
P.Q.L., Inc. 4 LAMPS

LumCAT: 4 LAMPS	Luminaire: 4000K
Report No: /	Voltage(V): 276.600
Test No:	Current(A): 0.239
LampCAT: LEDSM4'15WT8/40K/FR/V4	Power (W): 61.000
Lamp flux(lm)	PF: 0.923
Number of Lamps: 4	Ballast type:
Length(mm): 1200	Width(mm): 500
Phm Type: C	Height(mm): 150

Photometric Results

Lumens(lm): 7420.57
Lumens(lm)/Power(W): 121.65
Central intensity(cd): 2562.021
Maximum intensity(cd): 2564.332
Angle of maximum intensity: C=30.0 γ =0.0
Beam Angle(50%Imax): [H]Left=53.0 Right=55.3
 [V]Left=50.7 Right=62.7
Field angle(10%Imax): [H]Left=80.3 Right=83.3
 [V]Left=84.9 Right=85.5
Maximum s/h: C0_180=1.11 C90_270=1.25
Up flux rate of LUM(%): 1.84%
Down flux rate of LUM(%): 98.16%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 73.251%

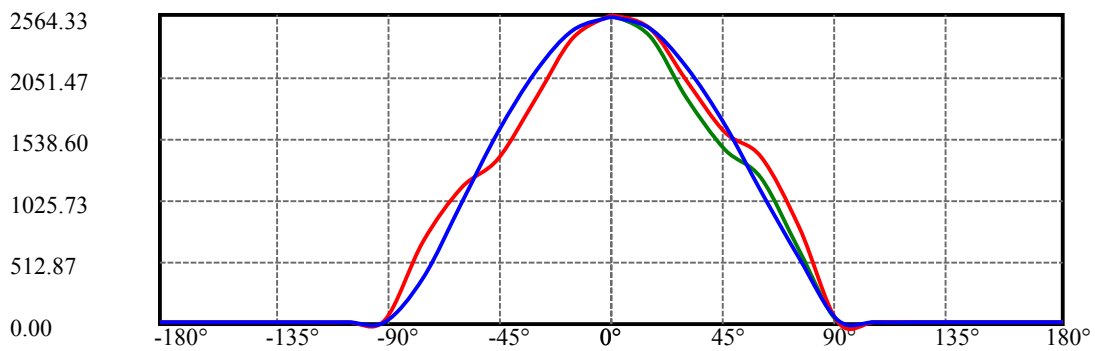
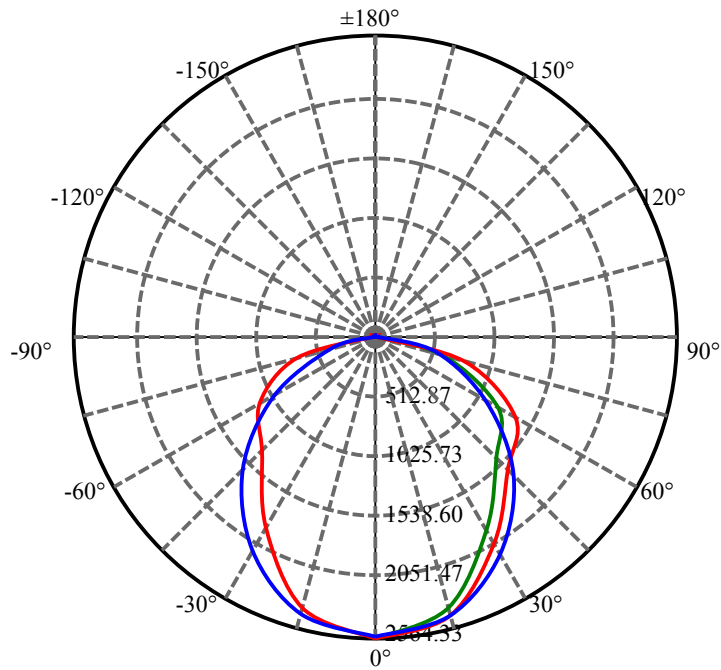
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2560.095	.000	.000	.000%	.000%
15.0	2425.541	533.698	533.698	7.192%	7.192%
30.0	2042.914	1402.409	1936.107	18.899%	26.091%
45.0	1536.124	1786.862	3722.969	24.080%	50.171%
60.0	1096.187	1712.701	5435.670	23.080%	73.251%
75.0	622.256	1302.051	6737.721	17.547%	90.798%
90.0	49.480	546.191	7283.912	7.361%	98.158%
105.0	16.111	53.333	7337.245	.719%	98.877%
120.0	16.391	24.626	7361.871	.332%	99.209%
135.0	17.874	22.294	7384.165	.300%	99.509%
150.0	19.771	18.794	7402.959	.253%	99.763%
165.0	21.495	12.951	7415.911	.175%	99.937%
180.0	22.034	4.660	7420.570	.063%	100.000%

