
AFX

Client:

LumCAT: ARNS1318LAJD4BKLB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 119.980

LampCAT:

Current(A): 0.165

Lamp flux(lm): 1706.7

Power (W): 19.300

Number of Lamps: 1

PF: 0.973

Length(mm): 400

Width(mm): 200

Phm Type: C

Height(mm): 360

Photometric Results

Lumens(lm): 1706.66, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 88.43

Central intensity(cd): 159.429, Maximum intensity(cd): 161.403

Angle of maximum intensity: C=0.0 γ =10.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.20 C90_270=1.53

Maximum s/h(1/4): C0_180=1.30 C90_270=1.74

Up flux rate of lamp(%): 47.40%

Down flux rate of lamp(%): 52.60%

Up flux rate of LUM(%): 47.40%

Down flux rate of LUM(%): 52.60%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 27.122%

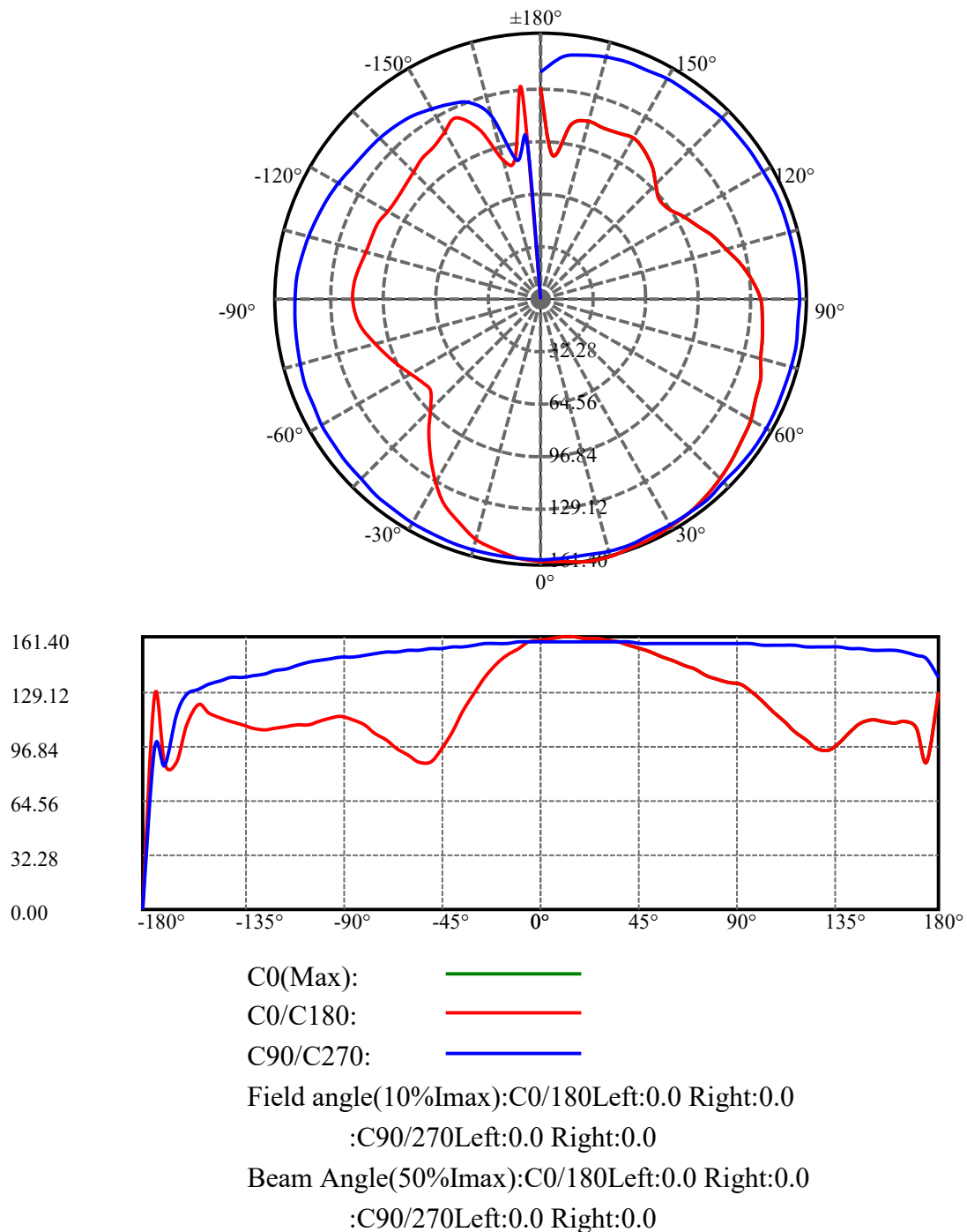
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	158.330	0.000	0	0.00%	0.00%
5.0	158.188	3.784	3.784	0.22%	0.22%
10.0	157.728	11.301	15.085	0.66%	0.88%
15.0	156.704	18.652	33.737	1.09%	1.98%
20.0	155.235	25.708	59.445	1.51%	3.48%
25.0	153.620	32.393	91.838	1.90%	5.38%
30.0	151.444	38.606	130.445	2.26%	7.64%
35.0	149.059	44.251	174.696	2.59%	10.24%
