



eW Graze Powercore Family

Linear exterior LED wall grazing luminaires with solid white light

eW Graze MX Powercore

eW Graze QLX Powercore

eW Graze QLX Powercore 5W

eW Graze EC Powercore

PHILIPS



eW Graze Powercore Family

Linear exterior LED wall grazing luminaires with solid white light

The eW Graze Powercore family extends the range and flexibility of the popular line of solid white light LED grazing luminaires from Philips Color Kinetics. Featuring Powercore technology, eW Graze Powercore luminaires process power directly from line voltage, eliminating the need for external power supplies. Luminaires are available in standard color temperatures of 2700 K, 3000 K, 3500 K, 4000 K, and 5500 K, with additional custom color temperatures available, ranging from 2200 K to 6500 K. Multiple luminaire lengths, beam angles, output levels, and power consumption levels support a wide range of façade or surface illumination applications. Low-profile housing, connected cabling, a universal power input range, and direct line-voltage operation make the luminaires easy to install and operate.

- Tailor light output to specific applications—Available in four standard lengths, with standard 9° x 9°, 10° x 60°, 15° x 30°, 30° x 60° and 60° x 30° beam angles.
- High-performance illumination and beam quality—eW Graze Powercore luminaires deliver up to 3,504 lumens of high-quality white light per foot. Superior beam quality offers striation-free saturation for several feet from luminaire placement with no visible light scalloping between luminaires.
- Integrates Powercore technology—Powercore technology rapidly, efficiently, and accurately controls power output to luminaires directly from line voltage over a single standard cable, dramatically simplifying installation and lowering total system cost.
- Versatile installation options—Convenient push-and-click connectors let you easily and rapidly install Leader Cables and Jumper Cables. Multiple cable lengths support a variety of layouts. Constant torque locking hinges offer simple and consistent position control from various angles. The low-profile aluminium housing accommodates placement within most architectural niches.
- Superior color consistency and accuracy—Optibin, an advanced binning algorithm, sets a new standard for the color consistency and uniformity of LED sources used in manufacturing.
- Universal power input range—Luminaires accept a universal power input range of 100 to 277 VAC for consistent installation anywhere in the world.
- “Cool lighting” functionality—eW Graze Powercore luminaires do not heat illuminated surfaces, discharge infrared radiation, or emit ultraviolet light.
- Dimming capability—Patented DIMand technology offers smooth dimming capability with selected commercially available reverse-phase ELV-type dimmers.

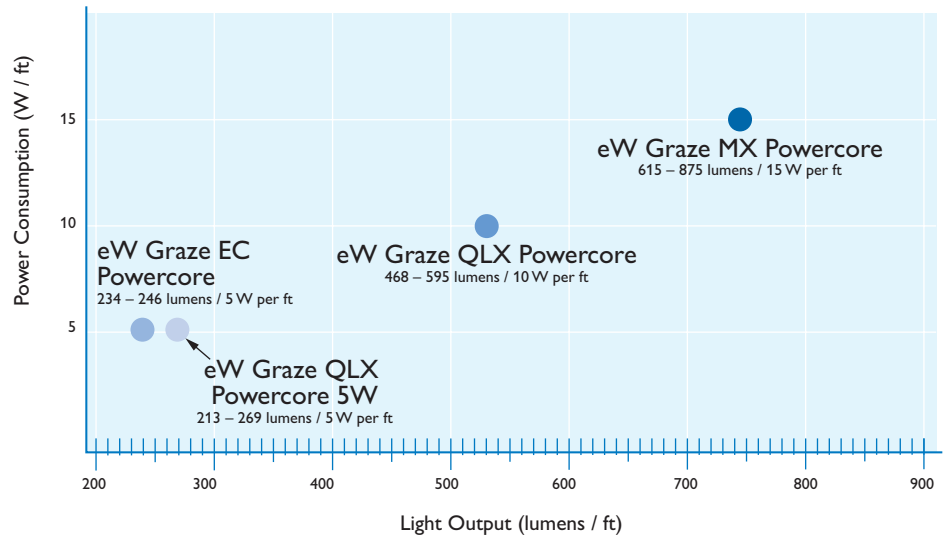
High performance + easy installation

With flexible mounting options, multiple luminaire length and beam angle options, integrated Powercore technology, and a discreet low-profile housing rated for use in outdoor locations, eW Graze Powercore offers high performance and simple installation.



Illuminate surfaces with the right level of light

The expanded range of eW Graze Powercore solid white light grazing luminaires offer four levels of performance at four levels of power consumption. A range of beam angles lets you select exactly the right light distribution and output for your application.



eW Graze MX Powercore

Features the most light output in our line of solid white light grazing luminaires—more than any previous version—for high-intensity multi-story façade and surface illumination.

eW Graze QLX Powercore

Consumes 33% less energy than eW Graze MX Powercore. Perfect for surface illumination applications calling for a balance of cost and performance.

eW Graze QLX Powercore 5W

Luminaires are factory-set to consume a maximum of 5 W per foot, to support ASHRAE standards, LEED green building certification, and other power-limited projects. Offers the same beam spread options as eW Graze MX Powercore and eW Graze QLX Powercore.

eW Graze EC Powercore

Wide beam angle (90° x 90°) produces a soft-edged, volume fill for exterior cove, niche, and architectural detail illumination.

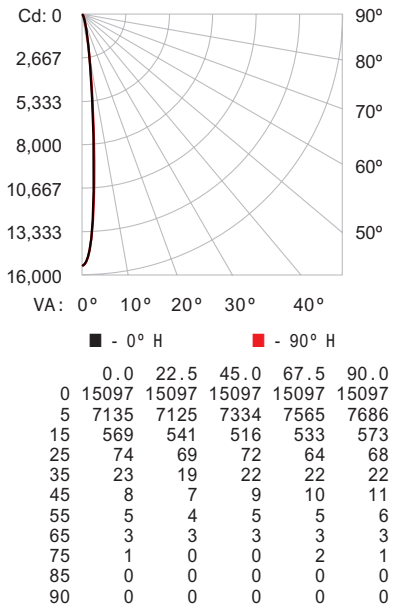
Photometrics/eW Graze MX Powercore, 2700 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

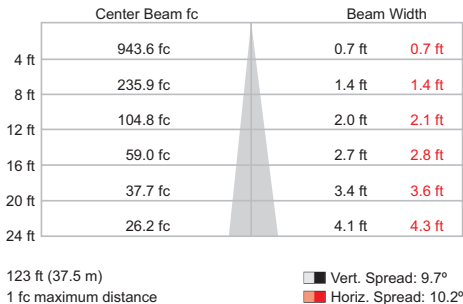
305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
735	49.3 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
RC	80	70	50	30	10	0						
RW	70	50	30	10	50	30	10	50	30	10	50	30
0	119119119119	116116116116	1111111111	106106106	102102102	100						
1	116114112111	113112110109	108107106	104104103	101100100	98						
2	113110107105	111108106104	105103102	102101100	100	99	98	96	95			
3	110107104101	109105103100	103101	99	101	99	97	99	97	96	95	
4	108104101	107103100	101	98	97	99	97	95	97	96	94	93
5	106101	98	96	105100	98	95	99	96	95	98	94	93
6	104	99	96	94	103	99	96	93	97	95	93	92
7	102	97	94	92	101	97	94	92	96	93	91	90
8	101	96	93	91	100	95	92	90	94	92	90	89
9	99	94	91	89	98	94	91	89	93	91	89	88
10	98	93	90	88	97	93	90	88	92	89	88	87

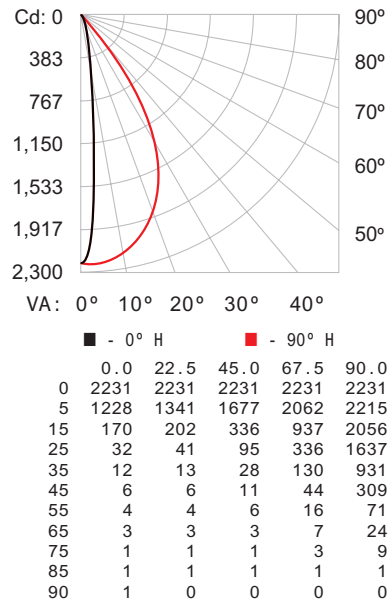
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	705	96.0
0- 40	719	97.9
0- 60	731	99.5
0- 90	735	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	735	100.0

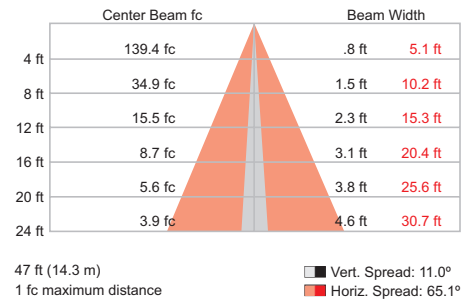
305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
645	47.1 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
RC	80	70	50	30	10	0						
RW	70	50	30	10	50	30	10	50	30	10	50	30
0	119119119119	116116116116	1111111111	106106106	102102102	100						
1	114111109107	111109107105	105103102	101100	98	97	96	94				
2	108104100	97	106102	99	96	94	96	94	92	93	91	90
3	103	97	93	89	102	96	92	88	93	90	87	83
4	99	92	87	83	97	91	86	82	88	84	81	78
5	94	87	81	77	93	86	81	77	84	80	77	73
6	90	82	76	73	89	81	76	72	80	75	72	69
7	86	78	72	68	85	77	72	68	76	71	68	66
8	83	74	69	65	82	74	68	65	73	68	65	63
9	80	71	65	62	79	70	65	62	69	64	61	60
10	77	68	62	59	76	67	62	59	67	62	59	57

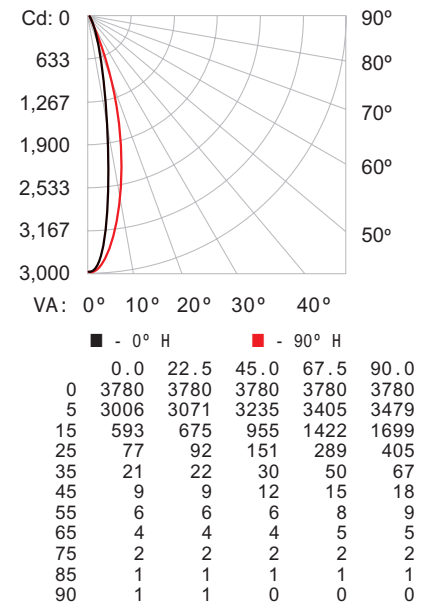
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	483	74.8
0- 40	578	89.7
0- 60	635	98.5
0- 90	645	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	645	100.0

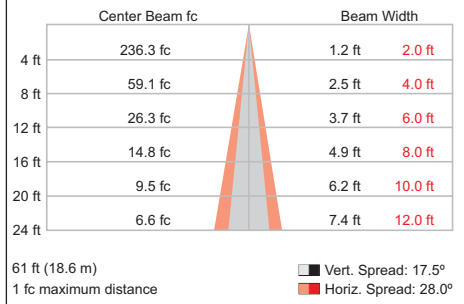
305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
710	46.4 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
RC	80	70	50	30	10	0						
RW	70	50	30	10	50	30	10	50	30	10	50	30
0	119119119119	116116116116	1111111111	106106106	102102102	100						
1	115113111109	11211109107	107105104	103102101	100	99	98	96				
2	111107104102	109106103101	103100	98	100	98	96	97	96	94	93	
3	107103	99	96	106101	98	95	99	96	94	92	94	91
4	104	99	95	92	102	98	94	91	96	92	90	88
5	101	95	91	88	100	94	90	87	93	89	87	84
6	98	92	88	85	97	91	87	84	90	86	83	82
7	95	89	85	82	94	88	84	82	87	84	81	79
8	93	86	82	79	92	86	82	79	85	81	78	77
9	90	84	80	77	90	83	79	77	83	79	76	75
10	88	82	78	75	87	81	77	75	80	77	74	73

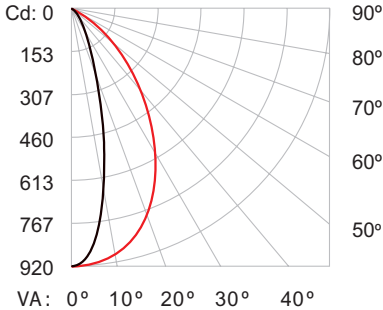
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	662	93.2
0- 40	687	96.7
0- 60	703	99.0
0- 90	710	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	710	100.0

305 mm (1 ft), 30° x 60° beam angle

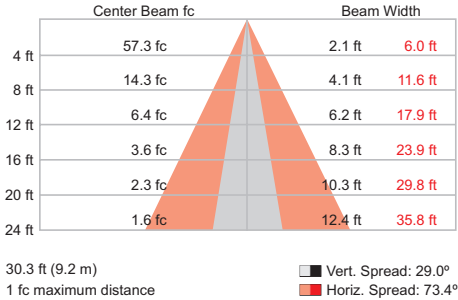
Lumens	Efficacy
615	45.9 lm / W

Polar Candela Distribution



0	0.0	22.5	45.0	67.5	90.0
5	917	917	917	917	917
15	851	858	878	900	908
25	435	475	598	758	838
35	123	151	268	519	703
45	35	41	85	271	498
55	17	18	28	105	273
65	12	11	13	35	109
75	7	7	7	12	34
85	3	3	3	4	9
90	1	1	1	1	1

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																					
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0		
0	11919119119119				116116116116				1111111111				106106106			102102102			100		
1	113110107105				11108106103				104102100				100	99	97	97	95	94	93		
2	107102	97	94		105100	96	93		97	94	91		94	91	89		91	89	87		
3	101	94	89	85		93	88	84		90	86	83		88	84	82		86	80		
4	96	88	82	78		84	81	77		85	80	76		82	78	75		81	74		
5	91	82	76	71		80	75	71		79	74	70		78	73	70		75	68		
6	86	77	71	66		75	70	66		75	69	66		73	69	65		72	65		
7	82	72	66	62		71	66	62		70	65	61		69	64	61		68	64		
8	78	68	62	58		77	68	62		66	61	57		65	61	57		64	60		
9	74	64	58	54		73	64	58		63	58	54		62	57	54		61	57		
10	71	61	55	51		70	61	55		60	55	51		59	54	51		58	54		

Zonal Lumen

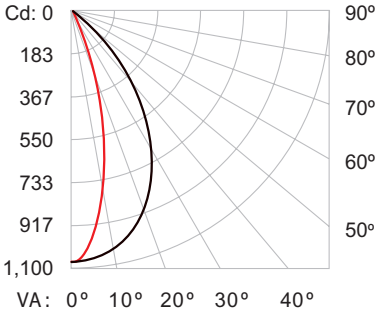
ZONE	LUMENS	%FIXT
0- 30	407	66.2
0- 40	512	83.2
0- 60	597	97.2
0- 90	615	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	615	100.0

For lux multiply fc by 10.7

305 mm (1 ft), 60° x 30° beam angle

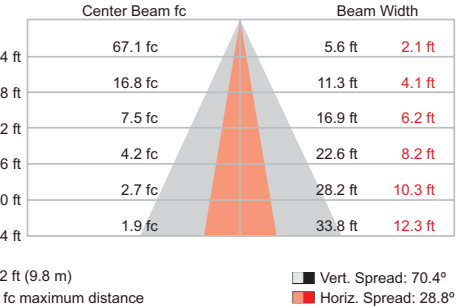
Lumens	Efficacy
694	48.2 lm / W

Polar Candela Distribution



0	0.0	22.5	45.0	67.5	90.0
5	1073	1073	1073	1073	1073
15	1065	1051	1024	1001	991
25	982	884	695	554	506
35	811	594	308	176	143
45	542	293	96	46	37
55	259	106	31	19	17
65	87	35	14	11	11
75	24	13	8	7	7
85	6	4	3	3	3
90	3	2	1	1	1

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																					
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	119119119119				116116116116				1111111111			106106106			102102102			100			
1	113110108105				11108106103				104102100			100	99	97	95	94					
2	107102	98	94		105107	97	93		97	94	91	94	92	89	87	85	83	81			
3	102	95	90	86	100	94	89	85	91	87	84	89	85	82	81	80	79	78			
4	96	89	83	79	95	87	82	78	85	81	77	83	79	76	81	78	75	74			
5	92	83	77	73	90	82	76	72	80	75	72	79	74	71	77	73	70	69			
6	87	78	72	67	85	77	71	67	76	72	67	73	69	66	72	68	65	64			
7	83	73	67	63	81	73	67	63	71	66	62	70	66	62	69	65	62	60			
8	79	69	63	59	78	69	63	59	68	62	59	67	62	58	66	61	58	57			
9	75	66	60	56	74	65	59	56	64	59	55	63	59	55	62	58	55	54			
10	72	62	56	53	71	62	56	52	61	56	52	60	55	52	59	55	52	51			

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	475	68.5
0- 40	592	85.3
0- 60	676	97.5
0- 90	693	99.9
90-120	0	0.1
90-130	0	0.1
90-150	0	0.1
90-180	0	0.1
0-180	694	100.0

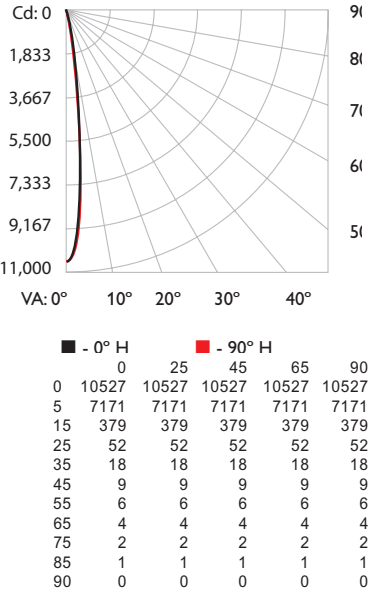
Photometrics/eW Graze MX Powercore, 3000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

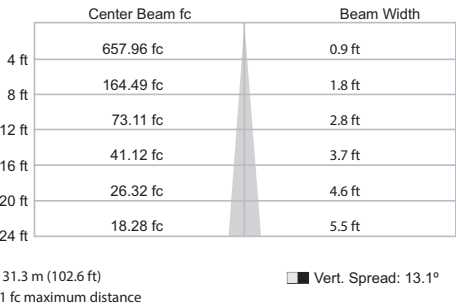
305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
702	48.7

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
RCR:	0	1.19	1.19	1.19	1.19	1.19
1	1.16	1.14	1.12	1.11	1.10	1.09
2	1.13	1.10	1.07	1.05	1.03	1.02
3	1.10	1.06	1.03	1.01	0.99	0.98
4	1.08	1.04	1.00	0.98	0.96	0.95
5	1.06	1.01	0.98	0.95	0.93	0.92
6	1.04	0.99	0.96	0.93	0.91	0.90
7	1.02	0.98	0.94	0.92	0.90	0.89
8	1.01	0.96	0.93	0.90	0.88	0.87
9	0.99	0.95	0.92	0.89	0.87	0.86
10	0.98	0.93	0.91	0.89	0.87	0.86

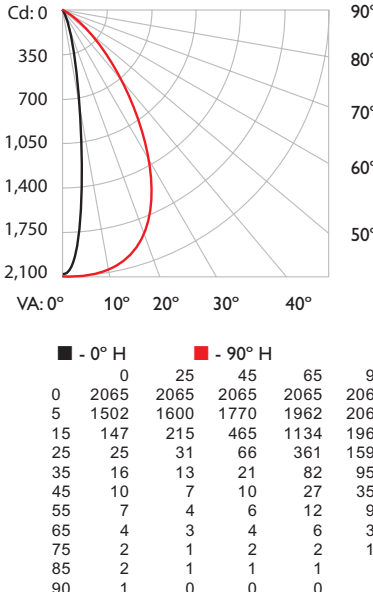
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	665.7	95.3%
0-40	677.6	97.0%
0-60	690.4	98.8%
60-90	6.1	0.9%
70-100	2.7	0.4%
90-120	0.5	0.1%
0-90	696.5	99.7%
90-180	1.9	0.3%
0-180	698.5	100.0%

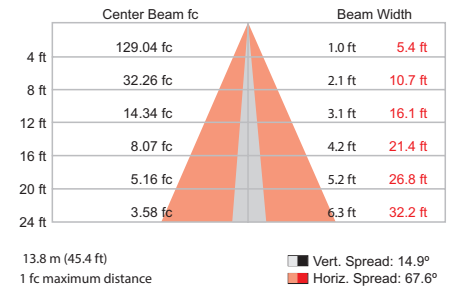
305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
673	46.9

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
RCR:	0	1.19	1.19	1.19	1.19	1.19
1	1.14	1.11	1.09	1.07	1.05	1.03
2	1.09	1.04	1.00	0.97	0.95	0.94
3	1.04	0.98	0.93	0.89	0.86	0.85
4	0.99	0.92	0.87	0.83	0.80	0.78
5	0.95	0.87	0.82	0.78	0.75	0.74
6	0.91	0.83	0.77	0.73	0.70	0.69
7	0.87	0.79	0.73	0.69	0.66	0.65
8	0.84	0.75	0.70	0.66	0.63	0.62
9	0.80	0.72	0.67	0.63	0.60	0.59
10	0.77	0.69	0.64	0.60	0.57	0.56

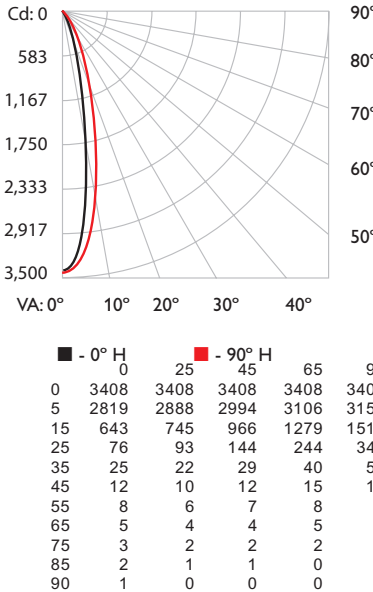
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	514.7	76.6%
0-40	606.1	90.2%
0-60	659.1	98.1%
60-90	10.3	1.5%
70-100	4.1	0.6%
90-120	0.7	0.1%
0-90	669.4	99.7%
90-180	2.2	0.3%
0-180	671.6	100.0%

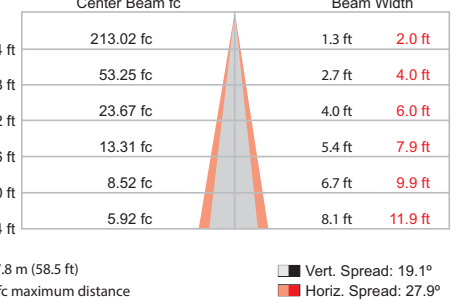
305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
676	47.1

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
RCR:	0	1.19	1.19	1.19	1.19	1.19
1	1.15	1.13	1.11	1.09	1.07	1.05
2	1.11	1.07	1.04	1.01	0.99	0.98
3	1.07	1.02	0.99	0.96	0.94	0.93
4	1.04	0.98	0.94	0.91	0.89	0.88
5	1.01	0.95	0.91	0.87	0.85	0.84
6	0.98	0.92	0.87	0.84	0.82	0.81
7	0.95	0.89	0.84	0.81	0.79	0.78
8	0.93	0.86	0.82	0.79	0.77	0.76
9	0.90	0.83	0.79	0.76	0.74	0.73
10	0.88	0.81	0.77	0.75	0.73	0.72

Zonal Lumen

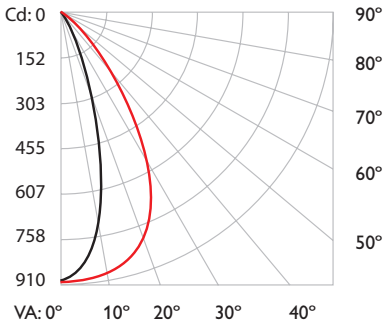
Zone	Lumens	% Luminaire
0-30	626.6	92.7%
0-40	648.9	96.0%
0-60	665.9	98.5%
60-90	7.7	1.1%
70-100	3.5	0.5%
90-120	0.7	0.1%
0-90	673.5	99.7%
90-180	2.2	0.3%
0-180	675.8	100.0%

For lux multiply fc by 10.7

305 mm (1 ft), 30° x 60° beam angle

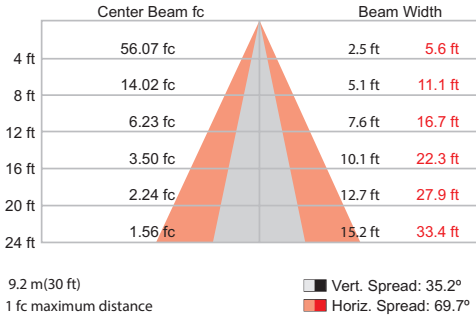
Lumens	Efficacy
672	46.7

Polar Candela Distribution



	- 0° H	- 90° H		
0	897	897	897	897
5	849	860	875	892
15	546	590	680	788
25	210	255	374	565
35	60	72	130	276
45	24	24	35	86
55	17	14	15	24
65	9	9	8	10
75	4	4	4	5
85	3	2	1	1
90	2	1	1	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%																		
RCC %:	80	70				50				30				10				0		
RW %:	70	50	30	0	70	50	30	0	70	50	30	0	70	50	30	0	50	30	20	0
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00		
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	0.99	0.97	0.97	0.95	0.94	0.92			
2	1.02	0.95	0.90	0.86	1.00	0.93	0.89	0.80	0.91	0.87	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.79		
3	0.96	0.89	0.83	0.78	0.94	0.87	0.82	0.75	0.85	0.81	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.74		
4	0.91	0.83	0.77	0.72	0.90	0.82	0.76	0.70	0.80	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.68		
5	0.87	0.78	0.72	0.67	0.85	0.77	0.71	0.65	0.75	0.70	0.66	0.74	0.69	0.66	0.72	0.69	0.65	0.64		
6	0.83	0.73	0.67	0.63	0.81	0.72	0.67	0.61	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.61	0.60		
7	0.79	0.69	0.63	0.59	0.77	0.68	0.63	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.56		
8	0.75	0.65	0.59	0.55	0.74	0.65	0.59	0.54	0.64	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.53		
9	0.72	0.62	0.56	0.52	0.70	0.61	0.56	0.51	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.50		
10	0.72	0.62	0.56	0.52	0.70	0.61	0.56	0.51	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.51	0.50		

Zonal Lumen

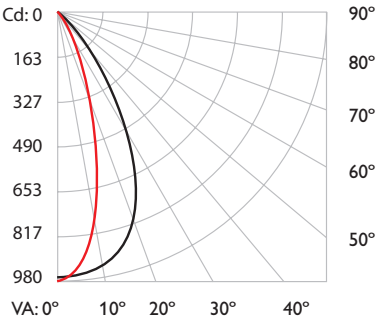
Zone	Lumens	% Luminaire
0-30	462.5	68.9%
0-40	581.0	86.5%
0-60	653.5	97.3%
60-90	16.0	2.4%
70-100	6.6	1.0%
90-120	0.9	0.1%
0-90	669.4	99.7%
90-180	2.2	0.3%
0-180	671.7	100.0%

For lux multiply fc by 10.7

305 mm (1 ft), 60° x 30° beam angle

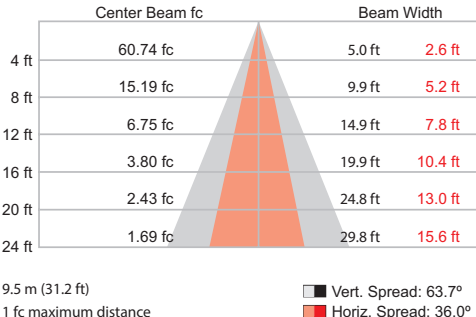
Lumens	Efficacy
679	47.2

Polar Candela Distribution



	- 0° H	- 90° H		
0	972	972	972	972
5	955	958	946	940
15	890	834	734	648
25	701	569	396	283
35	376	255	134	77
45	130	75	36	23
55	35	22	15	13
65	11	10	8	7
75	5	4	3	3
85	4	2	1	1
90	2	1	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%																		
RCC %:		80	70	50	30	10	0	70	50	30	10	0	70	50	30	10	0			
RW %:		70	50	30	10	0	70	50	30	10	0	70	50	30	10	0	70			
0		1.19	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1		1.13	1.10	1.08	1.06	1.11	1.08	1.06	0.93	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.93	
2		1.08	1.03	0.99	0.95	1.05	1.01	0.97	0.87	0.98	0.95	0.92	0.90	0.92	0.90	0.88	0.86	0.85	0.83	
3		1.02	0.96	0.91	0.87	1.00	0.94	0.90	0.81	0.92	0.88	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.80	
4		0.97	0.89	0.84	0.80	0.95	0.88	0.83	0.76	0.86	0.82	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.75	
5		0.92	0.84	0.78	0.74	0.91	0.83	0.78	0.71	0.81	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.71	0.70	
6		0.88	0.79	0.73	0.69	0.86	0.78	0.73	0.67	0.77	0.72	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.66	
7		0.84	0.74	0.68	0.64	0.82	0.74	0.68	0.63	0.72	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.62	
8		0.80	0.70	0.64	0.60	0.79	0.70	0.64	0.59	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.59	0.58	
9		0.76	0.67	0.61	0.57	0.75	0.66	0.61	0.56	0.65	0.60	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.55	
10		0.73	0.63	0.58	0.54	0.72	0.63	0.57	0.53	0.62	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.52	

