



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

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## Nata

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LumCAT: 1654-S  
Luminaire: 92.70.064.00  
Report No: NATA0100  
Test No: GC2018072814  
LampCAT: BRIDGELUX V6HD  
Lamp flux(lm): 1137.0  
Number of Lamps: 1  
Length(mm): 32  
Phm Type: C

Voltage(V): 36.0000  
Current(A): 0.3000  
Power (W): 10.8000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 32  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 976.64  
Efficiency(%): 85.90%  
Lumens(lm)/Power(W): 90.87  
Central intensity(cd): 5168.557  
Maximum intensity(cd): 5168.557  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=19.5  
                                  [C90/270]Total=19.5  
Field angle(10%Imax): [C0/180]Total=40.1  
                                  [C90/270]Total=40.1  
Maximum s/h(1/2): C0\_180=0.33 C90\_270=0.33  
Maximum s/h(1/4): C0\_180=0.34 C90\_270=0.34  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 86.32%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.812%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5168.557	4.946	4.946	.435%	.506%
2.0	5032.361	38.517	43.463	3.388%	4.450%
4.0	4647.586	71.101	114.565	6.253%	11.730%
6.0	4016.502	92.076	206.641	8.098%	21.158%
8.0	3255.210	99.357	305.998	8.739%	31.332%
10.0	2480.566	94.468	400.466	8.309%	41.004%
12.0	1812.801	82.660	483.126	7.270%	49.468%
14.0	1249.739	66.307	549.433	5.832%	56.257%
16.0	891.783	53.909	603.342	4.741%	61.777%
18.0	644.690	43.692	647.034	3.843%	66.251%
20.0	517.771	38.838	685.872	3.416%	70.227%
22.0	451.297	37.077	722.949	3.261%	74.024%
24.0	408.284	36.420	759.369	3.203%	77.753%
26.0	381.568	36.684	796.053	3.226%	81.509%
28.0	361.583	37.229	833.282	3.274%	85.321%
30.0	327.372	35.899	869.181	3.157%	88.997%
32.0	260.788	30.308	899.489	2.666%	92.100%
34.0	182.361	22.364	921.854	1.967%	94.390%
36.0	102.501	13.213	935.067	1.162%	95.743%
38.0	44.492	6.007	941.074	.528%	96.358%
40.0	20.034	2.824	943.899	.248%	96.647%
42.0	15.615	2.292	946.19	.202%	96.882%
44.0	12.890	1.964	948.154	.173%	97.083%
46.0	10.846	1.711	949.865	.150%	97.258%
48.0	9.738	1.587	951.452	.140%	97.421%
50.0	9.077	1.525	952.977	.134%	97.577%
52.0	8.582	1.483	954.46	.130%	97.729%
54.0	8.031	1.425	955.885	.125%	97.875%
56.0	7.660	1.393	957.278	.122%	98.017%
58.0	7.309	1.359	958.637	.120%	98.156%
60.0	6.985	1.327	959.964	.117%	98.292%
62.0	6.689	1.295	961.259	.114%	98.425%
64.0	6.407	1.263	962.522	.111%	98.554%
66.0	6.194	1.241	963.763	.109%	98.681%
68.0	5.987	1.217	964.981	.107%	98.806%
70.0	5.815	1.198	966.179	.105%	98.929%
72.0	5.657	1.180	967.359	.104%	99.049%
74.0	5.540	1.168	968.527	.103%	99.169%

