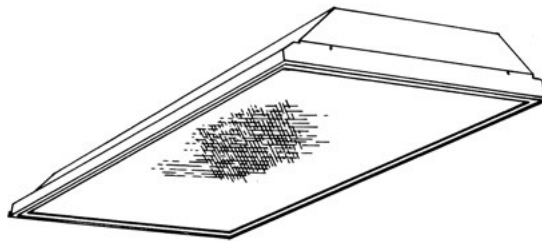


Recessed

Designer 2x4

2, 3, or 4 Lamp T8
with air handling



Project: _____
Location: _____
Cat.No: _____
Type: _____
Lamps: _____ Qty: _____
Notes: _____

Day-Brite / CFI Designer is a premium grade recessed luminaire. Multiple options in door frames, lenses, air handling, and ceiling types provide versatility to meet the needs of many applications.

Ordering guide

Example: 2DPGA232-FS01-UNV-1/2-EBLHE-LPT835

Width	Family	Ceiling type	Air function	No. of lamps (not included)	Lamp type/Wattage	Door frame	Lens	Voltage	Door finish
2	DP								
2 2'	DP Designer	G Grid F Flange	S Static (no air function) but with black reveal A Air Supply H Heat Transfer C Combination (A&H)	2 3 4	32 32WT8 (48") 28 28WT5 (46") 54HO 54WT5HO (46")	FA Flat Aluminum RA Regressed Aluminum	01 Pattern 12 prismatic acrylic 08 Frost glaze (opal), .187" nominal 12 K-12, .125" nominal 19 K-19, .156" nominal 21 Pattern 12, .125" nominal	120 120V 277 277V 347 347V UNV Universal voltage 120-277V	BLANK White B Black Door

Options

1/2	One 2 lamp ballast	E5ST	B50ST emerg. ballast w/self test, T8, 1100-1400 lumens, UNV
1/3	One 3 lamp ballast	E7LP	LP550 emerg. ballast T5/T5HO, 430-700 lumens, 120/277V
1/21	2 lamp and 1 lamp ballasts	E6LP	LP600 emerg. ballast U.S. or Canada market, T5/T5HO, 750-1325 lumens, 120/277V
2/2	Two 2 lamp ballasts	F1	3/8" flex, 3 wire 18 gauge 6'
APC	Air pattern control blade	F2	3/8" flex, 4 wire 18 gauge 6'
ASC	Snap out air slot covers one 1-lamp ballast	F2/5W	3/8" single flex, 5 wire 18 gauge 6' for dimmable luminaires
EB	Electronic ballast, <10% THD std. ballast factor	GLR	Fusing, fast blow
EB10R	T8 electronic ballast, program rapid start, <10% THD	LPT830	Installed T8/T5/T5HO lamps 80+ CRI 3000K
EBHE	T8 electronic ballast, high efficiency, std. ballast factor	LPT835	Installed T8/T5/T5HO lamps 80+ CRI 3500K
EBLHE	T8 electronic ballast, high efficiency, low ballast factor	LPT841	Installed T8/T5/T5HO lamps 80+ CRI 4100K
EBHHE	T8 electronic ballast, high efficiency, high ballast factor	LPT830HL	Installed T8/T5 hi lumen lamps 80+ CRI 3000K
EBD7	Advance Mark 7 dimming ballast, 0-10V (low voltage) control	LPT835HL	Installed T8/T5 hi lumen lamps 80+ CRI 3500K
EBDX	Advance Mark 10 dimming ballast, phase control	LPT841HL	Installed T8/T5 hi lumen lamps 80+ CRI 4100K
EBSD	T8 electronic step dimming ballast, .88 ballast factor	2W	2-way gasketing, 1W + gasketing between door frame & housing
EBD	Electronic dimming ballast, customer specified	3W	3-way gasketing, 2W + gasketing for field installation between housing & ceiling
E1	B100 emerg. ballast, T8, 350-450 lumens, 120/277V	SI	Specular Insert (reflector)
E1CAN	B100-CAN emerg. ballast, Canada market, T8, 350-450 lumens, 120/347V	PAF	Housing painted after fabrication
E7	B60 emerg. ballast, T8, 600-700 lumens, 120/277V	CHIC	Chicago Plenum rated
E5	B50 emerg. ballast, U.S. or Canada market, T8, 1100-1400 lumens, UNV	WR	White reveal
ECAN	B50-CAN emerg. ballast, Canada market, T8, 1100-1400 lumens, 120/347V		

Accessories (order separately)

