
Nata

LumCAT: 1545-E
Luminaire: 92.70.064.00
Report No: NT2017090502
Test No: GC2017090502
LampCAT: CITIZEN CLU028
Lamp flux(lm): 1463.0
Number of Lamps: 1
Length(mm): 22
Phm Type: C

Voltage(V): 35.5000
Current(A): 0.3000
Power (W): 10.6500
PF: 0.0000
Ballast type: DC
Width(mm): 22
Height(mm): 0

Photometric Results

Lumens(lm): 1295.04
Efficiency(%): 88.52%
Lumens(lm)/Power(W): 121.60
Central intensity(cd): 1775.982
Maximum intensity(cd): 1775.982
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=42.4
 [C90/270]Total=42.4
Field angle(10%Imax): [C0/180]Total=90.1
 [C90/270]Total=90.1
Maximum s/h(1/2): C0_180=0.66 C90_270=0.66
Maximum s/h(1/4): C0_180=0.73 C90_270=0.73
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.52%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.492%

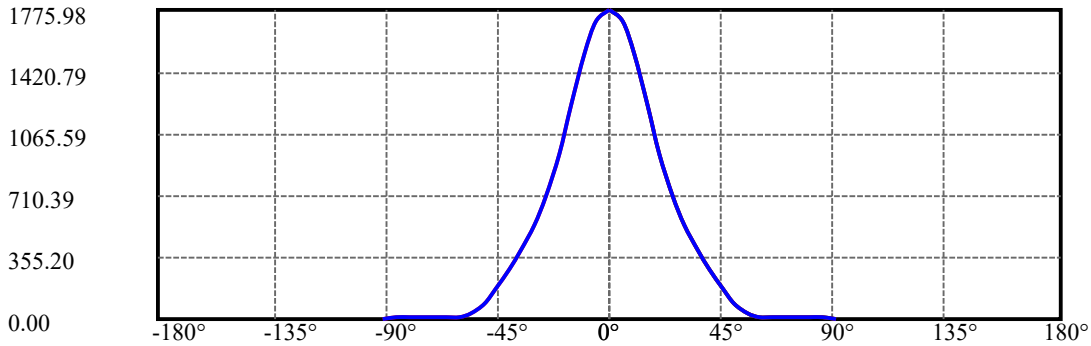
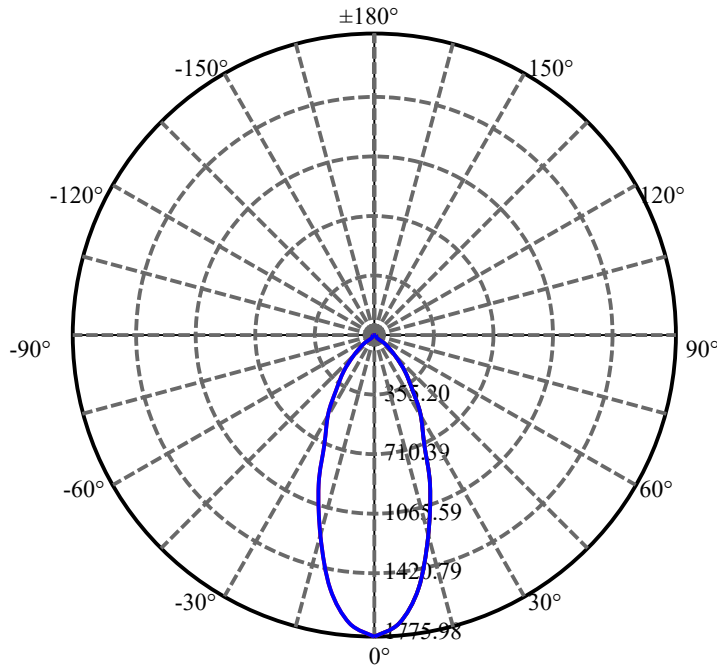
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1775.982	0.000	0	.000%	.000%
5.0	1708.125	41.652	41.652	2.847%	3.216%
10.0	1517.630	115.395	157.047	7.888%	12.127%
15.0	1223.862	162.623	319.67	11.116%	24.684%
20.0	943.887	178.653	498.323	12.211%	38.479%
25.0	706.959	173.143	671.467	11.835%	51.849%
30.0	540.420	157.857	829.323	10.790%	64.039%
35.0	401.616	138.721	968.045	9.482%	74.750%
40.0	287.835	115.030	1083.074	7.863%	83.633%
45.0	178.500	86.346	1169.42	5.902%	90.300%
50.0	90.244	54.304	1223.724	3.712%	94.493%
55.0	34.417	27.106	1250.829	1.853%	96.586%
60.0	16.324	11.729	1262.558	.802%	97.492%
65.0	13.110	7.156	1269.714	.489%	98.045%
70.0	11.527	6.238	1275.952	.426%	98.526%
75.0	10.392	5.729	1281.681	.392%	98.969%
80.0	9.415	5.300	1286.981	.362%	99.378%
85.0	7.570	4.615	1291.596	.315%	99.734%
90.0	4.996	3.441	1295.037	.235%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	829.32	56.69%	64.04%
0-40	1083.07	74.03%	83.63%
0-60	1262.56	86.30%	97.49%
0-90	1291.60	88.28%	99.73%
0-120	1291.60	88.28%	99.73%
0-180	1295.04	88.52%	100.00%
60-90	40.77	2.79%	3.15%
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%
0-37.96	1036.03	70.82%	80.00%

