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Nata

LumCAT: 3-2040-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.1000
Test No: GC2018071907	Current(A): 0.3000
LampCAT: BRIDGELUX V9 HD	Power (W): 10.2300
Lamp flux(lm): 1166.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1054.48
Efficiency(%): 90.44%
Lumens(lm)/Power(W): 103.63
Central intensity(cd): 6046.707
Maximum intensity(cd): 6046.707
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=18.4
 [C90/270]Total=18.4
Field angle(10%Imax): [C0/180]Total=37.9
 [C90/270]Total=37.9
Maximum s/h(1/2): C0_180=0.32 C90_270=0.32
Maximum s/h(1/4): C0_180=0.31 C90_270=0.31
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.92%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.109%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6046.707	5.786	5.786	.496%	.549%
2.0	5892.618	45.102	50.888	3.868%	4.826%
4.0	5391.742	82.486	133.374	7.074%	12.648%
6.0	4577.802	104.944	238.318	9.000%	22.600%
8.0	3617.618	110.419	348.736	9.470%	33.072%
10.0	2634.930	100.347	449.084	8.606%	42.588%
12.0	1782.747	81.289	530.373	6.972%	50.297%
14.0	1171.896	62.177	592.55	5.333%	56.194%
16.0	840.580	50.814	643.364	4.358%	61.012%
18.0	653.513	44.290	687.653	3.798%	65.213%
20.0	549.965	41.253	728.906	3.538%	69.125%
22.0	475.157	39.037	767.943	3.348%	72.827%
24.0	420.376	37.499	805.442	3.216%	76.383%
26.0	390.020	37.497	842.939	3.216%	79.939%
28.0	372.154	38.317	881.256	3.286%	83.573%
30.0	359.271	39.396	920.653	3.379%	87.309%
32.0	347.172	40.348	961	3.460%	91.135%
34.0	302.597	37.110	998.11	3.183%	94.654%
36.0	172.444	22.230	1020.34	1.906%	96.762%
38.0	58.628	7.916	1028.256	.679%	97.513%
40.0	13.110	1.848	1030.104	.159%	97.688%
42.0	9.098	1.335	1031.439	.115%	97.815%
44.0	7.357	1.121	1032.56	.096%	97.921%
46.0	6.125	0.966	1033.526	.083%	98.013%
48.0	5.712	0.931	1034.457	.080%	98.101%
50.0	5.526	0.928	1035.386	.080%	98.189%
52.0	5.368	0.928	1036.314	.080%	98.277%
54.0	5.251	0.932	1037.245	.080%	98.366%
56.0	5.141	0.935	1038.18	.080%	98.454%
58.0	5.051	0.940	1039.119	.081%	98.543%
60.0	4.976	0.945	1040.064	.081%	98.633%
62.0	4.921	0.953	1041.017	.082%	98.723%
64.0	4.872	0.960	1041.978	.082%	98.814%
66.0	4.838	0.969	1042.947	.083%	98.906%
68.0	4.804	0.977	1043.924	.084%	98.999%
70.0	4.762	0.981	1044.905	.084%	99.092%
72.0	4.755	0.992	1045.897	.085%	99.186%
74.0	4.721	0.995	1046.893	.085%	99.280%

