



ZhongShan HaoXiang Lighting CO.,LTD  
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### HX-DA614R.01

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LumCAT: HX-DA614R.01	Luminaire:
Report No:	Voltage(V): 220.800
Test No:	Current(A): 0.064
LampCAT: ZX-S6131 D72-2835-12CX4B	Power (W): 13.600
Lamp flux(lm): 1878.0	PF: 0.954
Number of Lamps: 1	Ballast type: LS-16-350LI1
Length(mm): -970	Width(mm): -970
Phm Type: C	Height(mm): 0

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### Photometric Results

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Lumens(lm): 590.65  
Efficiency(%): 31.45%  
Lumens(lm)/Power(W): 43.43  
Central intensity(cd): 246.717  
Maximum intensity(cd): 250.629  
Angle of maximum intensity: C=30.0  $\gamma$ =1.0  
Beam Angle(50%Imax): [H]Left=53.1 Right=49.6  
[V]Left=53.6 Right=48.9  
Field angle(10%Imax): [H]Left=71.7 Right=68.2  
[V]Left=72.3 Right=67.8  
Maximum s/h: C0\_180=1.27 C90\_270=1.27  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 31.45%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 89.918%

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Equipment: GMS-1980  
Temperature(°C): 25.0

Date: 2022-11-21  
Humidity(%): 65.3%

Operator: Lxl  
Distance(m): 7.27

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	248.048	.000	.000	.000%	.000%
1.0	248.030	.237	.237	.013%	.013%
2.0	247.911	.712	.949	.038%	.051%
3.0	247.704	1.185	2.135	.063%	.114%
4.0	247.413	1.657	3.792	.088%	.202%
5.0	247.048	2.127	5.919	.113%	.315%
6.0	246.625	2.594	8.513	.138%	.453%
7.0	246.092	3.058	11.572	.163%	.616%
8.0	245.467	3.518	15.090	.187%	.803%
9.0	244.819	3.973	19.063	.212%	1.015%
10.0	244.062	4.424	23.487	.236%	1.251%
11.0	243.229	4.869	28.356	.259%	1.510%
12.0	242.335	5.308	33.664	.283%	1.793%
13.0	241.348	5.740	39.404	.306%	2.098%
14.0	240.362	6.166	45.570	.328%	2.427%
15.0	239.221	6.584	52.154	.351%	2.777%
16.0	238.080	6.994	59.148	.372%	3.150%
17.0	236.706	7.394	66.542	.394%	3.543%
18.0	235.350	7.783	74.325	.414%	3.958%
19.0	233.821	8.163	82.487	.435%	4.392%
20.0	232.337	8.532	91.019	.454%	4.847%
21.0	230.699	8.891	99.911	.473%	5.320%
22.0	229.417	9.246	109.157	.492%	5.812%
23.0	228.144	9.601	118.758	.511%	6.324%
24.0	226.061	9.931	128.688	.529%	6.852%
25.0	223.740	10.227	138.916	.545%	7.397%
26.0	221.423	10.508	149.424	.560%	7.957%
27.0	218.939	10.774	160.197	.574%	8.530%
28.0	216.455	11.023	171.221	.587%	9.117%
29.0	213.940	11.260	182.481	.600%	9.717%
30.0	211.200	11.479	193.960	.611%	10.328%
31.0	208.487	11.679	205.639	.622%	10.950%
32.0	205.637	11.864	217.503	.632%	11.582%
33.0	202.832	12.034	229.537	.641%	12.222%
34.0	199.766	12.184	241.721	.649%	12.871%
35.0	196.626	12.310	254.031	.656%	13.527%
36.0	193.424	12.419	266.450	.661%	14.188%
37.0	190.006	12.505	278.956	.666%	14.854%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	186.540	12.569	291.524	.669%	15.523%
39.0	182.616	12.600	304.125	.671%	16.194%
40.0	178.801	12.605	316.730	.671%	16.865%
41.0	174.410	12.578	329.307	.670%	17.535%
42.0	170.270	12.523	341.830	.667%	18.202%
43.0	165.676	12.444	354.275	.663%	18.864%
44.0	161.334	12.342	366.617	.657%	19.522%
45.0	156.546	12.216	378.833	.651%	20.172%
46.0	151.952	12.065	390.898	.642%	20.815%
47.0	147.076	11.893	402.791	.633%	21.448%
48.0	142.139	11.692	414.483	.623%	22.070%
49.0	137.167	11.470	425.953	.611%	22.681%
50.0	131.939	11.220	437.172	.597%	23.279%
51.0	126.821	10.948	448.120	.583%	23.862%
52.0	121.412	10.652	458.772	.567%	24.429%
53.0	116.259	10.339	469.111	.551%	24.979%
54.0	110.727	10.005	479.115	.533%	25.512%
55.0	105.490	9.652	488.767	.514%	26.026%
56.0	99.817	9.277	498.044	.494%	26.520%
57.0	94.519	8.885	506.929	.473%	26.993%
58.0	88.934	8.483	515.413	.452%	27.445%
59.0	83.481	8.061	523.473	.429%	27.874%
60.0	77.954	7.627	531.100	.406%	28.280%
61.0	72.431	7.177	538.277	.382%	28.662%
62.0	67.048	6.721	544.998	.358%	29.020%
63.0	61.353	6.245	551.243	.333%	29.353%
64.0	56.059	5.761	557.004	.307%	29.659%
65.0	50.576	5.277	562.281	.281%	29.940%
66.0	45.476	4.792	567.074	.255%	30.196%
67.0	40.001	4.298	571.372	.229%	30.424%
68.0	34.945	3.796	575.168	.202%	30.627%
69.0	29.840	3.305	578.473	.176%	30.803%
70.0	24.925	2.813	581.286	.150%	30.952%
71.0	20.111	2.328	583.613	.124%	31.076%
72.0	15.614	1.858	585.471	.099%	31.175%
73.0	11.588	1.422	586.893	.076%	31.251%
74.0	7.800	1.019	587.913	.054%	31.305%
75.0	4.722	.662	588.574	.035%	31.340%