ZONAL LUMEN SUMMARY

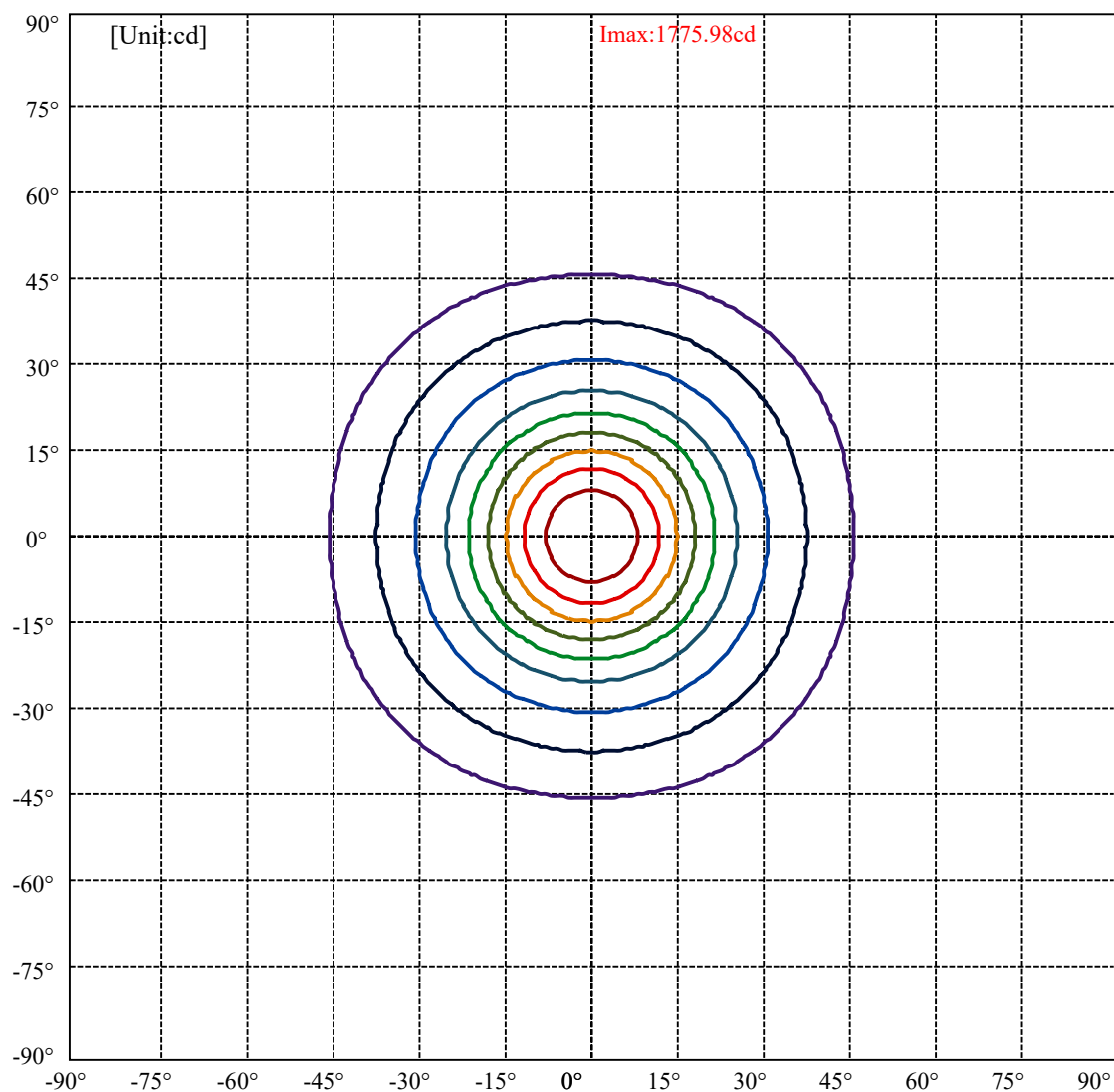
0-10	157.05
10-20	341.28
20-30	331.00
30-40	253.75
40-50	140.65
50-60	38.83
60-70	13.39
70-80	11.03
80-90	4.62
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



