IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Indoor Luminaire Photometric Data

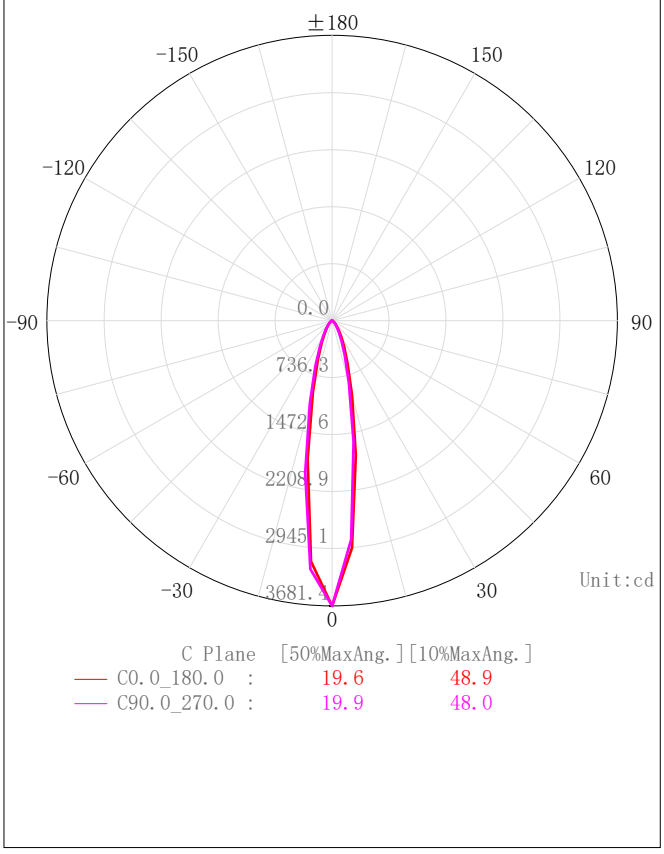
Description Information

Luminary Name: TR10-12-C5-01 4000K RA90 15D		Lum. Catelog:	Test ID: 01
Lamp Name:		Lamp Catelog: LED	Test Date: 2022/11/02
Manufacture: Shenzhen Norming Lighting		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(%):

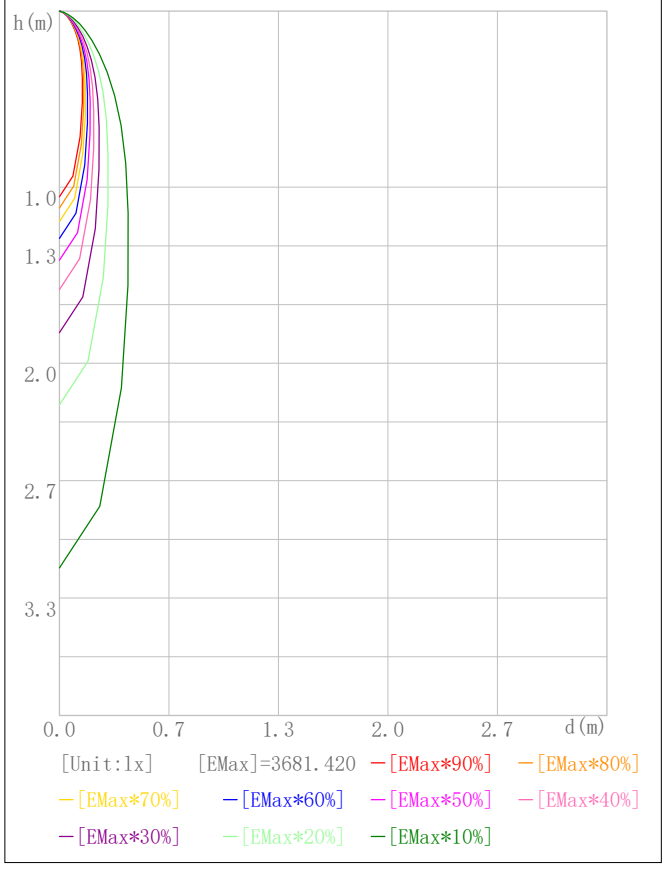
Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 865.130	Luminary Flux(lm): 865.128	Field Angle(10%Imax): 48.9(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 864.2891m 99.90%
Rated Voltage(V):	Luminary EER(lm/W): 72.154	Up Lumens&Percent: 0.8401m 0.10%
Tested Power(W): 11.990	Max.Candela(cd): 3681.420	S/MH: C0_a180=0.334 C90_270=0.337
Lamps' Inside: 1	Max Cand@Ang.(°): C=0.0 γ=0.0	CIE Type: Semi-Direct
Tested Electrics(V,A,pf):230.1,0.054	Beam Angle(50%Imax): 19.6(°)	ErP Φuse(90°): 798.983lm
Lamp Size(W*L*H):0.041m*0.041m*0.000m	Left=-9.9° ,Right=9.7°	IRF(%): 876.771

