

Luminaire Property

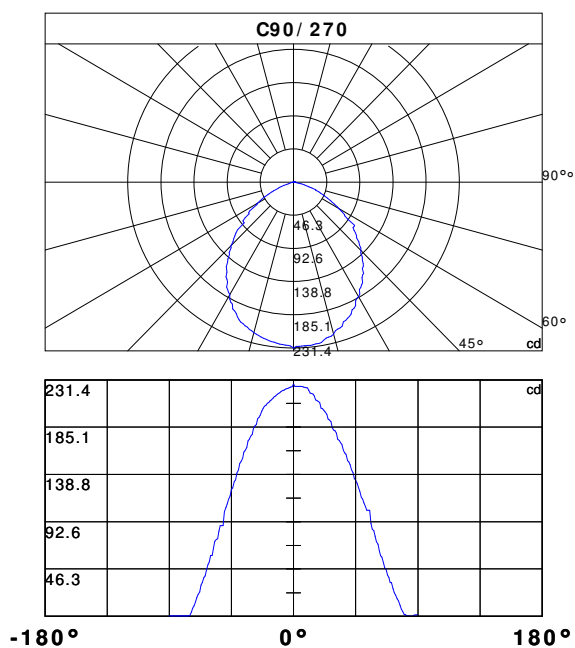
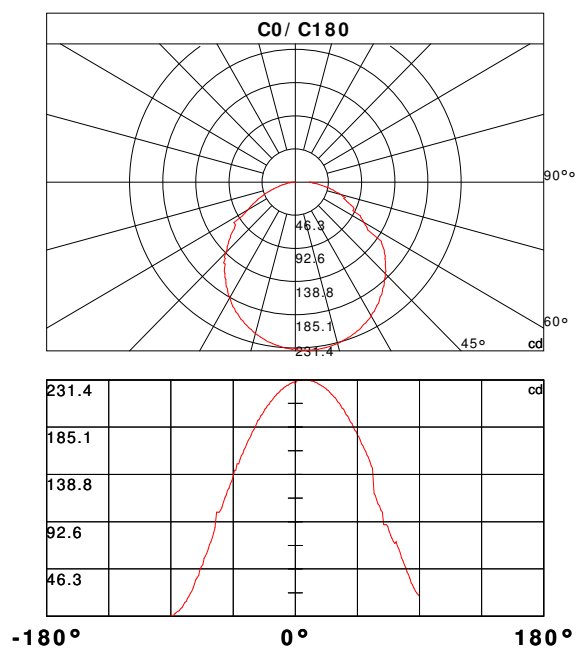
Luminaire Description: 12V-2835-60L-3000K
Luminaire Categorie:
Lamp Categorie:
Lamp Description:
Number of Lamp:
Lamp Lumens(lm): 627.55
Luminous Length(m):
Luminous Width(m):
Luminous Height(m):

Voltage: 12 V
Current: 0.535 A
Power: 6.432 W
Power Factor: 1
Test Lab:
Photometric Type: Type C

Photometric Results

CIE Class: Direct
Measurement Flux: 627.55 lm
Efficiency: 97.5669 lm/W
Central Intensity: 227.309cd
Max. Intensity: 231.406cd
Field Angle(10% I_{max}): 165.81, 74.76

Max.Intensity Angle: C:0.0 G:6.0
Beam Angle(50% I_{max}): 116.85, 117.01
Luminaire Efficacy Rating(LER) : 100.00%
Upward Ratio: 0.0%
Downward Ratio: 100.0%



Light intensity data Unit[cd]

C\ G	G0.0	G1.0	G2.0	G3.0	G4.0	G5.0	G6.0	G7.0	G8.0	G9.0
C0.0	227.3	230.3	230.6	231.0	231.2	231.3	231.4	231.4	231.4	231.2
C45.0	227.3	226.5	227.0	227.7	227.7	228.0	228.3	228.4	228.4	228.3
C90.0	227.3	225.0	225.0	225.0	225.0	224.9	224.9	224.5	224.1	223.9
C135.0	227.3	226.5	225.8	225.4	224.5	223.6	223.1	222.0	220.7	219.4
C180.0	227.3	229.4	228.7	228.2	227.3	226.4	225.8	224.6	224.0	222.6
C225.0	227.3	225.4	225.0	224.1	223.1	222.6	221.5	220.9	219.4	218.7
C270.0	227.3	224.6	224.3	223.8	223.2	222.9	222.2	221.4	220.9	220.0
C315.0	227.3	227.2	227.6	227.8	228.0	228.0	228.1	228.1	228.0	227.8
C360.0	227.3	230.3	230.6	231.0	231.2	231.3	231.4	231.4	231.4	231.2
C\ G	G10.0	G11.0	G12.0	G13.0	G14.0	G15.0	G16.0	G17.0	G18.0	G19.0
C0.0	231.1	230.7	230.4	230.0	229.3	229.0	228.1	227.2	226.7	225.6
C45.0	228.3	227.4	223.9	223.7	223.2	222.6	222.3	221.4	217.7	216.6
C90.0	223.4	220.9	218.5	218.1	217.6	215.7	211.9	210.8	210.1	208.9
C135.0	218.7	218.0	216.5	213.8	210.6	208.2	207.4	205.3	203.4	202.2
C180.0	221.9	220.4	218.7	217.9	216.0	215.1	213.1	211.0	209.9	207.6
C225.0	217.0	215.5	214.5	212.7	211.8	209.8	207.8	206.8	204.6	203.4
C270.0	218.9	218.3	217.1	215.7	214.9	213.4	211.8	211.0	209.3	208.4
C315.0	227.4	227.3	227.0	226.2	225.9	225.2	224.8	224.3	222.8	222.3
C360.0	231.1	230.7	230.4	230.0	229.3	229.0	228.1	227.2	226.7	225.6
C\ G	G20.0	G21.0	G22.0	G23.0	G24.0	G25.0	G26.0	G27.0	G28.0	G29.0
C0.0	225.0	223.7	223.0	221.6	220.8	219.2	217.5	216.6	214.8	213.7
C45.0	216.0	214.5	213.8	213.3	208.8	207.6	206.1	204.6	203.8	202.0
C90.0	203.7	202.9	201.4	199.9	197.9	193.2	192.3	190.4	184.6	182.5
C135.0	200.0	199.0	195.4	195.5	196.5	193.9	192.5	189.8	188.3	185.4
C180.0	206.4	203.8	202.7	200.1	197.4	196.0	193.2	191.7	188.7	185.6
C225.0	201.0	198.6	197.2	194.6	191.8	190.4	187.3	184.3	182.7	181.3
C270.0	206.5	205.6	203.5	200.7	196.8	194.6	193.5	187.6	186.3	183.8
C315.0	221.1	220.5	219.2	218.4	216.9	215.3	214.4	212.7	210.9	209.9
C360.0	225.0	223.7	223.0	221.6	220.8	219.2	217.5	216.6	214.8	213.7
C\ G	G30.0	G31.0	G32.0	G33.0	G34.0	G35.0	G36.0	G37.0	G38.0	G39.0
C0.0	211.8	209.6	208.4	206.2	203.8	202.7	199.8	197.1	195.9	193.1
C45.0	201.2	198.4	198.9	199.3	196.6	195.0	191.7	190.5	190.9	189.4
C90.0	181.4	179.2	173.3	172.2	169.8	168.2	162.5	159.8	158.6	152.5
C135.0	182.4	180.8	177.6	174.3	172.8	168.9	165.5	163.6	159.8	156.2
C180.0	182.5	180.8	177.5	174.0	172.4	168.8	165.1	163.2	159.3	157.1
C225.0	176.5	174.8	171.5	168.0	166.1	162.6	160.7	157.0	155.0	153.0
C270.0	178.1	176.2	173.4	171.9	165.2	162.3	160.8	154.4	151.4	149.4
C315.0	207.9	206.8	204.8	202.5	200.1	198.9	196.3	193.6	192.2	189.4
C360.0	211.8	209.6	208.4	206.2	203.8	202.7	199.8	197.1	195.9	193.1

