
Nata

LumCAT: 1535-E
Luminaire: 92.70.064.00
Report No: NT2017090504
Test No: GC2017090504
LampCAT: CITIZEN CLU028
Lamp flux(lm): 1463.0
Number of Lamps: 1
Length(mm): 25
Phm Type: C

Voltage(V): 0.0000
Current(A): 0.0000
Power (W): 0.0000
PF: 0.0000
Ballast type: DC
Width(mm):25
Height(mm): 0

Photometric Results

Lumens(lm): 1208.68
Efficiency(%): 82.62%
Lumens(lm)/Power(W): 0.00
Central intensity(cd): 1796.766
Maximum intensity(cd): 1796.766
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=43.8
 [C90/270]Total=43.8
Field angle(10%Imax): [C0/180]Total=82.7
 [C90/270]Total=82.7
Maximum s/h(1/2): C0_180=0.68 C90_270=0.68
Maximum s/h(1/4): C0_180=0.73 C90_270=0.73
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.62%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.083%

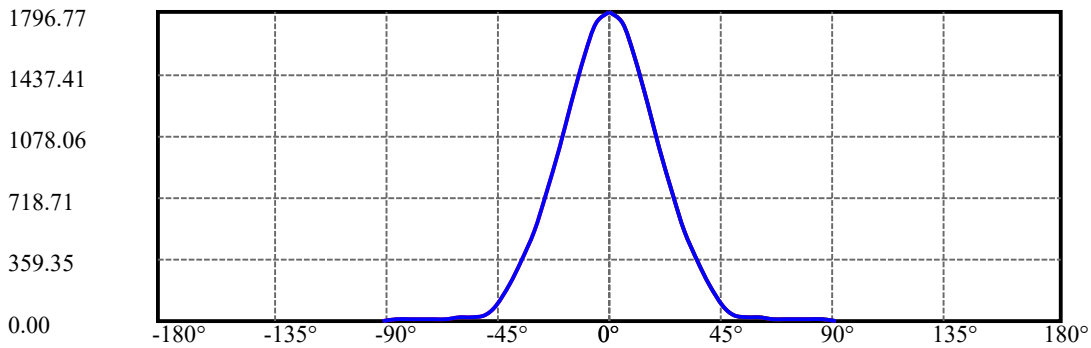
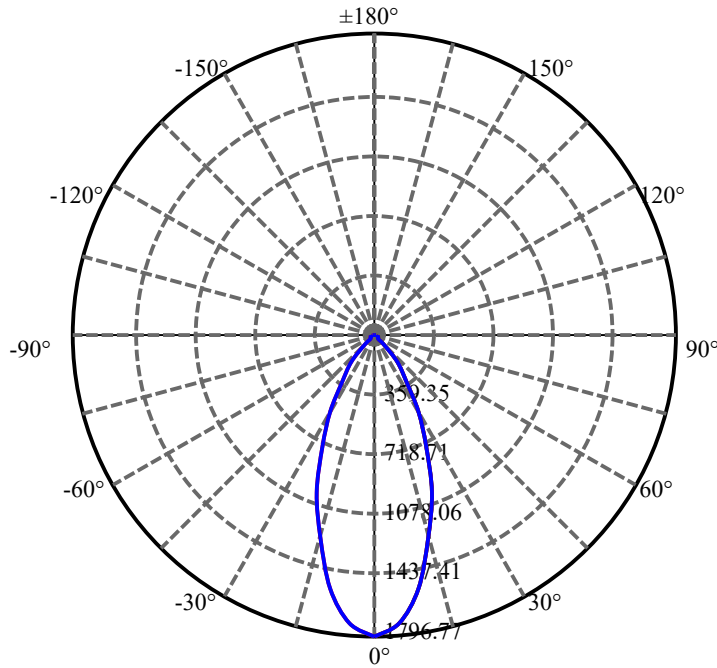
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1796.766	0.000	0	.000%	.000%
5.0	1728.152	42.139	42.139	2.880%	3.486%
10.0	1538.413	116.855	158.995	7.987%	13.154%
15.0	1255.995	165.762	324.757	11.330%	26.869%
20.0	999.033	185.846	510.603	12.703%	42.245%
25.0	732.229	181.577	692.181	12.411%	57.267%
30.0	523.566	158.922	851.102	10.863%	70.416%
35.0	343.772	127.722	978.824	8.730%	80.983%
40.0	212.896	92.876	1071.7	6.348%	88.667%
45.0	88.008	55.715	1127.415	3.808%	93.276%
50.0	34.885	24.832	1152.247	1.697%	95.331%
55.0	21.190	12.193	1164.44	.833%	96.340%
60.0	17.687	8.986	1173.426	.614%	97.083%
65.0	15.361	8.034	1181.46	.549%	97.748%
70.0	13.303	7.258	1188.718	.496%	98.348%
75.0	11.135	6.388	1195.105	.437%	98.877%
80.0	9.373	5.488	1200.593	.375%	99.331%
85.0	7.742	4.651	1205.244	.318%	99.716%
90.0	4.811	3.437	1208.681	.235%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	851.10	58.18%	70.42%
0-40	1071.70	73.25%	88.67%
0-60	1173.43	80.21%	97.08%
0-90	1205.24	82.38%	99.72%
0-120	1205.24	82.38%	99.72%
0-180	1208.68	82.62%	100.00%
60-90	40.80	2.79%	3.38%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-34.53	966.94	66.09%	80.00%

