
乐达凯

Client:

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

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 119.990

LampCAT:

Current(A): 0.241

Lamp flux(lm): 2432.7

Power (W): 28.650

Number of Lamps: 1

PF: 0.992

Length(mm): 200

Width(mm): 70

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2432.69, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 84.91

Central intensity(cd): 1036.567, Maximum intensity(cd): 1036.567

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=153.6

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(%): 0.44%

Down flux rate of lamp(%): 99.56%

Up flux rate of LUM(%): 0.44%

Down flux rate of LUM(%): 99.56%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 83.200%

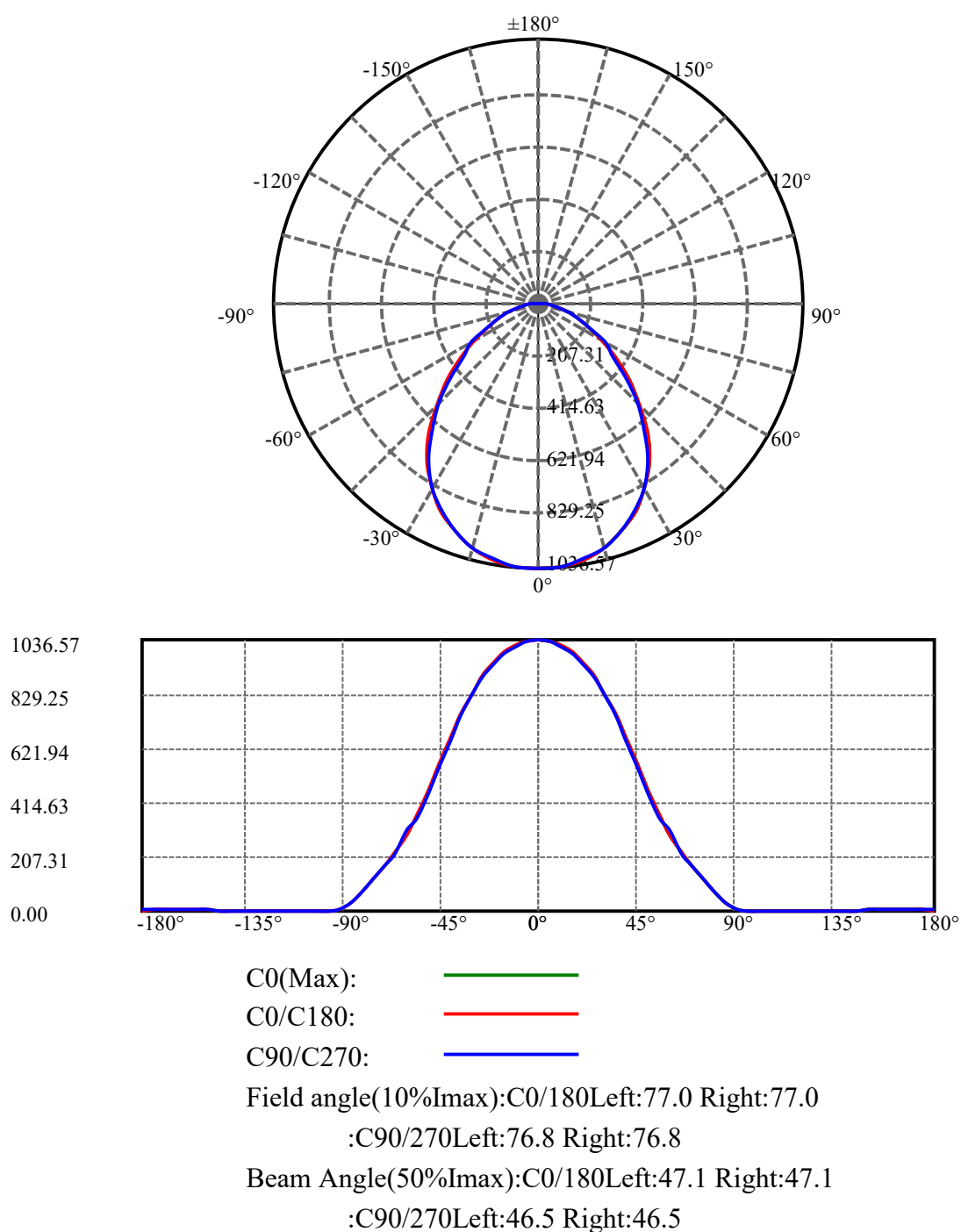
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1036.567	0.000	0	0.00%	0.00%
5.0	1030.700	24.714	24.714	1.02%	1.02%
10.0	1014.638	73.168	97.882	3.01%	4.02%
15.0	988.314	118.814	216.695	4.88%	8.91%
20.0	949.649	159.715	376.411	6.57%	15.47%
25.0	896.970	193.676	570.087	7.96%	23.43%
30.0	832.648	218.885	788.972	9.00%	32.43%
35.0	753.654	233.594	1022.566	9.60%	42.03%
