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Nata

LumCAT: 1405-N
Luminaire: 92.70.051.00
Report No: NATA0100
Test No: GC2018080102
LampCAT: BRIDGELUX V4 HD
Lamp flux(lm): 732.0
Number of Lamps: 1
Length(mm): 39
Phm Type: C

Voltage(V): 37.3000
Current(A): 0.2000
Power (W): 7.4600
PF: 0.0000
Ballast type: DC
Width(mm): 39
Height(mm): 0

Photometric Results

Lumens(lm): 631.80
Efficiency(%): 86.31%
Lumens(lm)/Power(W): 84.69
Central intensity(cd): 2070.258
Maximum intensity(cd): 2070.258
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=17.9
 [C90/270]Total=17.9
Field angle(10%Imax): [C0/180]Total=62.2
 [C90/270]Total=62.2
Maximum s/h(1/2): C0_180=0.31 C90_270=0.31
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.57%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.247%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2070.258	1.981	1.981	.271%	.314%
2.0	1987.605	15.213	17.194	2.078%	2.721%
4.0	1778.184	27.204	44.398	3.716%	7.027%
6.0	1479.021	33.906	78.304	4.632%	12.394%
8.0	1155.751	35.276	113.58	4.819%	17.977%
10.0	904.652	34.452	148.032	4.707%	23.430%
12.0	699.430	31.892	179.925	4.357%	28.478%
14.0	545.506	28.943	208.867	3.954%	33.059%
16.0	447.051	27.025	235.892	3.692%	37.337%
18.0	376.393	25.509	261.401	3.485%	41.374%
20.0	329.182	24.692	286.093	3.373%	45.282%
22.0	296.486	24.358	310.451	3.328%	49.138%
24.0	270.065	24.091	334.541	3.291%	52.951%
26.0	250.073	24.042	358.584	3.284%	56.756%
28.0	232.283	23.916	382.5	3.267%	60.542%
30.0	216.000	23.686	406.186	3.236%	64.291%
32.0	199.896	23.232	429.417	3.174%	67.968%
34.0	184.611	22.640	452.058	3.093%	71.551%
36.0	167.124	21.544	473.601	2.943%	74.961%
38.0	149.829	20.230	493.832	2.764%	78.163%
40.0	131.076	18.478	512.31	2.524%	81.088%
42.0	111.806	16.407	528.717	2.241%	83.685%
44.0	94.126	14.340	543.057	1.959%	85.954%
46.0	77.815	12.276	555.333	1.677%	87.898%
48.0	63.735	10.388	565.721	1.419%	89.542%
50.0	52.455	8.813	574.533	1.204%	90.937%
52.0	43.550	7.526	582.06	1.028%	92.128%
54.0	36.447	6.467	588.527	.883%	93.151%
56.0	31.093	5.653	594.18	.772%	94.046%
58.0	26.764	4.978	599.158	.680%	94.834%
60.0	23.199	4.406	603.564	.602%	95.531%
62.0	20.323	3.935	607.499	.538%	96.154%
64.0	17.818	3.512	611.011	.480%	96.710%
66.0	15.719	3.149	614.161	.430%	97.209%
68.0	13.867	2.820	616.981	.385%	97.655%
70.0	12.202	2.515	619.495	.344%	98.053%
72.0	10.633	2.218	621.713	.303%	98.404%
74.0	9.332	1.967	623.68	.269%	98.715%

