
乐达凯

Client:

LumCAT: LCD-SQD-12-CCT-UNV-WT

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.245

Lamp flux(lm): 2376.3

Power (W): 29.190

Number of Lamps: 1

PF: 0.992

Length(mm): 200

Width(mm): 70

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2376.34, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 81.41

Central intensity(cd): 1012.865, Maximum intensity(cd): 1012.865

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=94.2

[C90/270]Total=93.0

Field angle(10%Imax): [C0/180]Total=154.0

[C90/270]Total=153.8

Maximum s/h(1/2): C0_180=1.20 C90_270=1.19

Maximum s/h(1/4): C0_180=1.27 C90_270=1.26

Up flux rate of lamp(%): 0.43%

Down flux rate of lamp(%): 99.57%

Up flux rate of LUM(%): 0.43%

Down flux rate of LUM(%): 99.57%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 83.215%

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Zonal flux distribution table

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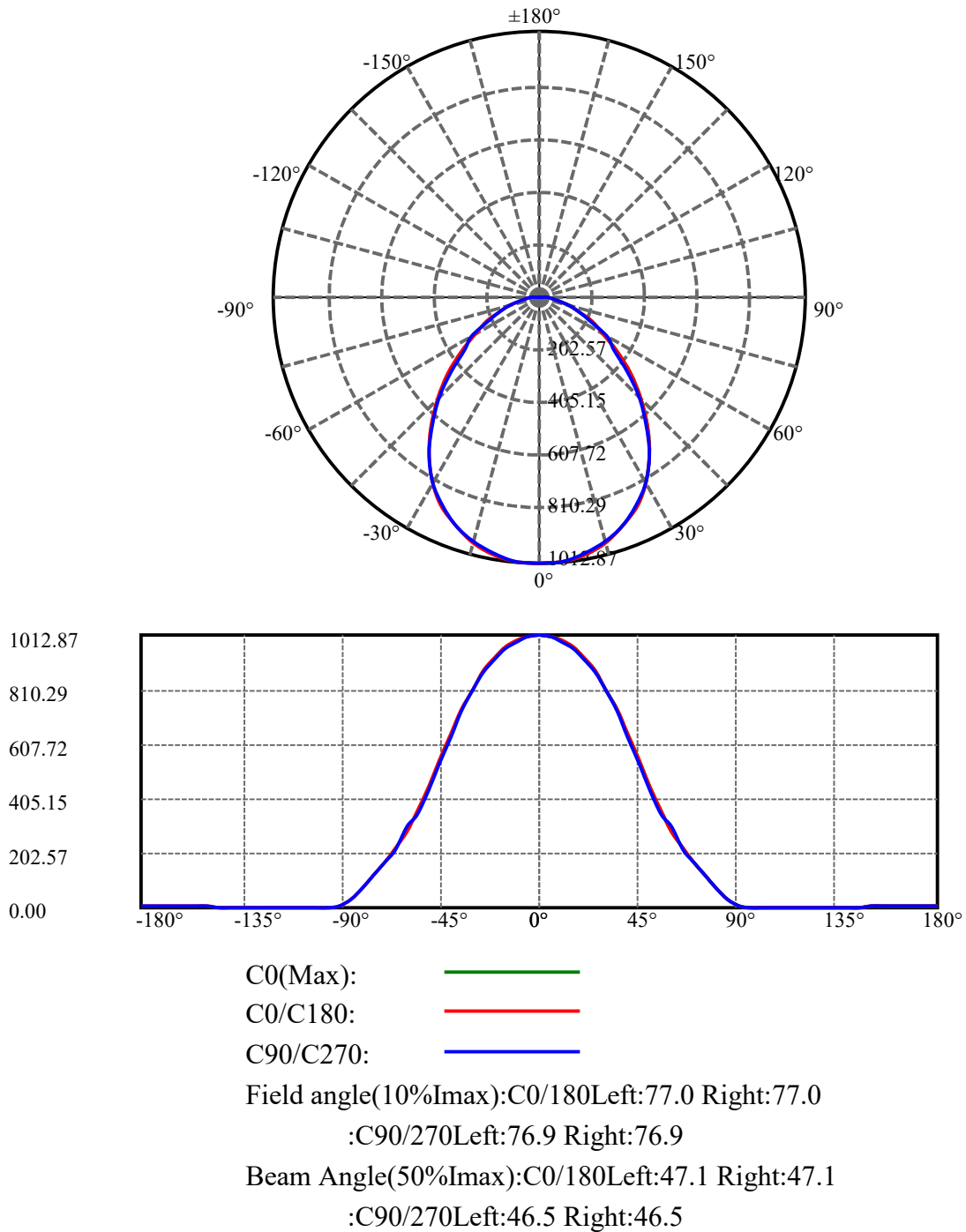
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1012.865	0.000	0	0.00%	0.00%
5.0	1007.033	24.147	24.147	1.02%	1.02%
10.0	991.318	71.487	95.635	3.01%	4.02%
15.0	965.535	116.079	211.714	4.88%	8.91%
20.0	927.794	156.037	367.751	6.57%	15.48%
25.0	876.470	189.234	556.985	7.96%	23.44%
