
Nata

LumCAT: 4-2176-E
Luminaire: LMOP009-2619-DH+92.76.233.00
Report No: 2017010049 Voltage(V): 218.3000
Test No: 2017010908 Current(A): 0.0290
LampCAT: CLU241 Power (W): 6.3000
Lamp flux(lm): 615.0 PF: 0.9860
Number of Lamps: 1 Ballast type: AC
Length(mm): 0 Width(mm): 0
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 564.87
Efficiency(%): 91.85%
Lumens(lm)/Power(W): 90.89
Central intensity(cd): 1385.770
Maximum intensity(cd): 1393.477
Angle of maximum intensity: C=45.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=30.8
 [C90/270]Total=30.9
Field angle(10%Imax): [C0/180]Total=68.8
 [C90/270]Total=68.2
Maximum s/h(1/2): C0_180=0.51 C90_270=0.51
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.11%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.322%

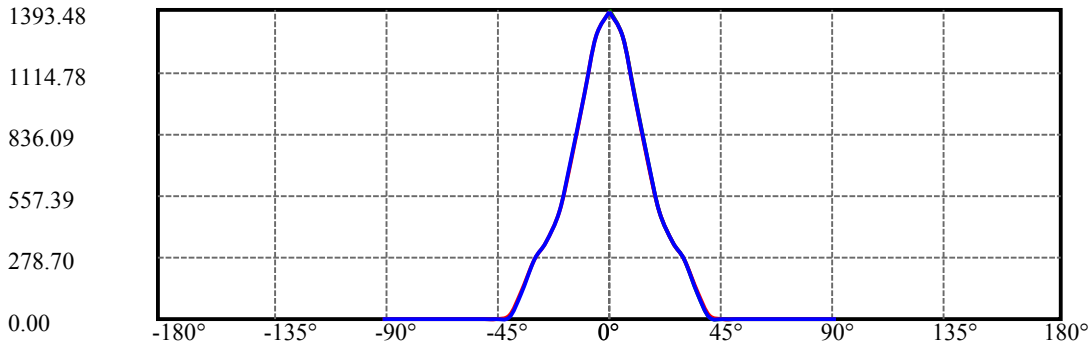
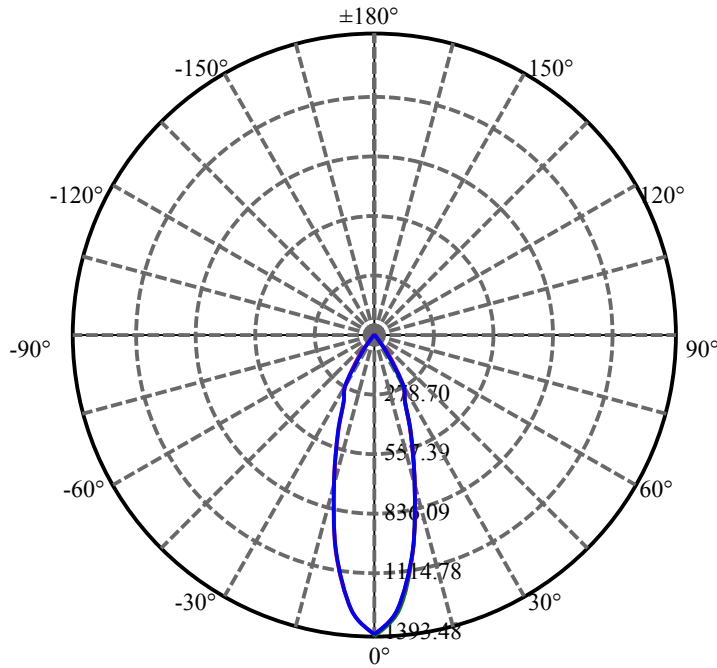
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1388.247	8.302	8.302	1.350%	1.470%
5.0	1272.835	60.808	69.11	9.887%	12.235%
10.0	1018.096	96.905	166.015	15.757%	29.390%
15.0	715.596	101.520	267.535	16.507%	47.362%
20.0	484.214	90.778	358.313	14.761%	63.433%
25.0	342.877	79.429	437.742	12.915%	77.494%
30.0	270.127	74.033	511.775	12.038%	90.600%
35.0	114.559	36.017	547.792	5.856%	96.977%
40.0	12.401	4.369	552.162	.710%	97.750%
45.0	3.441	1.334	553.495	.217%	97.986%
50.0	2.987	1.254	554.749	.204%	98.208%
55.0	2.794	1.255	556.004	.204%	98.430%
60.0	2.725	1.294	557.298	.210%	98.659%
65.0	2.739	1.361	558.658	.221%	98.900%
70.0	2.650	1.365	560.023	.222%	99.142%
75.0	2.588	1.370	561.393	.223%	99.384%
80.0	2.588	1.397	562.79	.227%	99.632%
85.0	2.560	1.398	564.188	.227%	99.879%
90.0	2.491	0.683	564.871	.111%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	511.78	83.22%	90.60%
0-40	552.16	89.78%	97.75%
0-60	557.30	90.62%	98.66%
0-90	564.19	91.74%	99.88%
0-120	564.19	91.74%	99.88%
0-180	564.87	91.85%	100.00%
60-90	8.18	1.33%	1.45%
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%
0-25.96	451.90	73.48%	80.00%

