
LumCAT: 4-1762-E
Luminaire: 92.76.233.00
Report No: NATA0100
Test No:
LampCAT: LUMENS EDC_57C_30W_230V
Lamp flux(lm): 2348.3
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 213.5000
Current(A): 0.1260
Power (W): 26.9000
PF: 1.0000
Ballast type:
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 2087.39
Efficiency(%): 88.89%
Lumens(lm)/Power(W): 79.31
Central intensity(cd): 8045.530
Maximum intensity(cd): 8045.530
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.5
[C90/270]Total=23.5
Field angle(10%Imax): [C0/180]Total=59.9
[C90/270]Total=59.9
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.573%

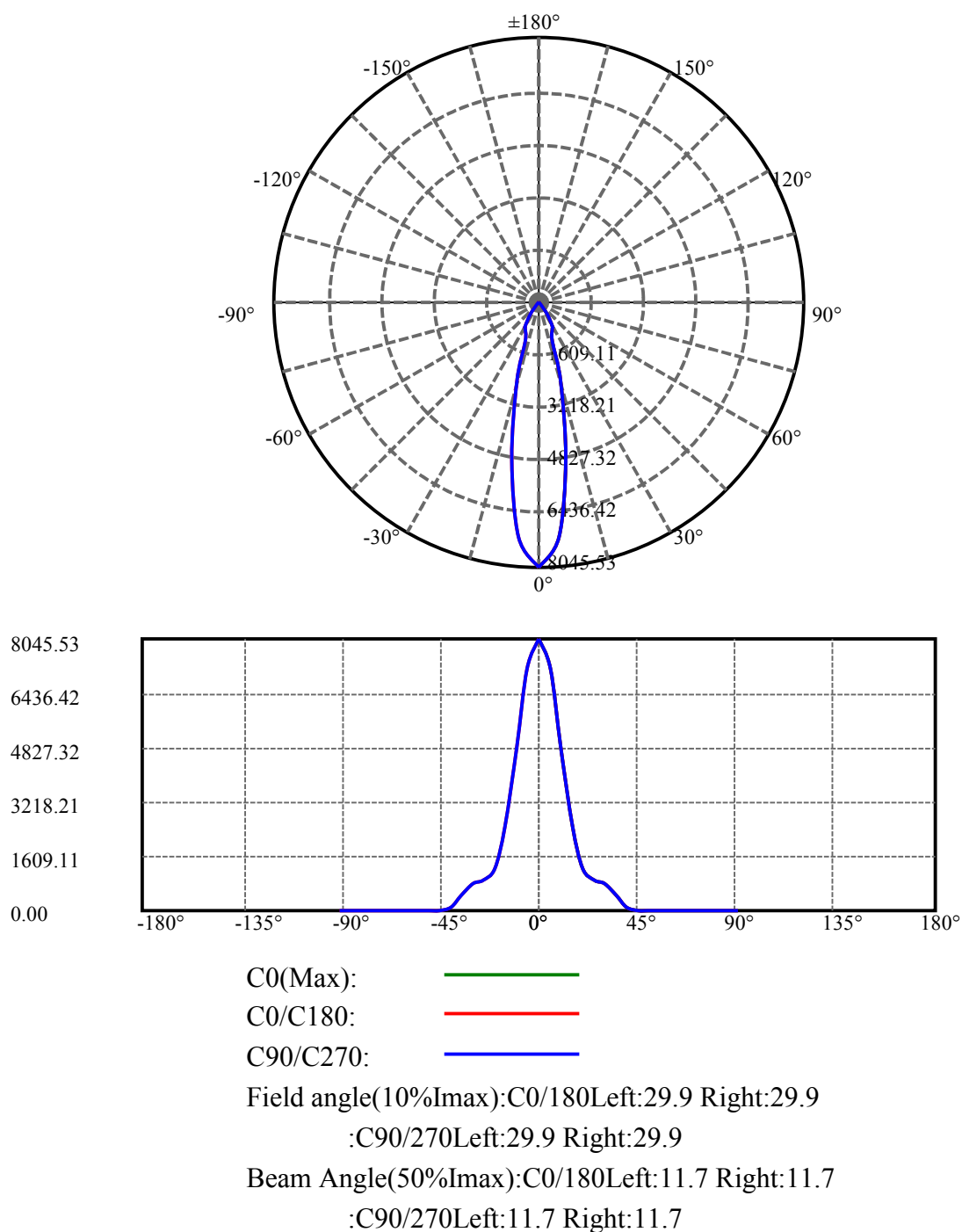
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8045.529	48.114	48.114	2.049%	2.305%
5.0	7143.052	341.247	389.361	14.532%	18.653%
10.0	4835.913	460.297	849.658	19.601%	40.704%
15.0	2487.001	352.827	1202.485	15.025%	57.607%
20.0	1247.299	233.836	1436.321	9.958%	68.809%
25.0	917.952	212.646	1648.967	9.055%	78.997%
30.0	803.073	220.097	1869.065	9.373%	89.541%
35.0	454.983	143.046	2012.111	6.092%	96.394%
40.0	92.130	32.461	2044.571	1.382%	97.949%
45.0	10.237	3.968	2048.539	.169%	98.139%
50.0	9.143	3.839	2052.378	.163%	98.323%
55.0	8.795	3.949	2056.327	.168%	98.512%
60.0	8.596	4.080	2060.408	.174%	98.707%
65.0	8.527	4.236	2064.644	.180%	98.910%
70.0	10.292	5.301	2069.945	.226%	99.164%
75.0	10.798	5.717	2075.662	.243%	99.438%
80.0	9.274	5.006	2080.668	.213%	99.678%
85.0	8.293	4.528	2085.196	.193%	99.895%
90.0	8.011	2.195	2087.392	.093%	100.000%

