Incandescent

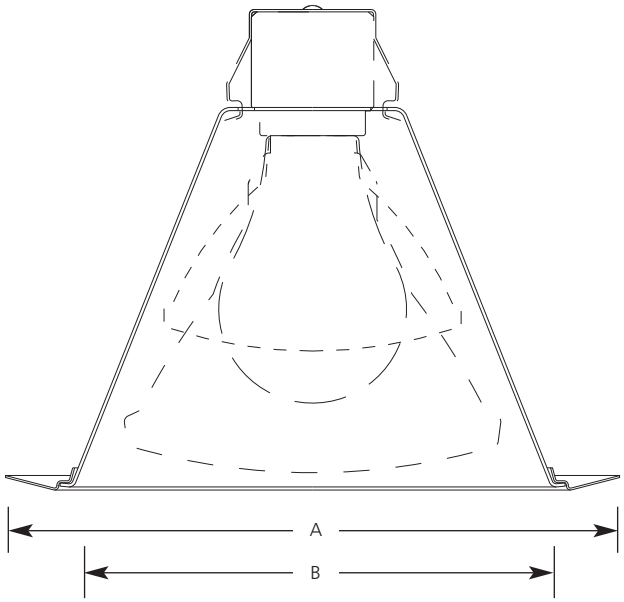
6" Alzak® Cone IC & Non-IC

Recessed

Type _____

	-21A	-22A	-23A	-21	-22	-28
P8068	☐	☐	☐	☐	☐	☐

	Finish						Dimensions (Inches)		
Catalog No.	Clear Alzak®	Gold Alzak®	Black Alzak®	Clear	Gold	White	A	B	C
P8068	-21A	-22A	-23A	-21	-22	-28	7-3/4	6-11/32	4-3/4



Lamp Wattage

Housing	IC	Non-IC
P87-AT	75PAR30/65BR30	120BR40/150PAR38/40A19
P87-ATQC	75PAR30/65BR30	120BR40/150PAR38/40A19
P187-TG	75PAR30/65BR30	120BR40/150PAR38/40A19
P821-AT	120BR40/150PAR38/100A19	120BR40/150PAR38/100A19
P821-FB, P821-FBFC	N/A	150R40/150BR40/150PAR38

Specifications:

Flange

- Bright white powdered painted metal flange

Trim

- All aluminum construction
- Built-in bracket to accept Trim-Lok spring
- Trim-Lok action forces trim to fit snugly against the ceiling
- One-piece construction
- No light leaks around trim flange
- Socket mounts to trim for optimum performance and consistent lamp position

Options

- Clear Cone - specify “21” after catalog number
- Gold Cone - specify “22” after catalog number
- White Cone - specify “28” after catalog number
- Clear Alzak® Cone - specify “21A” after catalog number
- Gold Alzak® Cone - specify “22A” after catalog number
- Black Alzak® Cone - specify "23A" after catalog number

Labels

- UL-CUL damp location listed

Rev. 4/06

Progress Lighting
701 Millennium Blvd.
Greenville, South Carolina
29607

www.progresslighting.com

Patent# 5,758,981, 5,758,982, 5,758,983, 5,758,984, 5,758,985, 5,758,986

P87-AT

P87-AT WITH P8068-21A

Report No. 98086

No. Lamps: 1 Type Lamp: 150BR40 FL Total Lumens: 1545

Fixture Efficiency: 98.4%

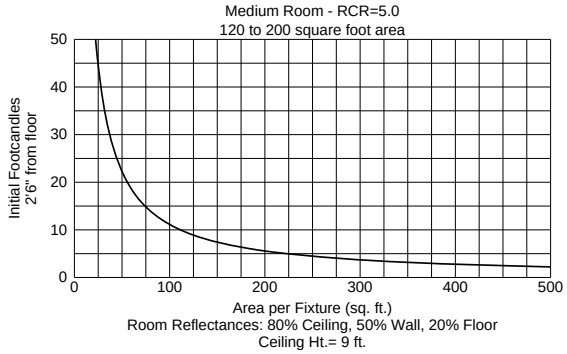
S/MH Ratio: 0.8

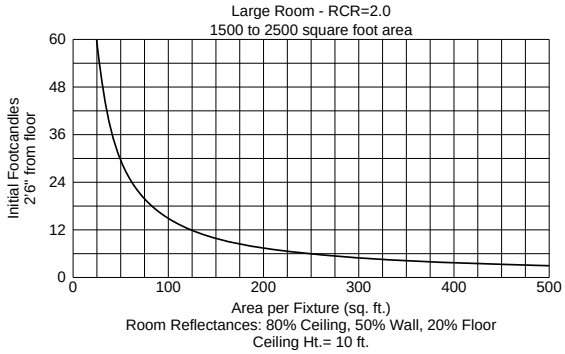
Single Fixture Data

	10% Values		Zero	50% Values	
Ceiling	Beam Angle - 93˚		Degrees	Beam Angle - 45˚	
Ht.(Ft.)	Ft.-C	Beam Dia.	Ft.-C	Ft.-C	Beam Dia.
8	3.7	12	37.4	18.7	5
10	2.0	16	20.1	10.1	6
12	1.3	20	12.5	6.3	8
14	0.9	24	8.6	4.3	10
16	0.6	28	6.2	3.1	11

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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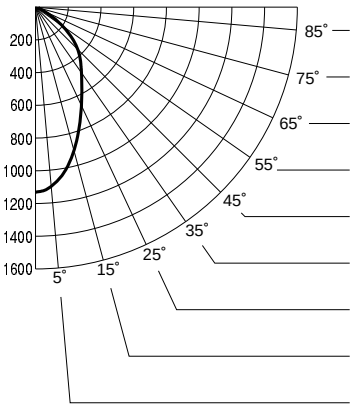


INTENSITY DATA

DEGREES	CANDELA
90	0
85	7
80	11
75	17
70	30
65	60
60	119
55	202
50	289
45	365
40	427
35	489
30	566
25	664
20	781
15	907
10	1021
5	1099
0	1131

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	109	109	109	105	105	105	100	100	100	98
1	110	106	103	100	107	104	101	99	100	98	95	96	94	93	93	91	90	88
2	102	96	91	86	100	94	89	85	91	87	83	88	84	82	85	82	80	78
3	95	87	80	75	93	85	79	75	83	77	73	80	76	72	78	74	71	69
4	88	79	72	66	86	78	71	66	75	70	65	73	68	64	71	67	63	62
5	82	72	64	59	81	71	64	59	69	63	58	67	62	58	65	61	57	55
6	77	66	58	53	75	65	58	53	63	57	52	62	56	52	60	55	52	50
7	72	61	53	48	71	60	53	48	58	52	48	57	52	47	56	51	47	45
8	68	56	49	44	66	55	48	44	54	48	43	53	47	43	52	47	43	41
9	64	52	45	40	62	52	45	40	50	44	40	50	44	40	49	43	40	38
10	60	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	37	35

P87-AT

P87-AT WITH P8068-21A

Report No. 98085

No. Lamps: 1 Type Lamp: 150PAR38 - SYLVANIA Total Lumens: 2200

Fixture Efficiency: 98.3%

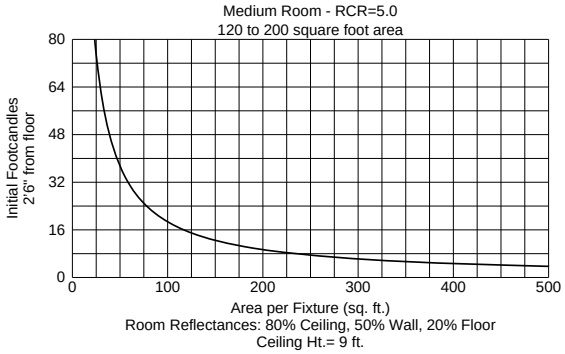
S/MH Ratio: 0.5

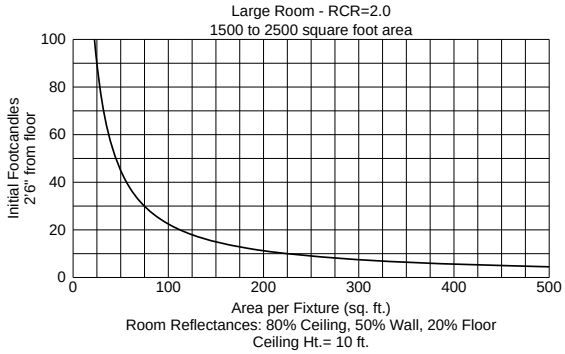
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 52° Ft.-C	10% Values Beam Angle - 52° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30° Ft.-C	50% Values Beam Angle - 30° Beam Dia.
8	16.6	5	166.2	83.1	3
10	8.9	7	89.4	44.7	4
12	5.6	9	55.7	27.9	5
14	3.8	11	38.0	19.0	6
16	2.8	13	27.6	13.8	7

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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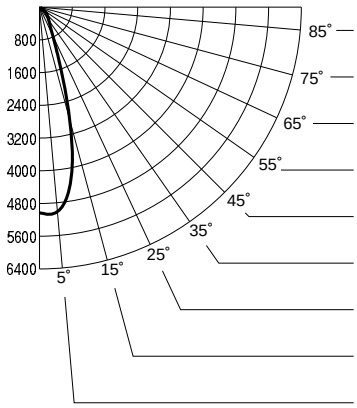


INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	1
75	3
70	7
65	13
60	36
55	99
50	186
45	257
40	323
35	397
30	518
25	763
20	1398
15	2852
10	4357
5	5016
0	5028

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	109	109	109	105	105	105	100	100	100	98
1	112	109	107	105	110	107	105	103	103	102	100	100	98	97	96	95	94	93
2	107	102	98	95	105	101	97	94	97	95	92	94	92	90	92	90	88	87
3	102	96	91	88	100	95	90	87	92	88	86	90	87	84	87	85	83	81
4	97	90	85	81	95	89	84	81	87	83	80	85	82	79	83	80	78	77
5	93	85	80	76	91	84	79	76	83	78	75	81	77	74	80	76	74	72
6	89	81	75	72	88	80	75	71	79	74	71	77	73	70	76	73	70	69
7	85	77	71	68	84	76	71	67	75	70	67	74	70	67	73	69	66	65
8	82	73	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	61	59
10	76	67	62	59	75	67	62	59	66	62	58	65	61	58	65	61	58	57

P87AT

P87AT WITH P8068-21A

Report No. 98127

No. Lamps: 1 Type Lamp: 150PAR38/FL Total Lumens: 2200

Fixture Efficiency: 77.8%

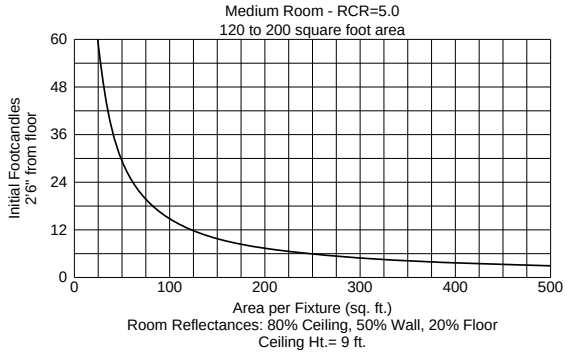
S/MH Ratio: 0.5

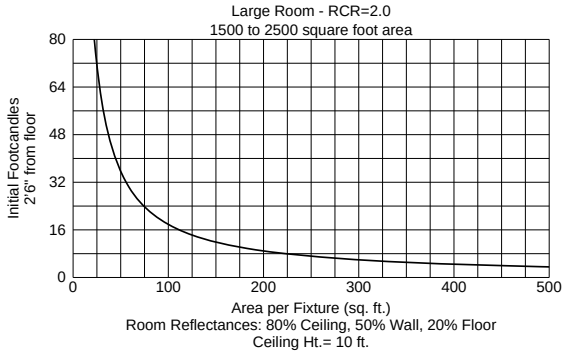
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 52° Ft.-C	10% Values Beam Angle - 52° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30° Ft.-C	50% Values Beam Angle - 30° Beam Dia.
8	13.1	5	131.2	65.6	3
10	7.1	7	70.5	35.3	4
12	4.4	9	44.0	22.0	5
14	3.0	11	30.0	15.0	6
16	2.2	13	21.8	10.9	7

