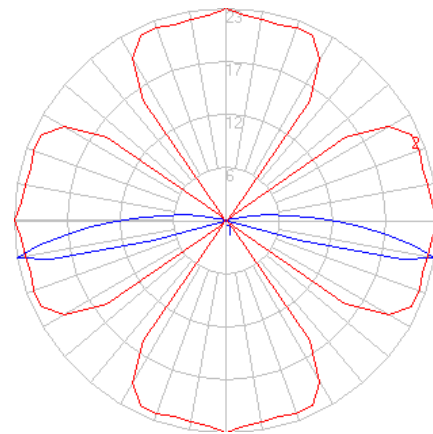
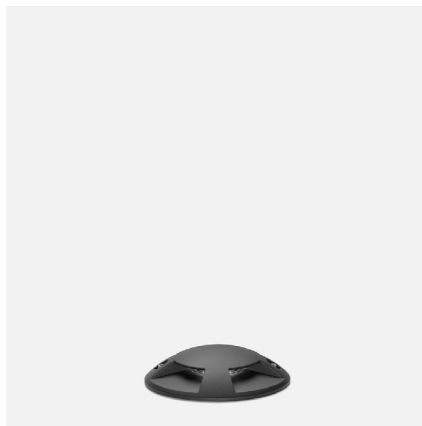


BEGA

File: 77070K4_BEGA_IES.ies

TEST: BE_77070K4
 TEST LAB: BEGA
 DATE: 01/25/2013
 LUMINAIRE: 77 070K4
 LAMP: 2.2W LED



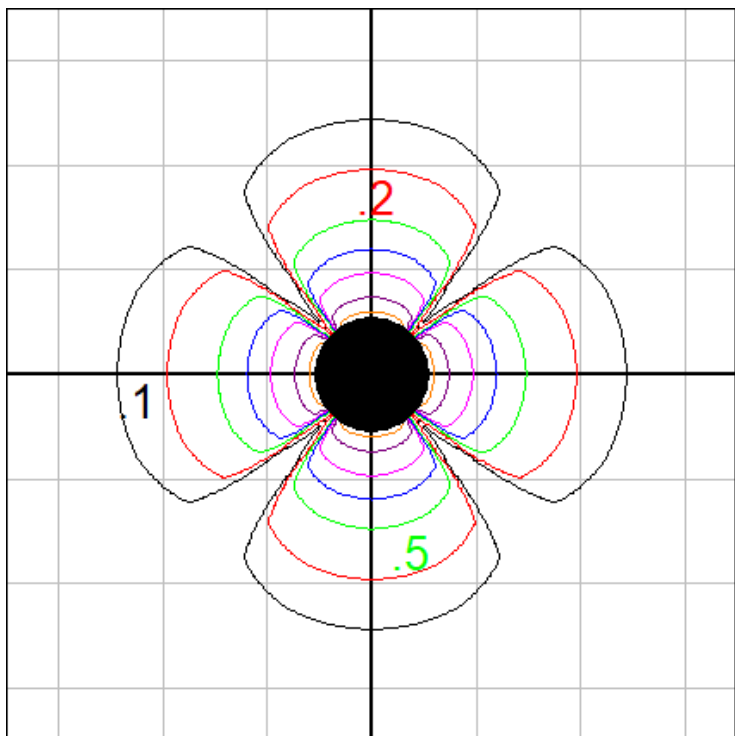
Characteristics

| | |
|------------------------------------|-----------------|
| IES Classification | Type VS |
| Longitudinal Classification | Long |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 30 |
| Downward Total Efficiency | N.A. |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 10 |
| Total Luminaire Watts | 3 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.23 |
| Max. Cd. | 23.1 (90H, 80V) |
| Max. Cd. (<90 Vert.) | 23.1 (90H, 80V) |
| Max. Cd. (At 90 Deg. Vert.) | 12 (40.0%Lum) |
| Max. Cd. (80 to <90 Deg. Vert.) | 23.1 (77.0%Lum) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

