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Nata

LumCAT: 1-0803-S	
Luminaire: 92.70.208.00	
Report No: NATA0100	Voltage(V): 24.9700
Test No: GC2019101003	Current(A): 0.1980
LampCAT: LUMILEDS LUXEON 5050	Power (W): 4.9400
Lamp flux(lm): 440.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 370.24
Efficiency(%): 84.15%
Lumens(lm)/Power(W): 74.95
Central intensity(cd): 880.875
Maximum intensity(cd): 882.788
Angle of maximum intensity: C=157.5 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=37.7
 [C90/270]Total=37.8
Field angle(10%Imax): [C0/180]Total=57.4
 [C90/270]Total=57.3
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
Maximum s/h(1/4): C0_180=0.58 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.15%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.500%

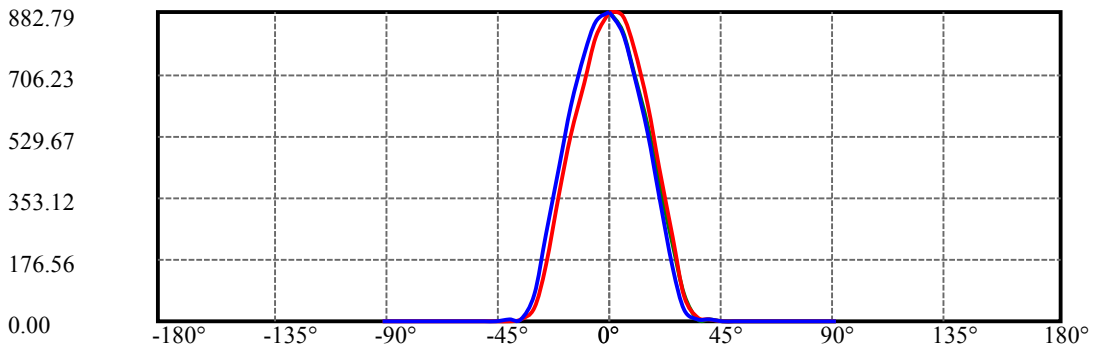
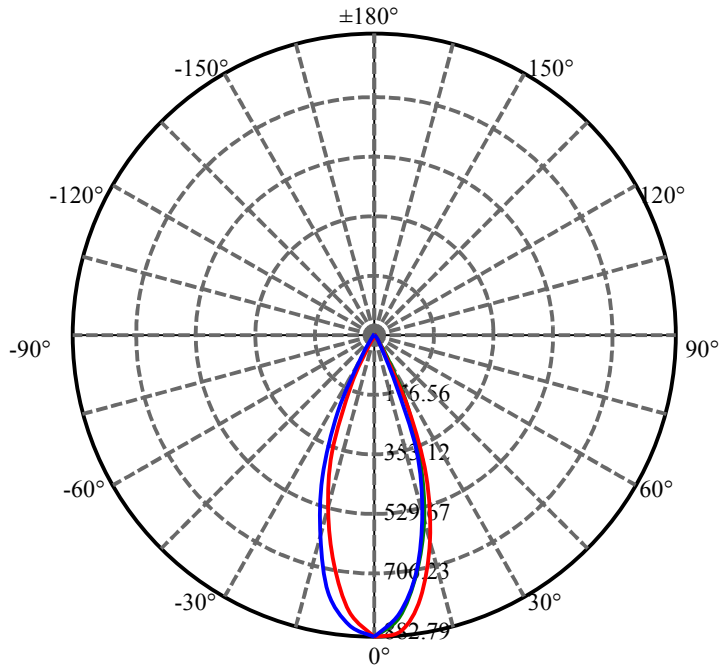
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	880.924	0.000	0	.000%	.000%
5.0	839.967	20.573	20.573	4.676%	5.557%
10.0	732.371	56.248	76.82	12.784%	20.749%
15.0	574.088	77.498	154.319	17.613%	41.680%
20.0	408.407	80.971	235.29	18.403%	63.550%
25.0	229.750	66.931	302.221	15.212%	81.628%
30.0	87.950	40.205	342.426	9.138%	92.487%
35.0	16.429	15.371	357.796	3.493%	96.638%
40.0	3.333	3.297	361.093	.749%	97.529%
45.0	2.204	1.025	362.119	.233%	97.806%
50.0	1.990	0.847	362.966	.193%	98.035%
55.0	1.916	0.849	363.815	.193%	98.264%
60.0	1.863	0.874	364.689	.199%	98.500%
65.0	1.818	0.895	365.584	.203%	98.742%
70.0	1.793	0.914	366.498	.208%	98.988%
75.0	1.772	0.932	367.43	.212%	99.240%
80.0	1.758	0.944	368.374	.215%	99.495%
85.0	1.705	0.941	369.315	.214%	99.749%
90.0	1.684	0.928	370.243	.211%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	342.43	77.82%	92.49%
0-40	361.09	82.07%	97.53%
0-60	364.69	82.88%	98.50%
0-90	369.32	83.94%	99.75%
0-120	369.32	83.94%	99.75%
0-180	370.24	84.15%	100.00%
60-90	5.50	1.25%	1.49%
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%
0-24.55	296.19	67.32%	80.00%

