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Nata

LumCAT: 2-1591-A

Luminaire:

Report No: NT2017022305

Voltage(V): 218.8000

Test No: GC2017022305

Current(A): 0.1480

LampCAT: OSRAM PL-CORE-Z6-3000-830

Power (W): 30.8000

Lamp flux(lm): 2590.0

PF: 0.9500

Number of Lamps: 1

Ballast type: AC

Length(mm): 70

Width(mm): 70

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2358.55

Efficiency(%): 91.06%

Lumens(lm)/Power(W): 76.58

Central intensity(cd): 2489.582

Maximum intensity(cd): 2489.582

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=63.7

[C90/270]Total=63.7

Field angle(10%Imax): [C0/180]Total=83.1

[C90/270]Total=83.1

Maximum s/h(1/2): C0_180=0.98 C90_270=0.98

Maximum s/h(1/4): C0_180=0.94 C90_270=0.94

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.55%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.132%

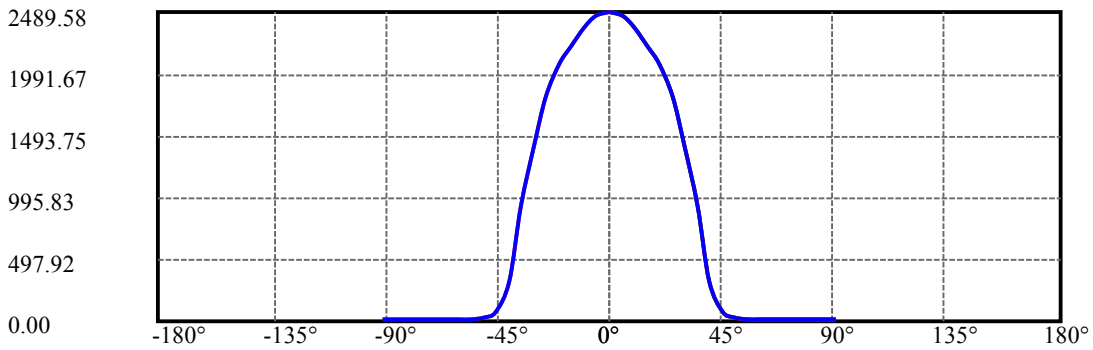
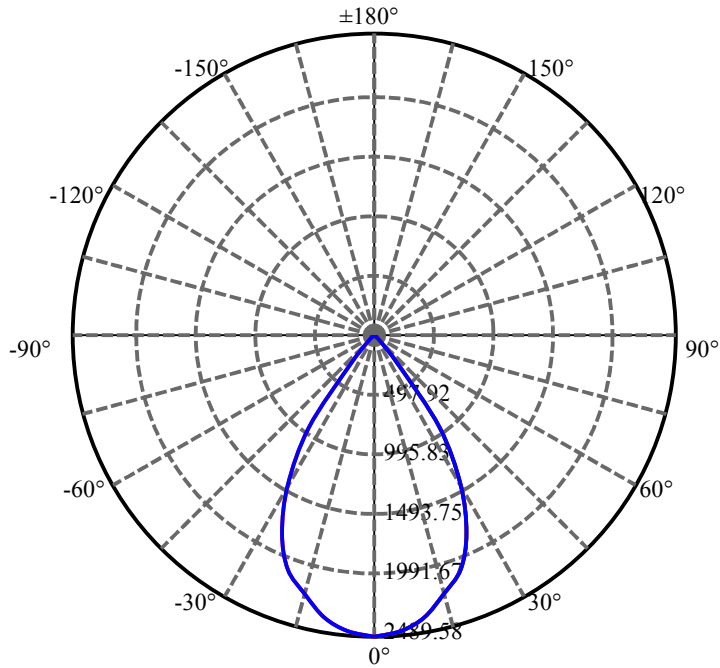
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2489.582	14.888	14.888	.575%	.631%
5.0	2459.094	117.479	132.367	4.536%	5.612%
10.0	2362.264	224.847	357.215	8.681%	15.145%
15.0	2217.878	314.647	671.862	12.149%	28.486%
20.0	2066.817	387.475	1059.336	14.960%	44.915%
25.0	1804.818	418.091	1477.427	16.143%	62.641%
30.0	1426.787	391.038	1868.465	15.098%	79.221%
35.0	934.052	293.665	2162.13	11.338%	91.672%
40.0	327.517	115.396	2277.526	4.455%	96.564%
45.0	73.080	28.325	2305.851	1.094%	97.765%
50.0	23.296	9.782	2315.633	.378%	98.180%
55.0	13.083	5.874	2321.507	.227%	98.429%
60.0	11.390	5.407	2326.914	.209%	98.658%
65.0	10.922	5.426	2332.34	.209%	98.889%
70.0	10.757	5.541	2337.88	.214%	99.123%
75.0	11.816	6.256	2344.137	.242%	99.389%
80.0	12.209	6.590	2350.727	.254%	99.668%
85.0	9.711	5.302	2356.029	.205%	99.893%
90.0	9.215	2.526	2358.555	.098%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1868.46	72.14%	79.22%
0-40	2277.53	87.94%	96.56%
0-60	2326.91	89.84%	98.66%
0-90	2356.03	90.97%	99.89%
0-120	2356.03	90.97%	99.89%
0-180	2358.55	91.06%	100.00%
60-90	34.52	1.33%	1.46%
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%
0-30.31	1886.84	72.85%	80.00%

