IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Indoor Luminaire Photometric Data

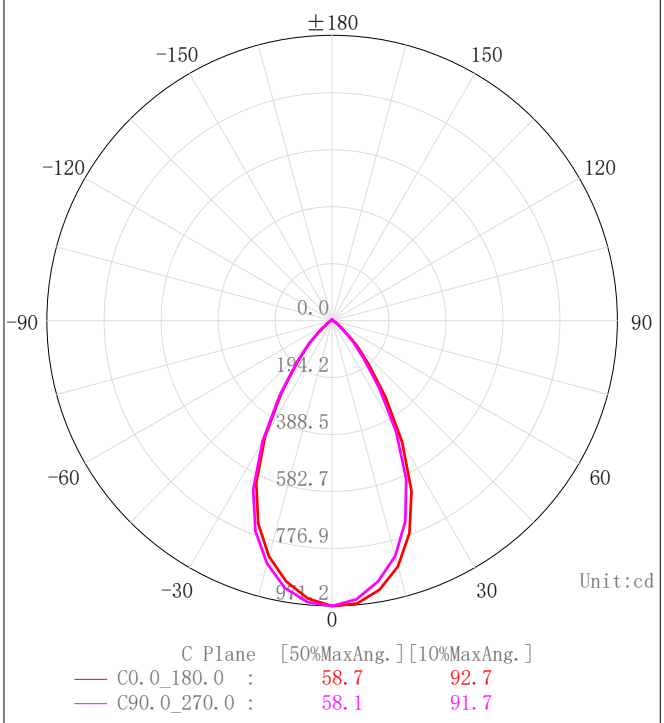
Description Information

Luminary Name: HCP-10X1201 5000K 60D		Lum. Catelog:	Test ID: 01
Lamp Name:		Lamp Catelog: LED	Test Date: 2022/11/01
Manufacture: Havit Commercial		Shld.Ang(°):	Test Machine:GON-2000
Test Lab: Quality Department		Frequency(Hz):	Lamp CCT(K): Ra:
Lum.Size(W*L*H):0.041m*0.041m*0.000m		Lum.Area(m2):0.002	Lum.W(kg): 0.000
Test System: C, γ	Test Step: C=90.0 γ=5.0	Temp.(℃): 25	Humidity(%):

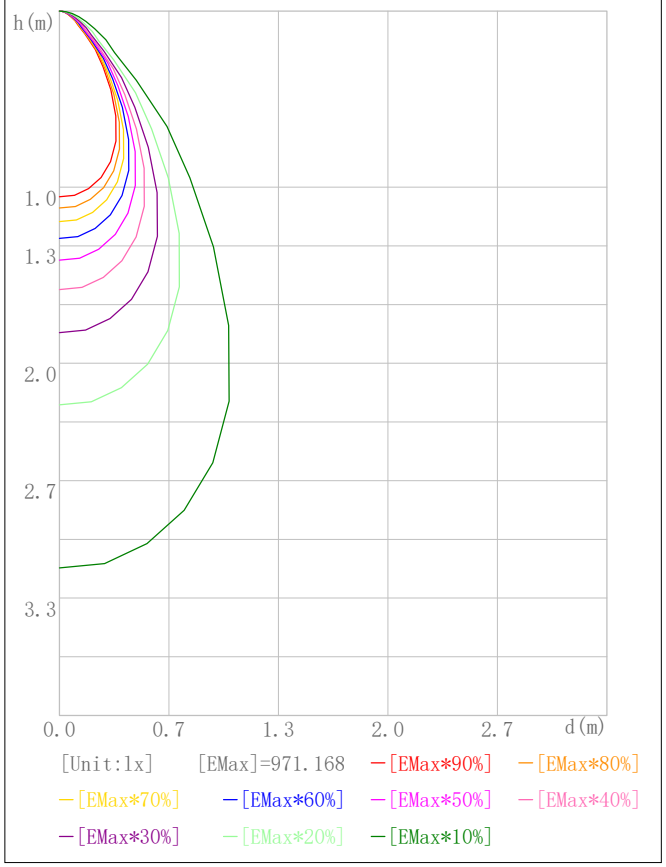
Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 940.290	Luminary Flux(lm): 940.287	Field Angle(10%Imax): 92.7(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 935.282lm 99.47%
Rated Voltage(V):	Luminary EER(lm/W): 78.227	Up Lumens&Percent: 5.004lm 0.53%
Tested Power(W): 12.020	Max.Candela(cd): 971.168	S/MH: C0_a180=0.905 C90_270=0.897
Lamps' Inside: 1	Max Cand@Ang.(°): C=0.0 γ=0.0	CIE Type: Semi-Direct
Tested Electrics(V,A,pf):230.0,0.055	Beam Angle(50%Imax): 58.7(°)	ErP Φuse(90°): 846.231lm
Lamp Size(W*L*H):0.041m*0.041m*0.000m	Left=-29.0° ,Right=29.7°	IRF(%): 225.490

