
P.Q.L., Inc. 4 LAMPS

LumCAT: 4 LAMPS	Luminaire: 4000K
Report No: /	Voltage(V):
Test No:	Current(A):
LampCAT: LED 18WT8/40K/FR	Power (W): 71.400
Lamp flux(lm): 1843.3	PF:
Number of Lamps: 4	Ballast type:
Length(mm): 1200	Width(mm): 500
Phm Type: C	Height(mm): 150

Photometric Results

Lumens(lm): 7373.02
Efficiency(%): 100.00%
Lumens(lm)/Power(W): 103.26
Central intensity(cd): 2433.393
Maximum intensity(cd): 2433.393
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [H]Left=55.3 Right=53.4
[V]Left=58.2 Right=61.7
Field angle(10%Imax): [H]Left=82.8 Right=82.1
[V]Left=82.7 Right=88.0
Maximum s/h: C0_180=1.22 C90_270=1.22
Up flux rate of lamp(%): 1.60%
Down flux rate of lamp(%): 98.40%
Up flux rate of LUM(%): 1.60%
Down flux rate of LUM(%): 98.40%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 73.430%

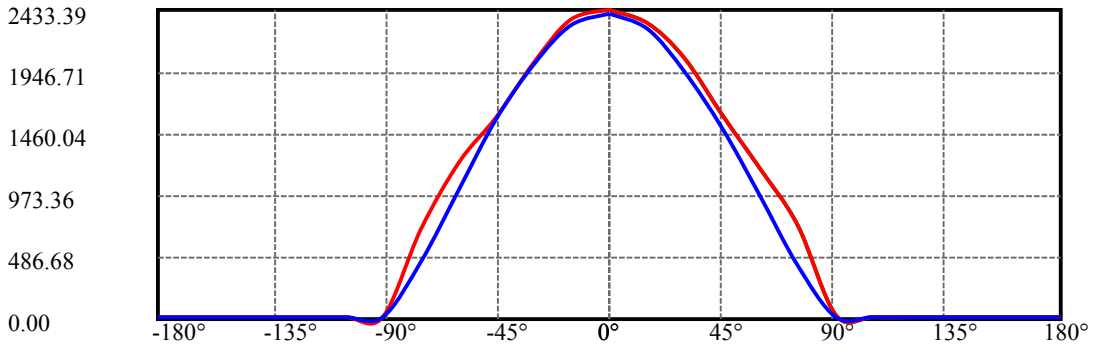
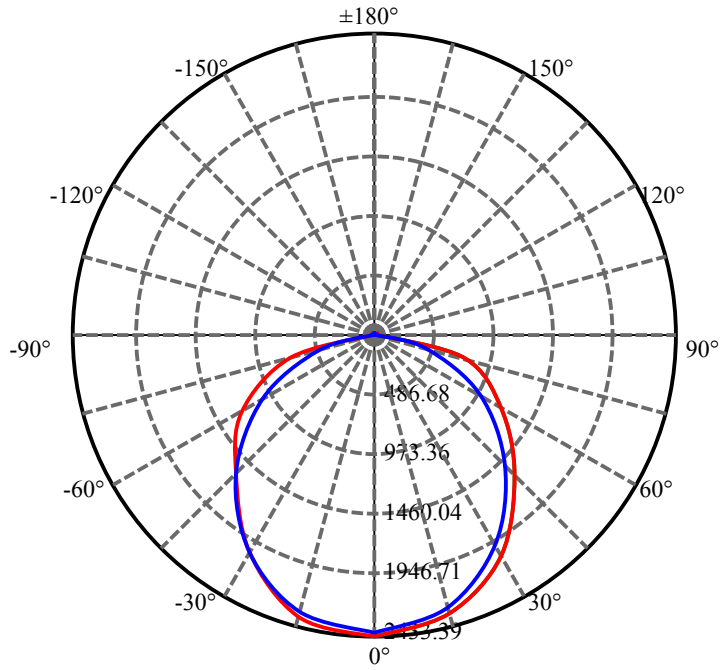
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2414.813	.000	.000	.000%	.000%
15.0	2323.308	507.203	507.203	6.879%	6.879%
30.0	2027.998	1365.642	1872.844	18.522%	25.401%
45.0	1581.315	1801.977	3674.821	24.440%	49.841%
60.0	1091.745	1739.213	5414.034	23.589%	73.430%
75.0	626.123	1301.615	6715.648	17.654%	91.084%
90.0	37.367	539.486	7255.135	7.317%	98.401%
105.0	14.962	42.549	7297.684	.577%	98.978%
120.0	15.038	22.731	7320.414	.308%	99.287%
135.0	16.023	20.209	7340.624	.274%	99.561%
150.0	17.538	16.755	7357.379	.227%	99.788%
165.0	19.053	11.484	7368.863	.156%	99.944%
180.0	19.735	4.152	7373.015	.056%	100.000%

