IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Indoor Luminaire Photometric Data

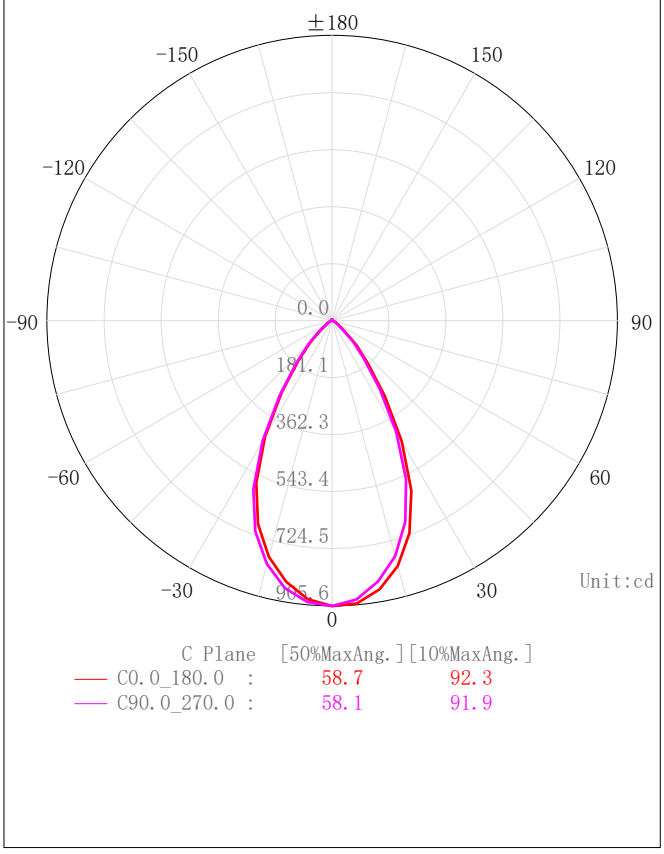
Description Information

Luminary Name: HCP-10X1201 4000K 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(%):

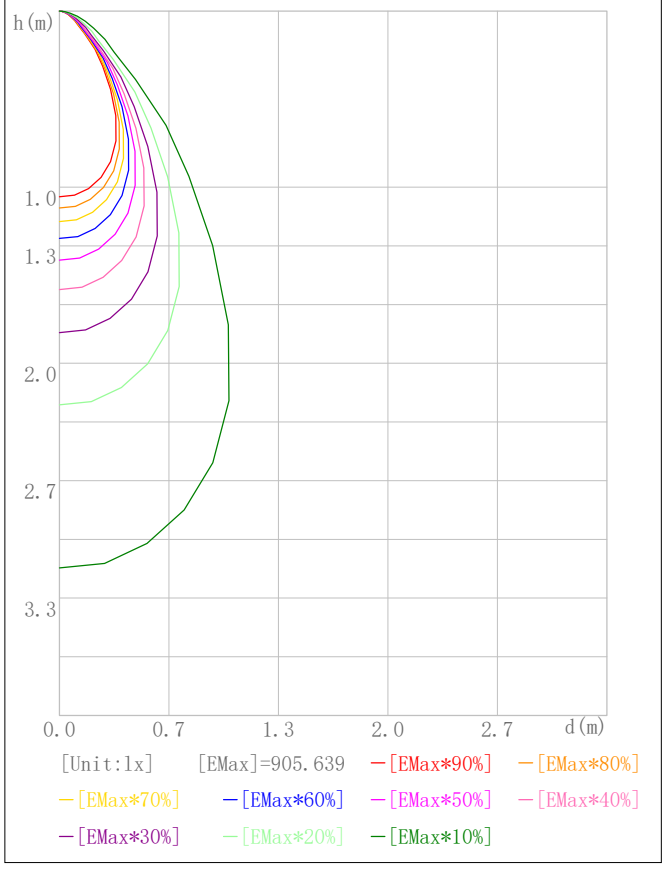
Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 870.960	Luminary Flux(lm): 870.958	Field Angle(10%Imax): 92.3(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 868.258lm 99.69%
Rated Voltage(V):	Luminary EER(lm/W): 72.519	Up Lumens&Percent: 2.700lm 0.31%
Tested Power(W): 12.010	Max.Candela(cd): 905.639	S/MH: C0_a180=0.905 C90_270=0.896
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°): 788.269lm
Lamp Size(W*L*H):0.041m*0.041m*0.000m	Left=-29.0° ,Right=29.7°	IRF(%): 225.925

