

# Lumination™ LED Luminaires

Downlights Powered by Infusion™  
RI10 - 10" Round Aperture



Project name \_\_\_\_\_

Date \_\_\_\_\_

Type \_\_\_\_\_

## Product Description:

Convert any commercial or industrial downlight to LED with the new Lumination RI Series retrofit LED downlight. Powered by the Infusion LED downlight module, the RI series delivers exceptional efficacy and 90+ CRI with high R9 across all lumen packages and color temperatures. Custom engineered, spec-grade optical system provide an exceptional aesthetic with 45° cutoff and no glare. Tool-free installation from below the ceiling in just minutes. 50,000 hour life virtually eliminates maintenance costs. Output up to 3460 lumens is ideal for high-ceiling applications.

## Targeted Performance Summary:

**Distribution Patterns:** Narrow, Medium, Wide

**Input Voltage:** 120V, 277V

**Standard Dimming Controls:** 0-10V to 10%

**CCT:** 2700K, 3000K, 3500K, 4000K

**CRI:** 90

**Color Consistency:** 4 Step MacAdam Ellipse

**Lifetime Rating:** L85 @ 50,000 hours

**Input Frequency (Hz):** 60Hz

**Power Factor:** >0.9

**Mounting Options:** Universal mounting frame secures to existing rough-in kit

**Weight:** 6 lb

**IC Rating:** Non-IC Rated

**Temperature Rating:** 35C max cavity temperature

**Limited Warranty:** 5 years system

**Files Available:** LM79, LM80, IES, Revit

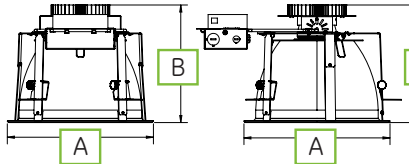
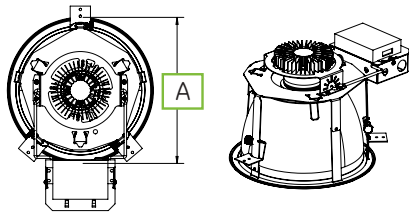
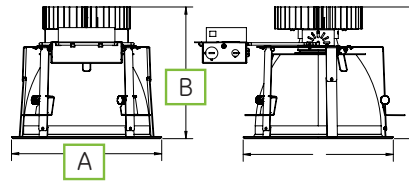
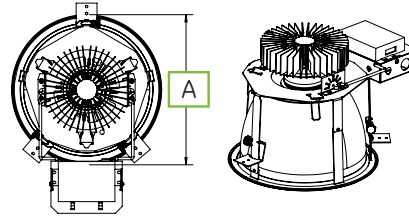
Nominal Module Lumens	1000	1500	2000	3000	4000
Fixture Lumens	880	1300	1760	2650	3460
System Input Power	14	19.5	25.0	38	51
System Efficacy (LPW)	62	67	70	70	68

Performance claims are for 120V, clear, specular reflectors. Other reflector finishes and colors will have an effect on performance.

Listings:

- Suitable for damp locations.

## Product Dimensions: RI10



**High Lumen**  
(3000, 4000 lm)  
A = 10.8 B = 9.47

**Low Lumen**  
(1000, 1500, 2000 lm)  
A = 10.8 B = 8.69

Ordering Information: For shortest lead time and lowest price, order **standard reflector options shown in bold**.

**RI10**

HOUSING	MODULE LUMENS	CCT	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE	VOLTAGE <sup>4</sup>
RI10 = Retrofit Downlight, Infusion, 10" Round	<b>10</b> = 1000 LM	<b>27</b> = 2700K	<b>N</b> = Narrow	<b>RM</b> = Semi-specular	<b>CL</b> = Clear	<b>FM</b> = Match Reflector	1 = 120V, 0-10V dimming 2 = 277V, 0-10V dimming* P = Forward Phase dimming driver 3 = Lutron EcoSystem, 120V 4 = Lutron EcoSystem, 277V
	<b>15</b> = 1500 LM	<b>30</b> = 3000K	<b>M</b> = Medium	<b>RD</b> = Diffused	<b>CB<sup>2</sup></b> = Black	<b>FW</b> = White	
	<b>20</b> = 2000 LM	<b>35</b> = 3500K	<b>W</b> = Wide	<b>RS</b> = Specular	<b>CK<sup>2</sup></b> = Gold		
	<b>30</b> = 3000 LM	<b>40</b> = 4000K		<b>RP<sup>1</sup></b> = Painted	<b>CP<sup>2</sup></b> = Pewter		
	<b>40</b> = 4000 LM				<b>CT<sup>2</sup></b> = Wheat		
					<b>CW</b> = White Paint		