C Plane Distribution Diagram



C0 Space ISO Illuminance Curve

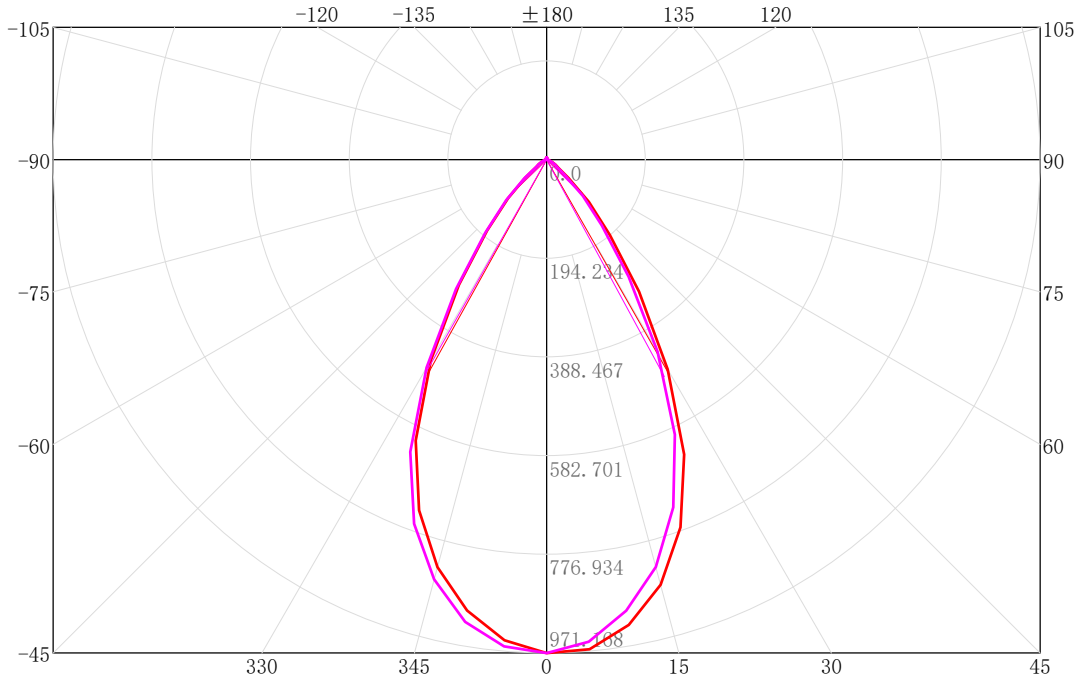


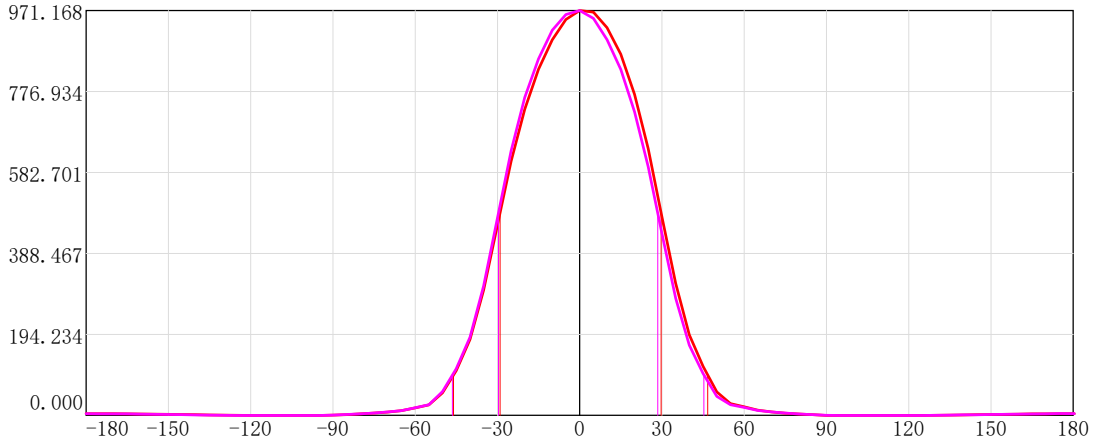
IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

2D Plane Light Intensity Distribution Curve

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

C Plane Distribution Diagram





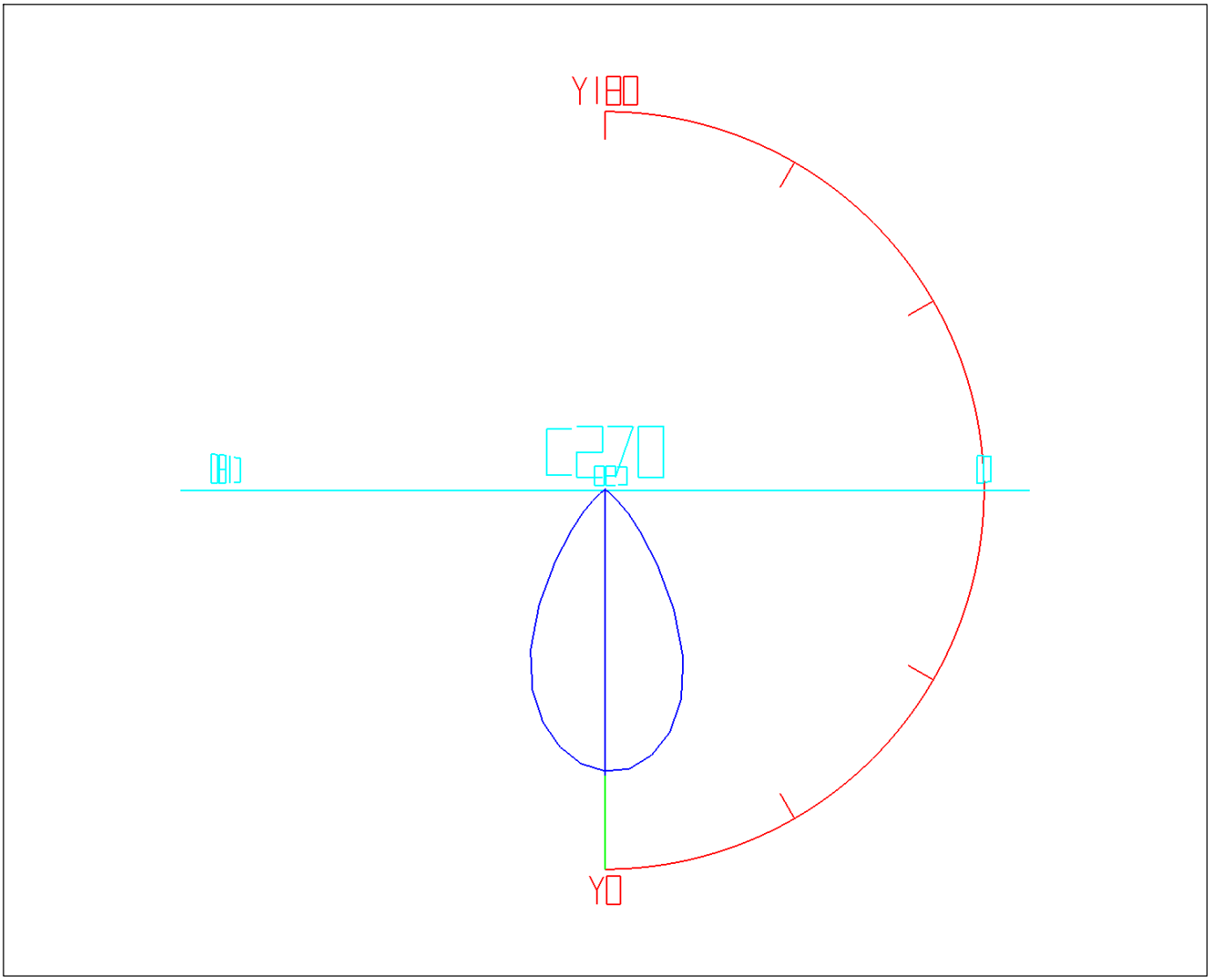
C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
C0.0_180.0 :	58.7	92.7	
C90.0_270.0 :	58.1	91.7	

