

---

Nata

---

LumCAT: 2-1795-N  
Luminaire: 92.70.135.00  
Report No: NT2018041207  
Test No: nata-0100  
LampCAT: LUMILEDS LUXEON COB 1205  
Lamp flux(lm): 2300.0  
Number of Lamps: 1  
Length(mm): 69  
Phm Type: C

Voltage(V): 37.5000  
Current(A): 0.6000  
Power (W): 22.5000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 69  
Height(mm): 0

---

Photometric Results

---

Lumens(lm): 1881.88  
Efficiency(%): 81.82%  
Lumens(lm)/Power(W): 84.73  
Central intensity(cd): 4401.071  
Maximum intensity(cd): 4401.071  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=37.8  
                                  [C90/270]Total=37.8  
Field angle(10%Imax): [C0/180]Total=61.7  
                                  [C90/270]Total=61.7  
Maximum s/h(1/2): C0\_180=0.62 C90\_270=0.62  
Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 82.89%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.200%

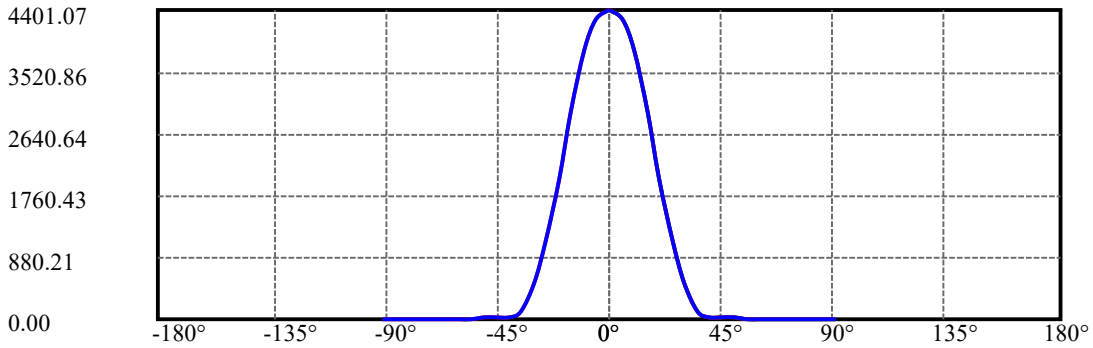
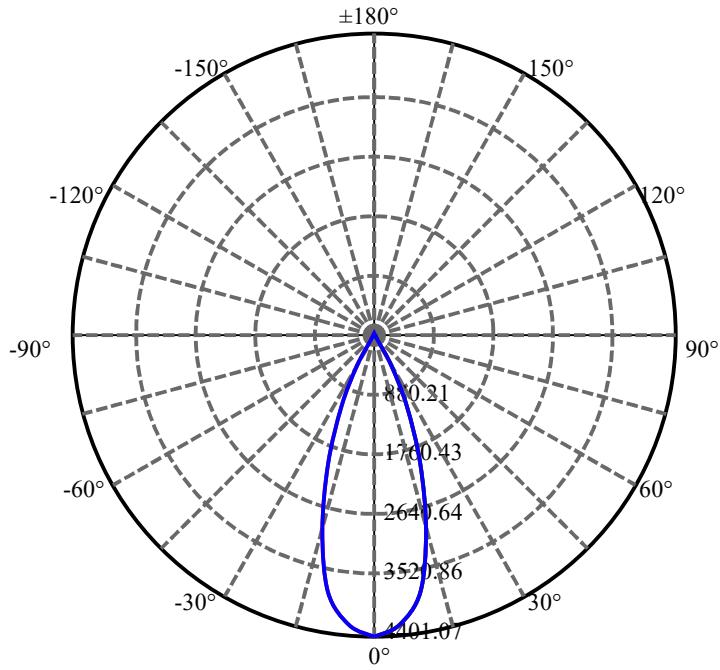
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4401.071	26.319	26.319	1.144%	1.399%
5.0	4252.075	203.136	229.455	8.832%	12.193%
10.0	3824.355	364.014	593.469	15.827%	31.536%
15.0	2957.767	419.614	1013.083	18.244%	53.833%
20.0	1985.678	372.263	1385.346	16.185%	73.615%
25.0	1134.134	262.725	1648.071	11.423%	87.576%
30.0	508.645	139.404	1787.475	6.061%	94.983%
35.0	105.350	33.122	1820.597	1.440%	96.743%
40.0	26.283	9.260	1829.857	.403%	97.235%
45.0	16.324	6.327	1836.184	.275%	97.572%
50.0	13.792	5.791	1841.975	.252%	97.879%
55.0	12.381	5.559	1847.534	.242%	98.175%
60.0	11.589	5.501	1853.036	.239%	98.467%
65.0	10.991	5.460	1858.496	.237%	98.757%
70.0	10.619	5.470	1863.966	.238%	99.048%
75.0	10.240	5.422	1869.387	.236%	99.336%
80.0	9.738	5.257	1874.644	.229%	99.615%
85.0	9.194	5.021	1879.665	.218%	99.882%
90.0	8.093	2.218	1881.883	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1787.47	77.72%	94.98%
0-40	1829.86	79.56%	97.24%
0-60	1853.04	80.57%	98.47%
0-90	1879.66	81.72%	99.88%
0-120	1879.66	81.72%	99.88%
0-180	1881.88	81.82%	100.00%
60-90	32.13	1.40%	1.71%
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%
0-22.29	1505.51	65.46%	80.00%

