
Nata

Client:

LumCAT: 1-0788-M2

Luminaire: 92.70.125.00+92.70.152.00

Report No: 200915-B010

Voltage(V): 34.7300

Test No: 200914-C010

Current(A): 0.3720

LampCAT: Vesta DW LES9 Gen2 PD

Power (W): 12.9190

Lamp flux(lm): 1286.0

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): 1112.85, Efficiency(%): 86.56% , Luminous Efficacy(lm/W): 86.14

Central intensity(cd): 1363.359, Maximum intensity(cd): 1363.359

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=46.4

[C90/270]Total=46.4

Field angle(10%Imax): [C0/180]Total=93.0

[C90/270]Total=93.0

Maximum s/h(1/2): C0_180=0.70 C90_270=0.70

Maximum s/h(1/4): C0_180=0.79 C90_270=0.79

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.56%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.250%

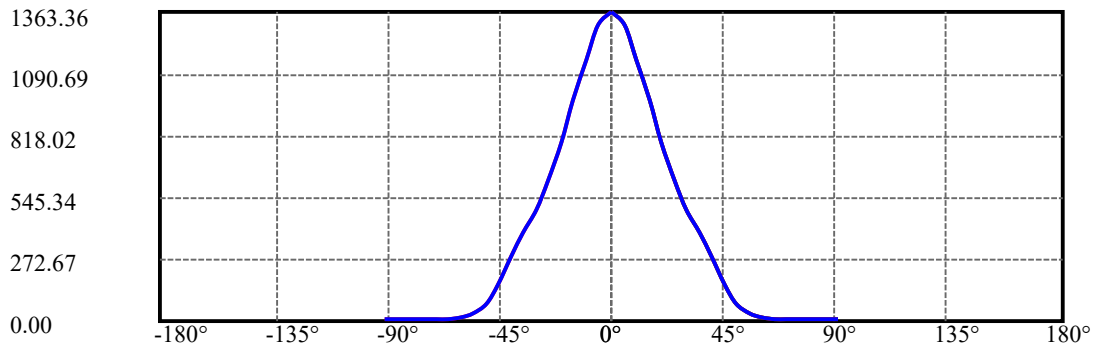
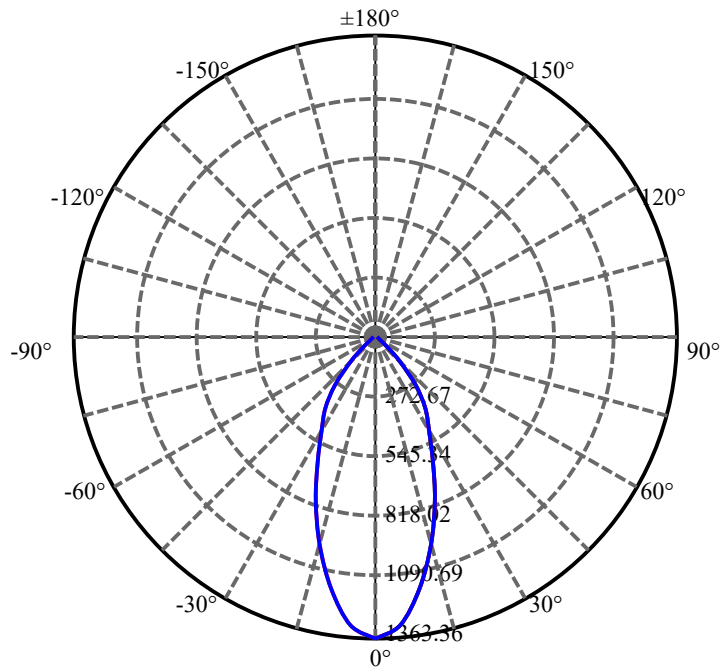
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1363.359	0.000	0	.000%	.000%
5.0	1308.023	31.936	31.936	2.484%	2.870%
10.0	1151.944	88.001	119.936	6.845%	10.777%
15.0	973.336	126.070	246.007	9.807%	22.106%
20.0	788.639	145.211	391.218	11.295%	35.155%
25.0	620.726	147.816	539.034	11.498%	48.437%
30.0	494.374	141.117	680.151	10.977%	61.118%
35.0	392.646	130.620	810.771	10.160%	72.855%
40.0	287.817	113.530	924.301	8.831%	83.057%
45.0	161.909	83.270	1007.572	6.477%	90.540%
50.0	77.913	48.460	1056.031	3.769%	94.894%
55.0	36.570	24.892	1080.924	1.936%	97.131%
60.0	17.290	12.449	1093.373	.968%	98.250%
65.0	7.158	5.943	1099.316	.462%	98.784%
70.0	5.013	3.082	1102.398	.240%	99.061%
75.0	4.859	2.580	1104.978	.201%	99.292%
80.0	4.894	2.609	1107.588	.203%	99.527%
85.0	4.873	2.654	1110.242	.206%	99.765%
90.0	4.662	2.611	1112.852	.203%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	680.15	52.89%	61.12%
0-40	924.30	71.87%	83.06%
0-60	1093.37	85.02%	98.25%
0-90	1110.24	86.33%	99.77%
0-120	1110.24	86.33%	99.77%
0-180	1112.85	86.54%	100.00%
60-90	29.32	2.28%	2.63%
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%
0-38.50	890.28	69.23%	80.00%

