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Nata

LumCAT: 3-1550-A3
Luminaire: 99.02.73.172+92.76.365.00
Report No: NATA0100
Test No: GC2018082807
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2575.0
Number of Lamps: 1
Length(mm): 78
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.5000
Power (W): 17.0000
PF: 0.0000
Ballast type: DC
Width(mm): 78
Height(mm): 0

Photometric Results

Lumens(lm): 2365.88
Efficiency(%): 91.88%
Lumens(lm)/Power(W): 139.17
Central intensity(cd): 4167.770
Maximum intensity(cd): 4167.770
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=42.8
 [C90/270]Total=42.8
Field angle(10%Imax): [C0/180]Total=73.4
 [C90/270]Total=73.4
Maximum s/h(1/2): C0_180=0.68 C90_270=0.68
Maximum s/h(1/4): C0_180=0.71 C90_270=0.71
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.76%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.744%

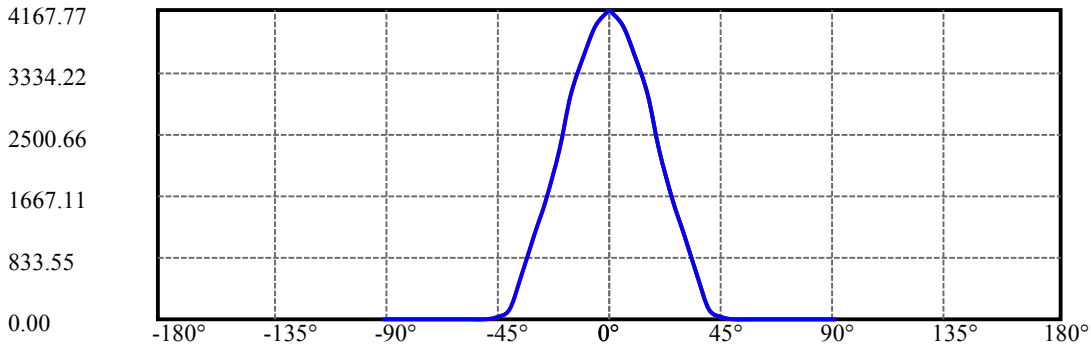
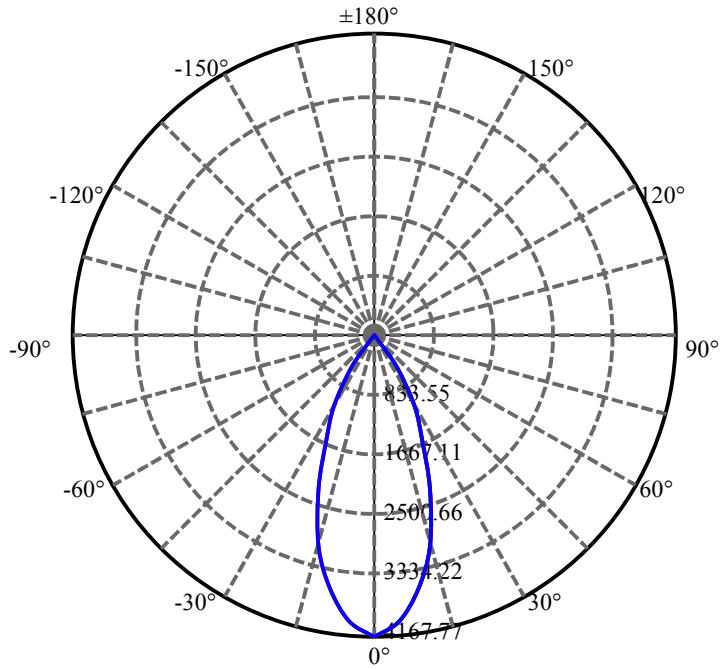
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4167.769	24.924	24.924	.968%	1.053%
5.0	3972.801	189.794	214.718	7.371%	9.076%
10.0	3566.141	339.436	554.154	13.182%	23.423%
15.0	3017.297	428.059	982.213	16.624%	41.516%
20.0	2270.388	425.639	1407.852	16.530%	59.507%
25.0	1601.040	370.886	1778.738	14.403%	75.183%
30.0	1138.759	312.098	2090.836	12.120%	88.375%
35.0	565.629	177.833	2268.669	6.906%	95.891%
40.0	123.650	43.566	2312.235	1.692%	97.733%
45.0	16.207	6.282	2318.517	.244%	97.998%
50.0	12.697	5.332	2323.848	.207%	98.223%
55.0	11.947	5.364	2329.213	.208%	98.450%
60.0	11.479	5.449	2334.662	.212%	98.681%
65.0	11.149	5.539	2340.201	.215%	98.915%
70.0	10.901	5.615	2345.816	.218%	99.152%
75.0	10.729	5.681	2351.496	.221%	99.392%
80.0	10.633	5.740	2357.236	.223%	99.635%
85.0	10.578	5.776	2363.012	.224%	99.879%
90.0	10.461	2.867	2365.879	.111%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2090.84	81.20%	88.37%
0-40	2312.24	89.80%	97.73%
0-60	2334.66	90.67%	98.68%
0-90	2363.01	91.77%	99.88%
0-120	2363.01	91.77%	99.88%
0-180	2365.88	91.88%	100.00%
60-90	33.80	1.31%	1.43%
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%
0-26.83	1892.70	73.50%	80.00%

