



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

Nata

LumCAT: 3-2442-A
Luminaire: 92.70.153.00
Report No: NATA0100
Test No: GC2019111415
LampCAT: PHILIPS SLM92757 TWL152024
Lamp flux(lm): 1410.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C
Voltage(V): 33.8800
Current(A): 0.4270
Power (W): 14.4600
PF: 1.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 1168.99
Efficiency(%): 82.91%
Lumens(lm)/Power(W): 80.84
Central intensity(cd): 2141.578
Maximum intensity(cd): 2141.578
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=38.9
[C90/270]Total=38.9
Field angle(10%Imax): [C0/180]Total=75.0
[C90/270]Total=75.0
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.65 C90_270=0.65
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.91%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.239%

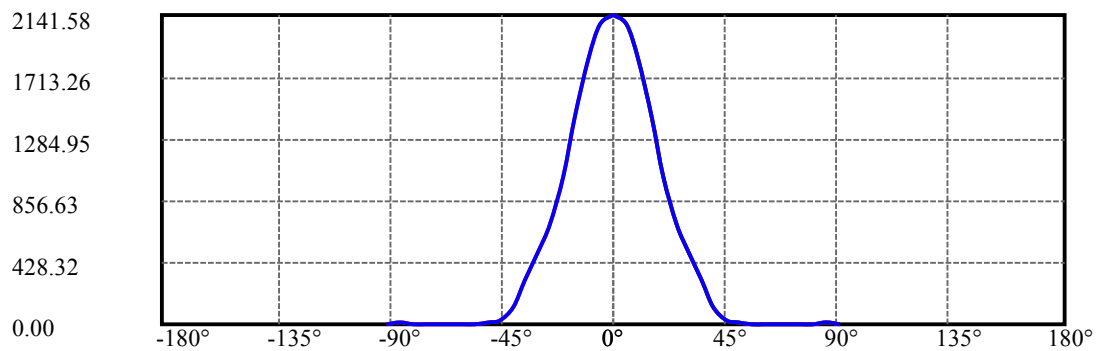
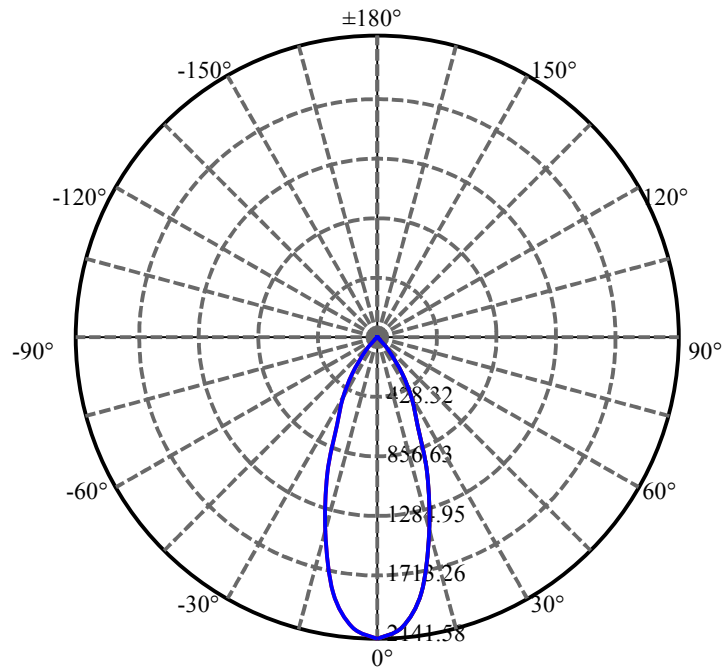
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2141.578	0.000	0	.000%	.000%
5.0	2073.164	50.386	50.386	3.573%	4.310%
10.0	1840.641	140.009	190.395	9.930%	16.287%
15.0	1440.984	194.664	385.059	13.806%	32.939%
20.0	1025.156	203.245	588.304	14.415%	50.326%
25.0	685.062	179.370	767.674	12.721%	65.670%
30.0	501.504	150.161	917.835	10.650%	78.515%
35.0	310.809	119.619	1037.454	8.484%	88.748%
40.0	117.520	71.464	1108.917	5.068%	94.861%
45.0	25.931	26.561	1135.478	1.884%	97.133%
50.0	7.741	6.804	1142.282	.483%	97.715%
55.0	6.595	3.117	1145.4	.221%	97.982%
60.0	6.398	3.003	1148.403	.213%	98.239%
65.0	6.335	3.096	1151.499	.220%	98.504%
70.0	6.321	3.205	1154.703	.227%	98.778%
75.0	6.321	3.304	1158.008	.234%	99.060%
80.0	6.384	3.400	1161.407	.241%	99.351%
85.0	8.156	3.951	1165.359	.280%	99.689%
90.0	5.112	3.633	1168.991	.258%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	917.83	65.09%	78.52%
0-40	1108.92	78.65%	94.86%
0-60	1148.40	81.45%	98.24%
0-90	1165.36	82.65%	99.69%
0-120	1165.36	82.65%	99.69%
0-180	1168.99	82.91%	100.00%
60-90	19.96	1.42%	1.71%
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%
0-30.73	935.19	66.33%	80.00%

