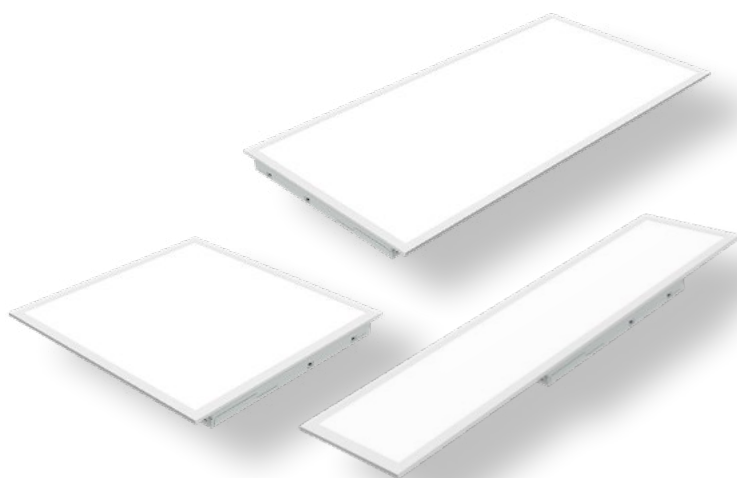# Halco
LIGHTING TECHNOLOGIES ®

LED Luminaires

Flat Panel

- 1'X4', 2'X2' and 2'X4' fixture sizes

- Select from 3500K, 4000K, or 5000K CCT

- Select from three lumen output levels

- All FPLCR Flat Panels come with a 3.5mm receptacle for integrated fixture sensors

- 0-10V Dimming to 10%

Specifications

Description

The Flat Panel Series is a family of highly efficient, versatile, configurable recessed fixtures, designed for recessed applications. The DLC Premium listed panels offer lumen output and color temperature selectability, making their versatility and simple aesthetic design perfect for educational, commercial and retail and applications. An optional 3.5mm receptacle allows for the additions of PIR and microwave sensors.
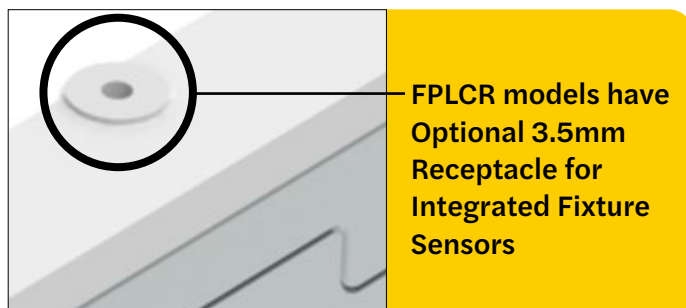
Performance

- Field selectable CCT (3500K, 4000K, 5000K)
- Field selectable lumen output
- 120-277V, 50/60 Hz 0-10V dimming driver to 10%
- 80 CRI
- L70 Lumen maintenance > 50,000 hours
- 5 year limited warranty

Construction

- Steel housing with aluminum frame
- Field selectable CCT switch
- Field selectable lumen output switch
- Optional extended junction box for additional wiring space

Certifications

- cETLus rated for damp locations
- IC Rated for direct contact with insulation
- DLC Premium listed
- Product can be used to comply with CA Title 24 standards
- IP20
- RoHS compliant
- FCC part 15 compliant
- TAA compliant

FPLCR models have Optional 3.5mm Receptacle for Integrated Fixture Sensors

Halco
LIGHTING TECHNOLOGIES ®

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

Flat Panel
Ordering Logic:

Series	-	Fixture Size	-	Lumen Output	-	CRI/CCT	-	Dimming Driver	-	Options
FPL = Flat Panel FPLCR = Controls Ready Flat Panel, w/Integral 3.5mm Receptacle		14 = 1' x 4' 22 = 2' x 2' 24 = 2' x 4'		LS = Lumen Selectable 1x4 - 2500 / 3125 / 3750 2x2 - 2500 / 3750 / 4375 2x4 - 3750 / 4375 / 5625		CS = Color Selectable, 80 CRI, 3500K/4000K/5000K		UNV = Universal 120-277V, 50/60 Hz, 0-10V Dimming		EM = Emergency Battery Backup

