



**HADAR70\*** Since the success of GAGGIONEw's LLC66 premium silicone collimator family, we have developed 70mm PMMA collimator range with variety of snap-on window accessories. HADAR70\* has **typical efficiency of 92 %** and supporting even larger COBs (3mm – 23mm LES), with better 3rd party connector support



10° FWHM

**HADAR70N**  
Narrow EH



25° FWHM

**HADAR70M**  
d R



7° FWHM

**HADAR70W**  
Wide EH



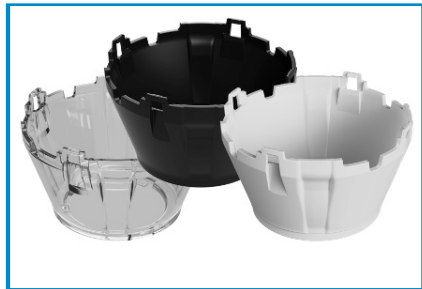
40° FWHM

**HADAR70WL**  
Large beam



55° FWHM

**HADAR70V**  
5 Re R



**HADAR70**  
i R-



10°-46° FWHM

**HADAR70Z**  
Zoom EH

HADAR70 holder and 3rd party connector support:

Holder reference	Compatibility
<b>HADAR70H10*</b>	LLH66 & B+W Bayonet50G
<b>HADAR70H10*</b>	LLH66 + B+W 4XX Typ Z1 combined
<b>HADAR70H10*</b>	GALAXY1 & GALAXY2 (patented, colormixing)
<b>HADAR70H40*</b>	BJB 35 mm & B+W Bayonet 35L
<b>HADAR70H41*</b>	BJB 50 mm & B+W Bayonet 50L
<b>HADAR70H90*</b>	HEKLA-G2 & HEKLA-K & B+W Hekla/HeklaXL

\* holder colors: 0 is clear, 1 is white, 2 is black



LLH66\*



GALAXY1 & GALAXY2 (RGBW)



Bayonet 50G

## HADAR70\* family's estimated beams:

HADAR70N	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
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k6idRZ N		w u	FC C	ED C	Ev u
k63dRZ N	w C	FA E	ED C	Dv F	Cu w
l - - RZ- H	vv E	Eu F	FE u	C u	D

HADAR70M	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
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k6idRZ N	EA E	EC B	ED D	Ev	DE E
k63dRZ N	Du u	Dw A	CE D	BF	Bv E
l - - RZ- H	C w	C w	C A	E w	F w

HADAR70W	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
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k6idRZ N	Dw D	Dw B	Dw B	CE A	CD A
k63dRZ N	AE F	AF A	AF A	Au C	uF A
l - - RZ- H	F w	E G	E G	F A	F B

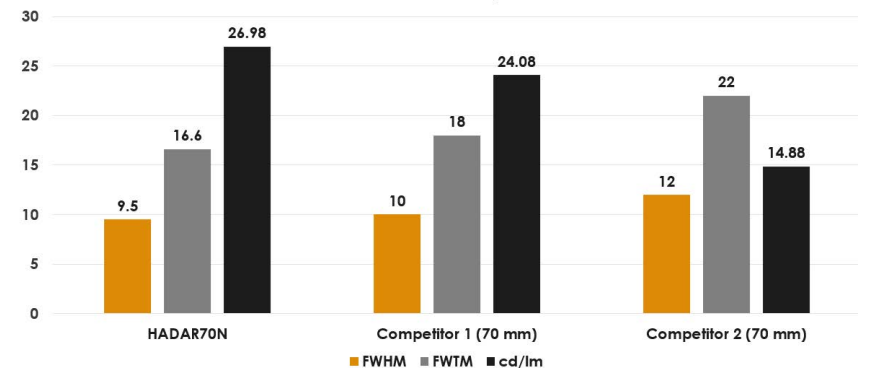
HADAR70V	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
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k6idRZ N	55,3	55,7	55,8	51,2	51,6
k63dRZ N	81,4	82,1	85,2	83,3	85,6
l - - RZ- H	1,1	1,1	1,0	1,1	1,1

HADAR70Z	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
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k6idRZ N	10 - 33,1	12,9 - 41,6	16,1 - 44,1	23 - 47,8	27,7 - 38,7
k63dRZ N	19,3 - 67,7	21,5 - 73,3	33,2 - 77	47,7 - 82,9	58,4 - 76,7
l - - RZ- H	17,2 - 2,9	14,3 - 1,4	6,3 - 1,2	3 - 1,1	2,1 - 1,2

HADAR70N vs Competition



**HADAR70W\*** HADAR70W\* window accessories provides ultimate flexibility. Extremely efficient (typical efficiency: >88%) snap-on window accessories are specifically designed to be used with HADAR70N series TIR lens, but you can mix HADAR70WF accessory also with any HADAR70 TIR lens to achieve the exact beam angle you want.