ZONAL LUMEN SUMMARY

0-10	119.94
10-20	271.28
20-30	288.93
30-40	244.15
40-50	131.73
50-60	37.34
60-70	9.03
70-80	5.19
80-90	2.65
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: —————

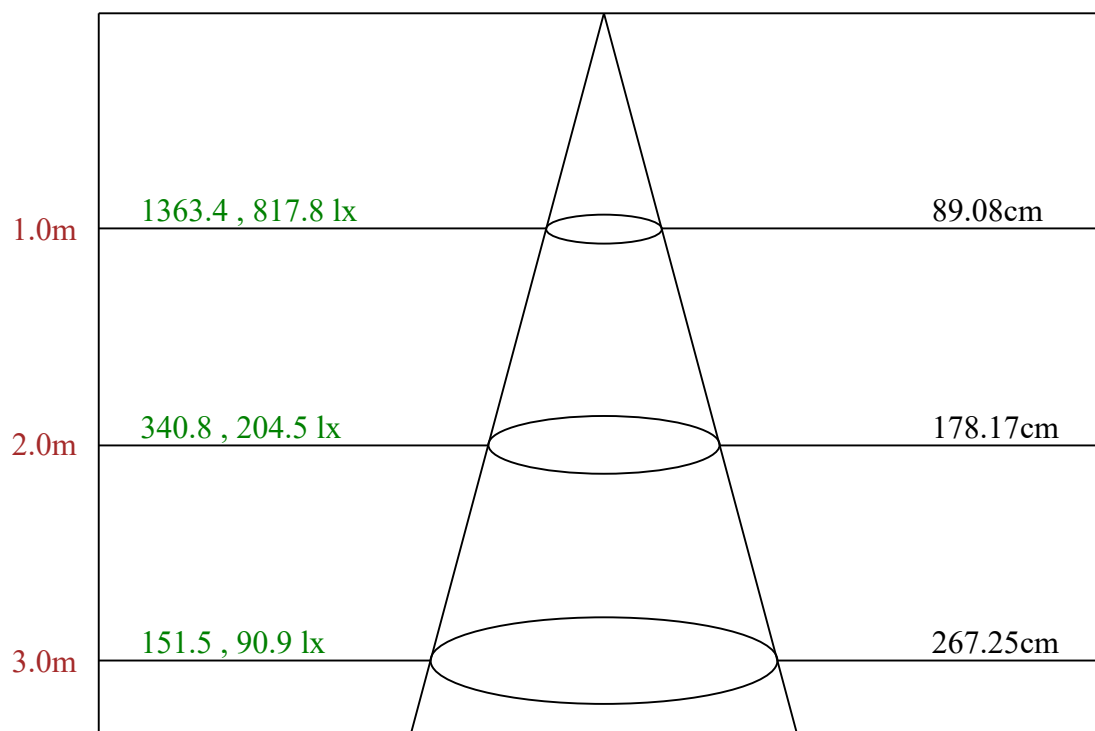
C90/C270: —————

Field angle(10%Imax):C0/180Left:46.5 Right:46.5