ZONAL LUMEN SUMMARY

0-10	357.21
10-20	702.12
20-30	809.13
30-40	409.06
40-50	38.11
50-60	11.28
60-70	10.97
70-80	12.85
80-90	5.30
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: —————

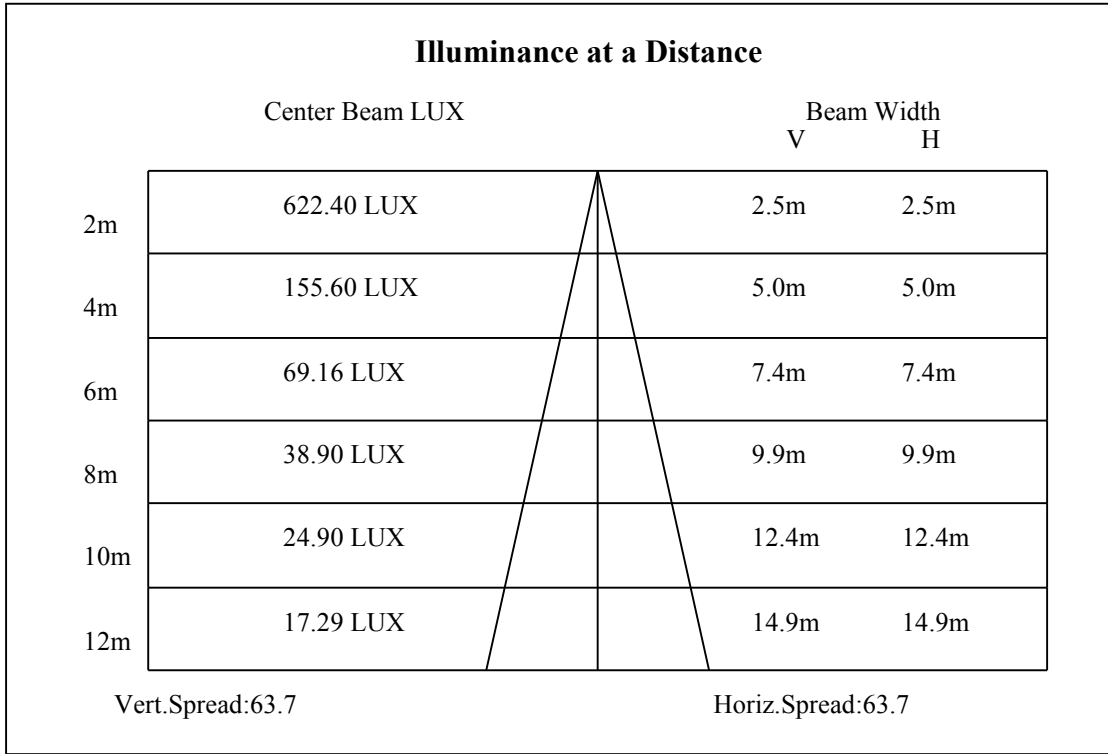
