
乐达凯

Client:

LumCAT: LCD-RDD-DP-15-CCT-UNV-WT

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.249

Lamp flux(lm): 2239.7

Power (W): 29.680

Number of Lamps: 1

PF: 0.992

Length(mm): 190

Width(mm): 70

Phm Type: C

Height(mm): 40

Photometric Results

Lumens(lm): 2239.66, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 75.46

Central intensity(cd): 498.596, Maximum intensity(cd): 539.679

Angle of maximum intensity: C=30.0 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=134.0

[C90/270]Total=128.0

Field angle(10%Imax): [C0/180]Total=195.4

[C90/270]Total=177.4

Maximum s/h(1/2): C0_180=1.57 C90_270=1.57

Maximum s/h(1/4): C0_180=1.64 C90_270=1.64

Up flux rate of lamp(%): 7.09%

Down flux rate of lamp(%): 92.91%

Up flux rate of LUM(%): 7.09%

Down flux rate of LUM(%): 92.91%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 66.769%

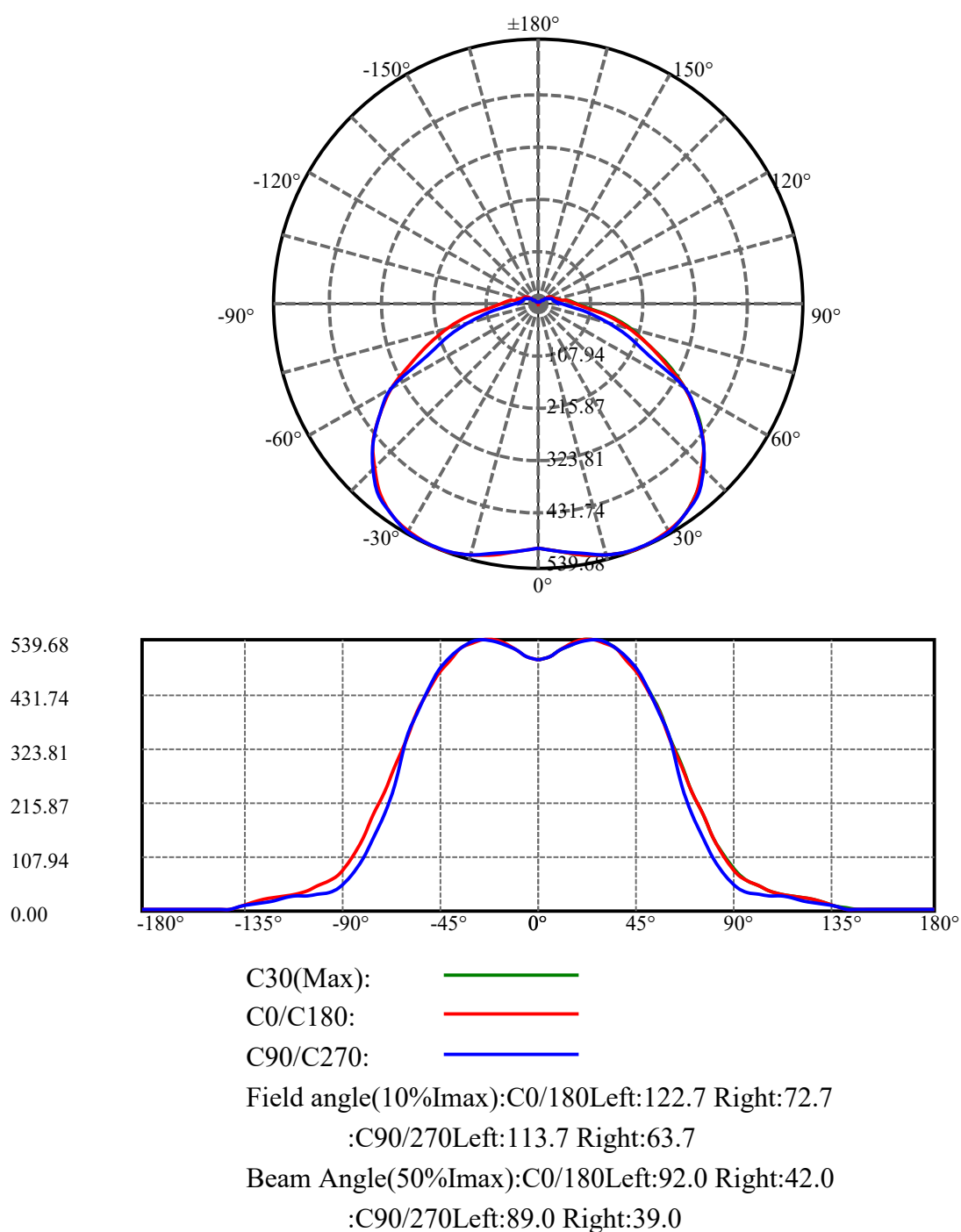
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	498.596	0.000	0	0.00%	0.00%
5.0	505.734	12.006	12.006	0.54%	0.54%
10.0	519.053	36.660	48.666	1.64%	2.17%
15.0	529.860	62.221	110.887	2.78%	4.95%
20.0	537.038	87.927	198.815	3.93%	8.88%
25.0	538.743	112.830	311.644	5.04%	13.91%
30.0	534.268	135.790	447.434	6.06%	19.98%