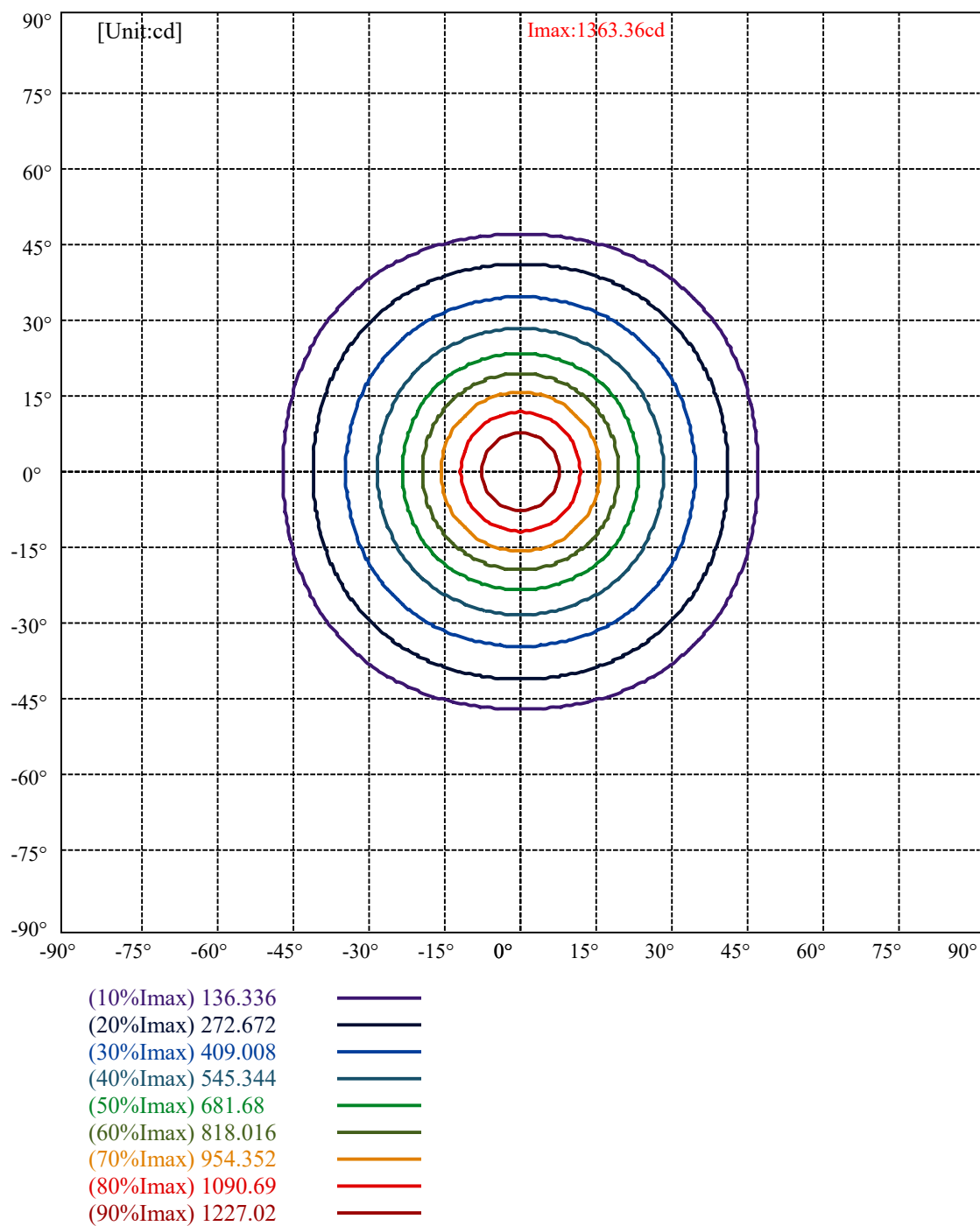
:C90/270Left:46.5 Right:46.5

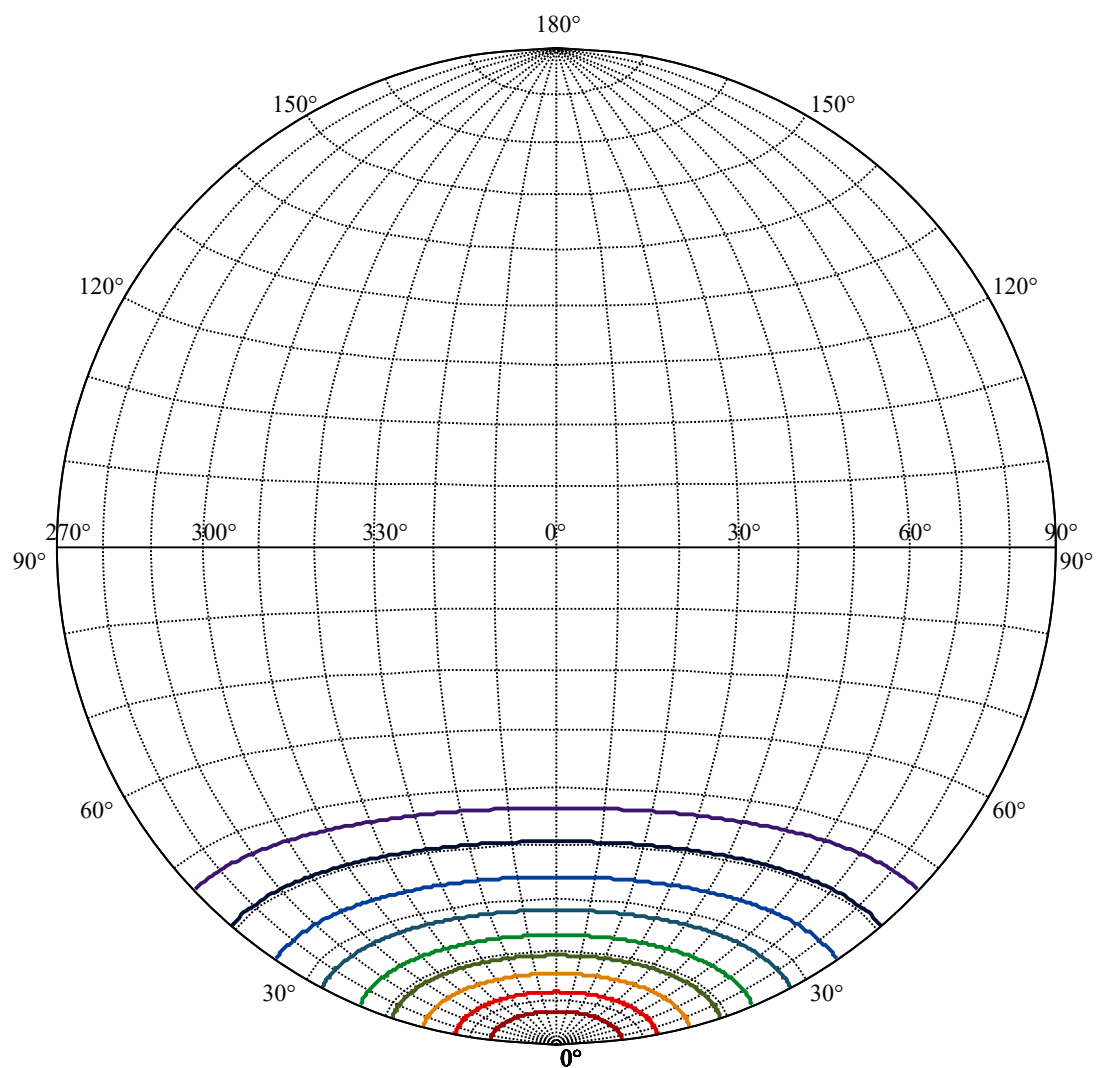
Beam Angle(50%Imax):C0/180Left:23.2 Right:23.2

:C90/270Left:23.2 Right:23.2



Max , Ave Beam angle of C0 plane 48.02





House

[Unit:cd]

