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PARKING
AREA & SITE

Parking Area & Site Lighting

Featuring HPG, SPG, TekDek, TES and MOS

Comprehensive overview for incorporating
Kenall luminaires seamlessly with
Wattstopper PLUS lighting controls



2 | *Parking, Area & Site Lighting*

Project: Houston State University's
College of Osteopathic Medicine
Location: Conroe, TX
Specifier: Kirksey Architecture



Design effective lighting and controls for parking, area, and site projects with clear diagrams that demonstrate layout and control integration using Kenall luminaires and Wattstopper controls.

Project: Foothill Transit Park and Ride
Location: Pomona, CA
Specifier: TJK Consulting Engineers, Inc



Products & Features



- Textured tertiary lens for glare reduction and up-light feature to eliminate “cave-effect”
- Outputs ranging from **3,086 to 12,943 lm**
- 10 year limited product warranty



- Unique hexagonal light guide with edge-lit LED light engine provides three distribution options: Type V, Rectangular and Drive Lane
- Lightweight construction (7 lbs) for ease of installation
- Nominal output range of **4,000 to 12,000 lm**



- Diffused LED source reduces glare while maintaining high optical efficiency
- Standard occupancy sensor
- Wet Location Listed and IP65 rated
- **2,509 – 4,700** lumen configurations
- Vandal-resistant for high abuse areas
- Designed to meet NFPA101 standards



- Textured tertiary lens for glare reduction and up-light feature to eliminate “cave-effect”
- Outputs ranging from **4,080 to 14,866 lm**

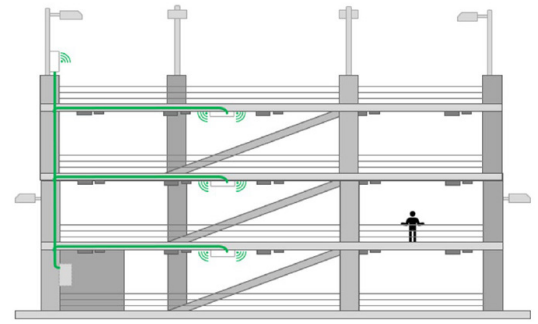


- Surface – ceiling or wall mount;
8”x24” (20.32 cm x 60.96 cm),
8”x36” (20.32 cm x 91.44 cm),
8”x48” (20.32 cm x 122 cm)
- Hinged door for ease of maintenance

Wireless System: Smart and Simple

Wattstopper PLUS

The FSP-600 series by Wattstopper PLUS is an integrated, luminaire level lighting controller and sensor for indoor/outdoor lighting applications that require networked wireless control. The FSP-600 series is designed to integrate directly into exterior, high bay, parking garage, and general site lighting solutions. Each FSP-600 supports 0-10v continuous dimming, occupancy sensing and daylight control.

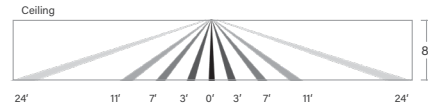
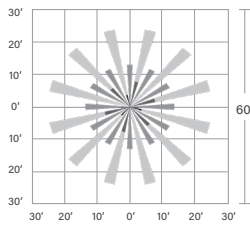


Ideal Wireless Manager Locations in Parking Structure

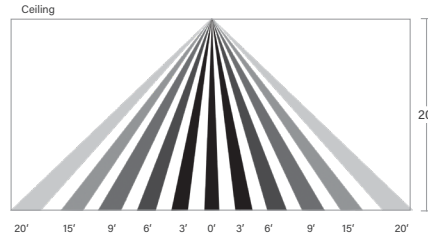
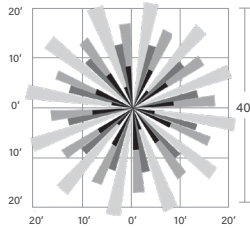


Coverage Patterns

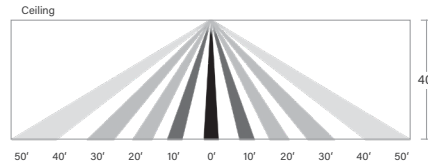
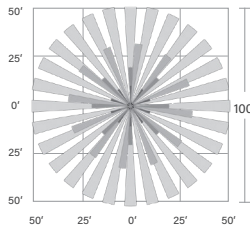
FSP-L2 top and side coverage patterns