ZONAL LUMEN SUMMARY

0-10	76.82
10-20	158.47
20-30	107.14
30-40	18.67
40-50	1.87
50-60	1.72
60-70	1.81
70-80	1.88
80-90	0.94
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



C157.5(Max): ———

C0/C180: ———

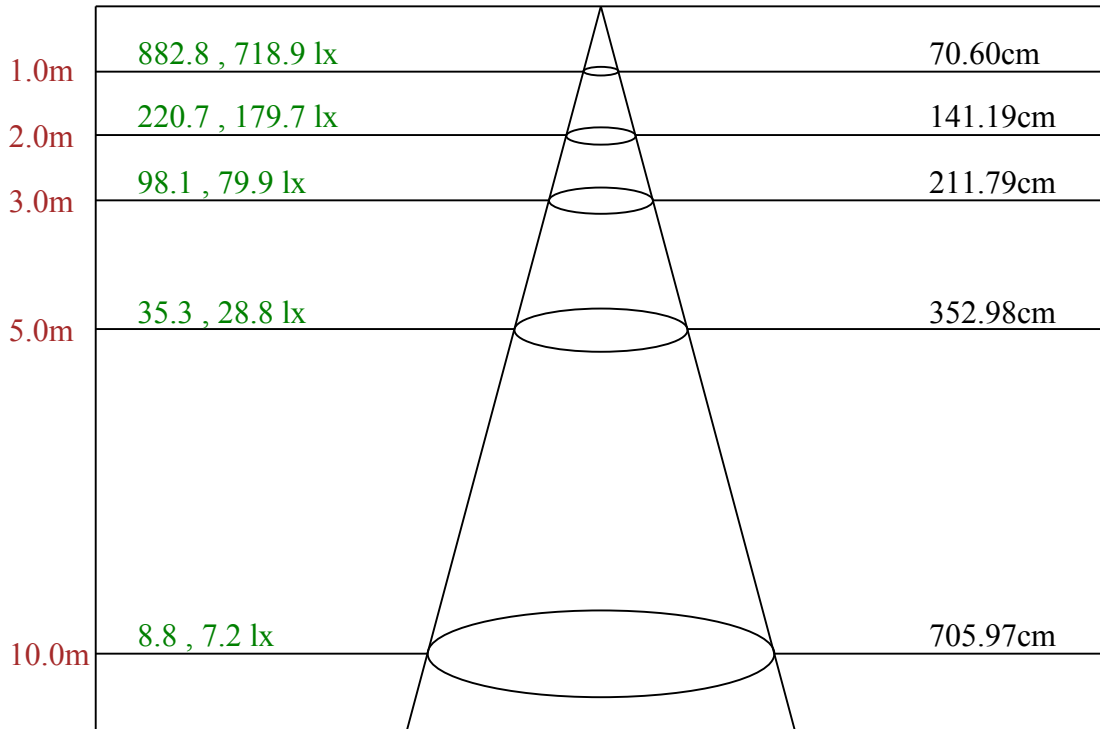
C90/C270: ———

Field angle(10%Imax):C0/180Left:27.9 Right:29.5

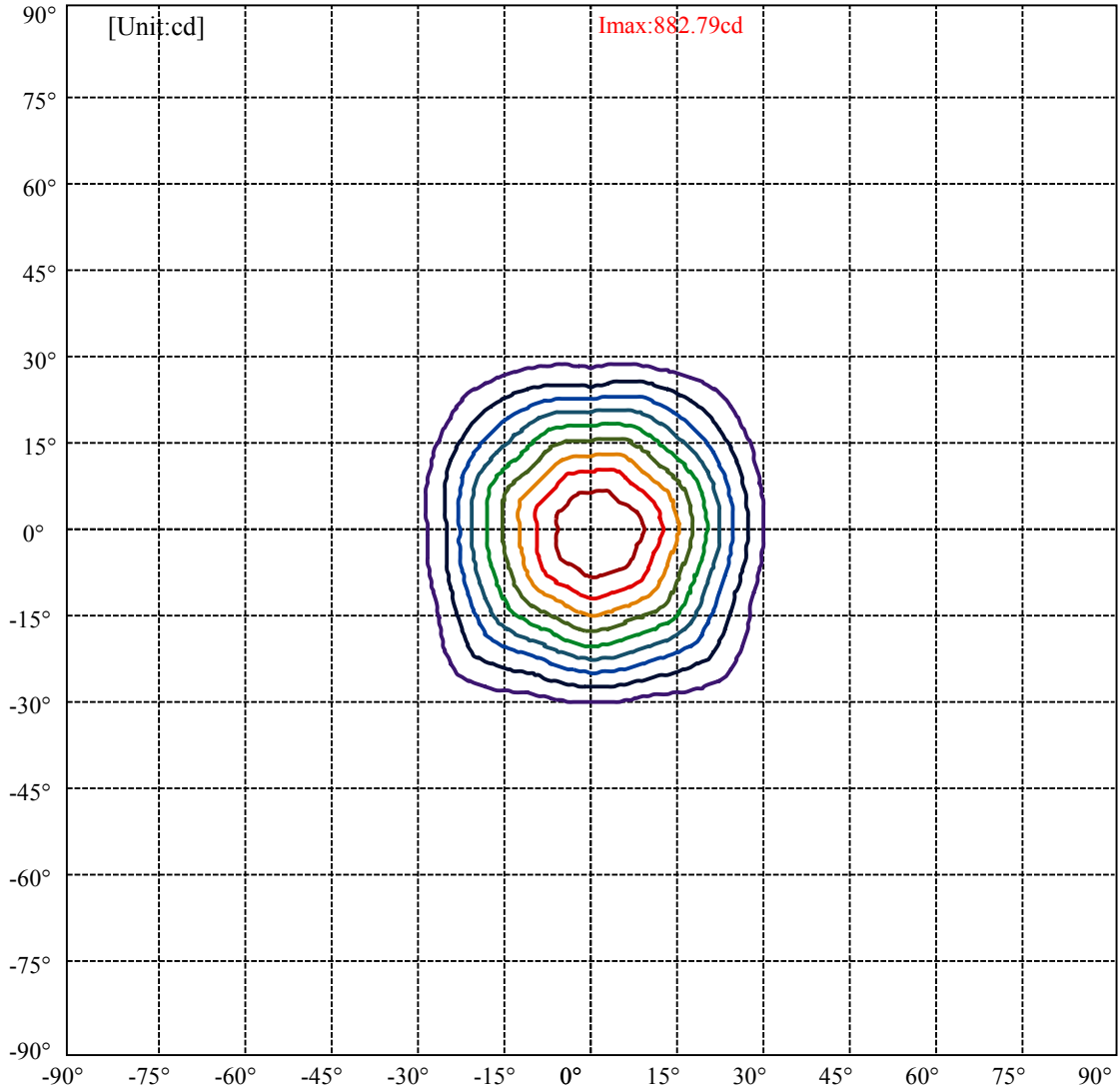
:C90/270Left:29.6 Right:27.7

