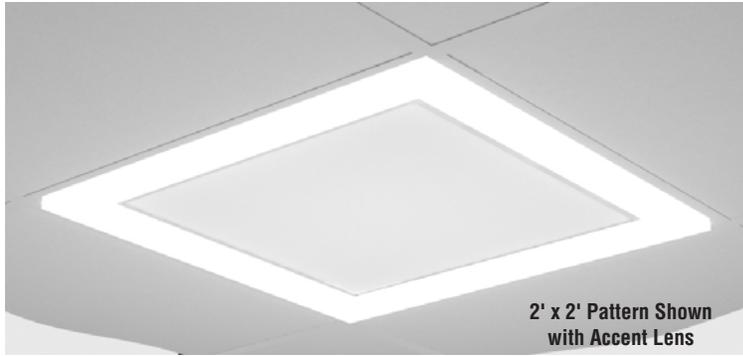


Microquad™ Recessed Series 2 - LED



2' x 2' Pattern Shown with Accent Lens

S P E C I F I C A T I O N S

Housing

Three piece, .070" thick extruded aluminum, mitered and joined together to form nominal 2' x 2' or 2' x 4' continuously lit patterns.

Optical Controls

- (AL) .070" thick high transmittance acrylic snap-in extended accent lens. Lens extends 3/8" below ceiling line.
- (FL) .070" thick high transmittance acrylic snap-in flush lens.

Reflector/Heat Sink

Minimum .040" thick die-formed aluminum finished with a high-reflectance white enamel.

Center Panel

- (PPNL/FXXX) Painted aluminum panel. Standard Finish is matte white.
- (OP/CT) Open. (Center ceiling tile provided by others.)

Finish (for Painted Center Panel)

Standard and premium finishes are baked powder coat electrostatically applied (2.0 mil minimum thickness) to assure aesthetics and durability.

Circuitry

All fixtures are factory pre-wired for a single circuit. Provision for multiple switching/circuiting is optional.

Certification

Fixtures are ETL listed for use in 'Dry or Damp Applications.' Conforms to UL Standard #1598 and to CAN/CSA #C22.2No.250.0. IC rated.

Light Engine

LED light source available for 3000K, 3500K, and 4000K CCT, in high and medium light outputs, 80 or 90 CRI:

2' X 2' Configuration

- HO** - High Output - with Flush Lens
*5008 Total Delivered Lms. at 49 System Watts
- HO** - High Output - with Accent Lens
*4880 Total Delivered Lms. at 49 System Watts
- MO** - Medium Output - with Flush Lens
*3461 Total Delivered Lms. at 32 System Watts
- MO** - Medium Output - with Accent Lens
*3373 Total Delivered Lms. at 32 System Watts (*Values per 8' using 3500K LED modules)

2' X 4' Configuration

- HO** - High Output - with Flush Lens
*7490 Total Delivered Lms. at 75 System Watts
- HO** - High Output - with Accent Lens
*7894 Total Delivered Lms. at 75 System Watts
- MO** - Medium Output - with Flush Lens
*5155 Total Delivered Lms. at 50 System Watts
- MO** - Medium Output - with Accent Lens
*5440 Total Delivered Lms. at 50 System Watts (*Values per 12' using 3500K LED modules)

Driver

Osram-Sylvania "Optotronic" power supply is UL/CUL recognized, 0-10V dimming available, 120-277 universal voltage. 347V also available.

Catalog Number

Type

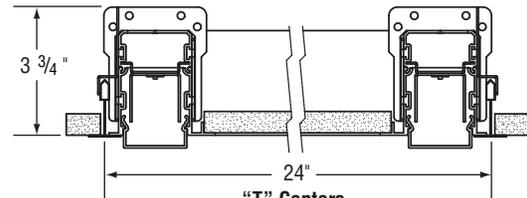
Project Name

MQR2-Grid Ceilings

Recessed Fixture Patterns - 2' x 2' and 2' x 4'



