

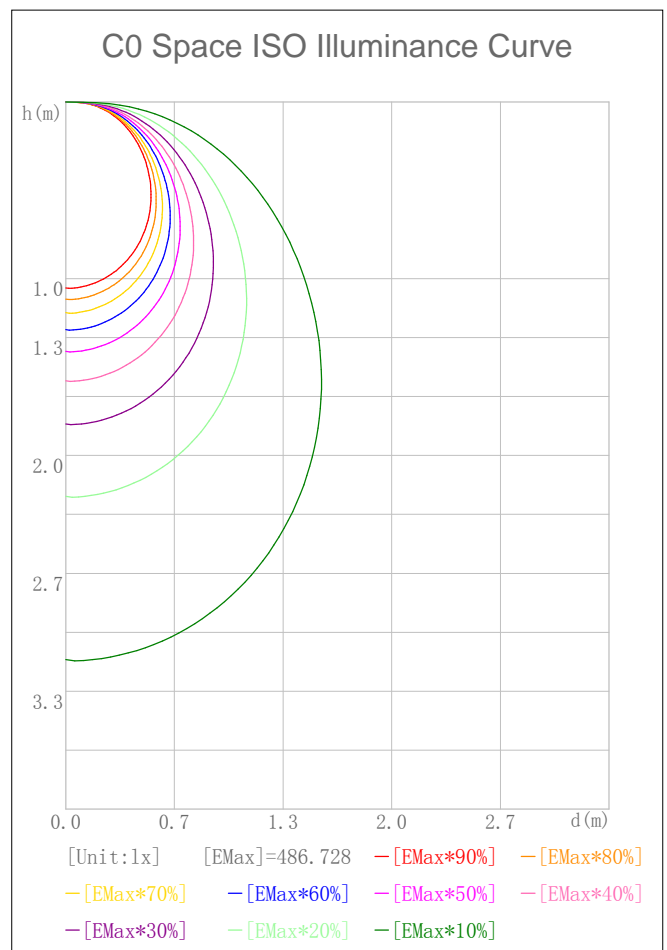
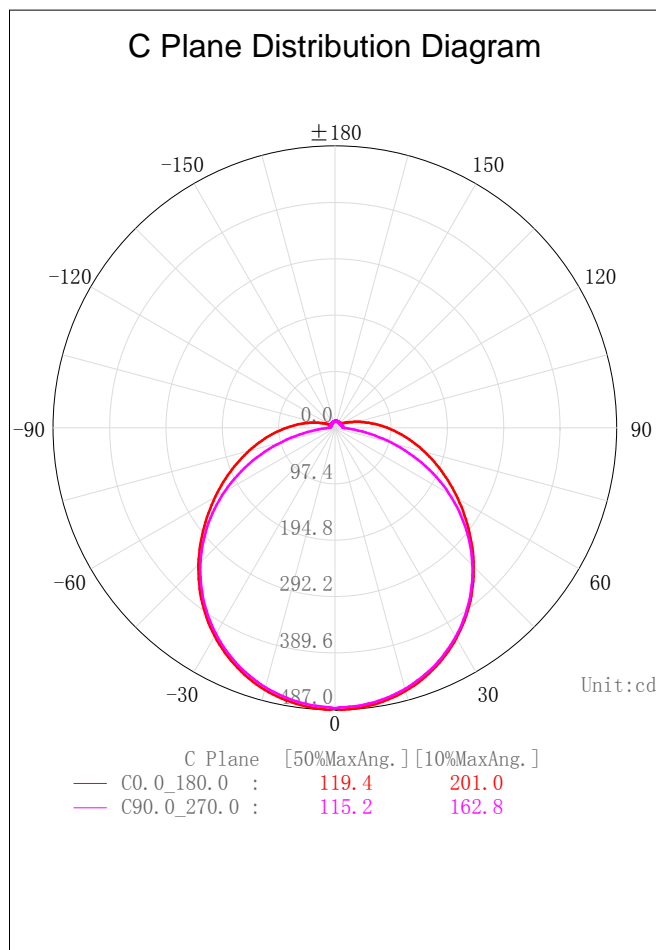
**Indoor Luminaire Photometric Data**

**Description Information**

Luminary Name: 20W 3000K		Lum. Catalog:	Test ID: 001
Lamp Name:		Lamp Catalog: LED	Test Date: 2019/04/12
Manufacture:		Shld. Ang(°):	Test Machine:GON-2000
Test Lab: Volnic IES	Frequency (Hz):		Lamp CCT (K): Ra:
Lum. Size (W*L*H): 0.075m*1.200m*0.000m		Lum. Area (m2): 0.090	Lum. W (kg): 0.500
Test System: C, γ	Test Step: C=30.0 γ=1.0	Temp. (°C): 25	Humidity (%): 50.0

**Character Parameter**

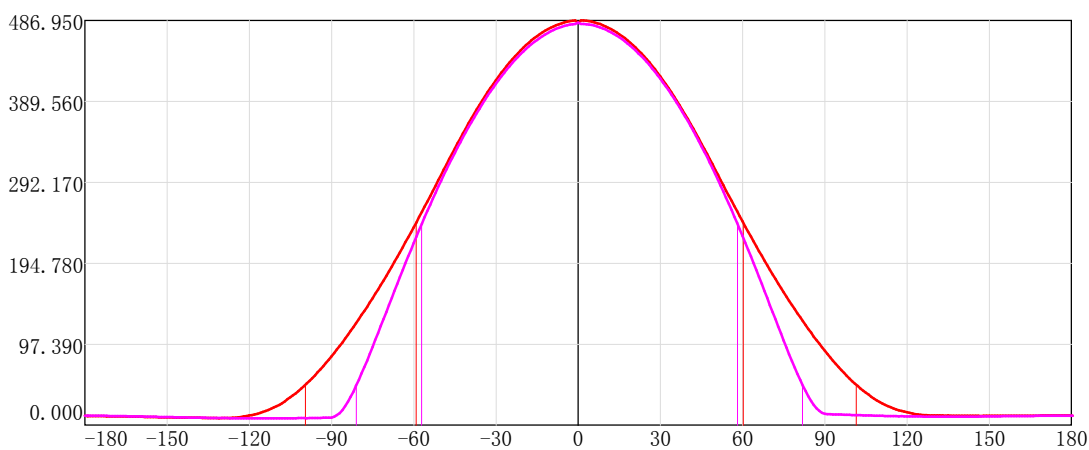
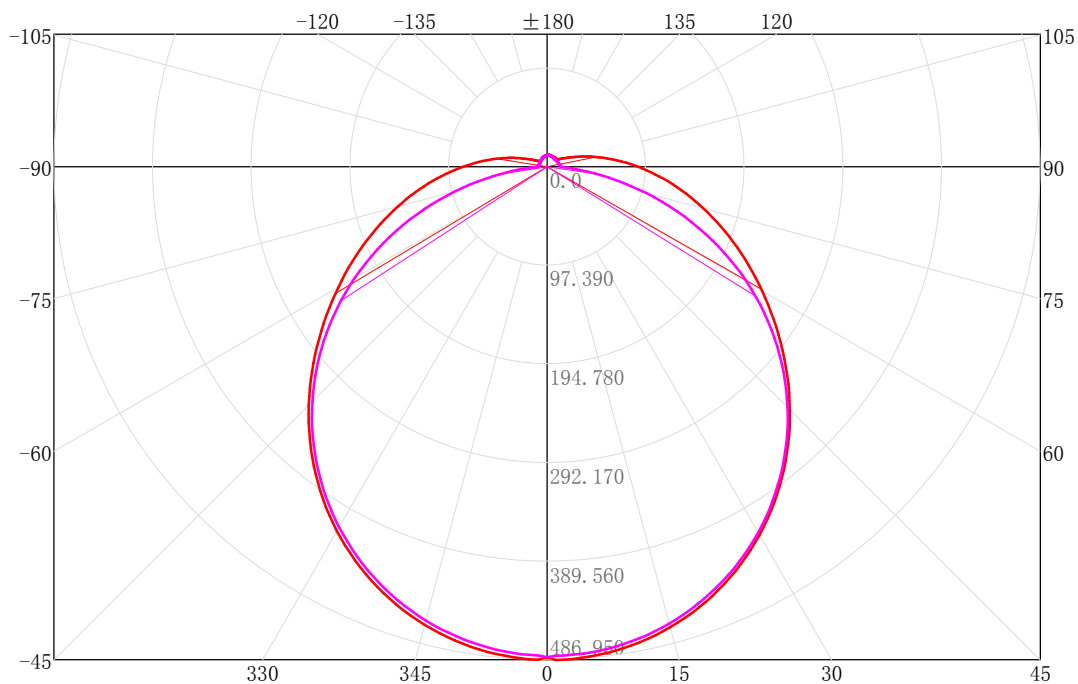
Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 1641.170	Luminary Flux(lm): 1641.167	Field Angle(10%Imax): 201.0(°)	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 1529.034lm 93.17%	
Rated Voltage(V):	Luminary EER(lm/W): 82.140	Up Lumens&Percent: 112.133lm 6.83%	
Tested Power(W): 19.980	Max. Candela(cd): 486.950	S/MH: C0_a180=1.280 C90_270=1.270	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=1.0	CIE Type: Semi-Direct	
Tested Electrics (V, A, pf): 240.0, 0.098, 0.847	Beam Angle(50%Imax): 119.4(°)	ErP Φuse(120°): 1116.699lm	
Lamp Size (W*L*H): 0.075m*1.200m*0.000m	Left=-59.1°, Right=60.3°	IRF (%): 107.121	



