IES Indoor Report
Photometric Filename:HCP-238401-3K.IES

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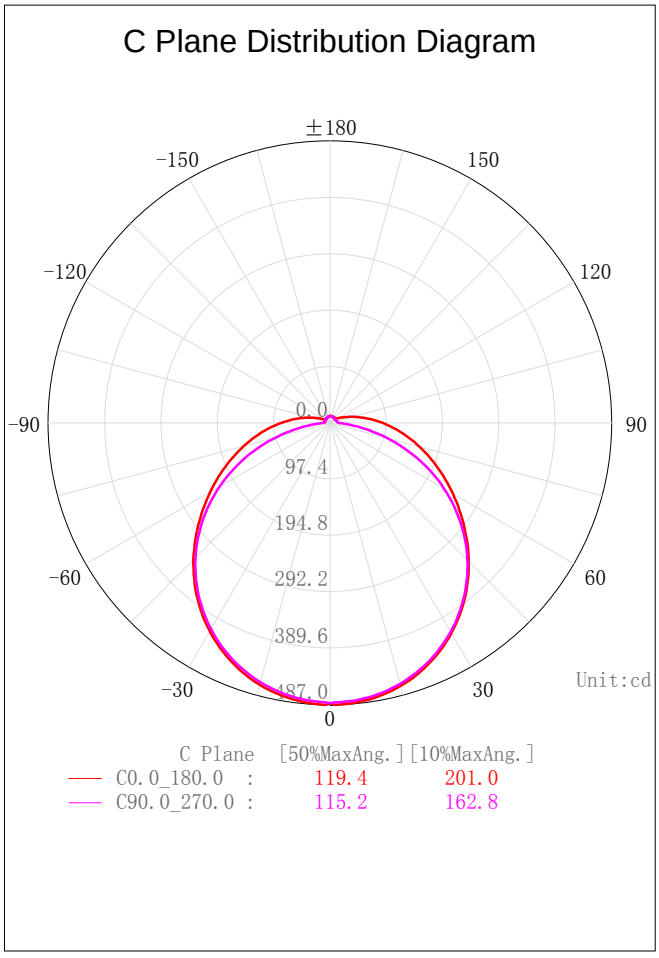
Indoor Luminaire Photometric Data

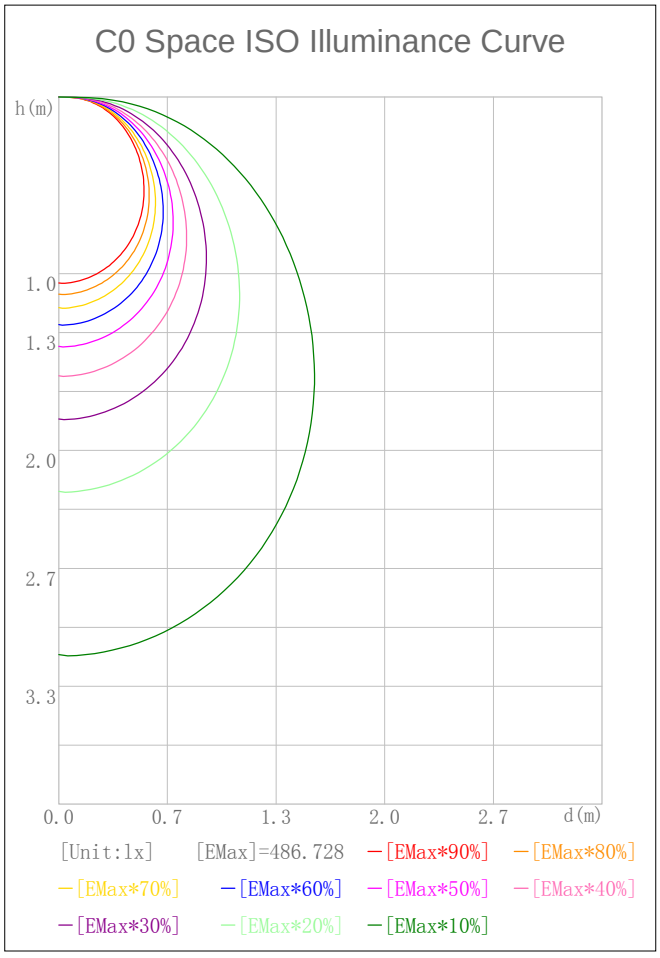
Description Information

Luminary Name: HCP-238401-3K(20W)		Lum. Catelog:	Test ID: 001
Lamp Name:		Lamp Catelog: 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.(℃): 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