ZONAL LUMEN SUMMARY

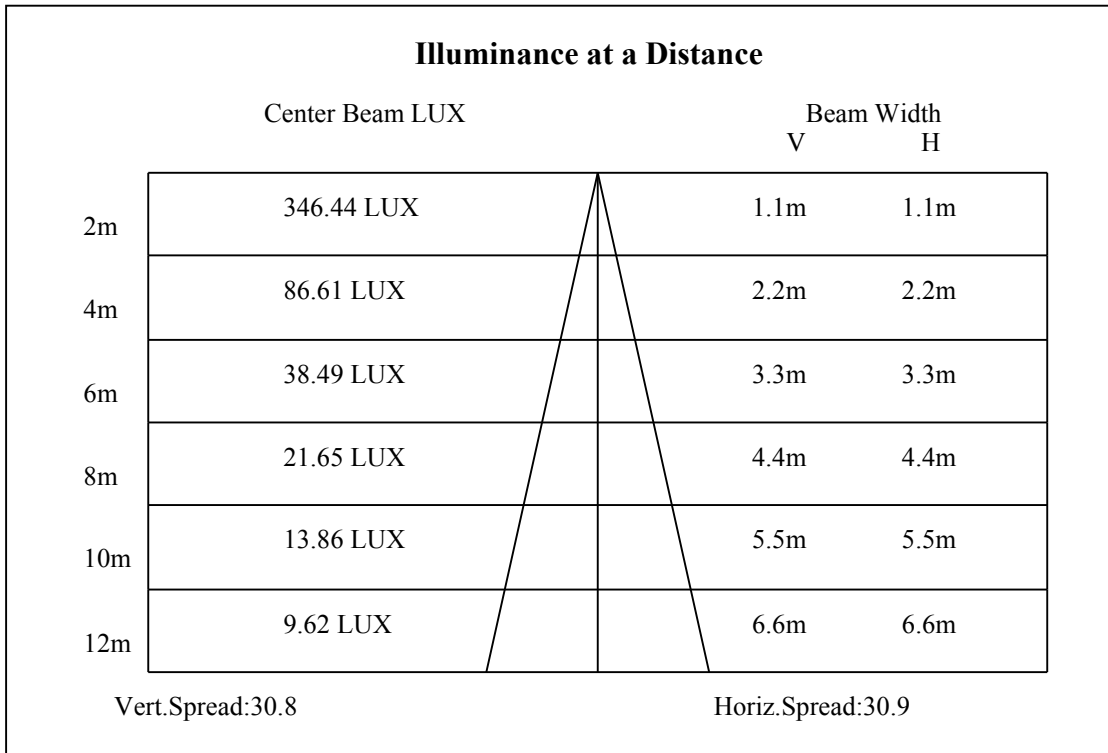
0-10	166.02
10-20	192.30
20-30	153.46
30-40	40.39
40-50	2.59
50-60	2.55
60-70	2.73
70-80	2.77
80-90	1.40
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