Road

Imax:1363.36

(10%Imax) 136.336

(20%Imax) 272.672

(30%Imax) 409.008

(40%Imax) 545.344

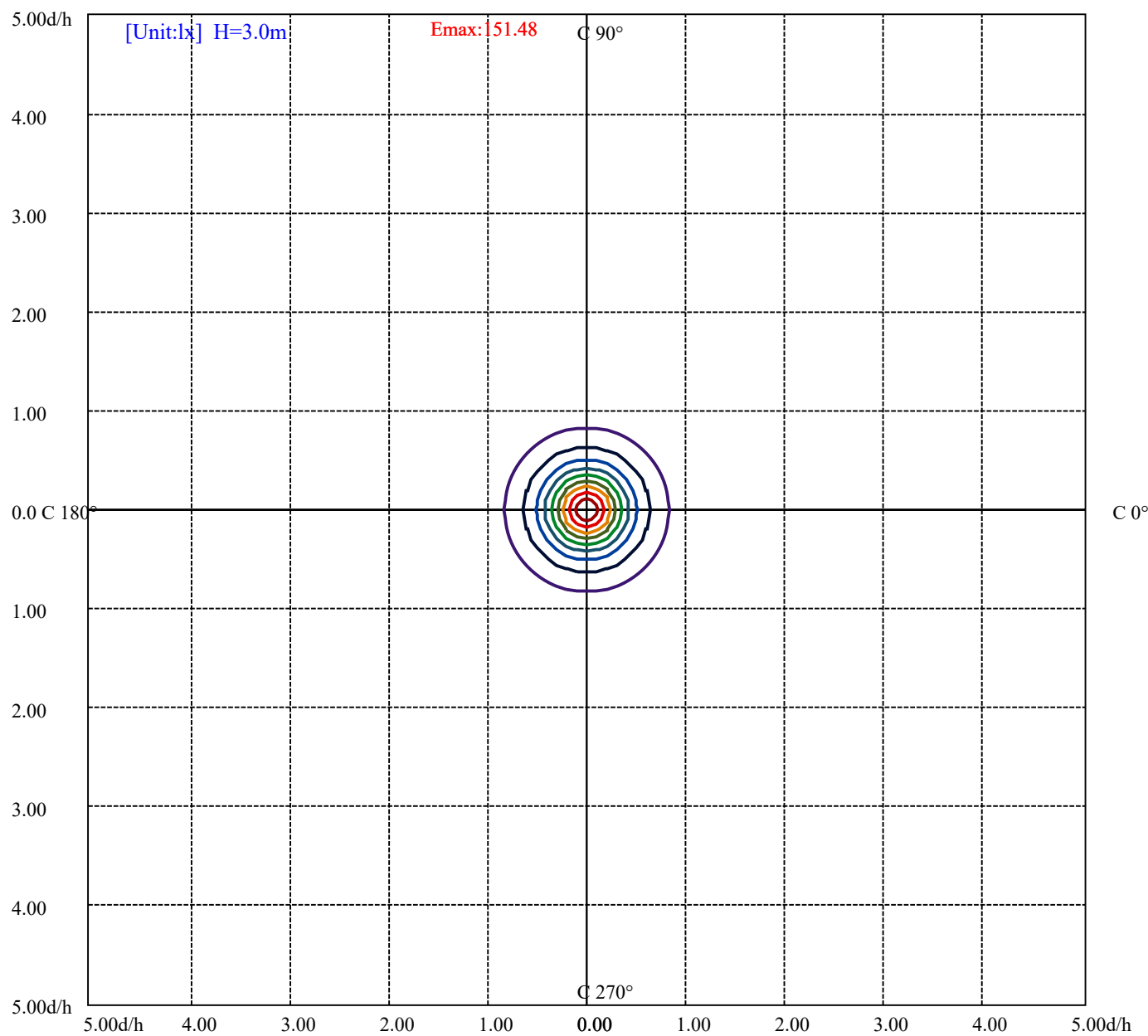
(50%Imax) 681.68

(60%Imax) 818.016

(70%Imax) 954.352

(80%Imax) 1090.69

(90%Imax) 1227.02



(10%E _{max}) 15.14844	—
(20%E _{max}) 30.29689	—
(30%E _{max}) 45.44522	—
(40%E _{max}) 60.59367	—
(50%E _{max}) 75.74211	—
(60%E _{max}) 90.89056	—
(70%E _{max}) 106.0389	—
(80%E _{max}) 121.1878	—
(90%E _{max}) 136.3356	—

