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Nata

LumCAT: 1426-N
Luminaire: 92.70.051.00+92.70.147.00
Report No: NATA0100
Test No: GC2018080203
LampCAT: BRIDGELUX V4 HD
Lamp flux(lm): 718.0
Number of Lamps: 1
Length(mm): 46
Phm Type: C

Voltage(V): 37.5000
Current(A): 0.2000
Power (W): 7.5000
PF: 0.0000
Ballast type: DC
Width(mm): 46
Height(mm): 0

Photometric Results

Lumens(lm): 576.48
Efficiency(%): 80.29%
Lumens(lm)/Power(W): 76.86
Central intensity(cd): 4470.442
Maximum intensity(cd): 4470.442
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=14.6
 [C90/270]Total=14.6
Field angle(10%Imax): [C0/180]Total=30.9
 [C90/270]Total=30.9
Maximum s/h(1/2): C0_180=0.25 C90_270=0.25
Maximum s/h(1/4): C0_180=0.25 C90_270=0.25
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 80.87%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.424%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/8/2
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4470.442	4.278	4.278	.596%	.742%
2.0	4220.968	32.307	36.585	4.500%	6.346%
4.0	3576.945	54.722	91.307	7.621%	15.839%
6.0	2766.928	63.430	154.737	8.834%	26.842%
8.0	1933.443	59.014	213.751	8.219%	37.079%
10.0	1180.595	44.961	258.712	6.262%	44.878%
12.0	779.041	35.523	294.235	4.947%	51.040%
14.0	533.737	28.318	322.553	3.944%	55.952%
16.0	414.588	25.062	347.615	3.491%	60.300%
18.0	341.735	23.160	370.775	3.226%	64.317%
20.0	285.750	21.434	392.209	2.985%	68.035%
22.0	237.575	19.518	411.727	2.718%	71.421%
24.0	200.570	17.891	429.619	2.492%	74.525%
26.0	168.005	16.152	445.771	2.250%	77.327%
28.0	139.671	14.381	460.152	2.003%	79.821%
30.0	116.548	12.780	472.932	1.780%	82.038%
32.0	96.892	11.261	484.193	1.568%	83.991%
34.0	81.876	10.041	494.234	1.398%	85.733%
36.0	69.935	9.015	503.249	1.256%	87.297%
38.0	60.321	8.145	511.394	1.134%	88.710%
40.0	52.606	7.416	518.81	1.033%	89.996%
42.0	45.539	6.683	525.493	.931%	91.156%
44.0	39.744	6.055	531.547	.843%	92.206%
46.0	35.030	5.526	537.074	.770%	93.165%
48.0	30.680	5.000	542.074	.696%	94.032%
50.0	26.186	4.399	546.473	.613%	94.795%
52.0	21.844	3.775	550.248	.526%	95.450%
54.0	17.659	3.133	553.382	.436%	95.993%
56.0	14.156	2.574	555.956	.358%	96.440%
58.0	11.424	2.125	558.08	.296%	96.809%
60.0	9.607	1.825	559.905	.254%	97.125%
62.0	8.258	1.599	561.504	.223%	97.402%
64.0	7.233	1.426	562.93	.199%	97.650%
66.0	6.559	1.314	564.244	.183%	97.878%
68.0	6.166	1.254	565.498	.175%	98.095%
70.0	5.898	1.215	566.713	.169%	98.306%
72.0	5.698	1.189	567.902	.166%	98.512%
74.0	5.568	1.174	569.076	.163%	98.716%

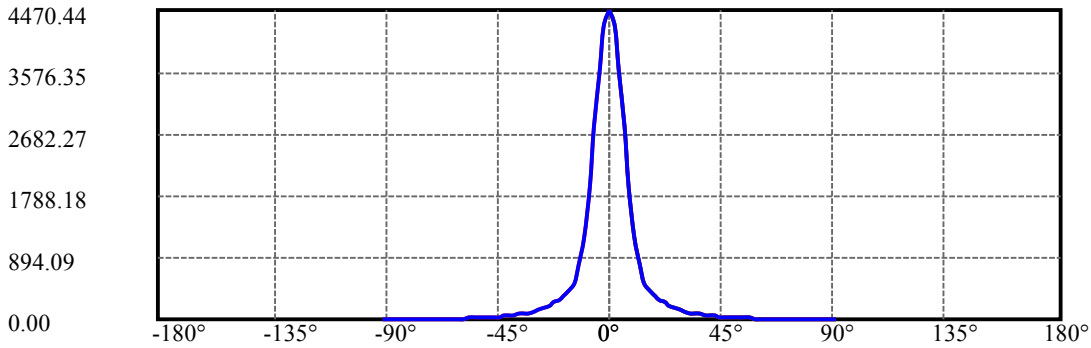
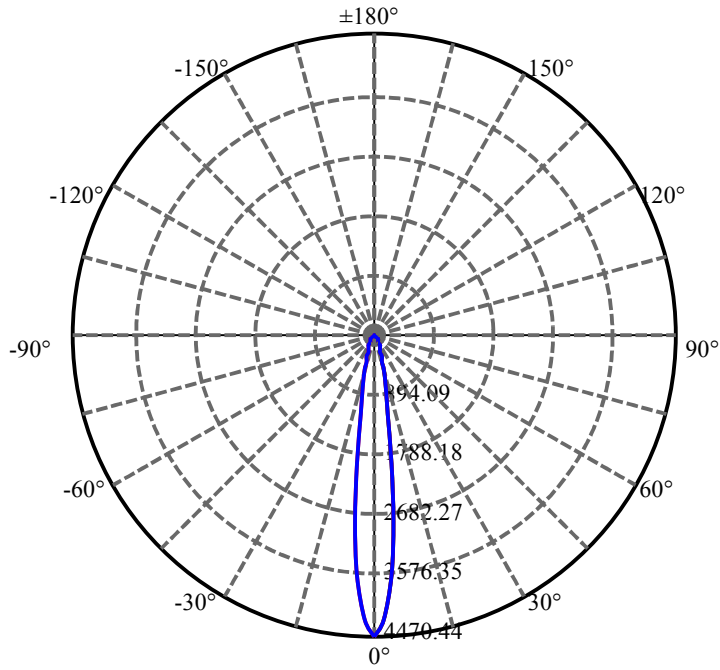
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.444	1.158	570.234	.161%	98.917%
78.0	5.334	1.144	571.378	.159%	99.115%
80.0	5.217	1.127	572.505	.157%	99.311%
82.0	5.141	1.116	573.622	.156%	99.504%
84.0	5.058	1.103	574.725	.154%	99.696%
86.0	4.143	0.906	575.631	.126%	99.853%
88.0	2.636	0.578	576.209	.080%	99.953%
90.0	2.457	0.269	576.478	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	472.93	65.87%	82.04%
0-40	518.81	72.26%	90.00%
0-60	559.91	77.98%	97.13%
0-90	576.21	80.25%	99.95%
0-120	576.21	80.25%	99.95%
0-180	576.48	80.29%	100.00%
60-90	18.13	2.52%	3.14%
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%
0-28.16	461.18	64.23%	80.00%