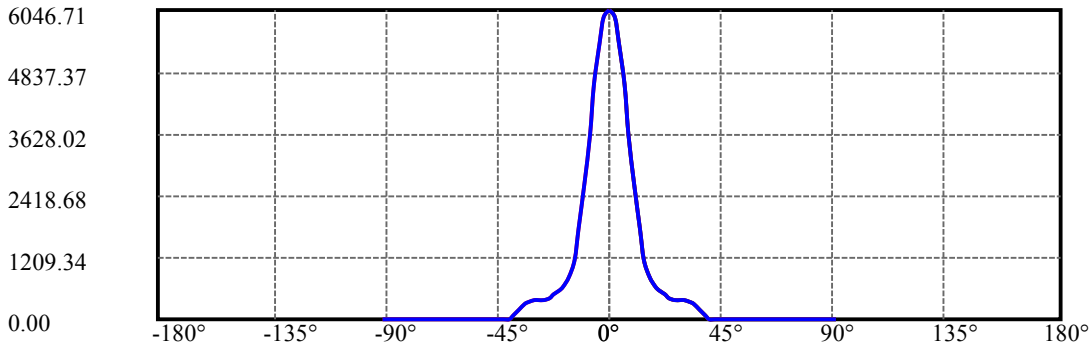
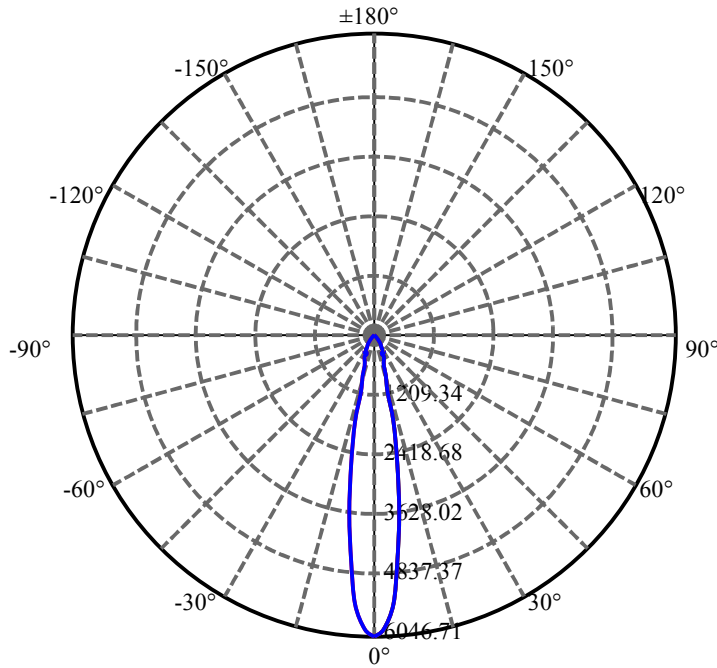
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.707	1.002	1047.894	.086%	99.375%
78.0	4.680	1.004	1048.898	.086%	99.471%
80.0	4.673	1.009	1049.907	.087%	99.566%
82.0	4.673	1.015	1050.922	.087%	99.663%
84.0	4.666	1.018	1051.94	.087%	99.759%
86.0	4.652	1.018	1052.958	.087%	99.856%
88.0	4.632	1.015	1053.973	.087%	99.952%
90.0	4.625	0.507	1054.48	.043%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	920.65	78.96%	87.31%
0-40	1030.10	88.35%	97.69%
0-60	1040.06	89.20%	98.63%
0-90	1053.97	90.39%	99.95%
0-120	1053.97	90.39%	99.95%
0-180	1054.48	90.44%	100.00%
60-90	14.85	1.27%	1.41%
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%
0-26.03	843.58	72.35%	80.00%

ZONAL LUMEN SUMMARY

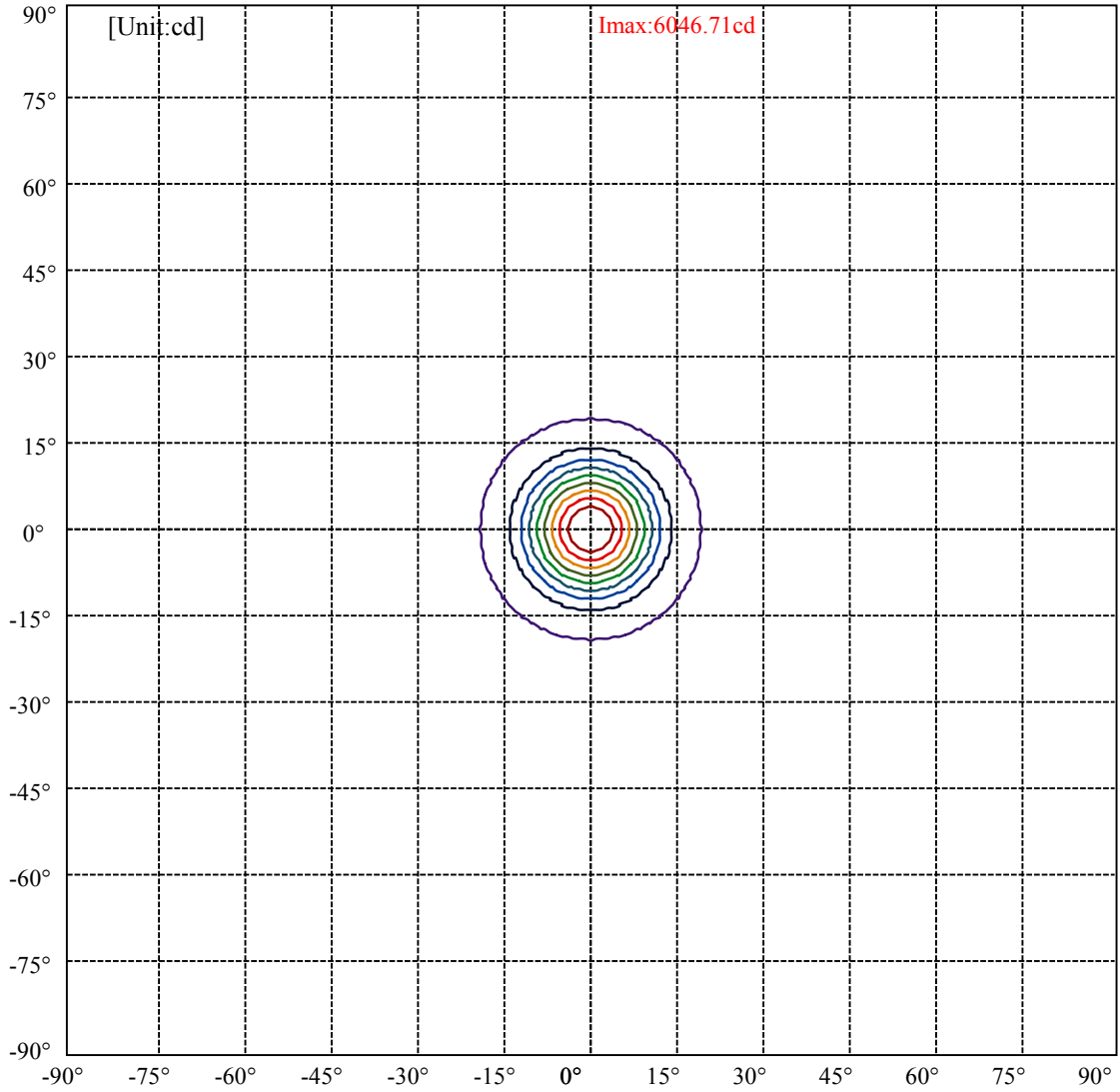
0-10	449.08
10-20	279.82
20-30	191.75
30-40	109.45
40-50	5.28
50-60	4.68
60-70	4.84
70-80	5.00
80-90	4.07
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



