

Indoor Luminaire Photometric Data

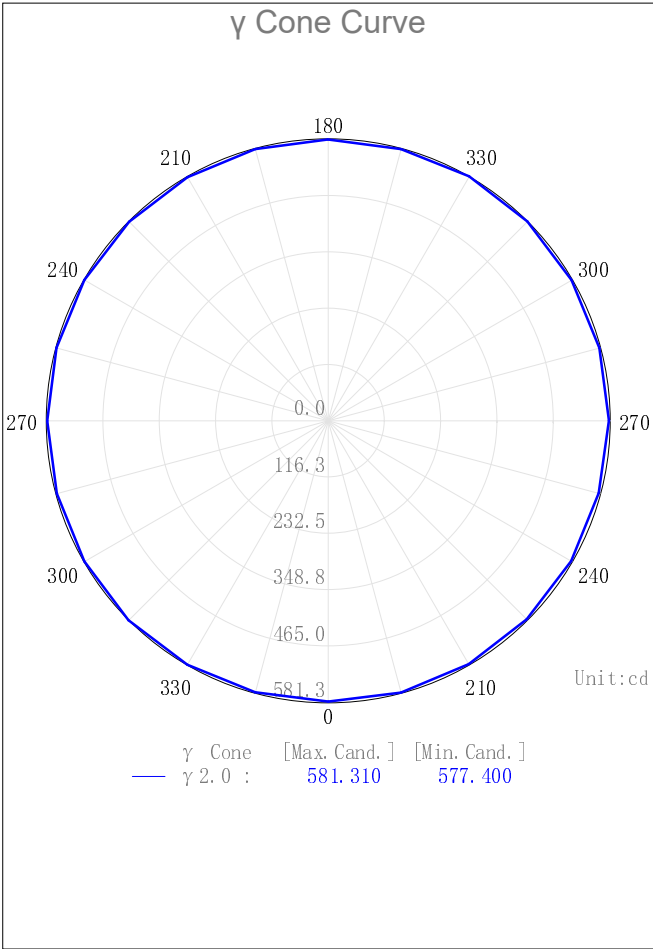
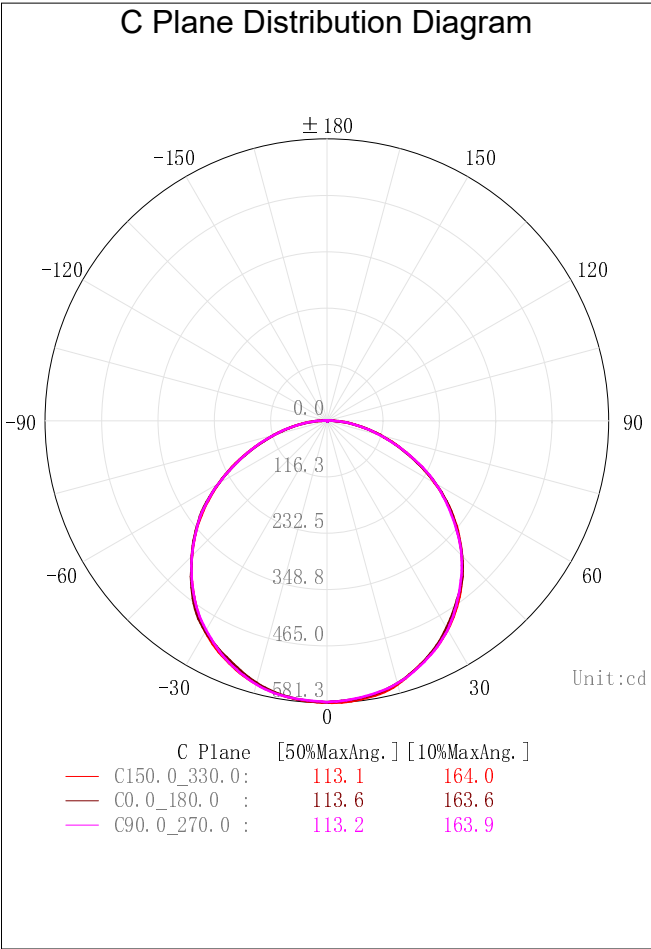
Description Information

Luminary Name: 18W-230-4000K		Lum. Catalog:	Test ID: 2024-11-14
Lamp Name: 0, 0		Lamp Catalog:	Test Date: 2024-11-14 10:09:50
Manufacture:		Shld. Ang(°):	Test Machine:GON-2000
Test Lab:		Frequency (Hz):	Lamp CCT(K): Ra:
Lum. Size(W*L*H):0.230m*0.230m*0.010m		Lum. Area(m2):0.000	Lum. W(kg):
Test System: C, γ	Test Step: C=15.0 γ=1.0	Temp. (°C):	Humidity(%):