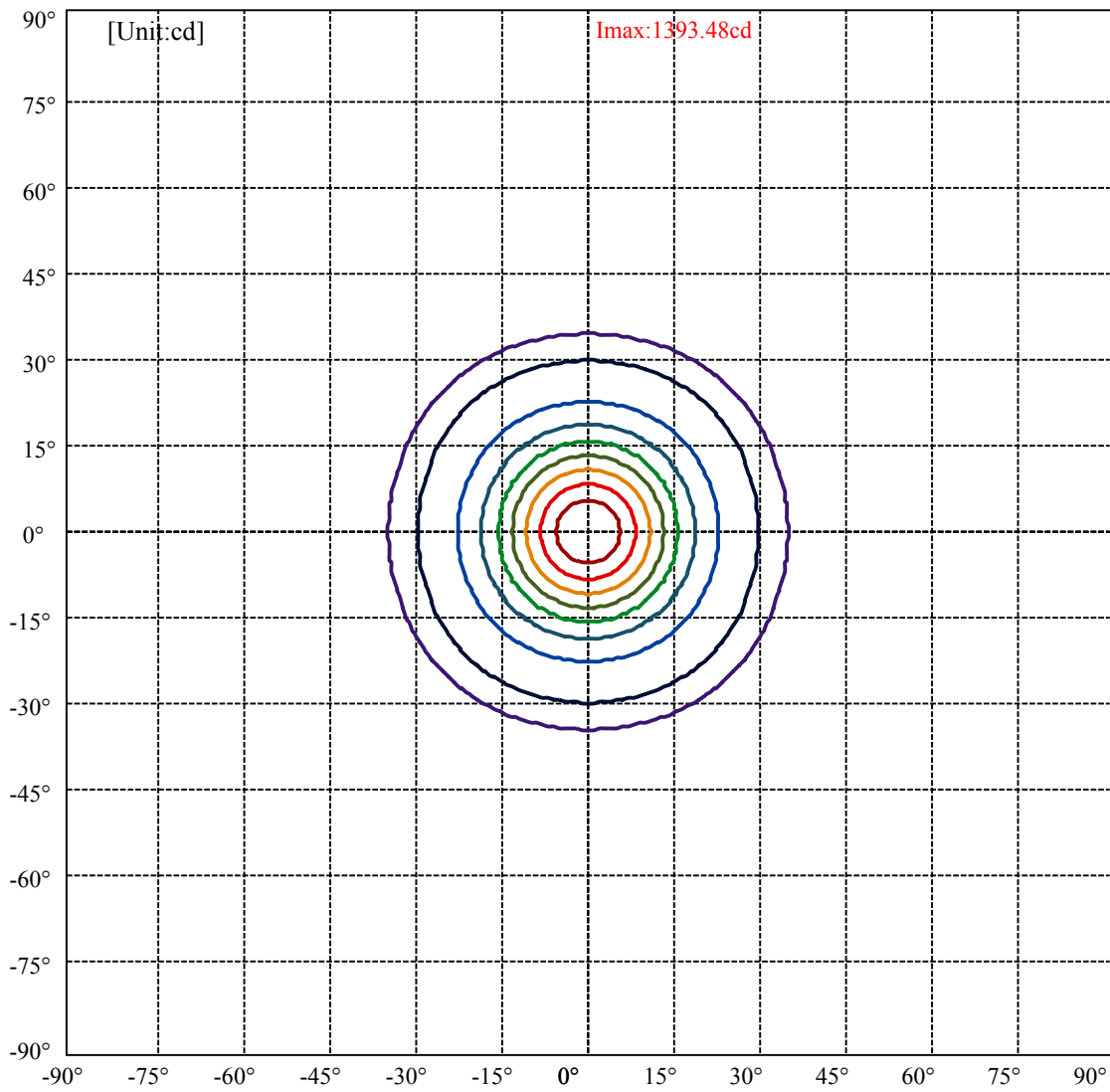


C45(Max): —————
 C0/C180: —————
 C90/C270: —————

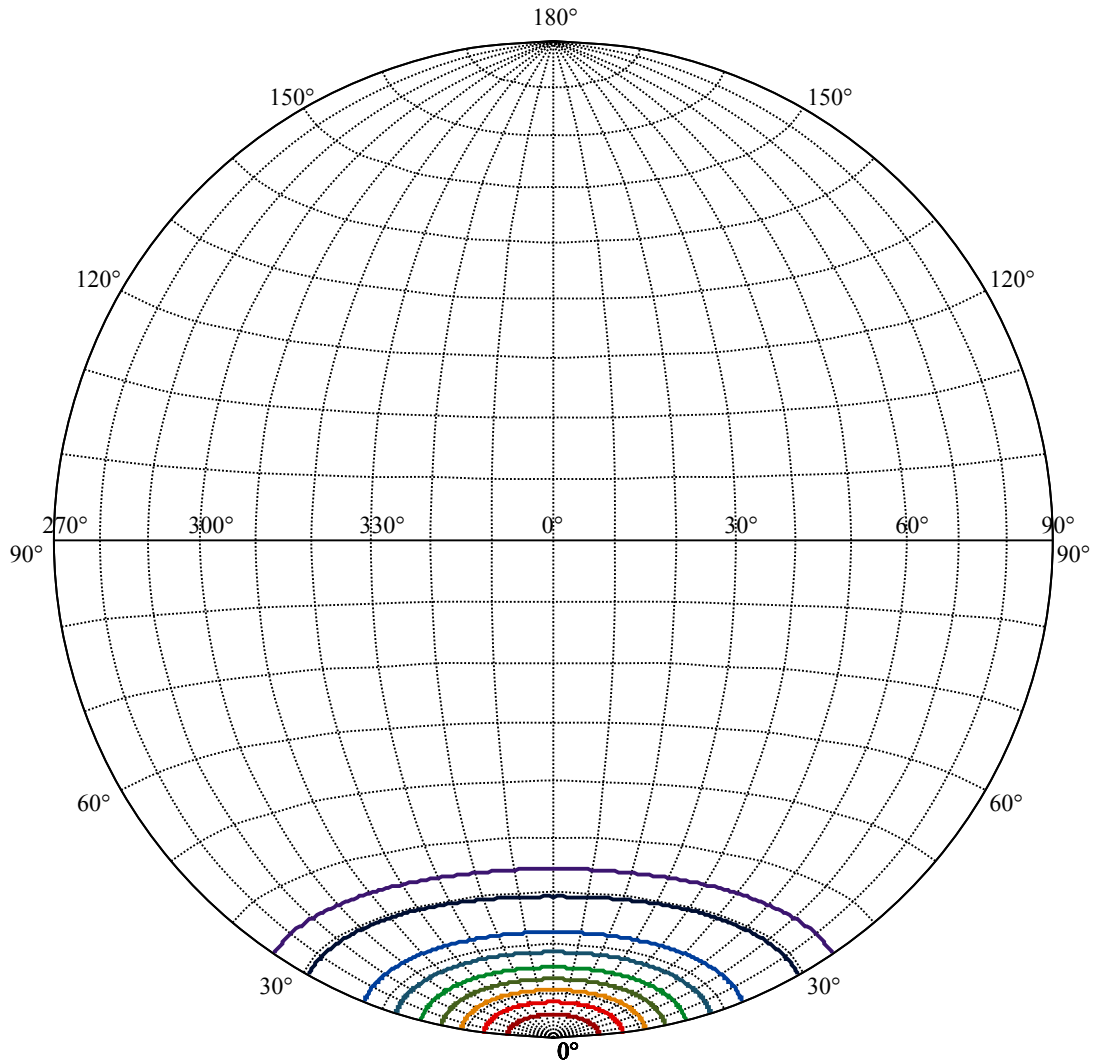
Field angle(10%Imax):C0/180Left:34.4 Right:34.4
 :C90/270Left:34.1 Right:34.1

Beam Angle(50%Imax):C0/180Left:15.4 Right:15.4
 :C90/270Left:15.5 Right:15.5





(10%Imax) 138.742	—
(20%Imax) 277.484	—
(30%Imax) 416.226	—
(40%Imax) 554.969	—
(50%Imax) 693.711	—
(60%Imax) 832.453	—
(70%Imax) 971.195	—
(80%Imax) 1109.94	—
(90%Imax) 1248.68	—