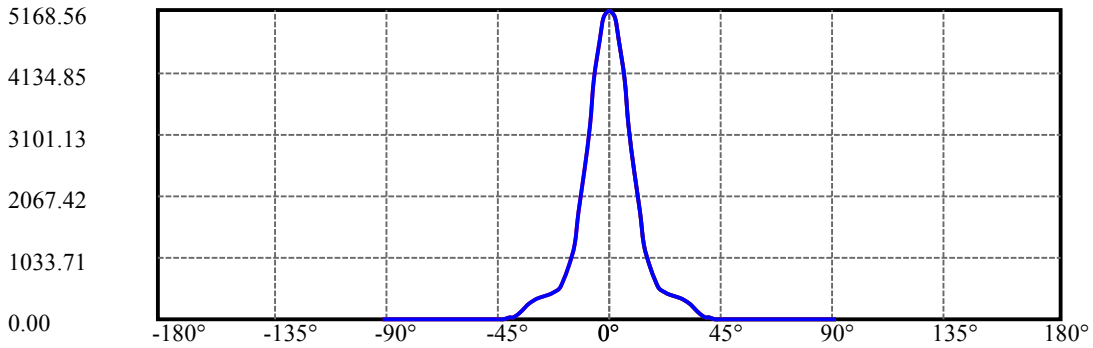
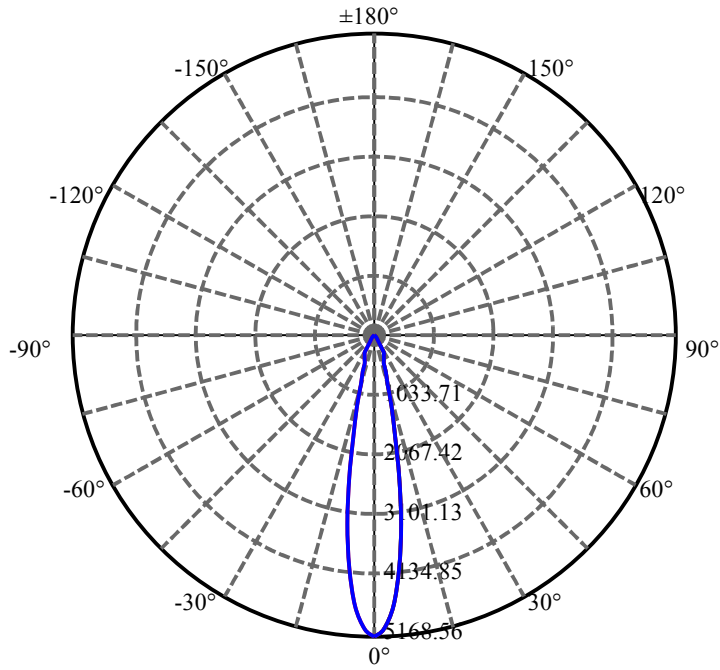
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.396	1.148	969.675	.101%	99.287%
78.0	5.292	1.135	970.811	.100%	99.403%
80.0	5.162	1.115	971.925	.098%	99.517%
82.0	5.038	1.094	973.02	.096%	99.629%
84.0	4.948	1.079	974.099	.095%	99.739%
86.0	4.872	1.066	975.165	.094%	99.849%
88.0	4.535	0.994	976.159	.087%	99.950%
90.0	4.418	0.484	976.643	.043%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	869.18	76.45%	89.00%
0-40	943.90	83.02%	96.65%
0-60	959.96	84.43%	98.29%
0-90	976.16	85.85%	99.95%
0-120	976.16	85.85%	99.95%
0-180	976.64	85.90%	100.00%
60-90	17.52	1.54%	1.79%
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%
0-25.20	781.31	68.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	400.47
10-20	285.41
20-30	183.31
30-40	74.72
40-50	9.08
50-60	6.99
60-70	6.22
70-80	5.75
80-90	4.23
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): —————

