

# RUSH PAR 2 RGBW Zoom, Standard (All LEDs on) , Zoom at Minimum (11.5°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

Product RUSH PAR 2 RGBW Zoom  
Catalog number 90480040  
Lens Option Standard  
Spread Minimum  
IES file RUSH PAR 2 RGBW Zoom\_Standard\_Minimum\_All LEDs on.ies

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 1° increments in the horizontal plane (rotational) and 1° increments in the vertical plane (radial).

**Test lamp**  
Model Osram Ostar SMT LE RTDUW S2W  
Rated life 50000 hours

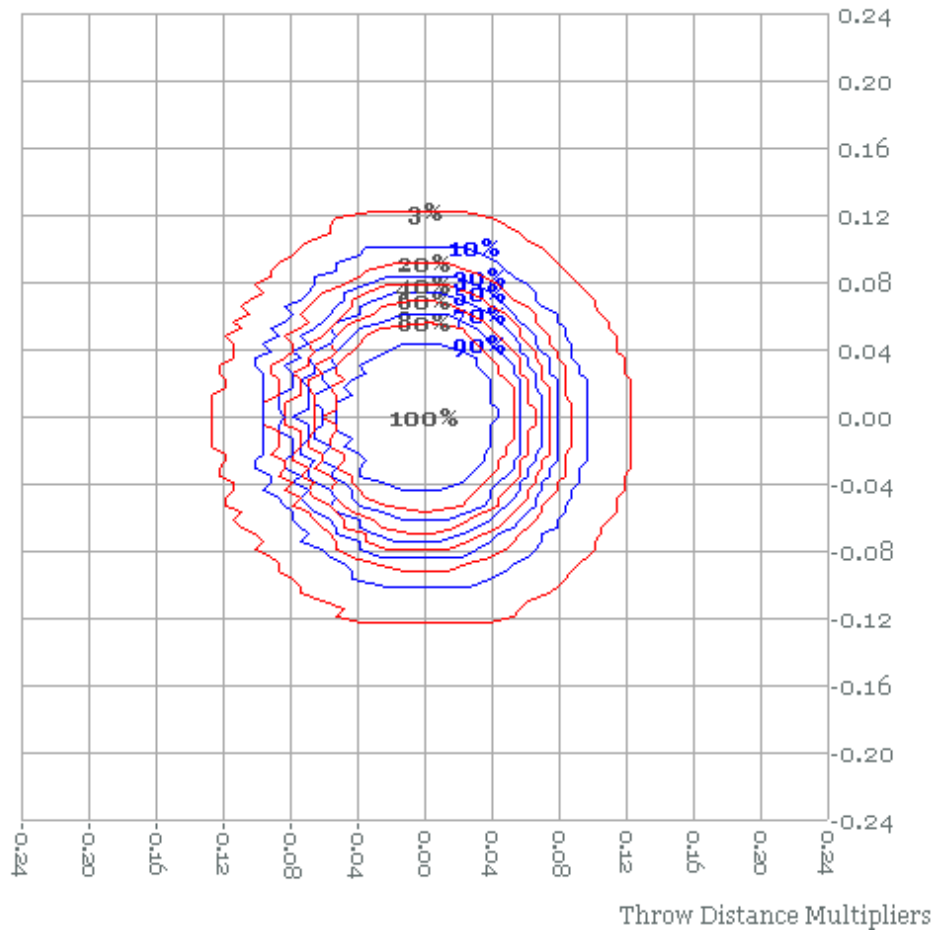
**Test conditions**  
Ambient temperature  $25 \pm 5$  °C  
Consumed power 135 W  
AC supply 230 V/50Hz  
Lamp age 2 hours

**Ballast**  
Type Electronic  
Ballast factor 1.000

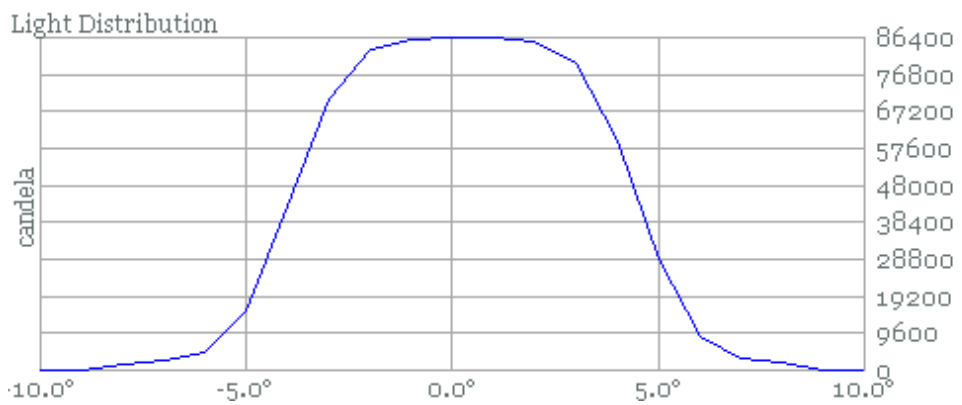
**Output**  
Total 1700 lumens  
One-tenth peak 1600 lumens  
Half-peak 1300 lumens  
Efficacy 12.3 lumens per watt

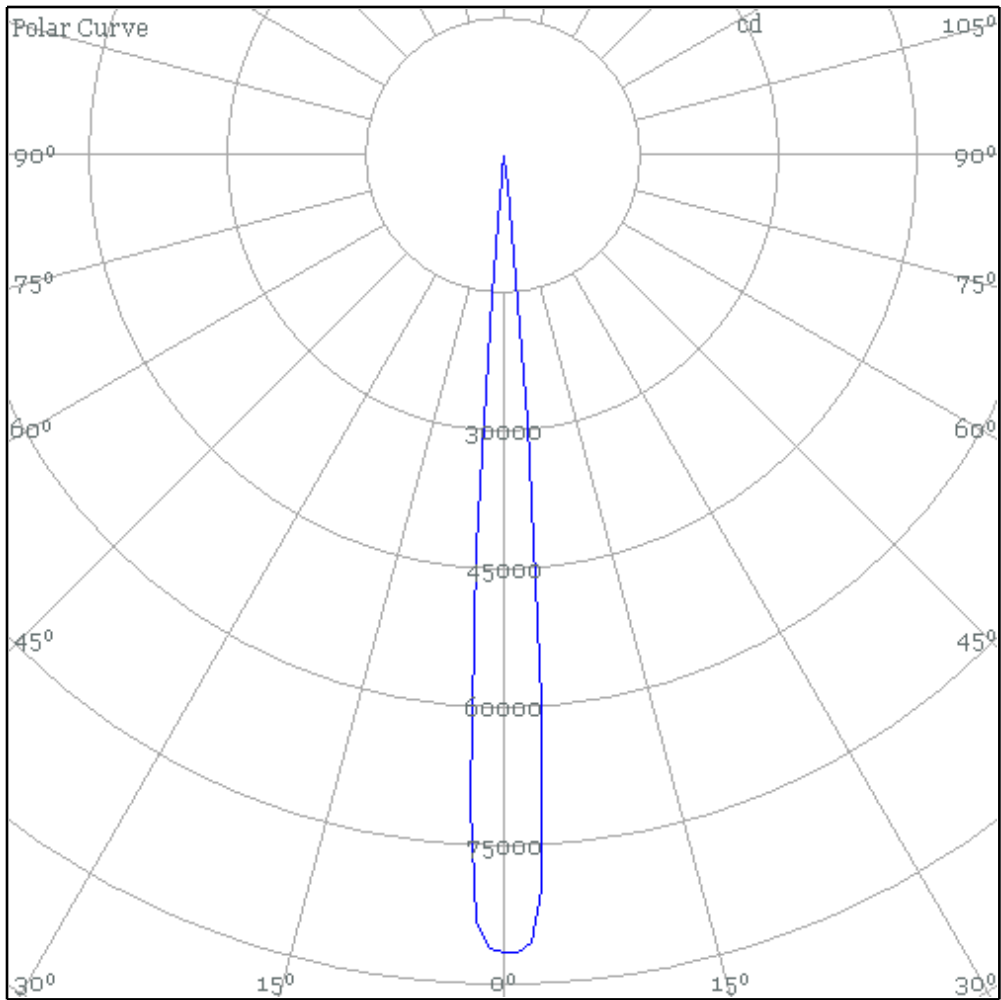
**Illuminance**  
Cutoff angle 14.5°  
One-tenth-peak angle 11.5°  
Half-peak angle 8.5°  
Cutoff diameter 0.254 x distance  
One-tenth-peak diam. 0.201 x distance  
Half-peak diam. 0.149 x distance