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	489.6	72.1%
0-40	601.2	88.6%
0-60	662.6	97.6%
60-90	14.1	2.1%
70-100	5.8	0.9%
90-120	0.9	0.1%
0-90	676.7	99.7%
90-180	2.2	0.3%
0-180	678.9	100.0%

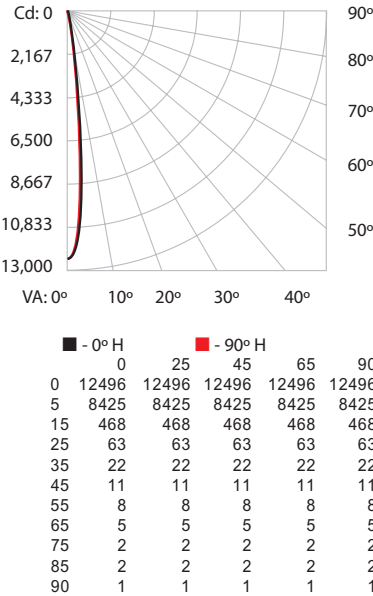
Photometrics/eW Graze MX Powercore, 3500 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

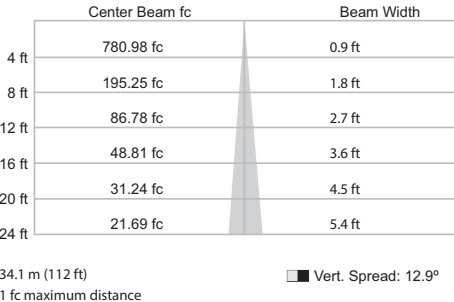
305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
822	57.3

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																			
RCC %:	80	70	50	30	0	70	50	30	0	50	30	10	0	0	0	0	0	0	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	0	0	0	0	0	0	0
RCR:																			
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.06	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.99	0.97
1	1.15	1.14	1.12	1.10	1.13	1.11	1.10	0.97	1.07	1.06	1.05	1.03	1.03	1.02	1.00	0.99	0.99	0.97	0.97
2	1.12	1.09	1.07	1.05	1.10	1.08	1.05	0.96	1.04	1.03	1.01	1.01	1.00	0.99	0.99	0.98	0.97	0.95	0.95
3	1.10	1.06	1.03	1.00	1.08	1.05	1.02	0.94	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.95	0.94	0.94
4	1.07	1.03	1.00	0.97	1.06	1.02	0.99	0.93	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.92	0.91	0.91
5	1.05	1.01	0.97	0.95	1.04	1.00	0.97	0.92	0.98	0.96	0.94	0.97	0.94	0.93	0.95	0.93	0.92	0.91	0.91
6	1.03	0.99	0.95	0.93	1.02	0.98	0.95	0.90	0.97	0.94	0.92	0.95	0.93	0.91	0.94	0.92	0.91	0.90	0.90
7	1.02	0.97	0.94	0.91	1.01	0.96	0.93	0.89	0.95	0.92	0.91	0.94	0.92	0.90	0.93	0.91	0.90	0.89	0.89
8	1.00	0.95	0.92	0.90	0.99	0.95	0.92	0.88	0.94	0.91	0.89	0.93	0.91	0.89	0.92	0.90	0.89	0.88	0.88
9	0.99	0.94	0.91	0.89	0.98	0.93	0.91	0.88	0.93	0.90	0.88	0.92	0.90	0.88	0.91	0.89	0.88	0.87	0.87
10	0.97	0.92	0.90	0.88	0.97	0.92	0.89	0.87	0.92	0.89	0.87	0.91	0.89	0.87	0.90	0.88	0.87	0.86	0.86

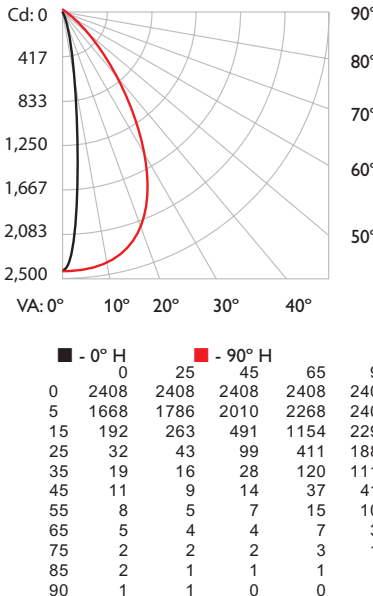
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	776.2	94.4%
0-40	790.0	96.1%
0-60	805.7	98.0%
60-90	8.9	1.1%
70-100	5.5	0.7%
90-120	3.3	0.4%
0-90	814.6	99.1%
90-180	7.6	0.9%
0-180	822.2	100.0%

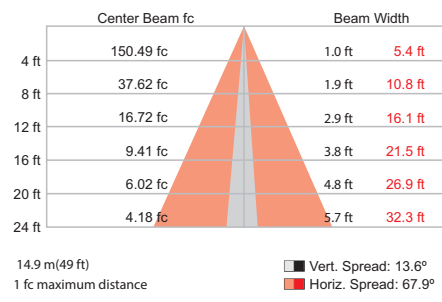
305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
768	53.4

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																			
RCC %:	80	70	50	30	0	70	50	30	0	50	30	20	10	0	0	0	0	0	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	0	0	0	0	0	0	0
RCR:																			
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.99	0.94
1	1.14	1.11	1.09	1.06	1.11	1.09	1.07	0.94	1.05	1.03	1.01	1.01	1.00	0.98	0.98	0.96	0.96	0.94	0.94
2	1.08	1.04	1.00	0.97	1.06	1.02	0.99	0.89	0.99	0.96	0.94	0.96	0.94	0.91	0.93	0.91	0.90	0.88	0.88
3	1.03	0.97	0.93	0.89	1.02	0.96	0.92	0.83	0.93	0.90	0.87	0.91	0.88	0.85	0.89	0.86	0.84	0.83	0.83
4	0.99	0.92	0.87	0.83	0.97	0.91	0.86	0.79	0.89	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.78	0.78
5	0.94	0.87	0.81	0.77	0.93	0.86	0.81	0.75	0.84	0.80	0.76	0.82	0.79	0.76	0.81	0.78	0.75	0.74	0.74
6	0.90	0.82	0.77	0.73	0.89	0.81	0.76	0.71	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.70	0.70
7	0.87	0.78	0.73	0.69	0.85	0.78	0.72	0.67	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.66	0.66
8	0.83	0.74	0.69	0.65	0.82	0.74	0.69	0.64	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.63	0.63
9	0.80	0.71	0.66	0.62	0.79	0.71	0.66	0.61	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.60	0.60
10	0.77	0.68	0.63	0.59	0.76	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.58	0.58

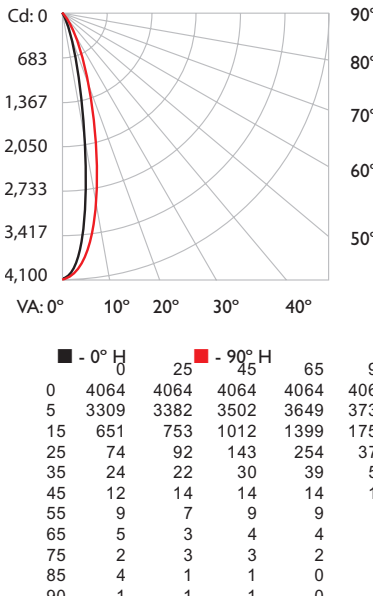
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	579.4	75.4%
0-40	688.1	89.6%
0-60	753.1	98.1%
60-90	12.6	1.6%
70-100	4.9	0.6%
90-120	0.7	0.1%
0-90	765.7	99.7%
90-180	2.3	0.3%
0-180	768.0	100.0%

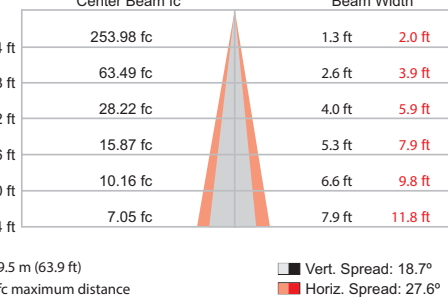
305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
775	53.7

Polar Candela Distribution



Illuminance at Distance



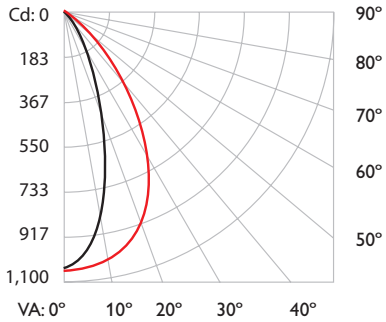
Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																			
RCC %:	80	70	50	30	0	70	50	30	0	50	30	20	10	0	0	0	0	0	0
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	0	0	0	0	0	0	0
RCR:																			
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	0.99	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.99	0.94
1	1.15	1.13	1.11	1.09	1.12	1.10	1.09	0.96	1.06	1.05	1.04	1.03	1.02	1.01	0.99	0.98	0.98	0.96	0.96
2	1.11	1.07	1.04	1.02	1.09	1.06	1.03	0.93	1.02	1.00	0.98	0.99	0.96	0.96	0.97	0.95	0.94	0.93	0.93
3	1.07	1.03	0.99	0.96	1.05	1.01	0.98	0.90	0.99	0.96	0.94	0.96	0.94	0.92	0.94	0.92	0.91	0.89	0.89
4	1.04	0.99	0.95	0.92	1.02	0.98	0.94	0.87	0.95	0.92	0.90	0.94	0.91	0.89	0.92	0.90	0.88	0.87	0.87
5	1.01	0.95	0.91	0.88	1.00	0.94	0.90	0.85	0.92	0.89	0.87	0.91	0.88	0.86	0.89	0.87	0.85	0.84	0.84
6	0.98	0.92	0.88	0.85	0.97	0.91	0.87	0.82	0.90	0.86	0.84	0.88	0.85	0.83	0.87	0.85	0.83	0.82	0.82
7	0.95	0.89	0.85	0.82	0.94	0.88	0.84	0.80	0.87	0.84	0.81	0.86	0.83	0.81	0.85	0.82	0.80	0.79	0.79
8	0.93	0.86	0.82	0.79	0.92	0.86	0.82	0.78	0.85	0.81	0.79	0.84	0.81	0.79	0.83	0.80	0.78	0.77	0.77
9	0.91	0.84	0.80	0.77	0.90	0.84	0.80	0.76	0.83	0.79	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.75	0.75</

305 mm (1 ft), 30° x 60° beam angle

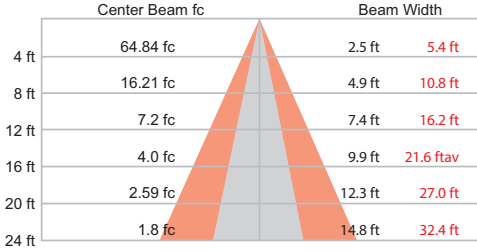
Lumens	Efficacy
747	51.7

Polar Candela Distribution



	0° H	25°	45°	65°	90°
0	1038	1038	1038	1038	1038
5	980	994	1010	1030	1036
15	613	663	771	897	975
25	231	282	417	631	804
35	65	76	140	299	485
45	25	25	37	91	190
55	18	15	16	25	53
65	10	9	9	10	15
75	5	4	4	4	5
85	3	2	1	1	0
90	2	1	1	0	0

Illuminance at Distance



9.8 m (32.2 ft) 1 fc maximum distance
Vert. Spread: 34.3°
Horiz. Spread: 68.0°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80				70				50				30				10				0			
RW %:	70	50	30	0	70	50	30	0	50	30	20	10	0	50	30	20	10	0	50	30	20	10	0	
RCR:																								
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00						
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	1.00	0.99	0.97	0.97	0.96	0.95	0.93						
2	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.87	0.84	0.89	0.85	0.83	0.86	0.84	0.81	0.80						
3	0.97	0.89	0.83	0.79	0.95	0.88	0.82	0.75	0.86	0.81	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.74						
4	0.92	0.83	0.77	0.73	0.90	0.82	0.77	0.70	0.80	0.76	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.69						
5	0.87	0.78	0.72	0.68	0.86	0.77	0.72	0.66	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.65						
6	0.83	0.74	0.68	0.63	0.82	0.73	0.67	0.62	0.72	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.61						
7	0.79	0.69	0.63	0.59	0.78	0.69	0.63	0.58	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.57						
8	0.75	0.66	0.60	0.56	0.74	0.65	0.60	0.55	0.64	0.59	0.56	0.63	0.59	0.55	0.63	0.58	0.55	0.54						
9	0.72	0.62	0.57	0.53	0.71	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.56	0.52	0.60	0.55	0.52	0.51						
10	0.72	0.62	0.57	0.53	0.71	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.56	0.52	0.60	0.55	0.52	0.51						

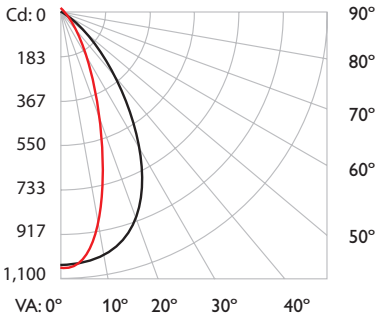
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	523.1	70.0%
0-40	651.8	87.3%
0-60	728.4	97.5%
60-90	16.4	2.2%
70-100	6.5	0.9%
90-120	0.8	0.1%
0-90	744.8	99.7%
90-180	2.2	0.3%
0-180	747.0	100.0%

305 mm (1 ft), 60° x 30° beam angle

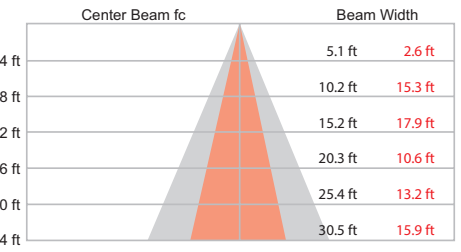
Lumens	Efficacy
755	52.3

Polar Candela Distribution



	0° H	25°	45°	65°	90°
0	1044	1044	1044	1044	1044
5	1027	1029	1018	1012	1003
15	960	899	795	708	662
25	766	627	442	319	268
35	431	294	157	90	69
45	154	90	43	27	24
55	42	26	17	15	14
65	13	11	10	9	8
75	5	4	4	4	4
85	4	2	1	1	1
90	2	1	0	0	0

Illuminance at Distance



9.9 m (32.3 ft) 1 fc maximum distance
Vert. Spread: 64.9°
Horiz. Spread: 36.6°

Coefficients Of Utilization - Zonal Cavity Method

	Effective Force Factor Reflectance: 20																	
RCC %:	80			70			50			10			0					
RW %:	70	50	30	0	70	50	30	0	70	50	30	0	70	50	30	20	10	0
RCR:	0	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	1.00	0.99	0.97	0.97	0.96	0.95	0.93
2	1.07	1.02	0.98	0.95	1.05	1.01	0.97	0.87	0.97	0.94	0.92	0.94	0.92	0.90	0.92	0.89	0.88	0.86
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.87	0.84	0.89	0.85	0.83	0.86	0.84	0.81	0.80
4	0.97	0.89	0.83	0.79	0.95	0.88	0.82	0.75	0.86	0.81	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.74
5	0.92	0.83	0.77	0.73	0.90	0.82	0.77	0.70	0.80	0.76	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.69
6	0.87	0.78	0.72	0.68	0.86	0.77	0.72	0.66	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.65
7	0.83	0.74	0.68	0.64	0.82	0.73	0.68	0.62	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.61
8	0.79	0.69	0.63	0.59	0.78	0.69	0.63	0.58	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.57
9	0.75	0.66	0.60	0.56	0.74	0.65	0.60	0.55	0.64	0.59	0.56	0.63	0.59	0.55	0.63	0.58	0.55	0.54
10	0.72	0.62	0.57	0.53	0.71	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.56	0.52	0.60	0.55	0.52	0.51

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	535.3	70.9%
0-40	663.2	87.9%
0-60	735.7	97.5%
60-90	16.4	2.2%
70-100	6.8	0.9%
90-120	1.1	0.1%
0-90	752.1	99.6%
90-180	2.7	0.4%
0-180	754.7	100.0%

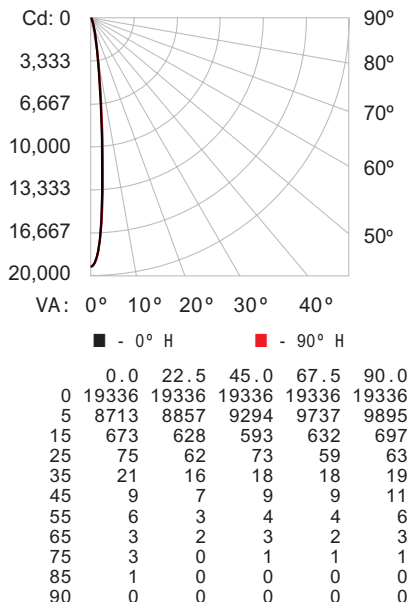
Photometrics/eW Graze MX Powercore, 4000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
875	60.3 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	1,208.5 fc	0.7 ft 0.7 ft
8 ft	302.1 fc	1.3 ft 1.4 ft
12 ft	134.3 fc	2.0 ft 2.1 ft
16 ft	75.5 fc	2.7 ft 2.9 ft
20 ft	48.3 fc	3.2 ft 3.6 ft
24 ft	33.6 fc	4.0 ft 4.3 ft

139 ft (127.1 m) ■ Vert. Spread: 9.5°
1 fc maximum distance ■ Horiz. Spread: 10.2°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RC		80	70	50	30	10	0	80	70	50	30
RW		70	50	30	10	0	0	70	50	30	10
0	119119119119	116116116116	1111111111	106106106	102102102	100		119119119119	116116116116	1111111111	106106106
1	116114113111	114112111109	108107106	104104103	101101100	98		116114113111	114112111109	108107106	104104103
2	113110108106	111109106105	106104102	103101100	100	98	97	113110108106	111109106105	106104102	103101100
3	111107104102	109106103101	103101100	101	99	98	97	111107104102	109106103101	103101100	101
4	108104101	107103100	101	99	97	100	98	108104101	107103100	101	99
5	106102	99	97	105101	98	96	100	106102	99	97	105101
6	105100	97	95	104	99	97	94	105100	97	95	104
7	103	98	95	102	98	95	93	103	98	95	102
8	102	97	94	101	96	94	92	102	97	94	101
9	100	95	93	100	95	92	90	100	95	93	100
10	99	94	91	90	98	94	89	99	94	91	90

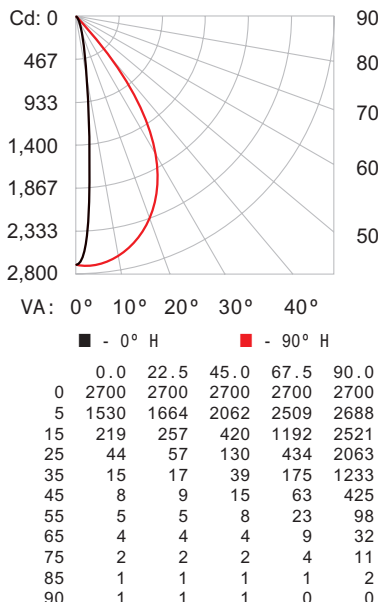
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	848	97.0
0- 40	860	98.3
0- 60	871	99.6
0- 90	875	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	875	100.0

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
829	60.5 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	168.8 fc	0.8 ft 5.3 ft
8 ft	42.2 fc	1.6 ft 10.7 ft
12 ft	18.8 fc	2.4 ft 16.0 ft
16 ft	10.5 fc	3.2 ft 21.4 ft
20 ft	6.8 fc	3.9 ft 26.7 ft
24 ft	4.7 fc	4.7 ft 32.0 ft

52 ft (15.8 m) ■ Vert. Spread: 11.3°
1 fc maximum distance ■ Horiz. Spread: 67.4°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RC		80	70	50	30	10	0	80	70	50	30
RW		70	50	30	10	0	0	70	50	30	10
0	119119119119	116116116116	1111111111	106106106	102102102	100		119119119119	116116116116	1111111111	106106106
1	114111108106	111109107105	105103101	101100	98	98	96	114111108106	111109107105	105103101	101100
2	108104100	106102	98	95	99	96	93	108104100	106102	98	95
3	103	97	92	88	101	96	91	103	97	92	88
4	98	91	86	82	97	90	85	98	91	86	82
5	94	86	80	76	92	85	80	94	86	80	76
6	90	81	76	72	88	80	75	90	81	76	72
7	86	77	71	67	84	76	71	86	77	71	67
8	82	73	68	64	81	73	67	82	73	68	64
9	79	70	64	61	78	69	64	79	70	64	61
10	76	67	61	58	75	66	61	76	67	61	58

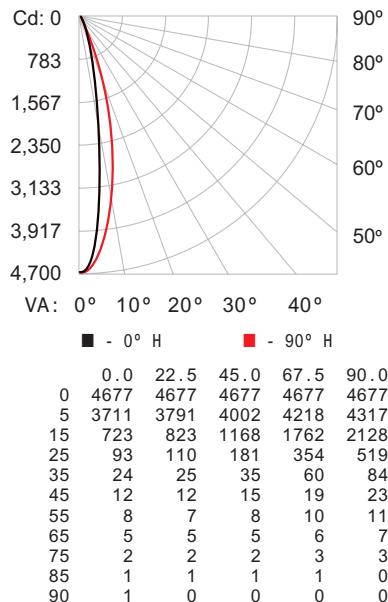
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	607	73.2
0- 40	736	88.7
0- 60	815	98.3
0- 90	829	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	829	100.0

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
876	60.4 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	292.3 fc	1.2 ft 2.0 ft
8 ft	73.1 fc	2.5 ft 4.0 ft
12 ft	32.5 fc	3.7 ft 6.0 ft
16 ft	18.3 fc	4.9 ft 8.0 ft
20 ft	11.7 fc	6.1 ft 10.1 ft
24 ft	8.1 fc	7.4 ft 12.1 ft

68 ft (20.7 m) ■ Vert. Spread: 17.5°
1 fc maximum distance ■ Horiz. Spread: 28.2°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RC		80	70	50	30	10	0	80	70	50	30
RW		70	50	30	10	0	0	70	50	30	10
0	119119119119	116116116116	1111111111	106106106	102102102	100		119119119119	116116116116	1111111111	106106106
1	115113111109	113111109107	107105104	103102101	100	98	96	115113111109	113111109107	107105104	103102101
2	111107104102	109106103101	103100	98	100	98	96	111107104102	109106103101	103100	98
3	107103	99	96	106101	98	95	99	107103	99	96	106101
4	104	99	95	103	98	94	91	104	99	95	103
5	101	95	91	88	100	94	90	101	95	91	88
6	98	92	88	85	97	91	87	98	92	88	85
7	95	89	85	82	94	88	84	95	89	85	82
8	93	86	82	79	92	86	82	93	86	82	79
9	90	84	80	77	90	83	80	90	84	80	77
10	88	82	78	75	87	81	77	88	82	78	75

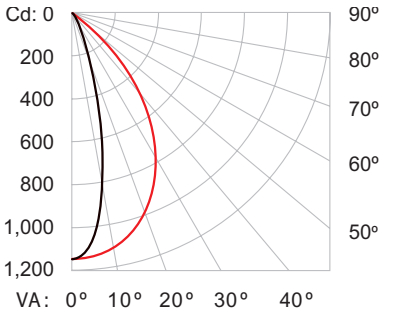
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	817	93.2
0- 40	847	96.7
0- 60	868	99.0
0- 90	876	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	876	100.0

305 mm (1 ft), 30° x 60° beam angle

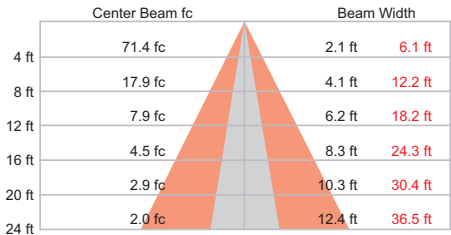
Lumens	Efficacy
775	57.8 lm / W

Polar Candela Distribution



VA: 0°	10°	20°	30°	40°
0.0	22.5	45.0	67.5	90.0
0	1143	1143	1143	1143
5	1063	1071	1097	1125
15	543	594	752	958
25	153	188	338	664
35	43	51	106	345
45	22	22	34	130
55	16	15	16	42
65	9	9	9	15
75	4	4	4	5
85	2	1	1	1
90	1	1	0	0

Illuminance at Distance



33 ft (10 m)
1 fc maximum distance

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																
RC	80				70				50			30		10		0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	0
0	119191191191				116116116116				111111111111			106106106		102102102		100
1	113110107105				11108106103				104102100			100	99	97	95	94
2	107102	97	94		105100	96	93		97	94	91	94	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	82	80	79
4	96	88	82	78	94	87	81	77	85	78	73	83	79	75	74	73
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	72	72
6	86	77	71	66	85	77	70	66	75	69	65	76	69	65	68	65
7	82	72	66	62	81	72	66	62	70	65	61	72	65	61	64	61
8	78	68	62	58	77	68	62	58	66	61	57	65	61	57	64	60
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54

Zonal Lumen

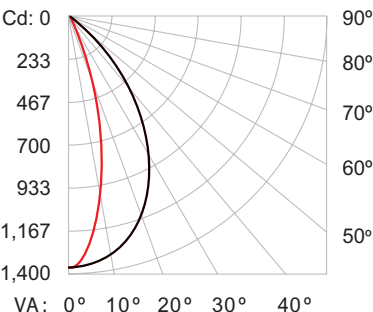
ZONE	LUMENS	%FIXT
0- 30	513	66.3
0- 40	647	83.5
0- 60	753	97.2
0- 90	775	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	775	100.0

For lux multiply fc by 10.7

305 mm (1 ft), 60° x 30° beam angle

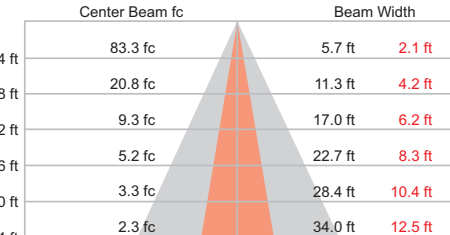
Lumens	Efficacy
872	60.1 lm / W

Polar Candela Distribution



VA: 0°	10°	20°	30°	40°
0.0	22.5	45.0	67.5	90.0
0	1332	1332	1332	1332
5	1323	1309	1277	1244
15	1224	1107	874	695
25	1011	748	389	221
35	679	371	121	57
45	332	134	38	23
55	113	44	17	14
65	30	16	10	9
75	9	6	4	4
85	4	2	1	1
90	2	1	1	0

Illuminance at Distance



36 ft (11 m)
1 fc maximum distance

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%																				
RC		80				70				50				30				10				0
RW		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	119119119119	116116116116	111111111111	106106106	102102102	100																
1	113110108105	11108106104	104102100	100	99	97	96	95	93													
2	107102	98	94	105100	97	93	97	94	89	85	82	81	89	87	86							
3	102	95	90	86	100	94	89	85	81	87	84	88	85	82	86	83	81	79				
4	96	89	83	78	95	87	82	78	85	81	77	83	79	76	81	78	75	74				
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69				
6	87	78	72	67	85	77	71	67	75	72	69	76	72	69	74	70	67	65				
7	83	73	67	63	81	73	67	63	75	67	63	72	67	62	69	65	62	60				
8	79	69	63	59	78	69	63	59	72	67	62	69	65	62	68	65	61	58	57			
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53				
10	72	62	56	52	71	62	56	52	61	56	52	60	55	52	59	55	52	51				

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	595	68.2
0- 40	742	85.1
0- 60	849	97.4
0- 90	871	99.9
90-120	1	0.1
90-130	1	0.1
90-150	1	0.1
90-180	1	0.1
0-180	872	100.0

