

Pylux User Manual

for Pylux v0.1-alpha2

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1 Introduction

1.1 About Pylux

Pylux is a program written in Python for the manipulation of XML plot files. These plot files can contain information about fixtures, cues, scenes and DMX universes.

In the future, Pylux will be extended with modules that allow for the exporting of documentation in the \LaTeX format, and creating lighting plots in SVG format.

Bugs and feature requests should be submitted to <https://github.com/jackdpage/pylux/issues>.

1.2 About this Manual

This manual is intended for general users of Pylux. If you are a developer who wants to contribute to Pylux, you should read the Developer Reference. The first section of this manual details all of the actions that you can enter on the command-line interface of Pylux. The second section goes into more detail about what tags you should use, etc.

2 Command-line Options

Pylux is invoked simply by running the `pylux` package with Python.

`--help, -h` Display the usage message of the program then exit.

`--version, -v` Display the version number of the program then exit.

`--file FILE, -f FILE` Load the file with path *FILE* as the plot file on launch.

`--gui, -g` Launch Pylux with the graphical user interface. This is not yet implemented. Omitting this flag launches Pylux with its standard CLI interface.

`--verbose, -V` Set the verbosity level of output. Don't include to keep logging level at the default of `WARNING`. Include once for logging level of `INFO` and include twice for a logging level of `DEBUG`.

3 Using the Command Line Interface

The command line interface (CLI) is the default interface used by Pylux. It allows for very efficient editing of plot files with very little CPU overhead.

The CLI is interacted with using a series of commands, each of which may have one or more arguments. When the prompt is displayed, the program is waiting for the user to enter one of these commands. Each command is a memorable two character sequence (apart from the utility commands), where the first character is the object that is going to be acted upon and the second character is the action to perform.

3.1 Piping Complex Objects into Commands

Many commands require that you specify an object other than one which can be represented by a simple command line string. For example, the `xs` command requires that you supply a fixture object as an argument. This is made possible whilst retaining the simplicity of text based entry through the interface reference system.

When you run a listing or filtering command such as `x1`, you will notice that the objects in the list each have a number which is underlined. This is that object's interface reference. Using this, you can pipe objects into other commands, simply by specifying the number where the command calls for another object type.

To allow for the efficient manipulation of objects in batch, you can specify more than one object at once using a comma-separated list (provided of course that the command allows for multiple objects to be piped into it) such as `a,b,c`. You can also specify ranges of numbers if you are piping sequential objects from a list using the format `a:b` where `a` and `b` are the inclusive limits. You can of course use any combination of these formats, such as `a:b,c,d:e,f`.

If you need to pipe the same object or group of objects into multiple commands, you can use the `this` reference instead of a number or list of numbers. This points to the last used reference, so will pipe in the same object or objects that were used for the last command, unless the reference list has changed since (i.e. a listing command has been run again).

3.2 Utility Commands

`h` Display a list of the available commands for the interactive prompt. This prints the contents of `help.txt` to the output.

`c` Clears the screen of previous input and output. This uses the system screen clearing command. (`clear` on UNIX, `cls` on Windows)

`q` Exit the program and autosave any changes that have been made to the tree.

`Q` Exit the program without saving any changes to disk.

3.3 File Commands

`fo FILE` Open the file with path `FILE` as the plot file. This will override any unsaved buffer associated with the previous plot file, if there was one.

`fw` Save the current file buffer to its original location.

`fw PATH` Save the current file buffer to a new file with location `PATH`.

`fg` Print the path of the file that is currently loaded.

fn *PATH* Create an new empty plot file at the location with path *PATH* and load it as the new plot file

3.4 Metadata Commands

mG List all the metadata tags associated with the currently loaded plot file.

ms *TAG VALUE* Set the value of the metadata with tag *TAG* to *VALUE*. If the metadata already exists, it will be overridden.

mr *TAG* Remove the piece of metadata from the file which has the name *TAG*.

mg *TAG* Get the value of a piece of metadata. Prints the value of the metadata with name *TAG* on the screen.

3.5 Fixture Commands

xn *TEMPLATE* Add a new fixture to the plot. This will load the contents of the fixture file with the name *TEMPLATE* into the new fixture, including DMX functions. This will not allocate DMX addresses to the fixture, use **xA** for that.

xc *REF* Clone the fixture with interface reference *REF* into a new fixture. This does not reassign any DMX values.

x1 List all the fixtures in the plot. This will generate a list of every fixture in the plot, listing an interface reference, the fixture olid, and the fixture UUID.

xf *TAG VALUE* List all the fixtures in the plot which have a tag called *TAG* with a value of *VALUE*. Like the list function, this will list an interface reference, the fixture olid and UUID, and also the value of the tag that was given for verification purposes.

xg *REF TAG* Print the value of *TAG* for the fixture with interface reference *REF*.

xG *REF* List all the information associated with the fixture with interface reference *REF*.

xr *REF* Remove the fixture with the interface reference *REF*. This fixture will be removed from the plot, but associated DMX channels will not be removed, use **xp** for that.

xs *REF TAG VALUE* Set the value of *TAG* in fixture with interface reference *REF* to *VALUE*. For a list of standard fixture tags, see subsection 6.2. There are also some shortcuts to set multiple tags at once, which can be found in the pseudo tags section.

xa *REF UNIVERSE ADDR* Assign DMX addresses to the fixture with interface reference *REF*. This will add the fixture to the universe *UNIVERSE*, beginning at the start address *ADDR*. *ADDR* can either be a user-assigned number or auto to allow Pylux to choose the most appropriate start address.

xp *REF* Remove the fixture with interface reference *REF* from the plot and also remove any DMX channels associated with it.

