IES Indoor Report
Photometric Filename:HCP-238400-3K.IES

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Indoor Luminaire Photometric Data

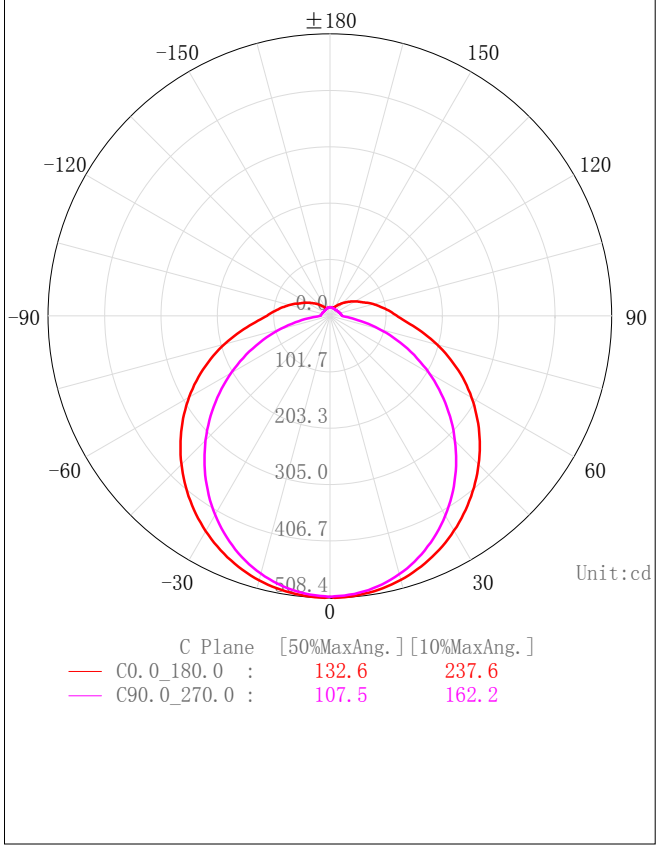
Description Information

Luminary Name: HCP-238400-3K(20W)		Lum. Catelog:	Test ID: 001
Lamp Name:		Lamp Catelog:	Test Date: 2019/11/28
Manufacture:		Shld.Ang(°):	Test Machine:GON-2000
Test Lab: Volnic IES		Frequency(Hz):	Lamp CCT(K): Ra:
Lum.Size(W*L*H):0.110m*1.250m*0.000m		Lum.Area(m2):0.138	Lum.W(kg): 1.000
Test System: C, γ	Test Step: C=30.0 γ=1.0	Temp.(℃): 25	Humidity(%): 50.0

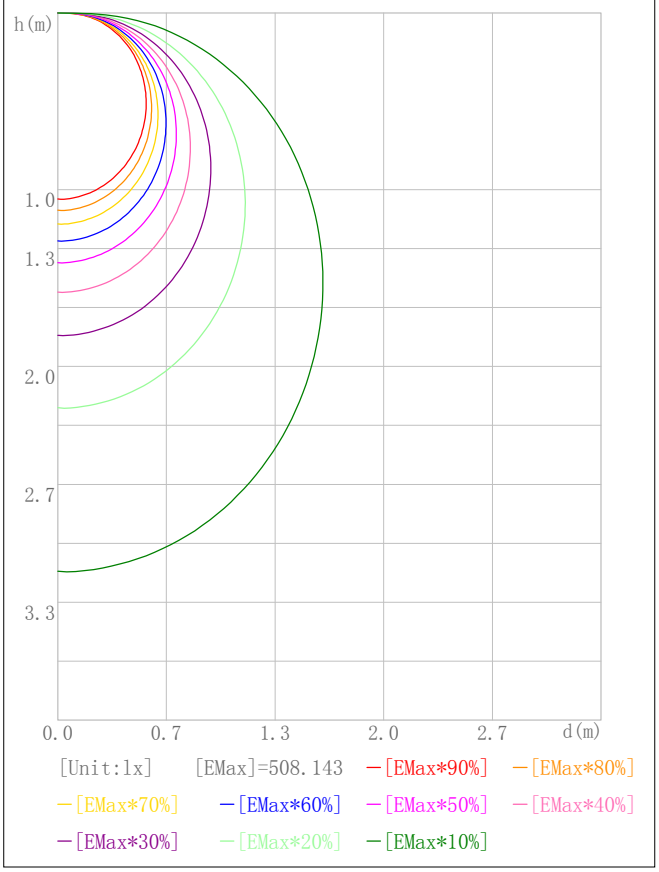
Character Parameter

Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 1874.700	Luminary Flux(lm): 1874.700	Field Angle(10%Imax): 237.6(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 1652.451lm 88.14%
Rated Voltage(V):	Luminary EER(lm/W): 103.006	Up Lumens&Percent: 222.249lm 11.86%
Tested Power(W): 18.200	Max.Candela(cd): 508.375	S/MH: C0_a180=1.315 C90_270=1.220
Lamps' Inside: 1	Max Cand@Ang.(°): C=0.0 γ=1.0	CIE Type: General Diffuse
Tested Electrics(V,A,pf):240.1,0.095,0.797	Beam Angle(50%Imax): 132.6(°)	ErP Φuse(120°): 1167.720lm
Lamp Size(W*L*H):0.110m*1.250m*0.000m	Left=-66.1° ,Right=66.6°	IRF(%): 106.898

C Plane Distribution Diagram



C0 Space ISO Illuminance Curve



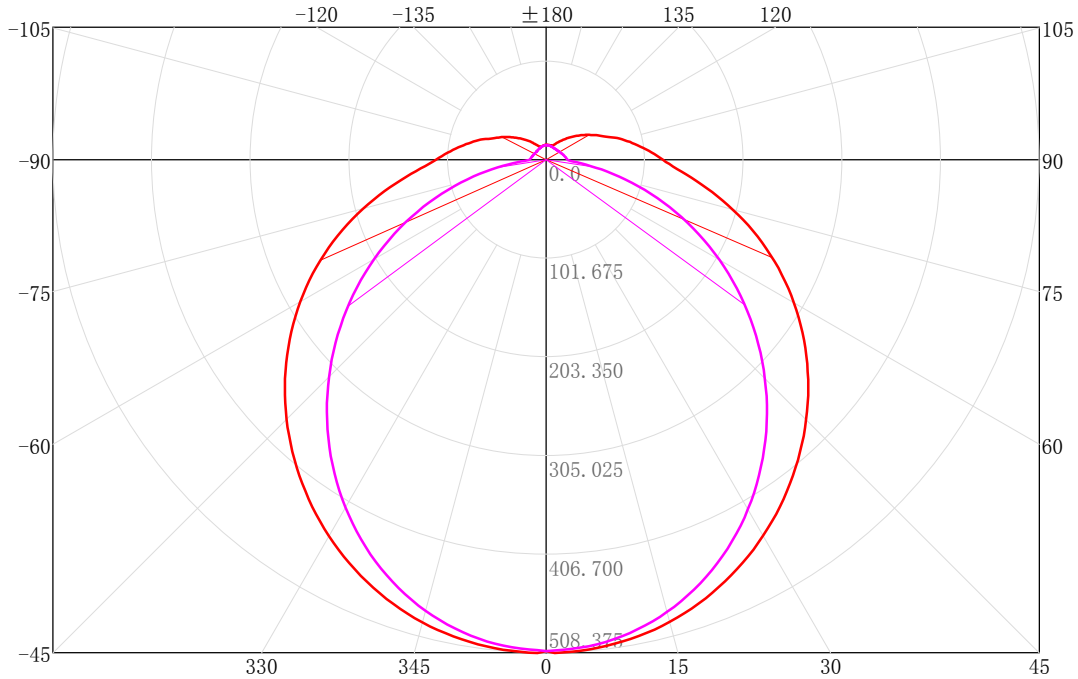
IES Indoor Report
Photometric Filename:HCP-238400-3K.IES

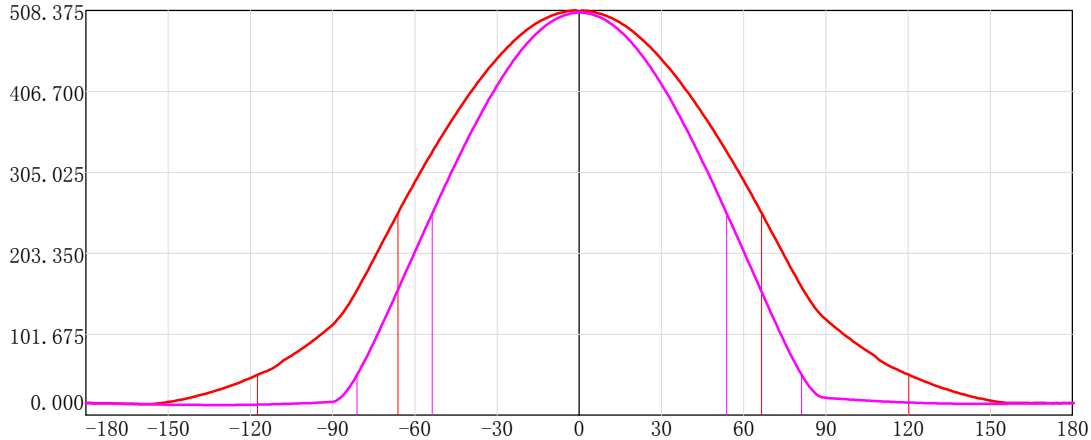
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2D Plane Light Intensity Distribution Curve