40.0	663.705	236.476	1259.041	9.72%	51.76%
45.0	559.597	226.504	1485.546	9.31%	61.07%
50.0	458.674	205.757	1691.302	8.46%	69.52%
55.0	368.545	179.865	1871.167	7.39%	76.92%
60.0	292.662	152.836	2024.003	6.28%	83.20%
65.0	227.048	126.343	2150.346	5.19%	88.39%
70.0	172.708	101.221	2251.567	4.16%	92.55%
75.0	122.987	77.290	2328.857	3.18%	95.73%
80.0	77.223	53.571	2382.427	2.20%	97.93%
85.0	31.851	29.638	2412.065	1.22%	99.15%
90.0	4.741	10.019	2422.084	0.41%	99.56%
95.0	0.732	1.499	2423.583	0.06%	99.63%
100.0	0.463	0.325	2423.907	0.01%	99.64%
105.0	0.463	0.248	2424.155	0.01%	99.65%
110.0	0.463	0.242	2424.398	0.01%	99.66%
115.0	0.463	0.235	2424.632	0.01%	99.67%
120.0	0.887	0.328	2424.96	0.01%	99.68%
125.0	0.927	0.419	2425.38	0.02%	99.70%
130.0	0.965	0.411	2425.791	0.02%	99.72%
135.0	1.120	0.421	2426.213	0.02%	99.73%
140.0	1.816	0.544	2426.756	0.02%	99.76%
145.0	2.547	0.728	2427.484	0.03%	99.79%
150.0	3.707	0.921	2428.405	0.04%	99.82%
155.0	4.863	1.084	2429.489	0.04%	99.87%
160.0	5.249	1.061	2430.55	0.04%	99.91%
165.0	5.560	0.891	2431.441	0.04%	99.95%
170.0	6.024	0.687	2432.128	0.03%	99.98%
175.0	6.487	0.448	2432.576	0.02%	100.00%
180.0	3.243	0.116	2432.692	0.00%	100.00%