C Plane Distribution Diagram



C0 Space ISO Illuminance Curve

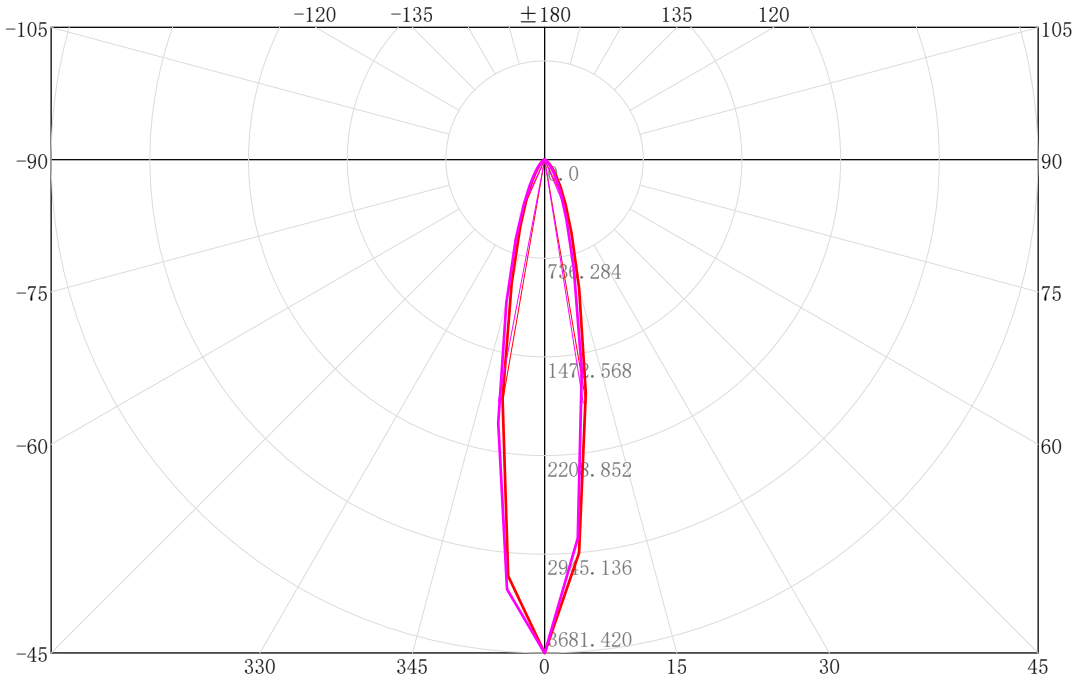


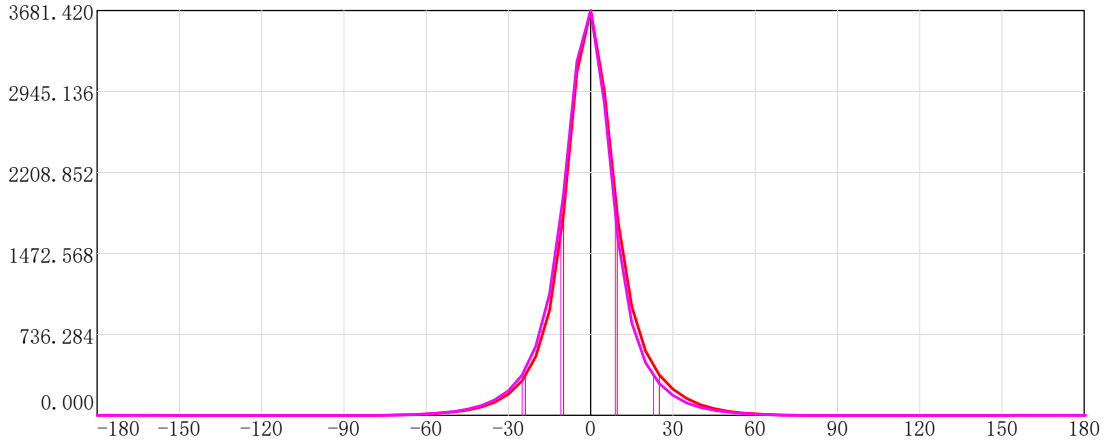
IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

2D Plane Light Intensity Distribution Curve

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

C Plane Distribution Diagram





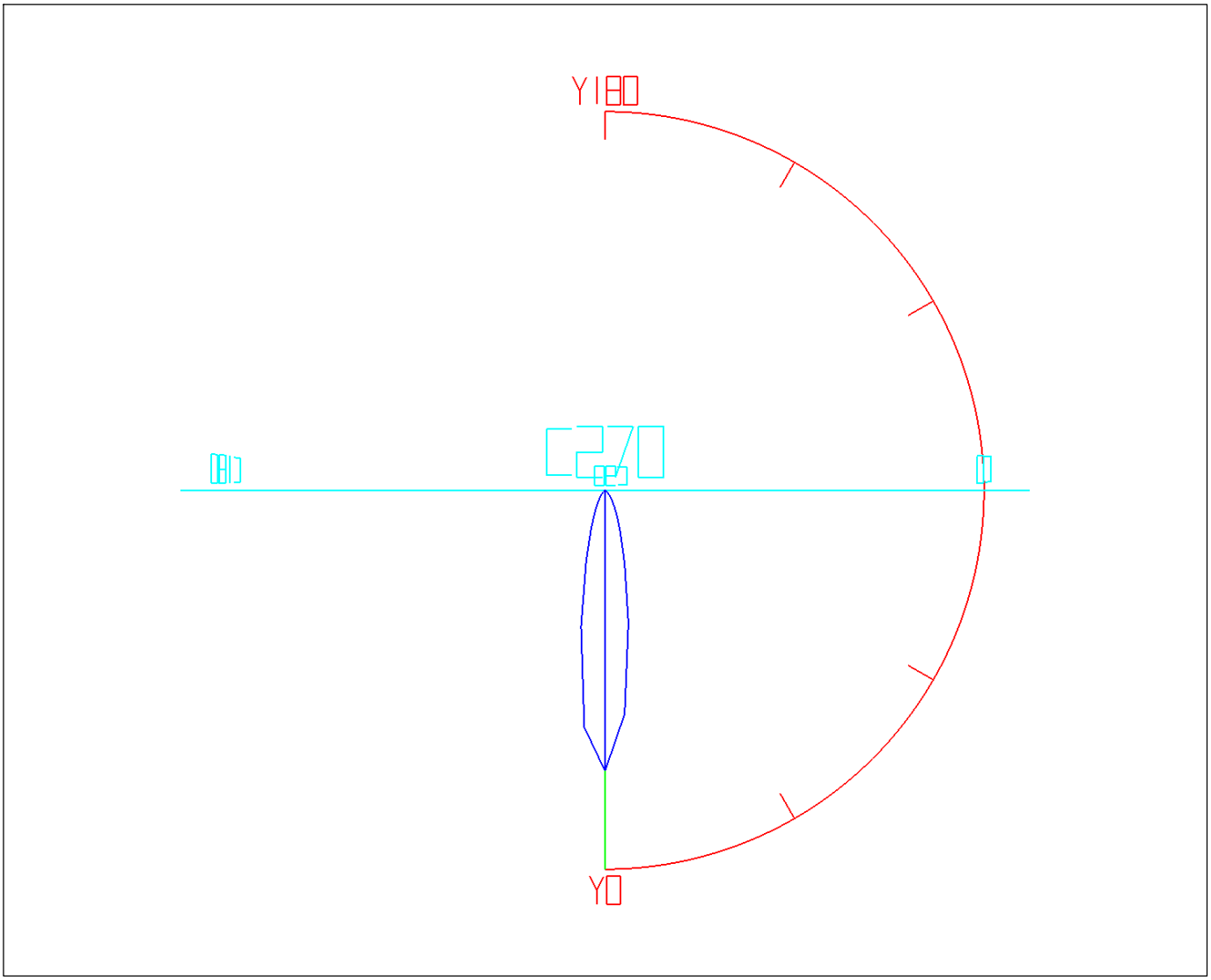
C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
C0.0_180.0 :	19.6	48.9	
C90.0_270.0 :	19.9	48.0	