35.0	523.841	155.814	603.248	6.96%	26.93%
40.0	504.592	171.586	774.835	7.66%	34.60%
45.0	476.673	181.689	956.524	8.11%	42.71%
50.0	441.542	185.539	1142.063	8.28%	50.99%
55.0	396.752	182.273	1324.336	8.14%	59.13%
60.0	343.353	171.073	1495.409	7.64%	66.77%
65.0	283.506	152.391	1647.8	6.80%	73.57%
70.0	229.292	129.844	1777.644	5.80%	79.37%
75.0	181.115	107.274	1884.917	4.79%	84.16%
80.0	137.978	85.381	1970.298	3.81%	87.97%
85.0	98.376	64.223	2034.521	2.87%	90.84%
90.0	70.706	46.296	2080.817	2.07%	92.91%
95.0	55.539	34.567	2115.384	1.54%	94.45%
100.0	44.233	27.110	2142.494	1.21%	95.66%
105.0	35.984	21.464	2163.958	0.96%	96.62%
110.0	32.134	17.805	2181.763	0.79%	97.41%
115.0	29.168	15.522	2197.285	0.69%	98.11%
120.0	23.785	12.873	2210.158	0.57%	98.68%
125.0	19.931	10.105	2220.263	0.45%	99.13%
130.0	15.120	7.621	2227.884	0.34%	99.47%
135.0	9.262	4.927	2232.811	0.22%	99.69%
140.0	4.670	2.580	2235.39	0.12%	99.81%
145.0	2.316	1.166	2236.556	0.05%	99.86%
150.0	2.316	0.682	2237.238	0.03%	99.89%
155.0	2.780	0.645	2237.883	0.03%	99.92%
160.0	2.780	0.583	2238.466	0.03%	99.95%
165.0	3.243	0.496	2238.962	0.02%	99.97%
170.0	3.243	0.385	2239.347	0.02%	99.99%
175.0	3.706	0.249	2239.596	0.01%	100.00%
180.0	1.853	0.066	2239.662	0.00%	100.00%

