



**Lightolier LED 3D Printed 3" Cylinders, ICY Series** allows for thousands of different combinations, tailored to seamlessly match any indoor environment. Create dynamic new decorative styles for your projects by selecting from a variety of visually rich surface colors and textures. Unleash your inner creator and select from the many options these cylinders have to offer.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

**Fixture** Now including AccuRender technology for the highest color quality at the highest efficacy.

examples: 3DP ICY3 BKST QT 23L NB 27K CBK CO BKST  
 3DP ICY3 BKST QT 23L NB 27K STBK 36

Series	Colors	Textures	Lumens	Beams	CRI/CCT	Mounting	Options	Colors
<b>3DP ICY3</b>								
3DP ICY3 ICY Series 3D Cylinder 3 inch	<b>BKST</b> Satin Black <b>BSST</b> Satin Brass <b>BZST</b> Satin Bronze <b>CAPP</b> Satin Cappuccino <b>GYST</b> Satin Grey <b>ROSE</b> Satin Rose <b>SAGE</b> Satin Sage <b>WHST</b> Satin White	<b>LF</b> Layered Fine <b>FC</b> Facets <b>WF</b> Wavy Fine <b>QT</b> Quilted	<b>10L</b> 1000lm <b>15L</b> 1500lm <b>23L</b> 2300lm	<b>NB</b> Narrow (17°) <b>MB</b> Medium (22°) <b>WB</b> Wide (34°) <b>VWB</b> Very Wide (60°)	<b>27K</b> 90 CRI / 2700K <b>30K</b> 90 CRI / 3000K <b>35K</b> 90 CRI / 3500K <b>40K</b> 90 CRI / 4000K	Cable Mount Only		
						<b>Cable</b> <b>CC</b> Clear Cable <b>CBK</b> Black Cable <b>CWH</b> White Cable	<b>Canopy</b> <b>CO</b> Conical <b>DI</b> Disk	<b>Satin Essentials</b> <b>BKST</b> Black <b>BSST</b> Brass <b>BZST</b> Bronze <b>CAPP</b> Cappuccino <b>GYST</b> Grey <b>ROSE</b> Satin Rose <b>SAGE</b> Sage <b>WHST</b> White
						Stem Mount Only		
						<b>Stem*</b> <b>ST<sup>1</sup></b> Stem	<b>Color</b> <b>BK</b> Black Stem <b>WH</b> White Stem	<b>Length</b> <b>36</b> 36" <b>48</b> 48" <b>60</b> 60" <b>72</b> 72"

\* Note the stem must be ordered separately as an accessory.

**Note:** Different colors are available upon request but will require a longer lead time.

1. Stem accessory to be ordered separately. See Mounting section for more ordering details.

### Features

- Customizable:** choose from wide variety of colors & textures to help personalize customer options.
- Sustainable:** 3D Printed products produce less carbon emissions compared to traditional, conventional luminaires.
- Local production:** Printed & assembled in Littlestown, PA.
- Quick delivery:** Created on demand, shipped in weeks.
- Color Rendering Index:** Standard 90CRI.
- Lifetime:** L90B50 lumen maint. at 65,000 hrs.
- Weight:** 2.5lbs.
- Cable Length:** 10 ft

### Mounting

**Stem:** Available in Black and White.

**Canopy:** Two styles to choose from in any color.

Stem Mount Black:		Stem Mount White:	
CASK36BK	36" Stem Kit	CASK36WH	36" Stem Kit
CASK48BK	48" Stem Kit	CASK48WH	48" Stem Kit
CASK60BK	60" Stem Kit	CASK60WH	60" Stem Kit
CASK72BK	72" Stem Kit	CASK72WH	72" Stem Kit

### Mounting:

- Cord:** Clear, Black and White; 10 ft.
- Stem:** Available in black and white
- Canopy:** Junction Box
- Junction Box:** Cover plate supplied to allow mounting to industry standard 4-inch box.

### Electrical

**Wattage:**

- 1000 lm = 9.5W
- 1500 lm = 13.5W
- 2300 lm = 22.5W

**Dimming:** 0-10V

**Mounting:** Cable & Stem

**Input Voltage:** 120/277V

**Frequency:** 50/60Hz

**Power Factor:** 0.9

### Labels

UL, cULus, IP20, RoHS

Declare. LBC Red List Approved.



Unleash your inner creator

To configure your custom 3D printed luminaire, scan this QR Code with your smartphone's camera or visit us at: <https://www.3dprinted.lighting.lightolier.com/en/us/ICY-Series/>

Declare.



interact ready.

