

SQUERO ACOUSTIX SPOKE

LUMENWERX

PENDANT
STATIC WHITE, BIOS



Project: _____
Type: _____

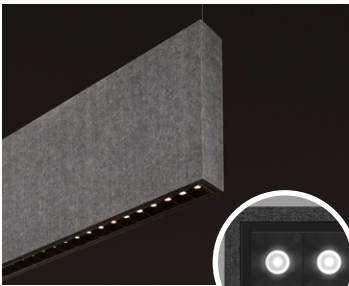
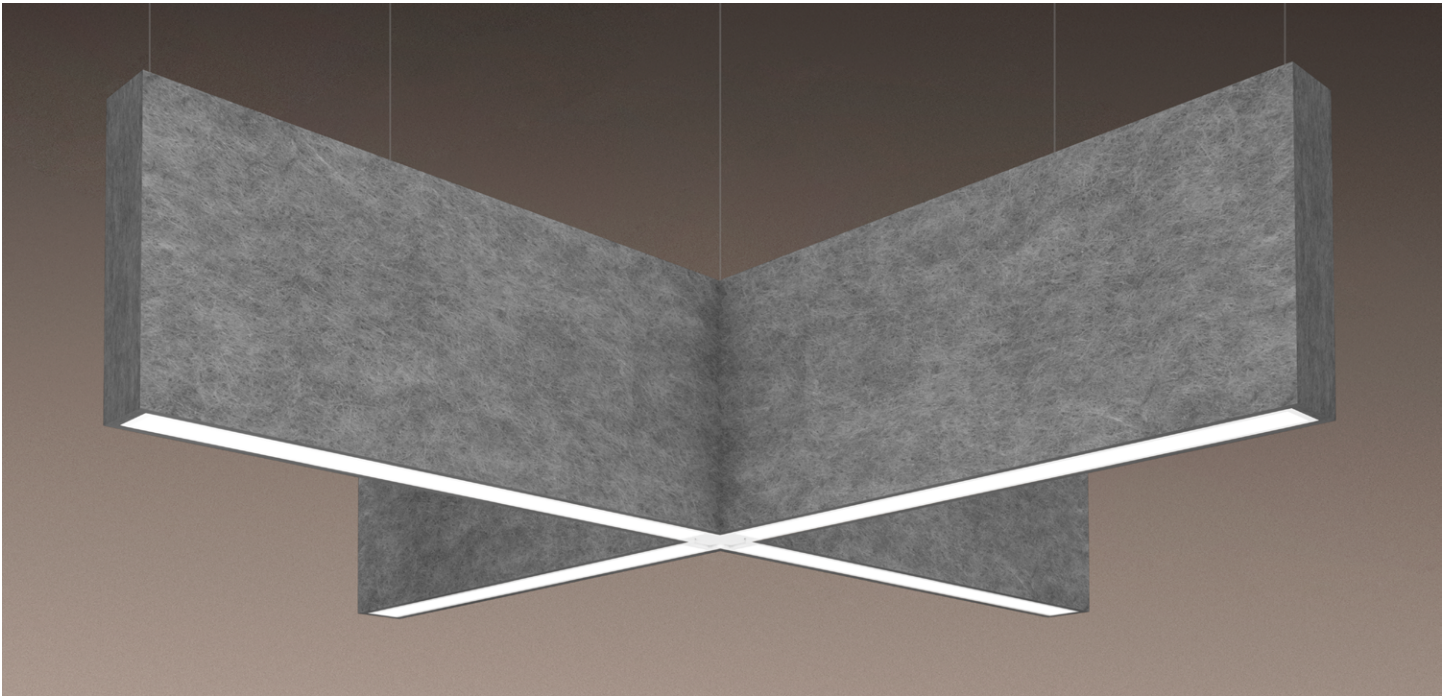
DESCRIPTION

Squero Acoustix is available in pre-assembled V, X, and Y spoke shapes created by linear units joined together with custom hubs. Like its non-acoustic Squero counterparts, Squero Acoustix is crisply detailed with a flat end cap. Three types of optics are available for advanced illumination—Parabolic louvers (MBPL, MPL, SPL), Miniature Reflector Optic (MRO), and High-Efficiency Lambertian Optic (HLO).

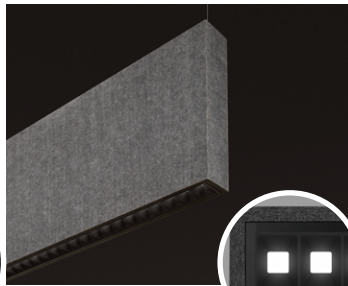
SENSORS
For latest information on sensors, click [here](#).



