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NATA

LumCAT: LM01D08538BK
Luminaire: 92.70.045.00
Report No: NATA0100
Test No: GC2018122104
LampCAT: LUMILEDS LUXEON 1205
Lamp flux(lm): 2231.0
Number of Lamps: 1
Length(mm): 85
Phm Type: C

Voltage(V): 35.7000
Current(A): 0.5000
Power (W): 17.8500
PF: 1.0000
Ballast type: DC
Width(mm): 85
Height(mm): 0

Photometric Results

Lumens(lm): 1961.20
Efficiency(%): 87.91%
Lumens(lm)/Power(W): 110.95
Central intensity(cd): 3528.422
Maximum intensity(cd): 3528.422
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=36.2
 [C90/270]Total=36.2
Field angle(10%Imax): [C0/180]Total=68.5
 [C90/270]Total=68.5
Maximum s/h(1/2): C0_180=0.59 C90_270=0.59
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.77%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 92.235%

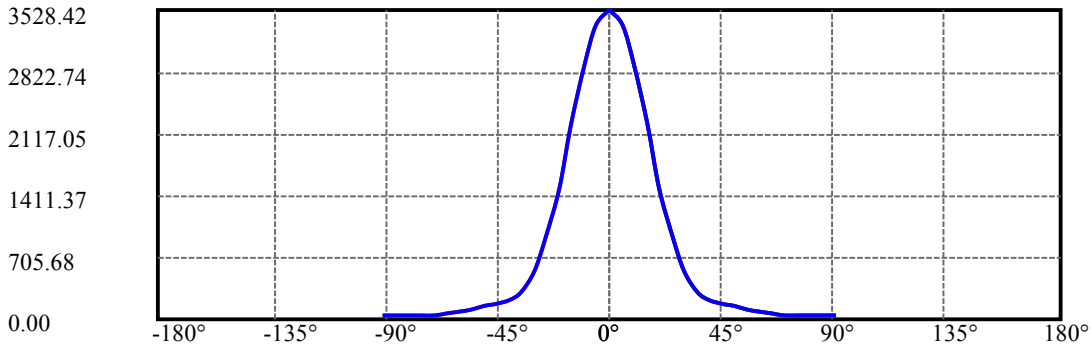
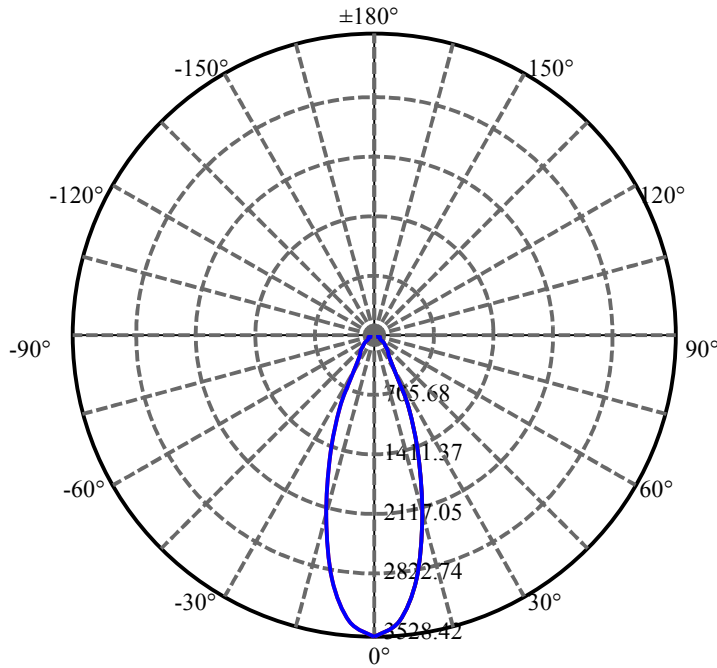
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3528.422	21.101	21.101	.946%	1.076%
5.0	3362.695	160.647	181.748	7.201%	9.267%
10.0	2891.672	275.238	456.986	12.337%	23.301%
15.0	2204.086	312.690	769.676	14.016%	39.245%
20.0	1497.052	280.658	1050.334	12.580%	53.556%
25.0	952.896	220.741	1271.076	9.894%	64.811%
30.0	558.042	152.942	1424.017	6.855%	72.609%
35.0	315.956	99.336	1523.354	4.453%	77.675%
40.0	227.426	80.130	1603.484	3.592%	81.760%
45.0	179.072	69.407	1672.891	3.111%	85.299%
50.0	144.935	60.858	1733.749	2.728%	88.402%
55.0	113.323	50.883	1784.631	2.281%	90.997%
60.0	88.509	42.015	1826.647	1.883%	93.139%
65.0	65.130	32.356	1859.002	1.450%	94.789%
70.0	50.428	25.975	1884.977	1.164%	96.113%
75.0	41.766	22.113	1907.09	.991%	97.241%
80.0	39.600	21.376	1928.467	.958%	98.331%
85.0	39.579	21.612	1950.079	.969%	99.433%
90.0	40.584	11.123	1961.202	.499%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1424.02	63.83%	72.61%
0-40	1603.48	71.87%	81.76%
0-60	1826.65	81.88%	93.14%
0-90	1950.08	87.41%	99.43%
0-120	1950.08	87.41%	99.43%
0-180	1961.20	87.91%	100.00%
60-90	165.45	7.42%	8.44%
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%
0-37.85	1568.96	70.33%	80.00%

