

# CK0407PC

## 4" ROUND DIRECT

4" round 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 <sup>1</sup>	SYSTEM WATTS	LPW
CK0407PC10L	778	6.7	116
CK0407PC15L	1038	9.5	109
CK0407PC20L	1424	13.2	108
CK0407PC30L	1949	17.8	109

<sup>1</sup> 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.

PROJECT: \_\_\_\_\_

QUANTITY: \_\_\_\_\_

TYPE: \_\_\_\_\_



## PRODUCT SELECTOR GUIDE

SERIES	LUMENS <sup>1</sup>	CCT	OPTICS	DRIVER / VOLTAGE	OPTIONS	MOUNTING	FINISH	ACCESSORIES
CK0407PC								

EXAMPLE

CK0407PC	10L	35K	MD	EX	SO	CS2	MW	
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SERIES	LUMENS <sup>1</sup>	CCT	OPTICS	DRIVER / VOLTAGE <sup>4</sup>	LENS	MOUNTING <sup>6/7</sup>	FINISH <sup>8</sup>	ACCESSORIES
CK0407PC	10L	800 Lm	82 CRI	ND 23°	EX Electronic Driver, 120V/277V	SO <sup>5</sup> Micro Prism Solite™ Lens	MW <sup>9</sup> Matte White	EMRM 7W Remote EM Enclosure EMEN 7W Remote with Enclosure
	15L	1050 Lm	27K 2700K					
	20L	1400 Lm	30K 3000K	WD 37°	DO10X <sup>2</sup> 1%, 0-10V, 120V/277V	PT <sup>9</sup> Platinum Silver		
	30L <sup>2/3</sup>	1950 Lm	35K 3500K	XW 64°			DS2W1 <sup>3</sup> ELV/MLV, 120V	
			40K 4000K	92 CRI	EXEM Electronic Driver, 120V/277V			
			27HK 2700K		DO10XEM 1%, 0-10V, 120V/277V			
			30HK 3000K		DS2W1EM ELV/MLV, 120V			
			35HK 3500K					
			40HK 4000K					

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

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<sup>3</sup> 30L option is not compatible with DS2W1  
<sup>4</sup> Contact Factory for Additional Options

<sup>5</sup> Standard Lens

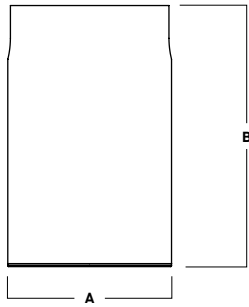
<sup>6</sup> See Second Page for Details on Components and Patterns  
<sup>7</sup> Junction box and conduit by others

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



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### FIXTURE DIMENSIONS



A	B
4.5 114.3 mm	7.1 180.3 mm

Fixture Weight: 3.8 lbs

### FINISH

<b>MW</b> Matte White	<b>MB</b> Matte Black	<b>PT</b> Platinum Silver	<b>CC</b> Custom Color

### 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



## CKO407PC 30L 35K ND xx NL xx MW

CANDLEPOWER CURVE TEST SP-01441_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																																																																						
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5° 6041	0° - 30° 1640 85%	7.5' 123 fc 3.1' 58 fc	18' 5' 67 0.66 71 0.77																																																																							
15° 2395	0° - 40° 1864 97%	8.5' 96 fc 3.5' 45 fc	22' 6' 54 0.53 44 0.47																																																																							
25° 962	0° - 60° 1901 98%	10.0' 69 fc 4.1' 33 fc	Delivered Illuminance Rating: (DIR)																																																																							
35° 334	0° - 80° 1917 99%	12.0' 48 fc 4.9' 23 fc		101 FC per W/Sq. Ft. 93 FC per W/Sq. Ft.																																																																						
45° 24	0° - 90° 1920 99%	14.0' 35 fc 5.7' 17 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																																																																							
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90° 2		20.0' 17 fc 8.2' 8 fc																																																																								

Delivered Lumens: 1930  
Luminaire Watts: 17.8  
LER: 108.43

CP at 0° (Nadir): 6944  
CRI: 80

Beam Angle: 23°  
Spacing Ratio: 0.39

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

## CKO407PC 30L 35K MD xx NL xx MW

CANDLEPOWER CURVE TEST SP-01439_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																																																																						
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Delivered Lumens: 1949  
Luminaire Watts: 17.8  
LER: 109.49