**2D Plane Light Intensity Distribution Curve**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

**C Plane Distribution Diagram**

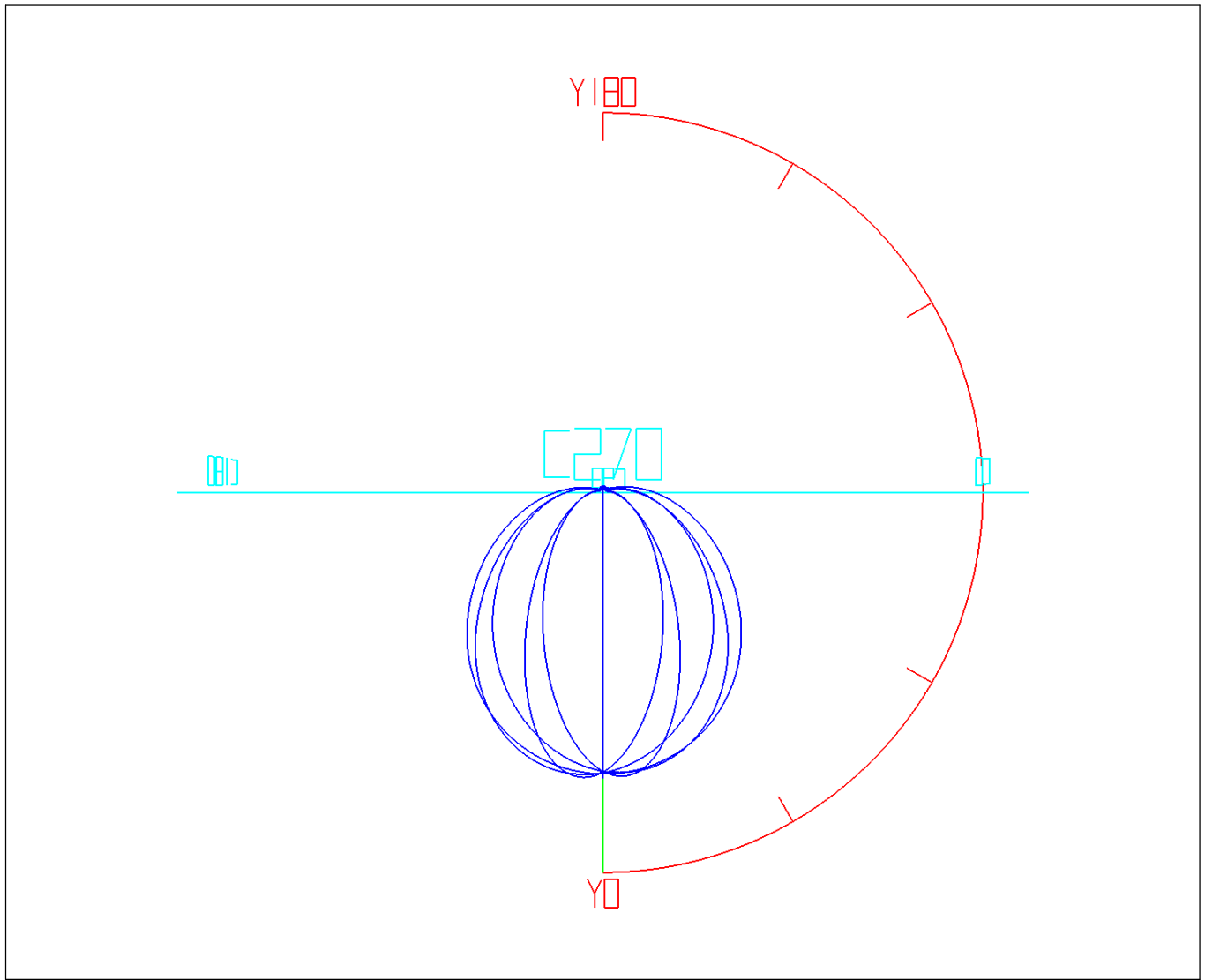


	C Plane	[50%MaxAng. ]	[10%MaxAng. ]	Unit:cd
—	C0_0_180.0 :	119.4	201.0	
—	C90_0_270.0 :	115.2	162.8	

### 3D Light Intensity Distribution Modal

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

### 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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**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Zonal Flux Tabulation**

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp	Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-1.0	0.46	0.46	0.03	0.03	47.0-48.0	25.60	828.22	1.56	50.47
1.0-2.0	1.39	1.85	0.08	0.11	48.0-49.0	25.47	853.70	1.55	52.02
2.0-3.0	2.31	4.16	0.14	0.25	49.0-50.0	25.31	879.01	1.54	53.56
3.0-4.0	3.23	7.39	0.20	0.45	50.0-51.0	25.11	904.12	1.53	55.09
4.0-5.0	4.15	11.54	0.25	0.70	51.0-52.0	24.89	929.01	1.52	56.61
5.0-6.0	5.06	16.60	0.31	1.01	52.0-53.0	24.63	953.64	1.50	58.11
6.0-7.0	5.96	22.56	0.36	1.37	53.0-54.0	24.35	977.99	1.48	59.59
7.0-8.0	6.86	29.42	0.42	1.79	54.0-55.0	24.05	1002.04	1.47	61.06
8.0-9.0	7.75	37.17	0.47	2.27	55.0-56.0	23.71	1025.75	1.44	62.50
9.0-10.0	8.63	45.80	0.53	2.79	56.0-57.0	23.35	1049.11	1.42	63.92
10.0-11.0	9.49	55.29	0.58	3.37	57.0-58.0	22.97	1072.08	1.40	65.32
11.0-12.0	10.35	65.64	0.63	4.00	58.0-59.0	22.56	1094.64	1.37	66.70
12.0-13.0	11.19	76.83	0.68	4.68	59.0-60.0	22.13	1116.77	1.35	68.05
13.0-14.0	12.02	88.85	0.73	5.41	60.0-61.0	21.69	1138.46	1.32	69.37
14.0-15.0	12.83	101.68	0.78	6.20	61.0-62.0	21.22	1159.68	1.29	70.66
15.0-16.0	13.62	115.30	0.83	7.03	62.0-63.0	20.73	1180.42	1.26	71.93
16.0-17.0	14.40	129.70	0.88	7.90	63.0-64.0	20.23	1200.64	1.23	73.16
17.0-18.0	15.16	144.87	0.92	8.83	64.0-65.0	19.70	1220.35	1.20	74.36
18.0-19.0	15.90	160.77	0.97	9.80	65.0-66.0	19.17	1239.52	1.17	75.53
19.0-20.0	16.62	177.39	1.01	10.81	66.0-67.0	18.63	1258.15	1.13	76.66
20.0-21.0	17.32	194.71	1.06	11.86	67.0-68.0	18.07	1276.21	1.10	77.76
21.0-22.0	18.00	212.71	1.10	12.96	68.0-69.0	17.50	1293.72	1.07	78.83
22.0-23.0	18.65	231.36	1.14	14.10	69.0-70.0	16.92	1310.63	1.03	79.86
23.0-24.0	19.28	250.64	1.17	15.27	70.0-71.0	16.33	1326.97	1.00	80.85
24.0-25.0	19.88	270.52	1.21	16.48	71.0-72.0	15.75	1342.71	0.96	81.81
25.0-26.0	20.46	290.98	1.25	17.73	72.0-73.0	15.15	1357.87	0.92	82.74
26.0-27.0	21.01	312.00	1.28	19.01	73.0-74.0	14.56	1372.43	0.89	83.62
27.0-28.0	21.54	333.54	1.31	20.32	74.0-75.0	13.96	1386.39	0.85	84.48
28.0-29.0	22.04	355.57	1.34	21.67	75.0-76.0	13.37	1399.76	0.81	85.29
29.0-30.0	22.51	378.08	1.37	23.04	76.0-77.0	12.77	1412.53	0.78	86.07
30.0-31.0	22.95	401.03	1.40	24.44	77.0-78.0	12.18	1424.71	0.74	86.81
31.0-32.0	23.36	424.38	1.42	25.86	78.0-79.0	11.61	1436.32	0.71	87.52
32.0-33.0	23.74	448.12	1.45	27.31	79.0-80.0	11.03	1447.35	0.67	88.19
33.0-34.0	24.09	472.21	1.47	28.77	80.0-81.0	10.47	1457.82	0.64	88.83
34.0-35.0	24.40	496.61	1.49	30.26	81.0-82.0	9.91	1467.72	0.60	89.43
35.0-36.0	24.69	521.30	1.50	31.76	82.0-83.0	9.36	1477.09	0.57	90.00
36.0-37.0	24.95	546.25	1.52	33.28	83.0-84.0	8.84	1485.92	0.54	90.54
37.0-38.0	25.17	571.43	1.53	34.82	84.0-85.0	8.33	1494.25	0.51	91.05
38.0-39.0	25.36	596.79	1.55	36.36	85.0-86.0	7.84	1502.09	0.48	91.53
39.0-40.0	25.52	622.31	1.56	37.92	86.0-87.0	7.37	1509.46	0.45	91.97
40.0-41.0	25.64	647.96	1.56	39.48	87.0-88.0	6.93	1516.39	0.42	92.40
41.0-42.0	25.74	673.69	1.57	41.05	88.0-89.0	6.51	1522.90	0.40	92.79
42.0-43.0	25.80	699.49	1.57	42.62	89.0-90.0	6.13	1529.03	0.37	93.17
43.0-44.0	25.83	725.32	1.57	44.20	90.0-91.0	5.77	1534.81	0.35	93.52
44.0-45.0	25.82	751.14	1.57	45.77	91.0-92.0	5.43	1540.24	0.33	93.85
45.0-46.0	25.78	776.91	1.57	47.34	92.0-93.0	5.11	1545.35	0.31	94.16
46.0-47.0	25.71	802.62	1.57	48.91	93.0-94.0	4.79	1550.14	0.29	94.45

