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Nata

LumCAT: 2-1053-M

Luminaire:

Report No: NT2014112904

Voltage(V): 17.2000

Test No: GC2014112904

Current(A): 0.5000

LampCAT: XTM LES19

Power (W): 8.6000

Lamp flux(lm): 1062.0

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): 866.02

Efficiency(%): 81.55%

Lumens(lm)/Power(W): 100.70

Central intensity(cd): 957.913

Maximum intensity(cd): 957.913

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=59.6

[C90/270]Total=59.6

Field angle(10%Imax): [C0/180]Total=79.9

[C90/270]Total=79.9

Maximum s/h(1/2): C0_180=0.91 C90_270=0.91

Maximum s/h(1/4): C0_180=0.89 C90_270=0.89

Up flux rate of lamp(%): 3.20%

Down flux rate of lamp(%): 78.35%

Up flux rate of LUM(%): 3.92%

Down flux rate of LUM(%): 96.08%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.879%

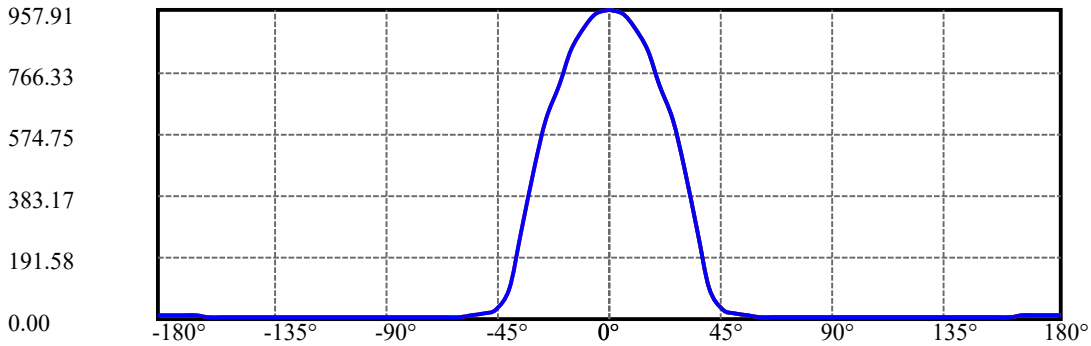
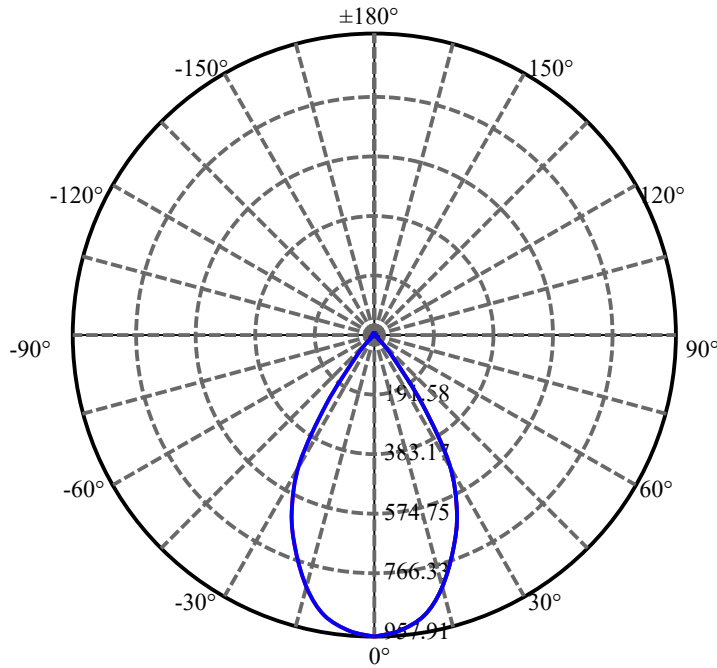
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	957.913	0.000	0	.000%	.000%
5.0	944.890	22.747	22.747	2.142%	2.627%
10.0	903.340	66.117	88.864	6.226%	10.261%
15.0	835.479	103.146	192.01	9.712%	22.172%
20.0	727.964	128.850	320.86	12.133%	37.050%
25.0	618.930	141.264	462.124	13.302%	53.362%
30.0	472.858	138.167	600.291	13.010%	69.316%
35.0	266.848	108.927	709.218	10.257%	81.894%
40.0	93.913	60.190	769.408	5.668%	88.845%
45.0	30.766	23.085	792.493	2.174%	91.510%
50.0	17.058	9.663	802.157	.910%	92.626%
55.0	11.484	6.206	808.363	.584%	93.343%
60.0	8.595	4.641	813.004	.437%	93.879%
65.0	7.008	3.793	816.797	.357%	94.317%
70.0	6.085	3.315	820.112	.312%	94.699%
75.0	5.525	3.035	823.147	.286%	95.050%
80.0	5.182	2.865	826.012	.270%	95.381%
85.0	6.106	3.067	829.079	.289%	95.735%
90.0	4.777	2.980	832.059	.281%	96.079%
95.0	5.182	2.727	834.786	.257%	96.394%
100.0	4.826	2.719	837.505	.256%	96.708%
105.0	4.798	2.575	840.08	.242%	97.005%
110.0	4.805	2.510	842.59	.236%	97.295%
115.0	4.798	2.431	845.021	.229%	97.576%
120.0	4.805	2.334	847.356	.220%	97.845%
125.0	4.833	2.228	849.583	.210%	98.103%
130.0	4.896	2.115	851.699	.199%	98.347%
135.0	4.987	1.997	853.695	.188%	98.577%
140.0	5.126	1.873	855.568	.176%	98.794%
145.0	5.455	1.765	857.333	.166%	98.997%
150.0	6.162	1.711	859.044	.161%	99.195%
155.0	7.218	1.693	860.737	.159%	99.391%
160.0	8.386	1.636	862.374	.154%	99.579%
165.0	9.414	1.467	863.841	.138%	99.749%
170.0	10.218	1.165	865.005	.110%	99.883%
175.0	10.763	0.751	865.756	.071%	99.970%
180.0	10.966	0.260	866.015	.024%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	600.29	56.52%	69.32%
0-40	769.41	72.45%	88.84%
0-60	813.00	76.55%	93.88%
0-90	832.06	78.35%	96.08%
0-120	847.36	79.79%	97.85%
0-180	866.02	81.55%	100.00%
60-90	23.70	2.23%	2.74%
90-120	18.28	1.72%	2.11%
90-130	22.62	2.13%	2.61%
90-150	29.97	2.82%	3.46%
90-180	36.68	3.45%	4.24%
0-34.25	692.81	65.24%	80.00%

