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Nata

LumCAT: 2-1795-N
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2018091004
LampCAT: LUMINUS CXM-11-AC30
Lamp flux(lm): 2546.0
Number of Lamps: 1
Length(mm): 69
Phm Type: C

Voltage(V): 34.7000
Current(A): 0.5100
Power (W): 17.6970
PF: 0.0000
Ballast type: DC
Width(mm): 69
Height(mm): 0

Photometric Results

Lumens(lm): 2101.85
Efficiency(%): 82.56%
Lumens(lm)/Power(W): 118.77
Central intensity(cd): 4854.657
Maximum intensity(cd): 4854.657
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=37.0
 [C90/270]Total=37.0
Field angle(10%Imax): [C0/180]Total=62.3
 [C90/270]Total=62.3
Maximum s/h(1/2): C0_180=0.61 C90_270=0.61
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(%): 83.62%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.571%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/10
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

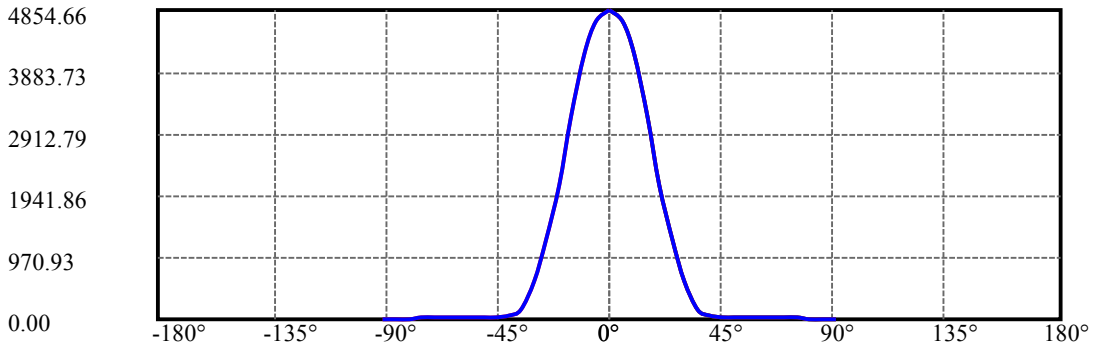
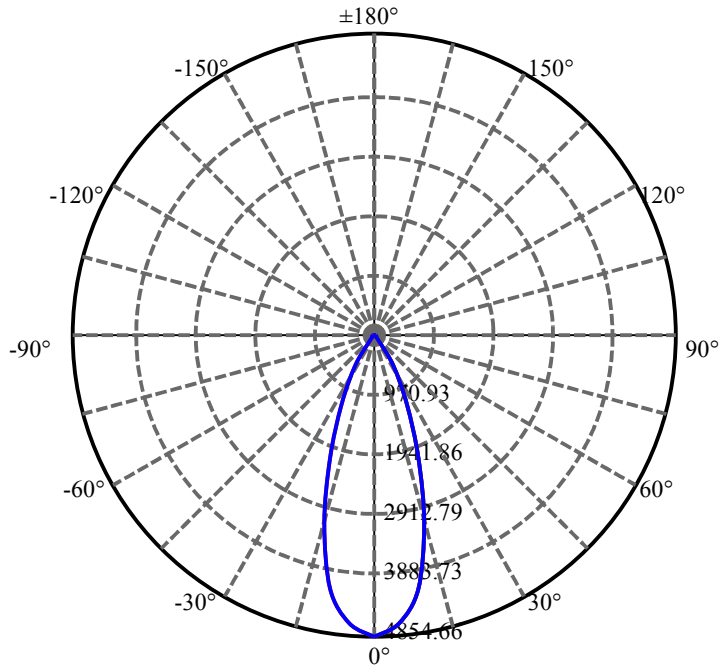
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4854.656	29.032	29.032	1.140%	1.381%
5.0	4660.313	222.639	251.67	8.745%	11.974%
10.0	4147.242	394.747	646.418	15.505%	30.755%
15.0	3151.336	447.075	1093.493	17.560%	52.025%
20.0	2115.000	396.508	1490	15.574%	70.890%
25.0	1242.394	287.804	1777.804	11.304%	84.583%
30.0	588.045	161.165	1938.969	6.330%	92.251%
35.0	147.347	46.326	1985.294	1.820%	94.455%
40.0	54.162	19.083	2004.378	.750%	95.362%
45.0	37.723	14.621	2018.999	.574%	96.058%
50.0	31.127	13.070	2032.069	.513%	96.680%
55.0	27.120	12.177	2044.246	.478%	97.259%
60.0	24.525	11.642	2055.888	.457%	97.813%
65.0	21.558	10.710	2066.597	.421%	98.323%
70.0	19.125	9.851	2076.448	.387%	98.791%
75.0	16.727	8.856	2085.305	.348%	99.213%
80.0	14.119	7.621	2092.926	.299%	99.575%
85.0	11.377	6.212	2099.138	.244%	99.871%
90.0	9.900	2.713	2101.852	.107%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1938.97	76.16%	92.25%
0-40	2004.38	78.73%	95.36%
0-60	2055.89	80.75%	97.81%
0-90	2099.14	82.45%	99.87%
0-120	2099.14	82.45%	99.87%
0-180	2101.85	82.56%	100.00%
60-90	54.89	2.16%	2.61%
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%
0-23.33	1681.48	66.04%	80.00%

