

CK0407SQPC

4" SQUARE DIRECT

4" square x 7" high surface mount cylinder luminaire designed for general illumination in spaces with exposed conduit and 4" surface-mounted octagonal junction boxes.

LUMENS / WATTAGE DATA			
PART NUMBER	DELIVERED LUMENS ¹	SYSTEM WATTS	LPW
CK0407SQPC10L	523	6.7	78
CK0407SQPC15L	694	9.5	73
CK0407SQPC20L	977	13.2	74
CK0407SQPC30L	1386	17.8	78

¹ Nominal Delivered Lumens at 35K MD xx NL xx MW

FEATURES

Spectrum's Cylinder series provides traditional architectural style with high performance and energy efficient illumination. Rugged design with flexible mounting, finish and LED options make these extremely versatile fixtures. Integral LED driver. Quick change LED module for job site flexibility and fixture upgrade.

FINISH

Multi-stage polyester powder-coat process applied on our dedicated paint lines. See mounting and color pages for standard finishes. All exposed materials are chromate pretreated to resist corrosion.

ELECTRONICS

LED module features state of the art, high efficiency LEDs. 3-step MacAdam Ellipse binning with 82 and 92 CRI available. DS2W1 MLV/ELV phase cut driver dims smooth to 1%. 0-10V 1% 120V and 277V options.

CONSTRUCTION

Fixtures are machined in our factory from 6063-H32 high purity aluminum extrusions. Specular primary optical reflectors provide high efficiency illumination. Plated steel hardware with galvanized steel brackets to resist corrosion. Machined conduit clearance slots are 1.125" wide and are offered in a variety of patterns.

CODE COMPLIANCE

BAA compliant. ETL certified to meet US and Canadian standards. Suitable for dry or damp locations. Manufactured and tested to UL standards No. 1598/8750.

PRODUCT SELECTOR GUIDE

SERIES	LUMENS ¹	CCT	OPTICS	DRIVER / VOLTAGE	OPTIONS	MOUNTING	FINISH	ACCESSORIES
CK0407SQPC								

EXAMPLE

CK0407SQPC	10L	35K	MD	EX	SO	CS2	MW	
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SERIES	LUMENS ¹	CCT	OPTICS	DRIVER / VOLTAGE ⁴	LENS	MOUNTING ^{6/7}	FINISH ⁸	ACCESSORIES
CK0407SQPC	10L 500 Lm	82 CRI	ND 25°	EX Electronic Driver, 120V/277V	SO ⁵ Micro Prism Solite™ Lens	CS1 1x Conduit Feed	MW ⁹ Matte White	EMRM 7W Remote EM EMEN 7W Remote with Enclosure
		27K 2700K	MD 31°					
	20L 1000 Lm	30K 3000K	WD 40°	DS2W1 ³ ELV/MLV, 120V	CS3 2x Conduit Feed, 90° Corner	PT ⁹ Platinum Silver		
	30L ^{2/3} 1400 Lm	35K 3500K	XW 56°				EXEM Electronic Driver, 120V/277V	
	92 CRI	40K 4000K		DO10XEM 1%, 0-10V, 120V/277V	CS5 4x Conduit Feed, X Pattern			
	27HK 2700K					DS2W1EM ELV/MLV, 120V		
	30HK 3000K							
	35HK 3500K							
	40HK 4000K							

¹ Nominal Delivered Lumens at Any CCT
² 30L, DO10X Will Dim to 5%
³ 30L option is not compatible with DS2W1

² 30L, DO10X Will Dim to 5%
³ 30L option is not compatible with DS2W1
⁴ Contact Factory for Additional Options

⁵ Standard Lens

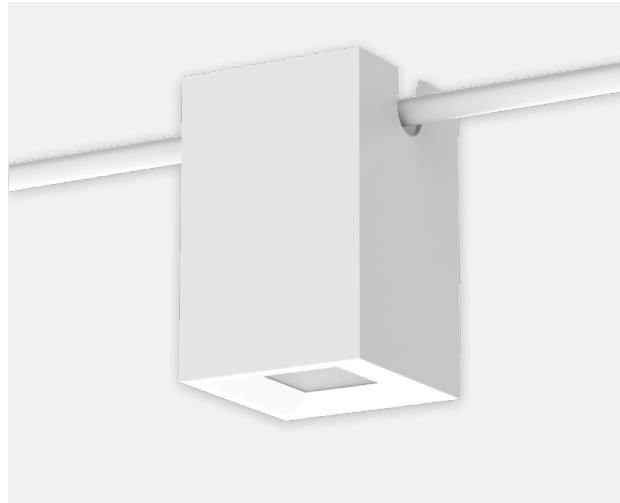
⁶ See Second Page for Details on Components and Patterns
⁷ Junction box and conduit by others