ZONAL LUMEN SUMMARY

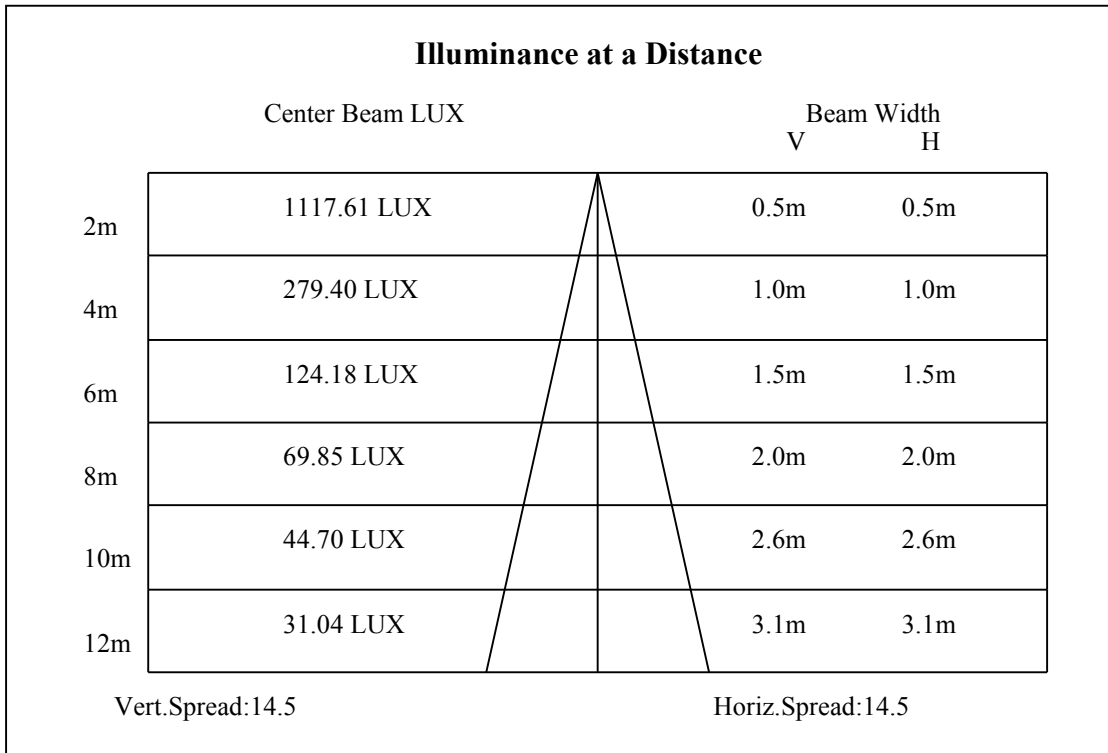
0-10	258.71
10-20	133.50
20-30	80.72
30-40	45.88
40-50	27.66
50-60	13.43
60-70	6.81
70-80	5.79
80-90	3.70
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

