
Client: P.Q.L., Inc.

LumCAT:

Luminaire: STR-25-X-35K-24-HH

Report No:

Ballast type:

Test No:

LampCAT:

Lamp flux(lm)

Number of Lamps: 1

Length(mm): -75

Phm Type: C

Voltage(V): 229.600

Current(A): 0.116

Power (W): 24.770

PF: 0.928

Width(mm): -75

Height(mm): 0

Photometric Results

Lumens(lm): 2291.06, Luminous Efficacy(lm/W): 92.49

Central intensity(cd): 12997.490, Maximum intensity(cd): 13011.600

Angle of maximum intensity: C=45.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.5

[C90/270]Total=23.7

Field angle(10%Imax): [C0/180]Total=37.2

[C90/270]Total=37.9

Maximum s/h(1/2): C0_180=0.41 C90_270=0.43

Maximum s/h(1/4): C0_180=0.39 C90_270=0.40

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.349%

Zonal flux distribution table

Appendix Page: 2 Total:17

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	12990.434	0.000	0	0.00%	0.00%
2.0	12716.986	49.198	49.198	2.15%	2.15%
4.0	12055.418	142.169	191.367	6.21%	8.35%
6.0	11055.128	220.872	412.239	9.64%	17.99%
8.0	9836.080	279.186	691.425	12.19%	30.18%
10.0	8165.401	308.799	1000.224	13.48%	43.66%
12.0	6290.078	302.459	1302.683	13.20%	56.86%
14.0	4414.755	264.060	1566.743	11.53%	68.39%
16.0	2881.682	207.082	1773.825	9.04%	77.42%
18.0	1623.822	144.449	1918.274	6.30%	83.73%
20.0	916.386	90.687	2008.961	3.96%	87.69%
22.0	492.982	55.385	2064.346	2.42%	90.10%
24.0	274.224	32.872	2097.218	1.43%	91.54%
26.0	173.666	20.757	2117.974	0.91%	92.45%
28.0	133.090	15.271	2133.246	0.67%	93.11%
30.0	113.684	13.119	2146.365	0.57%	93.68%
32.0	92.514	11.645	2158.01	0.51%	94.19%
34.0	78.400	10.208	2168.218	0.45%	94.64%
36.0	69.579	9.307	2177.525	0.41%	95.04%
38.0	55.466	8.252	2185.777	0.36%	95.40%
40.0	53.702	7.534	2193.311	0.33%	95.73%
42.0	48.409	7.346	2200.657	0.32%	96.05%
44.0	41.352	6.713	2207.37	0.29%	96.35%
46.0	37.824	6.139	2213.509	0.27%	96.62%
48.0	41.352	6.350	2219.859	0.28%	96.89%
50.0	32.531	6.115	2225.973	0.27%	97.16%
52.0	30.767	5.394	2231.368	0.24%	97.39%
54.0	30.767	5.389	2236.757	0.24%	97.63%
56.0	32.531	5.686	2242.442	0.25%	97.88%
58.0	29.003	5.659	2248.101	0.25%	98.13%
60.0	25.475	5.121	2253.222	0.22%	98.35%
62.0	21.946	4.548	2257.77	0.20%	98.55%
64.0	16.654	3.771	2261.542	0.16%	98.71%
66.0	16.654	3.310	2264.852	0.14%	98.86%
68.0	11.485	2.840	2267.692	0.12%	98.98%
70.0	11.608	2.364	2270.056	0.10%	99.08%
72.0	9.844	2.224	2272.28	0.10%	99.18%
74.0	11.485	2.237	2274.517	0.10%	99.28%

Equipment: GMS-1800
Temperature($^{\circ}\text{C}$): 25.0

Date: 2020/3/25 星期三
Humidity(%): 65.0%

Operator: 01
Distance(m): 11.88

Zonal flux distribution table

Appendix Page: 3 Total:17

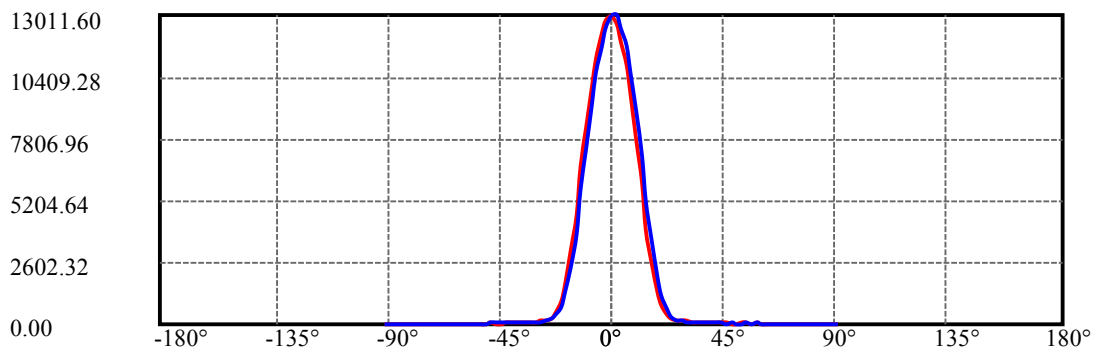
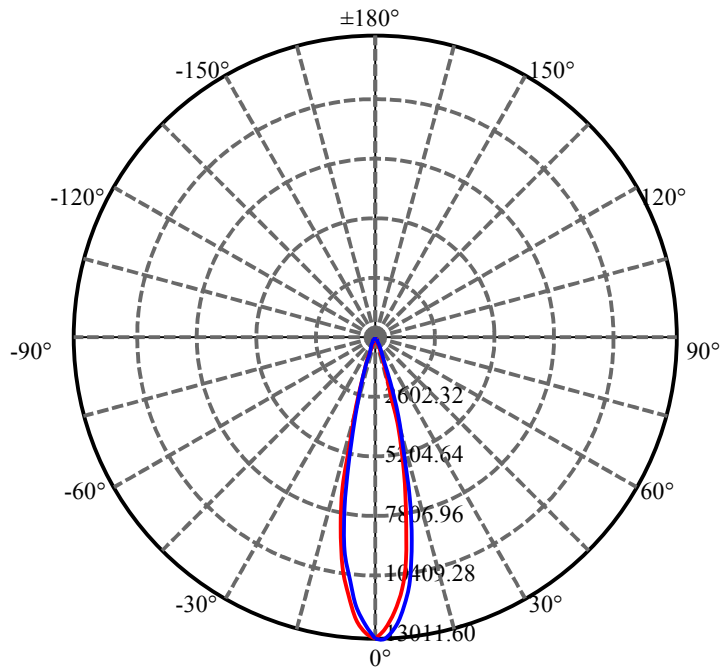
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.203	2.085	2276.602	0.09%	99.37%
78.0	8.203	1.753	2278.356	0.08%	99.45%
80.0	9.844	1.943	2280.298	0.08%	99.53%
82.0	8.203	1.955	2282.253	0.09%	99.62%
84.0	8.203	1.786	2284.039	0.08%	99.69%
86.0	8.203	1.792	2285.831	0.08%	99.77%
88.0	13.125	2.336	2288.166	0.10%	99.87%
90.0	13.249	2.892	2291.058	0.13%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	2146.36	93.68%
0-40	2193.31	95.73%
0-60	2253.22	98.35%
0-90	2288.17	99.87%
0-120	2288.17	99.87%
0-180	2291.06	100.00%
60-90	34.94	1.53%
90-120	0.00	0.00%
90-130	0.00	0.00%
90-150	0.00	0.00%
90-180	0.00	0.00%
0-16.82	1832.85	80.00%

