



立讯检测
Testing Laboratories

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SHENZHEN YOUWIN OPTRONICS CO., LTD

LumCAT: YWHBFM-200H-AL120

Luminaire: LED High Bay Light

Report No:

Voltage(V): 229.600

Test No:

Current(A): 0.902

LampCAT: LED

Power (W): 201.600

Lamp flux(lm)

PF: 0.973

Number of Lamps: 1

Ballast type: -

Length(mm): 510

Width(mm): 510

Phm Type: C

Height(mm): 400

Photometric Results

Lumens(lm): 21943.72

Lumens(lm)/Power(W): 108.85

Central intensity(cd): 10948.220

Maximum intensity(cd): 10953.490

Angle of maximum intensity: C=30.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Left=47.7 Right=48.1

[C90/270]Left=45.9 Right=49.7

Field angle(10%Imax): [C0/180]Left=62.9 Right=64.4

[C90/270]Left=61.9 Right=64.6

Beam angle of C30plane: 96.27

Maximum s/h: C0_180=1.10 C90_270=1.14

Up flux rate of LUM(%): 0.79%

Down flux rate of LUM(%): 99.21%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.772%

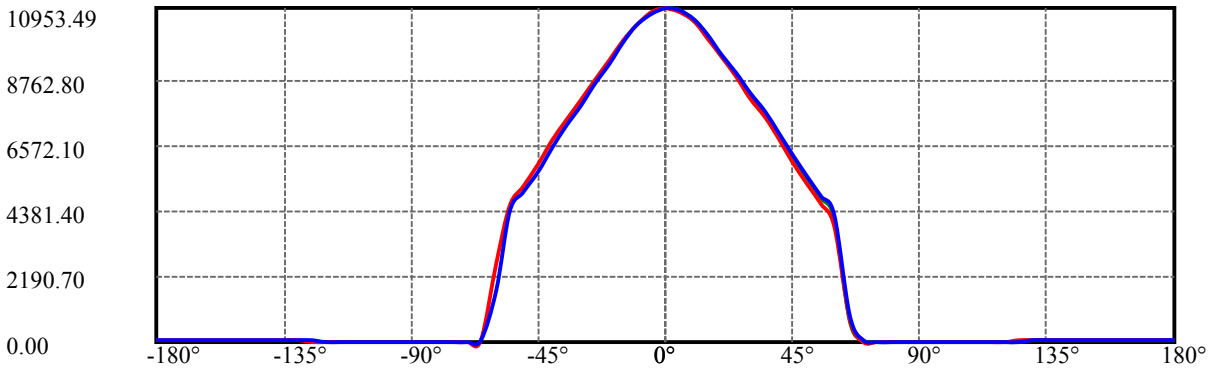
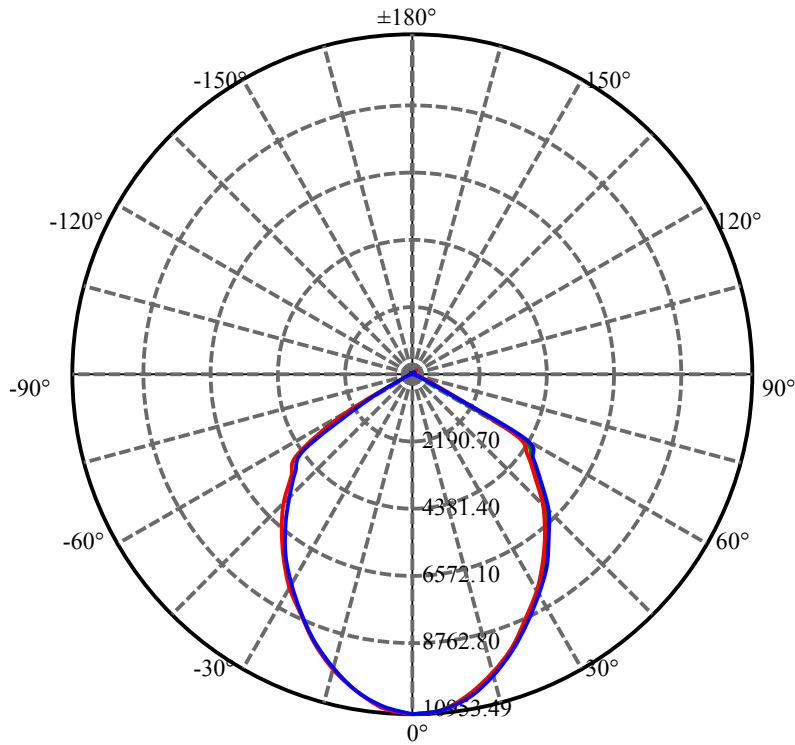
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10948.660	.000	.000	.000%	.000%
5.0	10820.390	260.243	260.243	1.186%	1.186%
10.0	10452.360	760.993	1021.236	3.468%	4.654%
15.0	9925.420	1208.796	2230.032	5.509%	10.163%
20.0	9304.906	1584.849	3814.881	7.222%	17.385%
25.0	8642.001	1882.299	5697.181	8.578%	25.963%
30.0	7971.189	2102.413	7799.594	9.581%	35.544%
35.0	7302.462	2249.152	10048.750	10.250%	45.793%
40.0	6612.429	2321.594	12370.340	10.580%	56.373%
45.0	5887.691	2314.499	14684.840	10.547%	66.920%
50.0	5160.758	2232.501	16917.340	10.174%	77.094%
55.0	4513.228	2103.447	19020.790	9.586%	86.680%
60.0	3169.109	1775.750	20796.540	8.092%	94.772%
65.0	340.019	853.076	21649.610	3.888%	98.660%
70.0	29.389	93.537	21743.150	.426%	99.086%
75.0	19.296	12.726	21755.880	.058%	99.144%
80.0	10.928	8.087	21763.960	.037%	99.181%
85.0	4.569	4.211	21768.180	.019%	99.200%
90.0	2.262	1.870	21770.050	.009%	99.209%
95.0	4.448	1.837	21771.880	.008%	99.217%
100.0	7.754	3.315	21775.200	.015%	99.232%
105.0	11.971	5.278	21780.480	.024%	99.256%
110.0	16.858	7.535	21788.010	.034%	99.290%
115.0	21.427	9.694	21797.710	.044%	99.335%
120.0	25.996	11.529	21809.240	.053%	99.387%
125.0	30.806	13.130	21822.370	.060%	99.447%
130.0	35.518	14.421	21836.790	.066%	99.513%
135.0	40.174	15.295	21852.080	.070%	99.582%
140.0	43.689	15.528	21867.610	.071%	99.653%
145.0	46.928	15.119	21882.730	.069%	99.722%
150.0	49.916	14.261	21896.990	.065%	99.787%
155.0	52.716	12.988	21909.980	.059%	99.846%
160.0	55.495	11.349	21921.330	.052%	99.898%
165.0	58.218	9.372	21930.700	.043%	99.941%
170.0	60.997	7.072	21937.770	.032%	99.973%
175.0	63.095	4.439	21942.210	.020%	99.993%
180.0	64.182	1.522	21943.730	.007%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	7799.59	35.54%
0-40	12370.34	56.37%
0-60	20796.54	94.77%
0-90	21770.05	99.21%
0-120	21809.24	99.39%
0-180	21943.73	100.00%
60-90	2749.26	12.53%
90-120	41.06	0.19%
90-130	68.61	0.31%
90-150	128.81	0.59%
90-180	174.03	0.79%
0-51.52	17554.99	80.00%

