

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: P367762

Luminaire Tested: **MSA-SA3A-760-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367762
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-SA3A-760-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 11757 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

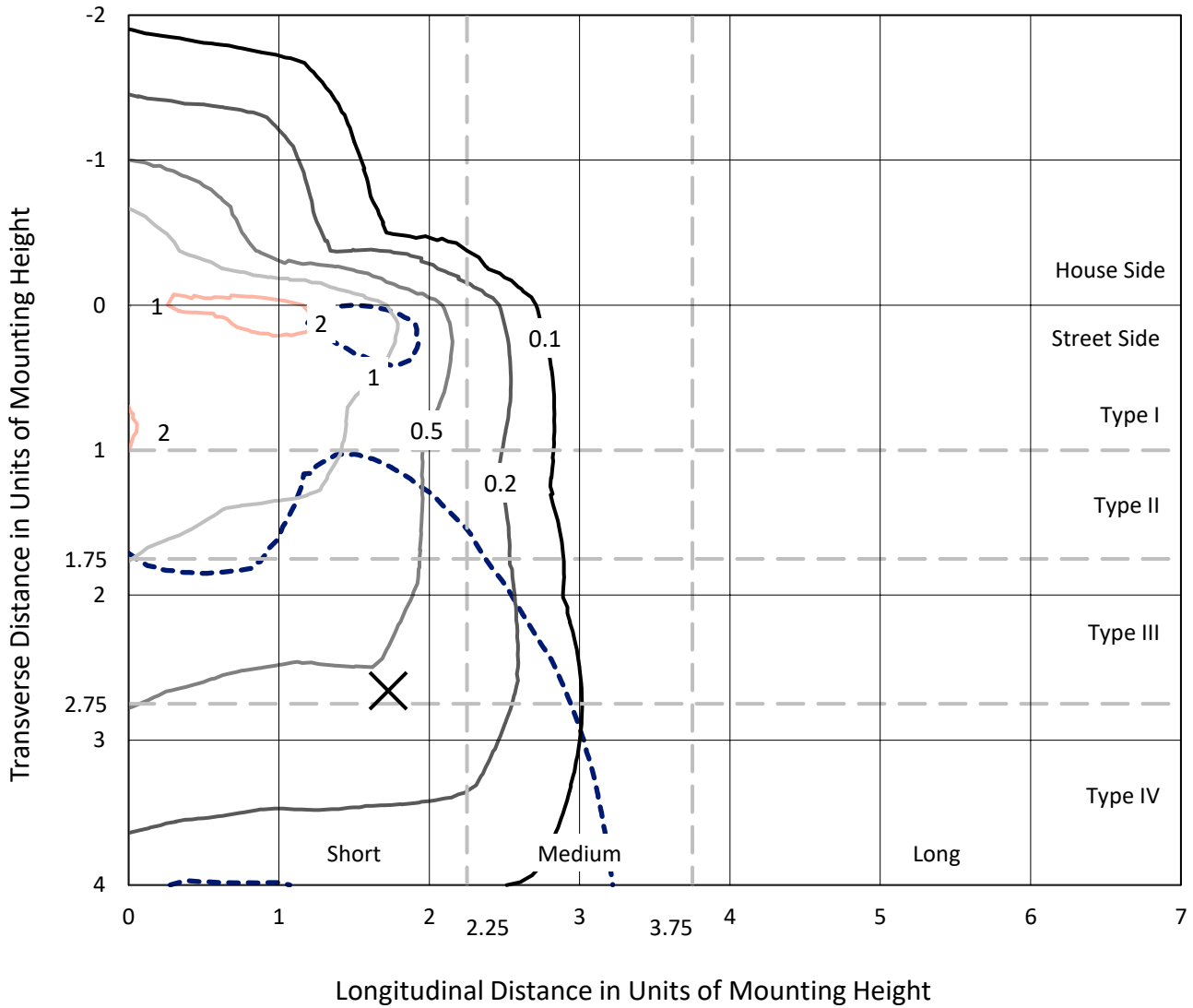
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

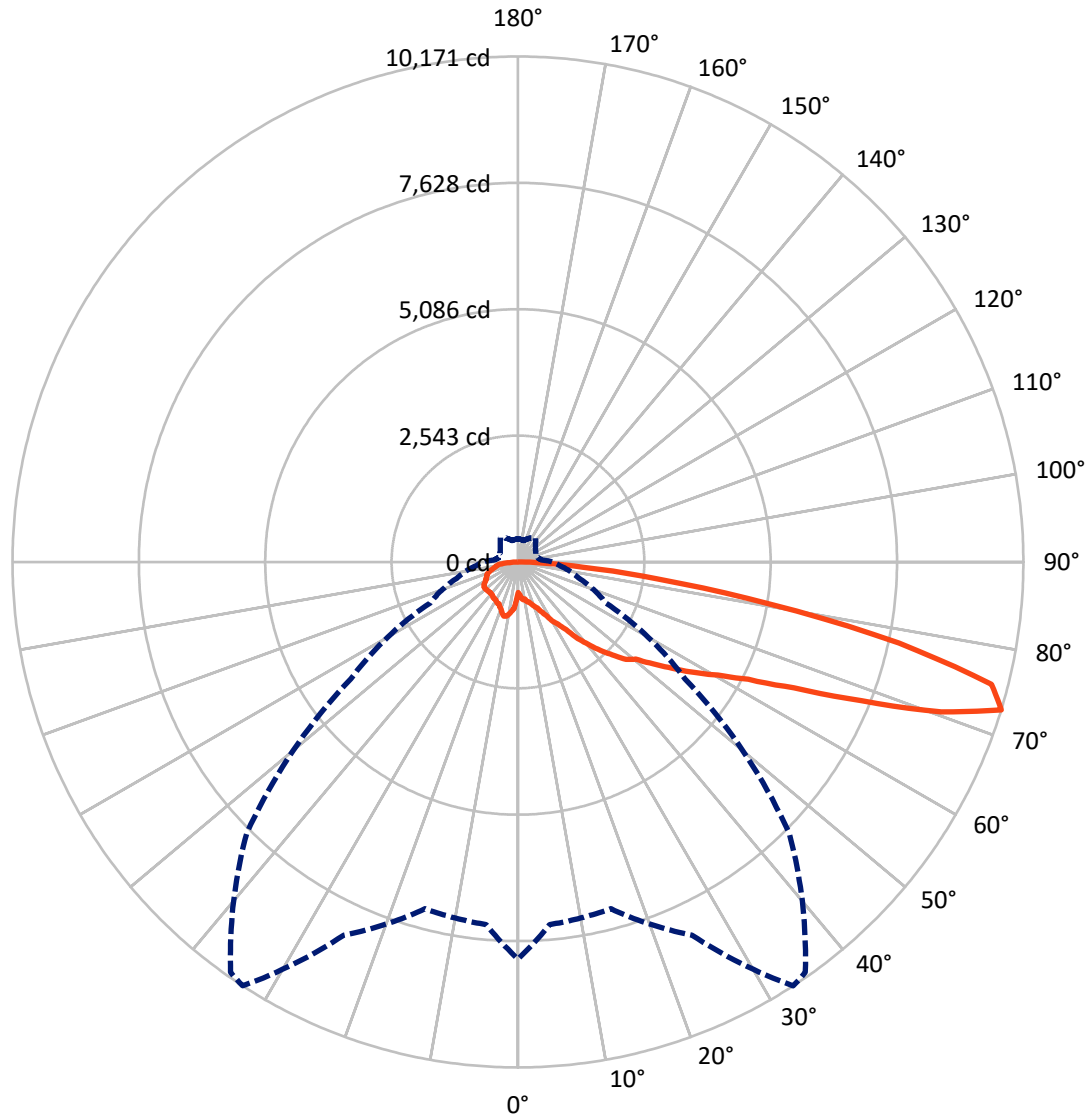
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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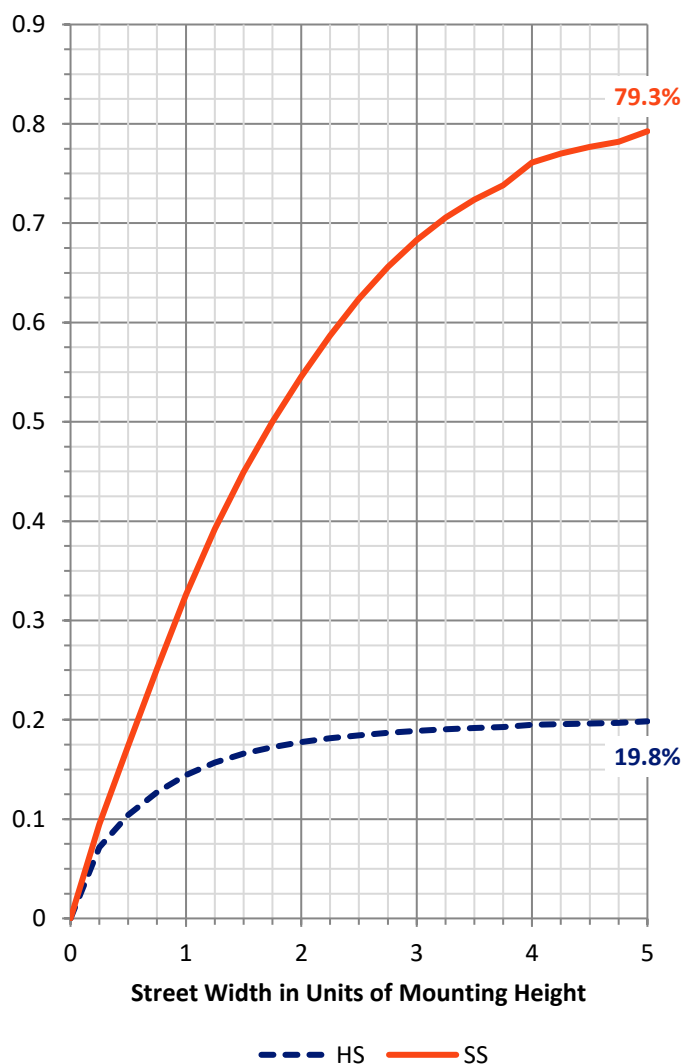
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2378.4	0.0	2378.4
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9378.6	0.0	9378.6
	% Fixture	79.8	0.0	79.8
Total	Lumens	11757.0	0.0	11757.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	0.7
10°-20°	313.3	2.7
20°-30°	571.2	4.9
30°-40°	966.4	8.2
40°-50°	1607.7	13.7
50°-60°	2359.4	20.1
60°-70°	3018.3	25.7
70°-80°	2455.6	20.9
80°-90°	380.3	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°	11757.0	100.0
0°-180°	11757.0	100.0

Coefficient of Utilization