ZONAL LUMEN SUMMARY

0-10	646.42
10-20	843.58
20-30	448.97
30-40	65.41
40-50	27.69
50-60	23.82
60-70	20.56
70-80	16.48
80-90	6.21
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: —————

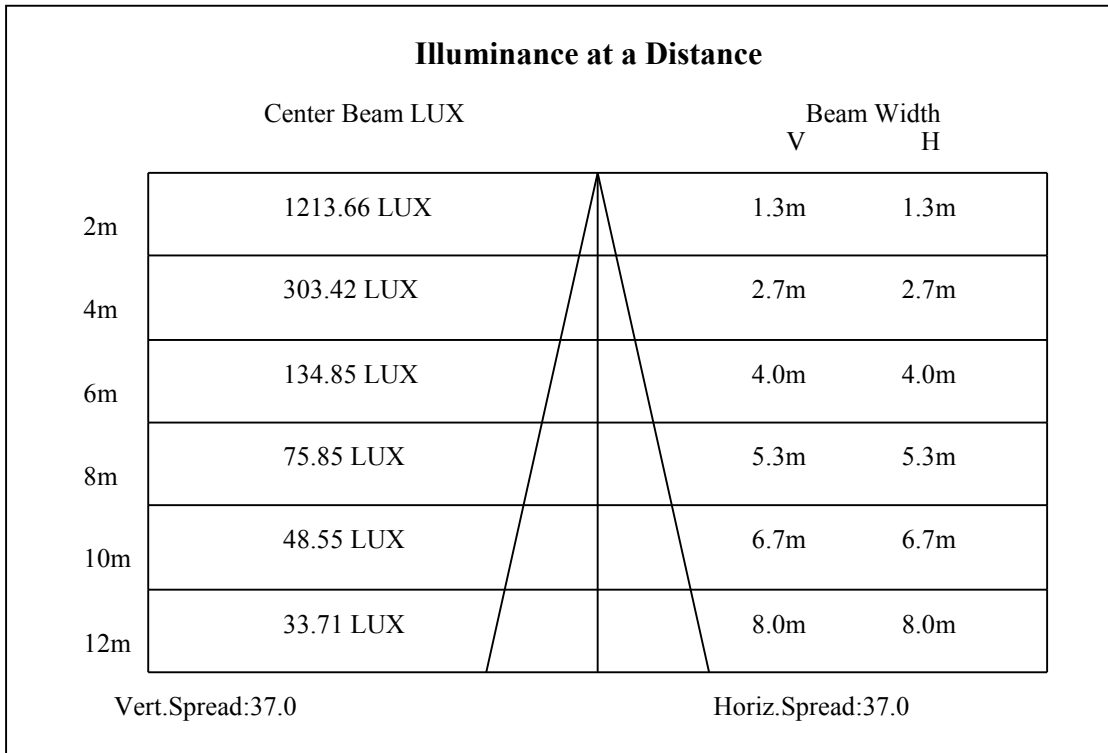