ZONAL LUMEN SUMMARY

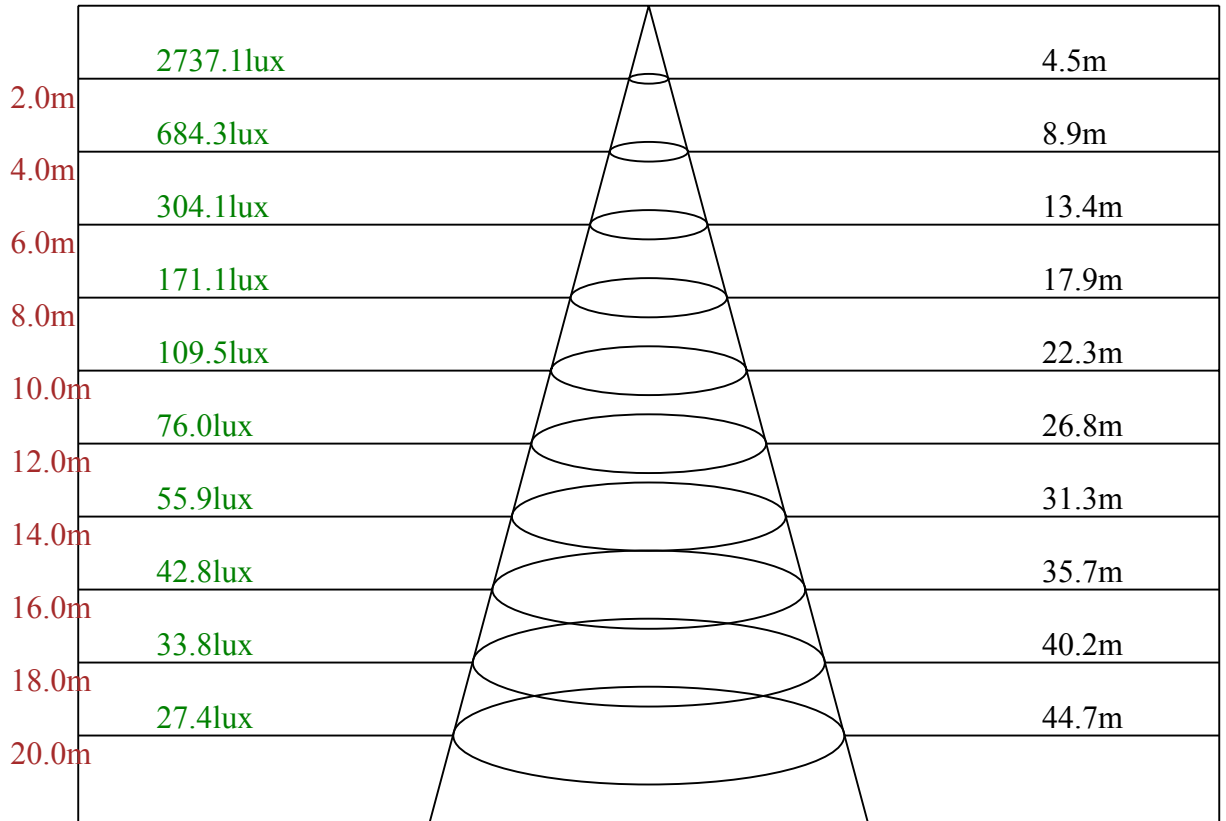
0-10	1021.24
10-20	2793.65
20-30	3984.71
30-40	4570.75
40-50	4547.00
50-60	3879.20
60-70	946.61
70-80	20.81
80-90	6.08
90-100	5.15
100-110	12.81
110-120	21.22
120-130	27.55
130-140	30.82
140-150	29.38
150-160	24.34
160-170	16.44
170-180	4.44