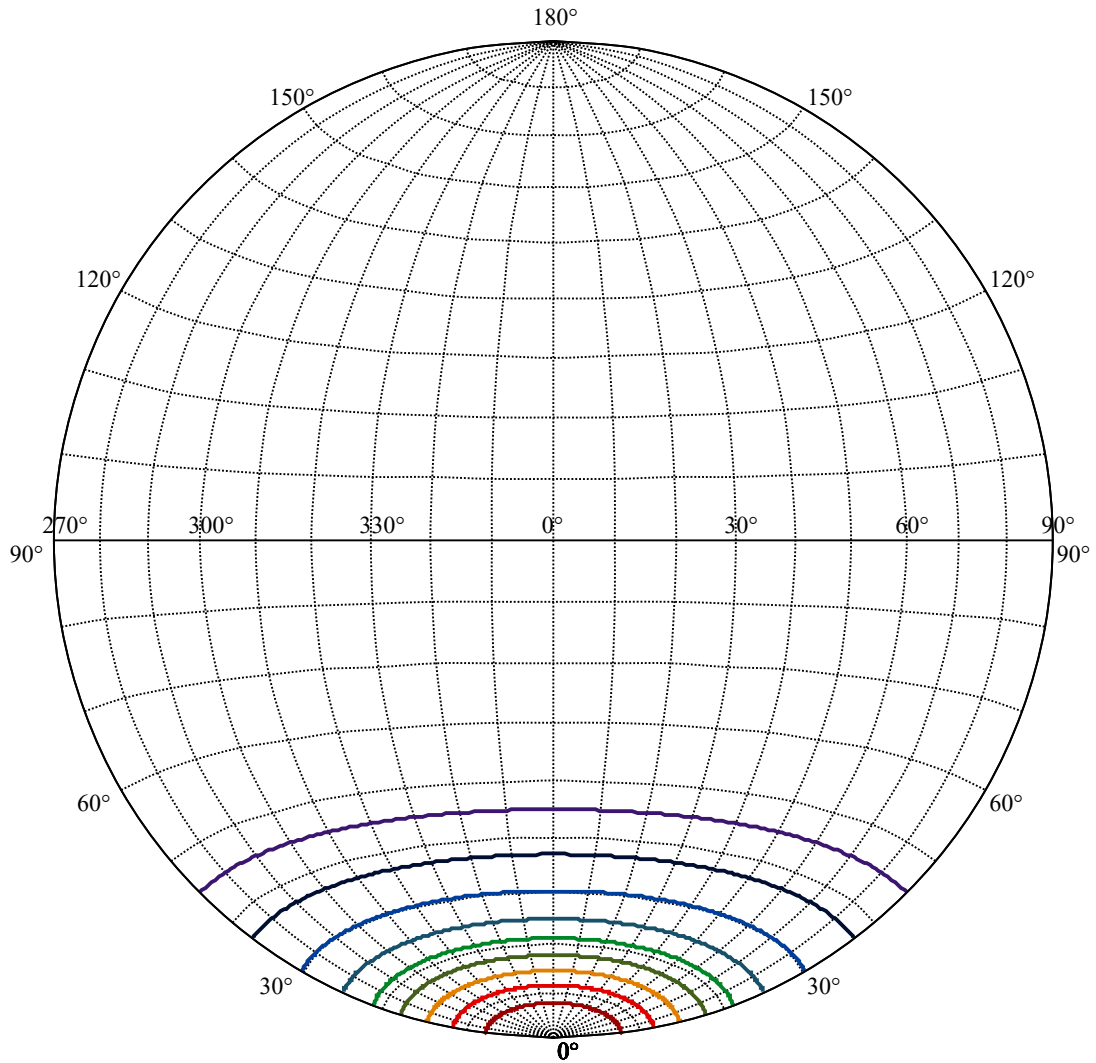
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:45.1 Right:45.1
:C90/270Left:45.1 Right:45.1