ZONAL LUMEN SUMMARY

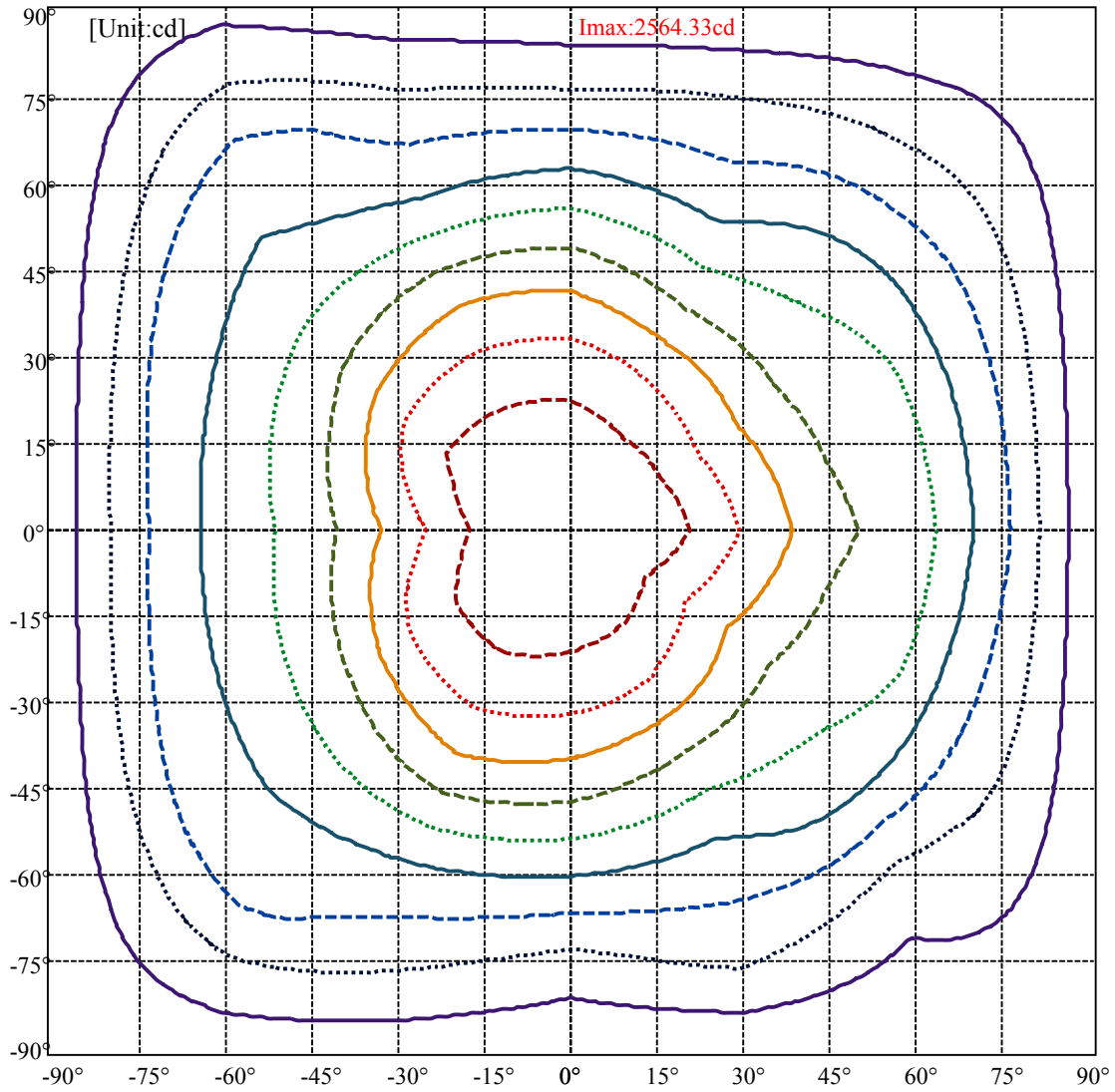
Zone	Lumens	%Fixt
0-30	1936.11	26.09%
0-40	1936.11	26.09%
0-60	5435.67	73.25%
0-90	7283.91	98.16%
90-120	77.96	1.05%
90-130	77.96	1.05%
90-150	119.05	1.60%
90-180	132.00	1.78%
0-180	7420.57	100.00%

ZONAL LUMEN SUMMARY

0-10	0.00
10-20	533.70
20-30	1402.41
30-40	0.00
40-50	1786.86
50-60	1712.70
60-70	0.00
70-80	1302.05
80-90	546.19
90-100	0.00
100-110	53.33
110-120	24.63
120-130	0.00
130-140	22.29
140-150	18.79
150-160	0.00
160-170	12.95
170-180	0.00