ZONAL LUMEN SUMMARY

0-10	190.40
10-20	397.91
20-30	329.53
30-40	191.08
40-50	33.37
50-60	6.12
60-70	6.30
70-80	6.70
80-90	3.95
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: —————

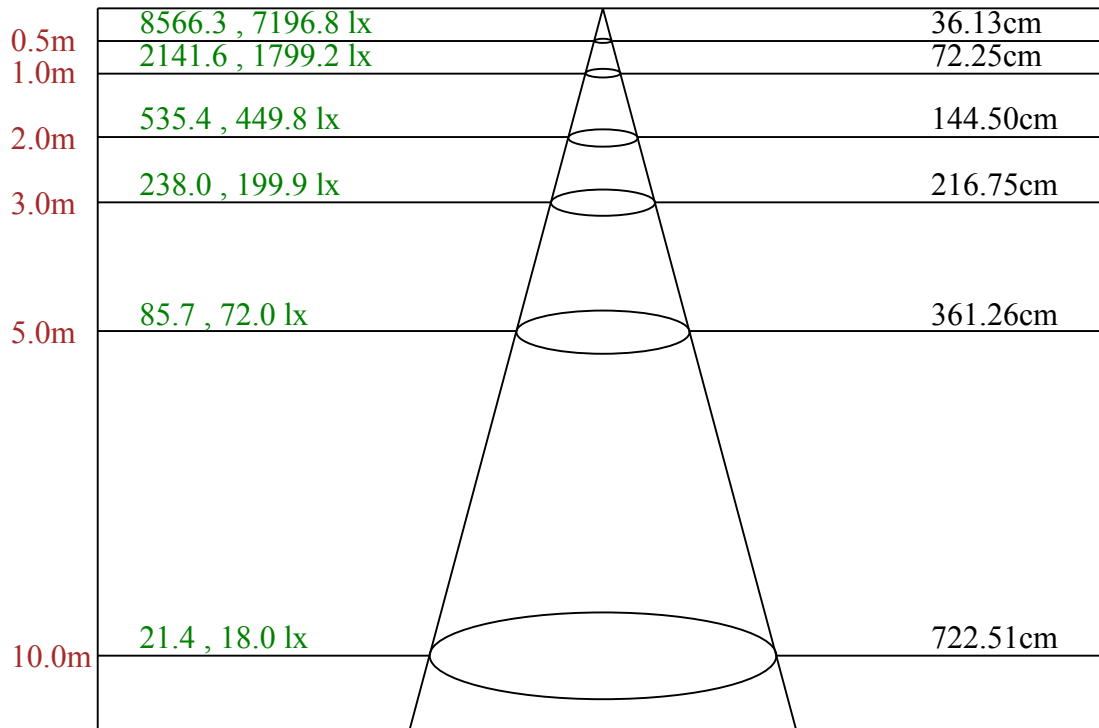
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.5 Right:37.5