Ordering Information

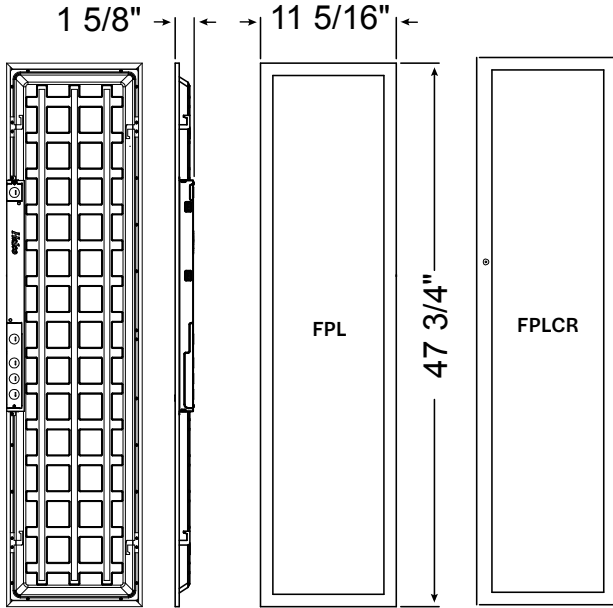| Product SKU	Product Code	Product Description	DLC Product ID
90518	FPL-14-LS-CS-UNV	1X4 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-F1QNY9
90519	FPL-22-LS-CS-UNV	2x2 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-PY7OHL
90520	FPL-24-LS-CS-UNV	2X4 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-GG0Y38
90521	FPLCR-14-LS-CS-UNV	1X4 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-Y81XLN
90522	FPLCR-22-LS-CS-UNV	2X2 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-0690JJ
90523	FPLCR-24-LS-CS-UNV	2X4 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable	S-7QC1WH
Non-Stocking Ordering Information			
90524	FPL-14-LS-CS-UNV-EM	1X4 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
90525	FPL-22-LS-CS-UNV-EM	2x2 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
90526	FPL-24-LS-CS-UNV-EM	2X4 Flat Panel, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
90527	FPLCR-14-LS-CS-UNV-EM	1X4 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
90528	FPLCR-22-LS-CS-UNV-EM	2X2 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
90529	FPLCR-24-LS-CS-UNV-EM	2X4 Flat Panel, Controls Ready 3.5mm Receptacle, Lumen Selectable, CCT Selectable, UNV 120-277V 0-10V Dimmable, Emergency Battery Backup	
Accessories			
81981	VPL/EM/LED3	LED Panel Gen III Emergency Battery 16W	
90530	EMMB-1	Emergency Battery Backup Mounting Bridge for 1x4 Flat Panel (Set of 2 pieces)	
90531	EMMB-2	Emergency Battery Backup Mounting Bridge for 2x2 and 2x4 Flat Panels	
90532	FMK-FPL-14	Drywall Flange Mount Kit for 1x4 Flat Panel	
90533	FMK-FPL-22	Drywall Flange Mount Kit for 2x2 Flat Panel	
90534	FMK-FPL-24	Drywall Flange Mount Kit for 2x4 Flat Panel	
90535	SMK-FPL-14	Surface Mount Kit for 1x4 Flat Panel	
90536	SMK-FPL-22	Surface Mount Kit for 2x2 Flat Panel	
90537	SMK-FPL-24	Surface Mount Kit for 2x4 Flat Panel	
90538	JBOX-EXT-FPL	Junction Box Extension for 1x4, 2x2, or 2x4 Flat Panels	
90550	HSN-SEN-PIR-DAY-010-3.5MM	PIR Sensor with Daylight Harvest 0-10V Dim 3.5mm Receptacle	
90552	HSN-SEN-MW-DAY-010-3.5MM	Microwave Sensor with Daylight Harvest 0-10V Dim 3.5mm Receptacle	
30292	LHB-MS-RC	Motion Control Sensor Remote	

LED Luminaires

Flat Panel

Performance Table

Product Code	Wattage	3500K		4000K		5000K	
		Lumen (lm)	Efficacy (lm/W)	Lumen (lm)	Efficacy (lm/W)	Lumen (lm)	Efficacy (lm/W)
FPL-14-LS-CS-UNV	20W	2595	134	2660	141	2628	136
	25W	3163	132	3263	139	3204	134
	30W	3608	129	3730	137	3646	131
FPL-22-LS-CS-UNV	20W	2735	136	2857	145	2871	142
	30W	3875	131	4085	142	4050	136
	35W	4385	128	4631	139	4561	134
FPL-24-LS-CS-UNV	30W	3977	135	4167	146	4158	141
	35W	4565	132	4814	144	4770	138
	45W	5660	126	5993	139	5882	131
FPLCR-14-LS-CS-UNV	20W	2572	134	2638	140	2608	136
	25W	3136	132	3237	139	3183	134
	30W	3588	129	3713	137	3637	131
FPLCR-22-LS-CS-UNV	20W	2719	135	2842	144	2857	141
	30W	3849	129	4064	140	4033	135
	35W	4350	127	4603	138	4537	132
FPLCR-24-LS-CS-UNV	30W	3945	135	4124	145	4103	140
	35W	4531	131	4767	143	4717	137
	45W	5610	125	5923	138	5813	130

LED Luminaires

Flat Panel
Dimensions

FPL-14-LS-CS-UNV
FPLCR-14-LS-CS-UNV

1 5/8"   11 5/16"