30.0	813.499	213.867	770.852	9.00%	32.44%
35.0	736.323	228.222	999.074	9.60%	42.04%
40.0	648.418	231.034	1230.107	9.72%	51.76%
45.0	546.624	221.272	1451.379	9.31%	61.08%
50.0	448.212	201.021	1652.4	8.46%	69.54%
55.0	360.092	175.752	1828.152	7.40%	76.93%
60.0	285.904	149.320	1977.473	6.28%	83.22%
65.0	221.721	123.405	2100.877	5.19%	88.41%
70.0	168.654	98.846	2199.723	4.16%	92.57%
75.0	119.936	75.433	2275.156	3.17%	95.74%
80.0	75.522	52.299	2327.455	2.20%	97.94%
85.0	30.924	28.924	2356.379	1.22%	99.16%
90.0	4.626	9.734	2366.113	0.41%	99.57%
95.0	0.732	1.467	2367.58	0.06%	99.63%
100.0	0.463	0.325	2367.904	0.01%	99.65%
105.0	0.463	0.248	2368.152	0.01%	99.66%
110.0	0.463	0.242	2368.395	0.01%	99.67%
115.0	0.463	0.235	2368.629	0.01%	99.68%
120.0	0.849	0.319	2368.948	0.01%	99.69%
125.0	0.927	0.410	2369.359	0.02%	99.71%
130.0	0.927	0.403	2369.762	0.02%	99.72%
135.0	1.043	0.398	2370.16	0.02%	99.74%
140.0	1.620	0.493	2370.653	0.02%	99.76%
145.0	2.317	0.657	2371.31	0.03%	99.79%
150.0	3.707	0.887	2372.197	0.04%	99.83%
155.0	4.362	1.021	2373.218	0.04%	99.87%
160.0	5.097	0.992	2374.21	0.04%	99.91%
165.0	5.560	0.878	2375.088	0.04%	99.95%
170.0	6.024	0.687	2375.775	0.03%	99.98%
175.0	6.487	0.448	2376.223	0.02%	100.00%
180.0	3.243	0.116	2376.339	0.00%	100.00%

