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Nata

LumCAT: 3-1703-N
Luminaire: 92.70.065.00+92.70.061.00
Report No: NATA0100
Test No: GC20180712011
LampCAT: BRIDGELUX V9 HD
Lamp flux(lm): 1191.0
Number of Lamps: 1
Length(mm): 86
Phm Type: C

Voltage(V): 34.1000
Current(A): 0.3000
Power (W): 10.2300
PF: 0.0000
Ballast type: DC
Width(mm): 86
Height(mm): 0

Photometric Results

Lumens(lm): 939.51
Efficiency(%): 78.88%
Lumens(lm)/Power(W): 92.03
Central intensity(cd): 2198.953
Maximum intensity(cd): 2198.953
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.0
 [C90/270]Total=34.0
Field angle(10%Imax): [C0/180]Total=61.3
 [C90/270]Total=61.3
Maximum s/h(1/2): C0_180=0.56 C90_270=0.56
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 79.05%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.464%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2198.953	2.104	2.104	.177%	.224%
2.0	2191.795	16.776	18.88	1.409%	2.010%
4.0	2145.892	32.829	51.709	2.756%	5.504%
6.0	2070.396	47.463	99.172	3.985%	10.556%
8.0	1950.442	59.532	158.704	4.999%	16.892%
10.0	1773.917	67.557	226.261	5.672%	24.083%
12.0	1585.418	72.292	298.553	6.070%	31.777%
14.0	1381.159	73.280	371.832	6.153%	39.577%
16.0	1191.407	72.022	443.854	6.047%	47.243%
18.0	1003.506	68.009	511.863	5.710%	54.482%
20.0	834.724	62.612	574.476	5.257%	61.146%
22.0	671.151	55.139	629.615	4.630%	67.015%
24.0	503.773	44.938	674.553	3.773%	71.798%
26.0	374.445	35.999	710.552	3.023%	75.630%
28.0	287.601	29.612	740.164	2.486%	78.782%
30.0	233.453	25.600	765.764	2.149%	81.507%
32.0	191.115	22.211	787.975	1.865%	83.871%
34.0	160.290	19.658	807.632	1.651%	85.963%
36.0	134.117	17.289	824.921	1.452%	87.803%
38.0	114.221	15.422	840.344	1.295%	89.445%
40.0	97.643	13.765	854.109	1.156%	90.910%
42.0	82.605	12.122	866.231	1.018%	92.200%
44.0	68.648	10.458	876.689	.878%	93.313%
46.0	55.937	8.825	885.514	.741%	94.253%
48.0	45.139	7.357	892.871	.618%	95.036%
50.0	36.551	6.141	899.012	.516%	95.689%
52.0	29.792	5.149	904.16	.432%	96.237%
54.0	24.053	4.268	908.428	.358%	96.692%
56.0	19.641	3.571	911.999	.300%	97.072%
58.0	16.207	3.014	915.014	.253%	97.393%
60.0	13.585	2.580	917.594	.217%	97.667%
62.0	11.603	2.247	919.841	.189%	97.906%
64.0	10.536	2.077	921.918	.174%	98.128%
66.0	9.807	1.965	923.883	.165%	98.337%
68.0	9.174	1.865	925.748	.157%	98.535%
70.0	8.575	1.767	927.515	.148%	98.723%
72.0	7.990	1.667	929.182	.140%	98.901%
74.0	7.481	1.577	930.759	.132%	99.069%

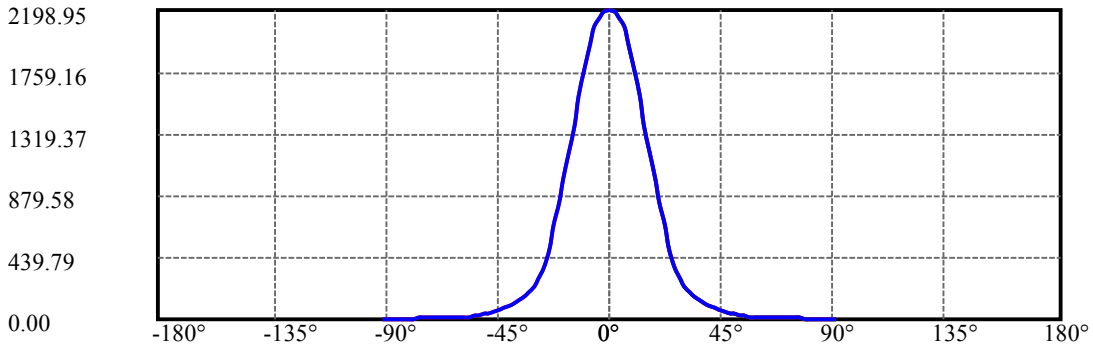
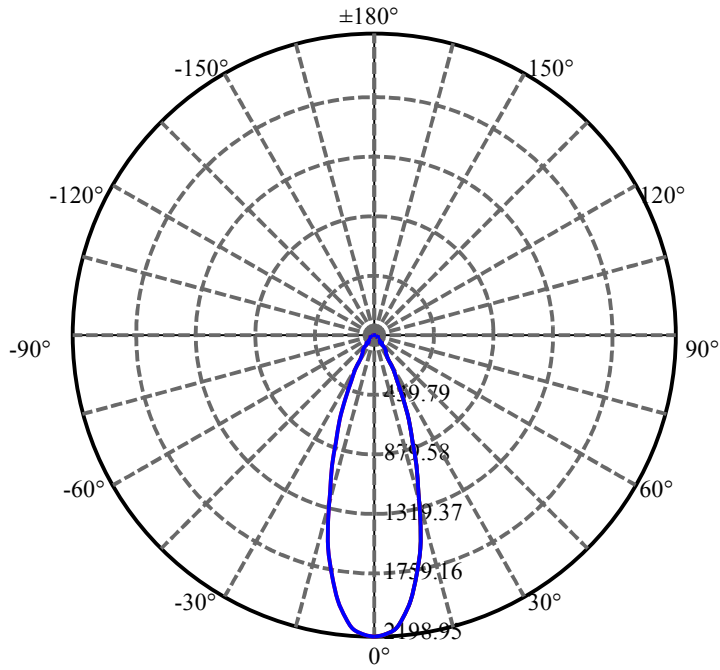
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.944	1.478	932.236	.124%	99.226%
78.0	6.393	1.372	933.608	.115%	99.372%
80.0	5.919	1.278	934.886	.107%	99.508%
82.0	5.437	1.181	936.067	.099%	99.634%
84.0	4.983	1.087	937.154	.091%	99.749%
86.0	4.549	0.995	938.149	.084%	99.855%
88.0	4.191	0.919	939.068	.077%	99.953%
90.0	4.033	0.442	939.51	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	765.76	64.30%	81.51%
0-40	854.11	71.71%	90.91%
0-60	917.59	77.04%	97.67%
0-90	939.07	78.85%	99.95%
0-120	939.07	78.85%	99.95%
0-180	939.51	78.88%	100.00%
60-90	24.05	2.02%	2.56%
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%
0-28.89	751.61	63.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	226.26
10-20	348.21
20-30	191.29
30-40	88.35
40-50	44.90
50-60	18.58
60-70	9.92
70-80	7.37
80-90	4.18
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: —————

