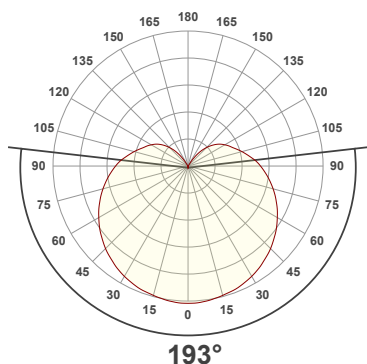




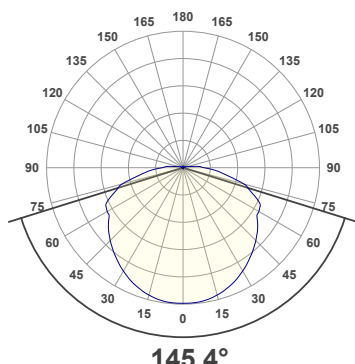
### PRODUCT INFORMATION

|                                 |                                                                                                                                                                        |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEASUREMENT SERIAL NUMBER:      | VFR-230907-1397-MS                                                                                                                                                     |
| DATE OF MEASUREMENT:            | 9/7/2023                                                                                                                                                               |
| MANUFACTURER:                   | GVA LIGHTING, INC.                                                                                                                                                     |
| PRODUCT NAME:                   | HIGHLIGHTER SERIES, HL-GEN4                                                                                                                                            |
| SIZE (width x length x height): | 50 mm x 300 mm x 87 mm                                                                                                                                                 |
| LOT:                            | GP-5-G/HR-4-L/RO-4-L/U73GY1                                                                                                                                            |
| PROFILE LEGEND:                 | DLN – NICHE, DL – CLAMPING,<br>CM – CLEAR MATTE,<br>BM – BLACK MATTE,<br>COVE-F – COVE FIXED,<br>COVE-OD – COVE OUTDOOR,<br>INF – INFINITY 380 V DC. ELV – 48 V DC.    |
|                                 | DLN – NICHE, DL – CLAMPING,<br>F – FLAT, R – ROUND,<br>SW – SATIN WHITE, B – BLACK,<br>(RGBW) – ALL CHANNELS ON,<br>(R) – RED, (G) – GREEN,<br>(B) – BLUE, (W) – WHITE |

### ANGULAR DISTRIBUTION AT C0/180



### ANGULAR DISTRIBUTION AT C90/270



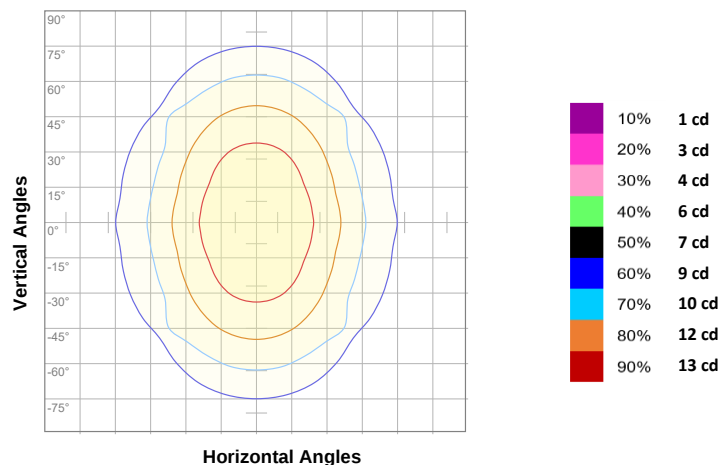
### LIGHT OUTPUT DATA

|                              |         |
|------------------------------|---------|
| TOTAL LUMEN OUTPUT:          | 82.1 lm |
| EFFICACY:                    | 18 lm/W |
| PEAK INTENSITY:              | 14.8 cd |
| COLOR RENDERING INDEX (CRI): | 0.0     |
| COLOR TEMPERATURE (CCT):     | 0K      |
| FIDELITY INDEX (TM30Rf):     | 0.0     |
| GAMUT INDEX (TM30Rg):        | 0.0     |

### BEAM OUTPUT DATA

|                              |        |
|------------------------------|--------|
| BEAM ANGLE (FWHM)   C0/180:  | 193°   |
| BEAM ANGLE (FWHM)   C90/270: | 145.4° |
| FIELD ANGLE (10%)   C0/180:  | 294.5° |
| FIELD ANGLE (10%)   C90/270: | 191.4° |
| NUMBER OF PLANES MEASURED:   | 18     |

