

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: P367830

Luminaire Tested: **MSA-SA3B-730-U-T4W**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367830  
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-730-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: 13574 lumens  
Efficiency: N/A  
Efficacy: 107.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

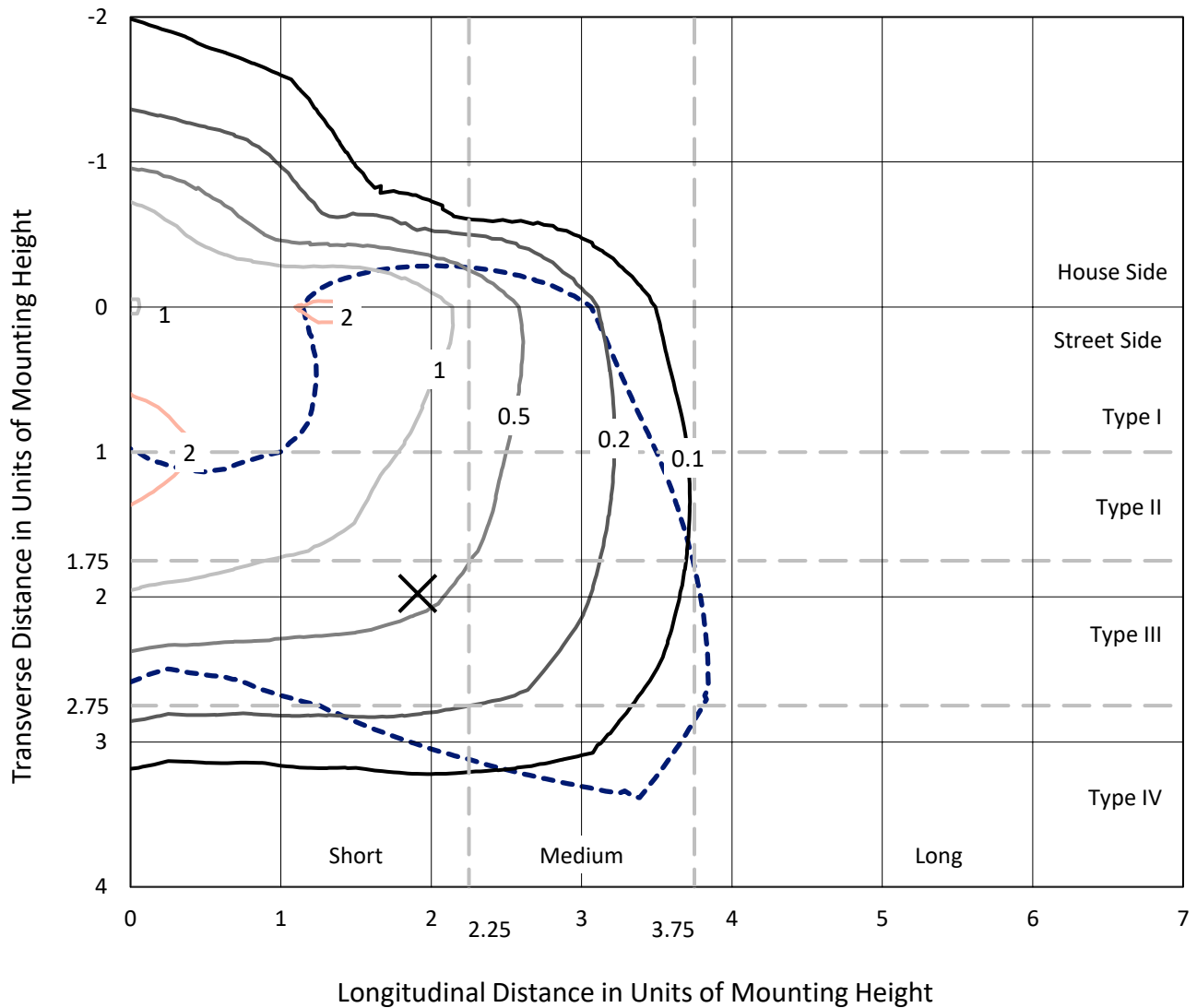
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

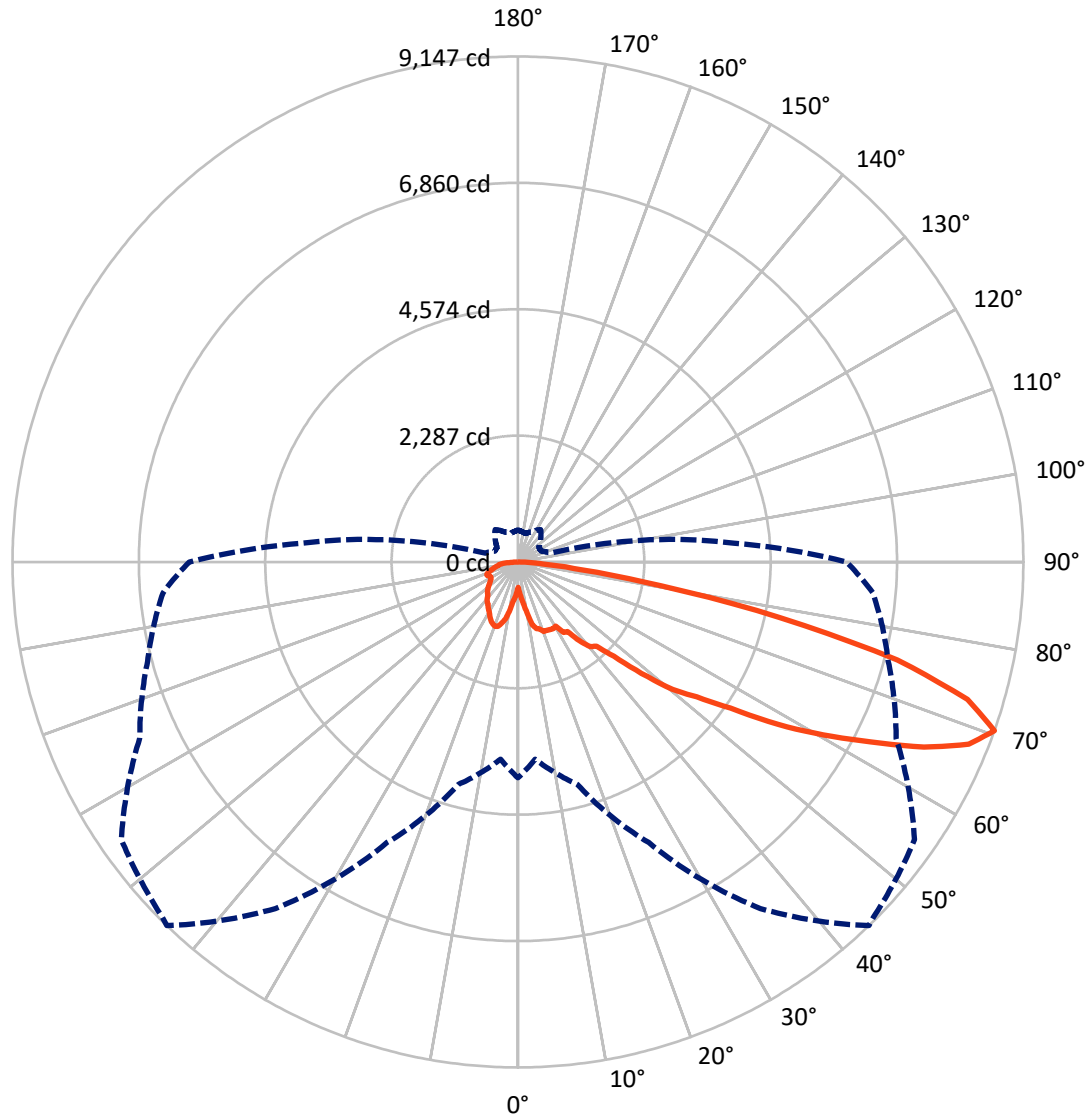
✕ Max cd  
 - - - 1/2 Max cd



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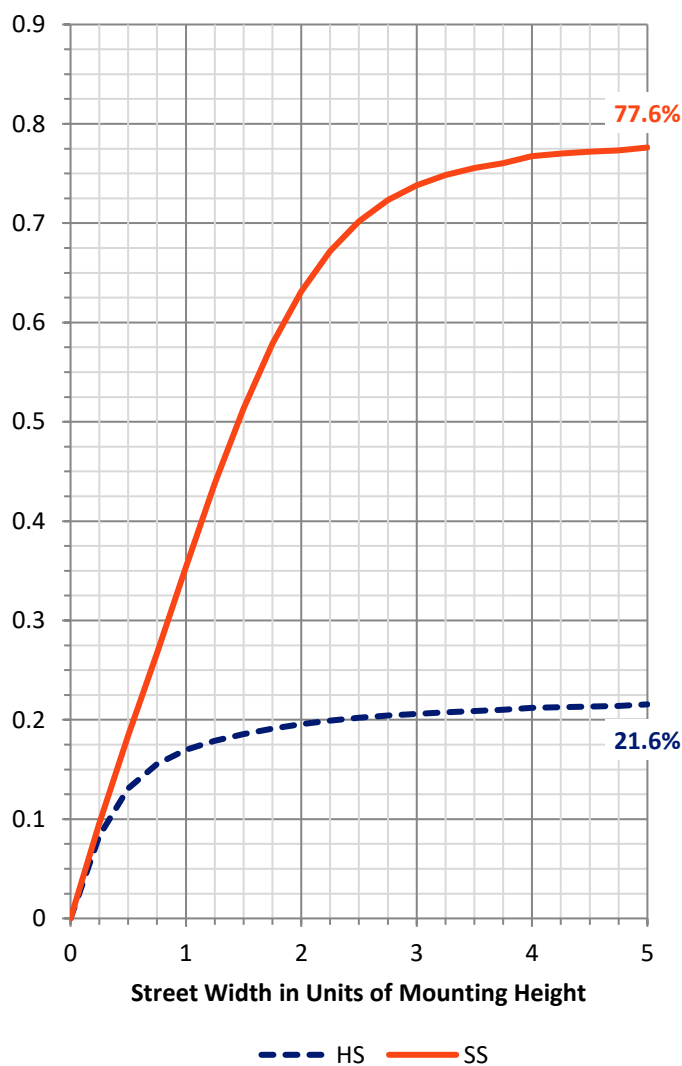
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2995.0	0.0	2995.0
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	10579.0	0.0	10579.0
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	13574.0	0.0	13574.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.3	0.5
10°-20°	333.1	2.5
20°-30°	622.5	4.6
30°-40°	999.3	7.4
40°-50°	1686.7	12.4
50°-60°	3005.6	22.1
60°-70°	4111.3	30.3
70°-80°	2417.6	17.8
80°-90°	325.5	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°	13574.0	100.0
0°-180°	13574.0	100.0

**Coefficient of Utilization**



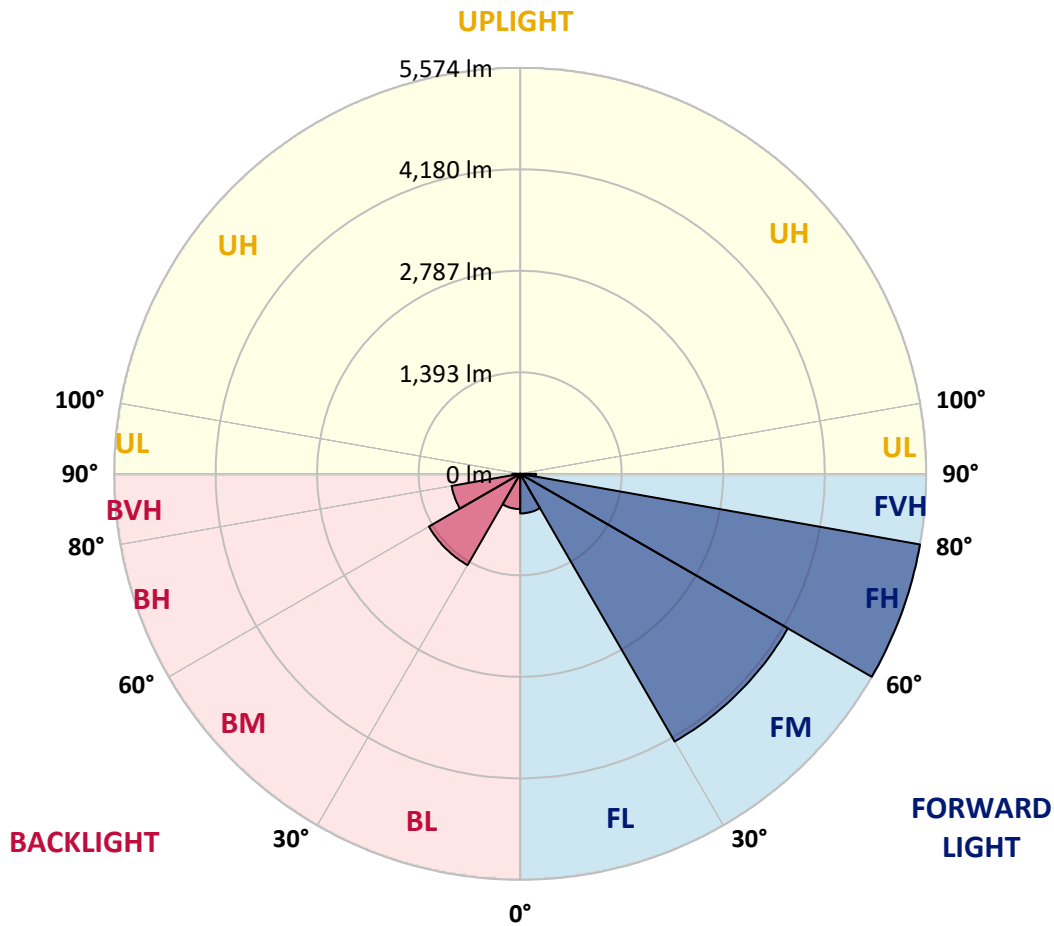
