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Nata

LumCAT: 4-2177-E	
Luminaire: 92.76.233.00	
Report No: 20161122008	Voltage(V): 217.5000
Test No: 2016122008	Current(A): 0.0760
LampCAT: PL-Core-AC-2000-G2	Power (W): 16.6000
Lamp flux(lm): 1733.0	PF: 0.9960
Number of Lamps: 1	Ballast type: AC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1578.35
Efficiency(%): 91.08%
Lumens(lm)/Power(W): 95.08
Central intensity(cd): 13307.130
Maximum intensity(cd): 13521.850
Angle of maximum intensity: C=90.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=13.3
 [C90/270]Total=13.0
Field angle(10%Imax): [C0/180]Total=28.7
 [C90/270]Total=27.8
Maximum s/h(1/2): C0_180=0.23 C90_270=0.22
Maximum s/h(1/4): C0_180=0.24 C90_270=0.23
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.08%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.682%

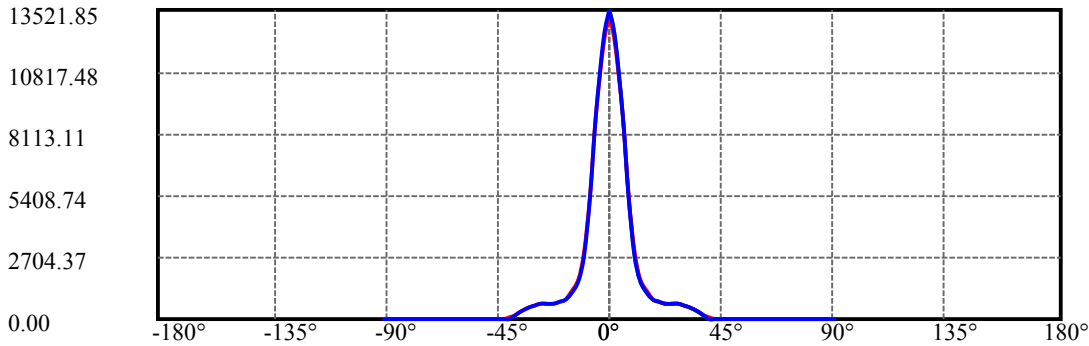
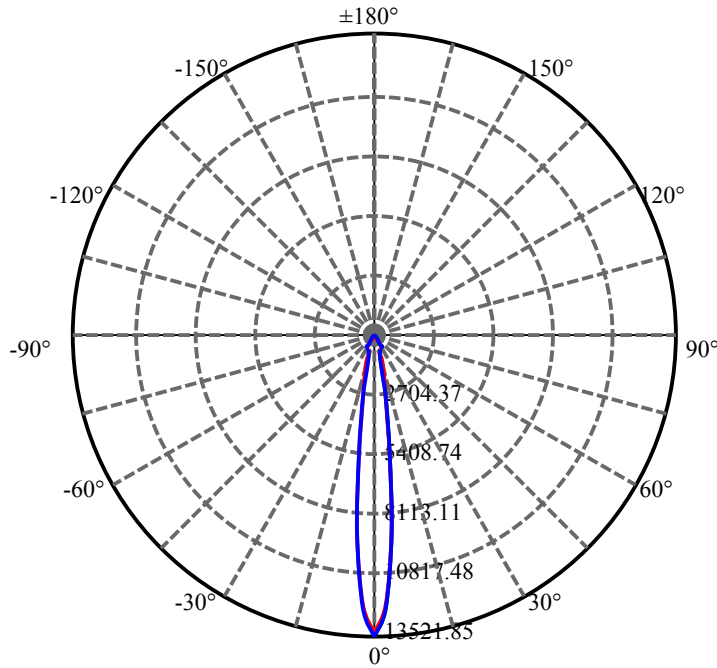
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13410.363	0.000	0	.000%	.000%
2.5	12123.695	76.349	76.349	4.406%	4.837%
5.0	8880.597	188.295	264.645	10.865%	16.767%
7.5	5458.016	213.962	478.606	12.346%	30.323%
10.0	2946.619	175.246	653.852	10.112%	41.426%
12.5	1711.497	124.560	778.412	7.188%	49.318%
15.0	1134.981	92.735	871.147	5.351%	55.193%
17.5	872.905	77.013	948.16	4.444%	60.073%
20.0	756.619	71.795	1019.955	4.143%	64.622%
22.5	700.386	72.382	1092.337	4.177%	69.207%
25.0	665.653	75.410	1167.747	4.351%	73.985%
27.5	639.797	79.140	1246.887	4.567%	78.999%
30.0	610.390	82.422	1329.309	4.756%	84.221%
32.5	533.187	81.316	1410.625	4.692%	89.373%
35.0	355.988	67.711	1478.336	3.907%	93.663%
37.5	173.937	42.950	1521.286	2.478%	96.384%
40.0	42.042	18.530	1539.815	1.069%	97.558%
42.5	17.398	5.372	1545.187	.310%	97.899%
45.0	8.616	2.466	1547.653	.142%	98.055%
47.5	8.141	1.659	1549.312	.096%	98.160%
50.0	7.818	1.645	1550.957	.095%	98.264%
52.5	7.529	1.641	1552.597	.095%	98.368%
55.0	7.323	1.642	1554.239	.095%	98.472%
57.5	7.144	1.649	1555.888	.095%	98.577%
60.0	7.006	1.658	1557.546	.096%	98.682%
62.5	6.896	1.671	1559.216	.096%	98.788%
65.0	6.799	1.684	1560.9	.097%	98.894%
67.5	6.731	1.697	1562.597	.098%	99.002%
70.0	6.676	1.713	1564.31	.099%	99.110%
72.5	6.634	1.728	1566.037	.100%	99.220%
75.0	6.593	1.741	1567.778	.100%	99.330%
77.5	6.559	1.751	1569.529	.101%	99.441%
80.0	6.538	1.761	1571.29	.102%	99.553%
82.5	6.517	1.769	1573.058	.102%	99.665%
85.0	6.510	1.775	1574.833	.102%	99.777%
87.5	6.421	1.769	1576.602	.102%	99.889%
90.0	6.345	1.749	1578.351	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1329.31	76.71%	84.22%
0-40	1539.82	88.85%	97.56%
0-60	1557.55	89.88%	98.68%
0-90	1576.60	90.98%	99.89%
0-120	1576.60	90.98%	99.89%
0-180	1578.35	91.08%	100.00%
60-90	20.71	1.20%	1.31%
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%
0-27.98	1262.68	72.86%	80.00%