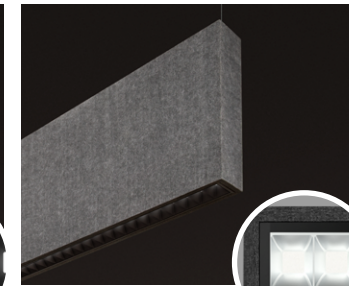
Up to 145 lm/W performance



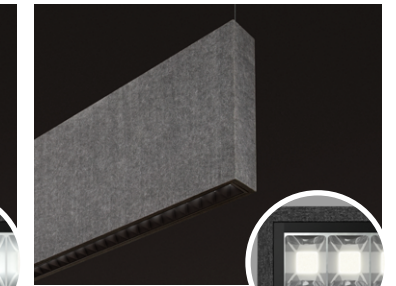
MRO
Miniature Reflector Optics



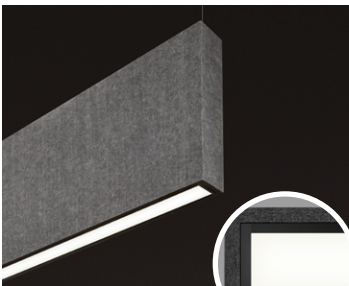
MBPL
Matte Black Parabolic Louver



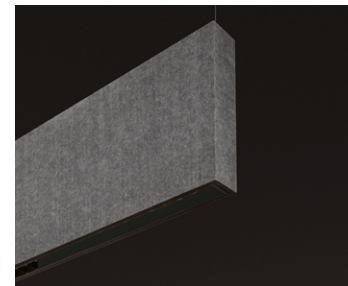
MPL
Matte Parabolic Louver



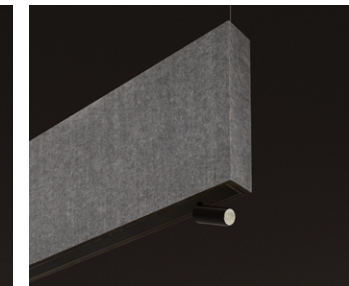
SPL
Specular Parabolic Louver



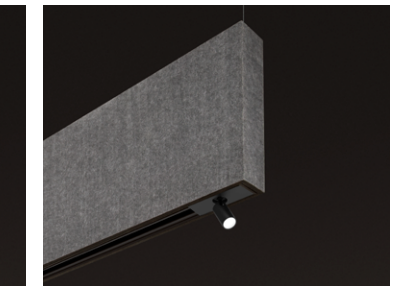
HLO
High-Efficiency Lambertian Optic



BLA
Blank



AAM
Adjustable Accent Module



MS
Micro Spot



SQUERO ACOUSTIX SPOKE LUMENWERX

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Project: _____
Type: _____

Order Guide

LUMINAIRE ID	DISTRIBUTION	LUMINAIRE HEIGHT	DIRECT OPTIC	MRO COLOR
SQUACOPY2 - Squero Acoustix Pendant Y Hub Spoke 2 ft SQUACOPY3 - Squero Acoustix Pendant Y Hub Spoke 3 ft SQUACOPYX2 - Squero Acoustix Pendant X Hub Spoke 2 ft SQUACOP60V2 - Squero Acoustix Pendant 60 deg V Hub Spoke 2 ft SQUACOP60V3 - Squero Acoustix Pendant 60 deg V Hub Spoke 3 ft SQUACOP60V4 - Squero Acoustix Pendant 60 deg V Hub Spoke 4 ft SQUACOP90V2 - Squero Acoustix Pendant 90 deg V Hub Spoke 2 ft SQUACOP90V3 - Squero Acoustix Pendant 90 deg V Hub Spoke 3 ft SQUACOP90V4 - Squero Acoustix Pendant 90 deg V Hub Spoke 4 ft SQUACOPI20V2 - Squero Acoustix Pendant 120 deg V Hub Spoke 2 ft SQUACOPI20V3 - Squero Acoustix Pendant 120 deg V Hub Spoke 3 ft SQUACOPI20V4 - Squero Acoustix Pendant 120 deg V Spoke Hub 4 ft	DI - Direct/Indirect D - Direct	8IN - 8" 12IN - 12" 16IN - 16"	MRO18 - 18 degree Miniature Reflector Optic MRO35 - 35 degree Miniature Reflector Optic MRO55 - 55 degree Miniature Reflector Optic MBPL ¹ - Matte Black Parabolic Louver MPL ¹ - Matte Parabolic Louver SPL ¹ - Specular Parabolic Louver HLO - High-Efficiency Lambertian Optic BLA ^{2,3} - Blank	WH ⁴ - White BK ⁴ - Black NA - Not applicable ⁴ Only available with MRO optics.

¹ Not available with BIOSTU.
² Specify with AAM or Micro Spot option.
³ Can also be specified as the direct optic option for a Direct/Indirect fixture.

INDIRECT OPTIC Specify NA for Direct fixture	LIGHT SOURCE ⁶	CRI	DIRECT LUMEN PACKAGE				INDIRECT LUMEN PACKAGE Specify NA for Direct fixture				COLOR TEMP.
WIO2 - Widespread Indirect Optic TIO ⁵ - Translucent Indirect Optic WAI2 ⁵ - Widespread Asymmetric Indirect Optic NA - Not applicable ⁵ Not available with BIOS.	SW - Static white BIOSST ⁷ - BIOS Biological Static BIOSDY ⁷ - BIOS Biological Dynamic BIOSTU ⁷ - BIOS Biological Tunable ⁶ Chromawerx Sola and Duo also available. Please consult factory. ⁷ See page 9 for details.	80CRI - 80 CRI 90CRI ⁸ - 90 CRI ⁸ Not available with BIOS.	ECO Y2 Y3 X2 V2 V3 V4	LOW 2100LM 3150LM 2800LM 1400LM 2100LM 2800LM	MEDIUM 4500LM 4500LM 4000LM 2000LM 3000LM 4000LM	HIGH ^{9,10} 6000LM 6750LM 6000LM 4000LM 6000LM 8000LM	ECO Y2 Y3 X2 V2 V3 V4	LOW 2100LM 3150LM 2800LM 1400LM 2100LM 2800LM	MEDIUM 4500LM 4500LM 4000LM 2000LM 3000LM 4000LM	HIGH ^{11,12,13} 6000LM 9000LM 8000LM 4000LM 6000LM 8000LM	27K ¹⁴ - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K ¹⁵ - 5000K ¹⁴ Not available with BIOS.

⁹ Not available with MBPL optic.
¹⁰ Not available with BIOS.
¹¹ Not available with WAI2.
¹² For Direct/Indirect, Direct must not exceed 750 lm/ft.
¹³ Not available with BIOS.

VOLTAGE	DRIVER ¹⁶	ELECTRICAL	ELECTRICAL SECTIONS (optional) ^{22,23}	MOUNTING ²⁸
120V - 120V 277V - 277V UNV - 120V-277V 347V ¹⁵ - 347V ¹⁵ Available with DI driver only.	DI - 1% 0-10V DA ¹⁷ - DALI LDE1 ¹⁷ - Lutron Hi-lume 1% Eco ELD1 - eldoLED 1% ECOdrive 0-10V ELDO - eldoLED 0.1% SOLOdrive 0-10V ¹⁶ PoE (Power-over-Ethernet) compatible. Consult factory for details. ¹⁷ On-site commissioning is required.	1C - 1 circuit 2C ¹⁸ - 2 circuits #MC ¹⁹ - Multi circuit EC - Emergency-powered fixture NL - Night light fixture DL - Daylight fixture GTDT ^{20,21} - Generator transfer device fixture ¹⁸ Available for Direct/Indirect only. Separate direct and indirect circuits. ¹⁹ Specify total number of circuits (#), including any required for electrical section, AAM or Micro Spot options. Provide drawing or layout specifications. Minimum 4' section per circuit. ²⁰ Minimum 4' fixture. ²¹ Not available with 347V.	#EC## ²⁴ - Emergency-powered section #NL## ²⁴ - Night light section #DL## ²⁴ - Daylight section #GTD## ^{24,25,26} - Generator transfer device section #EMB ^{26,27} - Emergency battery NA - None ²² Specify with multi circuit (#MC) electrical option only. ²³ Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. ²⁴ Specify quantity (#), and section length in inches (##). ²⁵ Minimum 4' section. ²⁶ Not available with 347V. ²⁷ Specify quantity (#). All batteries will be on the same circuit. Each battery powers a 4' section. For Direct/Indirect, minimum 8' fixture.	ACS - Aircraft cable, standard STS - Stem, standard ACC() - Aircraft cable, custom STC() - Stem, custom ²⁸ See page 3 for ordering details.