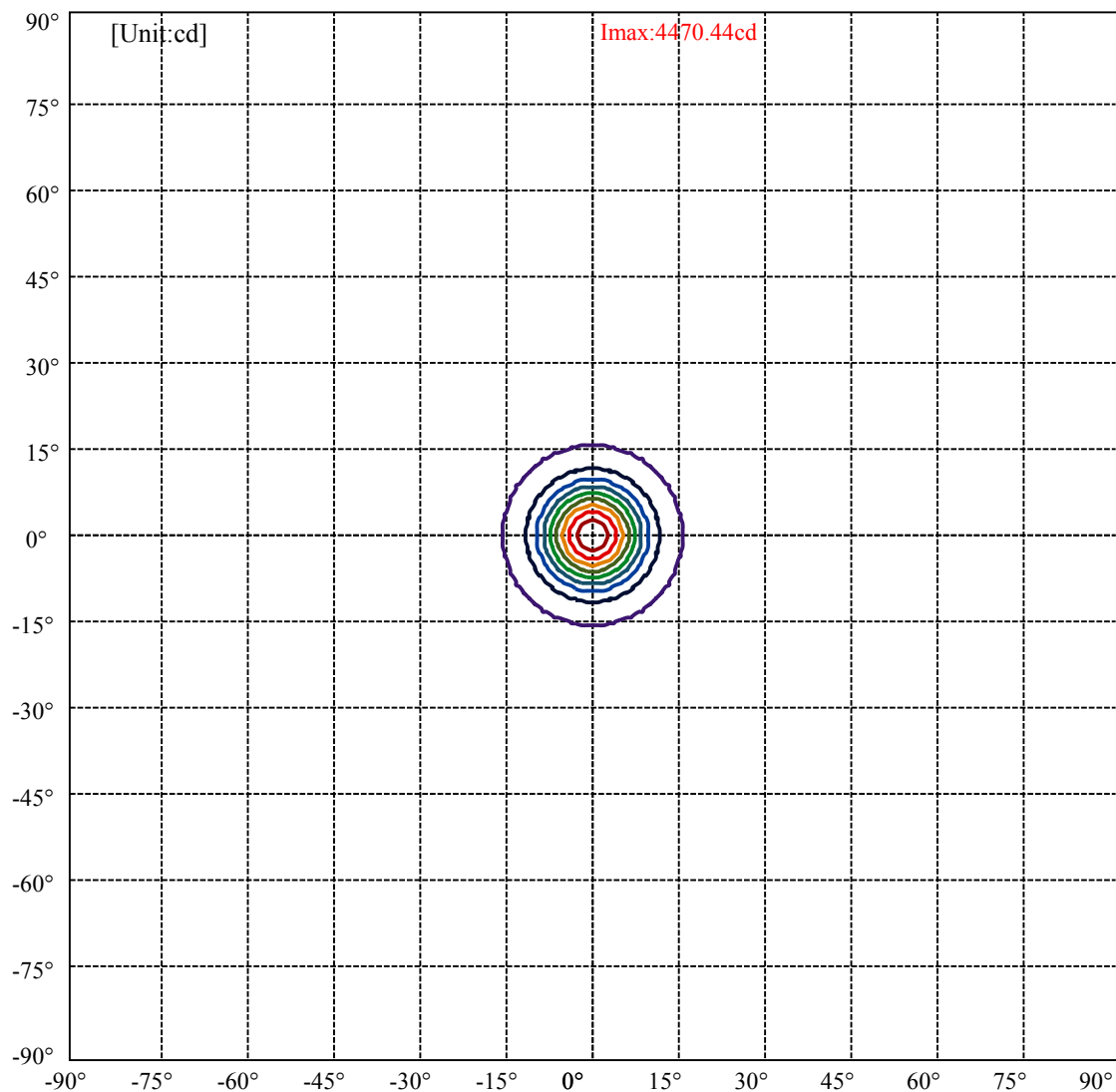


C0(Max): —————
C0/C180: —————
C90/C270: —————

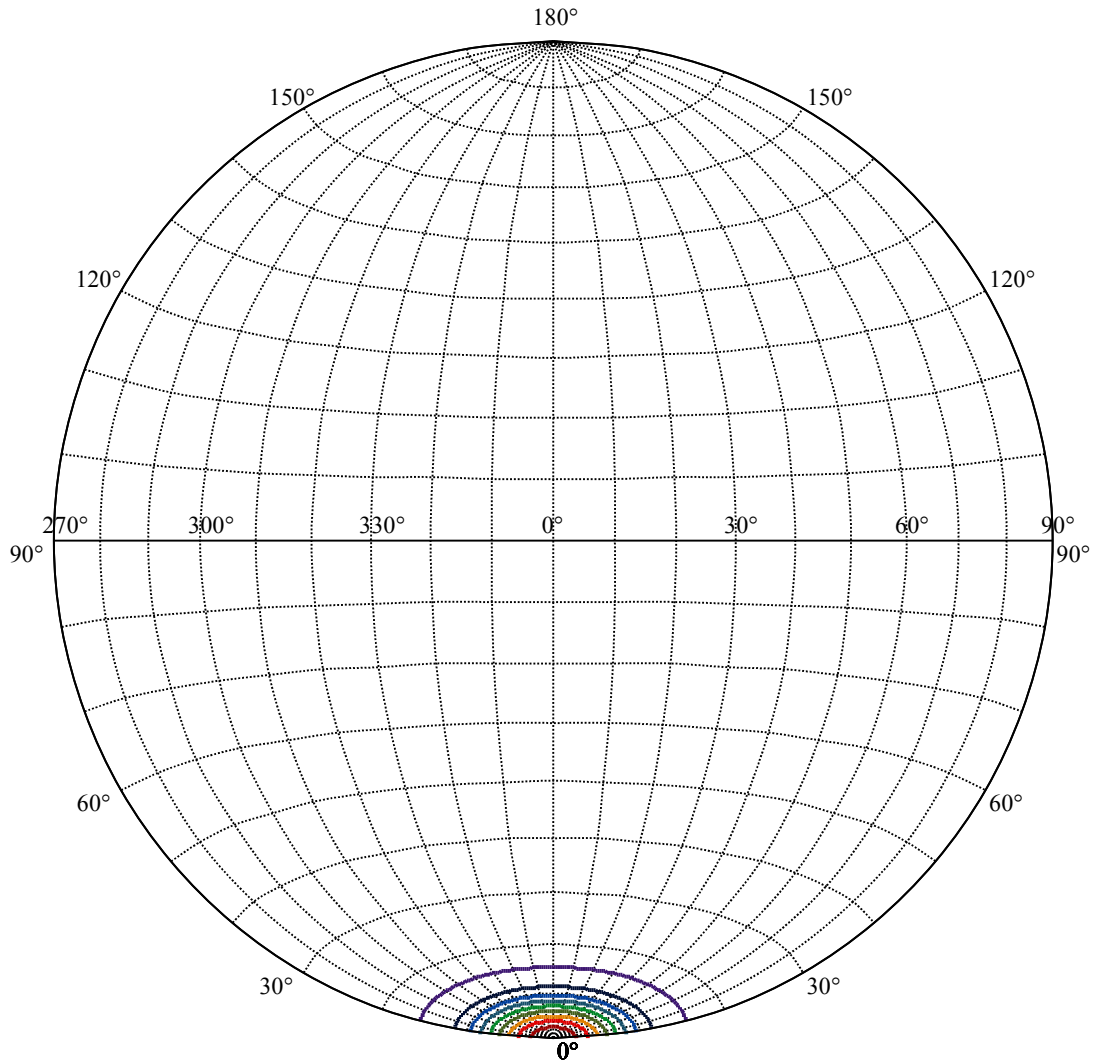
Field angle(10%Imax):C0/180Left:15.5 Right:15.5
:C90/270Left:15.5 Right:15.5

