

Detailed data sheet

1809/2018

3 step MacAdam Ellipse Initial	2 step MacAdam Ellipse Initial	L70/B50 50.000h
Ra 80	Ra 90	Ra 97



Interior
spot lights
downlight series

LIGHT SOURCE BY


Product description

HAZEL Standard series

HAZEL Standard Series support the seventh generation of the Bridgelux V Series that is a cost-effective light engine. HAZEL Standard Series is the best for commercial and residential lighting applications where cost and quality are essential.

Comes In 2700K, 3000K, 3500K, 4000K, 5000K, 5700 and 6500K CCT and in flux led lumens from 1982 to 2750 lumens delivering CRI(Ra) of 80 and 90 and high R values across all 15 CIE color samples.

The MacAdam steps can be 2 or 3 up to 4000K, and 4 steps for 5000K, 5700K and 6500K.

HAZEL Decor series

HAZEL Decor Series is a exceptional light source for demanding applications. When a pure white with rich colors over the entire visual spectrum is needed, Decor Series is the perfect choice. HAZEL Decor Series comes in 2700K and 3000K CCT and with flux from 1809 to 1926 led lumens delivering CRI(Ra) of 97 and high R values across all 15 CIE color samples. The MacAdam steps are 2 for both CCTs.

Features

- Supports the 7th generation V Series COBs of Bridgelux
- Optionally supports the Decor Series of Bridgelux V Series
- LED power 17W
- LED lumens from 1809lm up to 2750lm
- CCT from 2700K up to 6500K
- CRI Ra 80, 90 and 97
- UGR : <24,4
- Three beam angles
- Available with non dimming driver or with phase cut driver
- Wide angle Pan & Tilt rotation
- Easy selection among one of the 3 phases of the track
- Two colours
- Easy installation in track system
- Fast relocation within the track system with a single move
- Comply with DC central emergency systems (only for Non-Dimmable models)

Areas of application

- Foyers
- Lobbies
- Receptions
- Retail shops
- Halls
- Museums
- Offices
- Conference rooms
- Galleries

Specifications

Light source	LED COB by BRIDGELUX			
Luminaire lumens	See Photometric Data			
Led Power consumption	CRI80, CRI90 :	16,5W		
	CRI97 :	16,7W		
Luminaire power consumption	CRI80, CRI90 :	18,5W		
	CRI97 :	18,8W		
LED current	16,5W & 16,7W : 500mA			
LED Lumens	16,5W & 16,7W			
	CRI	80	90	97
	2700K	2379	1982	1809
	3000K	2489	2056	1926
	3500K	2552	2130	
	4000K	2576	2205	
	5000K	2654	2260	
	5700K	2700		
	6500K	2750		
	LED Efficacy (LPW)	16,5W & 16,7W		
CRI		80	90	97
2700K		144	120	108
3000K		151	125	115
3500K		155	129	
4000K		156	134	
5000K		161	137	
5700K		164		
6500K		167		
Luminaire Efficacy (LPW)		See Photometric Data		
Color Temperature (CCT)	CRI80 :	2700K, 3000K, 3500K, 4000K 5000K, 5700K, 6500K		
	CRI90 :	2700K, 3000K, 3500K, 4000K 5000K		
	CRI97 :	2700K, 3000K		
Color Rendering Index (Ra-8)	CRI80, CRI90, CRI97			
Gamut Area Index (GAI _{BB})	CRI80 : GAI _{BB} : 95 / R _r : 85 / R _g : 94			
IES TM-30 (R _r) (R _g)	CRI90 :	GAI _{BB} : 102 / R _r : 90 / R _g : 99		
	CRI97 :	GAI _{BB} : 106 / R _r : 94 / R _g : 100		
Initial color consistency	CRI80 :	3 SDCM (2 SDCM upon request)		
	CRI90, CRI97 :	2 SDCM		
Lumen maintenance	L70/B50 at 50000 hours			

- Notes.
1. All above values are typical.
 2. Absolute range of luminous flux is $\pm 10\%$ of typical value.
 3. Specifications are subject to change without notice

Driver operation

Phase Cut Drivers

- Light regulation 0/2 - 100%.
- Compatible with Leading edge (Triac) and Trailing edge (IGBT) dimmers.