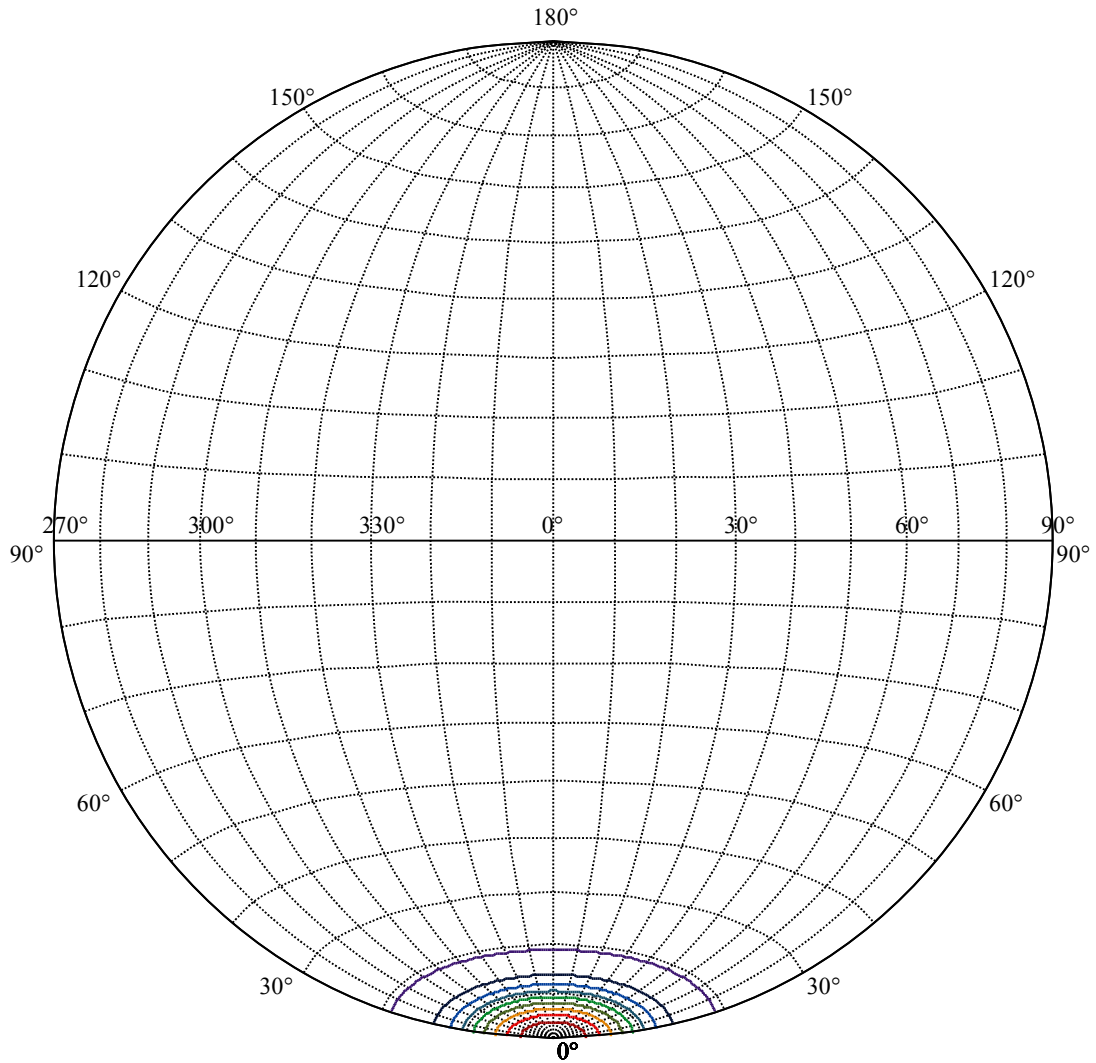
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:18.9 Right:18.9
:C90/270Left:18.9 Right:18.9

