



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NATA

LumCAT: 1451-E	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 10.2500
Test No: GC2019010810	Current(A): 0.6000
LampCAT: BRIDGELUX V6	Power (W): 6.1500
Lamp flux(lm): 519.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 44	Width(mm): 44
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 464.72
Efficiency(%): 89.54%
Lumens(lm)/Power(W): 76.58
Central intensity(cd): 1121.456
Maximum intensity(cd): 1121.456
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=29.5
[C90/270]Total=29.5
Field angle(10%Imax): [C0/180]Total=73.6
[C90/270]Total=73.6
Maximum s/h(1/2): C0_180=0.49 C90_270=0.49
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.75%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.884%

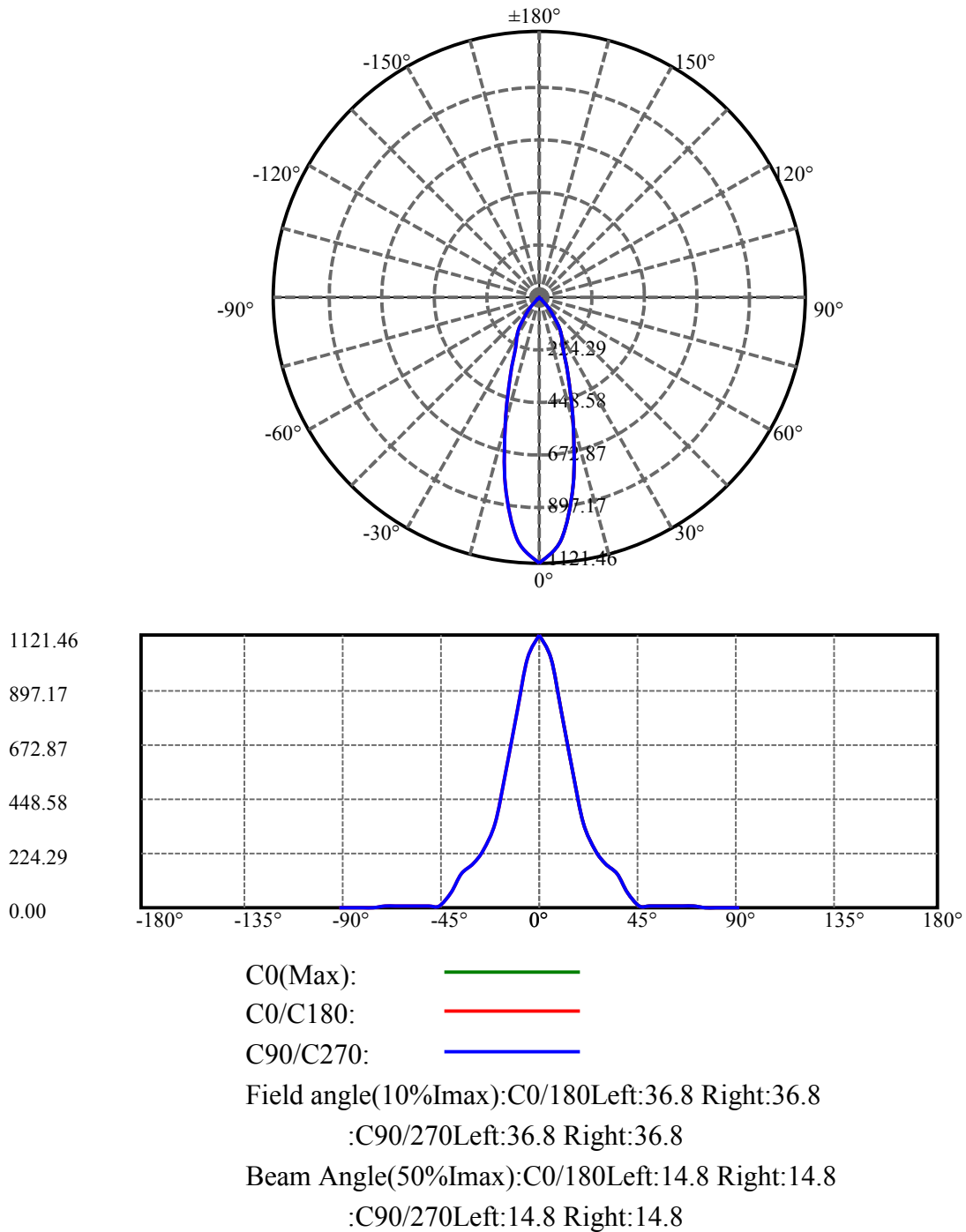
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1121.456	6.707	6.707	1.292%	1.443%
5.0	1025.803	49.006	55.713	9.442%	11.988%
10.0	805.205	76.642	132.354	14.767%	28.481%
15.0	548.346	77.793	210.147	14.989%	45.220%
20.0	345.959	64.858	275.006	12.497%	59.177%
25.0	238.416	55.230	330.235	10.642%	71.062%
30.0	180.274	49.408	379.643	9.520%	81.693%
35.0	138.811	43.642	423.285	8.409%	91.084%
40.0	64.167	22.608	445.893	4.356%	95.949%
45.0	9.844	3.815	449.709	.735%	96.770%
50.0	5.857	2.459	452.168	.474%	97.300%
55.0	4.669	2.096	454.264	.404%	97.751%
60.0	4.303	2.043	456.307	.394%	98.190%
65.0	3.902	1.939	458.246	.374%	98.607%
70.0	3.713	1.912	460.158	.368%	99.019%
75.0	3.059	1.619	461.777	.312%	99.367%
80.0	2.285	1.234	463.011	.238%	99.633%
85.0	2.130	1.163	464.174	.224%	99.883%
90.0	1.983	0.543	464.717	.105%	100.000%

