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Nata

LumCAT: 3-1545-A3
Luminaire: 99.02.73.172+92.76.365.00
Report No: NATA0100
Test No: GC2018072508
LampCAT: BRIDGELUX V9 HD
Lamp flux(lm): 1153.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.2900
Power (W): 9.8600
PF: 0.0000
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 1027.05
Efficiency(%): 89.08%
Lumens(lm)/Power(W): 106.10
Central intensity(cd): 20157.530
Maximum intensity(cd): 20157.530
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=8.4
 [C90/270]Total=8.4
Field angle(10%Imax): [C0/180]Total=16.8
 [C90/270]Total=16.8
Maximum s/h(1/2): C0_180=0.15 C90_270=0.15
Maximum s/h(1/4): C0_180=0.15 C90_270=0.15
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.74%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.908%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	20157.523	19.290	19.29	1.673%	1.878%
2.0	17193.426	131.597	150.887	11.413%	14.691%
4.0	10647.977	162.898	313.786	14.128%	30.552%
6.0	5381.832	123.376	437.161	10.700%	42.565%
8.0	2250.843	68.701	505.863	5.958%	49.254%
10.0	1074.962	40.938	546.801	3.551%	53.240%
12.0	798.738	36.421	583.222	3.159%	56.786%
14.0	664.951	35.280	618.502	3.060%	60.221%
16.0	561.610	33.950	652.452	2.944%	63.527%
18.0	480.814	32.586	685.037	2.826%	66.700%
20.0	431.429	32.361	717.398	2.807%	69.851%
22.0	405.711	33.332	750.73	2.891%	73.096%
24.0	391.506	34.923	785.654	3.029%	76.496%
26.0	377.618	36.304	821.958	3.149%	80.031%
28.0	363.414	37.418	859.376	3.245%	83.674%
30.0	350.916	38.480	897.856	3.337%	87.421%
32.0	339.629	39.471	937.327	3.423%	91.264%
34.0	301.165	36.934	974.261	3.203%	94.860%
36.0	172.154	22.192	996.454	1.925%	97.021%
38.0	45.662	6.165	1002.619	.535%	97.622%
40.0	13.977	1.970	1004.59	.171%	97.813%
42.0	10.474	1.537	1006.127	.133%	97.963%
44.0	7.316	1.115	1007.241	.097%	98.072%
46.0	5.272	0.832	1008.073	.072%	98.153%
48.0	4.928	0.803	1008.876	.070%	98.231%
50.0	4.797	0.806	1009.682	.070%	98.309%
52.0	4.707	0.814	1010.495	.071%	98.388%
54.0	4.625	0.821	1011.316	.071%	98.468%
56.0	4.570	0.831	1012.147	.072%	98.549%
58.0	4.515	0.840	1012.987	.073%	98.631%
60.0	4.473	0.850	1013.836	.074%	98.714%
62.0	4.432	0.858	1014.694	.074%	98.797%
64.0	4.411	0.870	1015.564	.075%	98.882%
66.0	4.391	0.880	1016.444	.076%	98.968%
68.0	4.356	0.886	1017.329	.077%	99.054%
70.0	4.343	0.895	1018.224	.078%	99.141%
72.0	4.343	0.906	1019.13	.079%	99.229%
74.0	4.329	0.913	1020.043	.079%	99.318%

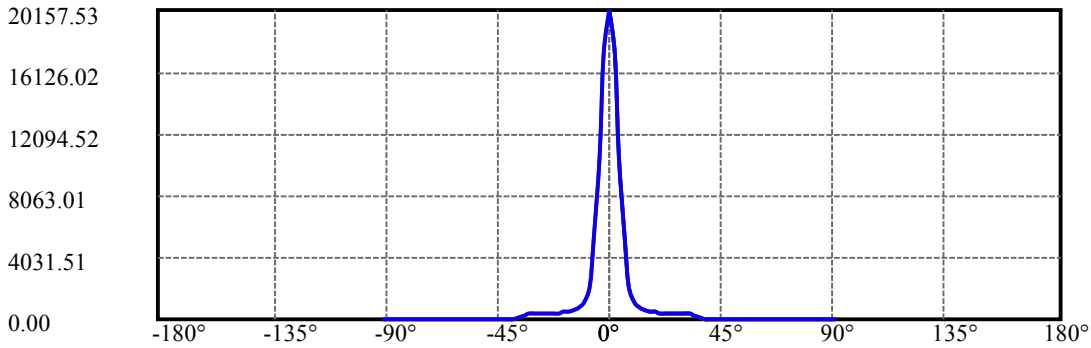
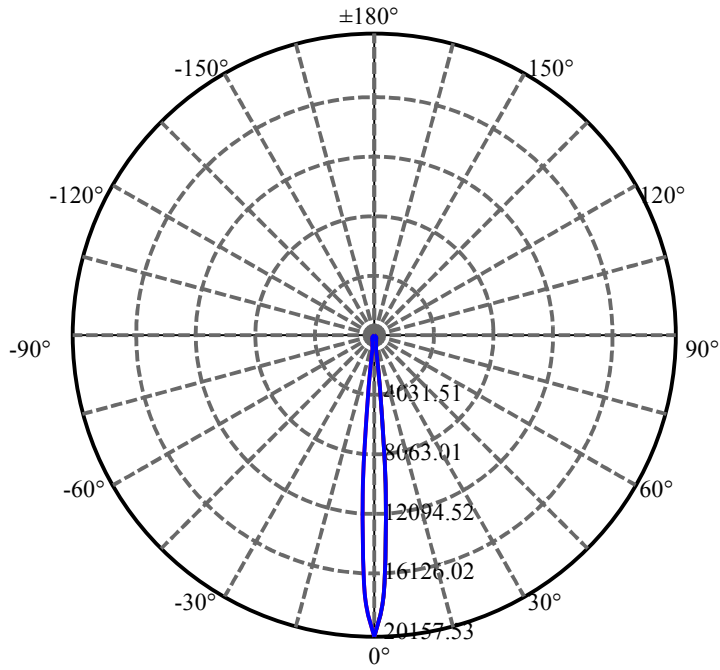
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.336	0.923	1020.965	.080%	99.408%
78.0	4.329	0.929	1021.894	.081%	99.498%
80.0	4.308	0.930	1022.825	.081%	99.589%
82.0	4.301	0.934	1023.759	.081%	99.680%
84.0	4.294	0.937	1024.695	.081%	99.771%
86.0	4.294	0.940	1025.635	.081%	99.863%
88.0	4.294	0.941	1026.576	.082%	99.954%
90.0	4.294	0.471	1027.047	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	897.86	77.87%	87.42%
0-40	1004.59	87.13%	97.81%
0-60	1013.84	87.93%	98.71%
0-90	1026.58	89.04%	99.95%
0-120	1026.58	89.04%	99.95%
0-180	1027.05	89.08%	100.00%
60-90	13.59	1.18%	1.32%
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%
0-25.98	821.64	71.26%	80.00%

