

Lumination® LED Luminaires

LRC Series | LED Downlights

Project name _____

Date _____

Type _____

Product Description

Convert any interior commercial or industrial downlight to LED with the Lumination® LRC Series retrofit LED downlight. The LRC series delivers exceptional efficacy across multiple lumen packages for maximum energy savings and quick paybacks. 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. Available with matching frame kits for new construction applications.



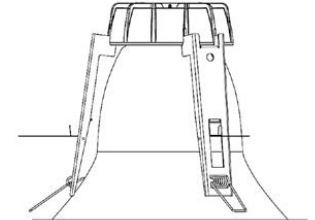
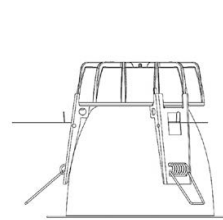
Performance Summary

Light Output Range: 1000-6000 lumens
CRI: 83 CRI, TriGain® 90
CCT: 2700K, 3000K, 3500K, 4000K, 5000K
Input Voltage: 120-277V, 120V, 277V & 347V
Wattage Range: 10-63 watts
Rated Lumen Depreciation: L85 @ 50,000 hrs.
Limited Warranty: 5 Years
System Efficacy: 100-116 LPW
Application: Interior covered



LRC 6"

LRC 8", 10", 12"



*See page 3 for detailed dimensional drawings

Listings

Type IC available¹²
 Damp rated (standard)
 Wet rated options⁹



Ordering Information:

FAMILY	FIXTURE TYPE	GENERATION	VOLTAGE	LUMEN	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE COLOR	CRI	CCT	DRIVER & CONTROLS	OPTIONS
LRC = Lumination® Retrofit Commercial Downlight	6R = 6" Round 8R = 8" Round 10R = 10" Round 12R = 12" Round	B = 2nd Generation	0 ¹ = 120 - 277V 1 = 120V 4 = 277V D ^{10,15} = 347V	10 = 1000 lumens 15 = 1500 lumens 20 = 2000 lumens 25 ^{7,8} = 2500 lumens 30 = 3000 lumens 40 = 4000 lumens 50 ⁸ = 5000 lumens 60 ⁸ = 6000 lumens	NR = Narrow (36 degree) WD = Wide (56 degree) WW ² = Wall Wash	SD = Semi-Diffused PT ^{3,9} = Painted (white reflector color and white flange color only)	CL = Clear (no color) WT ⁹ = White Paint	MR = Match Reflector WT = White Paint WT ⁹ = White Paint	8 = 83 CRI T ⁴ = TriGain® 90 CRI (1000, 1500, 2000lm only)	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 50 ⁸ = 5000K	VQ ¹⁵ = 0-10V Dimming, 10% PQ ⁷ = Phase Dimming LQ = Lutron 3 wire L3DA Hi-lume 1% TQ = Wireless ZigBee Daintree Enabled (no sensor) LE ⁸ = Lutron LDE1 Hi-lume 1% Ecosystem w/ Soft-on, Fade-to-Black	(blank) ¹⁴ = None EL ^{13,15} = Emergency Light WR ⁹ = Wet Rated CP ¹⁵ = Chicag Plenum (CCEA) rated

Ordering Notes:

- 120-277V only available for 1000lm & 1500lm
- Wall wash not available in 12" Reflector or painted reflector finish
- All-white painted reflectors order PT reflector finish and WT flange color (i.e. PTWTWT)
- TriGain™ available only in 1000, 1500, 2000lm options & 3500K and 4000K CCT
- 5000K only available in 83 CRI
- Energy Star® rating not available in 5000 and 6000lm
- Phase dimming only available with 120V and up to 4000lm. Not available for 2500lm option.
- Lutron available only up to 4000 lumens. LE option is 120V forward phase only.
- Wet rated available up to 4000lm. Available only with WD beam spread. WR option not available for PT Reflector Finish.
- LQ, Daintree not available with 347V
- Daintree adds 1.4W to system wattage. Daintree available up to 5000lm options.
- Type IC only available at 1000 and 1500 lumens and with 0-10V, Lutron or Daintree Drivers/Controls
- EL not available with 347V and only compatible with 0-10V dimming. EL option adds 5W to system wattage.
- Check with manufacturer for other options not listed.
- CP option for Chicago Plenum (CCEA) is not compatible with 347V (D) or Emergency Light (EL) options. Available only with 0-10V Dimming (VQ) option.