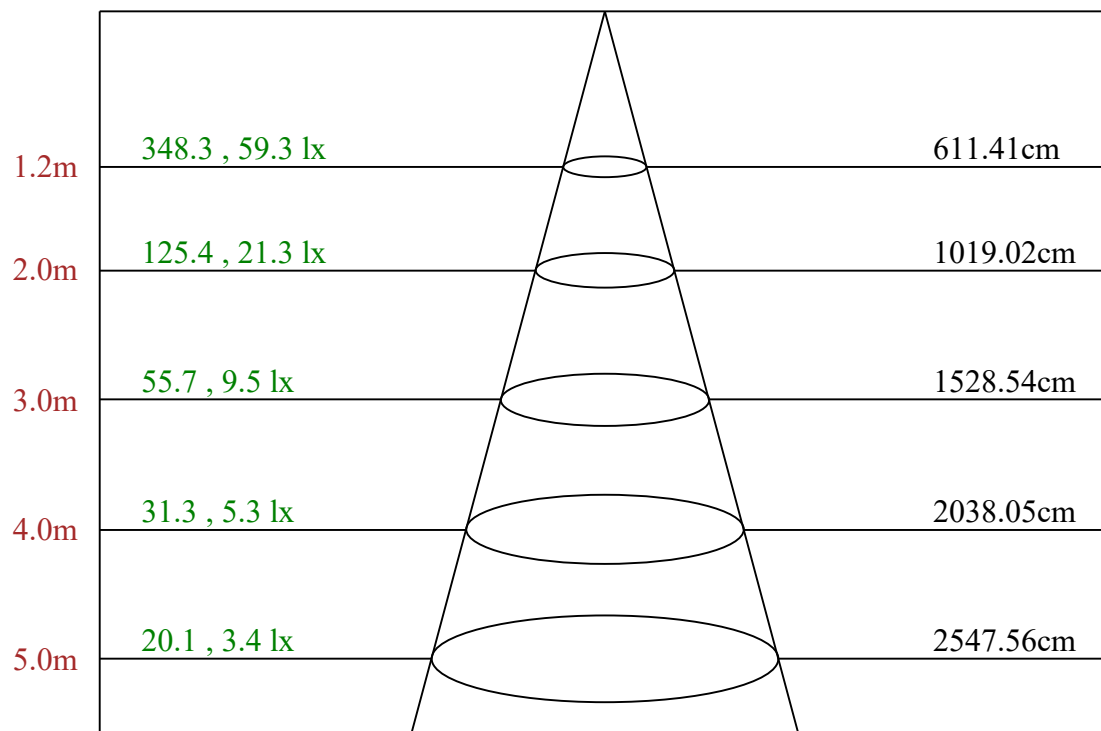
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	447.43	19.98%	19.98%
0-40	774.83	34.60%	34.60%
0-60	1495.41	66.77%	66.77%
0-90	2080.82	92.91%	92.91%
0-120	2210.16	98.68%	98.68%
0-180	2239.66	100.00%	100.00%
60-90	585.41	26.14%	26.14%
90-120	129.34	5.78%	5.78%
90-130	147.07	6.57%	6.57%
90-150	156.42	6.98%	6.98%
90-180	158.78	7.09%	7.09%
0-70.66	1791.73	80.00%	80.00%