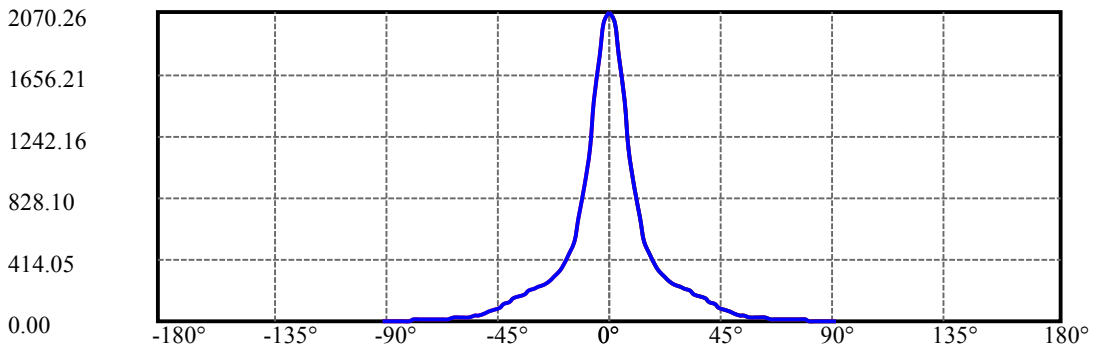
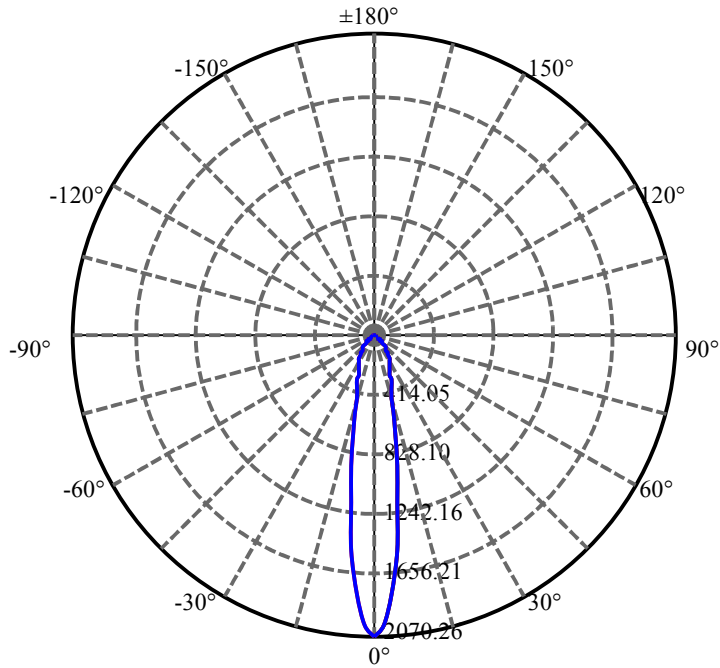
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.004	1.703	625.384	.233%	98.985%
78.0	6.861	1.472	626.855	.201%	99.218%
80.0	5.829	1.259	628.114	.172%	99.417%
82.0	4.907	1.066	629.18	.146%	99.586%
84.0	4.129	0.901	630.081	.123%	99.728%
86.0	3.496	0.765	630.846	.104%	99.850%
88.0	2.966	0.650	631.496	.089%	99.952%
90.0	2.739	0.300	631.796	.041%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	406.19	55.49%	64.29%
0-40	512.31	69.99%	81.09%
0-60	603.56	82.45%	95.53%
0-90	631.50	86.27%	99.95%
0-120	631.50	86.27%	99.95%
0-180	631.80	86.31%	100.00%
60-90	32.34	4.42%	5.12%
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%
0-39.26	505.44	69.05%	80.00%

ZONAL LUMEN SUMMARY

0-10	148.03
10-20	138.06
20-30	120.09
30-40	106.12
40-50	62.22
50-60	29.03
60-70	15.93
70-80	8.62
80-90	3.38
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