**Intended throw** -  
Luminous intensity 86000 candela  
Luminaire type Far field



100%=860 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)





# RUSH PAR 2 RGBW Zoom, Standard (Only Red LEDs on) , Zoom at Minimum (12°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |  |
|----------------|--|
| Product        | RUSH PAR 2 RGBW Zoom                                       |
| Catalog number | 90480040   |
| Lens Option    | Standard   |
| Spread         | Minimum  |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Minimum_Only Red LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 1° increments in the horizontal plane (rotational) and 1° increments in the vertical plane (radial).

**Test lamp**

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

**Test conditions**

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 7 hours    |

**Ballast**

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

**Output**

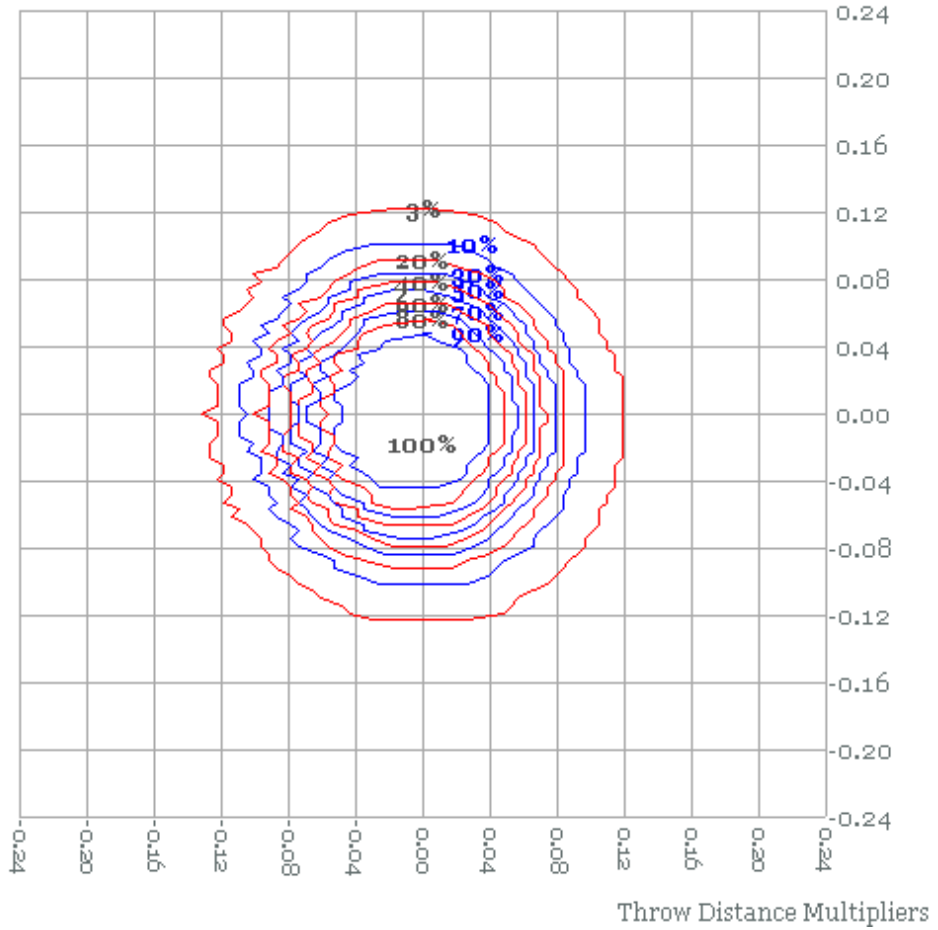
|                |                     |
|----------------|---------------------|
| Total          | 290 lumens          |
| One-tenth peak | 280 lumens          |
| Half-peak      | 220 lumens          |
| Efficacy       | 2.1 lumens per watt |

**Illuminance**

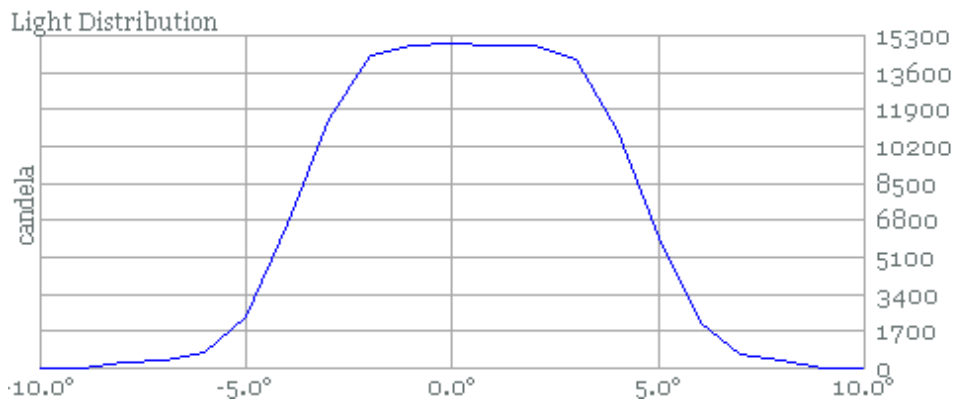
|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 14.5°            |
| One-tenth-peak angle | 12°              |
| Half-peak angle      | 8.5°             |
| Cutoff diameter      | 0.254 x distance |
| One-tenth-peak diam. | 0.210 x distance |
| Half-peak diam.      | 0.149 x distance |

