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Nata

LumCAT: 2-1572-A
Luminaire: 92.70.046.00+92.70.147.00
Report No: NT2017092519
Test No: GC2017092519
LampCAT: CREE CXA1512
Lamp flux(lm): 1390.0
Number of Lamps: 1
Length(mm): 65
Phm Type: C

Voltage(V): 37.3000
Current(A): 0.3000
Power (W): 11.1900
PF: 0.0000
Ballast type: DC
Width(mm): 65
Height(mm): 0

Photometric Results

Lumens(lm): 1161.25
Efficiency(%): 83.54%
Lumens(lm)/Power(W): 103.78
Central intensity(cd): 2607.471
Maximum intensity(cd): 2607.471
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=36.6
 [C90/270]Total=36.6
Field angle(10%Imax): [C0/180]Total=62.6
 [C90/270]Total=62.6
Beam angle of C0 plane : 36.60
Aveage BeamAngle(IEC 61341):36.60
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.59 C90_270=0.59
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.59%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.715%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/9/25
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

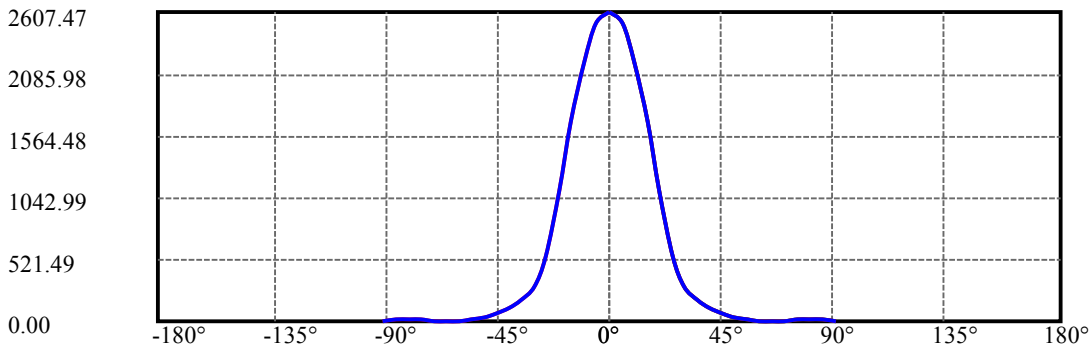
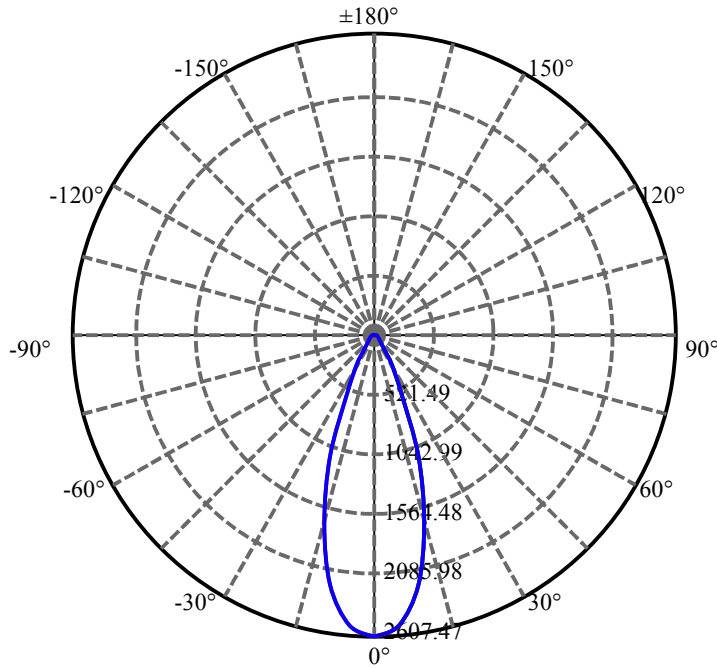
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2607.471	15.593	15.593	1.122%	1.343%
5.0	2514.563	120.129	135.722	8.642%	11.688%
10.0	2190.006	208.451	344.174	14.997%	29.638%
15.0	1688.717	239.576	583.749	17.236%	50.269%
20.0	1105.705	207.291	791.04	14.913%	68.120%
25.0	550.750	127.583	918.623	9.179%	79.106%
30.0	290.216	79.539	998.162	5.722%	85.956%
35.0	175.114	55.056	1053.218	3.961%	90.697%
40.0	107.092	37.732	1090.95	2.715%	93.946%
45.0	58.876	22.820	1113.77	1.642%	95.911%
50.0	33.261	13.966	1127.736	1.005%	97.114%
55.0	13.145	5.902	1133.638	.425%	97.622%
60.0	7.329	3.479	1137.117	.250%	97.922%
65.0	7.288	3.621	1140.738	.260%	98.234%
70.0	7.577	3.903	1144.641	.281%	98.570%
75.0	8.403	4.449	1149.09	.320%	98.953%
80.0	10.750	5.803	1154.893	.417%	99.453%
85.0	9.229	5.039	1159.932	.363%	99.887%
90.0	4.804	1.317	1161.248	.095%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	998.16	71.81%	85.96%
0-40	1090.95	78.49%	93.95%
0-60	1137.12	81.81%	97.92%
0-90	1159.93	83.45%	99.89%
0-120	1159.93	83.45%	99.89%
0-180	1161.25	83.54%	100.00%
60-90	26.29	1.89%	2.26%
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%
0-25.65	929.00	66.83%	80.00%