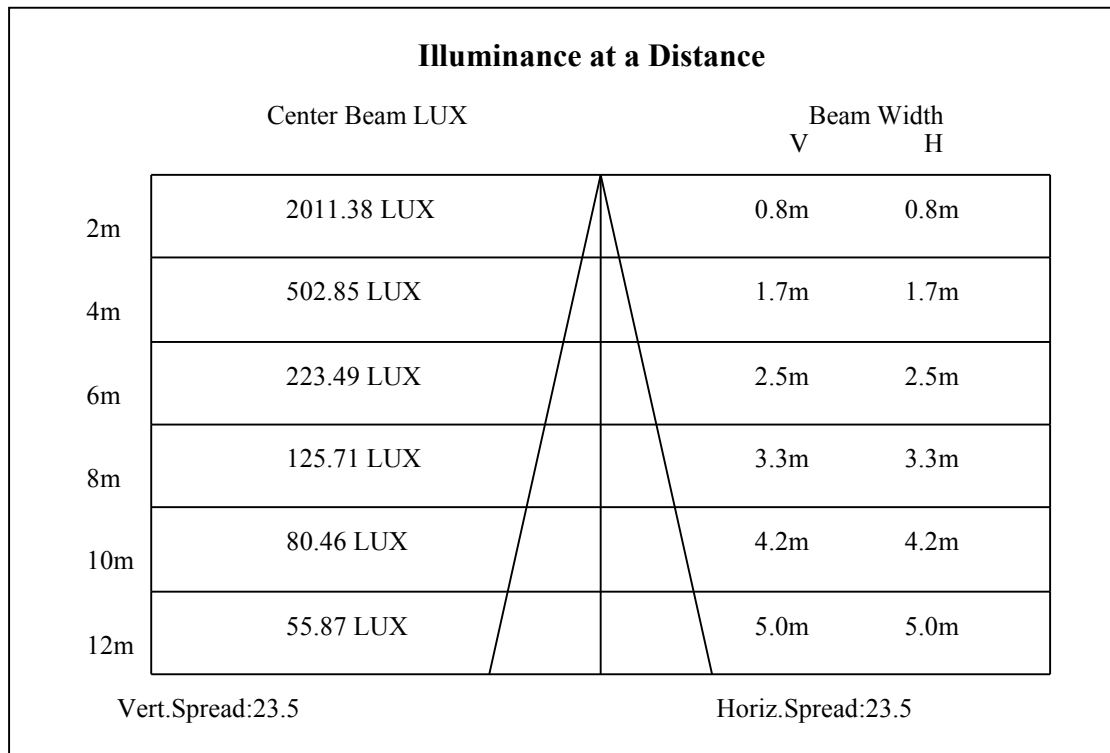
ZONAL LUMEN SUMMARY

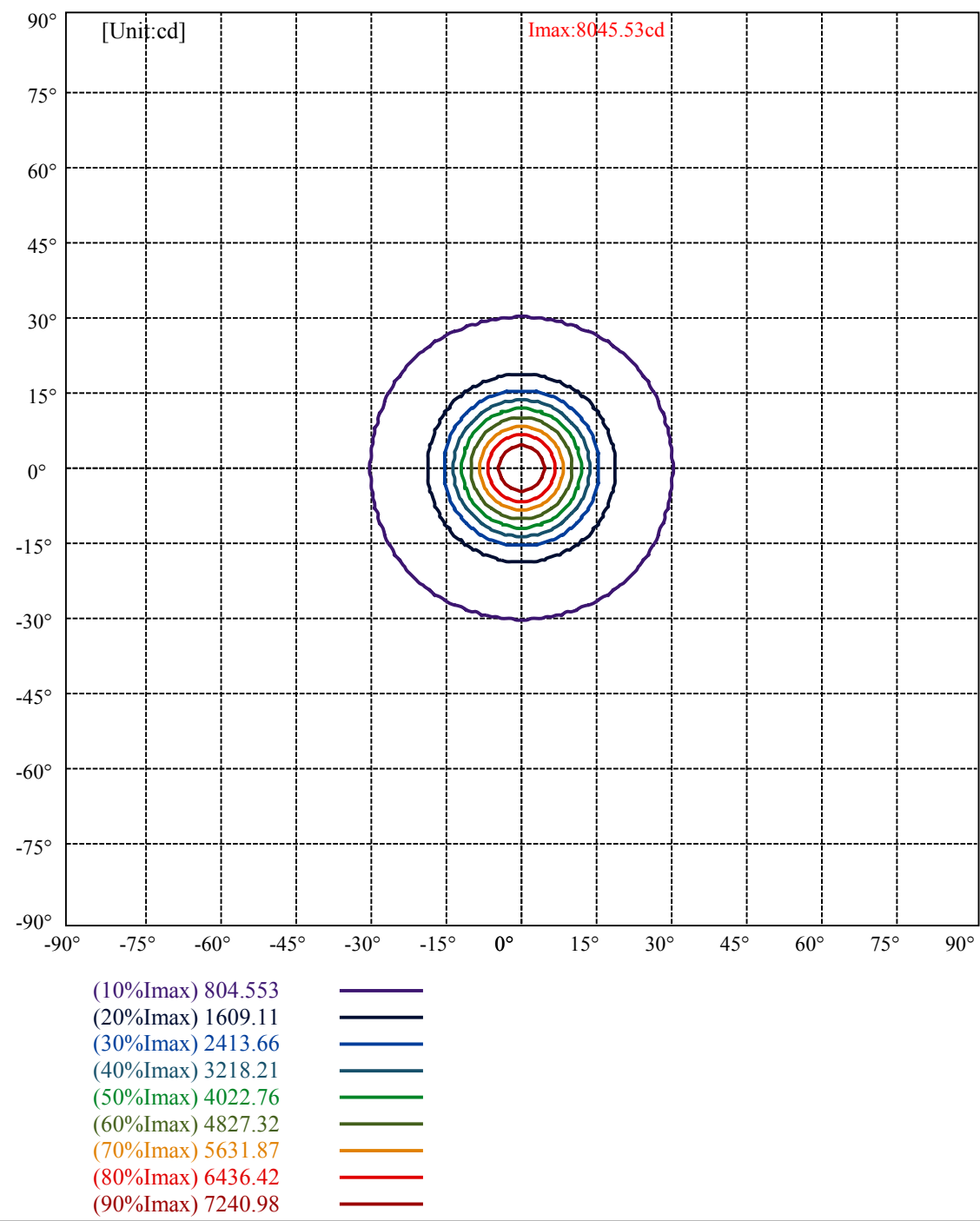
Zone	Lumens	%Lamp	%Fixt
0-30	1869.06	79.59%	89.54%
0-40	2044.57	87.07%	97.95%
0-60	2060.41	87.74%	98.71%
0-90	2085.20	88.80%	99.89%
0-120	2085.20	88.80%	99.89%
0-180	2087.39	88.89%	100.00%
60-90	28.87	1.23%	1.38%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.48	1669.91	71.11%	80.00%