Product type	Downlight spot for track systems			
Ceiling type	Any type of ceiling			
Material	Spot: aluminum			
	Driver case: aluminum die-cast			
	Heatsink: aluminum			
	Reflector: polymer			
Color	White, Black			
Optics	High gloss reflector: 25°, 40°, 60°			
Cover	Clear (Tempered glass), Honeycomb (Metal)			
Light distribution	Rotationally symmetric			
Dimming	Phase Cut			
Power supply voltage	220-240VAC /50-60Hz			
Power factor	$\geq 0,9$			
Flicker ripple	See Driver operation			
Unified Glare Rating (UGR)	See Photometric Data			
Ambient temperature range	-10°C / +50°C			
Protection class	CLASS I			
Ingress Protection	IP40			
Mechanical impact	IK03			
Connection	3 Phase track adaptor			
Dimensions	See Dimensions & Weight			
Weight	See Dimensions & Weight			
Pan rotation (horizontal plane)	320°			
Tilt rotation (vertical plane)	100°			
Compliance	LVD directive, EMC directive, RoHS			
Remarks	CRI90 & CRI97 are available upon request			
Luminaire Energy Class	18,5W & 18,8W			
	CRI	80	90	97
	2700K	A+	A	A
	3000K	A+	A	A
	3500K	A+	A+	
	4000K	A+	A+	
	5000K	A+	A+	
	5700K	A+		
6500K	A+			

Non Dimmable Drivers

- Current Ripple <3%.
- High efficiency.

Photometric data

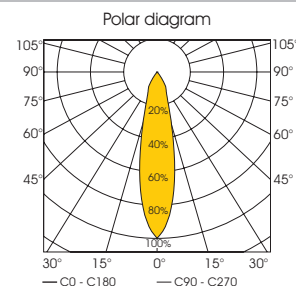
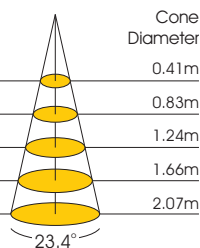
*Note: Use the coefficients, to calculate the Luminous flux, Efficacy and Illuminance for CRI90, CRI97.
All values below, correspond to CRI80.

Power 18.5W	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CRI90 Coeff.*	0.83	0.83	0.83	0.86	0.85		
CRI97 Coeff.*	0.76	0.77					

Luminaire lm	1654 lm	1730 lm	1774 lm	1791 lm	1845 lm	1877 lm	1912 lm
Efficacy (lm/W)	89	94	96	97	100	101	103
UGR : <21.9							

Illuminance	1m	5971 lx	6247 lx	6405 lx	6465 lx	6661 lx	6777 lx	6902 lx
	2m	1493 lx	1562 lx	1601 lx	1616 lx	1665 lx	1694 lx	1726 lx
	3m	1493 lx	694 lx	712 lx	718 lx	740 lx	753 lx	767 lx
	4m	663 lx	390 lx	400 lx	404 lx	416 lx	424 lx	431 lx
	5m	239 lx	250 lx	256 lx	259 lx	266 lx	271 lx	276 lx

Reflector 25° (typ.) with clear cover

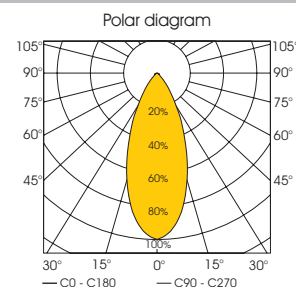
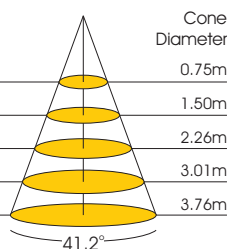


Power 18.5W	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CRI90 Coeff.*	0.83	0.83	0.83	0.86	0.85		
CRI97 Coeff.*	0.76	0.77					

Luminaire lm	1544 lm	1615 lm	1656 lm	1672 lm	1722 lm	1752 lm	1784 lm
Efficacy (lm/W)	83	87	90	90	93	95	96
UGR : <23.5							

Illuminance	1m	2538 lx	2655 lx	2722 lx	2748 lx	2831 lx	2880 lx	2933 lx
	2m	634 lx	664 lx	681 lx	687 lx	708 lx	720 lx	733 lx
	3m	282 lx	295 lx	302 lx	305 lx	315 lx	320 lx	326 lx
	4m	159 lx	166 lx	170 lx	172 lx	177 lx	180 lx	183 lx
	5m	102 lx	106 lx	109 lx	110 lx	113 lx	115 lx	117 lx

Reflector 40° (typ.) with clear cover

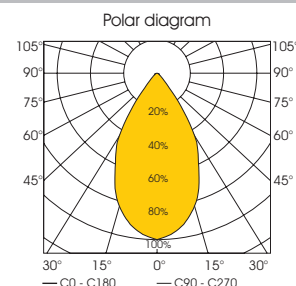
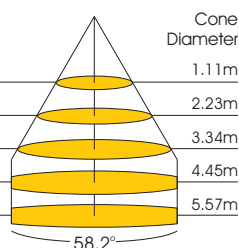