C30(Max): ———
C0/C180: ———
C90/C270: ———

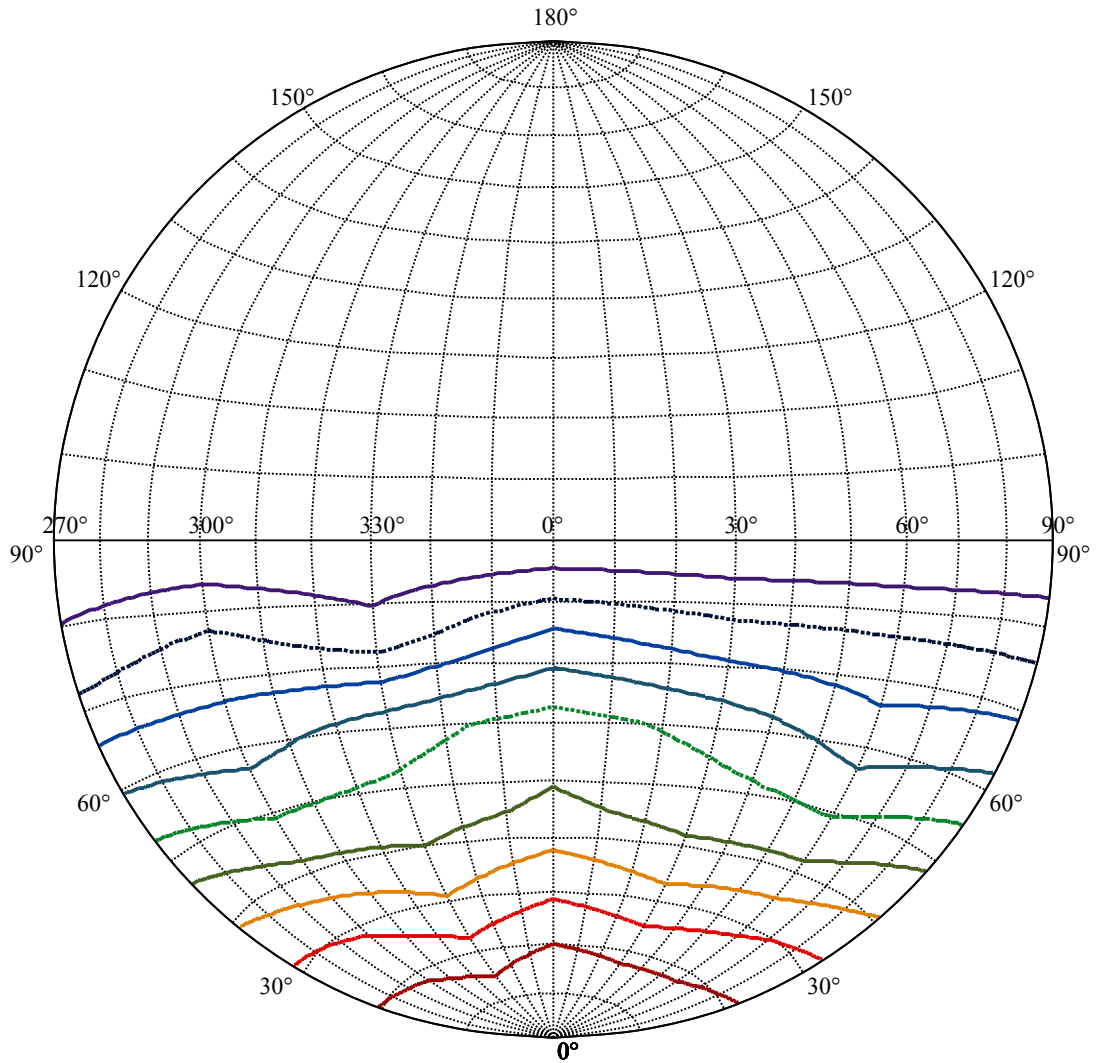


(10%Imax) 255.509	———
(20%Imax) 511.017
(30%Imax) 766.526	- - - - -
(40%Imax) 1022.03	—————
(50%Imax) 1277.54
(60%Imax) 1533.05	- - - - -
(70%Imax) 1788.56	—————
(80%Imax) 2044.07
(90%Imax) 2299.58	- - - - -