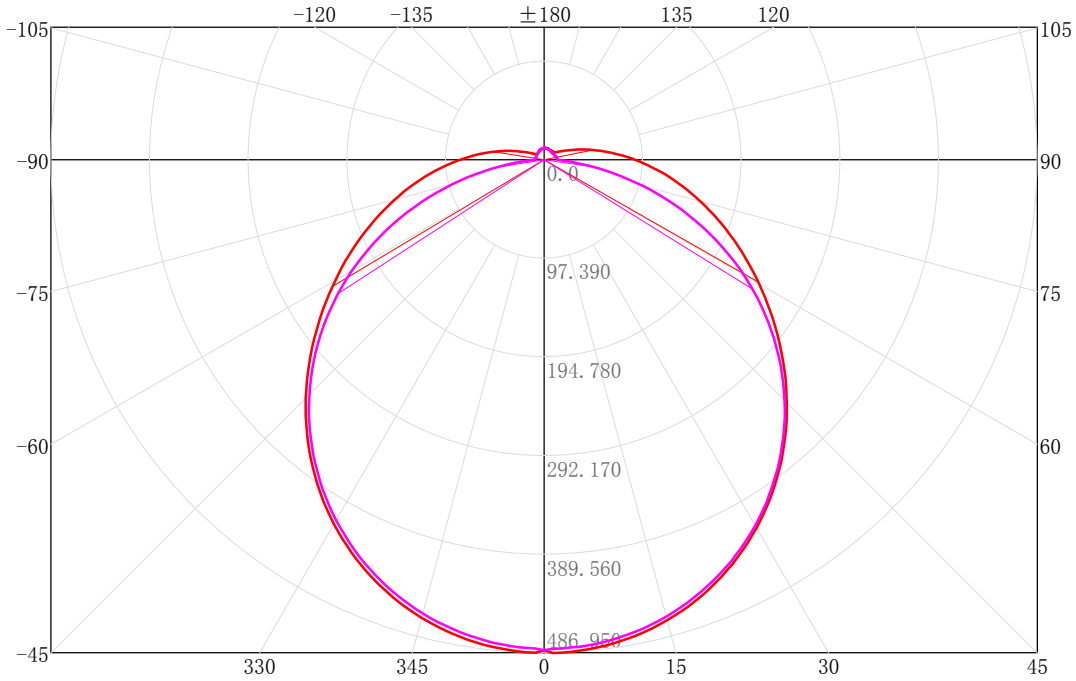
IES Indoor Report
Photometric Filename:HCP-238401-3K.IES

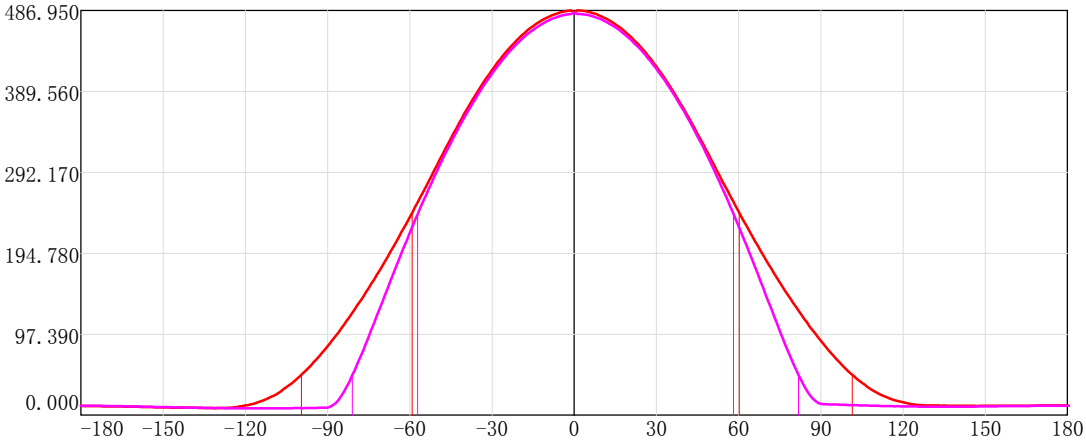
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2D Plane Light Intensity Distribution Curve

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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	

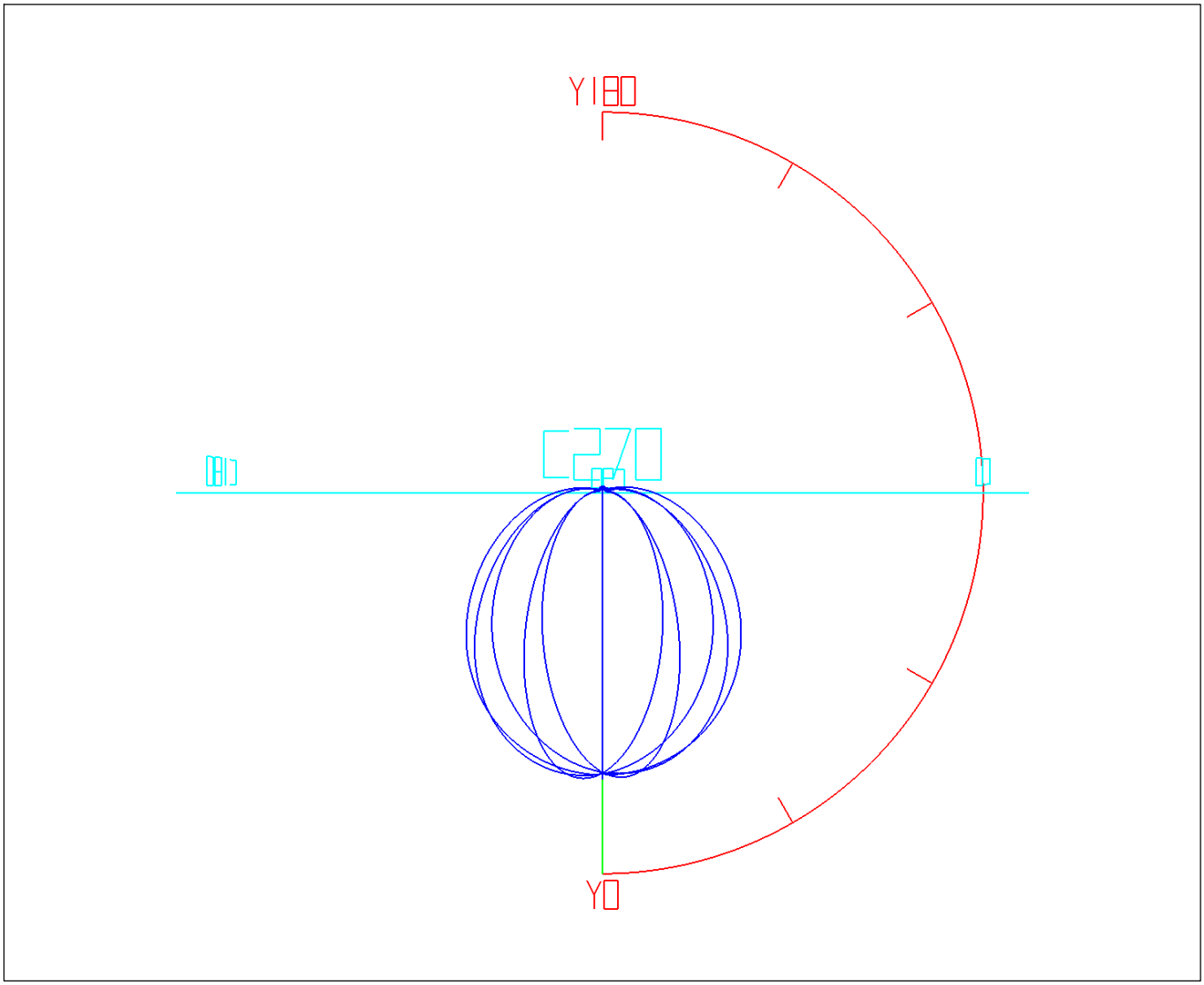
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Photometric Filename:HCP-238401-3K.IES

