

Project		Catalog #		Type	
Prepared by		Notes		Date	



Interactive Menu

- **Ordering Information** page 2
- **Dimensional Details** page 3
- **Energy and Performance Data** page 4-13
- **Optical Distributions** page 13

Streetworks

AVN Avenaire

Zero Uplight Decorative Post Top Luminaire

Product Certifications & Features



Light ARchitect™

AVAILABLE

AVAILABLE

Certified by DarkSky.org

Product Specifications

OPTICAL

- Choice of eight patented, high-efficiency AccuLED
- Optic™ technology options and four wavestream optics
- Optics are IP66 enclosure rated
- 8 Correlated Color Temperature (CCT) options:
 - » 70 CRI: 2200K, 2700K, 3000K, 4000K, 5000K
 - » 80 CRI: 3000K, 4000K
 - » Amber for wildlife-friendly and observatory applications
- Optional field-installable shields for superior spill light control (discrete LEDs only):
 - » Single-piece snap-on square shields
 - » Multiple-piece configurable vertical perimeter shielding

ELECTRICAL

- 120-277V, 347-480V, 347V, and 480V; 50/60Hz
- Standard 0-10V dimming
- 10kV and 20kV surge protection options in series and parallel versions
- Standard 3-position terminal block

- Suitable for operation in -40°C to 40°C ambient environments

PHYSICAL CHARACTERISTICS

- Heavy-duty cast aluminum housing and removable door
- Tool-less access to wiring compartment via a single stainless steel quarter turn fastener
- Base casting slipfits over a standard 3" O.D. tenon and secured via four stainless steel allen head fasteners
- Aluminum components are finished in premium TGIC polyester powder coat paint, with 2.5-mil thickness for superior durability and fade resistance
- Standard colors include grey, black, bronze, dark platinum, graphite metallic, hartford green, and white. Additional RAL color numbers available

CONTROLS

- 3- and 7-pin photocell receptacle options
- DALI and D4i driver options
- Field Adjustable Dimming Control option for manual adjustment of power consumption and lumen output. Factory preset to highest output level
- Optional 4-pin Zhaga Book 18 receptacle for integration of onboard sensors with DALI- and D4i-enabled drivers

COMPLIANCE

- Meets ANSI C136.25 for IP66 Optical enclosure rating
- Safety listing - Wet Location UL 1598
- Meets ANSI C136.15 for luminaire field identification label standard
- Meets ANSI C136.22 internal label standard
- 3,000-hours per ASTM B117, with a scribe rating of 7 per ASTM D1654 for standard color finish
- Dark Sky compliant (CCTs up to 3000K)

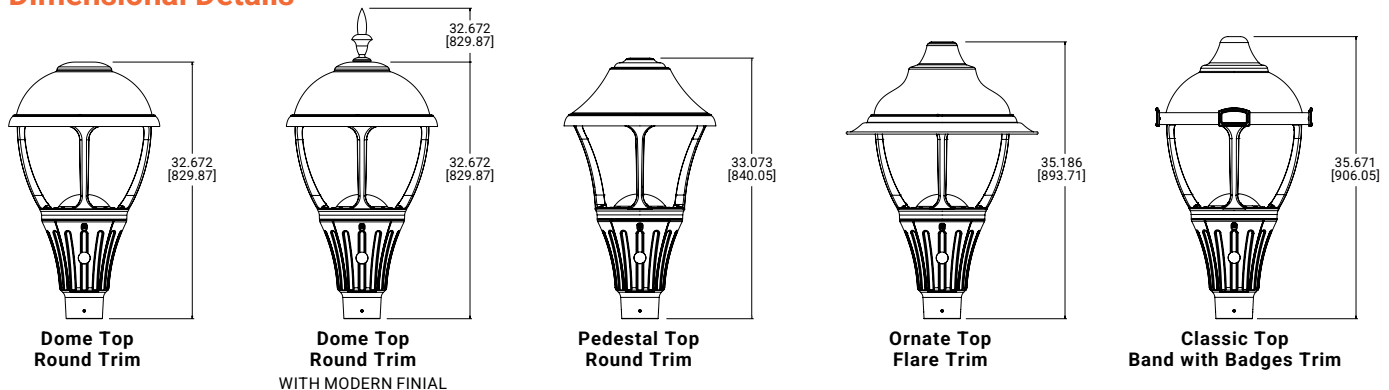
SHIPPING DATA

- Approximate Weight: 33lbs
- EPA: 2.01 sq ft
- Carton Size: 42.8" x 25.5" x 25.5"
- Pallet Size: 53" x 30"
- Cartons/Pallet: 2

WARRANTY

- Five-year limited warranty. Consult website for details www.cooperlighting.com/legal