⁸ Reference Color Sheet Located on Product Webpage for Full List of Available Colors/ Consult Factory for Special Finishes
⁹ Standard Finishes

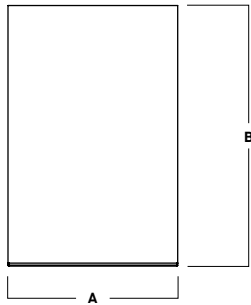


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PROJECT: _____
QUANTITY: _____ TYPE: _____







FIXTURE DIMENSIONS



A	B
4.5 114.3 mm	7.1 180.3 mm

Fixture Weight: 5.5 lbs

FINISH

MW Matte White 	MB Matte Black 	PT Platinum Silver 	CC Custom Color 
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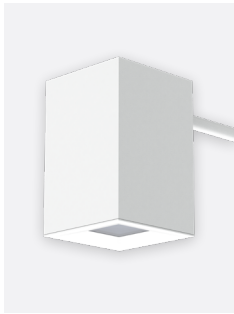
PAINT TIMES

TIER	COST	AVERAGE PAINT TIME*
Tier 1 - Standard Finishes	\$	
Custom Color	Contact Factory	Contact Factory

*CONTACT FACTORY FOR SPECIFIC PRODUCT LEAD TIMES

MOUNTING TYPES

CS1
1x CONDUIT FEED



CS2
2x CONDUIT FEED, STRAIGHT



CS3
3x CONDUIT FEED, 90° CORNER



CS4
4x CONDUIT FEED, T PATTERN



CS5
5x CONDUIT FEED, X PATTERN



CKO407SQPC 30L 35K ND xx NL xx MW

CANDLEPOWER CURVE TEST SP-01449_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																
	0°	0° - 10° 331 24%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>106 fc</td><td>2.9'</td><td>50 fc</td></tr> <tr><td>7.5'</td><td>80 fc</td><td>3.3'</td><td>37 fc</td></tr> <tr><td>8.5'</td><td>62 fc</td><td>3.7'</td><td>29 fc</td></tr> <tr><td>10.0'</td><td>45 fc</td><td>4.4'</td><td>21 fc</td></tr> <tr><td>12.0'</td><td>31 fc</td><td>5.3'</td><td>15 fc</td></tr> <tr><td>14.0'</td><td>23 fc</td><td>6.1'</td><td>11 fc</td></tr> <tr><td>16.0'</td><td>18 fc</td><td>7.0'</td><td>8 fc</td></tr> <tr><td>20.0'</td><td>11 fc</td><td>8.8'</td><td>5 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	106 fc	2.9'	50 fc	7.5'	80 fc	3.3'	37 fc	8.5'	62 fc	3.7'	29 fc	10.0'	45 fc	4.4'	21 fc	12.0'	31 fc	5.3'	15 fc	14.0'	23 fc	6.1'	11 fc	16.0'	18 fc	7.0'	8 fc	20.0'	11 fc	8.8'	5 fc	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 4</th> <th colspan="2">RCR 6</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>14'</td><td>4'</td><td>90</td><td>1.27</td><td>60</td><td>0.94</td></tr> <tr><td>18'</td><td>5'</td><td>47</td><td>0.66</td><td>49</td><td>0.77</td></tr> <tr><td>22'</td><td>6'</td><td>38</td><td>0.53</td><td>30</td><td>0.47</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 4		RCR 6		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	14'	4'	90	1.27	60	0.94	18'	5'	47	0.66	49	0.77	22'	6'	38	0.53	30	0.47
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0° 4487	0° - 20° 806 58%	0° - 10° 331 24%	Delivered Illuminance Rating: (DIR)	71 FC per W/Sq. Ft.	64 FC per W/Sq. Ft.																																																															
5° 3862	0° - 30° 1142 82%	0° - 20° 806 58%	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 RCR 6: Length & Width = Ceiling Ht. - 3.5' x 1.66 + Average Initial Footcandles at 2.5' Above Floor																																																																	
15° 1810	0° - 40° 1255 91%	0° - 30° 1142 82%																																																																		
25° 647	0° - 60° 1323 96%	0° - 40° 1255 91%																																																																		
35° 97	0° - 80° 1367 99%	0° - 60° 1323 96%																																																																		
45° 22	0° - 90° 1372 99%	0° - 80° 1367 99%																																																																		
55° 52	Total 1384 100%	0° - 90° 1372 99%																																																																		
90° 2		Total 1384 100%																																																																		

