
AFX

Client:

LumCAT: ARNS1318LAJD4LB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.167

Lamp flux(lm): 1768.3

Power (W): 19.510

Number of Lamps: 1

PF: 0.973

Length(mm): 400

Width(mm): 200

Phm Type: C

Height(mm): 360

Photometric Results

Lumens(lm): 1768.25, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 90.63

Central intensity(cd): 164.184, Maximum intensity(cd): 165.979

Angle of maximum intensity: C=105.0 γ =50.0

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=1.29 C90_270=1.55

Maximum s/h(1/4): C0_180=1.38 C90_270=1.76

Up flux rate of lamp(%): 47.50%

Down flux rate of lamp(%): 52.50%

Up flux rate of LUM(%): 47.50%

Down flux rate of LUM(%): 52.50%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 27.085%

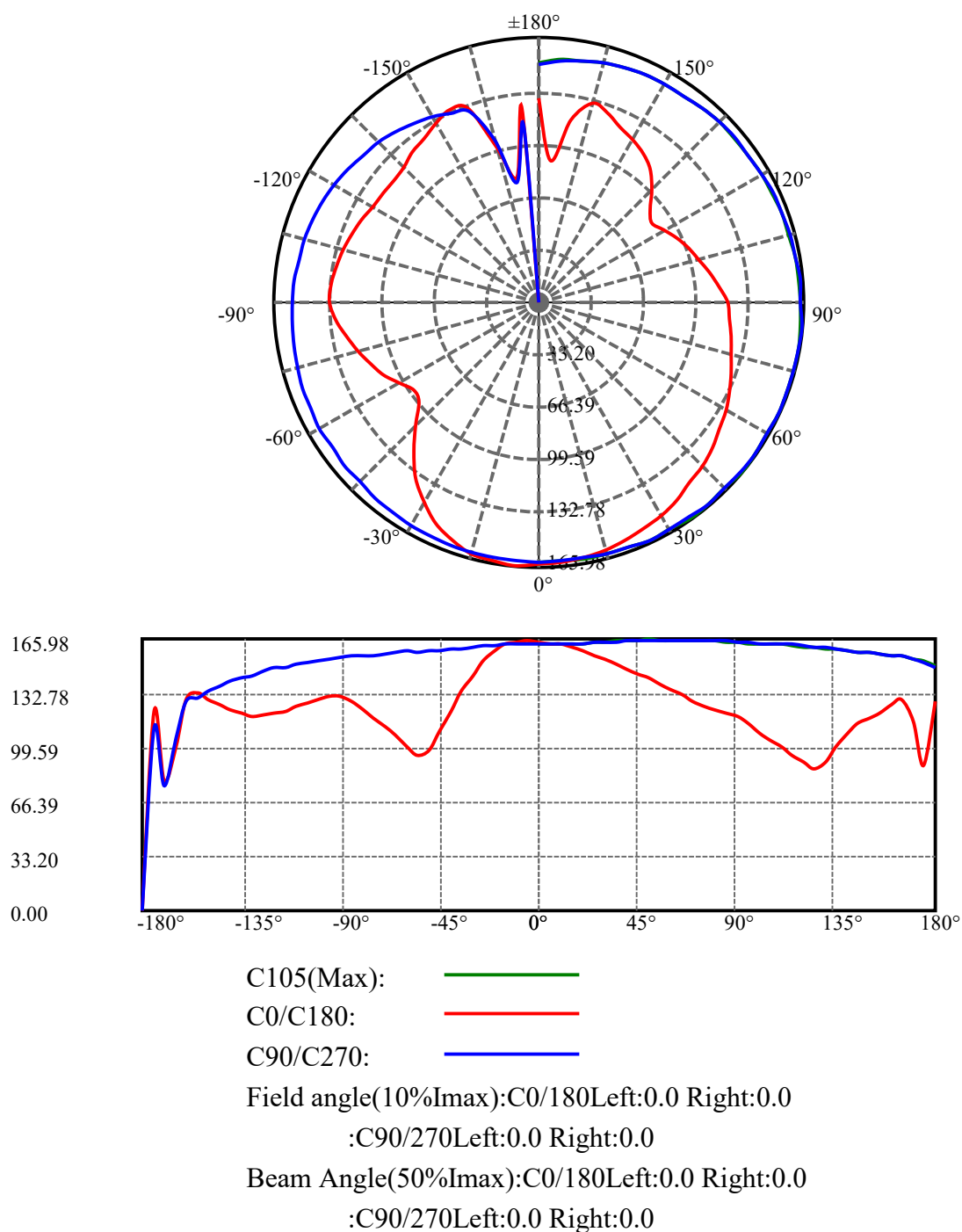
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	163.138	0.000	0	0.00%	0.00%
5.0	163.063	3.900	3.9	0.22%	0.22%
10.0	162.689	11.653	15.553	0.66%	0.88%
15.0	162.016	19.261	34.814	1.09%	1.97%
20.0	160.783	26.603	61.417	1.50%	3.47%
25.0	159.138	33.554	94.971	1.90%	5.37%
30.0	156.970	40.004	134.975	2.26%	7.63%
35.0	154.614	45.883	180.857	2.59%	10.23%
40.0	152.110	51.175	232.032	2.89%	13.12%
