



立讯检测
Testing Laboratories

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SHENZHEN YOUWIN OPTRONICS CO., LTD

LumCAT: YWHBFM-180H-AL080

Luminaire: LED High Bay Light

Report No:

Voltage(V): 229.800

Test No:

Current(A): 0.804

LampCAT: LED

Power (W): 178.800

Lamp flux(lm)

PF: 0.968

Number of Lamps: 1

Ballast type: -

Length(mm): 420

Width(mm): 420

Phm Type: C

Height(mm): 520

Photometric Results

Lumens(lm): 17620.19

Lumens(lm)/Power(W): 98.55

Central intensity(cd): 14751.690

Maximum intensity(cd): 14758.280

Angle of maximum intensity: C=60.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Left=36.1 Right=36.3

[C90/270]Left=35.8 Right=36.6

Field angle(10%Imax): [C0/180]Left=46.6 Right=46.7

[C90/270]Left=46.2 Right=47.5

Beam angle of C60plane: 72.35

Maximum s/h: C0_180=0.98 C90_270=1.00

Up flux rate of LUM(%): 0.82%

Down flux rate of LUM(%): 99.18%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.266%

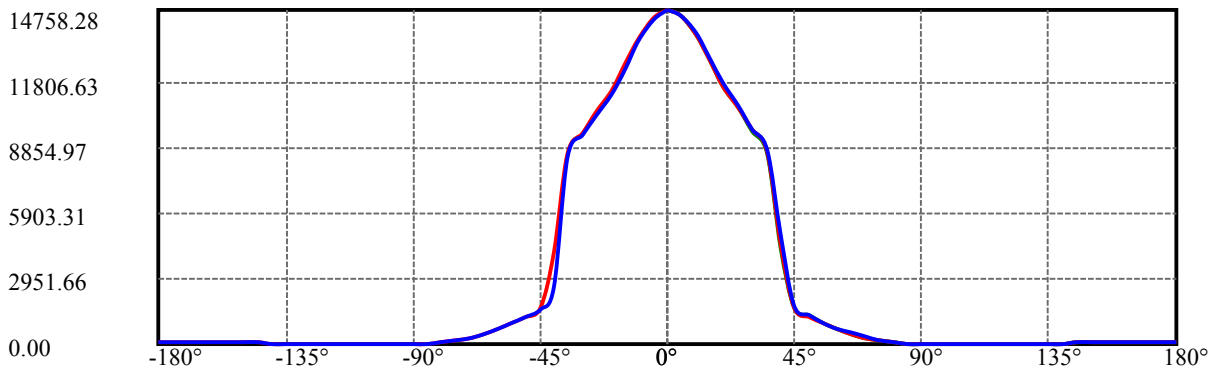
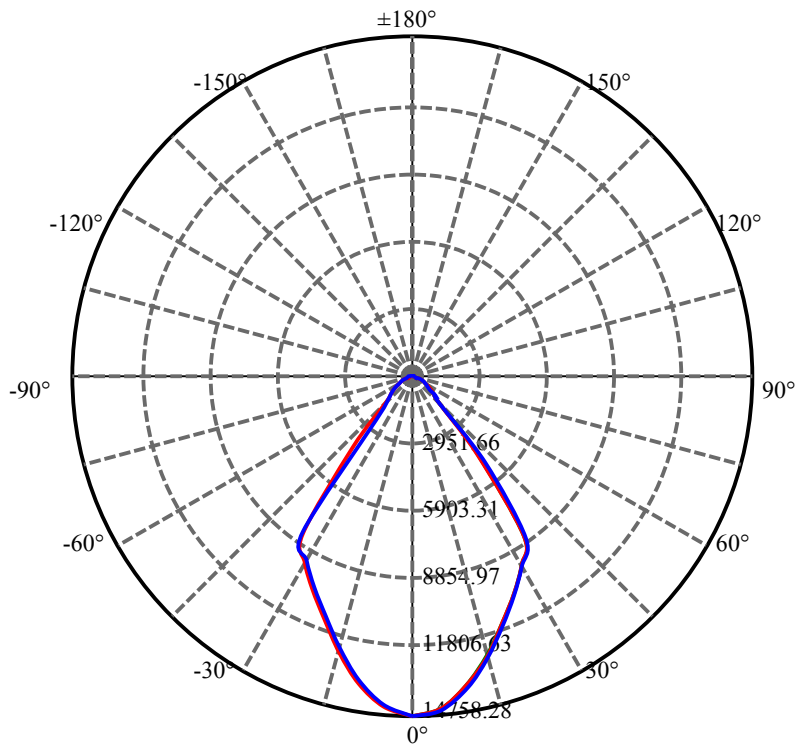
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14750.600	.000	.000	.000%	.000%
5.0	14427.270	348.813	348.813	1.980%	1.980%
10.0	13584.360	1002.064	1350.877	5.687%	7.667%
15.0	12448.440	1544.248	2895.125	8.764%	16.431%
20.0	11310.980	1958.109	4853.234	11.113%	27.544%
25.0	10358.570	2272.736	7125.970	12.898%	40.442%
30.0	9408.362	2501.522	9627.492	14.197%	54.639%
35.0	8414.224	2624.500	12251.990	14.895%	69.534%
40.0	4019.684	2074.503	14326.500	11.773%	81.307%
45.0	1620.747	1044.372	15370.870	5.927%	87.234%
50.0	1234.601	576.965	15947.830	3.274%	90.509%
55.0	925.311	469.637	16417.470	2.665%	93.174%
60.0	669.276	368.584	16786.050	2.092%	95.266%
65.0	448.977	271.849	17057.900	1.543%	96.809%
70.0	289.785	187.059	17244.960	1.062%	97.870%
75.0	171.503	120.573	17365.540	.684%	98.555%
80.0	87.146	69.207	17434.740	.393%	98.948%
85.0	31.915	32.352	17467.090	.184%	99.131%
90.0	1.263	9.084	17476.180	.052%	99.183%
95.0	1.658	.800	17476.980	.005%	99.187%
100.0	2.207	1.050	17478.030	.006%	99.193%
105.0	2.998	1.393	17479.420	.008%	99.201%
110.0	4.547	1.972	17481.390	.011%	99.212%
115.0	7.907	3.153	17484.550	.018%	99.230%
120.0	12.762	5.025	17489.570	.029%	99.259%
125.0	18.791	7.293	17496.870	.041%	99.300%
130.0	25.798	9.695	17506.560	.055%	99.355%
135.0	32.640	11.808	17518.370	.067%	99.422%
140.0	40.086	13.466	17531.840	.076%	99.499%
145.0	47.961	14.690	17546.530	.083%	99.582%
150.0	56.110	15.325	17561.850	.087%	99.669%
155.0	63.204	15.099	17576.950	.086%	99.755%
160.0	69.366	13.904	17590.860	.079%	99.834%
165.0	76.691	12.037	17602.890	.068%	99.902%
170.0	81.370	9.376	17612.270	.053%	99.955%
175.0	83.775	5.908	17618.180	.034%	99.989%
180.0	85.466	2.023	17620.200	.011%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	9627.49	54.64%
0-40	14326.50	81.31%
0-60	16786.05	95.27%
0-90	17476.18	99.18%
0-120	17489.57	99.26%
0-180	17620.20	100.00%
60-90	1058.71	6.01%
90-120	22.48	0.13%
90-130	39.47	0.22%
90-150	94.76	0.54%
90-180	151.08	0.86%
0-39.44	14096.16	80.00%

