





# Metalux

Celebrating 50+ years, Metalux offers an extensive line of LED lighting products including recessed, linear and industrial fixtures.

Metalux's complete family of luminaires are dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency.

Metalux delivers innovation, quality, product availability, and responsiveness all with an affordable value proposition.



The product selection guides are simple yet powerful tools to help assist with product comparisons and selection based on features, performance and value.

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### **Commercial LED** Planes of Light

### Metalux

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				iels							
_	Education	CGT	FP	FPS	FPX	AP GR	GR	RTC	FR	Cruze Retrofit	Cruze ST
λ.	Office	***	***	***	*** ***	***	***	***	**	***	***
ICAB	Healthcare	**	**	***	***	**	**	***	***	*	***
<b>APPLICABILITY<sup>1</sup></b>	Retail	**	***	***	***	**	**	**	**	*	***
	Sizes	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4
	lm/W (Max)	115	136	120	130	140	140	126	130 STD/150 HP	138	157
	Lum (Max)	5,300	7,000	6,500	6,400	6,400	18,000	7,000	3200 STD/8000 HP	5,000	17,000
CE	Life (@60K)	L84	L86	L87	L87	L90	L89	L75	L88	L85	L90
FEATURES / PERFORMANCE	Lens	Frost, Smooth	Frost, Smooth	Frost, Smooth	Frost, Smooth	Clear, Prismatic	Frost, Prismatic	Frost, Ribbed	Frost, Smooth	Frost, Ribbed	Round or Square, Frost - Ribbed or Smooth, Perf Inlays
PER	Emergency	Remote	Remote	Remote	Integrated	No	Integrated	Integrated	Integrated	Integrated	Integrated
ES /	CRI	80+	80 / 90	80+	80+	80+	80+	80+	80+	80+	80+/90
TUR	Sensor Location	Tile Mount	Tile Mount	Tile Mount	Integrated	Tile Mount	Integrated	Integrated	Integrated	Integrated	Integrated
FE/	DLC	Standard	Premium	Standard	Premium	Premium	Premium	Premium	Premium	Premium	Premium
	Door	No	No	No	No	Yes	Yes	No	Yes	None	Yes
	Lumen / CCT Select	No	No	💿 Yes 🏐	No	No	No	No	No	No	No
	VividTune™	No	No	No	No	No	Tunable White	No	No	No	Tunable White
<b></b>	Stand Alone Daylight / Occupancy				~		~	~	~		~
RATI	WaveLinx Lite				<b>v</b>		<ul> <li>✓</li> </ul>			~	~
INTEGRATED CONTROLS	WaveLinx				<ul> <li>✓</li> </ul>		<b>v</b>	~	~	~	~
Ξo	DLVP				<b>v</b>		<ul> <li>✓</li> </ul>		~		~



### Commercial LED

Linear

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## Metalux

		_ Good				Better				Best 🗾
	on products earn more			4	1					
		APSHP	SHP	ST	SLSTP	SSRK Retrofit	SNLED	SRL	SWLED	WSL
	Education			**	***	*	***	***	***	**
Ϊ	Office			**	***	*	***	***	***	***
<b>APPLICABILITY</b> <sup>1</sup>	Healthcare				*	*	**	**	*	**
LIC/	Retail			*	**	***	***	***	*	***
APF	Industrial			**	**	***	***	***	**	**
	Residential	***	***	***	**					
	Length	3', 4' Nominal	4' Nominal	2', 4', 8'	2', 4', 8'	4', 8'	2', 4', 8'	4', 8'	4'	4', 8'
щ	lm/W (Max)	105	105	108	125	159	150	149	150	121
IANC	Lum (Max)	4,000	4,600	8,400	10,500	8,000 / 4 ft.	17,000	11,000	8,000	16,000
ORN	Life (@60K)	L70/50K	L70/50K	L70/50K	L70/50K	L94	L87	L82	L91	L81
FEATURES / PERFORMANCE	Lens	Lens Optic and Reflector	Frost, Poly	White, Single or Dual Lens	Clear, Poly	Frost, Acrylic	Frost, Acrylic	Frost, Acrylic	(Vandal Resistant) Frost, Acrylic	WaveStream, Acrylic
RES	Emergency	None	None	None	None	Integrated	Integrated	Integrated	Integrated	Integrated
ATUI	CRI	80+	80+	80+	80+	80+	80+	80+	80+	80+
Ë	Sensor Location	N/A	N/A	Remote	Simple ("CS")	N/A	Integrated	Integrated	Integrated	Integrated
	DLC	No	Energy Star	Standard	Standard	Premium	Premium	Premium	Standard	Standard
	Basic Occupancy				<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
INTEGRATED Controls	Stand Alone Daylight / Occupancy					~	~	v	~	~
TEGI	WaveLinx Lite							<b>v</b>	<ul> <li>✓</li> </ul>	<b>~</b>
ΞÖ	WaveLinx							<b>v</b>	<ul> <li>✓</li> </ul>	<b>~</b>
	DLVP									~



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		Good			Be	tter	Best 🗾		
Click to	c on products learn more	COL +				/			
		FM CCT	WP	WPLD	LW	CWPLD	WNLED	WSNLED	BCLED
	Education	**	**	**	***	***	***	**	**
Σ	Office	*	*	**	**	**	**	***	*
<b>APPLICABILITY</b> <sup>1</sup>	Healthcare	*	*	*	*	*	*	**	**
PLIC/	Retail	**	*	*	**	**	*	***	*
API	Industrial		*		*	*	**		
	Residential	***	***	**			*	*	
	Sizes	9", 11", 15", 19"	2' and 4', 5.1" wide	2', 4'	4', 6.8" wide	4'	2', 4'	2', 4'	2', 4'
щ	lm/W (Max)	85	114	110	122	115	118	108	120
FEATURES / PERFORMANCE	Lum (Max)	2,400	3,400	4,700	4,617	5,000	5,000	6,500	4,800
FORM	Life (@60K)	L70/50K	L70/50K	L70/50K	L82	L70/50K	L88	L87	L82
PER	Lens	Frost / Acrylic	Prismatic Acrylic	Clear, Poly	White Ribbed Acrylic	Frost, Poly	Frost, Acrylic	Frost + Film, Acrylic	Frost, Smooth
RES /	Emergency	No	No	No	Integrated	No	Integrated	Integrated	Integrated
EATU	CRI	+08	80+	80/90	80+	80+	80+	80+	80+
Ē	Row Mount	NA	N/A	No	Yes	Yes	Yes	Yes	Yes
	DLC	Energy Star	Standard	Standard	DLC, Title 24 Non-Res	Standard	Standard	Standard	None
•	Basic Occupancy								
INTEGRATED Controls	Stand Alone Daylight / Occupancy								
ZŐ	Enlighted								



### **Specification LED** Recessed

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	on products learn more									
		Cruze ST	Cruze SB	SkyRidge	RLN	Ovation	Accord	Perceive	InDepth	Encounter
Ā	Education	***	***	*	**	**	*	***	***	**
<b>APPLICABILITY</b> <sup>1</sup>	Office	***	**	***	***	***	***	***	***	***
LICA	Healthcare	**	***	**	**	*	**	***	***	***
APF	Retail	***	**	**	**	***	**	**	**	**
	Sizes	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x2, 1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x2, 1x4, 2x2, 2x4, Metric
	lm/W (Max)	157	157	150	139	109	127	137	127	141
	Lumens (Max)	17,000	7,500	6,400	8,000	5,000	7,300	9,000	9,000	7,400
	Life (@60K)	L90	L84	L92	L93	L89	L89	L85	L86	L92
FEATURES / PERFORMANCE	Lens	Round or Square, Frost - Ribbed or Smooth, Perf Inlays	Round, Frost - Ribbed or Smooth	Acrylic (WaveStream)	Frosted Acrylic	Metal Perforated	Frosted Acrylic	Acrylic (Perceive Optics)	1", 2" Cube Regress 1", 2", 3" Cube Drop 2" Curve Regress & Drop	Acrylic (WaveStream)
/ PERF	Service from Below	No	Yes	No	Yes	No	Yes	Yes	No	No
JRES ,	Emergency	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated, Indicator is Remote	Integrated
EATI	CRI	80+ / 90	80+ / 90	80+	80+ / 90	80+	80+	80+ / 90	80+	80+ / 90
<b>–</b>	Sensor Location	Integrated	Integrated	Integrated	Integrated	Tile Mount	Integrated	Integrated	Tile Mount	Integrated
	DLC	Premium	Premium	Premium	Premium	Standard	Premium	Premium	Premium	Premium
	Air Venting	Yes	None	Yes	None	Yes	Yes	None	Planned	Yes
	VividTune™	Tunable White	Tunable White	No	Tunable White	No	No	Planned	No	Tunable White
INTEGRATED Controls	Stand Alone Daylight / Occupancy	~	~	~	~	~	~	~		~
TRC	WaveLinx Lite	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>			<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>
INTE	WaveLinx	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>
	DLVP	~	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>		<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>

Notes: 1.  $\star \star \star$  = high applicability,  $\star \star$  = medium applicability,  $\star$  = low applicability, blank = non-applicable