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

3D Light Intensity Distribution Modal

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

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:TR10-12-C5-01 4000K RA90 15D.IES

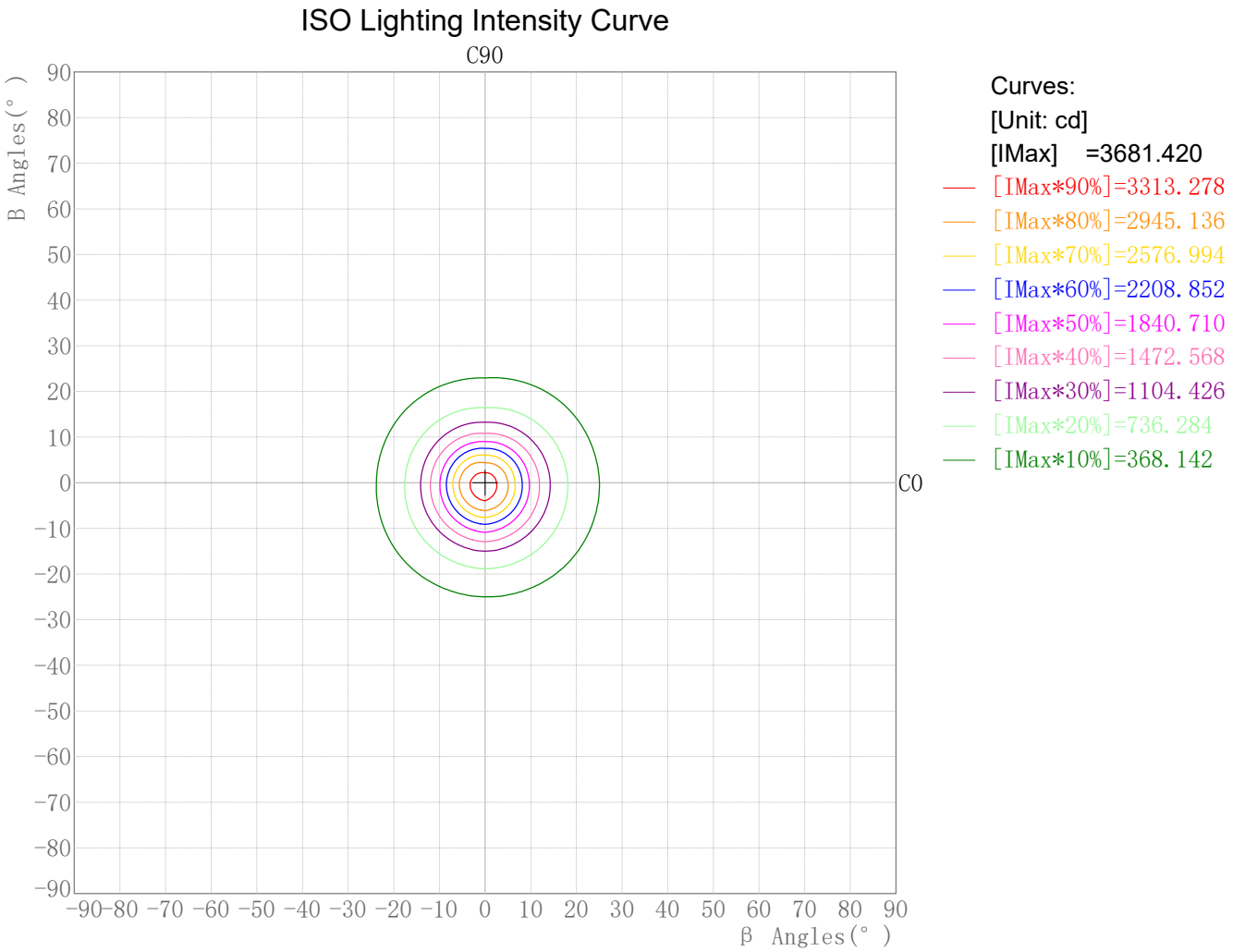
Zonal Flux Tabulation

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	80.22	80.22	9.27	9.27
5.0-10.0	172.42	252.64	19.93	29.20
10.0-15.0	163.87	416.51	18.94	48.14
15.0-20.0	125.95	542.46	14.56	62.70
20.0-25.0	93.68	636.14	10.83	73.53
25.0-30.0	69.11	705.25	7.99	81.52
30.0-35.0	50.31	755.56	5.81	87.33
35.0-40.0	35.97	791.53	4.16	91.49
40.0-45.0	25.40	816.93	2.94	94.43
45.0-50.0	17.67	834.60	2.04	96.47
50.0-55.0	12.12	846.72	1.40	97.87
55.0-60.0	8.16	854.88	0.94	98.82
60.0-65.0	5.07	859.95	0.59	99.40
65.0-70.0	2.76	862.71	0.32	99.72
70.0-75.0	1.23	863.93	0.14	99.86
75.0-80.0	0.35	864.28	0.04	99.90
80.0-85.0	0.01	864.29	0.00	99.90
85.0-90.0	0.00	864.29	0.00	99.90
