

# IES Flood Report

## Photometric Filename: HCP-3326193.IES

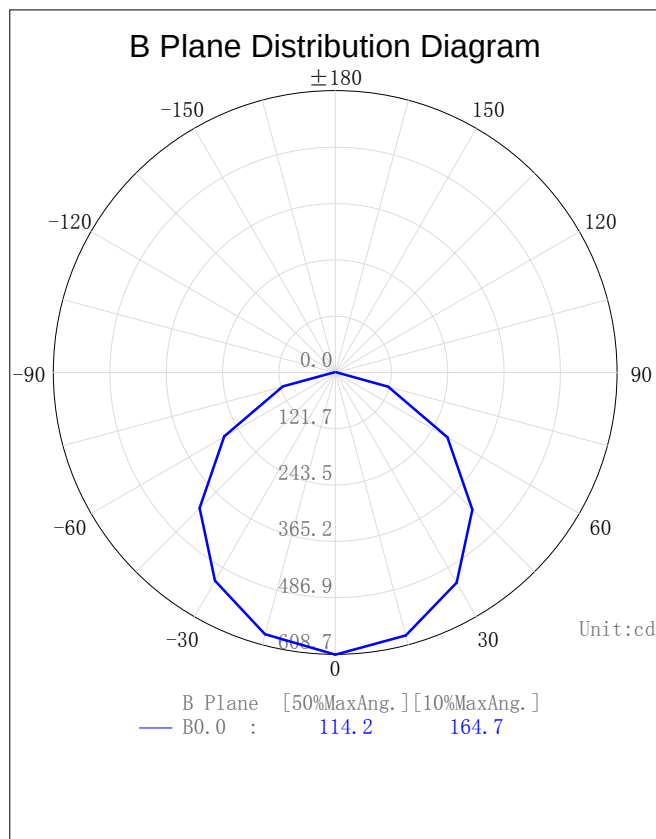
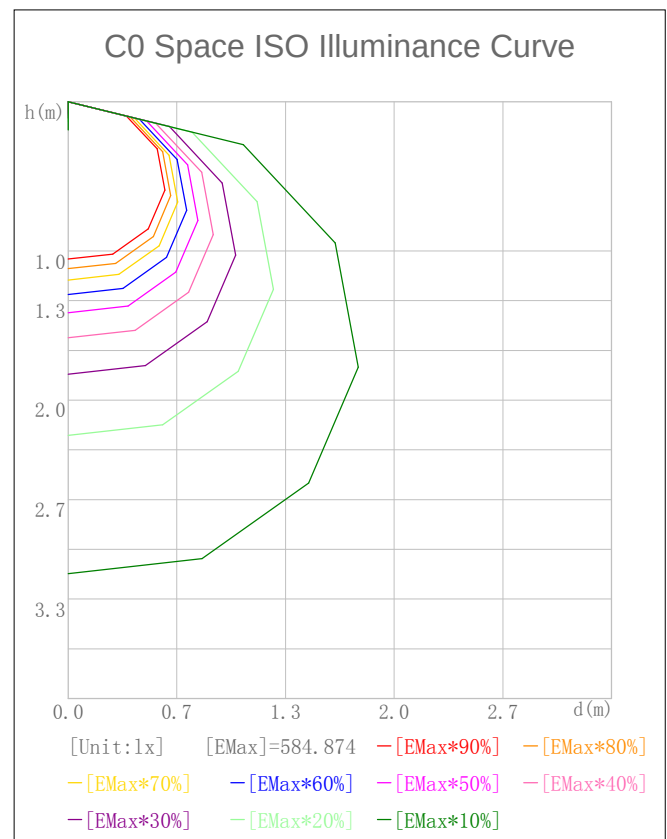
### Flood Luminaire Photometric Data

#### Description Information

|                                        |                          |                        |
|----------------------------------------|--------------------------|------------------------|
| Luminary Name: HCP-3326193             | Lum. Catalog:            | Test ID:               |
| Lamp Name: 2110 3000K                  | Lamp Catalog:            | Test Date: 2019/05/21  |
| Manufacture: HAVIT COMMERCIAL          | Shld. Ang(°):            | Test Machine: GON-2000 |
| Test Lab:                              | Frequency(Hz):           | Lamp CCT(K): Ra:       |
| Lum. Size(W*L*H): 0.006m*0.100m*0.010m | Lum. Area(m2): 0.002     | Lum. W(kg):            |
| Test System: B, β                      | Test Step: B=15.0 β=15.0 | Temp. (°C):            |
|                                        |                          | Humidity(%):           |