ZONAL LUMEN SUMMARY

0-10	546.80
10-20	170.60
20-30	180.46
30-40	106.73
40-50	5.09
50-60	4.15
60-70	4.39
70-80	4.60
80-90	3.75
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: —————

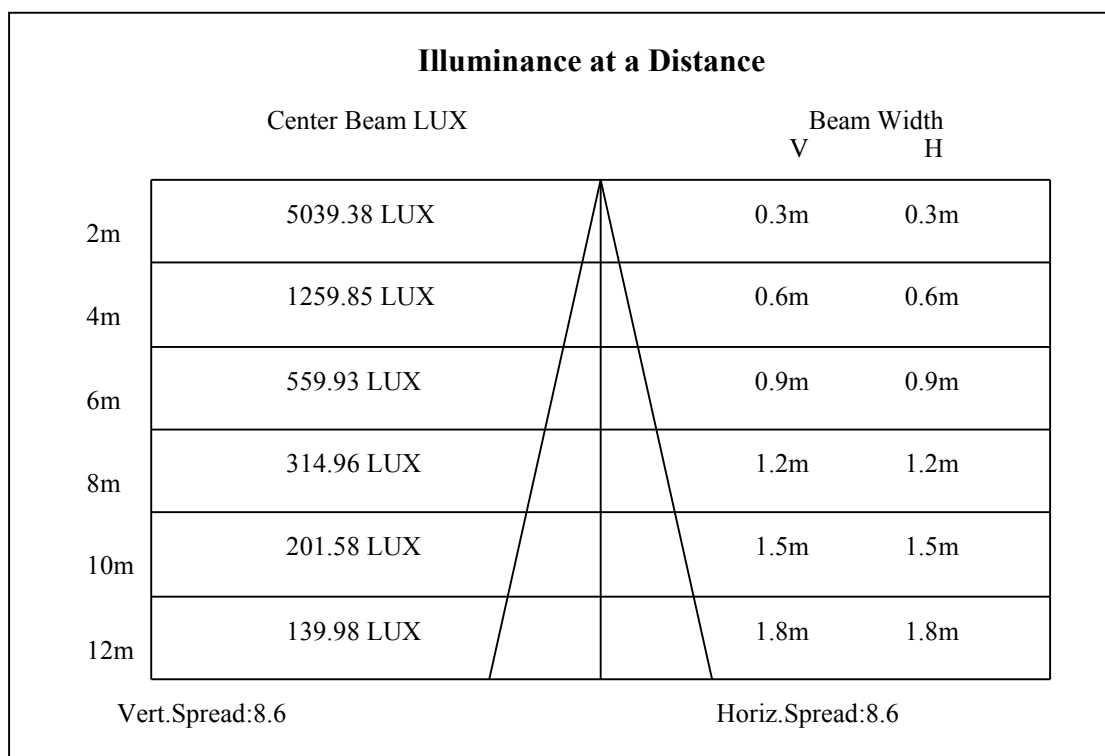
