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## NATA

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LumCAT: LM01D05536BH  
Luminaire: 92.70.132.00  
Report No: NATA0100  
Test No: GC2018122007  
LampCAT: LUMILEDS LUXEON1203  
Lamp flux(lm): 1030.0  
Number of Lamps: 1  
Length(mm): 55  
Phm Type: C

Voltage(V): 34.7000  
Current(A): 0.2500  
Power (W): 8.6750  
PF: 0.0000  
Ballast type: DC  
Width(mm): 55  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 943.58  
Efficiency(%): 91.61%  
Lumens(lm)/Power(W): 110.35  
Central intensity(cd): 2438.438  
Maximum intensity(cd): 2438.438  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=34.7  
                                  [C90/270]Total=34.7  
Field angle(10%Imax): [C0/180]Total=54.9  
                                  [C90/270]Total=54.9  
Maximum s/h(1/2): C0\_180=0.58 C90\_270=0.58  
Maximum s/h(1/4): C0\_180=0.55 C90\_270=0.55  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 92.94%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 94.124%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/12/20  
Humidity(%): 65.0%

Operator: NT07  
Distance(m): 7.50

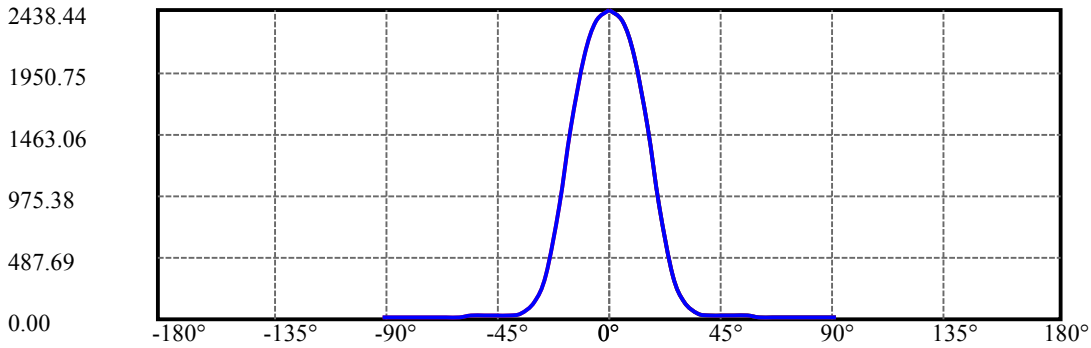
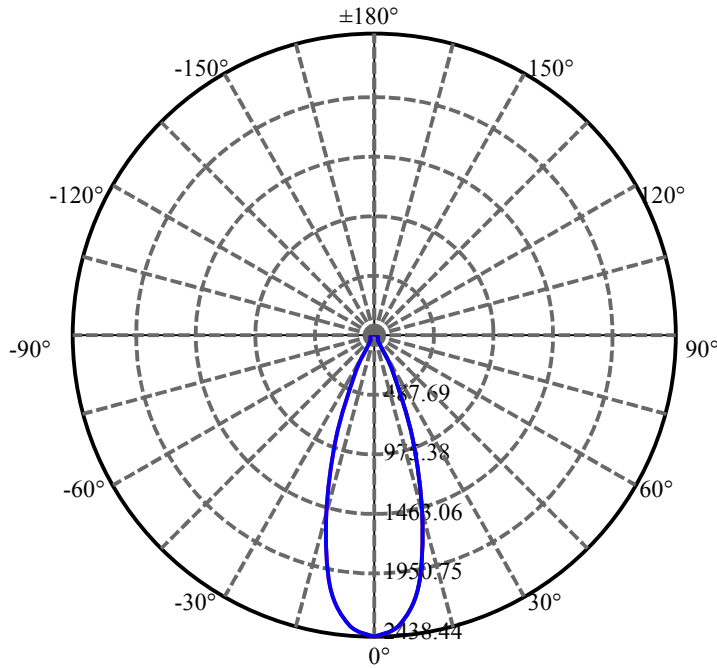
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2438.438	14.582	14.582	1.416%	1.545%
5.0	2352.727	112.398	126.98	10.912%	13.457%
10.0	2068.945	196.929	323.908	19.119%	34.328%
15.0	1507.458	213.861	537.769	20.763%	56.993%
20.0	890.937	167.027	704.797	16.216%	74.694%
25.0	350.227	81.131	785.928	7.877%	83.292%
30.0	131.913	36.153	822.081	3.510%	87.124%
35.0	52.453	16.491	838.572	1.601%	88.872%
40.0	37.385	13.172	851.744	1.279%	90.268%
45.0	34.446	13.351	865.095	1.296%	91.683%
50.0	31.901	13.395	878.49	1.300%	93.102%
55.0	26.888	12.073	890.563	1.172%	94.382%
60.0	22.008	10.447	901.01	1.014%	95.489%
65.0	17.044	8.467	909.477	.822%	96.386%
70.0	13.331	6.867	916.344	.667%	97.114%
75.0	13.022	6.895	923.238	.669%	97.845%
80.0	15.884	8.574	931.812	.832%	98.753%
85.0	15.005	8.193	940.006	.795%	99.622%
90.0	13.029	3.571	943.577	.347%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	822.08	79.81%	87.12%
0-40	851.74	82.69%	90.27%
0-60	901.01	87.48%	95.49%
0-90	940.01	91.26%	99.62%
0-120	940.01	91.26%	99.62%
0-180	943.58	91.61%	100.00%
60-90	49.44	4.80%	5.24%
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%
0-23.09	754.86	73.29%	80.00%