90.0-95.0	0.00	864.29	0.00	99.90
95.0-100.0	0.00	864.29	0.00	99.90
100.0-105.0	0.00	864.29	0.00	99.90
105.0-110.0	0.00	864.29	0.00	99.90
110.0-115.0	0.00	864.29	0.00	99.90
115.0-120.0	0.00	864.29	0.00	99.90
120.0-125.0	0.00	864.29	0.00	99.90
125.0-130.0	0.00	864.29	0.00	99.90
130.0-135.0	0.00	864.29	0.00	99.90
135.0-140.0	0.00	864.29	0.00	99.90
140.0-145.0	0.00	864.29	0.00	99.90
145.0-150.0	0.04	864.32	0.00	99.91
150.0-155.0	0.12	864.45	0.01	99.92
155.0-160.0	0.20	864.64	0.02	99.94
160.0-165.0	0.21	864.85	0.02	99.97
165.0-170.0	0.15	865.00	0.02	99.99
170.0-175.0	0.09	865.10	0.01	100.00
175.0-180.0	0.03	865.13	0.00	100.00

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Rectangle ISO Lighting Intensity Diagram

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02



Maximum Light Intensity(cd): 3681.42

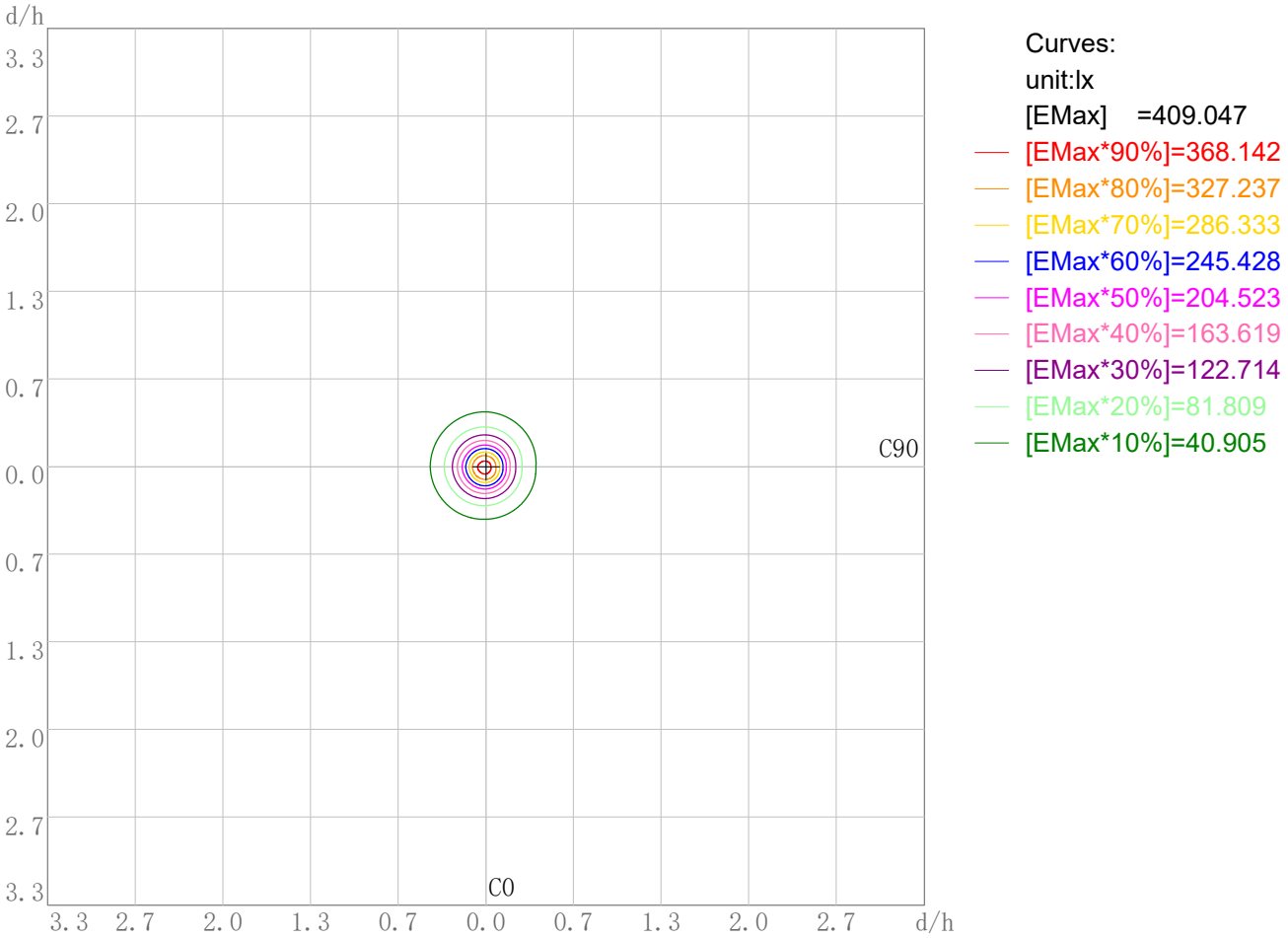
Maximum Cand.@Angle: H=0.0°,V=0.0°

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Plane ISO-Illuminance Diagram

