

---

P.Q.L., Inc. 4 LAMPS

---

LumCAT: 4 LAMPS	Luminaire: 4000K
Report No: /	Voltage(V):
Test No:	Current(A):
LampCAT: LED SMD 18WT8/40K/CL	Power (W): 71.600
Lamp flux(lm)	PF:
Number of Lamps: 4	Ballast type:
Length(mm): 1200	Width(mm): 500
Phm Type: C	Height(mm): 150

---

Photometric Results

---

Lumens(lm): 7593.08  
Lumens(lm)/Power(W): 106.05  
Central intensity(cd): 2807.013  
Maximum intensity(cd): 2811.635  
Angle of maximum intensity: C=150.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [H]Left=54.0 Right=53.1  
[V]Left=51.1 Right=54.0  
Field angle(10%Imax): [H]Left=79.9 Right=79.9  
[V]Left=81.7 Right=79.5  
Maximum s/h: C0\_180=1.13 C90\_270=1.25  
Up flux rate of LUM(%): 1.60%  
Down flux rate of LUM(%): 98.40%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 77.425%

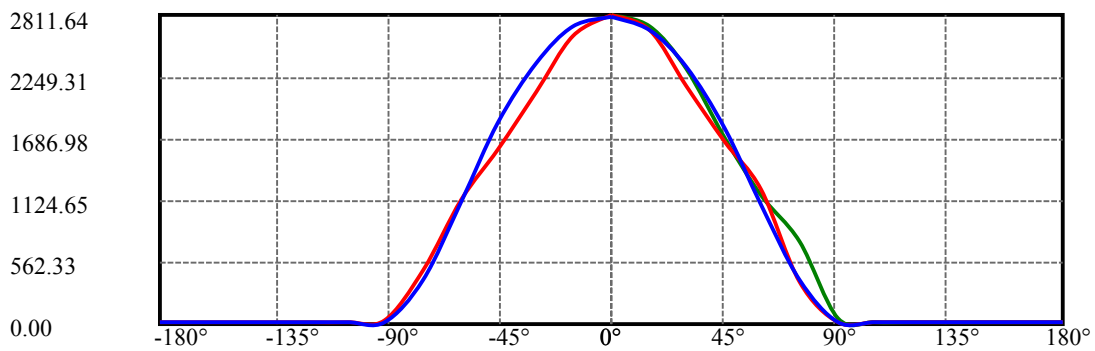
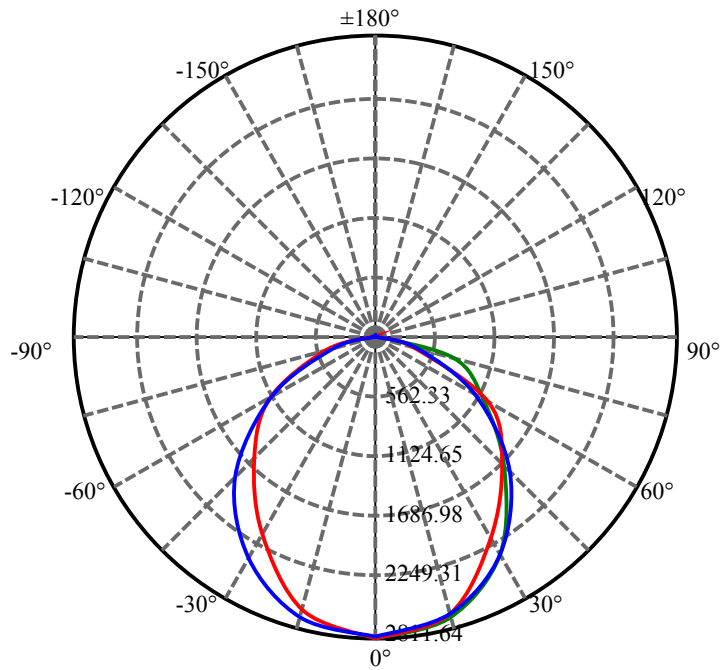
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2807.013	.000	.000	.000%	.000%
15.0	2665.834	585.853	585.853	7.716%	7.716%
30.0	2246.458	1541.705	2127.558	20.304%	28.020%
45.0	1674.511	1957.573	4085.131	25.781%	53.801%
60.0	1082.474	1793.818	5878.950	23.624%	77.425%
75.0	476.185	1180.984	7059.934	15.553%	92.978%
90.0	29.979	411.564	7471.498	5.420%	98.399%
105.0	15.832	37.249	7508.747	.491%	98.889%
120.0	16.545	24.532	7533.278	.323%	99.212%
135.0	18.153	22.576	7555.854	.297%	99.510%
150.0	20.291	19.193	7575.047	.253%	99.762%
165.0	21.947	13.256	7588.304	.175%	99.937%
180.0	22.708	4.780	7593.084	.063%	100.000%