<10° FWHM

**HADAR70WF**

Frosted beam accessory



25° FWHM

**HADAR70WM**

Medium beam accessory



30° FWHM

**HADAR70WW**

Wide beam accessory



40° FWHM

**HADAR70WL**

Large beam accessory



50° FWHM

**HADAR70WV**

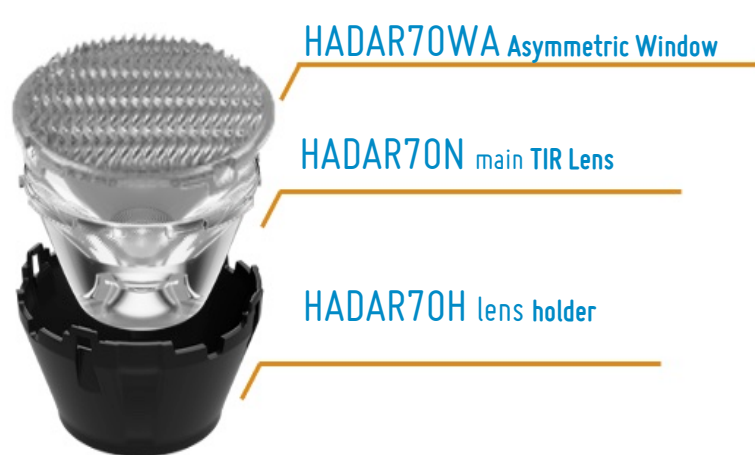
Very Large beam accessory



50° FWHM

**HADAR70WS**

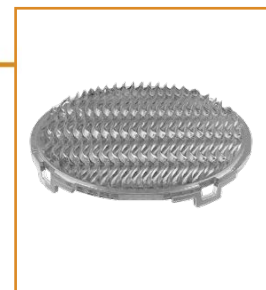
Super Wide beam accessory



**HADAR70WA** Asymmetric Window

**HADAR70N** main TIR Lens

**HADAR70H** lens holder



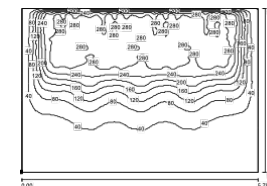
Wall washer

**HADAR70WA** accessory

## Estimated beams with HADAR70N lens + HADAR70W\* accessory:

<b>HADAR70WF</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	6,6	10,4	15	23,7	29,1
FWTM (°)	13,3	19,9	27,1	42,1	52
Efficacy (cd/lm)	38,6	17,7	9,4	3,8	2,5
<b>HADAR70WM</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	25,7	25,4	25,5	27,7	30,7
FWTM (°)	33,5	36,8	40,9	50,6	58,1
Efficacy (cd/lm)	4,8	4,5	4,1	2,8	2,2
<b>HADAR70WW</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	30,9	30,9	31,9	33,1	34,9
FWTM (°)	40,9	43,9	48,2	57,4	64,7
Efficacy (cd/lm)	3,4	3,2	2,8	2,2	1,8
<b>HADAR70WL</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	41,7	42,1	41,9	44,3	44,9
FWTM (°)	52,8	55,7	59,5	69,8	77
Efficacy (cd/lm)	1,9	1,9	1,8	1,4	1,2
<b>HADAR70WV</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	52,7	52,7	54,3	58	58,5
FWTM (°)	69	71	75,1	86,2	95,1
Efficacy (cd/lm)	1,2	1,2	1,1	0,9	0,8
<b>HADAR70WS</b>	LES 3 mm	LES 6 mm	LES 9mm	LES 15mm	LES 19mm
FWHM (°)	45,7	49,5	51,2	57,3	60,1
FWTM (°)	74,4	78,4	82,1	93,7	107,3
Efficacy (cd/lm)	1,4	1,3	1,2	0,9	0,7