Delivered Lumens: 1384
Luminaire Watts: 17.8
LER: 77.75

CP at 0° (Nadir): 4487
CRI: 80

Beam Angle: 25°
Spacing Ratio: 0.41

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

CKO407SQPC 30L 35K MD xx NL xx MW

CANDLEPOWER CURVE TEST SP-01447_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																
	0°	0° - 10° 286 21%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>82 fc</td><td>3.6'</td><td>37 fc</td></tr> <tr><td>7.5'</td><td>62 fc</td><td>4.2'</td><td>28 fc</td></tr> <tr><td>8.5'</td><td>48 fc</td><td>4.7'</td><td>22 fc</td></tr> <tr><td>10.0'</td><td>35 fc</td><td>5.6'</td><td>16 fc</td></tr> <tr><td>12.0'</td><td>24 fc</td><td>6.7'</td><td>11 fc</td></tr> <tr><td>14.0'</td><td>18 fc</td><td>7.8'</td><td>8 fc</td></tr> <tr><td>16.0'</td><td>14 fc</td><td>8.9'</td><td>6 fc</td></tr> <tr><td>20.0'</td><td>9 fc</td><td>11.2'</td><td>4 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	82 fc	3.6'	37 fc	7.5'	62 fc	4.2'	28 fc	8.5'	48 fc	4.7'	22 fc	10.0'	35 fc	5.6'	16 fc	12.0'	24 fc	6.7'	11 fc	14.0'	18 fc	7.8'	8 fc	16.0'	14 fc	8.9'	6 fc	20.0'	9 fc	11.2'	4 fc	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 4</th> <th colspan="2">RCR 6</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>14'</td><td>5'</td><td>45</td><td>0.65</td><td>34</td><td>0.53</td></tr> <tr><td>18'</td><td>6'</td><td>34</td><td>0.49</td><td>31</td><td>0.49</td></tr> <tr><td>22'</td><td>7'</td><td>21</td><td>0.30</td><td>19</td><td>0.30</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 4		RCR 6		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	14'	5'	45	0.65	34	0.53	18'	6'	34	0.49	31	0.49	22'	7'	21	0.30	19	0.30
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22'	7'	21	0.30	19	0.30																																																															
0° 3479	0° - 20° 771 56%	0° - 10° 286 21%	Delivered Illuminance Rating: (DIR)	70 FC per W/Sq. Ft.	64 FC per W/Sq. Ft.																																																															
5° 3199	0° - 30° 1128 81%	0° - 20° 771 56%	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 RCR 6: Length & Width = Ceiling Ht. - 3.5' x 1.66 + Average Initial Footcandles at 2.5' Above Floor																																																																	
15° 1816	0° - 40° 1257 91%	0° - 30° 1128 81%																																																																		
25° 710	0° - 60° 1321 95%	0° - 40° 1257 91%																																																																		
35° 108	0° - 80° 1370 99%	0° - 60° 1321 95%																																																																		
45° 35	0° - 90° 1374 99%	0° - 80° 1370 99%																																																																		
55° 30	Total 1386 100%	0° - 90° 1374 99%																																																																		
90° 2		Total 1386 100%																																																																		

Delivered Lumens: 1386
Luminaire Watts: 17.8
LER: 77.87

CP at 0° (Nadir): 3479
CRI: 80

Beam Angle: 31°
Spacing Ratio: 0.51

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

HOW TO USE PERFORMANCE DATA

SINGLE UNIT	MULTIPLE UNITS
<p>One of Light of a single, symmetrical beam luminaire. Direct initial illumination (FC) and Beam Angle diameter directly beneath fixture; shown at different distances from aperture to horizontal plane. Calculated using Inverse Square Law.</p> $FC_{H} = CP \times (\cos \theta) \div D^2$ <p>Beam Diam. = 1/2 Beam Angle (Tan) x 2D</p> <ul style="list-style-type: none"> • CP Candela at 0° (Nadir) • Cos θ Cosine of θ Angle • D Distance (Mounting Height AFF) • FC_H Footcandles, Horizontal • Beam Angle Cone of light to 50% max. CP • Beam Diam. Pattern of light at Beam Angle 	<p>Square grid layout of multiple luminaires in unfurnished, square rooms of different proportions (Room Cavity Ratios) with 80/50/20% room surface reflectances. 2' Suspension Length to aperture. Initial average illumination (FC) calculated at 2.5' above floor, using Zonal Cavity Method. W/Sq. Ft. of layout shown for each ceiling height and RCR.</p> <p>Delivered Illuminance Rating (DIR®): System performance indicator expressed as ratio of approximate initial FC per W/Sq. Ft. delivered to horizontal plane below, for the range of ceiling heights indicated.</p> <ul style="list-style-type: none"> • To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): $FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}$ • To estimate FC, Sq. Ft. per fixture for a specific target FC: $\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}$ • To estimate Fixture Quantity in a room: $\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}$ • To estimate Watts/Sq. Ft.: $W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}$

