

# Lighting Design Lab Qualified LED Fixtures List

This list is maintained by the LDL for Puget Sound Energy, Seattle City Light, Snohomish PUD, Tacoma Power, the Energy Trust of Oregon, Bonneville Power Administration, Idaho Power, and Eugene Water and Electric Board.

**NOTE: This is an interim qualifying list while products are being reviewed by ENERGY STAR or DLC.**

Products will be permanently removed 12 months after "Post Date".

If you don't see a product on this list, check the ENERGY STAR or DLC lists.

All products carry a warranty of 3 years or more. For questions, please contact [ledlist@lightingdesignlab.com](mailto:ledlist@lightingdesignlab.com).



Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date
Bollards	Leader Manufacturing, Inc.	LEA-LDN-DL9 Retrofit Kit	120	4317 K	10.7	96.2	1,029	1,029	73.2	-5.1	06/14/16
		LEA-LDN-DL9 Retrofit Kit	277	4317 K	11.4	96.2	1,029	1,029	73.2	-5.1	06/14/16
Canopy Luminaires	Deco Lighting	D525-LED-60W	120	5116 K	56.2	94.4	5,306	5,310	67.1	-28.9	07/21/15
		D530-LED-30W	120	5370 K	29.6	90.0	2,667	2,000	69.9	-12.8	05/12/15
	Lithonia	VRC LED 1 50K MVOLT	120	5096 K	37.7	93.7	3,529	3,389	78.2	-9.0	04/03/15
	Noribachi	CAS-021-[optional upgrades]-[mounting]	120	4893 K	31.6	120.0	3,789	3,789	77.4	-3.6	04/13/15
		CAS-042-[optional upgrades]-[mounting]	120	5017 K	61.5	124.0	7,634	7,634	76.8	-3.9	04/13/15
Display/Refrigerated Case/Sign Lighting	Deco Lighting	DCH-LED-4-45W	120	3953 K	44.1	102.0	4,531	4,000	82.7	15.1	03/12/15
		DCH-LED-4-60W	120	3953 K	59.1	102.0	6,042	4,000	82.7	15.1	03/12/15
		DSL-LED-4-35-50-UNV	120	5053 K	35.7	124.7	4,453	4,450	82.7	15.1	11/25/15
		DSL-LED-8-60-50-UNV	120	5018 K	63.7	89.8	5,725	5,880	84.5	25.0	11/25/15
	DEI Technology LED Power	DB E2455-40TR-50H	120	5400 K	26.1	79.6	2,080	2,080	84.1	0.0	04/19/16
		CLW-H38J-65K-120D-24V	24	6368 K	6.5	65.0	427	426	84.0	10.3	07/29/15
		CLW-H38V-65K-120D-24V	24	4914 K	6.2	84.0	521	521	83.0	7.3	07/30/15
		RB26LP-6-1/2w-4'-41K-24V	24	4064 K	16.2	80.4	1,299	1,299	83.8	18.3	11/17/15
		RB26LP-6-1/2w-5'-41K-24V	24	4064 K	20.2	80.4	1,624	1,624	83.8	18.3	11/17/15
		RB26LP-6-1/2w-6'-41K-24V	24	4064 K	24.2	80.4	1,948	1,948	83.8	18.3	11/17/15
Fuel Pump Canopy	EnviroLux	ENV-70W-LED-12x12	120	5431 K	66.4	107.7	7,154	7,154	74.5	0.0	10/15/15
	SNC LED	SNC-CP-100WA1	120	5965 K	101.2	101.5	10,270	10,860	72.5	0.0	10/14/15
HID Replacements	Deco Lighting	D800-RETRO-120W	120	5662 K	122.5	86.7	10,615	108,080	76.0	-17.8	06/11/15
		D800-RETRO-140W	120	5662 K	144.7	85.6	12,384	12,374	76.0	-17.8	06/11/15
		D800-RETRO-160W	120	5662 K	166.8	84.9	14,153	14,081	76.0	-17.8	06/11/15
		D800-Retro-320W	120	5662 K	322.5	87.8	28,306	28,314	76.0	-17.8	06/11/15
High-bay/Low-Bay (including Aisle)	1st Source Lighting	BAY-LHB8-6-S-PO-50K-DAC-U	120	5172 K	296.1	111.0	32,778	32,778	85.0	21.2	12/15/15
		RBL-135W-HO-4-2LC-UNI	120	5340 K	143.2	101.0	14,459	13,600	81.0	9.0	08/06/15
	Advanced Energy Ideas	RBL-135W-HO-4-2LC-UNI	277	5340 K	143.2	101.0	14,459	13,600	81.0	9.0	08/06/15
		RBL-80W-HO-3-2LC-UNI	120	5300 K	87.1	110.4	9,618	8,800	81.0	9.0	08/06/15
		RBL-80W-HO-3-2LC-UNI	277	5300 K	87.1	110.4	9,618	8,800	81.0	9.0	08/06/15
	Beyond Signs Inc dba Beyond LED Tech	102426-4	120	6634 K	21.2	122.5	2,600	2,640	82.7	2.0	12/28/15
	Deco Lighting	D980-LED-120W	120	5230 K	120.1	94.3	11,326	5,310	71.1	-26.3	04/19/16
		D980-LED-80W	120	5230 K	80.1	94.3	7,550	5,310	70.1	-26.3	04/19/16
		DHBX-LED-160	120	5556 K	161.2	95.8	15,440	17,100	70.0	-11.1	04/13/15
		DHBX-LED-180	120	5556 K	181.2	96.1	14,713	17,100	70.0	-11.1	04/13/15
		DHBX-LED-360	120	5556 K	361.2	96.4	34,826	34,200	70.0	-11.1	04/13/15
	Differential Energy Global Ltd.	DEG - HB-CF-325400-MF	110	4626 K	103.7	84.1	8,414	8,414	72.4	-17.7	06/15/16
DEG - HB-CF-325400-MF		277	4626 K	102.5	84.1	8,414	8,414	72.4	-17.7	06/15/16	