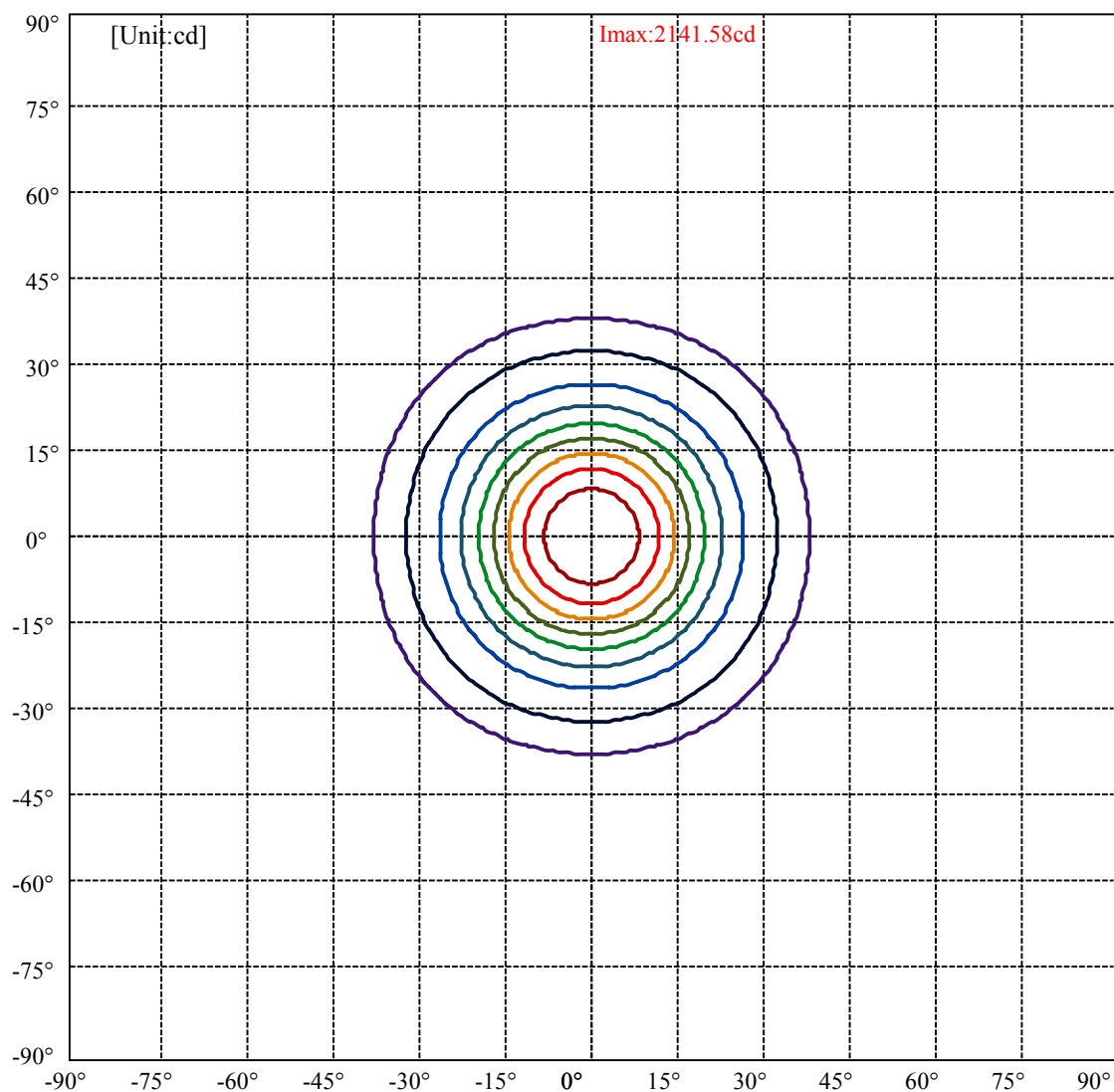
:C90/270Left:37.5 Right:37.5

