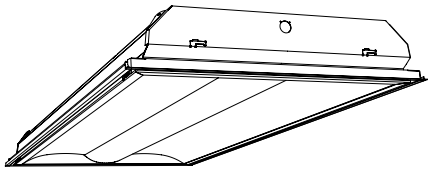
Day-Brite CFI by Signify

Recessed

SofTrace Air LED 2x4

3600, 4200, 5000, 6300 or 7000lm



Project:

Location:

Cat.No:

Type:

Lamps: Qty:

Notes:

Day-Brite / CFI SofTrace recessed LED brings new meaning to the concept of combining style with performance. Equipped with a fresh streamlined design and innovative technology, SofTrace provides a huge step forward for the lighting industry. The sleek profile design belies the true "horsepower under the hood". This architectural product delivers leading edge performance for the most environmentally conscious user.

Ordering guide

Example: 2STGA50L840-4-D-UNV-DIM

Width	Family	Ceiling Type	Air Function	Lumen Package[1]	Color Temp.	Length	Center Diffusers	Voltage	Driver	Options
2	ST				–	4 –	–	–	–	
2 2'	**ST** Softrace	**G** Grid **F** Flange **Z** Z Spline / Modular **T** Screw Slot	**A** Air Supply/ Return **S** Static (Reveal w/o air slots)	**36L** 3600 nominal delivered lumens **42L** 4200 nominal delivered lumens **50L** 5000 nominal delivered lumens **63L** 6300 nominal delivered lumens **70L** 7000 nominal delivered lumens	**835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**4** 4'	**D** Diffuse (ribbed) **DS** Diffuse (smooth) **PMW** Round perf w/ white overlay	**UNV** Universal voltage 120-277V **347** 347V	**DIM** 0-10V dimming **SDIM**[2] Step dimming to 40% input power **DALI** DALI dimming	**F1** 3/8" flex, 3 wire 18 gauge 6' **F2** 3/8" flex, 4 wire 18 gauge 6' **F1/D** 3/8" twin flex, 3 wire 18 gauge 6' for dimmable luminaires **F2/5W** 3/8" single flex, 5 wire 18 gauge 6' for dimmable luminaires **GLR** Fusing, fast blow **WR** White reveal **PAF** Housing painted after fabrication **EMLED** Integral emergency battery pack, 1100lm nominal (ballast enclosure on top of luminaire)

Footnotes:

1 The lumen values stated above are relevant only to the "D" center diffuser option. For lumen values with the other diffusers, check the photometrics tests online for those specific catalog numbers.
2 SDIM not available for 63L or 70L lumen package.

Accessories (order separately)

- **FKDP24** Flange conversion kit 2'X4'
- **FMA24** 2'x4' "F" mounting frame for NEMA "F" mounting

Energy data

Luminaire	Catalog Number	Input Power	Efficacy
2x4	2STGA36L840	29.2	125
	2STGA42L840	33.4	124
	2STGA50L840	40.0	124
	2STGA63L840	51.3	122
	2STGA70L840	59.5	119

2ST SofTrace Air LED 2X4

3600, 4200, 5000, 6300 or 7000 lm

Application

- Subtle enclosure curves provide architectural styling to complement any space.
- Smooth brightness across the face of the luminaire prevents glare and provides excellent visual comfort.
- Directs a controlled amount of light to higher angles to eliminate “cave effect” without creating glare.
- Ideal for modern offices, schools and retail environments.
- Excellent luminaire efficacy provides significant energy savings.
- High CRI source provides excellent color rendering.
- LEDs are an excellent source for use with controls since frequent switching does not affect the life of the light source.
- Grid, Flange or Z-spline/ Modular models available.
- Designed for air supply/return through side slots in reveal. See detail provided.

Construction/Finish

- One piece die-formed embossed steel housing provides added rigidity, resists damage during shipment/handling.
- Black reveal around enclosure provides floating appearance and disguises air slots. White reveal is optional.
- T-bar grid clips are built into luminaire ends for quick and easy installation, no extra parts required.
- End K.O.s for thru wiring or conduit entry in shallow plenums.
- Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility.