ZONAL LUMEN SUMMARY

0-10	1000.22
10-20	1008.74
20-30	137.40
30-40	46.95
40-50	32.66
50-60	27.25
60-70	16.83
70-80	10.24
80-90	7.87
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



C0/C180: —

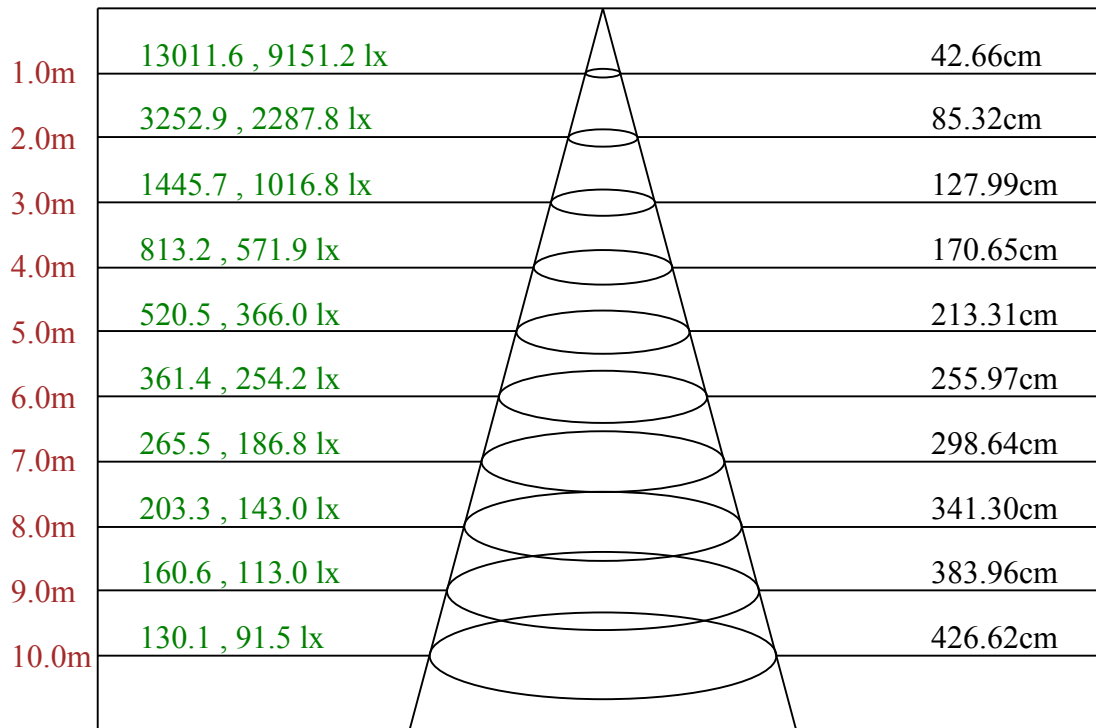
C90/C270: —