C90/C270: —————

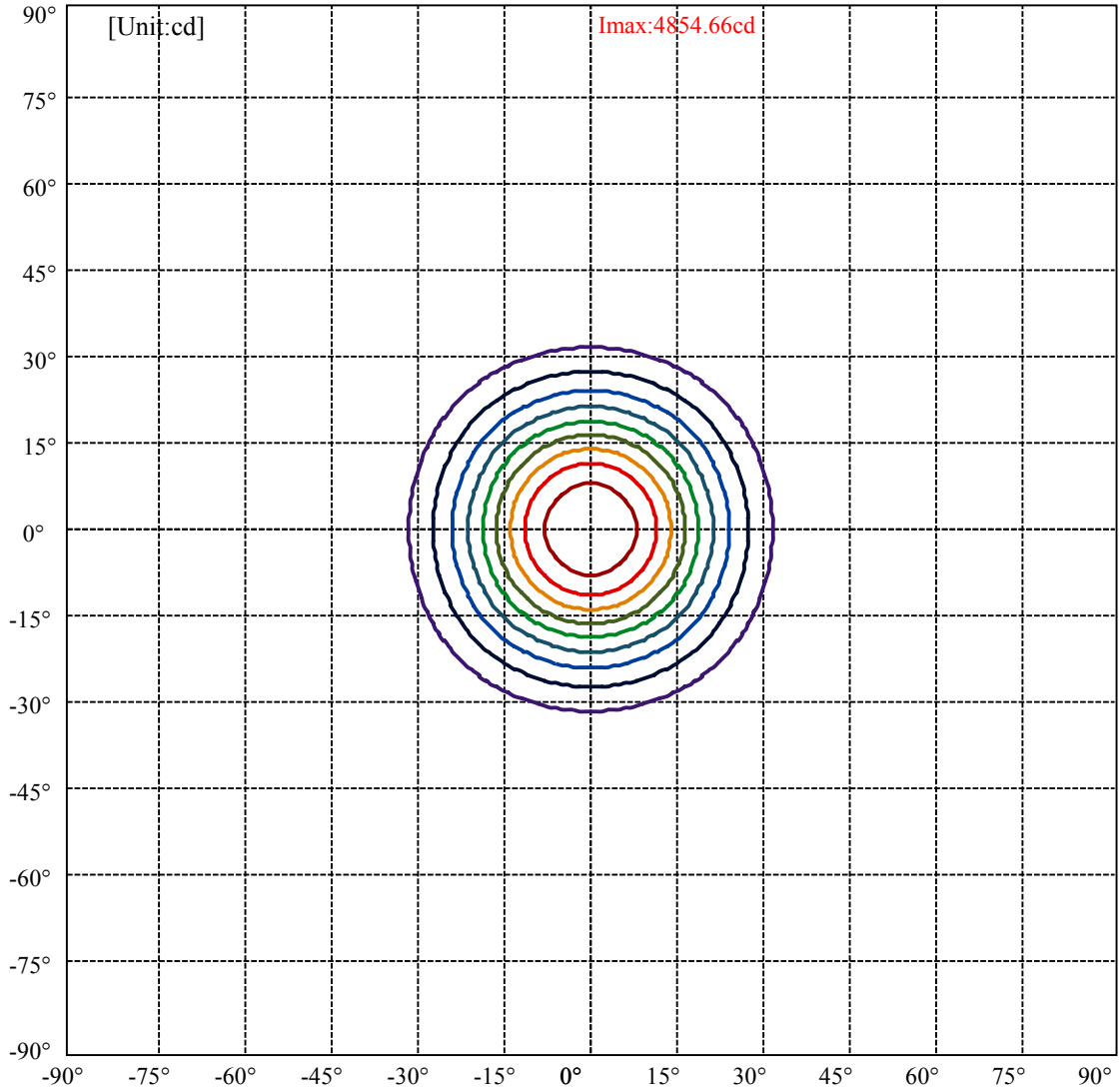
Field angle(10%Imax):C0/180Left:31.2 Right:31.2

:C90/270Left:31.2 Right:31.2

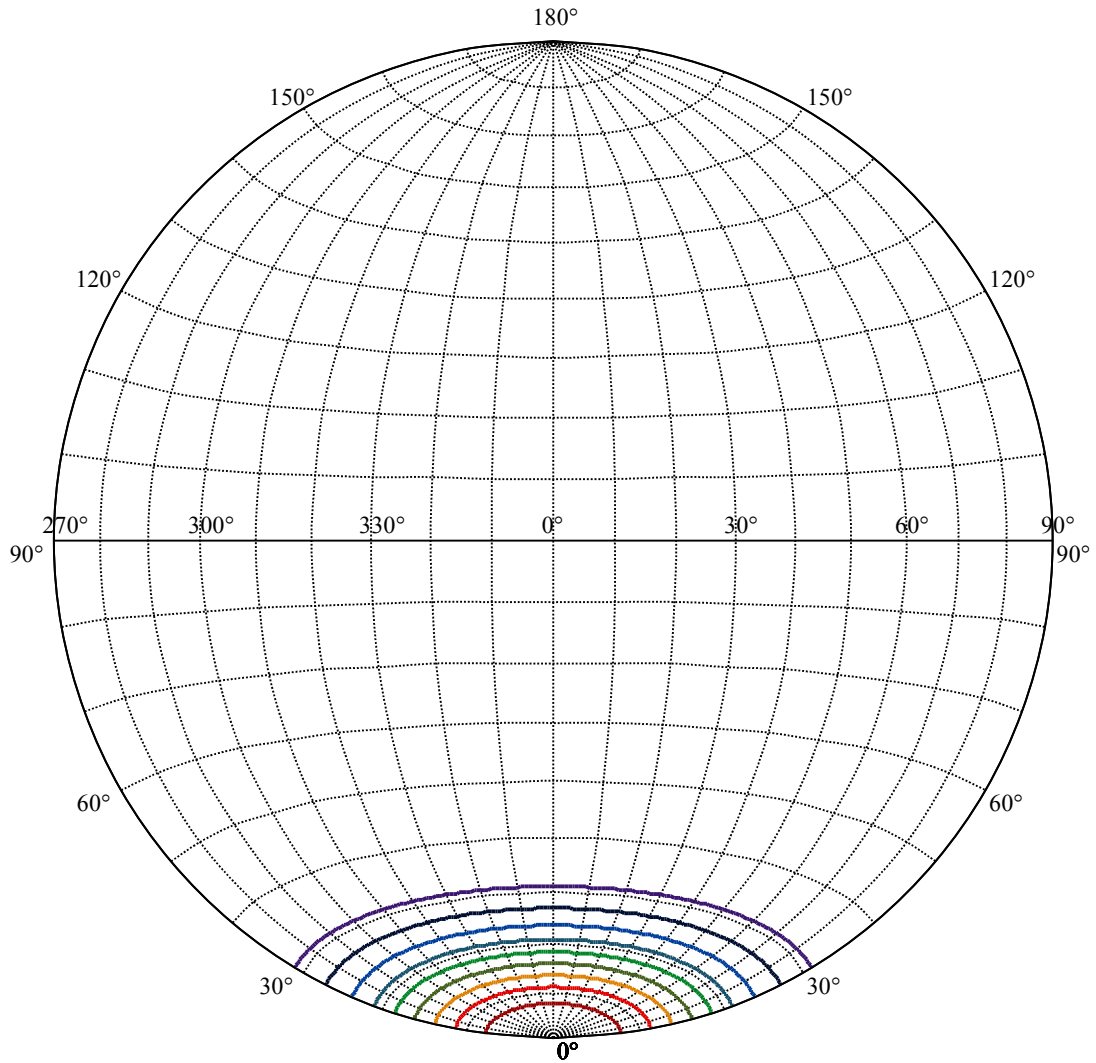
Beam Angle(50%Imax):C0/180Left:18.5 Right:18.5