Power 18.5W	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CRI90 Coeff.*	0.83	0.83	0.83	0.86	0.85		
CRI97 Coeff.*	0.76	0.77					

Luminaire lm	1809 lm	1893 lm	1941 lm	1959 lm	2018 lm	2053 lm	2092 lm
Efficacy (lm/W)	98	102	105	106	109	111	113
UGR : <24.4							

Illuminance	1m	2066 lx	2162 lx	2217 lx	2238 lx	2305 lx	2345 lx	2389 lx
	2m	517 lx	541 lx	554 lx	559 lx	576 lx	586 lx	597 lx
	3m	230 lx	240 lx	246 lx	249 lx	256 lx	261 lx	265 lx
	4m	129 lx	135 lx	139 lx	140 lx	144 lx	147 lx	149 lx
	5m	83 lx	86 lx	89 lx	90 lx	92 lx	94 lx	96 lx

Reflector 60° (typ.) with clear cover



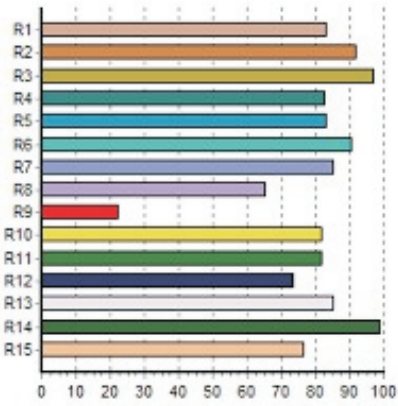
Color metric data

Standard models CRI 80

Typical values for 3000K

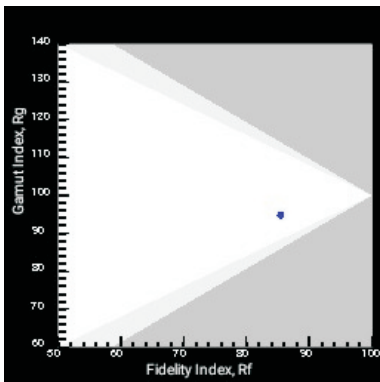
Color Rendering Index: CRI(Ra): 83 CRI(Re): 79

R values

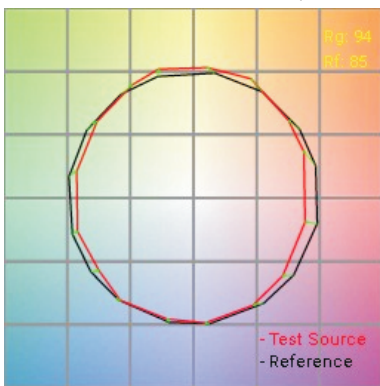


Gamut Area Index: GAI(BB8): 89 GAI(BB15): 95
 IES TM-30-15 Fidelity Index: Rf 85
 IES TM-30-15 Gamut Index: Rg 94

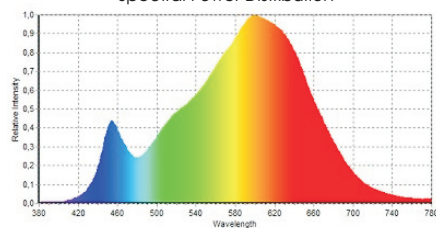
IES TM-30-15 Rf Rg Plot



IES TM-30-15 Color Vector Graphic



Spectral Power Distribution

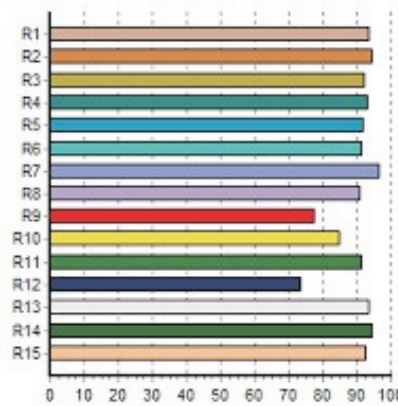


Standard models CRI 90

Typical values for 3000K

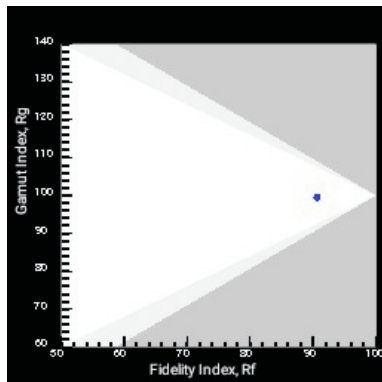
Color Rendering Index: CRI(Ra): 93 CRI(Re): 90