ZONAL LUMEN SUMMARY

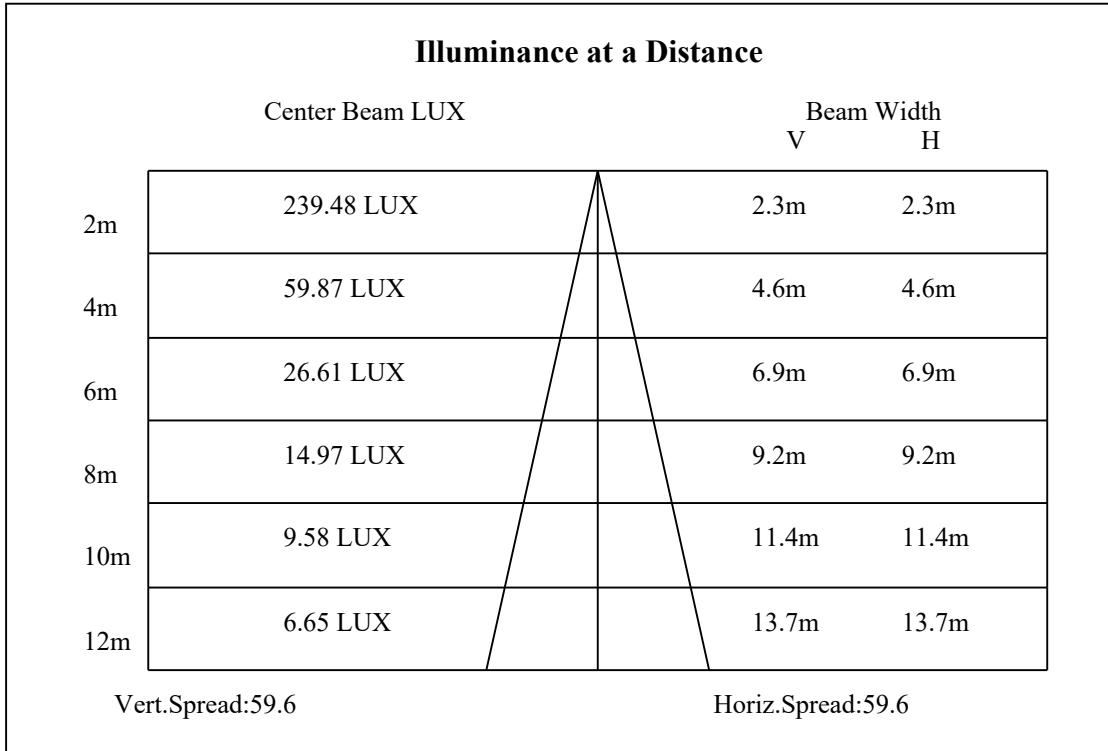
0-10	88.86
10-20	232.00
20-30	279.43
30-40	169.12
40-50	32.75
50-60	10.85
60-70	7.11
70-80	5.90
80-90	6.05
90-100	5.45
100-110	5.08
110-120	4.77
120-130	4.34
130-140	3.87
140-150	3.48
150-160	3.33
160-170	2.63
170-180	0.75