Limited Warranty LED Boards & Drivers

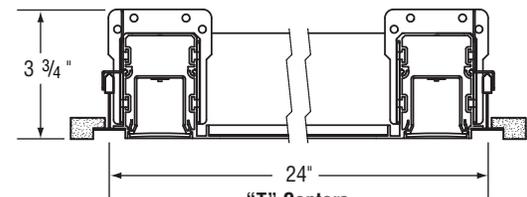


"T" Centers

MQR2-HO-FT-AL
MQR2-MO-FT-AL

Flush Tile with Accent Lens

Open Option shown - (Center Ceiling Tile By Others)

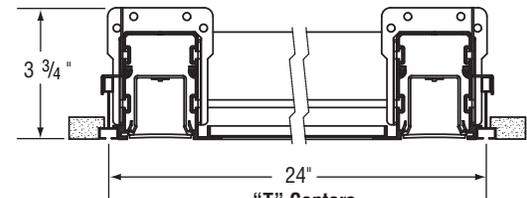


"T" Centers

MQR2-HO-TT-FL
MQR2-MO-TT-FL

Regular Tile with Flush Lens

Painted Aluminum Center Panel Option Shown



"T" Centers

MQR2-HO-SG-FL
MQR2-MO-SG-FL

Screw Slot Grid with Flush Lens

Painted Aluminum Center Panel Option Shown

Sample Catalog Number: **MQR2 - HO - K40 - 80 - 2 X 2 - FT - FL - PPNL/F01M - 120 - DIM1 - OPTIONS**



PAL Microquad Recessed Series 2

Lumen Outputs:

- 2' X 2': **HO** - High Output w/Flush Lens *5008 Total Lm. - 102 Lm/W
- 2' X 4': **HO** - High Output w/Flush Lens *7490 Total Lm. - 99 Lm/W
- MO** - Med. Output w/Flush Lens *3461 Total Lm. - 108 Lm/W
- MO** - Med. Output w/Flush Lens *5155 Total Lm. - 103 Lm/W

*Results using extended Accent Lenses are found on the following pages.

CCT: **K30**-3000K, **K35**-3500K, **K40**-4000K

CRI: **80** (Standard), **90** (Optional)

Pattern Configurations: **2' X 2'** **2' X 4'**

Mounting: **FT** = Flush Tile Grid Ceiling **TT** = Tegular Tile Grid Ceiling **SG** = Screw Slot Grid Ceiling

Optical Control: **FL** = Flush Acrylic Lens **AL** = 3/8" Extended Acrylic Lens

Painted Ctr. Panel/Stand. Finish: **PPNL/F01M** = Matte White

- Painted Ctr. Panel/Prem. Finish: **PPNL/F01G** = Gloss White **PPNL/F02** = Ivory **PPNL/F03** = Stonewash **PPNL/F04** = Camel **PPNL/F05** = Gray Day
- PPNL/F06** = Pebble Beach **PPNL/F07** = Steel **PPNL/F08** = Gray Seal **PPNL/F09** = Mocha **PPNL/F10** = Bronzed
- PPNL/F11G** = Gloss Black **PPNL/F11M** = Matte Black **PPNL/F12** = Ultrasonic Clear **PPNL/F13** = Merlot **PPNL/F14** = Red Skies
- PPNL/F15** = Lemon **PPNL/F16** = Forest Hunter **PPNL/F20** = Blue Print **PPNL/F21** = Reflex Blue **PPNL/F22** = Navy
- PPNL/FCC** = Custom Color

Open Center - No Panel: **OP/CT** = Open Center of Pattern to be Filled by Ceiling Tile (By Others)

Voltage: **120V, 277V, 347V or UNV** (Universal Voltage)

Dimming: **DIM1** = Standard Driver with Available Dimming - 100% to 1% **DIM0** = Optional Driver with Available Dimming - 100% to 0% (Dark)

Options: **NLCKT** = Night-Light Circuit (Common Neutral) **EMCKT** = Emergency Circuit (Separate Hot & Neutral) **EBPHST** = Self-Test Battery Pack (10 Watt) (Externally Mounted on Housing)

FS = Fused Drivers **GTD** = Generator Transfer Device (Consult Factory)



Precision Architectural Lighting 4830 Timber Creek Drive Houston, Texas 77017
Tel 713.946.4343 Fax 713.946.4441 www.pal-lighting.com