FPL   FPLCR

47 3/4"

FPL-22-LS-CS-UNV
FPLCR-22-LS-CS-UNV

1 5/8"   23 3/4"

FPL

23 3/4"

FPLCR

FPL-24-LS-CS-UNV
FPLCR-24-LS-CS-UNV

1 5/8"   23 3/4"

FPL   FPLCR

47 3/4"

Halco
LIGHTING TECHNOLOGIES ®

LED Luminaires

Flat Panel

Specifications Table

	FPL-14-LS-CS-UNV FPLCR-14-LS-CS-UNV	FPL-22-LS-CS-UNV FPLCR-22-LS-CS-UNV	FPL-24-LS-CS-UNV FPLCR-24-LS-CS-UNV
Nominal Wattage	20/25/30W	20/30/35W	30/35/45W
Delivered Lumens	2500/3125/3750	2500/3750/4375	3750/4375/5625
Efficacy (lm/W)	125+	125+	125+
CCT	Selectable - 3500K, 4000K, 5000K	Selectable - 3500K, 4000K, 5000K	Selectable - 3500K, 4000K, 5000K
CRI	80+	80+	80+
Beam Angle	115°	115°	115°
L70 Lifetime (hrs)	50,000	50,000	50,000
Voltage	120V, 50/60Hz	120V, 50/60Hz	120V, 50/60Hz
Power Factor	>0.9	>0.9	>0.9
Dimming	0-10V	0-10V	0-10V
Housing Material	Steel/Aluminum	Steel/Aluminum	Steel/Aluminum
Lens	PMMA	PMMA	PMMA
Operating Temperature	-20°C to 40°C	-20°C to 40°C	-20°C to 40°C
Listings	cETLus,FCC, Damp Location , IC Rated, DLC Premium	cETLus,FCC, Damp Location , IC Rated, DLC Premium	cETLus,FCC, Damp Location , IC Rated, DLC Premium
Environment	Damp Location, IC Rated, IP-20	Damp Location, IC Rated, IP-20	Damp Location, IC Rated, IP-20
Warranty	5 Years Standard	5 Years Standard	5 Years Standard

Dimmer Compatibility List

Dimmer Brand	Series
LEVITON	IP70-LFZ
LUTRON	DVSTV-WH
COOPER	DF10-PC1

Default Sensor Setting Information

1. Detection Area - 100%
2. Hold Time - 5 Seconds
3. Daylight Threshold - Disabled
4. Standby Period - 0 Seconds
5. Standby Dimming Level - 10%

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

Flat Panel

Photometric Information

90518 FPL-14-LS-CS-UNV_4000K_20W

FPL-14-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

84 Rf   95 Rg

CCT 4170K   Duv -0.0011

Information
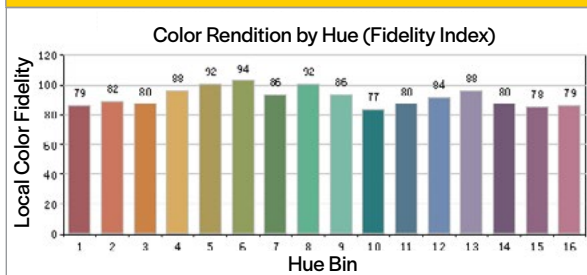
RF	84
RG	95

Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	91	3%
10° - 20°	245	9%
20° - 30°	373	14%
30° - 40°	453	17%
40° - 50°	474	18%
50° - 60°	432	16%
60° - 70°	333	13%
70° - 80°	199	7%
80° - 90°	62	2%
0° - 90°	2,660	100%
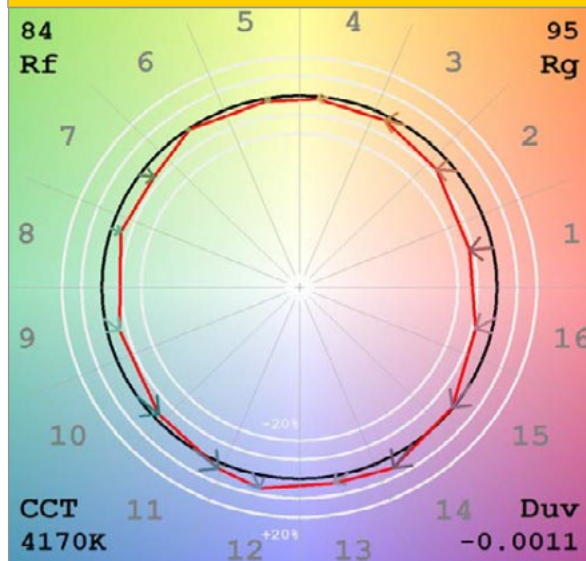
FPL-14-LS-CS-UNV Set to 4000K