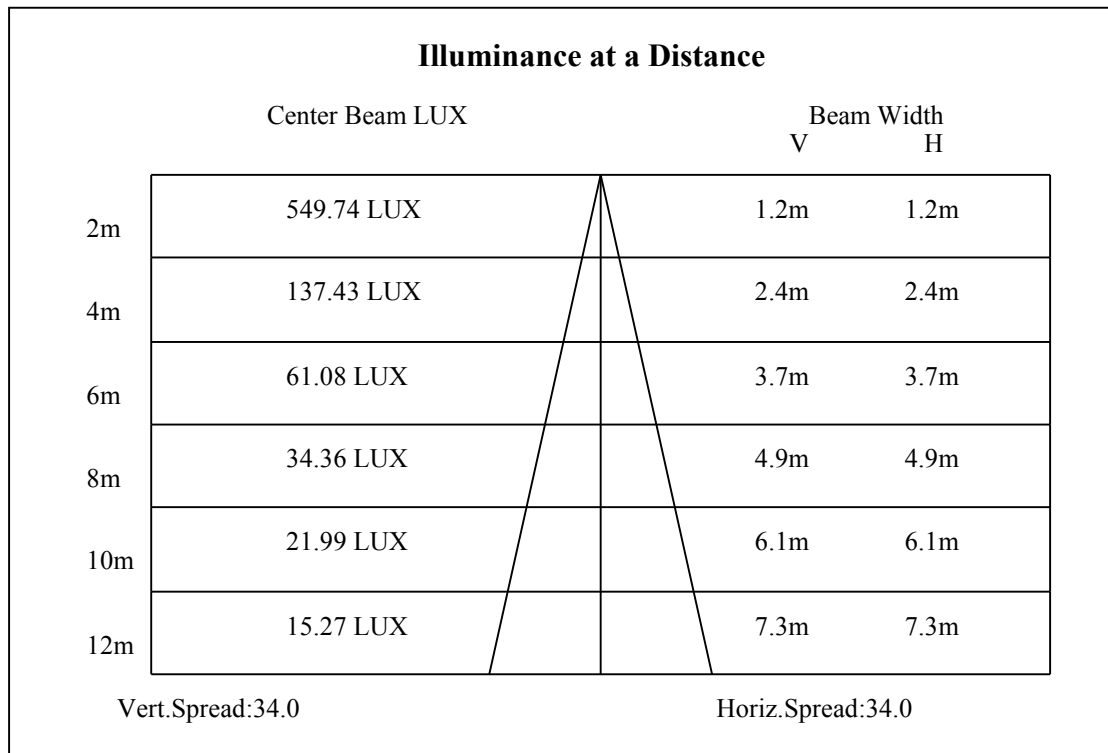
C90/C270: —————

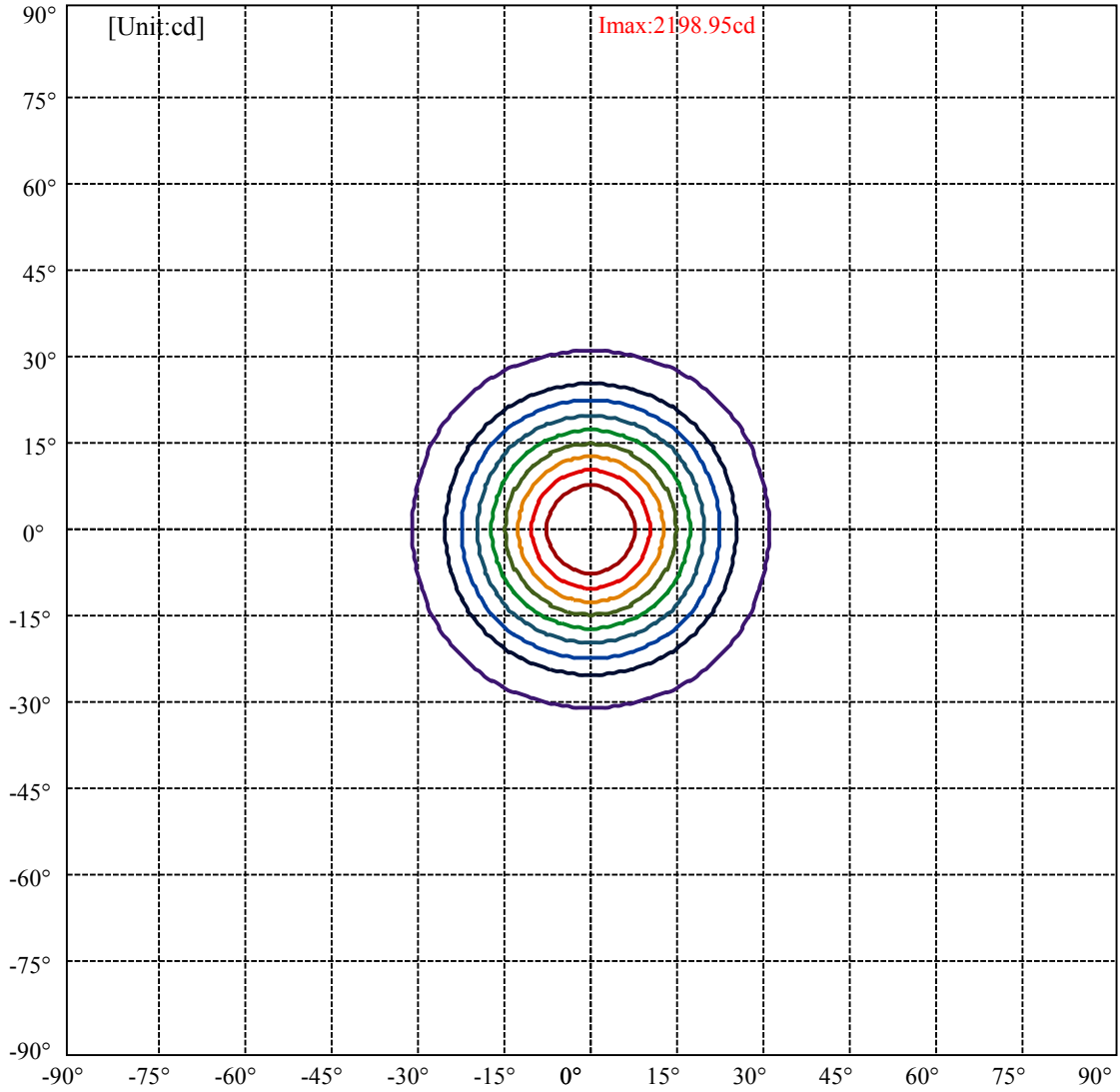
Field angle(10%Imax):C0/180Left:30.6 Right:30.6

