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NATA

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Client:

LumCAT: 1443-A

Luminaire:

Report No: nata-0100

Voltage(V): 17.6000

Test No:

Current(A): 0.7100

LampCAT: XICATO XTM LES19

Power (W): 12.5000

Lamp flux(lm): 1308.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 1122.56, Efficiency(%): 85.82% , Luminous Efficacy(lm/W): 89.80

Central intensity(cd): 1827.480, Maximum intensity(cd): 1827.480

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=38.0

[C90/270]Total=38.0

Field angle(10%Imax): [C0/180]Total=84.6

[C90/270]Total=84.6

Maximum s/h(1/2): C0\_180=0.61 C90\_270=0.61

Maximum s/h(1/4): C0\_180=0.66 C90\_270=0.66

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.58%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.727%

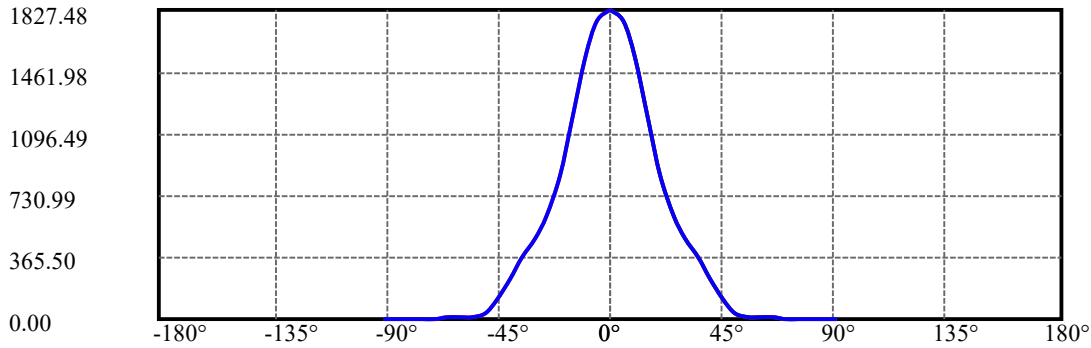
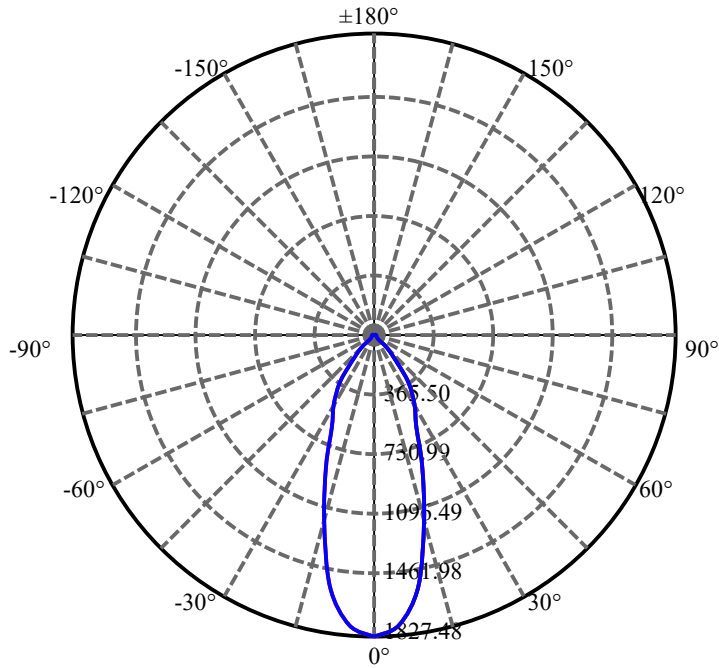
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1827.480	10.929	10.929	.836%	.974%
5.0	1763.627	84.254	95.183	6.441%	8.479%
10.0	1542.727	146.842	242.025	11.226%	21.560%
15.0	1171.608	166.214	408.239	12.708%	36.367%
20.0	848.404	159.054	567.292	12.160%	50.536%
25.0	617.032	142.937	710.23	10.928%	63.269%
30.0	478.960	131.268	841.497	10.036%	74.963%
35.0	361.558	113.674	955.171	8.691%	85.089%
40.0	237.233	83.586	1038.757	6.390%	92.535%
45.0	118.443	45.908	1084.664	3.510%	96.625%
50.0	34.934	14.669	1099.333	1.121%	97.931%
55.0	9.805	4.403	1103.736	.337%	98.324%
60.0	6.183	2.935	1106.671	.224%	98.585%
65.0	5.745	2.854	1109.525	.218%	98.839%
70.0	5.536	2.851	1112.376	.218%	99.093%
75.0	5.413	2.866	1115.242	.219%	99.349%
80.0	5.343	2.884	1118.127	.221%	99.605%
85.0	5.473	2.988	1121.115	.228%	99.872%
90.0	5.256	1.440	1122.555	.110%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	841.50	64.33%	74.96%
0-40	1038.76	79.42%	92.54%
0-60	1106.67	84.61%	98.58%
0-90	1121.11	85.71%	99.87%
0-120	1121.11	85.71%	99.87%
0-180	1122.56	85.82%	100.00%
60-90	17.38	1.33%	1.55%
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%
0-32.49	898.04	68.66%	80.00%