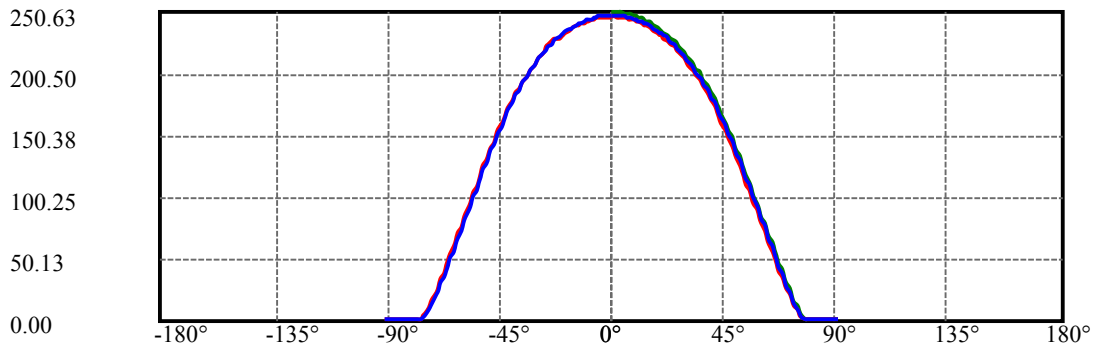
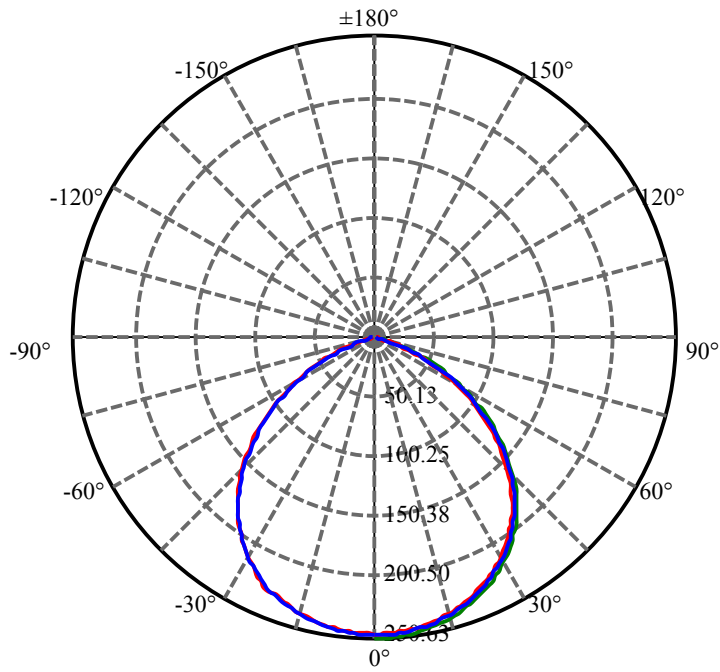
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.370	.376	588.951	.020%	31.361%
77.0	1.423	.202	589.153	.011%	31.371%
78.0	1.224	.142	589.295	.008%	31.379%
79.0	1.180	.129	589.424	.007%	31.386%
80.0	1.145	.125	589.549	.007%	31.392%
81.0	1.136	.123	589.673	.007%	31.399%
82.0	1.088	.121	589.793	.006%	31.405%
83.0	1.035	.115	589.909	.006%	31.412%
84.0	1.026	.112	590.021	.006%	31.418%
85.0	.991	.110	590.131	.006%	31.423%
86.0	.965	.107	590.238	.006%	31.429%
87.0	.947	.105	590.342	.006%	31.435%
88.0	.934	.103	590.445	.005%	31.440%
89.0	.916	.101	590.547	.005%	31.446%
90.0	.925	.101	590.648	.005%	31.451%

## ZONAL LUMEN SUMMARY

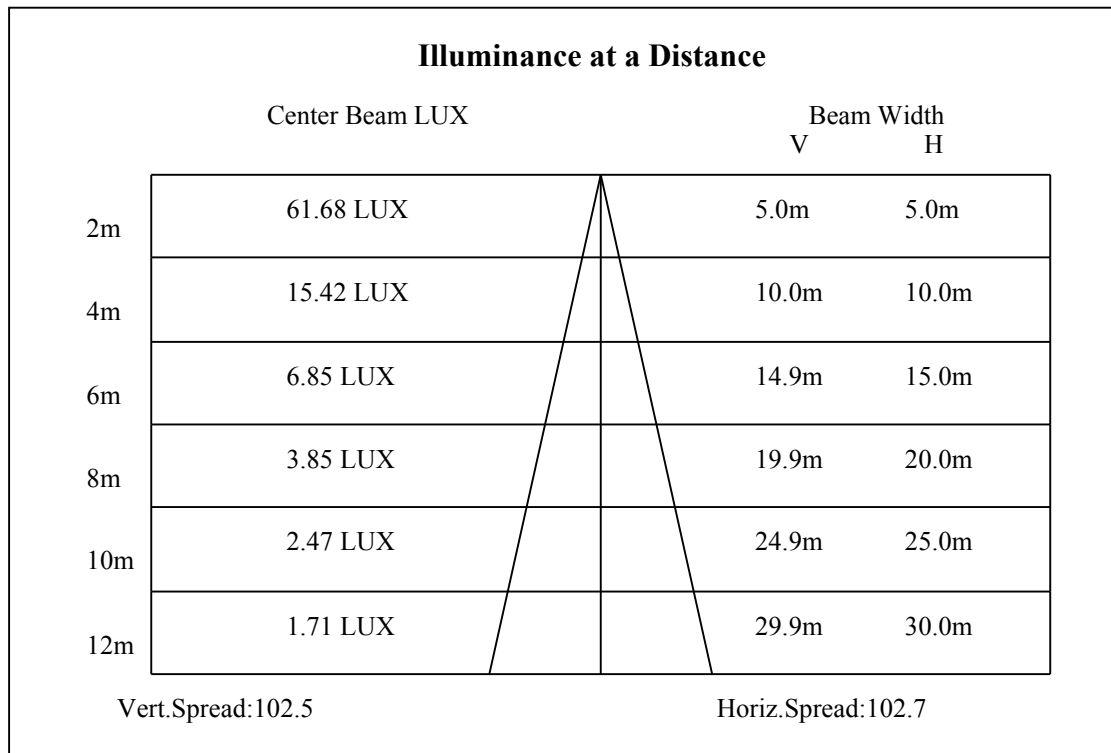
Zone	Lumens	%Lamp	%Fixt
0-30	193.96	10.33%	32.84%
0-40	316.73	16.87%	53.62%
0-60	531.10	28.28%	89.92%
0-90	590.55	31.45%	99.98%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-180	590.65	31.45%	100.00%

