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SAVEENERGYLIFE

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Client:

LumCAT: SE-350.190 120V

Luminaire:

Report No:

Voltage(V): 120.0000

Test No:

Current(A): 0.0580

LampCAT: 2835

Power (W): 5.4620

Lamp flux(lm): 500.0

PF: 0.7770

Number of Lamps: 1

Ballast type:

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 2

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Photometric Results

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Lumens(lm): 572.70

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 104.85

Central intensity(cd): 967.660

Maximum intensity(cd): 984.628

Angle of maximum intensity: C=150.0  $\gamma$ =0.0

Beam Angle(50% I<sub>max</sub>): [C0/180]Total=33.5

[C90/270]Total=31.8

Field angle(10% I<sub>max</sub>): [C0/180]Total=81.5

[C90/270]Total=84.3

Maximum s/h(1/2): C0\_180=0.47 C90\_270=0.53

Maximum s/h(1/4): C0\_180=0.56 C90\_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 114.54%

Up flux rate of LUM(%): 0.00%

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 94.773%

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Zonal flux distribution table

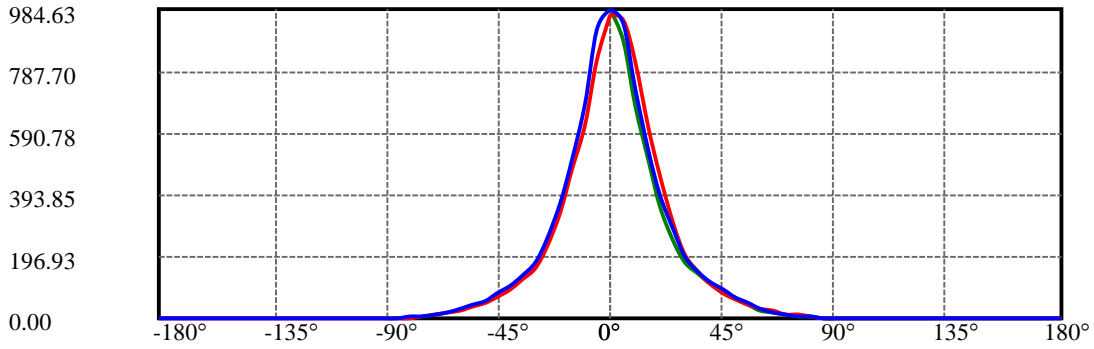
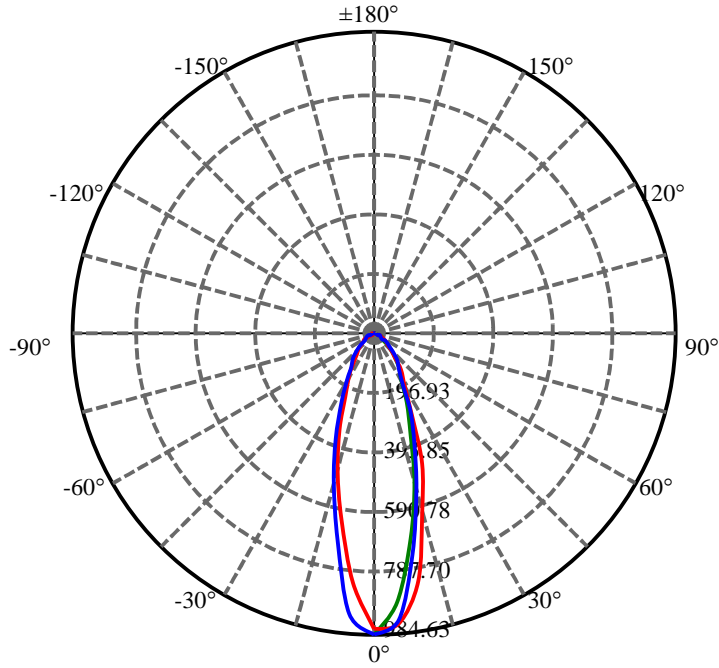
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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	979.898	0.000	0	.000%	.000%
5.0	911.392	22.610	22.61	4.522%	3.948%
10.0	718.143	58.294	80.903	11.659%	14.127%
15.0	529.342	74.000	154.903	14.800%	27.048%
20.0	383.245	75.210	230.113	15.042%	40.181%
25.0	265.560	68.048	298.161	13.610%	52.063%
30.0	184.646	56.974	355.135	11.395%	62.011%
35.0	137.920	47.500	402.635	9.500%	70.305%
40.0	105.171	40.558	443.193	8.112%	77.387%
45.0	79.287	34.154	477.347	6.831%	83.351%
50.0	58.057	27.752	505.099	5.550%	88.197%
55.0	41.164	21.574	526.673	4.315%	91.964%
60.0	28.450	16.091	542.764	3.218%	94.773%
65.0	19.071	11.552	554.317	2.310%	96.791%
70.0	12.676	8.039	562.355	1.608%	98.194%
75.0	7.871	5.371	567.726	1.074%	99.132%
80.0	4.048	3.189	570.915	.638%	99.689%
85.0	1.214	1.430	572.345	.286%	99.939%
90.0	0.019	0.337	572.683	.067%	99.998%
95.0	0.000	0.005	572.688	.001%	99.998%
100.0	0.000	0.000	572.688	.000%	99.998%
105.0	0.000	0.000	572.688	.000%	99.998%
110.0	0.000	0.000	572.688	.000%	99.998%
115.0	0.000	0.000	572.688	.000%	99.998%
120.0	0.000	0.000	572.688	.000%	99.998%
125.0	0.000	0.000	572.688	.000%	99.998%
130.0	0.000	0.000	572.688	.000%	99.998%
135.0	0.000	0.000	572.688	.000%	99.998%
140.0	0.000	0.000	572.688	.000%	99.998%
145.0	0.000	0.000	572.688	.000%	99.998%
150.0	0.000	0.000	572.688	.000%	99.998%
155.0	0.006	0.001	572.688	.000%	99.999%
160.0	0.019	0.003	572.691	.001%	99.999%
165.0	0.019	0.003	572.694	.001%	100.000%
170.0	0.013	0.002	572.696	.000%	100.000%
175.0	0.006	0.001	572.697	.000%	100.000%
180.0	0.000	0.000	572.697	.000%	100.000%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	355.13	71.03%	62.01%
0-40	443.19	88.64%	77.39%
0-60	542.76	108.55%	94.77%
0-90	572.68	114.54%	100.00%
0-120	572.69	114.54%	100.00%
0-180	572.70	114.54%	100.00%
60-90	46.01	9.20%	8.03%
90-120	0.34	0.07%	0.06%
90-130	0.34	0.07%	0.06%
90-150	0.34	0.07%	0.06%
90-180	0.35	0.07%	0.06%
0-42.19	458.16	91.63%	80.00%