Character Parameter

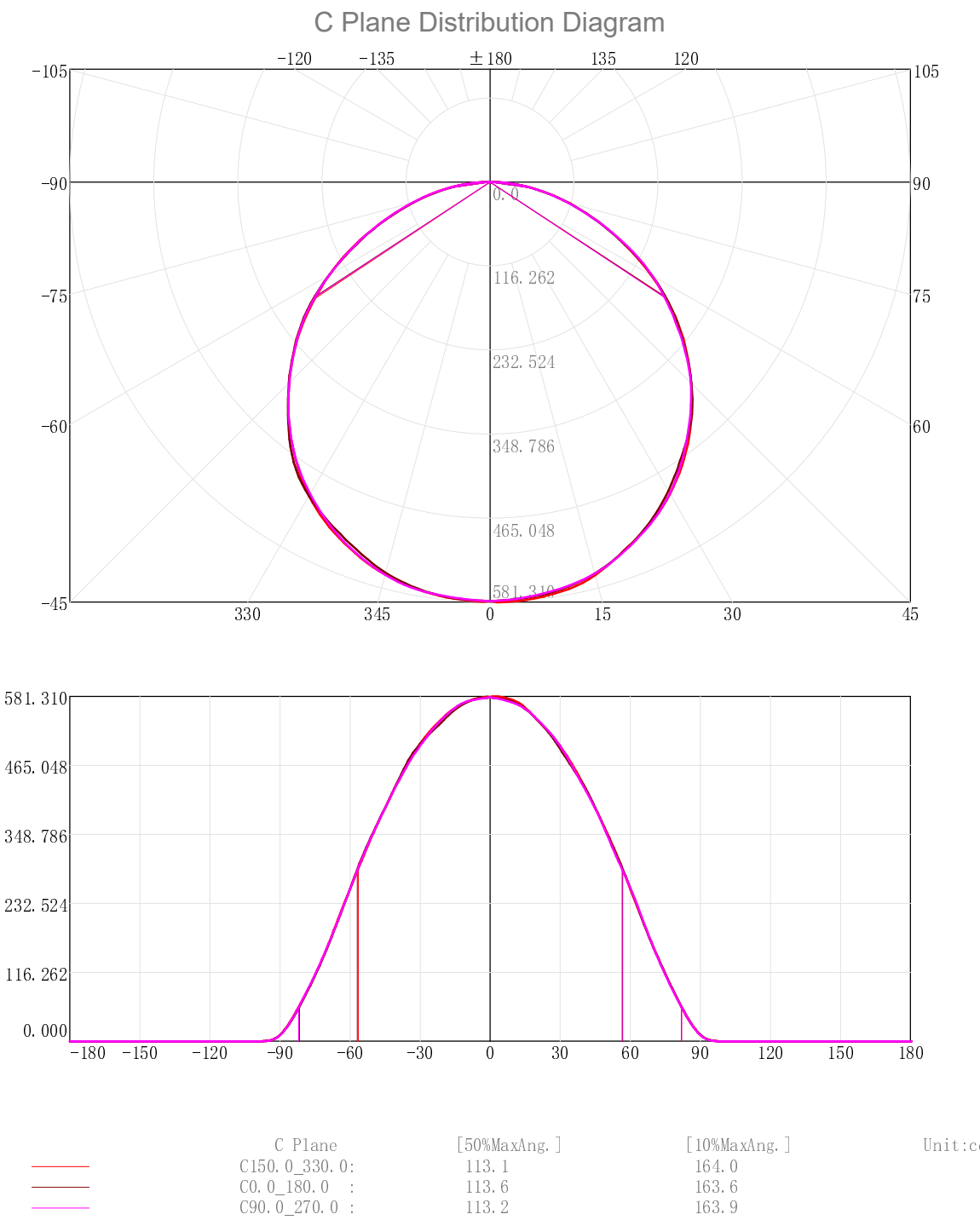
Lamp Speciality Parameter	Luminaire Speciality Parameter	
Rated Flux(lm): 1689.900	Luminary Flux(lm): 1689.900	Field Angle(10%Imax): 164.0(°)
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 1687.0531m 99.83%
Rated Voltage(V):	Luminary EER(lm/W): 93.988	Up Lumens&Percent: 2.8471m 0.17%
Tested Power(W): 17.980	Max. Candela(cd): 581.310	S/MH: C0_a180=1.275 C90_270=1.273
Lamps' Inside: 1	Max Cand@Ang. (°): C=150.0 γ=2.0	CIE Type: Semi-Direct
Tested Electrics(V, A, pf):	Beam Angle (50%Imax): 113.1(°)	ErP Φ use(120°): 1320.9281m
Lamp Size(W*L*H):0.230m*0.230m*0.010m	Left=-56.4(°), Right=56.6(°)	IRF(%): 107.060

Lighting Distribution Diagram



2D Plane Light Intensity Distribution Curve

Lum. Name:18W-230-4000K	Lum. Catalog:	Test ID:2024-11-14
Lamp Name:0, 0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date:2024-11-14 10:09:50