C Plane Distribution Diagram



C0 Space ISO Illuminance Curve

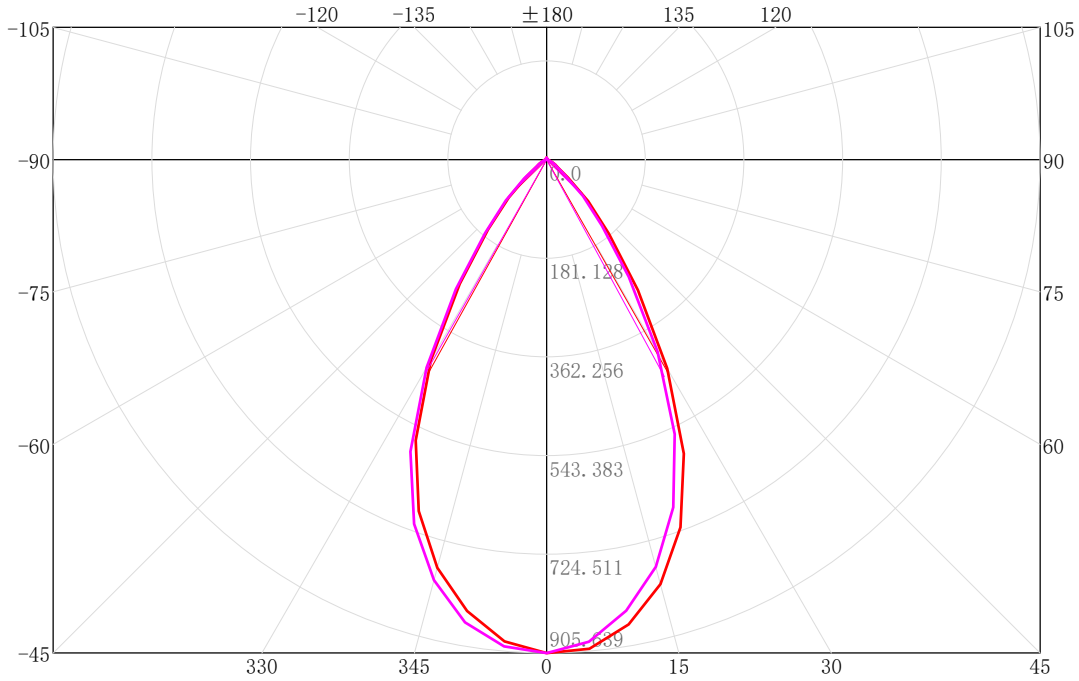


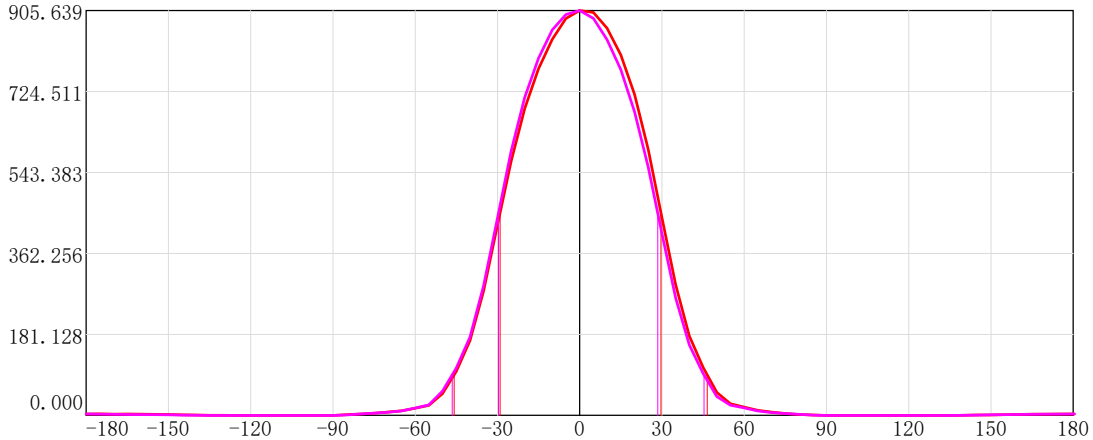
IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

2D Plane Light Intensity Distribution Curve

Lum.Name: HCP-10X1201 4000K 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





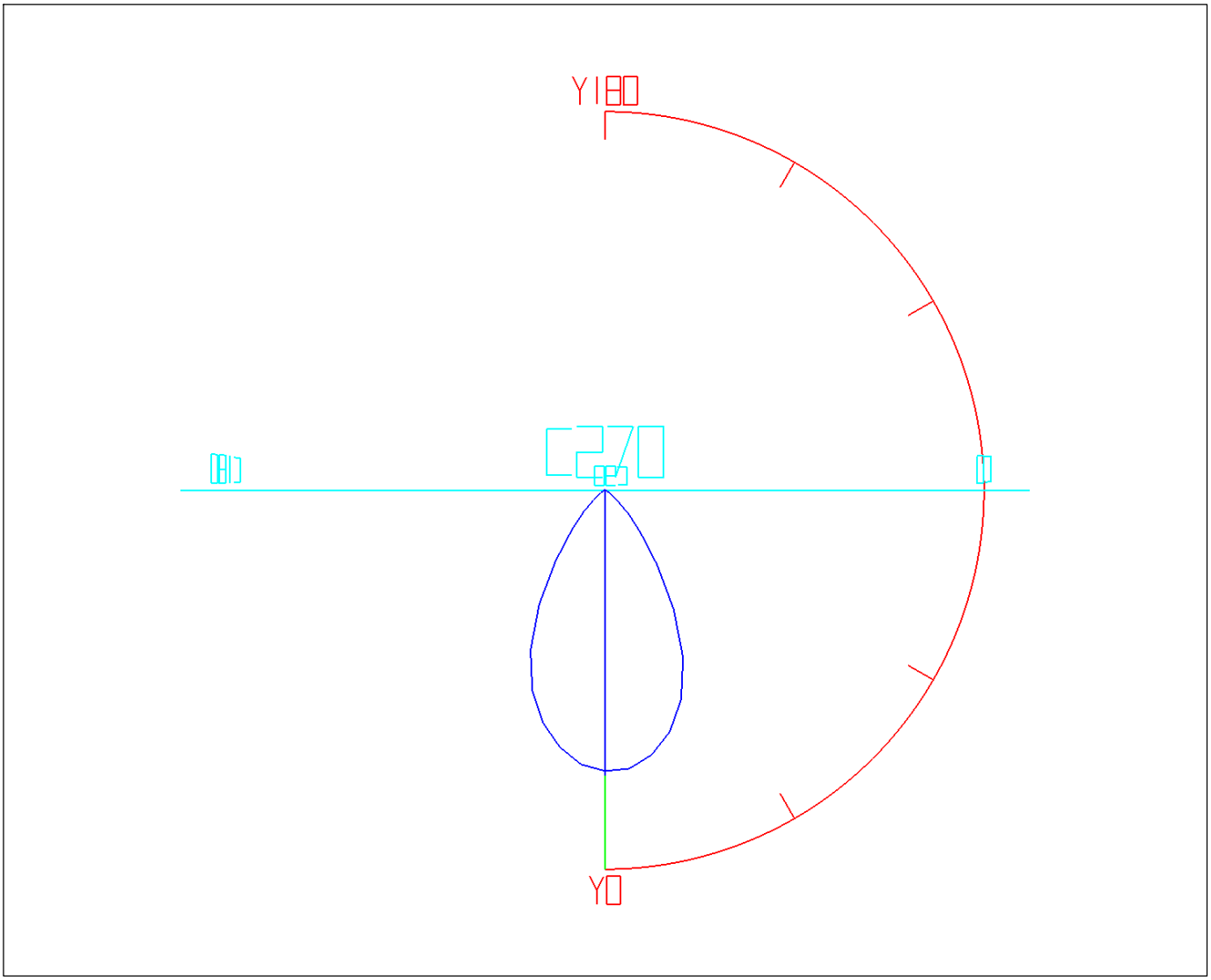
C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
C0.0_180.0 :	58.7	92.3	
C90.0_270.0 :	58.1	91.9	