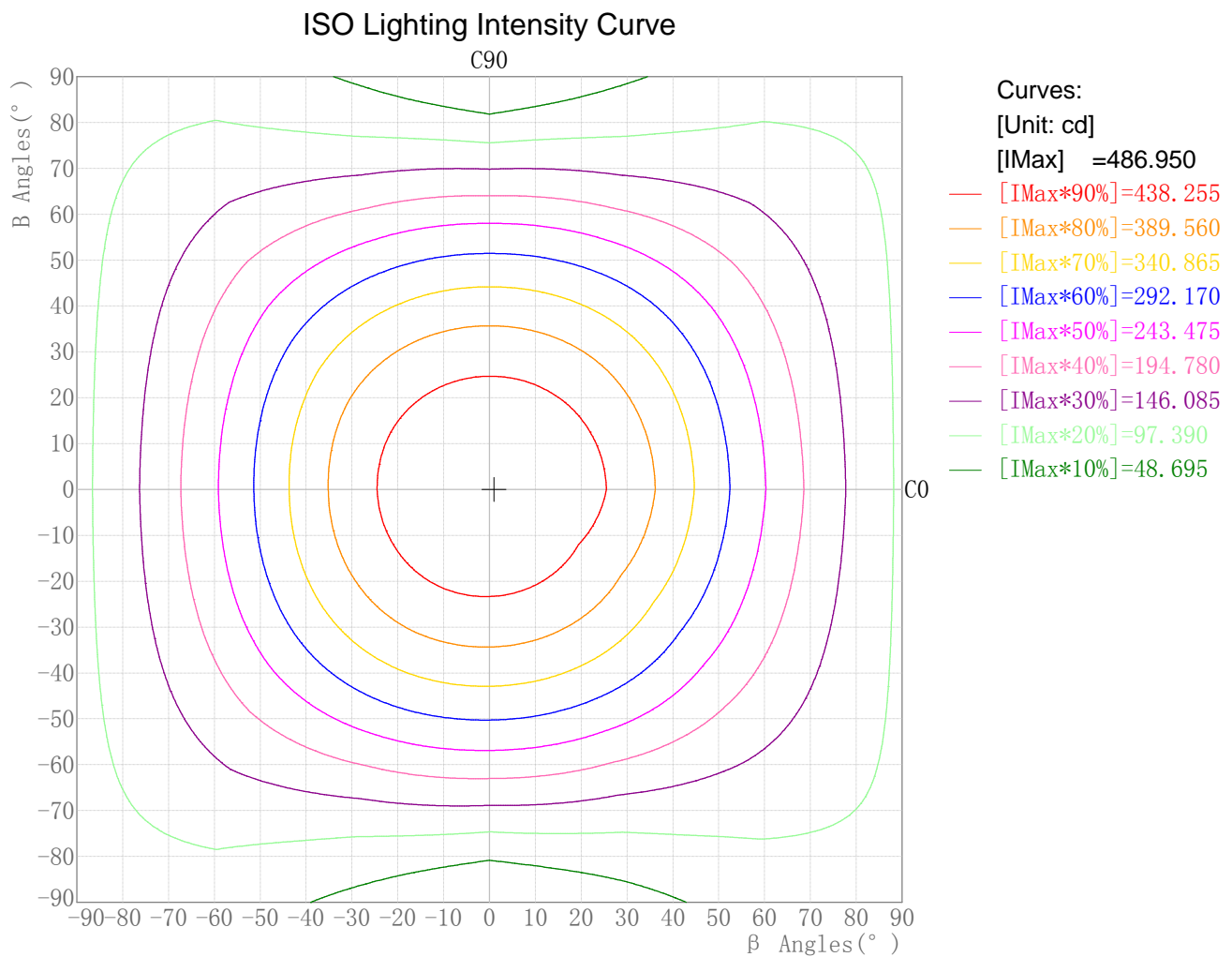
**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Zonal Flux Tabulation - (Cont.)**

Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp	Zone (γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
94.0-95.0	4.49	1554.64	0.27	94.73	141.0-142.0	0.69	1626.92	0.04	99.13
95.0-96.0	4.21	1558.84	0.26	94.98	142.0-143.0	0.68	1627.60	0.04	99.17
96.0-97.0	3.94	1562.78	0.24	95.22	143.0-144.0	0.66	1628.26	0.04	99.21
97.0-98.0	3.69	1566.47	0.22	95.45	144.0-145.0	0.65	1628.91	0.04	99.25
98.0-99.0	3.45	1569.92	0.21	95.66	145.0-146.0	0.64	1629.55	0.04	99.29
99.0-100.0	3.22	1573.14	0.20	95.86	146.0-147.0	0.62	1630.17	0.04	99.33
100.0-101.0	3.01	1576.16	0.18	96.04	147.0-148.0	0.61	1630.78	0.04	99.37
101.0-102.0	2.82	1578.98	0.17	96.21	148.0-149.0	0.60	1631.38	0.04	99.40
102.0-103.0	2.64	1581.62	0.16	96.37	149.0-150.0	0.58	1631.96	0.04	99.44
103.0-104.0	2.47	1584.09	0.15	96.52	150.0-151.0	0.57	1632.53	0.03	99.47
104.0-105.0	2.31	1586.39	0.14	96.66	151.0-152.0	0.55	1633.08	0.03	99.51
105.0-106.0	2.15	1588.54	0.13	96.79	152.0-153.0	0.54	1633.61	0.03	99.54
106.0-107.0	2.00	1590.54	0.12	96.91	153.0-154.0	0.52	1634.13	0.03	99.57
107.0-108.0	1.87	1592.41	0.11	97.03	154.0-155.0	0.50	1634.64	0.03	99.60
108.0-109.0	1.76	1594.17	0.11	97.14	155.0-156.0	0.49	1635.12	0.03	99.63
109.0-110.0	1.66	1595.84	0.10	97.24	156.0-157.0	0.47	1635.60	0.03	99.66
110.0-111.0	1.57	1597.41	0.10	97.33	157.0-158.0	0.46	1636.05	0.03	99.69
111.0-112.0	1.49	1598.90	0.09	97.42	158.0-159.0	0.44	1636.49	0.03	99.71
112.0-113.0	1.42	1600.32	0.09	97.51	159.0-160.0	0.42	1636.91	0.03	99.74
113.0-114.0	1.35	1601.66	0.08	97.59	160.0-161.0	0.40	1637.31	0.02	99.76
114.0-115.0	1.28	1602.95	0.08	97.67	161.0-162.0	0.38	1637.70	0.02	99.79
115.0-116.0	1.23	1604.18	0.07	97.75	162.0-163.0	0.36	1638.06	0.02	99.81
116.0-117.0	1.18	1605.35	0.07	97.82	163.0-164.0	0.35	1638.41	0.02	99.83
117.0-118.0	1.13	1606.49	0.07	97.89	164.0-165.0	0.33	1638.73	0.02	99.85
118.0-119.0	1.09	1607.58	0.07	97.95	165.0-166.0	0.31	1639.04	0.02	99.87
119.0-120.0	1.06	1608.64	0.06	98.02	166.0-167.0	0.29	1639.33	0.02	99.89
120.0-121.0	1.02	1609.66	0.06	98.08	167.0-168.0	0.27	1639.60	0.02	99.90
121.0-122.0	0.99	1610.65	0.06	98.14	168.0-169.0	0.25	1639.84	0.02	99.92
122.0-123.0	0.96	1611.61	0.06	98.20	169.0-170.0	0.23	1640.07	0.01	99.93
123.0-124.0	0.94	1612.55	0.06	98.26	170.0-171.0	0.21	1640.28	0.01	99.95
124.0-125.0	0.92	1613.47	0.06	98.31	171.0-172.0	0.19	1640.46	0.01	99.96
125.0-126.0	0.90	1614.36	0.05	98.37	172.0-173.0	0.16	1640.63	0.01	99.97
126.0-127.0	0.88	1615.25	0.05	98.42	173.0-174.0	0.14	1640.77	0.01	99.98
127.0-128.0	0.87	1616.11	0.05	98.47	174.0-175.0	0.12	1640.89	0.01	99.98
128.0-129.0	0.85	1616.96	0.05	98.53	175.0-176.0	0.10	1640.99	0.01	99.99
129.0-130.0	0.84	1617.80	0.05	98.58	176.0-177.0	0.08	1641.07	0.00	99.99
130.0-131.0	0.83	1618.63	0.05	98.63	177.0-178.0	0.06	1641.12	0.00	100.00
131.0-132.0	0.81	1619.44	0.05	98.68	178.0-179.0	0.03	1641.16	0.00	100.00
132.0-133.0	0.80	1620.25	0.05	98.73	179.0-180.0	0.01	1641.17	0.00	100.00
133.0-134.0	0.79	1621.04	0.05	98.77					
134.0-135.0	0.78	1621.81	0.05	98.82					
135.0-136.0	0.77	1622.58	0.05	98.87					
136.0-137.0	0.75	1623.33	0.05	98.91					
137.0-138.0	0.74	1624.08	0.05	98.96					
138.0-139.0	0.73	1624.81	0.04	99.00					
139.0-140.0	0.72	1625.52	0.04	99.05					
140.0-141.0	0.70	1626.23	0.04	99.09					