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

C Plane Distribution Diagram





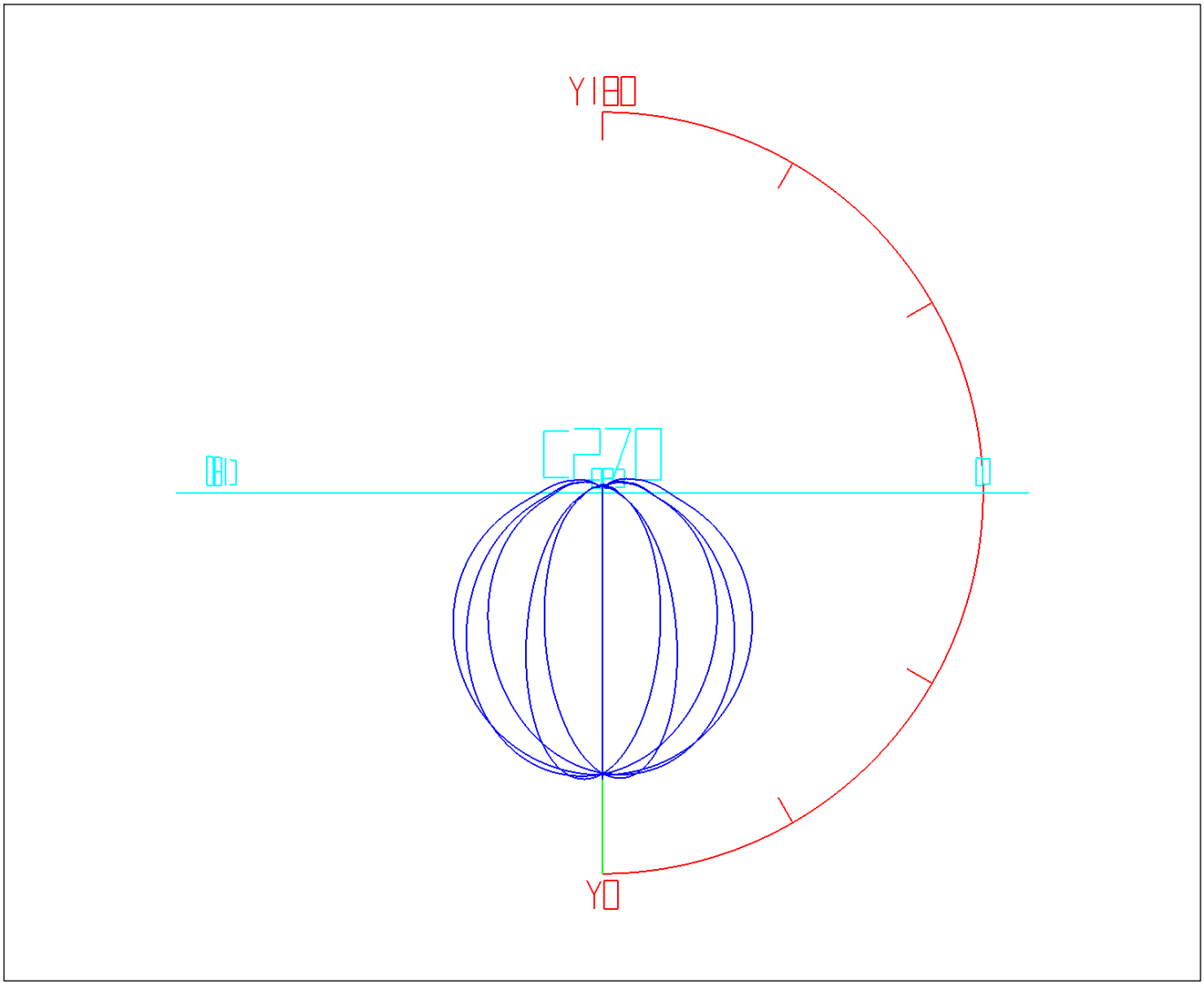
C Plane	[50%MaxAng.]	[10%MaxAng.]	Unit:cd
C0.0_180.0 :	132.6	237.6	
C90.0_270.0 :	107.5	162.2	

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3D Light Intensity Distribution Modal

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

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-238400-3K.IES

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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	0.48	0.48	0.03	0.03	47.0-48.0	26.94	863.53	1.44	46.06
1.0-2.0	1.45	1.94	0.08	0.10	48.0-49.0	26.85	890.38	1.43	47.49
2.0-3.0	2.42	4.36	0.13	0.23	49.0-50.0	26.74	917.12	1.43	48.92
3.0-4.0	3.38	7.74	0.18	0.41	50.0-51.0	26.59	943.71	1.42	50.34
4.0-5.0	4.34	12.08	0.23	0.64	51.0-52.0	26.42	970.13	1.41	51.75
5.0-6.0	5.29	17.37	0.28	0.93	52.0-53.0	26.23	996.36	1.40	53.15
6.0-7.0	6.24	23.61	0.33	1.26	53.0-54.0	26.00	1022.36	1.39	54.53
7.0-8.0	7.18	30.78	0.38	1.64	54.0-55.0	25.75	1048.11	1.37	55.91
8.0-9.0	8.10	38.89	0.43	2.07	55.0-56.0	25.48	1073.59	1.36	57.27
9.0-10.0	9.02	47.91	0.48	2.56	56.0-57.0	25.18	1098.77	1.34	58.61
10.0-11.0	9.92	57.83	0.53	3.08	57.0-58.0	24.85	1123.62	1.33	59.94
11.0-12.0	10.82	68.65	0.58	3.66	58.0-59.0	24.50	1148.12	1.31	61.24
12.0-13.0	11.69	80.34	0.62	4.29	59.0-60.0	24.13	1172.26	1.29	62.53
13.0-14.0	12.56	92.90	0.67	4.96	60.0-61.0	23.74	1195.99	1.27	63.80
14.0-15.0	13.40	106.30	0.71	5.67	61.0-62.0	23.32	1219.31	1.24	65.04
15.0-16.0	14.23	120.52	0.76	6.43	62.0-63.0	22.88	1242.19	1.22	66.26
16.0-17.0	15.03	135.56	0.80	7.23	63.0-64.0	22.43	1264.62	1.20	67.46
17.0-18.0	15.82	151.38	0.84	8.07	64.0-65.0	21.95	1286.57	1.17	68.63
18.0-19.0	16.59	167.96	0.88	8.96	65.0-66.0	21.46	1308.03	1.14	69.77
19.0-20.0	17.33	185.30	0.92	9.88	66.0-67.0	20.95	1328.97	1.12	70.89
20.0-21.0	18.05	203.35	0.96	10.85	67.0-68.0	20.42	1349.39	1.09	71.98
21.0-22.0	18.75	222.10	1.00	11.85	68.0-69.0	19.87	1369.26	1.06	73.04
22.0-23.0	19.42	241.52	1.04	12.88	69.0-70.0	19.31	1388.57	1.03	74.07
23.0-24.0	20.07	261.59	1.07	13.95	70.0-71.0	18.74	1407.31	1.00	75.07
24.0-25.0	20.69	282.29	1.10	15.06	71.0-72.0	18.15	1425.46	0.97	76.04
25.0-26.0	21.29	303.57	1.14	16.19	72.0-73.0	17.56	1443.03	0.94	76.97
26.0-27.0	21.85	325.43	1.17	17.36	73.0-74.0	16.96	1459.98	0.90	77.88
27.0-28.0	22.40	347.82	1.19	18.55	74.0-75.0	16.35	1476.33	0.87	78.75
28.0-29.0	22.91	370.73	1.22	19.78	75.0-76.0	15.74	1492.07	0.84	79.59
29.0-30.0	23.39	394.13	1.25	21.02	76.0-77.0	15.12	1507.19	0.81	80.40
30.0-31.0	23.85	417.97	1.27	22.30	77.0-78.0	14.51	1521.69	0.77	81.17
31.0-32.0	24.27	442.24	1.29	23.59	78.0-79.0	13.89	1535.59	0.74	81.91
32.0-33.0	24.66	466.90	1.32	24.91	79.0-80.0	13.28	1548.87	0.71	82.62
33.0-34.0	25.03	491.93	1.34	26.24	80.0-81.0	12.68	1561.55	0.68	83.30
34.0-35.0	25.36	517.29	1.35	27.59	81.0-82.0	12.10	1573.65	0.65	83.94
35.0-36.0	25.66	542.96	1.37	28.96	82.0-83.0	11.53	1585.17	0.61	84.56
36.0-37.0	25.94	568.90	1.38	30.35	83.0-84.0	10.98	1596.15	0.59	85.14
37.0-38.0	26.18	595.08	1.40	31.74	84.0-85.0	10.46	1606.61	0.56	85.70
38.0-39.0	26.39	621.47	1.41	33.15	85.0-86.0	9.97	1616.58	0.53	86.23
39.0-40.0	26.57	648.04	1.42	34.57	86.0-87.0	9.52	1626.09	0.51	86.74
40.0-41.0	26.72	674.77	1.43	35.99	87.0-88.0	9.12	1635.21	0.49	87.23
41.0-42.0	26.85	701.61	1.43	37.43	88.0-89.0	8.77	1643.98	0.47	87.69
42.0-43.0	26.94	728.55	1.44	38.86	89.0-90.0	8.47	1652.45	0.45	88.14
43.0-44.0	27.00	755.54	1.44	40.30	90.0-91.0	8.22	1660.68	0.44	88.58
44.0-45.0	27.03	782.57	1.44	41.74	91.0-92.0	7.99	1668.67	0.43	89.01
45.0-46.0	27.03	809.60	1.44	43.19	92.0-93.0	7.76	1676.43	0.41	89.42
46.0-47.0	27.00	836.59	1.44	44.63	93.0-94.0	7.54	1683.97	0.40	89.83

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Zonal Flux Tabulation - (Cont.)

Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
94.0-95.0	7.32	1691.28	0.39	90.22
95.0-96.0	7.09	1698.38	0.38	90.59
96.0-97.0	6.88	1705.26	0.37	90.96
97.0-98.0	6.67	1711.92	0.36	91.32
98.0-99.0	6.46	1718.39	0.34	91.66
99.0-100.0	6.26	1724.64	0.33	92.00
100.0-101.0	6.06	1730.70	0.32	92.32
101.0-102.0	5.86	1736.56	0.31	92.63
102.0-103.0	5.67	1742.23	0.30	92.93
103.0-104.0	5.48	1747.72	0.29	93.23
104.0-105.0	5.30	1753.02	0.28	93.51
105.0-106.0	5.11	1758.13	0.27	93.78
106.0-107.0	4.91	1763.04	0.26	94.04
107.0-108.0	4.70	1767.74	0.25	94.29
108.0-109.0	4.51	1772.25	0.24	94.54
109.0-110.0	4.32	1776.57	0.23	94.77
110.0-111.0	4.15	1780.72	0.22	94.99
111.0-112.0	4.00	1784.73	0.21	95.20
112.0-113.0	3.86	1788.58	0.21	95.41
113.0-114.0	3.71	1792.30	0.20	95.60
114.0-115.0	3.58	1795.88	0.19	95.80
115.0-116.0	3.45	1799.33	0.18	95.98
116.0-117.0	3.32	1802.65	0.18	96.16
117.0-118.0	3.20	1805.85	0.17	96.33
118.0-119.0	3.09	1808.94	0.16	96.49
119.0-120.0	2.98	1811.92	0.16	96.65
120.0-121.0	2.87	1814.79	0.15	96.80
121.0-122.0	2.76	1817.55	0.15	96.95
122.0-123.0	2.65	1820.20	0.14	97.09
123.0-124.0	2.55	1822.75	0.14	97.23
124.0-125.0	2.45	1825.20	0.13	97.36
125.0-126.0	2.36	1827.56	0.13	97.49
126.0-127.0	2.26	1829.82	0.12	97.61
127.0-128.0	2.17	1831.99	0.12	97.72
128.0-129.0	2.08	1834.07	0.11	97.83
129.0-130.0	1.99	1836.06	0.11	97.94
130.0-131.0	1.91	1837.97	0.10	98.04
131.0-132.0	1.83	1839.80	0.10	98.14
132.0-133.0	1.76	1841.56	0.09	98.23
133.0-134.0	1.68	1843.24	0.09	98.32
134.0-135.0	1.61	1844.85	0.09	98.41
135.0-136.0	1.54	1846.40	0.08	98.49
136.0-137.0	1.48	1847.88	0.08	98.57
137.0-138.0	1.41	1849.29	0.08	98.64
138.0-139.0	1.36	1850.65	0.07	98.72
139.0-140.0	1.30	1851.94	0.07	98.79
140.0-141.0	1.24	1853.19	0.07	98.85
141.0-142.0	1.19	1854.38	0.06	98.92
142.0-143.0	1.14	1855.53	0.06	98.98
143.0-144.0	1.10	1856.62	0.06	99.04
144.0-145.0	1.05	1857.67	0.06	99.09
145.0-146.0	1.01	1858.68	0.05	99.15
146.0-147.0	0.96	1859.65	0.05	99.20
147.0-148.0	0.92	1860.57	0.05	99.25
148.0-149.0	0.89	1861.46	0.05	99.29
149.0-150.0	0.85	1862.30	0.05	99.34
150.0-151.0	0.81	1863.12	0.04	99.38
151.0-152.0	0.78	1863.89	0.04	99.42
152.0-153.0	0.75	1864.64	0.04	99.46
153.0-154.0	0.72	1865.35	0.04	99.50
154.0-155.0	0.69	1866.04	0.04	99.54
155.0-156.0	0.66	1866.70	0.04	99.57
156.0-157.0	0.63	1867.33	0.03	99.61
157.0-158.0	0.61	1867.94	0.03	99.64
158.0-159.0	0.58	1868.52	0.03	99.67
159.0-160.0	0.56	1869.08	0.03	99.70
160.0-161.0	0.53	1869.62	0.03	99.73
161.0-162.0	0.51	1870.13	0.03	99.76
162.0-163.0	0.48	1870.61	0.03	99.78
163.0-164.0	0.46	1871.07	0.02	99.81
164.0-165.0	0.43	1871.50	0.02	99.83
165.0-166.0	0.41	1871.91	0.02	99.85
166.0-167.0	0.38	1872.29	0.02	99.87
167.0-168.0	0.35	1872.64	0.02	99.89
168.0-169.0	0.33	1872.96	0.02	99.91
169.0-170.0	0.30	1873.26	0.02	99.92
170.0-171.0	0.27	1873.53	0.01	99.94
171.0-172.0	0.24	1873.78	0.01	99.95
172.0-173.0	0.22	1873.99	0.01	99.96
173.0-174.0	0.19	1874.18	0.01	99.97
174.0-175.0	0.16	1874.34	0.01	99.98
175.0-176.0	0.13	1874.47	0.01	99.99
176.0-177.0	0.10	1874.57	0.01	99.99
177.0-178.0	0.07	1874.64	0.00	100.00
178.0-179.0	0.04	1874.69	0.00	100.00
179.0-180.0	0.01	1874.70	0.00	100.00

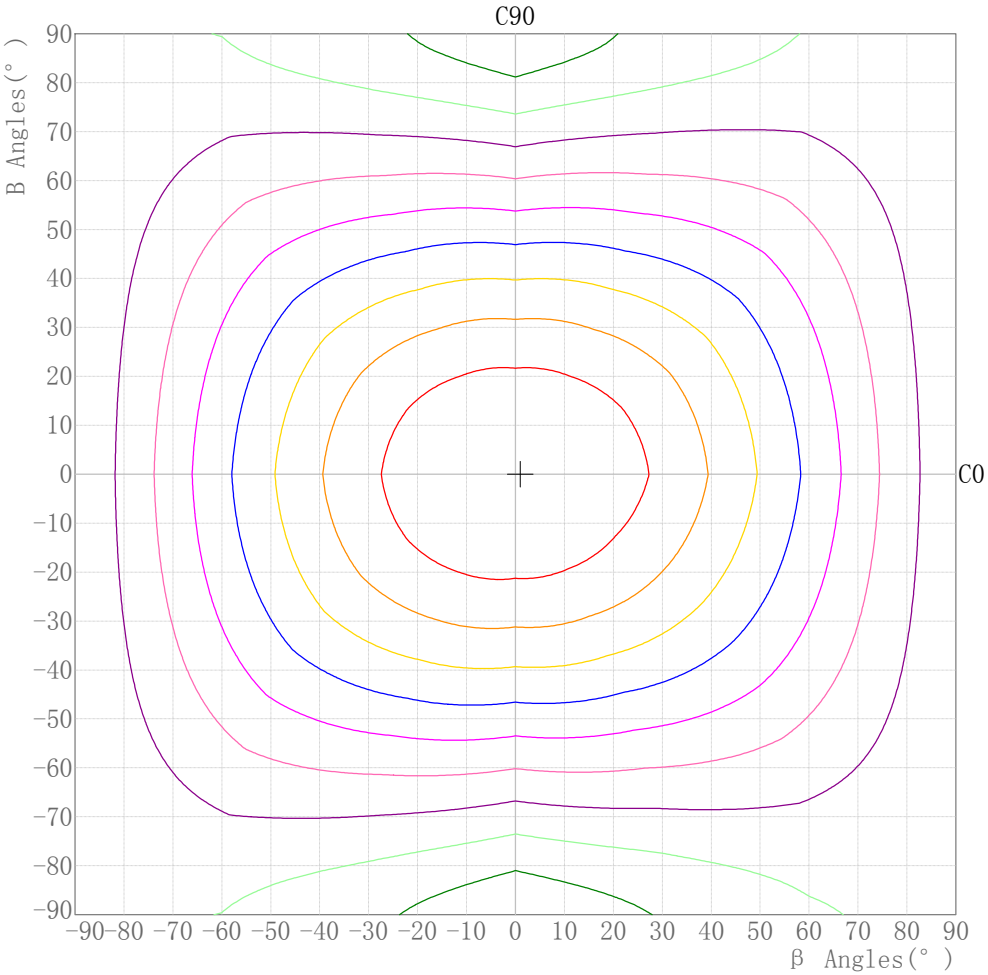
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Photometric Filename:HCP-238400-3K.IES

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Rectangle ISO Lighting Intensity Diagram

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

ISO Lighting Intensity Curve



Curves:
[Unit: cd]
[IMax] =508.375
[IMax*90%]=457.538
[IMax*80%]=406.700
[IMax*70%]=355.863
[IMax*60%]=305.025
[IMax*50%]=254.188
[IMax*40%]=203.350
[IMax*30%]=152.512
[IMax*20%]=101.675
[IMax*10%]=50.837

