.8	1153.4	1170.9
22.5°	1215.5	1198.6	1112.6	1064.0	1055.3	1057.7	1057.7	1050.4	1082.0	1134.9	1134.4
25°	1266.1	1282.1	1172.8	1126.2	1079.6	1021.3	1014.0	1020.3	1038.3	1140.3	1136.9
27.5°	1392.8	1348.6	1193.2	1158.2	1062.6	970.8	990.7	1000.4	1006.2	1117.9	1136.4
30°	1475.4	1489.0	1266.1	1177.2	1037.8	914.5	921.3	949.4	983.4	1115.5	1120.9
32.5°	1586.6	1557.4	1379.7	1145.6	971.8	880.5	867.8	905.7	956.2	1076.2	1090.7
35°	1690.0	1724.5	1427.8	1139.8	925.6	829.5	843.1	856.2	908.6	1032.5	1049.5
37.5°	1932.8	1854.2	1562.8	1111.6	887.3	803.7	789.2	809.1	853.8	949.4	988.8
40°	2117.4	2122.2	1591.9	1076.2	813.9	766.8	735.7	755.7	774.6	850.8	867.8
42.5°	2463.6	2357.8	1663.3	998.5	767.8	711.5	694.0	702.7	705.6	737.7	765.8
45°	2904.1	2655.9	1691.5	894.1	707.1	688.6	653.2	648.8	632.8	637.2	661.9
47.5°	3513.6	3121.2	1671.1	782.8	653.2	659.0	608.0	588.1	565.8	571.1	594.4
50°	4301.8	3715.6	1669.6	688.6	616.3	620.2	578.4	542.5	520.1	531.3	551.7
52.5°	5186.1	4312.0	1676.4	624.0	576.0	574.0	559.0	515.3	497.3	508.9	532.3
55°	6032.1	4824.8	1726.9	583.3	534.2	537.6	543.4	506.5	486.6	497.3	521.6
57.5°	6768.3	5229.8	1708.0	540.0	495.3	510.9	526.4	494.4	479.3	494.9	519.1
60°	7283.1	5417.8	1558.4	498.7	466.7	488.1	518.2	492.9	491.0	524.5	553.6
62.5°	7471.0	5348.3	1267.0	466.2	449.7	485.2	537.1	525.0	526.9	568.2	608.5
65°	7196.7	4983.1	945.0	445.3	436.6	499.2	580.8	543.9	517.2	551.2	588.1
67.5°	6416.2	4333.8	690.6	427.4	421.5	521.6	621.1	542.0	492.4	526.9	557.0
70°	5191.0	3420.8	534.7	404.5	401.6	506.5	625.0	527.4	465.7	488.1	505.1
72.5°	3556.8	2342.2	442.9	382.7	367.1	448.7	593.4	494.9	433.7	446.8	460.9
75°	1987.7	1314.6	372.5	355.5	321.5	399.7	556.5	475.4	409.9	413.8	433.2
77.5°	892.1	568.7	316.1	319.5	280.2	353.5	508.5	444.4	373.5	364.7	384.1
80°	337.5	277.3	256.4	270.0	235.5	306.4	458.4	416.2	335.1	323.9	335.1
82.5°	195.7	168.0	190.4	207.9	187.0	281.7	437.6	390.5	295.3	267.1	276.8
85°	90.8	86.9	114.1	135.0	130.6	219.5	374.4	293.8	210.3	177.7	196.7
87.5°	23.8	26.7	40.3	47.6	48.6	75.3	144.2	109.3	82.1	62.2	59.7
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)