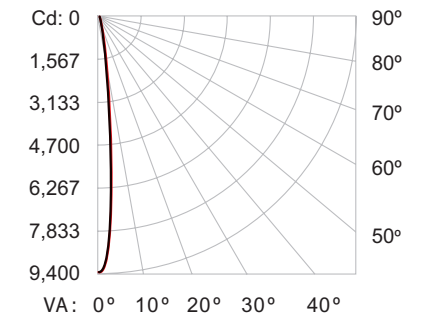
Photometrics/eW Graze Q LX Powercore, 2700 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
468	49.8 lm / W

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	9377	9377	9377	9377	9377
5	4537	4586	4753	4922	4962
15	378	362	351	365	401
25	45	40	42	38	39
35	13	10	11	11	12
45	5	4	5	6	6
55	3	2	2	3	4
65	3	1	1	2	2
75	1	1	0	1	1
85	1	0	0	0	0
90	1	0	0	0	0

Illuminance at Distance

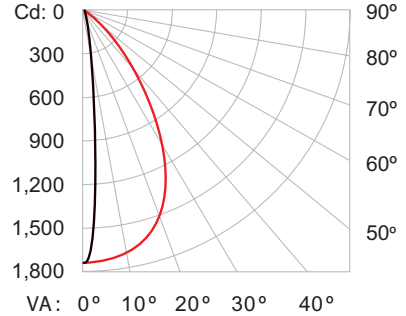
	Center Beam fc	Beam Width
4 ft	586 fc	0.7 ft 0.7 ft
8 ft	147 fc	1.4 ft 1.5 ft
12 ft	65 fc	2.1 ft 2.2 ft
16 ft	37 fc	2.7 ft 2.9 ft
20 ft	23 fc	3.4 ft 3.7 ft
24 ft	16 fc	4.1 ft 4.4 ft

97 ft (29.6 m) 1 fc maximum distance
■ Vert. Spread: 9.8° ■ Horiz. Spread: 10.5°

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
475	50.4 lm / W

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	1742	1742	1742	1742	1742
5	876	960	1229	1575	1729
15	110	133	228	680	1621
25	18	23	59	241	1313
35	8	8	16	93	788
45	4	4	7	30	286
55	3	3	4	10	68
65	2	2	2	4	20
75	1	1	1	2	7
85	1	1	1	0	1
90	0	0	0	0	0

Illuminance at Distance

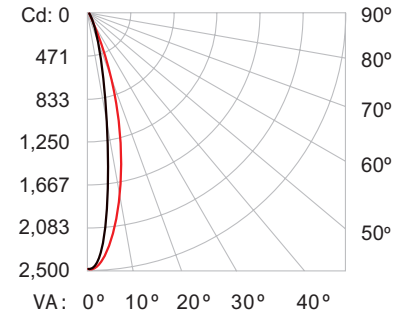
	Center Beam fc	Beam Width
4 ft	108.9 fc	0.7 ft 5.3 ft
8 ft	27.2 fc	1.4 ft 10.6 ft
12 ft	12.1 fc	2.2 ft 15.9 ft
16 ft	6.8 fc	2.9 ft 21.2 ft
20 ft	4.4 fc	3.6 ft 26.5 ft
24 ft	3.0 fc	4.3 ft 31.8 ft

41 ft (12.5 m) 1 fc maximum distance
■ Vert. Spread: 10.3° ■ Horiz. Spread: 67.1°

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
470	49.4 lm / W

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	3780	3780	3780	3780	3780
5	3006	3071	3235	3405	3479
15	593	675	955	1422	1699
25	77	92	151	289	405
35	21	22	30	50	67
45	9	9	12	15	18
55	6	6	6	8	9
65	4	4	4	5	5
75	2	2	2	2	2
85	1	1	1	1	1
90	1	1	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	153.9 fc	1.2 ft 2.0 ft
8 ft	38.5 fc	2.4 ft 4.1 ft
12 ft	17.1 fc	3.7 ft 6.1 ft
16 ft	9.6 fc	4.9 ft 8.2 ft
20 ft	6.2 fc	6.1 ft 10.2 ft
24 ft	4.3 fc	7.3 ft 12.3 ft

50 ft (15.2 m) 1 fc maximum distance
■ Vert. Spread: 17.3° ■ Horiz. Spread: 28.7°

Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance: 20%
RC	80 70 50 30 10 0
RW	70 50 30 10 0 0
0	119119119119 116116116116 1111111111 106106106 102102102 100
1	116114112111 113112110109 108107106 104103103 101100100 98
2	113110107105 111108106104 105103102 102101100 100 99 98 96
3	110107104101 109105103101 103101 99 101 99 98 99 97 96 95
4	108104101 98 107103100 98 101 98 97 99 97 96 97 96 95 94
5	106101 98 96 105101 98 95 99 97 95 98 96 94 96 95 93 92
6	104 99 96 94 103 99 96 94 97 95 93 96 94 92 95 93 92 91
7	102 97 94 92 101 97 94 92 96 93 92 95 93 91 94 92 91 90
8	101 96 93 91 100 95 93 91 95 92 90 94 92 90 93 91 90 89
9	99 94 91 89 99 94 91 89 93 91 89 93 90 89 92 90 89 88
10	98 93 90 88 97 93 90 88 92 90 88 92 89 88 91 89 88 87

Zonal Lumens

ZONE	LUMENS	%FIXT
0- 30	452	96.5
0- 40	459	98.0
0- 60	466	99.4
0- 90	468	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	468	100.0

Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance: 20%
RC	80 70 50 30 10 0
RW	70 50 30 10 0 0
0	119119119119 116116116116 1111111111 106106106 102102102 100
1	1161141109106 111109107105 105103102 101100 99 98 97 96 94
2	108104100 97 106102 98 96 99 96 93 96 93 91 93 91 90 88
3	103 97 93 89 101 96 92 88 93 90 87 91 88 85 89 86 84 82
4	99 91 86 82 97 90 86 82 88 84 81 86 83 80 84 81 79 78
5	94 86 81 77 93 85 80 77 84 79 82 82 78 75 81 77 75 73
6	90 82 76 72 89 81 76 72 80 75 71 78 74 71 77 73 71 69
7	86 78 72 68 85 77 72 68 76 71 68 75 70 67 74 70 67 66
8	83 74 68 65 82 73 68 64 72 68 64 71 67 64 70 67 64 62
9	79 71 65 61 78 70 65 61 69 64 61 68 64 61 68 64 61 60
10	76 68 62 59 75 67 62 59 66 62 58 66 61 58 65 61 58 57

Zonal Lumens

ZONE	LUMENS	%FIXT
0- 30	351	73.8
0- 40	422	89.0
0- 60	467	98.4
0- 90	475	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	475	100.0

Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance: 20%
RC	80 70 50 30 10 0
RW	70 50 30 10 0 0
0	119119119119 116116116116 1111111111 106106106 102102102 100
1	115113111109 112111109107 107105104 103102101 100 99 98 96
2	11107104102 109106103100 102100 98 100 98 96 97 95 94 93
3	107103 99 96 105101 98 95 99 96 94 96 94 92 94 92 91 90
4	104 98 94 91 102 97 94 91 95 92 90 94 91 89 92 90 88 87
5	101 95 91 87 99 94 90 87 92 89 86 91 88 86 89 87 85 84
6	98 91 87 84 97 91 87 84 89 86 83 88 85 83 87 84 82 81
7	95 89 84 81 94 88 84 81 87 83 81 86 83 80 85 82 80 79
8	93 86 82 79 92 85 81 79 84 81 78 84 80 78 83 80 78 77
9	90 83 79 77 89 83 79 76 82 79 76 81 78 76 81 78 76 75
10	88 81 77 74 87 81 77 74 80 77 74 79 76 74 79 76 74 73

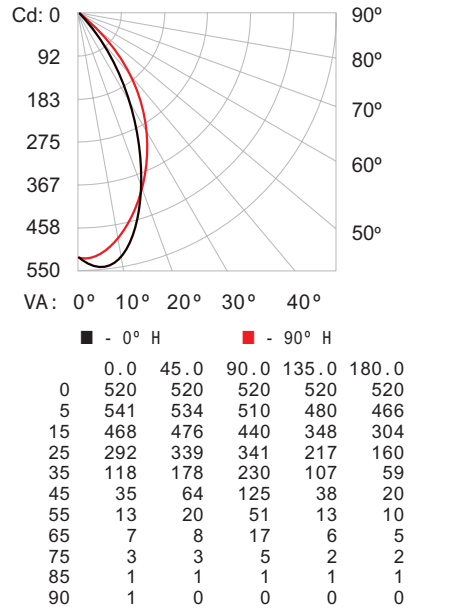
Zonal Lumens

ZONE	LUMENS	%FIXT
0- 30	436	92.8
0- 40	454	96.6
0- 60	465	99.0
0- 90	470	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	470	100.0

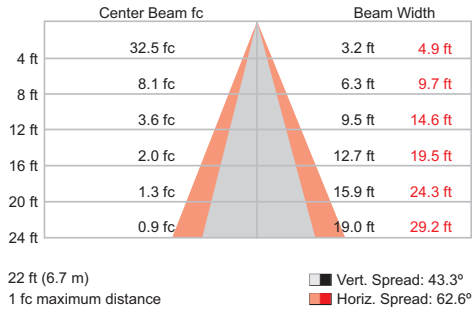
305 mm (1 ft), 30° x 60° beam angle

Lumens	Efficacy
470	49.7 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%										
RC	80	70	50	30	10	0	80	70	50	30
Rw	70	50	30	10	50	30	10	50	30	10
0	119119119119	116116116116	111111111111	106106106106	102102102102	100	119119119119	116116116116	111111111111	106106106106
1	113110107105	110108105103	103101100	100 98 97	96 95 94	92	113110107105	110108105103	103101100	100 98 97
2	106101 97 93	104 99 95 92	96 93 90	93 90 88	90 88 86	84	106101 97 93	104 99 95 92	96 93 90	93 90 88
3	100 93 88 83	98 92 87 83	89 85 81	87 83 80	84 81 79	77	100 93 88 83	98 92 87 83	89 85 81	87 83 80
4	95 86 80 76	93 85 80 75	83 78 74	81 77 73	79 75 73	71	95 86 80 76	93 85 80 75	83 78 74	81 77 73
5	89 80 74 69	88 79 73 69	77 72 68	76 71 68	74 70 67	65	89 80 74 69	88 79 73 69	77 72 68	76 71 68
6	85 75 68 64	83 74 68 63	72 67 63	71 66 62	70 65 62	61	85 75 68 64	83 74 68 63	72 67 63	71 66 62
7	80 70 63 59	79 69 63 59	68 62 58	67 62 58	66 61 58	56	80 70 63 59	79 69 63 59	68 62 58	67 62 58
8	76 66 59 55	75 65 59 55	64 58 54	63 58 54	62 57 54	52	76 66 59 55	75 65 59 55	64 58 54	63 58 54
9	72 62 55 51	71 61 55 51	60 55 51	59 54 51	58 54 50	49	72 62 55 51	71 61 55 51	60 55 51	59 54 51
10	69 58 52 48	67 58 52 48	57 51 48	56 51 47	55 51 47	46	69 58 52 48	67 58 52 48	57 51 48	56 51 47

Zonal Lumen

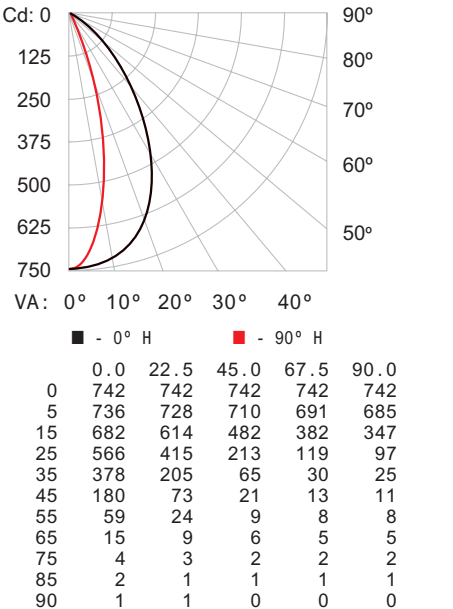
ZONE	LUMENS	%FIXT
0- 30	290	61.6
0- 40	385	81.8
0- 60	457	97.1
0- 90	470	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	470	100.0

For lux multiply fc by 10.7

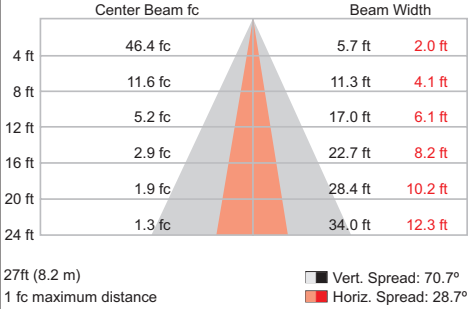
305 mm (1 ft), 60° x 30° beam angle

Lumens	Efficacy
480	50.4 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%										
RC	80	70	50	30	10	0	80	70	50	30
Rw	70	50	30	10	50	30	10	50	30	10
0	119119119119	116116116116	111111111111	106106106106	102102102102	100	119119119119	116116116116	111111111111	106106106106
1	113110108105	111108106104	104102100	100 99 97	97 96 95	93	113110108105	111108106104	104102100	100 99 97
2	107102 98 94	105100 97 93	97 94 91	94 92 89	91 89 87	86	107102 98 94	105100 97 93	97 94 91	94 92 89
3	102 95 90 86	100 94 89 85	91 87 84	89 85 82	86 83 81	79	102 95 90 86	100 94 89 85	91 87 84	89 85 82
4	96 89 83 79	95 88 82 78	85 81 77	83 79 76	81 78 75	74	96 89 83 79	95 88 82 78	85 81 77	83 79 76
5	92 83 77 73	90 82 76 72	80 75 72	79 74 71	77 73 70	69	92 83 77 73	90 82 76 72	80 75 72	79 74 71
6	87 78 72 67	85 77 71 67	76 71 67	74 70 66	73 69 66	64	87 78 72 67	85 77 71 67	76 71 67	74 70 66
7	83 73 67 63	81 73 67 63	71 66 62	70 66 62	69 65 62	60	83 73 67 63	81 73 67 63	71 66 62	70 66 62
8	79 69 63 59	78 69 63 59	68 62 59	67 62 58	66 61 58	57	79 69 63 59	78 69 63 59	68 62 59	67 62 58
9	75 66 60 56	74 65 59 56	64 59 55	63 59 55	62 58 55	54	75 66 60 56	74 65 59 56	64 59 55	63 59 55
10	72 62 56 53	71 62 56 53	61 56 52	60 56 52	59 55 52	51	72 62 56 53	71 62 56 53	61 56 52	60 56 52

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	329	68.5
0- 40	410	85.4
0- 60	468	97.5
0- 90	480	99.9
90-120	0	0.1
90-130	0	0.1
90-150	0	0.1
90-180	0	0.1
0-180	480	100.0

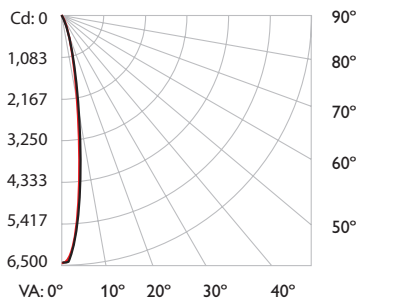
Photometrics/eW Graze Q LX Powercore, 3000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
472	50.1

Polar Candela Distribution



	0° H	90° H
0	6412	6412
5	4396	4396
15	306	306
25	38	38
35	13	13
45	6	6
55	5	5
65	2	2
75	1	1
85	1	1
90	0	0

Illuminance at Distance

Center Beam fc	Beam Width
400.73 fc	0.9 ft
100.18 fc	1.9 ft
44.53 fc	2.8 ft
22.05 fc	3.8 ft
16.03 fc	4.7 ft
11.13 fc	5.7 ft

24.4 m (80 ft) 1 fc maximum distance
Vert. Spread: 13.5°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
0	1.19	1.19	1.19	1.16	1.16	1.06
1	1.15	1.14	1.12	1.10	1.07	1.04
2	1.12	1.09	1.07	1.05	1.03	1.01
3	1.10	1.06	1.03	1.00	0.98	0.96
4	1.07	1.03	1.00	0.97	0.95	0.93
5	1.05	1.00	0.97	0.95	0.93	0.91
6	1.03	0.98	0.95	0.92	0.90	0.88
7	1.01	0.96	0.93	0.91	0.89	0.87
8	1.00	0.95	0.91	0.88	0.86	0.84
9	0.98	0.93	0.89	0.87	0.85	0.83
10	0.97	0.92	0.89	0.87	0.85	0.83

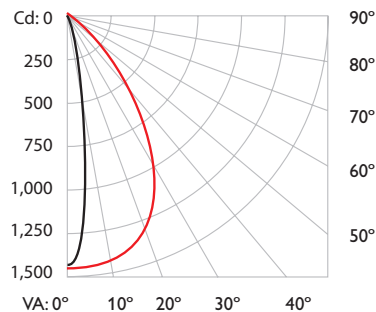
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	446.3	94.5%
0-40	454.4	96.3%
0-60	463.8	98.2%
60-90	4.7	1.0%
70-100	2.6	0.6%
90-120	1.5	0.3%
0-90	468.5	99.2%
90-180	3.6	0.8%
0-180	472.1	100.0%

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
453	48.1

Polar Candela Distribution



	0° H	90° H
0	1434	1434
5	1016	1080
15	92	132
25	18	22
35	10	10
45	6	5
55	4	3
65	2	2
75	1	1
85	1	0
90	1	0

Illuminance at Distance

Center Beam fc	Beam Width
89.61 fc	1.0 ft
22.4 fc	2.0 ft
9.96 fc	3.0 ft
5.6 fc	4.0 ft
3.58 fc	5.0 ft
2.49 fc	6.0 ft

11.5 m (37.8 ft) 1 fc maximum distance
Vert. Spread: 14.2°
Horiz. Spread: 68.1°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
0	1.19	1.19	1.19	1.16	1.16	1.06
1	1.14	1.11	1.09	1.07	1.04	1.03
2	1.09	1.04	1.00	0.97	0.95	0.93
3	1.04	0.98	0.93	0.89	0.86	0.84
4	0.99	0.92	0.87	0.83	0.80	0.78
5	0.95	0.87	0.82	0.78	0.75	0.73
6	0.91	0.83	0.77	0.73	0.70	0.68
7	0.87	0.79	0.73	0.69	0.66	0.64
8	0.83	0.75	0.70	0.66	0.63	0.61
9	0.80	0.72	0.66	0.63	0.60	0.58
10	0.77	0.69	0.63	0.60	0.57	0.55

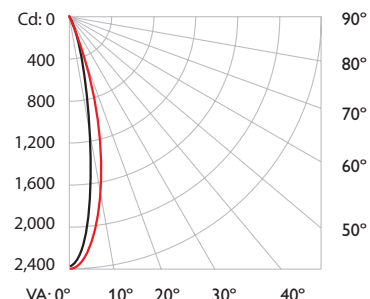
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	344.3	76.0%
0-40	407.1	89.9%
0-60	444.3	98.1%
60-90	7.3	1.6%
70-100	2.8	0.6%
90-120	0.3	0.1%
0-90	451.6	99.7%
90-180	1.2	0.3%
0-180	452.8	100.0%

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
465	48.8

Polar Candela Distribution



	0° H	90° H
0	2374	2374
5	1951	1994
15	425	509
25	58	73
35	16	16
45	8	7
55	4	4
65	3	3
75	2	2
85	1	1
90	1	1

Illuminance at Distance

Center Beam fc	Beam Width
148.36 fc	1.3 ft
37.09 fc	2.7 ft
16.48 fc	4.0 ft
9.27 fc	5.3 ft
5.93 fc	6.6 ft
4.12 fc	8.0 ft

14.8 m (48.6 ft) 1 fc maximum distance
Vert. Spread: 18.9°
Horiz. Spread: 27.6°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
0	1.19	1.19	1.19	1.16	1.16	1.06
1	1.15	1.13	1.11	1.09	1.06	1.04
2	1.11	1.07	1.04	1.01	0.99	0.96
3	1.07	1.02	0.99	0.96	0.93	0.91
4	1.04	0.98	0.94	0.91	0.88	0.86
5	1.01	0.95	0.91	0.87	0.84	0.82
6	0.98	0.92	0.87	0.84	0.81	0.79
7	0.95	0.89	0.84	0.81	0.78	0.76
8	0.93	0.86	0.82	0.79	0.76	0.74
9	0.90	0.83	0.79	0.77	0.74	0.72
10	0.88	0.81	0.77	0.75	0.72	0.70

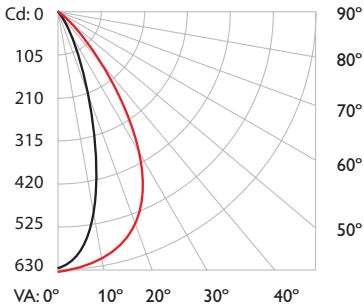
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	431.2	92.8%
0-40	446.8	96.1%
0-60	458.0	98.5%
60-90	5.1	1.1%
70-100	2.4	0.5%
90-120	0.6	0.1%
0-90	463.1	99.6%
90-180	1.7	0.4%
0-180	464.8	100.0%

305 mm (1 ft), 30° x 60° beam angle

Lumens	Efficacy
456	48

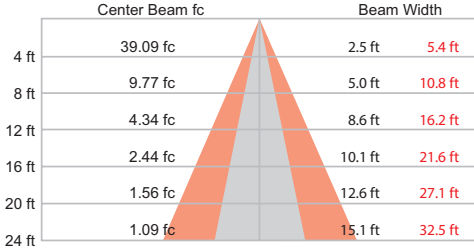
Polar Candela Distribution



■ - 0° H ■ - 90° H

	0	25	45	65	90
0	626	626	626	626	626
5	592	599	608	620	624
15	375	410	469	546	591
25	146	176	256	386	488
35	40	49	88	183	294
45	15	15	23	56	114
55	10	8	10	16	32
65	6	6	6	6	9
75	2	2	2	3	3
85	1	1	1	0	0
90	0	0	0	0	0

Illuminance at Distance



7.6 m (25 ft) 1 fc maximum distance

■ Vert. Spread: 35° ■ Horiz. Spread: 68.1°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%											
RCC %:	80	70	50	30	10	0					
RW %:	70	50	30	0	70	50	30	0	50	30	20
RCR:	0	1	2	3	4	5	6	7	8	9	10
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00
2	1.07	1.02	0.98	0.95	1.05	1.01	0.97	0.87	0.97	0.94	0.91
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.89	0.87
4	0.97	0.89	0.83	0.79	0.95	0.88	0.82	0.75	0.85	0.81	0.77
5	0.92	0.83	0.77	0.73	0.90	0.82	0.77	0.70	0.80	0.76	0.72
6	0.87	0.78	0.72	0.68	0.86	0.77	0.72	0.66	0.76	0.71	0.67
7	0.83	0.74	0.67	0.63	0.82	0.73	0.67	0.62	0.72	0.66	0.63
8	0.79	0.69	0.63	0.59	0.78	0.69	0.63	0.58	0.68	0.63	0.59
9	0.75	0.66	0.60	0.56	0.74	0.65	0.59	0.55	0.64	0.59	0.55
10	0.72	0.62	0.56	0.53	0.71	0.62	0.56	0.52	0.61	0.56	0.52

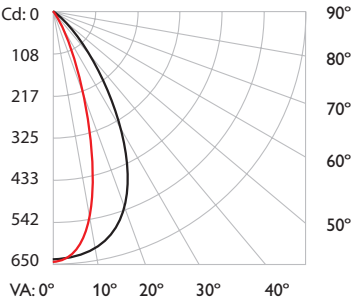
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	319.0	69.9%
0-40	398.2	87.2%
0-60	445.1	97.5%
60-90	10.0	2.2%
70-100	3.9	0.9%
90-120	0.6	0.1%
0-90	455.1	99.7%
90-180	1.6	0.3%
0-180	456.6	100.0%

305 mm (1 ft), 60° x 30° beam angle

Lumens	Efficacy
455	48.2

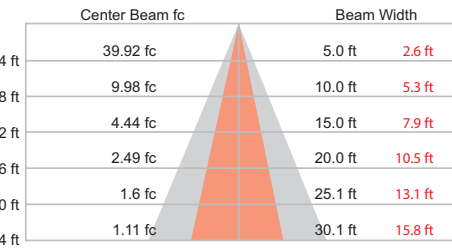
Polar Candela Distribution



■ - 0° H ■ - 90° H

	0	25	45	65	90
0	639	639	639	639	639
5	630	631	625	620	616
15	587	550	483	428	405
25	462	378	265	191	161
35	255	174	93	54	42
45	89	53	26	16	14
55	24	15	10	9	8
65	8	7	6	5	6
75	3	2	2	2	2
85	2	1	1	1	0
90	1	0	0	0	0

Illuminance at Distance



7.7 m (25.3 ft) 1 fc maximum distance

■ Vert. Spread: 64.1° ■ Horiz. Spread: 36.4°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%											
RCC %:	80	70	50	30	10	0					
RW %:	70	50	30	0	70	50	30	0	50	30	20
RCR:	0	1	2	3	4	5	6	7	8	9	10
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11
1	1.13	1.10	1.08	1.06	1.11	1.08	1.06	0.93	1.04	1.02	1.01
2	1.07	1.02	0.98	0.95	1.05	1.01	0.97	0.87	0.97	0.94	0.92
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.89	0.87
4	0.97	0.89	0.84	0.79	0.95	0.88	0.83	0.76	0.86	0.81	0.77
5	0.92	0.84	0.78	0.73	0.90	0.83	0.77	0.71	0.81	0.76	0.72
6	0.88	0.79	0.73	0.68	0.86	0.78	0.72	0.66	0.76	0.71	0.67
7	0.83	0.74	0.68	0.64	0.82	0.73	0.68	0.62	0.72	0.67	0.63
8	0.79	0.70	0.64	0.60	0.78	0.69	0.64	0.59	0.68	0.63	0.59
9	0.75	0.66	0.60	0.57	0.74	0.65	0.60	0.56	0.64	0.59	0.55
10	0.73	0.63	0.57	0.53	0.71	0.63	0.57	0.53	0.62	0.57	0.53

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	325.0	71.4%
0-40	400.9	88.1%
0-60	443.5	97.5%
60-90	9.8	2.2%
70-100	4.0	0.9%
90-120	0.7	0.1%
0-90	453.3	99.6%
90-180	1.6	0.4%
0-180	455.0	100.0%

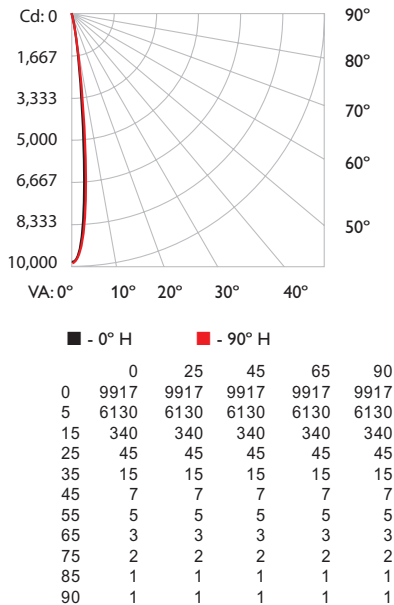
Photometrics/eW Graze QLX Powercore, 3500 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

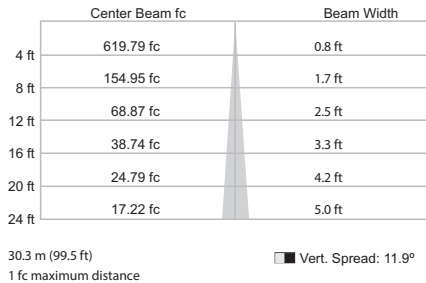
305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
584	61.9

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %	80	70	50	30	10	0
RW %	70	50	30	10	0	0
0	1.19	1.19	1.19	1.19	1.19	1.19
1	1.15	1.13	1.12	1.10	1.07	1.06
2	1.12	1.09	1.07	1.05	1.03	1.02
3	1.10	1.06	1.03	1.00	0.97	0.96
4	1.07	1.03	1.00	0.97	0.94	0.93
5	1.05	1.01	0.97	0.94	0.91	0.90
6	1.03	0.99	0.95	0.92	0.89	0.88
7	1.02	0.97	0.94	0.91	0.88	0.87
8	1.00	0.95	0.92	0.89	0.86	0.85
9	0.99	0.94	0.91	0.88	0.85	0.84
10	0.97	0.93	0.90	0.87	0.84	0.83

