

IES Indoor Report

Photometric Filename:KARLIN5FCCT-4K-2020-07-23.IES

Indoor Luminaire Photometric Data

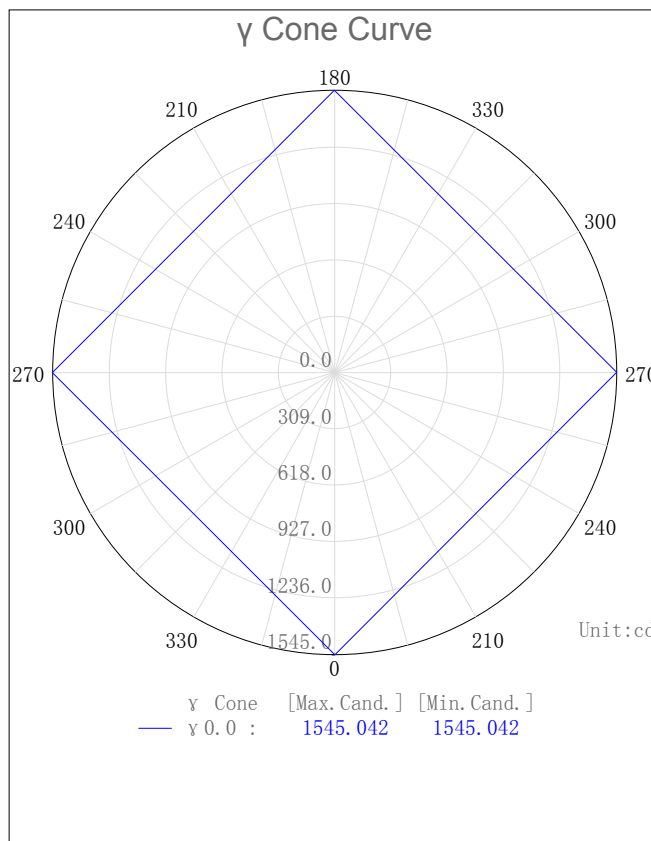
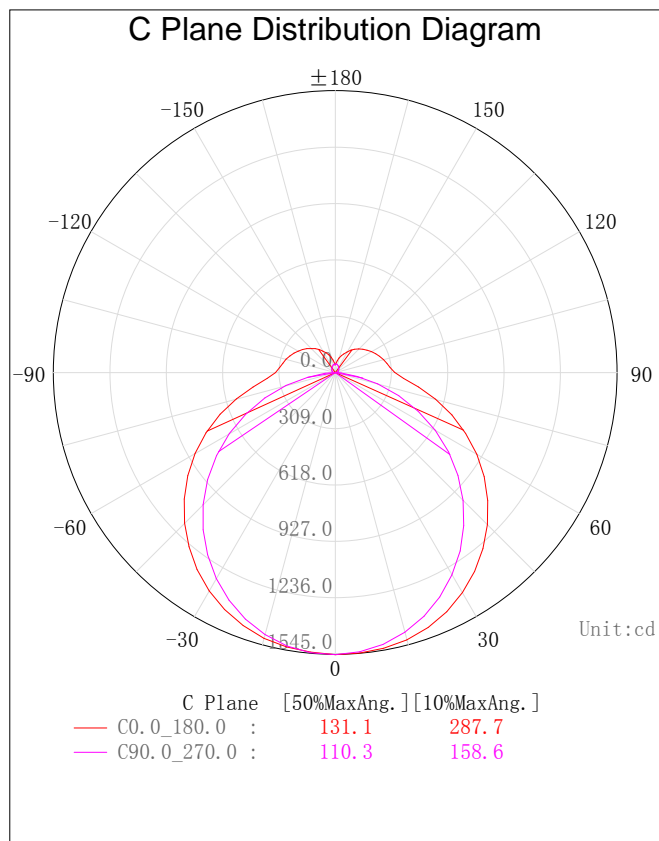
Description Information

Lum. Name:	KARLIN5FCCT	Lum. Catalog:	LED BATTEN	Test ID:	
Lamp Name:	4000K	Lamp Catalog:	SMD2835	Test Date:	2020/07/23
Manufacture:		ShldAngle(°):		Test Machine:	GON-2000
Test Lab:		Frequency(Hz):		Lamp CCT(K):	Ra:
Lum. Size(W*L*H):	0.060m*1.500m*0.065m	Lum. Area(m2):	0.188	Lum. W(kg):	2.000
Test System:	C, γ	Test Step:	C=90.0 γ=5.0	Temp. (°C):	25
				Humidity(%):	

Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm):	5726.950	Luminaire Flux:	5726.954lm
Rated Power(W):		Luminaire Efficiency:	100.00%
Rated Voltage(V):		Luminaire EER(lm/W):	127.322
Tested Power(W):	44.980	Max. Cand. (cd):	1545.042
Lamps' Inside:	1	Max Cand@Ang. (°):	C=0.0 γ=0.0
Tested Electric:U=225.9V, I=0.207A, PF=0.000		Beam Angle(50%Imax):	131.1
Lamp Size(W*L*H):0.060m*1.500m*0.065m		Left=-65.4 Right=65.8	
		Field Angle(10%Imax):	287.7
		Down Lumens&Percent:	4963.871lm 86.68%
		Up Lumens&Percent:	763.084lm 13.32%
		S/MH:	C0_a180=1.335 C90_270=1.244
		CIE Type:	General Diffuse
		ErP Φuse(120°):	3628.509lm
		IRF:	103.770%