ZONAL LUMEN SUMMARY

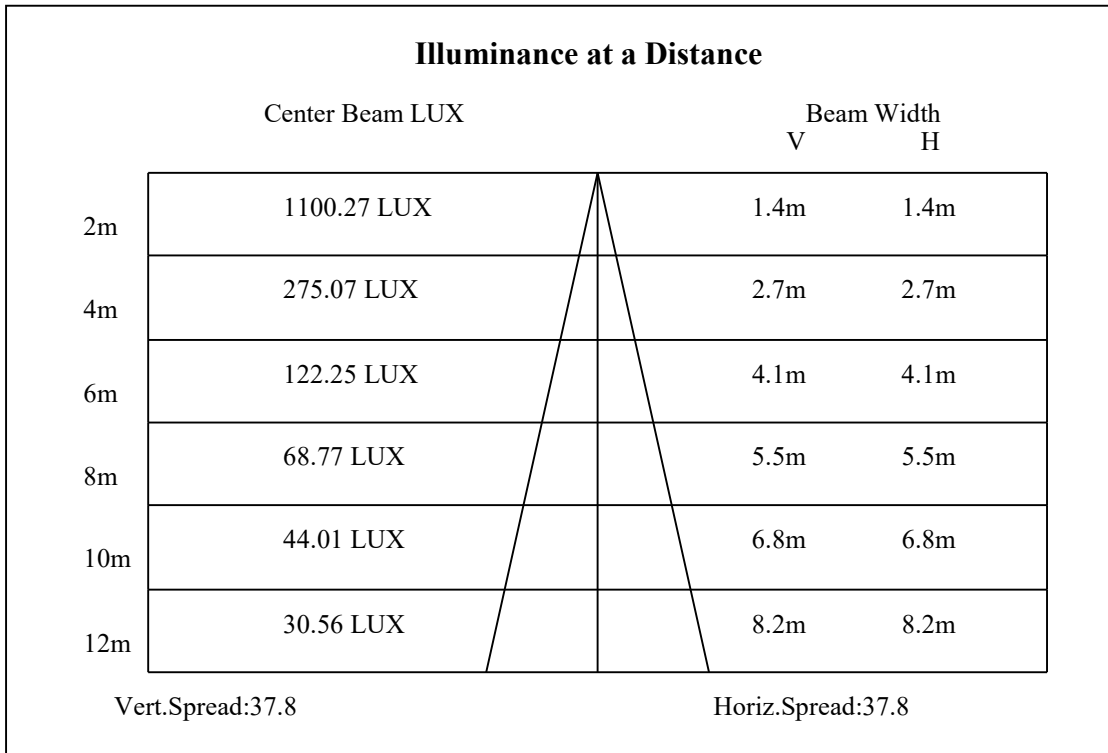
0-10	593.47
10-20	791.88
20-30	402.13
30-40	42.38
40-50	12.12
50-60	11.06
60-70	10.93
70-80	10.68
80-90	5.02
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