FSP-L3 top and side coverage patterns



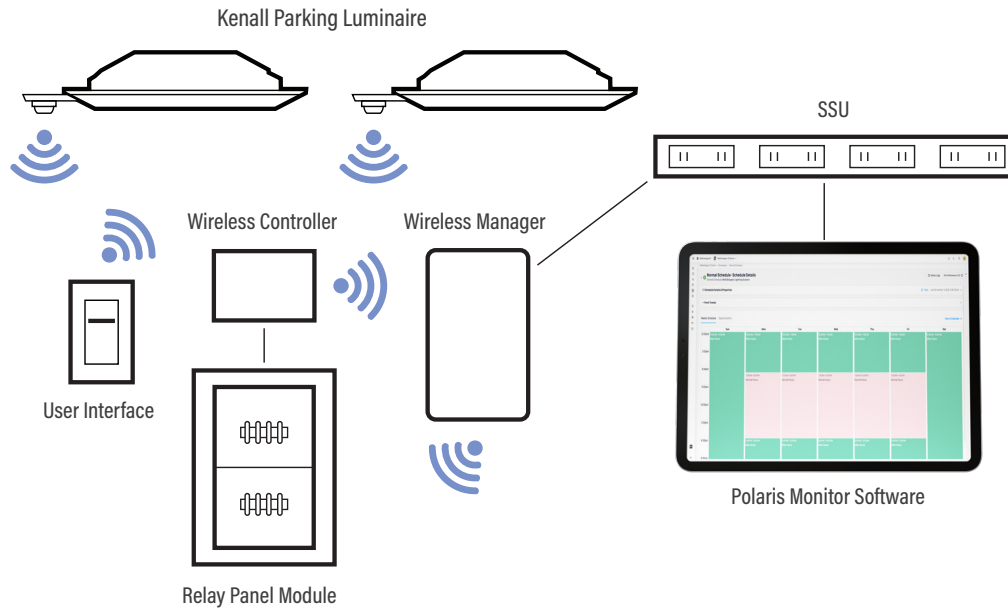
FSP-L7 top and side coverage patterns



FSP-600 series by Wattstopper PLUS Features and Benefits

- High- and low-mounted solution designed for industrial & outdoor environments
- All-in-one control with 0-10V continuous dimming, occupancy and daylighting
- Load and zone-based control to meet advanced energy codes
- Multiple lens options to meet a variety of mounting heights and coverage needed
- Programmable parameters include scheduling, grouping, time delay, high/low/off, time clock, and many more.
- Seamless integration into the Wattstopper PLUS lighting control platform
- Out-of-the-box functionality
- Data insights via Polaris Monitor software
- Included in Wattstopper's OEM Partner Program
- End-of-line testing features make install easy and 'touchless' on the factory floor

Wattstopper PLUS Architecture



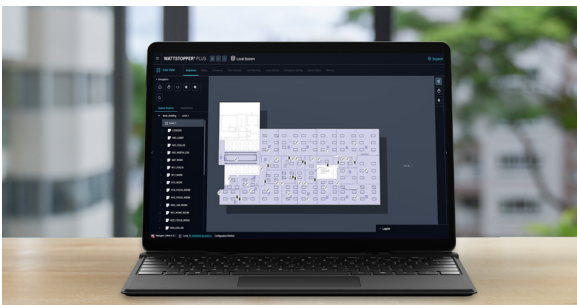
Initial Power Up and Other Settings

Factory default setting is 100% light output until the FSP-600 is commissioned into the Wattstopper PLUS network.

The FSP-600 series commissioning process is similar to existing PLUS devices, Polaris config software supports the following capabilities:

- Control loads individually or as a group
- Event scheduling using astronomical or time of day
- Occupancy sensing to turn loads on or off and dim to a level using ramp up or fade down timers.

Polaris software supports the ability to monitor power and energy calculations based on schedules, occupancy, and load usage.



Bringing Visibility & Control to Wattstopper PLUS

Polaris software is at the core of Wattstopper PLUS — empowering facility managers and enabling the Wattstopper Experience. The advanced Polaris Monitor software is intuitive and easy to use thanks to new workflows, multi-device access, and other enhancements.