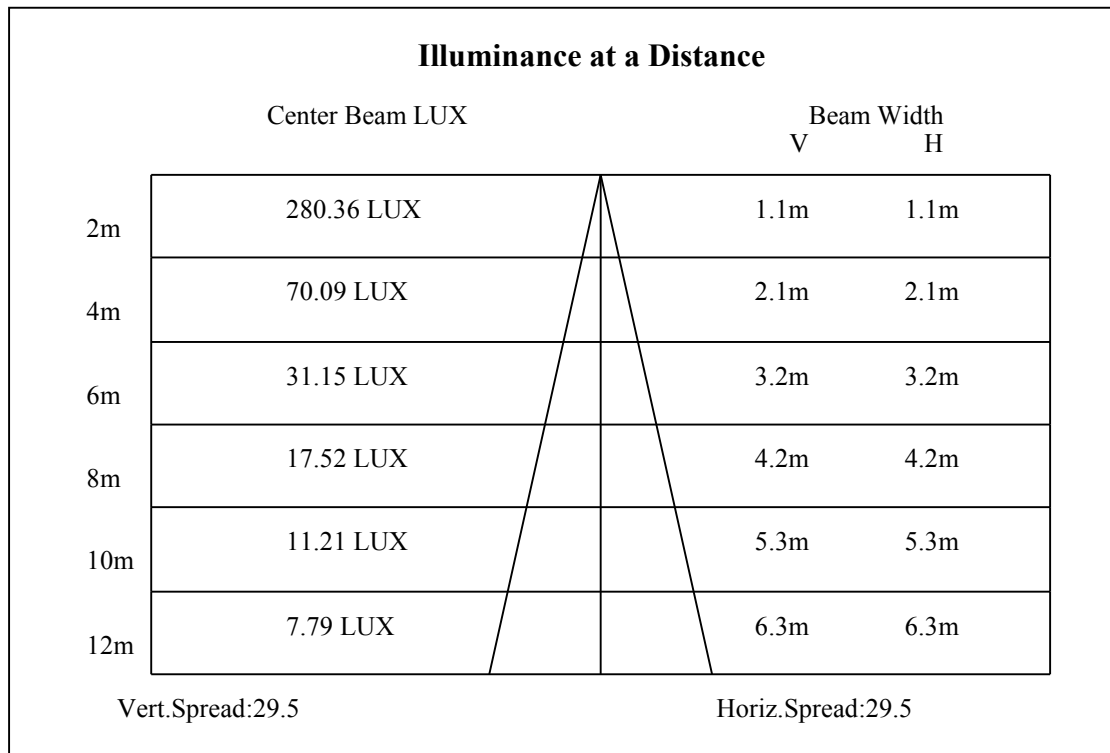
ZONAL LUMEN SUMMARY

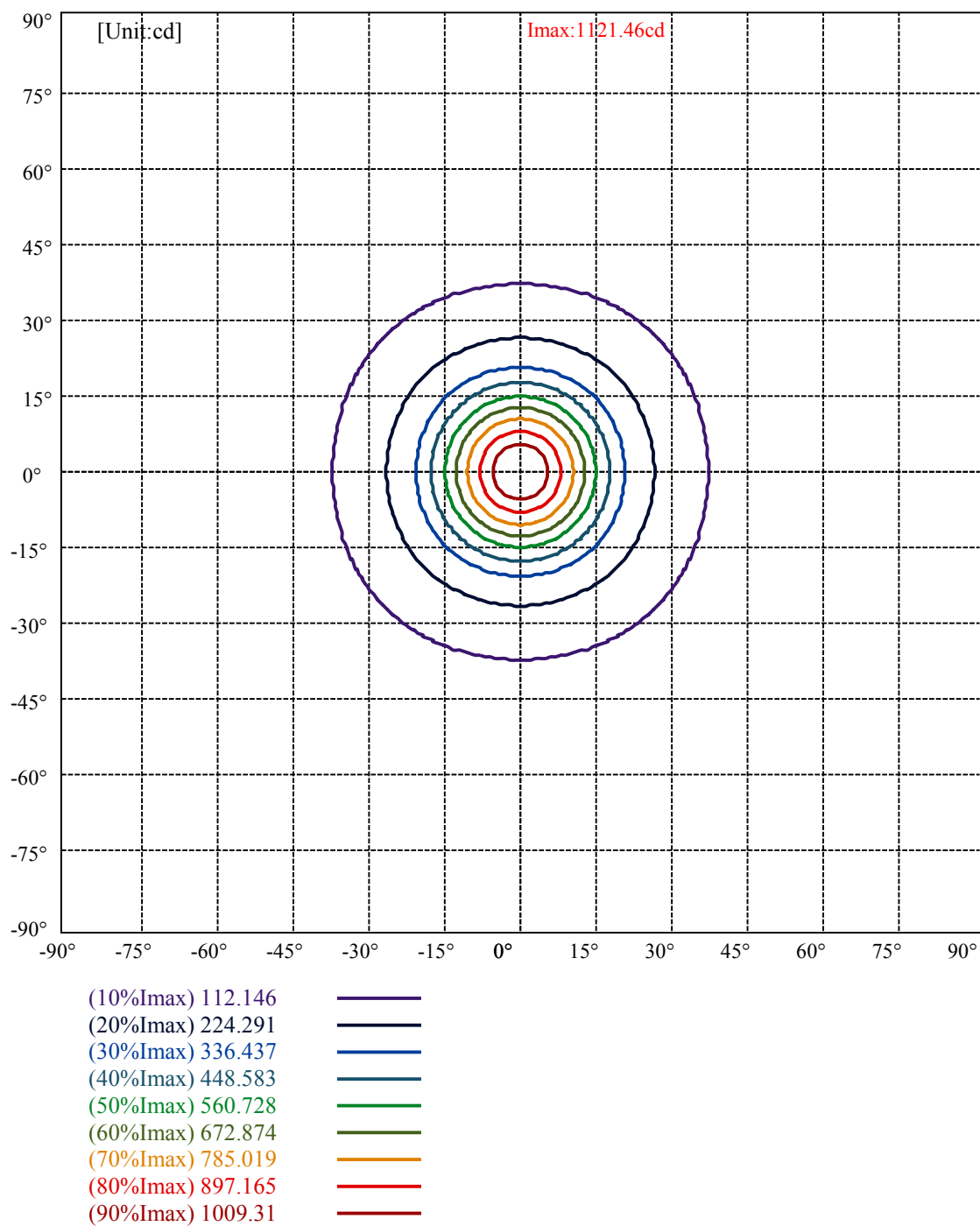
Zone	Lumens	%Lamp	%Fixt
0-30	379.64	73.15%	81.69%
0-40	445.89	85.91%	95.95%
0-60	456.31	87.92%	98.19%
0-90	464.17	89.44%	99.88%
0-120	464.17	89.44%	99.88%
0-180	464.72	89.54%	100.00%
60-90	9.91	1.91%	2.13%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.20	371.77	71.63%	80.00%