## ZONAL LUMEN SUMMARY

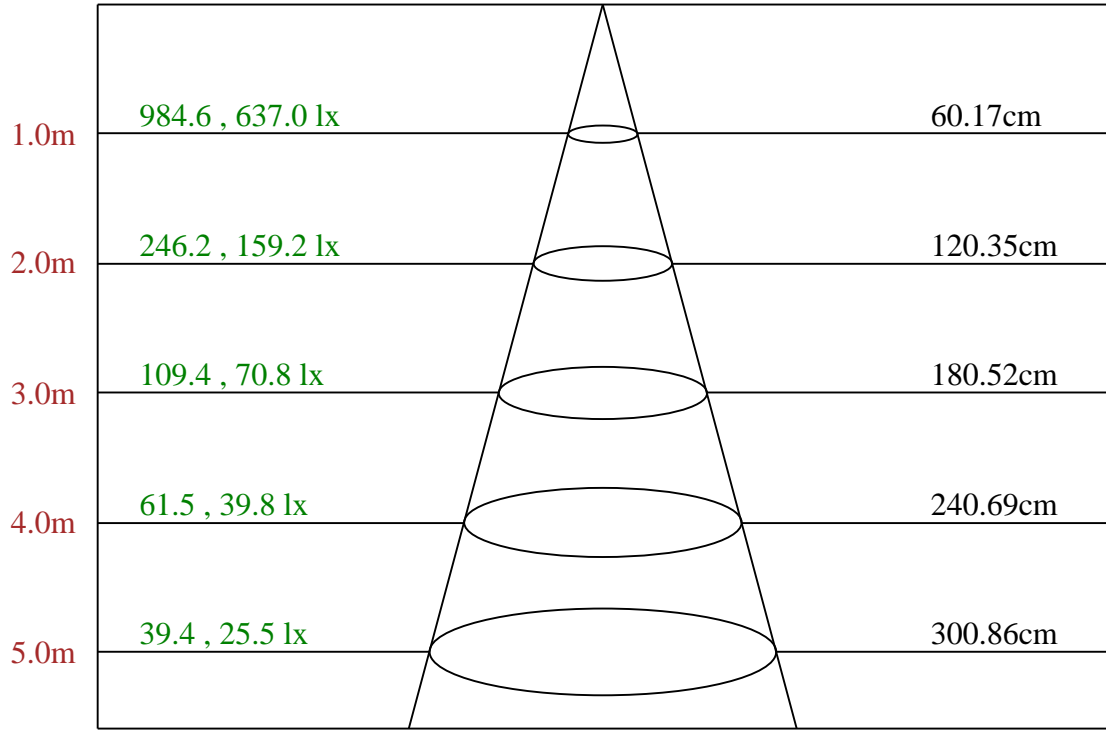
0-10	80.90
10-20	149.21
20-30	125.02
30-40	88.06
40-50	61.91
50-60	37.67
60-70	19.59
70-80	8.56
80-90	1.77
90-100	0.01
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