IES Indoor Report

Photometric Filename:18W-230-4000K.ies

Zonal Flux Tabulation

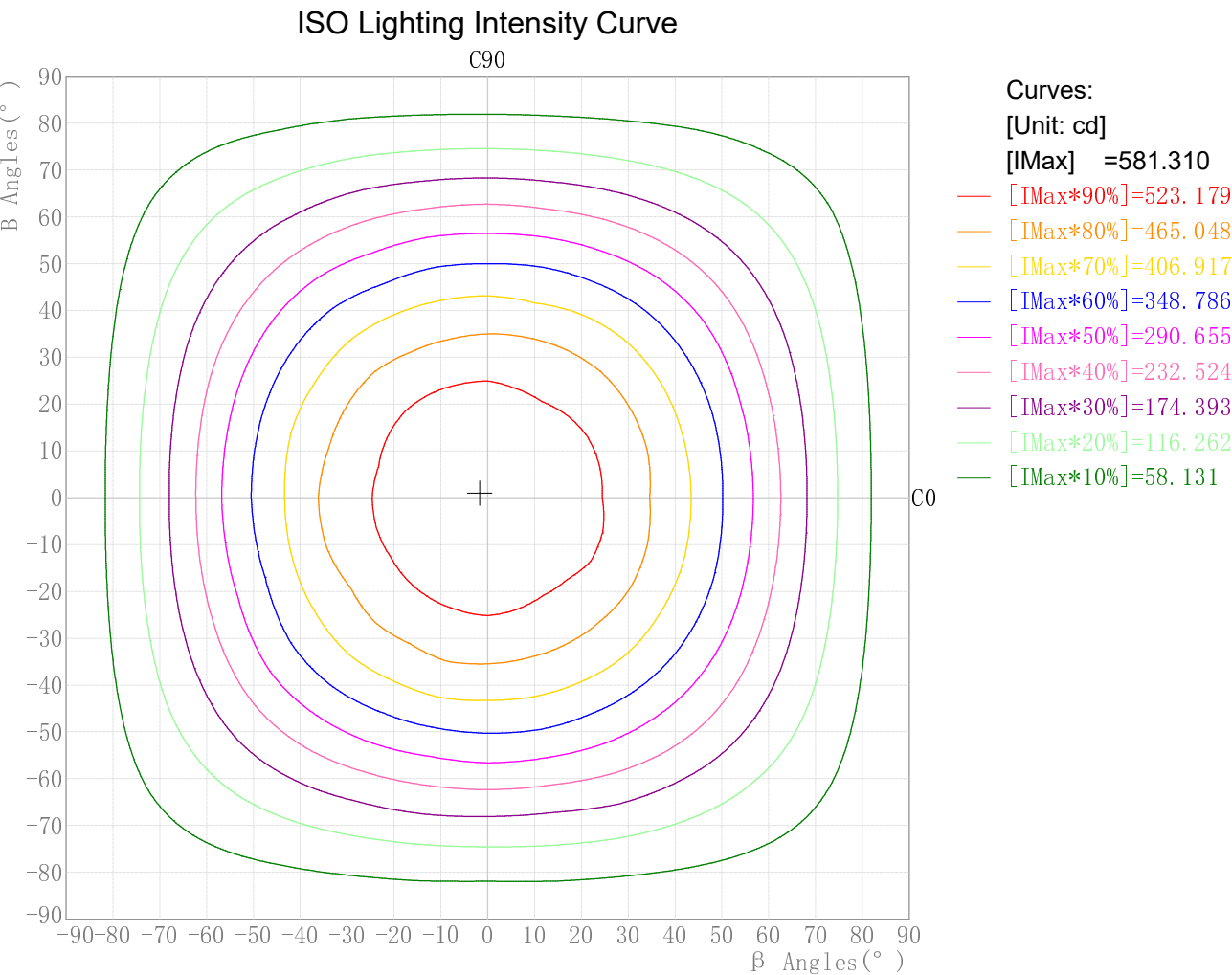
Zone (γ)	Zone Flux (1m)	Sums Flux (1m)	Zone%Lamp	Sums%Lamp	Zone (γ)	Zone Flux (1m)	Sums Flux (1m)	Zone%Lamp	Sums%Lamp
0.0-1.0	0.55	0.55	0.03	0.03	47.0-48.0	30.11	30.11	1.78	1.78
1.0-2.0	1.66	2.22	0.10	0.13	48.0-49.0	29.87	59.98	1.77	3.55
2.0-3.0	2.77	4.99	0.16	0.30	49.0-50.0	29.59	89.58	1.75	5.30
3.0-4.0	3.87	8.86	0.23	0.52	50.0-51.0	29.31	118.89	1.73	7.04
4.0-5.0	4.97	13.83	0.29	0.82	51.0-52.0	28.95	147.84	1.71	8.75
5.0-6.0	6.07	19.90	0.36	1.18	52.0-53.0	28.55	176.39	1.69	10.44
6.0-7.0	7.15	27.05	0.42	1.60	53.0-54.0	28.15	204.54	1.67	12.10
7.0-8.0	8.23	35.28	0.49	2.09	54.0-55.0	27.67	232.21	1.64	13.74
8.0-9.0	9.30	44.59	0.55	2.64	55.0-56.0	27.15	259.35	1.61	15.35
9.0-10.0	10.36	54.95	0.61	3.25	56.0-57.0	26.58	285.94	1.57	16.92
10.0-11.0	11.41	66.36	0.68	3.93	57.0-58.0	25.98	311.91	1.54	18.46
11.0-12.0	12.44	78.80	0.74	4.66	58.0-59.0	25.38	337.29	1.50	19.96
12.0-13.0	13.46	92.26	0.80	5.46	59.0-60.0	24.70	362.00	1.46	21.42
13.0-14.0	14.46	106.72	0.86	6.32	60.0-61.0	24.00	386.00	1.42	22.84
14.0-15.0	15.44	122.16	0.91	7.23	61.0-62.0	23.30	409.30	1.38	24.22
15.0-16.0	16.39	138.55	0.97	8.20	62.0-63.0	22.53	431.83	1.33	25.55
16.0-17.0	17.32	155.87	1.02	9.22	63.0-64.0	21.74	453.57	1.29	26.84
17.0-18.0	18.22	174.09	1.08	10.30	64.0-65.0	20.92	474.49	1.24	28.08
18.0-19.0	19.09	193.18	1.13	11.43	65.0-66.0	20.08	494.57	1.19	29.27
19.0-20.0	19.94	213.13	1.18	12.61	66.0-67.0	19.26	513.83	1.14	30.41
20.0-21.0	20.77	233.89	1.23	13.84	67.0-68.0	18.39	532.22	1.09	31.49
21.0-22.0	21.57	255.46	1.28	15.12	68.0-69.0	17.51	549.73	1.04	32.53