ZONAL LUMEN SUMMARY

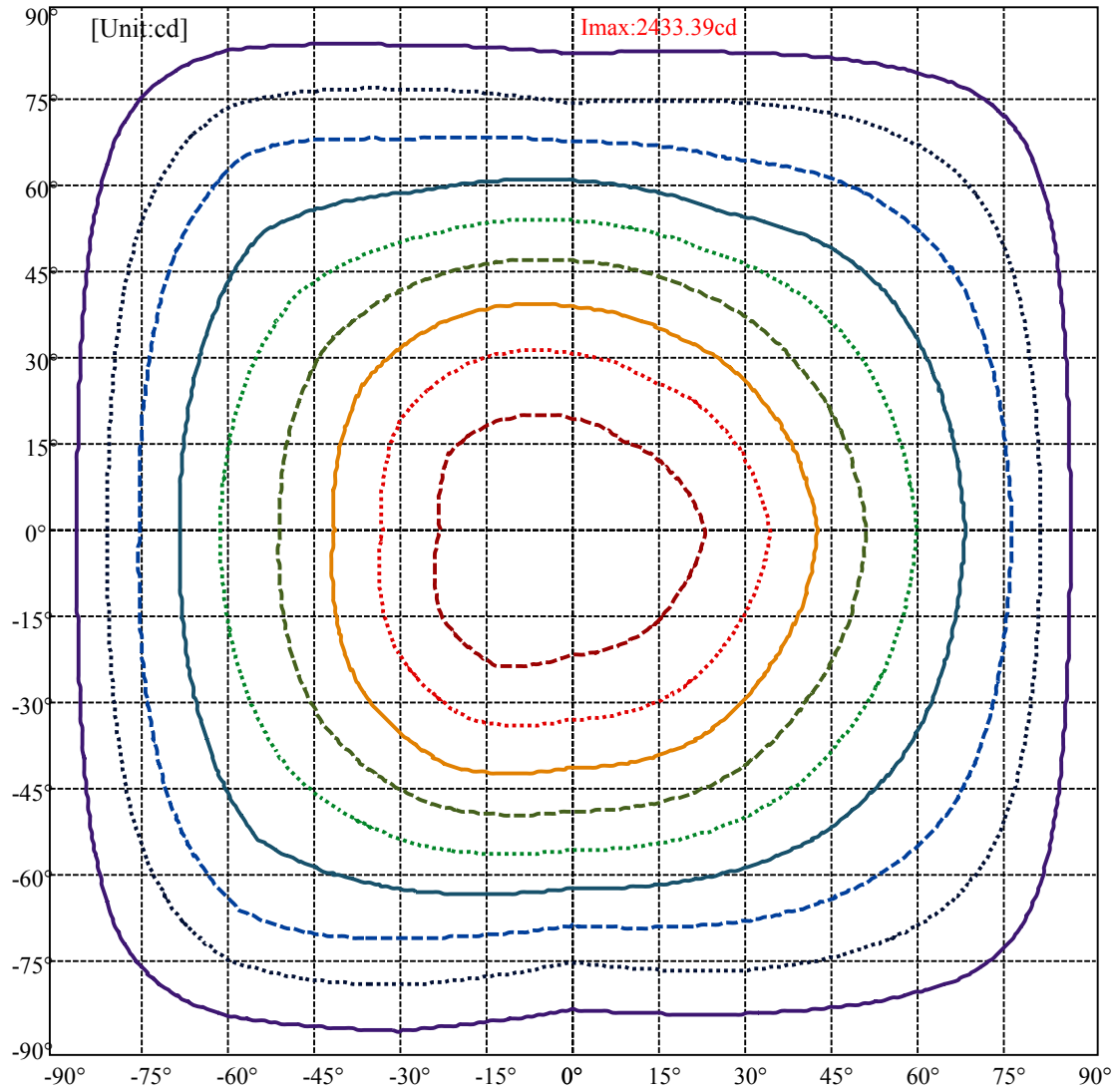
Zone	Lumens	%Lamp	%Fixt
0-30	1872.84	25.40%	25.40%
0-40	1872.84	25.40%	25.40%
0-60	5414.03	73.43%	73.43%
0-90	7255.14	98.40%	98.40%
90-120	65.28	0.89%	0.89%
90-130	65.28	0.89%	0.89%
90-150	102.24	1.39%	1.39%
90-180	113.73	1.54%	1.54%
0-180	7373.02	100.00%	100.00%

