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SOTEN

LumCAT: D1037

Luminaire: 2-1420-EF 36°

Report No:

Voltage(V): 220.7000

Test No:

Current(A): 0.1060

LampCAT: LUMILEDS-1203-3090-F

Power (W): 12.9100

Lamp flux(lm): 1322.0

PF: 0.5510

Number of Lamps: 1

Ballast type: PHILIPS CertaDrive 15W 0.3A 40V LPF I 230V

Length(mm): -88

Width(mm): -88

Phm Type: C

Height(mm): 68

Photometric Results

Lumens(lm): 1088.06

Efficiency(%): 82.30%

Lumens(lm)/Power(W): 84.28

Central intensity(cd): 2324.622

Maximum intensity(cd): 2324.622

Angle of maximum intensity: C=0.0 γ=0.0

Beam Angle(50%Imax): [C0/180]Total=35.8

[C90/270]Total=35.8

Field angle(10%Imax): [C0/180]Total=67.7

[C90/270]Total=67.7

Maximum s/h(1/2): C0_180=0.60 C90_270=0.60

Maximum s/h(1/4): C0_180=0.86 C90_270=0.62

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.30%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.878%



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2022/1/22
Humidity(%): 60.0%

Operator: New
Distance(m): 6.81

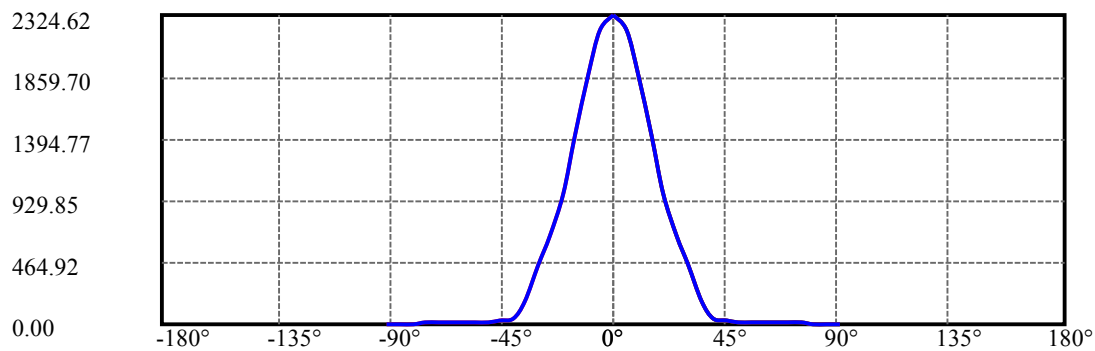
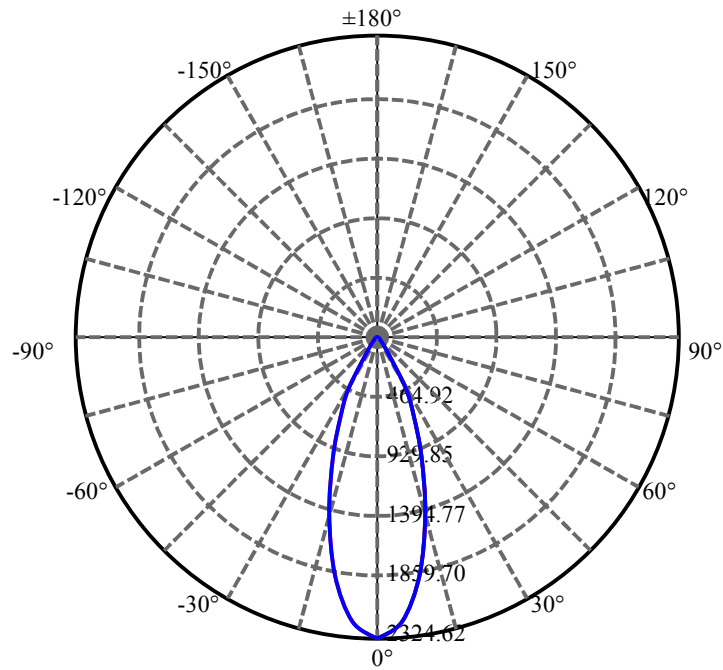
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2324.622	.000	.000	.000%	.000%
5.0	2203.277	54.130	54.130	4.095%	4.095%
10.0	1871.493	145.767	199.897	11.026%	15.121%
15.0	1410.894	194.709	394.606	14.728%	29.849%
20.0	981.199	197.142	591.748	14.912%	44.762%
25.0	667.187	172.885	764.633	13.078%	57.839%
30.0	454.242	141.918	906.551	10.735%	68.574%
35.0	167.563	91.565	998.116	6.926%	75.500%
40.0	36.659	34.073	1032.189	2.577%	78.078%
45.0	24.176	11.264	1043.453	.852%	78.930%
50.0	18.283	8.579	1052.032	.649%	79.579%
55.0	13.643	6.942	1058.974	.525%	80.104%
60.0	12.297	5.996	1064.970	.454%	80.557%
65.0	11.230	5.719	1070.689	.433%	80.990%
70.0	9.791	5.323	1076.012	.403%	81.393%
75.0	7.935	4.633	1080.645	.350%	81.743%
80.0	5.708	3.650	1084.296	.276%	82.019%
85.0	3.387	2.471	1086.767	.187%	82.206%
90.0	1.346	1.296	1088.063	.098%	82.304%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	906.55	68.57%	83.32%
0-40	1032.19	78.08%	94.86%
0-60	1064.97	80.56%	97.88%
0-90	1086.77	82.21%	99.88%
0-120	1086.77	82.21%	99.88%
0-180	1088.06	82.30%	100.00%
60-90	27.79	2.10%	2.55%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.73	870.45	65.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	199.90
10-20	391.85
20-30	314.80
30-40	125.64
40-50	19.84
50-60	12.94
60-70	11.04
70-80	8.28
80-90	2.47
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

