Cyanlite LED Backlite Panel Light Product Brochure

- Background
- Backlite Strength
- Comparison

Cyanlite

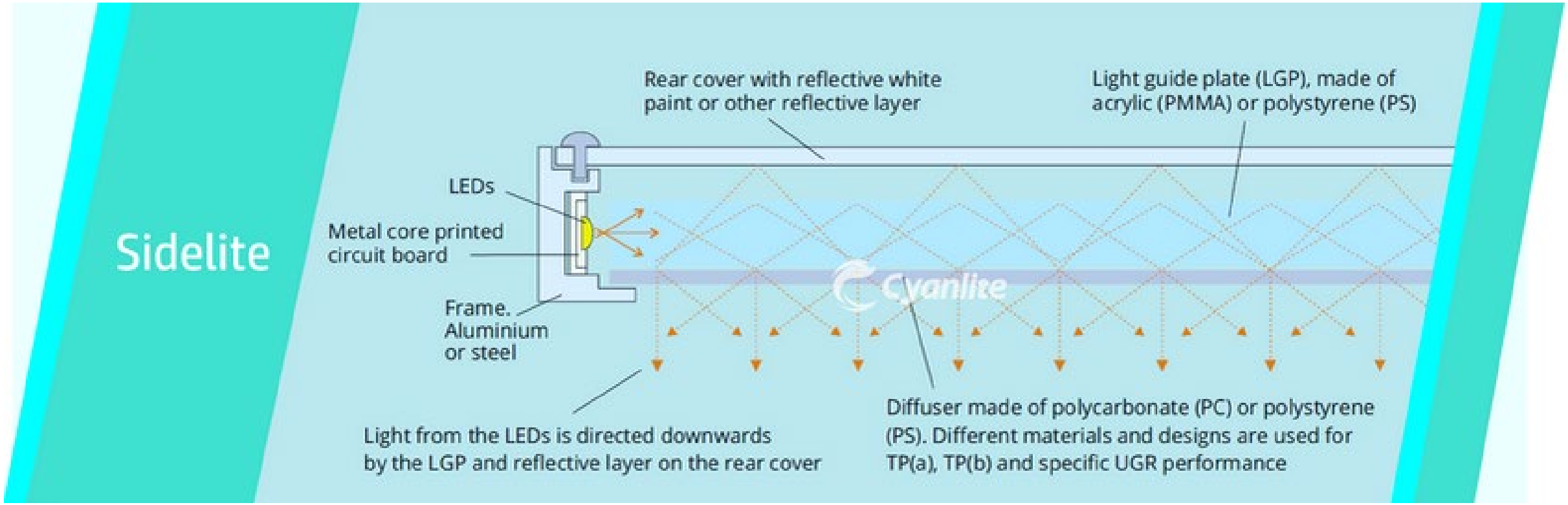
www.cyanlite.com

Background: Catch-22 Situation of LED Panel Lights

1. ***PMMA LGP price for Sidelite LED Panel is high***
2. ***PS LGP for Sidelite LED panel will turn yellow***
3. ***Too many cheap Backlite LED panels in the market***
4. ***Poor quality LED Panels cause big headaches***

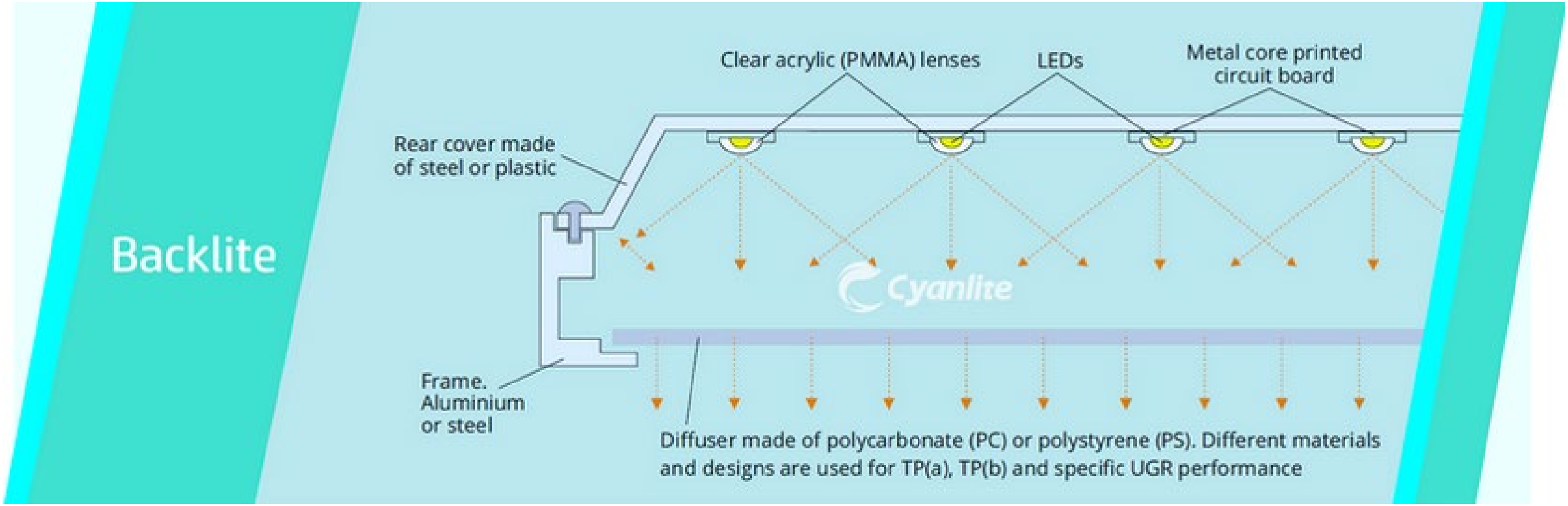
The situation can be changed with Cyanlite LED backlite panel.

