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Nata

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LumCAT: 1405-N  
Luminaire: 92.70.064.00  
Report No: NT2018040924  
Test No: nata-0100  
LampCAT: SEOUL SAWX10  
Lamp flux(lm): 1576.0  
Number of Lamps: 1  
Length(mm): 39  
Phm Type: C

Voltage(V): 34.4000  
Current(A): 0.3500  
Power (W): 12.0400  
PF: 0.0000  
Ballast type: DC  
Width(mm): 39  
Height(mm): 0

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Photometric Results

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Lumens(lm): 1390.96  
Efficiency(%): 88.26%  
Lumens(lm)/Power(W): 116.85  
Central intensity(cd): 2886.469  
Maximum intensity(cd): 2886.469  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=26.9  
                                  [C90/270]Total=26.9  
Field angle(10%Imax): [C0/180]Total=80.2  
                                  [C90/270]Total=80.2  
Maximum s/h(1/2): C0\_180=0.45 C90\_270=0.45  
Maximum s/h(1/4): C0\_180=0.50 C90\_270=0.50  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 89.27%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 95.068%

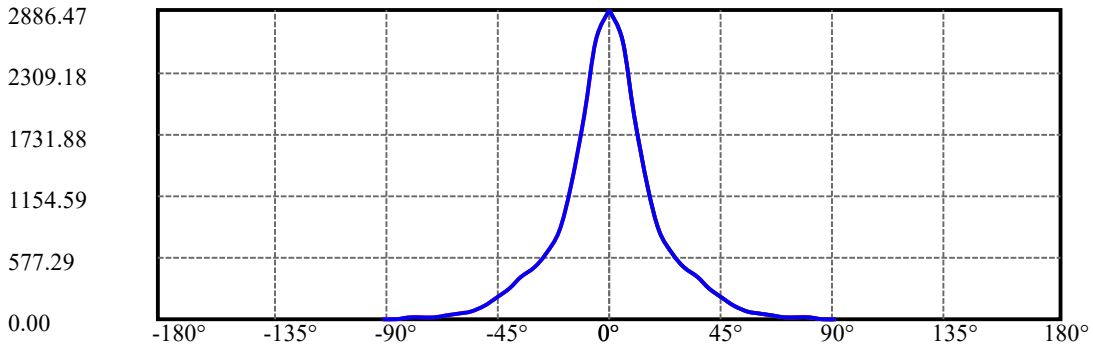
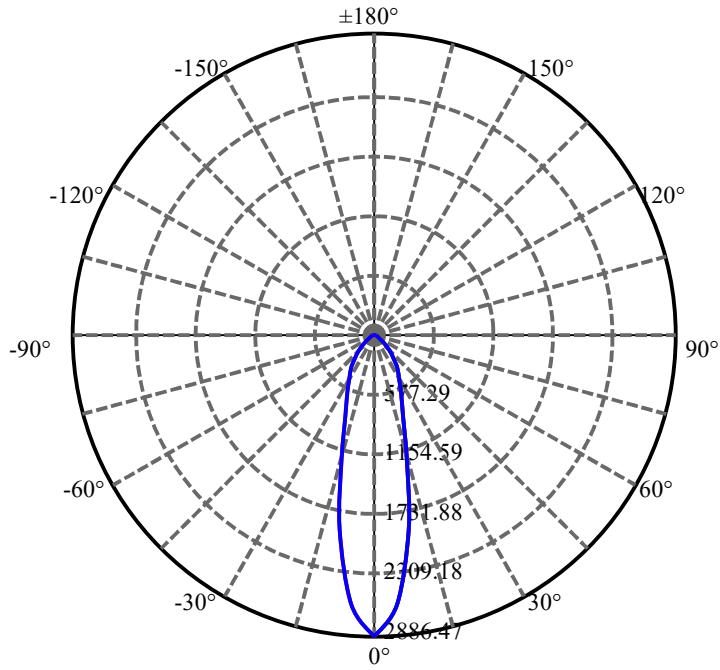
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2886.469	17.262	17.262	1.095%	1.241%
5.0	2592.812	123.867	141.129	7.860%	10.146%
10.0	1893.390	180.219	321.348	11.435%	23.103%
15.0	1237.874	175.615	496.963	11.143%	35.728%
20.0	829.920	155.588	652.551	9.872%	46.914%
25.0	612.482	141.883	794.434	9.003%	57.114%
30.0	491.158	134.611	929.045	8.541%	66.792%
35.0	387.625	121.869	1050.914	7.733%	75.553%
40.0	290.471	102.343	1153.257	6.494%	82.911%
45.0	197.322	76.480	1229.738	4.853%	88.409%
50.0	119.940	50.363	1280.101	3.196%	92.030%
55.0	74.450	33.429	1313.529	2.121%	94.433%
60.0	50.507	23.976	1337.505	1.521%	96.157%
65.0	35.525	17.648	1355.153	1.120%	97.426%
70.0	25.952	13.367	1368.521	.848%	98.387%
75.0	18.334	9.707	1378.228	.616%	99.085%
80.0	12.518	6.758	1384.985	.429%	99.571%
85.0	8.080	4.412	1389.397	.280%	99.888%
90.0	5.698	1.562	1390.959	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	929.05	58.95%	66.79%
0-40	1153.26	73.18%	82.91%
0-60	1337.51	84.87%	96.16%
0-90	1389.40	88.16%	99.89%
0-120	1389.40	88.16%	99.89%
0-180	1390.96	88.26%	100.00%
60-90	75.87	4.81%	5.45%
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%
0-38.02	1112.77	70.61%	80.00%