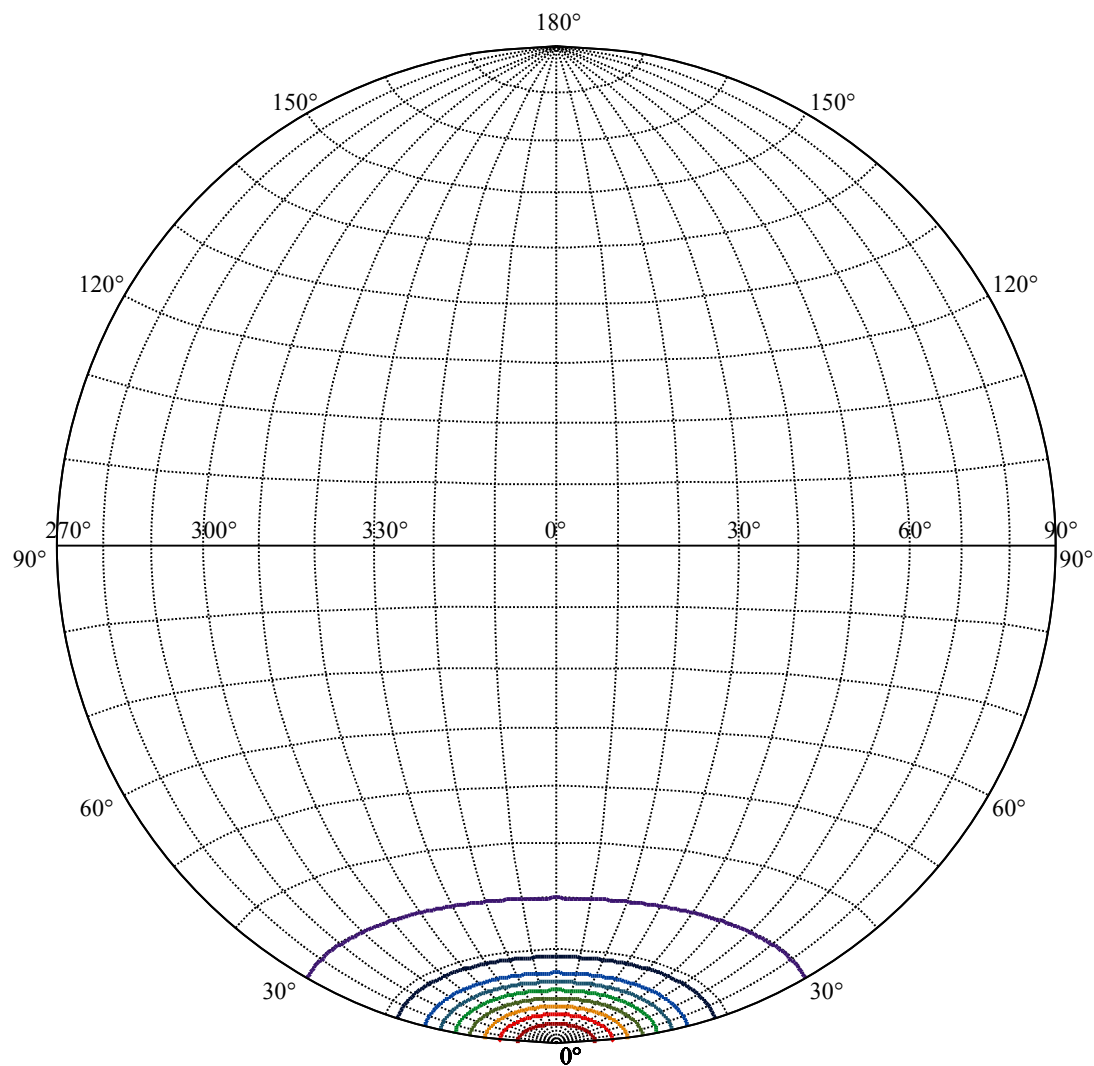
ZONAL LUMEN SUMMARY

0-10	849.66
10-20	586.66
20-30	432.74
30-40	175.51
40-50	7.81
50-60	8.03
60-70	9.54
70-80	10.72
80-90	4.53
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