ZONAL LUMEN SUMMARY

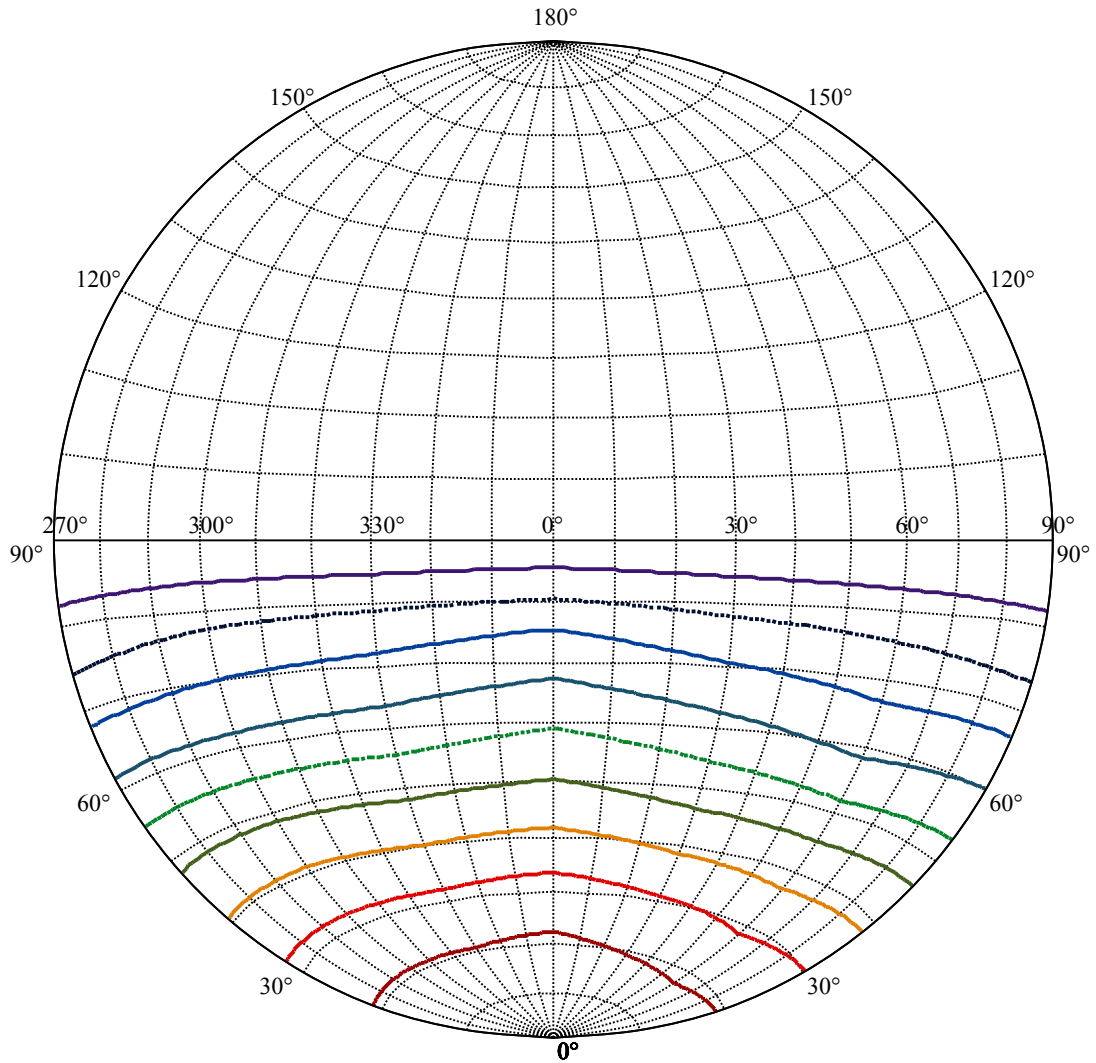
0-10	0.00
10-20	507.20
20-30	1365.64
30-40	0.00
40-50	1801.98
50-60	1739.21
60-70	0.00
70-80	1301.62
80-90	539.49
90-100	0.00
100-110	42.55
110-120	22.73
120-130	0.00
130-140	20.21
140-150	16.76
150-160	0.00
160-170	11.48
170-180	0.00



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



(10%Imax) 242.882	—
(20%Imax) 485.763	⋯
(30%Imax) 728.645	- - -
(40%Imax) 971.527	—
(50%Imax) 1214.41	⋯
(60%Imax) 1457.29	- - -
(70%Imax) 1700.17	—
(80%Imax) 1943.05	⋯
(90%Imax) 2185.94	- - -