3.6 DMX Registry Commands

rl *UNIVERSE* List all the used channels in *UNIVERSE*. This will list the DMX address, fixture UUID and function of every channel in the DMX registry with identifier *UNIVERSE*.

3.7 Cue Commands

qn *TYPE LOCATION* Append a cue to the cue list. Set the type to *TYPE* which is either *LX*, *SX* or *VX* and the location tag to *LOCATION*. *LOCATION* is the cue line or visual in the script.

ql List all the cues in the cue list, listing their type, location and sort key.

qs *CUE TAG VALUE* Set the value of *TAG* to *VALUE* for *CUE*, where *CUE* is an interface reference list.

qg *CUE TAG* Print the value of *TAG* for *CUE*.

qG *CUE* Print the value of all tags for *CUE*.

qr *CUE* Remove *CUE* from the cue list.

qm *CUE AFTER* Adjust the sort keys of the cues so that *CUE* comes immediately after the cue *AFTER* in the cue list.

qM *CUE BEFORE* Adjust the sort keys of the cues so that *CUE* comes immediately before the cue *BEFORE* in the cue list.

3.8 Using Extensions

You cannot directly interact with extensions from the **editor** interface, you must first load the extension using the **:** command. For example, to load the **texlux** extension, use **:texlux**. This will then present you with the interface as defined by that extension which may vary but in practise should be a prompt of the form **pylux:extension** to indicate to you which extension you are operating in and some commands, much like in the **editor** interface. The extension defines its own way of returning to **editor** but this should in general be **::** or **q**.

4 Using the Graphical User Interface

Pylux also comes with a graphical user interface. This is currently in development so most features are not yet implemented. When the GUI is launched, you are presented with a window containing a list of the fixtures in the plot. (The only way to load a plot file is using the `-f` tag at launch as there is currently no menu.) Each of these fixtures has to the right of it three buttons.

The leftmost button is the only currently functional button and launches a window containing a list of the fixture's data tags. You cannot currently edit the data tags. The other two buttons are for cloning and removing the fixture but this functionality is not yet implemented.

5 Extensions

In the previous sections, we have discussed the usage of the base program in Pylux: `editor`. This is the program that you will use to edit your plots, however, beyond that, it doesn't do much. That is why Pylux is also bundled with extensions to provide extra functionality. In the current version, Pylux comes bundled with the `texlux` and `plotter` extensions.

5.1 `texlux`

`texlux` is an extension to the base `editor` program which allows for the creation of reports in the L^AT_EX format, which can then be post-processed to create a PDF file, or many other formats through the use of an external tool such as Pandoc.

5.1.1 Commands

`rn TEMPLATE OUTPUT TITLE` Generates a report using the template *TEMPLATE*, with the title *TITLE*, writing the output to a file with path *OUTPUT*.

5.1.2 Processing

`texlux` uses built-in functions to generate L^AT_EX documents with pre-defined structures. Each built-in function has a corresponding L^AT_EX style file installed in `~/texmf` which is required to build the PDF report. Currently the only built-in function is `dimmer`, which produces a report categorised by dimmer and containing power draw totals.

5.2 `plotter`

`plotter` generates, from the fixture list and the fixture's symbol files, a plan view of the lighting plot in SVG format. It will consult the fixture's `posX` and `posY` tags to translate the symbol in the output image. It will also refer to the `rotation` tag to rotate the fixture symbol in the plot. Finally, it will colour the fixture using the hexadecimal colour code in the fixture's `colour` tag. If the `rotation` or `colour` tags are not present, `plotter` will calculate these when run.

There are also some options that can be set to customise the output of `plotter`.

5.2.1 Commands

`pn OUTPUT` Generates a new SVG plot, writing the output to the file with path `OUTPUT`.

`os OPTION VALUE` Set the value of the option with name `OPTION` to `VALUE`.

`og OPTION` Print the value of `OPTION` to the console.

`oG` Print the values of all the options.

5.2.2 Options

`beam_colour` The colour of the beam focus lines. Can be any colour in the legal list of gel colours or `auto` to make the focus lines the same colour as the fixture from which they come. Default: `Black`.

`beam_width` The thickness of the beam focus lines in SVG points. Default: `6`.

`show_beams` Choose whether or not to display the beam focus lines. Must be `True` or `False`. Default: `True`.