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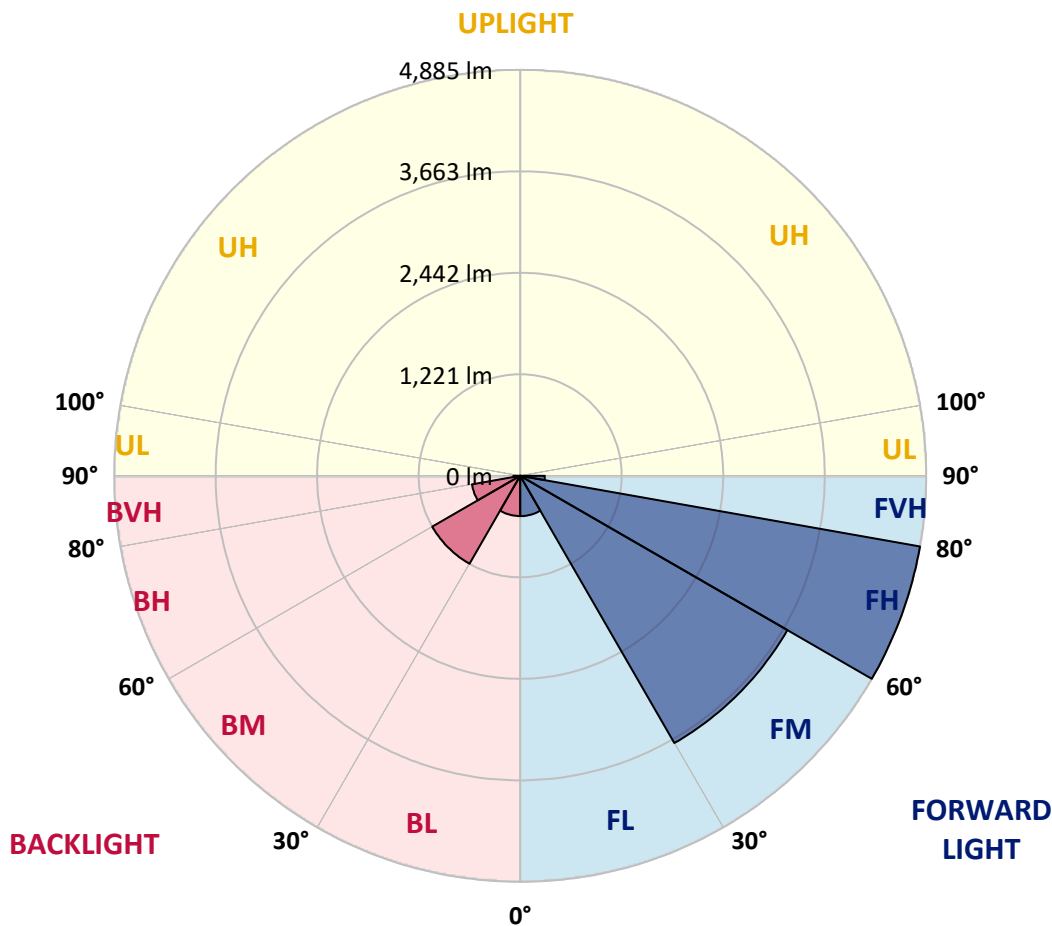
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.2	4.1			
FM (30°-60°)	3712.0	31.6			
FH (60°-80°)	4884.6	41.5			G2/5000
FVH (80°-90°)	296.8	2.5			G3/500
BL (0°-30°)	484.1	4.1	B1/500		
BM (30°-60°)	1221.5	10.4	B2/2500		
BH (60°-80°)	589.3	5.0	B2/1000		G2/1000
BVH (80°-90°)	83.5	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°	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5
2.5°	698.9	677.0	640.9	639.9	659.9	664.3	677.5	678.4	683.3	675.5	731.1
5°	771.1	747.7	733.5	738.4	729.2	740.4	740.4	772.6	815.5	865.2	936.0
7.5°	788.2	771.1	755.0	767.2	769.2	758.4	768.7	844.3	921.8	971.6	1084.7
10°	754.0	737.0	749.2	753.1	752.6	777.0	830.1	890.6	976.9	1068.6	1129.6
12.5°	747.7	759.9	765.7	772.6	818.9	826.2	906.7	969.1	1055.9	1136.4	1294.9
15°	841.8	857.9	821.8	819.4	834.5	841.3	924.7	987.7	1114.5	1249.6	1392.0
17.5°	975.9	981.8	916.9	883.8	895.0	900.4	936.9	1015.9	1094.0	1343.7	1521.2
20°	1105.7	1109.6	987.7	913.5	953.0	958.9	993.0	1038.4	1099.8	1396.4	1608.5
22.5°	1241.8	1216.9	1083.2	989.6	1012.5	1014.0	1034.0	1058.9	1146.2	1388.1	1714.9
25°	1390.5	1374.9	1206.6	1116.9	1115.9	1095.9	1096.9	1132.5	1195.4	1476.8	1784.6
