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NATA

LumCAT: 2-1569-M
Luminaire: BJB 47.319.2030
Report No: NATA0100
Test No: GC2019021908
LampCAT: BRIDGELUX V22B
Lamp flux(lm): 6677.9
Number of Lamps: 1
Length(mm): 70
Phm Type: C
Voltage(V): 50.6100
Current(A): 0.9000
Power (W): 45.5400
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 5755.51
Efficiency(%): 86.19%
Lumens(lm)/Power(W): 127.06
Central intensity(cd): 6080.766
Maximum intensity(cd): 6132.727
Angle of maximum intensity: C=0.0 γ =10.0
Beam Angle(50%Imax): [C0/180]Total=62.0
[C90/270]Total=62.0
Field angle(10%Imax): [C0/180]Total=81.4
[C90/270]Total=81.4
Maximum s/h(1/2): C0_180=1.00 C90_270=1.00
Maximum s/h(1/4): C0_180=0.91 C90_270=0.91
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.65%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.041%

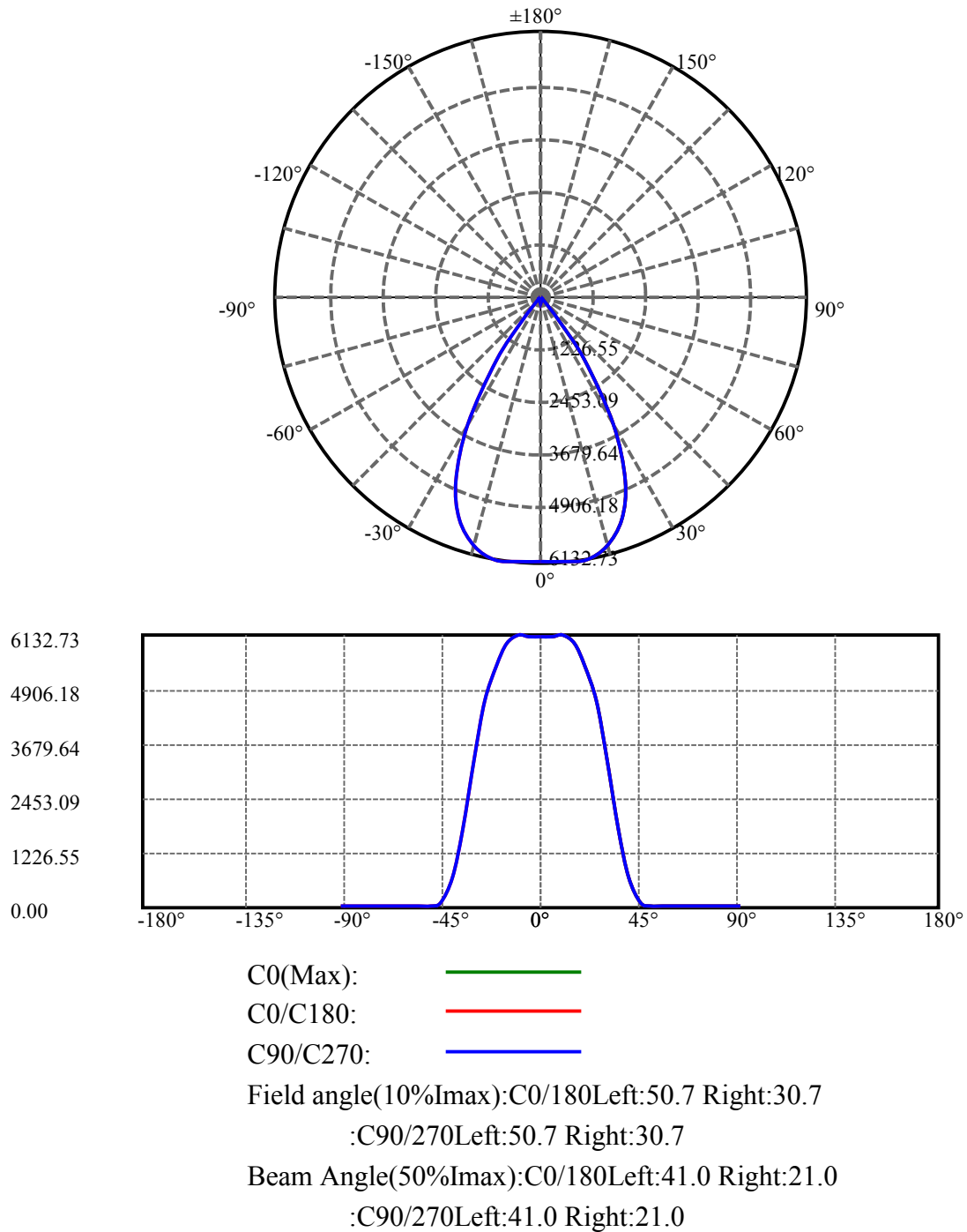
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6080.766	36.364	36.364	.545%	.632%
5.0	6105.094	291.661	328.025	4.368%	5.699%
10.0	6132.727	583.732	911.756	8.741%	15.841%
15.0	5950.477	844.185	1755.941	12.642%	30.509%
20.0	5459.977	1023.604	2779.545	15.328%	48.294%
25.0	4638.586	1074.542	3854.087	16.091%	66.963%
30.0	3387.516	928.412	4782.499	13.903%	83.094%
35.0	1768.155	555.906	5338.404	8.325%	92.753%
40.0	693.499	244.345	5582.749	3.659%	96.998%
45.0	124.580	48.286	5631.035	.723%	97.837%
50.0	40.226	16.891	5647.926	.253%	98.131%
55.0	27.914	12.534	5660.459	.188%	98.349%
60.0	26.473	12.567	5673.026	.188%	98.567%
65.0	29.651	14.730	5687.756	.221%	98.823%
70.0	31.219	16.080	5703.836	.241%	99.102%
75.0	30.853	16.335	5720.172	.245%	99.386%
80.0	27.949	15.087	5735.259	.226%	99.648%
85.0	25.348	13.841	5749.1	.207%	99.889%
90.0	23.393	6.411	5755.511	.096%	100.000%