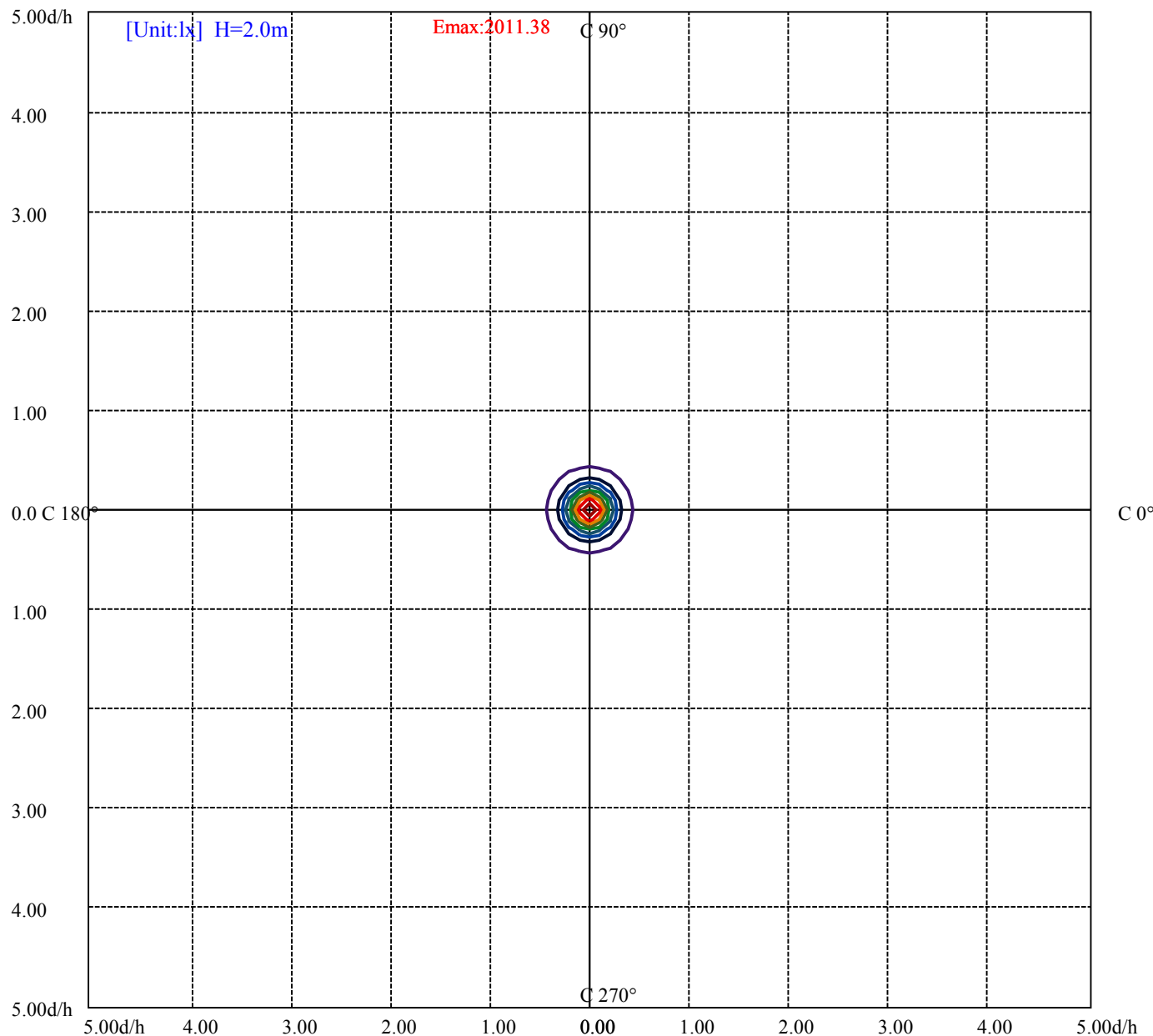


House

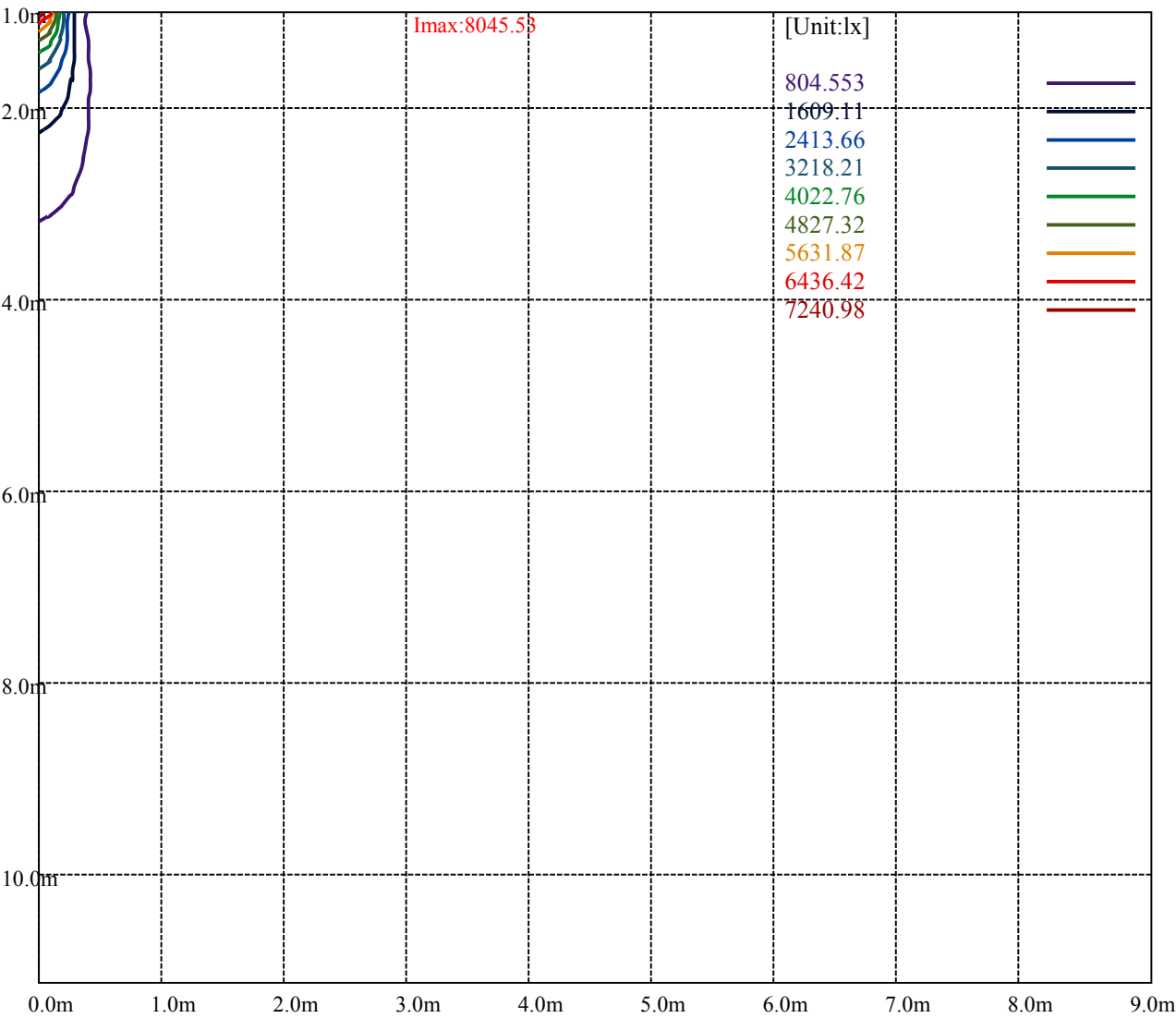
[Unit:cd]

Road

Imax:8045.53	
(10%Imax) 804.553	—
(20%Imax) 1609.11	—
(30%Imax) 2413.66	—
(40%Imax) 3218.21	—
(50%Imax) 4022.76	—
(60%Imax) 4827.32	—
(70%Imax) 5631.87	—
(80%Imax) 6436.42	—
(90%Imax) 7240.98	—



(10%Emax) 201.1375	—
(20%Emax) 402.275	—
(30%Emax) 603.4125	—
(40%Emax) 804.55	—
(50%Emax) 1005.688	—
(60%Emax) 1206.825	—
(70%Emax) 1407.963	—
(80%Emax) 1609.1	—
(90%Emax) 1810.238	—



