

Luminaire Property

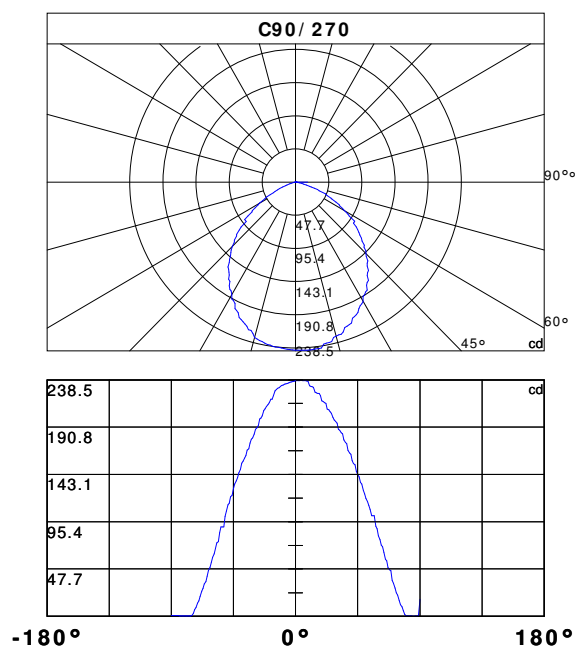
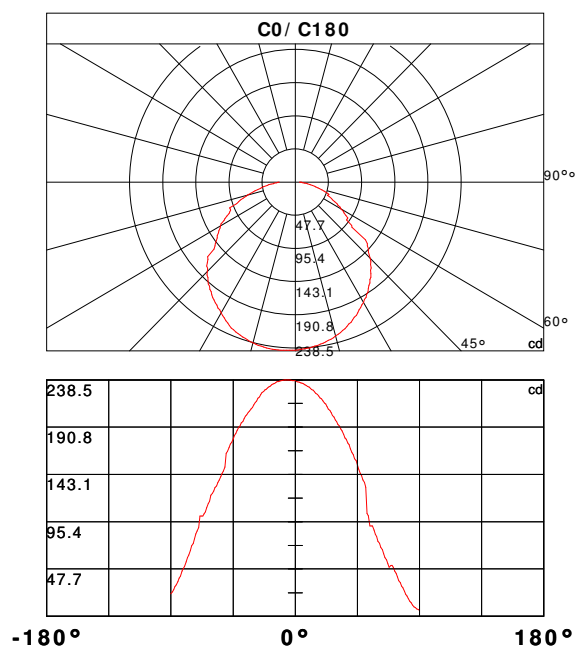
Luminaire Description: 12V-2835-60L-5000K
Luminaire Categorie:
Lamp Categorie:
Lamp Description:
Number of Lamp:
Lamp Lumens(lm): 663.08
Luminous Length(m):
Luminous Width(m):
Luminous Height(m):

Voltage: 12 V
Current: 0.52 A
Power: 6.24 W
Power Factor: 1
Test Lab:
Photometric Type: Type C

Photometric Results

CIE Class: Direct
Measurement Flux: 663.08 lm
Efficiency: 106.2628 lm/W
Central Intensity: 237.537cd
Max. Intensity: 238.45cd
Field Angle(10% I_{max}): 169.77, 166.63