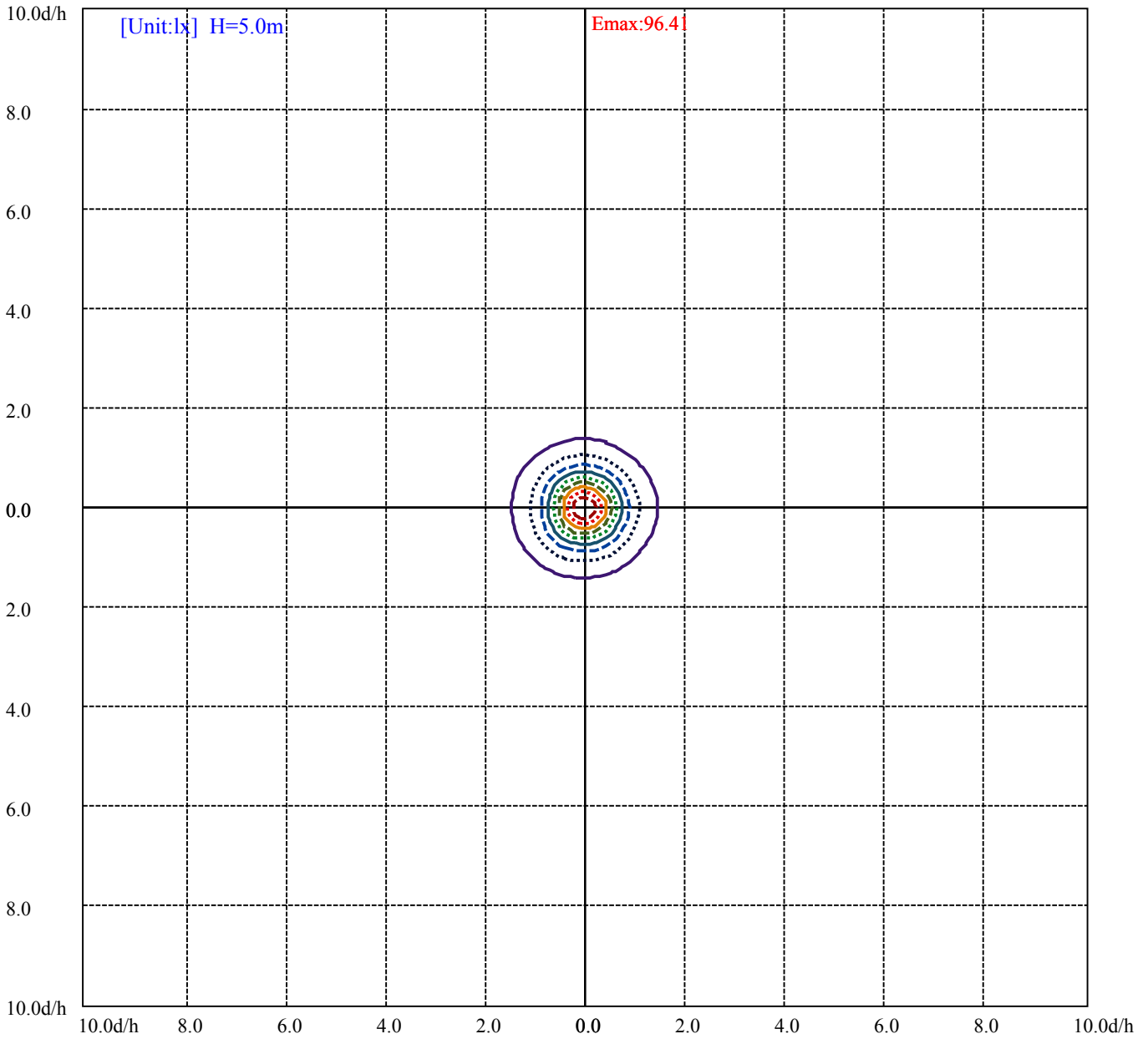


House

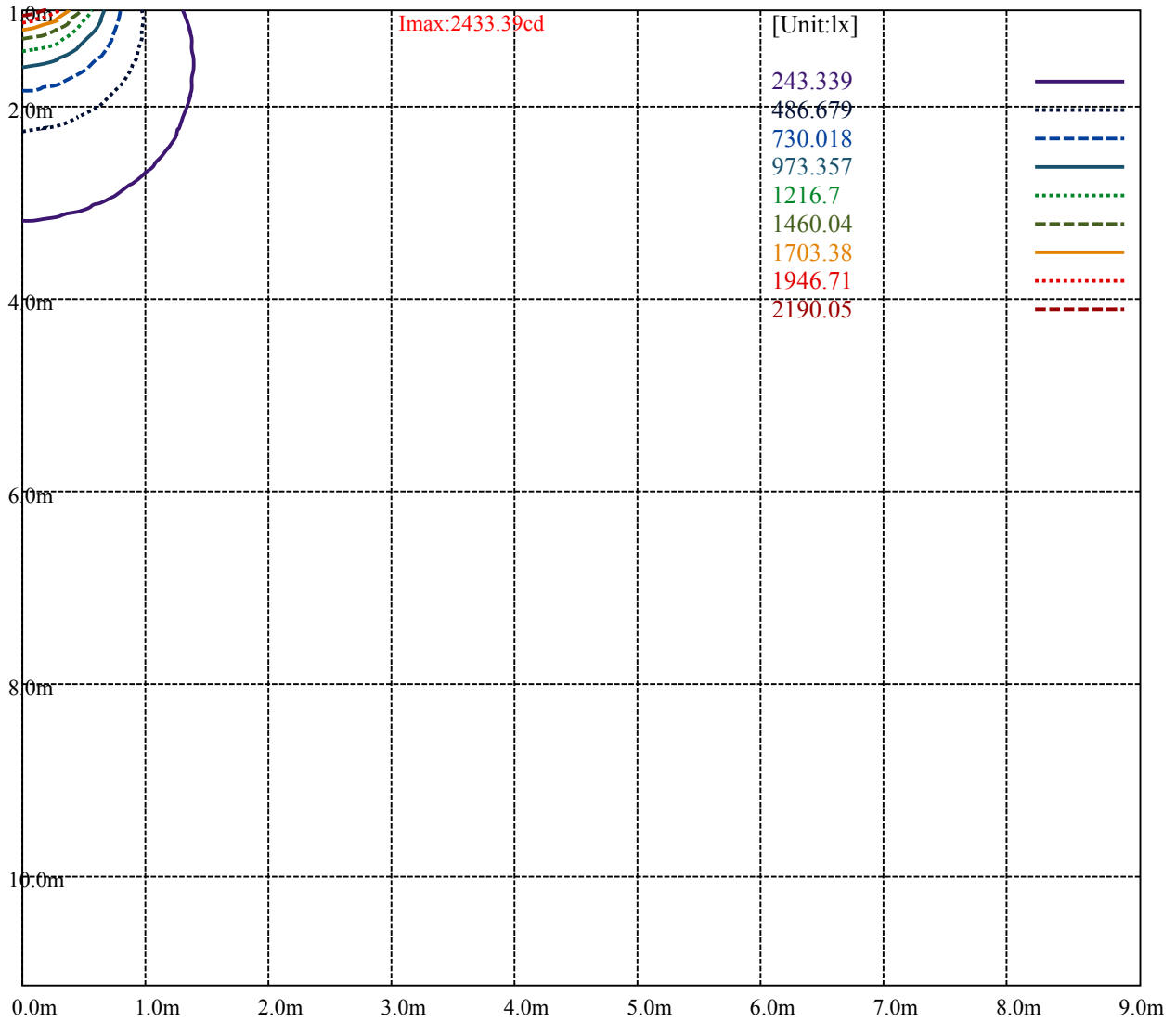
Road

I_{max}:2433.39cd

(10%I _{max}) 243.339	—
(20%I _{max}) 486.679	·····
(30%I _{max}) 730.018	- - - - -
(40%I _{max}) 973.357	—
(50%I _{max}) 1216.7	·····
(60%I _{max}) 1460.04	- - - - -
(70%I _{max}) 1703.38	—
(80%I _{max}) 1946.71	·····
(90%I _{max}) 2190.05	- - - - -