### **Industrial LED** High Bay

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		LHB	VHB	UHB	ILED	Steeler	HBLED	ОНВ	ХНВ	Benchmark
	Big Box Retail	*	*	**	***	**	*	***		*
Ā	Sports / Recreation	**	**	**	*	***	**	***		**
	Warehouses	***	***	**	***	***	***	***		
<b>APPLICABILITY</b> <sup>1</sup>	Manufacturing	**	**	**	*	***	***	***	***	***
PLI	Cold Storage	*	***	*		*	*	***		**
AF	Large Indoor					**	***	***	***	**
	<b>Complex Environments</b>		*	**		*			***	***
	Lumen Range	12,000 - 36,000	9,000 - 24,000	12,000 - 30,000	5,000 - 32,000	9,000 - 36,000	12,000 - 60,000	12,000 - 60,000	60,000 - 85,000	12,000 - 70,000
	Efficacy (Max)	140 lm/W	147 lm/W	137 lm/W	155 lm/W	152 lm/W	186 lm/W	207 lm/W	132 lm/W	181 lm/W
	CRI	80	70, 80, 90	80	80	80	70, 80	70, 80, 90	70, 80	70, 80
NCE	Distribution	M	N, W	М	N, W	N, M, W	N, W	N, M, W	N, M, W, EW, UW	N, M, W
MAI	Sizes	13" x 2' & 4'	< 2'	12" Dia	4', 8'	17" Dia	4'	Scalable	22" Dia	17", 25" Dia
FOR	Housing <sup>2</sup>	CRS	CRS / Extruded	Diecast	CRS	CRS / Diecast	CRS	CRS	Diecast	Diecast
PER	Lensing	Acrylic	Polycarbonate	Polycarbonate	Optional	Polycarbonate	Optional	Acrylic	Polycarbonate	Acrylic
ES /	Uplight	None	None	None	Up to 5%	Up to 10%	None	None	None	None
LURI	Life (@ 60K hrs)	L84	L83	L91	L86	L88	L84	L96	L87	L92
FEATURES / PERFORMANCE	Ambient Range	-20C to 50C	-40C to 40C	-40C to 45C	-40C to 35C	-40C to 55C	-40C to 55C	-40C to 55C	-40C to 65C	-40C to 65C
	Emergency	None	Remote	None	Integrated	Remote	Integrated	Integrated	Remote	Remote
	Ratings	Damp	Damp	IP65	Damp	IP65 Optics	Damp	Damp	IP66, NEMA 4X	IP66
	DLC	Premium	Standard, Premium	Premium	Premium	Premium	Premium	Premium	Premium	Premium
ο.	Basic Occupancy		<ul> <li>✓</li> </ul>		<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	~	~		<ul> <li>✓</li> </ul>
INTEGRATED Controls	Stand Alone Daylight / Occupancy		~		~	~	~	~		<b>v</b>
TEG	WaveLinx		<ul> <li>✓</li> </ul>			<ul> <li>✓</li> </ul>	~	~		<b>v</b>
Ξ0	Enlighted <sup>3</sup>		<ul> <li>✓</li> </ul>			~	<ul> <li>✓</li> </ul>	~		<b>v</b>

Notes: 1. ★★★ = high applicability, ★★ = medium applicability, ★ = low applicability, blank = non-applicable
2. CRS=Cold-rolled Steel, Extruded=Extruded Aluminum, Diecast=Diecast Aluminum.
3. Location data for asset tracking.



### Industrial LED Vaportite

### Metalux

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Metalux's sealed and gasketed products deliver maximum operation and reliability in complex environments where the elements require more than just a standard light fixture.



	on products earn more	and the second s			<i>~</i>	
		APVT	VT2	VT3	VT4S	VT4
	Canopy	**	**	**		
۲	Storage	***	***	**		
BILI	Parking Garage		**	***		
ICA	Warehouse	*	***	***	*	*
	Food Processing		**	***	**	**
A	Manufacturing		**	**	***	***
	<b>Complex Environments</b>		*	***	***	***
	Lumen Range	2,000 - 4,000	2,000 - 22,000	2,000 - 8,000	9,000 - 18,000	9,000 - 30,000
	Efficacy (Max)	132 lm/W	150 lm/W	154 lm/W	165 lm/W	146 lm/W
	Distribution <sup>2</sup>	G	G, W	G, W, P	G	G
ш	Sizes	2', 4'	2', 4', 8'	2', 4'	2'	4'
FEATURES / PERFORMANCE	Housing	Polycarbonate	Fiberglass/Polyester	Fiberglass/Polyester	Fiberglass	Fiberglass
MA	Lensing	Polycarbonate DR Acrylic or Polycarb	DR Acrylic or Polycarb	DR Acrylic or Polycarb	DR Acrylic or Polycarb	DR Acrylic or Polycarb
FOF	Wet Location	Yes	Yes	Yes	Yes	Yes
PER	IP Rating	None	IP65	IP65, 66, 67	IP65, 66, 67, 69	IP65, 67
/ S	NSF	None	Yes	Yes	Yes	Yes
URE	NEMA 4X	None	None	None	Yes	Yes
EAT	Life (@60K hrs)	L70 at 54K	L91	L91	L91	L92
ш	Ambient Range	-20C to 30C	-40C to 35C	-40C to 50C	-40C to 40C	-40C to 40C
	Emergency	None	Yes	Yes	Yes	Yes
	Vandal Resistant	None	Optional	Optional	Optional	Optional
	DLC	Standard	Premium	Premium	Premium	Premium
	Basic Occupancy		<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<b>v</b>
INTEGRATED CONTROLS	Stand Alone Daylight / Occupancy		~	~	~	<b>v</b>
COL	WaveLinx					
-	Enlighted <sup>3</sup>					

Good \_\_\_\_\_ Better \_\_\_\_\_

Notes: 1. ★★★ = high applicability, ★★ = medium applicability, ★ = low applicability, blank = non-applicable
2. G=General, W=Wide, P=Parking Garage.
3. Location data for asset tracking.



# **Corelite Neo-Ray**

Corelite and Neo-Ray offer a unique array of high performance LED luminaires perfectly suited for today's architectural interior environments.

Combining modern details and high optical performance, Corelite and Neo-Ray's innovative approach to linear, recessed and surfacemounted luminaires make it the ultimate solution for applications with both demanding energy requirements and uncompromising aesthetics.



The product selection guides are simple yet powerful tools to help assist with product comparisons and selection based on features, performance and value.

- 9-10 Architectural LED Linear Suspended
- 11 Architectural LED Recessed
- **12** Architectural Linear LED- Lines of Light





			Good		Better				
	k on products learn more								
		WSL	Hugo	RZL	Jaylum	Iridium i3	Continua CTA		
۶	Education	**	***	**	***	***	***		
BILT	Office	***	**	*	***	**	**		
<b>APPLICABILITY</b> <sup>1</sup>	Healthcare	**	**	**	**	**	**		
APF	Retail	***	***	***	*	*	**		
	Construction	Cold Rolled Steel	Extruded Aluminum	Cold Rolled Steel	Cold Rolled Steel	Cold Rolled Steel	Extruded Aluminum		
	Lengths	4', 8', Cont.	4', 8', 12', Cont.	4', 8', 12', Cont.	4', 8', Cont.	4', 8', Cont.	4', 8', 12', Cont.		
	lm/W (Max)	121	145	135	157	158	147		
	Lumens (Max)	8000 (2000 lms/ft)	8000 (2000 lms/ft)	8800 (2200 lms/ft)	8000 (2000 lms/ft)	8000 (2000 lms/ft)	6000 (1500 lms/ft)		
щ	Up/Down % Options	3	2	2	5	5	4+		
ANC	CIE Type	Direct, Semi-Direct	Direct, Semi-Direct	Direct, Semi-Direct	Direct/Indirect	Direct/Indirect	Direct, Direct/Indirect		
RM	Life (@60K)	L81	L85	L85	L93	L93	L84		
PERFO	Shielding	WaveStream - Acrylic	Frost - Smooth, Drop Lens, Baffle	Frost -Linear Prismatic, Baffle	Frost - Smooth	Frost - Smooth	Frost - Continuous Roll Lens		
FEATURES / PERFORMANCE	Companion Family Fixtures	Surface	Surface	Surface	Wall, Sconce	-	Wall		
ATL	Driver Location	Integral	Integral	Integral	Integral	Integral	Integral		
8	Emergency	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated		
	CRI	80+	80+ / 90	80+ / 90	80+ / 90	80+/90	80+ / 90		
	Sensor Location	Integrated	Integrated, Side Mount	Integrated	Integrated	Integrated	Integrated, Side Mount		
	DLC	Standard	Premium	Premium	Premium	None	Premium		
	VividTune™	No	No	No	Tunable White	Tunable White	No		
INTEGRATED Controls	Stand Alone Daylight / Occupancy	~		~	<b>v</b>	<ul> <li>✓</li> </ul>			
GRA TRO	WaveLinx	✓	<ul> <li>✓</li> </ul>	✓	<b>v</b>	<b>v</b>	<b>v</b>		
NTE	Enlighted	<b>v</b>	<b>v</b>	✓	✓	✓	<b>v</b>		
= 0	DLVP	✓							

Notes: 1.  $\star \star \star$  = high applicability,  $\star \star$  = medium applicability,  $\star$  = low applicability, blank = non-applicable