Field angle(10%Imax):C0/180Left:19.0 Right:18.2

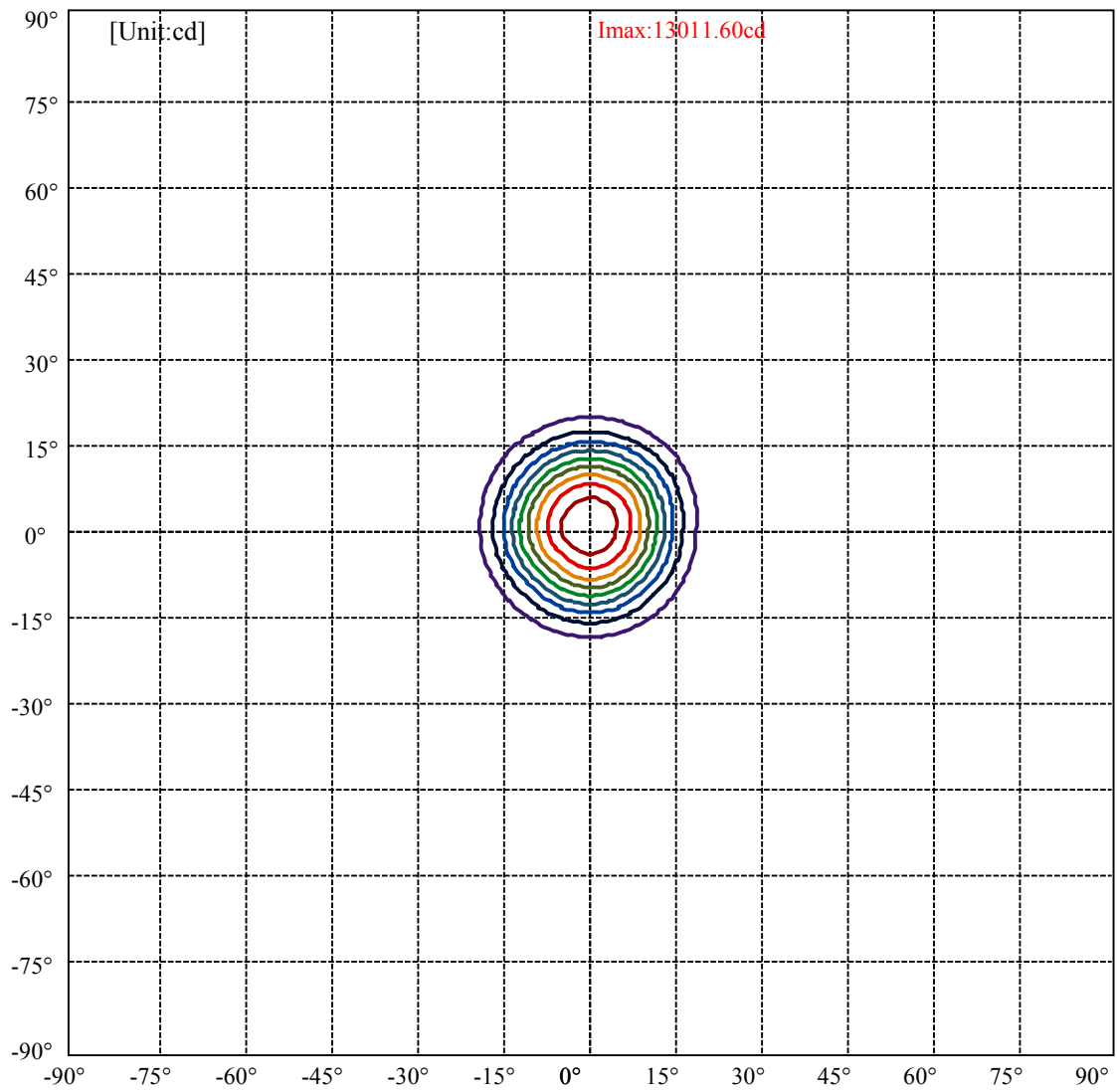
:C90/270Left:18.1 Right:19.8

Beam Angle(50%Imax):C0/180Left:12.1 Right:11.4

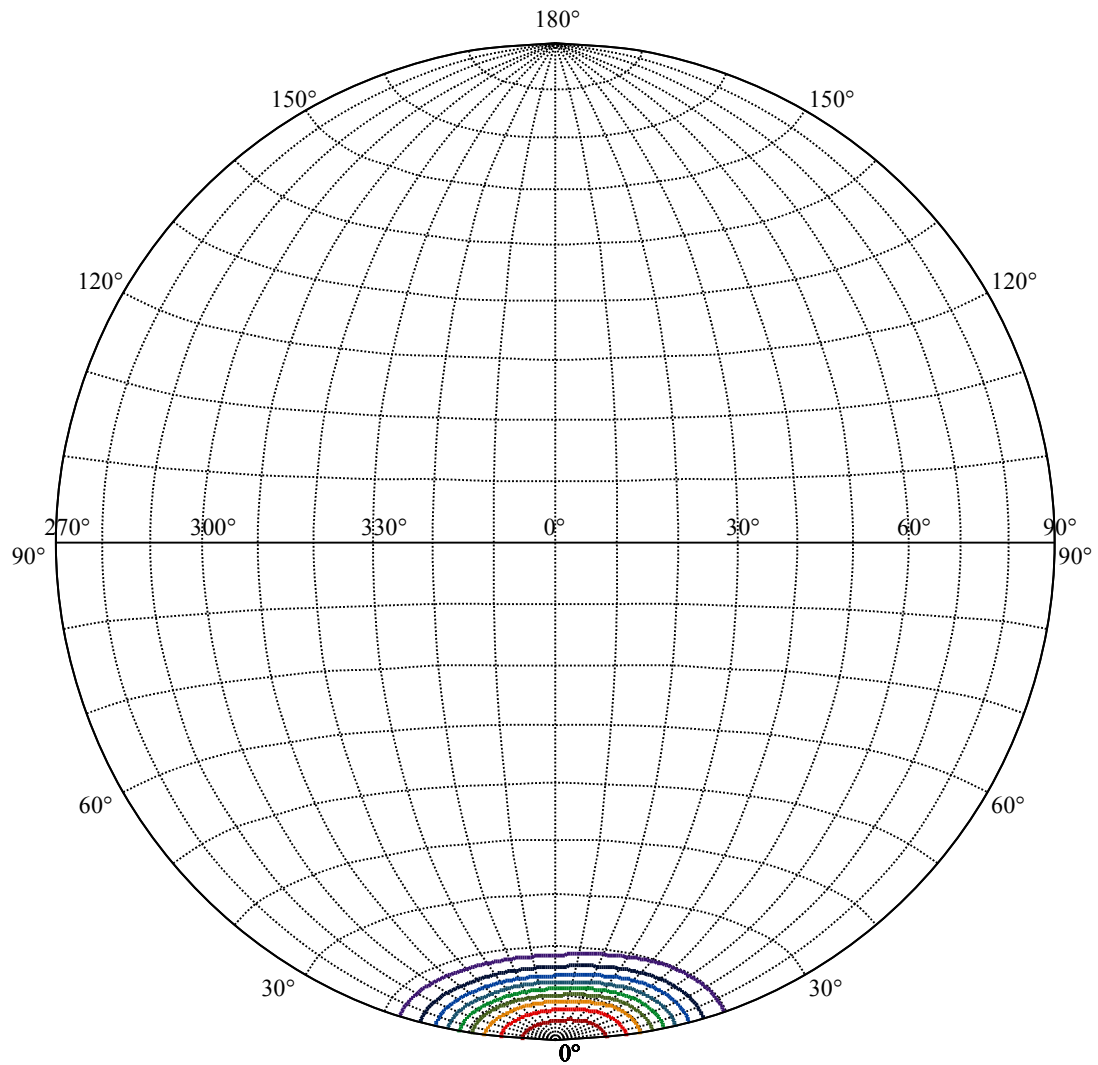
:C90/270Left:11.1 Right:12.6



Max , Ave Beam angle of C45 plane 24.08



