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## NATA

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LumCAT: 6495-EG

Luminaire:

Report No: NATA0100

Voltage(V): 26.1000

Test No: GC2019022607

Current(A): 0.9000

LampCAT: Philips DLM Flex LES64

Power (W): 23.4900

Lamp flux(lm): 1947.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 144

Width(mm): 144

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1772.54

Efficiency(%): 91.04%

Lumens(lm)/Power(W): 75.95

Central intensity(cd): 2197.125

Maximum intensity(cd): 2197.125

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=49.8

[C90/270]Total=49.8

Field angle(10%Imax): [C0/180]Total=88.8

[C90/270]Total=88.8

Maximum s/h(1/2): C0\_180=0.75 C90\_270=0.75

Maximum s/h(1/4): C0\_180=0.84 C90\_270=0.84

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.63%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.012%

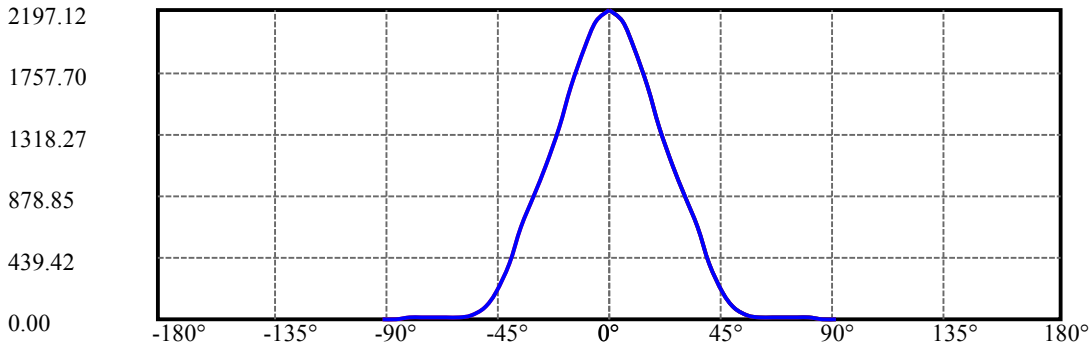
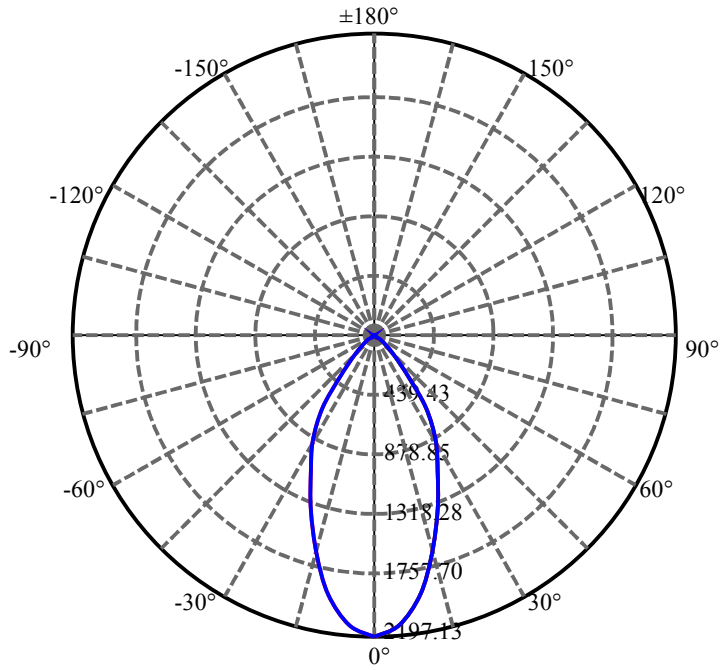
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2197.125	13.139	13.139	.675%	.741%
5.0	2119.078	101.235	114.375	5.200%	6.453%
10.0	1920.023	182.754	297.128	9.386%	16.763%
15.0	1645.945	233.508	530.636	11.993%	29.936%
20.0	1361.320	255.212	785.848	13.108%	44.335%
25.0	1094.259	253.488	1039.336	13.019%	58.635%
30.0	886.380	242.929	1282.266	12.477%	72.341%
35.0	648.232	203.803	1486.069	10.468%	83.838%
40.0	393.075	138.494	1624.563	7.113%	91.652%
45.0	196.207	76.048	1700.612	3.906%	95.942%
50.0	75.241	31.594	1732.205	1.623%	97.724%
55.0	21.080	9.465	1741.67	.486%	98.258%
60.0	14.442	6.856	1748.526	.352%	98.645%
65.0	11.194	5.561	1754.087	.286%	98.959%
70.0	9.330	4.806	1758.893	.247%	99.230%
75.0	8.044	4.259	1763.152	.219%	99.470%
80.0	7.263	3.921	1767.072	.201%	99.691%
85.0	6.750	3.686	1770.758	.189%	99.899%
90.0	6.504	1.783	1772.541	.092%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1282.27	65.86%	72.34%
0-40	1624.56	83.44%	91.65%
0-60	1748.53	89.81%	98.65%
0-90	1770.76	90.95%	99.90%
0-120	1770.76	90.95%	99.90%
0-180	1772.54	91.04%	100.00%
60-90	29.09	1.49%	1.64%
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%
0-33.33	1418.03	72.83%	80.00%