ZONAL LUMEN SUMMARY

0-10	1350.88
10-20	3502.36
20-30	4774.26
30-40	4699.00
40-50	1621.34
50-60	838.22
60-70	458.91
70-80	189.78
80-90	41.44
90-100	1.85
100-110	3.37
110-120	8.18
120-130	16.99
130-140	25.27
140-150	30.02
150-160	29.00
160-170	21.41
170-180	5.91



C60(Max): ———

C0/C180: ———

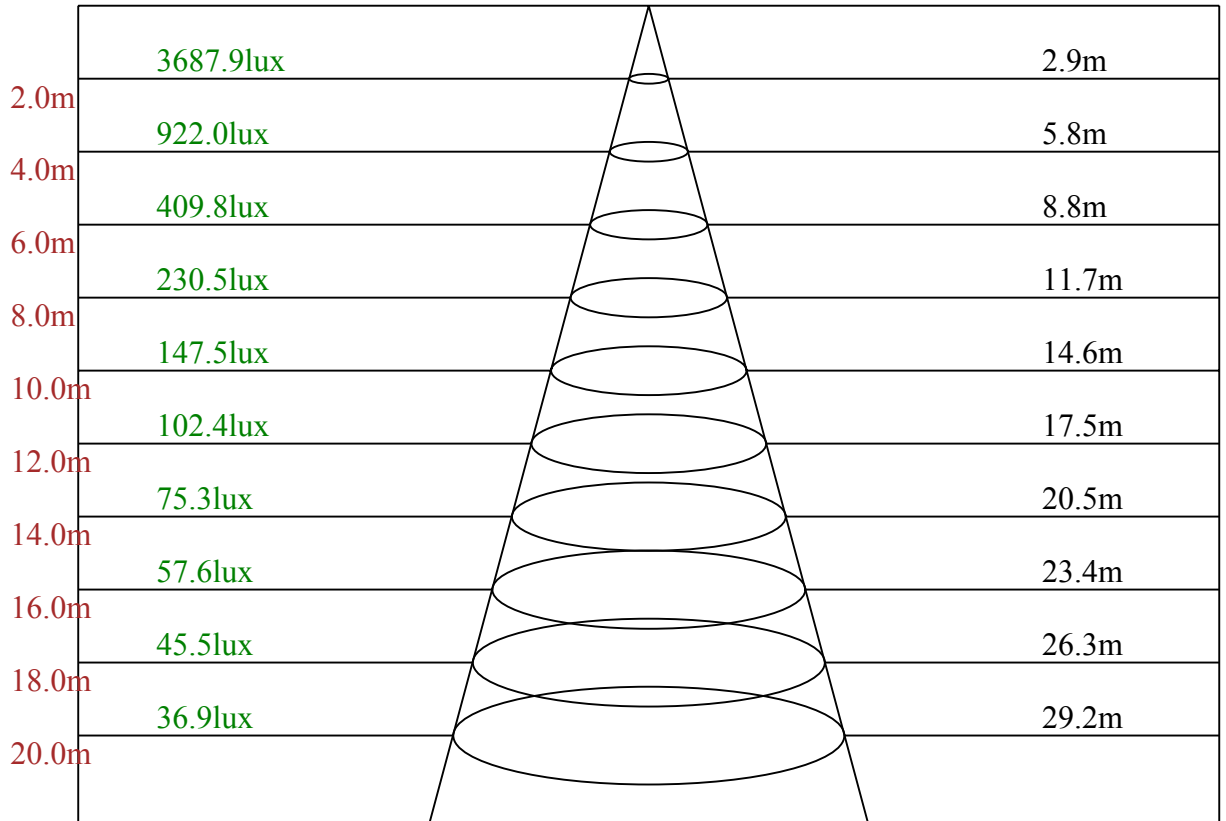
C90/C270: ———

Field angle(10%Imax):C0/180Left:46.6 Right:46.7

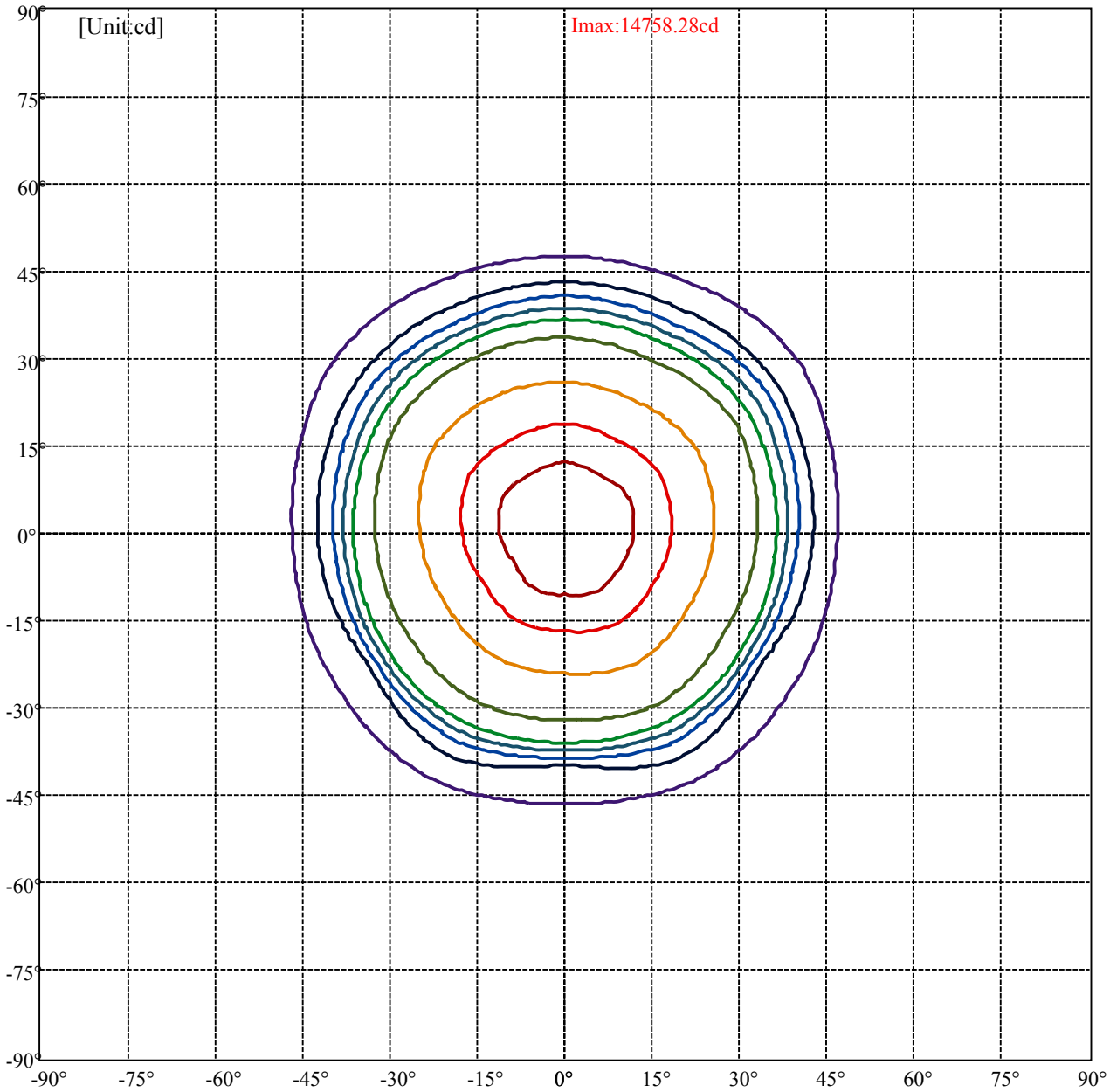
:C90/270Left:46.2 Right:47.5