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

3D Light Intensity Distribution Modal

Lum.Name: HCP-10X1201 4000K 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 4000K 60D.IES

Zonal Flux Tabulation

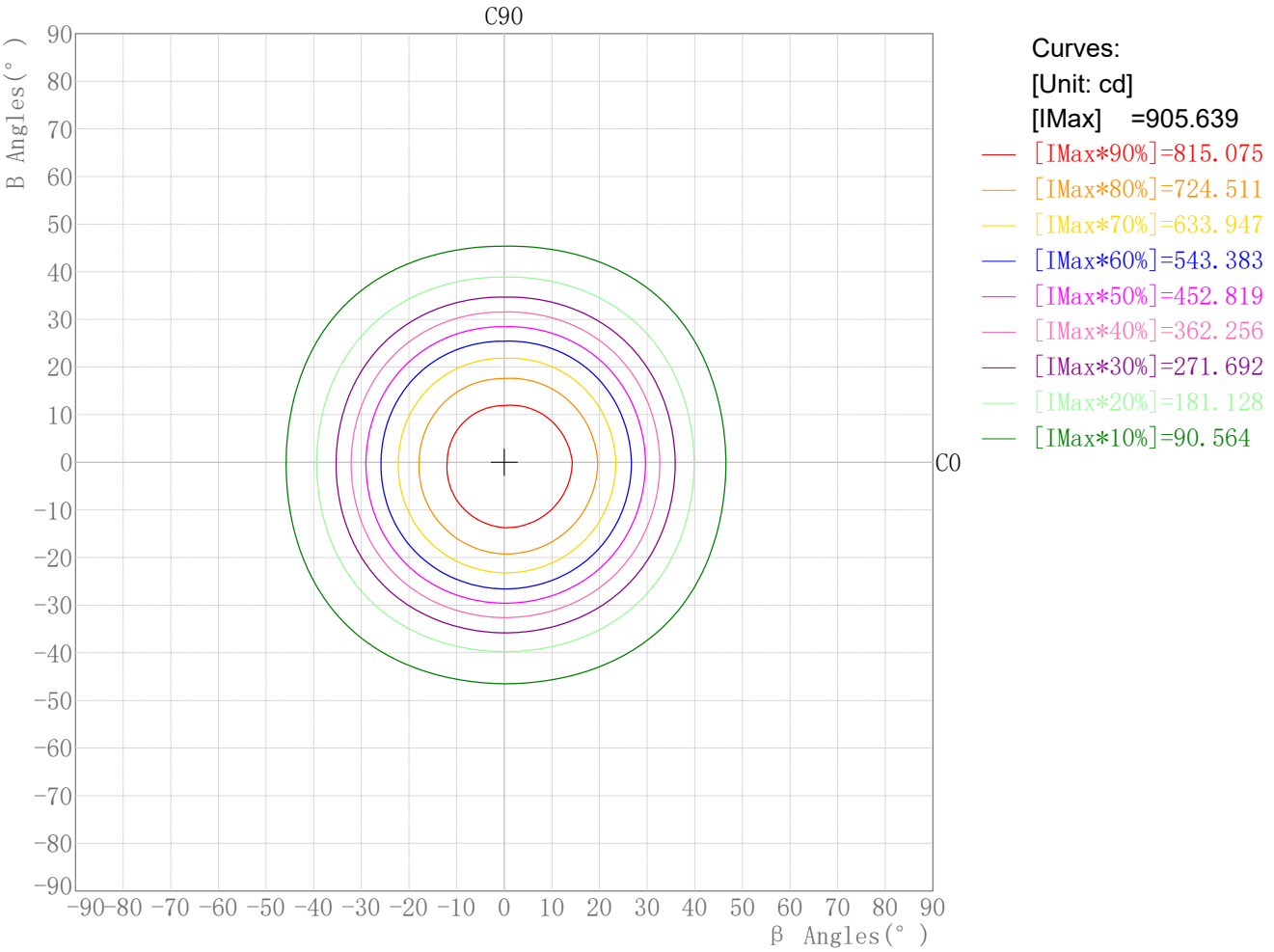
Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	21.51	21.51	2.47	2.47
5.0-10.0	62.46	83.97	7.17	9.64
10.0-15.0	97.35	181.32	11.18	20.82
15.0-20.0	122.58	303.90	14.07	34.89
20.0-25.0	133.89	437.79	15.37	50.27
25.0-30.0	127.36	565.15	14.62	64.89
30.0-35.0	104.47	669.62	11.99	76.88
35.0-40.0	75.15	744.77	8.63	85.51
40.0-45.0	50.22	794.99	5.77	91.28
45.0-50.0	30.47	825.47	3.50	94.78
50.0-55.0	15.87	841.34	1.82	96.60
55.0-60.0	9.43	850.77	1.08	97.68
60.0-65.0	6.65	857.42	0.76	98.45
65.0-70.0	4.43	861.85	0.51	98.95
70.0-75.0	3.07	864.92	0.35	99.31
75.0-80.0	1.98	866.90	0.23	99.53
80.0-85.0	1.05	867.95	0.12	99.65
85.0-90.0	0.31	868.26	0.04	99.69
90.0-95.0	0.00	868.26	0.00	99.69
95.0-100.0	0.00	868.26	0.00	99.69
100.0-105.0	0.00	868.26	0.00	99.69
105.0-110.0	0.00	868.26	0.00	99.69
110.0-115.0	0.00	868.26	0.00	99.69
115.0-120.0	0.00	868.26	0.00	99.69
120.0-125.0	0.00	868.26	0.00	99.69
125.0-130.0	0.01	868.27	0.00	99.69
130.0-135.0	0.04	868.31	0.00	99.70
135.0-140.0	0.12	868.43	0.01	99.71
140.0-145.0	0.24	868.66	0.03	99.74
145.0-150.0	0.37	869.03	0.04	99.78
150.0-155.0	0.46	869.49	0.05	99.83
155.0-160.0	0.45	869.94	0.05	99.88
160.0-165.0	0.40	870.34	0.05	99.93
165.0-170.0	0.32	870.67	0.04	99.97
170.0-175.0	0.21	870.88	0.02	99.99
175.0-180.0	0.08	870.96	0.01	100.00