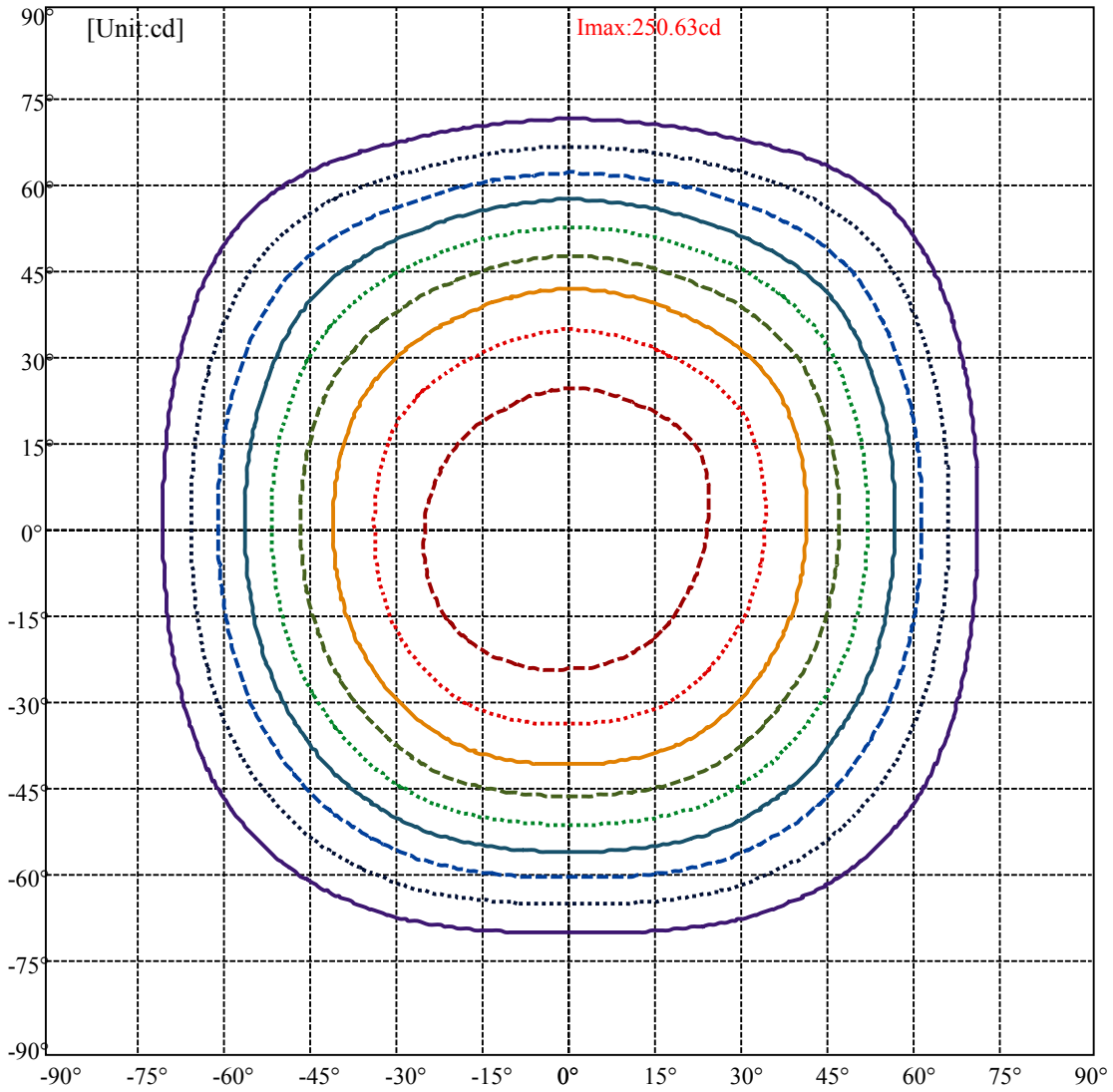
## ZONAL LUMEN SUMMARY

0-10	23.49
10-20	67.53
20-30	102.94
30-40	122.77
40-50	120.44
50-60	93.93
60-70	50.19
70-80	8.26
80-90	1.00
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



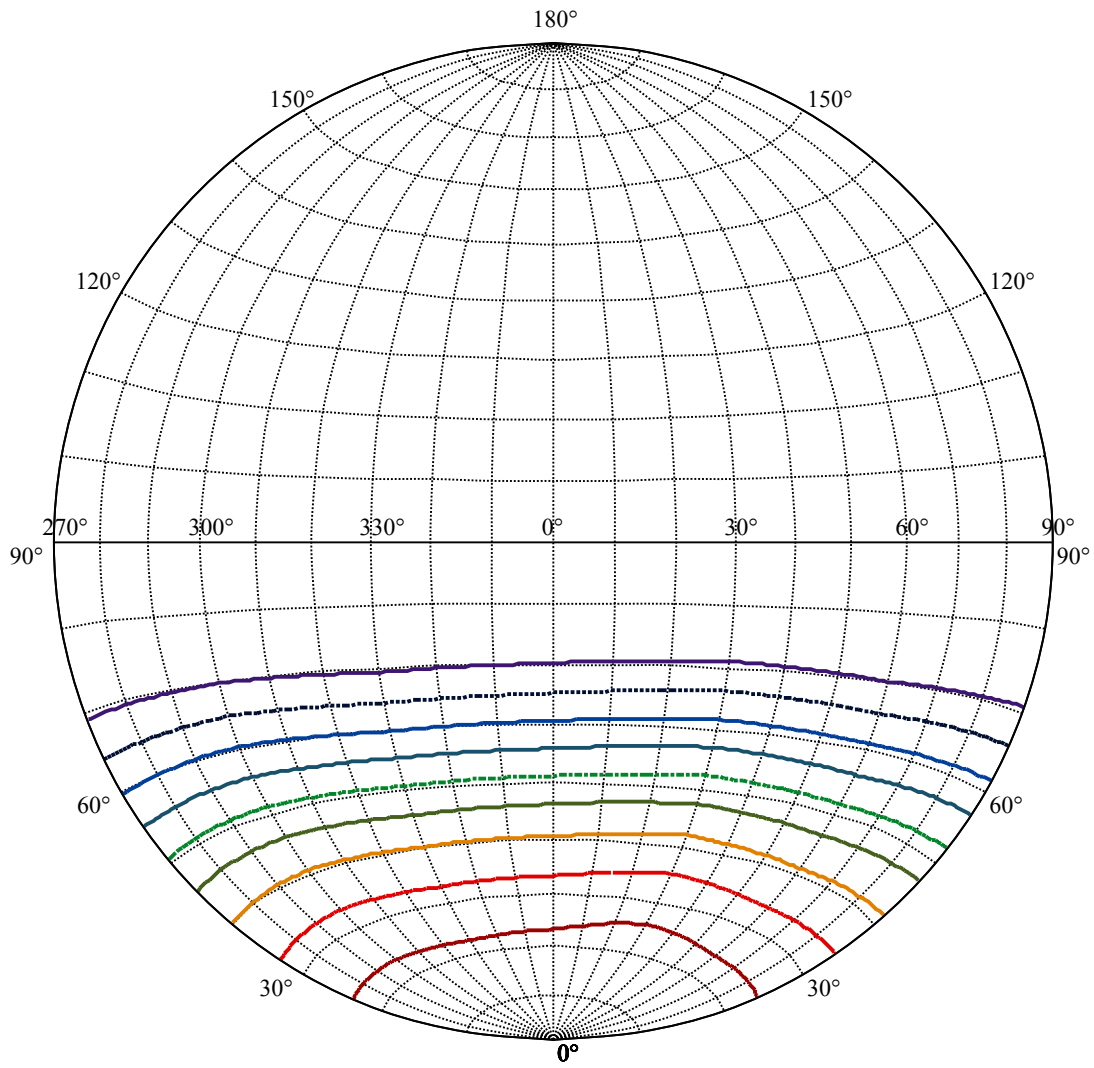
C30(Max): —  
C0/C180: —  
C90/C270: —





(10%Imax) 25.0025	—
(20%Imax) 50.005	⋯
(30%Imax) 75.0075	- - -
(40%Imax) 100.01	—
(50%Imax) 125.013	⋯
(60%Imax) 150.015	- - -
(70%Imax) 175.018	—
(80%Imax) 200.02	⋯
(90%Imax) 225.023	- - -