(10%Imax) 1300.16	—
(20%Imax) 2600.32	—
(30%Imax) 3900.48	—
(40%Imax) 5200.64	—
(50%Imax) 6500.8	—
(60%Imax) 7800.96	—
(70%Imax) 9101.12	—
(80%Imax) 10401.3	—
(90%Imax) 11701.4	—



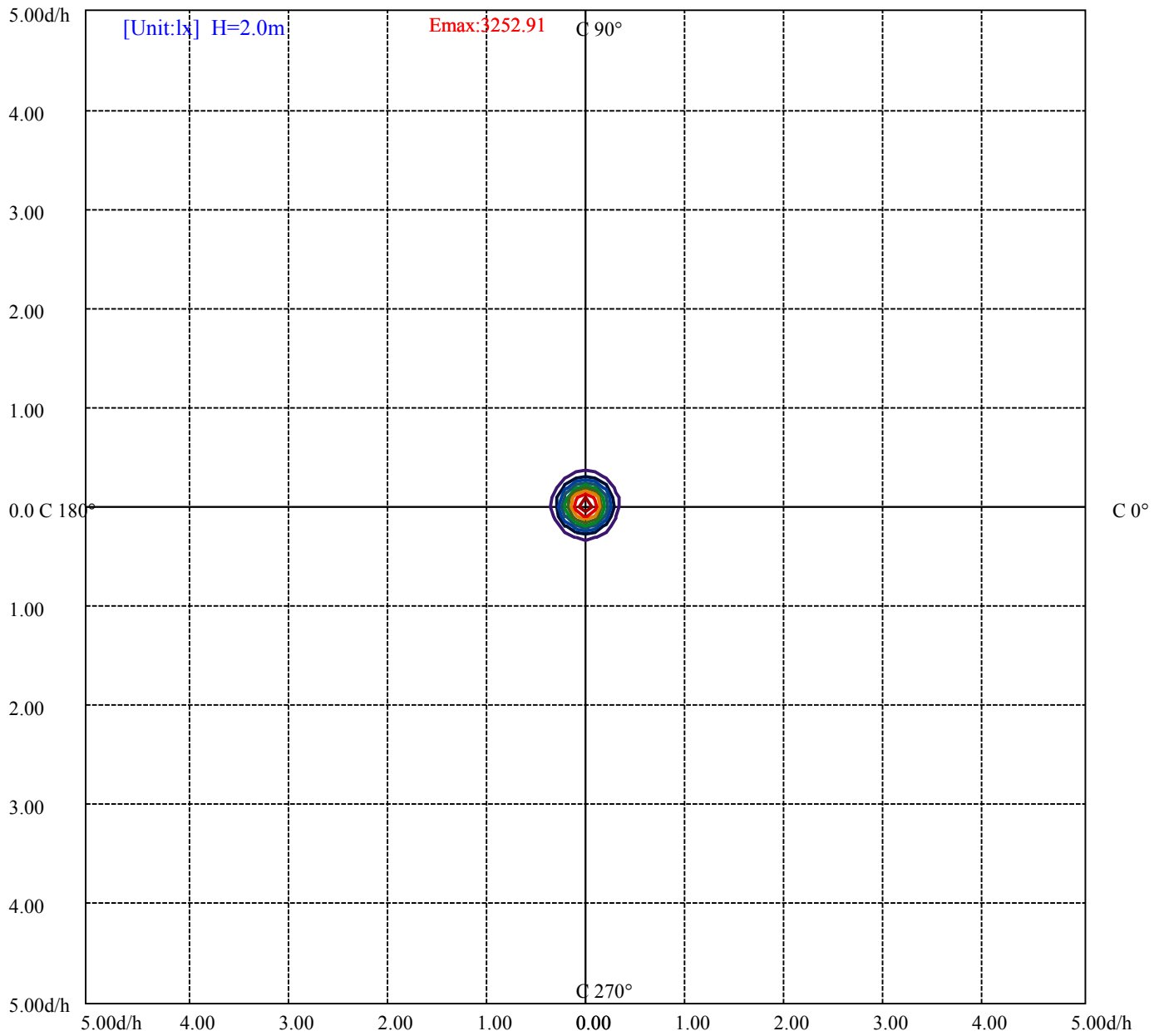
House

[Unit:cd]