Beam Angle(50%Imax):C0/180Left:36.1 Right:36.3

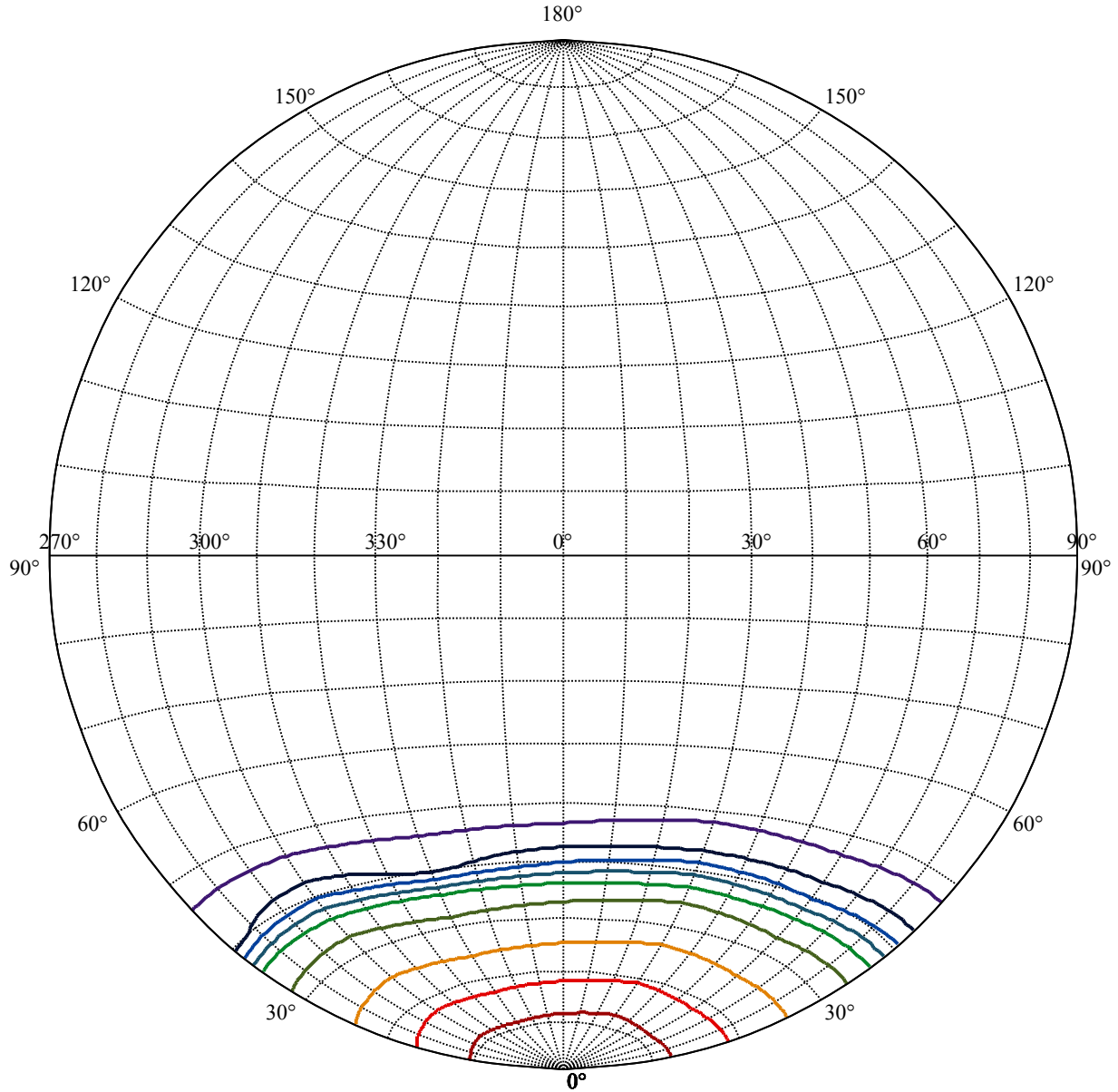
:C90/270Left:35.8 Right:36.6



Beam angle of C60plane72.35



(10%I _{max}) 1474.64	—
(20%I _{max}) 2949.28	—
(30%I _{max}) 4423.93	—
(40%I _{max}) 5898.57	—
(50%I _{max}) 7373.21	—
(60%I _{max}) 8847.85	—
(70%I _{max}) 10322.5	—
(80%I _{max}) 11797.1	—
(90%I _{max}) 13271.8	—












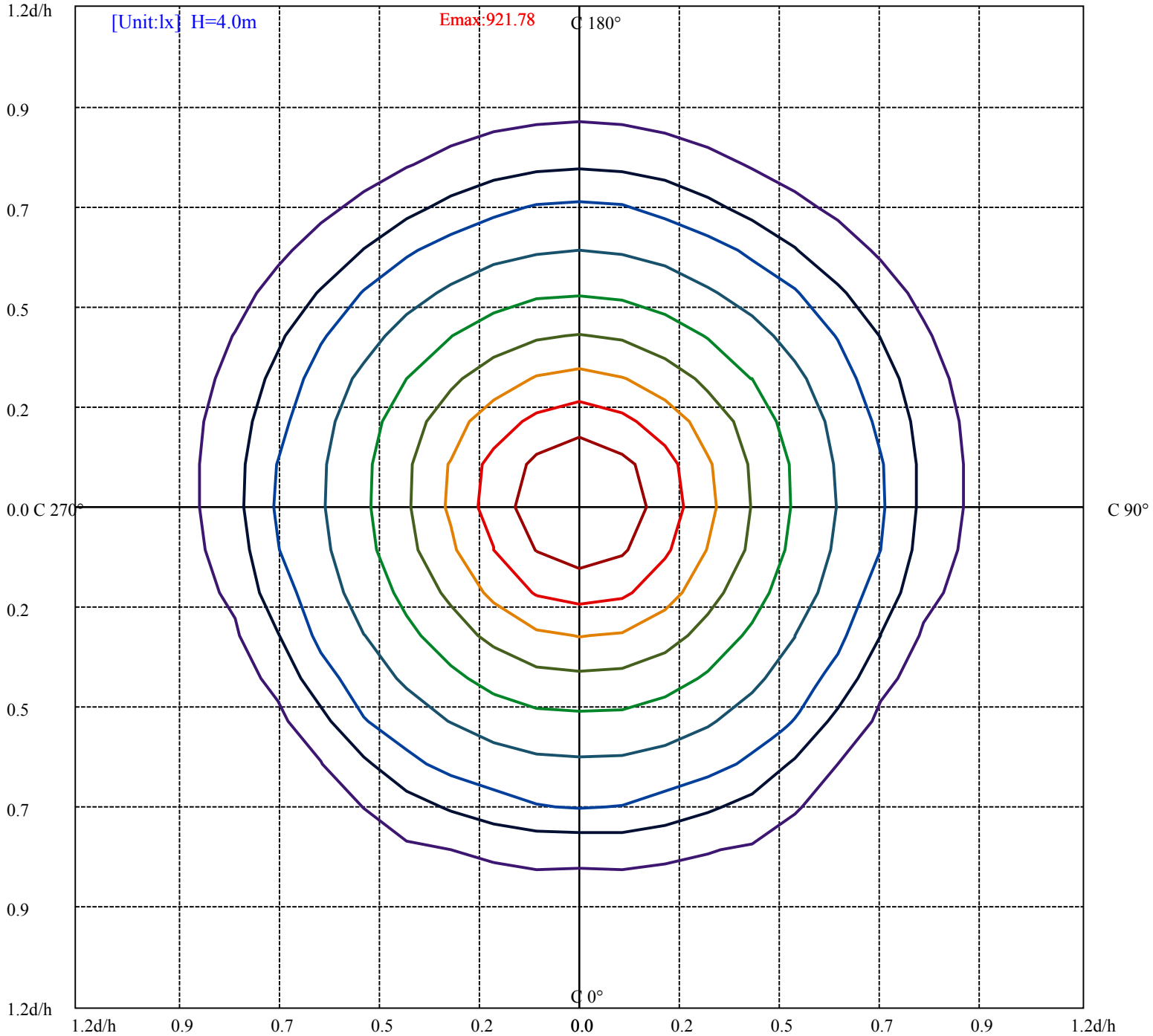
House

Road

[Unit:cd]