40.0	146.742	49.352	224.048	2.89%	13.13%
45.0	144.570	53.939	277.987	3.16%	16.29%
50.0	142.663	58.040	336.026	3.40%	19.69%
55.0	141.336	61.751	397.777	3.62%	23.31%
60.0	140.349	65.111	462.888	3.82%	27.12%
65.0	139.486	68.028	530.916	3.99%	31.11%
70.0	138.835	70.473	601.389	4.13%	35.24%
75.0	138.387	72.461	673.85	4.25%	39.48%
80.0	137.983	73.949	747.799	4.33%	43.82%
85.0	137.422	74.834	822.633	4.38%	48.20%
90.0	136.577	75.023	897.656	4.40%	52.60%
95.0	135.202	74.415	972.072	4.36%	56.96%
100.0	133.736	73.077	1045.148	4.28%	61.24%
105.0	132.080	71.125	1116.273	4.17%	65.41%
110.0	130.645	68.672	1184.946	4.02%	69.43%
115.0	129.407	65.847	1250.792	3.86%	73.29%
120.0	128.465	62.689	1313.482	3.67%	76.96%
125.0	127.452	59.155	1372.636	3.47%	80.43%
130.0	126.791	55.281	1427.917	3.24%	83.67%
135.0	126.207	51.122	1479.039	3.00%	86.66%
140.0	125.878	46.676	1525.715	2.73%	89.40%
145.0	125.628	41.962	1567.677	2.46%	91.86%
150.0	125.680	37.007	1604.684	2.17%	94.02%
155.0	125.131	31.740	1636.424	1.86%	95.88%
160.0	122.596	25.982	1662.406	1.52%	97.41%
165.0	117.759	19.809	1682.215	1.16%	98.57%
170.0	114.809	13.796	1696.01	0.81%	99.38%
175.0	121.568	8.456	1704.466	0.50%	99.87%
180.0	62.036	2.195	1706.661	0.13%	100.00%

