



CLED Series: LED Wellglass Lighting Luminaires

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Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)
IP66

Highlights

Application

- Flameproof luminaire solution for hazardous areas in explosive gas Zone 1/2 or dust Zone 21/22 atmosphere.
- Ideal for indoor or outdoor areas where water and dust ingress protection and corrosion resistant is required.
- For use in a wide range of field application such as
 - Power plants
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Waste and sewage treatment
 - Other areas where dust, water, dirt and rough usage are a problem.

Features

- Compact & lightweight fixture body made from pressure die casted high-grade copper-free aluminum alloy with epoxy powder coating finish.
- Robust enclosure housing with exceptional thermal design that renders a longer luminaire life.
- Photobiological Safe (RG1 with clear glass lens and RG0 glass lens with diffuser)
- Multiple lumen outputs that can provide up to 24,000lm.

Nominal Lumens ^①	HID Equivalent	Model Number
2,900	50-70W	CLED03
3,900	70-100W	CLED04
5,000	100-150W	CLED05
6,200	150-175W	CLED06
7,000	150-250W	CLED07
8,000	175-300W	CLED08
10,000	200-350W	CLED10
12,000	350-400W	CLED12
14,000	350-400W	CLED14
16,000	400-600W	CLED16
20,000	600-800W	CLED20
24,000	1000W	CLED24

^① Nominal lumen value for 5000K, clear glass globe with Type V illumination pattern. Detailed lumen information is provided in tables.

- With IP66 rating as standard, it's suitable for indoor and outdoor environments and for wet and marine (salt-water spray) location.
- Wide ambient range from -40°C to +50°C/+55°C.
- Glass lens is made of high strength toughened glass and the impact resistant is rated at IK10.
- LED L70 life is reported at 60,000+ hours.
- Standard 6KV surge protection.
- Two (2) different lens options: clear glass lens and glass lens with diffuser.
- Two (2) optic lens as options: Medium (55°) and Narrow (25°).
- Two (2) different emergency duration options: 90 mins and 180 mins. The lumen output will be different at different duration.
- Choice of three different color temperatures (CCT): 5000K cool white (-C), 4000K neutral white (-N) or 3000K warm white (-W).
- Standard cable entry size in M20 or M25.
- Separate field wiring compartment with screw terminal blocks for easy and secure connections (0.2mm² to 6mm²).
- Heavy duty, high temperature silicone gaskets.
- Multiple mounting options: Ceiling, Pendant, Wall Bracket or Stanchion Mounting.
- Drop safe design with safety cable.
- Field replaceable LED drivers and glass assembly.
- Photometric data & drawings available upon request.



Options

- Optional guard for increased glass protection.
- Safety Cable (sold separately).

Standard Materials

- Body: Pressure die-cast copper-free aluminum.
- Mounting accessories: Zinc plated steel, or Stainless Steel.
- Guard and all the fasteners: High corrosion resistant stainless steel.
- Gasket: Silicone.
- Entry holes: Two M20 or M25 threads, each at the side of the wiring compartment.
- Fixture Supplied with: Blanking Nylon plug 2x M20 or 2x M25.
- Standard Finish for fixture body, heat sink & glass assembly are in epoxy powder coat finish, electrostatically applied for complete uniform protection.

ATEX/IECEX Certification and Compliances

- Certification Type: CLED
- Gas: Zone 1 and 2
 - Conforming to ATEX 2014/34/EU: Ⓜ II 2G
 - Type of Protection: Ex db eb IIC T4 Gb
- Dust: Zone 21 and 22
 - Conforming to ATEX 2014/34/EU: Ⓜ II 2D
 - Type of Protection: Ex tb IIIC T135°C Db
- Surface Temperature: Gas (T4) and Dust (T135°C)
- Ambient Temperature:
 - -40°C ≤ Ta ≤ +55°C for CLED03; CLED04; CLED05; CLED06; CLED07; CLED08; CLED14 and CLED16;
 - -40°C ≤ Ta ≤ +50°C for CLED10; CLED12; CLED20 and CLED24;
- ATEX Certificate: C € 2460 ITS 18 ATEX 103084X
- IECEX Certificate: IECEX ITS 18.0007X
- Korea Certificate:
 - Gas: 19-KA4BO-0110X for CLED03;CLED04;CLED05; 19-KA4BO-0111X for CLED06;CLED07;CLED08;CLED10;
 - Dust: 19-KA4BO-0112X for CLED03;CLED04;CLED05; 19-KA4BO-0113X for CLED06;CLED07;CLED08;CLED10;
- Ingress Protection according to EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Photobiological Safety, IEC 62471 and IEC/TR 62778:
 - RG1 with clear lens and RG0 with diffuser

Related Products

- CHID Flameproof Wellglass HID Fixture.