I_{max}:14758.28

(10%I _{max}) 1475.83	
(20%I _{max}) 2951.66	
(30%I _{max}) 4427.48	
(40%I _{max}) 5903.31	
(50%I _{max}) 7379.14	
(60%I _{max}) 8854.97	
(70%I _{max}) 10330.8	
(80%I _{max}) 11806.6	
(90%I _{max}) 13282.5	

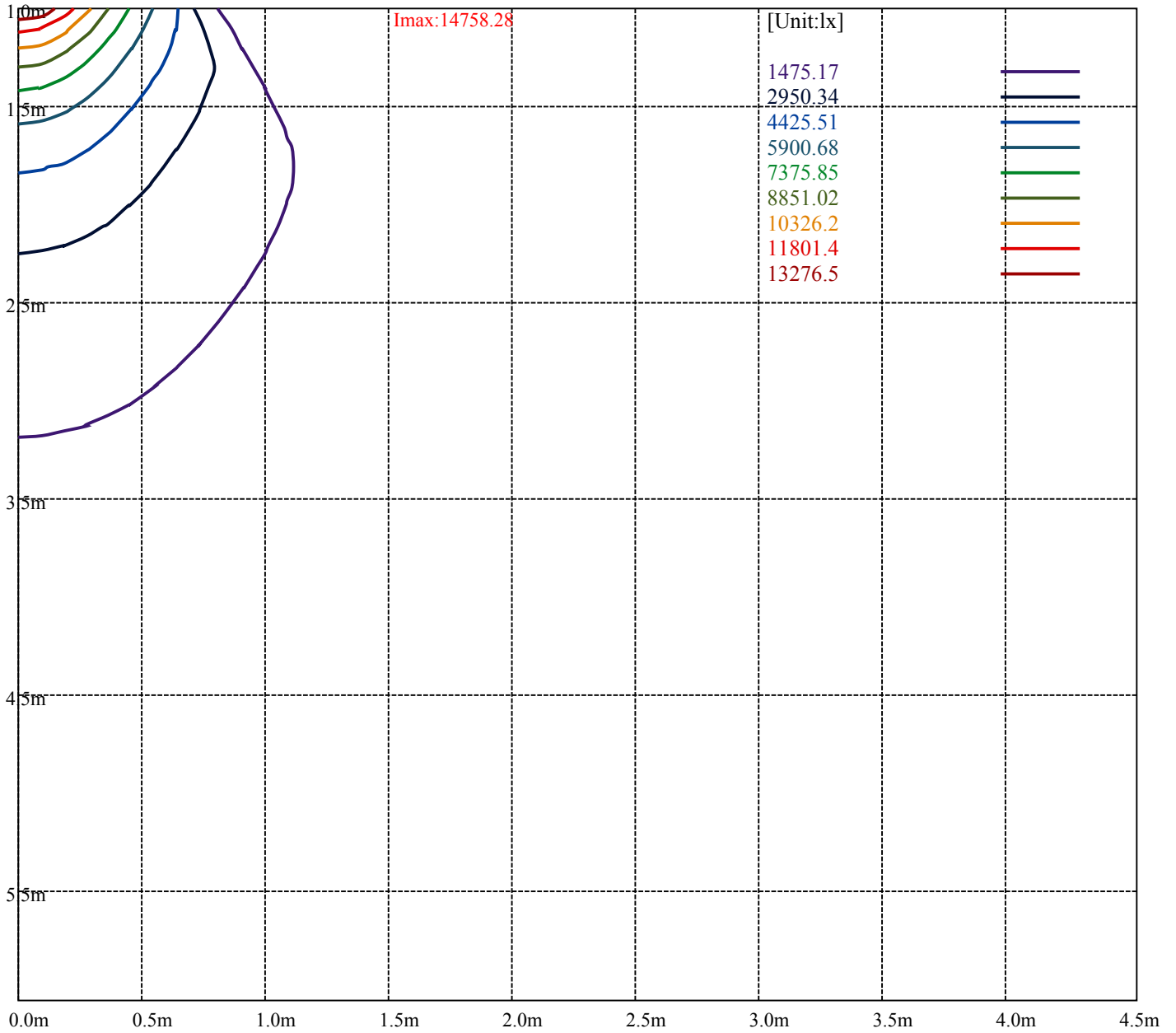


- (10%Emax) 92.1775
- (20%Emax) 184.355
- (30%Emax) 276.5325
- (40%Emax) 368.71
- (50%Emax) 460.8875
- (60%Emax) 553.065
- (70%Emax) 645.2438
- (80%Emax) 737.4188
- (90%Emax) 829.6