Beam Angle(50%Imax):C0/180Left:21.2 Right:21.2
:C90/270Left:21.2 Right:21.2



(10%Imax) 177.598	—
(20%Imax) 355.196	—
(30%Imax) 532.795	—
(40%Imax) 710.393	—
(50%Imax) 887.991	—
(60%Imax) 1065.59	—
(70%Imax) 1243.19	—
(80%Imax) 1420.79	—
(90%Imax) 1598.38	—












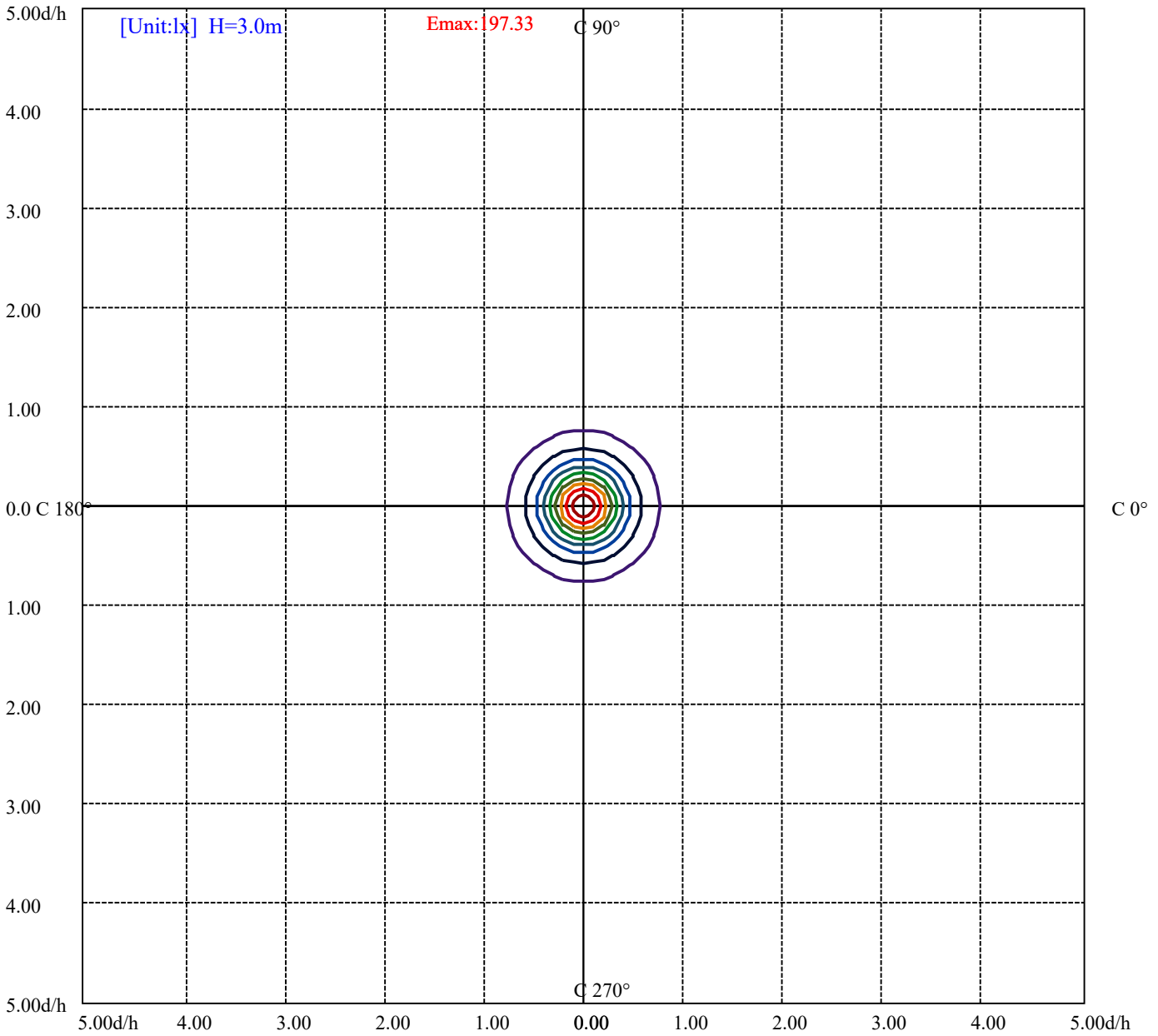
House

[Unit:cd]