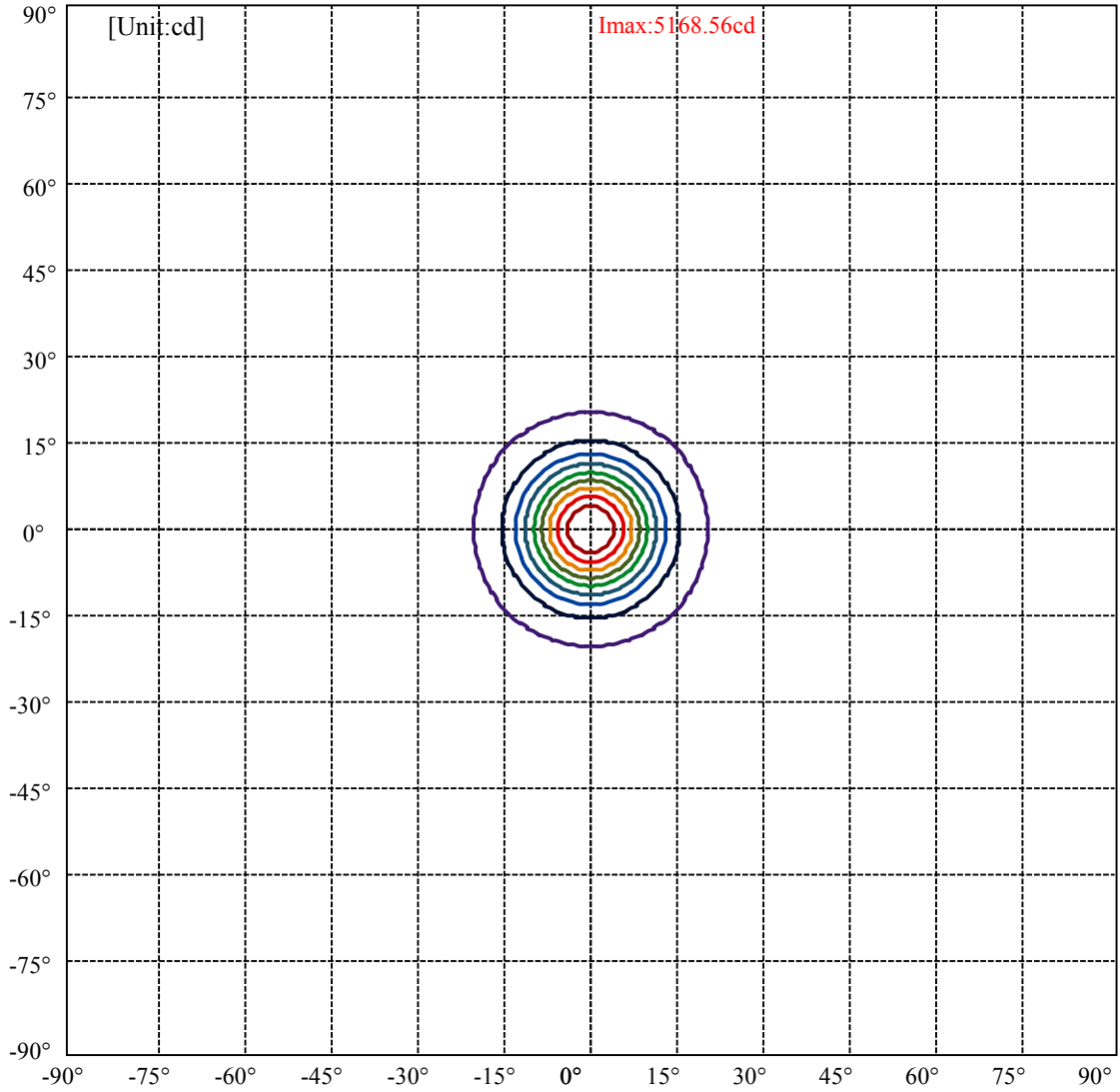
C0/C180: —————

C90/C270: —————

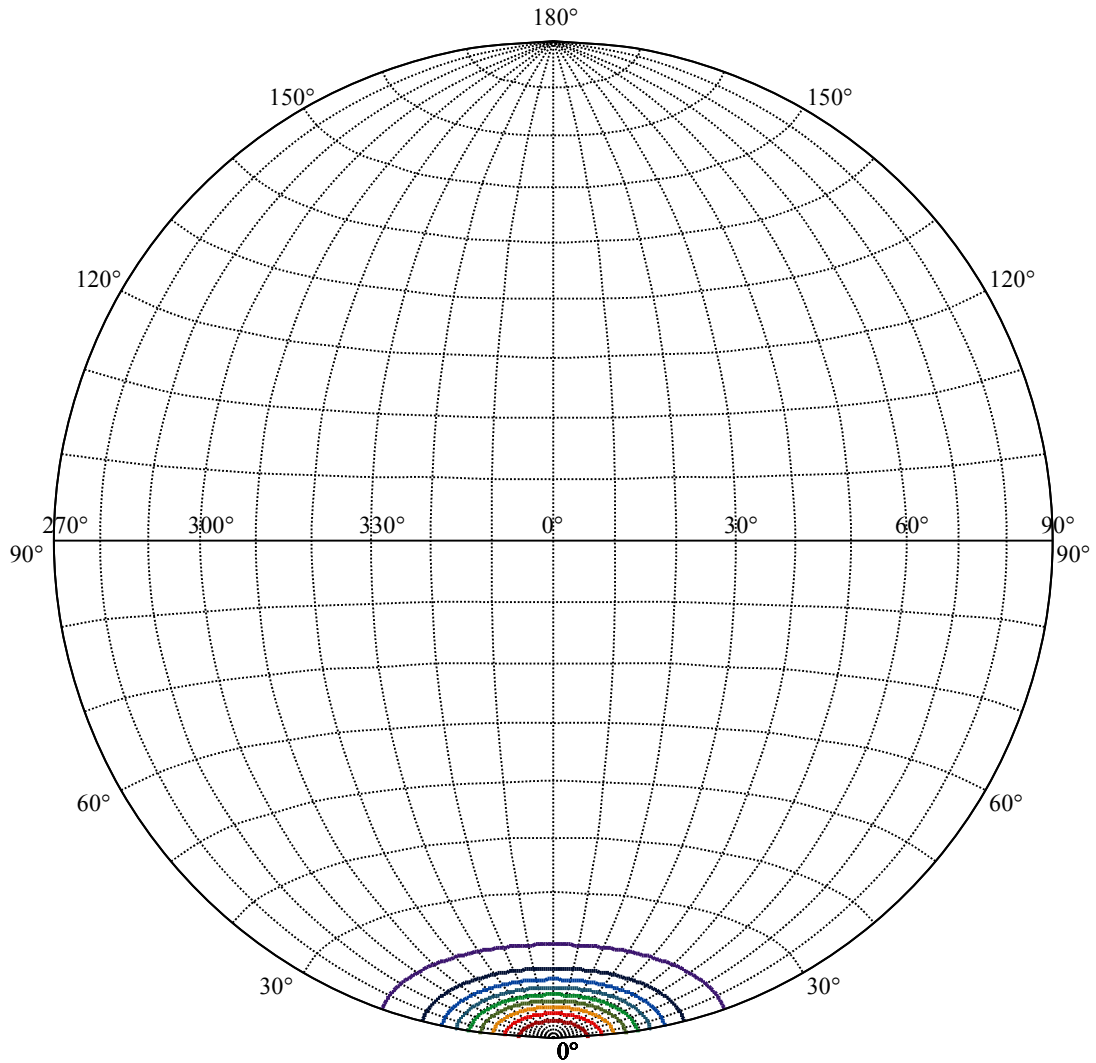
Field angle(10%Imax):C0/180Left:20.0 Right:20.0  
:C90/270Left:20.0 Right:20.0