ZONAL LUMEN SUMMARY

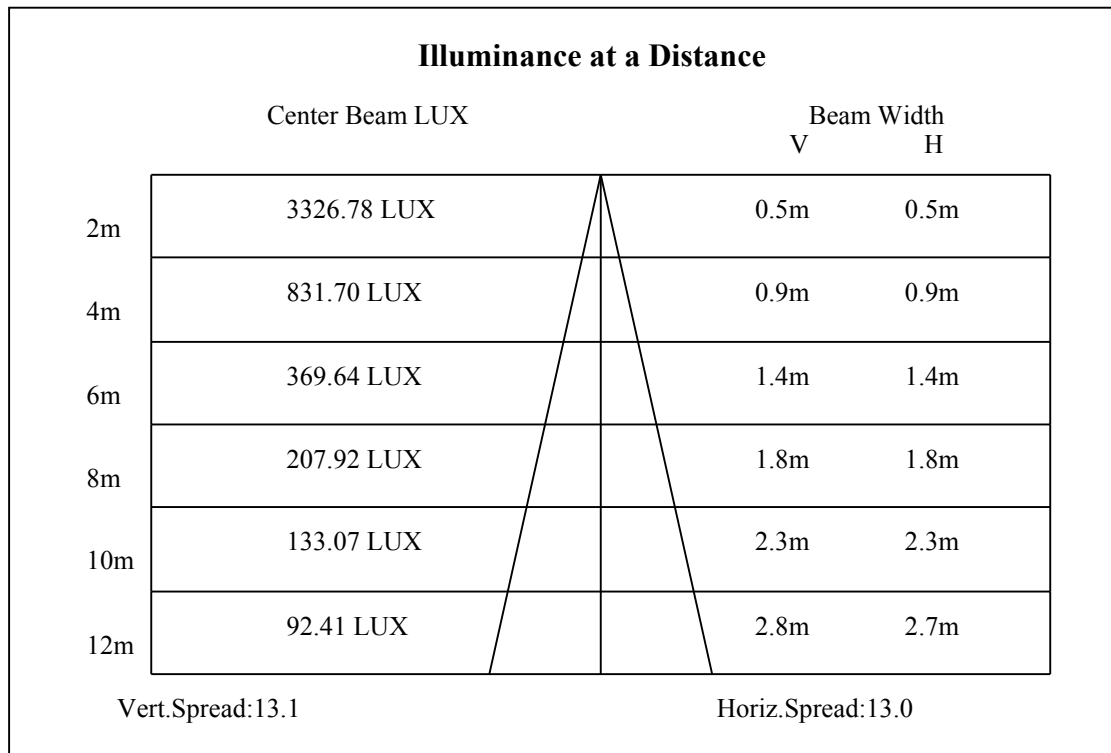
0-10	653.85
10-20	366.10
20-30	309.35
30-40	210.51
40-50	11.14
50-60	6.59
60-70	6.76
70-80	6.98
80-90	5.31
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

