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## Nata

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Client: NT

LumCAT: 69-0020 & 11-0161-S-MW

Luminaire: L280\*W40\*20(matt white)

Report No: 20241119-B007

Ballast type: AC

Test No: 20241119-C007

Voltage(V): 23.660

LampCAT: CREE JE2835B\_N×2

Current(A): 0.453

Lamp flux(lm): 1205.1

Power (W): 10.717

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

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## Photometric Results

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Lumens(lm): 1138.42, Efficiency(%): 94.46% , Luminous Efficacy(lm/W): 106.23

Central intensity(cd): 1230.202, Maximum intensity(cd): 1230.202

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=60.8

[C90/270]Total=62.4

Field angle(10%Imax): [C0/180]Total=78.6

[C90/270]Total=79.4

Maximum s/h(1/2): C0\_180=0.98 C90\_270=1.02

Maximum s/h(1/4): C0\_180=0.89 C90\_270=0.91

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.50%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.332%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2024/11/19  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.65

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1218.716	0.000	0	0.00%	0.00%
1.0	1218.278	1.166	1.166	0.10%	0.10%
2.0	1217.144	3.496	4.662	0.29%	0.41%
3.0	1214.986	5.817	10.478	0.48%	0.92%
4.0	1212.352	8.125	18.604	0.67%	1.63%
5.0	1209.865	10.420	29.024	0.86%	2.55%
6.0	1207.195	12.702	41.726	1.05%	3.67%
7.0	1203.208	14.961	56.687	1.24%	4.98%
8.0	1198.672	17.190	73.877	1.43%	6.49%
9.0	1193.340	19.386	93.263	1.61%	8.19%
10.0	1185.315	21.526	114.789	1.79%	10.08%
11.0	1180.516	23.640	138.429	1.96%	12.16%
12.0	1175.644	25.756	164.185	2.14%	14.42%
13.0	1166.313	27.793	191.978	2.31%	16.86%
14.0	1158.815	29.761	221.739	2.47%	19.48%
15.0	1150.465	31.703	253.442	2.63%	22.26%
16.0	1138.588	33.541	286.983	2.78%	25.21%
17.0	1125.629	35.260	322.243	2.93%	28.31%
18.0	1110.629	36.871	359.114	3.06%	31.55%
19.0	1093.105	38.340	397.455	3.18%	34.91%
20.0	1072.494	39.636	437.091	3.29%	38.39%
21.0	1049.824	40.753	477.844	3.38%	41.97%
22.0	1023.350	41.661	519.505	3.46%	45.63%
23.0	992.205	42.292	561.797	3.51%	49.35%
24.0	957.264	42.622	604.419	3.54%	53.09%
25.0	917.187	42.621	647.04	3.54%	56.84%
26.0	872.058	42.235	689.276	3.50%	60.55%
27.0	824.743	41.513	730.788	3.44%	64.19%
28.0	771.648	40.417	771.206	3.35%	67.74%
29.0	716.206	38.926	810.132	3.23%	71.16%
30.0	659.033	37.131	847.263	3.08%	74.42%
31.0	596.304	34.934	882.197	2.90%	77.49%
32.0	536.158	32.444	914.641	2.69%	80.34%
33.0	476.359	29.829	944.47	2.48%	82.96%
34.0	416.453	27.019	971.489	2.24%	85.34%
35.0	356.098	23.993	995.482	1.99%	87.44%
36.0	304.178	21.023	1016.505	1.74%	89.29%
37.0	258.399	18.348	1034.853	1.52%	90.90%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	220.846	15.997	1050.85	1.33%	92.31%
39.0	169.902	13.337	1064.187	1.11%	93.48%
40.0	122.330	10.192	1074.379	0.85%	94.37%
41.0	93.018	7.668	1082.048	0.64%	95.05%
42.0	69.883	5.918	1087.966	0.49%	95.57%
43.0	52.433	4.531	1092.497	0.38%	95.97%
44.0	40.827	3.520	1096.017	0.29%	96.28%
45.0	32.363	2.813	1098.83	0.23%	96.52%
46.0	27.301	2.333	1101.163	0.19%	96.73%
47.0	23.778	2.032	1103.195	0.17%	96.91%
48.0	21.207	1.819	1105.013	0.15%	97.07%
49.0	19.338	1.665	1106.678	0.14%	97.21%
50.0	17.816	1.549	1108.227	0.13%	97.35%
51.0	16.551	1.454	1109.681	0.12%	97.48%
52.0	15.428	1.372	1111.053	0.11%	97.60%
53.0	14.437	1.299	1112.353	0.11%	97.71%
54.0	13.574	1.235	1113.587	0.10%	97.82%
55.0	12.794	1.177	1114.764	0.10%	97.92%
56.0	12.059	1.123	1115.887	0.09%	98.02%
57.0	11.408	1.073	1116.96	0.09%	98.12%
58.0	10.743	1.024	1117.985	0.08%	98.21%
59.0	10.157	0.977	1118.962	0.08%	98.29%
60.0	9.616	0.934	1119.896	0.08%	98.37%
61.0	9.111	0.894	1120.79	0.07%	98.45%
62.0	8.661	0.856	1121.646	0.07%	98.53%
63.0	8.233	0.822	1122.468	0.07%	98.60%
64.0	7.864	0.790	1123.258	0.07%	98.67%
65.0	7.527	0.762	1124.019	0.06%	98.74%
66.0	7.217	0.736	1124.755	0.06%	98.80%
67.0	6.939	0.712	1125.467	0.06%	98.86%
68.0	6.701	0.691	1126.158	0.06%	98.92%
69.0	6.481	0.672	1126.83	0.06%	98.98%
70.0	6.258	0.654	1127.484	0.05%	99.04%
71.0	6.079	0.638	1128.122	0.05%	99.10%
72.0	5.900	0.623	1128.745	0.05%	99.15%
73.0	5.753	0.609	1129.354	0.05%	99.20%
74.0	5.582	0.596	1129.95	0.05%	99.26%
75.0	5.457	0.583	1130.533	0.05%	99.31%

