
Client: P.Q.L., Inc.

LumCAT:

Luminaire: STR-25-X-35K-32-HH

Report No:

Ballast type:

Test No:

Voltage(V): 229.600

LampCAT:

Current(A): 0.115

Lamp flux(lm)

Power (W): 24.570

Number of Lamps:

PF: 0.925

1 Length(mm): -75

Width(mm): -75

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2321.60, Luminous Efficacy(lm/W): 94.49

Central intensity(cd): 7935.672, Maximum intensity(cd): 7964.377

Angle of maximum intensity: C=90.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=31.4

[C90/270]Total=31.8

Field angle(10%Imax): [C0/180]Total=45.2

[C90/270]Total=46.8

Maximum s/h(1/2): C0_180=0.54 C90_270=0.54

Maximum s/h(1/4): C0_180=0.47 C90_270=0.49

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.220%

Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7950.026	0.000	0	0.00%	0.00%
2.0	7939.261	30.409	30.409	1.31%	1.31%
4.0	7869.893	90.729	121.137	3.91%	5.22%
6.0	7746.705	149.251	270.388	6.43%	11.65%
8.0	7512.288	203.918	474.306	8.78%	20.43%
10.0	6988.439	248.747	723.053	10.71%	31.14%
12.0	6072.300	273.276	996.329	11.77%	42.92%
14.0	5041.345	274.145	1270.474	11.81%	54.72%
16.0	3817.834	251.435	1521.908	10.83%	65.55%
18.0	2741.431	210.293	1732.202	9.06%	74.61%
20.0	1687.752	158.125	1890.327	6.81%	81.42%
22.0	1029.950	106.799	1997.126	4.60%	86.02%
24.0	586.233	69.247	2066.373	2.98%	89.01%
26.0	332.680	42.585	2108.958	1.83%	90.84%
28.0	201.120	26.574	2135.532	1.14%	91.99%
30.0	143.712	18.332	2153.865	0.79%	92.78%
32.0	120.988	14.950	2168.814	0.64%	93.42%
34.0	99.460	13.166	2181.98	0.57%	93.99%
36.0	80.324	11.308	2193.288	0.49%	94.47%
38.0	70.756	9.970	2203.258	0.43%	94.90%
40.0	56.404	8.775	2212.033	0.38%	95.28%
42.0	54.012	7.943	2219.976	0.34%	95.62%
44.0	45.639	7.452	2227.429	0.32%	95.94%
46.0	45.639	7.078	2234.506	0.30%	96.25%
48.0	42.051	7.033	2241.539	0.30%	96.55%
50.0	42.051	6.960	2248.499	0.30%	96.85%
52.0	33.679	6.454	2254.953	0.28%	97.13%
54.0	37.267	6.213	2261.166	0.27%	97.40%
56.0	36.071	6.588	2267.754	0.28%	97.68%
58.0	33.679	6.415	2274.169	0.28%	97.96%
60.0	31.287	6.107	2280.275	0.26%	98.22%
62.0	24.111	5.313	2285.588	0.23%	98.45%
64.0	25.307	4.828	2290.417	0.21%	98.66%
66.0	22.915	4.793	2295.209	0.21%	98.86%
68.0	14.543	3.781	2298.99	0.16%	99.03%
70.0	11.123	2.628	2301.618	0.11%	99.14%
72.0	5.621	1.736	2303.354	0.07%	99.21%
74.0	12.319	1.881	2305.235	0.08%	99.30%

Equipment: GMS-1800
Temperature($^{\circ}$ C): 25.0

Date: 2020/3/25 星期三
Humidity(%): 65.0%

Operator: 01
Distance(m): 11.98

Zonal flux distribution table

Appendix Page: 3 Total:17

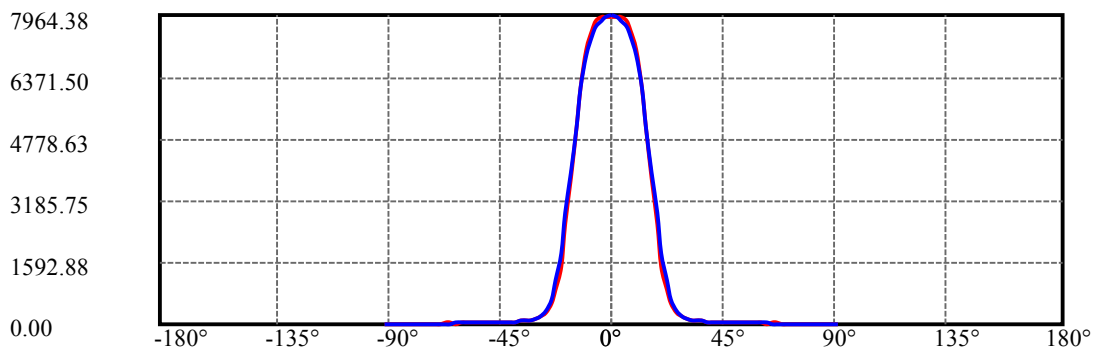
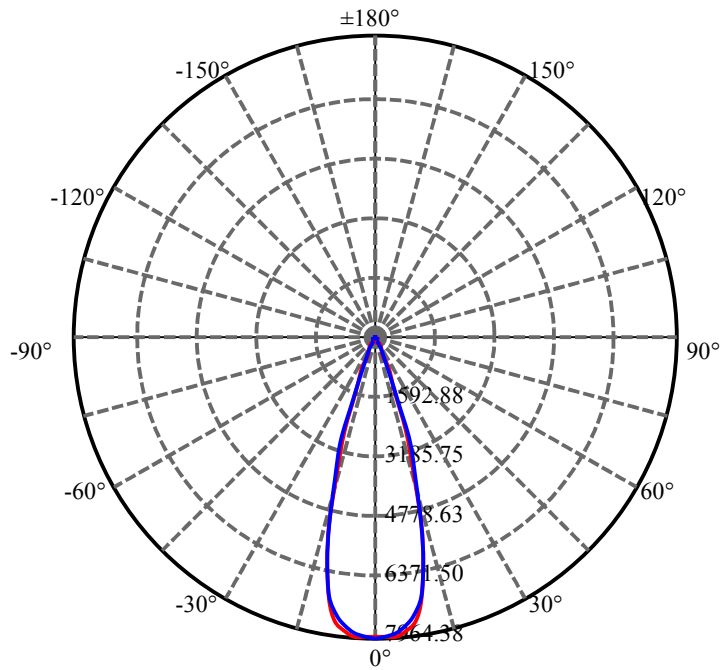
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.242	2.496	2307.731	0.11%	99.40%
78.0	8.946	2.157	2309.888	0.09%	99.50%
80.0	9.042	1.936	2311.824	0.08%	99.58%
82.0	11.242	2.197	2314.021	0.09%	99.67%
84.0	10.046	2.317	2316.338	0.10%	99.77%
86.0	6.722	1.832	2318.17	0.08%	99.85%
88.0	7.822	1.593	2319.763	0.07%	99.92%
90.0	8.898	1.833	2321.596	0.08%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	2153.86	92.78%
0-40	2212.03	95.28%
0-60	2280.28	98.22%
0-90	2319.76	99.92%
0-120	2319.76	99.92%
0-180	2321.60	100.00%
60-90	39.49	1.70%
90-120	0.00	0.00%
90-130	0.00	0.00%
90-150	0.00	0.00%
90-180	0.00	0.00%
0-19.58	1857.28	80.00%