Beam Angle(50%Imax):C0/180Left:9.7 Right:9.7  
:C90/270Left:9.7 Right:9.7





(10%Imax)	516.856	—
(20%Imax)	1033.71	—
(30%Imax)	1550.57	—
(40%Imax)	2067.42	—
(50%Imax)	2584.28	—
(60%Imax)	3101.13	—
(70%Imax)	3617.99	—
(80%Imax)	4134.85	—
(90%Imax)	4651.7	—



House

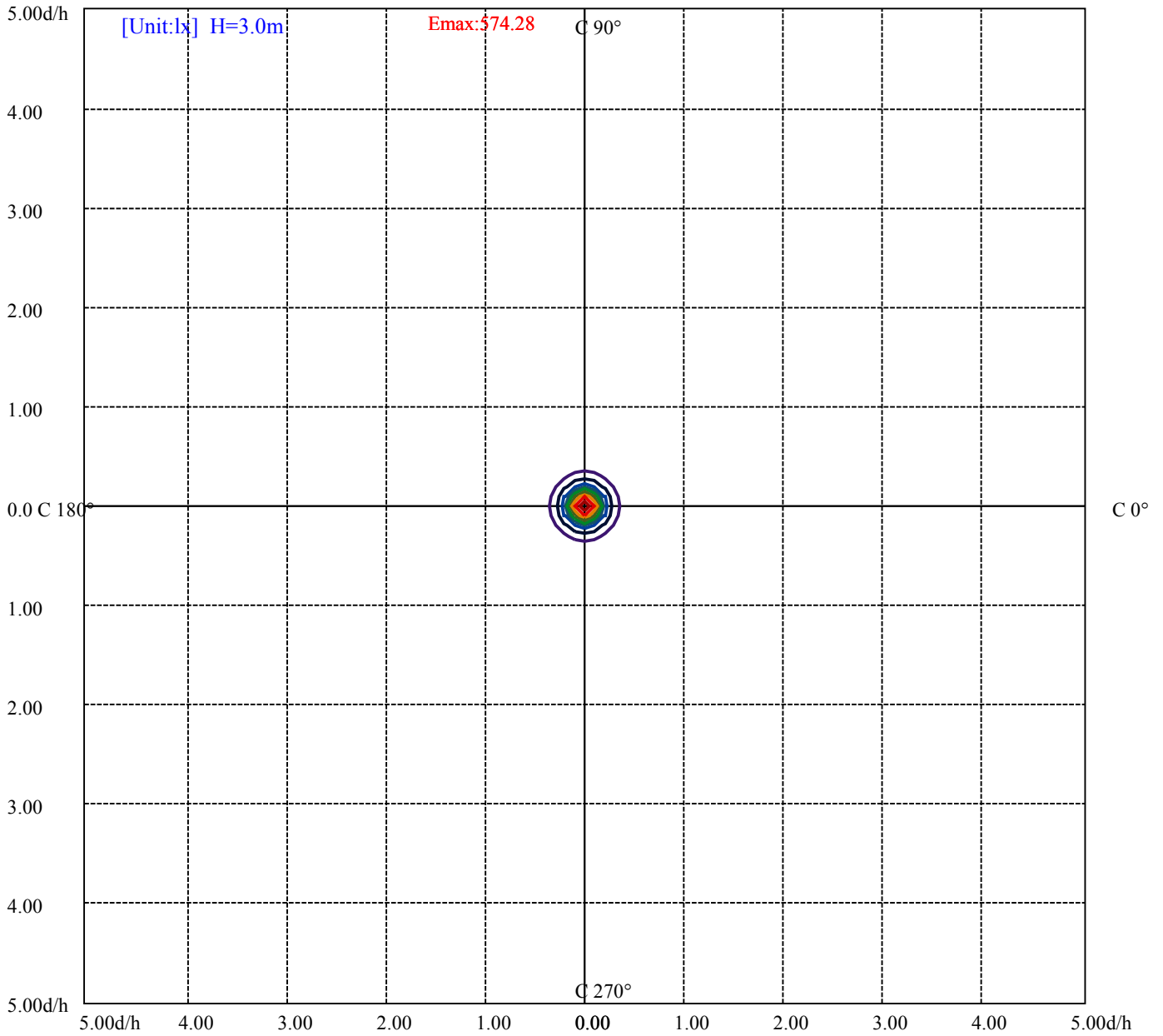
[Unit:cd]