## ZONAL LUMEN SUMMARY

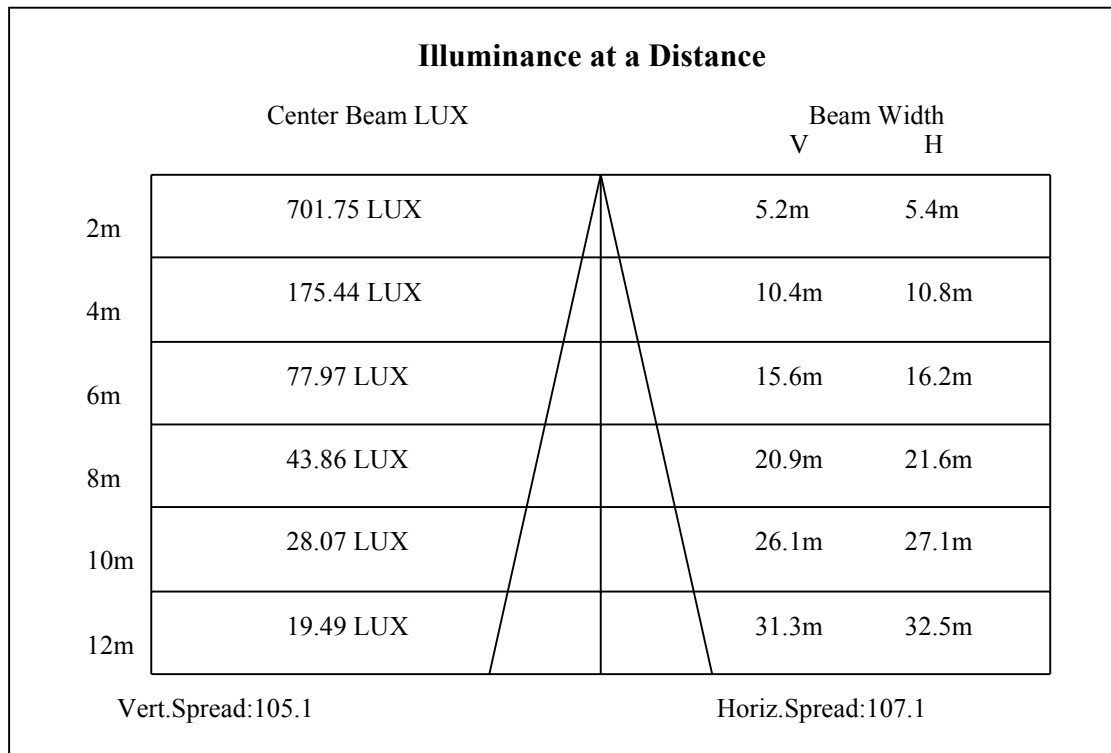
Zone	Lumens	%Fixt
0-30	2127.56	28.02%
0-40	2127.56	28.02%
0-60	5878.95	77.43%
0-90	7471.50	98.40%
90-120	61.78	0.81%
90-130	61.78	0.81%
90-150	103.55	1.36%
90-180	116.81	1.54%
0-180	7593.08	100.00%