:C90/270Left:30.6 Right:30.6

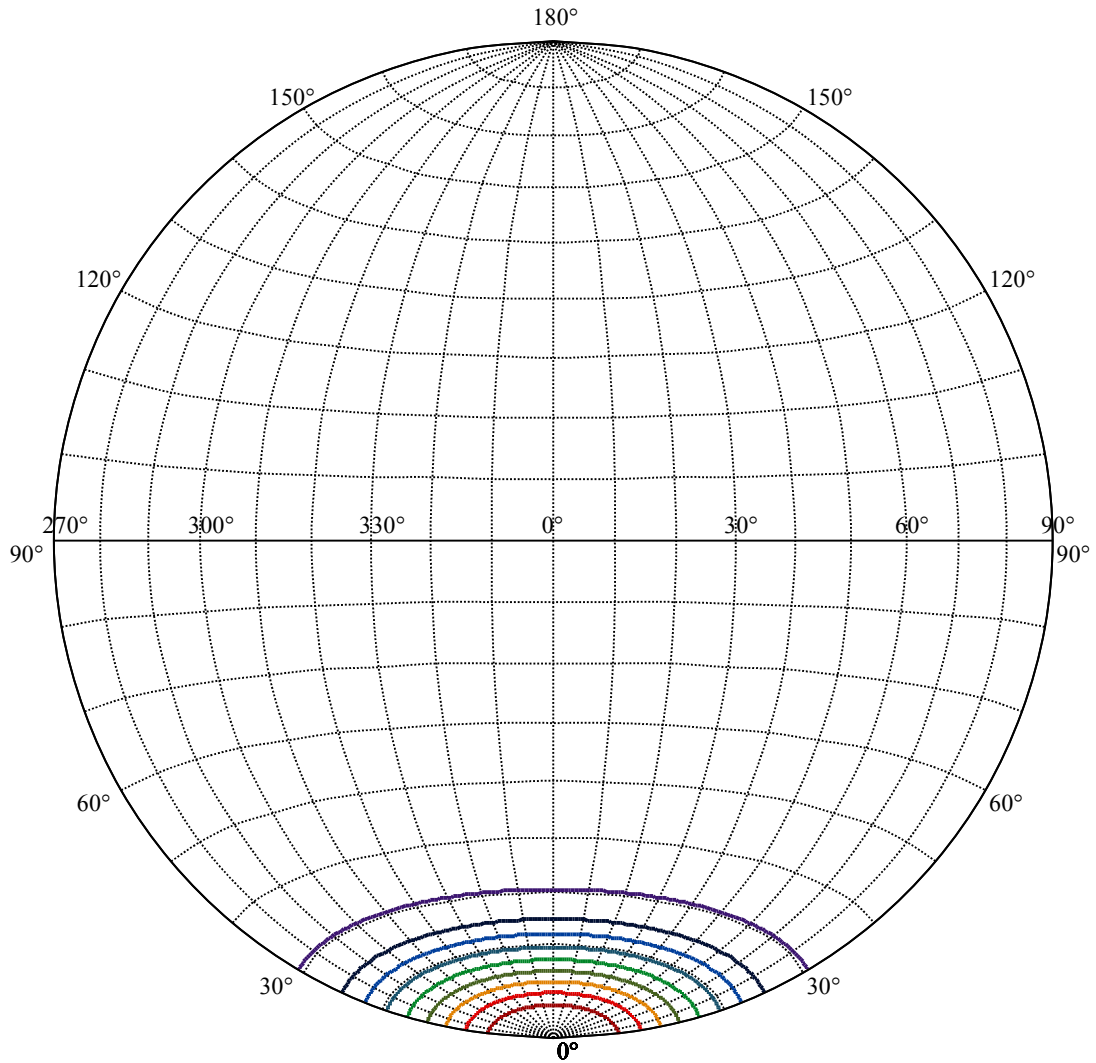
Beam Angle(50%Imax):C0/180Left:17.0 Right:17.0

