

LCCERT

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Jiangmen OGJG Lighting and Electronic Co., Ltd

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LumCAT: OG-LED220-NWPC(4000K)

Luminaire: Direct Linear Ambient Luminaires

Report No:

Voltage(V): 120.0000

Test No: LCZP16090150

Current(A): 0.3370

LampCAT: LED

Power (W): 40.2400

Lamp flux(lm): 4667.8

PF: 0.9950

Number of Lamps: 1

Ballast type:

Length(mm): 1170

Width(mm): 95

Phm Type: C

Height(mm): 28

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Photometric Results

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Lumens(lm): 4667.81

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 116.00

Central intensity(cd): 1420.858

Maximum intensity(cd): 1420.858

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=121.2

[C90/270]Total=100.8

Field angle(10%Imax): [C0/180]Total=229.9

[C90/270]Total=156.0

Maximum s/h(1/2): C0\_180=1.27 C90\_270=1.19

Maximum s/h(1/4): C0\_180=1.40 C90\_270=1.30

Up flux rate of lamp(%): 9.67%

Down flux rate of lamp(%): 90.33%

Up flux rate of LUM(%): 9.67%

Down flux rate of LUM(%): 90.33%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 66.940%

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Equipment: LC-I-902 GMS-2000  
Temperature(°C): 25.0

Date: 2016-10-11  
Humidity(%): 65.0%

Operator: Nick  
Distance(m): 29.54

Zonal flux distribution table

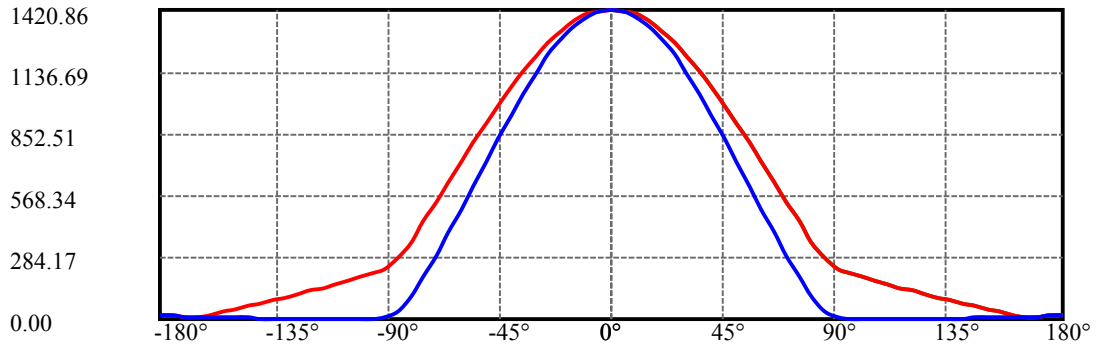
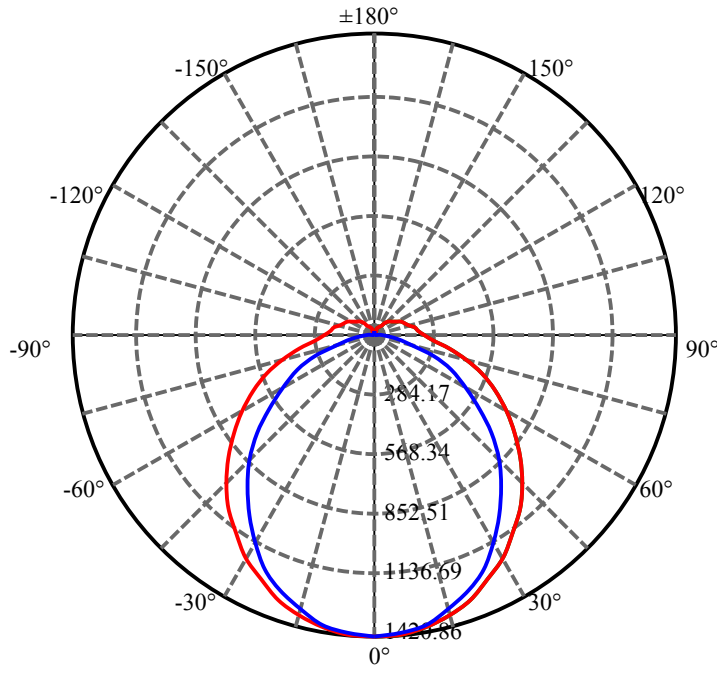
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1420.858	.000	.000	.000%	.000%
5.0	1413.296	33.882	33.882	.726%	.726%
10.0	1393.147	100.395	134.277	2.151%	2.877%
15.0	1356.932	163.133	297.410	3.495%	6.372%
20.0	1307.810	219.612	517.022	4.705%	11.076%
25.0	1246.256	267.874	784.896	5.739%	16.815%
30.0	1173.286	306.195	1091.091	6.560%	23.375%
35.0	1091.228	333.466	1424.557	7.144%	30.519%
40.0	1004.623	349.677	1774.234	7.491%	38.010%
45.0	912.022	354.882	2129.116	7.603%	45.613%
50.0	817.857	349.547	2478.663	7.488%	53.101%
55.0	721.519	334.712	2813.375	7.171%	60.272%
60.0	624.997	311.243	3124.618	6.668%	66.940%
65.0	527.899	280.271	3404.889	6.004%	72.944%
70.0	432.919	243.285	3648.174	5.212%	78.156%
75.0	340.338	202.117	3850.291	4.330%	82.486%
80.0	253.509	158.897	4009.188	3.404%	85.890%
85.0	182.353	118.434	4127.623	2.537%	88.427%
90.0	141.223	88.598	4216.220	1.898%	90.325%
95.0	124.669	72.803	4289.023	1.560%	91.885%
100.0	112.948	64.566	4353.590	1.383%	93.268%
105.0	102.062	57.531	4411.121	1.233%	94.501%
110.0	91.900	50.699	4461.819	1.086%	95.587%
115.0	82.355	44.122	4505.942	.945%	96.532%
120.0	73.063	37.782	4543.724	.809%	97.342%
125.0	63.626	31.595	4575.319	.677%	98.019%
130.0	54.080	25.593	4600.913	.548%	98.567%
135.0	44.938	20.008	4620.921	.429%	98.995%
140.0	36.851	15.144	4636.065	.324%	99.320%
145.0	29.381	11.050	4647.115	.237%	99.557%
150.0	22.602	7.655	4654.770	.164%	99.721%
155.0	17.094	5.024	4659.793	.108%	99.828%
160.0	12.966	3.153	4662.946	.068%	99.896%
165.0	11.994	2.057	4665.003	.044%	99.940%
170.0	13.085	1.488	4666.491	.032%	99.972%
175.0	14.066	.971	4667.462	.021%	99.993%
180.0	14.902	.346	4667.809	.007%	100.000%