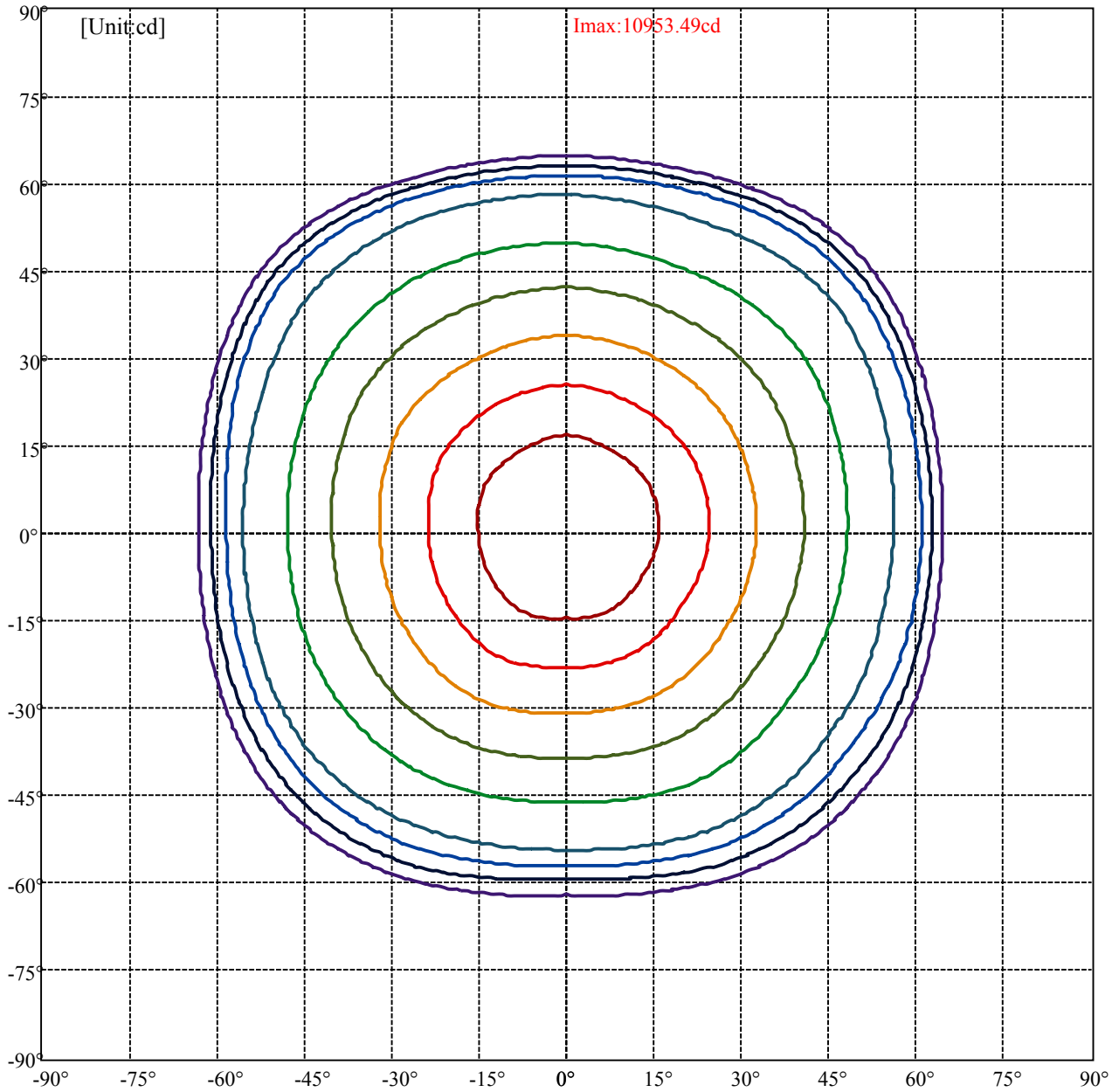
C30(Max): ———
 C0/C180: ———
 C90/C270: ———

Field angle(10%Imax):C0/180Left:62.9 Right:64.4
 :C90/270Left:61.9 Right:64.6

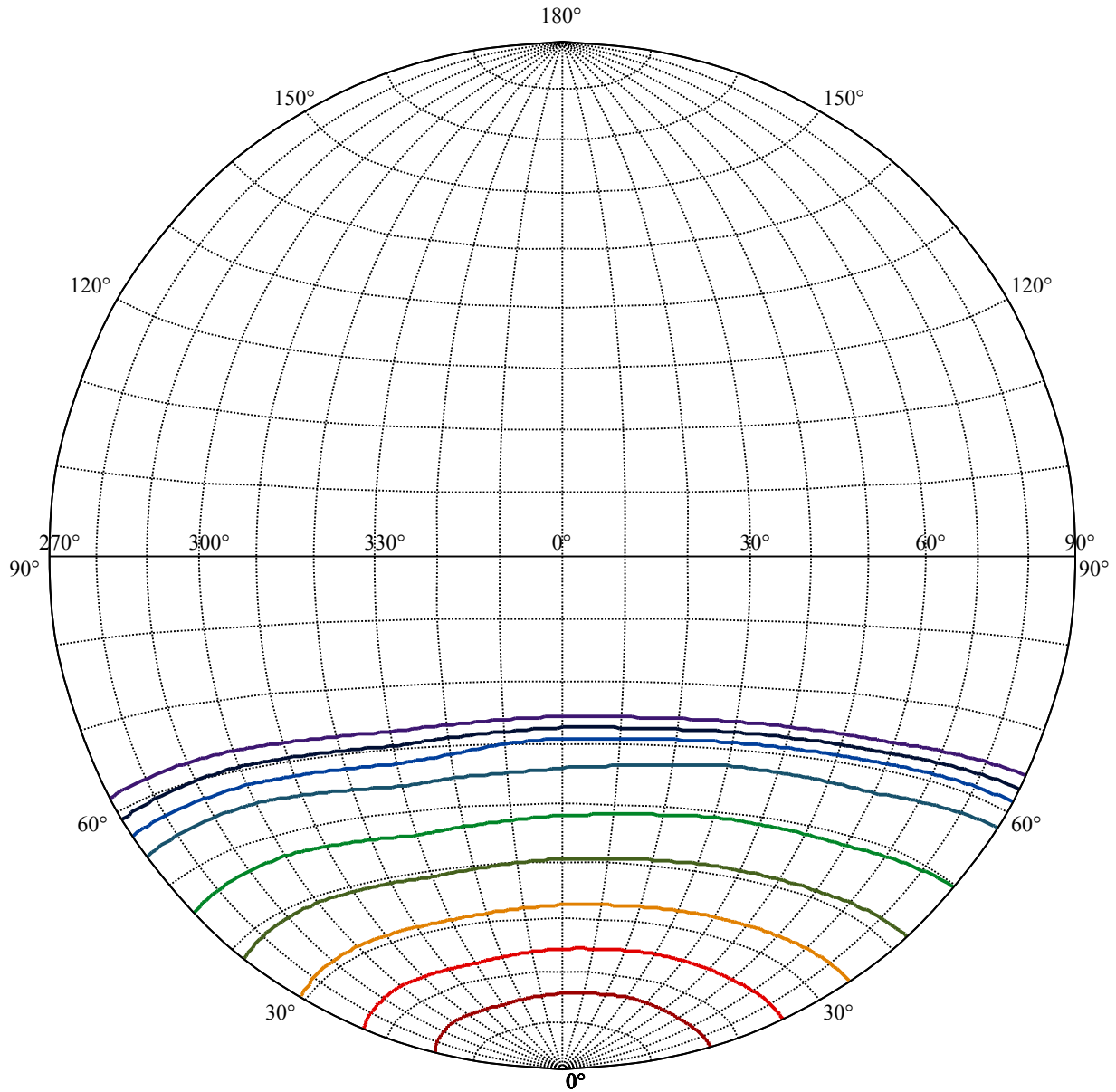
Beam Angle(50%Imax):C0/180Left:47.7 Right:48.1
 :C90/270Left:45.9 Right:49.7