ZONAL LUMEN SUMMARY

0-10	723.05
10-20	1167.27
20-30	263.54
30-40	58.17
40-50	36.47
50-60	31.78
60-70	21.34
70-80	10.21
80-90	7.94
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/C180: —

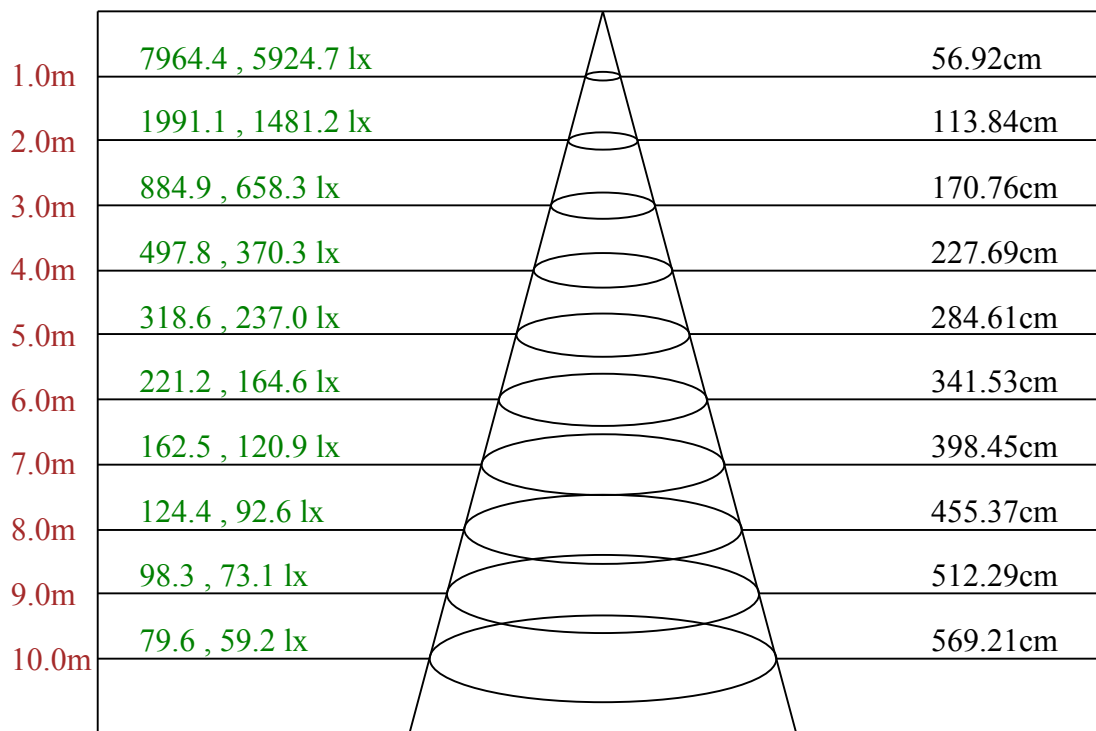
C90/C270: —

Field angle(10%Imax):C0/180Left:24.6 Right:20.6

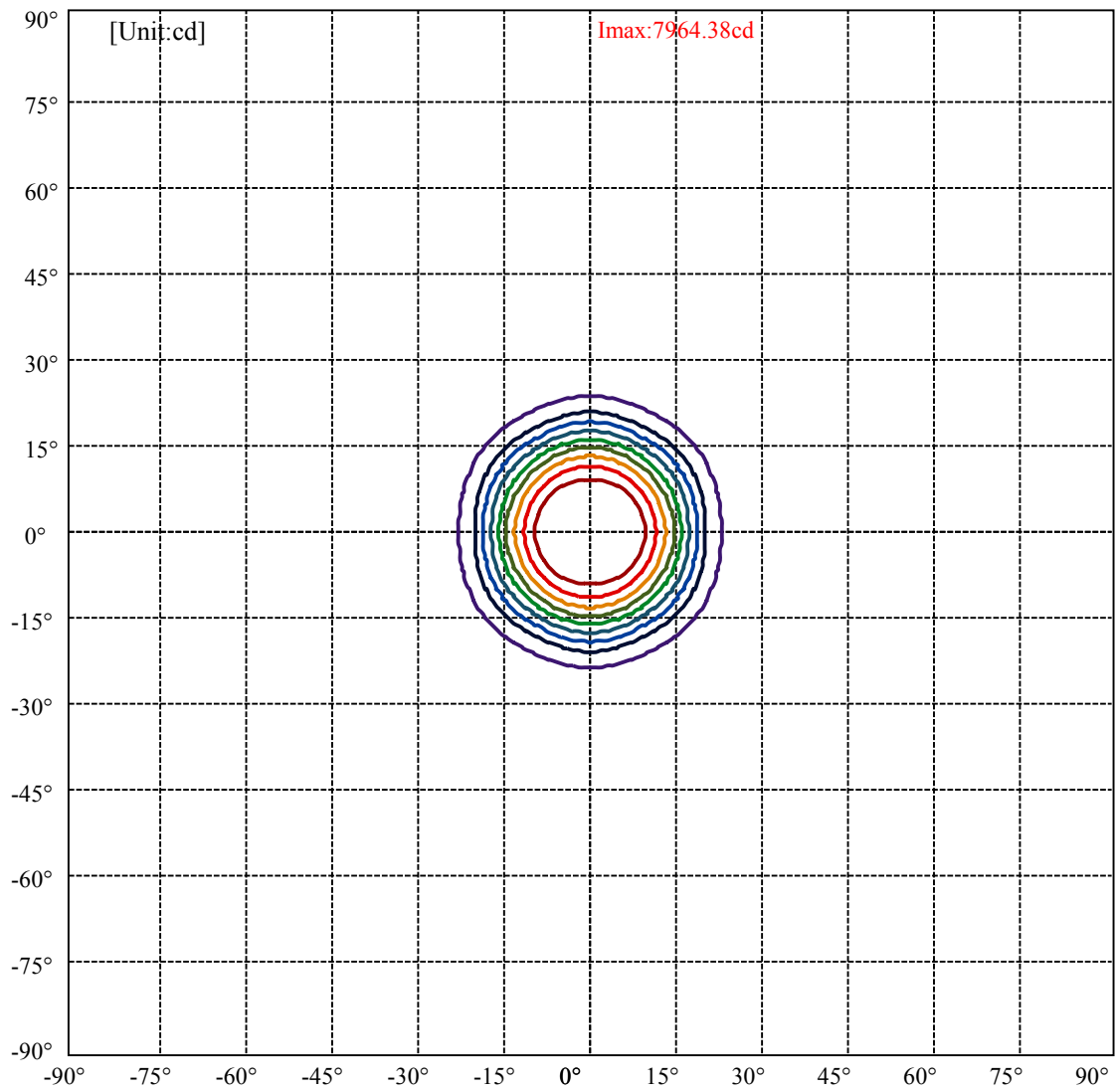
:C90/270Left:23.4 Right:23.4