Beam Angle(50%Imax):C0/180Left:9.2 Right:9.2
:C90/270Left:9.2 Right:9.2



(10%Imax) 604.671	—
(20%Imax) 1209.34	—
(30%Imax) 1814.01	—
(40%Imax) 2418.68	—
(50%Imax) 3023.35	—
(60%Imax) 3628.02	—
(70%Imax) 4232.69	—
(80%Imax) 4837.37	—
(90%Imax) 5442.04	—



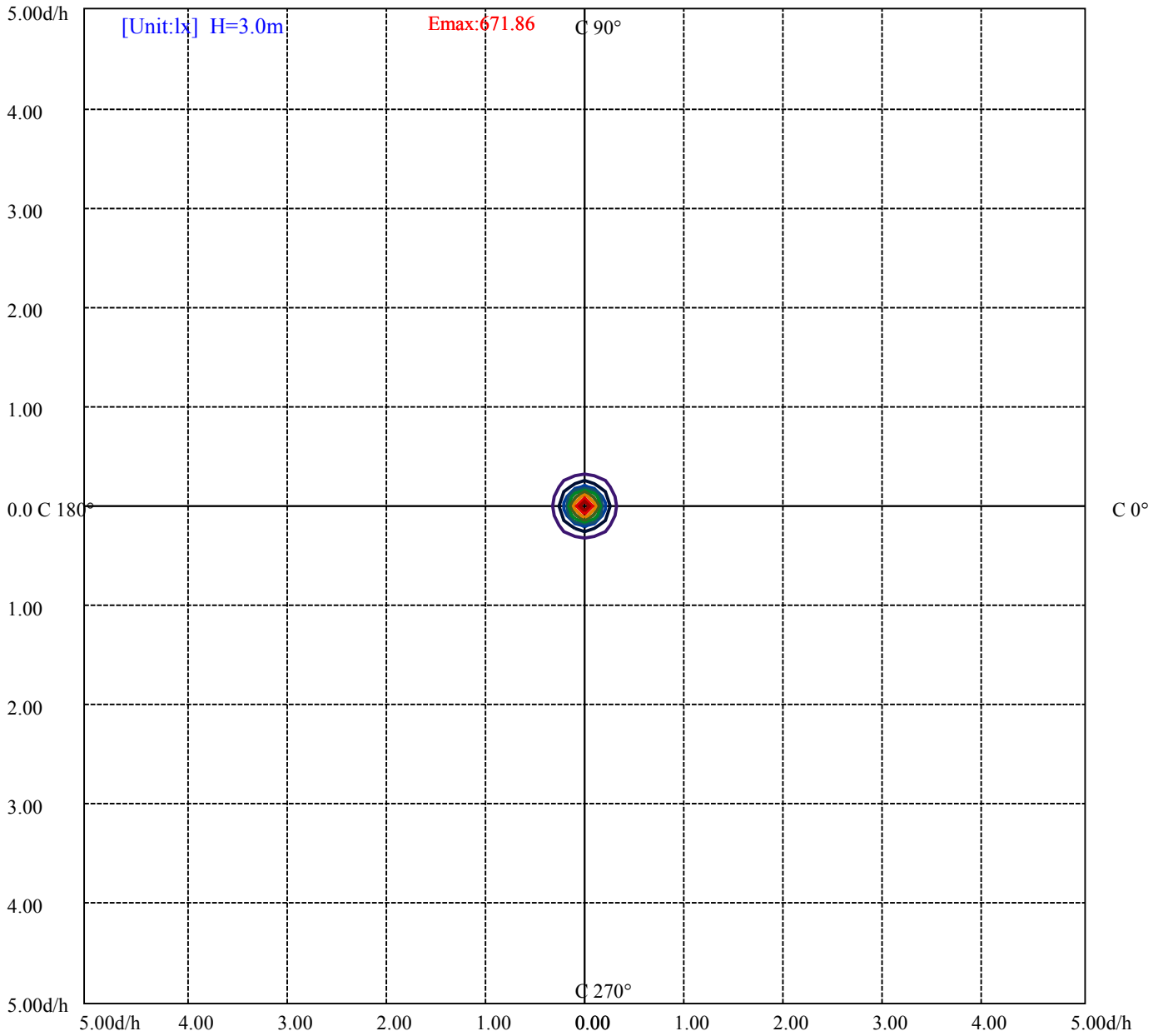
House

[Unit:cd]