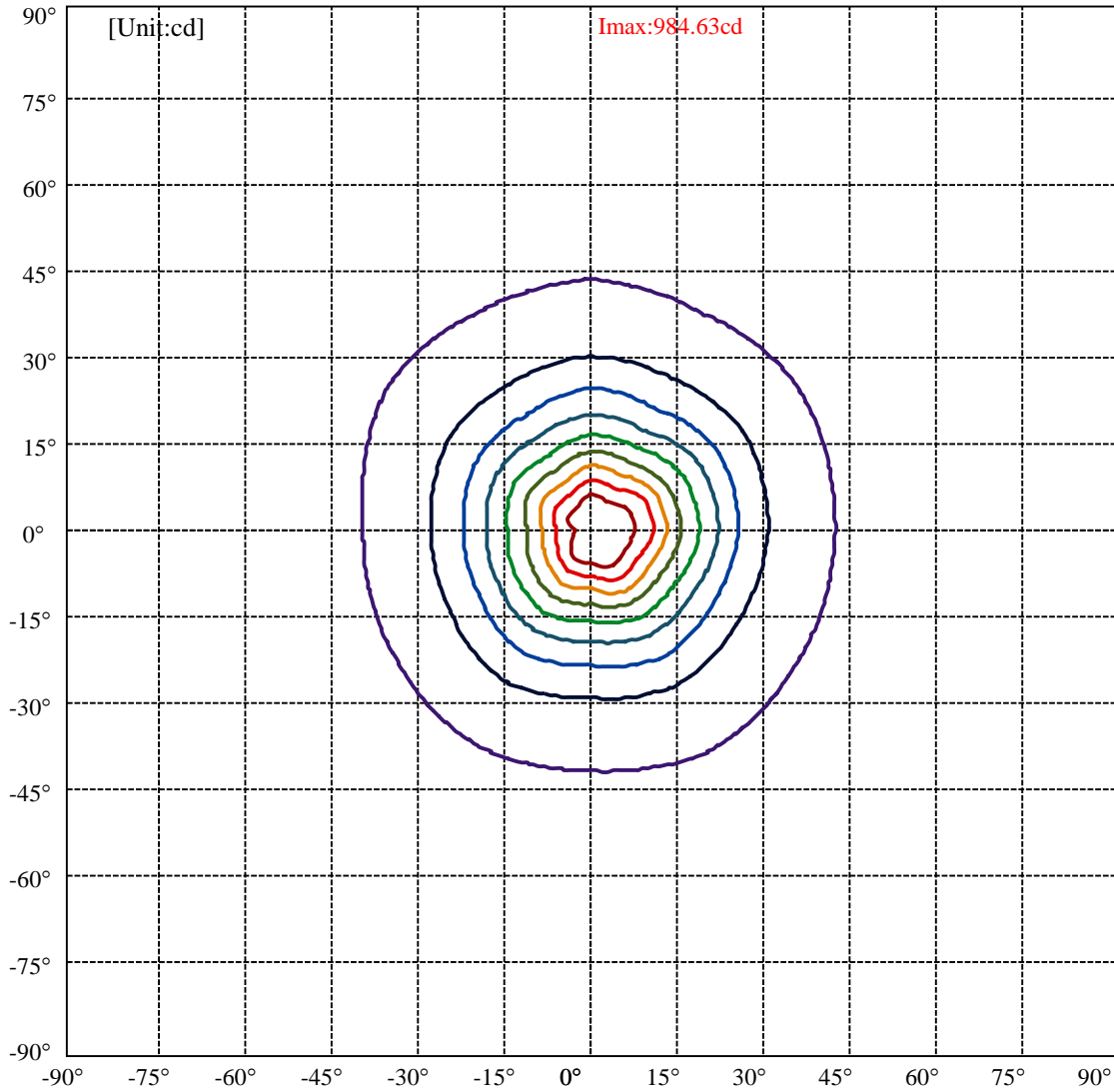
C150(Max): —  
C0/C180: —  
C90/C270: —

Field angle(10%Imax):C0/180Left:39.3 Right:42.2  
:C90/270Left:41.2 Right:43.1

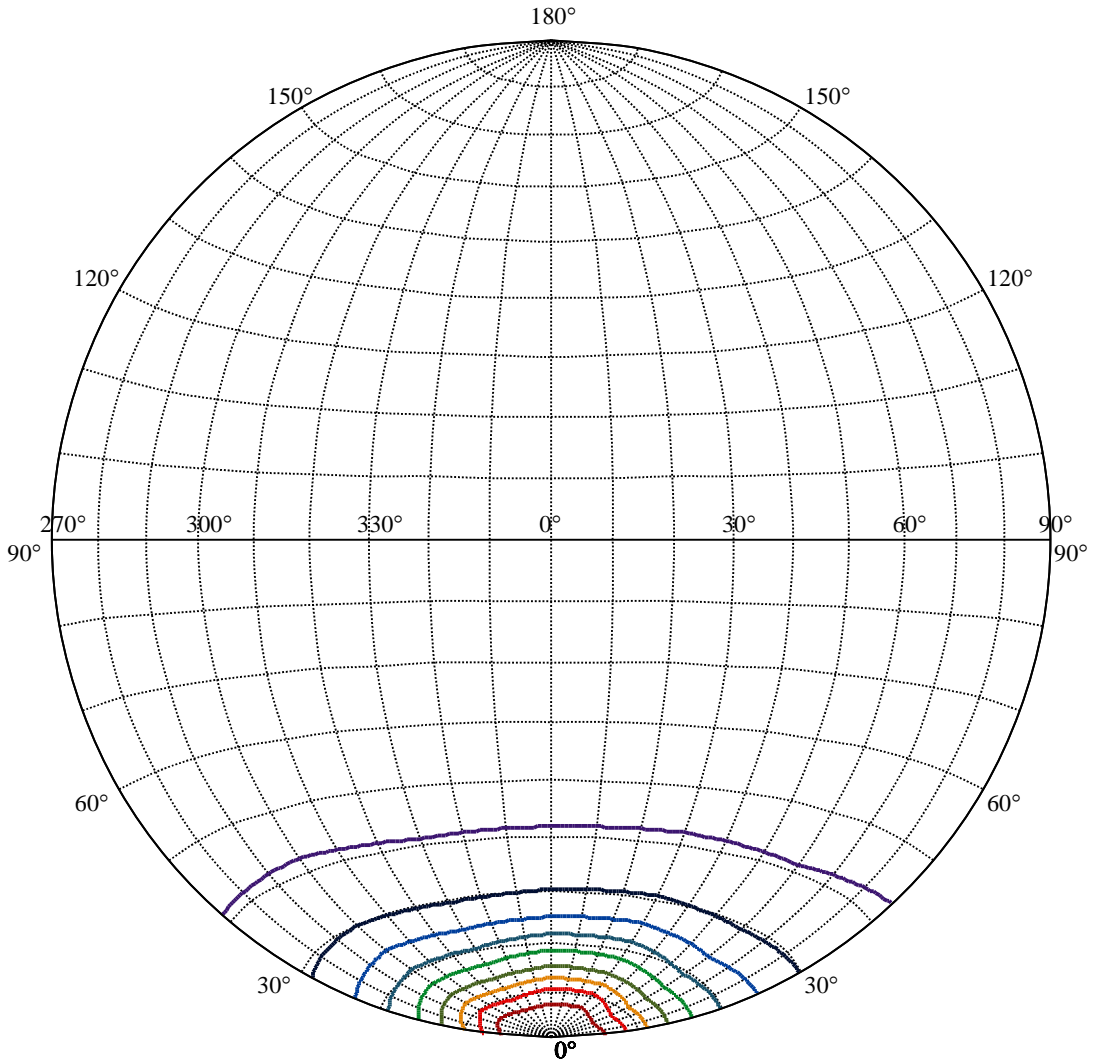
Beam Angle(50%Imax):C0/180Left:14.5 Right:19.0  
:C90/270Left:15.4 Right:16.4