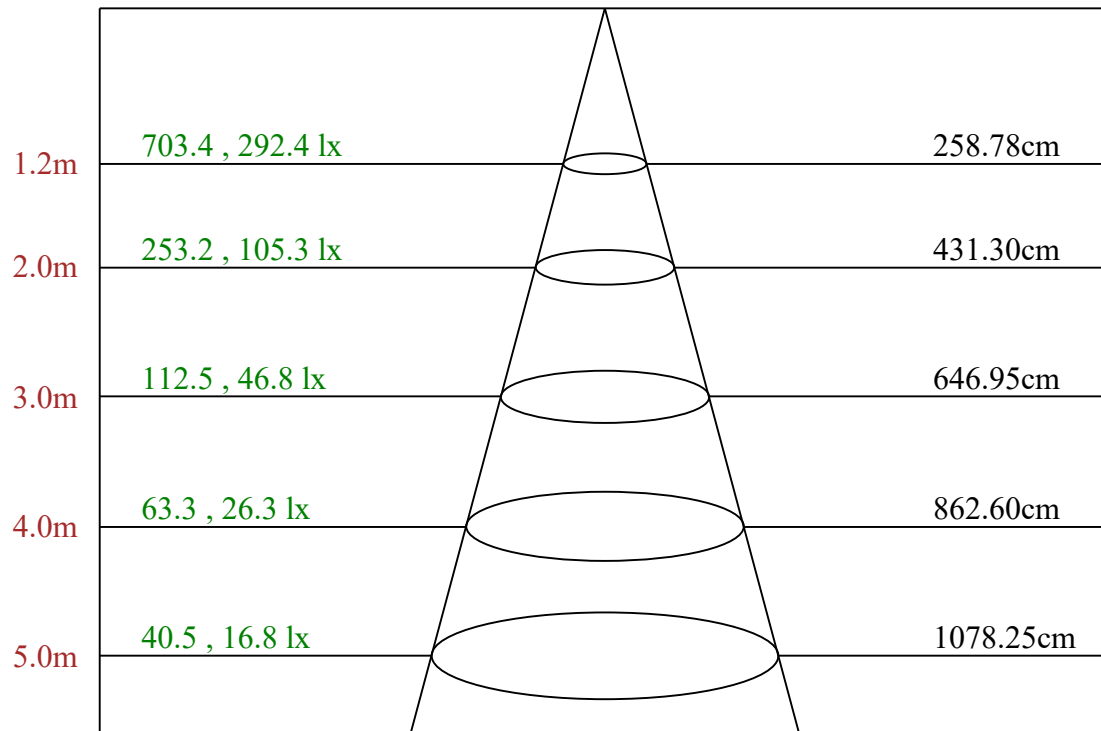
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	770.85	32.44%	32.44%
0-40	1230.11	51.76%	51.76%
0-60	1977.47	83.22%	83.22%
0-90	2366.11	99.57%	99.57%
0-120	2368.95	99.69%	99.69%
0-180	2376.34	100.00%	100.00%
60-90	388.64	16.35%	16.35%
90-120	2.84	0.12%	0.12%
90-130	3.65	0.15%	0.15%
90-150	6.08	0.26%	0.26%
90-180	10.11	0.43%	0.43%
0-57.44	1901.07	80.00%	80.00%