FIXTURE FINISH ²⁹	FELT COLOR	OPTIONS	MODULE (optional) ^{33,34}																																				
W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL# ²⁹ Blank & hub finish will match fixture finish.	<table border="0"> <tr> <th colspan="2">STANDARD COLORS</th> <th colspan="4">PREMIUM COLORS^{30,31}</th> </tr> <tr> <td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td> <td></td><td></td><td></td><td></td> </tr> </table> ³⁰ Please consult factory for more color options. ³¹ Lead time may vary.	STANDARD COLORS		PREMIUM COLORS ^{30,31}																																		FUI20 - Fuse 120V FU277 - Fuse 277V CTB9 ³² - T-bar caddy clip, 9/16" CTB15 ³² - T-bar caddy clip, 15/16" CTG9 ³² - Tegular caddy clip, 9/16" CTG15 ³² - Tegular caddy clip, 15/16" CST ³² - Screw slot caddy clip NA - None ³² Available with aircraft cable only.	#AAM21() - AAM 21° #AAM30() - AAM 30° #AAM36() - AAM 36° #MS25() - Micro Spot 25° #MS35() - Micro Spot 35° #MS50() - Micro Spot 50° NA - None ³³ See page 3 for ordering details. ³⁴ If more than one option is specified, separate codes with a "+", e.g. 1AAM21(...)+MS25(...).
STANDARD COLORS		PREMIUM COLORS ^{30,31}																																					



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Module

For a module, specify the options in the parentheses.

Example: 1AAM21(SW-80CRI-350LM-27K-W-NA)

MODULES (optional)								
MODULES ^{1,2,3}		LIGHT SOURCE	CRI	LUMEN PACKAGE		COLOR TEMP.	FINISH	OPTION
#AAM21() - AAM 21°	#MS25() - Micro Spot 25°	SW - Static white	80CRI - 80 CRI 90CRI - 90 CRI	AAM ⁴	MS ⁵	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K	W - Matte white B - Matte black	HCL ⁶ - Honeycomb louver NA - None ⁶ Not available with Micro Spot.
#AAM30() - AAM 30°	#MS35() - Micro Spot 35°			350LM - 350 lm	400LM - 400 lm			
#AAM36() - AAM 36°	#MS50() - Micro Spot 50°			600LM - 600 lm				
NA - None				⁴ 5 W for 350 lm and 8 W for 600 lm. Wattages are for reference only. May change based on driver.				
¹ Specify quantity (#).				⁵ 5 W. Wattage is for reference only. May change based on driver.				
² 6" blank per module.								
³ If more than one option is specified, separate codes with a "+", e.g. 1AAM21(..)+1MS25(..).								

Pendant Mounting Code

Standard

For a standard mounting, please refer to the information below.

MOUNTING	
ACS - Aircraft cable, standard	STS - Stem, standard
<p>Ø5" for power canopy Ø3" for non-power Canopies are white Power cord is white for all fixture finishes (except black fixture is black power cord) Aircraft cable length is 36"</p>	<p>Ø5" for power canopy Ø5" for non-power Canopies are white Stem finish is the same color as fixture Stem length is 18" Stem is not field adjustable</p>

Custom

Aircraft Cable

For a custom mounting, specify the options in the parentheses.

Example: ACC(3NPC-72IN-W-PCB-SLC)

MOUNTING					
ACC()					
	NON-POWER CANOPY SIZE	AIRCRAFT CABLE LENGTH	CANOPY FINISH	POWER CORD COLOR	OPTIONS
ACC	3NPC - Ø3" non-power canopy 5NPC - Ø5" non-power canopy	36IN - 36" 72IN - 72" 120IN - 120" #IN ¹ - Other lengths, specify in inches ¹ Maximum length is 288". For longer lengths, please consult factory.	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#	PCW - White PCB - Black	SEM - Seismic mounting SLC - Sloped ceiling for aircraft cable NA - None

Stem

For a custom mounting, specify the options in the parentheses.

Example: STC(5NPC-36IN-W-STW-SLS)

MOUNTING					
STC()					
	NON-POWER CANOPY SIZE	STEM LENGTH	CANOPY FINISH	STEM COLOR	OPTIONS
STC	5NPC - Ø5" non-power canopy	18IN - 18" 36IN - 36" #IN ² - Specify length in inches ² Minimum length is 6". Maximum length is 72". Stem is not field adjustable.	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#	STW - Matte white STAL - Aluminum STB - Matte black STCF# - Custom finish, specify RAL#	SLS - Sloped ceiling for stem NA - None

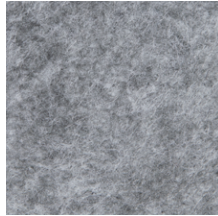
SQUERO ACOUSTIX SPOKE LUMENWERX

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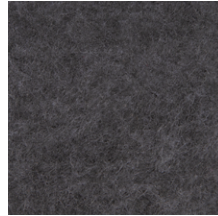
Standard Color Options