Light intensity data Unit[cd]

C\ G	G40.0	G41.0	G42.0	G43.0	G44.0	G45.0	G46.0	G47.0	G48.0	G49.0
C0.0	190.1	188.6	185.6	182.3	180.8	177.5	175.9	172.4	168.8	167.0
C45.0	188.8	187.5	187.3	184.7	183.1	180.1	176.8	175.2	171.7	168.0
C90.0	151.1	148.4	143.7	140.6	134.9	133.2	130.1	126.1	122.4	116.4
C135.0	154.3	150.3	146.3	144.3	140.1	138.0	133.7	129.5	127.1	122.8
C180.0	153.2	149.2	149.2	143.0	143.0	136.6	132.2	129.9	125.4	123.1
C225.0	147.2	144.9	141.1	139.0	134.4	130.2	128.0	123.6	121.2	116.8
C270.0	143.3	140.0	133.7	132.0	125.7	124.0	117.8	114.3	109.9	106.5
C315.0	188.0	184.9	181.8	180.3	177.1	175.3	172.0	168.6	168.6	163.2
C360.0	190.1	188.6	185.6	182.3	180.8	177.5	175.9	172.4	168.8	167.0
C\ G	G50.0	G51.0	G52.0	G53.0	G54.0	G55.0	G56.0	G57.0	G58.0	G59.0
C0.0	163.3	161.5	157.6	155.7	151.4	147.4	145.3	120.4	118.1	114.1
C45.0	166.3	162.5	160.9	157.0	154.9	150.9	147.1	145.0	140.8	136.6
C90.0	114.8	111.1	107.1	104.0	104.0	104.0	90.8	85.3	83.8	78.5
C135.0	120.5	115.6	111.2	108.6	103.6	101.4	89.3	89.3	86.8	84.4
C180.0	118.4	116.1	111.4	106.7	104.2	101.9	101.9	101.9	86.9	81.9
C225.0	114.4	109.8	105.1	102.7	102.7	102.7	90.8	86.0	81.1	78.7
C270.0	102.2	88.6	88.6	88.6	83.5	76.0	75.3	73.3	66.7	59.6
C315.0	161.4	157.7	155.7	151.9	147.9	145.9	141.9	139.8	135.5	131.3
C360.0	163.3	161.5	157.6	155.7	151.4	147.4	145.3	120.4	118.1	114.1
C\ G	G60.0	G61.0	G62.0	G63.0	G64.0	G65.0	G66.0	G67.0	G68.0	G69.0
C0.0	110.1	108.1	104.0	102.0	89.7	89.7	89.7	87.7	83.5	78.9
C45.0	134.4	130.0	125.5	123.3	121.0	116.4	111.6	101.2	90.8	90.8
C90.0	73.2	70.6	64.4	59.4	57.9	52.5	47.3	46.2	40.3	37.9
C135.0	81.9	76.1	74.2	69.3	62.0	62.0	50.1	46.0	44.1	40.1
C180.0	77.3	72.8	70.3	65.9	61.4	59.2	57.0	50.4	48.2	45.7
C225.0	73.8	69.0	66.6	64.0	56.8	47.5	46.0	40.5	38.7	33.2
C270.0	59.6	53.2	50.8	45.3	39.7	37.8	32.8	30.4	23.7	21.5
C315.0	128.8	124.3	119.9	117.5	112.9	106.4	106.4	106.4	88.8	86.4
C360.0	110.1	108.1	104.0	102.0	89.7	89.7	89.7	87.7	83.5	78.9
C\ G	G70.0	G71.0	G72.0	G73.0	G74.0	G75.0	G76.0	G77.0	G78.0	G79.0
C0.0	76.1	73.4	71.1	73.2	68.6	66.3	61.7	57.1	54.6	50.1
C45.0	86.3	84.1	81.9	76.1	72.2	69.1	64.3	61.8	59.5	56.8
C90.0	32.9	32.9	26.9	23.1	20.8	17.0	14.9	10.8	6.9	4.8
C135.0	36.1	34.2	30.4	26.9	25.2	22.0	18.9	17.5	15.5	14.1
C180.0	39.8	37.8	35.7	31.8	27.9	24.3	22.6	19.1	17.6	14.7
C225.0	31.4	29.6	26.0	22.7	19.6	18.2	15.3	13.9	11.7	10.4
C270.0	18.7	14.1	10.0	7.9	4.1	0.6	0.4	0.3	0.3	0.3
C315.0	81.8	77.3	75.1	69.9	67.3	63.0	60.0	58.2	55.5	53.0
C360.0	76.1	73.4	71.1	73.2	68.6	66.3	61.7	57.1	54.6	50.1

Light intensity data Unit[cd]