Dimensional Details



Ordering Information

SAMPLE NUMBER: **AVN-CLB-VA-100-730-U-WQ-OU-4-D-1-3-1-BK-PR7**

Product Family	Housing	Optic Type	Wattage (Nominal)	Color Temperature	Voltage	Optic	Upright Style	Upright Quantity
AVN =Avenaire BAA-AVN =Avenaire Buy American Compliant TAA-AVN =Avenaire Trade Agreements Compliant	CLB =Classical Base	SA =Discrete LED arrays VA =Visual Comfort (wavestream)	30 =30W 40 =40W 50 =50W ¹ 60 =60W 80 =80W ¹ 90 =90W ² 100 =100W 120 =120W ² 130 =130W ¹ 140 =140W ² 150 =150W ^{1,3} 170 =170W ^{1,3}	722 =70CRI, 2200K 727 =70CRI, 2700K 730 =70CRI, 3000K 740 =70CRI, 4000K 750 =70CRI, 5000K 830 =80CRI, 3000K 840 =80CRI, 4000K ² AMB =Amber, 590nm ⁸	U =Universal (120-277V) H =High Voltage (347-480V) 1 =120V 2 =208V 3 =240V 4 =277V 8 =480V 9 =347V	T1 =Type I ² T2R =Type II Roadway ² T2U =Type II Urban ² T3 =Type III ² T4W =Type IV Wide ² T5R =Type V Round ² 5MQ =Type V Square Medium ² 5WQ =Type V Square Wide ² CQ =Wavestream Concentrated ¹ MQ =Wavestream Medium ¹ WQ =Wavestream Wide ¹ WT4 =Wavestream Type IV ^{1,4}	IN =Inward curve OU =outward curve	2 =2 4 =4
Top	Finial Type	Trim Type	Trim Badge	Color				
D =Dome P =Pedestal R =Ornate C =Classic	X =None 1 =Victorian ⁵ 2 =Modern ⁵ 3 =Architectural ⁵ 4 =Nostalgic ⁵	X =None ⁶ 1 =Round trim ⁶ 2 =Flare trim ⁶ 3 =Plain band	X =none 1 =Avenaire badge ⁷	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic GN =Hartford Green (premium) WH =White RALXXX =RAL Number (premium)				
Options (Add as Suffix)			Controls			Accessories (Order Separately)		
10MSP =Parallel 10kV MOV Surge Protective Device 10K =Series 10kV UL 1449 Surge Protective Device 20MSP =Parallel 20kV MOV Surge Protective Device 20K =Series 20kV UL 1449 Surge Protective Device 20KI =Series 20kV UL 1449 Surge Protective Device w light indicator HSS =House Side Shield ^{2, 19} HA =50° C High Ambient Temperature ¹³ CC =Coastal Construction CBP-CEC =Cold Weather Emergency Battery Pack, CEC Compliant (Ambient Temp, -20° to 40°C) ^{11, 12, 14, 15} Dxxxx =DOT Configuration - Contact Quotes Team Uxxxxx =Utility Configuration - Contact Quotes Team			PR =NEMA 3-PIN Twistlock Photocontrol Receptacle ^{5, 17} PR7 =NEMA 7-Pin Twistlock Photocontrol Receptacle ^{5, 16} PR7T =Top mounted NEMA 7-pin Twistlock Photocell Receptacle ^{16, 17} PSC =Photocontrol Shorting Cap included ¹⁸ NPC =NEMA Photocontrol, Multi-Tap, included ¹⁸ LLPC =Long Life Photocontrol included ¹⁸ FADC =Field Adjustable Dimming Controller ¹¹ DALI =DALI Driver(s) D4 =D4i driver(s) Z4 =4-pin DALI receptacle Zhaga Book ⁹ WPS2WH =WaveLinX Pro Wireless Sensor, 7'-15' mounting height ^{9, 10} WPS4WH =WaveLinX Pro Wireless Sensor, 15'-40" mounting height ^{9, 10} WLS2WH =WaveLinX Lite Wireless Sensor with Bluetooth, 7'-15' mounting height ⁹ WLS4WH =WaveLinX Lite Wireless Sensor with Bluetooth, 15'-40' mounting height ⁹ ZSC =Zhaga Book 18 receptacle cap			OA1223 =10kV Surge Module PBHSS =House Side Shield (Single) PBPFS =Perimeter Fence Shield Kit (4 Pieces) OA/RA1013 =Photocontrol Shorting Cap OA/RA1014 =NEMA Photocontrol - 120V OA/RA1016 =NEMA Photocontrol - Multi-Tap OA/RA1027 =NEMA Twistlock Photocontrol - 480V		
NOTES: 1. Not available with SA optic 2. Not available with VA optic 3. Not available with WT4 optic 4. Not available in wattages above 130W 5. Not available with PR7T 6. Must choose Trim Badge option X (none) 7. Not available with trim options X, 1, or 2 8. Not available with VA optic above 130W 9. Must select DALI or D4 option 10. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. WAC not required for LC Bluetooth sensors 11. Not available with WPS2WH, WPS4WH, WLS2WH or WLS4WH options 12. Only offered in 30 and 40 watts 13. Not available in 160W and above. 14. Only offered with U (120-277V) 15. Not available with HA (High Ambient) option 16. Not available with PR 17. Not available with PR7 18. Must select PR, PR7 or PR7T 19. Not available with T1, T5R, 5MQ, or 5WQ optics								