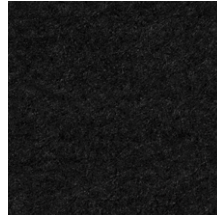
FWN - FROST WHITE



FON - FOG



ION - IRON



TBN - TRUE BLACK



MDN - MIDNIGHT BLUE



LVN - LAVENDER



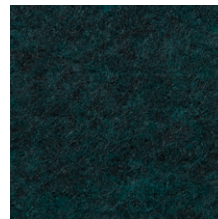
LEN - LATTE



CYN - CHERRY



PMN - PLUM



FGN - FOREST GREEN

Premium Color Options*



PKN - PAPRIKA



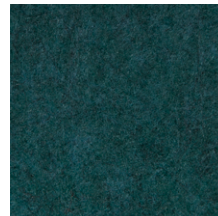
OGN - ORANGE



LNN - LEMON



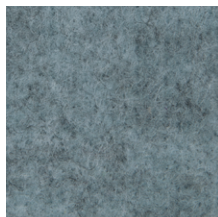
LMN - LIME



EGN - EVERGREEN



CDN - CLOUDY



LCN - LICHEN



SYN - SKY



BLN - BLUEBERRY



NVN - NAVY



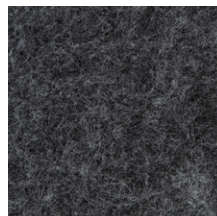
IVN - IVORY



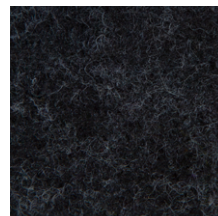
SLN - STEEL



CNN - CARBON



GHN - GRAPHITE



CLN - CHARCOAL



BHN - BLUSH



CFN - CAFÉ



GRN - GREIGE



MON - MOCHA



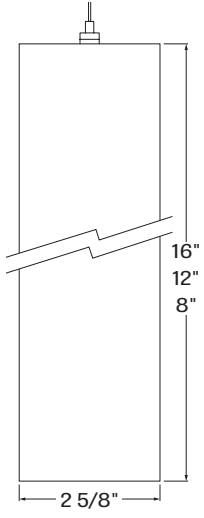
ESN - ESPRESSO

*Please consult factory for more color options.
 *Lead time may vary.

SQUERO ACOUSTIX SPOKE LUMENWERX

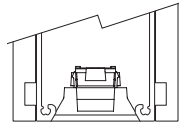
PENDANT
STATIC WHITE, BIOS

Dimension

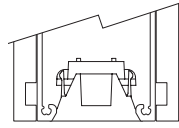


Section Views

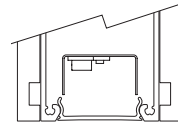
DIRECT OPTICS



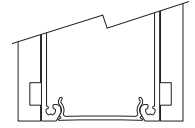
MRO
Miniature Reflector
Optic



MBPL, MPL & SPL
Matte Black, Matte &
Specular Parabolic Louver

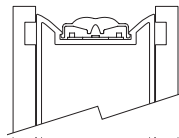


HLO
High-Efficiency
Lambertian Optic

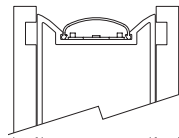


BLA
Blank

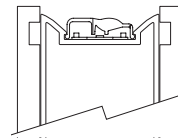
INDIRECT OPTICS



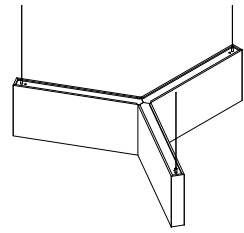
WIO2
Widespread Indirect
Optic



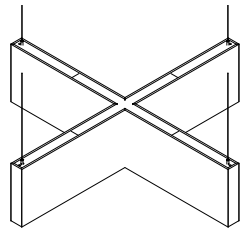
TIO
Translucent Indirect
Optic



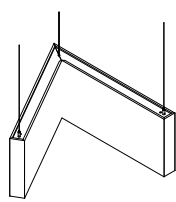
WA12
Widespread Asymmetric
Indirect Optic



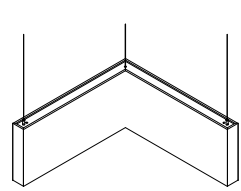
Y Hub Spoke



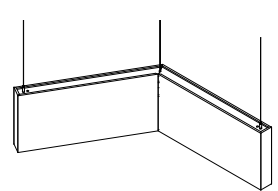
X Hub Spoke



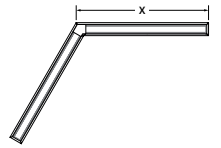
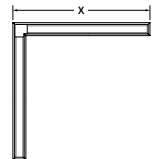
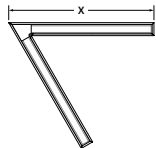
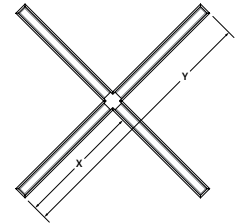
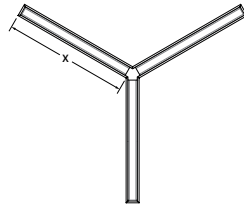
60 Deg V Hub Spoke



90 Deg V Hub Spoke



120 Deg V Hub Spoke



Y HUB SPOKE

X

2 ft	24 15/16"
3 ft	36 15/16"

X HUB SPOKE

X Y

2 ft	24 15/16"	52 1/4"
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60 Deg V HUB SPOKE

X

2 ft	29 1/8"
3 ft	41 1/16"
4 ft	45 1/16"

90 Deg V HUB SPOKE

X

2 ft	29 1/8"
3 ft	41 1/16"
4 ft	45 1/16"

120 Deg V HUB SPOKE

X

2 ft	29 1/8"
3 ft	41 1/16"
4 ft	45 1/16"

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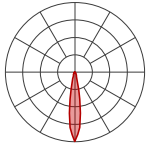
PENDANT
STATIC WHITE, BIOS

Photometrics

Values calculated based on a 4ft fixture at 35K and 80 CRI for all optics.

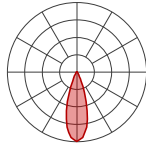
DIRECT OPTICS

MRO18



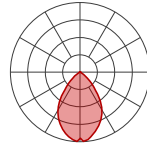
LM/FT	W/FT	LPW
350	2.7	130
500	4.0	125
750	6.4	118
1000	9.1	110

MRO35



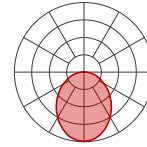
LM/FT	W/FT	LPW
350	2.9	121
500	4.3	116
750	6.9	108
1000	9.9	101

MRO55



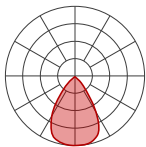
LM/FT	W/FT	LPW
350	3.2	109
500	4.8	104
750	7.7	97
1000	11.0	91

HLO



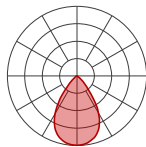
LM/FT	W/FT	LPW
350	3.1	112
500	4.6	108
750	7.3	103
1000	10.2	98

MBPL



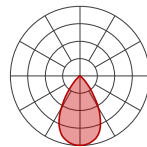
LM/FT	W/FT	LPW
350	5.2	67
500	7.5	66
750	11.7	64

MPL



LM/FT	W/FT	LPW
350	3.5	99
500	5.1	98
750	7.7	98
1000	10.6	95

SPL



LM/FT	W/FT	LPW
350	3.1	113
500	4.4	113
750	6.7	112
1000	9.1	109

MULTIPLIER TABLES - CCT/CRI

Use these tables to get results for different color temperatures and CRI for all Direct and Indirect photometric tables.