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Illustrated Features

APPLETON™



Rugged and Versatile Housing

Utilizing one fixture which can be fitted with different mounting options or different application.

Mounting hoods and bodies are copper free aluminum with baked epoxy-clad finish, electrostatically applied for complete uniform protection.



Threaded flameproof joints

Providing Ex d type enclosure protection makes this fixture more safe and suitable for hazardous environments.



Driver Assembly

Using non-sparking components this makes the fixture more safe and suitable for hazardous environments. Driver can be easily accessed and replaced.



Safety Cable

Safety cable is slipped around the housing through retention points that are casted in. Safety cable has built in loops combined with a locking carabiner to allow for a quick and secure installation.



Replaceable Globe Assembly

The replaceable glass lens assembly is available with either clear glass lens or glass lens with diffuser.



Wiring Termination

Separate field wiring compartment with screw terminal block for easy and secure connections.

Optional Wire Guard

Stainless steel wire guard can be used for additional protection.



Optic Lens

Medium (55°) or Narrow (25°) type of Optic Lens can be used for improving the optic distribution.

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Catalog Numbering Guide

Standard Version

<p>CLED</p> <p>Series: CLED = CLED Series Ex-proof Lighting Fixture</p>	<p>03</p> <p>Lumen (nominal): 03 = 2900 04 = 3900 05 = 5000 06 = 6200 07 = 7000 08 = 8000 10 = 10000 12 = 12000 14 = 14000^① 16 = 16000^① 20 = 20000^① 24 = 24000^①</p>	<p>C</p> <p>CCT: C = Cool, 5000K N = Neutral, 4000K W = Warm, 3000K G = Green^②</p>	<p>G5</p> <p>Light Distribution G5 = NEMA Type V GM= Medium (55°) GN= Narrow (25°)</p>	<p>1</p> <p>Conduit Entry: 1 = M20 2 = M25</p>	<p>S</p> <p>Wiring: S = Standard T = Three Phase L = Dual Loop In/Out Through wired</p>	<p>BU</p> <p>Voltage: BU = 120V~277VAC, 50Hz/60Hz or 125~300VDC</p>	<p>D</p> <p>Options: D = Diffuser 10 = Surge Protection 10KV 20 = Surge Protection 20KV</p>
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① CLED14, CLED16, CLED20 and CLED24 are only for High Lumen type.

② Contact your local sales representative for more information.

Emergency Version

<p>CLED</p> <p>Series: CLED = CLED Series Ex-proof Lighting Fixture</p>	<p>03</p> <p>Lumen (nominal): 03 = 2900 04 = 3900 05 = 5000 06 = 6200 08 = 8000^① 10 = 10000^① 12 = 12000^①</p>	<p>C</p> <p>CCT: C = Cool, 5000K N = Neutral, 4000K W = Warm, 3000K G = Green^②</p>	<p>G5</p> <p>Light Distribution G5 = NEMA Type V GM= Medium (55°) GN= Narrow (25°)</p>	<p>1</p> <p>Conduit Entry: 1 = M20 2 = M25</p>	<p>S</p> <p>Wiring: S = Standard T = Three Phase L = Dual Loop In/Out Through wired</p>	<p>BU</p> <p>Voltage: BU = 120V~277VAC, 50Hz/60Hz or 125~300VDC</p>	<p>D</p> <p>Options: D = Diffuser H = Emergency I^③ E = Emergency II^④</p>
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① CLED08, CLED10 and CLED12 Emergency Version are only for High Lumen type.

② Contact your local sales representative for more information.

③ The emergency duration is 90mins.

④ The emergency duration is 180mins.