Backlite Strength 1: More Efficient than Sidelite



A sidelite LED panel is made of a series of LEDs attached to the frame of the panel that shine horizontally into a light guide plate (LGP). The LGP directs light downward, through a diffuser into the space below. Sidelite panels are sometimes referred to as edge-lit panels.

Backlite Strength 1: More Efficient than Sidelite

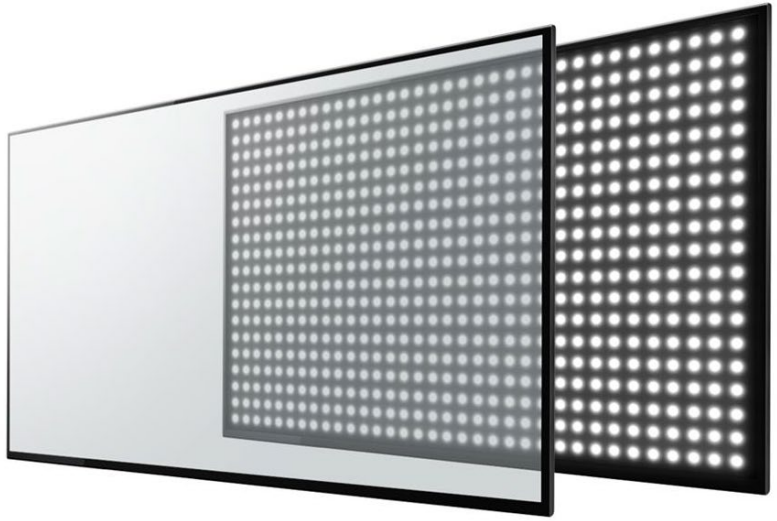


A backlite LED panel consists of a series of LEDs mounted on a horizontal panel that shine vertically downward through a diffuser into the space to be illuminated. Backlite panels are sometimes referred to as direct-lit panels.

Light losses within the fixture are lower, meaning a higher delivered lumen output.

Backlite Strength 2: Mature Technology

Widely used for LED ceiling and wall mounted luminaires



Fully array or direct light for LED TVs and monitors

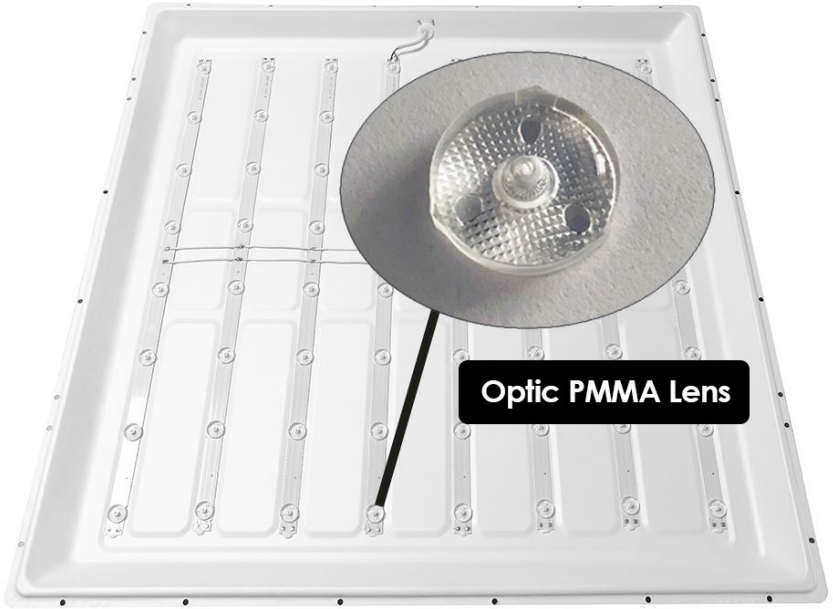
Mature technology with self-evident strength when adopt on LED panel light.

Backlite Strength 3: Fully Assembled by Machines

SMD mounting → Reflow Oven → Lens mounting → PCB mounting on back plate with glue → Screwing → Testing

Sidelite LED panel mostly produced by manual labour, backlite panel highly relies on machines, meaning exceptional quality consistency, production efficiency, and price advantage.

Backlite Strength 4: No LGP, No Yellowing



Optic PMMA lens for backlite panel, no LGP as sidelite panel, no yellowing.
Rest your heart always.

Big Players Go to Backlite Panels Already

Don’t lose your market share with sidelit panel only.

Catch the Tide. Seize Your Moment.

Comparison 1: Homogeneous illumination at the edge with square back plate

Cyanlite **Others**

Square back plate has better performance on light uniform than beveled one, because there is less distance between LEDs and panel edge.