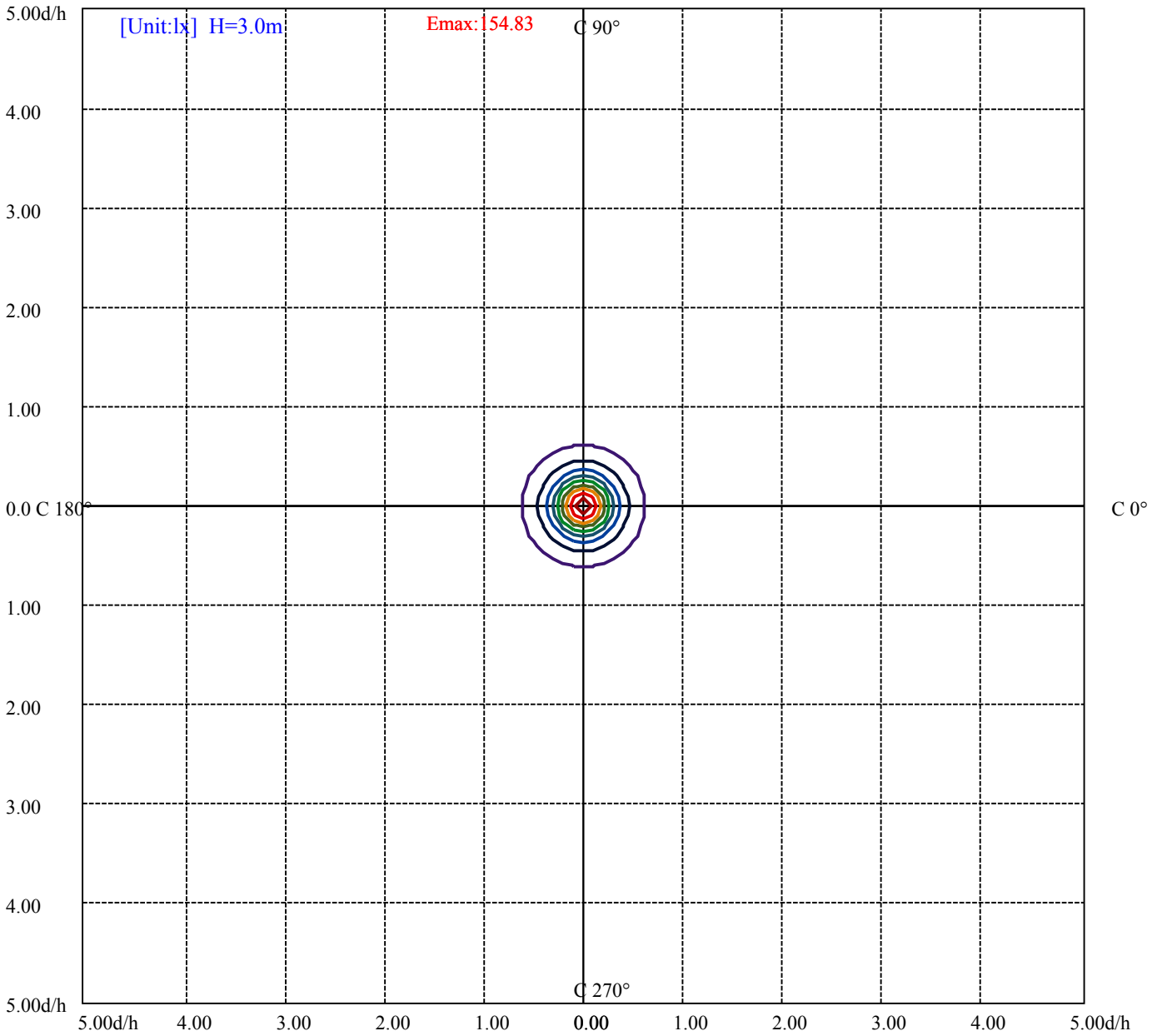
House

[Unit:cd]