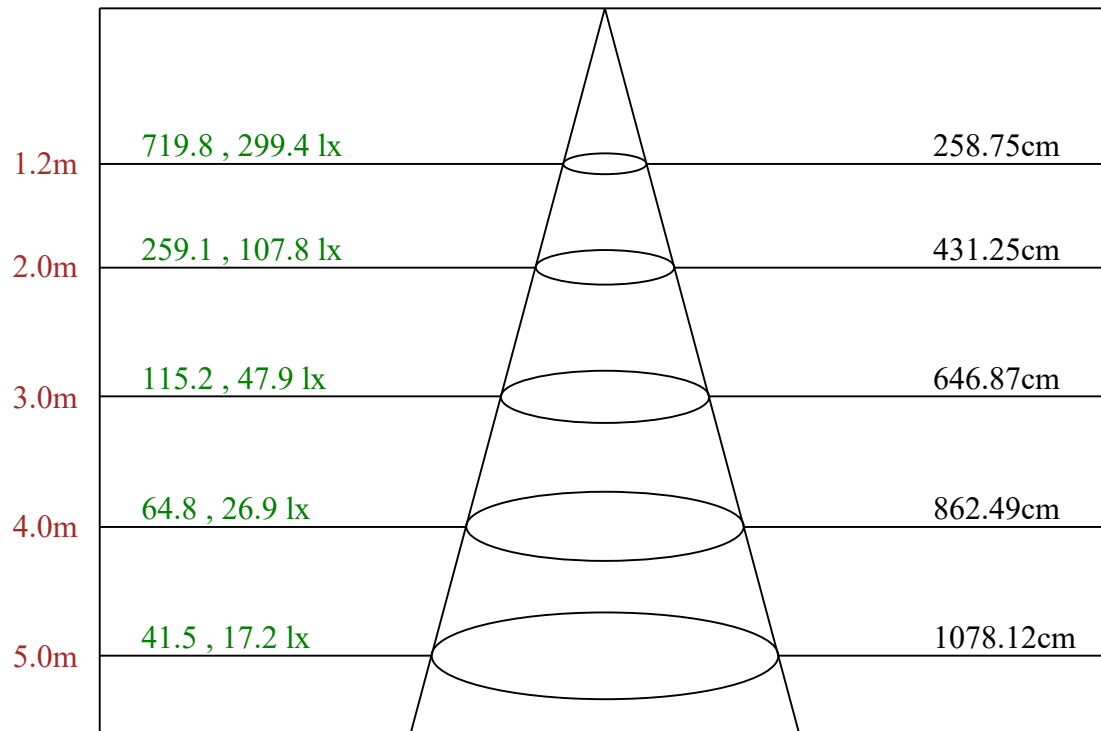
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	788.97	32.43%	32.43%
0-40	1259.04	51.76%	51.76%
0-60	2024.00	83.20%	83.20%
0-90	2422.08	99.56%	99.56%
0-120	2424.96	99.68%	99.68%
0-180	2432.69	100.00%	100.00%
60-90	398.08	16.36%	16.36%
90-120	2.88	0.12%	0.12%
90-130	3.71	0.15%	0.15%
90-150	6.32	0.26%	0.26%
90-180	10.49	0.43%	0.43%
0-57.45	1946.15	80.00%	80.00%