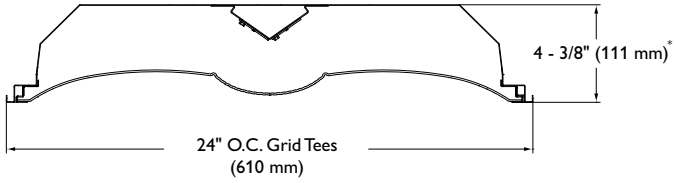
Electrical

- Driver and LED boards are easily accessible from below. LED boards are individually replaceable if required.
- 0-10V dimming is standard.
- Five year limited luminaire warranty includes LED boards and driver (emergency driver and batteries have a three year warranty in models so equipped).
  Visit **www.philips.com/warranties** for complete warranty information.
- High efficiency LEDs have 70,000 hour L70 rated life (defined as 70% lumen maintenance.)
- cETLus listed to UL standards, suitable for damp locations.

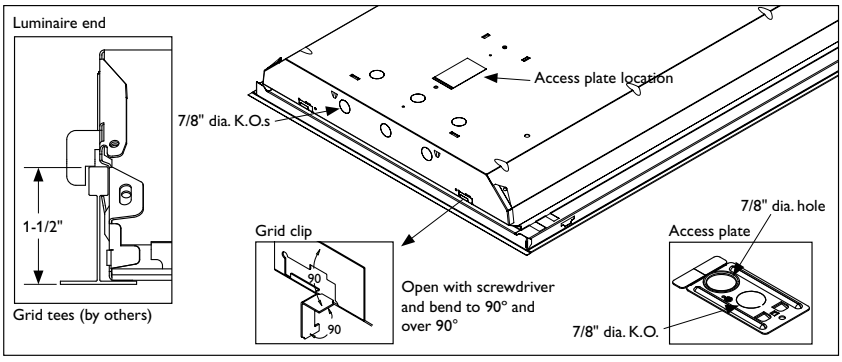
Enclosure

- Choice of three enclosures:
  - Single piece thermo formed acrylic lens with ribbed center diffuser (D)
  - Three piece acrylic lens with smooth center diffuser (DS).
  - Three piece acrylic lens with round perforated steel center diffuser (PMW)

Dimensions



* **EMLED** is 1-3/4" (45mm) deeper



2ST SofTrace Air LED 2X4

3600, 4200, 5000, 6300 or 7000 lm

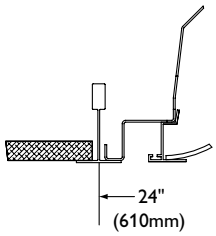
Ceiling configuration

2 ST G A 36L840

Ceiling type

G = Grid (NEMA G)

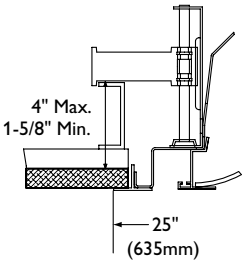
SIDE



(NEMA Type G)
Lay-in acoustical ceilings using exposed grid suspension, with tees for luminaires on 24" x 48" spacing.

F = Flange (NEMA F)

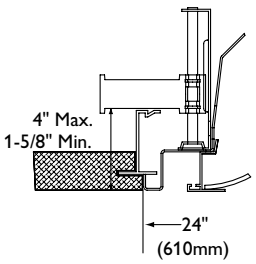
SIDE



(NEMA Type F)
Flange for acoustical ceilings using concealed mechanical suspension. Swing-jack mounting brackets: adjustment 4" max.and 1-5/8" min. Refer to sheet 801-CL for cut-out information.

Z = Modular & "Z" Spline (NEMA M/Z)

SIDE



(NEMA M/Z)
Modular and "Z" Spline using concealed mechanical suspension. Swing-jack mounting brackets: adjustment 4" max. and 1-5/8" min.