:C90/270Left:18.5 Right:18.5





(10%Imax) 485.466	—
(20%Imax) 970.931	—
(30%Imax) 1456.4	—
(40%Imax) 1941.86	—
(50%Imax) 2427.33	—
(60%Imax) 2912.79	—
(70%Imax) 3398.26	—
(80%Imax) 3883.73	—
(90%Imax) 4369.19	—



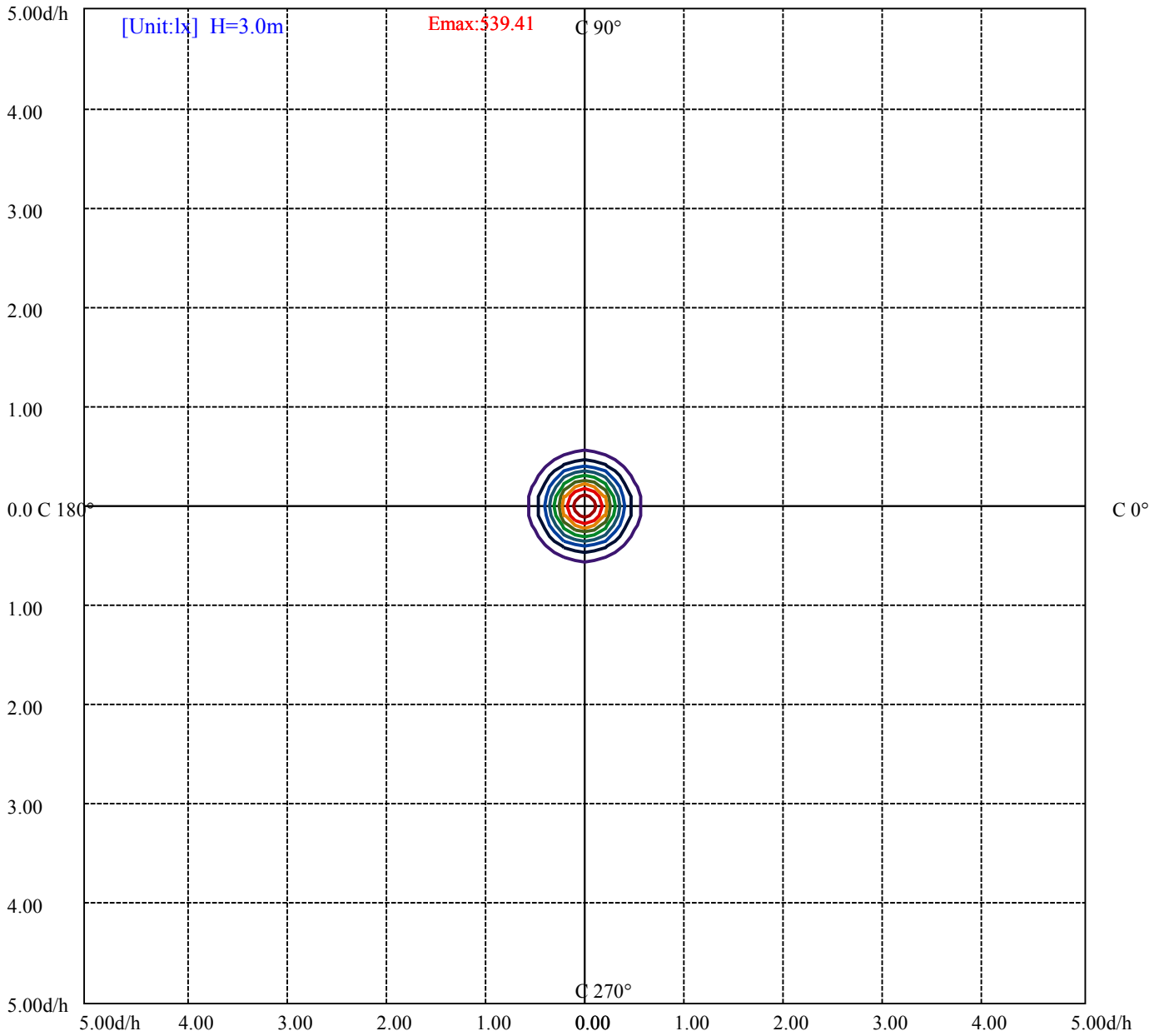
House

[Unit:cd]