#### Character Parameter

| Lamp Speciality Parameter                     | Luminaire Speciality Parameter              |                            |
|-----------------------------------------------|---------------------------------------------|----------------------------|
| Rated Flux(lm): 2037.600                      | Luminary Flux(lm): 1767.635                 | Beam Lumens(lm): 1280.81   |
| Rated Power(W):                               | Luminary Efficiency: 86.75%                 | Beam Efficiency(%): 72.46  |
| Rated Voltage(V):                             | Luminary EER(lm/W): 87.680                  | Field Lumens(lm): 1728.27  |
| Tested Power(W): 20.160                       | Max. Candela(cd): 608.667                   | Field Efficiency(%): 97.77 |
| Lamps' Inside: 1                              | Max Cand@Ang. (°): B=0.0 β=0.0              | ErP Φuse(120°): 1379.522lm |
| Tested Electrics(V, A, pf): 24.0, 0.84, 0.000 | Beam Angle(50%) (V, H): 114.1(°), 114.2(°)  | IRF(%): 108.134            |
| Lamp Size(W*L*H): 0.006m*0.100m*0.010m        | Field Angle(10%) (V, H): 166.7(°), 164.7(°) |                            |



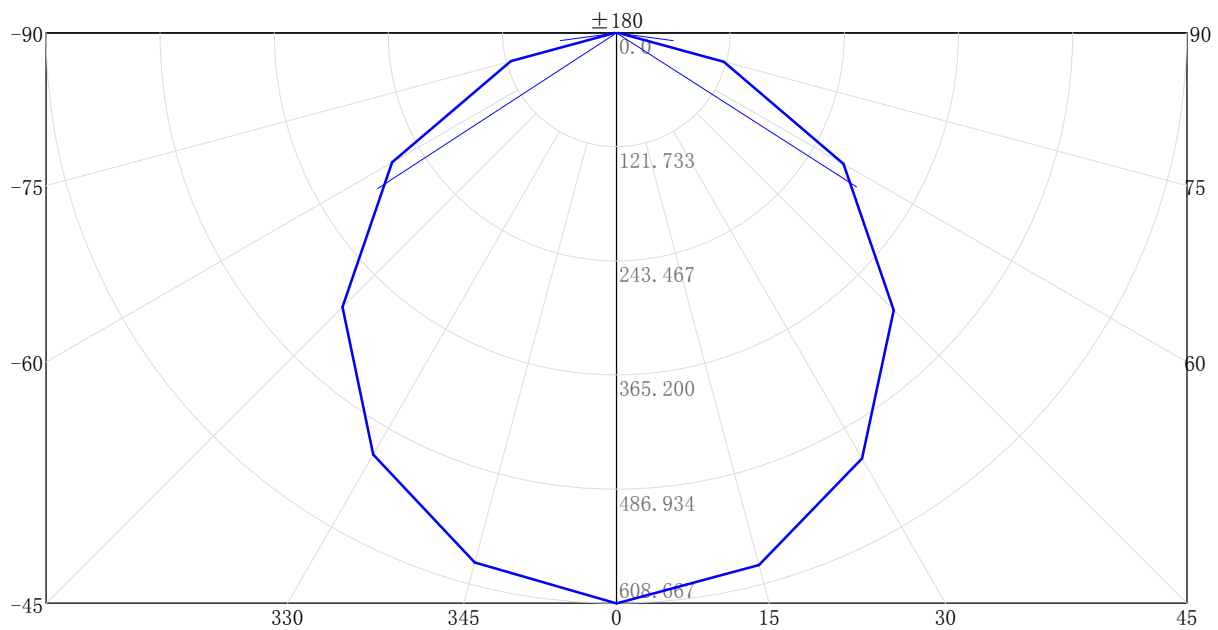
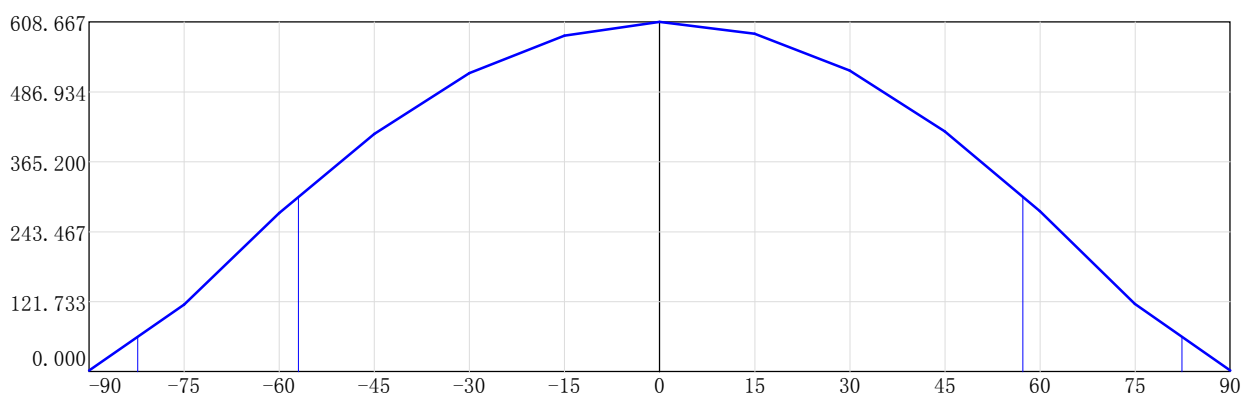
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### 2D Plane Light Intensity Distribution Curve

