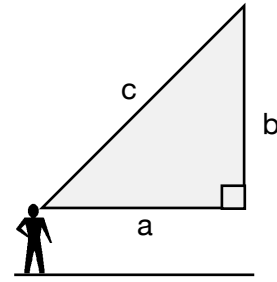
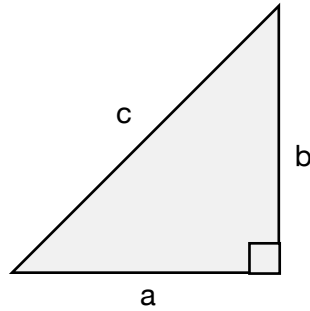


Beam Angle Cheat Sheet

Angle	Factor
2	0.03
4	0.07
6	0.10
8	0.14
10	0.17
12	0.21
14	0.25
16	0.28
18	0.32
20	0.35
22	0.39
24	0.43
26	0.46
28	0.50
30	0.54
32	0.57
34	0.61
36	0.65
38	0.69
40	0.73
42	0.77
44	0.81
46	0.85
48	0.89
50	0.93
52	0.98
54	1.02
56	1.06
58	1.11
60	1.15
62	1.20
64	1.25
66	1.30
68	1.35
70	1.40
72	1.45
74	1.51
76	1.56
78	1.62
80	1.68
82	1.74
84	1.80
86	1.87
88	1.93
90	2.00



$$a^2 + b^2 = c^2$$

$$c = \sqrt{(a^2 + b^2)}$$

a: distance from light to focus point in plan

b: height of light to floor (or focus height)

c: throw

diameter of beam = Angle Factor x Throw

$$D = F \times T$$

F = D / T, with F deduce needed beam angle

common beam angles:

PAR64

v. narrow: 10/24° oval

narrow: 14/26° oval

medium: 21/44° oval

wide: 45/71° oval

ETC Source 4 PAR

v. narrow: 15°

narrow: 19°

medium: 21/34° oval

wide: 30/51° oval

Fresnel (various)

16-70°, 18-49°,

10-62°

Profile Zoom

narrow: 15-30°

wide: 23-50°

ETC Source 4 fixed

5°, 10°, 14°, 19°, 26°,

36°, 50°, 70°, 90°