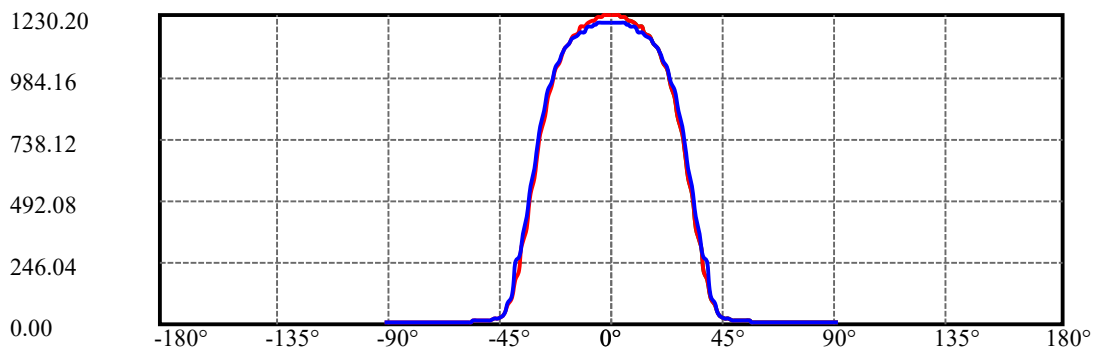
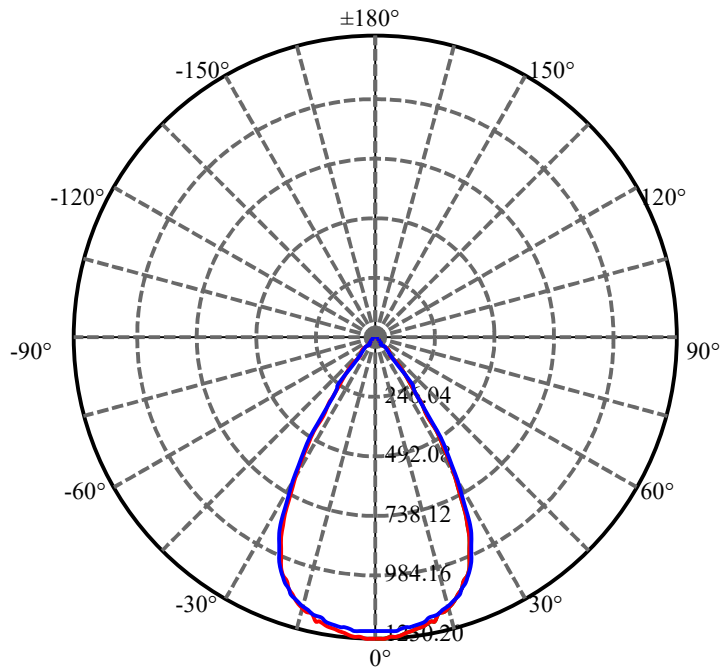
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.322	0.572	1131.106	0.05%	99.36%
77.0	5.216	0.562	1131.667	0.05%	99.41%
78.0	5.106	0.553	1132.22	0.05%	99.46%
79.0	5.022	0.544	1132.764	0.05%	99.50%
80.0	4.941	0.537	1133.301	0.04%	99.55%
81.0	4.854	0.530	1133.831	0.04%	99.60%
82.0	4.792	0.523	1134.354	0.04%	99.64%
83.0	4.733	0.518	1134.872	0.04%	99.69%
84.0	4.660	0.512	1135.383	0.04%	99.73%
85.0	4.634	0.507	1135.891	0.04%	99.78%
86.0	4.620	0.506	1136.397	0.04%	99.82%
87.0	4.609	0.505	1136.902	0.04%	99.87%
88.0	4.605	0.505	1137.406	0.04%	99.91%
89.0	4.598	0.504	1137.911	0.04%	99.96%
90.0	4.601	0.504	1138.415	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	847.26	70.31%	74.42%
0-40	1074.38	89.15%	94.37%
0-60	1119.90	92.93%	98.37%
0-90	1137.91	94.42%	99.96%
0-120	1137.91	94.42%	99.96%
0-180	1138.42	94.46%	100.00%
60-90	18.01	1.49%	1.58%
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%
0-31.88	910.73	75.57%	80.00%

ZONAL LUMEN SUMMARY

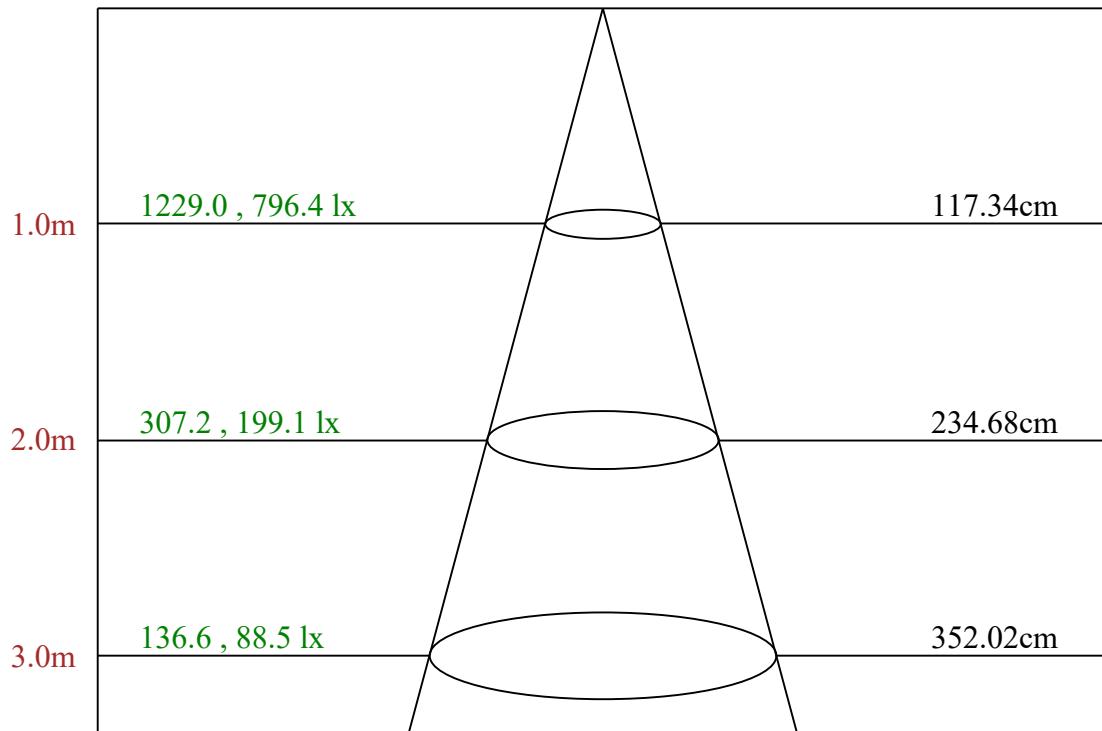
0-10	114.79
10-20	322.30
20-30	410.17
30-40	227.12
40-50	33.85
50-60	11.67
60-70	7.59
70-80	5.82
80-90	4.61
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