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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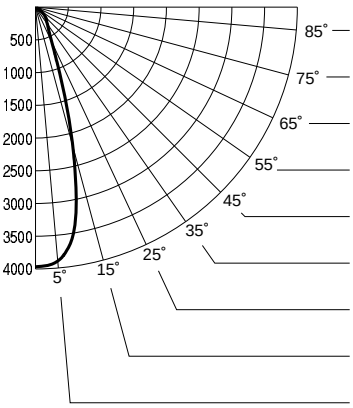


INTENSITY DATA

DEGREES	CANDELA
90	0
85	1
80	2
75	4
70	8
65	13
60	34
55	94
50	161
45	215
40	261
35	315
30	404
25	587
20	1083
15	2197
10	3427
5	3895
0	3968

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	93	93	93	93	91	91	91	91	87	87	87	83	83	83	79	79	79	78
1	89	86	85	83	87	85	83	82	82	80	79	79	78	77	76	75	74	73
2	84	81	78	75	83	79	77	74	77	75	73	75	73	71	72	71	70	68
3	80	76	72	69	79	74	71	68	72	70	67	71	68	66	69	67	65	64
4	77	71	67	64	75	70	66	63	68	65	63	67	64	62	66	63	61	60
5	73	67	63	60	72	66	62	59	65	61	59	64	61	58	62	60	58	57
6	70	63	59	56	69	63	59	56	62	58	55	61	57	55	60	57	55	54
7	67	60	56	53	66	60	56	53	59	55	52	58	55	52	57	54	52	51
8	64	57	53	50	63	57	53	50	56	53	50	55	52	50	55	52	49	48
9	62	55	51	48	61	55	50	48	54	50	48	53	50	47	53	49	47	46
10	59	53	48	46	59	52	48	46	52	48	46	51	48	45	51	47	45	44

P87-AT

P87-AT WITH P8068-21A

Report No. 98087

No. Lamps: 1 Type Lamp: 40A19 Total Lumens: 505

Fixture Efficiency: 54.0%

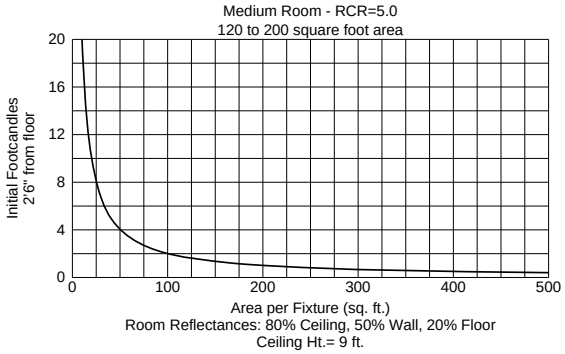
S/MH Ratio: 1.4

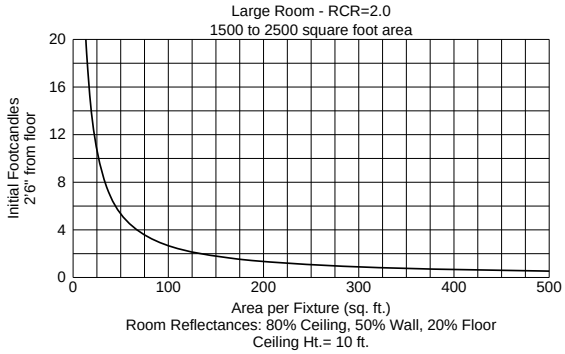
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 104˚ Ft.-C	10% Values Beam Angle - 104˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 69˚ Ft.-C	50% Values Beam Angle - 69˚ Beam Dia.
8	0.4	14	3.9	2.0	8
10	0.2	19	2.1	1.0	10
12	0.1	24	1.3	0.7	13
14	0.1	30	0.9	0.4	16
16	0.1	35	0.6	0.3	19

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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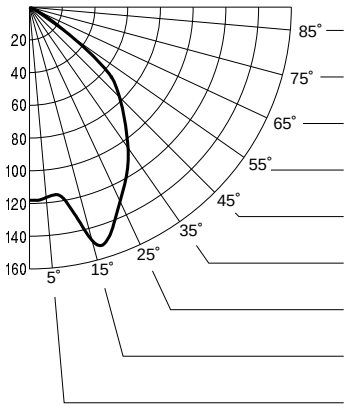


INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	0
70	1
65	4
60	13
55	32
50	64
45	78
40	91
35	105
30	119
25	131
20	146
15	148
10	119
5	117
0	118

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	65	65	65	65	63	63	63	63	60	60	60	58	58	58	55	55	55	54
1	61	59	57	56	59	58	56	55	56	54	53	53	52	52	52	51	50	49
2	57	53	51	48	55	52	50	48	51	48	47	49	47	46	47	46	45	44
3	53	48	45	42	52	47	44	42	46	43	41	45	42	40	43	41	40	39
4	49	44	40	37	48	43	40	37	42	39	36	41	38	36	40	37	35	34
5	46	40	36	33	45	39	35	33	38	35	32	37	34	32	36	34	32	31
6	42	36	32	29	42	36	32	29	35	31	29	34	31	29	33	31	28	27
7	40	33	29	26	39	33	29	26	32	29	26	31	28	26	31	28	26	25
8	37	31	26	24	36	30	26	24	30	26	24	29	26	23	28	25	23	22
9	35	28	24	22	34	28	24	21	27	24	21	27	24	21	26	23	21	20
10	33	26	22	20	32	26	22	20	25	22	20	25	22	19	24	21	19	19

P87-AT

P87-AT WITH P8068-21A

Report No. 98084

No. Lamps: 1 Type Lamp: 65BR30 FL Total Lumens: 770

Fixture Efficiency: 92.1%

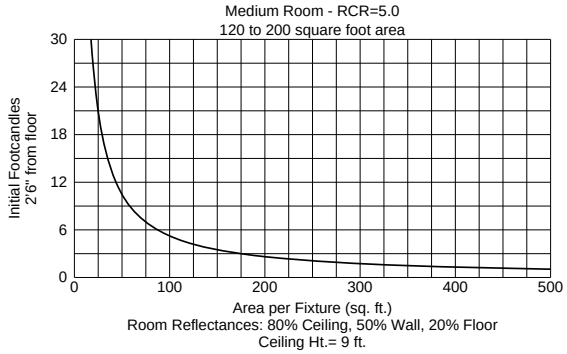
S/MH Ratio: 0.9

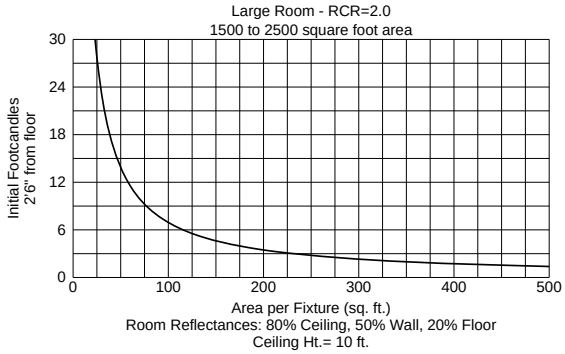
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 94˚ Ft.-C	10% Values Beam Angle - 94˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 47˚ Ft.-C	50% Values Beam Angle - 47˚ Beam Dia.
8	1.7	12	17.1	8.5	5
10	0.9	16	9.2	4.6	7
12	0.6	20	5.7	2.9	8
14	0.4	24	3.9	2.0	10
16	0.3	29	2.8	1.4	12

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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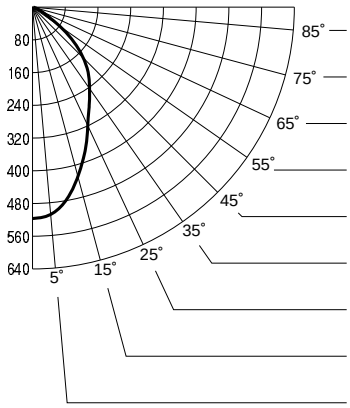


INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	3
75	7
70	14
65	23
60	42
55	82
50	132
45	175
40	212
35	243
30	277
25	320
20	375
15	429
10	477
5	509
0	517

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	110	110	110	110	107	107	107	107	102	102	102	98	98	98	94	94	94	92
1	103	100	97	94	101	98	95	93	94	92	90	91	89	87	87	86	85	83
2	96	90	86	82	94	89	84	81	86	82	79	83	80	77	80	78	76	74
3	90	82	76	71	88	81	75	71	78	73	70	76	72	69	74	70	67	66
4	83	75	68	63	82	73	67	63	71	66	62	69	65	61	68	64	60	59
5	78	68	61	56	76	67	61	56	65	60	56	64	59	55	62	58	54	53
6	73	63	56	51	71	62	55	51	60	54	50	59	54	50	57	53	49	48
7	68	58	51	46	67	57	50	46	56	50	46	54	49	45	53	49	45	43
8	64	53	47	42	63	53	46	42	52	46	42	51	45	41	50	45	41	40
9	60	49	43	38	59	49	43	38	48	42	38	47	42	38	46	41	38	36
10	57	46	40	35	56	46	40	35	45	39	35	44	39	35	43	39	35	34

P87-AT

P87-AT WITH P8068-21A

Report No. 98083

No. Lamps: 1 Type Lamp: 75PAR30 SN - GE Total Lumens: 1100

Fixture Efficiency: 104.6%

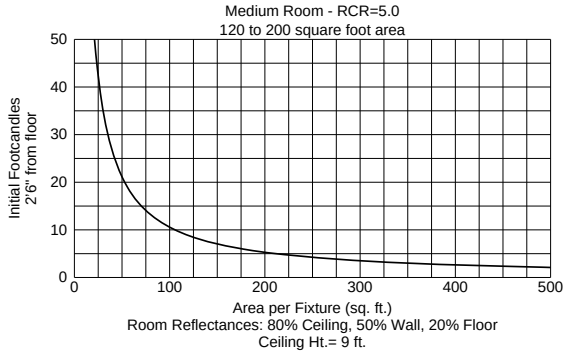
S/MH Ratio: 0.5

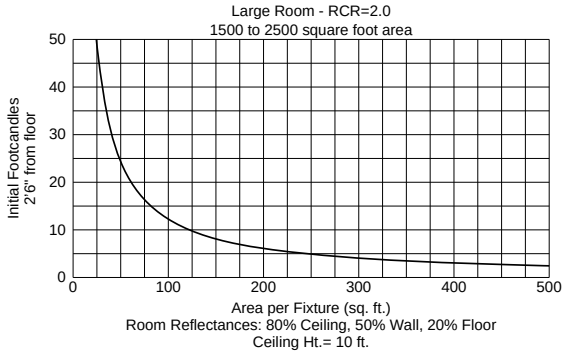
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 49° Ft.-C	10% Values Beam Angle - 49° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 27° Ft.-C	50% Values Beam Angle - 27° Beam Dia.
8	12.5	5	125.0	62.5	3
10	6.7	7	67.2	33.6	4
12	4.2	9	41.9	20.9	5
14	2.9	10	28.6	14.3	6
16	2.1	12	20.7	10.4	6

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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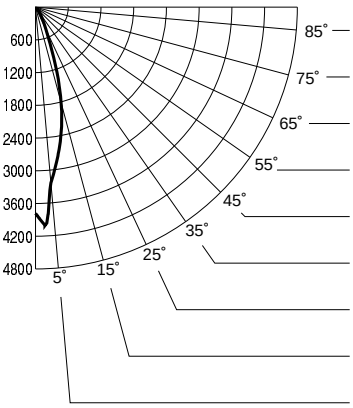


INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	1
65	1
60	3
55	7
50	13
45	35
40	88
35	158
30	259
25	454
20	957
15	1814
10	2562
5	3235
0	3781

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	125	125	125	125	122	122	122	122	116	116	116	111	111	111	107	107	107	105
1	120	118	115	113	117	115	113	112	111	110	108	107	106	105	104	103	102	100
2	115	111	108	105	113	110	106	104	106	104	102	103	101	99	100	99	97	96
3	111	106	102	98	109	104	100	97	102	99	96	99	97	94	97	95	93	92
4	107	101	96	93	105	100	95	92	98	94	91	96	92	90	94	91	89	88
5	103	96	91	88	102	95	91	88	94	90	87	92	89	86	91	88	85	84
6	100	92	87	84	98	92	87	84	90	86	83	89	85	82	87	84	82	81
7	96	89	84	80	95	88	83	80	87	83	80	86	82	79	85	81	79	78
8	93	85	80	77	92	85	80	77	84	79	76	83	79	76	82	78	76	75
9	90	82	77	74	89	82	77	74	81	77	74	80	76	73	79	76	73	72
10	87	79	75	71	86	79	74	71	78	74	71	77	74	71	77	73	71	70