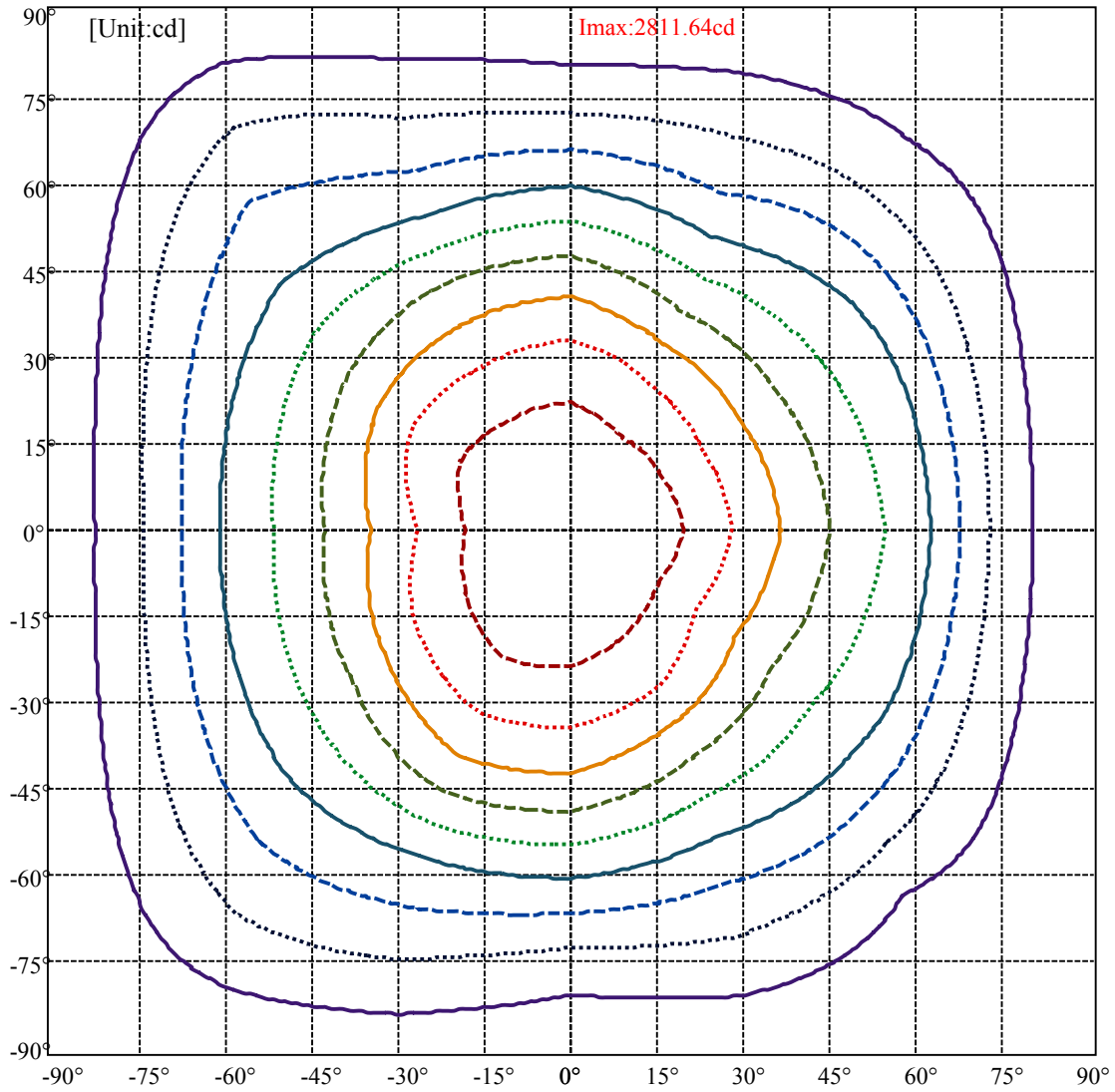
## ZONAL LUMEN SUMMARY

0-10	0.00
10-20	585.85
20-30	1541.71
30-40	0.00
40-50	1957.57
50-60	1793.82
60-70	0.00
70-80	1180.98
80-90	411.56
90-100	0.00
100-110	37.25
110-120	24.53
120-130	0.00
130-140	22.58
140-150	19.19
150-160	0.00
160-170	13.26
170-180	0.00