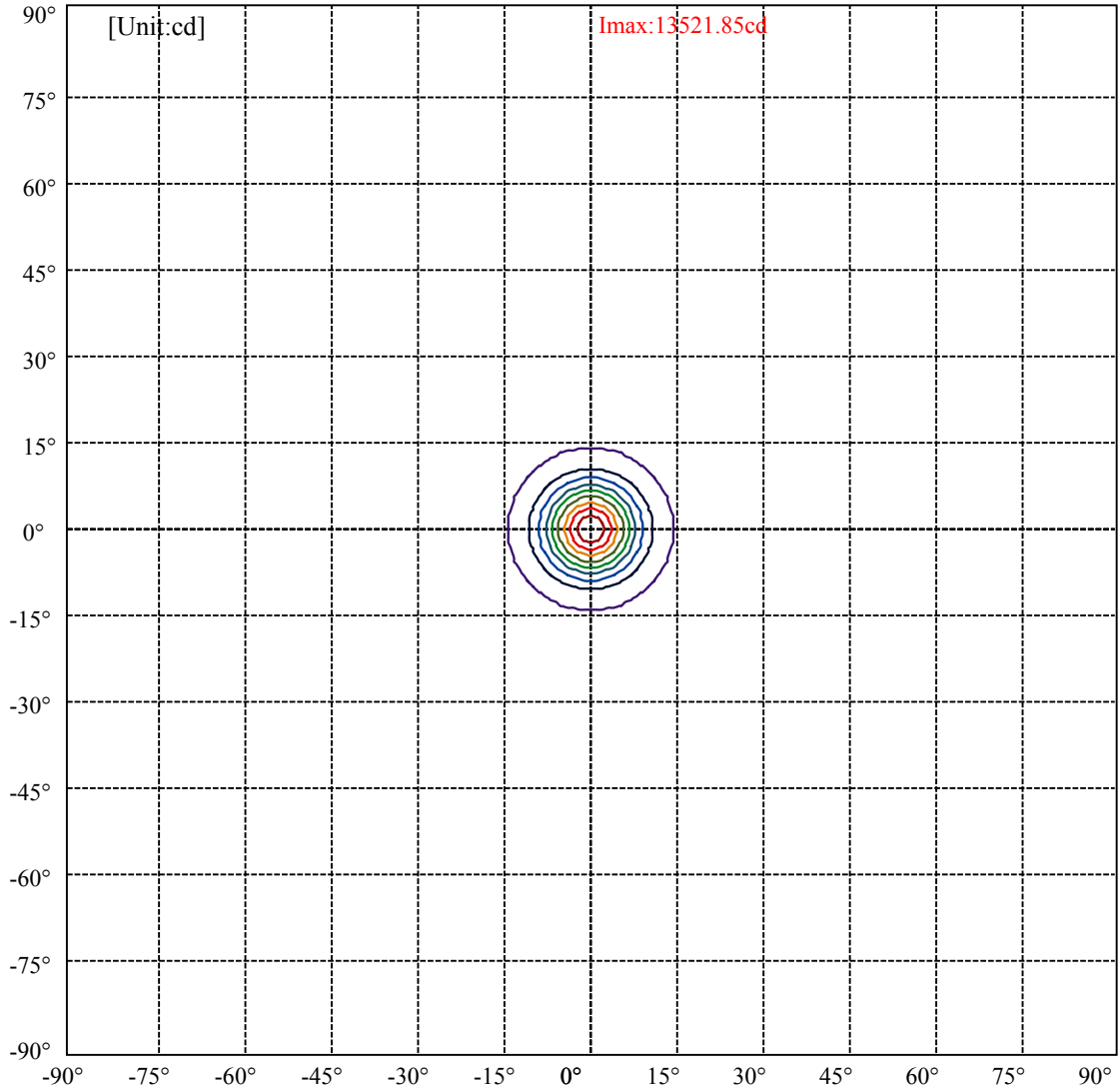


C90(Max): ———
C0/C180: ———
C90/C270: ———

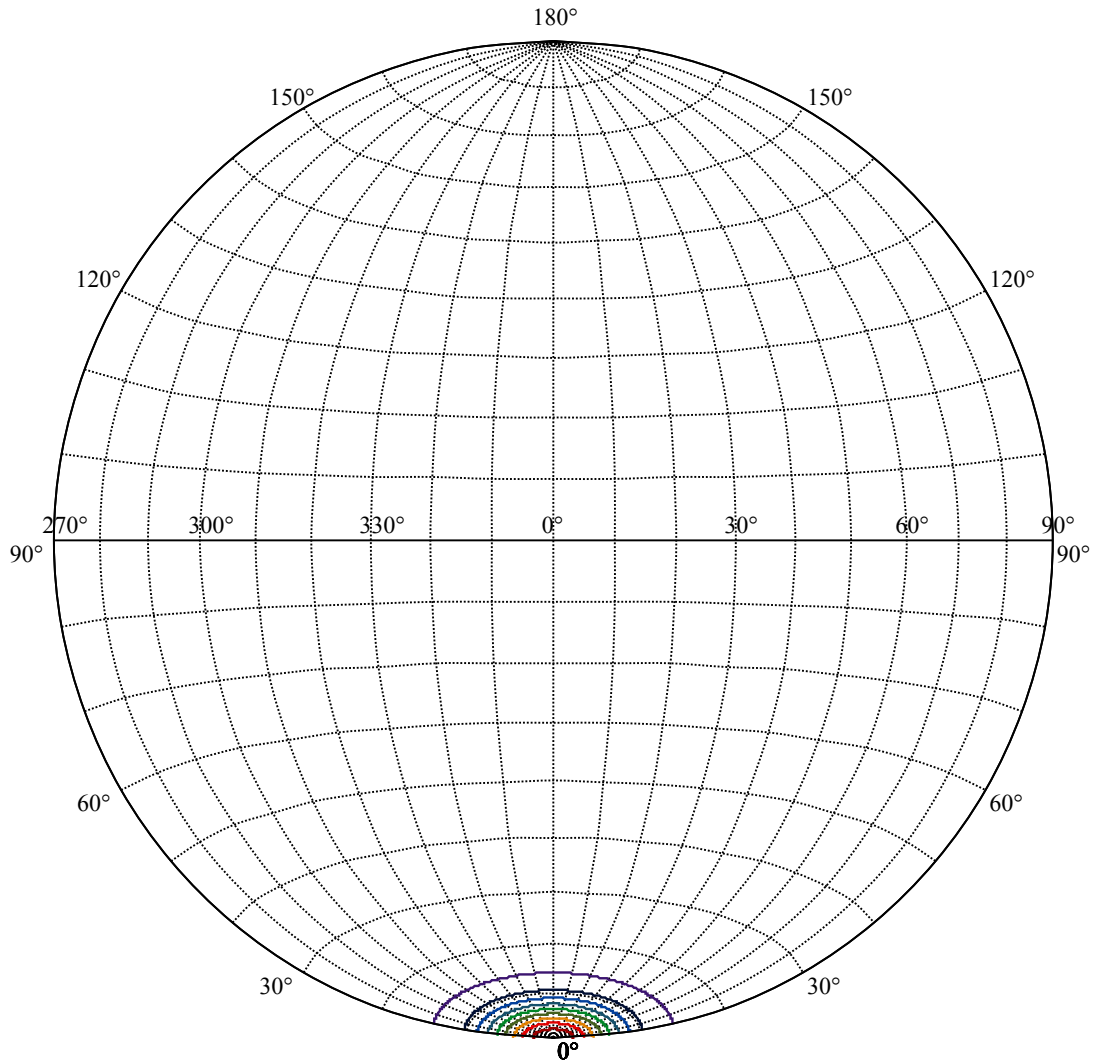
Field angle(10%Imax):C0/180Left:14.3 Right:14.3
:C90/270Left:13.9 Right:13.9

Beam Angle(50%Imax):C0/180Left:6.6 Right:6.6
:C90/270Left:6.5 Right:6.5





(10%Imax) 1352.19	—
(20%Imax) 2704.37	—
(30%Imax) 4056.56	—
(40%Imax) 5408.74	—
(50%Imax) 6760.93	—
(60%Imax) 8113.11	—
(70%Imax) 9465.3	—
(80%Imax) 10817.5	—
(90%Imax) 12169.7	—