ZONAL LUMEN SUMMARY

0-10	321.35
10-20	331.20
20-30	276.49
30-40	224.21
40-50	126.84
50-60	57.40
60-70	31.02
70-80	16.46
80-90	4.41
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: —————

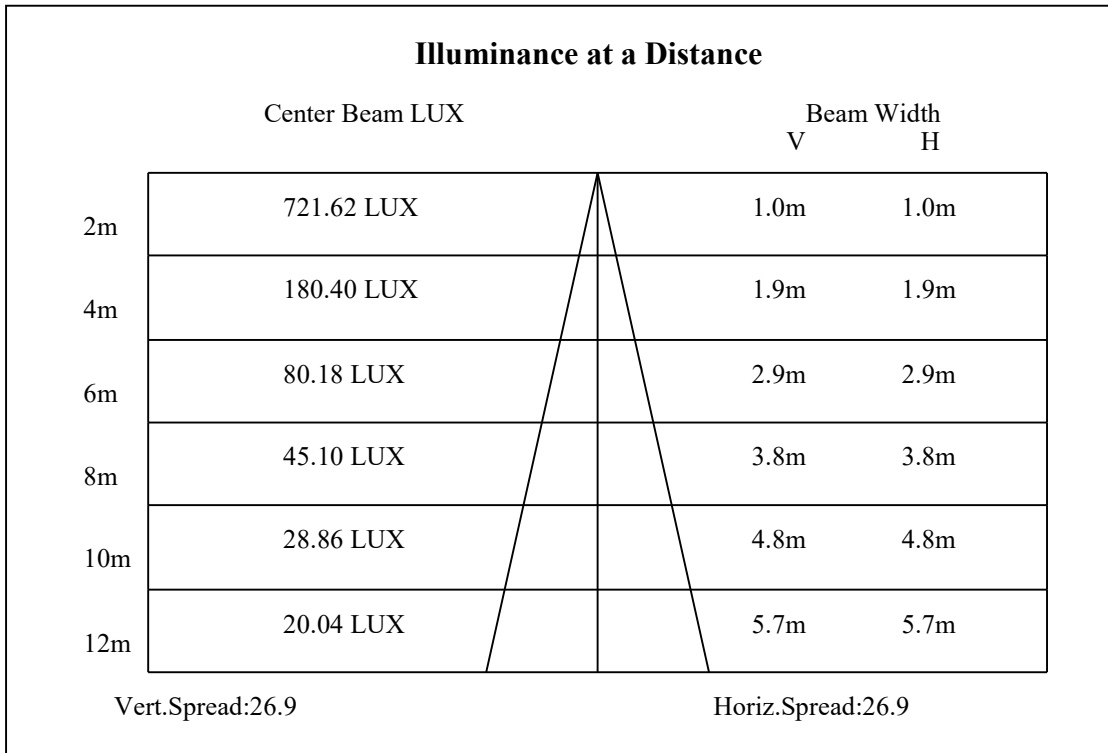