Nominal Lumen Tables: Lumination® LRC Series

Standard 83 CRI Performance Table

NOMINAL LUMENS	1000	1500	2000	2500	3000	4000	5000	6000
Fixture Lumens	1160	1576	2100	2535	3275	4260	5095	6100
System Input Power (W)	10	13.5	19	25	32.4	42.2	48.1	58.1
System Efficacy (LPW)	116	116	110	101	101	101	106	105

Configuration Notes:

1. Table based on 4000K CCT using semi-diffused finish with 120V Input
2. For painted white reflector [PTWTWT], multiply lumen output by an additional .75 factor

Standard 83 CRI Scaling Table

CCT	SCALING FACTOR	
	1000 TO 4000LM	5000 TO 6000LM
2700K	.83	.94
3000K	.87	.99
3500K	.99	.99
4000K	1.00	1.00
5000K	1.03	1.03



Performance Table

NOMINAL LUMENS	1000	1500	2000
Fixture Delivered Lumens	1022	1504	2015
System Input Power (W)	9.9	14.3	19.6
System Efficacy (LPW)	103	105	102
CRI	90		
R9	70		

Scaling Table

CCT	SCALING FACTOR
3500K	1
4000K	1

Configuration Notes:

1. Table based on 3500K/4000K CCT using semi-diffused finish with 120V Input
2. For painted white reflector [PTWTWT] or wet rated reflector [WR], multiply lumen output by an additional .75 factor

Performance Table

NOMINAL LUMENS	1000	1500	2000
Fixture Delivered Lumens	1015	1550	2044
System Input Power (W)	13.5	23.9	32.4
System Efficacy (LPW)	75	65	63
CRI	90		
R9	70		

Scaling Table

CCT	SCALING FACTOR
2700K	.95
3000K	1

Configuration Notes:

1. Table based on 3000K CCT using semi-diffused finish with 120V Input
2. For painted white reflector [PTWTWT] or wet rated reflector [WR], multiply lumen output by an additional .75 factor