ZONAL LUMEN SUMMARY

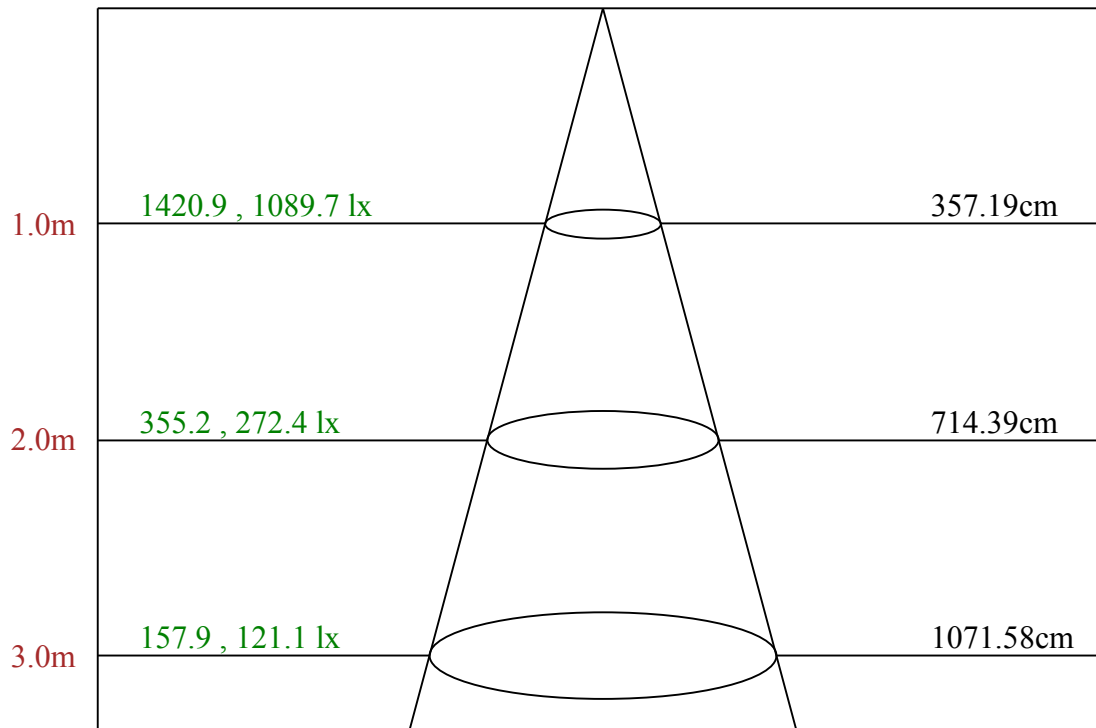
Zone	Lumens	%Lamp	%Fixt
0-30	1091.09	23.37%	23.37%
0-40	1774.23	38.01%	38.01%
0-60	3124.62	66.94%	66.94%
0-90	4216.22	90.33%	90.33%
0-120	4543.72	97.34%	97.34%
0-180	4667.81	100.00%	100.00%
60-90	1402.85	30.05%	30.05%
90-120	416.10	8.91%	8.91%
90-130	473.29	10.14%	10.14%
90-150	527.15	11.29%	11.29%
90-180	539.84	11.57%	11.57%
0-72.13	3734.25	80.00%	80.00%