- FMA24 2'x4' "F" mounting frame for NEMA "F" mounting
- TPDTH Torx head pin driver (sold separately)
- FKDP24 2x4 flange conversion kit from NEMA G to NEMA F type



2DP Designer recessed 2X4

2, 3, or 4 lamp T8

Application

- Premium quality recessed air handling troffer for:
 - Grid inverted T (NEMA "G") ceilings
 - Flange for concealed mechanical suspension (NEMA "F")
 - Screw Slot (NEMA "SS") with door frame at ceiling plane
 - Contact Philips Day-Brite for other ceiling types
- Select one of the four air handling functions:
 - Static; non-air handling
 - Heat transfer; air return through lamp compartment
 - Air supply; (or air return) through side slots, adjustable pattern control blade is optional
 - Combination; both heat transfer and air supply features listed above
- Air handling or combination models are available with optional factory installed snap-in air slot covers (ASC) or adjustable air pattern control blades (APC)
- Air boots by others

Construction/Finish

- One piece unitized body including end plates for added rigidity
- Housing is multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance baked white enamel
- Painted after fabrication housing optional
- Access plate (2 K.O.'s) factory installed includes grounding screw
- T-bar grid clips built into fixture end plates, no extra parts required

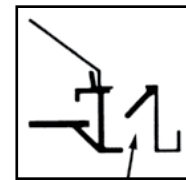
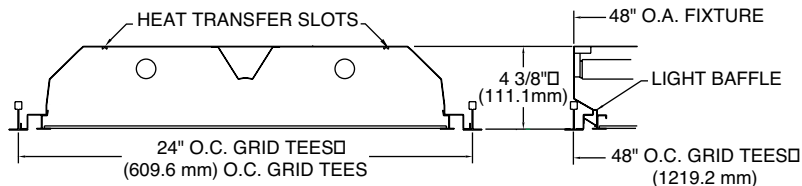
Electrical

- Class P, HPF ballasts comply with E Federal Ballast Law (Public Law 100-357, 1988)
- UL listed for damp locations. Canadian certified optional
- Self-contained fluorescent emergency power packs can be incorporated, UL listed for dry locations

Enclosure

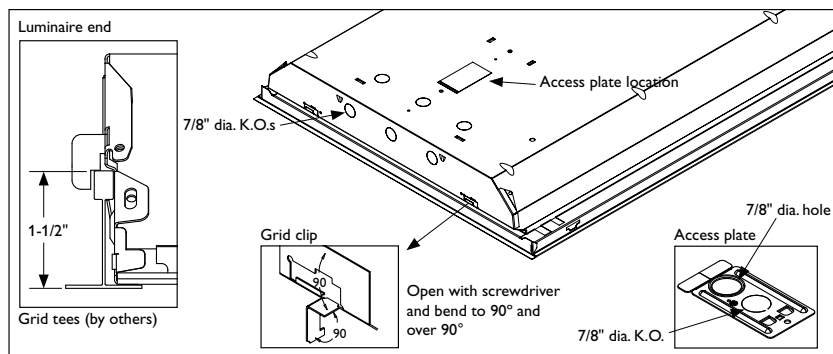
- Black reveal produces floating door appearance.
- Mitered corner door frames painted after fabrication with a choice of: Flat Steel, Flat Aluminum, or Regressed Aluminum.
- Door frames standard with guide post spring loaded latches.
- Mechanically designed interlocks block light, no gaskets are needed.
- Prismatic acrylic pattern 12 lens standard (01). Other lenses or louvers optional.
- Choice of door finishes; white (standard), or black.
- Can be hinged and latched from either side.

Dimensions



Optional Air Pattern Control
(on Air and Combination Units)

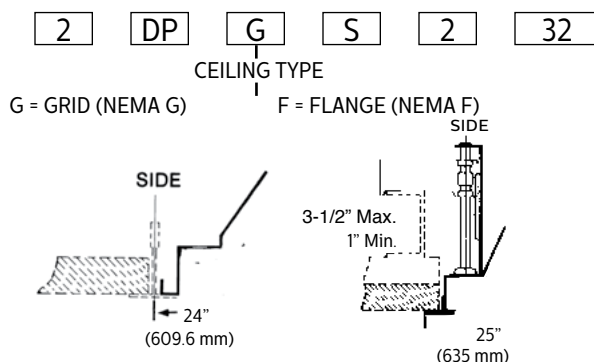
- Fully adjustable
 - Closed=Static
 - 45°= Horizontal Air Supply
 - 90°=(fully open)–Vertical Air Supply
- Side Slots may also be used for Return Air to Plenum



2DP Designer recessed 2X4

2, 3, or 4 lamp T8

Ceiling configuration



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

(NEMA Type F)
Flange for acoustical ceilings using concealed mechanical suspension. Swing-jack mounting brackets: adjustment 3-1/2" max. and 1" min.