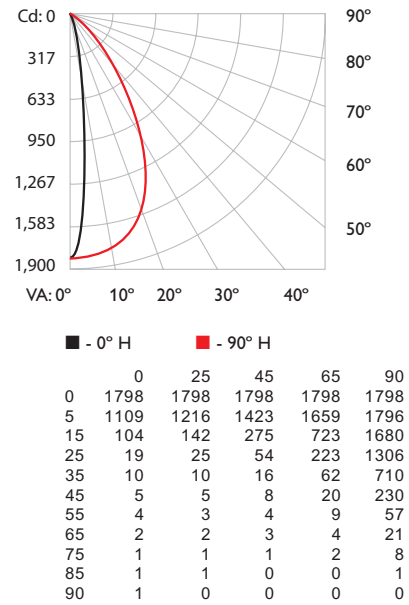
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	550.5	94.2%
0-40	560.2	95.9%
0-60	570.7	97.7%
60-90	6.9	1.2%
70-100	4.6	0.8%
90-120	3.0	0.5%
0-90	577.6	98.8%
90-180	6.8	1.2%
0-180	584.3	100.0%

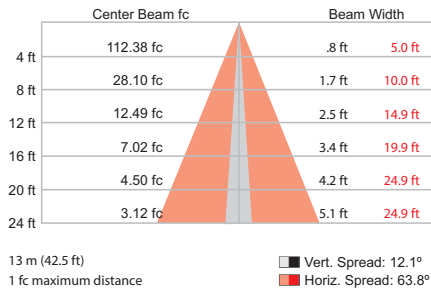
305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
489	51.1

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %	80	70	50	30	10	0
RW %	70	50	30	10	0	0
0	1.19	1.19	1.19	1.19	1.19	1.19
1	1.14	1.11	1.09	1.07	1.05	1.04
2	1.09	1.04	1.01	0.97	0.94	0.93
3	1.04	0.98	0.94	0.90	0.86	0.85
4	1.00	0.93	0.88	0.84	0.80	0.79
5	0.95	0.88	0.83	0.79	0.75	0.74
6	0.91	0.83	0.78	0.74	0.70	0.69
7	0.88	0.80	0.74	0.70	0.66	0.65
8	0.84	0.76	0.71	0.67	0.63	0.62
9	0.81	0.73	0.68	0.64	0.60	0.59
10	0.78	0.70	0.65	0.61	0.57	0.56

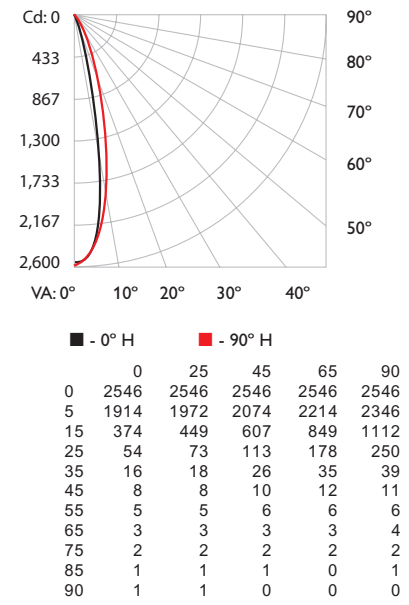
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	380.7	77.9%
0-40	444.3	90.9%
0-60	479.6	98.1%
60-90	7.4	1.5%
70-100	3.1	0.6%
90-120	0.6	0.1%
0-90	487.0	99.6%
90-180	1.8	0.4%
0-180	488.8	100.0%

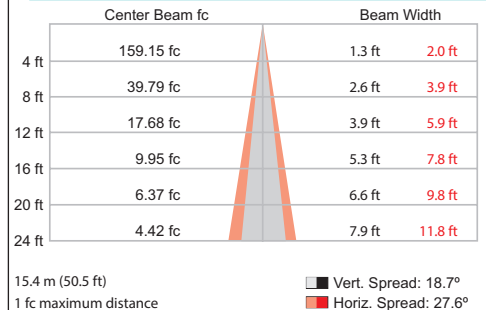
305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
492	51.7

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %	80	70	50	30	10	0
RW %	70	50	30	10	0	0
0	1.19	1.19	1.19	1.19	1.19	1.19
1	1.15	1.13	1.11	1.09	1.07	1.06
2	1.11	1.07	1.04	1.01	0.97	0.96
3	1.07	1.02	0.99	0.96	0.93	0.92
4	1.04	0.98	0.94	0.91	0.87	0.86
5	1.01	0.95	0.91	0.87	0.84	0.83
6	0.98	0.92	0.87	0.84	0.80	0.79
7	0.95	0.89	0.84	0.81	0.77	0.76
8	0.93	0.86	0.82	0.78	0.74	0.73
9	0.90	0.84	0.79	0.75	0.71	0.70
10	0.88	0.81	0.77	0.73	0.69	0.68

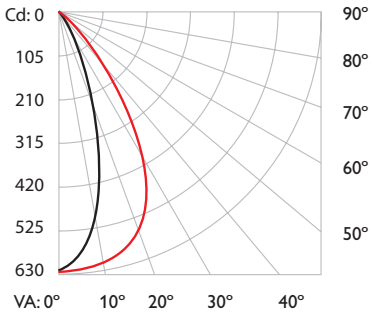
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	455.7	92.5%
0-40	472.2	95.8%
0-60	484.5	98.3%
60-90	5.9	1.2%
70-100	3.0	0.6%
90-120	0.9	0.2%
0-90	490.4	99.5%
90-180	2.4	0.5%
0-180	492.8	100.0%

305 mm (1 ft), 30° x 60° beam angle

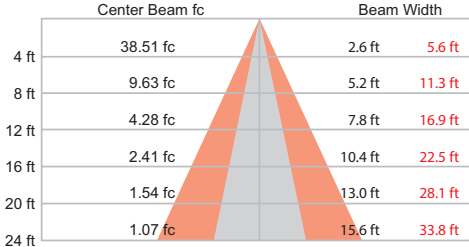
Lumens	Efficacy
481	50.9

Polar Candela Distribution



	0	25	45	65	90
0	616	616	616	616	616
5	587	595	602	612	615
15	383	415	474	546	589
25	158	191	272	397	496
35	47	57	101	202	312
45	18	18	28	67	130
55	11	10	11	19	39
65	6	6	6	8	11
75	3	2	2	3	4
85	2	1	1	0	1
90	1	1	0	0	0

Illuminance at Distance



7.6 m (24.8 ft)
1 fc maximum distance

Vert. Spread: 36.1°
Horiz. Spread: 70.2°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Area Cavity Reflections: 20																		
RCC %:	80					70					50					30				
RW %:	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20
RCR:	0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
1	1.13	1.10	1.07	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	1.00	0.98	0.97	0.96	0.95	0.94	0.94	0.92	
2	1.07	1.02	0.98	0.94	1.05	1.00	0.96	0.86	0.97	0.94	0.91	0.94	0.91	0.89	0.89	0.88	0.87	0.86	0.85	
3	1.01	0.95	0.89	0.85	0.99	0.93	0.88	0.80	0.91	0.87	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.79	0.77	
4	0.96	0.88	0.82	0.78	0.94	0.87	0.82	0.74	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.77	0.75	0.73	0.71	
5	0.91	0.82	0.76	0.72	0.89	0.81	0.76	0.69	0.80	0.75	0.71	0.78	0.74	0.70	0.76	0.73	0.70	0.68	0.66	
6	0.86	0.77	0.71	0.67	0.85	0.76	0.71	0.65	0.75	0.70	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.63	0.61	
7	0.82	0.73	0.66	0.62	0.81	0.72	0.66	0.61	0.71	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.59	0.57	
8	0.78	0.68	0.62	0.58	0.77	0.68	0.62	0.57	0.67	0.61	0.58	0.66	0.61	0.57	0.65	0.60	0.57	0.56	0.54	
9	0.74	0.65	0.59	0.55	0.73	0.64	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.52	0.50	
10	0.71	0.61	0.55	0.51	0.70	0.61	0.55	0.51	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.49	0.47	

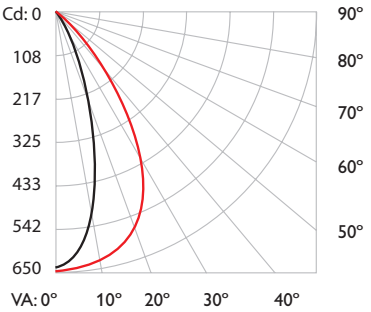
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	325.8	67.8%
0-40	413.0	85.9%
0-60	467.8	97.3%
60-90	11.3	2.3%
70-100	4.3	0.9%
90-120	0.6	0.1%
0-90	479.1	99.7%
90-180	1.6	0.3%
0-180	480.7	100.0%

305 mm (1 ft), 60° x 30° beam angle

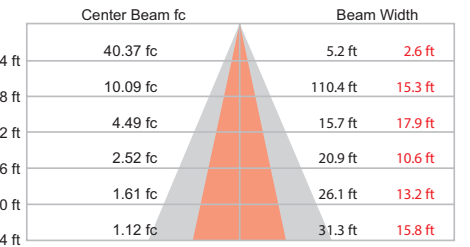
Lumens	Efficacy
478	50.6

Polar Candela Distribution



	0	25	45	65	90
0	646	646	646	646	646
5	637	639	630	624	621
15	602	563	494	436	409
25	490	397	277	198	167
35	281	190	100	58	45
45	101	59	28	18	16
55	27	17	11	10	9
65	9	7	6	6	6
75	4	3	3	2	3
85	2	1	1	0	1
90	0	1	0	0	0

Illuminance at Distance



7.7 m (25.4 ft)
1 fc maximum distance

Vert. Spread: 66.3°
Horiz. Spread: 36.5°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%																		
RCC %:	80	70	50	30	10	0	70	50	30	10	0	70	50	30	20	50	30	20	0	
RW %:	70	50	30	0	70	50	30	0	70	50	30	0	70	50	30	20	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	1.00	0.99	0.97	0.97	0.95	0.94	0.93		
2	1.07	1.02	0.98	0.95	1.05	1.01	0.98	0.86	0.97	0.94	0.91	0.94	0.92	0.89	0.91	0.89	0.87	0.86		
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.80	0.91	0.87	0.84	0.89	0.85	0.82	0.86	0.83	0.81	0.80		
4	0.97	0.89	0.83	0.79	0.95	0.88	0.82	0.75	0.85	0.81	0.77	0.83	0.80	0.76	0.81	0.78	0.76	0.74		
5	0.92	0.83	0.77	0.73	0.90	0.82	0.77	0.70	0.80	0.76	0.72	0.79	0.74	0.71	0.77	0.73	0.70	0.69		
6	0.87	0.78	0.72	0.68	0.86	0.77	0.72	0.66	0.76	0.71	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.65		
7	0.83	0.74	0.67	0.63	0.82	0.73	0.67	0.62	0.72	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.61		
8	0.79	0.69	0.63	0.59	0.78	0.69	0.63	0.58	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.61	0.58	0.57		
9	0.75	0.66	0.60	0.56	0.74	0.65	0.60	0.55	0.64	0.59	0.55	0.63	0.59	0.55	0.62	0.58	0.55	0.54		
10	0.72	0.62	0.56	0.53	0.71	0.62	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.51		

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	335.0	70.1%
0-40	417.6	87.4%
0-60	465.1	97.3%
60-90	10.7	2.2%
70-100	4.5	0.9%
90-120	0.9	0.2%
0-90	475.8	99.6%
90-180	2.0	0.4%
0-180	477.9	100.0%

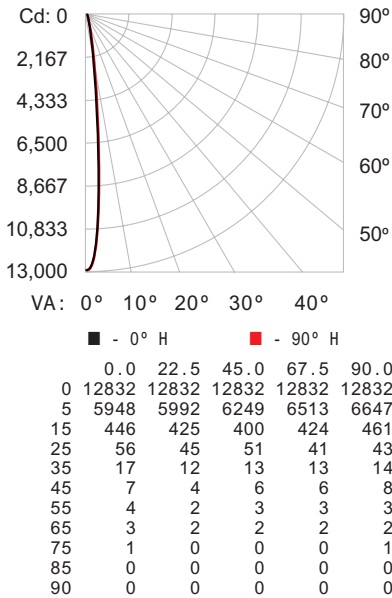
Photometrics/eW Graze Q LX Powercore, 4000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
595	63.1 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	802.0 fc	0.7 ft 0.7 ft
8 ft	200.5 fc	1.3 ft 1.4 ft
12 ft	89.1 fc	2.0 ft 2.2 ft
16 ft	50.1 fc	2.7 ft 2.9 ft
20 ft	32.1 fc	3.2 ft 3.6 ft
24 ft	22.3 fc	4.0 ft 4.3 ft

113 ft (34.4 m)
1 fc maximum distance

■ Vert. Spread: 9.6°
■ Horiz. Spread: 10.

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
RC	80	70	50	30	10	0	RC	80	70	50	30	0
RW	70	50	30	10	0	0	RW	70	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100	0	119119119119	116116116116	1111111111	106106106	102102102
1	116114113111	114112111109	108107106	104104103	101101100	98	1	116114113111	114112111109	108107106	104104103	101101100
2	113110108106	111109106105	105104102	103101100	100	99	2	113110108106	111109106105	105104102	103101100	100
3	111107104102	109106103101	103101	99	101	99	3	111107104102	109106103101	103101	99	101
4	108104101	99	107103100	98	101	99	4	108104101	99	107103100	98	101
5	106102	99	96	105101	98	96	5	106102	99	96	105101	98
6	105100	97	95	103	99	96	6	105100	97	95	103	99
7	103	98	95	93	102	98	7	103	98	95	93	102
8	101	97	94	92	101	96	8	101	97	94	92	101
9	100	95	92	90	99	95	9	100	95	92	90	99
10	99	94	91	89	98	94	10	99	94	91	89	98

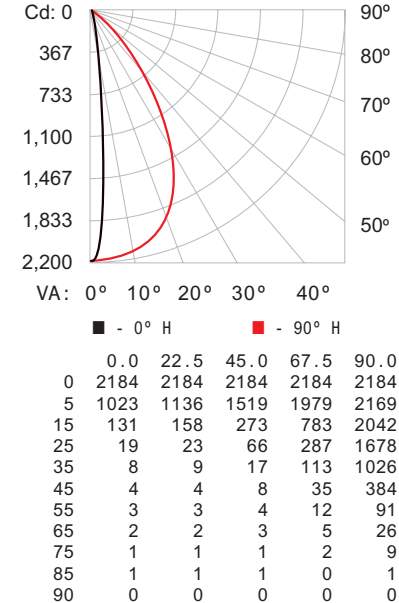
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	576	96.9
0- 40	585	98.3
0- 60	592	99.6
0- 90	595	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	595	100.0

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
583	61.8 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	136.5 fc	0.7 ft 5.4 ft
8 ft	34.1 fc	1.4 ft 10.8 ft
12 ft	15.2 fc	2.0 ft 16.2 ft
16 ft	8.5 fc	2.7 ft 21.7 ft
20 ft	5.5 fc	3.4 ft 27.1 ft
24 ft	3.8 fc	4.1 ft 32.5 ft

ft (m)
1 fc maximum distance

■ Vert. Spread: 9.8°
■ Horiz. Spread: 68.2°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
RC	80	70	50	30	10	0	RC	80	70	50	30	0
RW	70	50	30	10	0	0	RW	70	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100	0	119119119119	116116116116	1111111111	106106106	102102102
1	11411109106	111109107105	105103102	101100	98	97	1	11411109106	111109107105	105103102	101100	98
2	108104100	97	106102	98	95	99	2	108104100	97	106102	98	95
3	103	97	92	89	101	96	3	103	97	92	89	101
4	99	91	86	82	97	90	4	99	91	86	82	97
5	94	86	81	77	93	85	5	94	86	81	77	93
6	90	82	76	72	89	81	6	90	82	76	72	89
7	86	78	72	68	85	77	7	86	78	72	68	85
8	83	74	68	64	81	73	8	83	74	68	64	81
9	79	70	65	61	78	70	9	79	70	65	61	78
10	76	67	62	59	75	67	10	76	67	62	59	75

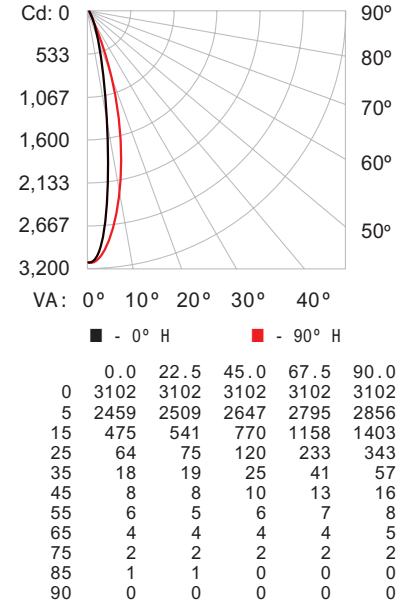
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	428	73.4
0- 40	517	88.7
0- 60	574	98.5
0- 90	583	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	583	100.0

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
581	61.4 lm / W

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	193.9 fc	1.2 ft 1.2 ft
8 ft	48.5 fc	2.4 ft 2.4 ft
12 ft	21.5 fc	3.7 ft 6.0 ft
16 ft	12.1 fc	4.9 ft 8.0 ft
20 ft	7.8 fc	6.1 ft 10.0 ft
24 ft	5.4 fc	7.3 ft 12.0 ft

55 ft (16.8 m)
1 fc maximum distance

■ Vert. Spread: 17.4°
■ Horiz. Spread: 28.1°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%												
C	80	70	50	30	10	0	C	80	70	50	30	0
W	70	50	30	10	0	0	W	70	50	30	10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100	0	119119119119	116116116116	1111111111	106106106	102102102
1	115113111109	11211109107	107105104	103102101	100	99	1	115113111109	11211109107	107105104	103102101	100
2	111107104102	109106103101	102100	98	100	98	2	111107104102	109106103101	102100	98	100
3	107103	99	96	106101	98	95	3	107103	99	96	106101	98
4	104	98	94	91	102	97	4	104	98	94	91	102
5	101	95	91	88	99	94	5	101	95	91	88	99
6	98	92	87	84	97	91	6	98	92	87	84	97
7	95	89	85	82	94	88	7	95	89	85	82	94
8	93	86	82	79	92	86	8	93	86	82	79	92
9	90	84	80	77	89	83	9	90	84	80	77	89
10	88	81	77	75	87	81	10	88	81	77	75	87

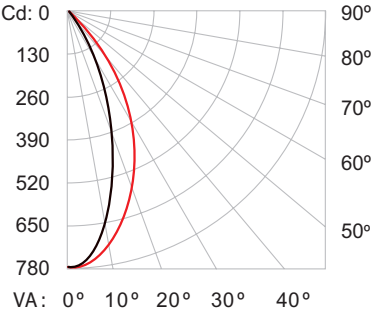
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	540	92.8
0- 40	561	96.5
0- 60	575	98.9
0- 90	581	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	581	100.0

305 mm (1 ft), 30° x 60° beam angle

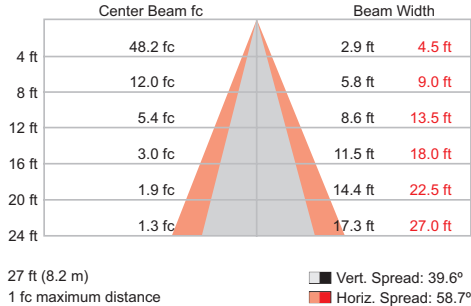
Lumens	Efficacy
579	61.2 lm / W

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	771	771	771	771	771
5	740	742	750	753	758
15	520	536	582	628	651
25	252	274	342	428	474
35	85	97	145	225	276
45	27	30	47	90	125
55	13	13	16	30	45
65	7	8	8	11	15
75	3	3	3	4	5
85	1	1	1	1	1
90	1	1	1	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RC	80	70	50	30	10	0
RW	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100
1	113110107105	11108106103	104102100	100 99 97	97 95 94	93
2	107102 98 94	105100 96 93	97 94 91	94 91 89	91 89 87	85
3	101 95 89 85	99 93 88 85	91 86 83	88 85 82	86 83 81	79
4	96 88 82 78	94 87 82 77	85 80 77	83 79 76	81 77 75	73
5	91 82 76 72	89 81 76 71	80 75 71	78 74 70	76 73 70	68
6	86 77 71 67	85 76 71 66	75 70 66	73 69 65	72 68 65	63
7	82 73 66 62	81 72 66 62	71 65 61	69 65 61	68 64 61	59
8	78 68 62 58	77 68 62 58	67 61 58	66 61 57	65 60 57	56
9	74 65 59 55	73 64 58 54	63 58 54	62 57 54	61 57 54	52
10	71 61 55 51	70 61 55 51	60 55 51	59 54 51	58 54 51	50

Zonal Lumen

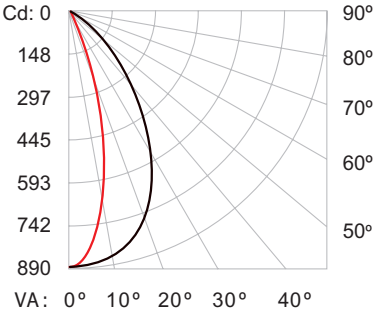
ZONE	LUMENS	%FIXT
0- 30	392	67.6
0- 40	494	85.4
0- 60	564	97.3
0- 90	579	99.9
90-120	0	0.1
90-130	0	0.1
90-150	0	0.1
90-180	0	0.1
0-180	579	100.0

For lux multiply fc by 10.7

305 mm (1 ft), 60° x 30° beam angle

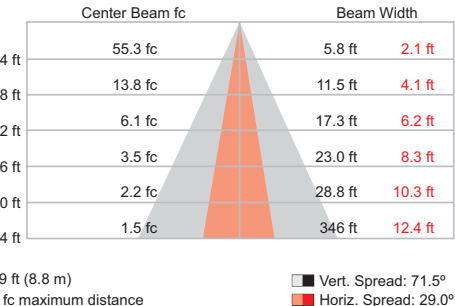
Lumens	Efficacy
580	61.3 lm / W

Polar Candela Distribution



	0.0	22.5	45.0	67.5	90.0
0	884	884	884	884	884
5	879	869	848	826	817
15	818	738	579	460	420
25	683	502	258	146	119
35	461	249	80	38	30
45	219	88	25	16	14
55	71	28	12	10	9
65	18	10	7	6	6
75	5	4	3	3	3
85	2	2	1	1	0
90	1	1	1	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RC	80	70	50	30	10	0
RW	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
0	119119119119	116116116116	1111111111	106106106	102102102	100
1	113110108105	11108106104	104102100	100 99 97	97 96 95	93
2	107102 98 94	105100 97 93	97 94 91	94 92 89	91 89 87	86
3	102 95 90 86	100 94 89 85	91 87 84	88 85 82	86 83 81	79
4	96 89 83 79	95 87 82 78	85 81 77	83 79 76	81 78 75	74
5	91 83 77 72	90 82 76 72	80 75 71	78 74 71	77 73 70	69
6	87 78 72 67	85 77 71 67	75 70 67	74 70 66	73 69 66	64
7	83 73 67 63	81 73 67 63	71 66 62	70 65 62	69 65 62	60
8	79 69 63 59	78 69 63 59	67 62 59	66 62 58	65 61 58	57
9	75 65 60 56	74 65 59 55	64 59 55	63 58 55	62 58 55	53
10	72 62 56 52	71 62 56 52	61 56 52	60 55 52	59 55 52	51

Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	396	68.3
0- 40	495	85.3
0- 60	565	97.5
0- 90	579	99.9
90-120	0	0.1
90-130	0	0.1
90-150	0	0.1
90-180	0	0.1
0-180	580	100.0

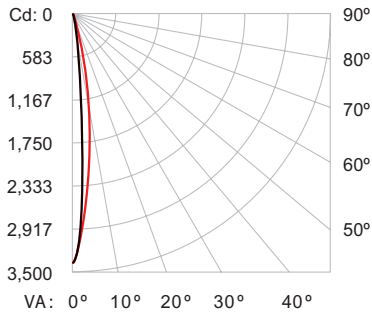
Photometrics/eW Graze QLX Powercore 5W, 2700 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

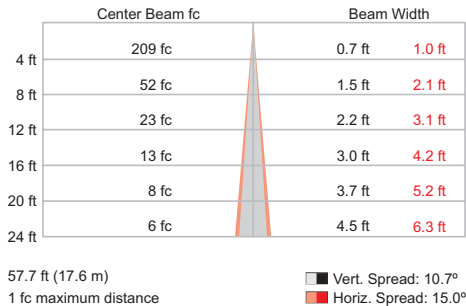
Lumens	Efficacy
226	54.3 lm / W

Polar Candela Distribution



	0°	25°	45°	70°	90°
0	3343	3343	3343	3343	3343
5	1311	1309	1546	1988	2224
15	74	82	104	166	230
25	13	12	13	17	20
35	5	4	5	5	5
45	2	2	2	2	3
55	1	1	1	1	2
65	1	1	1	1	1
75	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	20 50 30 0	20 50 30 0	20 50 30 0	20 50 30 20	20 50 30 20	20 50 30 20
RCR: 0	119 119 119 119	116 116 116 100	111 111 111	106 106 106	102 102 102	100
1	116 114 112 111	113 112 110 98	108 107 106	104 103 103	101 100 100	98
2	113 110 107 105	111 108 106 97	105 103 102	102 101 100	100 99 98	96
3	110 106 103 101	108 105 102 95	103 100 98	100 99 97	98 97 96	95
4	108 103 100 98	106 102 99 94	100 98 96	99 97 95	97 95 94	93
5	106 101 98 95	104 100 97 92	99 96 94	97 95 93	96 94 93	92
6	104 99 95 93	103 98 95 91	97 94 92	96 93 92	95 93 91	90
7	102 97 94 91	101 96 93 90	95 93 91	94 92 90	93 91 90	89
8	100 95 92 90	99 95 92 89	94 91 89	93 91 89	92 90 89	88
9	99 94 91 88	98 93 90 87	93 90 88	92 90 86	91 89 88	87
10	97 92 89 87	97 92 89 86	91 89 87	91 88 87	90 88 87	86

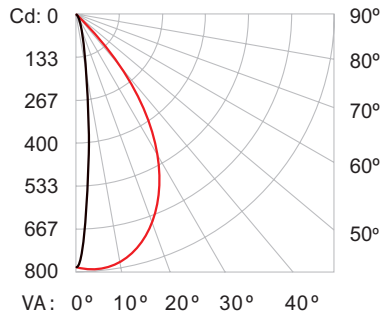
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	224.8	99.4 %
60 - 90	1.3	0.6 %
0 - 90	226.1	100.0 %

305 mm (1 ft), 10° x 60° beam angle

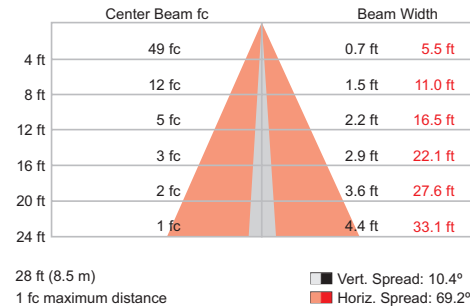
Lumens	Efficacy
221	49.6 lm / W

Polar Candela Distribution



	0°	25°	45°	70°	90°
0	784	784	784	784	784
5	364	400	512	699	787
15	39	51	89	345	750
25	7	9	23	121	616
35	3	3	6	47	375
45	2	2	3	15	136
55	1	1	2	5	31
65	1	1	1	2	9
75	0	0	0	1	3
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance:												20%							
RCC %:	80			70			50			30			10	0						
RW:	20	50	30	20	50	30	20	50	30	20	50	30	20	10	0					
RCR:	0	119	119	119	119	119	116	116	116	100	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	107	111	110	109	107	94	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	97	106	102	99	89	99	96	96	94	92	91	90	89	88	87	86
3	103	97	93	89	89	101	96	92	83	93	90	87	81	88	85	84	83	82	81	80
4	99	92	86	82	82	97	90	86	74	84	80	76	71	81	78	77	76	75	74	73
5	94	86	81	77	77	93	86	80	68	74	79	75	70	78	75	74	73	72	71	70
6	90	82	76	72	72	88	81	76	70	75	75	72	68	74	71	71	70	69	68	67
7	86	78	72	68	68	85	77	72	67	76	71	68	64	71	67	67	66	65	64	63
8	83	74	69	65	65	82	73	68	64	82	68	64	61	71	67	64	64	63	62	61
9	80	71	65	61	61	79	70	65	61	80	66	62	59	69	65	62	62	61	60	59
10	76	68	62	59	59	75	67	62	58	76	62	59	56	67	61	58	61	60	59	58

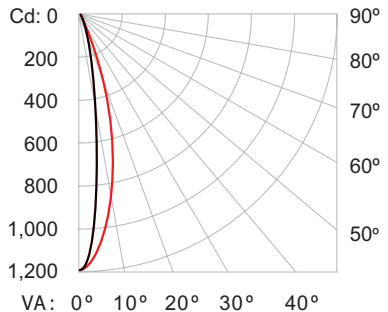
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	217.9	98.6 %
60 - 90	3.2	1.4 %
0 - 90	221.1	100.0 %