Beam Angle(50%Imax):C0/180Left:7.3 Right:7.3
:C90/270Left:7.3 Right:7.3





(10%Imax) 447.044	—
(20%Imax) 894.089	—
(30%Imax) 1341.13	—
(40%Imax) 1788.18	—
(50%Imax) 2235.22	—
(60%Imax) 2682.27	—
(70%Imax) 3129.31	—
(80%Imax) 3576.35	—
(90%Imax) 4023.4	—



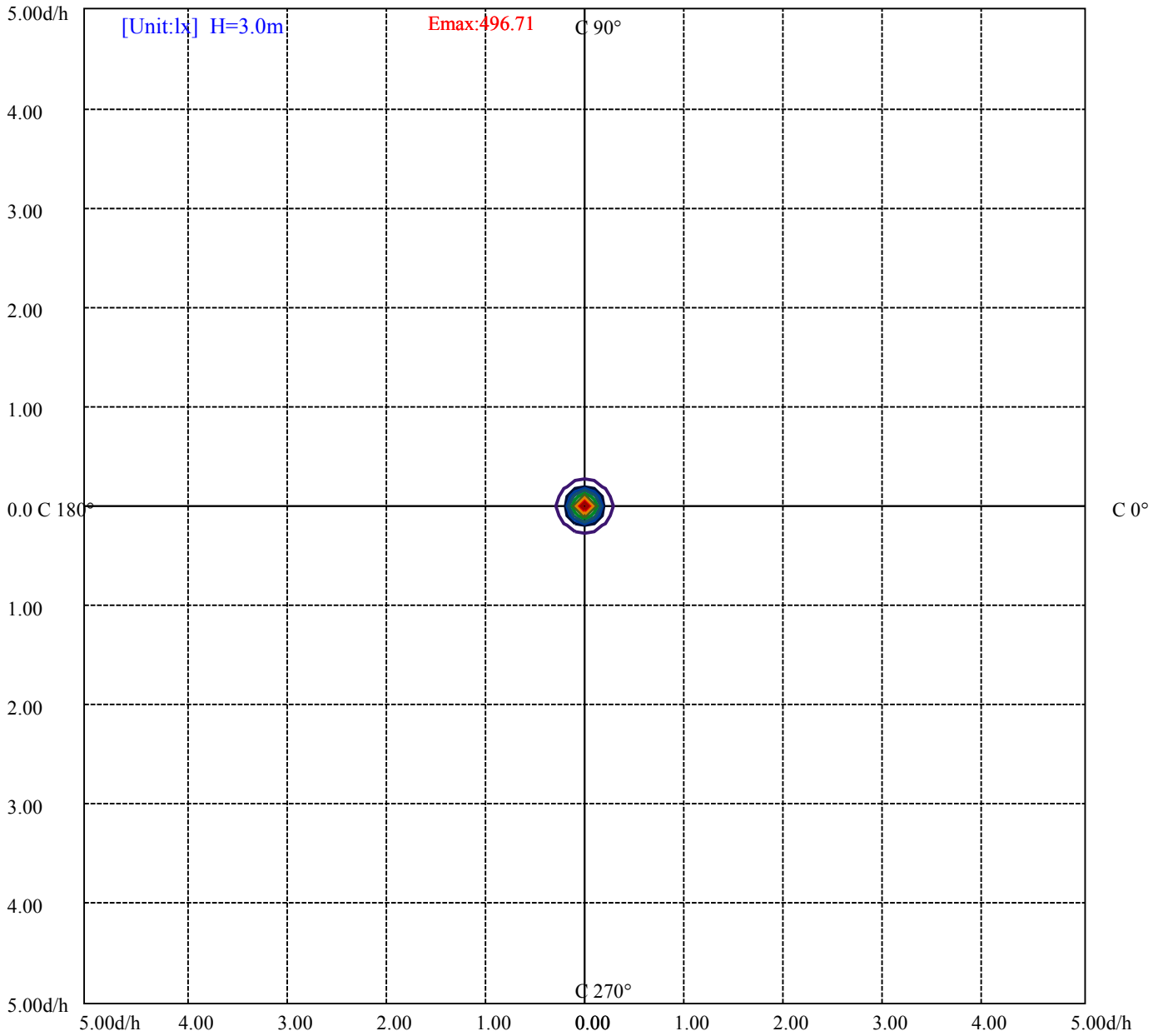
House

[Unit:cd]

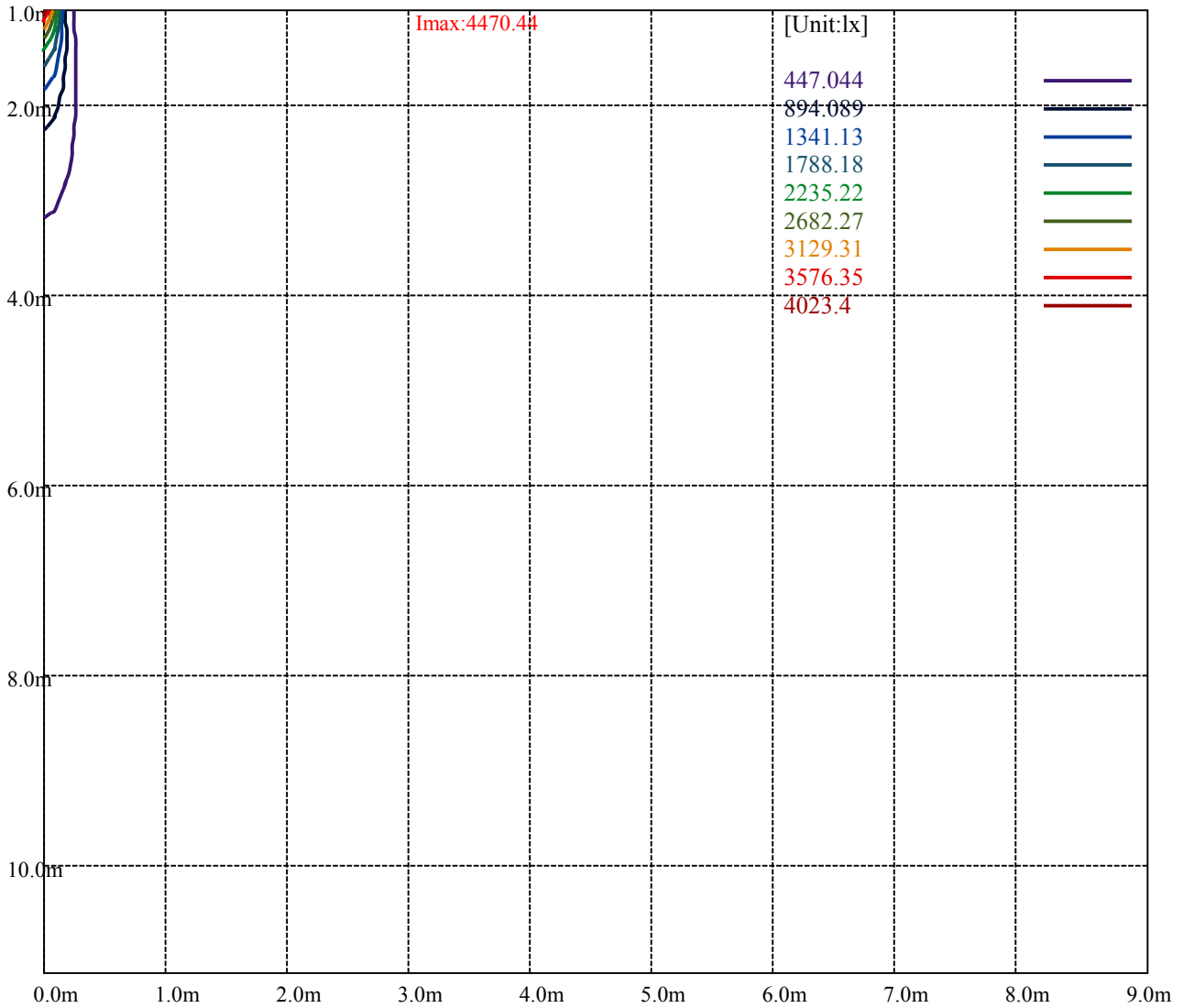
Road

Imax:4470.44

(10%Imax)	447.044	—
(20%Imax)	894.089	—
(30%Imax)	1341.13	—
(40%Imax)	1788.18	—
(50%Imax)	2235.22	—
(60%Imax)	2682.27	—
(70%Imax)	3129.31	—
(80%Imax)	3576.35	—
(90%Imax)	4023.4	—



- (10%Emax) 49.67133
- (20%Emax) 99.34278
- (30%Emax) 149.0145
- (40%Emax) 198.6856
- (50%Emax) 248.3567
- (60%Emax) 298.0278
- (70%Emax) 347.7
- (80%Emax) 397.3711
- (90%Emax) 447.0422



