

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: P367542

Luminaire Tested: **MSA-SA2D-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367542
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-SA2D-727-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 11306 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

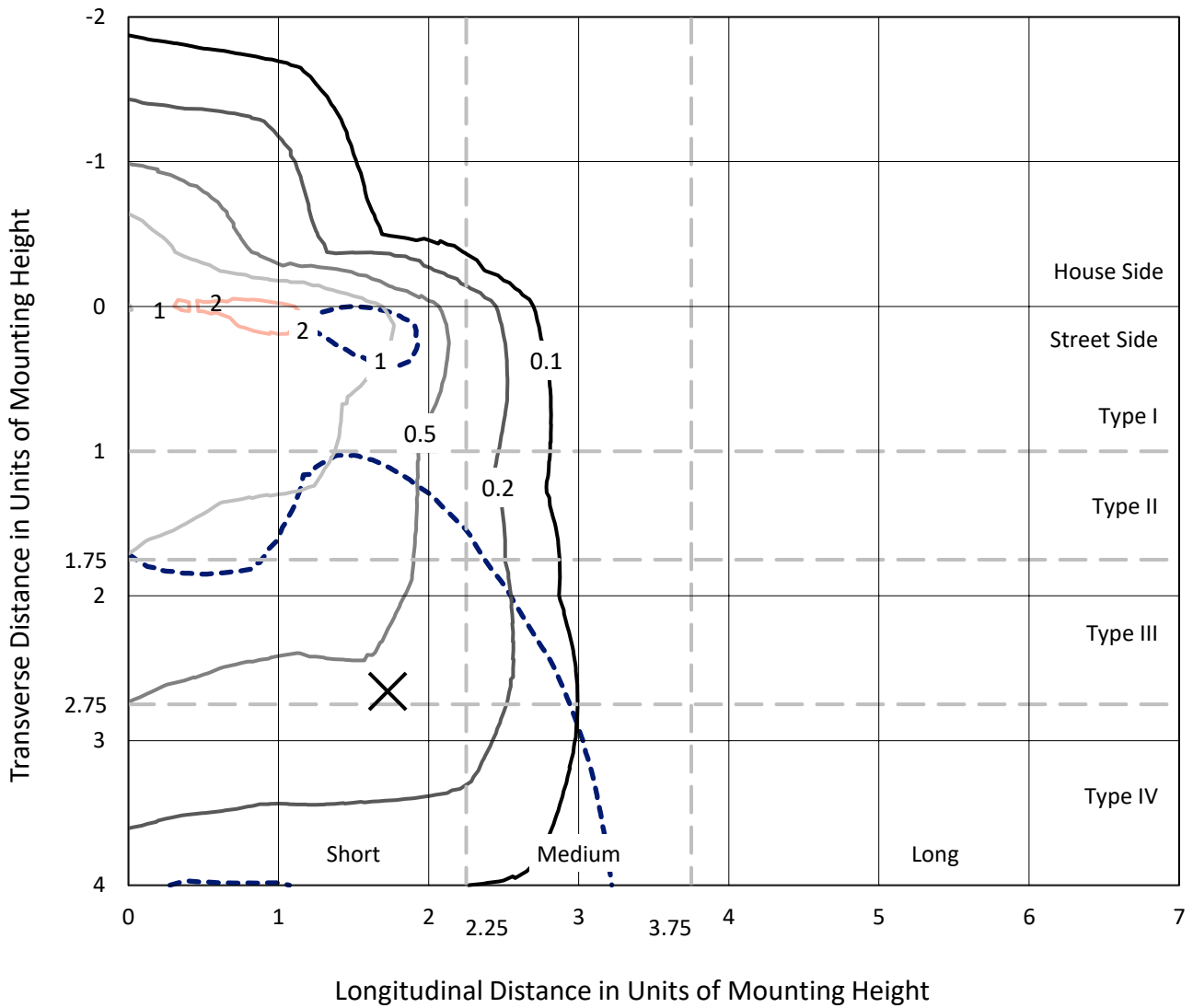
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367542
 CATALOG NUMBER: MSA-SA2D-727-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