ZONAL LUMEN SUMMARY

0-10	158.99
10-20	351.61
20-30	340.50
30-40	220.60
40-50	80.55
50-60	21.18
60-70	15.29
70-80	11.88
80-90	4.65
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

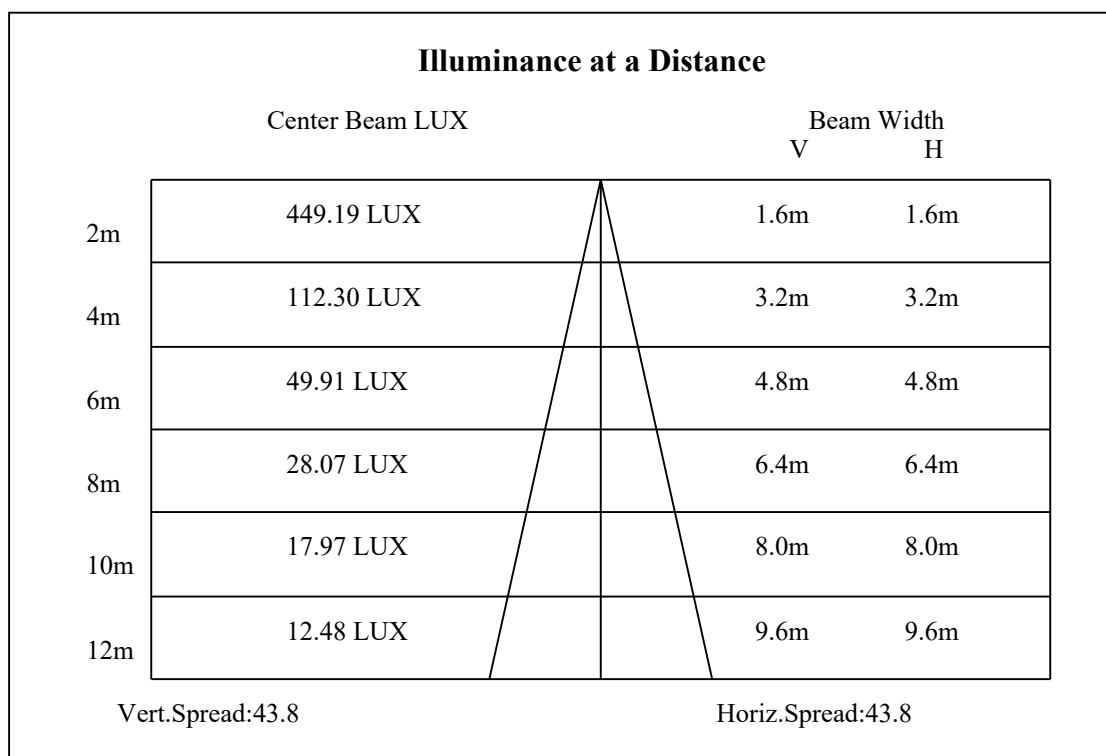
C90/C270: —————

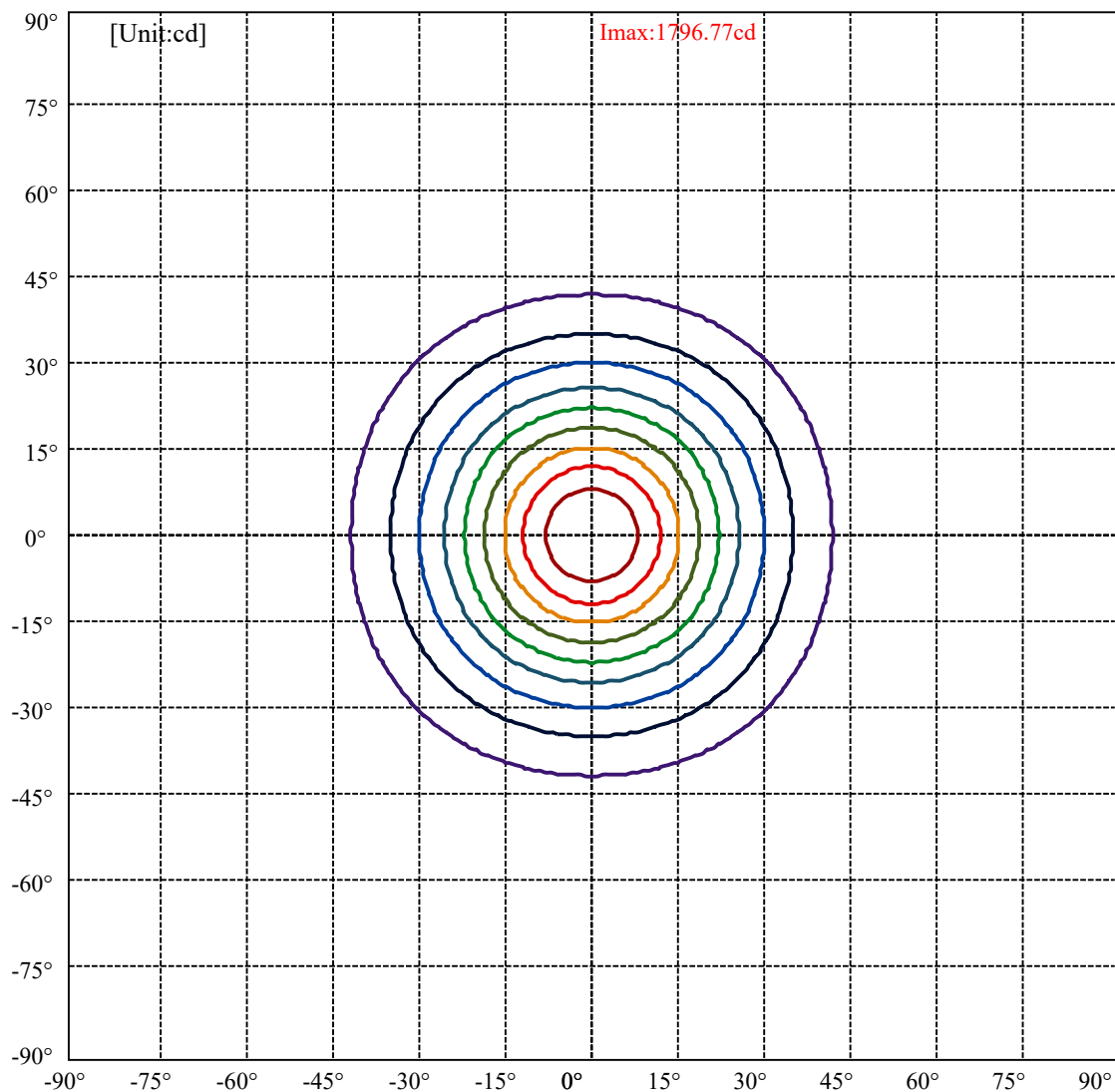
Field angle(10%Imax):C0/180Left:41.3 Right:41.3