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Flameproof

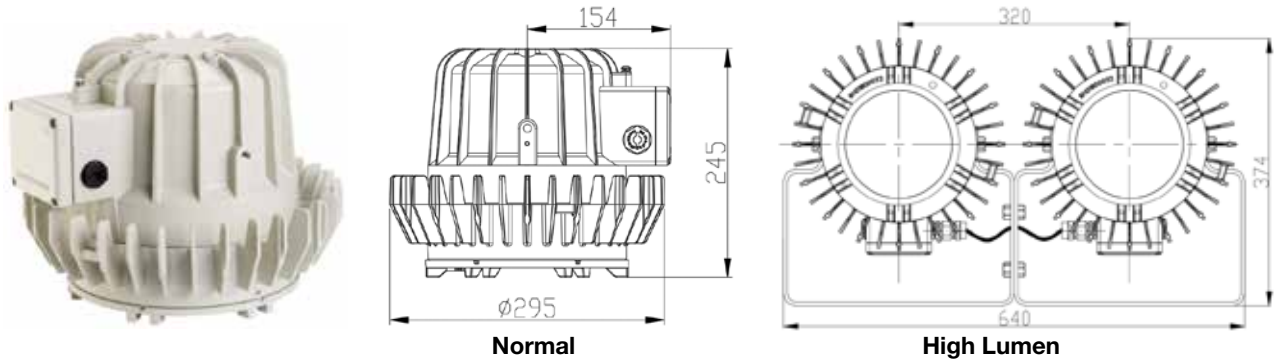
Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)
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Technical Data

Model Number	Voltage	Input Current (Amp, 120/277)	Power Facator	Input Power (W)	Ambient Temperature	Gas	Dust
CLED03	120V ~ 277VAC, 50Hz/60Hz; 125 ~ 300VDC	0.25/0.11	>0.95	29	-40°C ~ +55°C (-40°F ~ +131°F)	T4	T135°C
CLED04		0.33/0.14		39		T4	T135°C
CLED05		0.43/0.19		52		T4	T135°C
CLED06		0.50/0.22		58	T4	T135°C	
CLED07		0.58/0.25		68	T4	T135°C	
CLED08		0.66/0.29		78	T4	T135°C	
CLED10		0.78/0.35		93	-40°C ~ +50°C (-40°F ~ +122°F)	T4	T135°C
CLED12		0.95/0.41		114	T4	T135°C	
CLED14		1.11/0.48		134	-40°C ~ +55°C (-40°F ~ +131°F)	T4	T135°C
CLED16		1.27/0.55		152	T4	T135°C	
CLED20		1.58/0.69		190	-40°C ~ +55°C (-40°F ~ +122°F)	T4	T135°C
CLED24		1.90/0.82		228	T4	T135°C	

Note: Electrical ratings data presented here is measured on a typical sample. Electrical ratings in the field may vary from the given data in table. DC input current ratings, available upon request.

Dimensions (mm)



Standard version

Model NO.	Lumen Outputs	Weights	Type
CLED3	2,900	8.2 Kg (18.07lbs)	Normal
CLED4	3,900		
CLED5	5,000		
CLED6	6,200	8.9 Kg (19.62lbs)	
CLED7	7,000		
CLED8	8,000		
CLED10	10,000	21.5 Kg (47.40lbs)	High Lumen
CLED12	12,000		
CLED14	14,000	21.5 Kg (47.40lbs)	
CLED16	16,000		
CLED20	20,000		
CLED24	24,000		

Emergency version

Model NO.	Lumen Outputs	Weights	Type
CLED3	2,900	8.9 Kg (19.62lbs)	Normal
CLED4	3,900		
CLED5	5,000		
CLED6	6,200	21.7Kg (47.84lbs)	
CLED8	8,000		
CLED10	10,000		
CLED12	12,000		High Lumen

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CLED High Lumen

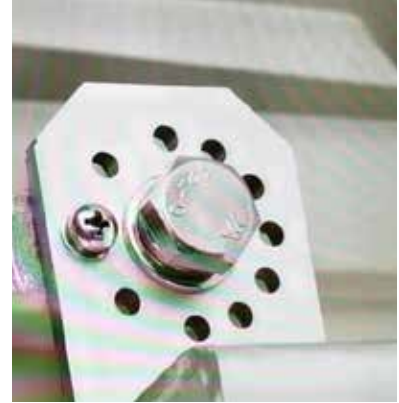


Multi-function Bracket

Installation Bracket is available with different installation requirements.

Adjustable Angle

Bracket with adjustable Angle for easy to adjust the lighting distribution.



Ex proof Cable Gland

Ex proof certified Cable Gland in Plastic and a cable are for the internal wiring before shipment.



Internal Wiring

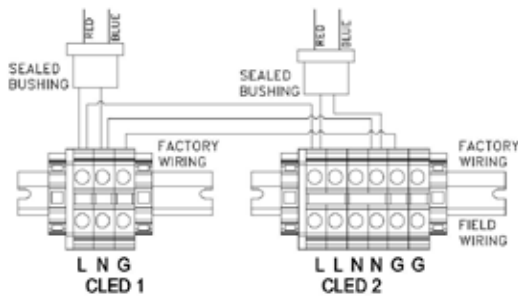
Internal wiring are fixed by screw terminal block for easy and secure connections.