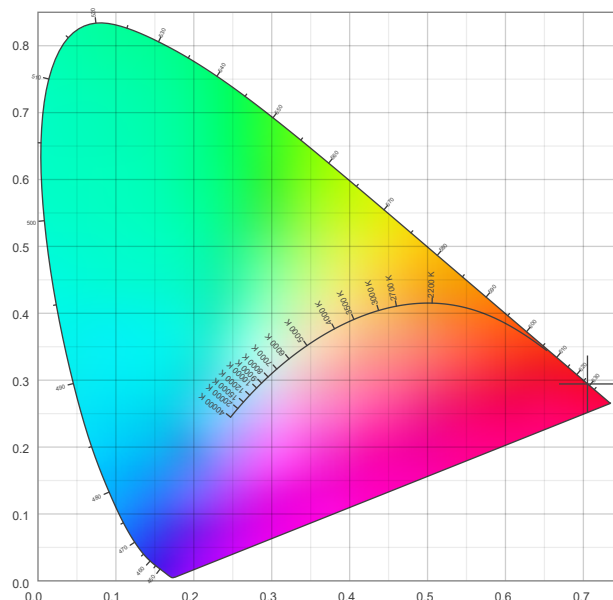
### ISOCANDELA DIAGRAM



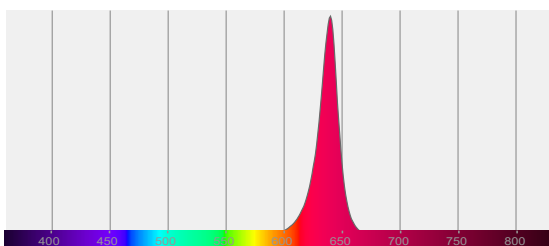
### POWER OUTPUT DATA

|                      |          |
|----------------------|----------|
| INPUT POWER:         | 4.6 W    |
| INPUT VOLTAGE:       | 380 V DC |
| INPUT CURRENT:       | 0.012 A  |
| POWER FACTOR:        | 1.0      |
| OPTICAL POWER:       | 0.551 mW |
| PEAK WAVELENGTH:     | 640 nm   |
| DOMINANT WAVELENGTH: | 628 nm   |