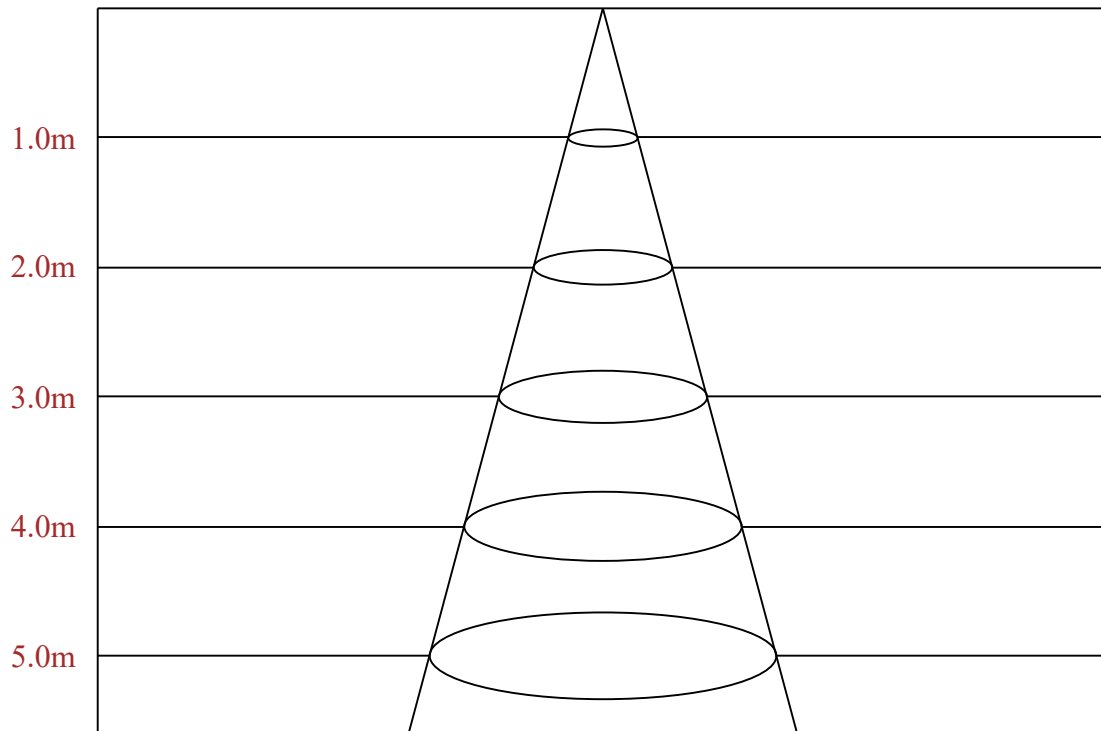
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	130.44	7.64%	7.64%
0-40	224.05	13.13%	13.13%
0-60	462.89	27.12%	27.12%
0-90	897.66	52.60%	52.60%
0-120	1313.48	76.96%	76.96%
0-180	1706.66	100.00%	100.00%
60-90	434.77	25.47%	25.47%
90-120	415.83	24.36%	24.36%
90-130	530.26	31.07%	31.07%
90-150	707.03	41.43%	41.43%
90-180	806.81	47.27%	47.27%
0-124.38	1365.33	80.00%	80.00%