45.0	149.643	55.872	287.904	3.16%	16.28%
50.0	147.549	60.052	347.956	3.40%	19.68%
55.0	145.829	63.790	411.746	3.61%	23.29%
60.0	144.820	67.183	478.929	3.80%	27.08%
65.0	143.960	70.203	549.132	3.97%	31.06%
70.0	143.325	72.742	621.875	4.11%	35.17%
75.0	142.951	74.828	696.702	4.23%	39.40%
80.0	142.802	76.459	773.162	4.32%	43.72%
85.0	142.353	77.483	850.645	4.38%	48.11%
90.0	141.568	77.740	928.385	4.40%	52.50%
95.0	140.372	77.197	1005.582	4.37%	56.87%
100.0	138.914	75.889	1081.471	4.29%	61.16%
105.0	137.231	73.889	1155.359	4.18%	65.34%
110.0	135.848	71.379	1226.738	4.04%	69.38%
115.0	134.503	68.455	1295.193	3.87%	73.25%
120.0	133.643	65.187	1360.379	3.69%	76.93%
125.0	132.484	61.514	1421.894	3.48%	80.41%
130.0	131.400	57.377	1479.271	3.24%	83.66%
135.0	130.802	52.982	1532.252	3.00%	86.65%
140.0	130.129	48.313	1580.566	2.73%	89.39%
145.0	129.830	43.372	1623.938	2.45%	91.84%
150.0	129.755	38.226	1662.164	2.16%	94.00%
155.0	129.905	32.860	1695.024	1.86%	95.86%
160.0	128.633	27.116	1722.14	1.53%	97.39%
165.0	121.830	20.642	1742.781	1.17%	98.56%
170.0	118.615	14.263	1757.044	0.81%	99.37%
175.0	129.157	8.864	1765.908	0.50%	99.87%
180.0	66.391	2.338	1768.246	0.13%	100.00%