C\ G	G80.0	G81.0	G82.0	G83.0	G84.0	G85.0	G86.0	G87.0	G88.0	G89.0
C0.0	47.8	43.4	41.2	37.0	32.7	30.8	27.3	24.9	23.1	21.0
C45.0	52.0	49.7	45.4	43.1	38.4	34.4	32.4	29.6	27.3	25.0
C90.0	1.7	1.7	0.3	0.3	0.2	0.2	0.2	1.1	1.3	1.4
C135.0	11.7	10.5	8.4	6.5	5.8	4.3	3.1	2.8	2.1	1.5
C180.0	13.3	10.8	8.4	7.4	5.5	4.7	3.9	2.6	1.1	0.6
C225.0	8.3	6.3	4.6	3.9	3.4	2.4	1.6	1.3	1.0	1.0
C270.0	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
C315.0	48.6	46.5	45.9	38.0	35.9	31.4	29.6	26.1	21.8	18.7
C360.0	47.8	43.4	41.2	37.0	32.7	30.8	27.3	24.9	23.1	21.0
C\ G	G90.0									
C0.0	19.6									
C45.0	22.8									
C90.0	1.3									
C135.0	1.3									
C180.0	0.5									
C225.0	0.5									
C270.0	0.5									
C315.0	19.6									
C360.0	19.6									

Zonal Luminous Flux Data

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
0.0	227.31	0.00	0.00	0.00	0.00
0.0-1.0	226.84	0.22	0.22	0.03	0.03
1.0-2.0	226.75	0.65	0.87	0.10	0.14
2.0-3.0	226.63	1.08	1.95	0.17	0.31
3.0-4.0	226.26	1.52	3.47	0.24	0.55
4.0-5.0	225.98	1.95	5.41	0.31	0.86
5.0-6.0	225.65	2.37	7.79	0.38	1.24
6.0-7.0	225.14	2.80	10.59	0.45	1.69
7.0-8.0	224.62	3.22	13.80	0.51	2.20
8.0-9.0	223.98	3.64	17.44	0.58	2.78
9.0-10.0	223.34	4.05	21.49	0.65	3.42
10.0-11.0	222.30	4.45	25.94	0.71	4.13
11.0-12.0	220.83	4.84	30.78	0.77	4.91
12.0-13.0	219.75	5.23	36.01	0.83	5.74
13.0-14.0	218.67	5.61	41.63	0.89	6.63
14.0-15.0	217.38	5.99	47.61	0.95	7.59
15.0-16.0	215.89	6.35	53.96	1.01	8.60
16.0-17.0	214.72	6.71	60.67	1.07	9.67
17.0-18.0	213.07	7.05	67.72	1.12	10.79
18.0-19.0	211.88	7.39	75.11	1.18	11.97
19.0-20.0	209.98	7.72	82.83	1.23	13.20
20.0-21.0	208.59	8.04	90.87	1.28	14.48
21.0-22.0	207.02	8.35	99.22	1.33	15.81
22.0-23.0	205.52	8.66	107.88	1.38	17.19
23.0-24.0	203.36	8.94	116.82	1.42	18.62
24.0-25.0	201.28	9.20	126.02	1.47	20.08
25.0-26.0	199.60	9.46	135.48	1.51	21.59
26.0-27.0	197.22	9.71	145.19	1.55	23.14
27.0-28.0	195.00	9.93	155.12	1.58	24.72
28.0-29.0	193.04	10.15	165.27	1.62	26.34
29.0-30.0	190.22	10.35	175.62	1.65	27.99
30.0-31.0	188.33	10.53	186.16	1.68	29.66
31.0-32.0	185.67	10.71	196.87	1.71	31.37
32.0-33.0	183.55	10.88	207.75	1.73	33.10
33.0-34.0	180.85	11.03	218.77	1.76	34.86
34.0-35.0	178.41	11.16	229.93	1.78	36.64
35.0-36.0	175.30	11.26	241.19	1.79	38.43
36.0-37.0	172.43	11.34	252.54	1.81	40.24
37.0-38.0	170.38	11.44	263.98	1.82	42.06
38.0-39.0	167.52	11.53	275.51	1.84	43.90
39.0-40.0	164.49	11.58	287.09	1.85	45.75