ZONAL LUMEN SUMMARY

0-10	323.91
10-20	380.89
20-30	117.28
30-40	29.66
40-50	26.75
50-60	22.52
60-70	15.33
70-80	15.47
80-90	8.19
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: —————

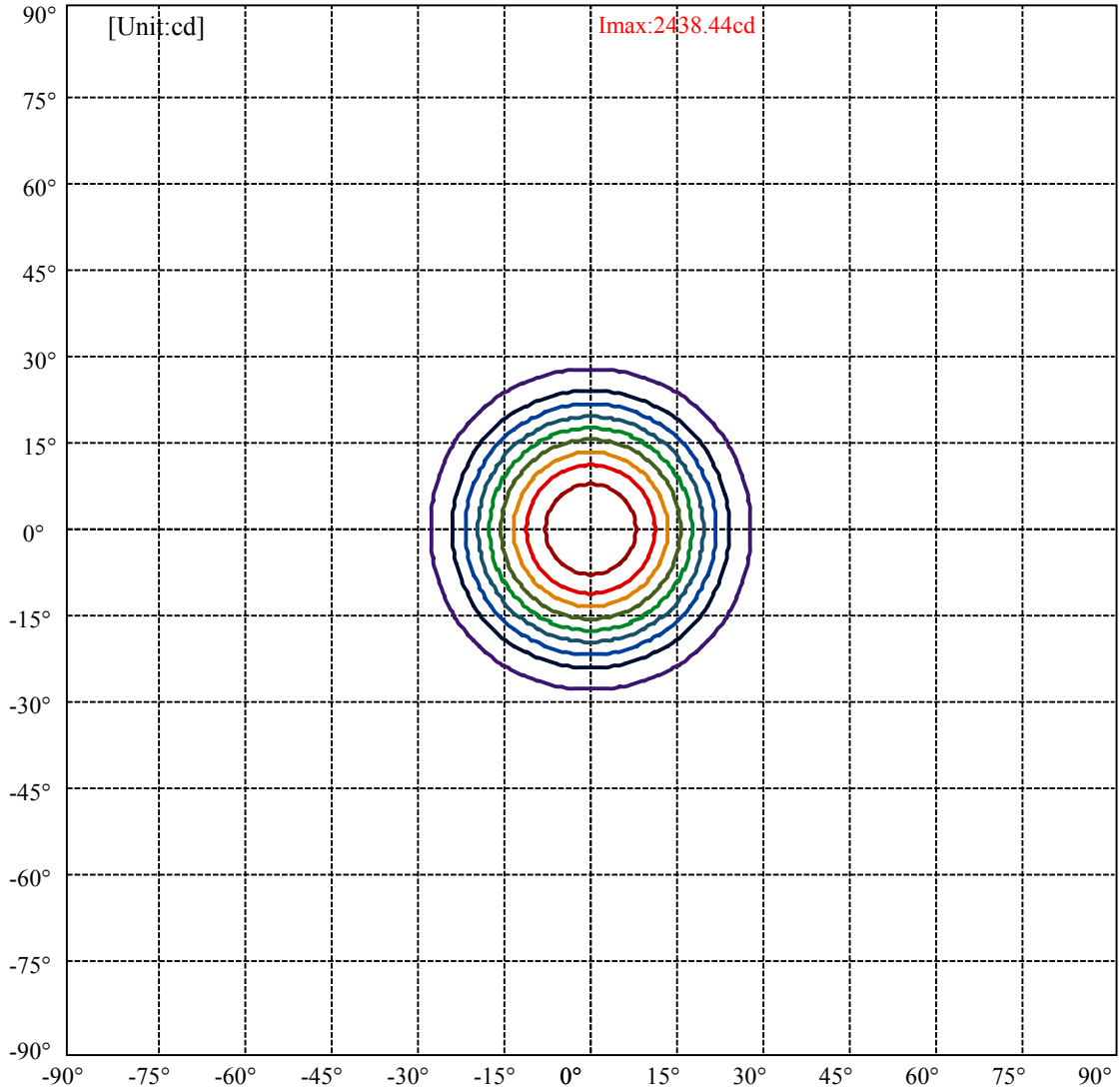
Field angle(10%Imax):C0/180Left:27.4 Right:27.4