ZONAL LUMEN SUMMARY

0-10	242.02
10-20	325.27
20-30	274.21
30-40	197.26
40-50	60.58
50-60	7.34
60-70	5.71
70-80	5.75
80-90	2.99
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: —————

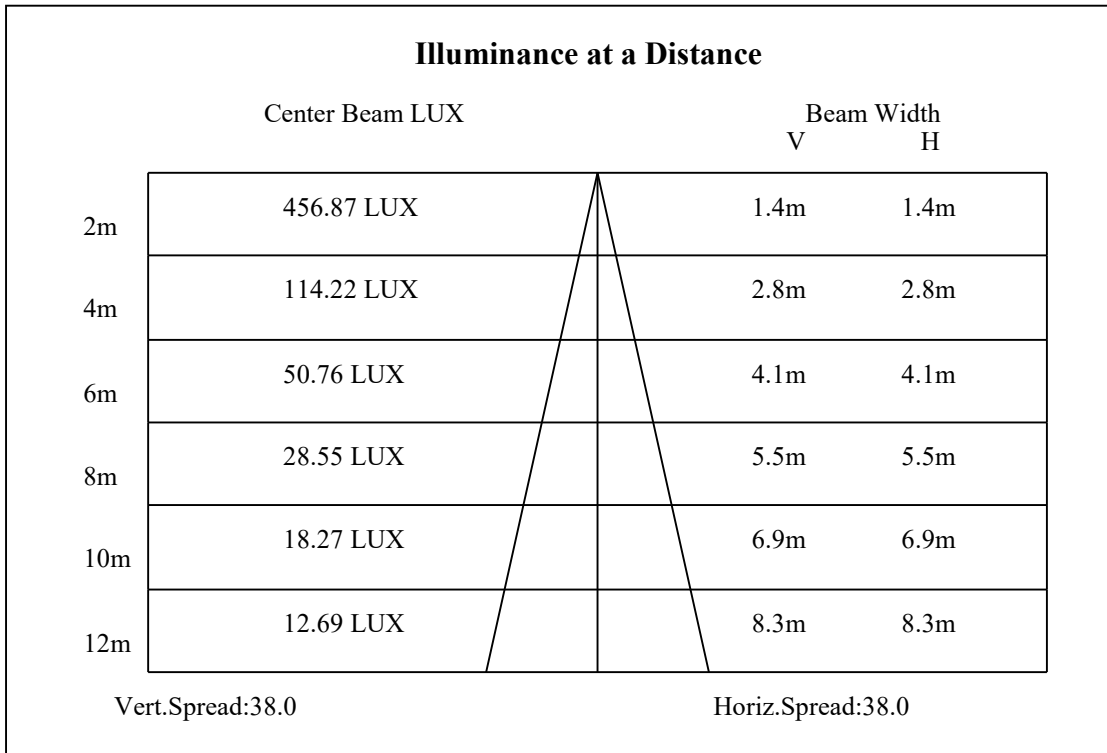