ZONAL LUMEN SUMMARY

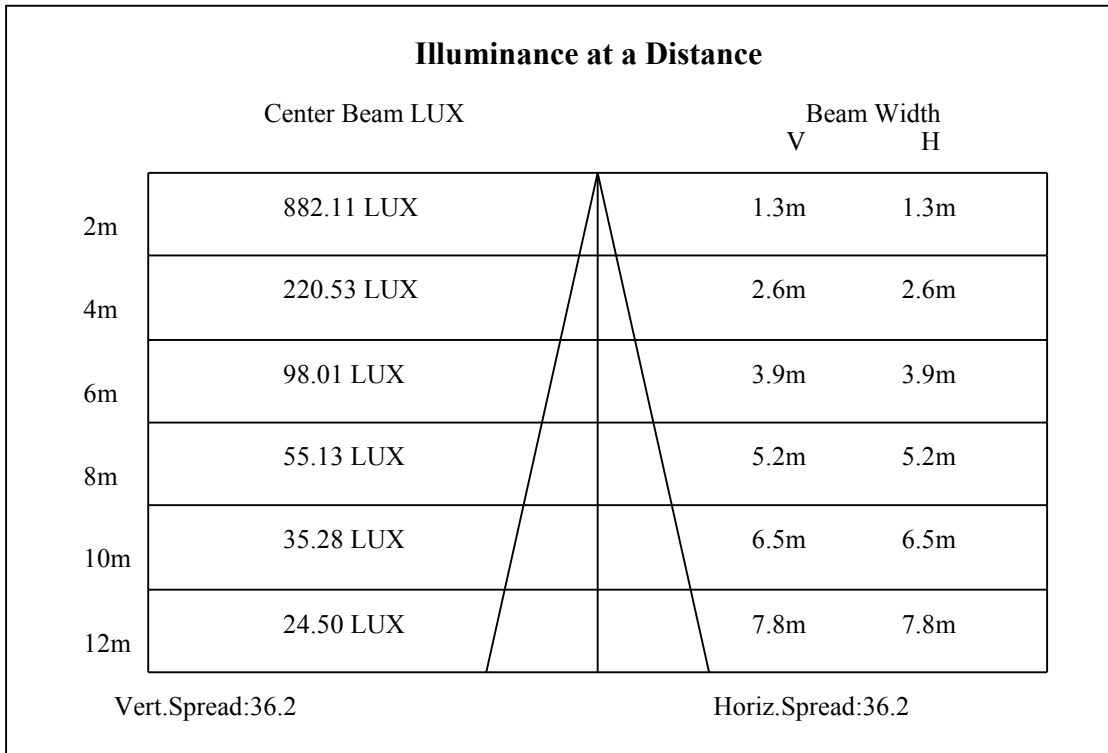
0-10	456.99
10-20	593.35
20-30	373.68
30-40	179.47
40-50	130.26
50-60	92.90
60-70	58.33
70-80	43.49
80-90	21.61
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