:C90/270Left:27.4 Right:27.4

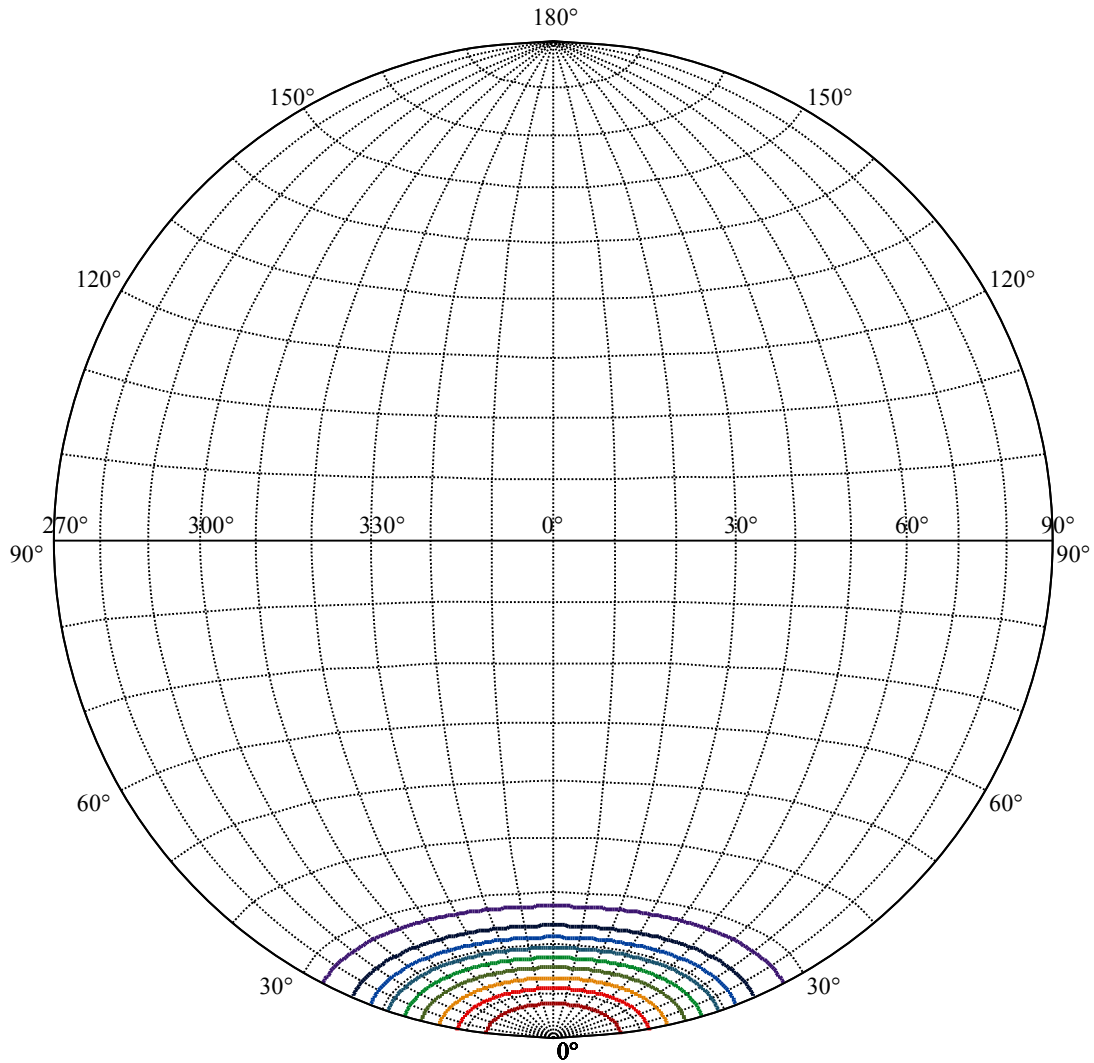
Beam Angle(50%Imax):C0/180Left:17.3 Right:17.3