P87-AT

P87-AT WITH P8068-21A

Report No. 98082

No. Lamps: 1 Type Lamp: 75PAR30 FL Total Lumens: 985

Fixture Efficiency: 97.7%

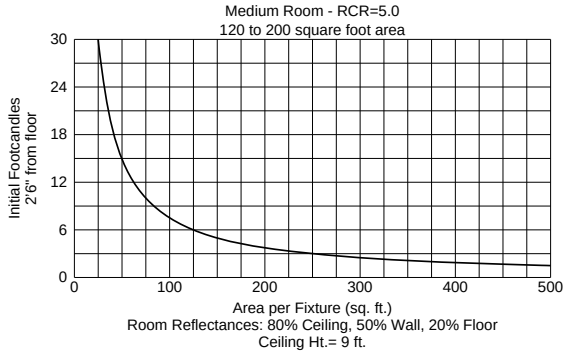
S/MH Ratio: 1.0

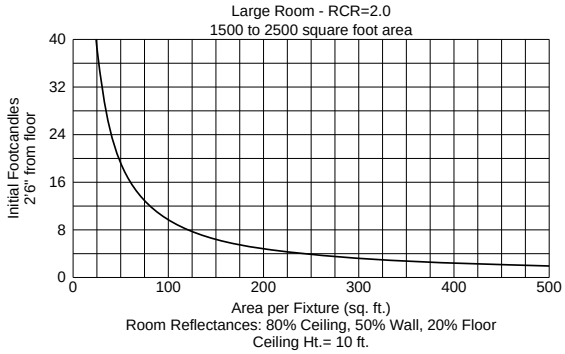
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 89° Ft.-C	10% Values Beam Angle - 89° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 54° Ft.-C	50% Values Beam Angle - 54° Beam Dia.
8	2.5	11	24.6	12.3	6
10	1.3	15	13.2	6.6	8
12	0.8	19	8.2	4.1	10
14	0.6	22	5.6	2.8	12
16	0.4	26	4.1	2.0	14

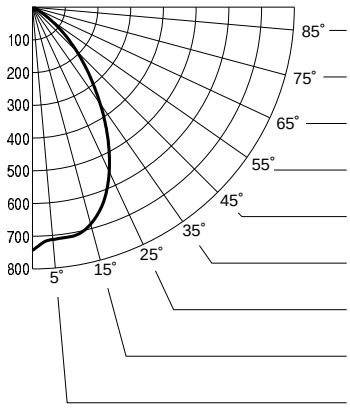
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	1
75	1
70	4
65	10
60	28
55	66
50	125
45	192
40	270
35	361
30	460
25	555
20	634
15	686
10	710
5	713
0	743

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	116	116	116	116	114	114	114	114	109	109	109	104	104	104	100	100	100	98
1	110	107	104	102	108	105	102	100	101	99	97	97	96	94	94	93	91	90
2	103	98	93	90	101	96	92	89	93	90	87	90	87	85	87	85	83	81
3	97	90	84	80	95	88	83	79	86	81	78	83	80	77	81	78	75	74
4	91	83	76	72	89	81	76	71	79	74	70	77	73	69	75	72	69	67
5	86	76	69	65	84	75	69	64	73	68	64	72	67	63	70	66	63	61
6	80	70	64	59	79	70	63	59	68	62	58	66	61	58	65	61	57	56
7	76	65	58	54	74	64	58	54	63	57	53	62	57	53	61	56	53	51
8	71	61	54	49	70	60	54	49	59	53	49	58	53	49	57	52	49	47
9	67	57	50	46	66	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	47	42	63	52	46	42	52	46	42	51	46	42	50	45	42	40

P87-AT

P87-AT WITH P8068-21

Report No. 98089

No. Lamps: 1 Type Lamp: 150PAR38 - SYLVANIA Total Lumens: 2200

Fixture Efficiency: 98.6%

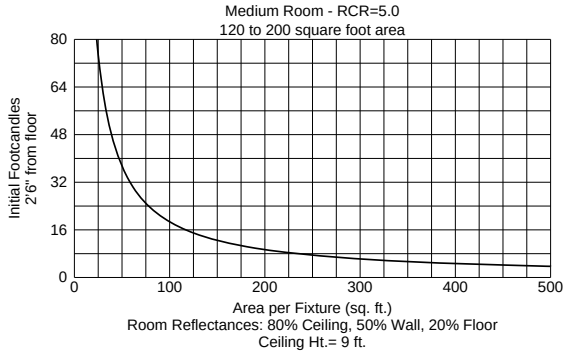
S/MH Ratio: 0.5

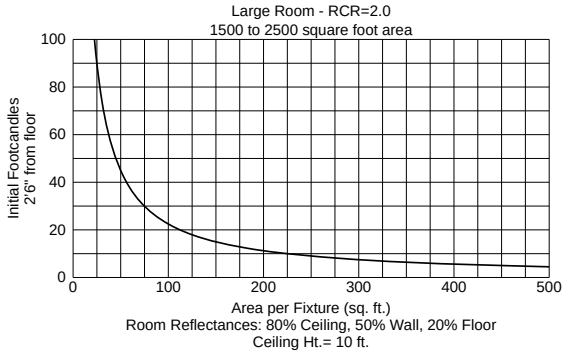
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 52° Ft.-C	10% Values Beam Angle - 52° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30° Ft.-C	50% Values Beam Angle - 30° Beam Dia.
8	16.6	5	165.8	82.9	3
10	8.9	7	89.2	44.6	4
12	5.6	9	55.6	27.8	5
14	3.8	11	37.9	19.0	6
16	2.8	13	27.5	13.8	7

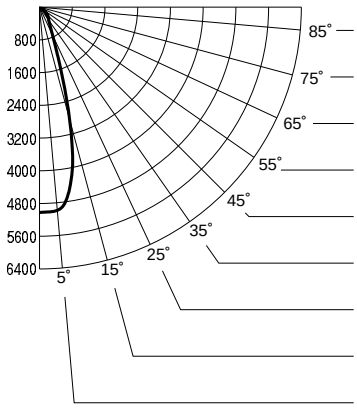
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	1
80	3
75	6
70	9
65	16
60	38
55	103
50	194
45	264
40	330
35	394
30	513
25	752
20	1366
15	2850
10	4373
5	4989
0	5016

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	112	110	107	105	110	108	105	103	104	102	100	100	99	97	96	95	95	93
2	107	102	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87
3	102	96	91	88	100	95	90	87	92	88	86	90	87	84	88	85	83	81
4	97	90	85	81	96	89	84	81	87	83	80	85	82	79	83	80	78	77
5	93	85	80	76	91	84	79	76	83	78	75	81	77	74	80	76	74	72
6	89	81	75	71	88	80	75	71	79	74	71	77	73	70	76	72	70	68
7	85	77	71	68	84	76	71	67	75	70	67	74	70	67	73	69	66	65
8	82	73	68	64	81	73	68	64	72	67	64	71	67	63	70	66	63	62
9	79	70	65	61	78	70	64	61	69	64	61	68	64	61	67	63	60	59
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57

P87-AT

P87-AT WITH P8068-21

Report No. 98090

No. Lamps: 1 Type Lamp: 40A19 Total Lumens: 505

Fixture Efficiency: 51.3%

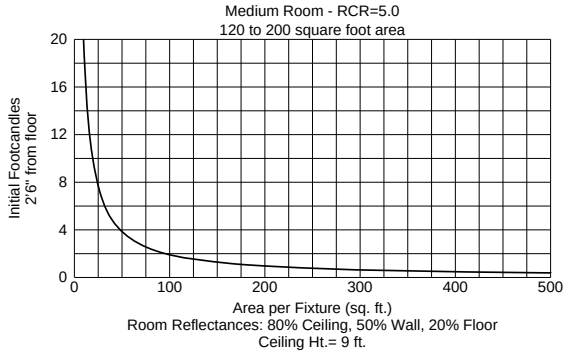
S/MH Ratio: 1.4

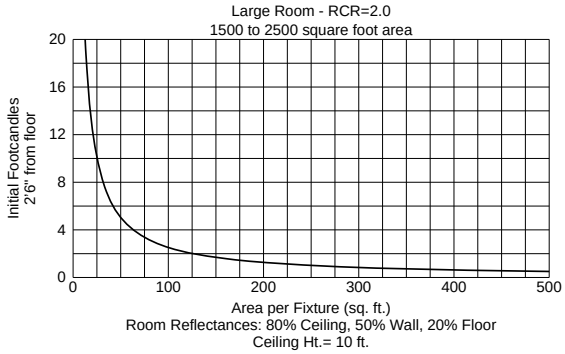
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 104˚ Ft.-C	10% Values Beam Angle - 104˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 69˚ Ft.-C	50% Values Beam Angle - 69˚ Beam Dia.
8	0.4	14	3.7	1.9	8
10	0.2	19	2.0	1.0	10
12	0.1	24	1.2	0.6	13
14	0.1	30	0.8	0.4	16
16	0.1	35	0.6	0.3	19

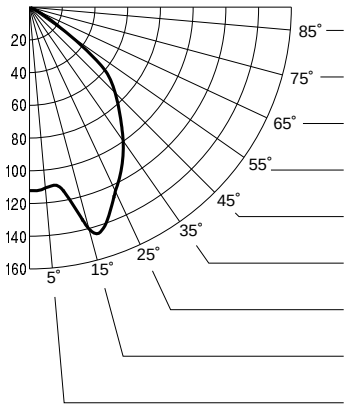
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	0
70	1
65	4
60	12
55	30
50	61
45	74
40	86
35	100
30	113
25	124
20	139
15	140
10	113
5	111
0	112

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	61	61	61	61	60	60	60	60	57	57	57	55	55	55	52	52	52	51
1	57	56	54	53	56	55	53	52	52	51	50	51	50	49	49	48	47	46
2	54	50	48	46	52	50	47	45	48	46	44	46	45	43	45	43	42	41
3	50	46	42	40	49	45	42	39	43	41	39	42	40	38	41	39	38	37
4	46	41	38	35	45	41	37	35	40	37	34	38	36	34	37	35	34	33
5	43	38	34	31	42	37	34	31	36	33	31	35	32	30	34	32	30	29
6	40	34	30	28	39	34	30	28	33	30	27	32	29	27	31	29	27	26
7	37	31	28	25	37	31	27	25	30	27	25	30	27	24	29	26	24	23
8	35	29	25	22	34	29	25	22	28	25	22	27	24	22	27	24	22	21
9	33	27	23	20	32	26	23	20	26	23	20	25	22	20	25	22	20	19
10	31	25	21	19	30	24	21	19	24	21	19	24	21	18	23	20	18	18

P87-AT

P87-AT WITH P8068-22A

Report No. 98080

No. Lamps: 1 Type Lamp: 150PAR38 - SYLVANIA Total Lumens: 2200

Fixture Efficiency: 96.8%

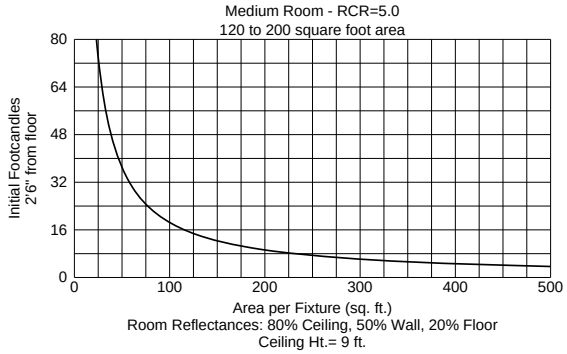
S/MH Ratio: 0.5

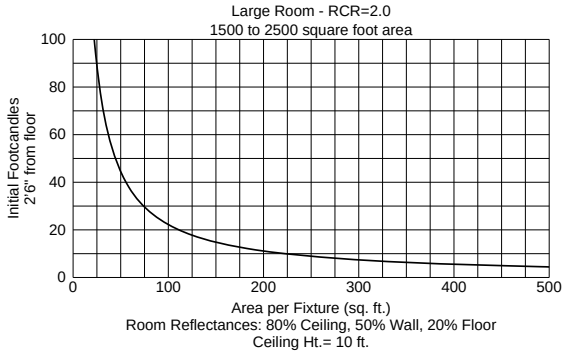
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 52° Ft.-C	10% Values Beam Angle - 52° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30° Ft.-C	50% Values Beam Angle - 30° Beam Dia.
8	16.3	5	163.4	81.7	3
10	8.8	7	87.9	43.9	4
12	5.5	9	54.8	27.4	5
14	3.7	11	37.4	18.7	6
16	2.7	13	27.1	13.6	7