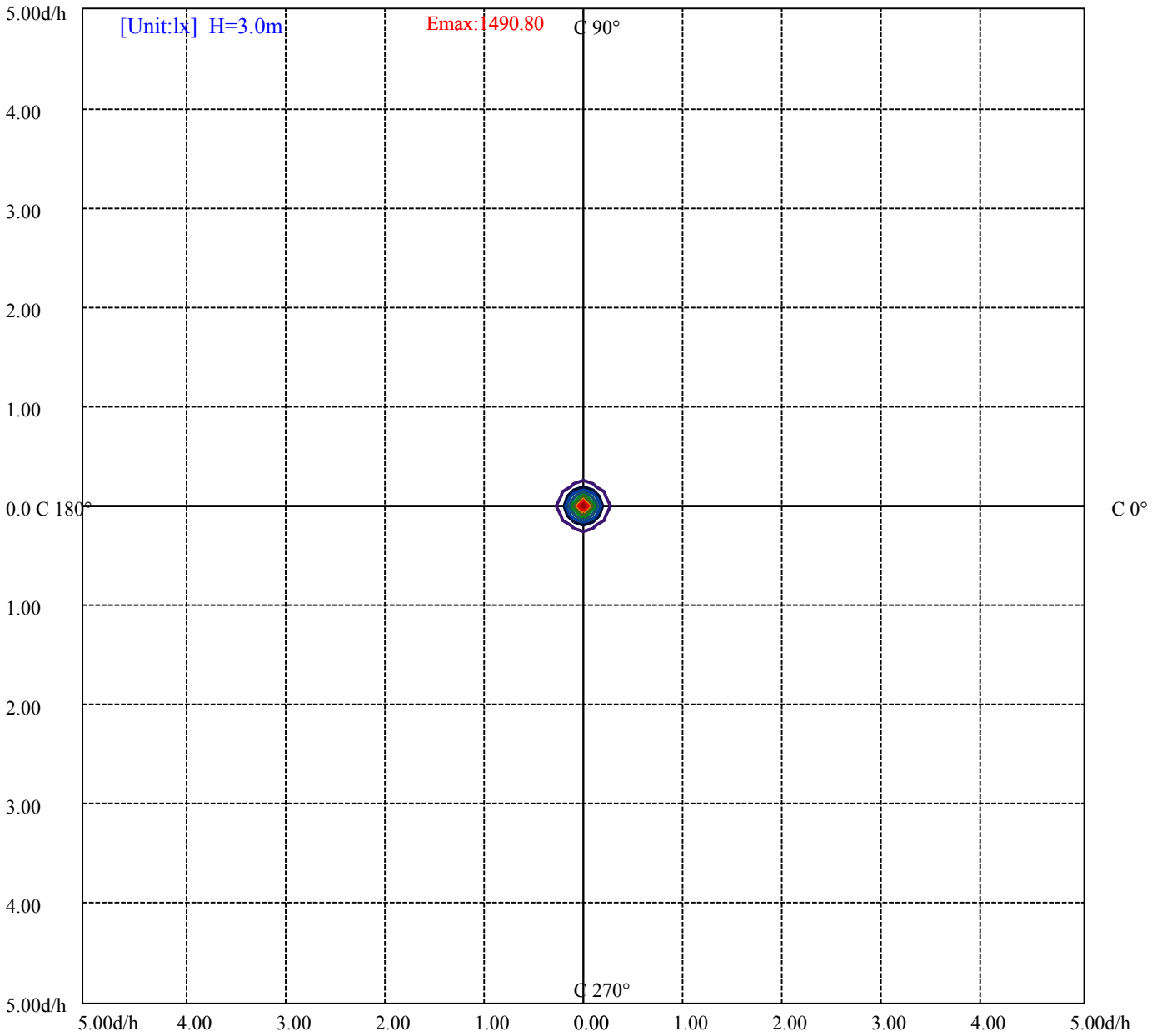
House

[Unit:cd]