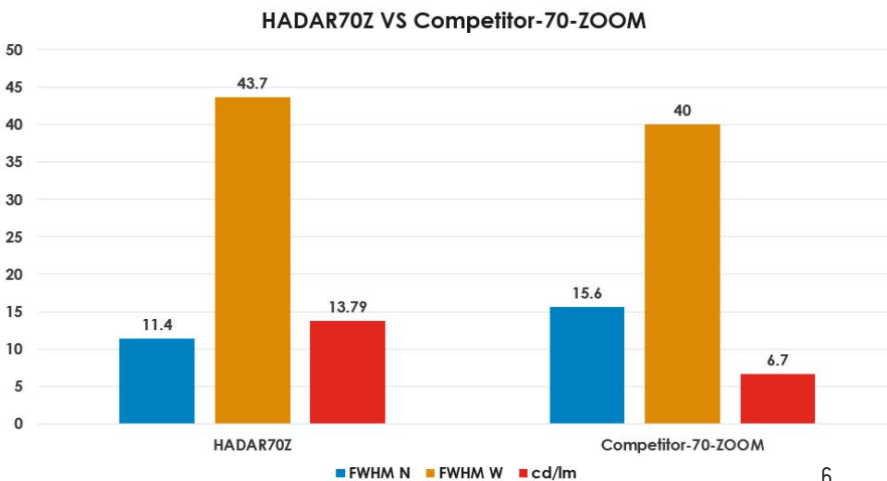
**HADAR70WA**  
Wall washer



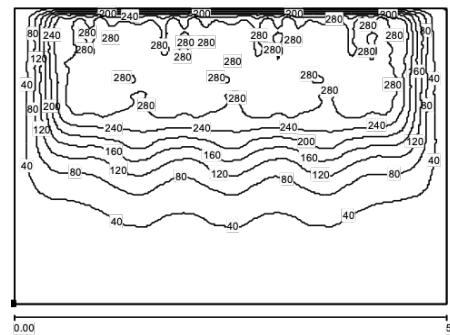
- \* Dialux simulation, four optics
- \* 1000 lumens per LED
- \* Distance to the wall 1m
- \* Optics spacing 1.25m

For full compatibility matrix please refer to our website [www.optic-gaggione.com](http://www.optic-gaggione.com)

**HADAR70Z** New innovative HADAR70Z zoom is patent pending optical design providing adjustable **10 – 45° beam**. HADAR70Z has industry's highest efficiency of **+88%** and is only solution in the market where the top lens is directly integrated to the lens holder (**rotation stop system**). Rotation stop system has **free rotation angle of 14°** that makes it easy to build fixture around HADAR70Z. HADAR70Z supports **COBs and Dim-to-warm solutions** from **3mm to 23mm LES**. Thanks to excellent optical design, HADAR70Z provides **broader beam range, higher efficiency and twice higher efficacy** vs competitors. Looking for RGBW zoom? use HADAR70Z with our patented **GALAXY base**, that is specifically designed for RGBW color mixing applications.

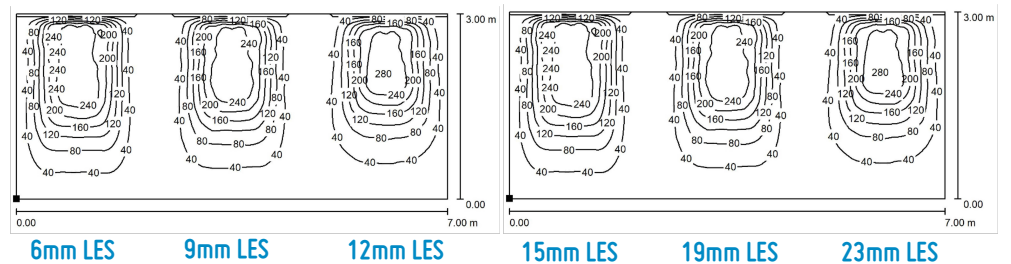


**HADAR70WA** New highly efficient, improved and patented wall washer window to be used with HADAR70N main TIR lens. We have minimized backlight and reduced surface brightness to provide glare-free experience. HADAR70WA' provides very visually pleasing beam, with soft cut-off. Light starts from the roof level and HADAR70WA is compatible with 3 mm – 23 mm LES COBs.



Dialux simulation, four optics  
 1000 lumens per LED  
 Distance to the wall 1m  
 Optics spacing 1.25m

**\*\* Extremely consistent results between different LES sizes. \*\***



For full compatibility matrix please refer to our website [www.optic-gaggione.com](http://www.optic-gaggione.com)