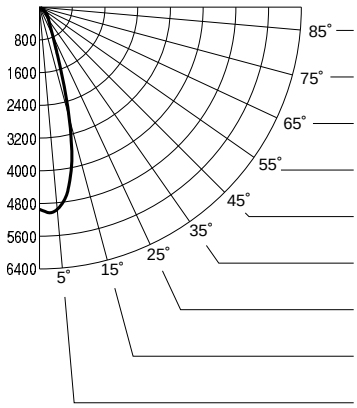
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	2
75	4
70	7
65	14
60	39
55	101
50	186
45	254
40	319
35	390
30	514
25	750
20	1347
15	2807
10	4282
5	4957
0	4942

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	115	115	115	115	113	113	113	113	108	108	108	103	103	103	99	99	99	97
1	110	108	105	103	108	106	103	102	102	100	99	98	97	96	95	94	93	91
2	105	101	97	94	103	99	96	93	96	93	91	93	91	89	90	89	87	85
3	100	94	90	86	98	93	89	86	91	87	84	88	85	83	86	84	82	80
4	96	89	84	80	94	88	83	80	86	82	79	84	80	78	82	79	77	75
5	91	84	79	75	90	83	78	74	81	77	74	80	76	73	78	75	73	71
6	87	80	74	70	86	79	74	70	77	73	70	76	72	69	75	71	69	67
7	84	76	70	67	83	75	70	66	74	69	66	73	69	66	72	68	65	64
8	81	72	67	63	79	72	67	63	71	66	63	70	66	63	69	65	62	61
9	77	69	64	60	76	68	64	60	68	63	60	67	63	60	66	62	60	58
10	75	66	61	58	74	66	61	58	65	60	57	64	60	57	64	60	57	56

P87AT

P87AT WITH P8068-22A

Report No. 98128

No. Lamps: 1 Type Lamp: 40A19 - GE Total Lumens: 505

Fixture Efficiency: 57.7%

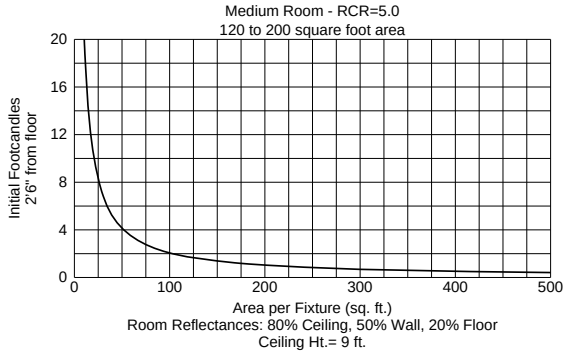
S/MH Ratio: 1.4

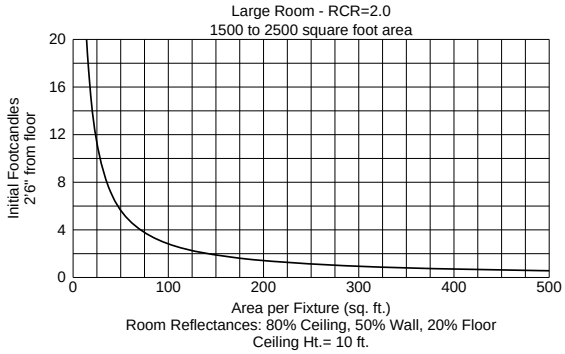
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 108˚ Ft.-C	10% Values Beam Angle - 108˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 72˚ Ft.-C	50% Values Beam Angle - 72˚ Beam Dia.
8	0.4	15	3.9	1.9	8
10	0.2	20	2.1	1.0	11
12	0.1	26	1.3	0.6	14
14	0.1	31	0.9	0.4	17
16	0.1	37	0.6	0.3	20

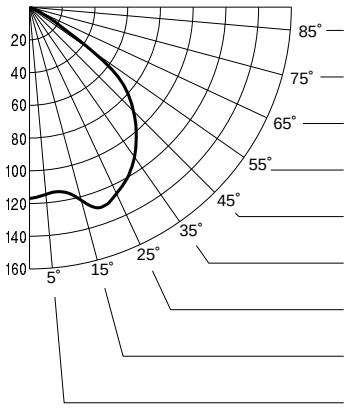
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	1
65	6
60	18
55	47
50	76
45	90
40	102
35	112
30	120
25	126
20	130
15	122
10	115
5	115
0	117

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	69	69	69	69	67	67	67	67	64	64	64	62	62	62	59	59	59	58
1	65	62	61	59	63	61	60	58	59	57	56	57	56	55	55	54	53	52
2	60	56	53	51	59	55	52	50	53	51	49	51	49	48	50	48	47	46
3	55	51	47	44	54	50	46	43	48	45	42	47	44	42	45	43	41	40
4	51	45	41	38	50	45	41	38	43	40	37	42	39	37	41	38	36	35
5	48	41	37	33	46	40	36	33	39	36	33	38	35	32	37	34	32	31
6	44	37	33	29	43	37	32	29	36	32	29	35	31	29	34	31	29	28
7	41	34	29	26	40	34	29	26	33	29	26	32	28	26	31	28	26	25
8	38	31	27	23	37	31	26	23	30	26	23	29	26	23	29	25	23	22
9	36	29	24	21	35	28	24	21	28	24	21	27	23	21	26	23	21	20
10	33	26	22	19	33	26	22	19	25	22	19	25	21	19	24	21	19	18

P87-AT

P87-AT WITH P8068-22A

Report No. 98079

No. Lamps: 1 Type Lamp: 75PAR30 SN - GE Total Lumens: 1100

Fixture Efficiency: 98.5%

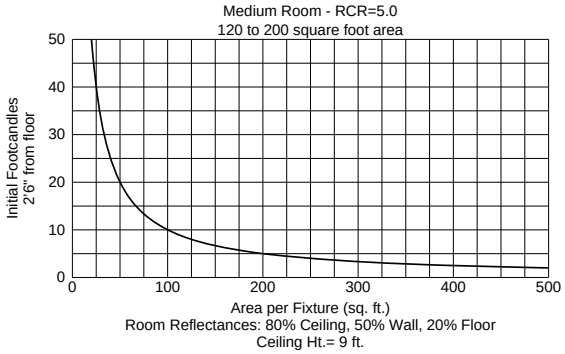
S/MH Ratio: 0.5

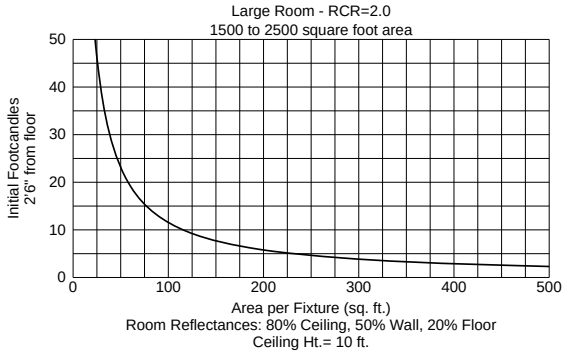
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 49° Ft.-C	10% Values Beam Angle - 49° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 28° Ft.-C	50% Values Beam Angle - 28° Beam Dia.
8	11.2	5	112.3	56.1	3
10	6.0	7	60.4	30.2	4
12	3.8	9	37.6	18.8	5
14	2.6	11	25.7	12.8	6
16	1.9	12	18.6	9.3	7

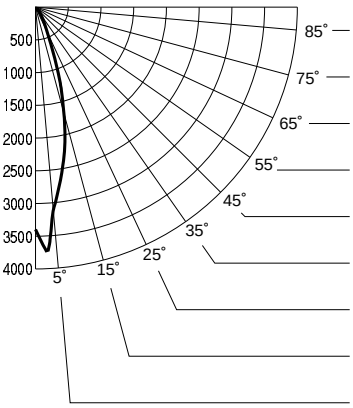
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	0
70	0
65	1
60	2
55	5
50	12
45	35
40	81
35	146
30	244
25	430
20	914
15	1675
10	2429
5	3112
0	3396

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	109	109	109	105	105	105	100	100	100	98
1	113	110	108	107	110	108	107	105	104	103	102	101	100	99	98	97	96	94
2	109	105	101	99	106	103	100	98	100	98	95	97	95	93	94	93	92	90
3	104	99	96	92	103	98	95	92	96	93	90	93	91	89	91	89	88	86
4	101	95	90	87	99	94	90	87	92	88	86	90	87	85	88	86	84	83
5	97	91	86	83	96	90	86	82	88	85	82	87	83	81	85	83	80	79
6	94	87	82	79	92	86	82	79	85	81	78	84	80	78	82	79	77	76
7	91	83	79	76	89	83	78	75	82	78	75	81	77	75	80	77	74	73
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	72	70
9	85	77	73	70	84	77	73	70	76	72	69	75	72	69	75	71	69	68
10	82	75	70	67	81	74	70	67	74	70	67	73	69	67	72	69	67	66

P87-AT

P87-AT WITH P8068-22

Report No. 98107

No. Lamps: 1 Type Lamp: 150PAR38 SYLVANIA Total Lumens: 2200

Fixture Efficiency: 76.5%

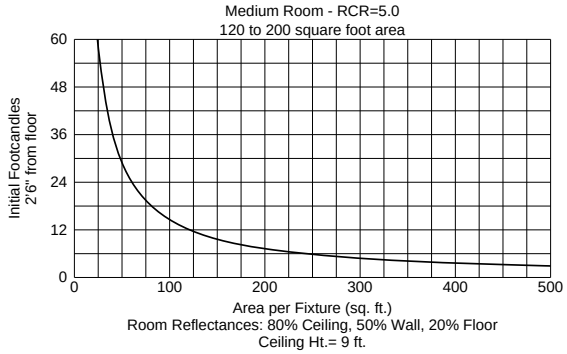
S/MH Ratio: 0.5

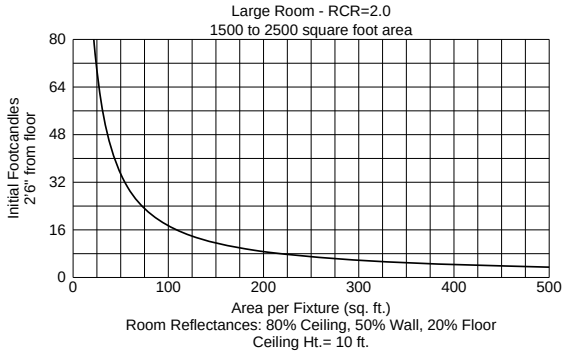
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 53˚ Ft.-C	10% Values Beam Angle - 53˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30˚ Ft.-C	50% Values Beam Angle - 30˚ Beam Dia.
8	12.9	5	128.8	64.4	3
10	6.9	7	69.3	34.6	4
12	4.3	9	43.2	21.6	5
14	2.9	11	29.5	14.7	6
16	2.1	13	21.4	10.7	7

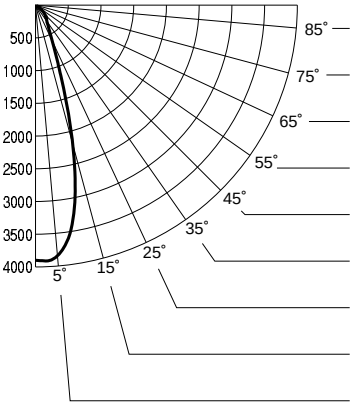
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	1
75	3
70	6
65	13
60	36
55	89
50	150
45	205
40	254
35	303
30	399
25	603
20	1103
15	2195
10	3310
5	3842
0	3897

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	91	91	91	91	89	89	89	89	85	85	85	81	81	81	78	78	78	77
1	87	85	83	82	85	83	82	80	80	79	78	77	76	76	75	74	73	72
2	83	79	76	74	81	78	75	73	76	73	72	73	72	70	71	70	69	67
3	79	74	71	68	78	73	70	67	71	69	66	70	67	65	68	66	64	63
4	75	70	66	63	74	69	65	63	68	64	62	66	63	61	65	62	60	59
5	72	66	62	59	71	65	61	58	64	61	58	63	60	57	62	59	57	56
6	69	63	58	55	68	62	58	55	61	57	55	60	57	54	59	56	54	53
7	66	59	55	52	65	59	55	52	58	54	52	57	54	52	56	53	51	50
8	63	57	52	50	62	56	52	49	55	52	49	55	51	49	54	51	49	48
9	61	54	50	47	60	54	50	47	53	49	47	52	49	47	52	49	47	46
10	59	52	48	45	58	52	48	45	51	47	45	50	47	45	50	47	45	44