:C90/270Left:41.3 Right:41.3

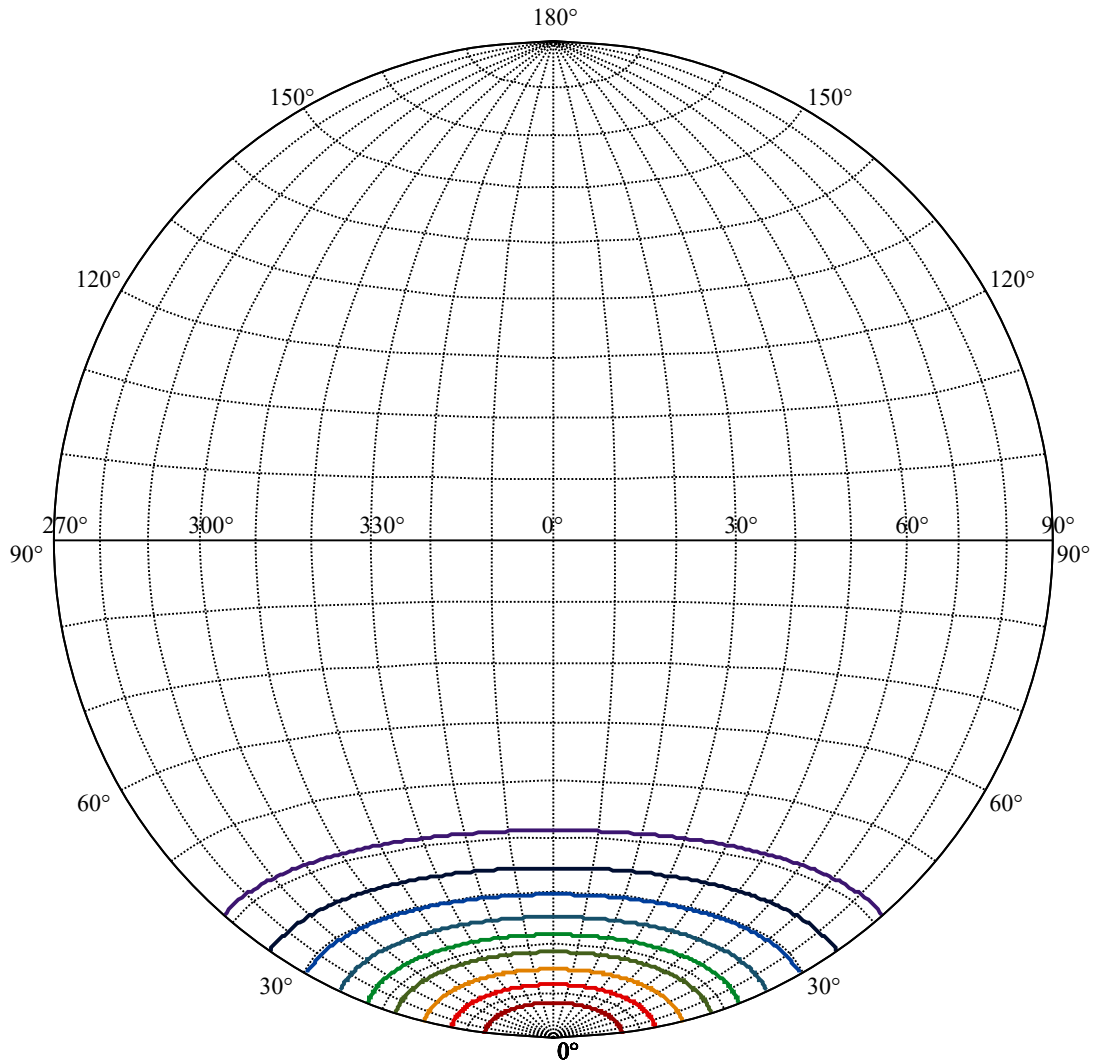
Beam Angle(50%Imax):C0/180Left:21.9 Right:21.9

:C90/270Left:21.9 Right:21.9





(10%Imax) 179.677	—
(20%Imax) 359.353	—
(30%Imax) 539.03	—
(40%Imax) 718.706	—
(50%Imax) 898.383	—
(60%Imax) 1078.06	—
(70%Imax) 1257.74	—
(80%Imax) 1437.41	—
(90%Imax) 1617.09	—