SENSCAPE™

SPG18 SERIES

Product Features:

- Textured tertiary lens for glare reduction and up-light feature to eliminate "cave-effect"
- Outputs ranging from 3,086 lm to 12,943 lm
- 10 Year limited product warranty



Low Profile Luminaire Delivering Low Glare & High Lumens, Ideal for Covered Parking Decks, Canopies & Low-Bay Applications

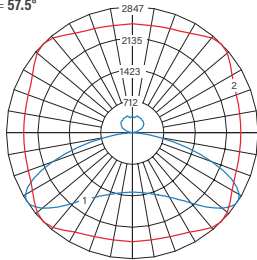
The SenScape SPG18 is the most recent addition to our parking series. The SPG18 offers low glare and high efficacy in a low profile design aesthetic. Ideal for covered parking applications, the fixture boasts 10% uplight: a highly desirable feature in many parking garage applications.

Optic			Initial Delivered Lumens, By Lamp Color [Downlight / Uplight] (lm)						Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (hrs)	LEL/CEL Delivered Output in Battery Mode (lm)
Distribution	Uplight	Lens Type	57K7	50K7	40K7	40K8	35K8	30K8				
SU (12%)	TA	30L	4,366	4,366	4,366	4,065	4,065	3,779	109 - 126	35	125,000	1,090
		45L	6,448	6,448	6,448	6,003	6,003	5,581	01 - 1165	5	120,000	
		70L8	,744	8,744	8,744	,141	8,141	,568	98 - 1137	81	00,000	
		90L	11,1011	1,1011	1,1011	0,335	10,335	9,608	94 - 1091	02	80,000	N/A
		104L	11,6151	1,6151	1,6151	0,8141	0,8141	0,053	89 - 103	113	100,000	
		122L	12,948	12,948	12,948	12,055	12,055	11,207	81 - 931	39	80,000	
	TP	30L	4,444	4,444	4,444	4,1384	,138	3,847	111 - 129	35	125,000	1,110
		45L	6,5636	,563	6,5636	,110	6,1105	,680	102 - 1185	5	120,000	
		70L8	,901	8,901	8,901	8,287	8,287	7,704	99 - 1157	81	00,000	
		90L	11,299	11,299	11,299	10,520	10,520	9,780	96 - 111	102	80,000	N/A
		104L	11,8231	1,823	11,823	11,008	11,008	10,233	91 - 1051	13	100,000	
		122L	13,179	13,179	13,179	12,271	12,271	1,407	82 - 95	139	80,000	

Standard Uplight

Model: SPG18-DTS-MW-5S-SU-TP-90L-40K7-DCC-DV

Max Candela = 2847
Horizontal Angle = 45°
Vertical Angle = 57.5°

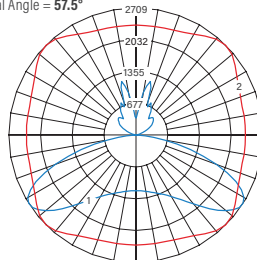


1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (57.5) (Through Max. Cd.)

Enhanced Uplight

Model: SPG18-DTS-MW-5S-EU-TP-90L-40K7-DCC-DV

Max Candela = 2709
Horizontal Angle = 45°
Vertical Angle = 57.5°

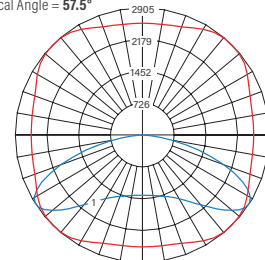


1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (57.5) (Through Max. Cd.)

Downlight

Model: SPG18-DTS-MW-5S-D-TP-90L-40K7-DCC-DV

Max Candela = 2905
Horizontal Angle = 45°
Vertical Angle = 57.5°



1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (57.5) (Through Max. Cd.)