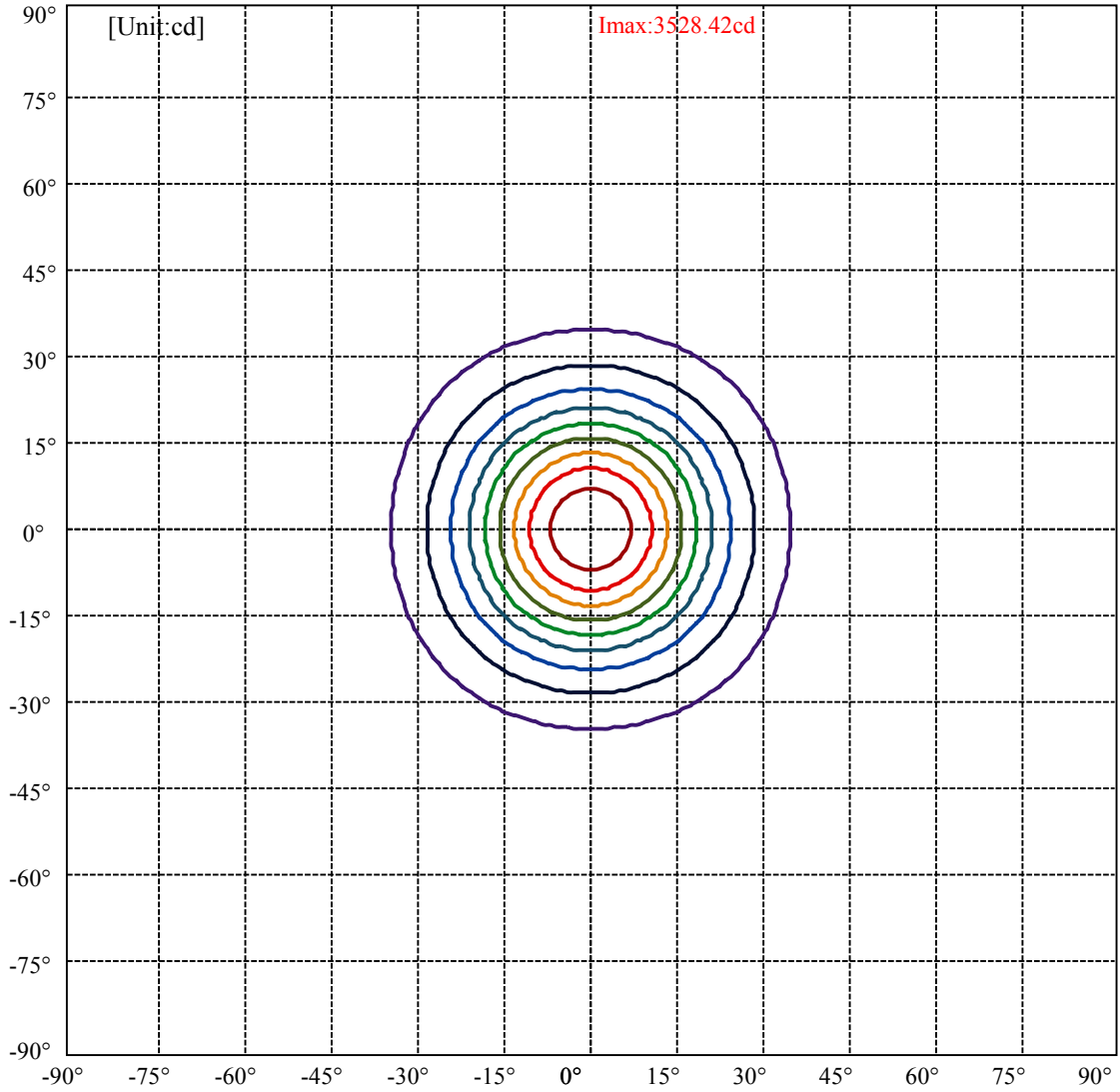


C0(Max): —————
C0/C180: —————
C90/C270: —————

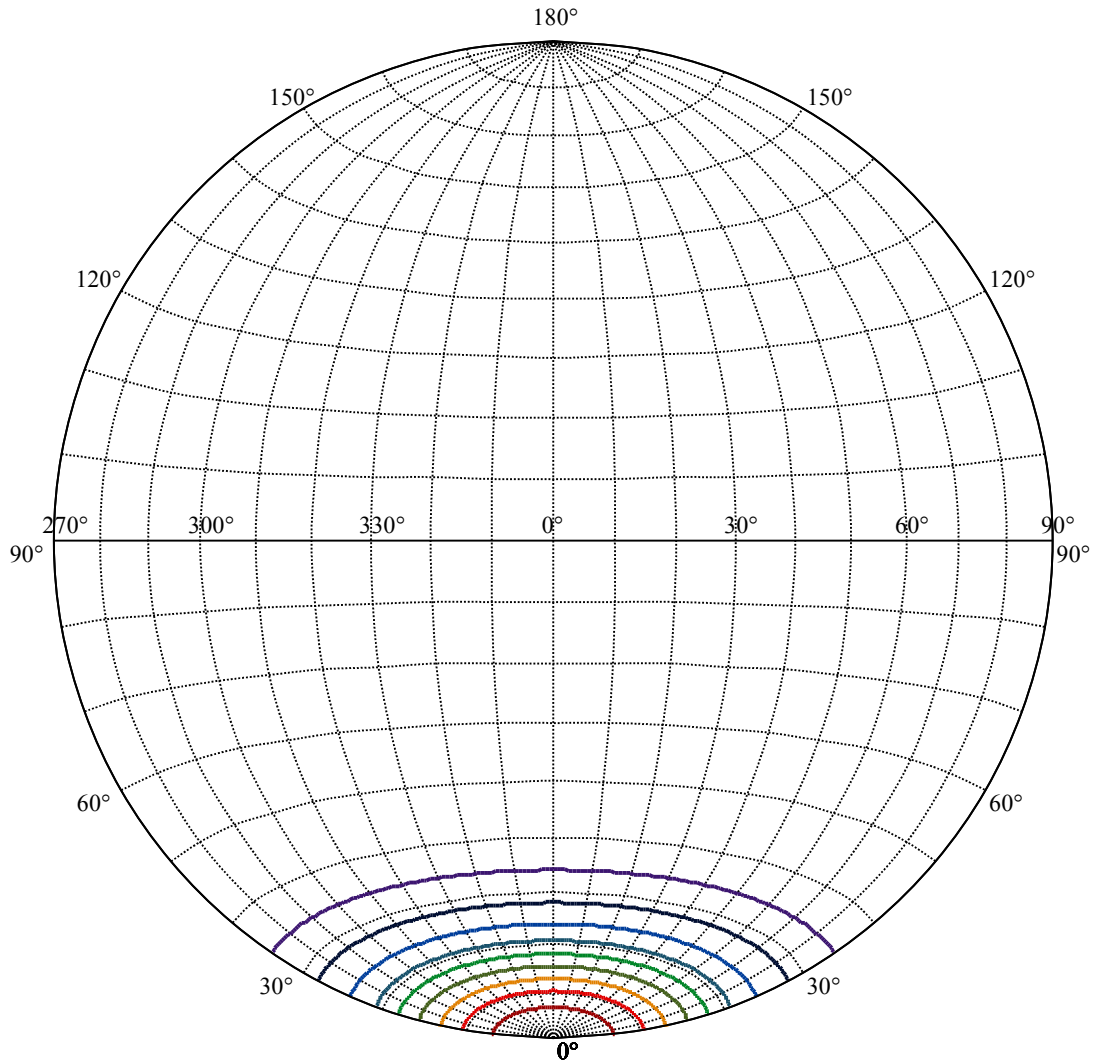
Field angle(10%Imax):C0/180Left:34.2 Right:34.2
:C90/270Left:34.2 Right:34.2

Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1
:C90/270Left:18.1 Right:18.1





(10%Imax) 352.842	—
(20%Imax) 705.684	—
(30%Imax) 1058.53	—
(40%Imax) 1411.37	—
(50%Imax) 1764.21	—
(60%Imax) 2117.05	—
(70%Imax) 2469.9	—
(80%Imax) 2822.74	—
(90%Imax) 3175.58	—



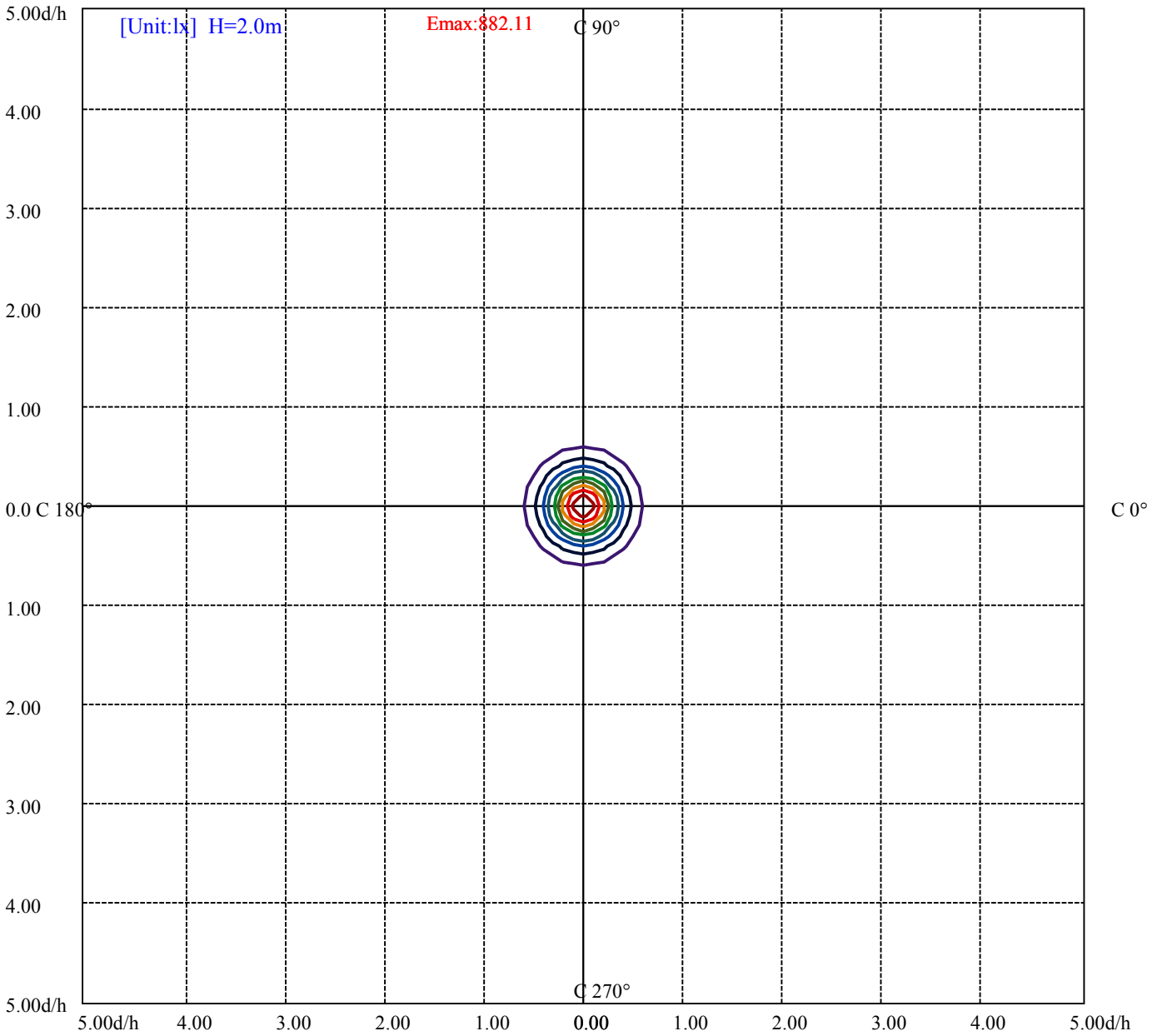
House

[Unit:cd]

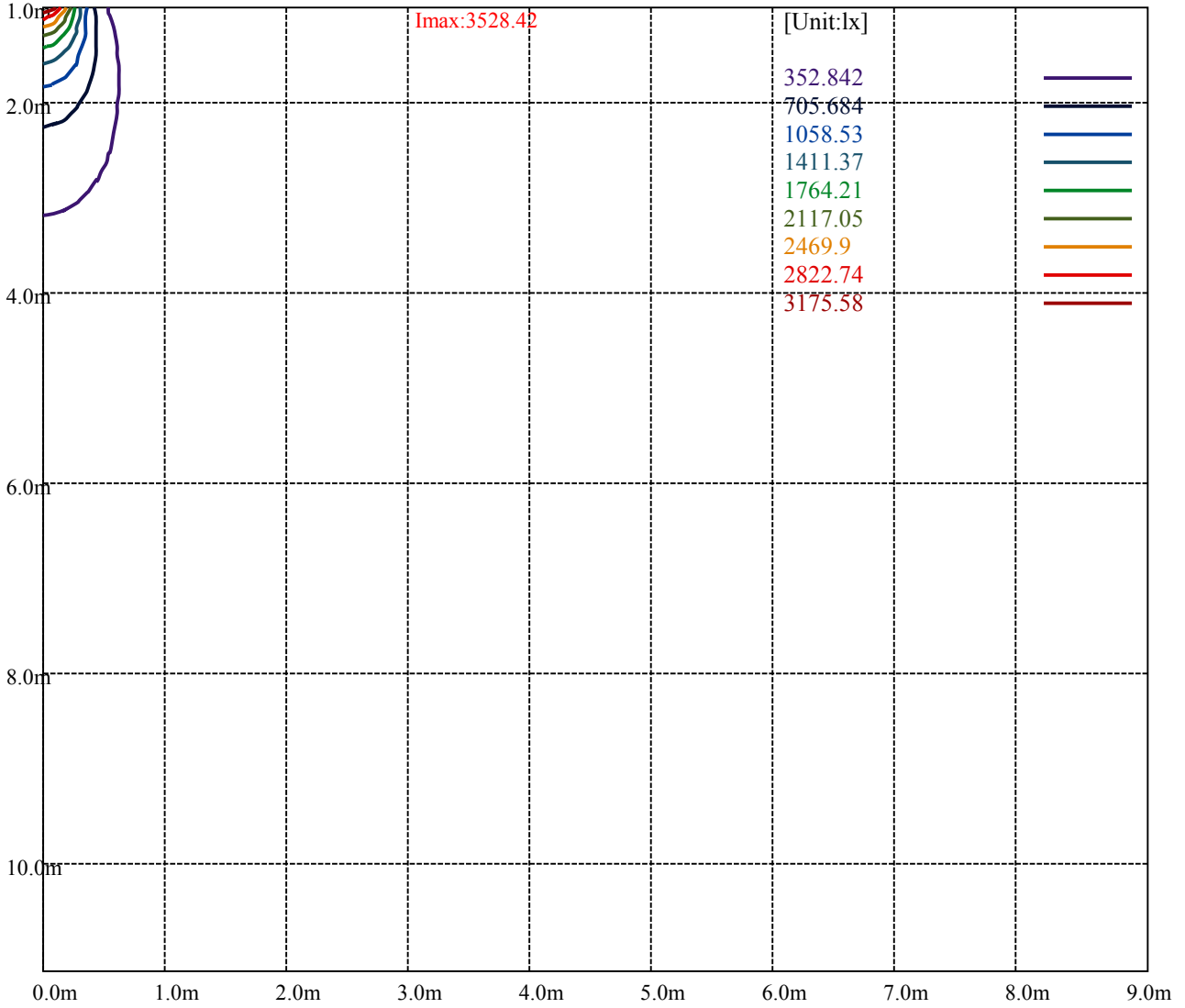
Road

Imax:3528.42

(10%Imax) 352.842	—
(20%Imax) 705.684	—
(30%Imax) 1058.53	—
(40%Imax) 1411.37	—
(50%Imax) 1764.21	—
(60%Imax) 2117.05	—
(70%Imax) 2469.9	—
(80%Imax) 2822.74	—
(90%Imax) 3175.58	—