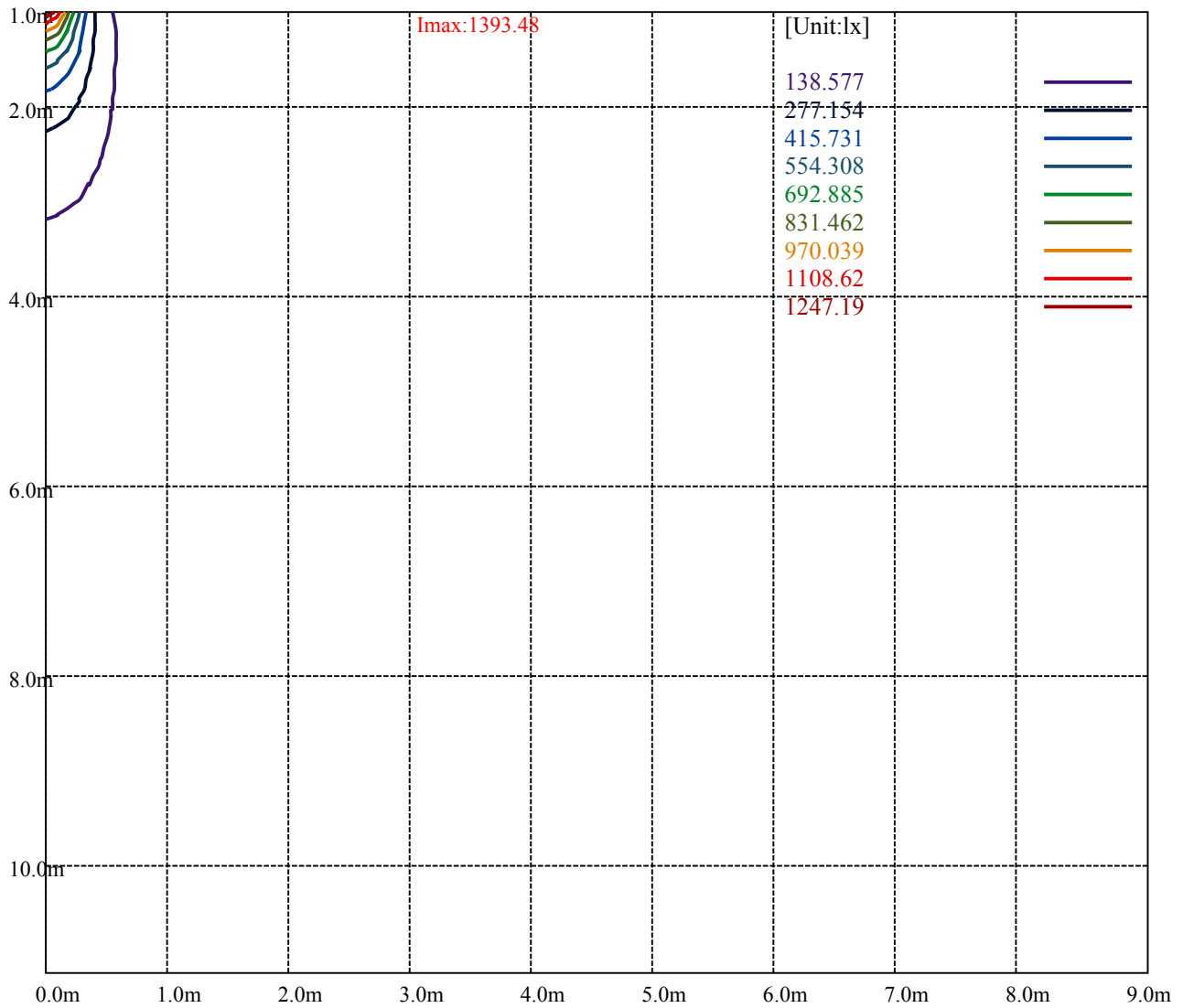
Road

Imax:1393.48

(10%Imax)	139.348	—
(20%Imax)	278.695	—
(30%Imax)	418.043	—
(40%Imax)	557.391	—
(50%Imax)	696.739	—
(60%Imax)	836.086	—
(70%Imax)	975.434	—
(80%Imax)	1114.78	—
(90%Imax)	1254.13	—



- (10%Emax) 15.483
- (20%Emax) 30.96611
- (30%Emax) 46.44911
- (40%Emax) 61.93211
- (50%Emax) 77.41522
- (60%Emax) 92.89822
- (70%Emax) 108.3812
- (80%Emax) 123.8644
- (90%Emax) 139.3478