6 Standard Tags

Below is a list of standard tags for each section, to advise which tags you should apply to your metadata and fixtures. Also included is a list of pseudo-tags: tags which are not added to the file but actually represent one or more other tags to make adding them easier.

6.1 Standard Metadata Tags

Whilst you can use any name for a tag you wish, there are some standard ones which are used by Pylux and its bundled extensions.

`production` The name of the production for which the lighting documentation is being produced, e.g. 'Romeo and Juliet'. Used by: `texlux`.

`designer` The name of the lighting designer for this production. Used by: `texlux`.

`board_operator` The name of the person operating the main lighting board for this production. Used by: `texlux`.

`spot_operator` The name of the person operating the primary followspot for this production. Used by: `texlux`.

director The name of the director of the production. Used by: **texlux**.

venue The location at which the production is taking place. Used by: **texlux**.

6.2 Standard Fixture Data Tags

dmx_functions This is the parent of a list of empty elements, each of which represents a function that the fixture has that requires the use of a DMX channel. For example, traditional fixtures will have an **intensity** function whilst modern LED fixtures may have **colour** and **mode** functions.

dmx_channels The number of DMX channels that a fixture needs. This is automatically calculated from the **dmx_functions** tag, so should not be changed manually.

dmx_start_address The start address of this fixture, if it has been addressed. This is automatically assigned using the address function so shouldn't be changed manually.

universe The universe in which the DMX channels for this fixture are located. This too is set when the address command is run so shouldn't be changed by the user.

posX The x position in 2D space where this fixture is located. Measured in metres.

posY The y position in 2D space where this fixture is located. Measured in metres.

focusX The x position in 2D space where the centre of this fixture's beam is focused. Measured in metres.

focusY The y position in 2D space where the centre of this fixture's beam is focused. Measured in metres.

rotation The rotation of this fixture about its centre. Measured anticlockwise from the positive x axis in degrees. This can be automatically calculated if the preceding four data tags are present.

circuit For traditional fixtures only. The circuit into which the fixture is patched. Used by: **texlux**.

power For traditional fixtures only. The maximum power draw by the lamp in this fixture.

dimmer_uuid For traditional fixtures only. The UUID of the dimmer (which must exist as a separate fixture in the plot file) which is controlling this fixture.

dimmer_chan For traditional fixtures only. The name or number of the dimmer channel by which this fixture is controlled.

gel The manufacturer's code of the gel that is being used in this fixture. The automatic colour calculation currently supports Rosco Supergel and E-colour and the named HTML (X11) colours.

colour A hexadecimal colour code indicating the colour which best represents the gel in this fixture. Can be automatically calculated if gel is present.

6.3 Pseudo Fixture Tags

These tags can be used to set multiple attributes of a fixture at once.

position *X,Y* Sets **posX** to *X* and **posY** to *Y*.

focus *X,Y* Sets **focusX** to *X* and **focusY** to *Y*.

dimmer *REF CHAN* Sets **dimmer_uuid** to the uuid of the dimmer represented by *REF* and **dimmer_channel** to *CHAN*.

6.4 Standard Cue Tags

Cues are different to fixtures in that their order is important. Pylux can't tell which order cues should go in based on the cue line, and it doesn't understand page numbers. Therefore, each cue has a special attributed called **key** which determines which order it goes in in the cue list. Use the **qm** and **qM** commands to manipulate keys.

type The type of cue, either **LX**, **SX** or **VX**.

location The cue in the script, could be a line or visual cue.

description A human-readable description of what should happen.

scene If this is a lighting cue, the UUID of the scene which is used for it.

A Included Fixture Templates

Here follows a list of the included fixture templates.

Fixture Type	Pylux Short Name
Generic Incandescent	generic
Hutton P650	p650
LEDJ RGB PAR	ledjrgbpar
PAR64 MFL	par64mfl
Strand Patt.23	patt23
Zero88 Betapack 2	betapack2

B Supported Gel Colours

These are the gel names that can be assigned to a fixture and their colour be generated automatically.

B.1 HTML Standard Colours

Standard HTML/X11 named colours. Taken directly from the HTML colour definitions.

Colour Name	Rendered Colour
AliceBlue	#F0F8FF
AntiqueWhite	#FAEBD7
Aqua	#00FFFF
Aquamarine	#7FFFD4
Azure	#F0FFFF
Beige	#F5F5DC
Bisque	#FFE4C4
Black	
BlanchedAlmond	#FFEBCD
Blue	#0000FF
BlueViolet	#8A2BE2
Brown	#A52A2A
BurlyWood	#DEB887
CadetBlue	#5F9EA0
Chartreuse	#7FFF00
Chocolate	#D2691E
Coral	#FF7F50
CornflowerBlue	#6495ED
Cornsilk	#FFF8DC
Crimson	#DC143C
Cyan	#00FFFF
DarkBlue	#00008B
DarkCyan	#008B8B
DarkGoldenrod	#B8860B
DarkGray	#A9A9A9
DarkGreen	#006400
DarkKhaki	#BDB76B
DarkMagenta	#8B008B
DarkOliveGreen	#556B2F
DarkOrange	#FF8C00
DarkOrchid	#9932CC
DarkRed	#8B0000
DarkSalmon	#E9967A
DarkSeaGreen	#8FBC8F
DarkSlateBlue	#483D8B
DarkSlateGray	#2F4F4F
DarkTurquoise	#00CED1
DarkViolet	#9400D3
DeepPink	#FF1493