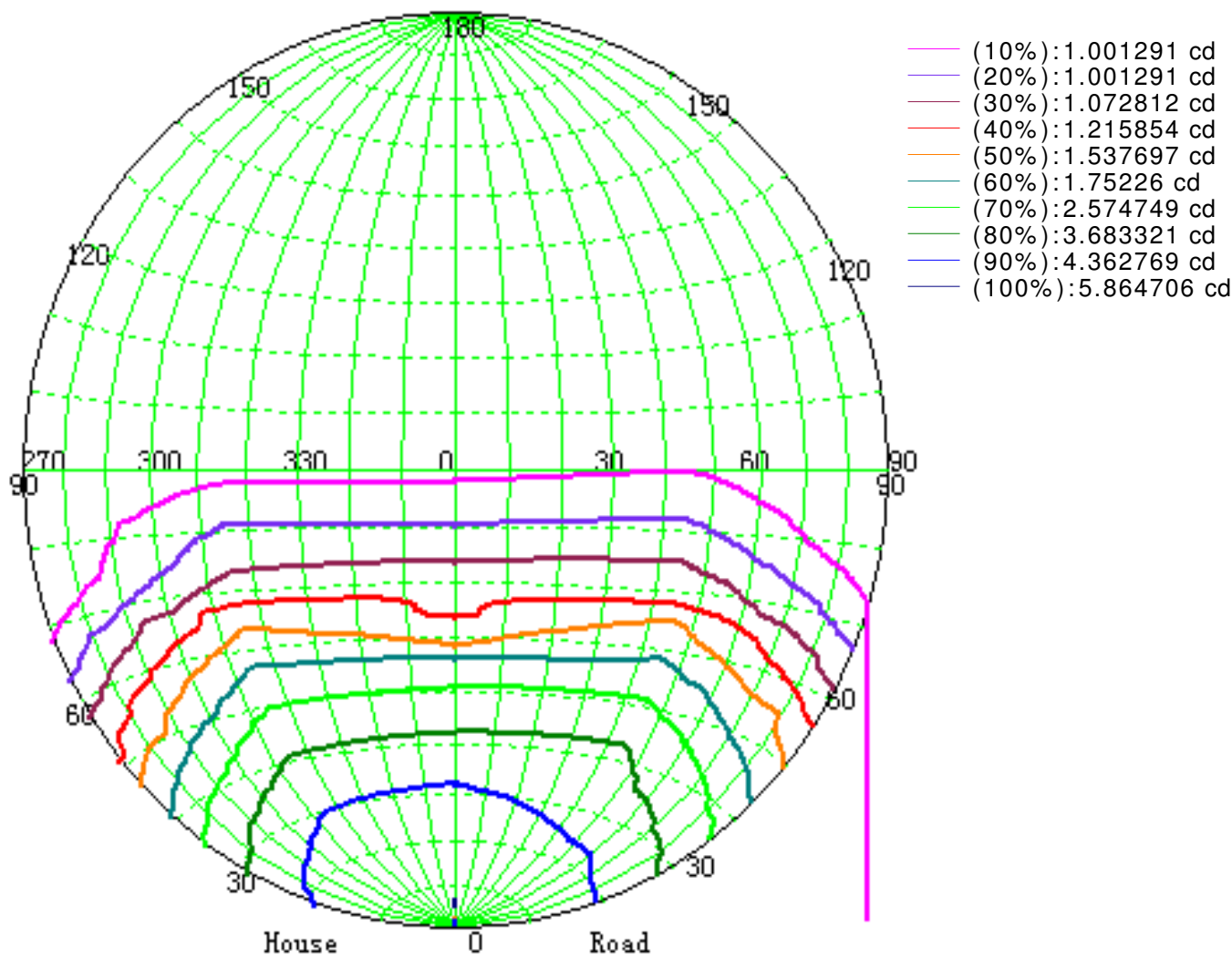
Zonal Luminous Flux Data

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
40.0-41.0	161.72	11.62	298.71	1.85	47.60
41.0-42.0	158.58	11.64	310.34	1.85	49.45
42.0-43.0	155.75	11.64	321.99	1.86	51.31
43.0-44.0	152.39	11.63	333.62	1.85	53.16
44.0-45.0	149.37	11.60	345.22	1.85	55.01
45.0-46.0	145.80	11.54	356.76	1.84	56.85
46.0-47.0	142.45	11.46	368.22	1.83	58.68
47.0-48.0	139.39	11.39	379.62	1.82	60.49
48.0-49.0	135.46	11.29	390.90	1.80	62.29
49.0-50.0	132.67	11.18	402.08	1.78	64.07
50.0-51.0	127.85	11.02	413.11	1.76	65.83
51.0-52.0	124.69	10.84	423.94	1.73	67.56
52.0-53.0	121.88	10.73	434.67	1.71	69.26
53.0-54.0	119.04	10.62	445.29	1.69	70.96
54.0-55.0	116.27	10.50	455.79	1.67	72.63
55.0-56.0	110.31	10.24	466.03	1.63	74.26
56.0-57.0	105.13	9.85	475.88	1.57	75.83
57.0-58.0	99.97	9.48	485.37	1.51	77.34
58.0-59.0	95.65	9.15	494.51	1.46	78.80
59.0-60.0	92.38	8.88	503.39	1.42	80.22
60.0-61.0	88.00	8.61	512.00	1.37	81.59
61.0-62.0	84.44	8.31	520.31	1.32	82.91
62.0-63.0	80.85	8.04	528.35	1.28	84.19
63.0-64.0	75.17	7.66	536.01	1.22	85.41
64.0-65.0	71.42	7.25	543.26	1.16	86.57
65.0-66.0	67.61	6.94	550.20	1.11	87.67
66.0-67.0	63.60	6.60	556.79	1.05	88.73
67.0-68.0	57.27	6.12	562.92	0.98	89.70
68.0-69.0	54.30	5.69	568.61	0.91	90.61
69.0-70.0	50.39	5.38	573.99	0.86	91.46
70.0-71.0	47.93	5.08	579.07	0.81	92.27
71.0-72.0	44.66	4.81	583.88	0.77	93.04
72.0-73.0	41.45	4.50	588.38	0.72	93.76
73.0-74.0	38.21	4.19	592.57	0.67	94.43
74.0-75.0	35.06	3.87	596.44	0.62	95.04
75.0-76.0	32.28	3.57	600.02	0.57	95.61
76.0-77.0	29.83	3.31	603.33	0.53	96.14
77.0-78.0	27.70	3.08	606.41	0.49	96.63
78.0-79.0	25.51	2.86	609.27	0.46	97.09
79.0-80.0	22.96	2.61	611.88	0.42	97.50
80.0-81.0	21.14	2.38	614.27	0.38	97.88

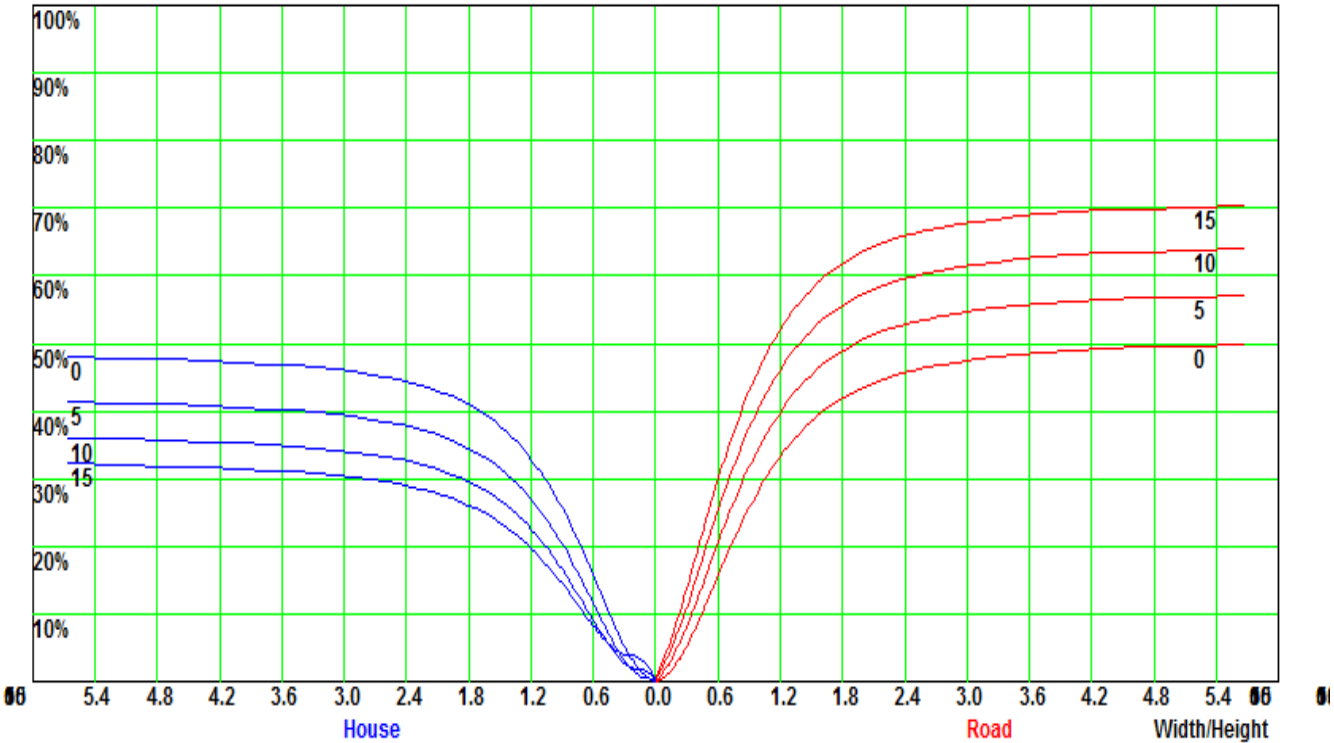
Zonal Luminous Flux Data

[illegible]