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Rectangle ISO Lighting Intensity Diagram

Lum.Name: HCP-10X1201 4000K 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

ISO Lighting Intensity Curve



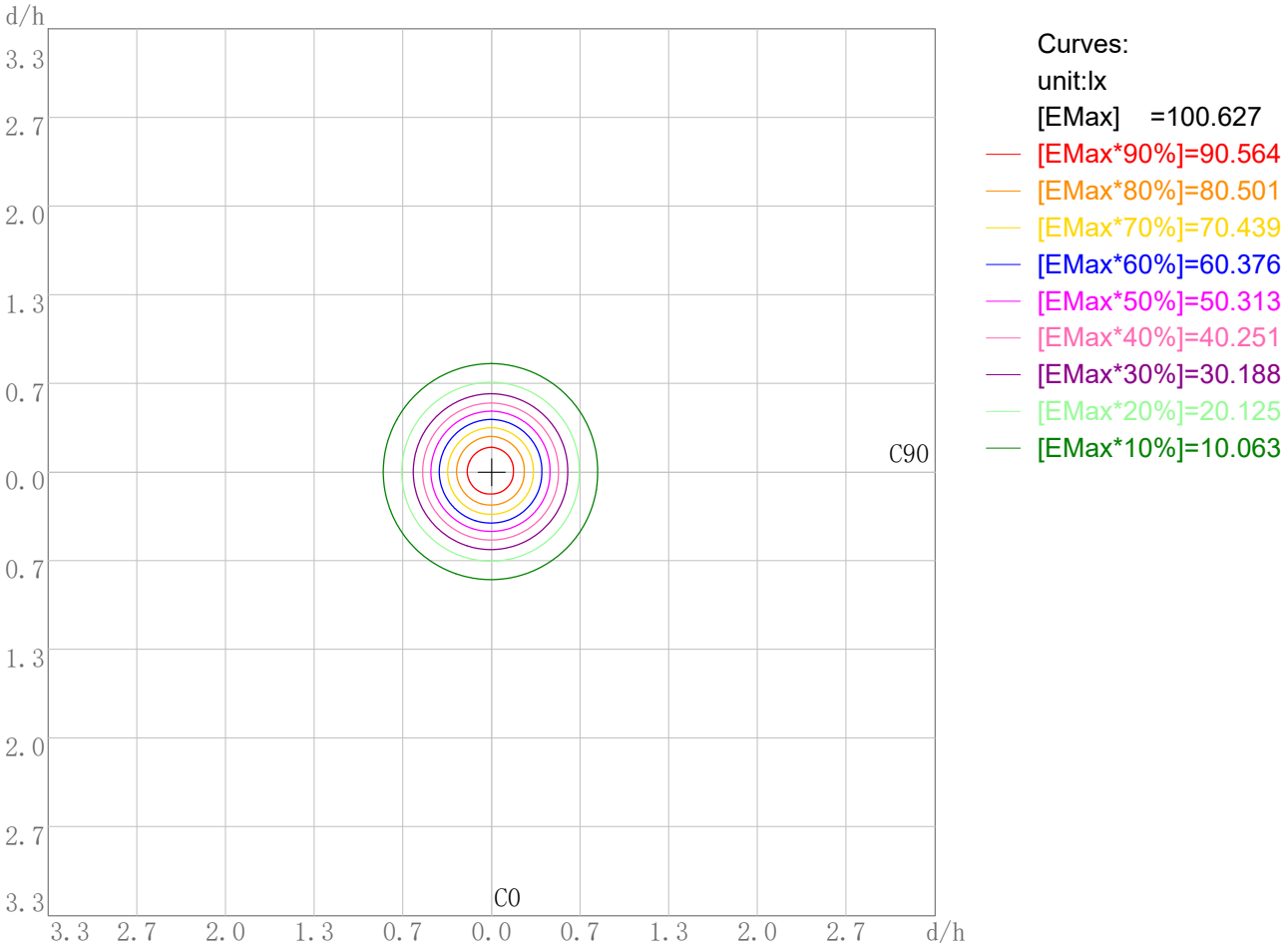
Maximum Light Intensity(cd): 905.64
Maximum Cand.@Angle: H=0.0°,V=0.0°

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Plane ISO-Illuminance Diagram

Lum.Name: HCP-10X1201 4000K 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