Lighting Distribution Diagram



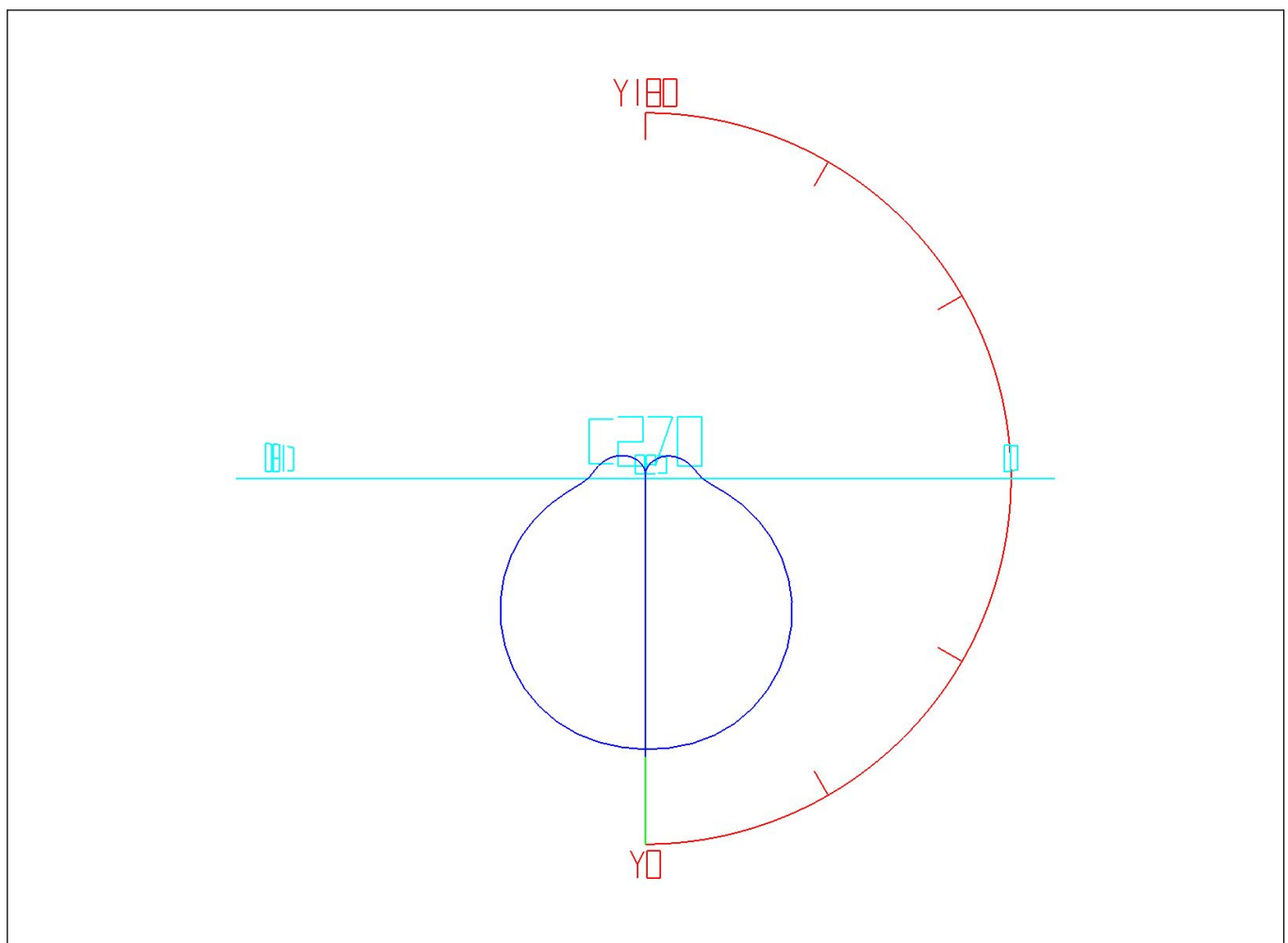
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3D Light Intensity Distribution Modal

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

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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Zonal Flux Tabulation