Road

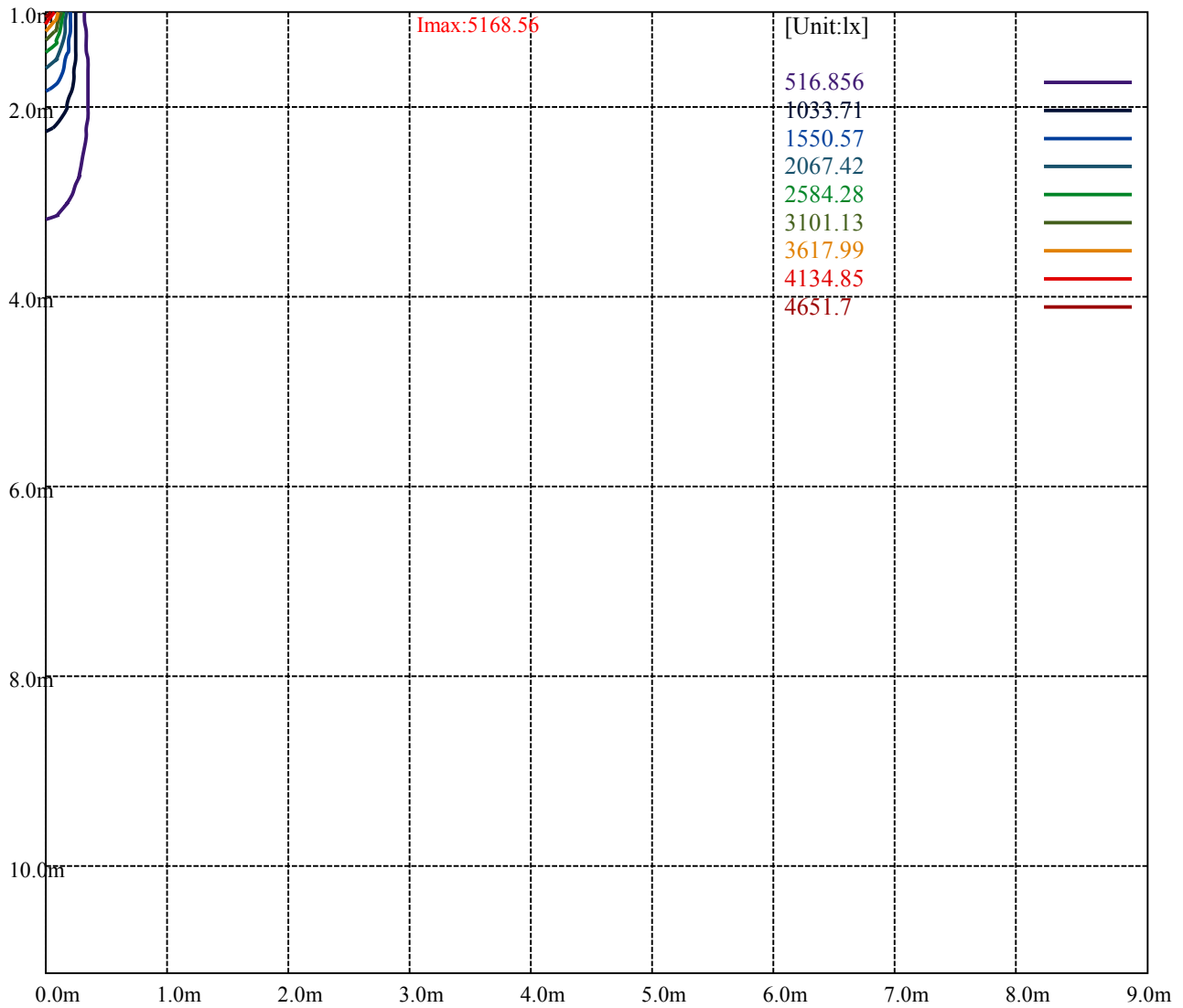
**Imax:5168.56**

(10%Imax) 516.856	—
(20%Imax) 1033.71	—
(30%Imax) 1550.57	—
(40%Imax) 2067.42	—
(50%Imax) 2584.28	—
(60%Imax) 3101.13	—
(70%Imax) 3617.99	—
(80%Imax) 4134.85	—
(90%Imax) 4651.7	—





(10%Emax) 57.42833	—
(20%Emax) 114.8567	—
(30%Emax) 172.2845	—
(40%Emax) 229.7133	—
(50%Emax) 287.1411	—
(60%Emax) 344.57	—
(70%Emax) 401.9978	—
(80%Emax) 459.4266	—
(90%Emax) 516.8544	—