Halco
LIGHTING TECHNOLOGIES®

LED Luminaires
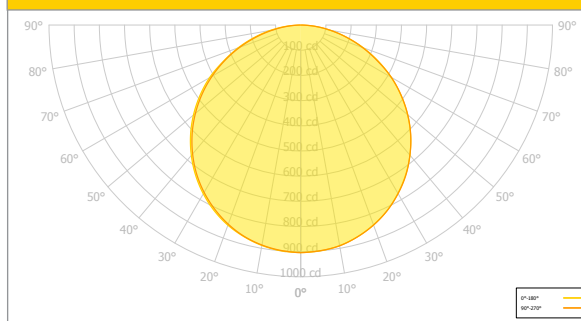
Flat Panel

Photometric Information

90519 FPL-22-LS-CS-UNV_4000K_20W

FPL-22-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

Information	
RF	84
RG	96
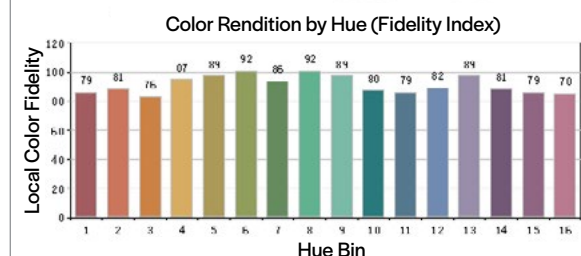
Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	98	3%
10° - 20°	265	9%
20° - 30°	404	14%
30° - 40°	490	17%
40° - 50°	511	18%
50° - 60°	465	16%
60° - 70°	356	12%
70° - 80°	207	7%
80° - 90°	61	2%
0° - 90°	2,857	100%
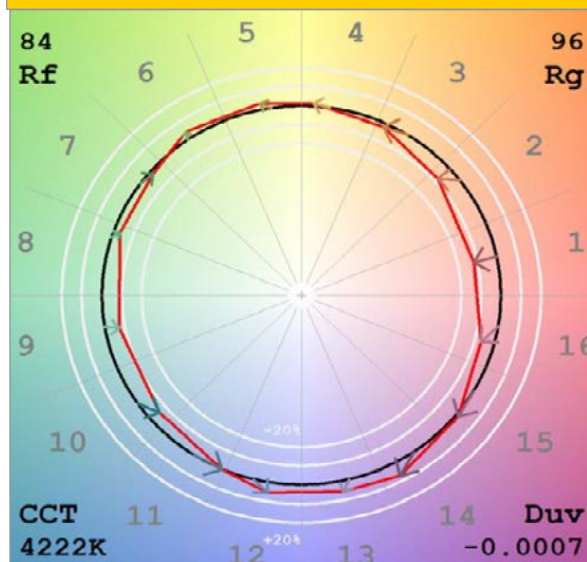
FPL-22-LS-CS-UNV Set to 4000K

LED Luminaires
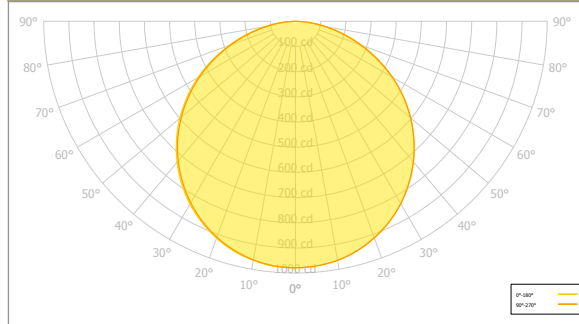
Flat Panel

Photometric Information

90520 FPL-24-LS-CS-UNV_4000K_30W

FPL-24-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

Information	
RF	84
RG	97
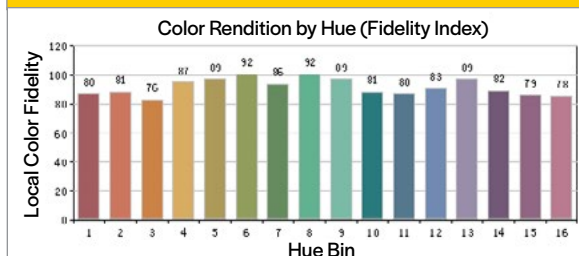
Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	143	3%
10° - 20°	387	9%
20° - 30°	588	14%
30° - 40°	713	17%
40° - 50°	745	18%
50° - 60°	677	16%
60° - 70°	520	12%
70° - 80°	304	7%
80° - 90°	90	2%
0° - 90°	4,167	100%
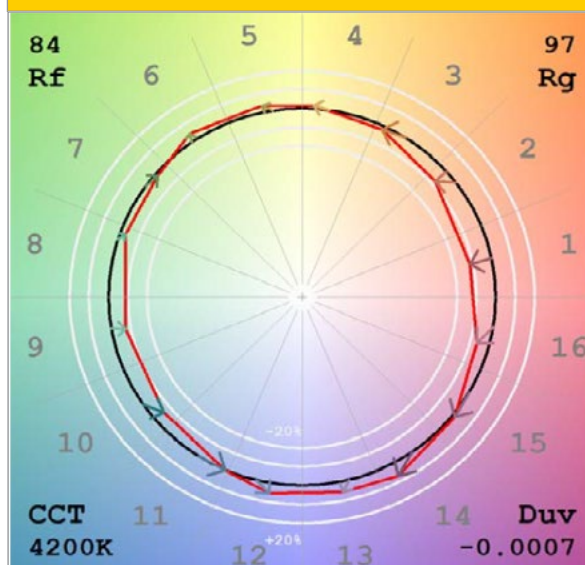
FPL-24-LS-CS-UNV Set to 4000K