CKO407SQPC 30L 35K WD xx NL xx MW

CANDLEPOWER CURVE TEST SP-01451_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY				MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT								
			Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	Ceiling Height	Fixture Spacing	RCR 3		RCR 5				
	0°	0° - 10°	231	16%	6.5'	61 fc	4.8'	25 fc	10'	4'	71	0.95	64	0.95	
	0°	0° - 20°	726	52%	7.5'	46 fc	5.5'	19 fc	14'	6'	39	0.52	24	0.36	
	5°	0° - 30°	1139	81%	8.5'	36 fc	6.3'	15 fc	18'	8'	21	0.27	23	0.34	
	15°	0° - 40°	1282	91%	10.0'	26 fc	7.4'	11 fc	Delivered Illuminance Rating: (DIR)		75 FC per W/Sq. Ft.		67 FC per W/Sq. Ft.		
	25°	0° - 60°	1350	96%	12.0'	18 fc	8.8'	7 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 3: Length & Width = Ceiling Ht. - 3.5' x 3.33 RCR 5: Length & Width = Ceiling Ht. - 3.5' x 2.00 * Average Initial Footcandles at 2.5' Above Floor						
	35°	0° - 80°	1389	99%	14.0'	13 fc	10.3'	5 fc							
	45°	0° - 90°	1392	99%	16.0'	10 fc	11.8'	4 fc							
	55°	90°	2	Total		20.0'	6 fc	14.7'	3 fc						
	90°	2	Total		1404	100%									

Delivered Lumens: 1404
Luminaire Watts: 17.8
LER: 78.88

CP at 0° (Nadir): 2593
CRI: 80

Beam Angle: 40°
Spacing Ratio: 0.65

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

CKO407SQPC 30L 35K XW xx NL xx MW

CANDLEPOWER CURVE TEST SP-01453_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY				MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT								
			Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	Ceiling Height	Fixture Spacing	RCR 2		RCR 4				
	0°	0° - 10°	131	9%	6.5'	32 fc	6.9'	11 fc	10'	6"	34	0.42	42	0.61	
	0°	0° - 20°	498	34%	7.5'	24 fc	8.0'	8 fc	14'	8"	19	0.23	16	0.23	
	5°	0° - 30°	946	65%	8.5'	19 fc	9.1'	6 fc	18'	10"	13	0.17	8	0.12	
	15°	0° - 40°	1201	83%	10.0'	14 fc	10.7'	5 fc	Delivered Illuminance Rating: (DIR)		80 FC per W/Sq. Ft.		69 FC per W/Sq. Ft.		
	25°	0° - 60°	1399	96%	12.0'	9 fc	12.8'	3 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00 RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 * Average Initial Footcandles at 2.5' Above Floor * Exceeds Spacing Ratio by 1%						
	35°	0° - 80°	1438	99%	14.0'	7 fc	15.0'	2 fc							
	45°	0° - 90°	1441	99%	16.0'	5 fc	17.1'	2 fc							
	55°	90°	82	Total		20.0'	3 fc	21.4'	1 fc						
	90°	2	Total		1452	100%									

Delivered Lumens: 1452
Luminaire Watts: 17.8
LER: 81.57

CP at 0° (Nadir): 1365
CRI: 80

Beam Angle: 56°
Spacing Ratio: 0.91

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

HOW TO USE PERFORMANCE DATA

SINGLE UNIT	MULTIPLE UNITS
<p>Cone of Light of a single, symmetrical beam luminaire. Direct initial illumination (FC) and Beam Angle diameter directly beneath fixture; shown at different distances from aperture to horizontal plane. Calculated using Inverse Square Law.</p> $FC_{H} = CP \times (\cos \theta) \div D^2$ <p>Beam Diam. = 1/2 Beam Angle (Tan) x 2D</p> <ul style="list-style-type: none"> - CP Candela at 0° (Nadir) - Cos θ Cosine of θ Angle - D Distance (Mounting Height AFF) - FC_H Footcandles, Horizontal - Beam Angle Cone of light to 50% max. CP - Beam Diam. Pattern of light at Beam Angle 	<p>Square grid layout of multiple luminaires in unfurnished, square rooms of different proportions (Room Cavity Ratios) with 80/50/20% room surface reflectances. 2' Suspension Length to aperture. Initial average illumination (FC) calculated at 2.5' above floor, using Zonal Cavity Method. W/Sq. Ft. of layout shown for each ceiling height and RCR.</p> <p>Delivered Illuminance Rating (DIR®): System performance indicator expressed as ratio of approximate initial FC per W/Sq. Ft. delivered to horizontal plane below, for the range of ceiling heights indicated.</p> <ul style="list-style-type: none"> - To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): $FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}$ - To estimate Sq. Ft. per fixture for a specific target FC: $\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}$ <ul style="list-style-type: none"> - To estimate Fixture Quantity in a room: $\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}$ - To estimate Watts/Sq. Ft.: $W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}$