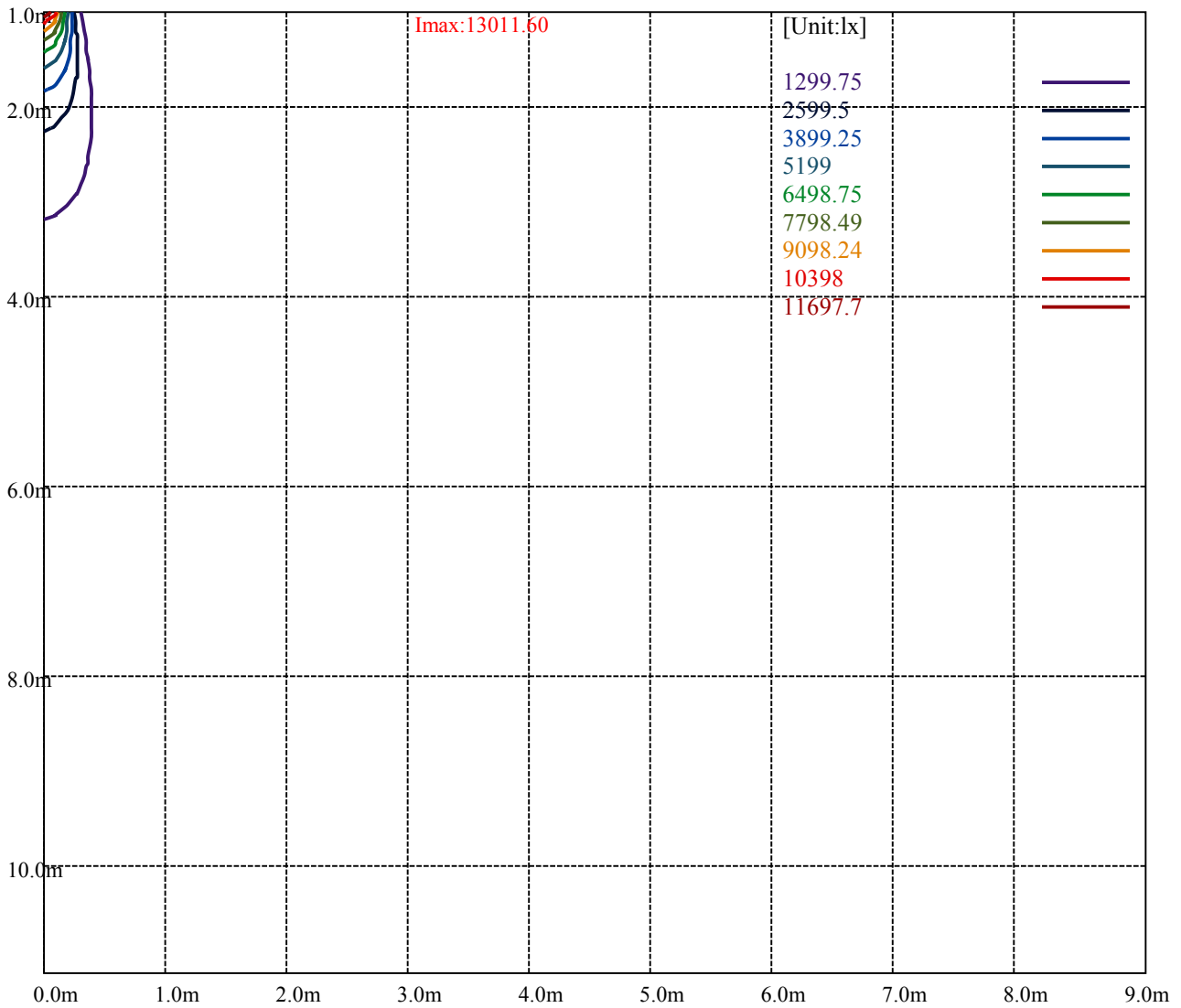
Road

Imax:13011.60

(10%Imax) 1301.16	—
(20%Imax) 2602.32	—
(30%Imax) 3903.48	—
(40%Imax) 5204.64	—
(50%Imax) 6505.8	—
(60%Imax) 7806.96	—
(70%Imax) 9108.12	—
(80%Imax) 10409.3	—
(90%Imax) 11710.4	—



(10%Emax) 325.29	—
(20%Emax) 650.58	—
(30%Emax) 975.87	—
(40%Emax) 1301.16	—
(50%Emax) 1626.45	—
(60%Emax) 1951.74	—
(70%Emax) 2277.03	—
(80%Emax) 2602.325	—
(90%Emax) 2927.6	—



Luminance Limiting Curve(luminous side)

Luminance Table

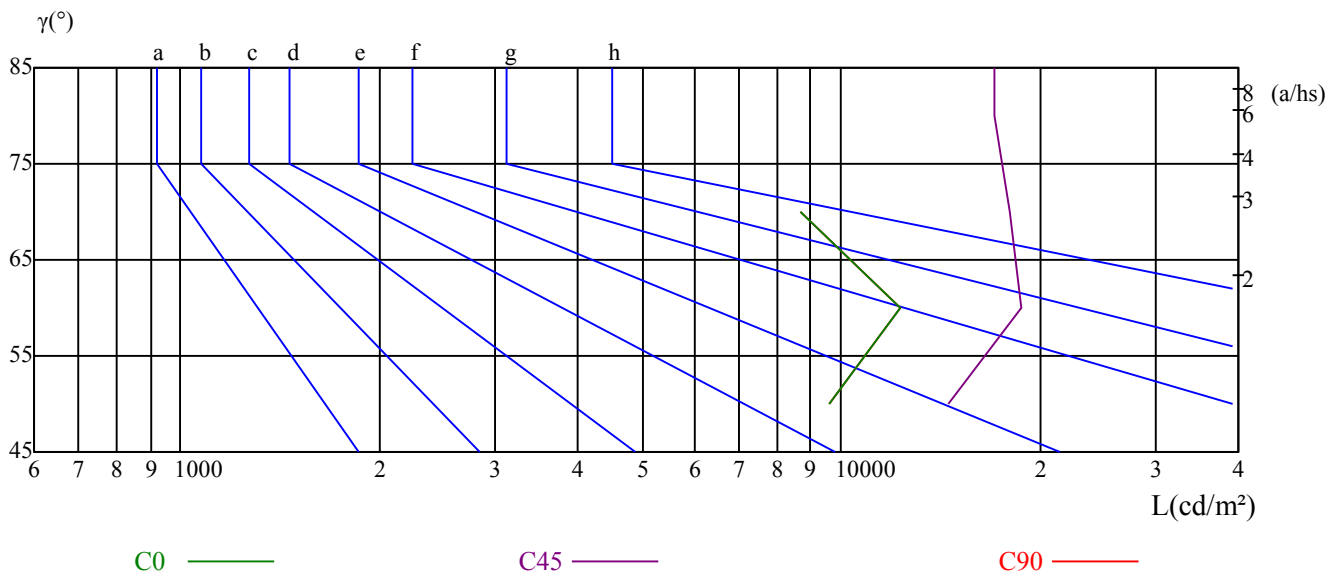
γ	45	50	55	60	65	70	75	80	85
C0	0	9592	0	12331	0	8687	0	0	0
C45	0	14562	0	18721	0	18027	0	17109	17044
C90	0	9592	0	12331	0	8687	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