ZONAL LUMEN SUMMARY

0-10	554.15
10-20	853.70
20-30	682.98
30-40	221.40
40-50	11.61
50-60	10.81
60-70	11.15
70-80	11.42
80-90	5.78
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: —————

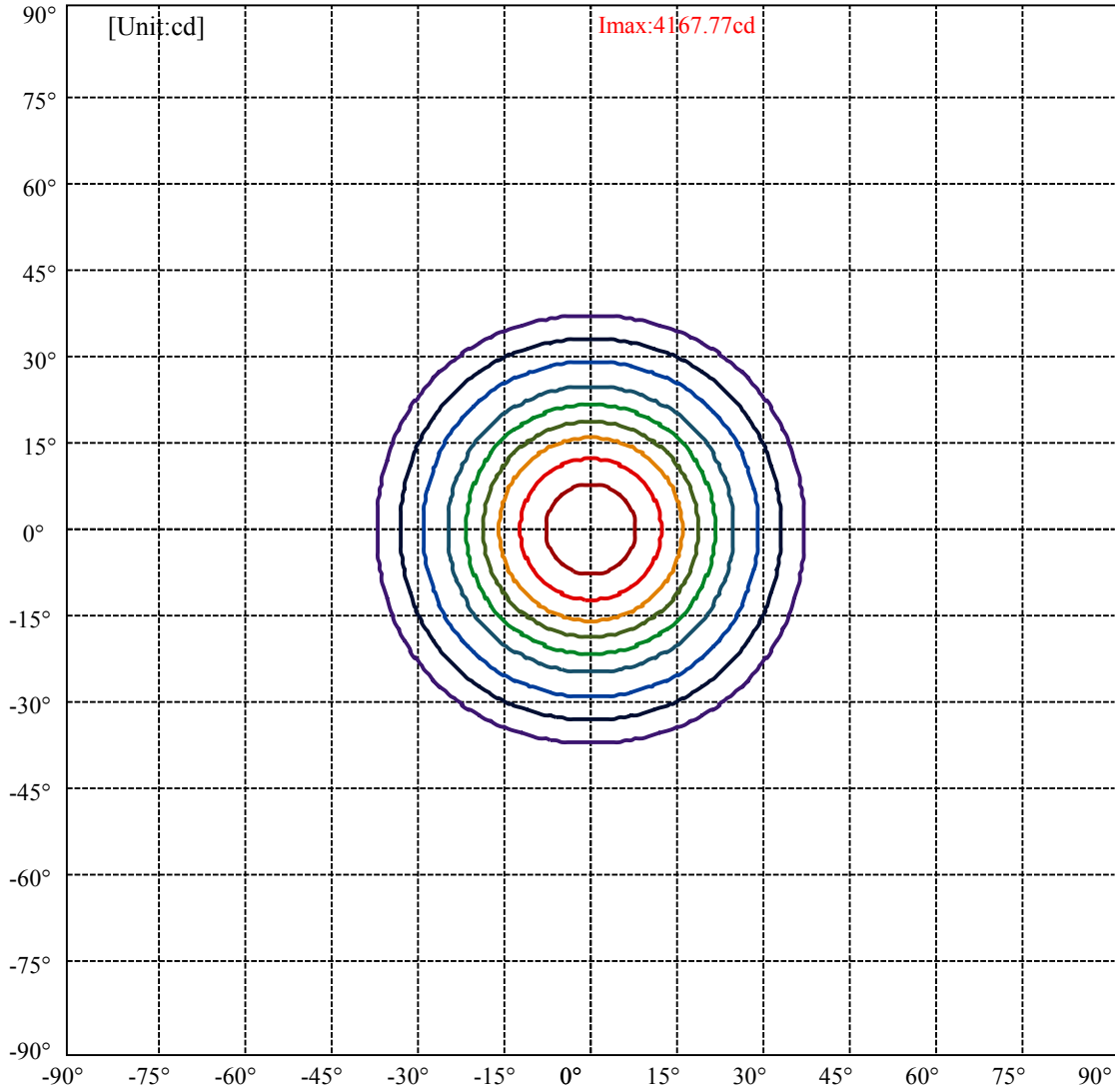
C90/C270: —————

Field angle(10%Imax):C0/180Left:36.7 Right:36.7

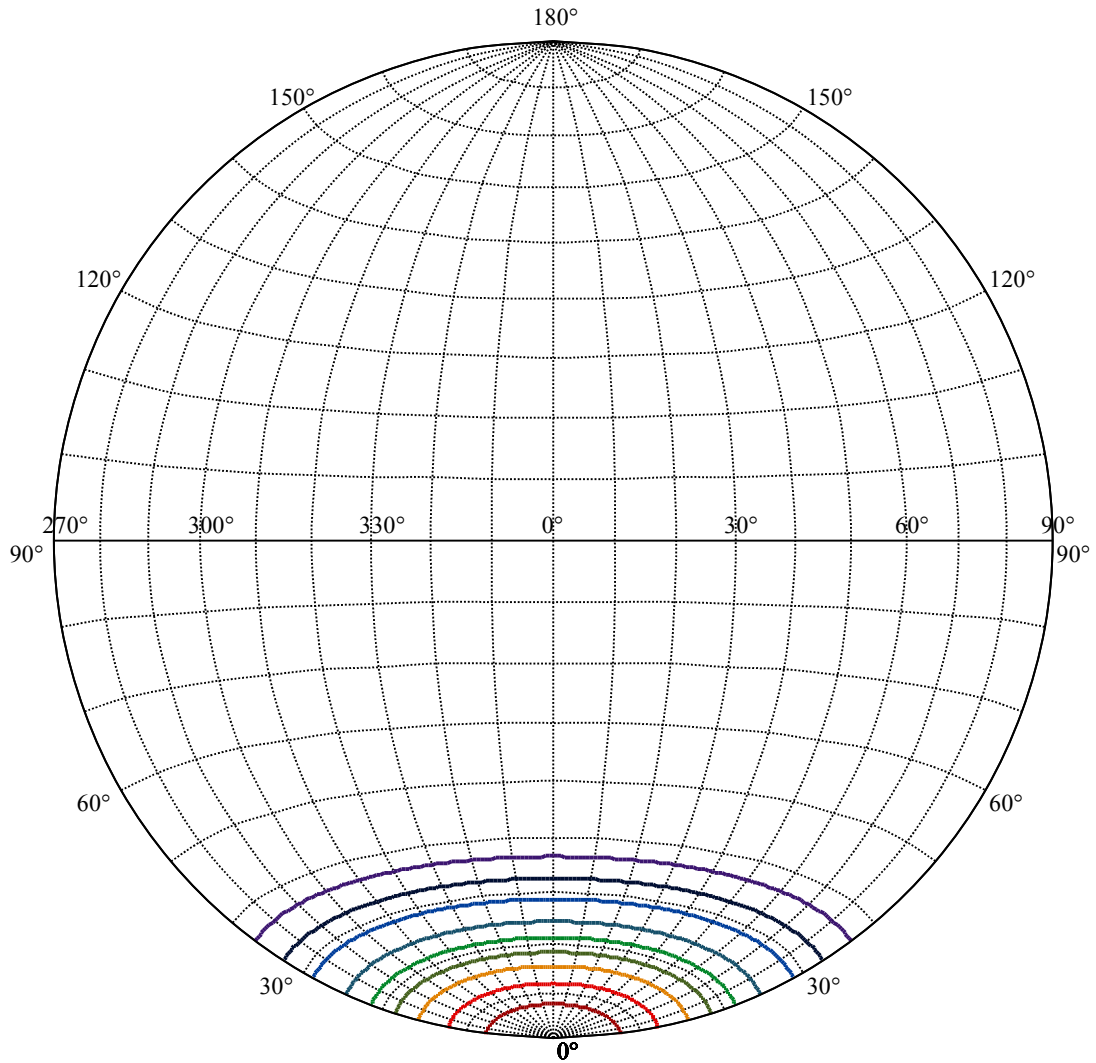
:C90/270Left:36.7 Right:36.7

Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4

:C90/270Left:21.4 Right:21.4



(10%Imax) 416.777	—
(20%Imax) 833.554	—
(30%Imax) 1250.33	—
(40%Imax) 1667.11	—
(50%Imax) 2083.88	—
(60%Imax) 2500.66	—
(70%Imax) 2917.44	—
(80%Imax) 3334.22	—
(90%Imax) 3750.99	—