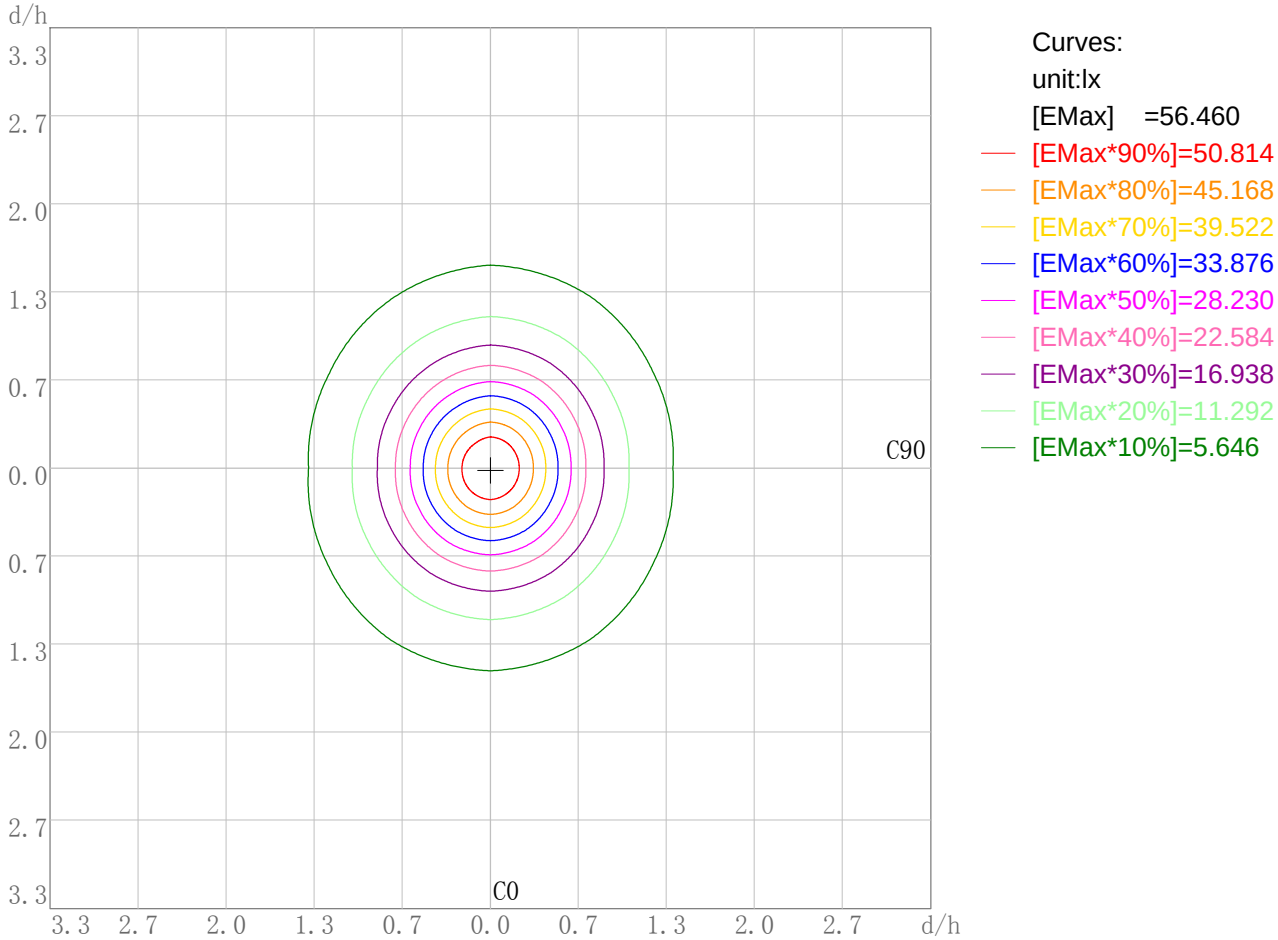
Maximum Light Intensity(cd): 508.38
Maximum Cand.@Angle: H=1.0°,V=0.0°

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Plane ISO-Illuminance Diagram

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

Plane ISO-Illuminance Curve



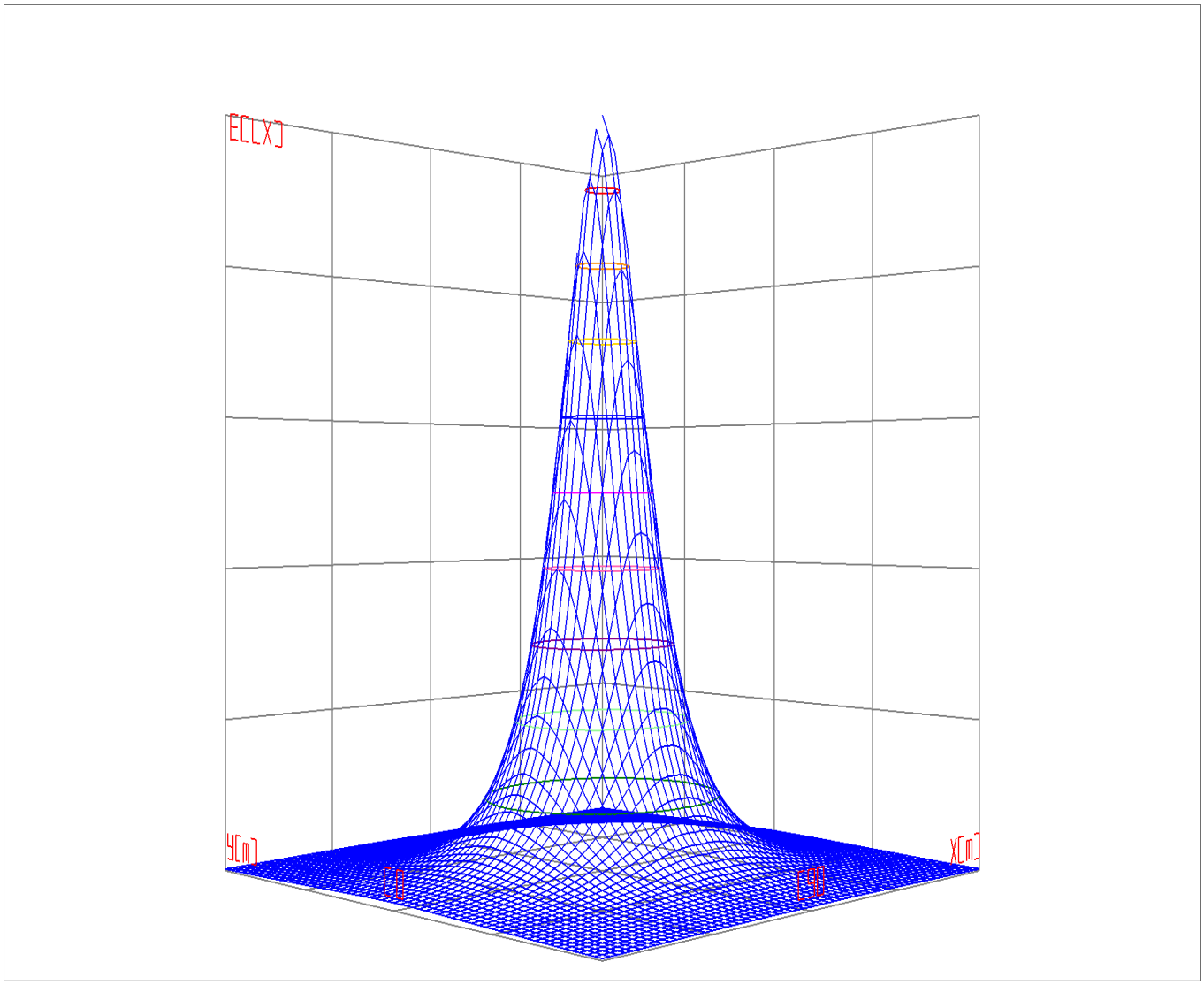
Working Plane Luminaire Mounting Height(m): 3.00
Working Plane Maximum Illuminance(lx): 56.46
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

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3D Plane ISO Illuminance Diagram

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

3D Plane Illuminance Modal



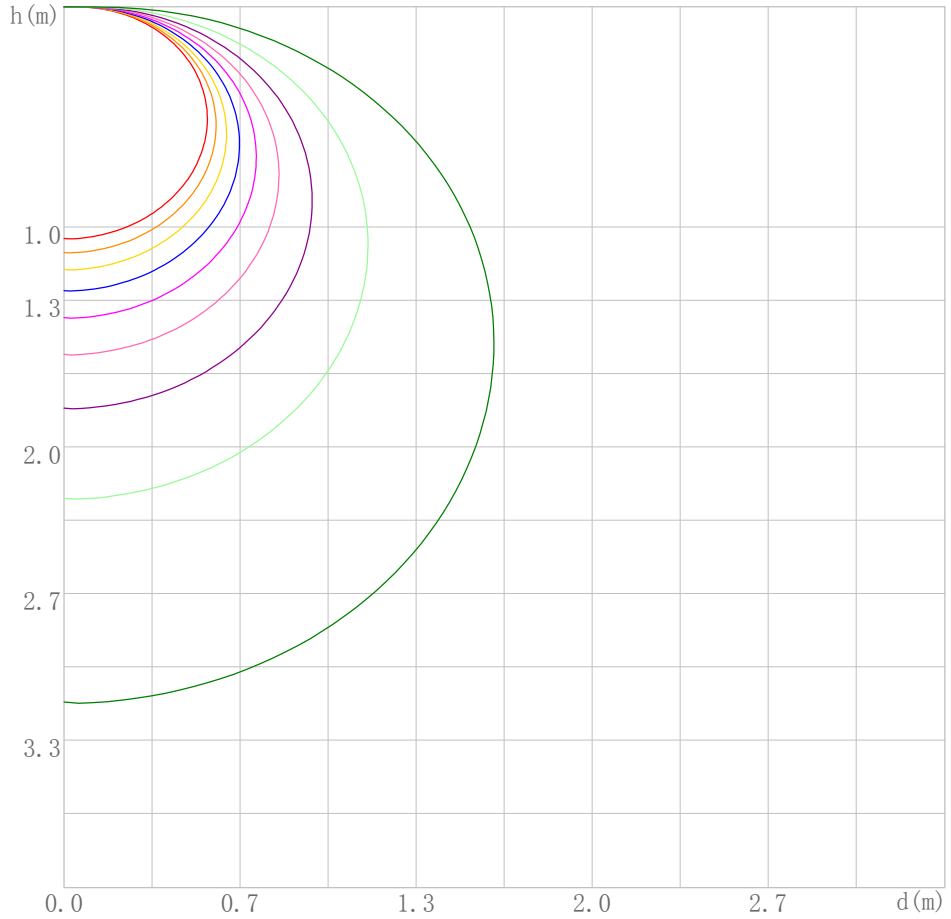
Curves: 3D Model 90% 80% 70% 60% 50% 40% 30% 20% 10%
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

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Space ISO Illuminance Diagram

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

Space ISO Illuminance Curve



Curves:
[Unit: lx]
[EMax] =508.143
[EMax*90%]=457.328
[EMax*80%]=406.514
[EMax*70%]=355.700
[EMax*60%]=304.886
[EMax*50%]=254.071
[EMax*40%]=203.257
[EMax*30%]=152.443
[EMax*20%]=101.629
[EMax*10%]=50.814