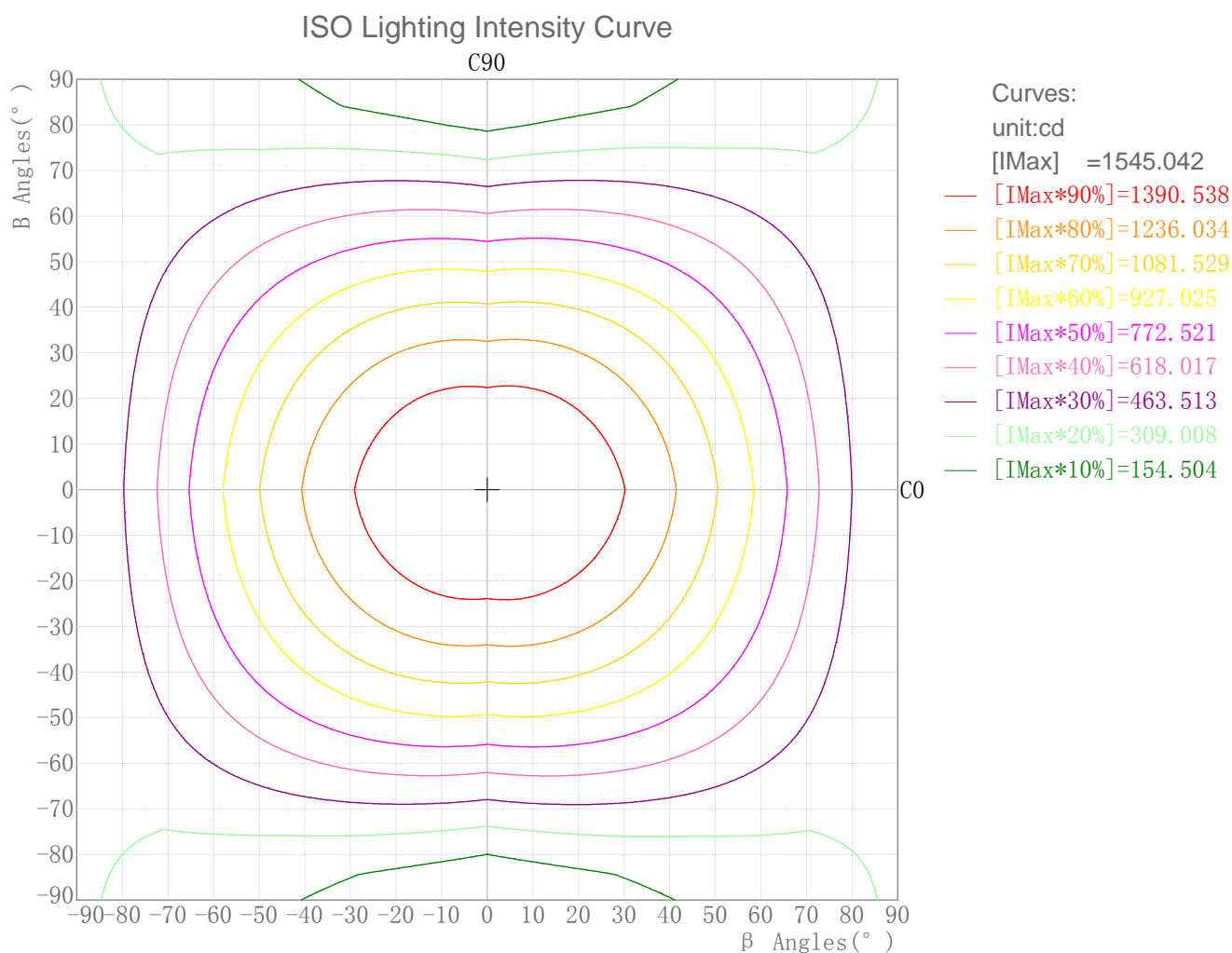
Zone (y)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	36.88	36.88	0.64	0.64
5.0-10.0	109.59	146.47	1.91	2.56
10.0-15.0	179.14	325.61	3.13	5.69
15.0-20.0	243.27	568.87	4.25	9.93
20.0-25.0	299.84	868.72	5.24	15.17
25.0-30.0	347.08	1215.80	6.06	21.23
30.0-35.0	383.57	1599.36	6.70	27.93
35.0-40.0	408.32	2007.68	7.13	35.06
40.0-45.0	420.71	2428.39	7.35	42.40
45.0-50.0	420.39	2848.78	7.34	49.74
50.0-55.0	407.47	3256.25	7.11	56.86
55.0-60.0	382.45	3638.69	6.68	63.54
60.0-65.0	346.26	3984.95	6.05	69.58
65.0-70.0	300.31	4285.27	5.24	74.83
70.0-75.0	246.90	4532.17	4.31	79.14
75.0-80.0	190.27	4722.43	3.32	82.46
80.0-85.0	138.17	4860.60	2.41	84.87
85.0-90.0	103.27	4963.87	1.80	86.68
90.0-95.0	89.08	5052.95	1.56	88.23
95.0-100.0	83.87	5136.82	1.46	89.70
100.0-105.0	79.26	5216.08	1.38	91.08
105.0-110.0	74.26	5290.33	1.30	92.38
110.0-115.0	68.84	5359.18	1.20	93.58
115.0-120.0	63.06	5422.24	1.10	94.68
120.0-125.0	56.92	5479.16	0.99	95.67
125.0-130.0	50.48	5529.64	0.88	96.55
130.0-135.0	43.95	5573.59	0.77	97.32
135.0-140.0	37.61	5611.21	0.66	97.98
140.0-145.0	31.54	5642.75	0.55	98.53
145.0-150.0	25.65	5668.40	0.45	98.98
150.0-155.0	20.20	5688.60	0.35	99.33
155.0-160.0	15.42	5704.01	0.27	99.60
160.0-165.0	11.02	5715.03	0.19	99.79
165.0-170.0	7.07	5722.10	0.12	99.92
170.0-175.0	3.77	5725.87	0.07	99.98
175.0-180.0	1.08	5726.95	0.02	100.00

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Rectangle ISO Lighting Intensity Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23