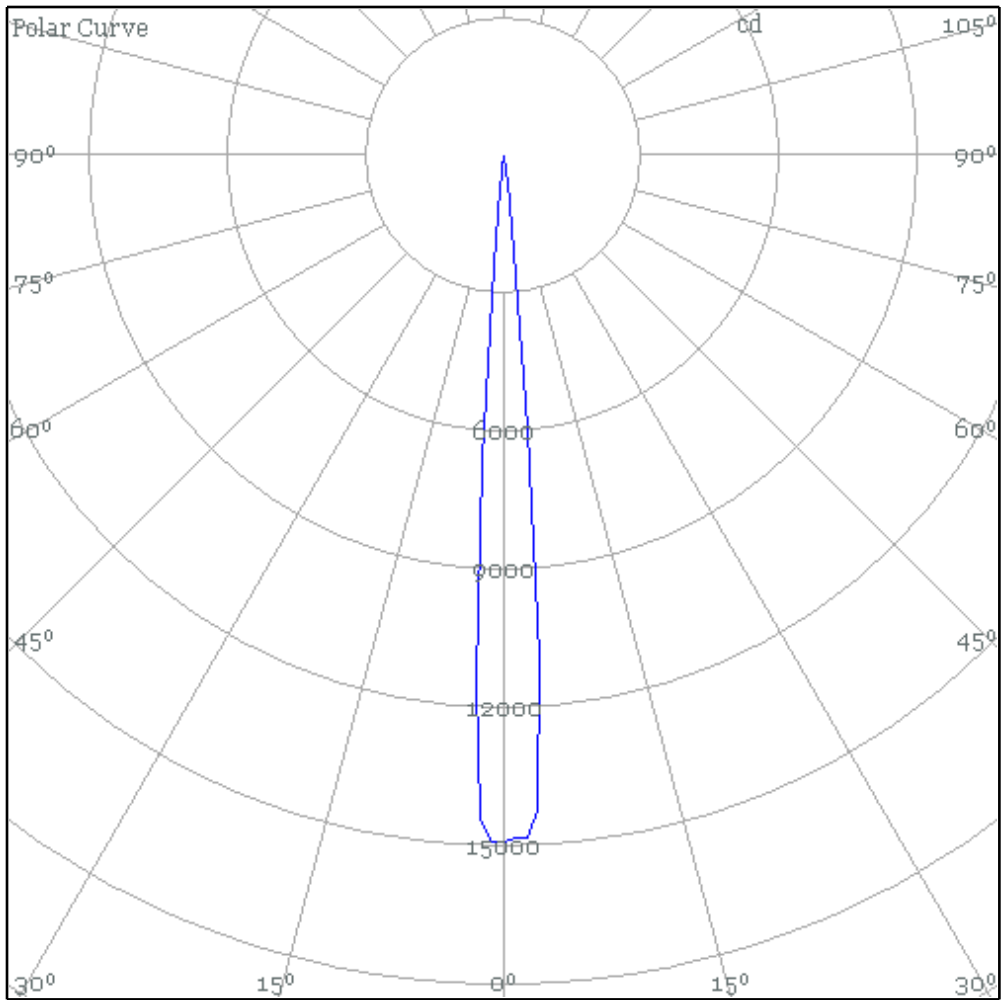
**Intended throw**

|                    |               |
|--------------------|---------------|
| Luminous intensity | 15000 candela |
| Luminaire type     | Far field     |



100%=150 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)





# RUSH PAR 2 RGBW Zoom, Standard (Only Green LEDs on) , Zoom at Minimum (12°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |  |
|----------------|--|
| Product        | RUSH PAR 2 RGBW Zoom   |
| Catalog number | 90480040   |
| Lens Option    | Standard   |
| Spread         | Minimum  |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Minimum_Only Green LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 1° increments in the horizontal plane (rotational) and 1° increments in the vertical plane (radial).

**Test lamp**

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

**Test conditions**

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 8 hours    |

**Ballast**

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

**Output**

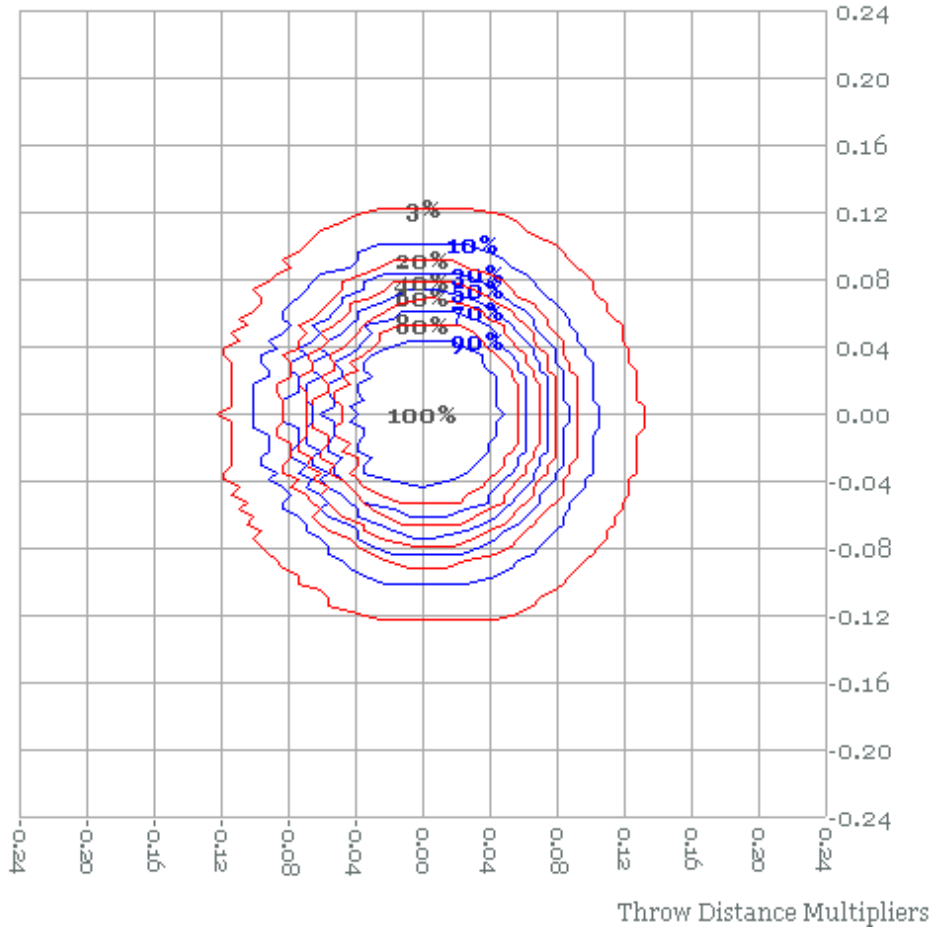
|                |                     |
|----------------|---------------------|
| Total          | 640 lumens          |
| One-tenth peak | 600 lumens          |
| Half-peak      | 490 lumens          |
| Efficacy       | 4.7 lumens per watt |