27.5°	1588.1	1590.0	1345.6	1297.4	1221.8	1208.6	1142.8	1209.1	1280.8	1477.8	1935.3
30°	1844.1	1796.8	1539.3	1461.2	1386.6	1358.8	1269.6	1326.1	1357.4	1562.2	2099.2
32.5°	2052.4	2038.7	1741.2	1623.2	1501.2	1533.4	1434.9	1385.2	1441.2	1707.5	2347.4
35°	2251.9	2207.0	1954.8	1801.2	1672.9	1653.4	1589.5	1597.8	1631.9	1891.4	2671.8
37.5°	2549.4	2525.0	2257.2	2011.4	1951.4	1871.9	1831.4	1857.3	1830.5	2127.0	3158.1
40°	2882.0	2740.6	2509.9	2290.9	2178.7	2122.6	2136.7	2112.4	2091.9	2391.3	3594.1
42.5°	3200.5	3071.7	2677.6	2579.1	2432.8	2456.2	2378.7	2395.7	2453.8	2766.4	3997.4
45°	3547.3	3268.8	2855.7	2768.8	2664.0	2693.7	2755.7	2737.1	2832.3	3208.8	4377.4
47.5°	3720.4	3455.6	3074.2	2932.7	2931.3	2869.3	3246.3	3287.3	3138.5	3536.5	4763.2
50°	3887.2	3626.8	3236.6	3141.0	3071.7	3204.4	3717.0	3622.9	3415.6	3912.6	5187.5
52.5°	4119.4	3822.3	3422.9	3321.0	3406.8	3529.7	4092.5	4074.0	3687.2	4299.3	5556.2
55°	4296.4	3996.5	3703.3	3608.7	3772.6	3893.1	4474.9	4363.2	3919.9	4583.2	5789.8
57.5°	4606.6	4298.9	4117.4	3907.2	4201.8	4199.8	4843.7	4757.3	4168.6	4816.3	5884.0
60°	5099.7	4738.3	4548.6	4306.2	4621.7	4734.4	5265.1	5016.3	4344.7	4963.6	5714.3
62.5°	5791.8	5362.6	5054.8	4814.9	5199.7	5403.6	5785.5	5205.1	4355.9	4921.7	5268.0