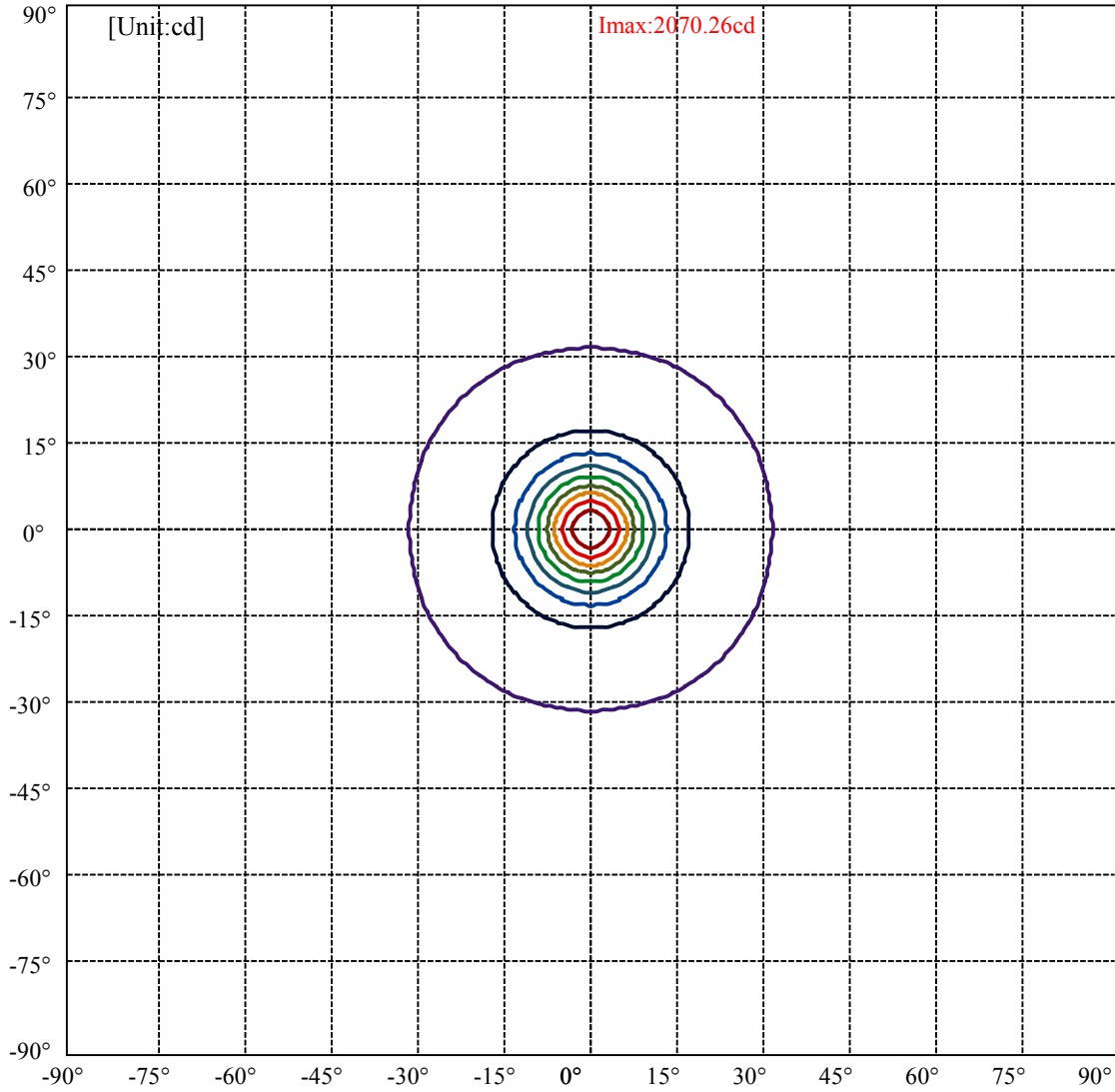
C0(Max): —————

C0/C180: —————

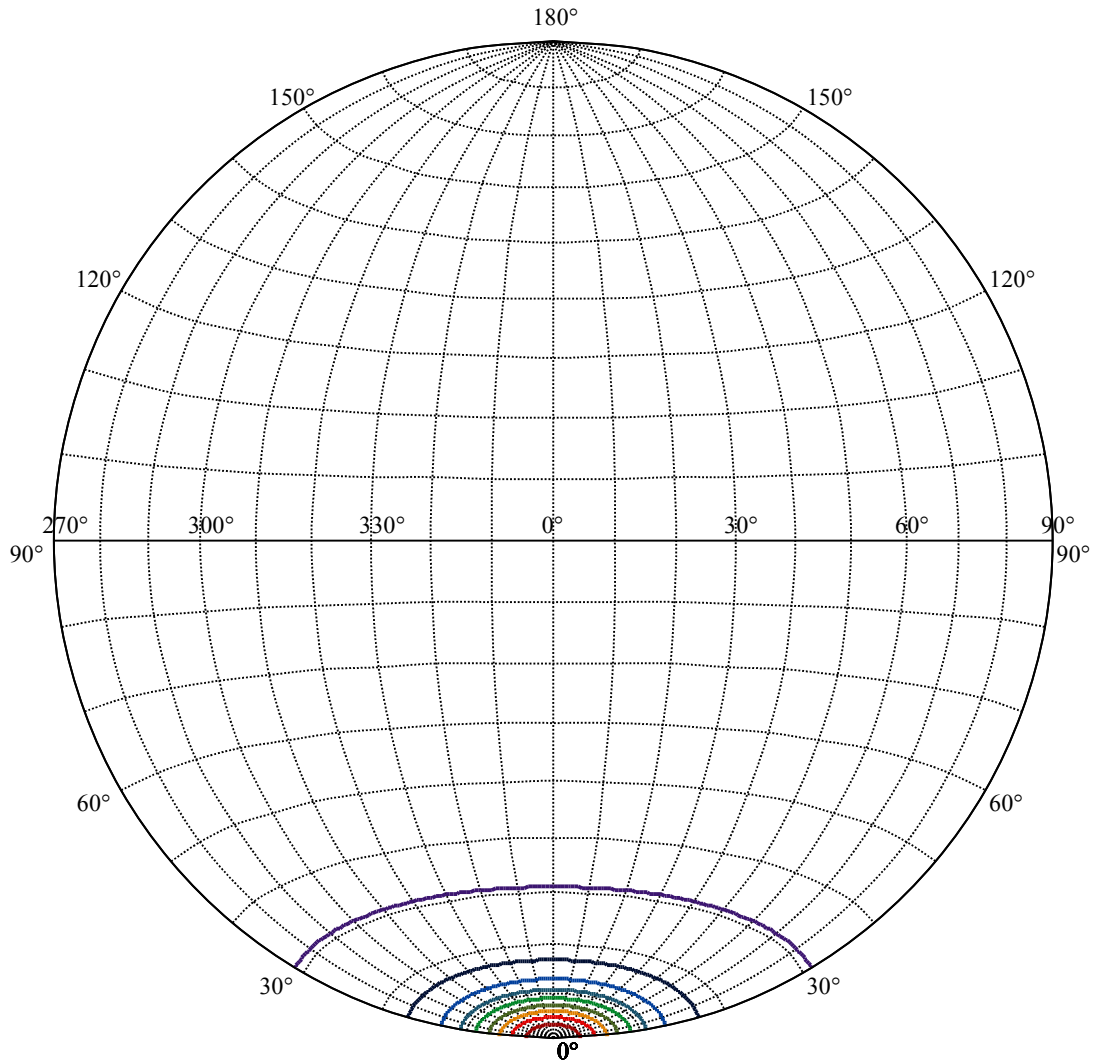
C90/C270: —————

Field angle(10%Imax):C0/180Left:31.1 Right:31.1
:C90/270Left:31.1 Right:31.1

Beam Angle(50%Imax):C0/180Left:9.0 Right:9.0
:C90/270Left:9.0 Right:9.0



(10%Imax) 207.026	—
(20%Imax) 414.052	—
(30%Imax) 621.078	—
(40%Imax) 828.103	—
(50%Imax) 1035.13	—
(60%Imax) 1242.16	—
(70%Imax) 1449.18	—
(80%Imax) 1656.21	—
(90%Imax) 1863.23	—