Luminance Table

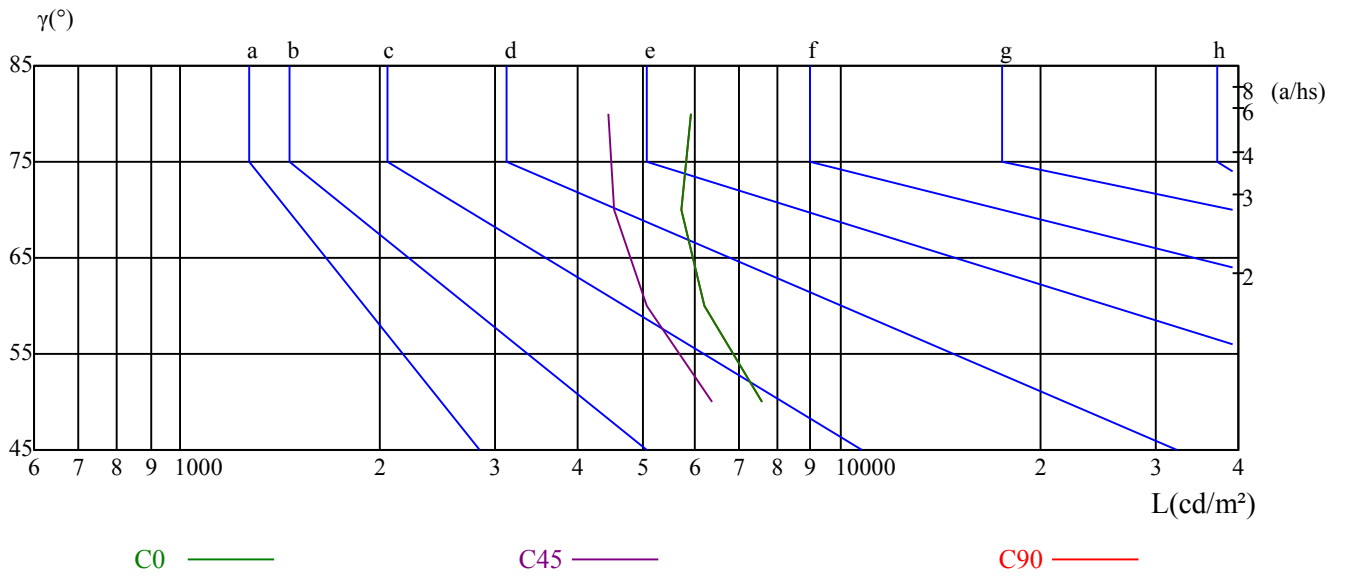
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	7580	0	6228	0	5748	0	5925	0
C45	0	6389	0	5083	0	4523	0	4456	0
C90	0	7580	0	6228	0	5748	0	5925	0

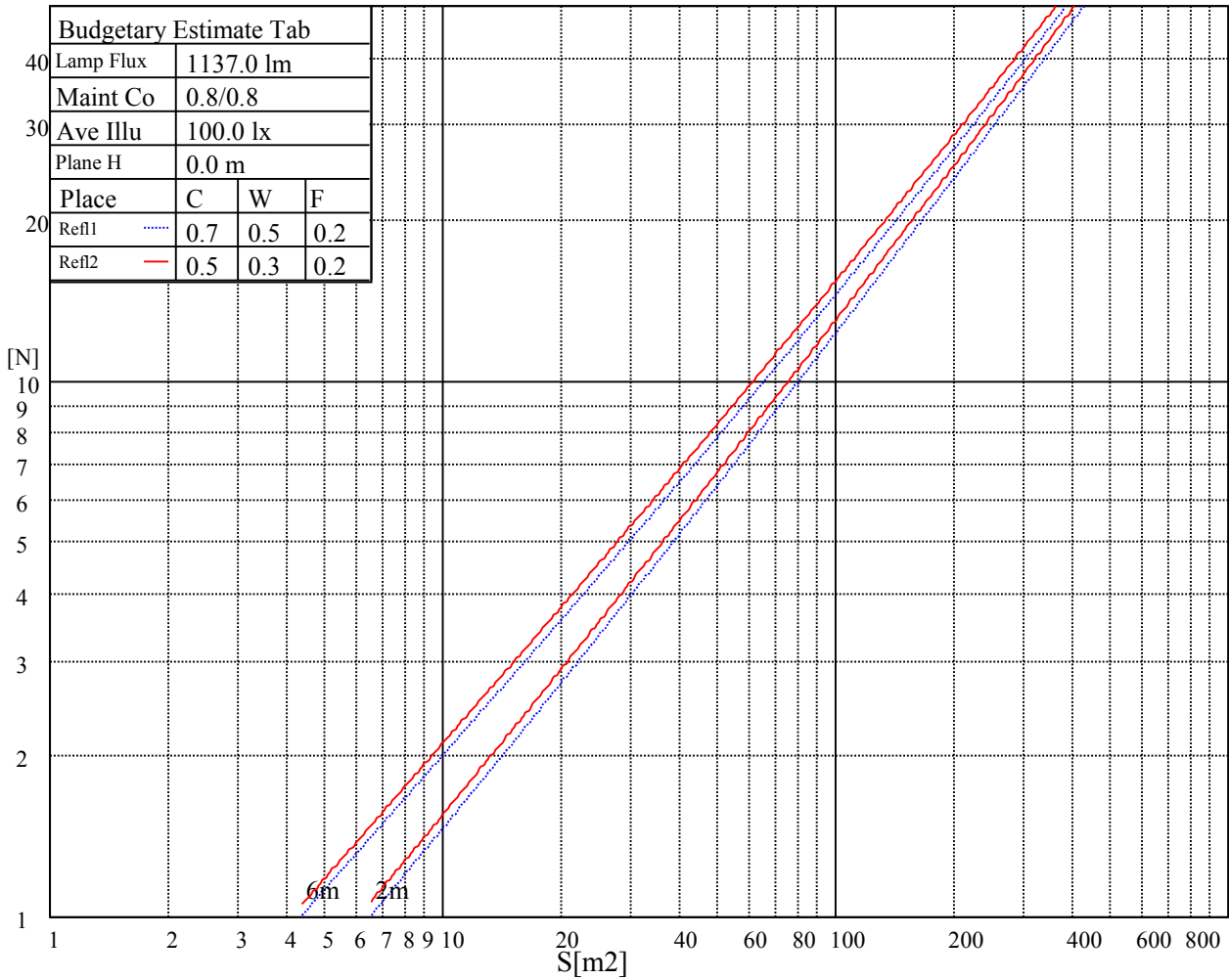
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
30104	30104	30104	37211	37211	37211	95387	95387	95387