ZONAL LUMEN SUMMARY

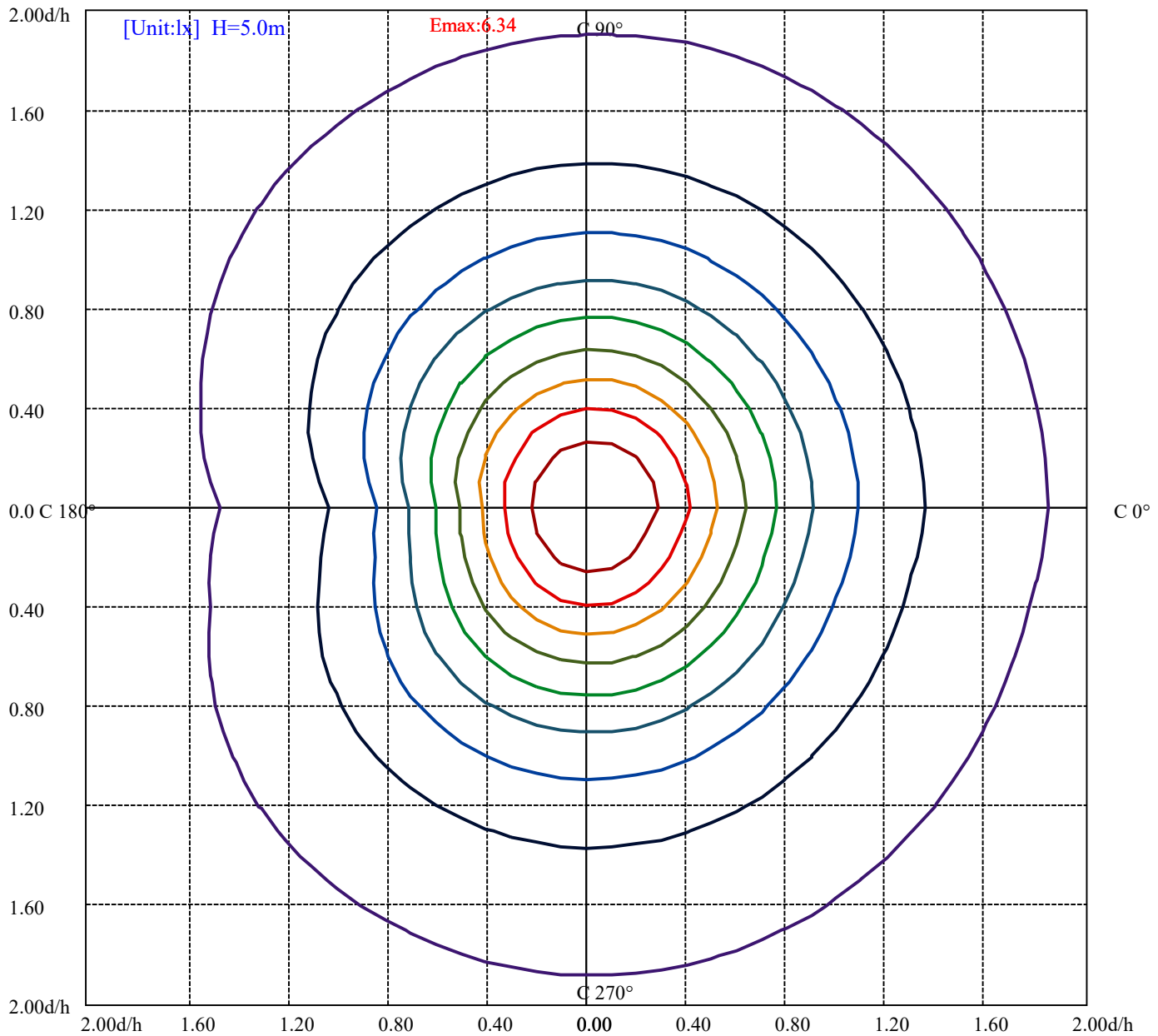
0-10	15.09
10-20	44.36
20-30	71.00
30-40	93.60
40-50	111.98
50-60	126.86
60-70	138.50
70-80	146.41
80-90	149.86
90-100	147.49
100-110	139.80
110-120	128.54
120-130	114.44
130-140	97.80
140-150	78.97
150-160	57.72
160-170	33.60
170-180	8.46