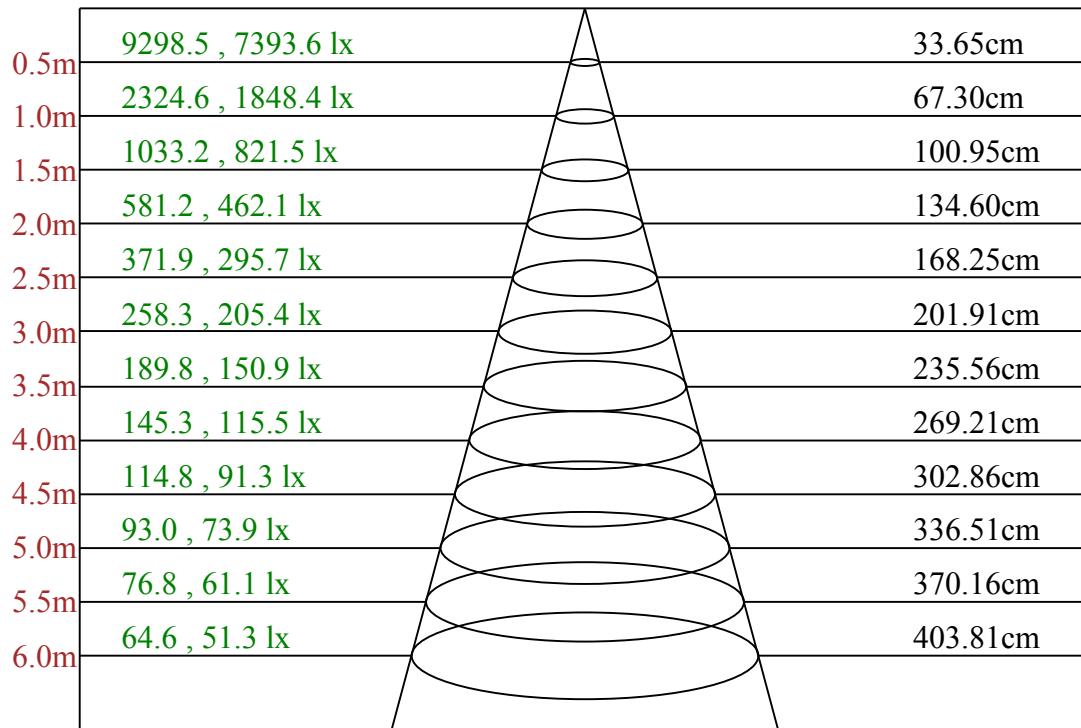
C0(Max): —————C0/C180: —————C90/C270: —————