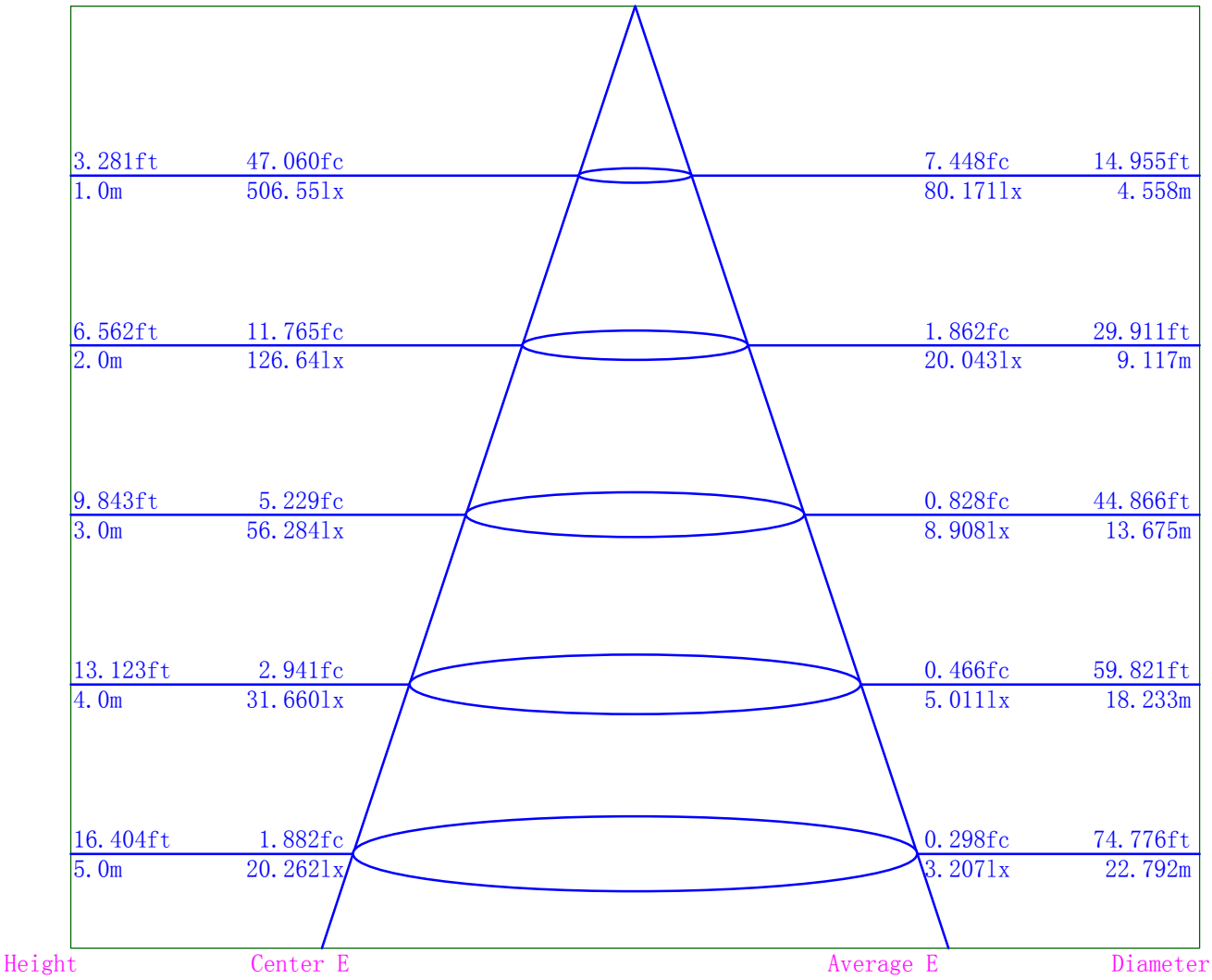
Space Plane Maximum Illuminance and @Angle:508.14lx,1.0deg
Plane Maximum Lighting Intensity and @Angle:508.375cd,0eg

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Illuminance-Distance Diagram

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

Illuminance-Distance Curve



Beam Angle:132.6

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IES Indoor Report
Photometric Filename:HCP-238400-3K.IES

Indoor Luminance Limiting Curves

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28

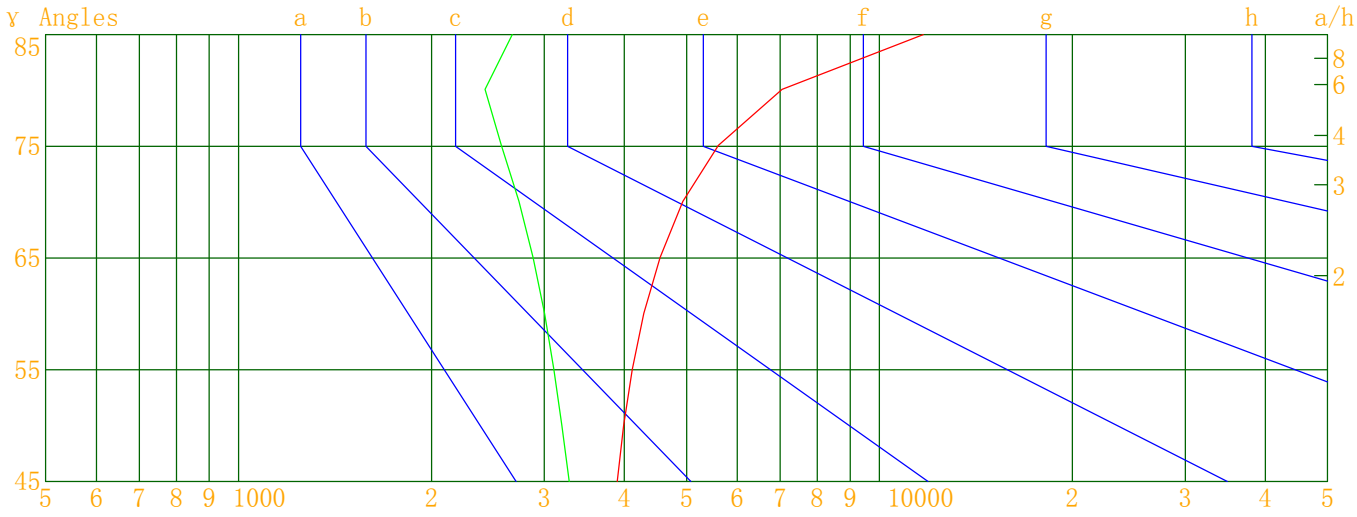
Glare Grade Table

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	3898	3989	4114	4289	4545	4932	5609	7044	11702
C90	3280	3196	3104	3001	2882	2739	2571	2424	2674

Luminance Limiting Curve



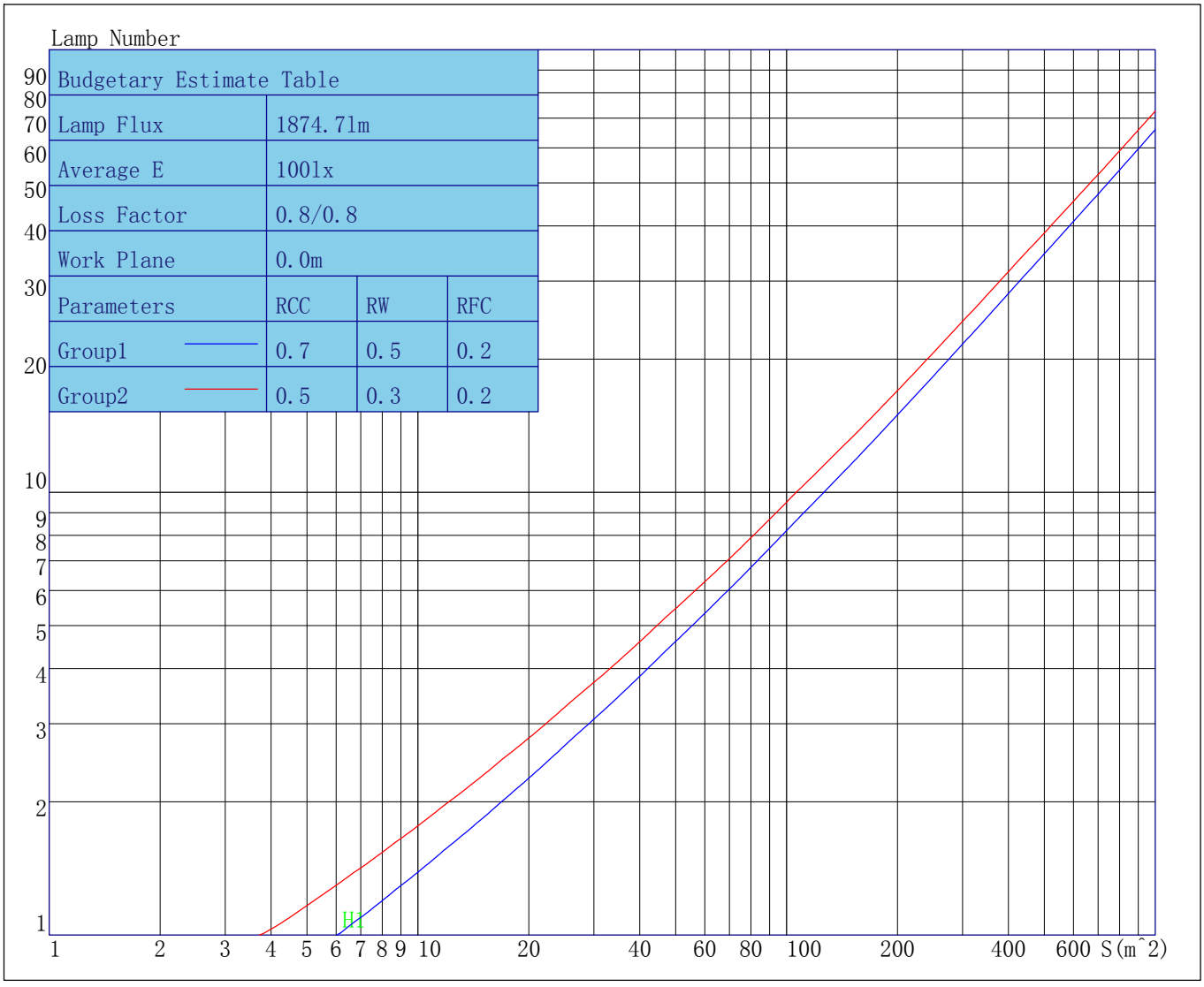
Luminous Size: Length(m)=1.250 Width(m)=0.110 Height(m)=0.000 Area(m^2)=0.137500
Luminous Type: Without Luminous Side
Luminous Curves: C0-C180 Color: ——— C90-C270 Color: ———