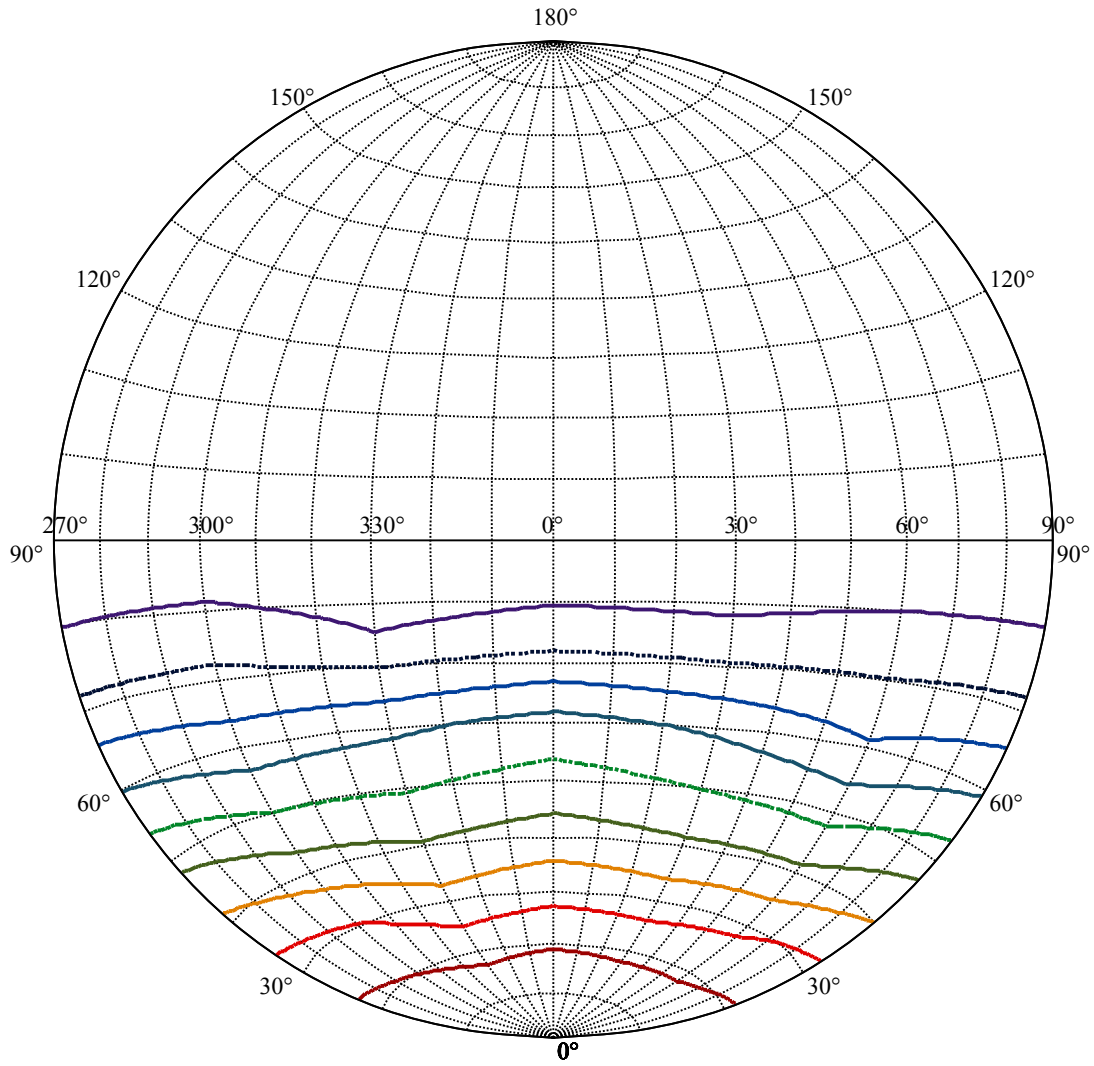


C150(Max): —  
C0/C180: —  
C90/C270: —





(10%Imax) 280.239	———
(20%Imax) 560.478	.....
(30%Imax) 840.717	- - - - -
(40%Imax) 1120.96	———
(50%Imax) 1401.2	.....
(60%Imax) 1681.43	- - - - -
(70%Imax) 1961.67	———
(80%Imax) 2241.91	.....
(90%Imax) 2522.15	- - - - -

