

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

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.



Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
2' and 4' Linear Replacement	GE Lighting	GELED08T8/4/830/RUA	2964 K	8.8	99.7	874	834	35.8	NA	Yes	88.0	12/01/16
		GELED08T8/4/835/RUA	3362 K	8.7	102.5	896	863	39.4	NA	Yes	88.0	12/01/16
		GELED08T8/4/840/RUA	3976 K	8.8	108.0	946	886	39	NA	Yes	87.0	12/01/16
		GELED14T8/4/830/RCA	2966 K	16.8	105.1	1,770	1,530	37.6	NA	Yes	88.0	12/01/16
		GELED14T8/4/835/RCA	3363 K	16.8	108.1	1,818	1,687	41.6	NA	Yes	89.0	12/01/16
		GELED14T8/4/840/RCA	3994 K	16.9	113.2	1,913	1,732	43.1	NA	Yes	88.0	12/01/16
	Intelligent Energy Optimizers LLC	OptieoLED6W	4062 K	6.3	172.1	1,088	1,020	4	371.5	No	81.4	01/09/17
2' and 4' Linear Replacement (T5)	GREEN CREATIVE	12T5HE/3F/830/DIR	2942 K	14.1	107.9	1,517	1,420	13	NA	Yes	83.6	12/01/16
		12T5HE/3F/835/DIR	3490 K	14.0	110.8	1,549	1,420	20	NA	Yes	85.2	12/01/16
		12T5HE/3F/840/DIR	3906 K	14.3	111.0	1,582	1,550	15	NA	Yes	84.3	12/01/16
		15T5HE/4F/830/DIR	2972 K	16.0	106.3	1,702	1,700	15	NA	Yes	83.6	07/28/16
		15T5HE/4F/835/DIR	3474 K	16.6	112.0	1,857	2,000	13	NA	Yes	83.9	08/23/16
		15T5HE/4F/840/DIR	4006 K	15.8	117.0	1,843	1,800	19	n/a	Yes	85.1	09/06/16
	Philips	16.5PL-LED/24-3000 IF 10/1	2956 K	16.5	104.1	2,095	1,900	8.1	NA	No	82.4	12/21/16
		16.5PL-LED/24-3500 IF 10/1	3476 K	16.5	107.4	2,139	2,000	14.5	NA	No	84.2	12/21/16
16.5PL-LED/24-4000 IF 10/1		3853 K	16.5	111.1	2,262	2,100	7.5	NA	No	83.1	12/20/16	
2' Linear Replacement	Clear Blue Fit BIXX	ZY-T8-15W-600U-BIXX	4974 K	14.7	127.5	1,879	1,700	7	NA	No	81.4	07/28/16
3' Linear Replacement	GREEN CREATIVE	10T8/3F/830/DIR	2957 K	11.1	97.5	1,085	1,100	5	NA	No	81.7	08/23/16
		10T8/3F/835/DIR	3494 K	11.2	103.7	1,162	1,100	18.4	NA	Yes	83.6	07/28/16
		10T8/3F/840/DIR	4078 K	11.4	111.7	1,271	1,150	11	NA	Yes	83.8	08/23/16
	Philips Lighting North America Corporation	9290011183	3022 K	12.5	96.2	2,404	1,100	18.2	NA	No	82.2	05/13/16
		9290011184	3428 K	12.3	99.6	2,451	1,160	19.1	NA	No	82.5	05/13/16
		9290011185	3858 K	12.5	101.8	2,545	1,200	21.2	NA	No	82.0	04/01/16
	Standard Products Inc.	63632	4014 K	13.4	104.2	1,389	1,450	24	300.0	Yes	86.4	03/08/16
4' Linear Replacement	3M	URT835183E-B	3433 K	18.9	106.3	2,064	2,000	15	NA	No	83.6	08/09/16
		URT835183E-L	3418 K	17.9	115.2	2,056	2,000	11	NA	No	83.5	08/09/16
	Beyond LED Technology	101311	6606 K	20.7	117.6	2,436	2,530	0	NA	No	83.1	07/28/16
		101642	6608 K	21.3	118.8	2,541	2,640	1	NA	No	82.6	02/25/16
	ESL Vision	ESL-T8BC-16W-F50	5132 K	16.1	121.7	1,961	1,900	4	NA	No	83.5	08/22/16
	ESL Vision, LLC	ESL-T8BC-16W	4035 K	14.1	125.5	1,766	1,740	9	NA	No	82.8	06/15/16
	GREEN CREATIVE	17.5T8/4F/GOLD/BYP	1420 K	17.5	62.5	1,091	1,100	0	NA	No	33.8	07/28/16
	James Industry Group	ZY-T8-18W1200 6000K	6038 K	18.6	106.2	1,976	2,150	9.7	NA	No	82.6	03/16/16
	Keystone Technologies	KT-LED13T5HE-48GC-835-S	3464 K	16.9	126.0	2,132	1,650	9.3	NA	No	83.4	09/19/16
		KT-LED13T5HE-48GC-840-S	3913 K	17.0	125.3	2,127	1,700	8.5	NA	No	82.9	09/19/16
KT-LED13T5HE-48GC-850-S		5081 K	17.1	126.3	2,166	1,800	11.8	NA	No	84.0	09/19/16	

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Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
4' Linear Replacement	Maxlite	L18T8SE450-10	5211 K	6.7	115.3	2,127	1,950	15.2	NA	No	82.1	07/27/16
	Sylvania	LED22T8/L48/F/DIM/1x2HE/835/UNV	3891 K	22.7	118.2	2,688	2,350	21	NA	Yes	85.0	05/03/16
		LED22T8/L48/F/DIM/1x2HE/835/UNV	3377 K	22.5	109.1	2,454	2,350	13	NA	Yes	83.0	05/03/16
		LED22T8/L48/F/DIM/1x2HE/850/UNV	5042 K	22.6	111.4	2,519	2,450	16	NA	Yes	84.0	05/03/16
		TGL Inc.	TGL-14W-3FT-410K	4079 K	12.4	127.8	1,583	1,550	16	NA	No	84.0
	TGL-14W-3FT-500K	5128 K	12.5	133.0	1,666	1,600	9.76	NA	No	84.0	10/17/16	
8' Linear Replacement	DiVi Energy, LLC	RDM-T836-240	4149 K	36.4	109.5	3,984	3,600	6	NA	No	82.0	05/13/16
	Keystone Technologies	KT-LED36T8-96P-840-D	4168 K	35.9	109.3	3,928	3,800	19	NA	No	85.3	05/11/16
		KT-LED36T8-96P-850-D	5169 K	36.2	116.4	4,214	4,000	11	NA	No	84.2	05/11/16
	Titan LED	17C-8-32-SP-57K	5634 K	33.4	124.0	4,152	4,255	19.4	NA	Yes	85.0	08/15/16
8' Linear Replacement	GE Lighting	LED36T8/G/8/830	3049 K	30.1	143.5	4,313	4,200	8.9	NA	Yes	83.1	12/01/16
		LED36T8/G/8/835	3465 K	29.3	143.8	4,401	4,400	17.7	NA	Yes	85.0	09/16/16
		LED36T8/G/8/840	4037 K	29.2	151.4	4,586	4,400	9.4	NA	Yes	83.7	09/16/16
		LED36T8/G/8/850	5102 K	29.1	152.1	4,631	4,400	15	NA	Yes	85.3	09/16/16
	Intelligent Energy Optimizers LLC	8'OptieoLED16W	4843 K	16.0	151.6	2,429	2,400	3	NA	No	82.5	12/01/16
	Shenzhen R&Z World Optoelectronic Co.	RZTL-T8R240-36W	4850 K	36.3	132.9	4,821	4,680	4	NA	No	82.8	12/01/16
A	Shenzhen Wellking Lighting	WK-BL-D24	6223 K	9.7	89.1	862	862	0	NA	Yes	84.1	02/05/16
A15	Archipelago Lighting, Inc.	LTA15C35027K1	2807 K	3.5	117.8	412	350	16.9	NA	Yes	84.9	02/04/16
	Satco	S9560	2699 K	4.6	112.1	512	470	1.7	NA	Yes	81.1	05/03/16
A19	Archipelago Lighting, Inc.	LVTZ-VC1918022K1	2200 K	2.1	94.2	202	180	11.1	NA	Yes	81.3	02/10/16
	GREEN CREATIVE	4.5FA19DIM/824/A	2527 K	4.6	90.1	411	380	0.2	NA	Yes	80.0	07/28/16
		8.5A19DIM/827	2677 K	8.0	108.7	874	800	1.1	NA	Yes	80.8	02/10/16
		8.5A19DIM/830	3007 K	8.1	113.1	912	800	1.2	NA	Yes	81.5	02/10/16
		8.5A19DIM/840	3778 K	7.9	117.2	929	850	5.9	NA	Yes	83.0	02/10/16
		9.5A19DIM/8CCTD	2705 K	9.4	85.8	806	800	3.1	NA	Yes	80.8	05/04/16
		Lighting Science Group	LSPro A19 40WE W27 FIL 120 BX	2697 K	4.4	125.0	554	450	4	NA	Yes	82.0
	LSPro A19 60WE W27 FIL 120 BX		2641 K	6.4	127.5	812	810	6	NA	Yes	81.7	05/04/16
	Maxlite	SB6.5A19DLED27	2760 K	6.8	104.0	706	700	3.3	NA	Yes	81.4	04/07/16
		V4.5A19DLED22	2173 K	4.5	92.8	416	400	8.1	NA	Yes	81.0	04/07/16
	Satco	S9561	2645 K	4.5	109.7	491	470	4.4	NA	Yes	81.6	05/03/16
		S9562	2626 K	6.8	113.6	751	810	3.4	NA	Yes	81.1	05/03/16
	Sengled	A19 - Sigalux 1102270651	2787 K	8.2	102.2	839	800	2.1	NA	Yes	80.7	08/02/16
	Sigh Twenty Hands Inc	STH-A19D-09-65	6404 K	9.0	104.8	944	800	14	NA	Yes	83.1	06/16/16
	The Home Depot	ECS A19 40WE W27 FIL 120 BL	2697 K	4.4	125.0	554	450	4	NA	Yes	82.0	05/04/16
		ECS A19 60WE W27 FIL 120 BL	2641 K	6.4	127.5	812	810	6	NA	Yes	81.7	05/04/16
	Viribright Lighting Inc.	A05EU2-5 / 750007	2656 K	4.8	100.6	488	450	39	NA	Yes	92.0	03/18/16
		A05EU4-5 / 750008	3972 K	5.0	108.0	537	450	58	NA	Yes	93.8	03/18/16
		A05EU6-5 / 750009	5958 K	5.0	106.6	527	450	76	NA	Yes	93.2	03/18/16
	Viribright Lighting Inc. (Matrix Lighting Limited)	750207 / A09EU2-5	2738 K	8.5	98.7	836	810	35	NA	Yes	90.8	06/01/16
		750208 / A09EU4-5	4065 K	8.8	95.7	846	810	61	NA	Yes	92.9	06/01/16
		750209 / A09EU6-5	6214 K	8.5	98.9	840	810	69	NA	Yes	94.4	06/01/16
	GE Lighting	LED14LS2/828	2800 K	14.5	84.5	1,223	1,060	2	NA	No	80.0	09/01/16
		LED14LS2/850	4783 K	14.5	94.0	1,362	1,060	6	NA	No	83.0	09/01/16
		LED16LS2/828	2819 K	15.3	104.6	1,596	1,520	5	NA	No	81.0	09/01/16