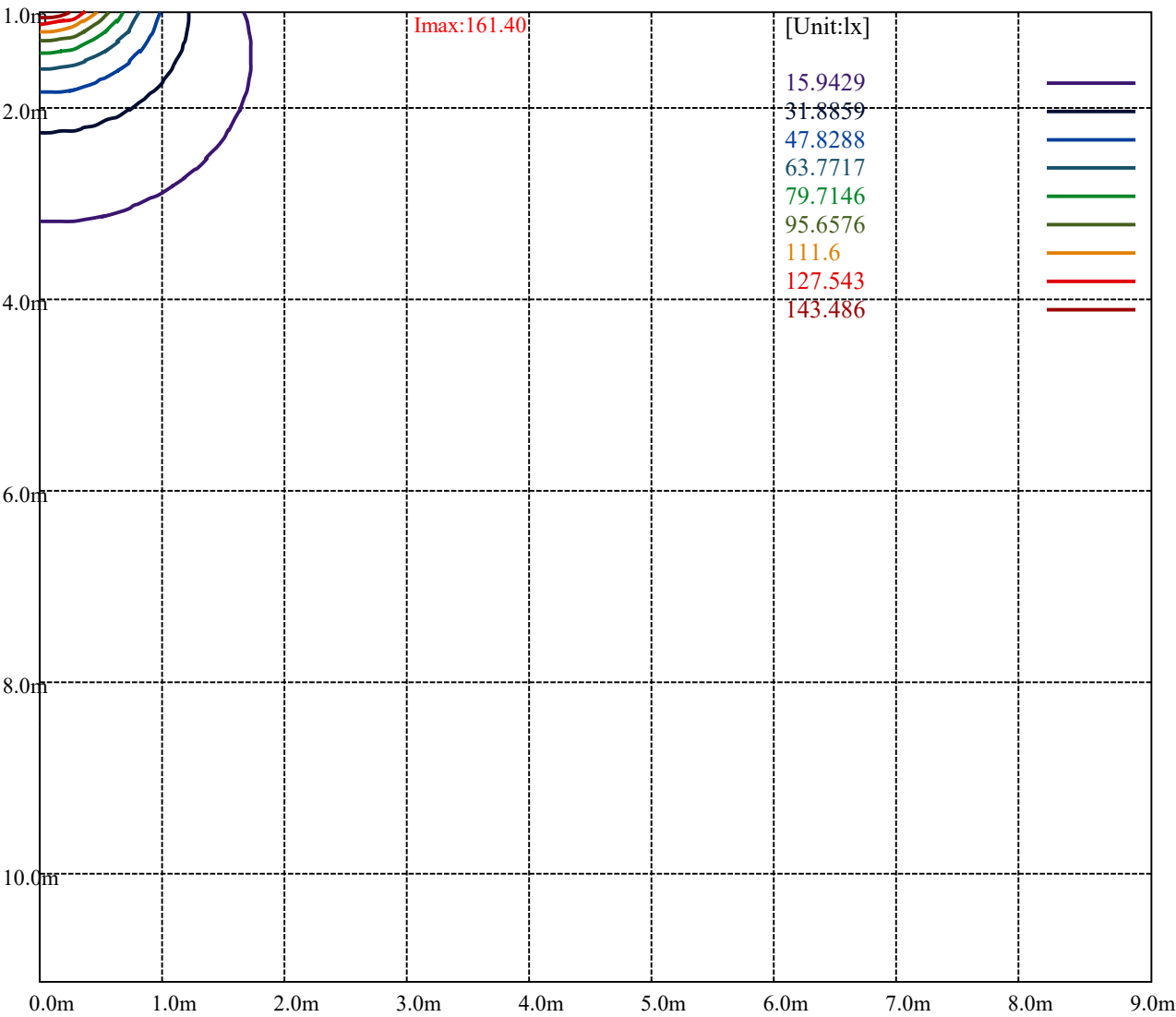


Max , Ave

Beam angle of C0 plane 180.00



(10%Emax) 0.634128	—
(20%Emax) 1.268256	—
(30%Emax) 1.902384	—
(40%Emax) 2.536512	—
(50%Emax) 3.17064	—
(60%Emax) 3.804768	—
(70%Emax) 4.43888	—
(80%Emax) 5.07304	—
(90%Emax) 5.70716	—



Luminance Table

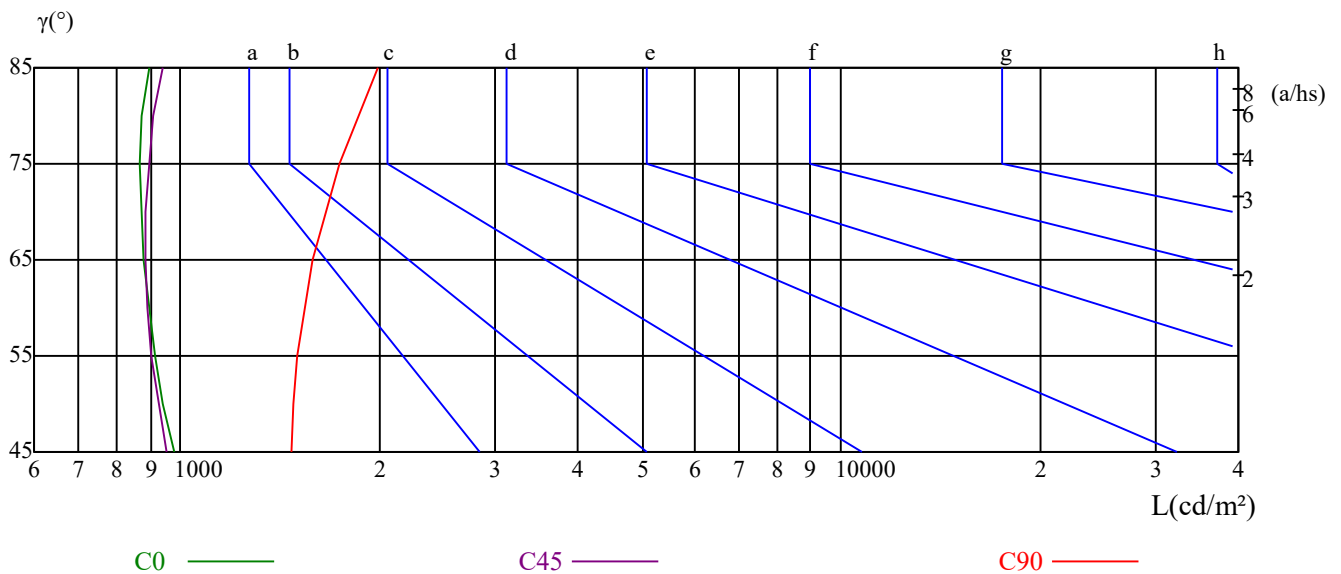
γ	45	50	55	60	65	70	75	80	85
C0	975	940	912	894	878	872	869	876	896
C45	955	926	906	892	885	886	894	912	938
C90	1467	1478	1502	1538	1589	1659	1745	1857	1996