Equipment: 1800
Temperature(°C): 25.0

Date: 2016-1-18
Humidity(%): 60.0%

Operator: zhy
Distance(m): 10.75

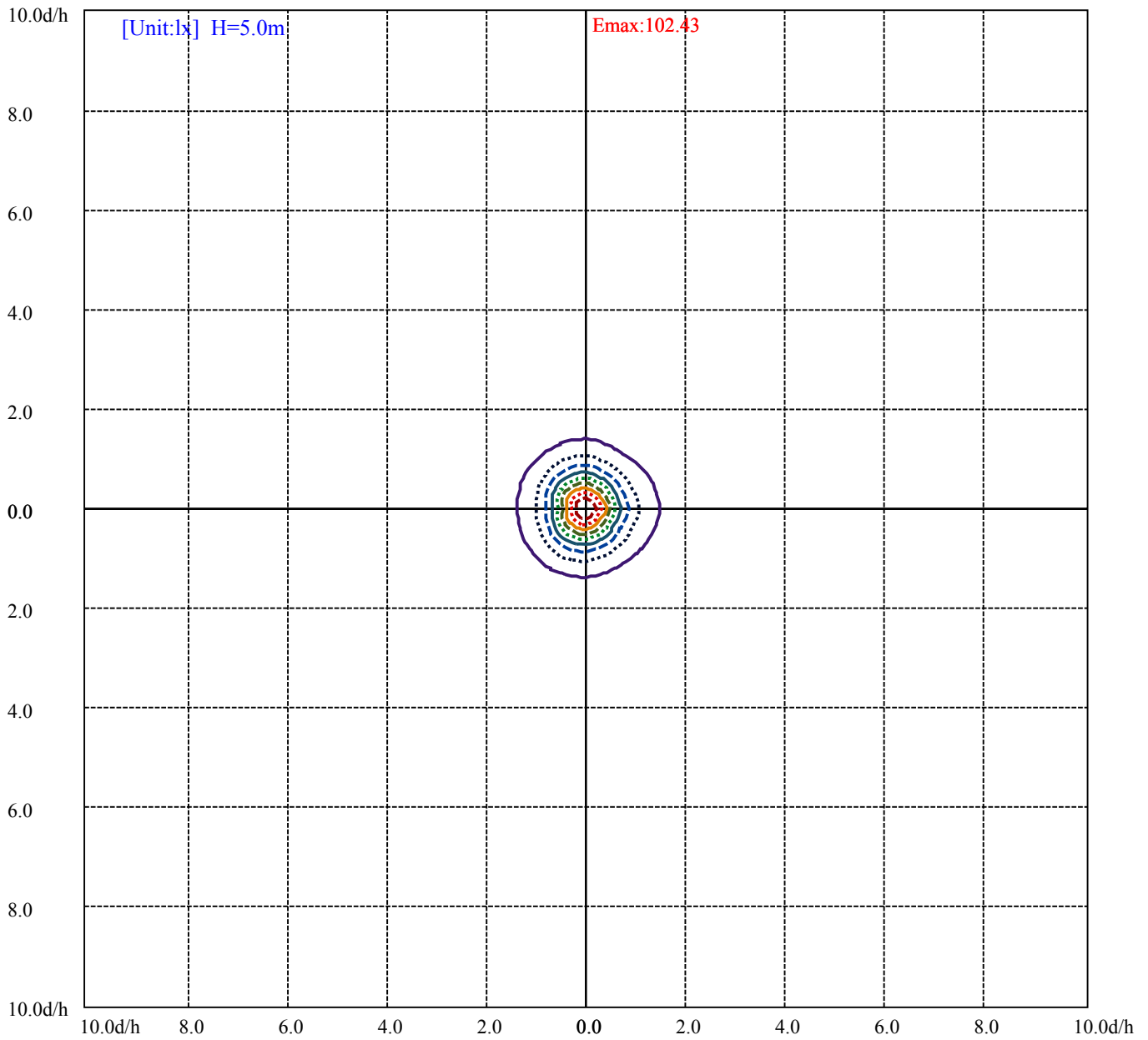


House

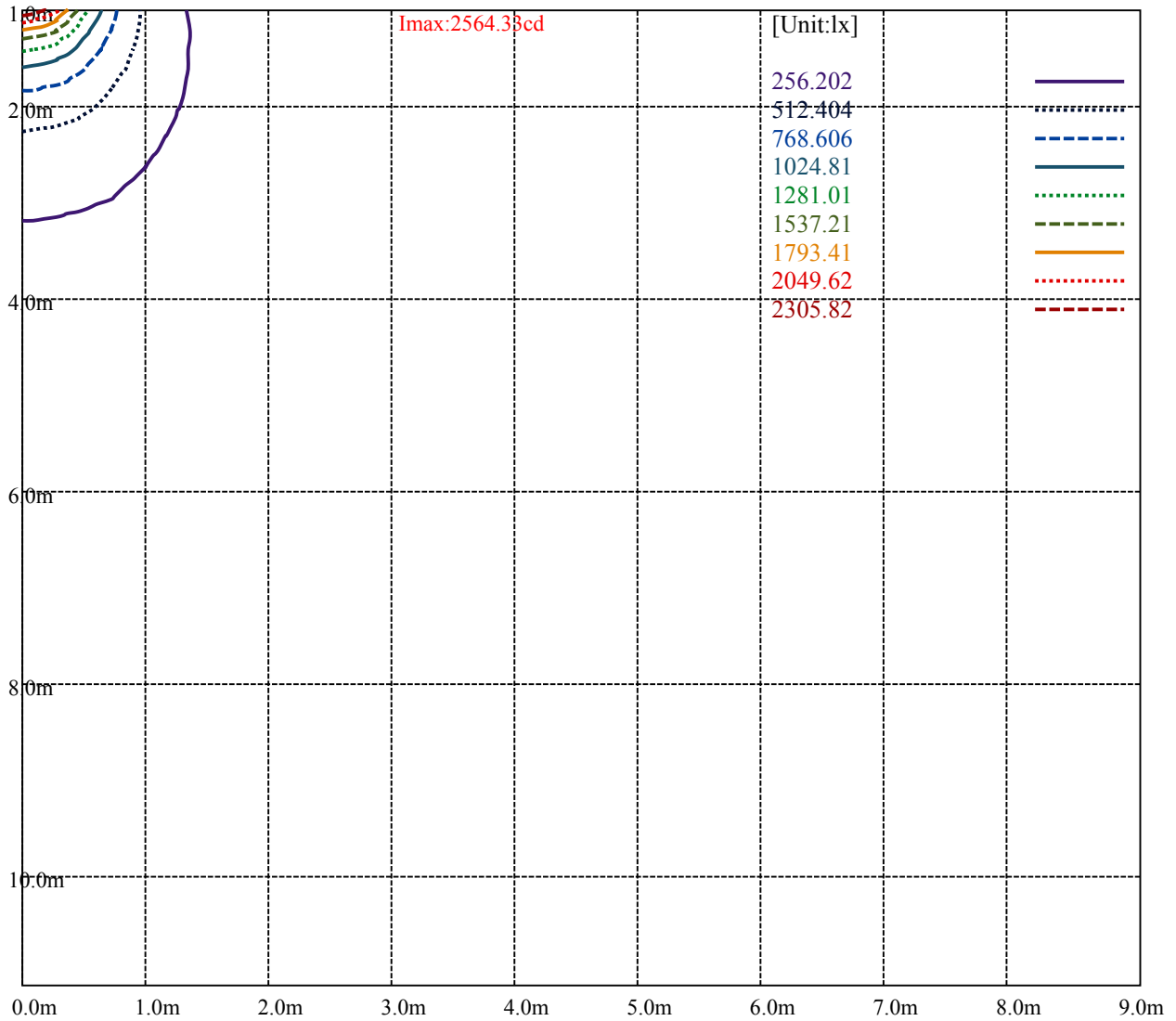
Road

Imax:2564.33cd

(10%Imax) 256.433	—
(20%Imax) 512.866	⋯
(30%Imax) 769.3	- - -
(40%Imax) 1025.73	—
(50%Imax) 1282.17	⋯
(60%Imax) 1538.6	- - -
(70%Imax) 1795.03	—
(80%Imax) 2051.47	⋯
(90%Imax) 2307.9	- - -