Configuration Examples



**Dome Top
Round Trim
Outward Curve - 4 Arm**



**Pedestal Top
Round Trim
Inward Curve - 4 Arm**

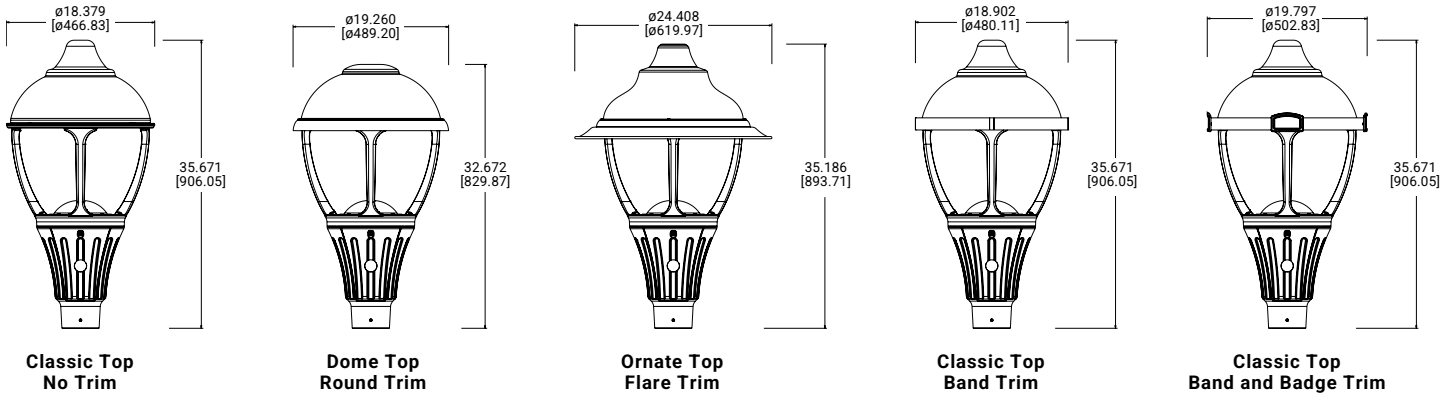


**Ornate Top
Flare Trim
Inward Curve - 4 Arm**

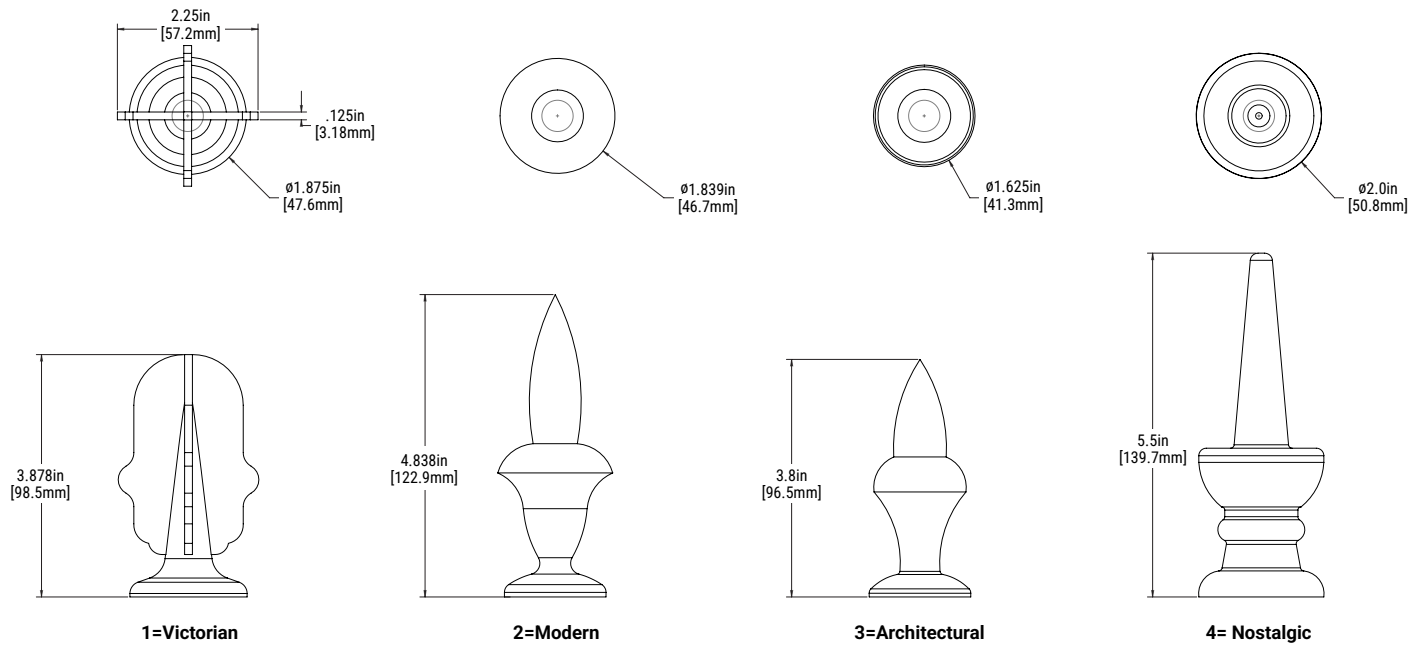


**Classic Top
Band with Badge Trim
Outward Curve - 4 Arm**

Trim & Badge Dimensional Details



Finial Details



Energy Performance Data

SA (Discrete) Optics - 2 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 120V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 277V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 347V	0.07	0.09	0.13	0.19	0.21	0.24	0.29
Current @ 480V	0.04	0.06	0.08	0.11	0.12	0.15	0.17

70 CRI, 2700K								
T1	Lumens	3,841	4,864	7,165	9,868	10,734	13,154	14,782
	Lumens per Watt	115	108	118	111	107	113	108
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2R	Lumens	3,806	4,819	7,071	9,739	10,594	12,926	14,526
	Lumens per Watt	114	107	116	109	106	111	106
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T2U	Lumens	3,764	4,766	7,040	9,697	10,548	12,899	14,496
	Lumens per Watt	113	106	116	109	105	111	106
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,830	4,849	7,079	9,750	10,606	13,047	14,662
	Lumens per Watt	115	108	117	109	106	112	107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4W	Lumens	3,729	4,721	6,908	9,515	10,350	12,779	14,360
	Lumens per Watt	112	105	114	107	103	110	105
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T5R	Lumens	4,095	5,185	7,584	10,445	11,362	14,039	15,777
	Lumens per Watt	123	115	125	117	114	121	115
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
5MQ	Lumens	3,845	4,869	7,553	10,403	11,316	13,663	15,355
	Lumens per Watt	115	108	124	117	113	118	112
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G2	B4-U0-G2
5WQ	Lumens	4,149	5,254	7,771	10,703	11,642	13,932	15,657
	Lumens per Watt	124	117	128	120	116	120	115
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,759	3,493	5,028	6,925	7,532	9,225	10,367
	Lumens per Watt	83	78	83	78	75	79	76
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2
T2U-HSS	Lumens	2,571	3,256	4,709	6,486	7,055	8,569	9,629
	Lumens per Watt	77	73	78	73	70	74	70
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T3-HSS	Lumens	2,712	3,433	4,942	6,807	7,404	9,011	10,126