2x4 SofTrace Air LED, 3600 nominal delivered lumens, diffuse

LER – 125

Catalog No.	2STGA36L840-4-D-UNV-DIM
Test No.	35355
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	3650
Input Watts	29.2

Comparative yearly lighting energy cost per 1000 lumens – **$1.92** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	1287	1287	1287	1287
5	1273	1282	1290	1282
15	1222	1244	1259	1244
25	1119	1157	1186	1157
35	972	1027	1068	1027
45	793	857	896	857
55	596	656	683	656
65	394	445	469	445
75	199	251	276	251
85	44	75	70	75

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1005	27.5
0-40	1646	45.1
0-60	2881	78.9
0-90	3650	100.0

Average Luminance

Angle	End	45°	Cross
45	1740	1883	1968
55	1613	1774	1850
65	1446	1635	1722
75	1195	1505	1655
85	784	1333	1252

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	109	104	98	106	102	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	81	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	51	42	63	51	41	48	40
8	59	46	38	58	46	38	45	36
9	56	42	34	55	41	34	40	34
10	53	40	32	52	39	32	38	30

Room Cavity Ratio

2x4 SofTrace Air LED, 4200 nominal delivered lumens, diffuse

LER – 124

Catalog No.	2STGA42L840-4-D-UNV-DIM
Test No.	35357
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	4158
Input Watts	33.4

Comparative yearly lighting energy cost per 1000 lumens – **$1.92** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	1467	1467	1467	1467
5	1451	1462	1471	1462
15	1393	1418	1436	1418
25	1276	1319	1352	1319
35	1107	1171	1218	1171
45	902	977	1021	977
55	678	747	778	747
65	448	506	533	506
75	226	285	312	285
85	50	85	79	85

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1146	27.6
0-40	1876	45.1
0-60	3282	78.9
0-90	4159	100.0

Average Luminance

Angle	End	45°	Cross
45	1981	2146	2243
55	1835	2022	2107
65	1645	1859	1958
75	1356	1707	1874
85	882	1516	1415

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	109	104	98	106	102	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	81	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	51	42	63	51	41	48	40
8	59	46	38	58	46	38	45	36
9	56	42	34	55	41	34	40	34
10	53	40	32	52	39	32	38	30

Room Cavity Ratio

2ST SofTrace Air LED 2X4

3600, 4200, 5000, 6300 or 7000 lm

2x4 SofTrace Air LED, 5000 nominal delivered lumens, diffuse

LER – 124

Catalog No.	2STGA50L840-4-D-UNV-DIM
Test No.	35358
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	4971
Input Watts	40.0

Comparative yearly lighting energy cost per 1000 lumens – **$1.94** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	1752	1752	1752	1752
5	1733	1746	1757	1746
15	1664	1695	1715	1695
25	1525	1576	1614	1576
35	1322	1400	1454	1400
45	1079	1168	1220	1168
55	811	892	930	892
65	535	605	639	605
75	271	341	376	341
85	59	101	95	101

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1369	27.5
0-40	2241	45.1
0-60	3923	78.9
0-90	4972	100.0

Average Luminance

Angle	End	45°	Cross
45	2370	2565	2678
55	2196	2416	2517
65	1967	2224	2346
75	1624	2044	2253
85	1055	1792	1687

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	109	104	98	106	102	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	81	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	51	42	63	51	41	48	40
8	59	46	38	58	46	38	45	36
9	56	42	34	55	41	34	40	34
10	53	40	32	52	39	32	38	30

Room Cavity Ratio

2x4 SofTrace Air LED, 6300 nominal delivered lumens, diffuse

LER – 123

Catalog No.	2STGA63L840-4-D-UNV-DIM
Test No.	35360
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	6305
Input Watts	51.3

Comparative yearly lighting energy cost per 1000 lumens – **$1.95** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	2224	2224	2224	2224
5	2199	2216	2230	2216
15	2111	2150	2177	2150
25	1933	1998	2050	1998
35	1677	1774	1847	1774
45	1369	1480	1551	1480
55	1030	1131	1183	1131
65	680	768	811	768
75	344	433	475	433
85	76	134	120	134

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1737	27.5
0-40	2843	45.1
0-60	4976	78.9
0-90	6306	100.0

Average Luminance

Angle	End	45°	Cross
45	3006	3250	3405
55	2788	3060	3204
65	2500	2821	2981
75	2064	2599	2851
85	1345	2391	2134

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	109	104	98	106	102	97	96	93
2	98	90	83	95	89	81	84	80
3	90	79	70	88	78	69	75	68
4	81	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	51	42	63	51	41	48	40
8	59	46	38	58	46	38	45	36
9	56	42	34	55	41	34	40	34
10	53	40	32	52	39	32	38	30

Room Cavity Ratio

2x4 SofTrace Air LED, 7000 nominal delivered lumens, diffuse

LER – 119

Catalog No.	2STGA70L840-4-D-UNV-DIM
Test No.	36412
S/MH	1.3
Lamp Type	LED
Lumens/Lamp	7088
Input Watts	59.5

Comparative yearly lighting energy cost per 1000 lumens – **$2.02** based on 3000 hrs. and $.08 pwr KWH.

