

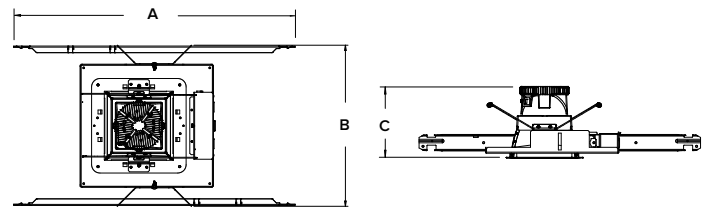
LTR-6SQD (MRI)

6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
MRI

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- 6" square architectural LED downlight delivering 600 – 6000 lumens
- Standard with non-ferromagnetic construction, options/accessories and remote power supply as required for MRI applications
- Five beam distributions assist in targeted illumination of patient, equipment and diagnostic related tasks
- 50° cutoff to source and source image provides a low glare, calming environment for patients with enhanced visual acuity necessary for clinical staff
- Options for color temperature range from 2700K– 5000K in 80+ or 90+ CRI support a wide array of procedural related tasks
- Aluminum anodized reflectors are available in a wide array of colors and finishes



Typical Dimensions and Weights			
Lumen Package	"A" Length Inches (mm)	"B" Width Inches (mm)	"C" Height Inches (mm)
06L - 15L	24.0 (610)	15.34 (390)	6.00 (152)
20L - 30L	24.0 (610)	15.34 (390)	6.78 (172)
35L - 45L	24.0 (610)	15.34 (390)	7.96 (202)
50L - 60L	24.0 (610)	15.34 (390)	9.14 (232)

See DIMENSIONS section for complete details

SPECIFICATIONS

CONSTRUCTION

- Non-ferromagnetic platform has pre-installed bar hangers for simple installation
- Light engine connections use plenum rated (CMP) cable
- Remote Driver Enclosure (RDE) houses remote power supply required for MRI applications

OPTICS

- Visually pleasing 50° cutoff to source and source image
- The light distribution is free of distracting bright spots or pixelation and the perimeter has a smooth transition
- Optical grade silicone lens is integral to the light engine to ensure precise beam control
- High purity aluminum reflector enables reliable and consistent finish and color
- Large selection of anodized finishes and colors
- Painted cones and flange options available

ELECTRICAL

- Chip-on-board LED with 2 SDCM
- Multiple CCTs, 80+ or 90+ CRI
- Long LED life: L90 at >55,000 hours (TM-21)

Remote Driver Cabinet (RDE)

- Universal voltage 120V–277V driver
- UL Class 2, inherent short circuit and overload protection
- Flicker free 0–10V dimming to 1%

INSTALLATION

- Accommodates ceiling thickness up to 2" (See DIMENSIONS section for details)
- Non-ferromagnetic adjustable mounting brackets and bar hangers included
- Light Engine fully serviceable from above or below the ceiling
- Remote driver cabinet requires MRI EMI lighting filters provided by others. (See ADDITIONAL INFORMATION section for details)

CERTIFICATIONS

- CSA certified
- Suitable for wet location (under covered ceiling)
- SL and ML Trim options comply with MIL-STD-461G for electromagnetic compatibility
- SL and ML Trim options comply with IEC / EN 6061-1-2:2020 for basic safety and performance for electromagnetic compatibility with medical electrical equipment and systems

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	600–6000
Wattage Range	8–61**
Efficacy Range (LPW)	69–110*
Life (Hours)	L90 / 55,000

* Based on Specular, 35K, 80 CRI

** Wattage per trim

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ORDERING GUIDE

Example: LTR-6SQD-H-MRI / LTR-6SQD-T-MRI-SL35K8MD-SS / RDE-LTR-SL10LDM1-1

CATALOG #	
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HOUSING

LTR-6SQD-H	MRI
Aperture/Shape/Function	Housing Type
LTR-6SQD-H 6" Square Downlight New Construction Housing	MRI MRI / Scanning (Non-ferromagnetic)