# Metalux | Corelite | Neo-Ray

			Best			
k on products learn more						
	Continua SQ4	Iridium i2 WaveStream	Element /Loft / Vertechs WaveStream	Divide	Define	Converge
Education	***	***	***	**	**	***
Office	***	**	**	***	***	***
Healthcare	**	**	**	*	**	*
Retail	**	*	*	**	*	**
Construction	Extruded Aluminum	Cold Rolled Steel	Extruded Aluminum	Extruded Aluminum	Extruded Aluminum	Extruded Aluminum
Lengths	4', 6', 8', 12', Cont.	4', 8', Cont.	4', 8', 12', Cont.	4', 8', Cont.	2' - 12', Cont.	4', 8', Cont.
lm/W (Max)	135	114	116	140	164	119
Lumens (Max)	10,800 lm (2,700 lms/ft)	7200 (1800 lms/ft)	7200 (1800 lms/ft)	6000 (1500 lms/ft)	9900 (2475 lms/ft)	6700 (1700 lms/ft)
Up/Down % Options	20+	3	3	2	∞	3
CIE Type	Direct, Direct/Indirect	Direct, Direct/Indirect	Direct, Direct/Indirect	Direct, Direct/Indirect	Direct, Direct/Indirect, Indirect	Direct, Direct/Indirect
Life (@60K)	L84	L81	L81	L87	L90	L85
Shielding	Frost - Continuous Roll Lens	Frost - Linear Prismatic	Frost - Smooth	WaveStream - Acrylic Specular, Diffuse	Frost - Smooth, Drop & Regressed, Asymmetric and Batwing Lens	WaveStream - Acrylic Diffuse
Companion Family Fixtures	Recessed	-	-	Surface, Wall, Recessed	Surface, Wall, Recessed, Perimeter	-
Driver Location	Integral	Integral	Integral	Integral	Integral	Remote w/ Luxwire
Emergency	Integrated	Integrated	Integrated	Integrated	Integrated	Remote
CRI	80+ / 90	80+ / 90	80+ / 90	80+ / 90	80+ / 90	80+ / 90
Sensor Location	Integrated, Endcap/Side Mount	Integrated	Integrated	Integrated	Integrated	Tile Mount
DLC	Premium	Standard	Standard	Premium	Premium	None
VividTune™	No	No	No	No	Tunable White	No
Stand Alone Daylight / Occupancy		<b>v</b>	v		~	~
WaveLinx	<ul> <li>✓</li> </ul>	<b>v</b>	<ul> <li>✓</li> </ul>	<ul> <li>✓</li> </ul>	<b>v</b>	<b>v</b>
Enlighted	<ul> <li>✓</li> </ul>	<b>v</b>	<b>v</b>	<b>v</b>	<ul> <li>✓</li> </ul>	V
DLVP						<b>v</b>
	Office         Healthcare         Retail         Construction         Lengths         Im/W (Max)         Lumens (Max)         Up/Down % Options         CIE Type         Life (@60K)         Shielding         Companion Family Fixtures         Driver Location         Emergency         CRI         Sensor Location         DLC         VividTune ™         Stand Alone         Daylight / Occupancy         WaveLinx         Enlighted	learn moreContinua SQ4Education★ ★ ★Office★ ★ ★Healthcare★ ★Retail★ ★ConstructionExtruded AluminumLengths4', 6', 8', 12', Cont.Im/W (Max)135Lumens (Max)10,800 Im (2,700 Ims/ft)Up/Down % Options20+CIE TypeDirect, Direct/IndirectLife (@60K)L84ShieldingFrost - Continuous Roll LensCompanion Family FixturesRecessedDriver LocationIntegralEmergencyIntegratedCRI80+ / 90Sensor LocationIntegratedDLCPremiumVividTune™NoStand Alone Daylight / Occupancy✓WaveLinx✓Enlighted✓	Itridium i2         Continua SQ4       Iridium i2         Education       ★ ★ ★         Education       ★ ★ ★         Office       ★ ★ ★         Healthcare       ★ ★         Retail       ★ ★         Construction       Extruded Aluminum       Cold Rolled Steel         Lengths       4', 6', 8', 12', Cont.       4', 8', Cont.         Im/W (Max)       135       114         Lumens (Max)       10,800 lm (2,700 lms/ft)       7200 (1800 lms/ft)         Up/Down % Options       20+       3         ClE Type       Direct, Direct/Indirect       Direct, Direct/Indirect         Life (@60K)       L84       L81         Shielding       Frost - Continuous Roll Lens       Frost - Linear Prismatic         Companion Family Fixtures       Recessed       -         Driver Location       Integrated       Integrated         Dtriver Location       Integrated, Endcap/Side Mount       Integrated         DLC       Premium       Standard       VividTune <sup>™</sup> No       No       No         Stand Alone Daylight / Occupancy       ✓       ✓         Enlighted       ✓       ✓       ✓         Enlighted <th<< th=""><th>Kon products learn more       Iridium i2       Element /Loft / Vertechs WaveStream         Education       ***       ***         Education       ***       ***         More Stream       ***       ***         Office       ***       ***         Healthcare       **       **         Konstruction       Extruded Aluminum       Cold Rolled Steel       Extruded Aluminum         Lengths       4', 6', 8', 12', Cont.       4', 8', Cont.       4', 8', 12', Cont.         Im/W (Max)       135       114       116         Lumens (Max)       10.800 lm (2,700 lms/ft)       7200 (1800 lms/ft)       7200 (1800 lms/ft)         Up/Down % Options       20+       3       3       3         CEI Type       Direct, Direct/Indirect       Direct, Direct/Indirect       Direct, Direct/Indirect         Life (@60k)       L84       L81       L81       L81         Shielding       Frost - Continuous Roll Lens       Frost - Linear Prismatic       Frost - Smooth         Companion Family       Recessed       -       -       -         Priver Location       Integrated       Integrated       Integrated         Diffyred       0       80+ / 90       80+ / 90       80+ / 90     <th>Kon products Beam more         Initiality         Element / Loft / Vertechs WaveStream         Divide           Education         * * *         WaveStream         Divide           Education         * * *         * * *         * * *           Office         * * *         * * *         * * *           Office         * * *         * * *         * * *           Healthcare         * *         * *         * *           Retail         * *         * *         * *         * *           Construction         Extruded Aluminum         Cold Rolled Steel         Extruded Aluminum         Extruded Aluminum           Lengths         4', 6', 6', 12', Cont.         4', 8', Cont.         4', 8', Cont.         4', 8', Cont.           InvW (Max)         10.800 In (2,700 Ims/ft)         7200 (1800 Ims/ft)         7200 (1800 Ims/ft)         6000 (1500 Ims/ft)           Up/Down % Options         20+         3         3         2           Cift Type         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect           Up/Down % Options         20+         3         3         2         0           Shielding         Frost - Continuous Roll Lens         Frost - Linear Prismatic</th><th>Construction         Initiality         Element / Loft / Vertechs WaveStream         Divide         Define           Education         ***</th></th></th<<>	Kon products learn more       Iridium i2       Element /Loft / Vertechs WaveStream         Education       ***       ***         Education       ***       ***         More Stream       ***       ***         Office       ***       ***         Healthcare       **       **         Konstruction       Extruded Aluminum       Cold Rolled Steel       Extruded Aluminum         Lengths       4', 6', 8', 12', Cont.       4', 8', Cont.       4', 8', 12', Cont.         Im/W (Max)       135       114       116         Lumens (Max)       10.800 lm (2,700 lms/ft)       7200 (1800 lms/ft)       7200 (1800 lms/ft)         Up/Down % Options       20+       3       3       3         CEI Type       Direct, Direct/Indirect       Direct, Direct/Indirect       Direct, Direct/Indirect         Life (@60k)       L84       L81       L81       L81         Shielding       Frost - Continuous Roll Lens       Frost - Linear Prismatic       Frost - Smooth         Companion Family       Recessed       -       -       -         Priver Location       Integrated       Integrated       Integrated         Diffyred       0       80+ / 90       80+ / 90       80+ / 90 <th>Kon products Beam more         Initiality         Element / Loft / Vertechs WaveStream         Divide           Education         * * *         WaveStream         Divide           Education         * * *         * * *         * * *           Office         * * *         * * *         * * *           Office         * * *         * * *         * * *           Healthcare         * *         * *         * *           Retail         * *         * *         * *         * *           Construction         Extruded Aluminum         Cold Rolled Steel         Extruded Aluminum         Extruded Aluminum           Lengths         4', 6', 6', 12', Cont.         4', 8', Cont.         4', 8', Cont.         4', 8', Cont.           InvW (Max)         10.800 In (2,700 Ims/ft)         7200 (1800 Ims/ft)         7200 (1800 Ims/ft)         6000 (1500 Ims/ft)           Up/Down % Options         20+         3         3         2           Cift Type         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect           Up/Down % Options         20+         3         3         2         0           Shielding         Frost - Continuous Roll Lens         Frost - Linear Prismatic</th> <th>Construction         Initiality         Element / Loft / Vertechs WaveStream         Divide         Define           Education         ***</th>	Kon products Beam more         Initiality         Element / Loft / Vertechs WaveStream         Divide           Education         * * *         WaveStream         Divide           Education         * * *         * * *         * * *           Office         * * *         * * *         * * *           Office         * * *         * * *         * * *           Healthcare         * *         * *         * *           Retail         * *         * *         * *         * *           Construction         Extruded Aluminum         Cold Rolled Steel         Extruded Aluminum         Extruded Aluminum           Lengths         4', 6', 6', 12', Cont.         4', 8', Cont.         4', 8', Cont.         4', 8', Cont.           InvW (Max)         10.800 In (2,700 Ims/ft)         7200 (1800 Ims/ft)         7200 (1800 Ims/ft)         6000 (1500 Ims/ft)           Up/Down % Options         20+         3         3         2           Cift Type         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect         Direct, Direct/Indirect           Up/Down % Options         20+         3         3         2         0           Shielding         Frost - Continuous Roll Lens         Frost - Linear Prismatic	Construction         Initiality         Element / Loft / Vertechs WaveStream         Divide         Define           Education         ***

Notes: 1.  $\star \star \star$  = high applicability,  $\star \star$  = medium applicability,  $\star$  = low applicability, blank = non-applicable



### Architectural LED Recessed

### Corelite

Whether lighting schools, offices, or hospitals on a budget, **Corelite's** commercial recessed products offer a complete family of innovative, affordable, and energy saving LED solutions for your next project.