# ICY Series

## 3D Cylinders (1000lm, 1500lm, 2300lm)

### AccuRender Technology (CRI 90+)

The right light brings colors to life. Our new AccuRender technology helps ensure colors are rendered more accurately and consistently, while doing so as efficiently as CRI 80 products.



Standard CRI 80

Good color rendering and high efficacy



Standard CRI 90

Better color rendering and low efficacy



AccuRender

Best color rendering, color preference and high efficacy

#### Promote savings

##### High efficacy, with no penalty:

- Energy efficacy compares well to conventional CRI80
- Up to 25% more energy savings vs competitor CRI90<sup>1</sup>
- Helps you meet Title 24 requirements

#### Enjoy design flexibility

##### Full range of products and options:

- Available soon in across Lightolier portfolio for application flexibility
- Multiple CCTs and lumen packages offered

1. Based on comparison of published specification sheet data, most competitor offerings reflect a 15 to 25% efficacy loss for CRI 90 compared to CRI 80, while Lightolier AccuRender results in only ≤5% drop compared to CRI 80.

#### Bolster wellbeing

##### High MDER:

- AccuRender has a Melanopic Daylight Efficacy Ratio up to 0.80
- Helps support Circadian Rhythm<sup>2</sup>
- Earns points towards WELL Building Standard

#### Contribute to productivity

##### High MDER:

- Supports daytime vitality<sup>3</sup> and alertness<sup>4</sup>
- Supports mood, thermo-regulation, and learning centers in the brain<sup>5</sup>
- May positively influence work engagement by helping make the environment more attractive<sup>6</sup>

2. Czeisler, 1999; Dijk & Archer, 2009; Lucas 2012, 2019

3. Partonen 2000

4. Viola 2008, Smolders 2012; Geerdink 2017

5. Fernandez 2018; Rupp, 2019

#### Show your true colors

##### High color rendering:

- **CRI:**  
R<sub>a</sub> up to 94, R<sub>9</sub> up to 67, G<sub>a</sub> up to 99, C<sub>9</sub> up to 94
- **TM-30:**  
R<sub>r</sub> up to 92, R<sub>fh</sub> up to 91, R<sub>g</sub> up to 100, R<sub>cs,hi</sub> up to -5%
- **True to life colors** to help energize your environment and render better flesh tones critical for Healthcare, Hospitality and Retail

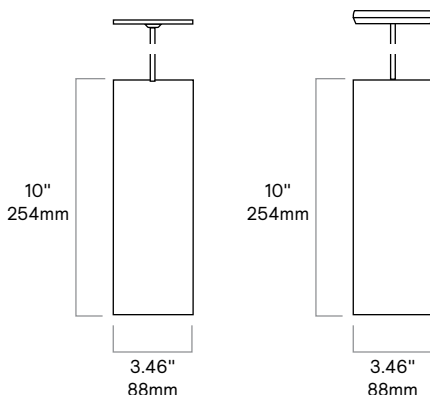
#### Achieve color balance

##### Best in class color consistency:

- ≤ 2 SDCM promotes aesthetic harmony

6. Veitch, Jennifer & Stokkermans, Mariska & R. Newsham, Guy. (2013). Linking Lighting Appraisals to Work Behaviors. Environment and Behavior. 45. 198-214. 10.1177/0013916511420560.

#### Dimensions



#### Interact Pro Scalable System

Interact Pro scalable system with its simple wireless offering can make your smart building journey easy and cost effective. This system can help you boost your energy savings, reach your sustainability targets, and enhance occupancy comfort levels immediately from day one. 3D printed luminaires can be integrated into the Interact Pro scalable system using the System Bridge Accessory SBA module or the RFSR10 control module. For more information please visit: [www.interact-lighting.com/enus/what-is-possible/interact-pro/scalable-system](http://www.interact-lighting.com/enus/what-is-possible/interact-pro/scalable-system).

#### Buy American Act 1933 (BAA)

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.