Luminance Table

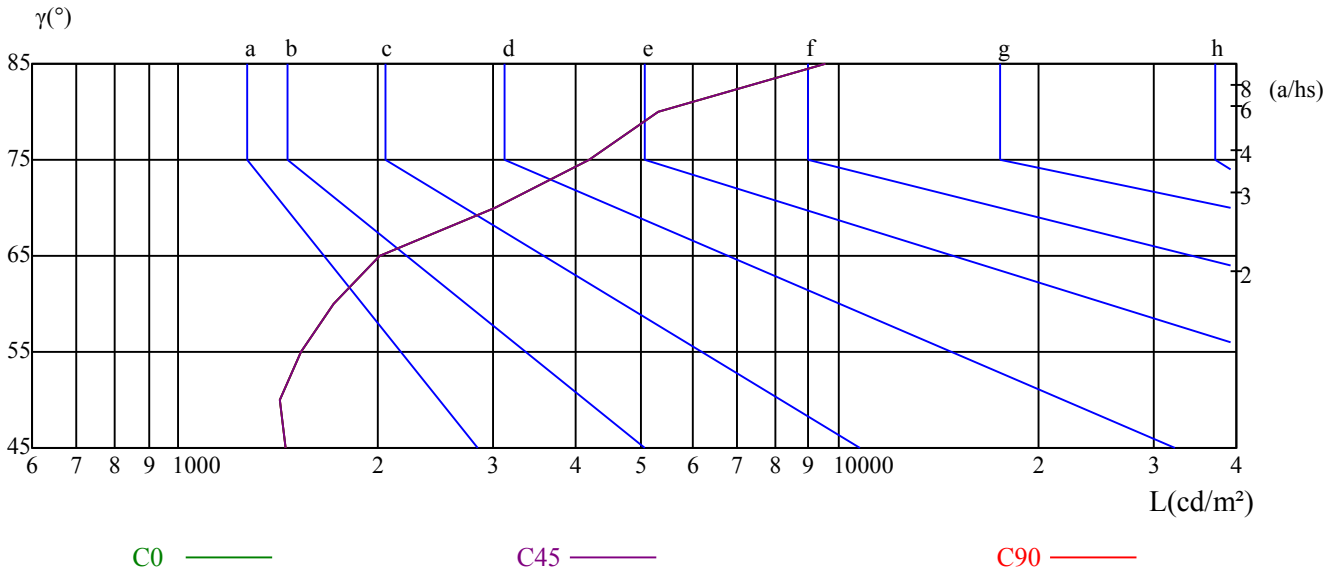
γ	45	50	55	60	65	70	75	80	85
C0	1448	1422	1533	1719	2018	3009	4172	5340	9515
C45	1448	1422	1533	1719	2018	3009	4172	5340	9515
C90	1448	1422	1533	1719	2018	3009	4172	5340	9515

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2018	2018	2018	4172	4172	4172	9515	9515	9515