C90/C270: —————

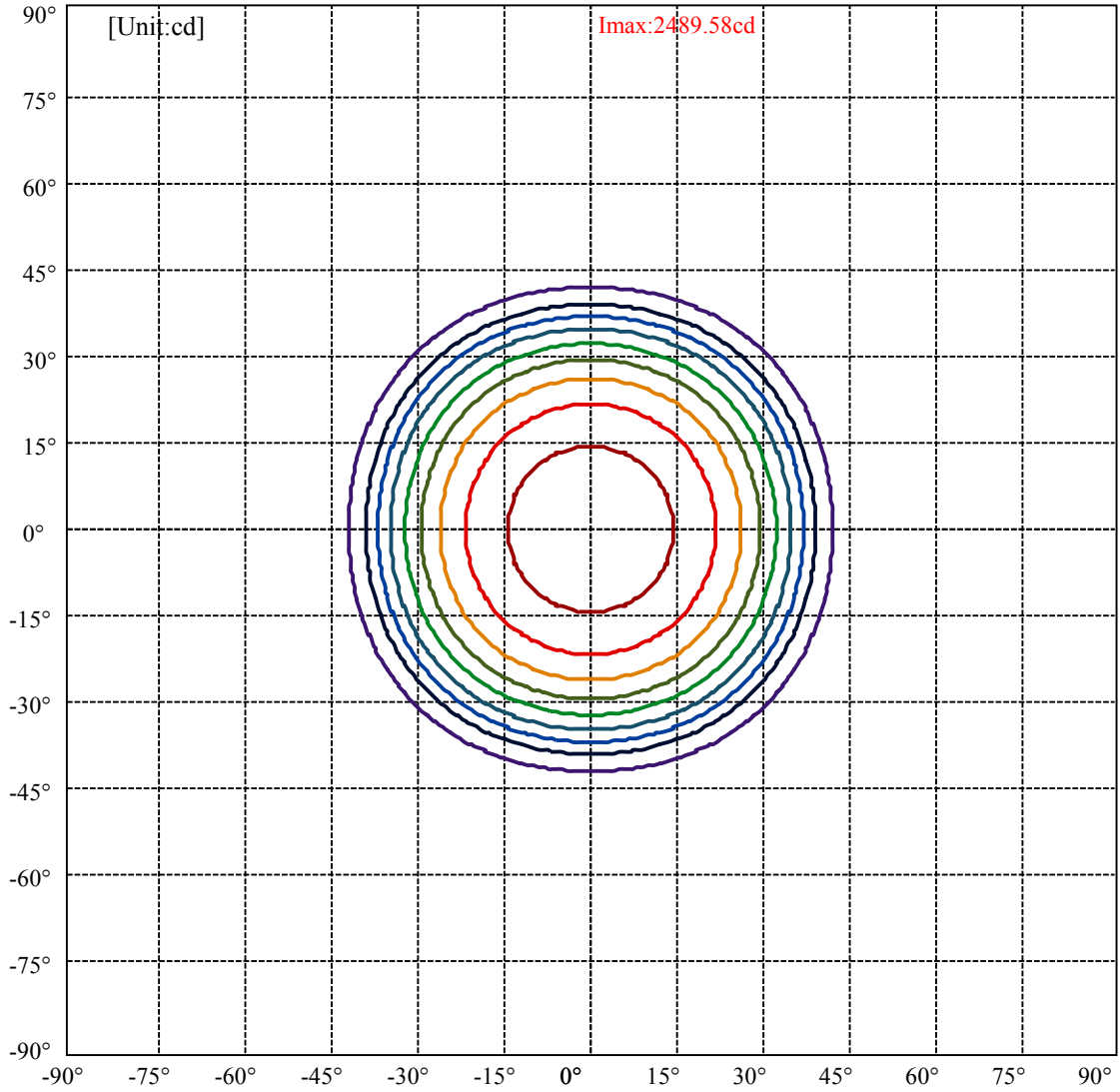
Field angle(10%Imax):C0/180Left:41.5 Right:41.5

:C90/270Left:41.5 Right:41.5

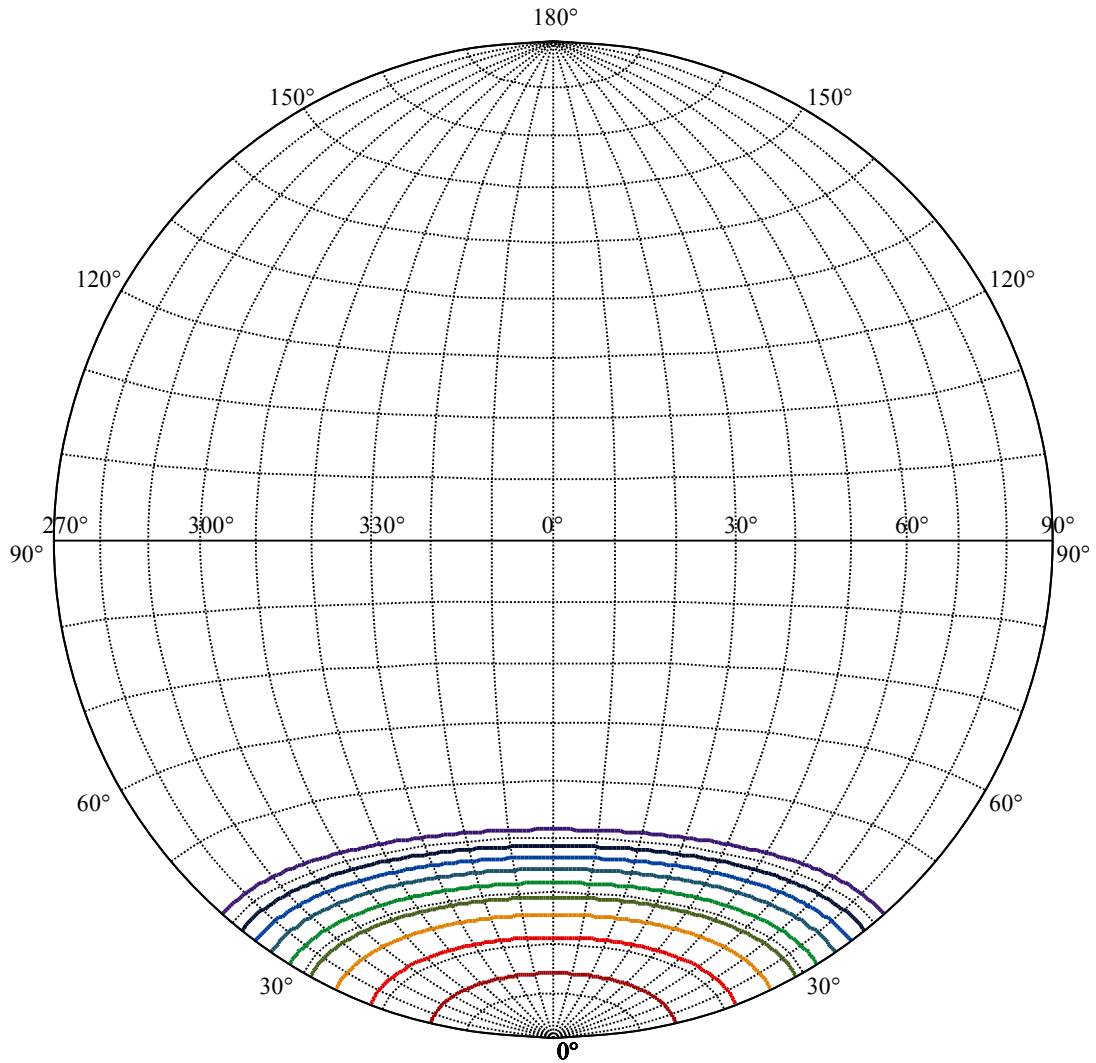
Beam Angle(50%Imax):C0/180Left:31.8 Right:31.8