TRIM

LTR-6SQD-T-MRI									
Aperture/Shape/Function	Lumen Package	CCT	CRI	Distribution	Reflector Finish	Reflector Color	Flange Color Options	Reflector Options	
LTR-6SQD-T-MRI 6" Square Non-ferromagnetic Downlight Light Engine / Trim Assembly	SL Standard Lumen	27K 2700K	8 80+ CRI	VNR Very Narrow (0.4 SC/25°)	<i>Finish not applicable with painted reflectors (WC or BC)</i>	Standard Clear	Standard matches reflector color	AM Antimicrobial Coating ⁴	
	ML Medium Lumen	30K 3000K		NR Narrow (0.6 SC/36°)	CG Champagne Gold	BL Black	WT White Flange ³		
	HL High Lumen ²	35K 3500K	9 90+ CRI	MD Medium (0.7 SC/43°)	S Specular	LW Light Wheat	BT Black Flange ³		
	VL Very High Lumen ²	40K 4000K		WD Wide (1.0 SC/65°)	SS Semi-Specular	PW Pewter			
		50K 5000K ¹		XW Extra Wide (1.2 SC/69°)	VS Softglow®	WC Painted White Cone and Flange			
						BC Painted Black Cone and Flange			

REMOTE DRIVER CABINET ^{5, 6, 7}

RDE-LTR				
Remote Driver Cabinet	Lumen Package	Lumen Output	Driver Options	Number of Drivers
RDE-LTR Remote Driver Cabinet for use with LTR MRI Downlights	SL Standard Lumen	06L 600 10L 1000 15L 1500	DM1 0-10V Dimming to 1%	1 1 Driver 2 2 Drivers 3 3 Drivers 4 4 Drivers 5 5 Drivers 6 6 Drivers 7 7 Drivers 8 8 Drivers
	ML Medium Lumen	20L 2000 25L 2500 30L 3000		
	HL High Lumen	35L 3500 40L 4000 45L 4500		
	VL Very High Lumen	50L 5000 55L 5500 60L 6000		

Notes:

- ¹ 5000K available in 80+ CRI only.
- ² HL and VL options not available with MIL461G or IEC.
- ³ WT not needed for WC, BT not needed for BC.
- ⁴ AM available with WC or Specular Clear (S or SWT). Consult factory for other colors.
- ⁵ For cabinet dimensions and mounting details see DIMENSIONS section.
- ⁶ Cabinet contains power supply only. Filters not included and must be supplied by others.
- ⁷ For driver and input power information see ADDITIONAL INFORMATION section.

LTR-6SQD (MRI)