# Lighting Design Lab Qualified LED Fixtures List

Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date	
High-bay/Low-Bay (including Aisle)	Differential Energy Global Ltd.	DEG - HB-CF-600750-MF	120	4344 K	228.2	96.2	18,366	18,366	80.5	-9.6	06/15/16	
		DEG - HB-CF-600750-MF	277	4344 K	219.5	96.2	18,366	18,366	80.5	-9.6	06/15/16	
	EnviroLux	ENV-138W-LED-LHB-PS-UNV	110	5556 K	135.8	139.2	18,909	18,909	71.6	0.0	08/18/15	
		ENV-180W-LED-LHB-PS-UNV (110V)	110	5610 K	191.6	127.7	24,465	24,465	71.4	0.0	08/18/15	
		HE-ENV-138W-LHB-PS-UNV	120	5450 K	131.0	133.5	17,507	17,507	86.0	0.0	09/15/15	
		HE-ENV-180W-LHB-PS-UNV	120	5500 K	198.0	121.9	24,128	24,128	86.0	0.0	09/15/15	
	ESL Vision, LLC	ESL-LBS-14-45W	120	4224 K	43.6	101.9	4,443	4,400	83.0	7.0	07/29/15	
	Global Tech LED	GTSOLM21	120	5650 K	58.3	81.7	4,765	4,765	70.0	0.0	02/12/13	
	KMW, Inc.	NA65-A5709	120	5582 K	71.4	108.2	7,728	6,825	89.1	20.3	04/29/15	
		NA65-A5709	277	5582 K	68.4	108.2	7,728	6,825	89.1	20.3	04/29/15	
		SR40-A40	120	4228 K	43.8	100.2	4,390	4,000	87.0	26.8	04/29/15	
		SR40-A40	277	4228 K	1.0	100.2	4,390	4,000	87.0	26.8	04/29/15	
		SR40-A50	120	5111 K	40.4	111.7	4,510	4,000	83.9	21.5	10/19/15	
		SR40-A50	277	5111 K	39.6	111.7	4,510	4,000	83.9	21.5	10/19/15	
	LDPI Inc.	LE300-P8-V1-(mount)-W-(options)	120	4978 K	81.3	111.0	9,025	9,000	73.6	0.0	07/23/15	
		LE300-P8-V1-(mount)-W-(options)	277	4978 K	81.0	111.0	9,025	9,000	73.6	0.0	07/23/15	
	LEDTRONICS, INC	HBL004-150W-XPW-201WD	277	5102 K	147.8	113.8	16,822	18,220	85.8	22.0	08/09/16	
	Maxlite	LSP4805SU44DV35	120	3572 K	39.4	95.8	3,774	3,900	85.3	25.0	06/03/15	
		LSP4805SU44DV35	277	3572 K	39.5	95.8	3,774	3,900	85.3	25.0	06/03/15	
		LSP9605SU80DV35	120	3581 K	78.2	101.1	7,907	8,013	85.1	24.2	06/03/15	
		LSP9605SU80DV35	277	3581 K	78.2	101.1	7,907	8,013	85.1	24.2	06/03/15	
	Noribachi	021-CAO-[optional upgrades]-[mounting]	120	4638 K	31.9	104.0	3,306	3,306	74.8	-12.8	05/27/15	
		021-FLL-[optional upgrades]-[mounting]	120	4760 K	31.6	116.0	3,667	3,667	74.5	-15.4	05/27/15	
		140-HBC-[optional upgrades]-[mounting]	120	4735 K	225.8	131.0	29,610	29,610	73.4	-13.6	05/27/15	
		378-FLXXL-[optional upgrades]-[mounting]	277	4765 K	530.0	129.5	70,420	70,420	73.9	-14.4	08/13/15	
		HBA-084-[optional upgrades]-[mounting]	120	4869 K	145.9	114.0	16,700	16,700	74.5	-8.2	04/15/15	
	<b>Linear Luminaires (Direct)</b>	Finelite, Inc	HP4-R-X-HO-3500K	277	3500 K	37.7	98.8	3,726	3,726	84.0	14.0	10/15/15
	<b>Linear Luminaires (Direct/Indirect)</b>	Deco Lighting	RCTR-LED-4-35W	120	3953 K	34.1	101.0	3,408	3,561	82.7	15.1	02/09/16
RCTR-LED-4-45W			120	3953 K	45.1	101.0	4,531	4,450	82.7	15.1	02/09/16	
RCTR-LED-4-60W			120	3953 K	58.1	155.5	4,531	5,933	82.7	15.1	02/10/16	
Finelite, Inc		S18 LED-ID-DCO-X-2E-HO-3500K-FTO	277	3523 K	38.1	100.6	3,831	838.75/ft	84.0	14.0	11/25/15	
<b>Linear Panels (Troffer)</b>	Kurtzon Lighting	WL-G-X-1X4-2/LED40-UNV (WL=EL) (X=3,4, or 5)	120	4083 K	76.6	85.7	6,568	6,598	83.0	21.7	04/19/16	
	Selex Corporation	L10 1A35 40 LW xx xx xx UNV DM	120	3950 K	34.3	84.4	2,896	725	83.9	0.0	04/01/16	
	Visioneering	SP4202-750X750-LED840K040L347-A1K0V08(120)V24(24-15P)	347	3999 K	36.7	115.5	4,233	4,000	82.6	0.0	08/17/16	
<b>Linear Panels (Troffers)</b>	BJ Take Inc.	BRL-B-4'-4L-840-UNV	120	4000 K	35.5	87.9	3,124	3,100	85.0	19.9	02/09/16	
	Kurtzon Lighting	EL-F-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		EL-G-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		FP-F-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		FP-G-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		KL-F-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		KL-G-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		TL-F-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		TL-G-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		WL-F-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	
		WL-G-2X4-3/LEDH40-120V-HD85	120	4067 K	232.7	85.4	19,870	19,870	84.8	20.3	04/15/15	