CK0407SQPC 30L 35K ND xx SO xx MW

CANDLEPOWER CURVE TEST SP-01450_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																	
	0°	0° - 10° 264 21%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>79 fc</td><td>3.3'</td><td>36 fc</td></tr> <tr><td>7.5'</td><td>59 fc</td><td>3.8'</td><td>27 fc</td></tr> <tr><td>8.5'</td><td>46 fc</td><td>4.3'</td><td>21 fc</td></tr> <tr><td>10.0'</td><td>33 fc</td><td>5.0'</td><td>15 fc</td></tr> <tr><td>12.0'</td><td>23 fc</td><td>6.0'</td><td>11 fc</td></tr> <tr><td>14.0'</td><td>17 fc</td><td>7.0'</td><td>8 fc</td></tr> <tr><td>16.0'</td><td>13 fc</td><td>8.0'</td><td>6 fc</td></tr> <tr><td>20.0'</td><td>8 fc</td><td>10.0'</td><td>4 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	79 fc	3.3'	36 fc	7.5'	59 fc	3.8'	27 fc	8.5'	46 fc	4.3'	21 fc	10.0'	33 fc	5.0'	15 fc	12.0'	23 fc	6.0'	11 fc	14.0'	17 fc	7.0'	8 fc	16.0'	13 fc	8.0'	6 fc	20.0'	8 fc	10.0'	4 fc	0° - 20° 695 55%	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 4</th> <th colspan="2">RCR 6</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>14'</td><td>4'</td><td>59</td><td>0.93</td><td>54</td><td>0.94</td></tr> <tr><td>18'</td><td>5'</td><td>42</td><td>0.66</td><td>44</td><td>0.77</td></tr> <tr><td>22'</td><td>6'</td><td>26</td><td>0.41</td><td>27</td><td>0.47</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 4		RCR 6		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	14'	4'	59	0.93	54	0.94	18'	5'	42	0.66	44	0.77	22'	6'	26	0.41	27	0.47
	Mounting Distance	FC at Beam Center		Diameter at Beam Angle	FC at Beam Edge																																																																
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0° 3322	0° - 30° 990 78%	6.5' 79 fc 3.3' 36 fc	14' 4' 59 0.93 54 0.94																																																																		
5° 3011	0° - 40° 1113 88%	7.5' 59 fc 3.8' 27 fc	18' 5' 42 0.66 44 0.77																																																																		
15° 1539	0° - 60° 1207 96%	8.5' 46 fc 4.3' 21 fc	22' 6' 26 0.41 27 0.47																																																																		
25° 585	0° - 80° 1249 99%	10.0' 33 fc 5.0' 15 fc	Delivered Illuminance Rating: (DIR) 64 FC per W/Sq. Ft. 57 FC per W/Sq. Ft.																																																																		
35° 134	0° - 90° 1252 99%	12.0' 23 fc 6.0' 11 fc																																																																			
45° 50	Total 1263 100%	14.0' 17 fc 7.0' 8 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 RCR 6: Length & Width = Ceiling Ht. - 3.5' x 1.66 * Average Initial Footcandles at 2.5' Above Floor																																																																		
55° 48		16.0' 13 fc 8.0' 6 fc																																																																			
90° 2		20.0' 8 fc 10.0' 4 fc																																																																			