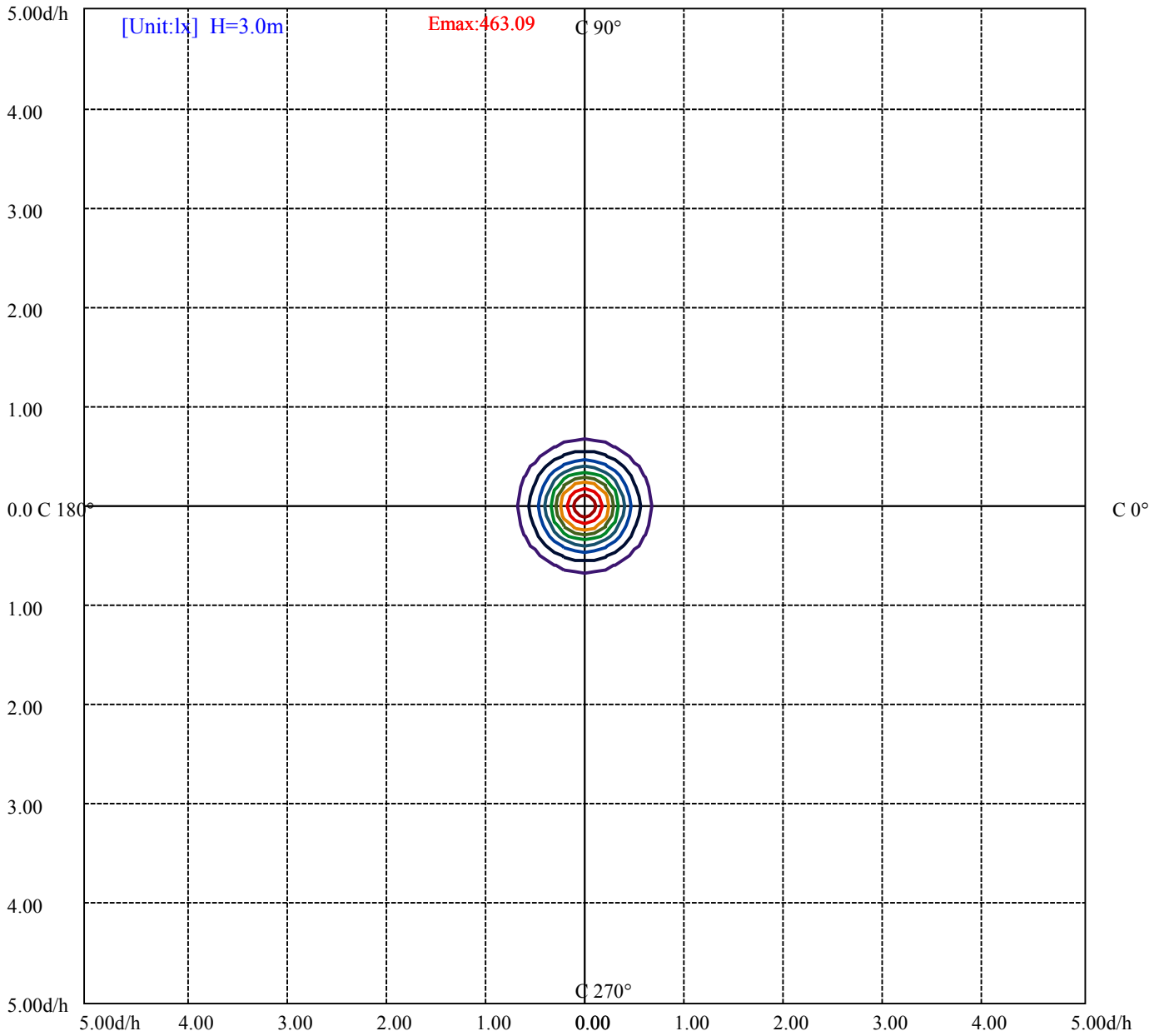
House

[Unit:cd]