# Lighting Design Lab Qualified LED Fixtures List

Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date
Linear Panels (Troffers)	Patina Lighting Ltd.	COSMOS – 2x2	120	4052 K	36.3	106.7	3,900	3,900	83.2	8.5	07/29/15
		COSMOS – 2x4 -	120	3927 K	37.2	109.0	4,044	4,000	83.5	10.2	08/18/15
	SAMJIN LND Co., Ltd.	FRK6EA-02535E10US	277	3547 K	25.1	90.6	2,356	2,100	82.8	21.5	02/27/15
		FRK6EA-02550E10US	277	5112 K	25.1	94.4	2,432	2,300	86.5	28.5	02/27/15
Linear Panels (Troffers) retrofit	Deco Lighting	LITHONIA 2PM3N	120	4018 K	35.7	105.0	3,754	3,500	84.5	25.0	03/17/15
	Precision Paragon [P2]	TKD-2X4-VL-F-UL-35K-FRL	120	3599 K	24.6	113.0	2,793	2,793	83.0	24.3	03/16/15
Outdoor Pole/Arm-Mounted Decorative Luminaires	Cyclone Lighting	CG21T4-AGPF-SKY-3-50W-4K	120	4036 K	58.2	65.2	3,749	3,749	73.0	-14.2	01/14/16
Outdoor Pole-Mounted Area and Roadway Luminaires	Atlas Lighting Products	DD42LED5K	120	5108 K	38.4	99.4	3,813	3,813	72.4	0.0	12/10/15
	Cree	BXSPA_PPL-U_	120	5483 K	165.1	81.6	13,461	12,744	73.0	-22.0	02/27/15
	Cyclone Lighting	CG21T4-AGPF-SKY-3-68W-4K	54	4018 K	68.0	77.3	4,236	4,248	74.0	-14.0	08/13/15
	Deco Lighting	D805-LED 60W	120	5502 K	63.5	72.9	4,623	4,300	68.9	-20.6	11/20/15
		D805-LED-120W	120	5662 K	126.9	70.7	8,976	9,600	69.4	-17.8	11/20/15
		D805-LED-200W	120	5662 K	234.2	81.2	19,011	19,000	69.4	-17.8	11/20/15
		D807-LED 60W	120	5502 K	63.5	72.9	4,623	4,300	68.9	-20.6	11/20/15
		D807-LED-120W	120	5662 K	126.9	81.2	8,976	9,600	69.4	-17.8	11/20/15
		D807-LED-200W	120	5662 K	234.2	81.2	19,011	9,600	69.4	-17.8	11/20/15
		D816-LED-160W	120	5662 K	166.9	84.8	14,153	13,600	76.0	-17.8	04/29/15
		DBM-LED-120W	120	5114 K	111.1	92.0	10,172	11,040	69.4	-20.2	03/16/16
		DBM-LED-180-50-UNV	120	5114 K	177.2	92.0	18,176	18,100	69.4	-20.2	12/07/15
		DBM-LED-20W	120	5114 K	19.1	88.6	1,692	2,760	69.1	-20.2	03/16/16
		DBM-LED-30W	120	5114 K	28.1	90.4	2,540	2,760	69.1	-20.2	03/16/16