Delivered Lumens: 1263
Luminaire Watts: 17.8
LER: 70.96

CP at 0° (Nadir): 3322
CRI: 80

Beam Angle: 28°
Spacing Ratio: 0.46

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

CK0407SQPC 30L 35K MD xx SO xx MW

CANDLEPOWER CURVE TEST SP-01448_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																	
	0°	0° - 10° 230 19%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>64 fc</td><td>3.9'</td><td>28 fc</td></tr> <tr><td>7.5'</td><td>48 fc</td><td>4.5'</td><td>21 fc</td></tr> <tr><td>8.5'</td><td>38 fc</td><td>5.1'</td><td>17 fc</td></tr> <tr><td>10.0'</td><td>27 fc</td><td>5.9'</td><td>12 fc</td></tr> <tr><td>12.0'</td><td>19 fc</td><td>7.1'</td><td>8 fc</td></tr> <tr><td>14.0'</td><td>14 fc</td><td>8.3'</td><td>6 fc</td></tr> <tr><td>16.0'</td><td>11 fc</td><td>9.5'</td><td>5 fc</td></tr> <tr><td>20.0'</td><td>7 fc</td><td>11.9'</td><td>3 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	64 fc	3.9'	28 fc	7.5'	48 fc	4.5'	21 fc	8.5'	38 fc	5.1'	17 fc	10.0'	27 fc	5.9'	12 fc	12.0'	19 fc	7.1'	8 fc	14.0'	14 fc	8.3'	6 fc	16.0'	11 fc	9.5'	5 fc	20.0'	7 fc	11.9'	3 fc	0° - 20° 654 53%	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 4</th> <th colspan="2">RCR 6</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>14'</td><td>5'</td><td>40</td><td>0.65</td><td>30</td><td>0.53</td></tr> <tr><td>18'</td><td>6'</td><td>30</td><td>0.49</td><td>28</td><td>0.49</td></tr> <tr><td>22'</td><td>7'</td><td>19</td><td>0.30</td><td>17</td><td>0.30</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 4		RCR 6		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	14'	5'	40	0.65	30	0.53	18'	6'	30	0.49	28	0.49	22'	7'	19	0.30	17	0.30
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0° 2722	0° - 30° 964 78%	6.5' 64 fc 3.9' 28 fc	14' 5' 40 0.65 30 0.53																																																																		
5° 2550	0° - 40° 1098 88%	7.5' 48 fc 4.5' 21 fc	18' 6' 30 0.49 28 0.49																																																																		
15° 1518	0° - 60° 1187 96%	8.5' 38 fc 5.1' 17 fc	22' 7' 19 0.30 17 0.30																																																																		
25° 630	0° - 80° 1225 99%	10.0' 27 fc 5.9' 12 fc	Delivered Illuminance Rating: (DIR) 62 FC per W/Sq. Ft. 56 FC per W/Sq. Ft.																																																																		
35° 156	0° - 90° 1229 99%	12.0' 19 fc 7.1' 8 fc																																																																			
45° 52	Total 1241 100%	14.0' 14 fc 8.3' 6 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 RCR 6: Length & Width = Ceiling Ht. - 3.5' x 1.66 * Average Initial Footcandles at 2.5' Above Floor																																																																		
55° 37		16.0' 11 fc 9.5' 5 fc																																																																			
90° 2		20.0' 7 fc 11.9' 3 fc																																																																			

Delivered Lumens: 1241
Luminaire Watts: 17.8
LER: 69.72

CP at 0° (Nadir): 2722
CRI: 80

Beam Angle: 33°
Spacing Ratio: 0.54

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

HOW TO USE PERFORMANCE DATA

SINGLE UNIT	MULTIPLE UNITS
<p>One of Light of a single, symmetrical beam luminaire. Direct initial illumination (FC) and Beam Angle diameter directly beneath fixture; shown at different distances from aperture to horizontal plane. Calculated using Inverse Square Law.</p> $FC_{H} = CP \times (\cos \theta) \div D^2$ <p>Beam Diam. = 1/2 Beam Angle (Tan) x 2D</p> <ul style="list-style-type: none"> CP Candela at 0° (Nadir) cos θ Cosine of θ Angle D Distance (Mounting Height AFF) FC_H Footcandles, Horizontal Beam Angle Cone of light to 50% max. CP Beam Diam. Pattern of light at Beam Angle 	<p>Square grid layout of multiple luminaires in unfurnished, square rooms of different proportions (Room Cavity Ratios) with 80/50/20% room surface reflectances. 2' Suspension Length to aperture. Initial average illumination (FC) calculated at 2.5' above floor, using Zonal Cavity Method. W/Sq. Ft. of layout shown for each ceiling height and RCR.</p> <p>Delivered Illuminance Rating (DIR*): System performance indicator expressed as ratio of approximate initial FC per W/Sq. Ft. delivered to horizontal plane below, for the range of ceiling heights indicated.</p> <ul style="list-style-type: none"> To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): $FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}$ To estimate FC, Sq. Ft. per fixture for a specific target FC: $\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}$ To estimate Fixture Quantity in a room: $\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}$ To estimate Watts/Sq. Ft.: $W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}$