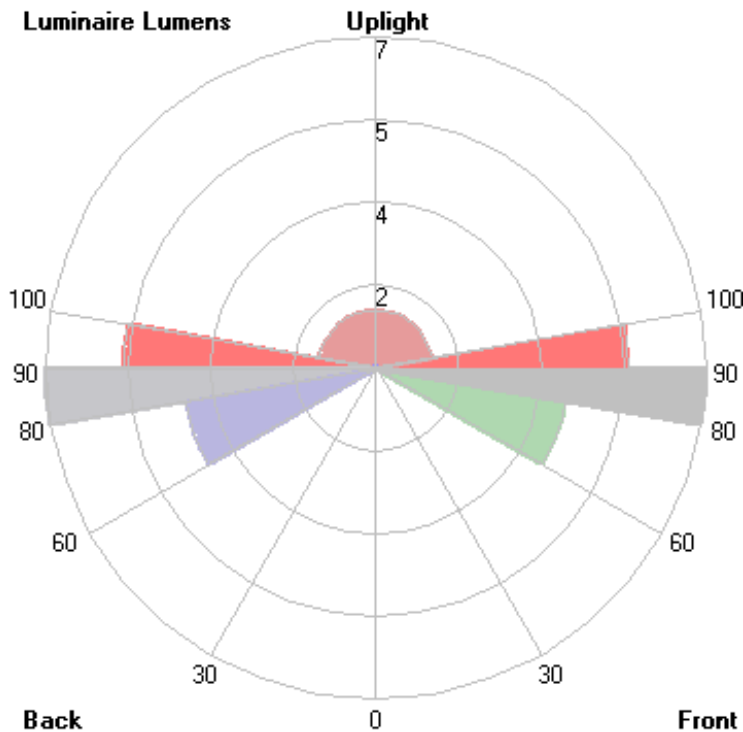
Lum. Classification System (LCS)

| LCS Zone | Lumens | %Lamp | %Lum |
|--------------|-------------|-------------|--------------|
| FL (0-30) | 0.0 | N.A. | 0.0 |
| FM (30-60) | 0.0 | N.A. | 0.0 |
| FH (60-80) | 4.2 | N.A. | 14.2 |
| FVH (80-90) | 7.2 | N.A. | 24.4 |
| BL (0-30) | 0.0 | N.A. | 0.0 |
| BM (30-60) | 0.0 | N.A. | 0.0 |
| BH (60-80) | 4.2 | N.A. | 14.2 |
| BVH (80-90) | 7.2 | N.A. | 24.4 |
| UL (90-100) | 5.5 | N.A. | 18.6 |
| UH (100-180) | 1.3 | N.A. | 4.2 |
| Total | 29.6 | N.A. | 100.0 |

BUG Rating B0-U1-G0



Grid Spacing: 1 ft.