Luminance Table

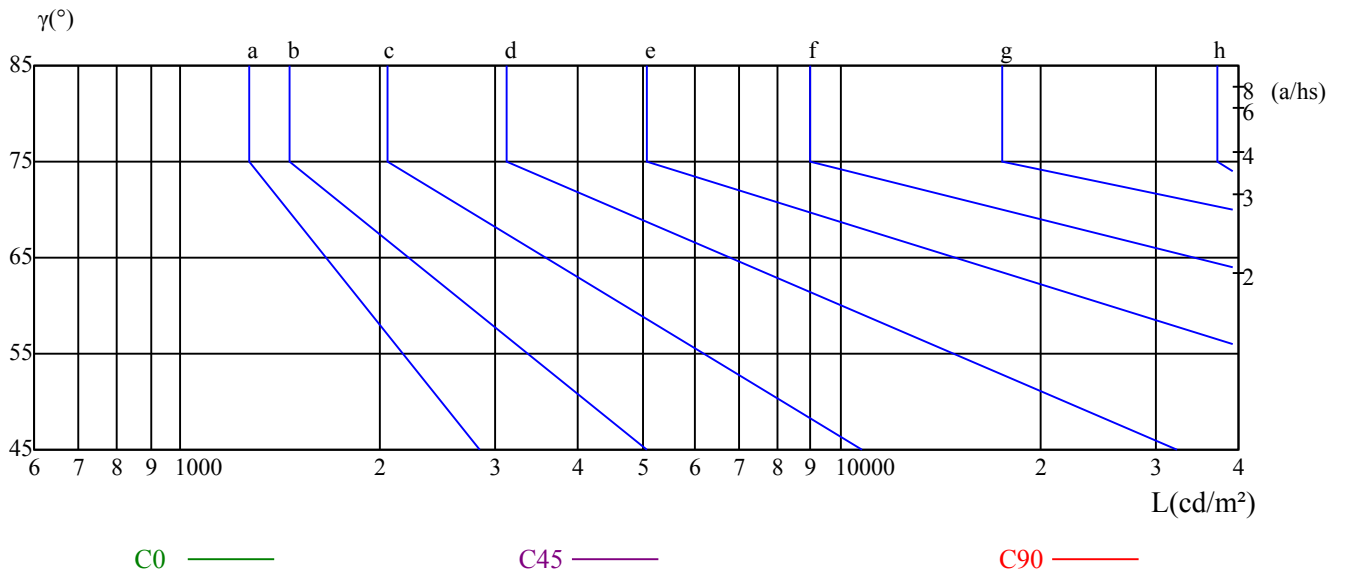
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