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3D Light Intensity Distribution Modal

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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

IES Indoor Report
Photometric Filename:HCP-238401-3K.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	0.46	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

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Zonal Flux Tabulation - (Cont.)

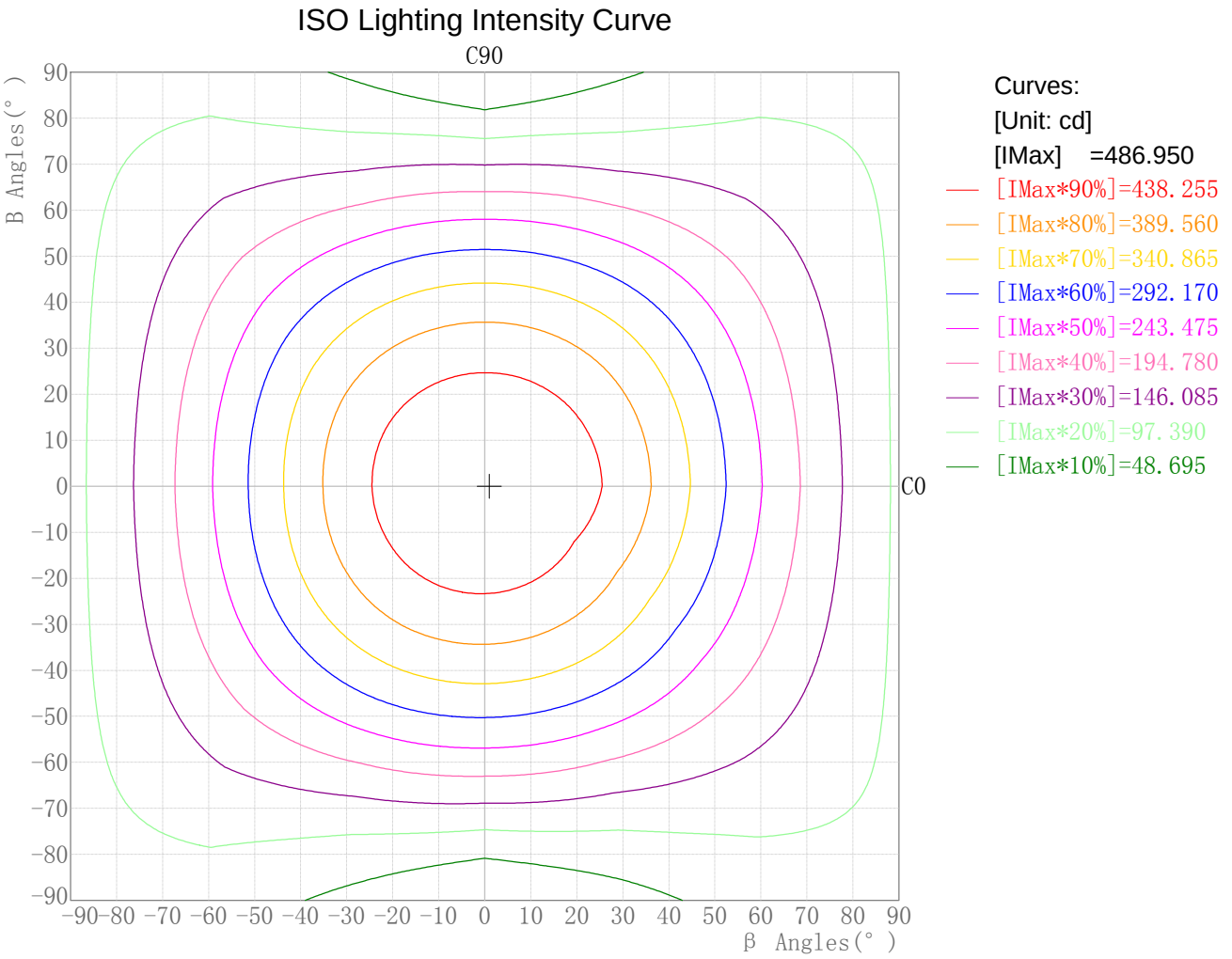
Zone(γ)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
94.0-95.0	4.49	1554.64	0.27	94.73
95.0-96.0	4.21	1558.84	0.26	94.98
96.0-97.0	3.94	1562.78	0.24	95.22
97.0-98.0	3.69	1566.47	0.22	95.45
98.0-99.0	3.45	1569.92	0.21	95.66
99.0-100.0	3.22	1573.14	0.20	95.86
100.0-101.0	3.01	1576.16	0.18	96.04
101.0-102.0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

