

PHILIPS Day-Brite CFI

Recessed

HP90 LED 2x2

2800, 3300, or 3900 lumens



Project: _____

Location: _____

Cat.No: _____

Type: _____

Lamps: _____ Qty: _____

Notes: _____

The Philips Day-Brite / Philips CFI HP90 LED recessed family is one of our popular soft light collection of luminaires. This is the first introduction of LED with a direct/indirect appearance utilizing highly reflective paint on the soft contoured reflectors and high light transmission linear prismatic lens to enclose the LEDs.

Ordering guide

Example: **HLS22GLR28L40ULAG**

Family	Air Function	Fixture Size	Ceiling Type	Diffuser	Lumen Package	Color Temp.	Voltage	Driver Type	Options
HL	S	22	G	LR				—	
HL HP90 direct-indirect recessed	S Static	22 2'x2'	G Fits both standard and slot grid Consult factory for other ceiling systems.	LR Linear prismatic lens	28L 2800 lumens 33L 3300 lumens 39L 3900 lumens 4000K represented (Approximate delivered values. Consult IES file)	35 3500K 40 4000K 50 5000K Consult representative for other color temperature options. (Approximate values. Consult IES file.)	U Universal voltage 120-277V 3 347V	LAG Standard driver DZT 0-10V dimming SZT Step dimming to 40% input power	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 EMLED Integral emergency battery pack CHIC Chicago Plenum rated

Accessories (order separately)

- **FMA22** – 2'x2' "F" mounting frame for NEMA "F" installations

HLS HP90 LED recessed 2x2

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Features

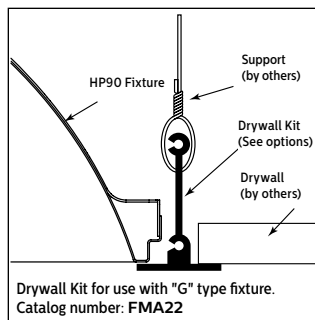
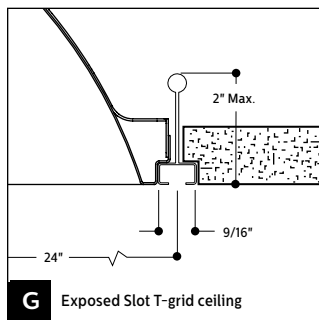
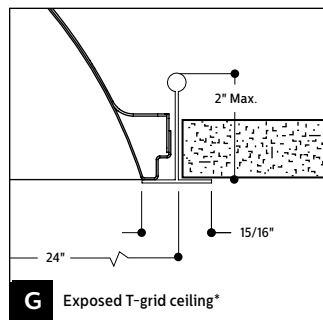
- Direct/indirect appearance with soft contoured interior.
- Translucent DR acrylic high light transmission linear prismatic lens.
- Field replaceable LED array and driver accessible from below.
- Integrated thermal management system conducts heat away from LEDs and transfers it to the surrounding environment.
- High efficiency LEDs have 50,000 hour rated life at L70.
- Predicted L70 lifetime is based on LED manufacturer's supplied LM-80 data and in-situ laboratory testing.
- Lens encloses light source compartment.
- Lamp shield opens from either side.
- Tension screws secure ends to body.
- Same fixture fits both G and Slot T ceiling types.
- Fits flush to face of slot grid (T) ceiling types.
- Suitable for continuous row mounting.
- Five-year warranty on luminaire, LED boards and driver.
- DLC Listed. Please check the DLC Qualified Products List to confirm (www.designlights.org/QPL).

- Many luminaire components, such as reflectors, refractors, lenses, sockets, lamp holders, 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.

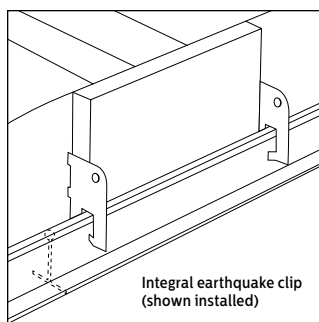
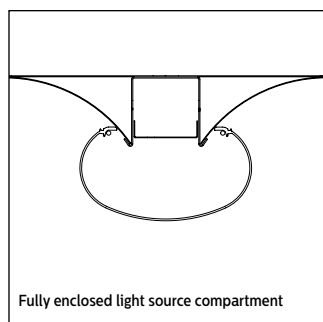
Specifications

- **Materials:** Chassis parts—Die-formed code gauge cold rolled steel.
- **Finish:** Chassis exterior—White baked polyester enamel. Cavity—White baked polyester enamel. Rust preventative undercoating.
- **Lens:** LR—Linear prismatic translucent DR acrylic lens.
- **Electrical:** LED boards and drivers are RoHS (Restriction of Hazardous Substances) compliant.
- **Labels:** cULus listed for damp locations.