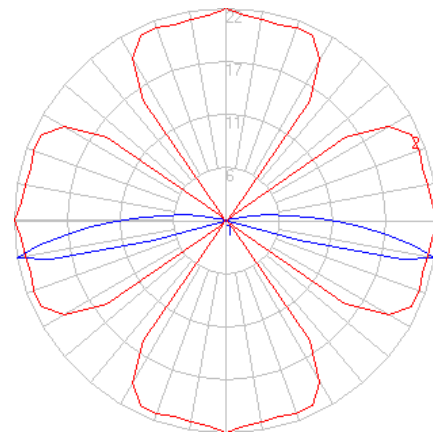


In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

BEGA

File: 77070K35_BEGA_IES.ies

TEST: BE_77070K4
 TEST LAB: BEGA
 DATE: 01/25/2013
 LUMINAIRE: 77 070K35
 LAMP: 2.2W LED



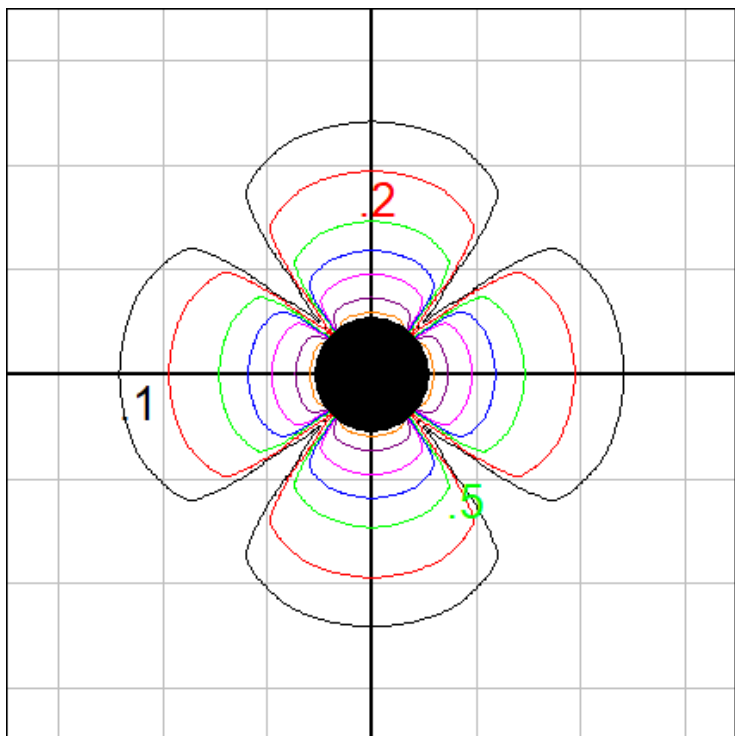
Characteristics

| | |
|------------------------------------|-------------------|
| IES Classification | Type VS |
| Longitudinal Classification | Long |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 29 |
| Downward Total Efficiency | N.A. |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 10 |
| Total Luminaire Watts | 3 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.23 |
| Max. Cd. | 22.407 (90H, 80V) |
| Max. Cd. (<90 Vert.) | 22.407 (90H, 80V) |
| Max. Cd. (At 90 Deg. Vert.) | 11.64 (40.1%Lum) |
| Max. Cd. (80 to <90 Deg. Vert.) | 22.407 (77.3%Lum) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

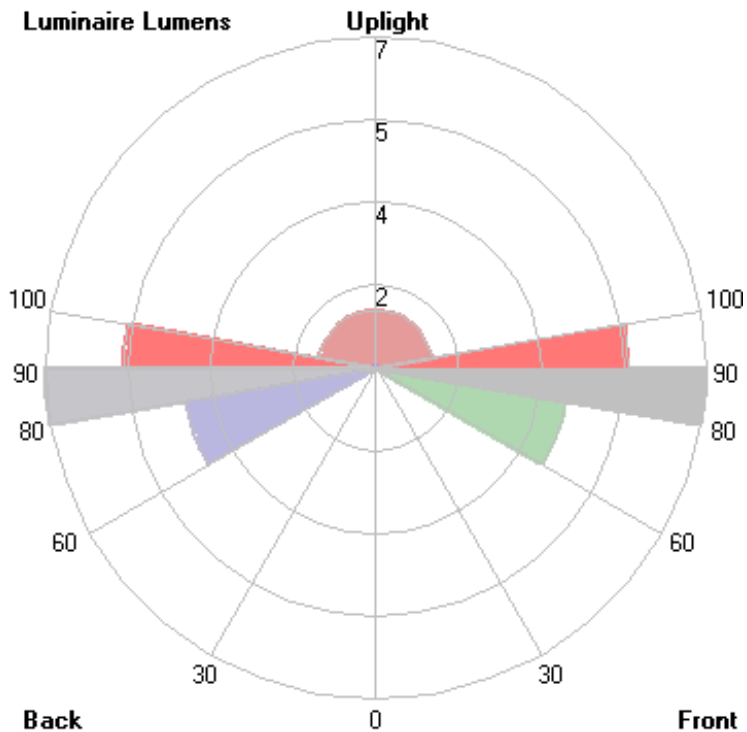
Lum. Classification System (LCS)

| LCS Zone | Lumens | %Lamp | %Lum |
|--------------|-------------|-------------|--------------|
| FL (0-30) | 0.0 | N.A. | 0.0 |
| FM (30-60) | 0.0 | N.A. | 0.0 |
| FH (60-80) | 4.1 | N.A. | 14.2 |
| FVH (80-90) | 7.0 | N.A. | 24.4 |
| BL (0-30) | 0.0 | N.A. | 0.0 |
| BM (30-60) | 0.0 | N.A. | 0.0 |
| BH (60-80) | 4.1 | N.A. | 14.2 |
| BVH (80-90) | 7.0 | N.A. | 24.4 |
| UL (90-100) | 5.3 | N.A. | 18.6 |
| UH (100-180) | 1.2 | N.A. | 4.2 |
| Total | 28.7 | N.A. | 100.0 |

BUG Rating B0-U1-G0



Grid Spacing: 1 ft.