22.0-23.0	22.34	277.81	1.32	16.44	69.0-70.0	16.68	566.41	0.99	33.52
23.0-24.0	23.09	300.90	1.37	17.81	70.0-71.0	15.80	582.21	0.93	34.45
24.0-25.0	23.82	324.72	1.41	19.22	71.0-72.0	14.93	597.13	0.88	35.34
25.0-26.0	24.51	349.23	1.45	20.67	72.0-73.0	14.06	611.19	0.83	36.17
26.0-27.0	25.17	374.40	1.49	22.15	73.0-74.0	13.20	624.39	0.78	36.95
27.0-28.0	25.79	400.19	1.53	23.68	74.0-75.0	12.38	636.77	0.73	37.68
28.0-29.0	26.38	426.57	1.56	25.24	75.0-76.0	11.53	648.30	0.68	38.36
29.0-30.0	26.95	453.52	1.59	26.84	76.0-77.0	10.69	659.00	0.63	39.00
30.0-31.0	27.47	480.99	1.63	28.46	77.0-78.0	9.90	668.90	0.59	39.58
31.0-32.0	27.95	508.95	1.65	30.12	78.0-79.0	9.07	677.97	0.54	40.12
32.0-33.0	28.41	537.36	1.68	31.80	79.0-80.0	8.25	686.22	0.49	40.61
33.0-34.0	28.82	566.18	1.71	33.50	80.0-81.0	7.44	693.66	0.44	41.05
34.0-35.0	29.19	595.37	1.73	35.23	81.0-82.0	6.64	700.30	0.39	41.44
35.0-36.0	29.51	624.88	1.75	36.98	82.0-83.0	5.89	706.19	0.35	41.79
36.0-37.0	29.79	654.67	1.76	38.74	83.0-84.0	5.12	711.31	0.30	42.09
37.0-38.0	30.05	684.72	1.78	40.52	84.0-85.0	4.37	715.68	0.26	42.35
38.0-39.0	30.24	714.96	1.79	42.31	85.0-86.0	3.69	719.36	0.22	42.57
39.0-40.0	30.40	745.36	1.80	44.11	86.0-87.0	3.02	722.38	0.18	42.75
40.0-41.0	30.53	775.89	1.81	45.91	87.0-88.0	2.40	724.78	0.14	42.89
41.0-42.0	30.60	806.49	1.81	47.72	88.0-89.0	1.86	726.64	0.11	43.00
42.0-43.0	30.63	837.12	1.81	49.54	89.0-90.0	1.38	728.02	0.08	43.08
43.0-44.0	30.61	867.72	1.81	51.35	90.0-91.0	1.01	729.03	0.06	43.14
44.0-45.0	30.54	898.26	1.81	53.15	91.0-92.0	0.70	729.73	0.04	43.18
45.0-46.0	30.46	928.72	1.80	54.96	92.0-93.0	0.46	730.19	0.03	43.21
46.0-47.0	30.31	959.03	1.79	56.75	93.0-94.0	0.29	730.48	0.02	43.23