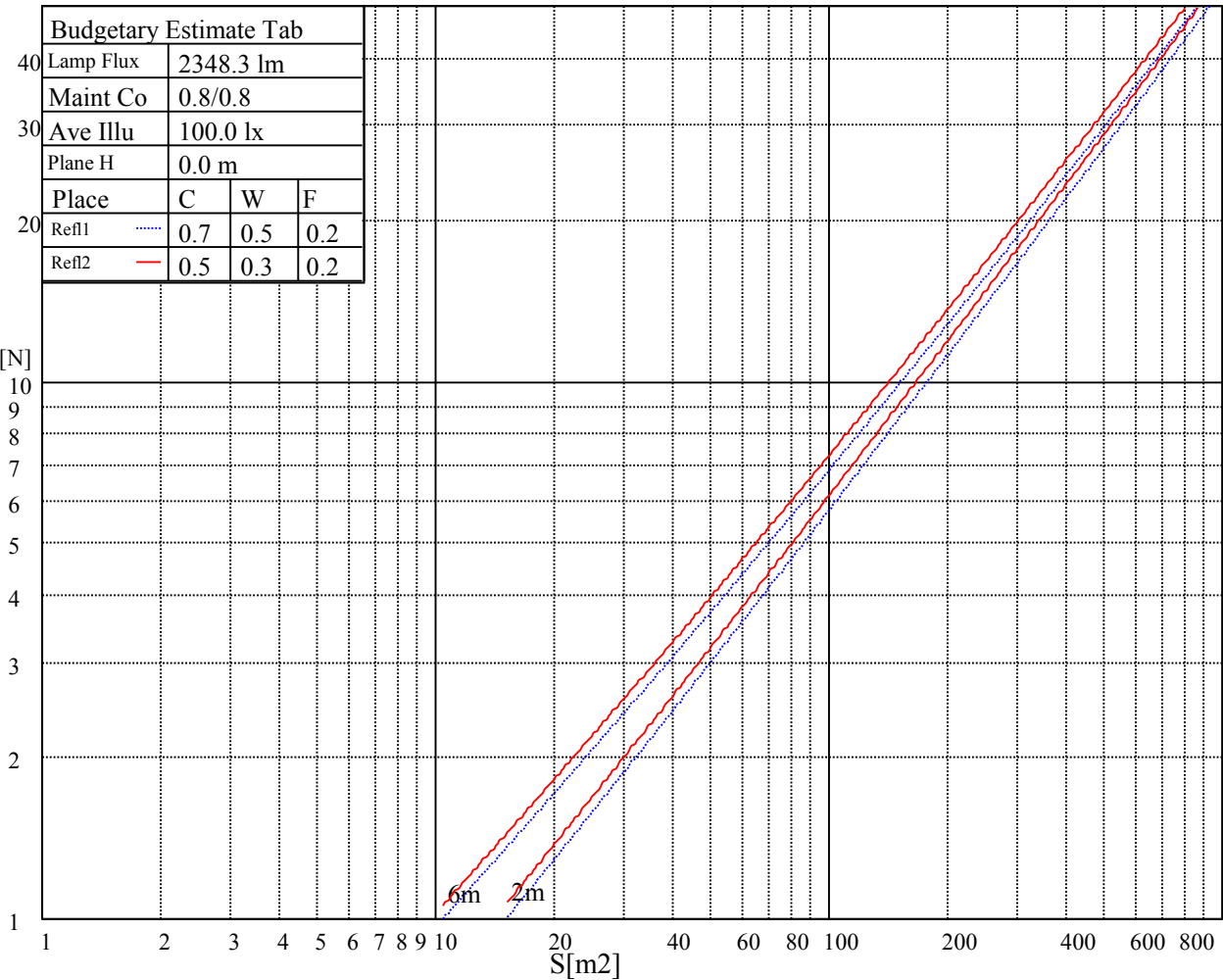
Glare Table

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

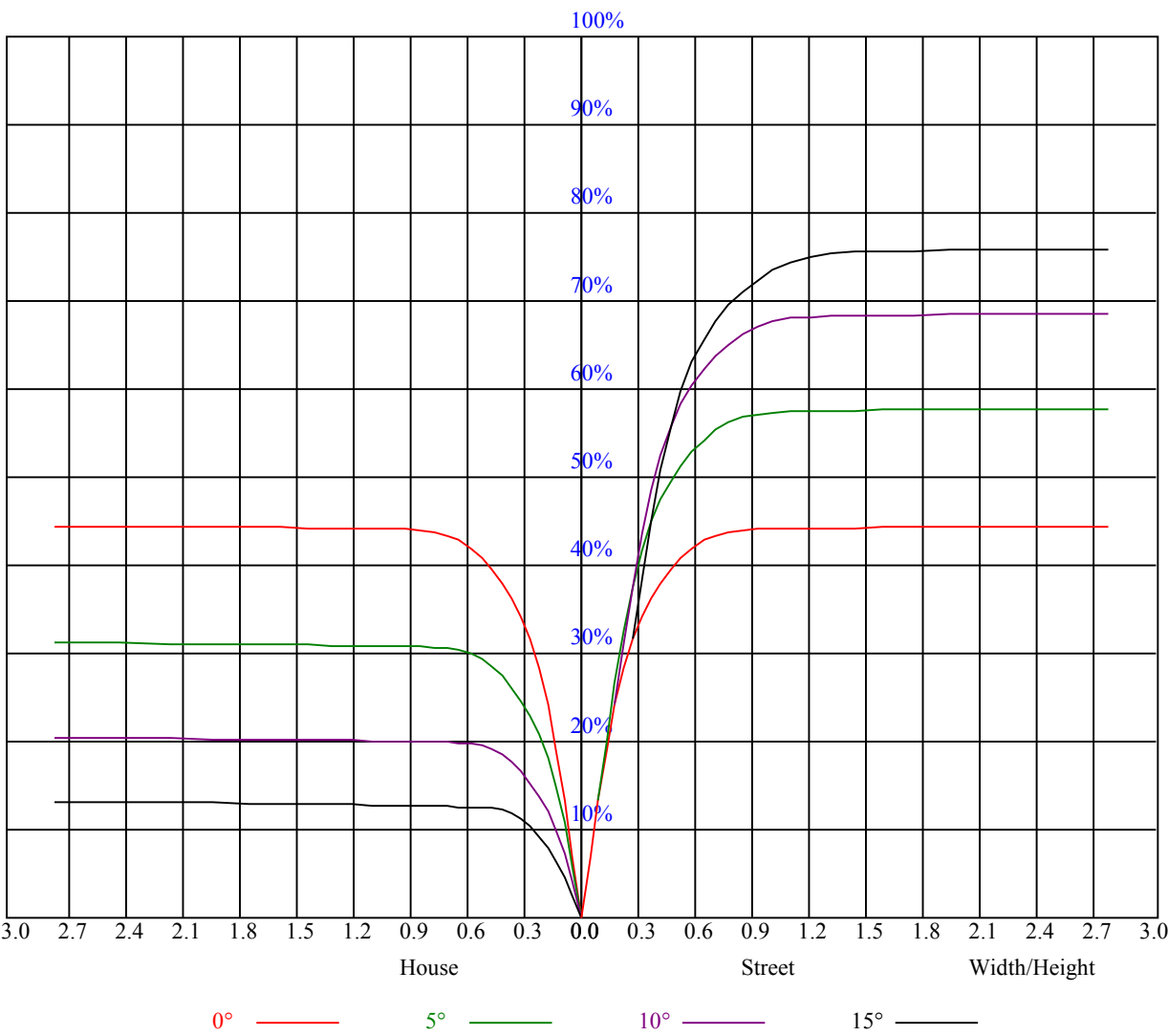
Luminance Limiting Curve



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	-0.54	0.37	-0.17	0.68	1.00	-0.56	0.36	-0.19	0.67	0.98
	3H	3.50	4.31	3.89	4.64	5.01	3.45	4.26	3.84	4.59	4.96
	4H	5.76	6.51	6.17	6.86	7.25	5.77	6.51	6.18	6.87	7.26
	6H	7.77	8.45	8.19	8.83	9.22	7.72	8.40	8.14	8.77	9.17
	8H	8.73	9.37	9.17	9.76	10.17	8.67	9.30	9.10	9.70	10.11
	12H	10.23	10.84	10.67	11.23	11.66	10.22	10.83	10.66	11.22	11.65
4H	2H	0.43	1.17	0.84	1.52	1.92	0.42	1.16	0.83	1.51	1.91
	3H	4.89	5.50	5.30	5.91	6.31	4.80	5.41	5.22	5.83	6.23
	4H	7.26	7.81	7.70	8.23	8.68	7.22	7.76	7.66	8.19	8.64
	6H	9.26	9.72	9.73	10.17	10.65	9.19	9.65	9.66	10.10	10.58