LUMEN AMBIENT TEMPERATURE (LAT) FACTORS

Avg. Ambient Temperature	0 °C1	5 °C2	0°C2	5°C3	0°C3	5°C4	0°C
Lumen Output Factor	1.03	1.02	1.01	10	.990	.980	.97

For additional photometry, go to www.kenall.com

HELOS™

Luminaires for Parking Garages

HPG14 SERIES

PRODUCT FEATURES

- Unique hexagonal light guide with edge-lit LED light engine provides three distribution options - Type V, Rectangular and Drive Lane
- Lightweight construction (7 lbs) for ease of installation
- Nominal output range of 4,000 to 12,000 lm

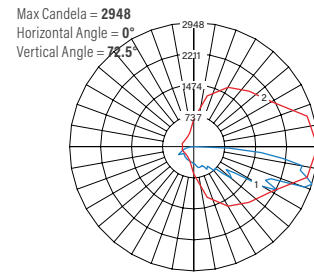
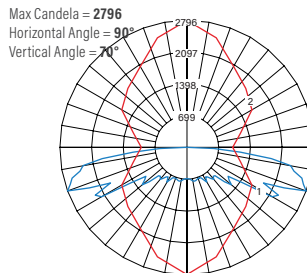
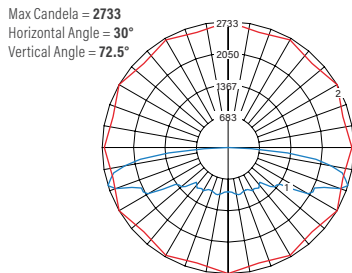


Kenall's Helos™ parking luminaire is designed to make your lighting, and its installation into your parking structure, easier. This new edge-lit design features a flat illuminance plane that provides superior lighting performance regardless of mounting type.

At just 7 pounds, Helos weighs less than half of its closest competitor, making it economical to ship and easy to install. Best of all, Helos has been designed to integrate seamlessly with Wattstopper wireless controls.

And that's just a few of the many ways Helos makes your next parking luminaire choice an easy one.

Optic		Lamp Power	Initial Delivered Lumens, By Lamp Color (lm)				Efficacy (lm/W)	Input Power (W)	TM-21 Reported L70 (hrs)	Delivered Output in LEL Battery Mode (lm)
Distribution	Lens Type		30K8	35K8	40K8	50K8				
5W	CP	35L	5,083	5,257	5,380	5,4141	27 - 1354	0	>102,000	1,350
		40L	5,741	5,938	6,076	6,116	126 - 1354	5		
		50L	7,004	7,245	7,4147	,462	125 - 1335	6		
		70L	9,287	9,797	10,025	10,090	118 - 129	78		
		90L	11,559	11,652	11,923	12,000	119 - 123	97		
RW	CP	35L	5,0155	,187	5,308	5,342	123 - 1314	1	>102,000	1,310
		40L	5,642	5,836	5,9716	,010	122 - 1304	6		
		50L	6,821	7,055	7,2197	,266	119 - 127	57		
DL	CP	30L	3,941	4,077	4,172	4,199	110 - 117	36	>102,000	1,170



— 1 - Vertical Plane Through Horizontal Angles (30 - 210) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (72.5) (Through Max. Cd.)

— 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

— 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (72.5) (Through Max. Cd.)

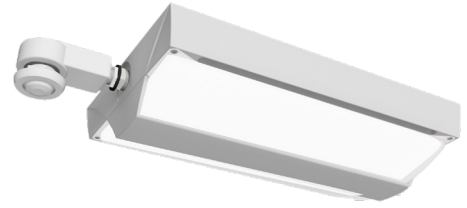
LUMEN AMBIENT TEMPERATURE (LAT) FACTORS

Avg. Ambient Temperature ¹	0°C ¹	5°C	20°C	25°C	30°C	35°C	40°C
Lumen Output Factor	1.03	1.02	1.01	10	.990	.980	.97