P87-AT

P87-AT WITH P8068-22

Report No. 98106

No. Lamps: 1 Type Lamp: 75PAR30 (SN) GE Total Lumens: 1100

Fixture Efficiency: 99.8%

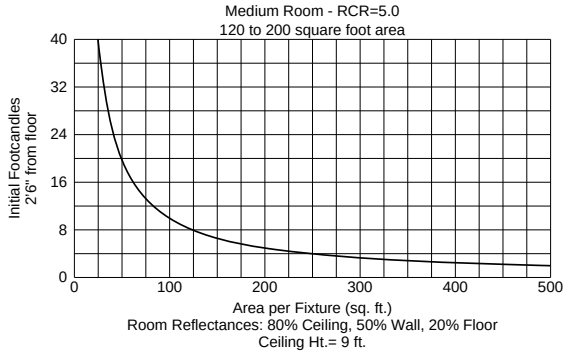
S/MH Ratio: 0.5

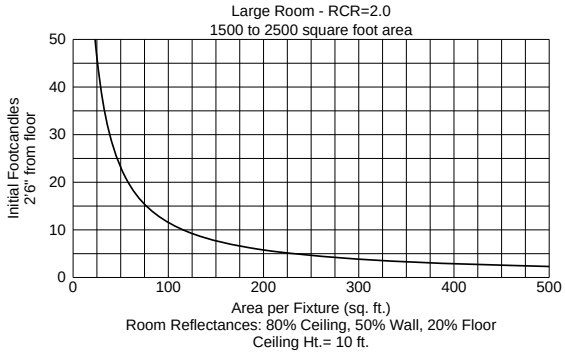
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 53˚ Ft.-C	10% Values Beam Angle - 53˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 31˚ Ft.-C	50% Values Beam Angle - 31˚ Beam Dia.
8	9.7	5	96.5	48.3	3
10	5.2	7	51.9	26.0	4
12	3.2	9	32.4	16.2	5
14	2.2	11	22.1	11.0	6
16	1.6	13	16.0	8.0	7

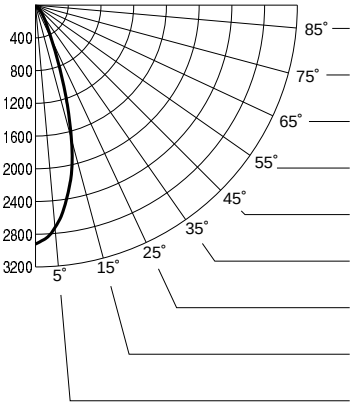
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	1
65	3
60	7
55	12
50	21
45	47
40	101
35	168
30	268
25	470
20	955
15	1694
10	2312
5	2730
0	2920

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	92	103	98	95	92	96	93	90	94	91	89	91	89	87	86
4	101	95	90	87	99	94	89	86	92	88	85	90	87	84	88	85	83	82
5	97	90	85	82	96	89	85	82	88	84	81	86	83	80	85	82	79	78
6	94	86	81	78	92	85	81	77	84	80	77	83	79	76	82	78	76	75
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69
9	84	76	71	68	83	76	71	68	75	71	68	74	70	67	73	70	67	66
10	81	73	68	65	80	73	68	65	72	68	65	71	68	65	71	67	65	64

P87-AT

P87-AT WITH P8068-22

Report No. 98108

No. Lamps: 1 Type Lamp: 40A19 Total Lumens: 505

Fixture Efficiency: 54.5%

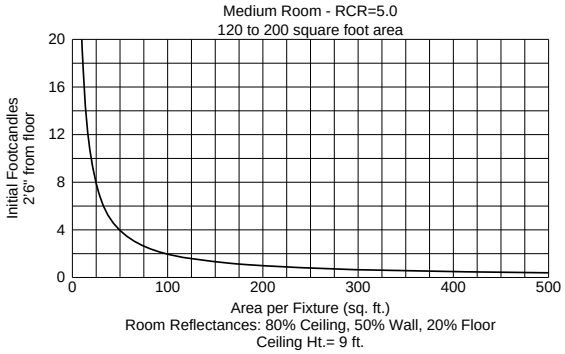
S/MH Ratio: 1.4

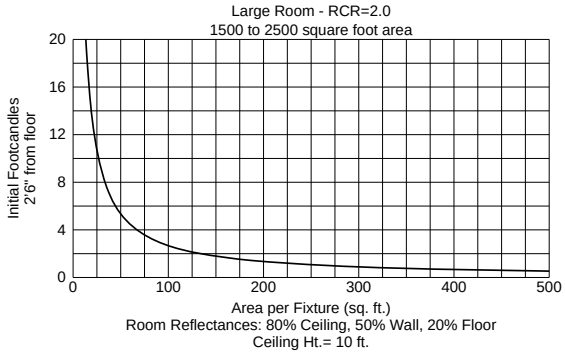
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 106˚ Ft.-C	10% Values Beam Angle - 106˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 68˚ Ft.-C	50% Values Beam Angle - 68˚ Beam Dia.
8	0.4	15	4.0	2.0	7
10	0.2	20	2.1	1.1	10
12	0.1	25	1.3	0.7	13
14	0.1	31	0.9	0.5	16
16	0.1	36	0.7	0.3	18

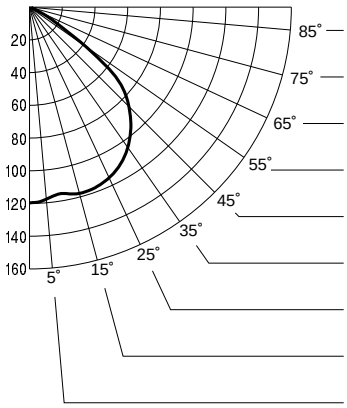
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	2
65	7
60	18
55	42
50	72
45	86
40	96
35	105
30	111
25	115
20	117
15	118
10	116
5	118
0	120

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	65	65	65	65	63	63	63	63	61	61	61	58	58	58	56	56	56	54
1	61	59	57	55	59	58	56	55	55	54	53	53	52	51	51	51	50	49
2	56	53	50	47	55	52	49	47	50	48	46	48	46	45	47	45	44	43
3	52	47	44	41	51	47	43	41	45	42	40	44	41	39	42	40	39	38
4	48	43	39	36	47	42	38	35	41	38	35	40	37	34	38	36	34	33
5	45	39	34	31	44	38	34	31	37	33	31	36	33	30	35	32	30	29
6	41	35	31	28	41	35	30	27	34	30	27	33	30	27	32	29	27	26
7	39	32	28	25	38	31	27	25	31	27	24	30	27	24	29	26	24	23
8	36	29	25	22	35	29	25	22	28	24	22	28	24	22	27	24	22	21
9	34	27	23	20	33	27	23	20	26	22	20	25	22	20	25	22	20	19
10	31	25	21	18	31	24	21	18	24	20	18	23	20	18	23	20	18	17

P87-AT

P87-AT WITH P8068-28

Report No. 98104

No. Lamps: 1 Type Lamp: 150BR40 FL Total Lumens: 1545

Fixture Efficiency: 98.5%

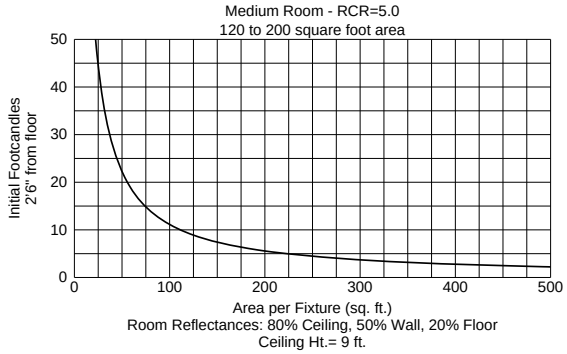
S/MH Ratio: 0.8

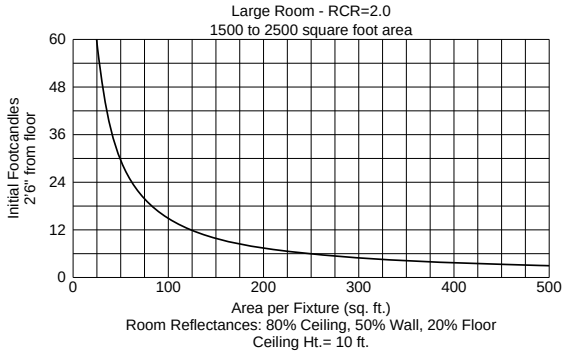
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 93° Ft.-C	10% Values Beam Angle - 93° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 45° Ft.-C	50% Values Beam Angle - 45° Beam Dia.
8	3.7	12	36.9	18.5	5
10	2.0	16	19.9	9.9	6
12	1.2	20	12.4	6.2	8
14	0.8	24	8.4	4.2	10
16	0.6	29	6.1	3.1	11

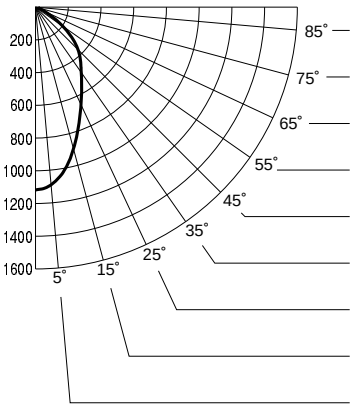
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	8
80	11
75	18
70	33
65	65
60	122
55	204
50	292
45	368
40	428
35	488
30	564
25	658
20	771
15	897
10	1013
5	1089
0	1117

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	117	117	117	117	114	114	114	114	109	109	109	105	105	105	100	100	100	98
1	110	106	103	100	107	104	101	99	100	98	95	96	94	93	93	91	90	88
2	102	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	80	78
3	95	87	80	75	93	85	79	74	82	77	73	80	76	72	77	74	71	69
4	88	79	71	66	86	77	71	66	75	69	65	73	68	64	71	67	63	61
5	82	72	64	59	80	71	64	58	69	63	58	67	62	57	65	61	57	55
6	77	66	58	53	75	65	58	53	63	57	52	62	56	52	60	55	51	50
7	72	60	53	48	70	60	53	48	58	52	47	57	51	47	56	51	47	45
8	67	56	49	44	66	55	48	43	54	48	43	53	47	43	52	47	43	41
9	64	52	45	40	62	51	44	40	50	44	40	49	44	39	48	43	39	38
10	60	48	41	37	59	48	41	37	47	41	37	46	40	36	45	40	36	35

P87-AT

P87-AT WITH P8068-28

Report No. 98103

No. Lamps: 1 Type Lamp: 150PAR38 Total Lumens: 2200

Fixture Efficiency: 71.3%

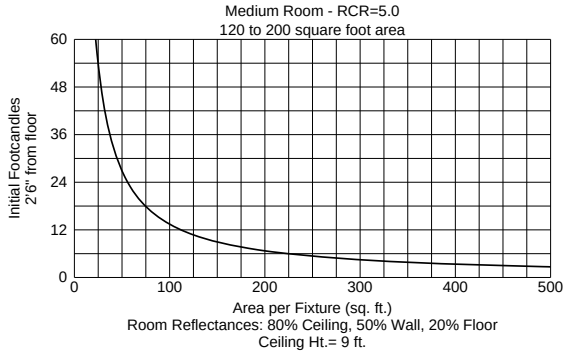
S/MH Ratio: 0.5

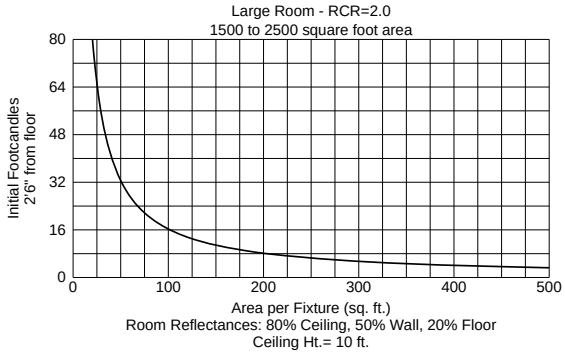
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 52° Ft.-C	10% Values Beam Angle - 52° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 30° Ft.-C	50% Values Beam Angle - 30° Beam Dia.
8	11.9	5	118.6	59.3	3
10	6.4	7	63.8	31.9	4
12	4.0	9	39.8	19.9	5
14	2.7	11	27.1	13.6	6
16	2.0	13	19.7	9.8	7