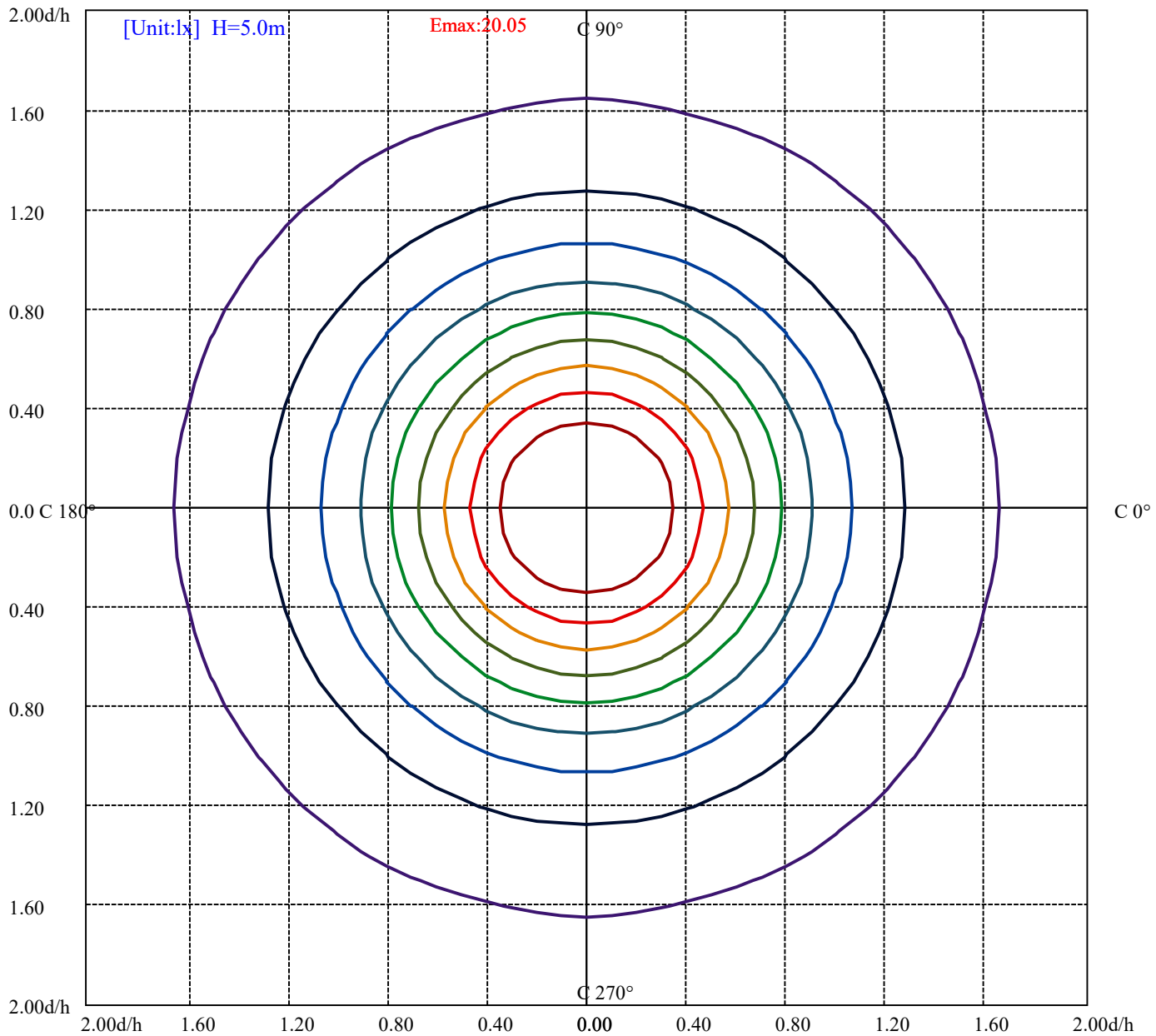
ZONAL LUMEN SUMMARY

0-10	48.67
10-20	150.15
20-30	248.62
30-40	327.40
40-50	367.23
50-60	353.35
60-70	282.23
70-80	192.65
80-90	110.52
90-100	61.68
100-110	39.27
110-120	28.40
120-130	17.73
130-140	7.51
140-150	1.85
150-160	1.23
160-170	0.88
170-180	0.25