		DBM-LED-40W	120	5114 K	38.1	88.8	3,383	3,680	69.1	-20.2	03/16/16
		DBM-LED-80W	120	5114 K	78.1	86.6	6,765	7,360	69.1	-20.2	03/16/16
	EnviroLux	ENV-45W-LED-RBF	120	5751 K	49.0	96.5	4,730	4,730	74.5	0.0	09/14/15
		ENV-90w-LED-DE-RETKIT-PS	120	5326 K	88.1	120.0	10,566	10,565	71.5	0.0	07/29/15
		ENV-90W-LED-LFL	120	5326 K	88.1	120.0	10,565	10,565	71.5	0.0	09/14/15
	ESL Vision, LLC	ESL-Bullet-105W	230	4947 K	102.4	80.6	8,258	8,250	71.9	-24.0	03/13/15
	Global Tech LED	GTL-AR-TITAN HM-112-HO-SV-GR-NL	277	5269 K	352.2	84.9	29,880	30,000	74.5	0.0	07/29/16
	Hilumz USA	HN15-120	120	5274 K	130.5	96.8	12,639	12,638	71.1	0.0	08/11/16
		HN15-150	240	5189 K	159.7	89.8	14,341	14,340	70.8	0.0	08/11/16
		HN15-80	120	5100 K	90.4	107.4	9,706	9,700	70.0	0.0	08/11/16
	KMW, Inc.	SET060-A50	120	5116 K	66.8	109.5	7,319	7,200	80.0	40.1	08/13/15
		SET060-A50	277	5116 K	66.3	109.5	7,319	7,200	80.0	40.1	08/13/15
		SET080-A50	120	5185 K	87.5	108.0	9,456	1,000	84.7	43.7	08/13/15
		SET080-A50	277	5185 K	84.3	108.0	9,456	1,000	84.7	43.7	08/13/15
		SET100-A50	120	5127 K	104.7	111.4	11,670	12,500	83.8	39.0	08/13/15
		SET100-A50	277	5127 K	100.2	111.4	11,670	12,500	83.8	39.0	08/13/15
	LSI Industries	XPTS3 5 LED HO NW UE	120	4136 K	87.6	71.0	6,181	6,200	73.0	0.0	04/29/15
	Musco	228 LED	480	5912 K	624.3	104.8	65,446	65,400	74.0	0.0	07/10/15
Neptun Light, Inc.	LED-CRK-180-UNV-841-T3	120	4117 K	180.6	114.7	20,713	18,000	84.8	22.1	11/25/15	
Noribachi	ALR-105-[optional upgrades]-[mounting]	120	4862 K	173.3	119.0	20,620	20,620	74.0	-17.1	04/13/15	
	ALR-140-[optional upgrades]-[mounting]	120	4824 K	231.7	113.0	26,170	26,170	74.0	-14.5	04/29/15	
	CBA-084-[optional upgrades]-[mounting]	120	4878 K	138.9	112.0	15,510	15,510	74.8	-15.3	04/29/15	
	HBM-140-[optional upgrades]-[mounting]	120	4956 K	226.3	117.0	26,380	26,380	75.2	-8.8	04/13/15	
	SBL-210-[optional upgrades]-[mounting]	120	4818 K	299.0	117.0	35,120	35,120	74.0	-19.2	03/20/15	