Beam angle of C30plane96.27



(10%Imax) 1094.56	—
(20%Imax) 2189.12	—
(30%Imax) 3283.68	—
(40%Imax) 4378.24	—
(50%Imax) 5472.79	—
(60%Imax) 6567.35	—
(70%Imax) 7661.91	—
(80%Imax) 8756.47	—
(90%Imax) 9851.03	—












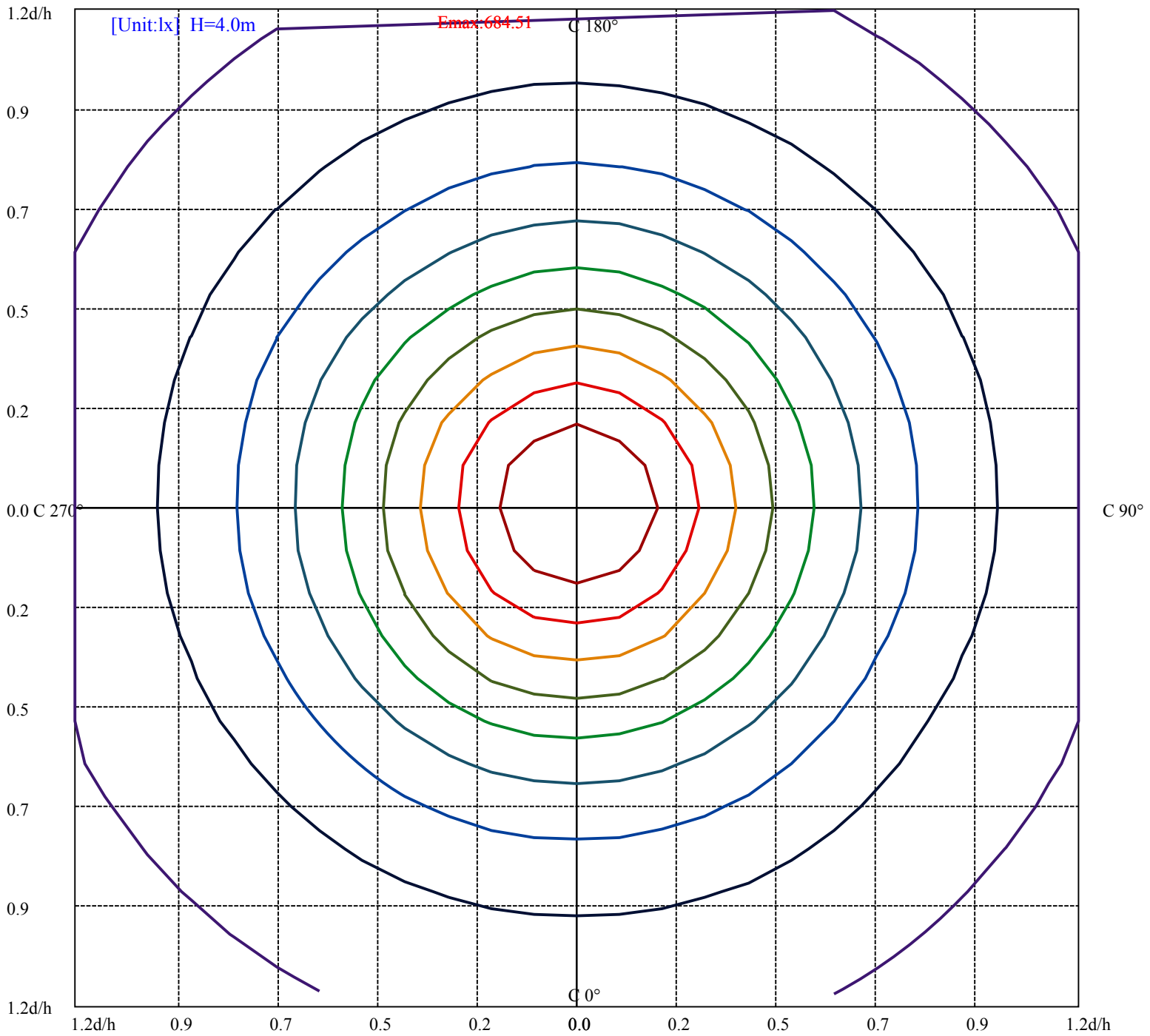
House

[Unit:cd]