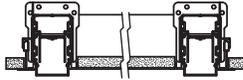


Made in America

10/21

Recessed-Grid

MQR2-HO-K35-80-2X2-AL



High Output

LED Optimized High Transmittance Accent Lens

Catalog Number: MQR2-HO-K35-80-2X2-X-AL-PPNL-120

Report Number: #LLIA000817-008.ies

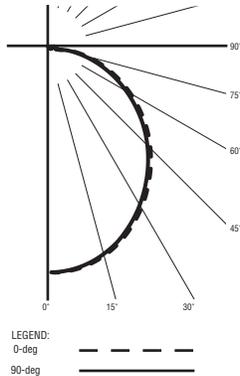
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Accent Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 99.6 Lm/W

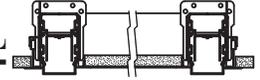
Color Rendering Index (CRI) = 84

100% Down



lighting facts®							
A Program of the U.S. DOE							
Light Output (Lumens)	4880						
Watts	49.02						
Lumens per Watt (Efficacy)	99.55						
Color Accuracy Color Rendering Index (CRI)	84						
Light Color Correlated Color Temperature (CCT)	3444 (Bright White)						
	<table border="1"> <tr> <td>Warm White</td> <td>Bright White</td> <td>Daylight</td> </tr> <tr> <td>2700K</td> <td>3000K</td> <td>4500K 6500K</td> </tr> </table>	Warm White	Bright White	Daylight	2700K	3000K	4500K 6500K
Warm White	Bright White	Daylight					
2700K	3000K	4500K 6500K					
Warranty**	Yes						
<small>All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008 Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.</small>							
<small>** See www.lightingfacts.com/products for details.</small>							
<small>Registration Number: INRP-HTSPR8 (7/20/2017) Model Number: MQR2-HO-K35-80-2X2-X-AL-PPNL-F01M-UNV Type Luminaire - Troffer/Grid Ceiling</small>							

MQR2-MO-K35-80-2X2-AL



Medium Output

LED Optimized High Transmittance Accent Lens

Catalog Number: MQR2-MO-K35-80-2X2-X-AL-PPNL-120

Report Number: #LLIA000817-006.ies

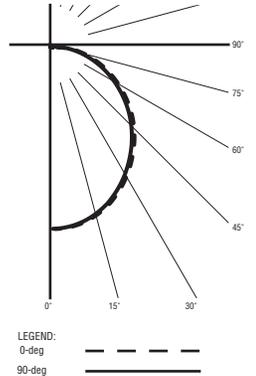
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Accent Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 105.7 Lm/W

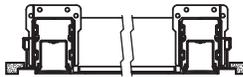
Color Rendering Index (CRI) = 84

100% Down



lighting facts®							
A Program of the U.S. DOE							
Light Output (Lumens)	3373						
Watts	31.94						
Lumens per Watt (Efficacy)	105.6						
Color Accuracy Color Rendering Index (CRI)	84						
Light Color Correlated Color Temperature (CCT)	3431 (Bright White)						
	<table border="1"> <tr> <td>Warm White</td> <td>Bright White</td> <td>Daylight</td> </tr> <tr> <td>2700K</td> <td>3000K</td> <td>4500K 6500K</td> </tr> </table>	Warm White	Bright White	Daylight	2700K	3000K	4500K 6500K
Warm White	Bright White	Daylight					
2700K	3000K	4500K 6500K					
Warranty**	Yes						
<small>All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008 Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.</small>							
<small>** See www.lightingfacts.com/products for details.</small>							
<small>Registration Number: INRP-HTHTB1 (7/20/2017) Model Number: MQR2-MO-K35-80-2X2-X-AL-PPNL-F01M-UNV Type Luminaire - Troffer/Grid Ceiling</small>							

MQR2-HO-K35-80-2X2-FL



High Output

LED Optimized High Transmittance Flush Lens

Catalog Number: MQR2-HO-K35-80-2X2-X-FL-PPNL-120

Report Number: #LLIA000817-007.ies

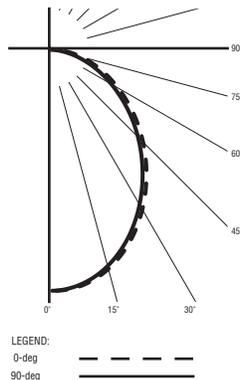
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Flush Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 102.2 Lm/W