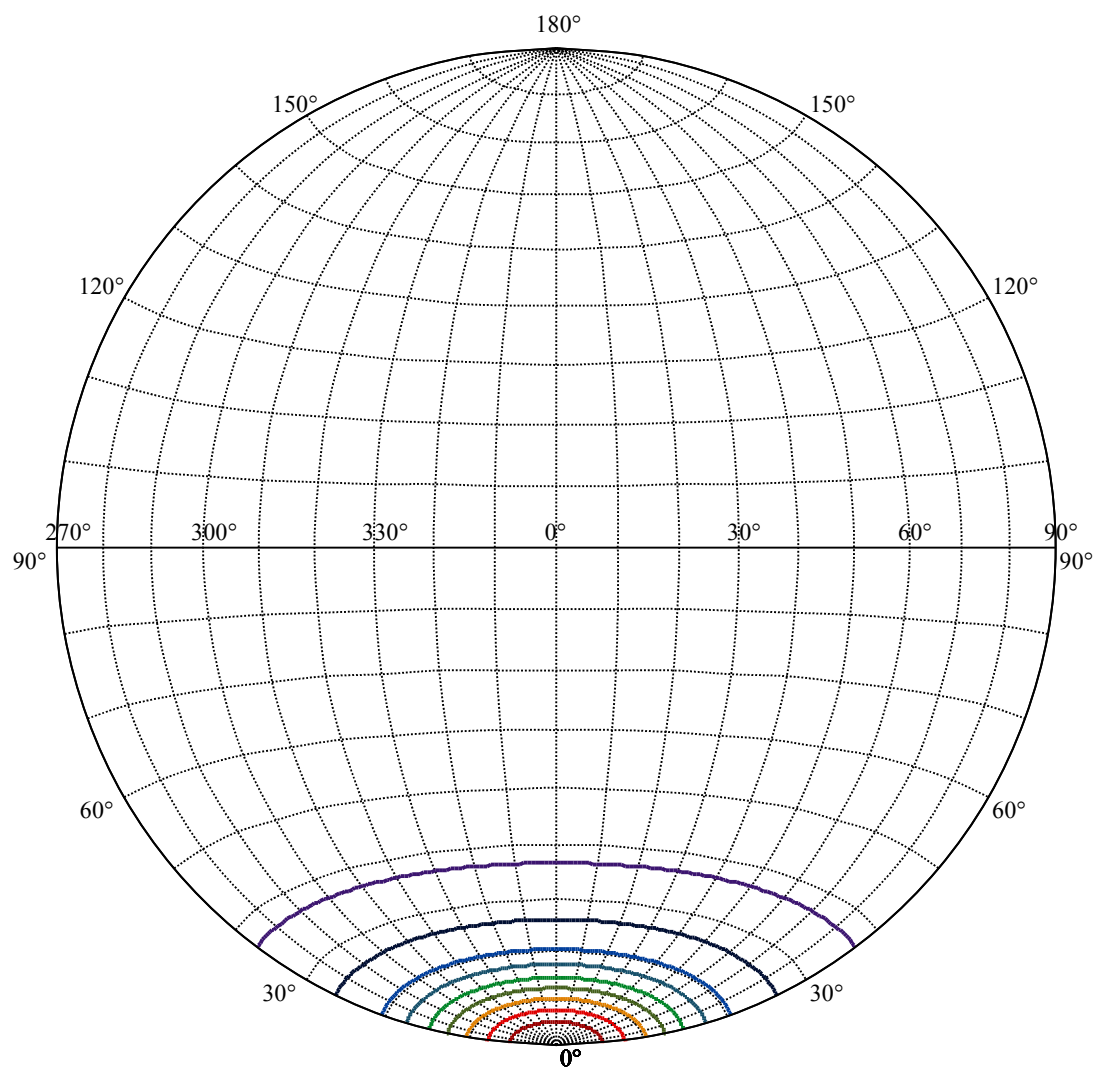
ZONAL LUMEN SUMMARY

0-10	132.35
10-20	142.65
20-30	104.64
30-40	66.25
40-50	6.27
50-60	4.14
60-70	3.85