	Lumens per Watt	81	76	81	76	74	78	74
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,661	3,369	4,934	6,796	7,392	9,105	10,232
	Lumens per Watt	80	75	81	76	74	78	75
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

SA (Discrete) Optics - 4 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 120V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 277V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 347V	0.07	0.09	0.13	0.19	0.21	0.24	0.29
Current @ 480V	0.04	0.06	0.08	0.11	0.12	0.15	0.17

70 CRI, 2700K								
T1	Lumens	3,592	4,548	6,875	9,469	10,300	12,618	14,180
	Lumens per Watt	108	101	115	106	103	109	104
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2R	Lumens	3,580	4,533	6,692	9,217	10,026	12,309	13,833
	Lumens per Watt	107	101	112	103	100	106	101
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2U	Lumens	3,561	4,508	6,677	9,197	10,004	12,269	13,788
	Lumens per Watt	107	100	111	103	100	106	101
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,580	4,533	6,692	9,217	10,026	12,309	13,833
	Lumens per Watt	107	101	112	103	100	106	101
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
T4W	Lumens	3,483	4,410	6,510	8,966	9,753	11,961	13,441
	Lumens per Watt	104	98	109	101	97	103	98
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
T5R	Lumens	3,841	4,864	7,122	9,809	10,670	13,061	14,677
	Lumens per Watt	115	108	119	110	107	112	107
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5MQ	Lumens	3,752	4,750	6,619	9,117	9,917	12,484	14,029
	Lumens per Watt	112	106	111	102	99	107	103
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,896	4,933	7,290	10,040	10,922	13,409	15,069
	Lumens per Watt	117	110	122	113	109	115	110
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,568	3,251	4,826	6,647	7,231	8,836	9,930
	Lumens per Watt	77	72	81	75	72	76	73
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
T2U-HSS	Lumens	2,400	3,038	4,512	6,215	6,760	8,300	9,328
	Lumens per Watt	72	68	75	70	68	71	68
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2
T3-HSS	Lumens	2,470	3,127	4,702	6,476	7,045	8,622	9,690
	Lumens per Watt	74	70	78	73	70	74	71
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,478	3,137	4,687	6,456	7,023	8,608	9,674
	Lumens per Watt	74	70	78	72	70	74	71
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