C90/C270: —————

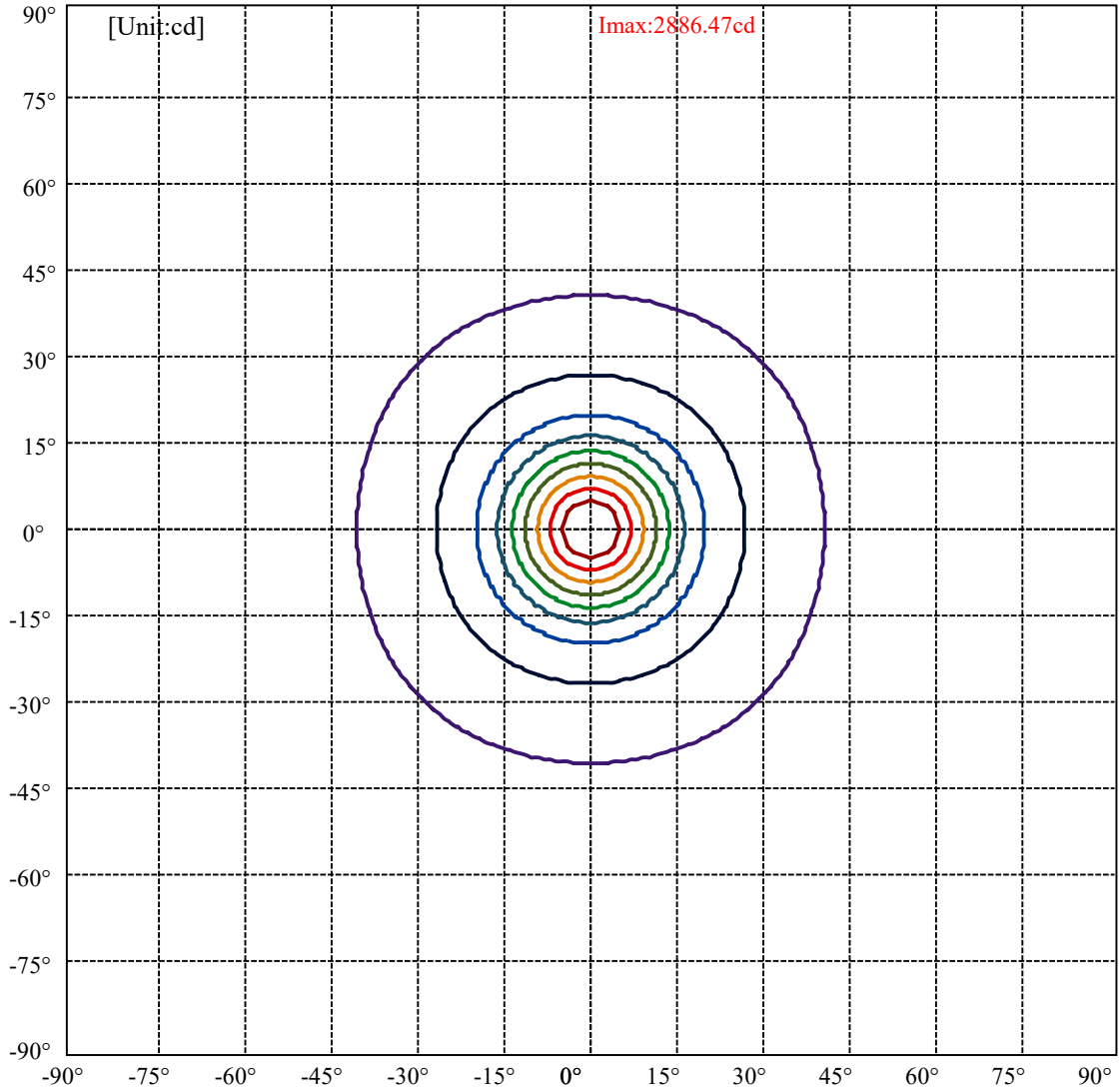
Field angle(10%Imax):C0/180Left:40.1 Right:40.1

:C90/270Left:40.1 Right:40.1

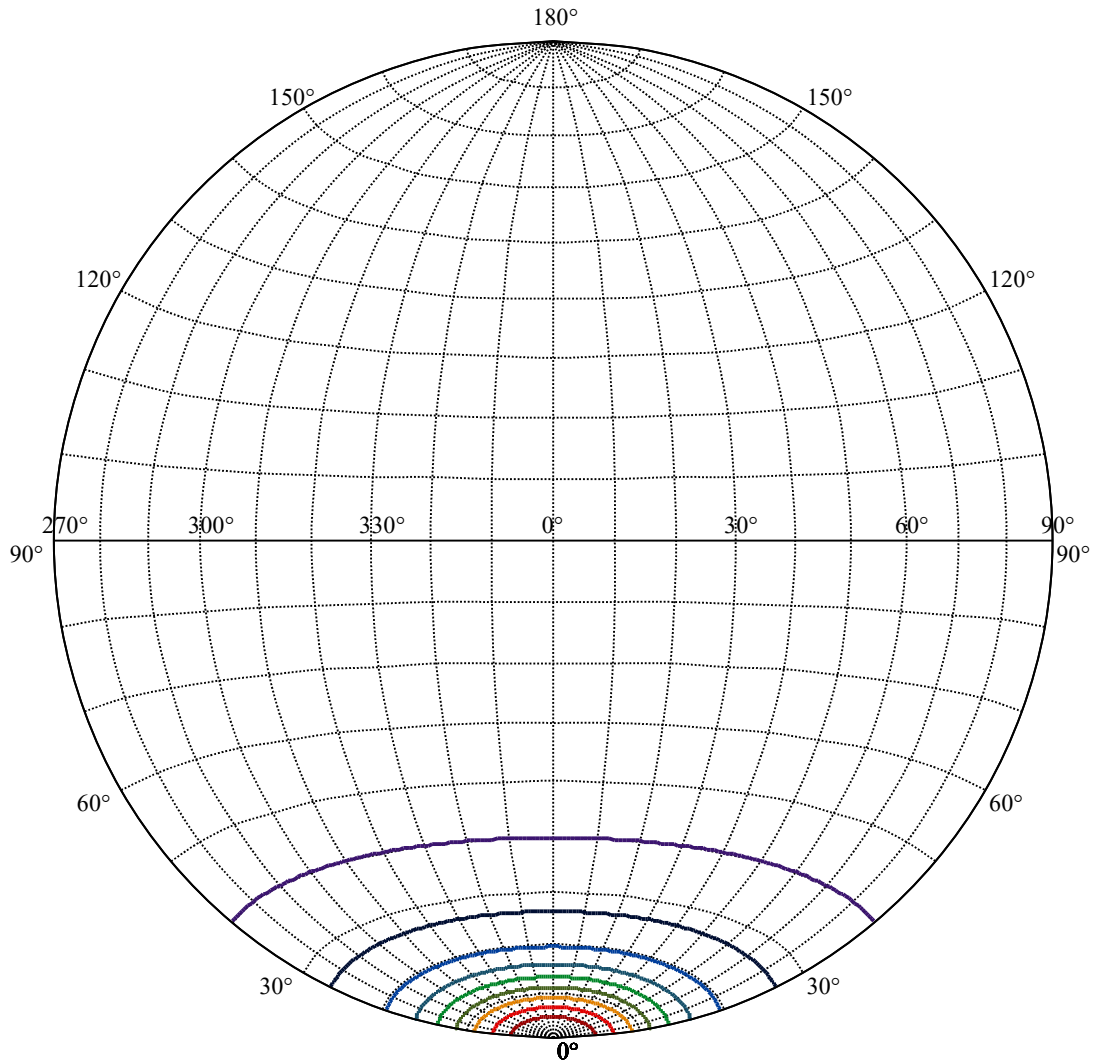
Beam Angle(50%Imax):C0/180Left:13.4 Right:13.4

