



The Day-Brite / CFI HP90 LED recessed 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.

Project: _____

Location: _____

Cat.No: _____

Type: _____

Lamps: _____ Qty: _____

Notes: _____

Ordering guide

example: HLS22GLR33L40UDZT

Family	Diffuser	Lumens (nom) ¹	Color ¹	Voltage	Driver	Options (Factory Installed)
HLS14G HP90 LED 1'x4'	LR Linear Prismatic Lens	28L 2800lm 35L 3500lm 39L 3900lm	35 CRI 80, 3500K 40 CRI 80, 4000K 50 CRI 80, 5000K	UNV Universal 120-277V 347 347V	DIM 0-10V Dimming SDIM Step Dimming to 40% Input Power	F1 3/8" Flex, 18 ga., 6'; 3 leads (non-dimming)
HLS22G HP90 LED 2'x2'	LR Linear Prismatic Lens	28L 2800lm 35L 3500lm 39L 3900lm	35 CRI 80, 3500K 40 CRI 80, 4000K 50 CRI 80, 5000K			F2 3/8" Flex, 18 ga., 6'; 4 leads (emergency, non-dimming)
HLS24G HP90 LED 2'x4'	LR Linear Prismatic Lens	28L 2800lm 35L 3500lm 39L 3900lm	35 CRI 80, 3500K 40 CRI 80, 4000K 50 CRI 80, 5000K			F1/D 3/8" Twin Flex, 18 g. 6'; 3 & 2 leads (dimming) F2/5W 3/8" Flex, 18 ga., 6'; 5 leads (dimming) GLR Fusing, fast blow DSC Quick driver disconnect EM10 ¹ 10W Integral Emergency Battery Pack (placed on top of luminaire)

1. ???

Accessories

- **FMA14** – 1'x4' "F" mounting frame for NEMA "F" mounting
- **FMA22** – 2'x2' "F" mounting frame for NEMA "F" mounting
- **FMA24** – 2'x4' "F" mounting frame for NEMA "F" mounting

HLS HP90 recessed LED

2'x2'

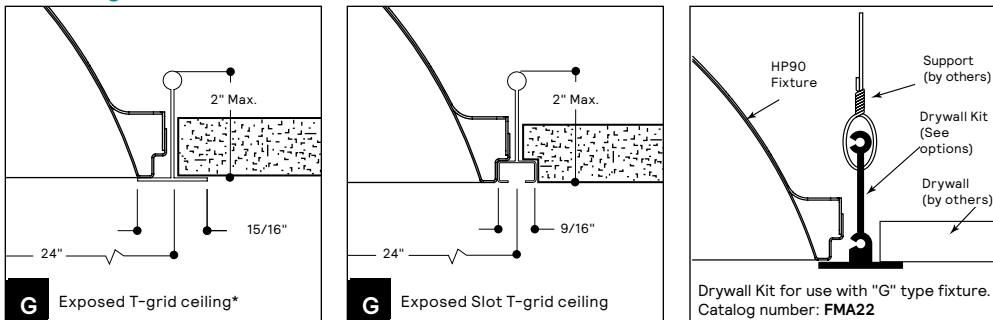
Features

- 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.

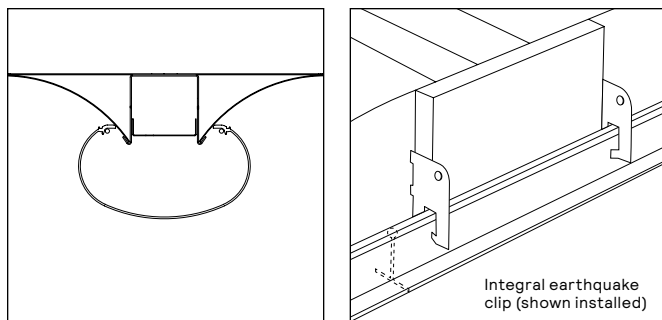
Specifications

- **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.

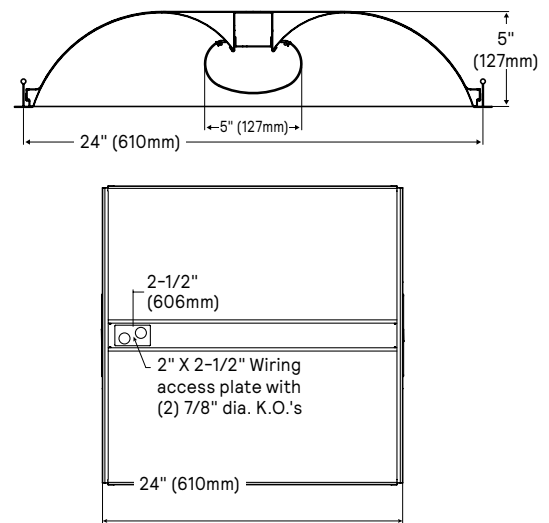
Mounting methods



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



Dimensions



HLS HP90 recessed LED

2'x2'