ZONAL LUMEN SUMMARY

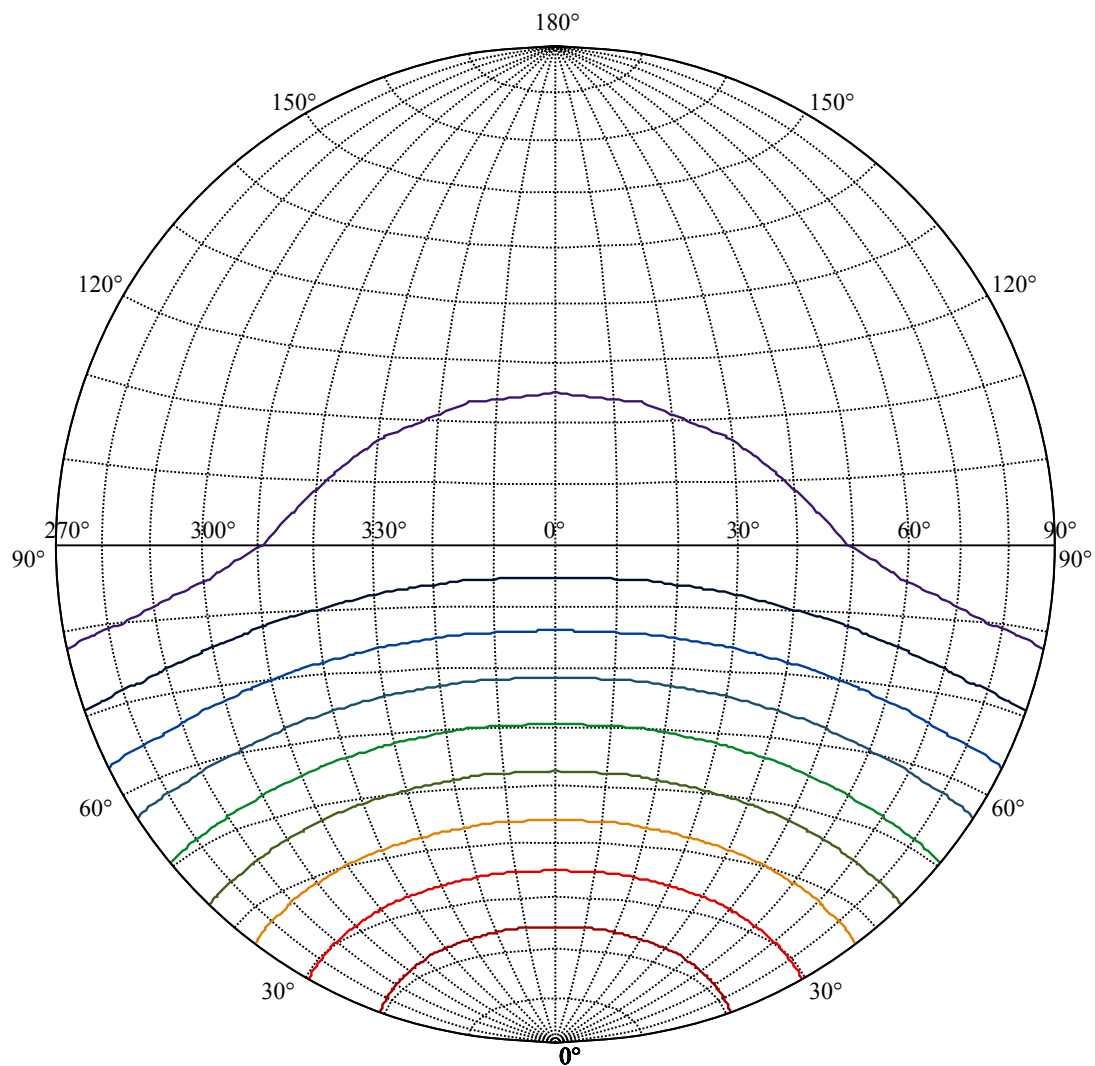
0-10	134.28
10-20	382.75
20-30	574.07
30-40	683.14
40-50	704.43
50-60	645.95
60-70	523.56
70-80	361.01
80-90	207.03
90-100	137.37
100-110	108.23
110-120	81.90
120-130	57.19
130-140	35.15
140-150	18.71
150-160	8.18
160-170	3.54
170-180	0.97



C0(Max): ———  
 C0/C180: ———  
 C90/C270: ———  
 Field angle(10%Imax):C0/180Left:115.0 Right:115.0  
                                   :C90/270Left:78.0 Right:78.0  
 Beam Angle(50%Imax):C0/180Left:60.6 Right:60.6  
                                   :C90/270Left:50.4 Right:50.4