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

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

Operator: Marine
 Distance(m): 11.48



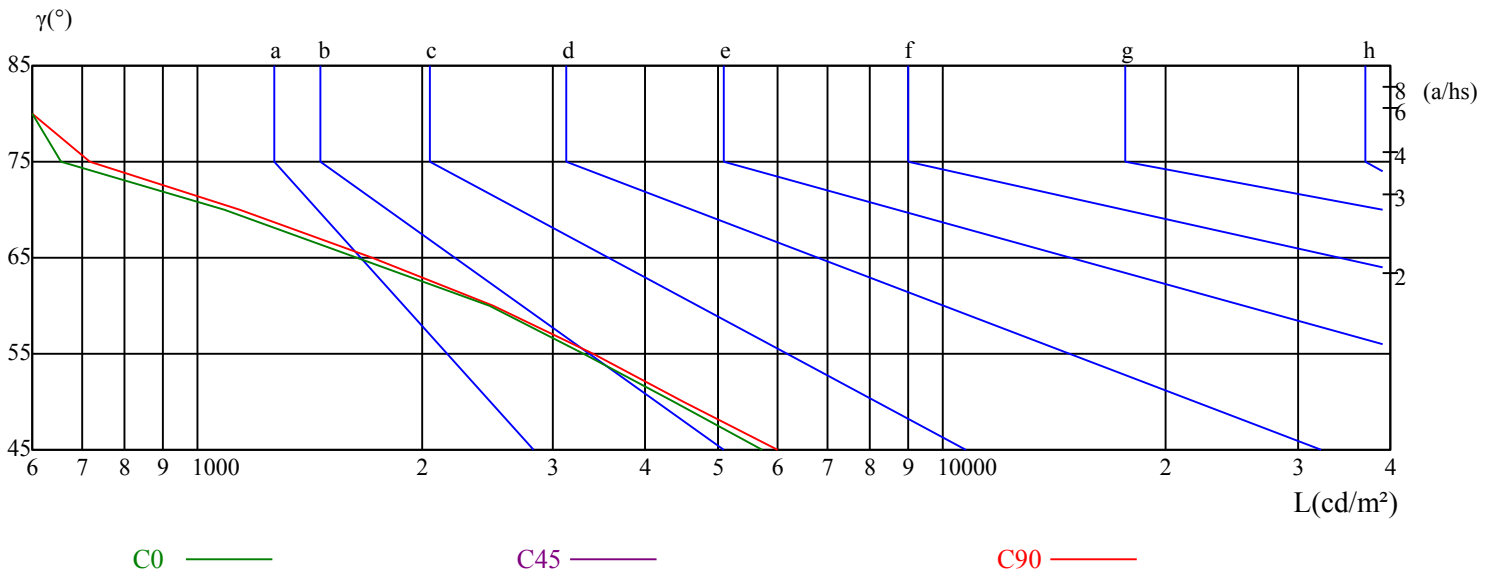
Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	5742	4373	3300	2468	1640	1086	657	352	137
C45	0	0	0	0	0	0	0	0	0
C90	6011	4504	3408	2496	1712	1142	715	382	158