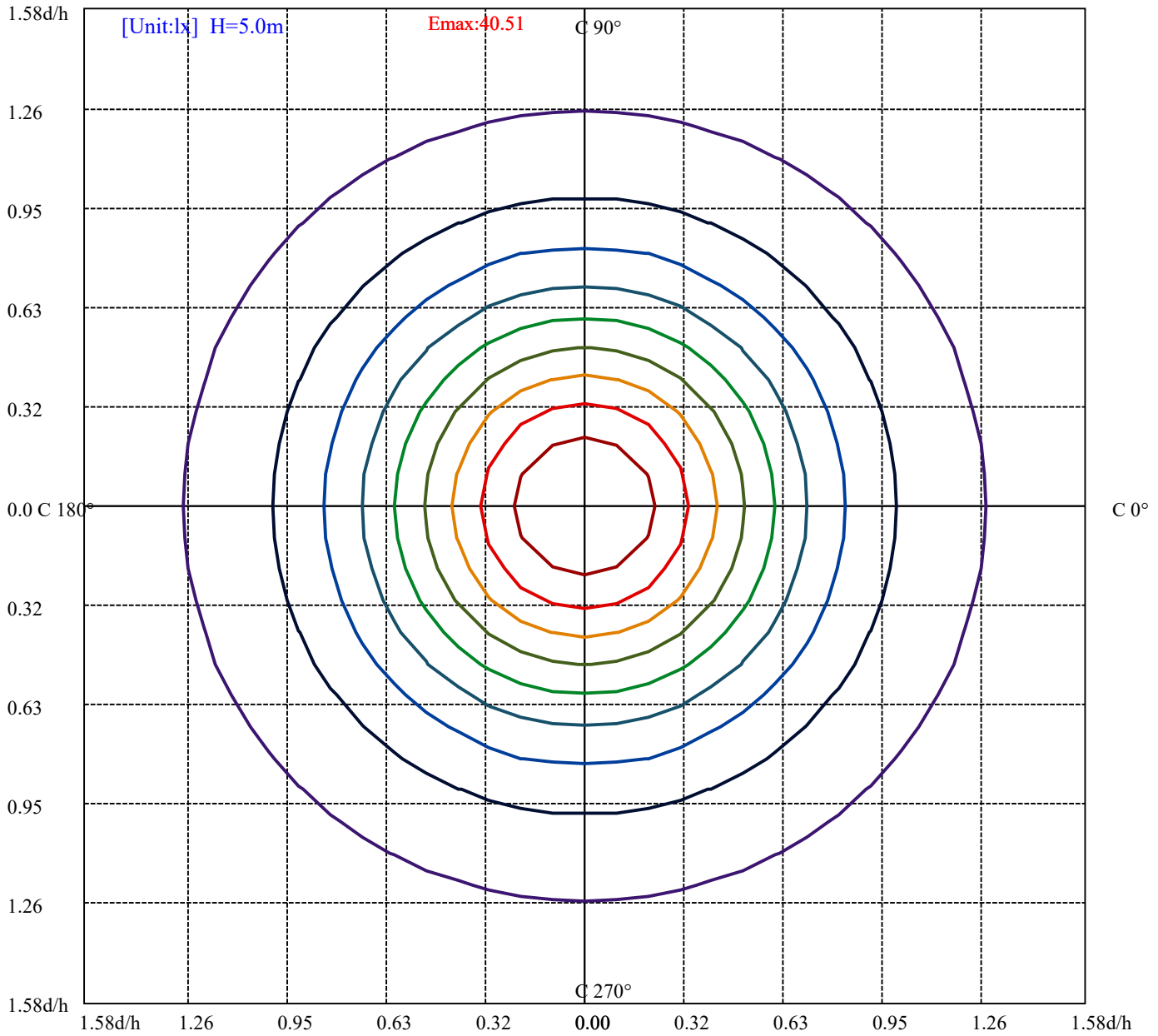
ZONAL LUMEN SUMMARY

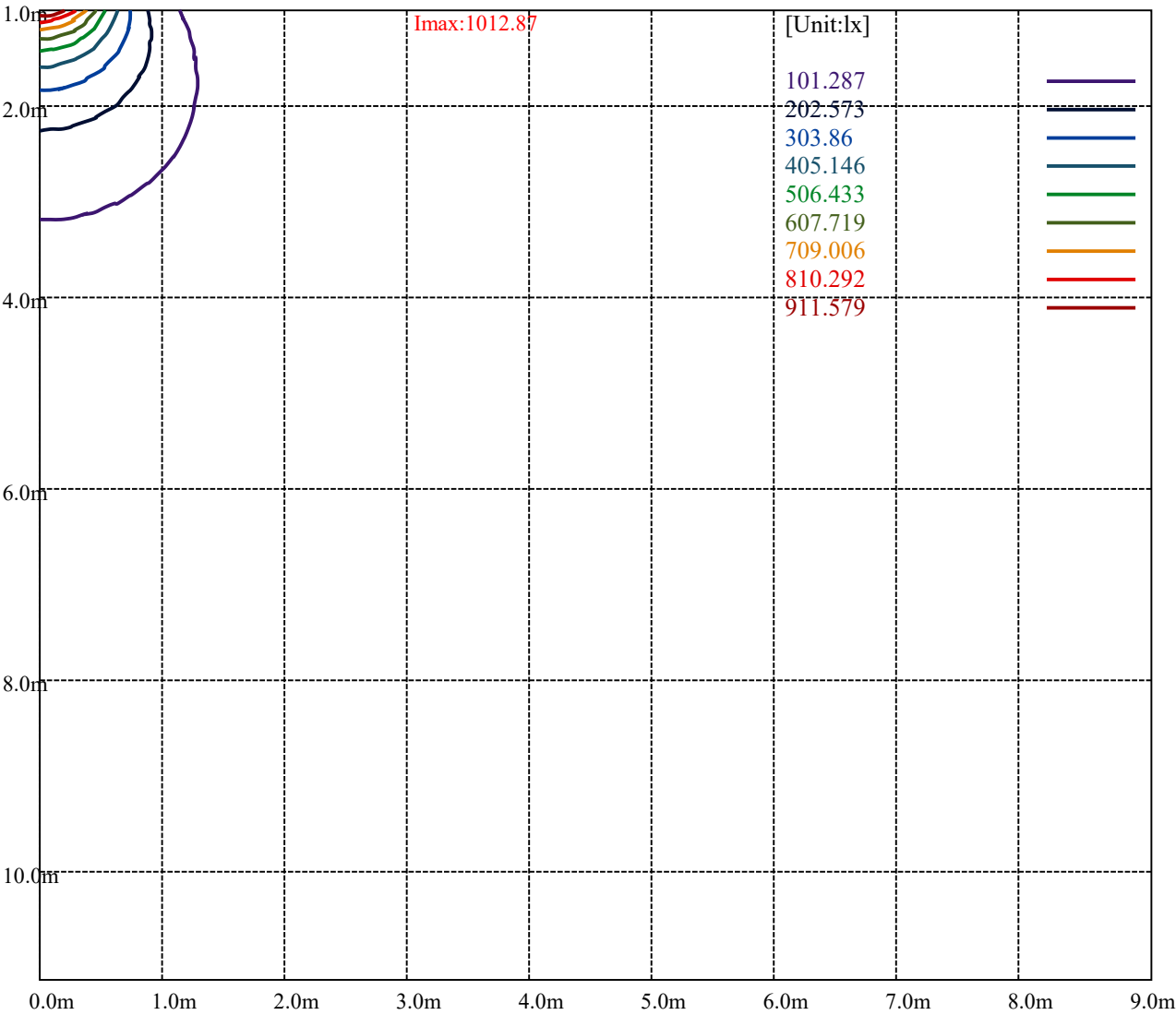
0-10	95.63
10-20	272.12
20-30	403.10
30-40	459.26
40-50	422.29
50-60	325.07
60-70	222.25
70-80	127.73
80-90	38.66
90-100	1.79
100-110	0.49
110-120	0.55
120-130	0.81
130-140	0.89
140-150	1.54
150-160	2.01
160-170	1.57
170-180	0.45