Max , Ave      Beam angle of C150 plane 33.49



(10% Imax) 98.4478	—
(20% Imax) 196.896	—
(30% Imax) 295.343	—
(40% Imax) 393.791	—
(50% Imax) 492.239	—
(60% Imax) 590.687	—
(70% Imax) 689.135	—
(80% Imax) 787.583	—
(90% Imax) 886.03	—



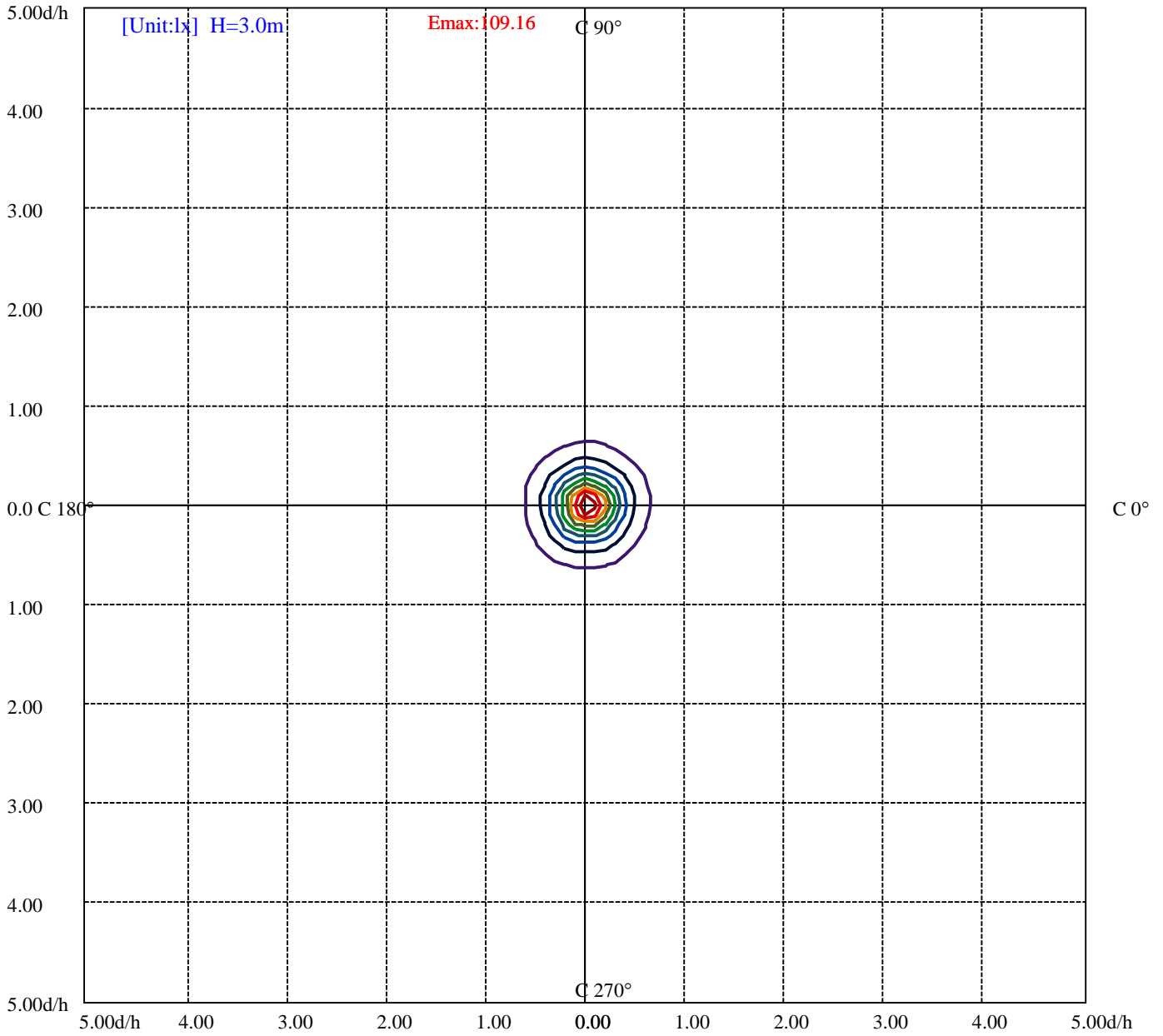
House

[Unit:cd]