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

B Plane Distribution Diagram



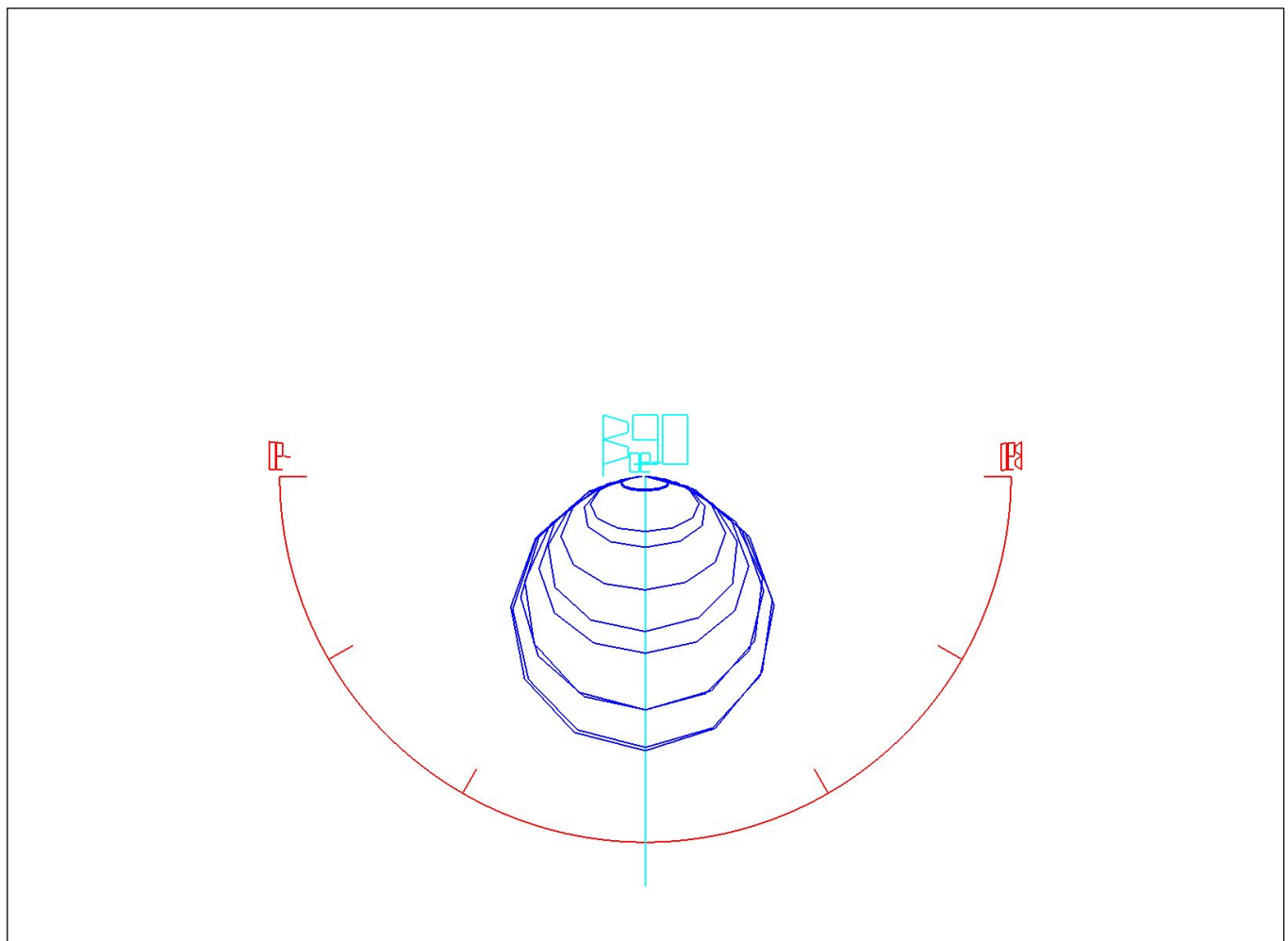
— B Plane [50%MaxAng.] [10%MaxAng.] Unit:cd  
 B0.0 : 114.2 164.7

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### 3D Light Intensity Distribution Modal

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

### 3D Light Intensity Distribution Modal



Curves: 3D Model — Fixture — Vert. HUD — Hori. HUD —  
View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