**Illuminance**

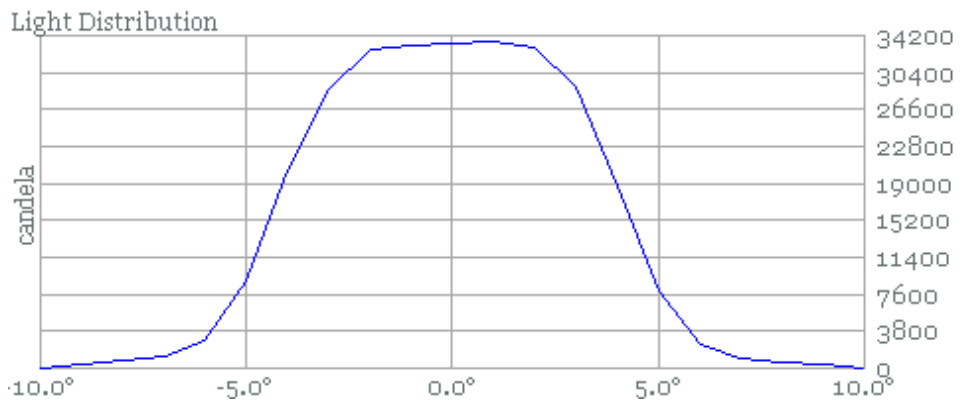
|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 14.5°            |
| One-tenth-peak angle | 12°              |
| Half-peak angle      | 8.5°             |
| Cutoff diameter      | 0.254 x distance |
| One-tenth-peak diam. | 0.210 x distance |
| Half-peak diam.      | 0.149 x distance |

**Intended throw**

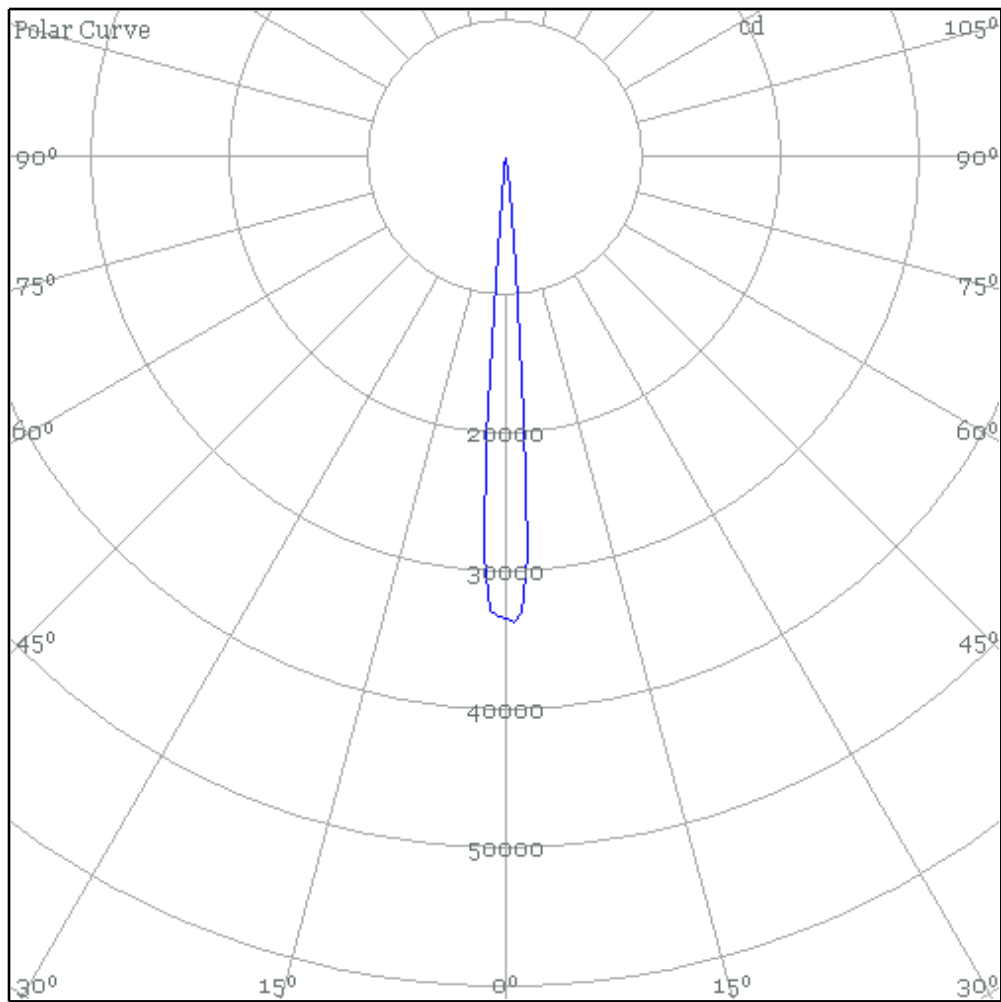
|                    |               |
|--------------------|---------------|
| Luminous intensity | 34000 candela |
| Luminaire type     | Far field     |



100%=340 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)







# RUSH PAR 2 RGBW Zoom, Standard (Only Blue LEDs on) , Zoom at Minimum (11.5°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |   |
|----------------|---|
| Product        | RUSH PAR 2 RGBW Zoom  |
| Catalog number | 90480040  |
| Lens Option    | Standard  |
| Spread         | Minimum   |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Minimum_Only Blue LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 1° increments in the horizontal plane (rotational) and 1° increments in the vertical plane (radial).

## Test lamp

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

## Test conditions

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 9 hours    |

## Ballast

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

## Output

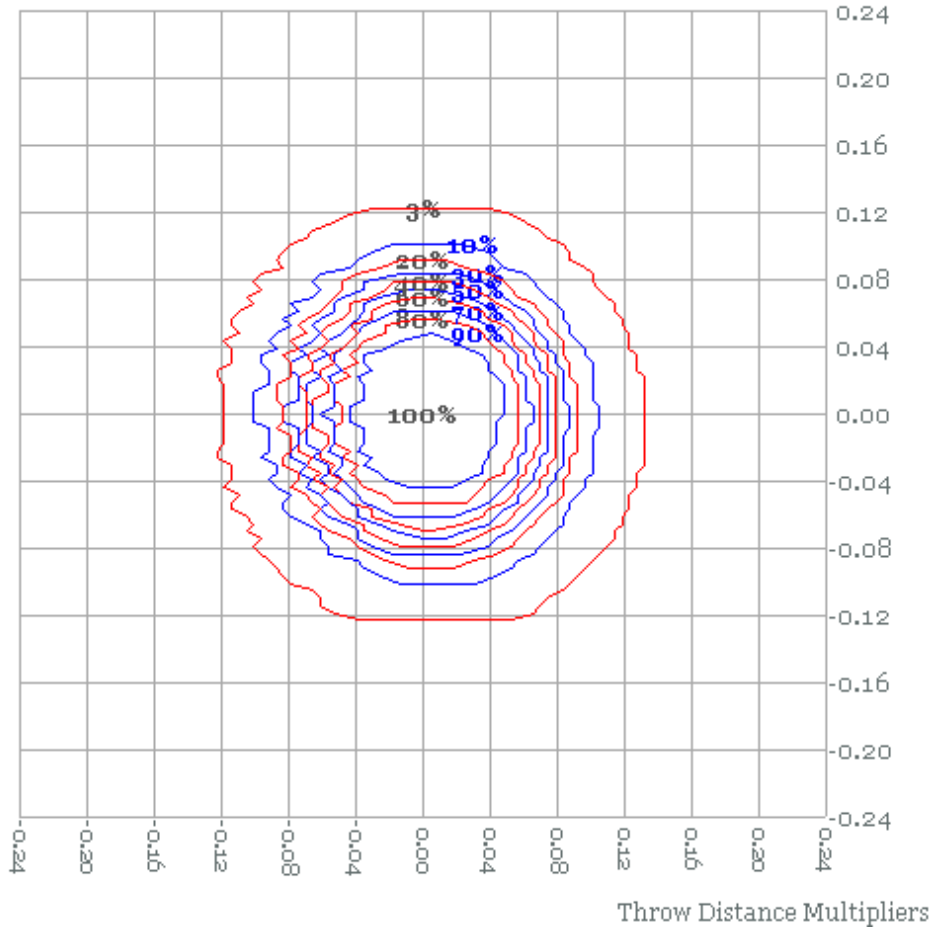
|                |                     |
|----------------|---------------------|
| Total          | 120 lumens          |
| One-tenth peak | 110 lumens          |
| Half-peak      | 90 lumens           |
| Efficacy       | 0.9 lumens per watt |