Max.Intensity Angle: C:180.0 G:6.0
Beam Angle(50% I_{max}): 118.22, 114.8
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	237.5	236.9	236.4	236.2	235.4	235.1	234.3	233.5	232.8	231.7
C45.0	237.5	237.4	237.2	237.1	236.7	236.5	236.0	235.4	235.0	234.2
C90.0	237.5	237.7	237.8	237.9	238.0	237.8	237.8	237.6	237.4	237.0
C135.0	237.5	238.2	238.3	238.4	238.4	238.4	238.3	237.9	237.8	237.2
C180.0	237.5	237.6	237.9	238.0	238.2	238.2	238.5	238.5	238.3	238.0
C225.0	237.5	237.6	237.6	237.4	237.4	237.2	236.9	236.7	236.1	235.5
C270.0	237.5	237.2	236.9	236.4	236.1	235.5	234.9	234.6	234.1	233.2
C315.0	237.5	237.7	237.6	237.2	236.6	236.4	235.7	235.0	234.6	233.7
C360.0	237.5	236.9	236.4	236.2	235.4	235.1	234.3	233.5	232.8	231.7
C\ G	G10.0	G11.0	G12.0	G13.0	G14.0	G15.0	G16.0	G17.0	G18.0	G19.0
C0.0	231.3	230.0	228.7	228.0	226.6	224.9	223.9	222.1	220.3	219.4
C45.0	233.7	228.9	228.3	227.2	225.4	225.4	224.0	223.2	217.7	216.1
C90.0	232.4	231.9	231.6	231.0	226.1	225.5	224.6	224.6	222.6	217.4
C135.0	237.0	235.2	231.8	231.4	230.5	230.1	229.1	228.0	227.5	226.4
C180.0	237.8	237.4	236.8	236.6	235.8	234.9	234.5	233.4	232.2	231.6
C225.0	235.2	234.4	233.6	233.1	232.1	231.5	230.4	229.7	228.4	227.0
C270.0	232.8	231.7	230.6	230.0	228.8	227.4	222.5	219.2	219.2	215.5
C315.0	232.7	232.2	231.0	230.5	229.2	227.8	226.4	225.6	223.8	222.1
C360.0	231.3	230.0	228.7	228.0	226.6	224.9	223.9	222.1	220.3	219.4
C\ G	G20.0	G21.0	G22.0	G23.0	G24.0	G25.0	G26.0	G27.0	G28.0	G29.0
C0.0	217.2	215.0	214.0	211.5	209.0	207.9	205.3	202.5	200.8	198.0
C45.0	215.2	213.5	212.5	210.2	204.5	203.5	201.4	199.1	197.9	195.4
C90.0	216.9	215.5	214.7	209.0	208.2	206.6	204.8	200.4	197.8	196.8
C135.0	228.5	228.2	225.9	222.0	221.0	221.5	220.1	219.2	217.4	215.2
C180.0	230.4	229.0	228.3	226.7	225.8	223.7	221.2	219.8	217.1	215.8
C225.0	226.1	224.5	223.6	221.8	219.9	219.0	216.9	215.8	213.5	211.3
C270.0	213.3	211.5	209.5	207.8	202.3	200.1	199.0	192.3	190.0	188.7
C315.0	221.2	219.3	218.3	214.3	210.0	208.8	206.6	205.4	202.9	201.6
C360.0	217.2	215.0	214.0	211.5	209.0	207.9	205.3	202.5	200.8	198.0
C\ G	G30.0	G31.0	G32.0	G33.0	G34.0	G35.0	G36.0	G37.0	G38.0	G39.0
C0.0	196.6	193.5	192.0	188.8	187.0	183.6	180.1	178.5	174.8	173.0
C45.0	192.7	191.5	188.8	186.0	184.6	181.5	178.2	176.6	173.4	173.0
C90.0	194.8	188.7	187.5	185.2	184.1	177.8	175.3	174.0	167.5	164.8
C135.0	214.1	211.8	210.6	208.1	206.8	204.0	201.2	199.8	196.8	195.3
C180.0	213.2	210.6	209.5	207.2	205.7	203.3	201.9	199.2	196.4	195.1
C225.0	210.0	207.6	206.2	203.6	202.2	199.4	196.5	193.5	192.0	188.5
C270.0	184.0	179.8	178.6	174.9	169.1	167.6	162.3	159.5	156.3	154.4
C315.0	199.0	196.3	194.9	192.0	190.5	187.2	184.0	182.3	179.0	177.3
C360.0	196.6	193.5	192.0	188.8	187.0	183.6	180.1	178.5	174.8	173.0

