

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: P368312

Luminaire Tested: **MSA-SA4A-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368312
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-SA4A-830-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: 12348 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

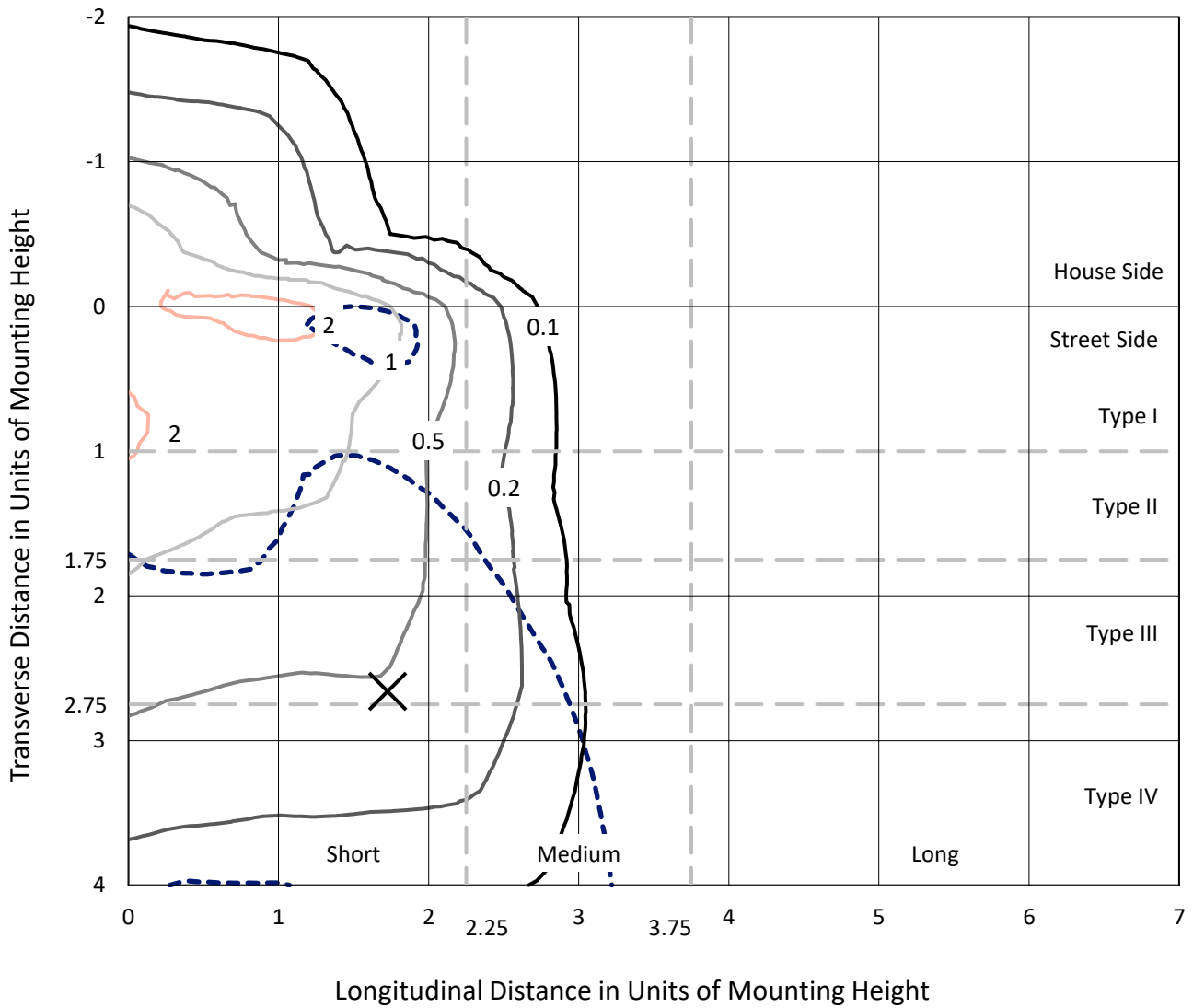
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

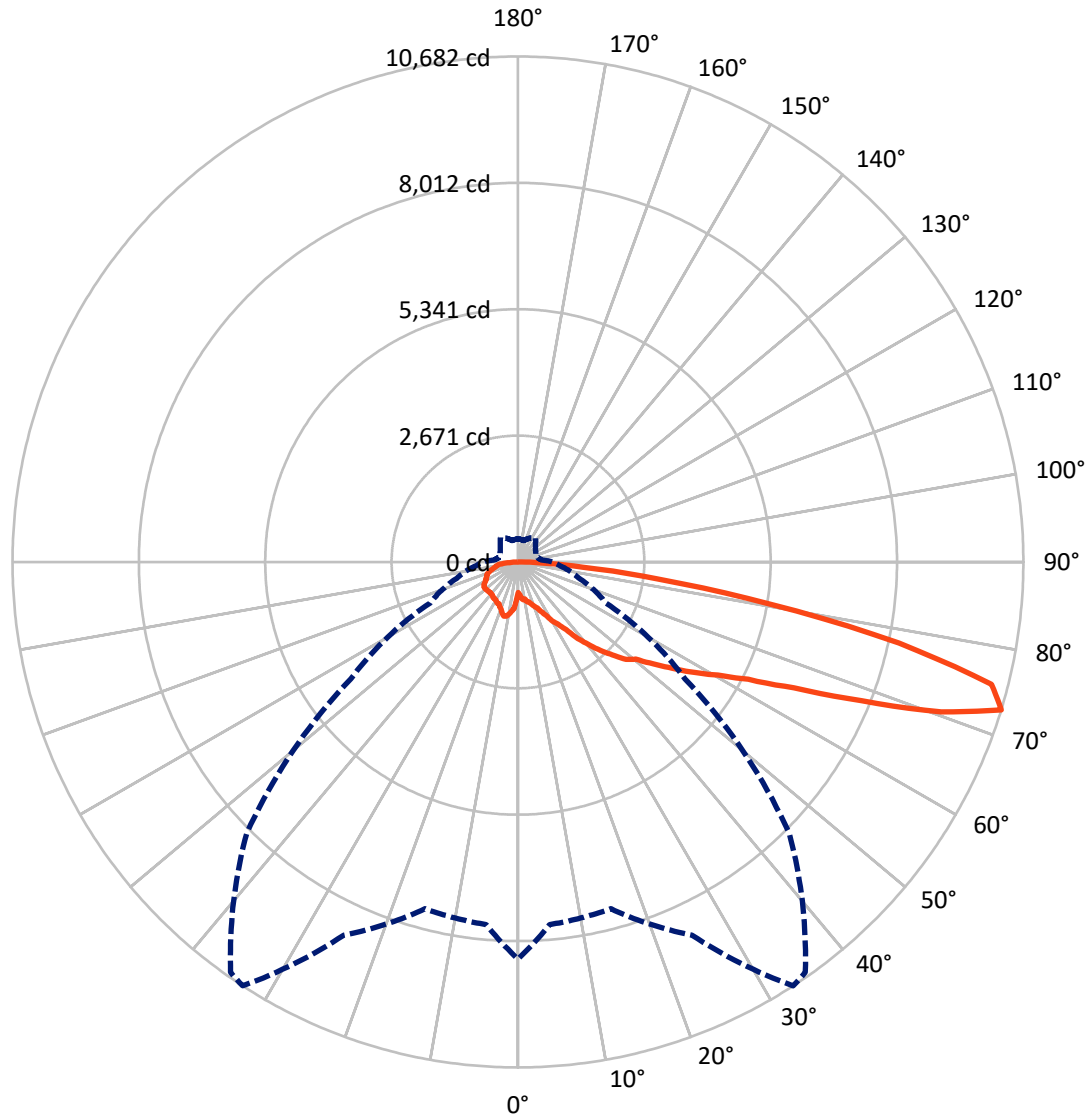
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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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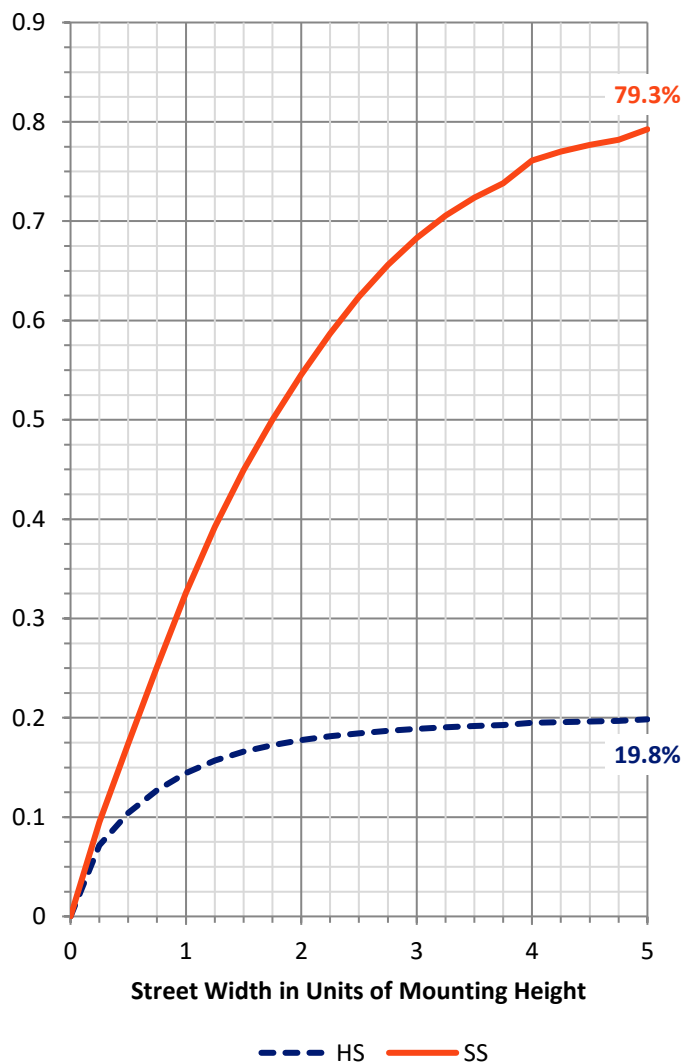
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2498.0	0.0	2498.0
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9850.0	0.0	9850.0
	% Fixture	79.8	0.0	79.8
Total	Lumens	12348.0	0.0	12348.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	0.7
10°-20°	329.0	2.7
20°-30°	599.9	4.9
30°-40°	1014.9	8.2
40°-50°	1688.5	13.7
50°-60°	2478.0	20.1
60°-70°	3170.0	25.7
70°-80°	2579.1	20.9
80°-90°	399.4	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°	12348.0	100.0
0°-180°	12348.0	100.0

Coefficient of Utilization