Field angle(10%Imax):C0/180Left:33.9 Right:33.9

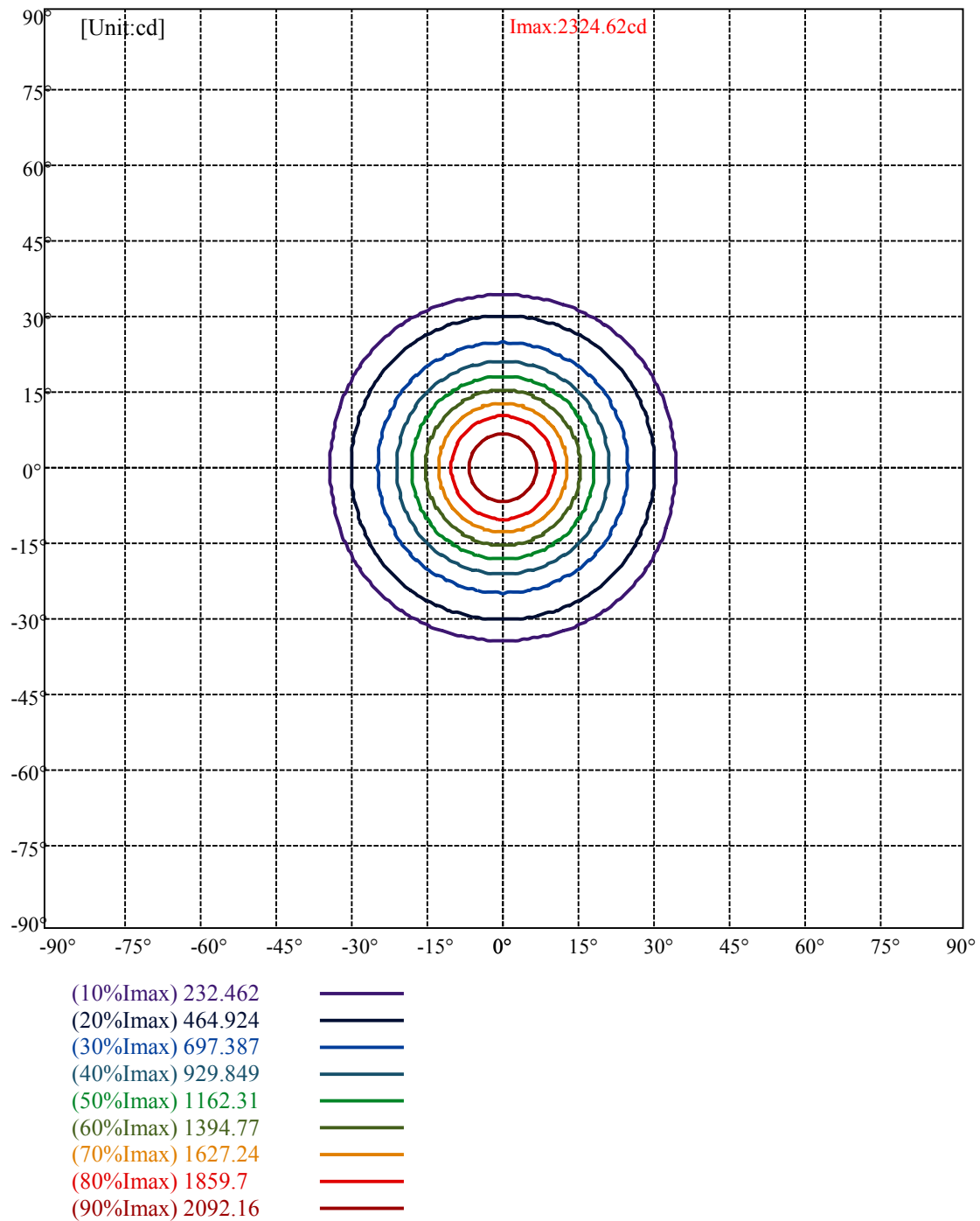
:C90/270Left:33.9 Right:33.9

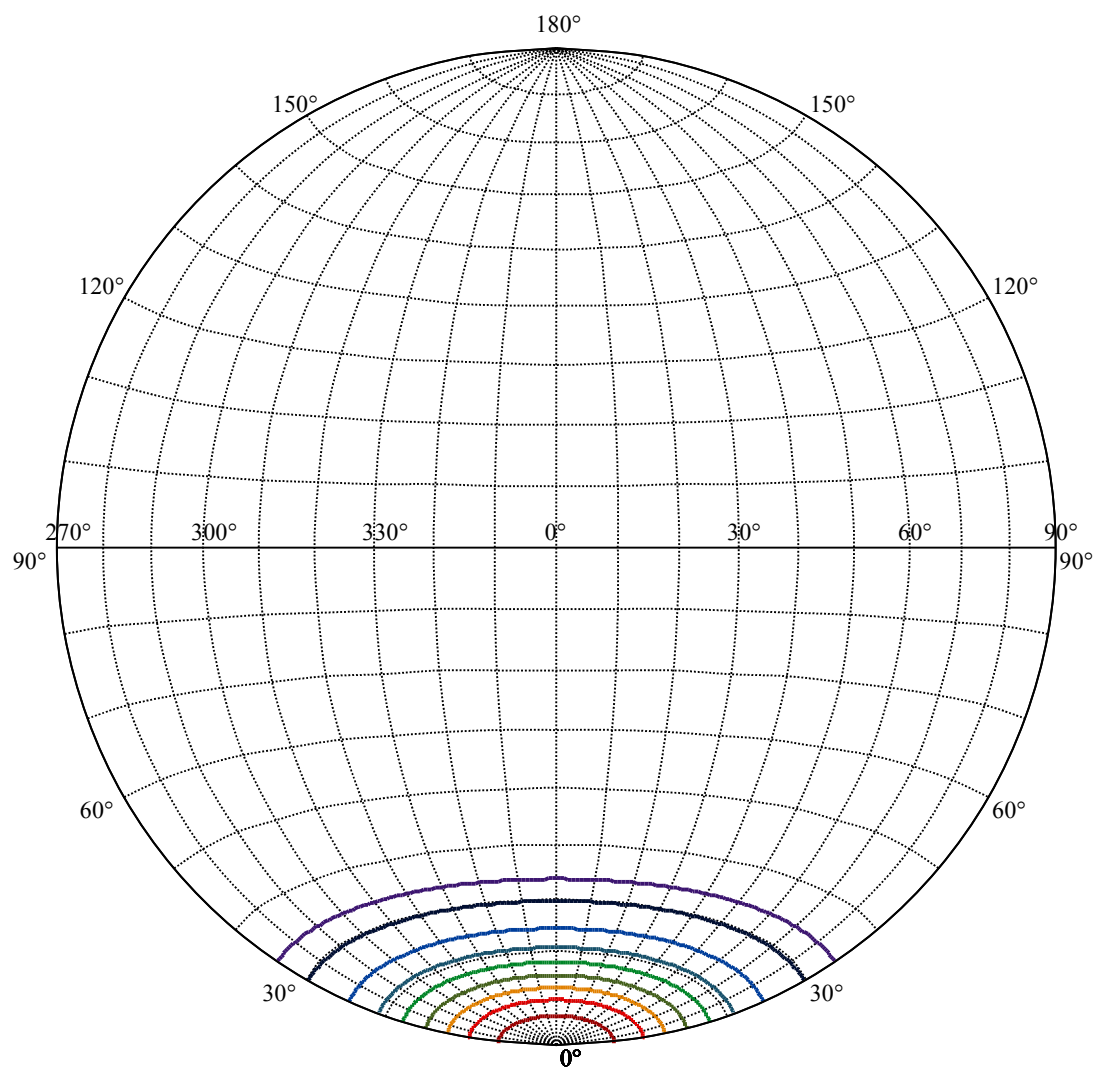
Beam Angle(50%Imax):C0/180Left:17.9 Right:17.9