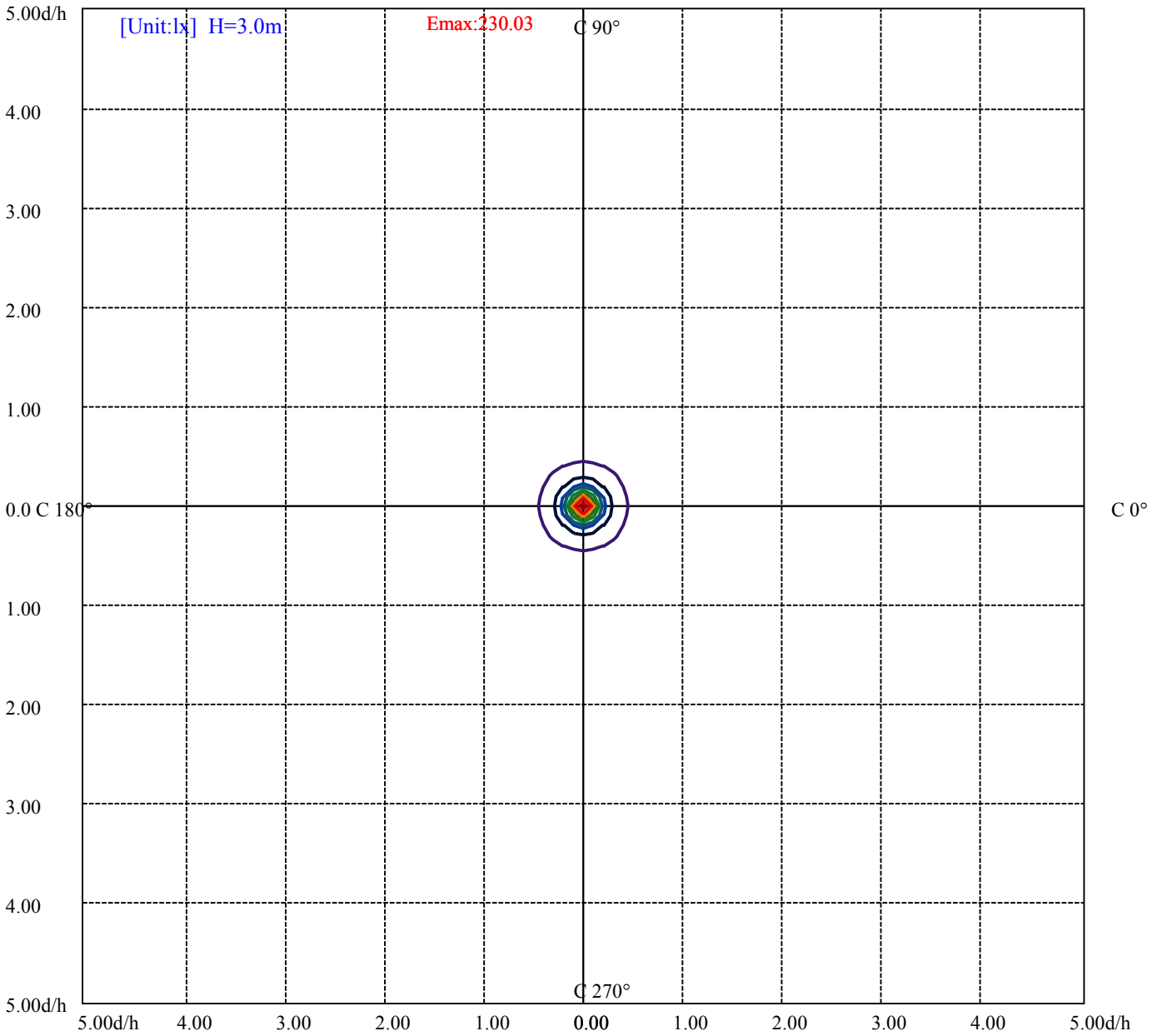
House

[Unit:cd]