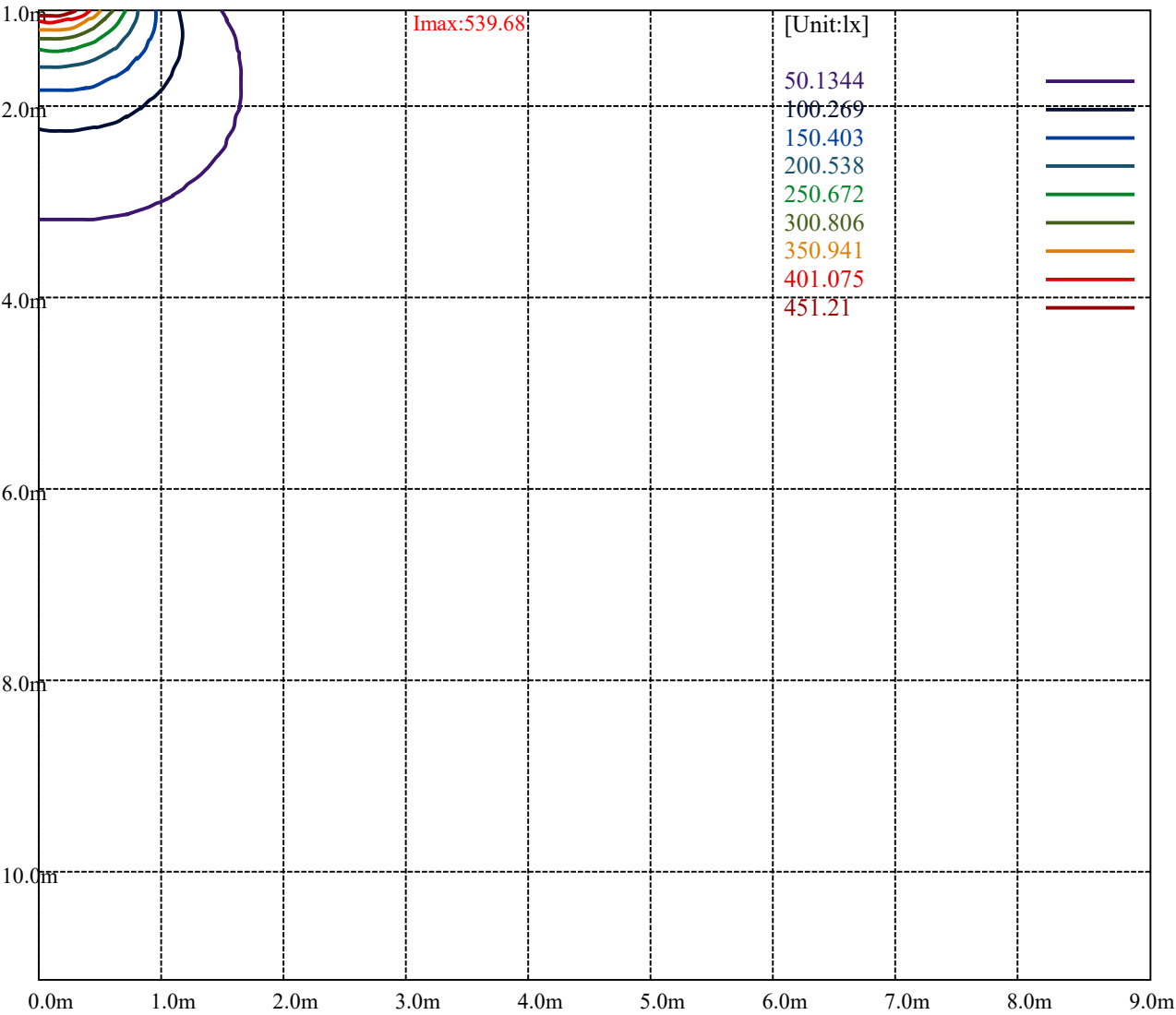




Max , Ave Beam angle of C30 plane 137.14



(10%Emax) 2.005376	
(20%Emax) 4.01076	
(30%Emax) 6.01612	
(40%Emax) 8.02152	
(50%Emax) 10.02688	
(60%Emax) 12.03224	
(70%Emax) 14.03764	
(80%Emax) 16.043	
(90%Emax) 18.0484	



Luminance Table

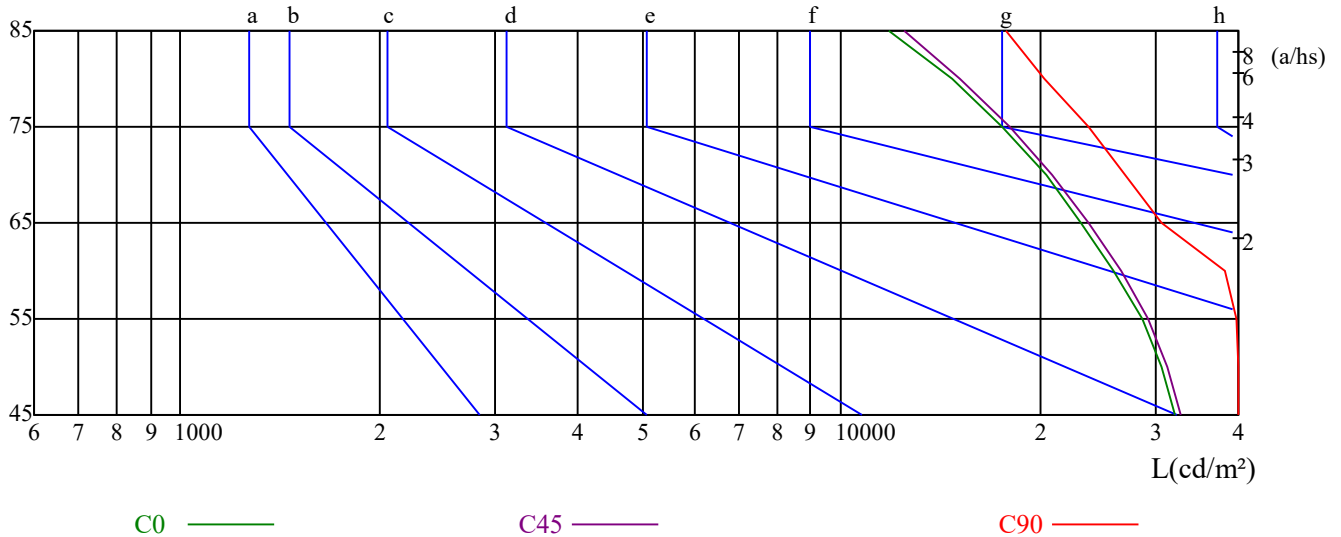
γ	45	50	55	60	65	70	75	80	85
C0	32029	30541	28566	25954	23160	20422	17584	14719	11832
C45	32650	31175	29151	26574	23661	20827	17982	15181	12456
C90	41989	41288	39644	38192	30614	26904	23664	20308	17768