:C90/270Left:13.4 Right:13.4





(10%Imax) 288.647	—
(20%Imax) 577.294	—
(30%Imax) 865.941	—
(40%Imax) 1154.59	—
(50%Imax) 1443.23	—
(60%Imax) 1731.88	—
(70%Imax) 2020.53	—
(80%Imax) 2309.18	—
(90%Imax) 2597.82	—



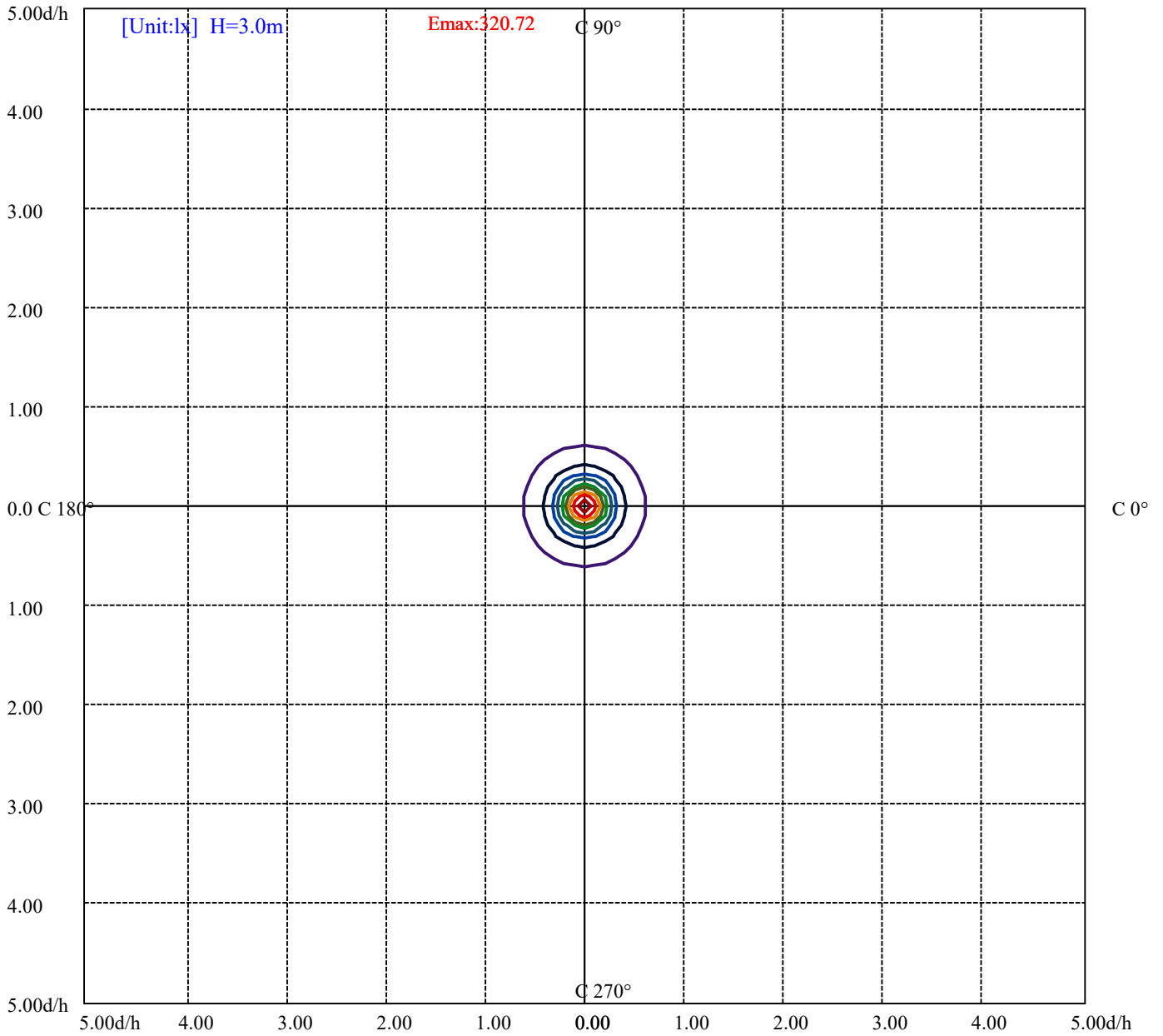
House

[Unit:cd]