Max , Ave Beam angle of C0 plane 94.31





Luminance Table

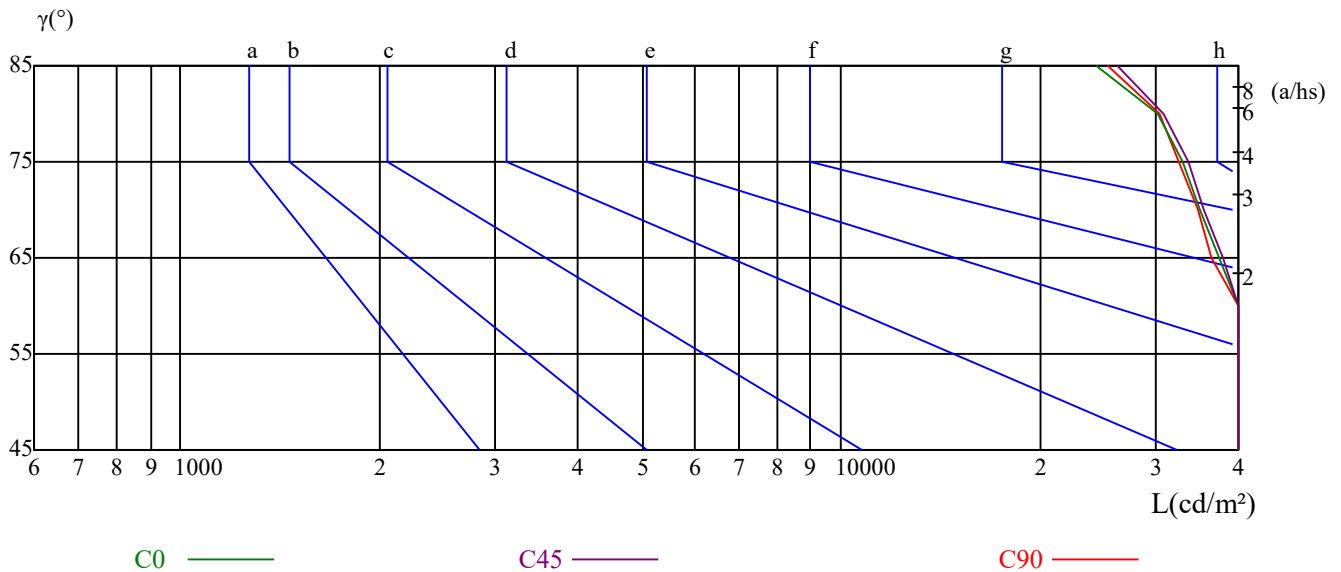
γ	45	50	55	60	65	70	75	80	85
C0	55110	50079	44920	40607	37400	34942	33017	30156	24328
C45	55892	50274	45571	41078	37901	35548	33536	30810	26220
C90	54007	48700	43392	42791	36399	34862	32443	30367	25435

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
37400	36399	37901	33017	32443	33536	24328	25435	26220

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



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	1.19	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	1.05	1.01	0.97	1.03	0.99	0.96	0.98	0.95	0.93	0.94	0.92	0.90	0.91	0.89	0.87	0.85
2	0.93	0.86	0.81	0.91	0.85	0.80	0.87	0.82	0.78	0.84	0.80	0.76	0.81	0.77	0.74	0.72
3	0.82	0.74	0.68	0.81	0.73	0.68	0.78	0.71	0.66	0.75	0.70	0.65	0.72	0.68	0.64	0.62
4	0.73	0.65	0.59	0.72	0.64	0.58	0.70	0.63	0.57	0.67	0.61	0.57	0.65	0.60	0.56	0.54
5	0.66	0.58	0.51	0.65	0.57	0.51	0.63	0.56	0.50	0.61	0.55	0.50	0.59	0.54	0.49	0.47
6	0.60	0.51	0.45	0.59	0.51	0.45	0.57	0.50	0.45	0.55	0.49	0.44	0.54	0.48	0.44	0.42
7	0.55	0.46	0.40	0.54	0.46	0.40	0.52	0.45	0.40	0.51	0.44	0.39	0.49	0.44	0.39	0.37
8	0.50	0.42	0.36	0.49	0.41	0.36	0.48	0.41	0.36	0.47	0.40	0.36	0.46	0.40	0.35	0.34
9	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.32	0.43	0.37	0.32	0.42	0.36	0.32	0.30
10	0.43	0.35	0.30	0.42	0.35	0.30	0.41	0.34	0.30	0.40	0.34	0.30	0.39	0.33	0.29	0.28