CP at 0° (Nadir): 5725  
CRI: 80

Beam Angle: 28°  
Spacing Ratio: 0.47

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"> <li>CP Candela at 0° (Nadir)</li> <li>cos θ Cosine of θ Angle</li> <li>D Distance (Mounting Height AFF)</li> <li>FC<sub>H</sub> Footcandles, Horizontal</li> <li>Beam Angle Cone of light to 50% max. CP</li> <li>Beam Diam. Pattern of light at Beam Angle</li> </ul>	<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"> <li>To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): FC = Chart Spacing² ÷ Different Spacing² x Chart FC</li> <li>To estimate FC, Sq. Ft. per fixture for a specific target FC: Sq. Ft. / Fixture = Chart FC x Chart Spacing² ÷ Target FC</li> <li>To estimate Fixture Quantity in a room: Fixture Qty. = Sq. Ft. of Rm. ÷ Sq. Ft. per fixture</li> <li>To estimate Watts/Sq. Ft.: W/ Sq. Ft. = Luminaire Watts x Qty. ÷ Sq. Ft. of Rm.</li> </ul>

CKO407PC 30L 35K WD xx NL xx MW

CANDLEPOWER CURVE TEST SP-01443_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																																																																	
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14'	6'	56	0.52	35	0.36																																																																
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0° 4109	0° - 30° 1625 83%	<table border="1"> <thead> <tr> <th>Delivered Illuminance Rating: (DIR)</th> <th>106 FC per W/Sq. Ft.</th> <th>96 FC per W/Sq. Ft.</th> </tr> </thead> <tbody> <tr> <td colspan="3">                     1' Suspension Length to luminous aperture                      Square rooms used for multiple units:                      RCR 3: Length &amp; Width = Ceiling Ht. - 3.5' x 3.33                      RCR 5: Length &amp; Width = Ceiling Ht. - 3.5' x 2.00                      * Average Initial Footcandles at 2.5' Above Floor                      * Exceeds Spacing Ratio by 6%                 </td> </tr> </tbody> </table>	Delivered Illuminance Rating: (DIR)	106 FC per W/Sq. Ft.	96 FC per W/Sq. Ft.	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 * Exceeds Spacing Ratio by 6%																																																															
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5° 3914	0° - 40° 1883 96%																																																																				
15° 2548	0° - 60° 1928 98%																																																																				
25° 1219	0° - 80° 1942 99%																																																																				
35° 390	0° - 90° 1945 99%																																																																				
45° 31	Total 1958 100%																																																																				
55° 12																																																																					
90° 2																																																																					