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	544.0	4.0			
FM (30°-60°)	4244.2	31.3			
FH (60°-80°)	5573.9	41.1			G3/7500
FVH (80°-90°)	217.0	1.6			G2/225
BL (0°-30°)	484.0	3.6	B1/500		
BM (30°-60°)	1447.3	10.7	B2/2500		
BH (60°-80°)	955.0	7.0	B2/1000		G2/1000
BVH (80°-90°)	108.6	0.8			G2/225
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°	35°	44°	45°	55°	65°	75°	85°
0°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4
2.5°	559.9	548.8	522.1	531.0	542.1	546.6	545.4	544.3	527.1	521.0	551.6
5°	760.8	736.3	716.9	709.1	683.5	663.4	651.2	683.5	678.5	686.8	708.0
7.5°	950.1	934.5	890.5	874.9	822.6	788.1	784.2	809.8	816.5	803.1	839.3
10°	1072.0	1045.2	1036.3	999.0	962.9	957.3	954.0	942.3	926.1	925.0	892.7
12.5°	1166.6	1180.5	1187.7	1144.9	1146.0	1166.0	1155.4	1108.1	1080.9	1033.0	1036.9
15°	1336.3	1356.4	1299.0	1271.8	1219.4	1249.5	1245.6	1206.1	1202.2	1171.0	1134.9
17.5°	1484.4	1493.3	1397.6	1335.2	1317.4	1274.0	1285.7	1286.8	1235.6	1291.2	1259.0
20°	1496.6	1528.3	1418.1	1294.0	1347.5	1341.9	1343.6	1332.4	1265.1	1356.9	1344.7
22.5°	1556.7	1508.3	1409.2	1318.5	1332.4	1340.8	1348.6	1335.2	1331.3	1382.5	1419.8
25°	1545.6	1530.0	1429.8	1353.0	1354.7	1356.4	1360.3	1400.3	1395.9	1465.5	1484.9