:C90/270Left:17.3 Right:17.3





(10%Imax) 243.844	—
(20%Imax) 487.688	—
(30%Imax) 731.531	—
(40%Imax) 975.375	—
(50%Imax) 1219.22	—
(60%Imax) 1463.06	—
(70%Imax) 1706.91	—
(80%Imax) 1950.75	—
(90%Imax) 2194.59	—



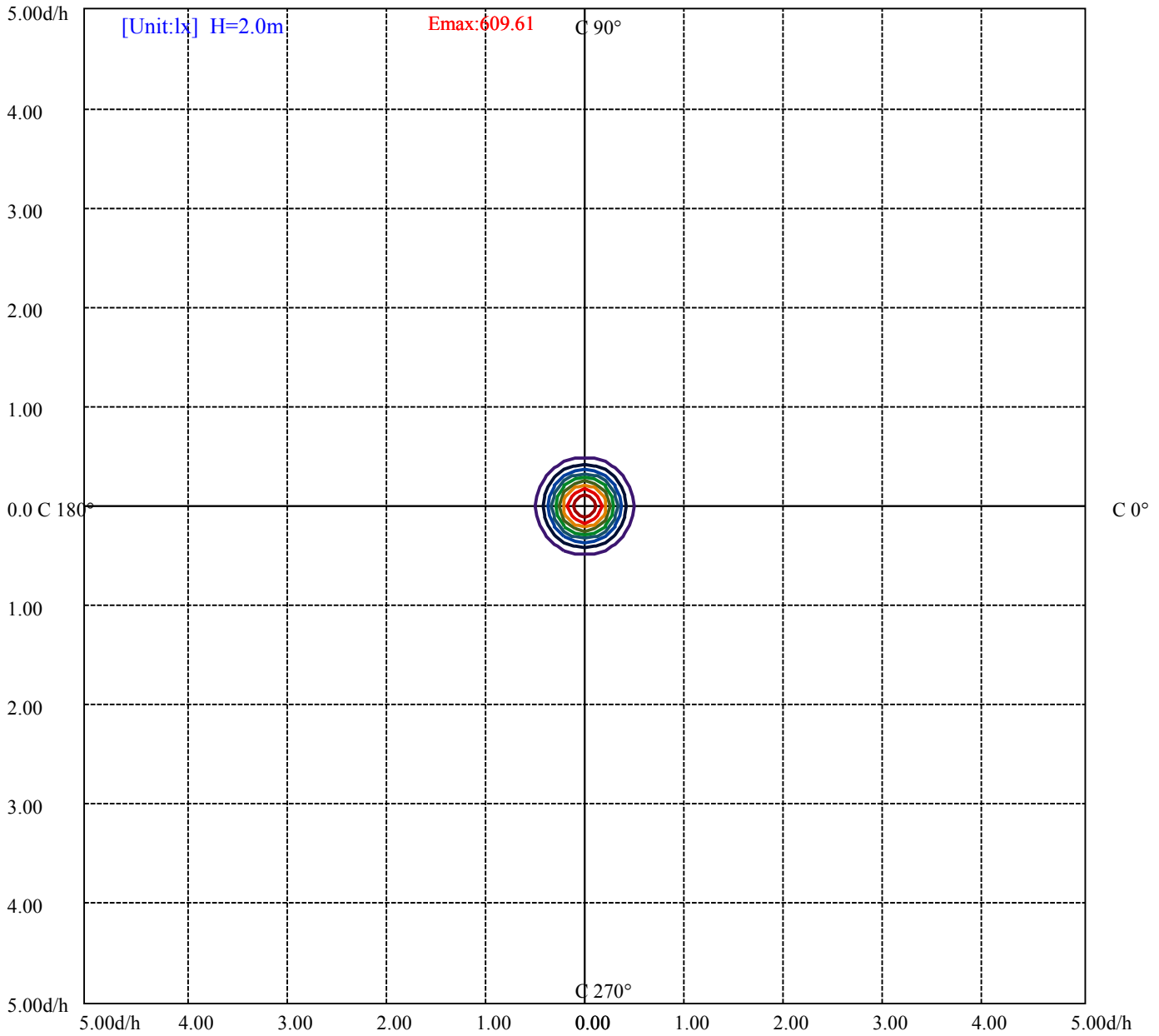
House

[Unit:cd]