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

3D Light Intensity Distribution Modal

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

3D Light Intensity Distribution Modal



Curves: 3D Model Fixture Vert. HUD Hori. HUD

View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

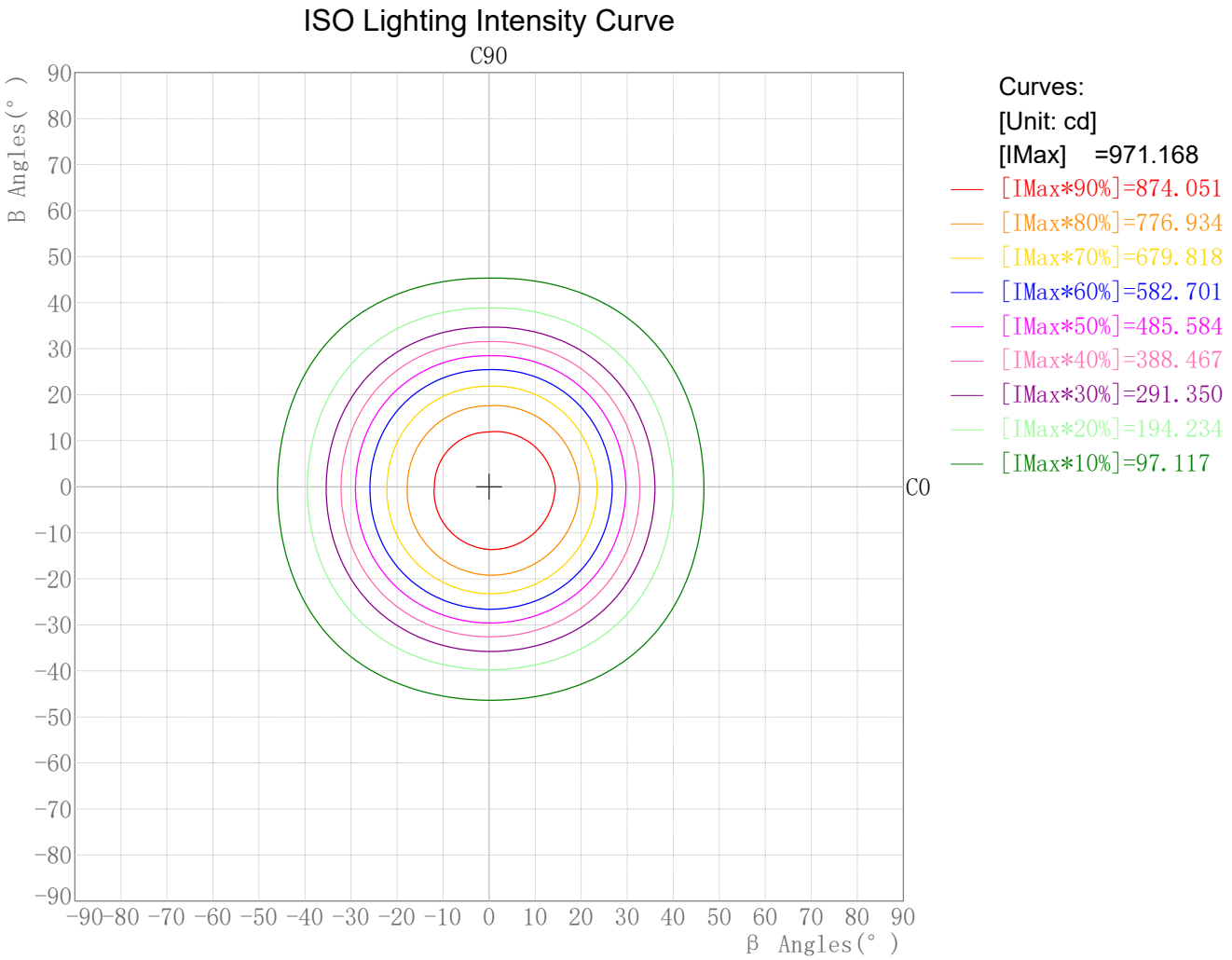
Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	23.06	23.06	2.45	2.45
5.0-10.0	66.96	90.02	7.12	9.57
10.0-15.0	104.37	194.39	11.10	20.67
15.0-20.0	131.39	325.78	13.97	34.65
20.0-25.0	143.61	469.39	15.27	49.92
25.0-30.0	136.76	606.15	14.54	64.46
30.0-35.0	112.29	718.44	11.94	76.41
35.0-40.0	80.97	799.41	8.61	85.02
40.0-45.0	54.18	853.59	5.76	90.78
45.0-50.0	32.92	886.52	3.50	94.28
50.0-55.0	17.29	903.81	1.84	96.12
55.0-60.0	10.46	914.27	1.11	97.23
60.0-65.0	7.52	921.78	0.80	98.03
65.0-70.0	5.12	926.90	0.54	98.58
70.0-75.0	3.67	930.57	0.39	98.97
75.0-80.0	2.50	933.08	0.27	99.23
80.0-85.0	1.55	934.62	0.16	99.40
85.0-90.0	0.66	935.28	0.07	99.47
90.0-95.0	0.13	935.42	0.01	99.48
95.0-100.0	0.03	935.44	0.00	99.48
100.0-105.0	0.00	935.44	0.00	99.48
105.0-110.0	0.00	935.44	0.00	99.48
110.0-115.0	0.00	935.44	0.00	99.48
115.0-120.0	0.00	935.45	0.00	99.48
120.0-125.0	0.04	935.48	0.00	99.49
125.0-130.0	0.15	935.63	0.02	99.50
130.0-135.0	0.30	935.93	0.03	99.54
135.0-140.0	0.44	936.37	0.05	99.58
140.0-145.0	0.57	936.95	0.06	99.64
145.0-150.0	0.66	937.60	0.07	99.71
150.0-155.0	0.65	938.25	0.07	99.78
155.0-160.0	0.62	938.87	0.07	99.85
160.0-165.0	0.57	939.44	0.06	99.91
165.0-170.0	0.45	939.90	0.05	99.96
170.0-175.0	0.29	940.19	0.03	99.99
175.0-180.0	0.10	940.29	0.01	100.00