DeepSkyBlue	#00BFFF
DimGray	#696969
DodgerBlue	#1E90FF
FireBrick	#B22222
FloralWhite	#FFFAF0
ForestGreen	#228B22
Fuchsia	#FF00FF
Gainsboro	#DCDCDC
GhostWhite	#F8F8FF
Gold	#FFD700
Goldenrod	#DAA520
Gray	#808080
Green	#008000
GreenYellow	#ADFF2F
Honeydew	#F0FFF0
HotPink	#FF69B4
IndianRed	#CD5C5C
Indigo	#4B0082
Ivory	#FFFFFF
Khaki	#F0E68C
Lavender	#E6E6FA
LavenderBlush	#FFF0F5
LawnGreen	#7CFC00
LemonChiffon	#FFFACD
LightBlue	#ADD8E6
LightCoral	#F08080
LightCyan	#E0FFFF
LightGoldenrodYellow	#FAFAD2
LightGreen	#90EE90
LightGrey	#D3D3D3
LightPink	#FFB6C1
LightSalmon	#FFA07A
LightSeaGreen	#20B2AA
LightSkyBlue	#87CEFA
LightSlateGray	#778899
LightSteelBlue	#B0C4DE
LightYellow	#FFFFE0
Lime	#00FF00
LimeGreen	#32CD32
Linen	#FAF0E6
Magenta	#FF00FF
Maroon	#800000
MediumAquamarine	#66CDAA
MediumBlue	#0000CD
MediumOrchid	#BA55D3
MediumPurple	#9370DB
MediumSeaGreen	#3CB371
MediumSlateBlue	#7B68EE
MediumSpringGreen	#00FA9A
MediumTurquoise	#48D1CC

MediumVioletRed	#C71585
MidnightBlue	#191970
MintCream	#F5FFFA
MistyRose	#FFE4E1
Moccasin	#FFE4B5
NavajoWhite	#FFDEAD
Navy	#000080
OldLace	#FDF5E6
Olive	#808000
OliveDrab	#6B8E23
Orange	#FFA500
OrangeRed	#FF4500
Orchid	#DA70D6
PaleGoldenrod	#EEE8AA
PaleGreen	#98FB98
PaleTurquoise	#AFEEEE
PaleVioletRed	#DB7093
PapayaWhip	#FFEFD5
PeachPuff	#FFDAB9
Peru	#CD853F
Pink	#FFC0CB
Plum	#DDA0DD
PowderBlue	#B0E0E6
Purple	#800080
Red	#FF0000
RosyBrown	#BC8F8F
RoyalBlue	#4169E1
SaddleBrown	#8B4513
Salmon	#FA8072
SandyBrown	#F4A460
SeaGreen	#2E8B57
Seashell	#FFF5EE
Sienna	#A0522D
Silver	#C0C0C0
SkyBlue	#87CEEB
SlateBlue	#6A5ACD
SlateGray	#708090
Snow	#FFFAFA
SpringGreen	#00FF7F
SteelBlue	#4682B4
Tan	#D2B48C
Teal	#008080
Thistle	#D8BFD8
Tomato	#FF6347
Turquoise	#40E0D0
Violet	#EE82EE
Wheat	#F5DEB3
White	#FFFFFF
WhiteSmoke	#F5F5F5
Yellow	#FFFF00

YellowGreen

#9ACD32

B.2 Rosco Gels

Colour representations taken from The official Rosco website. Both the gel name and manufacturer code can be used. E-Colour+ gels have an R prefixed to their manufacturer code, Supergel gels have an S prefixed to their manufacturer code.

B.2.1 E-Colour+

Gel Name	Manufacturer Code	Rendered Colour
Rose Pink	R002	#FF40B9
Lavender Tint	R003	#F5E6FF
Medium Bastard Amber	R004	#FAB8AC
Pale Yellow	R007	#FFFFDE
Dark Salmon	R008	#FF5E48
Pale Amber Gold	R009	#FFD28A
Medium Yellow	R010	#FFF30D
Straw Tint	R013	#FFDBA1
Deep Straw	R015	#FDC819
Surprise Peach	R017	#CC5F3D
Fire	R019	#ED2000
Medium Amber	R020	#FF8A24
Gold Amber	R021	#FF4800
Dark Amber	R022	#FF1900
Scarlet	R024	#F00E25
Sunset Red	R025	#FF4B2B
Bright Red	R026	#C70011
Medium Red	R027	#A10000
Plasa Red	R029	#BC0010
Light Pink	R035	#FFB8CE
Medium Pink	R036	#FF6E9E
Pink Carnation	R039	#FAC0D8
Dark Magenta	R046	#C5004F
Rose Purple	R048	#C43BFF
Medium Purple	R049	#BE00D4
Light Lavender	R052	#D7BAFF
Paler Lavender	R053	#E5DEFF
Lavender	R058	#9235FD
Mist Blue	R061	#D6E8FF
Pale Blue	R063	#B0D5F7
Sky Blue	R068	#597DFF
Tokyo Blue	R071	#3600B1
Evening Blue	R075	#4C79FF
Just Blue	R079	#3700EB
Deeper Blue	R085	#1A00BF
Lime Green	R088	#BEFF85
Moss Green	R089	#00CD55
Dark Yellow Green	R090	#00870B