MRO18 / MRO35 / MRO55

CCT (K)	WATTS		LPW	
	CRI 80	CRI 90	CRI 80	CRI 90
2700	1.04	1.19	0.96	0.84
3000	1.00	1.15	1.00	0.87
3500	1.00	1.12	1.00	0.89
4000	0.99	1.10	1.01	0.91
5000	0.94	1.06	1.06	0.94

MBPL / MPL / SPL

CCT (K)	WATTS		LPW	
	CRI 80	CRI 90	CRI 80	CRI 90
2700	1.04	1.19	0.96	0.84
3000	1.00	1.15	1.00	0.87
3500	1.00	1.12	1.00	0.89
4000	0.99	1.10	1.01	0.91
5000	0.94	1.06	1.06	0.94

HLO

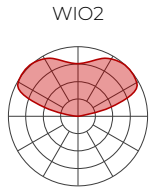
CCT (K)	WATTS		LPW	
	CRI 80	CRI 90	CRI 80	CRI 90
2700	1.05	1.27	0.95	0.79
3000	1.02	1.23	0.98	0.81
3500	1.00	1.19	1.00	0.84
4000	1.00	1.19	1.00	0.84
5000	0.96	1.12	1.04	0.89

SQUERO ACOUSTIX SPOKE LUMENWERX

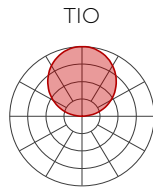
PENDANT
STATIC WHITE, BIOS

Values calculated based on a 4ft fixture at 35K and 80 CRI for all optics.

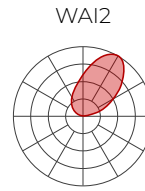
INDIRECT OPTICS



LM/FT	W/FT	LPW
350	2.4	145
500	3.5	141
750	5.5	136
1000	7.7	130



LM/FT	W/FT	LPW
350	2.8	127
500	4.0	124
750	6.3	119
1000	8.8	114



LM/FT	W/FT	LPW
350	2.5	139
500	3.7	135
750	5.8	130

MULTIPLIER TABLES - CCT/CRI

Use these tables to get results for different color temperatures and CRI for all Direct and Indirect photometric tables.

WIO2 / TIO / WAI2

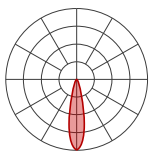
CCT (K)	WATTS		LPW	
	CRI 80	CRI 90	CRI 80	CRI 90
2700	1.05	1.27	0.95	0.79
3000	1.02	1.23	0.98	0.81
3500	1.00	1.19	1.00	0.84
4000	1.00	1.19	1.00	0.84
5000	0.96	1.12	1.04	0.89

DIRECT/INDIRECT - LPW CALCULATION

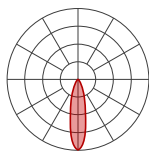
For Direct/Indirect performance values, follow the formula.

$$\left(\frac{\text{DIRECT LM/FT} + \text{INDIRECT LM/FT}}{\text{DIRECT W/FT} + \text{INDIRECT W/FT}} \right) = \text{LPW}$$

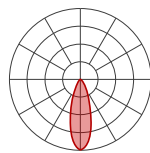
AAM



AAM 21°



AAM 30°

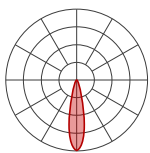


AAM 36°

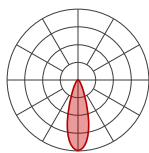
DELIVERED LUMENS

Wattage	5.0									
	80					90				
CRI	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K
Lumen	323	340	350	357	364	265	279	289	299	312
Wattage	8.0									
	CRI	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K
Lumen	553	583	600	612	624	454	478	495	513	534

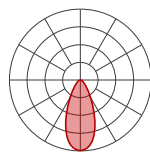
MICRO SPOT



Micro Spot 25°



Micro Spot 35°



Micro Spot 50°

DELIVERED LUMENS

Wattage	5.0									
	80					90				
CRI	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K
Lumen	373	400	400	432	432	324	344	344	345	372

SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT

STATIC WHITE, BIOS

Acoustic Calculator

Using the Lumenwerx Acoustix Value Calculator table, you can determine the number of acoustic luminaires required in a space by fixture type. We have three levels of recommended sound reduction: good, better, and best. Choosing one of these options will reduce the sound accordingly. The best option indicates the best acoustic improvement. Calculations are based on a standard ceiling height of 9 feet.



- 1 Calculate the square feet of your room (L x W).
- 2 Choose the level of acoustical improvement you are looking for, and find the corresponding value based on your room dimension and luminaire configuration.

% in reduction in reverberation time		
😊	GOOD	25%
😊😊	BETTER	40%
😊😊😊	BEST	50%

- 3 Use the Lumenwerx Acoustix Value Formula to determine the number of luminaires needed in the room.

**Square feet ÷ Value =
Number of luminaires**

Example:

Luminaires: Squero Acoustix
Pendant Y Hub Spoke 2 ft, 12" high
Room square feet: L: 20 ft x W: 18 ft
= 360 sq ft
Desired acoustical improvement:
Better = 33
**Number of luminaires needed in
the room:** 360 ÷ 33 = **11 luminaires**

LUMINAIRE	HEIGHT	Room dimensions under 300 sq ft			Room dimensions over 300 sq ft		
		GOOD 😊	BETTER 😊😊	BEST 😊😊😊	GOOD 😊	BETTER 😊😊	BEST 😊😊😊
Y Hub Spoke 2 ft	8"	29	14	9	44	23	15
	12"	44	21	12	68	33	21
	16"	57	29	18	87	44	29
Y Hub Spoke 3 ft	8"	43	20	14	65	34	23
	12"	65	32	18	101	50	32
	16"	86	43	27	131	65	43
X Hub Spoke 2 ft	8"	38	18	12	58	30	20
	12"	58	28	16	90	44	28
	16"	76	38	24	116	58	38
V Hub Spoke 2 ft	8"	19	9	6	29	15	10
	12"	29	14	8	45	22	14
	16"	38	19	12	58	29	19
V Hub Spoke 3 ft	8"	29	14	9	44	23	15
	12"	44	21	12	68	33	21
	16"	57	29	18	87	44	29
V Hub Spoke 4 ft	8"	38	18	12	58	30	20
	12"	58	28	16	90	44	28
	16"	76	38	24	116	58	38