Beam Angle(50%Imax):C0/180Left:17.7 Right:20.0

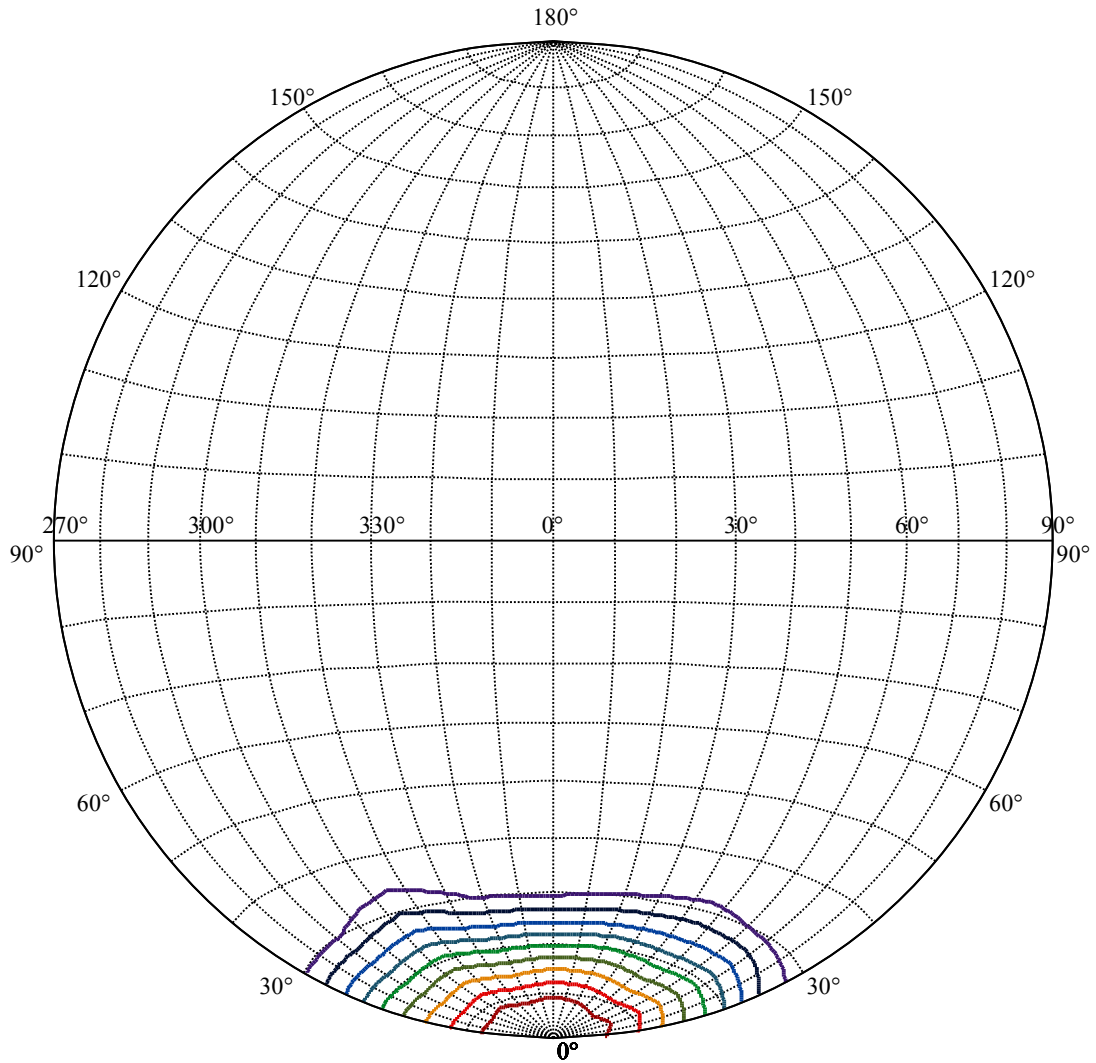
:C90/270Left:20.1 Right:17.7



Max , Ave Beam angle of C157.5 plane 38.88



(10%Imax) 88.2056	—
(20%Imax) 176.411	—
(30%Imax) 264.617	—
(40%Imax) 352.822	—
(50%Imax) 441.028	—
(60%Imax) 529.234	—
(70%Imax) 617.439	—
(80%Imax) 705.645	—
(90%Imax) 793.851	—



House

[Unit:cd]