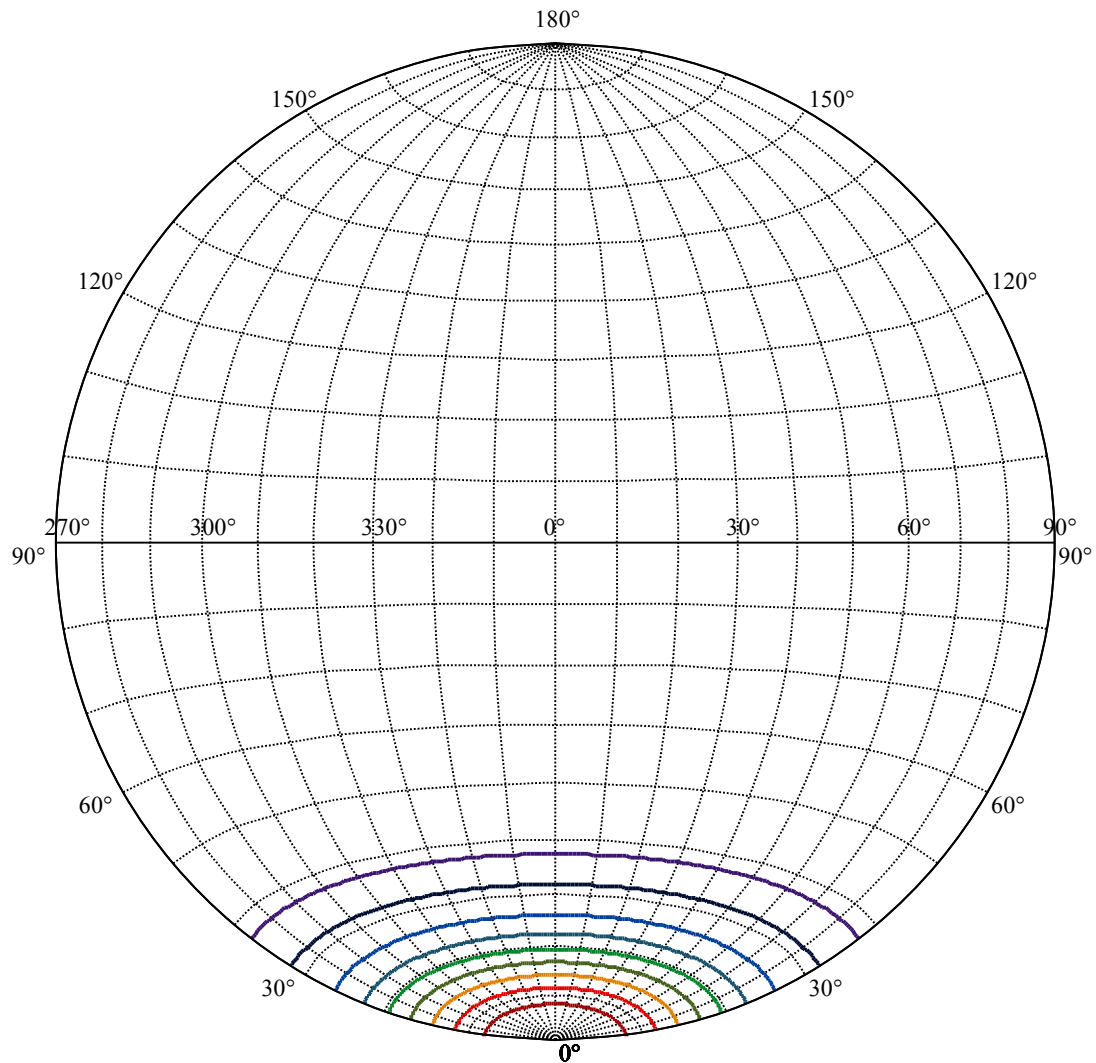
Beam Angle(50%Imax):C0/180Left:19.5 Right:19.5