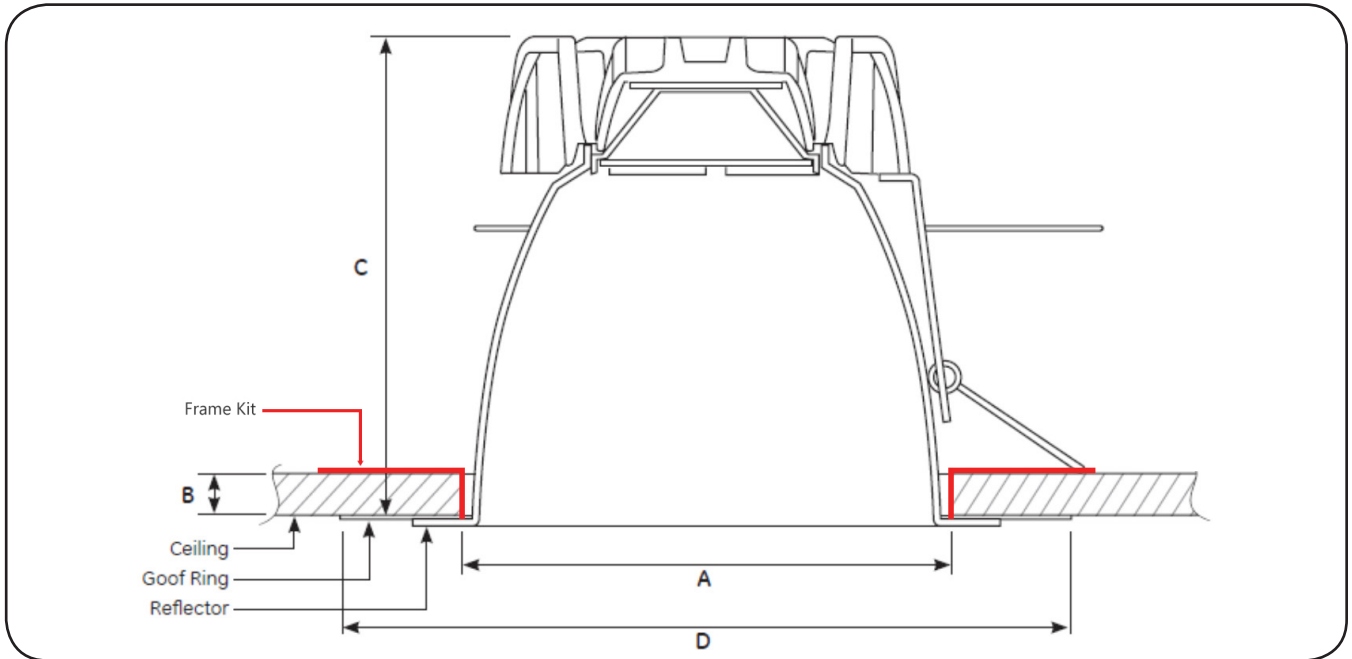
Phase Dimming Performance Table

NOMINAL LUMENS	1000	1500	2000	3000	4000
Fixture Delivered Lumens	1100	1500	2025	3310	4200
System Input Power (W)	15	18.4	21	36.8	46
System Efficacy (LPW)	73.3	81.5	96.4	89.9	91.3

Configuration Notes:

1. Table based on 4000K CCT using semi-diffused finish with 120V Input
2. For painted white reflector [PTWTWT] or wet rated reflector [WR], multiply lumen output by an additional .75 factor

Product Dimensions: Lumination® LRC Series

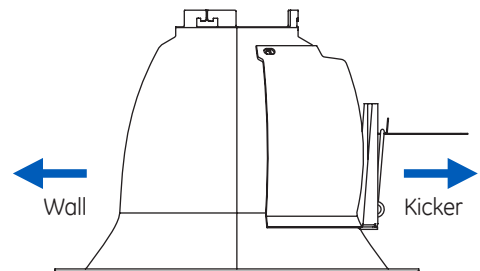


Dimension	Item	RC6	RC8	RC10	RC12
A	Applicable Hole Diameter (inches)	6.4 – 6.8	7.5 – 8.5	9.5 – 10	11.75 – 12.25
B	Applicable Ceiling Thickness (inches)	0.5 – 1.3	0.5 – 1.3	0.5 – 1.3	0.5 – 1.3
C	Height from Bottom of Ceiling (inches) (1000lm, 1500lm, 2000lm, 3000lm)	5.9	7.3	8.7	9.7
C	Height from Bottom of Ceiling (inches) (4000lm)	6.65	8.1	9.35	10.45
D	Max Applicable Hole Diameter (inches) w/ Goof Ring	8.5	10.2	12.1	N/A

Minimum Spacing Requirements for all Fixture Configurations

Center to center of adjacent luminaires	24"
Top of Luminaire to overhead building member	3"
Luminaire center to side building member	12"

Reflector Orientation When Mounting LRCXXXXXXXXWWXXXXXXXXXXXX SKUs



Accessories: Lumination® LRC Series

(ordered separately)

PRODUCT DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL
HANGER BAR, C-CHANNEL - 25 1/4" (BOXED PAIR)	BH3	93110306
6" ROUND GOOF RING, SEMI-DIFFUSED, CLEAR	GRR6RSDCL	93018828
6" ROUND GOOF RING, PAINTED, WHITE	GRR6RPTWT	93018829
8" ROUND GOOF RING, SEMI-DIFFUSED, CLEAR	GRR8RSDCL	93018830
8" ROUND GOOF RING, PAINTED, WHITE	GRR8RPTWT	93018831
10" ROUND GOOF RING, SEMI-DIFFUSED, CLEAR	GRR10RSDCL	93018833
10" ROUND GOOF RING, PAINTED, WHITE	GRR10RPTWT	93018834
12" ROUND GOOF RING, SEMI-DIFFUSED, CLEAR	GRR12RSDCL	93066721
12" ROUND GOOF RING, PAINTED, WHITE	GRR12RPTWT	93066722
12" ROUND ADAPTER RING, SEMI-DIFFUSED, CLEAR	A12RC10RSDPA	93030117
12" ROUND ADAPTER RING, PAINTED, WHITE	A12RC10RPTWT	93030118
6" ROUND NEW CONSTRUCTION FRAME KIT*	FRAME6R	93025091
8" ROUND NEW CONSTRUCTION FRAME KIT	FRAME8R	93025092
10" ROUND NEW CONSTRUCTION FRAME KIT	FRAME10R	93124880
12" ROUND NEW CONSTRUCTION FRAME KIT	FRAME12R	93124881
DAINTREE CONTROLS KIT (does not include sensor)	LCAMBA0TQFM	93057194