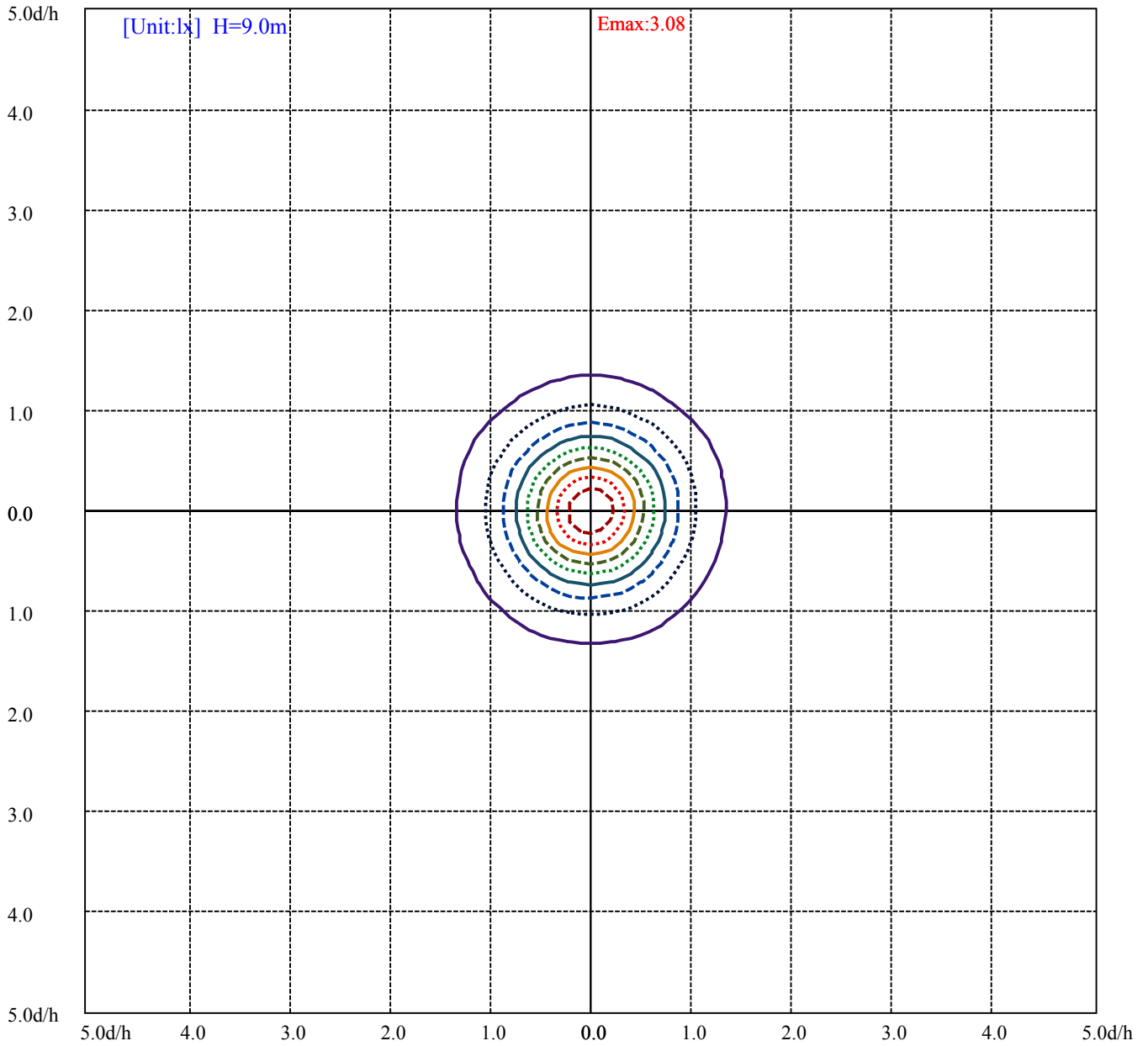


House

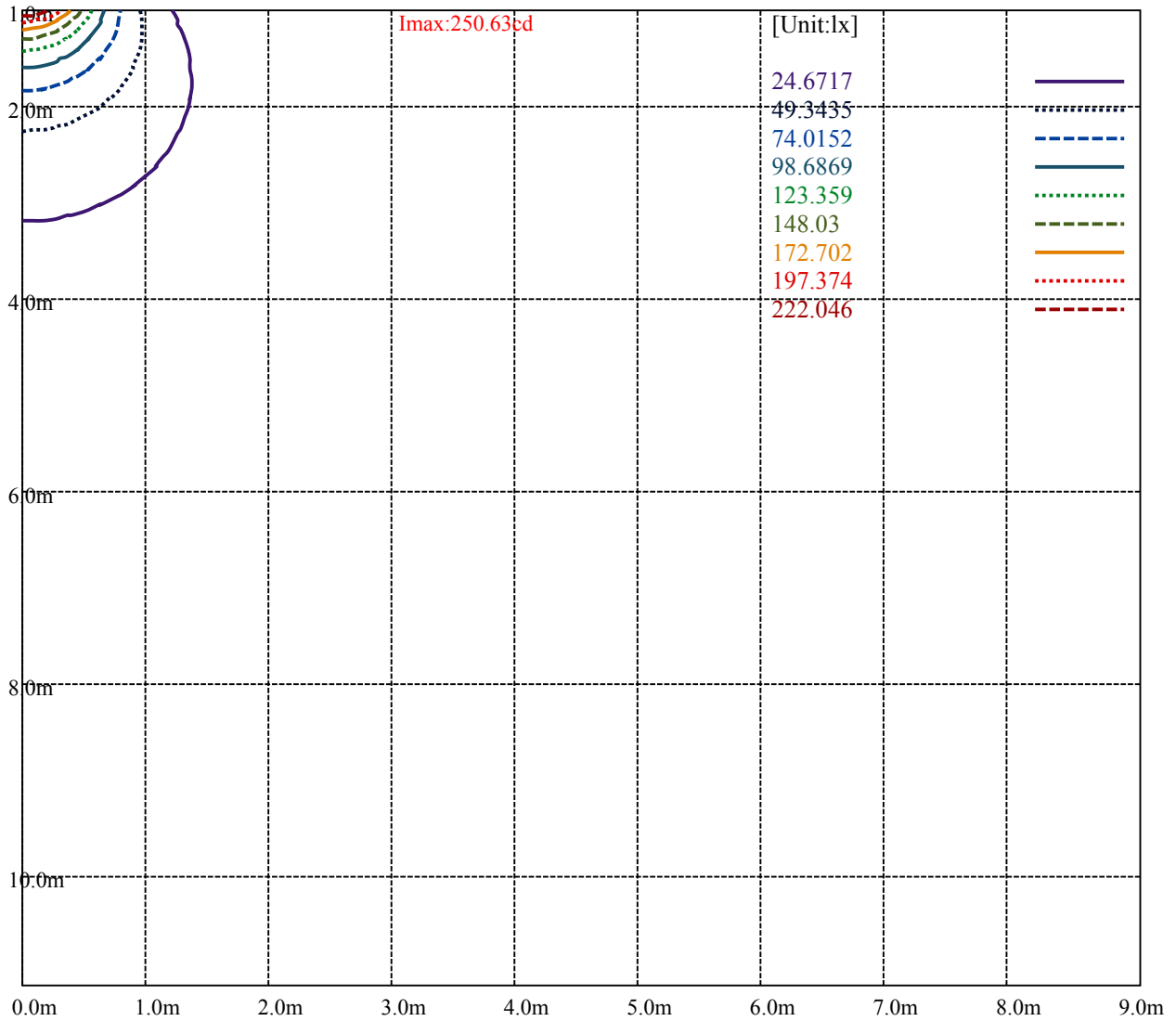
Road

**I<sub>max</sub>:250.63cd**

(10%I <sub>max</sub> ) 25.0628	—
(20%I <sub>max</sub> ) 50.1257	⋯
(30%I <sub>max</sub> ) 75.1885	- - -
(40%I <sub>max</sub> ) 100.251	—
(50%I <sub>max</sub> ) 125.314	⋯
(60%I <sub>max</sub> ) 150.377	- - -
(70%I <sub>max</sub> ) 175.44	—
(80%I <sub>max</sub> ) 200.503	⋯
(90%I <sub>max</sub> ) 225.566	- - -