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Rectangle ISO Lighting Intensity Diagram

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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°

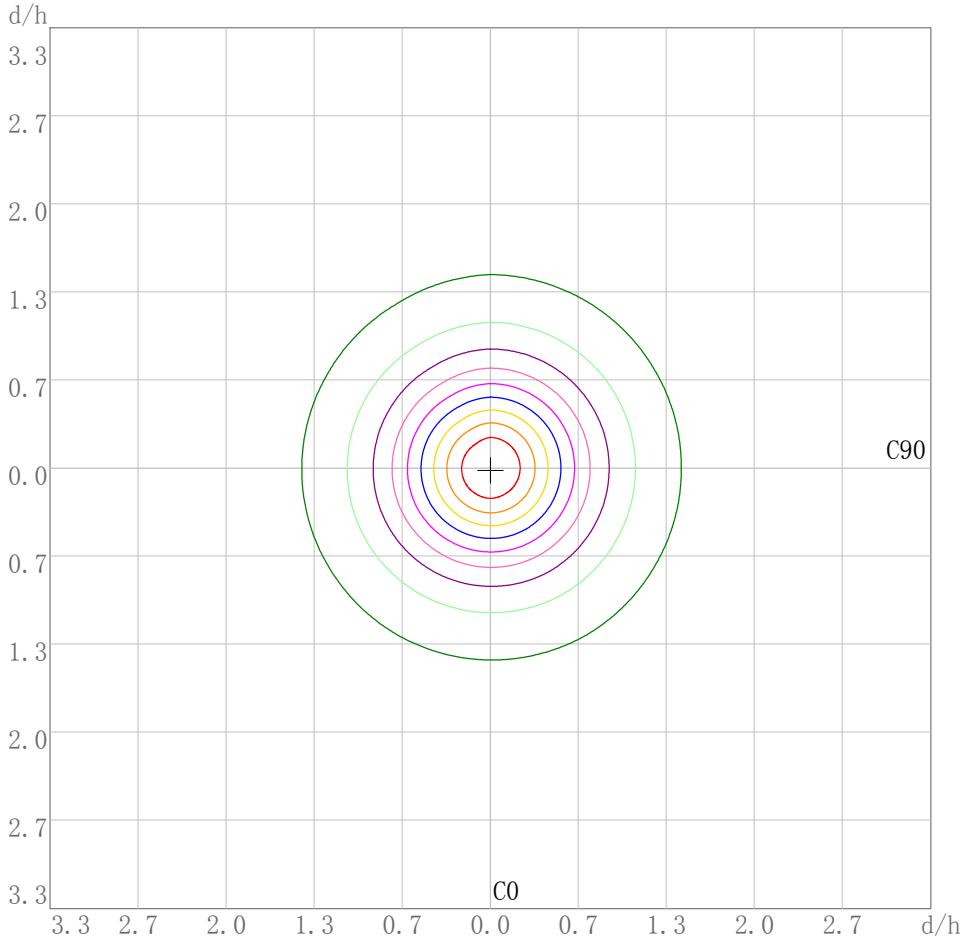
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Plane ISO-Illuminance Diagram

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

Plane ISO-Illuminance Curve



Curves:
unit:lx
[EMax] =54.081
[EMax*90%]=48.673
[EMax*80%]=43.265
[EMax*70%]=37.857
[EMax*60%]=32.449
[EMax*50%]=27.040
[EMax*40%]=21.632
[EMax*30%]=16.224
[EMax*20%]=10.816
[EMax*10%]=5.408