ZONAL LUMEN SUMMARY

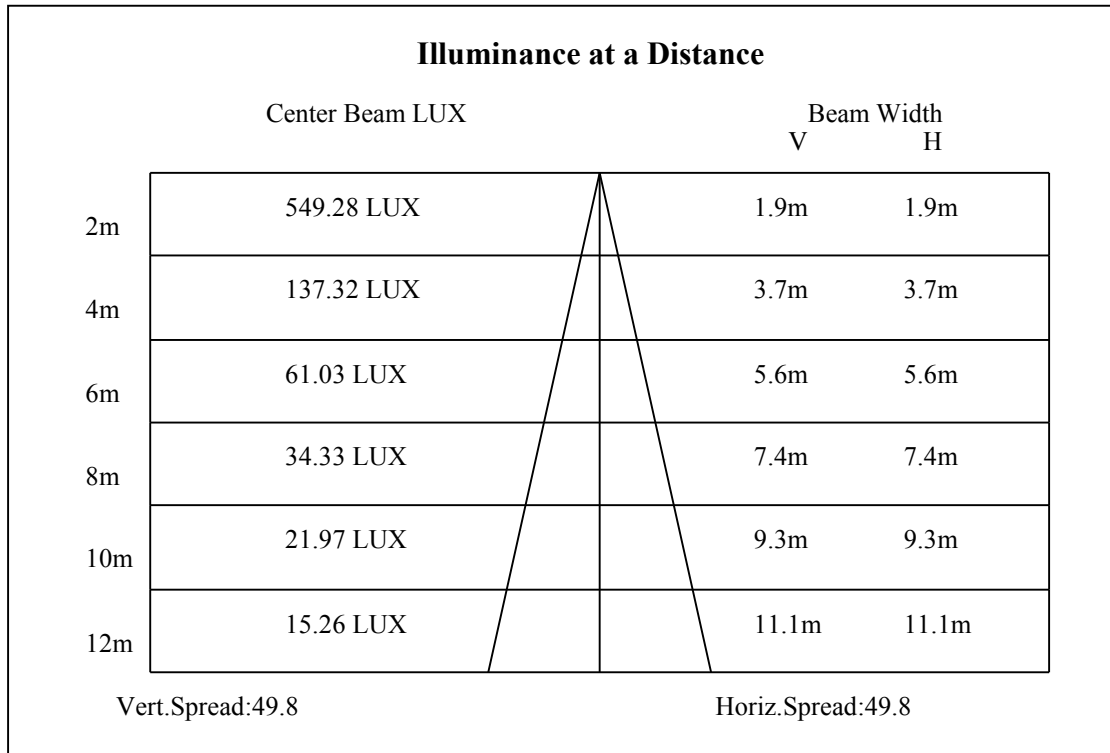
0-10	297.13
10-20	488.72
20-30	496.42
30-40	342.30
40-50	107.64
50-60	16.32
60-70	10.37
70-80	8.18
80-90	3.69
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