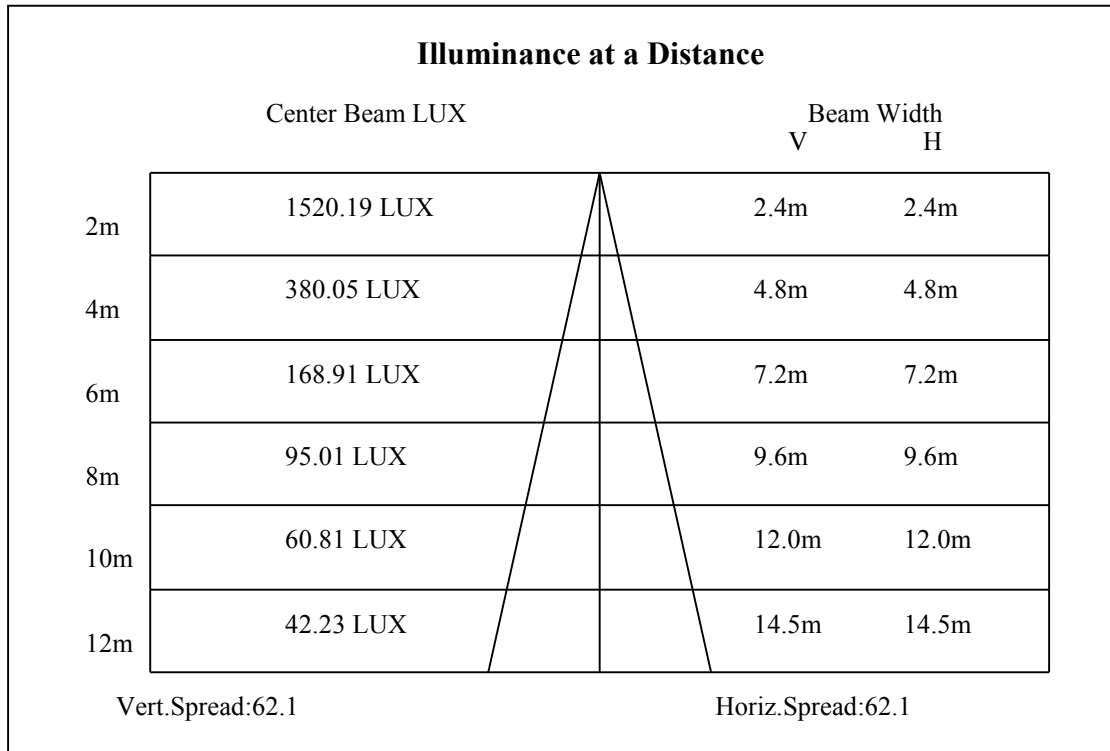
ZONAL LUMEN SUMMARY

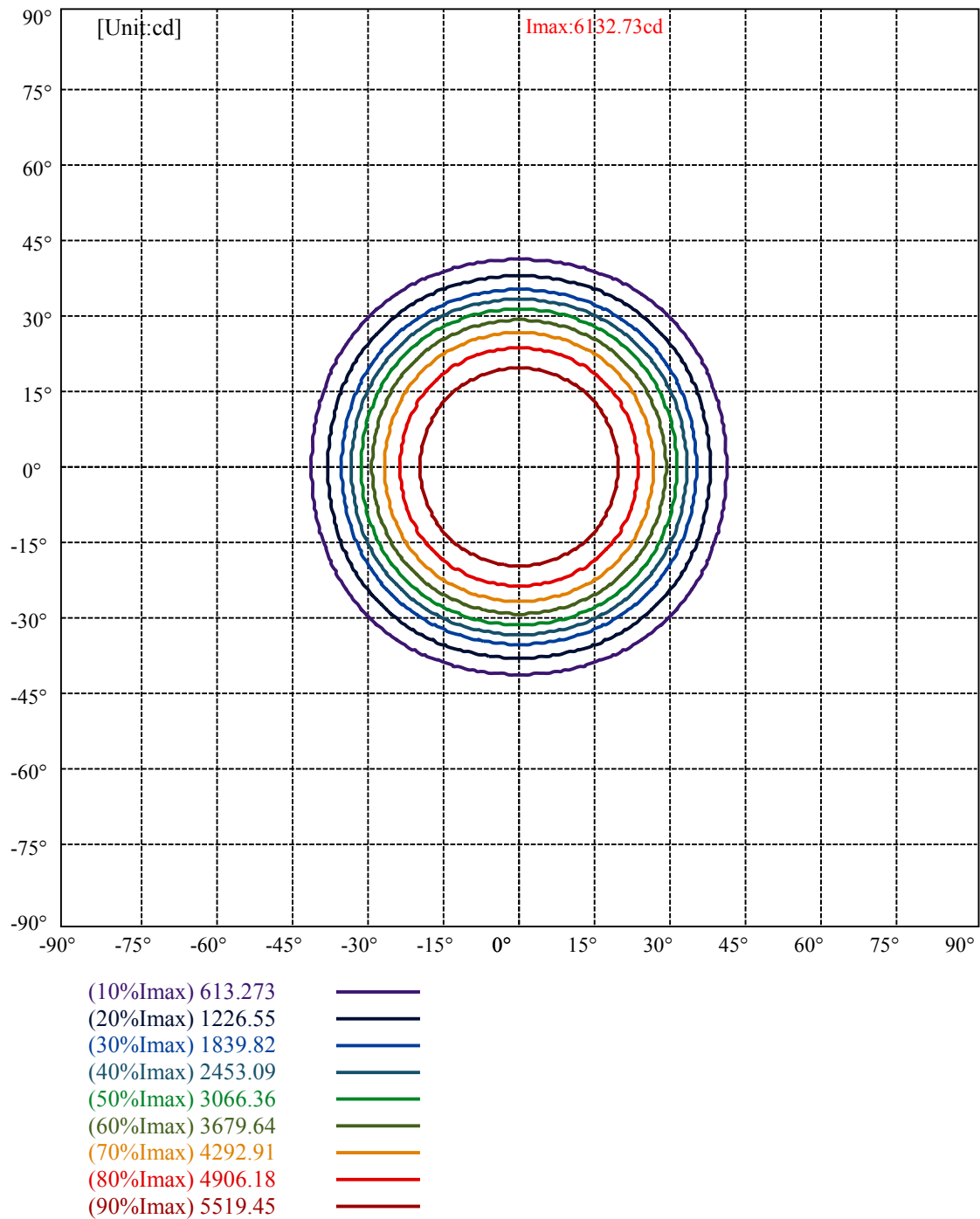
Zone	Lumens	%Lamp	%Fixt
0-30	4782.50	71.62%	83.09%
0-40	5582.75	83.60%	97.00%
0-60	5673.03	84.95%	98.57%
0-90	5749.10	86.09%	99.89%
0-120	5749.10	86.09%	99.89%
0-180	5755.51	86.19%	100.00%
60-90	88.64	1.33%	1.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-29.04	4604.41	68.95%	80.00%