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3547	4580	4209	5876	7453	6745	17751	22010	19732

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	1.08	1.08	1.08	1.00	1.00	1.00	0.85	0.85	0.85	0.71	0.71	0.71	0.59	0.59	0.59	0.53
1	0.88	0.82	0.78	0.81	0.76	0.72	0.68	0.64	0.61	0.56	0.53	0.51	0.45	0.43	0.41	0.36
2	0.75	0.67	0.60	0.69	0.62	0.56	0.57	0.52	0.47	0.47	0.43	0.39	0.37	0.34	0.32	0.27
3	0.64	0.56	0.48	0.59	0.51	0.45	0.49	0.43	0.38	0.40	0.36	0.32	0.32	0.28	0.25	0.21
4	0.56	0.47	0.40	0.52	0.44	0.37	0.43	0.37	0.32	0.35	0.30	0.26	0.28	0.24	0.21	0.17
5	0.50	0.40	0.34	0.46	0.37	0.31	0.38	0.32	0.27	0.31	0.26	0.22	0.25	0.21	0.18	0.14
6	0.44	0.35	0.29	0.41	0.33	0.27	0.34	0.28	0.23	0.28	0.23	0.19	0.22	0.18	0.15	0.12
7	0.40	0.31	0.25	0.37	0.29	0.23	0.31	0.24	0.20	0.25	0.20	0.16	0.20	0.16	0.13	0.10
8	0.36	0.27	0.22	0.33	0.26	0.20	0.28	0.22	0.17	0.23	0.18	0.14	0.19	0.15	0.12	0.09
9	0.33	0.25	0.19	0.30	0.23	0.18	0.26	0.20	0.15	0.21	0.16	0.13	0.17	0.13	0.10	0.08
10	0.30	0.22	0.17	0.28	0.21	0.16	0.23	0.18	0.14	0.20	0.15	0.11	0.16	0.12	0.09	0.07