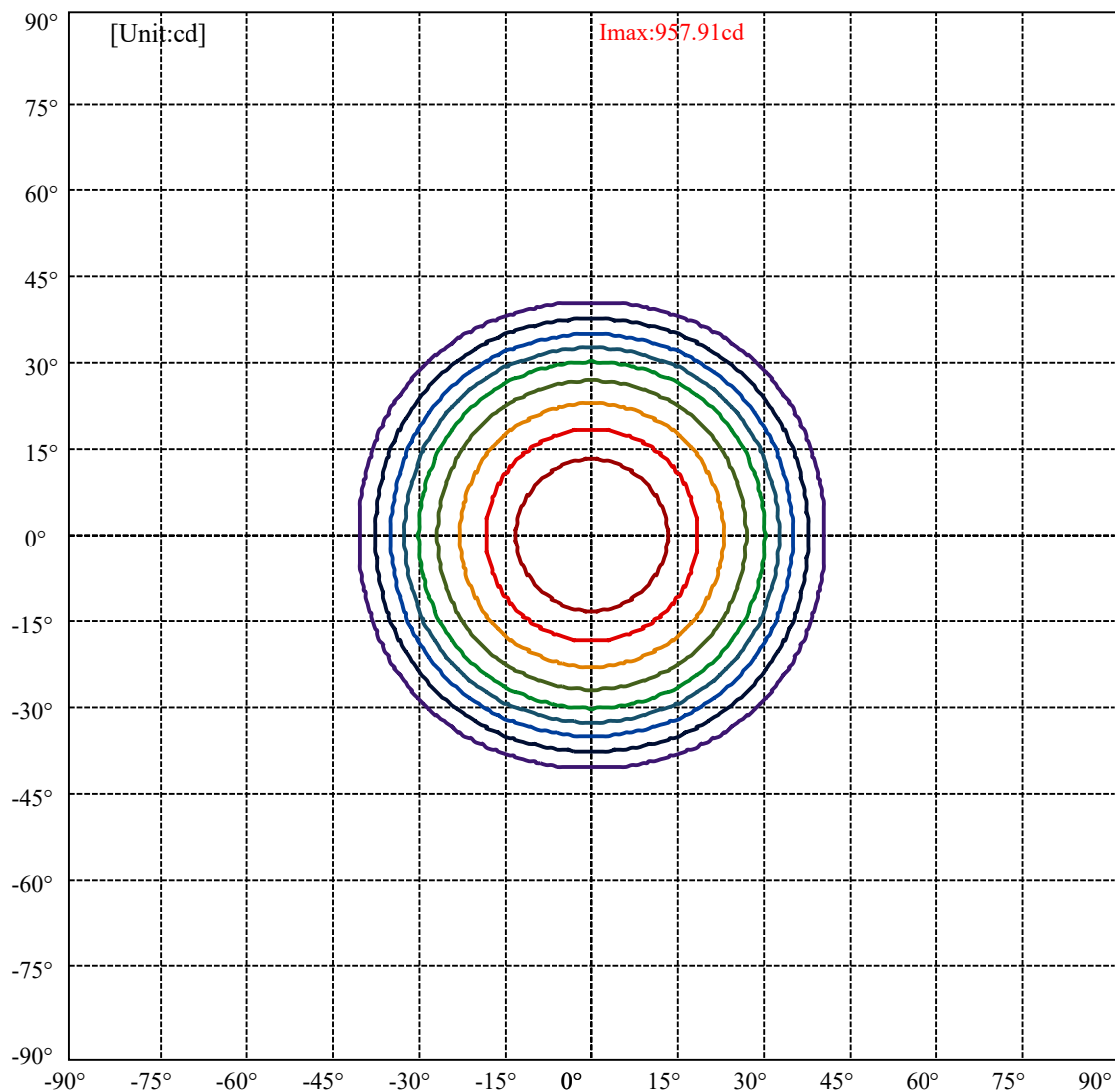


C0(Max): ———
C0/C180: ———
C90/C270: ———

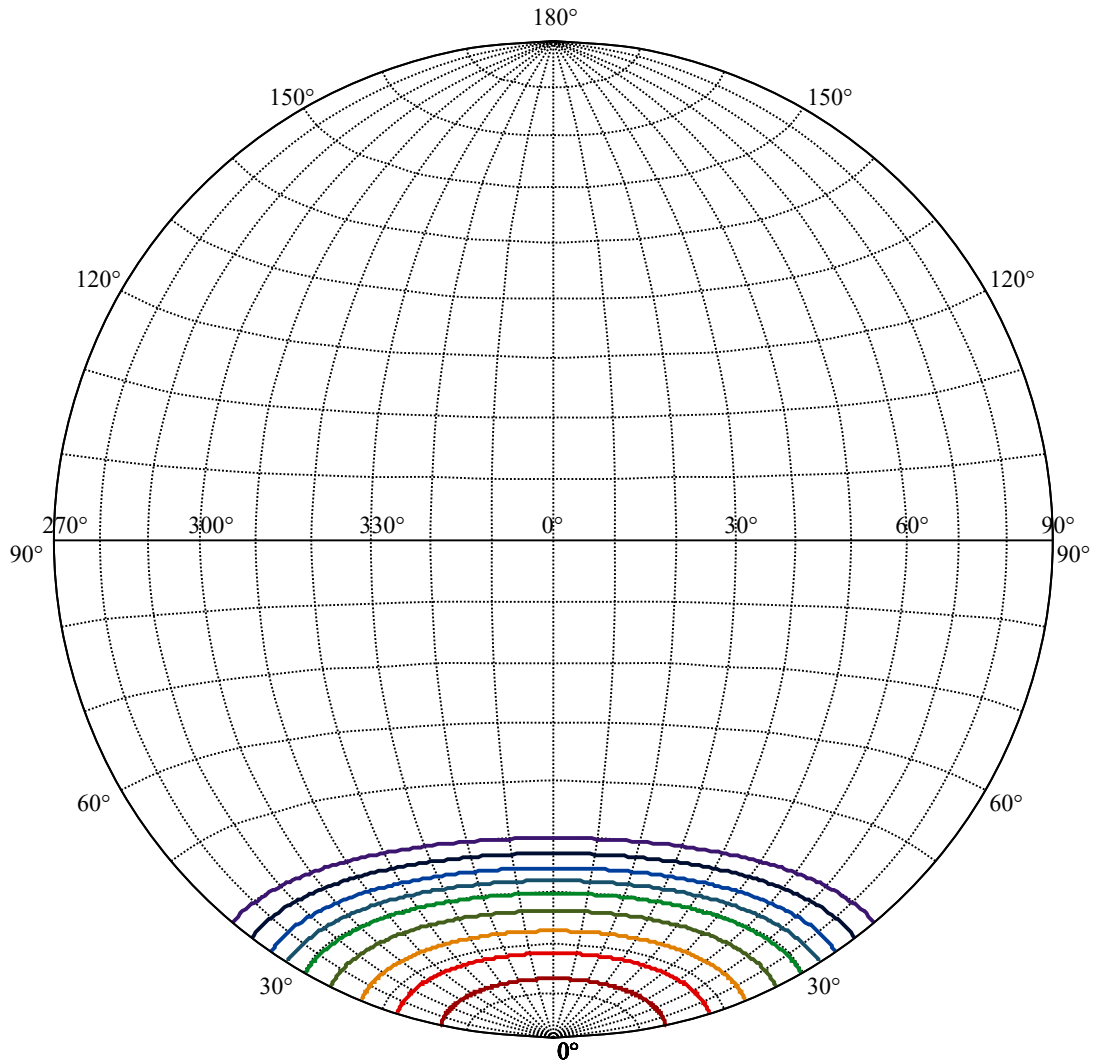
Field angle(10%Imax):C0/180Left:39.9 Right:39.9
:C90/270Left:39.9 Right:39.9

Beam Angle(50%Imax):C0/180Left:29.8 Right:29.8
:C90/270Left:29.8 Right:29.8





(10%Imax) 95.7913	—
(20%Imax) 191.583	—
(30%Imax) 287.374	—
(40%Imax) 383.165	—
(50%Imax) 478.956	—
(60%Imax) 574.748	—
(70%Imax) 670.539	—
(80%Imax) 766.33	—
(90%Imax) 862.122	—