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	

Coefficients of utilization

Ceiling		80%		50%		30%				
Wall		70	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	88
	2	98	89	82	84	78	74	81	76	72
	3	89	78	70	74	67	61	71	65	60
	4	81	69	60	65	58	52	63	56	51
	5	75	62	52	58	51	45	56	50	44
	6	69	55	46	53	45	39	51	44	39
	7	64	50	41	48	40	35	46	39	34
	8	60	46	37	44	36	31	42	36	31
	9	56	42	34	40	33	28	39	32	28
	10	52	39	31	37	30	25	36	30	25

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.

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

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	87
	2	98	89	82	84	78	74	81	76	72
	3	89	78	70	74	67	61	71	65	60
	4	81	69	60	65	58	52	63	56	51
	5	75	62	52	58	51	45	56	50	44
	6	69	55	46	53	45	39	51	44	39
	7	64	50	41	48	40	35	46	39	34
	8	60	46	37	44	36	31	42	36	31
	9	56	42	34	40	33	28	39	32	28
	10	52	39	31	37	30	25	36	30	25

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			

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

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_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

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.

HLS HP90 recessed LED

1'x4'

Features

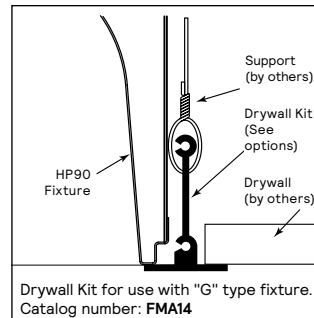
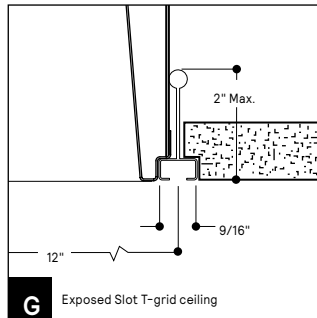
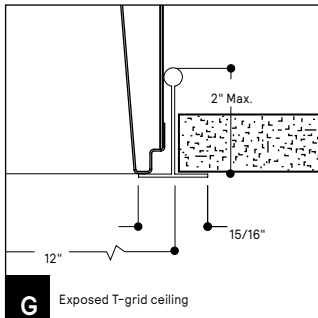
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- Field replaceable LED array and driver accessible from below.
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- High efficiency LEDs have 50,000 hour rated life at L70.
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- Lens encloses light 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

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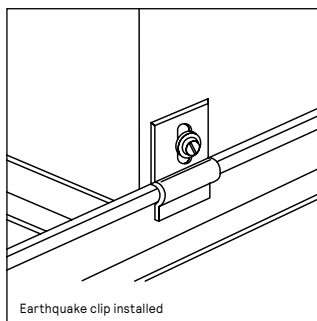
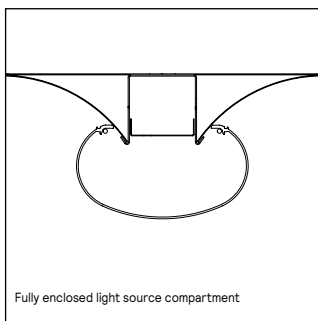
Specifications

- **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.

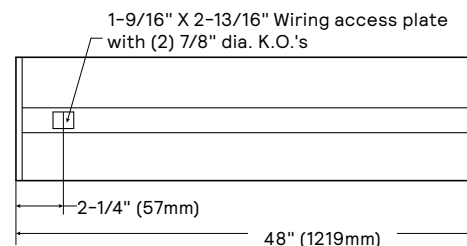
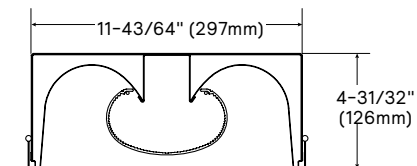
Mounting methods



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



Dimensions



HLS HP90 recessed LED

1'x4'

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
HLS14GLR28L40ULAG	2804	30.8	91.0	44	0.48	35	0.38
HLS14GLR35L40ULAG	3471	39.9	87.0	54	0.62	43	0.50
HLS14GLR39L40ULAG	3872	46.1	84.0	60	0.72	48	0.58
HLS14GLR28L35ULAG	2778	31.2	89.0	43	0.49	35	0.39
HLS14GLR35L35ULAG	3453	40.4	85.5	53	0.63	43	0.50