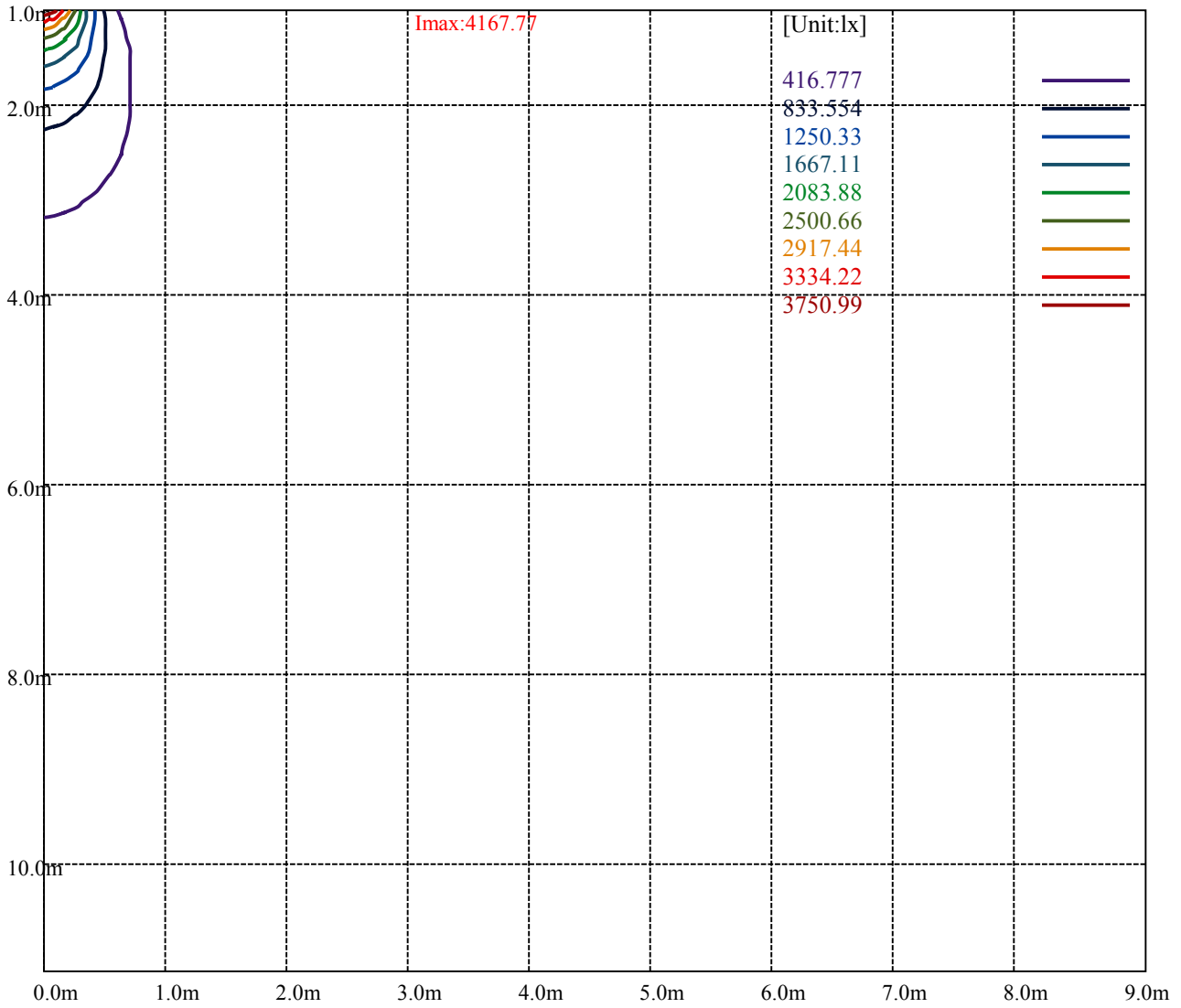
Road

Imax:4167.77

(10%Imax)	416.777	—
(20%Imax)	833.554	—
(30%Imax)	1250.33	—
(40%Imax)	1667.11	—
(50%Imax)	2083.88	—
(60%Imax)	2500.66	—
(70%Imax)	2917.44	—
(80%Imax)	3334.22	—
(90%Imax)	3750.99	—



(10%Emax) 46.30844	—
(20%Emax) 92.617	—
(30%Emax) 138.9256	—
(40%Emax) 185.2344	—
(50%Emax) 231.5422	—
(60%Emax) 277.8511	—
(70%Emax) 324.1589	—
(80%Emax) 370.4678	—
(90%Emax) 416.7767	—