305 mm (1 ft), 15° x 30° beam angle

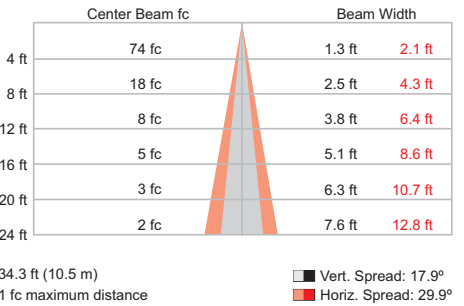
Lumens	Efficacy
238	52.7 lm / W

Polar Candela Distribution



	0°	25°	45°	70°	90°
0	1180	1180	1180	1180	1180
5	889	888	940	1014	1048
15	173	198	273	445	557
25	25	30	48	108	169
35	7	7	10	21	33
45	4	4	4	6	8
55	2	2	3	3	4
65	2	2	2	2	2
75	1	1	1	1	1
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%											
RCC %:	80	70	50	30	10	0	80	70	50	30	10	0	
RW %:	20	50	30	0	20	50	30	0	20	50	30	0	
RCR: 0	119	119	119	119	116	116	116	100	111	111	106	106	100
1	115	113	111	109	112	110	108	96	105	105	103	102	101
2	111	107	104	101	109	105	102	93	102	100	98	97	96
3	107	102	98	95	105	101	97	90	98	95	93	91	90
4	104	98	94	91	102	97	93	86	96	93	90	88	87
5	100	94	90	87	99	93	89	84	92	88	86	85	84
6	97	91	86	83	96	90	86	81	89	85	83	82	81
7	94	88	83	80	93	87	83	79	86	82	80	79	78
8	92	85	81	78	91	85	80	77	84	80	77	76	75
9	90	83	78	75	89	83	78	75	82	78	75	74	73
10	87	80	76	73	86	80	76	73	79	76	73	72	71

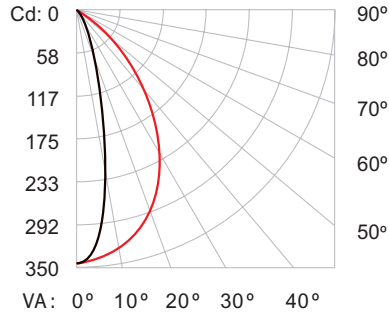
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	234.8	98.9 %
60 - 90	2.7	1.1 %
0 - 90	237.6	100.0 %

305 mm (1 ft), 30° x 60° beam angle

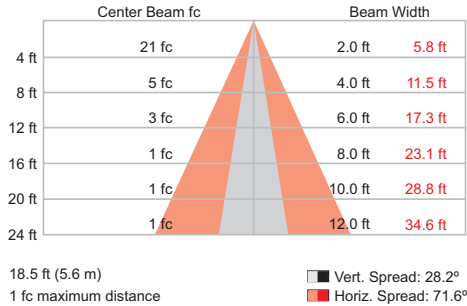
Lumens	Efficacy
213	50.9 lm / W

Polar Candela Distribution



	0° H	90° H
0	0	25
5	343	343
15	146	168
25	33	45
35	9	11
45	5	5
55	4	3
65	2	2
75	1	1
85	1	0
90	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	20	50	30	0	0	0
RCR:	119	119	119	119	119	119
1	113	110	108	105	104	102
2	107	102	98	94	91	87
3	102	95	90	86	83	81
4	96	89	83	79	75	71
5	91	83	77	73	70	69
6	87	78	72	67	64	63
7	83	73	67	63	60	59
8	79	69	63	59	56	55
9	75	65	60	56	53	52
10	72	62	56	53	51	51

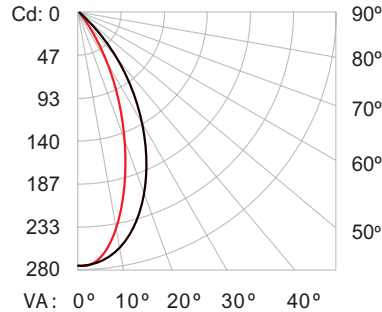
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	208.1	97.5 %
60 - 90	5.3	2.5 %
0 - 90	213.4	100.0 %

305 mm (1 ft), 60° x 30° beam angle

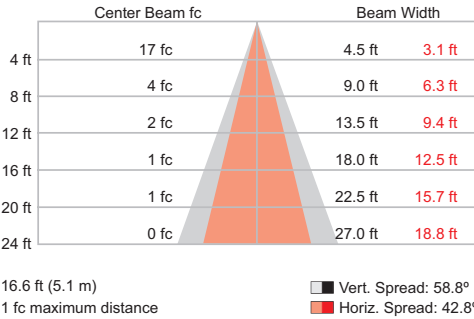
Lumens	Efficacy
219	53.3 lm / W

Polar Candela Distribution



	0° H	90° H
0	0	25
5	274	274
15	240	235
25	179	162
35	103	81
45	44	30
55	15	10
65	5	4
75	2	1
85	1	0
90	0	0

Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	20	50	30	0	0	0
RCR:	119	119	119	119	119	119
1	113	110	107	105	104	102
2	107	102	98	94	91	87
3	101	94	89	85	82	79
4	96	88	82	78	74	71
5	91	82	76	71	69	68
6	86	77	71	66	64	63
7	82	72	66	61	60	59
8	78	68	62	57	56	55
9	74	64	58	54	53	52
10	71	61	55	51	50	49

Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	213.4	97.5 %
60 - 90	5.5	2.5 %
0 - 90	218.9	100.0 %

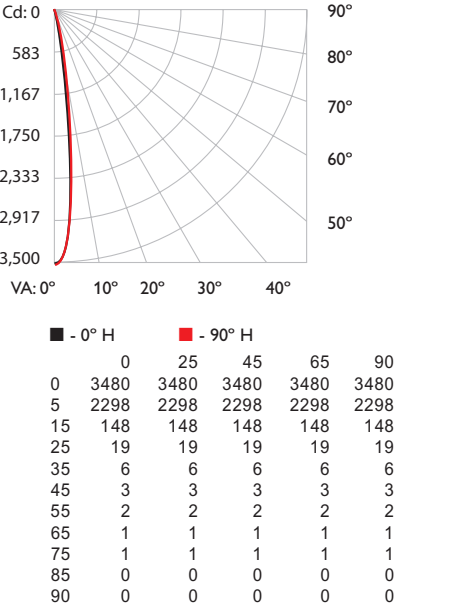
Photometrics/eW Graze QLX Powercore 5W, 3000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
232	56.4

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	217.53 fc	0.9 ft
8 ft	54.38 fc	1.8 ft
12 ft	24.17 fc	2.7 ft
16 ft	13.6 fc	3.6 ft
20 ft	8.7 fc	4.5 ft
24 ft	6.04 fc	5.4 ft

18 m (59 ft) 1 fc maximum distance

Vert. Spread: 12.7°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%											
RCC %:		80		70		50		30		10		0	
RW %:		70	50	30	0	70	50	30	0	70	50	30	0
0		1.19	1.19	1.19	1.19	1.16	1.16	1.16	0.99	1.11	1.11	1.11	1.06
1		1.15	1.14	1.12	1.10	1.13	1.11	1.10	0.97	1.07	1.06	1.05	1.04
2		1.12	1.09	1.07	1.05	1.10	1.08	1.05	0.96	1.04	1.03	1.01	1.02
3		1.10	1.06	1.03	1.00	1.08	1.05	1.02	0.94	1.02	1.00	0.98	0.99
4		1.07	1.03	1.00	0.97	1.06	1.02	0.99	0.93	1.00	0.98	0.96	0.95
5		1.05	1.01	0.97	0.95	1.04	1.00	0.97	0.92	0.98	0.96	0.94	0.93
6		1.03	0.98	0.95	0.93	1.02	0.98	0.95	0.90	0.97	0.94	0.92	0.91
7		1.02	0.97	0.93	0.91	1.01	0.96	0.93	0.89	0.95	0.92	0.90	0.89
8		1.00	0.95	0.92	0.90	0.99	0.95	0.92	0.88	0.94	0.91	0.89	0.88
9		0.99	0.94	0.91	0.89	0.98	0.93	0.90	0.87	0.92	0.89	0.88	0.87
10		0.97	0.92	0.89	0.87	0.97	0.92	0.89	0.87	0.91	0.89	0.87	0.86

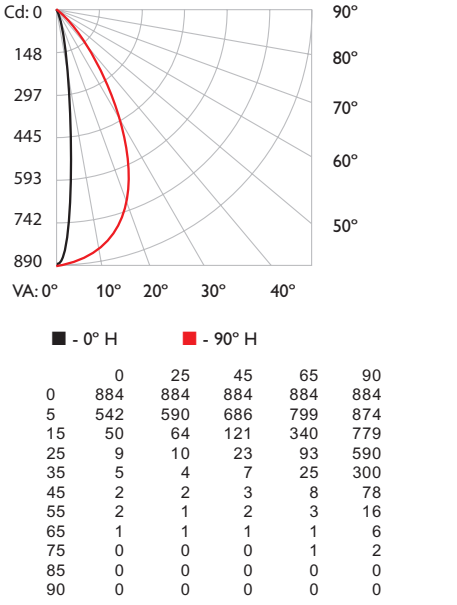
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	220.1	94.8%
0-40	223.9	96.4%
0-60	228.2	98.3%
60-90	2.3	1.0%
70-100	1.3	0.6%
90-120	0.7	0.3%
0-90	230.6	99.3%
90-180	1.7	0.7%
0-180	232.3	100.0%

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
219	50.4

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	55.23 fc	0.8 ft
8 ft	13.81 fc	1.7 ft
12 ft	6.14 fc	2.5 ft
16 ft	3.45 fc	3.4 ft
20 ft	2.21 fc	4.2 ft
24 ft	1.53 fc	5.1 ft

9.1 m (29.8 ft) 1 fc maximum distance

Vert. Spread: 12.0°
Horiz. Spread: 60.7°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80				70				50				30				10				0			
	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20
RW %:	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20	70	50	30	20
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00						
1	1.14	1.11	1.09	1.07	1.12	1.09	1.07	0.95	1.05	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.94						
2	1.09	1.05	1.01	0.98	1.07	1.03	1.00	0.90	1.00	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.89						
3	1.05	0.99	0.95	0.91	1.03	0.98	0.94	0.85	0.95	0.92	0.89	0.92	0.90	0.87	0.90	0.88	0.85	0.84						
4	1.00	0.94	0.89	0.85	0.99	0.93	0.88	0.81	0.90	0.87	0.84	0.88	0.85	0.83	0.87	0.84	0.82	0.80						
5	0.96	0.89	0.84	0.80	0.95	0.88	0.83	0.77	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.78	0.76						
6	0.92	0.85	0.80	0.76	0.91	0.84	0.79	0.74	0.83	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.73						
7	0.89	0.81	0.76	0.72	0.88	0.80	0.75	0.71	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.70						
8	0.86	0.78	0.72	0.69	0.85	0.77	0.72	0.68	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.67						
9	0.83	0.74	0.69	0.66	0.82	0.74	0.69	0.65	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.64						
10	0.80	0.72	0.67	0.63	0.79	0.71	0.66	0.63	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.62						

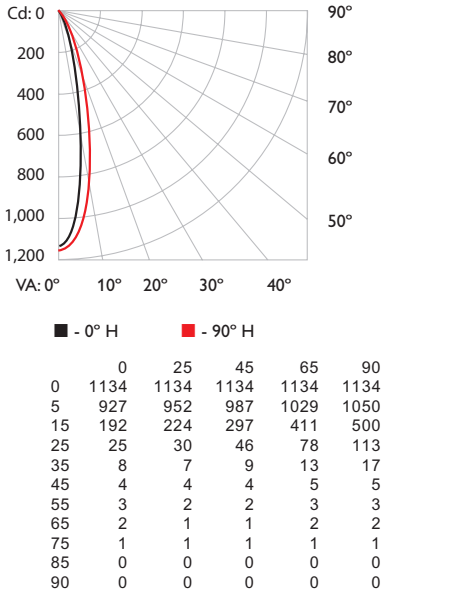
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	176.0	80.4%
0-40	202.8	92.6%
0-60	215.7	98.4%
60-90	2.3	1.1%
70-100	1.0	0.4%
90-120	0.4	0.2%
0-90	218.0	99.5%
90-180	1.1	0.5%
0-180	219.1	100.0%

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
219	53.4

Polar Candela Distribution



Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	70.89 fc	1.3 ft
8 ft	17.72 fc	2.6 ft
12 ft	7.88 fc	3.9 ft
16 ft	4.43 fc	5.2 ft
20 ft	2.84 fc	6.5 ft
24 ft	1.97 fc	7.8 ft

10.3 m (33.7 ft) 1 fc maximum distance

Vert. Spread: 18.5°
Horiz. Spread: 27.7°

Coefficients Of Utilization - Zonal Cavity Method

	Effective Floor Cavity Reflectance: 20%																	
CC %:	80			70			50			30			10			0		
RW %:	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30
RCR:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.15	1.12	1.10	1.09	1.12	1.10	1.08	0.96	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96
2	1.11	1.07	1.04	1.01	1.09	1.05	1.02	0.93	1.02	1.00	0.98	0.99	0.97	0.96	0.96	0.95	0.94	0.92
3	1.07	1.02	0.99	0.96	1.05	1.01	0.98	0.90	0.98	0.96	0.93	0.96	0.94	0.92	0.94	0.92	0.90	0.89
4	1.04	0.98	0.94	0.91	1.02	0.97	0.93	0.87	0.95	0.92	0.89	0.93	0.91	0.88	0.91	0.89	0.87	0.86
5	1.01	0.95	0.90	0.87	0.99	0.94	0.90	0.84	0.92	0.89	0.86	0.90	0.88	0.85	0.89	0.87	0.85	0.83
6	0.98	0.91	0.87	0.84	0.96	0.91	0.87	0.82	0.89	0.86	0.83	0.88	0.85	0.83	0.87	0.84	0.82	0.81
7	0.95	0.88	0.84	0.81	0.94	0.88	0.84	0.80	0.87	0.83	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.79
8	0.92	0.86	0.82	0.79	0.91	0.85	0.81	0.78	0.84	0.81	0.78	0.83	0.80	0.78	0.83	0.80	0.78	0.77
9	0.90	0.83	0.79	0.77	0.89	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.76	0.81	0.78	0.76	0.75
10	0.88	0.81	0.77	0.75	0.87	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.79	0.76	0.74	0.73

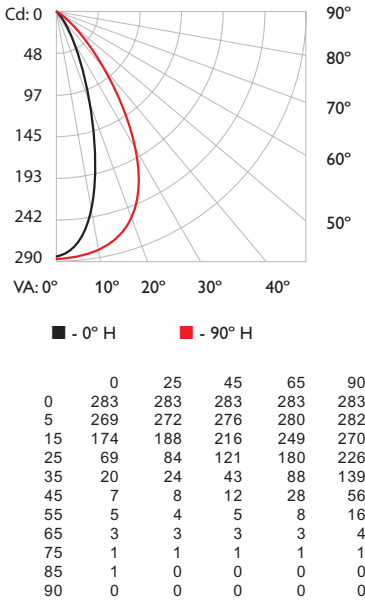
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	201.8	92.3%
0-40	209.1	95.6%
0-60	214.5	98.1%
60-90	2.7	1.2%
70-100	1.5	0.7%
90-120	0.6	0.3%
0-90	217.3	99.3%
90-180	1.4	0.7%
0-180	218.7	100.0%

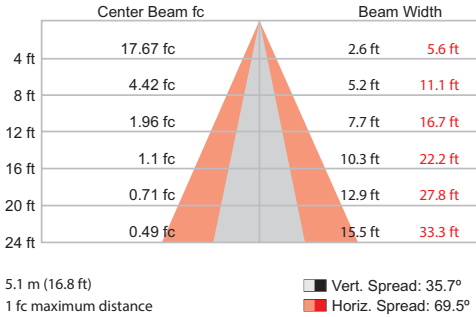
305 mm (1 ft), 30° x 60° beam angle

Lumens	Efficacy
214	51.7

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RCC %:	80	70	50	30	10	0					
RW %:	70	50	30	0	70	50	30	0	50	30	0
RCR:	0	1	2	3	4	5	6	7	8	9	10
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00
2	1.07	1.02	0.98	0.94	1.05	1.00	0.97	0.86	0.97	0.94	0.91
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.80	0.91	0.87	0.86
4	0.96	0.89	0.83	0.79	0.95	0.87	0.82	0.75	0.85	0.81	0.77
5	0.91	0.83	0.77	0.72	0.90	0.82	0.76	0.70	0.80	0.75	0.71
6	0.87	0.78	0.72	0.67	0.85	0.77	0.71	0.65	0.75	0.70	0.66
7	0.83	0.73	0.67	0.63	0.81	0.72	0.67	0.61	0.71	0.66	0.62
8	0.79	0.69	0.63	0.59	0.77	0.68	0.63	0.58	0.67	0.62	0.58
9	0.75	0.65	0.59	0.55	0.74	0.65	0.59	0.54	0.64	0.59	0.55
10	0.72	0.62	0.56	0.52	0.70	0.61	0.56	0.51	0.60	0.55	0.52

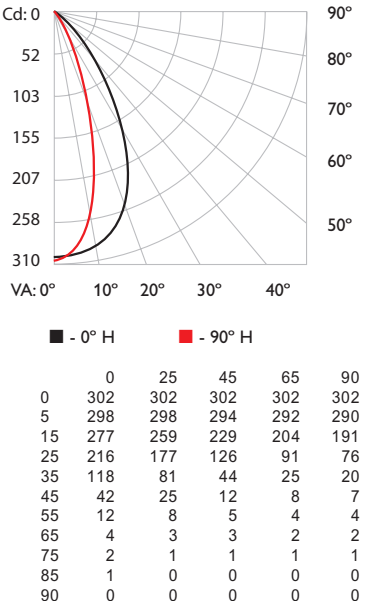
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	147.6	69.0%
0-40	185.6	86.7%
0-60	208.5	97.5%
60-90	4.7	2.2%
70-100	1.8	0.9%
90-120	0.3	0.1%
0-90	213.2	99.7%
90-180	0.7	0.3%
0-180	213.9	100.0%

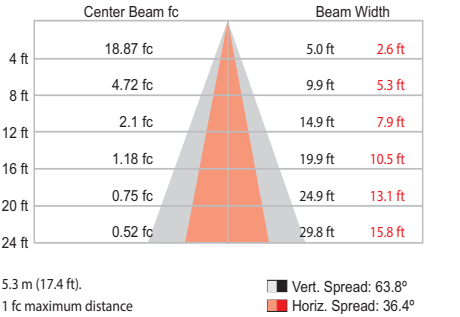
305 mm (1 ft), 60° x 30° beam angle

Lumens	Efficacy
215	52.2

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%									
RCC %:	80	70	50	30	10	0					
RW %:	70	50	30	0	70	50	30	0	50	30	0
RCR:	0	1	2	3	4	5	6	7	8	9	10
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.01
2	1.07	1.02	0.98	0.95	1.05	1.01	0.97	0.87	0.97	0.94	0.92
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.87	0.84
4	0.97	0.89	0.84	0.79	0.95	0.88	0.83	0.76	0.86	0.81	0.78
5	0.92	0.84	0.78	0.75	0.90	0.83	0.77	0.71	0.81	0.76	0.72
6	0.88	0.79	0.73	0.68	0.86	0.78	0.72	0.66	0.76	0.71	0.68
7	0.83	0.74	0.68	0.64	0.82	0.73	0.68	0.62	0.72	0.67	0.63
8	0.79	0.70	0.64	0.60	0.78	0.69	0.64	0.59	0.68	0.63	0.60
9	0.76	0.66	0.60	0.57	0.75	0.66	0.60	0.56	0.65	0.60	0.56
10	0.73	0.63	0.57	0.53	0.71	0.62	0.57	0.53	0.62	0.57	0.53

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	153.1	71.4%
0-40	188.7	88.0%
0-60	209.0	97.5%
60-90	4.7	2.2%
70-100	1.9	0.9%
90-120	0.3	0.1%
0-90	213.7	99.6%
90-180	0.8	0.4%
0-180	214.5	100.0%

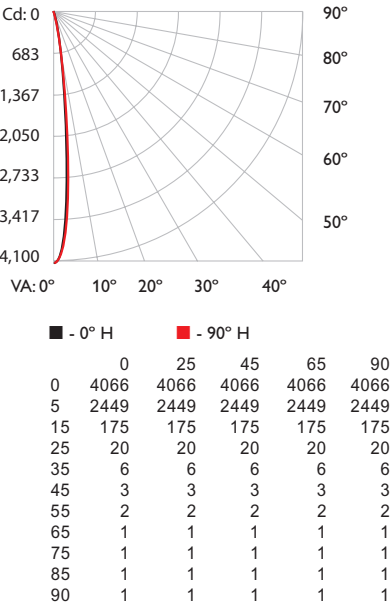
Photometrics/eW Graze QLX Powercore 5W, 3500 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

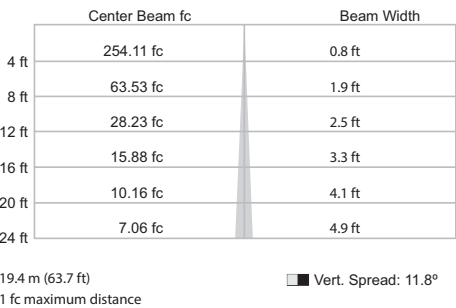
305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
251	60.4

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	0
RW %:	70	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19
1	1.15	1.13	1.11	1.09	1.07
2	1.12	1.09	1.06	1.04	1.02
3	1.09	1.05	1.02	1.00	0.98
4	1.07	1.02	0.99	0.97	0.95
5	1.05	1.00	0.96	0.94	0.92
6	1.03	0.98	0.94	0.91	0.89
7	1.01	0.96	0.93	0.90	0.88
8	0.99	0.94	0.91	0.88	0.86
9	0.98	0.93	0.90	0.87	0.85
10	0.96	0.91	0.88	0.85	0.83

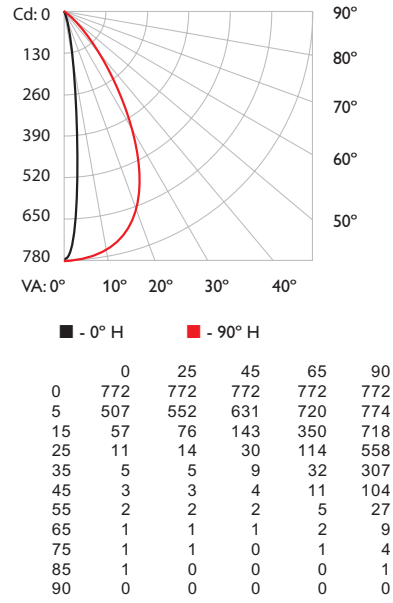
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	234.8	93.8%
0-40	238.7	95.3%
0-60	242.9	97.0%
60-90	3.1	1.3%
70-100	2.5	1.0%
90-120	2.1	0.8%
0-90	246.0	98.2%
90-180	4.4	1.8%
0-180	250.4	100.0%

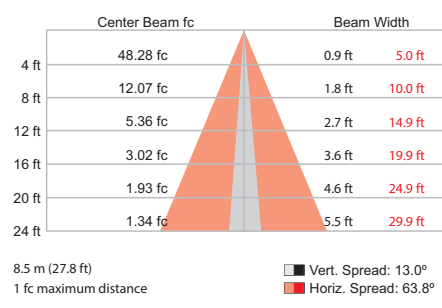
305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
229	55.7

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	0
RW %:	70	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19
1	1.14	1.11	1.09	1.07	1.05
2	1.09	1.04	1.00	0.97	0.94
3	1.04	0.98	0.93	0.89	0.85
4	0.99	0.92	0.87	0.83	0.79
5	0.95	0.87	0.82	0.78	0.74
6	0.91	0.83	0.77	0.73	0.70
7	0.87	0.79	0.73	0.69	0.66
8	0.84	0.75	0.70	0.66	0.63
9	0.81	0.72	0.67	0.63	0.60
10	0.78	0.69	0.64	0.60	0.57

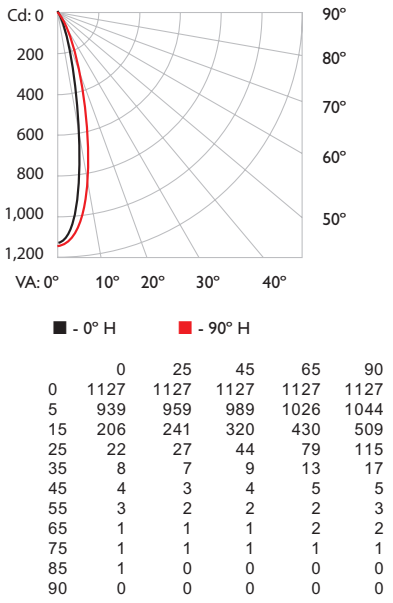
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	175.5	76.8%
0-40	205.8	90.0%
0-60	223.2	97.6%
60-90	3.9	1.7%
70-100	1.8	0.8%
90-120	0.6	0.3%
0-90	227.1	99.3%
90-180	1.5	0.7%
0-180	228.6	100.0%

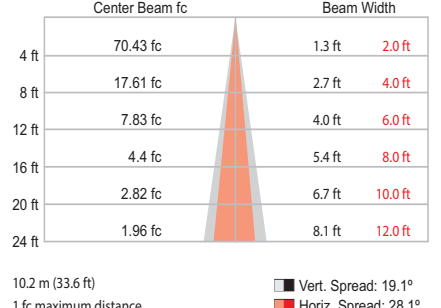
305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
222	53.8

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	0
Effective Floor Cavity Reflectance: 20%	80	70	50	30	0
RW %:	70	50	30	20	0
RCR:	0	1.19	1.19	1.19	1.19
1	1.15	1.13	1.11	1.09	1.07
2	1.11	1.07	1.04	1.02	1.00
3	1.07	1.03	0.99	0.96	0.94
4	1.04	0.98	0.94	0.91	0.89
5	1.01	0.95	0.91	0.88	0.86
6	0.98	0.92	0.87	0.84	0.82
7	0.95	0.89	0.85	0.82	0.79
8	0.93	0.86	0.82	0.78	0.75
9	0.90	0.84	0.80	0.77	0.74
10	0.88	0.81	0.78	0.75	0.72

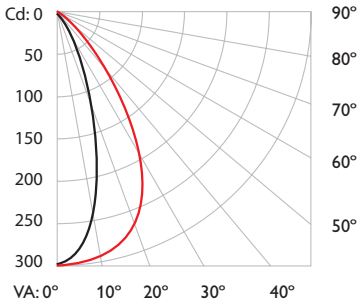
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	206.1	92.9%
0-40	213.2	96.1%
0-60	218.7	98.6%
60-90	2.4	1.1%
70-100	1.1	0.5%
90-120	0.3	0.1%
0-90	221.1	99.7%
90-180	0.8	0.3%
0-180	221.9	100.0%

305 mm (1 ft), 30° x 60° beam angle

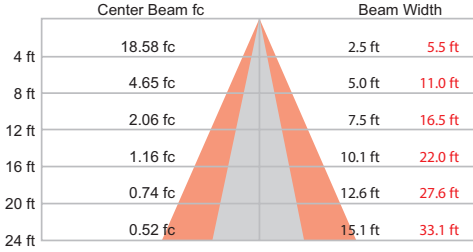
Lumens	Efficacy
221	53.7

Polar Candela Distribution



	0	25	45	65	90
0	297	297	297	297	297
5	280	284	289	294	297
15	180	195	225	261	282
25	69	84	123	185	235
35	19	24	43	91	144
45	8	8	12	29	57
55	5	4	5	8	16
65	3	3	3	3	4
75	1	1	1	1	1
85	1	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