Road

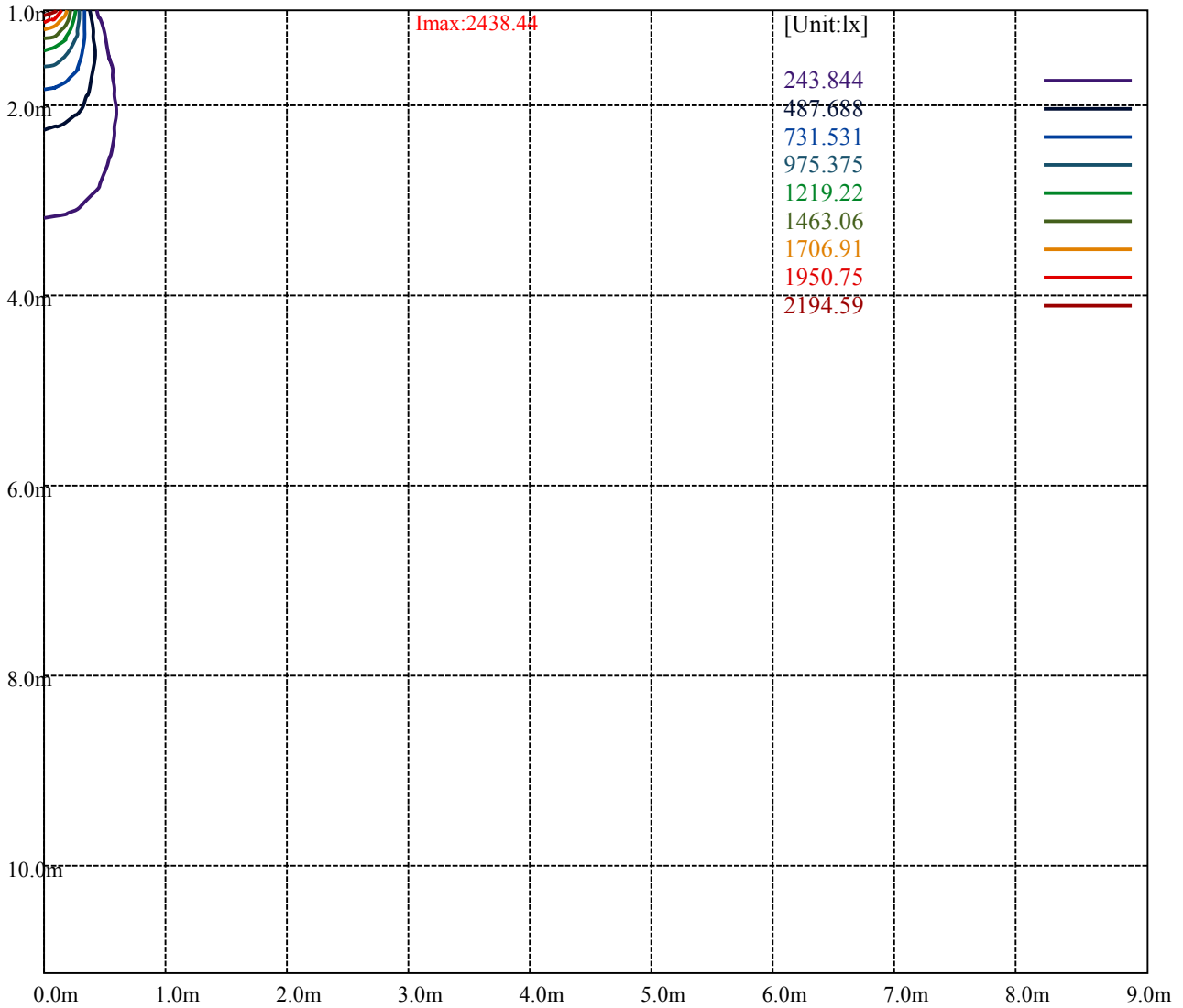
Imax:2438.44

(10%Imax) 243.844	—
(20%Imax) 487.688	—
(30%Imax) 731.531	—
(40%Imax) 975.375	—
(50%Imax) 1219.22	—
(60%Imax) 1463.06	—
(70%Imax) 1706.91	—
(80%Imax) 1950.75	—
(90%Imax) 2194.59	—