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	159.43	160.42	161.40	161.31	160.78	160.42	159.25	157.99	156.29
15.0	158.98	159.79	160.78	160.78	160.60	159.97	158.80	157.63	156.29
30.0	158.53	159.61	160.42	160.51	160.33	159.88	159.07	157.90	156.65
45.0	158.53	159.34	160.06	160.51	160.60	160.42	159.88	159.07	158.08
60.0	158.26	159.16	159.79	160.06	160.42	160.78	160.42	159.88	159.70
75.0	158.35	158.53	158.89	159.16	159.34	159.70	159.70	159.61	159.70
90.0	158.17	158.17	158.08	158.08	158.17	158.08	158.08	157.99	157.90
105.0	158.35	157.90	157.81	157.19	156.38	156.20	155.66	155.12	154.58
120.0	158.26	157.81	156.92	155.84	155.03	153.78	152.61	151.62	150.64
135.0	157.81	157.37	156.47	154.32	152.25	150.10	148.21	146.15	144.09
150.0	157.72	157.01	155.75	153.33	147.86	146.96	142.29	137.63	134.04
165.0	157.55	156.83	155.03	152.43	149.11	144.18	137.90	130.99	122.64
180.0	159.43	157.90	154.67	150.73	144.89	137.63	128.12	117.08	105.06
195.0	158.98	156.92	154.58	151.09	145.43	138.97	130.27	121.48	112.42
210.0	158.53	157.01	155.03	152.16	148.04	143.28	137.63	132.24	128.48
225.0	158.53	157.28	155.57	153.51	151.18	148.04	145.16	143.01	141.49
240.0	158.26	157.63	156.56	155.12	153.87	153.15	152.07	150.64	149.65
255.0	158.35	157.99	157.37	156.83	156.29	155.57	154.85	154.05	153.15
270.0	158.17	158.08	158.08	157.63	157.28	157.01	156.47	155.84	155.21
285.0	158.35	158.44	158.53	158.35	158.26	157.72	157.28	156.56	156.56
300.0	158.26	158.53	158.80	158.53	158.35	157.10	156.65	155.66	154.67
315.0	157.81	158.53	158.44	158.35	157.37	156.47	155.30	153.87	152.52
330.0	157.72	158.08	158.26	157.55	156.92	155.93	154.58	152.79	151.00
345.0	157.55	158.17	158.17	157.55	156.92	155.57	154.41	152.61	151.00
360.0	159.43	160.42	161.40	161.31	160.78	160.42	159.25	157.99	156.29
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	154.49	151.98	149.47	147.23	144.27	141.93	138.79	136.37	134.76
15.0	154.14	152.16	149.56	147.05	144.27	141.75	139.78	137.81	136.46
30.0	155.12	153.24	151.35	149.47	147.50	145.16	143.82	141.84	140.41
45.0	157.10	156.02	154.85	153.60	152.34	151.35	150.37	149.83	149.20
60.0	158.98	158.44	157.99	157.46	157.01	156.74	156.29	155.75	155.57
75.0	159.61	159.16	159.25	159.25	158.89	158.80	158.71	158.62	158.35
90.0	157.72	157.55	157.55	157.46	157.46	157.63	157.46	157.46	157.10
105.0	154.05	153.78	153.78	153.06	152.70	152.34	152.25	151.98	151.80
120.0	149.38	148.30	147.14	146.24	145.61	144.54	144.09	143.55	143.19
135.0	142.11	140.14	139.06	137.72	136.28	135.03	133.77	133.23	132.33
150.0	130.72	127.76	125.07	123.09	121.84	121.39	121.30	121.75	121.39
165.0	116.36	111.25	107.39	104.25	103.27	103.98	105.87	108.20	111.16
180.0	94.29	87.12	87.65	91.42	95.55	99.86	104.52	109.19	112.78
195.0	106.05	102.28	100.39	100.66	103.00	106.05	109.55	112.24	113.49
210.0	125.78	123.18	121.57	121.03	120.58	120.40	120.49	120.31	117.80
225.0	140.14	138.52	137.36	136.55	135.56	133.59	132.07	130.00	127.76
240.0	148.39	147.32	145.97	145.16	143.82	142.29	140.50	138.97	137.45
255.0	152.52	151.71	151.00	150.19	149.47	148.84	148.04	147.50	145.52
270.0	154.67	154.23	153.60	153.51	152.25	151.89	151.18	150.28	149.83
285.0	155.21	154.41	153.96	153.24	152.52	151.80	151.26	150.64	149.74
300.0	153.69	152.61	151.44	150.73	149.83	148.66	148.04	147.41	146.51
315.0	151.35	149.65	148.21	146.51	145.07	143.64	142.47	141.49	141.04
330.0	149.20	147.14	144.98	142.65	140.50	138.52	136.82	134.94	133.59
345.0	148.57	145.97	143.46	140.86	138.08	135.83	133.86	132.24	130.90
360.0	154.49	151.98	149.47	147.23	144.27	141.93	138.79	136.37	134.76