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

Plane ISO-Illuminance Curve



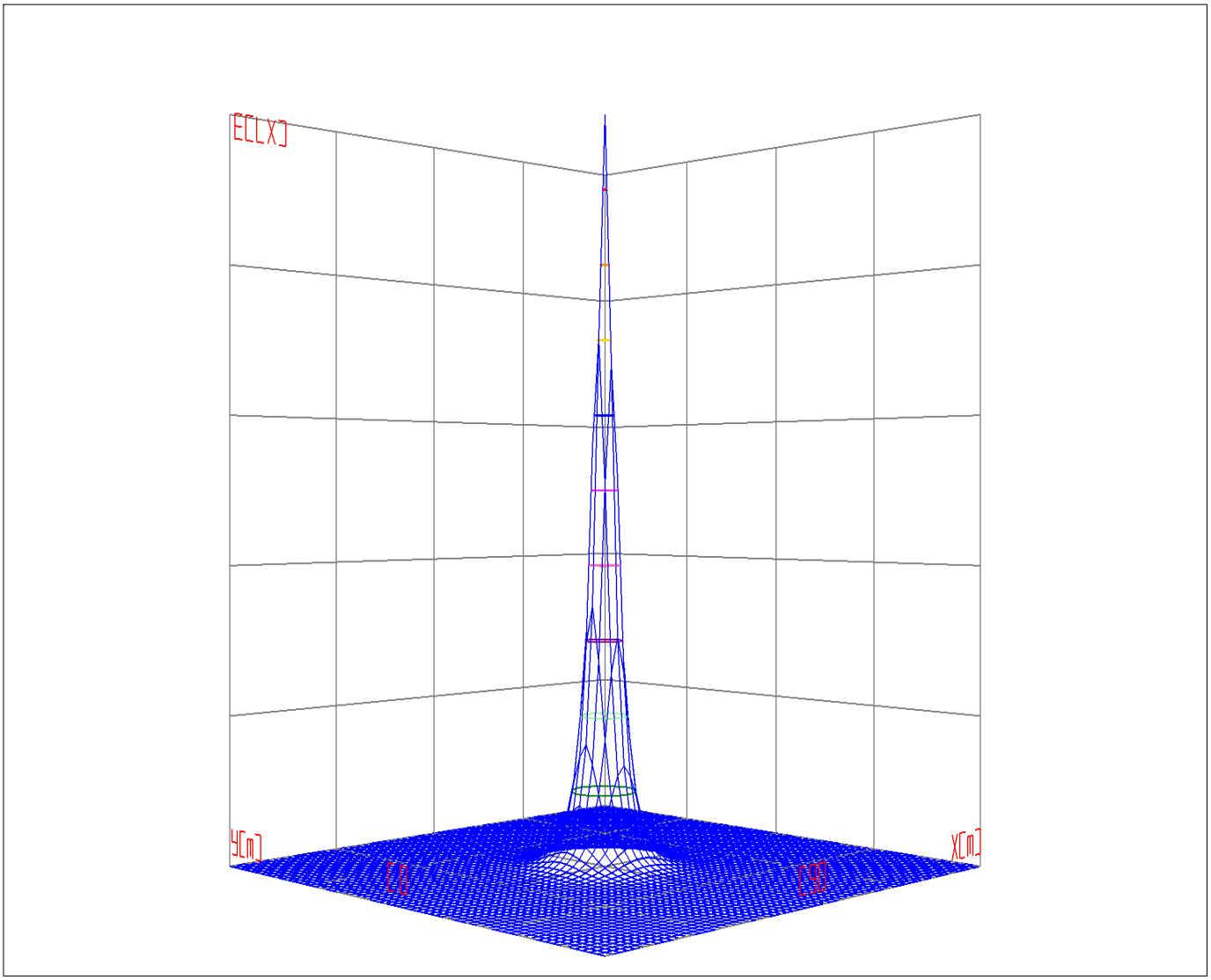
Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 409.05
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

3D Plane ISO Illuminance Diagram

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

3D Plane Illuminance Modal



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

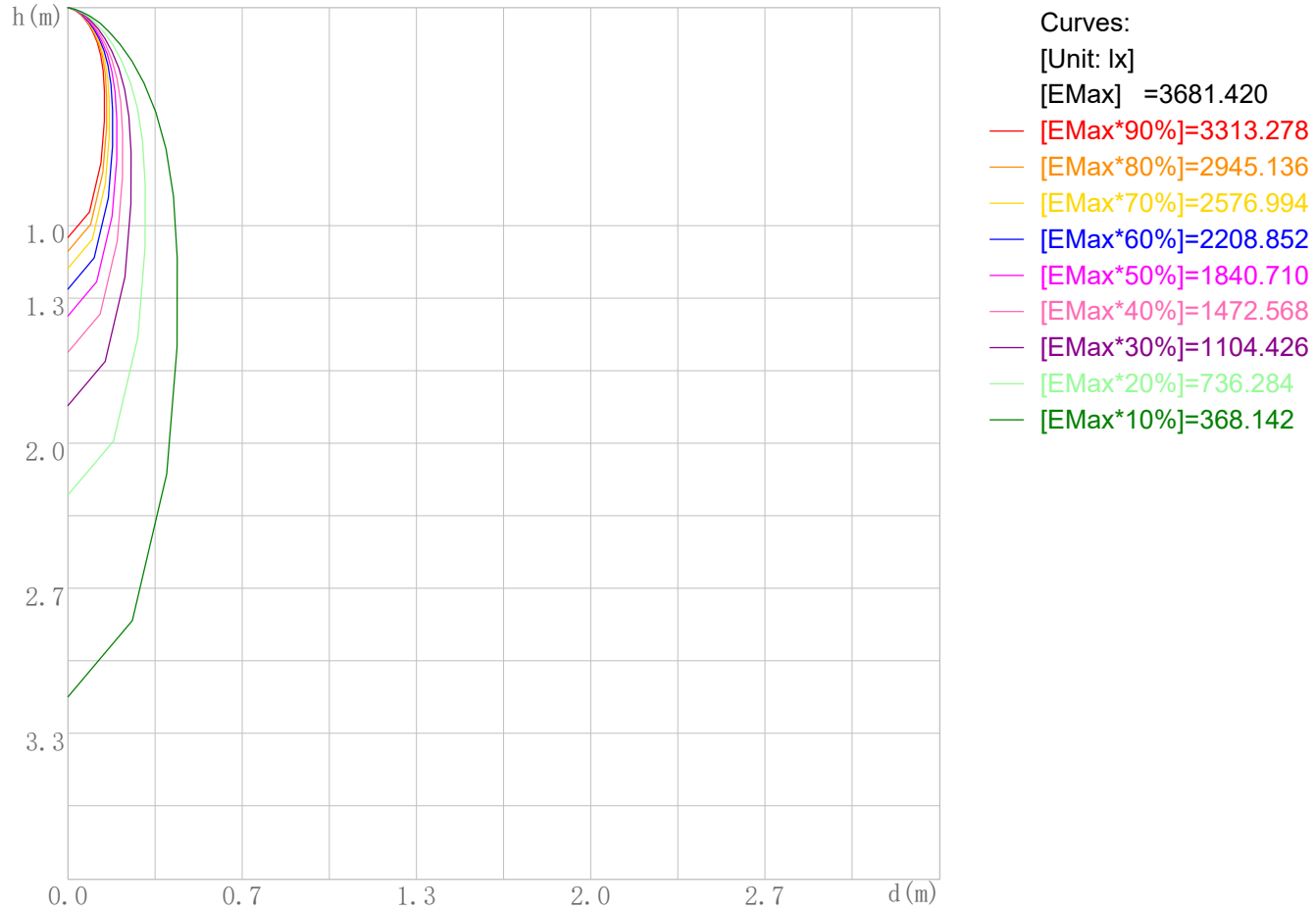
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Space ISO Illuminance Diagram