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PERFORMANCE DATA TABLE

Performance data provided below is for 3500K, 80 CRI

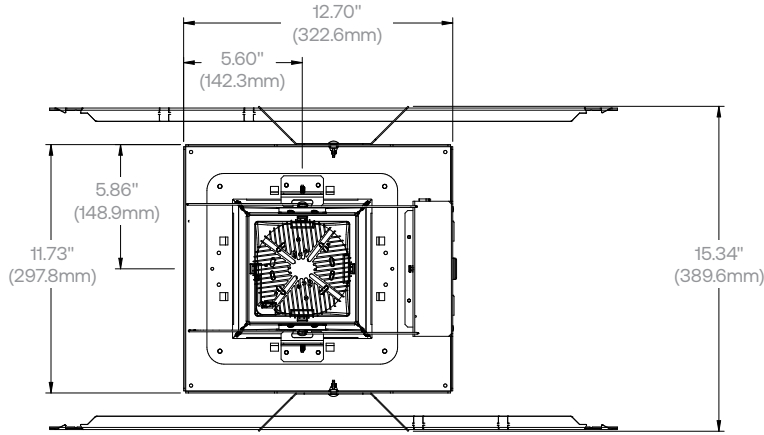
Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
06L	600	Very Narrow	723	7.8	93
		Narrow	757	7.8	97
		Medium	708	7.8	91
		Wide	600	7.8	77
		Extra Wide	567	7.8	73
10L	1000	Very Narrow	1155	12.0	96
		Narrow	1210	12.0	101
		Medium	1131	12.0	94
		Wide	958	12.0	80
		Extra Wide	906	12.0	76
15L	1500	Very Narrow	1660	18.7	89
		Narrow	1738	18.7	93
		Medium	1624	18.7	87
		Wide	1377	18.7	74
		Extra Wide	1302	18.7	70
20L	2000	Very Narrow	2282	22.7	101
		Narrow	2282	22.8	100
		Medium	2206	22.8	97
		Wide	2031	22.8	89
		Extra Wide	1975	22.8	87
25L	2500	Very Narrow	2774	27.7	100
		Narrow	2903	27.7	105
		Medium	2714	27.7	98
		Wide	2300	27.7	83
		Extra Wide	2176	27.7	79
30L	3000	Very Narrow	3305	34.3	96
		Narrow	3460	34.3	101
		Medium	3234	34.3	94
		Wide	2741	34.3	80
		Extra Wide	2593	34.3	76
35L	3500	Very Narrow	4015	43.0	93
		Narrow	4203	43.0	98
		Medium	3928	43.0	91
		Wide	3329	43.0	77
		Extra Wide	3149	43.0	73
40L	4000	Very Narrow	4589	51.6	89
		Narrow	4804	51.6	93
		Medium	4491	51.6	87
		Wide	3806	51.6	74
		Extra Wide	3600	51.6	70
45L	4500	Very Narrow	4817	55.1	87
		Narrow	5042	55.1	92
		Medium	4713	55.1	86
		Wide	3994	55.1	72
		Extra Wide	3778	55.1	69
50L	5000	Very Narrow	5147	48.7	106
		Narrow	5388	48.7	111
		Medium	5037	48.7	103
		Wide	4268	48.7	88
		Extra Wide	4038	48.7	83
55L	5500	Very Narrow	5708	53.9	106
		Narrow	5975	53.9	111
		Medium	5585	53.9	104
		Wide	4734	53.9	88
		Extra Wide	4478	53.9	83
60L	6000	Very Narrow	6358	60.7	105
		Narrow	6656	60.7	110
		Medium	6221	60.7	103
		Wide	5273	60.7	87
		Extra Wide	4987	60.7	82

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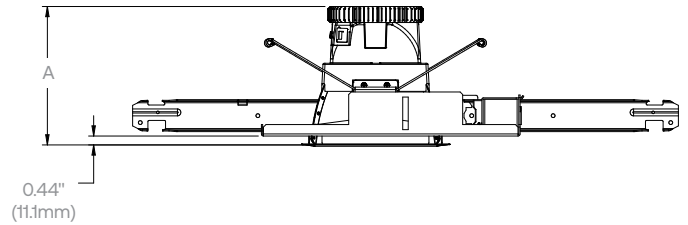
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TYPE:	PROJECT:
CATALOG #:	