Beam Angle(50%Imax):C0/180Left:17.7 Right:13.7

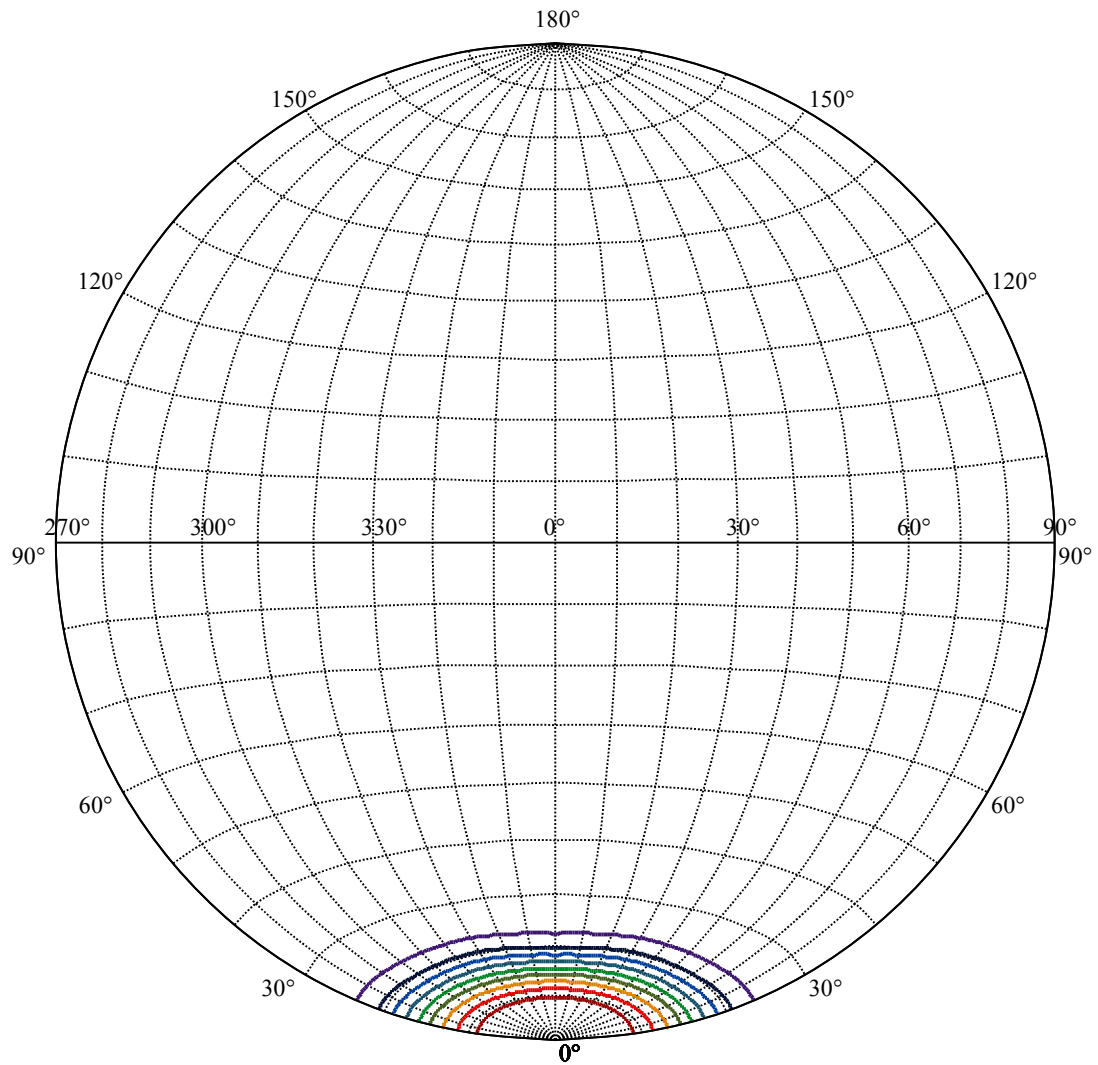
:C90/270Left:15.9 Right:15.9



Max , Ave Beam angle of C90 plane 31.77



(10%Imax) 796.438	—
(20%Imax) 1592.88	—
(30%Imax) 2389.31	—
(40%Imax) 3185.75	—
(50%Imax) 3982.19	—
(60%Imax) 4778.63	—
(70%Imax) 5575.06	—
(80%Imax) 6371.5	—
(90%Imax) 7167.94	—