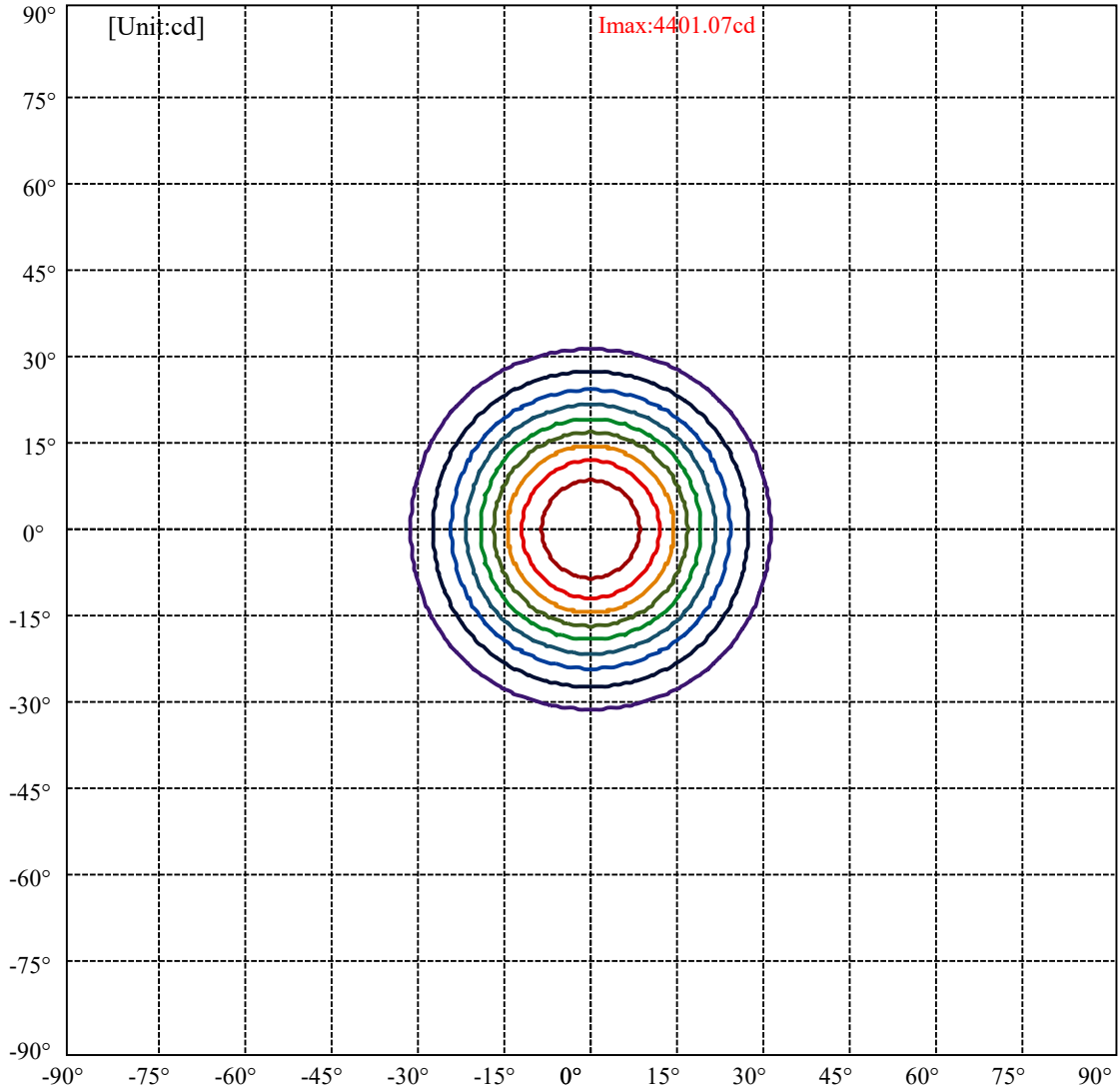


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