- (10%Emax) 9.64108
- (20%Emax) 19.28212
- (30%Emax) 28.9232
- (40%Emax) 38.56424
- (50%Emax) 48.2052
- (60%Emax) 57.8464
- (70%Emax) 67.48759
- (80%Emax) 77.1284
- (90%Emax) 86.7696



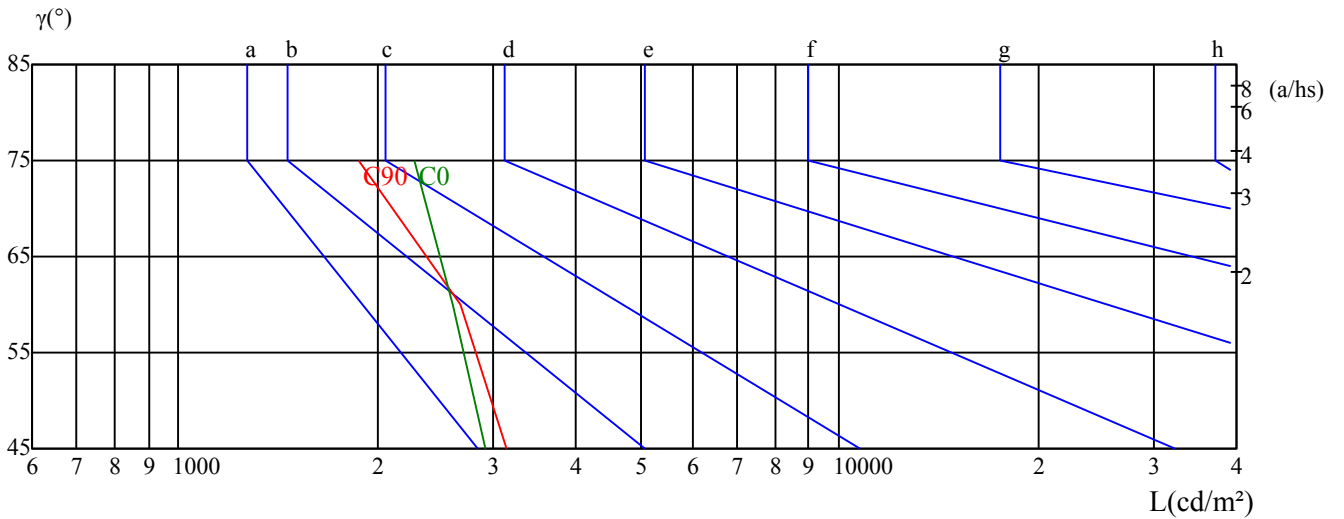
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	2918	0	0	2609	0	0	2271	0	0
C45	0	0	0	0	0	0	0	0	0
C90	3145	0	0	2673	0	0	1874	0	0