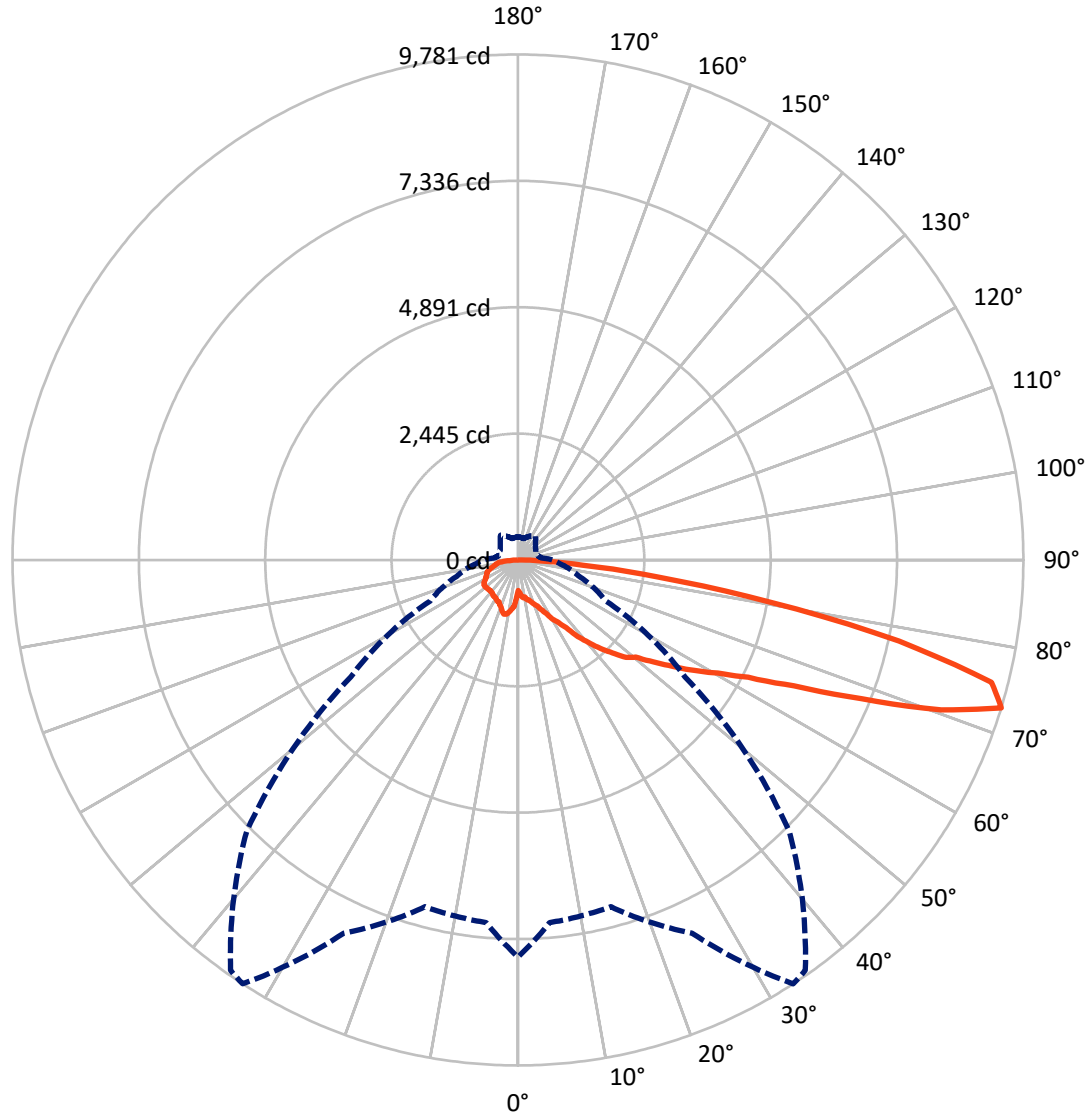
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type IV - Short - N/A

REPORT NUMBER: P367542
CATALOG NUMBER: MSA-SA2D-727-U-T4FT

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P367542
 CATALOG NUMBER: MSA-SA2D-727-U-T4FT