# ICY Series

3D Cylinders (1000lm, 1500lm, 2300lm)

## Colors & Textures



**BKST:** Satin Black  
**FC:** Facet texture



**BKST:** Satin Black  
**LF:** Layered Fine texture



**BKST:** Satin Black  
**QT:** Quilted texture



**BKST:** Satin Black  
**WA:** Wavy texture



**BSST:** Satin Brass  
**FC:** Facet texture



**BSST:** Satin Brass  
**LF:** Layered Fine texture



**BSST:** Satin Brass  
**QT:** Quilted texture



**BSST:** Satin Brass  
**WA:** Wavy texture



**BZST:** Satin Bronze  
**FC:** Facet texture



**BZST:** Satin Bronze  
**LF:** Layered Fine texture



**BZST:** Satin Bronze  
**QT:** Quilted texture



**BZST:** Satin Bronze  
**WA:** Wavy texture



**CAPP:** Satin Cappuccino  
**FC:** Facet texture



**CAPP:** Satin Cappuccino  
**LF:** Layered Fine texture



**CAPP:** Satin Cappuccino  
**QT:** Quilted texture

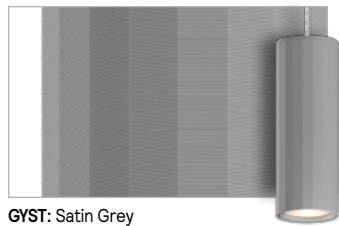


**CAPP:** Satin Cappuccino  
**WA:** Wavy texture

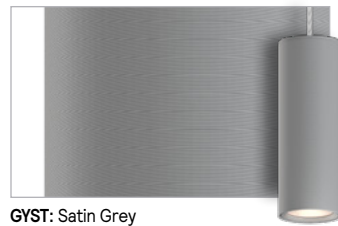
# ICY Series

3D Cylinders (1000lm, 1500lm, 2300lm)

## Colors & Textures



**GYST:** Satin Grey  
**FC:** Facet texture



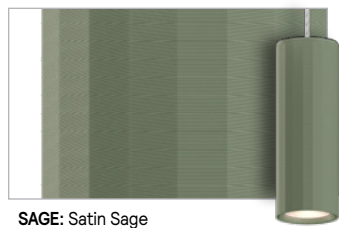
**GYST:** Satin Grey  
**LF:** Layered Fine texture



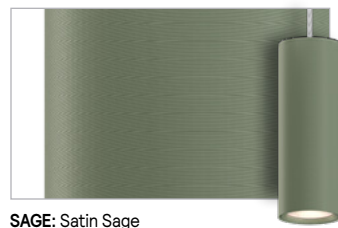
**GYST:** Satin Grey  
**QT:** Quilted texture



**GYST:** Satin Grey  
**WA:** Wavy texture



**SAGE:** Satin Sage  
**FC:** Facet texture



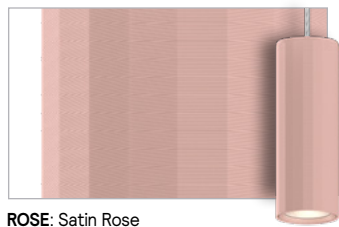
**SAGE:** Satin Sage  
**LF:** Layered Fine texture



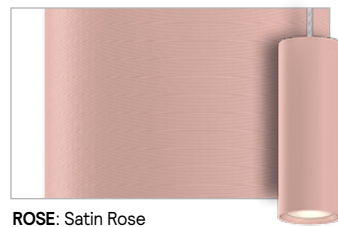
**SAGE:** Satin Sage  
**QT:** Quilted texture



**SAGE:** Satin Sage  
**WA:** Wavy texture



**ROSE:** Satin Rose  
**FC:** Facet texture



**ROSE:** Satin Rose  
**LF:** Layered Fine texture



**ROSE:** Satin Rose  
**QT:** Quilted texture



**ROSE:** Satin Rose  
**WA:** Wavy texture



**WHST:** Satin White  
**FC:** Facet texture



**WHST:** Satin White  
**LF:** Layered Fine texture



**WHST:** Satin White  
**QT:** Quilted texture



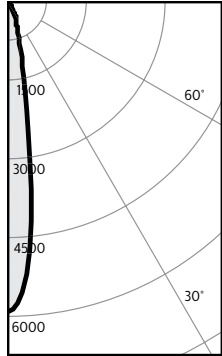
**WHST:** Satin White  
**WA:** Wavy texture

# ICY Series

## 3D Cylinders (1000lm)

### Downlight, Narrow beam, 864lm Engine, 90.9lm/W at 9.5W

Candela Curves



#### 3DPICY3 1000 LUMEN NARROW

Output lumens: 864 lms  
 Input watts<sup>1</sup>: 9.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 16°  
 Spacing Crit.: 0.3

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	813	94.1%
0-40	860	99.5%
0-60	863	99.9%
0-90	864	100.0%

Angle	Mean CP	Lumens
0	5909	
5	4744	
10	2109	358
15	955	
20	535	282
25	380	
30	239	173
35	50	
40	8	47
45	2	
50	1	2
55	1	
60	1	1
65	1	
70	0	1
75	0	
80	0	0
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	73	1.8'
6'	59	2.1'
7'	49	2.4'
8'	41	2.7'
9'	35	3.0'

\* Beam diameter is where foot-candles drop to 50% of maximum.