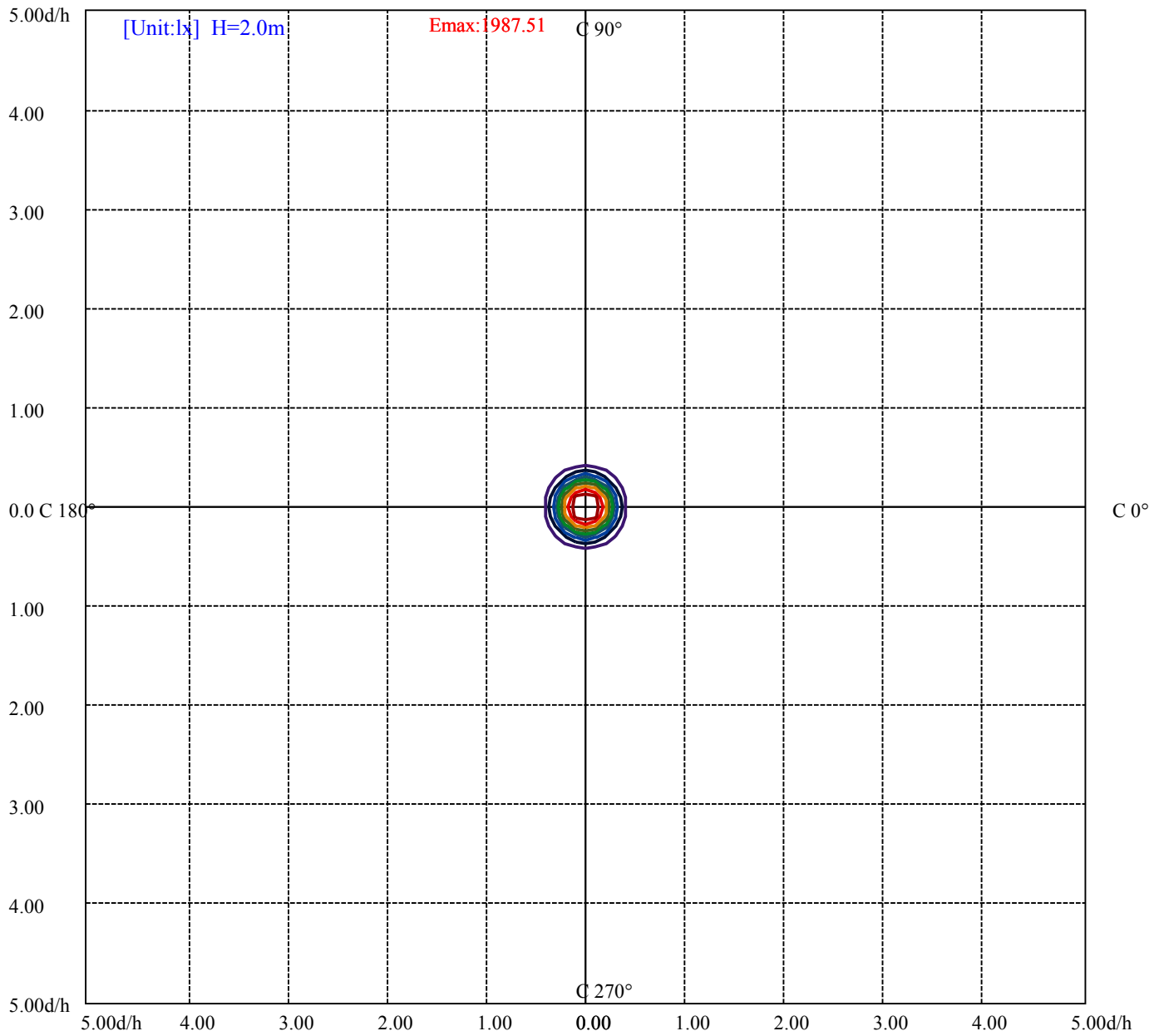
House

[Unit:cd]