C90/C270: —————

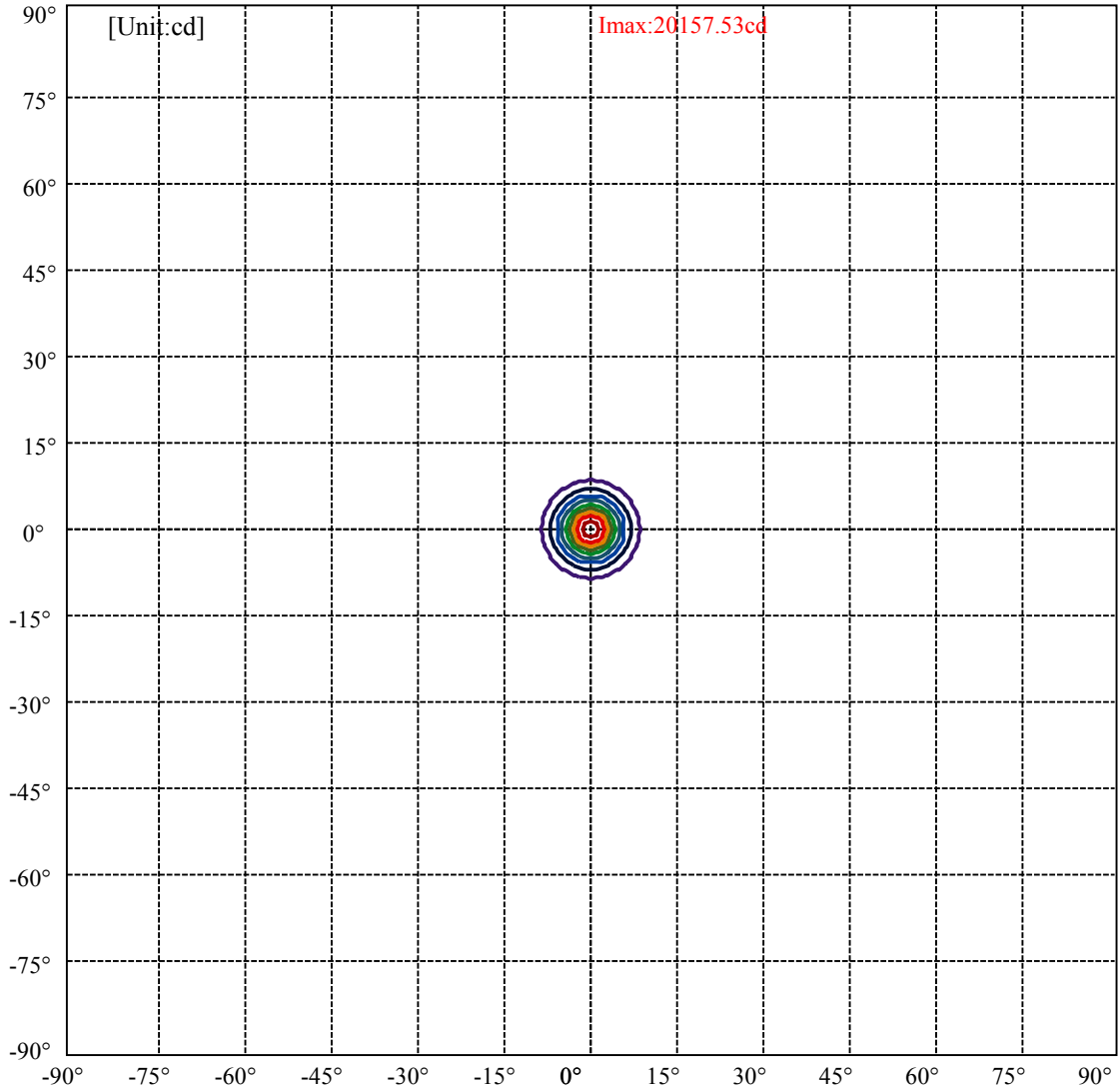
Field angle(10%Imax):C0/180Left:8.4 Right:8.4

:C90/270Left:8.4 Right:8.4

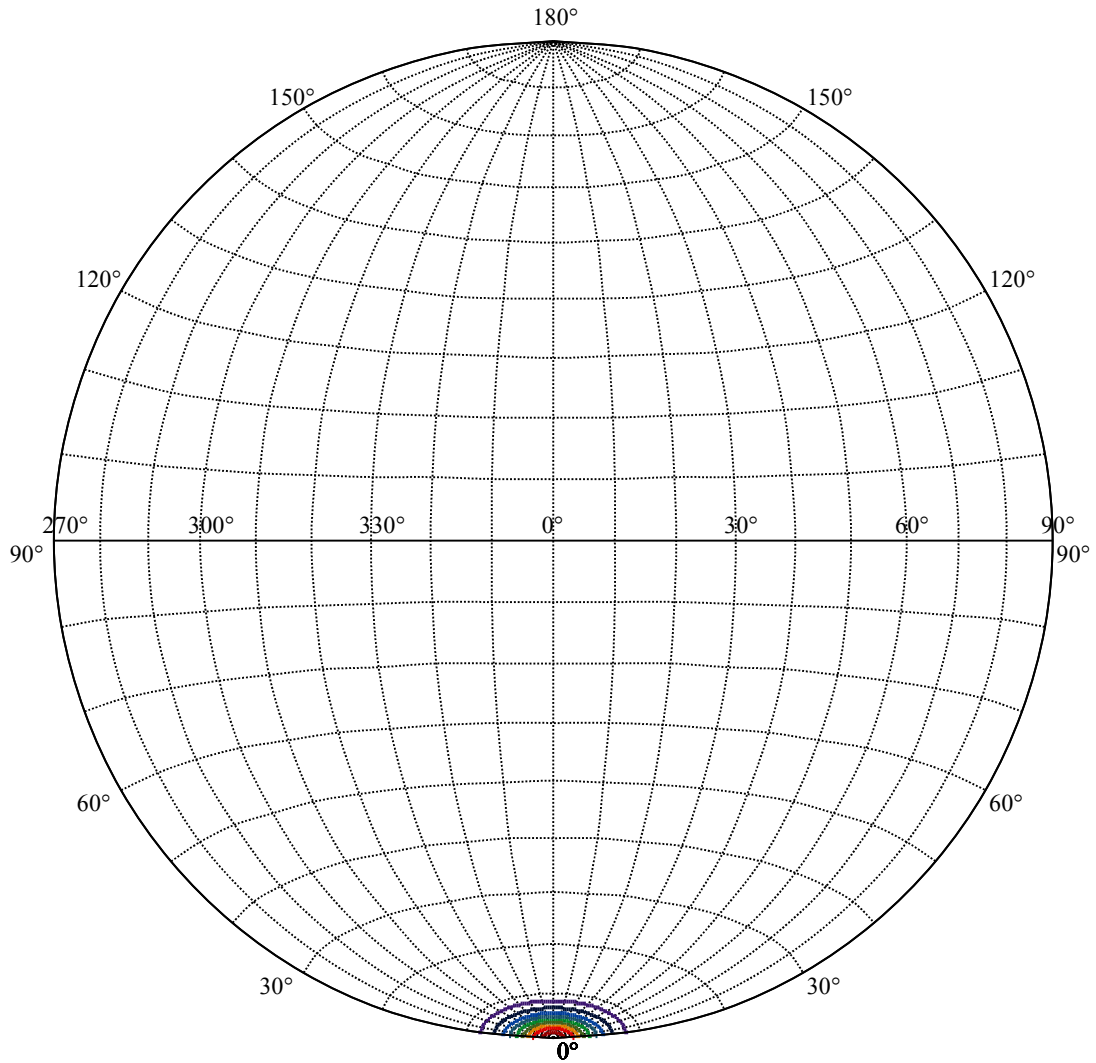
Beam Angle(50%Imax):C0/180Left:4.2 Right:4.2