- (10%Emax) 88.2105
- (20%Emax) 176.4207
- (30%Emax) 264.6325
- (40%Emax) 352.8425
- (50%Emax) 441.0525
- (60%Emax) 529.2625
- (70%Emax) 617.4725
- (80%Emax) 705.6825
- (90%Emax) 793.895



Luminance Table

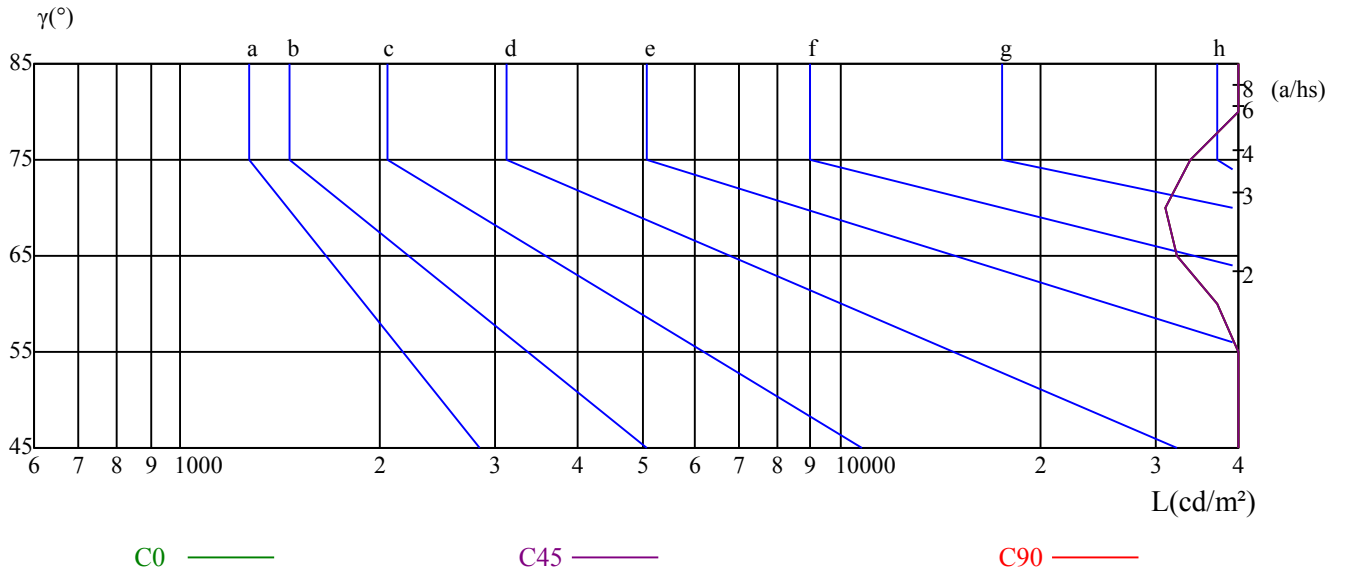
γ	45	50	55	60	65	70	75	80	85
C0	53192	47360	41498	37181	32370	30969	33894	47899	95383
C45	53192	47360	41498	37181	32370	30969	33894	47899	95383
C90	53192	47360	41498	37181	32370	30969	33894	47899	95383