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

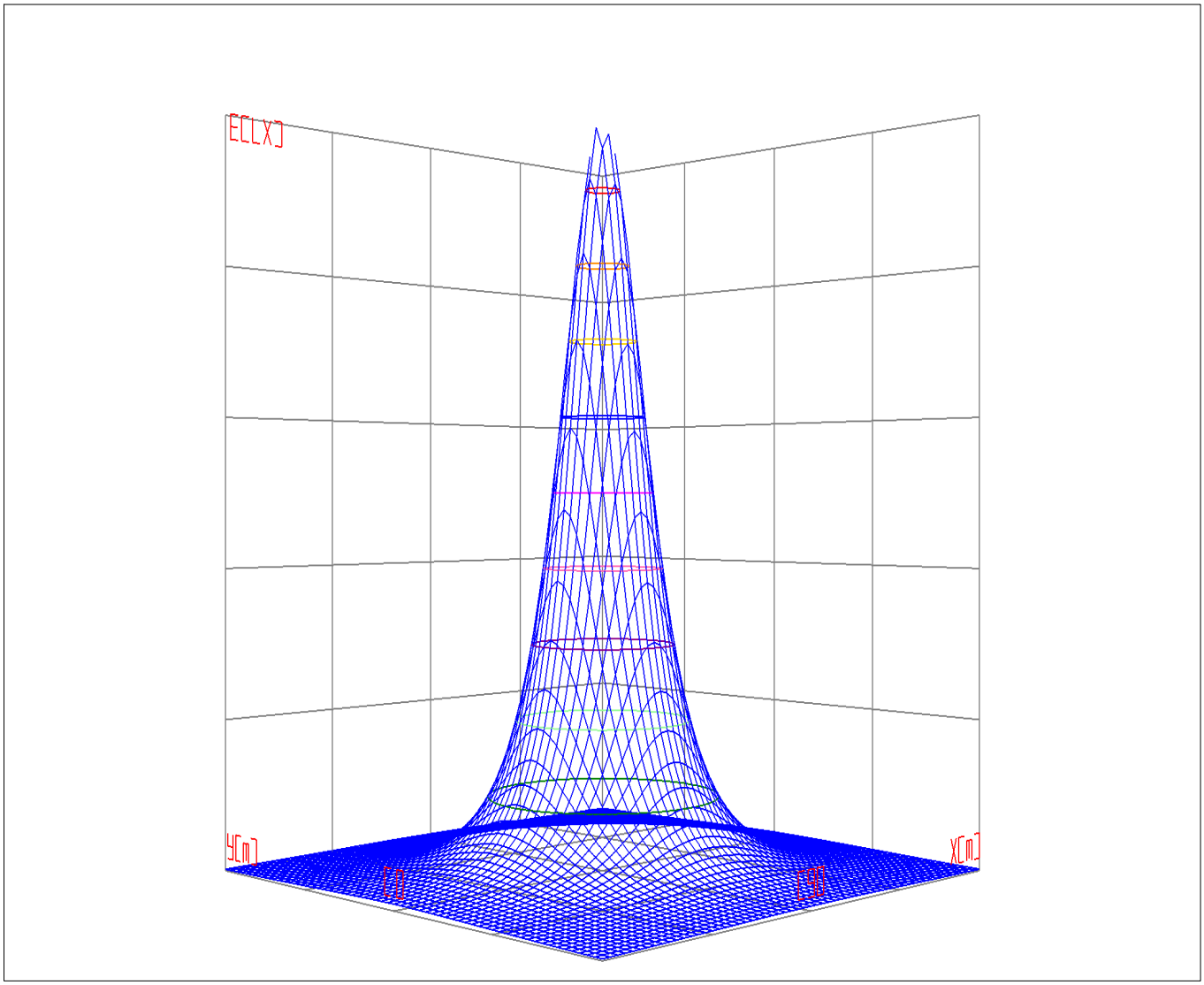
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3D Plane ISO Illuminance Diagram

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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

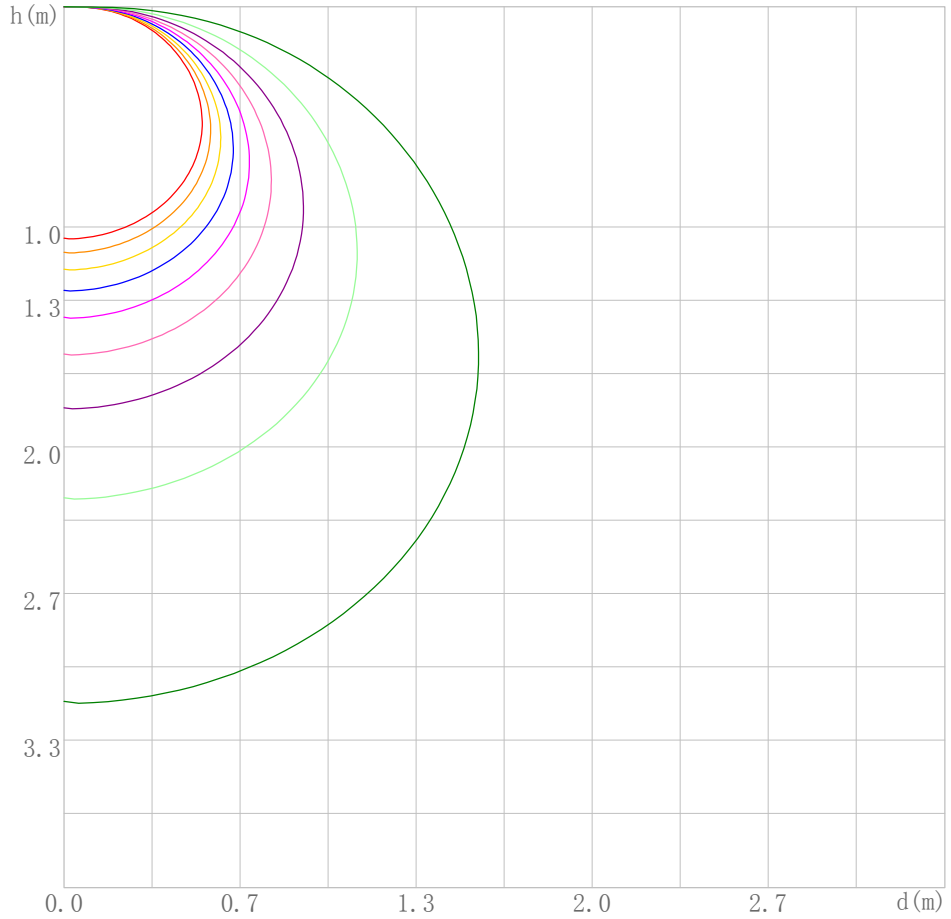
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Photometric Filename:HCP-238401-3K.IES

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Space ISO Illuminance Diagram

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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,0eg