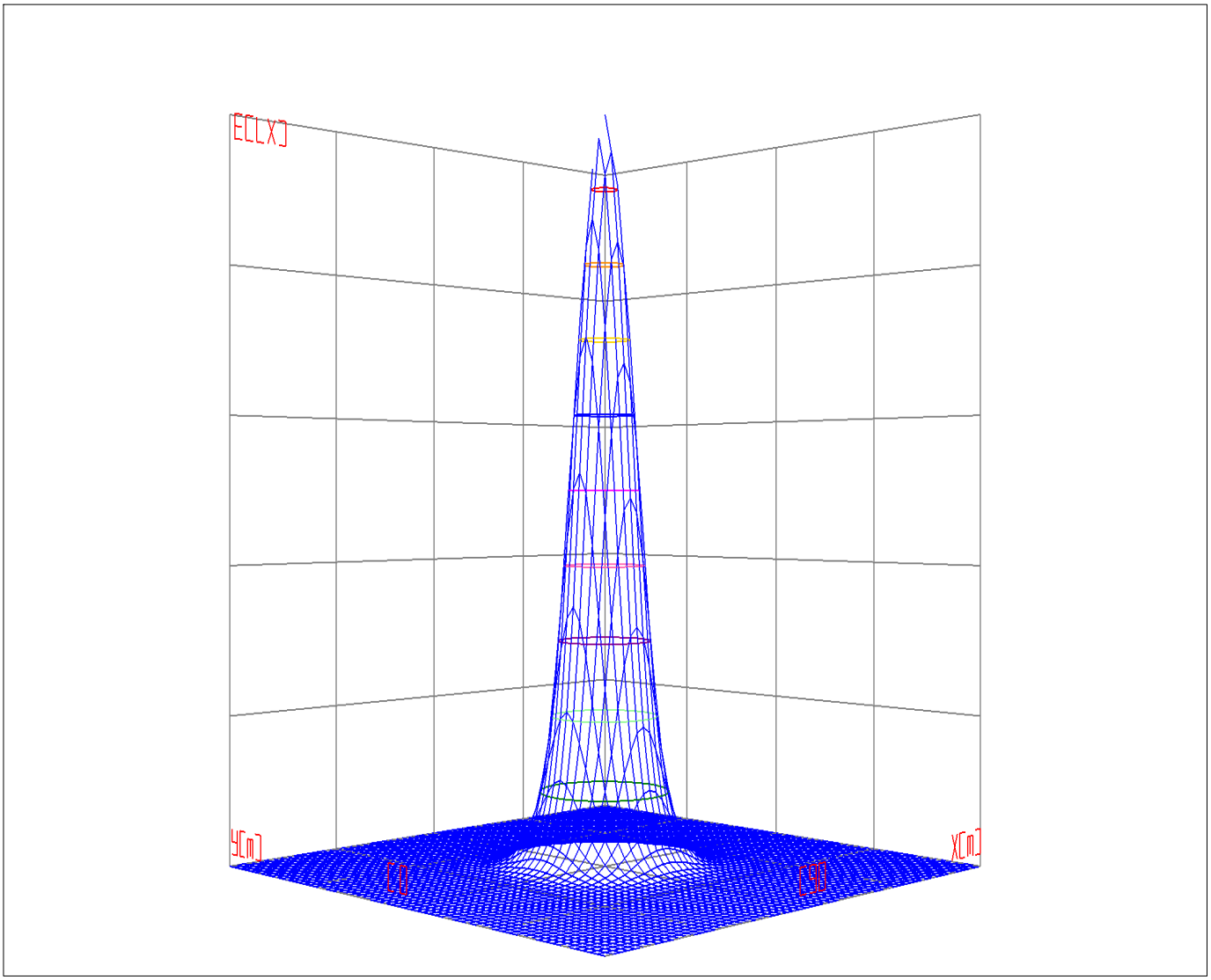
Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 100.63
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

3D Plane ISO Illuminance Diagram

Lum.Name: HCP-10X1201 4000K 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%

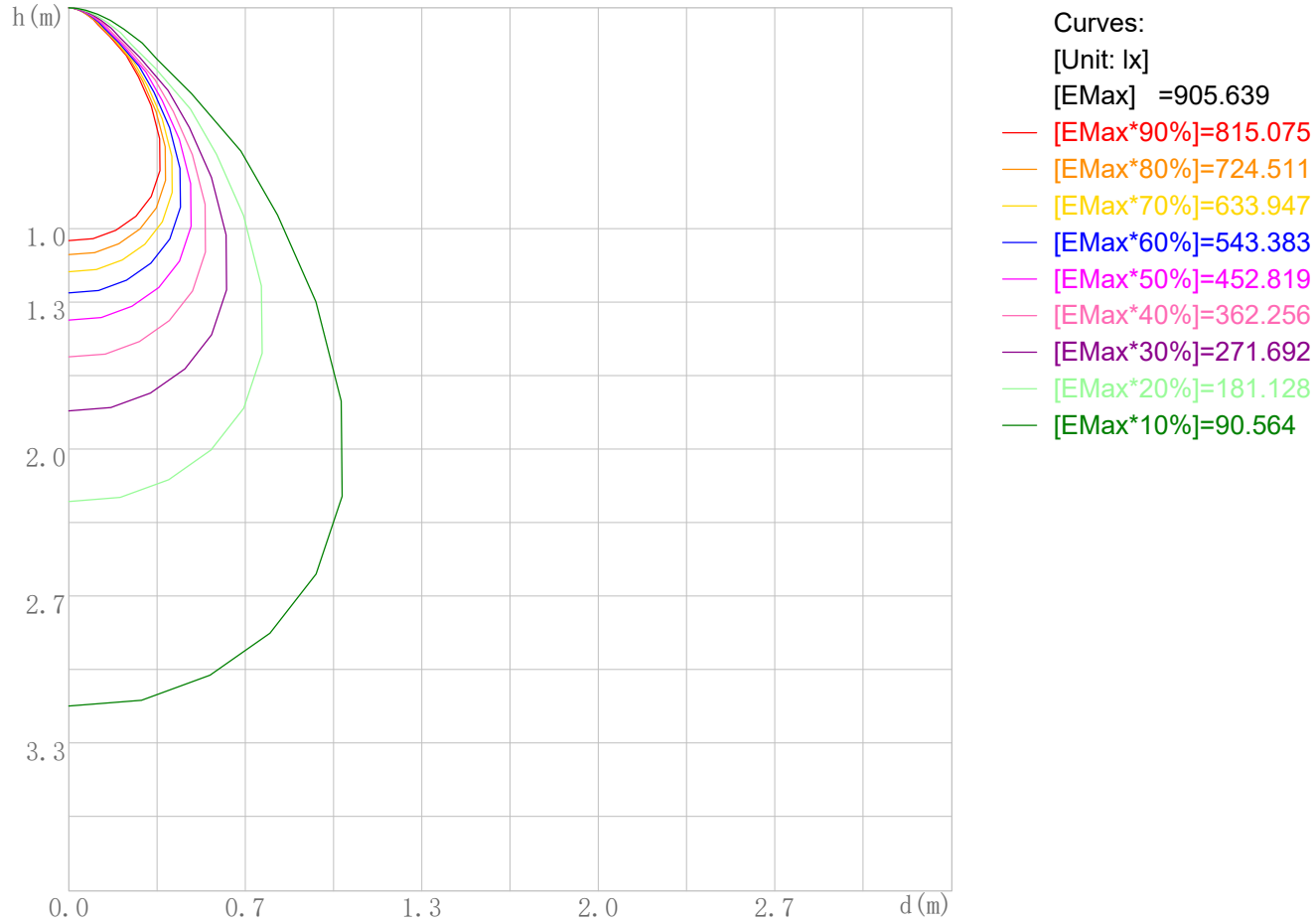
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Space ISO Illuminance Diagram