70-80	2.85
80-90	1.16
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









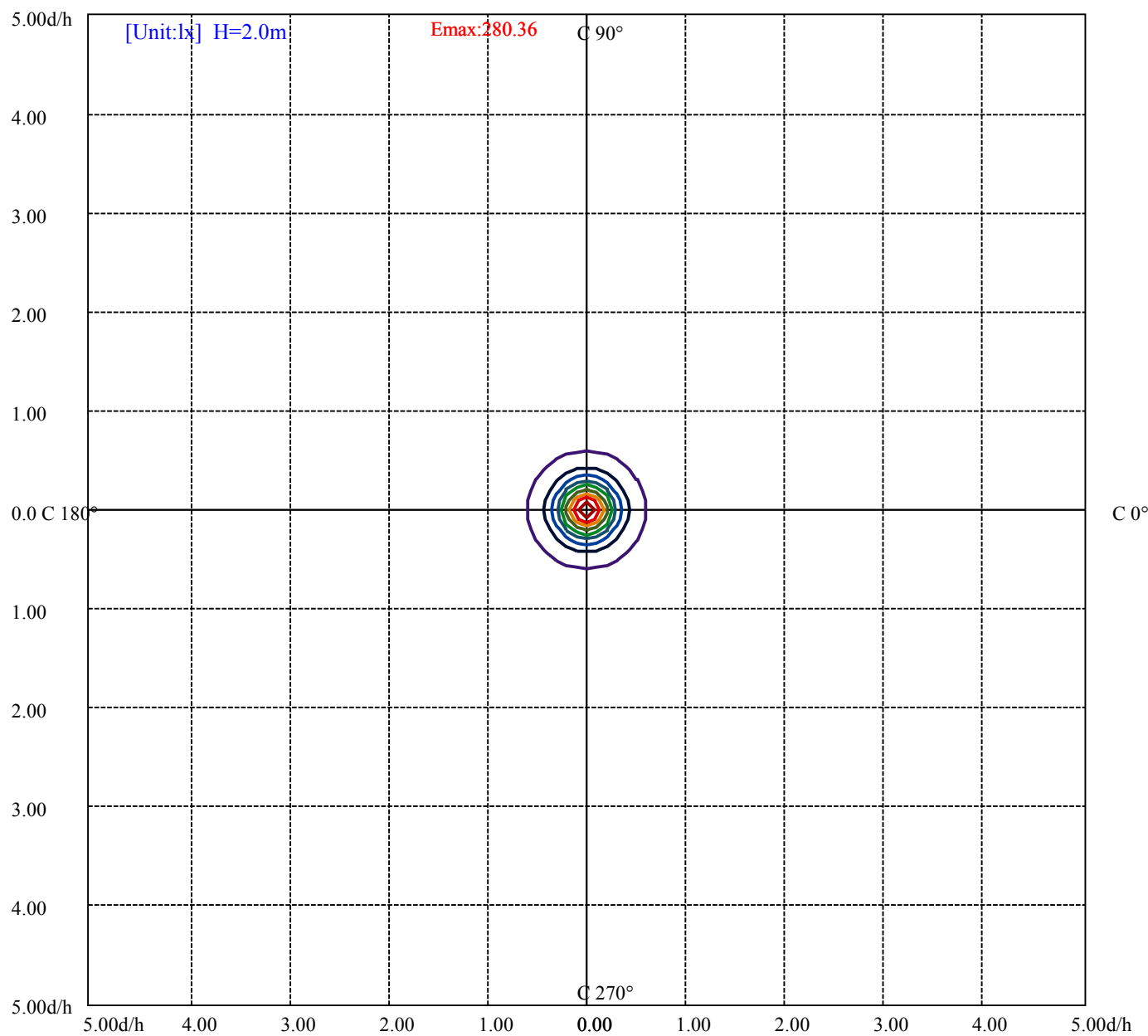
House

[Unit:cd]