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		Go	od		Better			Best
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		Class RX/ZX	Class D3X	Class R2X	InDepth	Bridge	Divide	Class R3/Z3
Ł	Education	***	**	***	***	**	**	*
APPLICABILITY	Office	***	***	***	***	***	***	***
	Healthcare	*	**	***	**	*	***	**
API	Retail	**	**	**	**	**	*	*
	Sizes	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4, Metric	1x4, 2x2, 2x4	1x4, 2x2, 2x4, Metric	1x4, 2x2, 2x4	1x4, 2x2, 2x4, Metric
	lm/W (Max)	145	139	134	127	118	137	141
	Lumens (Max)	7600	7800	8000	9000	7300	7500	7200
ы	Life (@60K)	L94	L93	L87	L84	L80	L87	L87
FEATURES / PERFORMANCE	Lens	Round (R), Flat (Z) Frost - Smooth	Frost - Smooth, Perf Inlays	Round (R), Frost - Smooth	1", 2" Cube Regress 1", 2", 3" Cube Drop 2" Curve Regress & Drop	Acrylic (Wavestream), Perf Inlays	Acrylic (Wavestream), Specular, Diffuse	Round (R), Flat (Z) Frost - Ribbed, Perf Inlays
3ES / P	Emergency	Integrated	Integrated	Integrated	Integrated, Indicator is Remote	Integrated	Integrated	Integrated
ATUI	CRI	80+/90	80+ / 90	80+ / 90	80+	80+ / 90	80+ / 90	80+ / 90
FE/	Sensor Location	Integrated	Integrated	Tile Mount	Tile Mount	Integrated	Integrated	Tile Mount
	DLC	Standard	Standard	Standard	Premium	Standard	Premium	Premium
	Air Return	Yes	None	Yes	Planned	Yes, concealed	None	Yes
	VividTune™	Tunable White	Tunable White	No	No	No	No	No
	Stand Alone Daylight / Occupancy	~	v	~		~	~	~
ATED	WaveLinx	<b>~</b>	<ul> <li>✓</li> </ul>			<b>v</b>	~	
INTEGRATED CONTROLS	WaveLinx, No Sensor	~	~		~			
E S	Enlighted	<b>v</b>	~	· ·		<ul> <li>✓</li> </ul>	<b>v</b>	~
	DLVP	~	~		<ul> <li>✓</li> </ul>	<b>v</b>		



### Architectural Linear LED Lines of Light

# Metalux | Corelite | Neo-Ray

		G	ood		Bet	ter <b>e</b>		Best
Whether lighting contemporary architectural spaces or general area lighting, <b>Cooper Lighting</b> <b>Solution's architectural</b> <b>linear LED</b> products offer a complete family of innovative,		on products earn more	Metalux	Metalux	Metalux	Corelite	Neo-Ray Define	Neo-Ray Define
affordable, and energy saving LED			RBG	RCG	SkyRidge Single	CL	Standard	Premium
solutions for your next project.	حَ	Office	**	**	**	**	***	***
		Secondary Education	**	**	**	**	***	**
	APPLICABILITY	Primary Education	***	***	*	***	**	*
A A A A A A A A A A A A A A A A A A A		Healthcare	**	*	**	*	**	***
	A	Tenant Improvement	***	***	***	***	**	*
		Apertures	4"	3"	Luminous Blade	2", 4"	1.5", 2", 3", 4", 5"	1.5", 2", 3", 4", 5"
		Sizes	Fixed 2', 4', 8'	4', 8'	2', 4'	4', 8' + Continuous Runs	2'-12' + Continuous Runs	2'-12' + Continuous Runs
		Length Resolution	Fixed	Fixed	2' Increments	4' Increments	1" Increments	1" Increments
		Installation Type	Ceiling, Wall	Ceiling	Ceiling, Wall	Ceiling	Ceiling, Wall, Perimeter	Ceiling, Wall, Perimeter
	FEATURES / PERFORMANCE	Configuration Geometry	Straight	Straight	Straight	Straight	Straight, Corners, Intersection	Straight, Corners, Intersection
		Compatible Family Fixtures	Surface/Susp & Drywall Kits	N/A	N/A	N/A	Suspended, Surface, Wall	Suspended, Surface, Wall
	ORN	lm/W (Max)	115	121	151	124	127	141
	ERF	Lms/ft (Max)	1,000	1,000	1,625	1,200	1,400	1,500
	/ PI	Standard Lumen Levels	3	4	4	5	5 + Custom	5 + Custom
	rures	Lens	Flush Frosted	Flush Frosted, Asymmetric	Wavestream	Flush Frosted, Asymmetric	Flush & Drop Frosted, Asymmetric, Louver	Flush & Drop Frosted, Asymmetric, Louver
	FEAT	Emergency	Integrated, Remote Switch	Integrated	Integrated	Integrated	Integrated	Integrated
		CRI	80+	80 Standard, 90 Optional	80 Standard	80 Standard, 90 Optional	80 Standard, 90 Optional	80 Standard, 90 Optional
		Ceiling Integration / Flange Type	Standard T-Grid, Gypsum	Standard T-Grid, Gypsum	Standard T-Grid, Gypsum	6 Common Architectural Systems	>12 Architectural Ceiling Systems	>12 Architectural Ceiling Systems
		DLC	Standard	Standard	Standard & Premium	Standard	Standard & Premium	Standard & Premium
		VividTune™	No	No	No	No	No	Tunable White
	INTEGRATED	WaveLinx, Enlighted, DLVP, Stand Alone	Integrated or Tile Mount	Integrated	Tile Mount	Integrated	Integrated or Tile Mount	Integrated or Tile Mount
		Integral Downlights	N/A	N/A	N/A	N/A	Optional Fixed or Adjustable	Optional Fixed or Adjustable
	20	White Tuning	N/A	N/A	N/A	N/A	N/A	Available

Notes: 1.  $\star \star \star$  = high applicability,  $\star \star$  = medium applicability,  $\star$  = low applicability, blank = non-applicable



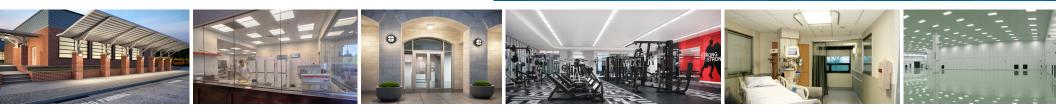
Fail-Safe is a leading provider of specialty grade lighting products designed to perform in a wide variety of complex environments.

Fail-Safe's complete family of luminaires are designed to meet the most demanding applications needs in medical / healthcare, vandal resistant, correctional, cleanroom, and specialty / custom lighting.



The product selection guides are simple yet powerful tools to help assist with product comparisons and selection based on features, performance and value.

**Cleanroom Spaces - LED** 14 Medical Spaces - LED 15, 16 17, 18 **Correctional Spaces - LED** Linear Vandal Resistant - LED 19 Indoor Vandal Resistant - LED 20 Vandal Resistant Wall Packs - LED 21 **Downlights -** LED 22 Troffer - LED 23 **Behavioral Health - LED** 24





# Cleanroom Spaces

### **Fail-Safe**



#### **Cleanroom Ratings**

- ISO standard ratings (1-9) are used to identify products suitable for those cleanroom rated conditions.
- FED-STD-209E has been replaced by ISO 14644-1, but is still referenced in some specifications.
- For both systems, lower numbers correspond to stricter cleanroom ratings.



#### **Hose Down Ratings**

- IP 65 is low pressure hose down.
- IP 66 is high pressure hose down.
- First digit signifies dust ingress protection rating (1-6) and second digit represents liquid ingress protection (1-6 for hosedown). In both cases, the higher the number, the better the seal on the fixture.



#### **NSF Ratings**

- NSF (National Sanitation Foundation) provides certified product for use in commercial food processing applications.
- NSF rating can serve as a good indicator of the ability to easily clean/wipe down products.



#### **Narrow Spectrum Illumination**

- Red light is used in vivarium (enclosed structure for animal observation or research) applications.
- Green light is used in operating rooms.
- Amber and Yellow are used in various industrial processes.