# Lighting Design Lab Qualified LED Fixtures List

Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date
Outdoor Pole-Mounted Area and	Noribachi	SBL-252-[optional upgrades]-[mounting]	120	4858 K	433.3	108.0	56,880	46,880	74.8	-15.5	04/29/15
		SBM-140-[optional upgrades]-[mounting]	120	4932 K	231.6	107.0	24,790	24,790	73.8	-17.5	04/29/15
	SCHREDER LIGHTING LLC	PIANO 1	120	4268 K	62.9	85.9	5,405	9,000	68.9	-12.3	03/13/15
Outdoor Pole-Mounted Area and Roadway Retrofit Kits	Harris Lighting Products	DL140-5000-1	120	5039 K	137.5	94.3	12,903	12,900	84.3	0.0	05/11/15
		DL70-5000-1	120	5052 K	67.4	94.3	6,357	6,300	84.4	0.0	05/11/15
		FL113-5000	120	5139 K	113.0	107.3	12,124	12,124	82.7	0.0	06/01/16
		FL56-5000	120	5110 K	56.7	114.9	6,518	6,518	82.6	0.0	06/01/16
	Viribright Lighting Inc. (Matrix Lighting Limited)	P15EU6-5 / 750077	120	5720 K	14.9	93.9	1,402	1,350	94.4	74.0	06/01/16
		P42EU2-5 / 750096	120	2641 K	4.2	91.5	383	380	92.2	38.0	06/01/16
		S42EU4-5 / 750049	120	4005 K	4.1	101.6	421	380	94.2	61.0	06/01/16
		S42EU6-5 / 750050	120	5653 K	4.0	100.4	402	380	93.9	71.0	06/01/16
Outdoor Wall/Ground-Mounted Luminaires	Atlas Lighting Products	WL20LED	120	4602 K	20.1	83.9	1,686	1,685	83.8	0.0	12/07/15
	Deco Lighting	350096-40W	120	5430 K	38.2	83.1	3,170	3,280	68.9	-18.7	11/05/15
		D211-LED-90W	120	5662 K	90.8	74.1	6,732	8,000	69.4	-17.8	06/03/15
		D220-LED-20W	120	5514 K	18.6	88.2	3,524	4,000	67.8	-25.7	03/16/16
		D220-LED-30W	120	5514 K	32.6	88.2	2,548	3,000	67.8	-25.7	03/16/16
		D220-LED-40W	120	5514 K	38.6	88.2	3,408	4,000	67.8	-25.7	03/16/16
		D400-LED-10	120	5430 K	8.2	97.1	792	790	68.9	-18.7	09/22/15
		D400-LED-20	120	5430 K	18.2	83.1	1,584	1,580	68.9	-18.7	09/22/15
		D400-LED-30	120	5430 K	28.2	83.1	2,376	2,370	68.9	-18.7	09/22/15
		D402-LED-20W	120	5430 K	18.2	83.1	1,584	1,660	68.9	-18.7	03/16/16
		D402-LED-30W	120	5430 K	28.2	83.1	2,376	2,490	68.9	-18.7	03/16/16
		D404-LED-100W	120	5230 K	97.4	82.8	7,903	8,200	67.0	-26.3	04/07/16
		D404-LED-120W	120	5230 K	117.4	82.8	9,488	9,840	67.0	-26.3	03/12/15
		D404-LED-60W	120	5230 K	57.4	82.8	4,747	4,920	67.0	-26.3	04/07/16
		D404-LED-80W	120	5230 K	77.4	81.6	6,309	6,560	67.0	-26.3	03/12/15
		D405-LED-10W	120	5430 K	8.2	97.1	792	820	68.9	-18.7	03/16/16
		D405-LED-15W	120	5430 K	14.2	83.9	1,188	1,230	68.9	-18.7	03/16/16
		D405-LED-20W	120	5430 K	18.2	83.1	1,584	1,640	68.9	-18.7	03/16/16
		D406-LED-40W	120	5430 K	38.2	83.1	3,170	3,280	68.9	-18.7	04/07/16
		D406-LED-60W	120	5230 K	57.4	82.8	4,747	4,920	67.0	-26.3	06/30/15
		D410-LED-10W	120	5430 K	8.2	97.1	792	820	68.9	-18.7	03/16/16
		D410-LED-15W	120	5430 K	14.2	83.9	1,188	1,230	68.9	-18.7	03/16/16
		D410-LED-20W	120	5430 K	18.2	83.1	1,584	1,640	68.9	-18.7	03/16/16
		D411-LED-10W	120	5430 K	8.2	97.1	792	820	68.9	-18.7	04/03/15
		D411-LED-15W	120	5430 K	14.2	83.9	1,188	1,230	68.9	-18.7	04/03/15
		D411-LED-20W	120	5430 K	18.2	83.1	1,584	1,270	68.9	-18.7	04/03/15
		D415-LED-20W	120	5430 K	18.6	91.1	1,698	1,700	68.9	-18.7	04/13/15
		D415-LED-30W	120	5430 K	28.6	89.0	2,548	2,550	68.9	-18.7	04/13/15
		D415-LED-40W	120	5430 K	40.0	84.7	3,388	3,400	68.9	-18.7	04/13/15
		D454-LED-100-50-UNV-BZ	120	5230 K	99.0	122.4	12,117	12,110	72.0	-26.3	08/18/15
		D454-LED-90-50-UNV-BZ	120	5230 K	89.0	122.4	10,895	10,895	72.0	-26.3	09/22/15
		D457-LED-120W	120	5230 K	117.4	82.8	9,488	9,490	67.0	-26.3	04/07/16
		D821-LED-120W	120	5662 K	126.9	70.7	8,976	9,600	69.4	-17.8	04/07/16
D821-LED-20W	120	5502 K	21.2	72.7	1,496	1,600	68.9	-20.6	04/07/16		
D821-LED-30W	120	5502 K	31.7	70.7	2,244	1,600	68.9	-20.6	04/07/16		