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	133.23	128.84	123.18	116.99	111.25	105.24	100.13	95.01	93.76
15.0	135.03	132.33	127.58	122.91	118.07	113.58	109.64	107.75	108.20
30.0	139.60	139.15	138.61	136.28	133.95	132.33	130.99	130.27	130.63
45.0	148.93	148.21	148.12	148.21	148.12	147.95	147.59	147.05	146.69
60.0	155.12	155.03	154.94	154.76	154.67	154.67	154.58	154.41	154.58
75.0	158.44	158.26	157.90	157.72	157.55	157.19	156.74	156.65	156.20
90.0	157.10	156.92	156.65	156.38	156.38	156.02	155.66	155.39	155.21
105.0	151.62	151.26	151.44	151.09	151.09	151.00	151.09	151.00	151.09
120.0	142.65	142.65	142.74	142.74	142.83	143.19	143.82	144.18	144.98
135.0	132.15	132.07	131.98	132.42	132.51	133.50	134.40	135.47	136.73
150.0	120.85	120.85	120.94	121.75	122.38	123.72	124.98	126.32	127.67
165.0	113.49	114.03	114.12	114.12	114.03	113.94	115.11	116.01	116.54
180.0	114.48	113.13	111.43	109.55	109.10	108.56	107.30	106.59	107.48
195.0	111.79	108.11	104.07	100.22	97.43	95.73	94.11	92.14	91.60
210.0	113.76	109.01	104.88	101.20	97.88	94.56	91.51	89.09	87.83
225.0	124.80	120.76	116.99	113.40	110.44	107.30	106.41	102.01	100.13
240.0	134.85	132.69	131.53	126.95	124.17	121.48	119.50	117.53	115.83
255.0	144.00	142.38	140.86	139.06	136.91	134.49	132.78	131.26	129.64
270.0	149.29	148.39	146.96	146.06	144.45	142.56	140.95	139.42	138.35
285.0	149.20	148.57	147.95	147.23	146.42	145.34	144.45	143.37	142.11
300.0	145.70	145.07	144.81	144.27	143.91	143.73	143.28	141.84	140.05
315.0	140.41	139.78	139.60	139.51	139.33	139.60	138.61	136.82	133.86
330.0	132.69	132.60	131.80	130.36	129.10	128.75	128.30	126.68	122.82
345.0	128.66	124.71	120.58	116.72	113.49	111.34	111.25	112.60	110.98
360.0	133.23	128.84	123.18	116.99	111.25	105.24	100.13	95.01	93.76
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	98.42	105.15	110.17	112.24	111.61	110.71	111.43	107.48	87.48
15.0	110.71	115.83	121.93	125.07	125.96	126.59	126.50	125.07	101.65
30.0	131.62	133.14	135.83	138.70	139.60	139.78	138.97	137.63	118.25
45.0	146.87	146.87	147.05	147.59	147.95	147.68	146.24	144.36	133.95
60.0	154.32	154.23	154.05	153.69	152.97	151.62	150.37	148.30	145.34
75.0	155.93	155.48	155.21	154.94	154.41	153.69	152.52	150.64	146.96
90.0	154.94	154.41	153.96	153.87	153.51	153.06	151.89	150.46	148.04
105.0	151.09	151.26	151.35	151.62	151.62	151.44	150.55	149.74	148.12
120.0	145.88	146.42	147.32	148.04	148.57	148.75	148.48	148.12	147.05
135.0	138.08	139.33	140.32	142.02	142.83	144.00	144.18	145.07	144.98
150.0	128.48	130.27	132.51	134.31	135.74	137.09	138.61	140.68	141.84
165.0	118.43	120.40	123.09	124.98	126.41	129.01	131.98	133.59	135.21
180.0	109.73	111.61	113.13	116.36	120.94	109.19	87.21	86.13	126.50
195.0	91.96	93.67	96.09	101.56	105.51	103.27	78.95	93.22	125.34
210.0	86.49	85.86	84.25	88.28	93.13	83.62	77.70	99.77	112.96
225.0	97.08	94.92	94.38	96.90	98.24	92.41	89.90	101.74	95.55
240.0	113.94	112.69	112.33	114.39	116.72	110.26	107.75	96.99	83.26
255.0	128.57	127.40	126.59	127.22	127.49	124.62	119.77	90.62	82.90
270.0	137.45	137.00	135.74	133.50	130.45	127.13	115.38	85.59	95.73
285.0	140.50	138.17	134.31	129.64	123.81	118.61	101.83	78.23	106.85
300.0	136.46	131.53	126.23	119.59	111.79	106.05	90.79	75.27	116.54
315.0	128.03	121.30	115.11	108.11	99.59	93.13	82.45	77.70	122.73
330.0	116.45	110.08	103.71	96.99	90.71	85.68	85.05	87.56	124.62
345.0	107.57	104.07	100.39	96.72	93.58	94.92	97.70	101.47	125.78
360.0	98.42	105.15	110.17	112.24	111.61	110.71	111.43	107.48	87.48

Intensity data(cd)

C/ γ (°)	180.0
0.0	128.21
15.0	88.91
30.0	85.68
45.0	97.88
60.0	114.48
75.0	128.75
90.0	137.54
105.0	142.56
120.0	143.64
135.0	142.83
150.0	140.95
165.0	137.45
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	128.21