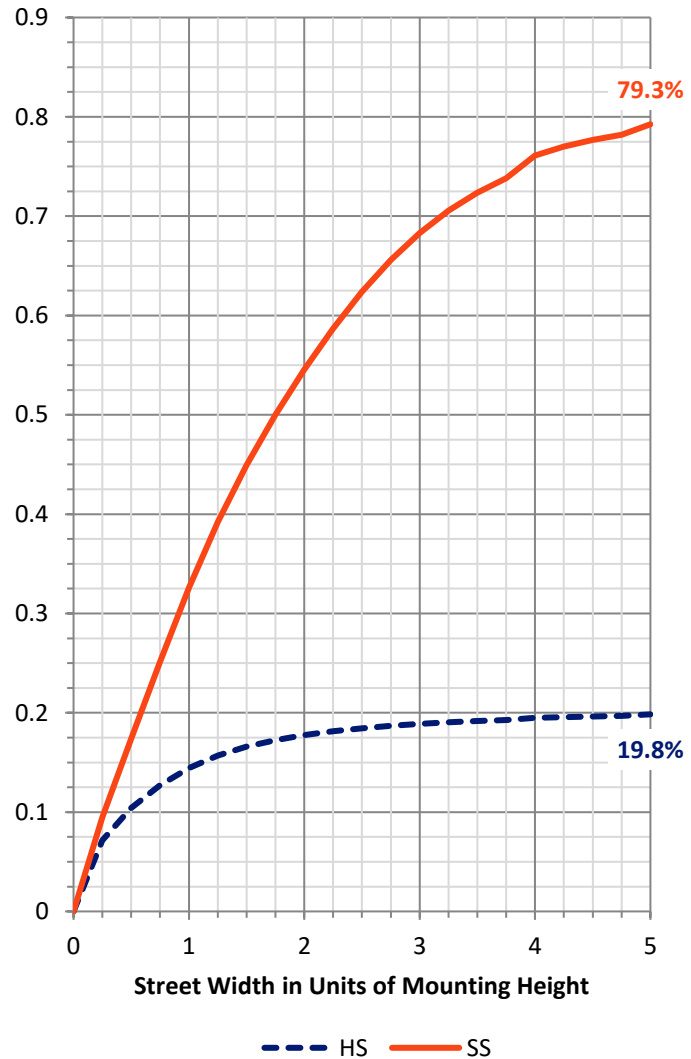
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2287.2	0.0	2287.2
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	9018.8	0.0	9018.8
	% Fixture	79.8	0.0	79.8
Total	Lumens	11306.0	0.0	11306.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	0.7
10°-20°	301.2	2.7
20°-30°	549.3	4.9
30°-40°	929.3	8.2
40°-50°	1546.0	13.7
50°-60°	2268.9	20.1
60°-70°	2902.5	25.7
70°-80°	2361.5	20.9
80°-90°	365.7	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°	11306.0	100.0
0°-180°	11306.0	100.0