65°	6647.8	6125.9	5722.5	5468.9	6103.9	6395.1	6414.6	5321.6	4252.5	4488.1	4329.6
67.5°	7482.8	6896.0	6475.1	6523.4	7450.6	7588.6	7096.5	5419.2	3697.0	3603.8	3006.4
70°	8032.4	7396.4	7116.0	7628.1	9036.7	8895.2	7649.1	5162.1	2911.3	2336.2	1692.9
72.5°	7991.0	7325.2	7224.3	8284.6	10171.1	10082.9	7716.4	4105.2	1949.9	1277.4	844.3
75°	6510.2	5992.7	6222.0	7842.7	9844.4	9840.0	6699.5	2541.1	1000.3	656.0	533.6
77.5°	3599.5	3398.5	4072.1	5938.1	7838.3	7878.3	4526.6	1152.5	539.4	464.8	401.9
80°	1260.8	1242.2	1764.6	3204.4	5156.3	5166.0	2105.0	527.2	392.1	351.7	295.1
82.5°	460.9	457.0	731.6	1488.6	2839.1	2832.7	798.4	328.2	290.7	248.7	194.6
85°	183.9	180.0	334.6	660.9	1304.2	1283.2	310.2	186.3	190.2	148.3	95.6
87.5°	50.7	52.7	113.6	206.8	399.5	370.2	78.0	62.9	77.1	60.5	30.2
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°	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5	616.5
2.5°	740.9	745.7	697.5	714.5	736.5	748.2	754.0	729.2	737.4	772.6	771.1
5°	950.6	931.1	912.5	931.6	918.9	900.8	930.1	928.6	947.7	966.7	971.1
7.5°	1107.1	1081.8	1073.0	1030.1	987.2	943.8	981.3	1004.7	1009.6	1056.9	1076.9
10°	1163.7	1154.0	1157.4	1100.8	1095.4	1099.8	1065.2	1027.6	1050.6	1031.1	1045.7