:C90/270Left:17.9 Right:17.9



Max , Ave Beam angle of C0plane37.20














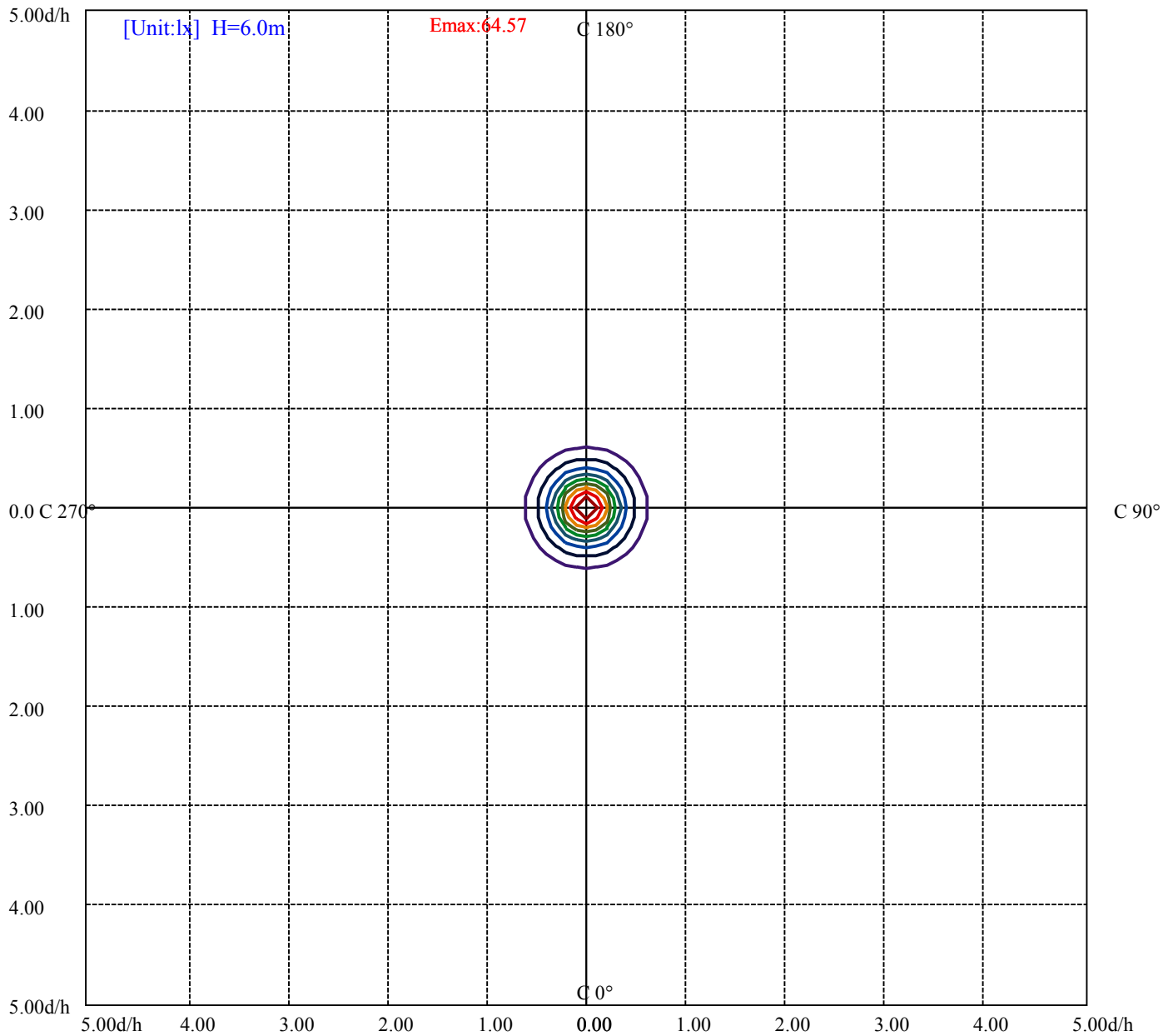
House

[Unit:cd]

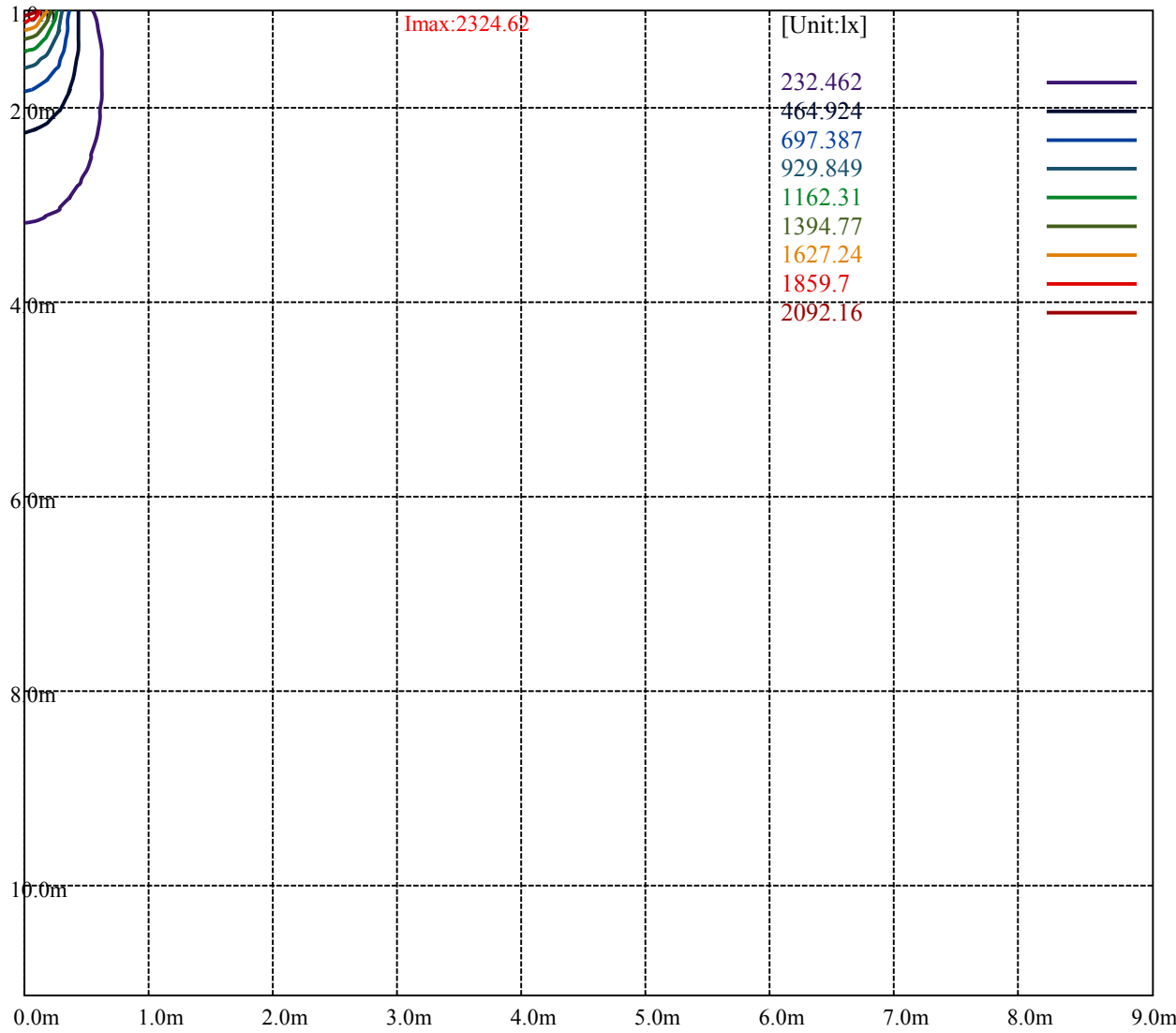
Road

Imax:2324.62

(10%Imax)	232.462	
(20%Imax)	464.924	
(30%Imax)	697.387	
(40%Imax)	929.849	
(50%Imax)	1162.31	
(60%Imax)	1394.77	
(70%Imax)	1627.24	
(80%Imax)	1859.7	
(90%Imax)	2092.16	