5.2 m (17.2 ft) 1 fc maximum distance
Vert. Spread: 34.9°
Horiz. Spread: 69.1°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																				
RCC %:	80	70	50	30	10	0	70	50	30	10	0	50	30	20	0	50	30	20	0	
RW %:	70	50	30	0	70	50	30	0	70	50	30	0	70	50	30	0	70	50	30	0
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00	1.00	1.00
1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	1.00	0.99	0.97	0.95	0.94	0.93	0.93	0.93	0.93
2	1.07	1.02	0.98	0.95	1.05	1.00	0.97	0.86	0.97	0.94	0.91	0.94	0.92	0.89	0.91	0.89	0.87	0.86	0.86	0.86
3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.80	0.91	0.87	0.84	0.88	0.85	0.82	0.86	0.83	0.81	0.79	0.79	0.79
4	0.96	0.89	0.83	0.79	0.95	0.88	0.82	0.75	0.85	0.81	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.74	0.74	0.74
5	0.92	0.83	0.77	0.73	0.90	0.82	0.76	0.70	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.70	0.69	0.69	0.69
6	0.87	0.78	0.72	0.67	0.85	0.77	0.71	0.65	0.75	0.70	0.67	0.74	0.70	0.66	0.73	0.69	0.66	0.64	0.64	0.64
7	0.83	0.73	0.67	0.63	0.81	0.73	0.67	0.61	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.60	0.60	0.60
8	0.79	0.69	0.63	0.59	0.77	0.69	0.63	0.58	0.67	0.62	0.58	0.66	0.62	0.58	0.65	0.61	0.58	0.57	0.57	0.57
9	0.75	0.65	0.59	0.55	0.74	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.53	0.53	0.53
10	0.72	0.62	0.56	0.52	0.71	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.50	0.50	0.50

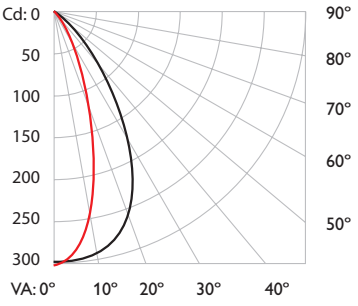
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	152.5	69.2%
0-40	191.4	86.8%
0-60	214.9	97.5%
60-90	4.7	2.1%
70-100	1.8	0.8%
90-120	0.3	0.1%
0-90	219.7	99.6%
90-180	0.8	0.4%
0-180	220.5	100.0%

305 mm (1 ft), 60° x 30° beam angle

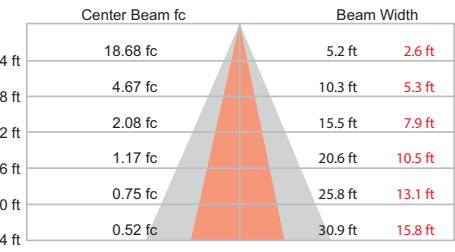
Lumens	Efficacy
218	52.9

Polar Candela Distribution



	0	25	45	65	90
0	299	299	299	299	299
5	295	295	291	288	286
15	278	261	229	202	189
25	223	182	127	91	76
35	127	86	45	26	20
45	45	26	13	8	7
55	12	8	5	4	4
65	4	3	3	3	3
75	1	1	1	1	1
85	1	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance



15.3 m (17.3 ft) 1 fc maximum distance
Vert. Spread: 65.6°
Horiz. Spread: 36.4°

Coefficients Of Utilization - Zonal Cavity Method

CC %:	80				70				50				30				20				20k
	0	70	50	30	0	70	50	30	0	50	30	20	0	50	30	20	0				
RCR:	0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.00	0.93		
	1	1.13	1.10	1.08	1.05	1.11	1.08	1.06	0.93	1.04	1.02	1.00	0.99	0.97	0.97	0.95	0.94	0.93	0.93		
	2	1.07	1.02	0.98	0.95	1.05	1.01	0.97	0.87	0.97	0.94	0.92	0.94	0.92	0.90	0.89	0.88	0.86	0.86		
	3	1.02	0.95	0.90	0.86	1.00	0.94	0.89	0.81	0.91	0.87	0.84	0.89	0.85	0.83	0.86	0.84	0.81	0.80		
	4	0.97	0.89	0.83	0.79	0.95	0.88	0.83	0.75	0.86	0.81	0.78	0.84	0.80	0.77	0.82	0.78	0.76	0.74		
	5	0.92	0.83	0.77	0.73	0.90	0.82	0.77	0.70	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.70	0.69		
	6	0.87	0.78	0.72	0.68	0.86	0.78	0.72	0.66	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.65		
	7	0.83	0.74	0.68	0.64	0.82	0.73	0.67	0.62	0.72	0.67	0.63	0.71	0.66	0.63	0.69	0.65	0.62	0.61		
	8	0.79	0.70	0.64	0.60	0.78	0.69	0.63	0.58	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.57		
	9	0.76	0.66	0.60	0.56	0.74	0.65	0.60	0.55	0.64	0.59	0.56	0.64	0.59	0.56	0.63	0.58	0.55	0.54		
	10	0.72	0.63	0.57	0.53	0.71	0.62	0.57	0.52	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.55	0.52	0.51		

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	153.9	70.6%
0-40	191.3	87.7%
0-60	212.6	97.5%
60-90	4.6	2.1%
70-100	1.9	0.9%
90-120	0.4	0.2%
0-90	217.2	99.6%
90-180	0.8	0.4%
0-180	218.0	100.0%

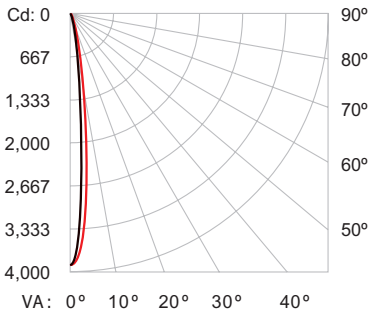
Photometrics/eW Graze Q LX Powercore 5W, 4000 K

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

305 mm (1 ft), 9° x 9° beam angle

Lumens	Efficacy
269	66.1 lm / W

Polar Candela Distribution



	0	25	45	70	90
0	3876	3876	3876	3876	3876
5	1658	1703	2143	2643	2738
15	161	176	189	239	279
25	21	22	25	30	28
35	6	5	6	6	6
45	3	2	3	3	3
55	2	1	1	2	2
65	1	1	1	1	1
75	1	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	242 fc	0.8 ft 1.1 ft
8 ft	61 fc	1.5 ft 2.2 ft
12 ft	27 fc	2.3 ft 3.3 ft
16 ft	15 fc	3.0 ft 4.4 ft
20 ft	10 fc	3.8 ft 4.4 ft
24 ft	7 fc	4.5 ft 6.5 ft

62.3 ft (19.0 m) 1 fc maximum distance
■ Vert. Spread: 10.8° ■ Horiz. Spread: 15.5°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%						
RCC: 0	119 119 119 119	116 116 116 116	111 111 111 111	106 106 106 106	102 102 102 102	100
1	116 114 112 111	113 112 110 98	108 107 106 104	103 103 101 100	100 100 98 96	98
2	113 110 107 105	111 108 106 97	105 103 102 102	101 101 100 99	98 97 96 95	95
3	110 108 103 101	109 105 102 95	103 101 99 101	99 97 97 96	95 94 93 92	91
4	108 104 100 98	106 103 100 94	101 98 96 99	97 95 97 96	94 93 92 91	90
5	106 101 98 96	103 100 97 93	99 96 94 97	95 94 94 93	92 91 90 89	88
6	104 99 96 93	103 98 95 91	97 95 93 96	94 92 92 91	89 88 87 86	85
7	102 97 94 92	101 97 94 90	96 93 91 95	92 91 91 90	87 86 85 84	83
8	100 96 92 90	100 95 92 89	94 92 90 93	91 90 90 89	86 85 84 83	82
9	99 94 91 89	98 94 91 88	93 90 89 92	90 88 88 87	83 82 81 80	79
10	98 93 90 88	97 92 90 87	92 89 88 91	89 87 87 86	81 80 79 78	77

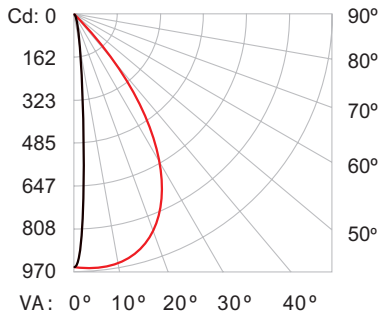
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	267.4	99.5 %
60 - 90	1.5	0.5 %
0 - 90	268.9	100.0 %

305 mm (1 ft), 10° x 60° beam angle

Lumens	Efficacy
261	64.5 lm / W

Polar Candela Distribution



	0	25	45	70	90
0	960	960	960	960	960
5	434	492	642	887	964
15	51	66	111	409	921
25	8	10	26	148	764
35	4	4	7	57	463
45	2	2	3	19	163
55	1	1	2	5	34
65	1	1	1	2	10
75	0	0	0	1	3
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	60 fc	0.7 ft 5.6 ft
8 ft	15 fc	1.3 ft 11.2 ft
12 ft	7 fc	2.0 ft 16.8 ft
16 ft	4 fc	2.7 ft 22.4 ft
20 ft	2 fc	3.3 ft 28.0 ft
24 ft	2 fc	4.0 ft 33.7 ft

31 ft (9.4 m) 1 fc maximum distance
■ Vert. Spread: 9.6° ■ Horiz. Spread: 70.1°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%						
RCC: 0	119 119 119 119	116 116 116 116	111 111 111 111	106 106 106 106	102 102 102 102	100
1	114 111 109 106	111 109 107 94	105 103 101 101	100 100 98 96	98 95 94 92	94
2	108 104 100 97	106 102 98 88	99 96 93 96	93 91 89 88	88 86 84 82	82
3	103 97 92 89	101 96 91 83	93 89 86 91	88 85 88 86	84 81 79 77	77
4	98 91 86 82	97 90 85 78	88 84 81 86	83 80 84 81	78 74 71 70	69
5	94 86 81 77	92 85 80 74	83 79 76 82	78 75 78 74	73 70 67 65	65
6	90 82 76 72	88 81 76 70	79 75 71 78	74 71 74 70	67 63 60 59	57
7	86 77 72 68	85 77 71 66	76 71 67 74	70 67 73 69	62 58 55 53	53
8	82 74 68 64	81 73 68 63	72 67 64 71	67 64 70 66	58 54 51 50	50
9	79 70 65 61	78 70 65 60	69 64 61 68	64 61 67 63	55 51 48 47	47
10	76 67 62 58	75 67 62 58	66 61 58 65	61 58 64 60	52 48 45 44	44

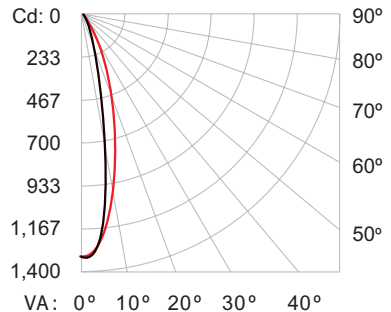
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	256.8	98.3 %
60 - 90	3.8	1.5 %
0 - 90	260.6	99.8 %

305 mm (1 ft), 15° x 30° beam angle

Lumens	Efficacy
267	65.5 lm / W

Polar Candela Distribution



	0	25	45	70	90
0	1311	1311	1311	1311	1311
5	1147	1150	1188	1221	1209
15	242	285	396	607	667
25	31	39	65	158	213
35	8	9	13	30	44
45	4	4	5	8	10
55	3	3	3	4	4
65	2	2	2	2	2
75	1	1	1	1	1
85	0	0	0	0	0
90	0	0	0	0	0

Illuminance at Distance

	Center Beam fc	Beam Width
4 ft	82 fc	1.2 ft 2.2 ft
8 ft	20 fc	2.4 ft 4.3 ft
12 ft	9 fc	3.7 ft 6.5 ft
16 ft	5 fc	4.9 ft 8.6 ft
20 ft	3 fc	6.1 ft 10.8 ft
24 ft	2 fc	7.3 ft 13.0 ft

36.2 ft (11.0 m) 1 fc maximum distance
■ Vert. Spread: 17.3° ■ Horiz. Spread: 30.2°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
Effective Floor Cavity Reflectance: 20%						
RCC: 0	119 119 119 119	116 116 116 116	111 111 111 111	106 106 106 106	102 102 102 102	100
1	115 113 111 109	112 110 109 96	106 105 104 103	102 101 99 98	97 95 94 92	92
2	111 107 104 101	109 105 102 93	102 100 98 99	97 96 97 95	92 91 90 89	89
3	107 102 98 95	105 101 97 90	98 95 93 96	94 92 94 92	89 88 87 86	85
4	103 98 94 91	102 97 93 87	95 92 95 93	90 88 91 89	87 86 85 84	83
5	100 94 90 87	99 93 89 84	92 88 86 90	87 85 89 86	84 83 82 81	80
6	97 91 86 83	96 90 86 81	89 85 82 87	84 82 86 84	81 80 79 78	77
7	94 88 83 80	93 87 83 79	86 82 80 85	82 79 84 81	79 77 76 75	74
8	92 85 81 78	91 84 80 77	83 80 77 83	79 77 82 79	76 75 74 73	72
9	89 82 78 75	88 82 78 74	81 78 75 80	77 75 80 77	74 73 72 71	70
10	87 80 76 73	86 80 76 72	79 75 73 78	75 73 78 75	72 71 70 69	68

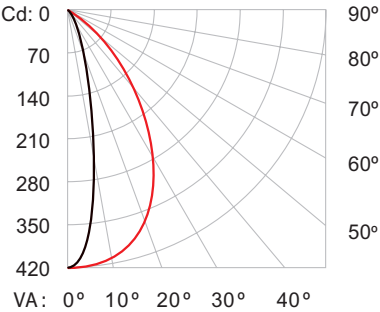
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	264.1	98.9 %
60 - 90	3.1	1.1 %
0 - 90	267.1	100.0 %

305 mm (1 ft), 30° x 60° beam angle

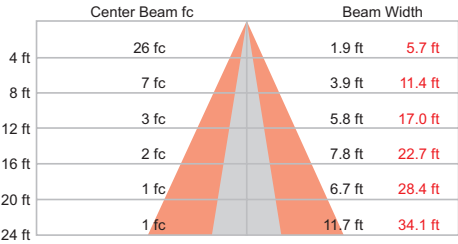
Lumens	Efficacy
258	63.6 lm / W

Polar Candela Distribution



	0° H	90° H
0	416	416
5	378	385
15	183	212
25	49	68
35	13	17
45	7	7
55	5	4
65	3	3
75	1	1
85	1	1
90	0	0

Illuminance at Distance



20.4 ft (6.2 m) 1 fc maximum distance
Vert. Spread: 27.3°
Horiz. Spread: 70.7°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	60	50	40	30	20	10	0
RW %:	70	50	30	10	0	50	30	10	0
RCR:	0	113	110	108	106	104	102	100	98
1	113	110	107	105	103	101	99	97	95
2	107	102	98	94	90	86	82	78	74
3	102	95	90	86	82	78	74	70	66
4	96	89	83	79	75	71	67	63	59
5	92	83	77	73	69	65	61	57	53
6	87	78	72	67	63	59	55	51	47
7	83	73	67	63	59	55	51	47	43
8	79	69	63	59	55	51	47	43	39
9	75	66	60	56	52	48	44	40	36
10	72	62	57	53	49	45	41	37	33

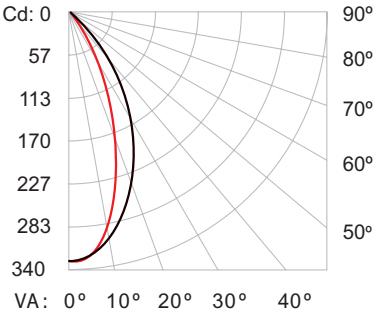
Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	251.3	97.5 %
60 - 90	6.5	2.5 %
0 - 90	257.8	100.0 %

305 mm (1 ft), 60° x 30° beam angle

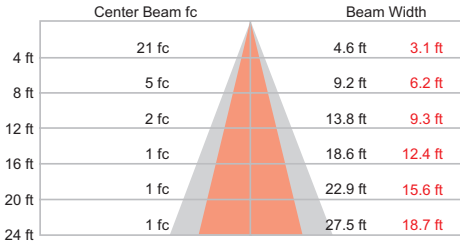
Lumens	Efficacy
263	64.7 lm / W

Polar Candela Distribution



	0° H	90° H
0	328	328
5	320	322
15	276	272
25	201	188
35	118	97
45	49	33
55	15	10
65	5	4
75	2	1
85	1	1
90	0	0

Illuminance at Distance



18.1 ft (5.5 m) 1 fc maximum distance
Vert. Spread: 59.6°
Horiz. Spread: 42.5°

Coefficients Of Utilization - Zonal Cavity Method

RCC %:	80	70	60	50	40	30	20	10	0
RW %:	70	50	30	10	0	50	30	10	0
RCR:	0	113	110	108	106	104	102	100	98
1	113	110	107	105	103	101	99	97	95
2	107	102	98	94	90	86	82	78	74
3	102	95	90	86	82	78	74	70	66
4	96	89	83	79	75	71	67	63	59
5	91	82	76	71	67	63	59	55	51
6	86	77	71	66	62	58	54	50	46
7	82	72	66	62	58	54	50	46	42
8	78	68	62	57	53	49	45	41	37
9	74	64	58	54	50	46	42	38	34
10	71	61	55	51	47	43	39	35	31

Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	256.5	97.6 %
60 - 90	6.2	2.4 %
0 - 90	262.8	100.0 %

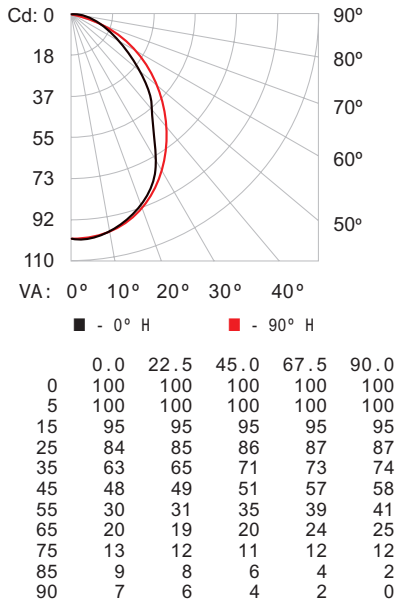
Photometrics/eW Graze EC Powercore

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

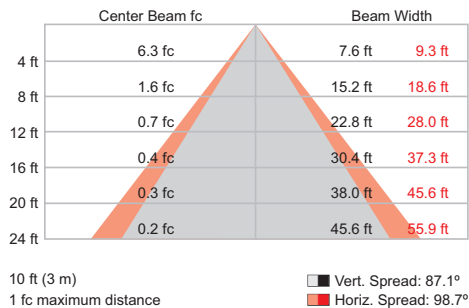
2700 K, 305 mm (1 ft), 90° x 90°

Lumens	Efficacy
234	44.3 lm / W

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																					
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99			
1	109	104	100	96	106	102	98	95	97	94	91	93	91	88	89	87	85	83			
2	100	92	85	80	97	90	84	79	86	81	77	83	78	75	79	76	73	71			
3	91	81	74	68	89	80	73	67	77	71	66	74	68	64	71	67	63	61			
4	84	73	64	58	82	71	64	58	69	62	57	66	60	56	64	59	55	53			
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	58	53	48	46			
6	72	59	51	45	70	58	50	44	57	49	44	55	48	44	53	47	43	41			
7	67	54	46	40	65	53	45	39	52	45	39	50	43	39	48	43	39	37			
8	63	50	42	36	61	49	41	35	48	40	35	45	38	35	43	38	35	33			
9	59	46	38	33	57	45	38	32	44	37	32	42	36	32	40	36	32	30			
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	37	32	29	27			

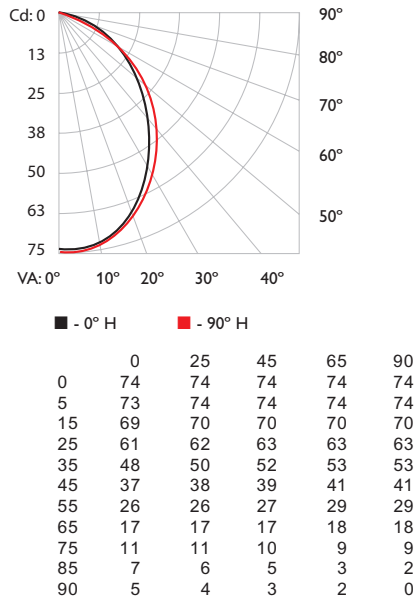
Zonal Lumen

ZONE	LUMENS	%FIXT
0- 30	76	32.3
0- 40	119	50.8
0- 60	191	81.4
0- 90	231	98.5
90-120	3	1.5
90-130	3	1.5
90-150	3	1.5
90-180	3	1.5
0-180	234	100.0

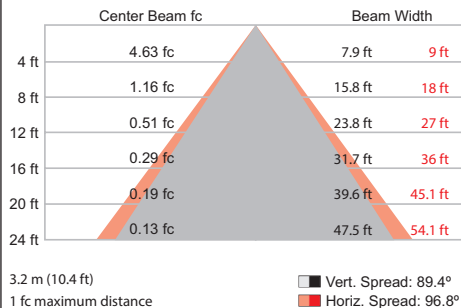
3000 K, 305 mm (1 ft), 90° x 90°

Lumens	Efficacy
178	43.2

Polar Candela Distribution



Illuminance at Distance



Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%																		
RCC %:	80				70				50				30				10	0
RW %:	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	0	
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.08	1.10	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	
1	1.08	1.04	0.99	0.93	1.06	1.01	0.97	0.93	0.97	0.94	0.91	0.93	0.90	0.87	0.85	0.82	0.80	
2	0.99	0.91	0.84	0.79	0.96	0.89	0.83	0.77	0.85	0.80	0.76	0.82	0.77	0.74	0.70	0.65	0.72	
3	0.91	0.81	0.73	0.68	0.88	0.79	0.72	0.61	0.76	0.69	0.64	0.73	0.67	0.63	0.70	0.66	0.62	
4	0.84	0.72	0.63	0.57	0.81	0.70	0.63	0.53	0.68	0.61	0.55	0.65	0.59	0.55	0.63	0.58	0.54	
5	0.77	0.65	0.56	0.50	0.75	0.63	0.55	0.47	0.61	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.47	
6	0.71	0.59	0.50	0.44	0.69	0.57	0.49	0.42	0.56	0.48	0.43	0.54	0.47	0.42	0.52	0.46	0.42	
7	0.66	0.53	0.45	0.39	0.65	0.52	0.44	0.37	0.51	0.44	0.38	0.49	0.43	0.38	0.48	0.42	0.37	
8	0.62	0.49	0.41	0.35	0.60	0.48	0.40	0.34	0.47	0.40	0.34	0.45	0.39	0.34	0.45	0.39	0.34	
9	0.58	0.45	0.37	0.32	0.57	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	
10	0.55	0.42	0.34	0.29	0.53	0.41	0.34	0.28	0.40	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28	

Zonal Lumen

Zone	Lumens	% Luminaire
0-30	55.3	31.0%
0-40	87.4	49.0%
0-60	141.9	79.6%
60-90	33.3	18.7%
70-100	17.9	10.0%
90-120	2.8	1.6%
0-90	175.2	98.2%
90-180	3.1	1.8%
0-180	178.4	100.0%

For lux multiply fc by 10.7

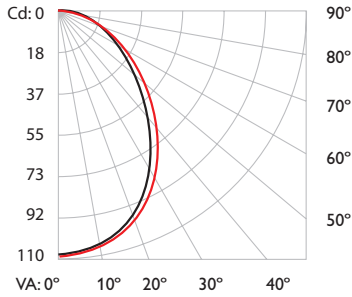
Photometrics/eW Graze EC Powercore

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.philipscolorkinetics.com/support/ies.

3500 K, 305 mm (1 ft), 90° x 90°

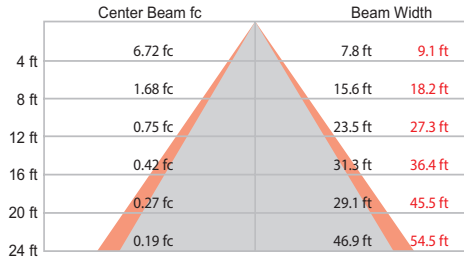
Lumens	Efficacy
259	61.2

Polar Candela Distribution



	0° H	90° H
0	0	25
5	108	108
15	106	107
25	101	102
35	89	91
45	70	72
55	53	54
65	36	37
75	24	24
85	16	15
90	10	9

Illuminance at Distance



3.2 m (10.4 ft)
1 fc maximum distance
Vert. Spread: 88.7°
Horiz. Spread: 97.3°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%															
RCC %:	80	70	50	30	10	0	0	0	0	0	0	0	0	0	0	0	0
RW %:	70	50	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	0.98
1	1.08	1.04	1.00	0.96	1.06	1.01	0.98	0.93	0.94	0.91	0.89	0.88	0.88	0.87	0.85	0.83	0.83
2	0.99	0.91	0.85	0.79	0.96	0.89	0.83	0.71	0.85	0.80	0.76	0.82	0.78	0.74	0.79	0.75	0.72
3	0.91	0.81	0.73	0.67	0.88	0.79	0.72	0.61	0.76	0.70	0.64	0.73	0.68	0.63	0.70	0.66	0.62
4	0.84	0.72	0.64	0.57	0.81	0.71	0.63	0.53	0.68	0.61	0.56	0.65	0.59	0.55	0.63	0.58	0.54
5	0.77	0.65	0.56	0.50	0.75	0.64	0.55	0.47	0.61	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.47
6	0.72	0.59	0.50	0.44	0.70	0.58	0.49	0.42	0.56	0.48	0.43	0.54	0.47	0.42	0.52	0.46	0.42
7	0.66	0.53	0.45	0.39	0.65	0.53	0.44	0.37	0.51	0.44	0.38	0.49	0.43	0.38	0.48	0.42	0.38
8	0.62	0.49	0.41	0.35	0.60	0.48	0.40	0.34	0.47	0.40	0.35	0.45	0.39	0.34	0.44	0.38	0.34
9	0.58	0.45	0.37	0.32	0.57	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31
10	0.55	0.42	0.34	0.29	0.53	0.41	0.34	0.28	0.40	0.33	0.29	0.39	0.33	0.28	0.38	0.32	0.28

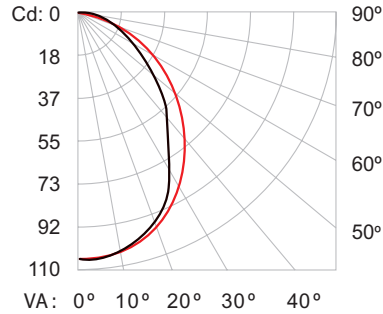
Zonal Lumen

Zone	Lumens	% Luminaire
0-30	80.5	31.1%
0-40	127.1	49.2%
0-60	206.3	79.8%
60-90	47.8	18.5%
90-100	25.6	9.9%
90-120	4.0	1.5%
0-90	254.1	98.3%
90-180	4.5	1.7%
0-180	258.6	100.0%

4000 K, 305 mm (1 ft), 90° x 90°

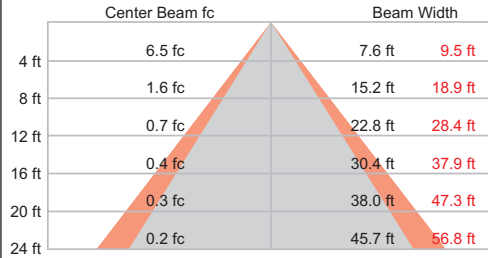
Lumens	Efficacy
246	45.9 lm / W

Polar Candela Distribution



	0° H	90° H
0	0.0	22.5
5	105	105
15	100	100
25	88	89
35	65	67
45	50	51
55	31	31
65	20	20
75	13	12
85	9	8
90	7	6

Illuminance at Distance



10 ft (3 m)
1 fc maximum distance
Vert. Spread: 87.1°
Horiz. Spread: 99.6°

Coefficients Of Utilization - Zonal Cavity Method

		Effective Floor Cavity Reflectance: 20%															
RC	80	70	50	30	10	0	0	0	0	0	0	0	0	0	0	0	0
RW	70	50	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0
0	119119119119	116116116116	110110110	105105105	101101101	98											
1	109104100	96	106102	98	95	97	94	91	93	91	88	89	87	85	83		
2	100	92	85	80	97	90	84	79	86	81	77	83	78	75	79	76	73
3	91	82	74	68	89	80	73	67	77	71	66	74	69	64	71	67	63
4	84	73	65	58	82	71	64	58	69	62	57	66	61	56	64	59	55
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	58	53	48
6	72	59	51	45	70	58	50	45	57	49	44	55	48	44	53	47	43
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39
8	63	50	42	36	61	49	41	36	48	41	35	46	40	35	45	39	35
9	59	46	38	33	57	45	38	32	44	37	32	43	36	32	42	36	32
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29

Zonal Lumen

ZONE	LUMENS	%FIXT
0-30	79	32.3
0-40	125	50.9
0-60	200	81.5
0-90	242	98.4
90-120	4	1.6
90-130	4	1.6
90-150	4	1.6
90-180	4	1.6
0-180	246	100.0

For lux multiply fc by 10.7

Specifications/eW Graze MX Powercore

Due to continuous improvements and innovations, specifications may change without notice.