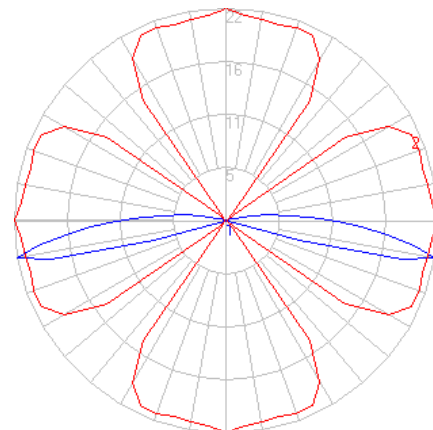


In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

BEGA

File: 77070K3_BEGA_IES.ies

TEST: BE_77070K4
 TEST LAB: BEGA
 DATE: 01/25/2013
 LUMINAIRE: 77 070K3
 LAMP: 2.2W LED



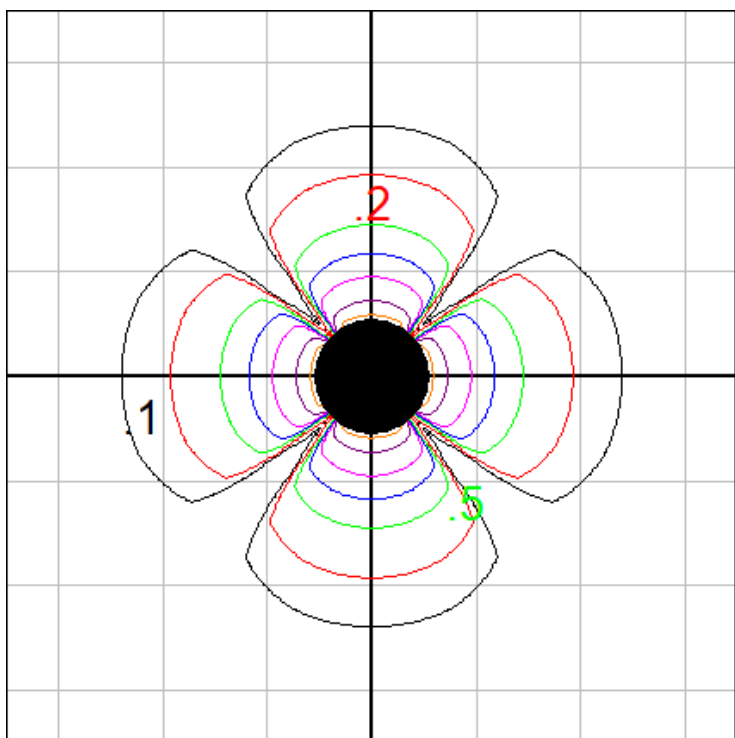
Characteristics

| | |
|------------------------------------|-------------------|
| IES Classification | Type VS |
| Longitudinal Classification | Long |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 28 |
| Downward Total Efficiency | N.A. |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 9 |
| Total Luminaire Watts | 3 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.23 |
| Max. Cd. | 21.899 (90H, 80V) |
| Max. Cd. (<90 Vert.) | 21.899 (90H, 80V) |
| Max. Cd. (At 90 Deg. Vert.) | 11.376 (40.6%Lum) |
| Max. Cd. (80 to <90 Deg. Vert.) | 21.899 (78.2%Lum) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