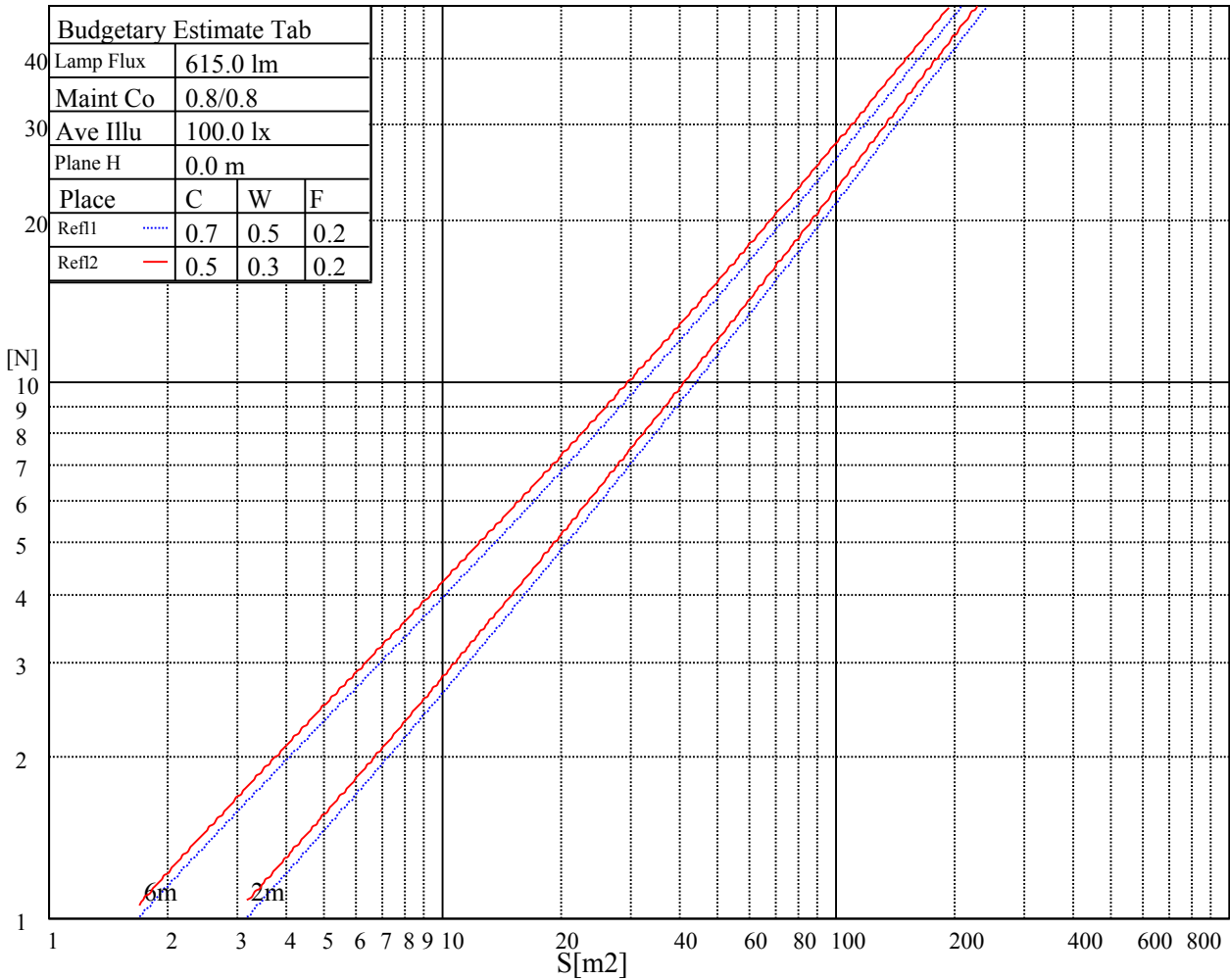
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.87	0.90	0.87	0.86	0.87	0.85	0.84	0.82
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.79
4	0.88	0.83	0.80	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.77	0.75
5	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.72
6	0.80	0.76	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.69
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.69	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.65	0.63	0.62
10	0.69	0.64	0.62	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60

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	1385.77	1282.81	1022.95	720.14	503.22	356.77	280.79	125.20	17.73
45.0	1393.48	1291.62	1035.06	714.63	483.40	346.30	281.34	112.37	10.41
90.0	1387.42	1241.52	972.46	671.63	452.34	332.82	254.91	73.61	9.19
135.0	1386.32	1294.38	1047.72	761.43	507.62	350.16	281.89	139.73	11.40
180.0	1385.77	1261.89	1005.38	702.41	470.73	327.97	252.60	118.32	10.02
225.0	1393.48	1264.09	1021.74	713.92	476.18	338.21	266.47	111.65	10.13
270.0	1387.42	1299.33	1054.88	759.78	509.82	353.46	285.19	144.36	12.22
315.0	1386.32	1247.03	984.57	680.83	470.40	337.33	257.83	91.23	18.11
360.0	1385.77	1282.81	1022.95	720.14	503.22	356.77	280.79	125.20	17.73
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	3.47	3.03	2.81	2.70	2.70	2.64	2.59	2.59	2.59
45.0	3.47	3.03	2.86	2.86	2.97	2.81	2.64	2.59	2.59
90.0	3.30	2.92	2.75	2.64	2.64	2.64	2.59	2.59	2.53
135.0	3.36	2.97	2.75	2.70	2.64	2.59	2.59	2.59	2.53
180.0	3.30	2.92	2.70	2.64	2.59	2.53	2.53	2.59	2.53
225.0	3.47	2.97	2.81	2.64	2.64	2.59	2.59	2.59	2.53
270.0	3.74	3.08	2.86	2.86	2.92	2.75	2.59	2.59	2.59
315.0	3.41	2.97	2.81	2.75	2.81	2.64	2.59	2.59	2.59
360.0	3.47	3.03	2.81	2.70	2.70	2.64	2.59	2.59	2.59
C/ γ (°)	90.0								
0.0	2.48								
45.0	2.48								
90.0	2.53								
135.0	2.53								
180.0	2.48								
225.0	2.48								
270.0	2.48								
315.0	2.48								
360.0	2.48								