Zonal Flux Tabulation - (Cont.)

Zone (γ)	Zone Flux (1m)	Sums Flux (1m)	Zone%Lamp	Sums%Lamp	Zone (γ)	Zone Flux (1m)	Sums Flux (1m)	Zone%Lamp	Sums%Lamp
94.0-95.0	0.17	0.17	0.01	0.01	141.0-142.0	0.00	0.00	0.00	0.00
95.0-96.0	0.10	0.28	0.01	0.02	142.0-143.0	0.00	0.00	0.00	0.00
96.0-97.0	0.06	0.33	0.00	0.02	143.0-144.0	0.00	0.00	0.00	0.00
97.0-98.0	0.03	0.36	0.00	0.02	144.0-145.0	0.00	0.00	0.00	0.00
98.0-99.0	0.01	0.38	0.00	0.02	145.0-146.0	0.00	0.00	0.00	0.00
99.0-100.0	0.01	0.38	0.00	0.02	146.0-147.0	0.00	0.00	0.00	0.00
100.0-101.0	0.00	0.39	0.00	0.02	147.0-148.0	0.00	0.00	0.00	0.00
101.0-102.0	0.00	0.39	0.00	0.02	148.0-149.0	0.00	0.00	0.00	0.00
102.0-103.0	0.00	0.39	0.00	0.02	149.0-150.0	0.00	0.00	0.00	0.00
103.0-104.0	0.00	0.39	0.00	0.02	150.0-151.0	0.00	0.00	0.00	0.00
104.0-105.0	0.00	0.39	0.00	0.02	151.0-152.0	0.00	0.00	0.00	0.00
105.0-106.0	0.00	0.39	0.00	0.02	152.0-153.0	0.00	0.00	0.00	0.00
106.0-107.0	0.00	0.39	0.00	0.02	153.0-154.0	0.00	0.00	0.00	0.00
107.0-108.0	0.00	0.39	0.00	0.02	154.0-155.0	0.00	0.00	0.00	0.00
108.0-109.0	0.00	0.39	0.00	0.02	155.0-156.0	0.00	0.00	0.00	0.00
109.0-110.0	0.00	0.39	0.00	0.02	156.0-157.0	0.00	0.00	0.00	0.00
110.0-111.0	0.00	0.39	0.00	0.02	157.0-158.0	0.00	0.00	0.00	0.00
111.0-112.0	0.00	0.39	0.00	0.02	158.0-159.0	0.00	0.00	0.00	0.00
112.0-113.0	0.00	0.39	0.00	0.02	159.0-160.0	0.00	0.00	0.00	0.00
113.0-114.0	0.00	0.39	0.00	0.02	160.0-161.0	0.00	0.00	0.00	0.00
114.0-115.0	0.00	0.39	0.00	0.02	161.0-162.0	0.00	0.00	0.00	0.00
115.0-116.0	0.00	0.39	0.00	0.02	162.0-163.0	0.00	0.00	0.00	0.00
116.0-117.0	0.00	0.39	0.00	0.02	163.0-164.0	0.00	0.00	0.00	0.00
117.0-118.0	0.00	0.39	0.00	0.02	164.0-165.0	0.00	0.00	0.00	0.00
118.0-119.0	0.00	0.39	0.00	0.02	165.0-166.0	0.00	0.00	0.00	0.00
119.0-120.0	0.00	0.39	0.00	0.02	166.0-167.0	0.00	0.00	0.00	0.00
120.0-121.0	0.00	0.39	0.00	0.02	167.0-168.0	0.00	0.00	0.00	0.00
121.0-122.0	0.00	0.39	0.00	0.02	168.0-169.0	0.00	0.00	0.00	0.00
122.0-123.0	0.00	0.39	0.00	0.02	169.0-170.0	0.00	0.00	0.00	0.00
123.0-124.0	0.00	0.39	0.00	0.02	170.0-171.0	0.00	0.00	0.00	0.00
124.0-125.0	0.00	0.39	0.00	0.02	171.0-172.0	0.00	0.00	0.00	0.00
125.0-126.0	0.00	0.39	0.00	0.02	172.0-173.0	0.00	0.00	0.00	0.00
126.0-127.0	0.00	0.39	0.00	0.02	173.0-174.0	0.00	0.00	0.00	0.00
127.0-128.0	0.00	0.39	0.00	0.02	174.0-175.0	0.00	0.00	0.00	0.00
128.0-129.0	0.00	0.39	0.00	0.02	175.0-176.0	0.00	0.00	0.00	0.00
129.0-130.0	0.00	0.39	0.00	0.02	176.0-177.0	0.00	0.00	0.00	0.00
130.0-131.0	0.00	0.39	0.00	0.02	177.0-178.0	0.00	0.00	0.00	0.00
131.0-132.0	0.00	0.39	0.00	0.02	178.0-179.0	0.00	0.00	0.00	0.00
132.0-133.0	0.00	0.39	0.00	0.02	179.0-180.0	0.00	0.00	0.00	0.00
133.0-134.0	0.00	0.39	0.00	0.02					
134.0-135.0	0.00	0.39	0.00	0.02					
135.0-136.0	0.00	0.39	0.00	0.02					
136.0-137.0	0.00	0.39	0.00	0.02					
137.0-138.0	0.00	0.39	0.00	0.02					
138.0-139.0	0.00	0.39	0.00	0.02					
139.0-140.0	0.00	0.39	0.00	0.02					
140.0-141.0	0.00	0.39	0.00	0.02					

Rectangle ISO Lighting Intensity Diagram

Lum. Name:18W-230-4000K	Lum. Catalog:	Test ID:2024-11-14
Lamp Name:0,0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date:2024-11-14 10:09:50