ZONAL LUMEN SUMMARY

0-10	344.17
10-20	446.87
20-30	207.12
30-40	92.79
40-50	36.79
50-60	9.38
60-70	7.52
70-80	10.25
80-90	5.04
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: —————

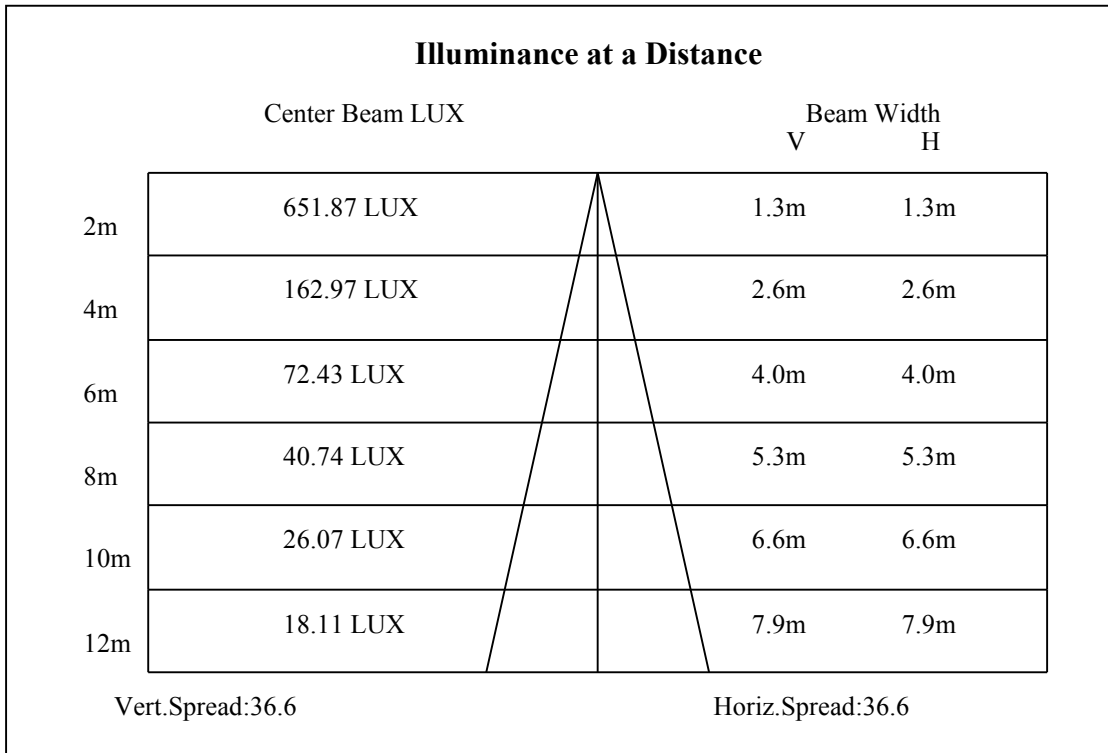