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
51541	44436	51716	55083	42258	55089	89116	60525	91177

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

 $\gamma(^{\circ})$ 

RHOC	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	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.01	1.01	1.01	0.96	0.96	0.96	0.93
1	1.00	0.95	0.90	0.97	0.92	0.88	0.91	0.87	0.84	0.86	0.83	0.80	0.81	0.79	0.77	0.74
2	0.86	0.78	0.72	0.83	0.76	0.70	0.78	0.73	0.68	0.74	0.69	0.65	0.70	0.66	0.62	0.60
3	0.74	0.66	0.59	0.72	0.64	0.58	0.68	0.61	0.56	0.64	0.59	0.54	0.61	0.56	0.52	0.49
4	0.65	0.56	0.49	0.64	0.55	0.48	0.60	0.53	0.47	0.57	0.50	0.45	0.54	0.48	0.44	0.41
5	0.58	0.48	0.41	0.56	0.47	0.41	0.53	0.46	0.40	0.51	0.44	0.39	0.48	0.42	0.38	0.35
6	0.52	0.42	0.36	0.50	0.42	0.35	0.48	0.40	0.34	0.45	0.39	0.33	0.43	0.37	0.33	0.30
7	0.47	0.38	0.31	0.46	0.37	0.31	0.43	0.36	0.30	0.41	0.34	0.29	0.39	0.33	0.29	0.26
8	0.42	0.34	0.27	0.41	0.33	0.27	0.39	0.32	0.27	0.38	0.31	0.26	0.36	0.30	0.25	0.23
9	0.39	0.30	0.24	0.38	0.30	0.24	0.36	0.29	0.24	0.34	0.28	0.23	0.33	0.27	0.23	0.21
10	0.36	0.27	0.22	0.35	0.27	0.22	0.33	0.26	0.21	0.32	0.25	0.21	0.30	0.25	0.20	0.19