- (10%Emax) 0.3083407
- (20%Emax) 0.6166815
- (30%Emax) 0.9250235
- (40%Emax) 1.233364
- (50%Emax) 1.541704
- (60%Emax) 1.850049
- (70%Emax) 2.158383
- (80%Emax) 2.466728
- (90%Emax) 2.775074

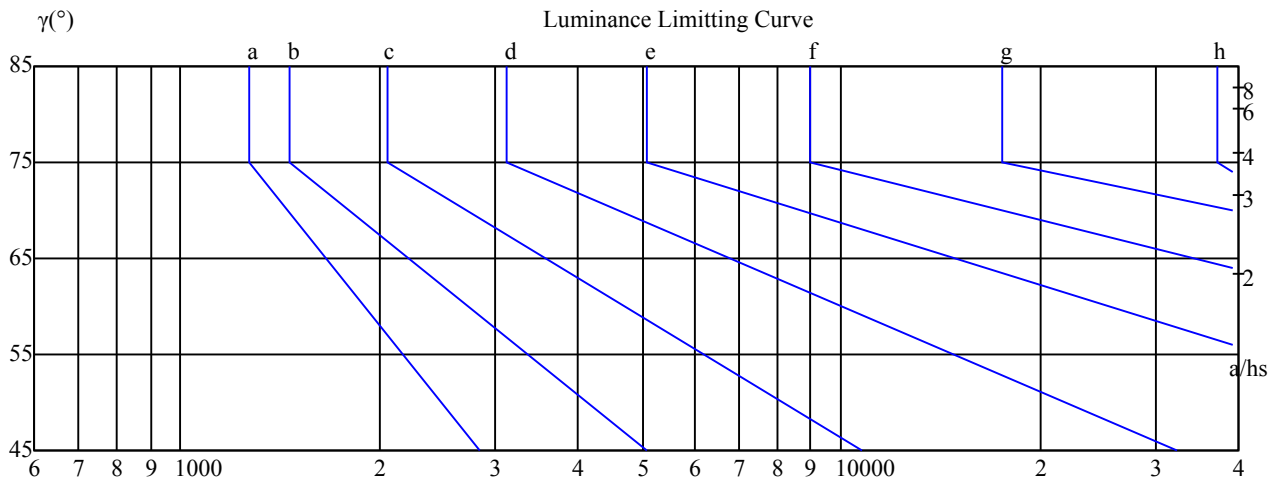


Luminance Table

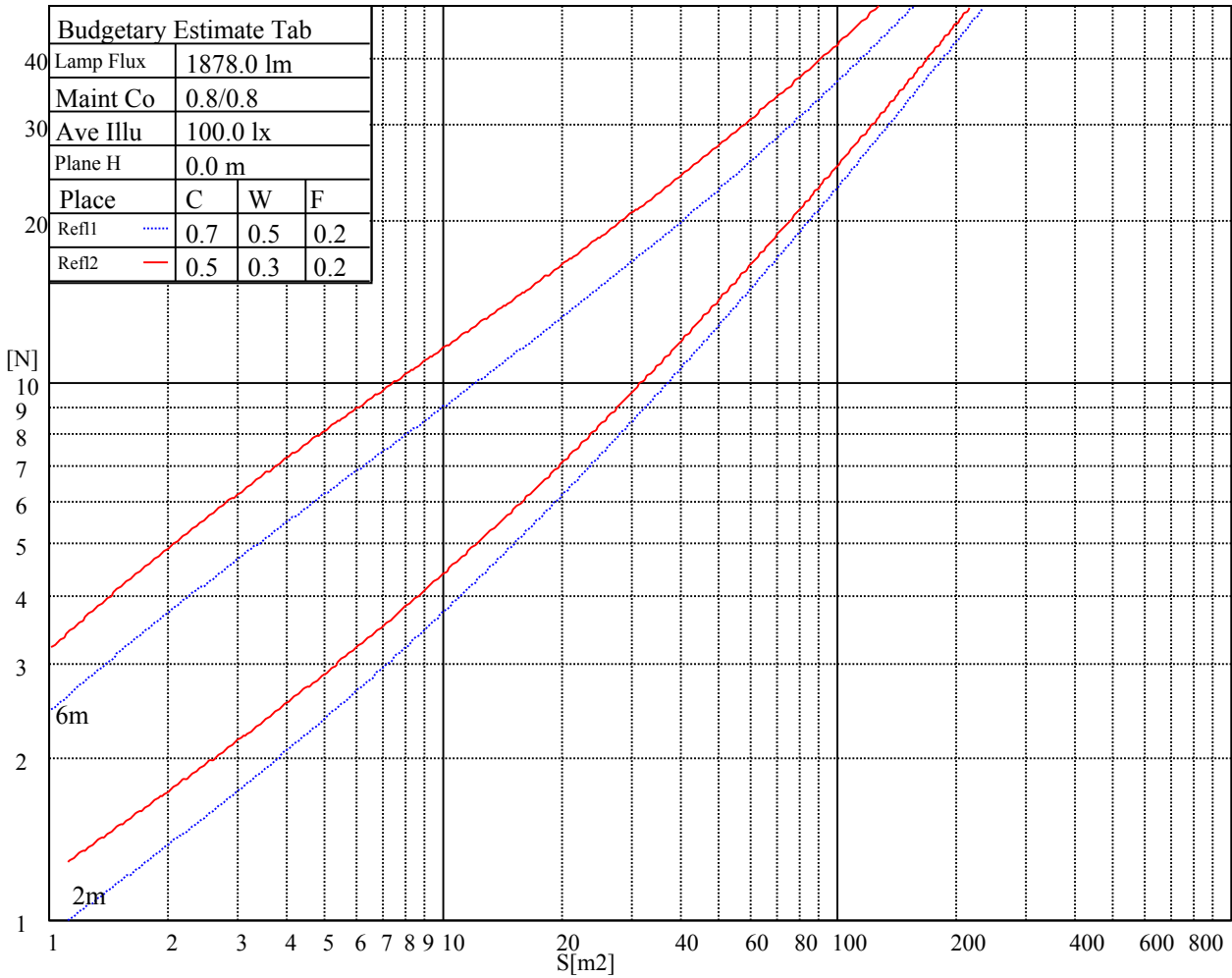
$\gamma$	45	50	55	60	65	70	75	80	85
C0	299	277	249	213	164	103	27	9	15
C45	0	0	0	0	0	0	0	0	0
C90	306	286	260	224	177	113	34	9	15