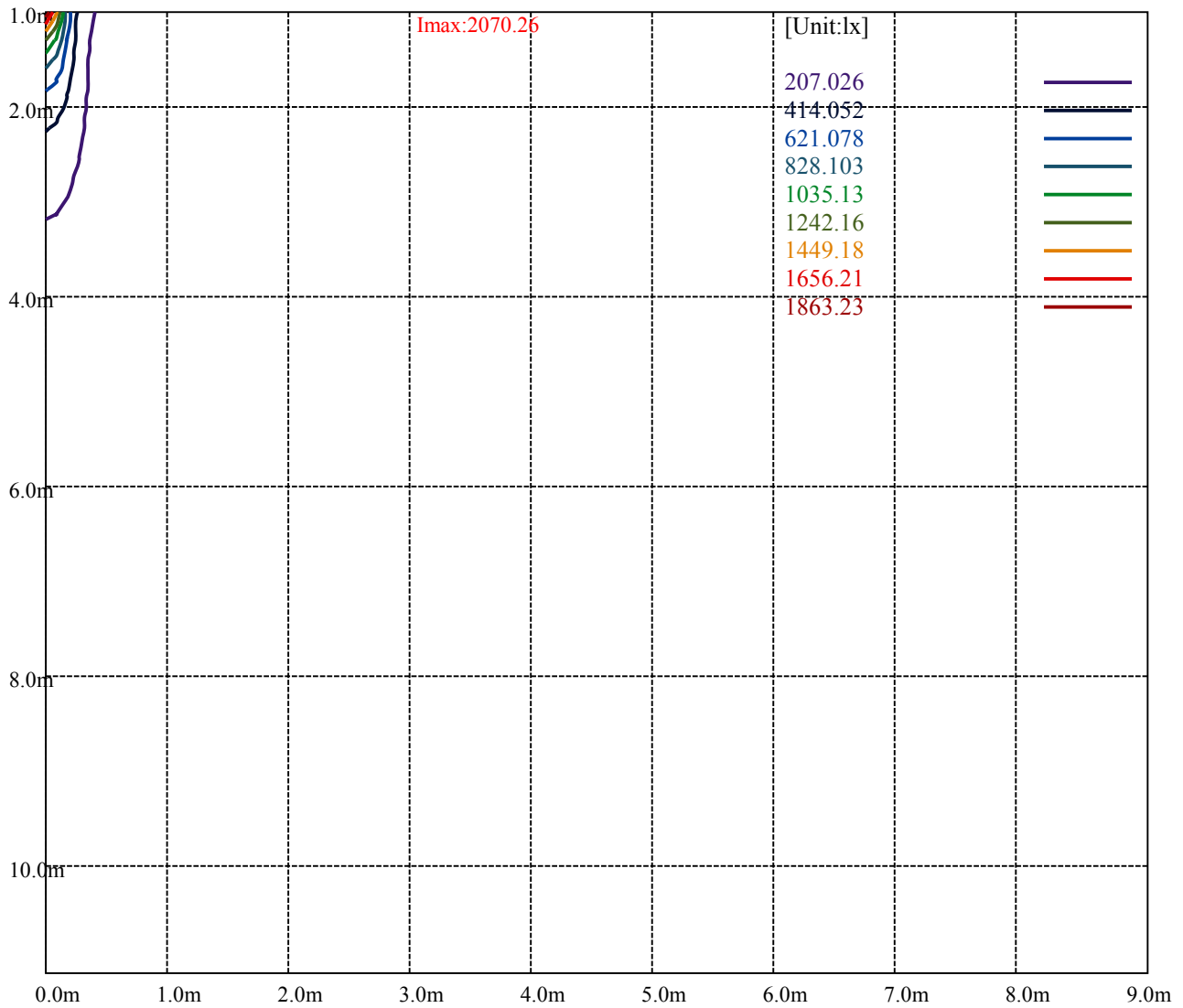
Road

Imax:2070.26

(10%Imax) 207.026	—
(20%Imax) 414.052	—
(30%Imax) 621.078	—
(40%Imax) 828.103	—
(50%Imax) 1035.13	—
(60%Imax) 1242.16	—
(70%Imax) 1449.18	—
(80%Imax) 1656.21	—
(90%Imax) 1863.23	—



- (10%Emax) 23.00278
- (20%Emax) 46.00555
- (30%Emax) 69.00845
- (40%Emax) 92.01122
- (50%Emax) 115.0144
- (60%Emax) 138.0167
- (70%Emax) 161.02
- (80%Emax) 184.0222
- (90%Emax) 207.0256