乐达凯 LCD-RDD-DP-15-CCT-UNV-WT

Intensity data(cd)										Appendix Page: 10 Total:12	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	498.60	509.61	523.39	534.41	541.75	542.67	537.16	527.06	505.02		
15.0	498.60	509.61	525.22	537.16	546.34	547.26	543.59	535.33	512.37		
30.0	498.60	510.58	527.17	540.07	550.21	553.89	549.29	540.07	520.72		
45.0	498.60	509.64	526.19	539.99	549.19	552.87	550.11	542.75	524.35		
60.0	498.60	506.00	524.50	535.60	547.62	553.17	552.25	545.77	528.20		
75.0	498.60	507.00	523.81	537.81	547.15	553.68	551.82	544.35	527.54		
90.0	498.60	507.02	521.05	535.08	545.37	550.98	549.11	540.69	523.85		
105.0	498.60	504.22	521.09	533.27	542.65	546.39	545.46	536.08	519.21		
120.0	498.60	502.35	519.21	530.46	541.71	544.52	543.58	533.27	515.47		
135.0	498.60	501.39	515.34	528.36	538.60	541.39	537.67	531.15	513.48		
150.0	498.60	503.22	514.32	527.27	538.37	538.37	535.60	527.27	509.70		
165.0	498.60	499.51	510.51	524.26	530.68	532.51	530.68	520.59	503.18		
180.0	498.60	504.11	518.80	528.90	534.41	535.33	528.90	518.80	496.76		
195.0	498.60	503.19	515.12	527.06	531.65	533.49	527.06	516.04	494.92		
210.0	498.60	504.13	515.19	524.40	531.77	530.85	527.17	516.11	496.75		
225.0	498.60	503.20	512.40	521.59	528.95	528.03	522.51	512.40	491.24		
240.0	498.60	502.30	513.40	521.72	526.35	528.20	521.72	510.62	488.42		
255.0	498.60	505.13	515.40	523.81	528.47	528.47	523.81	510.73	490.19		
270.0	498.60	504.21	515.43	523.85	527.60	527.60	521.05	507.95	487.37		
285.0	498.60	507.03	516.40	524.84	529.52	528.59	522.03	508.91	505.16		
300.0	498.60	505.16	518.28	525.78	525.78	529.52	522.96	508.91	486.41		
315.0	498.60	507.90	519.99	528.36	532.08	532.08	524.64	510.69	488.36		
330.0	498.60	511.55	522.65	531.90	536.52	535.60	527.27	512.47	490.27		
345.0	498.60	509.59	522.43	530.68	536.17	534.34	527.01	514.18	491.26		
360.0	498.60	509.61	523.39	534.41	541.75	542.67	537.16	527.06	505.02		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	477.48	442.58	399.43	346.17	292.91	240.57	190.07	144.16	104.68		
15.0	486.66	451.77	405.86	352.60	295.67	243.33	192.83	146.00	104.68		
30.0	493.99	457.12	412.89	360.35	300.45	244.23	193.54	148.38	107.83		
45.0	495.84	461.80	415.80	359.69	300.81	245.62	195.94	148.11	107.63		
60.0	502.30	467.14	423.67	369.09	308.04	250.69	198.88	154.48	111.93		
75.0	501.40	466.85	420.17	365.08	295.98	237.16	184.87	139.12	98.97		
90.0	495.79	461.18	417.21	343.31	268.47	207.67	157.16	113.19	77.64		
105.0	492.04	458.30	414.25	347.71	279.29	214.62	165.89	123.71	86.22		
120.0	491.10	457.36	415.18	363.64	305.53	247.42	195.88	151.83	111.53		
135.0	488.36	454.88	413.95	363.71	306.97	254.88	204.65	159.07	117.21		
150.0	484.72	452.34	414.42	363.54	308.96	253.46	206.28	157.26	117.48		
165.0	478.43	446.35	405.11	356.53	302.46	252.05	202.55	156.73	113.65		
180.0	469.21	435.24	392.08	340.66	286.49	236.90	189.15	144.16	101.92		
195.0	469.21	432.48	391.16	337.91	286.49	235.07	187.32	142.32	101.00		
210.0	469.10	433.16	388.92	337.31	283.86	232.25	188.01	142.85	102.30		
225.0	464.56	431.44	386.37	335.77	282.42	230.90	183.98	140.75	102.11		
240.0	461.59	425.52	379.27	326.54	276.59	222.01	179.46	135.98	99.90		
255.0	461.25	426.70	378.15	321.19	260.50	207.28	160.60	150.33	84.97		
270.0	460.24	421.89	369.50	349.86	231.06	178.67	133.77	92.61	62.68		
285.0	458.30	420.81	370.20	299.91	241.80	186.50	143.39	103.09	71.23		
300.0	458.30	422.68	373.95	324.27	268.98	215.56	168.70	125.59	89.97		
315.0	458.60	420.46	375.81	324.65	272.55	223.25	173.95	132.09	95.81		
330.0	460.67	424.59	380.19	325.61	275.66	222.93	174.83	131.36	95.28		
345.0	461.02	424.36	378.53	325.37	272.21	219.97	175.06	128.32	94.40		
360.0	477.48	442.58	399.43	346.17	292.91	240.57	190.07	144.16	104.68		