C90/C270: —————

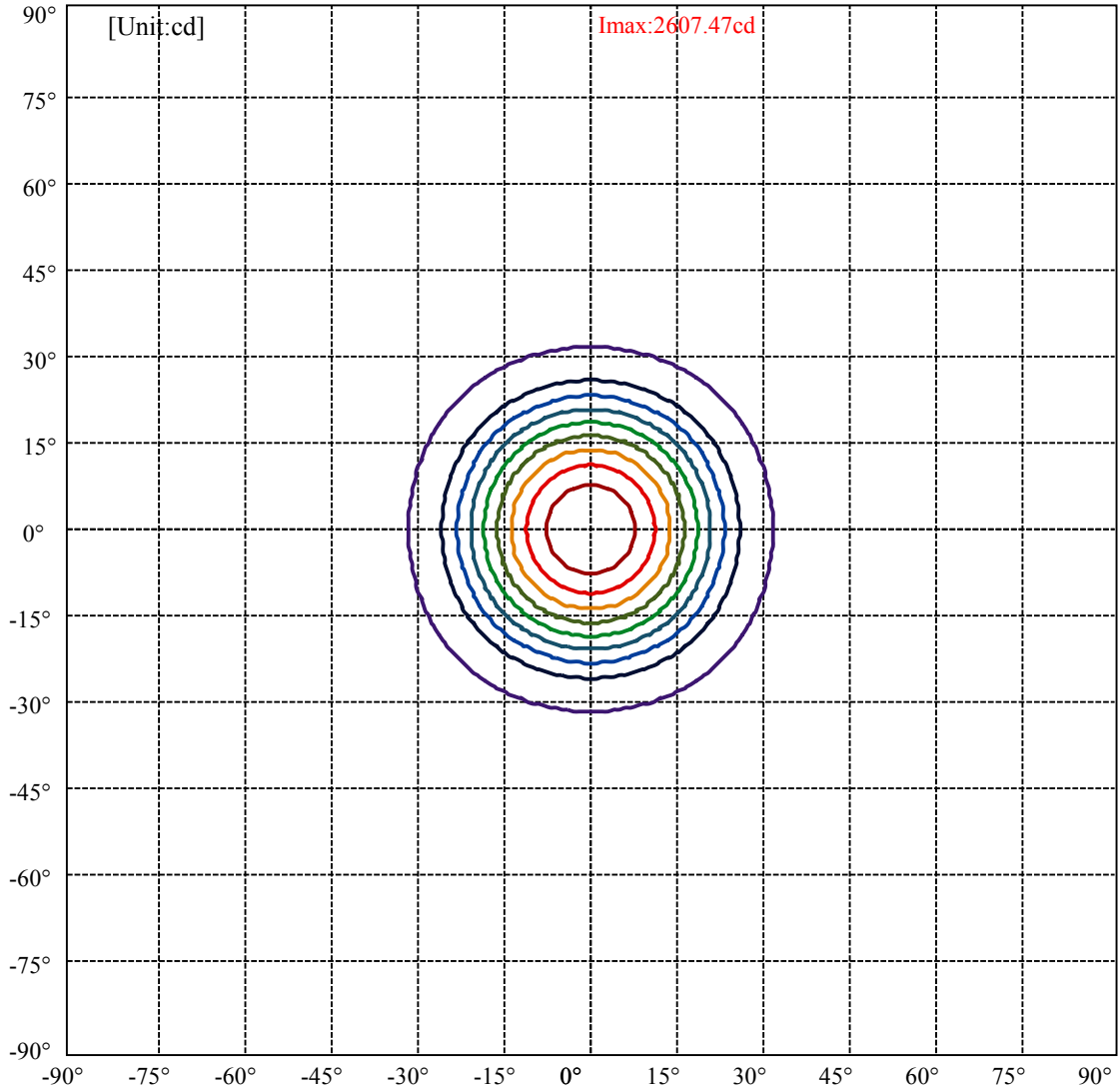
Field angle(10%Imax):C0/180Left:31.3 Right:31.3

:C90/270Left:31.3 Right:31.3

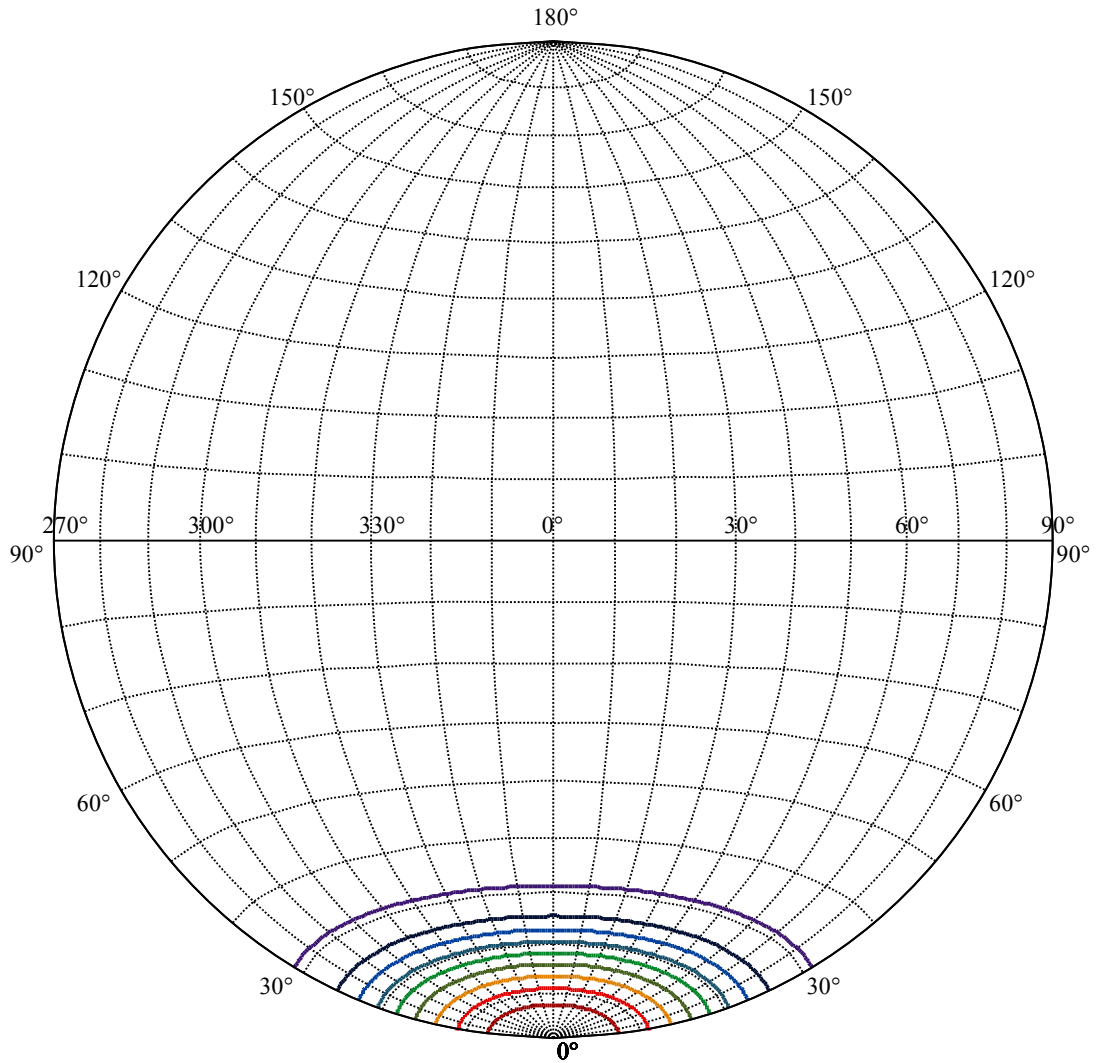
Beam Angle(50%Imax):C0/180Left:18.3 Right:18.3