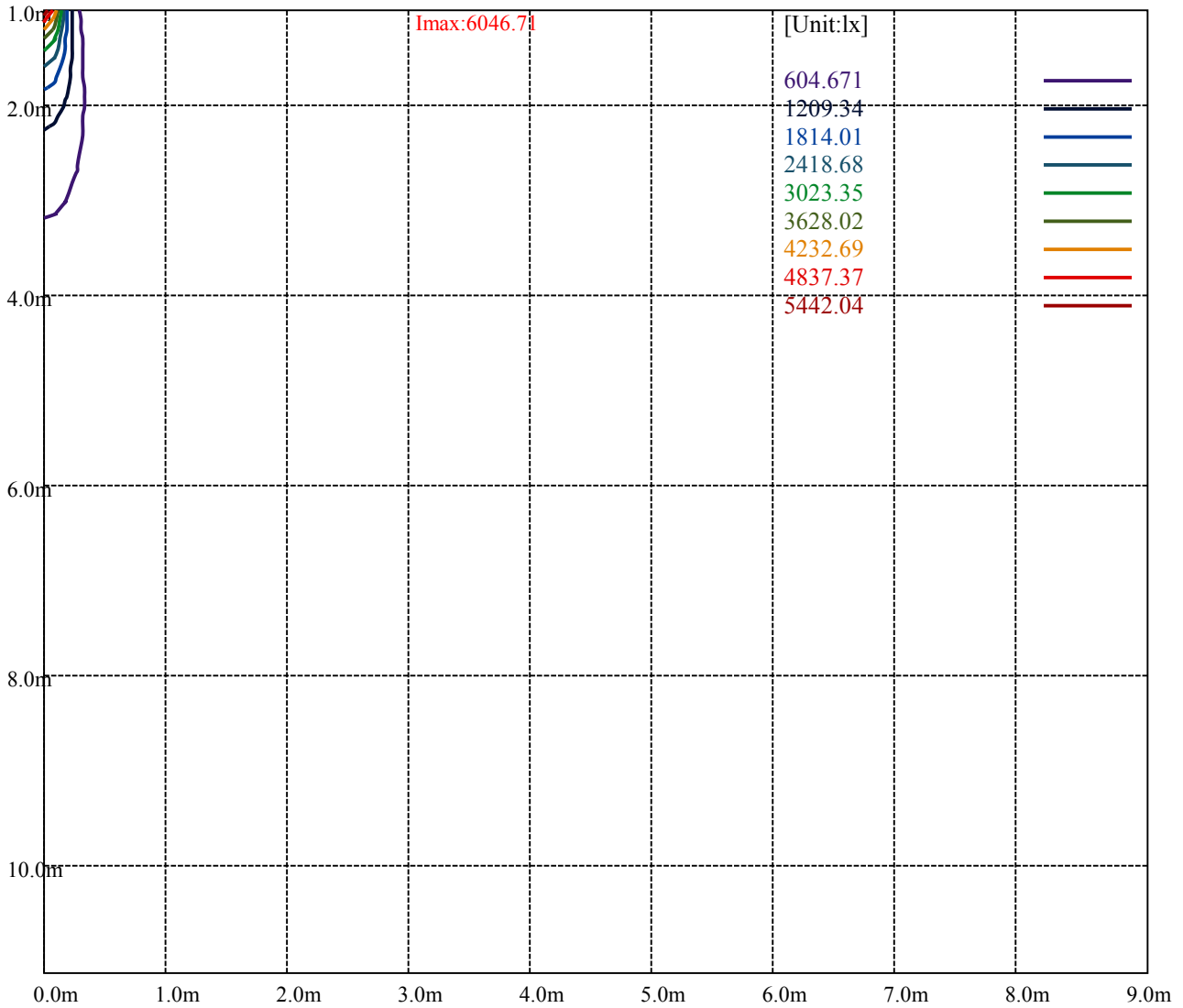
Road

Imax:6046.71

(10%Imax) 604.671	—
(20%Imax) 1209.34	—
(30%Imax) 1814.01	—
(40%Imax) 2418.68	—
(50%Imax) 3023.35	—
(60%Imax) 3628.02	—
(70%Imax) 4232.69	—
(80%Imax) 4837.37	—
(90%Imax) 5442.04	—



(10%Emax) 67.18545	—
(20%Emax) 134.3711	—
(30%Emax) 201.5567	—
(40%Emax) 268.7422	—
(50%Emax) 335.9278	—
(60%Emax) 403.1133	—
(70%Emax) 470.2989	—
(80%Emax) 537.4844	—
(90%Emax) 604.67	—