House

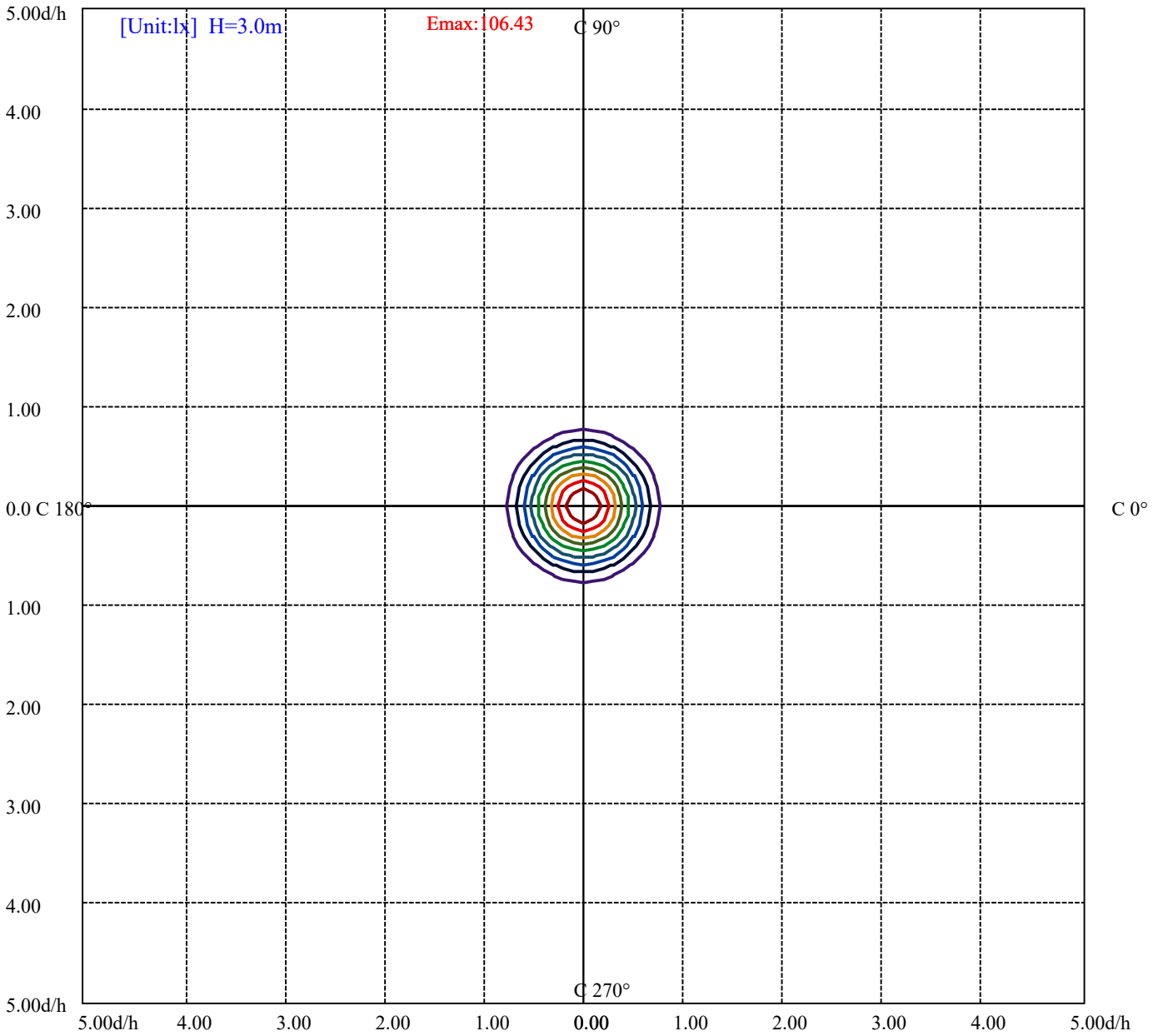
[Unit:cd]