:C90/270Left:17.0 Right:17.0





(10%Imax) 219.895	—
(20%Imax) 439.791	—
(30%Imax) 659.686	—
(40%Imax) 879.581	—
(50%Imax) 1099.48	—
(60%Imax) 1319.37	—
(70%Imax) 1539.27	—
(80%Imax) 1759.16	—
(90%Imax) 1979.06	—



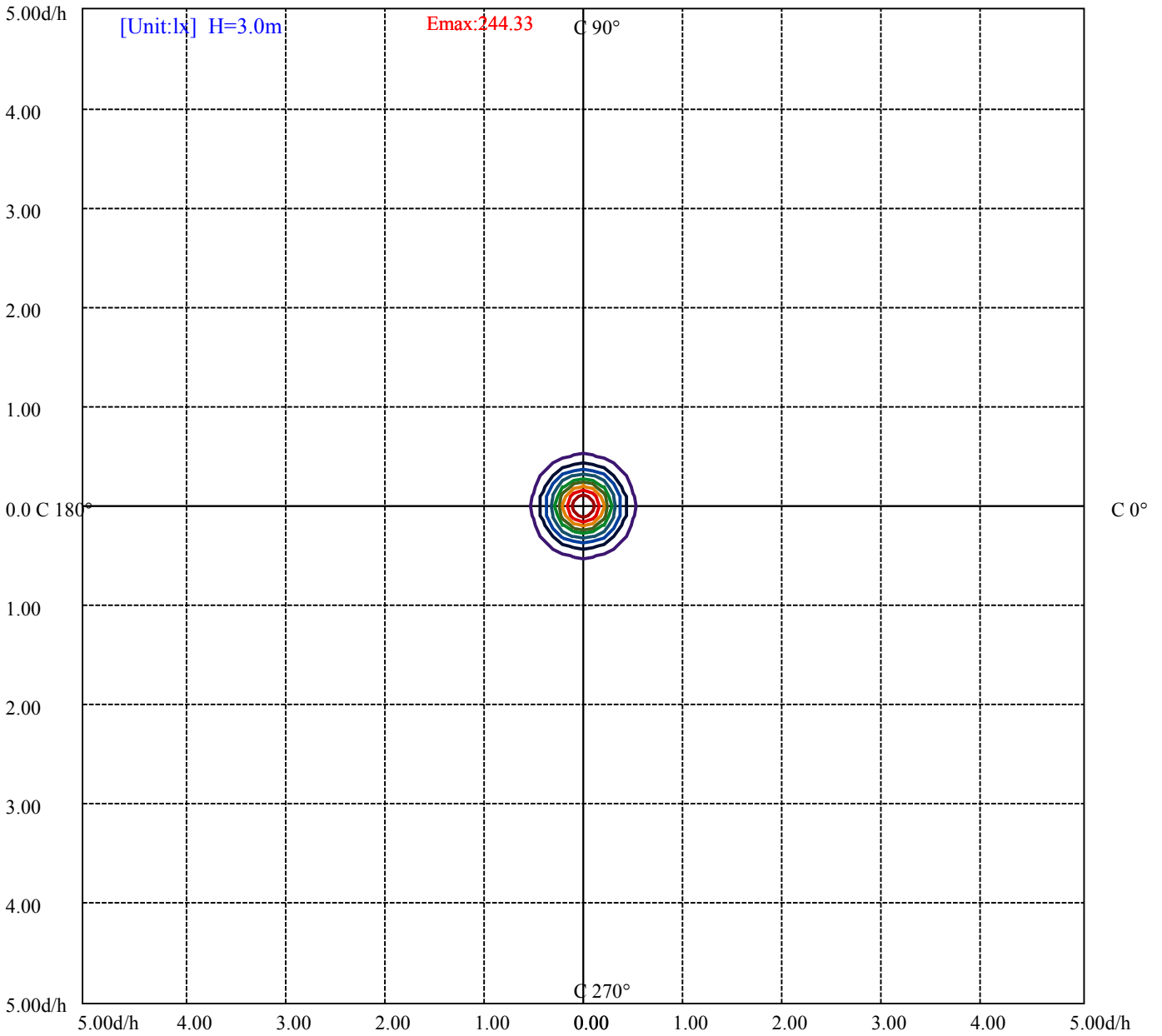
House

[Unit:cd]

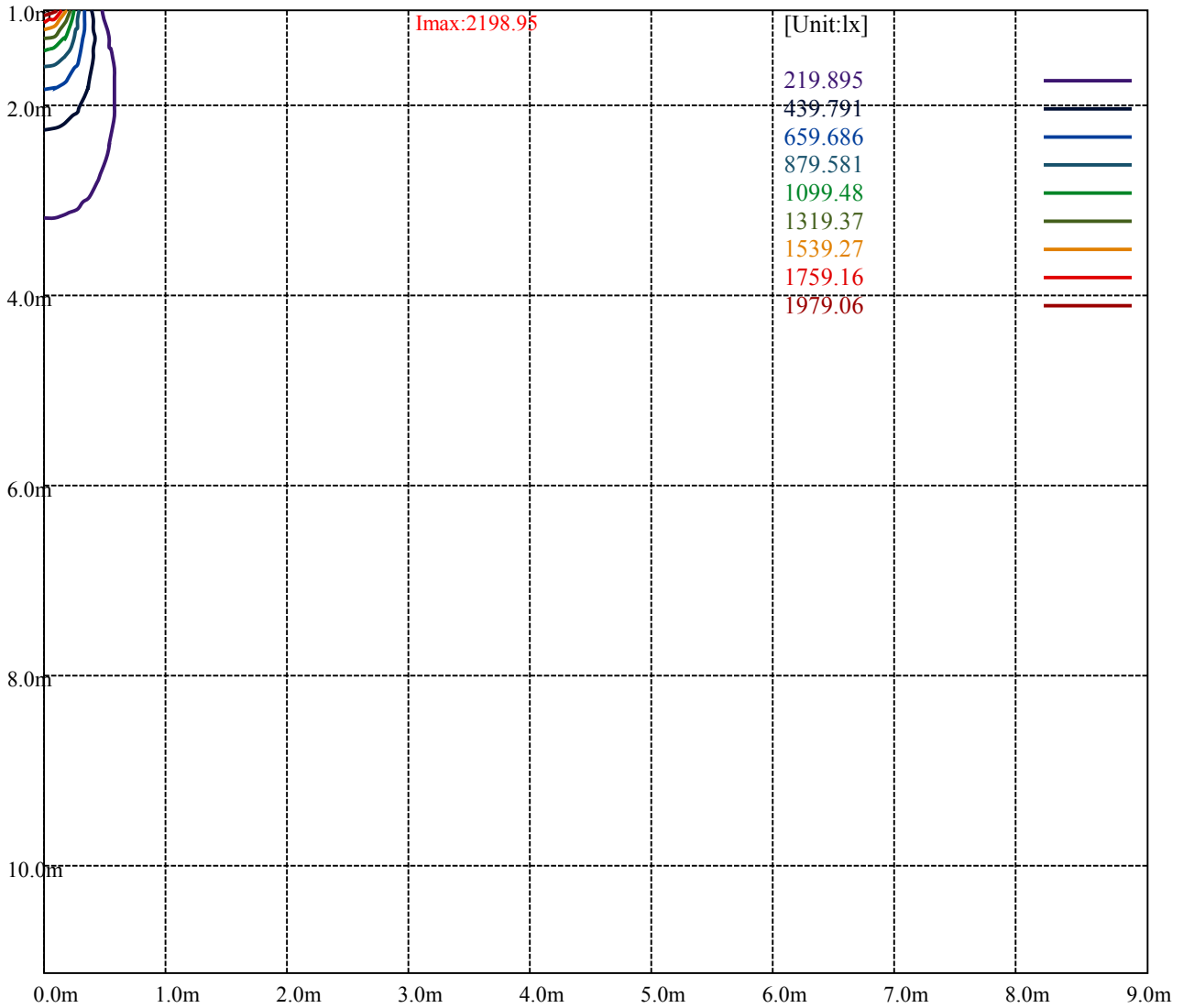
Road

Imax:2198.95

(10%Imax) 219.895	—
(20%Imax) 439.791	—
(30%Imax) 659.686	—
(40%Imax) 879.581	—
(50%Imax) 1099.48	—
(60%Imax) 1319.37	—
(70%Imax) 1539.27	—
(80%Imax) 1759.16	—
(90%Imax) 1979.06	—



- (10%Emax) 24.43278
- (20%Emax) 48.86555
- (30%Emax) 73.29844
- (40%Emax) 97.73122
- (50%Emax) 122.1644
- (60%Emax) 146.5967
- (70%Emax) 171.03
- (80%Emax) 195.4622
- (90%Emax) 219.8956