Spring Yellow	R100	#F2FF30
Yellow	R101	#FFEB0F
Light Amber	R102	#FFE74A
Straw	R103	#FFE7C4
Deep Amber	R104	#FCD628
Orange	R105	#FF760D
Primary Red	R106	#DE0000
Light Rose	R107	#FF809F
English Rose	R108	#FAAD96
Light Salmon	R109	#FF919C
Middle Rose	R110	#FFA3CA
Dark Pink	R111	#FF63A4
Magenta	R113	#FF004D
Peacock Blue	R115	#00C9BF
Medium Blue Green	R116	#009E96
Steel Blue	R117	#A3E2FF
Light Blue	R118	#00B7FF
Dark Blue	R119	#3300D9
Deep Blue	R120	#2800C9
Leaf Green	R121	#93FF54
Fern Green	R122	#74F55D
Dark Green	R124	#00AB44
Mauve	R126	#D400DB
Smokey Pink	R127	#BB334C
Bright Pink	R128	#FF177F
Heavy Frost	R129	#FFFFFF
Clear	R130	#FFFFFF
Marine Blue	R131	#02E3CC
Medium Blue	R132	#5286FF
Golden Amber	R134	#F5632F
Deep Golden Amber	R135	#FF4A00
Pale Lavender	R136	#E2C7FF
Special Lavender	R137	#B695FC
Pale Green	R138	#B4FFA8
Primary Green	R139	#009107
Summer Blue	R140	#38CAFF
Bright Blue	R141	#00ACF0
Pale Violet	R142	#AA96FF
Pale Navy Blue	R143	#007194
No Color Blue	R144	#4FC4FF
Apricot	R147	#FF7438
Bright Rose	R148	#FF1472
Gold Tint	R151	#FFC0B5
Pale Gold	R152	#FFCAA8
Pale Salmon	R153	#FFB2BA
Pale Rose	R154	#FFB2BA
Chocolate	R156	#C57951
Pink	R157	#FF4551
Deep Orange	R158	#FF5E00
No Color Straw	R159	#FFFAE0

Slate Blue	R161	#4AABFF
Bastard Amber	R162	#FFCFA8
Flame Red	R164	#F02225
Daylight Blue	R165	#1CACFF
Pale Red	R166	#FF3352
Lilac Tint	R169	#EBDAF5
Deep Lavender	R170	#DAADFF
Lagoon Blue	R172	#00AACC
Dark Steel Blue	R174	#52B4FF
Loving Amber	R176	#FAA498
Chrome Orange	R179	#FF9900
Dark Lavender	R180	#8B2BFF
Congo Blue	R181	#29007A
Light Red	R182	#CC0000
Moonlight Blue	R183	#00BAF2
Cosmetic Peach	R184	FFFFFF
Cosmetic Burgundy	R185	FFFFFF
Cosmetic Silver Rose	R186	FFFFFF
Cosmetic Rouge	R187	FFFFFF
Cosmetic Highlight	R188	FFFFFF
Cosmetic Silver Moss	R189	FFFFFF
Cosmetic Emerald	R190	FFFFFF
Cosmetic Aqua Blue	R191	FFFFFF
Flesh Pink	R192	#FF639F
Rosy Amber	R193	#FF454B
Surprise Pink	R194	#AC82FF
Zenith Blue	R195	#0003CC
True Blue	R196	#00A1FF
Alice Blue	R197	#1958CF
Palace Blue	R198	#43009C
Regal Blue	R199	#3700EE
Double CT Blue	R200	#0F5BFF
Full CT Blue	R201	#73A9FF
1/2 CT Blue	R202	#B8D5FF
1/4 CT Blue	R203	#E0EDFF
Full CT Orange	R204	#FF9B30
1/2 CT Orange	R205	#FFD28F
1/4 CT Orange	R206	#FFE6B8
CT Orange + .3 Neutral Density	R207	#A86300
CT Orange + .6 Neutral Density	R208	#974400
.3 Neutral Density	R209	#BFBDBD
.6 Neutral Density	R210	#969595
.9 Neutral Density	R211	#636262
LCT Yellow	R212	#FBFFD9
White Flame Green	R213	#E0FCB3
Full Tough Spun	R214	FFFFFF
Half Tough Spun	R215	FFFFFF
White Diffusion	R216	FFFFFF
Blue Diffusion	R217	FFFFFF
Eighth CT Blue	R218	#EBF3FF