Luminance Table

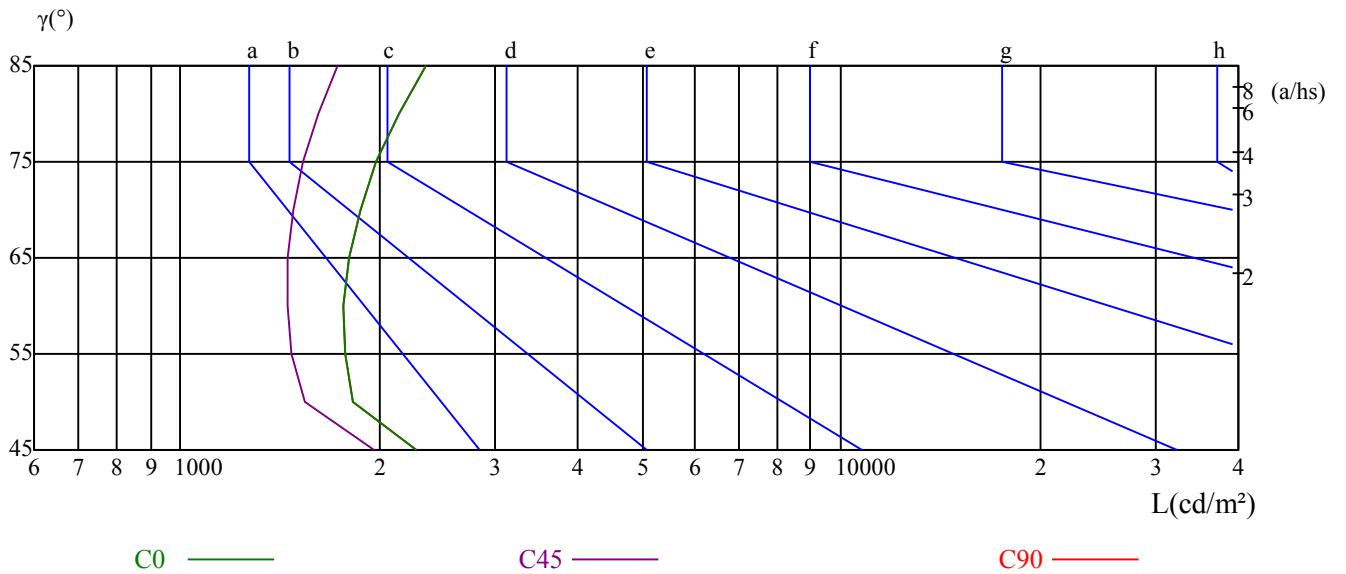
γ	45	50	55	60	65	70	75	80	85
C0	2278	1825	1770	1770	1805	1873	1981	2138	2354
C45	1957	1545	1475	1450	1454	1480	1531	1612	1724
C90	2278	1825	1770	1770	1805	1873	1981	2138	2354

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4336	4336	4336	6814	6814	6814	19948	19948	19948

