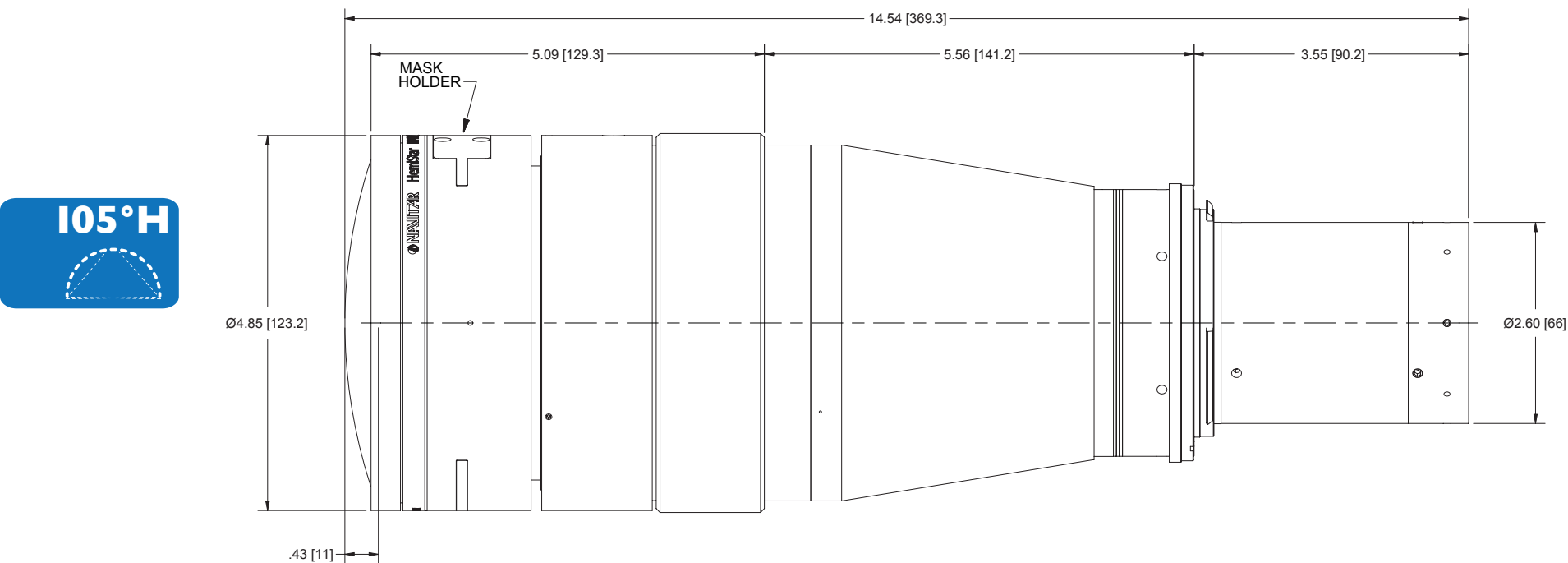


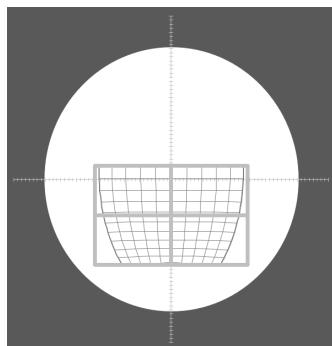
HemiStar HMI 17

Projection Angle Chart																	
Display Type		Resolution			Panel Size (mm)			# Pixels Projected			Projection Angles (°)				Shift		
Dome Lens		H	V	Pixel Pitch (µm)	H	V	Diag.	H	V	Mpixel Count	H	V	Diag.	TR Equiv.	H +/-%	V +/-%	V Angle +/-°
Original Panel 0.90” WQXGA		2560	1600	7.56	19.354	12.096	22.823	2560	1600	4.10	99.9	60.4	120.4	0.42	5%	12%	7.5
Alternate Panels	0.96” WUXGA	1920	1200	10.8	20.736	12.960	24.453	1920	1200	2.30	108.0	64.9	130.5	0.36	0%	0%	0.0
	0.94” HD1080	1920	1080	10.8	20.736	11.664	23.791	1920	1080	2.07	108.0	58.2	126.4	0.36	2%	6%	3.4
	0.94” SXGA+	1400	1050	13.68	19.152	14.364	23.940	1400	1050	1.47	98.8	72.4	127.3	0.43	2%	3%	2.3
Wide Angle Fisheye	0.76” WUXGA	1920	1200	8.5	16.320	10.200	19.245	1920	1200	2.30	83.0	50.7	99.3	0.57	18%	39%	21.4
	0.67” WUXGA	1920	1200	7.56	14.515	9.072	17.117	1920	1200	2.30	73.2	44.9	87.3	0.67	28%	58%	28.4
	0.66” HD1080	1920	1080	7.56	14.515	8.165	16.654	1920	1080	2.07	73.2	40.4	84.8	0.67	29%	71%	30.7



Panel Usage

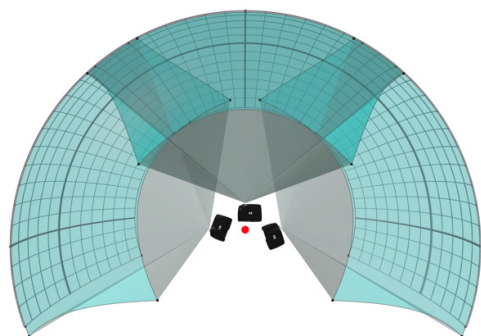
Active Image on Projector Panel



The illustration shows the active pixels used to project a hemisphere. A full hemisphere is projected as a circle of (active) pixels. This multi-channel example shows 3 WQXGA panels (0.90'') with shifted HMI I7 lenses.

On-Screen Projection

Active Image on Screen



The layout allows projection forward from the screen center. The steep projection to the base of the screen reduces cockpit shadowing & maximizes downwards FOV from the pilot eyepoint in flight simulation.

Lens Specifications

Focal Length	11.70mm	MTF Center	85% @ 66 lp/mm
Image Circle	24.454mm	MTF Edge	59% @ 66 lp/mm
Max Half-Angle	65.3°	Lateral Color R-G	< 3µm
F/#	F/2.5	Lateral Color B-G	< 2µm
Focus Range	800mm – Inf.	F-Theta Distortion	-9.0% Max
Transmittance	75%	Relative Illum.	>88%
Back Focus	Suitable for 0.95" single-chip DLP and 3LCD.		

HMI I7 - Model Numbers

Navitar Part #*	Projector	Resolution	Brightness ⁺
I-23150	Barco F32	SXGA+, 1080p, WUXGA	8,000
I-23150	Barco F35	1080p, WUXGA, WQXGA	7,500
I-25208	Barco F50	1080p, WUXGA, WQXGA	5,500
I-23150	Barco F70	WUXGA, WQXGA, 4K UHD	11,800
I-23150	Barco F90	WUXGA, WQXGA, 4K UHD	11,800
TBD	Norxe PI	WQXGA	4,000
I-26666	Christie D13WU-HS	1080p, WUXGA	13,000

* Part numbers vary depending on projector manufacturer and model

+ Projector brightness is stated for reference only, it is not representative a maximum lens brightness rating.