Luminance Table

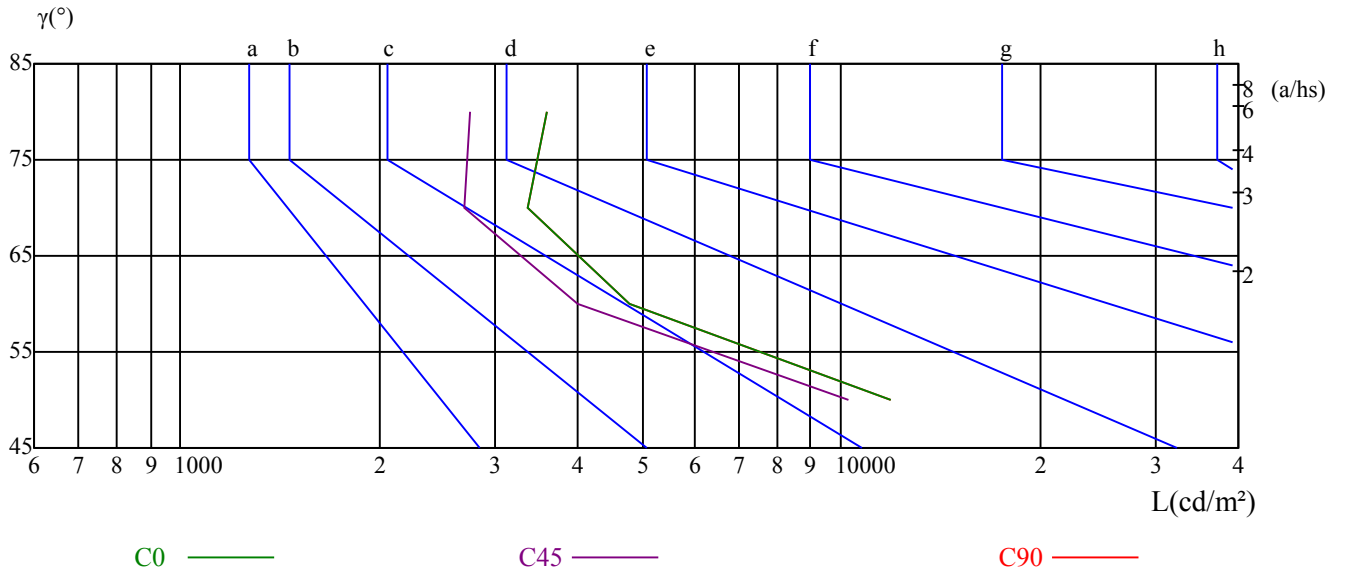
γ	45	50	55	60	65	70	75	80	85
C0	0	11871	0	4770	0	3349	0	3586	0
C45	0	10244	0	3986	0	2692	0	2738	0
C90	0	11871	0	4770	0	3349	0	3586	0

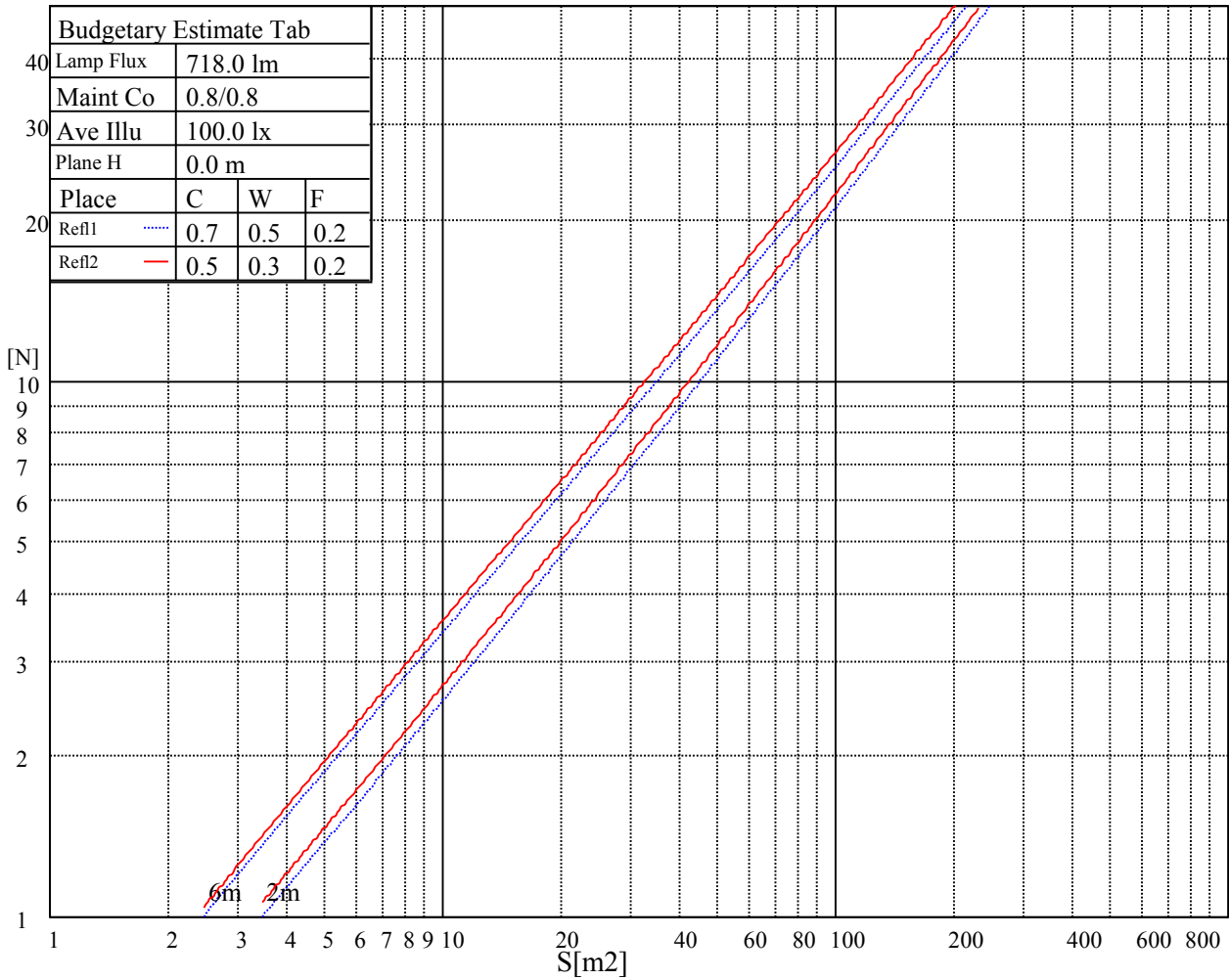
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8227	8227	8227	6999	6999	6999	15151	15151	15151