Road

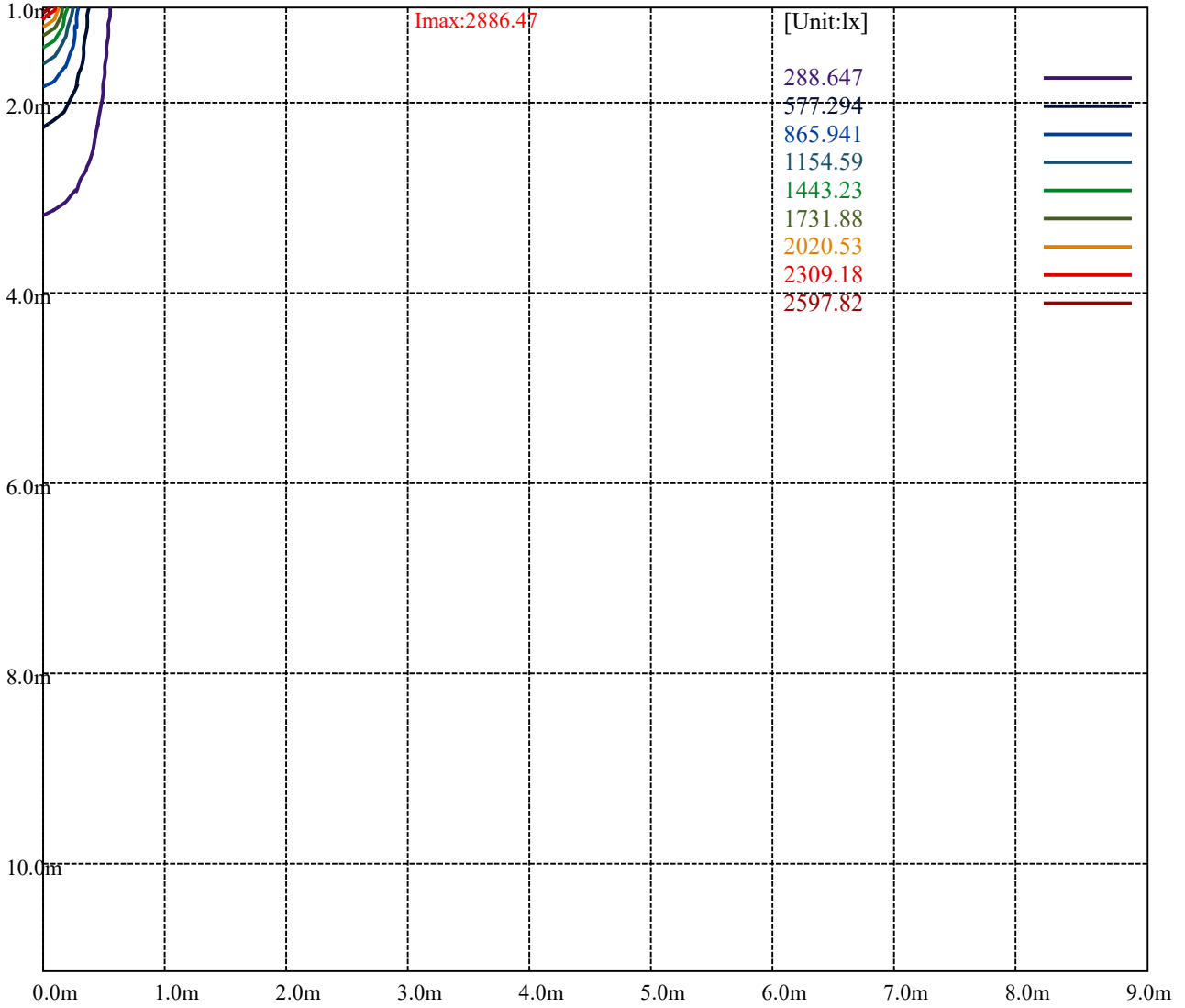
Imax:2886.47

(10%Imax) 288.647	—
(20%Imax) 577.294	—
(30%Imax) 865.941	—
(40%Imax) 1154.59	—
(50%Imax) 1443.23	—
(60%Imax) 1731.88	—
(70%Imax) 2020.53	—
(80%Imax) 2309.18	—
(90%Imax) 2597.82	—



(10%Emax) 32.07178	—
(20%Emax) 64.14355	—
(30%Emax) 96.21533	—
(40%Emax) 128.2867	—
(50%Emax) 160.3589	—