Road

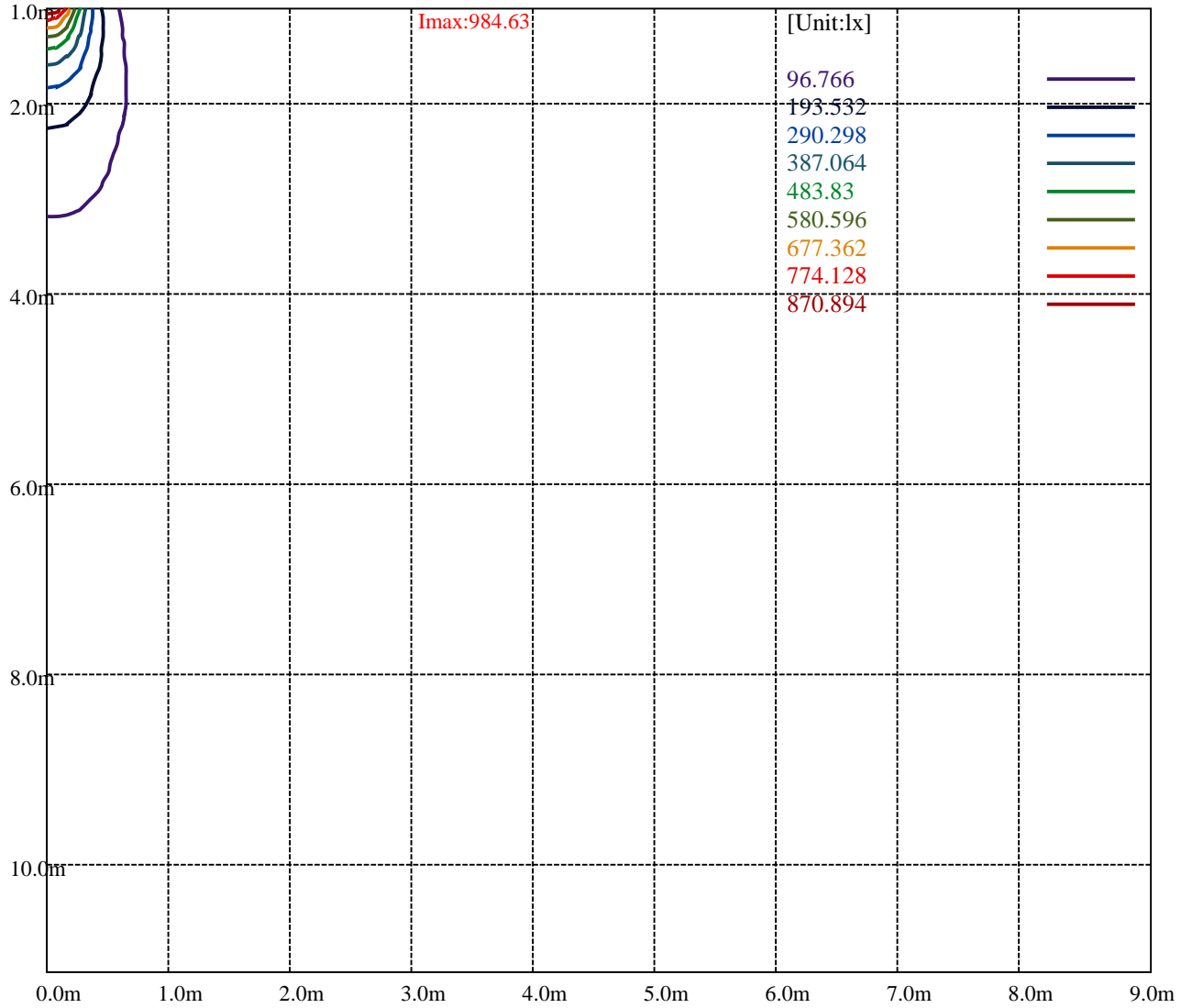
- Imax:984.63
- (10% I<sub>max</sub>) 98.4628
- (20% I<sub>max</sub>) 196.926
- (30% I<sub>max</sub>) 295.388
- (40% I<sub>max</sub>) 393.851
- (50% I<sub>max</sub>) 492.314
- (60% I<sub>max</sub>) 590.777
- (70% I<sub>max</sub>) 689.24
- (80% I<sub>max</sub>) 787.703
- (90% I<sub>max</sub>) 886.165





(10%Emax) 10.91611	—
(20%Emax) 21.83222	—
(30%Emax) 32.74833	—
(40%Emax) 43.66444	—
(50%Emax) 54.58055	—
(60%Emax) 65.49667	—
(70%Emax) 76.41278	—
(80%Emax) 87.32889	—
(90%Emax) 98.245	—





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Luminance Limiting Curve(no luminous side)

