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NATA

LumCAT: 6585-F

Luminaire:

Report No: NATA0100

Voltage(V): 218.1000

Test No: GC2019022605

Current(A): 0.0520

LampCAT: Philips DL-S 900lm

Power (W): 10.8000

Lamp flux(lm): 809.0

PF: 0.9550

Number of Lamps: 1

Ballast type: DC

Length(mm): 160

Width(mm): 160

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 732.27

Efficiency(%): 90.52%

Lumens(lm)/Power(W): 68.10

Central intensity(cd): 645.848

Maximum intensity(cd): 645.848

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=60.6

[C90/270]Total=60.6

Field angle(10%Imax): [C0/180]Total=106.1

[C90/270]Total=106.1

Maximum s/h(1/2): C0_180=0.85 C90_270=0.85

Maximum s/h(1/4): C0_180=0.95 C90_270=0.95

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.91%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.304%

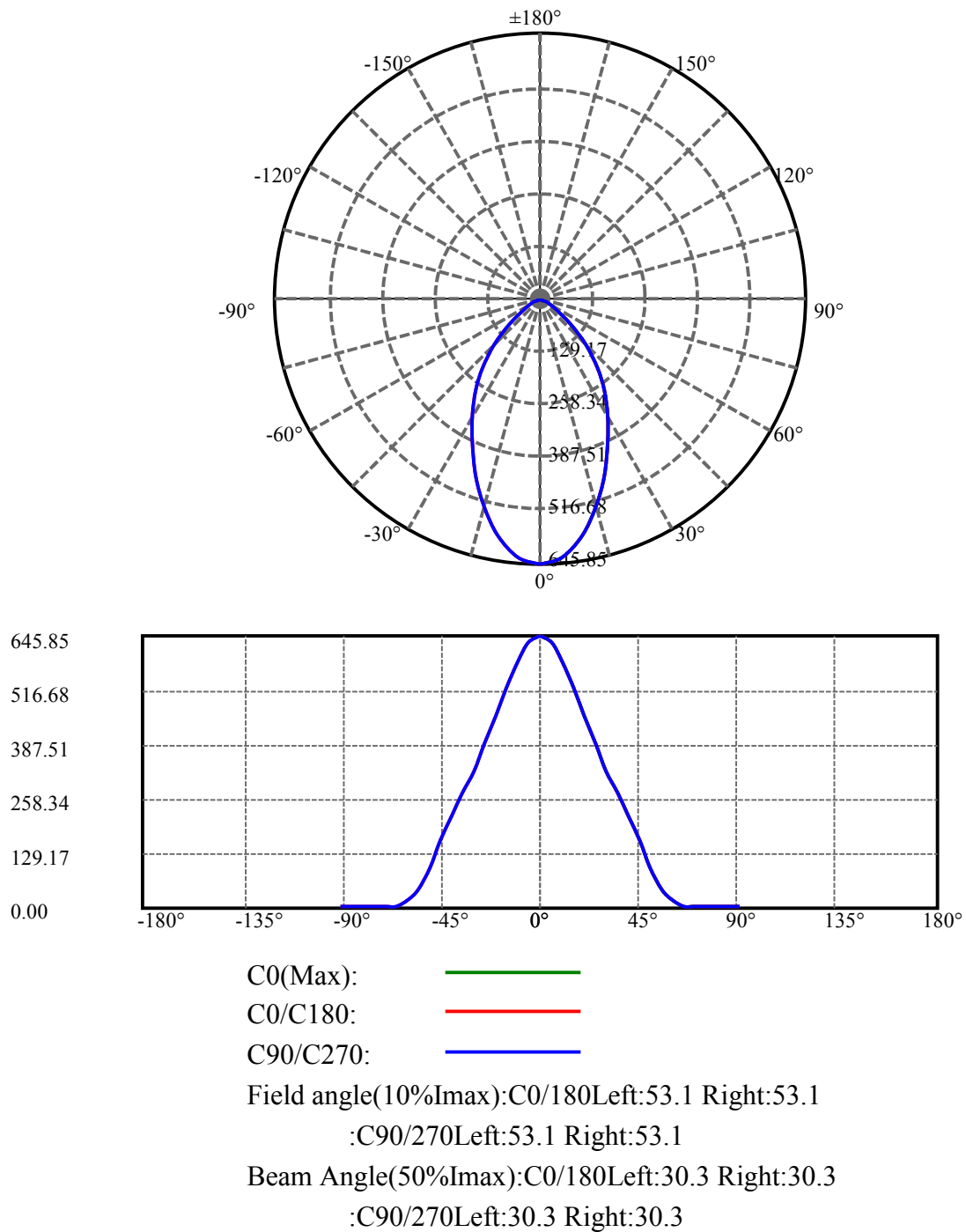
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	645.848	3.862	3.862	.477%	.527%
5.0	630.330	30.113	33.975	3.722%	4.640%
10.0	585.689	55.748	89.723	6.891%	12.253%
15.0	522.141	74.075	163.798	9.157%	22.368%
20.0	458.100	85.882	249.68	10.616%	34.097%
25.0	387.907	89.860	339.54	11.108%	46.368%
30.0	326.152	89.388	428.928	11.049%	58.575%
35.0	270.984	85.197	514.125	10.531%	70.210%
40.0	219.938	77.492	591.617	9.579%	80.792%
45.0	159.954	61.997	653.614	7.664%	89.258%
50.0	97.608	40.985	694.599	5.066%	94.855%
55.0	43.664	19.606	714.204	2.423%	97.533%
60.0	18.450	8.758	722.963	1.083%	98.729%
65.0	5.871	2.917	725.879	.361%	99.127%
70.0	3.016	1.554	727.433	.192%	99.339%
75.0	2.700	1.430	728.862	.177%	99.534%
80.0	2.566	1.385	730.248	.171%	99.724%
85.0	2.468	1.348	731.596	.167%	99.908%
90.0	2.468	0.676	732.272	.084%	100.000%