12" Round Adapter Ring, Semi Diffused, Clear: 93030117

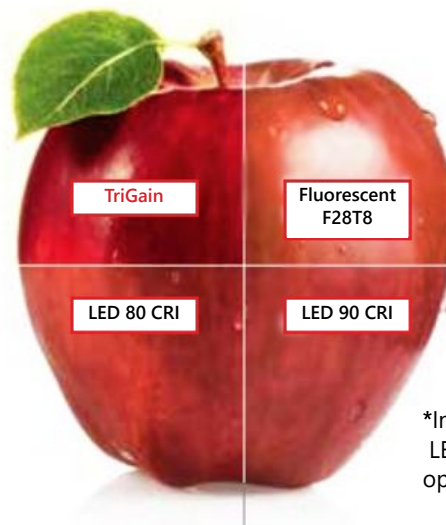


8" Round New Construction Frame Kit: 93025092
10" Round New Construction Frame Kit: 93124880
12" Round New Construction Frame Kit: 93124881

TriGain® Technology - Color without compromise

Current's TriGain® technology, is perfect for bringing out the beauty of merchandising, fabrics, architectural details and objects. With 90 CRI, a R9 greater than 90 and 103LPW (lumens per watt), ultimate color quality and minimal energy usage come together in a complete line of Lumination® LED fixtures. With TriGain®, colors and patterns appear more vivid, allowing for creation of sharper, clearer and more comfortably illuminated environments.

It's all the best of money-saving LED technology and a sophisticated design aesthetic. Why settle for anything less? With TriGain® technology, you get color without compromise.

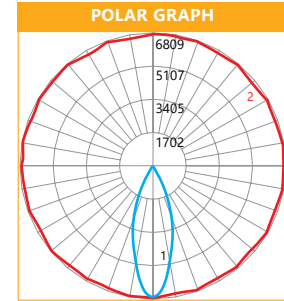


*Industry standard LED measured at the same operating conditions.

Photometric Data: Lumination® LRC Series

Narrow Beam – LRCRNB30NRSDXXXX835XX

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	114	112	110	108	112	110	108	106	106	104	103	102	101	99	98	97	97	95	
2	110	105	102	99	107	104	100	98	100	98	96	97	95	94	95	93	92	90	
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	85	
4	101	94	90	86	99	93	89	86	91	87	85	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	73	80	75	72	78	75	72	77	74	71	70	
8	86	78	73	69	85	77	72	69	76	72	69	75	71	69	74	71	68	67	
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64	
10	80	71	66	63	79	71	66	63	70	66	63	69	66	63	69	65	63	61	



Effective Floor Cavity Reflectance 0.20

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Fixture
0-20°	1760.39	N.A.	56.40
0-30°	2743.47	N.A.	97.90
0-40°	3047.65	N.A.	97.70
0-60°	3105.84	N.A.	99.60
0-80°	3111.01	N.A.	99.70
0-90°	3111.36	N.A.	99.70

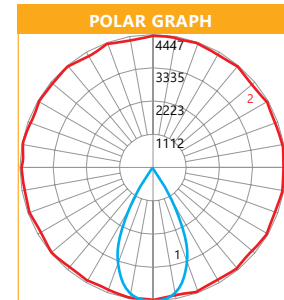
LUMINANCE DATA (CD/SQ.M)			
Angle in Degrees	0°	45°	90°
45°	1285	1247	1200
55°	413	404	391
65°	167	167	155
75°	61	61	61
85°	61	61	61

ZONAL LUMEN SUMMARY	
Zone	Lumens
0-10	588.00
10-20	1172.38
20-30	983.08
30-40	304.18
40-50	45.51
50-60	12.68

Total Luminaire Efficiency = N.A.%

Wide Beam – LRCRNB30WDSXXXX835XX

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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94	
2	109	104	101	98	107	103	99	96	99	97	94	96	94	92	94	92	90	89	
3	104	98	94	90	102	97	93	89	94	91	88	92	89	86	89	87	85	83	
4	99	92	87	83	98	91	87	83	89	85	82	87	84	81	85	82	80	79	
5	95	87	82	78	93	86	81	78	85	80	77	83	79	76	81	78	76	74	
6	91	83	77	73	89	82	77	73	80	76	72	79	75	72	78	74	71	70	
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66	
8	83	74	69	65	82	74	68	65	73	68	65	72	67	64	71	67	64	63	
9	79	71	65	62	78	70	65	61	69	65	61	68	64	61	68	64	61	60	
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57	