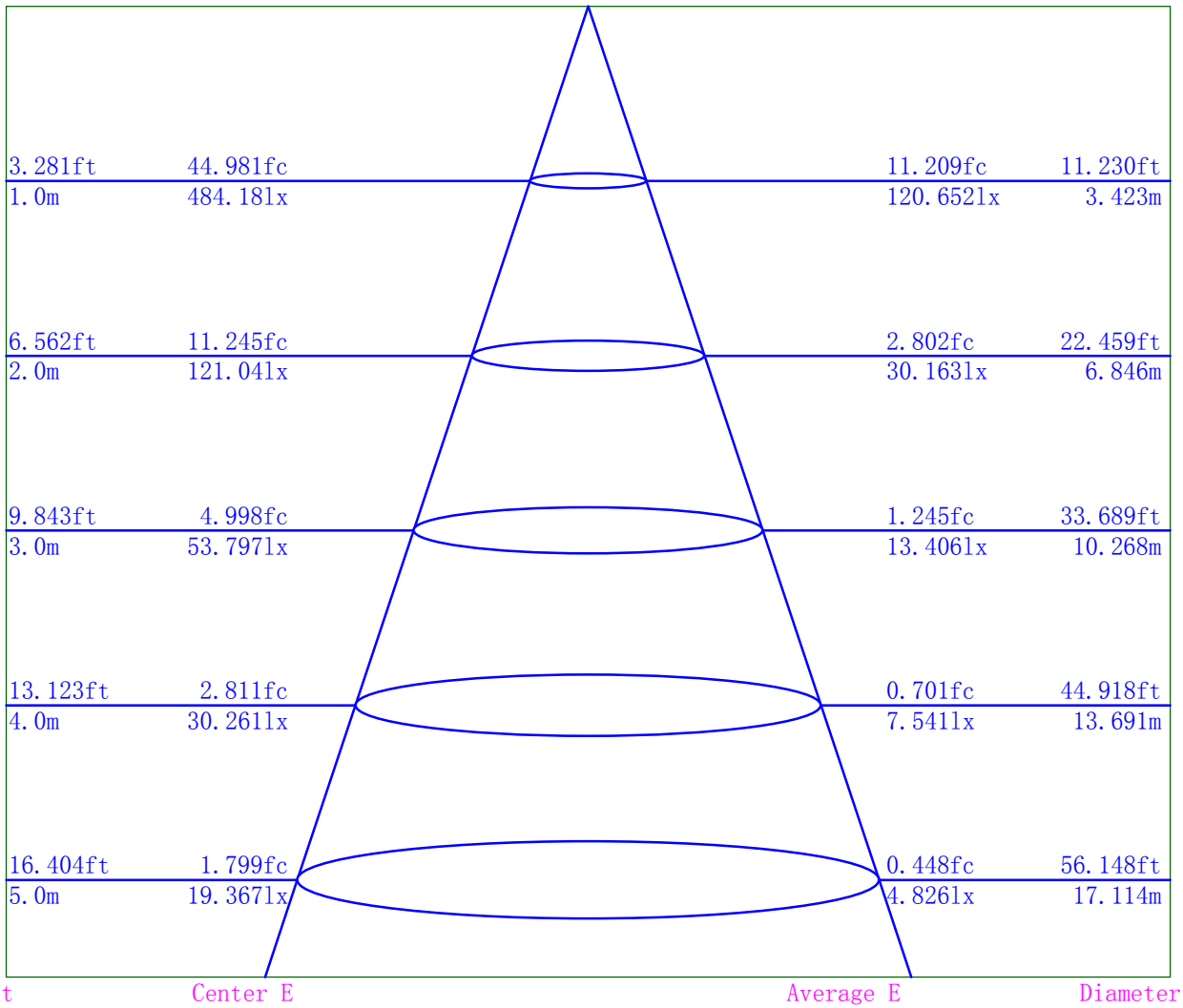
IES Indoor Report
Photometric Filename:HCP-238401-3K.IES

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Illuminance-Distance Diagram

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

Illuminance-Distance Curve



Beam Angle:119.4

IES Indoor Report
Photometric Filename:HCP-238401-3K.IES

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Indoor Luminance Limiting Curves

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 2019/04/12

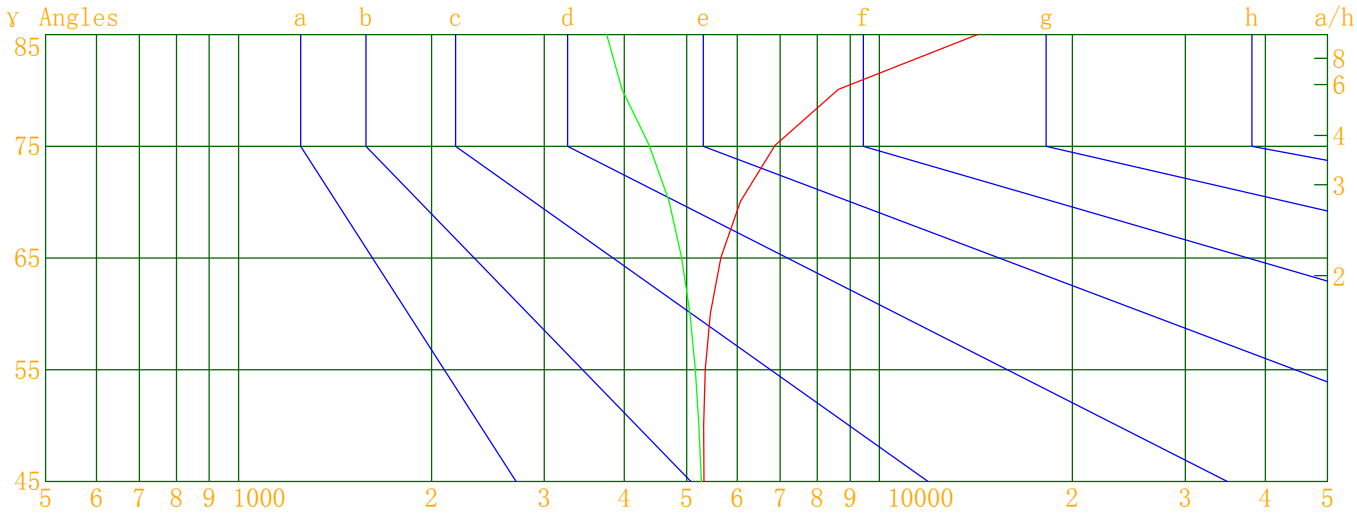
Glare Grade Table

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	5326	5320	5348	5449	5661	6072	6869	8627	14208
C90	5273	5229	5159	5058	4909	4694	4375	3964	3752