## Lighting Design Lab Qualified LED Fixtures List

Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date	
Outdoor Wall/Ground-Mounted	Deco Lighting	D821-LED-40W	120	5502 K	42.3	70.7	2,992	3,200	68.9	-20.6	04/07/16	
		D821-LED-60W	120	5502 K	63.5	72.9	4,620	4,300	68.9	-20.6	04/07/16	
		DVTL-LED-10-50-UNV	120	5430 K	10.7	91.4	978	950	68.9	-18.7	02/10/16	
		DVTL-LED-20-50-UNV	120	5315 K	18.2	91.4	1,955	1,900	68.9	-18.7	02/10/16	
		DVTL-LED-30-50-UNV	120	5430 K	32.1	91.4	2,933	2,900	68.9	-18.7	02/10/16	
		VINCI-10W	120	5430 K	10.7	66.9	716	700	68.9	-18.7	07/21/15	
	EnviroLux	ENV-180W-LED-LFL-PS-UNV	120	5818 K	174.0	114.2	19,871	19,871	74.5	0.0	08/18/15	
		ENV-45W-LED-HFMWP	120	5774 K	49.9	100.4	5,008	5,008	74.1	0.0	09/15/15	
		ENV-45W-LED-LWP	120	5467 K	49.6	101.8	5,051	5,051	74.3	0.0	09/14/15	
		ENV-45W-LED-LWPCO	120	5370 K	49.3	113.9	5,616	5,616	72.5	0.0	09/15/15	
		ENV-70W-LED-LWP	277	5560 K	63.5	100.2	6,453	6,453	74.3	0.0	09/14/15	
		ENV-70W-LED-LWPCO	120	5450 K	65.2	109.5	7,142	7,142	72.5	0.0	09/14/15	
	ENV-90W-LED-Slimline Wallpack	120	5480 K	87.1	90.9	7,916	7,916	74.2	0.0	09/14/15		
	ESL Vision, LLC	ESL-FLS-100W-350	120	5208 K	98.4	106.0	10,455	1,000	85.5	23.0	12/24/15	
	Howard Lighting Products	MLWP-5033-MV-XXX	120	5034 K	32.1	69.7	2,238	2,240	72.5	0.0	02/24/15	
		MLWP-5046-MV-XXX	120	5004 K	46.2	74.7	3,449	3,450	82.0	0.0	02/24/15	
		MLWP-5070-MV-XXX	120	5216 K	70.2	72.0	5,055	5,060	72.8	0.0	02/24/15	
	Hubbell Lighting	WGH-110L-4K-U-M	120	4013 K	54.0	96.7	5,219	4,888	82.0	12.1	11/18/15	
		WGH-110L-4K-U-M	277	4013 K	54.0	96.7	5,219	4,888	82.0	12.1	11/18/15	
	KMW, Inc.	WP050-A50	120	5157 K	52.1	118.0	6,147	6,250	84.0	24.0	10/19/15	
		WP050-A50	277	5157 K	51.9	118.0	6,147	6,250	84.0	24.0	10/19/15	
		WP075-A50	120	5171 K	75.8	115.7	8,773	9,375	84.2	25.7	04/01/16	
		WP075-A50	277	5171 K	73.5	115.7	8,773	9,375	84.2	25.7	04/01/16	