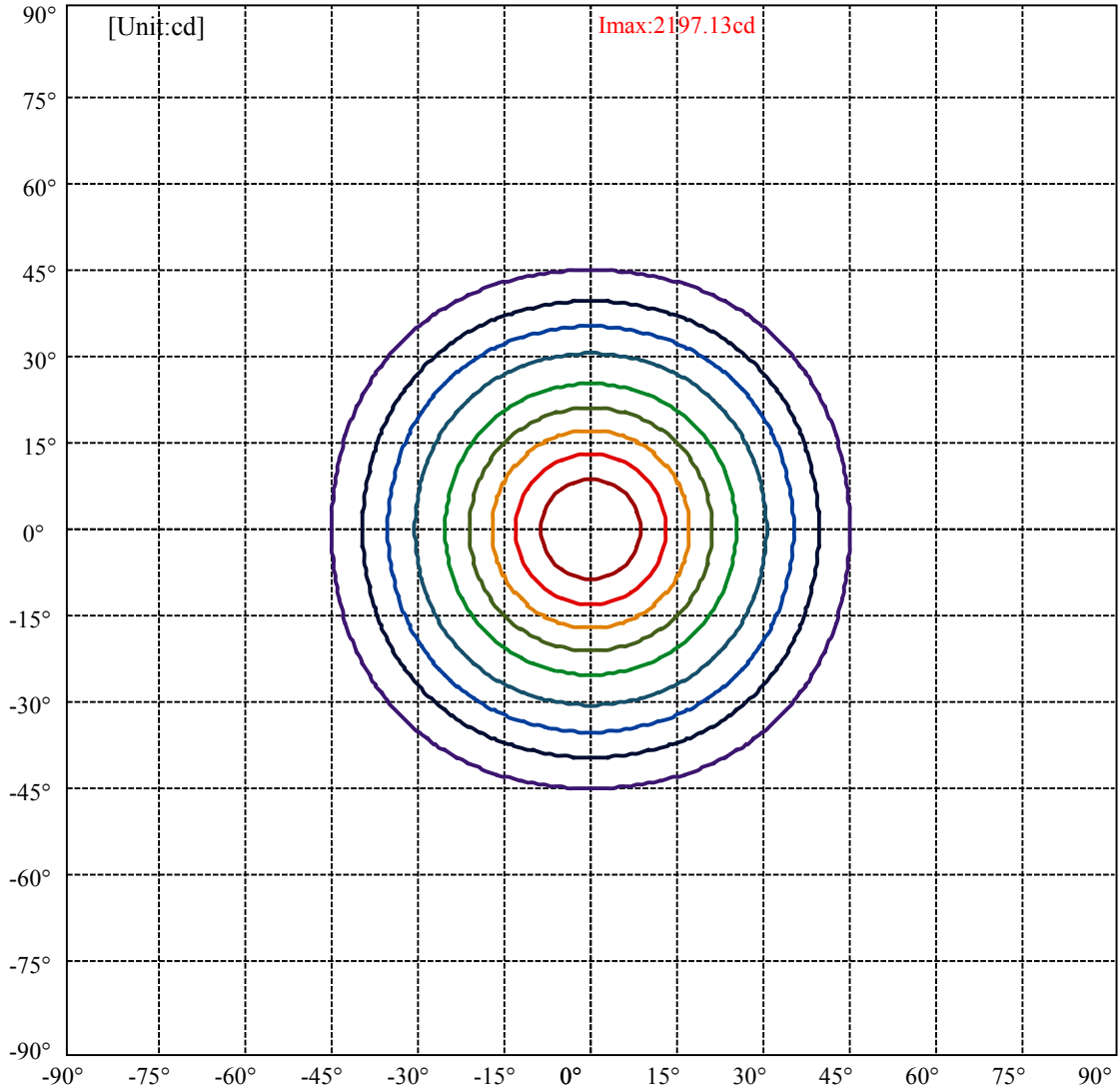


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

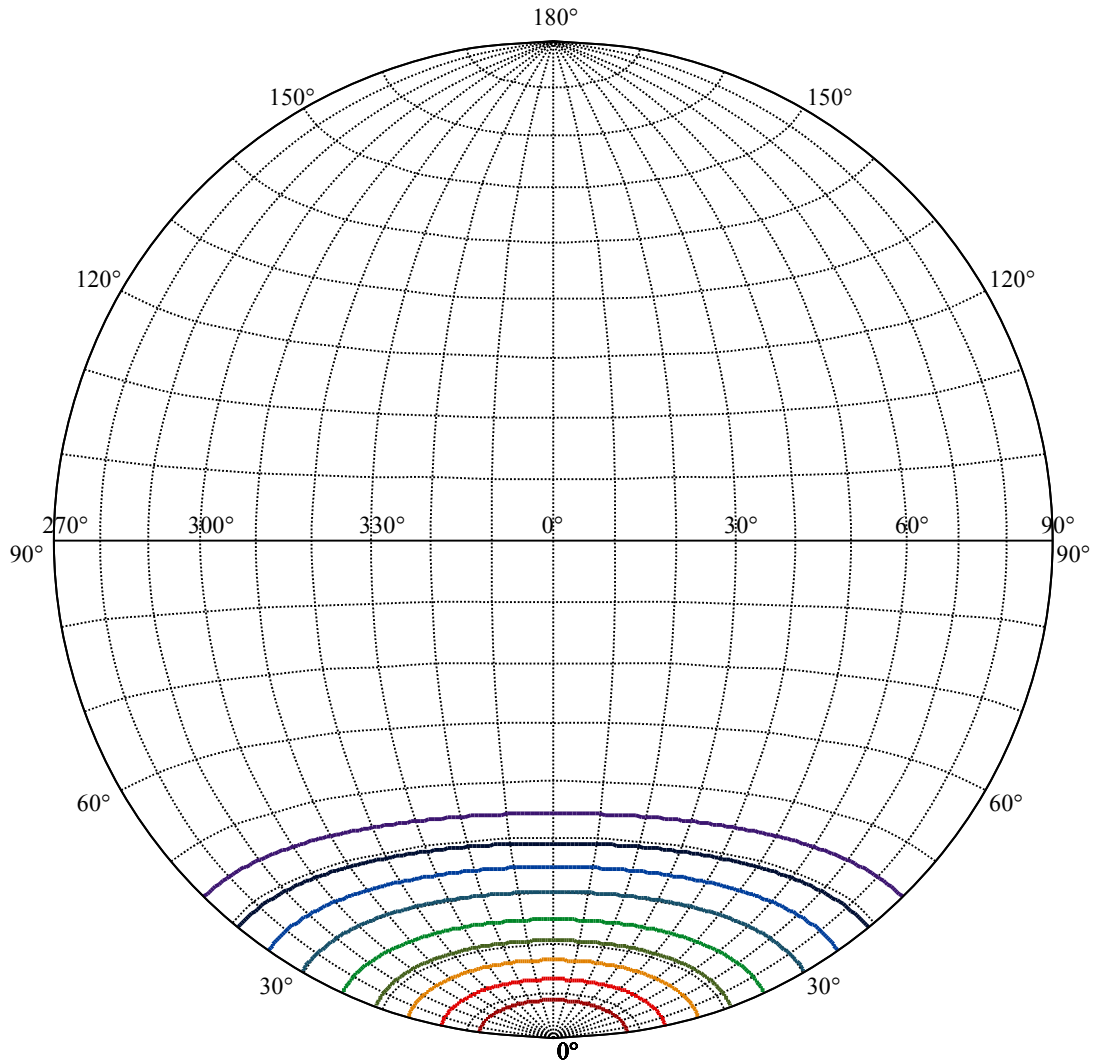
Field angle(10%Imax):C0/180Left:44.4 Right:44.4  
:C90/270Left:44.4 Right:44.4