C90/C270: —————

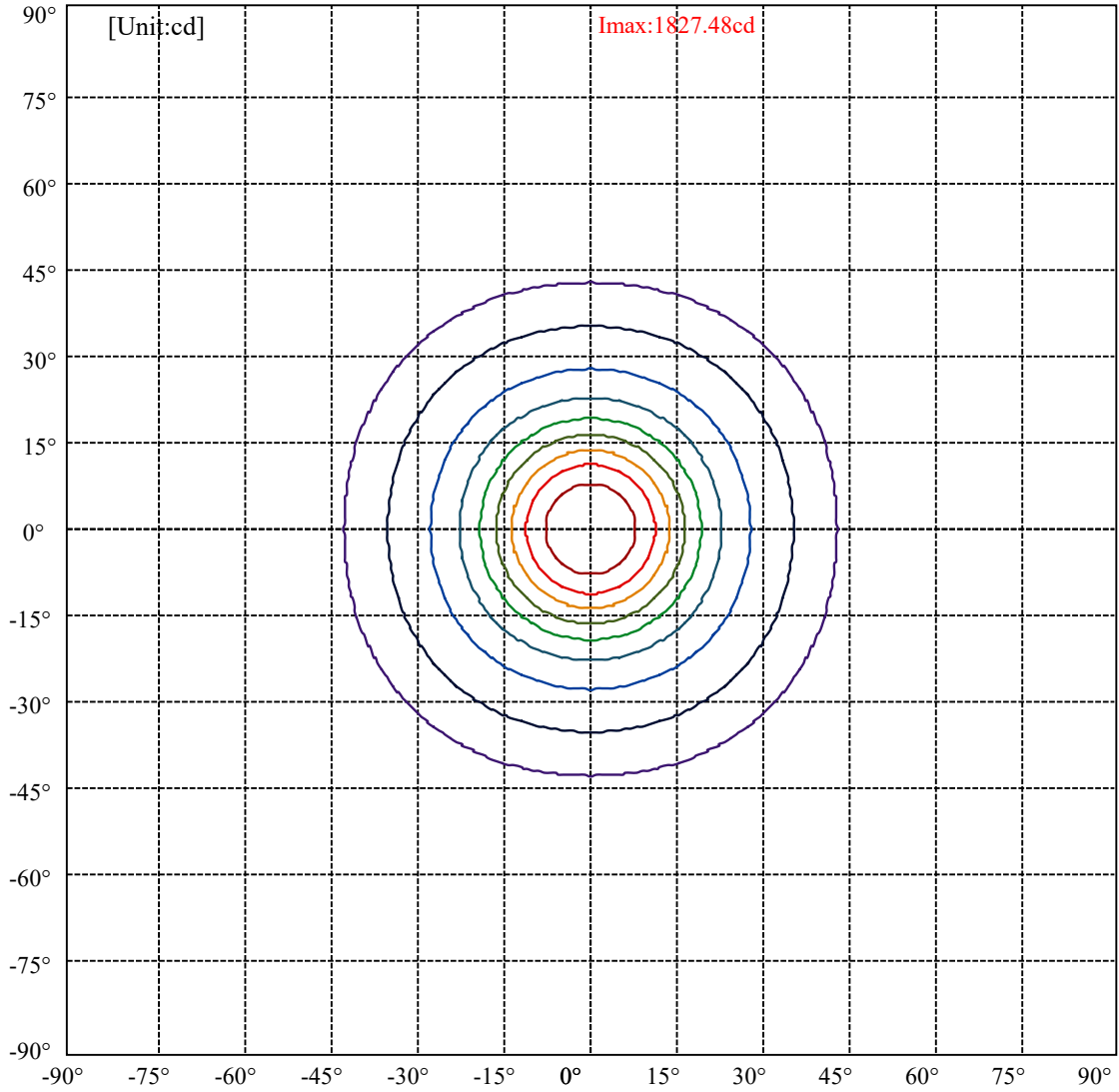
Field angle(10%Imax):C0/180Left:42.3 Right:42.3

:C90/270Left:42.3 Right:42.3

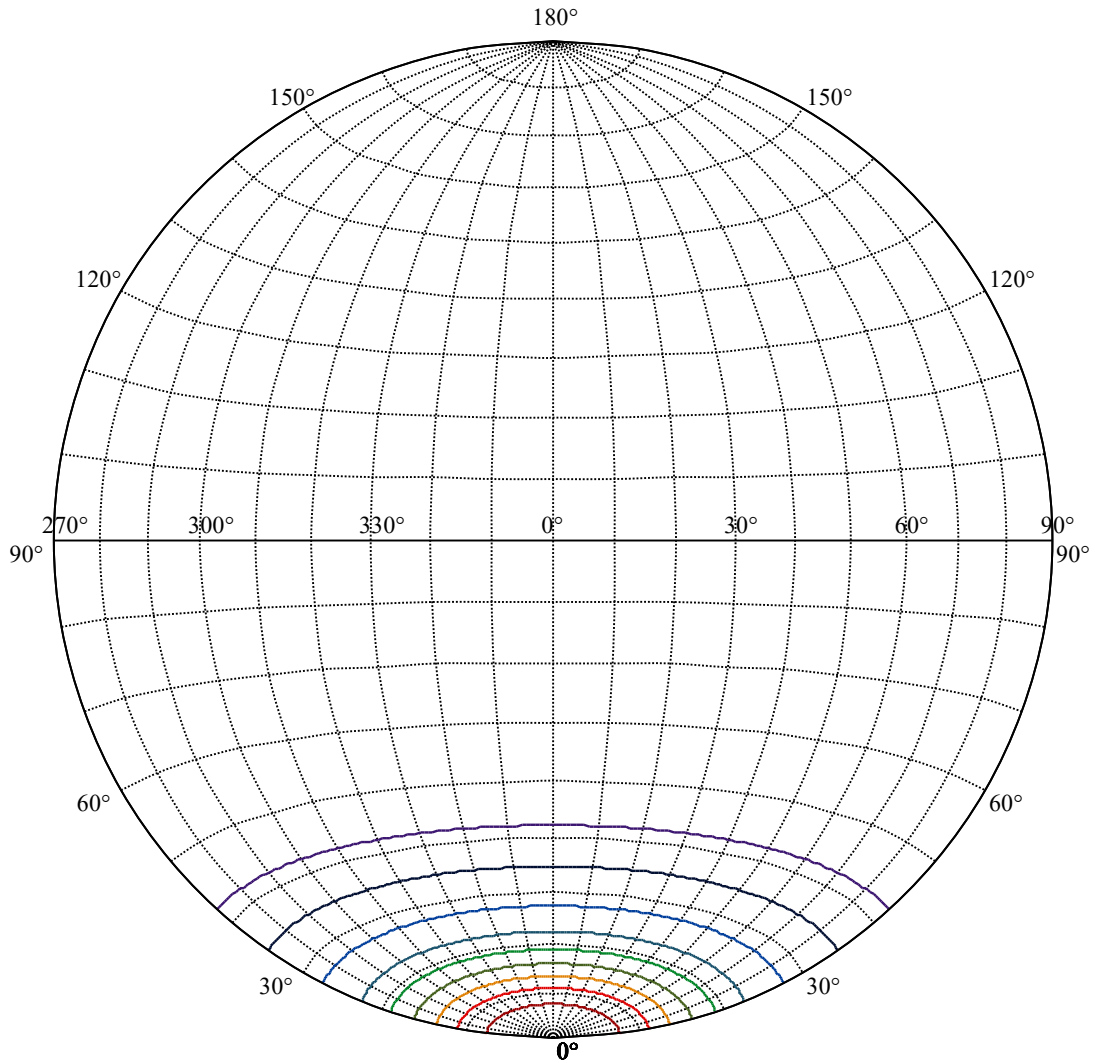
Beam Angle(50%Imax):C0/180Left:19.0 Right:19.0