Luminance Table

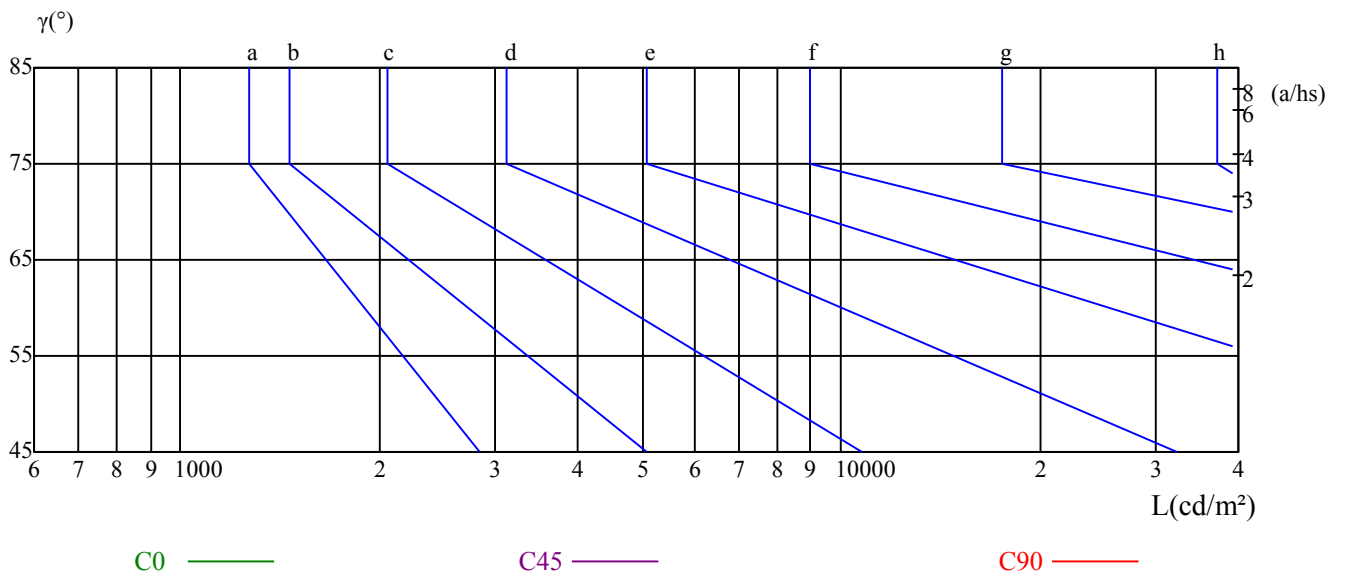
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

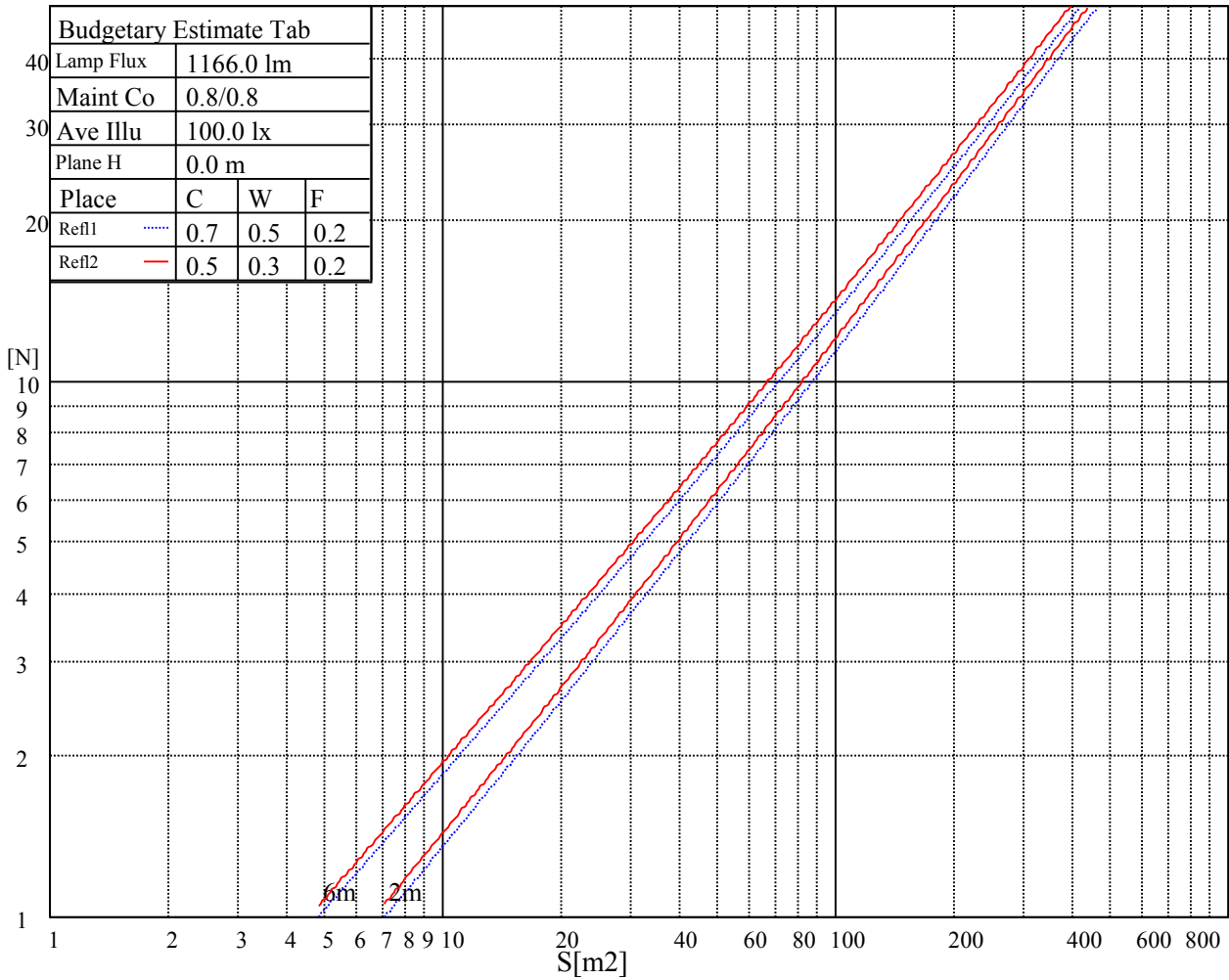
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