Delivered Lumens: 1958  
Luminaire Watts: 17.8  
LER: 110.00

CP at 0° (Nadir): 4109  
CRI: 80

Beam Angle: 37°  
Spacing Ratio: 0.58

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

CKO407PC 30L 35K XW xx NL xx MW

CANDLEPOWER CURVE TEST SP-01445_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° 164 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>41 fc</td><td>8.1'</td><td>13 fc</td></tr> <tr><td>7.5'</td><td>31 fc</td><td>9.3'</td><td>10 fc</td></tr> <tr><td>8.5'</td><td>24 fc</td><td>10.6'</td><td>7 fc</td></tr> <tr><td>10.0'</td><td>17 fc</td><td>12.5'</td><td>5 fc</td></tr> <tr><td>12.0'</td><td>12 fc</td><td>14.9'</td><td>4 fc</td></tr> <tr><td>14.0'</td><td>9 fc</td><td>17.4'</td><td>3 fc</td></tr> <tr><td>16.0'</td><td>7 fc</td><td>19.9'</td><td>2 fc</td></tr> <tr><td>20.0'</td><td>4 fc</td><td>24.9'</td><td>1 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	41 fc	8.1'	13 fc	7.5'	31 fc	9.3'	10 fc	8.5'	24 fc	10.6'	7 fc	10.0'	17 fc	12.5'	5 fc	12.0'	12 fc	14.9'	4 fc	14.0'	9 fc	17.4'	3 fc	16.0'	7 fc	19.9'	2 fc	20.0'	4 fc	24.9'	1 fc	0° - 20° 590 32%	<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>43</td><td>0.42</td><td>53</td><td>0.61</td></tr> <tr><td>14'</td><td>8'</td><td>24</td><td>0.23</td><td>20</td><td>0.23</td></tr> <tr><td>18'</td><td>10'</td><td>17</td><td>0.17</td><td>11</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'	43	0.42	53	0.61	14'	8'	24	0.23	20	0.23	18'	10'	17	0.17	11	0.12
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0° 1749	0° - 30° 1161 64%	<table border="1"> <thead> <tr> <th>Delivered Illuminance Rating: (DIR)</th> <th>101 FC per W/Sq. Ft.</th> <th>87 FC per W/Sq. Ft.</th> </tr> </thead> <tbody> <tr> <td colspan="3">                     1' Suspension Length to luminous aperture                      Square rooms used for multiple units:                      RCR 2: Length &amp; Width = Ceiling Ht. - 3.5' x 5.00                      RCR 4: Length &amp; Width = Ceiling Ht. - 3.5' x 2.50                      * Average Initial Footcandles at 2.5' Above Floor                 </td> </tr> </tbody> </table>	Delivered Illuminance Rating: (DIR)	101 FC per W/Sq. Ft.	87 FC per W/Sq. Ft.	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																																																															
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5° 1718	0° - 40° 1555 86%																																																																				
15° 1513	0° - 60° 1772 98%																																																																				
25° 1259	0° - 80° 1801 99%																																																																				
35° 640	0° - 90° 1804 99%																																																																				
45° 182	Total 1817 100%																																																																				
55° 84																																																																					
90° 2																																																																					

Delivered Lumens: 1817  
Luminaire Watts: 17.8  
LER: 102.08

CP at 0° (Nadir): 1749  
CRI: 80

Beam Angle: 64°  
Spacing Ratio: 0.98

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> $FC_{\theta} = CP \times (\cos \theta) \div D^2$ $\text{Beam Diam.} = \frac{1}{2} \text{Beam Angle (Tan)} \times 2D$ <ul style="list-style-type: none"> <li>- CP Candela at 0° (Nadir)</li> <li>- Cos θ Cosine of θ Angle</li> <li>- D Distance (Mounting Height AFF)</li> <li>- FC<sub>θ</sub> Footcandles, Horizontal</li> <li>- Beam Angle Cone of light to 50% max. CP</li> <li>- Beam Diam. Pattern of light at Beam Angle</li> </ul>	<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"> <li>- To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): <math>FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}</math></li> <li>- To estimate Sq. Ft. per fixture for a specific target FC: <math>\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}</math></li> </ul> <ul style="list-style-type: none"> <li>- To estimate Fixture Quantity in a room: <math>\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}</math></li> <li>- To estimate Watts/Sq. Ft.: <math>W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}</math></li> </ul>

CK0407PC 30L 35K ND xx SO xx MW

CANDLEPOWER CURVE TEST SP-01442_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° 413 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>127 fc</td><td>3.0'</td><td>59 fc</td></tr> <tr><td>7.5'</td><td>95 fc</td><td>3.4'</td><td>44 fc</td></tr> <tr><td>8.5'</td><td>74 fc</td><td>3.9'</td><td>34 fc</td></tr> <tr><td>10.0'</td><td>53 fc</td><td>4.6'</td><td>25 fc</td></tr> <tr><td>12.0'</td><td>37 fc</td><td>5.5'</td><td>17 fc</td></tr> <tr><td>14.0'</td><td>27 fc</td><td>6.4'</td><td>13 fc</td></tr> <tr><td>16.0'</td><td>21 fc</td><td>7.3'</td><td>10 fc</td></tr> <tr><td>20.0'</td><td>13 fc</td><td>9.1'</td><td>6 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	127 fc	3.0'	59 fc	7.5'	95 fc	3.4'	44 fc	8.5'	74 fc	3.9'	34 fc	10.0'	53 fc	4.6'	25 fc	12.0'	37 fc	5.5'	17 fc	14.0'	27 fc	6.4'	13 fc	16.0'	21 fc	7.3'	10 fc	20.0'	13 fc	9.1'	6 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>84</td><td>0.93</td><td>77</td><td>0.94</td></tr> <tr><td>18'</td><td>5'</td><td>60</td><td>0.66</td><td>63</td><td>0.77</td></tr> <tr><td>22'</td><td>6'</td><td>48</td><td>0.53</td><td>39</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'	84	0.93	77	0.94	18'	5'	60	0.66	63	0.77	22'	6'	48	0.53	39	0.47
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0° 5349	0° - 20° 1020 58%	0° - 10° 413 24%	Delivered Illuminance Rating: (DIR)	90 FC per W/Sq. Ft.	82 FC per W/Sq. Ft.																																																															
5° 4731	0° - 30° 1430 82%	0° - 20° 1020 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° 2191	0° - 40° 1618 92%	0° - 30° 1430 82%																																																																		
25° 886	0° - 60° 1708 97%	0° - 40° 1618 92%																																																																		
35° 290	0° - 80° 1737 99%	0° - 60° 1708 97%																																																																		
45° 70	0° - 90° 1740 99%	0° - 80° 1737 99%																																																																		
55° 31	Total 1752 100%	0° - 90° 1740 99%																																																																		
90° 2		Total 1752 100%																																																																		