:C90/270Left:18.3 Right:18.3





(10%Imax) 260.747	—
(20%Imax) 521.494	—
(30%Imax) 782.241	—
(40%Imax) 1042.99	—
(50%Imax) 1303.74	—
(60%Imax) 1564.48	—
(70%Imax) 1825.23	—
(80%Imax) 2085.98	—
(90%Imax) 2346.72	—



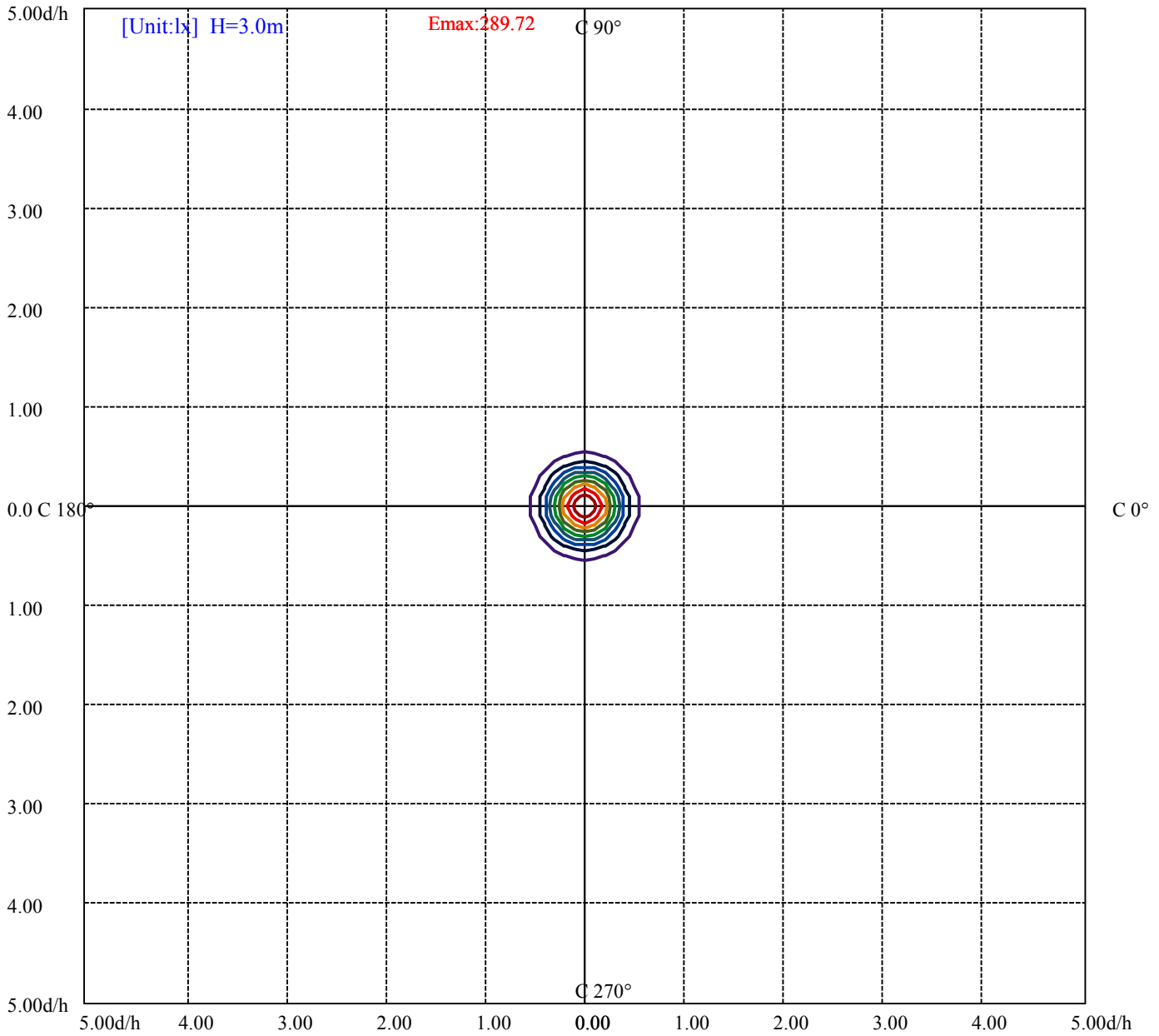
House

[Unit:cd]