IES Indoor Report
Photometric Filename:HCP-238400-3K.IES

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Indoor Budgetary Estimate Table

Lum.Name: HCP-238400-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog:	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/11/28



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

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Indoor Coefficient of Utilization Table

Lum.Name: HCP-238400-3K(20W)	**Lum.Catelog:**	**Test ID:** 001
Lamp Name:	**Lamp Catelog:**	**Test Lab:** Volnic IES
Manufacture:	**Test Machine:GON-2000**	**Test Date:** 2019/11/28

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	91	91	91	88
1	104	99	94	89	100	95	91	86	89	85	82	83	80	77	77	75	73	70
2	94	85	77	71	90	82	75	69	76	71	66	71	67	63	67	63	59	57
3	85	74	65	58	82	71	63	57	67	60	54	62	57	52	58	54	50	47
4	78	65	56	49	74	63	55	48	59	52	46	55	49	44	52	47	42	40
5	71	58	49	42	68	56	48	41	53	45	39	49	43	38	46	41	36	34
6	66	52	43	36	63	50	42	36	47	40	34	45	38	33	42	36	32	30
7	61	47	38	32	58	46	37	31	43	36	30	41	34	29	38	33	28	26
8	57	43	34	28	54	42	33	28	39	32	27	37	31	26	35	29	25	23
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	32	27	23	21
10	49	36	28	23	48	35	28	22	33	27	22	32	26	21	30	25	21	19

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Unified Glare Rating Table

Lum.Name: HCP-238400-3K(20W)	**Lum.Catelog:**	**Test ID:** 001
Lamp Name:	**Lamp Catelog:**	**Test Lab:** Volnic IES
Manufacture:	**Test Machine:GON-2000**	**Test Date:** 2019/11/28

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	16.6	18.0	17.1	18.5	19.1	15.2	16.7	15.8	17.2	17.8
	Y=3H	18.9	20.2	19.5	20.8	21.4	16.9	18.2	17.4	18.7	19.4
	Y=4H	20.1	21.4	20.7	22.0	22.6	17.6	18.8	18.1	19.4	20.0
	Y=6H	21.4	22.6	22.0	23.2	23.8	18.1	19.3	18.7	19.9	20.5
	Y=8H	22.1	23.2	22.7	23.8	24.5	18.3	19.4	18.9	20.0	20.7
	Y=12H	22.9	24.0	23.5	24.6	25.3	18.5	19.6	19.1	20.2	20.9
X=4H	Y=2H	17.3	18.5	17.8	19.1	19.7	16.3	17.5	16.9	18.1	18.8
	Y=3H	19.9	20.9	20.4	21.5	22.2	18.2	19.3	18.8	19.9	20.5
	Y=4H	21.3	22.2	21.9	22.9	23.5	19.0	20.0	19.6	20.6	21.3
	Y=6H	22.8	23.6	23.4	24.3	25.0	19.8	20.6	20.4	21.3	22.0
	Y=8H	23.6	24.4	24.2	25.0	25.7	20.1	20.9	20.7	21.5	22.2
	Y=12H	24.5	25.2	25.1	25.9	26.6	20.3	21.1	21.0	21.7	22.5
X=8H	Y=4H	21.6	22.5	22.3	23.1	23.8	19.8	20.6	20.4	21.3	22.0
	Y=6H	23.4	24.1	24.0	24.8	25.6	20.8	21.5	21.5	22.2	23.1
	Y=8H	24.4	25.0	25.0	25.7	26.4	21.3	21.9	22.0	22.6	23.3
	Y=12H	25.5	26.1	26.2	26.8	27.6	21.7	22.3	22.4	23.0	23.8
X=12H	Y=4H	21.7	22.4	22.3	23.1	23.8	20.0	20.8	20.7	21.4	22.2
	Y=6H	23.5	24.1	24.2	24.8	25.6	21.2	21.8	21.9	22.5	23.3
	Y=8H	24.6	25.1	25.3	25.8	26.6	21.8	22.4	22.5	23.0	23.8
Variations with the objerver position at spacings											
S=1.0H		0.1/-0.1					0.4/-0.4				
S=1.5H		0.2/-0.2					0.6/-0.6				
S=2.0H		0.1/-0.1					0.7/-0.8				
Reduced UGR Table:											
Nordic Standard Table:		BK0					BK0				
Correction Value		5.0					4.0				

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

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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	506.55	506.55	506.55	506.55	506.55	506.55	506.55	506.55	506.55	506.55	506.55	506.55
Y 1.0	508.38	506.66	506.15	505.67	505.32	504.94	508.32	506.63	506.13	505.57	505.09	504.61
Y 2.0	508.10	506.43	505.83	505.42	505.08	504.78	508.21	506.44	505.90	505.15	504.75	504.20
Y 3.0	507.84	506.02	505.33	504.90	504.65	504.52	507.86	506.09	505.33	504.58	504.10	503.71
Y 4.0	507.29	505.42	504.61	504.11	503.97	504.06	507.46	505.57	504.69	503.70	503.42	503.03
Y 5.0	506.70	504.78	503.71	503.27	503.21	503.61	506.87	504.79	503.97	502.78	502.41	502.26
Y 6.0	505.87	503.99	502.69	502.07	502.18	502.81	506.10	504.08	502.90	501.54	501.34	501.27
Y 7.0	504.93	502.97	501.50	500.79	500.98	502.08	505.32	503.10	501.76	500.10	500.12	500.21
Y 8.0	503.84	501.92	499.97	499.14	499.65	500.92	504.29	501.99	500.27	498.47	498.47	498.88
Y 9.0	502.75	500.49	498.31	497.33	498.09	499.83	503.18	500.76	498.76	496.60	496.74	497.40
Y 10.0	501.58	499.06	496.43	495.38	496.30	498.38	501.86	499.34	496.84	494.46	494.88	495.76
Y 11.0	500.13	497.54	494.48	493.15	494.44	496.91	500.54	497.81	494.88	492.16	492.66	494.06
Y 12.0	498.59	495.77	492.27	490.75	492.34	495.39	498.91	496.02	492.68	489.69	490.36	492.17
Y 13.0	496.88	493.89	489.88	488.23	490.05	493.47	497.26	494.06	490.34	486.99	487.93	490.11
Y 14.0	494.98	491.83	487.30	485.40	487.34	491.60	495.56	492.12	487.79	484.25	485.33	487.85
Y 15.0	493.01	489.56	484.65	482.39	484.73	489.48	493.49	489.89	485.03	481.14	482.48	485.50
Y 16.0	490.82	487.07	481.68	479.27	481.80	487.21	491.38	487.54	482.19	477.91	479.40	482.88
Y 17.0	488.56	484.58	478.67	475.86	478.88	484.69	489.10	485.03	479.11	474.35	476.19	480.19
Y 18.0	486.18	481.95	475.41	472.27	475.67	482.18	486.71	482.39	475.88	470.72	472.87	477.40
Y 19.0	483.47	479.13	471.89	468.45	472.19	479.47	484.09	479.67	472.43	466.91	469.13	474.42
Y 20.0	480.89	476.23	468.37	464.49	468.67	476.45	481.51	476.75	468.92	462.85	465.59	471.35
Y 21.0	477.98	472.97	464.58	460.42	464.85	473.27	478.60	473.69	465.28	458.80	461.74	468.06
Y 22.0	475.01	469.74	460.73	456.08	461.11	470.14	475.63	470.41	461.30	454.38	457.68	464.55
Y 23.0	471.98	466.39	456.75	451.64	456.97	466.75	472.53	466.98	457.29	449.83	453.40	461.00
Y 24.0	468.74	462.90	452.52	447.03	452.79	463.27	469.32	463.41	453.03	445.15	448.98	457.26
Y 25.0	465.54	459.35	448.11	442.23	448.49	459.64	465.97	459.80	448.73	440.25	444.53	453.52
Y 26.0	462.02	455.49	443.50	437.17	443.96	455.83	462.51	456.08	444.31	435.20	439.91	449.50
Y 27.0	458.62	451.67	438.91	432.15	439.28	451.94	459.02	452.26	439.71	430.00	435.18	445.46
Y 28.0	455.05	447.55	434.15	426.91	434.56	447.93	455.31	448.25	434.99	424.71	430.32	441.28
Y 29.0	451.30	443.59	429.28	421.55	429.66	443.93	451.60	444.12	429.95	419.19	425.22	437.10
Y 30.0	447.39	439.30	424.23	415.99	424.46	439.76	447.72	439.90	424.89	413.63	420.08	432.59
Y 31.0	443.46	435.03	418.94	410.34	419.24	435.48	443.77	435.62	419.78	407.92	414.73	428.18
Y 32.0	439.33	430.60	413.59	404.53	413.99	431.05	439.63	431.28	414.40	402.05	409.25	423.64
Y 33.0	435.28	425.98	408.19	398.48	408.46	426.42	435.48	426.77	409.11	396.11	403.71	418.99
Y 34.0	431.05	421.45	402.66	392.46	402.94	421.82	431.18	422.07	403.50	389.98	398.06	414.21
Y 35.0	426.71	416.73	397.11	386.20	397.23	417.01	426.77	417.29	397.78	383.67	392.28	409.34
Y 36.0	422.34	411.94	391.32	379.96	391.51	412.14	422.23	412.48	391.98	377.45	386.42	404.42
Y 37.0	417.78	407.23	385.51	373.57	385.58	407.23	417.81	407.63	386.24	371.04	380.49	399.36
Y 38.0	413.17	402.08	379.49	367.03	379.59	402.09	413.21	402.59	380.34	364.58	374.38	394.35
Y 39.0	408.48	397.05	373.50	360.44	373.47	397.04	408.48	397.56	374.36	358.00	368.32	389.13
Y 40.0	403.79	391.96	367.42	353.71	367.50	391.81	403.65	392.38	368.23	351.19	362.08	383.76
Y 41.0	398.97	386.69	361.39	346.93	361.29	386.63	398.67	387.18	362.07	344.36	355.75	378.44
Y 42.0	394.14	381.51	355.17	340.15	354.96	381.26	393.60	381.83	355.80	337.52	349.41	373.00
Y 43.0	389.18	376.14	348.87	333.10	348.59	375.81	388.58	376.54	349.45	330.61	342.87	367.51
Y 44.0	384.06	370.74	342.40	326.02	342.12	370.32	383.49	371.20	343.22	323.57	336.48	362.00
Y 45.0	378.96	365.23	335.96	318.87	335.62	364.63	378.28	365.71	336.75	316.54	329.96	356.51
Y 46.0	373.94	359.67	329.43	311.74	329.08	358.99	373.02	360.06	330.24	309.31	323.31	350.77