12.5°	1294.4	1318.8	1258.3	1219.8	1216.4	1189.6	1120.3	1095.9	1070.1	1096.9	1083.2
15°	1399.3	1444.7	1379.8	1312.0	1235.4	1194.0	1134.9	1097.9	1080.8	1086.7	1070.1
17.5°	1552.9	1595.4	1430.5	1326.6	1247.6	1186.6	1096.4	1017.4	1059.4	1062.8	1043.7
20°	1654.9	1657.8	1447.6	1290.5	1219.3	1113.5	1025.7	956.4	1004.7	1054.0	1075.4
22.5°	1754.4	1732.4	1468.6	1261.8	1116.4	1014.0	971.1	966.7	1002.8	1044.2	1049.1
25°	1829.0	1832.4	1480.7	1251.0	1055.9	916.4	916.4	948.1	979.9	1078.4	1073.5
27.5°	2009.9	1876.8	1433.4	1201.8	972.0	859.4	916.9	959.4	974.5	1081.3	1092.0
30°	2141.6	2054.8	1443.2	1117.4	887.2	832.6	879.9	933.0	975.0	1098.4	1094.5
32.5°	2362.6	2128.9	1466.1	998.9	823.8	822.3	864.3	920.3	970.6	1079.8	1085.7
35°	2606.9	2347.4	1402.2	908.6	808.7	816.5	870.6	893.0	952.0	1072.5	1077.9
37.5°	3059.0	2461.6	1361.7	838.9	798.9	821.3	841.8	876.5	936.0	1035.9	1071.1
40°	3324.4	2696.7	1211.5	798.4	778.4	817.4	827.7	856.9	889.1	992.0	1014.5
42.5°	3673.6	2770.8	1083.2	753.5	768.2	801.3	832.1	839.4	860.8	922.8	963.8
45°	3964.8	2826.4	947.2	717.5	733.5	836.9	838.9	835.5	831.6	854.5	888.2
47.5°	4266.2	2975.6	821.8	677.5	720.4	866.2	842.3	811.1	795.0	797.9	829.1