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	169.0	165.1	163.1	159.0	156.9	152.7	148.4	144.0	141.9	137.4
C45.0	171.7	171.0	169.9	166.0	164.1	160.2	158.1	154.0	149.7	147.6
C90.0	163.4	157.1	154.2	152.6	146.2	143.0	140.5	135.0	133.4	126.9
C135.0	192.0	188.5	186.8	183.3	181.5	177.8	173.9	172.0	167.9	165.8
C180.0	191.9	190.5	187.5	184.3	182.5	179.1	175.5	173.9	170.2	166.3
C225.0	185.2	183.6	180.1	178.3	176.5	171.0	169.0	167.1	163.1	159.1
C270.0	148.2	144.9	140.0	136.6	133.3	128.6	122.1	120.4	114.1	112.4
C315.0	173.8	172.7	171.8	168.0	164.3	162.3	158.3	154.3	152.2	150.1
C360.0	169.0	165.1	163.1	159.0	156.9	152.7	148.4	144.0	141.9	137.4
C\ G	G50.0	G51.0	G52.0	G53.0	G54.0	G55.0	G56.0	G57.0	G58.0	G59.0
C0.0	135.2	130.1	103.7	101.6	91.2	91.2	91.2	86.9	82.7	80.5
C45.0	143.2	141.0	136.4	131.8	129.4	124.4	122.0	117.2	112.2	109.7
C90.0	123.6	119.0	115.6	111.7	107.9	101.6	101.6	101.6	90.9	88.3
C135.0	161.5	157.2	155.0	148.4	146.1	143.9	139.3	134.4	120.6	114.6
C180.0	164.5	150.4	146.3	144.2	140.7	137.2	135.2	131.6	129.8	126.2
C225.0	154.9	152.8	148.4	146.3	141.5	137.3	134.9	130.0	108.5	103.6
C270.0	106.0	100.7	90.3	90.3	90.3	84.2	75.5	74.1	68.4	63.0
C315.0	145.7	141.3	136.7	132.2	129.9	124.9	124.9	117.7	115.1	110.3
C360.0	135.2	130.1	103.7	101.6	91.2	91.2	91.2	86.9	82.7	80.5
C\ G	G60.0	G61.0	G62.0	G63.0	G64.0	G65.0	G66.0	G67.0	G68.0	G69.0
C0.0	75.8	73.7	69.4	67.3	63.2	59.0	57.0	53.0	49.7	51.0
C45.0	104.7	84.3	84.3	76.1	75.2	73.0	68.7	64.3	62.2	57.8
C90.0	81.1	77.2	71.8	70.1	64.6	57.8	56.1	49.3	46.9	45.9
C135.0	109.2	107.0	102.6	100.7	91.5	91.5	89.2	84.7	82.4	76.1
C180.0	124.2	122.2	116.1	113.8	109.7	105.3	103.3	101.0	101.0	101.0
C225.0	101.3	101.3	101.3	89.6	84.9	80.2	77.9	73.0	68.3	65.9
C270.0	59.6	54.5	49.6	46.4	40.6	35.1	32.6	28.1	25.1	20.0
C315.0	105.2	102.5	102.5	102.5	87.3	85.0	80.5	78.1	73.6	69.0
C360.0	75.8	73.7	69.4	67.3	63.2	59.0	57.0	53.0	49.7	51.0
C\ G	G70.0	G71.0	G72.0	G73.0	G74.0	G75.0	G76.0	G77.0	G78.0	G79.0
C0.0	51.4	49.4	45.4	43.4	39.7	35.9	34.0	30.5	28.8	25.3
C45.0	55.7	51.5	45.7	42.3	38.5	39.3	36.0	32.6	30.8	27.5
C90.0	36.3	33.3	28.6	23.7	21.2	15.8	11.8	9.4	5.5	1.8
C135.0	73.0	70.7	66.2	63.9	59.9	57.6	55.4	50.7	46.6	44.3
C180.0	89.6	85.8	83.2	78.3	73.5	71.1	66.4	61.7	59.3	54.8
C225.0	61.1	56.3	54.0	49.3	48.8	48.1	45.7	39.2	37.0	32.9
C270.0	15.5	13.3	8.9	6.7	3.1	0.6	0.6	0.5	0.5	0.5
C315.0	66.7	62.0	57.3	54.9	50.6	46.2	45.8	40.0	36.0	34.0
C360.0	51.4	49.4	45.4	43.4	39.7	35.9	34.0	30.5	28.8	25.3