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

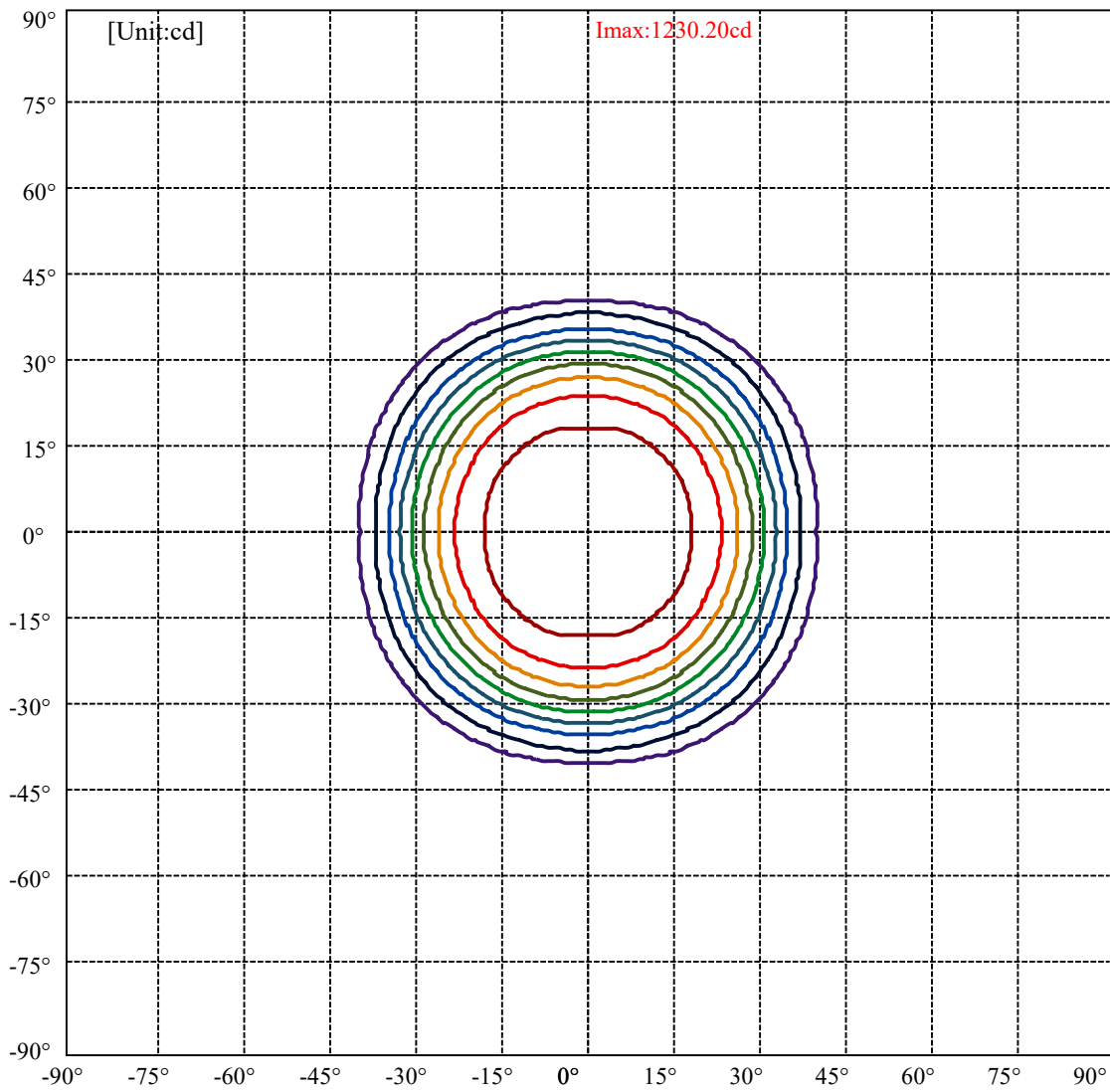
Field angle(10%Imax):C0/180Left:39.4 Right:39.4  
 :C90/270Left:39.8 Right:39.8

Beam Angle(50%Imax):C0/180Left:30.4 Right:30.4  
 :C90/270Left:31.2 Right:31.2



Max , Ave      Beam angle of C0 plane 60.80

ISO-Intensity(V-H)



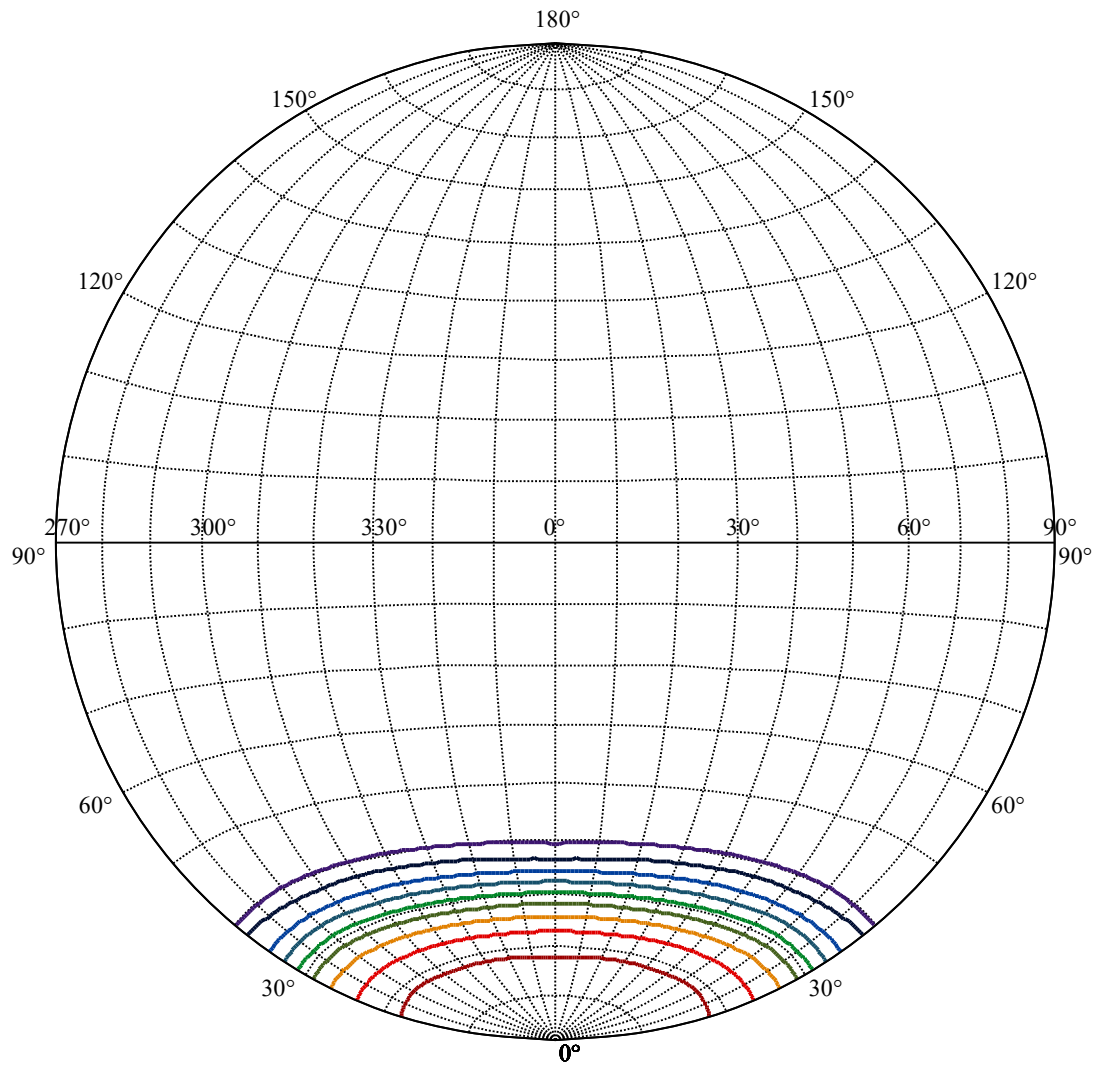
(10%Imax) 122.991	—
(20%Imax) 245.982	—
(30%Imax) 368.973	—
(40%Imax) 491.964	—
(50%Imax) 614.954	—
(60%Imax) 737.945	—
(70%Imax) 860.936	—
(80%Imax) 983.927	—
(90%Imax) 1106.92	—