Delivered Lumens: 1752  
Luminaire Watts: 17.8  
LER: 98.43

CP at 0° (Nadir): 5349  
CRI: 80

Beam Angle: 26°  
Spacing Ratio: 0.43

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

CK0407PC 30L 35K MD xx SO xx MW

CANDLEPOWER CURVE TEST SP-01440_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° 381 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>108 fc</td><td>3.5'</td><td>48 fc</td></tr> <tr><td>7.5'</td><td>81 fc</td><td>4.1'</td><td>36 fc</td></tr> <tr><td>8.5'</td><td>63 fc</td><td>4.6'</td><td>28 fc</td></tr> <tr><td>10.0'</td><td>46 fc</td><td>5.5'</td><td>20 fc</td></tr> <tr><td>12.0'</td><td>32 fc</td><td>6.6'</td><td>14 fc</td></tr> <tr><td>14.0'</td><td>23 fc</td><td>7.6'</td><td>10 fc</td></tr> <tr><td>16.0'</td><td>18 fc</td><td>8.7'</td><td>8 fc</td></tr> <tr><td>20.0'</td><td>11 fc</td><td>10.9'</td><td>5 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	108 fc	3.5'	48 fc	7.5'	81 fc	4.1'	36 fc	8.5'	63 fc	4.6'	28 fc	10.0'	46 fc	5.5'	20 fc	12.0'	32 fc	6.6'	14 fc	14.0'	23 fc	7.6'	10 fc	16.0'	18 fc	8.7'	8 fc	20.0'	11 fc	10.9'	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>5'</td><td>60</td><td>0.65</td><td>44</td><td>0.53</td></tr> <tr><td>18'</td><td>6'</td><td>45</td><td>0.49</td><td>41</td><td>0.49</td></tr> <tr><td>22'</td><td>7'</td><td>28</td><td>0.30</td><td>25</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'	60	0.65	44	0.53	18'	6'	45	0.49	41	0.49	22'	7'	28	0.30	25	0.30
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22'	7'	28	0.30	25	0.30																																																															
0° 4564	0° - 20° 1015 57%	0° - 10° 381 21%	Delivered Illuminance Rating: (DIR)	92 FC per W/Sq. Ft.	83 FC per W/Sq. Ft.																																																															
5° 4272	0° - 30° 1453 81%	0° - 20° 1015 57%	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° 2333	0° - 40° 1661 92%	0° - 30° 1453 81%																																																																		
25° 933	0° - 60° 1756 98%	0° - 40° 1661 92%																																																																		
35° 311	0° - 80° 1782 99%	0° - 60° 1756 98%																																																																		
45° 76	0° - 90° 1785 99%	0° - 80° 1782 99%																																																																		
55° 30	Total 1796 100%	0° - 90° 1785 99%																																																																		
90° 2		Total 1796 100%																																																																		