Maximum Light Intensity(cd): 1545.04
Maximum Cand.@Angle: H=0.0°,V=0.0°

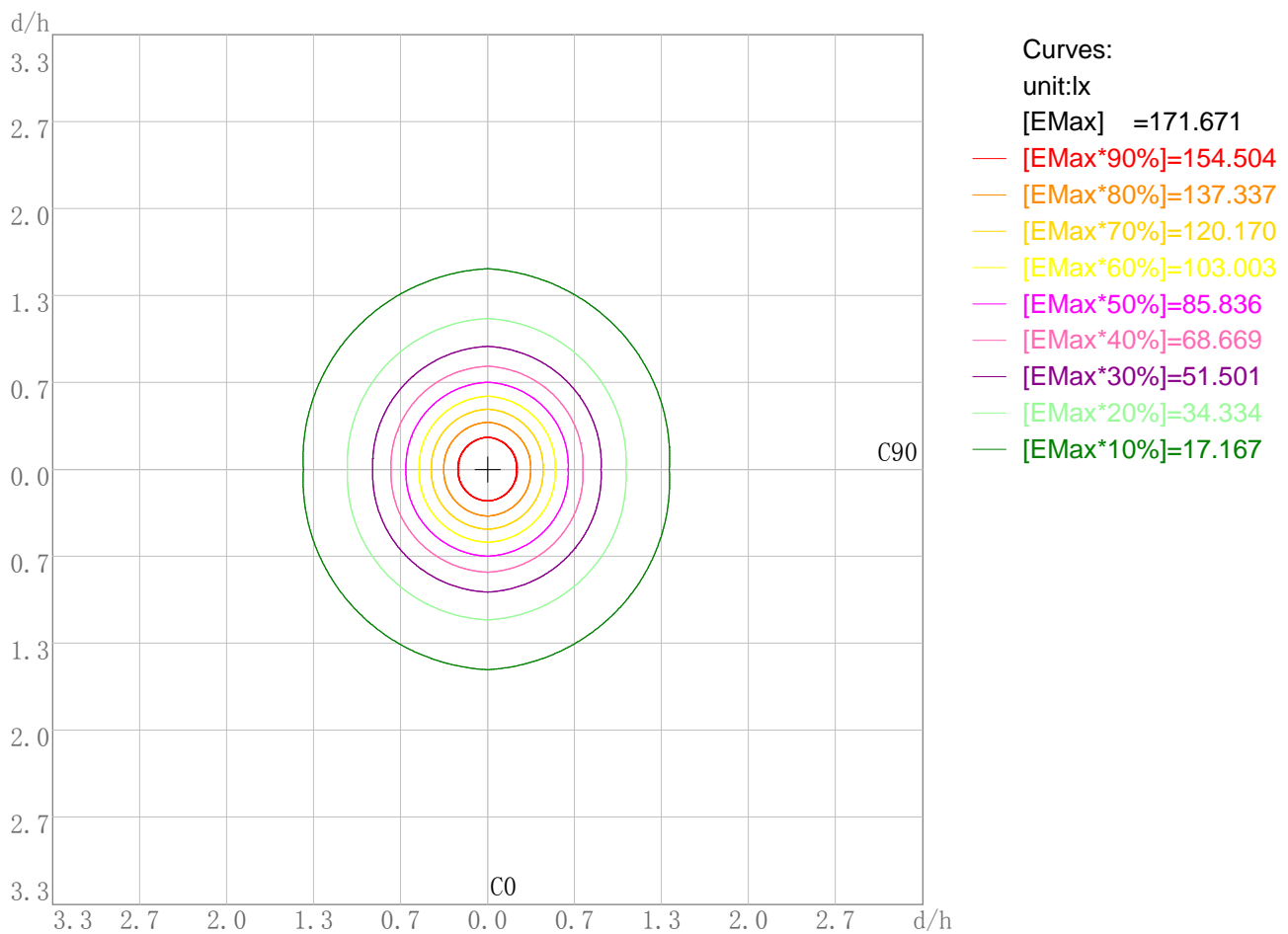
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Plane ISO-Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 171.67

Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

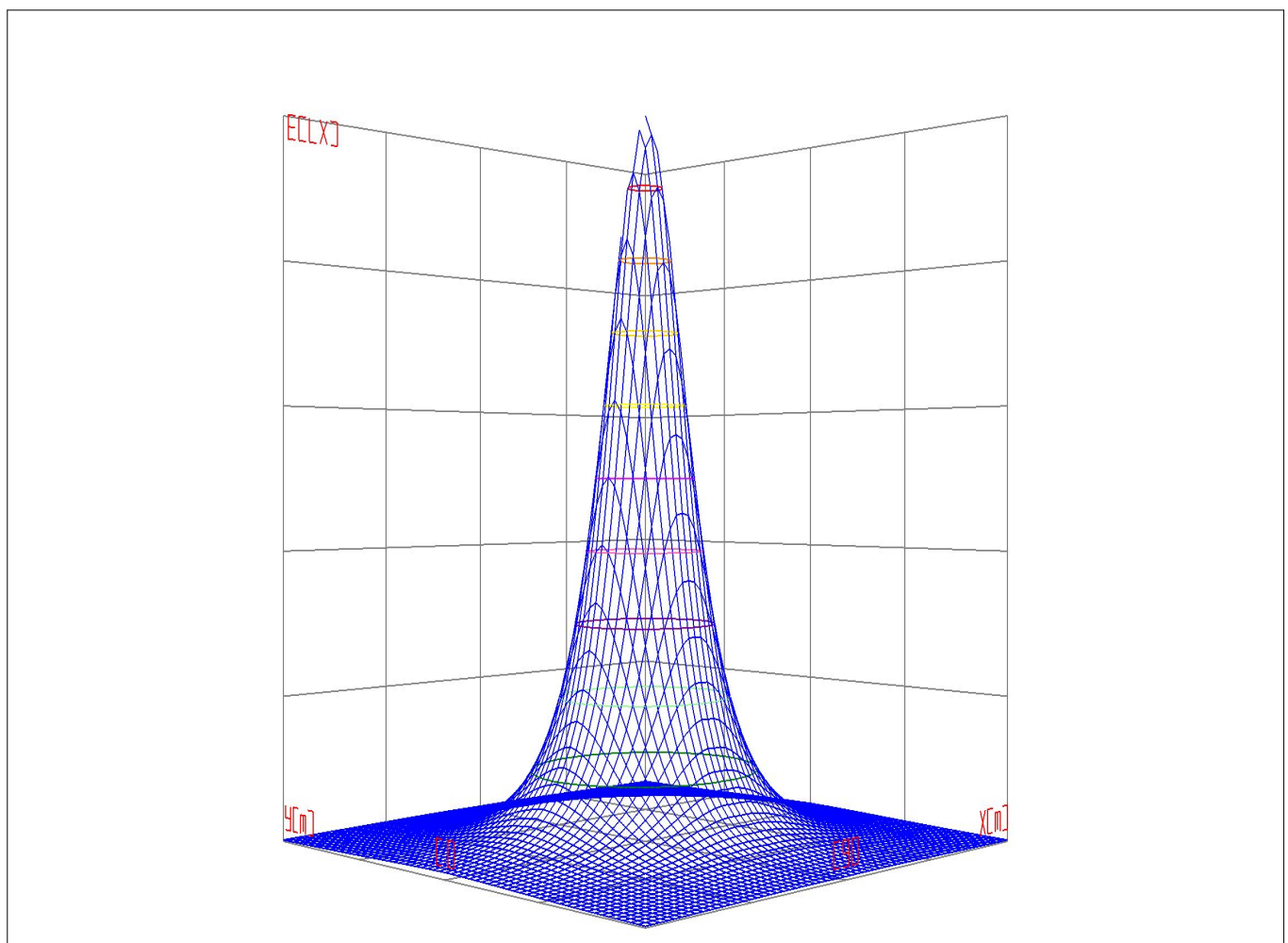
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3D Plane ISO Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