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Luminance Table

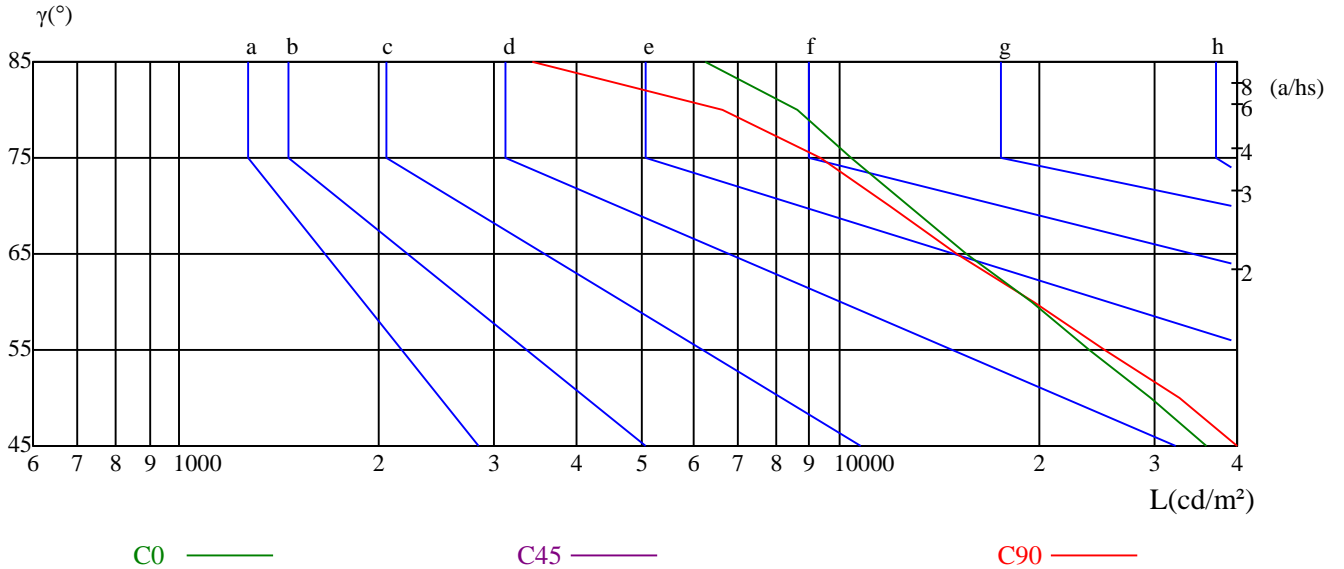
$\gamma$	45	50	55	60	65	70	75	80	85
C0	36004	29497	23859	19474	15582	12734	10386	8650	6236
C45	0	0	0	0	0	0	0	0	0
C90	40034	32791	25176	19661	15091	11876	9373	6636	3420

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14477	15593	0	9542	10261	0	4841	4272	0

Glare Table

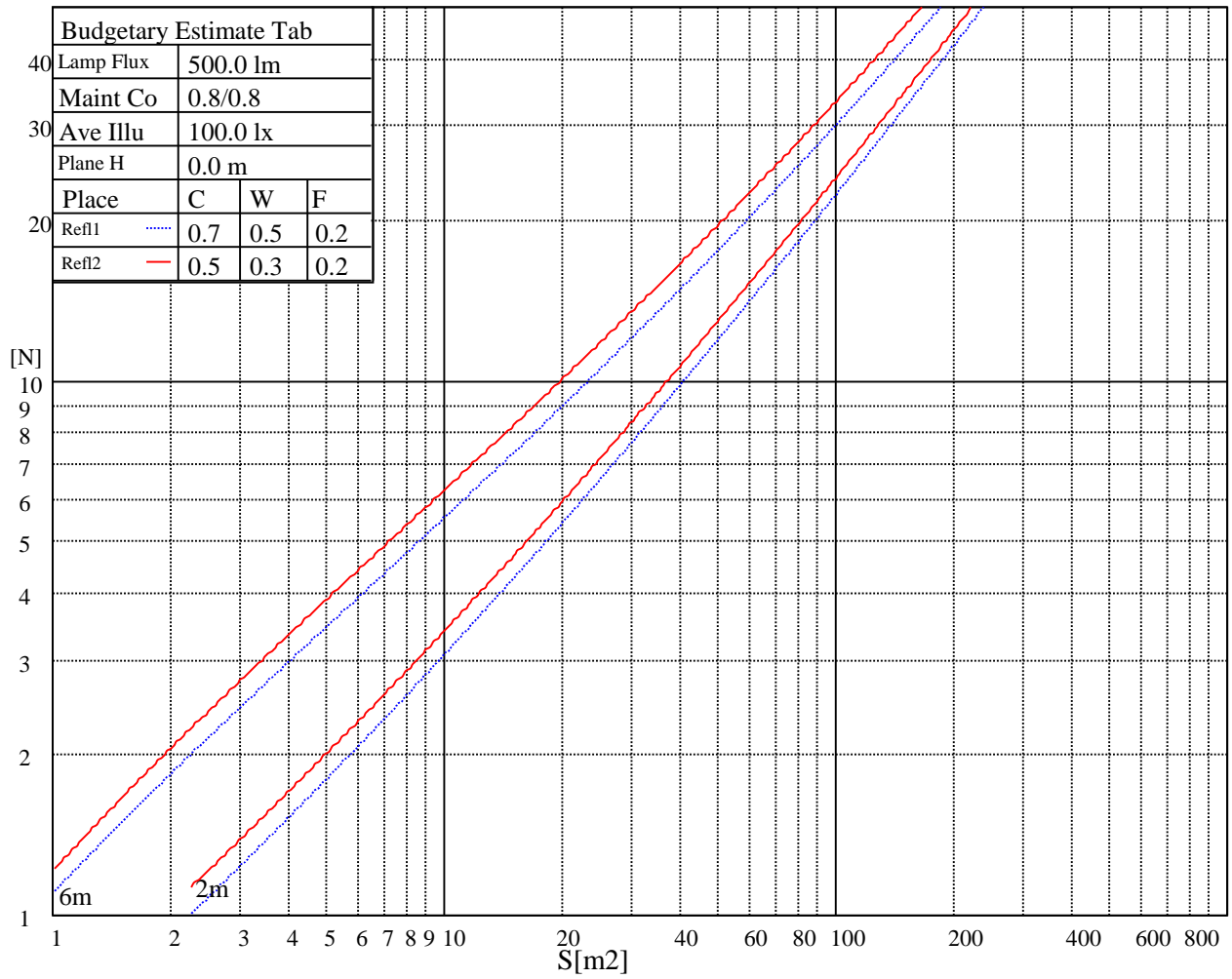
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	21.77	22.98	22.13	23.29	23.60	21.68	22.89	22.05	23.20	23.52
	3H	22.31	23.39	22.70	23.72	24.07	22.15	23.23	22.54	23.56	23.91
	4H	22.49	23.48	22.89	23.84	24.20	22.29	23.28	22.68	23.64	24.00
	6H	22.62	23.53	23.03	23.90	24.30	22.36	23.27	22.77	23.65	24.04
	8H	22.62	23.50	23.04	23.88	24.28	22.33	23.21	22.75	23.59	24.00
4H	12H	22.60	23.44	23.03	23.83	24.24	22.29	23.12	22.71	23.51	23.93
	2H	21.92	22.92	22.32	23.27	23.64	21.84	22.84	22.24	23.19	23.56
	3H	22.57	23.40	22.99	23.79	24.21	22.39	23.22	22.81	23.61	24.03
	4H	22.87	23.59	23.30	24.01	24.45	22.62	23.35	23.06	23.77	24.21
	6H	23.02	23.66	23.49	24.11	24.56	22.71	23.34	23.17	23.79	24.24
8H	8H	23.08	23.67	23.56	24.12	24.59	22.72	23.31	23.20	23.76	24.23
	12H	23.10	23.65	23.59	24.10	24.61	22.70	23.25	23.19	23.70	24.21
	4H	22.84	23.43	23.32	23.89	24.36	22.61	23.20	23.09	23.66	24.13
	6H	23.05	23.54	23.55	24.02	24.52	22.73	23.22	23.23	23.69	24.20
	8H	23.19	23.61	23.72	24.13	24.62	22.81	23.22	23.33	23.74	24.24
12H	12H	23.24	23.58	23.78	24.10	24.61	22.80	23.14	23.34	23.65	24.17
	4H	22.81	23.36	23.30	23.81	24.32	22.59	23.13	23.07	23.58	24.10
	6H	23.07	23.49	23.60	24.01	24.50	22.75	23.17	23.28	23.69	24.19
	8H	23.18	23.52	23.72	24.03	24.55	22.80	23.14	23.34	23.65	24.17
Variation with the observer position at spacings:											
S = 1.0H		0.6/-1.0					0.6/-1.1				
S = 1.5H		1.3/-2.0					1.4/-1.9				
S = 2.0H		3.7/-2.7					3.5/-2.3				
Standard tables:		BK2					BK2				
Uncorrected UGR		4.7					4.9				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25