Luminance Table

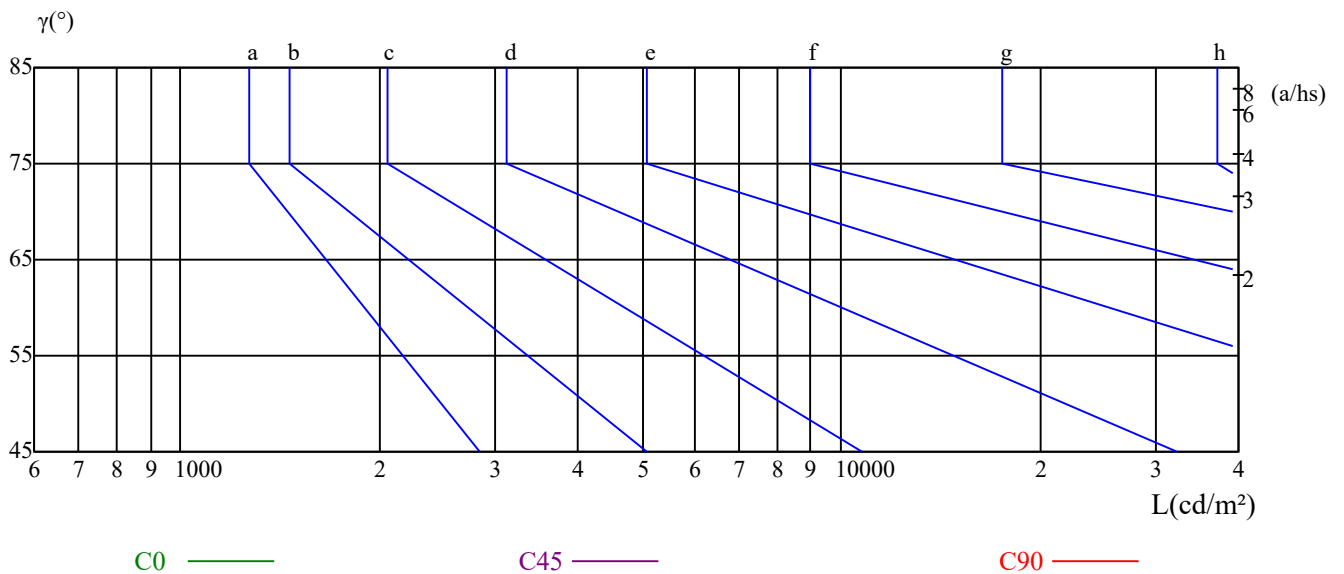
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

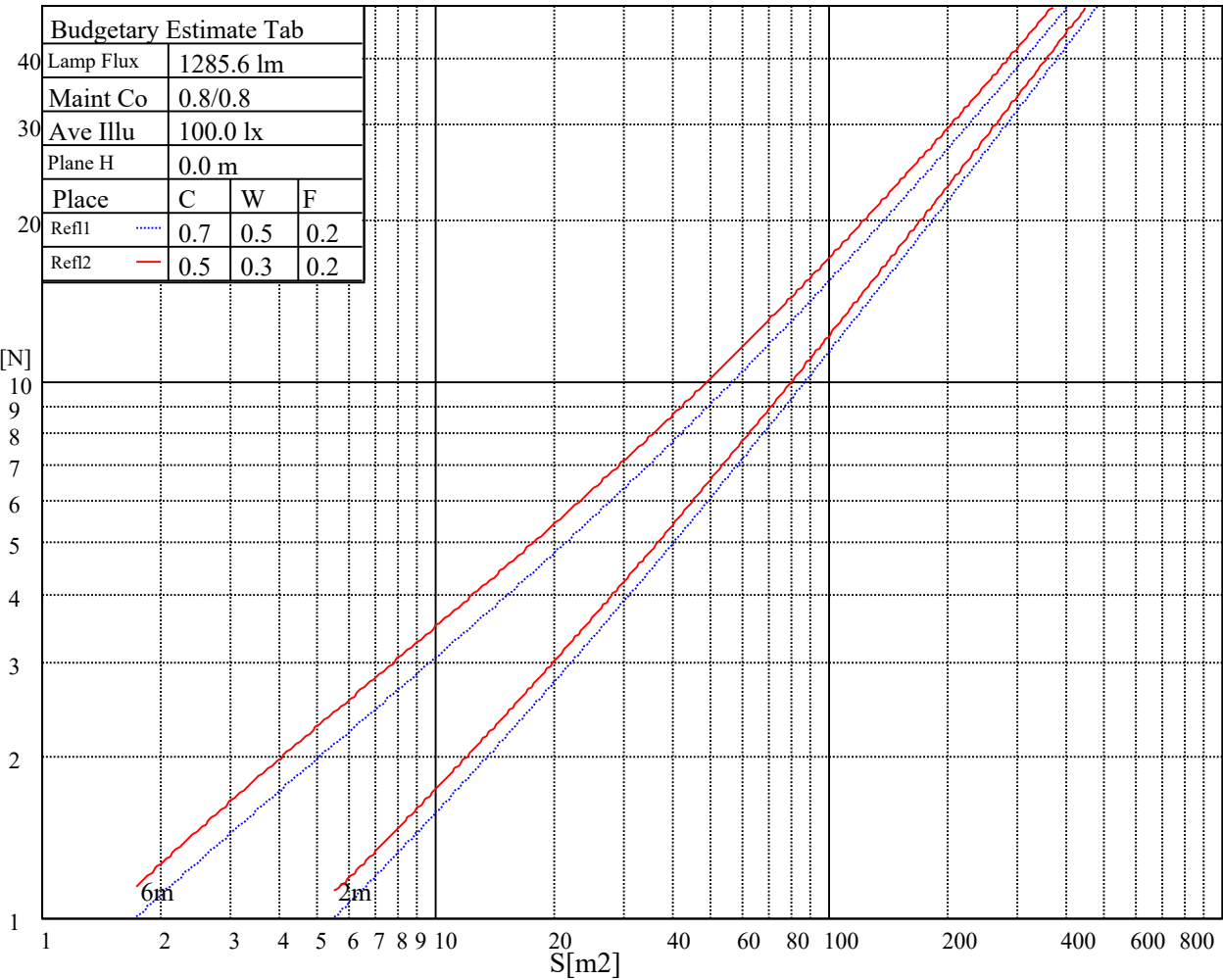
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.88	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.78	0.81	0.79	0.76	0.78	0.77	0.75	0.73
3	0.81	0.77	0.73	0.80	0.76	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.67
4	0.75	0.70	0.66	0.74	0.70	0.66	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.64	0.62
5	0.70	0.65	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.57
6	0.65	0.60	0.56	0.65	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.53
7	0.61	0.56	0.52	0.61	0.55	0.52	0.59	0.55	0.51	0.58	0.54	0.51	0.57	0.54	0.51	0.49
8	0.57	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.46
9	0.54	0.49	0.45	0.54	0.48	0.45	0.53	0.48	0.45	0.52	0.48	0.44	0.51	0.47	0.44	0.43
10	0.51	0.46	0.42	0.51	0.45	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.48	0.44	0.42	0.40