(10%Emax) 6.457278	—
(20%Emax) 12.91456	—
(30%Emax) 19.37181	—
(40%Emax) 25.82908	—
(50%Emax) 32.28639	—
(60%Emax) 38.74361	—
(70%Emax) 45.20083	—
(80%Emax) 51.65805	—
(90%Emax) 58.11555	—



Luminance Table

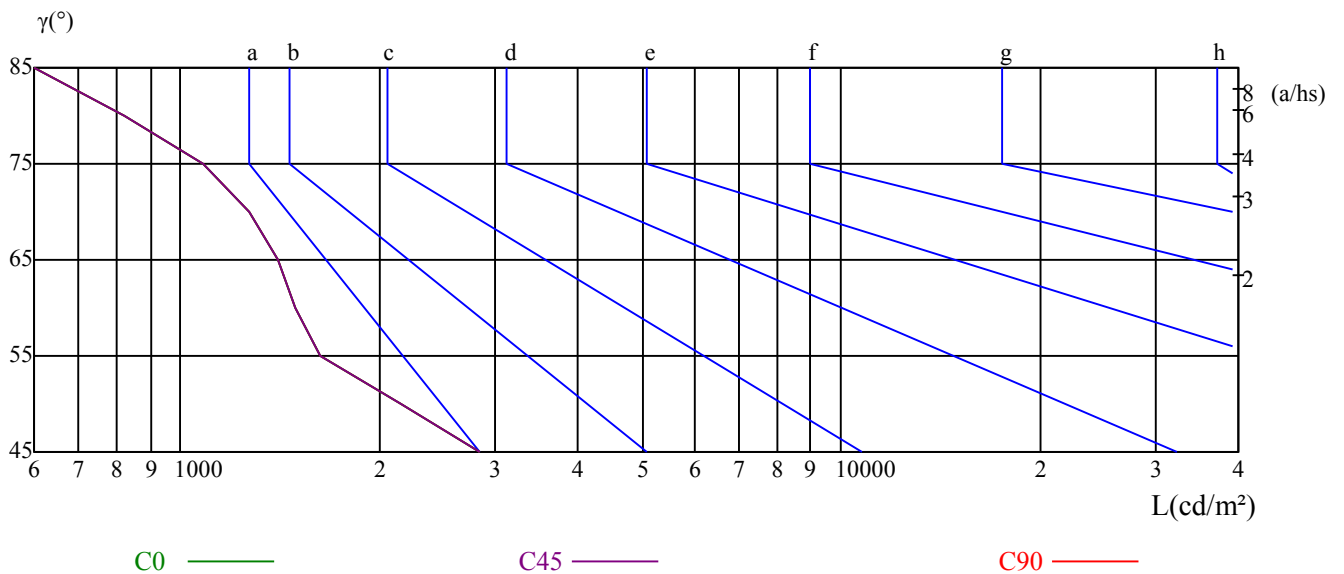
γ	45	50	55	60	65	70	75	80	85
C0	2834	2153	1626	1495	1405	1271	1079	821	522
C45	2834	2153	1626	1495	1405	1271	1079	821	522
C90	2834	2153	1626	1495	1405	1271	1079	821	522

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
4369	4369	4369	5041	5041	5041	6390	6390	6390