(10%Emax) 60.961	—
(20%Emax) 121.9218	—
(30%Emax) 182.8828	—
(40%Emax) 243.8435	—
(50%Emax) 304.805	—
(60%Emax) 365.765	—
(70%Emax) 426.725	—
(80%Emax) 487.6875	—
(90%Emax) 548.6475	—





Luminance Table

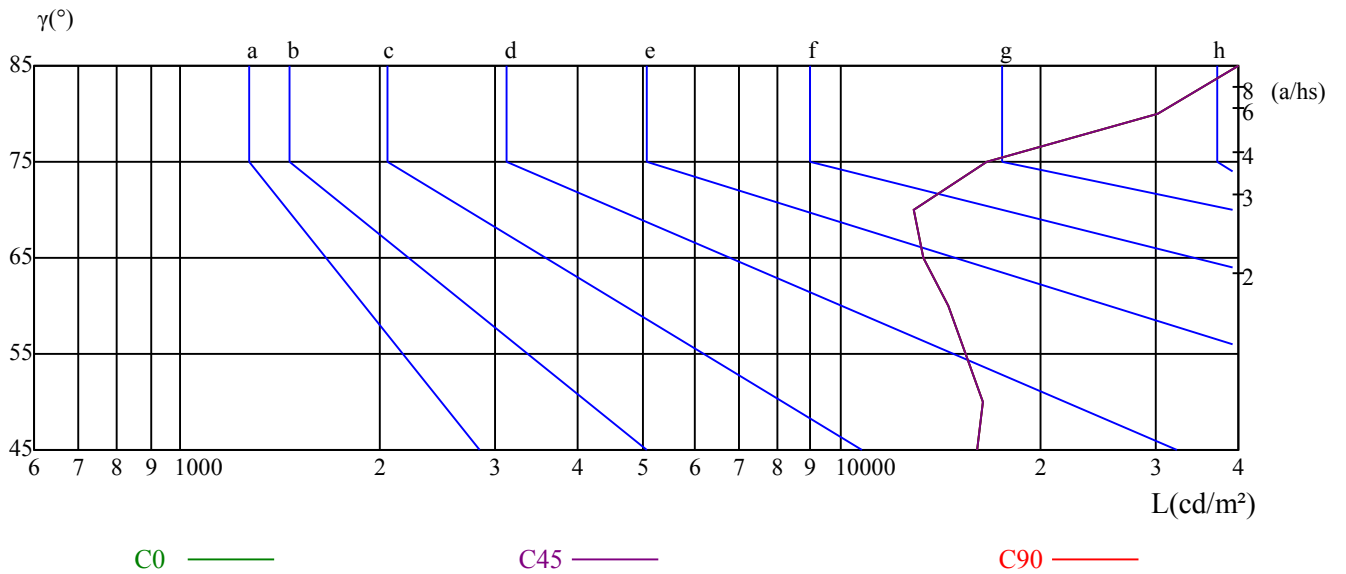
$\gamma$	45	50	55	60	65	70	75	80	85
C0	16104	16406	15497	14551	13332	12885	16632	30238	56912
C45	16104	16406	15497	14551	13332	12885	16632	30238	56912
C90	16104	16406	15497	14551	13332	12885	16632	30238	56912