Luminance Table

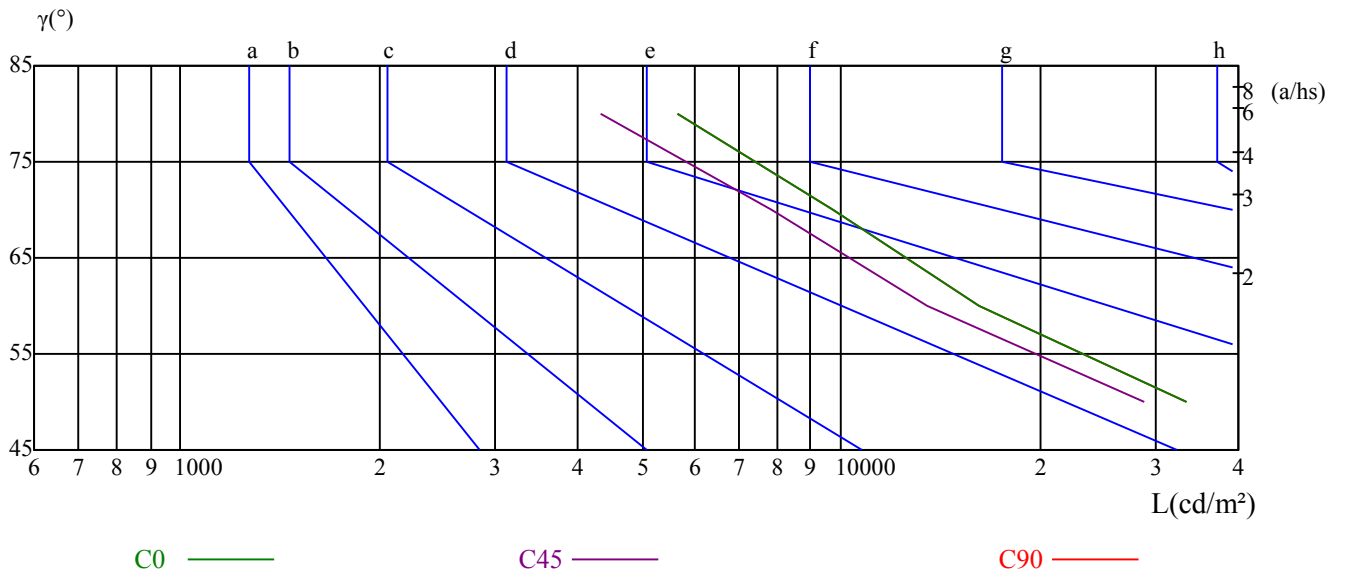
γ	45	50	55	60	65	70	75	80	85
C0	0	33301	0	16156	0	9737	0	5647	0
C45	0	28779	0	13521	0	7838	0	4316	0
C90	0	33301	0	16156	0	9737	0	5647	0

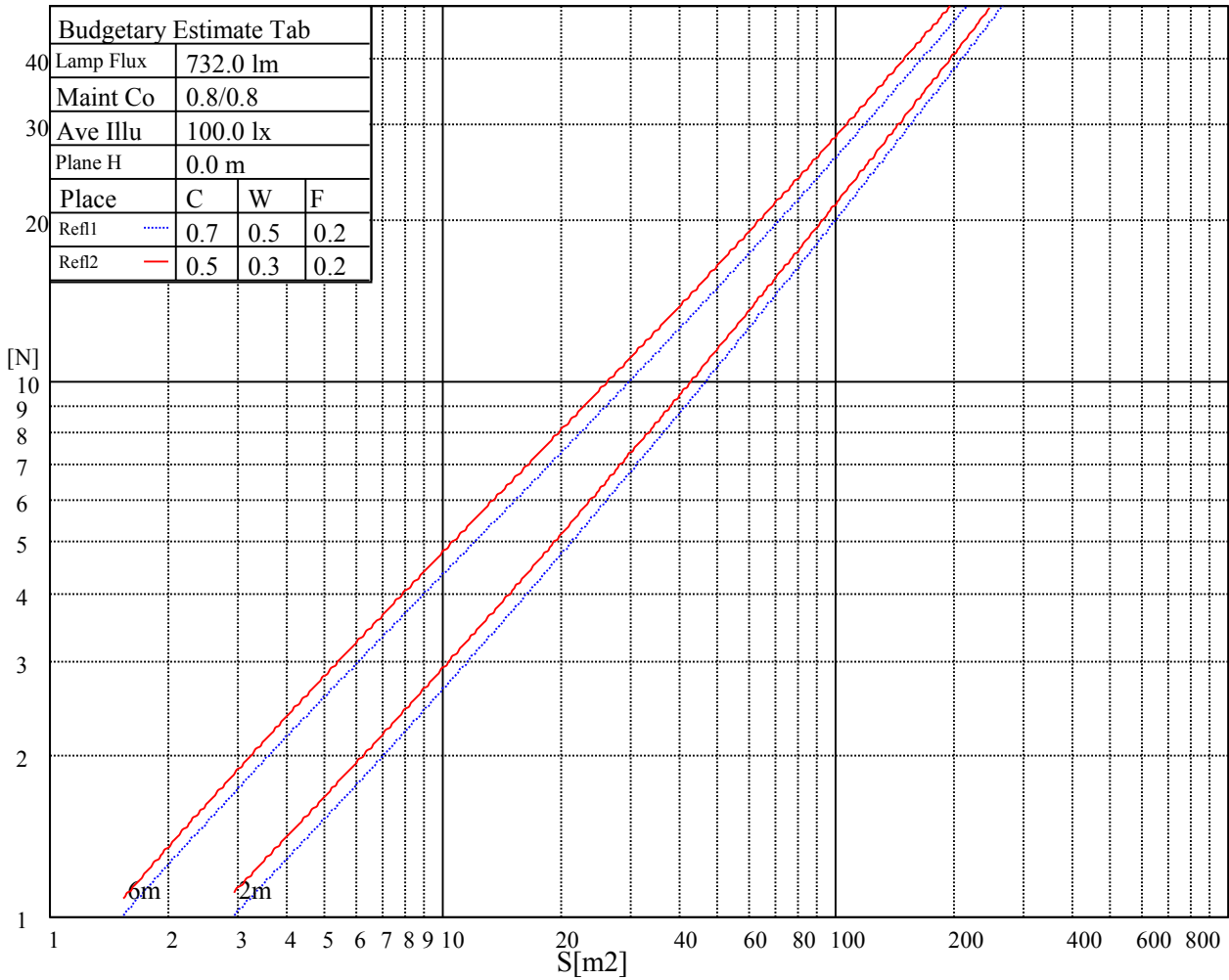
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29378	28650	29400	24615	23636	24265	30111	27411	29384