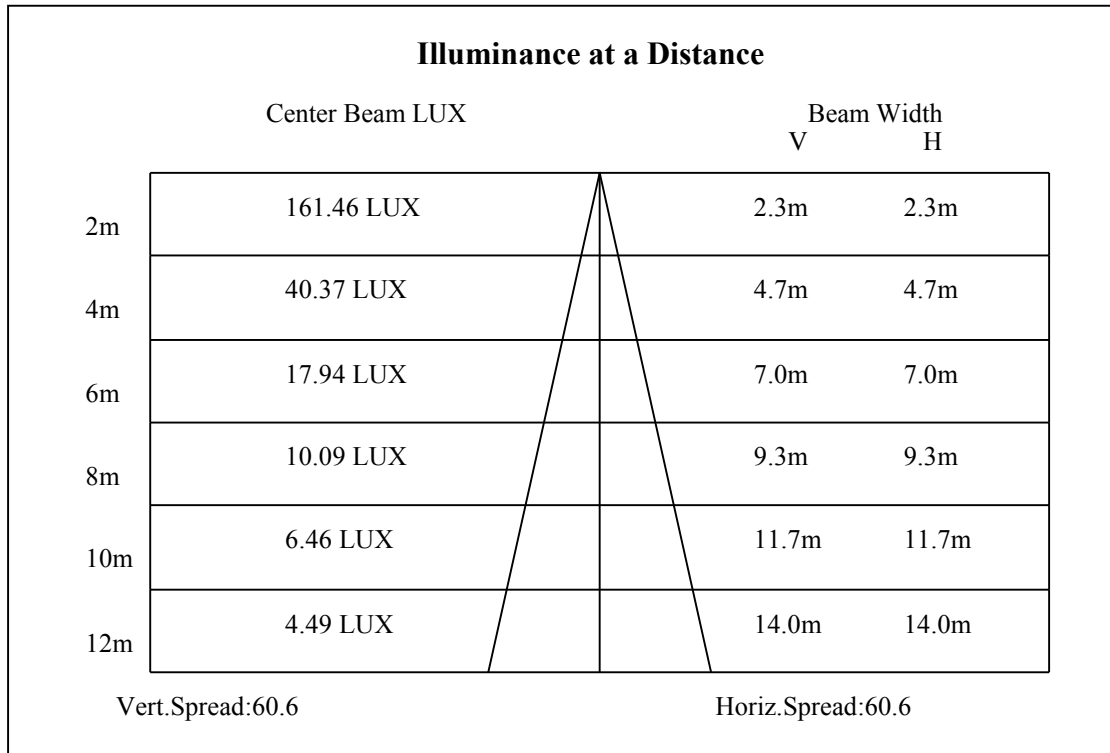
ZONAL LUMEN SUMMARY

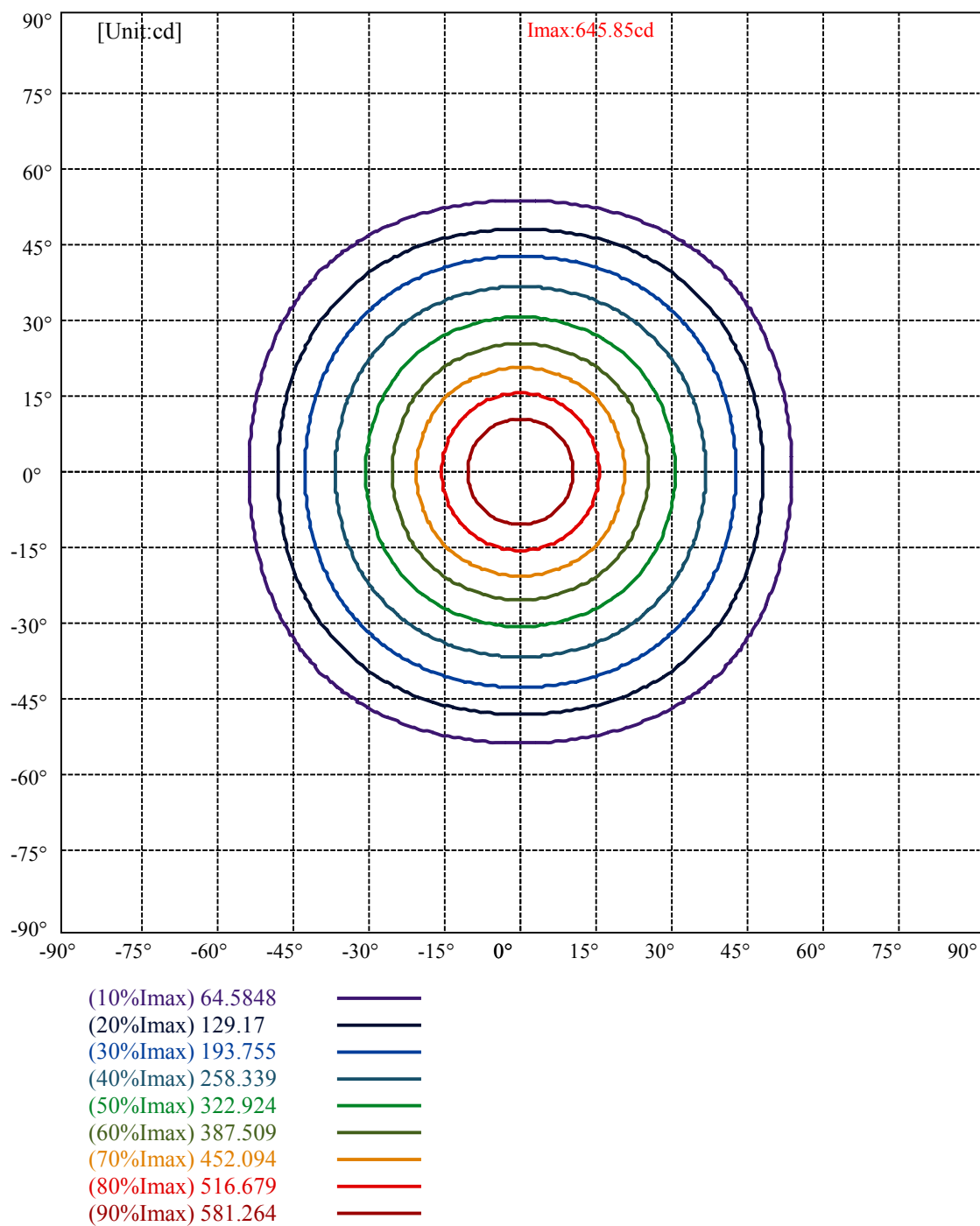
Zone	Lumens	%Lamp	%Fixt
0-30	428.93	53.02%	58.57%
0-40	591.62	73.13%	80.79%
0-60	722.96	89.37%	98.73%
0-90	731.60	90.43%	99.91%
0-120	731.60	90.43%	99.91%
0-180	732.27	90.52%	100.00%
60-90	17.39	2.15%	2.37%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-39.63	585.82	72.41%	80.00%