Beam Angle(50%Imax):C0/180Left:24.9 Right:24.9  
:C90/270Left:24.9 Right:24.9





(10%Imax) 219.712	—
(20%Imax) 439.425	—
(30%Imax) 659.137	—
(40%Imax) 878.85	—
(50%Imax) 1098.56	—
(60%Imax) 1318.27	—
(70%Imax) 1537.99	—
(80%Imax) 1757.7	—
(90%Imax) 1977.41	—



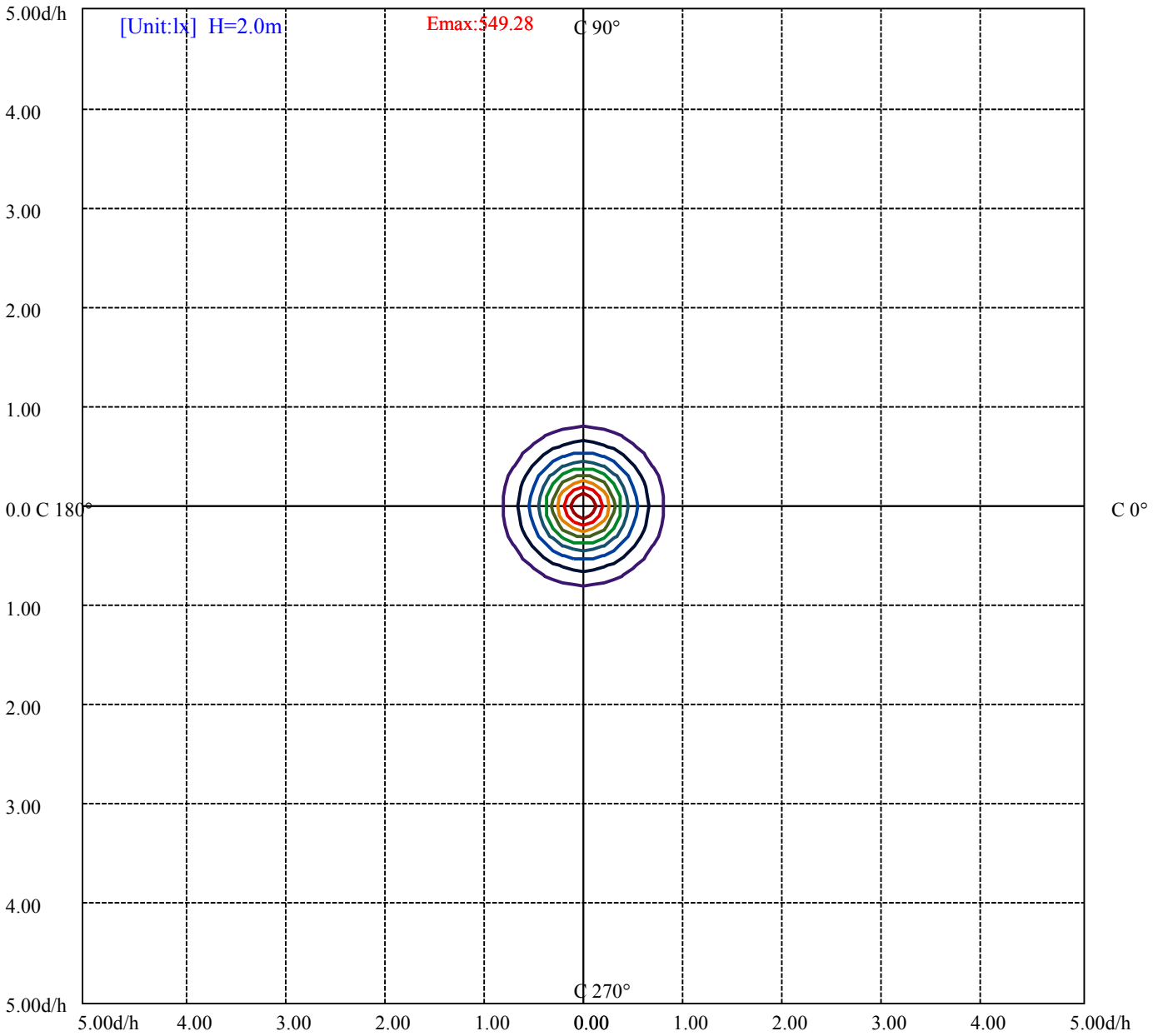
House

[Unit:cd]