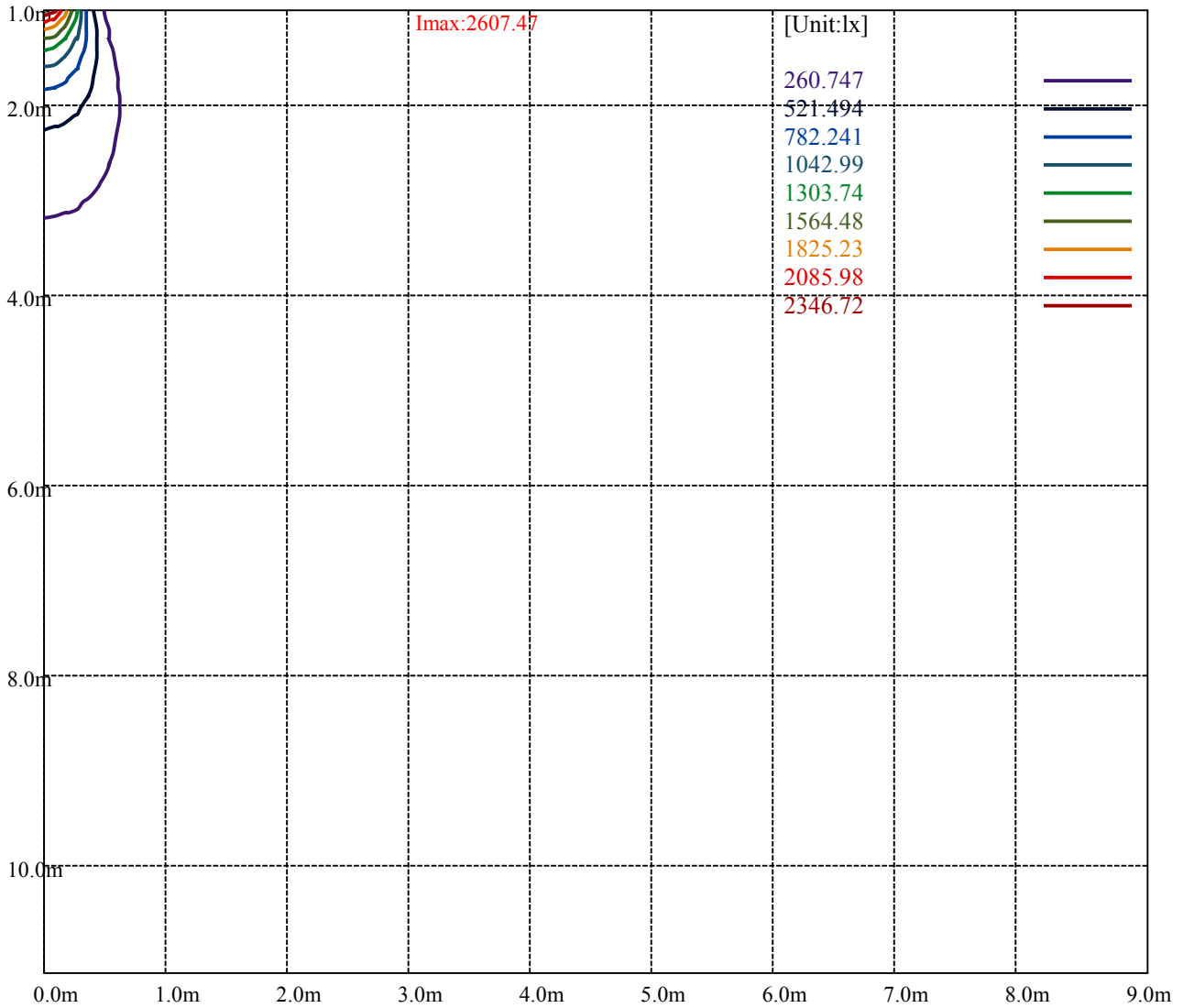
Road

Imax:2607.47

(10%Imax) 260.747	—
(20%Imax) 521.494	—
(30%Imax) 782.241	—
(40%Imax) 1042.99	—
(50%Imax) 1303.74	—
(60%Imax) 1564.48	—
(70%Imax) 1825.23	—
(80%Imax) 2085.98	—
(90%Imax) 2346.72	—



- (10%Emax) 28.97189 ———
- (20%Emax) 57.94378 ———
- (30%Emax) 86.91556 ———
- (40%Emax) 115.8878 ———
- (50%Emax) 144.8589 ———
- (60%Emax) 173.8311 ———
- (70%Emax) 202.8033 ———
- (80%Emax) 231.7744 ———
- (90%Emax) 260.7467 ———