Fluorescent Green	R219	#2EE8CF
White Frost	R220	#FFFFFF
Blue Frost	R221	#FFFFFF
1/8 CT Orange	R223	#FFEAD1
Daylight Blue Frost	R224	#FFFFFF
Neutral Density Frost	R225	#FFFFFF
U.V. Filter	R226	#FFFFFF
Brushed Silk	R228	#FFFFFF
Quarter Tough Spun	R229	#FFFFFF
Super Correction WF Green	R232	#AD6824
HMI To Tungsten	R236	#FF8438
C.I.D. to Tungsten	R237	#F08F56
C.S.I. to Tungsten	R238	#E5B1A0
Polarizer	R239	#FFFFFF
Fluorescent 5700K	R241	#1AD8D8
Fluorescent 4300K	R242	#5AE2C7
Fluorescent 3600K	R243	#87E5B6
Plus Green	R244	#E0FC90
Half Plus Green	R245	#EAFCB8
Quarter Plus Green	R246	#F0FCD2
Minus Green	R247	#FFB8D0
Half Minus Green	R248	#FACDE0
Quarter Minus Green	R249	#FADEE8
Half White Diffusion	R250	#FFFFFF
Quarter White Diffusion	R251	#FFFFFF
Eighth White Diffusion	R252	#FFFFFF
Hanover Frost	R253	#FFFFFF
HT New Hanover Frost	R254	#FFFFFF
Haarlem Frost	R255	#FFFFFF
Half Hanover Frost	R256	#FFFFFF
Quarter Hanover Frost	R257	#FFFFFF
Eighth Hanover Frost	R258	#FFFFFF
Heat Shield	R269	#FFFFFF
Scrim	R270	#FFFFFF
Mirror Silver	R271	#FFFFFF
Soft Gold Reflector	R272	#FFFFFF
Soft Silver Reflector	R273	#FFFFFF
Mirror Gold	R274	#FFFFFF
Black Scrim	R275	#FFFFFF
Eighth Plus Green	R278	#F6FFE0
Eighth Minus Green	R279	#FCE8F3
Three Quarter CT Blue	R281	#9CC5FF
1.5 CT Blue	R283	#759EE5
3/4 CT Orange	R285	#F7AF5C
1.5 CT Orange	R286	#F8963E
Double CT Orange	R287	#F77F1E
.15 Neutral Density	R298	#DCD9D9
1.2 Neutral Density	R299	#474747
Soft Green	R322	#02E59A
Jade	R323	#02E2A3

Mallard Green	R325	#005C46
Forest Green	R327	#006539
Follies Pink	R328	#FF33A0
Special Rose Pink	R332	#FF0D6A
Plum	R341	#CD9BD1
Special Medium Lavender	R343	#7345FF
Violet	R344	#A98AFF
Fuschia Pink	R345	#C953DB
Glacier Blue	R352	#00A6FF
Lighter Blue	R353	#54D5FF
Special Steel Blue	R354	#00BFD8
Special Medium Blue	R363	#0236DF
Cornflower	R366	#5783CF
Rolux	R400	FFFFFF
Light Rolux	R401	FFFFFF
Soft Frost	R402	FFFFFF
Half Soft Frost	R404	FFFFFF
Opal Frost	R410	FFFFFF
Highlight	R414	FFFFFF
Three Quarter White	R416	FFFFFF
Light Opal Frost	R420	FFFFFF
Quiet Frost	R429	FFFFFF
Grid Cloth	R430	FFFFFF
Light Grid Cloth	R432	FFFFFF
Quarter Grid Cloth	R434	FFFFFF
Full CT Straw	R441	#F7BF4F
Half CT Straw	R442	#FFCE9C
Quarter CT Straw	R443	#FFE3BA
Eighth CT Straw	R444	#FFF5DC
Three Eighths White	R450	FFFFFF
One Sixteenth White	R452	FFFFFF
Quiet Grid Cloth	R460	FFFFFF
Quiet Light Grid Cloth	R462	FFFFFF
Quiet Quarter Grid Cloth	R464	FFFFFF
Full Atlantic Frost	R480	FFFFFF
Half Atlantic Frost	R481	FFFFFF
Quarter Atlantic Frost	R482	FFFFFF
Double New Colour Blue	R500	#6977FF
New Colour Blue (Robertson Blue)	R501	#BFC7FB
Half New Colour Blue	R502	#D9E3FF
Quarter New Colour Blue	R503	#F0F5FF
Waterfront Green	R504	#B3DCE3
Sally Green	R505	#BFFF59
Marlene	R506	#F7C9A3
Madge	R507	#E93511
Midnight Maya	R508	#1602AA
Argent Blue	R525	#2261D6
Gold Medal	R550	#F5AE3F
Full CT Eight Five	R604	#FFC470
Half Mustard Yellow	R642	#DFAB00