:C90/270Left:19.0 Right:19.0





(10%Imax) 182.748	—
(20%Imax) 365.496	—
(30%Imax) 548.244	—
(40%Imax) 730.992	—
(50%Imax) 913.74	—
(60%Imax) 1096.49	—
(70%Imax) 1279.24	—
(80%Imax) 1461.98	—
(90%Imax) 1644.73	—



House

[Unit:cd]

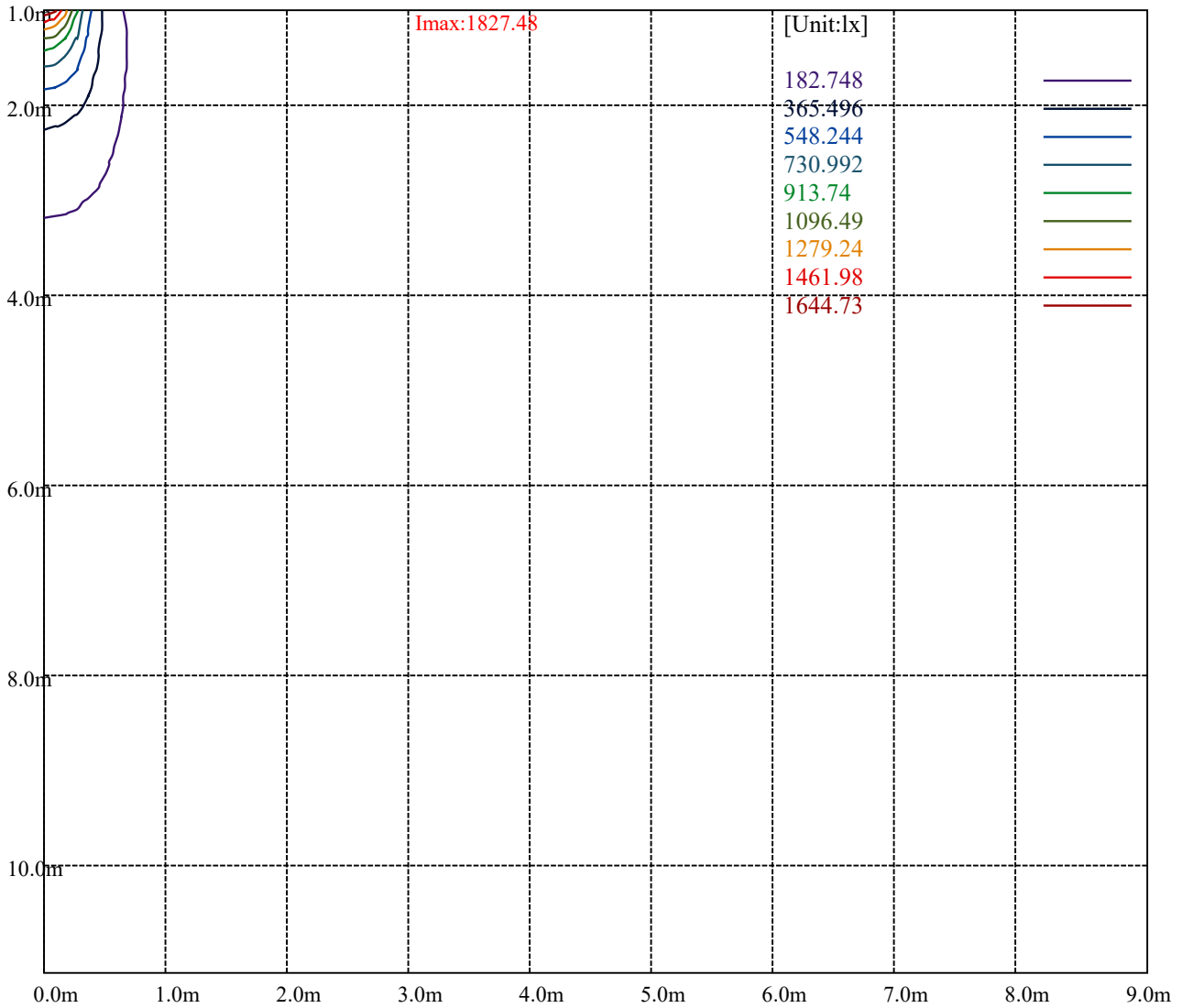
Road

**Imax:1827.48**

(10%Imax) 182.748	—
(20%Imax) 365.496	—
(30%Imax) 548.244	—
(40%Imax) 730.992	—
(50%Imax) 913.74	—
(60%Imax) 1096.49	—
(70%Imax) 1279.24	—
(80%Imax) 1461.98	—
(90%Imax) 1644.73	—