MILLENIUM OS™ MOS SERIES

PRODUCT FEATURES

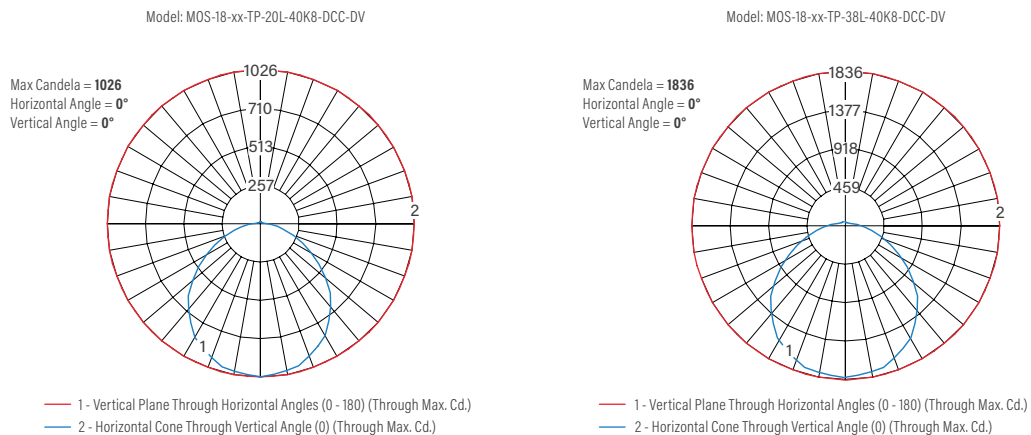
- Diffused LED source reduces glare while maintaining high optical efficiency
- Standard occupancy sensor
- Wet Location Listed and IP65 rated
- **2,509 - 4,700** lumen configurations
- Vandal resistant for high abuse areas
- Designed to meet NFPA101 standards



Dial up energy savings with the new Kenall **Millenium OS™** LED stairwell luminaire. The concealed high frequency Doppler sensor provides the flexibility to dim to 10% during non-occupied periods for increased energy savings. This vandal-resistant luminaire maintains optimal performance in both cold and ambient temperatures. Optimized for stairwells, this product is also suitable for any interior or exterior application. Offering Kenall's exclusive Peace of Mind Guarantee® AND a 10-year limited lifetime warranty, the MOS can be specified with confidence.

Lens Type	Initial Delivered Lumens, By Lamp Color (lm)						Input Power (W)	Estd. L70 LED Life (hrs)	Delivered Output in LEL Battery Mode (lm)
	Lamp Power	30K8	35K8	40K8	50K8	Efficacy (lm/W)			
TA	20L2	,527	2,6132	,585	2,589	103 - 1072	5	100,0001	,030
	38L4	,522	4,6764	,626	4,6339	8 - 1024	68	0,0009	80
TP	20L2	,5512	,638	2,6102	,614	104 - 1082	5	100,0001	,040
	38L4	,565	4,7204	,670	4,6779	9 - 1024	68	0,0009	90

Battery Mode Delivered Lumen Output is the measured luminaire output after 90 minutes of battery operation (when ordered with LEL Option). Subject to change without notice. Visit www.kenall.com for IES files and additional information.



For additional photometry, go to www.kenall.com

TEKDEK™ TD 17 SERIES

PRODUCT FEATURES

- Textured tertiary lens for glare reduction and up-light feature to eliminate "cave-effect"
- Outputs ranging from 4,080 lm to 14,866 lm

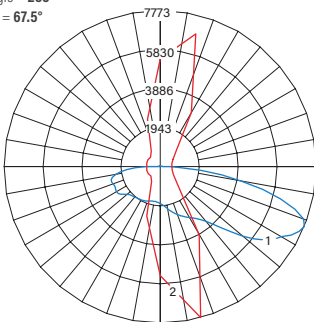


A signature Kenall parking garage luminaire, the TekDek™ series has been specifically designed to reduce hazardous glare and light trespass, while providing desirable vertical illumination, visual comfort and uplight. TekDek's powerful efficacy, when paired with Wattstopper wireless controls, provides facility owners a significant return on investment. Also ideal for retrofit installations, TekDek provides a highly effective replacement option for less energy efficient lighting fixtures.