:C90/270Left:19.5 Right:19.5



Max , Ave Beam angle of C0 plane 39.73





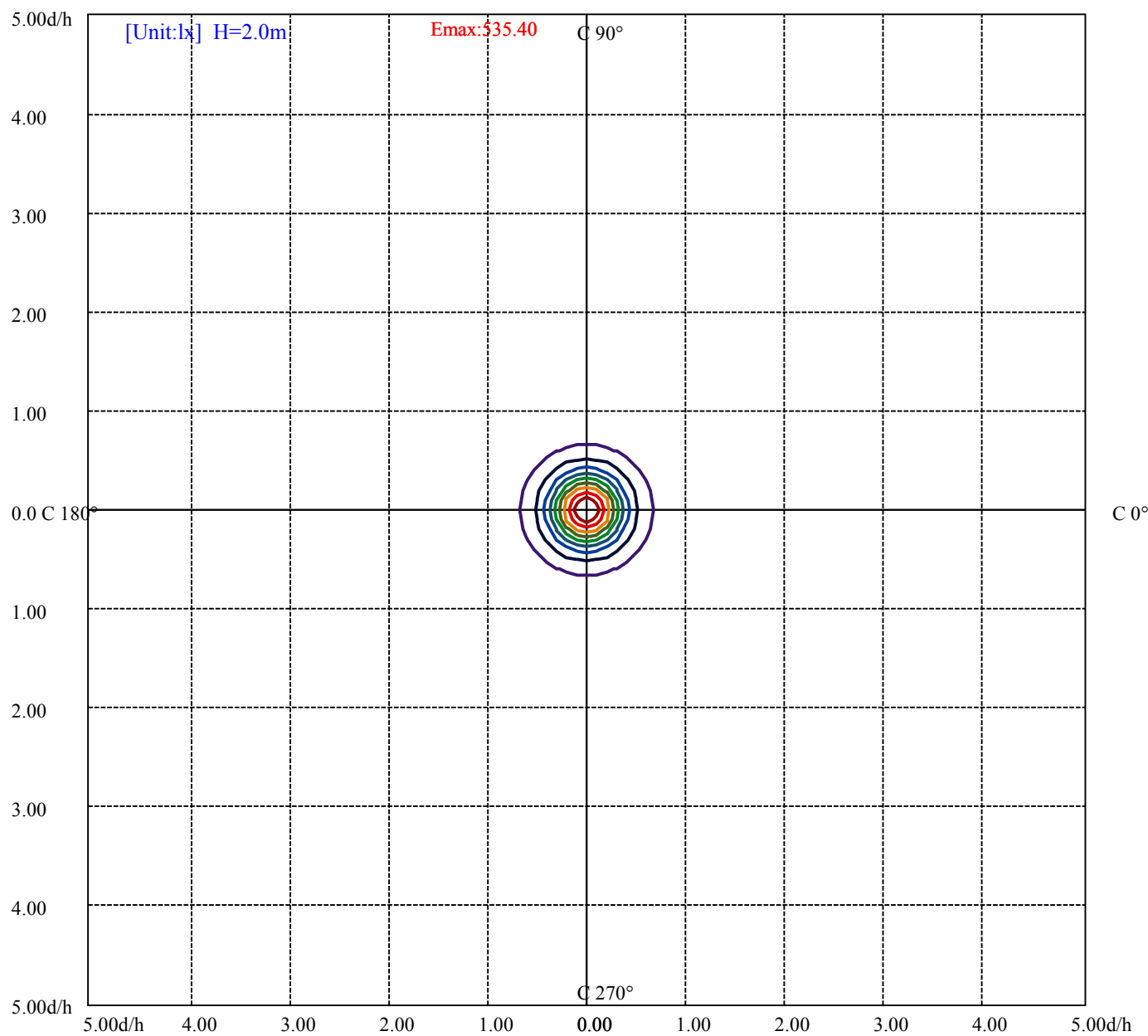
House

[Unit:cd]