**Rectangle ISO Lighting Intensity Diagram**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

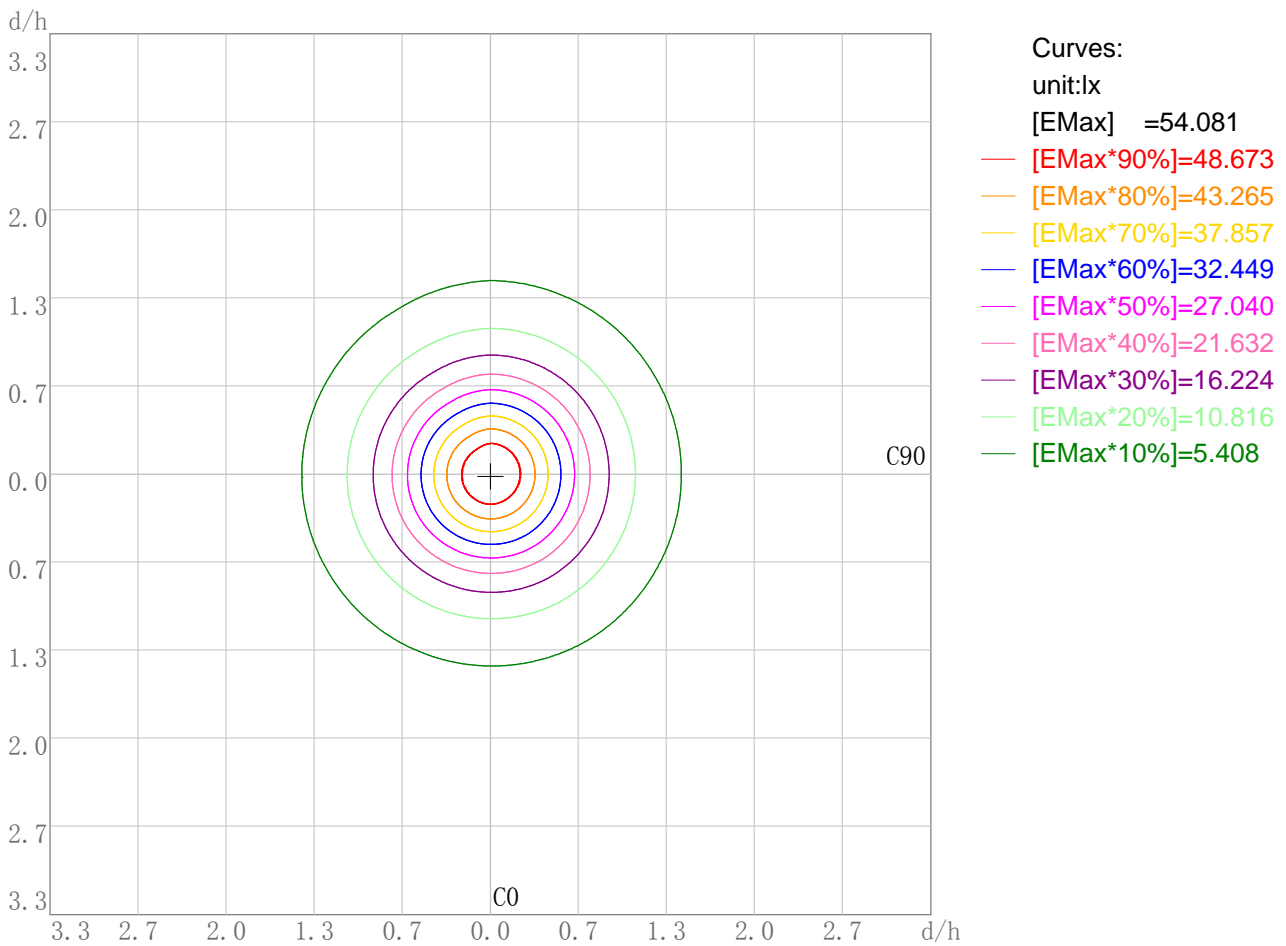


Maximum Light Intensity(cd): 486.95  
Maximum Cand.@Angle: H=1.0°;V=0.0°

**Plane ISO-Illuminance Diagram**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

Plane ISO-Illuminance Curve



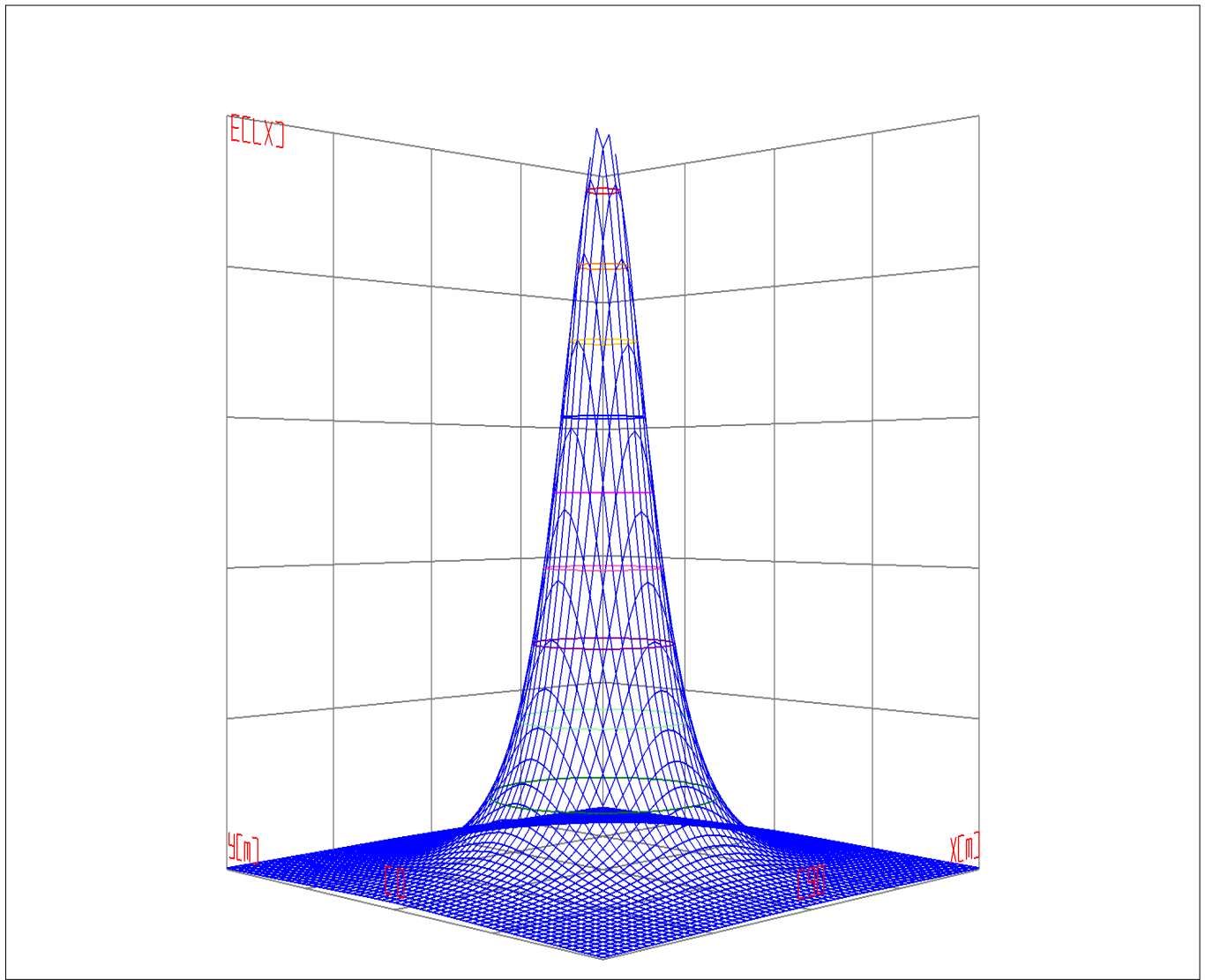
Working Plane Luminaire Mounting Height(m): 3.00  
Working Plane Maximum Illuminance(lx): 54.08  
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

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### 3D Plane ISO Illuminance Diagram