Max , Ave      Beam angle of C0plane 121.51



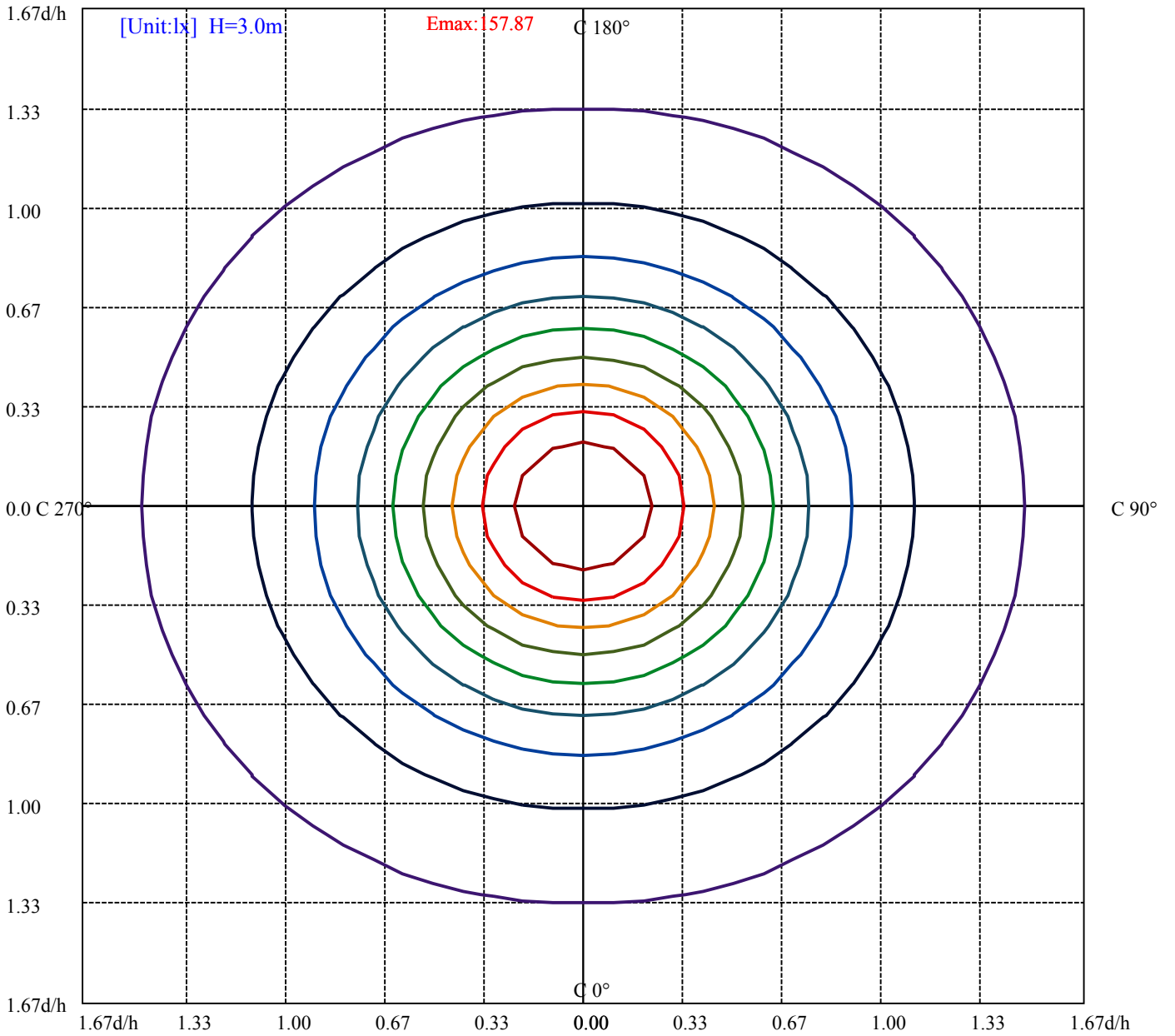
House

[Unit:cd]

Road

**Imax:1420.86**

(10%Imax) 142.086	—
(20%Imax) 284.172	—
(30%Imax) 426.257	—
(40%Imax) 568.343	—
(50%Imax) 710.429	—
(60%Imax) 852.515	—
(70%Imax) 994.6	—
(80%Imax) 1136.69	—
(90%Imax) 1278.77	—



(10%Emax) 15.78733	—
(20%Emax) 31.57467	—
(30%Emax) 47.36189	—
(40%Emax) 63.14922	—
(50%Emax) 78.93655	—
(60%Emax) 94.72389	—
(70%Emax) 110.5111	—
(80%Emax) 126.2989	—
(90%Emax) 142.0856	—

Luminance Limiting Curve(no luminous side)