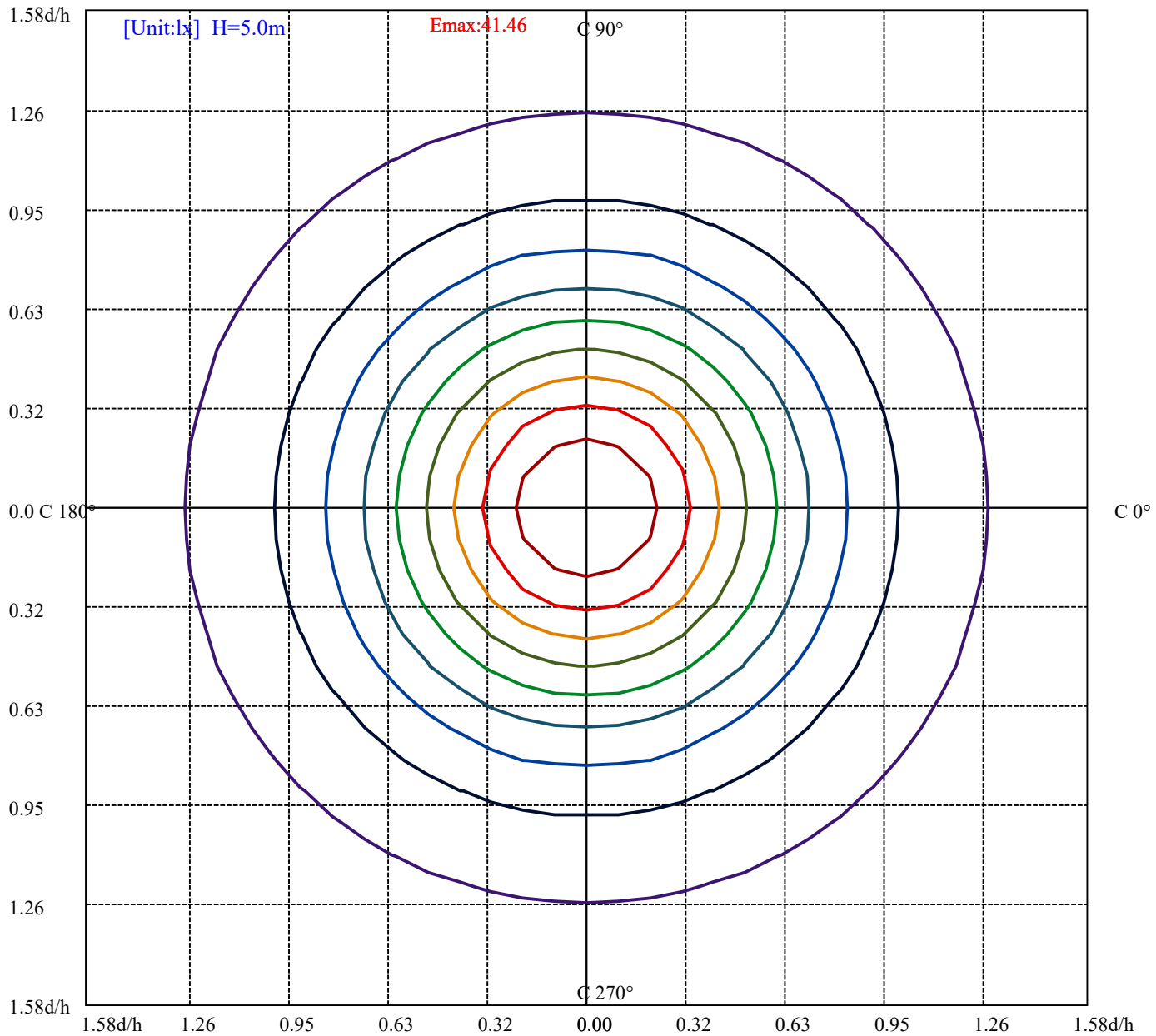
ZONAL LUMEN SUMMARY

0-10	97.88
10-20	278.53
20-30	412.56
30-40	470.07
40-50	432.26
50-60	332.70
60-70	227.56
70-80	130.86
80-90	39.66
90-100	1.82
100-110	0.49
110-120	0.56
120-130	0.83
130-140	0.97
140-150	1.65
150-160	2.15
160-170	1.58
170-180	0.45