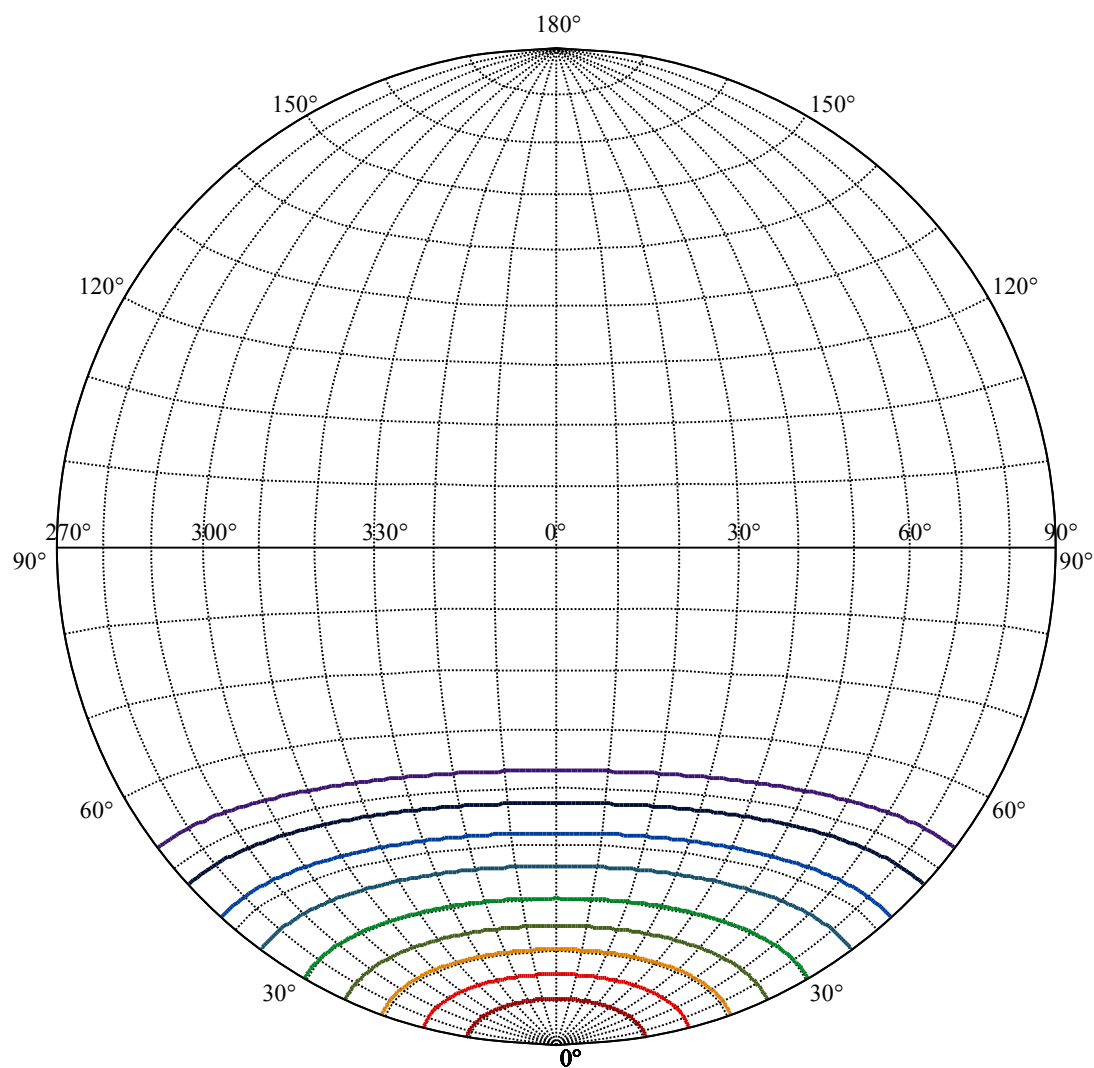
ZONAL LUMEN SUMMARY

0-10	89.72
10-20	159.96
20-30	179.25
30-40	162.69
40-50	102.98
50-60	28.36
60-70	4.47