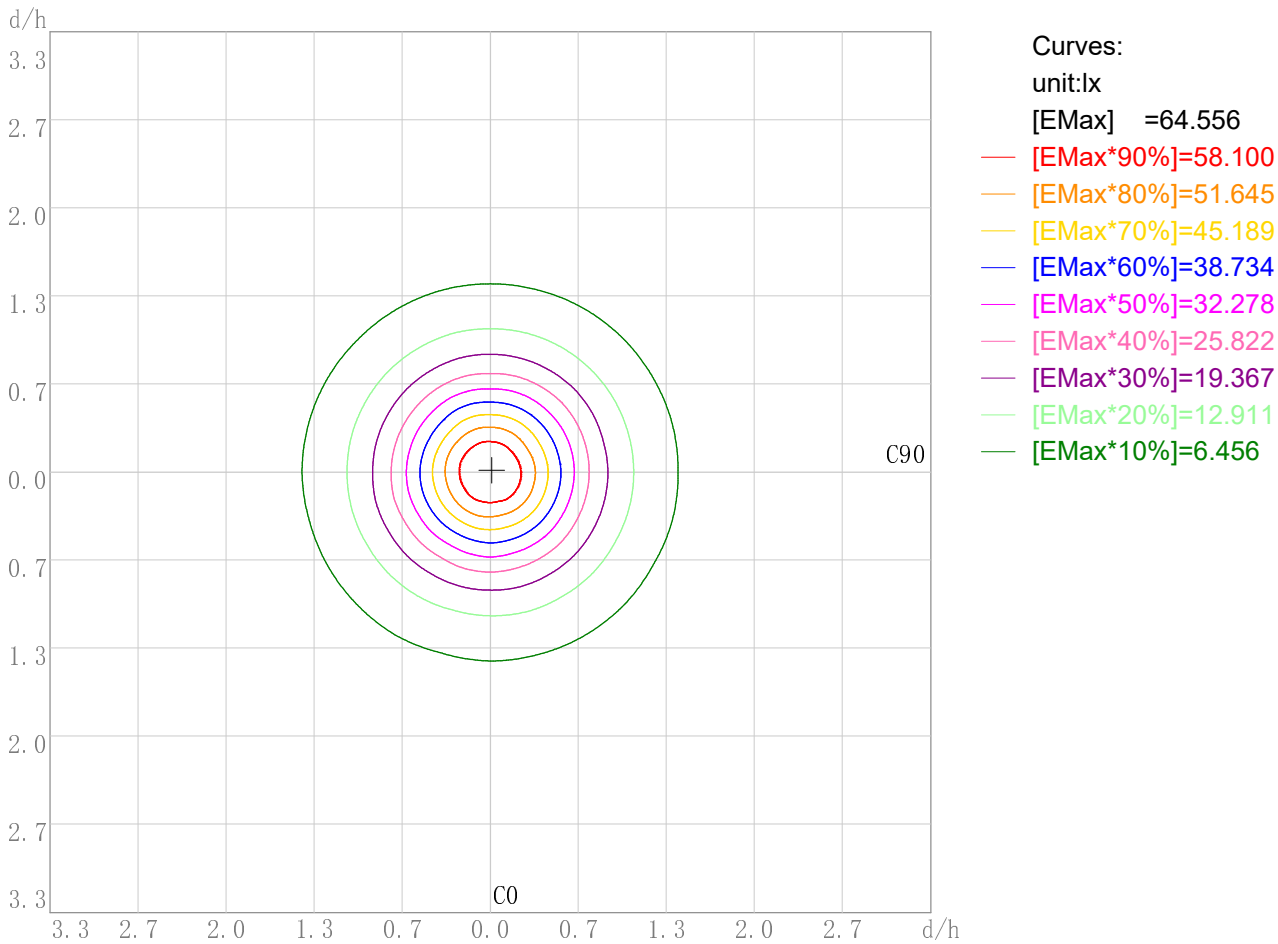
IES Indoor Report

Photometric Filename:18W-230-4000K.ies

Plane ISO-Illuminance Diagram

Lum. Name: 18W-230-4000K	Lum. Catalog:	Test ID: 2024-11-14
Lamp Name: 0, 0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine: GON-2000	Test Date: 2024-11-14 10:09:50