Road

Imax:10953.49

(10%Imax) 1095.35	
(20%Imax) 2190.7	
(30%Imax) 3286.05	
(40%Imax) 4381.4	
(50%Imax) 5476.75	
(60%Imax) 6572.1	
(70%Imax) 7667.45	
(80%Imax) 8762.79	
(90%Imax) 9858.14	

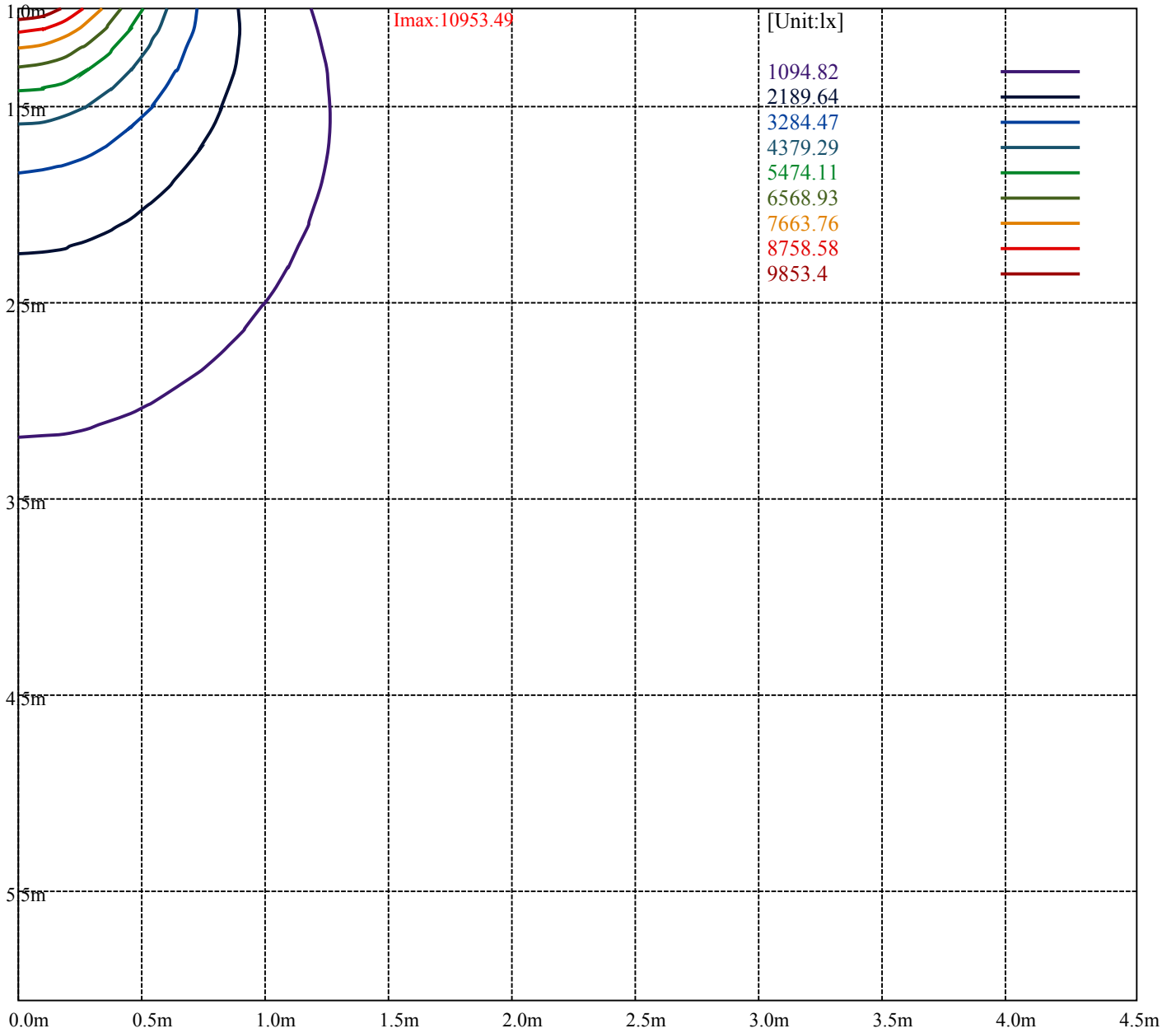


(10%Emax) 68.45125	—
(20%Emax) 136.9019	—
(30%Emax) 205.3531	—
(40%Emax) 273.8044	—
(50%Emax) 342.2556	—
(60%Emax) 410.7062	—
(70%Emax) 479.1575	—
(80%Emax) 547.6088	—
(90%Emax) 616.0600	—