Coefficient of Utilization

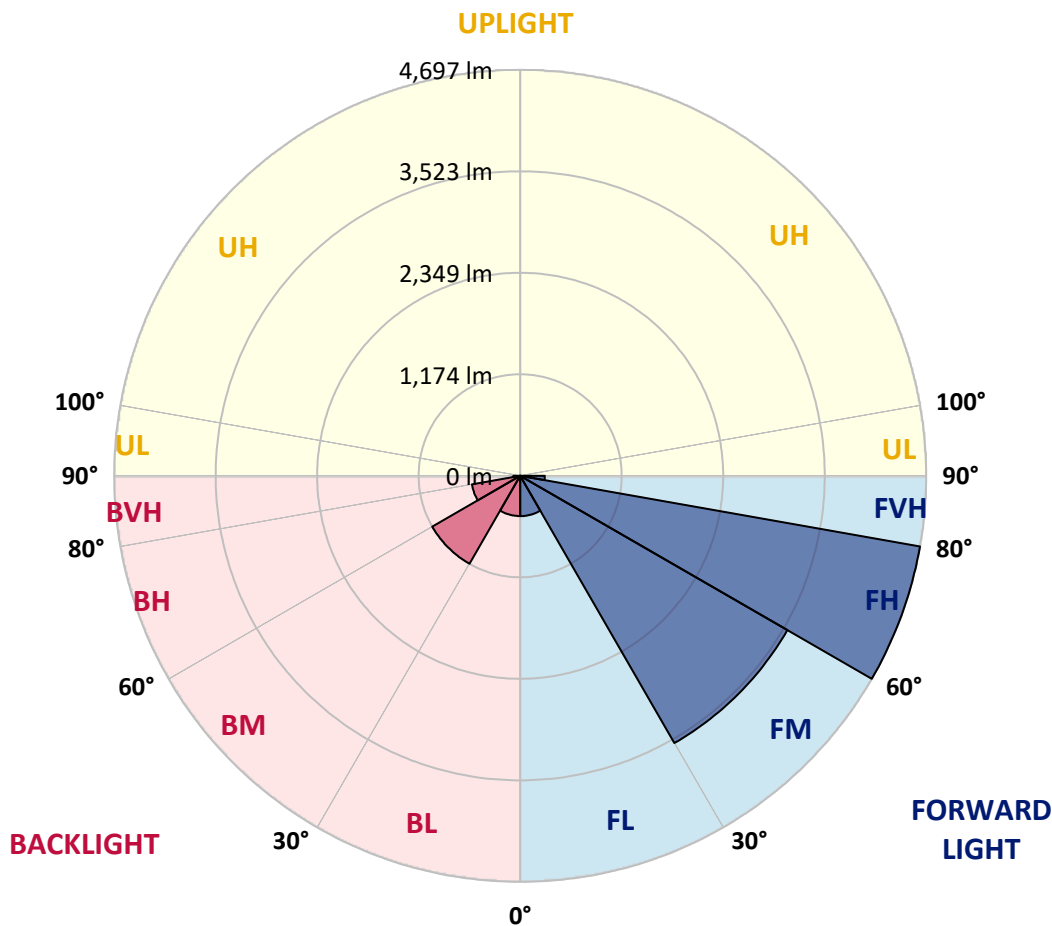


REPORT NUMBER: P367542
 CATALOG NUMBER: MSA-SA2D-727-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	466.6	4.1			
FM (30°-60°)	3569.6	31.6			
FH (60°-80°)	4697.2	41.5			G2/5000
FVH (80°-90°)	285.5	2.5			G3/500
BL (0°-30°)	465.5	4.1	B1/500		
BM (30°-60°)	1174.7	10.4	B2/2500		
BH (60°-80°)	566.7	5.0	B2/1000		G2/1000
BVH (80°-90°)	80.3	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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 CATALOG NUMBER: MSA-SA2D-727-U-T4FT