HLS14GLR39L35ULAG Photometry – 4000K CCT

Report number ¹ :	G2012125
Catalog number:	HLS14GLR39L40ULAG
Delivered lumens:	3872
Color ² :	3967K
Input watts:	45.0
Efficacy:	84.0 lm/w
CRI:	84.5
Lamp:	LED
Luminaire:	HP90 recessed LED 1' x 4' 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:	47.040 11.040

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1370	1370	1370	
5	1348	1363	1375	130
15	1284	1312	1335	371
25	1164	1213	1255	560
35	999	1075	1140	673
45	807	910	992	699
55	603	724	802	638
65	400	512	540	487
75	203	266	243	262
85	41	42	43	53
90	5	5	5	

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	109	104	100	98	95	92	94	91
2	99	91	84	85	80	75	82	78	74
3	90	80	71	75	69	63	72	67	62
4	83	70	62	67	59	54	64	58	53
5	76	63	54	60	52	46	58	51	46
6	70	57	48	54	46	41	52	45	40
7	65	51	43	49	41	36	48	41	36
8	60	47	38	45	37	32	44	37	32
9	56	43	35	41	34	29	40	33	29
10	53	40	32	38	31	26	37	31	26

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	1060	27.4	27.4
0-40	1733	44.8	44.8
0-60	3070	79.3	79.3
0-90	3872	100.0	100.0

*Total Efficiency

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	3405.	3840.	4186.
55	3137.	3766.	4172.
65	2824.	3615.	3812.
75	2340.	3066.	2801.
85	1404.	1438.	1472.

Photometry – 3500K CCT

Report number ¹ :	G2012120
Catalog number:	HLS14GLR39L35ULAG
Delivered lumens:	3864
Color ² :	3439K
Input watts:	45.0
Efficacy:	82.9 lm/w
CRI:	83.7
Lamp:	LED
Luminaire:	HP90 recessed LED 1' x 4' 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:	47.040 11.040

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1351	1351	1351	
5	1330	1344	1356	128
15	1266	1294	1318	366
25	1147	1198	1243	553
35	984	1064	1132	665
45	793	902	990	693
55	593	721	808	636
65	394	516	553	490
75	200	277	265	273
85	41	47	44	60

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	109	104	100	97	94	91	94	91
2	99	90	84	85	80	75	82	77	73
3	90	79	71	75	68	63	72	66	62
4	82	70	61	66	59	53	64	58	53
5	76	63	54	59	52	46	57	51	46
6	70	56	47	54	46	40	52	45	40
7	65	51	42	49	41	36	47	40	35
8	60	47	38	45	37	32	43	37	32
9	56	43	34	41	34	29	40	33	28
10	53	39	31	38	31	26	37	30	26

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	1046	27.1	27.1
0-40	1711	44.3	44.3
0-60	3041	78.7	78.7
0-90	3864	100.0	100.0

*Total Efficiency

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	3346.	3806.	4177.
55	3085.	3750.	4203.
65	2782.	3643.	3904.
75	2306.	3193.	3055.
85	1404.	1609.	1506.

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_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

HLS HP90 recessed LED

2'x4'

Features

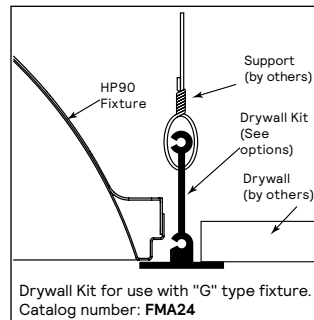
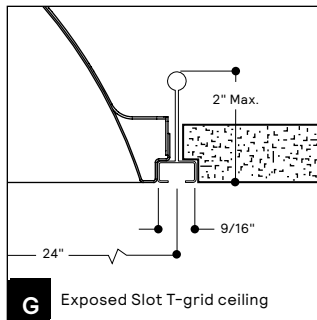
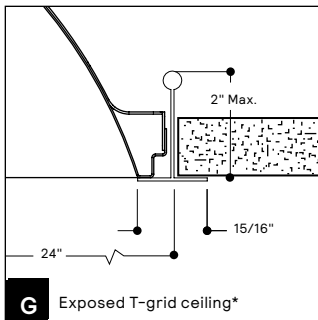
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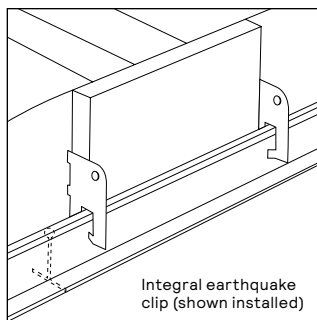
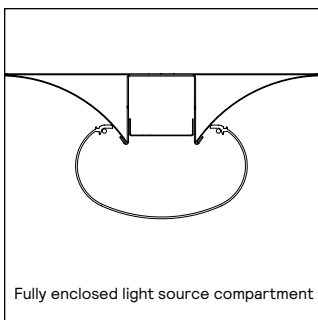
Specifications