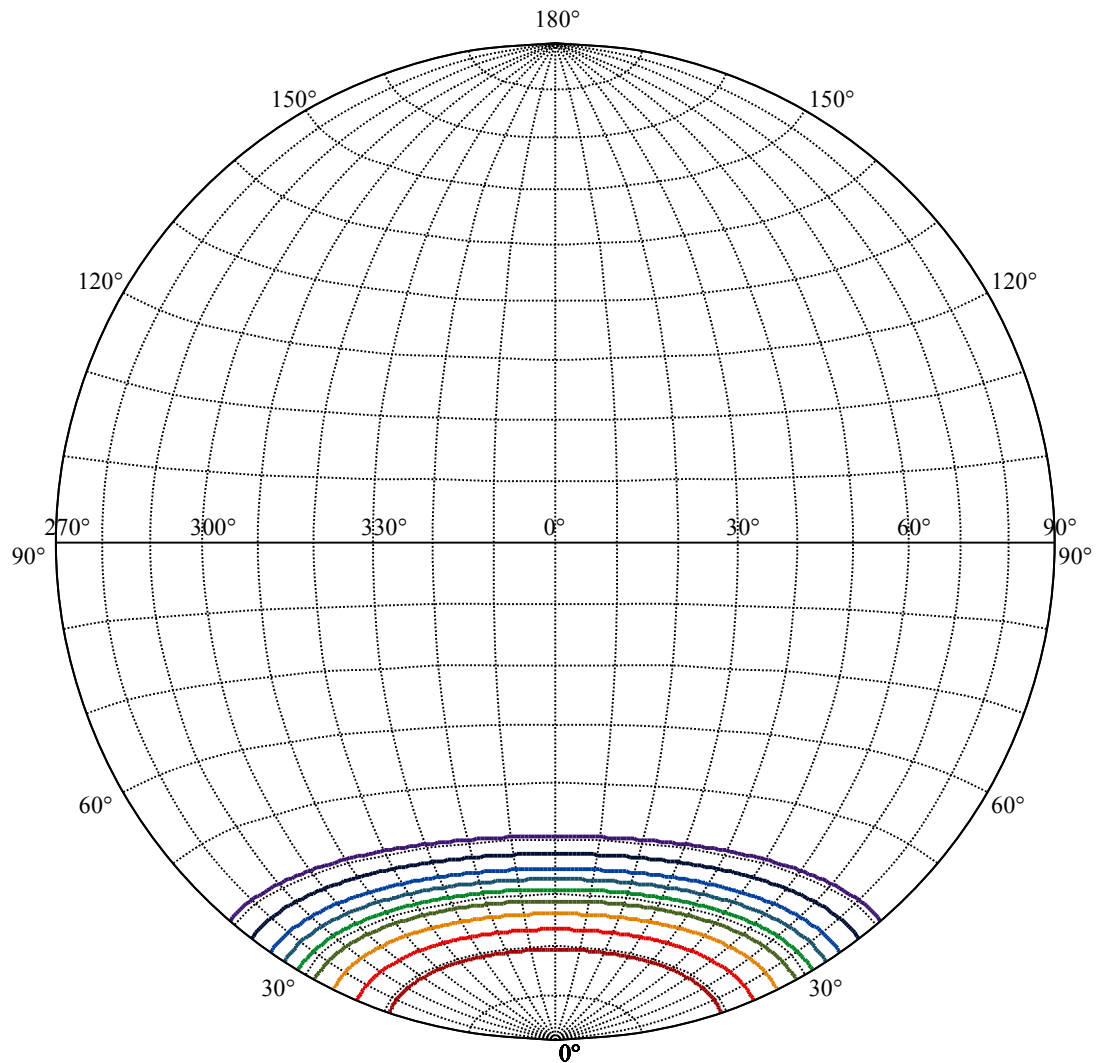
ZONAL LUMEN SUMMARY

0-10	911.76
10-20	1867.79
20-30	2002.95
30-40	800.25
40-50	65.18
50-60	25.10
60-70	30.81
70-80	31.42
80-90	13.84
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:6132.73