Road

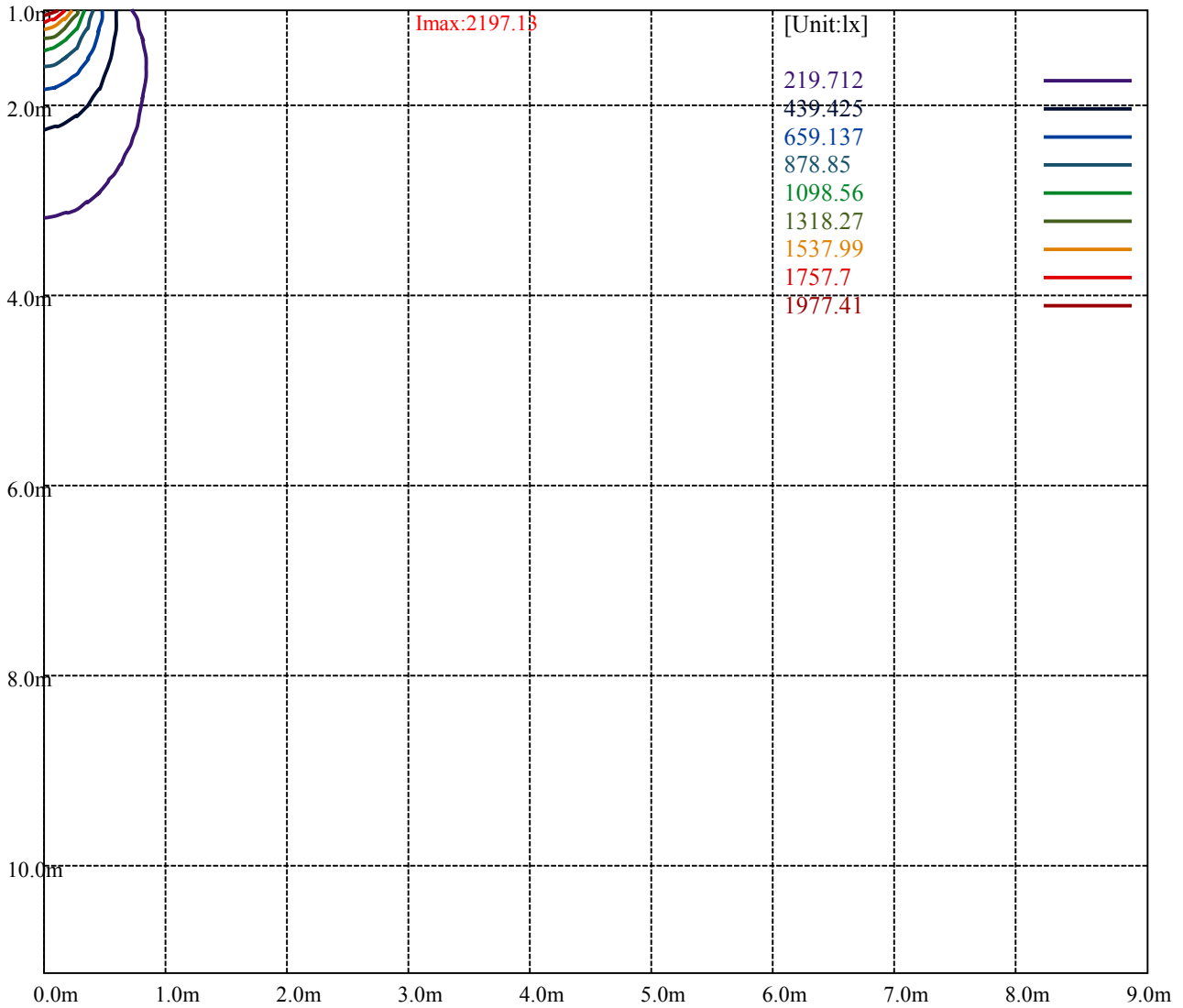
**I<sub>max</sub>:2197.13**

(10%I <sub>max</sub> ) 219.712	—
(20%I <sub>max</sub> ) 439.425	—
(30%I <sub>max</sub> ) 659.137	—
(40%I <sub>max</sub> ) 878.85	—
(50%I <sub>max</sub> ) 1098.56	—
(60%I <sub>max</sub> ) 1318.27	—
(70%I <sub>max</sub> ) 1537.99	—
(80%I <sub>max</sub> ) 1757.7	—
(90%I <sub>max</sub> ) 1977.41	—



(10%Emax) 54.928	—
(20%Emax) 109.856	—
(30%Emax) 164.7843	—
(40%Emax) 219.7122	—
(50%Emax) 274.64	—
(60%Emax) 329.5675	—
(70%Emax) 384.4975	—
(80%Emax) 439.425	—
(90%Emax) 494.3525	—