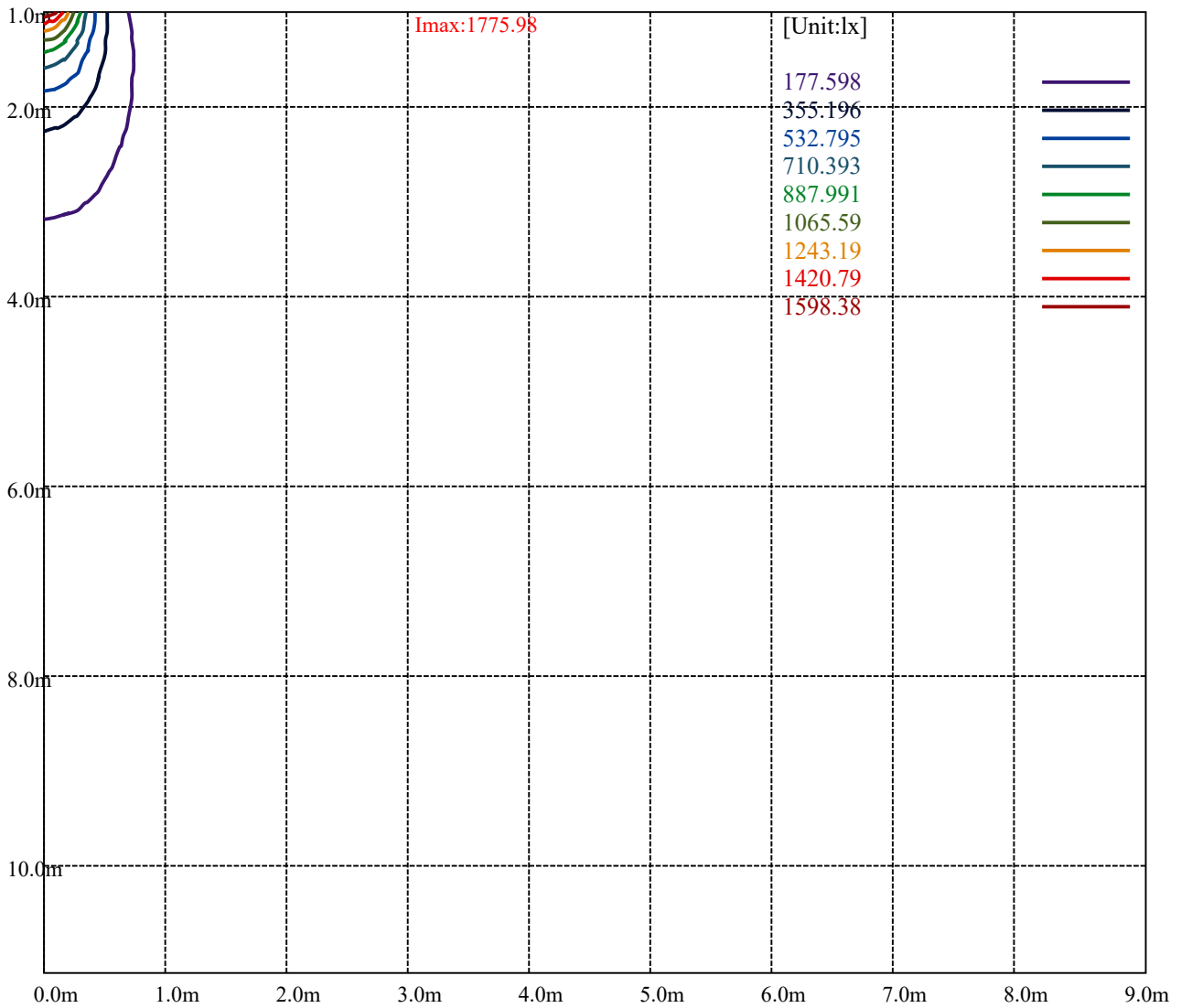
Road

Imax:1775.98

(10%Imax)	177.598	
(20%Imax)	355.196	
(30%Imax)	532.795	
(40%Imax)	710.393	
(50%Imax)	887.991	
(60%Imax)	1065.59	
(70%Imax)	1243.19	
(80%Imax)	1420.79	
(90%Imax)	1598.38	



- (10%Emax) 19.73311
- (20%Emax) 39.46622
- (30%Emax) 59.19933
- (40%Emax) 78.93245
- (50%Emax) 98.66556