### Ordering Notes:

1. Use with CW = White reflector color only.
2. Reflector colors (other than white paint) available with RM = Semi-specular reflector finish only.
3. See back page of spec sheet for goof ring dimensional info.
4. 277V input, 1000 lumen version is not Energy Star certified.
5. Phase dimming available in 1000, 1500, and 2000 lumen packages only.
6. Lutron EcoSystem available only in 1000 and 1500 lumen packages only.

ACCESSORIES	DESCRIPTION CODE	PRODUCT CODE
347V Field Installed Transformer Kit	TR347/120-75VA	83264
10" Goof Ring, Specular Finish	RIGR10RS <sup>3</sup>	16168
10" Goof Ring, Semi-Spec Finish	RIGR10RM <sup>3</sup>	16169
10" Goof Ring, Diffused Finish	RIGR10RD <sup>3</sup>	16175
10" Goof Ring, White Painted	RIGR10WH <sup>3</sup>	16176



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**ecomagination™**

# Photometric Data: Lumination™ RI10 Series Downlights

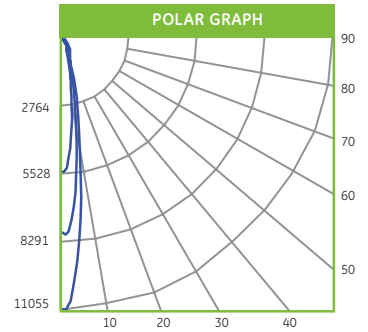
## Narrow Distribution

Performance claims are for clear specular reflectors. Other reflector finishes and colors will have an effect on performance.

COEFFICIENTS OF UTILIZATION																										
RC	80%					70%					50%					30%					10%					0%
RW	70%	50%	30%	10%	0%	70%	50%	30%	10%	0%	50%	30%	10%	0%	50%	30%	10%	0%	50%	30%	10%	0%				
0	119	119	119	119	119	116	116	116	116	116	111	111	111	111	106	106	106	102	102	102	102	100				
1	115	112	110	109	112	110	108	107	106	105	104	103	102	101	99	98	98	98	96	96	96	96	96			
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	91	93	91	89	88	88			
3	106	101	97	94	105	100	96	94	98	95	92	95	93	91	93	91	89	88	86	84	84	84	84			
4	103	97	92	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84	82	81	79	78	78			
5	99	93	88	85	98	92	88	84	90	86	84	89	85	83	87	84	82	81	79	76	74	73	73			
6	96	89	84	81	94	88	84	81	87	83	80	86	82	80	84	81	79	78	76	74	71	70	70			
7	93	85	81	78	91	85	81	77	84	80	77	83	79	77	82	79	76	75	73	71	69	68	68			
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73	71	69	67	66	66			
9	87	80	75	72	86	79	75	72	78	74	72	78	74	71	77	74	71	70	68	66	64	63	63			
10	84	77	73	70	83	77	72	69	76	72	69	75	72	69	75	71	69	68	66	64	62	61	61			

NOTE: Floor Cavity Reflectance : 20%

Narrow - 1000, 1500, 2000 Lm



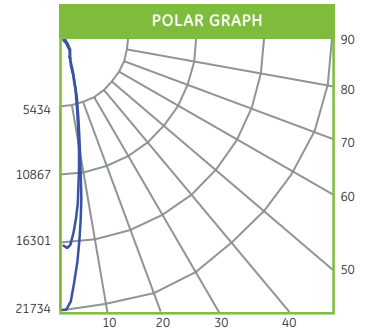
### CANDLEPOWER SUMMARY

Angle	NOMINAL MODULE LUMENS				
	1000	1500	2000	3000	4000
0	5462	8067	10923	16445	21475
5	4340	6410	8680	13067	17064
10	2131	3147	4262	6416	8379
15	1116	1649	2233	3362	4390
20	516	762	1032	1554	2029
25	408	602	815	1227	1603
30	351	519	703	1058	1381
35	233	345	467	703	918
40	65	96	131	196	257
45	8	11	15	23	30
50	2	2	3	5	6
55	1	2	2	3	4
60	1	1	2	2	3