Luminance Table

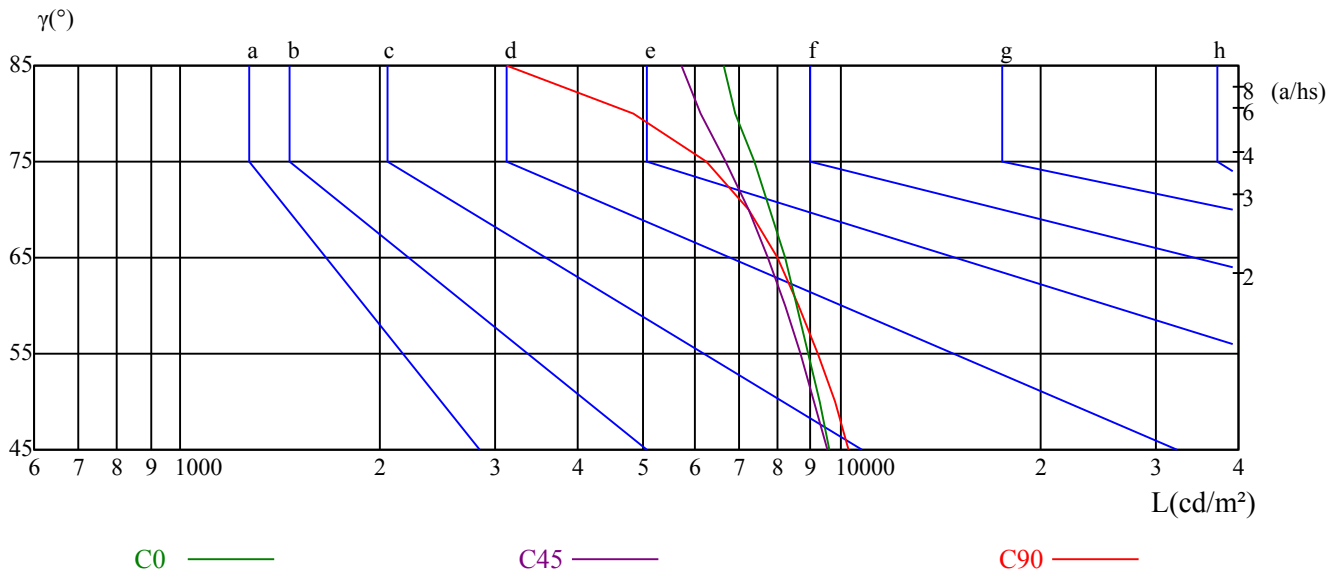
$\gamma$	45	50	55	60	65	70	75	80	85
C0	9632	9308	8938	8591	8214	7817	7380	6931	6629
C45	9549	9119	8671	8223	7747	7238	6699	6129	5726
C90	10282	9793	9246	8655	7996	7258	6252	4858	3126

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
13406	8406	11491	15498	6810	12332	28960	3981	20473