(10%Emax) 10.24344	———
(20%Emax) 20.48688
(30%Emax) 30.73036	- - - - -
(40%Emax) 40.9736	—————
(50%Emax) 51.2172
(60%Emax) 61.4608	- - - - -
(70%Emax) 71.704	—————
(80%Emax) 81.9476
(90%Emax) 92.1912	- - - - -



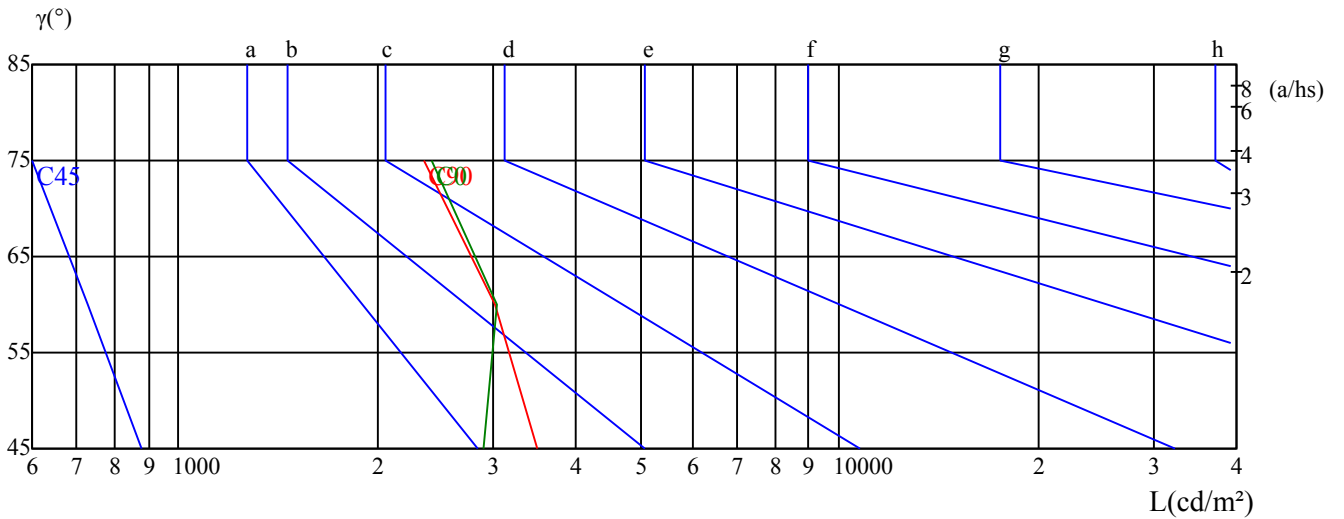
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	2889	0	0	3039	0	0	2415	0	0
C45	877	0	0	726	0	0	509	0	0
C90	3487	0	0	3021	0	0	2348	0	0