CKO407SQPC 30L 35K WD xx SO xx MW

CANDLEPOWER CURVE TEST SP-01452_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																	
	0°	0° - 10° 198 16%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>52 fc</td><td>4.8'</td><td>21 fc</td></tr> <tr><td>7.5'</td><td>39 fc</td><td>5.6'</td><td>16 fc</td></tr> <tr><td>8.5'</td><td>30 fc</td><td>6.3'</td><td>13 fc</td></tr> <tr><td>10.0'</td><td>22 fc</td><td>7.4'</td><td>9 fc</td></tr> <tr><td>12.0'</td><td>15 fc</td><td>8.9'</td><td>6 fc</td></tr> <tr><td>14.0'</td><td>11 fc</td><td>10.4'</td><td>5 fc</td></tr> <tr><td>16.0'</td><td>9 fc</td><td>11.9'</td><td>4 fc</td></tr> <tr><td>20.0'</td><td>6 fc</td><td>14.8'</td><td>2 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	52 fc	4.8'	21 fc	7.5'	39 fc	5.6'	16 fc	8.5'	30 fc	6.3'	13 fc	10.0'	22 fc	7.4'	9 fc	12.0'	15 fc	8.9'	6 fc	14.0'	11 fc	10.4'	5 fc	16.0'	9 fc	11.9'	4 fc	20.0'	6 fc	14.8'	2 fc	0° - 20° 625 49%	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 3</th> <th colspan="2">RCR 5</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>10'</td><td>4'</td><td>64</td><td>0.95</td><td>56</td><td>0.95</td></tr> <tr><td>14'</td><td>6'</td><td>35</td><td>0.52</td><td>22</td><td>0.36</td></tr> <tr><td>18'</td><td>8'</td><td>18</td><td>0.27</td><td>20</td><td>0.34</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 3		RCR 5		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	10'	4'	64	0.95	56	0.95	14'	6'	35	0.52	22	0.36	18'	8'	18	0.27	20	0.34
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0° 2202	0° - 30° 975 77%	6.5' 52 fc 4.8' 21 fc	10' 4' 64 0.95 56 0.95																																																																		
5° 2139	0° - 40° 1123 89%	7.5' 39 fc 5.6' 16 fc	14' 6' 35 0.52 22 0.36																																																																		
15° 1579	0° - 60° 1211 96%	8.5' 30 fc 6.3' 13 fc	18' 8' 18 0.27 20 0.34																																																																		
25° 683	0° - 80° 1247 99%	10.0' 22 fc 7.4' 9 fc	Delivered Illuminance Rating: (DIR) 67 FC per W/Sq. Ft. 60 FC per W/Sq. Ft.																																																																		
35° 159	0° - 90° 1251 99%	12.0' 15 fc 8.9' 6 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 3: Length & Width = Ceiling Ht. - 3.5' x 3.33 RCR 5: Length & Width = Ceiling Ht. - 3.5' x 2.00 + Average Initial Footcandles at 2.5' Above Floor																																																																		
45° 54	Total 1264 100%	14.0' 11 fc 10.4' 5 fc																																																																			
55° 33		16.0' 9 fc 11.9' 4 fc																																																																			
90° 2		20.0' 6 fc 14.8' 2 fc																																																																			