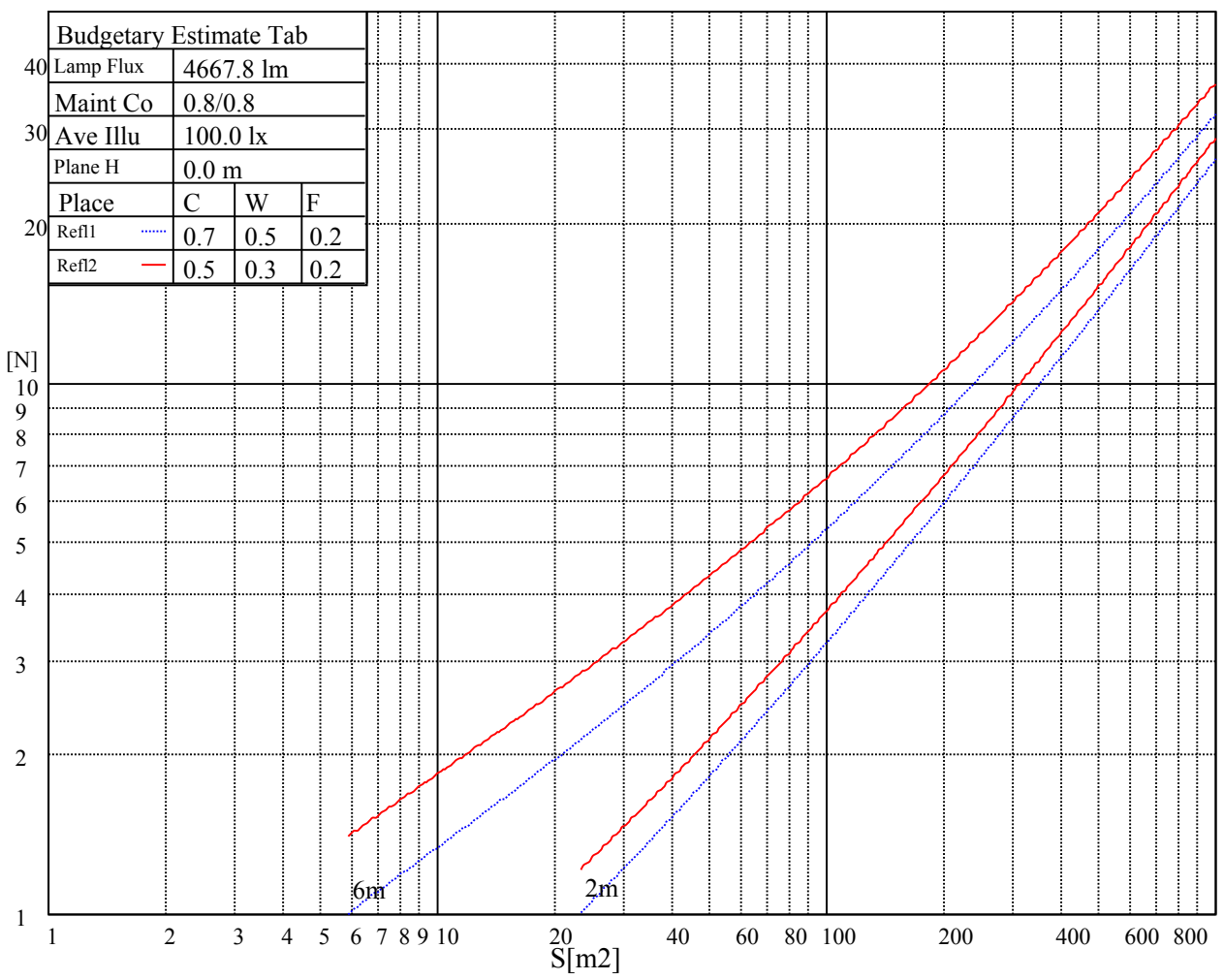
Glare Table

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







RHOCC	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	1.13	1.13	1.13	1.06	1.06	1.06	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	1.00	0.95	0.91	0.97	0.92	0.89	0.91	0.87	0.84	0.85	0.82	0.80	0.80	0.78	0.76	0.73
2	0.87	0.79	0.73	0.84	0.77	0.72	0.79	0.73	0.69	0.74	0.69	0.66	0.70	0.66	0.63	0.60
3	0.76	0.67	0.61	0.73	0.66	0.59	0.69	0.62	0.57	0.65	0.59	0.55	0.61	0.57	0.53	0.50
4	0.67	0.58	0.51	0.65	0.57	0.50	0.61	0.54	0.48	0.58	0.52	0.47	0.54	0.49	0.45	0.43
5	0.60	0.51	0.44	0.58	0.50	0.43	0.55	0.47	0.42	0.52	0.45	0.40	0.49	0.44	0.39	0.37
6	0.54	0.45	0.38	0.52	0.44	0.38	0.49	0.42	0.37	0.47	0.40	0.35	0.44	0.39	0.34	0.32
7	0.49	0.40	0.34	0.47	0.39	0.33	0.45	0.38	0.32	0.43	0.36	0.31	0.41	0.35	0.30	0.28
8	0.44	0.36	0.30	0.43	0.35	0.30	0.41	0.34	0.29	0.39	0.33	0.28	0.37	0.32	0.27	0.25
9	0.41	0.32	0.27	0.40	0.32	0.27	0.38	0.31	0.26	0.36	0.30	0.25	0.34	0.29	0.25	0.23
10	0.37	0.30	0.24	0.37	0.29	0.24	0.35	0.28	0.23	0.33	0.27	0.23	0.32	0.26	0.22	0.21