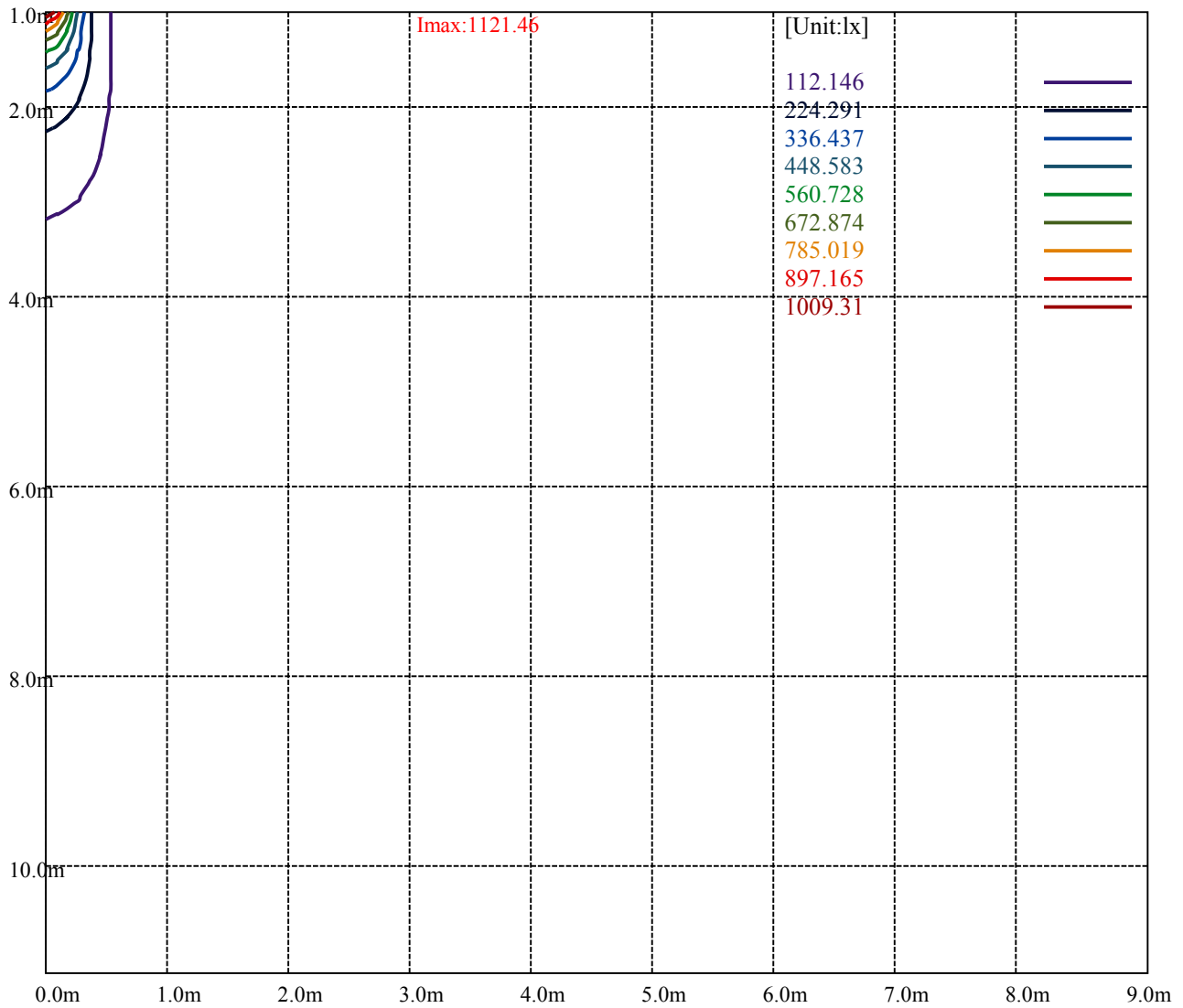
Road

Imax:1121.46

(10%Imax)	112.146	—
(20%Imax)	224.291	—
(30%Imax)	336.437	—
(40%Imax)	448.583	—
(50%Imax)	560.728	—
(60%Imax)	672.874	—
(70%Imax)	785.019	—
(80%Imax)	897.165	—
(90%Imax)	1009.31	—



(10%E _{max}) 28.03625	—
(20%E _{max}) 56.07275	—
(30%E _{max}) 84.109	—
(40%E _{max}) 112.1452	—
(50%E _{max}) 140.1817	—
(60%E _{max}) 168.218	—
(70%E _{max}) 196.2543	—
(80%E _{max}) 224.2908	—
(90%E _{max}) 252.3275	—