Plane ISO-Illuminance Curve



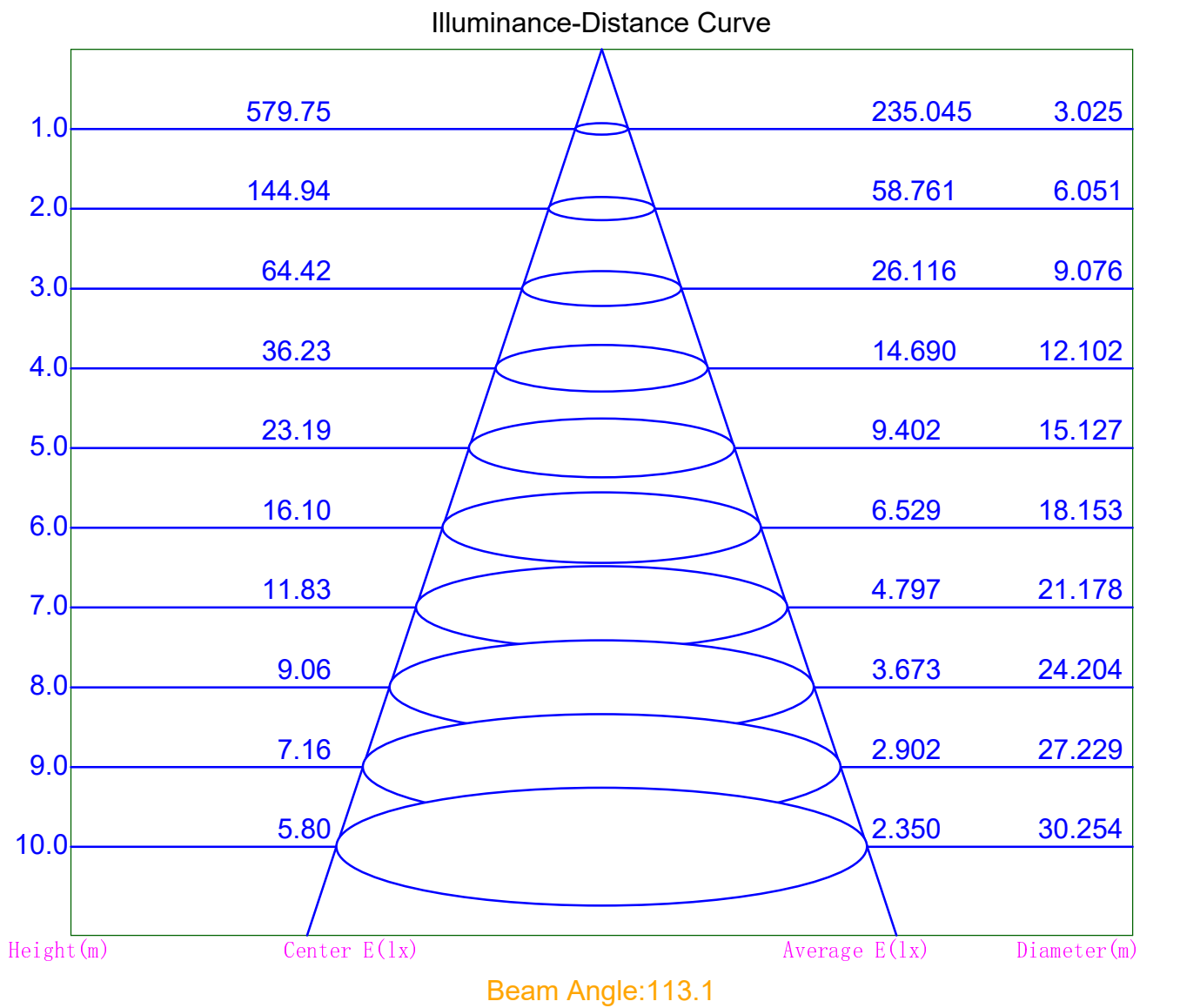
Working Plane Luminaire Mounting Height(m): 3.00

Working Plane Maximum Illuminance(lx): 64.56

Working Plane Maximum Illuminance Position(d/h):H0.0 V-0.0

Illuminance-Distance Diagram

Lum. Name: 18W-230-4000K	Lum. Catalog:	Test ID: 2024-11-14
Lamp Name: 0, 0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2024-11-14 10:09:50



Indoor Luminance Limiting Curves

Lum. Name:18W-230-4000K	Lum. Catalog:	Test ID:2024-11-14
Lamp Name:0,0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date:2024-11-14 10:09:50

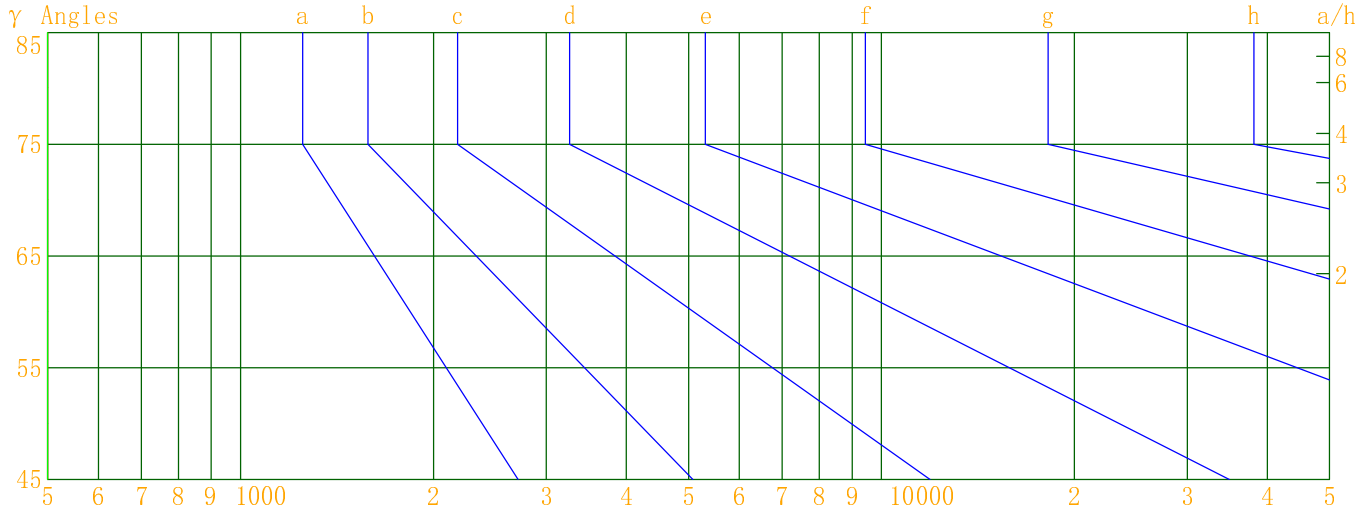
Glare Grade Table

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	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