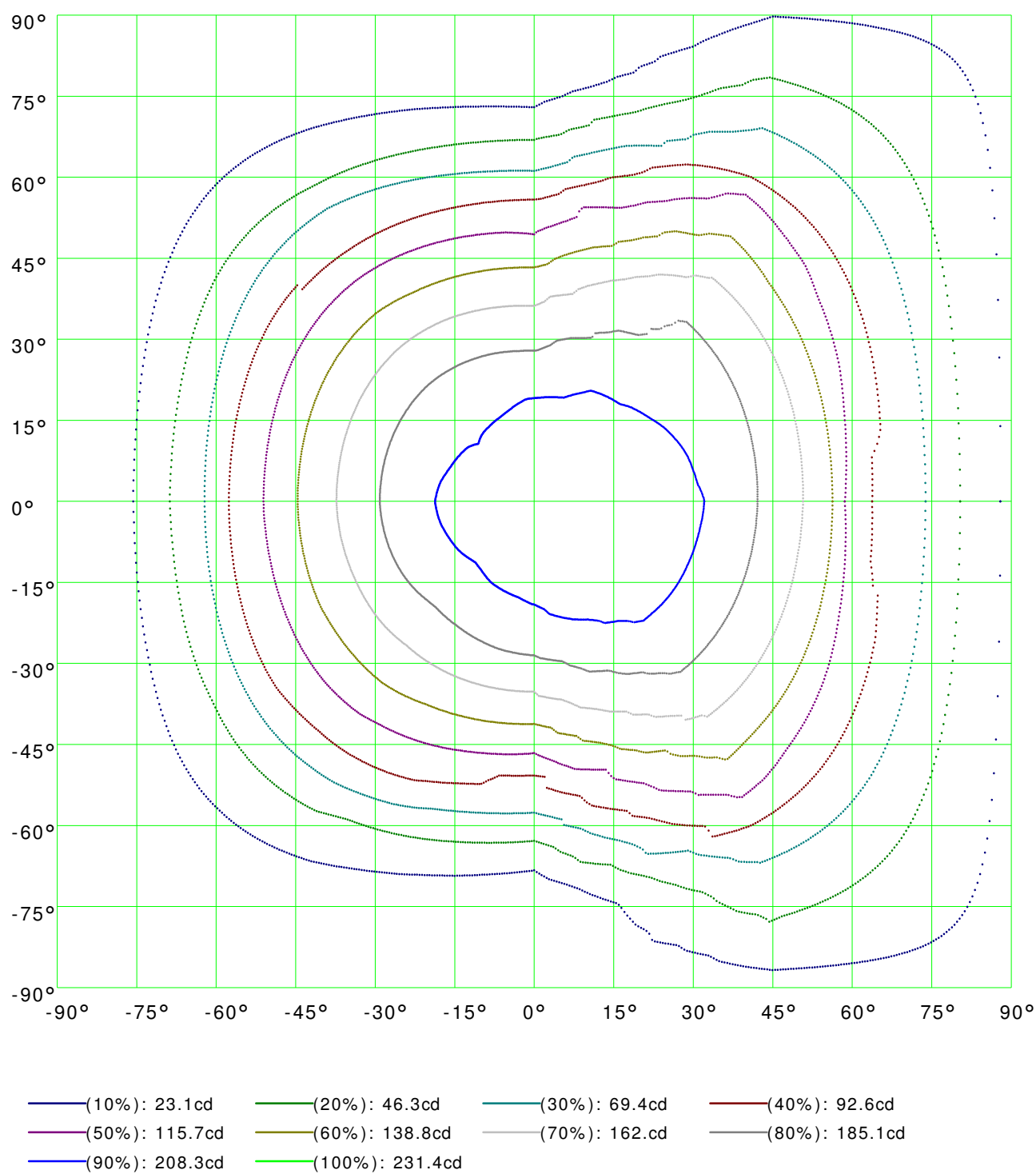
Iso-Candela [cd]