Delivered Lumens: 1264
Luminaire Watts: 17.8
LER: 71.01

CP at 0° (Nadir): 2202
CRI: 80

Beam Angle: 41°
Spacing Ratio: 0.66

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

CKO407SQPC 30L 35K XW xx SO xx MW

CANDLEPOWER CURVE TEST SP-01454_M-30L	INTENSITY CANDELA 0° AZIMUTH	ZONAL LUMENS	SINGLE UNIT: PERFORMANCE HORIZONTAL FOOTCANDLES INITIAL DOWNLIGHT ONLY	MULTIPLE UNITS: PERFORMANCE 80/50/20% REFLECTANCES HORIZONTAL FOOTCANDLES AND WATTS/SQ FT																																																																	
	0°	0° - 10° 121 9%	<table border="1"> <thead> <tr> <th>Mounting Distance</th> <th>FC at Beam Center</th> <th>Diameter at Beam Angle</th> <th>FC at Beam Edge</th> </tr> </thead> <tbody> <tr><td>6.5'</td><td>30 fc</td><td>6.7'</td><td>11 fc</td></tr> <tr><td>7.5'</td><td>22 fc</td><td>7.7'</td><td>8 fc</td></tr> <tr><td>8.5'</td><td>17 fc</td><td>8.7'</td><td>6 fc</td></tr> <tr><td>10.0'</td><td>13 fc</td><td>10.3'</td><td>4 fc</td></tr> <tr><td>12.0'</td><td>9 fc</td><td>12.3'</td><td>3 fc</td></tr> <tr><td>14.0'</td><td>6 fc</td><td>14.4'</td><td>2 fc</td></tr> <tr><td>16.0'</td><td>5 fc</td><td>16.4'</td><td>2 fc</td></tr> <tr><td>20.0'</td><td>3 fc</td><td>20.5'</td><td>1 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	30 fc	6.7'	11 fc	7.5'	22 fc	7.7'	8 fc	8.5'	17 fc	8.7'	6 fc	10.0'	13 fc	10.3'	4 fc	12.0'	9 fc	12.3'	3 fc	14.0'	6 fc	14.4'	2 fc	16.0'	5 fc	16.4'	2 fc	20.0'	3 fc	20.5'	1 fc	0° - 20° 445 35%	<table border="1"> <thead> <tr> <th rowspan="2">Ceiling Height</th> <th rowspan="2">Fixture Spacing</th> <th colspan="2">RCR 2</th> <th colspan="2">RCR 4</th> </tr> <tr> <th>FC +</th> <th>W/Sq. Ft.</th> <th>FC +</th> <th>W/Sq. Ft.</th> </tr> </thead> <tbody> <tr><td>10'</td><td>6'</td><td>30</td><td>0.42</td><td>37</td><td>0.61</td></tr> <tr><td>14'</td><td>8'</td><td>17</td><td>0.23</td><td>14</td><td>0.23</td></tr> <tr><td>18'</td><td>10'</td><td>12</td><td>0.17</td><td>7</td><td>0.12</td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 2		RCR 4		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	10'	6'	30	0.42	37	0.61	14'	8'	17	0.23	14	0.23	18'	10'	12	0.17	7	0.12
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25° 749	0° - 80° 1273 99%	10.0' 13 fc 10.3' 4 fc	Delivered Illuminance Rating: (DIR) 71 FC per W/Sq. Ft. 61 FC per W/Sq. Ft.																																																																		
35° 320	0° - 90° 1277 99%	12.0' 9 fc 12.3' 3 fc	1' Suspension Length to luminous aperture Square rooms used for multiple units: RCR 2: Length & Width = Ceiling Ht. - 3.5' x 5.00 RCR 4: Length & Width = Ceiling Ht. - 3.5' x 2.50 + Average Initial Footcandles at 2.5' Above Floor * Exceeds Spacing Ratio by 6%																																																																		
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90° 2		20.0' 3 fc 20.5' 1 fc																																																																			

Delivered Lumens: 1290
Luminaire Watts: 17.8
LER: 72.47

CP at 0° (Nadir): 1260
CRI: 80

Beam Angle: 54°
Spacing Ratio: 0.87

Lumen Multiplier: 10L x 0.34, 15L x 0.49, 20L x 0.67
CCT Multiplier: 27K x 0.95, 30K x 0.97, 40K x 1.03

HOW TO USE PERFORMANCE DATA

SINGLE UNIT	MULTIPLE UNITS
<p>Cone of Light of a single, symmetrical beam luminaire. Direct initial illumination (FC) and Beam Angle diameter directly beneath fixture; shown at different distances from aperture to horizontal plane. Calculated using Inverse Square Law.</p> $FC_{H} = CP \times (\cos \theta) \div D^2$ $\text{Beam Diam.} = \frac{1}{2} \text{Beam Angle (Tan } \theta) \times 2D$ <ul style="list-style-type: none"> - CP Candela at 0° (Nadir) - Cos θ Cosine of θ Angle - D Distance (Mounting Height AFF) - FC_H Footcandles, Horizontal - Beam Angle Cone of light to 50% max. CP - Beam Diam. Pattern of light at Beam Angle 	<p>Square grid layout of multiple luminaires in unfurnished, square rooms of different proportions (Room Cavity Ratios) with 80/50/20% room surface reflectances. 2' Suspension Length to aperture. Initial average illumination (FC) calculated at 2.5' above floor, using Zonal Cavity Method. W/Sq. Ft. of layout shown for each ceiling height and RCR.</p> <p>Delivered Illuminance Rating (DIR)*: System performance indicator expressed as ratio of approximate initial FC per W/Sq. Ft. delivered to horizontal plane below, for the range of ceiling heights indicated.</p> <ul style="list-style-type: none"> - To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): $FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}$ - To estimate Sq. Ft. per fixture for a specific target FC: $\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}$ <ul style="list-style-type: none"> - To estimate Fixture Quantity in a room: $\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}$ - To estimate Watts/Sq. Ft.: $W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}$