Glare Table

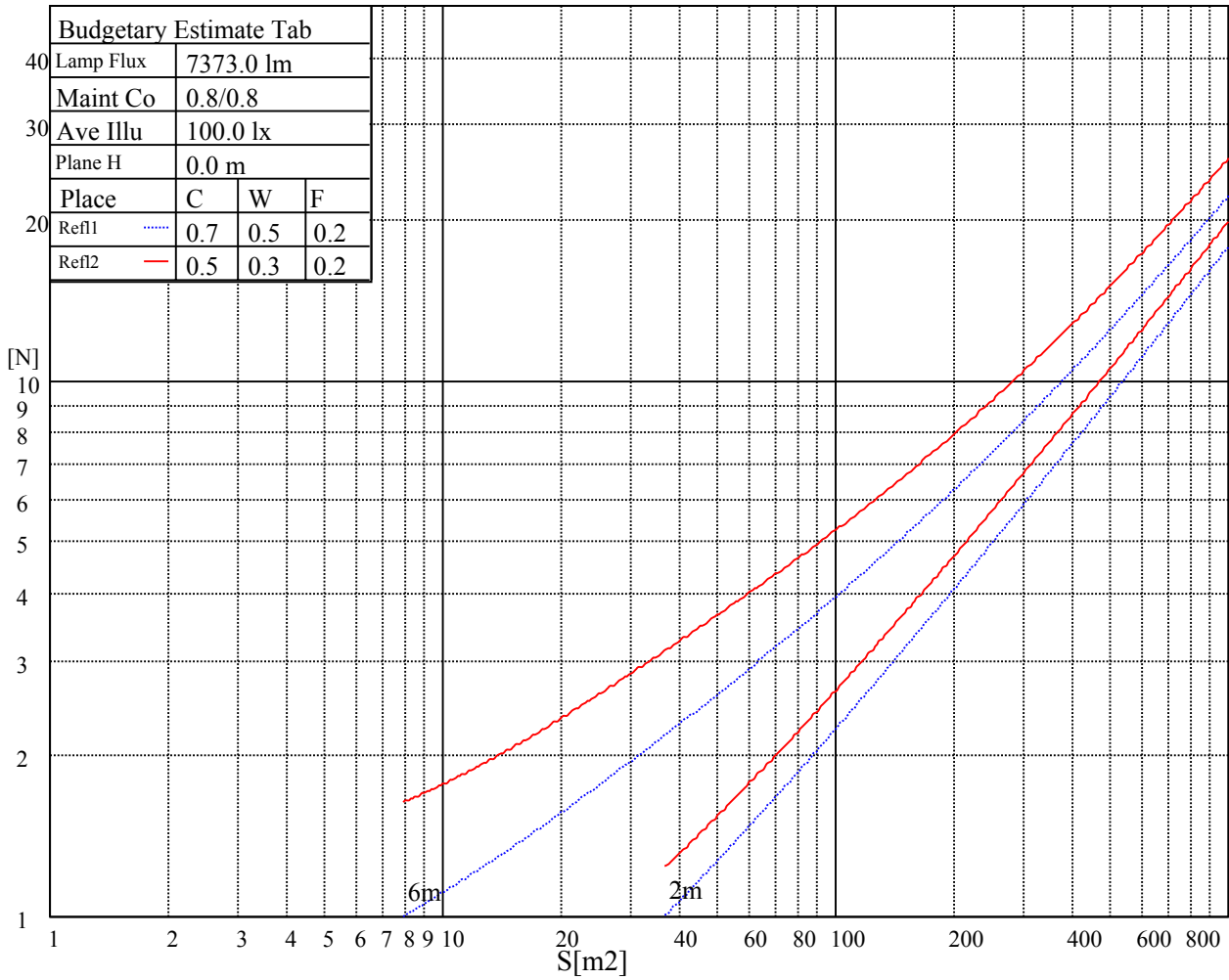
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