Luminance Table

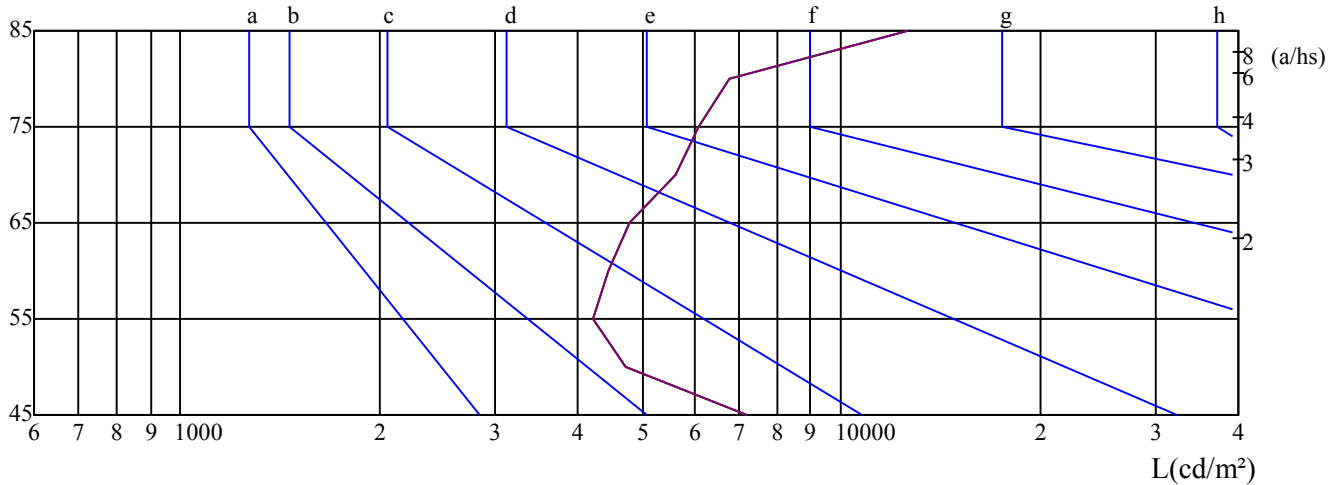
γ	45	50	55	60	65	70	75	80	85
C0	7191	4707	4204	4445	4769	5607	6104	6797	12626
C45	7191	4707	4204	4445	4769	5607	6104	6797	12626
C90	7191	4707	4204	4445	4769	5607	6104	6797	12626

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4769	4769	4769	6104	6104	6104	12626	12626	12626