Halco
LIGHTING TECHNOLOGIES

LED Luminaires
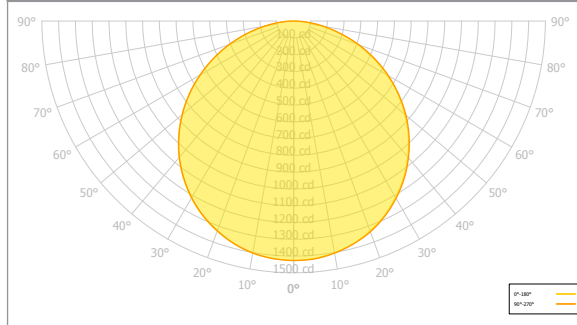
Flat Panel

Photometric Information

90521 FPLCR-14-LS-CS-UNV_4000K_20W

FPLCR-14-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

84 Rf   96 Rg

CCT 4227K   Duv -0.0009

Information
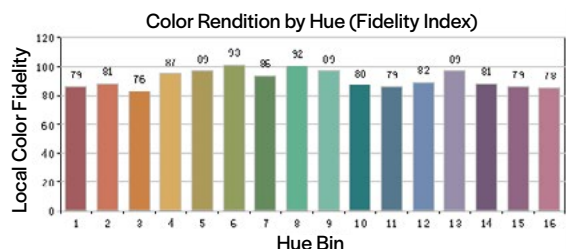
RF	84
RG	96

Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	90	3%
10° - 20°	243	9%
20° - 30°	371	14%
30° - 40°	450	17%
40° - 50°	470	18%
50° - 60°	429	16%
60° - 70°	330	13%
70° - 80°	195	7%
80° - 90°	60	2%
0° - 90°	2,638	100%

FPLCR-14-LS-CS-UNV Set to 4000K

Halco
LIGHTING TECHNOLOGIES ®

LED Luminaires

Flat Panel

Photometric Information

90522 FPLCR-22-LS-CS-UNV_4000K_20W

FPLCR-22-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

84 Rf   94 Rg

CCT 4156K   Duv -0.0008

Information

RF	84
RG	94
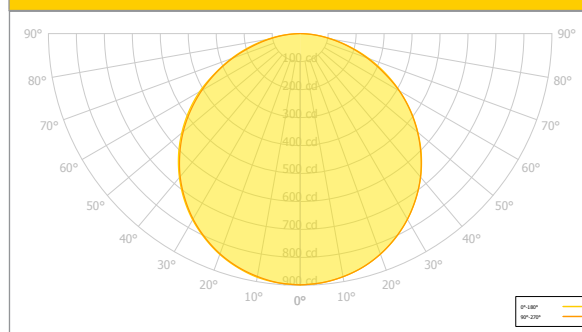
Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	95	3%
10° - 20°	257	9%
20° - 30°	393	14%
30° - 40°	479	17%
40° - 50°	503	18%
50° - 60°	463	16%
60° - 70°	361	13%
70° - 80°	219	8%
80° - 90°	72	3%
0° - 90°	2,842	100%
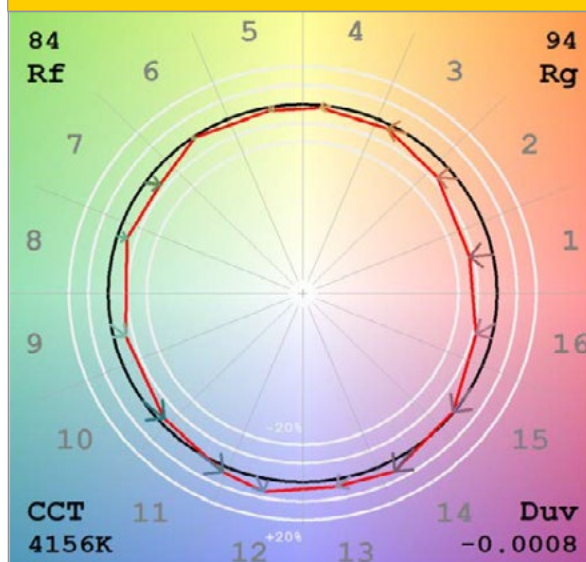
FPLCR-22-LS-CS-UNV Set to 4000K