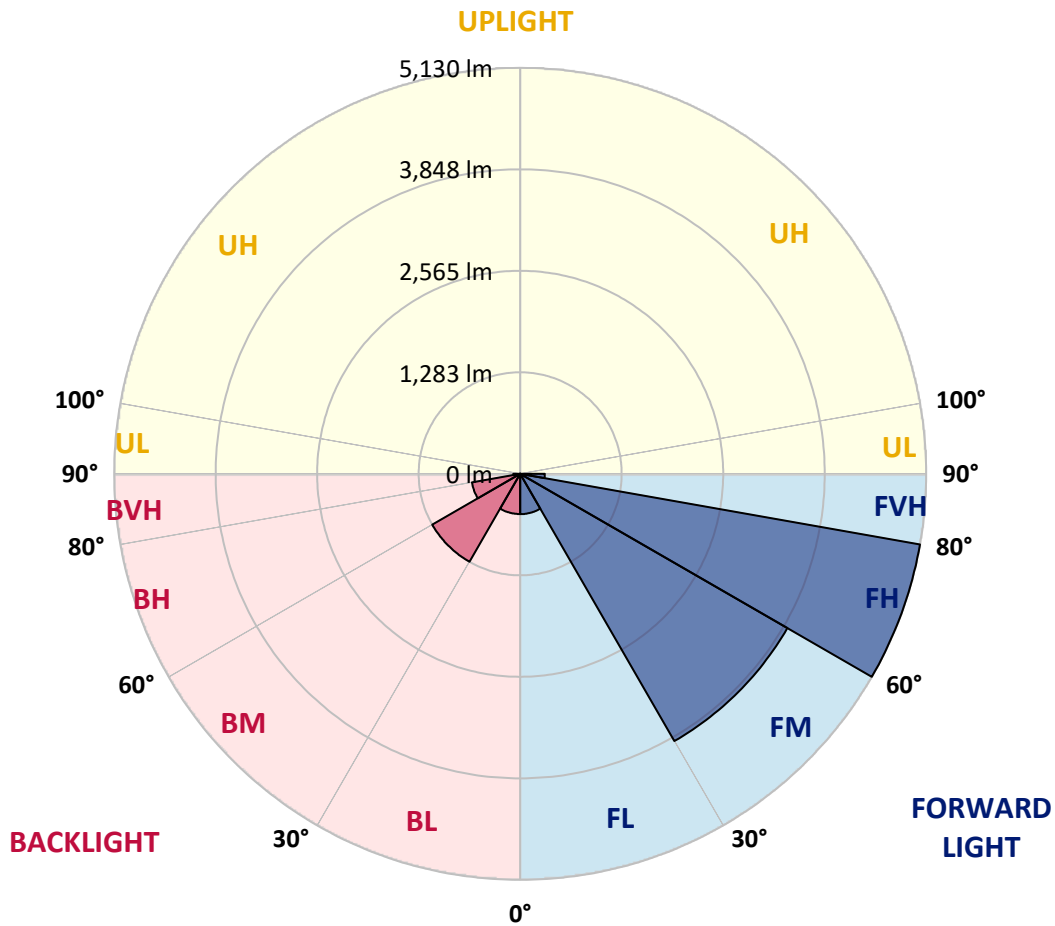
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	509.6	4.1			
FM (30°-60°)	3898.5	31.6			
FH (60°-80°)	5130.1	41.5			G3/7500
FVH (80°-90°)	311.8	2.5			G3/500
BL (0°-30°)	508.4	4.1	B2/1000		
BM (30°-60°)	1282.9	10.4	B2/2500		
BH (60°-80°)	619.0	5.0	B2/1000		G2/1000
BVH (80°-90°)	87.7	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°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5
2.5°	734.1	711.0	673.1	672.1	693.1	697.7	711.5	712.5	717.7	709.5	767.9
5°	809.9	785.3	770.4	775.5	765.8	777.6	777.6	811.4	856.5	908.7	983.0
7.5°	827.8	809.9	793.0	805.8	807.8	796.5	807.3	886.7	968.1	1020.4	1139.2
10°	791.9	774.0	786.8	790.9	790.4	816.0	871.8	935.4	1026.0	1122.3	1186.4
12.5°	785.3	798.1	804.2	811.4	860.1	867.7	952.3	1017.8	1109.0	1193.5	1360.0
15°	884.1	901.0	863.1	860.6	876.5	883.6	971.2	1037.3	1170.5	1312.4	1462.0
17.5°	1025.0	1031.2	963.0	928.2	940.0	945.6	984.0	1067.0	1149.0	1411.2	1597.7
20°	1161.3	1165.4	1037.3	959.4	1000.9	1007.1	1042.9	1090.6	1155.1	1466.6	1689.4
22.5°	1304.2	1278.1	1137.7	1039.4	1063.4	1065.0	1086.0	1112.1	1203.8	1457.9	1801.1
25°	1460.4	1444.0	1267.3	1173.0	1172.0	1151.0	1152.0	1189.4	1255.5	1551.1	1874.3