	CFA	FLD4B	FLD6B	FSP	FCZ	ENW/ENC	FSN	CLM	CLP
Mounting	Surface	Recessed	Recessed	Recessed	Recessed	Recessed	Recessed	Recessed / Surface	Recessed / Surface
ISO Rating	3		5	5	5	5	5	5	5
FED-STD-209E	1		100	100	100	100	100	100	100
Max Lumens	4,100	5,300	6,600	6,400	7,500	7,000	4,121 (4ft)	24,000	24,000
Sizes	2', 3', 4', 8'	4" Round	6" Round	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x2, 1x4, 2x2, 2x4	Fixed 2', 4', 8'	1x2, 1x4, 2x2, 2x4	1x2, 1x4, 2x2, 2x4
UL Rating	Wet Location	Wet Location	Wet Location	Wet Location	Wet Location	Wet Location	Wet Location	Wet Location	Wet Location
IP Rating		IP65/IP66	IP65/IP66	IP65/IP66	IP65	IP66	IP66	IP65	IP66
NSF		Optional	Optional	Standard	Standard	Standard	Standard	Standard	Standard
Red	Optional							Optional	Optional
Green	Optional							Upon Request	Upon Request
Amber	Optional							Upon Request	Upon Request
Yellow	Upon Request							Upon Request	Upon Request



#### Patient rooms





#### Multi-function vs multi-compartment

- Multi-function fixtures have a variety of functions and light outputs in a single fixture.
- Multi-compartment fixtures place each function in a distinctly separate compartment.

#### Multiple lights in one package

- · Patient bed lights need to perform a variety of functions within a single fixture.
- Typical functions include ambient, exam, reading, nightlight, and chart light.

#### Mounting

• Patient bed lights can be ceiling mounted above or beside the bed, or to the headwall.

#### **Operating rooms**



#### Operating room layout

- Troffers typically used to form high lumen perimeter around operating table.
- · Downlights typically used around perimeter of operating theater.

#### MIL-STD-461-G

- Rated to provide high level of protection against radiated and conducted electromagnetic interference (EMI).
- Protects certain sensitive equipment used in some operating rooms.

#### Green LEDs for auxiliary lighting

• Green LEDs used as auxiliary and supplemental lighting to primary white LEDs. If requested by the surgical staff, green LEDs are available for specification.

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	MAE	MNAE	MPBL
Sizes	2' x 2', 2' x 4'	36", 48", 54", 60"	24", 36", 48"
Mounting	Recessed ceiling (above bed)	Ceiling (beside bed)	Wall Mount
Max lumens	18,000	6,100	12,650
UL Location Rating	Damp	Damp (Wet optional)	Damp
Wipedown	Optional	Standard	Standard
Tamperproof	Optional		
CRI	80, 90	80, 90	80, 90







	ORL	FLD6B/OR
Sizes	1' x 4', 2' x 2', 2' x 4'	6" round
Mounting	Recessed troffer	Recessed downlight
Max lumens	28,000	6,600
UL Location Rating	Wet	Wet
IP Rating	IP66	IP65 (IP66 optional)
Wipedown	Standard	Standard
NSF	Standard	Optional
CRI	80, 90	80, 90, 97
MIL-STD-461-G	Optional	Optional
Green LEDs	Optional	



# Medical Spaces

### **Fail-Safe**

#### Behavioral health





#### Form and function

- Fixtures should have aesthetic appeal while maintaining high structural security.
- Continue visual themes from non-behavioral health areas.

#### Self harm resistant

- Designed to protect against self harm by patients.
- Polycarbonate lens and tamperproof hardware used to withstand high abuse.

#### Disease prevention and control

Antimicrobial Matte White paint finish protects against disease propagation.

#### Exam rooms



#### High light levels and light quality

- High lumen levels needed for performing patient examinations.
- High CRI available for aid in visual evaluation of patient and symptoms.

#### Ease of cleaning

• Wipedown design and NSF (National Sanitation Foundation) rating make regular cleaning of fixtures easier.

#### **Disease prevention and control**

• Antimicrobial Matte White paint finish protects against disease propogation.







	FSP	FLD6BXV	FWL
Sizes	1' x 4', 2' x 2', 2' x 4'	6" round	18", 24", 48"
Mounting	Recessed	Recessed downlight	Wall mount
Max lumens	6,400	6,600	6,000
UL Location Rating Wet		Wet	Damp
IP Rating	IP65/IP66	IP66	
Wipedown	Standard	Standard	Standard
Tamperproof	Standard	Standard	Standard
NSF	Standard		
CRI	80	80, 90, 97	80, 90



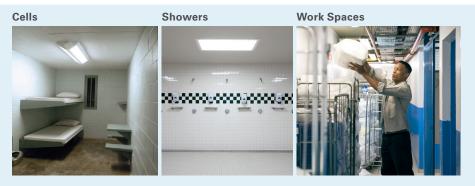




	SGI	FCZ			
Sizes	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'			
Mounting	Recessed troffer	Recessed			
Max lumens	11,500	7,500			
UL Location Rating	Damp (Wet optional)	Wet			
IP Rating	IP65 (optional)	IP65			
Wipedown	Standard	Standard			
Tamperproof	Optional	Standard			
NSF	Optional	Standard			
CRI	80, 90	80, 90			



#### Unsupervised Areas



- Inmates regularly present in these areas for long periods of time
- Guards only pass by periodically; not continuously present
- Fixtures typically mounted at lower heights and easy to reach
- Lens and metal thicknesses are thick to withstand regular, extended periods of potential high abuse

#### Supervised Areas



- Inmates occasionally present in these areas
- Guards regularly present, able to respond quickly to inmates attempting to damage fixtures
- Fixture mounting heights low, medium, or high depending on space/application
- Lens and metal thicknesses withstand intermittent, moderate abuse

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to learn more	

17

		FMB	FMR	FCC	FUSL	
ility	Cells	***	***	***	***	
Applicability	Showers		***	***	**	
App	Work Spaces	**	***	**	***	
	Mounting	Wall	Recessed	Corner	Surface	
	Size	2', 4'	1x1,1x2,1x4, 2x2, 2x4	2', 4'	2', 4'	
Features	Max Lumens	5,264 / 5,264*	9,960*	7,178*	11,832*	
Feat	Wet Location	N/A	Optional	Optional	Optional	
	Max Metal Ga. / Thickness	12 ga / 0.109"	12 ga / 0.109"	12 ga / 0.109"	12 ga / 0.109"	
	Max Total Lens Thickness	.750"	.875"	.875"	.687"	

**Notes:** 1.  $\star \star =$  high applicability,  $\star \star =$  medium applicability,  $\star =$  low applicability, blank = non-applicable \*Max Lumens with 0.250° Polycarbonate Lens \*\*Nominal Lens Thickness









		FCT	FMS	TR15
ility	Hallways	***	***	**
Applicability	Cafeterias	**	***	**
App	Visiting Spaces	***	***	***
	Mounting	Surface	Surface	Wall
	Size	2', 4'	1x1,1x2,1x4,2x2,2x4	15" Round
ures	Max Lumens*	16,700	15,300	4,875
Features	Wet Location	N/A	Optional	Standard
	Max Metal Ga. / Thickness	12 ga / 0.109"	12 ga / 0.109"	N/A
	Max Total Lens Thickness	.500"	.860"	0.135"



#### Non-Correctional Areas



- Inmates never/rarely present
- Guards rarely present
- Improved aesthetic appearance desired
- Lenses can be polycarbonate or acrylic



		GRV	FLD6B	ENV	G12
ility	Offices	***	***	***	*
Applicability	Entrances	***	***	***	***
App	Waiting Areas	***	***	***	*
	Mounting	Recessed	Recessed	Recessed	Wall
s	Size	1x4, 2x2, 2x4	6" Round	1x2, 1x4, 2x2, 2x4	12" Square
Features	Max Lumens	18,000	7,000	6,489*	3,750
Fea	Wet Location	N/A	Standard	Standard	Standard
	Max Total Lens Thickness	0.187"	0.375"	0.250"	0.135"**

Notes: 1.  $\star \star \star$  = high applicability,  $\star \star$  = medium applicability,  $\star$  = low applicability, blank = non-applicable

\*Max Lumens with 0.250" Polycarbonate Lens \*\*Nominal Lens Thickness



	Security Level	Super Max	Max	Medium	Minimum	High Abuse	Non- Correctional
	Metal Material	Steel / Stainless	Steel / Stainless	Steel / Stainless	Steel / Stainless	Steel / Stainless / Aluminum	Steel / Aluminum
Door Gauge		12 ga	14 ga	16 ga	18 ga	20 ga	N/A
	Housing Gauge	14 ga	14 ga	16 ga	16 ga	20 ga	N/A
Lens		0.375" Polycarbonate or Tempered Glass	0.250" Polycarbonate or Tempered Glass	0.187" Polycarbonate or Tempered Glass	0.156" Polycarbonate or Tempered Glass	0.125" Polycarbonate	0.125" DR Acrylic
Areas	Unsupervised Areas		Supervised Areas	Non-Correctio	onal V eas		