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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	368.67	354.11	323.00	304.42	322.54	353.37	367.50	354.48	323.62	302.05	316.55	345.01
Y 48.0	363.42	348.48	316.39	297.27	315.82	347.53	362.19	348.82	317.07	294.76	309.73	339.22
Y 49.0	358.02	342.76	309.85	290.01	309.13	341.74	356.66	343.01	310.46	287.59	302.99	333.47
Y 50.0	352.53	337.01	303.13	282.49	302.32	335.80	351.24	337.28	303.75	280.18	296.36	327.53
Y 51.0	347.00	331.15	296.39	275.06	295.54	329.92	345.63	331.42	297.09	272.70	289.55	321.65
Y 52.0	341.51	325.24	289.72	267.50	288.71	323.97	339.91	325.49	290.38	265.24	282.70	315.81
Y 53.0	335.94	319.38	283.00	259.98	281.98	317.94	334.21	319.52	283.44	257.64	275.70	309.73
Y 54.0	330.22	313.47	276.28	252.41	275.07	311.83	328.43	313.55	276.65	250.26	268.97	303.72
Y 55.0	324.47	307.49	269.34	244.81	268.29	305.74	322.58	307.52	269.85	242.71	262.01	297.56
Y 56.0	318.60	301.46	262.50	237.25	261.16	299.53	316.78	301.41	263.05	235.20	255.16	291.53
Y 57.0	312.75	295.30	255.65	229.42	254.27	293.25	310.78	295.25	256.16	227.56	248.26	285.40
Y 58.0	306.86	289.17	248.79	221.77	247.30	287.13	304.73	289.26	249.35	219.94	241.31	279.19
Y 59.0	300.90	283.04	242.00	214.09	240.42	280.81	298.64	283.00	242.44	212.19	234.37	273.02
Y 60.0	294.90	276.77	235.19	206.35	233.48	274.52	292.50	276.70	235.64	204.52	227.30	266.82
Y 61.0	288.81	270.58	228.27	198.55	226.59	268.14	286.33	270.37	228.79	196.84	220.43	260.54
Y 62.0	282.74	264.18	221.23	190.66	219.60	261.66	280.12	264.01	221.90	189.22	213.62	254.24
Y 63.0	276.51	257.95	214.43	182.95	212.73	255.21	273.84	257.79	215.15	181.53	206.59	247.96
Y 64.0	270.24	251.69	207.67	175.10	205.85	248.85	267.48	251.36	208.32	173.86	199.70	241.62
Y 65.0	264.12	245.27	200.86	167.45	199.00	242.50	261.04	245.03	201.34	166.17	192.75	235.33
Y 66.0	257.78	239.04	194.01	159.69	192.20	236.12	254.56	238.74	194.50	158.47	185.83	228.93
Y 67.0	251.39	232.57	187.27	151.92	185.38	229.71	248.15	232.26	187.71	150.74	179.05	222.54
Y 68.0	244.84	226.13	180.35	144.15	178.54	223.19	241.72	225.94	180.98	143.20	172.27	216.30
Y 69.0	238.43	219.68	173.70	136.45	171.83	216.69	235.25	219.30	174.28	135.61	165.48	209.82
Y 70.0	231.95	213.14	166.91	128.80	165.06	210.24	228.71	212.87	167.49	128.02	158.85	203.49
Y 71.0	225.58	206.70	160.50	121.25	158.45	203.82	222.04	206.26	160.81	120.41	152.12	197.05
Y 72.0	219.07	200.30	153.92	113.70	151.90	197.30	215.38	199.85	154.16	112.98	145.45	190.68
Y 73.0	212.51	194.07	147.46	106.21	145.35	190.85	208.85	193.40	147.61	105.55	138.95	184.38
Y 74.0	206.00	187.62	140.84	98.74	138.84	184.49	202.24	186.99	141.13	98.22	132.46	178.03
Y 75.0	199.61	181.11	134.54	91.49	132.36	178.10	195.66	180.55	134.82	91.01	126.14	171.91
Y 76.0	193.22	174.84	128.24	84.41	126.19	171.78	189.17	174.14	128.53	83.87	119.88	165.59
Y 77.0	186.99	168.68	122.18	77.58	120.09	165.50	182.61	167.75	122.30	76.81	113.75	159.38
Y 78.0	180.51	162.51	116.18	70.81	114.03	159.34	176.15	161.49	116.17	70.02	107.51	153.42
Y 79.0	174.28	156.38	110.26	64.19	108.15	153.25	169.80	155.39	110.32	63.43	101.57	147.35
Y 80.0	168.18	150.44	104.42	57.87	102.27	147.19	163.56	149.36	104.35	57.06	95.99	141.54
Y 81.0	162.15	144.62	98.83	51.82	96.89	141.32	157.30	143.24	98.67	50.87	90.36	135.88
Y 82.0	156.31	138.87	93.57	46.24	91.56	135.73	151.35	137.64	93.19	44.98	84.94	130.21
Y 83.0	150.75	133.41	88.49	41.11	86.43	130.35	145.59	131.85	87.85	39.54	79.73	124.75
Y 84.0	145.39	128.19	83.65	36.10	81.76	124.92	140.03	126.60	82.79	34.45	74.85	119.69
Y 85.0	140.23	123.29	79.22	32.04	77.12	120.07	134.71	121.34	78.03	29.83	70.22	114.76
Y 86.0	135.35	118.63	74.97	28.38	73.05	115.30	129.71	116.49	73.57	25.81	66.00	110.10
Y 87.0	130.89	114.38	71.38	25.45	69.27	111.05	125.02	112.07	69.51	22.43	62.17	105.94
Y 88.0	126.99	110.57	68.10	23.42	66.08	107.16	120.81	107.93	65.81	19.69	58.70	102.02
Y 89.0	123.41	107.29	65.60	22.31	63.46	103.80	116.77	104.17	62.65	17.88	55.81	98.79
Y 90.0	120.46	104.28	63.36	21.99	61.22	100.82	113.51	101.01	59.88	17.00	53.36	95.96
Y 91.0	117.47	101.59	61.11	21.66	59.20	98.19	110.57	98.33	57.72	16.68	51.33	93.39
Y 92.0	114.50	98.94	59.03	21.43	57.21	95.48	107.64	95.66	55.70	16.40	49.56	90.94
Y 93.0	111.71	96.28	57.03	21.20	55.23	92.93	104.70	92.98	53.75	16.28	47.69	88.38