:C90/270Left:4.2 Right:4.2





(10%Imax)	2015.75	—
(20%Imax)	4031.51	—
(30%Imax)	6047.26	—
(40%Imax)	8063.01	—
(50%Imax)	10078.8	—
(60%Imax)	12094.5	—
(70%Imax)	14110.3	—
(80%Imax)	16126	—
(90%Imax)	18141.8	—



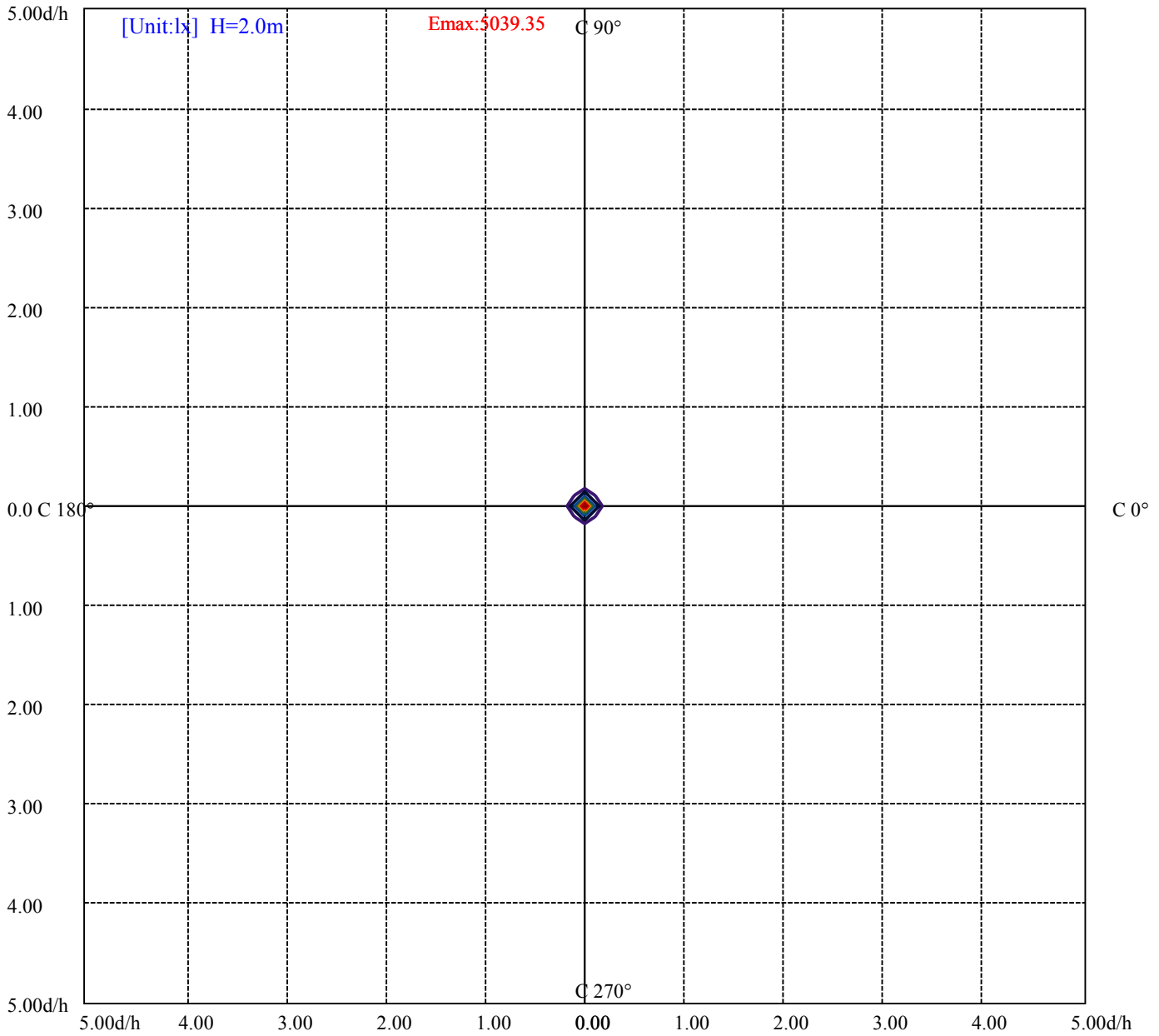
House

[Unit:cd]

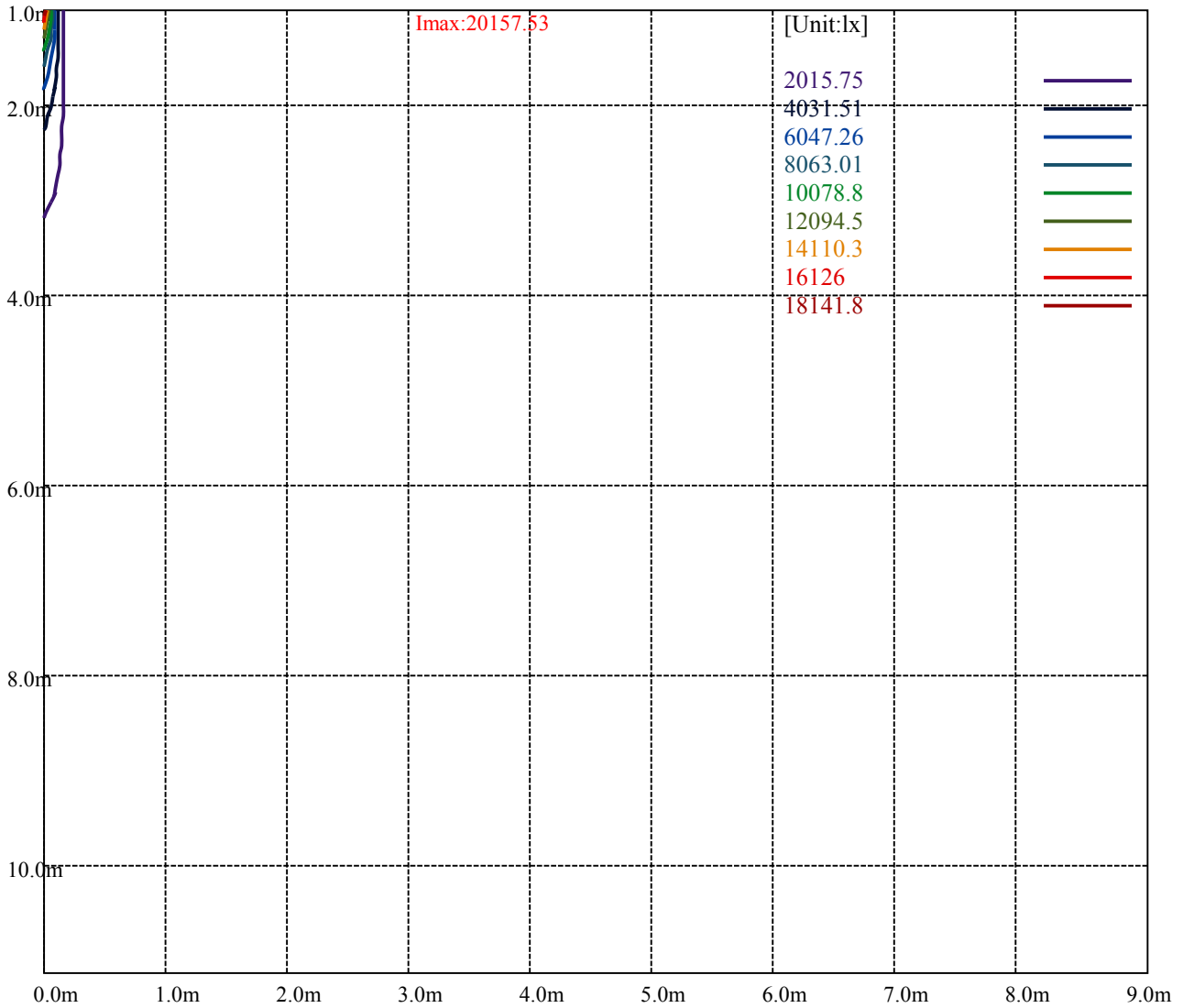
Road

Imax:20157.53

(10%Imax) 2015.75	—
(20%Imax) 4031.51	—
(30%Imax) 6047.26	—
(40%Imax) 8063.01	—
(50%Imax) 10078.8	—
(60%Imax) 12094.5	—
(70%Imax) 14110.3	—
(80%Imax) 16126	—
(90%Imax) 18141.8	—



- (10%Emax) 503.9325
- (20%Emax) 1007.865
- (30%Emax) 1511.797
- (40%Emax) 2015.73
- (50%Emax) 2519.675
- (60%Emax) 3023.6
- (70%Emax) 3527.525
- (80%Emax) 4031.45
- (90%Emax) 4535.4