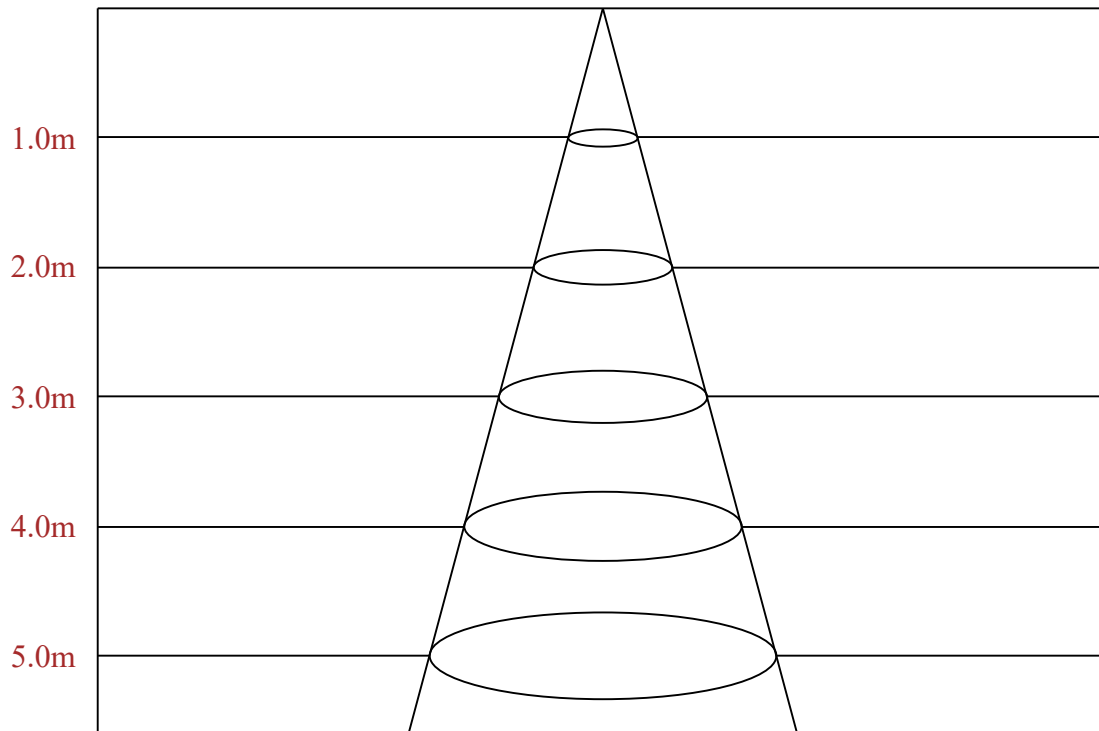
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	134.97	7.63%	7.63%
0-40	232.03	13.12%	13.12%
0-60	478.93	27.08%	27.08%
0-90	928.38	52.50%	52.50%
0-120	1360.38	76.93%	76.93%
0-180	1768.25	100.00%	100.00%
60-90	449.46	25.42%	25.42%
90-120	431.99	24.43%	24.43%
90-130	550.89	31.15%	31.15%
90-150	733.78	41.50%	41.50%
90-180	837.52	47.36%	47.36%
0-124.41	1414.60	80.00%	80.00%