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2024/11/19  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.65





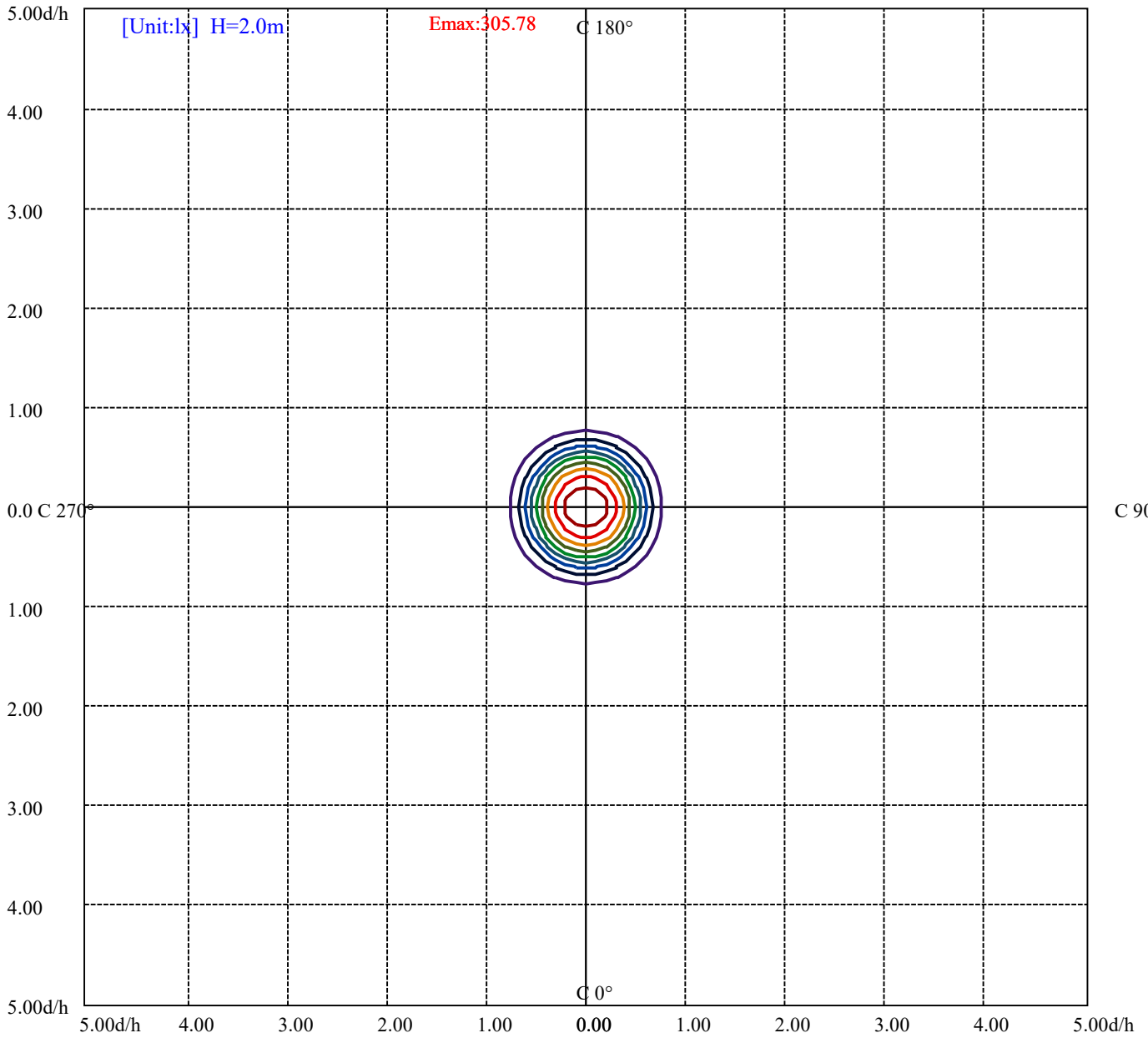
House

[Unit:cd]

Road

Imax:1230.20

(10%Imax)	122.897	—
(20%Imax)	245.795	—
(30%Imax)	368.692	—
(40%Imax)	491.589	—
(50%Imax)	614.486	—
(60%Imax)	737.384	—
(70%Imax)	860.281	—
(80%Imax)	983.178	—
(90%Imax)	1106.08	—



(10%Emax) 30.578	—
(20%Emax) 61.156	—
(30%Emax) 91.73375	—
(40%Emax) 122.3118	—
(50%Emax) 152.8898	—
(60%Emax) 183.4677	—
(70%Emax) 214.0455	—
(80%Emax) 244.6235	—
(90%Emax) 275.2025	—