R values

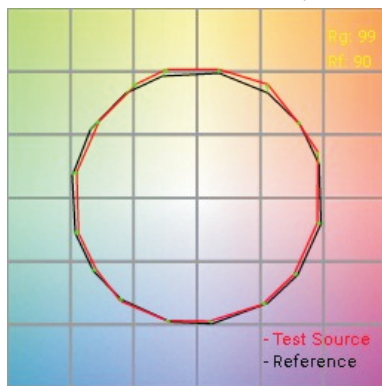


Gamut Area Index: GAI(BB8): 97 GAI(BB15): 102
 IES TM-30-15 Fidelity Index: Rf 90
 IES TM-30-15 Gamut Index: Rg 99

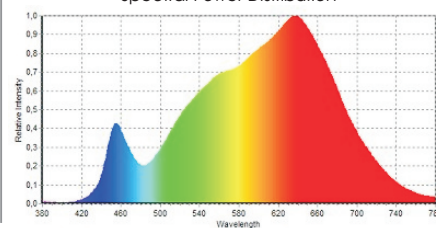
IES TM-30-15 Rf Rg Plot



IES TM-30-15 Color Vector Graphic



Spectral Power Distribution

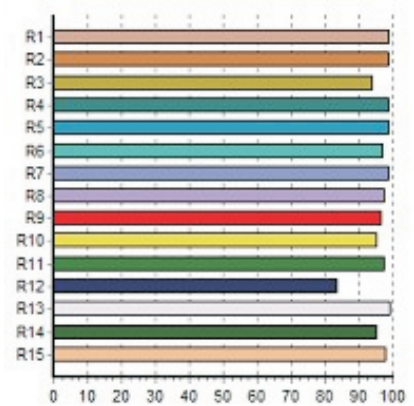


Decor models CRI 97

Typical values for 3000K

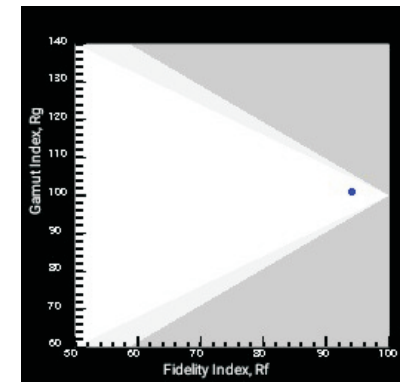
Color Rendering Index: CRI(Ra): 97 CRI(Re): 96

R values

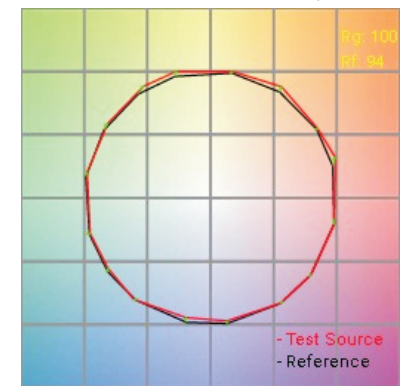


Gamut Area Index: GAI(BB8): 102 GAI(BB15): 106
 IES TM-30-15 Fidelity Index: Rf 94
 IES TM-30-15 Gamut Index: Rg 100