27.5°	1649.7	1625.7	1436.0	1417.0	1373.6	1364.2	1337.4	1420.9	1486.0	1484.4	1591.8
30°	1847.8	1823.3	1578.4	1523.3	1444.9	1348.0	1399.2	1510.5	1561.7	1579.0	1715.4
32.5°	2157.3	2197.3	1859.0	1636.9	1539.5	1518.3	1512.8	1501.6	1628.5	1713.7	1837.8
35°	2601.4	2569.7	2189.6	1880.1	1639.1	1548.4	1560.6	1628.5	1779.4	1834.5	1949.1
37.5°	3110.1	3044.4	2613.1	2155.6	1926.3	1812.8	1772.1	1837.8	1871.2	1914.6	2148.9
40°	3627.2	3466.9	3028.9	2517.9	2098.8	2013.1	1977.5	1896.8	1975.3	2063.2	2361.0
42.5°	4126.4	4002.3	3481.4	2950.4	2389.4	2083.8	2064.3	1985.3	2228.5	2321.5	2667.1
45°	4649.6	4361.9	3945.0	3438.5	2814.0	2430.5	2401.6	2259.7	2571.4	2765.0	3099.0
47.5°	5001.4	4734.8	4369.6	3834.8	3169.7	3010.5	2955.4	2712.7	2995.5	3247.0	3766.3
50°	5334.2	5059.8	4676.3	4268.4	3813.6	3630.5	3513.1	3109.0	3523.7	3933.3	4621.8
52.5°	5810.6	5565.2	5032.5	4705.3	4505.5	4055.2	3967.8	3745.7	4141.5	4694.1	5556.8
55°	6319.9	5985.4	5502.8	5321.4	5240.7	4664.1	4592.8	4451.5	4964.1	5472.8	6465.7
57.5°	6544.7	6195.8	5929.7	5821.2	5814.5	5549.0	5467.2	5368.7	5805.0	6140.7	7321.1
60°	6723.4	6348.8	6242.5	6303.2	6523.6	6348.8	6242.5	6155.7	6489.6	6800.8	8019.1