:C90/270Left:31.8 Right:31.8





(10%Imax) 248.958	—
(20%Imax) 497.916	—
(30%Imax) 746.874	—
(40%Imax) 995.833	—
(50%Imax) 1244.79	—
(60%Imax) 1493.75	—
(70%Imax) 1742.71	—
(80%Imax) 1991.67	—
(90%Imax) 2240.62	—



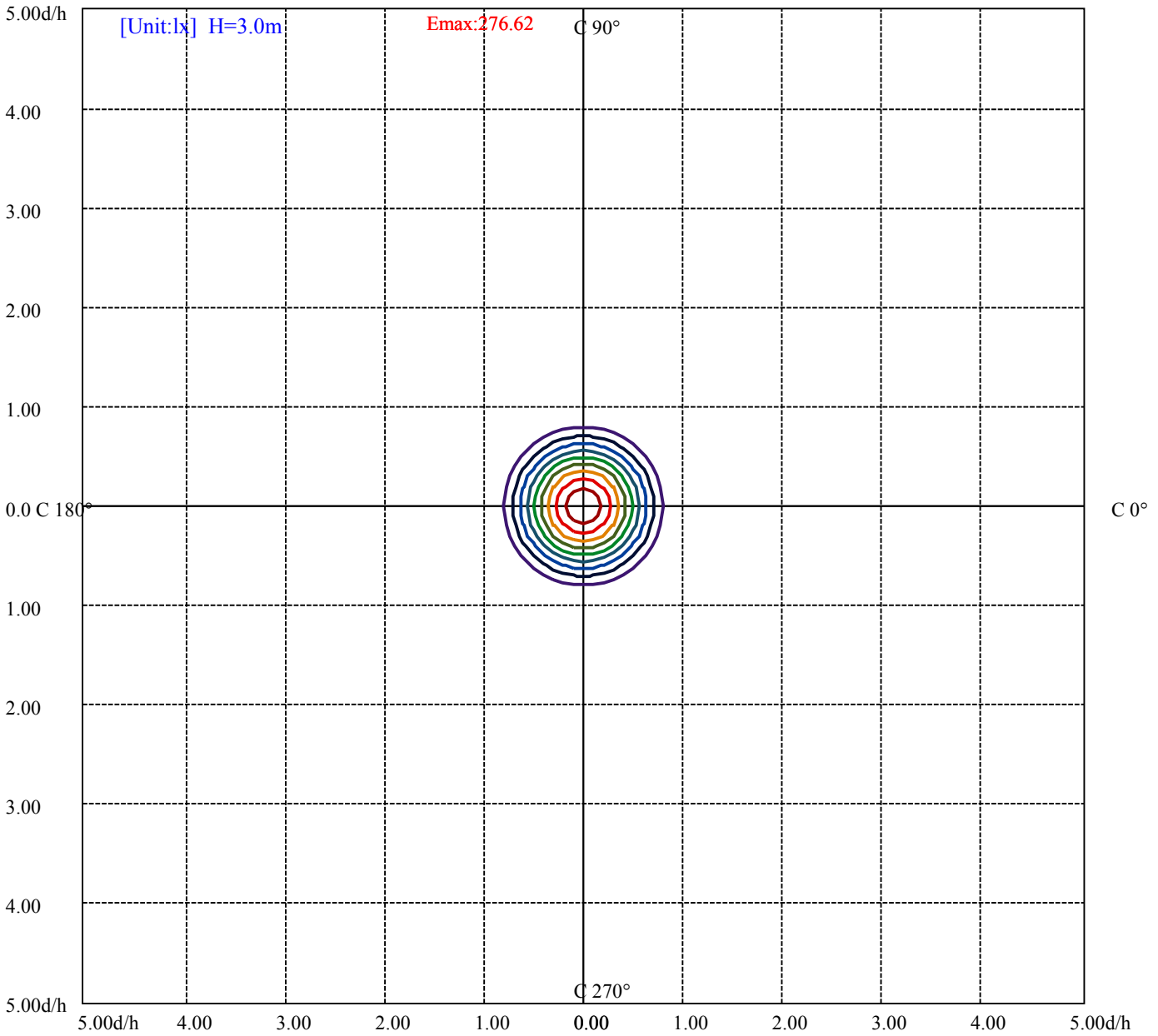
House

[Unit:cd]

