



**Calculations Report for CEILING mounted strobes  
Room Size: 60 Ceiling Height: 15. Rated Candela: 150**

UL Angle (on axis = 0)	UL Angle (radians)	UL Wall% Vertical/ Horizontal	Lumens/sqft Horizontal/ Vertical
0	0.000	100	0.667
5	0.087	90	0.595
10	0.175	90	0.582
15	0.262	90	0.560
20	0.349	90	0.530
25	0.436	90	0.493
30	0.524	75	0.375
35	0.611	75	0.336
40	0.698	75	0.293
45	0.785	75	0.250
50	0.873	55	0.151
55	0.960	45	0.099
60	1.047	40	0.067
65	1.134	35	0.048
70	1.222	35	0.052
75	1.309	30	0.047
80	1.396	30	0.048
85	1.484	25	0.041
90	1.571	25	0.042

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To calculate performance based strobe coverage, the inverse square law is used to calculate the illumination at each of the angles in the horizontal and vertical planes per UL 1971 and the effect of polar distribution is included using the minimum percentages in UL 1971 or actual test results recorded by the Listing organization (per Section 7.5.4.3.2).

The calculated illumination is required to be at least 0.0375 lumens/ft squared at any point within the covered area (per Section 7.5.4.3.1).

The calculation points are in the horizontal and vertical planes in 5 degree increments per UL 1971 (to comply with Section 7.5.4.3.2).

For the effect of polar distribution (rated candela at each angle), the UL 1971 minimum percentages are used for the calculations. UL 1971 does not provide ratings for each angle based on actual test results.

This utility is based on square rooms with wall mounted strobes on the centerline of the wall and ceiling mounted strobes on the center of the ceiling.



FIRE ALARM SYSTEMS



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**Calculations Report for CEILING mounted strobes  
Room Size: 55 Ceiling Height: 15. Rated Candela: 135**

UL Angle (on axis = 0)	UL Angle (radians)	UL Wall% Vertical/ Horizontal	Lumens/sqft Horizontal/ Vertical
0	0.000	100	0.600
5	0.087	90	0.536
10	0.175	90	0.524
15	0.262	90	0.504
20	0.349	90	0.477
25	0.436	90	0.444
30	0.524	75	0.338
35	0.611	75	0.302
40	0.698	75	0.264
45	0.785	75	0.225
50	0.873	55	0.136
55	0.960	45	0.089
60	1.047	40	0.060
65	1.134	35	0.051
70	1.222	35	0.055
75	1.309	30	0.050
80	1.396	30	0.052
85	1.484	25	0.044
90	1.571	25	0.045

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To calculate performance based strobe coverage, the inverse square law is used to calculate the illumination at each of the angles in the horizontal and vertical planes per UL 1971 and the effect of polar distribution is included using the minimum percentages in UL 1971 or actual test results recorded by the Listing organization (per Section 7.5.4.3.2).

The calculated illumination is required to be at least 0.0375 lumens/ft squared at any point within the covered area (per Section 7.5.4.3.1).

The calculation points are in the horizontal and vertical planes in 5 degree increments per UL 1971 (to comply with Section 7.5.4.3.2).

For the effect of polar distribution (rated candela at each angle), the UL 1971 minimum percentages are used for the calculations. UL 1971 does not provide ratings for each angle based on actual test results.

This utility is based on square rooms with wall mounted strobes on the centerline of the wall and ceiling mounted strobes on the center of the ceiling.