DIMENSIONS



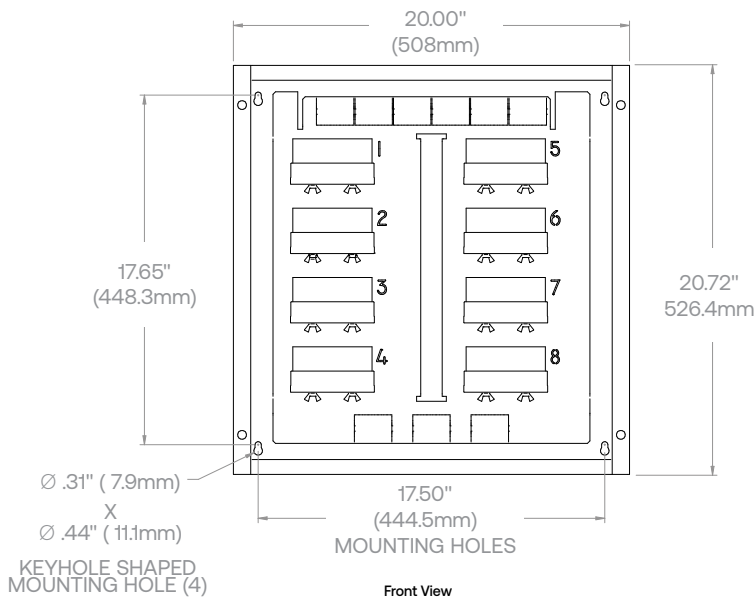
Top View

LTR-6SQD-H MRI New Construction

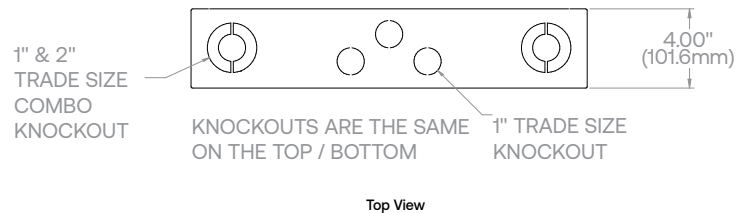


Lumen Package	"A"
06L-15L	6.00" (152.4mm)
20L-30L	6.78" (172.2mm)
35L-45L	7.96" (202.2mm)
50L-60L	9.14" (232.2mm)

Dimensional Data	
Aperture Opening	□ 6.00" (152.4 mm)
Overall Flange	□ 7.25" (184.2mm)
Ceiling Cutout	□ 6.69" (127.0mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)



Front View



Top View

RDE-LTR Remote Driver Cabinet

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PHOTOMETRY

LTR-6SQD-H-MRI-ML20L-DM1 / LTR-6SQD-T-MRI-ML35K8VNR-SS / RDE-LTR-ML20LDM1-1

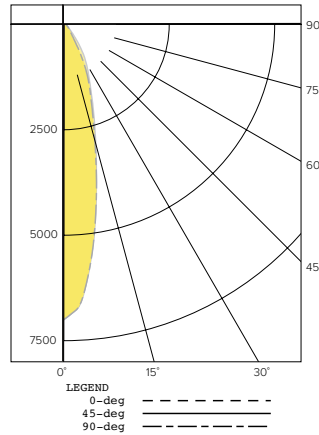
LUMINAIRE DATA

Test No.	19.00934
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	2282
Watts	22.8W
Efficacy	100
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	25

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2282	95.1
0-60	2274	99.7
0-90	2282	100.0
0-180	2282	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela - 0	Candela - 45	Candela - 90
0	7034	7034	7034
5	6158	6172	6176
15	2778	2894	2806
25	1214	1390	1221
35	266	580	269
45	88	116	90
55	17	23	21
65	4	4	4
75	2	2	2
85	0	1	0
90	0	0	0

LTR-6SQD-H-MRI-ML20L-DM1 / LTR-6SQD-T-MRI-ML35K8NR-SS / RDE-LTR-ML20LDM1-1

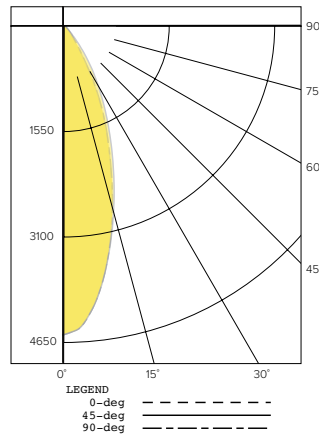
LUMINAIRE DATA

Test No.	P19.00935
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	2252
Watts	22.8W
Efficacy	98.7
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	36

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2124	94.3
0-60	2244	99.7
0-90	2252	100.0
0-180	2252	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela - 0	Candela - 45	Candela - 90
0	4567	4567	4567
5	4305	4307	4304
15	2800	2874	2805
25	1334	1536	1343
35	342	628	344
45	99	134	101
55	19	26	19
65	4	5	4
75	2	2	2
85	0	1	0
90	0	0	0