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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	1012.87	1015.56	1002.97	984.08	954.40	908.52	851.85	782.59	700.73		
15.0	1012.87	1012.87	1004.70	984.73	956.59	913.94	857.67	786.88	703.38		
30.0	1012.87	1014.69	1003.75	981.87	953.61	910.76	856.06	791.33	708.37		
45.0	1012.87	1013.78	1001.88	980.81	953.34	908.47	857.18	785.75	704.24		
60.0	1012.87	1012.87	1001.71	981.27	949.68	908.79	854.90	785.20	697.85		
75.0	1012.87	1012.87	998.84	981.07	953.01	905.31	846.39	776.25	684.60		
90.0	1012.87	1012.87	1001.58	979.01	947.97	900.01	843.58	765.53	678.06		
105.0	1012.87	1010.04	999.69	975.21	943.21	897.08	834.95	759.65	668.34		
120.0	1012.87	1013.81	1002.46	976.93	942.88	896.54	834.12	763.20	674.30		
135.0	1012.87	1014.74	1001.59	976.22	941.46	894.48	835.29	760.12	669.92		
150.0	1012.87	1009.14	997.05	973.80	900.32	885.44	824.06	754.30	665.01		
165.0	1012.87	1008.24	994.38	971.28	930.62	877.94	819.72	742.09	642.28		
180.0	1012.87	1002.97	983.18	952.60	905.82	847.35	776.29	689.94	592.79		
195.0	1012.87	1001.07	981.10	947.52	905.77	842.24	775.99	692.49	592.65		
210.0	1012.87	1000.10	979.13	945.40	899.82	842.38	773.10	690.13	598.06		
225.0	1012.87	998.21	977.15	944.18	900.22	842.53	769.26	687.76	595.26		
240.0	1012.87	999.86	978.48	945.96	899.50	842.82	774.05	690.42	595.64		
255.0	1012.87	998.84	977.33	943.66	898.77	841.72	776.25	685.53	592.01		
270.0	1012.87	1001.58	977.13	949.86	904.71	845.47	774.93	688.41	592.48		
285.0	1012.87	996.86	978.04	947.91	902.73	844.37	777.53	694.70	669.28		
300.0	1012.87	1004.35	985.44	958.01	945.72	856.82	788.73	710.24	618.50		
315.0	1012.87	1005.35	985.62	963.07	925.48	871.93	803.34	725.35	634.22		
330.0	1012.87	1004.49	988.68	966.36	925.44	875.21	809.18	733.84	643.62		
345.0	1012.87	1003.62	989.76	962.04	926.00	875.17	809.55	730.08	640.43		
360.0	1012.87	1015.56	1002.97	984.08	954.40	908.52	851.85	782.59	700.73		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	602.68	504.63	406.59	321.13	251.87	193.40	143.92	97.15	51.27		
15.0	606.27	503.71	411.14	322.19	255.94	196.95	144.31	97.11	51.73		
30.0	612.64	509.62	411.16	324.55	254.36	197.83	145.87	98.46	54.70		
45.0	608.09	502.77	411.19	325.11	254.59	195.06	146.53	96.16	54.03		
60.0	604.00	499.00	402.36	317.80	249.96	194.21	143.10	96.64	51.11		
75.0	584.53	482.58	391.87	310.50	244.10	187.98	138.42	94.46	47.70		
90.0	576.50	473.99	380.88	300.00	236.99	186.21	137.31	91.22	46.08		
105.0	575.15	468.78	378.41	299.34	236.27	182.62	132.73	86.60	44.24		
120.0	575.00	471.91	380.18	304.52	236.43	184.42	134.29	87.01	41.61		
135.0	575.02	468.85	381.47	301.60	235.83	180.40	132.48	83.62	40.40		
150.0	563.63	464.11	371.10	296.70	230.66	177.65	127.42	80.92	36.27		
165.0	548.94	455.60	364.11	287.41	224.57	170.97	122.91	77.63	33.27		
180.0	488.44	396.69	314.83	247.37	190.70	141.23	95.35	49.47	8.10		
195.0	491.91	396.61	314.93	246.86	193.32	143.40	96.20	50.82	8.17		
210.0	492.30	400.22	318.17	248.89	191.45	142.22	95.73	51.05	10.03		
225.0	494.53	400.20	316.86	248.18	191.40	143.78	95.24	53.12	10.99		
240.0	495.28	400.50	321.52	249.03	195.14	144.03	97.57	52.97	12.08		
255.0	491.00	397.48	317.05	249.71	196.40	143.09	99.14	86.04	14.96		
270.0	492.80	402.51	315.99	299.06	193.73	147.65	97.81	56.43	15.99		
285.0	499.84	404.77	326.64	256.04	200.50	150.61	103.55	58.36	16.94		
300.0	520.15	425.57	339.51	268.58	208.06	156.99	106.87	63.36	20.81		
315.0	535.56	437.84	354.22	275.30	215.16	161.61	111.81	66.71	22.55		
330.0	543.17	446.44	355.29	279.96	215.78	161.84	115.33	66.97	25.11		
345.0	541.55	442.67	356.72	281.86	218.10	163.57	114.59	70.24	24.03		
360.0	602.68	504.63	406.59	321.13	251.87	193.40	143.92	97.15	51.27		