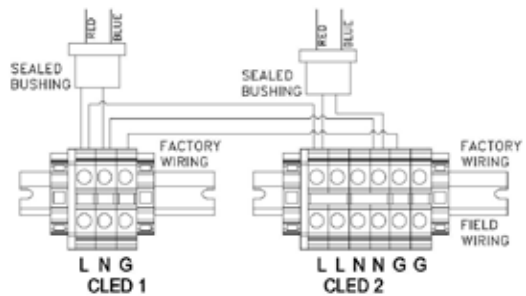
Optional Optic Lens

Medium (55°) or Narrow (25°) type of Optic Lens are suitable and for improving the optic distribution.

CLED High Lumen Factory Wiring



Standard version




Emergency version

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Mounting & Accessories

	Part	Material	Catalog Number
Wall Mounting		Zinc plated steel	CHIDWZ
		SS 304	CHIDWS
		SS 316L	CHIDWS6
Ceiling Mounting		Zinc plated steel	CHIDCZ
		SS 304	CHIDCS
		SS 316	CHIDCS6
Pendant Mounting		Zinc plated steel	CHIDBZ
		SS 304	CHIDBS
		SS 316	CHIDBS6
Stanchion Mounting		Zinc plated steel	CFEHC49Z
		SS 304	CFEHC49S
Bracket for High Lumen ^①		Zinc plated steel	CLEDTMZ
		SS 304	CLEDTMS
		SS 316	CLEDTMS6

① High Lumen Type must be supplied with this Bracket.

Accessory

	Part	Material	Catalog Number
	CLED Glass Globe Guard (in SS316L)		CLEDDGS
	Safety Cable		CLEDDSC
	Clear Glass Lens Assembly		CLEDDCG
	Diffused Glass Lens Assembly		CLEDDDCG

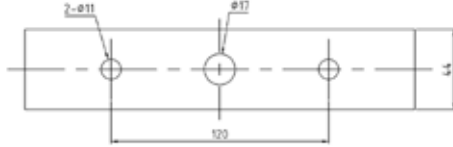
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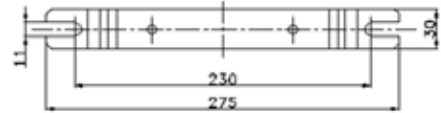
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Dimensions (mm)