The photometric results were obtained in the Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	2503	2503	2503	2503
5	2470	2493	2501	2493
15	2373	2408	2433	2408
25	2174	2244	2297	2244
35	1886	2004	2094	2004
45	1534	1700	1770	1700
55	1143	1293	1347	1293
65	746	862	911	862
75	371	474	518	474
85	79	131	118	131

Light Distribution

Degrees	Lumens	% Luminaire
0-30	1949	27.5
0-40	3199	45.1
0-60	5623	79.3
0-90	7091	100.0

Average Luminance

Angle	End	45°	Cross
45	3369	3734	3886
55	3093	3499	3646
65	2740	3165	3349
75	2223	2843	3105
85	1407	2328	2104

Coefficients of Utilization

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)

Ceiling (pcc)	80%			70%			50%	
Wall (pw)	70	50	30	70	50	30	50	30
RCR	Zonal cavity method - Effective floor reflectance = 20%							
0	118	118	118	115	115	115	111	111
1	109	104	100	106	102	97	96	93
2	98	91	83	95	89	81	84	80
3	90	80	70	88	78	69	75	68
4	82	69	61	80	68	60	67	58
5	76	63	54	73	61	53	59	52
6	69	56	47	68	56	46	54	46
7	65	51	42	63	51	41	48	41
8	59	46	38	58	46	38	45	36
9	56	42	34	55	41	34	40	34
10	53	40	32	52	39	32	38	30