### ZONAL LUMEN SUMMARY

Zone	NOMINAL MODULE LUMENS					% of Fixture
	1000	1500	2000	3000	4000	
0 - 30°	749	1107	1499	2257	2948	85.2
0 - 40°	869	1283	1738	2616	3417	98.8
0 - 60°	879	1298	1758	2647	3457	99.9
0 - 90°	880	1299	1760	2649	3460	100

Narrow - 3000, 4000 Lm



### CONE OF LIGHT

Height	NOMINAL MODULE LUMENS					Dia. (ft.)
	1000	1500	2000	3000	4000	
6'	152	224	303	457	597	1.6
8'	85	126	171	257	336	2.1
10'	55	81	109	164	215	2.6
12'	38	56	76	114	149	3.2
14'	28	41	56	84	110	3.7
16'	21	32	43	64	84	4.2
18'	17	25	34	51	66	4.7
20'	14	20	27	41	54	5.3

### APPLICATION REFERENCE (Open Space)

Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' x 4'	57.4	0.96	84.7	1.38	114.8	1.74	155.0	2.46	202.4	3.24
6' x 6'	26.8	0.45	39.5	0.64	53.6	0.81	72.3	1.15	94.5	1.51
8' x 8'	14.3	0.24	21.2	0.35	28.7	0.44	38.7	0.62	50.6	0.81
10' x 10'	9.6	0.16	14.1	0.23	19.1	0.29	25.8	0.41	33.7	0.54

10' ceiling, Open Space: 50' x 40' x 10'      20' ceiling, Open Space: 50' x 40' x 20'

LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane

### APPLICATION REFERENCE (Corridor)

Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' on ctr.	29.5	0.67	43.6	0.96	59.1	1.21	69.5	1.71	90.8	2.25
6' on ctr.	20.1	0.45	29.6	0.65	40.2	0.82	47.2	1.16	61.7	1.53
8' on ctr.	14.2	0.32	20.9	0.46	28.3	0.58	33.4	0.82	43.6	1.08
10' on ctr.	11.8	0.27	17.4	0.38	23.6	0.48	27.8	0.68	36.3	0.90

10' ceiling, Corridor: 6' W x 100' L      20' ceiling, Corridor: 6' W x 100' L

LLF: 1.0 Initial, 80/50/20 Reflectances, Light levels on the ground

Spacing Criteria: RI10 - Narrow = 0.30

# Photometric Data: Lumination™ RI10 Series Downlights

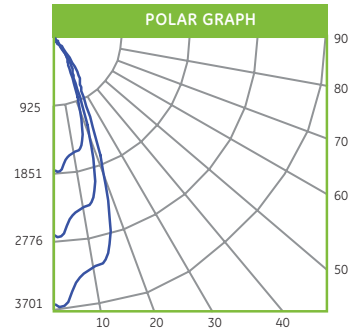
## Medium Distribution

Performance claims are for clear specular reflectors. Other reflector finishes and colors will have an effect on performance.

COEFFICIENTS OF UTILIZATION																				
RC	80%					70%					50%				30%			10%		0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
0	119	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95		
2	110	105	102	99	107	104	100	98	100	98	96	98	95	94	95	93	92	90		
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	86		
4	101	94	90	86	99	93	89	85	91	87	84	89	86	84	87	85	83	81		
5	97	90	85	81	95	89	84	81	87	83	80	85	82	79	84	81	79	77		
6	93	85	80	77	92	85	80	76	83	79	76	82	78	75	81	77	75	74		
7	89	81	76	73	88	81	76	72	79	75	72	78	75	72	77	74	71	70		
8	86	78	73	69	85	77	72	69	76	72	69	75	71	68	74	71	68	67		
9	82	74	69	66	81	74	69	66	73	69	65	72	68	65	71	68	65	64		
10	79	71	66	63	79	71	66	63	70	66	63	69	65	62	69	65	62	61		