Effective Floor Cavity Reflectance 0.20

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Fixture
0-20°	1483.73	N.A.	47.60
0-30°	2588.49	N.A.	83.00
0-40°	3017.70	N.A.	96.70
0-60°	3103.79	N.A.	99.50
0-80°	3110.83	N.A.	99.70
0-90°	3111.26	N.A.	99.70

LUMINANCE DATA (CD/SQ.M)			
Angle in Degrees	0°	45°	90°
45°	2267	2082	1770
55°	622	604	518
65°	247	234	205
75°	123	102	102
85°	61	61	61

ZONAL LUMEN SUMMARY	
Zone	Lumens
0-10	413.89
10-20	1069.84
20-30	1104.76
30-40	429.21
40-50	69.08
50-60	17.02

Total Luminaire Efficiency = N.A.%

Note: Photometric distributions in the LRC series are the same for 6", 8", 10", and 12"

Typical Specification: Lumination® LRC Series

LED & Optical Assembly

CRI: 83 CRI, TriGain® 90

R9: Standard > 0, TriGain® 96

Color Consistency: 4-Step MacAdam Ellipse

Distribution/Options: Wide, Narrow, Wall Wash

Electrical

Input Voltage: 120-277V, 120V, 277V or 347V

Input Frequency: 50/60Hz

System Power Factor (PF): >0.9*

Total Harmonic Distortion (THD): <20%*

LED Driver Type: Class 2

* PF and THD may vary with options



Ratings & Evaluations

Operating Temperature: -20°C to +30°C*

Storage Temperature: -40°C to +70°C

Surge Protection: ANSI C82.77 Complaint

Location: Dry, Damp, Wet Rated

Safety: UL/cUL Listed [Non-IC] /  

Environmental: RoHS compliant

Construction & Finish

Housing: Galvanized steel junction box with multiple knockouts

Heatsink: Custom engineered to provide superior passive cooling performance

Lensing: Polycarbonate diffused, acrylic clear

Reflector: Wet rated lenses include tempered glass designed not to break during moderate turbulence. Perfect for shower/bathroom applications (up to 4000lm)

Paint: Powder coat painted reflector options

Weight: 5.0 lbs. (2.3kg)

Controls

Standard Dimming: 0-10VDC [ANSI C137.x] compliant

Minimum Dimming: Standard 0-10V dims down to 10%

Lutron EcoSystem®: Hi-lume driver provides smooth, continuous dimming down to 1%. Built on the EcoSystem® platform, this LED driver has guaranteed compatibility with EcoSystem® digital controls. – Controls option “LU”. Lumen packages 1000, 1500, 2000, 3000 and 4000 provided with LDE1 Fade to Black lutron driver for an incandescent-like experience. Comes with 2 dimming leads. Lumen package 2500 provided a L3D Lutron driver. It comes with standard 3-wire, line-voltage phase-control technology for consistent dimming performance and compatibility with all Lutron 3-wire fluorescent controls. with standard 3-wire.

Wireless Networking & Sensing: ZigBee Wireless Daintree with No Sensor – Controls option “TQ”

Mounting

Typical Mounting: Spring assembly with trigger quick release installation to frame. Junction box rests securely on most existing downlight frames. Hanger bars (BH3 - 93110306) for T-grid

Ceiling: Compatible with thickness up to 1.5”

Wiring Access: 1/2” trade-size KOs on a removable access plate provided

Reflector Options

Standard Reflectors: Polished aluminum with a variety of color & finish options including clear alzak, painted trims, and full painted reflectors

Wet Rated: Lensed reflectors certified by UL for Wet Rating location. Lensed glass is secured by internal flange to seal interior from contaminants and water

Design Life & Warranty

Reliability Testing: Components and systems evaluation at extreme conditions and monitored during production. Thermal protection feature enables prevention of overheating. All components are designed to exceed 85,000 hours of rated life.

System Warranty: 5 Year

Optional Emergency Battery: Provides 90-minutes of Emergency lighting. 120-277V and only compatible with 0-10V dimming driver.