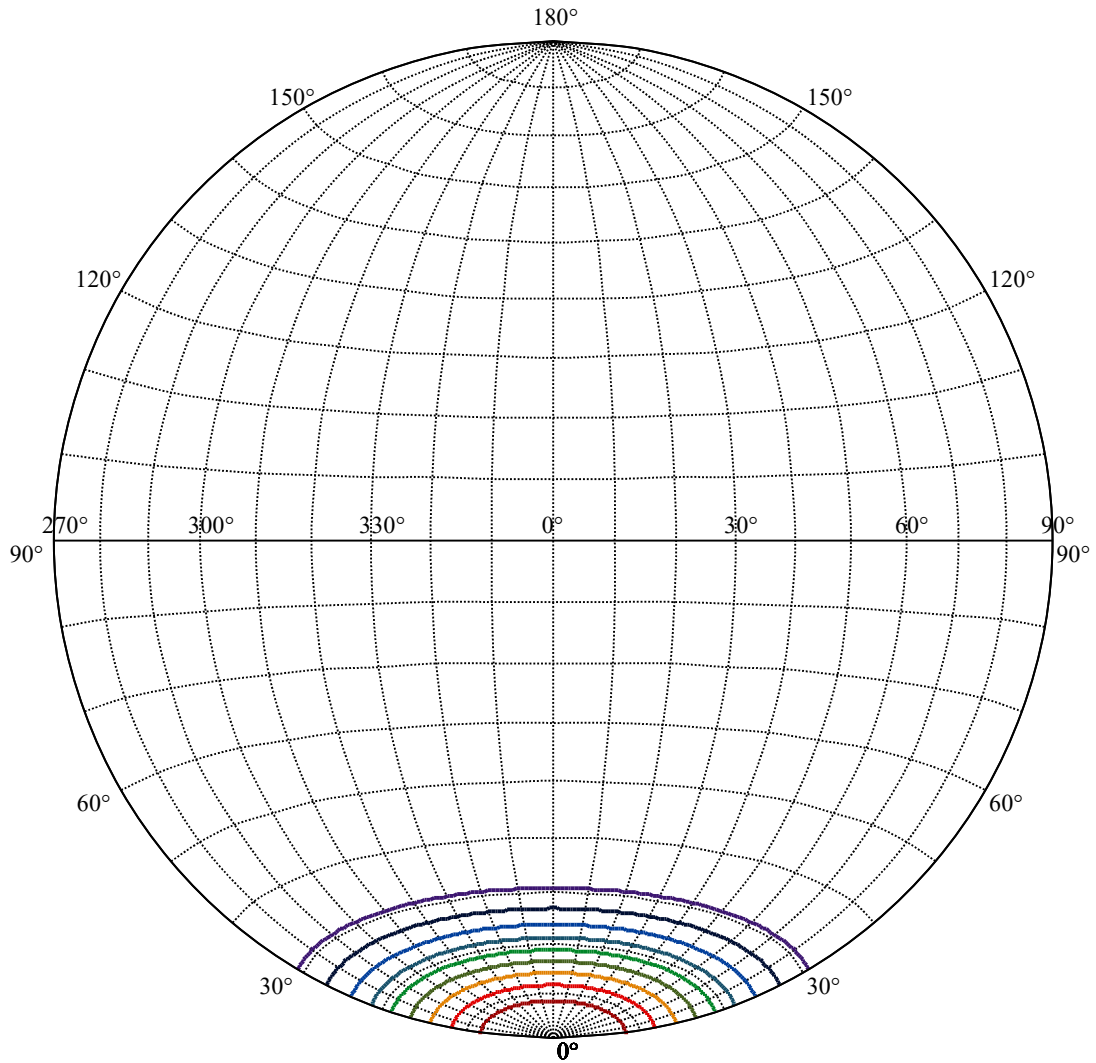
Field angle(10%Imax):C0/180Left:30.8 Right:30.8  
:C90/270Left:30.8 Right:30.8