Luminance Table

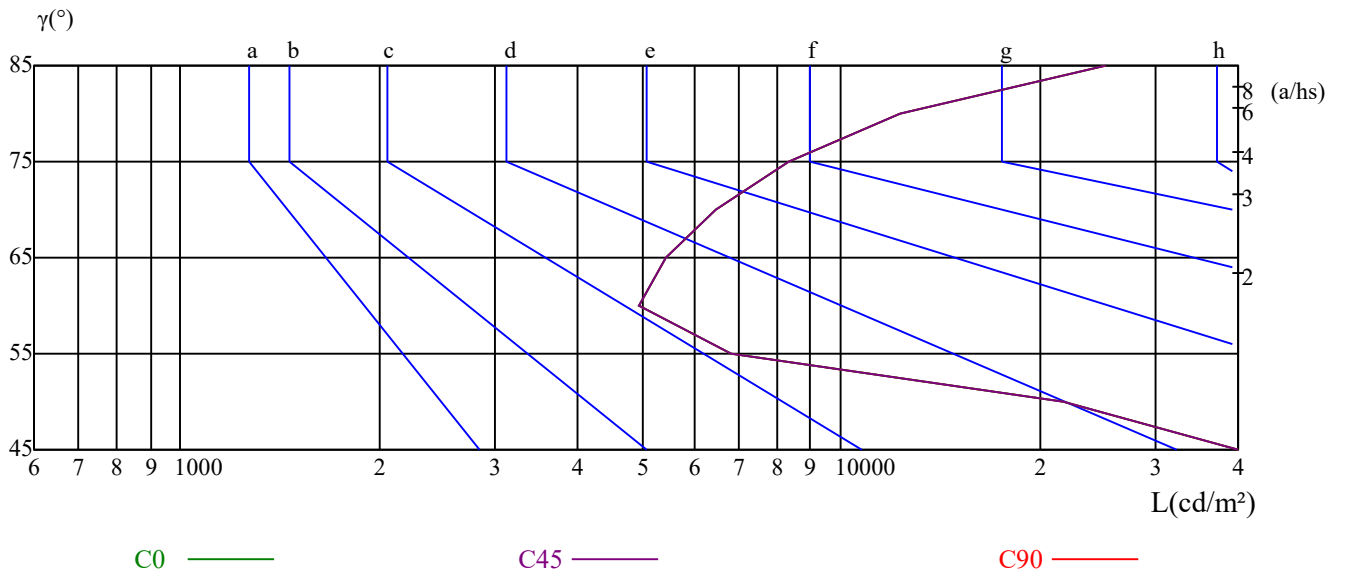
$\gamma$	45	50	55	60	65	70	75	80	85
C0	67002	21739	6838	4946	5438	6474	8366	12308	25117
C45	67002	21739	6838	4946	5438	6474	8366	12308	25117
C90	67002	21739	6838	4946	5438	6474	8366	12308	25117