Halco
LIGHTING TECHNOLOGIES ®

LED Luminaires
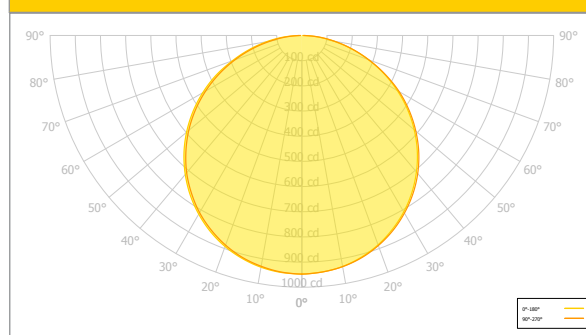
Flat Panel

Photometric Information

90523 FPLCR-24-LS-CS-UNV_4000K_30W

FPLCR-24-LS-CS-UNV Set to 4000K

Color Rendition by Hue (Fidelity Index)

Color Vector Graphics

84 Rf   97 Rg

CCT 4215K   Duv -0.0003

Information
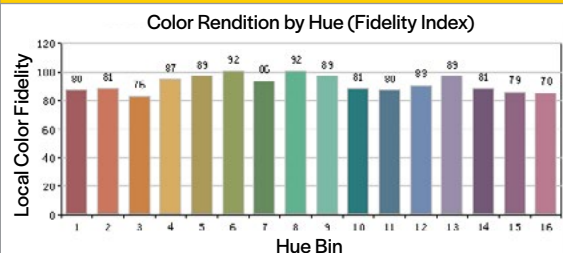
RF	84
RG	97

Zonal Lumen Summary

Zonal	Lumens	% Fixture
0° - 10°	141	3%
10° - 20°	380	9%
20° - 30°	579	14%
30° - 40°	702	17%
40° - 50°	733	18%
50° - 60°	668	16%
60° - 70°	517	13%
70° - 80°	308	7%
80° - 90°	96	2%
0° - 90°	4,124	100%

FPLCR-24-LS-CS-UNV Set to 4000K

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:
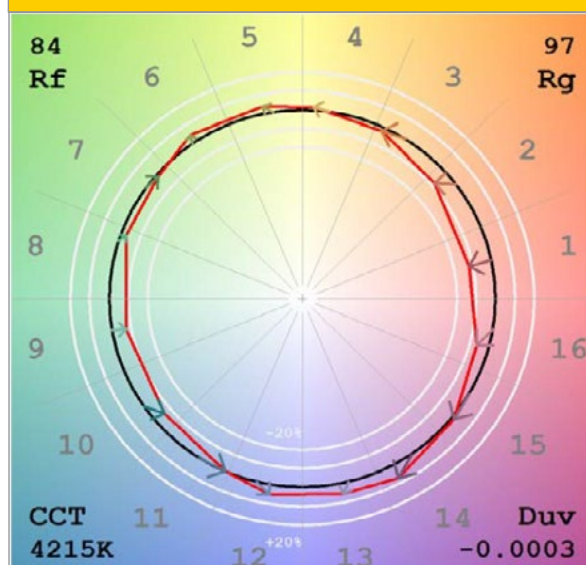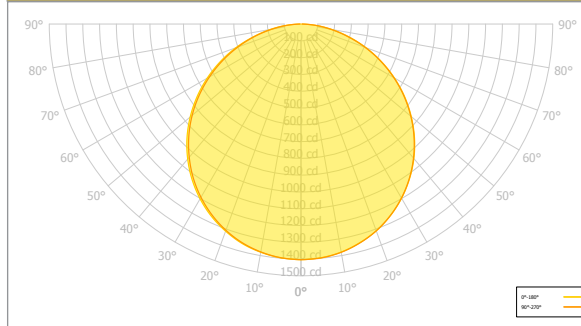
Flat Panel
Accessories

90535-Surface Mount Kit for 1' x 4' Panel

90532-Drywall Flange Mount Kit for 1' x 4' Panel

90536-Surface Mount Kit for 2' x 2' Panel

90533-Drywall Flange Mount Kit for 2' x 2' Panel

90537-Suface Mount Kit for 2' x 4' Panel

90534-Drywall Flange Mount Kit for 2' x 4' Panel

90538-Junction Box Extension for 1'x4', 2'x2' or 2'x4' Flat Panels

81981-LED Panel Gen III Emergency Battery

90530-Emergency Battery Mounting Bracket for 1'x4' Flat Panel

90531-Emergency Battry Mounting Bracket for 2'x2' & 2'x4' Flat Panels

90550-PIR Sensor with Daylight Harvest 0-10V Dim 3.5mm Receptacle

90552-Microwave Sensor with Daylight Harvest 0-10V Dim 3.5mm Receptacle

30292-Motion Control Sensor Remote

Halco
LIGHTING TECHNOLOGIES ®

LED Luminaires

Flat Panel
Detection Coverage

PIR Sensor

Mounting Height
<4m/13.12' Ceiling Mounted

Detection Distance
Radius 2-4m/6.56-13.12'