Beam Angle(50%Imax):C0/180Left:18.9 Right:18.9  
:C90/270Left:18.9 Right:18.9





(10%Imax) 440.107	—
(20%Imax) 880.214	—
(30%Imax) 1320.32	—
(40%Imax) 1760.43	—
(50%Imax) 2200.54	—
(60%Imax) 2640.64	—
(70%Imax) 3080.75	—
(80%Imax) 3520.86	—
(90%Imax) 3960.96	—



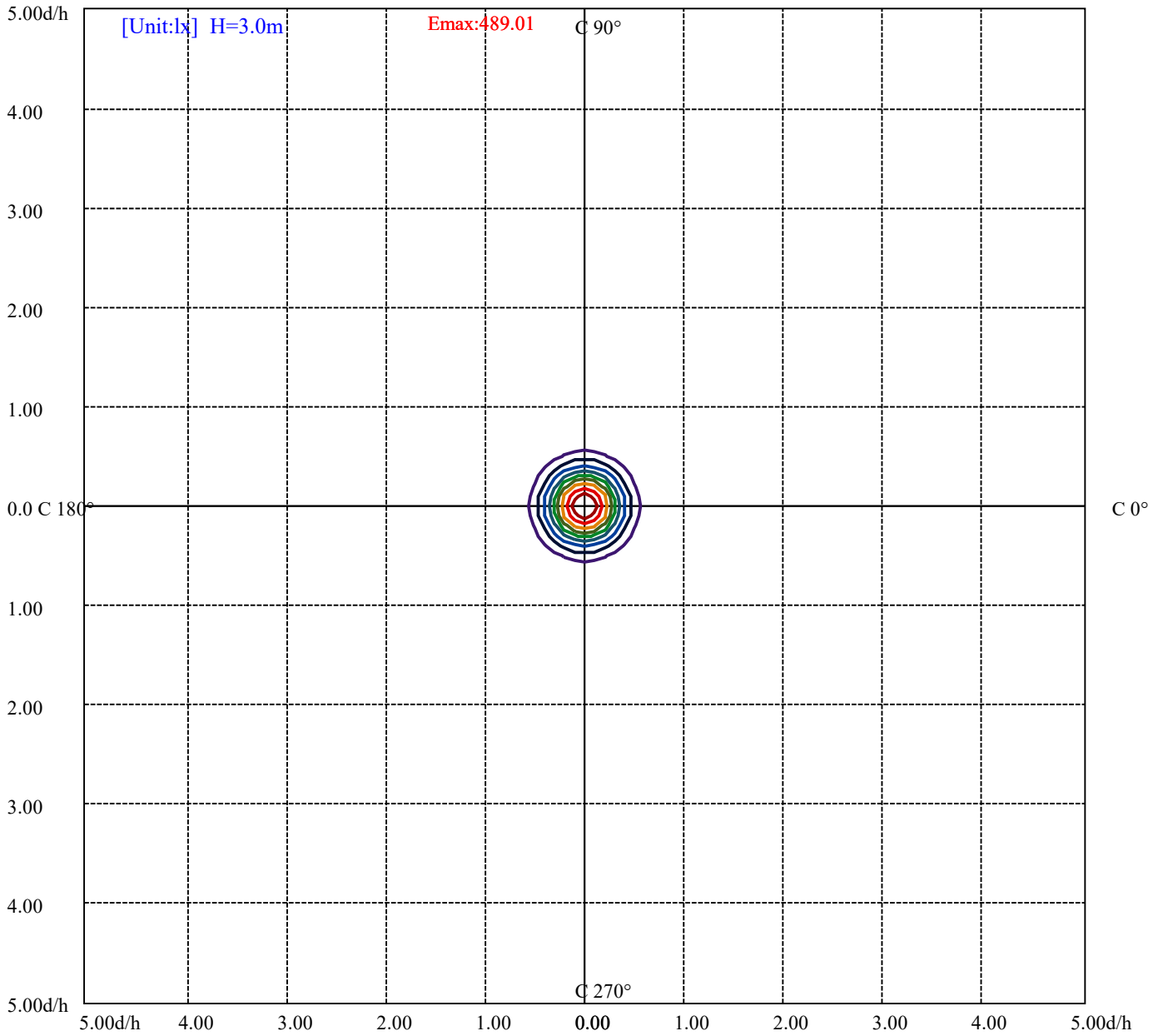
House

[Unit:cd]