Luminance Limiting Curve



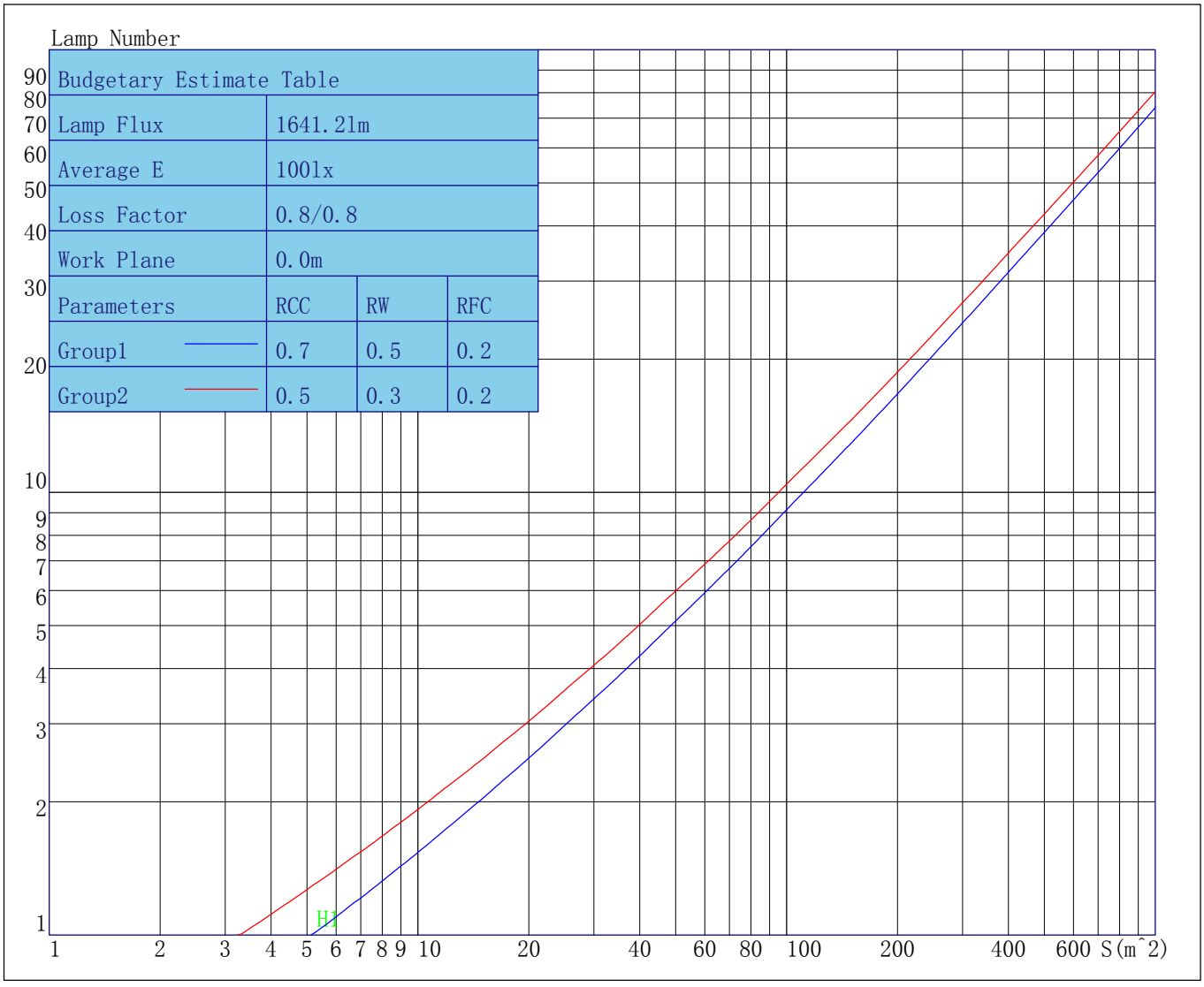
Luminous Size: Length(m)=1.200 Width(m)=0.075 Height(m)=0.000 Area(m^2)=0.090000
Luminous Type: Without Luminous Side
Luminous Curves: C0-C180 Color: ——— C90-C270 Color: ———

IES Indoor Report
Photometric Filename:HCP-238401-3K.IES

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Indoor Budgetary Estimate Table

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: 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

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Indoor Coefficient of Utilization Table

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 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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Unified Glare Rating Table

Lum.Name: HCP-238401-3K(20W)	Lum.Catelog:	Test ID: 001
Lamp Name:	Lamp Catelog: LED	Test Lab: Volnic IES
Manufacture:	Test Machine:GON-2000	Test Date: 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 objerver position at spacings											
S=1.0H		0.1/-0.1					0.4/-0.4				
S=1.5H		0.2/-0.2					0.6/-0.7				
S=2.0H		0.1/-0.2					0.7/-0.9				
Reduced UGR Table:											
Nordic Standard Table:		BK0					BK0				
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:HCP-238401-3K.IES