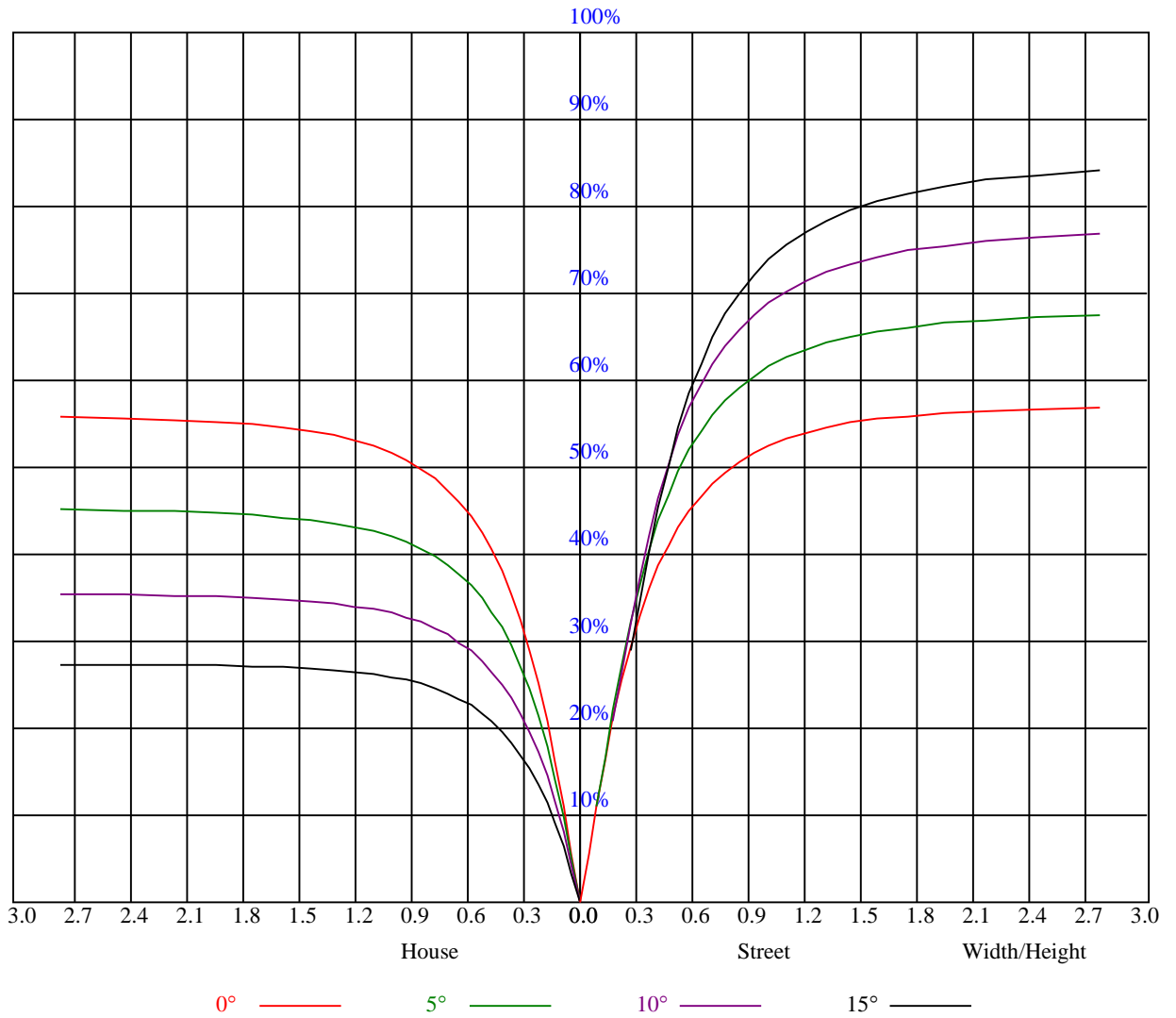


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Utilization factor table for indoor luminaire