## Illuminance

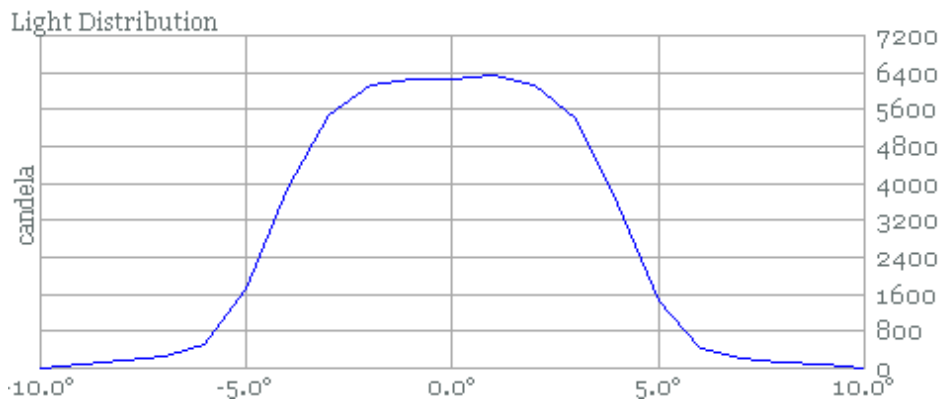
|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 14.5°            |
| One-tenth-peak angle | 11.5°            |
| Half-peak angle      | 8.5°             |
| Cutoff diameter      | 0.254 x distance |
| One-tenth-peak diam. | 0.201 x distance |
| Half-peak diam.      | 0.149 x distance |

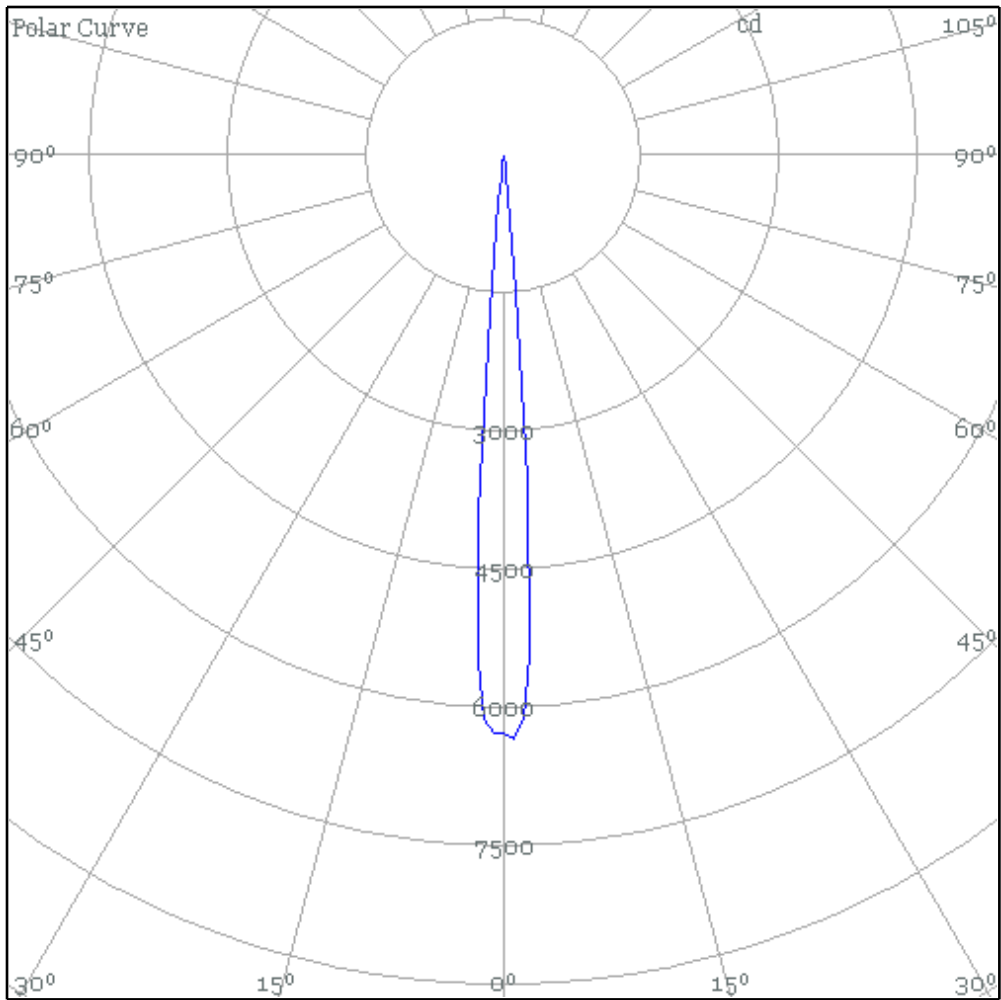
## Intended throw

|                    |              |
|--------------------|--------------|
| Luminous intensity | 6300 candela |
| Luminaire type     | Far field    |



100%=63 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)





# RUSH PAR 2 RGBW Zoom, Standard (Only White LEDs on) , Zoom at Minimum (12°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |  |
|----------------|--|
| Product        | RUSH PAR 2 RGBW Zoom   |
| Catalog number | 90480040   |
| Lens Option    | Standard   |
| Spread         | Minimum  |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Minimum_Only White LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 1° increments in the horizontal plane (rotational) and 1° increments in the vertical plane (radial).