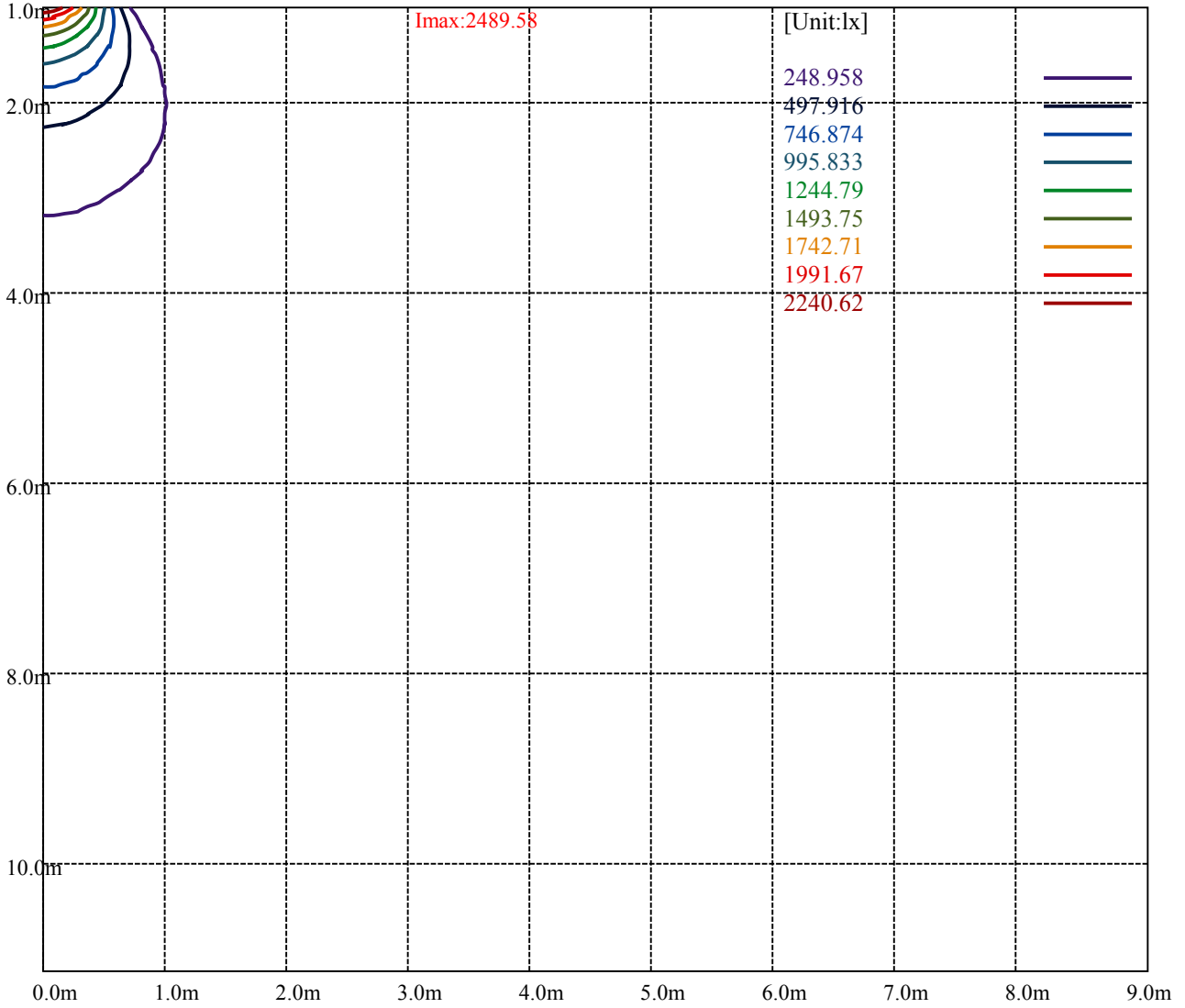
Road

Imax:2489.58

(10%Imax) 248.958	—
(20%Imax) 497.916	—
(30%Imax) 746.874	—
(40%Imax) 995.833	—
(50%Imax) 1244.79	—
(60%Imax) 1493.75	—
(70%Imax) 1742.71	—
(80%Imax) 1991.67	—
(90%Imax) 2240.62	—



(10%Emax) 27.662	—
(20%Emax) 55.324	—
(30%Emax) 82.986	—
(40%Emax) 110.648	—
(50%Emax) 138.31	—