Equipment: GMS-1800B
 Temperature(°C): 25.0

Date: 2015-4-29
 Humidity(%): 50.0%

Operator: Marine
 Distance(m): 11.48



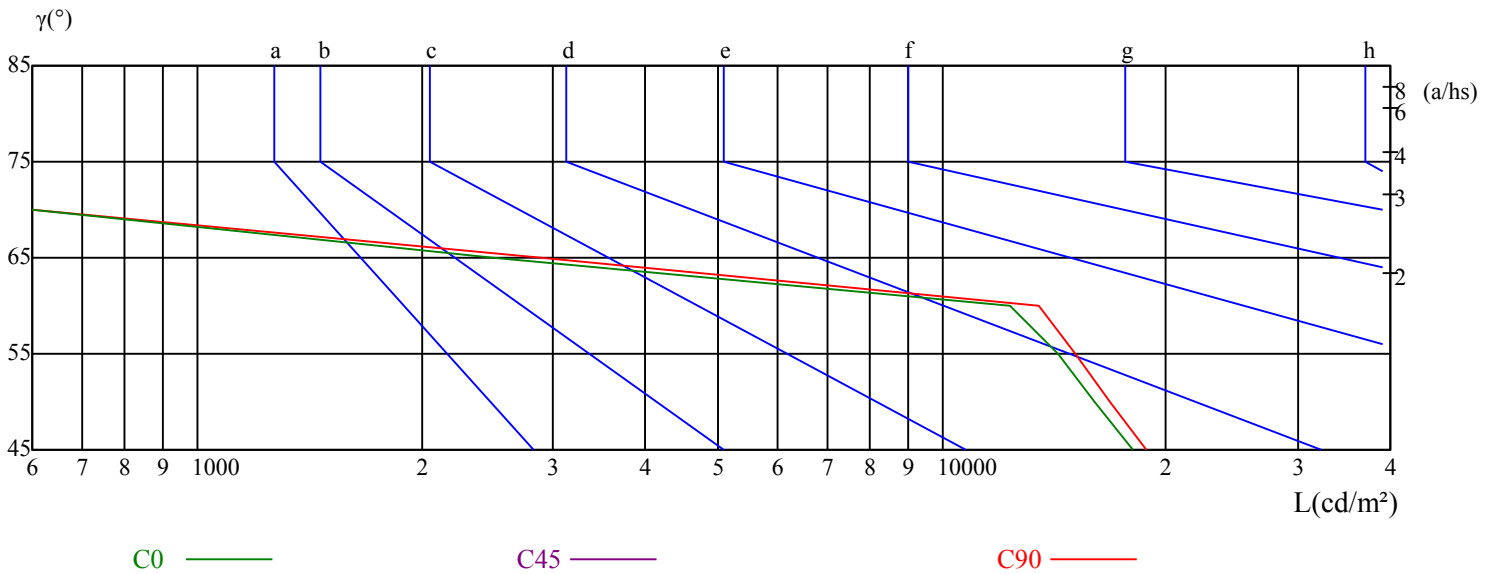
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	18073	16038	14331	12333	2491	105	75	46	21
C45	0	0	0	0	0	0	0	0	0
C90	18816	16804	15101	13455	2894	129	90	58	31