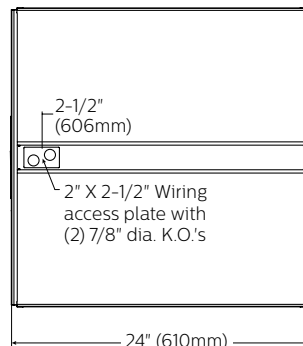
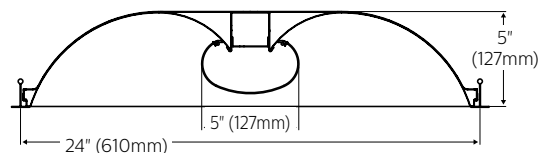
Mounting methods



* For flush mounting when using 9/16" Exposed T-Grid ceiling system consult factory



Dimensions



HLS HP90 LED recessed 2x2

2800, 3300, or 3900 lumens

Additional ordering information

Catalog Number	Delivered Lumens	Input Watts	Lumens per Watt	Average initial 8'X8' footcandles	8'X8' Watts per sq. foot	Average initial 8'X10' footcandles	8'X10' Watts per sq. foot
HLS22GLR28L40ULAG	2844	30.7	92.6	44	0.48	36	0.38
HLS22GLR35L40ULAG	3345	39.6	84.5	52	0.62	42	0.50
HLS22GLR39L40ULAG	3887	46.0	84.5	61	0.72	49	0.58
HLS22GLR28L35ULAG	2761	30.3	91.1	43	0.47	35	0.38
HLS22GLR35L35ULAG	3417	39.6	86.3	53	0.62	43	0.50
HLS22GLR39L35ULAG	3802	45.5	83.6	59	0.71	48	0.57

Photometry – 4000K CCT

Report number ¹ :	G2012089
Catalog number:	HLS22GLR39L40ULAG
Delivered lumens:	3887
Color ² :	3992K
Input watts:	45.0
Efficacy:	87.0 lm/w
CRI:	84.5
Lamp:	LED
Luminaire:	HP90 recessed LED 2' x 2' fixture with linear prismatic lens.
CIE Type:	Direct
Plane:	0-Deg. 90-Deg.
Spacing criteria:	1.2 1.3
Plane:	0-Deg. 90-Deg.
Luminous length:	23.040 23.040

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1322	1322	1322	
5	1311	1315	1321	125
15	1244	1263	1279	357
25	1122	1164	1201	537
35	958	1029	1095	644
45	771	870	966	672
55	575	696	821	624
65	380	516	664	515
75	197	330	445	338
85	47	64	55	76
90	5	6	7	

¹ Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

² Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

Coefficients of utilization

Ceiling	80%			50%			30%		
Wall	70	50	30	50	30	10	50	30	10
RC	Zonal Cavity Method								
RW	Effective Floor Reflectance = 20%								
Room Cavity Ratio	1	108	103	99	97	93	90	93	90
	2	98	89	82	84	78	74	81	76
	3	89	78	70	74	67	61	71	65
	4	81	69	60	65	58	52	63	56
	5	75	62	52	58	51	45	56	50
	6	69	55	46	53	45	39	51	44
	7	64	50	41	48	40	35	46	39
	8	60	46	37	44	36	31	42	36
	9	56	42	34	40	33	28	39	32
	10	52	39	31	37	30	25	36	30

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	1018	26.2	26.2
0-40	1662	42.8	42.8
0-60	2958	76.1	76.1
0-90	3887	100.0	100.0

*Total Efficiency

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	3183.	3591.	3988.
55	2926.	3542.	4178.
65	2624.	3564.	4586.
75	2222.	3722.	5018.
85	1574.	2143.	1842.

Photometry – 3500K CCT

Report number ¹ :	G2012095
Catalog number:	HLS22GLR39L35ULAG
Delivered lumens:	3802
Color ² :	3436K
Input watts:	45.0
Efficacy:	83.6 lm/w
CRI:	83.8
Lamp:	LED
Luminaire:	HP90 recessed LED 2' x 2' fixture with linear prismatic lens.
CIE Type:	Direct
Plane:	0-Deg. 90-Deg.
Spacing criteria:	1.2 1.3
Plane:	0-Deg. 90-Deg.
Luminous length:	23.040 23.040

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1294	1294	1294	
5	1282	1287	1293	122
15	1216	1236	1252	349
25	1096	1139	1177	525
35	934	1005	1071	629
45	750	849	947	656
55	558	680	807	610
65	370	505	655	504
75	193	324	445	334
85	48	60	45	73
90	5	5	5	

¹ Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

² Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

Coefficients of utilization

Ceiling	80%			50%			30%		
Wall	70	50	30	50	30	10	50	30	10
RC	Zonal Cavity Method								
RW	Effective Floor Reflectance = 20%								
Room Cavity Ratio	1	108	103	99	97	93	90	93	90
	2	98	89	82	84	78	74	81	76
	3	89	78	70	74	67	61	71	65
	4	81	69	60	65	58	52	63	56
	5	75	62	52	58	51	45	56	50
	6	69	55	46	53	45	39	51	44
	7	64	50	41	48	40	35	46	39
	8	60	46	37	44	36	31	42	36
	9	56	42	34	40	33	28	39	32
	10	52	39	31	37	30	25	36	30

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	996	26.2	26.2
0-40	1625	42.7	42.7
0-60	2891	76	76
0-90	3802	100.0	100.0

*Total Efficiency

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	3096.	3505.	3909.
55	2840.	3460.	4107.
65	2555.	3488.	4524.
75	2177.	3654.	5018.
85	1608.	2009.	1507.

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