(60%Emax) 165.9722	—
(70%Emax) 193.6344	—
(80%Emax) 221.2956	—
(90%Emax) 248.9578	—



Luminance Table

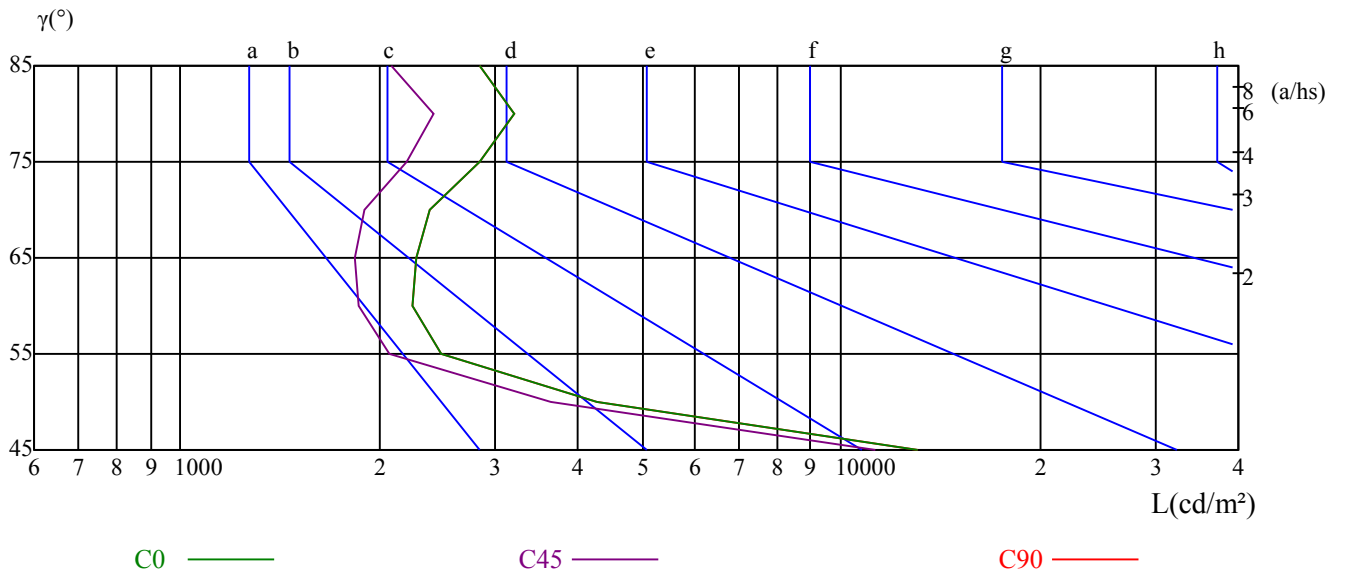
γ	45	50	55	60	65	70	75	80	85
C0	13066	4270	2480	2252	2276	2388	2830	3200	2835
C45	11287	3634	2077	1856	1842	1895	2196	2421	2080
C90	13066	4270	2480	2252	2276	2388	2830	3200	2835