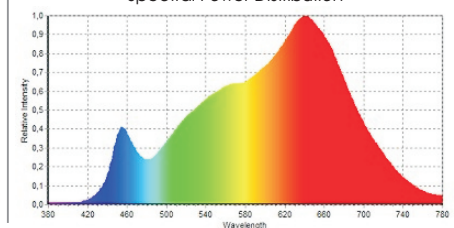
IES TM-30-15 Rf Rg Plot



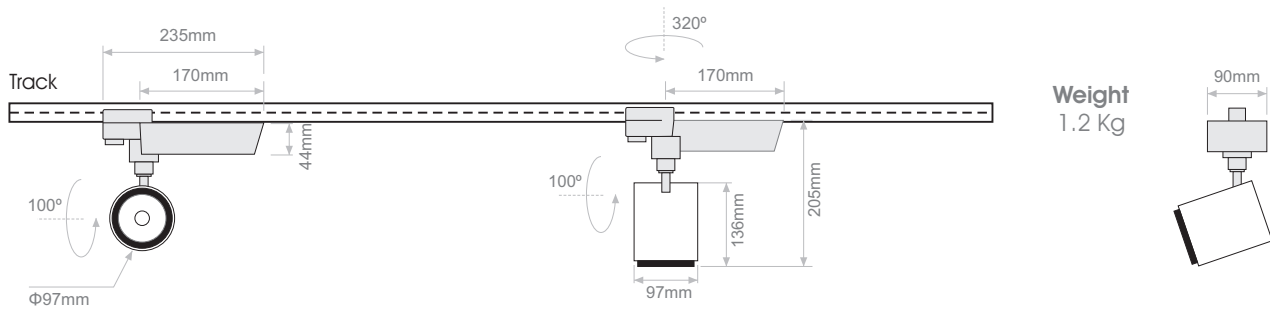
IES TM-30-15 Color Vector Graphic



Spectral Power Distribution



Dimensions & weights

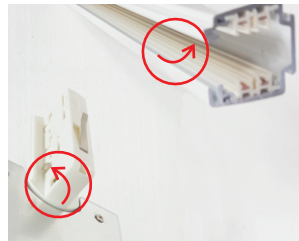


Installation guide

1 Preparations

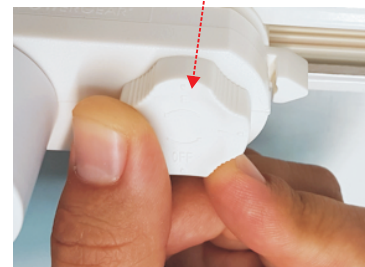
Step 1
Place the phase selection switch to "OFF" position.

Step 2
HAZEL can only be placed to the track system with its left side connected to the left side of the track.



3 Phase selection

Step 1
Select number 1, 2 or 3 by turning the selection switch for the phases 1, 2 and 3 accordingly.

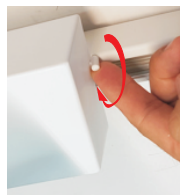


2 Connection

Step 1
Dock HAZEL to the desired position in the track system.

Step 2
Secure HAZEL from the back side by turning the safety switch clockwise.

Step 3
Secure HAZEL from the front side by turning the safety switch clockwise.



Note: For undocking you must first place the phase selection switch to "OFF" position.

Electrical Installation

Maximum loading of automatic circuit breakers

Model power	18,5/18,8W
Circuit Braker	B10A / B16A
Non dimmable driver	31 / 50
Phase cut driver	31 / 50

Notes.

- Actual quantities may differ due to used circuit breaker types and installation environment.
- In PHASE-CUT models, when a Leading edge dimmer is used, the total power of luminaires must not exceed the 1/5 of the dimmer power.

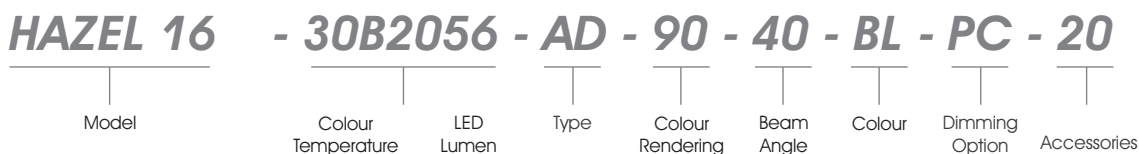


Ordering code information

Model (LED Power)	Colour Temperature	LED Lumen	Type	CRI	Beam Angle	Colour	Dimming Option	Accessories
HAZEL 16.5W (HAZEL 16)	(27B2379)	2700K - 2379lm	Adjustable (AD)	(80) 80				COVER (0) Standard (2) Honeycomb ↓ (XX) EXTRAS (0) No Extras
	(30B2489)	3000K - 2489lm						
	(35B2552)*	3500K - 2552lm						
	(40B2576)	4000K - 2576lm						
	(50B2654)*	5000K - 2654lm						
	(57B2700)	5700K - 2700lm						
(65B2750)*	6500K - 2750lm							
HAZEL 16.5W (HAZEL 16)	(27B1982)	2700K - 1982lm	Adjustable	(90) 90				
	(30B2056)	3000K - 2056lm						
	(35B2130)*	3500K - 2130lm						
	(40B2205)	4000K - 2205lm						
	(50B2260)*	5000K - 2260lm						
HAZEL 16.7W (HAZEL 16)	(27B1809)	2700K - 1809lm	Adjustable	(97) 97				
	(30B1926)	3000K - 1926lm						

(*) Colour temperatures at 3500K, 5000K, and 6500K are available upon request.

Ordering Code Example:



Means: HAZEL 16.5W, 3000K, 2056lm, Adjustable, CRI90, 40°, Black, dimming with Phase Cut control and Honeycomb accessory.



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At the end of its lifetime, the product must be delivered in a special waste collection center. The improper disposal can cause damages for the environment and poses dangers for the human health.