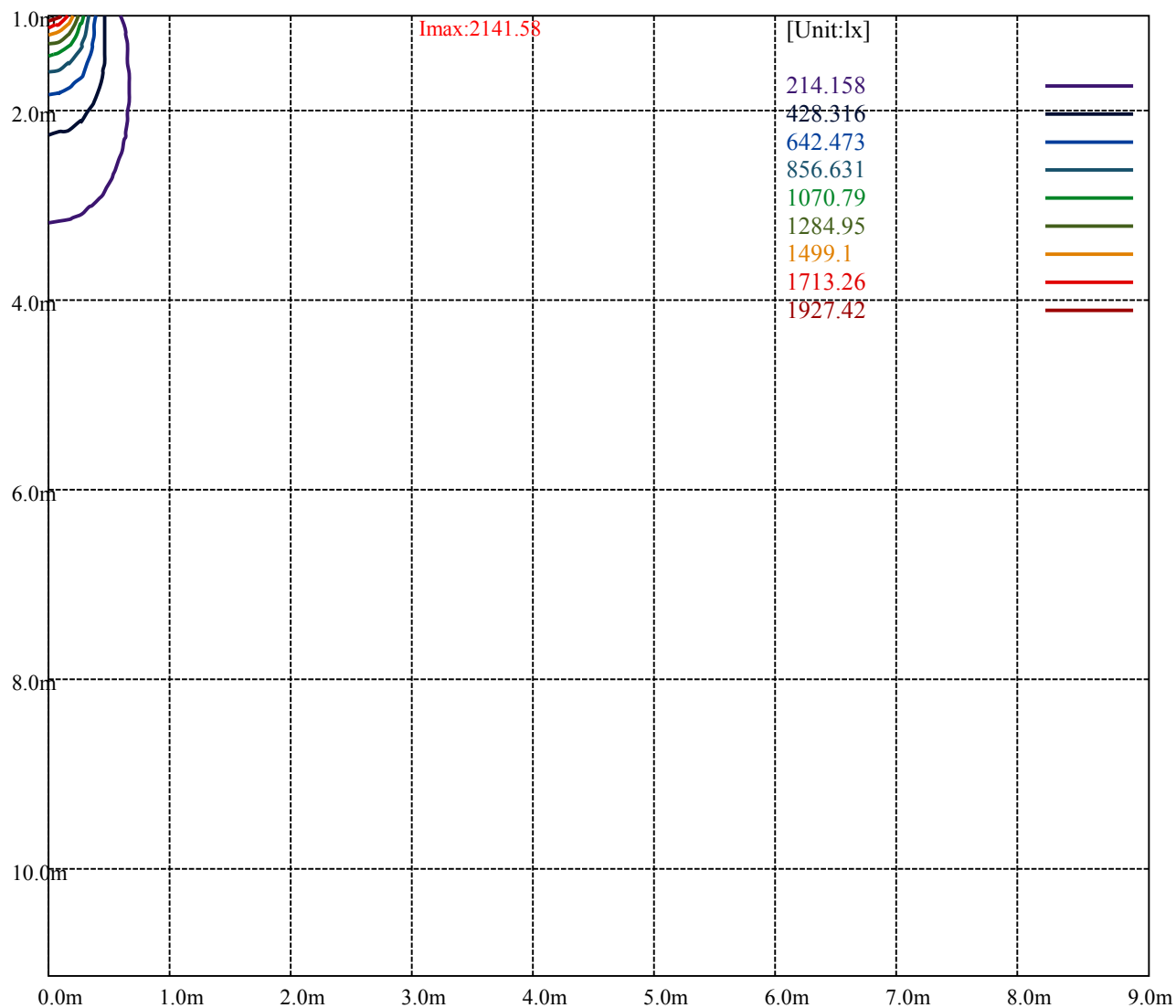
Road

Imax:2141.58

(10%Imax)	214.158	
(20%Imax)	428.316	
(30%Imax)	642.473	
(40%Imax)	856.631	
(50%Imax)	1070.79	
(60%Imax)	1284.95	
(70%Imax)	1499.1	
(80%Imax)	1713.26	
(90%Imax)	1927.42	



(10%E _{max}) 53.5395	—
(20%E _{max}) 107.0788	—
(30%E _{max}) 160.6183	—
(40%E _{max}) 214.1575	—
(50%E _{max}) 267.6975	—
(60%E _{max}) 321.2375	—
(70%E _{max}) 374.775	—
(80%E _{max}) 428.315	—
(90%E _{max}) 481.855	—



Luminance Table

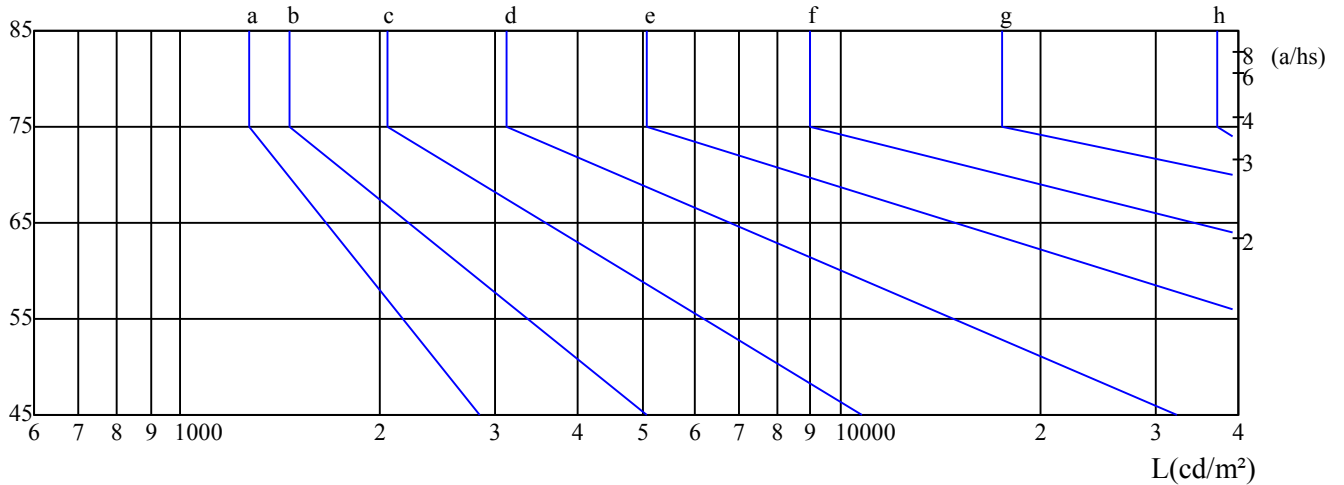
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