## Test lamp

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

## Test conditions

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 10 hours   |

## Ballast

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

## Output

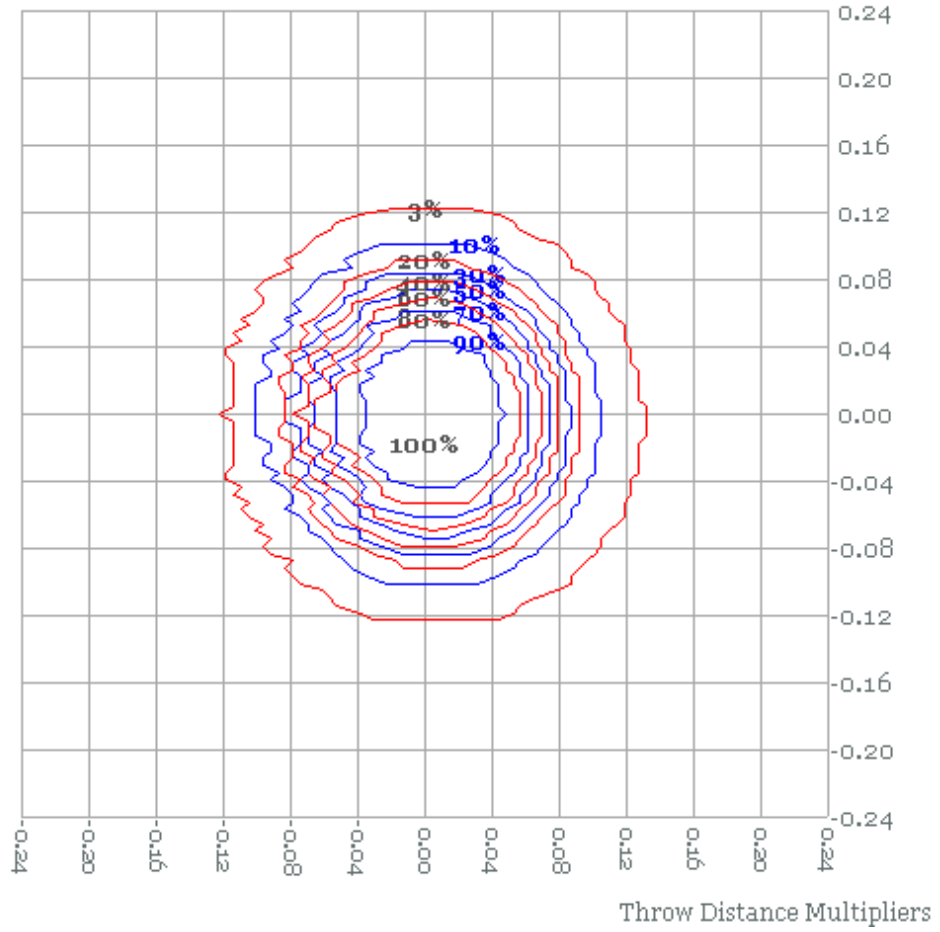
|                |                     |
|----------------|---------------------|
| Total          | 730 lumens          |
| One-tenth peak | 700 lumens          |
| Half-peak      | 560 lumens          |
| Efficacy       | 5.4 lumens per watt |

## Illuminance

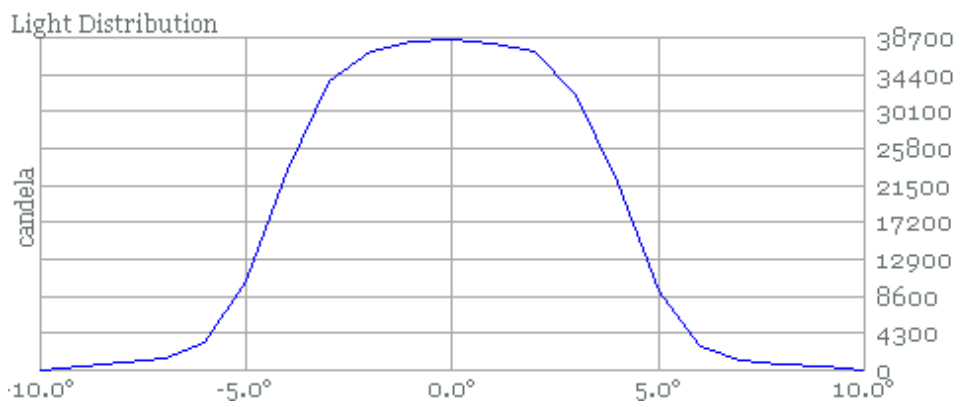
|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 14.5°            |
| One-tenth-peak angle | 12°              |
| Half-peak angle      | 8.5°             |
| Cutoff diameter      | 0.254 x distance |
| One-tenth-peak diam. | 0.210 x distance |
| Half-peak diam.      | 0.149 x distance |

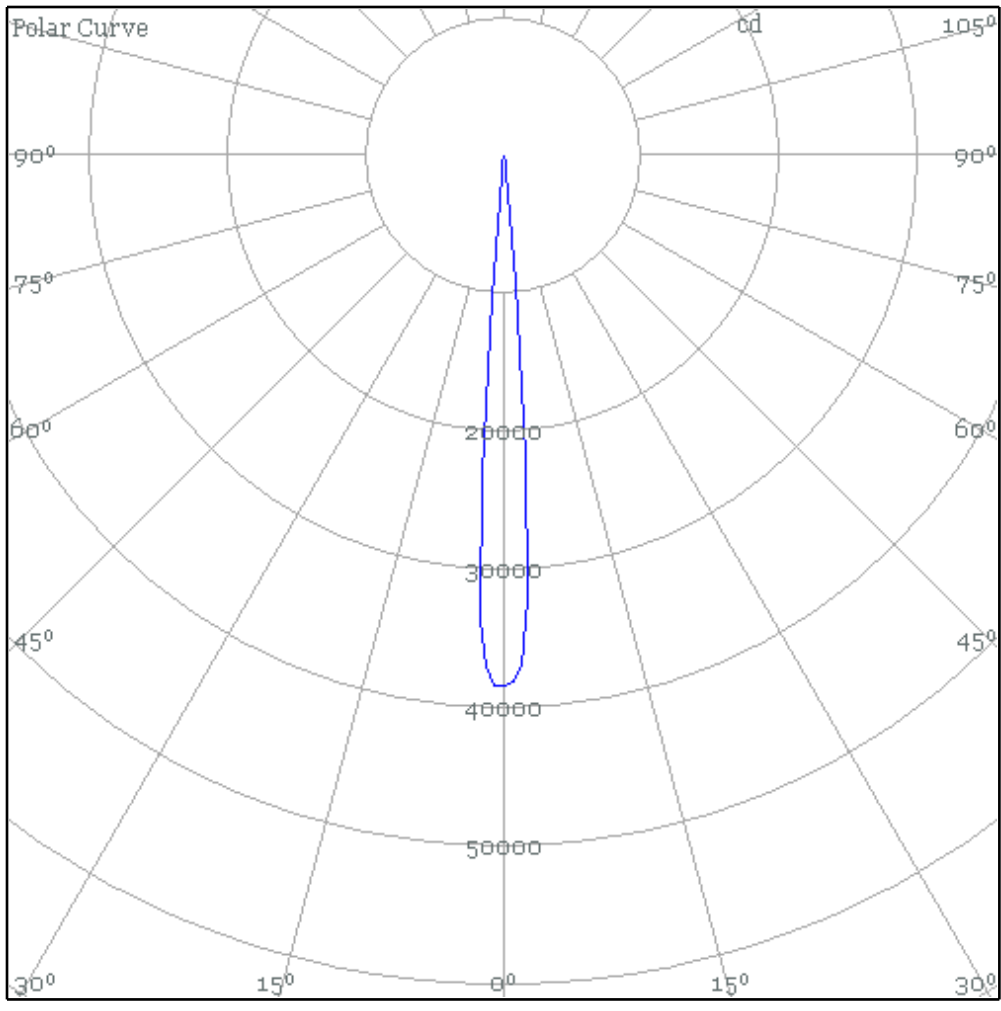
## Intended throw

|                    |               |
|--------------------|---------------|
| Luminous intensity | 39000 candela |
| Luminaire type     | Far field     |



100%=390 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)





# RUSH PAR 2 RGBW Zoom, Standard (All LEDs on) , Zoom at Median (38°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |  |
|----------------|--|
| Product        | RUSH PAR 2 RGBW Zoom                                 |
| Catalog number | 90480040   |
| Lens Option    | Standard   |
| Spread         | Median   |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Median_All LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 2° increments in the horizontal plane (rotational) and 2° increments in the vertical plane (radial).