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Rectangle ISO Lighting Intensity Diagram

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01



Maximum Light Intensity(cd): 971.17

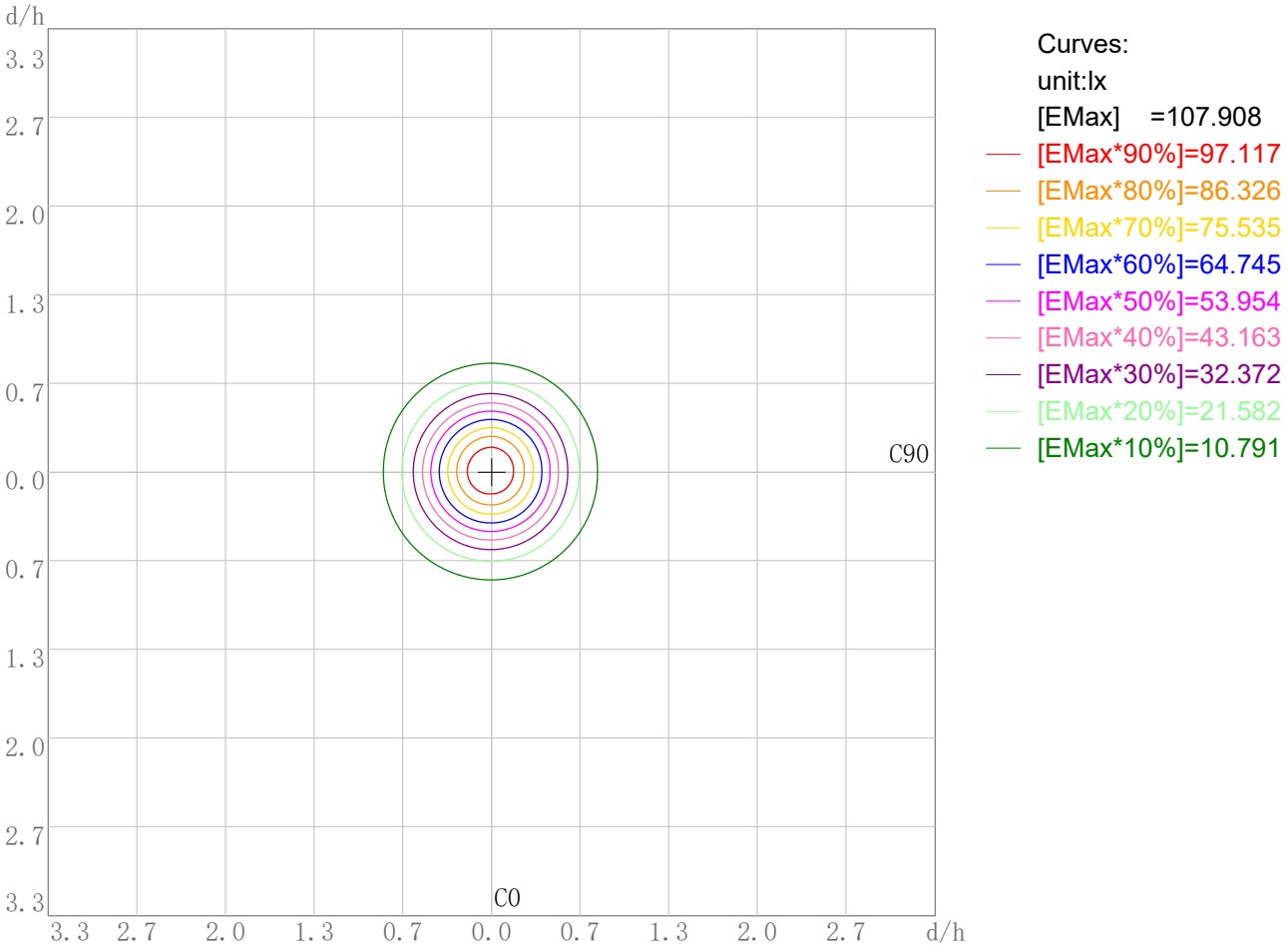
Maximum Cand.@Angle: H=0.0°,V=0.0°

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Plane ISO-Illuminance Diagram