Lum.Name: HCP-10X1201 4000K 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



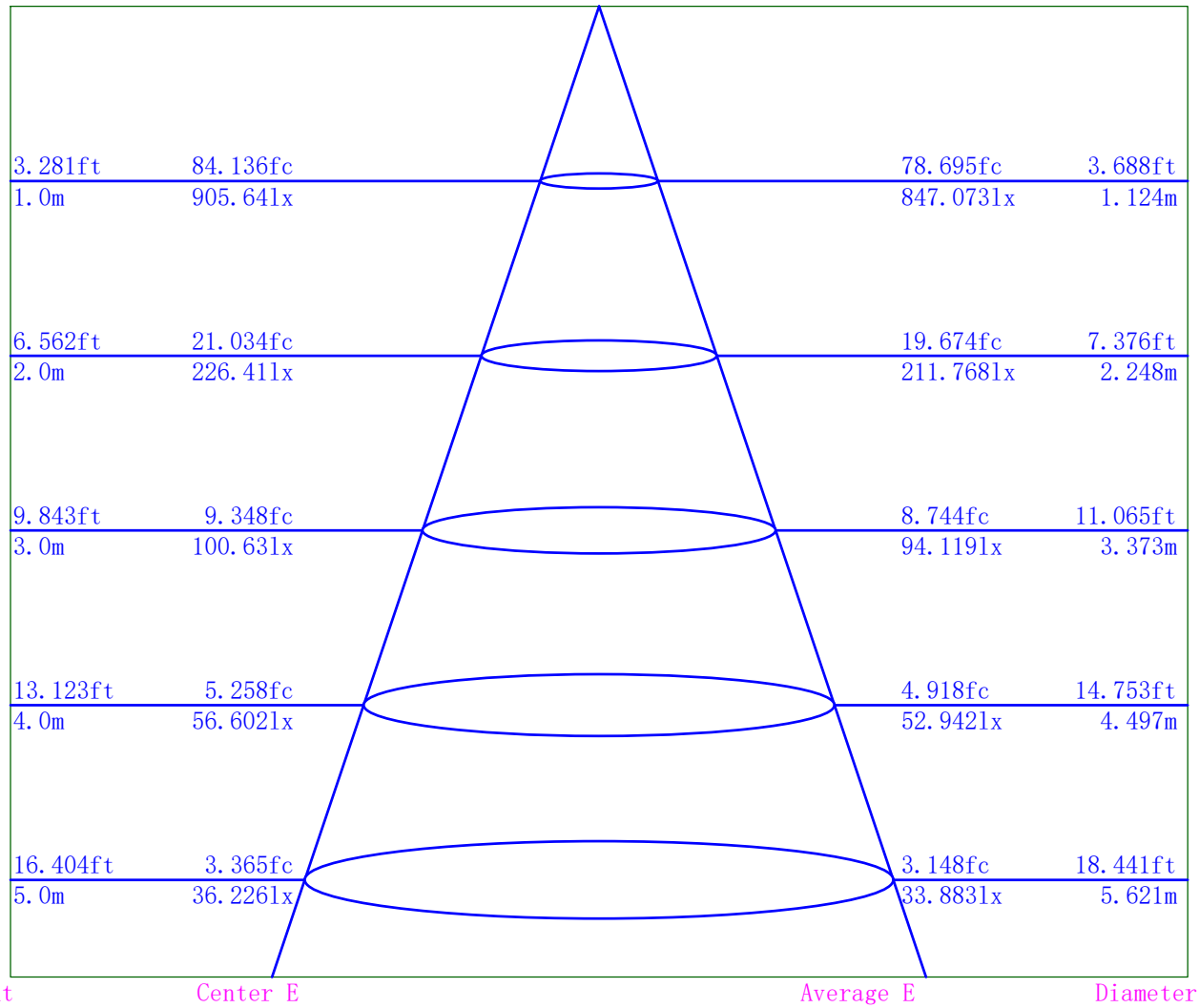
Space Plane Maximum Illuminance and @Angle:905.64lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:905.639cd,0eg

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Illuminance-Distance Diagram

Lum.Name: HCP-10X1201 4000K 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 4000K 60D.IES

Indoor Luminance Limiting Curves

Lum.Name: HCP-10X1201 4000K 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