NOTE: Floor Cavity Reflectance : 20%

Medium - 1000, 1500, 2000 Lm



### CANDLEPOWER SUMMARY

Angle	NOMINAL MODULE LUMENS				
	1000	1500	2000	3000	4000
0	1839	2716	3677	5536	7229
5	1649	2436	3299	4966	6486
10	1503	2221	3007	4527	5911
15	1440	2128	2881	4337	5664
20	973	1436	1945	2928	3824
25	527	778	1054	1587	2072
30	349	515	698	1051	1372
35	234	346	469	706	922
40	67	99	133	201	262
45	8	13	17	26	33
50	2	3	4	6	8
55	1	2	3	4	6
60	1	2	2	3	4

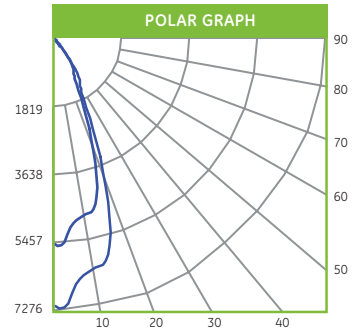
### ZONAL LUMEN SUMMARY

Zone	NOMINAL MODULE LUMENS					% of Fixture
	1000	1500	2000	3000	4000	
0 - 30°	748	1106	1497	2255	2944	85.1
0 - 40°	868	1282	1736	2613	3413	98.6
0 - 60°	878	1298	1757	2646	3455	99.9
0 - 90°	880	1299	1760	2649	3460	100

### CONE OF LIGHT

Height	NOMINAL MODULE LUMENS					Dia. (ft.)
	1000	1500	2000	3000	4000	
6'	51	75	102	154	201	4.2
8'	29	42	57	87	113	5.7
10'	18	27	37	55	72	7.1
12'	13	19	26	38	50	8.5
14'	9	14	19	28	37	9.9
16'	7	11	14	22	28	11.3
18'	6	8	11	17	22	12.7
20'	5	7	9	14	18	14.2

Medium - 3000, 4000 Lm



### APPLICATION REFERENCE (Open Space)

Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
4' x 4'	56.7	0.96	83.7	1.38	113.4	1.74	150.7	2.46	196.8	3.24
6' x 6'	26.5	0.45	39.1	0.64	52.9	0.81	70.3	1.15	91.8	1.51
8' x 8'	14.2	0.24	20.9	0.35	28.3	0.44	37.7	0.62	49.2	0.81
10' x 10'	9.4	0.16	13.9	0.23	18.9	0.29	25.1	0.41	32.8	0.54
10' ceiling, Open Space: 50' x 40' x 10'					20' ceiling, Open Space: 50' x 40' x 20'					

LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane, Light levels on the ground

### APPLICATION REFERENCE (Corridor)

Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
4' on ctr.	27.5	0.67	40.6	0.96	55.0	1.21	59.2	1.71	77.4	2.25
6' on ctr.	18.7	0.45	27.6	0.65	37.4	0.82	40.3	1.16	52.6	1.53
8' on ctr.	13.2	0.32	19.5	0.46	26.4	0.58	28.4	0.82	37.1	1.08
10' on ctr.	11.0	0.27	16.2	0.38	22.0	0.48	23.7	0.68	30.9	0.90
10' ceiling, Corridor: 6' W x 100' L					20' ceiling, Corridor: 6' W x 100' L					

LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane, Light levels on the ground

Spacing Criteria: RI10 - Medium = 0.70

# Photometric Data: Lumination™ RI10 Series Downlights

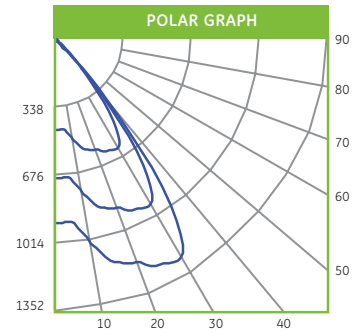
## Wide Distribution

Performance claims are for clear specular reflectors. Other reflector finishes and colors will have an effect on performance.