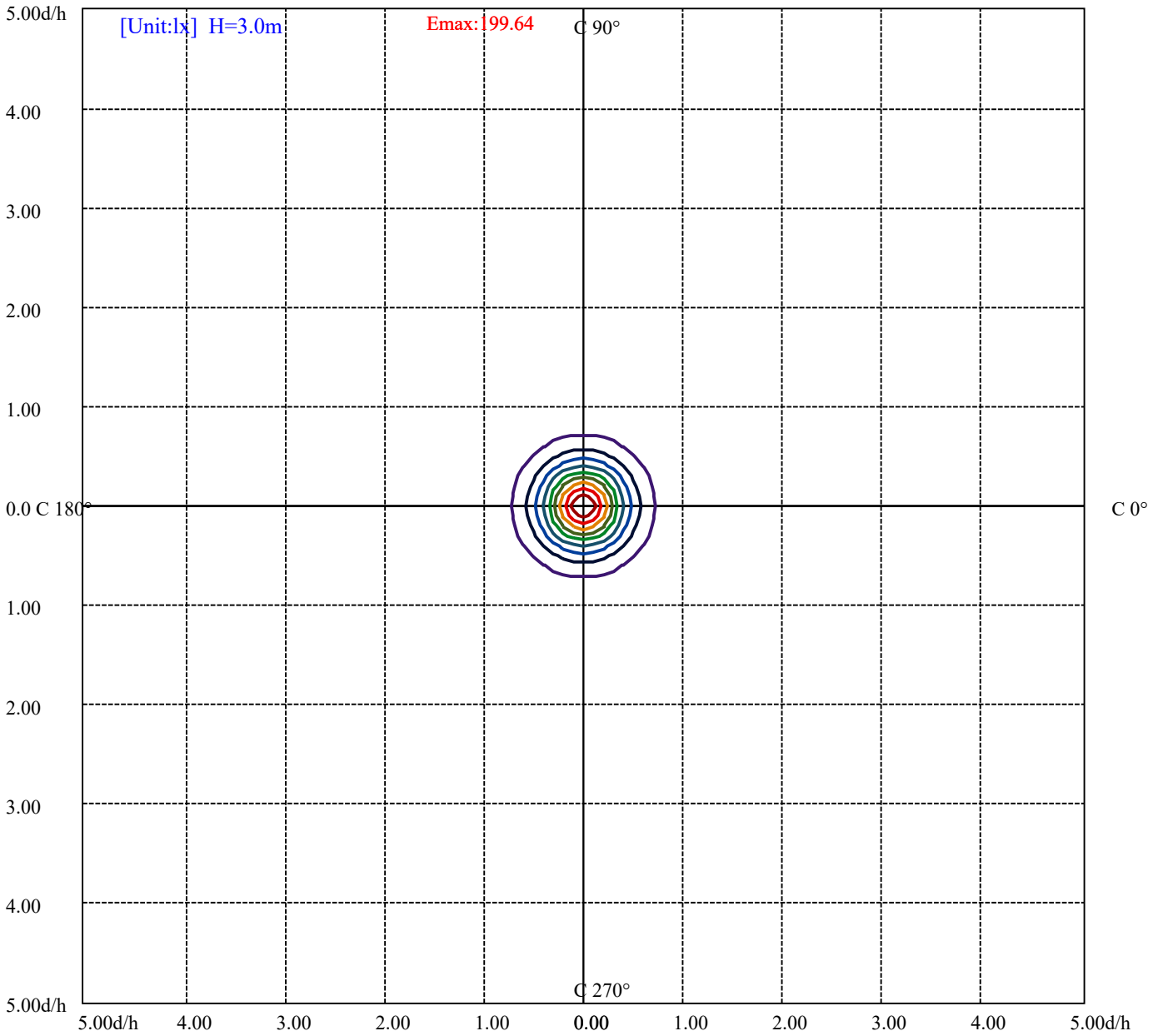
House

[Unit:cd]