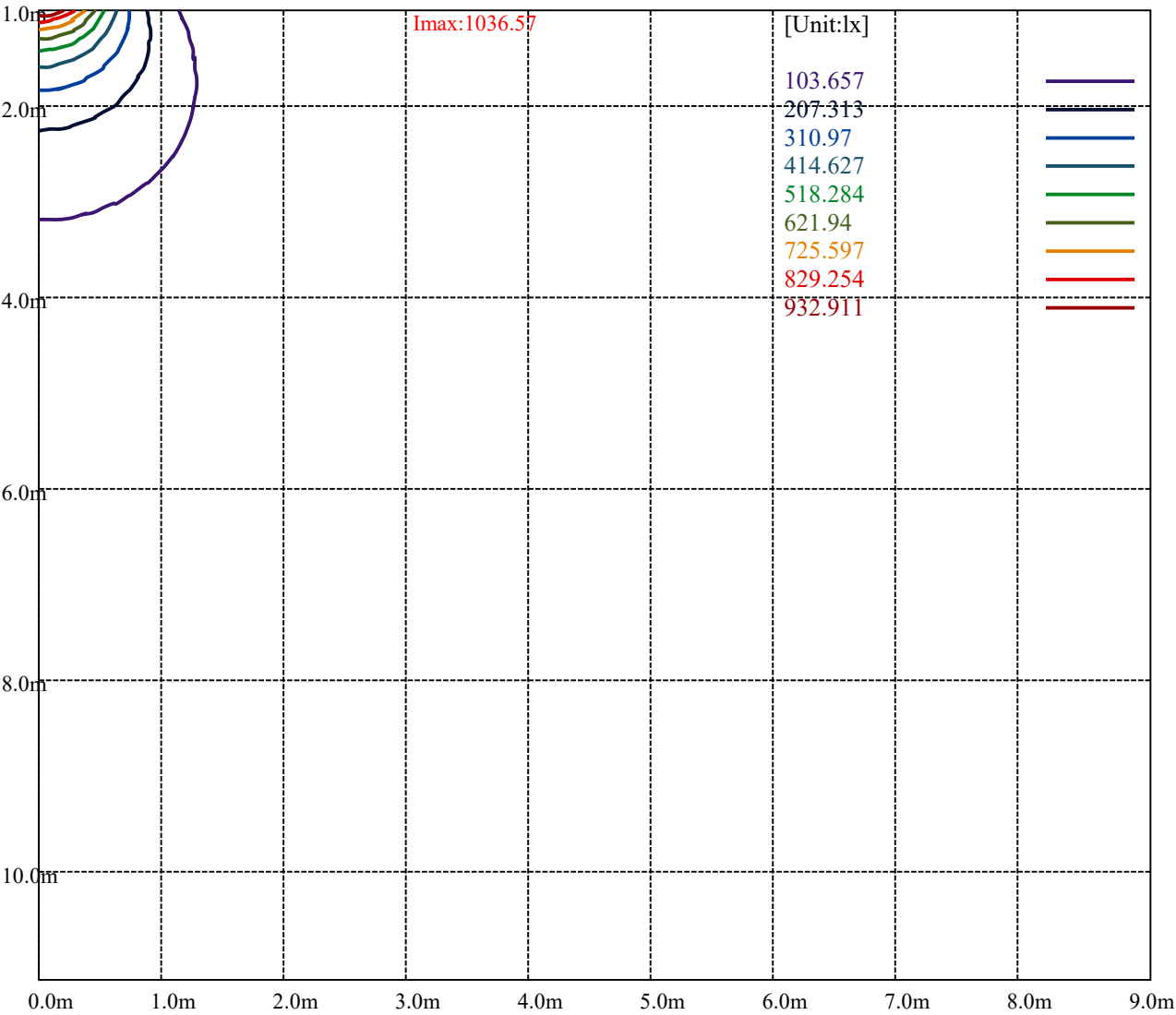




Max , Ave Beam angle of C0 plane 94.31



(10%Emax) 4.14628	—
(20%Emax) 8.292521	—
(30%Emax) 12.4388	—
(40%Emax) 16.58508	—
(50%Emax) 20.73136	—
(60%Emax) 24.8776	—
(70%Emax) 29.02388	—
(80%Emax) 33.17016	—
(90%Emax) 37.31644	—



Luminance Table

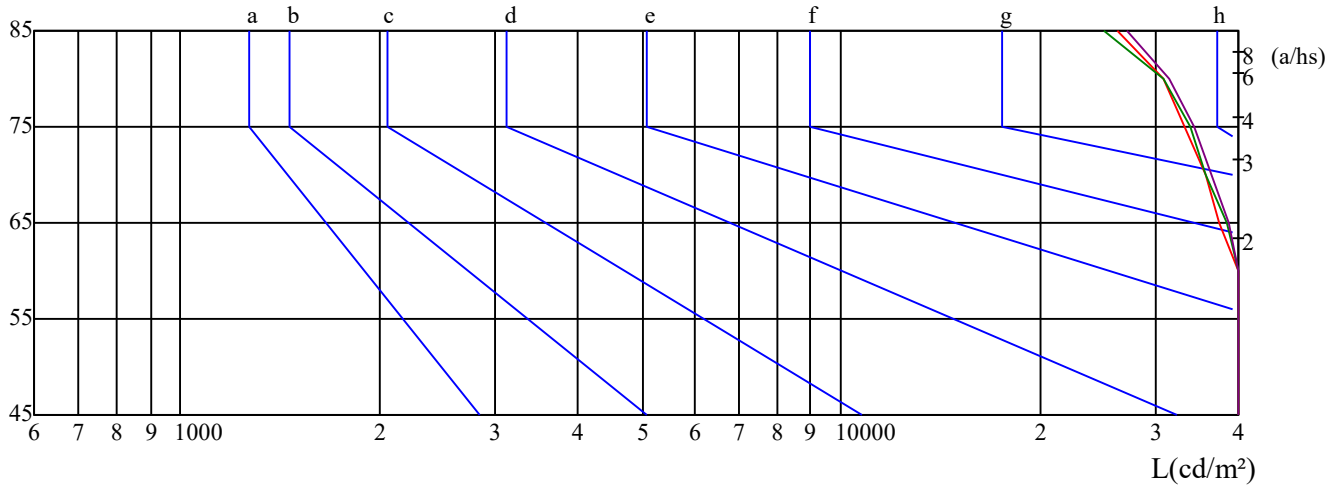
γ	45	50	55	60	65	70	75	80	85
C0	56399	51244	45998	41584	38324	35798	33896	30720	25073
C45	57254	51437	46613	42073	38805	36469	34307	31478	27169
C90	55350	49904	44494	43846	37314	35687	33258	30788	26234