- (60%Emax) 118.3989
- (70%Emax) 138.1322
- (80%Emax) 157.8644
- (90%Emax) 177.5978



Luminance Table

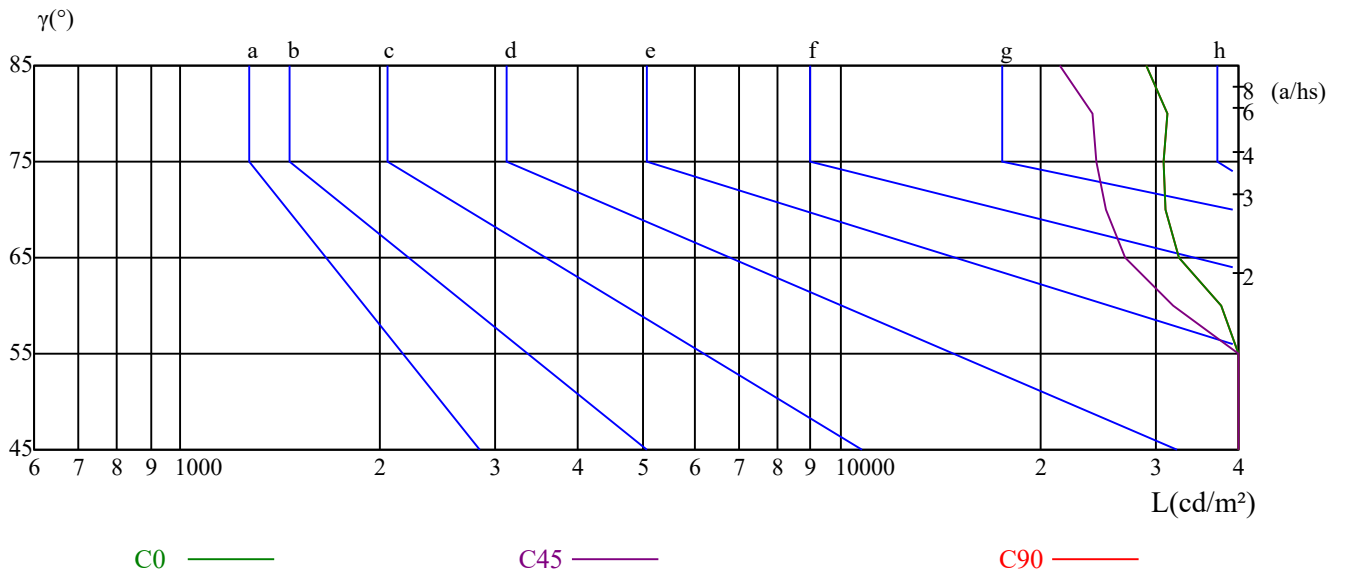
γ	45	50	55	60	65	70	75	80	85
C0	358575	188151	75175	37742	32456	30965	30766	31309	28966
C45	317480	164246	64637	31918	26947	25174	24406	24113	21499
C90	358575	188151	75175	37742	32456	30965	30766	31309	28966