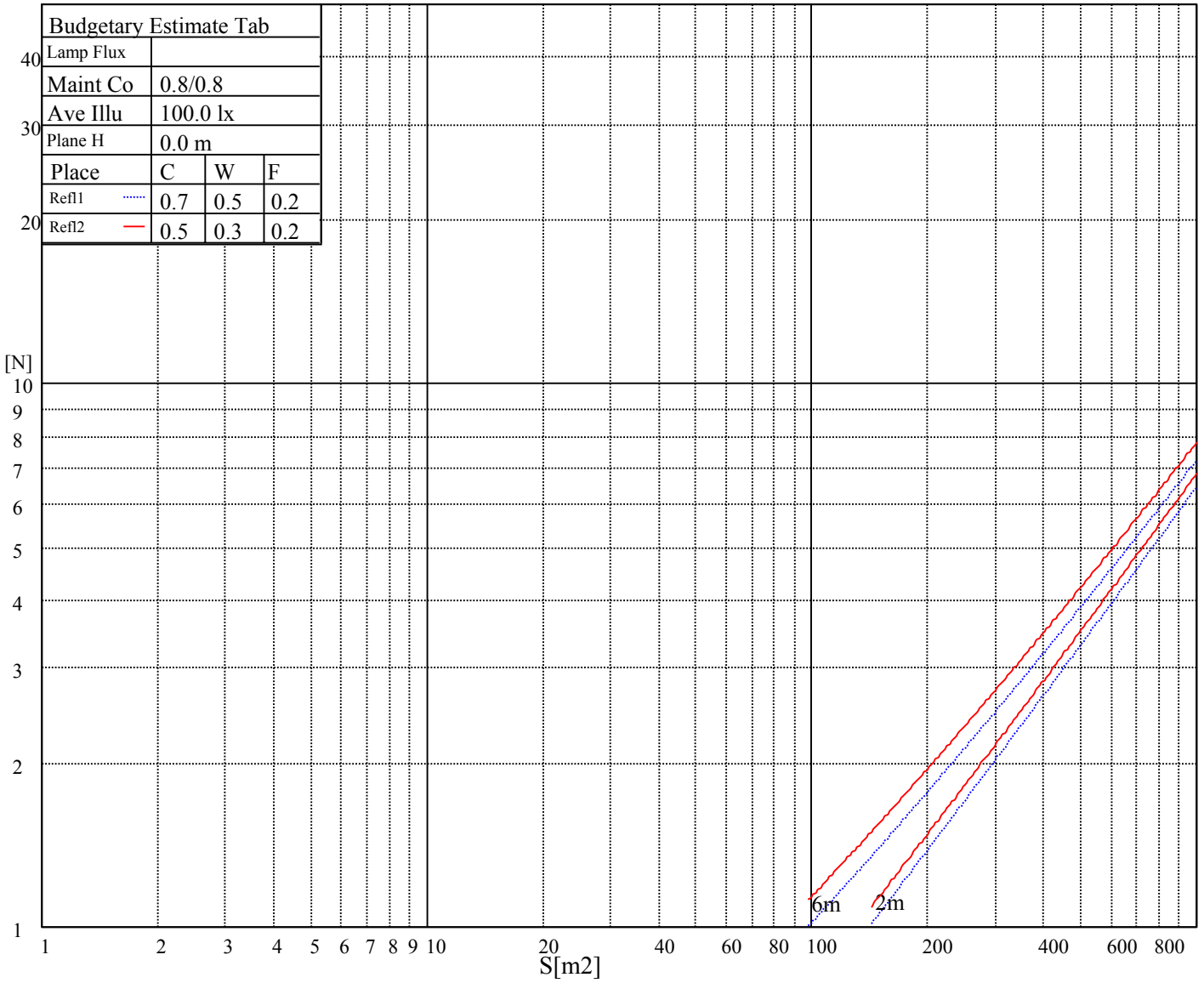
Glare Table

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	5.6	6.6	5.9	6.8	7.1	5.4	6.4	5.7	6.6	6.9
	3H	5.7	6.5	6.0	6.8	7.1	5.5	6.4	5.8	6.6	6.9
	4H	5.5	6.3	5.9	6.6	6.9	5.4	6.1	5.8	6.4	6.8
	6H	5.6	6.3	6.0	6.6	7.0	5.4	6.2	5.8	6.5	6.8
	8H	5.6	6.3	6.0	6.7	7.0	5.4	6.2	5.8	6.5	6.8
	12H	5.4	6.0	5.8	6.4	6.8	5.3	5.8	5.7	6.2	6.6
4H	2H	5.4	6.1	5.8	6.5	6.8	5.2	6.0	5.6	6.3	6.6
	3H	5.5	6.1	6.0	6.5	6.9	5.4	5.9	5.8	6.3	6.7
	4H	5.7	6.2	6.1	6.6	7.0	5.5	6.0	5.9	6.4	6.8
	6H	5.7	6.3	6.2	6.7	7.1	5.6	6.1	6.0	6.5	6.9
	8H	5.5	5.8	6.0	6.3	6.8	5.4	5.7	5.9	6.2	6.7
	12H	5.5	5.8	6.1	6.3	6.9	5.4	5.7	5.9	6.2	6.7
8H	4H	5.5	5.8	6.0	6.3	6.8	5.4	5.7	5.9	6.1	6.7
	6H	5.6	5.9	6.1	6.4	6.9	5.4	5.7	5.9	6.2	6.8
	8H	5.6	5.9	6.1	6.4	6.9	5.5	5.8	6.0	6.3	6.8
	12H	5.6	5.9	6.1	6.4	6.9	5.5	5.8	6.0	6.3	6.8
12H	4H	5.5	5.8	6.0	6.3	6.8	5.4	5.7	5.9	6.1	6.7
	6H	5.6	5.9	6.1	6.4	6.9	5.5	5.8	6.0	6.2	6.8
	8H	5.6	5.9	6.1	6.4	6.9	5.5	5.8	6.0	6.3	6.8
Variation with the observer position at spacings:											
S = 1.0H		2.7/-3.4					2.8/-3.3				
S = 1.5H		4.9/-4.4					5.0/-4.2				
S = 2.0H		7.0/-5.3					7.1/-5.1				
Standard tables:		BK1					BK1				
Uncorrected UGR		-12.2					-12.4				
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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.00	0.99	0.99	0.97	0.95	0.95	0.94	0.93	0.91
2	1.00	0.95	0.91	0.98	0.94	0.90	0.95	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.82
3	0.92	0.86	0.81	0.90	0.85	0.81	0.87	0.83	0.79	0.85	0.81	0.78	0.82	0.79	0.76	0.75
4	0.84	0.78	0.73	0.83	0.77	0.73	0.81	0.76	0.72	0.79	0.74	0.71	0.77	0.73	0.70	0.68
5	0.78	0.71	0.66	0.77	0.71	0.66	0.75	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.62
6	0.72	0.65	0.61	0.71	0.65	0.60	0.70	0.64	0.60	0.68	0.63	0.59	0.67	0.62	0.59	0.57
7	0.67	0.60	0.56	0.66	0.60	0.55	0.65	0.59	0.55	0.64	0.58	0.55	0.62	0.58	0.54	0.53
8	0.63	0.56	0.51	0.62	0.56	0.51	0.61	0.55	0.51	0.60	0.54	0.51	0.59	0.54	0.50	0.49
9	0.59	0.52	0.47	0.58	0.52	0.47	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.45
10	0.55	0.48	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.53	0.47	0.44	0.52	0.47	0.43	0.42
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 WLC															
1	0.21	0.12	0.04	0.20	0.11	0.04	0.19	0.11	0.03	0.17	0.10	0.03	0.16	0.09	0.03	
2	0.20	0.11	0.03	0.19	0.11	0.03	0.18	0.10	0.03	0.17	0.10	0.03	0.16	0.09	0.03	
3	0.19	0.10	0.03	0.18	0.10	0.03	0.17	0.09	0.03	0.17	0.09	0.03	0.16	0.09	0.03	