(60%Emax) 192.4311	—
(70%Emax) 224.5022	—
(80%Emax) 256.5744	—
(90%Emax) 288.6456	—





Luminance Table

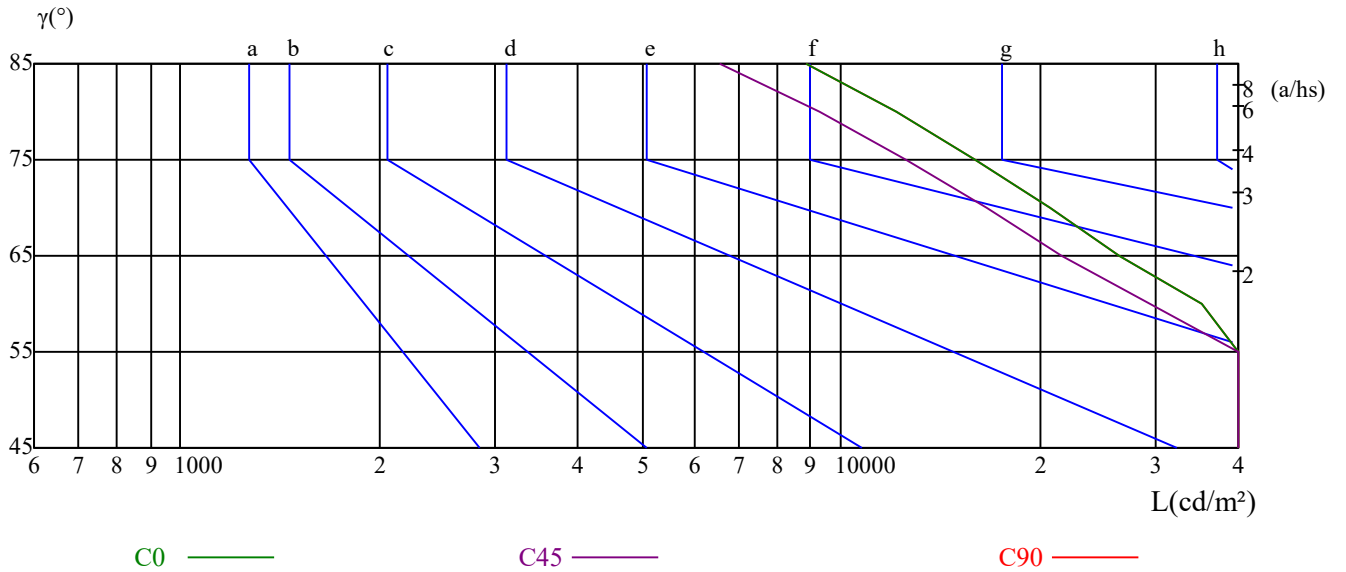
$\gamma$	45	50	55	60	65	70	75	80	85
C0	121276	76143	49261	35172	26320	20709	15983	12127	8883
C45	106344	65804	41920	29437	21628	16671	12565	9270	6561
C90	121276	76143	49261	35172	26320	20709	15983	12127	8883