NOTES:

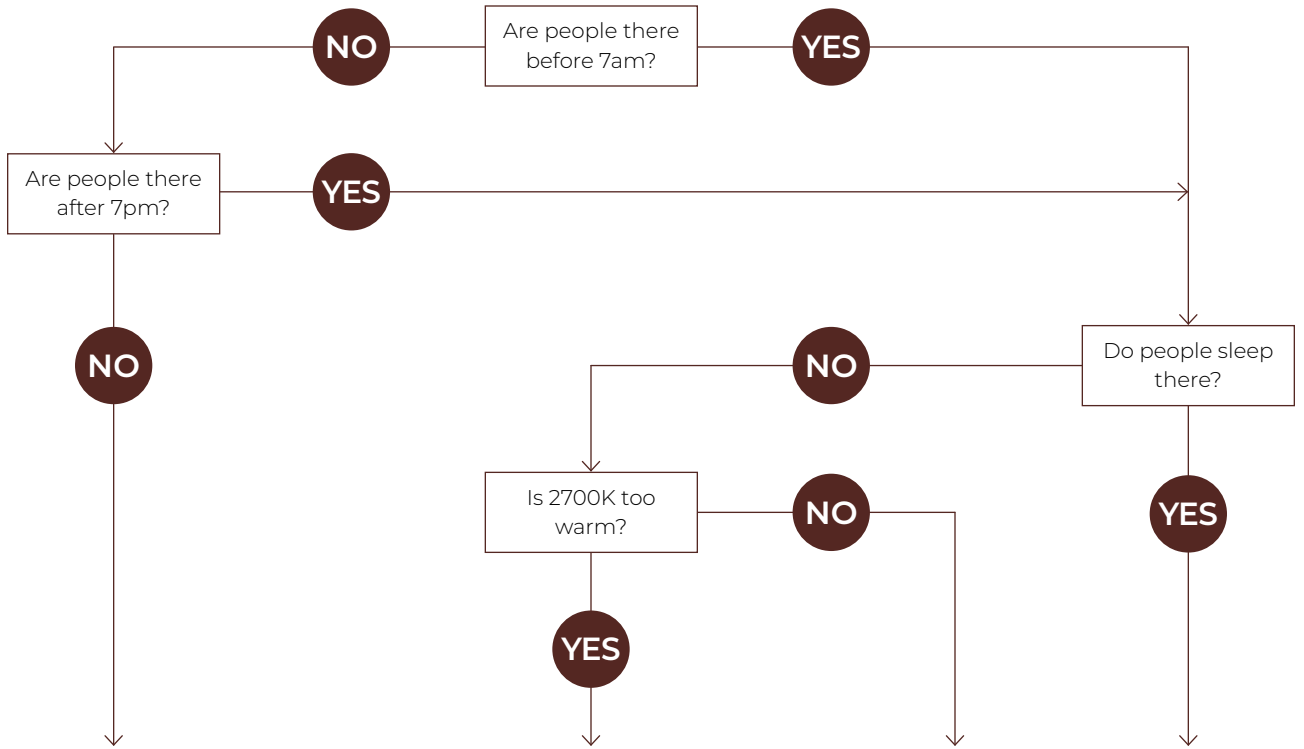
- You can mix lit and blank fixtures.
- Lumenwerx acoustic calculators were developed to act as a guide. For precise acoustic performance in a space, please consult an acoustician.

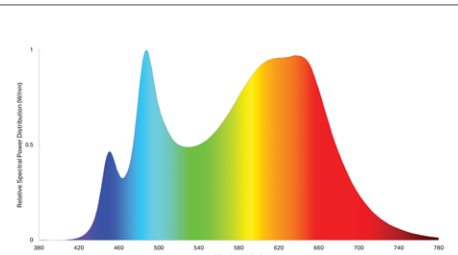
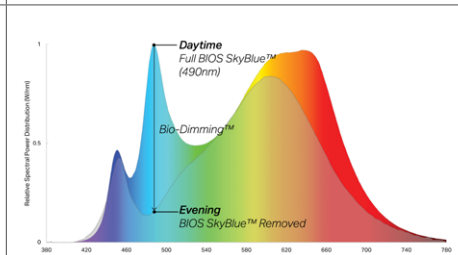
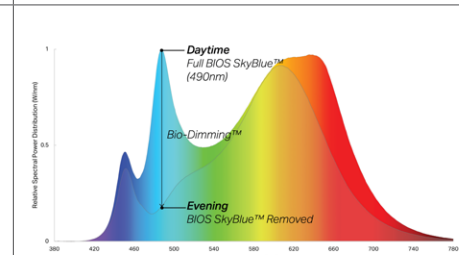
SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT
STATIC WHITE, BIOS

BIOS

Three BIOS Circadian LED solutions are offered – Biological Static, Biological Dynamic, and Biological Tunable.
Use the decision tree below to identify when and where to use BIOS Wellness LED Lighting Solutions.



Biological Static BIOSST	Biological Dynamic BIOSDY	Biological Tunable BIOSTU
No CCT change when dimmed	500K shift when dimmed	Dims to 2700K
Daytime solution	Daytime + evening solution	Daytime + evening solution
Spaces in operation during daytime hours, between 7am and 7pm	Spaces in operation overnight, after 7pm and before 7am, and when CCT color shift in the evening is not preferred	Suitable for spaces in operation overnight, after 7pm and before 7am, and where people do not sleep (CCT color shift in the evening is preferred)
E.g. offices, medical/dental offices	E.g. hospitals	E.g. offices, shiftwork
		

SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT

STATIC WHITE, BIOS

Technical Specifications

DIRECT OPTICS

Miniature Reflector Optic (MRO)

Locates individual, precisely molded TIR elements over each LED emitter, and further shield the source with precise parabolic reflectors. The controlled beam is remarkably comfortable – especially in a small LED luminaire.