Delivered Lumens: 1796  
Luminaire Watts: 17.8  
LER: 100.90

CP at 0° (Nadir): 4564  
CRI: 80

Beam Angle: 31°  
Spacing Ratio: 0.50

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"> <li>CP Candela at 0° (Nadir)</li> <li>cos θ Cosine of θ Angle</li> <li>D Distance (Mounting Height AFF)</li> <li>FC<sub>H</sub> Footcandles, Horizontal</li> <li>Beam Angle Cone of light to 50% max. CP</li> <li>Beam Diam. Pattern of light at Beam Angle</li> </ul>	<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"> <li>To estimate FC for Fixture Spacing that is different than shown (do not exceed Spacing Ratio): <math>FC = \text{Chart Spacing}^2 \div \text{Different Spacing}^2 \times \text{Chart FC}</math></li> <li>To estimate FC, Sq. Ft. per fixture for a specific target FC: <math>\text{Sq. Ft.} / \text{Fixture} = \text{Chart FC} \times \text{Chart Spacing}^2 \div \text{Target FC}</math></li> <li>To estimate Fixture Quantity in a room: <math>\text{Fixture Qty.} = \text{Sq. Ft. of Rm.} \div \text{Sq. Ft. per fixture}</math></li> <li>To estimate Watts/Sq. Ft.: <math>W / \text{Sq. Ft.} = \text{Luminaire Watts} \times \text{Qty.} \div \text{Sq. Ft. of Rm.}</math></li> </ul>

CKO407PC 30L 35K WD xx SO xx MW

CANDLEPOWER CURVE TEST SP-01444_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° 304 17%	<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>4.5'</td><td>35 fc</td></tr> <tr><td>7.5'</td><td>62 fc</td><td>5.2'</td><td>26 fc</td></tr> <tr><td>8.5'</td><td>48 fc</td><td>5.9'</td><td>20 fc</td></tr> <tr><td>10.0'</td><td>35 fc</td><td>7.0'</td><td>15 fc</td></tr> <tr><td>12.0'</td><td>24 fc</td><td>8.4'</td><td>10 fc</td></tr> <tr><td>14.0'</td><td>18 fc</td><td>9.8'</td><td>7 fc</td></tr> <tr><td>16.0'</td><td>14 fc</td><td>11.2'</td><td>6 fc</td></tr> <tr><td>20.0'</td><td>9 fc</td><td>14.0'</td><td>4 fc</td></tr> </tbody> </table>	Mounting Distance	FC at Beam Center	Diameter at Beam Angle	FC at Beam Edge	6.5'	82 fc	4.5'	35 fc	7.5'	62 fc	5.2'	26 fc	8.5'	48 fc	5.9'	20 fc	10.0'	35 fc	7.0'	15 fc	12.0'	24 fc	8.4'	10 fc	14.0'	18 fc	9.8'	7 fc	16.0'	14 fc	11.2'	6 fc	20.0'	9 fc	14.0'	4 fc	<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>92</td><td>0.95</td><td>82</td><td>0.95</td></tr> <tr><td>14'</td><td>6'</td><td>51</td><td>0.52</td><td>31</td><td>0.36</td></tr> <tr><td>18'</td><td>8'</td><td>27</td><td>0.27</td><td>29</td><td>0.34</td></tr> <tr><td colspan="2">Delivered Illuminance Rating: (DIR)</td><td colspan="2">97 FC per W/Sq. Ft.</td><td colspan="2">86 FC per W/Sq. Ft.</td></tr> <tr><td colspan="6">                     1' Suspension Length to luminous aperture                      Square rooms used for multiple units:                      RCR 3: Length &amp; Width = Ceiling Ht. - 3.5' x 3.33                      RCR 5: Length &amp; Width = Ceiling Ht. - 3.5' x 2.00                      * Average Initial Footcandles at 2.5' Above Floor                      * Exceeds Spacing Ratio by 1%                 </td></tr> </tbody> </table>	Ceiling Height	Fixture Spacing	RCR 3		RCR 5		FC +	W/Sq. Ft.	FC +	W/Sq. Ft.	10'	4"	92	0.95	82	0.95	14'	6'	51	0.52	31	0.36	18'	8'	27	0.27	29	0.34	Delivered Illuminance Rating: (DIR)		97 FC per W/Sq. Ft.		86 FC per W/Sq. Ft.		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 * Exceeds Spacing Ratio by 1%					
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Delivered Lumens: 1799  
Luminaire Watts: 17.8  
LER: 101.07

CP at 0° (Nadir): 3478  
CRI: 80

Beam Angle: 39°  
Spacing Ratio: 0.61

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

CKO407PC 30L 35K XW xx SO xx MW

CANDLEPOWER CURVE TEST SP-01446_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																																																																												
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Delivered Lumens: 1588  
Luminaire Watts: 17.8  
LER: 89.21

CP at 0° (Nadir): 1555  
CRI: 80

Beam Angle: 60°  
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

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