Glare Table

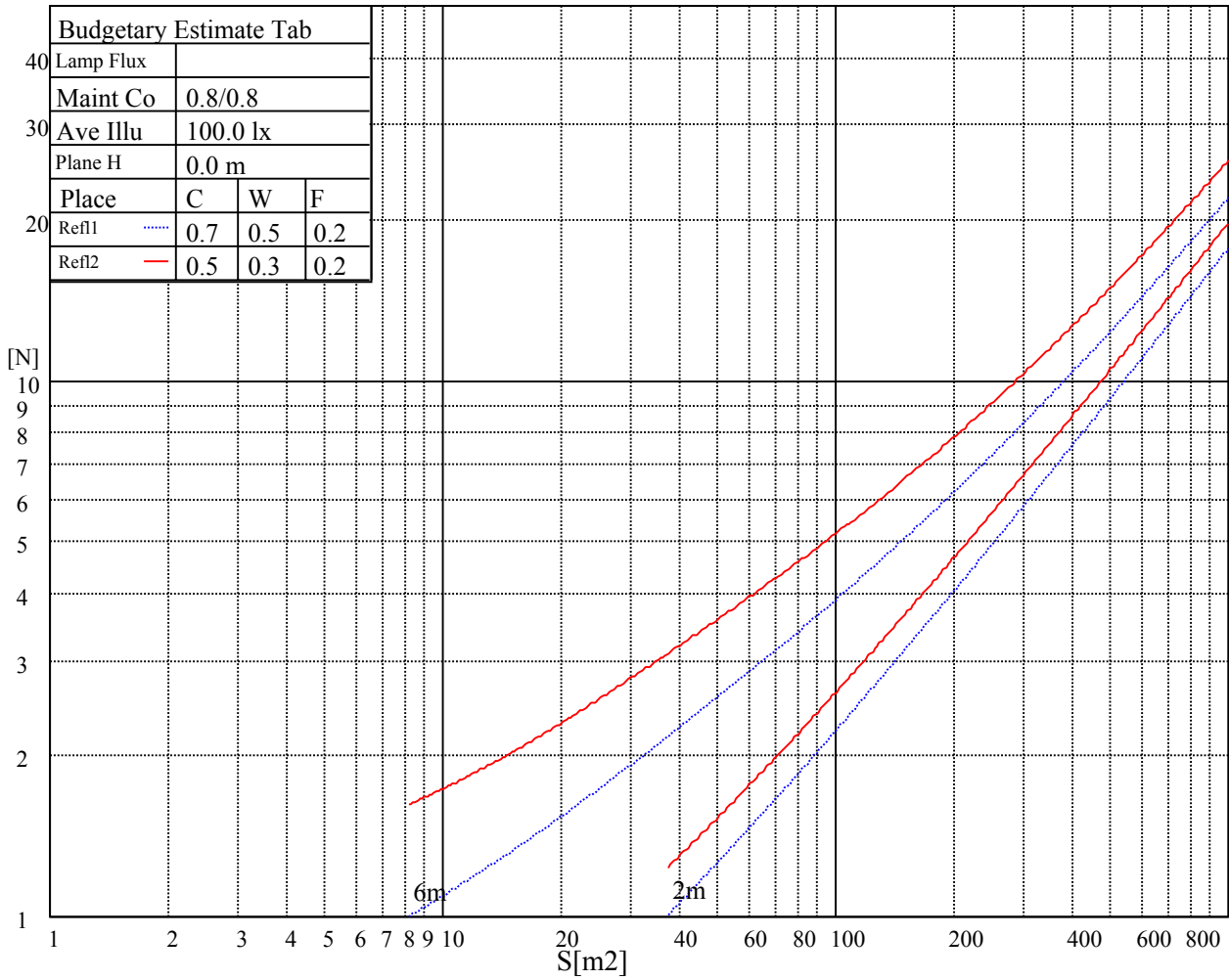
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