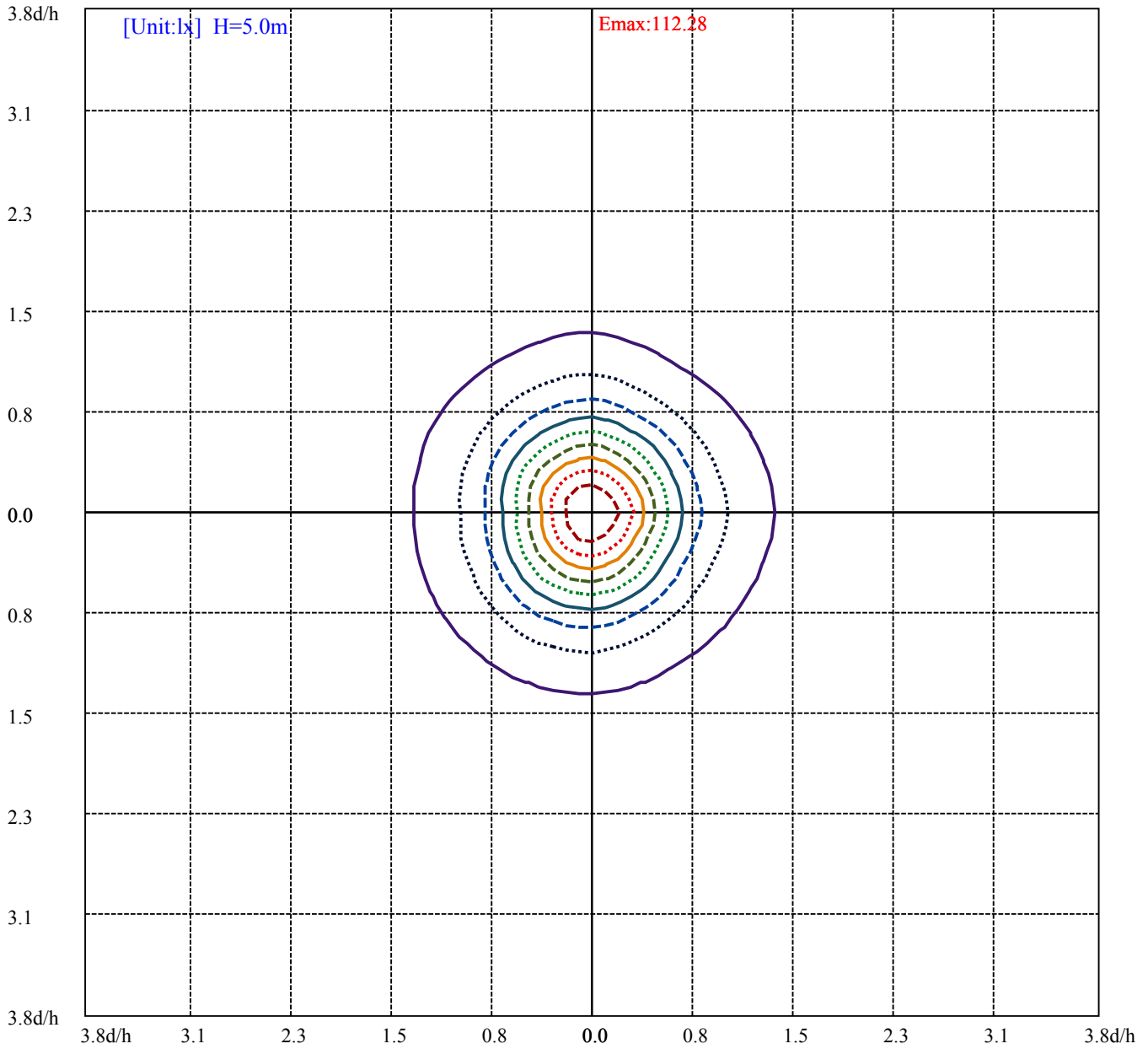


House

Road

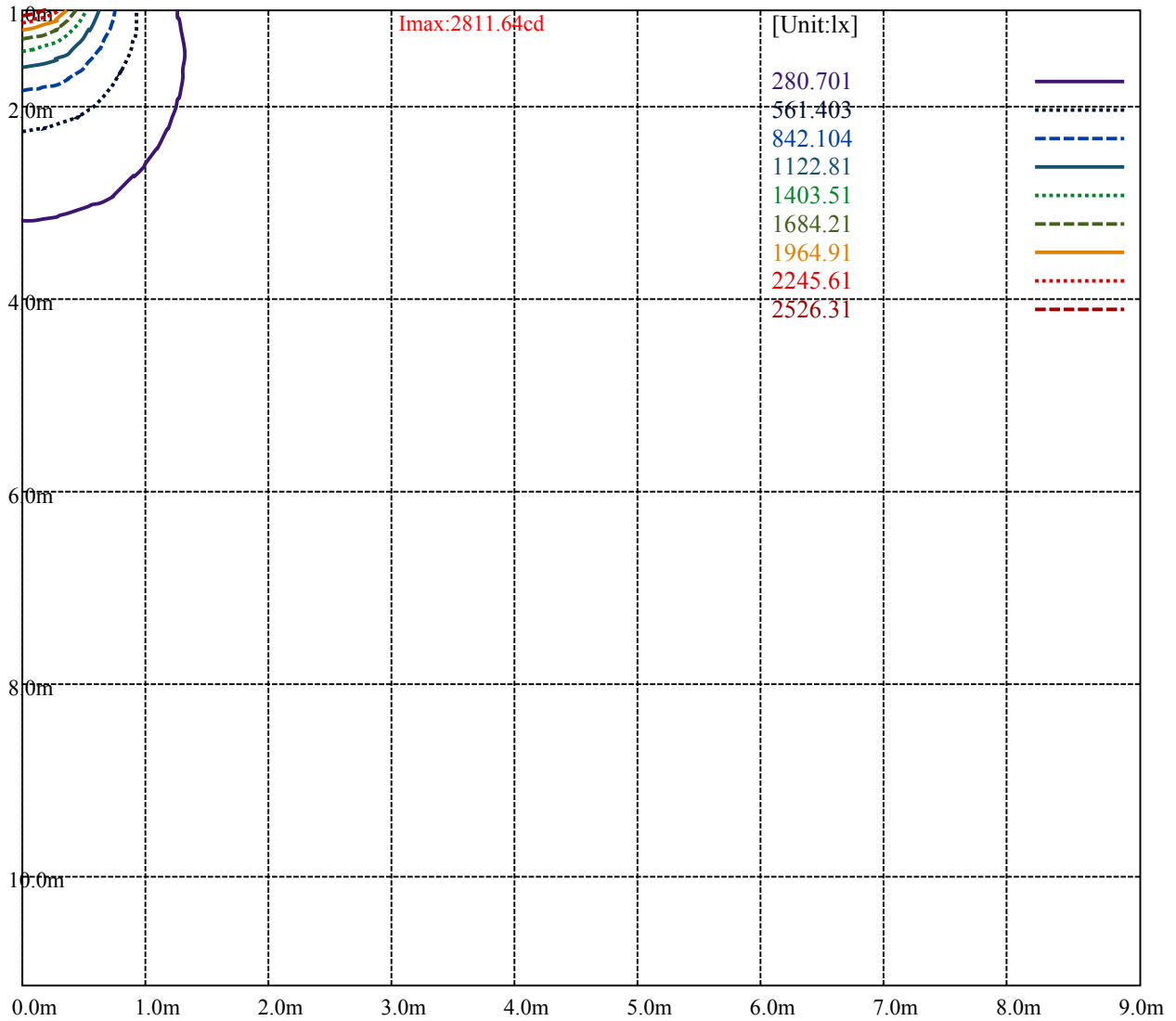
I<sub>max</sub>:2811.64cd

(10%I <sub>max</sub> ) 281.164	—
(20%I <sub>max</sub> ) 562.327	·····
(30%I <sub>max</sub> ) 843.49	- - - - -
(40%I <sub>max</sub> ) 1124.65	—
(50%I <sub>max</sub> ) 1405.82	·····
(60%I <sub>max</sub> ) 1686.98	- - - - -
(70%I <sub>max</sub> ) 1968.14	—
(80%I <sub>max</sub> ) 2249.31	·····
(90%I <sub>max</sub> ) 2530.47	- - - - -



- (10%Emax) 11.22804 ————
- (20%Emax) 22.45608 ······
- (30%Emax) 33.68412 - - - -
- (40%Emax) 44.912 ————
- (50%Emax) 56.1404 ······
- (60%Emax) 67.3684 - - - -
- (70%Emax) 78.59641 ————
- (80%Emax) 89.8244 ······
- (90%Emax) 101.0524 - - - -