ZONAL LUMEN SUMMARY

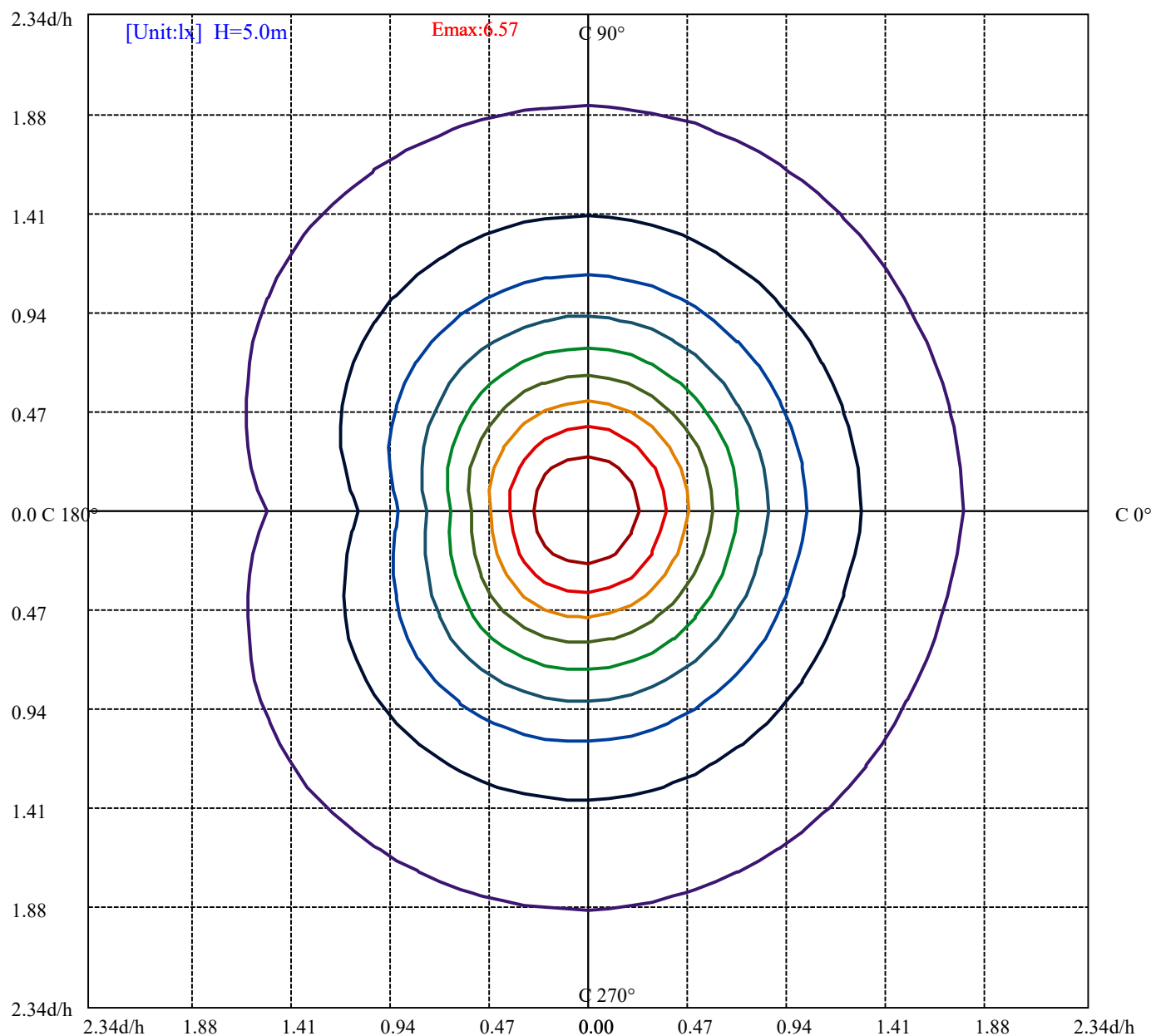
0-10	15.55
10-20	45.86
20-30	73.56
30-40	97.06
40-50	115.92
50-60	130.97
60-70	142.95
70-80	151.29
80-90	155.22
90-100	153.09
100-110	145.27
110-120	133.64
120-130	118.89
130-140	101.30
140-150	81.60
150-160	59.98
160-170	34.90
170-180	8.86