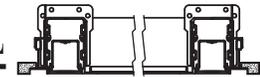
Color Rendering Index (CRI) = 84

100% Down



lighting facts®							
A Program of the U.S. DOE							
Light Output (Lumens)	5008						
Watts	49.03						
Lumens per Watt (Efficacy)	102.14						
Color Accuracy Color Rendering Index (CRI)	84						
Light Color Correlated Color Temperature (CCT)	3457 (Bright White)						
	<table border="1"> <tr> <td>Warm White</td> <td>Bright White</td> <td>Daylight</td> </tr> <tr> <td>2700K</td> <td>3000K</td> <td>4500K 6500K</td> </tr> </table>	Warm White	Bright White	Daylight	2700K	3000K	4500K 6500K
Warm White	Bright White	Daylight					
2700K	3000K	4500K 6500K					
Warranty**	Yes						
<small>All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008 Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.</small>							
<small>** See www.lightingfacts.com/products for details.</small>							
<small>Registration Number: INRP-HUNUJ0 (7/20/2017) Model Number: MQR2-HO-K35-80-2X2-X-FL-PPNL-F01M-UNV Type Luminaire - Troffer/Grid Ceiling</small>							

MQR2-MO-K35-80-2X2-FL



Medium Output

LED Optimized High Transmittance Flush Lens

Catalog Number: MQR2-MO-K35-80-2X2-X-FL-PPNL-120

Report Number: #LLIA000817-005.ies

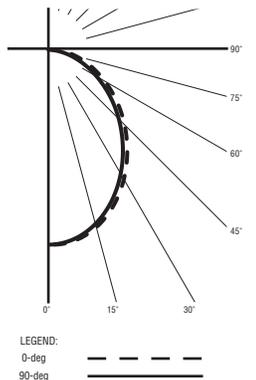
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Flush Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 108.5 Lm/W

Color Rendering Index (CRI) = 84

100% Down



lighting facts®							
A Program of the U.S. DOE							
Light Output (Lumens)	3461						
Watts	31.94						
Lumens per Watt (Efficacy)	108.36						
Color Accuracy Color Rendering Index (CRI)	84						
Light Color Correlated Color Temperature (CCT)	3441 (Bright White)						
	<table border="1"> <tr> <td>Warm White</td> <td>Bright White</td> <td>Daylight</td> </tr> <tr> <td>2700K</td> <td>3000K</td> <td>4500K 6500K</td> </tr> </table>	Warm White	Bright White	Daylight	2700K	3000K	4500K 6500K
Warm White	Bright White	Daylight					
2700K	3000K	4500K 6500K					
Warranty**	Yes						
<small>All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008 Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.</small>							
<small>** See www.lightingfacts.com/products for details.</small>							
<small>Registration Number: INRP-EPBPA (7/20/2017) Model Number: MQR2-MO-K35-80-2X2-X-FL-PPNL-F01M-UNV Type Luminaire - Troffer/Grid Ceiling</small>							

For more information, visit our website at www.pal-lighting.com



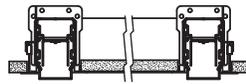
Precision Architectural Lighting 4830 Timber Creek Drive Houston, Texas 77017
Tel 713.946.4343 Fax 713.946.4441 www.pal-lighting.com



Made in America

Recessed-Grid

MQR2-HO-K35-80-2X4-AL



High Output

LED Optimized High Transmittance Accent Lens

Catalog Number: MQR2-HO-K35-80-2X4-X-AL-PPNL-120

Report Number: #LLIA000938-004.ies

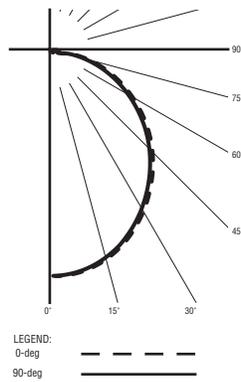
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Accent Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 105.1 Lm/W

Color Rendering Index (CRI) = 83

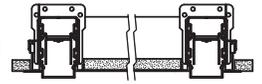
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CANDELA DISTRIBUTION