Luminance Table

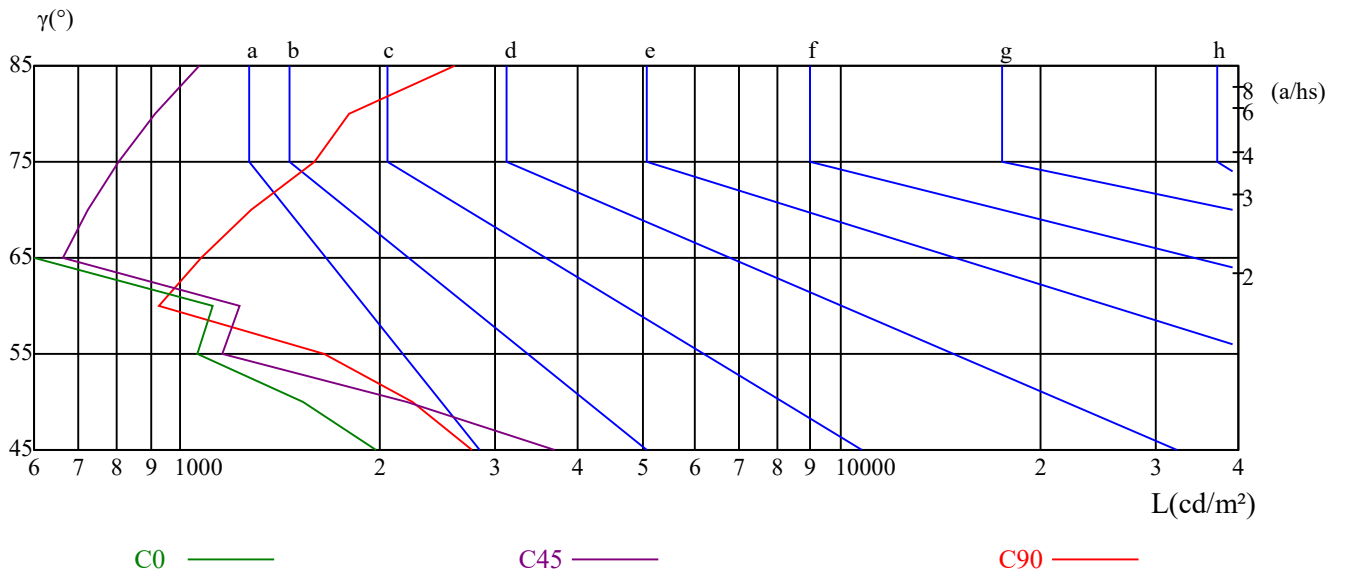
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1971	1528	1063	1120	597	644	704	785	893
C45	3684	2195	1155	1230	662	724	805	914	1067
C90	2759	2247	1653	930	1072	1277	1594	1799	2607

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1236	1236	1236	2019	2019	2019	5995	4736	5995

Glare Table

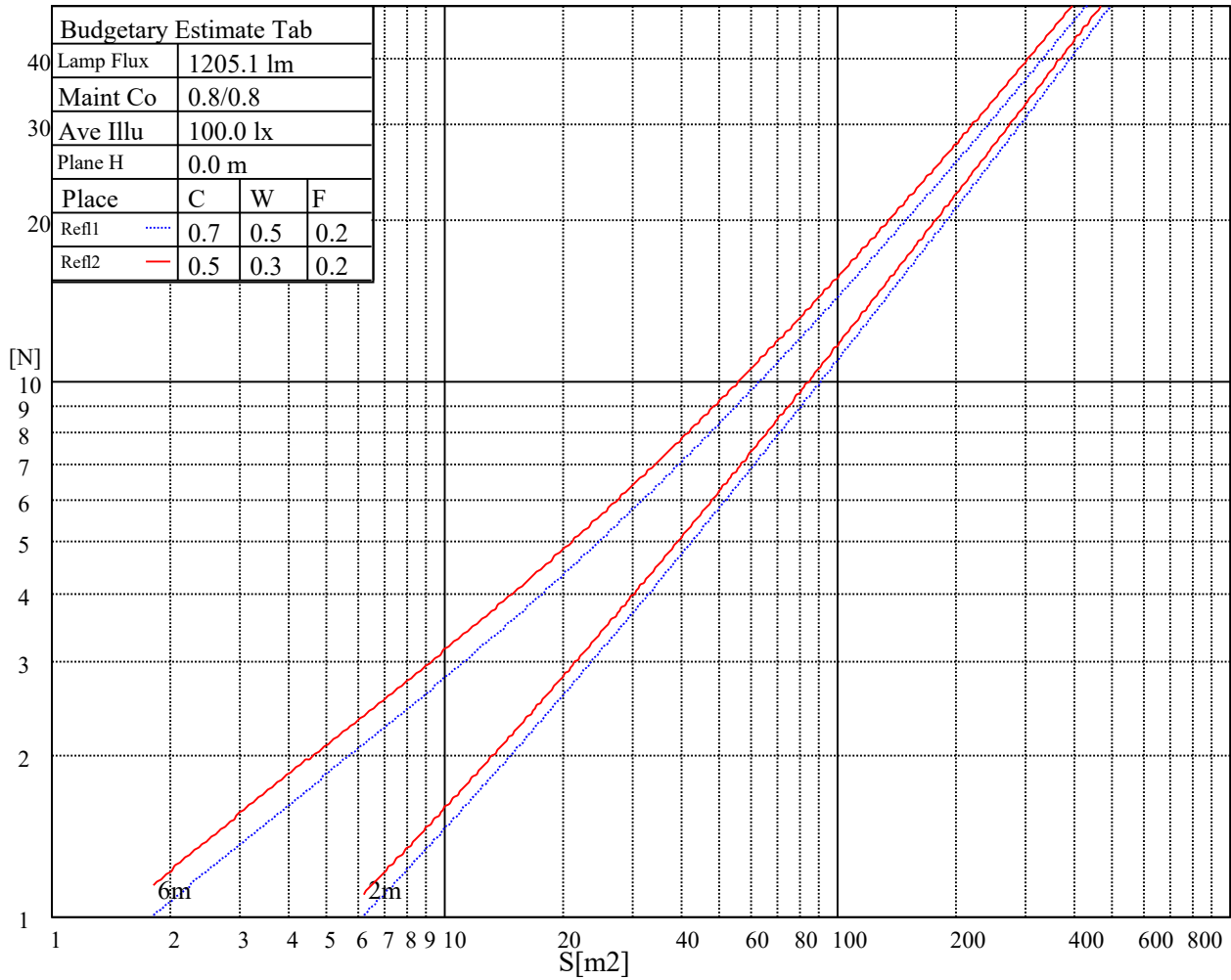
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	15.48	16.44	15.84	16.75	17.07	15.65	16.61	16.02	16.93	17.24
	3H	15.33	16.19	15.72	16.52	16.87	15.51	16.36	15.90	16.70	17.05
	4H	15.27	16.06	15.67	16.41	16.78	15.46	16.25	15.86	16.61	16.97
	6H	15.23	15.96	15.65	16.33	16.73	15.46	16.18	15.88	16.56	16.96
	8H	15.19	15.89	15.62	16.27	16.68	15.45	16.14	15.87	16.53	16.93
	12H	15.17	15.82	15.59	16.21	16.63	15.47	16.13	15.90	16.52	16.94
4H	2H	15.19	15.98	15.59	16.34	16.71	15.36	16.15	15.76	16.51	16.88
	3H	15.03	15.70	15.46	16.09	16.51	15.21	15.87	15.64	16.27	16.69
	4H	15.02	15.60	15.46	16.02	16.47	15.22	15.80	15.66	16.22	16.67
	6H	14.98	15.49	15.45	15.94	16.39	15.23	15.73	15.70	16.19	16.64
	8H	14.99	15.46	15.47	15.92	16.39	15.28	15.75	15.77	16.21	16.69
	12H	15.01	15.45	15.50	15.90	16.42	15.39	15.83	15.88	16.28	16.80
8H	4H	14.86	15.33	15.35	15.79	16.27	15.06	15.53	15.55	15.99	16.46
	6H	14.85	15.24	15.36	15.72	16.23	15.11	15.49	15.61	15.97	16.48
	8H	14.94	15.26	15.48	15.79	16.28	15.26	15.58	15.79	16.10	16.60
	12H	15.02	15.27	15.56	15.78	16.31	15.45	15.70	15.99	16.21	16.74
12H	4H	14.82	15.26	15.31	15.71	16.23	15.02	15.45	15.51	15.90	16.42
	6H	14.87	15.19	15.40	15.71	16.21	15.11	15.44	15.65	15.96	16.46
	8H	14.94	15.18	15.48	15.70	16.23	15.25	15.50	15.79	16.02	16.54
Variation with the observer position at spacings:											
S = 1.0H	5.5/-7.8					5.4/-7.9					
S = 1.5H	8.0/-6.8					8.0/-7.1					
S = 2.0H	9.8/-6.0					9.8/-6.4					
Standard tables:	BK1					BK1					
Uncorrected UGR	-3.4					-4.0					