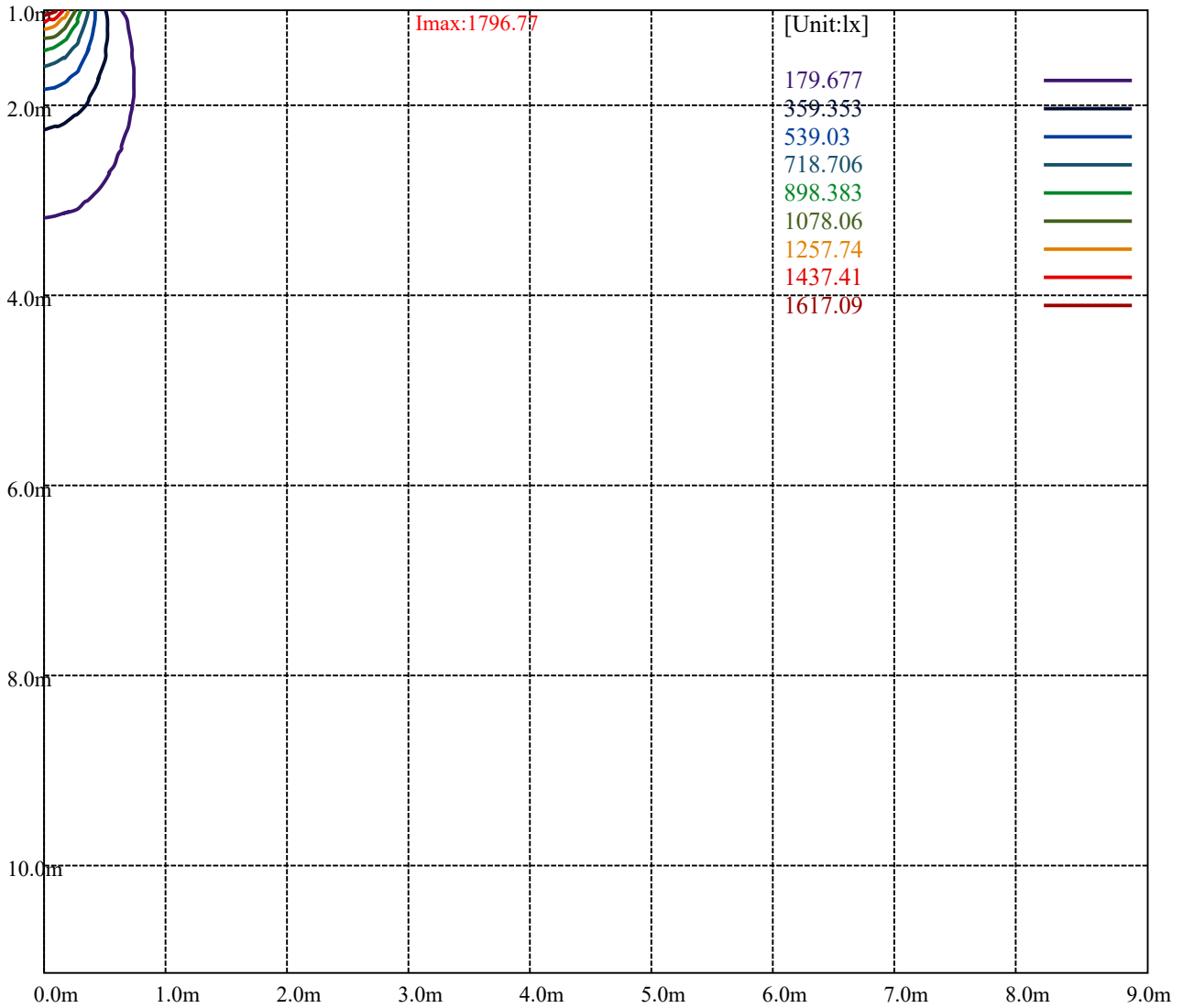
Road

Imax:1796.77

(10%Imax) 179.677	—
(20%Imax) 359.353	—
(30%Imax) 539.03	—
(40%Imax) 718.706	—
(50%Imax) 898.383	—
(60%Imax) 1078.06	—
(70%Imax) 1257.74	—
(80%Imax) 1437.41	—
(90%Imax) 1617.09	—



(10%Emax) 19.964	—
(20%Emax) 39.92811	—
(30%Emax) 59.89211	—
(40%Emax) 79.85611	—
(50%Emax) 99.82022	—
(60%Emax) 119.7845	—
(70%Emax) 139.7478	—
(80%Emax) 159.7122	—
(90%Emax) 179.6767	—