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
38324	37314	38805	33896	33258	34307	25073	26234	27169

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

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———

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	0.29	0.39	0.33	0.29	0.28

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Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1036.57	1039.27	1026.67	1006.87	976.28	930.39	871.90	801.72	718.04
15.0	1036.57	1036.57	1027.50	1008.45	978.53	935.00	877.86	805.31	719.16
30.0	1036.57	1037.48	1027.45	1005.57	976.40	931.73	875.20	809.56	725.69
45.0	1036.57	1037.48	1025.58	1003.60	975.22	929.43	877.24	803.98	720.65
60.0	1036.57	1036.57	1025.42	1003.13	971.55	929.75	874.95	802.50	714.27
75.0	1036.57	1036.57	1022.53	1004.76	975.76	927.11	866.30	795.20	700.71
90.0	1036.57	1036.57	1026.21	1003.62	971.61	921.71	864.28	785.19	694.81
105.0	1036.57	1034.68	1022.45	998.91	966.90	917.94	854.86	776.72	684.45
120.0	1036.57	1038.46	1026.16	1000.63	965.63	917.40	854.98	780.26	689.47
135.0	1036.57	1038.45	1025.29	999.92	963.27	915.34	855.19	778.13	686.03
150.0	1036.57	1032.85	1019.83	996.59	921.29	905.49	843.20	771.62	680.51
165.0	1036.57	1031.95	1017.17	993.15	952.50	897.99	838.86	759.41	657.79
180.0	1036.57	1026.67	1006.87	975.38	927.69	866.51	794.52	706.34	607.36
195.0	1036.57	1023.87	1003.01	969.46	925.93	861.54	793.52	707.37	605.80
210.0	1036.57	1023.80	1001.92	967.28	920.79	862.44	791.33	706.54	611.73
225.0	1036.57	1021.00	999.94	966.06	921.19	862.59	787.50	704.17	609.85
240.0	1036.57	1022.64	1001.27	967.83	919.54	861.95	792.29	706.83	608.38
255.0	1036.57	1022.53	1000.08	966.40	920.56	861.62	794.27	702.58	606.22
270.0	1036.57	1026.21	1001.73	972.55	926.41	867.10	793.67	705.17	607.25
285.0	1036.57	1020.56	1001.73	969.72	924.53	864.28	795.55	710.82	685.40
300.0	1036.57	1028.06	1009.14	980.77	967.53	876.73	807.69	726.35	633.67
315.0	1036.57	1029.05	1009.31	985.82	947.29	892.78	822.30	742.42	649.38
330.0	1036.57	1028.20	1011.47	989.15	947.32	895.26	827.39	752.09	658.20
345.0	1036.57	1027.33	1012.55	983.91	947.88	895.22	828.70	747.40	654.09
360.0	1036.57	1039.27	1026.67	1006.87	976.28	930.39	871.90	801.72	718.04
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	617.26	516.48	416.61	329.33	258.24	197.96	147.57	98.98	53.09
15.0	619.40	515.11	420.79	329.20	262.09	200.42	146.92	98.85	53.51
30.0	626.32	521.47	421.19	331.85	259.83	202.39	149.51	100.28	55.61
45.0	621.76	513.71	420.30	333.31	260.06	200.54	149.26	98.90	55.86
60.0	617.67	510.85	411.47	325.09	255.43	198.77	146.75	98.46	52.01
75.0	597.80	493.96	401.34	318.08	250.72	192.72	141.27	96.36	48.65
90.0	591.25	485.80	389.77	306.92	242.90	190.18	140.28	92.26	47.07
105.0	588.42	479.21	386.95	306.92	241.96	187.35	136.51	89.44	46.13
120.0	588.27	483.29	388.71	312.11	242.12	188.21	138.08	88.90	42.56
135.0	590.18	481.16	390.94	308.24	241.52	185.13	136.27	85.52	42.29
150.0	577.32	475.05	380.23	303.07	235.20	181.28	131.08	82.74	37.19
165.0	561.71	466.55	372.31	293.79	230.04	174.61	125.64	79.45	35.11
180.0	499.39	405.81	322.13	252.84	195.26	144.87	98.08	50.39	8.10
195.0	503.32	405.38	321.94	253.02	198.61	146.92	98.85	51.69	8.16
210.0	504.15	409.34	325.47	254.36	196.01	145.87	98.46	51.97	10.94
225.0	506.38	408.40	324.16	254.56	195.96	147.43	97.06	54.03	11.90
240.0	507.14	409.61	328.80	255.43	199.70	147.68	100.31	53.87	12.07
255.0	504.25	407.89	325.56	256.34	201.14	146.88	101.97	88.88	14.97
270.0	504.63	412.37	324.81	306.92	198.65	151.58	100.74	57.43	16.95
285.0	512.16	414.25	334.22	261.73	206.18	153.46	106.39	60.25	17.89
300.0	533.42	435.06	348.04	274.27	212.80	161.73	109.71	65.26	21.75
315.0	548.83	448.27	361.81	281.93	220.85	165.40	114.65	67.66	22.55
330.0	555.01	456.46	362.57	287.26	221.26	165.48	118.07	69.72	26.03
345.0	554.31	452.69	364.92	287.32	222.65	168.14	118.25	72.06	24.02
360.0	617.26	516.48	416.61	329.33	258.24	197.96	147.57	98.98	53.09