Luminance Table

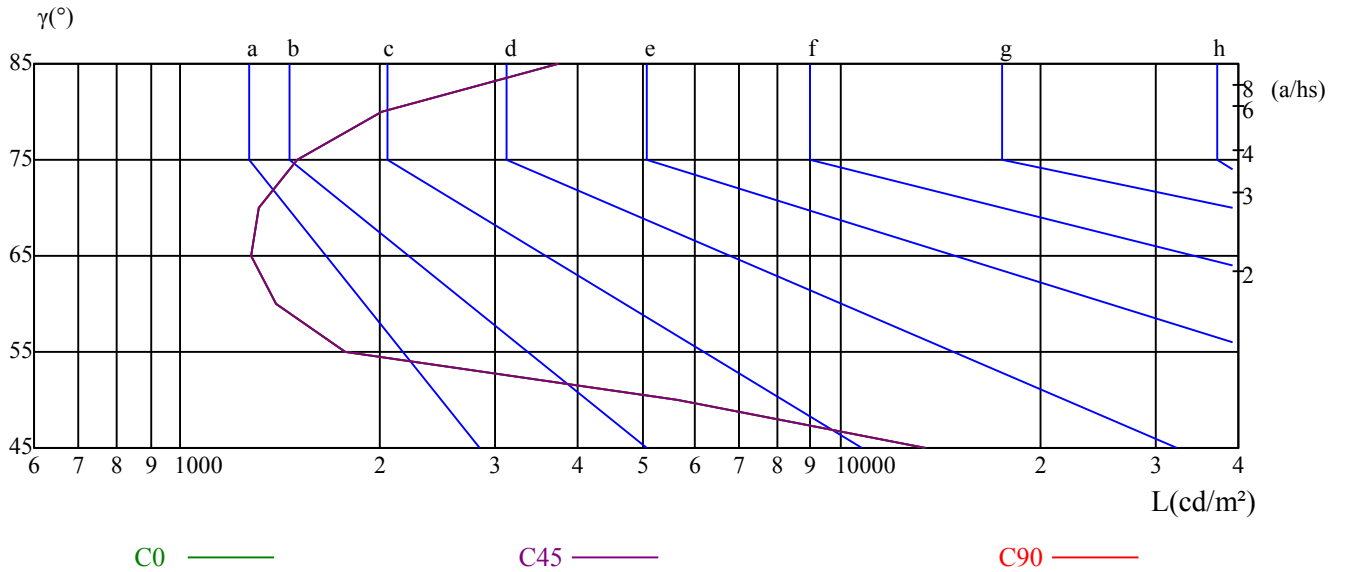
$\gamma$	45	50	55	60	65	70	75	80	85
C0	13382	5645	1772	1393	1277	1316	1499	2017	3735
C45	13382	5645	1772	1393	1277	1316	1499	2017	3735
C90	13382	5645	1772	1393	1277	1316	1499	2017	3735

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1277	1277	1277	1499	1499	1499	3735	3735	3735