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<b>A19</b>	GE Lighting	LED16LS2/850	4943 K	15.2	104.5	1,584	1,520	9	NA	No	83.0	09/01/16
<b>A21</b>	Kobi Electric	LED-2000-AD-30	2984 K	20.4	111.8	2,284	2,250	11	NA	Yes	83.0	04/12/16
		LED-2000-AD-40	4027 K	19.8	116.4	2,305	2,000	24	NA	Yes	85.0	04/12/16
		LED-2000-AD-50	5112 K	20.0	115.5	2,313	2,150	3	NA	Yes	82.0	04/12/16
		LED-2200-AD-27-ND	2671 K	20.9	105.9	2,215	2,200	9	NA	Yes	82.0	04/12/16
		LED-2450-AD-30-ND	3061 K	21.3	115.2	2,456	2,450	7	NA	Yes	82.0	04/12/16
		LED-2550-AD-40-ND	3980 K	21.1	119.2	2,517	2,550	12	NA	Yes	84.0	04/12/16
		LED-2550-AD-40-ND	4004 K	21.0	120.1	2,554	2,550	6.4	582.9	Yes	82.7	04/05/16
		LED-2700-AD-50-ND	5008 K	21.1	123.4	2,597	2,700	15	NA	Yes	85.0	04/12/16
	ESL Vision, LLC	ESL-A21-13W-127	2776 K	12.9	100.0	1,290	1,235	10	NA	Yes	82.3	08/01/16
		ESL-A21-13W-130	2948 K	12.8	105.3	1,349	1,300	8	NA	Yes	82.0	08/01/16
		ESL-A21-13W-140	4229 K	12.8	114.1	1,455	1,430	10	NA	Yes	83.4	08/01/16
		ESL-A21-13W-150	5023 K	12.7	119.7	1,518	1,495	10	NA	Yes	84.1	08/01/16
		<b>B</b>	Archipelago Lighting, Inc.	LTCB12C32524K1	2396 K	3.4	102.1	345	325	15.9	NA	Yes
		LTCB12C32527K1	2679 K	3.6	90.2	328	325	18.1	NA	Yes	83.3	08/17/16
		LTCB26C32524K1	2396 K	3.4	102.1	345	325	15.9	NA	Yes	83.1	08/17/16
		LTCB26C32527K1	2679 K	3.6	90.2	328	325	18.1	NA	Yes	83.3	08/17/16
	Lighting Science Group	LSPro B11 25WE W27 FIL E12 120 3PK	2748 K	2.4	108.6	261	250	7	NA	Yes	83.0	05/04/16
		LSPro B11 25WE W27 FIL E26 120 3PK	2748 K	2.4	108.6	261	250	7	NA	Yes	83.0	05/04/16
		LSPro B11 40WE W27 FIL E12 120 3PK	2693 K	4.5	104.6	471	450	7	NA	Yes	82.0	05/04/16
		LSPro B11 40WE W27 FIL E26 120 3PK	2693 K	4.5	104.6	471	450	7	NA	Yes	82.0	05/04/16
	The Home Depot	ECS B11 25WE W27 FIL E12 120 3PK	2748 K	2.4	108.6	261	250	7	NA	Yes	83.0	04/05/16
		ECS B11 25WE W27 FIL E12 120 BL	2748 K	2.4	108.6	261	250	7	NA	Yes	83.0	05/04/16
		ECS B11 25WE W27 FIL E26 120 BL	2748 K	2.4	108.6	261	250	7	NA	Yes	83.0	05/04/16
		ECS B11 40WE W27 FIL E12 120 3PK	2693 K	4.5	104.6	471	470	7	NA	Yes	82.0	04/05/16
		ECS B11 40WE W27 FIL E12 120 BL	2693 K	4.5	104.6	471	450	7	NA	Yes	82.0	05/04/16
		ECS B11 40WE W27 FIL E26 120 BL	2693 K	4.5	104.6	471	450	7	NA	Yes	82.0	05/04/16
		GREEN CREATIVE	3.5FBA10DIM/824/FT/A	2449 K	3.7	84.1	312	280	5.6	NA	Yes	80.3
<b>Biax</b>	GE Lighting	LED172G11/830/10	3031 K	14.9	146.9	2,189	2,150	6.4	NA	No	82.6	07/29/16
	GE Lighting	LED172G11/835/10	3390 K	16.0	134.4	250	2,150	10	NA	No	84.0	07/29/16
		LED172G11/840/10	3937 K	16.0	139.4	2,230	2,200	10	NA	No	84.0	07/29/16
		LED172G11/850/10	4971 K	16.0	138.4	2,215	2,200	15	NA	No	85.0	07/29/16
<b>BR/R 30</b>	Viribright Lighting Inc.	750114	2845 K	9.3	85.8	802	800	41	304.0	Yes	92.6	03/17/16
		750116	6076 K	9.0	97.3	881	860	75	327.0	Yes	94.4	03/17/16
<b>BR/R 40</b>	Viribright Lighting Inc.	750270	2836 K	15.0	80.4	1,204	1,200	36	503.0	Yes	91.3	03/17/16
		750271	4058 K	14.4	95.8	1,377	1,350	52	569.0	Yes	93.4	03/17/16
		750272	5843 K	14.2	99.9	1,420	1,350	78	583.0	Yes	94.9	03/17/16
<b>BR30</b>	GE Lighting	LED10DR30V/827W	2757 K	9.2	75.8	694	650	2	NA	Yes	80.0	09/01/16
		LED10DR30V/830W	3043 K	9.3	78.4	729	650	5	NA	Yes	81.0	09/01/16
		LED10DR30V/850W	4992 K	9.2	81.0	742	650	2	NA	Yes	81.0	09/01/16
	ESL Vision, LLC	ESL-BR30-13W-D40	4026 K	13.5	90.7	1,226	1,200	6	NA	Yes	82.6	07/27/16
<b>BR40</b>	ESL Vision	ESL-BR40-15W-240	4010 K	15.3	91.8	1,407	1,150	6	NA	Yes	82.4	08/22/16