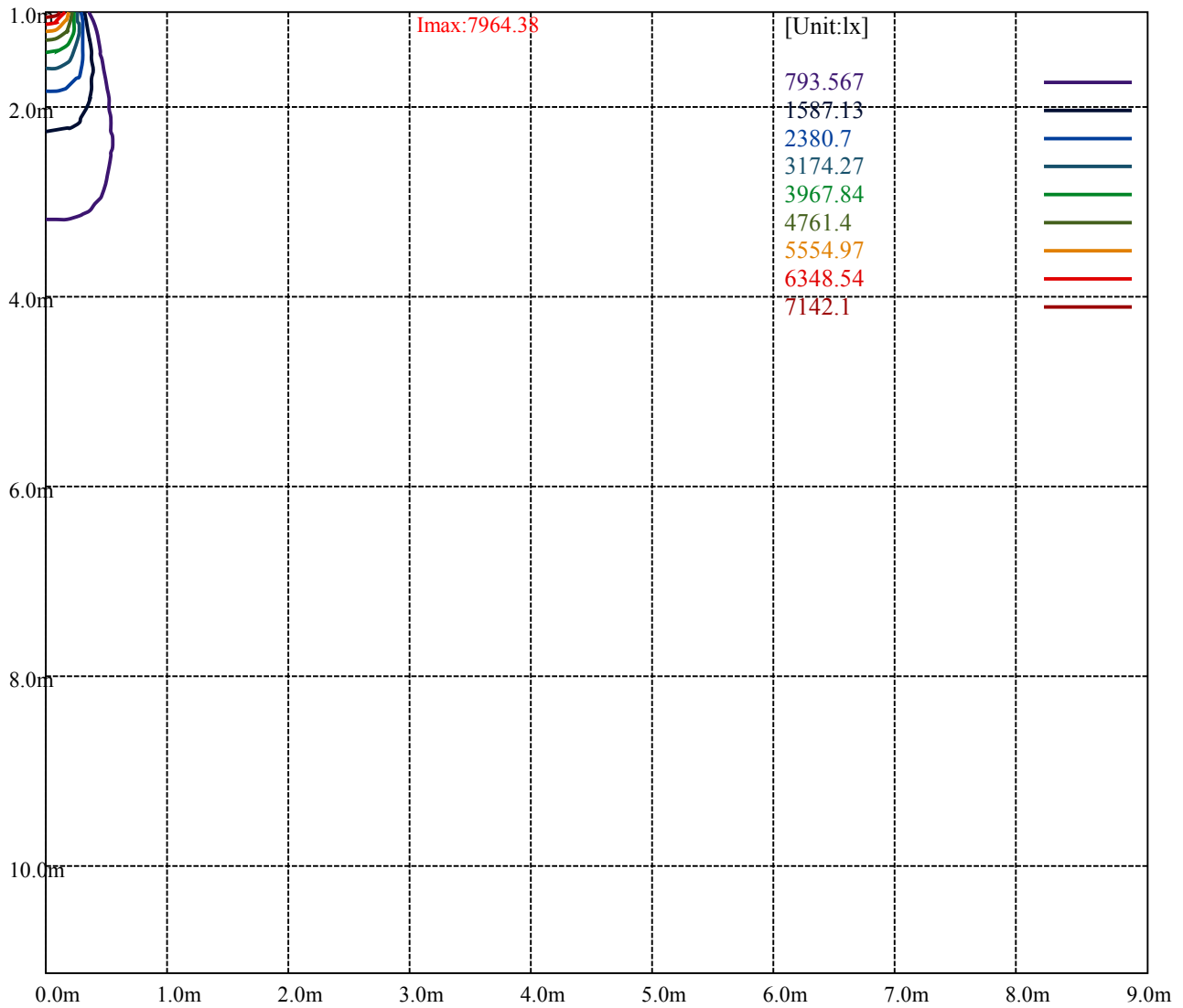
Road

Imax:7964.38

(10%Imax) 796.438	—
(20%Imax) 1592.88	—
(30%Imax) 2389.31	—
(40%Imax) 3185.75	—
(50%Imax) 3982.19	—
(60%Imax) 4778.63	—
(70%Imax) 5575.06	—
(80%Imax) 6371.5	—
(90%Imax) 7167.94	—



- (10%Emax) 198.7507
- (20%Emax) 397.5025
- (30%Emax) 596.2525
- (40%Emax) 795.0025
- (50%Emax) 993.7525
- (60%Emax) 1192.505
- (70%Emax) 1391.255
- (80%Emax) 1590.005
- (90%Emax) 1788.755



Luminance Limiting Curve(luminous side)

Luminance Table

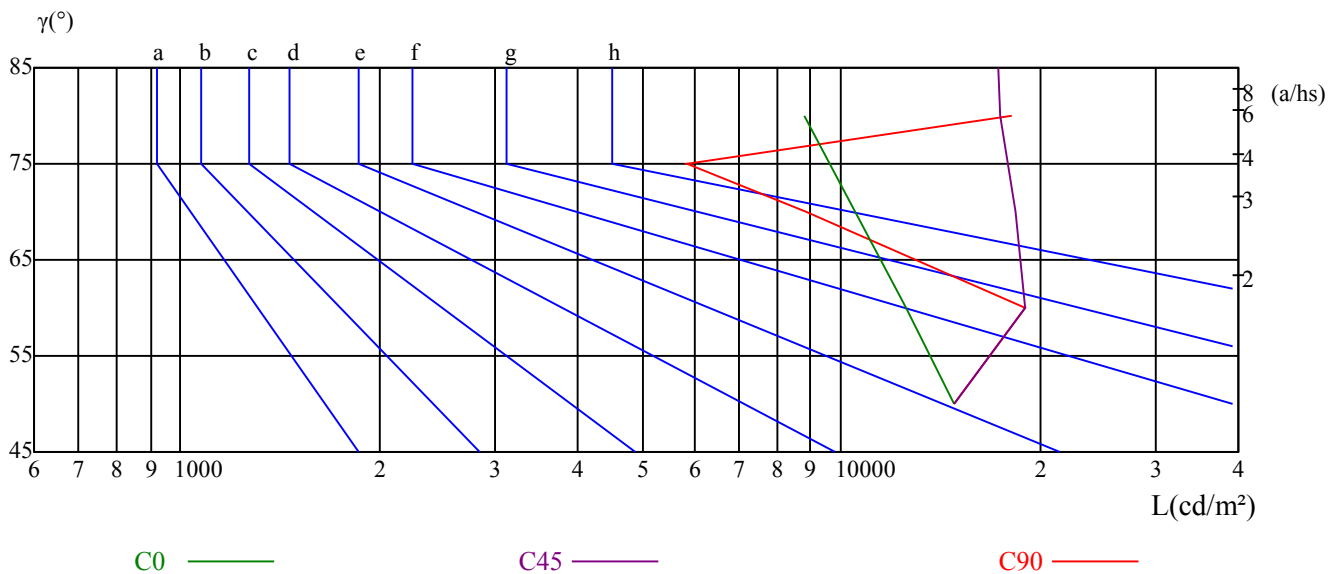
γ	45	50	55	60	65	70	75	80	85
C0	0	14808	0	12540	0	0	0	8793	0
C45	0	14808	0	19037	0	18332	0	17399	17332
C90	0	14808	0	19037	0	8833	5837	18147	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