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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	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	465.90	465.01	464.28
Y 15.0	470.42	468.66	467.39	466.75	466.38	466.56	468.11	465.98	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

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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	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

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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	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

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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 141.0	11.51	10.87	10.92	10.46	10.95	10.67	9.05	9.68	9.24	9.36	9.24	9.46
Y 142.0	11.44	10.89	10.89	10.48	10.93	10.59	9.17	9.66	9.21	9.40	9.35	9.52
Y 143.0	11.42	10.95	10.82	10.46	10.98	10.65	9.21	9.72	9.29	9.46	9.46	9.64
Y 144.0	11.38	10.96	10.86	10.49	11.05	10.61	9.29	9.72	9.34	9.61	9.50	9.68
Y 145.0	11.36	11.02	10.86	10.52	11.11	10.59	9.22	9.85	9.45	9.64	9.56	9.85
Y 146.0	11.44	10.92	10.87	10.52	11.15	10.59	9.39	9.89	9.51	9.81	9.66	9.82
Y 147.0	11.30	11.00	10.99	10.60	11.15	10.59	9.37	9.84	9.64	9.81	9.64	9.78
Y 148.0	11.36	11.05	11.08	10.64	11.17	10.68	9.45	9.91	9.81	9.86	9.69	9.86
Y 149.0	11.36	11.01	11.08	10.77	11.09	10.69	9.53	9.95	9.81	9.93	9.77	9.92
Y 150.0	11.49	11.03	11.13	10.81	11.15	10.68	9.54	10.00	10.00	9.95	9.80	10.00
Y 151.0	11.38	11.01	11.19	10.75	11.00	10.74	9.60	10.07	10.07	10.04	9.92	10.11
Y 152.0	11.41	11.02	11.13	10.86	11.07	10.73	9.71	10.17	10.18	10.10	9.85	10.18
Y 153.0	11.44	11.09	11.23	10.88	11.19	10.85	9.80	10.29	10.35	10.18	9.98	10.08
Y 154.0	11.40	11.03	11.29	10.92	11.18	10.90	9.84	10.34	10.37	10.28	10.04	10.23
Y 155.0	11.48	11.15	11.38	10.98	11.20	10.95	9.90	10.37	10.41	10.32	10.18	10.37
Y 156.0	11.47	11.19	11.51	10.98	11.24	11.05	9.95	10.51	10.49	10.35	10.26	10.40
Y 157.0	11.48	11.24	11.53	11.05	11.25	10.95	10.08	10.53	10.60	10.51	10.32	10.46
Y 158.0	11.46	11.29	11.58	11.06	11.23	11.01	10.13	10.53	10.62	10.56	10.40	10.56
Y 159.0	11.50	11.26	11.53	11.03	11.33	11.12	10.21	10.58	10.63	10.64	10.50	10.56
Y 160.0	11.51	11.38	11.53	11.10	11.33	11.12	10.22	10.64	10.69	10.71	10.54	10.65
Y 161.0	11.59	11.44	11.62	11.12	11.49	11.14	10.28	10.73	10.72	10.65	10.67	10.70
Y 162.0	11.50	11.40	11.52	11.11	11.43	11.16	10.33	10.78	10.84	10.84	10.68	10.82
Y 163.0	11.51	11.39	11.60	11.19	11.43	11.21	10.52	10.86	10.89	10.79	10.74	10.85
Y 164.0	11.59	11.46	11.56	11.25	11.46	11.13	10.56	10.87	11.03	10.89	10.86	10.95
Y 165.0	11.61	11.54	11.59	11.30	11.51	11.26	10.62	10.92	11.06	10.97	10.81	10.99
Y 166.0	11.70	11.62	11.59	11.34	11.48	11.26	10.64	11.05	11.15	10.97	11.01	11.03
Y 167.0	11.74	11.66	11.62	11.40	11.49	11.23	10.70	11.14	11.16	11.18	10.99	11.12
Y 168.0	11.67	11.65	11.58	11.39	11.61	11.29	10.66	11.21	11.20	11.09	11.01	11.29
Y 169.0	11.77	11.59	11.54	11.45	11.46	11.30	10.75	11.29	11.25	11.13	11.04	11.35
Y 170.0	11.79	11.57	11.54	11.41	11.53	11.29	10.85	11.26	11.28	11.23	11.09	11.42
Y 171.0	11.90	11.55	11.54	11.43	11.60	11.44	10.86	11.36	11.46	11.29	11.07	11.49
Y 172.0	11.78	11.51	11.66	11.48	11.63	11.45	10.91	11.37	11.47	11.41	11.11	11.43
Y 173.0	11.86	11.64	11.72	11.55	11.66	11.38	11.02	11.46	11.42	11.47	11.26	11.47
Y 174.0	11.86	11.53	11.63	11.52	11.58	11.41	11.10	11.52	11.47	11.53	11.29	11.46
Y 175.0	11.89	11.59	11.61	11.46	11.65	11.49	11.11	11.49	11.45	11.49	11.28	11.45
Y 176.0	11.98	11.55	11.58	11.49	11.68	11.46	11.29	11.62	11.53	11.59	11.29	11.55
Y 177.0	11.88	11.51	11.65	11.61	11.68	11.48	11.33	11.65	11.55	11.48	11.34	11.53
Y 178.0	12.03	11.63	11.64	11.51	11.70	11.44	11.34	11.68	11.64	11.54	11.37	11.41
Y 179.0	11.91	11.57	11.71	11.58	11.65	11.45	11.35	11.63	11.61	11.55	11.50	11.53
Y 180.0	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57