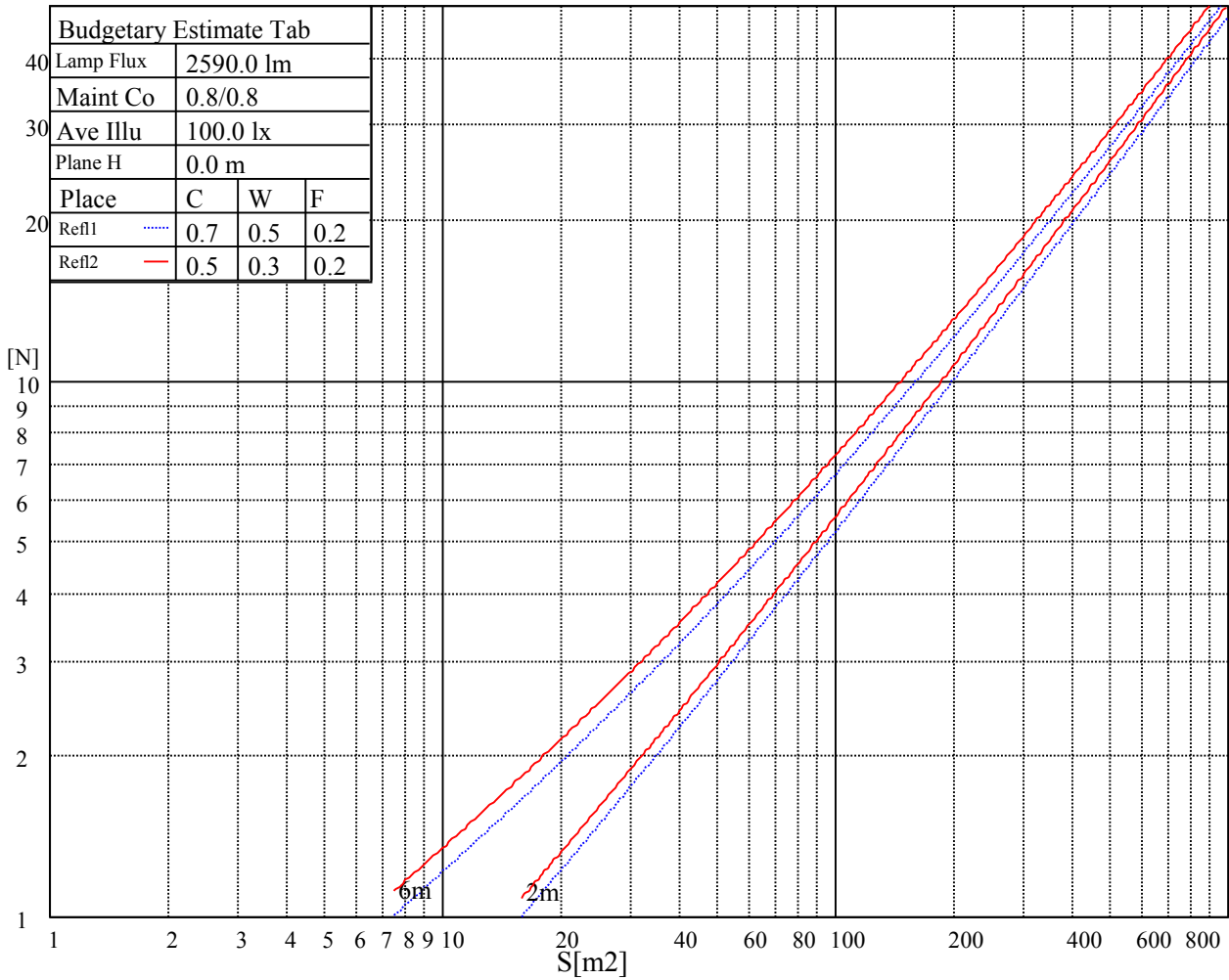
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5274	5274	5274	9317	9317	9317	22738	22738	22738