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

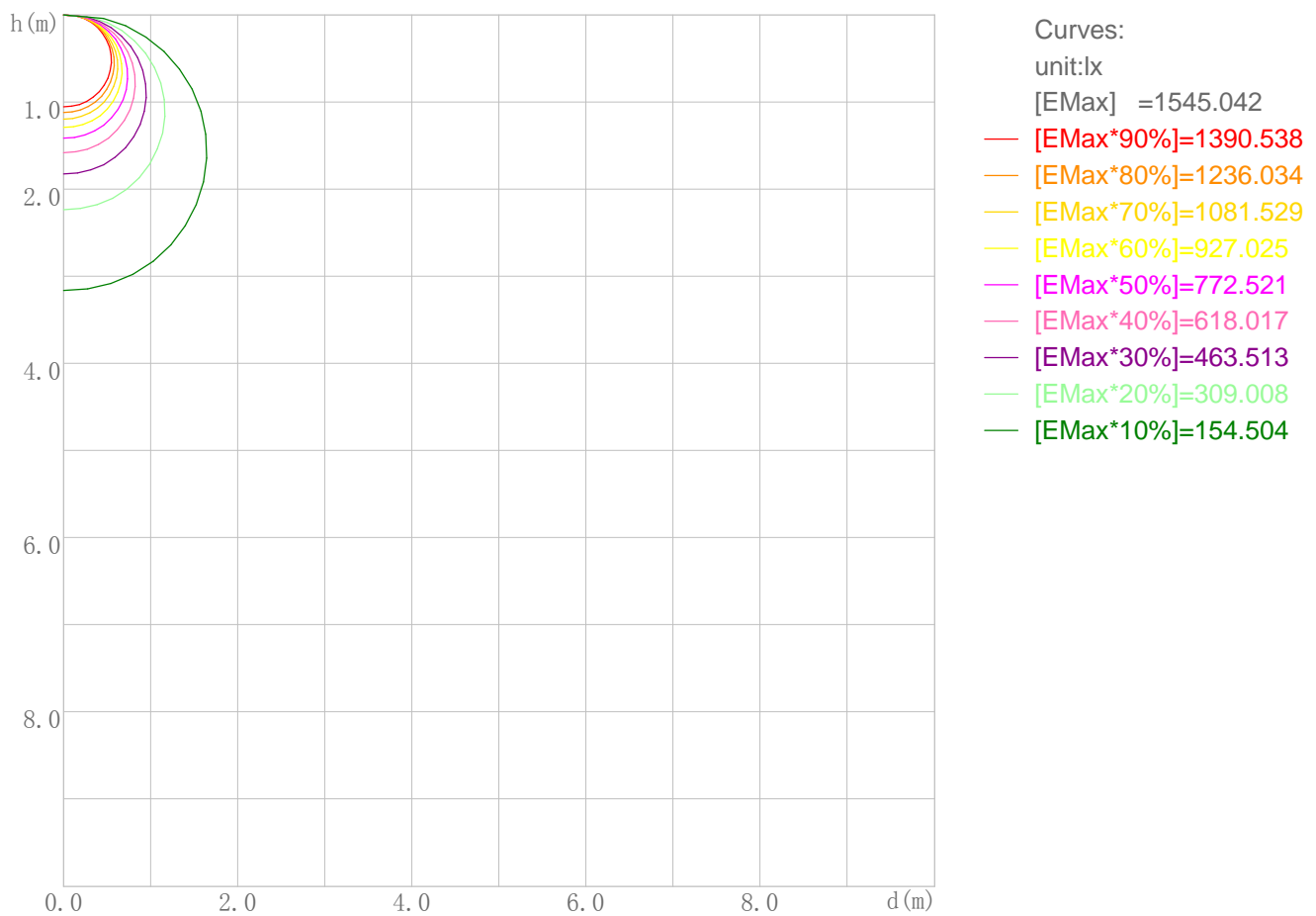
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Space ISO Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