Luminance Table

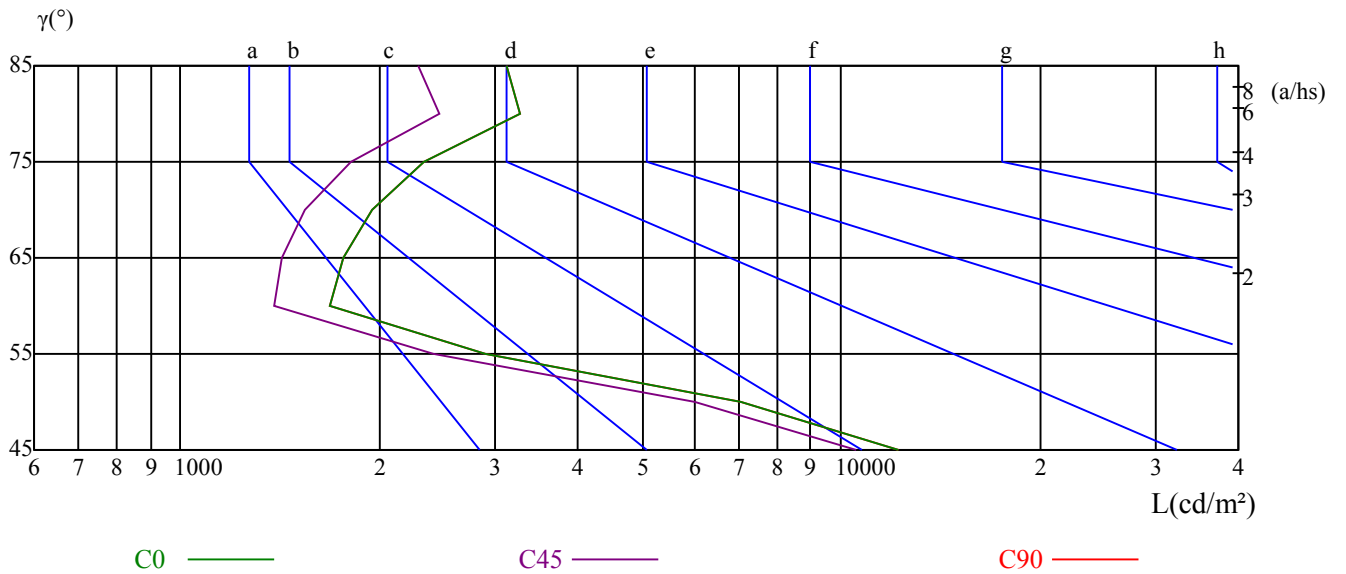
γ	45	50	55	60	65	70	75	80	85
C0	12200	7066	2887	1679	1760	1949	2331	3263	3120
C45	10537	6012	2418	1384	1424	1546	1809	2469	2289
C90	12200	7066	2887	1679	1760	1949	2331	3263	3120

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4082	4082	4082	7684	7684	7684	25062	25062	25062