(10%Imax) 613.273

(20%Imax) 1226.55

(30%Imax) 1839.82

(40%Imax) 2453.09

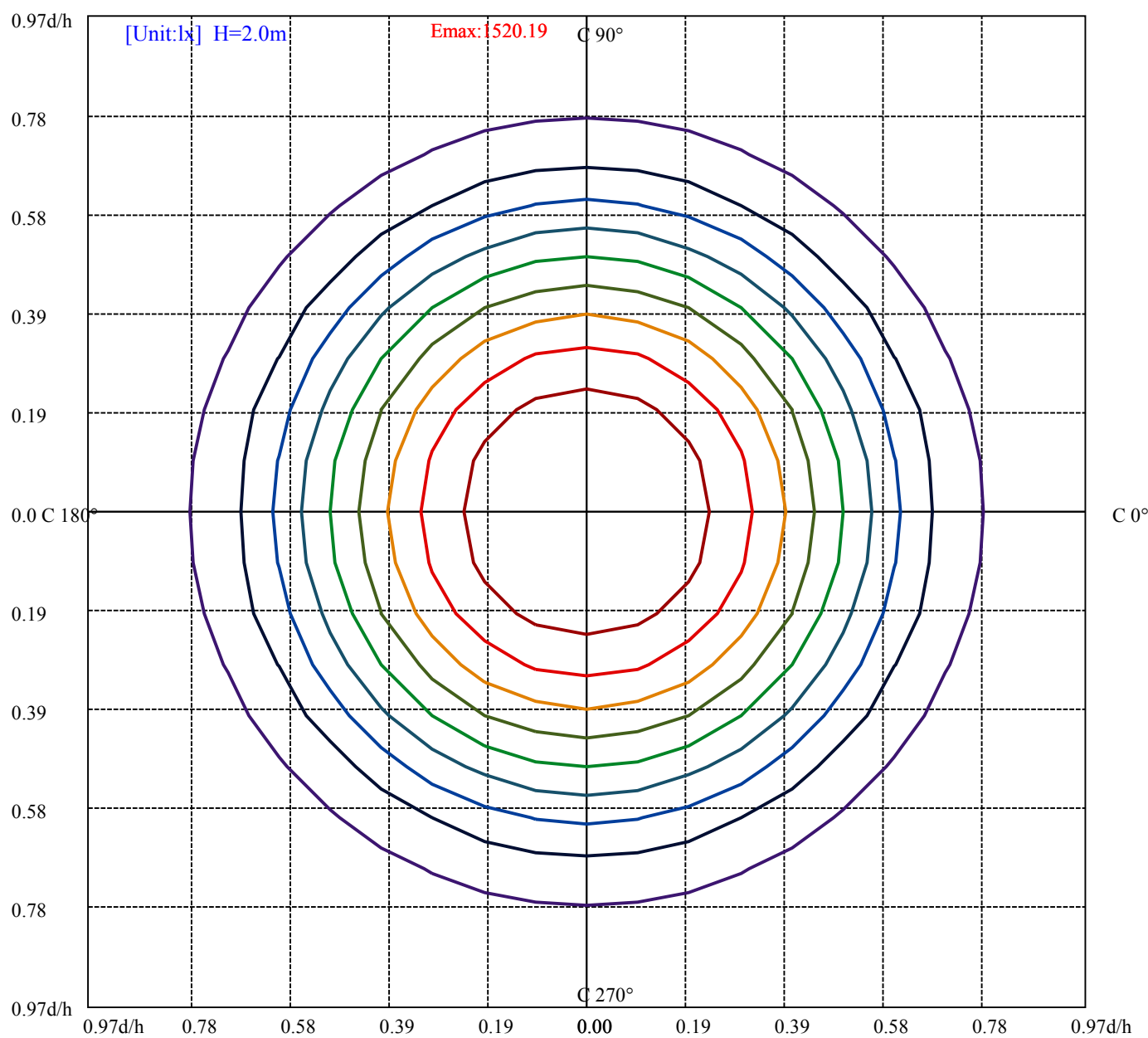
(50%Imax) 3066.36

(60%Imax) 3679.64

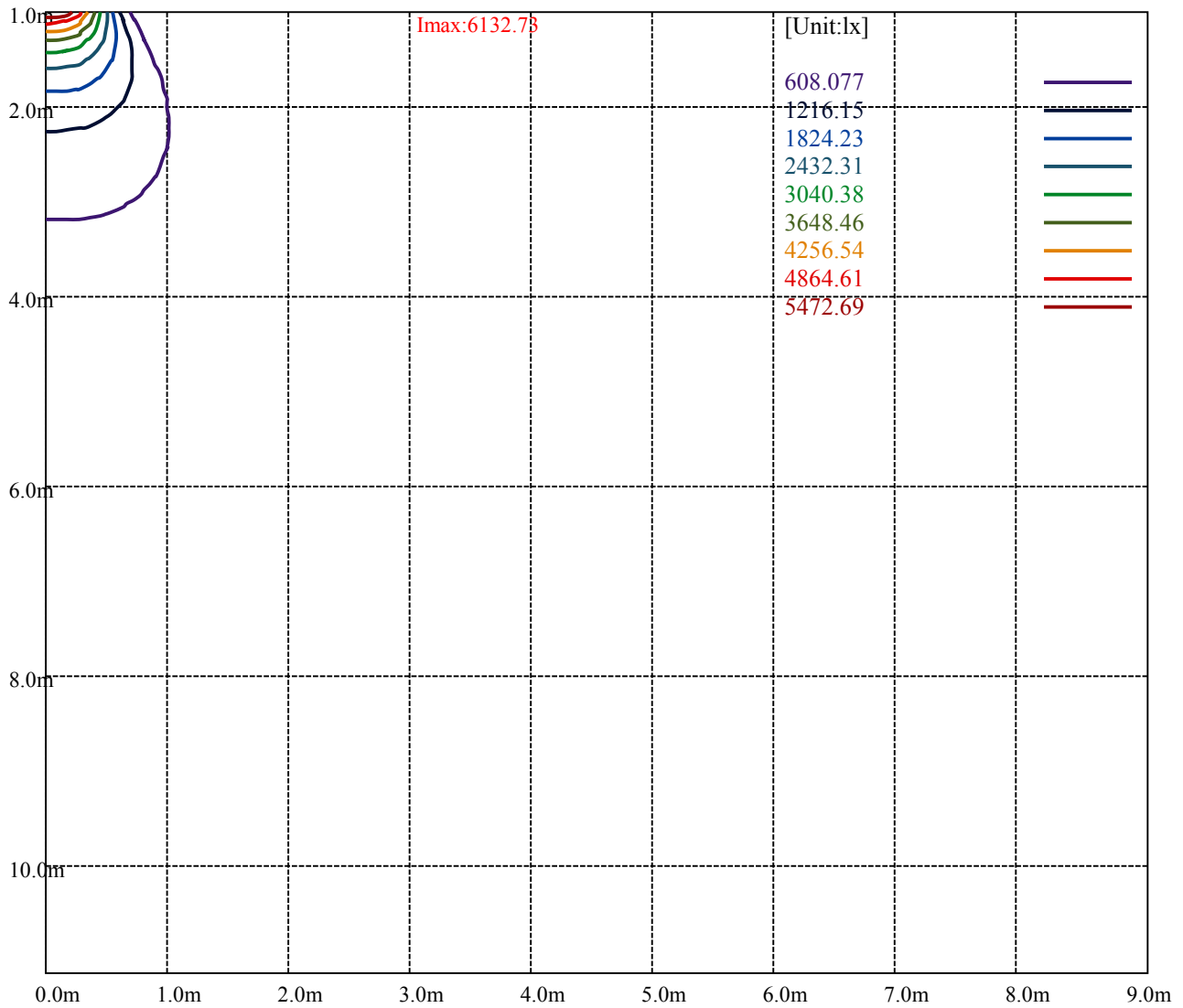
(70%Imax) 4292.91

(80%Imax) 4906.18

(90%Imax) 5519.45



(10%Emax) 152.0193	—
(20%Emax) 304.0375	—
(30%Emax) 456.0575	—
(40%Emax) 608.0775	—
(50%Emax) 760.095	—
(60%Emax) 912.115	—
(70%Emax) 1064.135	—
(80%Emax) 1216.152	—
(90%Emax) 1368.172	—