Luminance Table

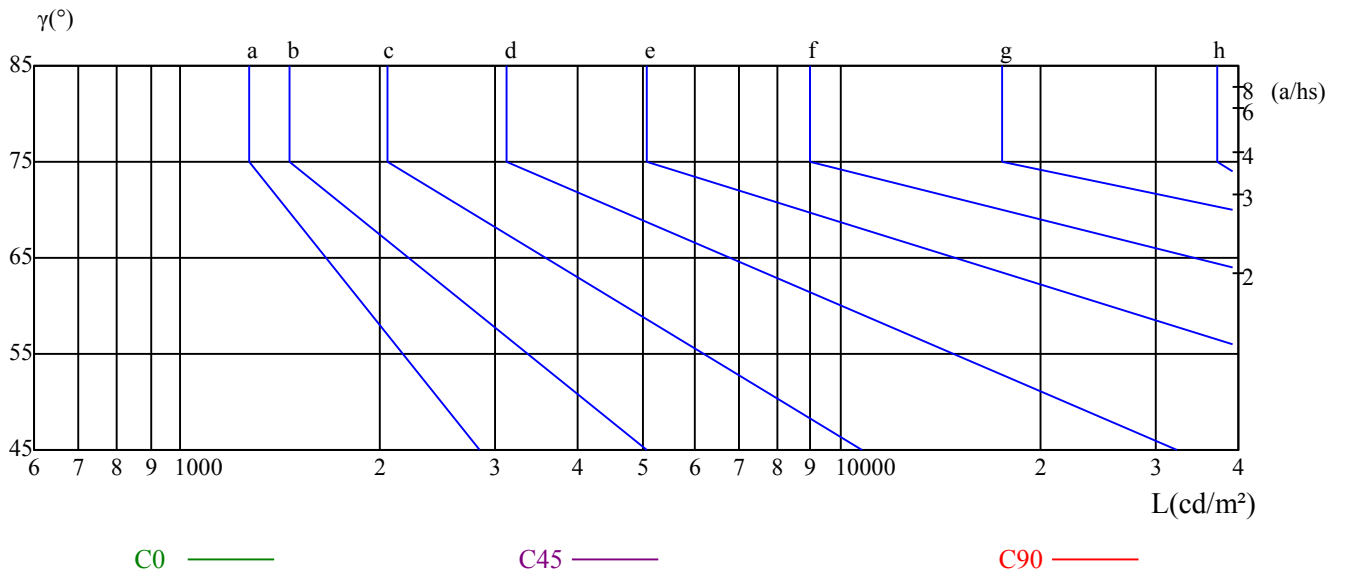
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

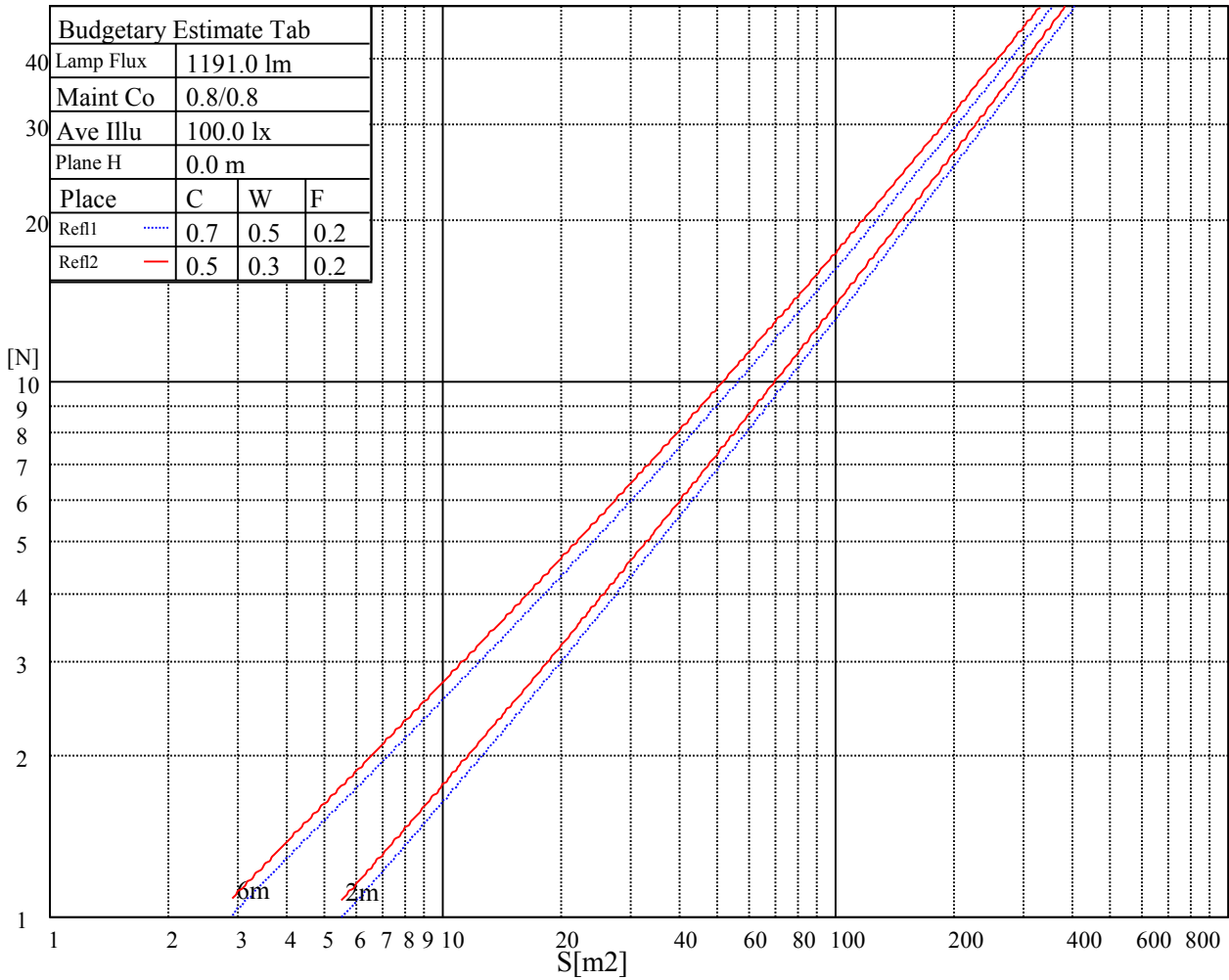
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