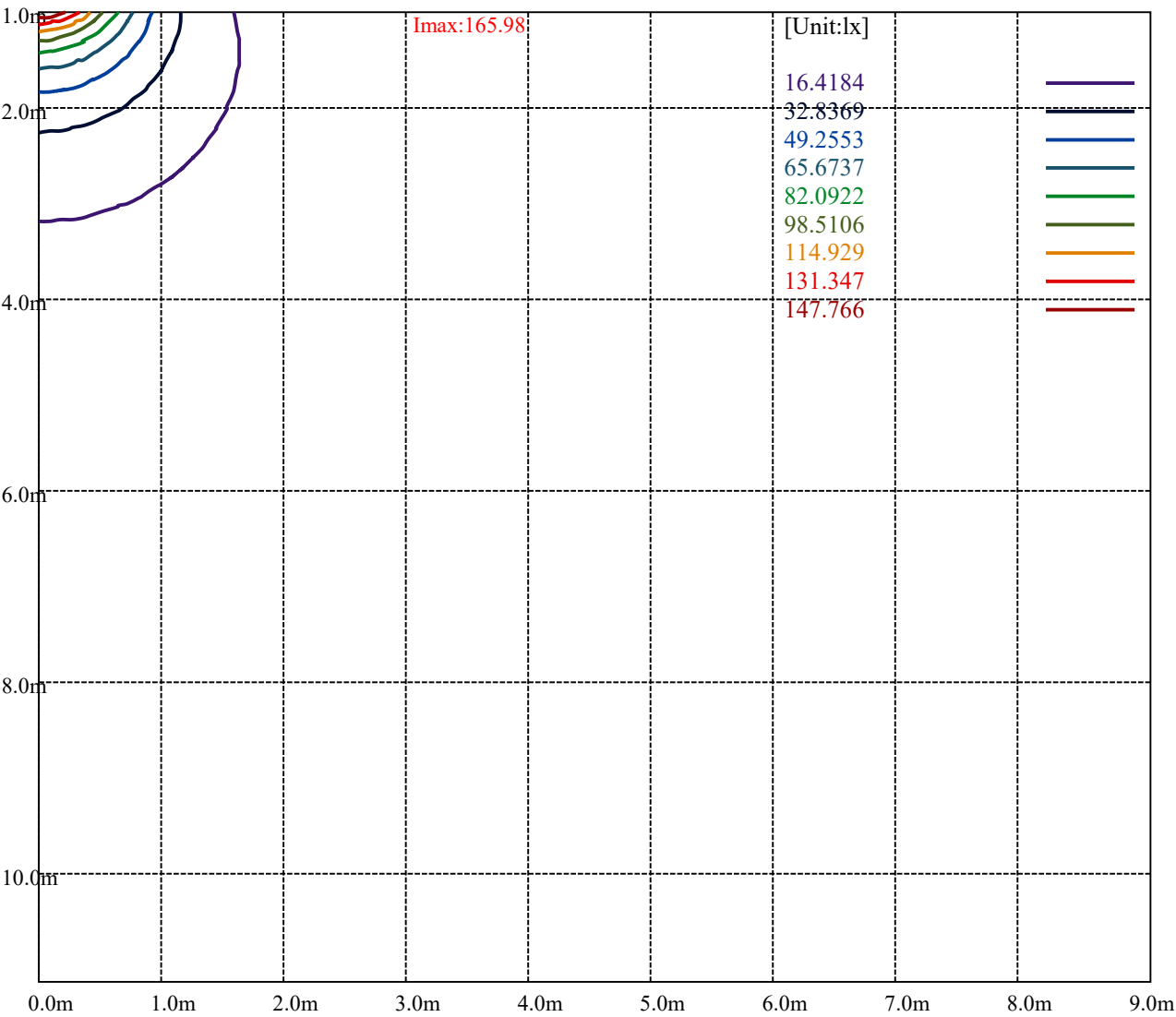


Max , Ave

Beam angle of C105 plane 348.88



(10%Emax) 0.656736	
(20%Emax) 1.313472	
(30%Emax) 1.970208	
(40%Emax) 2.626944	
(50%Emax) 3.28368	
(60%Emax) 3.94042	
(70%Emax) 4.59716	
(80%Emax) 5.25388	
(90%Emax) 5.91064	