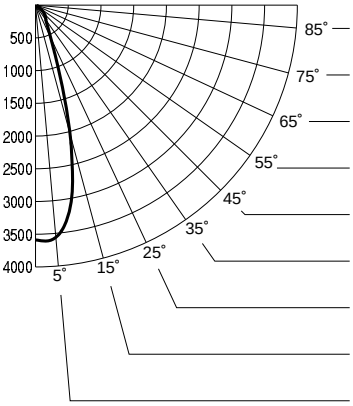
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	2
80	4
75	7
70	10
65	16
60	37
55	83
50	142
45	192
40	235
35	277
30	363
25	545
20	1002
15	2033
10	3096
5	3561
0	3588

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	85	85	85	85	83	83	83	83	79	79	79	76	76	76	73	73	73	71
1	81	79	77	76	79	77	76	75	75	73	72	72	71	70	70	69	68	67
2	77	74	71	69	76	72	70	68	70	68	66	68	66	65	66	65	64	62
3	73	69	66	63	72	68	65	62	66	64	61	64	62	60	63	61	59	58
4	70	65	61	58	69	64	61	58	63	60	57	61	59	56	60	58	56	55
5	67	61	57	54	66	61	57	54	59	56	54	58	55	53	57	55	53	52
6	64	58	54	51	63	57	54	51	56	53	51	55	52	50	54	52	50	49
7	61	55	51	48	60	55	51	48	54	50	48	53	50	48	52	49	47	46
8	59	52	48	46	58	52	48	46	51	48	45	51	48	45	50	47	45	44
9	56	50	46	44	56	50	46	44	49	46	43	49	45	43	48	45	43	42
10	54	48	44	42	54	48	44	42	47	44	42	47	44	41	46	43	41	40

P87-AT

P87-AT WITH P8068-28

Report No. 98105

No. Lamps: 1 Type Lamp: 40A19 Total Lumens: 505

Fixture Efficiency: 57.1%

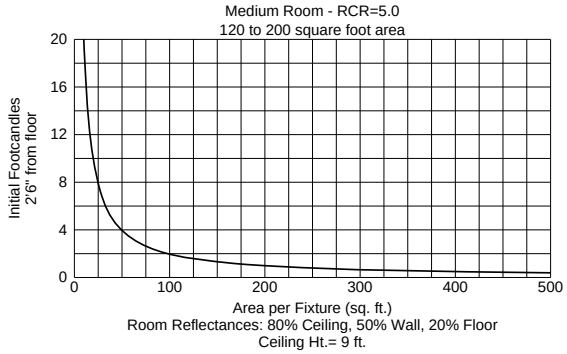
S/MH Ratio: 1.3

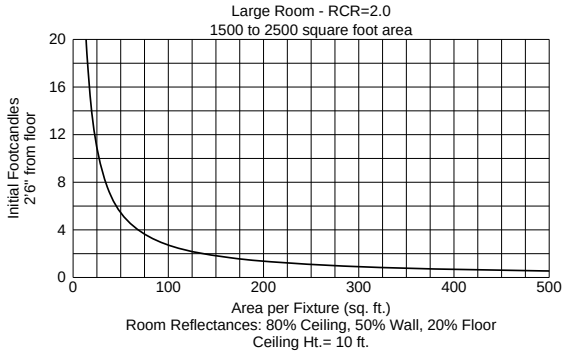
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 108˚ Ft.-C	10% Values Beam Angle - 108˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 67˚ Ft.-C	50% Values Beam Angle - 67˚ Beam Dia.
8	0.4	15	3.7	1.8	7
10	0.2	21	2.0	1.0	10
12	0.1	26	1.2	0.6	13
14	0.1	32	0.8	0.4	15
16	0.1	37	0.6	0.3	18

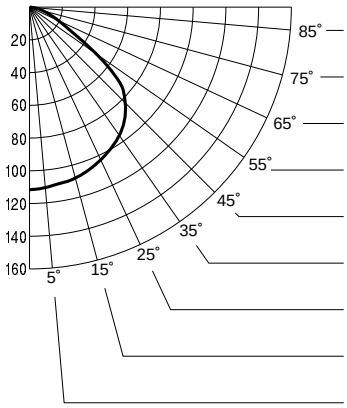
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	2
80	5
75	9
70	13
65	20
60	29
55	50
50	72
45	83
40	90
35	96
30	100
25	103
20	106
15	108
10	109
5	111
0	112

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	68	68	68	68	67	67	67	67	64	64	64	61	61	61	58	58	58	57
1	63	61	59	57	62	60	58	56	57	56	54	55	54	53	53	52	51	50
2	58	54	50	48	57	53	50	47	51	48	46	49	47	45	47	46	44	43
3	53	48	44	40	52	47	43	40	45	42	39	44	41	39	42	40	38	37
4	49	43	38	35	48	42	38	34	41	37	34	39	36	34	38	35	33	32
5	45	39	34	30	44	38	33	30	37	33	30	36	32	29	35	32	29	28
6	42	35	30	27	41	34	30	26	33	29	26	32	29	26	31	28	26	25
7	39	32	27	24	38	31	27	23	30	26	23	29	26	23	29	25	23	22
8	36	29	24	21	35	28	24	21	28	24	21	27	23	21	26	23	21	20
9	34	26	22	19	33	26	22	19	26	22	19	25	21	19	24	21	19	18
10	32	24	20	17	31	24	20	17	24	20	17	23	19	17	23	19	17	16

P87-AT

P87-AT WITH P8068-28

Report No. 98102

No. Lamps: 1 Type Lamp: 65BR30 FL Total Lumens: 770

Fixture Efficiency: 91.0%

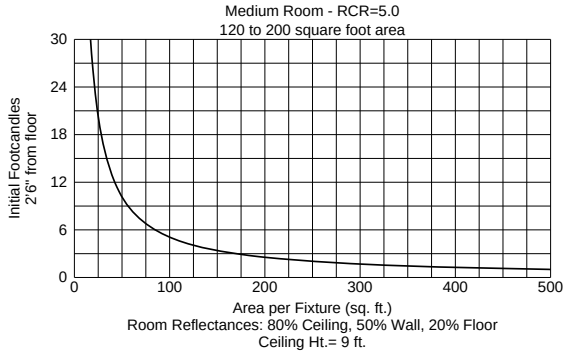
S/MH Ratio: 0.9

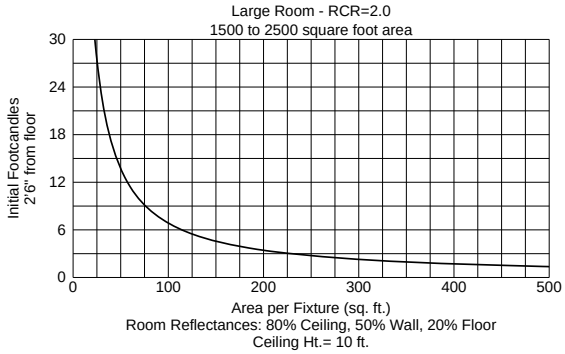
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 95° Ft.-C	10% Values Beam Angle - 95° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 49° Ft.-C	50% Values Beam Angle - 49° Beam Dia.
8	1.6	12	15.7	7.8	5
10	0.8	16	8.4	4.2	7
12	0.5	21	5.3	2.6	9
14	0.4	25	3.6	1.8	10
16	0.3	29	2.6	1.3	12

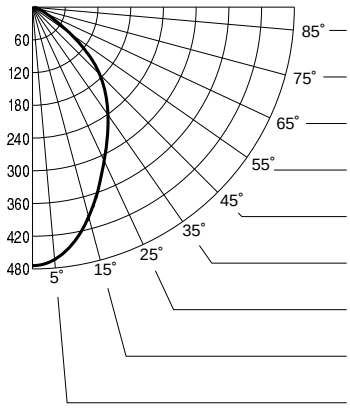
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	1
80	5
75	11
70	17
65	26
60	46
55	84
50	132
45	173
40	209
35	241
30	274
25	311
20	354
15	398
10	437
5	464
0	474

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	108	108	108	108	106	106	106	106	101	101	101	97	97	97	93	93	93	91
1	101	98	95	93	99	96	93	91	92	90	88	89	87	86	86	84	83	81
2	94	89	84	80	92	87	82	79	84	80	77	81	78	75	78	76	74	72
3	88	80	74	69	86	79	73	69	76	72	68	74	70	67	72	68	66	64
4	82	73	66	61	80	72	65	61	69	64	60	67	63	59	66	62	59	57
5	76	66	59	54	74	65	59	54	64	58	54	62	57	53	60	56	53	51
6	71	61	54	49	69	60	53	49	58	53	48	57	52	48	56	51	48	46
7	66	56	49	44	65	55	49	44	54	48	44	53	47	43	51	47	43	42
8	62	52	45	40	61	51	45	40	50	44	40	49	44	40	48	43	39	38
9	59	48	41	37	57	47	41	37	46	41	37	45	40	36	45	40	36	35
10	55	45	38	34	54	44	38	34	43	38	34	42	37	34	42	37	33	32

P87-AT

P87-AT WITH P8068-28

Report No. 98100

No. Lamps: 1 Type Lamp: 75PAR30 LN/FL Total Lumens: 985

Fixture Efficiency: 97.9%

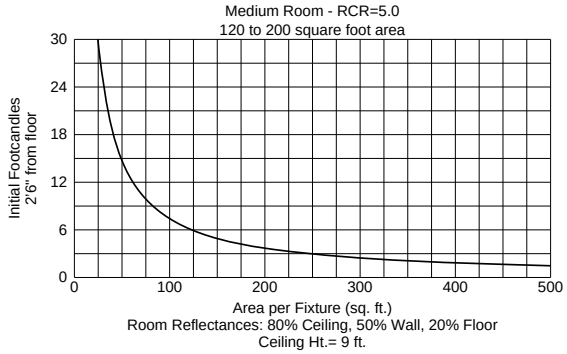
S/MH Ratio: 1.0

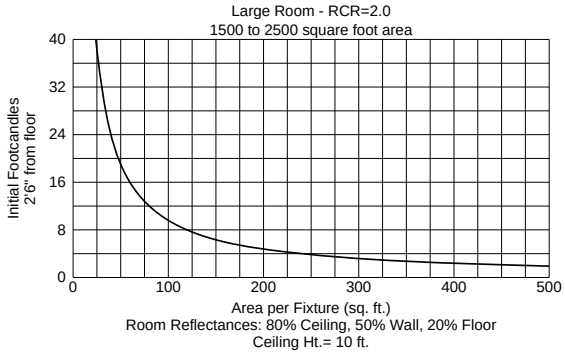
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 90° Ft.-C	10% Values Beam Angle - 90° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 55° Ft.-C	50% Values Beam Angle - 55° Beam Dia.
8	2.3	11	22.9	11.4	6
10	1.2	15	12.3	6.2	8
12	0.8	19	7.7	3.8	10
14	0.5	23	5.2	2.6	12
16	0.4	27	3.8	1.9	14

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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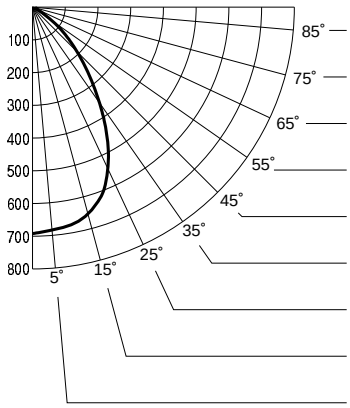


INTENSITY DATA

DEGREES	CANDELA
90	0
85	2
80	4
75	6
70	9
65	16
60	34
55	75
50	131
45	192
40	268
35	357
30	455
25	544
20	615
15	654
10	676
5	683
0	692

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	116	116	116	116	114	114	114	114	109	109	109	104	104	104	100	100	100	98
1	110	107	104	101	107	105	102	100	101	98	97	97	95	94	93	92	91	89
2	103	97	93	89	101	96	91	88	92	89	86	89	87	84	87	84	82	80
3	97	89	83	79	94	88	82	78	85	80	77	83	79	76	80	77	74	73
4	90	82	75	70	89	81	75	70	78	73	69	76	72	68	74	71	67	66
5	85	75	68	63	83	74	68	63	72	67	62	71	66	62	69	65	61	60
6	80	69	62	58	78	69	62	57	67	61	57	65	60	56	64	60	56	54
7	75	64	57	52	73	63	57	52	62	56	52	61	56	52	60	55	51	50
8	70	60	53	48	69	59	53	48	58	52	48	57	51	48	56	51	47	46
9	66	56	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	42
10	63	52	45	41	62	51	45	41	51	45	41	50	44	41	49	44	41	39