Comparison 2: Our back plate matters a lot

Cyanlite

Shape: Square → Stable structure

Thickness: 0.25~0.3mm → Stiffness

Surface Treatment: Nano coating → High light efficiency

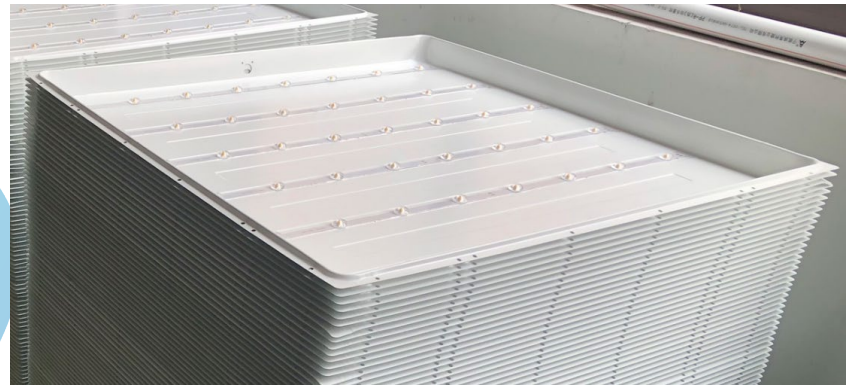
Others

Shape: Beveled → Weak structure

Thickness: 0.15~0.18mm → Deformed after screws fixed

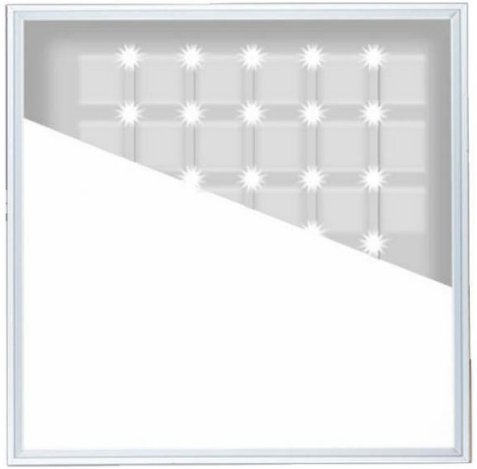
Surface Treatment: Powder coating or rolled coating → Low light efficiency and PCB may fall off easily

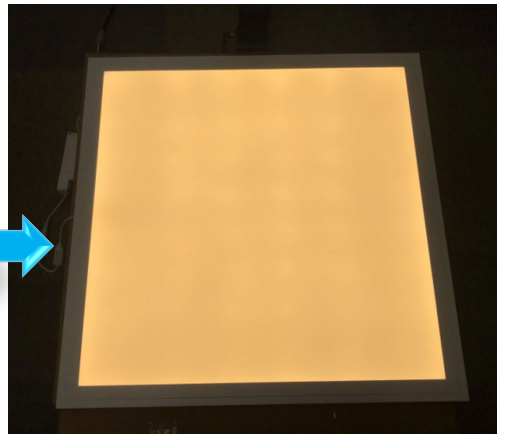
Comparison 3: Self-designed PMMA Lens



Cyanlite

Thanks to our self-designed PMMA lens, the combination of LEDs and back plate height is carefully considered, so that we get uniform light surface.



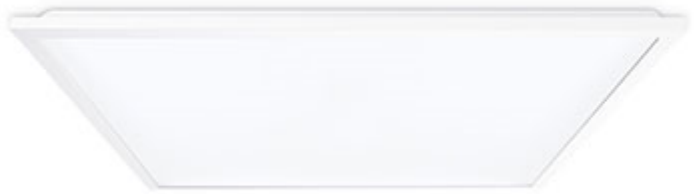


Others

Simply assemble all cheap raw materials together, it turns out light spots and dark area on the panel surface.

Poor Uniformity
due to Poor Lens

Comparison 4: Thicker diffuser, Solider panel surface



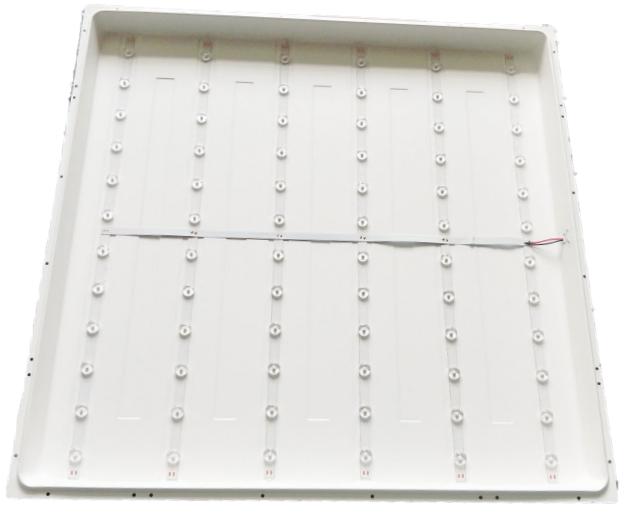
Cyanlite

1mm thickness diffuser, strong and smooth

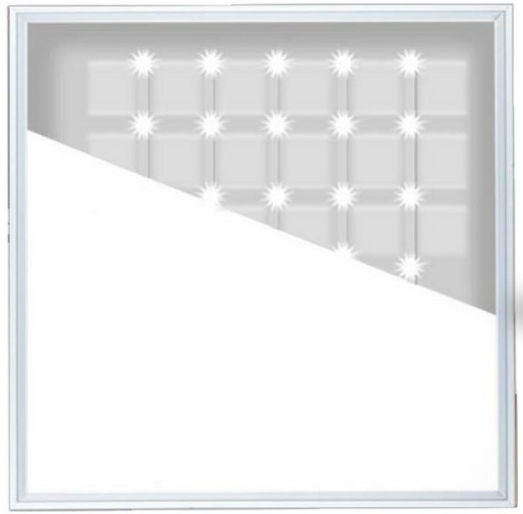
Others

0.5~0.8mm diffuser, get bent surface after installation easily

Comparison 5: Light Efficiency and Uniformity



Cyanlite

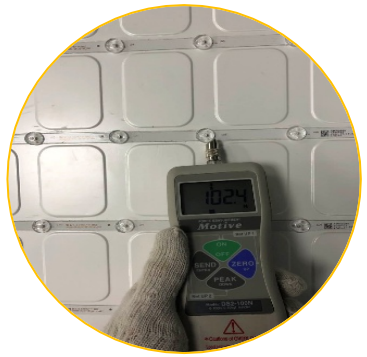


Others

Poor Uniformity
due to too few LED qty

Cyanlite Series	*System Power*	*System Efficiency*	*Luminous Flux*	*Light Colour*	*2835SMD Qty*
PREMIUM	30W	135lm/W	4050lm	840	84pcs
PRO	35W	125lm/W	4375lm	840	72pcs
ECO	40W	100lm/W	4000lm	840	48pcs