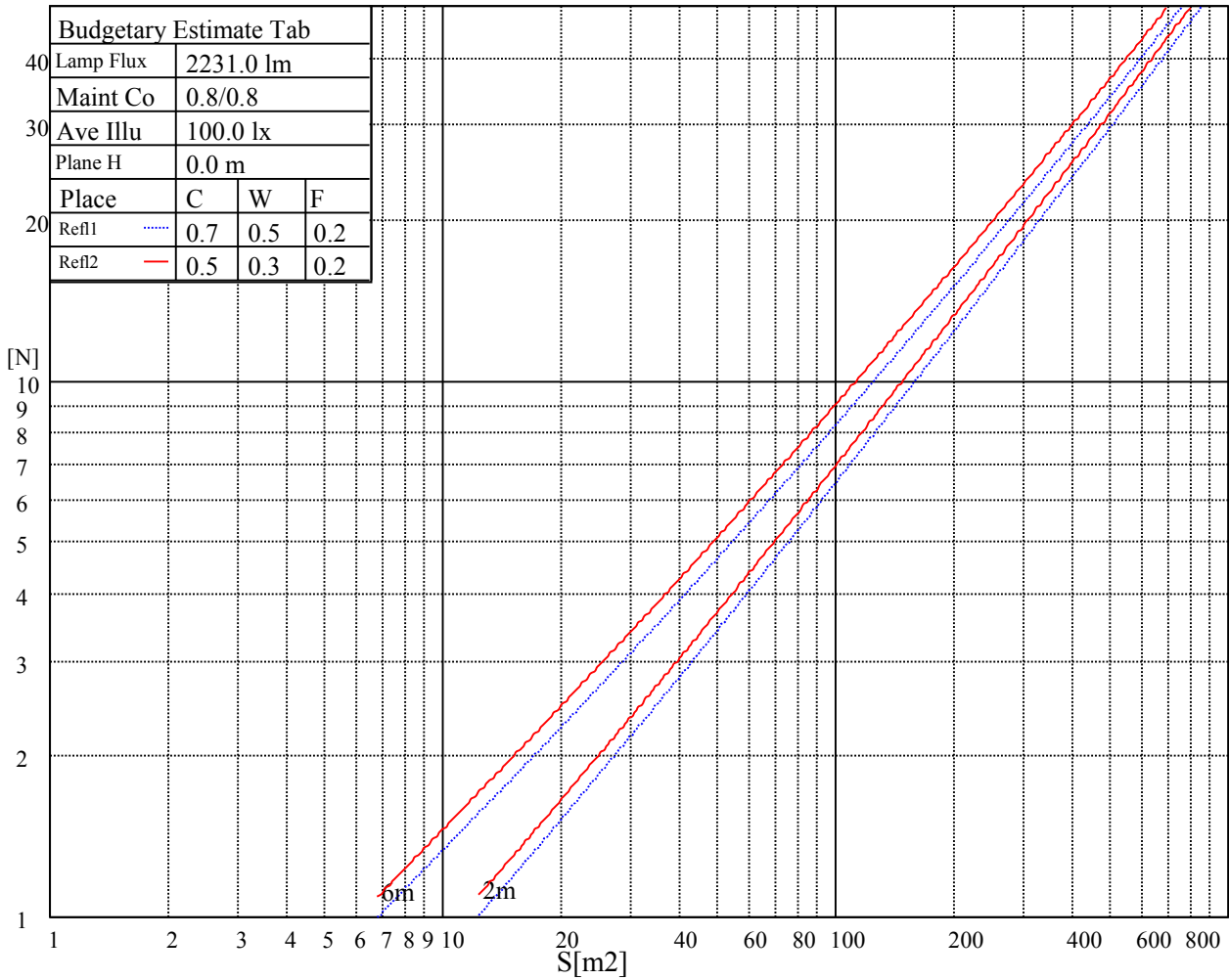
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
32370	32370	32370	33894	33894	33894	95383	95383	95383