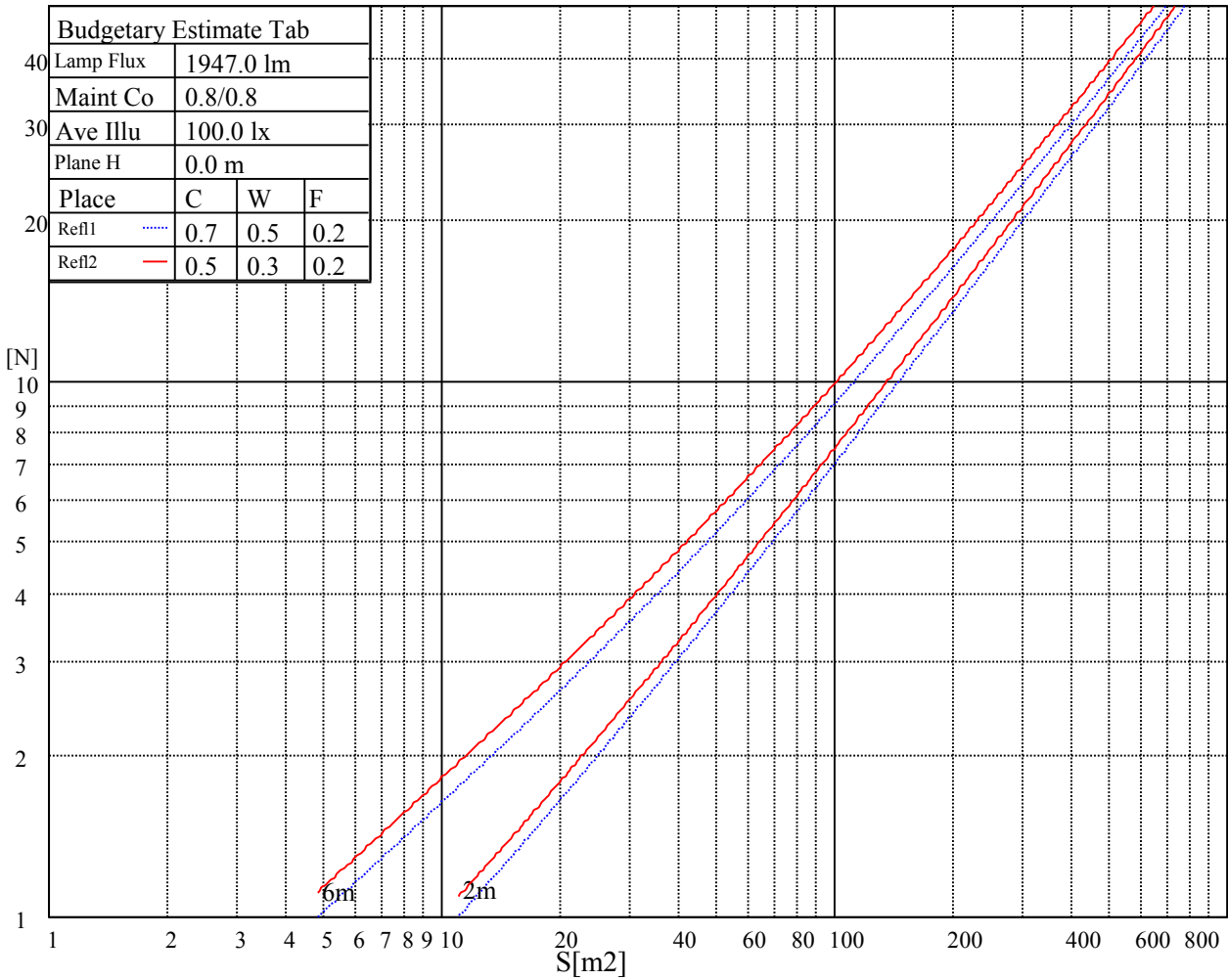
Glare Table

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

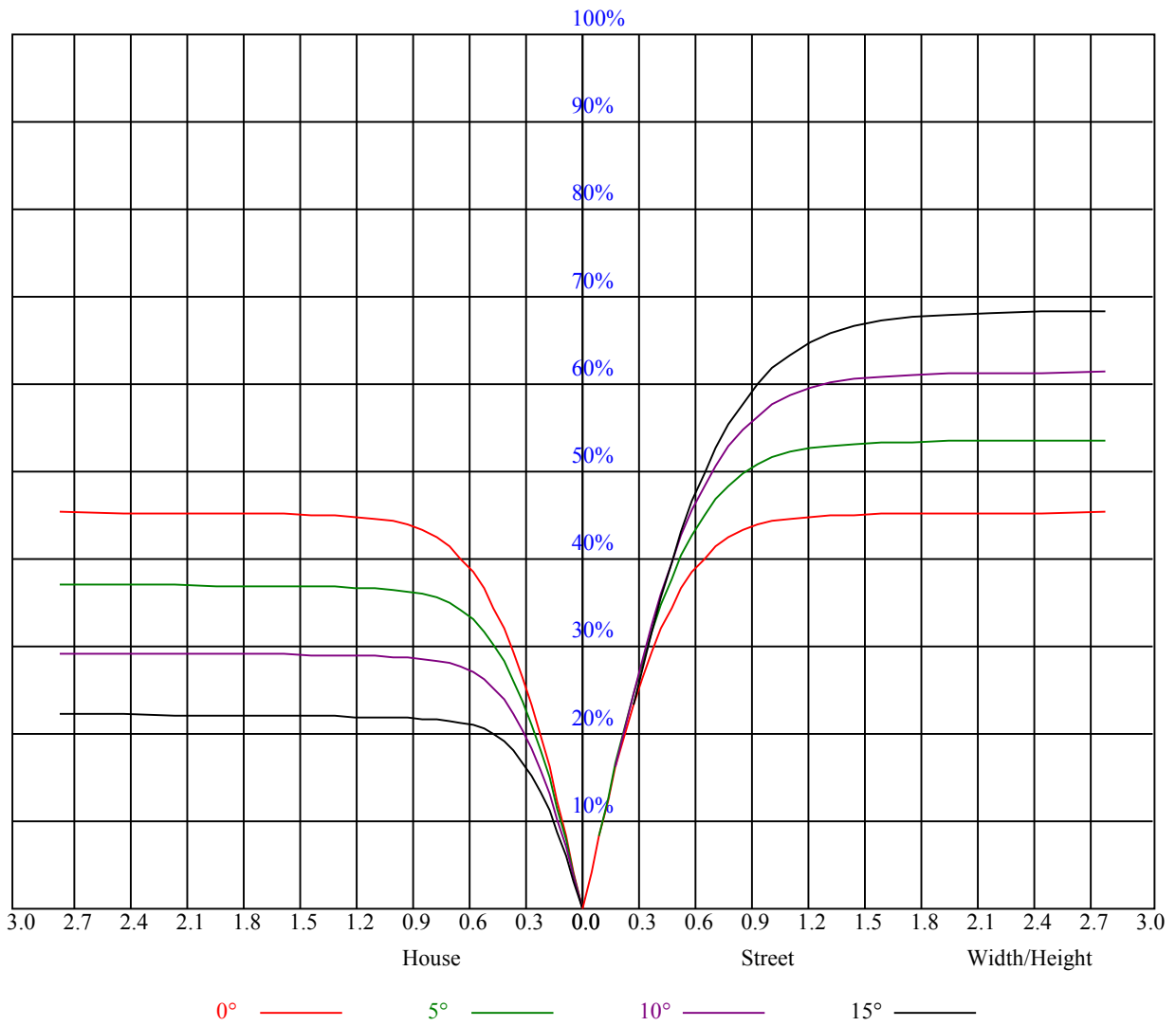
Luminance Limiting Curve



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	2.60	3.63	2.96	3.94	4.26	2.99	4.03	3.36	4.34	4.65
	3H	4.02	4.93	4.40	5.26	5.63	4.50	5.41	4.88	5.74	6.11
	4H	4.90	5.74	5.31	6.09	6.48	5.32	6.16	5.73	6.51	6.90
	6H	6.02	6.79	6.44	7.16	7.56	6.30	7.07	6.72	7.45	7.84
	8H	6.70	7.43	7.14	7.82	8.23	6.90	7.62	7.34	8.02	8.43
	12H	7.93	8.62	8.37	9.01	9.44	8.00	8.69	8.44	9.08	9.51
4H	2H	2.96	3.80	3.36	4.15	4.54	3.29	4.13	3.69	4.48	4.87
	3H	4.71	5.40	5.13	5.81	6.21	5.11	5.79	5.52	6.20	6.61
	4H	5.80	6.41	6.24	6.84	7.28	6.14	6.75	6.57	7.17	7.62
	6H	7.12	7.64	7.59	8.09	8.57	7.33	7.85	7.80	8.30	8.77
	8H	7.95	8.44	8.43	8.89	9.37	8.07	8.56	8.55	9.01	9.49
	12H	9.21	9.63	9.70	10.12	10.60	9.22	9.64	9.71	10.13	10.61
8H	4H	6.23	6.72	6.71	7.17	7.65	6.51	7.00	6.99	7.45	7.93
	6H	7.85	8.24	8.36	8.74	9.23	8.00	8.39	8.51	8.89	9.38
	8H	8.88	9.23	9.42	9.75	10.25	8.95	9.30	9.49	9.82	10.32
	12H	10.41	10.71	10.93	11.21	11.79	10.41	10.71	10.93	11.21	11.79
12H	4H	6.34	6.76	6.83	7.25	7.73	6.61	7.03	7.10	7.52	7.99
	6H	8.37	8.41	8.60	8.89	9.43	8.51	8.56	8.74	9.03	9.57
	8H	9.23	9.53	9.75	10.03	10.61	9.29	9.59	9.81	10.09	10.67
Variation with the observer position at spacings:											
S = 1.0H		3.4/-8.9					3.4/-8.9				
S = 1.5H		5.9/-8.0					5.9/-8.0				
S = 2.0H		7.7/-7.0					7.7/-7.0				
Standard tables:		BK1					BK1				
Uncorrected UGR		-0.9					-0.9				



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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.01	0.98	0.96	0.99	0.96	0.94	0.95	0.93	0.92	0.92	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.79
3	0.88	0.83	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.76	0.80	0.77	0.75	0.74
4	0.82	0.77	0.73	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.70	0.69