Luminance Table

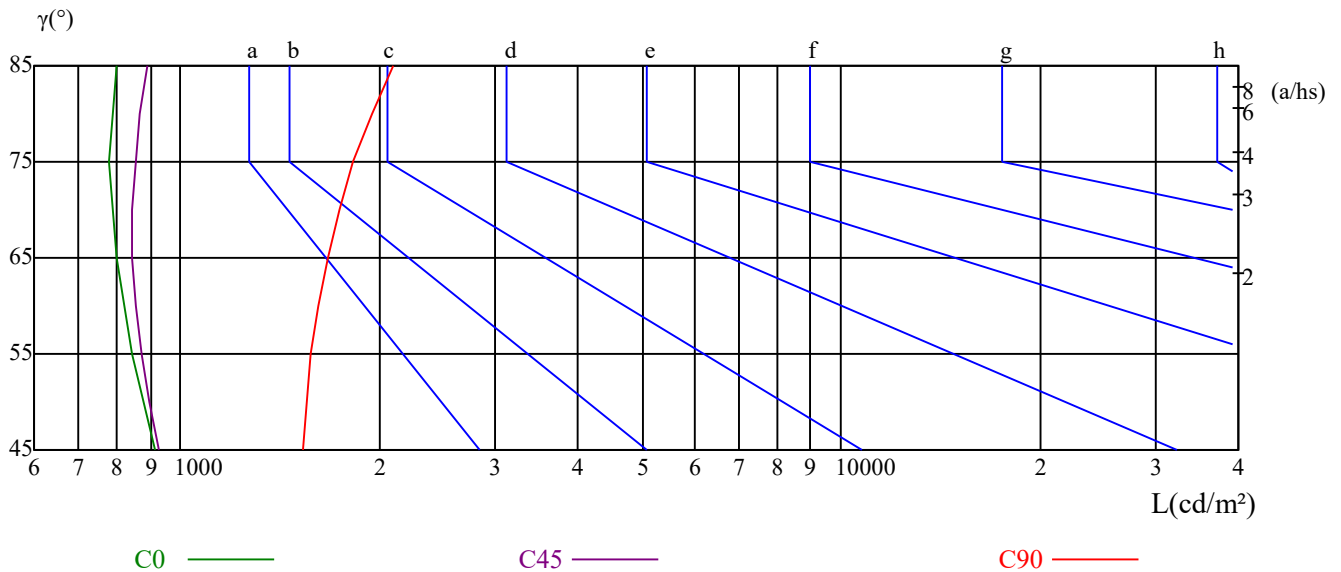
γ	45	50	55	60	65	70	75	80	85
C0	912	876	843	823	803	789	780	789	799
C45	927	895	871	854	844	845	853	868	891
C90	1536	1549	1574	1613	1666	1737	1829	1947	2098

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3529	4777	4372	5850	7756	7030	17757	22969	20556

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	0.58	0.58	0.58	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

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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	164.18	163.29	162.39	160.60	158.80	156.11	153.42	150.73	147.14
15.0	164.18	163.29	162.39	160.60	158.80	156.11	154.32	150.73	148.04
30.0	164.18	163.29	162.39	160.60	159.70	157.90	155.21	153.42	150.73
45.0	164.18	163.29	162.39	161.49	160.60	159.70	157.90	156.11	154.32
60.0	163.29	163.29	162.39	162.39	161.49	161.49	160.60	159.70	158.80
75.0	163.29	162.39	162.39	162.39	163.29	163.29	163.29	163.29	162.39
90.0	162.39	162.39	162.39	163.29	163.29	164.18	164.18	164.18	165.08
105.0	162.39	162.39	163.29	163.29	163.29	164.18	164.18	165.08	165.08
120.0	162.39	163.29	163.29	164.18	164.18	163.29	164.18	164.18	163.29
135.0	163.29	163.29	164.18	164.18	163.29	161.49	160.60	159.70	158.80
150.0	162.39	163.29	164.18	163.29	160.60	159.70	157.01	152.52	148.93
165.0	161.49	163.29	164.18	163.29	161.49	157.90	152.52	146.24	138.17
180.0	164.18	165.08	164.18	163.29	158.80	152.52	143.55	133.68	122.02
195.0	164.18	164.18	164.18	163.29	159.70	154.32	148.04	139.96	131.89
210.0	164.18	165.08	164.18	163.29	161.49	157.01	153.42	148.93	146.24
225.0	164.18	164.18	164.18	163.29	162.39	160.60	159.70	158.80	157.01
240.0	163.29	164.18	163.29	163.29	163.29	163.29	162.39	161.49	161.49
255.0	163.29	163.29	162.39	162.39	162.39	162.39	161.49	161.49	160.60
270.0	162.39	162.39	162.39	162.39	161.49	161.49	160.60	159.70	159.70
285.0	162.39	162.39	162.39	161.49	160.60	159.70	158.80	157.90	157.90
300.0	162.39	162.39	161.49	160.60	160.60	157.90	156.11	155.21	153.42
315.0	163.29	161.49	160.60	158.80	157.90	156.11	154.32	151.62	149.83
330.0	162.39	161.49	159.70	158.80	157.01	154.32	151.62	148.93	146.24
345.0	161.49	160.60	159.70	157.90	155.21	153.42	149.83	147.14	143.55
360.0	164.18	163.29	162.39	160.60	158.80	156.11	153.42	150.73	147.14