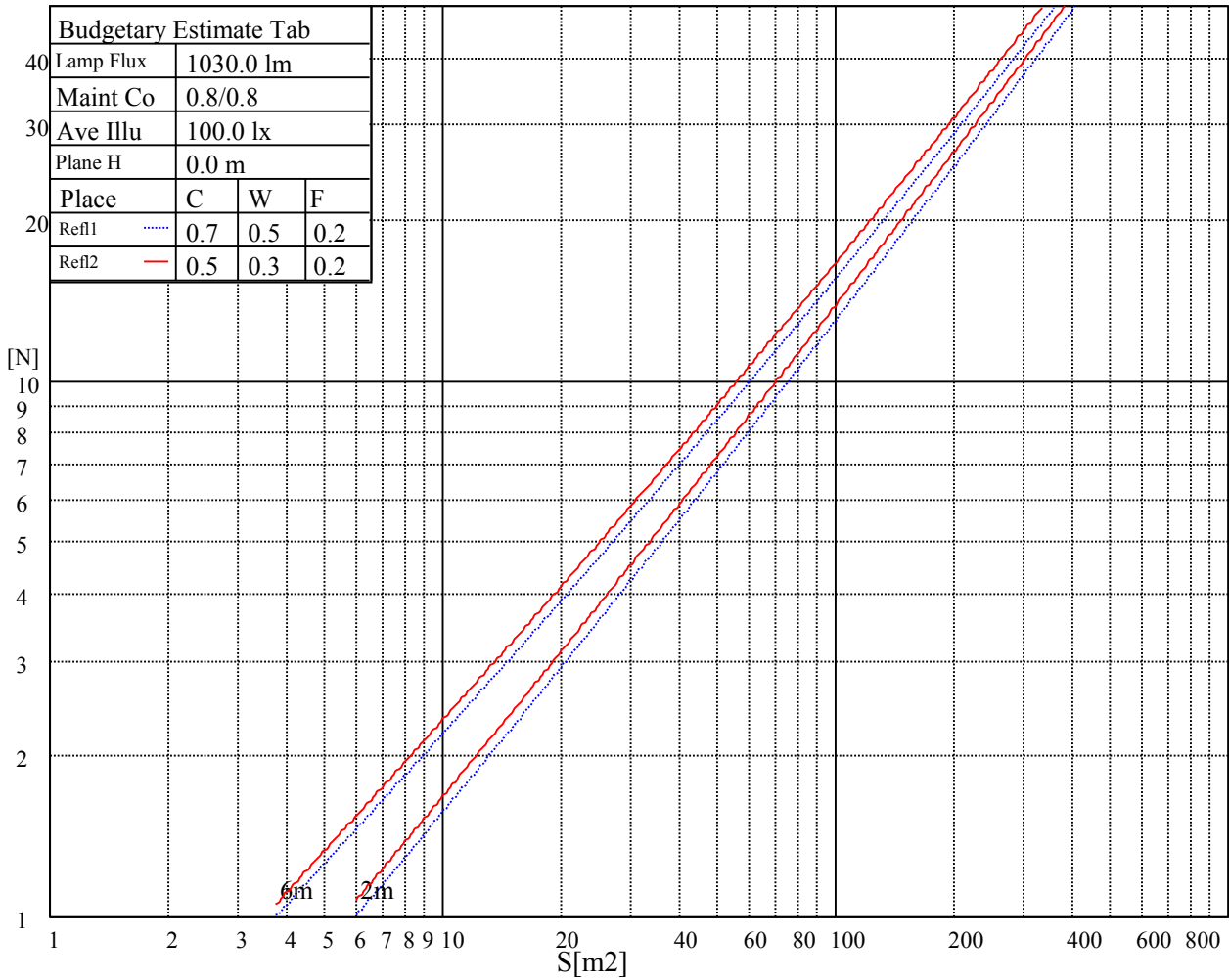
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13332	13332	13332	16632	16632	16632	56912	56912	56912