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8
2.5°	672.1	651.0	616.3	615.4	634.6	638.8	651.5	652.4	657.1	649.6	703.1
5°	741.5	719.0	705.4	710.1	701.2	712.0	712.0	742.9	784.2	832.0	900.1
7.5°	757.9	741.5	726.0	737.8	739.6	729.3	739.2	811.9	886.4	934.3	1043.1
10°	725.1	708.7	720.4	724.2	723.7	747.2	798.3	856.4	939.4	1027.6	1086.3
12.5°	719.0	730.7	736.4	742.9	787.5	794.5	871.9	931.9	1015.4	1092.8	1245.3
15°	809.5	825.0	790.3	788.0	802.5	809.1	889.3	949.8	1071.7	1201.6	1338.6
17.5°	938.5	944.1	881.8	849.9	860.7	865.8	901.0	977.0	1052.0	1292.2	1462.9
20°	1063.3	1067.0	949.8	878.5	916.5	922.1	954.9	998.5	1057.6	1342.8	1546.8
22.5°	1194.1	1170.2	1041.7	951.6	973.7	975.1	994.3	1018.2	1102.2	1334.8	1649.1
25°	1337.2	1322.2	1160.4	1074.1	1073.1	1053.9	1054.8	1089.1	1149.6	1420.2	1716.1
27.5°	1527.1	1529.0	1294.0	1247.6	1174.9	1162.2	1098.9	1162.7	1231.6	1421.1	1861.1
30°	1773.4	1727.9	1480.2	1405.2	1333.4	1306.7	1220.9	1275.3	1305.3	1502.3	2018.7
32.5°	1973.6	1960.5	1674.4	1560.9	1443.6	1474.6	1379.9	1332.0	1386.0	1642.0	2257.4
35°	2165.5	2122.3	1879.8	1732.1	1608.7	1590.0	1528.5	1536.5	1569.3	1818.9	2569.3
37.5°	2451.6	2428.1	2170.6	1934.2	1876.6	1800.1	1761.2	1786.0	1760.2	2045.4	3036.9
40°	2771.4	2635.4	2413.6	2203.0	2095.1	2041.2	2054.8	2031.3	2011.6	2299.6	3456.2
42.5°	3077.7	2953.9	2574.9	2480.2	2339.5	2362.0	2287.4	2303.8	2359.6	2660.3	3844.1
45°	3411.2	3143.4	2746.1	2662.6	2561.8	2590.4	2650.0	2632.1	2723.6	3085.7	4209.5
47.5°	3577.7	3323.0	2956.2	2820.2	2818.8	2759.3	3121.8	3161.2	3018.2	3400.9	4580.5
50°	3738.1	3487.6	3112.4	3020.5	2953.9	3081.5	3574.4	3483.9	3284.6	3762.5	4988.5
52.5°	3961.4	3675.7	3291.6	3193.6	3276.1	3394.3	3935.6	3917.7	3545.8	4134.4	5343.1
55°	4131.6	3843.2	3561.3	3470.3	3627.9	3743.7	4303.3	4195.9	3769.5	4407.4	5567.7
57.5°	4429.9	4134.0	3959.5	3757.3	4040.6	4038.7	4657.8	4574.8	4008.7	4631.6	5658.3
60°	4904.1	4556.5	4374.1	4141.0	4444.4	4552.8	5063.1	4823.9	4178.0	4773.2	5495.1
62.5°	5569.6	5156.9	4860.9	4630.2	5000.2	5196.3	5563.5	5005.4	4188.8	4732.9	5065.9
65°	6392.8	5890.9	5503.0	5259.1	5869.8	6149.8	6168.6	5117.5	4089.4	4315.9	4163.5
67.5°	7195.7	6631.5	6226.7	6273.2	7164.8	7297.5	6824.3	5211.3	3555.2	3465.6	2891.0
70°	7724.3	7112.7	6843.0	7335.5	8690.0	8554.0	7355.7	4964.1	2799.6	2246.6	1628.0
72.5°	7684.4	7044.2	6947.1	7966.8	9781.0	9696.1	7420.4	3947.8	1875.1	1228.4	811.9
75°	6260.5	5762.9	5983.3	7541.9	9466.7	9462.5	6442.5	2443.6	962.0	630.8	513.1
77.5°	3461.4	3268.1	3915.9	5710.3	7537.6	7576.1	4353.0	1108.3	518.7	447.0	386.5
80°	1212.4	1194.6	1696.9	3081.5	4958.5	4967.9	2024.3	507.0	377.1	338.2	283.8
82.5°	443.2	439.5	703.5	1431.5	2730.2	2724.1	767.8	315.7	279.5	239.2	187.1
85°	176.8	173.1	321.7	635.5	1254.2	1234.0	298.3	179.2	182.9	142.6	91.9
87.5°	48.8	50.7	109.3	198.9	384.1	356.0	75.0	60.5	74.1	58.2	29.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367542
 CATALOG NUMBER: MSA-SA2D-727-U-T4FT