Quarter Mustard Yellow	R643	#FDC200
Industry Sodium	R650	#D9CE73
HI Sodium	R651	#FFB95C
Urban Sodium	R652	#FF752B
LO Sodium	R653	#5E2A02
Perfect Lavender	R700	#7500EB
Provence	R701	#9A3BFF
Special Pale Lavender	R702	#DACCFF
Cold Lavender	R703	#C587FF
Lily	R704	#E2BAFF
Lily Frost	R705	#D59EFF
King Fals Lavender	R706	#6600FF
Ultimate Violet	R707	#7500F2
Cool Lavender	R708	#BFC8FF
Electric Lilac	R709	#7394FF
Spir Special Blue	R710	#554CFF
Cold Blue	R711	#224ED4
Bedford Blue	R712	#3853FF
Winter Blue	R713	#1F009A
Elysian Blue	R714	#0F17FF
Cabanna Blue	R715	#072EDE
Mikkel Blue	R716	#2600BF
Shanklin Frost	R717	#FFFFFF
1/2 Shanklin Frost	R718	#FFFFFF
Colour Wash Blue	R719	#2265F5
Daylight Frost	R720	#FFFFFF
Berry Blue	R721	#0036E8
Bray Blue	R722	#0024C2
Virgin Blue	R723	#0031F7
Ocean Blue	R724	#2BC7FF
Old Steel Blue	R725	#8CDFFF
QFD Blue	R727	#007385
Steel Green	R728	#95DEDA
Scuba Blue	R729	#007070
Liberty Green	R730	#A3F7DB
Dirty Ice	R731	#B4F0D2
Damp Squib	R733	#A8E5C7
Velvet Green	R735	#005C1D
Twickenham Green	R736	#0D5700
Jas Green	R738	#5FE300
Aurora Borealis Green	R740	#354D15
Mustard Yellow	R741	#C5A100
Bram Brown	R742	#8E5324
Dirty White	R744	#F7C757
Brown	R746	#753900
Easy White	R747	#CC8C7C
Seedy Pink	R748	#C23061
Hanover Rose	R749	#FFBCBA
Durham Frost	R750	#FFFFFF
Wheat	R763	#FFEFBA

Sun Colour Straw	R764	#FFEC94
Sunlight Yellow	R765	#FFEC6E
Oklahoma Yellow	R767	#FFDE24
Egg Yolk Yellow	R768	#FCC200
Burnt Yellow	R770	#FF8A0D
Cardbox Amber	R773	#FFB28F
Soft Amber	R774	#FFC49C
Soft Amber 2	R775	#FFBA8C
Nectarine	R776	#FF8345
Rust	R777	#D94F18
Millennium Gold	R778	#FF4405
Bastard Pink	R779	#F56A2F
As Golden Amber	R780	#FF3B05
Terry Red	R781	#FF0F0D
Marius Red	R787	#91001B
Blood Red	R789	#99000D
Moroccan Pink	R790	#FF919C
Moroccan Frost	R791	#FFFFFF
Vanity Fair	R793	#FF12AC
Pretty N Pink	R794	#FF82DE
Magical Magenta	R795	#FF00C8
Deep Purple	R797	#AD00CC
Chrysalis Pink	R798	#7B0FFF
Special K.H. Lavender	R799	#120096
Damson Violet	R5084	#8800C7
French Lilac	R5085	#6D00F2
Max Blue	R5202	#B8D4FF
Ice Blue	R5211	#E8F4FF
Venetian Blue	R5264	#96C9FF
Fuji Blue	R5287	#002DE3
Aztec Gold	R5336	#F2CF88
Wisteria	R5404	#DFCFFF
Olympia Green	R5454	#009C72
Tarragon	R5455	#7DFFB1
Grotto Green	R5461	#02BF9C
Prussian Green	R5463	#00A6B5

B.2.2 Supergel

Gel Name	Manufacturer Code	Rendered Colour
Dempster Open White	S00	#FFFFFF
Light Bastard Amber	S01	#FBB39A
Bastard Amber	S02	#FFD1AC
Dark Bastard Amber	S03	#FBA9A9
Warm Peach	S303	#FF8A4A
Medium Bastard Amber	S04	#F9B09A
Pale Apricot	S304	#FABCA9
Rose Tint	S05	#FFD7D3
Rose Gold	S305	#F5BAB8