Photometry

CATALOG # 2DPGS232-FA01-1/2-EB LAMPS = F32T8 INPUT WATTS = 69
TEST #20884 S/MH=1.4 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-69

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.48 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 82.1%

CANDLEPOWER			
Angle	End	45	Cross
0	1887	1887	1887
5	1890	1881	1872
10	1865	1866	1869
15	1824	1842	1864
20	1763	1807	1856
25	1687	1763	1836
30	1586	1703	1787
35	1455	1616	1669
40	1297	1456	1475
45	1105	1211	1239
50	906	926	994
55	712	680	774
60	547	458	553
65	407	294	386
70	288	202	272
75	203	169	191
80	129	147	124
85	70	90	72

MAINTAINED ILLUMINATION TABLE - Square Feet/Fixture*						
n 80-50-20 Reflectances (Ceiling-Wall-Floor)						
n LLF = 0.75 2850 Lumens/Lamp very clean						
n Room width divided by room height = 5 or more, 2 or 1						
Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
2 Lamp T8	5	-	124	74	53	37
	2	-	88	53	38	-
	1	-	65	39	-	-

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2850 LUMEN LAMPS			
ANGLE	END	45	CROSS
45	2647	2901	2969
55	2103	2008	2286
65	1632	1179	1547
75	1329	1106	1250
85	1361	1749	1400

TYPICAL V.C.P.'s			
Room Size	Mounting Height		
	Lengthwise	Crosswise	
	8.5	10	8.5 10
30x30	65	70	66 70
40x40	62	65	62 66
60x30	67	71	68 71
60x60	58	61	59 61
100x100	55	57	56 57

COEFFICIENT OF UTILIZATION											
pfc	20			70			50				
pcc	80										
pw	70	50	30	70	50	30	50	30			
RCR											
0	97	97	97	95	95	95	91	91			
1	90	86	83	88	84	81	81	79			
2	82	77	71	81	75	70	71	68			
3	76	68	61	73	67	60	65	59			
4	69	60	54	68	59	54	57	53			
5	65	55	47	63	54	47	52	46			
6	59	50	42	58	48	42	47	41			
7	56	45	39	55	45	38	44	38			
8	52	41	34	51	40	34	40	34			
9	48	38	32	47	38	32	36	30			
10	46	34	28	45	34	28	34	28			

LIGHT DISTRIBUTION			
DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	1513	26.5	32.3
0-40	2502	43.9	53.4
0-60	4058	71.2	86.7
0-90	4682	82.1	100.0

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.91 @ 40% RATED LAMP LIFE BF = 0.88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

2DP Designer recessed 2X4

2, 3, or 4 lamp T8

Photometry

CATALOG # 2DPGS332-FA01-1/3-EB LAMPS = F32T8 INPUT WATTS = 89
TEST #20921 S/MH=1.3 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-65

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.69 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 77.1%

CANDLEPOWER			
Angle	End	45	Cross
0	2747	2747	2747
5	2749	2740	2721
10	2712	2714	2709
15	2648	2669	2680
20	2561	2602	2623
25	2446	2507	2536
30	2300	2378	2407
35	2111	2208	2235
40	1868	1988	2007
45	1586	1660	1734
50	1288	1295	1418
55	1012	951	1075
60	785	647	771
65	575	417	543
70	413	287	379
75	291	243	269
80	188	208	176
85	102	128	101

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*						
n 80-50-20 Reflectances (Ceiling- Wall- Floor)						
n LLF = 0.75 2850 Lumens/Lamp very clean						
n Room width divided by room height = 5 or more, 2 or 1						
Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
3 Lamp T8	5	-	-	105	75	52
	2	-	123	74	53	37
	1	-	92	55	39	-

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2850 LUMEN LAMPS			
ANGLE	END	45°	CROSS
45	3798	3975	4153
55	2988	2808	3174
65	2304	1671	2176
75	1904	1590	1760
85	1982	2487	1962

TYPICAL V.C.P.'s			
Room Size	Mounting Height		
	Lengthwise	Crosswise	
	8.5	10	8.5 10
30x30	57	62	58 62
40x40	53	57	54 58
60x30	59	64	60 64
60x60	49	52	50 53
100x100	46	48	48 49