Luminance Table

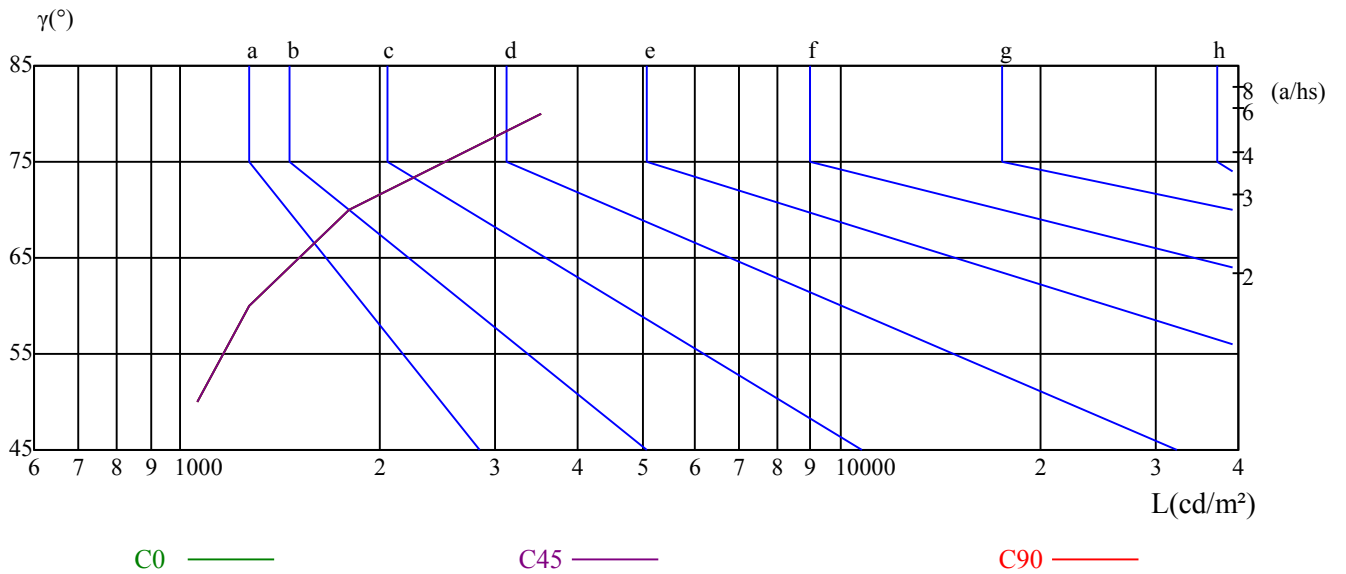
γ	45	50	55	60	65	70	75	80	85
C0	0	1058	0	1268	0	1799	0	3516	0
C45	0	1058	0	1268	0	1799	0	3516	0
C90	0	1058	0	1268	0	1799	0	3516	0

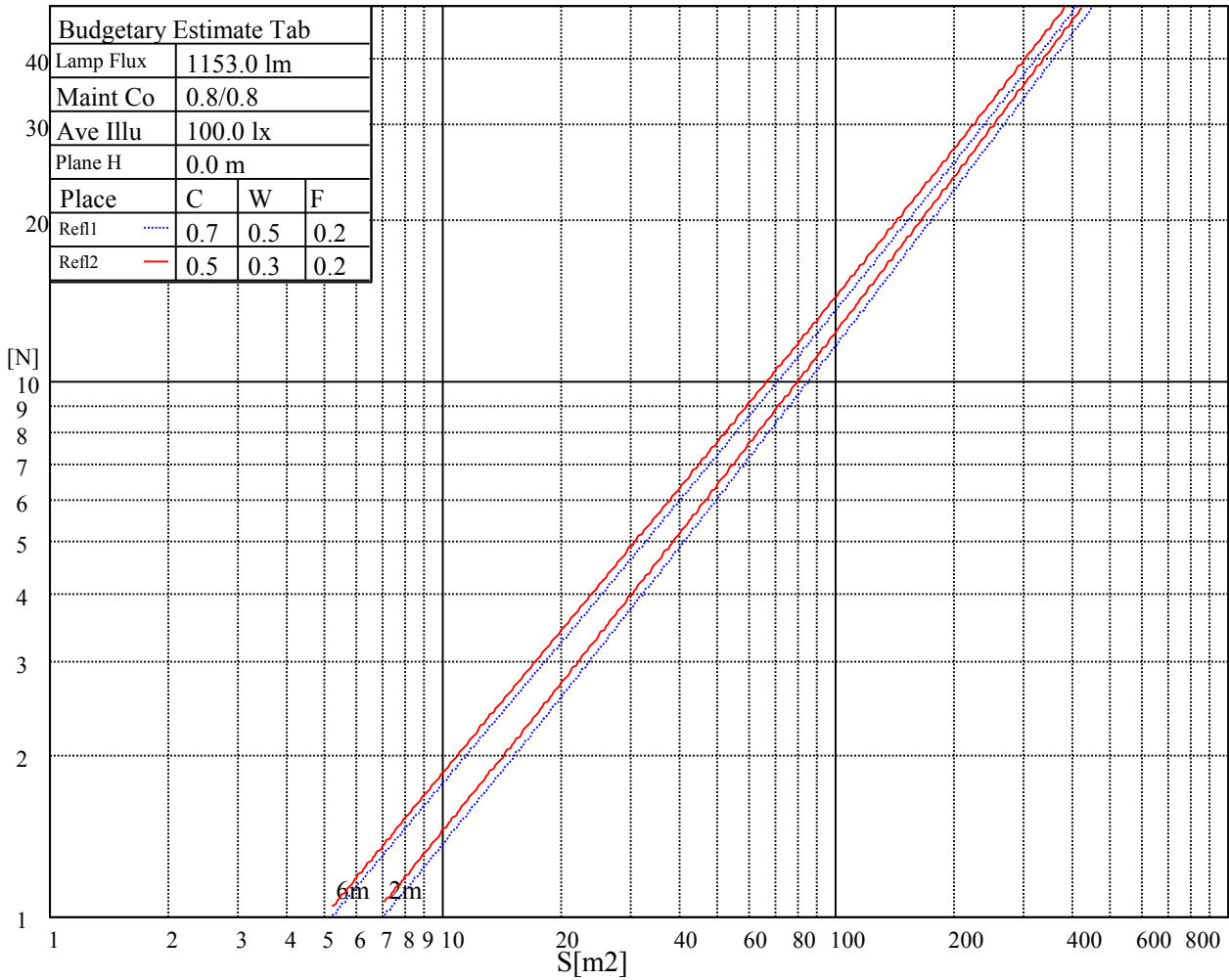
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5181	5181	5181	8852	8852	8852	27373	27373	27373