乐达凯 LCD-RDD-DP-15-CCT-UNV-WT

Intensity data(cd)										Appendix Page: 11 Total:12	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	75.29	61.52	49.58	40.40	35.81	32.14	28.46	24.79	17.45		
15.0	75.29	61.52	49.58	40.40	35.81	32.14	28.46	24.79	18.36		
30.0	78.34	61.75	49.77	40.55	35.94	32.26	28.57	24.88	18.43		
45.0	79.11	62.55	49.68	40.48	34.96	31.28	26.68	21.16	17.48		
60.0	81.40	61.98	46.25	35.15	30.53	27.75	21.28	17.58	13.88		
75.0	69.09	52.29	38.28	29.88	27.08	27.08	18.67	16.81	14.01		
90.0	52.39	39.29	32.74	30.87	29.00	29.00	19.64	16.84	14.03		
105.0	59.04	44.05	34.68	29.05	29.05	29.05	18.74	16.87	14.06		
120.0	78.73	57.17	42.17	31.87	28.12	27.18	19.68	15.93	15.00		
135.0	84.65	65.12	49.30	38.14	31.63	29.77	23.26	19.53	15.81		
150.0	85.10	65.68	51.80	42.55	35.15	31.45	28.68	24.98	19.43		
165.0	81.57	63.24	50.41	41.24	33.91	31.16	27.50	24.75	18.33		
180.0	72.54	58.77	47.75	39.48	33.97	31.22	28.46	23.87	17.45		
195.0	73.46	57.85	47.75	39.48	34.89	31.22	27.55	24.79	16.53		
210.0	74.65	59.91	47.92	38.71	34.10	31.34	28.57	23.04	16.59		
225.0	75.43	61.63	48.76	39.56	34.96	31.28	29.44	21.16	14.72		
240.0	72.15	55.50	51.80	33.30	30.53	25.90	20.35	15.73	12.03		
255.0	58.82	45.75	35.48	28.94	28.01	25.21	17.74	14.94	12.14		
270.0	43.97	37.42	31.81	30.87	29.00	27.13	17.77	14.97	12.16		
285.0	49.67	40.30	31.87	29.99	29.05	26.24	17.81	15.00	12.18		
300.0	63.73	48.73	37.49	29.99	28.12	23.43	17.81	15.00	12.18		
315.0	70.70	55.81	43.72	35.35	31.63	26.05	21.39	17.67	12.09		
330.0	72.15	58.28	47.18	38.85	35.15	30.53	26.83	21.28	14.80		
345.0	69.66	56.83	45.83	38.49	34.83	30.25	27.50	22.00	13.75		
360.0	75.29	61.52	49.58	40.40	35.81	32.14	28.46	24.79	17.45		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	9.18	4.59	1.84	2.75	3.67	3.67	3.67	3.67	3.67		
15.0	10.10	4.59	2.75	2.75	3.67	3.67	3.67	3.67	3.67		
30.0	11.98	5.53	2.76	2.76	3.69	3.69	3.69	3.69	3.69		
45.0	11.04	5.52	2.76	2.76	3.68	3.68	3.68	3.68	3.68		
60.0	9.25	5.55	2.78	2.78	3.70	3.70	3.70	3.70	3.70		
75.0	10.27	5.60	2.80	2.80	3.73	3.73	3.73	3.73	3.73		
90.0	10.29	5.61	2.81	2.81	3.74	3.74	3.74	3.74	3.74		
105.0	10.31	5.62	2.81	2.81	3.75	3.75	3.75	3.75	3.75		
120.0	10.31	5.62	2.81	2.81	3.75	3.75	3.75	3.75	3.75		
135.0	10.23	5.58	2.79	2.79	3.72	3.72	3.72	3.72	3.72		
150.0	12.95	6.48	2.78	2.78	3.70	3.70	3.70	3.70	3.70		
165.0	11.91	6.42	3.67	2.75	3.67	3.67	3.67	3.67	3.67		
180.0	8.26	3.67	1.84	1.84	1.84	1.84	2.75	2.75	3.67		
195.0	8.26	3.67	1.84	1.84	1.84	1.84	2.75	2.75	3.67		
210.0	9.22	8.29	1.84	1.84	1.84	1.84	2.76	2.76	3.69		
225.0	8.28	4.60	1.84	1.84	1.84	1.84	2.76	2.76	3.68		
240.0	8.33	3.70	1.85	1.85	1.85	1.85	2.78	2.78	3.70		
255.0	8.40	3.73	1.87	1.87	1.87	1.87	2.80	2.80	3.73		
270.0	7.48	3.74	1.87	1.87	1.87	1.87	2.81	2.81	3.74		
285.0	7.50	2.81	1.87	1.87	1.87	1.87	2.81	2.81	3.75		
300.0	6.56	2.81	1.87	1.87	1.87	1.87	2.81	2.81	3.75		
315.0	6.51	2.79	1.86	1.86	1.86	1.86	2.79	2.79	3.72		
330.0	8.33	2.78	1.85	1.85	1.85	1.85	2.78	2.78	3.70		
345.0	7.33	2.75	1.83	1.83	1.83	1.83	2.75	2.75	3.67		
360.0	9.18	4.59	1.84	2.75	3.67	3.67	3.67	3.67	3.67		

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	3.67
15.0	3.67
30.0	3.69
45.0	3.68
60.0	3.70
75.0	3.73
90.0	3.74
105.0	3.75
120.0	3.75
135.0	3.72
150.0	3.70
165.0	3.67
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	3.67