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	1420.86	1414.82	1399.28	1368.63	1328.06	1271.95	1208.51	1136.43	1063.49
15.0	1420.86	1414.98	1399.28	1368.78	1324.32	1271.80	1206.85	1133.63	1056.71
30.0	1420.86	1413.67	1395.38	1362.92	1316.75	1261.21	1193.05	1116.82	1035.80
45.0	1420.86	1414.09	1394.23	1359.54	1310.88	1249.79	1178.00	1097.26	1010.21
60.0	1420.86	1411.27	1389.69	1349.79	1298.35	1232.30	1155.57	1069.03	977.03
75.0	1420.86	1412.75	1387.33	1345.04	1289.82	1219.25	1137.52	1045.70	949.28
90.0	1420.86	1411.22	1386.67	1342.41	1285.43	1214.43	1128.97	1033.43	933.94
105.0	1420.86	1412.75	1387.33	1345.04	1289.82	1219.25	1137.52	1045.70	949.28
120.0	1420.86	1411.27	1389.69	1349.79	1298.35	1232.30	1155.57	1069.03	977.03
135.0	1420.86	1414.09	1394.23	1359.54	1310.88	1249.79	1178.00	1097.26	1010.21
150.0	1420.86	1413.67	1395.38	1362.92	1316.75	1261.21	1193.05	1116.82	1035.80
165.0	1420.86	1414.98	1399.28	1368.78	1324.32	1271.80	1206.85	1133.63	1056.71
180.0	1420.86	1414.82	1399.28	1368.63	1328.06	1271.95	1208.51	1136.43	1063.49
195.0	1420.86	1414.98	1399.28	1368.78	1324.32	1271.80	1206.85	1133.63	1056.71
210.0	1420.86	1413.67	1395.38	1362.92	1316.75	1261.21	1193.05	1116.82	1035.80
225.0	1420.86	1414.09	1394.23	1359.54	1310.88	1249.79	1178.00	1097.26	1010.21
240.0	1420.86	1411.27	1389.69	1349.79	1298.35	1232.30	1155.57	1069.03	977.03
255.0	1420.86	1412.75	1387.33	1345.04	1289.82	1219.25	1137.52	1045.70	949.28
270.0	1420.86	1411.22	1386.67	1342.41	1285.43	1214.43	1128.97	1033.43	933.94
285.0	1420.86	1412.75	1387.33	1345.04	1289.82	1219.25	1137.52	1045.70	949.28
300.0	1420.86	1411.27	1389.69	1349.79	1298.35	1232.30	1155.57	1069.03	977.03
315.0	1420.86	1414.09	1394.23	1359.54	1310.88	1249.79	1178.00	1097.26	1010.21
330.0	1420.86	1413.67	1395.38	1362.92	1316.75	1261.21	1193.05	1116.82	1035.80
345.0	1420.86	1414.98	1399.28	1368.78	1324.32	1271.80	1206.85	1133.63	1056.71
360.0	1420.86	1414.82	1399.28	1368.63	1328.06	1271.95	1208.51	1136.43	1063.49
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	980.18	898.61	809.70	721.22	629.72	537.79	445.85	357.37	280.55
15.0	974.55	890.43	804.14	714.57	621.29	530.43	437.15	349.33	273.49
30.0	950.21	861.57	772.06	681.02	588.68	495.25	404.21	316.23	243.92
45.0	919.65	826.49	730.70	635.36	539.79	445.53	354.77	269.45	198.33
60.0	879.15	779.31	678.38	578.32	480.22	383.65	292.09	206.64	139.28
75.0	844.76	740.23	634.17	529.64	425.11	326.72	232.93	147.47	79.54
90.0	827.45	719.63	609.63	500.94	394.88	294.08	195.90	106.50	38.57
105.0	844.76	740.23	634.17	529.64	425.11	326.72	232.93	147.47	79.54
120.0	879.15	779.31	678.38	578.32	480.22	383.65	292.09	206.64	139.28
135.0	919.65	826.49	730.70	635.36	539.79	445.53	354.77	269.45	198.33
150.0	950.21	861.57	772.06	681.02	588.68	495.25	404.21	316.23	243.92
165.0	974.55	890.43	804.14	714.57	621.29	530.43	437.15	349.33	273.49
180.0	980.18	898.61	809.70	721.22	629.72	537.79	445.85	357.37	280.55
195.0	974.55	890.43	804.14	714.57	621.29	530.43	437.15	349.33	273.49
210.0	950.21	861.57	772.06	681.02	588.68	495.25	404.21	316.23	243.92
225.0	919.65	826.49	730.70	635.36	539.79	445.53	354.77	269.45	198.33
240.0	879.15	779.31	678.38	578.32	480.22	383.65	292.09	206.64	139.28
255.0	844.76	740.23	634.17	529.64	425.11	326.72	232.93	147.47	79.54
270.0	827.45	719.63	609.63	500.94	394.88	294.08	195.90	106.50	38.57
285.0	844.76	740.23	634.17	529.64	425.11	326.72	232.93	147.47	79.54
300.0	879.15	779.31	678.38	578.32	480.22	383.65	292.09	206.64	139.28
315.0	919.65	826.49	730.70	635.36	539.79	445.53	354.77	269.45	198.33
330.0	950.21	861.57	772.06	681.02	588.68	495.25	404.21	316.23	243.92
345.0	974.55	890.43	804.14	714.57	621.29	530.43	437.15	349.33	273.49
360.0	980.18	898.61	809.70	721.22	629.72	537.79	445.85	357.37	280.55