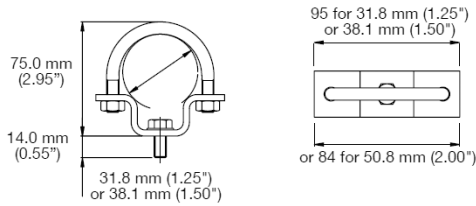
Wall Mounting



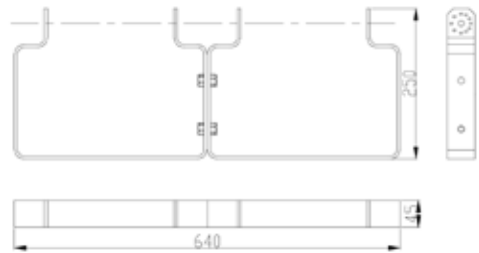
Ceiling Mounting



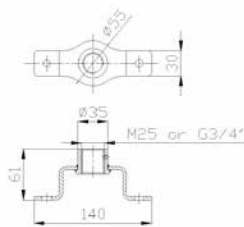
Stanchion Mounting



Bracket for High Lumen

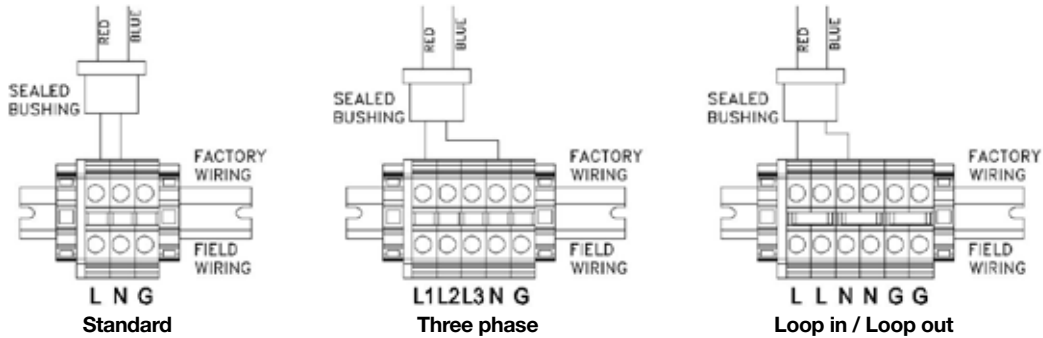


Pendant Mounting

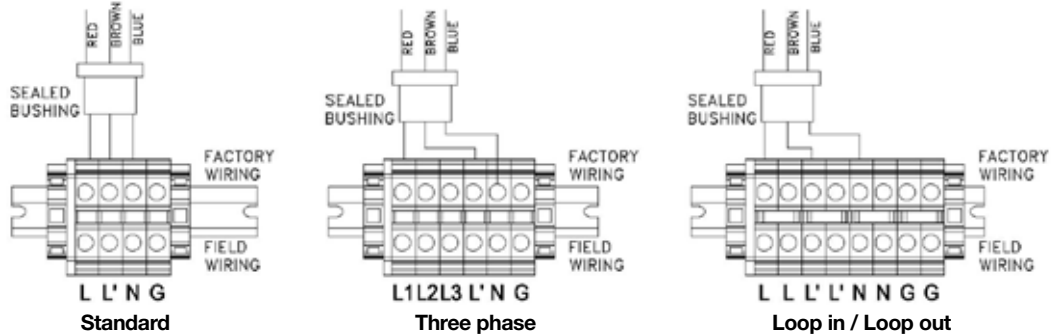


Wiring

Standard version



Emergency version



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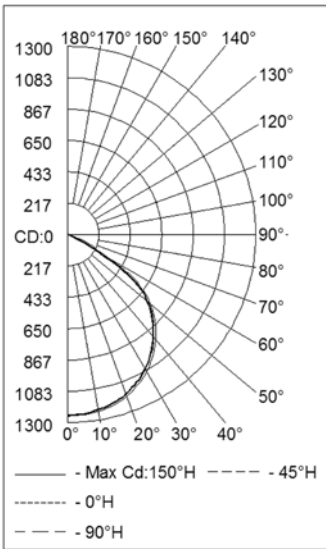
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Photometric Data – DATA SHOWN IS ABSOLUTE

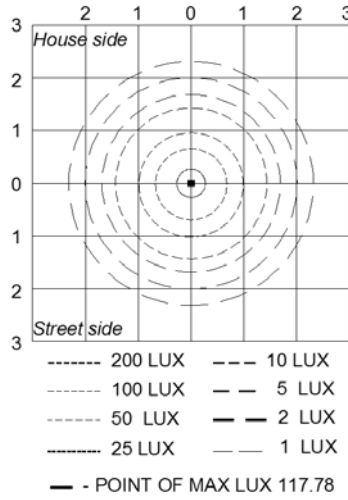
Type V, Clear Glass Lens Assembly 5000K CCT
 REPORT NUMBER: CLED03CG5XXBU

Luminaire Lumens 3122

Polar Candela Distribution



ISO Lux Plot



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	960.7	30.8%
0-40	1,584.8	50.8%
0-60	2,804.0	89.8%
60-90	306.0	9.8%
70-100	39.2	1.3%
90-120	2.0	0.1%
0-90	3,110.0	99.6%
90-180	12.0	0.4%
0-180	3,122.0	100%

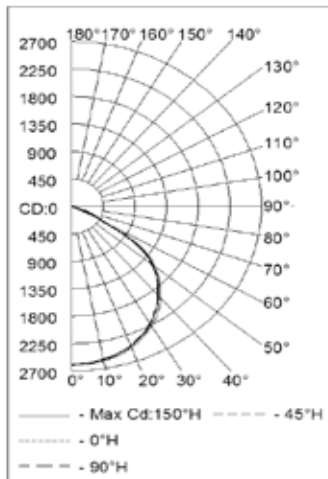
LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	115.7	3.7%	90-100	0.1	0%
10-20	333.5	10.7%	100-110	0.6	0%
20-30	511.5	16.4%	110-120	1.3	0%
30-40	624.1	20.0%	120-130	1.9	0.1%
40-50	651.6	20.9%	130-140	2.3	0.1%
50-60	567.6	18.2%	140-150	2.2	0.1%
60-70	266.9	8.5%	150-160	1.8	0.1%
70-80	32.5	1.0%	160-170	1.3	0%
80-90	6.6	0.2%	170-180	0.5	0%