SA (Discrete) Optics - 2 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	33	44	61	89	100	116	137
Current @ 120V	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 277V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 347V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 480V	0.07	0.09	0.13	0.19	0.21	0.24	0.29

70 CRI, 3000K								
T1	Lumens	3,925	4,969	7,320	10,082	10,967	13,440	15,104
	Lumens per Watt	118	111	121	113	110	116	110
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2R	Lumens	3,889	4,924	7,225	9,951	10,824	13,207	14,842
	Lumens per Watt	116	110	119	112	108	114	109
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2U	Lumens	3,846	4,869	7,193	9,908	10,777	13,180	14,811
	Lumens per Watt	115	108	119	111	108	113	108
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,913	4,955	7,233	9,962	10,836	13,331	14,981
	Lumens per Watt	117	110	119	112	108	115	110
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4W	Lumens	3,810	4,824	7,058	9,722	10,575	13,056	14,673
	Lumens per Watt	114	107	116	109	106	112	107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T5R	Lumens	4,184	5,297	7,749	10,672	11,609	14,344	16,120
	Lumens per Watt	125	118	128	120	116	123	118
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
5MQ	Lumens	3,929	4,974	7,717	10,629	11,562	13,960	15,688
	Lumens per Watt	118	111	127	119	116	120	115
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G2	B4-U0-G2
5WQ	Lumens	4,240	5,368	7,940	10,936	11,895	14,235	15,997
	Lumens per Watt	127	120	131	123	119	123	117
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,819	3,569	5,137	7,075	7,696	9,426	10,593
	Lumens per Watt	84	79	85	79	77	81	77
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
T2U-HSS	Lumens	2,627	3,326	4,812	6,627	7,209	8,755	9,839
	Lumens per Watt	79	74	79	74	72	75	72
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T3-HSS	Lumens	2,770	3,508	5,049	6,955	7,565	9,207	10,346
	Lumens per Watt	83	78	83	78	76	79	76
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,719	3,443	5,041	6,943	7,553	9,303	10,454
	Lumens per Watt	81	77	83	78	75	80	76
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

SA (Discrete) Optics - 4 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	33	44	61	89	100	116	137
Current @ 120V	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 277V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 347V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 480V	0.07	0.09	0.13	0.19	0.21	0.24	0.29

70 CRI, 3000K								
T1	Lumens	3,670	4,646	7,024	9,675	10,524	12,892	14,488
	Lumens per Watt	110	103	117	108	105	111	106
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2R	Lumens	3,658	4,632	6,837	9,417	10,244	12,577	14,133
	Lumens per Watt	110	103	114	106	102	108	103
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2U	Lumens	3,638	4,606	6,823	9,397	10,222	12,536	14,088
	Lumens per Watt	109	103	114	105	102	108	103
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,658	4,632	6,837	9,417	10,244	12,577	14,134
	Lumens per Watt	110	103	114	106	102	108	103
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4W	Lumens	3,559	4,506	6,651	9,161	9,965	12,221	13,733
	Lumens per Watt	107	100	111	103	100	105	100
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3
T5R	Lumens	3,925	4,969	7,277	10,023	10,902	13,345	14,996
	Lumens per Watt	118	111	121	112	109	115	110
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5MQ	Lumens	3,833	4,853	6,763	9,315	10,132	12,755	14,334
	Lumens per Watt	115	108	113	104	101	110	105
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	3,981	5,040	7,448	10,259	11,159	13,700	15,396
	Lumens per Watt	119	112	124	115	111	118	113
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,624	3,322	4,931	6,792	7,388	9,028	10,146
	Lumens per Watt	79	74	82	76	74	78	74
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
T2U-HSS	Lumens	2,452	3,105	4,610	6,350	6,907	8,481	9,531
	Lumens per Watt	73	69	77	71	69	73	70
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T3-HSS	Lumens	2,524	3,195	4,804	6,617	7,198	8,810	9,900
	Lumens per Watt	76	71	80	74	72	76	72
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,532	3,206	4,789	6,596	7,175	8,796	9,884
	Lumens per Watt	76	71	80	74	72	76	72
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

SA (Discrete) Optics - 2 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	33	44	61	89	100	116	137
Current @ 120V	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 277V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 347V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 480V	0.07	0.09	0.13	0.19	0.21	0.24	0.29