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### Zone Lumens Tabulation

|        | β -90.0 | β -75.0 | β -60.0 | β -45.0 | β -30.0 | β -15.0 | β 0.0  | β 15.0 | β 30.0 | β 45.0 | β 60.0 | β 75.0 | β 90.0 |
|--------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| B-90.0 |         |         |         |         |         |         |        |        |        |        |        |        |        |
| B-75.0 | 0.07    | 0.60    | 1.72    | 3.08    | 4.32    | 5.05    | 5.08   | 4.42   | 3.19   | 1.82   | 0.67   | 0.08   |        |
| B-60.0 | 0.17    | 1.57    | 4.63    | 8.43    | 11.92   | 13.96   | 14.04  | 12.11  | 8.65   | 4.80   | 1.66   | 0.18   |        |
| B-45.0 | 0.28    | 2.76    | 8.04    | 14.49   | 20.27   | 23.63   | 23.72  | 20.49  | 14.75  | 8.23   | 2.85   | 0.30   |        |
| B-30.0 | 0.40    | 3.85    | 11.01   | 19.61   | 27.21   | 31.62   | 31.72  | 27.45  | 19.87  | 11.19  | 3.93   | 0.40   |        |
| B-15.0 | 0.48    | 4.65    | 13.10   | 23.16   | 32.00   | 37.15   | 37.25  | 32.25  | 23.43  | 13.27  | 4.71   | 0.49   |        |
| B0.0   | 0.52    | 5.04    | 14.12   | 24.89   | 34.33   | 39.83   | 39.93  | 34.58  | 25.16  | 14.29  | 5.11   | 0.53   |        |
| B15.0  | 0.52    | 5.02    | 14.04   | 24.77   | 34.14   | 39.61   | 39.70  | 34.38  | 25.02  | 14.20  | 5.09   | 0.52   |        |
| B30.0  | 0.47    | 4.58    | 12.87   | 22.79   | 31.45   | 36.49   | 36.58  | 31.66  | 23.03  | 13.03  | 4.65   | 0.48   |        |
| B45.0  | 0.38    | 3.76    | 10.66   | 19.03   | 26.34   | 30.61   | 30.69  | 26.53  | 19.24  | 10.81  | 3.83   | 0.39   |        |
| B60.0  | 0.27    | 2.65    | 7.61    | 13.77   | 19.19   | 22.37   | 22.44  | 19.35  | 13.96  | 7.75   | 2.72   | 0.28   |        |
| B75.0  | 0.15    | 1.46    | 4.21    | 7.70    | 10.81   | 12.67   | 12.72  | 10.94  | 7.86   | 4.33   | 1.54   | 0.16   |        |
| B90.0  | 0.06    | 0.46    | 1.29    | 2.35    | 3.29    | 3.86    | 3.89   | 3.34   | 2.41   | 1.34   | 0.50   | 0.06   |        |
| Total  | 3.75    | 36.41   | 103.28  | 184.07  | 255.28  | 296.86  | 297.76 | 257.49 | 186.56 | 105.06 | 37.25  | 3.87   |        |

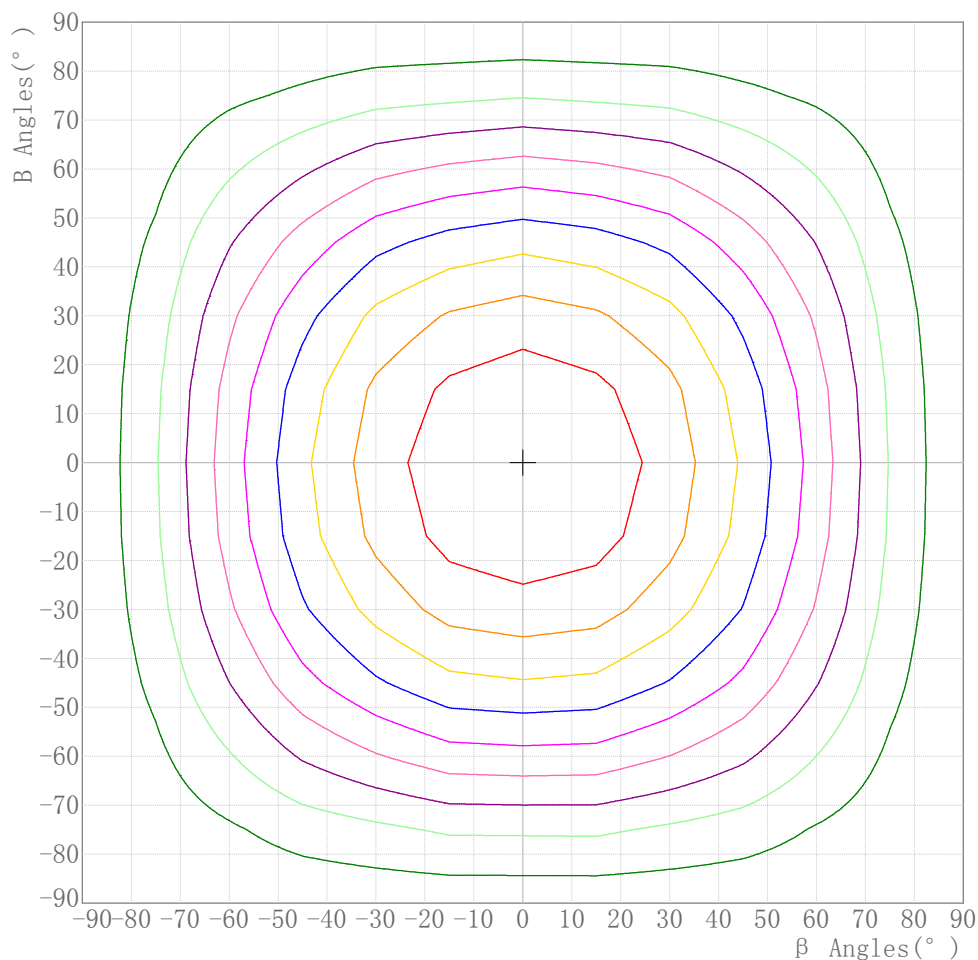
| β 90.0 | Total   |
|--------|---------|
| B-90.0 | 30.10   |
| B-75.0 | 82.12   |
| B-60.0 | 139.80  |
| B-45.0 | 188.26  |
| B-30.0 | 221.93  |
| B-15.0 | 238.33  |
| B0.0   | 237.01  |
| B15.0  | 218.07  |
| B30.0  | 182.25  |
| B45.0  | 132.36  |
| B60.0  | 74.55   |
| B75.0  | 22.85   |
| B90.0  |         |
| Total  | 1767.63 |