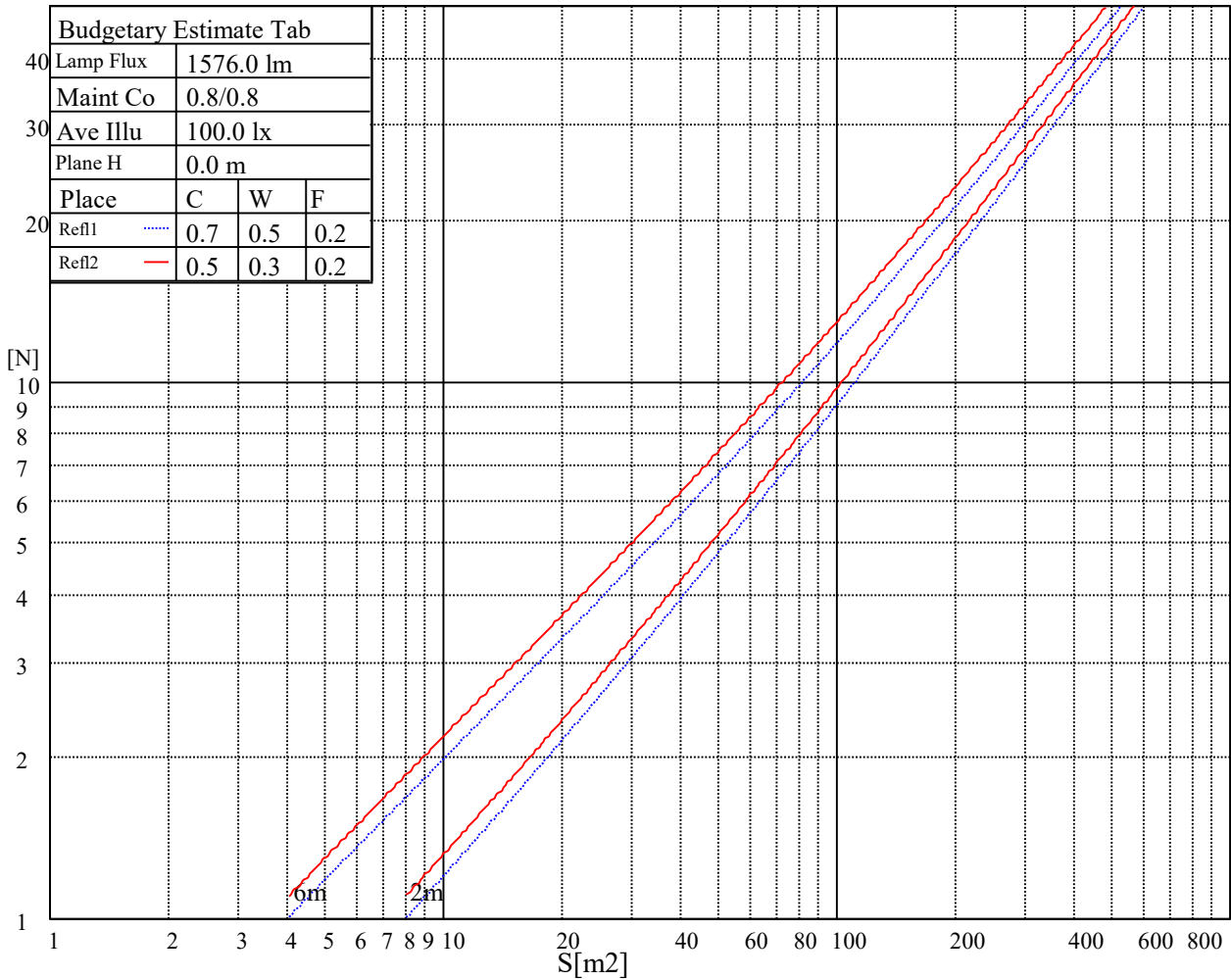
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
55266	55266	55266	46572	46572	46572	60948	60948	60948