13.12ft
6.56ft
0
6.56ft
13.12ft

13.12ft
13.12ft   6.56ft   0   6.56ft   13.12ft

Ceiling Mounted

0.5-1.0M/S

Mounting Height

1
2
3
4
5
10 8 6 4 2 0 2 4 6 8 10

Wall Mounted

1   2   3   4   5

12
9
6
3
0
3
6
9
12
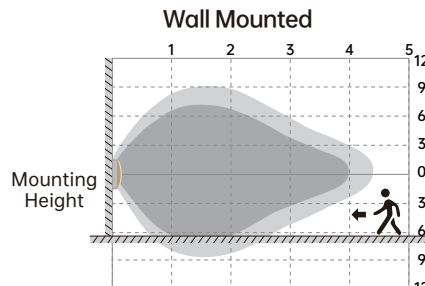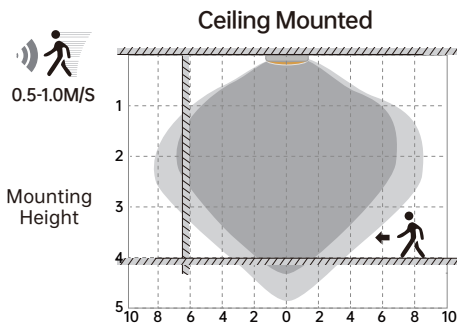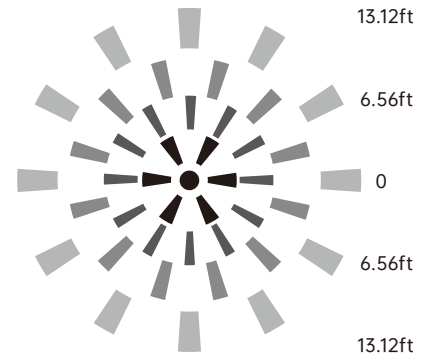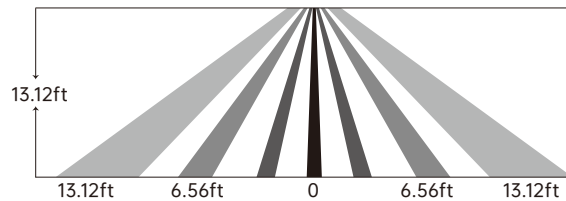
Mounting Height

Microwave Sensor

Highest mounting height is 4m/13.12'.

This figure indicates the maximum distance at the highest mounting height with 100% sensitivity.

■ Well Detected Area   ■ Possibly Detected Area

Performance

1.Daylight Harvesting

1. Adjust "daylight" value higher than 50lux

2. Preset "standby period" 0S

3. press MW/PIR button 3 times till MW/PIR icons both blinking on LCD screen, daylight harvesting function enabled.

Natural Light Brightness

Artificial Light Brightness

Preset Lux Value

Light ON

Light OFF

Daylight Harvesting phase
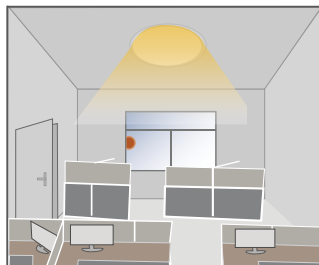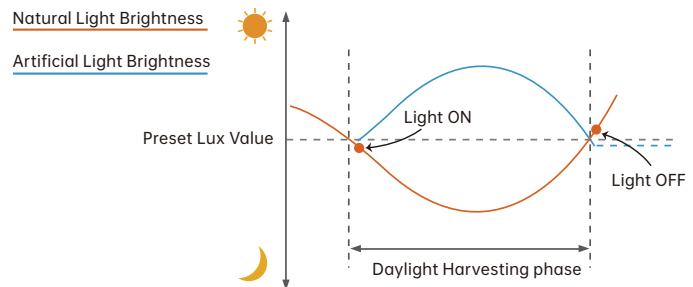
When ambient brightness is lower than preset lux level, sensor will turn on light automatically and keep dimming according to the change of the ambient brightness; when outside is getting darker, the inside will be brighter, and brighter darker.

Light OFF when ambient brightness becomes higher than the preset lux level.