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

Plane ISO-Illuminance Curve



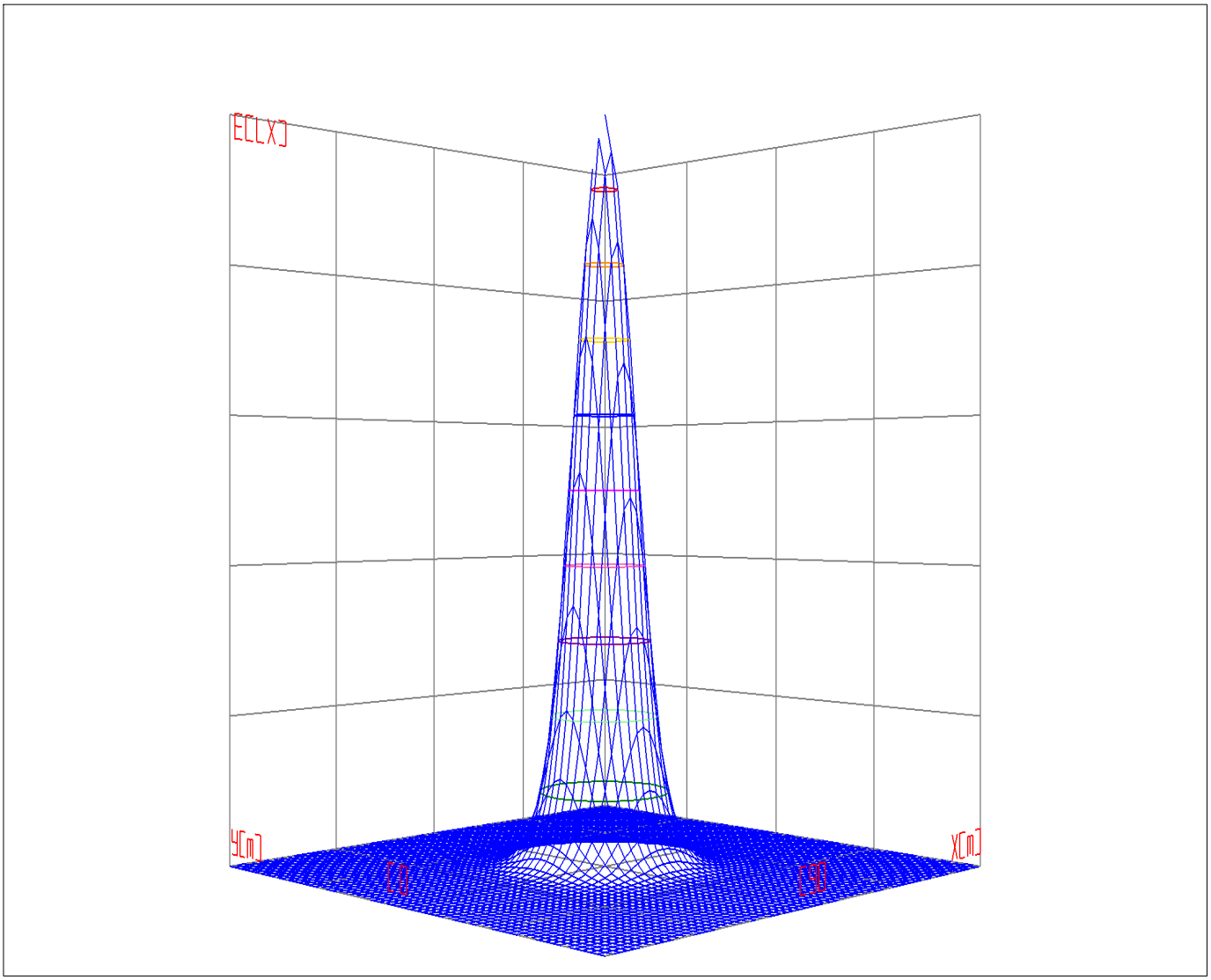
Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 107.91
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

3D Plane ISO Illuminance Diagram

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

3D Plane Illuminance Modal



Curves: 3D Model 90% 80% 70% 60% 50% 40% 30% 20% 10%

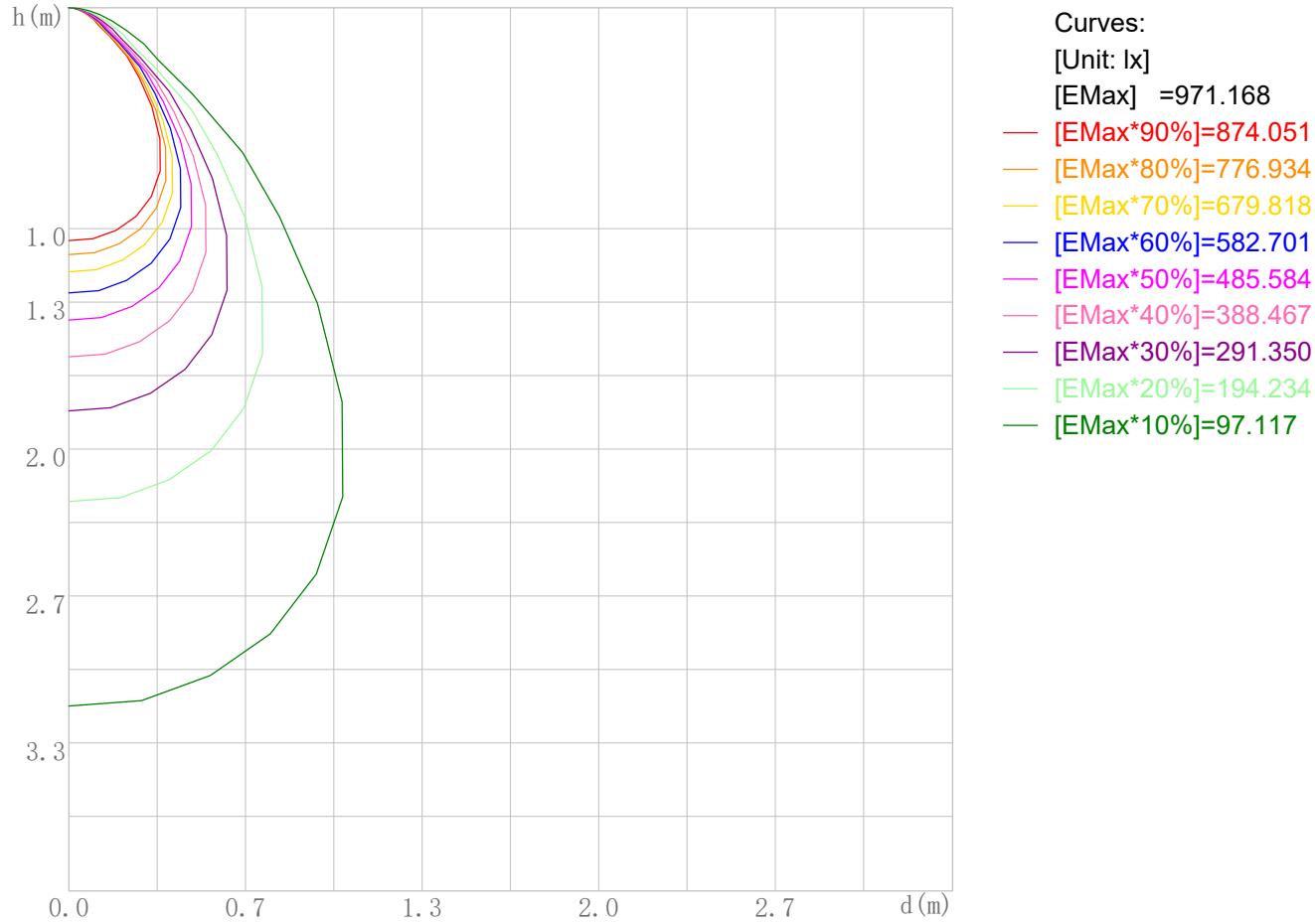
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Space ISO Illuminance Diagram