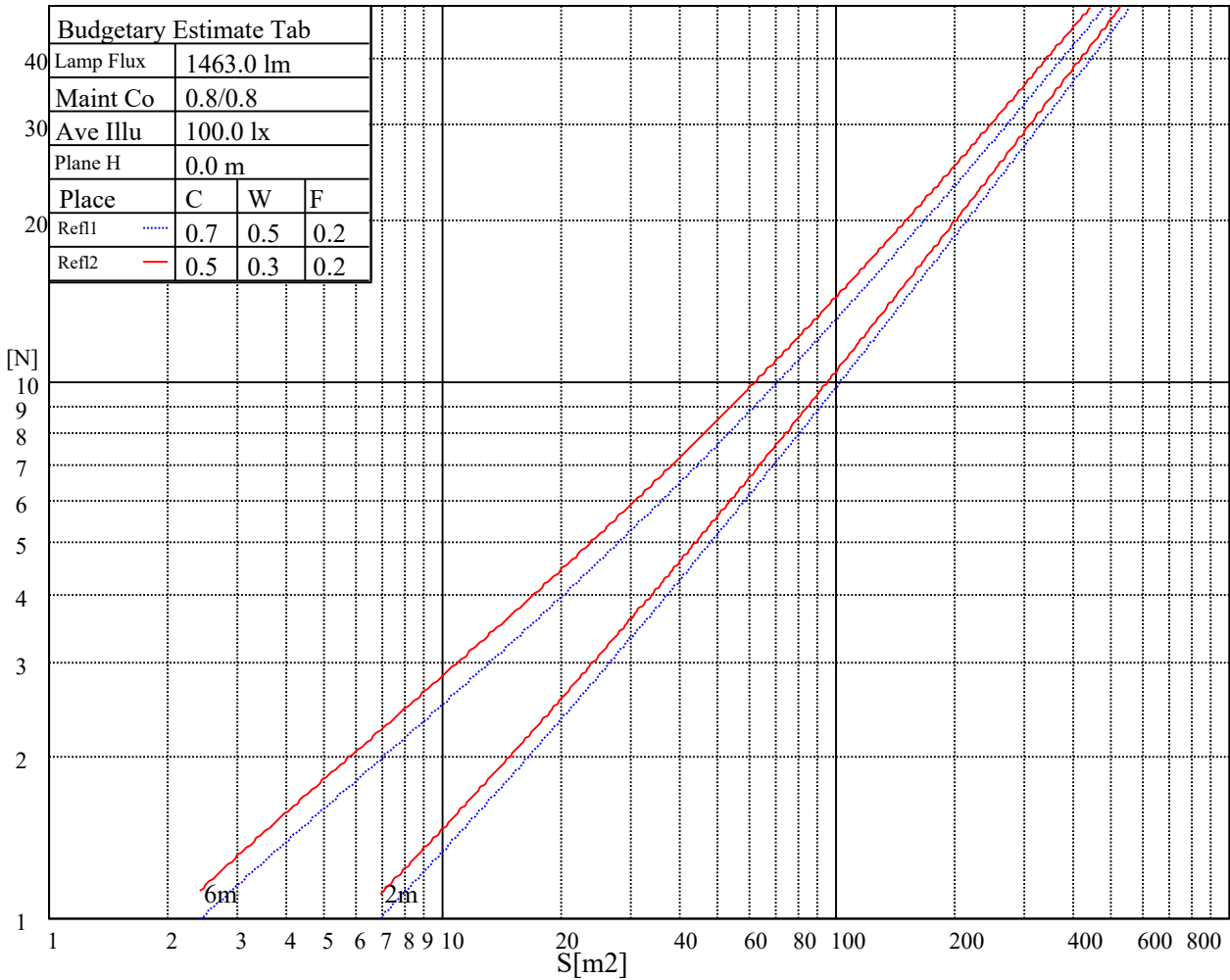
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
64094	64094	64094	82957	82957	82957	179461	179461	179461