Glare Table

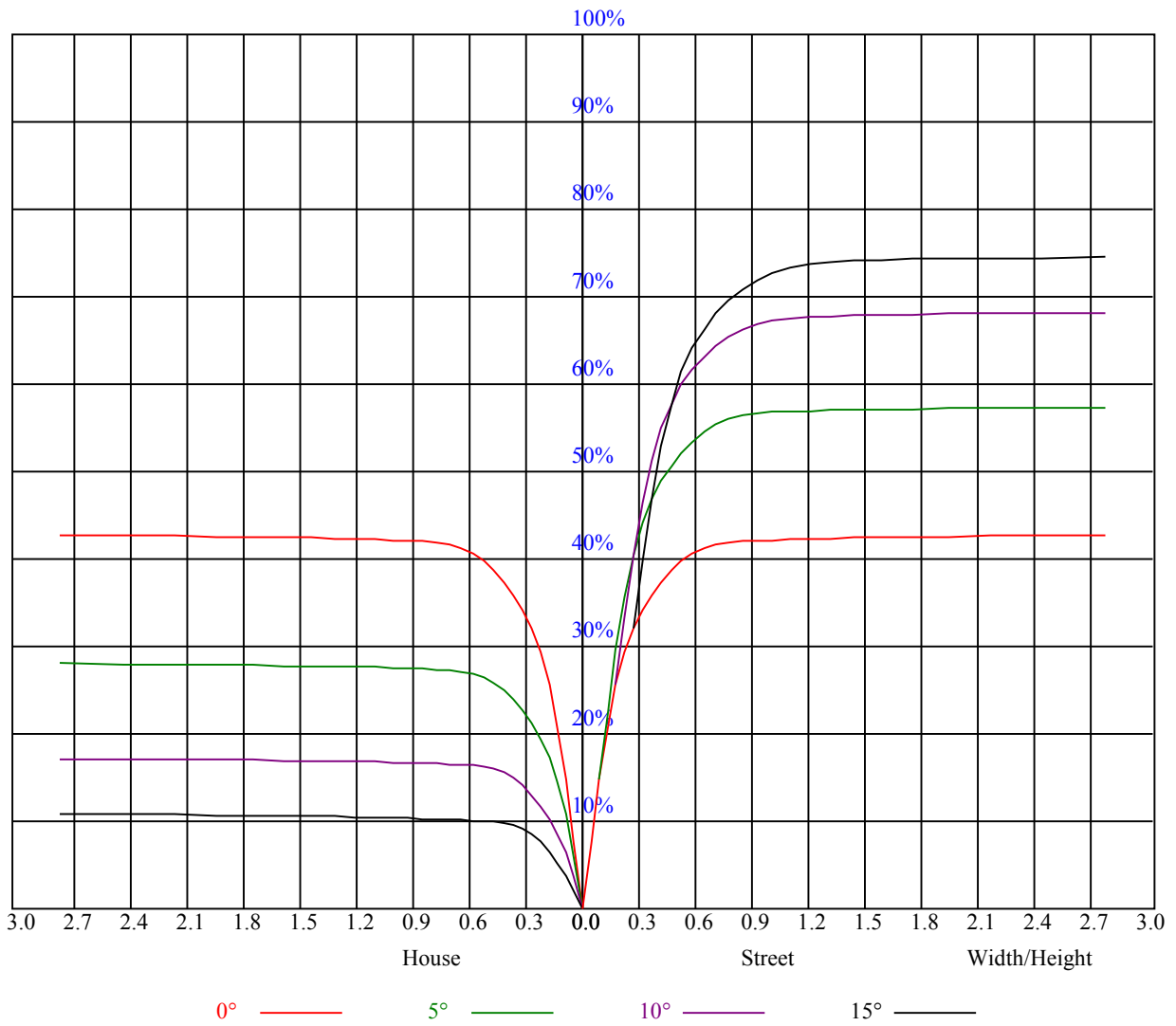
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.96	0.94	0.93	0.94	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.91	0.89	0.86	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.82	0.81	0.80	0.79
3	0.87	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.77	0.76
4	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.72	0.71
6	0.77	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.70	0.67	0.65	0.64
9	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.63
10	0.68	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61