70 CRI, 4000K								
T1	Lumens	4,175	5,286	7,788	10,726	11,667	14,298	16,068
	Lumens per Watt	127	120	128	121	117	123	117
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4
T2R	Lumens	4,137	5,238	7,686	10,586	11,515	14,050	15,789
	Lumens per Watt	125	119	126	119	115	121	115
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2U	Lumens	4,091	5,180	7,653	10,540	11,465	14,021	15,756
	Lumens per Watt	124	118	125	118	115	121	115
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	4,163	5,271	7,694	10,598	11,528	14,182	15,937
	Lumens per Watt	126	120	126	119	115	122	116
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4W	Lumens	4,053	5,132	7,509	10,342	11,250	13,890	15,609
	Lumens per Watt	123	117	123	116	113	120	114
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T5R	Lumens	4,451	5,635	8,243	11,354	12,350	15,260	17,149
	Lumens per Watt	135	128	135	128	124	132	125
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
5MQ	Lumens	4,180	5,292	8,209	11,307	12,300	14,852	16,690
	Lumens per Watt	127	120	135	127	123	128	122
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G2	B4-U0-G2
5WQ	Lumens	4,510	5,710	8,446	11,634	12,655	15,144	17,018
	Lumens per Watt	137	130	138	131	127	131	124
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,999	3,797	5,465	7,527	8,187	10,028	11,269
	Lumens per Watt	91	86	90	85	82	86	82
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2
T2U-HSS	Lumens	2,795	3,539	5,119	7,050	7,669	9,314	10,467
	Lumens per Watt	85	80	84	79	77	80	76
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T3-HSS	Lumens	2,947	3,732	5,372	7,399	8,048	9,794	11,007
	Lumens per Watt	89	85	88	83	80	84	80
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,892	3,662	5,363	7,387	8,035	9,897	11,122
	Lumens per Watt	88	83	88	83	80	85	81
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

SA (Discrete) Optics - 4 Uprights

Nominal Power (Watts)	30	40	60	90	100	120	140
Actual Wattage	33	44	61	89	100	116	137
Wattage Label	33	44	61	89	100	116	137
Current @ 120V	0.28	0.37	0.51	0.74	0.83	0.97	1.14
Current @ 277V	0.12	0.16	0.22	0.32	0.36	0.42	0.49
Current @ 347V	0.10	0.13	0.18	0.26	0.29	0.33	0.39
Current @ 480V	0.07	0.09	0.13	0.19	0.21	0.24	0.29

70 CRI, 4000K								
T1	Lumens	3,904	4,943	7,473	10,292	11,196	13,715	15,413
	Lumens per Watt	118	112	123	116	112	118	113
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2R	Lumens	3,892	4,927	7,274	10,019	10,898	13,379	15,035
	Lumens per Watt	118	112	119	113	109	115	110
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T2U	Lumens	3,870	4,900	7,258	9,997	10,874	13,336	14,987
	Lumens per Watt	117	111	119	112	109	115	109
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,892	4,928	7,274	10,019	10,898	13,380	15,036
	Lumens per Watt	118	112	119	113	109	115	110
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4W	Lumens	3,786	4,794	7,076	9,746	10,601	13,001	14,610
	Lumens per Watt	115	109	116	110	106	112	107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T5R	Lumens	4,175	5,286	7,741	10,662	11,598	14,196	15,954
	Lumens per Watt	127	120	127	120	116	122	116
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
5MQ	Lumens	4,078	5,163	7,195	9,909	10,779	13,569	15,249
	Lumens per Watt	124	117	118	111	108	117	111
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
5WQ	Lumens	4,235	5,362	7,924	10,914	11,872	14,575	16,379
	Lumens per Watt	128	122	130	123	119	126	120
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
T2R-HSS	Lumens	2,791	3,534	5,246	7,225	7,860	9,605	10,793
	Lumens per Watt	85	80	86	81	79	83	79
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
T2U-HSS	Lumens	2,609	3,303	4,905	6,755	7,348	9,022	10,139
	Lumens per Watt	79	75	80	76	73	78	74
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2
T3-HSS	Lumens	2,685	3,399	5,111	7,039	7,657	9,372	10,532
	Lumens per Watt	81	77	84	79	77	81	77
	BUG Rating	B0-U0-G1	B0-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T4W-HSS	Lumens	2,693	3,410	5,095	7,018	7,634	9,357	10,515
	Lumens per Watt	82	78	84	79	76	81	77
	BUG Rating	B0-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2

Energy Performance Data

Nominal Power (Watts)	30	40	50	60	80	100	130	150	170
Actual Wattage	30	42	50	61	79	104	129	152	168
Wattage Label	30	42	50	61	79	104	129	152	168
Current @ 120V	0.25	0.35	0.42	0.51	0.66	0.87	1.08	1.26	1.40
Current @ 277V	0.11	0.15	0.18	0.22	0.28	0.38	0.47	0.55	0.61
Current @ 347V	0.09	0.12	0.15	0.18	0.23	0.30	0.37	0.44	0.49
Current @ 480V	0.06	0.09	0.11	0.13	0.16	0.22	0.27	0.32	0.35