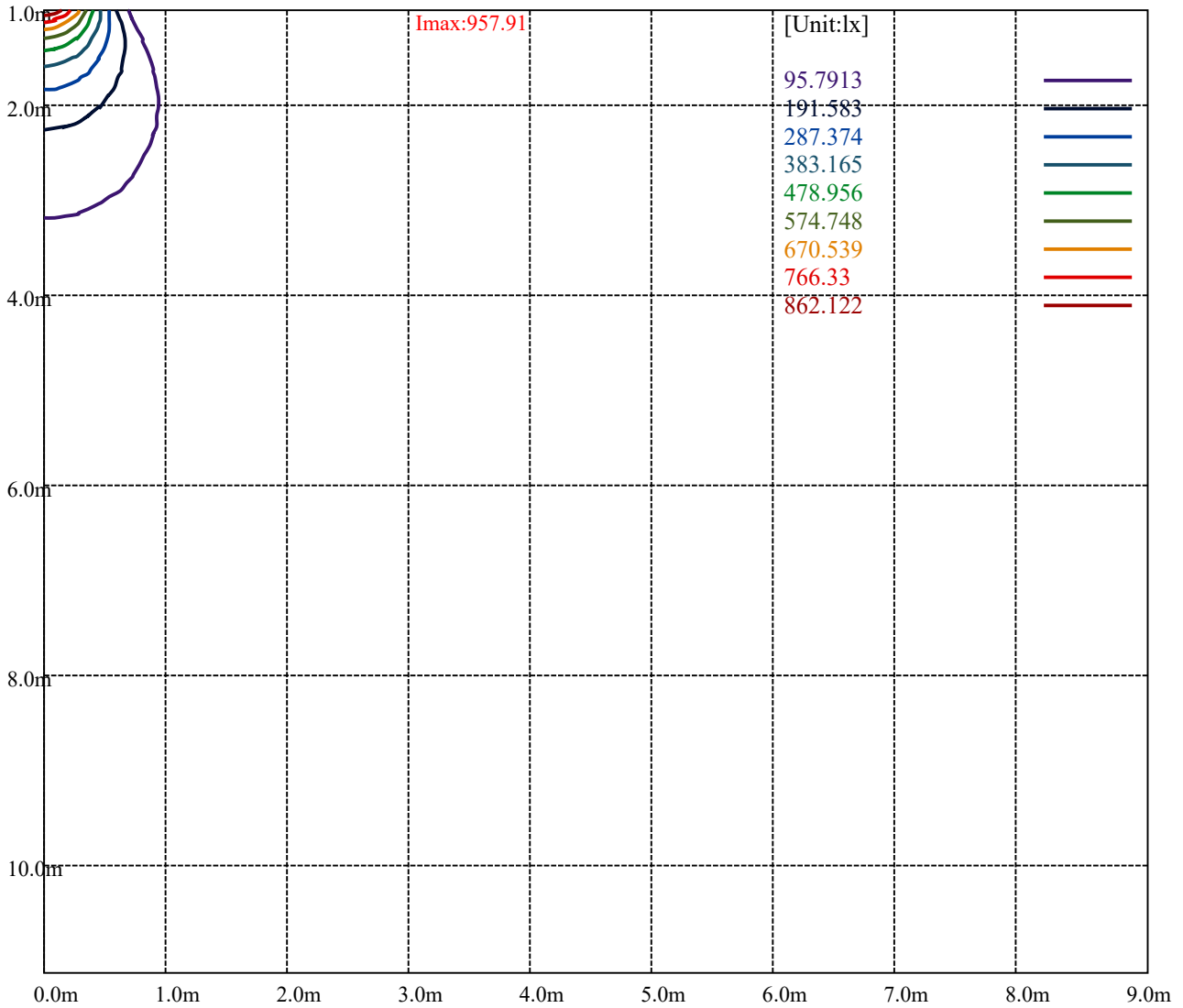
Road

Imax:957.91

- (10%Imax) 95.7913
- (20%Imax) 191.583
- (30%Imax) 287.374
- (40%Imax) 383.165
- (50%Imax) 478.956
- (60%Imax) 574.748
- (70%Imax) 670.539
- (80%Imax) 766.33
- (90%Imax) 862.122







Luminance Table

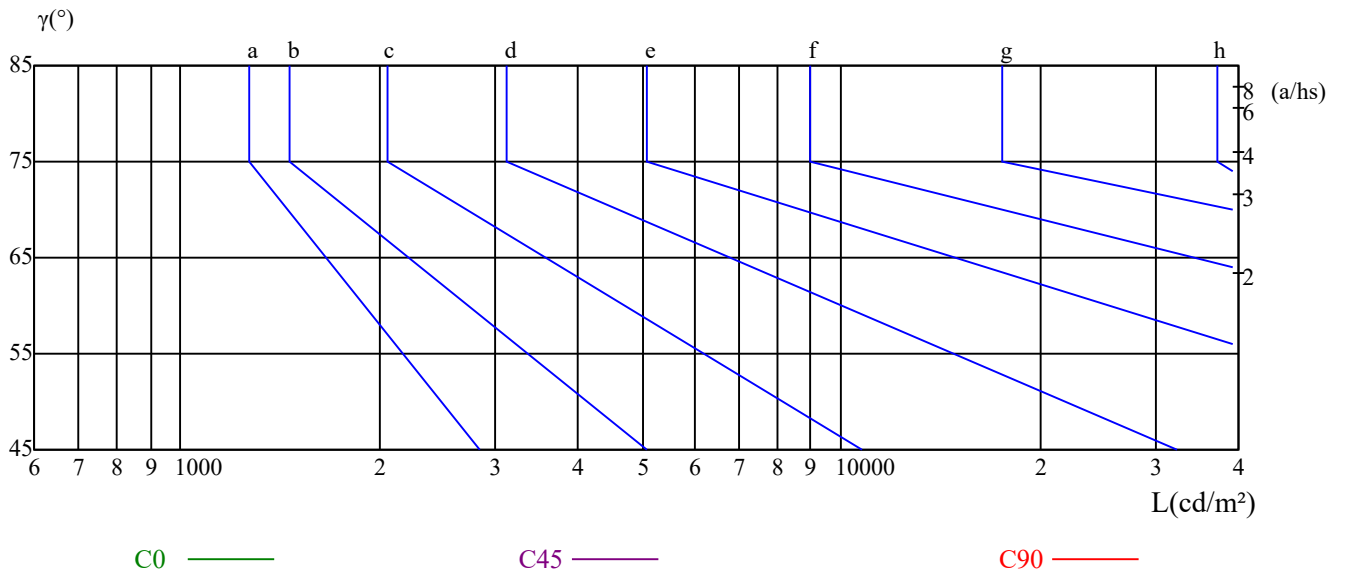
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