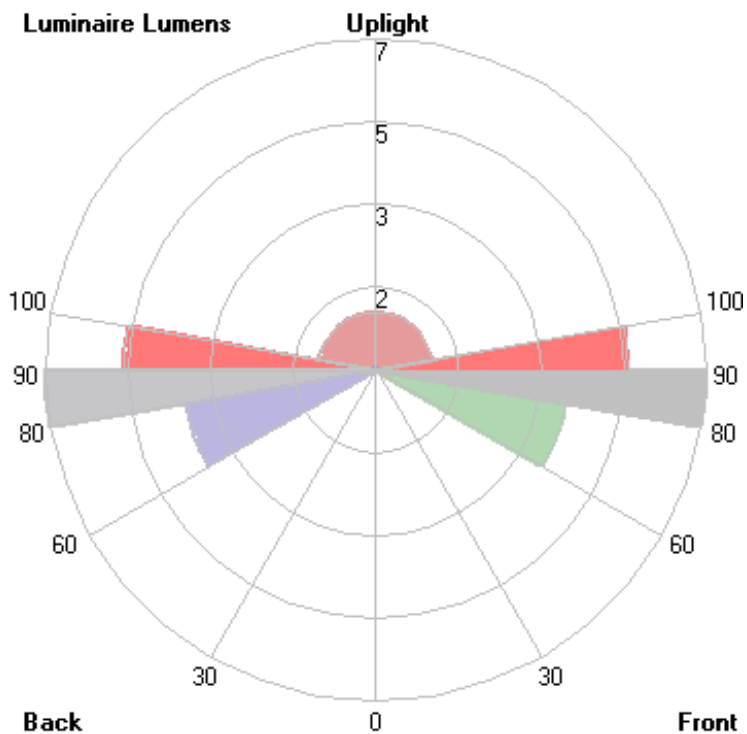
Lum. Classification System (LCS)

| LCS Zone | Lumens | %Lamp | %Lum |
|--------------|-------------|-------------|--------------|
| FL (0-30) | 0.0 | N.A. | 0.0 |
| FM (30-60) | 0.0 | N.A. | 0.0 |
| FH (60-80) | 4.0 | N.A. | 14.2 |
| FVH (80-90) | 6.9 | N.A. | 24.3 |
| BL (0-30) | 0.0 | N.A. | 0.0 |
| BM (30-60) | 0.0 | N.A. | 0.0 |
| BH (60-80) | 4.0 | N.A. | 14.2 |
| BVH (80-90) | 6.9 | N.A. | 24.3 |
| UL (90-100) | 5.2 | N.A. | 18.5 |
| UH (100-180) | 1.2 | N.A. | 4.2 |
| Total | 28.2 | N.A. | 100.0 |

BUG Rating B0-U1-G0



Grid Spacing: 1 ft.

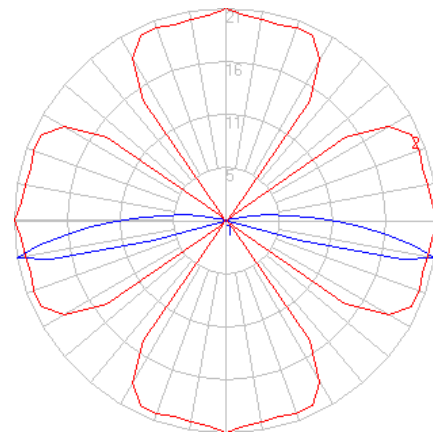


In the interest of product improvement, BEGA reserves the right to make technical changes without notice.