5	0.77	0.72	0.68	0.76	0.72	0.68	0.75	0.71	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.65
6	0.73	0.68	0.64	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.61
7	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.57
8	0.65	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
9	0.62	0.57	0.53	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.51
10	0.59	0.54	0.50	0.58	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.49



NATA 6495-EG

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2200.50	2103.19	1882.69	1621.69	1353.94	1108.13	916.88	707.06	448.31
45.0	2199.94	2092.50	1875.94	1608.19	1323.56	1086.19	887.63	649.13	390.94
90.0	2193.75	2078.44	1868.63	1579.50	1290.38	1036.52	823.78	567.68	327.43
135.0	2194.31	2149.31	1980.56	1699.88	1400.63	1118.81	891.56	633.38	401.63
180.0	2200.50	2149.31	1955.25	1666.13	1377.56	1083.09	845.10	612.39	352.35
225.0	2199.94	2151.00	1979.44	1698.75	1402.31	1109.53	902.42	652.44	374.18
270.0	2193.75	2143.69	1974.94	1701.56	1415.25	1134.56	927.00	698.63	443.81
315.0	2194.31	2085.19	1842.75	1591.88	1326.94	1077.24	896.68	665.16	405.96
360.0	2200.50	2103.19	1882.69	1621.69	1353.94	1108.13	916.88	707.06	448.31

C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	286.88	97.20	31.95	20.87	15.36	12.04	9.23	7.59	6.69
45.0	178.93	78.13	24.13	17.44	12.88	10.13	8.44	7.37	6.69
90.0	136.80	54.84	15.75	11.81	9.56	8.44	7.76	7.20	6.75
135.0	160.65	64.41	15.02	10.35	8.78	7.93	7.31	6.98	6.69
180.0	145.69	60.53	13.05	10.18	8.72	7.88	7.20	6.86	6.53
225.0	174.54	70.93	16.54	11.76	9.62	8.44	7.71	7.14	6.81
270.0	295.31	92.48	26.66	15.24	11.42	9.45	8.27	7.59	7.03
315.0	190.86	83.42	25.54	17.89	13.22	10.35	8.44	7.37	6.81
360.0	286.88	97.20	31.95	20.87	15.36	12.04	9.23	7.59	6.69

C/ $\gamma$ (°)	90.0
0.0	6.47
45.0	6.47
90.0	6.53
135.0	6.41
180.0	6.36
225.0	6.53
270.0	6.64
315.0	6.64
360.0	6.47