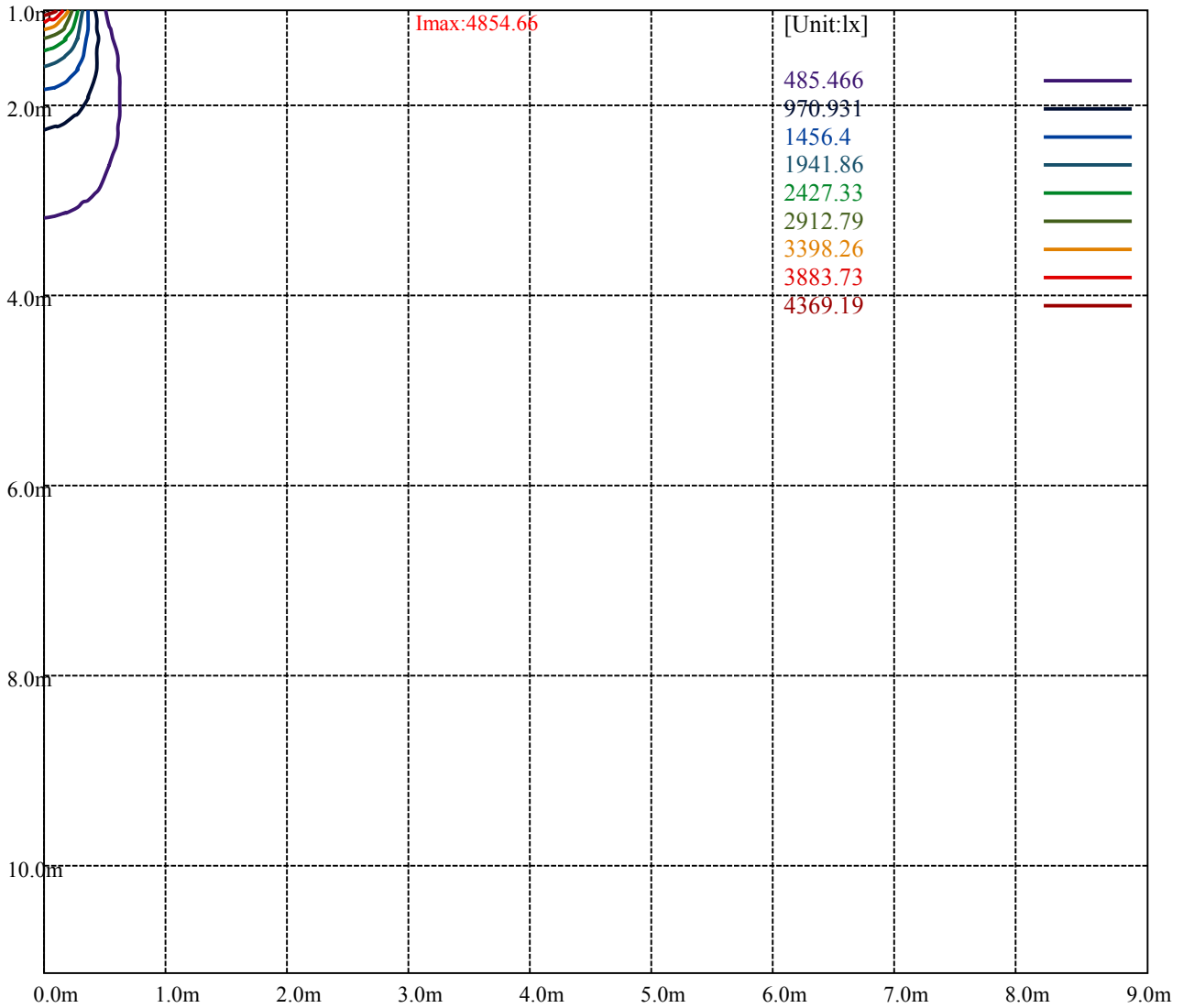
Road

Imax:4854.66

(10%Imax) 485.466	—
(20%Imax) 970.931	—
(30%Imax) 1456.4	—
(40%Imax) 1941.86	—
(50%Imax) 2427.33	—
(60%Imax) 2912.79	—
(70%Imax) 3398.26	—
(80%Imax) 3883.73	—
(90%Imax) 4369.19	—



(10%Emax) 53.94056	—
(20%Emax) 107.8811	—
(30%Emax) 161.8222	—
(40%Emax) 215.7622	—
(50%Emax) 269.7033	—
(60%Emax) 323.6433	—
(70%Emax) 377.5844	—
(80%Emax) 431.5244	—
(90%Emax) 485.4655	—