70-80	2.81
80-90	1.35
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









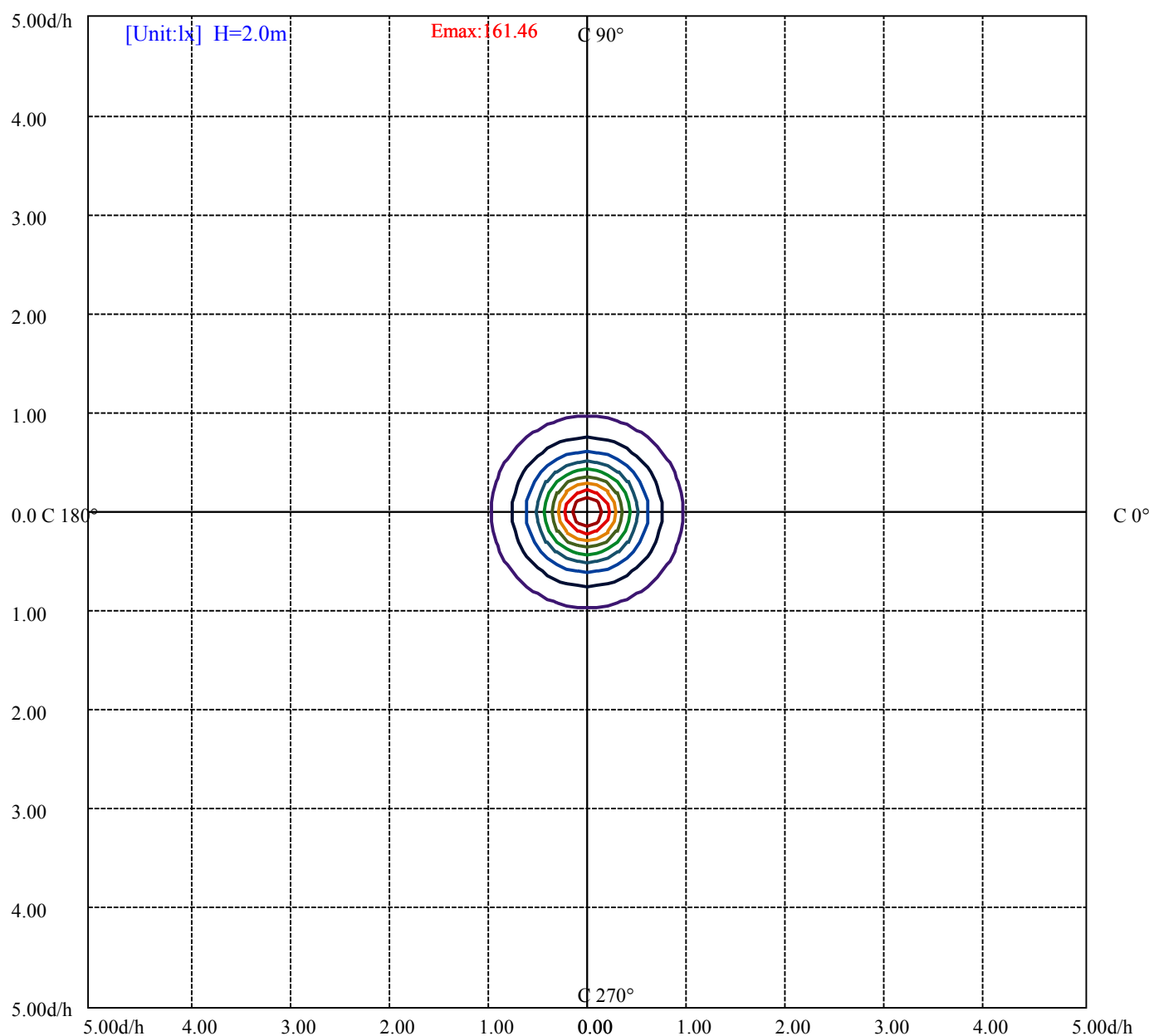
House

[Unit:cd]