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	5149.98	5029.95	4647.31	4033.43	3301.18	2543.06	1874.12	1309.79	930.45
45.0	5154.93	5120.80	4862.58	4292.75	3566.55	2784.20	2060.76	1477.16	1033.41
90.0	5219.35	5254.03	5064.64	4584.00	3810.45	2980.75	2211.07	1544.88	1095.73
135.0	5149.98	5240.82	5073.45	4614.83	3918.91	3073.80	2321.73	1617.56	1124.25
180.0	5149.98	4989.76	4566.93	3885.88	3158.04	2337.69	1690.78	1097.88	840.55
225.0	5154.93	4902.22	4392.40	3651.89	2875.05	2096.55	1505.79	1013.86	728.12
270.0	5219.35	4903.32	4358.82	3583.07	2790.81	2063.51	1460.10	982.76	694.26
315.0	5149.98	4817.99	4214.57	3486.17	2620.68	1964.96	1378.06	954.02	687.49
360.0	5149.98	5029.95	4647.31	4033.43	3301.18	2543.06	1874.12	1309.79	930.45
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	666.73	544.51	481.74	429.44	396.96	376.59	345.20	281.34	194.84
45.0	706.92	544.51	467.98	426.14	400.81	380.44	358.97	297.30	212.74
90.0	733.57	539.17	446.23	396.63	363.21	344.54	327.09	271.98	206.41
135.0	780.15	561.58	473.49	421.18	389.80	366.13	356.77	307.21	237.51
180.0	615.53	526.67	465.01	421.02	394.59	374.99	333.81	264.16	179.54
225.0	560.42	485.05	436.98	403.34	384.18	369.21	321.86	240.05	161.21
270.0	547.26	462.47	412.92	373.83	347.96	328.69	280.79	206.57	131.75
315.0	546.93	478.22	426.03	394.70	375.04	352.09	294.50	217.69	134.89
360.0	666.73	544.51	481.74	429.44	396.96	376.59	345.20	281.34	194.84
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	110.17	38.98	15.03	12.77	10.46	8.15	7.38	6.94	6.61
45.0	125.86	58.14	18.55	14.76	12.39	9.47	8.26	7.65	7.16
90.0	130.65	64.25	26.59	18.66	15.64	12.83	11.07	10.41	10.19
135.0	155.42	82.80	31.05	19.49	17.45	14.81	12.66	11.62	10.57
180.0	96.40	38.65	18.33	15.80	12.44	10.02	9.03	8.48	7.93
225.0	77.35	27.47	18.06	15.91	12.50	11.23	10.30	9.58	8.92
270.0	65.35	25.49	17.95	15.31	13.05	12.06	11.51	10.52	9.91
315.0	58.80	20.15	14.70	12.22	9.19	8.20	7.71	7.43	7.38
360.0	110.17	38.98	15.03	12.77	10.46	8.15	7.38	6.94	6.61
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	6.39	6.28	6.17	6.11	6.11	6.06	6.00	5.95	5.84
45.0	6.94	6.88	6.83	6.66	6.77	6.50	6.50	6.22	6.11
90.0	9.69	9.25	8.81	8.37	7.76	7.16	6.77	6.22	5.89
135.0	9.52	8.59	8.09	7.49	6.99	6.44	6.11	5.78	5.62
180.0	7.16	6.83	6.61	6.39	6.17	6.06	6.00	5.89	5.78
225.0	8.15	7.54	7.21	6.72	6.44	6.17	6.00	5.84	5.73
270.0	9.14	8.59	7.82	7.38	6.77	6.55	6.11	6.00	5.78
315.0	7.27	7.32	6.94	6.77	6.50	6.33	6.06	6.00	5.78
360.0	6.39	6.28	6.17	6.11	6.11	6.06	6.00	5.95	5.84
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	5.73	5.62	5.45	5.34	5.23	5.07	5.01	4.90	4.68
45.0	5.78	5.62	5.40	5.29	5.18	5.07	4.96	4.84	4.68
90.0	5.62	5.51	5.40	5.34	5.23	5.12	4.96	4.73	4.51
135.0	5.51	5.40	5.29	5.18	5.01	4.90	4.79	4.62	4.51
180.0	5.62	5.45	5.23	5.07	4.90	4.79	4.73	4.68	4.62
225.0	5.62	5.51	5.40	5.29	5.18	5.07	4.96	4.96	4.57
270.0	5.73	5.67	5.62	5.51	5.34	5.18	5.01	5.01	4.35
315.0	5.67	5.56	5.40	5.34	5.23	5.12	5.18	5.23	4.35
360.0	5.73	5.62	5.45	5.34	5.23	5.07	5.01	4.90	4.68

Intensity data(cd)

C/γ(°)	90.0
0.0	4.40
45.0	4.46
90.0	4.40
135.0	4.40
180.0	4.57
225.0	4.51
270.0	4.35
315.0	4.24
360.0	4.40