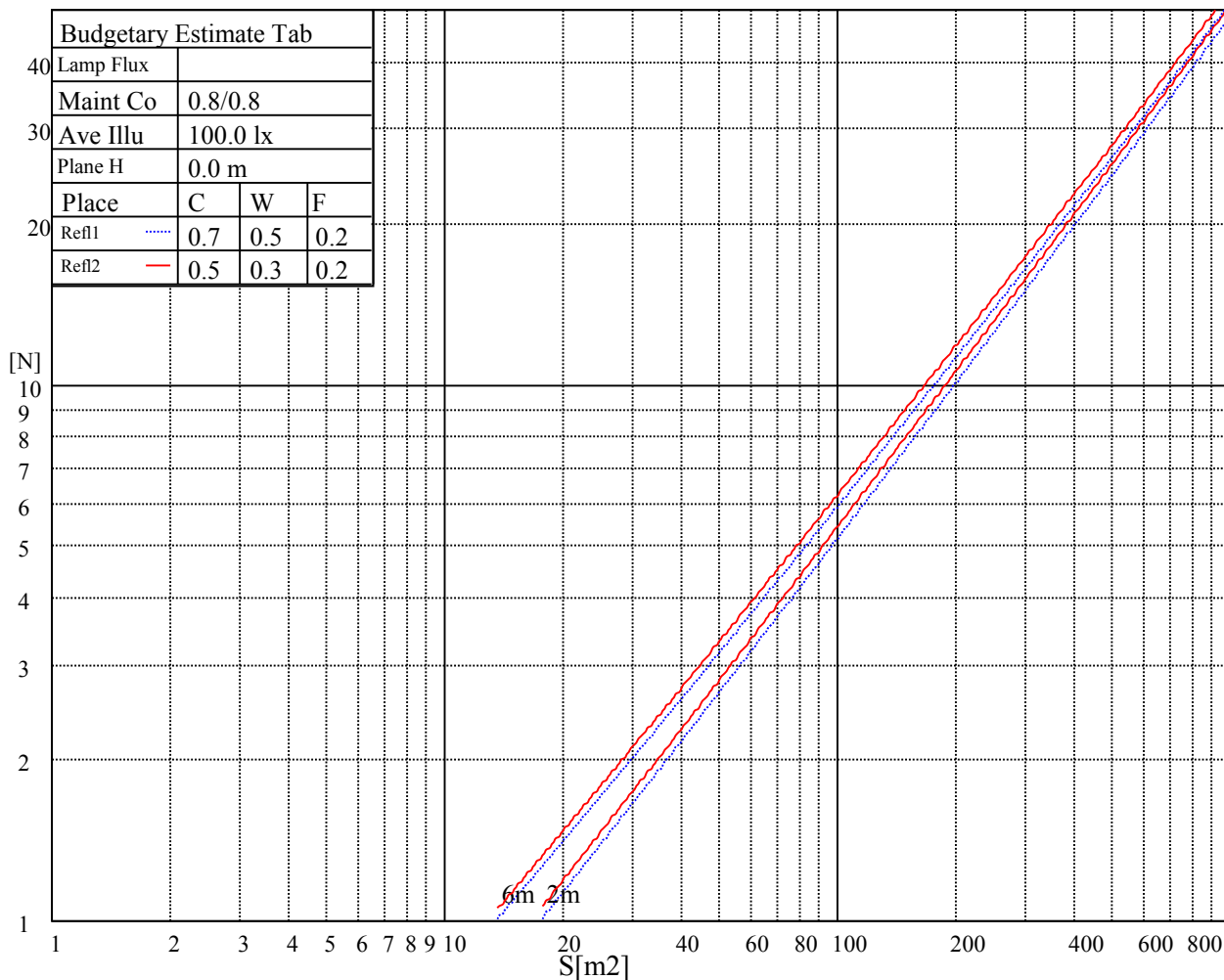
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