Luminance Table

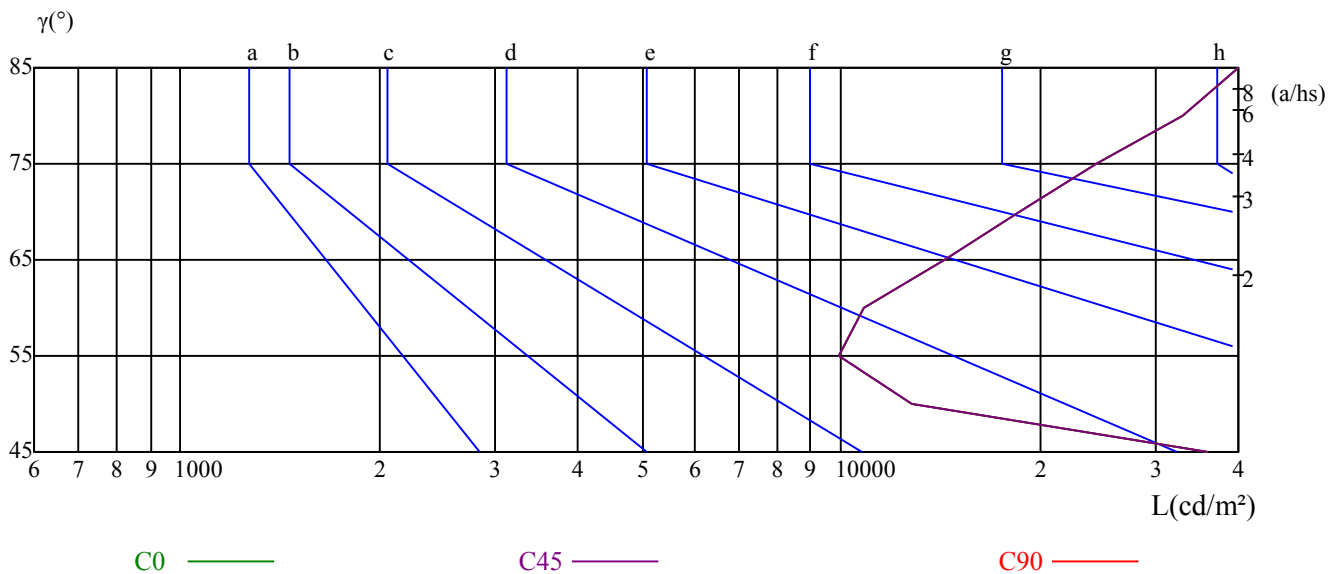
γ	45	50	55	60	65	70	75	80	85
C0	35956	12771	9932	10805	14318	18628	24328	32848	59353
C45	35956	12771	9932	10805	14318	18628	24328	32848	59353
C90	35956	12771	9932	10805	14318	18628	24328	32848	59353

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14318	14318	14318	24328	24328	24328	59353	59353	59353