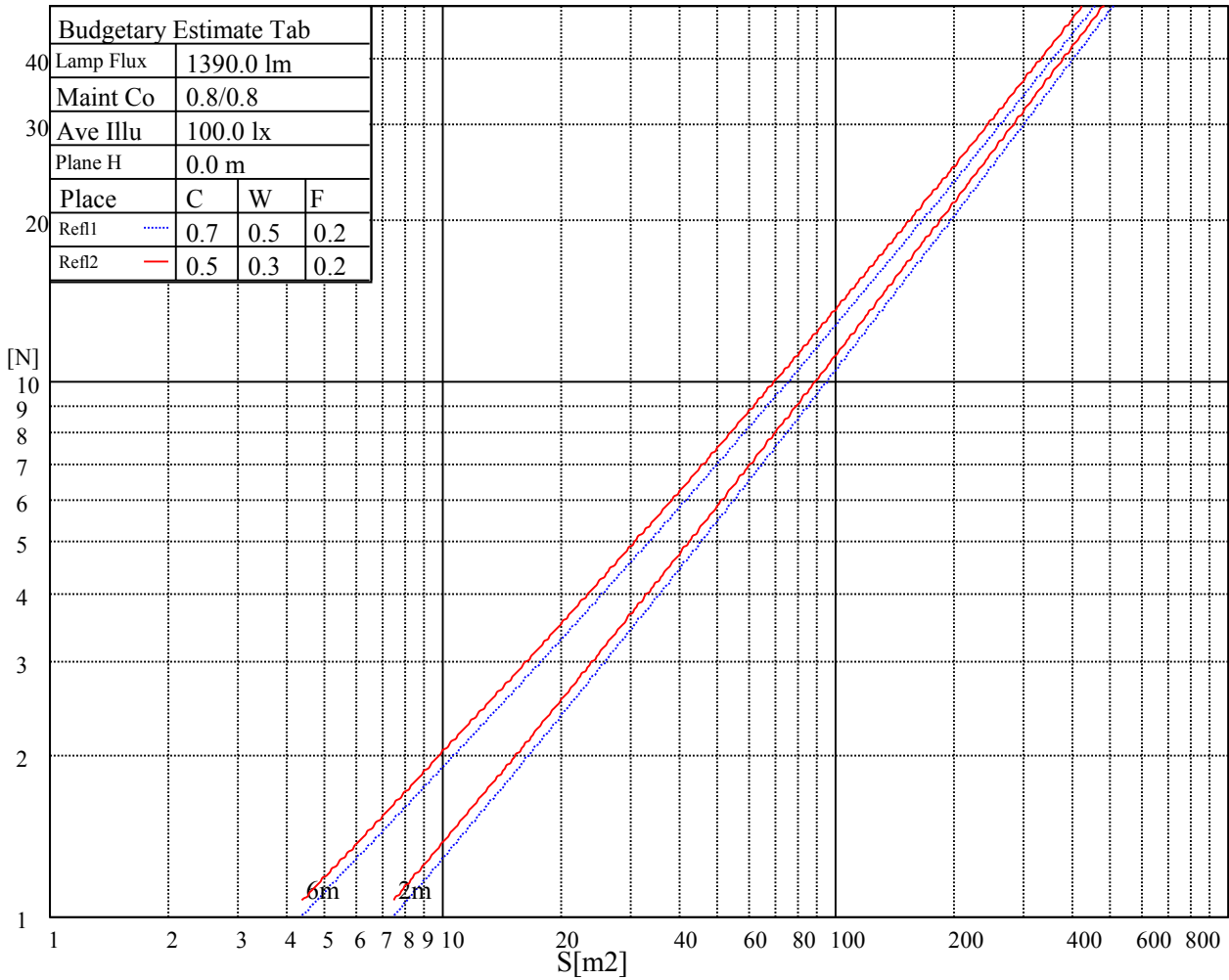
Glare Table

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

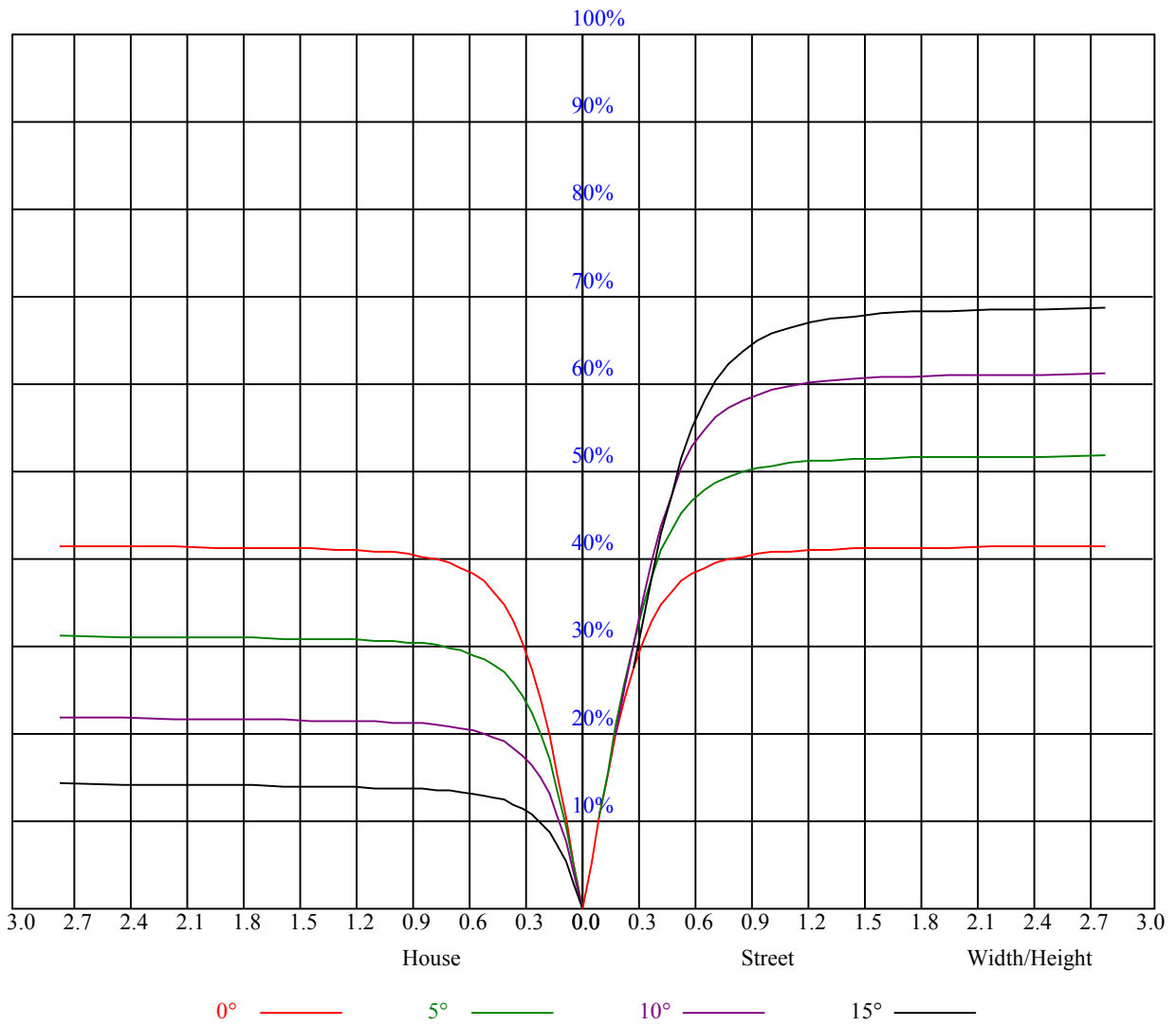
Luminance Limiting Curve



Illumination 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	5.31	6.30	5.68	6.61	6.93	5.57	6.56	5.94	6.87	7.18
	3H	6.80	7.67	7.18	8.00	8.37	7.16	8.03	7.54	8.36	8.73
	4H	7.91	8.72	8.32	9.07	9.46	8.42	9.23	8.83	9.58	9.97
	6H	9.62	10.36	10.04	10.74	11.14	10.23	10.97	10.65	11.34	11.74
	8H	10.50	11.19	10.93	11.58	11.99	11.05	11.75	11.49	12.14	12.55
	12H	11.72	12.38	12.15	12.77	13.20	12.12	12.78	12.55	13.17	13.60
4H	2H	5.54	6.35	5.95	6.70	7.09	5.76	6.57	6.17	6.92	7.31
	3H	7.46	8.13	7.88	8.54	8.94	7.77	8.44	8.19	8.85	9.25
	4H	8.87	9.46	9.31	9.88	10.33	9.32	9.92	9.76	10.34	10.79
	6H	10.51	11.02	10.98	11.47	11.94	11.04	11.55	11.51	12.00	12.47
	8H	11.60	12.07	12.07	12.52	13.00	12.07	12.55	12.55	13.00	13.48
	12H	12.84	13.25	13.33	13.74	14.22	13.18	13.59	13.67	14.08	14.56
8H	4H	9.54	10.02	10.02	10.47	10.94	9.91	10.38	10.38	10.83	11.31
	6H	11.58	11.96	12.09	12.47	12.95	12.00	12.38	12.51	12.88	13.37
	8H	12.77	13.11	13.30	13.63	14.13	13.14	13.48	13.67	14.00	14.50
	12H	14.03	14.32	14.55	14.82	15.40	14.29	14.58	14.81	15.08	15.66
12H	4H	9.76	10.17	10.25	10.66	11.14	10.08	10.50	10.57	10.98	11.46
	6H	12.17	12.23	12.43	12.70	13.25	12.54	12.60	12.79	13.07	13.62
	8H	13.15	13.45	13.68	13.95	14.53	13.48	13.77	14.00	14.27	14.85
Variation with the observer position at spacings:											
S = 1.0H	3.1/-4.3					3.1/-4.3					
S = 1.5H	4.6/-3.2					4.6/-3.2					
S = 2.0H	5.6/-2.5					5.6/-2.5					
Standard tables:	BK3					BK3					
Uncorrected UGR	-2.6					-2.6					



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	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.93	0.91	0.89	0.91	0.89	0.87	0.88	0.86	0.85	0.85	0.83	0.82	0.82	0.81	0.80	0.78