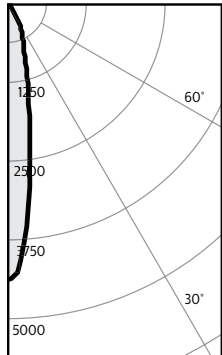
Efficacy: 90.9 lm/w  
 Report<sup>3</sup>: FO44196.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	113	111	109	111	108	107	104	103	101	97
	2	111	108	105	102	106	101	103	99	100	97	94
	3	108	103	100	97	102	96	99	95	97	93	91
	4	105	99	95	92	98	92	96	91	94	90	88
	5	102	96	92	89	95	88	93	88	92	87	85
	6	99	93	88	85	92	85	90	85	89	84	83
	7	96	90	85	83	89	82	88	82	87	82	80
	8	93	87	83	80	86	80	86	80	85	79	78
	9	91	84	80	78	84	78	83	77	83	77	76
	10	89	82	78	76	82	76	81	75	81	75	74

### Downlight, Medium beam, 946lm Engine, 99.6lm/W at 9.5W

Candela Curves



#### 3DPICY3 1000 LUMEN MEDIUM

Output lumens: 946 lms  
 Input watts<sup>1</sup>: 99.6 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 19°  
 Spacing Crit.: 0.34

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	870	92.0%
0-40	936	98.9%
0-60	943	99.7%
0-90	946	100.0%

Angle	Mean CP	Lumens
0	4384	
5	3554	
10	2053	288
15	1193	
20	756	338
25	539	
30	315	244
35	76	
40	22	66
45	5	
50	2	6
55	1	
60	1	1
65	1	
70	1	1
75	1	
80	1	1
85	1	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	54	2.0'
6'	44	2.4'
7'	36	2.7'
8'	30	3.1'
9'	26	3.4'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 99.6 lm/w  
 Report<sup>3</sup>: FO44193.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	112	110	109	110	107	106	104	103	101	96
	2	111	107	103	101	105	100	102	98	99	95	92
	3	107	102	98	95	100	94	98	92	95	91	88
	4	103	97	93	90	96	89	94	88	92	87	85
	5	99	93	89	85	92	85	90	84	89	83	82
	6	96	89	85	81	89	81	87	81	86	80	79
	7	93	86	81	78	85	78	84	78	83	77	76
	8	90	83	78	75	82	75	81	75	80	74	73
	9	87	80	75	72	79	72	79	72	78	72	71
	10	85	77	73	70	77	70	76	70	75	70	68

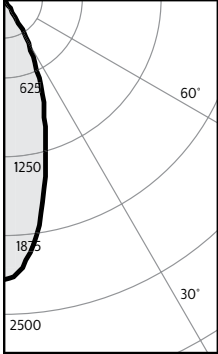
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.  
 2. Wattage: controlled to within 5%  
 3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# ICY Series

## 3D Cylinders (1000lm)

### Downlight, Wide beam, 864lm Engine, 96.3lm/W at 9.5W

#### Candela Curves



#### 3DPICY3 1000 LUMEN WIDE

Output lumens: 915 lms  
 Input watts<sup>1</sup>: 9.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 35°  
 Spacing Crit.: 0.56

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	830	90.7%
0-40	905	98.9%
0-60	913	99.8%
0-90	915	100.0%

Angle	Mean CP	Lumens
0	2220	
5	2080	
10	1727	187
15	1280	
20	939	357
25	628	
30	350	286
35	91	
40	20	75
45	6	
50	3	6
55	2	
60	1	2
65	1	
70	1	1
75	1	
80	1	1
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	27	3.4'
6'	22	3.9'
7'	18	4.5'
8'	15	5.0'
9'	13	5.6'

\* Beam diameter is where foot-candles drop to 50% of maximum.