#### **Control** Systems

#### **TCS Touch Control System**

• High security capacitive touch bolt

in wall

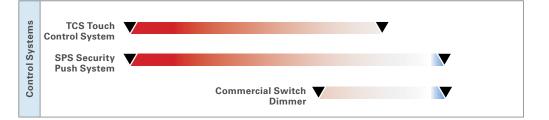
Remote override capacity
 L
 Integral to fixture or remote

#### SPS Security Push System

- Security push switch, integral to fixture
- Local single fixture/circuit control

#### Commercial Switch / Dimmer

- Non-tamper resistant
- Offers on/off and dimming



Good			Better					Best 📕	
Click to I	on products earn more				1				
		FVS4	FVS8	HVSL2	HVSL4	HVSL8	HVSL12	HVL8	HVL12
	Behavioral Health	*	*	**	**	***	**	**	**
LITY	Outdoor Vandal Resistant	**	**	**	**	**	**	**	**
<b>APPLICABILITY</b> <sup>1</sup>	Indoor Vandal Resistant	***	***	***	***	***	***	***	***
APPL	Industrial High Abuse	***	***	***	***	***	***	***	***
	Multifamily homes	**	**	***	***	***	***	**	**
ŊŊ	Wall	~	<ul> <li>✓</li> </ul>	<b>v</b>	✓	~	✓	<b>v</b>	✓
MOUNTING	Ceiling	~	<b>v</b>	<ul> <li>✓</li> </ul>	<b>v</b>	<b>v</b>	<b>v</b>	<b>~</b>	<b>v</b>
MO	Pendant			<b>v</b>	~			<b>v</b>	~
	Lengths	2', 3', 4', 8'	2', 3', 4', 8'	2', 3', 4', 8'	1', 2', 3', 4', 8'	2', 4', 8'	2', 4', 8'	1', 2', 4', 8'	1', 2', 4', 8'
	Size (W x H)	4" x 3.75"	8" x 3.75"	2.5" x 2.75"	4" x 3.3"	8.5" x 3.6"	12.5" x 3.6"	8.6" x 3.6"	12.6" x 3.6"
ES	Maximum Lumen Output (4ft Length)	8664	13841	4083	7883	13444	12942	12690	12350
FEATURES	Lens Thickness	0.125", 0.187"	0.125", 0.187"	0.085"	0.085"	0.135"	0.135"	0.135"	0.135"
Ë	Emergency	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	Occupancy	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	Photocell	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SNO	IP	N/A	N/A	N/A	N/A	IP63	IP63	IP64	IP64
CERTIFICATIONS	Wet Location	Optional	Optional	Optional	Optional	Optional	Optional	Standard	Standard
CERTI	NSF	N/A	N/A	N/A	Optional	N/A	N/A	Optional	Optional



Good					Better					Best
	on products earn more								/	
		FLD4B	FLD6B	UCLV	GRV	FSP	FCZ	ENV	FSN	SGI
۲	Behavioral Health	***	***	**	**	***	***	***	***	***
<b>APPLICABILITY</b> <sup>1</sup>	Indoor Vandal Resistant	***	***	***	***	***	***	***	***	***
PLIC/	Indoor High Abuse	***	***	*	***	***	***	*	***	*
AF	Multifamily homes	***	***	*	**	**	**	**	*	**
	Size	4" Round	6" Round	1', 2', 3', 4'	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x4, 2x2, 2x4	1x2, 1x4, 2x2, 2x4	Fixed 2', 4', 8'	1x4, 2x2, 2x4
	Mounting	Recessed	Recessed	Undercabinet	Recessed	Recessed	Recessed	Recessed	Recessed or Surface/Suspension	Recessed
FEATURES	Maximum Lumen Output	4,000	7,000	2,400	17,000	6,400	7,500	6,200	4,121 (4ft)	11,500
FEAT	Maximum Lens Thickness	0.187"	0.500"	0.187"	0.187"	0.375"	0.250"	0.375"	0.250"	0.375"
	Emergency	Optional	Optional	N/A	Optional	Optional	Optional	Optional	Optional	Optional
	Occupancy	N/A	N/A	Optional	N/A	N/A	N/A	N/A	N/A	N/A
SNO	IP	IP66	IP66	IP63	N/A	IP65/IP66	IP65	IP66	IP66	IP65
CERTIFICATIONS	Wet Location	Standard	Standard	N/A	N/A	Standard	Standard	Standard	Standard	Optional
CERT	NSF	Standard	Standard	N/A	N/A	Standard	Standard	Standard	Standard	Optional



Whether lighting hallways, stairwells, prisons, or shopping plazas in a variety of high abuse applications, **Fail-Safe's** wall pack vandal resistant LED products offer a complete family of innovative, affordable, and energy saving LED solutions for your next project.



		Good		Better			Best
Click on products to learn more							
		B95	H12	G12	TR11	TR15	FW
	Behavioral Health	**	**	**	*7	**	***
LITY	Outdoor Vandal Resistant	***	***	***	*7	**	***
<b>APPLICABILITY</b> <sup>1</sup>	Indoor Vandal Resistant	**	**	**	*7	**	**
APPLI	Industrial High Abuse	***	***	*** ***		**	***
	Multifamily homes	**	**	**	*>	**	***
MOUNTING	Wall	<b>v</b>	~	•	6	/	~
MOUN	Ceiling	<b>v</b>	~	~	•	/	N/A
	Size	5" x 9" Rectangle	12" x 12" Square	12" x 12" Square	11" Round	15" Round	6" x 12", 12" x 6", 9" x 9", 12" x 12"
	Maximum Lumen Output	1,975	4,703	3,750	2,630	4,875	2,500
URES	Lens Thickness	0.130"	0.156"	0.130"	0.1	25"	0.125"
FEATURES	Emergency	N/A	Optional	Optional	Opti	onal	Optional
	Occupancy	N/A	Optional	Optional	Opti	onal	Optional
	Photocell	Optional	Optional	Optional	Opti	onal	N/A
CERTIFICATIONS	IP	IP65	IP65	IP65	IP65		IP65
CERTIFIC	Wet Location	Standard	Standard	Standard	Star	ıdard	Standard



**Fail-Safe** offers an assortment of downlights intended for a variety of customer applications. Whether it's high abuse environments, medical spaces, or even MRI suites, **Fail-Safe's** downlight fixtures meet the most stringent requirements and still deliver the aesthetic appeal desired by customers.



Click on products to learn more							
		<b>FLD4B</b> Open Medical 4"	<b>FLD4BX</b> Enclosed 4"	<b>FLD6B</b> Open Medical 6"	<b>FLD6BX</b> Enclosed 6"	FLD6BX / OR Operating Room	<b>MRI-R6DNLT</b> MRI Downlight
	Vandal Resistant / Behavioral Health	*	***	*	***		
Τ	Correctional		*		**		
<b>APPLICABILITY</b>	Food Processing	***	***	***	***	*	
ICA.	Cleanroom			***	***	**	
PPL	Medical (non-OR)	***	***	***	***	*	
4	<b>Operating Room</b>	*	**	*	**	***	
	MRI						***
TIONS	Open	~	~	~	•		<b>v</b>
CONFIGURATIONS	Bottom Lens		~		~		
CONF	Bottom Trim Ring				•	~	
	Size	4"	4"	6"	6"	6"	6"
	Max Lumens	5,000	5,000	7,000	7,000	5,000	1,800
SES	Tamperproof	-	Optional	-	Optional	-	-
FEATURES	VividTune	Available	Available	Available	Available	-	-
E/	Dim to Warm	Available	Available	Available	Available	Available	-
	Non-Ferrous	_	_	-	-	-	Standard
	Remote Driver	_	-	-	-	-	Standard
S	UL	Wet	Wet	Wet	Wet	Wet	Damp
CERTIFICATIONS	IP	IP65	IP65/IP66	IP65	IP65/IP66	IP66	-
ICAI	NSF	Available	Available	Available	Available	Available	-
RTI	MIL-STD-461-G	_	-	-	-	Available	-
Ü	ISO Cleanroom <sup>2</sup>	5	5	5	5	5	-

Notes: 1. ★ ★ ★ = high applicability, ★ ★ = medium applicability, ★ = low applicability, blank = non-applicable. 2. Fixtures rated ISO 5 are compatible with cleanrooms rated ISO 5 or higher.



Good			Better						Best 🗖			
	on products learn more	/					<		17	D	/	
		GRW	GRV	FSP	FCB	FCZ	ENW/ENC	ENV	CLM	CLP	FSN	SGI
	Vandal Resistant	*	***	**	**	***	*	***	*	*	***	***
	High Abuse	*	***	***	**	***	**	***	**	*	***	***
	Healthcare	*	*	***	***	***	***	**	*	*	***	***
LITY	Behavioral Health	*	***	**	**	***	*	***	*	*	***	***
CABI	Cleanroom	*		***		**	***	**	***	***	**	*
<b>APPLICABILITY<sup>1</sup></b>	Pharmaceuticals	**		***	*	**	***	**	***	***	**	**
	Vivariums					*			***	***		**
	Hosedown	**		***	*	**	***	***	***	***	***	***
	Food Prep			***		***	***	**	***	***	***	***
	Size	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	Fixed 2', 4', 8'	1' x 4', 2' x 2', 2' x 4'
FEATURES	Mounting	Grid	Grid	Grid	Grid	Grid	Grid	Grid	Grid	Grid/Flange/ Surface	Surface	Grid
FEAT	Max Lumens	18,000	18,000	6,400	7,500	7,500	7,000	7,000	24,000	24,000	4,121 (4ft)	11,500
	Sevice from Below	~	~		~				~	~		<b>v</b>
	Wet Location	Standard	Standard	Standard	Optional	Standard	Optional (ENW) Standard (ENC)	Standard	Standard	Standard	Standard	Standard
RATINGS	IP	_	-	IP66 Optional	-	IP65 Optional	IP66	IP66	IP65	IP66	IP66	IP65 Available
RAT	NSF	-	-	Standard	-	Standard	Standard	Standard	Standard	Standard	Standard	Available
	ISO Cleanroom <sup>2</sup>	-	-	5	-	5	5	5	5	5	5	-

Notes: 1. ★★★ = high applicability, ★★ = medium applicability, ★ = low applicability, blank = non-applicable 2. Fixtures rated ISO 5 are compatible with cleanrooms rated ISO 5 or higher.