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	233.07	209.33	190.34	172.64	156.67	142.00	128.19	113.94	100.57
15.0	225.77	202.89	184.36	166.93	151.46	136.64	122.91	109.61	95.67
30.0	199.49	177.93	162.03	146.79	132.42	119.57	107.81	95.17	81.67
45.0	156.43	138.54	125.67	113.67	102.76	92.73	82.47	71.13	59.78
60.0	101.57	88.06	78.68	71.06	64.08	56.23	47.73	39.67	31.39
75.0	44.26	34.62	30.67	26.51	21.25	16.87	12.27	8.10	4.38
90.0	6.57	2.63	2.19	2.19	2.19	2.19	2.19	2.19	2.63
105.0	44.26	34.62	30.67	26.51	21.25	16.87	12.27	8.10	4.38
120.0	101.57	88.06	78.68	71.06	64.08	56.23	47.73	39.67	31.39
135.0	156.43	138.54	125.67	113.67	102.76	92.73	82.47	71.13	59.78
150.0	199.49	177.93	162.03	146.79	132.42	119.57	107.81	95.17	81.67
165.0	225.77	202.89	184.36	166.93	151.46	136.64	122.91	109.61	95.67
180.0	233.07	209.33	190.34	172.64	156.67	142.00	128.19	113.94	100.57
195.0	225.77	202.89	184.36	166.93	151.46	136.64	122.91	109.61	95.67
210.0	199.49	177.93	162.03	146.79	132.42	119.57	107.81	95.17	81.67
225.0	156.43	138.54	125.67	113.67	102.76	92.73	82.47	71.13	59.78
240.0	101.57	88.06	78.68	71.06	64.08	56.23	47.73	39.67	31.39
255.0	44.26	34.62	30.67	26.51	21.25	16.87	12.27	8.10	4.38
270.0	6.57	2.63	2.19	2.19	2.19	2.19	2.19	2.19	2.63
285.0	44.26	34.62	30.67	26.51	21.25	16.87	12.27	8.10	4.38
300.0	101.57	88.06	78.68	71.06	64.08	56.23	47.73	39.67	31.39
315.0	156.43	138.54	125.67	113.67	102.76	92.73	82.47	71.13	59.78
330.0	199.49	177.93	162.03	146.79	132.42	119.57	107.81	95.17	81.67
345.0	225.77	202.89	184.36	166.93	151.46	136.64	122.91	109.61	95.67
360.0	233.07	209.33	190.34	172.64	156.67	142.00	128.19	113.94	100.57

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	85.03	70.78	57.40	44.02	31.08	19.42	12.09	12.95	14.24
15.0	81.07	66.90	54.04	40.97	28.98	18.31	12.21	13.08	14.38
30.0	68.60	55.97	43.99	33.10	22.65	13.94	11.98	13.07	13.94
45.0	48.65	38.83	29.67	21.16	13.53	10.47	11.78	13.09	13.96
60.0	24.41	17.65	11.98	8.06	8.72	10.03	11.99	13.08	13.95
75.0	3.07	4.16	5.26	6.79	8.77	10.30	12.05	13.15	14.02
90.0	2.63	4.38	5.26	7.01	8.77	10.08	11.83	13.15	14.02
105.0	3.07	4.16	5.26	6.79	8.77	10.30	12.05	13.15	14.02
120.0	24.41	17.65	11.98	8.06	8.72	10.03	11.99	13.08	13.95
135.0	48.65	38.83	29.67	21.16	13.53	10.47	11.78	13.09	13.96
150.0	68.60	55.97	43.99	33.10	22.65	13.94	11.98	13.07	13.94
165.0	81.07	66.90	54.04	40.97	28.98	18.31	12.21	13.08	14.38
180.0	85.03	70.78	57.40	44.02	31.08	19.42	12.09	12.95	14.24
195.0	81.07	66.90	54.04	40.97	28.98	18.31	12.21	13.08	14.38
210.0	68.60	55.97	43.99	33.10	22.65	13.94	11.98	13.07	13.94
225.0	48.65	38.83	29.67	21.16	13.53	10.47	11.78	13.09	13.96
240.0	24.41	17.65	11.98	8.06	8.72	10.03	11.99	13.08	13.95
255.0	3.07	4.16	5.26	6.79	8.77	10.30	12.05	13.15	14.02
270.0	2.63	4.38	5.26	7.01	8.77	10.08	11.83	13.15	14.02
285.0	3.07	4.16	5.26	6.79	8.77	10.30	12.05	13.15	14.02
300.0	24.41	17.65	11.98	8.06	8.72	10.03	11.99	13.08	13.95
315.0	48.65	38.83	29.67	21.16	13.53	10.47	11.78	13.09	13.96
330.0	68.60	55.97	43.99	33.10	22.65	13.94	11.98	13.07	13.94
345.0	81.07	66.90	54.04	40.97	28.98	18.31	12.21	13.08	14.38
360.0	85.03	70.78	57.40	44.02	31.08	19.42	12.09	12.95	14.24

Intensity data(cd)

C/γ(°)	180.0
0.0	15.54
15.0	14.82
30.0	14.81
45.0	14.84
60.0	14.82
75.0	14.90
90.0	14.90
105.0	14.90
120.0	14.82
135.0	14.84
150.0	14.81
165.0	14.82
180.0	15.54
195.0	14.82
210.0	14.81
225.0	14.84
240.0	14.82
255.0	14.90
270.0	14.90
285.0	14.90
300.0	14.82
315.0	14.84
330.0	14.81
345.0	14.82
360.0	15.54