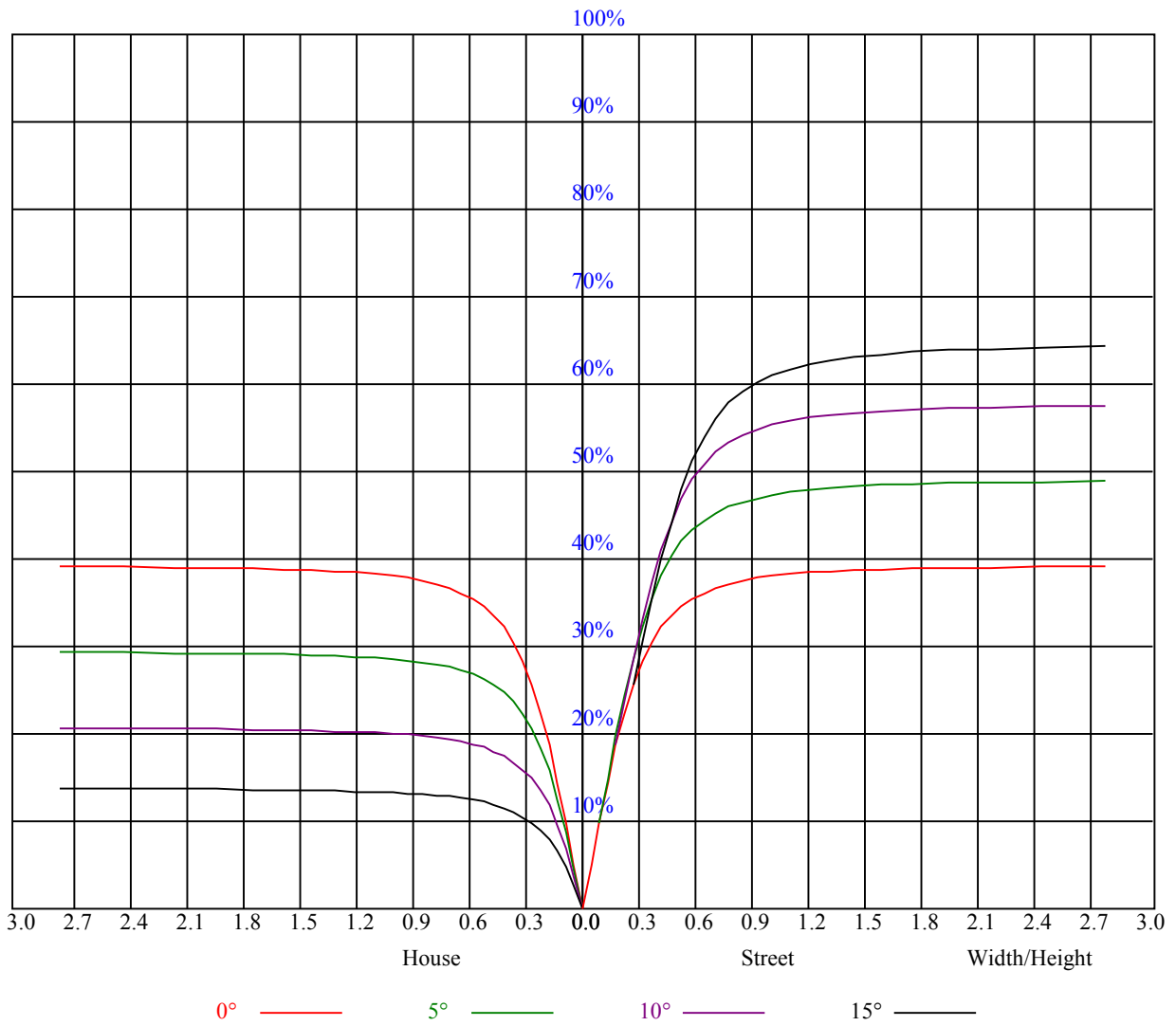
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.81	0.81	0.81	0.79
1	0.88	0.86	0.84	0.86	0.84	0.83	0.83	0.81	0.80	0.80	0.79	0.78	0.77	0.76	0.76	0.74
2	0.82	0.79	0.77	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.71	0.70
3	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.70	0.73	0.70	0.68	0.71	0.69	0.67	0.66
4	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.64	0.62	0.67	0.64	0.61	0.65	0.63	0.61	0.60
6	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.57
7	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55
8	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.58	0.55	0.53	0.52
9	0.59	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.57	0.54	0.51	0.56	0.53	0.51	0.50
10	0.56	0.52	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.55	0.52	0.49	0.54	0.51	0.49	0.48