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BT	Satco	S9575	2675 K	4.5	115.3	520	470	3.1	NA	Yes	81.4	05/03/16
		S9576	2668 K	6.8	114.1	775	810	3.1	NA	Yes	81.4	05/03/16
C	Satco	S9567	2626 K	4.5	109.4	493	470	3.4	NA	Yes	81.0	05/03/16
		S9568	2626 K	4.5	109.4	493	470	3.4	NA	Yes	81.0	05/03/16
		S9569	2626 K	4.5	109.4	493	470	3.4	NA	Yes	81.0	05/03/16
		S9570	2626 K	4.5	109.4	493	470	3.4	NA	Yes	81.0	05/03/16
CA	Archipelago Lighting, Inc.	LTCA12C32524K1	2382 K	3.3	97.4	322	325	16.5	NA	Yes	83.2	08/17/16
		LTCA26C32524K1	2382 K	3.3	97.4	322	325	16.5	NA	Yes	83.2	08/17/16
	Archipelago Lighting, Inc.	LVTZ-CA1216022K1	2270 K	2.1	79.7	165	160	15.3	NA	Yes	82.3	02/04/16
		LVTZ-CA1230022K1	2230 K	3.4	97.5	334	300	11.5	NA	Yes	81.5	02/04/16
	Satco	S9571	2665 K	4.5	108.6	492	470	1.7	NA	Yes	81.1	05/03/16
		S9572	2665 K	4.5	108.6	492	470	1.7	NA	Yes	81.1	05/03/16
		S9573	2665 K	4.5	108.6	492	470	1.7	NA	Yes	81.1	05/03/16
S9574		2665 K	4.5	108.6	492	470	1.7	NA	Yes	81.1	05/03/16	
Candle	GREEN CREATIVE	5B11DIM/8CCTD	2706 K	4.8	65.9	313	300	5.4	NA	Yes	81.2	05/04/16
CFL Replacement	CH Lighting	CH1158-02-6W 835-3	3570 K	6.1	87.9	533	535	22	NA	No	84.0	04/22/16
	EiKO Global	LED9W4PH/830DR-G6	2941 K	11.3	79.4	899	850	23	NA	No	84.8	08/17/16
		LED9W4PH/835DR-G6	3444 K	11.6	83.9	976	850	16	NA	No	83.2	08/17/16
		LED9W4PH/840DR-G6	4087 K	11.6	83.7	967	900	16	NA	No	84.4	08/17/16
		LED9W4PV/830DR-G6	2998 K	11.8	79.5	937	850	7	NA	No	82.0	08/17/16
		LED9W4PV/835DR-G6	3474 K	11.7	83.1	976	850	11	NA	No	83.4	08/17/16
		LED9W4PV/840DR-G6	3874 K	11.9	87.2	1,034	900	13	NA	No	84.0	08/17/16
		ESL Vision	ESL-2G11-17-F40-DQC1-15W-1L	4170 K	14.7	104.7	1,534	1,500	8	NA	No	83.2
	ESL Vision, LLC	ESL-PL-6W-30	3116 K	6.0	95.0	569	530	7	NA	No	82.6	02/25/16
		ESL-PL-6W-40	4132 K	6.0	97.2	581	555	13	NA	No	83.9	02/25/16
		ESL-PL-7W-30	2983 K	6.5	104.8	678	650	5	NA	No	82.0	05/13/16
	Eспен Technology Inc.	CLD18WH/827-ID	2706 K	10.8	89.3	962	2,700	9.5	NA	No	82.1	10/12/16
		CLD18WH/840-ID	3907 K	10.5	108.2	1,132	1,000	17.7	NA	No	84.9	10/17/16
		CLD18WH/850-ID	5291 K	10.7	98.2	1,048	1,000	21.3	NA	No	85.0	10/12/16
		CLD18WV/827-ID	2692 K	10.7	88.7	947	1,000	9.8	NA	No	82.2	10/17/16
		CLD18WV/840-ID	3883 K	10.5	109.1	1,144	1,000	12.2	NA	No	83.8	10/12/16
		CLD18WV/850-ID	5046 K	10.7	117.4	1,250	1,000	11.9	NA	No	84.1	10/14/16
		LT18W/835-ID	3460 K	8.3	109.3	902	640	22.5	NA	No	84.4	10/17/16
		LT18W/840-ID	4089 K	8.3	109.7	909	640	38.2	NA	No	86.6	10/17/16
		LT18W/850-ID	4949 K	8.2	115.3	944	640	15.6	NA	No	84.5	10/17/16
	GREEN CREATIVE	10.5PLH/827/BYP	2790 K	10.4	89.6	930	870	3	NA	No	81.0	08/03/16
		10.5PLH/830/BYP	2969 K	10.4	90.3	943	920	14.6	NA	Yes	83.2	08/23/16
		10.5PLH/835/BYP	3597 K	10.3	98.4	1,015	920	13.7	NA	No	83.9	08/03/16
		10.5PLH/840/BYP	4120 K	10.6	101.2	1,071	935	13.9	NA	No	84.1	08/03/16
		10PLV/827/DIR	2705 K	11.0	87.3	958	950	9	NA	Yes	82.4	12/01/16
		10PLV/830/DIR	2945 K	11.0	89.4	986	1,000	9	NA	Yes	82.3	08/23/16
		10PLV/835/DIR	3522 K	14.1	74.4	1,050	1,000	22	NA	Yes	84.3	08/09/16
10PLV/840/DIR		4142 K	14.1	78.3	1,105	1,000	20	NA	Yes	85.2	08/09/16	
11.5PLV/827/BYP		2730 K	11.4	85.1	968	950	4	NA	No	80.7	08/03/16	

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date	
CFL Replacement	GREEN CREATIVE	11.5PLV/830/BYP	3001 K	11.7	89.5	1,044	1,000	1	NA	No	80.7	08/03/16	
		11.5PLV/835/BYP	3571 K	11.7	88.5	1,040	1,000	15	NA	No	82.7	08/03/16	
		11.5PLV/840/BYP	4159 K	11.5	99.8	1,148	1,120	16	NA	No	84.8	08/23/16	
		11PLVG4/840/BYP	4041 K	10.5	97.1	1,023	920	13	NA	No	83.9	02/10/16	
		14.5PLL/835/DIR	3548 K	18.6	86.4	1,609	1,550	28	NA	Yes	86.4	07/28/16	
		17PLL/830/DIR	3105 K	21.7	100.8	2,191	2,000	17.3	NA	No	85.0	02/10/16	
		17PLL/835/DIR	3572 K	21.5	100.7	2,166	2,050	23	NA	No	86.2	02/10/16	
		17PLL/840/DIR	4114 K	17.0	102.9	2,226	2,100	22.6	NA	No	86.6	02/10/16	
		3.5PLS/835/BYP/2G7	3525 K	3.3	90.4	301	300	20.6	NA	No	84.3	06/01/16	
		3.5PLS/835/HYB/G23	3525 K	3.3	90.4	301	300	20.6	NA	No	84.3	06/01/16	
		5.5PLH/827/DIR	2721 K	7.3	84.8	615	520	5.2	NA	Yes	81.9	08/23/16	
		5.5PLH/830/DIR	2960 K	7.2	83.4	604	550	6.6	NA	Yes	82.0	08/23/16	
		5.5PLH/835/DIR	3535 K	7.4	87.3	650	550	(blank)	NA	Yes	83.5	10/10/16	
		5.5PLH/840/DIR	4143 K	7.3	86.8	632	560	18.6	NA	Yes	85.4	12/01/16	
		5.5PLS/827/HYB/GX23	2787 K	5.4	87.4	473	450	7.2	NA	No	81.7	04/06/16	
		5.5PLS/830/HYB/GX23	3109 K	5.6	94.8	530	500	24	NA	No	85.4	04/06/16	
		5.5PLS/835/BYP/2GX7	3551 K	5.5	94.5	523	500	24	NA	No	85.0	06/01/16	
		5.5PLS/835/HYB/2GX7	3551 K	5.5	94.5	523	500	24	NA	No	85.0	05/04/16	
		5.5PLS/835/HYB/GX23	3551 K	5.5	94.5	523	500	24	NA	No	85.0	02/10/16	
		5.5PLS/840/HYB/GX23	4231 K	5.6	94.9	529	520	20	NA	No	85.1	04/06/16	
		6.5/830/DIR	2942 K	7.7	82.6	632	600	4.2	NA	Yes	81.4	12/01/16	
		6.5/830/DIR								No	81.4	08/23/16	
		6.5PLV/827/DIR	2658 K	7.7	81.3	623	570	1	NA	No	81.2	08/23/16	
		6.5PLV/835/DIR	3508 K	7.9	82.0	646	600	16.7	NA	No	83.1	08/23/16	
		6.5PLV/840/DIR	4109 K	7.7	85.7	663	620	16.6	NA	No	85.0	08/23/16	
		6PLH/830/BYP	2981 K	6.1	100.3	607	550	22	NA	No	84.6	08/23/16	
		6PLH/830/BYP/E26	2981 K	6.1	100.3	607	550	22	NA	No	84.6	08/23/16	
		6PLH/830/BYP/GU24	2981 K	6.1	100.3	607	550	22	NA	No	84.6	08/23/16	
		6PLH/835/BYP	3615 K	6.1	104.2	639	550	15	NA	No	84.4	08/03/16	
		6PLH/835/BYP/E26	3615 K	6.1	104.2	639	550	15	NA	No	84.4	08/03/16	
		6PLH/835/BYP/GU24	3615 K	6.1	104.2	939	550	15	NA	No	84.4	08/03/16	
		6PLH/840/BYP	4129 K	6.3	103.8	656	560	17	NA	No	84.7	08/03/16	
		6PLH/840/BYP/E26	4129 K	6.3	103.8	656	560	17	NA	No	84.7	08/03/16	
		6PLH/840/BYP/GU24	4129 K	6.3	103.8	656	560	17	NA	No	84.7	08/03/16	
		6PLS/827/HYB/GX23	2744 K	6.1	95.3	580	520	3	NA	No	80.7	08/23/16	
		6PLS/830/HYB/GX23	2969 K	6.0	98.8	596	550	22	NA	No	84.6	08/23/16	
		6PLS/835/HYB/GX23	3509 K	6.2	112.5	692	550	20	NA	No	83.6	08/23/16	
		6PLS/840/HYB/GX23	4126 K	6.1	108.1	661	560	19	NA	No	85.0	08/23/16	
		7PLSV/827/HYB/GX23	2727 K	7.0	84.3	590	550	3	NA	No	81.9	08/23/16	
		7PLSV/830/HYB/GX23	2986 K	7.1	89.3	631	550	5	NA	No	81.6	08/23/16	
		7PLSV/835/HYB/GX23	3542 K	7.0	89.5	623	560	18	NA	No	83.3	08/23/16	
		7PLSV/840/HYB/GX23	4200 K	7.0	91.1	634	570	19	NA	No	85.3	08/23/16	
		7PLV/835/BYP	3531 K	7.0	89.1	619	600	17	NA	No	83.1	08/23/16	
		7PLV/840/BYP	4168 K	7.0	94.1	658	620	18	NA	No	85.2	08/23/16	
		9.5PLH/827/DIR	2671 K	10.4	91.0	943	870	4	NA	No	81.8	08/23/16	
		9.5PLH/830/DIR	3015 K	13.0	72.8	950	920	13	NA	Yes	83.0	08/09/16	
		9.5PLH/835/DIR	3559 K	13.4	72.7	970	920	24	NA	Yes	84.5	08/09/16	
		9.5PLH/840/DIR	4199 K	13.1	78.9	1,034	935	2	NA	Yes	85.7	08/09/16	
			Greenlite Lighting	6W/LED/PLC/GX23/35K	3570 K	6.1	87.9	533	520	22	NA	No	84.0