## Test lamp

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

## Test conditions

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 11 hours   |

## Ballast

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

## Output

|                |                      |
|----------------|----------------------|
| Total          | 2300 lumens          |
| One-tenth peak | 2300 lumens          |
| Half-peak      | 1700 lumens          |
| Efficacy       | 17.4 lumens per watt |

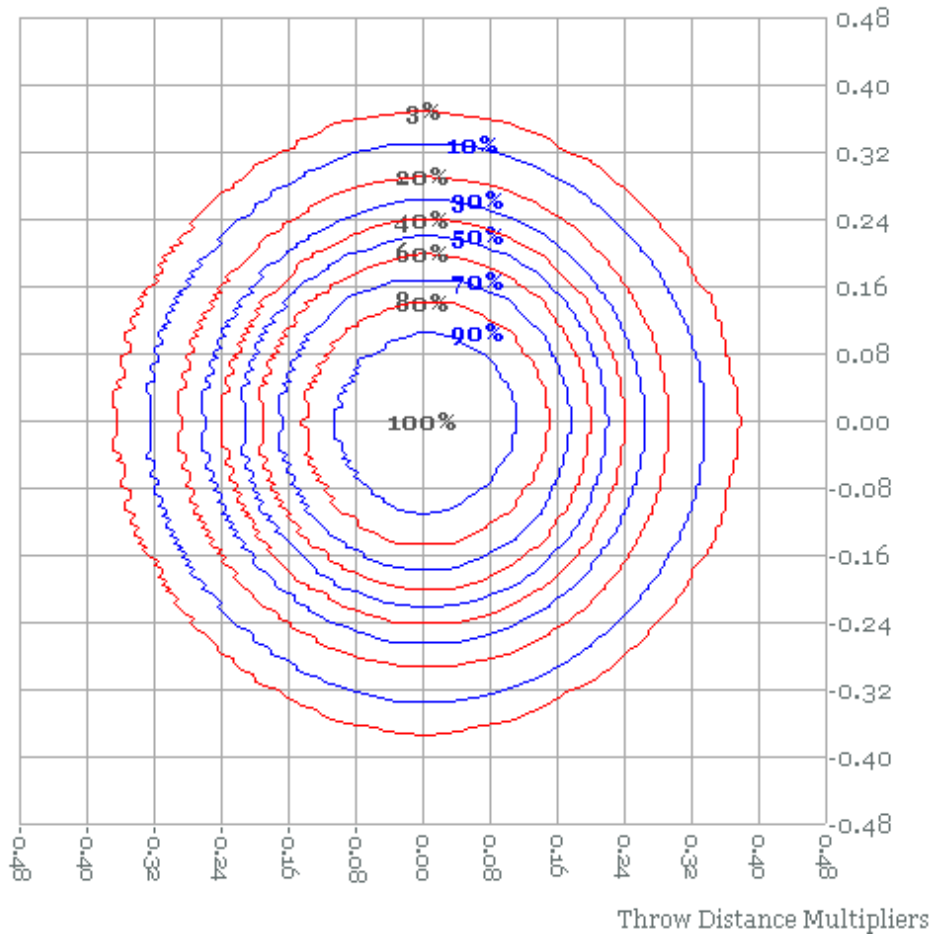
## Illuminance

|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 41°              |
| One-tenth-peak angle | 38°              |
| Half-peak angle      | 26°              |
| Cutoff diameter      | 0.748 x distance |
| One-tenth-peak diam. | 0.689 x distance |
| Half-peak diam.      | 0.462 x distance |