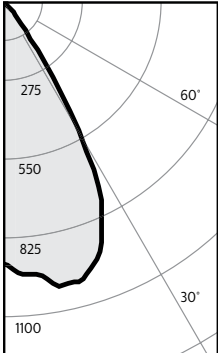
Efficacy: 96.3 lm/w  
 Report#: FO44194.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
	1	114	112	110	108	110	106	106	103	102	95
	2	110	106	102	99	104	98	101	96	98	94
	3	106	100	96	93	99	92	96	91	94	86
	4	101	95	91	87	94	87	92	86	90	85
	5	98	91	86	82	90	82	88	81	87	81
	6	94	87	82	78	86	78	84	77	83	75
	7	90	83	78	74	82	74	81	74	80	73
	8	87	79	74	71	79	71	78	70	77	69
	9	84	76	71	68	76	68	75	68	74	66
	10	81	73	68	65	73	65	72	65	71	63

### Downlight, Wide beam, 905lm Engine, 95.3lm/W at 9.5W

#### Candela Curves



#### 3DPICY3 1000 LUMEN V.WIDE

Output lumens: 905 lms  
 Input watts<sup>1</sup>: 9.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 57°  
 Spacing Crit.: 1.08

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	733	81.0%
0-40	877	96.9%
0-60	901	99.6%
0-90	905	100.0%

Angle	Mean CP	Lumens
0	913	
5	955	
10	999	92
15	1010	
20	955	282
25	812	
30	520	359
35	208	
40	65	144
45	15	
50	9	18
55	6	
60	4	6
65	3	
70	2	3
75	1	
80	1	1
85	1	
90	0	1

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	11	4.3'
6'	9	5.4'
7'	8	6.5'
8'	6	7.6'
9'	5	8.6'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 95.3 lm/w  
 Report#: FO44195.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
	1	114	111	109	107	109	105	105	102	101	94
	2	108	104	100	97	102	96	99	94	96	88
	3	103	97	92	89	96	88	93	87	91	85
	4	98	91	86	82	90	82	88	81	86	80
	5	94	86	80	76	85	76	83	75	82	75
	6	89	81	75	71	80	71	79	70	77	68
	7	85	76	71	67	76	66	74	66	73	66
	8	81	72	67	63	72	62	71	62	70	62
	9	78	68	63	59	68	59	67	59	66	57
	10	74	65	59	56	64	56	64	55	63	55

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

2. Wattage: controlled to within 5%

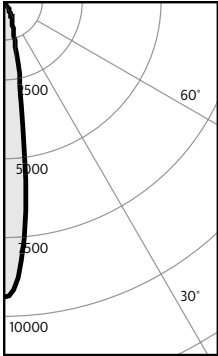
3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# ICY Series

## 3D Cylinders (1500lm)

### Downlight, Narrow beam, 1370lm Engine, 101.5 lm/W at 13.5W

#### Candela Curves



#### 3DPICY3 1500 LUMEN NARROW

Output lumens: 1370 lms  
 Input watts<sup>1</sup>: 13.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 16°  
 Spacing Crit.: 0.3

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	1290	94.2%
0-40	1364	99.6%
0-60	1368	99.9%
0-90	1370	100.0%

Angle	Mean CP	Lumens
0	9367	
5	7521	
10	3343	568
15	1514	
20	848	447
25	602	
30	379	275
35	79	
40	12	74
45	3	
50	2	3
55	1	
60	1	1
65	1	
70	1	1
75	1	
80	0	1
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	116	1.8'
6'	94	2.1'
7'	77	2.4'
8'	65	2.7'
9'	55	3.0'

\* Beam diameter is where foot-candles drop to 50% of maximum.

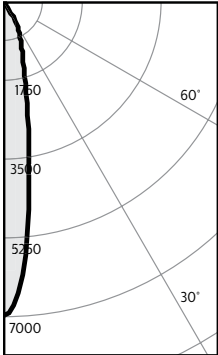
Efficacy: 101.5 lm/w  
 Report<sup>3</sup>: FO44196.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	113	111	109	111	108	107	104	103	101	97
	2	111	108	105	102	106	101	103	99	100	97	94
	3	108	103	100	97	102	96	99	95	97	93	91
	4	105	99	95	92	98	92	96	91	94	90	88
	5	102	96	92	89	95	88	93	88	92	87	85
	6	99	93	88	85	92	85	90	85	89	84	83
	7	96	90	85	83	89	82	88	82	87	82	80
	8	93	87	83	80	86	80	86	80	85	79	78
	9	91	84	80	78	84	78	83	77	83	77	76
	10	89	82	78	76	82	76	81	75	81	75	74