Glare Table

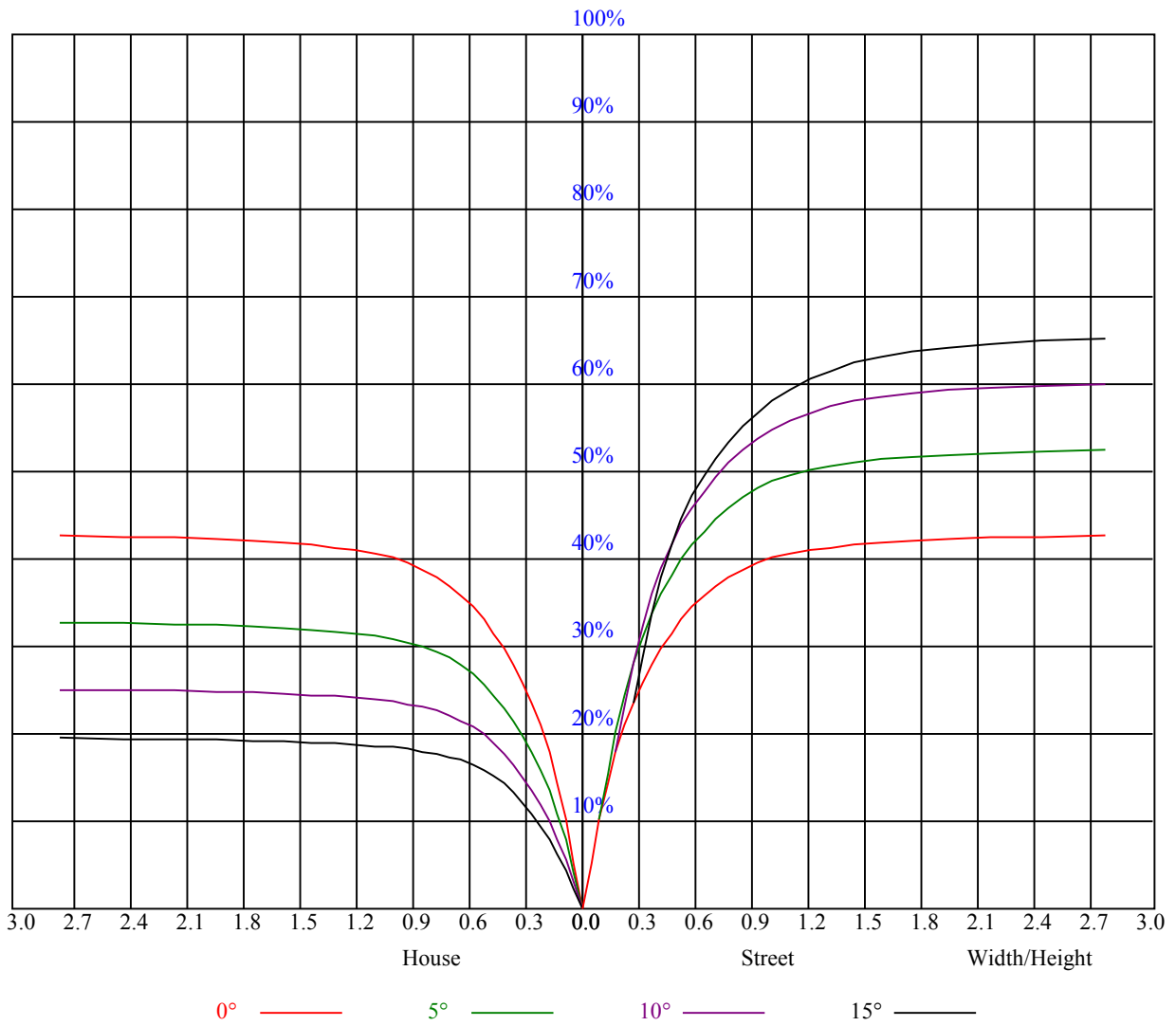
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.95	0.92	0.90	0.93	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.79
2	0.88	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.78	0.81	0.78	0.76	0.78	0.76	0.75	0.73
3	0.82	0.77	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.70	0.74	0.71	0.69	0.68
4	0.76	0.71	0.67	0.75	0.71	0.67	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.63
5	0.72	0.66	0.63	0.71	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.61	0.59
6	0.67	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56
7	0.64	0.59	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
8	0.61	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.57	0.54	0.51	0.50
9	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.48
10	0.55	0.50	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.47	0.53	0.49	0.46	0.45



