

# ANGLE & PHOTOMETRIC CONVERSION CHARTS



UNIVERSAL  
PHOTONICS  
INCORPORATED

SOURCE: ZYGO CORP. AND DYNASIL CORP.

ANGLE CONVERSIONS							
	DEGREE	MIN	SEC	RAD	MRAD	CIRCUMFERENCE	QUADRANT
1 Degree (°)	= 1	60	3600	$1.7453 \times 10^{-2}$	$1.7453 \times 10^{-5}$	$2.7778 \times 10^{-3}$	$1.11112 \times 10^{-2}$
1 Minute (')	= $1.66667 \times 10^{-2}$	1	60	$2.9089 \times 10^{-4}$	$2.9089 \times 10^{-7}$	$4.6296 \times 10^{-5}$	$1.8518 \times 10^{-4}$
1 Second (")	= $2.77778 \times 10^{-4}$	$1.66667 \times 10^{-2}$	1	$4.8481 \times 10^{-6}$	$4.8481 \times 10^{-9}$	$7.71605 \times 10^{-6}$	$3.0864 \times 10^{-5}$
1 Radian (rad)	= $5.72958 \times 10^1$	$3.43775 \times 10^3$	$2.06265 \times 10^5$	1	10 <sup>3</sup>	$1.59155 \times 10^{-1}$	$6.3662 \times 10^{-1}$
1 Milliradian (mrad)	= $5.72958 \times 10^{-2}$	3.43775	$2.06265 \times 10^2$	10 <sup>3</sup>	1	$1.59155 \times 10^{-4}$	$6.3662 \times 10^{-4}$
1 Circumference	= 360	21,600	1,296,000	6.28319	$6.28319 \times 10^{-3}$	1	4
1 Quadrant	= 90	5,400	324,000	1.5708	$1.5708 \times 10^3$	0.25000	1

LINEAR TO ANGULAR			
LINEAR TO MEASURE	PER INCH	PER 10 INCHES	PER FOOT
.000001"	0.206 sec	0.021 sec	0.017 sec.
.000025"	5.157 sec	0.516 sec	0.430 sec.
.00005"	10.3 sec	1.03 sec	0.86 sec.
.0001"	3 min. 26 sec.	2.06 sec	1.72 sec.
.001"	3 mm. 26 sec.	20.6 sec	17.2 sec.
.005"	17 min. 11 sec.	1 min. 43 sec.	1 min. 26 sec.

ANGULAR TO LINEAR			
ANGLES	PER INCH	PER 10 INCHES	PER FOOT
1 second	.000005"	.000048"	.000058"
5 seconds	.000024"	.000242"	.000291"
10 seconds	.000048"	.0000485"	.000582"
20 seconds	.000097"	.000970"	.001163"
30 seconds	.000145"	.001454"	.001745"
1 minute	.000291"	.002909"	.003491"

PHOTOMETRIC UNITS	
1 Foot Candle	= 1 Lumen/Ft <sup>2</sup>
1 Foot Candle	= 10.764 Meter Candles
1 Candle	= 1 Lumen/Steradian
1 Candle/M <sup>2</sup>	= $3.142 \times 10^{-4}$ Lambert
1 Lambert	= 2.054 Candle/In <sup>2</sup>
1 Lux	= 1 Meter Candle
1 Lux	= 0.0929 Ft. Candle
1 Meter Candle	= 1 Lumen/M <sup>2</sup>