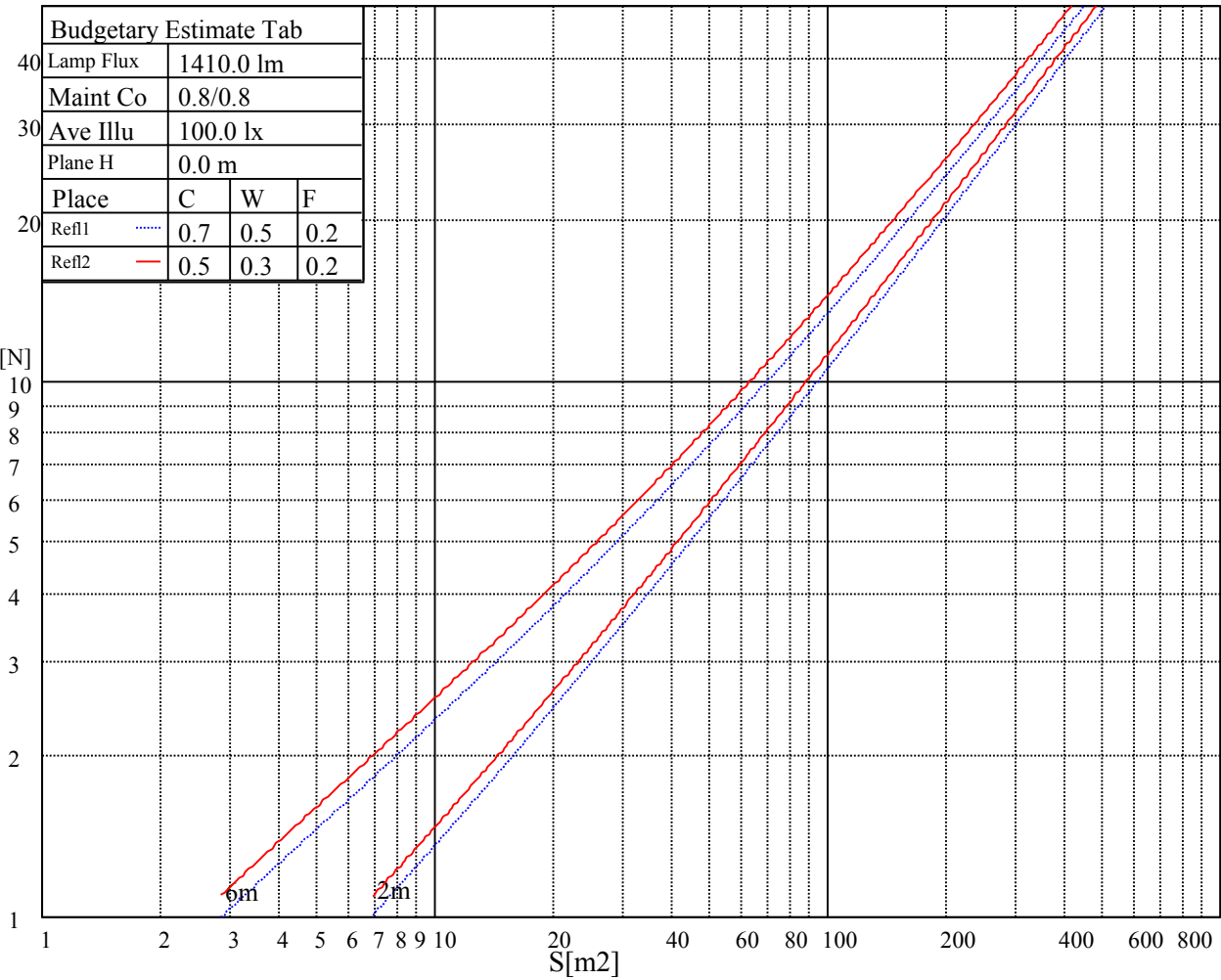
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