Glare Table

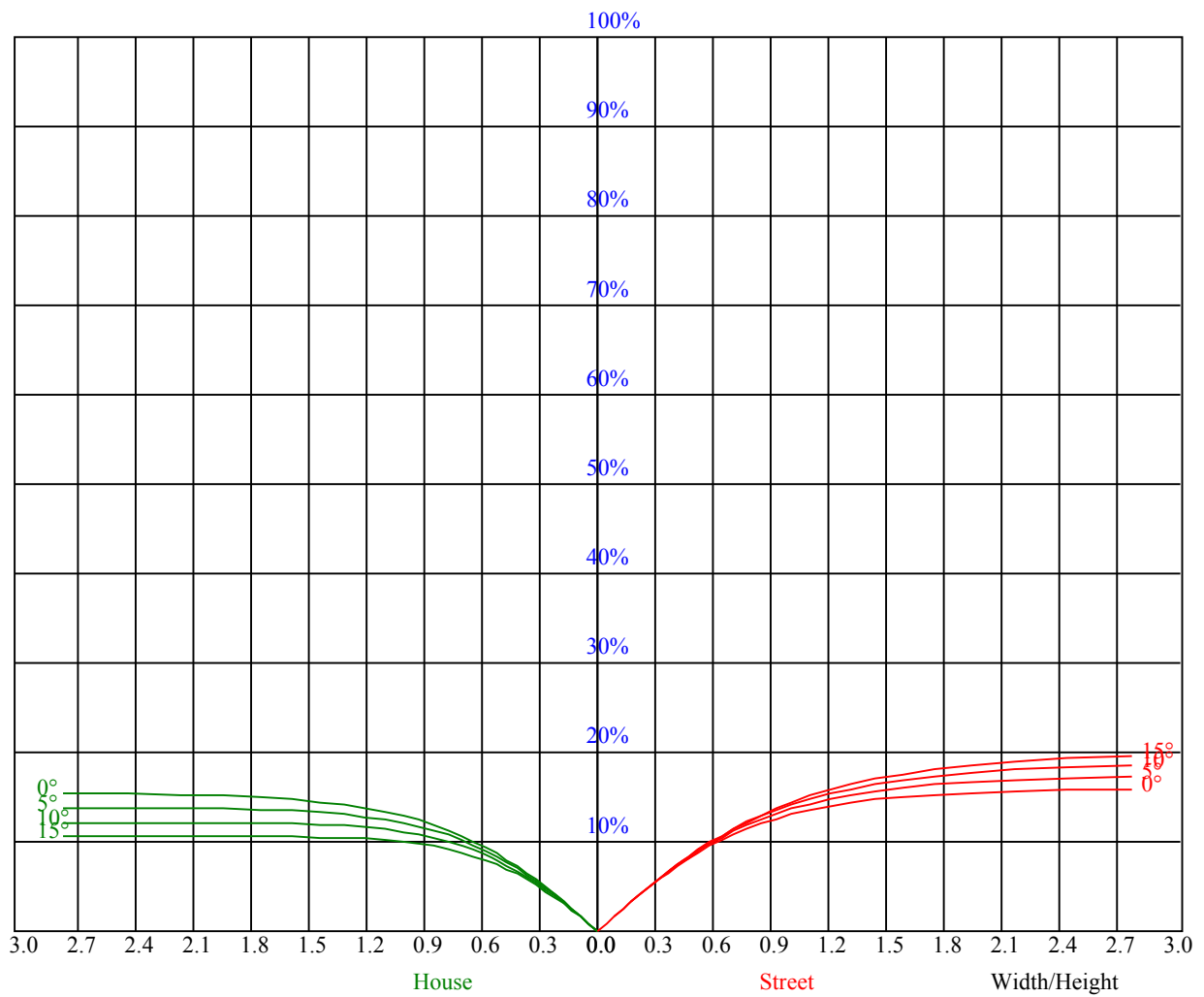
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



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	5.7	7.0	6.0	7.2	7.4	5.7	6.9	5.9	7.1	7.4
	3H	6.3	7.4	6.6	7.7	8.0	6.2	7.4	6.6	7.6	7.9
	4H	6.2	7.1	6.5	7.4	7.7	6.1	7.0	6.5	7.4	7.7
	6H	6.2	7.1	6.5	7.4	7.7	6.1	7.0	6.5	7.4	7.7
	8H	6.2	7.1	6.5	7.4	7.7	6.1	7.0	6.5	7.4	7.7
	12H	6.0	6.7	6.4	7.1	7.5	5.9	6.6	6.4	7.0	7.4
4H	2H	6.0	6.9	6.3	7.2	7.5	5.9	6.8	6.3	7.2	7.5
	3H	6.6	7.3	7.1	7.7	8.1	6.5	7.2	7.0	7.6	8.0
	4H	6.7	7.4	7.1	7.8	8.2	6.6	7.3	7.0	7.7	8.1
	6H	6.7	7.4	7.1	7.8	8.2	6.6	7.3	7.0	7.7	8.1
	8H	6.6	6.9	7.0	7.4	7.9	6.5	6.8	6.9	7.3	7.8
	12H	6.6	6.9	7.1	7.4	7.9	6.5	6.8	7.0	7.3	7.8
8H	4H	6.6	7.0	7.1	7.4	7.9	6.5	6.9	7.0	7.3	7.9
	6H	6.6	7.0	7.1	7.4	8.0	6.5	6.9	7.0	7.4	7.9
	8H	6.6	7.0	7.1	7.4	8.0	6.5	6.9	7.0	7.4	7.9
	12H	6.6	7.0	7.1	7.5	8.0	6.5	6.9	7.0	7.4	7.9
12H	4H	6.6	7.0	7.1	7.4	7.9	6.5	6.9	7.0	7.3	7.9
	6H	6.6	7.0	7.1	7.4	8.0	6.5	6.9	7.0	7.4	7.9
	8H	6.6	7.0	7.1	7.5	8.0	6.5	6.9	7.0	7.4	7.9
Variation with the observer position at spacings:											
S = 1.0H		0.6/-0.5					0.6/-0.5				
S = 1.5H		0.7/-1.7					0.7/-1.5				
S = 2.0H		2.5/-3.1					2.6/-3.1				
Standard tables:		BK2					BK2				
Uncorrected UGR		-14.9					-15.0				
According 1000lm											