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0	2685	2685	2685	2685	2685
5	2678	2674	2673	2670	2645
15	2541	2547	2550	2549	2529
25	2300	2312	2323	2321	2311
35	1994	2010	2025	2020	2022
45	1651	1668	1683	1686	1701
55	1271	1299	1325	1342	1348
65	901	936	973	989	983
75	529	579	625	642	633
85	212	268	314	334	328
90	61	85	112	126	126

MQR2-MO-K35-80-2X4-AL



Medium Output

LED Optimized High Transmittance Accent Lens

Catalog Number: MQR2-MO-K35-80-2X4-X-AL-PPNL-120

Report Number: #LLIA000938-002.ies

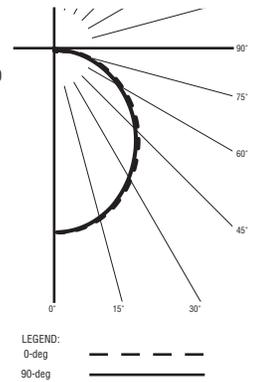
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Accent Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 108.8 Lm/W

Color Rendering Index (CRI) = 83

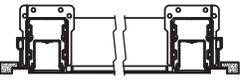
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1850	1850	1850	1850	1850
5	1845	1841	1841	1839	1822
15	1751	1754	1757	1756	1742
25	1584	1593	1600	1599	1592
35	1374	1385	1395	1392	1393
45	1137	1149	1160	1162	1173
55	876	895	914	926	929
65	621	645	671	682	677
75	365	399	431	443	437
85	146	185	217	230	226
90	42	58	78	87	87

MQR2-HO-K35-80-2X4-FL



High Output

LED Optimized High Transmittance Flush Lens

Catalog Number: MQR2-HO-K35-80-2X4-X-FL-PPNL-120

Report Number: #LLIA000938-003.ies

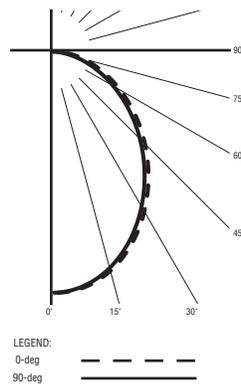
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Flush Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 99.3 Lm/W

Color Rendering Index (CRI) = 83

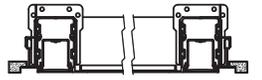
100% Down



CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
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5	2861	2855	2853	2849	2823
15	2708	2709	2709	2706	2685
25	2441	2446	2448	2442	2432
35	2104	2107	2106	2095	2097
45	1725	1720	1713	1705	1720
55	1303	1302	1298	1299	1303
65	890	887	885	884	879
75	476	478	484	482	479
85	123	129	134	133	131
90	1	1	2	2	3

MQR2-MO-K35-80-2X4-FL



Medium Output

LED Optimized High Transmittance Flush Lens

Catalog Number: MQR2-MO-K35-80-2X4-X-FL-PPNL-120

Report Number: #LLIA000938-001.ies

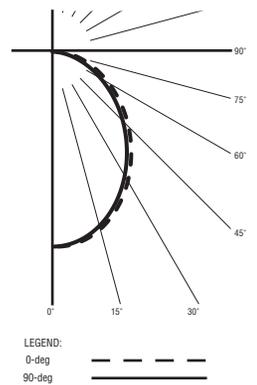
Luminaire Description: Extruded Aluminum Housing with White Aluminum Reflector and LED Optimized Acrylic Flush Lens

LED Module: Multiple White Low-Power Light Emitting Diodes (LEDs) in a precise lay-out.

Total Luminaire Efficacy = 103.3 Lm/W

Color Rendering Index (CRI) = 83

100% Down



CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1974	1974	1974	1974	1974
5	1969	1965	1964	1962	1942
15	1864	1865	1865	1862	1848
25	1681	1684	1685	1681	1674
35	1449	1450	1449	1441	1443
45	1187	1184	1179	1173	1184
55	896	896	893	893	897
65	612	611	609	608	605
75	328	329	333	332	329
85	85	89	92	92	91
90	0	1	1	2	2