LTR-6SQD-H-MRI-ML20L-DM1 / LTR-6SQD-T-MRI-ML35K8MD-SS / RDE-LTR-ML20LDM1-1

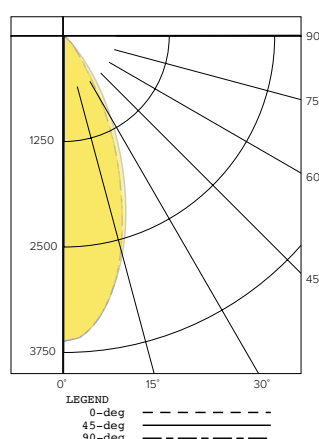
LUMINAIRE DATA

Test No.	P19.01046
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	2206
Watts	22.8W
Efficacy	96.8
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	43

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2062	93.5
0-60	2199	99.7
0-90	2206	100.0
0-180	2206	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela - 0	Candela - 45	Candela - 90
0	3615	3615	3615
5	3486	3487	3485
15	2608	2668	2602
25	1387	1592	1385
35	413	684	414
45	112	155	112
55	20	29	20
65	4	5	4
75	2	2	2
85	0	1	0
90	0	0	0

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PHOTOMETRY CONTINUED

LTR-6SQD-H-MRI-ML20L-DM1 / LTR-6SQD-T-MRI-ML35K8WD-SS / RDE-LTR-ML20LDM1-1

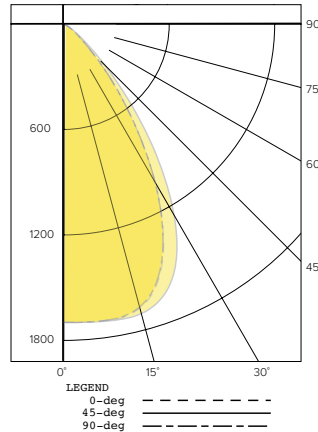
LUMINAIRE DATA

Test No.	P1900936
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	2031
Watts	22.8W
Efficacy	89.0
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	65

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1768	87.0
0-60	2020	99.5
0-90	2031	100.0
0-180	2031	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela - 0	Candela - 45	Candela - 90
0	1697	1697	1697
5	1701	1702	1701
15	1671	1704	1664
25	1335	1501	1326
35	701	915	697
45	205	308	207
55	31	54	32
65	6	7	6
75	3	3	3
85	1	1	1
90	0	0	0

LTR-6SQD-H-MRI-ML20L-DM1 / LTR-6SQD-T-MRI-ML35K8XW-SS / RDE-LTR-ML20LDM1-1

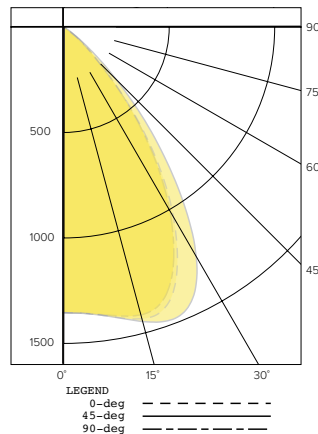
LUMINAIRE DATA

Test No.	P1901047
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1975
Watts	22.7W
Efficacy	87.0
Mounting	Recessed
Spacing Criterion	1.2
Beam Angle (FWHM)	69

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1670	84.5
0-60	1964	99.4
0-90	1975	100.0
0-180	1975	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela - 0	Candela - 45	Candela - 90
0	1354	1354	1354
5	1364	1365	1363
15	1432	1445	1413
25	1275	1436	1236
35	775	970	747
45	244	367	240
55	36	64	36
65	7	8	7
75	3	3	3
85	1	1	1
90	0	0	0

LUMEN MULTIPLIER

Option	27K8	30K8	35K8	40K8	50K8	27K9	30K9	35K9	40K9
Multiplier	0.94	0.98	1.00	1.01	1.02	0.81	0.84	0.85	0.85