Space ISO Illuminance Curve



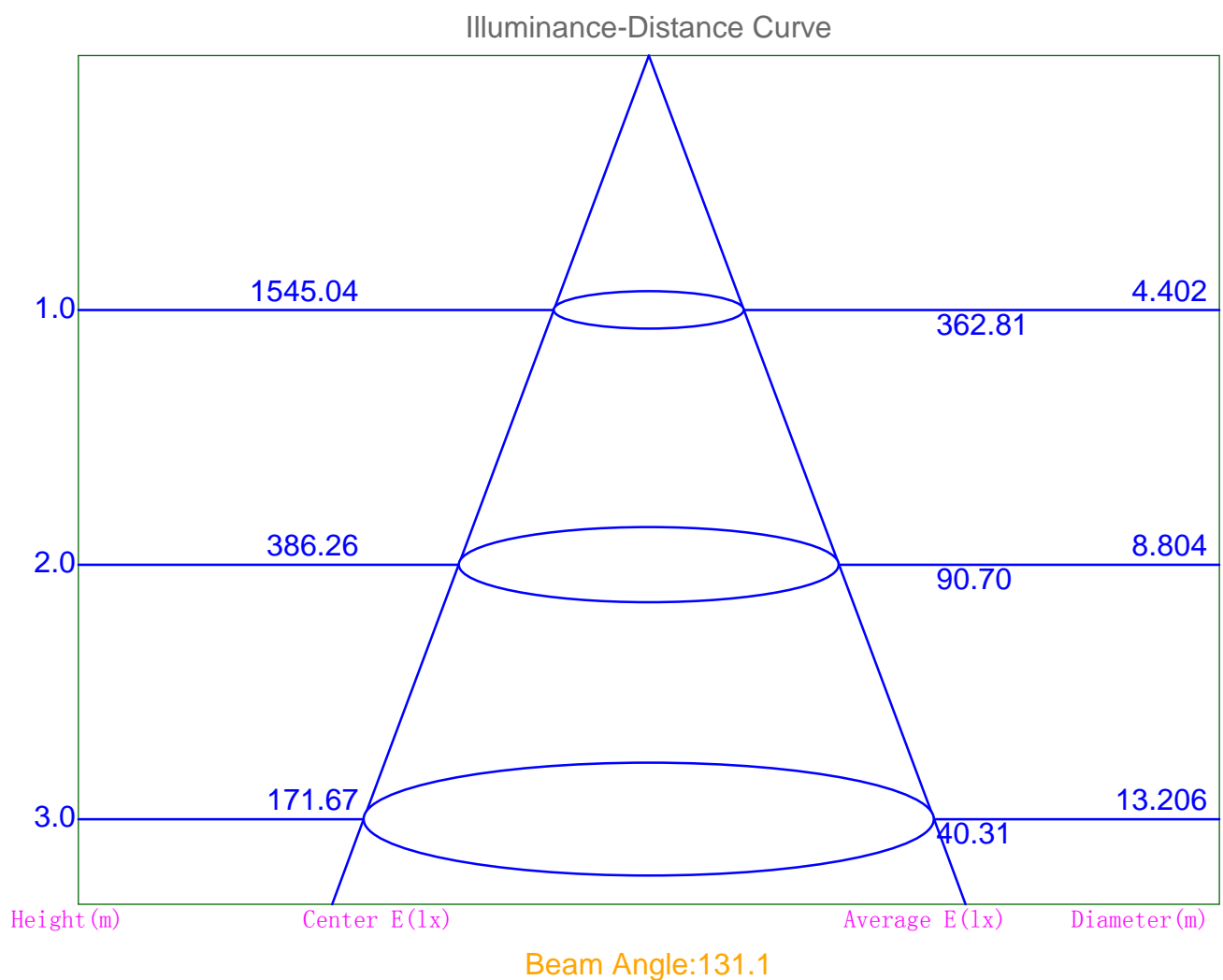
Space Plane Maximum Illuminance and @Angle:1545.04,0.0deg
Plane Maximum Lighting Intensity and @Angle:1545.042cd,0deg

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Illuminance-Distance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23



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Indoor Luminance Limiting Curves