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

3D Plane Illuminance Modal



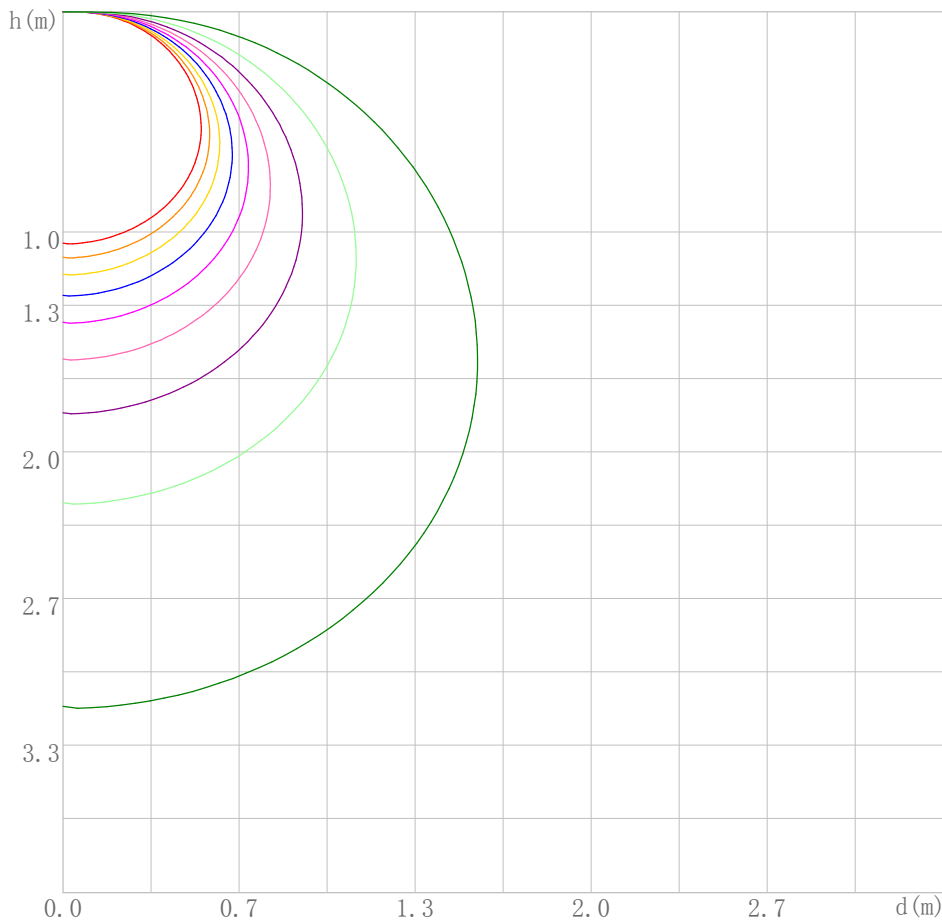
Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0    Height(m): 3.0    Distance(m): 10.0



**Space ISO Illuminance Diagram**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

Space ISO Illuminance Curve



- Curves:  
 [Unit: lx]  
 [EMax] =486.728
- [EMax\*90%]=438.055
  - [EMax\*80%]=389.382
  - [EMax\*70%]=340.709
  - [EMax\*60%]=292.037
  - [EMax\*50%]=243.364
  - [EMax\*40%]=194.691
  - [EMax\*30%]=146.018
  - [EMax\*20%]=97.346
  - [EMax\*10%]=48.673

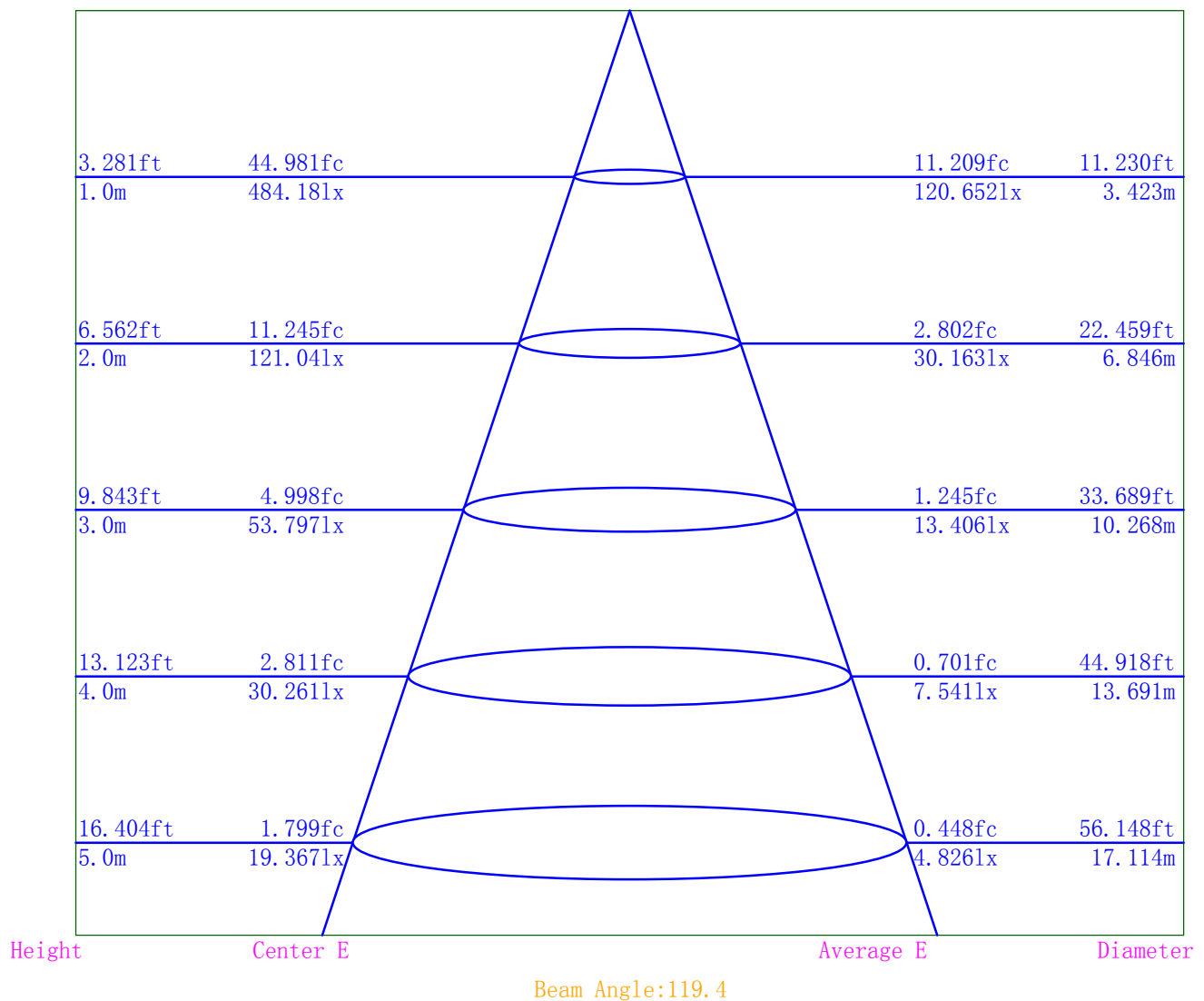
Space Plane Maximum Illuminance and @Angle:486.73lx,1.0deg  
 Plane Maximum Lighting Intensity and @Angle:486.950cd,0deg

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**Illuminance-Distance Diagram**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

Illuminance-Distance Curve



### Indoor Luminance Limiting Curves

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

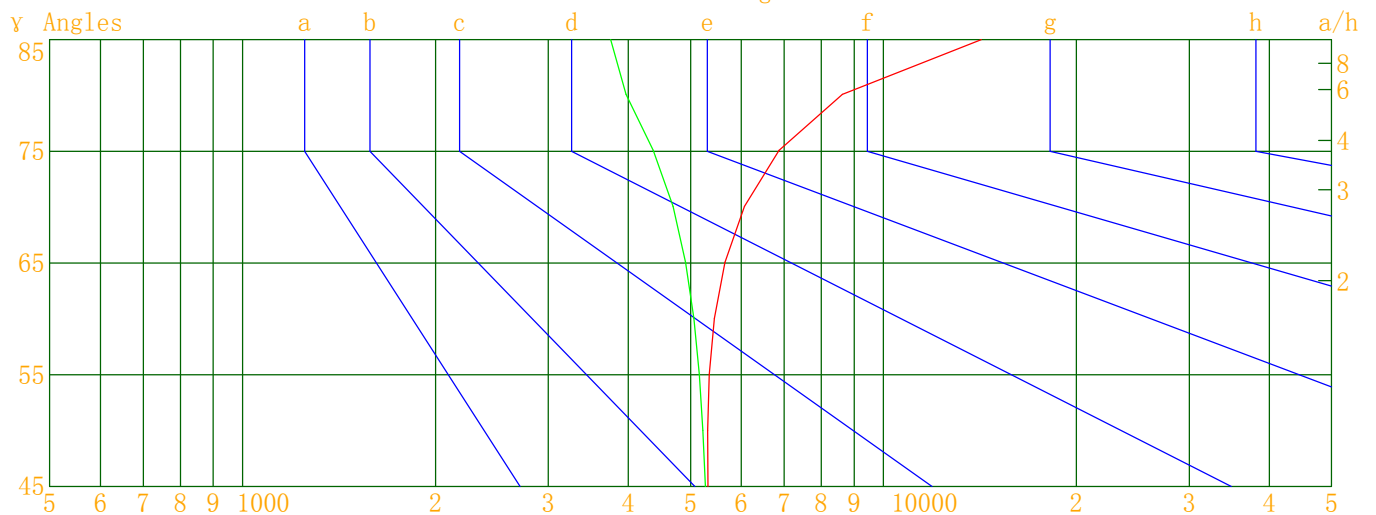
Glare Grade Table

GI	Quality	Using Illuminance							
		a	b	c	d	e	f	g	h
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	5326	5320	5348	5449	5661	6072	6869	8627	14208
C90	5273	5229	5159	5058	4909	4694	4375	3964	3752