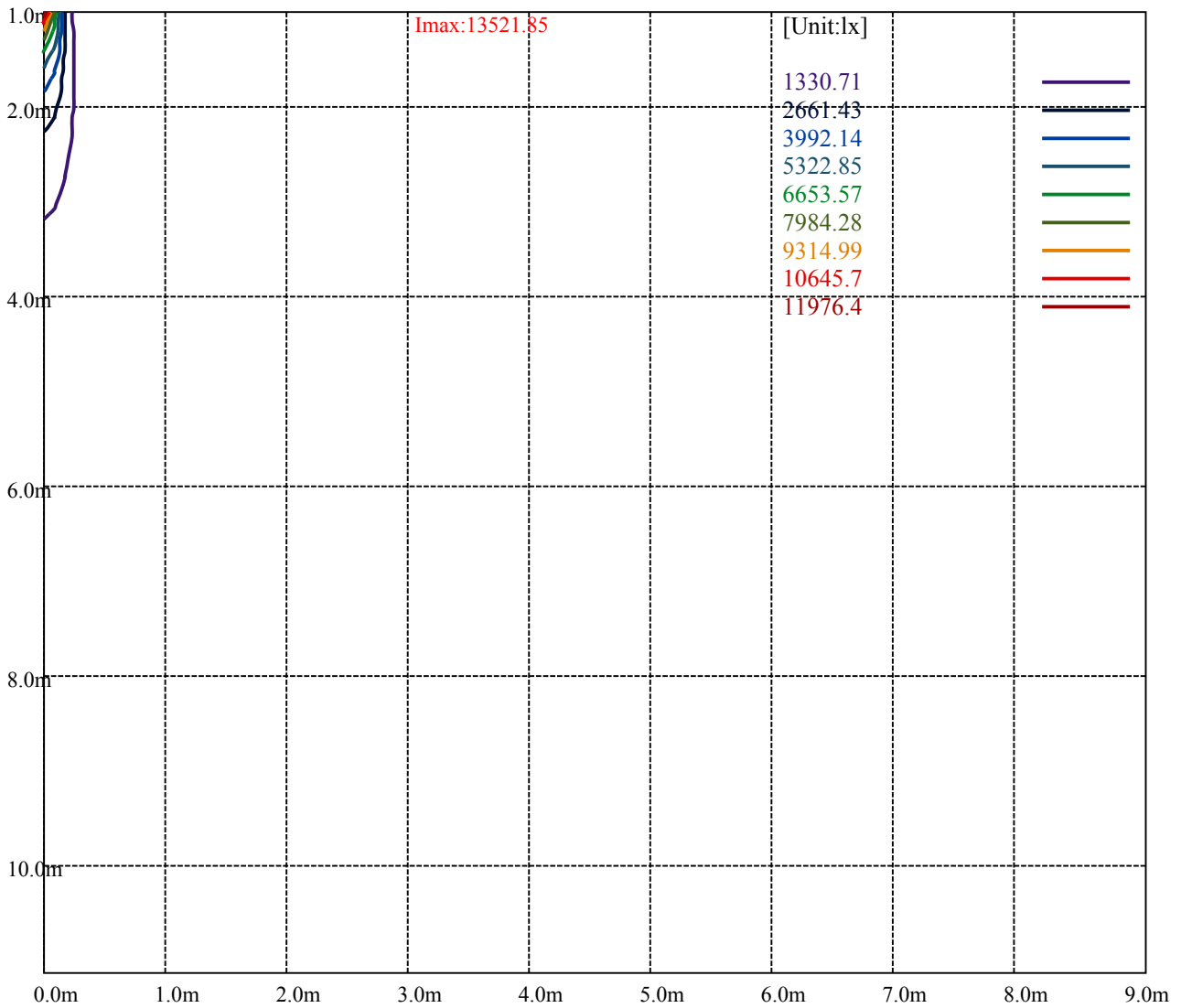
Road

Imax:13521.85

(10%Imax) 1352.19	—
(20%Imax) 2704.37	—
(30%Imax) 4056.56	—
(40%Imax) 5408.74	—
(50%Imax) 6760.93	—
(60%Imax) 8113.11	—
(70%Imax) 9465.3	—
(80%Imax) 10817.5	—
(90%Imax) 12169.7	—



- (10%Emax) 149.08
- (20%Emax) 298.1589
- (30%Emax) 447.2389
- (40%Emax) 596.3189
- (50%Emax) 745.3989
- (60%Emax) 894.4778
- (70%Emax) 1043.558
- (80%Emax) 1192.633
- (90%Emax) 1341.722



Luminance Table

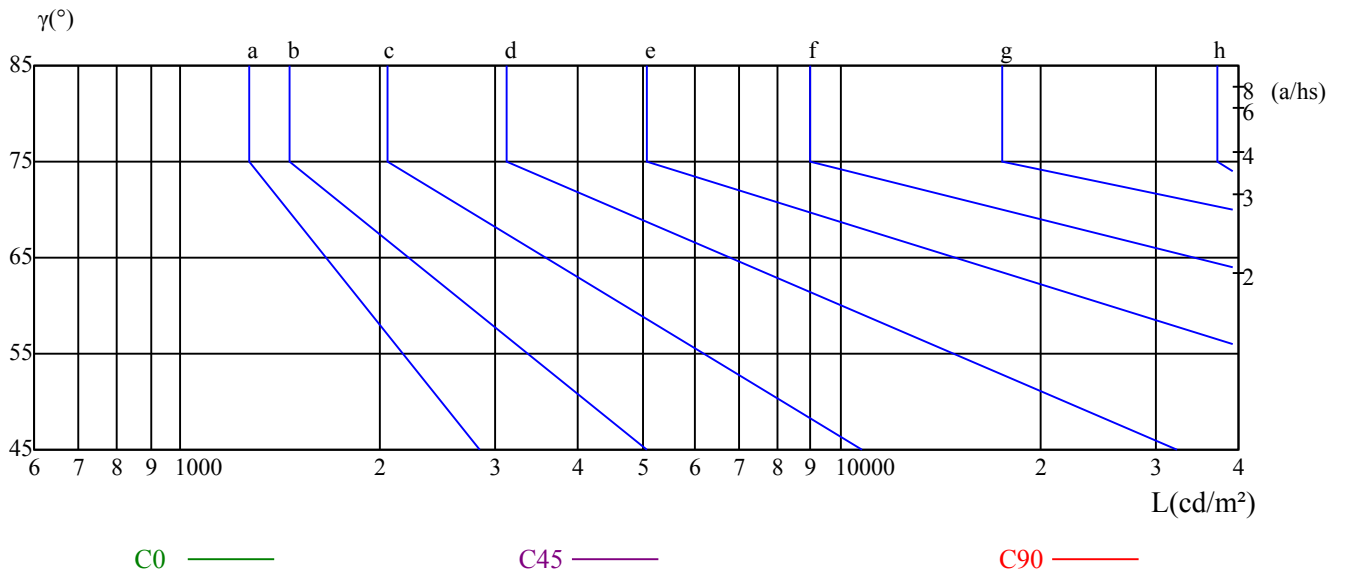
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