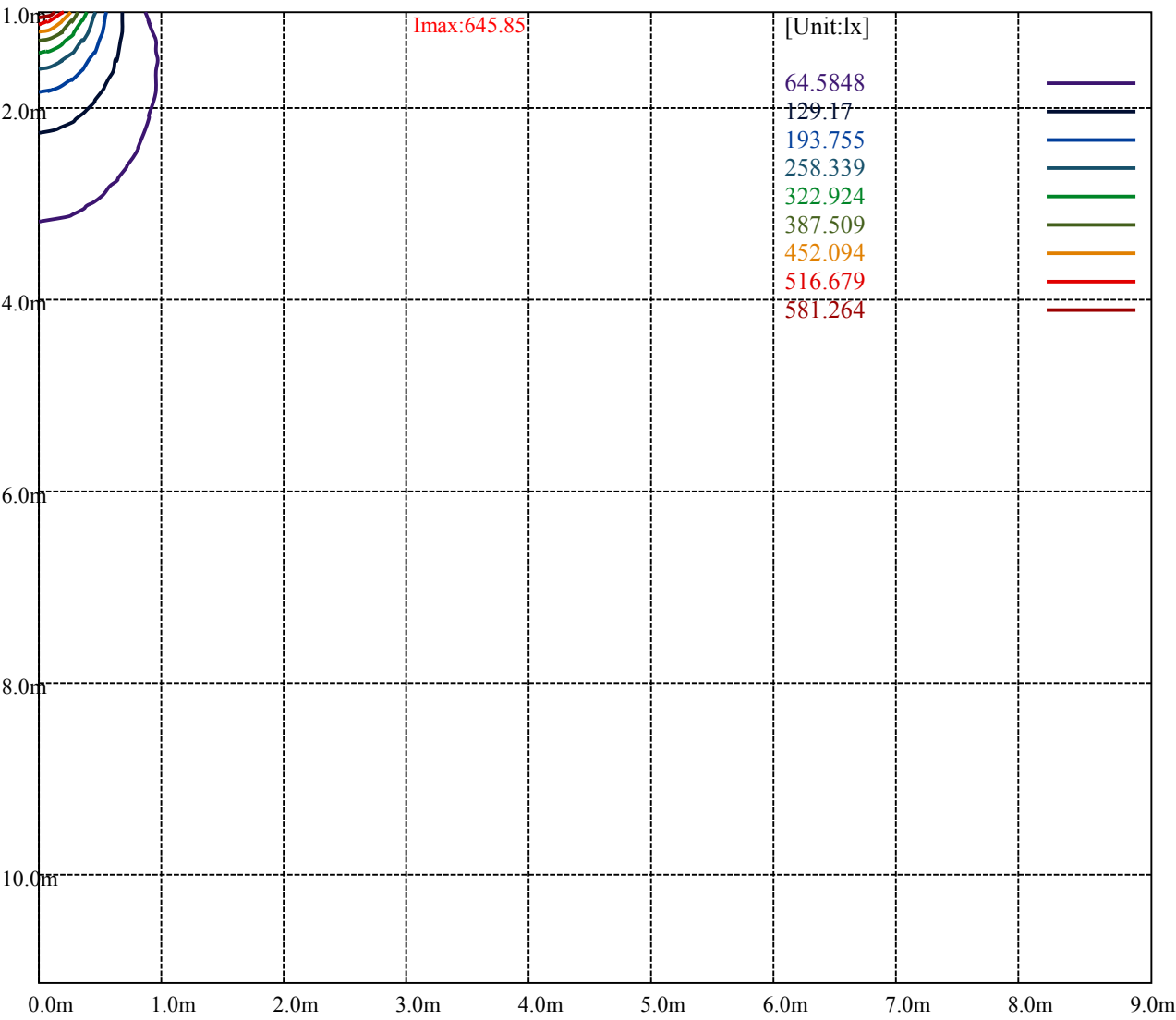
Road

Imax:645.85
(10%Imax) 64.5848
(20%Imax) 129.17
(30%Imax) 193.755
(40%Imax) 258.339
(50%Imax) 322.924
(60%Imax) 387.509
(70%Imax) 452.094
(80%Imax) 516.679
(90%Imax) 581.264





(10%E _{max}) 16.1462	—
(20%E _{max}) 32.2925	—
(30%E _{max}) 48.4385	—
(40%E _{max}) 64.58475	—
(50%E _{max}) 80.731	—
(60%E _{max}) 96.87725	—
(70%E _{max}) 113.0235	—
(80%E _{max}) 129.1695	—
(90%E _{max}) 145.3158	—