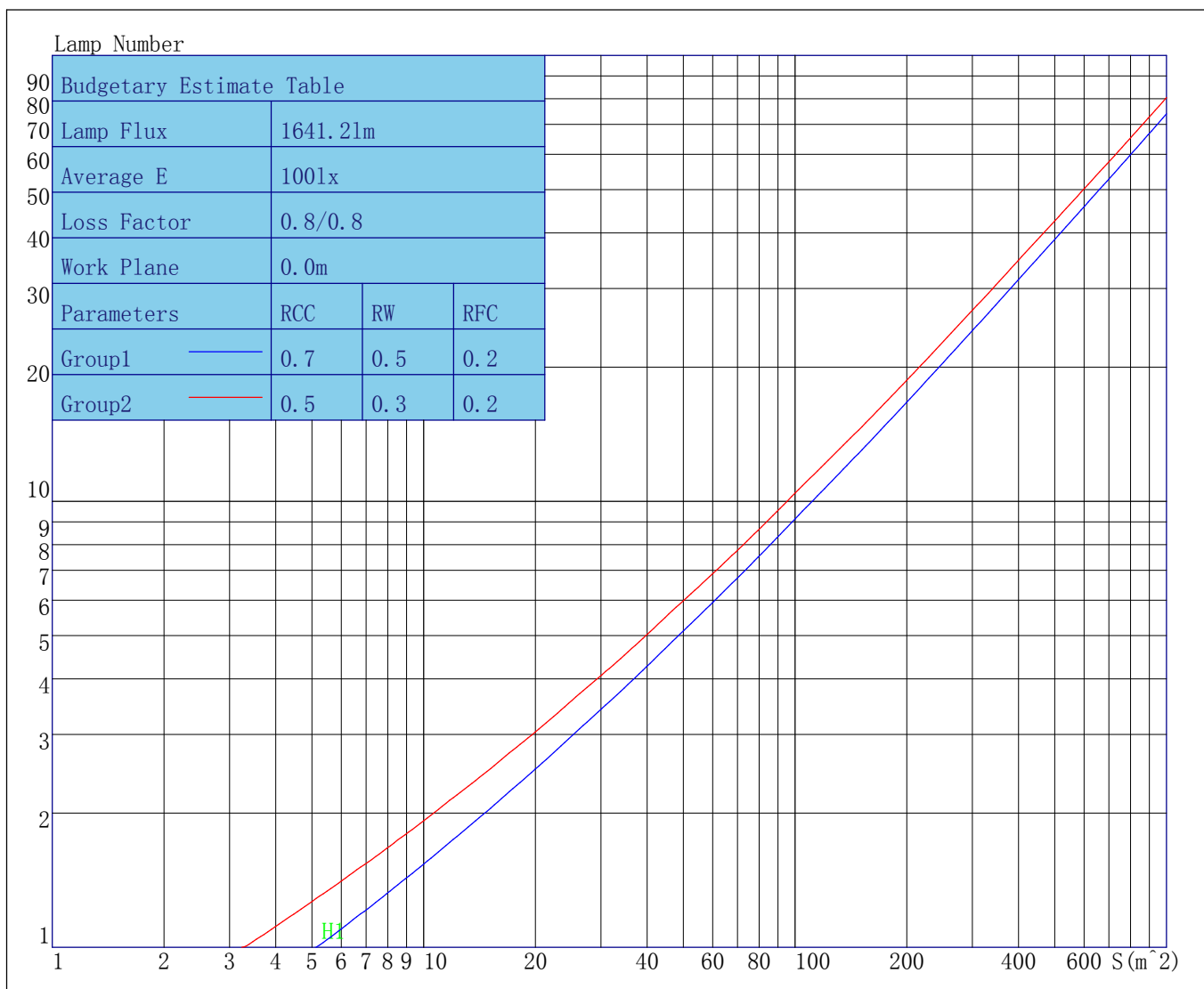
Luminance Limiting Curve



Luminous Size: Length(m)=1.200 Width(m)=0.075 Height(m)=0.000 Area(m^2)=0.090000  
 Luminous Type: Without Luminous Side  
 Luminous Curves: C0-C180 Color: ——— C90-C270 Color: ———

**Indoor Budgetary Estimate Table**

Lum. Name: 20W 3000K	Lum. Catalog:	Test ID: 001
Lamp Name:	Lamp Catalog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12



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

**Indoor Coefficient of Utilization Table**

<b>Lum. Name:</b> 20W 3000K	<b>Lum. Catalog:</b>	<b>Test ID:</b> 001
<b>Lamp Name:</b>	<b>Lamp Catalog:</b> LED	<b>Test Lab:</b> Volnic IES
<b>Manufacture:</b>	<b>Test Machine:</b> GON-2000	<b>Test Date:</b> 2019/04/12

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	106	100	95	91	102	97	93	89	92	88	85	86	84	81	82	79	77	75
2	95	87	79	73	92	84	77	71	79	74	69	75	70	66	71	67	64	61
3	87	76	67	60	84	73	65	59	69	63	57	66	60	55	62	57	53	51
4	79	67	57	50	76	65	56	50	61	54	48	58	52	47	55	50	46	43
5	73	59	50	43	70	58	49	43	55	47	42	52	46	40	50	44	39	37
6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	35	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	25
9	54	40	32	26	52	39	31	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	26	22	20

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**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Unified Glare Rating Table**

<b>Lum. Name:</b> 20W 3000K	<b>Lum. Catalog:</b>	<b>Test ID:</b> 001
<b>Lamp Name:</b>	<b>Lamp Catalog:</b> LED	<b>Test Lab:</b> Volnic IES
<b>Manufacture:</b>	<b>Test Machine:</b> GON-2000	<b>Test Date:</b> 2019/04/12

**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	17.7	19.2	18.1	19.6	20.1	17.5	19.0	18.0	19.5	20.0
Y=3H	19.8	21.2	20.3	21.7	22.2	19.2	20.6	19.7	21.1	21.6
Y=4H	21.0	22.3	21.5	22.8	23.3	19.9	21.2	20.4	21.7	22.2
Y=6H	22.2	23.4	22.7	23.9	24.5	20.5	21.7	21.0	22.2	22.7
Y=8H	22.8	24.0	23.4	24.5	25.1	20.7	21.8	21.2	22.3	22.9
Y=12H	23.6	24.7	24.1	25.2	25.8	20.8	21.9	21.3	22.4	23.0
X=4H Y=2H	18.4	19.8	18.9	20.2	20.8	18.3	19.7	18.8	20.1	20.7
Y=3H	20.8	21.9	21.3	22.4	23.0	20.3	21.4	20.8	21.9	22.5
Y=4H	22.1	23.1	22.6	23.7	24.2	21.1	22.2	21.7	22.7	23.3
Y=6H	23.5	24.4	24.1	25.0	25.6	21.8	22.8	22.4	23.3	23.9
Y=8H	24.3	25.1	24.8	25.7	26.3	22.1	23.0	22.7	23.5	24.1
Y=12H	25.2	25.9	25.7	26.5	27.1	22.3	23.1	22.9	23.7	24.3
X=8H Y=4H	22.5	23.3	23.1	23.9	24.5	21.7	22.6	22.3	23.1	23.7
Y=6H	24.1	24.9	24.7	25.5	26.2	22.7	23.4	23.3	24.0	24.7
Y=8H	25.1	25.7	25.7	26.3	27.0	23.1	23.7	23.7	24.3	25.0
Y=12H	26.2	26.8	26.8	27.4	28.1	23.5	24.0	24.1	24.6	25.3
X=12H Y=4H	22.5	23.3	23.1	23.9	24.5	21.9	22.6	22.4	23.2	23.8
Y=6H	24.3	24.9	24.9	25.5	26.2	22.9	23.6	23.5	24.2	24.8
Y=8H	25.3	25.9	25.9	26.5	27.2	23.5	24.0	24.1	24.6	25.3
Variations with the objverver position at spacings										
S=1.0H	0.1/-0.1					0.4/-0.4				
S=1.5H	0.2/-0.2					0.6/-0.7				
S=2.0H	0.1/-0.2					0.7/-0.9				
Reduced UGR Table:										
Nordic Standard Table:	BKO					BKO				
Correction Value	4.8					3.6				