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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	7.20	0.90	0.00	0.00	0.00	0.00	0.90	0.90	0.90		
15.0	10.88	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91		
30.0	11.85	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	13.00	0.93	0.00	0.00	0.00	0.00	0.00	0.93	0.93		
75.0	12.16	0.94	0.00	0.00	0.00	0.00	0.00	0.94	0.94		
90.0	9.41	0.00	0.00	0.00	0.00	0.00	0.94	0.94	0.94		
105.0	7.53	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	1.86		
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	1.82	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	3.60	4.50	6.30	6.30	6.30	6.30	6.30		
15.0	0.91	1.81	2.72	4.53	6.35	6.35	6.35	6.35	6.35		
30.0	1.82	1.82	2.74	4.56	6.38	6.38	6.38	6.38	6.38		
45.0	0.92	1.83	2.75	4.58	6.41	6.41	6.41	6.41	6.41		
60.0	0.93	1.86	2.79	4.64	6.50	6.50	6.50	6.50	6.50		
75.0	0.94	1.87	2.81	4.68	6.55	6.55	6.55	6.55	6.55		
90.0	0.94	1.88	2.82	4.71	6.59	6.59	6.59	6.59	6.59		
105.0	1.88	1.88	2.82	4.71	6.59	6.59	6.59	6.59	6.59		
120.0	0.95	2.84	2.84	4.73	6.62	6.62	6.62	6.62	6.62		
135.0	1.88	1.88	3.76	4.70	6.58	6.58	6.58	6.58	6.58		
150.0	1.86	1.86	3.72	4.65	6.51	6.51	6.51	6.51	6.51		
165.0	1.85	2.77	3.70	4.62	6.47	6.47	6.47	6.47	6.47		
180.0	0.90	1.80	1.80	2.70	3.60	4.50	4.50	5.40	6.30		
195.0	0.91	1.81	2.72	2.72	3.63	3.63	4.53	5.44	6.35		
210.0	0.91	0.91	1.82	2.74	3.65	4.56	4.56	5.47	6.38		
225.0	0.92	1.83	2.75	2.75	3.66	4.58	4.58	5.49	6.41		
240.0	0.93	1.86	1.86	2.79	3.72	4.64	4.64	5.57	6.50		
255.0	0.94	1.87	1.87	2.81	3.74	3.74	4.68	5.61	6.55		
270.0	0.94	1.88	1.88	2.82	2.82	3.77	4.71	5.65	6.59		
285.0	0.94	1.88	1.88	2.82	2.82	3.77	4.71	5.65	6.59		
300.0	0.95	1.89	1.89	2.84	2.84	3.78	4.73	5.67	6.62		
315.0	0.94	1.88	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	3.60	4.50	6.30	6.30	6.30	6.30	6.30		

Intensity data(cd)

C/ $\gamma(^{\circ})$	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	6.59
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