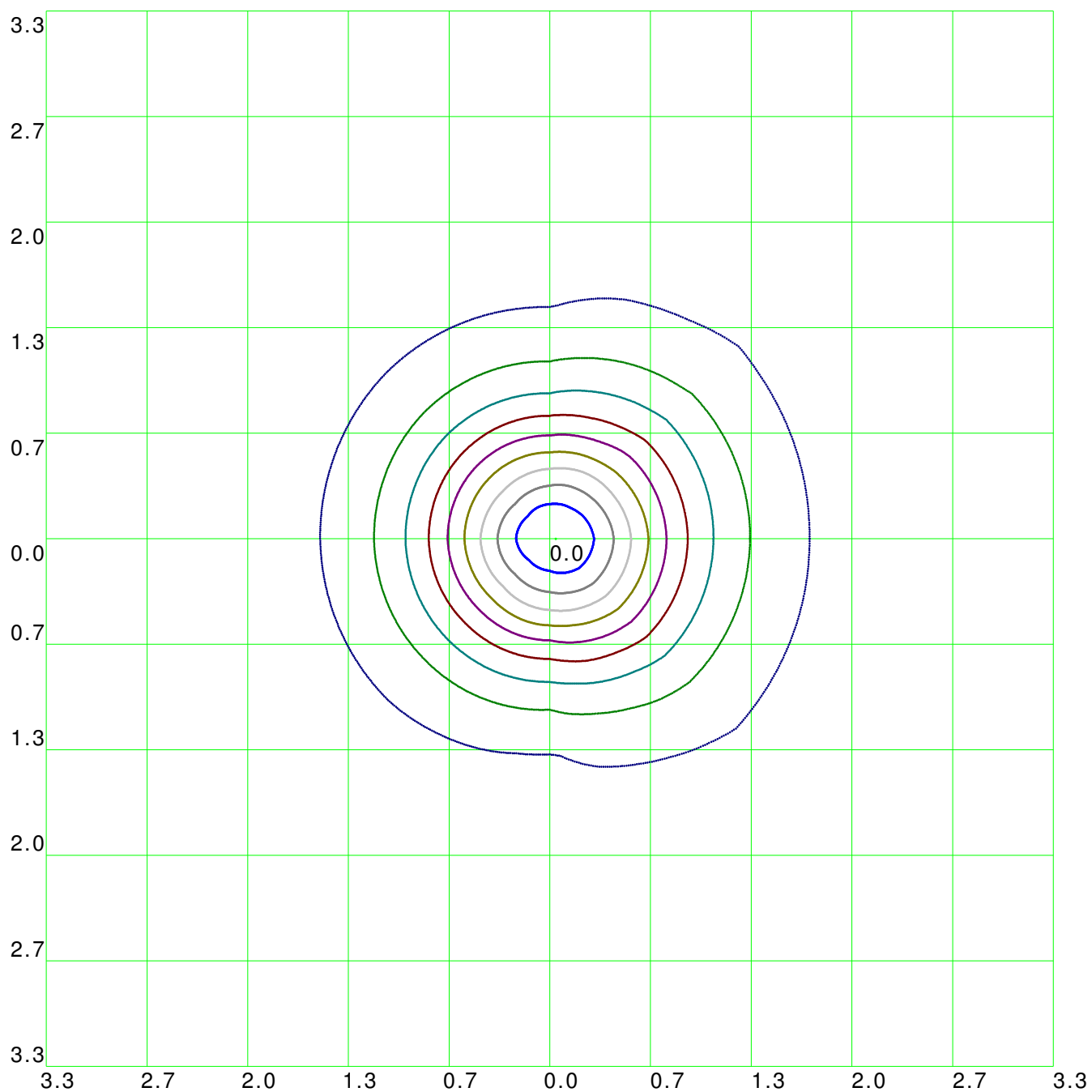
Coefficient Utilization Curve



Isocandela(rectangle)



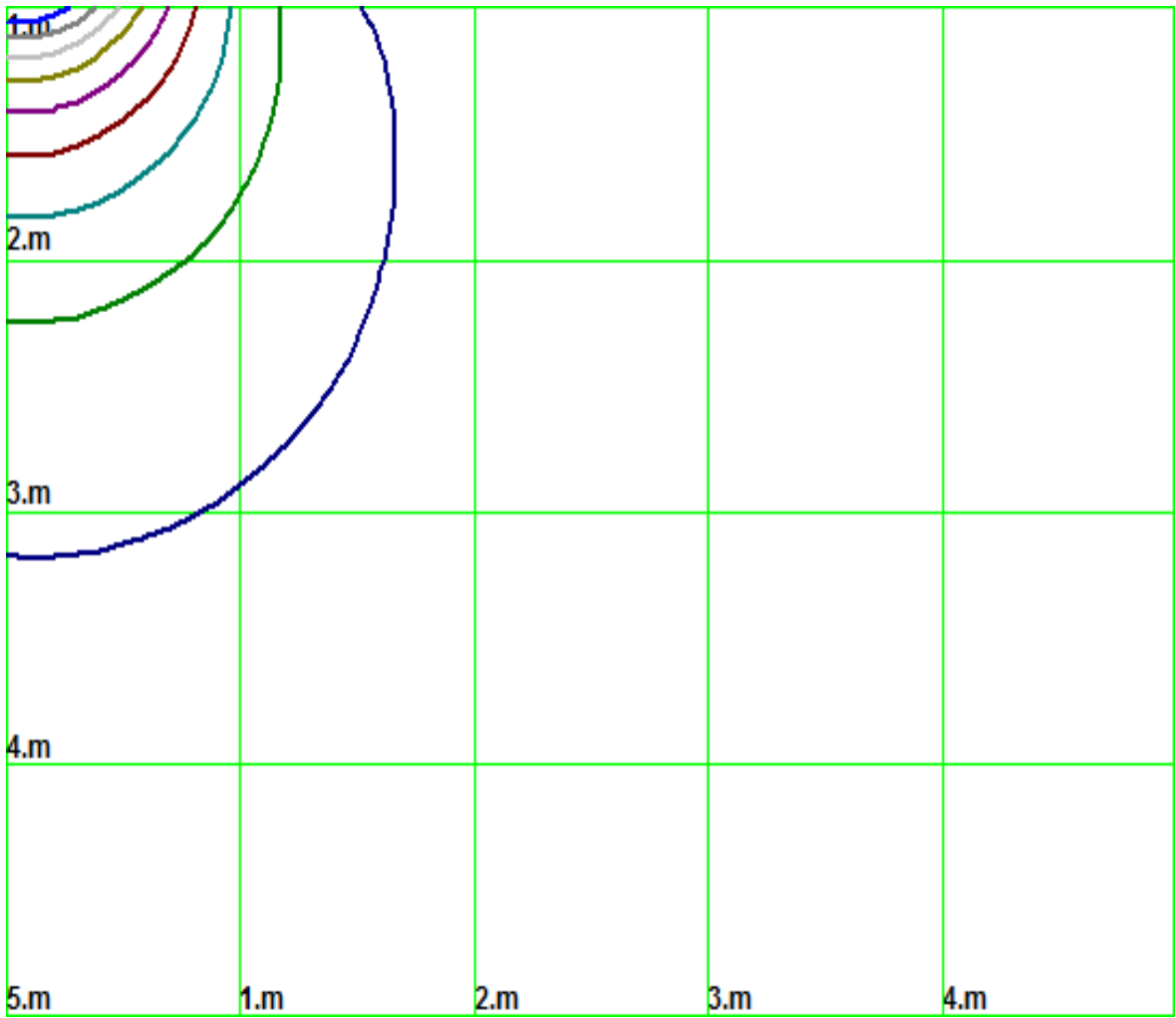
Isolx curve



Height: 1 m

(10%): 23.1lx	(20%): 46.3lx	(30%): 69.4lx	(40%): 92.6lx
(50%): 115.7lx	(60%): 138.8lx	(70%): 162.1lx	(80%): 185.1lx
(90%): 208.3lx	(100%): 231.2lx		

Space Isolx Curve



(10%): 23.1lx	(20%): 46.3lx	(30%): 69.4lx	(40%): 92.6lx
(50%): 115.7lx	(60%): 138.8lx	(70%): 162.1lx	(80%): 185.1lx
(90%): 208.3lx	(100%): 231.2lx		