### CIE 1931



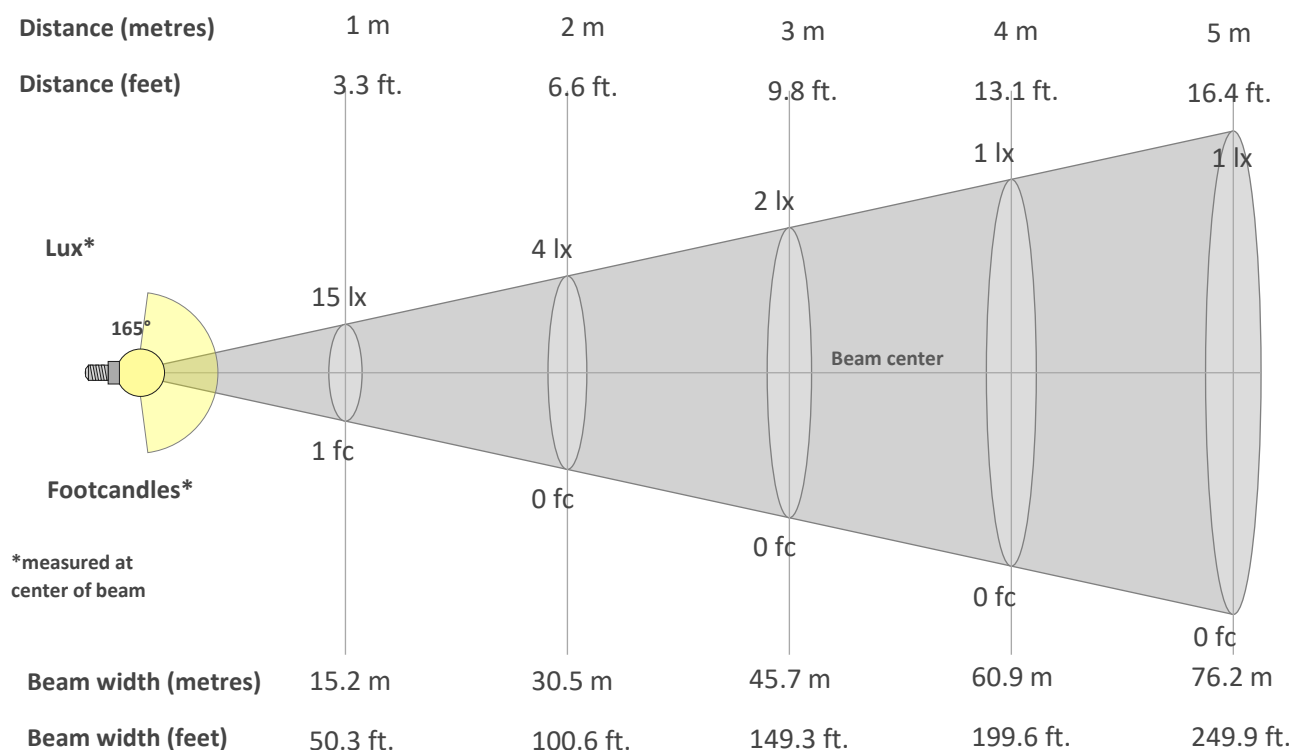
### SPECTRAL DISTRIBUTION



### CIE 1931 ZOOM

x: 0.705  
y: 0.294  
u: 0.551  
v: 0.345  
 $\Delta u$ :  
n/a

# BEAM DETAILS



## Beam intensity from 1-20m

| 1m    | 2m    | 3m    | 4m     | 5m     | 6m     | 7m   | 8m     | 9m     | 10m    | 11m    | 12m    | 13m    | 14m    | 15m    | 16m    | 17m    | 18m    | 19m    | 20m    |
|-------|-------|-------|--------|--------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| 15lx  | 4lx   | 2lx   | 1lx    | 0lx    | 0lx    | 0lx  | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    | 0lx    |
| 1.4fc | 0.3fc | 0.2fc | 0.1fc  | 0.1fc  | 0fc    | 0fc  | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    | 0fc    |

## Intensity in 0° c-plane

| 0°   | 9°   | 18°  | 27°  | 36°  | 45°  | 54°  | 63°  | 72°  | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|------|------|------|------|------|------|------|------|
| 14.8 | 14.7 | 14.4 | 14.0 | 13.5 | 12.8 | 12.0 | 11.1 | 10.1 | 9.1 | 8.1 | 7.1 | 6.0  | 5.2  | 4.4  | 3.3  | 2.0  | 0.8  | 0.3  | 0.1  |
| 100% | 99%  | 97%  | 94%  | 91%  | 86%  | 81%  | 75%  | 68%  | 62% | 55% | 48% | 41%  | 35%  | 30%  | 22%  | 13%  | 5%   | 2%   | 1%   |

## Intensity in 90° c-plane

| 0°   | 9°   | 18°  | 27°  | 36°  | 45°  | 54°  | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 14.8 | 14.7 | 14.2 | 13.3 | 12.3 | 11.2 | 10.0 | 9.4 | 7.5 | 4.6 | 2.3 | 0.8 | 0.3  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 100% | 99%  | 96%  | 90%  | 83%  | 76%  | 68%  | 63% | 51% | 31% | 16% | 6%  | 2%   | 1%   | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   |

## Intensity in 180° c-plane

| 0°   | 9°   | 18°  | 27°  | 36°  | 45°  | 54°  | 63°  | 72°  | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|------|------|------|------|------|------|------|------|
| 14.8 | 14.7 | 14.4 | 14.0 | 13.5 | 12.8 | 12.0 | 11.1 | 10.1 | 9.1 | 8.1 | 7.1 | 6.0  | 5.2  | 4.4  | 3.3  | 2.0  | 0.8  | 0.3  | 0.1  |
| 100% | 99%  | 97%  | 94%  | 91%  | 86%  | 81%  | 75%  | 68%  | 62% | 55% | 48% | 41%  | 35%  | 30%  | 22%  | 13%  | 5%   | 2%   | 1%   |

## Intensity in 270° c-plane

| 0°   | 9°   | 18°  | 27°  | 36°  | 45°  | 54°  | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 14.8 | 14.7 | 14.2 | 13.3 | 12.3 | 11.2 | 10.0 | 9.4 | 7.5 | 4.6 | 2.3 | 0.8 | 0.3  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 100% | 99%  | 96%  | 90%  | 83%  | 76%  | 68%  | 63% | 51% | 31% | 16% | 6%  | 2%   | 1%   | 0%   | 0%   | 0%   | 0%   | 0%   | 0%   |