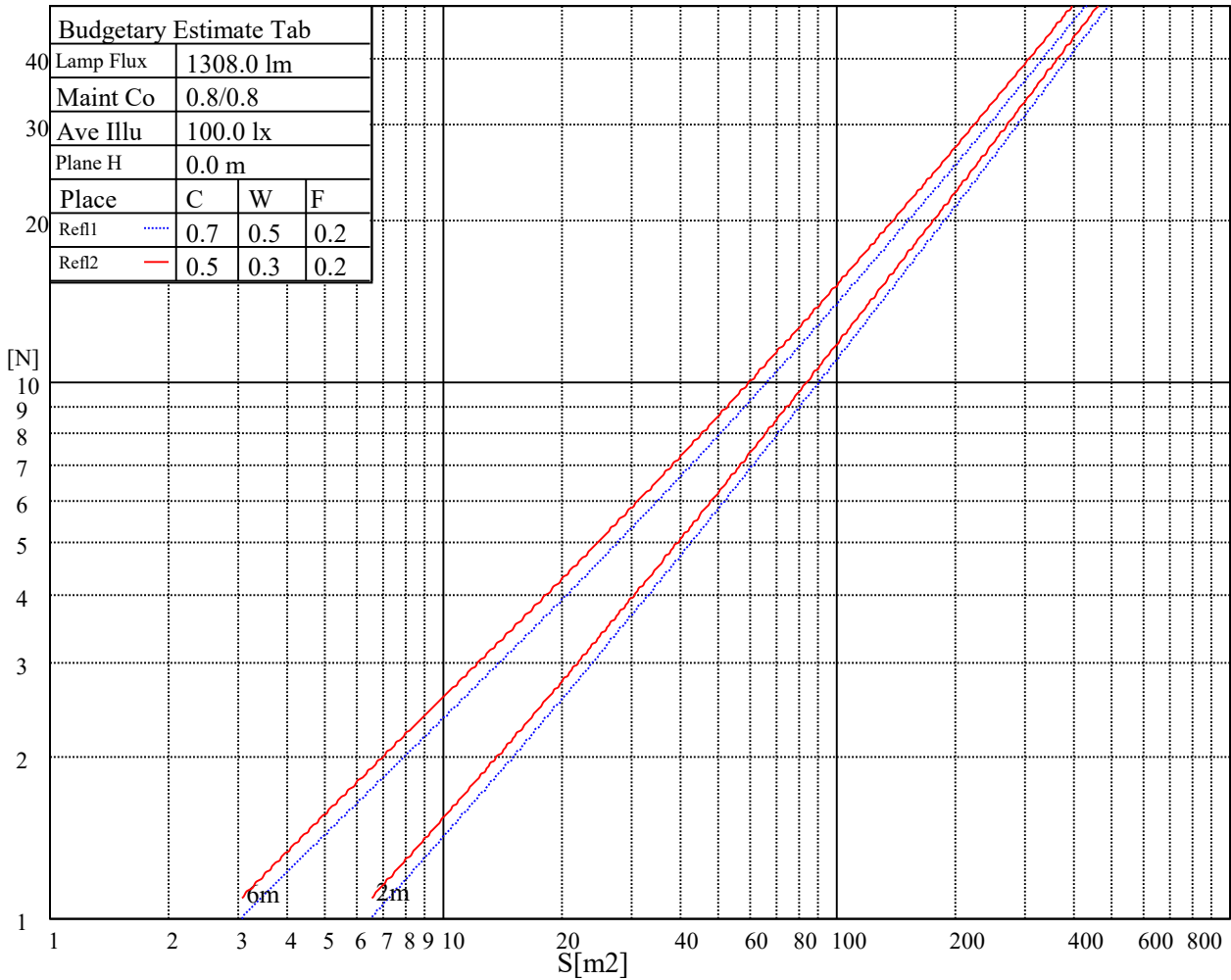
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5438	5438	5438	8366	8366	8366	25117	25117	25117

Glare Table

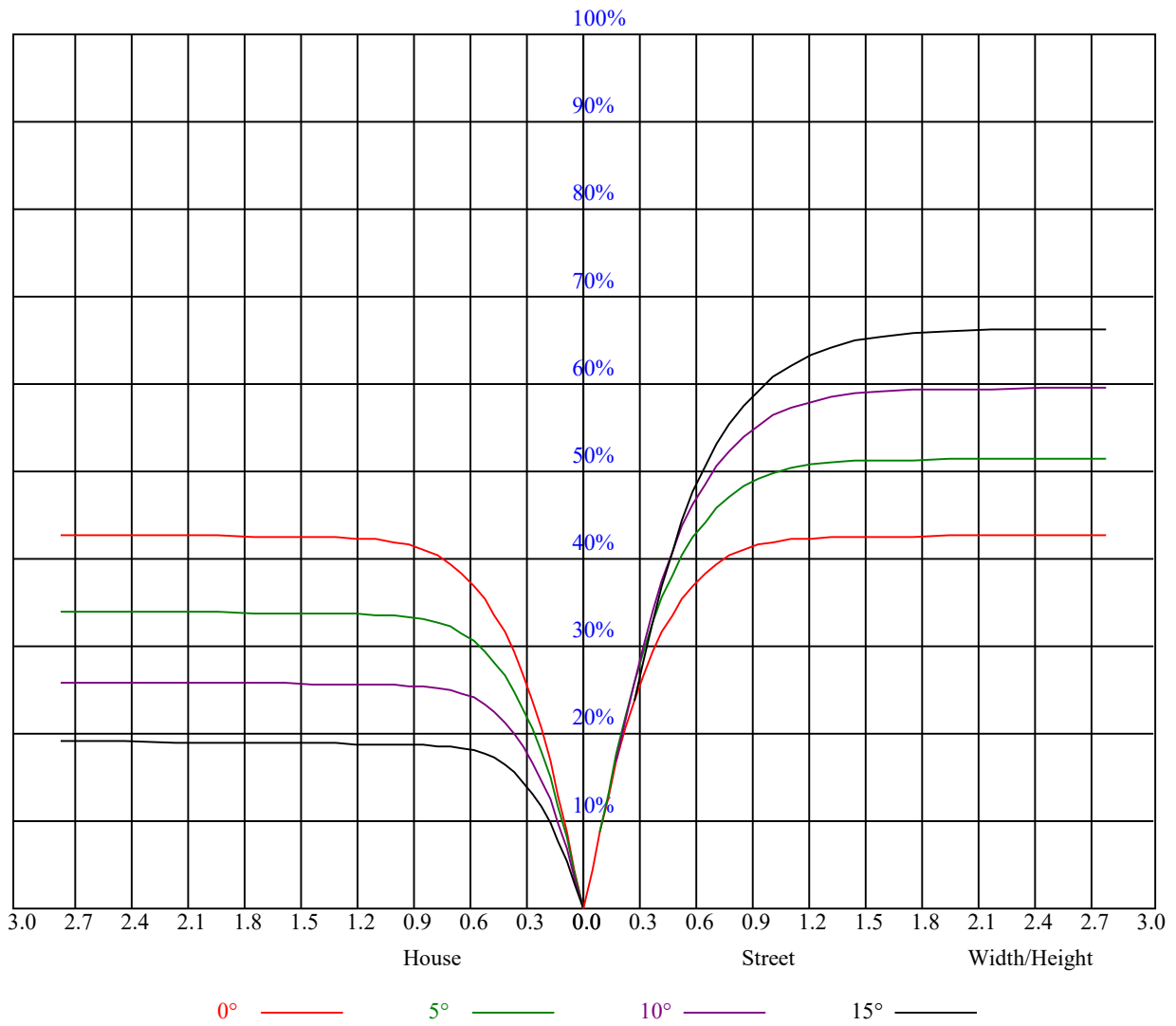
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