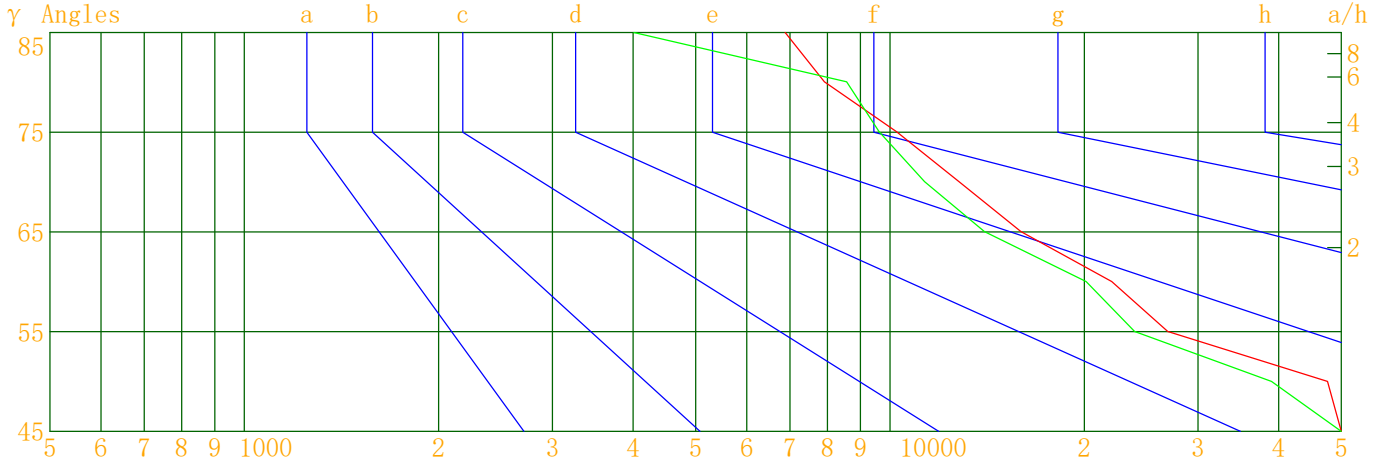
Glare Grade Table

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	90793	47601	26936	22049	15954	12793	10237	7914	6880
C90	79341	38975	23932	20131	14006	11313	9619	8568	4013

Luminance Limiting Curve



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

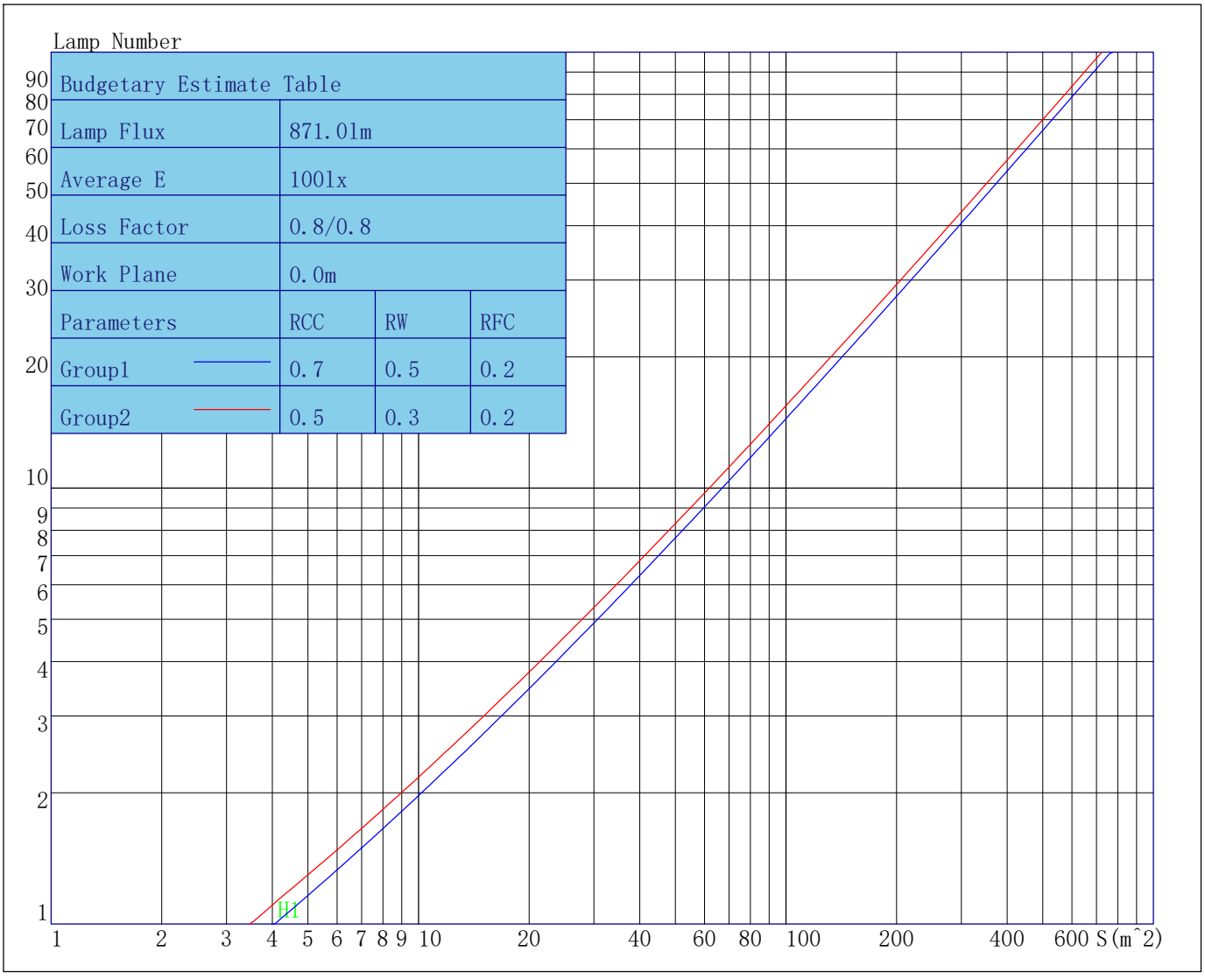
Luminous Type: Without Luminous Side

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

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Indoor Budgetary Estimate Table