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

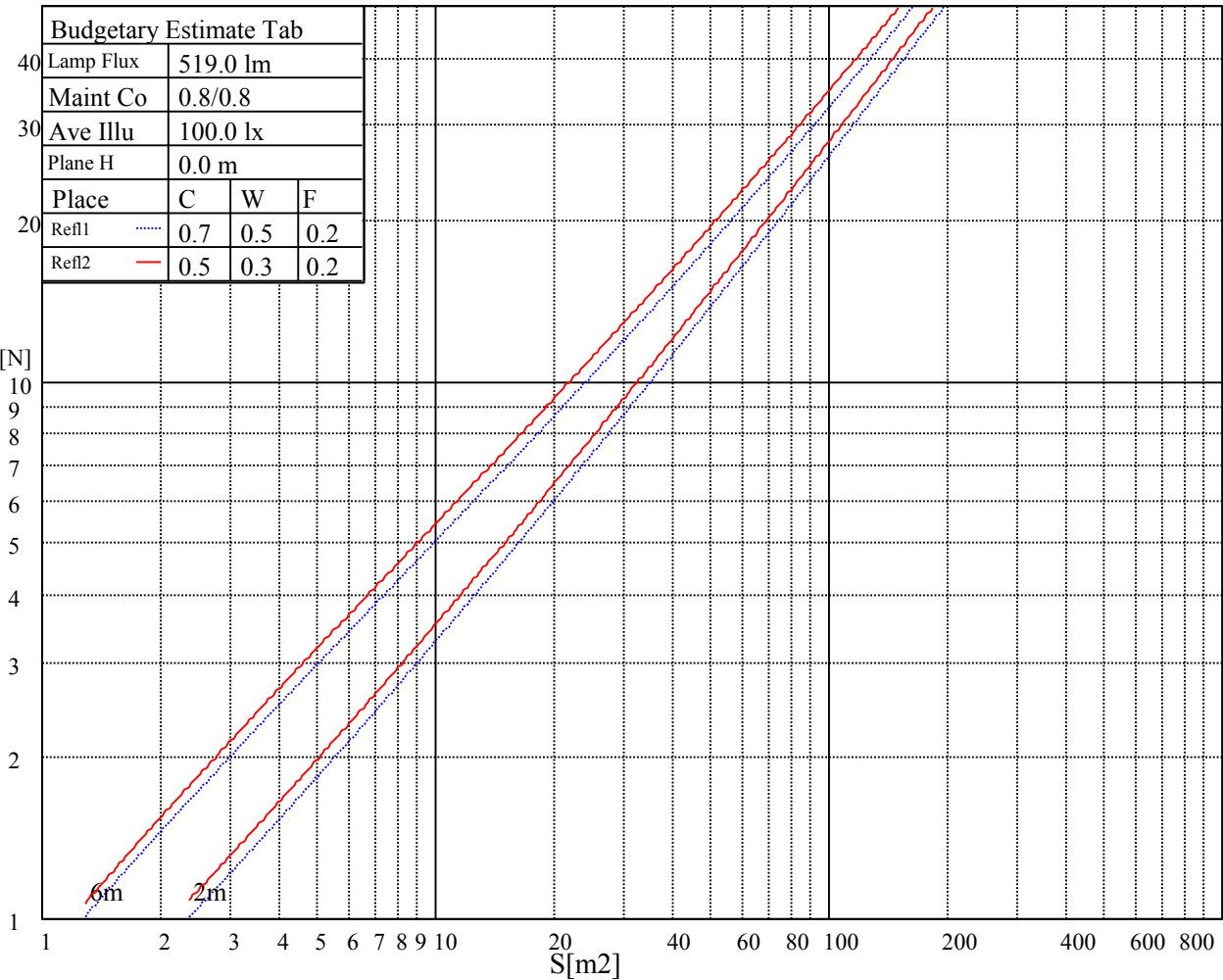
 $\gamma(^{\circ})$ 

C0 ———

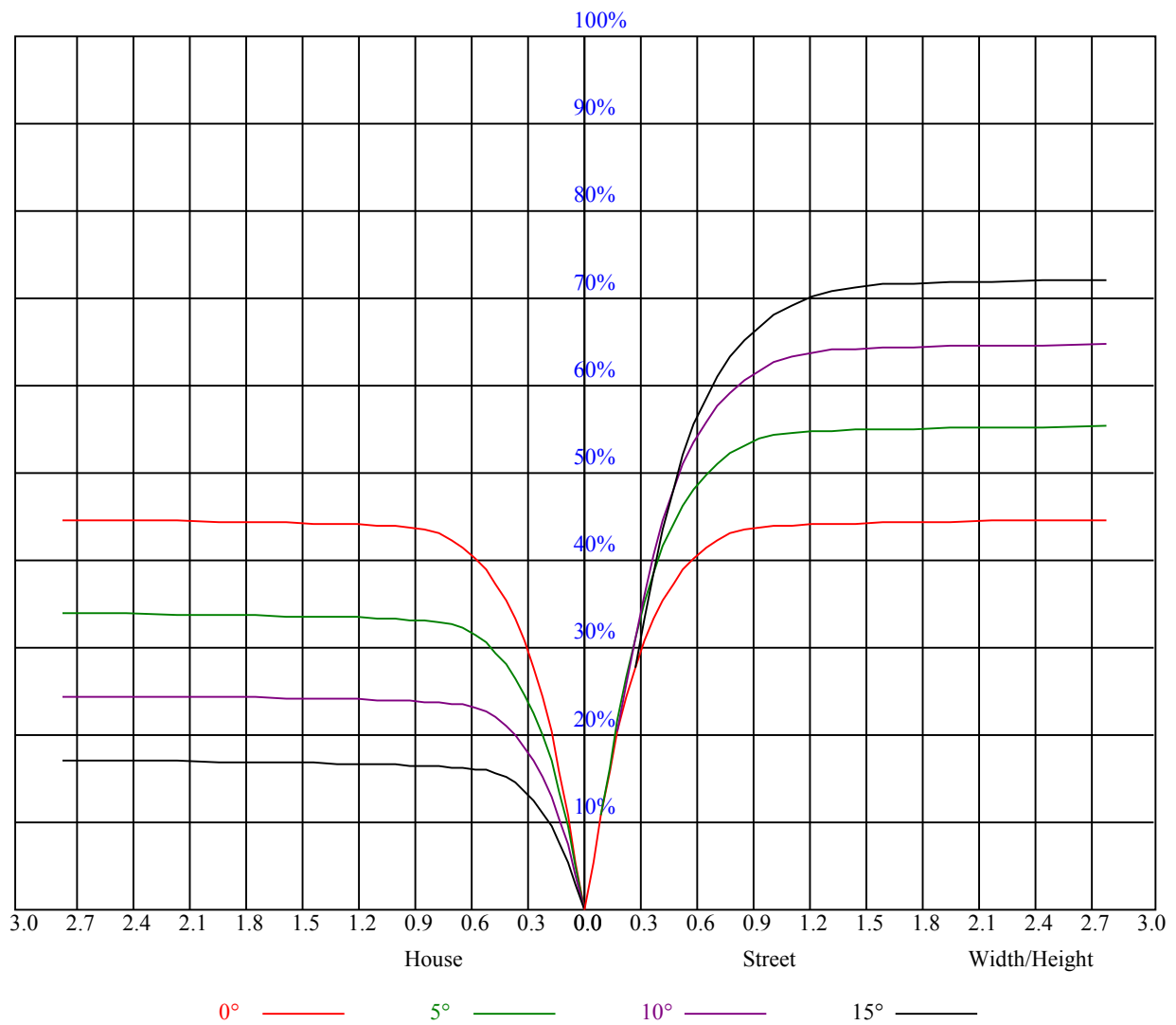
C45 ———

C90 ———

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	12.20	13.14	12.56	13.45	13.77	9.55	10.50	9.92	10.81	11.12
	3H	15.33	16.17	15.72	16.50	16.87	12.17	13.01	12.56	13.34	13.71
	4H	16.73	17.50	17.13	17.85	18.24	13.28	14.05	13.69	14.41	14.80
	6H	17.71	18.42	18.13	18.79	19.19	14.56	15.26	14.98	15.64	16.04
	8H	18.14	18.81	18.58	19.20	19.61	15.36	16.02	15.80	16.42	16.83
	12H	18.91	19.55	19.35	19.93	20.36	16.82	17.45	17.25	17.84	18.27
4H	2H	12.52	13.29	12.93	13.65	14.04	10.49	11.26	10.90	11.61	12.00
	3H	15.94	16.57	16.35	16.98	17.39	13.38	14.01	13.80	14.42	14.83
	4H	17.50	18.06	17.94	18.49	18.94	14.64	15.21	15.08	15.63	16.08
	6H	18.58	19.07	19.05	19.52	19.99	16.02	16.51	16.49	16.96	17.43
	8H	19.13	19.58	19.61	20.03	20.51	16.90	17.36	17.38	17.81	18.28
	12H	19.96	20.35	20.46	20.84	21.32	18.29	18.67	18.78	19.16	19.64
8H	4H	17.72	18.17	18.20	18.62	19.10	15.35	15.81	15.83	16.26	16.73
	6H	19.01	19.37	19.52	19.87	20.36	16.95	17.31	17.46	17.81	18.30
	8H	19.75	20.06	20.28	20.59	21.08	18.01	18.33	18.55	18.85	19.35
	12H	20.94	21.21	21.46	21.71	22.29	19.61	19.88	20.13	20.38	20.96
12H	4H	17.74	18.13	18.23	18.62	19.10	15.50	15.88	15.99	16.37	16.85
	6H	19.34	19.43	19.65	19.90	20.45	17.44	17.52	17.74	18.00	18.55
	8H	19.96	20.23	20.49	20.73	21.31	18.40	18.67	18.92	19.17	19.75
Variation with the observer position at spacings:											
S = 1.0H		4.1/-5.5					4.1/-5.5				
S = 1.5H		6.2/-4.3					6.2/-4.3				
S = 2.0H		7.7/-3.6					7.7/-3.6				
Standard tables:		BK2					BK2				
Uncorrected UGR		1.1					1.1				



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 RHOF=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	1.00	0.97	0.95	0.98	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.89	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.77	0.75