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

Space ISO Illuminance Curve



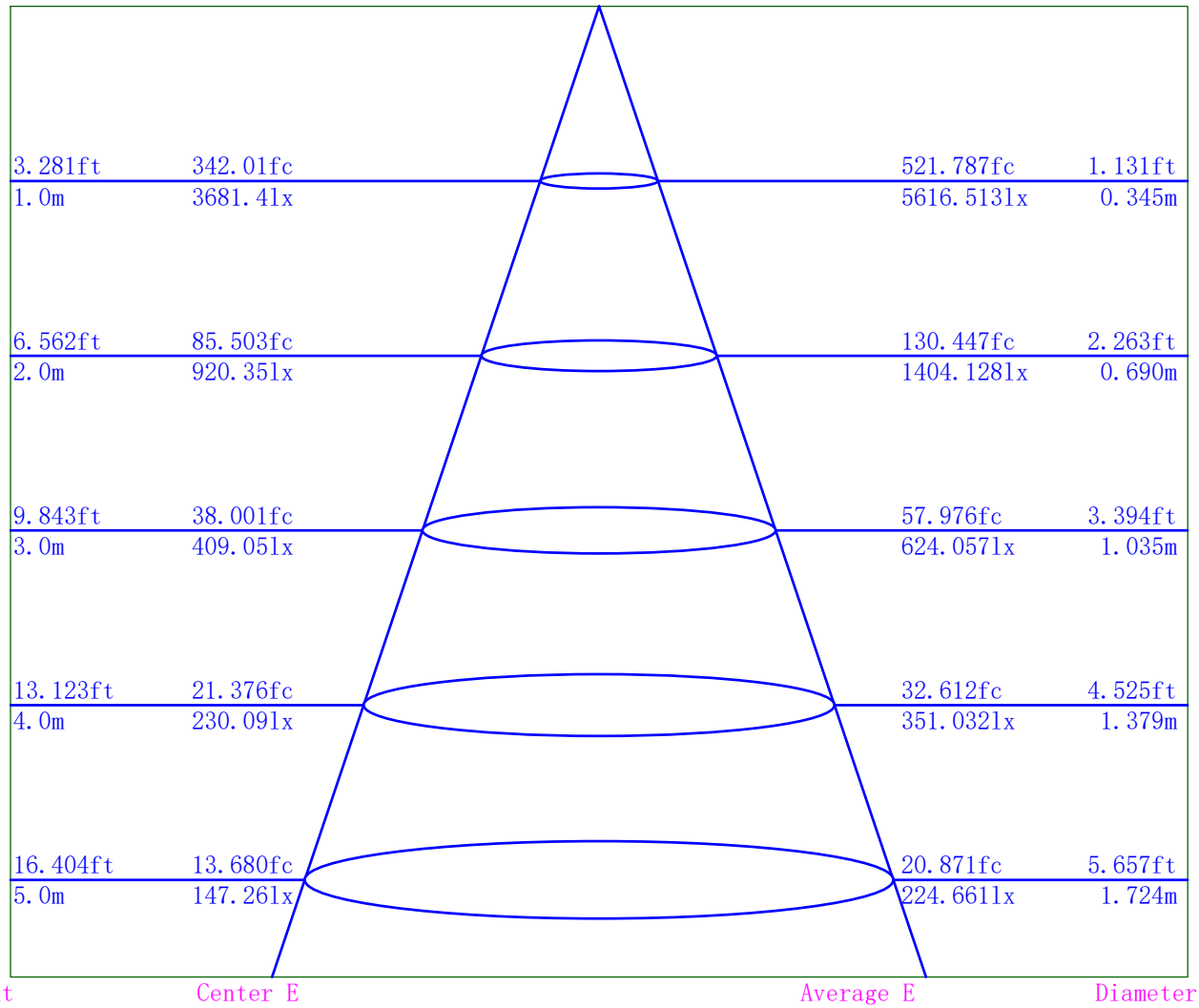
Space Plane Maximum Illuminance and @Angle:3681.42lx,0.0deg
Plane Maximum Lighting Intensity and @Angle:3681.420cd,0eg

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Illuminance-Distance Diagram

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

Illuminance-Distance Curve



Beam Angle:19.6

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Indoor Luminance Limiting Curves