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	2053.05	2012.86	1843.84	1572.41	1298.78	1036.16	815.39	632.60	508.72
45.0	2067.92	2053.05	1887.33	1610.95	1325.21	1026.25	787.31	614.43	488.90
90.0	2092.14	2070.67	1888.99	1587.28	1087.03	917.40	691.29	524.30	428.78
135.0	2067.92	2053.60	1881.83	1555.89	1215.65	912.28	680.50	518.08	423.93
180.0	2053.05	1915.41	1683.07	1369.25	1043.92	795.68	617.40	490.61	415.29
225.0	2067.92	1937.43	1681.42	1404.49	1084.39	846.71	670.97	528.05	440.56
270.0	2092.14	1943.49	1700.69	1383.02	1120.40	863.83	674.44	536.80	435.50
315.0	2067.92	1914.31	1658.30	1348.88	1070.63	838.89	658.14	519.18	434.73
360.0	2053.05	2012.86	1843.84	1572.41	1298.78	1036.16	815.39	632.60	508.72
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	422.83	361.17	322.63	291.25	270.27	245.61	227.55	210.81	195.40
45.0	407.42	354.01	316.02	285.74	262.40	242.85	225.84	209.93	192.15
90.0	357.48	312.00	280.07	255.13	234.93	218.68	202.22	186.15	172.11
135.0	355.66	311.62	282.99	257.22	239.39	225.07	210.81	196.22	184.22
180.0	357.21	319.93	289.05	267.46	247.92	231.51	214.94	199.36	183.56
225.0	370.47	324.61	292.35	268.68	249.52	234.15	218.96	203.49	188.68
270.0	370.53	325.38	292.35	263.72	244.67	225.79	209.60	193.58	177.01
315.0	369.54	324.72	296.42	271.32	251.50	234.60	218.08	199.63	183.78
360.0	422.83	361.17	322.63	291.25	270.27	245.61	227.55	210.81	195.40
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	178.55	159.94	141.83	122.00	104.06	87.21	72.51	59.46	49.66
45.0	174.64	156.14	137.37	116.44	98.83	81.54	67.22	55.61	45.31
90.0	155.92	139.62	122.61	105.60	88.42	74.66	61.11	50.38	42.50
135.0	168.58	155.31	136.59	116.39	99.54	80.33	65.30	54.62	44.60
180.0	164.84	147.55	126.96	107.53	89.52	73.56	59.74	49.55	41.29
225.0	170.56	152.51	133.24	114.08	94.64	79.06	63.76	51.59	42.94
270.0	159.77	142.16	123.82	104.77	89.14	73.11	60.18	49.33	40.74
315.0	164.12	145.40	126.19	107.64	88.86	73.06	60.07	49.11	41.35
360.0	178.55	159.94	141.83	122.00	104.06	87.21	72.51	59.46	49.66
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	41.29	35.02	30.06	25.77	22.57	19.55	17.18	15.20	13.38
45.0	38.70	32.48	27.91	24.11	21.20	18.50	16.52	14.37	12.66
90.0	35.57	30.17	26.37	23.01	19.93	17.78	15.58	13.71	12.06
135.0	37.22	32.15	27.47	23.89	21.09	18.33	16.24	14.37	12.72
180.0	34.69	30.06	25.88	22.63	19.88	17.51	15.36	13.60	11.84
225.0	35.57	30.01	25.71	22.24	19.27	17.07	15.03	13.27	11.67
270.0	34.02	29.07	25.16	21.69	19.16	16.74	14.81	13.10	11.51
315.0	34.52	29.79	25.55	22.24	19.49	17.07	15.03	13.32	11.78
360.0	41.29	35.02	30.06	25.77	22.57	19.55	17.18	15.20	13.38
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	11.67	10.24	9.03	7.82	6.83	5.73	4.84	4.24	3.47
45.0	11.18	9.86	8.42	7.32	6.28	5.29	4.46	3.80	3.08
90.0	10.52	9.14	7.82	6.66	5.56	4.68	3.91	3.30	2.81
135.0	11.01	9.69	8.20	7.05	5.95	5.01	4.13	3.47	2.97
180.0	10.30	9.03	7.65	6.50	5.45	4.62	4.02	3.25	2.81
225.0	10.19	8.92	7.71	6.61	5.56	4.73	3.96	3.30	2.86
270.0	9.97	8.70	7.43	6.28	5.34	4.40	3.63	3.14	2.75
315.0	10.24	9.08	7.76	6.66	5.67	4.79	4.07	3.47	2.97
360.0	11.67	10.24	9.03	7.82	6.83	5.73	4.84	4.24	3.47

Intensity data(cd)

C/γ(°)	90.0
0.0	3.03
45.0	2.81
90.0	2.64
135.0	2.70
180.0	2.64
225.0	2.64
270.0	2.70
315.0	2.75
360.0	3.03