4	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.65
7	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
9	0.67	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
10	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56



NATA 1451-E

Intensity data(cd)										Appendix Page: 15 Total:15
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
0.0	1122.19	1029.94	821.25	567.00	372.94	259.54	188.38	148.61	66.15	
45.0	1120.44	1046.25	836.44	595.69	370.13	256.33	190.86	153.84	78.41	
90.0	1121.12	1039.78	817.20	543.26	329.18	214.43	167.34	133.71	69.24	
135.0	1122.08	1072.13	874.69	594.56	372.94	284.63	189.73	157.11	94.56	
180.0	1122.19	1026.23	795.21	559.52	346.56	229.89	180.28	144.51	63.00	
225.0	1120.44	1004.91	768.15	507.77	331.31	226.07	179.55	131.18	52.99	
270.0	1121.12	1007.44	795.94	531.00	328.50	215.66	165.21	117.45	48.94	
315.0	1122.08	979.76	732.77	487.97	316.13	220.78	180.84	124.09	40.05	
360.0	1122.19	1029.94	821.25	567.00	372.94	259.54	188.38	148.61	66.15	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	8.38	4.67	3.32	2.98	2.87	2.70	2.14	2.14	2.19	
45.0	9.51	5.57	4.05	3.66	3.26	3.15	2.70	2.03	2.08	
90.0	11.42	7.31	6.19	5.91	5.57	5.23	4.50	2.53	2.03	
135.0	13.61	7.76	4.95	4.44	3.83	3.43	3.21	2.14	1.97	
180.0	8.16	4.05	3.49	3.15	3.04	2.81	2.19	2.08	2.08	
225.0	8.16	4.84	4.28	3.99	3.38	3.43	2.64	2.14	2.14	
270.0	10.91	7.37	6.41	5.96	5.79	5.40	4.28	2.87	2.19	
315.0	8.61	5.29	4.67	4.33	3.49	3.54	2.81	2.36	2.36	
360.0	8.38	4.67	3.32	2.98	2.87	2.70	2.14	2.14	2.19	
C/γ(°)	90.0									
0.0	1.97									
45.0	2.08									
90.0	1.86									
135.0	2.03									
180.0	2.03									
225.0	2.03									
270.0	1.86									
315.0	2.03									
360.0	1.97									