Glare Table

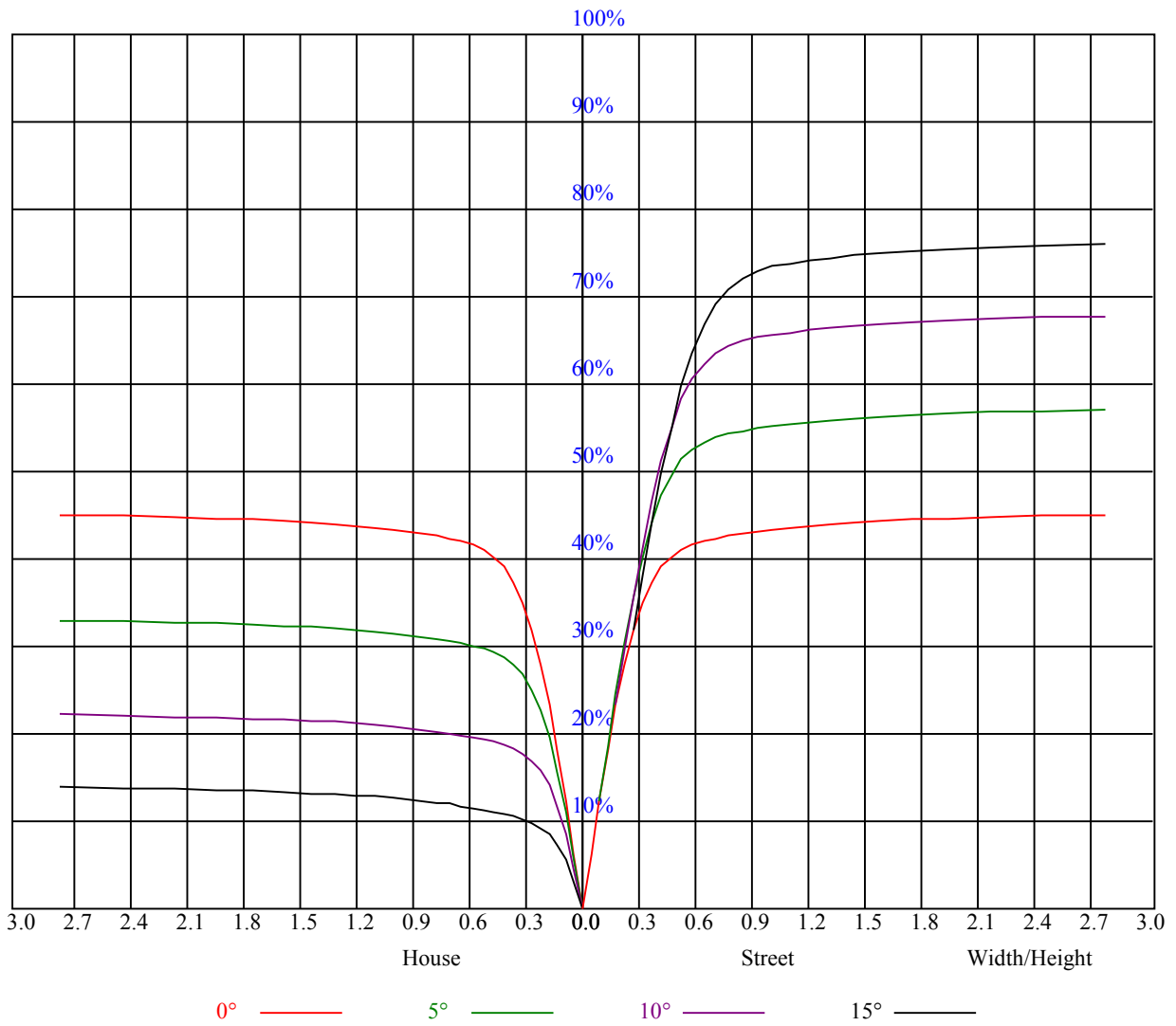
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.01	0.99	0.96	0.99	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.96	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.81
3	0.91	0.86	0.83	0.90	0.86	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.77
4	0.87	0.82	0.79	0.86	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.75	0.74
5	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.71
6	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.73	0.70	0.69
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.70	0.66	0.64	0.63
10	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.61



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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	2439.00	2318.63	2022.75	1459.13	708.19	288.00	92.19	45.17	36.68
45.0	2437.88	2422.13	2201.63	1742.63	959.06	394.88	137.76	60.13	41.68
90.0	2443.50	2451.38	2205.00	1775.81	1043.16	375.02	137.36	59.06	38.81
135.0	2433.38	2426.63	2269.13	1873.69	1298.81	571.50	293.06	70.99	39.66
180.0	2439.00	2350.13	2152.13	1683.00	1058.23	452.25	139.61	54.96	35.72
225.0	2437.88	2304.00	1952.44	1117.24	753.58	249.98	93.43	44.04	34.26
270.0	2443.50	2296.69	1908.56	1308.94	741.38	298.69	92.03	45.45	36.68
315.0	2433.38	2252.25	1839.94	1099.24	565.09	171.51	69.86	39.83	35.61
360.0	2439.00	2318.63	2022.75	1459.13	708.19	288.00	92.19	45.17	36.68

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	34.76	31.05	25.82	21.38	16.14	12.83	14.68	18.84	15.75
45.0	38.14	34.65	28.69	23.57	18.00	14.06	13.22	17.10	15.64
90.0	35.61	33.24	27.62	22.28	17.61	13.84	11.31	12.49	14.18
135.0	34.03	32.85	29.03	24.19	19.63	14.91	11.48	14.01	15.58
180.0	31.78	31.44	27.96	23.79	18.56	14.40	12.32	16.03	15.92
225.0	32.12	30.04	24.92	20.42	15.81	12.43	12.26	16.65	14.63
270.0	34.99	32.01	26.38	21.15	15.98	12.54	13.11	16.14	14.18
315.0	34.14	29.93	24.69	19.29	14.63	11.64	15.81	15.81	14.18
360.0	34.76	31.05	25.82	21.38	16.14	12.83	14.68	18.84	15.75

C/γ(°)	90.0
0.0	13.33
45.0	12.77
90.0	12.66
135.0	13.44
180.0	12.26
225.0	12.60
270.0	13.22
315.0	13.95
360.0	13.33