Luminance Limiting Curve

Diameter: 0mm

Length: 0mm

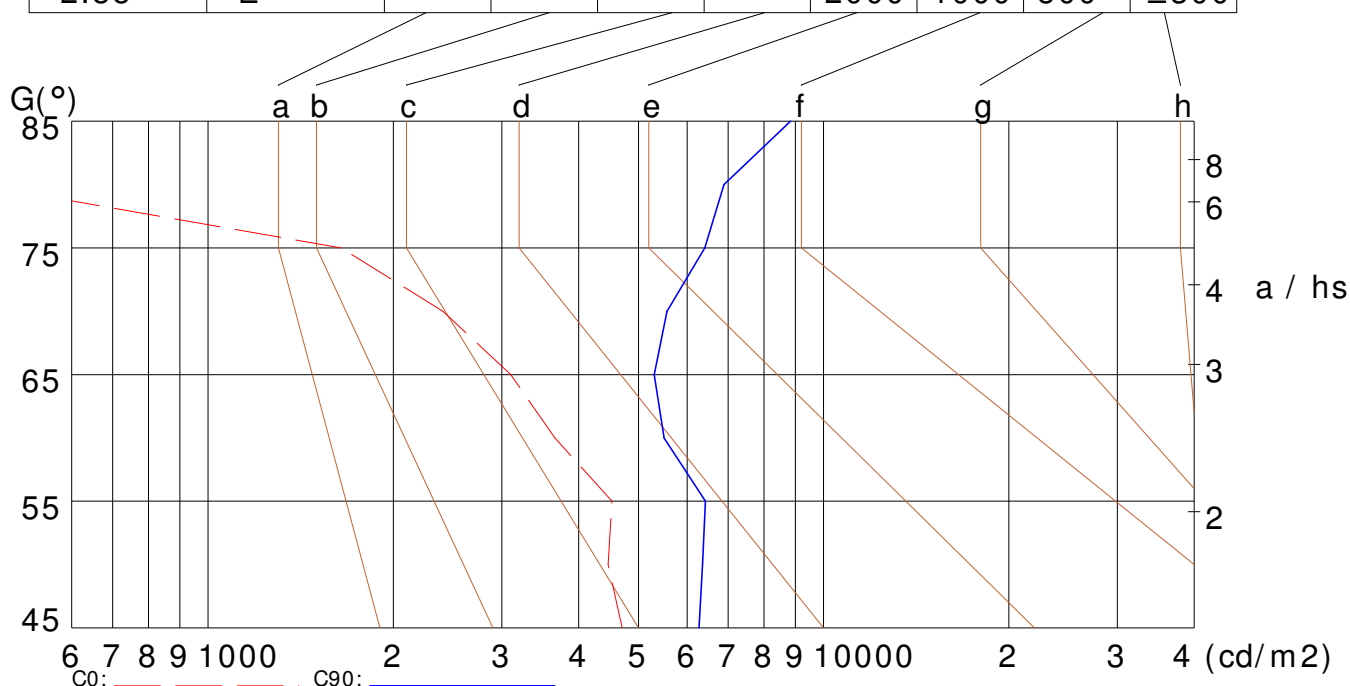
Width: 0mm

Height: 0mm

(cd/m²)

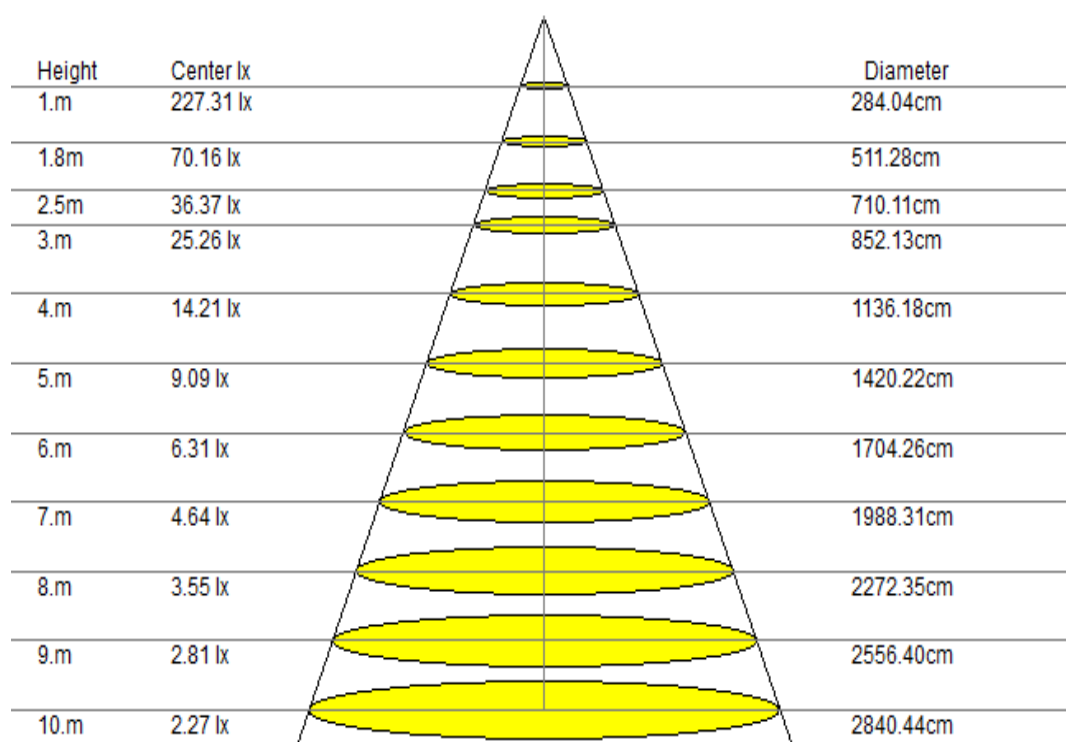
γ	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	4708	4466	4531	3660	3103	2407	1644	242	51
C90	6276	6352	6425	5507	5305	5565	6408	6883	8842

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



Lum. Limiting Curve (C0/C90)