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**Rectangle ISO Lighting Intensity Diagram**

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

**ISO Lighting Intensity Curve**



Curves:

[Unit: cd]

[IMax] =608.667

— [IMax\*90%]=547.800

— [IMax\*80%]=486.934

— [IMax\*70%]=426.067

— [IMax\*60%]=365.200

— [IMax\*50%]=304.333

— [IMax\*40%]=243.467

— [IMax\*30%]=182.600

— [IMax\*20%]=121.733

— [IMax\*10%]=60.867

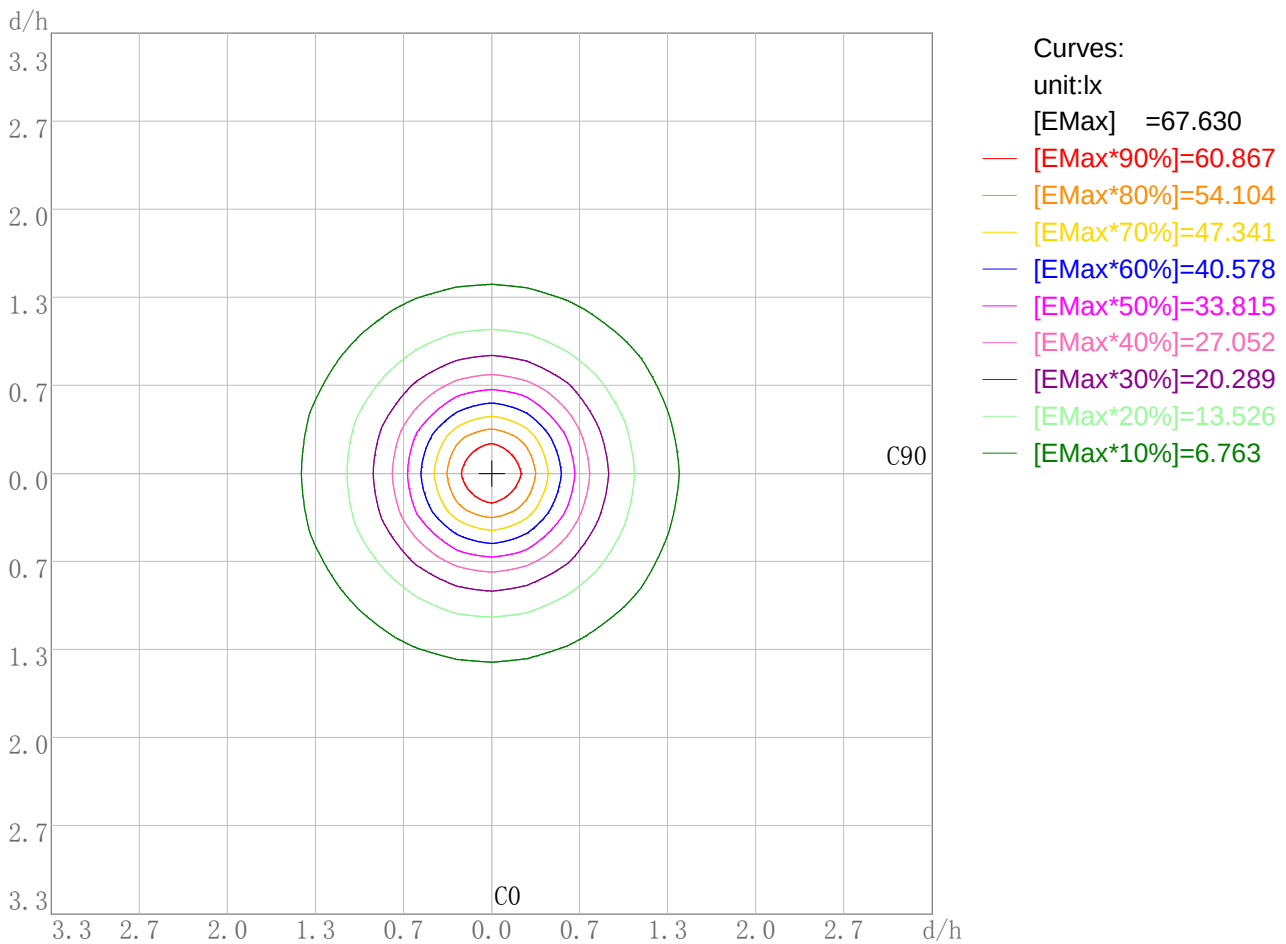
Maximum Light Intensity(cd): 608.67

Maximum Cand.@Angle: H=0.0°,V=0.0°

## Plane ISO-Illuminance Diagram

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

Plane ISO-Illuminance Curve

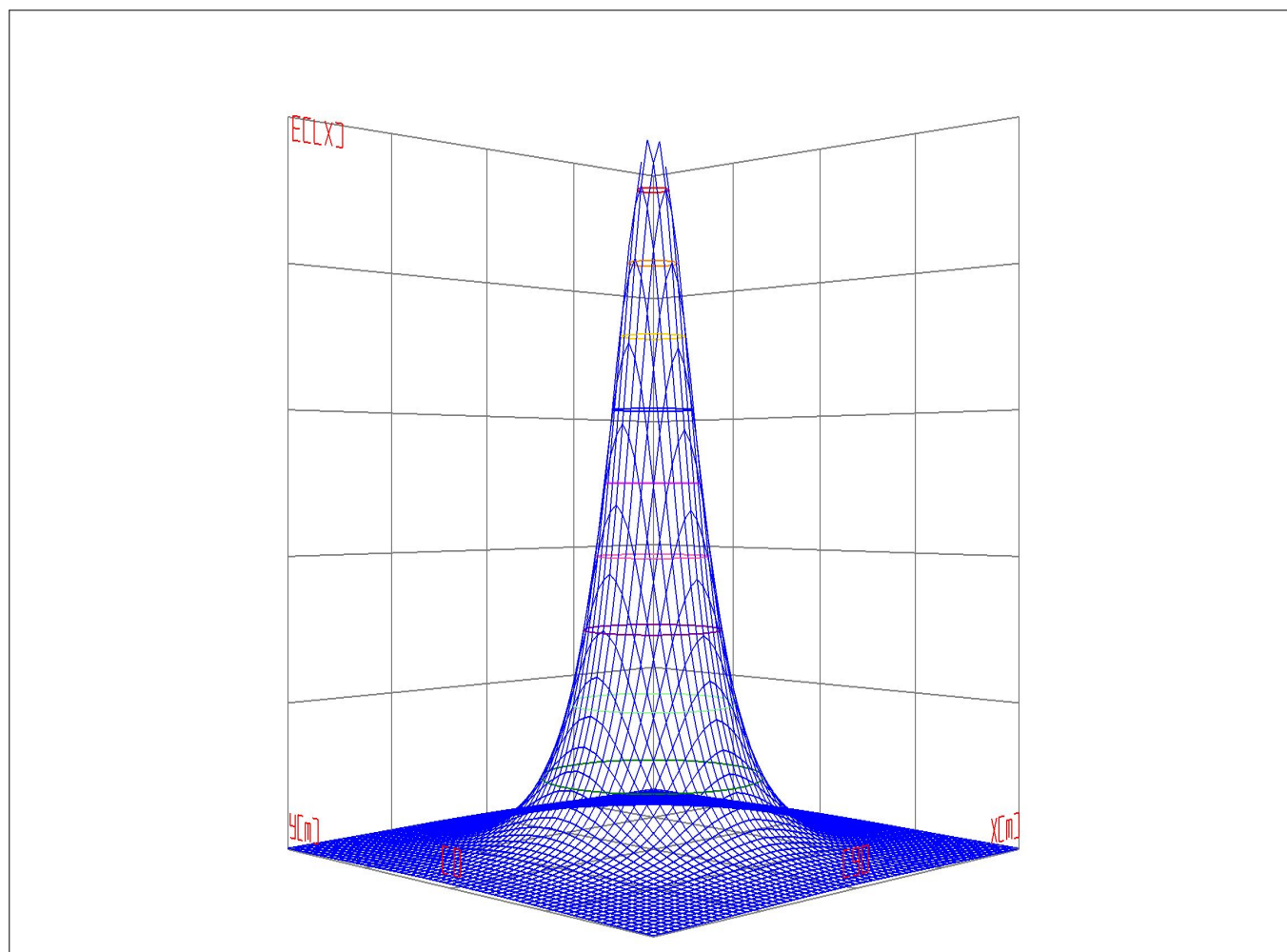


Working Plane Luminaire Mounting Height(m): 3.00  
Working Plane Maximum Illuminance(lx): 67.63  
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