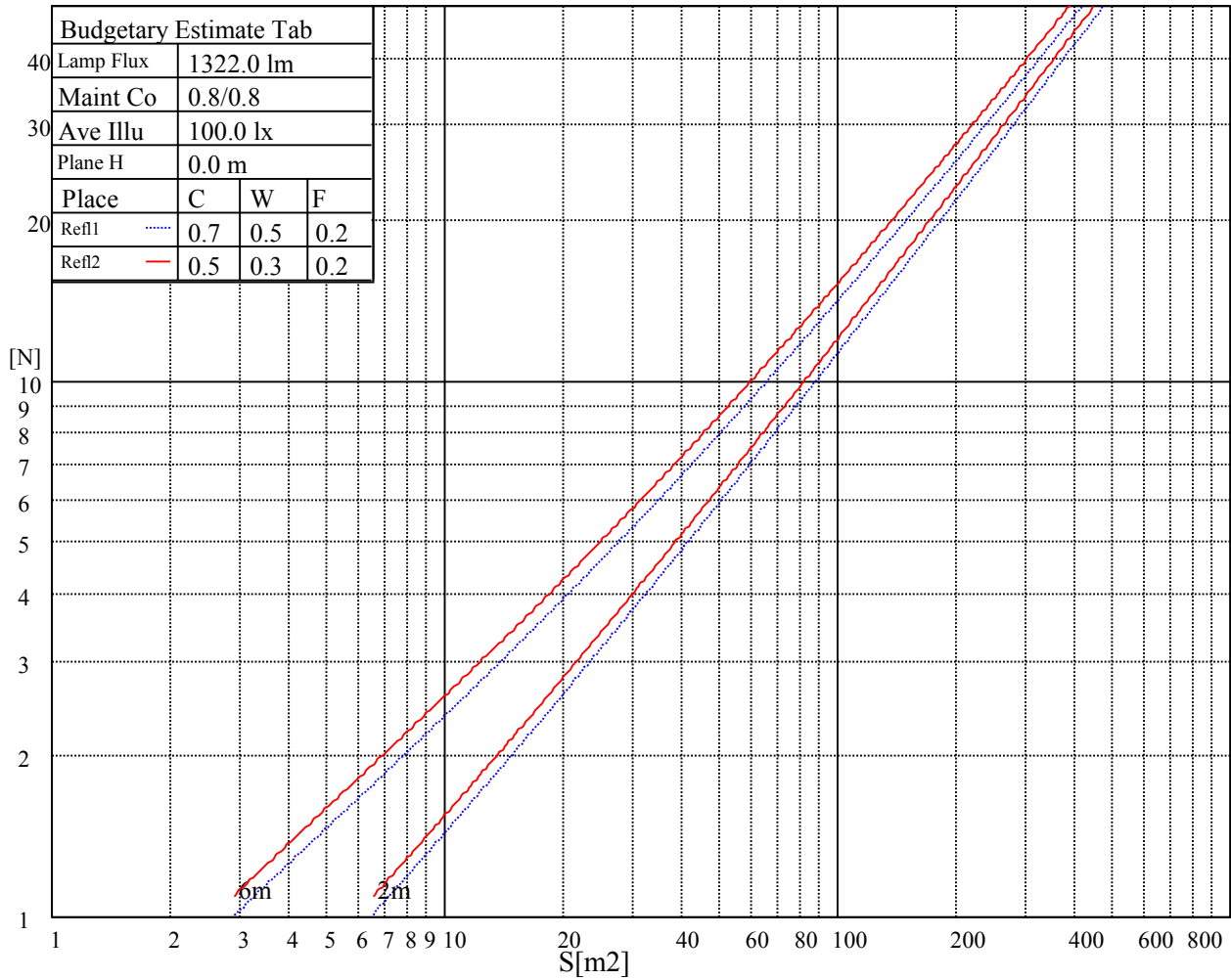
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
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					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