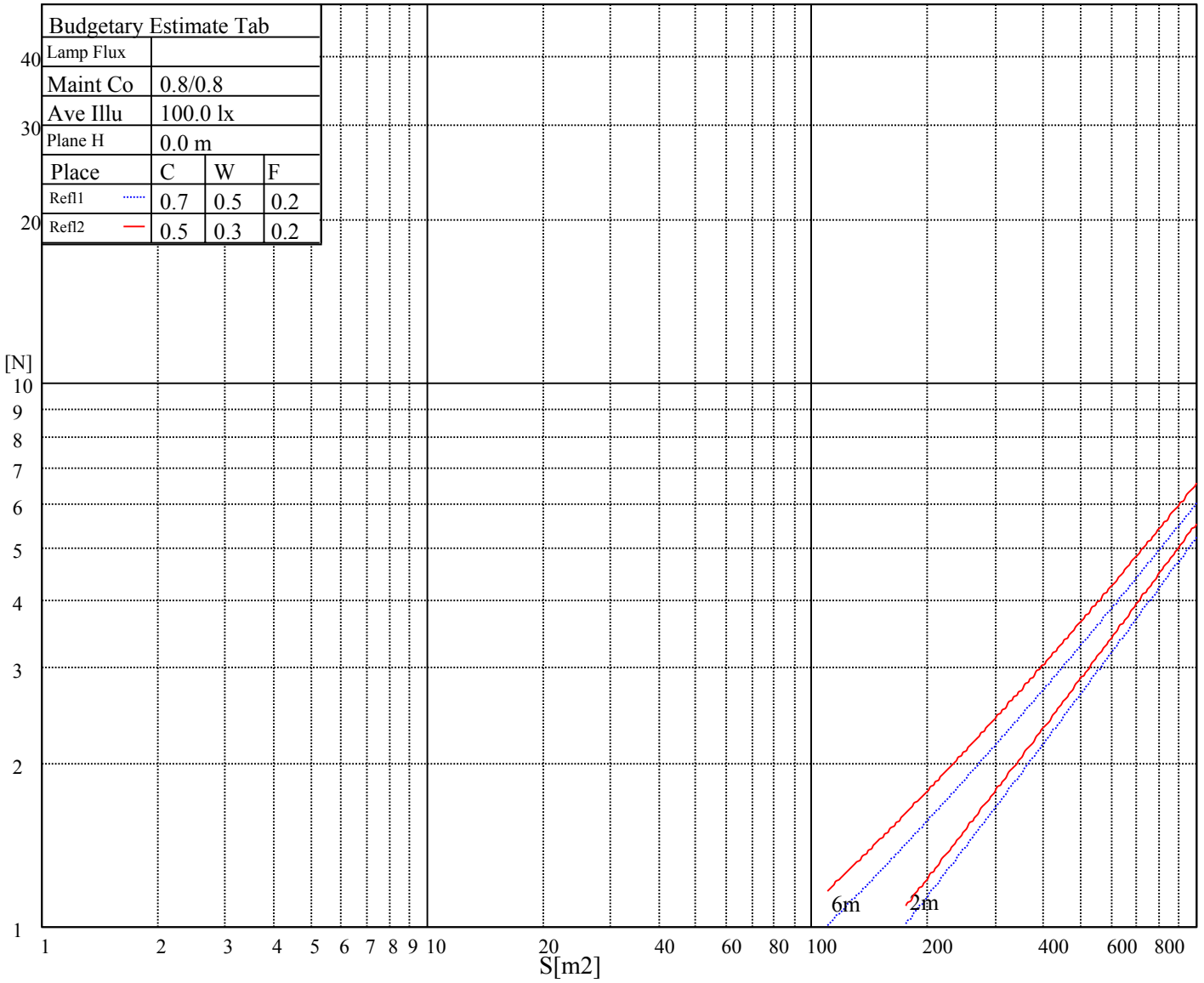
Glare Table

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



Illuminatin 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	10.4	11.6	10.7	11.9	12.1	10.5	11.7	10.8	11.9	12.2
	3H	10.3	11.3	10.6	11.6	11.9	10.3	11.4	10.7	11.7	12.0
	4H	10.1	11.0	10.5	11.3	11.6	10.2	11.0	10.5	11.3	11.7
	6H	10.1	11.0	10.5	11.3	11.6	10.2	11.0	10.5	11.3	11.7
	8H	10.1	11.0	10.5	11.3	11.6	10.2	11.0	10.5	11.3	11.7
	12H	9.9	10.5	10.3	10.9	11.4	10.0	10.6	10.4	11.0	11.4
4H	2H	10.4	11.3	10.8	11.6	12.0	10.5	11.4	10.9	11.7	12.0
	3H	10.3	10.9	10.7	11.3	11.8	10.4	11.0	10.8	11.4	11.8
	4H	10.3	10.9	10.7	11.3	11.8	10.4	11.0	10.8	11.4	11.8
	6H	10.3	10.9	10.7	11.3	11.8	10.4	11.0	10.8	11.4	11.8
	8H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	12H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
8H	4H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	6H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	8H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	12H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
12H	4H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	6H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
	8H	10.1	10.5	10.6	11.0	11.5	10.2	10.5	10.7	11.0	11.5
Variation with the observer position at spacings:											
S = 1.0H		0.9/-0.5					0.9/-0.5				
S = 1.5H		1.7/-3.7					1.6/-4.4				
S = 2.0H		3.6/-15.7					3.6/-17.9				
Standard tables:		BK0					BK0				
Uncorrected UGR		-7.9					-7.8				
According 1000lm											



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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.08	1.04	1.01	1.05	1.02	1.00	1.01	0.99	0.96	0.97	0.95	0.93	0.93	0.92	0.91	0.89
2	0.96	0.91	0.86	0.95	0.90	0.85	0.91	0.87	0.83	0.88	0.84	0.81	0.85	0.82	0.79	0.77
3	0.86	0.80	0.74	0.85	0.79	0.73	0.82	0.77	0.72	0.79	0.75	0.71	0.77	0.73	0.70	0.68
4	0.78	0.70	0.64	0.76	0.69	0.64	0.74	0.68	0.63	0.72	0.66	0.62	0.69	0.65	0.61	0.59
5	0.70	0.62	0.56	0.69	0.62	0.56	0.67	0.60	0.55	0.65	0.59	0.55	0.63	0.58	0.54	0.52
6	0.64	0.55	0.50	0.63	0.55	0.50	0.61	0.54	0.49	0.59	0.53	0.49	0.58	0.52	0.48	0.46
7	0.58	0.50	0.44	0.57	0.50	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.53	0.47	0.43	0.41
8	0.53	0.45	0.40	0.52	0.45	0.40	0.51	0.44	0.39	0.50	0.44	0.39	0.49	0.43	0.39	0.37
9	0.49	0.41	0.36	0.48	0.41	0.36	0.47	0.40	0.36	0.46	0.40	0.36	0.45	0.39	0.35	0.34
10	0.45	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.42	0.36	0.32	0.31
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 WLC															
1	0.23	0.13	0.04	0.23	0.13	0.04	0.21	0.12	0.04	0.20	0.12	0.04	0.19	0.11	0.04	
2	0.23	0.13	0.04	0.23	0.12	0.04	0.21	0.12	0.04	0.20	0.11	0.04	0.19	0.11	0.03	
3	0.22	0.12	0.04	0.22	0.12	0.04	0.21	0.11	0.03	0.20	0.11	0.03	0.19	0.11	0.03	
4	0.21	0.11	0.03	0.21	0.11	0.03	0.20	0.11	0.03	0.19	0.10	0.03	0.18	0.10	0.03	
5	0.20	0.10	0.03	0.20	0.10	0.03	0.19	0.10	0.03	0.18	0.10	0.03	0.17	0.09	0.03	
6	0.19	0.10	0.03	0.19	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.17	0.09	0.03	
7	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.02	0.16	0.08	0.02	0.16	0.08	0.02	
8	0.17	0.08	0.02	0.17	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	
9	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	0.02	0.14	0.07	0.02	
10	0.15	0.07	0.02	0.15	0.07	0.02	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CCLU															
0	0.20	0.20	0.20	0.17	0.17	0.17	0.11	0.11	0.11	0.07	0.07	0.07	0.02	0.02	0.02	
1	0.16	0.15	0.14	0.14	0.13	0.12	0.10	0.09	0.09	0.06	0.05	0.05	0.02	0.02	0.02	
2	0.13	0.12	0.10	0.12	0.10	0.09	0.09	0.08	0.07	0.06	0.05	0.04	0.02	0.02	0.01	
3	0.11	0.09	0.08	0.10	0.08	0.07	0.08	0.06	0.05	0.05	0.04	0.03	0.02	0.01	0.01	
4	0.09	0.07	0.06	0.09	0.07	0.05	0.07	0.05	0.04	0.05	0.04	0.02	0.02	0.01	0.01	
5	0.08	0.06	0.05	0.08	0.06	0.04	0.07	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01	
6	0.07	0.05	0.04	0.07	0.05	0.04	0.06	0.04	0.03	0.04	0.03	0.02	0.02	0.01	0.01	
7	0.06	0.04	0.03	0.06	0.04	0.03	0.06	0.04	0.02	0.04	0.03	0.01	0.02	0.01	0.01	
8	0.06	0.04	0.03	0.06	0.04	0.03	0.06	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	
9	0.05	0.04	0.02	0.06	0.04	0.02	0.05	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	
10	0.05	0.03	0.02	0.05	0.03	0.02	0.05	0.03	0.02	0.04	0.02	0.01	0.01	0.01	0.00	