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8	592.8
2.5°	712.4	717.1	670.7	687.1	708.2	719.5	725.1	701.2	709.2	742.9	741.5
5°	914.1	895.4	877.5	895.8	883.6	866.3	894.4	893.0	911.3	929.6	933.8
7.5°	1064.7	1040.3	1031.8	990.6	949.3	907.6	943.7	966.2	970.9	1016.4	1035.6
10°	1119.1	1109.7	1113.0	1058.6	1053.4	1057.6	1024.3	988.2	1010.3	991.5	1005.6
12.5°	1244.8	1268.2	1210.1	1173.0	1169.7	1143.9	1077.3	1053.9	1029.0	1054.8	1041.7
15°	1345.6	1389.2	1326.9	1261.7	1188.0	1148.2	1091.4	1055.8	1039.4	1045.0	1029.0
17.5°	1493.4	1534.2	1375.6	1275.7	1199.8	1141.1	1054.4	978.4	1018.7	1022.0	1003.7
20°	1591.4	1594.2	1392.1	1241.0	1172.6	1070.8	986.4	919.8	966.2	1013.6	1034.2
22.5°	1687.1	1666.0	1412.2	1213.4	1073.6	975.1	933.8	929.6	964.3	1004.2	1008.9
25°	1758.8	1762.1	1423.9	1203.0	1015.4	881.3	881.3	911.8	942.3	1037.0	1032.3
27.5°	1932.8	1804.8	1378.5	1155.7	934.8	826.4	881.8	922.6	937.1	1039.8	1050.1
30°	2059.5	1976.0	1387.8	1074.5	853.1	800.6	846.1	897.2	937.6	1056.2	1052.5
32.5°	2271.9	2047.3	1409.9	960.6	792.2	790.8	831.1	885.0	933.4	1038.4	1044.0
35°	2506.9	2257.4	1348.4	873.8	777.6	785.1	837.2	858.8	915.5	1031.4	1036.5
37.5°	2941.7	2367.1	1309.5	806.7	768.3	789.8	809.5	842.8	900.1	996.2	1030.0
40°	3196.8	2593.2	1165.0	767.8	748.6	786.1	795.9	824.1	855.0	954.0	975.6
42.5°	3532.7	2664.5	1041.7	724.6	738.7	770.6	800.1	807.2	827.8	887.4	926.8
45°	3812.7	2718.0	910.8	689.9	705.4	804.8	806.7	803.4	799.7	821.7	854.1
47.5°	4102.5	2861.5	790.3	651.5	692.7	833.0	810.0	780.0	764.5	767.3	797.3
50°	4422.4	2965.6	704.9	620.0	695.6	833.0	825.9	756.1	725.1	717.1	748.6
52.5°	4703.8	2977.8	640.2	594.7	683.8	804.4	836.7	741.1	689.0	669.8	699.3
55°	4857.2	2823.5	593.3	571.7	653.8	778.6	831.1	732.6	645.4	630.8	657.1
57.5°	4853.9	2567.4	553.4	539.8	619.6	742.5	799.7	686.6	618.6	610.2	636.0
60°	4679.0	2267.2	523.0	513.6	584.4	689.9	743.4	656.6	592.8	588.6	616.8
62.5°	4282.2	1957.2	493.4	485.9	551.6	652.9	716.7	623.3	566.1	565.6	592.4
65°	3506.9	1571.2	465.7	463.9	521.1	616.3	691.3	595.2	538.4	547.8	575.0
67.5°	2416.4	1104.1	436.2	441.8	492.9	581.1	672.1	576.4	509.4	528.6	553.0
70°	1325.9	682.9	403.4	414.6	457.3	540.3	642.1	545.9	471.4	500.9	517.8
72.5°	674.5	455.4	362.6	380.4	413.7	480.3	585.8	501.9	430.6	441.8	450.7
75°	453.1	342.9	317.1	336.8	360.7	423.1	519.7	460.6	391.6	390.2	400.1
77.5°	342.4	267.8	269.2	291.7	307.2	371.9	467.1	425.9	358.8	355.5	370.1
80°	250.5	203.1	216.7	240.1	254.2	333.9	432.9	387.4	314.2	301.1	313.3
82.5°	166.0	144.0	160.4	183.9	195.1	279.1	393.0	328.8	256.1	222.8	224.7
85°	78.3	75.5	95.7	106.9	121.5	173.1	294.1	227.5	163.2	135.1	141.2
87.5°	17.8	23.9	31.4	31.0	36.1	46.4	91.5	63.8	47.4	32.4	21.6
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)