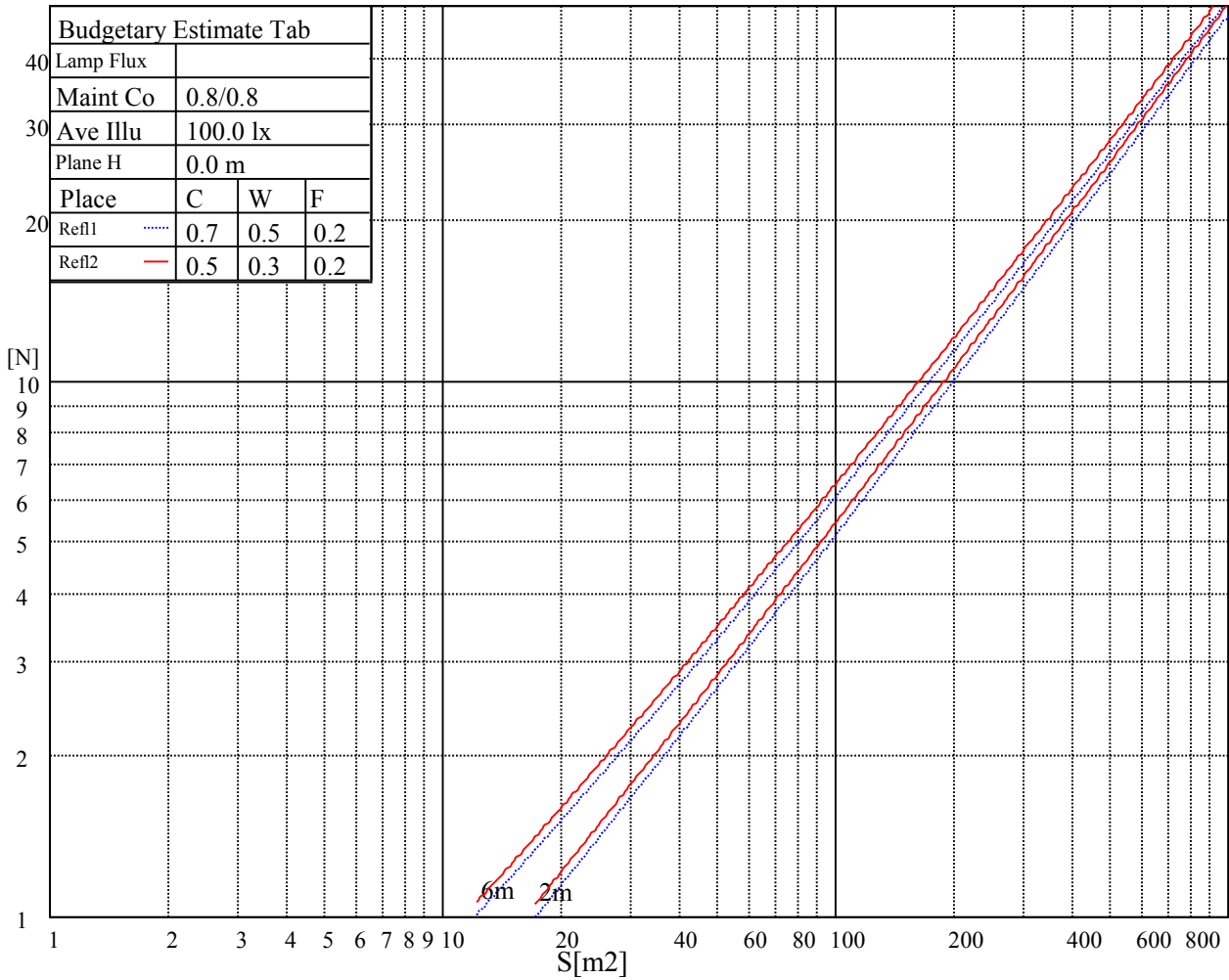
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