Room Cavity Ratio

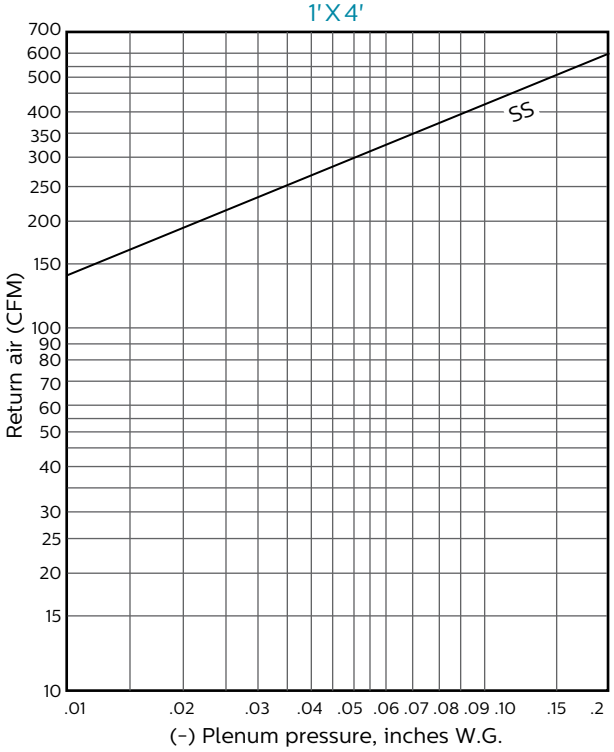
2ST SofTrace Air LED 2X4

3600, 4200, 5000, 6300 or 7000 lm

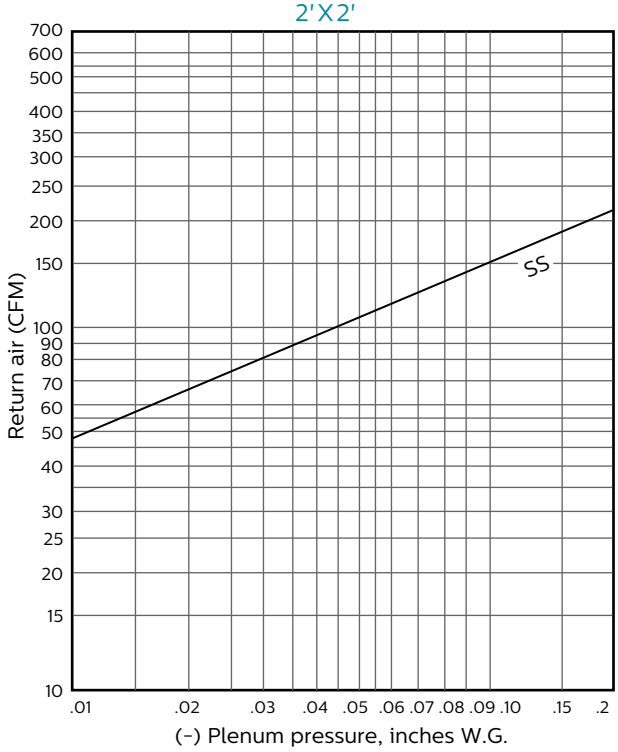
Return air data: SofTrace air

SS=Return Through Side Slots Only

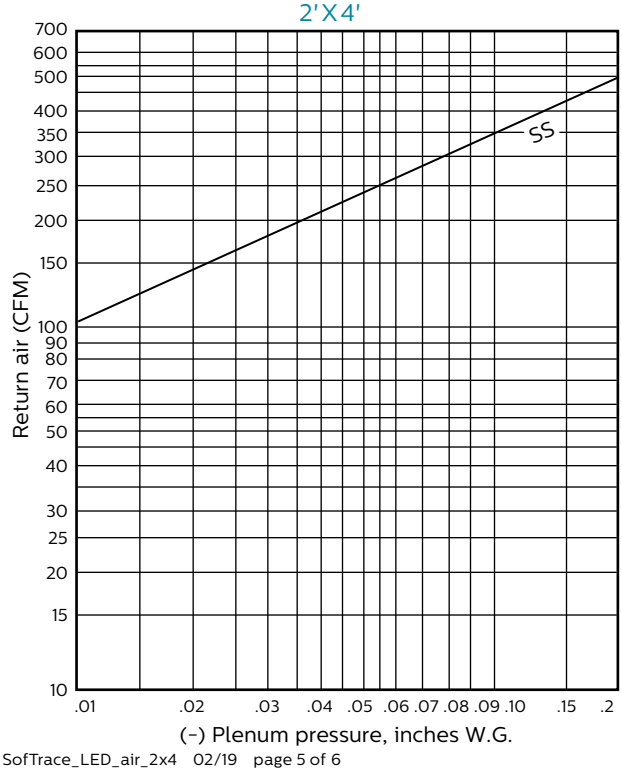
1'X4'



2'X2'



2'X4'



2ST SofTrace Air LED 2X4

3600, 4200, 5000, 6300 or 7000 lm

Return air data

Return air–noise criteria

			CFM													
Size	**Mode**		**40**	**50**	**60**	**70**	**80**	**90**	**100**	**125**	**150**	**175**	**200**	**250**	**300**	**350**
1'X4'	SS	NC	–	–	–	–	–	–	22	31	35	38	40			
2'X2'	SS	NC	–	–	–	–	–	–	–	–	–	–	21	27	32	36
2'X4'	SS	NC	–	–	–	–	–	–	–	–	–	–	26	32	36	41

Recommended indoor design goals for air conditioning system sound control*

(NOTE: NC Values are for occupied spaces, with all systems operating.)

TYPE OF AREA	NC CRITERIA RANGE
1. Private residences	25-30
2. Apartments	30-35
3. Hotels/Motels	
a. Rooms or suites	30-35
b. Meeting/banquet rooms	30-35
c. Halls, corridors, lobbies	35-40
d. Service/support areas	40-45
4. Offices	
a. Executive	25-30
b. Conference rooms	25-30
c. Private	30-35
d. Open-plan areas	35-40
e. Computer/business machine areas	40-45
f. Public circulation	40-45
5. Hospitals and clinics	
a. Private rooms	25-30
b. Wards	30-35
c. Operating rooms	25-30
d. Laboratories	30-35
e. Corridors	30-35
f. Public areas	35-40
6. Schools	
a. Lecture and classrooms	25-30
b. Open-plan classrooms	30-35**
7. Libraries	30-35

* Design goals can be increased by 5dB when dictated by budget constraints or when noise intrusion from other sources represent a limiting condition.

**An acoustical expert should be consulted on these critical spaces. Reference: ASHRAE HANDBOOK, 1980 SYSTEMS, CHAP. 35.16.

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