62.5°	6690.6	6314.9	6369.4	6554.2	7116.9	7168.1	7086.3	6875.9	7168.1	7341.7	8419.3
65°	6160.7	5813.4	6131.2	6569.8	7668.4	8077.5	8073.1	7522.6	7623.9	7623.9	8377.0
67.5°	5232.3	4872.8	5393.2	6432.3	8049.7	8798.3	8799.4	8208.3	7665.7	7595.5	7722.4
70°	3907.1	3581.5	4166.5	5601.9	7656.2	9147.3	9096.6	8761.6	7551.0	6938.2	6450.7
72.5°	2333.7	2123.3	2661.5	4078.0	6530.8	8505.5	8640.2	8124.3	6912.6	5770.0	4611.2
75°	1059.7	968.4	1250.6	2342.6	4662.4	7094.6	7241.0	6856.4	5490.6	4149.8	2664.9
77.5°	453.6	429.1	546.0	1039.1	2570.8	4851.6	5151.6	4900.1	3720.1	2411.6	1178.8
80°	291.6	276.1	335.6	499.8	1193.8	2621.5	2879.7	2785.6	1895.1	937.8	415.2
82.5°	174.2	169.2	224.3	313.9	651.2	1153.8	1300.2	1334.7	787.0	420.8	237.7
85°	95.2	96.3	123.0	190.3	390.7	449.2	480.9	523.2	370.7	243.8	115.2
87.5°	31.7	36.7	49.5	77.4	139.1	126.9	127.5	148.0	156.4	101.3	36.7
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°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4
2.5°	556.6	546.6	521.0	522.6	532.1	534.3	537.1	521.0	517.6	548.2	551.0
5°	711.3	678.5	663.4	658.4	644.0	638.9	665.7	677.9	690.1	714.1	725.8
7.5°	835.4	798.7	771.4	746.4	725.2	713.0	758.1	792.6	813.7	862.7	884.9
10°	892.2	860.5	850.4	830.4	846.5	883.3	891.6	892.7	939.5	938.4	947.8