MRO is available in a specular black or gloss white finish and creates a distinctive visual texture.

Different TIR elements offer a choice of beam spreads: narrow (18° with SC of 0.3), medium (35° with SC of 0.6), and wide (55° with SC of 0.9). These concentrated distributions can provide effective task illumination in a variety of applications.

Each MRO module is 6" long with five optical chambers.



Parabolic Louvers (MBPL, MPL & SPL)

Parabolic Louver Optics provide excellent shielding and a pleasing crisp visual texture. The precisely molded louvers consist of 1" deep blades and side reflectors with shielding of 50° lengthwise and 45° crosswise.

The parabolic contour of the blades and side reflectors direct light into a comfortable downlight distribution with a spacing criterion of 1.1, while minimizing shadows from the LED array above each cell.

Three finishes are available: matte black, matte, and specular. Specular (SPL) provides higher efficacy, sharper cut-off, and an ultra quiet appearance at shallow viewing angles. Matte (MPL) offers a softer appearance, a wider beam spread, and gentle brightness transition at cut-off. Matte black (MBPL) offers the highest UGR in Squero as the black parabolic louver is very quiet and glare free. The UGR is the best in class rating of under 10.



High-Efficiency Lambertian Optic (HLO)

The High-Efficiency Lambertian Optic (HLO) shielding of diffusing 0.075" thick acrylic with up to 88% transmission and good source obscuration is combined with matte white side reflectors to create an efficient optical chamber with uniform luminosity.

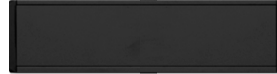
Luminaire brightness is controlled by the flux-to-shielding area ratio. For visual comfort, avoid high lumen output unless Squero is installed in a high ceiling application. Spacing criteria: 1.2 (longitudinal) x 1.1 (lateral).



Blank (BLA)

Aluminum Blank covers provide spacing – functional or rhythmic – in the direct component of a Squero Combination luminaire.

Covers are sized according to the Combination design, finished to match the luminaire housing, and snap into the aperture.



INDIRECT OPTICS

Widespread Indirect Optic (WIO2)

The Widespread Indirect Optic (WIO2) is a horizontal LED array with a widespread indirect micro prismatic optic that offers an impressive 160° spread. WIO2 creates an even illumination for smooth brightness on the ceiling that can achieve uniformity ratios of up to 2:1.

Uniformity [max/min]

Based on 18' continuous runs, in a 20' x 40' room, 10' wall height

Mounting height from ceiling	Spacing (Center to center)		
	8'	10'	12'
12"	5.5	10.0	9.0
18"	6.5	6.0	6.0
24"	2.5	4.0	4.5

Translucent Indirect Optic (TIO)

The Translucent Indirect Optic (TIO) is composed of a horizontal LED array that has a translucent lens to mask pixilation from the diodes. TIO has a 100° spread in the indirect that is ideal when the fixture is mounted farther away from the ceiling.

Widespread Asymmetric Indirect Optic (WAI2)

The Widespread Asymmetric Indirect Optic (WAI2) offers an upward grazing effect with a 45° forward throw. It softly highlights the ceiling in the up-light while distributing the required illumination of the rest of an interior space. For avoiding glare and enjoying visual comfort, WAI2 is an ideal solution.

LIGHT SOURCE - STATIC WHITE

Custom linear array of high-flux LEDs mounted onto aluminum-backed circuitry with quick-connect wiring to facilitate service and optimize thermal management. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

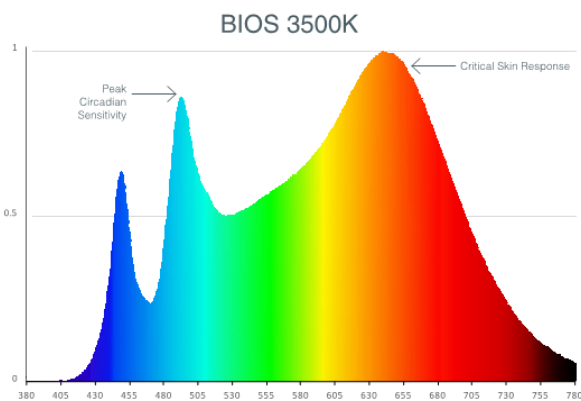
SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT

STATIC WHITE, BIOS

LIGHT SOURCE - BIOS

BIOS SkyBlue™ Technology is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night, and overall feelings of well-being. The non-visual light signals that stimulate our circadian system have peak intensity in the "sky blue" region. As the diagram below illustrates, BIOS SkyBlue technology shifts the peak LED spectral intensity (490 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.



Three BIOS solutions are offered: BIOS Biological Static (BIOSST), BIOS Biological Dynamic (BIOSDY), and BIOS Biological Tunable (BIOSTU). See page 7 for details.



WELL for Light - The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 55 or L04 meets WELL glare category (b-c-d)
- Feature 58 or L07 when 90CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5 % or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Sound - This luminaire is recommended for use as an acoustical absorption surface to limit reverberation times (RT) in a given space. This luminaire contributes to noise reduction and vibration dampening to promote focus and concentration. Reverberation needs to be calculated in each space based on the materials used.



WELL for Mind - This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, and smooth optics. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information, please contact well@lumenwerx.com

LUMINAIRE SHAPE

Squero Acoustix Spoke is available in 3 shapes, Y, X, and V spoke, and 3 height options, 8", 12", and 16". Y spoke comes in 2' and 3' options, and X spoke comes in 2' only. V spoke comes in 2', 3', and 4' options, and in 60°, 90°, and 120° V configurations.

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency > 84%, PF > 0.9, THD < 20%. Other specifiable options include Lutron Hi-Lume 1% Eco, eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, Duo (tunable white), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT

STATIC WHITE, BIOS

ELECTRICAL SECTION OPTIONS

Electrical section options are available for fixtures specified as multi circuit (#MC). With MC, specify the total number of circuits (#), including any circuits required for optional electrical sections. A drawing is required to specify the layout. Please consult factory for custom configurations.

Electrical sections

Options include emergency-powered (#EC##), night light (#NL##), daylight (#DL##), and generator transfer device (#GTD##) sections. Specify the quantity (#), as well as the section length in inches (##).

Example 1: A 32' Direct fixture with two 8' emergency-powered sections on a second circuit.