Luminance Table

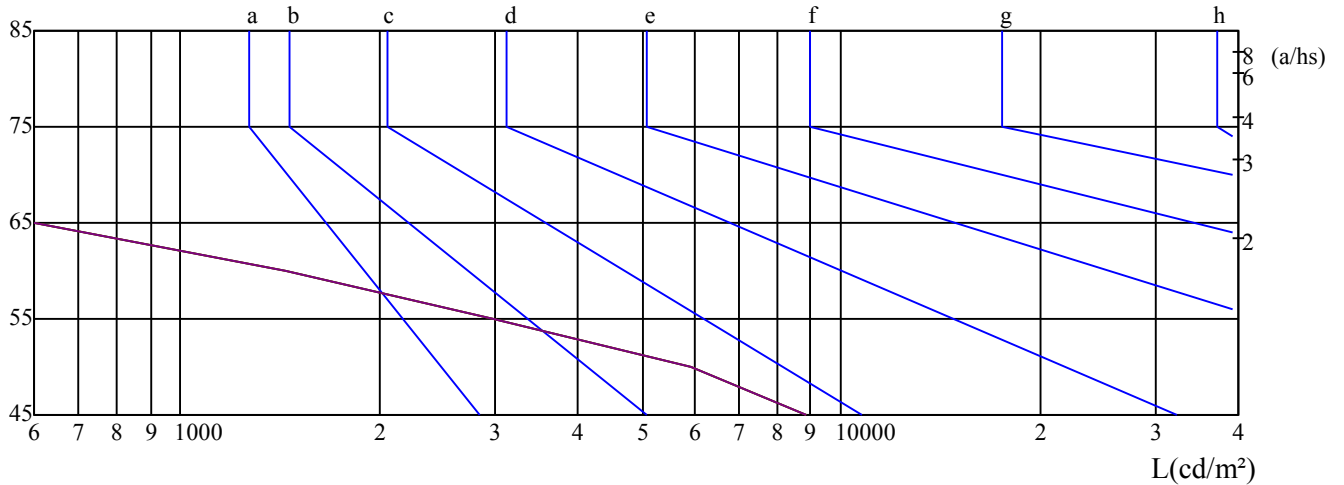
γ	45	50	55	60	65	70	75	80	85
C0	8836	5932	2974	1441	543	345	407	577	1106
C45	8836	5932	2974	1441	543	345	407	577	1106
C90	8836	5932	2974	1441	543	345	407	577	1106

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
543	543	543	407	407	407	1106	1106	1106