27.5°	1667.9	1669.9	1413.3	1362.6	1283.2	1269.3	1200.2	1269.9	1345.2	1552.1	2032.6
30°	1936.8	1887.1	1616.7	1534.7	1456.3	1427.1	1333.4	1392.8	1425.6	1640.7	2204.7
32.5°	2155.5	2141.2	1828.7	1704.8	1576.7	1610.5	1507.0	1454.8	1513.7	1793.4	2465.4
35°	2365.0	2317.9	2053.1	1891.7	1757.0	1736.5	1669.4	1678.1	1714.0	1986.5	2806.1
37.5°	2677.5	2651.9	2370.7	2112.5	2049.5	1966.0	1923.5	1950.6	1922.5	2233.9	3316.8
40°	3026.9	2878.3	2636.0	2406.0	2288.2	2229.3	2244.2	2218.5	2197.0	2511.6	3774.8
42.5°	3361.4	3226.1	2812.2	2708.8	2555.1	2579.7	2498.2	2516.2	2577.1	2905.5	4198.4
45°	3725.6	3433.1	2999.2	2908.0	2797.9	2829.1	2894.2	2874.7	2974.6	3370.1	4597.4
47.5°	3907.4	3629.3	3228.7	3080.1	3078.6	3013.6	3409.5	3452.5	3296.3	3714.3	5002.6
50°	4082.6	3809.1	3399.3	3298.9	3226.1	3365.5	3903.8	3805.0	3587.3	4109.3	5448.3
52.5°	4326.4	4014.5	3595.0	3487.9	3578.0	3707.1	4298.3	4278.8	3872.6	4515.5	5835.5
55°	4512.4	4197.4	3889.5	3790.1	3962.2	4088.8	4699.9	4582.6	4116.9	4813.6	6080.9
57.5°	4838.2	4515.0	4324.4	4103.6	4413.0	4411.0	5087.1	4996.5	4378.2	5058.4	6179.8
60°	5356.1	4976.5	4777.2	4522.6	4854.1	4972.4	5529.7	5268.5	4563.1	5213.1	6001.5
62.5°	6082.9	5632.2	5308.9	5056.9	5461.1	5675.2	6076.3	5466.7	4574.9	5169.1	5532.8