Luminance Table

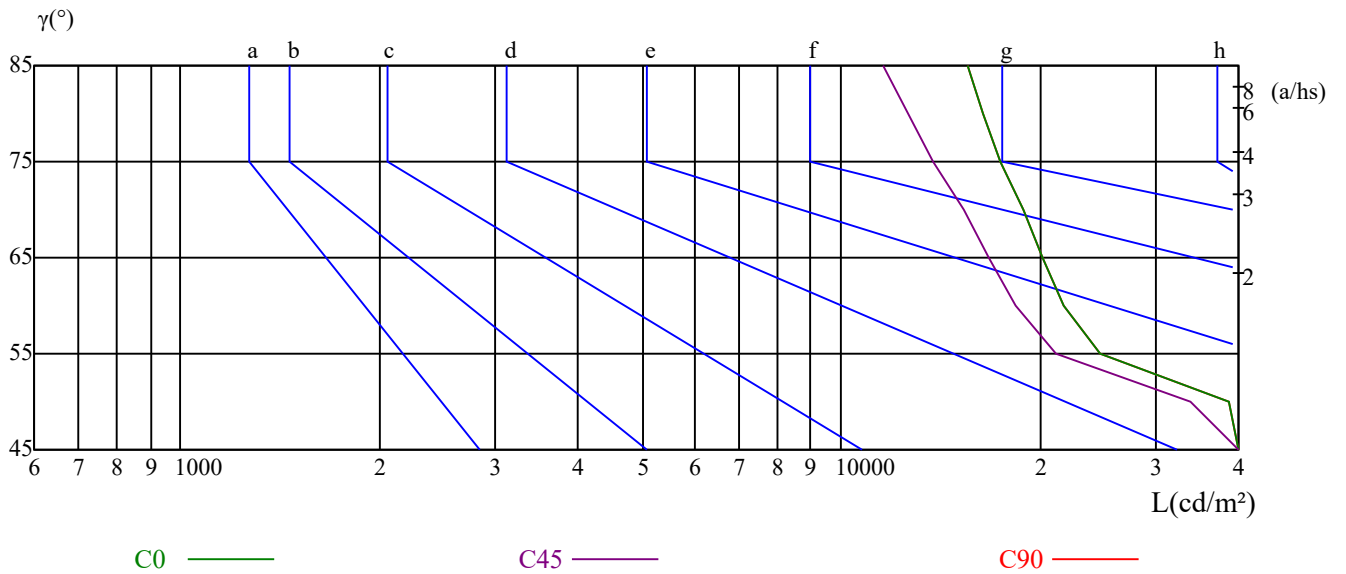
γ	45	50	55	60	65	70	75	80	85
C0	94289	38751	24632	21736	20185	18937	17436	16447	15583
C45	83309	33754	21131	18340	16721	15362	13804	12646	11553
C90	94289	38751	24632	21736	20185	18937	17436	16447	15583

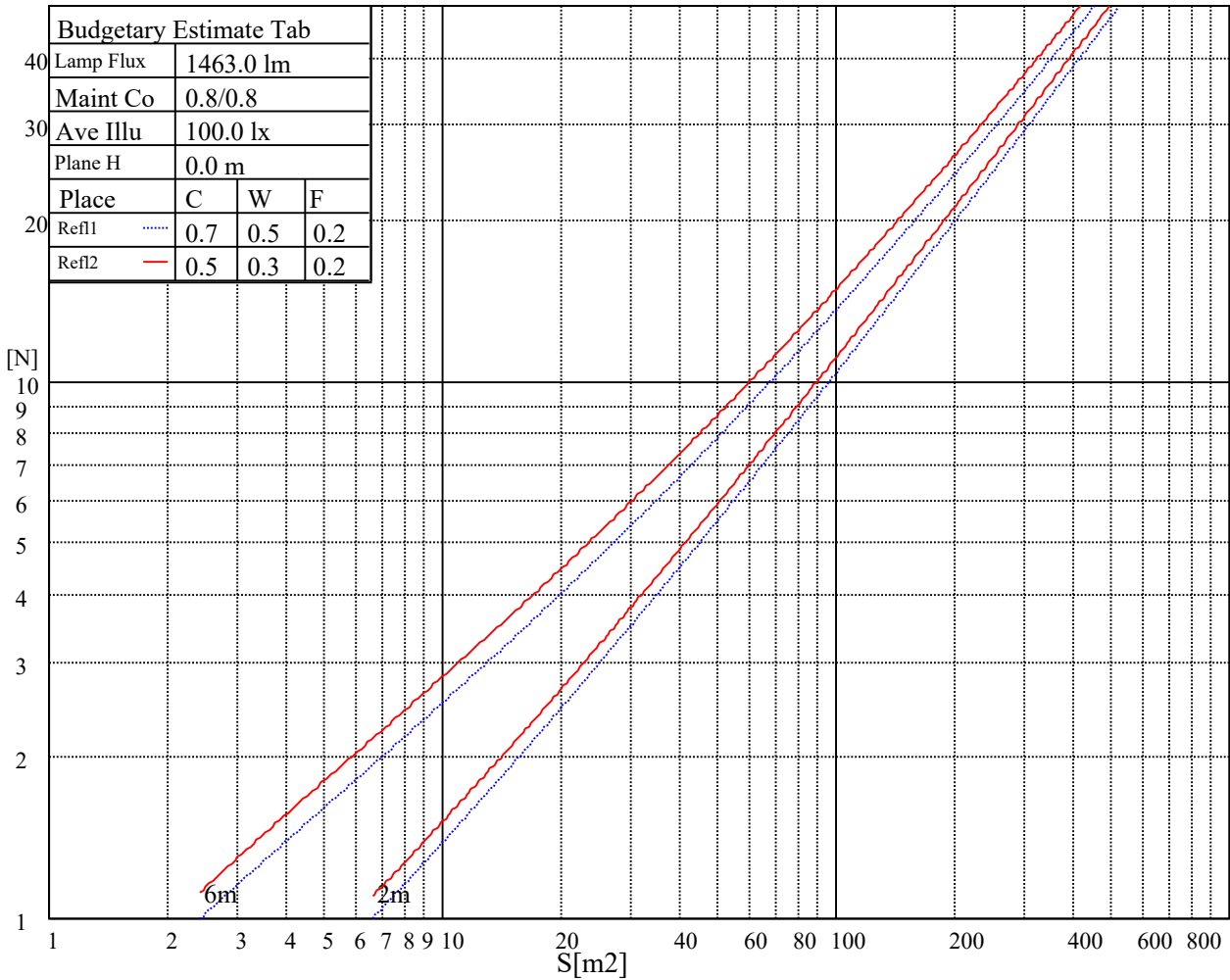
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
40385	40385	40385	47803	47803	47803	98703	98703	98703