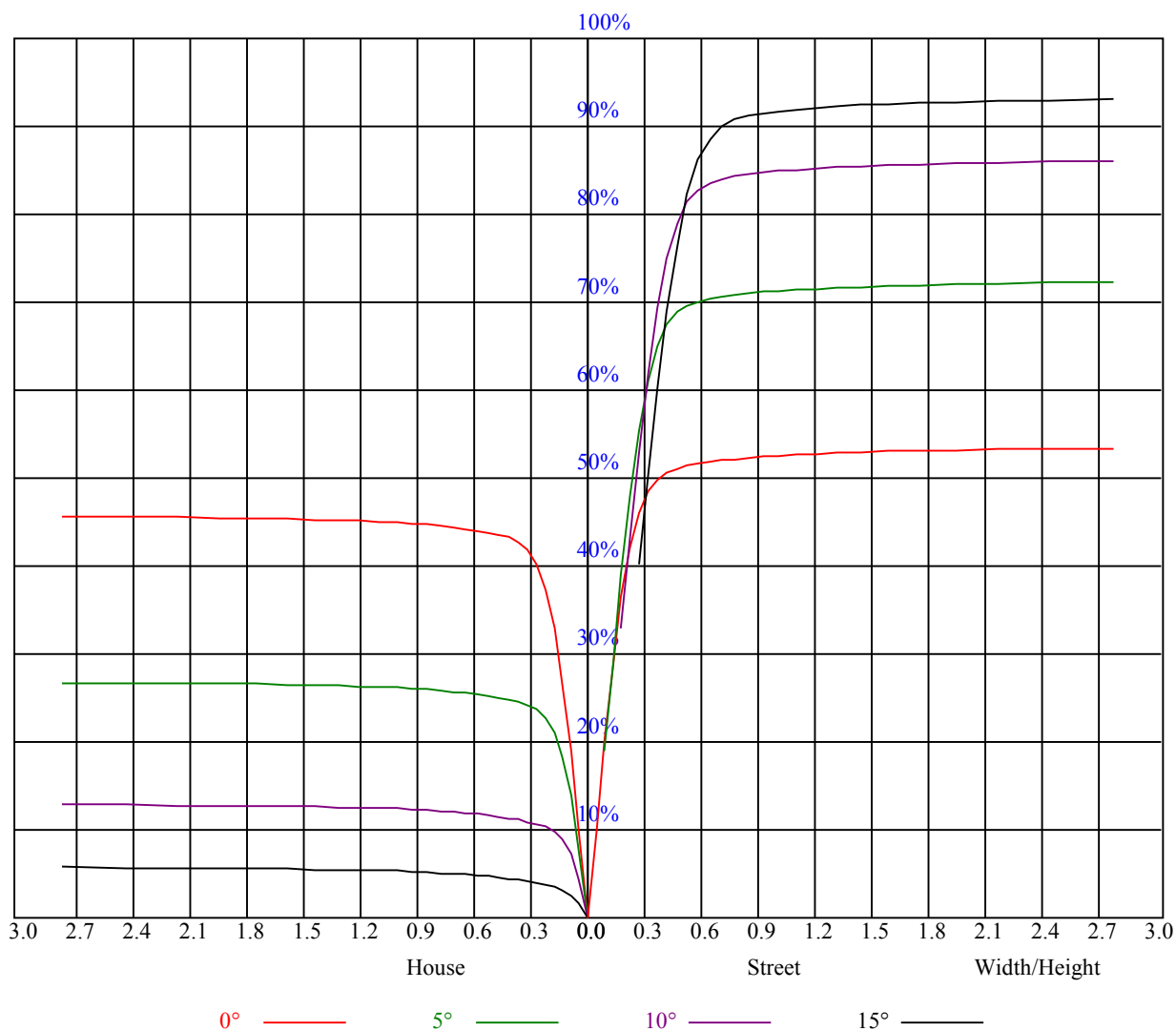


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	13.53	14.47	13.89	14.78	15.10	13.98	14.92	14.34	15.24	15.55
	3H	14.73	15.57	15.12	15.91	16.25	14.73	15.57	15.12	15.91	16.25
	4H	15.13	15.91	15.53	16.26	16.63	14.94	15.71	15.34	16.07	16.44
	6H	15.07	15.78	15.49	16.16	16.55	15.33	16.03	15.74	16.41	16.81
	8H	15.05	15.73	15.47	16.11	16.52	15.30	15.98	15.73	16.37	16.78
	12H	16.35	16.99	16.78	17.39	17.80	16.09	16.73	16.52	17.13	17.55
4H	2H	13.96	14.73	14.36	15.09	15.46	14.32	15.10	14.72	15.45	15.82
	3H	15.44	16.10	15.87	16.49	16.91	15.34	15.99	15.76	16.39	16.80
	4H	15.96	16.53	16.40	16.95	17.40	15.74	16.30	16.17	16.72	17.17
	6H	15.96	16.46	16.44	16.91	17.37	16.29	16.79	16.77	17.24	17.70
	8H	16.04	16.50	16.53	16.96	17.43	16.36	16.82	16.84	17.28	17.75
	12H	17.59	18.02	18.08	18.47	18.99	17.30	17.72	17.79	18.17	18.69
8H	4H	16.28	16.74	16.76	17.20	17.67	16.12	16.58	16.61	17.04	17.52
	6H	16.62	17.00	17.13	17.48	17.99	16.97	17.34	17.47	17.82	18.34
	8H	16.93	17.25	17.47	17.77	18.27	17.25	17.56	17.78	18.09	18.59
	12H	18.69	18.93	19.23	19.44	19.97	18.29	18.53	18.83	19.04	19.57
12H	4H	16.35	16.77	16.84	17.22	17.75	16.18	16.60	16.67	17.06	17.58
	6H	16.94	17.25	17.47	17.78	18.27	17.24	17.56	17.78	18.08	18.58
	8H	17.26	17.50	17.81	18.02	18.55	17.54	17.78	18.08	18.29	18.82
Variation with the observer position at spacings:											
S = 1.0H	0.8/-1.0					0.7/-1.2					
S = 1.5H	0.9/-1.0					0.7/-1.8					
S = 2.0H	1.3/-1.8					1.9/-2.0					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	1.7					1.6					