Road

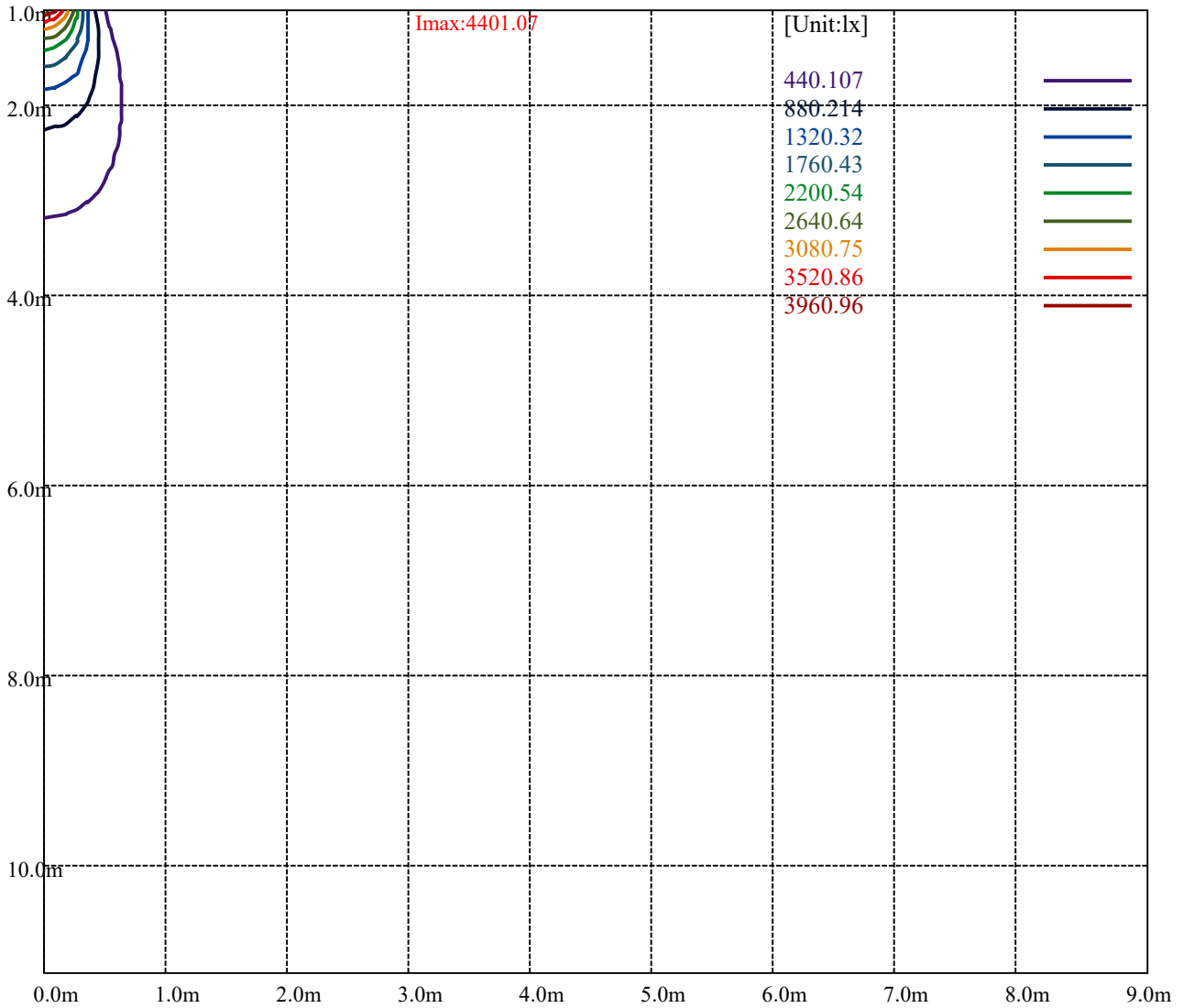
**Imax:4401.07**

(10%Imax) 440.107	—
(20%Imax) 880.214	—
(30%Imax) 1320.32	—
(40%Imax) 1760.43	—
(50%Imax) 2200.54	—
(60%Imax) 2640.64	—
(70%Imax) 3080.75	—
(80%Imax) 3520.86	—
(90%Imax) 3960.96	—



- (10%Emax) 48.90078
- (20%Emax) 97.80145
- (30%Emax) 146.7022
- (40%Emax) 195.6033
- (50%Emax) 244.5033
- (60%Emax) 293.4044
- (70%Emax) 342.3055
- (80%Emax) 391.2056
- (90%Emax) 440.1067





Luminance Table

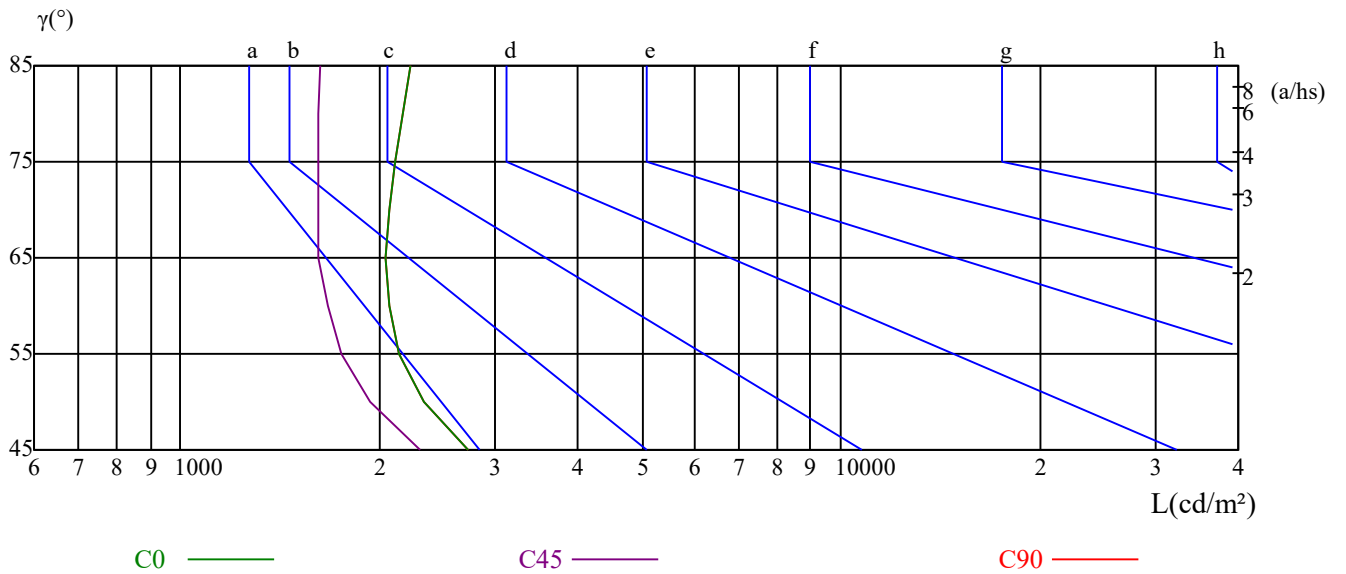
$\gamma$	45	50	55	60	65	70	75	80	85
C0	2720	2332	2141	2067	2039	2070	2120	2166	2228
C45	2302	1943	1757	1669	1619	1614	1620	1619	1623
C90	2720	2332	2141	2067	2039	2070	2120	2166	2228