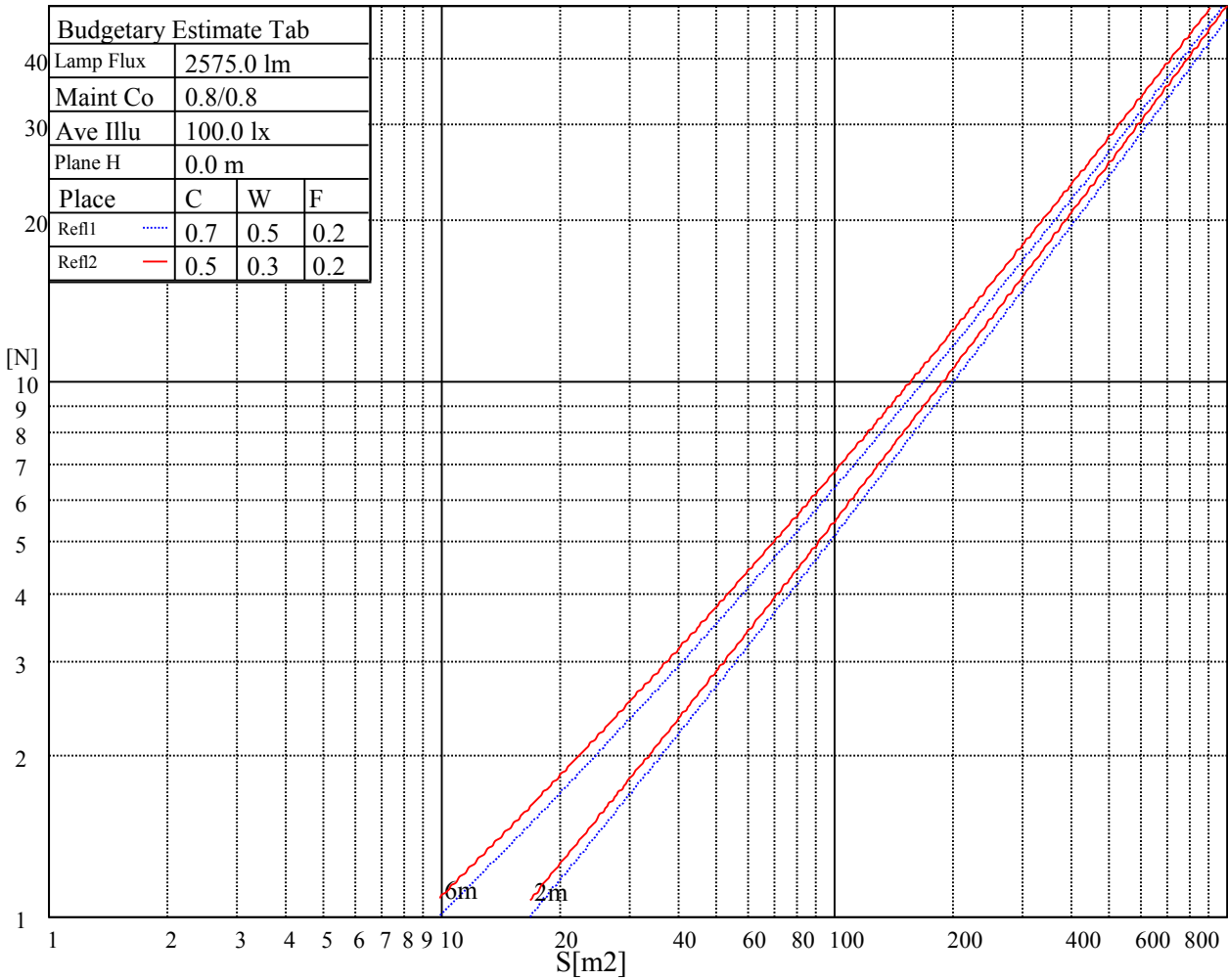
Glare Table

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

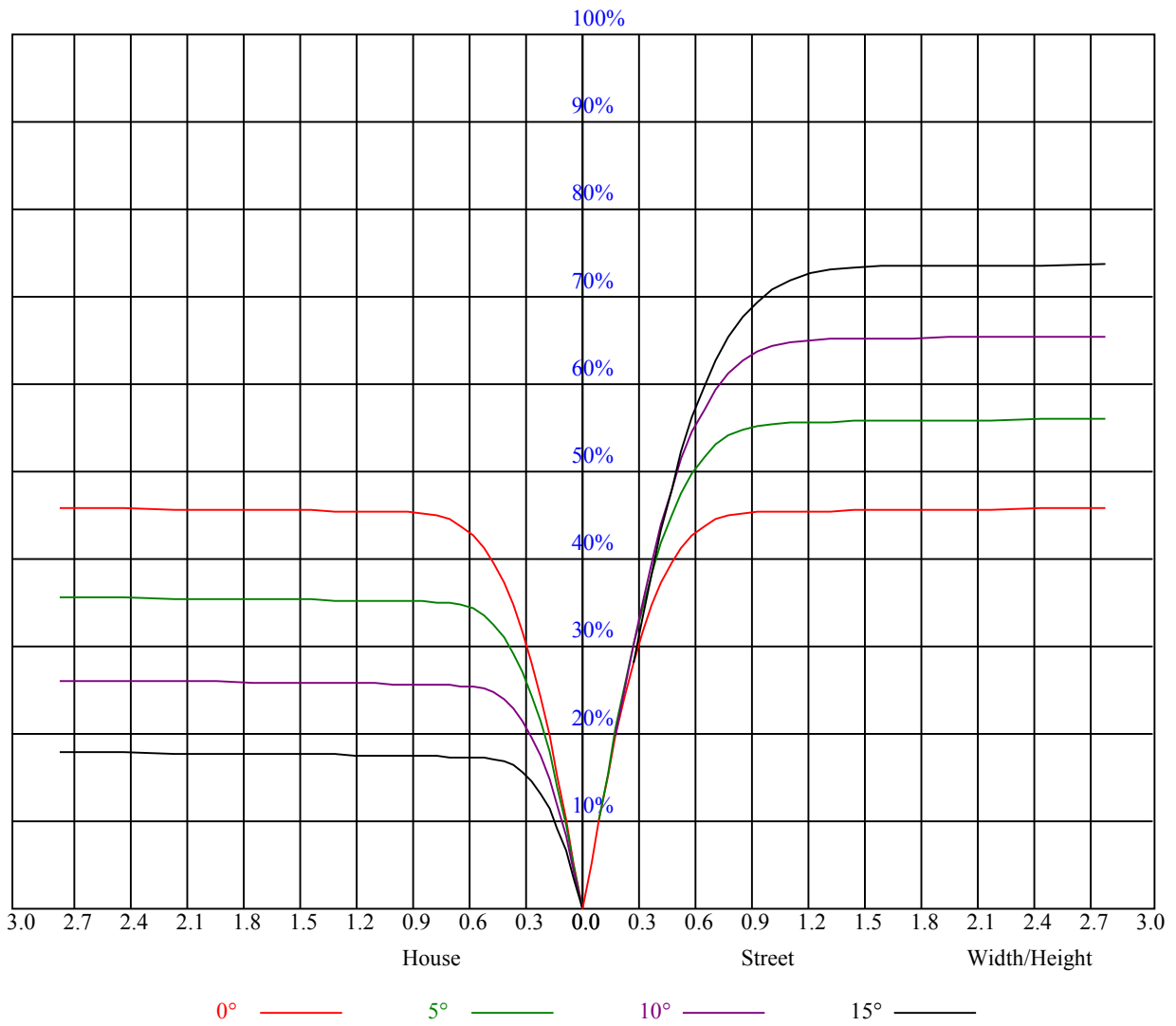
Luminance Limiting Curve



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	0.34	1.25	0.70	1.56	1.88	0.27	1.18	0.63	1.49	1.81
	3H	2.58	3.38	2.96	3.72	4.09	2.53	3.34	2.92	3.68	4.05
	4H	3.79	4.54	4.20	4.89	5.28	3.76	4.51	4.17	4.86	5.25
	6H	5.09	5.77	5.51	6.15	6.54	5.07	5.75	5.49	6.13	6.52
	8H	5.74	6.38	6.17	6.77	7.18	5.72	6.36	6.16	6.75	7.16
	12H	6.74	7.36	7.18	7.74	8.17	6.73	7.34	7.16	7.72	8.15
4H	2H	0.81	1.56	1.22	1.91	2.31	0.76	1.51	1.17	1.86	2.25
	3H	3.35	3.96	3.77	4.37	4.78	3.32	3.93	3.73	4.34	4.75
	4H	4.74	5.29	5.18	5.71	6.16	4.72	5.26	5.15	5.69	6.14
	6H	6.13	6.60	6.61	7.05	7.53	6.12	6.59	6.59	7.04	7.52
	8H	6.90	7.34	7.38	7.79	8.26	6.89	7.32	7.36	7.77	8.25
8H	12H	7.90	8.28	8.40	8.77	9.25	7.89	8.27	8.38	8.76	9.23
	4H	5.17	5.61	5.65	6.06	6.54	5.15	5.59	5.63	6.04	6.52
	6H	6.81	7.15	7.32	7.66	8.14	6.80	7.14	7.31	7.64	8.13
	8H	7.72	8.03	8.26	8.55	9.05	7.72	8.02	8.25	8.54	9.04
12H	12H	8.86	9.12	9.38	9.62	10.20	8.85	9.11	9.38	9.61	10.20
	4H	5.26	5.64	5.75	6.13	6.60	5.24	5.62	5.73	6.11	6.58
	6H	7.18	7.28	7.51	7.76	8.31	7.17	7.27	7.50	7.74	8.29
	8H	7.99	8.25	8.51	8.75	9.33	7.98	8.24	8.51	8.74	9.33
Variation with the observer position at spacings:											
S = 1.0H	5.8/-8.9					5.8/-8.9					
S = 1.5H	8.3/-7.1					8.3/-7.1					
S = 2.0H	10.0/-5.8					10.0/-5.8					
Standard tables:	BK1					BK1					
Uncorrected UGR	-2.0					-2.0					



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	1.10	1.10	1.10	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	0.91	0.90	0.89	0.88	0.86