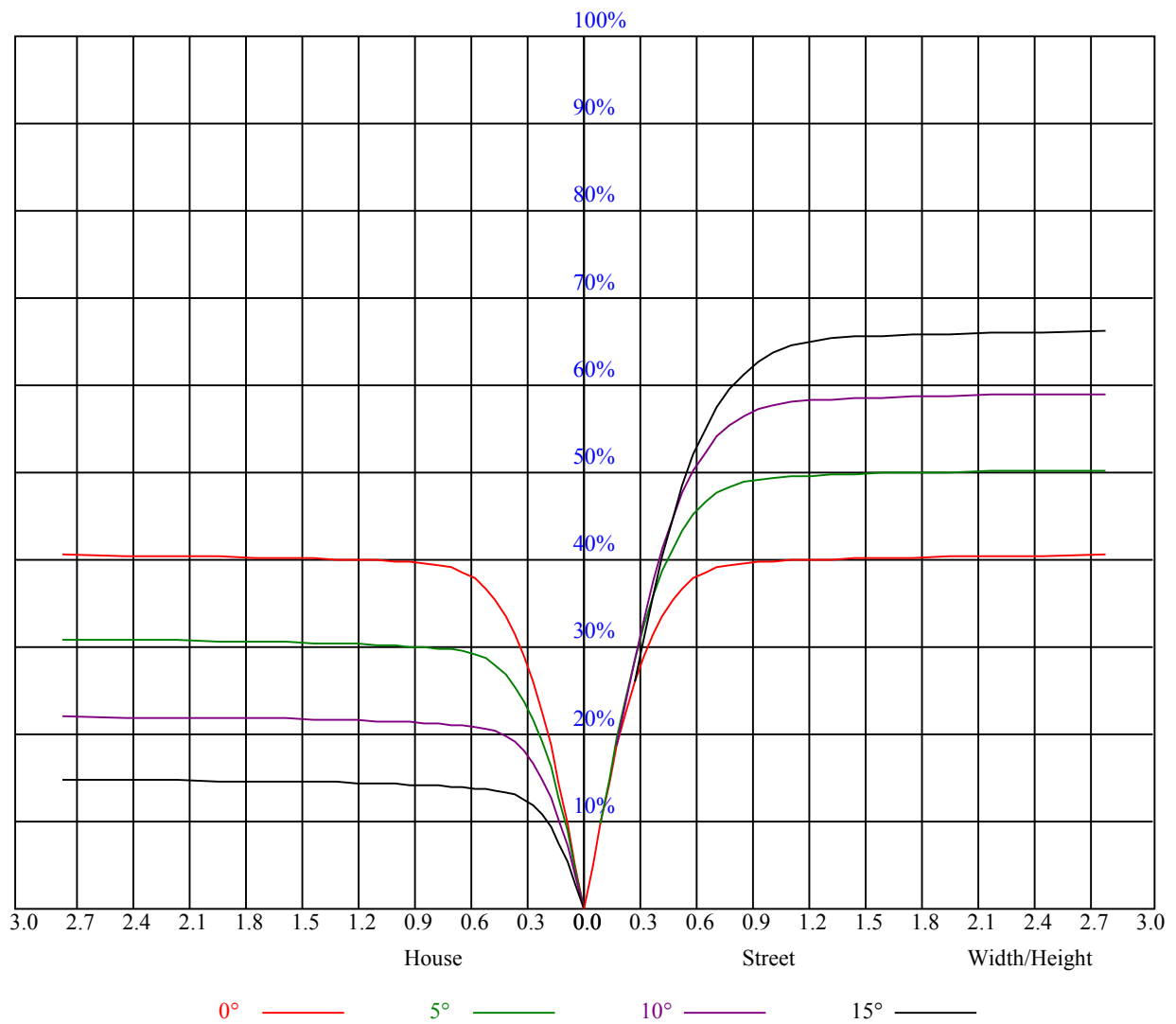
Luminance Limiting Curve



Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions	Viewed crosswise					Viewed endwise					
X	Y										
2H	2H	7.7	8.4	7.9	8.6	8.8	7.7	8.4	7.9	8.6	8.8
	3H	7.8	8.5	8.1	8.7	9.0	7.8	8.5	8.1	8.7	9.0
	4H	7.8	8.4	8.2	8.7	9.0	7.8	8.4	8.2	8.7	9.0
	6H	8.0	8.5	8.3	8.8	9.2	8.0	8.5	8.3	8.8	9.2
	8H	8.0	8.6	8.4	8.9	9.2	8.0	8.6	8.4	8.9	9.2
	12H	7.9	8.3	8.3	8.7	9.1	7.9	8.3	8.3	8.7	9.1
4H	2H	7.4	8.0	7.8	8.3	8.6	7.4	8.0	7.8	8.3	8.6
	3H	7.7	8.1	8.1	8.5	8.9	7.7	8.1	8.1	8.5	8.9
	4H	8.0	8.4	8.4	8.8	9.2	8.0	8.4	8.4	8.8	9.2
	6H	8.2	8.6	8.6	9.0	9.4	8.2	8.6	8.6	9.0	9.4
	8H	8.1	8.3	8.6	8.8	9.3	8.1	8.3	8.6	8.8	9.3
	12H	8.2	8.4	8.6	8.9	9.4	8.2	8.4	8.6	8.9	9.4
8H	4H	7.9	8.1	8.4	8.6	9.1	7.9	8.1	8.4	8.6	9.1
	6H	8.2	8.5	8.7	8.9	9.4	8.2	8.5	8.7	8.9	9.4
	8H	8.3	8.6	8.8	9.1	9.6	8.3	8.6	8.8	9.1	9.6
	12H	8.5	8.7	9.0	9.2	9.7	8.5	8.7	9.0	9.2	9.7
12H	4H	7.9	8.1	8.4	8.6	9.1	7.9	8.1	8.4	8.6	9.1
	6H	8.2	8.5	8.7	9.0	9.5	8.2	8.5	8.7	9.0	9.5
	8H	8.4	8.7	8.9	9.1	9.6	8.4	8.7	8.9	9.1	9.6
Variation with the observer position at spacings:											
S = 1.0H		5.3/-4.3					5.3/-4.3				
S = 1.5H		7.6/-3.9					7.6/-3.9				
S = 2.0H		9.4/-3.6					9.4/-3.6				
Standard tables:		BK2					BK2				
Uncorrected UGR		-4.5					-4.5				



RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.98	0.98	0.98	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.84	0.84	0.84	0.82
1	0.92	0.90	0.88	0.90	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.77
2	0.86	0.83	0.80	0.84	0.82	0.79	0.82	0.79	0.78	0.79	0.77	0.76	0.77	0.76	0.74	0.73
3	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
4	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.65
5	0.72	0.68	0.65	0.72	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
6	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.59
7	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
8	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.54	0.53
9	0.60	0.55	0.53	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49



Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
45.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
90.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
135.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
180.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
225.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
270.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
315.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
360.0	2324.62	2203.28	1871.49	1410.89	981.20	667.19	454.24	167.56	36.66
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
45.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
90.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
135.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
180.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
225.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
270.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
315.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
360.0	24.18	18.28	13.64	12.30	11.23	9.79	7.93	5.71	3.39
C/γ(°)	90.0								
0.0	1.35								
45.0	1.35								
90.0	1.35								
135.0	1.35								
180.0	1.35								
225.0	1.35								
270.0	1.35								
315.0	1.35								
360.0	1.35								