50°	4598.8	3083.9	733.1	644.8	723.3	866.2	858.9	786.2	754.0	745.7	778.4
52.5°	4891.4	3096.6	665.8	618.4	711.1	836.5	870.1	770.6	716.5	696.5	727.2
55°	5050.9	2936.1	617.0	594.5	679.9	809.6	864.3	761.8	671.1	656.0	683.3
57.5°	5047.5	2669.8	575.5	561.4	644.3	772.1	831.6	714.0	643.3	634.5	661.4
60°	4865.6	2357.7	543.8	534.1	607.7	717.5	773.1	682.8	616.5	612.1	641.4
62.5°	4453.0	2035.3	513.1	505.3	573.6	678.9	745.3	648.2	588.7	588.2	616.0
65°	3646.8	1633.9	484.3	482.4	541.9	640.9	718.9	618.9	559.9	569.7	598.0
67.5°	2512.8	1148.1	453.6	459.4	512.6	604.3	698.9	599.4	529.7	549.7	575.0
70°	1378.8	710.1	419.4	431.2	475.5	561.9	667.7	567.7	490.2	520.9	538.5
72.5°	701.4	473.6	377.0	395.5	430.2	499.4	609.2	521.9	447.7	459.4	468.7
75°	471.1	356.5	329.7	350.2	375.1	439.9	540.4	479.0	407.3	405.8	416.0
77.5°	356.0	278.5	280.0	303.4	319.5	386.8	485.8	442.9	373.1	369.7	384.8
80°	260.4	211.2	225.3	249.7	264.3	347.3	450.2	402.9	326.8	313.1	325.8
82.5°	172.7	149.7	166.8	191.2	202.9	290.2	408.7	341.9	266.3	231.7	233.6
85°	81.5	78.5	99.5	111.2	126.3	180.0	305.8	236.5	169.7	140.5	146.8
87.5°	18.5	24.9	32.7	32.2	37.6	48.3	95.1	66.3	49.3	33.7	22.4
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)