	8H	10.30	10.74	10.78	11.19	11.66	10.22	10.66	10.70	11.11	11.59
	12H	11.71	12.08	12.20	12.57	13.05	11.68	12.06	12.18	12.55	13.03
8H	4H	8.06	8.49	8.54	8.95	9.42	8.02	8.46	8.50	8.91	9.39
	6H	10.27	10.61	10.78	11.11	11.60	10.21	10.55	10.72	11.05	11.54
	8H	11.47	11.77	12.00	12.29	12.79	11.41	11.71	11.94	12.23	12.73
	12H	12.99	13.25	13.51	13.75	14.33	12.97	13.23	13.50	13.73	14.31
12H	4H	8.23	8.61	8.73	9.10	9.58	8.20	8.58	8.70	9.07	9.55
	6H	10.73	10.84	11.07	11.31	11.86	10.68	10.79	11.02	11.26	11.81
	8H	11.86	12.12	12.38	12.62	13.20	11.81	12.07	12.33	12.57	13.15
Variation with the observer position at spacings:											
S = 1.0H		5.4/-6.9					5.4/-6.9				
S = 1.5H		7.4/-4.9					7.4/-4.9				
S = 2.0H		8.7/-3.6					8.7/-3.6				
Standard tables:		BK3					BK3				
Uncorrected UGR		-1.3					-1.3				