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

**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Candela Tabulation**

V/H	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0	C300.0	C330.0
Y 0.0	484.18	484.18	484.18	484.18	484.18	484.18	484.18	484.18	484.18	484.18	484.18	484.18
Y 1.0	486.95	484.94	483.70	482.87	482.15	481.97	486.83	484.78	483.49	482.60	481.95	481.60
Y 2.0	486.80	484.79	483.53	482.74	482.02	481.92	486.54	484.45	483.17	482.18	481.53	481.20
Y 3.0	486.53	484.50	483.19	482.36	481.85	481.66	486.00	484.01	482.81	481.79	481.03	480.61
Y 4.0	486.03	483.98	482.79	481.96	481.47	481.27	485.32	483.33	482.16	481.08	480.39	479.89
Y 5.0	485.31	483.36	482.10	481.38	480.86	480.75	484.52	482.50	481.31	480.24	479.49	478.98
Y 6.0	484.58	482.65	481.44	480.65	480.15	479.95	483.66	481.54	480.32	479.31	478.57	477.95
Y 7.0	483.59	481.77	480.40	479.72	479.21	479.07	482.51	480.51	479.21	478.12	477.49	476.86
Y 8.0	482.53	480.67	479.34	478.67	478.15	478.11	481.17	479.29	477.97	476.85	476.05	475.52
Y 9.0	481.33	479.30	478.11	477.35	476.96	476.89	479.82	477.82	476.51	475.43	474.61	474.17
Y 10.0	479.83	477.98	476.67	475.98	475.49	475.54	478.21	476.13	474.85	473.78	473.01	472.48
Y 11.0	478.24	476.36	475.06	474.41	474.01	474.10	476.48	474.41	473.20	472.04	471.24	470.67
Y 12.0	476.57	474.72	473.41	472.83	472.36	472.46	474.64	472.53	471.36	470.11	469.26	468.78
Y 13.0	474.63	472.82	471.62	470.94	470.53	470.72	472.56	470.45	469.36	468.15	467.26	466.57
Y 14.0	472.64	470.90	469.55	468.95	468.64	468.62	470.42	468.31	467.24	466.09	465.01	464.28
Y 15.0	470.42	468.66	467.39	466.75	466.38	466.56	468.11	466.98	464.94	463.54	462.64	461.88
Y 16.0	468.18	466.25	465.15	464.51	464.10	464.36	465.61	463.48	462.46	461.12	460.06	459.26
Y 17.0	465.63	463.86	462.70	461.97	461.71	461.99	462.92	460.83	459.81	458.43	457.44	456.75
Y 18.0	463.00	461.28	459.97	459.39	459.24	459.44	460.14	458.05	457.03	455.68	454.52	453.74
Y 19.0	460.17	458.52	457.33	456.57	456.45	456.68	457.17	455.14	454.12	452.75	451.58	450.84
Y 20.0	457.25	455.48	454.38	453.76	453.60	453.84	454.10	452.09	451.00	449.61	448.46	447.62
Y 21.0	454.11	452.42	451.29	450.66	450.53	450.82	450.82	448.84	447.87	446.41	445.20	444.24
Y 22.0	450.81	449.15	448.12	447.48	447.30	447.65	447.39	445.39	444.42	442.97	441.80	440.86
Y 23.0	447.53	445.80	444.73	444.11	444.04	444.29	443.87	441.91	440.87	439.48	438.18	437.31
Y 24.0	443.92	442.37	441.24	440.61	440.65	440.88	440.15	438.27	437.22	435.84	434.49	433.55
Y 25.0	440.21	438.66	437.56	437.11	437.00	437.30	436.33	434.58	433.56	431.94	430.57	429.73
Y 26.0	436.37	434.83	433.89	433.26	433.24	433.58	432.39	430.56	429.64	427.97	426.63	425.74
Y 27.0	432.32	430.90	429.89	429.34	429.33	429.64	428.21	426.56	425.48	423.88	422.56	421.47
Y 28.0	428.27	426.70	425.82	425.30	425.24	425.50	424.02	422.34	421.28	419.62	418.23	417.14
Y 29.0	423.94	422.37	421.70	421.12	421.07	421.34	419.60	418.01	416.87	415.24	413.78	412.78
Y 30.0	419.51	418.10	417.35	416.82	416.80	417.05	415.08	413.47	412.45	410.72	409.23	408.17
Y 31.0	415.02	413.68	412.86	412.36	412.36	412.61	410.49	408.93	407.83	406.12	404.58	403.51
Y 32.0	410.26	409.02	408.11	407.82	407.63	408.06	405.64	404.18	403.19	401.33	399.78	398.67
Y 33.0	405.43	404.12	403.33	403.03	402.93	403.27	400.79	399.23	398.29	396.41	394.82	393.70
Y 34.0	400.53	399.29	398.44	398.02	398.04	398.43	395.69	394.18	393.14	391.36	389.69	388.63
Y 35.0	395.44	394.23	393.52	393.02	393.10	393.41	390.39	388.98	387.96	386.17	384.45	383.38
Y 36.0	390.36	389.21	388.33	387.83	387.95	388.49	385.16	383.82	382.66	380.83	379.17	378.10
Y 37.0	385.03	383.81	383.07	382.56	382.69	383.14	379.80	378.47	377.31	375.45	373.66	372.74
Y 38.0	379.60	378.49	377.64	377.18	377.33	377.75	374.37	373.03	371.85	369.98	368.15	367.08
Y 39.0	373.96	372.91	372.11	371.61	371.75	372.24	368.73	367.33	366.20	364.20	362.45	361.47
Y 40.0	368.35	367.22	366.34	365.95	366.11	366.54	362.89	361.46	360.33	358.39	356.57	355.72
Y 41.0	362.68	361.50	360.66	360.14	360.37	360.92	357.01	355.69	354.38	352.55	350.54	349.70
Y 42.0	356.90	355.64	354.71	354.20	354.36	355.09	351.01	349.75	348.34	346.49	344.51	343.80
Y 43.0	351.05	349.68	348.69	348.22	348.39	349.10	345.02	343.79	342.24	340.33	338.39	337.64
Y 44.0	344.97	343.59	342.46	342.00	342.17	342.99	338.94	337.57	335.94	334.09	332.12	331.65
Y 45.0	338.92	337.34	336.22	335.57	335.95	336.92	332.85	331.32	329.63	327.70	325.69	325.22
Y 46.0	332.73	330.99	329.80	329.19	329.55	330.58	326.48	324.90	323.13	321.06	319.13	318.84

**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Candela Tabulation - (Cont.)**

V/H	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0	C300.0	C330.0
Y 47.0	326.50	324.71	323.32	322.80	323.05	324.26	320.16	318.56	316.58	314.45	312.44	312.55
Y 48.0	320.43	318.19	316.84	316.01	316.55	317.90	313.78	312.04	309.86	307.80	305.77	305.94
Y 49.0	314.10	311.78	310.13	309.25	309.85	311.48	307.42	305.51	303.14	301.04	298.95	299.36
Y 50.0	307.76	305.23	303.29	302.51	302.93	304.94	301.12	299.09	296.39	294.09	292.03	292.94
Y 51.0	301.34	298.64	296.36	295.38	296.05	298.44	294.70	292.43	289.32	286.99	284.96	286.37
Y 52.0	295.02	292.06	289.32	288.19	289.06	291.71	288.25	285.75	282.25	279.86	277.88	279.57
Y 53.0	288.67	285.48	282.22	280.94	282.05	285.11	281.84	279.03	275.02	272.56	270.57	272.87
Y 54.0	282.31	278.82	275.13	273.66	274.81	278.42	275.44	272.41	267.76	265.30	263.25	266.22
Y 55.0	276.08	272.08	267.89	266.31	267.62	271.86	269.18	265.72	260.49	257.86	256.02	259.61
Y 56.0	269.73	265.44	260.41	258.81	260.16	265.27	262.87	259.17	253.16	250.21	248.65	252.90
Y 57.0	263.53	258.73	253.07	251.17	252.72	258.54	256.74	252.55	245.69	242.60	241.18	246.22
Y 58.0	257.33	251.99	245.48	243.47	245.25	251.90	250.41	245.93	238.14	234.75	233.65	239.68
Y 59.0	251.21	245.33	238.09	235.61	237.75	245.35	244.20	239.32	230.44	227.01	225.97	233.01
Y 60.0	245.21	238.84	230.57	227.61	230.19	238.82	238.05	232.82	222.83	219.12	218.31	226.59
Y 61.0	239.12	232.26	222.89	219.85	222.49	232.32	231.99	226.46	215.36	211.08	210.70	220.14
Y 62.0	233.06	225.88	215.29	211.52	214.77	225.88	226.04	220.19	207.66	203.09	202.93	213.76
Y 63.0	227.01	219.43	207.54	203.36	207.15	219.50	220.07	213.71	200.08	194.87	195.19	207.48
Y 64.0	221.16	213.04	199.91	195.07	199.47	213.15	214.04	207.42	192.31	186.59	187.47	201.09
Y 65.0	215.32	206.78	192.33	186.73	191.92	207.02	208.04	201.16	184.66	178.38	179.86	194.95
Y 66.0	209.58	200.64	184.80	178.49	184.40	200.78	202.30	195.01	177.12	170.07	172.16	188.87
Y 67.0	203.90	194.43	177.18	169.99	176.79	194.64	196.59	189.08	169.48	161.76	164.52	182.79
Y 68.0	198.15	188.37	169.65	161.66	169.24	188.67	190.92	183.09	162.12	153.35	157.14	176.92
Y 69.0	192.44	182.41	162.17	153.13	161.85	182.56	185.30	177.10	154.68	144.83	149.76	170.94
Y 70.0	186.91	176.41	154.83	144.50	154.51	176.64	179.66	171.15	147.46	136.34	142.45	164.98
Y 71.0	181.49	170.63	147.60	135.96	147.48	170.77	174.09	165.40	140.29	127.96	135.25	159.38
Y 72.0	176.02	164.81	140.59	127.42	140.46	165.07	168.63	159.79	133.41	119.49	128.12	153.73
Y 73.0	170.52	159.20	133.64	118.90	133.64	159.53	163.31	154.21	126.59	111.03	121.34	148.21
Y 74.0	165.24	153.59	126.87	110.38	126.88	153.90	158.02	148.76	119.84	102.64	114.63	142.71
Y 75.0	160.01	147.96	120.21	101.92	120.21	148.34	152.85	143.33	113.37	94.28	108.00	137.39
Y 76.0	154.76	142.58	113.81	93.57	113.75	142.92	147.67	137.94	106.83	86.01	101.58	132.10
Y 77.0	149.78	137.17	107.44	85.43	107.43	137.65	142.56	132.64	100.73	77.89	95.44	126.92
Y 78.0	144.70	132.07	101.40	77.34	101.46	132.47	137.49	127.49	94.73	69.87	89.50	121.78
Y 79.0	139.80	126.96	95.36	69.46	95.55	127.40	132.62	122.43	89.03	62.27	83.75	116.94
Y 80.0	134.83	121.86	89.82	61.95	89.88	122.24	127.76	117.47	83.51	54.70	78.19	111.88
Y 81.0	129.95	116.91	84.25	54.59	84.41	117.30	122.99	112.53	78.00	47.55	72.84	106.90
Y 82.0	125.36	111.88	78.85	47.58	79.14	112.40	118.31	107.62	72.71	40.56	67.65	102.18
Y 83.0	120.57	106.99	73.81	41.01	74.06	107.60	113.60	102.87	67.78	34.28	62.66	97.47
Y 84.0	116.03	102.33	68.94	34.95	69.38	102.87	108.88	98.19	62.88	28.43	57.79	93.04
Y 85.0	111.44	97.73	64.21	29.43	64.62	98.39	104.37	93.88	58.35	23.09	53.41	88.60
Y 86.0	106.80	93.36	59.69	24.60	60.15	93.88	99.89	89.44	53.95	18.64	49.17	84.22
Y 87.0	102.39	88.80	55.37	20.52	55.81	89.40	95.56	85.04	49.78	14.75	45.13	79.95
Y 88.0	98.06	84.49	51.31	17.25	51.80	85.11	91.17	80.69	45.76	12.13	41.24	75.80
Y 89.0	93.87	80.30	47.44	15.15	47.92	80.91	87.08	76.73	41.99	10.38	37.60	71.78
Y 90.0	89.80	76.22	43.89	13.81	44.37	76.92	82.93	72.68	38.41	9.40	34.13	67.91
Y 91.0	85.73	72.19	40.30	13.59	40.92	72.93	78.97	68.85	35.17	9.34	30.90	63.98
Y 92.0	81.67	68.39	37.08	13.32	37.73	69.11	75.04	65.01	31.94	9.19	27.98	60.41
Y 93.0	77.76	64.51	33.97	13.27	34.57	65.25	71.22	61.33	29.03	9.15	25.21	56.79