Comparison 6: Strong Stickiness of PCB & Lens



Cyanlite

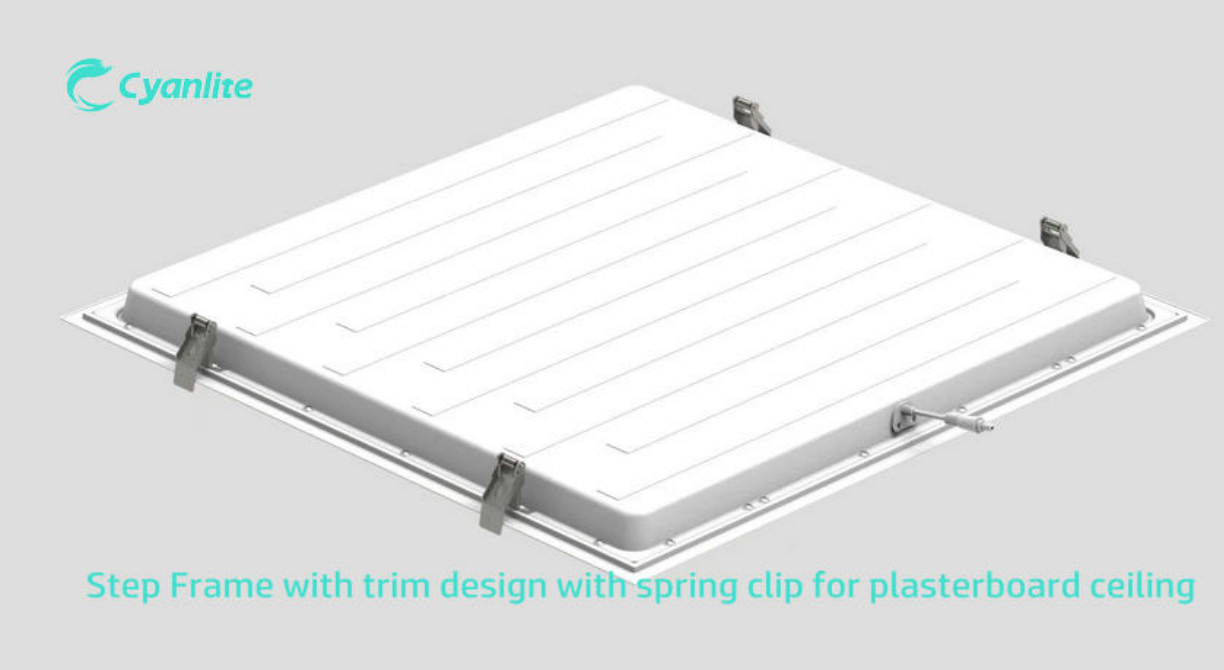
Others

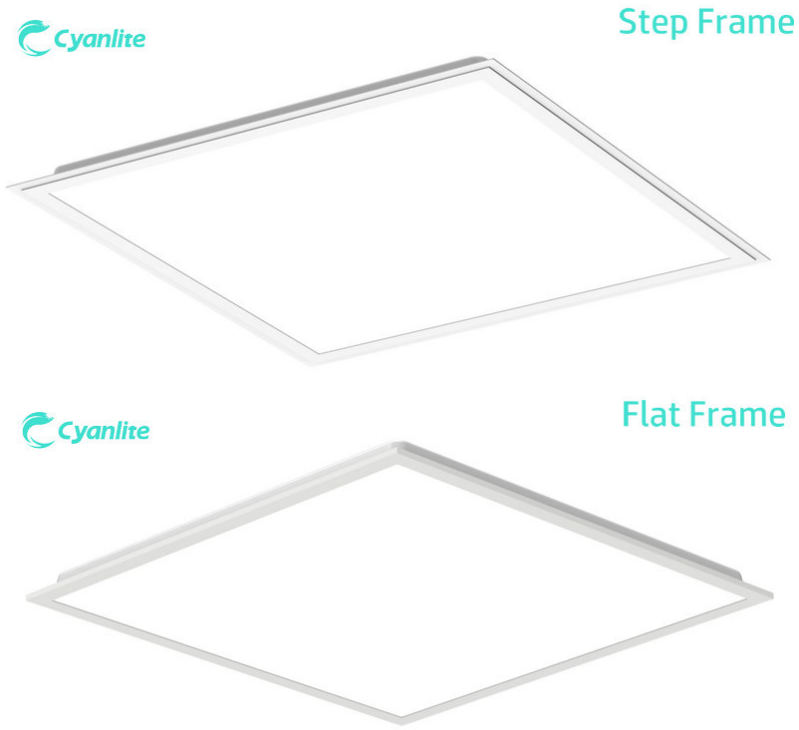
Bright dots
Due to PCB/Lens fall

After 168 hours aging (55℃ + 80%RH)

- **100N pushing test: PASS**
- **46N pulling test: PASS**

Cyanlite Different Frame Design





Cyanlite Flat Frame as standard for 595x595/295x1195/595x1195 sizes

Cyanlite Step Frame as standard for 620x620/308x1245/620x1245 sizes

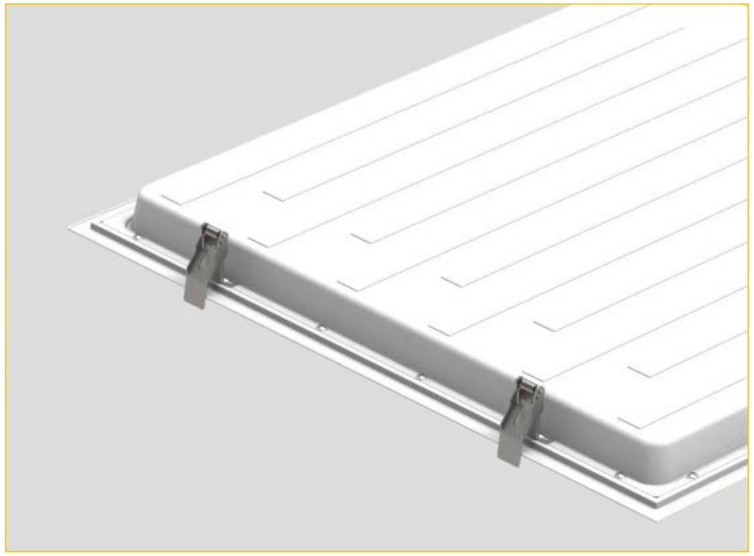
Universal Design for both T bar and Plasterboard Ceiling