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

Space ISO Illuminance Curve



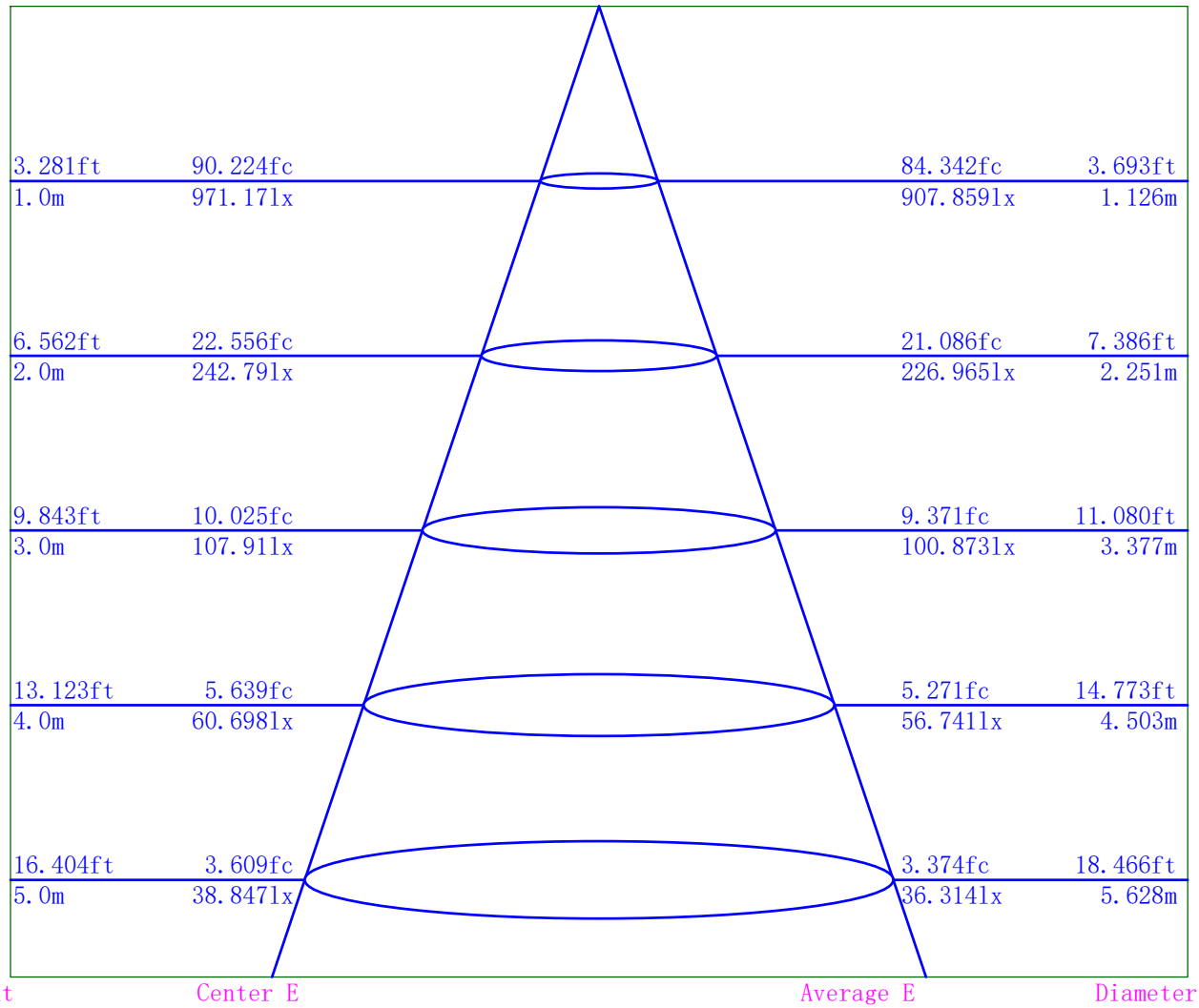
Space Plane Maximum Illuminance and @Angle:971.17lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:971.168cd,0eg

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Illuminance-Distance Diagram

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

Illuminance-Distance Curve



Beam Angle:58.7

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Indoor Luminance Limiting Curves