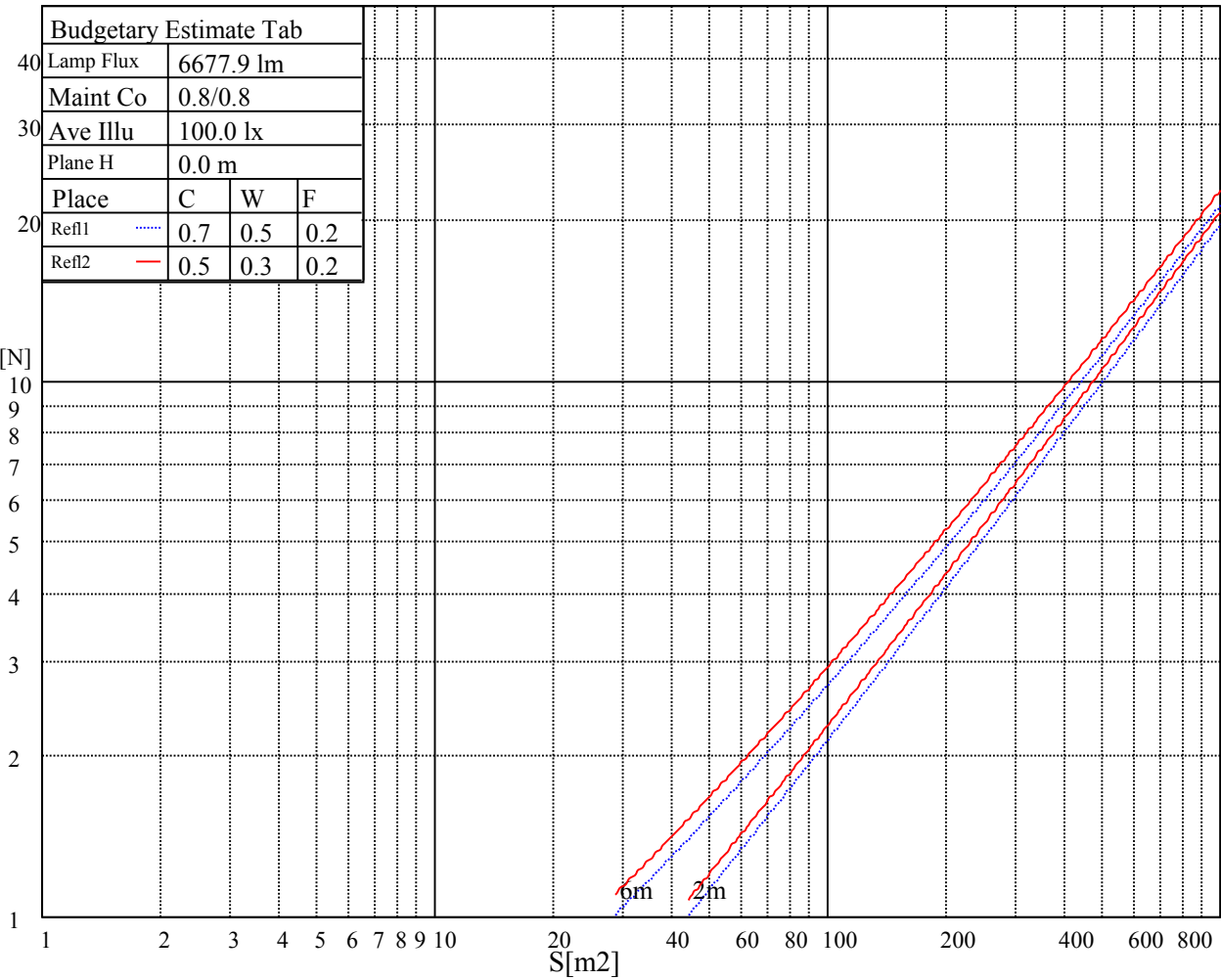
Glare Table

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

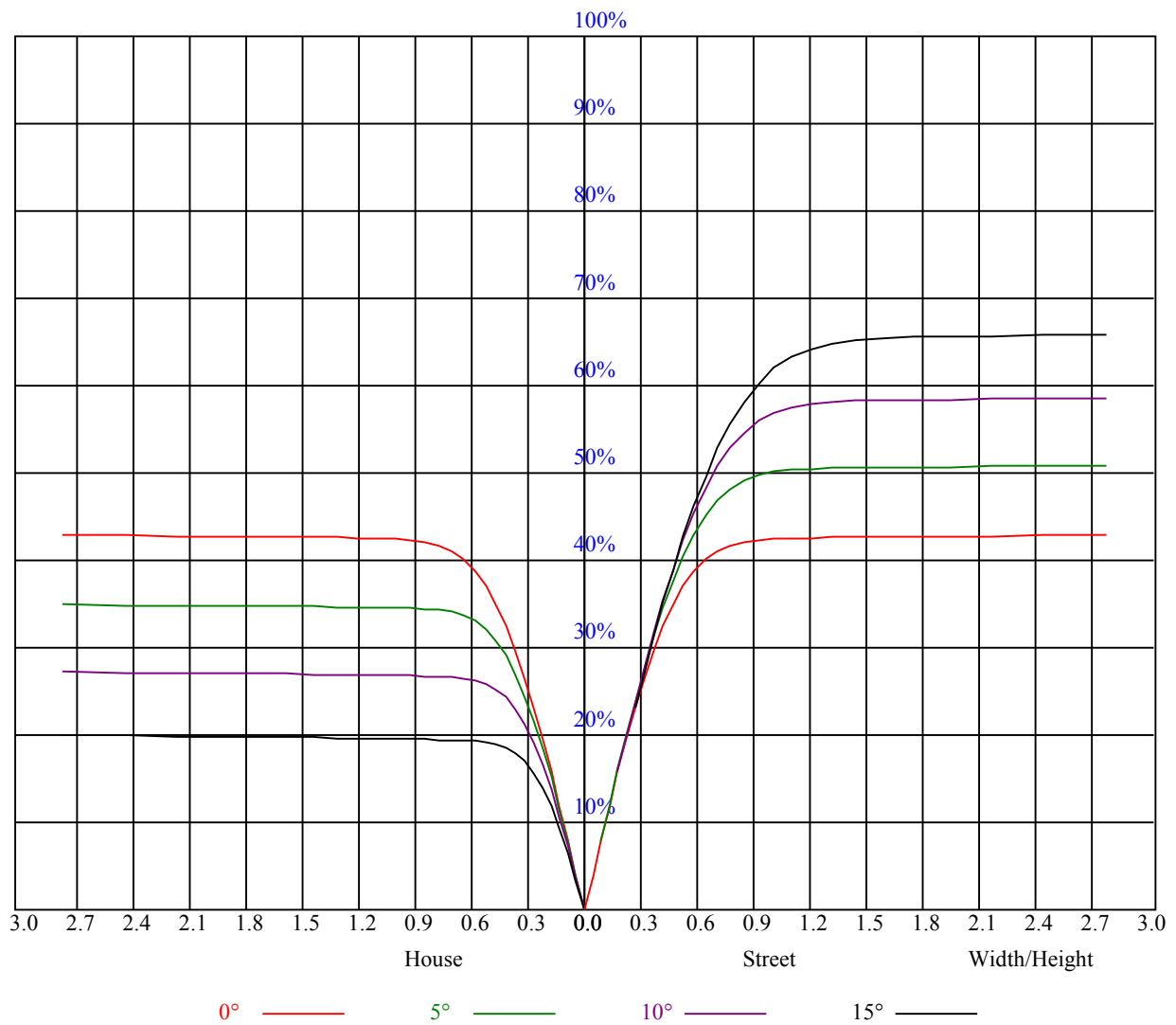
Luminance Limiting Curve



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	2.76	3.69	3.13	4.00	4.32	2.78	3.71	3.14	4.02	4.34
	3H	6.44	7.26	6.82	7.59	7.96	6.47	7.29	6.85	7.63	8.00
	4H	8.27	9.04	8.68	9.39	9.78	8.38	9.14	8.79	9.49	9.89
	6H	10.15	10.85	10.57	11.22	11.62	10.27	10.97	10.69	11.35	11.74
	8H	11.16	11.81	11.60	12.21	12.62	11.28	11.93	11.72	12.33	12.74
	12H	12.82	13.44	13.26	13.83	14.26	12.94	13.56	13.37	13.94	14.38
4H	2H	4.30	5.06	4.71	5.41	5.81	4.31	5.07	4.72	5.42	5.82
	3H	8.15	8.77	8.57	9.18	9.59	8.19	8.81	8.60	9.22	9.63
	4H	10.07	10.63	10.51	11.05	11.50	10.16	10.72	10.60	11.15	11.60
	6H	11.91	12.38	12.38	12.83	13.31	12.00	12.48	12.48	12.93	13.41
	8H	12.96	13.40	13.44	13.85	14.33	13.06	13.50	13.53	13.95	14.43
	12H	14.45	14.83	14.94	15.32	15.80	14.55	14.93	15.04	15.42	15.90
8H	4H	11.05	11.50	11.53	11.95	12.43	11.12	11.57	11.60	12.02	12.49
	6H	13.14	13.49	13.65	14.00	14.48	13.22	13.57	13.73	14.07	14.56
	8H	14.33	14.64	14.87	15.17	15.67	14.41	14.72	14.95	15.25	15.75
	12H	15.91	16.18	16.43	16.68	17.26	15.99	16.26	16.52	16.76	17.34
12H	4H	11.26	11.64	11.75	12.13	12.61	11.32	11.70	11.81	12.19	12.67
	6H	13.70	13.79	14.02	14.27	14.82	13.77	13.86	14.09	14.33	14.88
	8H	14.80	15.07	15.33	15.57	16.15	14.88	15.14	15.40	15.64	16.22
Variation with the observer position at spacings:											
S = 1.0H		5.4/-8.4					5.4/-8.4				
S = 1.5H		7.7/-6.5					7.7/-6.5				
S = 2.0H		9.3/-5.2					9.3/-5.2				
Standard tables:		BK2					BK2				
Uncorrected UGR		6.9					6.9				



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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.96	0.93	0.91	0.94	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.77	0.76
3	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.71
4	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.67