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

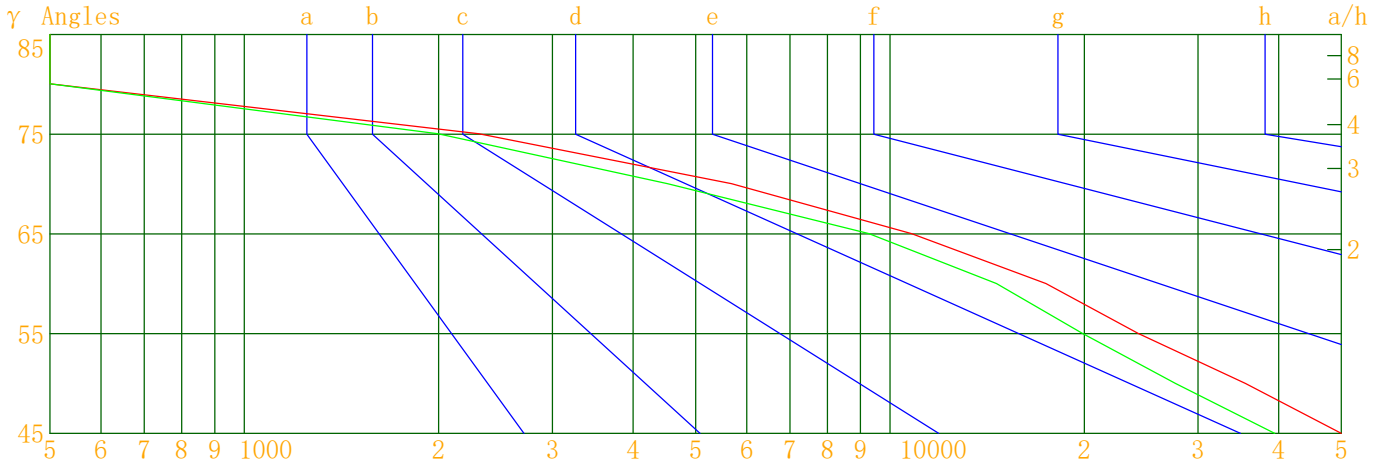
Glare Grade Table

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	52211	35524	24249	17444	10799	5684	2308	0	0
C90	39439	27682	19871	14619	9276	4522	1995	0	0

Luminance Limiting Curve



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

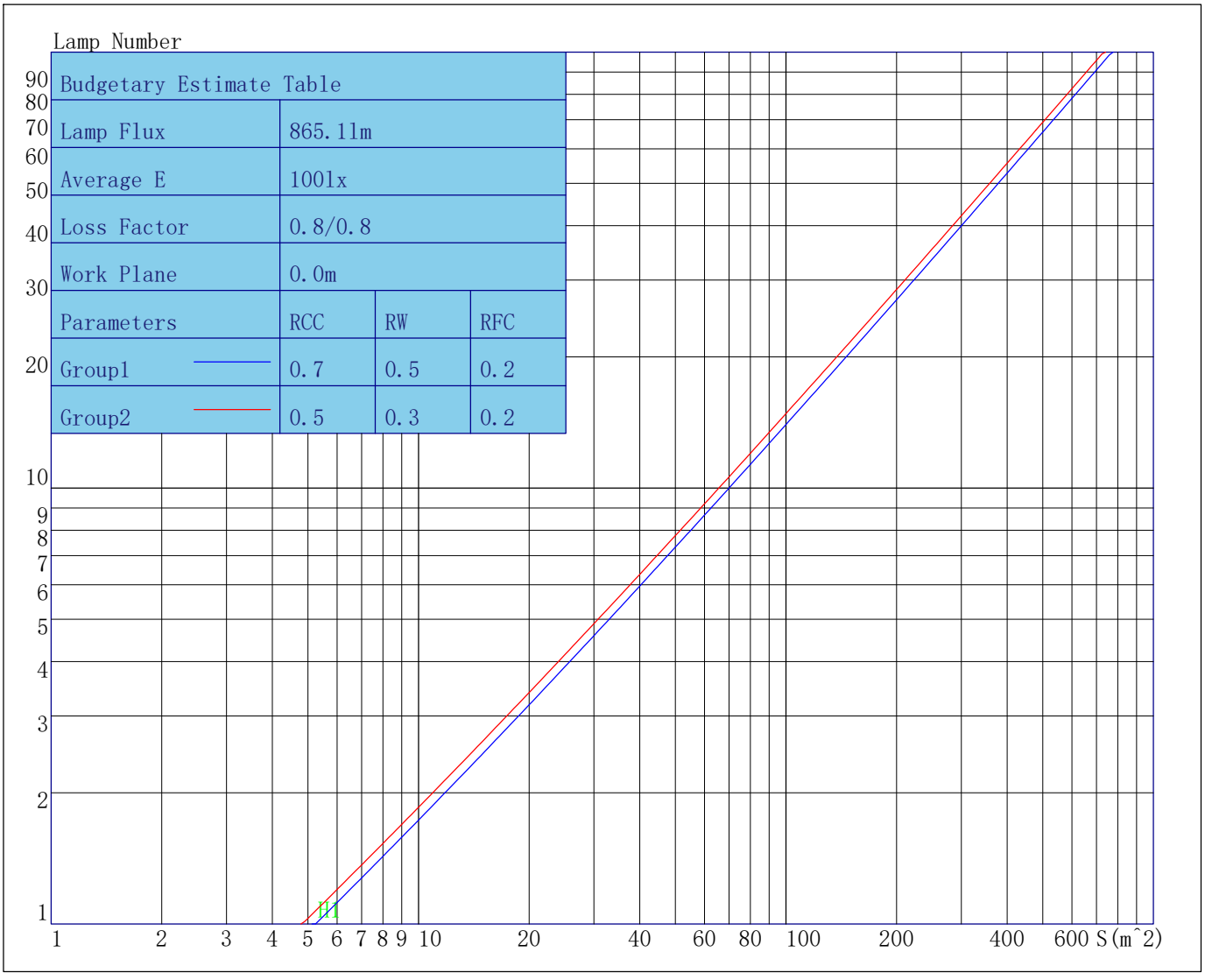
Luminous Type: Without Luminous Side

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

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Indoor Budgetary Estimate Table