65°	6981.9	6433.8	6010.2	5743.8	6410.8	6716.6	6737.1	5589.1	4466.3	4713.7	4547.2
67.5°	7858.9	7242.7	6800.6	6851.3	7825.1	7970.1	7453.2	5691.6	3882.8	3785.0	3157.5
70°	8436.2	7768.2	7473.7	8011.6	9490.9	9342.4	8033.6	5421.6	3057.6	2453.7	1778.0
72.5°	8392.7	7693.4	7587.4	8701.0	10682.4	10589.7	8104.3	4311.6	2048.0	1341.6	886.7
75°	6837.5	6294.0	6534.7	8236.9	10339.2	10334.6	7036.2	2668.8	1050.6	689.0	560.4
77.5°	3780.4	3569.3	4276.8	6236.6	8232.3	8274.3	4754.2	1210.4	566.5	488.2	422.1
80°	1324.2	1304.7	1853.3	3365.5	5415.5	5425.7	2210.9	553.7	411.8	369.3	309.9
82.5°	484.1	480.0	768.4	1563.4	2981.8	2975.1	838.5	344.7	305.3	261.2	204.4
85°	193.1	189.0	351.4	694.1	1369.8	1347.7	325.8	195.7	199.8	155.7	100.4
87.5°	53.3	55.3	119.4	217.2	419.5	388.8	82.0	66.1	80.9	63.5	31.8
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°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5
2.5°	778.1	783.2	732.5	750.4	773.5	785.8	791.9	765.8	774.5	811.4	809.9
5°	998.4	977.9	958.4	978.4	965.1	946.1	976.9	975.3	995.3	1015.3	1019.9
7.5°	1162.8	1136.2	1126.9	1081.9	1036.8	991.2	1030.6	1055.2	1060.4	1110.0	1131.0
10°	1222.2	1212.0	1215.6	1156.1	1150.5	1155.1	1118.7	1079.3	1103.4	1082.9	1098.3