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





RHOCC	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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.89
1	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.80	0.83	0.80	0.78	0.80	0.78	0.77	0.75
3	0.83	0.79	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.69
4	0.78	0.72	0.68	0.77	0.72	0.68	0.75	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
5	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
6	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.55
7	0.64	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.56	0.53	0.60	0.56	0.53	0.52
8	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.54	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.48
9	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.54	0.50	0.47	0.46
10	0.53	0.48	0.45	0.53	0.48	0.44	0.52	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.43

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1777.77	1688.58	1512.40	1233.26	946.42	718.49	546.16	403.01	291.80
45.0	1774.47	1713.36	1504.14	1243.72	955.23	727.30	556.07	411.27	295.10
90.0	1775.57	1707.85	1515.15	1190.32	943.94	714.69	541.70	411.82	296.92
135.0	1776.12	1750.24	1586.73	1324.11	1019.09	756.47	578.09	431.64	316.57
180.0	1777.77	1718.31	1526.16	1254.18	951.70	685.95	532.78	391.62	276.60
225.0	1774.47	1712.80	1523.96	1185.91	924.62	685.18	531.79	397.62	281.50
270.0	1775.57	1713.36	1523.96	1264.65	946.42	707.47	534.60	404.11	287.94
315.0	1776.12	1660.50	1448.53	1094.74	863.67	660.13	502.17	361.83	256.23
360.0	1777.77	1688.58	1512.40	1233.26	946.42	718.49	546.16	403.01	291.80
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	181.91	95.85	41.57	20.15	16.46	14.70	12.66	11.29	9.25
45.0	185.15	91.01	34.91	14.65	12.39	10.96	10.02	9.36	7.38
90.0	183.72	89.14	31.77	12.66	10.52	9.41	8.81	8.26	6.61
135.0	204.15	108.63	35.79	16.74	10.85	9.97	9.19	8.42	6.99
180.0	173.43	84.02	26.43	12.94	10.35	9.41	8.59	7.87	6.55
225.0	171.61	86.38	30.78	14.20	11.34	9.97	8.92	7.98	6.61
270.0	174.91	92.22	37.38	18.77	15.20	12.72	11.12	9.86	7.43
315.0	153.11	74.71	36.72	20.48	17.78	15.09	13.82	12.28	9.74
360.0	181.91	95.85	41.57	20.15	16.46	14.70	12.66	11.29	9.25
C/γ(°)	90.0								
0.0	4.96								
45.0	4.96								
90.0	4.96								
135.0	4.90								
180.0	4.84								
225.0	5.18								
270.0	5.12								
315.0	5.07								
360.0	4.96								