Luminance Limiting Curve



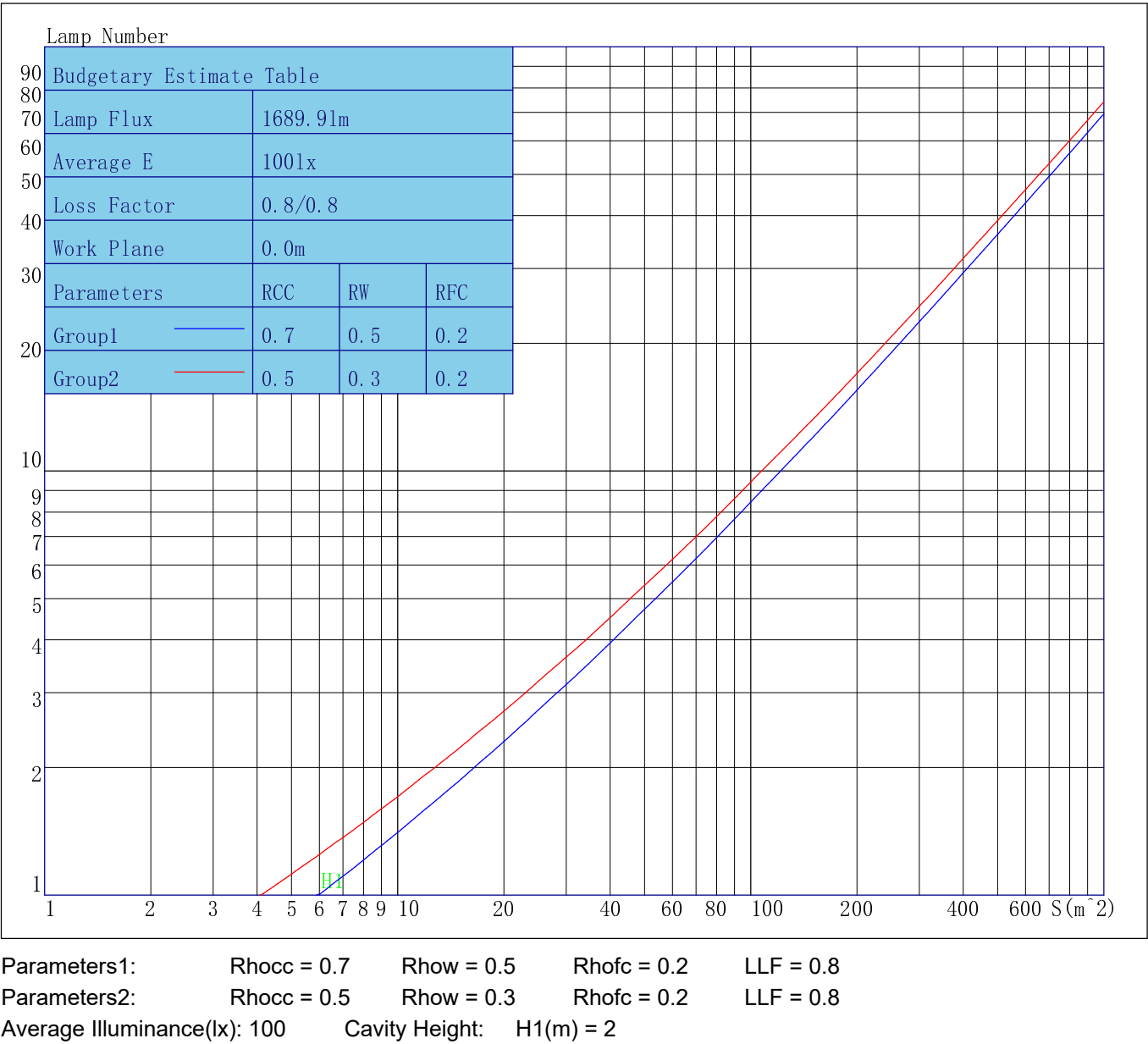
Luminous Size:Length(m)=0.230Width(m)=-0.230Height(m)=0.010Area(m^2)=0.000000

Luminous Type:Without Luminous Side

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

Indoor Budgetary Estimate Table

Lum. Name: 18W-230-4000K	Lum. Catalog:	Test ID: 2024-11-14
Lamp Name: 0, 0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2024-11-14 10:09:50



Indoor Coefficient of Utilization Table

Lum. Name:18W-230-4000K	Lum. Catelog:	Test ID:2024-11-14
Lamp Name:0,0	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date:2024-11-14 10:09:50

Coefficients of Utilization – Zonal Cavity Method																		
Coef.	Effective Floor Cavity Reflectance RFC=0. 20																	
RhoCC (%)	80				70				50			30			10			0
RhoW (%)	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	Coefficient of Utilization(%)																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	75	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Unified Glare Rating Table

Lum. Name: 18W-230-4000K	Lum. Catalog:	Test ID: 2024-11-14
Lamp Name: 0, 0	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2024-11-14 10:09:50

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	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
X=4H Y=2H	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
X=8H Y=4H	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
X=12H Y=4H	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$	-1. \$
Variations with the objerver position at spacings										
S=1. 0H	-1. \$/-1. \$					-1. \$/-1. \$				
S=1. 5H	-1. \$/-1. \$					-1. \$/-1. \$				
S=2. 0H	-1. \$/-1. \$					-1. \$/-1. \$				