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	1.13	1.13	1.13	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.95
1	1.04	1.02	1.00	1.02	1.00	0.98	0.99	0.97	0.95	0.95	0.94	0.92	0.92	0.91	0.90	0.88
2	0.97	0.93	0.90	0.96	0.92	0.89	0.92	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.82
3	0.91	0.86	0.82	0.89	0.85	0.82	0.87	0.83	0.80	0.85	0.82	0.79	0.82	0.80	0.78	0.76
4	0.85	0.80	0.76	0.84	0.79	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.71
5	0.80	0.74	0.70	0.79	0.74	0.70	0.77	0.73	0.69	0.75	0.72	0.68	0.74	0.71	0.68	0.66
6	0.75	0.69	0.65	0.74	0.69	0.65	0.73	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.62
7	0.70	0.65	0.61	0.70	0.64	0.61	0.69	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.58
8	0.66	0.61	0.57	0.66	0.60	0.57	0.65	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.55
9	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.52
10	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.57	0.53	0.50	0.49

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	1230.20	1231.96	1232.54	1231.37	1229.62	1227.28	1224.93	1220.25	1213.23
22.5	1224.35	1226.69	1227.28	1227.86	1227.86	1227.28	1226.69	1224.93	1220.84
45.0	1227.86	1230.20	1231.37	1230.79	1228.45	1224.93	1222.01	1217.33	1212.06
67.5	1209.72	1211.47	1211.47	1211.47	1212.06	1210.30	1210.30	1209.72	1206.79
90.0	1202.70	1203.28	1204.45	1204.45	1204.45	1203.87	1200.94	1196.84	1193.33
112.5	1199.77	1202.11	1204.45	1205.62	1206.79	1206.79	1206.79	1205.04	1200.94
135.0	1223.18	1222.01	1220.84	1218.50	1214.99	1210.30	1205.04	1199.18	1195.09
157.5	1231.96	1230.20	1228.45	1226.10	1221.42	1216.74	1211.47	1206.21	1200.94
180.0	1230.20	1227.86	1224.93	1221.42	1215.57	1212.06	1205.62	1199.77	1193.92
202.5	1224.35	1222.01	1218.50	1214.99	1209.72	1205.62	1202.11	1198.01	1193.92
225.0	1227.86	1224.93	1222.59	1219.08	1215.57	1210.89	1204.45	1195.09	1188.65
247.5	1209.72	1206.79	1203.87	1200.35	1196.26	1193.92	1192.75	1189.24	1183.97
270.0	1202.70	1200.94	1199.77	1193.92	1191.58	1188.65	1185.72	1181.04	1176.36
292.5	1199.77	1198.60	1195.67	1193.92	1191.58	1188.65	1185.72	1181.04	1176.36
315.0	1223.18	1222.59	1219.67	1212.64	1207.38	1205.62	1206.21	1203.87	1199.77
337.5	1231.96	1230.79	1228.45	1227.28	1224.35	1221.42	1217.91	1213.82	1210.30
360.0	1230.20	1231.96	1232.54	1231.37	1229.62	1227.28	1224.93	1220.25	1213.23

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1206.79	1201.53	1195.09	1198.60	1166.41	1164.01	1153.36	1139.14	1122.64
22.5	1217.33	1213.23	1208.55	1203.28	1198.60	1193.33	1185.14	1175.19	1163.49
45.0	1208.55	1202.70	1196.26	1191.58	1185.72	1166.94	1166.94	1158.51	1148.21
67.5	1203.28	1200.35	1198.60	1196.26	1192.75	1188.07	1181.04	1173.43	1164.07
90.0	1190.99	1187.48	1166.76	1166.76	1164.77	1156.76	1146.57	1138.32	1128.02
112.5	1197.43	1193.33	1189.82	1185.14	1179.87	1174.02	1167.00	1157.63	1147.68
135.0	1191.58	1167.23	1167.23	1165.36	1158.22	1146.28	1135.92	1124.39	1112.10
157.5	1195.67	1190.99	1186.89	1180.46	1174.02	1167.58	1159.97	1145.93	1133.05
180.0	1187.48	1181.63	1175.19	1168.17	1155.88	1148.86	1137.74	1126.03	1110.82
202.5	1189.24	1166.00	1166.00	1160.33	1151.90	1139.26	1127.20	1114.44	1095.19
225.0	1178.70	1166.41	1158.80	1151.20	1144.76	1138.91	1133.05	1123.69	1114.33
247.5	1167.11	1167.11	1165.48	1155.88	1149.15	1139.78	1131.24	1115.32	1101.04
270.0	1172.26	1166.41	1161.73	1155.29	1148.27	1138.91	1130.13	1117.25	1105.55
292.5	1184.55	1167.52	1167.52	1159.39	1149.85	1143.35	1134.58	1120.94	1108.83
315.0	1196.84	1192.16	1187.48	1181.63	1174.02	1168.17	1161.14	1144.17	1127.79
337.5	1205.62	1200.94	1196.84	1190.99	1166.82	1166.82	1156.40	1143.00	1127.26
360.0	1206.79	1201.53	1195.09	1198.60	1166.41	1164.01	1153.36	1139.14	1122.64