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.87	0.82	0.79	0.86	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.74
5	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.71
6	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.65
8	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57



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	4169.42	4008.66	3634.27	3116.19	2405.96	1718.86	1211.24	680.50	289.05
45.0	4159.51	4023.52	3626.01	3114.54	2383.94	1667.66	1195.27	658.47	164.89
90.0	4172.17	3982.78	3523.61	2968.09	2176.38	1528.37	1084.12	504.43	43.77
135.0	4169.97	4058.76	3623.26	3083.71	2361.92	1613.15	1159.49	573.69	68.88
180.0	4169.42	3942.59	3491.13	2910.28	2115.27	1495.33	1092.65	450.36	38.37
225.0	4159.51	3919.47	3517.55	2919.64	2147.75	1534.97	1080.81	471.17	45.86
270.0	4172.17	3952.50	3605.09	3053.98	2326.13	1672.61	1191.97	641.41	285.74
315.0	4169.97	3894.14	3508.19	2971.94	2245.75	1577.37	1094.52	545.00	52.63
360.0	4169.42	4008.66	3634.27	3116.19	2405.96	1718.86	1211.24	680.50	289.05

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.11	12.83	12.00	11.51	11.18	10.96	10.74	10.68	10.57
45.0	17.29	12.94	12.06	11.62	11.23	10.96	10.79	10.68	10.63
90.0	15.14	12.72	12.00	11.51	11.18	10.96	10.74	10.63	10.68
135.0	16.08	12.66	12.00	11.51	11.18	10.96	10.79	10.68	10.68
180.0	13.71	12.44	11.78	11.34	11.07	10.85	10.68	10.57	10.52
225.0	14.04	12.50	11.78	11.40	11.07	10.79	10.68	10.63	10.52
270.0	20.32	12.83	12.06	11.56	11.18	10.90	10.74	10.63	10.52
315.0	14.98	12.66	11.89	11.40	11.12	10.85	10.68	10.57	10.52
360.0	18.11	12.83	12.00	11.51	11.18	10.96	10.74	10.68	10.57

C/γ(°)	90.0
0.0	10.46
45.0	10.46
90.0	10.46
135.0	10.46
180.0	10.46
225.0	10.46
270.0	10.46
315.0	10.46
360.0	10.46