Glare Table

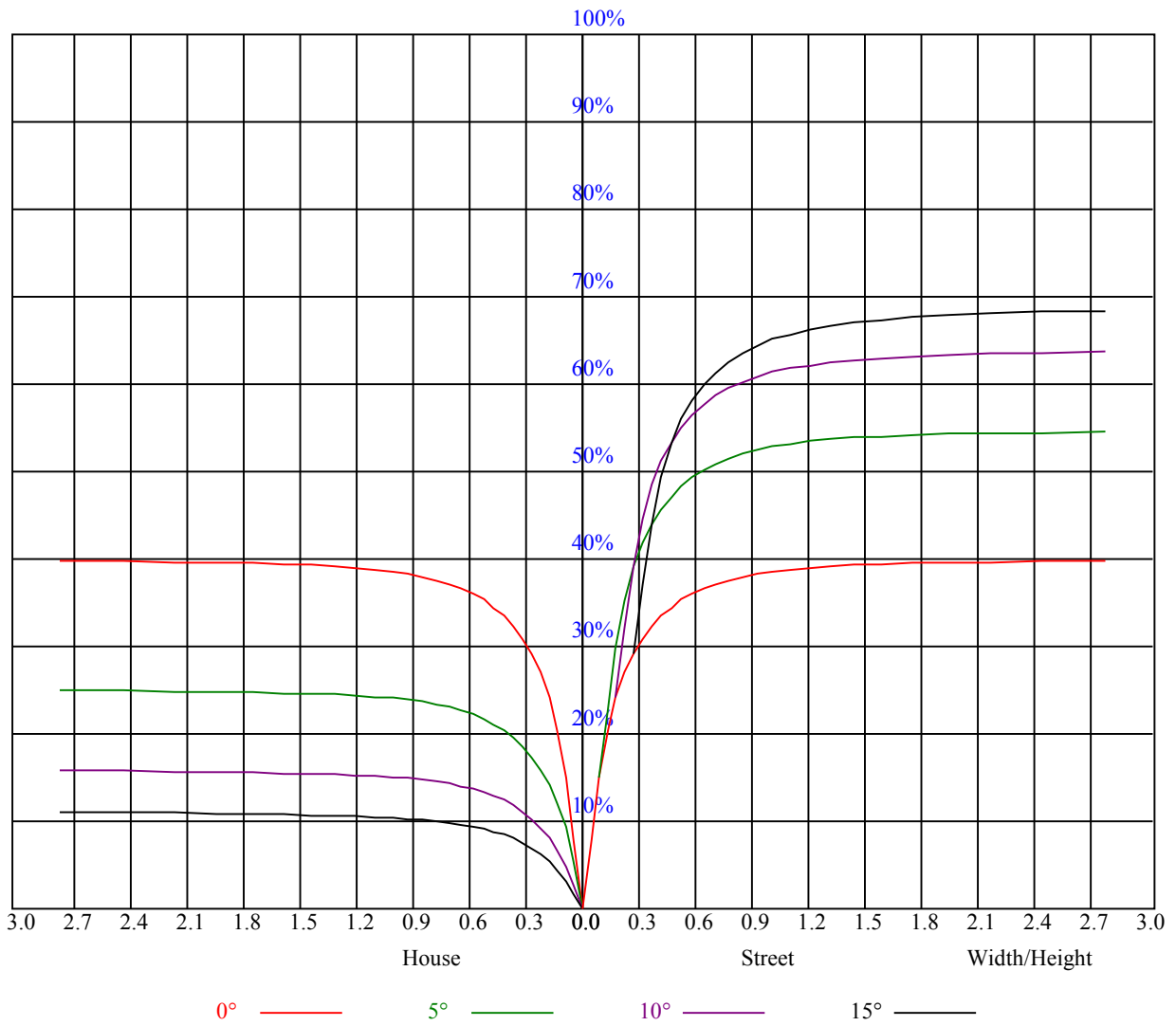
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.81
1	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.76
2	0.85	0.82	0.79	0.83	0.81	0.78	0.81	0.78	0.77	0.78	0.77	0.75	0.76	0.75	0.73	0.72
3	0.80	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.69
4	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.66
5	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.68	0.66	0.70	0.68	0.66	0.69	0.67	0.65	0.64
6	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.62
7	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
8	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.64	0.61	0.59	0.58
9	0.64	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
10	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.61	0.58	0.56	0.55