Page **13/14** Rev Date: **07/30/24**

Halco
LIGHTING TECHNOLOGIES ®

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

LED Luminaires

Detection Coverage

2.Dusk/Dawn function

Sensor is able to differentiate artificial light brightness from natural light after installed inside the fixture, and automatically turn off light when ambient brightness exceeds preset lux level.
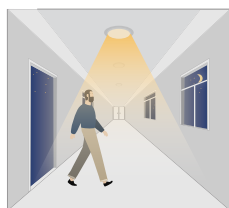
Precondition of Dusk/Dawn function:

1. Standby period is +∞;

2.Standby dimming level is on 10%,20% or 30%;

3. Daylight threshold is on 30lux/ 50lux/ 80lux/ 120lux/ 200Lux/ 250Lux/300Lux/ 350Lux/ 400Lux
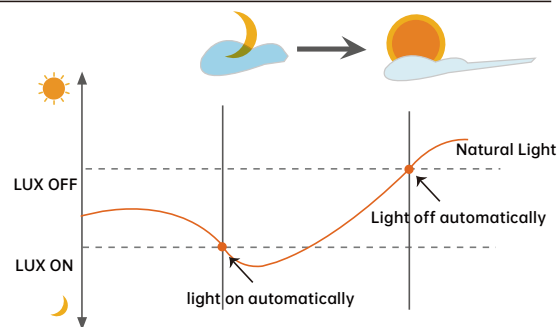
3. With Dusk/Dawn function
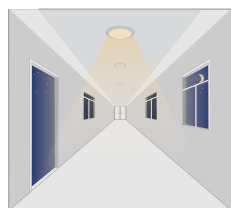
With insufficient ambient brightness, sensor turns on light and keeps it at standby dimming level even if there is no motion or persence.
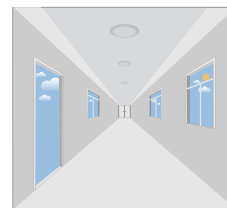
When sensor detects motion or presence it will bring the light level up to 100%.
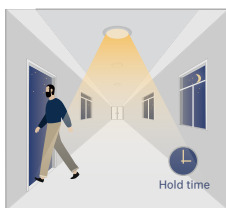
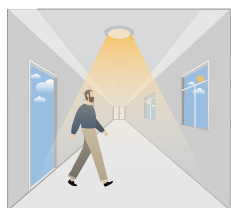After motion is no longer detected,fixture remains at 100% for hold time.
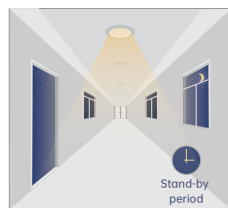
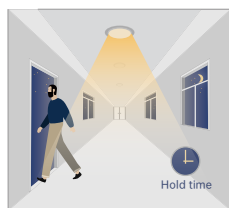After pre-set hold time period it will dim light to standby dimming level again and always keep it.

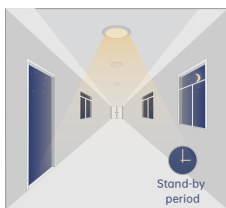With sufficient ambient brightness, sensor will turn OFF light automatically.
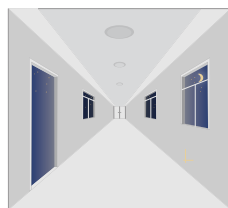
4. Without daylight disabled

Sensor turns ON light when motion is detected.

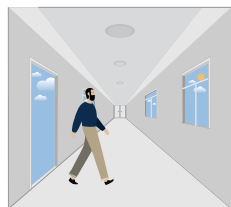Sensor keeps for a hold time period after motion leaves

Sensor dims light to standby dimming level after hold time if there is still no motion
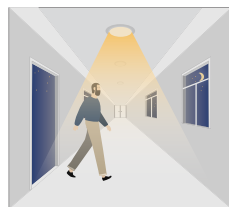
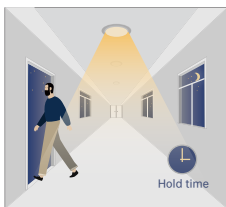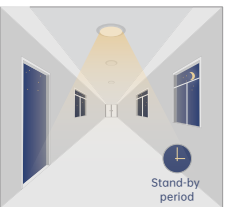Sensor turns OFF light after standby period

5. With Daylight Threshold

With sufficient daylight, the sensor keeps light OFF even motion gets detected

With insufficient daylight, the sensor turns light ON when motion gets detected

After there's no motion detected, the sensor keeps light ON 100% for holdtime.

After holdtime, sensor dims light to standby dimming level for standby period.
if the standby period has been set as 0s, sensor turns light OFF automatically after holdtime.

The sensor turns OFF light automatically after the standby period when there's no motion detected.

Page **14/14** Rev Date: **07/30/24** **Halco Lighting Technologies** 2940 Pacific Drive | Norcross, GA 30071 | Toll Free 800.677.3334 | Phone 770.242.3612 | Fax 800.880.0822 | halcolighting.com | Atlanta | Chicago | Cleveland | Houston | Phoenix © 2024 Halco Lighting Technologies, LLC. All rights reserved. Halco and ProLED are registered trademarks of Halco Lighting Technologies. All sizes and specifications are subject to change without notice.