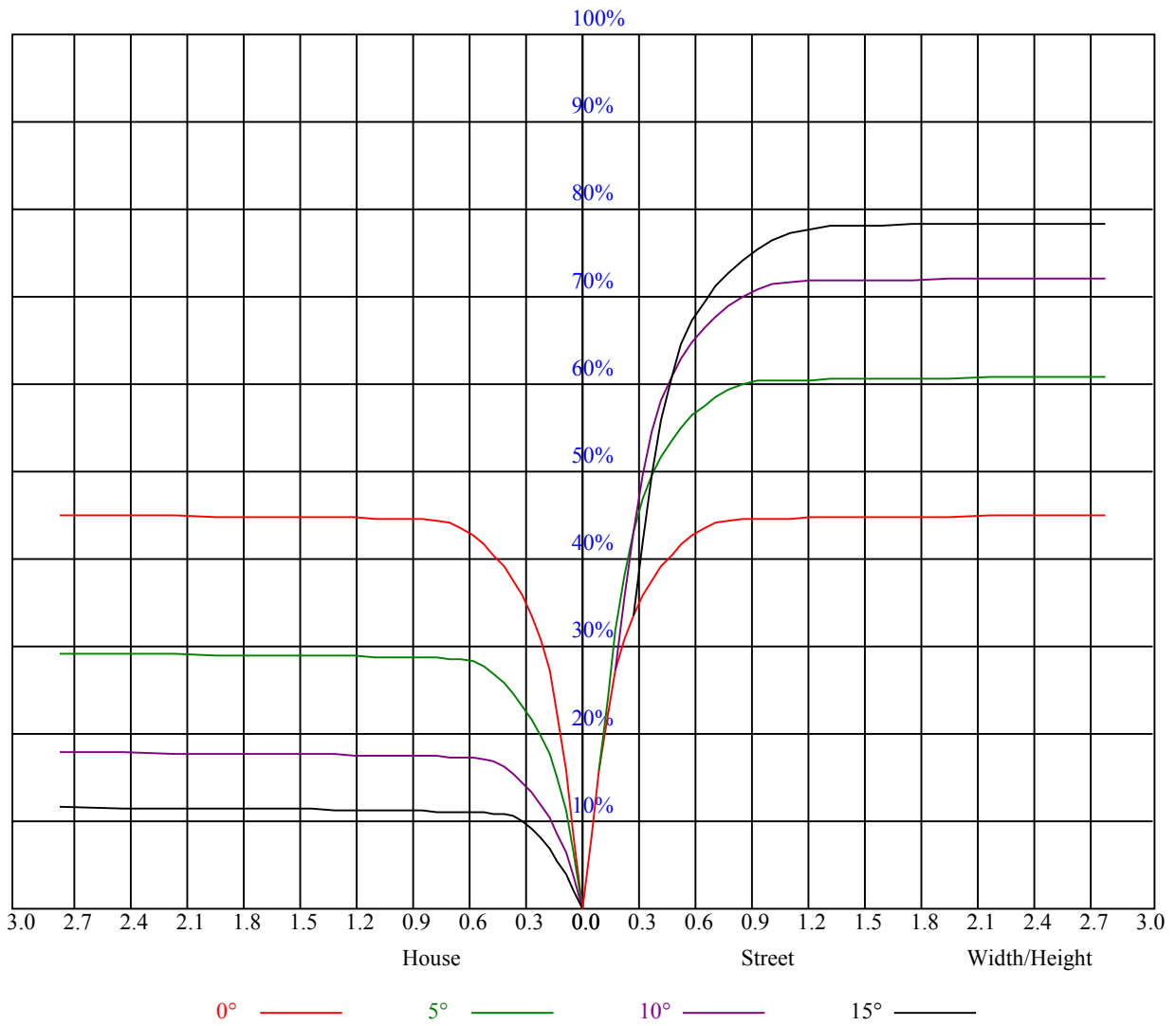
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.98	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.89	0.89	0.88	0.86
2	0.96	0.93	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.87	0.85	0.84	0.83
3	0.92	0.88	0.86	0.91	0.87	0.85	0.88	0.86	0.84	0.86	0.84	0.82	0.84	0.83	0.81	0.80
4	0.88	0.84	0.81	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.74	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.76	0.73	0.71	0.70
8	0.76	0.72	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.69	0.68
9	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	6060.06	5939.48	5419.20	4574.64	3609.50	2568.93	1740.33	1159.49	807.13
45.0	6043.54	5688.43	4968.84	4041.69	2966.99	2092.69	1353.84	929.35	710.78
90.0	6014.91	5604.19	4798.17	3809.90	2800.17	1915.41	1086.43	886.13	685.34
135.0	6068.32	5826.07	5230.36	4394.05	3439.92	2429.09	1676.47	1095.07	770.24
180.0	6060.06	5921.32	5394.43	4586.20	3635.37	2597.01	1766.76	1089.02	820.67
225.0	6043.54	6068.87	5823.87	5173.65	4222.28	3232.36	2262.27	1501.39	993.16
270.0	6014.91	6087.04	5929.02	5308.54	4425.98	3458.64	2477.54	1625.26	1067.54
315.0	6068.32	6005.55	5570.06	4733.75	3840.73	2785.30	1898.34	1089.46	869.78
360.0	6060.06	5939.48	5419.20	4574.64	3609.50	2568.93	1740.33	1159.49	807.13
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	657.92	557.17	483.40	425.04	395.86	379.89	367.23	355.11	313.27
45.0	589.10	503.77	437.15	404.11	383.74	371.08	357.32	345.20	280.79
90.0	568.90	489.23	424.59	393.60	376.70	362.99	350.54	333.31	216.76
135.0	624.89	529.09	456.42	407.42	380.44	366.68	354.56	344.10	290.70
180.0	629.57	542.58	463.74	409.12	379.45	364.42	351.92	341.79	306.39
225.0	723.61	587.34	510.70	440.01	397.89	372.35	358.14	347.46	337.11
270.0	763.63	613.33	533.50	456.97	410.17	383.19	369.98	357.32	347.41