COEFFICIENTS OF UTILIZATION																		
RC	80%				70%				50%			30%			10%			0%
RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	95	94	93
2	107	102	97	94	105	100	96	92	97	93	90	94	91	88	91	89	87	85
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78
4	95	87	81	76	93	85	80	76	83	78	75	81	77	74	79	76	73	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	67	74	70	67	65
6	84	74	68	63	83	73	67	63	72	66	62	70	66	62	69	65	61	60
7	79	69	62	58	78	68	62	57	67	61	57	66	61	57	64	60	57	55
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43

NOTE: Floor Cavity Reflectance : 20%

Wide - 1000, 1500, 2000 Lm



## CANDLEPOWER SUMMARY

Angle	NOMINAL MODULE LUMENS				
	1000	1500	2000	3000	4000
0	456	673	912	1372	1792
5	453	670	907	1365	1782
10	511	755	1023	1539	2010
15	571	843	1142	1719	2244
20	593	876	1187	1786	2333
25	618	912	1235	1860	2429
30	644	951	1288	1939	2532
35	545	805	1090	1641	2143
40	283	419	567	853	1114
45	86	127	173	260	339
50	16	23	31	47	61
55	3	4	6	9	11
60	2	3	4	6	8

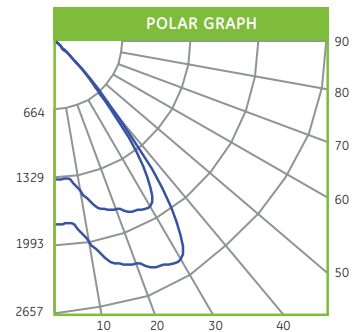
## ZONAL LUMEN SUMMARY

Zone	NOMINAL MODULE LUMENS					% of Fixture
	1000	1500	2000	3000	4000	
0 - 30°	496	733	993	1495	1953	56.4
0 - 40°	805	1189	1610	2424	3166	91.5
0 - 60°	877	1296	1755	2643	3451	99.8
0 - 90°	880	1299	1760	2649	3460	100

## CONE OF LIGHT

Height	NOMINAL MODULE LUMENS					Dia. (ft.)
	1000	1500	2000	3000	4000	
6'	13	19	25	38	50	7.6
8'	7	11	14	21	28	10.2
10'	5	7	9	14	18	12.7
12'	3	5	6	10	12	15.3
14'	2	3	5	7	9	17.8
16'	2	3	4	5	7	20.4
18'	1	2	3	4	6	22.9
20'	1	2	2	3	4	25.5

Wide - 3000, 4000 Lm



## APPLICATION REFERENCE (Open Space)

Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' x 4'	54.9	0.96	81.0	1.38	109.8	1.74	138.3	2.46	180.6	3.24
6' x 6'	25.6	0.45	37.8	0.64	51.2	0.81	64.5	1.15	84.3	1.51
8' x 8'	13.7	0.24	20.3	0.35	27.4	0.44	34.6	0.62	45.1	0.81
10' x 10'	9.1	0.16	13.5	0.23	18.3	0.29	23.0	0.41	30.1	0.54

10' ceiling, Open Space: 50' x 40' x 10'      20' ceiling, Open Space: 50' x 40' x 20'

LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane, Light levels on the ground

## APPLICATION REFERENCE (Corridor)

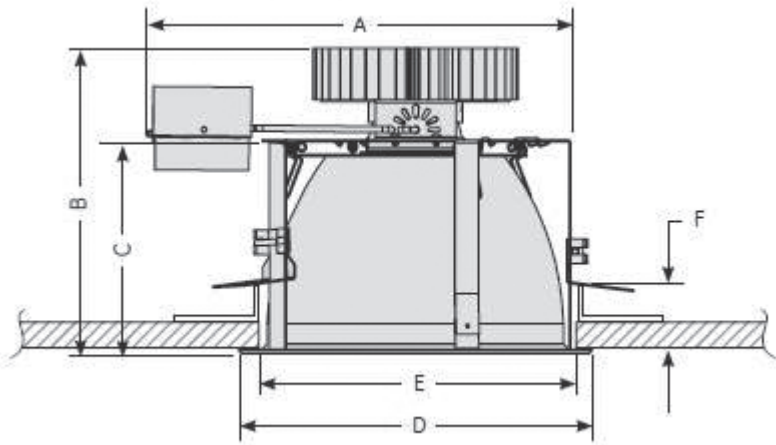
Spacing	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' on ctr.	22.2	0.67	32.7	0.96	44.3	1.21	38.8	1.71	50.7	2.25
6' on ctr.	15.1	0.45	22.3	0.65	30.1	0.82	26.4	1.16	34.4	1.53
8' on ctr.	10.6	0.32	15.7	0.46	21.3	0.58	18.6	0.82	24.3	1.08
10' on ctr.	8.9	0.27	13.1	0.38	17.7	0.48	15.5	0.68	20.3	0.90