No Color Straw	S06	#FCFADB
Pale Yellow	S07	#FDFAD1
Pale Amber Gold	S09	#FFCB86
Medium Yellow	S10	#FFF200
Light Straw	S11	#FFD21A
Canary	S312	#FFEA00
Straw Tint	S13	#FFD88F
Light Relief Yellow	S313	#FFE462
Medium Straw	S14	#FCD419
Deep Straw	S15	#FECB00
Apricot	S317	#FF7418
Mayan Sun	S318	#FF6F29
Fire	S19	#FF390B
Medium Amber	S20	#FF871C
Golden Amber	S21	#FF6613
Deep Amber	S22	#FF430A
Orange	S23	#FF5A00
Scarlet	S24	#F50014
Gypsy Red	S324	#F50F39
Orange Red	S25	#E51F00
Light Red	S26	#D70229
Medium Red	S27	#B00202
Light Salmon Pink	S30	#FF7A59
Salmon Pink	S31	#FF847F
Shell Pink	S331	#FF9D8D
Medium Salmon Pink	S32	#FF413C
Cherry Rose	S332	#FF2957
No Color Pink	S33	#FFC2D0
Light Pink	S35	#FFA7BB
Medium Pink	S36	#FF6D96
Billington Pink	S336	#FF73B7
True Pink	S337	#FFAFC2
Light Rose	S38	#FFBBE2
Broadway Pink	S339	#FF1283
Skelton Exotic Sangria	S39	#E800BC
Light Salmon	S40	#FF4F1F
Rose Pink	S342	#FF1562
Deep Pink	S43	#FF3E93
Neon Pink	S343	#FF397F
Follies Pink	S344	#FF05D3
Rose	S45	#EB016D
Magenta	S46	#BD045D
Tropical Magenta	S346	#FF2DD5
Light Rose Purple	S47	#CC4EB9
Belladonna Rose	S347	#B101DD
Rose Purple	S48	#C800CF
Purple Jazz	S348	#DA2DFF
Medium Purple	S49	#C900E6
Fisher Fuchsia	S349	#F000FF
Mauve	S50	#BB002C

Lavender Mist	S351	#EFDCCF
Light Lavender	S52	#DDBFFF
Pale Lavender	S53	#E4DCFF
Lilly Lavender	S353	#C4ADFF
Special Lavender	S54	#E6C7FF
Lilac	S55	#C0AAFD
Pale Violet	S355	#A590FF
Gypsy Lavender	S56	#8C2FFF
Middle Lavender	S356	#C38DFF
Lavender	S57	#B482FF
Royal Lavender	S357	#8A2BFF
Deep Lavender	S58	#933FFD
Rose Indigo	S358	#8E0AEA
Indigo	S59	#7200FF
Medium Violet	S359	#683FFF
Mist Blue	S61	#D3EAFD
Hemsley Blue	S361	#669EFC
Booster Blue	S62	#A1CEFF
Pale Blue	S63	#A4D3FF
Aquamarine	S363	#ABE9FF
Light Steel Blue	S64	#50AEFD
Daylight Blue	S65	#00A9FF
Cool Blue	S66	#94EAFD
Jordan Blue	S366	#29C0F9
Light Sky Blue	S67	#14A9FF
Slate Blue	S367	#44A5FF
Parry Sky Blue	S68	#447DFF
Winkler Blue	S368	#448AFF
Brilliant Blue	S69	#00A3F7
Tahitian Blue	S369	#00C6FF
Nile Blue	S70	#6CE5FF
Italian Blue	S370	#01CDDF
Sea Blue	S71	#0096C7
Theatre Booster 1	S371	#A3A8FF
Azure Blue	S72	#55CCFF
Theatre Booster 2	S372	#D9DCFF
Peacock Blue	S73	#00A4B8
Theatre Booster 3	S373	#E0E9FD
Night Blue	S74	#4200FF
Sea Green	S374	#01A4A6
Twilight Blue	S75	#007AAC
Light Green Blue	S76	#005773
Iris Purple	S377	#7124FF
Trudy Blue	S78	#6F6FFF
Bright Blue	S79	#1626FF
Primary Blue	S80	#0048FF
Urban Blue	S81	#486FFF
Surprise Blue	S82	#4F34F8
Congo Blue	S382	#250070
Medium Blue	S83	#0228EC

Sapphire Blue	S383	#0022D1
Zephyr Blue	S84	#5767FF
Midnight Blue	S384	#0500D0
Deep Blue	S85	#0049CE
Royal Blue	S385	#4F02CF
Pea Green	S86	#89FA19
Leaf Green	S386	#7BD300
Gaslight Green	S388	#D0F54E
Moss Green	S89	#51F655
Chroma Green	S389	#29F433
Dark Yellow Green	S90	#007F06
Primary Green	S91	#005E2C
Pacific Green	S392	#009493
Blue Green	S93	#01A3A0
Emerald Green	S393	#007150
Kelly Green	S94	#00985D
Medium Blue Green	S95	#009C91
Teal Green	S395	#00726A
Lime	S96	#F3FF6B
Neutral Grey	S398	#B0B4B9
Frost	S100	FFFFFF
Light Frost	S101	FFFFFF
Tough Silk	S104	FFFFFF
Matte Silk	S113	FFFFFF
Hamburg Frost	S114	FFFFFF
Light Hamburg Frost	S119	FFFFFF
Red Diffusion	S120	FFFFFF
Blue Diffusion	S121	FFFFFF
Green Diffusion	S122	FFFFFF
Red Cyc Silk	S124	FFFFFF
Blue Cyc Silk	S125	FFFFFF
Green Cyc Silk	S126	FFFFFF
Amber Cyc Silk	S127	FFFFFF
Quarter Hamburg Frost	S132	FFFFFF
Subtle Hamburg Frost	S140	FFFFFF
Light Tough Silk	S160	FFFFFF