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	144.45	141.75	138.17	135.47	131.89	128.30	124.71	122.91	120.22
15.0	145.34	141.75	139.06	136.37	132.78	129.19	127.40	125.61	123.81
30.0	148.04	145.34	142.65	139.96	137.27	135.47	133.68	130.99	130.09
45.0	152.52	150.73	148.93	147.14	145.34	144.45	143.55	142.65	141.75
60.0	157.90	157.01	156.11	155.21	154.32	153.42	152.52	152.52	152.52
75.0	162.39	162.39	162.39	161.49	161.49	161.49	160.60	160.60	160.60
90.0	165.08	165.08	165.08	165.08	165.08	165.08	165.08	165.08	165.08
105.0	165.08	165.98	165.08	165.08	165.08	165.08	165.08	165.08	164.18
120.0	163.29	163.29	162.39	162.39	162.39	161.49	160.60	160.60	159.70
135.0	157.90	157.01	156.11	156.11	155.21	154.32	153.42	152.52	151.62
150.0	146.24	144.45	142.65	140.86	139.96	139.96	139.96	140.86	141.75
165.0	130.99	124.71	121.12	118.43	116.63	118.43	121.12	123.81	128.30
180.0	109.46	97.79	95.10	100.48	106.76	112.15	117.53	122.91	127.40
195.0	125.61	121.12	118.43	117.53	119.33	121.12	124.71	128.30	130.99
210.0	143.55	141.75	139.96	139.06	138.17	139.06	139.96	139.96	137.27
225.0	156.11	154.32	153.42	153.42	152.52	150.73	149.83	148.04	145.34
240.0	160.60	159.70	158.80	157.90	157.01	156.11	155.21	153.42	151.62
255.0	160.60	160.60	159.70	159.70	158.80	157.90	157.90	157.01	155.21
270.0	158.80	158.80	157.90	158.80	157.90	157.01	156.11	156.11	155.21
285.0	156.11	155.21	155.21	154.32	153.42	152.52	152.52	151.62	151.62
300.0	151.62	150.73	148.93	148.04	147.14	146.24	144.45	144.45	143.55
315.0	147.14	144.45	142.65	139.96	138.17	137.27	135.47	135.47	134.58
330.0	142.65	139.96	136.37	132.78	130.99	128.30	126.50	125.61	124.71
345.0	139.96	137.27	133.68	130.09	127.40	124.71	122.02	121.12	119.33
360.0	144.45	141.75	138.17	135.47	131.89	128.30	124.71	122.91	120.22