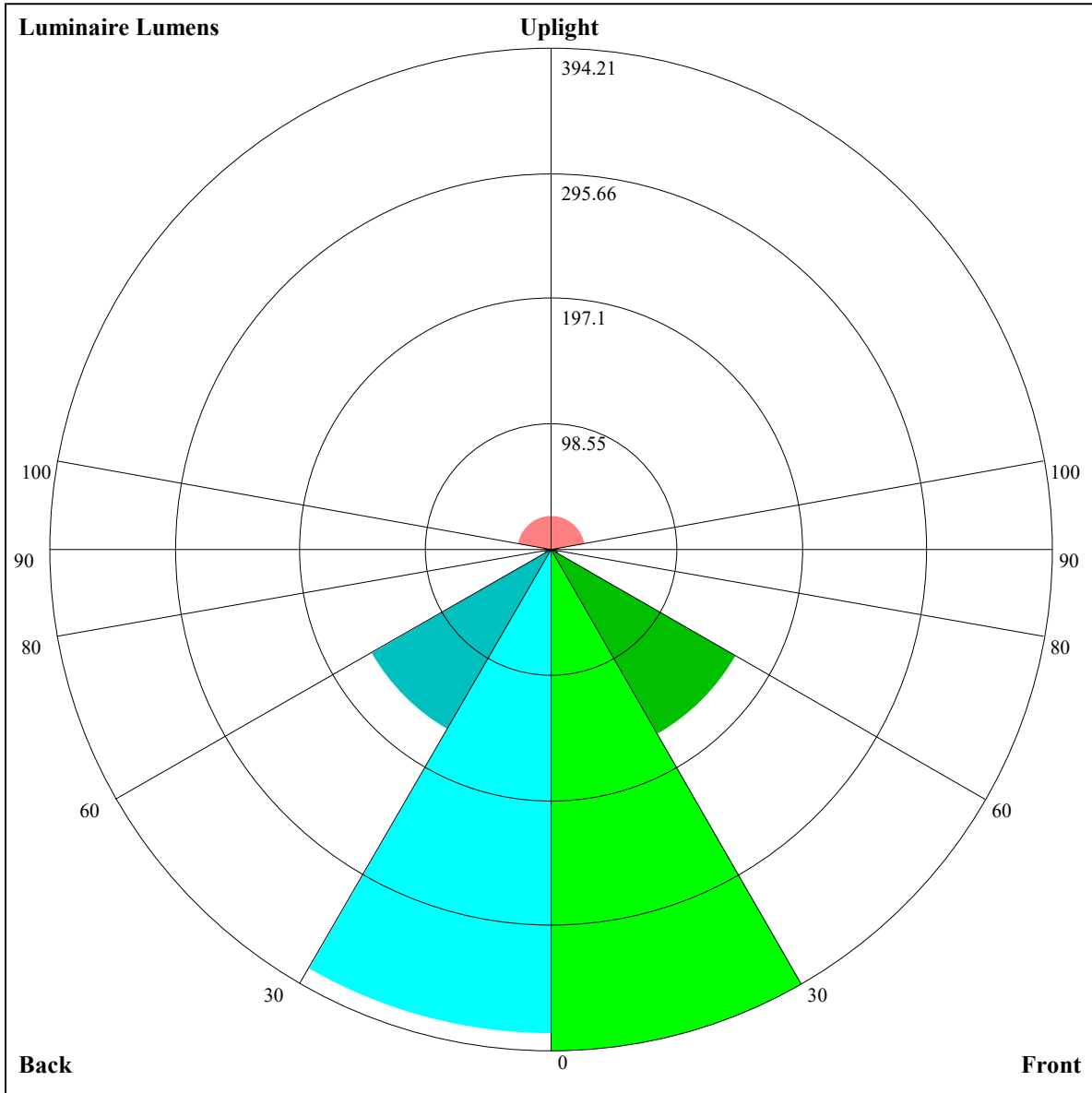
Luminance Limiting Curve





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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.89	0.85	0.82	0.87	0.84	0.82	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.76	0.75
3	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.70
4	0.79	0.74	0.71	0.78	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.66
5	0.74	0.70	0.66	0.74	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.69	0.66	0.64	0.63
6	0.70	0.65	0.62	0.70	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.59
7	0.67	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.57	0.56
8	0.64	0.59	0.55	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.54
9	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.49





Luminaire Lumens:

FL=394.21,FM=167.66,FH=5.75,FVH=2.94

BL=381.16,BM=164.32,BH=5.74,BVH=2.93

UL=5.73,UH=27.29

BUG Rating:B1-U2-G0

NATA 1443-A

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	1836.85	1759.08	1521.29	1144.19	802.33	579.65	457.11	346.33	211.55
22.5	1810.55	1827.34	1713.76	1411.07	1067.53	724.56	547.19	425.22	309.97
45.0	1826.22	1810.55	1643.82	1340.01	937.84	673.08	517.65	404.97	276.95
67.5	1818.39	1816.15	1677.95	1376.38	997.60	701.06	536.00	429.70	299.89
90.0	1830.14	1796.57	1608.57	1296.37	907.96	659.38	498.52	398.70	269.79
112.5	1828.46	1804.96	1645.50	1330.50	960.67	681.48	532.65	412.35	289.82
135.0	1835.17	1788.73	1585.63	1097.19	887.04	646.79	498.52	384.55	263.58
157.5	1834.05	1801.60	1644.38	1308.12	939.41	669.17	525.37	405.08	283.11
180.0	1836.85	1792.09	1588.43	1096.52	868.18	645.16	497.01	382.87	263.25
202.5	1810.55	1665.64	1337.77	942.32	694.23	533.32	414.03	292.96	170.98
225.0	1826.22	1702.01	1439.04	1038.44	741.34	552.79	444.81	318.92	191.85