		Good					Better					Best 🔳
	c on products learn more			1							/	
		FW	FWL	HVSL8B	FLD4B	FLD6B	FSP	FCB	FCZ	ENV	FSN	SGI
	Patient Rooms	**	***	***	***	***	***	*	***	***	***	***
ΓΙΤΥ	Hallways	**	**	***	**	**	**	***	***	***	***	***
<b>APPLICABILITY<sup>1</sup></b>	Common Spaces	***	*	***	***	***	***	***	***	***	***	***
APPL	Dining Areas	***	*	***	**	**	***	***	**	***	***	**
	Medical Offices	***	**	**	***	***	***	***	***	***	***	**
	Mounting	Wall/Ceiling	Wall	Wall/Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling	Recessed Ceiling
SNO	Sizes	6" x 12", 12" x 6", 9" x 9", 12" x 12"	1.5', 2', 4'	2', 4', 8'	4"	6"	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 4', 2' x 2', 2' x 4'	1' x 2', 1' x 4', 2' x 2', 2' x 4'	Fixed 2', 4', 8'	1' x 4', 2' x 2', 2' x 4'
FEATURES / CERTIFICATIONS	Maximum Lumen Output	2,500	6,000	13,400	4,000	7,000	6,400	6,500	7,500	6,100	4,121 (4ft)	11,500
/ CER	Ligature Resistant	~	~	~	~	~	~		~	~	~	~
TURES	Tamperproof Screws	Standard	Optional	Optional	Optional	Optional	no screws	Optional	no screws	no screws	no screws	Optional
FEA	IP	IP65	N/A	IP63	IP66	IP66	IP65/IP66	N/A	IP65	IP66	IP66	IP65
	Wet Location	Standard	N/A	Standard	Standard	Standard	Standard	Optional	Standard	Standard	Standard	Standard
	NSF	N/A	N/A	N/A	N/A	Optional	Standard	N/A	Standard	Standard	Standard	Available



# **Sure-Lites**

Sure-Lites has been the trusted name and industry leader for emergency and exit lighting for over 30 years. Sure-Lites offers a full line of innovative emergency and exit lighting products designed for commercial, industrial, hospitality, educational and multi-housing residential spaces.

Sure-Lites products are designed to meet and exceed today's building codes. Our products offer maximum reliability and performance while minimizing installation and maintenance costs. From ease of installation to performance-enhancing electronics to time-saving features, Sure-Lites is focused on advancing technology to develop the most effective emergency and exit lighting solutions.



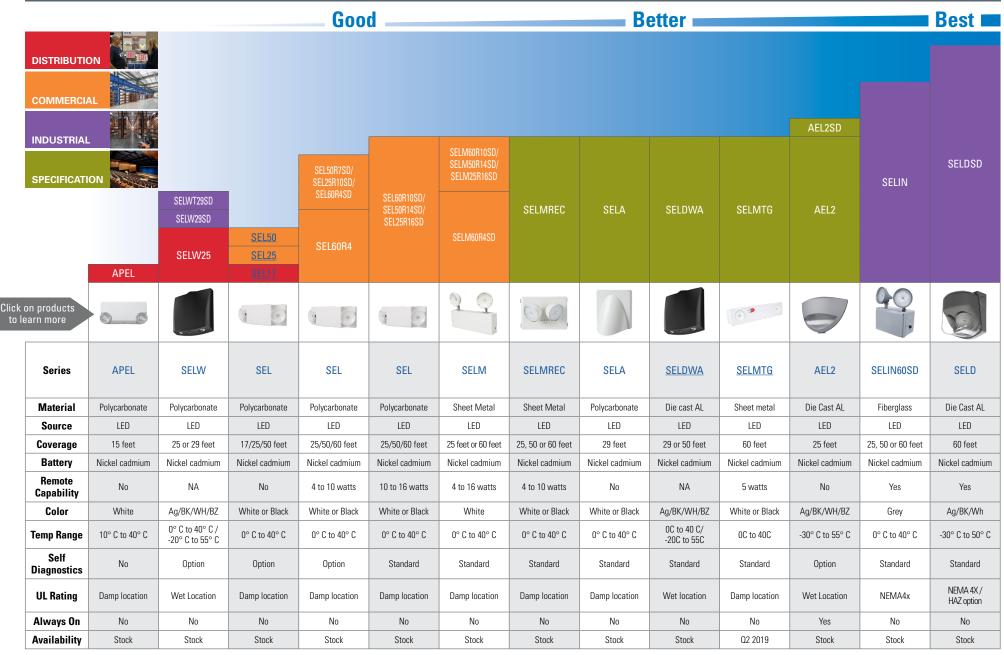
The product selection guides are simple yet powerful tools to help assist with product comparisons and selection based on features, performance and value.







### **Sure-Lites**





**Exit** LED

## **Sure-Lites**

		Good				Better					Best	
DISTRIBUTION												
COMMERCIAL								EUXSD			UX HAZ	
INDUSTRIAL												
SPECIFICATION								EUX	ACE	ELX/ES	UX	
			LPXSD	CXSD	LPXC	EUS	LPXW Outdoor					
	АРХ	APC	LPX	CXSD	LPAU	EUS EUR						
k on products learn more	EXIT	• EXIT	EXIT,	EXIT	• EXIT	EXIT	<b>EXIT</b> )	EXIT	(EXIT)	< <u>EXIT&gt;</u>	EXIT	
Series	АРХ	APC/APCH	LPX	CX	LPXC	EU	LPXW	EUX	ACE	ES / ELX	UX	
Туре	Box	Combo	Box	Box	Combo	Edge Lit	Box	Edge Lit	Circular	Edge Lit	Box	
Material	Polycarbonate	Polycarbonate	Polycarbonate	Die Cast	Polycarbonate	Aluminum	Polycarbonate	Aluminum	Aluminum	Aluminum	Die Cast AL	
Mounting	Universal		Universal	Universal	Universal	Sur / Rec	Universal	Universal	Universal	Sur / Rec	Universal	
Faces	Universal	Universal	Universal	Universal	Universal	Universal	One or Two	Universal	Universal	One or Two	One or Two	
Letter Color	Red or Green	Red or Green	Red & Green	Red & Green	Red & Green	Red or Green	Red or Green	Red or Green	Red & Green	Red or Green	Red & Green	
Housing Color	White, Black	White, Black	White, Black	Silver, Black, White	White, Black	Silver	Silver, Black, White	Silver, Black, White	Silver, Black, White	Wh, BK, BZ, BR, AL	Silver, Black, White	
Self Diagnostics	N/A	N/A	Option	Option	Option	N/A	Standard	Option	Standard	Option ELX	Standard	
Remote Capacity	Option	Yes	Option	No	Option	No	No	No	No	No	No	
UL Rating	Damp location	Damp location	Damp location	Damp location	Damp location	Damp location	Wet location	Damp location	Damp location	Damp location	NEMA4X/HAZ	
Availability	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock	MTO	Stock	



Remote	
LED	

## **Sure-Lites**

		Good		Best		
	DISTRIBUTION			Better		
	INDUSTRIAL					
	SPECIFICATION	APWR	SRP	SRM	SPRA	
Click to	on products learn more	:::			6 0	
	Series	APWR	SRP	SRM	SRPA	
	Material	Plastic	Polycarbonate	Sheet Metal	Polycarbonate	
	Source	LED	LED	LED	LED	
	Number of heads	1 or 2	1 or 2	1 or 2	2	
	Adjustable	Yes	Yes	Yes	Yes, with forward throw	
	Coverage	15 feet	13 to 60 feet	13 to 60 feet	29 feet	
	Voltage input	3.6 volts	4.8 through 12 volts	4.8 through 12 volts	4.8 through 6 volt	
	Color	White, Black	White, Black, Grey	White, Black, Grey	White, Black, Silver, Grey	
	Temp Range	0° C to 40° C	-30° C to 60° C	-30° C to 60° C	-30° C to 55° C	
	UL Rating	Wet location	Wet Location	Wet Location	Wet Location	
	Availability	Stock	Stock	Stock	Stock	



# **Lighting controls**

Make your workspace work for you. Cooper Lighting Solution's connected lighting systems take the guesswork out of managing your facility, seamlessly adapting to patterns and preferences. With solutions that let you easily manage comfort, productivity and energy savings, it pays to be connected.