### Downlight, Medium beam, 1500lm Engine, 111.1lm/W at 13.5W

#### Candela Curves



#### 3DPICY3 1500 LUMEN MEDIUM

Output lumens: 1500 lms  
 Input watts<sup>1</sup>: 13.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 19°  
 Spacing Crit.: 0.34

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	1380	92.0%
0-40	1485	99.0%
0-60	1496	99.7%
0-90	1500	100.0%

Angle	Mean CP	Lumens
0	6950	
5	5634	
10	3255	456
15	1891	
20	1199	537
25	854	
30	500	387
35	120	
40	35	105
45	8	
50	3	9
55	2	
60	2	2
65	2	
70	2	2
75	2	
80	1	1
85	1	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	86	2.0'
6'	69	2.4'
7'	57	2.7'
8'	48	3.1'
9'	41	3.4'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 111.1 lm/w  
 Report<sup>3</sup>: FO44193.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	112	110	109	110	107	106	104	103	101	96
	2	111	107	103	101	105	100	102	98	99	95	92
	3	107	102	98	95	100	94	98	92	95	91	88
	4	103	97	93	90	96	89	94	88	92	87	85
	5	99	93	89	85	92	85	90	84	89	83	82
	6	96	89	85	81	89	81	87	81	86	80	79
	7	93	86	81	78	85	78	84	78	83	77	76
	8	90	83	78	75	82	75	81	75	80	74	73
	9	87	80	75	72	79	72	79	72	78	72	71
	10	85	77	73	70	77	70	76	70	75	69	68

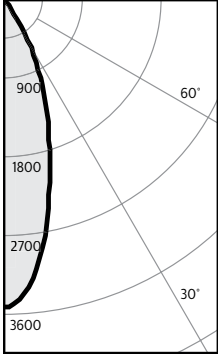
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.  
 2. Wattage: controlled to within 5%  
 3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# ICY Series

## 3D Cylinders (1500lm)

### Downlight, Wide beam, 1450lm Engine, 107.4 lm/W at 13.5W

Candela Curves



**3DPICY3 1500 LUMEN WIDE**

Output lumens: 1450 lms  
 Input watts<sup>1</sup>: 13.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 35°  
 Spacing Crit.: 0.56

Zonal summary

Zone	Lumens	%Luminaire
0-30	1316	90.8%
0-40	1435	99.0%
0-60	1447	99.8%
0-90	1450	100.0%

Angle	Mean CP	Lumens
0	3520	
5	3298	
10	2738	297
15	2030	
20	1489	565
25	996	
30	554	454
35	144	
40	31	119
45	9	
50	5	9
55	3	
60	2	3
65	2	
70	1	2
75	1	
80	1	1
85	0	
90	0	1

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	43	3.4'
6'	35	3.9'
7'	29	4.5'
8'	24	5.0'
9'	21	5.6'

\* Beam diameter is where foot-candles drop to 50% of maximum.

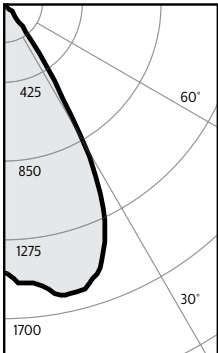
Efficacy: 107.4 lm/w  
 Report<sup>3</sup>: FO44194.PSO

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
	1	114	112	110	108	110	106	106	103	102	95
	2	110	106	102	100	104	98	101	96	98	91
	3	106	100	96	93	99	92	96	91	94	86
	4	102	95	91	87	94	87	92	86	90	82
	5	98	91	86	82	90	82	88	81	87	79
	6	94	87	82	78	86	78	84	77	83	75
	7	90	83	78	74	82	74	81	74	80	72
	8	87	79	74	71	79	71	78	71	77	69
	9	84	76	71	68	76	68	75	68	74	66
	10	81	73	68	65	73	65	72	65	71	63

### Downlight, Very Wide beam, 1435lm Engine, 106.3 lm/W at 13.5W

Candela Curves



**3DPICY3 1500 LUMEN V.WIDE**

Output lumens: 1435 lms  
 Input watts<sup>1</sup>: 13.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 57°  
 Spacing Crit.: 1.08

Zonal summary

Zone	Lumens	%Luminaire
0-30	1162	81.0%
0-40	1390	96.9%
0-60	1427	99.4%
0-90	1435	100.0%