2	0.88	0.84	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.77	0.79	0.77	0.76	0.74
3	0.83	0.79	0.76	0.82	0.79	0.76	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
6	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.68	0.66	0.64	0.63
7	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.65	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54



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	2609.67	2538.10	2251.81	1802.55	1249.78	645.81	328.14	203.05	120.68
45.0	2605.82	2530.39	2210.51	1711.70	1135.26	561.58	290.70	178.00	109.23
90.0	2609.67	2509.47	2158.21	1614.80	1005.00	493.31	271.32	162.42	99.27
135.0	2604.72	2545.26	2252.91	1726.57	1120.40	566.53	299.51	177.17	110.94
180.0	2609.67	2480.29	2107.56	1574.06	998.78	467.81	251.88	156.25	96.46
225.0	2605.82	2495.16	2128.48	1593.88	1050.09	508.23	261.90	162.25	99.87
270.0	2609.67	2526.54	2242.45	1776.67	1202.98	612.78	318.78	182.35	111.60
315.0	2604.72	2491.30	2168.12	1709.50	1083.34	549.96	299.51	179.43	108.68
360.0	2609.67	2538.10	2251.81	1802.55	1249.78	645.81	328.14	203.05	120.68
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	67.39	38.15	17.45	7.49	7.32	7.54	7.93	9.91	9.69
45.0	57.81	33.31	14.15	7.65	7.65	7.98	9.30	12.50	9.74
90.0	51.75	28.90	9.36	6.72	6.72	6.88	7.32	9.41	8.64
135.0	59.57	33.03	12.06	7.32	7.21	7.43	7.93	9.63	9.25
180.0	53.18	30.56	10.08	7.54	7.60	8.04	9.52	11.34	8.37
225.0	55.61	30.83	12.17	7.60	7.71	8.26	9.86	11.95	9.41
270.0	64.25	37.11	16.85	7.10	6.99	7.10	7.49	9.58	10.02
315.0	61.44	34.19	13.05	7.21	7.10	7.38	7.87	11.67	8.70
360.0	67.39	38.15	17.45	7.49	7.32	7.54	7.93	9.91	9.69
C/ γ (°)	90.0								
0.0	4.84								
45.0	4.79								
90.0	4.79								
135.0	4.79								
180.0	4.79								
225.0	4.79								
270.0	4.79								
315.0	4.84								
360.0	4.84								