Code: 2MC-2EC96

Example 2: A 16' Direct/Indirect fixture with separate circuits for direct and indirect, and with one 4' night light section on the direct side on a third circuit.

Code: 3MC-1NL48

Example 3: A 24' Direct fixture with one 4' generator transfer device section.

Code: 1MC-1GTD48

Battery

Each emergency battery (#EMB) powers a 4' section. All batteries will be on the same circuit. Specify the number of batteries (#) required.

Factory installed long life, high temperature, maintenance-free Lithium-Ion battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 1000 lumens per 4' (25°C) emergency lighting output and recharge time of 24 hours.

MOUNTING OPTIONS

Fixtures can be pendant-mounted, using aircraft cables, or stem-mounted. Unless otherwise specified, Lumenwerx provides the following hardware:

Standard aircraft cable option (ACS) - Canopies are white, Ø5" for power canopy, Ø3" for non-power. Power cord is black for black fixtures, and white for all other fixture finishes. Aircraft cable length is 36".

Standard stem option (STS) - Canopies are white, Ø5" for both power and non-power. Stem finish is the same color as fixture. Stem length is 18". Stem is not field adjustable.

Caddy clips, if required specify under OPTIONS

For all other options, see the mounting code on page 3.

FINISH

Interior - 95%, reflective matte powder coated white paint

Exterior - Matte white, matte black, or aluminum powder coating. Custom finishes are also available.

ACOUSTIC FINISH

Material is 100% polyester containing up to 50% of recycled plastic bottles (PET) with an ASTM E-84 Class A fire rating and is moisture resistant.

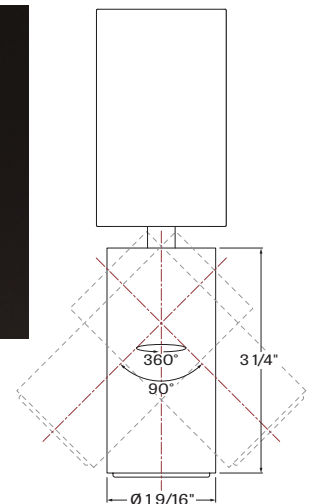
CARE

Remove dust and debris by wiping down with a clean, dry or damp, soft, lint-free cloth, or vacuum.

ADJUSTABLE LED ACCENT MODULE (AAM)

The Adjustable Accent Module (AAM) features a Ø 1 9/16" x 3 1/4" cylinder that rotates 360° and tilts 90°. The LED light source is coupled with TIR optics to provide beam angles of 21°, 30°, and 36° while producing up to 600 lumens. LED light source CCT options are 2700K, 3000K, 3500K, 4000K, and 5000K, available in either 80 CRI or 90 CRI.

The AAM module can be selected in either a white or black finish and a honeycomb louver accessory is also available. The AAM driver is mounted above the cylinder, inside the SQUERO housing and accepts universal input voltage (120-277VAC) while providing 0-10V dimming control.



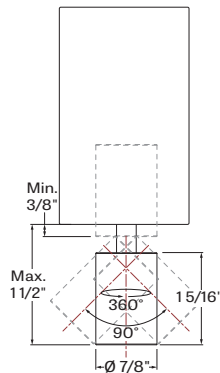
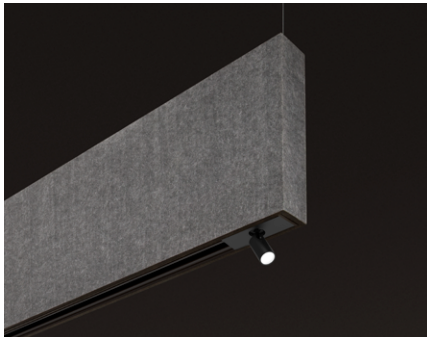
SQUERO ACOUSTIX SPOKE LUMENWERX

PENDANT

STATIC WHITE, BIOS

MICRO SPOT (MS)

The Micro Spot is a $\varnothing 7/8"$ x $1 5/16"$ adjustable spotlight that extends, retracts, rotates 360°, and tilts 90°. Its LED light source is coupled with a TIR refractor to provide beam angles of 25°, 35°, and 50°, while producing up to 400 lumens. LED light source CCT options are 2700K, 3000K, 3500K, 4000K, and 5000K, available in either 80 CRI or 90 CRI. The Micro Spot is offered in a white or black finish. The Micro Spot driver is mounted within the luminaire housing and accepts universal input voltage (120-277VAC) with 0-10 V dimming control.



CONSTRUCTION

Housing - Extruded aluminum (0.100" nominal) up to 90% recycled content

Interior brackets - Die formed cold rolled sheet steel 10 gauge thick

Hubs - Digitally milled from solid aluminum

Louvers - Injection molded optical grade polycarbonate (0.100" nominal) up to 95% reflective

Light guide - Clear PMMA laminated with microstructure film formed into optical TIR/extraction form

End caps - Die cast aluminum (0.125" nominal)

Hanger - Chromed griplock securely attached in end caps and/or joiners with stainless steel hardware

Aircraft cable suspension - 7x7 braids stainless steel air craft cable 0.05" thick

Stem - 0.5" diameter threaded steel tube matte white or aluminum powder coating. Custom finishes are also available.

WEIGHT

Squero Acoustix Spoke - (16in fixture)

	Spoke Length	Direct/Indirect		Direct	
		Weight		Weight	
		(LB)	(KG)	(LB)	(KG)
Y Hub	2 ft	22.74	10.31	13.49	6.12
	3 ft	32.92	14.93	19.49	8.84
X Hub	2 ft	31.09	14.1	18.61	8.84
60 deg V Hub	2 ft	16.49	7.48	9.71	4.40
	3 ft	22.6	10.25	13.36	6.06
	4 ft	24.64	11.18	14.55	6.6
90 deg V Hub	2 ft	17.34	7.87	10.11	4.59
	3 ft	23.44	10.63	13.77	6.25
	4 ft	25.49	11.56	14.96	6.79
120 deg V Hub	2 ft	15.78	7.16	9.32	4.23
	3 ft	21.89	9.93	12.97	5.88
	4 ft	23.93	10.85	14.17	6.43

ENVIRONMENT

Ambient temperature at fixture location shall not exceed 30°C/86°F. For indoor use only.

CERTIFICATION

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

WARRANTY

Lumenwerx provides a five-year limited warranty on electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.