Angle	Mean CP	Lumens
0	1447	
5	1513	
10	1583	146
15	1602	
20	1514	447
25	1287	
30	825	569
35	330	
40	103	228
45	24	
50	14	28
55	10	
60	7	9
65	4	
70	3	4
75	2	
80	2	2
85	1	
90	0	1

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	18	4.3'
6'	14	5.4'
7'	12	6.5'
8'	10	7.6'
9'	9	8.6'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 106.3 lm/w  
 Report<sup>3</sup>: FO44195.PSO

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
	1	114	111	109	107	109	105	105	102	101	94
	2	108	104	100	97	102	96	99	94	96	88
	3	103	97	92	89	96	88	93	87	91	82
	4	98	91	86	82	90	82	88	81	86	77
	5	94	86	80	76	85	76	83	75	82	73
	6	89	81	75	71	80	71	79	70	77	68
	7	85	76	71	67	76	66	74	66	73	64
	8	81	72	67	63	72	62	71	62	70	60
	9	78	68	63	59	68	59	67	59	66	57
	10	74	65	59	56	64	56	64	55	63	54

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

2. Wattage: controlled to within 5%

3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

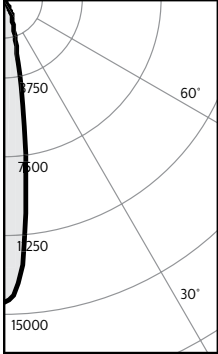


# ICY Series

## 3D Cylinders (2300lm)

### Downlight, Narrow beam, 2108lm Engine, 93.7lm/W at 22.5W

#### Candela Curves



#### 3DPICY3 2300 LUMEN NARROW

Output lumens: 2108 lms  
 Input watts<sup>1</sup>: 22.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 16°  
 Spacing Crit.: 0.3

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	1985	94.2%
0-40	2099	99.6%
0-60	2106	99.9%
0-90	2108	100.0%

Angle	Mean CP	Lumens
0	14412	
5	11571	
10	5143	874
15	2330	
20	1304	688
25	926	
30	583	423
35	121	
40	19	114
45	5	
50	2	5
55	2	
60	1	2
65	1	
70	1	1
75	1	
80	1	1
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	178	1.8'
6'	144	2.1'
7'	119	2.4'
8'	100	2.7'
9'	85	3.0'

\* Beam diameter is where foot-candles drop to 50% of maximum.

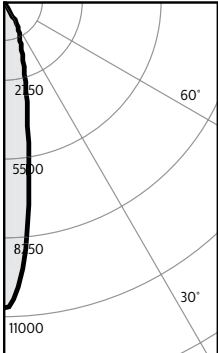
Efficacy: 93.7 lm/w  
 Report<sup>3</sup>: FO44196.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	113	111	109	111	108	107	104	103	101	97
	2	111	108	105	102	106	101	103	99	100	97	94
	3	108	103	100	97	102	96	99	95	97	93	91
	4	105	99	95	92	98	92	96	91	94	90	88
	5	102	96	92	89	95	88	93	88	92	87	85
	6	99	93	88	85	92	85	90	85	89	84	83
	7	96	90	85	83	89	82	88	82	87	82	80
	8	93	87	83	80	86	80	86	80	85	79	78
	9	91	84	80	78	84	78	83	77	83	77	76
	10	89	82	78	76	82	76	81	75	81	75	74

### Downlight, Medium beam, 2308lm Engine, 102.6lm/W at 22.5W

#### Candela Curves



#### 3DPICY3 2300 LUMEN MEDIUM

Output lumens: 2308 lms  
 Input watts<sup>1</sup>: 22.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 19°  
 Spacing Crit.: 0.34

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	2123	92.0%
0-40	2284	99.0%
0-60	2301	99.7%
0-90	2308	100.0%

Angle	Mean CP	Lumens
0	10692	
5	8668	
10	5008	702
15	2909	
20	1844	826
25	1314	
30	769	595
35	184	
40	54	161
45	12	
50	5	14
55	3	
60	3	3
65	3	
70	3	3
75	2	
80	2	3
85	1	
90	0	1

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	132	2.0'
6'	107	2.4'
7'	88	2.7'
8'	74	3.1'
9'	63	3.4'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 102.6 lm/w  
 Report<sup>3</sup>: FO44193.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	115	112	110	109	110	107	106	104	103	101	96
	2	111	107	103	101	105	100	102	98	99	95	92
	3	107	102	98	95	100	94	98	92	95	91	88
	4	103	97	93	90	96	89	94	88	92	87	85
	5	99	93	89	85	92	85	90	84	89	83	82
	6	96	89	85	81	89	81	87	81	86	80	79
	7	93	86	81	78	85	78	84	78	83	77	76
	8	90	83	78	75	82	75	81	75	80	74	73
	9	87	80	75	72	79	72	79	72	78	72	71
	10	85	77	73	70	77	70	76	70	75	69	68