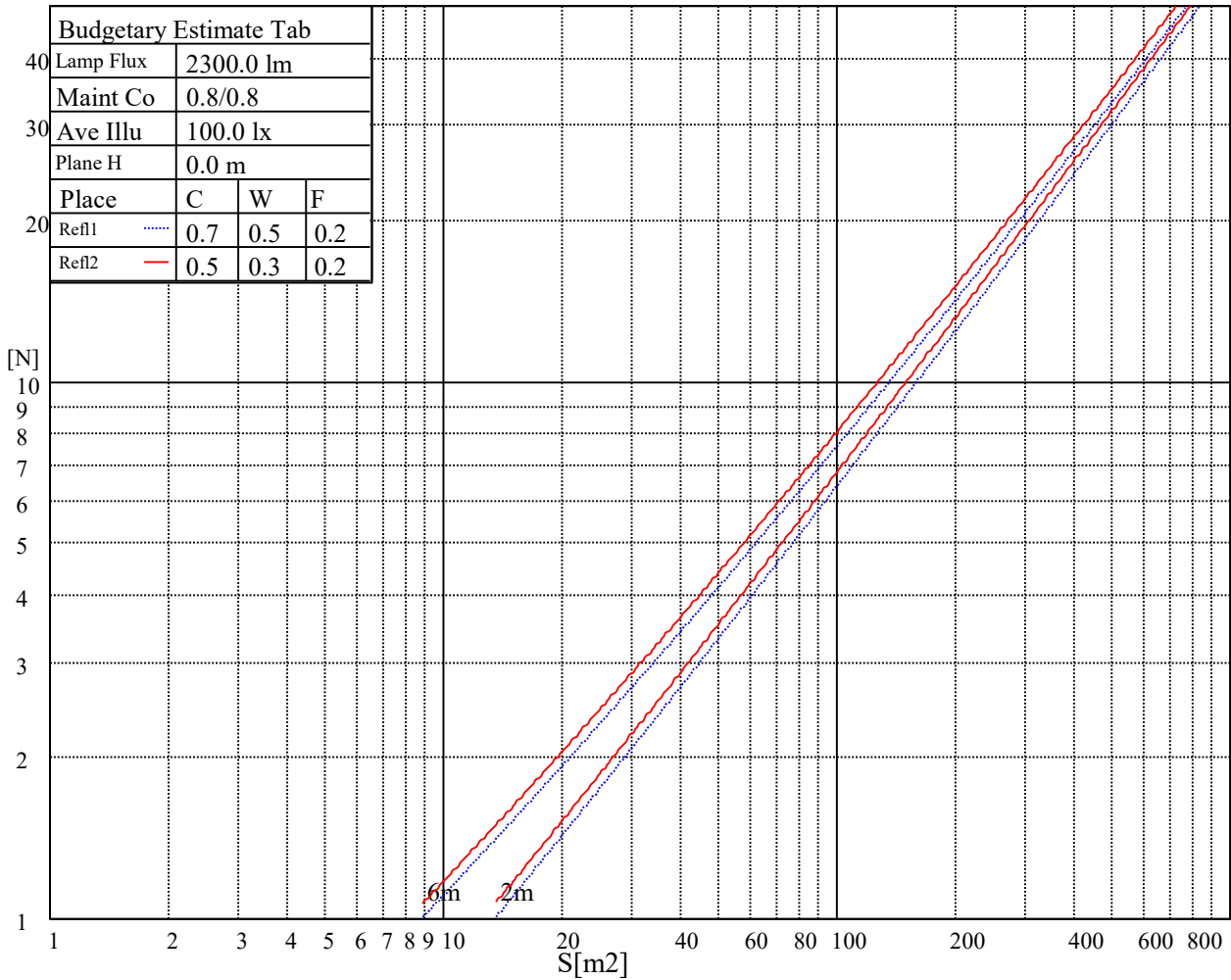
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5462	5462	5462	8310	8310	8310	22158	22158	22158