CCT	Beam Angle	Lumenst				Efficacy (lm/W)
		305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)	
2700 K	9° x 9°	735	1,470	2,205	2,940	49.3
	10° x 60°	645	1,290	1,935	2,580	47.1
	15° x 30°	710	1,420	2,130	2,840	46.4
	30° x 60°	615	1,230	1,845	2,460	45.9
	60° x 30°	694	1,388	2,082	2,776	48.2
3000 K	9° x 9°	702	1,404	2,106	2,808	48.7
	10° x 60°	673	1,346	2,019	2,692	46.9
	15° x 30°	676	1,352	2,028	2,704	47.1
	30° x 60°	672	1,344	2,016	2,688	46.7
	60° x 30°	679	1,358	2,037	2,716	47.2
3500 K	9° x 9°	822	1,644	2,466	3,288	57.3
	10° x 60°	768	1,536	2,304	3,072	53.4
	15° x 30°	775	1,550	2,325	3,100	53.7
	30° x 60°	747	1,494	2,241	2,988	51.7
	60° x 30°	755	1,510	2,265	3,020	52.3
4000 K	9° x 9°	875	1,750	2,625	3,500	60.3
	10° x 60°	829	1,658	2,487	3,316	60.5
	15° x 30°	876	1,752	2,628	3,504	60.4
	30° x 60°	775	1,550	2,325	3,100	57.8
	60° x 30°	872	1,744	2,616	3,488	60.1

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Output	Color Temperature	2700 K/3000 K/3500 K/4000 K/5500 K			
	CRI	2700 K	3000 K	3500 K	4000 K
		81	83	83 to 84	81
Electrical	Input Voltage	100 to 277 VAC, auto-ranging, 50/60 Hz			
	Power Consumption	15 W max. at full output, steady state	30 W max. at full output, steady state	45 W max. at full output, steady state	60 W max. at full output, steady state
Control	Dimming	Compatible with selected commercially available reverse-phase ELV-type dimmers‡			
Physical	Dimensions (Height x Width x Depth)	69 x 305 x 71 mm (2.7 x 12 x 2.8 in)	69 x 610 x 71 mm (2.7 x 24 x 2.8 in)	69 x 914 x 71 mm (2.7 x 36 x 2.8 in)	69 x 1219 x 71 mm (2.7 x 48 x 2.8 in)
	Weight	1 kg (2.1 lb)	2.1 kg (4.6 lb)	3.2 kg (7.1 lb)	4.2 kg (9.3 lb)
	Housing	Extruded anodized aluminium			
	Lens	Clear polycarbonate lens			
	Luminaire Connectors	Integral male/female waterproof connectors			

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Physical	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-40 to 50 °C (-40 to 122 °F) Operating -20 to 50 °C (-4 to 122 °F) Startup -40 to 80 °C (-40 to 176 °F) Storage			
	Mechanical Impact	IK10			
	Humidity	0 to 95%, non-condensing			
	Vibration Resistance♣	Complies with ANSI C136.31			
	Luminaire Run Lengths	To calculateluminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry/Damp/Wet Location, IP66			

Lumen Maintenance†

Threshold§	Ambient Temperature	Reported¶	Calculated
L70	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs
L50	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs









† 305 mm (1 ft) lumen output measurements comply with IES LM-79-08 testing procedures. 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) measurements are estimated based on the 305 mm (1 ft) measurements.

‡ Refer to www.philipscolorkinetics.com/support/appnotes/ for more information.

§ L_{xx} = xx% lumen maintenance (when light output drops below xx% of initial output). L_{xx} = xx% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED luminaires are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

♣ eWGRAze 305 mm (1 ft) and 610 mm (2 ft) luminaire models conform to ANSI C136.31 roadway and area lighting luminaire vibration standards. ColorGraze 914 mm (3 ft) and 1219 mm (4 ft) luminaires can be customized for conformance. Please contact your Philips Color Kinetics Lighting Sales group for custom configurations.

Specifications/eW Graze QLX Powercore

Due to continuous improvements and innovations, specifications may change without notice.

CCT	Beam Angle	Lumens*				Efficacy (lm / W)
		305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)	
2700 K	9° x 9°	468	936	1,404	1,872	49.8
	10° x 60°	475	950	1,425	1,900	50.4
	15° x 30°	470	940	1,410	1,880	49.4
	30° x 60°	470	940	1,410	1,880	49.7
	60° x 30°	480	960	1,440	1,920	50.4
3000 K	9° x 9°	472	944	1,416	1,888	50.1
	10° x 60°	453	906	1,359	1,812	48.1
	15° x 30°	465	930	1,395	1,860	48.8
	30° x 60°	456	912	1,368	1,824	48.0
	60° x 30°	455	910	1,365	1,820	48.2
3500 K	9° x 9°	584	1,168	1,752	2,336	61.9
	10° x 60°	489	978	1,467	1,956	51.1
	15° x 30°	492	984	1,476	1,968	51.7
	30° x 60°	481	962	1,443	1,924	50.9
	60° x 30°	478	956	1,434	1,912	50.6
4000 K	9° x 9°	595	1,190	1,785	2,380	63.1
	10° x 60°	583	1,166	1,749	2,332	61.8
	15° x 30°	581	1,162	1,743	2,324	61.4
	30° x 60°	579	1,158	1,737	2,316	61.2
	60° x 30°	580	1,160	1,740	2,320	61.3

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Output	Color Temperature†	2700 K/3000 K/3500 K/4000 K/5500 K			
	CRI	2700 K	3000 K	3500 K	4000 K
		81	84	84	81
Electrical	Input Voltage	100 to 277 VAC, auto-ranging, 50/60 Hz			
	Power Consumption	10 W max. at full output, steady state	20 W max. at full output, steady state	30 W max. at full output, steady state	40 W max. at full output, steady state
Control	Dimming	Compatible with selected commercially available reverse-phase ELV-type dimmers§			
Physical	Dimensions (Height x Width x Depth)	69 x 305 x 71 mm (2.7 x 12 x 2.8 in)	69 x 610 x 71 mm (2.7 x 24 x 2.8 in)	69 x 914 x 71 mm (2.7 x 36 x 2.8 in)	69 x 1219 x 71 mm (2.7 x 48 x 2.8 in)
	Weight	1 kg (2.1 lb)	2.1 kg (4.6 lb)	3.2 kg (7.1 lb)	4.2 kg (9.3 lb)
	Housing	Extruded anodized aluminium			
	Lens	Clear polycarbonate lens			
	Luminaire Connectors	Integral male/female waterproof connectors			

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Physical	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-40 to 50 °C (-40 to 122 °F) Operating -20 to 50 °C (-4 to 122 °F) Startup -40 to 80 °C (-40 to 176 °F) Storage			
	Mechanical Impact	IK10			
	Humidity	0 to 95%, non-condensing			
	Vibration Resistance♣	Complies with ANSI C136.31			
	Luminaire Run Lengths	To calculate luminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry/Damp/Wet Location, IP66			

Lumen Maintenance†

Threshold§	Ambient Temperature	Reported¶	Calculated
L70	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs
L50	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs

DIMAND | **OPTIBIN** | **POWERCORE**    

† 305 mm (1 ft) lumen output measurements comply with IES LM-79-08 testing procedures. 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) measurements are estimated based on the 305 mm (1 ft) measurements.

‡ Refer to www.philipscolorkinetics.com/support/apnotes/ for more information.

§ L_{xx} = xx% lumen maintenance (when light output drops below xx% of initial output). L_{xx} = xx% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED luminaires are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/apnotes/lm-80-08.pdf for more information.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

♣ eWGraze 305 mm (1 ft) and 610 mm (2 ft) luminaire models conform to ANSI C136.31 roadway and area lighting luminaire vibration standards. ColorGraze 914 mm (3 ft) and 1219 mm (4 ft) luminaires can be customized for conformance. Please contact your Philips Color Kinetics Lighting Sales group for custom configurations.

Specifications/eW Graze QLX Powercore 5W

Due to continuous improvements and innovations, specifications may change without notice.

CCT	Beam Angle	Lumens*				Efficacy (lm / W)
		305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)	
2700 K	9° x 9°	226	452	678	904	54.3
	10° x 60°	221	442	663	884	49.6
	15° x 30°	238	476	714	952	52.7
	30° x 60°	213	426	639	852	50.9
	60° x 30°	219	438	657	876	53.3
3000 K	9° x 9°	232	464	696	928	56.4
	10° x 60°	219	438	657	876	50.4
	15° x 30°	219	438	657	876	53.4
	30° x 60°	214	428	642	856	51.7
	60° x 30°	215	430	645	860	52.2
3500 K	9° x 9°	251	502	753	1,004	60.4
	10° x 60°	229	458	687	916	55.7
	15° x 30°	222	444	666	888	53.8
	30° x 60°	221	442	663	884	53.7
	60° x 30°	218	436	654	872	52.9
4000 K	9° x 9°	269	538	807	1,076	66.1
	10° x 60°	261	522	783	1,044	64.5
	15° x 30°	267	534	801	1,068	65.5
	30° x 60°	258	516	774	1,032	63.6
	60° x 30°	263	526	789	1,052	64.7

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Output	Color Temperature†	2700 K/3000 K/3500 K/4000 K/5500 K			
	CRI	2700 K	3000 K	3500 K	4000 K
		82	84 to 85	84 to 85	82
Electrical	Input Voltage	100 to 277 VAC, auto-ranging, 50/60 Hz			
	Power Consumption	5W max. at full output, steady state	10 W max. at full output, steady state	15 W max. at full output, steady state	20 W max. at full output, steady state
Control	Dimming	Compatible with selected commercially available reverse-phase ELV-type dimmers§			
Physical	Dimensions (Height x Width x Depth)	69 x 305 x 71 mm (2.7 x 12 x 2.8 in)	69 x 610 x 71 mm (2.7 x 24 x 2.8 in)	69 x 914 x 71 mm (2.7 x 36 x 2.8 in)	69 x 1219 x 71 mm (2.7 x 48 x 2.8 in)
	Weight	1 kg (2.1 lb)	2.1 kg (4.6 lb)	3.2 kg (7.1 lb)	4.2 kg (9.3 lb)
	Housing	Extruded anodized aluminium			
	Lens	Clear polycarbonate lens			
	Luminaire Connectors	Integral male/female waterproof connectors			

Item	Specification	305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Physical	Mounting	Multi-positional, constant torque locking hinges			
	Temperature	-40 to 50 °C (-40 to 122 °F) Operating -20 to 50 °C (-4 to 122 °F) Startup -40 to 80 °C (-40 to 176 °F) Storage			
	Mechanical Impact	IK10			
	Humidity	0 to 95%, non-condensing			
	Vibration Resistance♣	Complies with ANSI C136.31			
	Luminaire Run Lengths	To calculate luminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/			
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, PSE, C-Tick			
	Environment	Dry/Damp/Wet Location, IP66			

Lumen Maintenance†

Threshold§	Ambient Temperature	Reported¶	Calculated
L70	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs
L50	@ 25°C	60,000 hrs	60,000 hrs
	@ 50°C	60,000 hrs	60,000 hrs

DIMAND | **OPTIBIN** | **POWERCORE**
CK TECHNOLOGY CK TECHNOLOGY CK TECHNOLOGY



† 305 mm (1 ft) lumen output measurements comply with IES LM-79-08 testing procedures. 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) measurements are estimated based on the 305 mm (1 ft) measurements.

‡ Refer to www.philipscolorkinetics.com/support/appnotes/ for more information.

§ L_{xx} = xx% lumen maintenance (when light output drops below xx% of initial output). L_{xx} = xx% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED luminaires are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

♣ eWGraze 305 mm (1 ft) and 610 mm (2 ft) luminaire models conform to ANSI C136.31 roadway and area lighting luminaire vibration standards. ColorGraze 914 mm (3 ft) and 1219 mm (4 ft) luminaires can be customized for conformance. Please contact your Philips Color Kinetics Lighting Sales group for custom configurations.

Specifications/eW Graze EC Powercore

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification		305 mm (1 ft)	610 mm (2 ft)	914 mm (3 ft)	1219 mm (4 ft)
Output	Color Temperature*		2700 K/3000 K/3500 K/4000 K/5500 K			
	Beam Angle		90° x 90°			
	Lumens†	2700 K	234	468	702	936
		3000 K	178	356	534	712
		3500 K	259	518	777	1036
		4000 K	246	492	738	984
	Efficacy (lm / W)		44.3 (2700 K)	43.2 (3000 K)	61.2 (3500 K)	45.9 (4000 K)
CRI	2700 K		3000 K		3500 K	4000 K
	80		93		82	87
Electrical	Input Voltage		100 to 277 VAC, auto-switching, 50/60 Hz			
	Power Consumption		5 W max. at full output, steady state	10 W max. at full output, steady state	15 W max. at full output, steady state	20 W max. at full output, steady state
Control	Dimming		Compatible with selected commercially available reverse-phase ELV-type dimmers§			
Physical	Dimensions (Height x Width x Depth)		69 x 305 x 71 mm (2.7 x 12 x 2.8 in)	69 x 610 x 71 mm (2.7 x 24 x 2.8 in)	69 x 914 x 71 mm (2.7 x 36 x 2.8 in)	69 x 1219 x 71 mm (2.7 x 48 x 2.8 in)
	Weight		1 kg (2.1 lb)	2.1 kg (4.6 lb)	3.2 kg (7.1 lb)	4.2 kg (9.3 lb)
	Housing		Extruded anodized aluminium			
	Lens		Frosted polycarbonate lens			
	Luminaire Connectors		Integral male/female waterproof connectors			
	Mounting		Multi-positional, constant torque locking hinges			
	Temperature		-40 to 50 °C (-40 to 122 °F) Operating -20 to 50 °C (-4 to 122 °F) Startup -40 to 80 °C (-40 to 176 °F) Storage			
	Mechanical Impact		IK08			
	Humidity		0 to 95%, non-condensing			
	Vibration Resistance♣		Complies with ANSI C136.31			
Certification and Safety	Luminaire Run Lengths		To calculate luminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/			
	Certification		UL/cUL, FCC Class A, CE, PSE, C-Tick			
	Environment		Dry/Damp/Wet Location, IP66			

Lumen Maintenance†

Threshold§	Ambient Temperature	Reported¶	Calculated
L70	@ 25°C	36,000 hrs	36,000 hrs
	@ 50°C	36,000 hrs	36,000 hrs
L50	@ 25°C	36,000 hrs	36,000 hrs
	@ 50°C	36,000 hrs	36,000 hrs



† 305 mm (1 ft) lumen output measurements comply with IES LM-79-08 testing procedures. 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) measurements are estimated based on the 305 mm (1 ft) measurements.

‡ Refer to www.philipscolorkinetics.com/support/appnotes/ for more information.

§ L_{xx} = xx% lumen maintenance (when light output drops below xx% of initial output). L_{xx} = xx% lumen maintenance (when light output drops below 50% of initial output). Ambient luminaire temperatures specified. Lumen maintenance calculations are based on lifetime prediction graphs supplied by LED source manufacturers. Calculations for white-light LED luminaires are based on measurements that comply with IES LM-80-08 testing procedures. Refer to www.philipscolorkinetics.com/support/appnotes/lm-80-08.pdf for more information.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

♣ eWGraze 305 mm (1 ft) and 610 mm (2 ft) luminaire models conform to ANSI C136.31 roadway and area lighting luminaire vibration standards. ColorGraze 914 mm (3 ft) and 1219 mm (4 ft) luminaires can be customized for conformance. Please contact your Philips Color Kinetics Lighting Sales group for custom configurations.

Luminaires and Accessories

eW Graze Powercore luminaires are part of a complete system which includes:

- Leader Cables to connect the first luminaire in a series to power or a junction box
- Jumper Cables to connect luminaires in series, and optionally to add space between luminaires in a series
- 2 + ground copper wire to connect junction boxes to power if installing in parallel

You can control eW Graze Powercore luminaires with commercially available ON / OFF switches and selected reverse-phase ELV-type dimmers.

Item	Beam Angle	2700 K		3000 K		3500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze MX Powercore 305 mm (1 ft)	9° x 9°	523-000080-00	910503703152	523-000080-60	912400135113	523-000080-80	912400135133
	10° x 60°	523-000080-03	910503703690	523-000080-61	912400135114	523-000080-81	912400135134
	15° x 30°	523-000080-06	910503703693	523-000080-62	912400135115	523-000080-82	912400135135
	30° x 60°	523-000080-09	910503703696	523-000080-63	912400135116	523-000080-83	912400135136
	60° x 30°	523-000080-12	910503703699	523-000080-64	912400135117	523-000080-84	912400135137
eW Graze MX Powercore 610 mm (2 ft)	9° x 9°	523-000080-15	910503703703	523-000080-65	912400135118	523-000080-85	912400135138
	10° x 60°	523-000080-18	910503703706	523-000080-66	912400135119	523-000080-86	912400135139
	15° x 30°	523-000080-21	910503703709	523-000080-67	912400135120	523-000080-87	912400135140
	30° x 60°	523-000080-24	910503703712	523-000080-68	912400135121	523-000080-88	912400135141
	60° x 30°	523-000080-27	910503703715	523-000080-69	912400135122	523-000080-89	912400135142
eW Graze MX Powercore 914 mm (3 ft)	9° x 9°	523-000080-30	910503703718	523-000080-70	912400135123	523-000080-90	912400135143
	10° x 60°	523-000080-33	910503703721	523-000080-71	912400135124	523-000080-91	912400135144
	15° x 30°	523-000080-36	910503703724	523-000080-72	912400135125	523-000080-92	912400135145
	30° x 60°	523-000080-39	910503703727	523-000080-73	912400135126	523-000080-93	912400135146
	60° x 30°	523-000080-42	910503703730	523-000080-74	912400135127	523-000080-94	912400135147
eW Graze MX Powercore 1219 mm (4 ft)	9° x 9°	523-000080-45	910503703733	523-000080-75	912400135128	523-000080-95	912400135148
	10° x 60°	523-000080-48	910503703736	523-000080-76	912400135129	523-000080-96	912400135149
	15° x 30°	523-000080-51	910503703739	523-000080-77	912400135130	523-000080-97	912400135150
	30° x 60°	523-000080-54	910503703742	523-000080-78	912400135131	523-000080-98	912400135151
	60° x 30°	523-000080-57	910503703745	523-000080-79	912400135132	523-000080-99	912400135152
Item	Beam Angle	4000 K		5500 K			
		Item Number	Philips 12NC	Item Number	Philips 12NC		
eW Graze MX Powercore 305 mm (1 ft)	9° x 9°	523-000080-01	910503703688	523-000080-02	910503703689		
	10° x 60°	523-000080-04	910503703691	523-000080-05	910503703692		
	15° x 30°	523-000080-07	910503703694	523-000080-08	910503703695		
	30° x 60°	523-000080-10	910503703697	523-000080-11	910503703698		
	60° x 30°	523-000080-13	910503703701	523-000080-14	910503703702		
eW Graze MX Powercore 610 mm (2 ft)	9° x 9°	523-000080-16	910503703704	523-000080-17	910503703705		
	10° x 60°	523-000080-19	910503703707	523-000080-20	910503703708		
	15° x 30°	523-000080-22	910503703710	523-000080-23	910503703711		
	30° x 60°	523-000080-25	910503703713	523-000080-26	910503703714		
	60° x 30°	523-000080-28	910503703716	523-000080-29	910503703717		
eW Graze MX Powercore 914 mm (3 ft)	9° x 9°	523-000080-31	910503703719	523-000080-32	910503703720		
	10° x 60°	523-000080-34	910503703722	523-000080-35	910503703723		
	15° x 30°	523-000080-37	910503703725	523-000080-38	910503703726		
	30° x 60°	523-000080-40	910503703728	523-000080-41	910503703729		
	60° x 30°	523-000080-43	910503703731	523-000080-44	910503703732		
eW Graze MX Powercore 1219 mm (4 ft)	9° x 9°	523-000080-46	910503703734	523-000080-47	910503703735		
	10° x 60°	523-000080-49	910503703737	523-000080-50	910503703738		
	15° x 30°	523-000080-52	910503703740	523-000080-53	910503703741		
	30° x 60°	523-000080-55	910503703743	523-000080-56	910503703744		
	60° x 30°	523-000080-58	910503703746	523-000080-59	910503703747		

Item	Beam Angle	2700 K		3000 K		3500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze Q LX Powercore 305 mm (1 ft)	9° x 9°	523-000081-00	910503703153	523-000081-60	912400135246	523-000081-80	912400135286
	10° x 60°	523-000081-03	910503703750	523-000081-61	912400135247	523-000081-81	912400135287
	15° x 30°	523-000081-06	910503703753	523-000081-62	912400135248	523-000081-82	912400135288
	30° x 60°	523-000081-09	910503703756	523-000081-63	912400135249	523-000081-83	912400135289
	60° x 30°	523-000081-12	910503703759	523-000081-64	912400135250	523-000081-84	912400135290
eW Graze Q LX Powercore 610 mm (2 ft)	9° x 9°	523-000081-15	910503703762	523-000081-65	912400135251	523-000081-85	912400135291
	10° x 60°	523-000081-18	910503703765	523-000081-66	912400135252	523-000081-86	912400135292
	15° x 30°	523-000081-21	910503703768	523-000081-67	912400135253	523-000081-87	912400135293
	30° x 60°	523-000081-24	910503703771	523-000081-68	912400135254	523-000081-88	912400135294
	60° x 30°	523-000081-27	910503703774	523-000081-69	912400135255	523-000081-89	912400135295
eW Graze Q LX Powercore 914 mm (3 ft)	9° x 9°	523-000081-30	910503703777	523-000081-70	912400135256	523-000081-90	912400135296
	10° x 60°	523-000081-33	910503703780	523-000081-71	912400135257	523-000081-91	912400135297
	15° x 30°	523-000081-36	910503703783	523-000081-72	912400135258	523-000081-92	912400135298
	30° x 60°	523-000081-39	910503703786	523-000081-73	912400135259	523-000081-93	912400135299
	60° x 30°	523-000081-42	910503703789	523-000081-74	912400135260	523-000081-94	912400135300
eW Graze Q LX Powercore 1219 mm (4 ft)	9° x 9°	523-000081-45	910503703792	523-000081-75	912400135261	523-000081-95	912400135301
	10° x 60°	523-000081-48	910503703795	523-000081-76	912400135262	523-000081-96	912400135302
	15° x 30°	523-000081-51	910503703798	523-000081-77	912400135263	523-000081-97	912400135303
	30° x 60°	523-000081-54	910503703802	523-000081-78	912400135264	523-000081-98	912400135304
	60° x 30°	523-000081-57	910503703805	523-000081-79	912400135265	523-000081-99	912400135305

Item	Beam Angle	4000 K		5500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze Q LX Powercore 305 mm (1 ft)	9° x 9°	523-000081-01	910503703748	523-000081-02	910503703749
	10° x 60°	523-000081-04	910503703751	523-000081-05	910503703752
	15° x 30°	523-000081-07	910503703754	523-000081-08	910503703755
	30° x 60°	523-000081-10	910503703757	523-000081-11	910503703758
	60° x 30°	523-000081-13	910503703760	523-000081-14	910503703761
eW Graze Q LX Powercore 610 mm (2 ft)	9° x 9°	523-000081-16	910503703763	523-000081-17	910503703764
	10° x 60°	523-000081-19	910503703766	523-000081-20	910503703767
	15° x 30°	523-000081-22	910503703769	523-000081-23	910503703770
	30° x 60°	523-000081-25	910503703772	523-000081-26	910503703773
	60° x 30°	523-000081-28	910503703775	523-000081-29	910503703776
eW Graze Q LX Powercore 914 mm (3 ft)	9° x 9°	523-000081-31	910503703778	523-000081-32	910503703779
	10° x 60°	523-000081-34	910503703781	523-000081-35	910503703782
	15° x 30°	523-000081-37	910503703784	523-000081-38	910503703785
	30° x 60°	523-000081-40	910503703787	523-000081-41	910503703788
	60° x 30°	523-000081-43	910503703790	523-000081-44	910503703791
eW Graze Q LX Powercore 1219 mm (4 ft)	9° x 9°	523-000081-46	910503703793	523-000081-47	910503703794
	10° x 60°	523-000081-49	910503703796	523-000081-50	910503703797
	15° x 30°	523-000081-52	910503703799	523-000081-53	910503703801
	30° x 60°	523-000081-55	910503703803	523-000081-56	910503703804
	60° x 30°	523-000081-58	910503703806	523-000081-59	910503703807

Use Item Number when ordering in North America.

Item	Beam Angle	2700 K		3000 K		3500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze QLX Powercore 5W 305 mm (1 ft)	9° x 9°	523-000086-00	910503704061	523-000086-60	912400135266	523-000086-80	912400135307
	10° x 60°	523-000086-03	910503703840	523-000086-61	912400135267	523-000086-81	912400135308
	15° x 30°	523-000086-06	910503703843	523-000086-62	912400135268	523-000086-82	912400135309
	30° x 60°	523-000086-09	910503703846	523-000086-63	912400135269	523-000086-83	912400135310
	60° x 30°	523-000086-12	910503703849	523-000086-64	912400135270	523-000086-84	912400135311
eW Graze QLX Powercore 5W 610 mm (2 ft)	9° x 9°	523-000086-15	910503703852	523-000086-65	912400135271	523-000086-85	912400135312
	10° x 60°	523-000086-18	910503703855	523-000086-66	912400135272	523-000086-86	912400135313
	15° x 30°	523-000086-21	910503703858	523-000086-67	912400135273	523-000086-87	912400135314
	30° x 60°	523-000086-24	910503703861	523-000086-68	912400135274	523-000086-88	912400135315
	60° x 30°	523-000086-27	910503703864	523-000086-69	912400135275	523-000086-89	912400135316
eW Graze QLX Powercore 5W 914 mm (3 ft)	9° x 9°	523-000086-30	910503703867	523-000086-70	912400135276	523-000086-90	912400135317
	10° x 60°	523-000086-33	910503703870	523-000086-71	912400135277	523-000086-91	912400135318
	15° x 30°	523-000086-36	910503703873	523-000086-72	912400135278	523-000086-92	912400135319
	30° x 60°	523-000086-39	910503703876	523-000086-73	912400135279	523-000086-93	912400135320
	60° x 30°	523-000086-42	910503703879	523-000086-74	912400135280	523-000086-94	912400135321
eW Graze QLX Powercore 5W 1219 mm (4 ft)	9° x 9°	523-000086-45	910503703882	523-000086-75	912400135281	523-000086-95	912400135322
	10° x 60°	523-000086-48	910503703885	523-000086-76	912400135282	523-000086-96	912400135323
	15° x 30°	523-000086-51	910503703888	523-000086-77	912400135283	523-000086-97	912400135324
	30° x 60°	523-000086-54	910503703891	523-000086-78	912400135284	523-000086-98	912400135325
	60° x 30°	523-000086-57	910503703894	523-000086-79	912400135285	523-000086-99	912400135326

Item	Beam Angle	4000 K		5500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze QLX Powercore 5W 305 mm (1 ft)	9° x 9°	523-000086-01	910503703838	523-000086-02	910503703839
	10° x 60°	523-000086-04	910503703841	523-000086-05	910503703842
	15° x 30°	523-000086-07	910503703844	523-000086-08	910503703845
	30° x 60°	523-000086-10	910503703847	523-000086-11	910503703848
	60° x 30°	523-000086-13	910503703850	523-000086-14	910503703851
eW Graze QLX Powercore 5W 610 mm (2 ft)	9° x 9°	523-000086-16	910503703853	523-000086-17	910503703854
	10° x 60°	523-000086-19	910503703856	523-000086-20	910503703857
	15° x 30°	523-000086-22	910503703859	523-000086-23	910503703860
	30° x 60°	523-000086-25	910503703862	523-000086-26	910503703863
	60° x 30°	523-000086-28	910503703865	523-000086-29	910503703866
eW Graze QLX Powercore 5W 914 mm (3 ft)	9° x 9°	523-000086-31	910503703868	523-000086-32	910503703869
	10° x 60°	523-000086-34	910503703871	523-000086-35	910503703872
	15° x 30°	523-000086-37	910503703874	523-000086-38	910503703875
	30° x 60°	523-000086-40	910503703877	523-000086-41	910503703878
	60° x 30°	523-000086-43	910503703880	523-000086-44	910503703881
eW Graze QLX Powercore 5W 1219 mm (4 ft)	9° x 9°	523-000086-46	910503703883	523-000086-47	910503703884
	10° x 60°	523-000086-49	910503703886	523-000086-50	910503703887
	15° x 30°	523-000086-52	910503703889	523-000086-53	910503703890
	30° x 60°	523-000086-55	910503703892	523-000086-56	910503703893
	60° x 30°	523-000086-58	910503703895	523-000086-59	910503703896

Use Item Number when ordering in North America.