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	2198.40	2196.20	2176.38	2121.87	2045.90	1893.94	1722.71	1522.31	1340.62
45.0	2197.85	2190.14	2161.51	2080.58	1991.39	1833.38	1651.69	1463.40	1267.40
90.0	2199.50	2192.35	2156.56	2081.13	1967.72	1796.49	1605.44	1399.53	1214.54
135.0	2200.05	2200.60	2176.38	2109.21	1986.43	1813.01	1603.79	1374.76	1165.54
180.0	2198.40	2181.89	2119.67	2031.58	1868.06	1672.06	1467.80	1250.88	1064.02
225.0	2197.85	2180.78	2087.19	2002.40	1842.74	1633.52	1457.89	1258.04	1078.66
270.0	2199.50	2196.75	2135.09	2047.55	1935.78	1756.30	1572.41	1384.67	1184.26
315.0	2200.05	2195.65	2154.36	2088.84	1965.51	1792.64	1601.59	1395.68	1216.20
360.0	2198.40	2196.20	2176.38	2121.87	2045.90	1893.94	1722.71	1522.31	1340.62
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	1146.27	960.18	804.37	621.04	460.27	338.05	278.03	221.99	185.98
45.0	1083.51	913.94	749.87	563.78	422.83	313.27	248.74	204.20	170.18
90.0	1011.17	836.69	669.76	504.21	364.25	284.64	228.87	187.63	159.00
135.0	978.35	801.07	648.56	478.99	354.01	278.59	224.24	183.56	152.67
180.0	875.40	720.58	546.71	406.48	308.15	248.47	204.37	169.46	143.04
225.0	905.68	751.41	590.37	437.48	321.69	257.55	209.60	172.71	147.28
270.0	1004.78	837.96	671.69	497.71	382.09	284.09	231.51	193.14	159.22
315.0	1022.89	855.96	687.87	520.50	382.26	296.15	242.25	196.22	164.95
360.0	1146.27	960.18	804.37	621.04	460.27	338.05	278.03	221.99	185.98
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	153.88	129.49	109.34	92.38	77.19	63.59	51.81	41.35	33.97
45.0	141.77	119.69	101.80	86.00	72.56	59.08	48.17	39.15	31.77
90.0	132.14	112.09	96.46	82.42	67.61	55.99	44.87	36.06	29.57
135.0	130.26	111.93	97.45	82.53	69.92	55.55	44.87	36.83	29.40
180.0	120.63	105.16	90.29	75.92	62.32	50.54	40.36	33.25	26.59
225.0	123.49	105.76	90.90	76.86	62.65	51.48	41.24	33.20	27.42
270.0	133.35	112.37	95.80	80.66	67.50	54.67	44.32	36.01	29.46
315.0	137.42	117.27	99.10	84.07	69.43	56.60	45.48	36.56	30.17
360.0	153.88	129.49	109.34	92.38	77.19	63.59	51.81	41.35	33.97
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	27.31	22.30	18.33	15.25	12.72	11.23	10.41	9.69	9.08
45.0	26.10	20.92	17.23	14.48	12.28	10.90	10.19	9.52	8.86
90.0	23.78	19.21	16.13	13.54	11.45	10.57	9.80	9.14	8.53
135.0	23.56	19.32	15.91	13.27	11.45	10.35	9.69	9.03	8.48
180.0	21.25	17.56	14.48	12.28	10.79	10.02	9.36	8.75	8.20
225.0	22.13	18.06	14.98	12.66	10.96	10.19	9.47	8.86	8.31
270.0	23.89	19.60	16.19	13.43	11.56	10.46	9.74	9.14	8.53
315.0	24.39	20.15	16.41	13.76	11.62	10.57	9.80	9.25	8.59
360.0	27.31	22.30	18.33	15.25	12.72	11.23	10.41	9.69	9.08
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	8.48	7.93	7.38	6.83	6.33	5.84	5.34	4.90	4.40
45.0	8.26	7.76	7.21	6.66	6.17	5.67	5.23	4.73	4.29
90.0	7.98	7.43	6.88	6.33	5.89	5.40	5.01	4.57	4.18
135.0	7.87	7.38	6.88	6.33	5.84	5.34	4.90	4.46	4.13
180.0	7.65	7.16	6.61	6.06	5.62	5.12	4.68	4.29	4.07
225.0	7.71	7.21	6.72	6.17	5.67	5.23	4.79	4.40	4.07
270.0	7.98	7.49	6.88	6.33	5.89	5.40	4.90	4.46	4.18
315.0	7.98	7.49	6.99	6.44	5.95	5.51	5.01	4.57	4.18
360.0	8.48	7.93	7.38	6.83	6.33	5.84	5.34	4.90	4.40

Intensity data(cd)

C/γ(°)	90.0
0.0	4.13
45.0	4.02
90.0	4.02
135.0	4.02
180.0	4.02
225.0	4.02
270.0	4.02
315.0	4.02
360.0	4.13