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

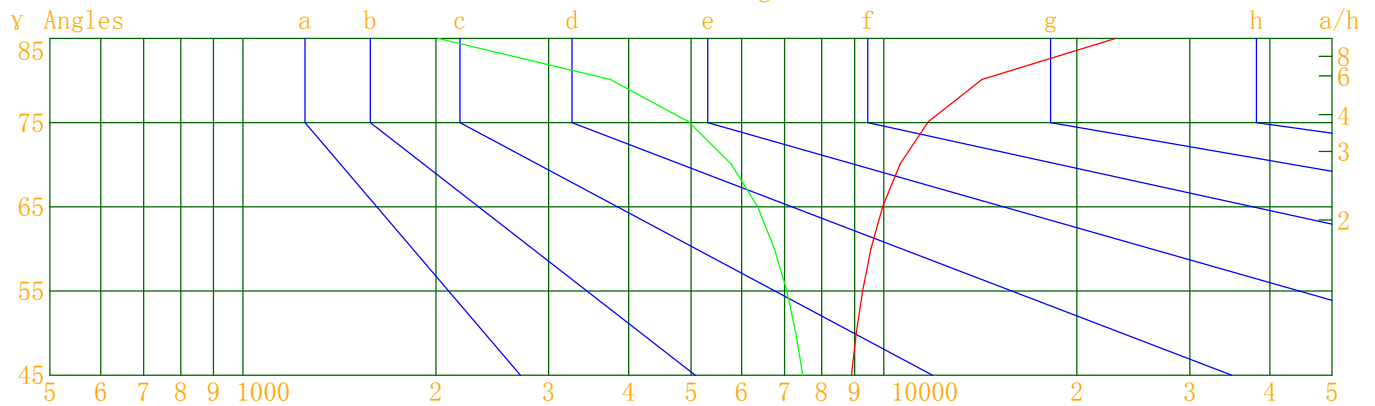
Glare Grade Table

GI	Quality	Using Illuminance							
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	8897	9059	9266	9549	9960	10597	11727	14224	22987
C90	7477	7287	7052	6750	6345	5778	4958	3739	2017

Luminance Limiting Curve



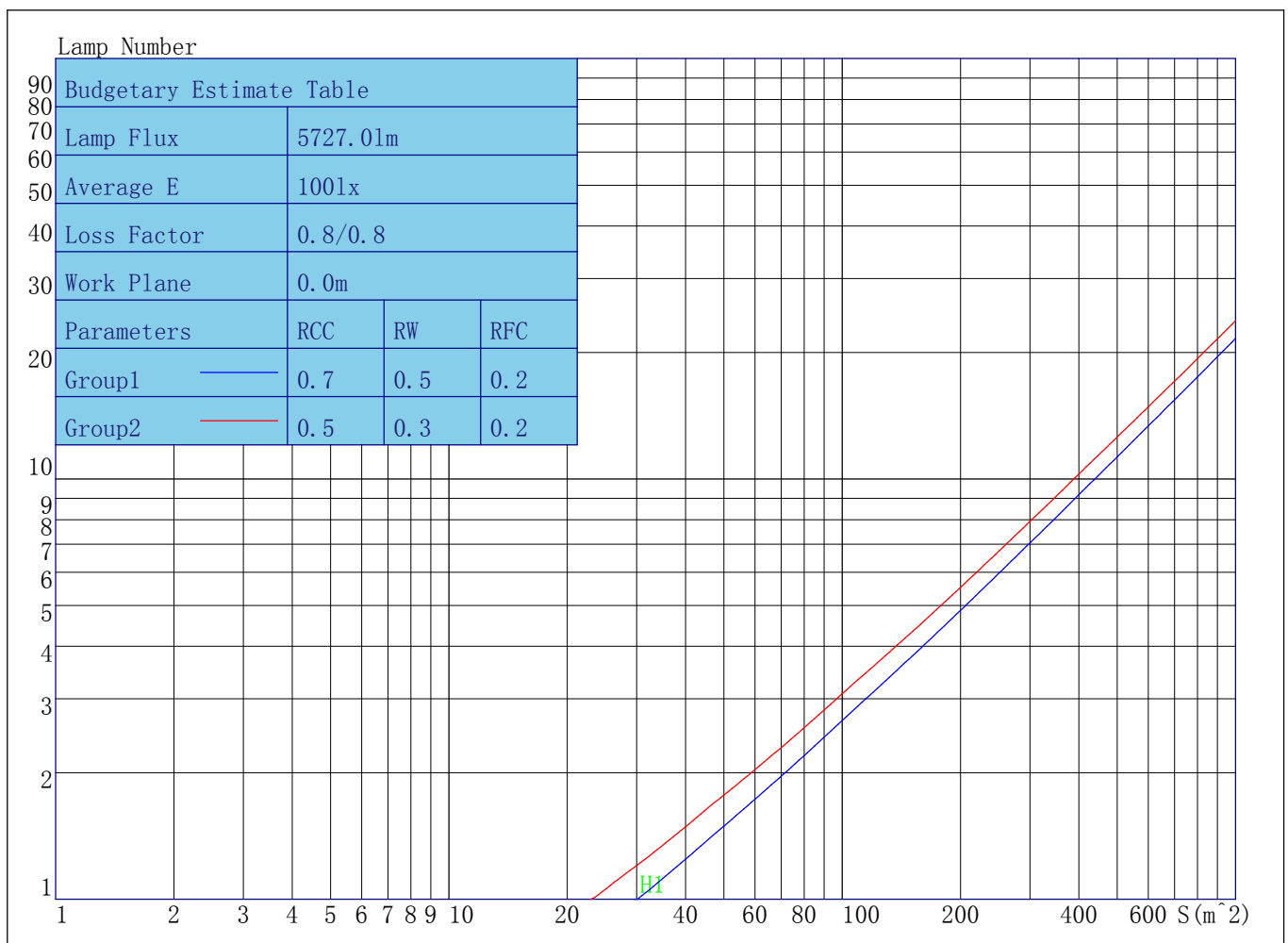
Luminous Size: Length(m)=1.500 Width(m)=0.060 Height(m)=0.065 Area(m^2)=0.187500
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

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Indoor Budgetary Estimate Table

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
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Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23



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: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