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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	1.36	1.36	1.36	1.33	1.33	1.33	1.27	1.27	1.27	1.22	1.22	1.22	1.17	1.17	1.17	1.15
1	1.25	1.22	1.19	1.23	1.20	1.17	1.18	1.16	1.14	1.14	1.12	1.10	1.10	1.08	1.07	1.05
2	1.15	1.10	1.06	1.13	1.08	1.04	1.09	1.05	1.02	1.06	1.03	1.00	1.03	1.00	0.98	0.96
3	1.06	1.00	0.95	1.05	0.99	0.94	1.02	0.97	0.92	0.99	0.95	0.91	0.96	0.93	0.90	0.88
4	0.99	0.92	0.86	0.97	0.91	0.86	0.95	0.89	0.85	0.92	0.87	0.84	0.90	0.86	0.83	0.81
5	0.92	0.84	0.79	0.91	0.84	0.79	0.89	0.83	0.78	0.87	0.81	0.77	0.85	0.80	0.77	0.75
6	0.86	0.78	0.73	0.85	0.78	0.73	0.83	0.77	0.72	0.81	0.76	0.72	0.80	0.75	0.71	0.70
7	0.81	0.73	0.68	0.80	0.73	0.68	0.78	0.72	0.67	0.77	0.71	0.67	0.76	0.71	0.67	0.65
8	0.76	0.69	0.64	0.75	0.68	0.64	0.74	0.68	0.63	0.73	0.67	0.63	0.72	0.67	0.63	0.61
9	0.72	0.65	0.60	0.71	0.64	0.60	0.70	0.64	0.60	0.69	0.63	0.59	0.68	0.63	0.59	0.58
10	0.68	0.61	0.57	0.68	0.61	0.57	0.67	0.61	0.56	0.66	0.60	0.56	0.65	0.60	0.56	0.54



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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	967.66	950.77	820.05	607.64	452.90	301.83	201.75	148.81	110.45
30.0	980.42	954.52	818.17	593.68	443.89	305.88	206.78	147.46	111.42
60.0	984.48	910.90	719.66	531.21	374.21	262.49	185.75	139.05	104.59
90.0	984.48	937.48	735.05	532.71	389.90	283.44	193.49	145.81	114.12
120.0	977.72	872.08	657.57	479.85	348.46	242.74	175.24	134.62	105.57
150.0	984.63	879.21	678.74	503.65	356.42	247.62	177.12	137.70	107.22
180.0	967.66	820.95	615.15	468.51	333.52	225.47	161.88	123.59	92.28
210.0	980.42	851.21	641.80	490.36	338.85	229.60	166.08	125.84	93.78
240.0	984.48	916.00	702.39	525.73	383.37	269.32	187.78	136.35	103.99
270.0	984.48	919.98	686.70	504.18	367.08	251.45	176.52	134.17	104.59
300.0	977.72	968.94	778.98	557.79	406.65	291.99	197.32	144.01	109.85
330.0	984.63	954.67	763.44	556.81	403.72	274.88	186.05	137.63	104.21
360.0	967.66	950.77	820.05	607.64	452.90	301.83	201.75	148.81	110.45

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	79.81	59.84	43.55	31.31	21.47	14.49	9.24	5.48	2.33
30.0	82.82	61.79	43.92	29.66	20.20	13.74	9.01	4.96	1.88
60.0	78.01	57.74	41.22	28.53	18.32	12.09	7.58	3.98	1.13
90.0	88.75	66.52	45.95	31.61	20.80	13.51	8.33	4.20	1.28
120.0	79.21	58.71	41.22	28.38	18.85	12.16	6.83	3.23	0.68
150.0	81.39	58.94	41.60	27.18	17.87	12.01	7.06	3.45	0.83
180.0	69.38	49.40	34.76	23.95	15.54	9.84	5.71	2.33	0.23
210.0	68.93	49.93	34.84	23.58	15.17	9.91	5.93	2.70	0.38
240.0	78.99	56.39	39.94	28.16	18.92	12.61	8.03	4.05	1.13
270.0	79.81	57.14	40.39	28.61	19.07	12.31	7.73	3.98	0.98
300.0	84.84	61.04	44.45	32.06	22.60	15.32	9.99	5.33	2.03
330.0	79.51	59.24	42.12	28.38	20.05	14.12	9.01	4.88	1.73
360.0	79.81	59.84	43.55	31.31	21.47	14.49	9.24	5.48	2.33

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.0	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
330.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210.0	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.00
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
270.0	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.00
300.0	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
330.0	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.08	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Intensity data(cd)

<b>C/γ(°)</b>	<b>180.0</b>
<b>0.0</b>	<b>0.00</b>
<b>30.0</b>	<b>0.00</b>
<b>60.0</b>	<b>0.00</b>
<b>90.0</b>	<b>0.00</b>
<b>120.0</b>	<b>0.00</b>
<b>150.0</b>	<b>0.00</b>
<b>180.0</b>	<b>0.00</b>
<b>210.0</b>	<b>0.00</b>
<b>240.0</b>	<b>0.00</b>
<b>270.0</b>	<b>0.00</b>
<b>300.0</b>	<b>0.00</b>
<b>330.0</b>	<b>0.00</b>
<b>360.0</b>	<b>0.00</b>