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

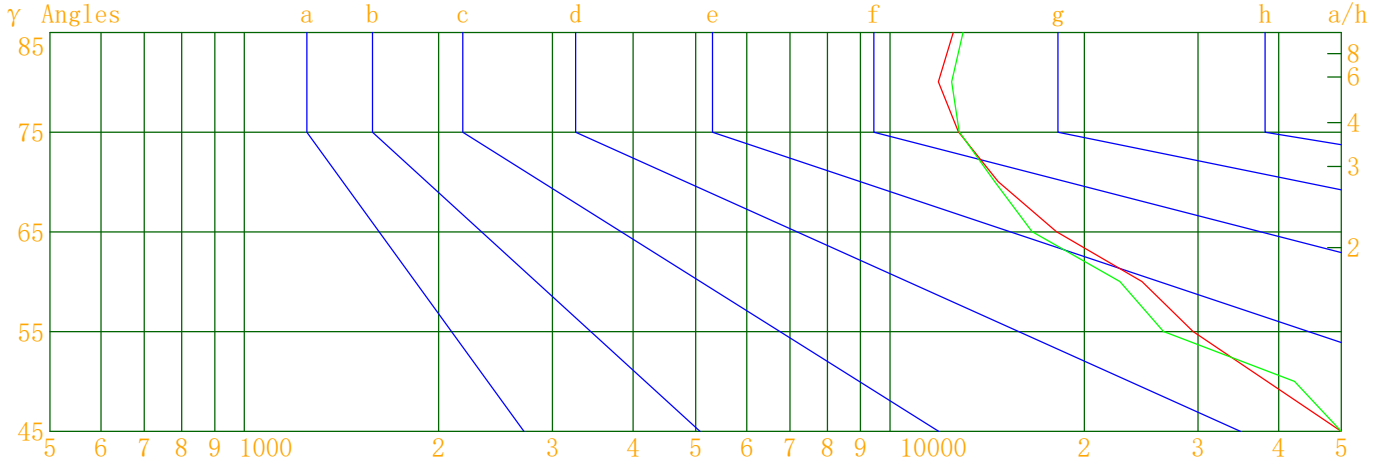
Glare Grade Table

GI	Quality	Using Illuminace							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E	a				2000	1000	500	<=300
			b	c	d	e	f	g	h

Luminance Table

Gama(deg)	45	50	55	60	65	70	75	80	85
C0	99125	52091	29475	24558	18099	14715	12766	11884	12532
C90	84717	42317	26511	22697	16594	14527	12802	12463	12975

Luminance Limiting Curve



Luminous Size: Length(m)=0.041 Width(m)=0.041 Height(m)=0.000 Area(m^2)=0.001681

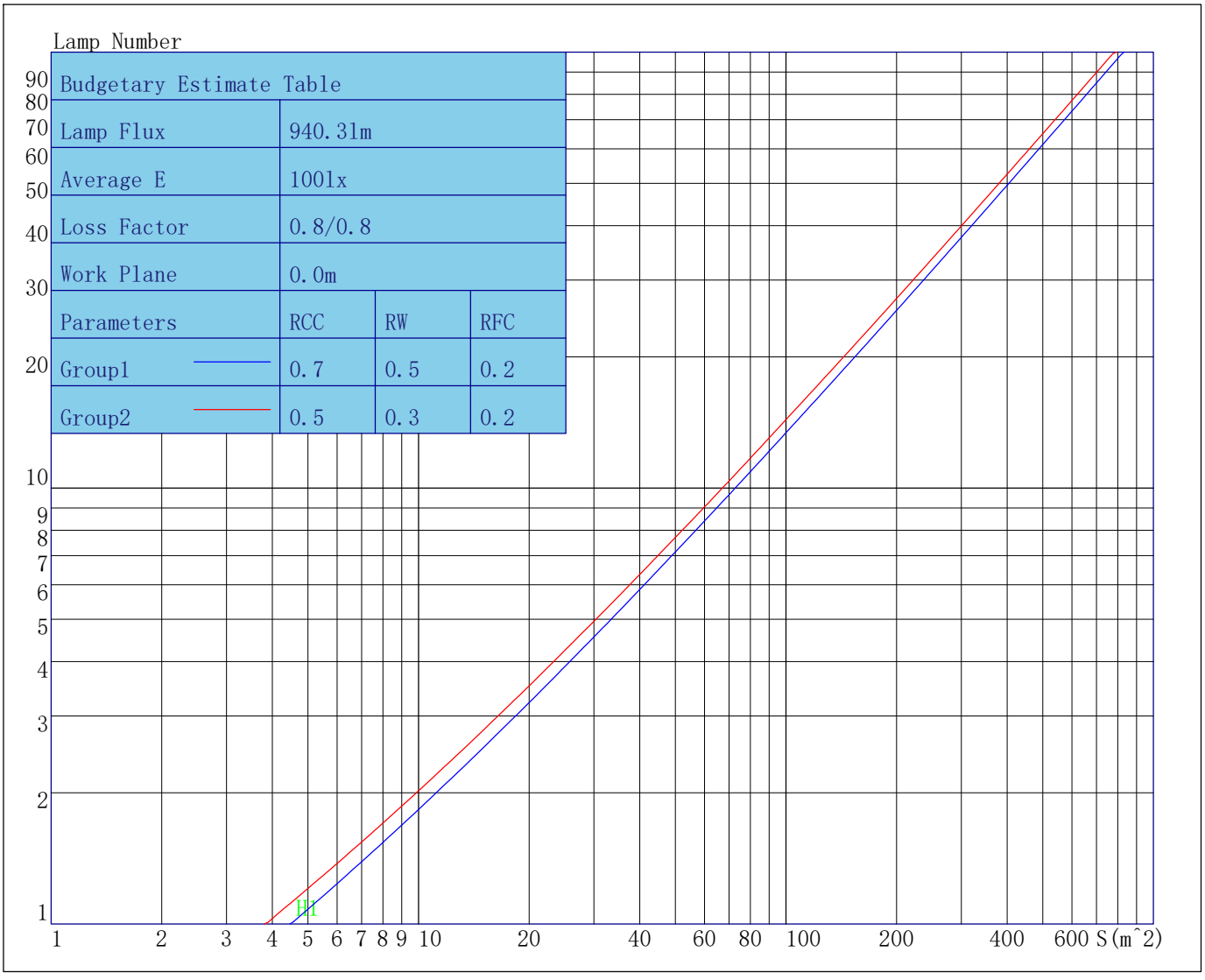
Luminous Type: Without Luminous Side

Luminous Curves: C0-C180 Color: C90-C270 Color:

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Indoor Budgetary Estimate Table

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01



Parameters1: Rhocc = 0.7 Rhow = 0.5 Rhofc = 0.2 LLF = 0.8
Parameters2: Rhocc = 0.5 Rhow = 0.3 Rhofc = 0.2 LLF = 0.8
Average Illuminance(lx): 100 Cavity Height: H1(m) = 2

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Indoor Coefficient of Utilization Table