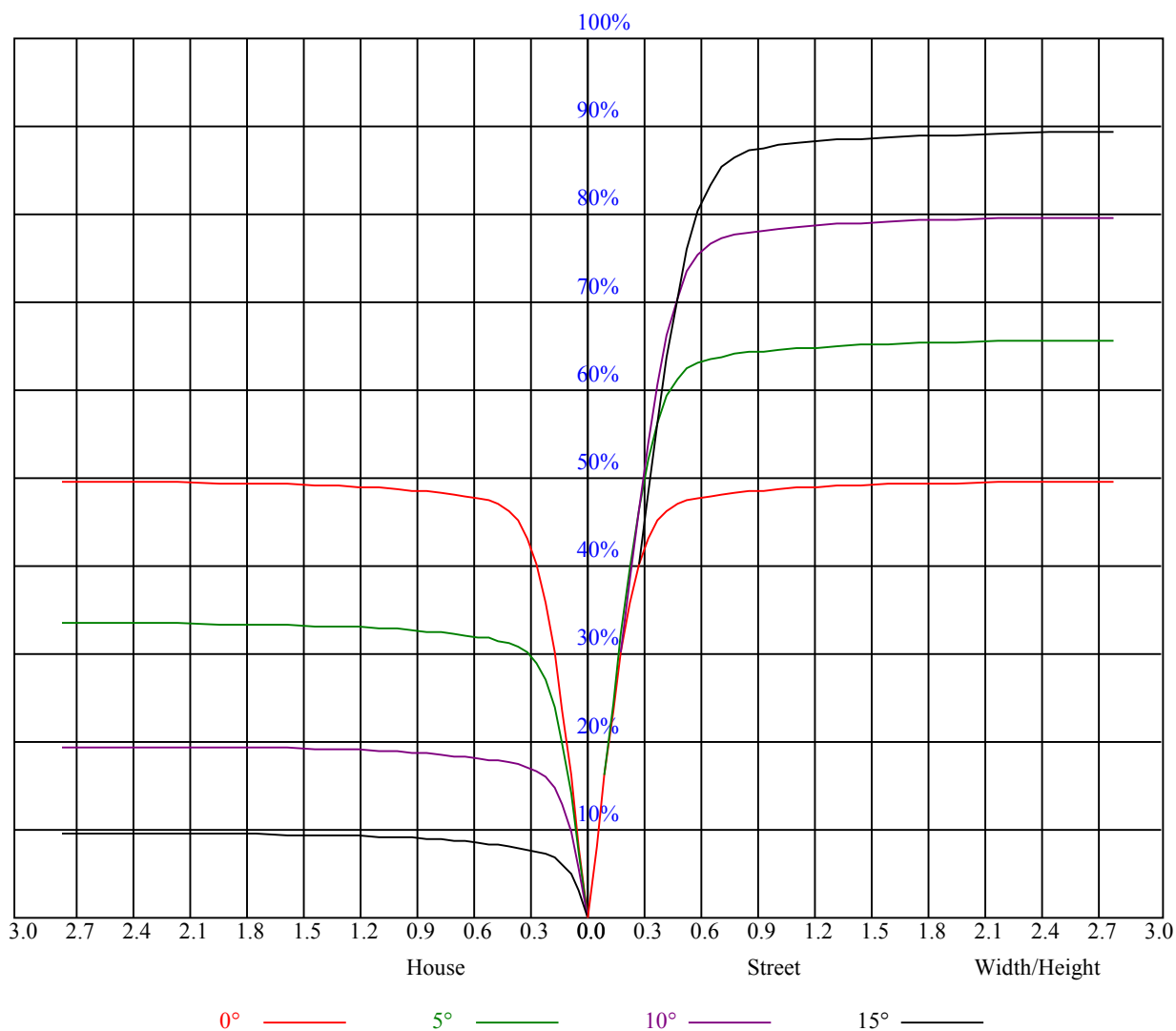


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	13.85	14.80	14.21	15.11	15.43	14.41	15.36	14.77	15.67	15.99
	3H	14.85	15.70	15.24	16.03	16.38	15.17	16.02	15.56	16.35	16.70
	4H	15.75	16.53	16.15	16.89	17.26	15.28	16.07	15.68	16.42	16.79
	6H	16.51	17.22	16.92	17.60	18.00	16.25	16.97	16.67	17.35	17.75
	8H	17.10	17.78	17.52	18.17	18.58	16.58	17.26	17.00	17.65	18.06
	12H	17.81	18.45	18.23	18.85	19.27	16.88	17.52	17.30	17.92	18.33
4H	2H	14.39	15.18	14.80	15.53	15.90	14.81	15.60	15.22	15.95	16.32
	3H	15.38	16.03	15.80	16.43	16.85	15.60	16.26	16.03	16.65	17.07
	4H	16.46	17.03	16.90	17.46	17.91	15.90	16.46	16.34	16.89	17.34
	6H	17.28	17.78	17.75	18.23	18.69	16.97	17.47	17.44	17.92	18.37
	8H	18.08	18.55	18.57	19.01	19.48	17.48	17.95	17.97	18.41	18.88
	12H	19.01	19.44	19.50	19.89	20.41	17.93	18.36	18.42	18.81	19.33
8H	4H	16.51	16.98	17.00	17.44	17.91	15.99	16.45	16.47	16.91	17.38
	6H	17.58	17.96	18.08	18.44	18.95	17.28	17.66	17.79	18.14	18.65
	8H	18.72	19.04	19.26	19.56	20.06	18.16	18.48	18.69	19.00	19.50
	12H	19.95	20.19	20.50	20.71	21.23	18.81	19.05	19.36	19.57	20.09
12H	4H	16.55	16.97	17.04	17.43	17.95	16.04	16.47	16.53	16.92	17.44
	6H	17.80	18.11	18.33	18.64	19.14	17.54	17.85	18.07	18.38	18.87
	8H	19.05	19.29	19.59	19.81	20.33	18.48	18.72	19.03	19.24	19.77
Variation with the observer position at spacings:											
S = 1.0H	0.6/-0.8					0.4/-1.7					
S = 1.5H	0.5/-1.3					1.6/-1.4					
S = 2.0H	1.3/-1.1					0.9/-1.3					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	2.3					2.8					

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96
2	1.07	1.03	1.01	1.05	1.02	1.00	1.02	0.99	0.97	0.99	0.97	0.95	0.96	0.95	0.93	0.92
3	1.02	0.98	0.95	1.00	0.97	0.94	0.98	0.95	0.93	0.96	0.93	0.91	0.94	0.92	0.90	0.89
4	0.98	0.93	0.90	0.96	0.93	0.90	0.94	0.91	0.89	0.93	0.90	0.88	0.91	0.89	0.87	0.85
5	0.94	0.89	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.90	0.87	0.84	0.88	0.86	0.84	0.83
6	0.90	0.86	0.83	0.90	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.82	0.86	0.83	0.81	0.80
7	0.87	0.83	0.80	0.87	0.83	0.80	0.86	0.82	0.79	0.85	0.81	0.79	0.84	0.81	0.79	0.78
8	0.85	0.80	0.77	0.84	0.80	0.77	0.83	0.80	0.77	0.82	0.79	0.77	0.81	0.79	0.76	0.75
9	0.82	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
10	0.80	0.76	0.73	0.79	0.75	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71



Intensity data(cd)