Lux-Distance Curve

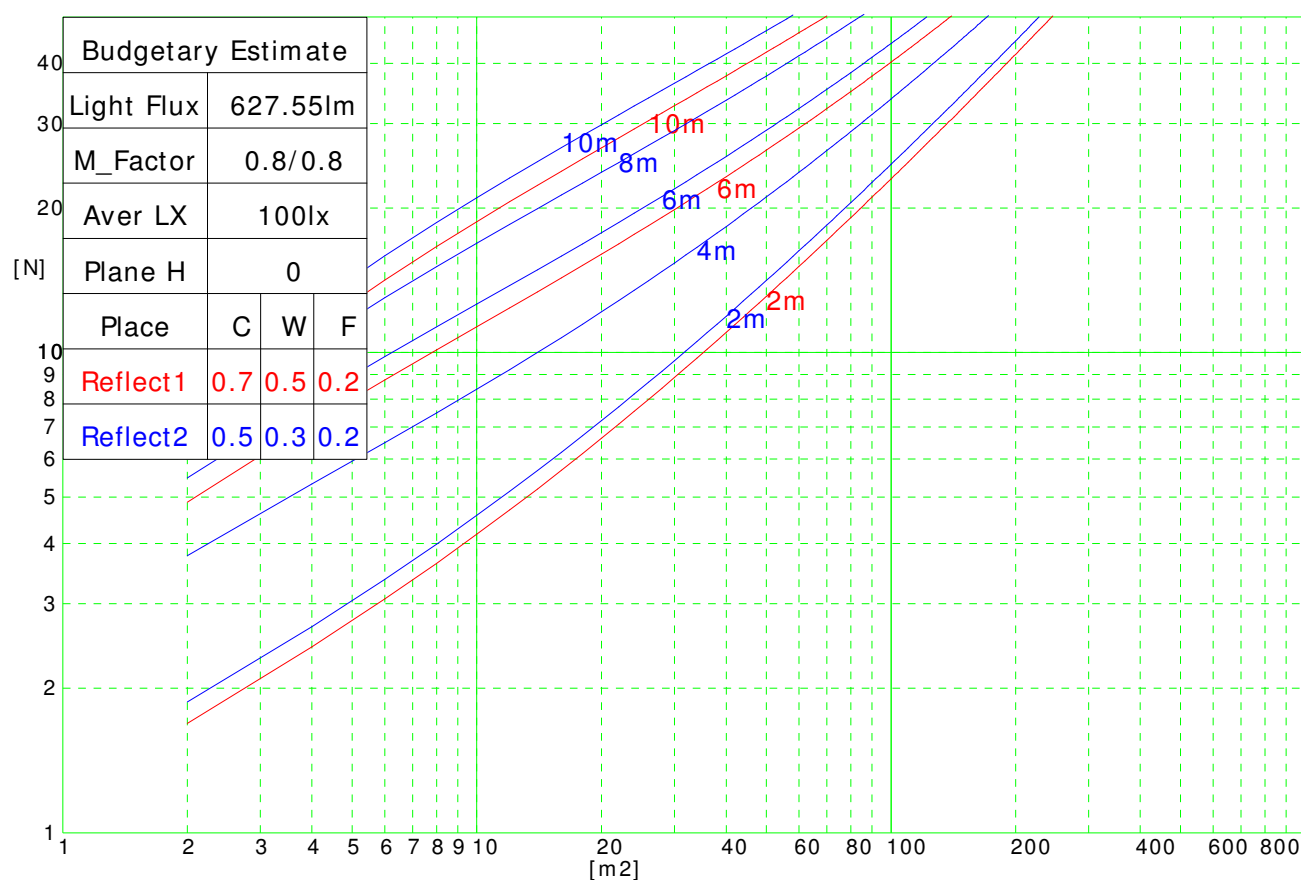


Beam Angle:109.70°(50%Imax)

Coefficients of Utilization

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 FOR RHOFC= 20															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.04	1.02	1.01	1.03	1.01	0.99	0.99	0.97	0.95	0.95	0.92	0.90	0.88	0.86	0.84	0.78
2	0.89	0.86	0.84	0.88	0.85	0.83	0.86	0.82	0.79	0.83	0.79	0.75	0.78	0.74	0.70	0.66
3	0.76	0.73	0.71	0.76	0.73	0.70	0.75	0.71	0.67	0.73	0.68	0.64	0.70	0.64	0.60	0.55
4	0.66	0.63	0.61	0.66	0.62	0.60	0.66	0.61	0.57	0.65	0.59	0.55	0.62	0.57	0.52	0.47
5	0.58	0.55	0.53	0.58	0.54	0.52	0.58	0.53	0.50	0.58	0.52	0.47	0.56	0.50	0.45	0.41
6	0.51	0.48	0.46	0.52	0.48	0.45	0.52	0.47	0.44	0.52	0.46	0.42	0.51	0.45	0.40	0.36
7	0.45	0.43	0.41	0.46	0.43	0.40	0.47	0.42	0.39	0.47	0.41	0.37	0.47	0.40	0.35	0.32
8	0.41	0.38	0.37	0.42	0.38	0.36	0.43	0.38	0.35	0.43	0.37	0.33	0.43	0.37	0.32	0.28
9	0.37	0.34	0.33	0.38	0.34	0.32	0.39	0.34	0.31	0.40	0.34	0.30	0.40	0.33	0.28	0.26
10	0.33	0.31	0.30	0.34	0.31	0.29	0.36	0.31	0.28	0.37	0.31	0.27	0.37	0.31	0.26	0.23

Indoor Budgetary Estimate Chart



Ceiling		70	70	50	50	30	70	70	50	50	30
Wall		50	30	50	30	30	50	30	50	30	30
Floor		20	20	20	20	20	20	20	20	20	20
Room Size		Left to light axis direction of observation					Direction of light axis parallel observation				
X	Y										
2H	2H	14.7	16.0	15.0	15.9	16.4	14.6	15.8	14.8	16.0	16.3
	3H	16.3	17.3	16.5	17.7	18.0	16.2	17.4	16.6	17.8	18.0
	4H	16.9	18.0	17.4	18.5	18.9	16.9	18.0	17.2	18.6	18.7
	6H	17.5	18.6	18.0	18.9	19.0	17.4	18.5	17.8	18.8	19.1
	8H	18.0	19.0	18.1	19.0	19.3	17.7	18.8	17.9	19.0	19.4
4H	12H	17.8	18.7	18.2	19.2	19.4	17.8	18.8	18.1	19.2	19.5
	2H	15.7	16.6	15.9	16.9	17.0	15.7	16.6	15.8	16.9	17.0
	3H	17.4	18.3	17.6	18.3	18.9	17.4	18.3	17.7	18.4	18.8
	4H	18.2	19.1	18.6	19.2	19.6	18.0	18.9	18.4	19.1	19.5
	6H	18.8	19.5	19.2	19.7	20.0	18.6	19.4	19.1	19.7	20.1
8H	8H	19.0	19.8	19.5	20.0	20.3	19.0	19.7	19.4	20.0	20.3
	12H	19.2	19.8	19.6	20.2	20.4	19.2	19.9	19.5	20.2	20.6
	4H	18.6	19.1	18.9	19.4	19.9	18.3	19.1	18.8	19.4	19.8
	6H	19.4	19.9	19.9	20.2	20.5	19.2	19.8	19.7	20.2	20.6
	8H	19.7	20.2	20.1	20.5	20.9	19.6	20.0	20.1	20.6	20.9
12H	12H	20.0	20.4	20.5	20.8	21.1	19.9	20.3	20.3	20.7	21.1
	4H	18.5	19.1	19.0	19.6	19.9	18.5	19.0	18.9	19.6	19.8
	6H	19.5	20.0	19.8	20.3	20.7	19.4	19.8	19.7	20.2	20.7
	8H	19.9	20.4	20.4	20.5	21.0	19.8	20.2	20.3	20.6	20.9