Intensity data(cd)										Appendix Page: 12 Total:12	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1357.88	1326.38	1202.63	1014.75	821.81	650.25	510.19	403.88	300.94		
45.0	1367.44	1330.88	1195.31	1001.25	808.88	640.69	506.25	400.50	304.31		
90.0	1364.63	1293.19	1120.67	937.41	772.43	601.26	475.48	385.14	282.32		
135.0	1363.50	1309.50	1157.06	987.19	792.00	622.13	509.06	403.88	301.50		
180.0	1357.88	1273.50	1108.29	916.03	742.11	598.16	488.48	391.84	273.60		
225.0	1367.44	1295.44	1119.66	942.19	758.81	596.25	487.13	382.56	270.45		
270.0	1364.63	1328.06	1195.88	1007.44	823.50	638.44	497.25	399.94	293.06		
315.0	1363.50	1307.25	1116.06	980.44	789.58	618.64	481.16	373.44	276.36		
360.0	1357.88	1326.38	1202.63	1014.75	821.81	650.25	510.19	403.88	300.94		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	181.24	89.83	43.14	21.54	8.77	4.89	4.67	4.61	4.61		
45.0	177.53	88.82	43.76	20.76	8.33	4.95	4.67	4.67	4.56		
90.0	153.68	74.59	34.43	16.43	6.64	5.06	4.95	4.95	4.67		
135.0	166.84	76.16	34.31	16.20	7.03	5.01	4.78	4.84	4.89		
180.0	144.28	65.25	28.80	13.84	5.91	4.89	4.84	4.89	5.12		
225.0	150.36	70.09	31.67	13.61	6.24	5.18	5.12	5.40	5.51		
270.0	166.73	83.08	38.42	18.28	7.37	5.23	5.12	5.06	5.06		
315.0	154.63	75.49	38.03	17.66	6.98	4.89	4.73	4.73	4.56		
360.0	181.24	89.83	43.14	21.54	8.77	4.89	4.67	4.61	4.61		
C/ γ (°)	90.0										
0.0	4.56										
45.0	4.56										
90.0	4.56										
135.0	4.56										
180.0	5.46										
225.0	4.56										
270.0	4.50										
315.0	4.56										
360.0	4.56										