Luminance Table

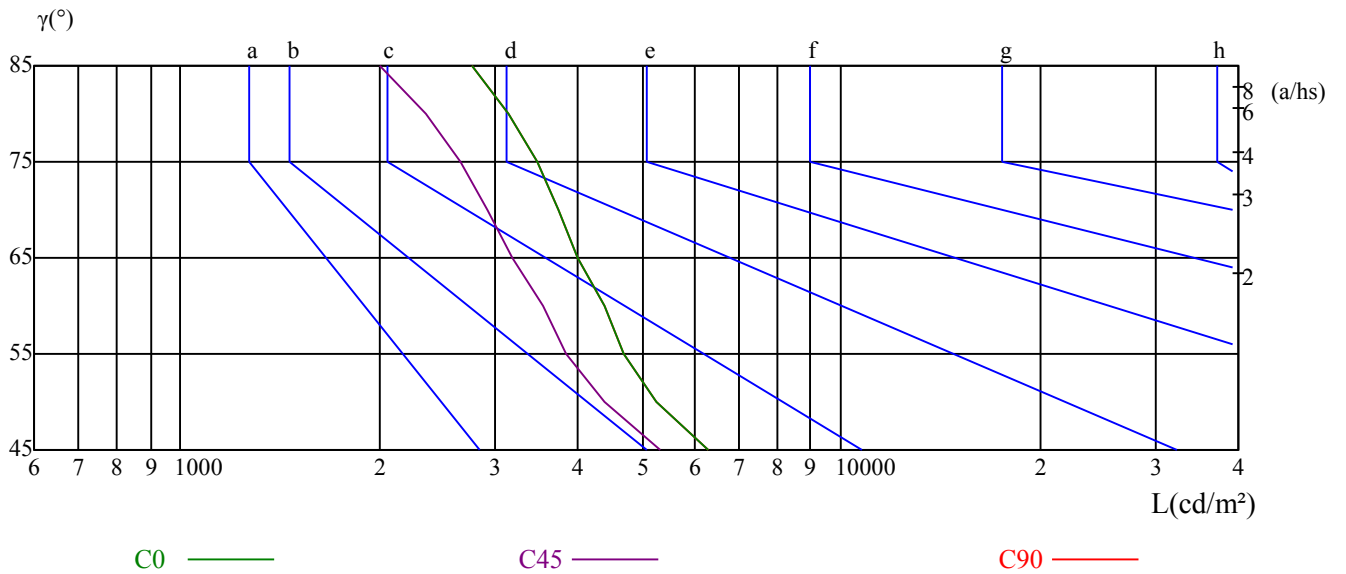
γ	45	50	55	60	65	70	75	80	85
C0	6286	5263	4690	4374	4000	3728	3462	3140	2757
C45	5319	4386	3848	3532	3176	2907	2646	2347	2008
C90	6286	5263	4690	4374	4000	3728	3462	3140	2757

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10714	10714	10714	13575	13575	13575	27417	27417	27417