VA (Visual Comfort) Optics - 2 Uprights

70 CRI, 2700K										
CQ (Type V Concentrated)	Lumens	2,890	3,937	4,675	5,553	7,004	9,121	10,974	12,785	14,063
	Lumens per Watt	96	94	93	91	89	88	85	84	84
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2
MQ (Type V Medium)	Lumens	3,010	4,101	4,870	5,785	7,295	9,501	11,581	13,493	14,841
	Lumens per Watt	100	98	97	95	92	91	89	89	88
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3
WQ (Type V Wide)	Lumens	2,948	4,016	4,769	5,665	7,145	9,304	11,475	13,369	14,705
	Lumens per Watt	98	96	95	93	91	89	89	88	87
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	2,782	3,738	4,391	5,147	6,349	7,756	10,271	--	--
	Lumens per Watt	92	89	87	84	80	75	79	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B2-U0-G3	--	--

VA (Visual Comfort) Optics - 4 Uprights

70 CRI, 2700K										
CQ (Type V Concentrated)	Lumens	2,721	3,708	4,324	5,136	6,477	8,435	10,122	11,792	12,971
	Lumens per Watt	90	89	86	84	82	81	78	78	77
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
MQ (Type V Medium)	Lumens	2,781	3,789	4,500	5,345	6,741	8,778	10,686	12,450	13,695
	Lumens per Watt	92	91	89	88	85	84	83	82	81
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G3
WQ (Type V Wide)	Lumens	2,672	3,641	4,403	5,230	6,596	8,590	10,655	12,413	13,654
	Lumens per Watt	88	87	87	86	84	83	82	82	81
	BUG Rating	B1-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	2,571	3,455	4,058	4,756	5,867	7,168	9,466	--	--
	Lumens per Watt	85	83	81	78	74	69	73	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B2-U0-G3	--	--

Energy Performance Data

Nominal Power (Watts)	30	40	50	60	80	100	130	150	170
Actual Wattage	30	42	50	61	79	104	129	152	168
Wattage Label	30	42	50	61	79	104	129	152	168
Current @ 120V	0.25	0.35	0.42	0.51	0.66	0.87	1.08	1.26	1.40
Current @ 277V	0.11	0.15	0.18	0.22	0.28	0.38	0.47	0.55	0.61
Current @ 347V	0.09	0.12	0.15	0.18	0.23	0.30	0.37	0.44	0.49
Current @ 480V	0.06	0.09	0.11	0.13	0.16	0.22	0.27	0.32	0.35

VA (Visual Comfort) Optics - 2 Uprights

70 CRI, 3000K										
CQ (Type V Concentrated)	Lumens	2,964	4,038	4,795	5,696	7,183	9,355	12,373	14,415	15,856
	Lumens per Watt	98	97	95	93	91	90	96	95	94
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2
MQ (Type V Medium)	Lumens	3,087	4,206	4,995	5,933	7,483	9,744	13,058	15,213	16,734
	Lumens per Watt	102	101	99	97	95	94	101	100	99
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WQ (Type V Wide)	Lumens	3,023	4,119	4,892	5,810	7,328	9,543	12,938	15,074	16,580
	Lumens per Watt	100	99	97	95	93	92	100	99	98
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	2,854	3,834	4,504	5,279	6,512	7,955	11,581	--	--
	Lumens per Watt	94	92	89	87	83	76	89	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B2-U0-G3	--	--

VA (Visual Comfort) Optics - 4 Uprights

70 CRI, 3000K										
CQ (Type V Concentrated)	Lumens	2,741	3,734	4,435	5,267	6,643	8,651	11,413	13,296	14,626
	Lumens per Watt	91	89	88	86	84	83	88	88	87
	BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2
MQ (Type V Medium)	Lumens	2,852	3,887	4,615	5,482	6,914	9,004	12,049	14,038	15,441
	Lumens per Watt	94	93	92	90	88	87	93	93	92
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3
WQ (Type V Wide)	Lumens	2,791	3,803	4,516	5,364	6,765	8,810	12,014	13,996	15,396
	Lumens per Watt	92	91	90	88	86	85	93	92	91
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	2,637	3,543	4,162	4,878	6,017	7,351	10,673	--	--
	Lumens per Watt	87	85	83	80	76	71	82	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B2-U0-G3	--	--

Energy Performance Data

Nominal Power (Watts)	30	40	50	60	80	100	130	150	170
Actual Wattage	30	42	50	61	79	104	129	152	168
Wattage Label	30	42	50	61	79	104	129	152	168
Current @ 120V	0.25	0.35	0.42	0.51	0.66	0.87	1.08	1.26	1.40
Current @ 277V	0.11	0.15	0.18	0.22	0.28	0.38	0.47	0.55	0.61
Current @ 347V	0.09	0.12	0.15	0.18	0.23	0.30	0.37	0.44	0.49
Current @ 480V	0.06	0.09	0.11	0.13	0.16	0.22	0.27	0.32	0.35