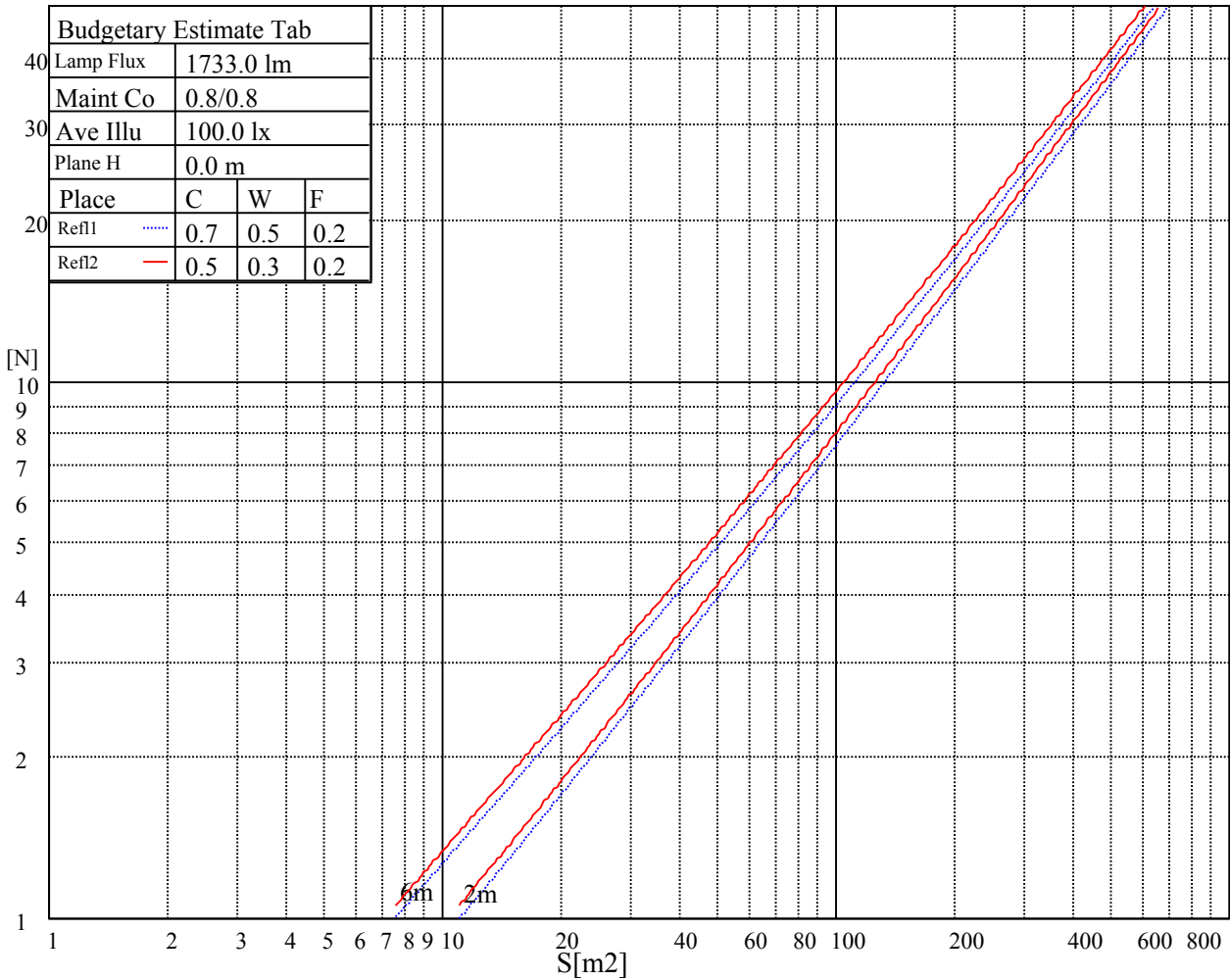
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOF=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	1.02	1.00	0.99	1.00	0.99	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.87
2	0.97	0.94	0.91	0.95	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.87	0.87	0.86	0.85	0.83
3	0.92	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.83	0.85	0.83	0.81	0.80
4	0.88	0.84	0.81	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.73	0.72
7	0.79	0.74	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
9	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
10	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.64