12.5°	1359.5	1385.1	1321.6	1281.1	1277.5	1249.4	1176.6	1151.0	1123.9	1152.0	1137.7
15°	1469.6	1517.3	1449.1	1377.9	1297.5	1254.0	1192.0	1153.1	1135.1	1141.3	1123.9
17.5°	1631.0	1675.6	1502.4	1393.3	1310.3	1246.3	1151.5	1068.5	1112.6	1116.2	1096.2
20°	1738.1	1741.1	1520.4	1355.4	1280.6	1169.5	1077.3	1004.5	1055.2	1107.0	1129.5
22.5°	1842.6	1819.5	1542.4	1325.2	1172.5	1065.0	1019.9	1015.3	1053.2	1096.7	1101.8
25°	1920.9	1924.5	1555.2	1313.9	1109.0	962.5	962.5	995.8	1029.1	1132.6	1127.5
27.5°	2111.0	1971.1	1505.5	1262.2	1020.9	902.6	963.0	1007.6	1023.5	1135.7	1146.9
30°	2249.3	2158.1	1515.7	1173.6	931.8	874.4	924.1	979.9	1024.0	1153.6	1149.5
32.5°	2481.3	2236.0	1539.8	1049.1	865.2	863.6	907.7	966.6	1019.4	1134.1	1140.3
35°	2738.0	2465.4	1472.7	954.3	849.3	857.5	914.4	937.9	999.9	1126.4	1132.1
37.5°	3212.8	2585.3	1430.2	881.1	839.1	862.6	884.1	920.5	983.0	1088.0	1124.9
40°	3491.5	2832.2	1272.4	838.5	817.5	858.5	869.3	900.0	933.8	1041.9	1065.5
42.5°	3858.2	2910.1	1137.7	791.4	806.8	841.6	873.9	881.6	904.1	969.2	1012.2
45°	4164.1	2968.5	994.8	753.5	770.4	879.0	881.1	877.5	873.4	897.5	932.8
47.5°	4480.6	3125.2	863.1	711.5	756.6	909.8	884.7	851.9	835.0	838.0	870.8