Lighting the spaces where we congregate - whether for work, for entertainment, education or services is fundamental to our experience and performance. Maximizing those interactions requires specific design, cost and efficiency considerations.



The product selection guides are simple yet powerful tools to help assist with product comparisons and selection based on features, performance and value.





### **Lighting** Controls

Vired Switches●●Battery Switches●●Battery Sensors●●Battery Sensors●●Battery Sensors●●Wireless fixtures●●Sensor integrated fixtures●●Sensor integrated Control●●Receptacle Control●●Modular Wiring System●●Modular Wiring System●●Wireless communications●●Two wire communications●●DepenADR●●AV integration●●Mobile App●●Floorplan●●Alarms & Events●●API Integration●●Coffice/ Private/ Open●●Education/ Classroom●●Outdoor Parking Lot●●Outdoor Parking Garage●●Outdoor Parking Garage●<	р	Click on Connected product to learn more	WaveLinx Wireless	WaveLinx Wired
Vired Sensors••Battery Sensors••Battery Sensors••Wireless fixtures••Sensor integrated fixtures••Switchpacks••Receptacle Control••Integration••Modular Wiring System••Modular Wiring System••Two wire communications••Two wire communications••AV integration••BACnet••Mobile App••Mobile App••Floorplan••Alarms & Events••Energy Dashboard••Office/ Private/ Open••Education/ Classroom••Outdoor Parking Lot••Outdoor Area Site••Outdoor Area Si		Wired Switches	•	•
Battery Sensors		Battery Switches	•	
SwitchpacksReceptacle ControlReceptacle ControlIntegrationIntegrationModular Wiring SystemModular Wiring SystemWireless communicationsTwo wire communicationsTwo wire communicationsAV integrationBACnetOpenADROpenADRMobile AppFloorplanEnergy DashboardEnergy DashboardOffice/ Private/ OpenEducation/ ClassroomIndustrial/ WarehouseOutdoor Parking LotOutdoor Parking LotOutdoor Area SiteOutdoor Area Site<		Wired Sensors	•	•
SwitchpacksReceptacle ControlReceptacle ControlIntegrationIntegrationModular Wiring SystemModular Wiring SystemWireless communicationsTwo wire communicationsTwo wire communicationsAV integrationBACnetOpenADROpenADRMobile AppFloorplanEnergy DashboardEnergy DashboardOffice/ Private/ OpenEducation/ ClassroomIndustrial/ WarehouseOutdoor Parking LotOutdoor Parking LotOutdoor Area SiteOutdoor Area Site<	IENT	Battery Sensors	•	
SwitchpacksReceptacle ControlReceptacle ControlIntegrationIntegrationModular Wiring SystemModular Wiring SystemWireless communicationsTwo wire communicationsTwo wire communicationsAV integrationBACnetOpenADROpenADRMobile AppFloorplanEnergy DashboardEnergy DashboardOffice/ Private/ OpenEducation/ ClassroomIndustrial/ WarehouseOutdoor Parking LotOutdoor Parking LotOutdoor Area SiteOutdoor Area Site<	IIPW	Wireless fixtures	•	
Receptacle ControlImage: ControlImage: ControlIntegrationImage: ControlImage: ControlImage: ControlImage: ControlImage: ControlModular Wiring SystemImage: ControlImage: ControlModular Wiring SystemImage: ControlImage: ControlWireless communicationsImage: ControlImage: ControlTwo wire communicationsImage: ControlImage: ControlTwo wire communicationsImage: ControlImage: ControlAV integrationImage: ControlImage: ControlDepenADRImage: ControlImage: Control <t< th=""><th>EQU</th><td>Sensor integrated fixtures</td><td>•</td><td></td></t<>	EQU	Sensor integrated fixtures	•	
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Modular Wiring System•••Wireless communications•••Two wire communications•••AV integration•••BACnet•••OpenADR•••Mobile App•••Mobile App•••Floorplan•••Alarms & Events•••API Integration•••Office/ Private/ Open•••Industrial/ Warehouse•••Outdoor Parking Lot•••Outdoor Area Site•••		Integration	•	•
AV integrationImage: Constraint of the co	NO	Traditional wiring	•	$\bullet$
AV integrationImage: Constraint of the co	LATI	Modular Wiring System	$\bullet$	•
AV integrationImage: Constraint of the co	STAL	Wireless communications	•	
BACnetBACnetOpenADRMobile AppFloorplanFloorplanAlarms & EventsAlarms & EventsEnergy DashboardAPI IntegrationOffice/ Private/ OpenEducation/ ClassroomIndustrial/ WarehouseOutdoor Parking LotOutdoor Area Site	Ä	Two wire communications	•	•
Provide Image: Constraint of the second secon		AV integration	•	•
Mobile AppImage: Constraint of the section of the sectio		BACnet	•	$\bullet$
Alarms & Events     Image: Constraint of the second s	E	OpenADR	•	$\bullet$
Alarms & Events       Energy Dashboard       API Integration       Office/ Private/ Open       Education/ Classroom       Education/ Classroom       Industrial/ Warehouse       Outdoor Parking Lot       Outdoor Area Site	WAF	Mobile App	•	•
Alarms & Events     Image: Constraint of the second s	0FT	Floorplan	•	
API IntegrationImage: Constraint of the second	S	Alarms & Events	•	
Office/ Private/ Open       ●         Education/ Classroom       ●         Industrial/ Warehouse       ●         Outdoor Parking Lot       ●         Outdoor Area Site       ●		Energy Dashboard	•	
StolEducation/ ClassroomImage: ClassroomIndustrial/ WarehouseImage: ClassroomImage: ClassroomOutdoor Parking LotImage: ClassroomImage: ClassroomOutdoor Area SiteImage: ClassroomImage: ClassroomOutdoor Area SiteImage: ClassroomImage: Class		API Integration	•	
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	SN	Education/ Classroom	•	$\bullet$
	ATIO	Industrial/ Warehouse	•	$\bullet$
	JIC	Outdoor Parking Lot	•	$\bullet$
Outdoor Parking Garage	APF	Outdoor Area Site	$\bullet$	$\bullet$
		Outdoor Parking Garage		•
ASHRAE 90.1 2016		ASHRAE 90.1 2016	•	•
IECC 2018 ● ●	ODE	IECC 2018	•	•
T24 2018 ● ●	8	T24 2018	•	•

# Why use Controls?



Rising conduit and wire costs Conduit and copper has seen continued cost increase, as much as 22% over the past 12 months.

- Eliminate up to 60% of the wire runs
- Less wire Less pipe

#### Shortage of qualified labor

80% of electrical contracting firms are reporting difficulty filling hourly craft worker positions and higher salaries.

- Save up to 45 minutes per control zone
- Less time Less people

#### Installation times

Get off the job at least 40% faster simple install and simple setup.

- More jobs with the same people means more money for you
- Faster install

#### Energy savings

How do you make sure you meet local code and provide energy savings to your customer?

- Network Lighting Controls (NLCs) provide 47-70% savings with integrated luminaire lighting controls
- Up to 70% energy savings

Wired or Wireless, code-compliant and cost-effective for today's **Electrician** 



#### Training

How do you keep up with the latest technology? Cooper Lighting Solutions provides local and classroom certification programs

- Learn how the system works in as little as 2 hours
- Simply mobile

#### Instructional videos

What if I need a tutorial on site? WaveLinx has fifteen, 5 minute videos that walk you through it.

- Free mobile app
- Free training videos

### Utility incentives Many states provide

Many states provide rebate incentives for LED fixtures with integrated sensors.

- Less material to install, and the rebate pays for it
- Incentives up to \$75 per fixture

#### Cybersecurity

Are you concerned with cybersecurity? Good, but know that WaveLinx has the UL2900-1 listing for Network Cybersecurity.

- Help customers stay secure
- Peace of mind that the product is backed by UL for cybersecurity

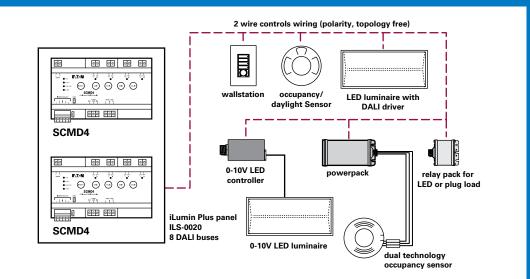




# Wired

Your wired solution to control complete building lighting via area (relay), zone (0-10v) or fixture (2-wire or DMX) all from one system.

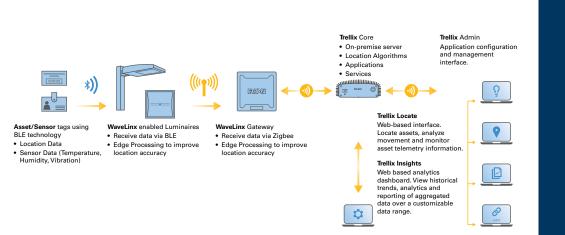
- Simplified control wiring
- Achieve more wired applications
- Control a floor or entire building



# Wireless

Electrical Contractors use basic wiring practices they already know to complete projects and get off the job faster with the most comprehensive and cost effective system on the market.

- No special wiring required
- Get more jobs done faster
- Feel safe with industry best UL2900 listing
- Control a room, floor or entire building



WaveLinx