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date	
CFL Replacement	Halco Lighting Technologies	PL13H/827/4P/LED	2711 K	13.8	69.2	958	1,000	9.1	311.0	Yes	82.1	08/04/16	
		PL13H/830/4P/LED	3065 K	13.4	76.8	1,027	1,000	3.1	337.0	Yes	81.1	08/04/16	
		PL13H/835/4P/LED	3414 K	11.4	89.3	1,021	1,000	8.8	332.0	Yes	82.9	09/27/16	
		PL13H/841/4P/LED	3898 K	13.6	85.7	1,162	1,000	16.7	383.0	Yes	84.7	08/04/16	
		PL13H/850/4P/LED	5268 K	13.6	77.3	105	1,000	21.2	352.0	Yes	84.9	08/04/16	
		PL13V/827/4P/LED	2676 K	13.4	74.3	997	1,000	5.2	318.0	Yes	81.3	08/04/16	
		PL13V/830/4P/LED	3046 K	13.6	76.6	1,043	1,000	3.1	338.0	Yes	81.2	08/04/16	
		PL13V/835/4P/LED	3430 K	11.4	93.2	1,065	1,000	9.1	329.0	Yes	82.9	09/26/16	
		PL13V/841/4P/LED	3914 K	11.4	102.0	1,163	1,000	12.1	361.0	Yes	83.5	09/27/16	
		PL13V/850/4P/LED	5075 K	13.7	91.9	125	1,000	13.2	388.0	Yes	84.4	08/04/16	
	Hylite LED	HL-G24-13W	4197 K	12.2	125.3	1,522	1,365	27	566.5	No	86.6	08/17/16	
		HL-G24-15W	4193 K	13.8	124.3	1,709	1,575	27	639.5	No	86.7	08/17/16	
		HL-G24-7W	4208 K	6.9	120.6	829	725	28	312.8	No	86.8	08/17/16	
		HL-G24-9W	4193 K	9.0	121.4	1,103	945	25	411.5	No	86.5	08/17/16	
		HL-Gx23-5W	4193 K	5.0	117.9	586	525	26	NA	No	86.6	08/17/16	
	HyLite LED	HL-OBF-11W-G24	3987 K	10.5	101.2	1,061	1,060	12	NA	No	84.1	09/27/16	
		HL-OBF-13W-G24	4002 K	12.5	98.7	1,234	1,233	13	NA	No	84.2	09/27/16	
		HL-OBF-15W-G24	4007 K	14.8	97.2	1,433	1,432	12	NA	No	84.2	09/27/16	
		HL-OBF-5W-Gx23	3979 K	5.0	101.1	504	503	12	NA	No	84.0	09/27/16	
		HL-OBF-7W-G24	3971 K	6.8	99.6	673	672	12	NA	No	84.1	09/27/16	
		HL-OBF-9W-G24	3976 K	8.8	102.4	900	899	13	NA	No	84.3	09/27/16	
		HL-VLF-12W-G24	3991 K	11.7	116.3	1,358	1,358	25	NA	No	86.1	09/26/16	
	Keystone Technologies	KT-LED114P-EV-827-S	2676 K	13.4	74.3	997	1,000	5.2	NA	No	81.3	09/02/16	
		KT-LED114P-EV-830-S	3046 K	13.6	76.6	1,043	1,050	3.1	NA	No	81.2	08/01/16	
		KT-LED114P-EV-835-S	3430 K	11.4	93.3	1,065	1,000	9.1	NA	No	82.9	09/27/16	
		KT-LED114P-EV-840-S	3852 K	13.5	86.2	1,166	1,050	11.6	NA	No	93.6	07/29/16	
		KT-LED114P-EV-850-S	5075 K	13.7	91.9	1,255	1,050	13	NA	No	84.4	08/01/16	
		KT-LED114P-H-827-S	2711 K	13.8	69.2	958	1,000	9.1	NA	No	82.1	09/01/16	
		KT-LED114P-H-830-S	3065 K	13.4	76.8	1,027	1,000	3.1	NA	No	81.1	07/29/16	
		KT-LED114P-H-835-S	3414 K	11.4	89.3	1,021	1,000	8.8	NA	No	82.9	09/27/16	
		KT-LED114P-H-840-S	3898 K	13.6	85.7	1,162	1,050	16.7	NA	No	84.7	07/27/16	
		KT-LED114P-H-850-S	5268 K	13.6	77.3	1,054	1,050	21.2	NA	No	84.9	09/02/16	
		KT-LED114P-V-827-S	2676 K	13.4	74.3	997	1,000	5.2	NA	No	81.3	09/02/16	
		KT-LED114P-V-830-S	3046 K	13.6	76.6	1,043	1,000	3.1	NA	No	81.2	08/17/16	
		KT-LED114P-V-830-S					1,050	3.1	NA	No	81.2	08/01/16	
		KT-LED114P-V-835-S	3430 K	11.4	93.3	1,065	1,000	9.1	NA	No	82.9	09/27/16	
		KT-LED114P-V-840-S	3852 K	13.5	86.2	1,166	1,050	11.6	NA	No	83.6	07/27/16	
		KT-LED114P-V-850-S	5075 K	13.7	91.9	1,255	1,050	13.2	NA	No	84.4	08/01/16	
		KT-LED134P-EV-850-S	5290 K	14.5	76.2	1,102	950	24	NA	Yes	85.4	03/09/16	
		KT-LED134P-V-850-S	5270 K	14.6	75.9	1,105	950	23	NA	Yes	85.3	03/09/16	
		KT-LED62P-H-830-D	2918 K	5.8	90.8	530	500	6.3	NA	No	81.8	09/27/16	
		KT-LED62P-H-840-D	4204 K	6.1	84.5	515	550	17.9	NA	No	84.9	09/27/16	
		KT-LED62P-H-850-D	4976 K	5.7	99.9	565	550	10.6	NA	No	83.5	09/27/16	
		Kobi Electric	PL-440-RPP-GX23	4105 K	3.9	109.8	424	400	14	NA	No	84.0	10/14/16
			PL-450-RPP-GX23	5154 K	4.0	108.3	430	400	4	NA	No	83.0	10/14/16
	PL-640-RPP-GX23		4103 K	5.8	110.3	634	600	14	NA	No	84.1	10/14/16	
	PL-650-RPP-GX23		5138 K	5.9	108.5	639	600	5	NA	No	83.3	10/17/16	
	PL-840-RPP-GX23		4092 K	7.8	113.4	885	800	7	NA	No	82.5	10/17/16	
	PL-850-RPP-GX23		5230 K	7.7	112.8	866	800	10	NA	No	83.6	10/17/16	