4	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.16	0.09	0.03	0.15	0.08	0.03	
5	0.17	0.09	0.03	0.17	0.09	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.08	0.02	
6	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.08	0.02	0.14	0.07	0.02	
7	0.15	0.08	0.02	0.15	0.08	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	
8	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02	
9	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.06	0.02	0.12	0.06	0.02	
10	0.13	0.06	0.02	0.13	0.06	0.02	0.13	0.06	0.02	0.12	0.06	0.02	0.12	0.06	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	0.15	0.14	0.13	0.13	0.10	0.09	0.09	0.06	0.06	0.05	0.02	0.02	0.02	
2	0.14	0.12	0.11	0.12	0.11	0.10	0.09	0.08	0.07	0.05	0.05	0.04	0.02	0.02	0.01	
3	0.12	0.10	0.09	0.10	0.09	0.08	0.08	0.07	0.05	0.05	0.04	0.03	0.02	0.01	0.01	
4	0.10	0.08	0.07	0.09	0.07	0.06	0.07	0.06	0.04	0.05	0.04	0.03	0.02	0.01	0.01	
5	0.09	0.07	0.05	0.08	0.06	0.05	0.07	0.05	0.04	0.04	0.03	0.02	0.02	0.01	0.01	
6	0.08	0.06	0.05	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	0.07	0.05	0.04	0.07	0.05	0.03	0.06	0.04	0.03	0.04	0.03	0.02	0.02	0.01	0.01	
8	0.06	0.04	0.03	0.06	0.04	0.03	0.05	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0.01	
9	0.06	0.04	0.03	0.06	0.04	0.03	0.05	0.03	0.02	0.04	0.02	0.01	0.01	0.01	0.00	
10	0.05	0.04	0.02	0.05	0.03	0.02	0.05	0.03	0.02	0.03	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	14751.69	14473.62	13671.01	12566.61	11377.86	10422.38	9457.67	8452.11	4432.51
30.0	14738.51	14589.59	13839.70	12755.07	11620.35	10637.20	9697.53	8728.87	5436.75
60.0	14758.28	14492.07	13644.65	12519.16	11391.04	10418.43	9440.54	8403.35	4254.59
90.0	14746.42	14526.33	13757.99	12670.72	11508.33	10483.00	9524.89	8564.14	4872.69
120.0	14755.65	14451.21	13636.75	12529.71	11456.93	10551.53	9545.97	8541.73	4338.94
150.0	14753.01	14498.66	13736.91	12699.72	11596.63	10629.29	9656.68	8610.26	4875.32
180.0	14751.69	14381.36	13523.41	12396.60	11207.85	10256.32	9292.94	8357.22	4046.36
210.0	14738.51	14229.80	13247.97	12026.27	10944.27	10036.23	9158.51	8108.14	2598.64
240.0	14758.28	14373.46	13465.42	12234.50	11080.01	10158.80	9240.22	8340.09	4012.10
270.0	14746.42	14314.15	13387.66	12171.24	11053.66	10123.22	9224.40	8243.89	2514.82
300.0	14755.65	14418.26	13572.17	12457.22	11289.56	10360.44	9437.91	8457.38	4276.99
330.0	14753.01	14378.73	13528.68	12354.43	11205.21	10226.01	9223.09	8163.49	2576.50
360.0	14751.69	14473.62	13671.01	12566.61	11377.86	10422.38	9457.67	8452.11	4432.51