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	104	104	104	96	96	96	90	90	90	87
1	104	99	94	90	100	96	91	87	89	85	82	83	80	77	77	75	73	70
2	94	86	78	72	90	83	76	70	77	71	67	72	67	63	67	63	60	57
3	86	75	66	60	82	72	64	58	67	61	55	63	57	53	58	54	50	47
4	78	66	57	50	75	64	55	49	59	52	47	56	50	45	52	47	43	40
5	72	59	49	43	69	57	48	42	53	46	40	50	43	39	47	41	37	34
6	66	53	44	37	63	51	43	36	48	40	35	45	39	34	42	37	32	30
7	61	48	39	33	59	46	38	32	43	36	31	41	34	30	38	33	29	26
8	57	43	35	29	55	42	34	28	40	32	27	37	31	26	35	30	26	23
9	53	40	31	26	51	39	31	25	36	29	25	34	28	24	32	27	23	21
10	50	36	29	23	48	35	28	23	34	27	22	32	26	22	30	25	21	19

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Unified Glare Rating Table

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

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	Viewed crosswise					Viewed endwise				
X=2H Y=2H	16.2	19.5	17.5	20.8	22.2	14.5	17.8	15.8	19.1	20.5
Y=3H	22.2	25.5	23.5	26.8	28.2	18.8	22.1	20.1	23.4	24.8
Y=4H	26.0	28.9	27.4	30.2	31.6	21.2	24.0	22.5	25.4	26.8
Y=6H	29.4	32.2	30.8	33.6	35.0	22.5	25.3	23.8	26.6	28.0
Y=8H	31.2	34.0	32.6	35.4	36.8	22.9	25.6	24.2	27.0	28.4
Y=12H	33.3	36.0	34.7	37.4	38.8	23.0	25.8	24.4	27.2	28.6
X=4H Y=2H	17.5	20.3	18.8	21.7	23.1	16.8	19.7	18.2	21.1	22.5
Y=3H	23.7	26.6	25.1	28.0	29.4	21.4	24.3	22.8	25.6	27.0
Y=4H	26.0	27.8	27.6	29.4	31.1	22.3	24.2	24.0	25.8	27.4
Y=6H	30.0	31.7	31.7	33.3	35.0	24.3	25.9	26.0	27.6	29.2
Y=8H	32.2	33.8	33.9	35.5	37.1	25.0	26.6	26.7	28.2	29.9
Y=12H	33.9	35.2	35.7	37.0	38.7	24.5	25.9	26.3	27.6	29.4
X=8H Y=4H	26.3	27.9	28.0	29.6	31.2	23.4	25.0	25.1	26.7	28.3
Y=6H	29.8	30.9	31.6	32.7	34.5	25.1	26.2	26.9	28.0	29.7
Y=8H	31.8	32.7	33.7	34.6	36.4	25.7	26.6	27.6	28.5	30.3
Y=12H	34.9	35.7	36.8	37.6	39.4	26.6	27.5	28.5	29.3	31.2
X=12H Y=4H	25.4	26.7	27.2	28.5	30.3	22.8	24.1	24.6	25.9	27.6
Y=6H	29.3	30.3	31.2	32.2	34.0	25.0	25.9	26.9	27.8	29.6
Y=8H	31.9	32.8	33.8	34.7	36.5	26.3	27.2	28.2	29.0	30.9
Variations with the observer position at spacings										
S=1.0H	2.1/-2.0					2.3/-0.3				
S=1.5H	-2.0/-20.3					-0.3/-16.7				
S=2.0H	-2.0/-20.3					-0.3/-16.7				

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Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
Y 0.0	1545.04	1545.04	1545.04	1545.04
Y 5.0	1542.81	1536.68	1538.59	1541.03
Y 10.0	1534.81	1512.22	1527.37	1520.84
Y 15.0	1516.70	1473.75	1507.34	1486.47
Y 20.0	1487.37	1421.38	1476.19	1437.80
Y 25.0	1445.63	1356.51	1433.69	1376.93
Y 30.0	1393.01	1280.07	1381.10	1303.48
Y 35.0	1330.84	1192.97	1318.27	1219.27
Y 40.0	1259.63	1096.41	1246.48	1125.48
Y 45.0	1179.54	991.31	1167.06	1022.69
Y 50.0	1091.76	878.21	1079.48	911.87
Y 55.0	996.49	758.46	985.67	793.98
Y 60.0	895.17	632.77	885.85	669.81
Y 65.0	789.25	502.79	780.62	541.11
Y 70.0	679.59	370.56	670.97	409.27
Y 75.0	569.07	240.60	560.48	277.80
Y 80.0	463.14	121.74	457.04	154.45
Y 85.0	375.65	32.97	374.33	54.62
Y 90.0	324.48	7.73	327.65	11.22
Y 95.0	301.98	10.14	306.11	12.06
Y 100.0	287.30	12.87	291.54	12.60
Y 105.0	273.22	14.89	277.84	14.56
Y 110.0	258.85	16.87	263.69	16.47
Y 115.0	243.98	19.06	249.19	19.44
Y 120.0	228.67	21.56	234.12	21.60
Y 125.0	213.21	23.76	218.43	23.66
Y 130.0	197.19	25.84	202.10	24.43
Y 135.0	181.16	27.75	185.82	25.81
Y 140.0	165.12	29.78	169.54	27.62
Y 145.0	148.27	33.00	152.83	30.07
Y 150.0	128.73	36.14	134.79	32.84
Y 155.0	111.37	39.03	119.43	36.07
Y 160.0	98.20	41.29	103.29	39.22
Y 165.0	80.55	43.60	86.42	42.20
Y 170.0	65.27	45.95	68.44	44.50
Y 175.0	50.81	47.70	51.82	46.99
Y 180.0	41.16	41.16	41.16	41.16