50°	4830.0	3238.9	769.9	677.2	759.7	909.8	902.1	825.7	791.9	783.2	817.5
52.5°	5137.3	3252.3	699.2	649.5	746.9	878.5	913.8	809.4	752.5	731.5	763.8
55°	5304.8	3083.7	648.0	624.4	714.1	850.3	907.7	800.1	704.9	689.0	717.7
57.5°	5301.3	2804.0	604.5	589.6	676.7	810.9	873.4	749.9	675.7	666.4	694.6
60°	5110.2	2476.2	571.2	560.9	638.3	753.5	811.9	717.1	647.5	642.9	673.6
62.5°	4676.8	2137.6	538.9	530.7	602.4	713.0	782.7	680.8	618.3	617.8	647.0
65°	3830.1	1716.0	508.7	506.6	569.1	673.1	755.1	650.0	588.1	598.3	628.0
67.5°	2639.1	1205.8	476.4	482.5	538.4	634.7	734.1	629.6	556.3	577.3	603.9
70°	1448.1	745.8	440.5	452.8	499.4	590.1	701.3	596.3	514.8	547.1	565.5
72.5°	736.6	497.4	396.0	415.4	451.8	524.5	639.8	548.1	470.2	482.5	492.3
75°	494.8	374.5	346.3	367.8	393.9	462.0	567.6	503.0	427.7	426.2	436.9
77.5°	373.9	292.5	294.0	318.6	335.5	406.2	510.2	465.1	391.9	388.3	404.2
80°	273.5	221.8	236.7	262.3	277.6	364.7	472.8	423.1	343.2	328.9	342.2
82.5°	181.3	157.3	175.2	200.8	213.1	304.8	429.3	359.1	279.7	243.3	245.4
85°	85.5	82.5	104.5	116.8	132.7	189.0	321.2	248.4	178.3	147.5	154.2
87.5°	19.5	26.1	34.3	33.8	39.4	50.7	99.9	69.7	51.7	35.3	23.6
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)