Road

Imax:882.79

(10%Imax) 88.2745

(20%Imax) 176.549

(30%Imax) 264.824

(40%Imax) 353.098

(50%Imax) 441.373

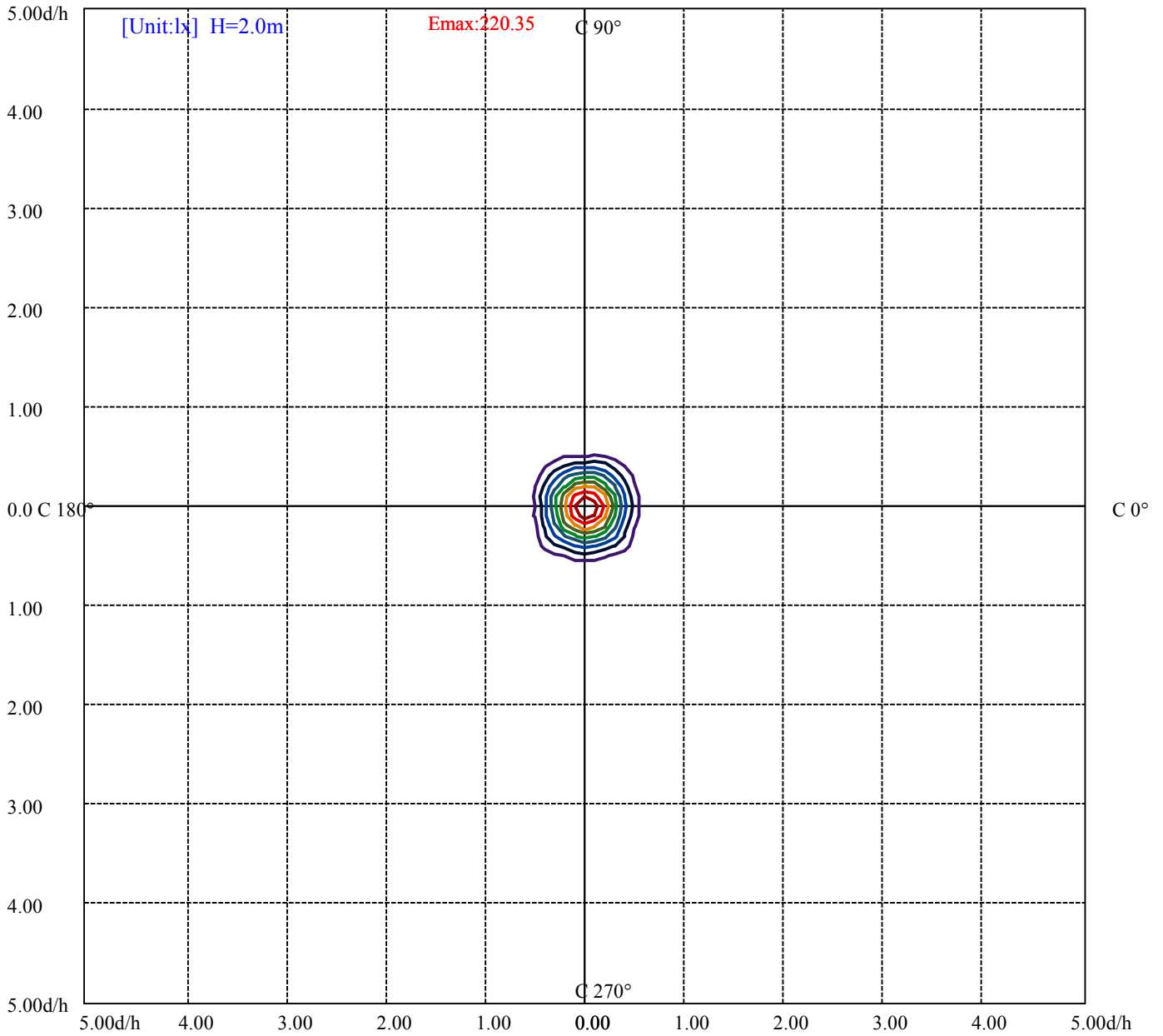
(60%Imax) 529.647

(70%Imax) 617.922

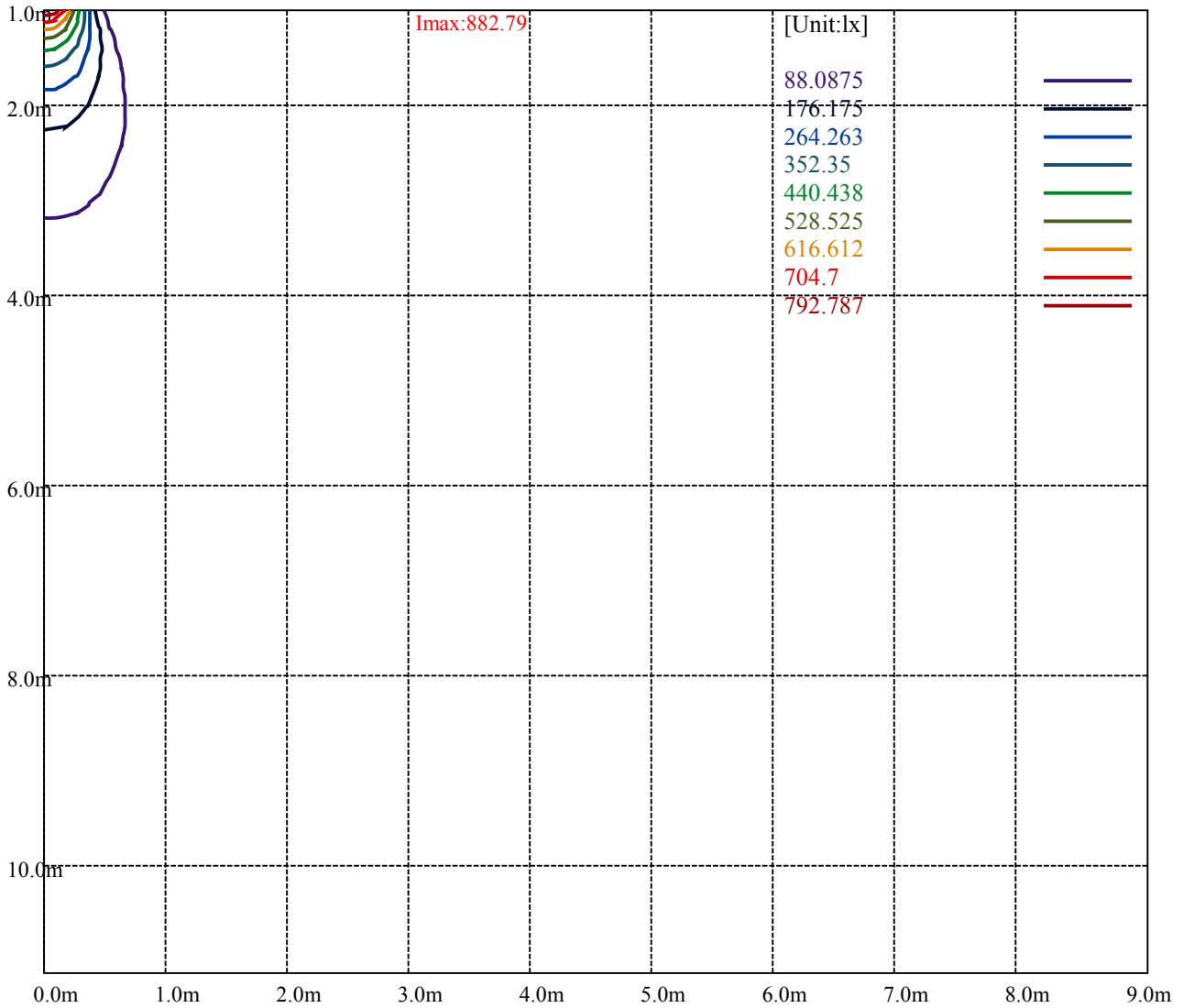
(80%Imax) 706.196

(90%Imax) 794.471





- (10%Emax) 22.0345
- (20%Emax) 44.069
- (30%Emax) 66.1035
- (40%Emax) 88.138
- (50%Emax) 110.1725
- (60%Emax) 132.207
- (70%Emax) 154.2415
- (80%Emax) 176.276
- (90%Emax) 198.3105