12.5°	1005.2	984.6	951.7	959.0	1001.3	1039.1	1028.5	1044.7	1061.4	1101.5	1083.1
15°	1108.1	1102.6	1072.0	1077.0	1085.3	1132.6	1138.7	1154.9	1180.5	1212.2	1190.5
17.5°	1235.0	1232.8	1158.2	1151.5	1171.0	1217.2	1202.8	1174.4	1259.0	1292.9	1284.0
20°	1321.3	1304.6	1208.9	1180.5	1230.0	1236.1	1219.4	1174.4	1247.8	1321.9	1341.9
22.5°	1393.1	1373.6	1275.1	1219.4	1209.4	1212.2	1212.2	1203.9	1240.0	1300.7	1300.2
25°	1451.0	1469.4	1344.1	1290.7	1237.3	1170.5	1162.1	1169.4	1190.0	1306.8	1302.9
27.5°	1596.2	1545.6	1367.5	1327.4	1217.8	1112.6	1135.4	1146.5	1153.2	1281.2	1302.4
30°	1690.9	1706.4	1451.0	1349.1	1189.4	1048.0	1055.8	1088.1	1127.1	1278.4	1284.6
32.5°	1818.3	1784.9	1581.2	1313.0	1113.7	1009.1	994.6	1038.0	1095.9	1233.4	1250.1
35°	1936.9	1976.4	1636.3	1306.3	1060.8	950.6	966.2	981.2	1041.3	1183.3	1202.8
37.5°	2215.2	2125.0	1791.0	1274.0	1016.9	921.1	904.4	927.2	978.5	1088.1	1133.2
40°	2426.7	2432.2	1824.4	1233.4	932.8	878.8	843.2	866.0	887.7	975.1	994.6
42.5°	2823.5	2702.2	1906.3	1144.3	879.9	815.4	795.3	805.4	808.7	845.4	877.7
45°	3328.3	3043.9	1938.5	1024.6	810.4	789.2	748.6	743.6	725.2	730.2	758.6
47.5°	4026.8	3577.1	1915.2	897.2	748.6	755.3	696.8	674.0	648.4	654.5	681.2