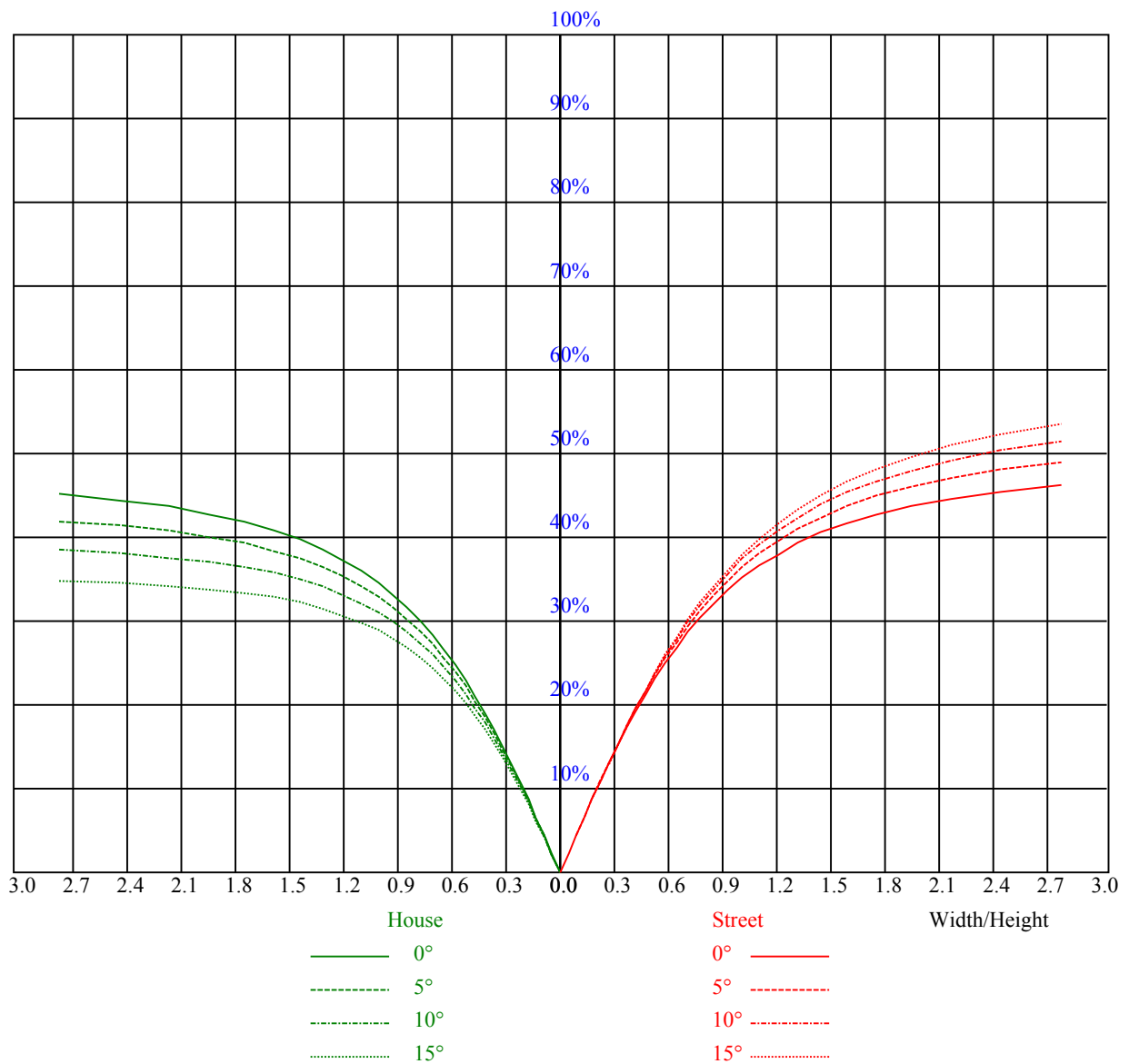


Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	9.1	10.7	9.4	11.0	11.3	8.2	9.9	8.6	10.1	10.5
	3H	11.1	12.6	11.5	12.9	13.2	10.0	11.5	10.4	11.8	12.2
	4H	11.8	13.1	12.2	13.4	13.8	10.6	11.9	11.0	12.3	12.7
	6H	12.5	13.8	12.9	14.2	14.6	11.3	12.6	11.7	12.9	13.3
	8H	12.8	14.1	13.2	14.4	14.8	11.5	12.8	12.0	13.2	13.6
	12H	12.7	13.8	13.2	14.2	14.7	11.5	12.6	12.0	13.0	13.5
4H	2H	9.4	10.7	9.8	11.1	11.5	8.7	10.0	9.1	10.4	10.8
	3H	11.6	12.6	12.0	13.1	13.5	10.6	11.7	11.1	12.1	12.6
	4H	12.6	13.7	13.1	14.1	14.6	11.6	12.7	12.1	13.1	13.6
	6H	13.5	14.5	13.9	14.9	15.4	12.4	13.5	12.9	13.9	14.4
	8H	13.6	14.3	14.1	14.8	15.4	12.5	13.3	13.1	13.8	14.3
	12H	13.8	14.5	14.3	15.0	15.6	12.8	13.5	13.3	14.0	14.6
8H	4H	12.8	13.5	13.3	14.0	14.6	11.9	12.6	12.4	13.1	13.7
	6H	13.7	14.5	14.3	15.0	15.5	12.8	13.6	13.4	14.1	14.6
	8H	14.1	14.8	14.6	15.4	15.9	13.2	14.0	13.8	14.5	15.0
	12H	14.4	15.1	14.9	15.6	16.2	13.5	14.3	14.1	14.8	15.3
12H	4H	12.8	13.5	13.3	14.1	14.6	11.9	12.7	12.5	13.2	13.7
	6H	13.8	14.5	14.3	15.1	15.6	12.9	13.7	13.5	14.2	14.7
	8H	14.2	15.0	14.8	15.5	16.0	13.4	14.1	13.9	14.6	15.2
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.7					0.2/-0.7					
S = 1.5H	0.6/-0.5					0.6/-0.5					
S = 2.0H	0.9/-0.5					0.7/-0.6					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	-1.2					-2.1					
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	1.00	1.00	1.00	0.98
1	0.93	0.85	0.79	0.90	0.83	0.77	0.85	0.80	0.74	0.80	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	0.69	0.58	0.50	0.67	0.57	0.50	0.63	0.55	0.48	0.60	0.53	0.47	0.57	0.51	0.46	0.43
4	0.60	0.49	0.41	0.58	0.48	0.41	0.55	0.47	0.40	0.52	0.45	0.39	0.50	0.43	0.38	0.35
5	0.52	0.42	0.34	0.51	0.41	0.34	0.48	0.40	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	0.28	0.41	0.33	0.27	0.39	0.32	0.27	0.24