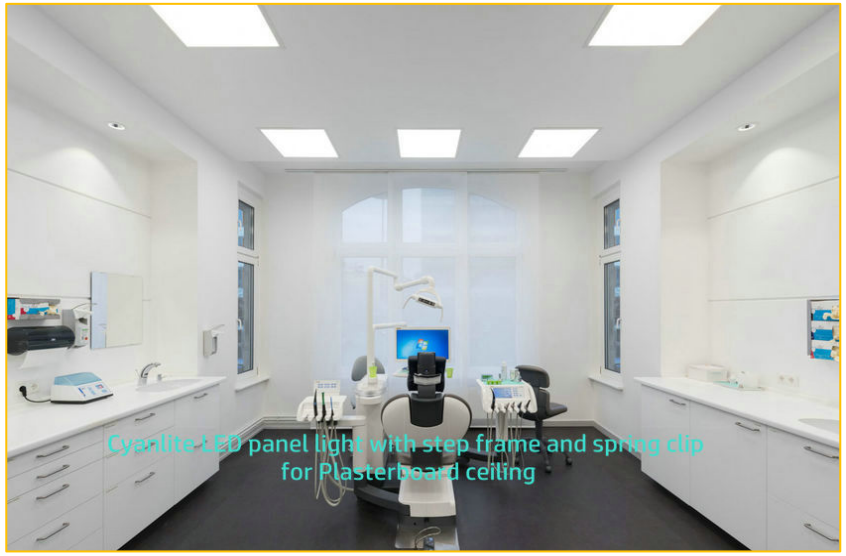
Cyanlite Step Frame 620 LED Panel Light on T bar Ceiling

Normal Flat Frame 620 LED Panel light on T bar Ceiling

Cyanlite LED panel light with step frame
for T24/T15 T bar Lay-On ceiling

Cyanlite Step Frame 620 LED Panel Light on Plasterboard Ceiling





Cyanlite LED panel light with step frame and spring clip
for Plasterboard ceiling

Excellent Performance

VISO SYSTEMS

Light efficiency:

128 Lumen/Watt

Output: 3844 lm
Peak: 1777 cd

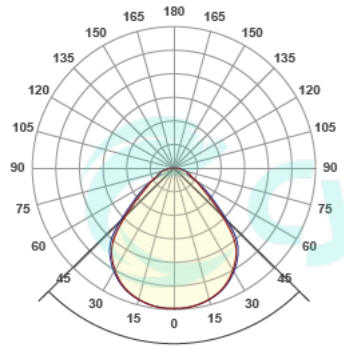
Light quality:

CRI: 83,7

Power: 30,1 W
PF: 0,98

Color temperature:

3979 K



Beam angle

90,9°

CIE 1931
x: 0,382
y: 0,379

Tracking number: n/a

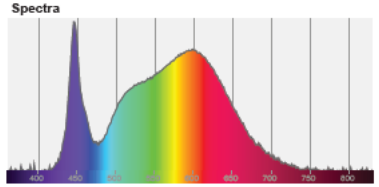
Product name:
Backlite 625 Panel

Item number:
PB30W062R-840

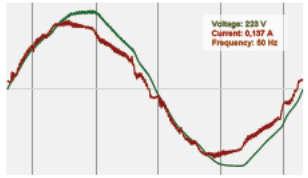
Date and time:
29.07.2021 11:24:41

Description:
Stabilität Lichtstrom: <2%
Umgebungstemperatur: T=22°C +-1°
C 800mA
Gemessen: idkl

Spectra

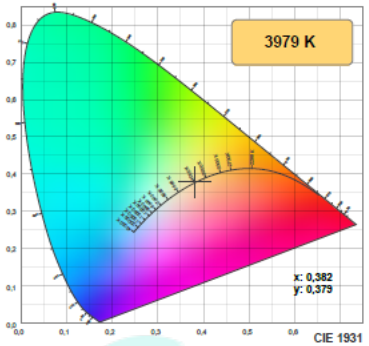


Power

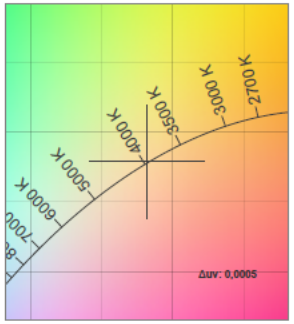


VISO SYSTEMS

Color details

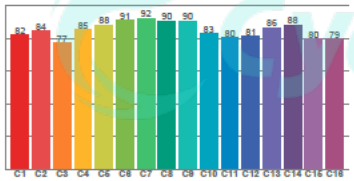


CIE 1931

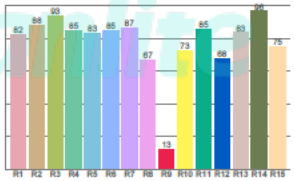


CIE 1931 ZOOM

TM30: 84,7



CRI: 83,7 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82,3	88,0	93,4	84,6	82,6	84,5	86,5	87,0	12,6	72,6	85,4	67,7	83,4	96,3	75,2