Item	Beam Angle	2700 K		3000 K		3500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze EC Powercore 305 mm (1 ft)	90° x 90°	523-000082-00	910503703154	523-000082-12	912400135327	523-000082-13	912400135328
eW Graze EC Powercore 610 mm (2 ft)	90° x 90°	523-000082-03	910503703810	523-000082-14	912400135329	523-000082-15	912400135330
eW Graze EC Powercore 914 mm (3 ft)	90° x 90°	523-000082-06	910503703813	523-000082-16	912400135331	523-000082-17	912400135332
eW Graze EC Powercore 1219 mm (4 ft)	90° x 90°	523-000082-09	910503703816	523-000082-18	912400135333	523-000082-19	912400135334

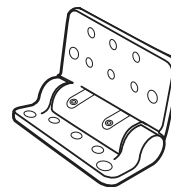
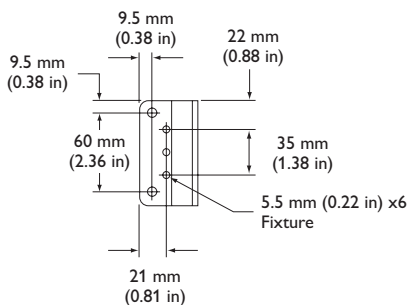
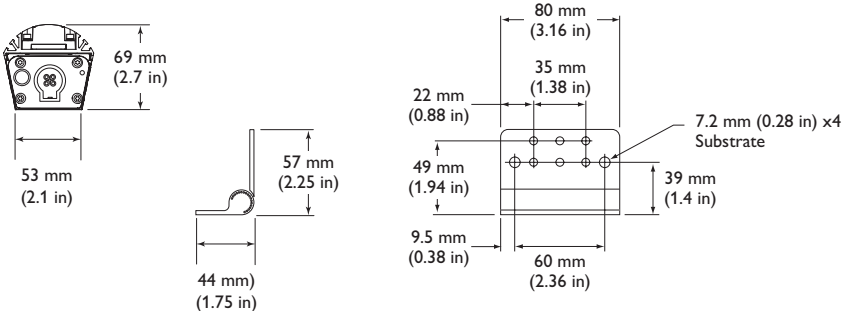
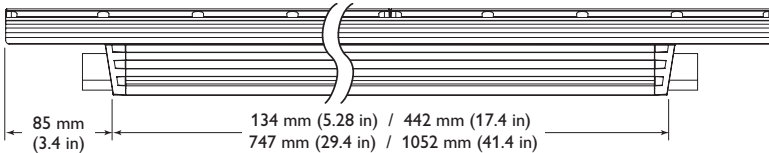
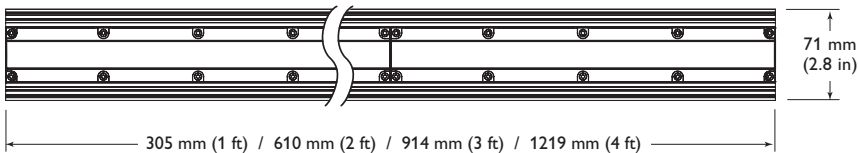
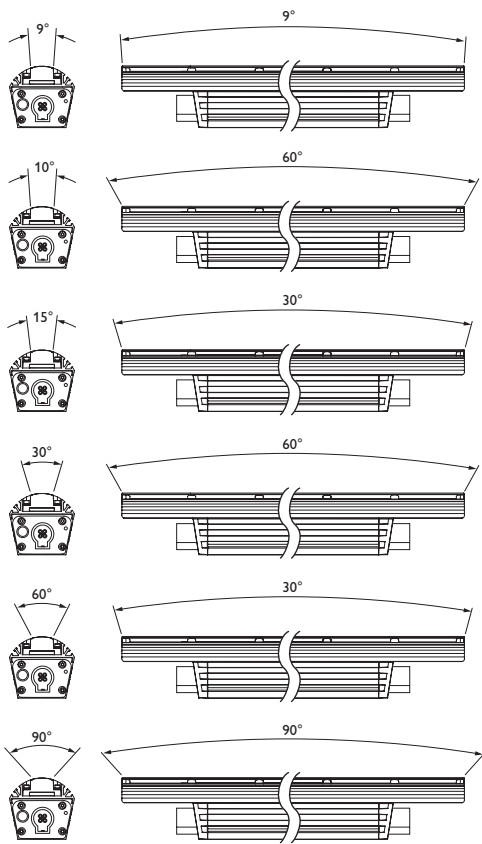
Item	Beam Angle	4000 K		5500 K	
		Item Number	Philips 12NC	Item Number	Philips 12NC
eW Graze EC Powercore 305 mm (1 ft)	90° x 90°	523-000082-01	910503703808	523-000082-02	910503703809
eW Graze EC Powercore 610 mm (2 ft)	90° x 90°	523-000082-04	910503703811	523-000082-05	910503703812
eW Graze EC Powercore 914 mm (3 ft)	90° x 90°	523-000082-07	910503703814	523-000082-08	910503703815
eW Graze EC Powercore 1219 mm (4 ft)	90° x 90°	523-000082-10	910503703817	523-000082-11	910503703818

Item	Type	Size	Item Number	Philips 12NC
Leader Cable with Terminator	UL/cUL	3 m (10 ft)	108-000056-03	910503704071
		15.2 m (50 ft)	108-000056-00	910503703138
	CE/PSE	3 m (10 ft)	108-000056-04	910503704072
		15.2 m (50 ft)	108-000056-01	910503704069
Jumper Cable	UL/cUL	End-to-End	108-000057-00	910503703139
		305 mm (1 ft)	108-000057-03	910503704076
		1.5 m (5 ft)	108-000057-06	910503704079
		3 m (10 ft)	108-000057-09	910503704082
		6.1 m (20 ft)	108-000057-12	912400130304
		9.1 m (30 ft)	108-000057-15	912400130306
	CE/PSE	End-to-End	108-000057-01	910503704074
		305 mm (1 ft)	108-000057-04	910503704077
		1.5 m (5 ft)	108-000057-07	910503704080
		3 m (10 ft)	108-000057-10	910503704083
		6.1 m (20 ft)	108-000057-13	912400130299
		9.1 m (30 ft)	108-000057-16	912400130307
Glare Shield		305 mm (1 ft)	120-000081-00	910503700745
		610 mm (2 ft)	120-000081-01	910503700746
		914 mm (3 ft)	120-000081-02	910503700747
		1219 mm (4 ft)	120-000081-03	910503700748
Mounting Arm		Short, Black	120-000201-00	912400135840
		Medium, Black	120-000201-01	912400135841
		Long, Black	120-000201-02	912400135842
		Short, Gray	120-000201-03	912400135843
		Medium, Gray	120-000201-04	912400135844
		Long, Gray	120-000201-05	912400135845
		Short, White	120-000201-06	912400135846
		Medium, White	120-000201-07	912400135847
		Long, White	120-000201-08	912400135848

Use Item Number when ordering in North America.

Graze Louver	MX/MX4, 305 mm (1 ft)	120-000202-00	912400135849
	MX/MX4, 610 mm (2 ft)	120-000202-01	912400135850
	MX/MX4, 915 mm (3 ft)	120-000202-02	912400135851
	MX/MX4, 1220 mm (4 ft)	120-000202-03	912400135852
	QLX, 305 mm (1 ft)	120-000202-04	912400135853
	QLX, 610 mm (2 ft)	120-000202-05	912400135854
	QLX, 915 mm (3 ft)	120-000202-06	912400135855
	QLX, 1220 mm (4 ft)	120-000202-07	912400135856
Graze Masking Shield	305 mm (1ft)	120-000203-00	912400135857
	610 mm (2 ft)	120-000203-01	912400135858
	915 mm (3 ft)	120-000203-02	912400135859
	1220 mm (4 ft)	120-000203-03	912400135860
Additional Terminators	QTY 10	120-000157-00	910503703142
Additional Hinge	QTY 1	120-000098-00	910503700772

Dimensions



Installation

eW Graze Powercore offers dimmable, high-quality solid white LED illumination for surface grazing and wall-washing applications, both indoors and outdoors. Patented Powercore technology integrates power management directly within the luminaires and eases installation by eliminating the need for external power supplies.

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate eW Graze Powercore luminaires in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector to ensure compliance.

Installing in Damp or Wet Locations

When installing in damp or wet locations, seal all luminaires and all junction boxes with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in wiring compartments, cables, luminaires, or other electrical parts. Use suitable outdoor-rated junction boxes when installing in damp or wet locations. Additionally, use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

Start the Installation

1. Refer to the lighting design plan, architectural diagram, or other diagram that shows the physical layout of the installation to identify the locations of all switches, luminaires, and cables.

eW Graze Powercore luminaires can be installed in series or in parallel (wired to a common junction box). The maximum number of luminaires each circuit can support depends on specific configuration details such as luminaire length, luminaire spacing, circuit size, line voltage, and leader cable length. For more information, and for help calculating the number of luminaires your specific installation can support, download the Configuration Calculator from www.philipscolorkinetics.com/support/install_tool/, or consult Application Engineering Services at support@colorkinetics.com.

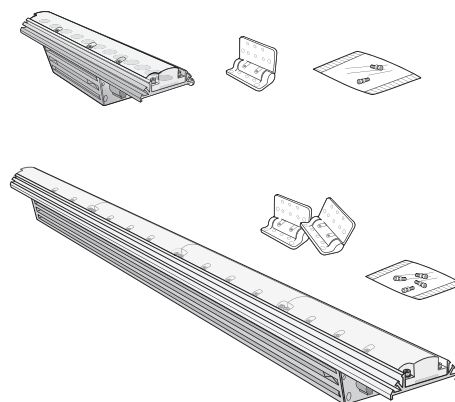
2. Carefully inspect the box containing eW Graze Powercore and the contents for any damage that may have occurred in transit.
3. Ensure that all additional parts and tools are available, including:
 - The included mounting hinges and hardware
 - 2 mm, 2.5 mm, and 4 mm hex key wrenches
 - 5 mm (1/4 in) socket cap fasteners, anchors, or screws for surface mounting
 - Conduit as needed
 - 2 + ground copper wire, as needed. Standard 2.05 mm (12 AWG) stranded wire is recommended.
 - Junction boxes, as needed, rated for your application. (Refer to the manufacturer's literature for additional items required for mounting or sealing.)
 - Electronics-grade room temperature vulcanizing (RTV) silicone sealant, as needed

✳ Refer to the eW Graze Powercore Installation Instructions for specific warning and caution statements.

✳ Clean the lens with water and mild detergent using a soft cleaning cloth, and wipe dry. Because they will scratch, soften, pit, haze, yellow, mar, or crack the lens, do not use paper towels, abrasive cleaning products, window cleaners, or cleaning solutions containing chemicals such as ammonia, sodium hydroxide, and isopropyl alcohol.

Included in the box

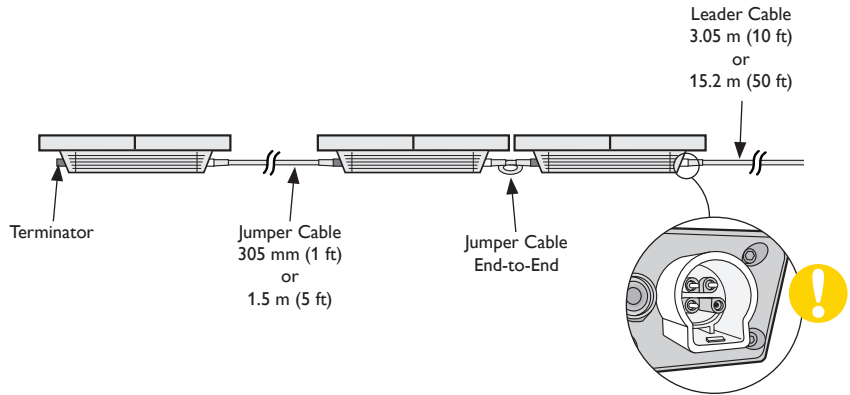
eW Graze Powercore luminaire
(1) or (2) Mounting hinges
(2) or (4) M5, 15 mm stainless steel hex bolts for hinge installation
Installation Instructions



Mount and Connect Luminaires

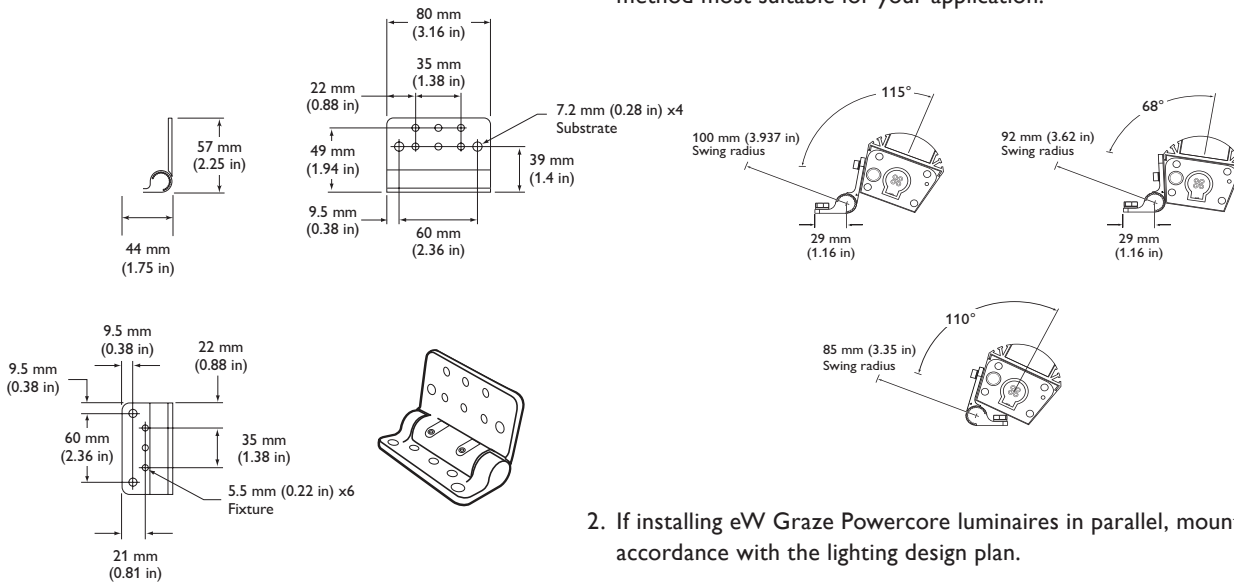
Make sure the power is OFF before mounting and connecting eW Graze Powercore luminaires.

eW Graze Powercore luminaires offer bulkhead connectors that accept the eW Graze Powercore pre-configured Leader and Jumper Cables. Because they have a male connector on one end of the luminaire and a female connector on the other end, eW Graze Powercore luminaires are directional, and must all be oriented in the same direction.



Mount Luminaires

- Using the included 4 mm hex hardware, attach two hinges to each luminaire. There are three possible methods for attaching hinges to the luminaires, each method offering differing degrees of swing radius and space-efficiency. Select the method most suitable for your application.



- If installing eW Graze Powercore luminaires in parallel, mount junction boxes in accordance with the lighting design plan.
- When installing a linear series of eW Graze Powercore luminaires, make sure that all luminaires are oriented in the same direction. The white connectors are for cable inputs, and the black connectors are for cable outputs. The Leader Cable connects to the male bulkhead connector on the first luminaire in each series.
- Rotate the luminaire hinge assemblies into the desired positions. For consistent position control, use the indicators on the side of each hinge knuckle for reference. Use a 2 mm hex key wrench to loosen the set screws, as needed.
- To accommodate installation from various angles, each hinge has four set screws designed to lock the hinge position. All four, or only two, of the set screws may

be used, depending on the mounting method and swing radius you select for the hinge. For example, if the hinge leaves are to be fully closed, the interior set screws may not be accessible.

Do not lock the hinges' positions at this time; the hinges have a built-in constant torque feature that allows temporary positioning. For optimal light output performance, aim and lock the hinges following installation.

Make Cable Connections

1. Connect Leader Cables:

- If installing luminaires in series, run a 3 m (10 ft) or 15.2 m (50 ft) Leader Cable from a line voltage source to the input side of the first luminaire in the series. Push the Leader Cable into the connector to lock it into place.
- If installing luminaires in parallel, run 2 + ground copper wire from a line voltage source to a common junction box.

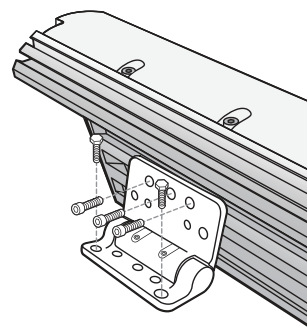
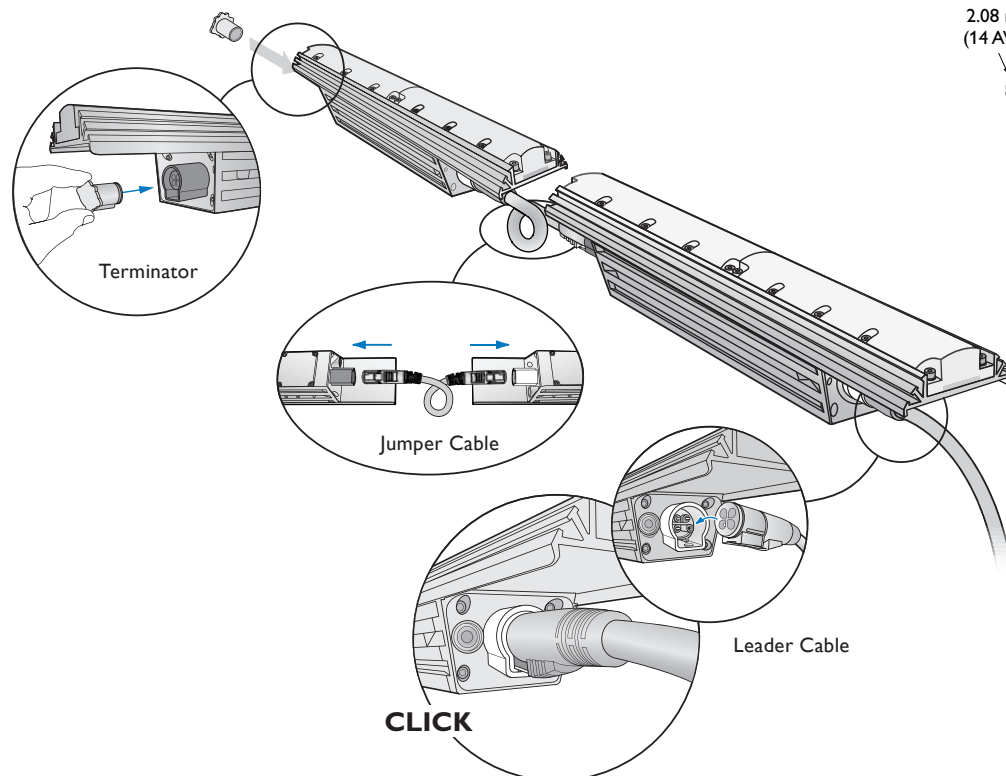
Run Leader Cables from the common junction box to the input side of the first luminaire in each series. Push the Leader Cables into the connectors to lock them into place.

Within the common junction box, use wire nuts to connect line, neutral, and ground data wires. Tuck wire connections into the junction box.

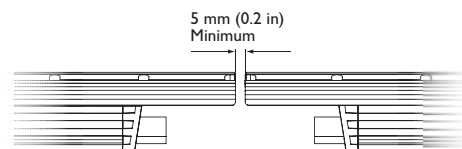
Secure all junction box covers. If installing in a damp or wet location, seal all junction boxes and points of entry with contractor-grade RTV silicone sealant. Use gaskets, clamps, and other parts and fittings required to comply with local outdoor wiring codes.

3. Connect all Jumper Cables between luminaires. Push the cable ends into the connectors to lock them into place.

4. Insert a terminator into the output side of the last luminaire in each series. (Terminators are provided with the eW Graze Powercore Leader Cables.)



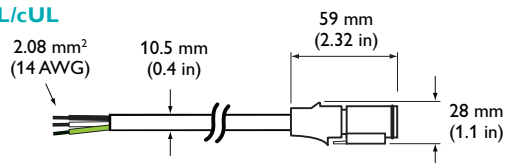
Minimum distance between luminaires



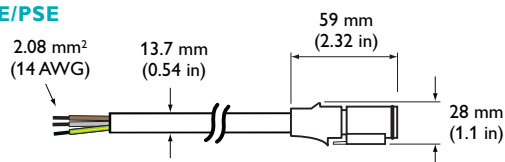
❁ Be sure to position luminaires close enough together so that Leader Cables and Jumper Cables are not stretched or taut when installed.

Leader Cable Connector Dimensions

UL/cUL



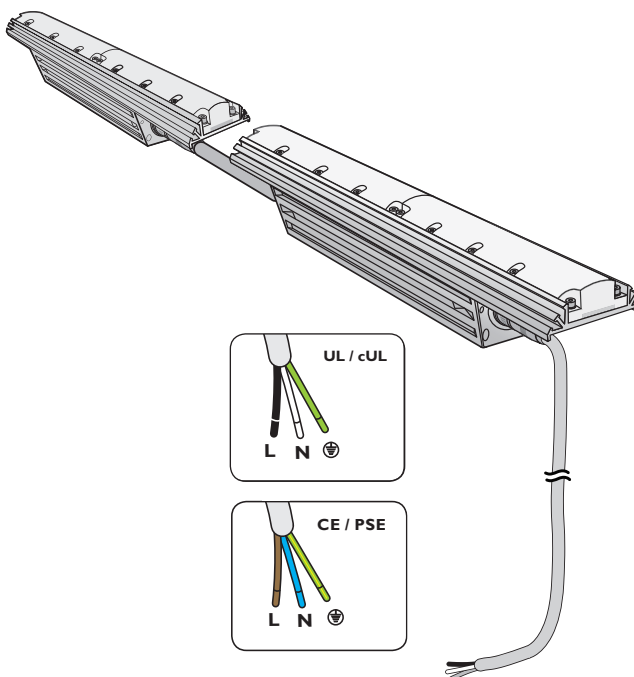
CE/PSE



✱ To ensure CE compliance when using a terminal block, the terminal block must conform to EN 60998-2-1 or EN 60998-2-2 and meet the specified ratings for the voltage listed in this Product Guide.

Make Power Connections

Once you've made all luminaire and junction box connections, connect the flying leads from a Leader Cable, or the 2 + ground wire from a common junction box, to a line circuit by a method that meets all national, regional, and local regulations.



✱ Do not look directly into a luminaire when aiming and locking.

✱ The hinge position set screws have factory applied thread lock. Confirm the luminaire angle and positioning before locking each hinge.

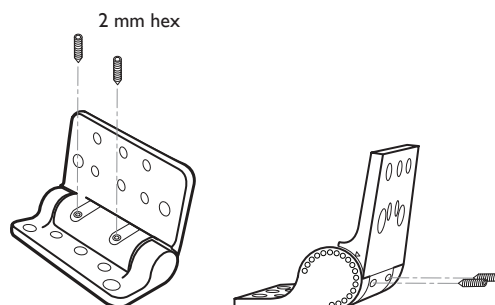
Aim and Lock the Luminaires

Make sure power is ON before aiming luminaires.

Rotate the luminaires to achieve the optimal angle for light output. For consistent position control, use the indicators on the side of each hinge knuckle as reference.

For fine horizontal adjustment, you can change the position of the hinge mounting block located on the side of each luminaire. Loosen the set screw with a 2.5 mm hex key, slide the mounting block to the desired position, then tighten the set screw.

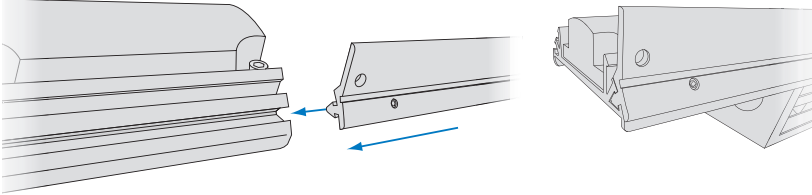
Once satisfied with luminaire angles and positioning, use a 2 mm hex key wrench to tighten the hinge position set screws and lock each hinge.



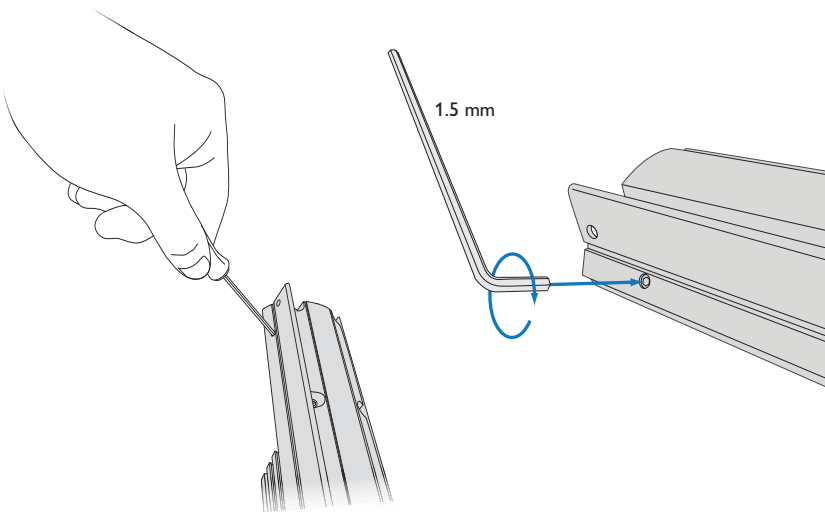
Attach Glare Shields (Optional)

Glare Shields, in 305 mm (1 ft), 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) lengths, can be inserted in the grooves in the eW Graze Powercore housing. Glare Shields block unwanted spill light, and can shield the light sources from being directly visible in certain mounting situations.

1. Insert the Glare Shield's triangular tab in the outer groove on the side of the eW Graze Powercore housing.



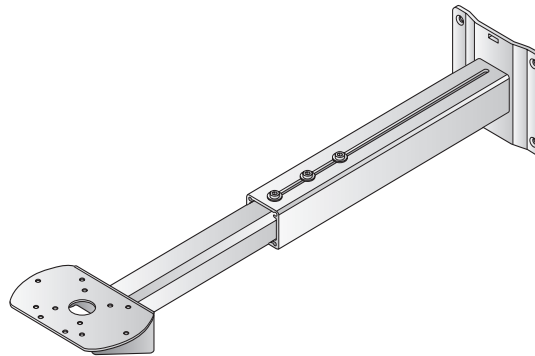
2. Using a hex wrench, tighten the locking screws to hold the Glare Shield in place.
3. (Optional) Attach a tether to the knockout in the Glare Shield, and affix the tether to a secure anchor point.
4. Using a small screwdriver, hand-tighten all set screws. Using a 1.5 mm hex wrench, torque the set screws to approximately 4 kgf/cm (3.5 in-lbs) to hold the Glare Shield in place.



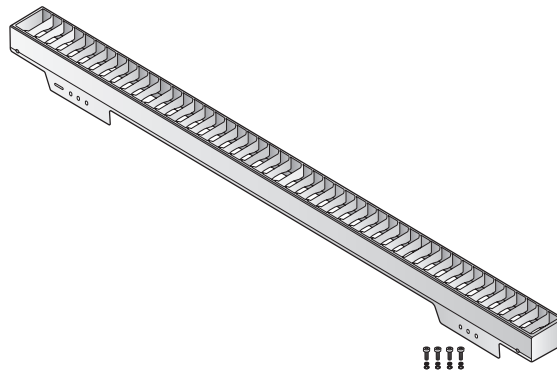
Attach Accessories (Optional)

Additional accessories can be installed on luminaires.

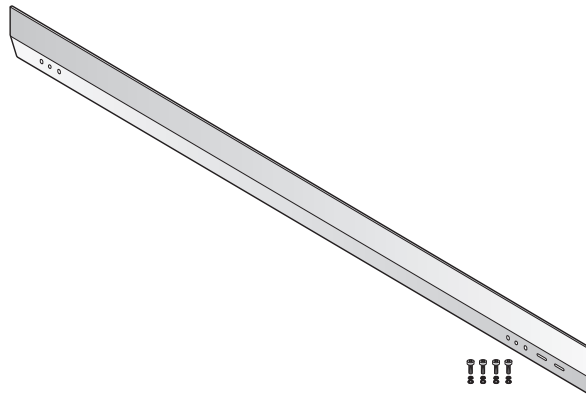
* For complete instructions on how to install the Mounting Arm, refer to <http://www.colorkinetics.com/lis/accessories/mounting-arm/>. Refer to <http://www.colorkinetics.com/lis/accessories/graze/> for Installation Instructions for the Symmetric Louver and Masking Shield.



Mounting Arm



Graze Louver



Graze Masking Shield

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