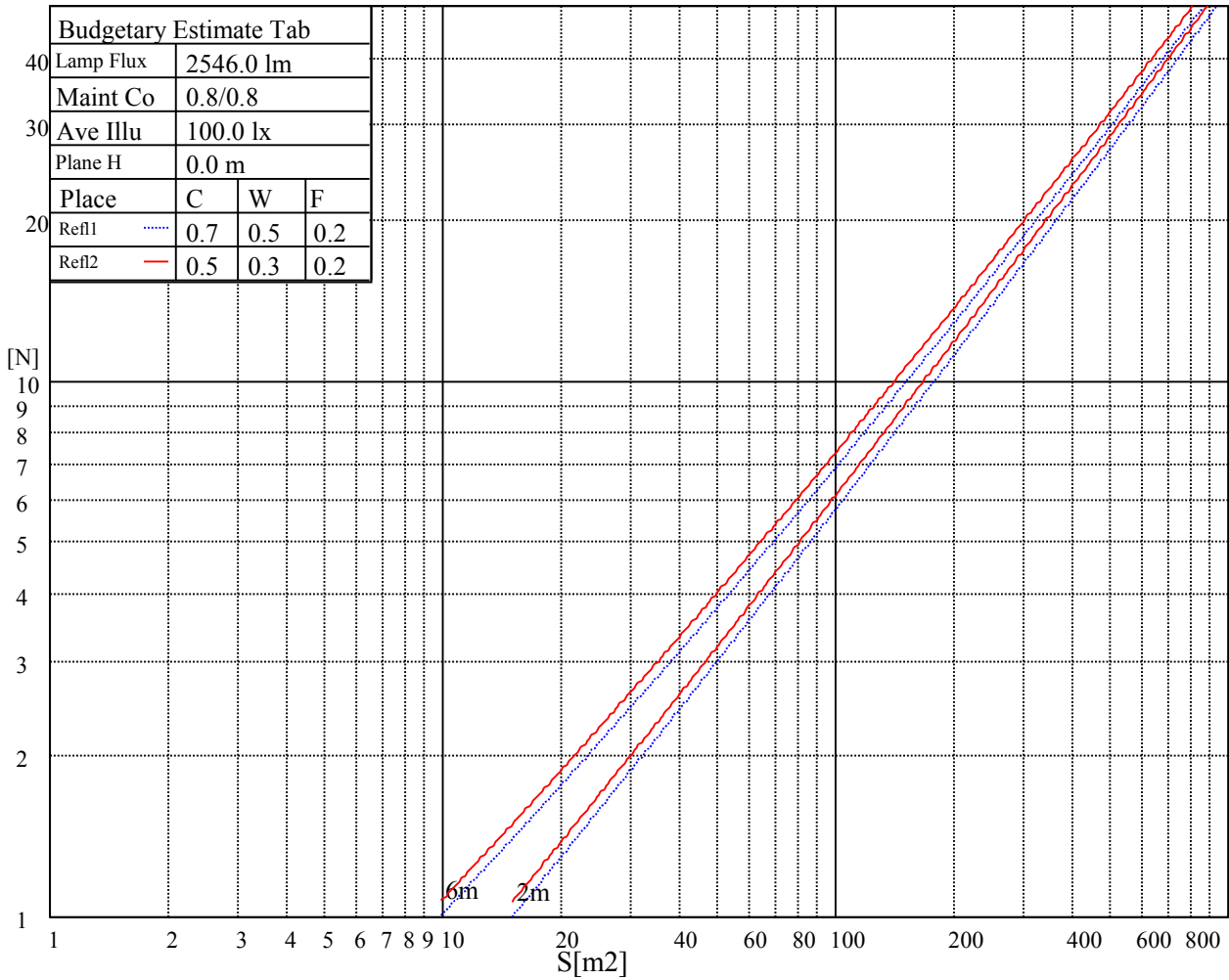
Glare Table

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

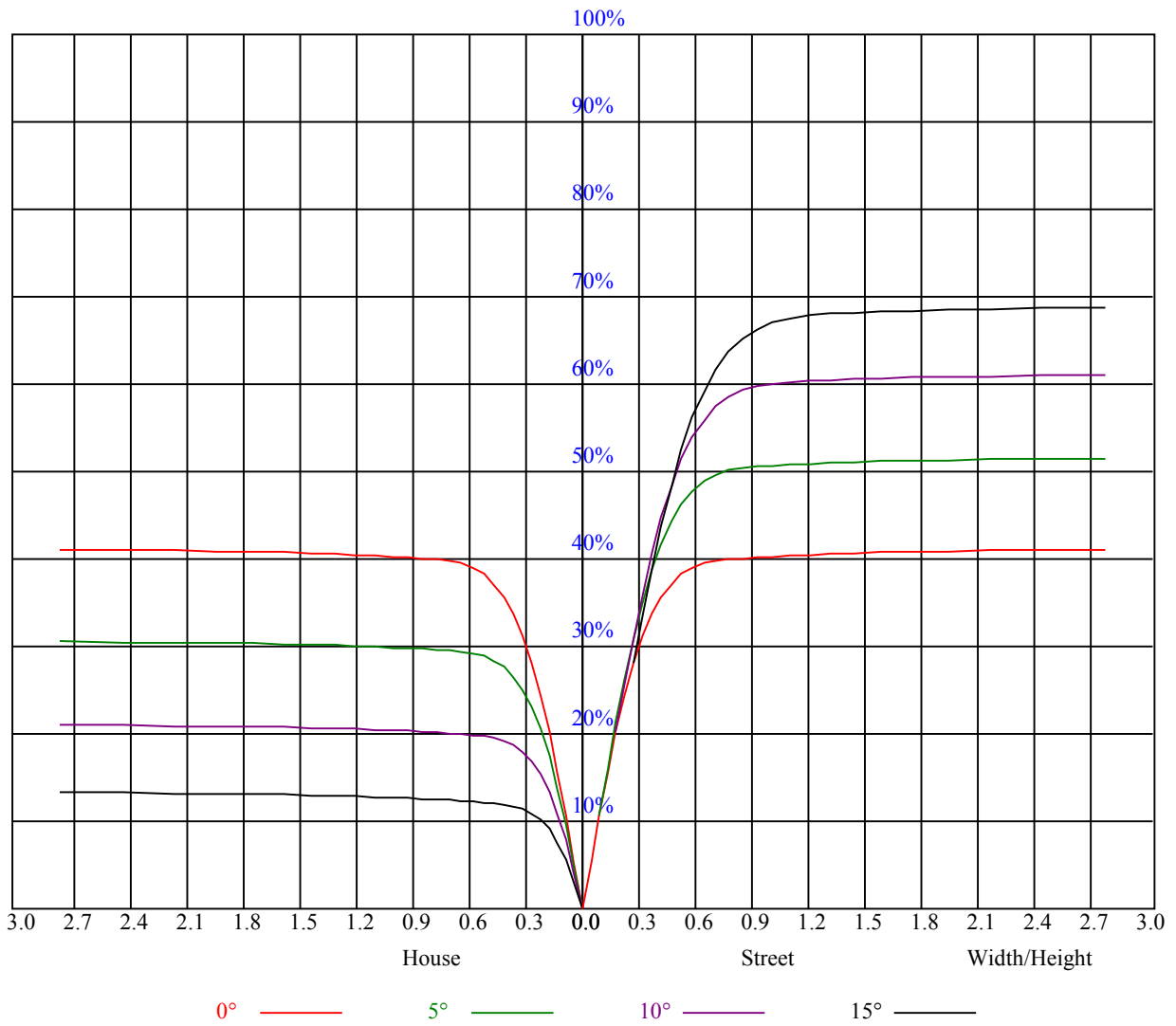
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	7.13	8.08	7.49	8.40	8.71	7.10	8.06	7.46	8.37	8.68
	3H	8.74	9.58	9.12	9.92	10.29	8.70	9.55	9.08	9.88	10.25
	4H	9.52	10.31	9.93	10.66	11.05	9.46	10.25	9.87	10.60	10.99
	6H	10.25	10.97	10.67	11.34	11.74	10.17	10.89	10.59	11.27	11.66
	8H	10.56	11.23	10.99	11.62	12.03	10.49	11.16	10.92	11.55	11.96
	12H	11.01	11.65	11.44	12.04	12.47	10.96	11.61	11.40	11.99	12.42
4H	2H	7.41	8.20	7.82	8.55	8.94	7.39	8.17	7.80	8.53	8.92
	3H	9.27	9.92	9.69	10.33	10.73	9.24	9.88	9.65	10.29	10.70
	4H	10.21	10.79	10.65	11.21	11.66	10.15	10.73	10.59	11.15	11.60
	6H	10.97	11.46	11.44	11.91	12.39	10.90	11.39	11.37	11.84	12.32
	8H	11.36	11.82	11.84	12.28	12.75	11.30	11.76	11.78	12.21	12.69
	12H	11.86	12.25	12.35	12.74	13.22	11.82	12.22	12.31	12.71	13.19
8H	4H	10.44	10.90	10.91	11.35	11.82	10.39	10.85	10.86	11.30	11.77
	6H	11.38	11.74	11.89	12.25	12.73	11.32	11.68	11.83	12.19	12.67
	8H	11.89	12.22	12.43	12.74	13.24	11.84	12.17	12.38	12.69	13.19
	12H	12.56	12.84	13.09	13.34	13.92	12.54	12.82	13.06	13.32	13.90
12H	4H	10.46	10.85	10.95	11.34	11.82	10.41	10.80	10.90	11.29	11.77
	6H	11.70	11.78	11.99	12.25	12.80	11.64	11.72	11.93	12.19	12.74
	8H	12.04	12.32	12.56	12.82	13.40	11.99	12.27	12.51	12.77	13.35
Variation with the observer position at spacings:											
S = 1.0H	3.7/-1.9					3.7/-1.9					
S = 1.5H	5.0/-1.5					5.0/-1.5					
S = 2.0H	6.2/-1.3					6.2/-1.3					
Standard tables:	BK3					BK3					
Uncorrected UGR	-3.4					-3.4					