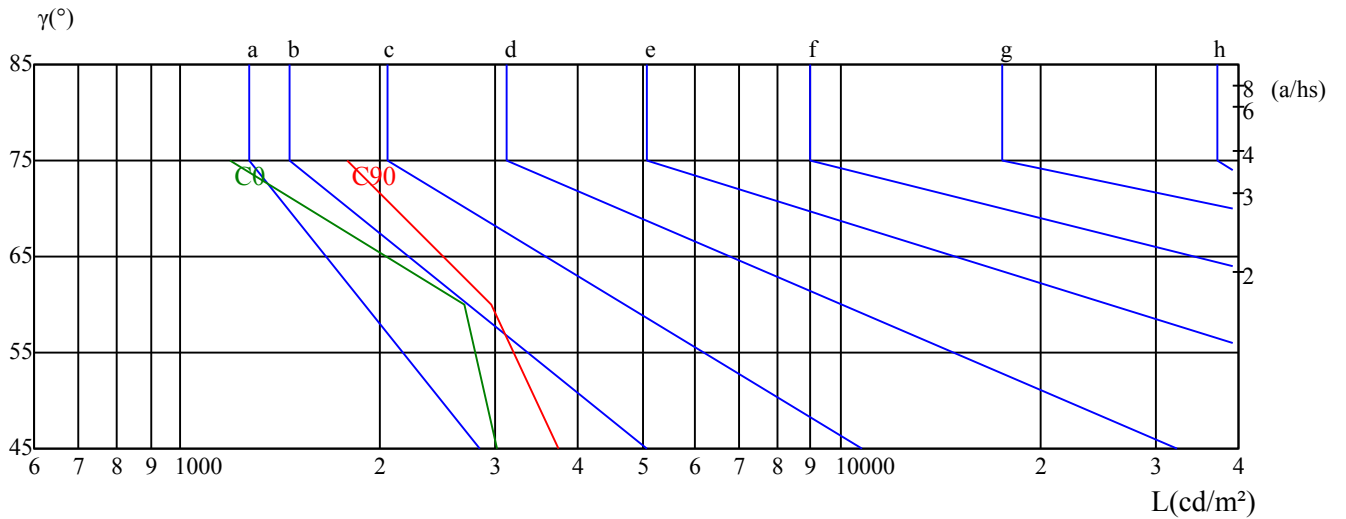
Luminance Table

$\gamma$	45	50	55	60	65	70	75	80	85
C0	3019	0	0	2684	0	0	1189	0	0
C45	0	0	0	0	0	0	0	0	0
C90	3724	0	0	2958	0	0	1789	0	0

Glare Table

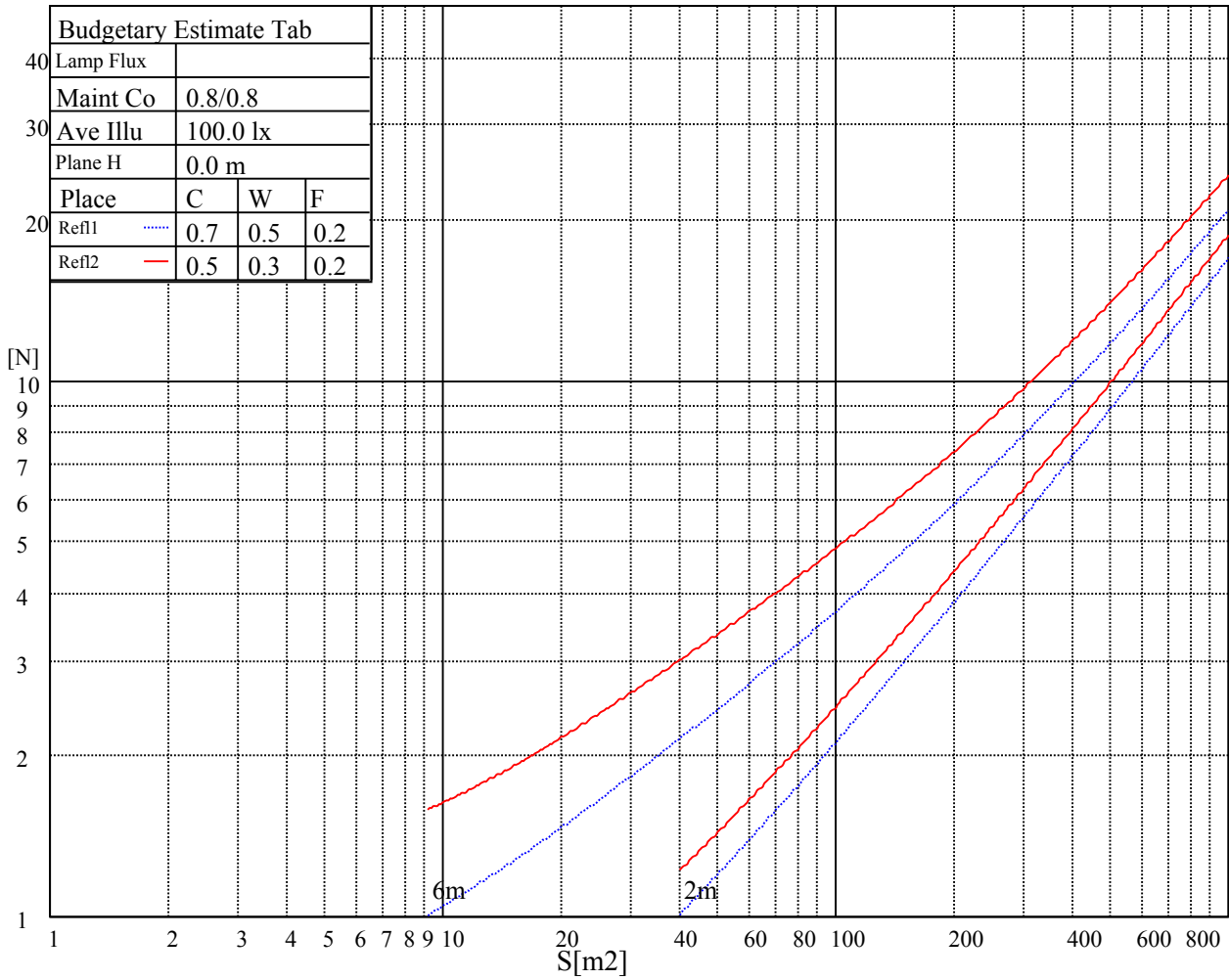
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