P87AT

P87AT WITH P8068-28

Report No. 98101

No. Lamps: 1 Type Lamp: 75PAR30 SN - GE Total Lumens: 1100

Fixture Efficiency: 99.3%

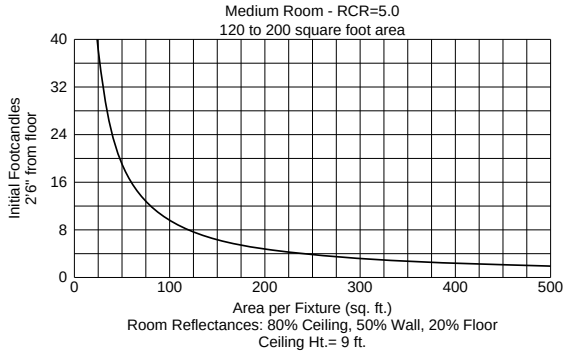
S/MH Ratio: 0.5

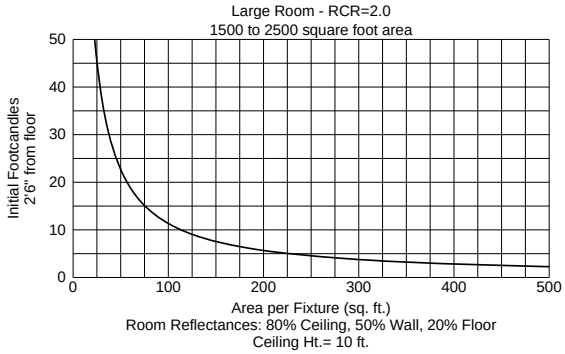
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 54° Ft.-C	10% Values Beam Angle - 54° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 32° Ft.-C	50% Values Beam Angle - 32° Beam Dia.
8	8.5	6	85.3	42.6	3
10	4.6	8	45.8	22.9	4
12	2.9	10	28.6	14.3	5
14	2.0	12	19.5	9.8	7
16	1.4	14	14.2	7.1	8

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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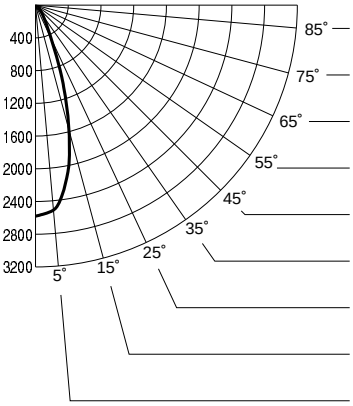


INTENSITY DATA

DEGREES	CANDELA
90	0
85	2
80	5
75	9
70	14
65	18
60	23
55	26
50	34
45	59
40	109
35	167
30	257
25	453
20	936
15	1580
10	2167
5	2515
0	2579

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	110	110	110	106	106	106	101	101	101	99
1	113	110	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	100	97	106	102	98	96	99	96	93	96	93	91	93	91	90	88
3	103	97	93	89	101	96	92	89	94	90	87	91	88	86	89	87	85	83
4	99	92	87	83	97	91	86	83	89	85	82	87	84	81	85	82	80	79
5	95	87	82	78	93	87	82	78	85	81	77	83	80	77	82	79	76	75
6	91	83	78	74	90	82	78	74	81	77	73	80	76	73	78	75	73	71
7	88	79	74	71	86	79	74	70	78	73	70	76	73	70	75	72	69	68
8	84	76	71	67	83	75	71	67	74	70	67	73	69	67	73	69	66	65
9	81	73	68	64	80	72	68	64	72	67	64	71	67	64	70	66	64	62
10	78	70	65	62	77	70	65	62	69	64	61	68	64	61	67	64	61	60

Compact Fluorescent

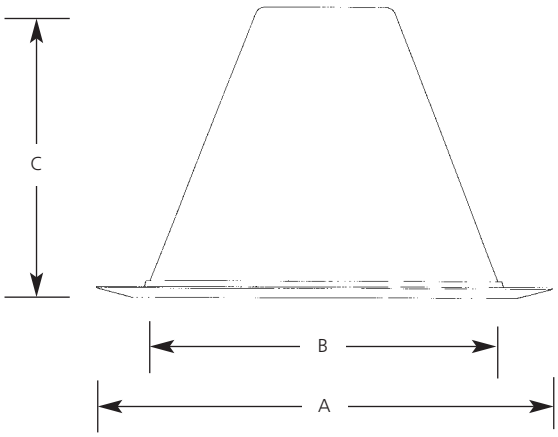
6" Alzak® Cone Single Lamp Vertical IC & Non-IC

Recessed

Type _____

	-21A	-22A	-23A	-28	-21	-22
P8068	☐	☐	☐	☐	☐	☐

	Finish						Dimensions (Inches)		
Catalog No.	**Clear Alzak®**	**Gold Alzak®**	**Black Alzak®**	**Clear**	**Gold**	**White**	**A**	**B**	**C**
P8068	-21A	-22A	-23A	-21	-22	-28	7-3/4	6-11/32	4-3/4



Lamp Wattage

Housing	**IC**	**Non-IC**
P83-AT	13w 4-pin Quad/Triple-tube CF	13w 4-pin Quad/Triple-tube CF
P83-ICAT	13w 4-pin Quad/Triple-tube CF	13w 4-pin Quad/Triple-tube CF
P83-26ICAT	26w 4-pin Quad/Triple-tube CF	26w 4-pin Quad/Triple-tube CF
P88-ICAT	18w 4-pin Quad/Triple-tube CF	18w 4-pin Quad/Triple-tube CF
P183-EB	13w 4-pin Quad/Triple-tube CF	13w 4-pin Quad/Triple-tube CF

Specifications:

Flange

- Bright white powdered painted metal flange

Trim

- All aluminum construction
- Trim-Lok action forces trim to fit snugly against the ceiling
- One-piece construction
- No light leaks around trim flange
- Socket mounts to trim for optimum performance and consistent lamp position

Options

- Clear Alzak® Cone - specify "21A" after catalog number
- Gold Alzak® Cone - specify "22A" after catalog number
- Black Alzak® Cone - specify "23A" after catalog number

Labels

- UL-CUL damp location listed

Progress Lighting
701 Millennium Blvd.
Greenville, South Carolina
29607

Rev. 5/09

www.progresslighting.com

Patent# 5,758,981, 5,758,982, 5,758,983, 5,758,984, 5,758,985, 5,758,986

P83

P83 WITH P8068-21A

Report No. 98035

No. Lamps: 1 Type Lamp: 13W QUAD CF-GE Total Lumens: 860

Fixture Efficiency: 63.2%

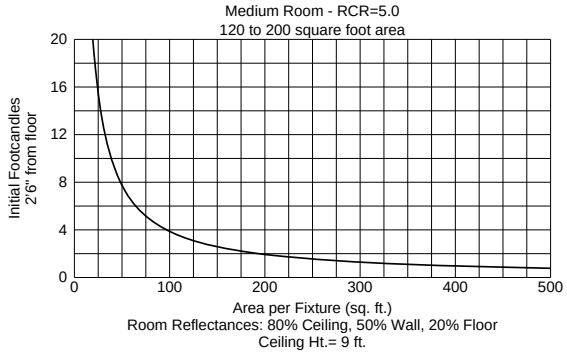
S/MH Ratio: 1.1

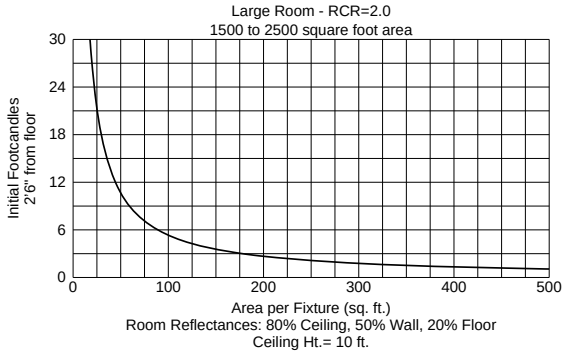
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 99° Ft.-C	10% Values Beam Angle - 99° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 56° Ft.-C	50% Values Beam Angle - 56° Beam Dia.
8	1.1	13	10.7	5.4	6
10	0.6	17	5.8	2.9	8
12	0.4	22	3.6	1.8	10
14	0.2	27	2.5	1.2	12
16	0.2	31	1.8	0.9	14

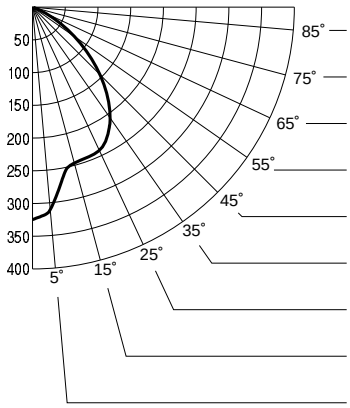
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	4
65	22
60	48
55	78
50	111
45	145
40	178
35	207
30	228
25	241
20	245
15	247
10	265
5	311
0	325

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	75	75	75	75	73	73	73	73	70	70	70	67	67	67	64	64	64	63
1	71	68	66	65	69	67	65	63	64	63	61	62	61	60	60	59	58	57
2	66	62	58	55	64	60	57	55	58	56	54	56	54	52	54	53	51	50
3	61	55	51	48	59	54	51	48	53	49	47	51	48	46	50	47	45	44
4	56	50	45	42	55	49	45	42	48	44	41	46	43	41	45	42	40	39
5	52	45	41	37	51	45	40	37	43	39	36	42	39	36	41	38	36	35
6	49	41	36	33	48	41	36	33	40	36	33	39	35	32	38	35	32	31
7	45	38	33	29	44	37	33	29	36	32	29	36	32	29	35	31	29	28
8	42	35	30	27	41	34	30	27	34	29	26	33	29	26	32	29	26	25
9	40	32	27	24	39	32	27	24	31	27	24	30	27	24	30	26	24	23
10	37	30	25	22	37	29	25	22	29	25	22	28	24	22	28	24	22	21

P83

P83 WITH 8068-21

Report No. 98061

No. Lamps: 1 Type Lamp: 13W QUAD CF - GE Total Lumens: 860

Fixture Efficiency: 68.3%

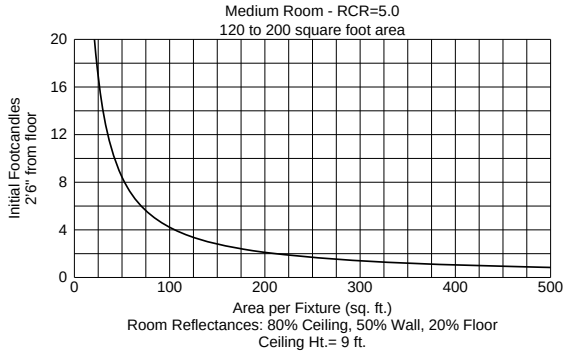
S/MH Ratio: 1.3

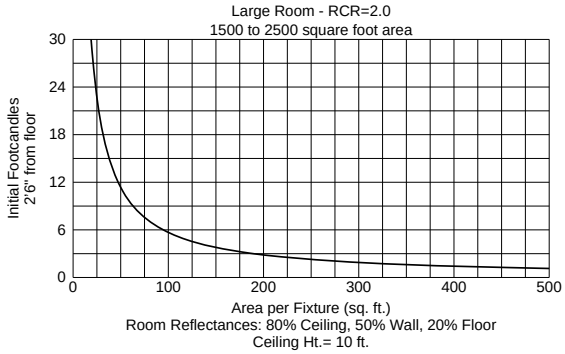
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 102˚ Ft.-C	10% Values Beam Angle - 102˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 65˚ Ft.-C	50% Values Beam Angle - 65˚ Beam Dia.
8	0.9	14	9.5	4.7	7
10	0.5	19	5.1	2.5	10
12	0.3	24	3.2	1.6	12
14	0.2	29	2.2	1.1	15
16	0.2	34	1.6	0.8	17

Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





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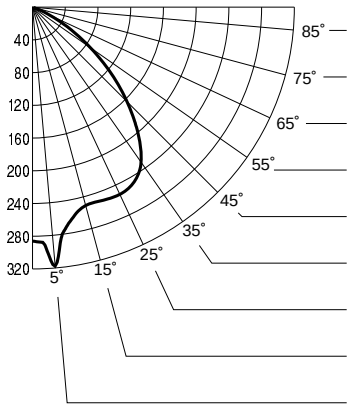


INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	6
65	24
60	52
55	87
50	125
45	163
40	200
35	231
30	247
25	253
20	251
15	251
10	266
5	318
0	286