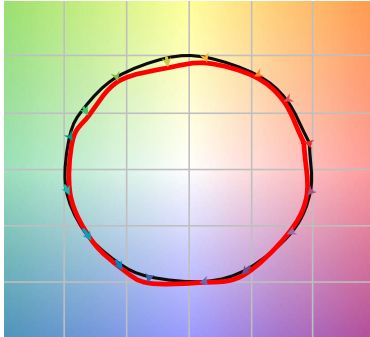
Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

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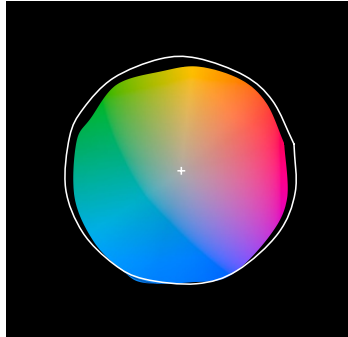
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI



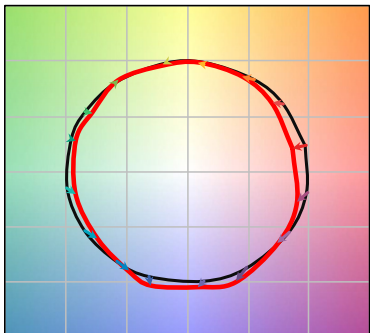
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 90 CRI



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R_f	84	88
R_g	95	95
CCT (K)	3411	3419
D_{uv}	0.0015	0.0042
x	0.4120	0.4147
y	0.3974	0.4052
CIE R_a	84	93
CIE R_g	11	62

COLOR VECTOR GRAPHIC
3500K, 80 CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 CRI



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ADDITIONAL INFORMATION

Dimming Compatibility

For more details and recommended dimmer list, see Dimming Compatibility Information on currentlighting.com/lifeshield.

Remote Driver Cabinet (RDE)

WARNING: The Remote Driver Enclosure contains electronic devices and ferrous parts that could damage or interfere with the function of the MRI equipment if placed inside the MRI shield.

DO NOT PLACE THE REMOTE DRIVER ENCLOSURE INSIDE THE MRI RF SHIELD!

DO NOT ATTACH the Remote Driver Enclosure to the MRI RF shield!

See RDE Remote Driver Cabinet Installation instructions on currentlighting.com/lifeshield for complete details.

REMOTE DRIVER CABINET (RDE) ELECTRICAL DATA	
Input Voltage	120-277 V
Input Frequency	50/60 Hz
Power Factor	≥0.90
THD	<20%

UL Class 2, inherent short circuit and overload protection with 0–10V dimming to 1%

EMI FILTERS

An appropriately rated MRI EMI filter (supplied by others) is REQUIRED to be used on each driver/luminaire circuit to prevent interference and degradation of the MRI image. The EMI Filters should be rated for the DC voltage and current output of each of the driver/luminaire circuits.

Use the MRI Trim Electrical Data table for determining the MRI EMI filter ratings needed.

Some suggested MRI EMI Lighting Filters are:

TE Corcom 1-1609091-3, 1-1609091-4, and 1-1609091-5

Astrodyne TDI 059 Series MRI EMI Filters

ETS-Lindgren MRI EMI Filters

MRI TRIM ELECTRICAL DATA				
Volts DC	Amps	Lumen Output	Cat. Logic	Optical Dist.
34	0.165	600 (06L)	SL	VNR
34	0.280	1000 (10L)		
34	0.420	1500 (15L)		
34	0.550	2000 (20L)	ML	NR
34	0.700	2500 (25L)		
34	0.870	3000 (30L)		
34	1.050	3500 (35L)	HL	WD
34	1.250	4000 (40L)		
34	1.330	4500 (45L)		
51.1	0.850	5000 (50L)	VL	XW
51.1	0.940	5500 (55L)		
51.1	1.250	6000 (60L)		