315.0	670.48	577.21	491.76	426.74	395.91	376.64	364.47	353.08	328.36
360.0	657.92	557.17	483.40	425.04	395.86	379.89	367.23	355.11	313.27
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	174.69	39.09	11.62	9.74	7.60	6.06	5.84	5.67	5.51
45.0	88.59	12.61	9.97	7.82	6.11	5.78	5.56	5.40	5.29
90.0	70.25	10.57	9.08	7.27	6.06	5.67	5.51	5.34	5.23
135.0	143.59	23.45	9.58	7.87	6.66	5.84	5.67	5.51	5.34
180.0	172.05	51.81	10.46	9.03	7.32	5.89	5.67	5.51	5.34
225.0	257.11	128.94	17.29	10.35	8.31	6.66	5.84	5.62	5.40
270.0	289.60	138.25	25.27	10.96	9.14	7.10	5.89	5.67	5.51
315.0	183.67	64.31	11.62	9.74	7.65	6.00	5.73	5.51	5.34
360.0	174.69	39.09	11.62	9.74	7.60	6.06	5.84	5.67	5.51
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	5.40	5.18	5.07	4.96	4.96	4.84	4.84	4.79	4.79
45.0	5.18	5.07	5.01	4.96	4.90	4.84	4.79	4.79	4.73
90.0	5.12	5.07	5.01	4.96	4.90	4.84	4.84	4.79	4.73
135.0	5.23	5.12	5.07	4.96	4.90	4.90	4.84	4.84	4.79
180.0	5.23	5.12	5.07	5.01	4.90	4.84	4.84	4.79	4.73
225.0	5.29	5.18	5.01	4.96	4.90	4.84	4.79	4.79	4.73
270.0	5.40	5.29	5.18	5.07	5.01	4.96	4.90	4.84	4.79
315.0	5.18	5.12	5.01	4.96	4.90	4.90	4.84	4.79	4.79
360.0	5.40	5.18	5.07	4.96	4.96	4.84	4.84	4.79	4.79
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.73	4.73	4.68	4.68	4.68	4.68	4.68	4.68	4.62
45.0	4.73	4.68	4.68	4.62	4.62	4.62	4.62	4.62	4.62
90.0	4.73	4.73	4.73	4.73	4.73	4.73	4.68	4.62	4.62
135.0	4.79	4.73	4.73	4.68	4.68	4.68	4.68	4.68	4.68
180.0	4.73	4.68	4.68	4.68	4.68	4.68	4.68	4.62	4.62
225.0	4.73	4.68	4.68	4.62	4.62	4.62	4.62	4.62	4.62
270.0	4.79	4.79	4.73	4.73	4.68	4.68	4.68	4.68	4.62
315.0	4.79	4.73	4.73	4.68	4.68	4.68	4.68	4.68	4.62
360.0	4.73	4.73	4.68	4.68	4.68	4.68	4.68	4.68	4.62

Intensity data(cd)

C/ γ ($^{\circ}$)	90.0
0.0	4.68
45.0	4.62
90.0	4.62
135.0	4.62
180.0	4.62
225.0	4.57
270.0	4.62
315.0	4.62
360.0	4.68