Intensity data(cd)

C/γ(°)	0.0	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
0.0	13307.13	13103.42	10339.59	6815.98	3798.89	2183.54	1338.97	951.93	789.51
45.0	13417.24	13389.72	10785.55	7069.24	3826.42	2004.60	1323.01	935.96	779.05
90.0	13521.85	12679.49	9515.40	5684.57	2926.80	1678.12	1098.54	856.40	747.12
135.0	13395.22	12299.60	8875.09	5417.55	2862.93	1631.32	1103.88	850.62	742.71
180.0	13307.13	10985.95	7415.00	4175.48	2228.68	1398.98	998.39	805.09	721.46
225.0	13417.24	10972.74	7225.05	4129.78	2238.59	1421.01	997.18	813.90	736.71
270.0	13521.85	11798.59	8208.91	5059.68	2785.85	1639.58	1128.66	874.85	763.08
315.0	13395.22	11760.05	8680.19	5311.84	2904.78	1734.83	1091.22	894.50	773.32
360.0	13307.13	13103.42	10339.59	6815.98	3798.89	2183.54	1338.97	951.93	789.51
C/γ(°)	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5
0.0	721.24	681.05	653.52	630.40	593.51	442.65	281.34	81.48	24.45
45.0	710.78	672.24	643.61	621.59	576.44	417.33	281.89	51.26	19.21
90.0	692.22	656.93	632.10	599.67	520.28	331.27	139.90	32.59	19.32
135.0	689.86	656.27	628.74	599.01	510.92	310.52	132.80	29.62	14.37
180.0	675.05	643.17	616.85	583.54	462.03	274.73	88.70	26.32	11.62
225.0	692.61	662.44	639.20	604.57	499.03	294.50	103.07	32.04	9.47
270.0	711.33	679.40	655.17	629.85	553.87	384.29	174.31	36.78	13.54
315.0	710.01	673.73	649.17	614.48	549.41	392.61	189.50	46.25	27.20
360.0	721.24	681.05	653.52	630.40	593.51	442.65	281.34	81.48	24.45
C/γ(°)	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0
0.0	9.03	8.42	7.98	7.71	7.43	7.21	7.10	6.99	6.88
45.0	8.81	8.26	7.93	7.65	7.43	7.27	7.10	6.99	6.88
90.0	8.48	8.04	7.76	7.49	7.32	7.10	6.99	6.88	6.77
135.0	8.59	8.20	7.87	7.60	7.38	7.16	7.05	6.94	6.83
180.0	8.37	7.98	7.71	7.43	7.27	7.10	6.99	6.88	6.77
225.0	8.37	7.93	7.65	7.38	7.21	7.05	6.88	6.83	6.72
270.0	8.53	8.09	7.76	7.43	7.21	7.10	6.94	6.83	6.77
315.0	8.75	8.20	7.87	7.54	7.32	7.16	6.99	6.83	6.77
360.0	9.03	8.42	7.98	7.71	7.43	7.21	7.10	6.99	6.88
C/γ(°)	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5
0.0	6.77	6.72	6.66	6.61	6.55	6.55	6.55	6.55	6.44
45.0	6.77	6.72	6.66	6.66	6.61	6.55	6.55	6.61	6.55
90.0	6.72	6.66	6.61	6.55	6.55	6.55	6.50	6.44	6.39
135.0	6.77	6.72	6.66	6.61	6.55	6.55	6.50	6.50	6.39
180.0	6.72	6.66	6.66	6.61	6.55	6.55	6.55	6.50	6.33
225.0	6.72	6.66	6.66	6.61	6.55	6.55	6.50	6.50	6.44
270.0	6.66	6.61	6.55	6.55	6.55	6.50	6.50	6.50	6.44
315.0	6.72	6.66	6.61	6.55	6.55	6.50	6.50	6.50	6.39
360.0	6.77	6.72	6.66	6.61	6.55	6.55	6.55	6.55	6.44
C/γ(°)	90.0								
0.0	6.39								
45.0	6.39								
90.0	6.33								
135.0	6.33								
180.0	6.33								
225.0	6.33								
270.0	6.33								
315.0	6.33								
360.0	6.39								