7	0.41	0.31	0.24	0.40	0.31	0.24	0.38	0.30	0.24	0.37	0.29	0.23	0.35	0.28	0.23	0.21
8	0.37	0.27	0.21	0.36	0.27	0.21	0.35	0.26	0.20	0.33	0.26	0.20	0.32	0.25	0.20	0.18
9	0.34	0.24	0.18	0.33	0.24	0.18	0.31	0.23	0.18	0.30	0.23	0.18	0.29	0.22	0.17	0.15
10	0.31	0.22	0.16	0.30	0.22	0.16	0.29	0.21	0.16	0.28	0.21	0.16	0.27	0.20	0.15	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	2562.02	2455.70	2015.41	1593.61	1385.59	795.07	20.80	15.72	15.49
30.0	2564.33	2390.99	1882.51	1448.00	1205.32	606.70	18.03	16.64	17.33
60.0	2557.40	2380.59	2002.81	1420.03	923.69	557.36	18.03	16.41	17.22
90.0	2555.09	2452.24	2132.13	1664.10	1102.47	534.71	32.47	16.29	16.87
120.0	2558.55	2474.19	2174.89	1703.28	1040.53	591.22	86.56	16.53	17.10
150.0	2563.18	2501.93	2194.53	1583.21	1133.67	912.94	177.62	17.10	17.10
180.0	2562.02	2375.97	1874.19	1372.54	1124.08	692.22	27.39	16.99	17.57
210.0	2564.33	2485.75	2138.72	1518.49	1084.90	841.53	71.65	16.29	15.83
240.0	2557.40	2473.04	2179.51	1708.01	1057.40	592.84	89.68	15.72	15.49
270.0	2555.09	2430.28	2095.73	1595.80	1001.23	385.98	17.91	15.02	15.37
300.0	2558.55	2384.05	2006.17	1419.11	919.88	595.15	16.76	15.14	15.49
330.0	2563.18	2301.77	1818.38	1407.32	1175.50	361.36	16.87	15.49	15.83
360.0	2562.02	2455.70	2015.41	1593.61	1385.59	795.07	20.80	15.72	15.49
C/γ(°)	135.0	150.0	165.0	180.0					
0.0	16.99	19.07	21.15	21.84					
30.0	19.30	20.80	21.96	22.07					
60.0	18.84	20.45	21.96	22.19					
90.0	18.37	20.34	21.96	21.96					
120.0	18.37	20.34	21.73	22.07					
150.0	18.37	20.57	21.96	22.07					
180.0	19.18	20.69	21.84	21.84					
210.0	16.87	19.07	21.49	22.07					
240.0	16.76	18.72	20.92	22.19					
270.0	16.76	18.84	20.92	21.96					
300.0	16.99	18.84	20.92	22.07					
330.0	17.68	19.53	21.15	22.07					
360.0	16.99	19.07	21.15	21.84					