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



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	1.02	1.02	1.02	1.00
1	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.96
2	1.08	1.05	1.02	1.06	1.03	1.01	1.03	1.01	0.99	1.00	0.98	0.97	0.97	0.96	0.95	0.93
3	1.03	1.00	0.97	1.02	0.99	0.96	1.00	0.97	0.95	0.97	0.95	0.93	0.95	0.93	0.92	0.91
4	1.00	0.96	0.93	0.99	0.95	0.92	0.97	0.94	0.91	0.95	0.92	0.90	0.93	0.91	0.89	0.88
5	0.96	0.92	0.90	0.96	0.92	0.89	0.94	0.91	0.88	0.93	0.90	0.88	0.91	0.89	0.87	0.86
6	0.94	0.90	0.87	0.93	0.89	0.86	0.92	0.88	0.86	0.90	0.88	0.85	0.89	0.87	0.85	0.84
7	0.91	0.87	0.84	0.90	0.87	0.84	0.89	0.86	0.84	0.88	0.85	0.83	0.87	0.85	0.83	0.82
8	0.89	0.85	0.82	0.88	0.85	0.82	0.87	0.84	0.82	0.86	0.84	0.81	0.86	0.83	0.81	0.80
9	0.87	0.83	0.80	0.86	0.83	0.80	0.85	0.82	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.79
10	0.85	0.81	0.78	0.84	0.81	0.78	0.84	0.80	0.78	0.83	0.80	0.78	0.82	0.80	0.78	0.77



Intensity data(cd)

Appendix Page: 16 Total:17

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	12997.49	12644.65	11910.76	10922.81	9723.17	7775.52	5983.11	3979.00	2553.54
45.0	13011.60	12997.49	12517.63	11529.69	10414.73	9003.39	6971.05	5136.30	3569.71
90.0	12997.49	12983.38	12475.29	11699.05	10598.21	8961.05	7112.19	5206.87	3527.37
135.0	12955.15	12870.47	12404.73	11416.79	10315.94	8932.82	6928.71	5079.85	3301.56
180.0	12997.49	12785.79	12193.02	11190.97	10047.78	8354.17	6618.22	4614.11	3118.08
225.0	13011.60	12489.41	11628.49	10428.84	9130.41	7338.00	5644.39	3724.96	2384.18
270.0	12997.49	12461.18	11614.37	10598.21	9271.54	7450.91	5644.39	3837.87	2412.41
315.0	12955.15	12503.52	11699.05	10654.66	9186.86	7507.36	5418.57	3739.07	2186.60
360.0	12997.49	12644.65	11910.76	10922.81	9723.17	7775.52	5983.11	3979.00	2553.54
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	1368.02	789.36	408.30	238.94	168.37	140.15	126.03	97.81	69.58
45.0	2045.46	1170.43	620.00	351.85	196.60	140.15	126.03	97.81	83.69
90.0	2059.57	1198.65	634.12	337.73	196.60	140.15	111.92	83.69	83.69
135.0	1946.67	1099.86	591.78	337.73	210.71	154.26	111.92	111.92	83.69
180.0	1664.40	930.50	507.10	267.17	168.37	140.15	111.92	83.69	69.58
225.0	1311.56	747.02	422.42	224.83	140.15	111.92	97.81	83.69	83.69
270.0	1339.79	761.14	394.19	210.71	154.26	111.92	97.81	83.69	83.69
315.0	1255.11	634.12	365.96	224.83	154.26	126.03	126.03	97.81	69.58
360.0	1368.02	789.36	408.30	238.94	168.37	140.15	126.03	97.81	69.58
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	69.58	55.47	41.35	55.47	41.35	41.35	27.24	27.24	41.35
45.0	69.58	69.58	69.58	55.47	41.35	41.35	41.35	41.35	27.24
90.0	69.58	55.47	55.47	41.35	41.35	27.24	41.35	27.24	27.24
135.0	69.58	55.47	55.47	55.47	55.47	41.35	55.47	27.24	41.35
180.0	69.58	41.35	55.47	41.35	27.24	27.24	41.35	27.24	27.24
225.0	69.58	55.47	41.35	55.47	41.35	41.35	41.35	41.35	27.24
270.0	69.58	55.47	55.47	41.35	41.35	41.35	41.35	27.24	27.24
315.0	69.58	55.47	55.47	41.35	41.35	41.35	41.35	41.35	27.24
360.0	69.58	55.47	41.35	55.47	41.35	41.35	27.24	27.24	41.35
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	41.35	27.24	41.35	27.24	13.13	13.13	27.24	13.13	13.13
45.0	27.24	41.35	27.24	41.35	27.24	13.13	13.13	13.13	27.24
90.0	41.35	27.24	41.35	27.24	27.24	27.24	13.13	13.13	13.13
135.0	27.24	41.35	27.24	27.24	27.24	13.13	13.13	13.13	13.13
180.0	27.24	27.24	13.13	27.24	13.13	13.13	13.13	0.00	13.13
225.0	27.24	41.35	27.24	13.13	27.24	13.13	13.13	13.13	13.13
270.0	27.24	27.24	27.24	13.13	13.13	27.24	27.24	13.13	0.00
315.0	27.24	27.24	27.24	27.24	27.24	13.13	13.13	13.13	0.00
360.0	41.35	27.24	41.35	27.24	13.13	13.13	27.24	13.13	13.13
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	13.13	13.13	0.00	0.00	0.00	0.00	13.13	13.13	13.13
45.0	13.13	13.13	13.13	13.13	13.13	13.13	0.00	13.13	13.13
90.0	0.00	13.13	0.00	13.13	0.00	0.00	13.13	0.00	13.13
135.0	0.00	13.13	13.13	13.13	13.13	0.00	0.00	0.00	13.13
180.0	13.13	13.13	13.13	0.00	13.13	13.13	13.13	0.00	13.13
225.0	13.13	13.13	13.13	0.00	13.13	13.13	13.13	13.13	13.13
270.0	13.13	0.00	13.13	13.13	13.13	13.13	13.13	13.13	13.13
315.0	13.13	13.13	0.00	13.13	13.13	13.13	0.00	13.13	13.13
360.0	13.13	13.13	0.00	0.00	0.00	0.00	13.13	13.13	13.13

Intensity data(cd)

Appendix Page: 17 Total:17

C/ γ ($^{\circ}$)	90.0
0.0	27.24
45.0	13.13
90.0	13.13
135.0	0.00
180.0	13.13
225.0	13.13
270.0	13.13
315.0	13.13
360.0	27.24