Luminance Table

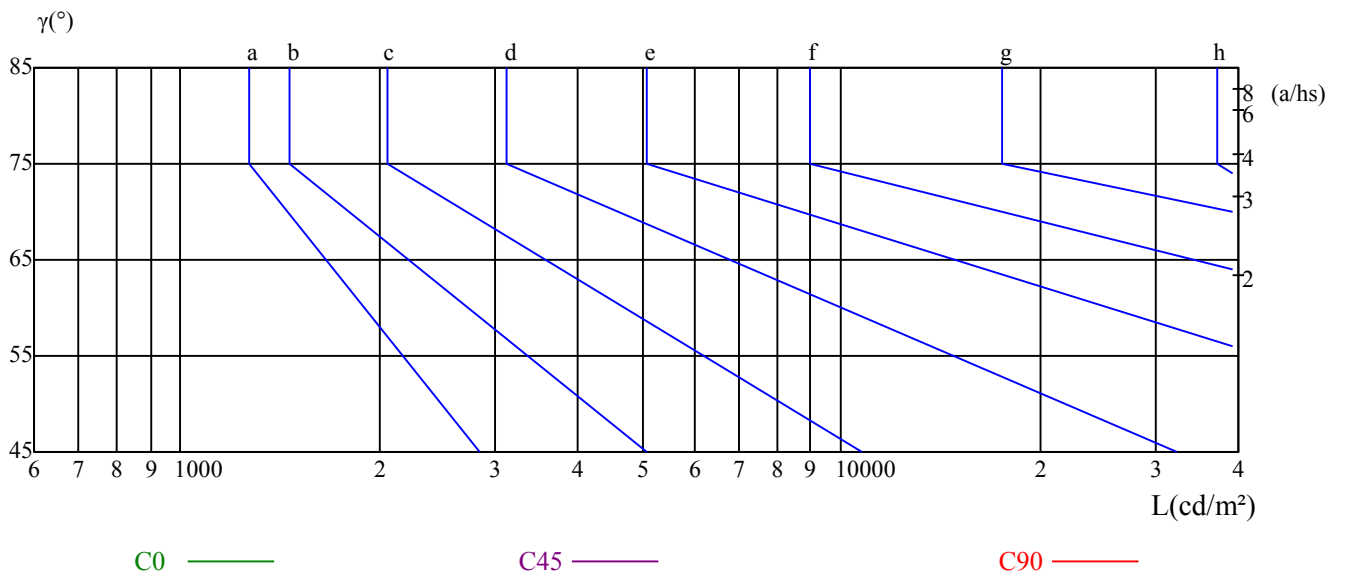
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

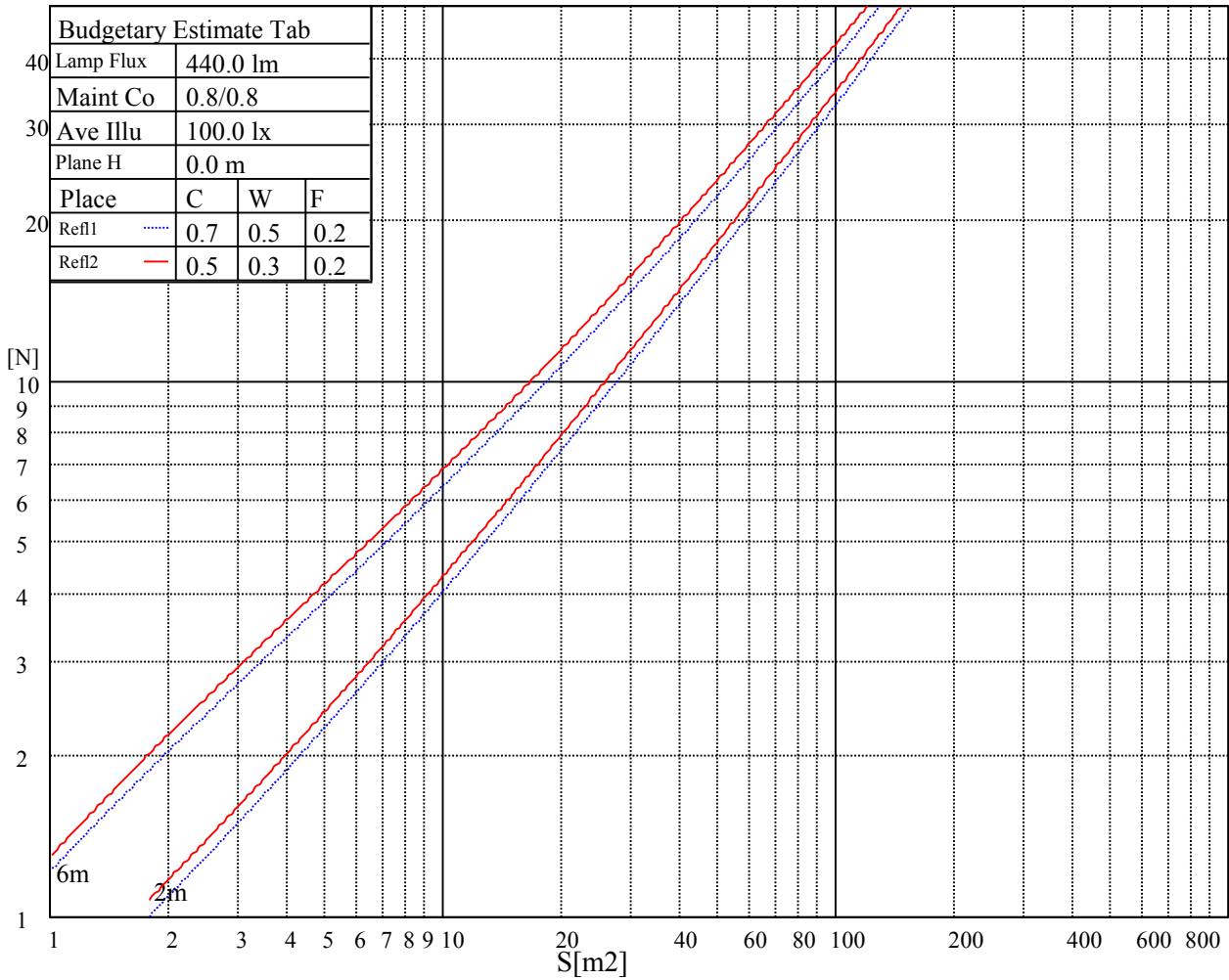
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