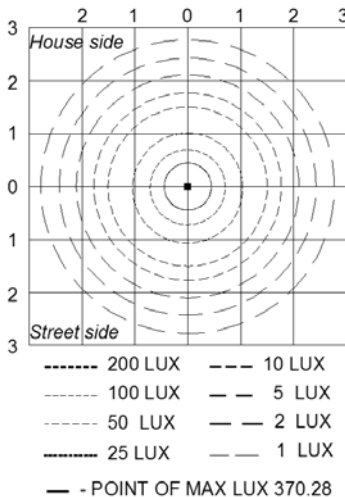
Type V, Clear Glass Lens Assembly 5000K CCT
 REPORT NUMBER: CLED06CG5XXBU

Luminaire Lumens 6522

Polar Candela Distribution



ISO Lux Plot



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	2,055.0	31.5%
0-40	3,394.4	52%
0-60	5,871.3	90%
60-90	623.4	9.6%
70-100	105.3	1.6%
90-120	4.9	0.1%
0-90	6,494.8	99.6%
90-180	27.2	0.4%
0-180	6,522.0	100%

LUMENS PER ZONE

Zone	% Total	Zone	Lumens	% Total	
0-10	246.9	3.8%	90-100	0.5	0%
10-20	712.6	10.9%	100-110	1.5	0%
20-30	1,095.5	16.8%	110-120	3.0	0%
30-40	1,339.4	20.5%	120-130	4.3	0.1%
40-50	1,390.5	21.3%	130-140	5.1	0.1%
50-60	1,086.4	16.7%	140-150	5.0	0.1%
60-70	518.6	8.0%	150-160	3.9	0.1%
70-80	87.9	1.3%	160-170	2.9	0%
80-90	17.0	0.3%	170-180	1.1	0%

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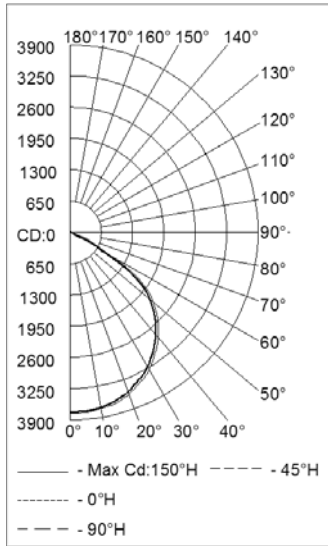
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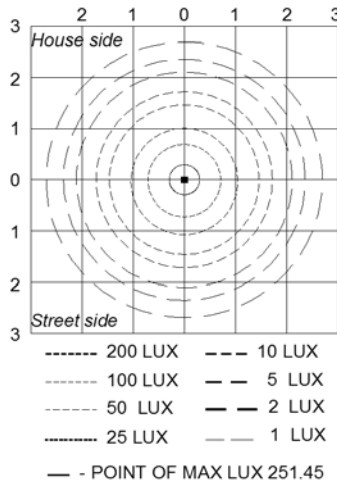
Type V, Clear Glass Lens Assembly 5000K CCT
 REPORT NUMBER: CLED10CG5XXBU

Luminaire Lumens 9672

Polar Candela Distribution



ISO Lux Plot



ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	3,047.1	31.5%
0-40	5,033.3	52%
0-60	8,704.8	90%
60-90	924.6	9.6%
70-100	156.9	1.6%
90-120	7.8	0.1%
0-90	9,629.4	99.6%
90-180	41.3	0.4%
0-180	9,670.7	100%

LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	366.2	3.8%	90-100	0.8	0%
10-20	1,057.0	10.9%	100-110	2.3	0%
20-30	1,623.9	16.8%	110-120	4.6	0%
30-40	1,986.2	20.5%	120-130	6.5	0.1%
40-50	2,061.2	21.3%	130-140	7.7	0.1%
50-60	1,610.3	16.7%	140-150	7.5	0.1%
60-70	768.5	7.9%	150-160	5.9	0.1%
70-80	130.6	1.4%	160-170	4.3	0%
80-90	25.5	0.3%	170-180	1.7	0%

Type V, Clear Glass Lens Assembly 5000K CCT
 REPORT NUMBER: CLED10CG5XXBU

Luminaire Lumens 9672

APPLETON

Simple, efficient, low maintenance lighting for Zone 1 hazardous locations



Appleton is the cornerstone brands of Emerson's Electrical Apparatus and Lighting business; trusted worldwide to make electrical installations safer, more productive and more reliable.

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