50°	4930.1	4258.3	1913.5	789.2	706.3	710.7	662.9	621.7	596.1	608.9	632.3
52.5°	5943.6	4941.8	1921.3	715.2	660.1	657.9	640.6	590.5	569.9	583.3	610.0
55°	6913.2	5529.5	1979.2	668.4	612.2	616.1	622.8	580.5	557.7	569.9	597.8
57.5°	7756.9	5993.7	1957.5	618.9	567.7	585.5	603.3	566.6	549.3	567.1	595.0
60°	8346.9	6209.1	1786.0	571.6	534.9	559.4	593.9	564.9	562.7	601.1	634.5
62.5°	8562.3	6129.5	1452.1	534.3	515.4	556.0	615.6	601.7	603.9	651.2	697.4
65°	8247.8	5711.0	1083.1	510.4	500.4	572.2	665.7	623.4	592.7	631.7	674.0
67.5°	7353.4	4966.8	791.4	489.8	483.1	597.8	711.9	621.1	564.4	603.9	638.4
70°	5949.2	3920.5	612.8	463.6	460.3	580.5	716.3	604.4	533.8	559.4	578.8
72.5°	4076.3	2684.3	507.6	438.6	420.8	514.3	680.1	567.1	497.0	512.0	528.2
75°	2278.0	1506.6	426.9	407.4	368.5	458.1	637.8	544.9	469.7	474.2	496.5
77.5°	1022.4	651.7	362.3	366.2	321.1	405.2	582.7	509.3	428.0	418.0	440.2
80°	386.8	317.8	293.9	309.5	269.9	351.2	525.4	477.0	384.0	371.2	384.0
82.5°	224.3	192.6	218.2	238.2	214.3	322.8	501.5	447.5	338.4	306.1	317.2
85°	104.1	99.6	130.8	154.7	149.7	251.6	429.1	336.7	241.0	203.7	225.4
87.5°	27.3	30.6	46.2	54.5	55.7	86.3	165.3	125.2	94.1	71.2	68.5
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)