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	0.37	0.37	0.37	0.37	0.37	0.37	0.35	0.35	0.35	0.33	0.33	0.33	0.32	0.32	0.32	0.31
1	0.34	0.33	0.32	0.33	0.32	0.31	0.32	0.31	0.30	0.30	0.30	0.29	0.29	0.29	0.28	0.28
2	0.30	0.28	0.26	0.29	0.28	0.26	0.28	0.27	0.26	0.27	0.26	0.25	0.26	0.25	0.24	0.24
3	0.27	0.24	0.23	0.26	0.24	0.22	0.25	0.23	0.22	0.24	0.23	0.22	0.24	0.22	0.21	0.21
4	0.24	0.21	0.19	0.23	0.21	0.19	0.23	0.21	0.19	0.22	0.20	0.19	0.21	0.20	0.19	0.18
5	0.21	0.19	0.17	0.21	0.19	0.17	0.20	0.18	0.17	0.20	0.18	0.16	0.19	0.18	0.16	0.16
6	0.19	0.17	0.15	0.19	0.17	0.15	0.18	0.16	0.15	0.18	0.16	0.15	0.17	0.16	0.14	0.14
7	0.18	0.15	0.13	0.17	0.15	0.13	0.17	0.15	0.13	0.16	0.14	0.13	0.16	0.14	0.13	0.12
8	0.16	0.14	0.12	0.16	0.13	0.12	0.15	0.13	0.12	0.15	0.13	0.12	0.15	0.13	0.12	0.11
9	0.15	0.12	0.11	0.15	0.12	0.11	0.14	0.12	0.11	0.14	0.12	0.11	0.14	0.12	0.10	0.10
10	0.14	0.11	0.10	0.13	0.11	0.10	0.13	0.11	0.10	0.13	0.11	0.10	0.13	0.11	0.10	0.09





## Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	246.72	246.77	246.61	246.45	246.19	245.82	245.34	244.87	244.34
30.0	250.58	250.63	250.52	250.31	250.05	249.73	249.41	248.94	248.41
60.0	248.94	248.88	248.83	248.57	248.36	247.99	247.51	246.93	246.29
90.0	247.83	247.88	247.77	247.62	247.35	247.03	246.56	246.08	245.40
120.0	247.30	247.19	247.03	246.82	246.56	246.14	245.71	245.08	244.34
150.0	246.93	246.88	246.82	246.61	246.40	245.98	245.61	245.13	244.39
180.0	246.72	246.66	246.51	246.29	246.03	245.71	245.34	244.81	244.07
210.0	250.58	250.58	250.31	250.15	249.68	249.36	248.99	248.41	247.83
240.0	248.94	248.83	248.78	248.62	248.41	247.93	247.56	246.98	246.51
270.0	247.83	247.88	247.77	247.51	247.14	246.77	246.29	245.71	245.08
300.0	247.30	247.30	247.25	247.03	246.72	246.40	245.92	245.45	244.87
330.0	246.93	246.88	246.72	246.45	246.08	245.71	245.24	244.71	244.07
360.0	246.72	246.77	246.61	246.45	246.19	245.82	245.34	244.87	244.34
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	243.70	243.07	242.22	241.43	240.27	239.21	238.00	236.83	235.46
30.0	247.83	247.03	246.19	245.29	244.39	243.39	242.33	241.17	239.90
60.0	245.61	244.92	244.02	243.12	242.28	241.11	240.01	238.90	237.52
90.0	244.81	244.02	243.23	242.44	241.48	240.59	239.48	238.42	237.10
120.0	243.70	242.75	241.96	241.01	240.01	239.11	238.00	236.89	235.57
150.0	243.76	242.96	242.17	241.33	240.32	239.48	238.42	237.42	236.09
180.0	243.44	242.59	241.80	240.90	239.95	239.00	238.00	236.94	235.46
210.0	247.14	246.35	245.40	244.55	243.55	242.65	241.54	240.22	238.74
240.0	245.71	245.13	244.34	243.55	242.44	241.54	240.38	239.32	237.84
270.0	244.44	243.65	242.81	241.75	240.90	239.85	238.58	237.31	235.99
300.0	244.23	243.55	242.75	241.91	240.85	239.69	238.47	237.42	235.99
330.0	243.44	242.70	241.85	240.75	239.74	238.74	237.47	236.15	234.83
360.0	243.70	243.07	242.22	241.43	240.27	239.21	238.00	236.83	235.46
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	234.19	232.71	231.34	229.59	227.69	226.21	224.31	222.25	220.03
30.0	238.58	237.05	235.51	233.82	232.24	230.39	229.06	227.74	225.15
60.0	236.15	234.77	233.24	231.55	229.75	227.74	226.10	223.88	221.77
90.0	235.72	234.24	232.87	231.23	229.65	227.69	225.89	223.78	221.56
120.0	234.30	232.76	231.23	229.54	227.85	225.84	223.99	221.77	219.82
150.0	234.72	233.24	231.81	230.28	228.69	227.00	224.99	222.93	220.77
180.0	234.14	232.55	231.02	229.38	228.32	228.43	227.80	224.25	222.72
210.0	237.20	235.51	233.93	232.92	233.45	234.93	231.02	227.58	223.83
240.0	236.52	235.04	233.56	231.81	231.07	230.91	227.64	224.84	222.56
270.0	234.56	233.03	231.55	229.86	229.33	227.37	224.62	222.72	220.08
300.0	234.61	233.13	231.71	229.91	228.11	226.37	224.47	222.46	220.13
330.0	233.50	231.81	230.28	228.48	226.84	224.84	222.83	220.66	218.65
360.0	234.19	232.71	231.34	229.59	227.69	226.21	224.31	222.25	220.03
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	217.70	215.27	212.73	209.98	207.55	204.70	202.00	198.89	195.56
30.0	222.25	219.97	217.44	215.22	212.68	209.93	207.34	204.38	201.63
60.0	219.50	217.23	214.58	211.94	209.35	206.34	203.59	200.37	197.19
90.0	219.45	217.12	214.95	212.36	209.56	206.76	204.17	201.48	198.41
120.0	217.38	214.85	212.63	209.93	207.34	204.28	201.58	198.41	195.13
150.0	218.55	216.64	215.01	211.94	208.77	206.07	203.38	201.11	198.20
180.0	218.71	215.38	212.57	209.77	207.24	204.22	201.11	198.25	195.08
210.0	220.77	218.07	215.06	211.94	208.87	205.76	202.48	199.52	196.14
240.0	221.08	218.12	214.90	211.73	209.72	207.66	204.75	200.63	197.04
270.0	217.49	215.06	213.00	210.25	206.76	203.64	200.79	197.56	194.66
300.0	217.91	215.75	213.10	210.41	207.92	205.12	202.37	199.31	196.08
330.0	216.49	214.00	211.31	208.93	206.07	203.17	200.42	197.30	194.39
360.0	217.70	215.27	212.73	209.98	207.55	204.70	202.00	198.89	195.56