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

Coefficients of Utilization - Zonal Cavity Method																		
Coef.	Effective Floor Cavity Reflectance RFC=0.20																	
RhoCC(%)	80				70				50			30			10			0
RhoW(%)	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	Coefficient of Utilization(%)																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	99
1	113	110	107	105	110	108	105	103	103	102	100	100	98	97	96	95	94	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85
3	101	94	89	84	99	92	88	84	90	86	82	87	84	81	85	82	79	78
4	95	87	81	77	93	86	81	76	84	79	75	82	78	74	80	76	73	72
5	90	81	75	70	88	80	74	70	78	73	69	77	72	69	75	71	68	66
6	85	76	69	65	84	75	69	65	73	68	64	72	67	64	70	66	63	62
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	66	62	59	57
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	52	50
10	69	59	53	49	68	59	53	49	58	52	49	57	52	49	56	52	48	47

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Unified Glare Rating Table

Lum.Name: HCP-10X1201 5000K 60D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Havit Commercial	Test Machine:GON-2000	Test Date: 2022/11/01

Unified Glare Rating Table

Ceiling RCC		0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
Wall RW		0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
Floor RFC		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Room Size		Vewed crosswise					Vewed endwise				
X=2H	Y=2H	24.2	25.3	24.6	25.6	26.0	23.6	24.7	24.0	25.0	25.4
	Y=3H	24.2	25.2	24.6	25.5	25.9	23.6	24.6	24.0	24.9	25.3
	Y=4H	24.2	25.1	24.6	25.4	25.8	23.6	24.5	24.0	24.8	25.2
	Y=6H	24.1	25.0	24.6	25.3	25.7	23.6	24.4	24.0	24.8	25.2
	Y=8H	24.1	24.9	24.6	25.3	25.7	23.6	24.3	24.0	24.7	25.1
	Y=12H	24.1	24.8	24.5	25.2	25.7	23.5	24.3	24.0	24.7	25.1
X=4H	Y=2H	24.1	24.9	24.5	25.3	25.7	23.5	24.3	23.9	24.7	25.1
	Y=3H	24.1	24.8	24.5	25.2	25.6	23.5	24.2	23.9	24.7	25.1
	Y=4H	24.1	24.7	24.5	25.2	25.6	23.5	24.2	24.0	24.6	25.1
	Y=6H	24.1	24.6	24.6	25.1	25.6	23.6	24.1	24.0	24.6	25.1
	Y=8H	24.1	24.6	24.6	25.0	25.5	23.5	24.1	24.0	24.5	25.0
	Y=12H	24.1	24.5	24.6	25.0	25.5	23.5	24.0	24.0	24.5	25.0
X=8H	Y=4H	24.0	24.5	24.5	25.0	25.4	23.4	24.0	23.9	24.4	24.9
	Y=6H	24.0	24.4	24.5	24.9	25.5	23.5	23.9	24.0	24.4	25.0
	Y=8H	24.0	24.4	24.5	24.9	25.4	23.5	23.9	24.1	24.4	24.9
	Y=12H	24.0	24.4	24.6	24.9	25.5	23.6	23.9	24.1	24.4	25.0
X=12H	Y=4H	23.9	24.4	24.4	24.9	25.4	23.4	23.8	23.9	24.3	24.8
	Y=6H	24.0	24.3	24.5	24.8	25.4	23.5	23.8	24.0	24.3	24.9
	Y=8H	24.0	24.3	24.5	24.8	25.4	23.5	23.8	24.0	24.3	24.9
Variations with the objerver position at spacings											
S=1.0H		0.4/-0.4					0.4/-0.4				
S=1.5H		0.8/-0.8					0.8/-0.8				
S=2.0H		1.3/-1.3					1.1/-1.2				
Reduced UGR Table:											
Nordic Standard Table:		BK0					BK0				
Correction Value		0.4					0.5				

o the CIE Pub.117,data has been corrected,refers to the lamp's lumens 8.2flm.

IES Indoor Report
Photometric Filename:HCP-10X1201 5000K 60D.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	971.17	971.17	971.17	971.17
γ 5.0	967.14	952.30	949.50	961.72
γ 10.0	930.01	901.42	900.91	923.90
γ 15.0	866.21	829.96	830.41	855.22
γ 20.0	769.96	728.21	734.39	762.69
γ 25.0	640.16	597.00	609.82	634.78
γ 30.0	476.37	436.56	455.57	472.56
γ 35.0	316.74	281.08	300.75	310.57
γ 40.0	193.65	168.55	182.24	187.66
γ 45.0	117.82	100.70	107.58	112.28
γ 50.0	56.29	45.72	53.94	57.37
γ 55.0	28.42	25.56	25.16	25.67
γ 60.0	20.64	19.08	18.18	18.30
γ 65.0	12.86	11.79	11.34	11.49
γ 70.0	8.46	8.35	8.18	8.41
γ 75.0	5.55	5.57	5.75	5.84
γ 80.0	3.47	3.64	3.82	3.80
γ 85.0	1.84	1.90	1.99	2.33
γ 90.0	0.10	0.23	0.60	0.65
γ 95.0	0.00	0.12	0.19	0.06
γ 100.0	0.00	0.00	0.00	0.00
γ 105.0	0.00	0.00	0.00	0.00
γ 110.0	0.00	0.00	0.00	0.00
γ 115.0	0.00	0.00	0.04	0.00
γ 120.0	0.00	0.00	0.00	0.00
γ 125.0	0.00	0.05	0.54	0.02
γ 130.0	0.34	0.37	0.91	0.44
γ 135.0	0.82	0.92	1.32	0.90
γ 140.0	1.27	1.42	1.76	1.15
γ 145.0	1.95	1.71	2.36	2.07
γ 150.0	2.33	2.48	2.68	2.20
γ 155.0	2.73	2.57	2.96	2.62
γ 160.0	3.25	2.97	3.47	3.10
γ 165.0	3.88	3.61	3.68	3.77
γ 170.0	3.86	3.76	4.16	3.80
γ 175.0	4.34	4.42	4.17	3.98
γ 180.0	4.19	4.19	4.19	4.19