RHOC	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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.90	0.86	0.83	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.79	0.82	0.80	0.78	0.77
4	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.72
6	0.79	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.72	0.68	0.65	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.70	0.66	0.63	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.62	0.61



Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	8011.26	7237.16	5044.82	2550.21	1357.14	935.96	818.69	483.40	83.08
22.5	7989.78	7342.32	5304.68	2734.65	1384.12	942.02	830.80	514.23	88.37
45.0	8009.05	6901.32	4319.17	2158.76	1079.66	898.74	787.31	357.21	34.74
67.5	8088.89	7103.93	4569.13	2182.99	1176.56	898.52	806.58	365.02	41.35
90.0	8016.76	6446.00	3849.54	1860.91	1040.29	857.39	722.12	261.02	24.61
112.5	8146.14	6776.89	4388.55	2067.92	1126.45	875.40	788.96	327.59	39.48
135.0	8016.76	6496.66	3921.67	1920.92	1073.10	872.15	736.16	292.07	33.91
157.5	8085.58	7030.70	4638.50	2339.35	1238.77	904.58	803.82	415.13	47.46
180.0	8011.26	7029.05	4500.31	2280.44	1080.43	900.89	797.05	403.67	48.06
202.5	7989.78	6797.81	4257.51	2196.20	1080.87	881.01	792.81	389.63	37.66
225.0	8009.05	7413.89	5255.68	2788.06	1387.97	931.55	821.44	572.59	171.50
247.5	8088.89	7440.32	5091.07	2651.52	1236.57	931.94	810.65	539.72	81.59
270.0	8016.76	7805.90	5977.47	3275.31	1603.79	991.57	842.91	655.17	292.90
292.5	8146.14	7624.76	5505.64	2975.80	1423.76	958.53	828.65	582.72	100.64
315.0	8016.76	7716.15	5754.49	3210.89	1569.66	984.41	850.07	629.29	286.29
337.5	8085.58	7125.95	4996.37	2598.11	1097.66	922.58	811.15	491.27	62.43
360.0	8011.26	7237.16	5044.82	2550.21	1357.14	935.96	818.69	483.40	83.08
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.97	9.25	8.92	8.70	8.53	8.53	9.63	9.03	8.64
22.5	9.74	9.14	8.75	8.59	8.42	10.08	11.78	10.96	8.26
45.0	9.52	9.08	8.75	8.59	8.59	13.65	13.43	10.74	8.31
67.5	9.74	9.25	8.92	8.75	8.75	14.37	15.53	11.23	8.37
90.0	9.58	9.14	8.92	8.75	8.97	12.06	12.33	10.24	8.37
112.5	9.63	9.25	8.97	8.81	8.81	10.41	10.63	9.91	8.42
135.0	9.58	9.14	8.92	8.75	8.75	12.50	12.39	9.08	8.42
157.5	9.69	9.19	8.92	8.75	8.75	12.33	12.28	9.47	8.42
180.0	9.63	9.14	8.86	8.64	8.59	11.95	12.11	8.86	8.42
202.5	9.47	8.86	8.53	8.37	8.26	9.14	9.69	8.31	8.15
225.0	9.86	9.14	8.64	8.42	8.26	8.20	8.64	8.37	8.04
247.5	9.86	9.03	8.64	8.37	8.26	8.20	8.97	8.15	8.04
270.0	16.24	9.25	8.75	8.48	8.31	8.26	8.59	8.42	8.15
292.5	10.41	9.08	8.64	8.42	8.31	8.26	8.86	8.59	8.20
315.0	11.01	9.25	8.81	8.53	8.42	8.37	9.30	8.42	8.26
337.5	9.86	9.08	8.75	8.59	8.42	8.37	8.59	8.59	8.20
360.0	9.97	9.25	8.92	8.70	8.53	8.53	9.63	9.03	8.64
C/ γ (°)	90.0								
0.0	8.09								
22.5	7.93								
45.0	7.93								
67.5	7.98								
90.0	7.98								
112.5	8.09								
135.0	8.09								
157.5	8.15								
180.0	8.09								
202.5	7.82								
225.0	7.87								
247.5	7.93								
270.0	7.98								
292.5	8.04								
315.0	8.09								
337.5	8.09								
360.0	8.09								