Glare Table

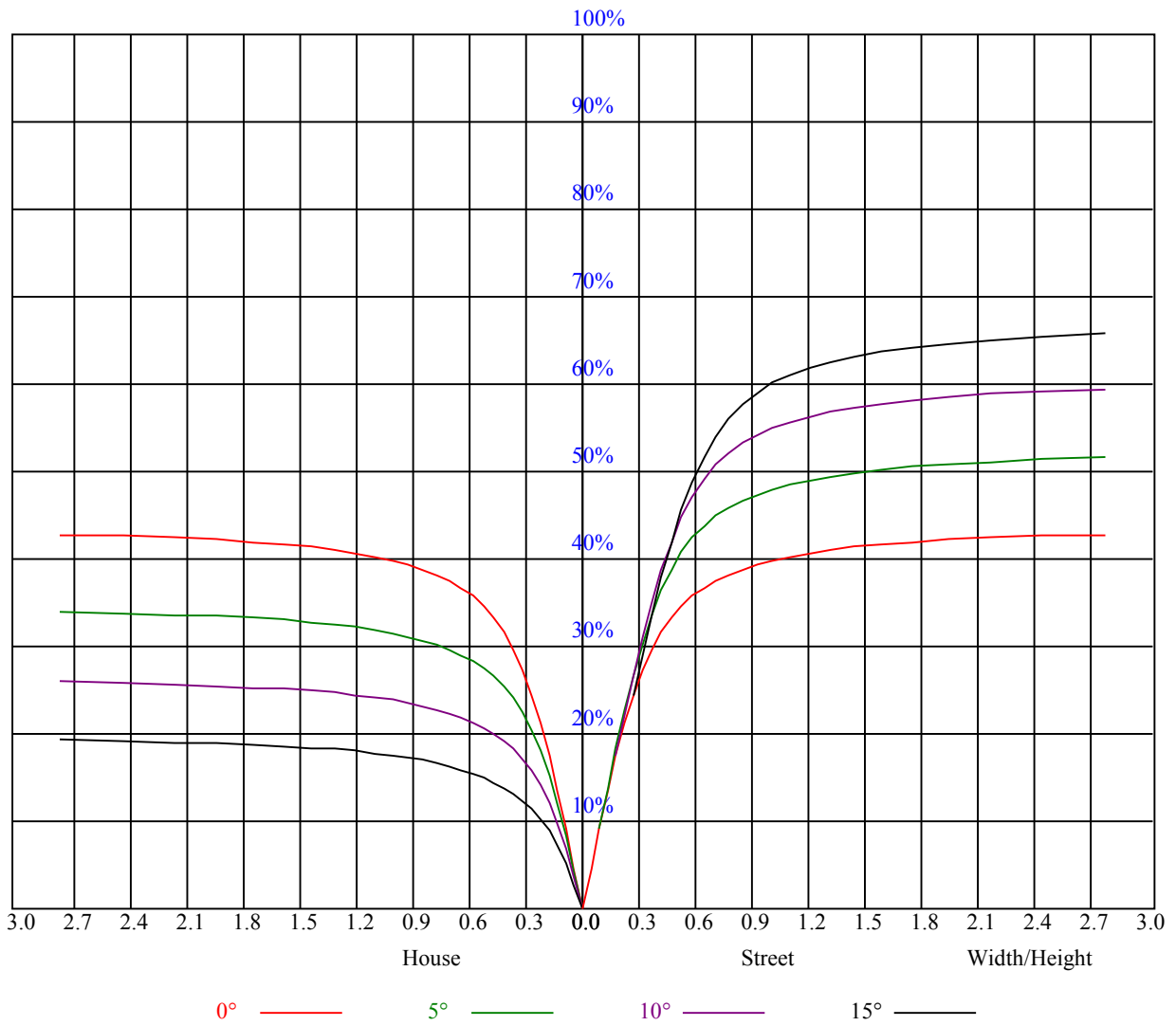
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.96	0.93	0.91	0.94	0.91	0.89	0.90	0.88	0.86	0.87	0.85	0.84	0.84	0.83	0.81	0.80
2	0.89	0.85	0.81	0.87	0.84	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.79	0.77	0.75	0.74
3	0.83	0.78	0.74	0.82	0.77	0.74	0.79	0.76	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.69
4	0.78	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.70	0.67	0.71	0.68	0.66	0.65
5	0.73	0.68	0.64	0.73	0.68	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.61
6	0.70	0.64	0.60	0.69	0.64	0.60	0.68	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
7	0.66	0.61	0.57	0.66	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55
8	0.63	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52
9	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.58	0.54	0.51	0.50
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.56	0.52	0.49	0.48



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	3524.63	3310.88	2824.88	2177.44	1512.00	963.00	565.31	325.13	229.61
45.0	3542.63	3292.88	2812.50	2127.38	1474.88	966.94	592.31	338.06	244.52
90.0	3515.06	3179.81	2675.81	1963.13	1110.04	839.70	497.42	294.47	213.92
135.0	3531.38	3371.63	2904.75	2207.25	1553.63	983.25	586.69	334.69	239.46
180.0	3524.63	3400.31	2932.88	2222.44	1558.13	964.63	546.58	313.20	225.73
225.0	3542.63	3446.44	2950.31	2282.06	1532.81	886.78	520.88	295.09	217.80
270.0	3515.06	3517.88	3138.19	2441.25	1708.31	1080.56	605.81	319.50	223.14
315.0	3531.38	3381.75	2894.06	2211.75	1526.63	938.31	549.34	307.52	225.23
360.0	3524.63	3310.88	2824.88	2177.44	1512.00	963.00	565.31	325.13	229.61
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	178.88	145.58	114.81	90.45	67.84	51.75	42.24	39.49	39.99
45.0	183.26	147.21	116.78	91.86	67.73	52.14	42.08	39.32	36.45
90.0	169.03	135.34	104.85	84.15	62.16	48.60	40.95	41.06	39.54
135.0	183.04	147.21	116.27	91.41	67.11	53.38	42.41	41.46	39.66
180.0	177.75	145.52	115.14	89.61	64.86	51.36	42.13	40.22	40.33
225.0	177.58	143.66	112.11	86.74	63.56	48.38	41.74	38.03	41.23
270.0	181.01	148.11	114.08	88.59	64.97	50.18	42.36	39.32	38.98
315.0	182.03	146.87	112.56	85.28	62.83	47.64	40.22	37.91	40.44
360.0	178.88	145.58	114.81	90.45	67.84	51.75	42.24	39.49	39.99
C/ γ (°)	90.0								
0.0	41.01								
45.0	41.34								
90.0	39.04								
135.0	39.94								
180.0	39.88								
225.0	40.56								
270.0	40.95								
315.0	41.96								
360.0	41.01								