247.5	1818.39	1697.54	1384.21	998.27	700.95	541.26	420.13	299.45	178.31
270.0	1830.14	1739.50	1487.16	1087.68	767.64	570.69	449.84	323.95	204.55
292.5	1828.46	1719.92	1444.64	1059.03	731.55	555.98	429.48	309.74	181.28
315.0	1835.17	1760.20	1526.89	1132.44	823.03	581.88	457.67	332.35	212.16
337.5	1834.05	1736.14	1434.57	1087.23	747.16	556.26	437.36	317.80	188.66
360.0	1836.85	1759.08	1521.29	1144.19	802.33	579.65	457.11	346.33	211.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	92.37	21.32	9.23	6.04	5.71	5.54	5.43	5.32	5.65
22.5	177.53	69.94	13.20	6.88	5.93	5.60	5.48	5.37	5.32
45.0	154.65	53.88	11.47	6.27	5.76	5.54	5.43	5.32	5.26
67.5	168.41	67.48	12.20	6.38	5.87	5.60	5.43	5.37	5.32
90.0	146.93	44.42	11.13	6.21	5.76	5.54	5.43	5.32	5.32
112.5	158.40	59.59	11.81	6.38	5.87	5.65	5.48	5.37	5.32
135.0	142.34	40.68	11.41	6.27	5.82	5.54	5.43	5.37	5.32
157.5	160.07	56.12	11.86	6.38	5.87	5.65	5.43	5.37	5.32
180.0	142.11	41.57	11.25	6.21	5.76	5.54	5.43	5.32	5.32
202.5	64.01	12.37	6.43	5.87	5.60	5.48	5.37	5.37	5.71
225.0	87.39	15.22	7.05	5.93	5.65	5.48	5.37	5.37	5.87
247.5	69.66	12.14	6.43	5.87	5.54	5.43	5.37	5.32	5.48
270.0	87.23	16.67	8.17	6.04	5.65	5.48	5.37	5.37	5.37
292.5	77.55	13.43	7.61	5.99	5.65	5.48	5.37	5.32	5.32
315.0	93.49	19.14	9.29	6.15	5.76	5.54	5.43	5.32	5.82
337.5	72.96	14.99	8.34	6.04	5.71	5.48	5.37	5.32	5.87
360.0	92.37	21.32	9.23	6.04	5.71	5.54	5.43	5.32	5.65
C/γ(°)	90.0								
0.0	5.26								
22.5	5.32								
45.0	5.26								
67.5	5.26								
90.0	5.20								
112.5	5.26								
135.0	5.26								
157.5	5.26								
180.0	5.26								
202.5	5.26								
225.0	5.26								
247.5	5.20								
270.0	5.26								
292.5	5.26								
315.0	5.26								
337.5	5.26								
360.0	5.26								