## Intensity data(cd)

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	192.60	189.16	185.94	181.97	178.27	173.89	169.66	165.17	161.04
30.0	198.36	195.03	191.96	188.21	184.72	180.49	176.63	172.19	167.44
60.0	194.29	190.90	187.52	183.61	179.91	175.52	170.98	166.43	162.15
90.0	195.56	192.23	188.74	184.88	181.34	177.06	173.25	168.76	164.69
120.0	191.86	188.74	185.36	181.50	177.27	172.83	168.92	164.32	160.14
150.0	194.66	191.17	187.58	183.72	180.12	176.00	172.04	167.49	163.37
180.0	191.70	188.58	185.30	181.34	177.11	172.72	168.71	163.95	159.72
210.0	193.07	189.21	185.14	180.92	176.95	172.30	168.07	163.21	158.82
240.0	193.55	190.43	186.68	183.19	179.22	174.57	170.03	165.48	161.20
270.0	191.27	187.47	183.88	179.65	175.79	171.30	167.17	162.47	157.66
300.0	193.12	189.64	186.25	182.29	178.54	174.26	169.92	165.43	161.25
330.0	191.06	187.52	184.14	180.12	176.37	171.98	167.86	163.21	158.51
360.0	192.60	189.16	185.94	181.97	178.27	173.89	169.66	165.17	161.04
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	156.23	151.85	147.30	142.12	136.84	131.55	126.69	121.35	116.49
30.0	162.58	158.35	153.38	148.83	143.65	138.90	133.61	128.12	123.20
60.0	157.45	153.06	148.20	143.76	138.58	133.30	128.54	123.04	118.13
90.0	160.09	155.33	150.95	145.87	141.33	136.04	130.76	125.42	120.50
120.0	155.39	151.00	146.09	141.01	136.47	131.18	126.42	120.82	115.33
150.0	158.72	153.85	149.42	144.34	139.74	134.51	129.23	124.42	118.87
180.0	154.91	150.47	145.45	140.38	135.73	130.34	125.47	119.87	114.32
210.0	153.70	148.52	143.76	138.47	133.51	127.90	122.30	117.23	111.41
240.0	156.34	151.74	146.61	141.17	136.36	130.86	125.84	120.29	115.33
270.0	152.59	148.15	142.91	138.16	132.87	127.96	122.51	116.96	111.94
300.0	157.03	152.06	146.88	142.28	136.99	131.60	126.74	121.30	116.49
330.0	153.54	149.05	143.97	139.27	133.93	129.12	123.73	118.13	113.11
360.0	156.23	151.85	147.30	142.12	136.84	131.55	126.69	121.35	116.49
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	111.10	105.55	99.84	94.71	89.59	83.82	78.65	72.94	67.23
30.0	117.60	112.63	106.97	101.37	95.72	90.59	84.78	79.60	73.84
60.0	112.58	106.97	101.37	96.30	90.64	85.67	79.91	74.84	69.03
90.0	115.01	110.09	104.44	99.42	93.71	88.00	82.87	77.06	71.93
120.0	110.36	104.81	99.05	94.03	88.32	83.19	77.43	71.72	66.54
150.0	113.26	108.35	102.75	97.73	92.07	86.36	81.23	75.42	70.35
180.0	108.67	103.75	97.99	92.92	87.21	82.24	76.53	70.88	65.85
210.0	105.65	100.47	95.29	89.48	83.56	77.69	72.46	66.59	61.47
240.0	109.83	104.23	98.41	93.13	87.26	81.97	76.11	70.82	65.11
270.0	106.29	101.21	95.35	89.64	84.51	78.65	72.88	67.70	62.58
300.0	110.94	105.34	99.68	94.55	89.37	83.51	78.33	72.57	66.70
330.0	107.45	102.48	96.67	90.96	85.25	80.07	74.26	69.03	63.95
360.0	111.10	105.55	99.84	94.71	89.59	83.82	78.65	72.94	67.23
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	61.52	56.61	51.27	46.46	41.01	36.31	31.08	26.00	21.62
30.0	68.81	63.05	57.35	52.38	46.88	41.91	36.31	31.45	26.16
60.0	63.16	57.98	52.38	47.25	41.49	36.47	30.97	25.69	20.72
90.0	66.12	60.25	55.13	49.52	43.92	38.90	33.98	28.59	23.47
120.0	60.73	55.50	49.89	44.82	39.16	33.56	28.22	23.68	18.82
150.0	64.53	59.41	53.75	48.20	42.60	37.63	32.82	27.48	22.41
180.0	60.15	55.02	49.63	44.66	39.11	33.61	28.43	24.00	19.13
210.0	55.81	50.90	45.40	39.96	35.20	29.91	25.42	20.40	15.75
240.0	59.41	54.39	48.99	44.19	38.64	33.24	28.65	23.68	18.97
270.0	56.82	51.11	45.56	40.59	35.20	30.50	25.42	21.04	16.33
300.0	60.94	55.92	50.53	45.61	40.12	35.31	29.97	24.74	20.30
330.0	58.24	52.59	47.04	42.07	36.68	31.98	26.80	22.36	17.65
360.0	61.52	56.61	51.27	46.46	41.01	36.31	31.08	26.00	21.62

## Intensity data(cd)

C/ $\gamma$ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	16.81	12.90	8.72	5.13	2.59	1.37	1.27	1.22	1.22
30.0	20.93	16.12	12.05	8.30	4.81	2.17	1.27	1.27	1.16
60.0	16.33	12.31	8.14	4.60	2.01	1.27	1.16	1.11	1.06
90.0	18.34	14.16	9.83	6.45	3.38	1.59	1.27	1.22	1.22
120.0	14.64	10.31	6.87	3.65	1.48	1.22	1.16	1.11	1.11
150.0	17.55	13.48	9.35	6.08	3.12	1.48	1.16	1.16	1.16
180.0	15.01	10.73	6.82	4.02	1.69	1.22	1.16	1.11	1.06
210.0	11.84	7.88	4.60	2.43	1.43	1.32	1.16	1.22	1.16
240.0	15.01	10.94	7.66	4.44	2.17	1.32	1.27	1.16	1.22
270.0	12.00	8.62	5.29	3.01	1.48	1.37	1.32	1.22	1.11
300.0	15.64	11.89	8.03	4.92	2.59	1.43	1.27	1.22	1.16
330.0	13.27	9.72	6.24	3.65	1.69	1.32	1.22	1.16	1.11
360.0	16.81	12.90	8.72	5.13	2.59	1.37	1.27	1.22	1.22
C/ $\gamma$ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.22	1.06	1.06	1.00	0.95	0.90	0.90	0.95	0.90
30.0	1.16	1.16	1.06	1.00	1.00	1.06	1.00	0.95	0.95
60.0	1.11	1.11	1.00	1.06	1.00	0.95	0.90	0.90	0.90
90.0	1.11	1.06	1.06	1.06	0.95	0.90	0.95	0.95	0.90
120.0	1.11	1.06	1.00	1.00	1.00	0.95	0.95	0.90	0.95
150.0	1.16	1.06	1.06	1.00	1.00	0.95	0.90	0.95	0.85
180.0	1.11	1.06	1.00	0.95	0.95	0.95	0.95	0.90	0.95
210.0	1.11	1.11	1.00	1.06	1.06	0.95	0.95	0.90	0.90
240.0	1.22	1.11	1.11	1.00	1.00	0.95	0.95	0.95	0.95
270.0	1.06	1.06	1.06	1.00	0.95	1.00	1.00	1.00	0.95
300.0	1.16	1.11	1.00	1.11	1.06	1.06	0.95	0.90	0.95
330.0	1.11	1.11	1.00	1.06	0.95	0.95	0.95	0.95	0.85
360.0	1.22	1.06	1.06	1.00	0.95	0.90	0.90	0.95	0.90
C/ $\gamma$ (°)	90.0								
0.0	0.95								
30.0	0.90								
60.0	1.00								
90.0	0.95								
120.0	0.90								
150.0	0.95								
180.0	0.85								
210.0	0.90								
240.0	0.95								
270.0	0.90								
300.0	0.90								
330.0	0.95								
360.0	0.95								