Glare Table

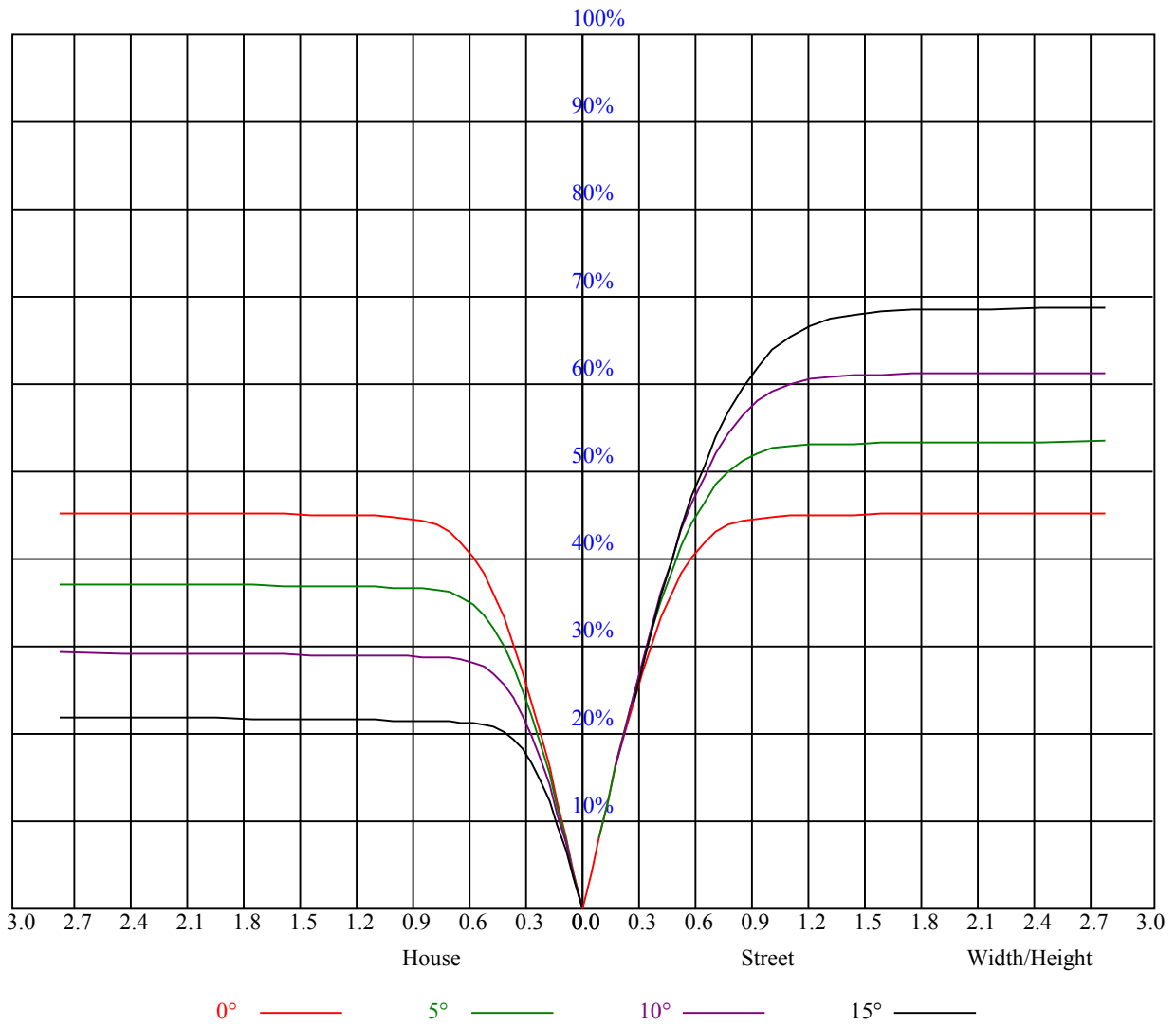
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.01	0.99	0.96	0.99	0.97	0.95	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.88	0.87	0.85
2	0.94	0.91	0.88	0.93	0.89	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.80
3	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.81	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.75
4	0.83	0.78	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.70
5	0.78	0.73	0.70	0.78	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.62
7	0.70	0.65	0.61	0.70	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
8	0.67	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.56
9	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53
10	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.58	0.54	0.51	0.50



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	2486.90	2471.48	2382.29	2246.85	2076.18	1806.95	1423.76	1004.23	376.04
45.0	2493.50	2469.83	2349.81	2187.39	2024.97	1787.68	1466.15	962.39	347.96
90.0	2489.65	2441.75	2335.49	2182.99	2060.21	1832.28	1475.51	951.87	349.72
135.0	2488.00	2462.67	2364.12	2217.67	2065.17	1874.67	1525.06	1071.40	472.38
180.0	2487.45	2434.04	2331.09	2175.83	2044.79	1755.20	1343.93	872.97	270.77
225.0	2493.50	2461.02	2374.03	2234.74	2086.64	1813.56	1406.14	873.63	311.62
270.0	2489.65	2464.88	2391.10	2279.33	2136.19	1853.20	1446.88	934.86	289.60
315.0	2488.00	2467.08	2370.18	2218.22	2040.39	1715.01	1326.86	801.07	202.06
360.0	2486.90	2471.48	2382.29	2246.85	2076.18	1806.95	1423.76	1004.23	376.04
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	73.23	22.35	13.76	12.00	11.40	11.18	11.95	13.32	10.08
45.0	82.69	27.20	13.71	11.67	11.07	10.79	10.57	10.24	9.58
90.0	95.08	30.61	13.32	11.01	10.52	10.24	10.08	9.86	9.58
135.0	95.69	26.98	13.82	11.40	11.01	10.90	12.61	14.53	10.08
180.0	65.35	23.78	13.54	11.84	11.29	11.23	15.75	16.35	9.91
225.0	63.48	19.88	12.66	11.29	10.79	10.63	10.41	9.97	9.63
270.0	62.21	18.55	11.73	10.68	10.35	10.19	9.97	9.74	9.36
315.0	46.91	17.01	12.11	11.23	10.96	10.90	13.21	13.65	9.47
360.0	73.23	22.35	13.76	12.00	11.40	11.18	11.95	13.32	10.08
C/ γ (°)	90.0								
0.0	9.30								
45.0	9.14								
90.0	9.14								
135.0	9.25								
180.0	9.25								
225.0	9.19								
270.0	9.19								
315.0	9.25								
360.0	9.30								