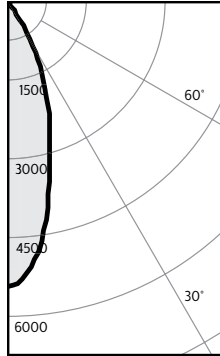
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.  
 2. Wattage: controlled to within 5%  
 3. Correlated Color Temperature: within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# ICY Series

## 3D Cylinders (2300lm)

### Downlight, Wide beam, 2231lm Engine, 99.2lm/W at 22.5W

#### Candela Curves



#### 3DPICY3 2300 LUMEN WIDE

Output lumens: 2231 lms  
 Input watts<sup>1</sup>: 22.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 35°  
 Spacing Crit.: 0.56

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	2025	90.8%
0-40	2208	99.0%
0-60	2228	99.9%
0-90	2231	100.0%

Angle	Mean CP	Lumens
0	5415	
5	5073	
10	4213	457
15	3123	
20	2290	870
25	1533	
30	852	698
35	221	
40	48	183
45	14	
50	8	15
55	5	
60	3	5
65	3	
70	2	3
75	2	
80	2	2
85	1	
90	0	1

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	67	2.2'
6'	54	2.8'
7'	45	3.4'
8'	38	3.9'
9'	32	4.5'

\* Beam diameter is where foot-candles drop to 50% of maximum.

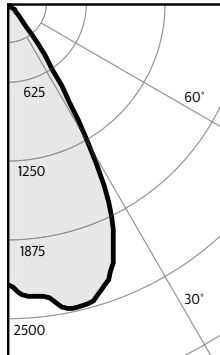
Efficacy: 99.2 lm/w  
 Report#: FO44194.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	114	112	110	108	110	106	106	103	102	100	95
	2	110	106	102	100	104	98	101	96	98	94	91
	3	106	100	96	93	99	92	96	91	94	89	86
	4	101	95	91	87	94	87	92	86	90	85	82
	5	98	91	86	82	90	82	88	81	87	81	79
	6	94	87	82	78	86	78	84	77	83	77	75
	7	90	83	78	74	82	74	81	74	80	73	72
	8	87	79	74	71	79	71	78	71	77	70	69
	9	84	76	71	68	76	68	75	68	74	67	66
	10	81	73	68	65	73	65	72	65	71	65	63

### Downlight, Very Wide beam, 2207lm Engine, 98.1lm/W at 22.5W

#### Candela Curves



#### 3DPICY3 2300 LUMEN V.WIDE

Output lumens: 2207 lms  
 Input watts<sup>1</sup>: 22.5 W  
 CRI: 90 min  
 CCT<sup>2</sup>: 3000K  
 Beam Angle: 57°  
 Spacing Crit.: 1.08

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	1788	81.0%
0-40	2138	96.9%
0-60	2196	99.5%
0-90	2207	100.0%

Angle	Mean CP	Lumens
0	2226	
5	2328	
10	2436	225
15	2464	
20	2330	688
25	1980	
30	1269	875
35	508	
40	158	350
45	37	
50	21	44
55	15	
60	10	14
65	7	
70	4	7
75	3	
80	3	4
85	2	
90	0	2

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	27	4.3'
6'	22	5.4'
7'	18	6.5'
8'	15	7.6'
9'	13	8.6'

\* Beam diameter is where foot-candles drop to 50% of maximum.

Efficacy: 98.1 lm/w  
 Report#: FO44195.PSO

#### Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	114	111	109	107	109	105	105	102	101	99	94
	2	108	104	100	97	102	96	99	94	96	92	88
	3	103	97	92	89	96	88	93	87	91	85	82
	4	98	91	86	82	90	82	88	81	86	80	77
	5	94	86	80	76	85	76	83	75	82	75	73
	6	89	81	75	71	80	71	79	70	77	70	68
	7	85	76	71	67	76	66	74	66	73	66	64
	8	81	72	67	63	72	62	71	62	70	62	60
	9	78	68	63	59	68	59	67	59	66	58	57
	10	74	65	59	56	64	56	64	55	63	55	54

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI/NEMA ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.