### 3D Plane ISO Illuminance Diagram

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

### 3D Plane Illuminance Model



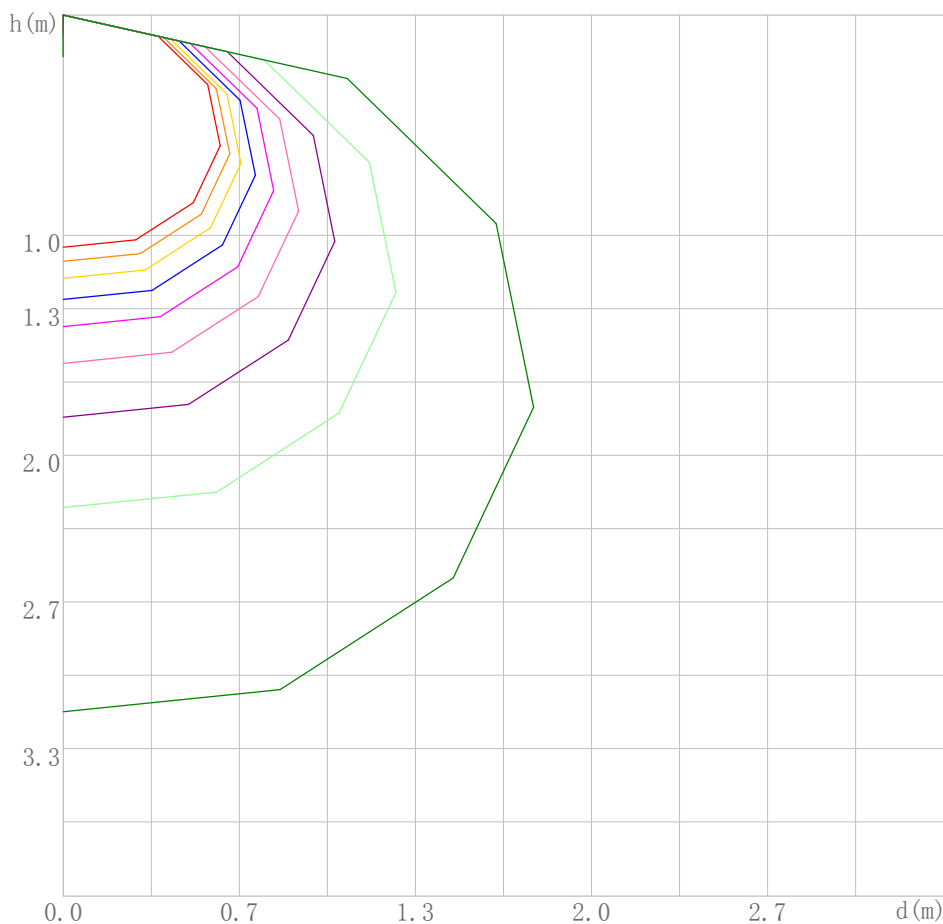
Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

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## Space ISO Illuminance Diagram

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

### Space ISO Illuminance Curve



Curves:

[Unit: lx]

[EMax] =584.874

— [EMax\*90%]=526.387

— [EMax\*80%]=467.899

— [EMax\*70%]=409.412

— [EMax\*60%]=350.924

— [EMax\*50%]=292.437

— [EMax\*40%]=233.950

— [EMax\*30%]=175.462

— [EMax\*20%]=116.975

— [EMax\*10%]=58.487

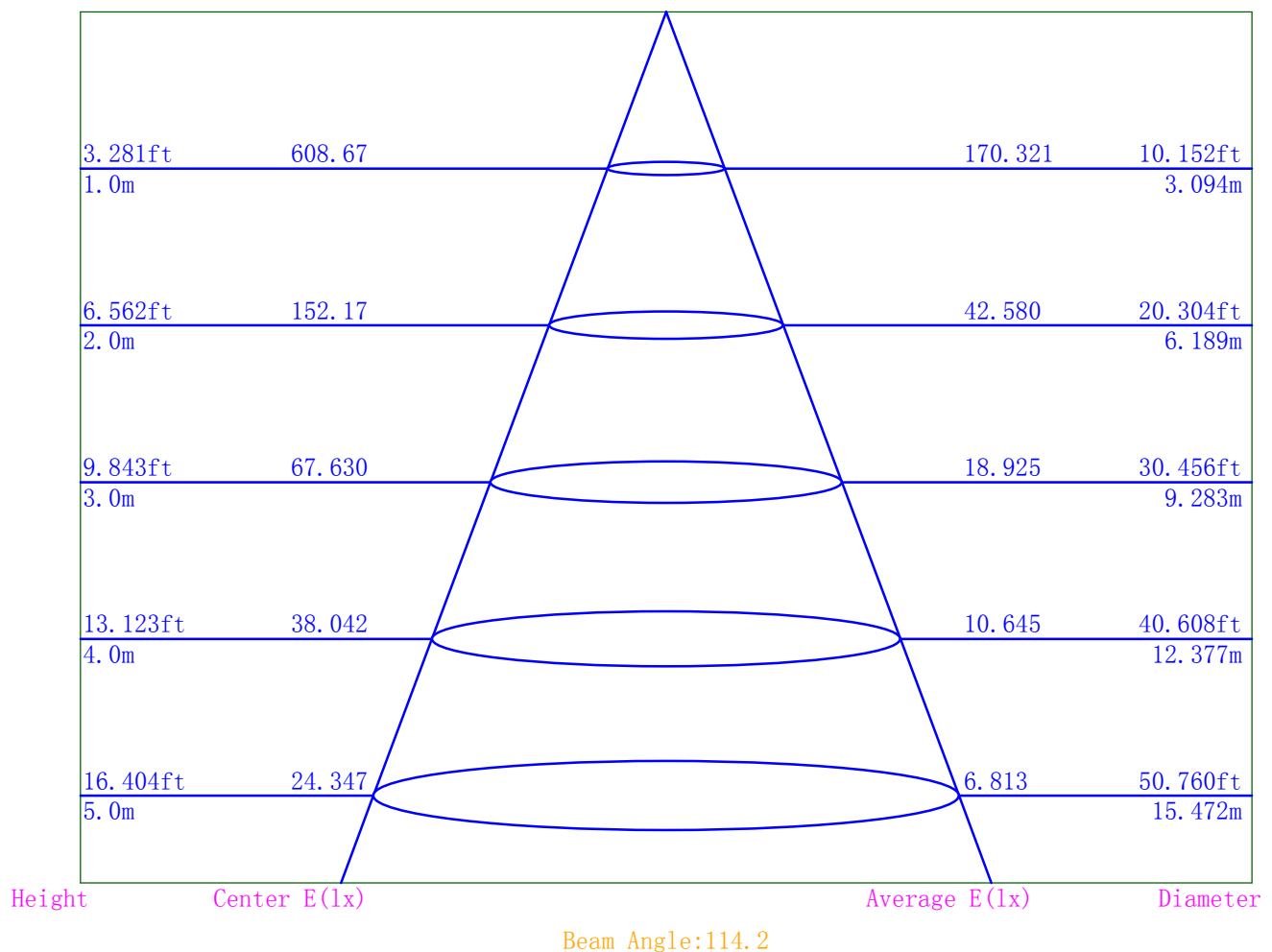
Space Plane Maximum Illuminance and @Angle:584.87lx,0.0deg  
Plane Maximum Lighting Intensity and @Angle:608.667cd,0deg