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1108.01	1092.79	1073.07	1047.90	1027.60	1001.14	967.20	917.57	875.96
22.5	1147.68	1134.81	1117.84	1100.87	1080.97	1055.22	1019.52	984.99	948.12
45.0	1138.15	1124.33	1108.12	1088.99	1059.08	1030.64	988.97	951.34	909.97
67.5	1151.78	1139.49	1124.86	1109.06	1083.31	1058.73	1032.40	1001.38	958.07
90.0	1115.44	1098.23	1081.91	1061.25	1037.84	1004.01	974.05	934.19	896.97
112.5	1134.22	1120.76	1103.79	1081.55	1061.07	1038.25	1000.21	963.92	925.30
135.0	1094.72	1076.35	1055.39	1025.43	997.34	954.74	915.76	873.45	815.98
157.5	1120.18	1106.13	1083.31	1059.32	1024.20	993.19	959.24	908.33	863.85
180.0	1095.60	1075.70	1050.54	1030.64	1006.06	964.51	922.37	883.16	826.98
202.5	1076.81	1047.79	1020.98	991.49	950.52	913.71	873.21	827.57	767.70
225.0	1102.62	1085.07	1062.83	1041.17	1013.08	981.48	937.59	898.38	845.12
247.5	1082.43	1064.35	1039.24	1013.96	983.30	943.21	906.69	855.60	815.57
270.0	1092.67	1076.87	1056.97	1038.25	1016.01	985.58	957.49	928.23	886.09
292.5	1093.61	1070.49	1048.84	1026.25	1000.85	963.10	927.93	890.54	852.85
315.0	1111.40	1090.92	1067.51	1040.00	1024.20	1009.57	990.26	953.39	918.86
337.5	1104.73	1085.59	1064.70	1041.06	1008.17	978.20	943.32	902.94	845.53
360.0	1108.01	1092.79	1073.07	1047.90	1027.60	1001.14	967.20	917.57	875.96

Intensity data(cd)

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	831.60	772.32	723.34	672.01	603.43	544.43	481.64	406.20	346.69
22.5	906.57	848.05	795.96	743.88	674.82	616.89	560.12	487.55	431.37
45.0	850.68	797.19	743.29	687.11	615.19	558.42	503.41	447.93	381.57
67.5	918.28	875.56	814.69	764.36	694.72	636.78	578.26	517.40	438.98
90.0	850.92	788.12	735.10	679.15	605.18	544.20	481.76	418.85	342.94
112.5	886.67	830.49	778.99	725.74	668.97	595.82	535.54	474.68	399.18
135.0	765.12	711.52	657.09	603.48	536.18	482.17	429.44	378.47	317.60
157.5	815.28	764.95	697.65	641.47	586.45	530.27	461.80	406.79	354.70
180.0	781.92	734.52	681.85	608.69	553.10	492.82	429.03	360.56	306.72
202.5	717.43	664.17	608.46	553.68	483.81	428.85	375.36	311.52	262.82
225.0	795.96	749.73	684.19	629.18	578.85	516.23	463.56	408.55	364.07
247.5	771.85	723.28	654.93	599.15	544.38	488.02	418.14	363.54	310.23
270.0	843.37	784.26	734.52	681.85	625.66	554.27	493.99	435.47	378.70
292.5	800.70	752.31	700.92	631.87	575.10	504.35	448.17	392.57	324.16
315.0	863.27	815.28	765.53	694.14	637.95	582.36	513.30	458.87	407.38
337.5	796.26	734.63	682.78	628.77	557.08	502.65	448.22	394.32	330.48
360.0	831.60	772.32	723.34	672.01	603.43	544.43	481.64	406.20	346.69
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	290.62	240.82	187.56	148.41	116.05	88.37	61.51	45.35	32.07
22.5	375.19	309.64	296.77	296.77	171.82	130.33	102.00	78.60	59.52
45.0	331.88	283.83	226.25	183.29	148.53	111.31	87.43	69.76	53.84
67.5	378.70	321.35	295.01	295.01	166.91	131.03	101.07	71.40	53.61
90.0	286.06	234.68	187.15	133.78	100.54	72.86	48.69	35.35	26.51
112.5	343.00	303.79	303.79	183.12	144.84	104.87	80.00	60.40	45.53
135.0	268.44	210.92	169.01	134.08	99.43	78.42	61.74	47.17	39.33
157.5	303.79	303.79	193.07	146.19	115.64	90.01	64.32	49.51	38.39
180.0	306.72	191.66	156.43	116.40	89.77	67.18	49.51	34.59	27.33
202.5	210.21	172.11	137.94	101.83	78.65	59.87	46.00	33.71	27.80
225.0	296.77	296.77	241.05	161.64	120.67	93.75	72.92	55.95	45.76
247.5	250.42	204.59	164.33	121.84	93.17	71.28	50.62	39.39	32.01
270.0	311.98	299.11	299.11	165.74	118.92	89.54	65.31	44.01	33.77
292.5	273.65	225.90	182.88	138.46	107.74	82.63	62.74	45.30	35.76
315.0	356.46	297.94	297.94	242.22	166.15	125.00	98.96	78.60	63.38
337.5	282.96	237.48	195.23	149.64	118.45	91.82	65.31	49.86	38.62
360.0	290.62	240.82	187.56	148.41	116.05	88.37	61.51	45.35	32.07
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	25.69	22.12	19.61	18.32	17.26	16.04	15.22	14.46	13.69
22.5	42.78	33.59	27.39	22.41	20.07	18.26	16.80	15.86	15.04
45.0	44.54	37.45	32.01	26.86	23.58	20.78	18.61	16.50	15.16
67.5	38.16	30.26	25.28	21.42	19.43	18.02	16.68	15.80	14.92
90.0	22.65	20.42	18.96	17.62	16.62	15.74	14.92	13.93	13.17
112.5	33.59	27.51	23.53	21.07	19.02	17.73	16.74	15.63	14.81
135.0	33.65	29.38	25.28	22.71	20.54	18.67	16.80	15.63	14.63
157.5	29.44	24.99	22.06	20.07	18.32	17.32	16.39	15.57	14.57
180.0	23.12	20.78	19.08	17.97	17.09	16.21	15.22	14.46	13.58
202.5	24.11	21.24	19.08	17.91	16.91	15.92	15.16	14.28	13.64
225.0	38.98	32.77	28.68	25.63	22.41	20.31	18.43	16.91	15.39
247.5	26.80	22.82	20.78	19.20	17.97	16.68	15.74	14.75	13.99
270.0	25.81	22.41	20.42	19.02	17.62	16.74	15.92	15.10	14.05
292.5	29.14	23.99	21.48	19.61	17.91	16.85	15.86	14.81	13.99
315.0	49.86	42.43	35.11	30.43	26.92	23.17	20.66	18.49	16.44
337.5	29.50	24.64	21.71	19.08	17.73	16.62	15.68	14.69	13.93
360.0	25.69	22.12	19.61	18.32	17.26	16.04	15.22	14.46	13.69



Intensity data(cd)