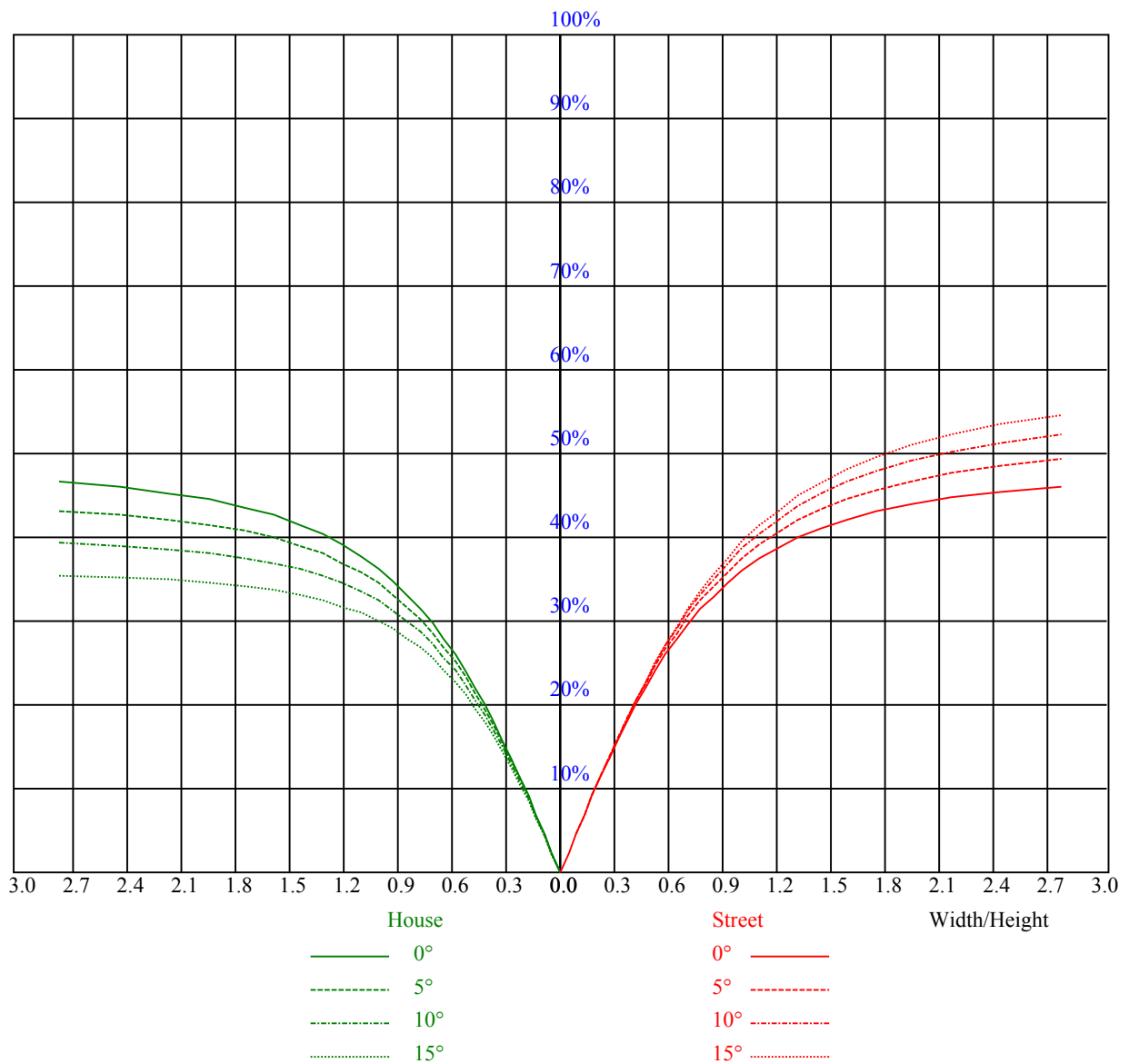


Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	8.5	10.1	8.8	10.4	10.6	8.1	9.7	8.4	10.0	10.3
	3H	9.8	11.2	10.2	11.6	11.9	9.5	11.0	9.9	11.3	11.6
	4H	10.0	11.2	10.4	11.6	12.0	9.9	11.1	10.3	11.5	11.9
	6H	10.3	11.6	10.7	11.9	12.3	10.4	11.6	10.8	12.0	12.4
	8H	10.4	11.7	10.9	12.1	12.4	10.6	11.8	11.0	12.2	12.6
	12H	10.3	11.3	10.8	11.7	12.2	10.5	11.5	10.9	11.9	12.4
4H	2H	8.7	10.0	9.1	10.3	10.7	8.4	9.7	8.8	10.0	10.4
	3H	10.2	11.2	10.7	11.6	12.1	10.0	11.0	10.5	11.4	11.9
	4H	10.7	11.7	11.2	12.1	12.6	10.7	11.7	11.2	12.1	12.6
	6H	11.1	12.1	11.6	12.5	13.0	11.3	12.3	11.8	12.7	13.2
	8H	11.1	11.8	11.6	12.3	12.8	11.3	12.0	11.9	12.5	13.1
	12H	11.2	11.9	11.7	12.4	12.9	11.5	12.2	12.1	12.7	13.3
8H	4H	10.8	11.5	11.3	12.0	12.5	10.8	11.5	11.3	12.0	12.5
	6H	11.3	12.0	11.8	12.5	13.0	11.5	12.2	12.0	12.7	13.3
	8H	11.5	12.2	12.0	12.7	13.2	11.8	12.5	12.4	13.0	13.6
	12H	11.7	12.4	12.2	12.9	13.4	12.1	12.8	12.6	13.3	13.8
12H	4H	10.8	11.5	11.4	12.0	12.6	10.8	11.5	11.4	12.0	12.6
	6H	11.4	12.0	11.9	12.5	13.1	11.6	12.3	12.1	12.8	13.3
	8H	11.6	12.3	12.1	12.8	13.3	11.9	12.6	12.5	13.1	13.7
Variation with the observer position at spacings:											
S = 1.0H	0.4/-0.4					0.3/-0.5					
S = 1.5H	0.7/-0.6					0.6/-0.6					
S = 2.0H	1.1/-0.9					1.0/-0.8					
Standard tables:	BK3					BK3					
Uncorrected UGR	-6.5					-6.5					
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 RHOF=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	0.95	0.88	0.82	0.92	0.86	0.81	0.87	0.82	0.78	0.83	0.79	0.75	0.79	0.75	0.72	0.70
2	0.81	0.73	0.65	0.79	0.71	0.64	0.75	0.68	0.62	0.71	0.66	0.61	0.68	0.63	0.59	0.56
3	0.70	0.61	0.53	0.69	0.59	0.52	0.65	0.57	0.51	0.62	0.55	0.50	0.59	0.53	0.49	0.46
4	0.61	0.51	0.43	0.60	0.50	0.43	0.57	0.48	0.42	0.54	0.47	0.41	0.52	0.45	0.40	0.38
5	0.54	0.43	0.36	0.52	0.43	0.35	0.50	0.41	0.35	0.48	0.40	0.34	0.46	0.39	0.34	0.31