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
CFL Replacement	Lunera	HN-H-G24D-26W-2700-G2	2710 K	14.0	60.8	850	883	17.2	293.7	No	82.1	08/15/16
		HN-H-G24D-26W-3000-G2	3034 K	13.8	61.0	845	883	21.5	293.7	No	83.1	08/15/16
		HN-H-G24D-26W-3500-G2	3500 K	13.9	66.3	920	883	24.7	293.7	No	84.1	08/15/16
		HN-H-G24D-26W-4000-G2	3970 K	14.0	79.7	1,113	883	10.7	293.7	No	82.2	08/15/16
		HN-H-G24Q-26W-2700-G2	2737 K	14.0	64.4	940	883	11.1	293.7	Yes	82.3	08/02/16
		HN-H-G24Q-26W-3000-G2	3055 K	14.5	61.4	889	899	20	293.7	Yes	82.7	08/02/16
		HN-H-G24Q-26W-3000-G3	3099 K	16.1	56.6	913	920	10.3	354.4	Yes	81.9	08/26/16
		HN-H-G24Q-26W-3500-G2	3466 K	14.5	70.6	1,023	930	13.6	293.7	Yes	82.3	08/02/16
		HN-H-G24Q-26W-3500-G3	3587 K	16.1	58.2	939	940	12.3	354.4	Yes	82.2	08/26/16
		HN-H-G24Q-26W-4000-G2	4065 K	14.5	71.3	1,035	954	15.7	293.7	Yes	83.2	08/02/16
		HN-H-G24Q-26W-4000-G3	4041 K	16.3	60.2	979	970	15.3	354.4	Yes	83.3	08/26/16
		HN-H-G24Q-B-11W-827-G4	2729 K	12.9	67.9	878	880	2.5	293.7	Yes	80.4	10/14/16
		HN-H-G24Q-B-11W-830-G4	2981 K	13.8	70.3 l	967	900	18.2	NA	Yes	82.9	12/01/16
		HN-H-G24Q-B-11W-835-G4	3501 K	14.0	88.0	1,229	910	9.8	NA	Yes	83.3	12/01/16
		HN-H-G24Q-B-11W-840-G4	4046 K	12.9	69.1	893	925	17.4	293.7	Yes	83.8	10/14/16
		HN-H-GX23-U-5W-827-G4	2690 K	5.5	97.0	529	500	8.33	155.9	Available	82.0	04/15/16
		HN-H-GX23-U-5W-830-G4	2999 K	5.4	93.0	505	508	23.1	150.0	Available	83.0	04/15/16
		HN-H-GX23-U-5W-835-G4	3463 K	5.5	104.0	575	525	12.1	169.8	Available	82.0	04/15/16
		HN-H-GX23-U-5W-840-G4	3994 K	5.5	105.0	578	535	16	170.0	Available	83.0	04/15/16
		HN-V-G24D-26W-2700-G2	2663 K	14.0	69.7	973	920	16.7	293.9	No	81.9	08/15/16
		HN-V-G24D-26W-3000-G2	3033 K	14.0	71.4	1,002	920	22.8	293.9	No	83.2	08/15/16
		HN-V-G24D-26W-3500-G2	3517 K	14.0	79.2	1,111	920	16.5	293.9	No	82.8	08/15/16
		HN-V-G24D-26W-4000-G2	4023 K	14.0	75.4	1,055	920	26.1	293.9	No	84.0	08/15/16
		HN-V-G24Q-26W-2700-G3	2780 K	16.0	60.1	960	880	6.8	360.3	Yes	81.3	08/26/16
		HN-V-G24Q-26W-3000-G3	3159 K	15.9	62.1	990	912	8.8	360.3	Yes	81.6	08/26/16
		HN-V-G24Q-26W-3500-G3	3499 K	16.4	60.6	992	916	12.3	360.3	Yes	82.1	08/26/16
		HN-V-G24Q-26W-4000-G3	4085 K	16.3	61.0	997	950	12.3	360.3	Yes	83.2	08/26/16
		HN-V-G24Q-B-11W-827-G4	2711 K	13.8	67.1	927	925	5	NA	Yes	81.7	10/14/16
		HN-V-G24Q-B-11W-830-G4	2964 K	15.2	67.9	1,030	970	16.9	293.7	Yes	82.6	12/01/16
		HN-V-G24Q-B-11W-835-G4	3499 K	15.0	86.1	1,292	1,000	8.6	293.7	Yes	83.1	12/01/16
		HN-V-G24Q-B-11W-840-G4	3972 K	13.8	67.2	926	1,020	16.6	293.7	Yes	83.8	10/14/16
		HN-VL-G24Q-26W-2700-G2	2725 K	14.3	67.1	961	920	12.9	266.6	Yes	82.6	08/02/16
		HN-VL-G24Q-26W-3000-G2	3046 K	14.3	68.3	976	937	12.3	266.6	Yes	82.5	08/02/16
		HN-VL-G24Q-26W-3500-G2	3460 K	14.3	72.5	1,039	969	16.1	266.6	Yes	82.8	08/02/16
	HN-VL-G24Q-26W-4000-G2	4000 K	14.3	71.2	1,015	994	16.2	266.6	Yes	83.4	08/02/16	
	Maxlite	11PLG24QHLED40	4188 K	14.0	77.0	1,080	1,050	15	419.8	No	84.2	08/22/16
	Metrosphere Light Corp.	MET-SUPL-5WHG24-30	3016 K	7.0	74.8	523	500	8	NA	Yes	82.6	09/28/16
		MET-SUPL-5WHG24-40	4163 K	7.0	73.6	512	500	19	NA	Yes	85.2	09/28/16
		MET-SUPL-9WHG24-30	2941 K	11.3	79.4	899	900	23	NA	Yes	84.8	09/27/16
		MET-SUPL-9WHG24-40	4087 K	12.0	83.7	967	900	16	NA	Yes	84.4	09/27/16
		MET-WIPL-06WHG24-30	3110 K	8.1	85.6	696	700	7.9	NA	No	82.9	12/13/16
		MET-WIPL-06WHG24-40	4102 K	8.3	86.9	723	700	14.5	NA	No	84.3	12/13/16
		MET-WIPL--5WHGX23-30	2928 K	5.3	95.4	507	500	12.9	NA	No	83.8	12/01/16
		MET-WIPL--5WHGX23-40	4199 K	5.3	98.0	523	500	19.1	NA	No	85.1	12/01/16
		MET-WIPL-HY6WHG24D-40	4022 K	6.1	111.5	681	680	8.4	NA	No	82.8	12/13/16
	NINGBO VEALITE ILLUMINATION CO.L	5PL01G23LEDYY	2703 K	4.7	107.5	505	500	(blank)	NA	No	82.4	12/01/16
	Optimal LED	GQR04NX1010VV50JPW	5223 K	9.9	83.3	820	900	15	NA	No	84.2	08/17/16
	RemPhos	RPT-LEDBIAX-1500LM-3000K	2971 K	13.9	94.1	1,308	1,500	0	NA	No	83.6	04/13/16
		RPT-LEDBIAX-1500LM-4000K	4215 K	14.0	95.4	1,340	1,500	23	NA	No	85.2	04/13/16

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
CFL Replacement	RemPhos	RPT-LEDBIAX-2000LM-3000K	2981 K	20.8	88.5	1,837	1,500	10	NA	No	83.4	04/13/16
		RPT-LEDBIAX-2000LM-4000K	4100 K	21.1	89.7	1,889	2,000	22	NA	No	85.0	04/13/16
	Satco Products Inc.	S9850	2941 K	11.3	79.4	899	850	23	NA	No	84.8	12/01/16
		S9851	3444 K	11.6	83.9	976	850	16	NA	No	83.2	12/01/16
		S9852	4087 K	11.6	83.7	967	900	16	NA	No	84.4	12/01/16
		S9858	2998 K	11.8	79.5	937	850	7	NA	No	82.0	12/01/16
		S9859	3474 K	11.7	83.1	976	850	11	NA	No	83.4	12/01/16
		S9860	3874 K	11.9	87.2	1,034	900	13	NA	No	84.0	12/01/16
	Shenzhen Seven Rainbow lighting Co., L	CH-2G11-22W	6486 K	20.1	137.1	2,753	2,200	18	NA	No	86.0	12/01/16
	TGL Inc.	TGL-PLG24Q-10W4K	3938 K	9.4	94.0	885	800	19.2	NA	No	85.0	09/27/16
	Verbatim Americas	PL4-L1000-C27-DIR	2701 K	11.6	88.8	1,029	1,100	12	NA	No	83.0	08/11/16
		PL4-L1100-C30-DIR	2994 K	11.5	91.3	1,053	1,100	19	NA	No	85.0	08/11/16
		PL4-L1100-C35-DIR	3462 K	11.6	94.7	1,098	1,100	17	NA	No	85.0	08/11/16
		PL4-L1100-C40-DIR	3976 K	11.6	95.6	1,108	1,100	18	NA	No	85.0	08/11/16
		PL4-L800-C27-DIR	2695 K	8.3	86.4	715	800	10	NA	No	83.0	08/11/16
		PL4-L800-C30-DIR	3045 K	8.2	92.0	749	800	18	NA	No	85.0	08/11/16
		PL4-L800-C35-DIR	3408 K	8.1	96.0	789	800	14	NA	No	84.0	08/11/16
	PL4-L800-C40-DIR	3979 K	8.2	97.0	795	800	13	NA	No	84.0	08/11/16	
Display/Refrigerated Case	Diode LED	DI-24V-AV27-90XX	2695 K	18.8	52.3	140	162	77.1	NA	Yes	95.6	12/13/16
Globe	Lighting Science Group	LSPRO G25 40WE W27 FIL 120 BX	2675 K	4.5	112.9	508	470	5	NA	Yes	82.0	05/04/16
	The Home Depot	ECS G25 40WE W27 FIL 120 BL	2675 K	4.5	112.9	508	470	5	NA	Yes	82.0	05/04/16
	Archipelago Lighting, Inc.	LVTS-G2518022K1	2294 K	2.1	102.1	212	180	14.3	NA	Yes	82.4	02/04/16
	Maxlite	V6.5G30DLED22	2175 K	6.7	98.0	654	620	16.9	NA	Yes	83.6	04/07/16
HID Replacements (screw-in)	Bbier Manufacturing Co.,ltd	BB-HYD-006	4080 K	51.9	129.5	6,720	6,720	0	NA	No	81.3	03/08/16
	CAO Lighting, Inc.	803-120W-40K	4119 K	116.7	111.0	12,959	12,600	17.8	NA	No	84.6	04/06/16
	Differential Energy Global Ltd.	DEG-150175 (120V)	4422 K	53.5	81.7	4,370	4,370	-6.7	6.9	Yes	74.9	04/15/16
		DEG-150175 (277V)	4422 K	58.1	81.7	4,370	4,370	-6.7	6.9	Yes	74.9	04/15/16
		DEG-325400 (120V)	4639 K	105.1	78.1	8,203	8,203	-18.7	31.6	Yes	72.9	04/19/16
		DEG-325400 (277V)	4639 K	103.1	78.1	8,203	8,203	-18.7	31.6	Yes	72.9	04/19/16
		DEG-450550 (120V)	4632 K	169.8	79.1	13,437	13,437	-23	55.9	Yes	71.6	04/15/16
		DEG-450550 (277V)	4632 K	163.7	79.1	13,437	13,437	-23	55.9	Yes	71.6	04/15/16
	DiVi Energy, LLC	BB-HJD-014	4346 K	10.9	109.9	1,193	1,100	17	NA	No	84.1	02/05/16
	Ecomax lighting	SUN09-36W(E26,E39)	5114 K	33.7	122.8	4,141	4,320	19	NA	No	84.4	02/10/16
		SUN09-45W(E26,E39)	4914 K	43.2	121.3	5,233	5,400	30	NA	No	85.7	02/10/16
		SUN23-50W(E26,E39)	4952 K	46.6	122.2	5,688	6,250	27	NA	No	85.2	02/10/16
		SUN-CBRHD-40W 5000(E26,E39)	4929 K	39.3	130.7	5,132	5,600	22	NA	No	84.8	02/10/16
		SUN-CBRHD-40W 6000(E26,E39)	5944 K	39.3	133.5	5,247	5,600	12	NA	No	83.4	02/10/16
	EiKO Global	LED15WPT40KMED-G7	4086 K	14.7	131.2	1,929	1,875	8	NA	No	82.9	09/23/16
		LED15WPT50KMED-G7	5134 K	14.6	133.5	1,949	1,900	16	NA	No	86.0	09/23/16
		LED19WPT40KMED-G7	4108 K	19.1	126.2	2,411	2,375	8	NA	No	82.8	09/23/16
		LED19WPT50KMED-G7	5164 K	18.8	130.9	2,461	2,470	8	NA	No	86.0	09/23/16
LED20WPT40KMED-G6		4157 K	19.1	115.0	2,190	2,100	15	NA	No	84.5	08/17/16	
LED20WPT50KMED-G6		5044 K	18.2	127.6	2,326	2,100	-1	NA	No	81.5	08/17/16	
LED24WPT40KMED-G7	4148 K	23.8	132.2	3,147	3,000	12	NA	No	83.7	09/23/16		



# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
(screw-in)	EiKO Global	LED24WPT50KMED-G7	5116 K	23.5	133.3	3,129	3,120	16	NA	No	86.0	09/23/16
		LED27WPT40KMED-G7	4086 K	26.6	136.8	3,636	3,645	12	NA	No	83.5	09/23/16
		LED27WPT50KMED-G7	5238 K	27.5	136.1	3,749	3,645	4	NA	No	84.0	10/10/16
		LED36WPT40KMED-G7	4085 K	36.0	137.1	4,939	4,860	13	NA	No	83.7	09/23/16
		LED36WPT50KMED-G7	5146 K	37.1	137.9	5,112	4,860	11	NA	No	85.2	10/17/16
		LED45WPT40KMED-G5	4233 K	44.1	114.0	5,128	5,100	17	NA	No	84.3	03/07/16
		LED45WPT40KMED-G7	4008 K	40.3	143.6	5,779	6,075	10	NA	No	83.3	09/23/16
		LED45WPT50KMED-G7	5150 K	40.6	149.5	6,073	6,075	-2	NA	No	82.6	09/23/16
		LED54WPT40KMED-G5	4129 K	53.6	109.9	5,895	5,800	27	NA	No	85.8	03/07/16
		LED54WPT40KMED-G7	4065 K	54.3	137.8	7,482	7,290	17	NA	No	85.0	09/26/16
	ESL Vision	ESL-CL-55W-EXT-480V	5112 K	57.4	124.1	7,122	6,900	29	NA	No	86.4	09/27/16
	ESL Vision, LLC	ESL-CL-15W-230S	3082 K	15.1	122.7	1,848	1,845	12	NA	No	82.8	10/12/16
		ESL-CL-15W-240S	3993 K	14.9	131.5	1,952	1,950	17	NA	No	84.2	10/12/16
		ESL-CL-15W-250S	5112 K	15.0	134.5	2,018	2,015	16	NA	No	84.7	10/12/16
		ESL-CL-23W-230S	3076 K	21.9	127.2	3,076	2,780	12	NA	No	82.7	10/12/16
		ESL-CL-23W-240S	4005 K	22.0	134.9	2,974	2,970	17	NA	No	84.1	10/12/16
		ESL-CL-23W-250	5236 K	22.2	129.0	2,875	2,875	4	NA	No	81.6	06/01/16
		ESL-CL-23W-250S	5096 K	22.4	139.2	3,117	3,115	17	NA	No	84.8	10/12/16
		ESL-CL-9W-230S	3081 K	8.4	117.1	981	980	12	NA	No	82.7	10/12/16
		ESL-CL-9W-240S	3976 K	8.2	124.6	1,026	1,025	17	NA	No	84.0	10/12/16
		ESL-CL-9W-250S	5082 K	8.2	127.2	1,045	1,045	16	NA	No	84.6	10/12/16
	Foreverlamp Inc	GS-400D-HO-840	4197 K	190.0	101.2	19,230	20,000	0	NA	No	84.0	08/12/16
		PS-400D-HO-840	3985 K	200.0	112.0	22,422	20,000	0	NA	No	83.0	08/12/16
	Foreverlamp Inc.	GS-400D-VVHO-850	5010 K	229.4	89.0	25,399	26,000	0	NA	No	84.0	09/26/16
		GS-400U-HO-840	4137 K	204.9	76.0	20,054	21,000	0	NA	No	84.0	09/28/16
		GS-400U-VHO-850	5078 K	211.9	122.0	25,758	24,000	0	NA	No	82.0	09/28/16
		PS-400D-HO-850	5034 K	201.6	80.0	20,899	21,000	0	NA	No	84.0	09/28/16
	Intelligent Energy Optimizers LLC	OptioLED14WCorn	3095 K	13.0	120.3	1,561	1,680	12	170.6	No	83.6	03/15/16
		OptioLED8WCorn	3100 K	8.1	123.2	1,000	960	12	124.1	No	83.6	03/15/16
	Keystone Technologies	KT-LED20HID-E26-840-D	4157 K	19.1	109.7	2,090	2,100	15	NA	No	84.5	10/12/16
		KT-LED20HID-E26-850-D	5044 K	18.2	127.6	2,326	2,130	(blank)	NA	No	81.5	10/12/16
		KT-LED36HID-E26-840-D	4085 K	36.0	137.1	4,939	5,040	13	NA	No	83.7	10/14/16
		KT-LED36HID-E26-850-D	5134 K	37.1	137.9	5,112	5,100	11	NA	No	85.2	12/01/16
	Kobi Electric	EC-18-27-MV-E26	2680 K	17.4	108.1	1,879	1,850	10	NA	No	83.0	04/12/16
		EC-18-50-MV-E26	5220 K	17.3	126.9	2,197	2,150	23	NA	No	85.0	04/12/16
		EC-36-50-MV-E26	5230 K	34.0	125.3	4,259	4,250	23	NA	No	85.0	04/12/16
	Light Efficient Design	LED-8029E30-A	2965 K	23.2	101.7	2,362	2,362	8	NA	No	82.6	08/08/16
		LED-8029E40-A	4026 K	22.4	118.4	2,656	2,656	15	NA	No	84.4	08/08/16
		LED-8029E57-A	5772 K	22.1	120.5	2,667	2,667	16	NA	No	85.2	08/08/16
		LED-8029M30	3036 K	24.2	96.6	2,336	2,336	8	NA	No	82.4	05/03/16
		LED-8029M42	3989 K	24.5	100.8	2,472	2,472	16	NA	No	83.6	05/03/16
		LED-8029M57	5518 K	25.1	105.9	2,660	2,660	26	NA	No	85.7	05/03/16
		LED-8032M40-A	4051 K	144.4	113.6	16,407	16,407	13	NA	No	84.3	08/02/16
		LED-8032M57-A	5393 K	144.2	115.2	16,605	16,605	12	NA	No	84.7	08/02/16
		LED-8039E30-A	2958 K	18.2	112.8	2,056	2,055	7	NA	No	82.4	08/08/16
		LED-8039E40-A	4087 K	18.0	127.8	2,297	229	17	NA	No	84.7	08/08/16
		LED-8039E57-A	5552 K	18.0	124.4	2,243	2,243	15	NA	No	85.1	08/08/16
		LED-8055E27	2783 K	30.2	83.9	2,537	2,537	9	NA	No	82.2	08/08/16
		LED-8055M27	2783 K	30.2	83.9	2,537	2,537	9	NA	No	82.2	08/08/16