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	81	81	81	81	79	79	79	79	76	76	76	73	73	73	70	70	70	68
1	76	74	72	70	74	72	70	68	69	68	66	67	66	64	64	63	62	61
2	71	66	63	60	69	65	62	59	63	60	58	61	58	56	59	57	55	54
3	66	60	55	51	64	59	54	51	57	53	50	55	52	49	53	51	49	47
4	61	54	49	45	59	53	48	45	51	47	44	50	46	43	48	45	43	42
5	56	49	43	39	55	48	43	39	47	42	39	45	41	38	44	41	38	37
6	52	44	39	35	51	44	39	35	42	38	35	41	37	34	40	37	34	33
7	49	40	35	31	48	40	35	31	39	34	31	38	34	31	37	33	31	29
8	45	37	32	28	44	37	32	28	36	31	28	35	31	28	34	30	28	26
9	42	34	29	25	42	34	29	25	33	28	25	32	28	25	32	28	25	24
10	40	32	27	23	39	31	26	23	31	26	23	30	26	23	29	26	23	22

P83

P83 WITH P8068-22A

Report No. 98031

No. Lamps: 1 Type Lamp: 13W QUAD CF - GE Total Lumens: 860

Fixture Efficiency: 64.0%

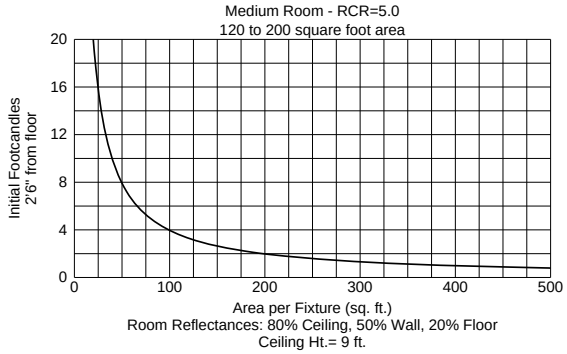
S/MH Ratio: 1.0

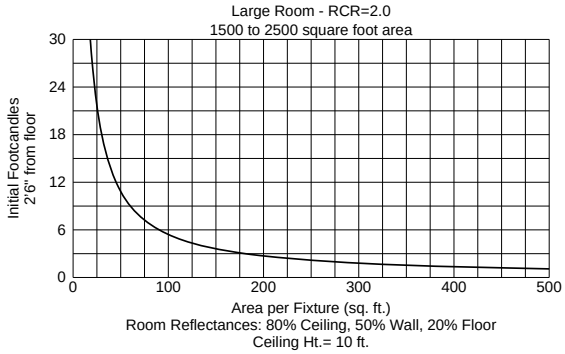
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 98° Ft.-C	10% Values Beam Angle - 98° Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 55° Ft.-C	50% Values Beam Angle - 55° Beam Dia.
8	1.1	13	11.1	5.5	6
10	0.6	17	6.0	3.0	8
12	0.4	22	3.7	1.9	10
14	0.3	26	2.5	1.3	12
16	0.2	31	1.8	0.9	14

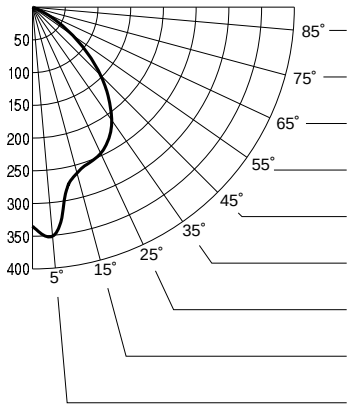
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	0
70	3
65	18
60	44
55	74
50	110
45	147
40	181
35	211
30	233
25	246
20	253
15	263
10	290
5	351
0	335

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	76	76	76	76	74	74	74	74	71	71	71	68	68	68	65	65	65	64
1	71	69	67	65	70	68	66	64	65	64	62	63	62	61	61	60	59	58
2	67	63	59	56	65	61	58	56	59	57	55	57	55	53	55	54	52	51
3	62	56	52	49	60	56	52	49	54	50	48	52	49	47	51	48	46	45
4	57	51	47	43	56	50	46	43	49	45	42	47	44	42	46	43	41	40
5	53	46	42	38	52	46	41	38	45	41	38	43	40	37	42	39	37	36
6	50	42	37	34	49	42	37	34	41	37	34	40	36	33	39	36	33	32
7	46	39	34	31	45	38	34	30	37	33	30	37	33	30	36	32	30	29
8	43	36	31	28	42	35	31	28	35	30	27	34	30	27	33	30	27	26
9	41	33	28	25	40	33	28	25	32	28	25	31	28	25	31	27	25	24
10	38	31	26	23	37	30	26	23	30	26	23	29	25	23	29	25	23	22

P83

P83 WITH P8068-22

Report No. 98036

No. Lamps: 1 Type Lamp: 13W QUAD CF - GE Total Lumens: 860

Fixture Efficiency: 58.8%

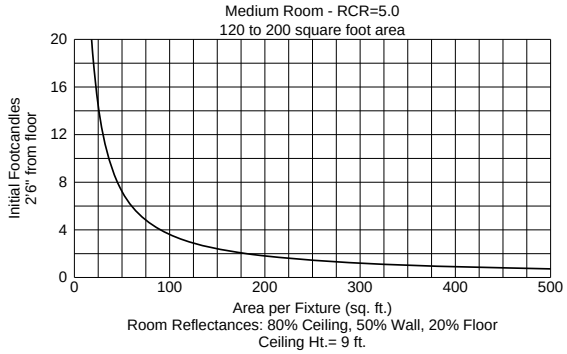
S/MH Ratio: 1.1

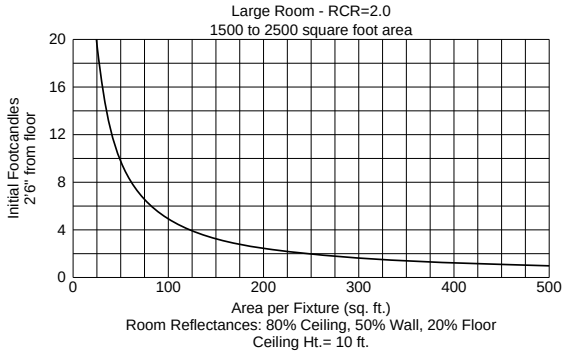
Single Fixture Data

	10% Values		Zero	50% Values	
Ceiling	Beam Angle - 101˚		Degrees	Beam Angle - 60˚	
Ht.(Ft.)	Ft.-C	Beam Dia.	Ft.-C	Ft.-C	Beam Dia.
8	0.9	13	9.0	4.5	6
10	0.5	18	4.8	2.4	9
12	0.3	23	3.0	1.5	11
14	0.2	28	2.1	1.0	13
16	0.1	33	1.5	0.7	16

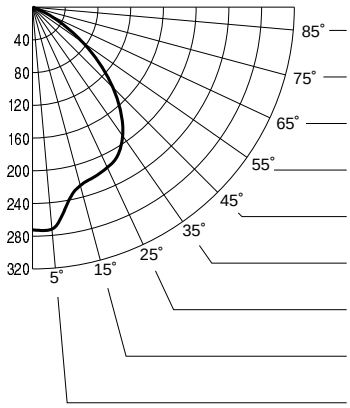
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	0
80	0
75	1
70	5
65	21
60	46
55	75
50	107
45	139
40	168
35	192
30	209
25	216
20	221
15	226
10	244
5	272
0	272

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	70	70	70	70	68	68	68	68	65	65	65	63	63	63	60	60	60	59
1	66	64	62	60	64	62	61	59	60	58	57	58	57	55	56	55	54	53
2	61	57	54	51	60	56	53	51	54	52	50	52	50	49	51	49	48	46
3	57	51	48	44	55	51	47	44	49	46	43	47	45	43	46	44	42	41
4	52	46	42	39	51	46	42	39	44	41	38	43	40	38	42	39	37	36
5	49	42	37	34	47	41	37	34	40	36	34	39	36	33	38	35	33	32
6	45	38	34	30	44	38	33	30	37	33	30	36	32	30	35	32	29	28
7	42	35	30	27	41	34	30	27	34	30	27	33	29	27	32	29	27	25
8	39	32	28	24	38	32	27	24	31	27	24	30	27	24	30	26	24	23
9	37	30	25	22	36	29	25	22	29	25	22	28	24	22	27	24	22	21
10	35	27	23	20	34	27	23	20	27	23	20	26	22	20	25	22	20	19

P83

P83 WITH P8068-28

Report No. 98037

No. Lamps: 1 Type Lamp: 13W QUAD CF - GE Total Lumens: 860

Fixture Efficiency: 58.2%

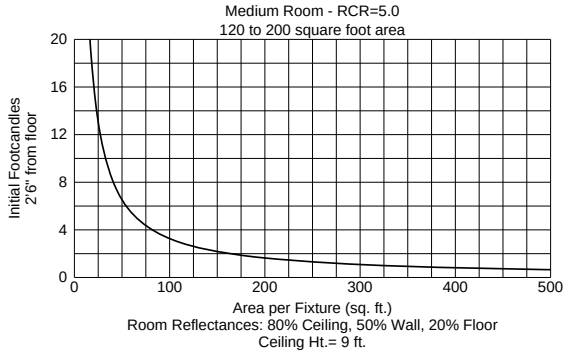
S/MH Ratio: 1.4

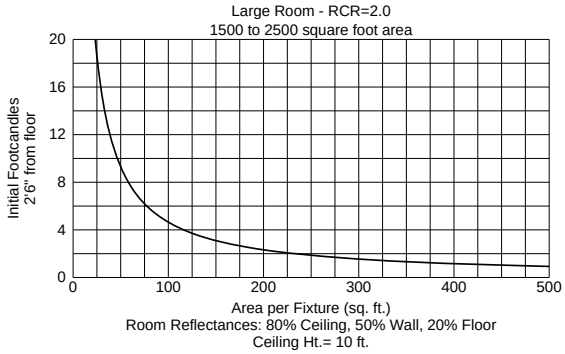
Single Fixture Data

Ceiling Ht.(Ft.)	10% Values Beam Angle - 109˚ Ft.-C	10% Values Beam Angle - 109˚ Beam Dia.	Zero Degrees Ft.-C	50% Values Beam Angle - 71˚ Ft.-C	50% Values Beam Angle - 71˚ Beam Dia.
8	0.6	15	6.0	3.0	8
10	0.3	21	3.2	1.6	11
12	0.2	27	2.0	1.0	13
14	0.1	32	1.4	0.7	16
16	0.1	38	1.0	0.5	19

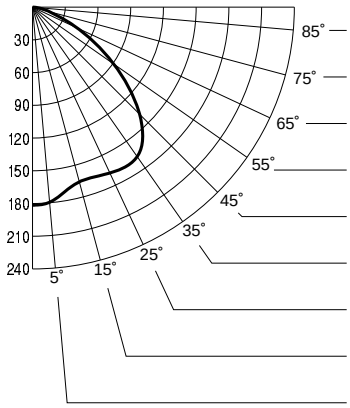
Ft.-C (Footcandles) are initial and measured 2'-6" from floor

Quick Calculator Charts





DISTRIBUTION CURVE



INTENSITY DATA

DEGREES	CANDELA
90	0
85	4
80	9
75	16
70	27
65	45
60	67
55	91
50	116
45	139
40	157
35	167
30	169
25	168
20	166
15	166
10	172
5	180
0	182

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	69	69	69	69	68	68	68	68	65	65	65	62	62	62	59	59	59	58
1	64	61	59	57	62	60	58	56	58	56	55	55	54	53	53	52	51	50
2	59	54	51	48	57	53	50	47	51	48	46	49	47	45	48	46	44	43
3	54	48	44	40	52	47	43	40	45	42	39	44	41	38	42	40	38	36
4	49	43	38	34	48	42	37	34	40	37	33	39	36	33	38	35	33	31
5	45	38	33	29	44	38	33	29	36	32	29	35	32	29	34	31	28	27
6	42	34	29	26	41	34	29	26	33	29	25	32	28	25	31	28	25	24
7	39	31	26	23	38	31	26	23	30	26	22	29	25	22	28	25	22	21
8	36	28	24	20	35	28	23	20	27	23	20	26	23	20	26	22	20	19
9	34	26	21	18	33	26	21	18	25	21	18	24	21	18	24	20	18	17
10	31	24	19	16	31	24	19	16	23	19	16	23	19	16	22	19	16	15