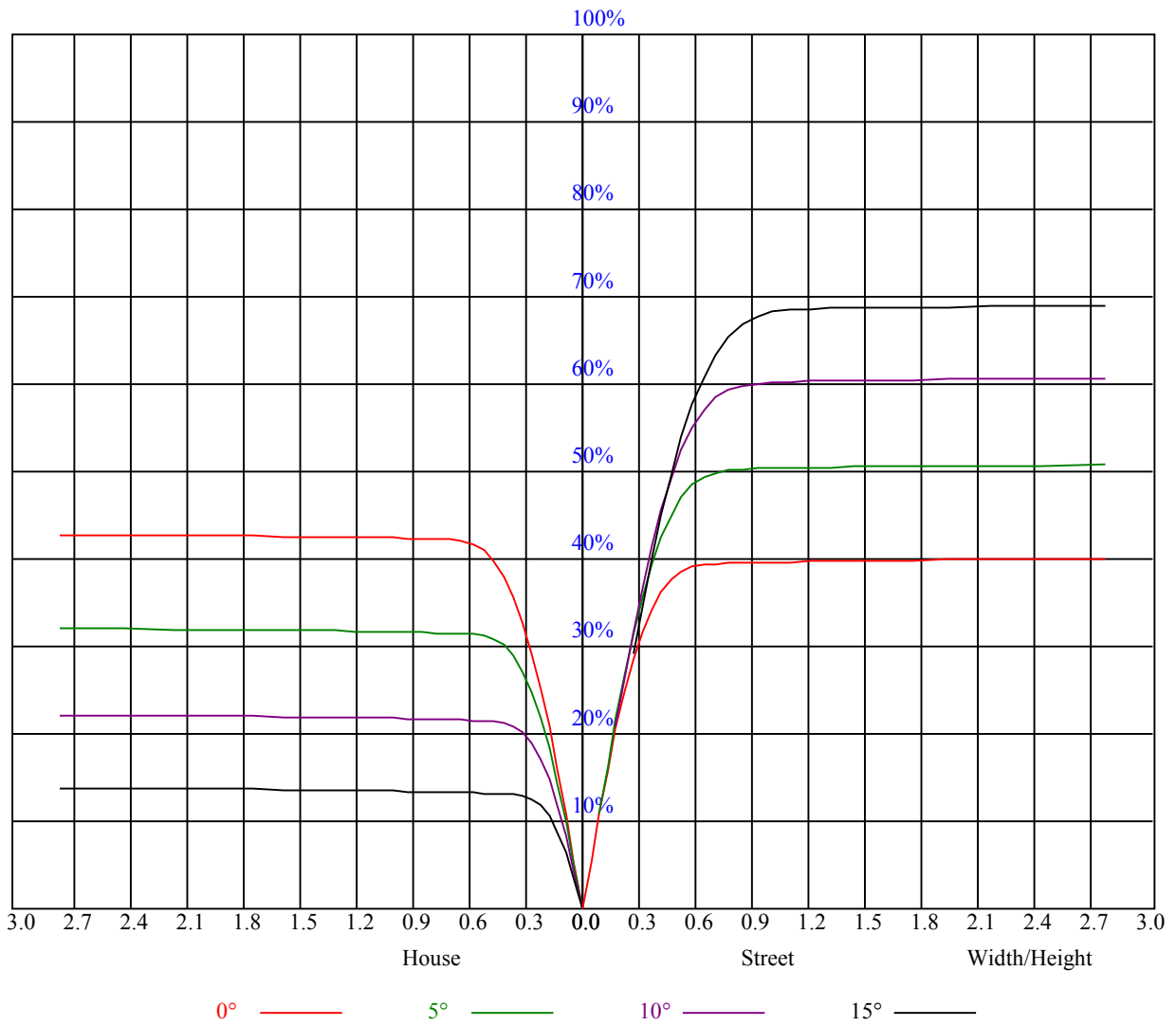
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.00	1.00	1.00	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.94	0.92	0.90	0.92	0.91	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.89	0.86	0.83	0.87	0.85	0.82	0.85	0.83	0.81	0.82	0.80	0.79	0.80	0.79	0.77	0.76
3	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.74	0.73
4	0.80	0.76	0.73	0.79	0.76	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
5	0.76	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.63
7	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.58
9	0.65	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54