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.91 @ 40% RATED LAMP LIFE BF = 0.88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

COEFFICIENT OF UTILIZATION									
pfc	20								
pcc	80		70		50				
pw	70	50	30	70	50	30	50	30	
RCR									
0	92	92	92	90	90	90	85	85	
1	84	81	78	82	80	77	76	73	
2	78	71	67	76	70	66	68	64	
3	71	64	57	69	63	57	60	56	
4	66	56	51	64	56	51	55	48	
5	60	52	45	58	51	45	48	44	
6	56	46	40	55	46	40	45	39	
7	53	42	35	51	41	35	40	34	
8	48	39	33	47	39	33	38	32	
9	46	35	29	45	35	29	34	28	
10	42	33	27	41	33	27	32	27	

LIGHT DISTRIBUTION			
DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	2165	25.3	32.8
0-40	3530	41.3	53.6
0-60	5703	66.7	86.5
0-90	6589	77.1	100.0

Photometry

CATALOG # 2DPGS432-FA01-1/4-EB LAMPS = F32T8 INPUT WATTS = 117
TEST #20920 S/MH=1.3 BALLAST = ELECTRONIC BALLAST FACTOR = .88

LER = FL-68

COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$3.53 BASED ON 3000 HRS. AND \$.08 PER KWH.

FIXTURE EFFICIENCY= 79.9%

CANDLEPOWER			
Angle	End	45	Cross
0	3800	3800	3800
5	3811	3790	3770
10	3757	3755	3749
15	3671	3696	3710
20	3552	3609	3640
25	3389	3474	3530
30	3180	3310	3359
35	2920	3071	3107
40	2583	2747	2780
45	2194	2287	2361
50	1781	1789	1900
55	1389	1308	1444
60	1077	896	1053
65	792	570	749
70	567	390	526
75	401	332	367
80	257	283	241
85	141	177	138

MAINTAINED ILLUMINATION TABLE- Square Feet/Fixture*						
n 80-50-20 Reflectances (Ceiling-Wall-Floor)						
n LLF = 0.75 2850 Lumens/Lamp very clean						
n Room width divided by room height = 5 or more, 2 or 1						
Fixture Size & # of Lamps	Room Width Room Height =	Approx. Area (sq. ft.) per Fixture				
		10 ft-c	30 ft-c	50 ft-c	70 ft-c	100 ft-c
4 Lamp T8	5	-	-	145	103	72
	2	-	-	102	73	51
	1	-	127	76	54	38

*Observe Fixture S/MH Requirements for Specific Applications

AVERAGE LUMINANCE CD/SQ.M WITH 2850 LUMEN LAMPS			
ANGLE	END	45°	CROSS
45	5254	5477	5654
55	4101	3862	4263
65	3173	2284	3001
75	2624	2172	2401
85	2740	3439	2681

TYPICAL V.C.P.'s			
Room Size	Mounting Height		
	Lengthwise	Crosswise	
	8.5	10	8.5 10
30x30	49	54	50 54
40x40	45	49	46 50
60x30	52	56	52 56
60x60	41	44	42 45
100x100	39	40	40 42

LLF = .75 LLF = LIGHT LOSS FACTOR LLF = LDD X LLD X BF LDD = VERY CLEAN 0.94 CLEAN 0.90
LLD = 0.91 @ 40% RATED LAMP LIFE BF = 0.88 ELECTRONIC BALLAST & T8 LAMP (RELAMP AT 70% LAMP LIFE)

COEFFICIENT OF UTILIZATION									
pfc	20								
pcc	80		70		50				
pw	70	50	30	70	50	30	50	30	
RCR									
0	94	94	94	93	93	93	89	89	
1	88	83	81	85	82	80	79	77	
2	81	75	69	79	72	68	69	67	
3	73	67	60	71	65	59	63	57	
4	68	59	53	67	58	52	56	51	
5	63	54	46	61	53	46	51	46	
6	58	48	41	56	47	41	46	40	
7	55	44	38	53	44	36	41	36	
8	51	40	34	50	40	34	39	33	
9	47	36	30	46	36	30	35	30	
10	45	34	28	44	34	28	33	28	

LIGHT DISTRIBUTION			
DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	3002	26.3	33.0
0-40	4899	43.0	53.8
0-60	7889	69.2	86.6
0-90	9104	79.9	100.0



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, "Contain Mercury" and/or the symbol "HG". Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org

signify