VA (Visual Comfort) Optics - 2 Uprights

70 CRI, 4000K										
CQ (Type V Concentrated)	Lumens	3,135	4,272	5,073	6,026	7,600	9,897	13,079	15,238	16,762
	Lumens per Watt	104	102	101	99	96	95	101	100	100
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
MQ (Type V Medium)	Lumens	3,266	4,450	5,285	6,277	7,916	10,310	13,803	16,082	17,689
	Lumens per Watt	108	106	105	103	100	99	107	106	105
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WQ (Type V Wide)	Lumens	3,199	4,358	5,175	6,147	7,753	10,096	13,677	15,934	17,527
	Lumens per Watt	106	104	103	101	98	97	106	105	104
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	3,019	4,057	4,765	5,585	6,889	8,417	12,242	--	--
	Lumens per Watt	100	97	95	92	87	81	95	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B2-U0-G3	--	--

VA (Visual Comfort) Optics - 4 Uprights

70 CRI, 4000K										
CQ (Type V Concentrated)	Lumens	2,953	4,024	4,692	5,573	7,028	9,153	12,064	14,055	15,460
	Lumens per Watt	98	96	93	91	89	88	93	93	92
	BUG Rating	B2-U0-G1	B3-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2
MQ (Type V Medium)	Lumens	3,018	4,112	4,883	5,800	7,315	9,526	12,737	14,839	16,323
	Lumens per Watt	100	98	97	95	93	92	98	98	97
	BUG Rating	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3
WQ (Type V Wide)	Lumens	2,900	3,951	4,778	5,675	7,158	9,321	12,699	14,795	16,274
	Lumens per Watt	96	95	95	93	91	90	98	98	97
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3
WT4 (Type IV)	Lumens	2,790	3,749	4,404	5,161	6,366	7,778	11,283	--	--
	Lumens per Watt	92	90	87	85	81	75	87	--	--
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B2-U0-G3	--	--

Lumen Maintenance

SA Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours*	L70*
25°C	98.1%	96.3%	95.5%	92.7%	>102,000
40°C	98.0%	96.0%	95.2%	92.2%	>102,000
50°C	97.9%	95.7%	94.9%	91.6%	>102,000

Note: * Calculations provided in accordance with IES TM-21-11 using the configuration resulting in highest LED temperature.

VA Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours*	L70*
25°C	97.5%	96.3%	95.8%	93.9%	>78000
40°C	97.2%	95.9%	95.3%	93.2%	>78000
50°C	97.2%	95.8%	95.3%	93.1%	>78000

Note: * Calculations provided in accordance with IES TM-21-11 using the configuration resulting in highest LED temperature.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

FADC Settings

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: +/-5% typical value

LED Color Multipliers

SA	CCT				
	2200	2700	3000	4000	5000
CRI	Lumen Multiplier*				
70	0.860	0.923	0.943	1.000	0.987
80	-	-	0.873	0.949	-

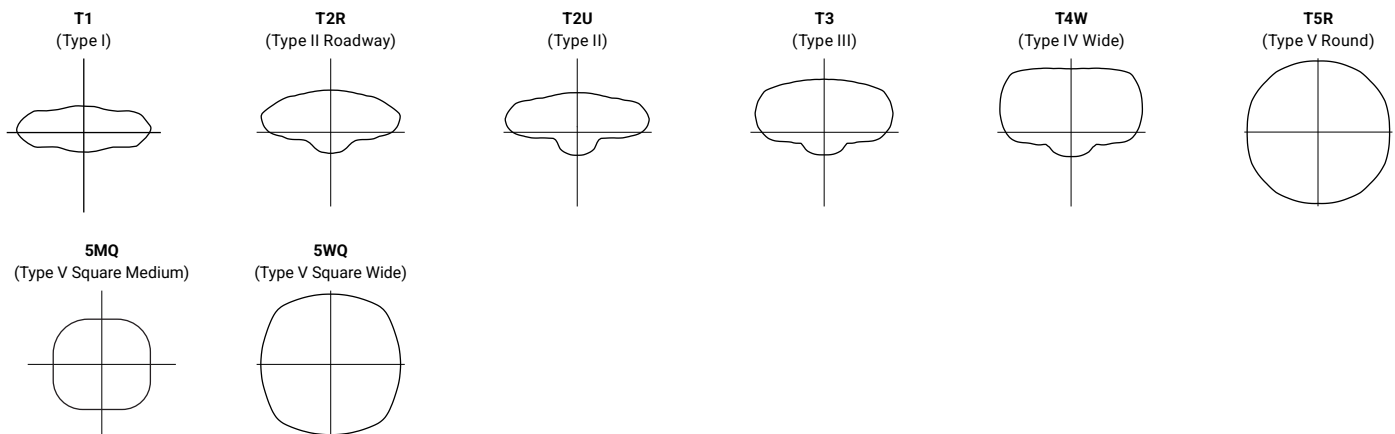
Note: * Estimates, refer to IES files for accuracy.

VA	CCT				
	2200	2700	3000	4000	5000
CRI	Lumen Multiplier*				
70	-	0.839	0.946	1.000	1.031
80	-	-	0.790	-	-

Note: * Estimates, refer to IES files for accuracy.

Optical Distributions

Discrete LED Arrays (SA)



Wavestream Visual Comfort (VA)