Glare Table

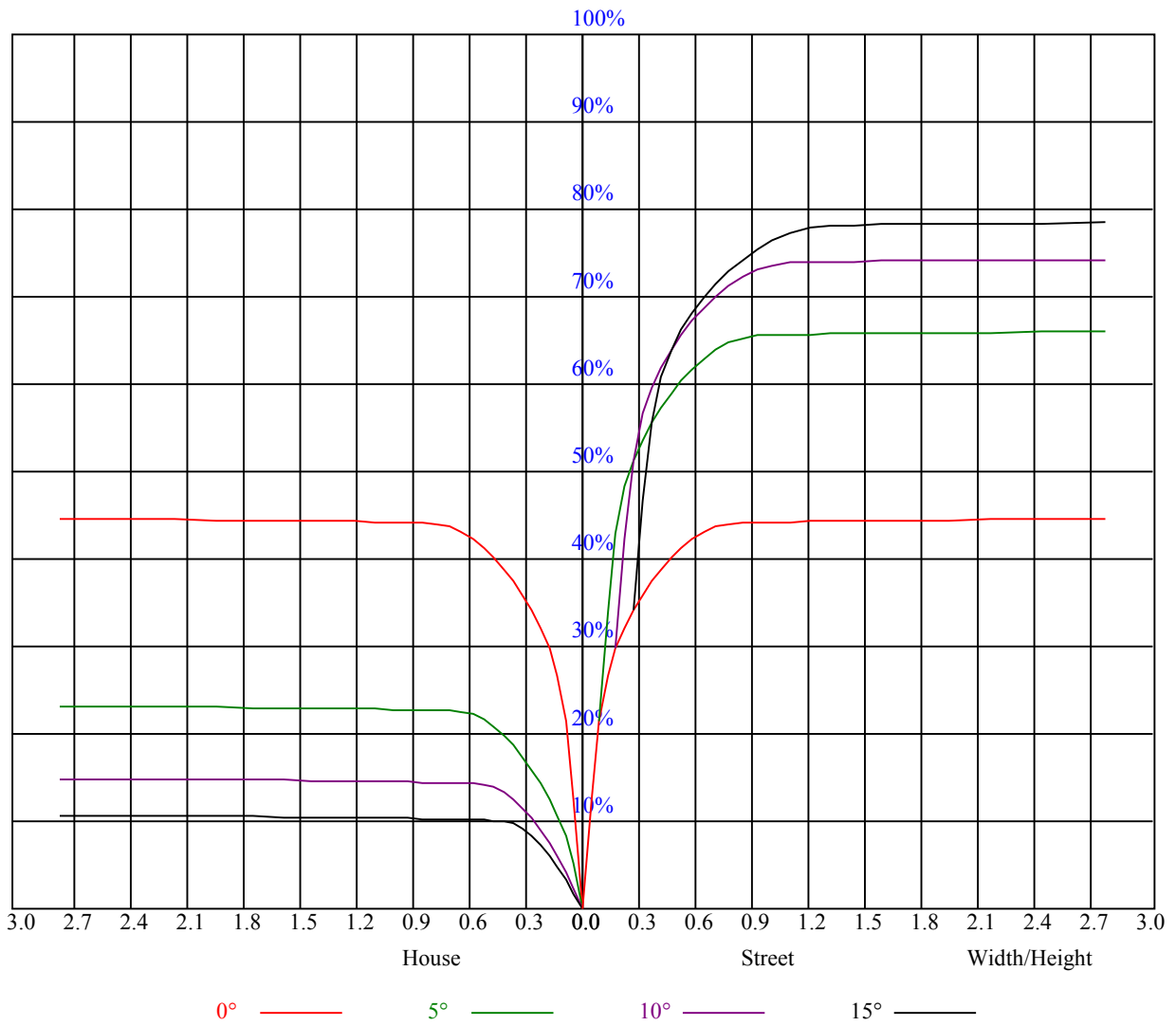
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.98	0.95	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.84
2	0.95	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	0.83	0.81
3	0.91	0.87	0.84	0.90	0.86	0.84	0.88	0.85	0.82	0.85	0.83	0.81	0.83	0.82	0.80	0.79
4	0.87	0.83	0.80	0.86	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.79	0.77	0.75	0.74
6	0.82	0.77	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
9	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67
10	0.73	0.69	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.71	0.69	0.66	0.71	0.68	0.66	0.65