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1602.97	1227.36	924.25	684.39	446.90	288.36	168.69	86.45	31.89
30.0	1753.21	1319.62	987.51	718.65	484.59	314.98	191.23	99.37	40.46
60.0	1627.22	1231.05	929.78	670.94	450.59	296.00	174.10	89.75	32.42
90.0	1678.09	1264.27	954.56	692.29	466.54	303.38	183.58	93.97	36.77
120.0	1639.60	1249.64	935.18	660.80	447.82	288.75	173.04	87.11	32.42
150.0	1722.90	1287.99	969.05	698.88	469.04	304.70	185.43	96.21	38.09
180.0	1592.69	1225.26	923.85	657.50	447.69	290.20	175.15	88.96	32.82
210.0	1521.52	1171.75	870.08	620.07	418.96	268.33	154.46	76.31	24.38
240.0	1602.97	1239.23	929.52	680.43	457.84	290.73	172.65	87.77	30.58
270.0	1563.03	1203.77	895.25	650.12	434.78	277.68	159.07	78.81	26.89
300.0	1614.83	1222.09	916.34	676.48	441.63	284.01	164.74	83.42	30.05
330.0	1529.96	1173.20	868.37	620.73	421.33	270.30	155.91	77.62	26.23
360.0	1602.97	1227.36	924.25	684.39	446.90	288.36	168.69	86.45	31.89

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.19	1.58	2.11	2.90	4.22	7.12	11.99	18.19	25.30
30.0	1.85	1.58	2.11	2.90	4.22	7.51	12.12	17.40	23.85
60.0	1.19	1.71	2.24	2.90	4.74	8.43	13.05	18.85	25.04
90.0	1.19	1.71	2.24	3.03	4.35	7.91	12.65	18.32	24.51
120.0	1.19	1.71	2.24	3.03	4.74	8.17	13.18	18.85	25.30
150.0	1.32	1.58	2.11	2.77	4.35	7.78	12.52	18.32	24.64
180.0	1.19	1.71	2.24	3.03	4.88	8.43	13.71	19.24	25.83
210.0	1.32	1.71	2.37	3.16	4.88	8.43	13.57	20.16	28.07
240.0	1.19	1.58	2.11	3.03	4.48	7.51	12.39	18.85	26.49
270.0	1.19	1.71	2.24	3.03	4.61	8.17	12.92	19.37	27.28
300.0	1.19	1.58	2.24	3.03	4.48	7.51	12.12	18.71	26.23
330.0	1.19	1.71	2.24	3.16	4.61	7.91	12.92	19.24	27.02
360.0	1.19	1.58	2.11	2.90	4.22	7.12	11.99	18.19	25.30

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	32.82	40.20	48.24	56.93	64.45	70.64	77.62	82.76	84.21
30.0	30.18	37.56	45.07	53.11	60.89	66.55	73.80	79.21	82.63
60.0	31.37	38.61	46.13	54.30	61.15	67.34	74.59	79.73	83.29
90.0	30.84	38.09	45.86	53.51	61.15	66.82	74.33	79.60	82.76
120.0	31.89	39.01	46.52	54.43	61.15	66.69	74.46	79.60	83.16
150.0	31.10	38.61	46.39	54.43	61.94	67.48	74.33	79.34	82.24
180.0	32.68	40.06	48.10	56.80	64.18	69.72	75.91	80.26	82.37
210.0	35.06	42.83	50.74	59.17	65.76	72.48	79.47	83.03	84.48
240.0	33.61	41.12	49.42	57.20	63.92	70.38	78.55	83.03	85.00
270.0	34.40	42.04	50.34	58.51	65.10	72.62	80.13	83.82	85.40
300.0	33.61	41.12	49.03	57.07	63.92	70.51	78.42	83.16	85.00
330.0	34.13	41.78	49.68	57.86	64.84	71.17	78.68	82.90	84.74
360.0	32.82	40.20	48.24	56.93	64.45	70.64	77.62	82.76	84.21

Intensity data(cd)

C/γ(°)	180.0
0.0	85.00
30.0	85.27
60.0	85.80
90.0	85.66
120.0	85.80
150.0	85.27
180.0	85.00
210.0	85.27
240.0	85.80
270.0	85.66
300.0	85.80
330.0	85.27
360.0	85.00