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Intensity data(cd)

C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	7.20	0.90	0.00	0.00	0.00	0.00	0.90	0.90	0.90
15.0	9.98	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91
30.0	10.94	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91
45.0	12.82	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92
60.0	13.01	0.93	0.00	0.00	0.00	0.00	0.00	0.93	0.93
75.0	11.22	0.94	0.00	0.00	0.00	0.00	0.00	0.94	0.94
90.0	8.46	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.94
105.0	8.47	0.94	0.00	0.00	0.00	0.00	0.94	0.94	0.94
120.0	5.67	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.95
135.0	4.70	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.94
150.0	2.79	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93
165.0	1.85	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
180.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
195.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
210.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
225.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
240.0	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
255.0	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
270.0	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
285.0	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
300.0	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
315.0	1.88	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
330.0	1.86	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
345.0	1.85	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
360.0	7.20	0.90	0.00	0.00	0.00	0.00	0.90	0.90	0.90
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.90	1.80	2.70	4.50	6.30	6.30	6.30	6.30	6.30
15.0	0.91	1.82	2.72	4.54	6.35	6.35	6.35	6.35	6.35
30.0	0.91	1.82	2.74	4.56	5.47	6.38	6.38	6.38	6.38
45.0	0.92	1.83	2.75	4.58	5.49	6.41	6.41	6.41	6.41
60.0	0.93	1.86	2.79	4.65	5.58	6.50	6.50	6.50	6.50
75.0	0.94	1.87	2.81	4.68	5.61	6.55	6.55	6.55	6.55
90.0	0.94	1.88	2.82	4.70	5.64	6.58	6.58	6.58	6.58
105.0	0.94	1.88	2.82	4.71	5.65	6.59	6.59	6.59	6.59
120.0	0.95	1.89	2.84	4.73	5.67	6.62	6.62	6.62	6.62
135.0	1.88	1.88	2.82	4.70	6.58	6.58	6.58	6.58	6.58
150.0	1.86	1.86	2.79	4.65	6.51	6.51	6.51	6.51	6.51
165.0	1.85	1.85	2.77	4.62	6.47	6.47	6.47	6.47	6.47
180.0	0.90	1.80	1.80	2.70	2.70	3.60	4.50	5.40	6.30
195.0	0.91	1.82	1.82	2.72	2.72	3.63	4.54	5.45	6.35
210.0	0.91	0.91	1.82	2.74	2.74	3.65	4.56	5.47	6.38
225.0	0.92	1.83	1.83	2.75	2.75	3.66	4.58	5.49	6.41
240.0	0.93	1.86	1.86	2.79	2.79	3.72	4.65	5.58	6.50
255.0	0.94	1.87	1.87	2.81	2.81	3.74	4.68	5.61	6.55
270.0	0.94	1.88	1.88	2.82	2.82	3.76	4.70	5.64	6.58
285.0	0.94	0.94	1.88	2.82	2.82	3.77	4.71	5.65	6.59
300.0	0.95	0.95	1.89	2.84	2.84	3.78	4.73	5.67	6.62
315.0	0.94	0.94	1.88	2.82	2.82	3.76	4.70	5.64	6.58
330.0	0.93	0.93	1.86	2.79	2.79	3.72	4.65	5.58	6.51
345.0	0.92	0.92	1.85	2.77	2.77	3.70	4.62	5.54	6.47
360.0	0.90	1.80	2.70	4.50	6.30	6.30	6.30	6.30	6.30

Intensity data(cd)

C/ γ (°)	180.0
0.0	6.30
15.0	6.35
30.0	6.38
45.0	6.41
60.0	6.50
75.0	6.55
90.0	6.58
105.0	6.59
120.0	6.62
135.0	6.58
150.0	6.51
165.0	6.47
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	6.30