6	0.47	0.37	0.30	0.46	0.37	0.30	0.44	0.36	0.29	0.42	0.35	0.29	0.40	0.34	0.28	0.26
7	0.42	0.32	0.25	0.41	0.32	0.25	0.39	0.31	0.25	0.38	0.30	0.25	0.36	0.29	0.24	0.22
8	0.38	0.29	0.22	0.37	0.28	0.22	0.36	0.27	0.22	0.34	0.27	0.21	0.33	0.26	0.21	0.19
9	0.34	0.25	0.19	0.34	0.25	0.19	0.32	0.24	0.19	0.31	0.24	0.19	0.30	0.23	0.18	0.16
10	0.31	0.23	0.17	0.31	0.23	0.17	0.30	0.22	0.17	0.29	0.22	0.17	0.28	0.21	0.16	0.14



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	2807.01	2664.87	2162.17	1665.26	1223.81	391.53	16.41	14.68	14.91
30.0	2810.48	2626.74	2115.95	1559.86	1079.82	347.84	17.57	16.99	18.14
60.0	2803.55	2612.87	2191.30	1521.03	882.55	414.06	17.57	17.10	18.26
90.0	2802.39	2678.74	2338.99	1777.35	1079.35	407.36	21.61	16.99	17.91
120.0	2807.01	2696.07	2299.58	1757.13	1012.91	497.84	35.02	16.99	18.03
150.0	2811.64	2706.47	2328.58	1696.46	1163.71	751.16	54.43	16.99	17.68
180.0	2807.01	2627.89	2115.60	1584.71	1132.74	485.36	29.01	16.76	17.80
210.0	2810.48	2681.05	2280.86	1660.29	1143.49	654.55	42.07	14.79	15.02
240.0	2803.55	2734.21	2404.86	1873.27	1111.71	592.84	75.46	14.79	15.14
270.0	2802.39	2699.54	2381.74	1841.14	1111.02	408.51	17.91	14.45	15.14
300.0	2807.01	2651.00	2269.65	1619.03	978.81	472.42	16.64	14.79	15.14
330.0	2811.64	2610.56	2068.22	1538.60	1069.76	290.76	16.06	14.68	15.37
360.0	2807.01	2664.87	2162.17	1665.26	1223.81	391.53	16.41	14.68	14.91
C/γ(°)	135.0	150.0	165.0	180.0					
0.0	16.64	18.95	21.50	22.42					
30.0	19.99	21.73	22.65	22.54					
60.0	19.76	21.84	22.42	22.54					
90.0	19.53	21.73	22.54	23.34					
120.0	19.42	21.50	22.77	22.77					
150.0	19.30	21.26	22.65	22.65					
180.0	19.76	21.15	22.54	22.42					
210.0	16.53	18.95	21.38	22.54					
240.0	16.41	18.95	21.03	22.54					
270.0	16.53	19.07	21.15	23.34					
300.0	16.76	18.95	21.26	22.77					
330.0	17.22	19.42	21.50	22.65					
360.0	16.64	18.95	21.50	22.42					