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	20310.31	18526.48	12398.70	5830.47	2868.44	1146.27	817.04	698.12	595.16
45.0	20310.31	15591.97	9128.35	3749.34	1654.44	964.04	765.83	664.53	550.56
90.0	19627.61	12899.71	7296.07	3147.57	1253.63	879.14	733.85	629.51	530.91
135.0	20381.88	16109.50	9706.44	4118.22	1831.18	1031.21	796.67	665.08	556.07
180.0	20310.31	15977.37	9637.07	4238.79	1726.57	978.57	751.08	629.35	537.30
225.0	20310.31	19231.20	10832.90	7157.88	2681.25	1097.49	821.22	648.45	553.59
270.0	19627.61	20332.33	15311.18	8308.01	3595.18	1426.51	895.77	700.87	592.96
315.0	20381.88	18878.84	10873.09	6504.36	2396.05	1076.46	808.45	683.69	576.33
360.0	20310.31	18526.48	12398.70	5830.47	2868.44	1146.27	817.04	698.12	595.16
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	492.20	437.15	405.22	390.35	378.24	366.13	354.56	344.65	325.93
45.0	457.52	411.27	393.10	383.74	376.04	362.27	349.06	336.95	278.03
90.0	451.79	408.57	391.12	382.31	372.13	358.42	344.98	332.98	241.26
135.0	485.60	427.24	399.71	388.70	376.04	361.17	349.06	336.95	286.84
180.0	461.43	419.14	398.55	384.79	370.69	356.71	343.28	333.75	289.21
225.0	487.80	444.25	413.47	393.10	374.93	362.71	350.60	339.75	328.69
270.0	518.63	464.13	431.64	411.27	391.45	371.63	360.07	347.96	335.84
315.0	491.54	439.68	412.87	397.78	381.43	368.27	355.72	344.05	323.51
360.0	492.20	437.15	405.22	390.35	378.24	366.13	354.56	344.65	325.93
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	198.09	55.22	13.60	9.86	6.44	5.12	4.96	4.79	4.68
45.0	118.87	15.97	11.84	7.60	5.89	4.96	4.84	4.73	4.68
90.0	91.28	17.01	13.49	9.08	5.34	4.96	4.79	4.73	4.62
135.0	146.78	25.88	15.64	12.00	8.97	5.07	4.96	4.79	4.73
180.0	141.94	26.04	12.72	9.63	7.43	5.07	4.90	4.79	4.68
225.0	211.58	72.40	13.54	10.96	7.65	5.29	4.90	4.79	4.73
270.0	278.59	100.09	16.41	13.60	9.52	6.55	5.07	4.90	4.79
315.0	190.11	52.69	14.59	11.07	7.27	5.18	5.01	4.84	4.73
360.0	198.09	55.22	13.60	9.86	6.44	5.12	4.96	4.79	4.68
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	4.62	4.57	4.51	4.46	4.46	4.40	4.40	4.35	4.35
45.0	4.62	4.57	4.46	4.46	4.40	4.40	4.40	4.35	4.35
90.0	4.57	4.51	4.46	4.46	4.40	4.40	4.35	4.35	4.29
135.0	4.62	4.57	4.57	4.51	4.46	4.46	4.40	4.35	4.35
180.0	4.62	4.57	4.51	4.46	4.46	4.40	4.40	4.35	4.35
225.0	4.62	4.57	4.51	4.46	4.40	4.40	4.35	4.35	4.35
270.0	4.68	4.62	4.57	4.51	4.46	4.40	4.40	4.40	4.35
315.0	4.62	4.57	4.51	4.46	4.40	4.40	4.40	4.35	4.35
360.0	4.62	4.57	4.51	4.46	4.46	4.40	4.40	4.35	4.35
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.35	4.29	4.35	4.35	4.29	4.35	4.29	4.29	4.29
45.0	4.35	4.35	4.35	4.35	4.29	4.29	4.29	4.29	4.29
90.0	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
135.0	4.35	4.35	4.35	4.35	4.29	4.29	4.29	4.29	4.29
180.0	4.35	4.35	4.35	4.29	4.35	4.29	4.29	4.29	4.29
225.0	4.35	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
270.0	4.35	4.35	4.35	4.35	4.35	4.29	4.29	4.29	4.29
315.0	4.35	4.35	4.35	4.35	4.29	4.29	4.29	4.29	4.29
360.0	4.35	4.29	4.35	4.35	4.29	4.35	4.29	4.29	4.29

Intensity data(cd)

C/γ(°)	90.0
0.0	4.29
45.0	4.29
90.0	4.29
135.0	4.29
180.0	4.29
225.0	4.29
270.0	4.29
315.0	4.29
360.0	4.29