		WP100-A50	120	5215 K	111.9	116.4	13,030	12,500	83.3	18.6	04/01/16	
		WP100-A50	277	5215 K	107.0	116.4	13,030	12,500	83.3	18.6	04/01/16	
	Lithonia	TWH LED 20C 50K	120	5062 K	72.6	77.8	5,654	5,562	67.5	-30.5	03/03/15	
	Maxlite	MLLWP60LED50	120	4728 K	51.3	88.3	4,525	4,030	83.1	13.0	05/11/15	
		MLLWP60LED50	277	4728 K	50.6	88.3	4,525	4,030	83.1	13.0	05/11/15	
		MLSWP30LED50	120	4850 K	29.2	74.1	2,166	2,165	83.6	17.0	05/11/15	
		SECA15U50BPC12	120	5173 K	15.1	91.0	1,364	1,450	83.3	0.0	02/09/16	
		SECA15U50BPC12	277	5173 K	15.6	91.0	1,364	1,450	83.3	0.0	02/09/16	
	Noribachi	Hex-042-[optional upgrades]-[mounting]	120	4777 K	61.0	113.0	6,880	6,880	74.3	-16.5	04/15/15	
		SBM-084-[optional upgrades]-[mounting]	120	4834 K	139.7	119.0	16,580	16,580	74.2	-16.8	04/15/15	
		WPF-063-[optional upgrades]-[mounting]	120	4827 K	94.6	120.0	11,320	11,320	73.7	-19.9	04/03/15	
	RAB Lighting	WP1LED30	120	5200 K	31.4	97.5	3,060	3,060	83.0	0.0	09/11/15	
		WP2LED24	120	5018 K	24.4	120.6	2,942	2,942	81.0	0.0	09/04/15	
		WP2LED37	120	5094 K	38.7	111.9	4,329	4,329	82.0	0.0	09/11/15	
		WP3LED55	120	5066 K	56.7	117.2	6,645	6,645	81.0	0.0	09/04/15	
	Tamlite Lighting	TAFLL5000-XX	120	5208 K	31.9	79.6	2,539	2,750	70.2	0.0	09/02/16	
		TAFLL5050-XX	120	5215 K	51.0	73.3	3,740	3,800	70.6	0.0	09/02/16	
	Outdoor Wall/Ground-Mounted Retrofit Kits	Harris Lighting Products	FL21-5000	120	4902 K	21.5	113.2	2,435	2,400	82.7	0.0	04/11/16
			FL37-5000	120	4915 K	37.2	109.6	4,083	4,000	78.8	0.0	04/07/16
		Viribright Lighting Inc. (Matrix Lighting Limited)	P15EU2-5 / 750075	120	2741 K	14.9	82.6	1,232	1,200	91.9	37.0	06/01/16
			P15EU4-5 / 750076	120	4028 K	15.0	93.7	1,405	1,350	94.0	55.0	06/01/16
			P42EU4-5 / 750097	120	3998 K	4.1	100.1	413	380	94.1	60.0	06/01/16
			S42EU2-5 / 750048	120	2662 K	4.1	91.2	371	370	92.5	40.0	06/01/16