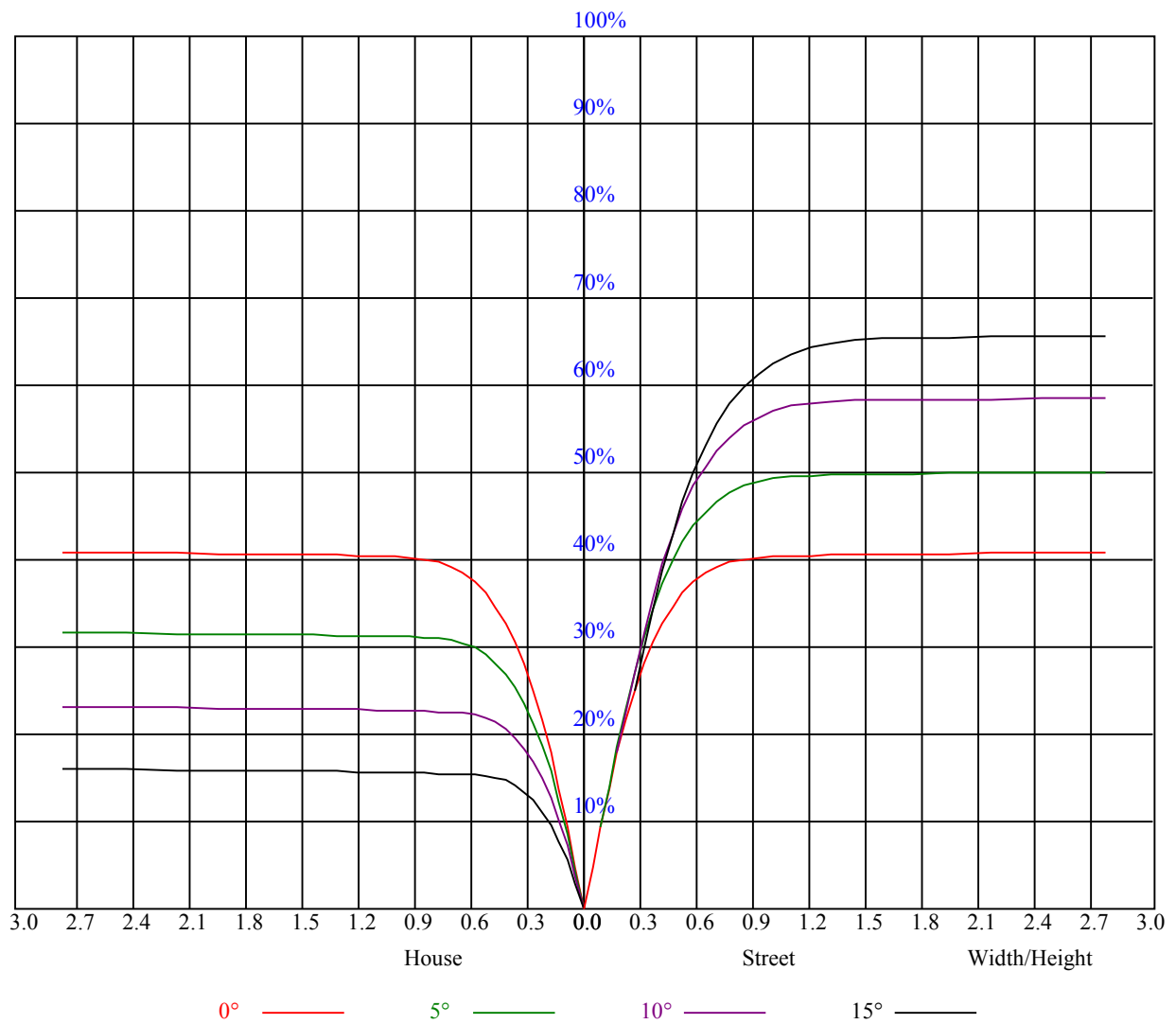
C0 ———

C45 ———

C90 ———



RHOC	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	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.92	0.90	0.88	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.86	0.83	0.80	0.85	0.82	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.77	0.76	0.74	0.73
3	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
4	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.67	0.70	0.68	0.66	0.65
5	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
6	0.68	0.64	0.60	0.68	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
7	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55
8	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.59	0.55	0.53	0.52
9	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.50
10	0.56	0.52	0.49	0.56	0.51	0.49	0.55	0.51	0.48	0.54	0.51	0.48	0.54	0.51	0.48	0.47



Intensity data(cd)

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C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2139.75	2061.56	1815.19	1430.44	1003.50	670.50	500.63	302.63	104.51
45.0	2145.38	2038.50	1806.75	1380.94	945.00	637.31	479.25	292.50	87.81
90.0	2138.06	2018.25	1716.75	1248.75	888.58	604.58	455.23	239.79	73.29
135.0	2143.13	2079.00	1850.63	1451.81	1041.19	687.94	503.44	334.13	120.09
180.0	2139.75	2088.56	1851.75	1458.56	1037.64	684.73	501.75	296.89	123.75
225.0	2145.38	2101.50	1914.19	1542.38	1101.77	736.31	528.36	342.28	149.01
270.0	2138.06	2118.38	1949.63	1600.88	1171.69	786.94	552.94	376.88	172.97
315.0	2143.13	2079.56	1820.25	1414.13	1011.88	672.19	490.44	301.39	108.73
360.0	2139.75	2061.56	1815.19	1430.44	1003.50	670.50	500.63	302.63	104.51
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	22.44	7.37	6.53	6.36	6.24	6.19	6.19	6.19	6.24
45.0	19.69	7.14	6.53	6.41	6.30	6.30	6.30	6.36	7.03
90.0	16.14	7.03	6.58	6.47	6.53	6.47	6.53	6.75	10.07
135.0	25.54	8.21	6.64	6.47	6.41	6.36	6.36	6.41	12.21
180.0	26.55	7.59	6.53	6.30	6.19	6.19	6.13	6.08	5.96
225.0	33.53	8.04	6.53	6.30	6.19	6.19	6.19	6.19	6.30
270.0	41.51	9.06	6.81	6.47	6.41	6.53	6.53	6.58	8.44
315.0	22.05	7.48	6.64	6.41	6.41	6.36	6.36	6.53	9.00
360.0	22.44	7.37	6.53	6.36	6.24	6.19	6.19	6.19	6.24
C/ γ (°)	90.0								
0.0	5.12								
45.0	5.12								
90.0	5.12								
135.0	5.12								
180.0	5.06								
225.0	5.12								
270.0	5.12								
315.0	5.12								
360.0	5.12								