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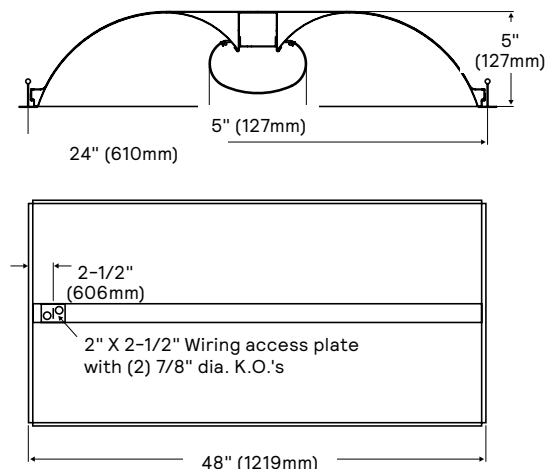
Mounting methods



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



Dimensions



HLS HP90 recessed LED

2'x4'

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
HLS24GLR30L40ULAG	2961	30.8	96.1	46	0.48	37	0.38
HLS24GLR37L40ULAG	3665	40.0	91.6	57	0.62	46	0.50
HLS24GLR41L40ULAG	4090	46.0	88.9	64	0.72	51	0.58
HLS24GLR30L35ULAG	2980	31.2	95.5	47	0.49	37	0.38
HLS24GLR37L35ULAG	3679	40.4	91.1	57	0.63	46	0.50
HLS24GLR41L35ULAG	4118	46.6	88.4	64	0.73	51	0.57

Photometry - 4000K CCT

Report number¹: G2012101

Catalog number: HLS24GLR41L40ULAG

Delivered lumens: 4090

Color²: 3979K

Input watts: 45.0

Efficacy: 87.0 lm/w

CRI: 88.9

Lamp: LED

Luminaire: HP90 recessed LED
2' x 4' 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: 47.040 23.040

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1377	1377	1377	
5	1360	1371	1378	130
15	1296	1319	1336	373
25	1177	1221	1258	563
35	1014	1083	1143	678
45	823	919	1002	708
55	620	737	841	657
65	416	549	664	540
75	216	355	436	356
85	49	72	43	84
90	6	6	6	

Coefficients of utilization

Ceiling	80%	50%	30%
Wall	70	50	30
RC	70	50	30
RW	70	50	30
1	108	103	99
2	98	89	82
3	89	78	70
4	81	69	60
5	75	62	52
6	69	55	46
7	64	50	41
8	59	46	37
9	56	42	34
10	52	39	31

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	1066	26.1	26.1
0-40	1744	42.6	42.6
0-60	3109	76	76
0-90	4090	100.0	100.0

*Total Efficiency

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	1664.	1858.	2026.
55	1545.	1837.	2096.
65	1407.	1857.	2246.
75	1193.	1961.	2408.
85	804.	1181.	705.

Candela distribution

Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	1377	1377	1377	
5	1361	1371	1377	130
15	1296	1319	1336	373
25	1176	1220	1258	563
35	1011	1083	1147	678
45	820	919	1009	708
55	616	739	847	659
65	412	553	673	544
75	215	365	457	368
85	49	94	68	96
90	6	6	6	

Coefficients of utilization

Ceiling	80%	50%	30%
Wall	70	50	30
RC	70	50	30
RW	70	50	30
1	108	103	98
2	98	89	82
3	89	78	69
4	81	69	60
5	75	61	52
6	69	55	46
7	64	50	41
8	59	46	37
9	55	42	33
10	52	39	30

Zonal lumen summary*

Zone	Lumens	% Lamp	% Fixt.
0-30	1065	25.9	25.9
0-40	1743	42.3	42.3
0-60	3111	75.5	75.5
0-90	4118	100.0	100.0

*Total Efficiency

Photometry - 3500K CCT

Report number¹: G2012104

Catalog number: HLS24GLR41L35ULAG

Delivered lumens: 4118

Color²: 3437K

Input watts: 45.0

Efficacy: 88.4 lm/w

CRI: 83.8

Lamp: LED

Luminaire: HP90 recessed LED
2' x 4' 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: 47.040 47.040

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/ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

Avg. Luminance (cd/m²)

Vertical Angle	Horizontal Angle		
	0°	45°	90°
45	1658.	1858.	2040.
55	1535.	1842.	2111.
65	1394.	1871.	2277.
75	1188.	2016.	2524.
85	804.	1542.	1115.