C/ γ (°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	7935.67	7935.67	7914.15	7813.68	7569.70	7060.20	6077.08	5093.97	3759.23
30.0	7942.85	7950.03	7889.03	7777.80	7544.58	7024.32	6055.56	5011.45	3813.05
60.0	7957.20	7935.67	7856.74	7720.39	7497.94	6945.38	6080.67	5011.45	3813.05
90.0	7964.38	7928.50	7813.68	7670.16	7419.00	6931.03	6084.26	5108.32	3895.57
120.0	7957.20	7935.67	7856.74	7720.39	7497.94	6945.38	6080.67	5011.45	3813.05
150.0	7942.85	7950.03	7889.03	7777.80	7544.58	7024.32	6055.56	5011.45	3813.05
180.0	7935.67	7935.67	7914.15	7813.68	7569.70	7060.20	6077.08	5093.97	3759.23
210.0	7942.85	7950.03	7889.03	7777.80	7544.58	7024.32	6055.56	5011.45	3813.05
240.0	7957.20	7935.67	7856.74	7720.39	7497.94	6945.38	6080.67	5011.45	3813.05
270.0	7964.38	7928.50	7813.68	7670.16	7419.00	6931.03	6084.26	5108.32	3895.57
300.0	7957.20	7935.67	7856.74	7720.39	7497.94	6945.38	6080.67	5011.45	3813.05
330.0	7942.85	7950.03	7889.03	7777.80	7544.58	7024.32	6055.56	5011.45	3813.05
360.0	7935.67	7935.67	7914.15	7813.68	7569.70	7060.20	6077.08	5093.97	3759.23
C/ γ (°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	2596.71	1491.61	896.00	530.02	293.21	192.75	149.69	113.81	106.64
30.0	2819.17	1749.94	1064.63	598.19	350.62	207.10	153.28	135.34	106.64
60.0	2664.89	1645.89	1003.64	565.90	329.09	196.34	135.34	113.81	95.87
90.0	2883.76	1843.23	1147.16	659.19	343.44	207.10	135.34	113.81	85.11
120.0	2664.89	1645.89	1003.64	565.90	329.09	196.34	135.34	113.81	95.87
150.0	2819.17	1749.94	1064.63	598.19	350.62	207.10	153.28	135.34	106.64
180.0	2596.71	1491.61	896.00	530.02	293.21	192.75	149.69	113.81	106.64
210.0	2819.17	1749.94	1064.63	598.19	350.62	207.10	153.28	135.34	106.64
240.0	2664.89	1645.89	1003.64	565.90	329.09	196.34	135.34	113.81	95.87
270.0	2883.76	1843.23	1147.16	659.19	343.44	207.10	135.34	113.81	85.11
300.0	2664.89	1645.89	1003.64	565.90	329.09	196.34	135.34	113.81	95.87
330.0	2819.17	1749.94	1064.63	598.19	350.62	207.10	153.28	135.34	106.64
360.0	2596.71	1491.61	896.00	530.02	293.21	192.75	149.69	113.81	106.64
C/ γ (°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	77.93	70.76	49.23	49.23	42.05	49.23	34.88	42.05	27.70
30.0	85.11	81.52	56.40	56.40	45.64	42.05	42.05	42.05	31.29
60.0	77.93	63.58	59.99	49.23	45.64	42.05	49.23	42.05	34.88
90.0	77.93	63.58	56.40	63.58	49.23	56.40	34.88	42.05	42.05
120.0	77.93	63.58	59.99	49.23	45.64	42.05	49.23	42.05	34.88
150.0	85.11	81.52	56.40	56.40	45.64	42.05	42.05	42.05	31.29
180.0	77.93	70.76	49.23	49.23	42.05	49.23	34.88	42.05	27.70
210.0	85.11	81.52	56.40	56.40	45.64	42.05	42.05	42.05	31.29
240.0	77.93	63.58	59.99	49.23	45.64	42.05	49.23	42.05	34.88
270.0	77.93	63.58	56.40	63.58	49.23	56.40	34.88	42.05	42.05
300.0	77.93	63.58	59.99	49.23	45.64	42.05	49.23	42.05	34.88
330.0	85.11	81.52	56.40	56.40	45.64	42.05	42.05	42.05	31.29
360.0	77.93	70.76	49.23	49.23	42.05	49.23	34.88	42.05	27.70
C/ γ (°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	27.70	27.70	34.88	27.70	20.52	27.70	27.70	13.35	0.00
30.0	42.05	34.88	31.29	27.70	24.11	24.11	24.11	16.94	13.35
60.0	34.88	38.46	38.46	31.29	24.11	27.70	20.52	13.35	13.35
90.0	42.05	42.05	27.70	42.05	27.70	20.52	20.52	13.35	13.35
120.0	34.88	38.46	38.46	31.29	24.11	27.70	20.52	13.35	13.35
150.0	42.05	34.88	31.29	27.70	24.11	24.11	24.11	16.94	13.35
180.0	27.70	27.70	34.88	27.70	20.52	27.70	27.70	13.35	0.00
210.0	42.05	34.88	31.29	27.70	24.11	24.11	24.11	16.94	13.35
240.0	34.88	38.46	38.46	31.29	24.11	27.70	20.52	13.35	13.35
270.0	42.05	42.05	27.70	42.05	27.70	20.52	20.52	13.35	13.35
300.0	34.88	38.46	38.46	31.29	24.11	27.70	20.52	13.35	13.35
330.0	42.05	34.88	31.29	27.70	24.11	24.11	24.11	16.94	13.35
360.0	27.70	27.70	34.88	27.70	20.52	27.70	27.70	13.35	0.00

Intensity data(cd)

C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	0.00	20.52	20.52	13.35	6.75	13.35	13.35	0.00	13.35
30.0	6.75	13.35	10.05	6.75	10.05	10.05	13.35	6.75	6.75
60.0	6.75	13.35	6.75	6.75	6.75	13.63	6.75	10.05	10.05
90.0	6.75	0.00	13.35	13.35	13.92	6.75	6.75	6.75	0.00
120.0	6.75	13.35	6.75	6.75	6.75	13.63	6.75	10.05	10.05
150.0	6.75	13.35	10.05	6.75	10.05	10.05	13.35	6.75	6.75
180.0	0.00	20.52	20.52	13.35	6.75	13.35	13.35	0.00	13.35
210.0	6.75	13.35	10.05	6.75	10.05	10.05	13.35	6.75	6.75
240.0	6.75	13.35	6.75	6.75	6.75	13.63	6.75	10.05	10.05
270.0	6.75	0.00	13.35	13.35	13.92	6.75	6.75	6.75	0.00
300.0	6.75	13.35	6.75	6.75	6.75	13.63	6.75	10.05	10.05
330.0	6.75	13.35	10.05	6.75	10.05	10.05	13.35	6.75	6.75
360.0	0.00	20.52	20.52	13.35	6.75	13.35	13.35	0.00	13.35

C/γ(°)	90.0
0.0	13.35
30.0	10.05
60.0	3.30
90.0	13.35
120.0	3.30
150.0	10.05
180.0	13.35
210.0	10.05
240.0	3.30
270.0	13.35
300.0	3.30
330.0	10.05
360.0	13.35