Lum.Name: HCP-10X1201 4000K 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 4000K 60D.IES

Indoor Coefficient of Utilization Table

Lum.Name: HCP-10X1201 4000K 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	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	82	88	84	81	85	82	80	78
4	95	87	82	77	94	86	81	77	84	79	76	82	78	75	80	77	74	72
5	90	81	75	71	89	80	75	70	79	74	70	77	72	69	75	71	68	67
6	85	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62
7	81	71	65	60	80	71	64	60	69	64	60	68	63	60	67	62	59	58
8	77	67	61	56	76	66	60	56	65	60	56	64	59	56	63	59	55	54
9	73	63	57	53	72	62	56	52	61	56	52	60	56	52	60	55	52	50
10	69	59	53	49	68	59	53	49	58	53	49	57	52	49	56	52	49	47

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Unified Glare Rating Table

Lum.Name: HCP-10X1201 4000K 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	23.9	25.0	24.3	25.3	25.7	23.4	24.4	23.7	24.8	25.1
	Y=3H	23.9	24.9	24.3	25.2	25.6	23.3	24.3	23.7	24.6	25.0
	Y=4H	23.9	24.7	24.3	25.1	25.5	23.3	24.2	23.7	24.5	24.9
	Y=6H	23.8	24.6	24.2	25.0	25.4	23.2	24.0	23.6	24.4	24.8
	Y=8H	23.8	24.5	24.2	24.9	25.3	23.2	24.0	23.6	24.3	24.8
	Y=12H	23.7	24.4	24.2	24.8	25.3	23.1	23.9	23.6	24.3	24.7
X=4H	Y=2H	23.8	24.7	24.2	25.0	25.4	23.2	24.1	23.6	24.4	24.8
	Y=3H	23.8	24.5	24.2	24.9	25.3	23.2	23.9	23.6	24.3	24.7
	Y=4H	23.7	24.4	24.2	24.8	25.3	23.2	23.8	23.6	24.2	24.7
	Y=6H	23.7	24.3	24.2	24.7	25.2	23.2	23.7	23.6	24.2	24.6
	Y=8H	23.7	24.2	24.1	24.6	25.1	23.1	23.6	23.6	24.1	24.6
	Y=12H	23.6	24.1	24.1	24.6	25.0	23.1	23.5	23.6	24.0	24.5
X=8H	Y=4H	23.6	24.1	24.1	24.6	25.1	23.1	23.6	23.5	24.0	24.5
	Y=6H	23.6	24.0	24.1	24.5	25.0	23.1	23.5	23.6	24.0	24.5
	Y=8H	23.6	23.9	24.1	24.5	25.0	23.0	23.4	23.6	23.9	24.4
	Y=12H	23.5	23.9	24.1	24.4	24.9	23.0	23.3	23.5	23.8	24.4
X=12H	Y=4H	23.6	24.0	24.1	24.5	25.0	23.0	23.5	23.5	24.0	24.4
	Y=6H	23.5	23.9	24.1	24.4	24.9	23.0	23.4	23.5	23.9	24.4
	Y=8H	23.5	23.8	24.0	24.4	24.9	23.0	23.3	23.5	23.8	24.4
Variations with the objerver position at spacings											
S=1.0H		0.6/-0.6					0.6/-0.7				
S=1.5H		1.1/-1.2					1.0/-1.1				
S=2.0H		1.7/-1.9					1.6/-1.8				
Reduced UGR Table:											
Nordic Standard Table:		BK0					BK0				
Correction Value		0.3					0.3				

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

IES Indoor Report
Photometric Filename:HCP-10X1201 4000K 60D.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	905.64	905.64	905.64	905.64
γ 5.0	901.18	888.23	887.59	896.59
γ 10.0	866.36	840.66	841.08	862.21
γ 15.0	806.43	773.55	775.49	798.98
γ 20.0	717.97	679.00	686.53	711.55
γ 25.0	595.49	556.00	568.52	591.25
γ 30.0	442.27	406.93	424.76	440.46
γ 35.0	292.14	262.52	278.33	290.24
γ 40.0	177.74	157.87	167.37	175.51
γ 45.0	107.92	94.31	98.31	105.99
γ 50.0	51.43	42.11	48.75	54.41
γ 55.0	25.97	23.08	22.72	23.56
γ 60.0	18.53	16.92	16.08	16.33
γ 65.0	11.33	9.95	10.23	10.04
γ 70.0	7.36	6.50	7.57	7.00
γ 75.0	4.45	4.18	5.06	4.88
γ 80.0	2.31	2.50	3.16	3.06
γ 85.0	1.01	0.59	1.65	1.18
γ 90.0	0.00	0.00	0.04	0.00
γ 95.0	0.00	0.00	0.00	0.00
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	0.00	0.00
γ 120.0	0.00	0.00	0.00	0.00
γ 125.0	0.00	0.00	0.00	0.00
γ 130.0	0.00	0.00	0.21	0.00
γ 135.0	0.10	0.03	0.42	0.00
γ 140.0	0.27	0.22	1.02	0.43
γ 145.0	0.99	0.61	1.31	0.80
γ 150.0	1.25	1.44	2.13	1.61
γ 155.0	1.91	1.88	2.48	1.83
γ 160.0	2.22	2.13	2.78	1.90
γ 165.0	2.77	2.53	3.21	1.97
γ 170.0	2.94	2.94	3.02	2.49
γ 175.0	3.18	3.03	3.57	2.76
γ 180.0	3.21	3.21	3.21	3.21