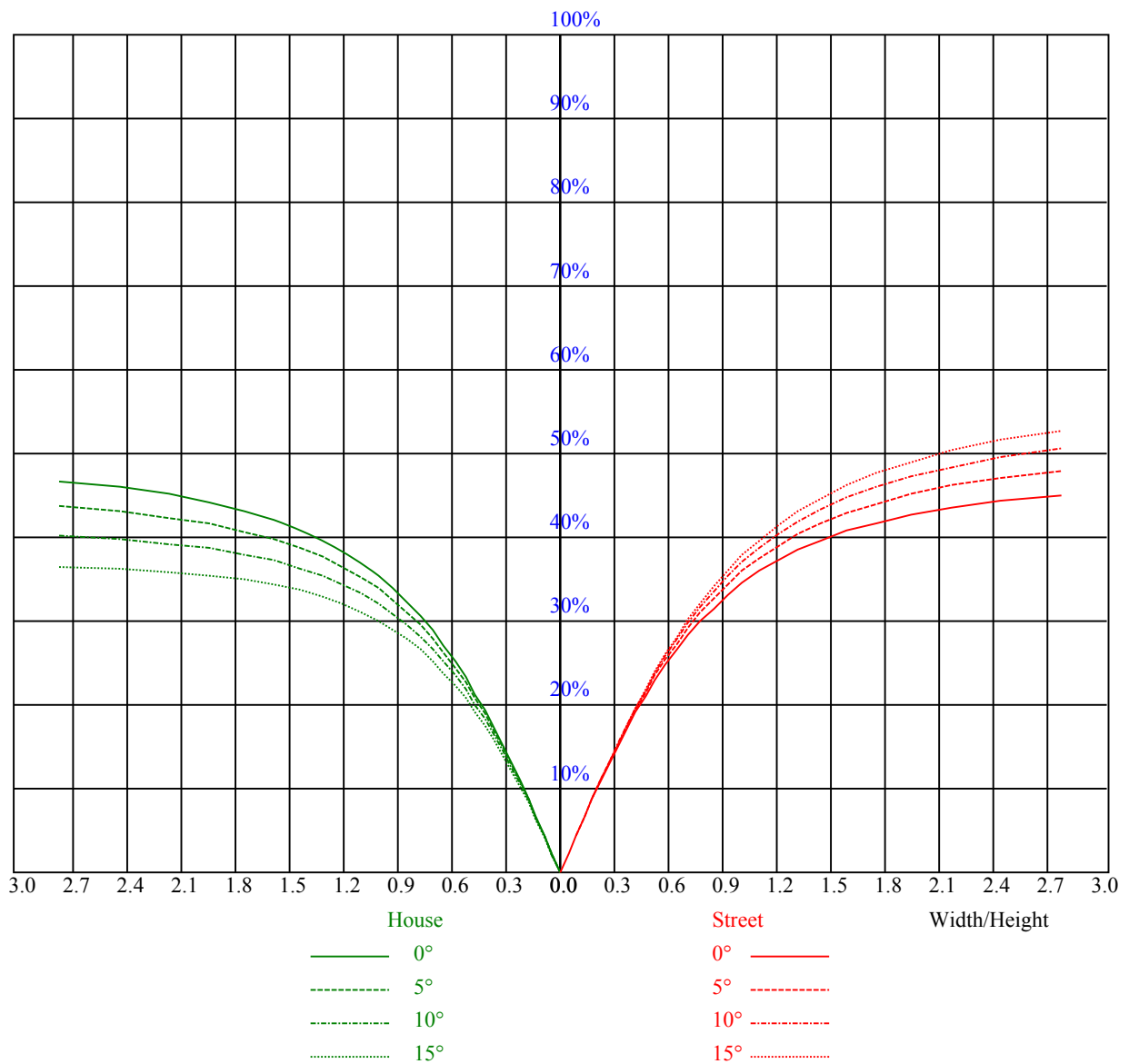


Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	8.6	10.2	8.9	10.5	10.8	7.9	9.6	8.3	9.8	10.1
	3H	10.5	12.0	10.9	12.3	12.6	9.5	11.0	9.9	11.3	11.6
	4H	11.2	12.5	11.6	12.9	13.3	10.0	11.3	10.4	11.6	12.0
	6H	12.0	13.3	12.4	13.7	14.1	10.5	11.8	10.9	12.2	12.6
	8H	12.3	13.6	12.7	13.9	14.3	10.7	12.0	11.2	12.4	12.8
	12H	12.2	13.3	12.7	13.7	14.2	10.7	11.7	11.1	12.2	12.6
4H	2H	8.9	10.2	9.3	10.6	11.0	8.4	9.7	8.8	10.1	10.5
	3H	11.0	12.1	11.5	12.5	13.0	10.1	11.2	10.6	11.6	12.1
	4H	12.1	13.2	12.6	13.6	14.1	11.0	12.1	11.5	12.5	12.9
	6H	13.0	14.1	13.5	14.5	15.0	11.7	12.7	12.2	13.2	13.6
	8H	13.1	13.9	13.7	14.4	14.9	11.8	12.5	12.3	13.0	13.6
	12H	13.4	14.1	13.9	14.6	15.2	12.0	12.7	12.5	13.2	13.8
8H	4H	12.3	13.0	12.8	13.5	14.1	11.3	12.0	11.8	12.5	13.1
	6H	13.3	14.0	13.8	14.6	15.1	12.1	12.9	12.7	13.4	13.9
	8H	13.7	14.5	14.2	15.0	15.5	12.5	13.2	13.0	13.7	14.3
	12H	14.0	14.8	14.6	15.3	15.8	12.8	13.5	13.3	14.0	14.6
12H	4H	12.3	13.1	12.9	13.6	14.1	11.4	12.1	11.9	12.6	13.2
	6H	13.4	14.1	13.9	14.6	15.2	12.3	13.0	12.8	13.5	14.1
	8H	13.8	14.6	14.4	15.1	15.6	12.7	13.4	13.2	13.9	14.5
Variation with the observer position at spacings:											
S = 1.0H		0.1/-0.8					0.2/-0.6				
S = 1.5H		0.6/-0.5					0.6/-0.6				
S = 2.0H		0.7/-0.5					0.7/-0.7				
Standard tables:		BKBF					BK4				
Uncorrected UGR		-1.7					-5.7				
According 1000lm											