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	880.88	871.54	781.20	621.23	438.64	240.58	70.65	9.11	3.38
22.5	880.76	856.63	765.06	608.18	441.73	251.44	95.96	13.28	3.32
45.0	881.38	831.66	720.96	563.79	397.18	247.33	120.99	28.58	2.81
67.5	880.14	840.38	741.60	580.33	409.16	241.93	74.19	9.34	3.32
90.0	882.06	819.84	700.82	536.01	356.85	152.78	32.63	6.36	3.04
112.5	881.21	830.19	714.15	553.44	389.87	206.55	75.15	10.24	3.32
135.0	878.18	812.93	682.48	514.69	362.31	222.92	105.81	20.70	2.81
157.5	882.79	830.25	709.31	559.86	397.18	221.29	75.99	7.31	2.98
180.0	880.88	813.54	682.26	531.28	365.68	161.33	36.56	4.16	2.59
202.5	880.76	826.65	703.24	538.48	384.75	204.81	57.83	5.79	2.70
225.0	881.38	841.33	735.24	581.06	423.06	273.26	157.89	51.81	4.61
247.5	880.14	833.29	729.51	567.51	403.31	218.19	84.26	7.48	2.81
270.0	882.06	854.61	763.59	613.97	445.50	247.16	75.43	6.86	3.09
292.5	881.21	854.66	752.12	595.58	426.15	251.61	89.10	8.27	2.93
315.0	878.18	863.49	776.81	627.36	468.34	298.29	169.99	62.83	6.53
337.5	882.79	858.49	759.60	592.65	424.80	236.53	84.77	10.74	3.09
360.0	880.88	871.54	781.20	621.23	438.64	240.58	70.65	9.11	3.38

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	2.31	1.97	1.86	1.74	1.74	1.69	1.69	1.74	1.74
22.5	2.31	2.03	1.91	1.86	1.80	1.80	1.80	1.74	1.69
45.0	2.08	2.03	1.97	1.97	1.97	1.91	1.80	1.74	1.69
67.5	2.36	2.08	2.03	1.91	1.80	1.74	1.74	1.69	1.69
90.0	2.31	2.03	1.91	1.80	1.74	1.74	1.69	1.80	1.69
112.5	2.42	2.08	2.03	1.91	1.80	1.80	1.74	1.74	1.69
135.0	2.08	2.03	2.03	1.97	1.91	1.91	1.91	1.86	1.74
157.5	2.25	2.03	1.91	1.86	1.80	1.80	1.80	1.74	1.74
180.0	2.03	1.86	1.80	1.74	1.74	1.74	1.69	1.69	1.69
202.5	2.03	1.86	1.80	1.80	1.74	1.74	1.74	1.74	1.69
225.0	2.08	1.91	1.91	1.91	1.91	1.86	1.91	1.74	1.69
247.5	2.19	1.97	1.91	1.86	1.80	1.74	1.74	1.74	1.69
270.0	2.36	2.08	1.91	1.86	1.74	1.74	1.69	1.74	1.69
292.5	2.19	2.03	1.91	1.91	1.80	1.80	1.74	1.74	1.69
315.0	2.14	1.97	1.97	1.91	1.97	1.91	1.91	1.91	1.74
337.5	2.14	1.91	1.80	1.80	1.80	1.74	1.74	1.74	1.74
360.0	2.31	1.97	1.86	1.74	1.74	1.69	1.69	1.74	1.74

C/γ(°)	90.0
0.0	1.69
22.5	1.69
45.0	1.69
67.5	1.69
90.0	1.63
112.5	1.69
135.0	1.69
157.5	1.69
180.0	1.69
202.5	1.69
225.0	1.69
247.5	1.69
270.0	1.69
292.5	1.69
315.0	1.69
337.5	1.69
360.0	1.69