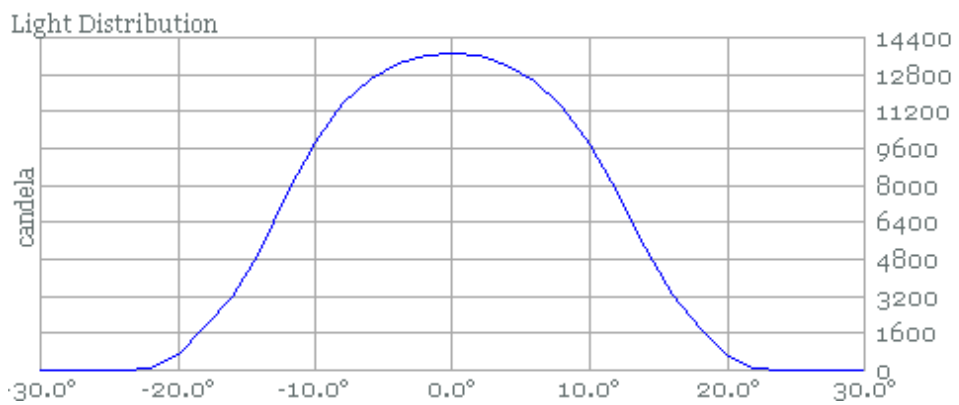
## Intended throw

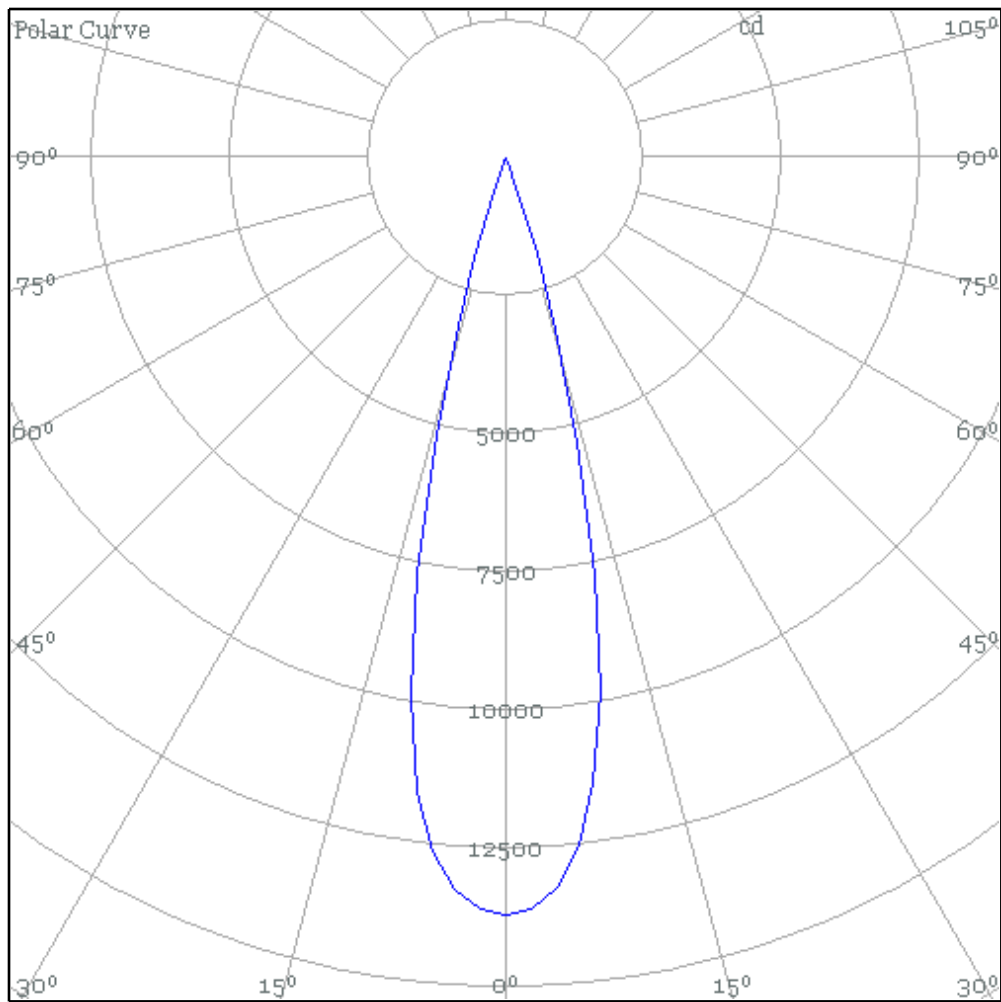
|                    |                            |
|--------------------|----------------------------|
| Luminous intensity | -                          |
| Luminaire type     | 14000 candela<br>Far field |





100%=140 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)





# RUSH PAR 2 RGBW Zoom, Standard (All LEDs on) , Zoom at Maximum (58°) Photometric Report

Martin R&D Optics Laboratory, 29-Jan-2014

Data sheet conforms to American National Standard E1.9 - 2001

|                |   |
|----------------|---|
| Product        | RUSH PAR 2 RGBW Zoom                                  |
| Catalog number | 90480040  |
| Lens Option    | Standard  |
| Spread         | Maximum   |
| IES file       | RUSH PAR 2 RGBW Zoom_Standard_Maximum_All LEDs on.ies |

**Procedure** The goniometer consists of a computerized robot IRB 6000 and a LMT Digital Illuminance Meter B 520 that provides luminous intensity measurements for computerized data collection. The computerized robot IRB 6000 is initialized so that the center of the luminaire's front lens is positioned 7 m from the luxmeter. The luminaire is rotated around both the horizontal and vertical axis per IESNA's type B photometry in 3° increments in the horizontal plane (rotational) and 3° increments in the vertical plane (radial).

## Test lamp

|            |                              |
|------------|------------------------------|
| Model      | Osram Ostar SMT LE RTDUW S2W |
| Rated life | 50000 hours                  |

## Test conditions

|                     |            |
|---------------------|------------|
| Ambient temperature | 25 ± 5 °C  |
| Consumed power      | 135 W      |
| AC supply           | 230 V/50Hz |
| Lamp age            | 2 hours    |

## Ballast

|                |            |
|----------------|------------|
| Type           | Electronic |
| Ballast factor | 1.000      |

## Output

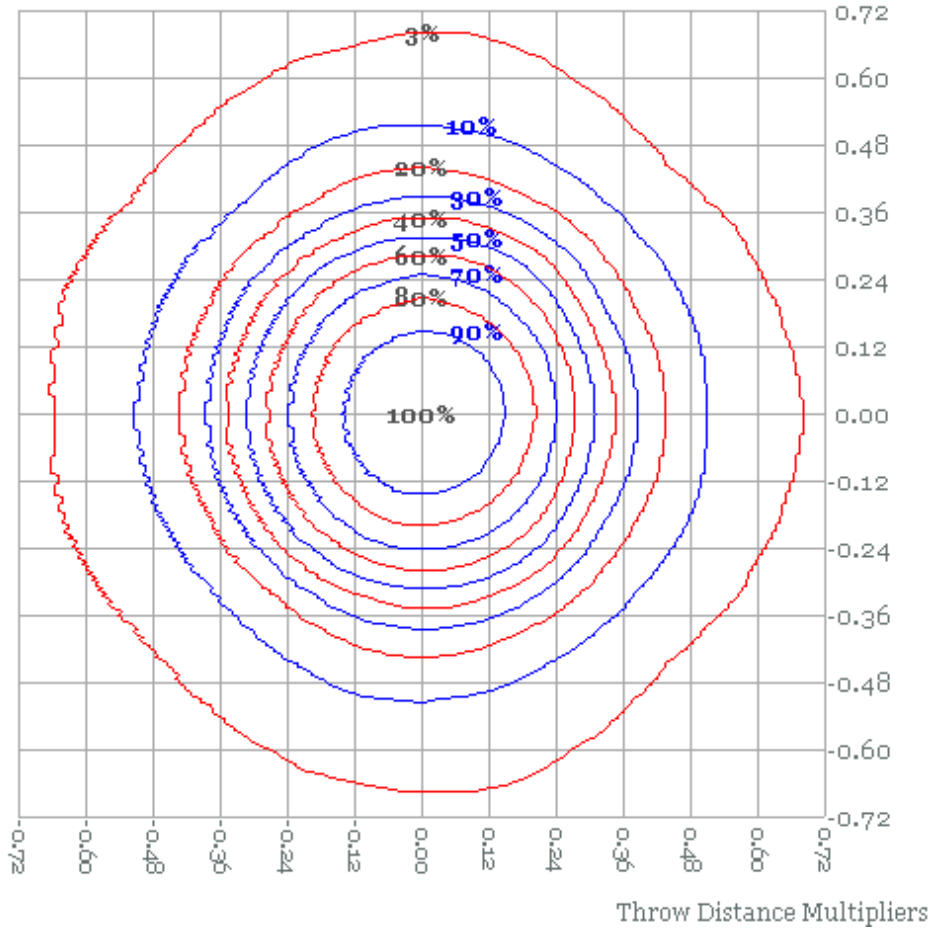
|                |                      |
|----------------|----------------------|
| Total          | 2400 lumens          |
| One-tenth peak | 2200 lumens          |
| Half-peak      | 1500 lumens          |
| Efficacy       | 17.8 lumens per watt |

## Illuminance

|                      |                  |
|----------------------|------------------|
| Cutoff angle         | 73°              |
| One-tenth-peak angle | 58°              |
| Half-peak angle      | 37°              |
| Cutoff diameter      | 1.480 x distance |
| One-tenth-peak diam. | 1.109 x distance |
| Half-peak diam.      | 0.669 x distance |

## Intended throw

|                    |              |
|--------------------|--------------|
| Luminous intensity | 6100 candela |
| Luminaire type     | Far field    |



100%=61 lux at 10m  
 (distance from origin)=(throw distance) X (throw distance multiplier)