Glare Table

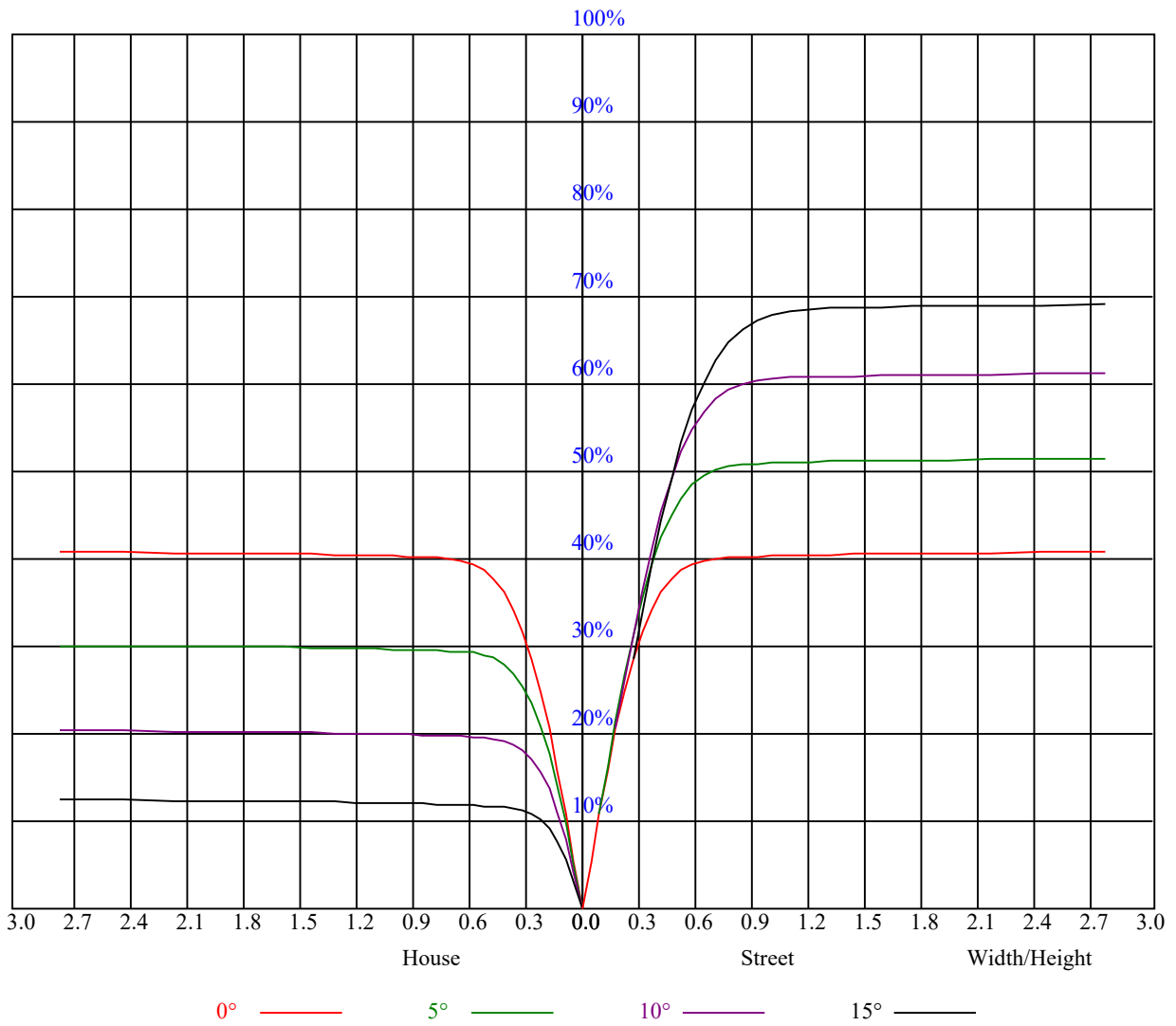
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.92	0.89	0.88	0.90	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.80	0.80	0.79	0.77
2	0.87	0.84	0.81	0.85	0.83	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.78	0.77	0.75	0.74
3	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.78	0.75	0.74	0.76	0.74	0.72	0.71
4	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.74	0.71	0.70	0.69
5	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.66
6	0.73	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.69	0.67	0.65	0.64
7	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
8	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60
9	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.58
10	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.57	0.62	0.59	0.57	0.56



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	4394.05	4297.15	3948.65	3113.99	2135.64	1281.16	559.92	96.07	26.21
45.0	4403.41	4206.31	3755.40	2935.06	1908.81	1109.39	473.49	70.42	22.74
90.0	4388.00	4084.08	3517.55	2529.84	1640.13	931.39	317.90	57.04	21.64
135.0	4418.83	4190.89	3729.52	2812.83	1855.40	1138.57	471.83	77.52	26.48
180.0	4394.05	4223.38	3730.07	2779.25	1869.16	1081.47	432.30	77.79	26.21
225.0	4403.41	4325.23	3935.43	3064.99	2091.04	1076.90	554.20	88.97	28.52
270.0	4388.00	4364.32	4053.25	3308.89	2285.39	1376.41	693.16	291.80	33.86
315.0	4418.83	4325.23	3924.97	3117.29	2099.85	1077.78	566.37	83.19	24.61
360.0	4394.05	4297.15	3948.65	3113.99	2135.64	1281.16	559.92	96.07	26.21
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	16.24	13.76	12.11	11.23	10.57	10.24	9.86	9.63	9.47
45.0	15.09	13.05	11.67	10.96	10.30	9.74	9.25	8.92	8.59
90.0	15.58	13.82	13.21	12.83	12.55	12.33	11.95	10.41	8.92
135.0	16.08	13.43	12.11	11.29	10.74	10.41	10.08	9.69	9.36
180.0	16.68	14.09	12.44	11.56	10.96	10.63	10.41	10.08	9.74
225.0	16.63	13.76	12.39	11.45	10.79	10.30	9.74	9.25	8.92
270.0	18.22	14.87	13.10	12.33	11.67	11.34	10.90	10.41	9.25
315.0	16.08	13.54	12.00	11.07	10.35	9.97	9.74	9.52	9.30
360.0	16.24	13.76	12.11	11.23	10.57	10.24	9.86	9.63	9.47
C/ $\gamma$ (°)	90.0								
0.0	8.15								
45.0	7.93								
90.0	8.04								
135.0	8.15								
180.0	8.15								
225.0	8.09								
270.0	8.09								
315.0	8.15								
360.0	8.15								