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 RHOF=20 CU															
0	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.83
1	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.84	0.83	0.83	0.82	0.80	0.80	0.79	0.78	0.77
2	0.84	0.81	0.78	0.83	0.80	0.77	0.80	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.71
3	0.79	0.75	0.71	0.78	0.74	0.71	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.69	0.67	0.66
4	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.61
5	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.57
6	0.65	0.60	0.56	0.64	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
7	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.51
8	0.58	0.53	0.50	0.57	0.53	0.49	0.56	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.48
9	0.55	0.50	0.47	0.54	0.50	0.47	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45
10	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.44	0.50	0.46	0.44	0.43

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	1791.54	1813.56	1678.12	1432.57	1177.66	866.59	619.94	432.19	284.64
45.0	1799.24	1759.05	1580.12	1333.47	1054.33	784.00	590.20	377.69	278.59
90.0	1794.29	1673.16	1450.19	1092.37	896.65	656.66	454.49	281.56	149.53
135.0	1802.00	1690.23	1450.74	1159.49	873.19	626.54	423.38	278.59	141.00
180.0	1791.54	1631.32	1392.93	1088.02	842.86	596.92	415.84	252.93	131.97
225.0	1799.24	1698.49	1492.03	1178.76	958.15	703.29	504.81	328.91	191.82
270.0	1794.29	1771.16	1623.06	1373.66	1099.48	814.83	598.46	410.17	283.54
315.0	1802.00	1788.23	1640.13	1389.62	1089.95	809.00	581.40	388.15	242.08
360.0	1791.54	1813.56	1678.12	1432.57	1177.66	866.59	619.94	432.19	284.64
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	137.64	51.09	22.74	15.20	12.72	11.01	9.41	8.04	6.88
45.0	94.15	31.16	19.49	16.13	13.32	10.85	9.08	7.87	6.72
90.0	55.72	28.52	22.13	18.94	16.46	13.93	11.34	8.92	6.94
135.0	51.97	29.07	25.05	22.30	20.26	18.11	14.37	12.55	9.69
180.0	46.14	26.21	23.78	21.31	18.99	17.29	14.53	11.62	9.41
225.0	72.12	26.87	19.93	17.73	15.42	13.43	11.34	9.41	8.04
270.0	130.04	43.66	18.28	15.64	13.49	11.62	9.97	8.37	6.99
315.0	116.28	42.50	18.11	14.26	12.22	10.19	9.03	8.20	7.27
360.0	137.64	51.09	22.74	15.20	12.72	11.01	9.41	8.04	6.88
C/γ(°)	90.0								
0.0	5.23								
45.0	4.62								
90.0	4.62								
135.0	4.68								
180.0	4.73								
225.0	4.68								
270.0	4.90								
315.0	5.01								
360.0	5.23								