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	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.92	0.90	0.88	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.81	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	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.75	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
5	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
6	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
7	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61
8	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.56



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	4871.81	4676.06	4244.63	3363.19	2291.06	1459.13	777.94	294.75	59.34
45.0	4835.81	4557.94	4087.69	3106.69	2071.13	1301.06	618.19	130.28	56.59
90.0	4843.69	4553.44	3920.63	2907.00	1928.25	1083.32	476.33	108.56	51.36
135.0	4867.31	4683.94	4182.75	3161.81	2166.19	1335.94	589.50	127.52	54.56
180.0	4871.81	4683.38	4086.00	3026.81	1949.06	1111.44	462.26	96.69	48.15
225.0	4835.81	4720.50	4216.50	3159.00	2112.75	1115.04	577.58	110.93	52.88
270.0	4843.69	4749.19	4331.25	3387.94	2280.94	1414.13	645.75	192.60	59.85
315.0	4867.31	4658.06	4108.50	3098.25	2120.63	1119.09	556.82	117.45	50.57
360.0	4871.81	4676.06	4244.63	3363.19	2291.06	1459.13	777.94	294.75	59.34
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	38.81	31.95	27.96	25.59	22.61	20.42	17.33	14.91	11.76
45.0	38.76	31.61	27.23	24.75	21.60	18.90	16.59	13.95	11.19
90.0	37.46	30.77	27.00	24.47	21.83	19.35	17.38	14.01	11.08
135.0	37.41	31.33	26.83	24.08	21.04	18.79	16.37	14.01	11.36
180.0	35.89	29.93	26.78	23.91	21.09	18.56	16.31	13.61	11.53
225.0	37.74	31.05	26.55	24.36	20.98	18.23	16.20	13.73	11.31
270.0	39.94	32.34	28.01	25.26	22.22	20.08	17.27	14.96	11.53
315.0	35.78	30.04	26.61	23.79	21.09	18.68	16.37	13.78	11.25
360.0	38.81	31.95	27.96	25.59	22.61	20.42	17.33	14.91	11.76
C/ γ (°)	90.0								
0.0	9.90								
45.0	9.84								
90.0	9.90								
135.0	9.90								
180.0	9.96								
225.0	9.90								
270.0	9.90								
315.0	9.90								
360.0	9.90								