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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	118.43	113.94	108.56	104.07	99.59	95.10	90.62	86.13	90.62
15.0	122.91	120.22	116.63	113.04	110.35	107.66	106.76	107.66	111.25
30.0	129.19	129.19	129.19	128.30	127.40	127.40	127.40	129.19	130.09
45.0	141.75	141.75	141.75	141.75	142.65	142.65	143.55	144.45	145.34
60.0	151.62	152.52	151.62	151.62	151.62	152.52	152.52	152.52	152.52
75.0	160.60	159.70	159.70	159.70	158.80	158.80	158.80	157.90	157.90
90.0	164.18	164.18	163.29	163.29	162.39	162.39	161.49	160.60	160.60
105.0	164.18	163.29	163.29	162.39	162.39	161.49	160.60	160.60	159.70
120.0	158.80	158.80	157.90	157.90	157.01	157.01	157.01	157.01	156.11
135.0	150.73	150.73	149.83	149.83	149.83	149.83	148.93	149.83	149.83
150.0	140.86	139.96	139.96	139.96	139.96	139.96	140.86	141.75	142.65
165.0	131.89	133.68	133.68	133.68	132.78	132.78	131.89	131.89	131.89
180.0	130.99	130.99	129.19	126.50	124.71	122.02	120.22	119.33	118.43
195.0	130.09	126.50	122.91	118.43	114.84	111.25	107.66	104.07	102.28
210.0	132.78	128.30	122.91	117.53	112.15	107.66	103.18	98.69	95.10
225.0	141.75	137.27	133.68	129.19	124.71	120.22	119.33	112.15	107.66
240.0	148.93	147.14	146.24	139.96	137.27	133.68	130.99	126.50	122.02
255.0	154.32	152.52	150.73	148.93	146.24	144.45	142.65	139.06	135.47
270.0	154.32	153.42	152.52	151.62	150.73	148.93	148.04	146.24	143.55
285.0	150.73	149.83	149.83	148.93	148.93	148.04	147.14	146.24	146.24
300.0	143.55	142.65	143.55	143.55	143.55	143.55	143.55	143.55	139.96
315.0	133.68	134.58	134.58	134.58	135.47	135.47	136.37	136.37	130.09
330.0	124.71	124.71	122.91	122.02	122.02	122.02	122.91	122.02	118.43
345.0	116.63	113.04	109.46	106.76	104.97	103.18	104.97	105.87	105.87
360.0	118.43	113.94	108.56	104.07	99.59	95.10	90.62	86.13	90.62
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	100.48	108.56	113.94	117.53	121.12	125.61	129.19	115.74	88.82
15.0	115.74	122.02	128.30	132.78	135.47	139.06	139.96	137.27	105.87
30.0	132.78	135.47	139.06	142.65	145.34	147.14	147.14	148.04	128.30
45.0	145.34	147.14	148.93	149.83	151.62	152.52	151.62	152.52	146.24
60.0	153.42	153.42	154.32	154.32	155.21	155.21	154.32	153.42	152.52
75.0	157.90	157.01	157.01	157.01	156.11	155.21	154.32	153.42	151.62
90.0	159.70	158.80	157.90	157.90	157.01	156.11	155.21	153.42	151.62
105.0	159.70	158.80	157.90	157.90	157.01	156.11	155.21	153.42	152.52
120.0	156.11	156.11	157.01	157.01	157.01	156.11	155.21	153.42	152.52
135.0	150.73	150.73	151.62	151.62	151.62	152.52	152.52	152.52	151.62
150.0	142.65	142.65	143.55	144.45	146.24	147.14	148.04	148.93	148.93
165.0	131.89	133.68	135.47	137.27	139.06	140.86	142.65	145.34	145.34
180.0	120.22	122.91	125.61	129.19	132.78	129.19	100.48	79.85	122.02
195.0	104.07	105.87	109.46	113.94	120.22	121.12	84.34	87.92	128.30
210.0	92.41	92.41	93.31	98.69	104.07	91.51	78.95	93.31	117.53
225.0	101.38	96.00	92.41	93.31	96.00	87.92	82.54	95.10	96.90
240.0	117.53	113.04	110.35	109.46	107.66	101.38	97.79	87.03	84.34
255.0	132.78	129.19	126.50	124.71	124.71	119.33	106.76	78.05	92.41
270.0	141.75	139.96	137.27	133.68	130.09	127.40	104.97	76.26	111.25
285.0	143.55	139.06	134.58	129.19	123.81	120.22	95.10	77.16	123.81
300.0	135.47	130.09	123.81	115.74	108.56	103.18	86.13	84.34	132.78
315.0	123.81	117.53	111.25	102.28	93.31	89.72	85.23	94.20	135.47
330.0	112.15	105.87	100.48	96.90	95.10	97.79	99.59	105.87	139.06
345.0	107.66	106.76	105.87	106.76	108.56	114.84	116.63	120.22	139.96
360.0	100.48	108.56	113.94	117.53	121.12	125.61	129.19	115.74	88.82

Intensity data(cd)

C/ γ (°)	180.0
0.0	127.40
15.0	102.28
30.0	93.31
45.0	108.56
60.0	128.30
75.0	142.65
90.0	148.93
105.0	149.83
120.0	148.93
135.0	148.93
150.0	148.04
165.0	146.24
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	127.40