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	10948.22	10841.47	10483.00	9958.48	9348.29	8684.06	7996.12	7337.17	6671.63
30.0	10953.49	10859.92	10513.32	10028.33	9402.32	8755.23	8064.65	7399.11	6741.47
60.0	10950.86	10842.79	10492.23	9980.88	9383.87	8726.24	8083.10	7441.28	6740.16
90.0	10945.59	10877.06	10555.49	10069.18	9473.49	8817.17	8166.13	7529.58	6857.45
120.0	10948.22	10838.84	10504.09	9976.93	9378.60	8744.69	8068.60	7432.06	6788.92
150.0	10945.59	10853.33	10518.59	10008.56	9383.87	8744.69	8109.46	7462.37	6795.51
180.0	10948.22	10797.98	10394.70	9853.05	9232.31	8560.18	7913.09	7246.23	6579.37
210.0	10953.49	10790.08	10385.48	9842.50	9204.64	8547.00	7888.05	7197.47	6495.03
240.0	10950.86	10801.94	10426.33	9897.85	9282.39	8623.44	7926.27	7233.05	6472.62
270.0	10945.59	10768.99	10365.71	9791.10	9153.24	8462.66	7757.58	7070.95	6330.29
300.0	10948.22	10801.94	10411.84	9866.22	9238.90	8532.51	7840.61	7136.85	6458.12
330.0	10945.59	10770.31	10377.57	9831.96	9176.96	8506.15	7840.61	7143.44	6418.59
360.0	10948.22	10841.47	10483.00	9958.48	9348.29	8684.06	7996.12	7337.17	6671.63

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5930.96	5187.67	4532.67	3782.78	734.47	29.39	19.90	11.33	4.74
30.0	6045.62	5347.13	4719.81	4026.59	713.38	32.82	22.01	13.05	5.80
60.0	6016.63	5236.43	4591.97	3923.80	342.39	33.47	22.27	13.44	5.93
90.0	6174.78	5435.43	4776.48	4126.75	853.08	36.11	23.72	14.37	6.98
120.0	6094.38	5394.58	4731.67	4079.31	479.06	32.82	22.14	13.05	6.06
150.0	6053.53	5294.42	4630.19	3938.29	690.98	31.37	21.09	12.39	5.80
180.0	5871.66	5129.68	4499.72	2567.94	55.88	27.15	18.32	10.02	3.95
210.0	5771.50	5058.51	4431.19	2481.61	41.51	25.30	16.61	9.09	3.29
240.0	5716.15	4986.03	4323.12	2511.00	43.36	26.23	16.87	8.96	3.29
270.0	5597.53	4926.72	4261.18	1713.80	40.20	25.30	15.55	8.17	2.77
300.0	5750.41	5029.52	4391.65	2425.34	43.10	26.23	16.21	8.57	3.03
330.0	5629.16	4903.00	4269.09	2452.09	42.83	26.49	16.87	8.70	3.16
360.0	5930.96	5187.67	4532.67	3782.78	734.47	29.39	19.90	11.33	4.74

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.71	3.82	7.25	11.73	17.13	21.88	26.62	31.63	36.51
30.0	2.37	4.35	7.25	11.07	15.29	20.03	24.38	29.26	34.00
60.0	2.37	4.09	7.25	10.81	15.29	20.03	24.38	29.26	34.13
90.0	2.64	3.69	6.72	10.28	14.37	19.24	23.46	28.60	33.61
120.0	2.37	4.09	6.98	10.81	15.02	19.64	23.99	28.86	33.74
150.0	2.37	4.09	6.98	10.68	14.89	19.64	23.99	28.73	33.47
180.0	2.37	5.01	8.17	11.99	16.61	20.95	25.44	30.44	35.85
210.0	1.98	4.74	8.30	12.92	18.58	22.80	27.54	32.29	36.64
240.0	2.11	4.61	8.04	12.92	18.19	22.67	27.41	32.03	36.37
270.0	2.50	5.14	9.09	13.97	19.24	23.72	28.47	33.21	37.82
300.0	2.24	4.88	8.57	13.31	18.98	23.33	28.07	32.68	36.90
330.0	2.11	4.88	8.43	13.18	18.71	23.20	28.20	32.68	37.16
360.0	1.71	3.82	7.25	11.73	17.13	21.88	26.62	31.63	36.51

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	41.25	44.94	48.63	51.93	54.96	57.59	59.57	61.81	63.26
30.0	39.01	42.96	46.13	48.89	51.66	54.17	57.07	60.36	62.86
60.0	38.61	42.30	45.60	48.37	51.27	54.17	57.07	60.36	63.13
90.0	38.22	41.78	45.20	48.10	50.61	53.64	56.67	60.10	62.73
120.0	38.35	41.78	44.81	47.84	50.21	53.11	56.54	59.96	62.86
150.0	38.75	42.44	45.47	48.37	51.00	53.64	56.67	59.70	62.34
180.0	41.12	44.41	47.71	50.21	52.72	55.48	57.86	60.76	62.60
210.0	41.38	44.41	47.84	50.87	53.77	56.80	59.31	61.55	63.00
240.0	40.59	43.75	46.92	50.08	53.11	56.01	58.91	61.55	63.52
270.0	41.51	45.34	48.24	51.27	54.43	57.46	59.83	62.07	63.79
300.0	41.38	44.81	48.10	51.40	54.17	56.93	59.57	61.81	63.52
330.0	41.91	45.34	48.50	51.66	54.69	56.93	59.57	61.94	63.52
360.0	41.25	44.94	48.63	51.93	54.96	57.59	59.57	61.81	63.26

Intensity data(cd)

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C/γ(°)	180.0
0.0	64.05
30.0	64.05
60.0	64.31
90.0	64.45
120.0	64.18
150.0	64.05
180.0	64.05
210.0	64.05
240.0	64.31
270.0	64.45
300.0	64.18
330.0	64.05
360.0	64.05