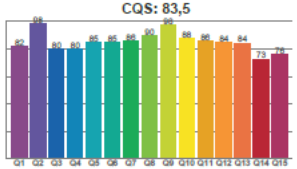
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
82,1	84,3	76,9	85,0	88,0	90,9	92,0	90,5	90,4	82,6	80,4	81,1	86,3	88,1	79,8	79,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81,6	96,1	80,1	80,3	84,8	85,0	96,1	90,0	97,6	87,7	85,8	84,5	84,2	73,7	75,9

CQS: 83,5



Color parameters

CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3979 K	83,7	12,6	84,7	98,3	83,6	0,382	0,379	0,225	0,336	0,0005

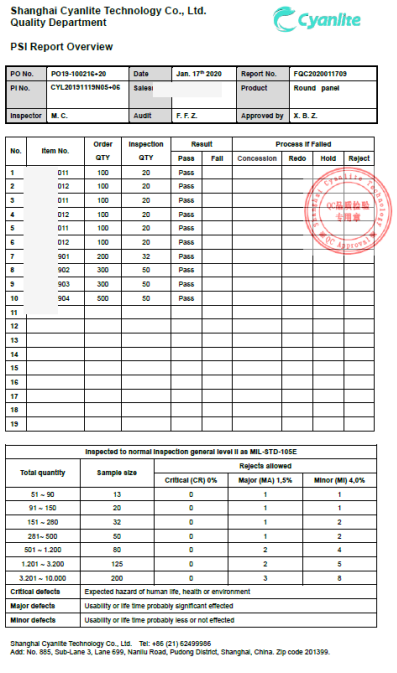
VISO SYSTEMS

UGR

Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	15,3	16,3	15,5	16,6	16,8	15,6	16,6	15,8	16,9	17,1
	3H	15,9	17,0	16,3	17,3	17,5	16,2	17,3	16,6	17,5	17,7
	4H	16,4	17,4	16,8	17,7	17,9	16,6	17,7	17,0	18,0	18,2
	6H	16,9	17,8	17,2	18,1	18,4	17,1	18,1	17,4	18,3	18,7
	8H	17,1	18,0	17,4	18,3	18,7	17,3	18,2	17,6	18,5	18,9
	12H	17,3	18,1	17,6	18,5	18,9	17,5	18,3	17,8	18,7	19,1
4H	2H	15,5	16,6	15,9	16,8	17,1	15,8	16,9	16,2	17,1	17,4
	3H	16,5	17,4	16,9	17,7	18,1	16,8	17,6	17,1	18,0	18,4
	4H	17,0	17,8	17,4	18,2	18,7	17,3	18,1	17,8	18,5	19,1
	6H	17,6	18,4	18,1	18,8	19,1	17,9	18,7	18,4	19,0	19,4
	8H	18,0	18,7	18,5	19,0	19,4	18,1	18,9	18,7	19,2	19,6
	12H	18,3	18,9	18,8	19,3	19,8	18,4	19,0	18,9	19,4	19,9
8H	4H	17,3	18,0	17,8	18,3	18,7	17,5	18,2	18,0	18,6	19,0
	6H	18,1	18,7	18,6	19,1	19,7	18,3	18,8	18,8	19,3	19,8
	8H	18,7	19,1	19,2	19,6	20,3	18,7	19,2	19,2	19,7	20,3
	12H	19,1	19,5	19,7	20,0	20,6	19,1	19,4	19,6	19,9	20,6
12H	4H	17,3	17,9	17,8	18,3	18,8	17,6	18,1	18,1	18,6	19,0
	6H	18,3	18,7	18,8	19,2	19,9	18,4	18,9	18,9	19,4	20,0
	8H	18,8	19,2	19,4	19,7	20,3	18,8	19,2	19,4	19,7	20,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,2 / -0,3					0,2 / -0,3				
S = 1.5H		0,6 / -0,5					0,7 / -0,7				
S = 2.0H		1,3 / -0,9					1,4 / -1,1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 3844 lm total luminous flux											

PSI report - No Distance for Quality Control



Shanghai Cyanlite Technology Co., Ltd.
Quality Department

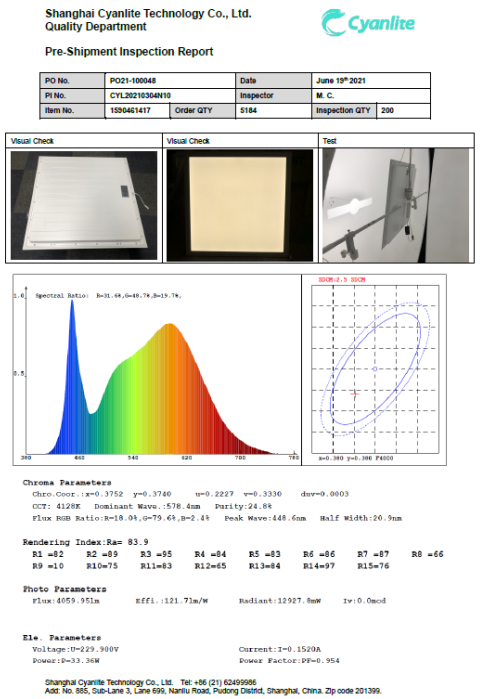
PSI Report Overview

PO No.	PO19-100216+20	Date	Jan. 17th 2020	Report No.	FQC2020011709
PI No.	CYL20191119N05+06	Sales		Product	Round panel
Inspector	M. C.	Audit	F. F. Z.	Approved by	X. B. Z.