10' ceiling, Corridor: 6' W x 100' L

20' ceiling, Corridor: 6' W x 100' L

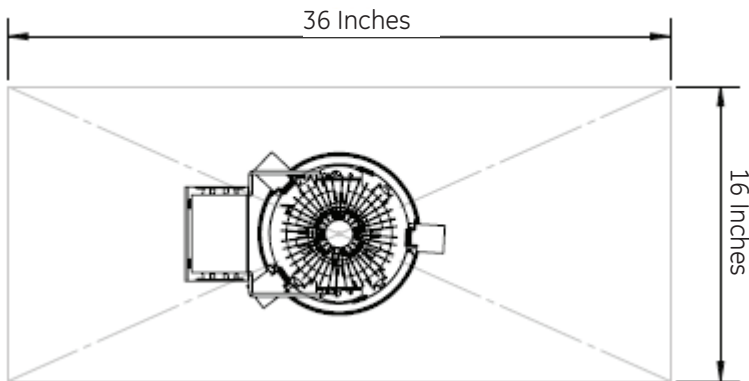
LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane, Light levels on the ground

## Spacing Criteria: RI10 - Wide = 1.52



PARAMETER	FRAME SIZE 10"
A Width of Frame with Swing Arm Extended	13.55"
B Height from Bottom of Reflector to Top of Heat Sink	9.32" High Lumen 8.34" Low Lumen
C Height from Bottom of Reflector to Top of Frame	6.52"
D Reflector Diameter	10.80"
E Cut-Out Dimension for Ceiling	9.75" - 10.50" 10.50" - 12.50" (w/Goof Ring)
F Maximum Ceiling and Rough-in Kit Thickness	4.25"

- SPACING REQUIREMENTS FOR FIXTURE: EACH INDIVIDUAL FIXTURE NEEDS TO HAVE 576 SQUARE INCHES OF SPACE BEFORE ANY OBJECT/OBSTRUCTION
- THERMAL PROTECTION FEATURE PRESENT IN MODULE THAT PROTECTS LEDS FROM OVERHEATING IN ABNORMAL CONDITIONS



## Product Specifications:

### Construction:

- 18 gauge galvanized steel housing
- 14 gauge aluminum reflectors resist dents during transportation and installation
- Custom engineered heat sinks for passive cooling at all lumen option

### Installation:

- Universal mounting frame installs from below the ceiling and secures to existing rough in kit with 3 mounting clamps
- Hinged J-box eases installation through ceiling hole and then flips into traditional remodel housing position
- Included tether secures to existing fixture frame for hands-free wiring

### Optical System:

- Custom engineered reflectors for precise beam distributions and 45° cutoff to light source and source image
- Self-flanged design with white or reflector-matching flange
- Available in specular, semi-specular, and diffused finishes in 10 different colors to precisely match existing fixtures
- Reflector is retained by four torsion springs to ensure uniform seating to LED module for exceptional light distribution for the life of the product
- LPW calculated using 120V. System will see decrease of ~5% using @ 277V and ~25% @ 347V

### Electrical System:

- Infusion DLM LED module for exceptional performance and tool-free upgradeability
- Standard 0-10V dimming, high efficiency drivers
- Pre-wired with 30" flexible armored cable and push-in connector compatible with 1/2" knockout on existing junction box
- Thermal protection feature in module protects LEDs from overheating in abnormal conditions

For more information and access to all of our resources, including our design tool visit: [www.gelighting.com](http://www.gelighting.com)



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