**IES Indoor Report**  
**Photometric Filename:20W 3000K.IES**

**Candela Tabulation - (Cont.)**

V/H	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0	C300.0	C330.0
Y 94.0	73.96	60.77	31.15	13.15	31.80	61.69	67.42	57.71	26.30	9.03	22.65	53.38
Y 95.0	70.20	57.14	28.66	13.09	29.28	58.10	63.83	54.22	23.71	8.84	20.33	49.98
Y 96.0	66.56	53.90	26.35	12.94	26.96	54.66	60.21	50.91	21.50	8.73	18.31	46.76
Y 97.0	63.17	50.67	24.39	12.84	24.82	51.33	56.74	47.67	19.52	8.68	16.60	43.73
Y 98.0	59.64	47.51	22.54	12.69	23.05	48.20	53.55	44.63	17.71	8.68	15.10	40.67
Y 99.0	56.22	44.56	20.97	12.64	21.33	45.20	50.27	41.63	16.19	8.56	13.75	37.85
Y 100.0	53.10	41.60	19.51	12.45	19.98	42.32	47.18	38.86	14.72	8.68	12.63	35.30
Y 101.0	50.08	38.87	18.19	12.49	18.60	39.45	44.28	36.25	13.58	8.66	11.59	32.66
Y 102.0	47.20	36.40	17.08	12.37	17.48	37.03	41.38	33.72	12.52	8.66	10.75	30.48
Y 103.0	44.43	33.95	16.05	12.21	16.48	34.58	38.66	31.43	11.55	8.49	10.10	28.29
Y 104.0	41.73	31.78	15.24	12.12	15.58	32.40	36.24	29.22	10.93	8.51	9.40	26.19
Y 105.0	39.15	29.56	14.54	11.98	14.84	30.17	33.76	26.74	10.18	8.41	8.96	23.53
Y 106.0	36.79	27.10	13.95	11.87	14.24	27.54	31.46	24.49	9.60	8.37	8.64	21.60
Y 107.0	34.42	25.27	13.44	11.84	13.53	25.39	28.96	22.64	9.01	8.33	8.33	19.84
Y 108.0	31.78	23.46	13.11	11.72	13.30	23.52	26.71	21.09	8.78	8.36	8.12	18.43
Y 109.0	29.87	22.18	12.75	11.55	12.95	22.31	24.74	19.69	8.53	8.36	8.06	17.22
Y 110.0	27.95	20.80	12.57	11.52	12.55	21.01	22.91	18.42	8.29	8.31	7.84	16.02
Y 111.0	26.25	19.58	12.36	11.40	12.28	19.77	21.46	17.12	8.15	8.39	7.93	14.80
Y 112.0	24.55	18.29	12.22	11.31	12.21	18.50	19.98	15.91	8.11	8.35	8.01	13.97
Y 113.0	23.05	17.27	12.14	11.26	11.96	17.50	18.59	14.82	7.98	8.35	7.99	13.02
Y 114.0	21.78	16.31	12.08	11.20	11.88	16.53	17.24	13.96	7.99	8.28	8.03	12.22
Y 115.0	20.52	15.32	11.96	11.14	11.71	15.57	16.11	13.18	8.02	8.33	7.96	11.53
Y 116.0	19.36	14.65	11.85	11.05	11.67	14.87	15.06	12.51	8.08	8.44	7.96	10.99
Y 117.0	18.19	13.99	11.79	10.97	11.60	14.33	14.05	11.89	8.07	8.51	8.03	10.49
Y 118.0	17.18	13.36	11.65	11.02	11.46	13.75	13.21	11.33	8.16	8.56	8.11	10.22
Y 119.0	16.42	12.81	11.68	10.88	11.44	13.18	12.42	10.67	8.20	8.63	8.10	9.75
Y 120.0	15.66	12.38	11.64	10.84	11.39	12.81	11.80	10.37	8.16	8.61	8.17	9.43
Y 121.0	14.88	12.05	11.44	10.86	11.32	12.39	11.19	10.01	8.23	8.60	8.08	9.29
Y 122.0	14.19	11.84	11.40	10.82	11.23	11.93	10.62	9.75	8.20	8.56	8.10	9.25
Y 123.0	13.55	11.57	11.29	10.74	11.20	11.76	10.17	9.56	8.29	8.49	8.22	9.05
Y 124.0	13.22	11.36	11.27	10.66	11.18	11.45	9.78	9.36	8.33	8.51	8.16	9.05
Y 125.0	12.84	11.26	11.17	10.64	11.04	11.23	9.42	9.18	8.37	8.56	8.19	9.04
Y 126.0	12.47	11.30	11.12	10.51	11.05	11.09	9.19	9.14	8.40	8.58	8.36	9.01
Y 127.0	12.27	11.27	11.17	10.49	11.00	11.03	9.03	9.16	8.40	8.61	8.28	8.97
Y 128.0	12.12	11.22	11.13	10.50	10.97	11.01	8.81	9.17	8.51	8.70	8.25	9.08
Y 129.0	11.98	11.14	11.04	10.51	10.87	10.98	8.72	9.11	8.56	8.80	8.32	9.01
Y 130.0	11.94	11.05	11.04	10.43	10.88	10.93	8.72	9.09	8.63	8.79	8.35	9.01
Y 131.0	11.90	11.09	10.95	10.45	10.78	10.88	8.64	9.18	8.70	8.79	8.45	9.01
Y 132.0	11.91	11.09	10.98	10.39	10.73	10.89	8.67	9.16	8.82	8.87	8.51	9.11
Y 133.0	11.78	11.05	10.98	10.44	10.75	10.78	8.80	9.15	8.81	8.94	8.48	9.16
Y 134.0	11.74	11.02	10.83	10.38	10.75	10.75	8.76	9.21	8.86	8.95	8.67	9.14
Y 135.0	11.77	10.98	10.91	10.35	10.78	10.75	8.76	9.36	8.94	8.99	8.66	9.24
Y 136.0	11.71	11.02	10.92	10.38	10.78	10.70	8.82	9.37	9.03	9.12	8.75	9.35
Y 137.0	11.65	10.97	10.93	10.40	10.71	10.57	8.91	9.42	9.07	9.08	8.89	9.38
Y 138.0	11.59	10.95	10.97	10.43	10.75	10.66	9.09	9.53	9.17	9.18	8.89	9.39
Y 139.0	11.58	10.85	10.88	10.41	10.72	10.62	9.07	9.52	9.10	9.25	9.05	9.43
Y 140.0	11.48	10.87	10.93	10.40	10.90	10.67	9.14	9.52	9.18	9.29	9.13	9.44