BEGA

File: 77070K27_BEGA_IES.ies

TEST: BE_77070K4
 TEST LAB: BEGA
 DATE: 01/25/2013
 LUMINAIRE: 77 070K27
 LAMP: 2.2W LED



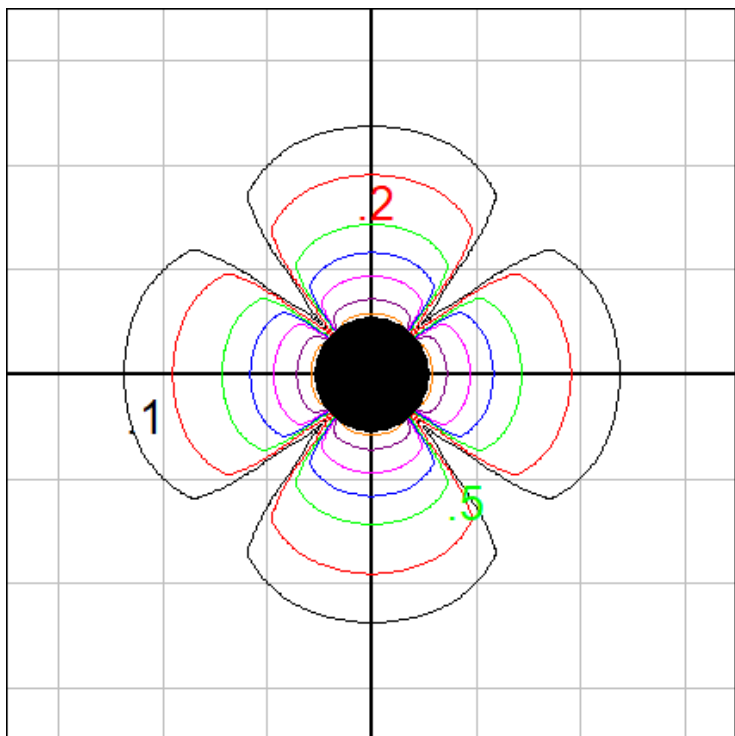
Characteristics

| | |
|------------------------------------|-------------------|
| IES Classification | Type VS |
| Longitudinal Classification | Long |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 27 |
| Downward Total Efficiency | N.A. |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 9 |
| Total Luminaire Watts | 3 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.23 |
| Max. Cd. | 21.113 (90H, 80V) |
| Max. Cd. (<90 Vert.) | 21.113 (90H, 80V) |
| Max. Cd. (At 90 Deg. Vert.) | 10.968 (40.6%Lum) |
| Max. Cd. (80 to <90 Deg. Vert.) | 21.113 (78.2%Lum) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

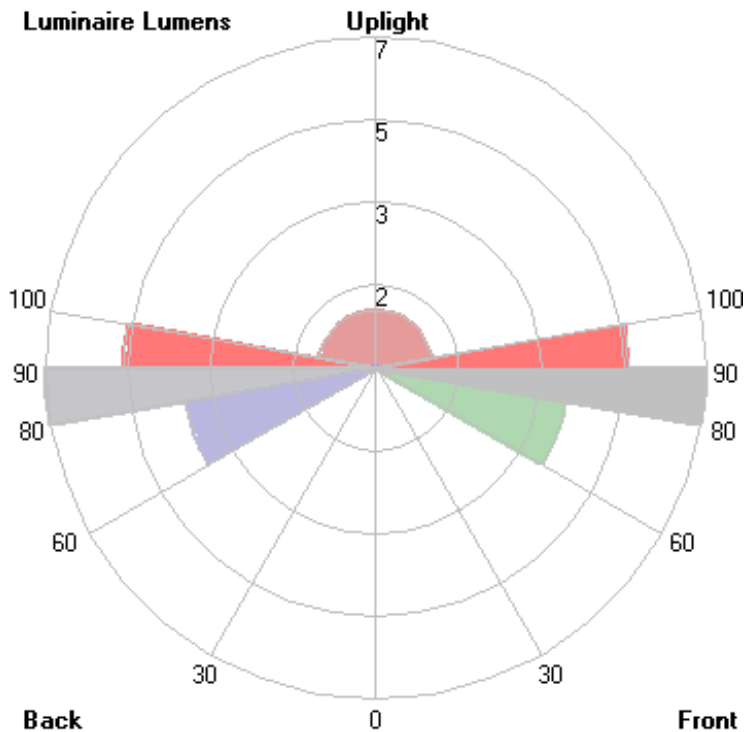
Lum. Classification System (LCS)

| LCS Zone | Lumens | %Lamp | %Lum |
|--------------|-------------|-------------|--------------|
| FL (0-30) | 0.0 | N.A. | 0.0 |
| FM (30-60) | 0.0 | N.A. | 0.0 |
| FH (60-80) | 3.9 | N.A. | 14.2 |
| FVH (80-90) | 6.6 | N.A. | 24.4 |
| BL (0-30) | 0.0 | N.A. | 0.0 |
| BM (30-60) | 0.0 | N.A. | 0.0 |
| BH (60-80) | 3.9 | N.A. | 14.2 |
| BVH (80-90) | 6.6 | N.A. | 24.4 |
| UL (90-100) | 5.0 | N.A. | 18.6 |
| UH (100-180) | 1.1 | N.A. | 4.2 |
| Total | 27.1 | N.A. | 100.0 |

BUG Rating B0-U1-G0



Grid Spacing: 1 ft.



In the interest of product improvement, BEGA reserves the right to make technical changes without notice.