Lamp Code	Initial Delivered Lumens, By Optic Type (lm)						Efficacy (lm/W)	Input Power (W)	Estd. L ₇₀ LED Life (Hrs)
	2-TA	2-TP	5S-TA	5S-TP	5N-TA	5N-TP			
30L-57K7	4,843	4,8145	,349	5,317	5,319	5,288	134 - 1493	61	75,000
30L-50K7	4,843	4,8145	,349	5,317	5,319	5,288	134 - 1493	61	75,000
30L-40K7	4,843	4,8145	,349	5,317	5,319	5,288	134 - 1493	61	75,000
30L-40K8	4,370	4,344	4,827	4,798	4,800	4,772	121 - 1343	61	75,000
30L-35K8	4,370	4,344	4,827	4,798	4,800	4,772	121 - 1343	61	75,000
30L-30K8	4,1044	,080	4,510	4,483	4,508	4,482	113 - 125	36	175,000
47L-57K7	6,867	6,826	7,584	7,540	8,060	8,0121	29 - 1525	31	75,000
47L-50K7	6,867	6,826	7,584	7,540	8,060	8,0121	29 - 1525	31	75,000
47L-40K7	6,867	6,826	7,584	7,540	8,060	8,0121	29 - 1525	31	75,000
47L-40K8	6,1976	,160	6,845	6,804	7,274	7,231	116 - 137	531	75,000
47L-35K8	6,1976	,160	6,845	6,804	7,274	7,231	116 - 137	531	75,000
47L-30K8	5,820	5,786	6,395	6,3576	,831	6,791	109 - 1295	31	75,000

Model: TD17-sss-2-TA-vv-94L-40K7-DCC-DV

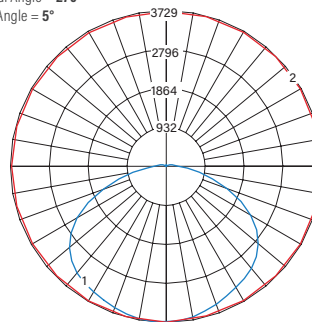
Max Candela = 7773
Horizontal Angle = 285°
Vertical Angle = 67.5°



— 1 - Vertical Plane Through Horizontal Angles (285 - 105) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

Model: TD17-sss-5N-TA-vv-94L-40K7-DCC-DV

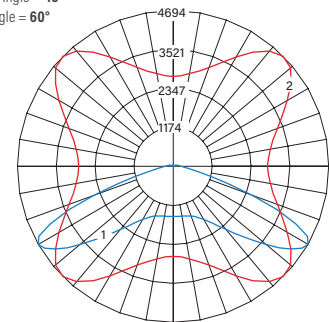
Max Candela = 3729
Horizontal Angle = 270°
Vertical Angle = 5°



— 1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

Model: TD17-sss-5S-TA-vv-94L-40K7-DCC-DV

Max Candela = 4694
Horizontal Angle = 45°
Vertical Angle = 60°



— 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
— 2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

For additional photometry, go to www.kenall.com

ENVIROSEAL™ TES5 SERIES

PRODUCT FEATURES

- Surface ceiling or wall mount – 5"×24" (12.70 cm × 60.96 cm), 5"×36" (12.70 cm × 91.44 cm), and 5"×48" (12.70 cm × 122 cm)
- » Hinged housing for ease of maintenance



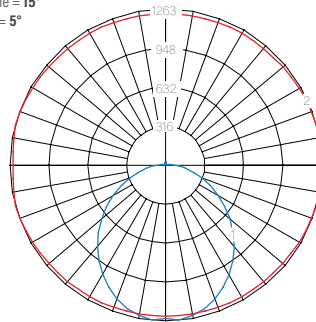
Ideal for parking facility, transit station, stairwell and platform applications, the EnviroSeal TES series is available for ceiling or wall installations. It's one-piece cold rolled or stainless steel housing provides the corrosion resistance so critical in exterior applications. Mount individually or in a continuous row for flexibility of installation. The luminaire also offers Kenall's signature Peace of Mind Guarantee against breakage for the normal service life of the fixture.

Lamp Type	Initial Delivered Lumens		Input Power (W)	Drive Current (mA)	Estd. L70 LED Life (Hrs)
	@ 25°C	Efficacy (lm/W)			
45L30K	4,4109	0	49	100	80,000
45L35K	4,546	93			
45L40K	4,701	96			
45L50K	4,825	98			

Displayed information above is for PP lens type. Info subject to change. Visit www.kenall.com for IES files and additional information.

Model: ES5-48-45L40K-DCC-DV-2H-PP

Max Candela = 1263
Horizontal Angle = 15°
Vertical Angle = 5°



- 1 - Vertical Plane Through Horizontal Angles (15 - 195) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

For additional photometry, go to www.kenall.com

RENALL[®]