5	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
6	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
7	0.67	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
8	0.64	0.59	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.54
9	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52
10	0.58	0.54	0.51	0.58	0.53	0.50	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.49



NATA 2-1569-M

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	6075.00	6112.13	6145.31	5971.50	5508.56	4699.13	3413.81	1778.63	680.06		
45.0	6083.44	6107.06	6117.75	5883.19	5398.31	4548.38	3250.69	1708.31	604.13		
90.0	6084.56	6089.63	6084.00	5802.75	5231.25	4363.88	3005.44	1065.43	509.74		
135.0	6080.06	6084.00	6113.25	5970.38	5494.50	4727.81	3529.69	1904.63	790.88		
180.0	6075.00	6096.38	6144.19	5960.81	5484.38	4662.00	3288.94	1835.44	696.94		
225.0	6083.44	6114.38	6155.44	6011.44	5520.94	4712.63	3515.63	1978.88	791.89		
270.0	6084.56	6113.25	6148.13	6044.06	5591.25	4819.50	3765.38	2183.06	889.88		
315.0	6080.06	6123.94	6153.75	5959.69	5450.63	4575.38	3330.56	1690.88	584.49		
360.0	6075.00	6112.13	6145.31	5971.50	5508.56	4699.13	3413.81	1778.63	680.06		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	90.56	40.05	27.62	26.38	25.71	25.37	27.17	24.53	24.53		
45.0	71.55	33.98	26.38	25.37	24.69	24.24	23.96	24.13	24.81		
90.0	67.84	32.01	27.34	26.44	25.71	25.65	25.26	24.75	24.64		
135.0	166.50	44.21	30.43	27.73	44.04	51.41	49.84	39.66	27.45		
180.0	93.04	40.84	27.79	26.55	25.99	25.88	26.04	25.65	25.48		
225.0	110.53	42.13	26.66	25.26	24.53	24.13	23.85	24.02	24.92		
270.0	312.19	49.28	27.90	26.49	25.65	25.03	25.71	24.58	24.47		
315.0	84.43	39.32	29.19	27.56	40.89	48.04	45.00	36.28	26.49		
360.0	90.56	40.05	27.62	26.38	25.71	25.37	27.17	24.53	24.53		
C/γ(°)	90.0										
0.0	22.78										
45.0	22.95										
90.0	23.74										
135.0	24.53										
180.0	24.30										
225.0	23.01										
270.0	23.06										
315.0	22.78										
360.0	22.78										