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	4458.47	4324.13	3736.68	2924.60	2082.23	1323.01	862.73	554.97	421.18
45.0	4486.00	4131.43	3448.73	2623.44	1798.69	1110.49	712.98	504.32	396.41
90.0	4448.56	4052.70	3297.88	2446.71	1655.00	1002.36	653.19	484.99	391.34
135.0	4488.75	4174.93	3522.51	2703.82	1884.58	1182.61	768.59	539.55	421.73
180.0	4458.47	4093.44	3349.63	2588.20	1730.97	1062.59	701.25	502.61	403.51
225.0	4486.00	4326.88	3722.91	2919.64	2086.64	1224.45	838.01	567.03	436.98
270.0	4448.56	4391.85	3905.70	3115.64	2257.86	1458.99	929.90	597.91	442.10
315.0	4488.75	4272.38	3631.52	2813.38	1971.57	1080.26	765.67	518.52	403.45
360.0	4458.47	4324.13	3736.68	2924.60	2082.23	1323.01	862.73	554.97	421.18
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	352.36	287.94	240.93	203.27	170.90	142.05	119.36	99.10	83.52
45.0	328.14	278.59	225.57	186.20	155.48	129.33	108.19	89.91	77.08
90.0	320.37	269.89	221.82	186.48	152.51	124.48	104.39	86.66	73.50
135.0	350.71	291.25	244.23	206.57	174.09	143.81	119.91	98.83	83.19
180.0	334.14	281.12	234.65	201.40	170.01	142.27	118.59	98.55	83.69
225.0	352.58	297.69	247.81	207.73	175.35	146.95	121.89	102.96	87.04
270.0	363.92	301.71	252.54	213.12	178.38	147.77	123.11	102.07	85.06
315.0	331.66	277.81	233.05	199.80	167.32	140.72	116.94	97.06	81.92
360.0	352.36	287.94	240.93	203.27	170.90	142.05	119.36	99.10	83.52
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	71.63	60.84	53.18	46.08	40.19	34.96	31.11	26.87	22.74
45.0	66.18	58.14	51.92	45.48	40.41	36.12	31.99	27.14	22.52
90.0	63.09	55.28	47.90	42.17	37.00	32.81	28.57	23.95	19.66
135.0	71.19	60.78	52.52	45.37	39.42	34.63	30.39	25.71	21.42
180.0	71.30	61.77	52.91	45.81	39.37	34.52	29.95	25.11	20.32
225.0	73.78	64.42	56.05	48.28	42.61	37.66	32.59	28.46	23.67
270.0	72.73	61.50	54.51	46.52	40.69	36.17	31.60	27.14	23.07
315.0	69.59	59.85	51.86	44.60	38.26	33.36	29.23	25.11	21.36
360.0	71.63	60.84	53.18	46.08	40.19	34.96	31.11	26.87	22.74
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	18.72	14.87	11.95	9.91	8.53	7.32	6.55	6.06	5.73
45.0	17.84	13.93	11.56	9.74	8.42	7.32	6.72	6.33	6.11
90.0	15.69	12.50	10.24	8.86	7.76	6.94	6.44	6.22	6.00
135.0	17.18	13.54	10.96	9.25	7.98	6.94	6.28	5.89	5.62
180.0	16.74	13.54	10.85	9.36	7.98	6.94	6.28	5.95	5.67
225.0	18.66	15.36	12.28	10.24	8.86	7.82	7.05	6.66	6.39
270.0	18.83	15.14	12.28	9.97	8.42	7.54	6.94	6.44	6.17
315.0	17.62	14.37	11.29	9.52	8.09	7.05	6.22	5.78	5.51
360.0	18.72	14.87	11.95	9.91	8.53	7.32	6.55	6.06	5.73
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	5.45	5.23	5.01	4.79	4.62	4.51	4.57	4.46	2.81
45.0	5.95	5.78	5.73	5.62	5.45	5.34	5.07	2.75	2.59
90.0	5.84	5.84	5.84	5.78	5.67	5.62	5.45	2.75	2.53
135.0	5.40	5.29	5.12	5.07	5.01	5.18	5.34	4.79	2.53
180.0	5.45	5.29	5.07	4.96	4.84	4.79	4.68	4.24	2.59
225.0	6.28	6.17	6.06	6.00	5.89	5.84	5.73	5.18	2.70
270.0	6.00	5.95	5.89	5.78	5.67	5.34	5.23	4.96	2.70
315.0	5.23	5.01	4.84	4.68	4.57	4.51	4.40	4.02	2.64
360.0	5.45	5.23	5.01	4.79	4.62	4.51	4.57	4.46	2.81

Intensity data(cd)

C/γ(°)	90.0
0.0	2.42
45.0	2.48
90.0	2.48
135.0	2.42
180.0	2.42
225.0	2.48
270.0	2.48
315.0	2.48
360.0	2.42