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## Illuminance-Distance Diagram

|                               |                        |                       |
|-------------------------------|------------------------|-----------------------|
| Lum. Name: HCP-3326193        | Lum. Catalog:          | Test ID:              |
| Lamp Name: 2110 3000K         | Lamp Catalog:          | Test Lab:             |
| Manufacture: HAVIT COMMERCIAL | Test Machine: GON-2000 | Test Date: 2019/05/21 |

Illuminance-Distance Curve





| V/H    | β -90.0 | β -75.0 | β -60.0 | β -45.0 | β -30.0 | β -15.0 | β 0.0  | β 15.0 | β 30.0 | β 45.0 | β 60.0 | β 75.0 |
|--------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| B-90.0 | 2.05    | 6.23    | 10.66   | 15.22   | 17.17   | 18.36   | 18.61  | 18.70  | 17.72  | 15.91  | 12.80  | 8.48   |
| B-75.0 | 2.05    | 22.63   | 52.78   | 86.41   | 108.06  | 130.04  | 130.91 | 131.90 | 111.44 | 90.24  | 56.19  | 25.42  |
| B-60.0 | 2.05    | 47.92   | 116.93  | 189.07  | 238.46  | 278.73  | 284.70 | 281.07 | 242.69 | 193.77 | 121.18 | 50.86  |
| B-45.0 | 2.05    | 75.16   | 181.91  | 284.83  | 356.83  | 410.13  | 421.47 | 412.84 | 361.54 | 289.80 | 186.07 | 77.47  |
| B-30.0 | 2.05    | 97.98   | 234.02  | 357.65  | 447.34  | 509.23  | 525.91 | 512.15 | 452.22 | 362.67 | 237.78 | 99.74  |
| B-15.0 | 2.05    | 112.36  | 266.17  | 401.23  | 502.41  | 568.43  | 589.39 | 571.47 | 507.26 | 406.20 | 269.45 | 113.90 |
| B0.0   | 2.05    | 116.68  | 276.29  | 413.50  | 519.31  | 584.87  | 608.67 | 587.86 | 524.07 | 418.40 | 279.44 | 118.28 |
| B15.0  | 2.05    | 110.61  | 264.53  | 395.35  | 498.91  | 559.90  | 584.74 | 562.63 | 503.31 | 400.08 | 267.61 | 112.49 |
| B30.0  | 2.05    | 94.83   | 230.92  | 346.53  | 440.39  | 492.94  | 516.82 | 495.46 | 444.31 | 350.98 | 233.81 | 97.07  |
| B45.0  | 2.05    | 71.35   | 177.68  | 269.79  | 347.18  | 388.10  | 408.92 | 390.25 | 350.55 | 273.77 | 180.43 | 73.86  |
| B60.0  | 2.05    | 43.94   | 112.01  | 172.26  | 226.83  | 253.66  | 270.07 | 255.39 | 229.55 | 175.80 | 115.03 | 47.11  |
| B75.0  | 2.05    | 19.00   | 48.24   | 71.96   | 97.33   | 107.17  | 117.14 | 108.49 | 99.53  | 74.73  | 50.75  | 21.99  |
| B90.0  | 2.05    | 1.84    | 1.84    | 1.86    | 1.89    | 1.83    | 1.86   | 1.86   | 1.84   | 1.84   | 1.84   | 1.83   |
| V/H    | β 90.0  |         |         |         |         |         |        |        |        |        |        |        |
| B-90.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B-75.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B-60.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B-45.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B-30.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B-15.0 | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B0.0   | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B15.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B30.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B45.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B60.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B75.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |
| B90.0  | 2.07    |         |         |         |         |         |        |        |        |        |        |        |