五、灯具的概算曲线



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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.98
1	0.93	0.85	0.79	0.90	0.83	0.77	0.85	0.80	0.74	0.81	0.76	0.72	0.76	0.73	0.69	0.66
2	0.79	0.70	0.62	0.77	0.68	0.61	0.73	0.66	0.59	0.69	0.63	0.58	0.66	0.60	0.56	0.53
3	0.68	0.58	0.50	0.67	0.57	0.49	0.63	0.55	0.48	0.60	0.53	0.47	0.57	0.51	0.46	0.43
4	0.59	0.49	0.41	0.58	0.48	0.40	0.55	0.46	0.39	0.52	0.45	0.39	0.50	0.43	0.38	0.35
5	0.52	0.41	0.34	0.51	0.41	0.33	0.48	0.39	0.33	0.46	0.38	0.32	0.44	0.37	0.32	0.29
6	0.46	0.36	0.28	0.45	0.35	0.28	0.43	0.34	0.27	0.41	0.33	0.27	0.39	0.32	0.27	0.24
7	0.41	0.31	0.24	0.40	0.30	0.24	0.38	0.30	0.23	0.36	0.29	0.23	0.35	0.28	0.23	0.20
8	0.37	0.27	0.20	0.36	0.27	0.20	0.34	0.26	0.20	0.33	0.25	0.20	0.31	0.25	0.20	0.17
9	0.33	0.24	0.18	0.33	0.24	0.18	0.31	0.23	0.18	0.30	0.23	0.17	0.29	0.22	0.17	0.15
10	0.30	0.22	0.16	0.30	0.21	0.16	0.29	0.21	0.16	0.28	0.20	0.15	0.26	0.20	0.15	0.13



Intensity data(cd)

C/γ(°)	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0
0.0	2433.39	2323.96	2057.26	1609.54	1189.54	747.38	26.48	13.52	12.95
30.0	2416.80	2277.37	1971.81	1506.13	1052.72	598.75	18.75	16.82	17.39
60.0	2403.73	2243.28	1914.31	1467.15	918.40	504.20	17.84	16.48	17.27
90.0	2405.78	2277.83	1953.06	1501.13	975.68	426.70	20.80	16.48	16.93
120.0	2410.78	2314.87	2038.74	1575.90	1023.06	580.79	31.25	16.59	17.16
150.0	2418.39	2384.42	2080.10	1638.85	1186.24	785.00	59.32	16.93	17.16
180.0	2433.39	2364.76	2023.62	1581.01	1236.01	710.45	19.77	16.70	17.16
210.0	2416.80	2408.51	2121.69	1679.42	1217.95	824.31	75.11	13.64	12.95
240.0	2403.73	2362.37	2133.62	1694.53	1147.95	651.36	122.39	13.41	12.95
270.0	2405.78	2311.58	2016.58	1574.76	1030.90	459.54	20.68	12.73	12.61
300.0	2410.78	2307.71	2015.67	1590.10	1045.68	578.52	19.89	12.95	12.84
330.0	2418.39	2303.05	2009.53	1557.26	1076.81	646.47	16.14	13.30	13.07
360.0	2433.39	2323.96	2057.26	1609.54	1189.54	747.38	26.48	13.52	12.95
C/γ(°)	135.0	150.0	165.0	180.0					
0.0	13.86	15.68	17.61	19.20					
30.0	18.18	18.98	19.77	19.55					
60.0	18.18	19.20	20.11	20.11					
90.0	18.18	19.55	20.45	20.23					
120.0	18.07	19.32	20.11	19.89					
150.0	17.84	18.86	19.77	19.43					
180.0	17.95	18.64	19.55	19.20					
210.0	13.75	15.80	18.07	19.55					
240.0	13.86	16.02	18.41	20.11					
270.0	14.09	16.25	18.64	20.23					
300.0	14.09	16.14	18.30	19.89					
330.0	14.20	16.02	17.84	19.43					
360.0	13.86	15.68	17.61	19.20					