Glare Table

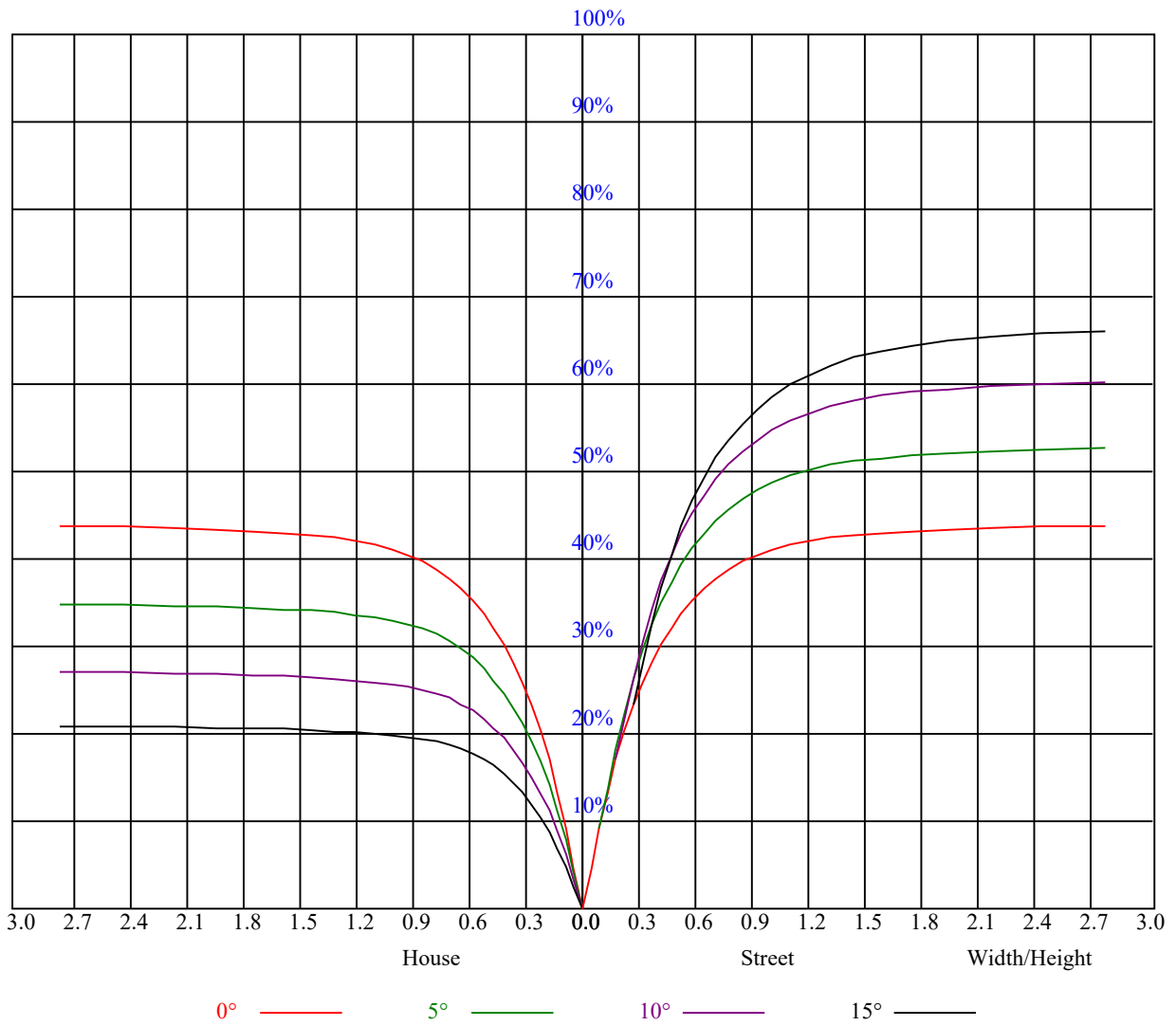
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.97	0.94	0.92	0.95	0.93	0.90	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.82	0.81
2	0.90	0.86	0.82	0.88	0.85	0.81	0.85	0.82	0.80	0.83	0.80	0.78	0.80	0.78	0.76	0.75
3	0.84	0.79	0.75	0.82	0.78	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.69
4	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	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	0.69	0.64	0.60	0.69	0.63	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.57
7	0.66	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
8	0.62	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.51
9	0.59	0.54	0.51	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.49
10	0.57	0.52	0.48	0.56	0.51	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.48	0.47



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Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2857.98	2848.07	2245.20	1481.02	945.87	666.73	540.10	443.20	347.41
45.0	2857.43	3028.10	2562.32	1740.33	1097.82	762.53	574.79	459.72	362.27
90.0	2934.51	2864.03	2144.45	1443.58	935.46	666.79	537.19	431.15	330.72
135.0	2895.97	2677.39	1960.01	1242.62	844.57	619.94	501.01	403.01	303.36
180.0	2857.98	2321.73	1539.93	983.97	707.86	545.33	439.74	330.83	231.90
225.0	2857.43	2163.72	1440.83	922.80	670.42	528.76	434.45	323.84	213.84
270.0	2934.51	2381.74	1580.12	1017.99	702.52	552.22	451.46	349.06	278.59
315.0	2895.97	2457.72	1674.27	1070.68	734.84	557.56	450.53	360.18	255.68
360.0	2857.98	2848.07	2245.20	1481.02	945.87	666.73	540.10	443.20	347.41
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	279.69	155.86	93.43	60.67	42.17	30.78	22.02	15.91	9.97
45.0	282.99	166.49	97.84	64.09	43.27	31.27	22.90	16.08	10.30
90.0	227.05	141.72	84.68	56.21	39.75	28.79	20.21	14.20	9.08
135.0	198.15	128.12	79.06	53.79	37.33	27.69	19.27	12.94	7.93
180.0	141.00	88.31	58.75	41.79	29.79	21.97	14.98	9.74	6.39
225.0	136.43	84.79	55.39	39.59	28.08	20.26	14.09	9.03	6.17
270.0	155.04	95.08	63.20	43.05	30.67	22.41	15.86	10.68	6.88
315.0	158.23	99.16	63.26	44.87	33.14	24.45	17.34	11.56	7.93
360.0	279.69	155.86	93.43	60.67	42.17	30.78	22.02	15.91	9.97
C/ $\gamma$ (°)	90.0								
0.0	6.06								
45.0	6.22								
90.0	5.89								
135.0	5.56								
180.0	5.51								
225.0	5.40								
270.0	5.45								
315.0	5.51								
360.0	6.06								