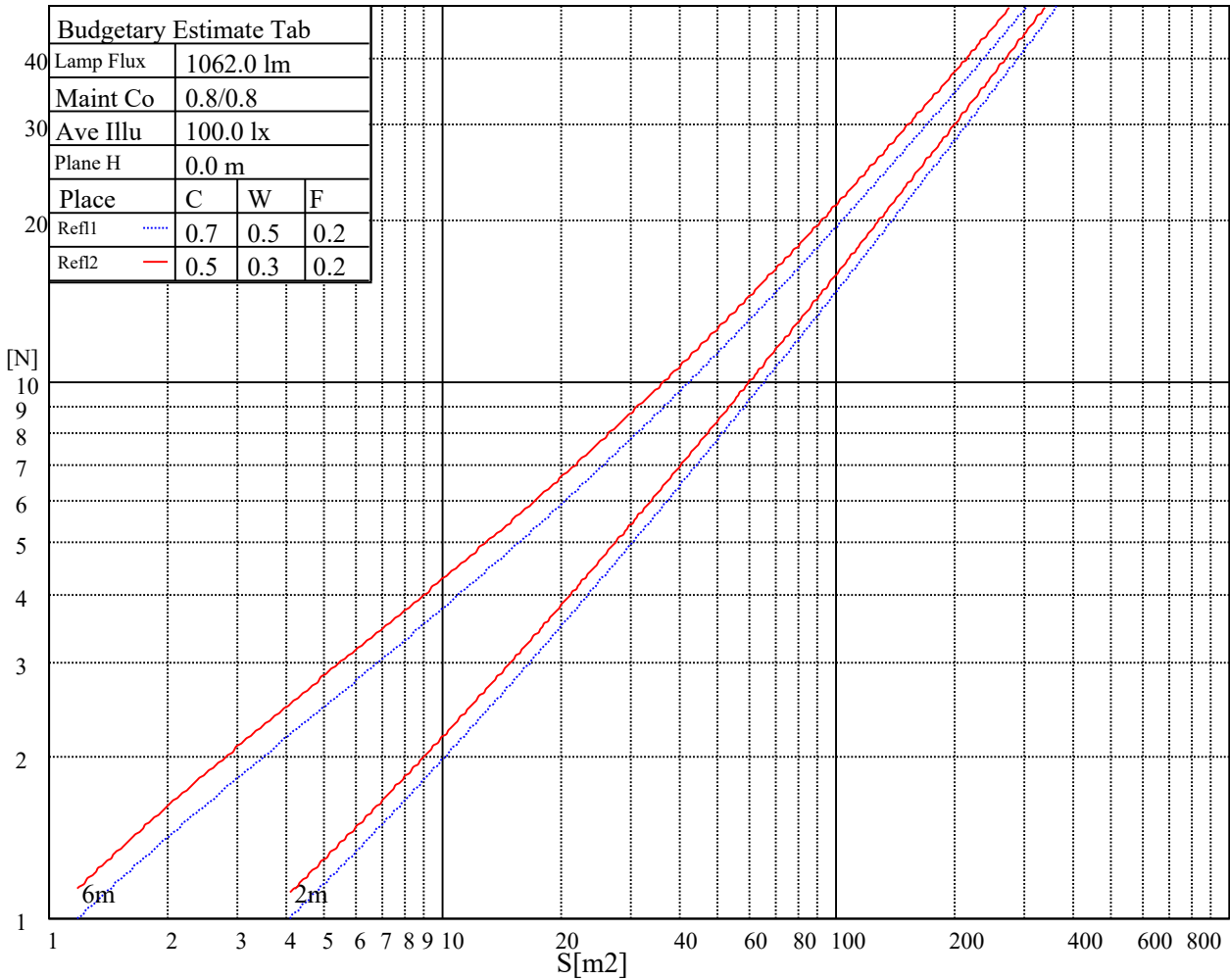
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOF=20 CU															
0	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89	0.84	0.84	0.84	0.80	0.80	0.80	0.78
1	0.89	0.87	0.85	0.87	0.85	0.83	0.83	0.81	0.80	0.79	0.78	0.77	0.76	0.75	0.74	0.73
2	0.83	0.79	0.76	0.81	0.78	0.75	0.78	0.75	0.73	0.75	0.73	0.71	0.72	0.70	0.69	0.67
3	0.77	0.73	0.69	0.75	0.72	0.69	0.73	0.70	0.67	0.70	0.68	0.66	0.68	0.66	0.64	0.63
4	0.72	0.67	0.64	0.71	0.66	0.63	0.68	0.65	0.62	0.66	0.63	0.61	0.64	0.62	0.60	0.58
5	0.67	0.62	0.59	0.66	0.62	0.58	0.64	0.60	0.57	0.63	0.59	0.57	0.61	0.58	0.56	0.55
6	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.53	0.59	0.56	0.53	0.58	0.55	0.52	0.51
7	0.59	0.54	0.51	0.58	0.54	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.55	0.51	0.49	0.48
8	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.46	0.52	0.49	0.46	0.45
9	0.53	0.48	0.45	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.44	0.49	0.46	0.43	0.42
10	0.50	0.45	0.42	0.49	0.45	0.42	0.48	0.44	0.41	0.48	0.44	0.41	0.47	0.43	0.41	0.40