## Lighting Design Lab Qualified LED Fixtures List

Fixture/Lamp Type	Manufacturer	Model Number	Lamp Voltage	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	CRI	R9 Value	Post Date
Parking Garage/Canopy Fixtures	ALP Lighting Components	F2402RLED-21B3	120	4233 K	51.7	108.4	5,602	5,602	83.5	0.0	01/06/16
	Deco Lighting	D206-LED-100	120	5662 K	100.9	74.1	7,480	8,000	69.4	-17.8	04/14/15
		D206-LED-120	120	5662 K	126.9	70.7	8,976	9,600	69.4	-17.8	04/14/15
		D206-LED-150	120	5662 K	150.9	74.4	11,219	12,000	69.4	-17.8	04/14/15
		D530-LED2050BZ	120	5370 K	19.4	92.1	1,778	2,000	70.9	-12.8	04/19/16
		D530-LED-30W	120	5370 K	29.6	90.0	2,667	2,000	70.5	-12.8	04/19/16
	EnviroLux	ENV-45W-LED-12x12	120	5368 K	49.0	111.6	5,470	5,470	74.4	0.0	09/14/15
		ENV-45W-LED-Garage	120	5787 K	49.6	109.2	5,417	5,417	76.0	0.0	09/14/15
		ENV-45W-LED-SE-RETKIT-PS-UNV	120	5537 K	65.0	99.5	6,472	6,472	85.8	0.0	09/14/15
		ENV-70W-LED-Garage	120	5921 K	65.1	105.3	6,858	6,858	76.2	0.0	09/15/15
		ENV-90W-LED-18x18-Canopy	277	5695 K	87.7	112.9	9,924	9,924	74.7	0.0	09/14/15
	Intelligent Energy Optimizers LLC	OptieoLED 600W Flood	120	5132 K	577.7	101.3	5,852	63,000	77.8	8.0	03/08/16
	Lithonia	FEM4 LED 3L IMACD	120	4087 K	38.5	88.8	3,418	3,418	67.2	0.0	11/05/15
	Maxlite	CAN20U50B	120	5105 K	20.9	118.6	2,475	2,475	73.9	-16.0	11/18/15
CAN20U50B		277	5105 K	21.4	115.6	2,467	2,475	73.9	-16.0	11/18/15	
LSP4805HU44DV50PKG		120	5295 K	39.1	129.5	5,063	4,106	83.7	13.2	02/20/15	
Recessed, Surface and Pendant-Mounted Downlights	Aquarii, Inc.	AX-150-30-80-36	120	3017 K	148.5	74.4	11,051	12,000	79.3	-2.4	07/08/15
	CGF Design	E74-OP-LED80-CT4-GEN3-UNV-0-10D-WHT	305	5210 K	76.3	88.8	6,772	8,840	85.0	21.0	04/03/15
		17-4-L55/840-A-DIM-UNV	120	4000 K	49.1	113.8	5,591	5,500	82.0	18.6	07/14/15
	H.E. Williams	18-4-L90/840-A-DIM-UNV	120	4000 K	81.4	111.7	9,088	9,000	82.0	20.4	07/14/15
		ARV13-25WHP-4100K-120-277-OP-WHT	120	4310 K	25.9	92.1	2,385	2,385	87.0	0.0	05/11/15
	Luminaire LED, Inc.	ARV13-25WHP-4100K-120-277-OP-WHT	277	4310 K	25.7	92.1	2,385	2,385	87.0	0.0	05/11/15
		AR148-L1W30	120	4135 K	32.9	98.7	3,248	3,248	81.0	0.0	06/11/15
	Luminis	AR148-L1W65	120	4135 K	58.5	106.1	6,207	6,207	81.0	0.0	03/09/16
ST	Green Creative	5FST19DIM/824/A	120	2378 K	4.9	79.2	391	380	80.9	6.5	08/23/16
Stairway and Passageway	Maxlite	MLVPC14LED50CP	120	5234 K	13.4	83.6	1,123	1,120	65.5	0.0	02/25/16
		MLVPC14LED50CP	277	5234 K	14.1	83.6	1,123	1,120	65.5	0.0	02/25/16
		MLVPW14LED50CP	120	5234 K	13.4	83.6	1,123	1,120	65.5	0.0	02/25/16
		MLVPW14LED50CP	277	5234 K	14.1	83.6	1,123	1,120	65.5	0.0	02/25/16
Track or Mono-point Directional Fixtures	Amerlux, LLC	C3M	120	3000 K	21.0	87.6	1,817	1,850	83.0	11.0	03/09/16
Wall Wash Luminaires	ARVA, LLC	HL-XPL-2-30W	120	2984 K	29.7	85.8	2,547	2,750	83.8	23.0	04/15/15
		HL-XPL-4-70W	120	3114 K	68.9	82.5	5,634	6,100	83.1	19.0	04/15/15
	Finelite, Inc	HPW-LED-FR-4000K-120v-X-X	120	4221 K	37.5	82.3	3,087	3,070	84.0	16.0	03/15/16
Wall Wash Luminaires (sconce)	v2 Lighting Group, Inc	VC3S-xx-13804060-xx	120	3972 K	19.4	59.0	1,155	1,300	83.0	21.8	04/13/15