No.	Item No.	Order QTY	Inspection QTY	Result		Process if Failed			
				Pass	Fail	Concession	Redo	Hold	Reject
1	011	100	20	Pass					
2	012	100	20	Pass					
3	011	100	20	Pass					
4	012	100	20	Pass					
5	011	100	20	Pass					
6	012	100	20	Pass					
7	901	200	32	Pass					
8	902	300	50	Pass					
9	903	300	50	Pass					
10	904	500	50	Pass					
11									
12									
13									
14									
15									
16									
17									
18									
19									

Inspected to normal inspection general level II as MIL-STD-105E				
Total quantity	Sample size	Rejects allowed		
		Critical (CR) 0%	Major (MA) 1.5%	Minor (MI) 4.0%
51 ~ 90	13	0	1	1
91 ~ 150	20	0	1	1
151 ~ 280	32	0	1	2
281~ 500	50	0	1	2
501 ~ 1,200	80	0	2	4
1,201 ~ 3,200	125	0	2	5
3,201 ~ 10,000	200	0	3	8
Critical defects	Expected hazard of human life, health or environment			
Major defects	Usability or life time probably significant effected			
Minor defects	Usability or life time probably less or not effected			

Shanghai Cyanlite Technology Co., Ltd. Tel: +86 (21) 62499986
Add: No. 885, Sub-Lane 3, Lane 699, Nanlu Road, Pudong District, Shanghai, China. Zip code 201399.



Shanghai Cyanlite Technology Co., Ltd.
Quality Department

Pre-Shipment Inspection Report

PO No.	PO21-100048		Date	June 19th 2021
PI No.	CYL20210304N10		Inspector	M. C.
Item No.	1590461417	Order QTY	5184	Inspection QTY 200

Visual Check | Visual Check | Test

Chroma Parameters
Chro.Coor.:x=0.3752 y=0.3740 u=0.2227 v=0.3330 duv=0.0003
CCT: 4128K Dominant Wave.:578.4nm Purity:24.8%
Flux RGB Ratio:R=18.0%,G=79.6%,B=2.4% Peak Wave:448.6nm Half Width:20.9nm

Rendering Index:Ra= 83.9
R1 =82 R2 =89 R3 =95 R4 =84 R5 =83 R6 =86 R7 =87 R8 =66
R9 =10 R10=75 R11=83 R12=65 R13=84 R14=97 R15=76

Photo Parameters
Flux:4059.95lm Effi.:121.71lm/W Radiant:12927.8mW Iv:0.0mcd

Ele. Parameters
Voltage:U=229.900V Current:I=0.1520A
Power:P=33.36W Power Factor:PF=0.954

Shanghai Cyanlite Technology Co., Ltd. Tel: +86 (21) 62499986
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Shanghai Cyanlite Technology Co., Ltd.
Quality Department

Pre-Shipment Inspection Report

PO No.	PO21-100048		Date	June 19th 2021
PI No.	CYL20210304N10		Inspector	M. C.
Item No.	1590461417	Order QTY	5184	Inspection QTY 200

Master box label | Gift box label | Product label
Package | Weight | Driver label
Driver | DC cable | DC cable
Manual | Visual Check | Visual Check

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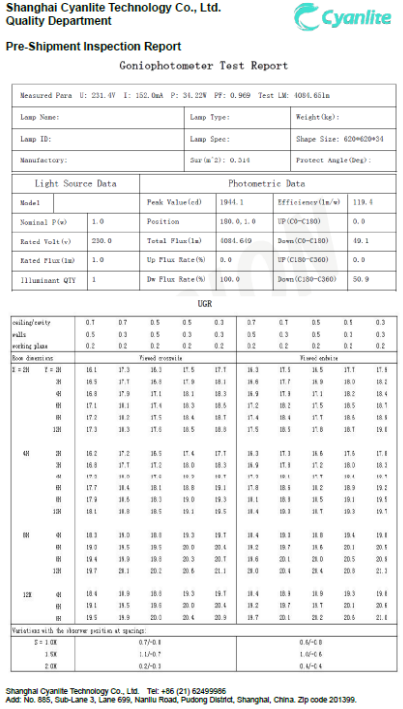
Add: No. 885, Sub-Lane 3, Lane 699, Nanlu Road, Pudong District, Shanghai, China. Zip code 201399.



Shanghai Cyanlite Technology Co., Ltd.
Quality Department

Pre-Shipment Inspection Report

Goniophotometer Test Report

Measured Para U: 231.4V I: 152.0mA P: 34.22W PF: 0.969 Test LM: 4084.65lm					
Lamp Name:			Lamp Type:	Weight(kg):	
Lamp ID:			Lamp Spec:	Shape Size: 620*620*54	
Manufactory:			Sur(m^2): 0.314	Protect Angle(Deg):	
Light Source Data		Photometric Data			
Model		Peak Value(cd)	1944.1	Efficiency(lm/w)	119.4
Nominal P(w)	1.0	Position	180.0,1.0	UP(C0~C180)	0.0
Rated Volt(v)	230.0	Total Flux(lm)	4084.649	Down(C0~C180)	49.1
Rated Flux(lm)	1.0	Up Flux Rate(%)	0.0	UP(C180~C360)	0.0
Illuminant QTY	1	Dw Flux Rate(%)	100.0	Down(C180~C360)	50.9