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date	
(screw-in)	Light Efficient Design	LED-8055M42	4105 K	32.3	88.0	2,842	2,886	29	NA	No	88.0	08/08/16	
		LED-8055M57	5958 K	32.2	89.6	2,886	2,886	37	NA	No	88.3	08/08/16	
		LED-8081E40	3942 K	31.8	110.4	3,509	3,509	11	NA	No	83.5	08/09/16	
		LED-8081E57	5794 K	31.3	113.9	3,567	3,567	1	NA	No	81.2	08/09/16	
		LED-8082M40	3933 K	41.6	120.4	5,010	5,010	13	NA	No	83.8	08/09/16	
		LED-8082M57	5775 K	42.8	122.2	5,230	5,229	1	NA	No	81.2	08/09/16	
		LED-8083E30	2929 K	13.1	117.6	3,662	3,661	6	NA	No	81.9	08/08/16	
		LED-8083E40	4041 K	30.7	127.9	3,920	3,919	12	NA	No	83.8	08/08/16	
		LED-8083E57	5606 K	30.7	128.8	3,956	3,955	9	NA	No	84.4	08/08/16	
		LED-8087E40-A	4041 K	32.9	127.0	4,172	4,171	11	NA	No	83.5	08/08/16	
		LED-8087E57-A	5636 K	32.8	128.9	4,225	4,225	9	NA	No	84.4	08/08/16	
		LED-8090M40-A	3835 K	114.9	101.0	11,605	11,605	0	NA	No	73.4	08/02/16	
		LED-8090M50-A	4915 K	114.5	102.7	11,760	11,760	0	NA	No	73.8	08/02/16	
		Lunera	SN-360-E26-L-5Klm-835-G3	3355 K	53.4	98.1	5,237	5,400	14.9	NA	Available	82.6	08/01/16
	SN-360-E26-L-5Klm-840-G3		3954 K	53.5	107.6	5,763	5,400	15.2	NA	Available	83.4	08/01/16	
	SN-360-E26-L-5Klm-850-G3		4886 K	52.9	103.6	5,481	5,400	14	NA	Available	83.7	08/01/16	
	SN-360-E26-L-8Klm-835-G3		3539 K	89.5	94.0	8,413	8,400	10.7	NA	Available	81.7	08/01/16	
	SN-360-E26-L-8Klm-840-G3		4056 K	85.7	100.4	8,602	8,400	14.1	NA	Available	83.0	08/01/16	
	SN-360-E26-L-8Klm-850-G3		4855 K	87.3	97.9	8,553	8,400	8.9	NA	Available	82.8	08/01/16	
	SN-V-E26-L-4.5Klm-840-G3		3883 K	58.6	81.9	4,800	4,500	10.4	NA	Available	81.9	08/15/16	
	SN-V-E26-L-4.5Klm-850-G3		4729 K	58.8	83.6	4,911	4,500	7.5	NA	Available	82.5	08/15/16	
	SN-V-E26-L-9Klm-840-G3		3899 K	106.1	82.9	8,794	9,000	14.8	NA	Available	83.1	08/15/16	
	SN-V-E26-L-9Klm-850-G3		4982 K	109.4	83.9	9,170	9,000	14.8	NA	Available	84.1	08/15/16	
	SN-VS-E26-L-4.5Klm-840-G3		3877 K	59.1	83.4	4,926	4,500	11	NA	Available	82.1	08/15/16	
	SN-VS-E26-L-4.5Klm-850-G3		4711 K	57.9	83.6	4,843	4,500	7.8	NA	Available	82.5	08/15/16	
	SN-VS-E26-L-9Klm-840-G3		3911 K	108.2	83.1	8,990	9,000	7.8	NA	Available	83.1	08/15/16	
	SN-VS-E26-L-9Klm-850-G3		4971 K	107.5	85.1	9,144	9,000	14.6	NA	Available	84.1	08/15/16	
	Maxlite		BLHR43UN50B	5000 K	43.5	95.6	4,160	4,100	0	NA	No	86.7	08/17/16
			SKPT12LEDU30E26	2949 K	11.7	109.2	1,280	1,100	3	NA	No	81.5	04/01/16
		SKPT20LEDU30E26 (277v)	3119 K	19.1	105.2	1,951	1,800	6	NA	No	82.5	04/01/16	
		SKPT20LEDU30E26(120v)	3119 K	18.5	105.2	1,951	1,800	6	NA	No	82.5	04/01/16	
		SKPT20LEDU50E26 (120v)	5105 K	18.2	123.6	2,254	1,800	5	NA	No	83.4	04/01/16	
		SKPT20LEDU50E26 (120v)	5023 K	11.9	117.9	1,403	1,100	2	NA	No	83.1	04/01/16	
		SKPT20LEDU50E26 (277v)	5105 K	18.9	123.6	2,254	1,800	5	NA	No	83.4	04/01/16	
		SKPT50LEDU50E39 (277v)	5067 K	47.7	122.8	5,726	5,600	10	NA	No	82.7	04/01/16	
		SKPT50LEDU50E39(120v)	5067 K	46.6	122.8	5,726	5,600	10	NA	No	82.7	04/01/16	
	OEO Energy Solutions	EZ LED HO-D-5K	5034 K	201.0	104.0	20,899	21,500	0	NA	No	84.0	09/06/16	
		EZ LED VHO-U-5K	5078 K	211.9	122.0	25,758	26,000	0	NA	No	82.0	09/09/16	
		EZLED HO-U-5K	5036 K	205.2	101.0	20,763	21,000	0	NA	No	84.0	09/09/16	
	Shenzhen Guanke Technologies	GKS21-100W(E39)	4104 K	104.0	129.6	13,475	14,000	22	NA	No	85.7	02/05/16	
		GKS21-125W(E39)	4954 K	127.9	126.8	16,225	17,000	8	NA	No	82.9	03/08/16	
		GKS21-80W(E39)	4920 K	81.5	128.7	10,491	11,000	7	NA	No	82.8	02/05/16	
		GKS30-100W(E39)	4854 K	99.1	117.7	11,666	12,000	3	NA	No	81.1	02/05/16	
		GKS30-100W(EX39)	4854 K	99.1	117.7	166	12,000	3	NA	No	81.1	02/05/16	
	Shenzhen Guanke Technologies Co., Ltd	GKS09-27W-10 E26 E39	3031 K	27.4	93.8	2,560	3,510	6	NA	No	80.7	12/01/16	
		GKS09-36W-10 E26 E39	4948 K	33.7	132.8	4,473	4,680	8	NA	No	82.6	12/01/16	
		GKS13-40W E26 E39	4876 K	39.5	145.5	5,748	5,600	10	NA	No	83.4	12/01/16	
	Truly Green Solutions	310772	4166 K	12.3	111.5	1,372	1,150	5	NA	No	82.8	12/07/16	
		310781	5164 K	14.9	100.5	1,501	1,650	-22	NA	No	73.0	12/13/16	

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
(screw-in)	Truly Green Solutions	310802	4125 K	21.5	110.2	2,374	2,400	0	NA	No	84.1	03/15/16
		310822	3931 K	35.9	122.3	4,385	4,320	0	NA	No	83.9	02/10/16
		310832	3944 K	46.3	124.4	5,762	5,400	0	NA	No	83.6	02/10/16
		310841-G4	5080 K	51.3	136.9	7,021	7,830	0	NA	No	83.9	02/10/16
		310861-IL-G4	4920 K	81.5	128.7	10,491	10,880	7	NA	No	82.8	09/02/16
		310872-IL-G4	4104 K	104.0	129.6	13,475	13,680	22	NA	No	85.7	09/02/16
	Truly Green Solutions	310792	4157 K	19.1	109.7	2,090	2,100	0	NA	No	84.5	03/15/16
		310812	4123 K	28.0	115.6	3,233	3,200	0	NA	No	84.8	03/15/16
<b>Integral Omnidirectional LED &lt;=5 watts</b>	Luminance	L7588-2-RF	2700 K	1.5	111.1	160	160	19	NA	Yes	84.4	01/10/17
	TGL Inc.	VINE12-4WT-270K	2732 K	3.7	100.5	367	320	1.01	NA	Yes	80.7	12/13/16
	TGL Inc.	VINE12-2WT-270K	2726 K	1.8	101.1	183	180	1.7	NA	Yes	81.1	12/13/16
<b>MR16</b>	Sylvania	LED7MR16/DIM/827/FL36	2718 K	7.1	64.4	456	500	17	1190.0	Yes	81.7	04/06/16
	Viribright Lighting Inc.	P42ML2-5 / 750138	2720 K	4.2	79.0	330	318	38	124.0	Yes	92.3	03/16/16
		P42ML4-5 / 750139	3860 K	4.1	85.0	346	318	58	130.0	Yes	94.4	03/16/16
		P42ML6-5 / 750138	6046 K	4.0	80.1	319	318	82	120.0	Yes	94.2	03/16/16
		S42HU2-5 / 750045	2662 K	4.1	91.2	371	370	40	168.0	Yes	92.5	03/16/16
		S42HU4-5 / 750046	4005 K	4.1	101.6	421	380	61	196.0	Yes	84.2	03/16/16
		S42HU6-5 / 750047	5653 K	4.0	100.4	402	380	71	184.0	Yes	93.9	03/16/16
		S42ML2-5 / 750135	2743 K	4.1	83.7	341	318	43	158.0	Yes	93.4	03/16/16
		S42ML4-5 / 750135	4019 K	4.1	91.7	379	318	65	177.0	Yes	95.1	03/16/16
	Sengled-Sigalux	MR16-6M-WH-DIM-A-36°-3000K	3031 K	6.3	81.5	511	350	7	850.0	Yes	81.5	08/09/16
	Verbatim Americas	M16-L300-C30-B25-ENC	2986 K	3.7	85.9	316	300	12	1620.0	Yes	81.2	06/16/16
		M16-L300-C30-B36-ENC	2990 K	3.7	88.8	329	300	11	900.0	Yes	81.0	06/16/16
		M16-L430-C30-B25-ENC	3052 K	5.8	80.0	460	430	14	2405.0	Yes	82.0	06/16/16
		M16-L430-C30-B36-ENC	3013 K	5.9	78.0	457	430	10	1260.0	Yes	80.8	06/16/16
		M16-L500-C27-B13-97-ENC	2725 K	8.5	66.4	552	500	78	6475.0	Yes	96.3	06/16/16
		M16-L500-C27-B25-97-ENC	2718 K	8.3	59.6	482	500	77.5	2690.0	Yes	96.2	06/16/16
		M16-L500-C27-B36-97-ENC	2733 K	8.1	60.2	485	500	77.6	1400.0	Yes	96.3	06/16/16
		M16-L525-C30-B13-97-ENC	2986 K	8.5	67.0	568	525	80.5	6500.0	Yes	96.4	06/16/16
		M16-L525-C30-B25-97-ENC	2979 K	8.3	62.2	516	525	85.3	2715.0	Yes	96.5	06/16/16
		M16-L525-C30-B36-97-ENC	3013 K	8.2	63.6	522	525	86	1430.0	Yes	96.7	06/16/16
Sengled	1102011245	2699 K	8.0	73.0	580	525	63.9	4885.0	Yes	93.3	12/01/16	
<b>Outdoor Pole-Mounted Area and Roadway Retrofit Kits</b>	Harris Lighting Products	FL113-5000	5139 K	113.0	107.3	12,124	12,124	0	NA	Yes	82.7	06/01/16
		FL56-5000	5110 K	56.7	114.9	6,518	6,518	0	NA	Yes	82.6	06/01/16
	Viribright Lighting Inc. (Matrix Lighting Limited)	P15EU6-5 / 750077	5720 K	14.9	93.9	1,402	1,350	74	612.0	Yes	94.4	06/01/16
		P42EU2-5 / 750096	2641 K	4.2	91.5	383	380	38	143.0	Yes	92.2	06/01/16
		S42EU4-5 / 750049	4005 K	4.1	101.6	421	380	61	196.0	Yes	94.2	06/01/16
		S42EU6-5 / 750050	5653 K	4.0	100.4	402	380	71	184.0	Yes	93.9	06/01/16
<b>Outdoor Wall/Ground-Mounted Retrofit Kits</b>	Harris Lighting Products	FL21-5000	4902 K	21.5	113.2	2,435	2,400	0	NA	Yes	82.7	04/11/16
		FL37-5000	4915 K	37.2	109.6	4,083	4,000	0	NA	Yes	78.8	04/07/16
	Viribright Lighting Inc. (Matrix Lighting Limited)	P15EU2-5 / 750075	2741 K	14.9	82.6	1,232	1,200	37	545.0	Yes	91.9	06/01/16

# Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date
Outdoor Wall/Ground-	Viribright Lighting Inc. (Matrix Lighting Lim	P15EU4-5 / 750076	4028 K	15.0	93.7	1,405	1,350	55	621.0	Yes	94.0	06/01/16
		P42EU4-5 / 750097	3998 K	4.1	100.1	413	380	60	157.0	Yes	94.1	06/01/16
		S42EU2-5 / 750048	2662 K	4.1	91.2	371	370	40	168.0	Yes	92.5	06/01/16
PAR16	Viribright Lighting Inc.	P42HU2-5 / 750099	2641 K	4.2	91.5	383	380	38	143.0	Yes	92.2	03/16/16
		P42HU4-5 / 750100	3998 K	4.1	100.1	413	380	60	157.0	Yes	94.1	03/16/16
		P42HU6-5 / 750101	5568 K	4.1	94.4	390	380	69	147.0	Yes	93.7	03/16/16
PAR30	Viribright Lighting Inc.	P95EU2-5 / 750081	2721 K	9.1	85.2	774	760	42	397.0	Yes	91.7	03/16/16
		P95EU4-5 / 750082	4173 K	9.4	87.5	820	820	66	426.0	Yes	95.2	03/17/16
		P95EU6-5 / 750083	5975 K	9.0	94.6	853	820	75	443.0	Yes	94.3	03/17/16
PAR38	Viribright Lighting Inc.	750267	2741 K	14.9	82.6	1,232	1,200	37	545.0	Yes	91.9	03/17/16
		750268	4028 K	15.0	93.7	1,405	1,350	55	621.0	Yes	94.0	03/17/16
		750269	5720 K	14.9	93.9	1,402	1,350	74	612.0	Yes	94.4	03/17/16
S14	Maxlite	SKBC2.5DLED27	2795 K	2.4	55.1	133	125	7	NA	No	82.1	02/25/16
		SKBF2.5DLED27	2749 K	2.6	56.7	148	125	0	NA	No	79.2	02/25/16
ST	GREEN CREATIVE	5FST19DIM/824/A	2378 K	4.9	79.2	391	380	6.5	NA	Yes	80.9	08/23/16
ST18	Maxlite	V6.5ST18DLED22	2162 K	6.7	94.5	634	620	15.2	NA	Yes	83.1	04/07/16
ST19	Archipelago Lighting, Inc.	LVTS-ED1930022K1	2234 K	3.6	100.9	358	300	12.3	NA	Yes	81.8	02/04/16
T10	Archipelago Lighting, Inc.	LVTS-RD1030022K1	2214 K	3.5	92.4	321	300	10.4	NA	Yes	81.1	02/04/16
		LVTS-TB1016022K1	2266 K	2.0	101.2	205	160	13.9	NA	Yes	82.1	02/04/16
		LVTS-TB1030022K1	2257 K	3.6	100.5	357	300	13.8	NA	Yes	82.1	02/04/16
T12	Archipelago Lighting, Inc.	LVTS-RD1230022K1	2235 K	3.5	97.2	344	300	12	NA	Yes	81.6	02/04/16
T14	Archipelago Lighting, Inc.	LVTS-RD1418022K1	2238 K	2.1	94.8	200	180	11.4	NA	Yes	81.4	02/04/16
	Maxlite	V4.5T14DLED22	2288 K	4.4	96.6	429	400	13.9	NA	Yes	83.0	04/07/16
T6	Archipelago Lighting, Inc.	LVTS-TB616022K1	2266 K	1.9	102.0	196	160	12	NA	Yes	81.7	02/04/16
T9	Archipelago Lighting, Inc.	LVTS-TB916022K1	2231 K	2.0	86.0	170	160	33.1	NA	Yes	86.1	02/04/16
		LVTS-TB930022K1	2222 K	3.5	102.9	364	300	12.7	NA	Yes	81.8	02/04/16
U-Bent	Aledra Inc.	LLT-2U-T8-15W-BA-C-30K	3020 K	17.5	109.6	1,920	1,920	2.8	NA	No	81.6	06/13/16
		LLT-2U-T8-15W-BA-C-50K	5189 K	17.6	116.1	2,041	1,920	3.6	NA	No	82.3	06/13/16
		LLT-2U-T8-15W-BA-D-30K	3022 K	17.4	102.4	1,777	1,778	3.3	NA	No	81.8	06/13/16
		LLT-2U-T8-15W-BA-D-50K	5167 K	17.4	108.6	1,891	1,850	3.3	NA	No	82.3	06/13/16
	CAO Lighting, Inc.	33213-30-UL	2987 K	16.7	120.3	2,011	1,750	4	NA	No	81.6	03/08/16
	GE Lighting	LED13ET8/U6/830	3036 K	12.4	146.6	1,817	1,800	6	NA	No	83.0	09/16/16
		LED13ET8/U6/835	3396 K	12.4	149.6	1,860	1,850	11	NA	No	84.0	09/16/16
		LED13ET8/U6/840	3930 K	12.4	155.6	1,934	1,900	9	NA	No	84.0	09/16/16
		LED13ET8/U6/850	4984 K	12.4	156.4	1,945	1,900	5	NA	No	82.0	09/16/16
		LED15T8/G/U6/830	3139 K	13.0	135.9	1,770	1,700	5	NA	Yes	83.0	12/01/16

## Lighting Design Lab Qualified LED List -- Lamps and Linear Tubes

Lamp Type	Manufacturer	Model Number	CCT	Input Wattage	Efficacy LPW	Initial Lumen Output	Rated Lumens	R9 Value	Rated CBCP	Dimmable	CRI	Post Date	
U-Bent	GE Lighting	LED15T8/G/U6/835	3487 K	13.1	139.3	1,827	1,800	5	NA	Yes	84.0	12/01/16	
		LED15T8/G/U6/840	4033 K	13.1	145.3	1,900	1,800	7	NA	Yes	83.0	12/01/16	
		LED15T8/G/U6/850	5099 K	13.0	142.5	1,853	1,850	9	NA	Yes	84.0	12/01/16	
	James Industry Group	ZY-T8-15W600UBend-BINS-3000K	5130 K	14.2	106.6	1,514	1,550	9.9	NA	No	83.0	04/22/16	
	Kobi Electric	T8U-1.6-1535-RMV	3386 K	15.2	124.0	1,880	1,850	11	NA	No	83.8	09/27/16	
		T8U-1.6-1540-PP	4087 K	15.6	120.1	1,872	1,850	17	NA	No	84.9	09/27/16	
		T8U-1.6-1540-RMV	4044 K	15.3	124.2	1,899	1,850	9	NA	No	83.5	09/27/16	
		T8U-1.6-1550-PP	5108 K	16.0	120.0	1,915	1,900	8	NA	No	83.9	09/27/16	
		T8U-1.6-1550-RMV	5139 K	15.4	121.1	1,858	1,850	23	NA	No	86.2	09/27/16	
		T8U-6-1535-RMV	3387 K	15.4	120.7	1,853	1,850	11	NA	No	83.7	09/27/16	
		T8U-6-1540-PP	4073 K	16.1	112.2	1,801	1,800	16	NA	No	84.7	09/27/16	
		T8U-6-1540-RMV	4062 K	15.3	123.3	1,890	1,850	8	NA	No	83.4	09/27/16	
		T8U-6-1550-PP	5263 K	15.8	120.1	1,896	1,850	18	NA	No	85.5	09/27/16	
		T8U-6-1550-RMV	5182 K	15.1	120.3	1,815	1,850	23	NA	No	86.4	09/27/16	
		Maxlite	U16T8DF240	4071 K	18.2	97.9	1,786	1,800	25.7	NA	No	85.2	03/09/16
			U16T8DF250	5023 K	18.2	97.4	1,776	1,800	20.2	NA	No	84.7	03/09/16
	Turolight	VIV-T8DF/U/20W/35/F	3476 K	21.5	102.6	2,210	2,000	11.7	NA	No	84.1	06/01/16	
		VIV-T8DF/U/20W/40/F	4053 K	21.5	106.7	2,289	2,000	17.6	NA	No	85.2	06/01/16	