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

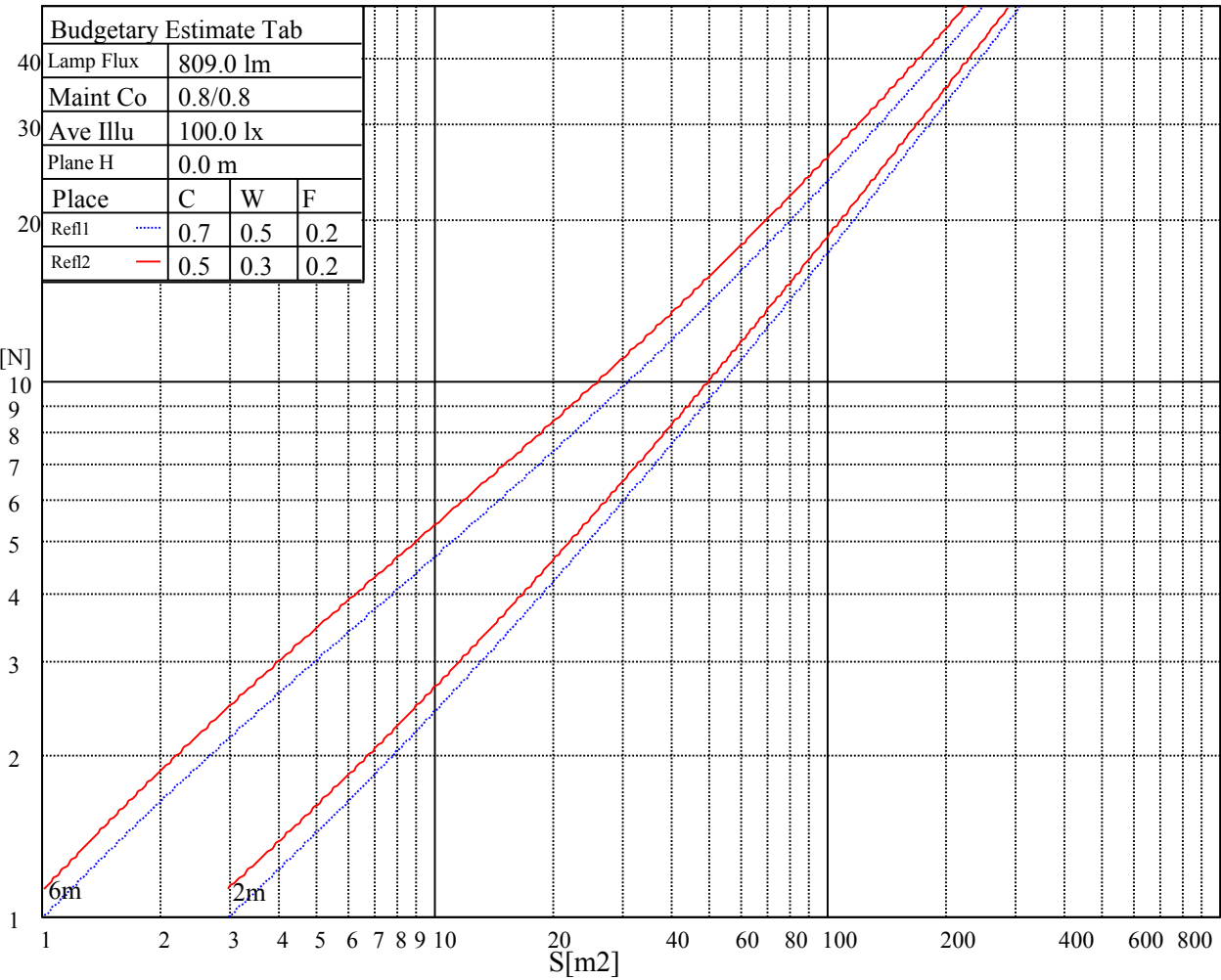
 $\gamma(^{\circ})$ 

C0 ———

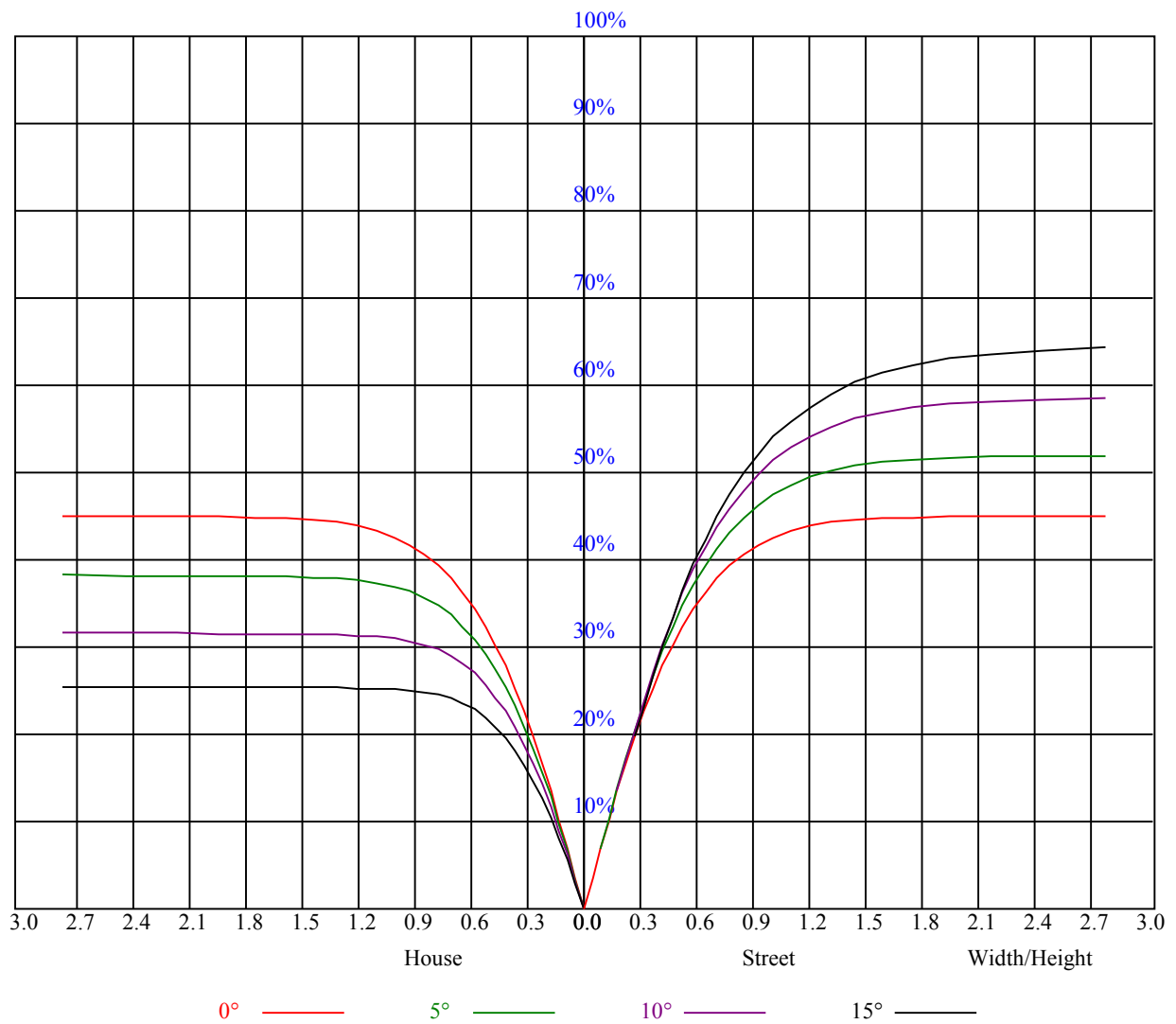
C45 ———

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	11.98	13.18	12.34	13.49	13.80	11.46	12.66	11.83	12.98	13.29
	3H	11.91	12.96	12.29	13.30	13.66	11.42	12.47	11.80	12.81	13.17
	4H	11.88	12.86	12.29	13.21	13.60	11.41	12.38	11.81	12.73	13.12
	6H	11.89	12.78	12.30	13.15	13.55	11.44	12.33	11.86	12.71	13.10
	8H	11.92	12.76	12.35	13.15	13.56	11.49	12.34	11.93	12.73	13.13
	12H	12.05	12.85	12.48	13.23	13.66	11.68	12.48	12.11	12.86	13.29
4H	2H	11.81	12.78	12.21	13.13	13.52	11.31	12.28	11.71	12.63	13.02
	3H	11.77	12.56	12.18	12.96	13.37	11.30	12.08	11.71	12.49	12.89
	4H	11.76	12.46	12.20	12.88	13.33	11.31	12.01	11.75	12.43	12.88
	6H	11.83	12.43	12.29	12.88	13.35	11.42	12.02	11.89	12.47	12.94
	8H	11.90	12.46	12.38	12.91	13.39	11.53	12.10	12.01	12.55	13.02
	12H	12.11	12.61	12.60	13.09	13.57	11.82	12.31	12.31	12.80	13.27
8H	4H	11.66	12.22	12.14	12.67	13.15	11.22	11.78	11.69	12.23	12.71
	6H	11.79	12.25	12.30	12.75	13.24	11.41	11.87	11.92	12.37	12.85
	8H	11.95	12.36	12.47	12.88	13.37	11.62	12.03	12.14	12.55	13.04
	12H	12.44	12.81	12.96	13.30	13.88	12.21	12.58	12.73	13.07	13.65
12H	4H	11.63	12.12	12.12	12.61	13.08	11.19	11.68	11.68	12.17	12.64
	6H	12.25	12.20	12.32	12.67	13.22	11.87	11.83	11.94	12.29	12.84
	8H	12.00	12.36	12.51	12.86	13.44	11.68	12.04	12.20	12.54	13.12
Variation with the observer position at spacings:											
S = 1.0H		1.5/-4.1					1.5/-4.1				
S = 1.5H		3.3/-9.1					3.3/-9.1				
S = 2.0H		5.4/-10.3					5.4/-10.3				
Standard tables:		BK0					BK0				
Uncorrected UGR		-2.2					-2.2				



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	1.08	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	0.94	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	0.92	0.87	0.84	0.90	0.86	0.83	0.87	0.84	0.81	0.84	0.82	0.79	0.82	0.80	0.78	0.76
3	0.85	0.80	0.76	0.83	0.79	0.75	0.81	0.77	0.74	0.79	0.75	0.73	0.76	0.74	0.71	0.70