UGR

ceiling/cavity		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimension		Viewed crosswise					Viewed endwise				
X = 2H	Y = 2H	16.1	17.3	16.3	17.5	17.7	16.3	17.5	16.5	17.7	17.9
	3H	16.5	17.7	16.8	17.9	18.1	16.6	17.7	16.9	18.0	18.2
	4H	16.8	17.9	17.1	18.1	18.3	16.9	17.9	17.1	18.2	18.4
	6H	17.1	18.1	17.4	18.3	18.5	17.2	18.2	17.5	18.5	18.7
	8H	17.2	18.2	17.5	18.4	18.7	17.4	18.4	17.7	18.6	18.8
	12H	17.3	18.3	17.6	18.5	18.8	17.5	18.5	17.8	18.7	19.0
4H	2H	16.2	17.2	16.5	17.4	17.7	16.3	17.3	16.6	17.6	17.8
	3H	16.6	17.7	17.0	18.0	18.3	16.9	17.9	17.2	18.0	18.3
	4H	17.0	18.0	17.3	18.3	18.5	17.2	18.2	17.5	18.4	18.7
	6H	17.7	18.4	18.1	18.8	19.1	17.8	18.5	18.2	18.9	19.2
	8H	17.9	18.6	18.3	19.0	19.3	18.1	18.8	18.5	19.1	19.5
	12H	18.1	18.8	18.5	19.1	19.5	18.4	19.0	18.7	19.3	19.7
6H	2H	16.3	17.3	16.6	17.5	17.8	16.4	17.4	16.7	17.7	17.9
	3H	16.8	17.8	17.1	18.1	18.4	17.0	18.0	17.3	18.2	18.5
	4H	17.2	18.2	17.5	18.5	18.8	17.4	18.4	17.7	18.6	18.9
	6H	18.0	18.7	18.4	19.2	19.5	18.2	18.9	18.6	19.4	19.8
	8H	18.3	19.0	18.8	19.5	19.9	18.5	19.2	18.9	19.7	20.1
	12H	18.5	19.2	18.9	19.7	20.1	18.7	19.4	19.1	19.9	20.3
8H	4H	17.4	18.4	17.7	18.6	18.9	17.5	18.5	17.8	18.7	19.0
	6H	18.2	18.9	18.6	19.4	19.7	18.3	19.0	18.7	19.5	19.9
	8H	18.5	19.2	18.9	19.7	20.1	18.6	19.3	19.0	19.8	20.2
	12H	18.7	19.4	19.1	19.9	20.3	18.8	19.5	19.2	20.0	20.4
12H	4H	17.6	18.6	17.9	18.8	19.1	17.7	18.7	18.0	18.9	19.2
	6H	18.4	19.1	18.8	19.6	19.9	18.5	19.2	18.9	19.7	20.1
	8H	18.7	19.4	19.1	19.9	20.3	18.8	19.5	19.2	20.0	20.4
	12H	18.9	19.6	19.3	20.1	20.5	19.0	19.7	19.4	20.2	20.6
Variation with the observer position at spacing:											
S = 1.0X				0.7/~0.8					0.8/~0.8		
1.5X				1.1/~0.7					1.0/~0.6		
2.0X				0.2/~0.1					0.4/~0.4		

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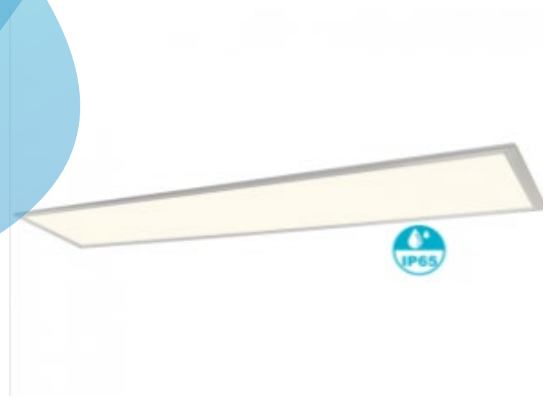
Pre-shipment inspection (PSI) report will be provided to customer, you know what you will have before receiving them.

Cyanlite Versatile Products by Backlite

Backlite panel with special LED Ra>97 and COI<3.3 for medical staff to detect cyanosis through clinical observation.

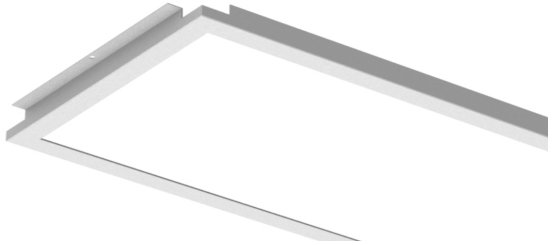
Color temperature changeable from 3000K-6000K for Human Centric Lighting, and 3 CCT Switchable.

Cyanlite Backlite panel integrated with Philips occupancy sensing, daylight harvesting and task tuning.



IP65 Waterproof LED panel light, designed specifically for dusty and wet places where it requires higher IP protection of wet/damp air, steaming, splashing

Cyanlite Backlite LED Panel with circle and other patterns for architectural lighting



Cyanlite Backlite panel for different metal ceiling systems, such as SAS150 Clip-In and SAS330 Hook-Over ceilings

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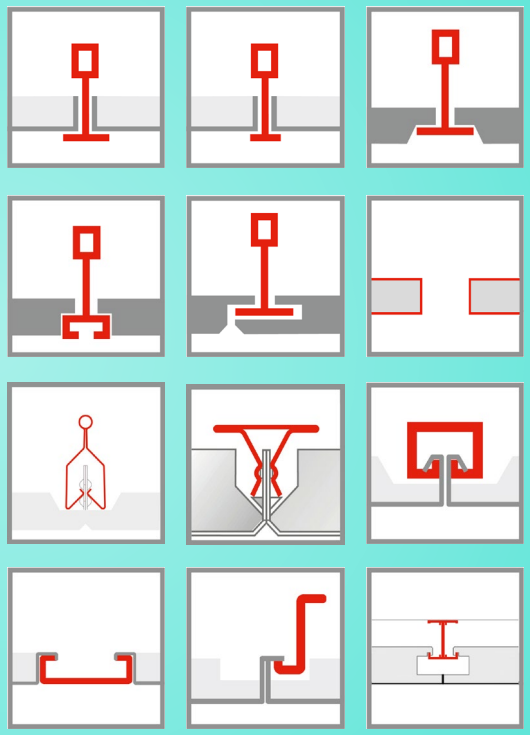
Ceilings



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