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	957.76	948.97	916.41	852.96	750.07	644.21	508.92	295.19	110.28
45.0	957.59	949.31	913.61	856.10	745.99	629.39	490.57	286.35	105.63
90.0	958.21	944.27	899.01	825.38	714.15	601.63	445.14	232.92	81.58
135.0	958.09	947.24	905.50	834.28	727.30	614.06	473.06	260.17	98.64
180.0	957.76	940.81	893.02	829.52	715.83	603.54	435.29	240.75	72.96
225.0	957.59	941.09	895.99	823.14	711.91	610.92	456.67	251.16	72.06
270.0	958.21	944.39	904.66	833.61	734.13	627.48	500.20	291.39	117.50
315.0	958.09	943.04	898.51	828.85	724.33	620.21	473.00	276.84	92.65
360.0	957.76	948.97	916.41	852.96	750.07	644.21	508.92	295.19	110.28
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	33.79	18.30	11.86	8.78	7.11	6.15	5.54	5.15	4.92
45.0	31.16	17.62	11.53	8.67	6.99	6.15	5.54	5.20	5.71
90.0	28.98	16.23	11.08	8.50	6.99	6.04	5.54	5.20	8.11
135.0	29.54	16.56	11.25	8.56	6.94	6.04	5.48	5.15	5.71
180.0	25.85	15.27	10.52	8.06	6.66	5.93	5.43	5.20	7.78
225.0	29.21	15.95	10.91	8.17	6.88	5.99	5.48	5.20	6.55
270.0	35.92	19.53	12.81	9.34	7.39	6.32	5.65	5.26	4.98
315.0	31.67	17.01	11.92	8.67	7.11	6.04	5.54	5.09	5.09
360.0	33.79	18.30	11.86	8.78	7.11	6.15	5.54	5.15	4.92
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	4.76	4.92	4.81	4.76	4.81	4.81	4.81	4.81	4.92
45.0	4.81	5.09	4.81	4.81	4.81	4.81	4.81	4.81	4.87
90.0	4.76	5.48	4.81	4.76	4.81	4.76	4.81	4.81	4.87
135.0	4.81	5.15	4.87	4.81	4.81	4.81	4.81	4.81	4.87
180.0	4.76	5.82	4.92	4.87	4.81	4.76	4.76	4.81	4.87
225.0	4.81	5.20	4.81	4.76	4.81	4.81	4.81	4.87	4.98
270.0	4.76	4.87	4.76	4.81	4.81	4.81	4.81	4.87	4.87
315.0	4.76	4.92	4.81	4.81	4.76	4.81	4.81	4.87	4.92
360.0	4.76	4.92	4.81	4.76	4.81	4.81	4.81	4.81	4.92
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	5.04	5.20	5.43	6.04	6.94	8.11	9.12	9.96	10.52
45.0	4.92	5.04	5.32	6.04	7.22	8.39	9.46	10.24	10.85
90.0	4.92	5.04	5.43	6.21	7.33	8.56	9.62	10.35	10.85
135.0	4.92	5.04	5.37	5.99	7.11	8.22	9.34	10.07	10.69
180.0	4.92	5.04	5.37	6.10	7.16	8.28	9.23	10.07	10.57
225.0	5.09	5.26	5.65	6.49	7.50	8.73	9.74	10.57	11.02
270.0	5.04	5.20	5.54	6.15	7.22	8.39	9.46	10.29	10.85
315.0	5.04	5.20	5.54	6.27	7.27	8.39	9.34	10.18	10.74
360.0	5.04	5.20	5.43	6.04	6.94	8.11	9.12	9.96	10.52
C/γ(°)	180.0								
0.0	10.74								
45.0	11.13								
90.0	11.08								
135.0	10.91								
180.0	10.74								
225.0	11.13								
270.0	11.08								
315.0	10.91								
360.0	10.74								