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	12.76	12.00	11.35	10.77	10.07	9.54	9.13	8.66	8.37
22.5	14.10	13.46	12.82	12.17	11.41	10.77	10.24	9.71	9.07
45.0	14.10	13.11	12.41	11.65	11.12	10.59	10.12	9.48	9.01
67.5	14.16	13.28	12.52	11.88	11.18	10.36	9.83	9.07	8.72
90.0	12.35	11.53	10.71	10.12	9.48	9.07	8.49	8.13	7.84
112.5	13.87	13.17	12.47	11.82	11.00	10.42	9.83	9.31	8.66
135.0	13.64	12.93	12.17	11.59	11.06	10.53	9.95	9.42	8.90
157.5	13.87	13.11	12.47	11.82	11.00	10.42	9.95	9.42	8.90
180.0	12.82	11.94	11.29	10.71	10.18	9.60	9.19	8.84	8.49
202.5	12.93	12.29	11.53	10.94	10.42	9.89	9.31	8.84	8.49
225.0	14.40	13.58	12.93	12.17	11.65	11.06	10.48	9.95	9.36
247.5	13.28	12.41	11.70	11.06	10.24	9.66	9.07	8.60	8.13
270.0	13.28	12.52	11.70	10.89	10.30	9.48	9.01	8.60	8.19
292.5	13.28	12.64	11.82	11.18	10.53	10.01	9.19	8.72	8.31
315.0	15.10	14.16	13.28	12.64	11.88	11.29	10.77	10.18	9.71
337.5	13.23	12.58	11.76	11.12	10.36	9.83	9.31	8.84	8.43
360.0	12.76	12.00	11.35	10.77	10.07	9.54	9.13	8.66	8.37
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	7.96	7.72	7.43	7.26	6.96	6.79	6.55	6.38	6.20
22.5	8.66	8.31	7.90	7.61	7.32	7.02	6.85	6.55	6.38
45.0	8.49	8.02	7.55	7.26	6.91	6.61	6.44	6.20	5.97
67.5	8.19	7.90	7.49	7.26	6.96	6.67	6.50	6.26	6.09
90.0	7.55	7.26	6.96	6.73	6.55	6.38	6.14	5.97	5.85
112.5	8.25	7.90	7.55	7.26	6.91	6.67	6.50	6.20	6.09
135.0	8.43	7.90	7.55	7.26	6.91	6.61	6.44	6.14	5.97
157.5	8.49	8.19	7.84	7.55	7.20	6.96	6.67	6.50	6.26
180.0	8.08	7.78	7.49	7.26	6.96	6.73	6.55	6.38	6.14
202.5	8.08	7.78	7.49	7.14	6.91	6.73	6.44	6.26	6.09
225.0	8.84	8.31	7.90	7.43	7.14	6.85	6.61	6.32	6.14
247.5	7.78	7.49	7.26	6.85	6.67	6.44	6.26	6.09	5.85
270.0	7.84	7.55	7.32	6.96	6.79	6.61	6.38	6.14	5.97
292.5	7.84	7.55	7.20	6.96	6.73	6.50	6.26	6.09	5.91
315.0	9.13	8.49	8.02	7.49	7.20	6.91	6.61	6.38	6.20
337.5	8.13	7.67	7.49	7.20	6.91	6.73	6.50	6.26	6.14
360.0	7.96	7.72	7.43	7.26	6.96	6.79	6.55	6.38	6.20
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	6.03	5.91	5.74	5.62	5.50	5.38	5.27	5.15	5.09
22.5	6.14	5.97	5.79	5.62	5.50	5.38	5.27	5.21	5.03
45.0	5.79	5.68	5.50	5.38	5.27	5.15	5.03	4.97	4.92
67.5	5.91	5.79	5.68	5.50	5.38	5.27	5.15	5.03	4.97
90.0	5.68	5.56	5.38	5.33	5.21	5.09	5.03	4.97	4.92
112.5	5.91	5.79	5.56	5.50	5.38	5.27	5.15	5.03	4.97
135.0	5.85	5.56	5.44	5.33	5.21	5.09	5.03	4.97	4.86
157.5	6.09	5.91	5.74	5.56	5.38	5.33	5.21	5.03	4.97
180.0	5.97	5.85	5.68	5.56	5.38	5.33	5.15	5.09	5.03
202.5	5.97	5.68	5.50	5.38	5.27	5.15	5.03	4.97	4.92
225.0	5.91	5.74	5.62	5.44	5.33	5.15	5.09	4.97	4.92
247.5	5.74	5.62	5.44	5.33	5.15	5.09	4.97	4.92	4.86
270.0	5.85	5.74	5.50	5.44	5.33	5.21	5.09	5.03	4.92
292.5	5.74	5.68	5.50	5.38	5.21	5.15	5.09	4.92	4.86
315.0	5.97	5.85	5.62	5.50	5.38	5.27	5.09	5.09	4.97
337.5	5.85	5.74	5.62	5.44	5.27	5.15	5.03	4.97	4.86
360.0	6.03	5.91	5.74	5.62	5.50	5.38	5.27	5.15	5.09

Intensity data(cd)

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.97	4.92	4.80	4.68	4.68	4.68	4.68	4.68	4.68
22.5	4.97	4.86	4.80	4.74	4.62	4.56	4.62	4.62	4.62
45.0	4.80	4.74	4.74	4.68	4.80	4.80	4.80	4.74	4.68
67.5	4.86	4.86	4.80	4.68	4.68	4.62	4.62	4.62	4.56
90.0	4.80	4.74	4.68	4.62	4.62	4.56	4.56	4.56	4.56
112.5	4.86	4.74	4.74	4.68	4.62	4.56	4.56	4.56	4.56
135.0	4.80	4.74	4.68	4.62	4.62	4.74	4.74	4.74	4.68
157.5	4.92	4.80	4.74	4.68	4.62	4.56	4.56	4.56	4.62
180.0	4.92	4.92	4.80	4.68	4.68	4.62	4.62	4.62	4.62
202.5	4.80	4.74	4.68	4.68	4.56	4.62	4.56	4.62	4.62
225.0	4.80	4.80	4.74	4.62	4.62	4.62	4.56	4.56	4.56
247.5	4.80	4.74	4.68	4.62	4.56	4.56	4.56	4.56	4.56
270.0	4.92	4.80	4.74	4.68	4.62	4.62	4.56	4.56	4.56
292.5	4.80	4.74	4.68	4.62	4.62	4.51	4.56	4.56	4.56
315.0	4.86	4.80	4.74	4.68	4.62	4.62	4.56	4.51	4.51
337.5	4.80	4.74	4.68	4.56	4.56	4.62	4.56	4.56	4.56
360.0	4.97	4.92	4.80	4.68	4.68	4.68	4.68	4.68	4.68

C/γ(°)	90.0
0.0	4.68
22.5	4.62
45.0	4.68
67.5	4.56
90.0	4.56
112.5	4.56
135.0	4.62
157.5	4.62
180.0	4.62
202.5	4.62
225.0	4.56
247.5	4.56
270.0	4.56
292.5	4.56
315.0	4.62
337.5	4.56
360.0	4.68