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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	108.89	93.70	55.08	20.93	53.38	90.46	101.95	90.37	51.81	16.11	45.92	85.93
Y 95.0	106.14	91.14	53.17	20.77	51.55	87.95	99.17	87.83	49.98	15.94	44.18	83.58
Y 96.0	103.32	88.58	51.25	20.51	49.91	85.45	96.52	85.28	48.08	15.80	42.54	81.25
Y 97.0	100.63	86.11	49.59	20.34	48.23	83.20	93.86	82.93	46.38	15.62	40.94	78.93
Y 98.0	98.09	83.62	47.88	20.12	46.51	80.80	91.34	80.58	44.67	15.45	39.40	76.61
Y 99.0	95.51	81.34	46.28	19.86	45.06	78.67	88.84	78.28	43.06	15.45	37.85	74.40
Y 100.0	92.94	78.98	44.65	19.66	43.47	76.39	86.42	75.89	41.51	15.33	36.60	72.27
Y 101.0	90.53	76.72	43.18	19.40	42.05	74.26	83.96	73.69	40.00	15.15	35.10	70.05
Y 102.0	88.20	74.49	41.74	19.19	40.76	72.20	81.71	71.53	38.52	14.97	33.84	68.02
Y 103.0	85.76	72.40	40.27	18.96	39.37	70.01	79.37	69.47	37.15	14.89	32.60	65.98
Y 104.0	83.36	70.18	38.92	18.75	38.06	68.05	77.11	67.41	35.81	14.70	31.44	64.07
Y 105.0	81.09	68.06	37.65	18.66	36.81	65.97	74.89	65.30	34.46	14.55	30.29	62.00
Y 106.0	78.92	65.61	36.32	18.42	35.60	63.66	72.82	63.28	33.31	14.41	29.23	59.64
Y 107.0	76.64	62.61	35.03	18.14	34.26	60.71	70.70	60.41	32.09	14.35	28.05	56.75
Y 108.0	74.18	59.90	33.62	18.00	33.10	58.14	68.62	57.57	30.80	14.29	27.00	54.33
Y 109.0	71.33	57.70	32.48	17.82	31.97	55.96	65.96	55.48	29.53	14.18	25.84	52.38
Y 110.0	68.35	55.80	31.36	17.59	30.80	54.07	63.02	53.50	28.46	14.05	24.88	50.64
Y 111.0	66.12	54.42	30.27	17.41	29.75	52.83	60.62	52.03	27.32	14.01	24.04	49.25
Y 112.0	64.18	52.99	29.02	17.33	28.71	51.40	58.72	50.52	26.16	13.97	23.09	47.78
Y 113.0	62.38	51.20	27.98	17.18	27.77	49.81	57.05	48.96	25.27	13.79	22.29	46.07
Y 114.0	60.71	49.52	27.07	16.95	26.95	48.19	55.58	47.28	24.47	13.69	21.55	44.55
Y 115.0	59.25	47.89	26.35	16.74	26.21	46.66	54.22	45.73	23.78	13.66	20.79	43.03
Y 116.0	57.76	46.25	25.57	16.59	25.45	45.06	52.96	44.02	22.94	13.59	20.17	41.61
Y 117.0	56.02	44.80	24.93	16.40	24.76	43.67	51.34	42.61	22.33	13.56	19.58	40.27
Y 118.0	54.35	43.63	24.27	16.33	24.14	42.68	49.74	41.49	21.68	13.43	19.05	39.30
Y 119.0	52.71	42.47	23.64	16.22	23.45	41.55	48.13	40.48	21.11	13.42	18.42	38.04
Y 120.0	51.25	41.15	23.06	16.10	22.77	40.29	46.72	39.21	20.51	13.32	18.00	36.78
Y 121.0	49.91	39.92	22.47	15.95	22.20	38.98	45.33	38.00	19.97	13.27	17.56	35.73
Y 122.0	48.41	38.57	21.83	15.91	21.76	37.80	44.01	36.78	19.44	13.22	17.14	34.55
Y 123.0	46.86	37.26	21.19	15.71	21.20	36.63	42.53	35.58	18.84	13.17	16.72	33.49
Y 124.0	45.51	36.21	20.69	15.62	20.73	35.46	41.17	34.41	18.25	13.15	16.29	32.47
Y 125.0	44.04	34.98	20.23	15.52	20.15	34.41	39.92	33.44	17.92	13.08	15.89	31.40
Y 126.0	42.64	33.99	19.65	15.42	19.68	33.43	38.63	32.40	17.50	13.02	15.61	30.39
Y 127.0	41.24	32.96	19.20	15.36	19.16	32.36	37.36	31.46	16.96	12.92	15.13	29.36
Y 128.0	40.02	31.87	18.62	15.19	18.70	31.41	36.08	30.44	16.61	12.99	14.66	28.42
Y 129.0	38.68	30.75	18.02	15.09	18.21	30.34	34.89	29.48	16.27	12.97	14.34	27.55
Y 130.0	37.44	29.87	17.58	15.11	17.73	29.41	33.75	28.49	15.80	12.92	13.90	26.64
Y 131.0	36.17	28.73	17.25	15.06	17.32	28.49	32.67	27.61	15.33	13.00	13.61	25.69
Y 132.0	35.02	27.82	16.92	14.85	17.02	27.56	31.63	26.78	14.98	12.96	13.37	24.90
Y 133.0	33.89	26.92	16.58	14.87	16.68	26.78	30.55	25.92	14.70	12.99	13.14	24.17
Y 134.0	32.78	26.07	16.32	14.85	16.32	25.87	29.40	25.14	14.45	12.98	13.02	23.36
Y 135.0	31.65	25.24	16.12	14.71	16.15	25.12	28.47	24.35	14.13	12.92	12.89	22.64
Y 136.0	30.62	24.41	15.86	14.68	15.80	24.24	27.40	23.50	13.88	12.98	12.80	21.84
Y 137.0	29.50	23.65	15.64	14.59	15.49	23.43	26.45	22.64	13.69	13.02	12.68	21.11
Y 138.0	28.46	22.83	15.39	14.54	15.30	22.70	25.61	21.95	13.46	13.07	12.64	20.37
Y 139.0	27.47	22.10	15.34	14.56	15.21	21.94	24.74	21.18	13.28	13.06	12.67	19.68
Y 140.0	26.61	21.46	15.23	14.53	15.00	21.31	23.78	20.47	13.09	13.10	12.79	18.98

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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
γ 141.0	25.63	20.67	15.21	14.54	15.04	20.64	22.98	19.83	13.02	13.15	12.71	18.44
γ 142.0	24.63	20.05	15.17	14.52	14.97	20.02	22.10	19.10	13.09	13.18	12.72	17.95
γ 143.0	23.90	19.38	15.16	14.52	14.87	19.45	21.25	18.62	13.12	13.25	12.81	17.48
γ 144.0	23.04	18.86	15.08	14.53	14.90	18.95	20.49	18.06	13.18	13.29	12.78	16.80
γ 145.0	22.29	18.26	15.08	14.46	14.85	18.39	19.74	17.59	13.13	13.30	12.78	16.31
γ 146.0	21.41	17.67	15.06	14.45	14.71	17.83	19.23	17.09	13.27	13.28	12.84	15.84
γ 147.0	20.76	17.27	15.07	14.56	14.75	17.27	18.48	16.57	13.20	13.38	12.99	15.46
γ 148.0	20.04	16.73	15.13	14.49	14.82	16.78	17.82	16.16	13.39	13.40	13.01	15.05
γ 149.0	19.33	16.41	15.12	14.51	14.75	16.37	17.32	15.71	13.42	13.43	12.98	14.82
γ 150.0	18.66	16.03	15.00	14.37	14.73	16.01	16.83	15.43	13.46	13.35	13.14	14.52
γ 151.0	18.05	15.70	15.08	14.45	14.65	15.69	16.18	14.94	13.49	13.44	13.29	14.20
γ 152.0	17.46	15.43	15.08	14.48	14.66	15.39	15.73	14.64	13.57	13.49	13.32	14.07
γ 153.0	16.94	15.26	15.07	14.51	14.72	15.06	15.37	14.44	13.59	13.58	13.35	14.04
γ 154.0	16.57	15.17	15.13	14.51	14.74	14.87	14.93	14.19	13.67	13.67	13.42	13.92
γ 155.0	16.19	15.08	15.04	14.59	14.72	14.81	14.53	14.17	13.71	13.75	13.48	13.94
γ 156.0	15.87	15.12	15.07	14.60	14.75	14.70	14.23	14.20	13.89	13.90	13.46	13.90
γ 157.0	15.77	15.06	15.15	14.67	14.68	14.88	14.19	14.17	13.93	13.92	13.56	14.00
γ 158.0	15.58	15.11	15.14	14.77	14.70	14.84	14.13	14.19	14.01	13.97	13.64	14.06
γ 159.0	15.55	14.99	15.16	14.74	14.86	14.87	14.15	14.37	14.14	14.02	13.77	14.05
γ 160.0	15.54	15.07	15.18	14.91	14.83	14.83	14.19	14.44	14.11	14.14	13.77	14.13
γ 161.0	15.52	15.11	15.13	14.83	14.88	14.81	14.27	14.46	14.17	14.21	13.86	14.19
γ 162.0	15.54	15.19	15.17	14.85	14.89	14.85	14.29	14.53	14.26	14.17	13.93	14.28
γ 163.0	15.55	15.08	15.17	14.89	14.87	14.85	14.39	14.60	14.30	14.35	13.98	14.37
γ 164.0	15.51	15.12	15.21	14.78	14.85	14.83	14.45	14.60	14.30	14.32	14.15	14.35
γ 165.0	15.45	15.12	15.17	14.83	14.86	14.94	14.57	14.69	14.31	14.43	14.14	14.43
γ 166.0	15.50	15.18	15.20	14.92	14.86	14.88	14.62	14.73	14.34	14.51	14.16	14.50
γ 167.0	15.48	15.14	15.25	14.88	14.89	14.98	14.81	14.74	14.45	14.59	14.28	14.56
γ 168.0	15.52	15.21	15.24	15.01	14.86	14.96	14.81	14.93	14.52	14.64	14.30	14.66
γ 169.0	15.57	15.20	15.29	15.01	14.99	15.00	14.84	14.94	14.63	14.68	14.36	14.70
γ 170.0	15.50	15.24	15.21	15.01	15.04	15.01	14.99	15.01	14.67	14.82	14.46	14.73
γ 171.0	15.47	15.26	15.20	15.11	15.09	14.85	15.09	15.09	14.75	14.77	14.52	14.80
γ 172.0	15.45	15.19	15.29	15.08	15.05	14.92	15.07	15.10	14.77	14.83	14.64	14.79
γ 173.0	15.45	15.17	15.38	14.99	15.10	14.92	15.10	15.08	14.88	14.90	14.70	14.84
γ 174.0	15.52	15.18	15.27	15.11	15.10	14.90	15.23	15.13	14.95	14.79	14.66	14.82
γ 175.0	15.43	15.19	15.33	15.07	15.12	14.96	15.24	15.11	14.98	14.96	14.81	14.90
γ 176.0	15.43	15.17	15.26	15.20	15.12	15.03	15.32	15.14	15.01	15.03	14.74	14.88
γ 177.0	15.48	15.14	15.38	15.21	15.09	15.02	15.36	15.21	14.99	15.01	14.88	14.82
γ 178.0	15.47	15.09	15.25	15.28	15.02	14.90	15.50	15.27	15.07	15.06	14.78	14.88
γ 179.0	15.49	15.12	15.21	15.32	15.02	14.83	15.51	15.24	15.00	15.14	14.89	14.97
γ 180.0	15.17	15.17	15.17	15.17	15.17	15.17	15.17	15.17	15.17	15.17	15.17	15.17