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02



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:TR10-12-C5-01 4000K RA90 15D.IES

Indoor Coefficient of Utilization Table

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	110	105	102	99	107	104	100	98	100	98	96	97	95	94	95	93	92	90
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	86
4	101	94	90	86	99	93	89	86	91	88	85	89	86	84	88	85	83	81
5	97	90	85	81	96	89	84	81	87	83	80	86	82	80	84	81	79	78
6	93	86	81	77	92	85	81	77	84	80	77	82	79	76	81	78	76	74
7	90	82	77	74	89	82	77	74	81	76	73	79	76	73	78	75	73	71
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69
9	84	76	71	68	83	76	71	68	75	71	68	74	70	67	73	70	67	66
10	81	73	69	66	80	73	69	65	72	68	65	72	68	65	71	67	65	64

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Unified Glare Rating Table

Lum.Name: TR10-12-C5-01 4000K RA90 15D	Lum.Catelog:	Test ID: 01
Lamp Name:	Lamp Catelog: LED	Test Lab: Quality Department
Manufacture: Shenzhen Norming Lighting	Test Machine:GON-2000	Test Date: 2022/11/02

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	20.4	21.4	20.7	21.7	22.0	19.0	20.1	19.4	20.4	20.7
	Y=3H	20.3	21.2	20.7	21.6	21.9	19.0	19.9	19.4	20.2	20.6
	Y=4H	20.2	21.1	20.6	21.4	21.8	18.9	19.8	19.3	20.1	20.5
	Y=6H	20.1	20.9	20.5	21.3	21.7	18.8	19.6	19.2	20.0	20.4
	Y=8H	20.1	20.8	20.5	21.2	21.6	18.7	19.5	19.2	19.9	20.3
	Y=12H	20.0	20.7	20.4	21.1	21.5	18.7	19.4	19.1	19.8	20.2
X=4H	Y=2H	20.2	21.1	20.7	21.5	21.8	19.0	19.8	19.4	20.2	20.6
	Y=3H	20.2	20.9	20.6	21.3	21.7	18.9	19.6	19.4	20.0	20.5
	Y=4H	20.1	20.7	20.5	21.1	21.6	18.8	19.5	19.3	19.9	20.3
	Y=6H	20.0	20.5	20.5	21.0	21.5	18.7	19.3	19.2	19.7	20.2
	Y=8H	19.9	20.4	20.4	20.9	21.4	18.7	19.2	19.1	19.6	20.1
	Y=12H	19.8	20.3	20.3	20.8	21.3	18.6	19.0	19.1	19.5	20.0
X=8H	Y=4H	19.9	20.4	20.4	20.9	21.4	18.7	19.2	19.1	19.6	20.1
	Y=6H	19.8	20.2	20.3	20.7	21.2	18.5	19.0	19.1	19.5	20.0
	Y=8H	19.7	20.1	20.3	20.6	21.1	18.5	18.8	19.0	19.4	19.9
	Y=12H	19.7	20.0	20.2	20.5	21.1	18.4	18.7	18.9	19.2	19.8
X=12H	Y=4H	19.9	20.3	20.4	20.8	21.3	18.6	19.1	19.1	19.5	20.0
	Y=6H	19.7	20.1	20.3	20.6	21.1	18.5	18.9	19.0	19.3	19.9
	Y=8H	19.7	20.0	20.2	20.5	21.1	18.4	18.7	18.9	19.2	19.8
Variations with the objerver position at spacings											
S=1.0H		2.3/-4.2					2.3/-4.2				
S=1.5H		3.4/-5.6					3.3/-5.4				
S=2.0H		4.3/-8.5					4.3/-8.1				
Reduced UGR Table:											
Nordic Standard Table:		BK0					BK0				
Correction Value		0.2					0.2				

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

IES Indoor Report
Photometric Filename:TR10-12-C5-01 4000K RA90 15D.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
γ 0.0	3681.42	3681.42	3681.42	3681.42
γ 5.0	2944.70	2835.03	3118.32	3217.11
γ 10.0	1764.92	1595.33	1811.04	1992.91
γ 15.0	989.71	839.18	952.68	1104.57
γ 20.0	584.88	478.72	535.19	628.12
γ 25.0	369.70	291.66	316.31	368.18
γ 30.0	238.98	181.55	193.77	224.17
γ 35.0	154.54	113.59	119.46	140.44
γ 40.0	98.06	72.23	75.11	88.94
γ 45.0	62.06	46.88	48.65	56.84
γ 50.0	38.38	29.91	31.46	35.59
γ 55.0	23.38	19.16	21.41	23.68
γ 60.0	14.66	12.29	12.94	13.71
γ 65.0	7.67	6.59	7.67	7.89
γ 70.0	3.27	2.60	3.90	3.94
γ 75.0	1.00	0.87	1.89	1.29
γ 80.0	0.00	0.00	0.13	0.00
γ 85.0	0.00	0.00	0.00	0.00
γ 90.0	0.00	0.00	0.00	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	0.00	0.00
γ 135.0	0.00	0.00	0.00	0.00
γ 140.0	0.00	0.00	0.00	0.00
γ 145.0	0.00	0.00	0.00	0.00
γ 150.0	0.00	0.39	0.57	0.00
γ 155.0	0.79	0.89	0.84	0.35
γ 160.0	0.95	1.37	1.18	1.11
γ 165.0	1.33	1.36	1.65	1.19
γ 170.0	1.14	1.36	1.34	0.99
γ 175.0	1.69	1.32	1.23	1.25
γ 180.0	1.34	1.34	1.34	1.34