4	0.78	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.70	0.66	0.72	0.68	0.66	0.64
5	0.73	0.67	0.63	0.72	0.66	0.62	0.70	0.65	0.62	0.69	0.64	0.61	0.67	0.64	0.61	0.59
6	0.68	0.62	0.58	0.67	0.61	0.57	0.66	0.61	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.55
7	0.63	0.57	0.53	0.63	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.51
8	0.59	0.53	0.49	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.47
9	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.44
10	0.53	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.41



NATA 6585-F

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	646.14	629.94	587.19	530.78	460.63	391.16	328.56	274.50	221.06		
45.0	645.86	631.58	589.39	525.43	465.19	390.77	328.67	270.90	221.96		
90.0	646.31	631.13	584.66	516.71	456.08	386.72	324.90	270.96	218.98		
135.0	645.08	636.02	597.32	535.11	472.22	401.34	338.63	282.43	230.68		
180.0	646.14	630.84	584.33	519.75	455.34	385.31	322.88	262.58	216.23		
225.0	645.86	628.88	582.13	520.09	452.81	383.18	322.31	268.82	217.07		
270.0	646.31	629.89	586.46	521.61	458.10	388.91	327.49	274.67	222.53		
315.0	645.08	624.38	574.03	507.66	444.43	375.86	315.79	263.03	210.99		
360.0	646.14	629.94	587.19	530.78	460.63	391.16	328.56	274.50	221.06		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	159.81	94.95	39.43	17.89	6.24	3.09	2.76	2.59	2.48		
45.0	162.11	99.79	47.03	19.46	6.24	3.04	2.64	2.53	2.42		
90.0	158.85	99.56	45.00	18.28	5.12	2.93	2.59	2.42	2.31		
135.0	172.86	117.06	51.13	21.77	7.37	3.15	2.76	2.59	2.48		
180.0	155.31	90.39	39.77	17.33	5.18	3.04	2.81	2.70	2.59		
225.0	157.22	97.82	43.82	18.00	5.96	3.04	2.81	2.70	2.64		
270.0	163.86	101.36	47.48	19.41	6.13	2.93	2.59	2.48	2.36		
315.0	149.63	79.93	35.66	15.47	4.73	2.93	2.64	2.53	2.48		
360.0	159.81	94.95	39.43	17.89	6.24	3.09	2.76	2.59	2.48		
C/ γ (°)	90.0										
0.0	2.48										
45.0	2.42										
90.0	2.31										
135.0	2.48										
180.0	2.59										
225.0	2.64										
270.0	2.31										
315.0	2.53										
360.0	2.48										