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	22.0	20.6	17.8	15.0	13.7	11.3	9.4	8.8	7.5	6.7
C45.0	24.3	22.7	18.7	17.7	15.8	14.6	12.4	10.9	9.8	8.5
C90.0	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2
C135.0	42.3	38.3	34.4	32.5	27.5	26.0	24.6	22.4	20.3	18.8
C180.0	50.5	48.3	45.8	40.3	38.7	35.1	31.8	30.3	26.7	24.5
C225.0	24.6	22.8	22.6	20.4	17.1	15.5	12.0	9.8	7.6	4.4
C270.0	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8
C315.0	30.2	26.6	24.9	21.6	18.2	16.8	14.1	11.8	9.5	8.4
C360.0	22.0	20.6	17.8	15.0	13.7	11.3	9.4	8.8	7.5	6.7
C\ G	G90.0									
C0.0	6.0									
C45.0	7.6									
C90.0	17.4									
C135.0	17.4									
C180.0	22.7									
C225.0	0.8									
C270.0	0.8									
C315.0	6.0									
C360.0	6.0									

Zonal Luminous Flux Data

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
0.0	237.54	0.00	0.00	0.00	0.00
0.0-1.0	237.53	0.23	0.23	0.03	0.03
1.0-2.0	237.46	0.68	0.91	0.10	0.14
2.0-3.0	237.34	1.14	2.04	0.17	0.31
3.0-4.0	237.10	1.59	3.63	0.24	0.55
4.0-5.0	236.89	2.04	5.67	0.31	0.86
5.0-6.0	236.55	2.49	8.16	0.38	1.23
6.0-7.0	236.14	2.93	11.09	0.44	1.67
7.0-8.0	235.77	3.38	14.47	0.51	2.18
8.0-9.0	235.08	3.82	18.29	0.58	2.76
9.0-10.0	234.13	4.25	22.53	0.64	3.40
10.0-11.0	232.72	4.66	27.20	0.70	4.10
11.0-12.0	231.55	5.08	32.27	0.77	4.87
12.0-13.0	230.97	5.49	37.76	0.83	5.69
13.0-14.0	229.30	5.89	43.65	0.89	6.58
14.0-15.0	228.45	6.28	49.94	0.95	7.53
15.0-16.0	226.91	6.67	56.61	1.01	8.54
16.0-17.0	225.74	7.05	63.66	1.06	9.60
17.0-18.0	223.95	7.41	71.07	1.12	10.72
18.0-19.0	221.94	7.76	78.83	1.17	11.89
19.0-20.0	221.11	8.11	86.94	1.22	13.11
20.0-21.0	219.56	8.46	95.40	1.28	14.39
21.0-22.0	218.34	8.80	104.20	1.33	15.71
22.0-23.0	215.43	9.10	113.30	1.37	17.09
23.0-24.0	212.59	9.36	122.66	1.41	18.50
24.0-25.0	211.37	9.64	132.30	1.45	19.95
25.0-26.0	209.40	9.93	142.23	1.50	21.45
26.0-27.0	206.82	10.18	152.42	1.54	22.99
27.0-28.0	204.67	10.42	162.83	1.57	24.56
28.0-29.0	202.83	10.66	173.50	1.61	26.17
29.0-30.0	200.55	10.89	184.39	1.64	27.81
30.0-31.0	197.47	11.08	195.46	1.67	29.48
31.0-32.0	196.01	11.27	206.74	1.70	31.18
32.0-33.0	193.23	11.47	218.20	1.73	32.91
33.0-34.0	191.24	11.64	229.84	1.75	34.66
34.0-35.0	188.06	11.78	241.62	1.78	36.44
35.0-36.0	184.93	11.88	253.49	1.79	38.23
36.0-37.0	182.94	12.00	265.49	1.81	40.04
37.0-38.0	179.52	12.10	277.59	1.82	41.86
38.0-39.0	177.66	12.19	289.78	1.84	43.70
39.0-40.0	174.41	12.28	302.06	1.85	45.55

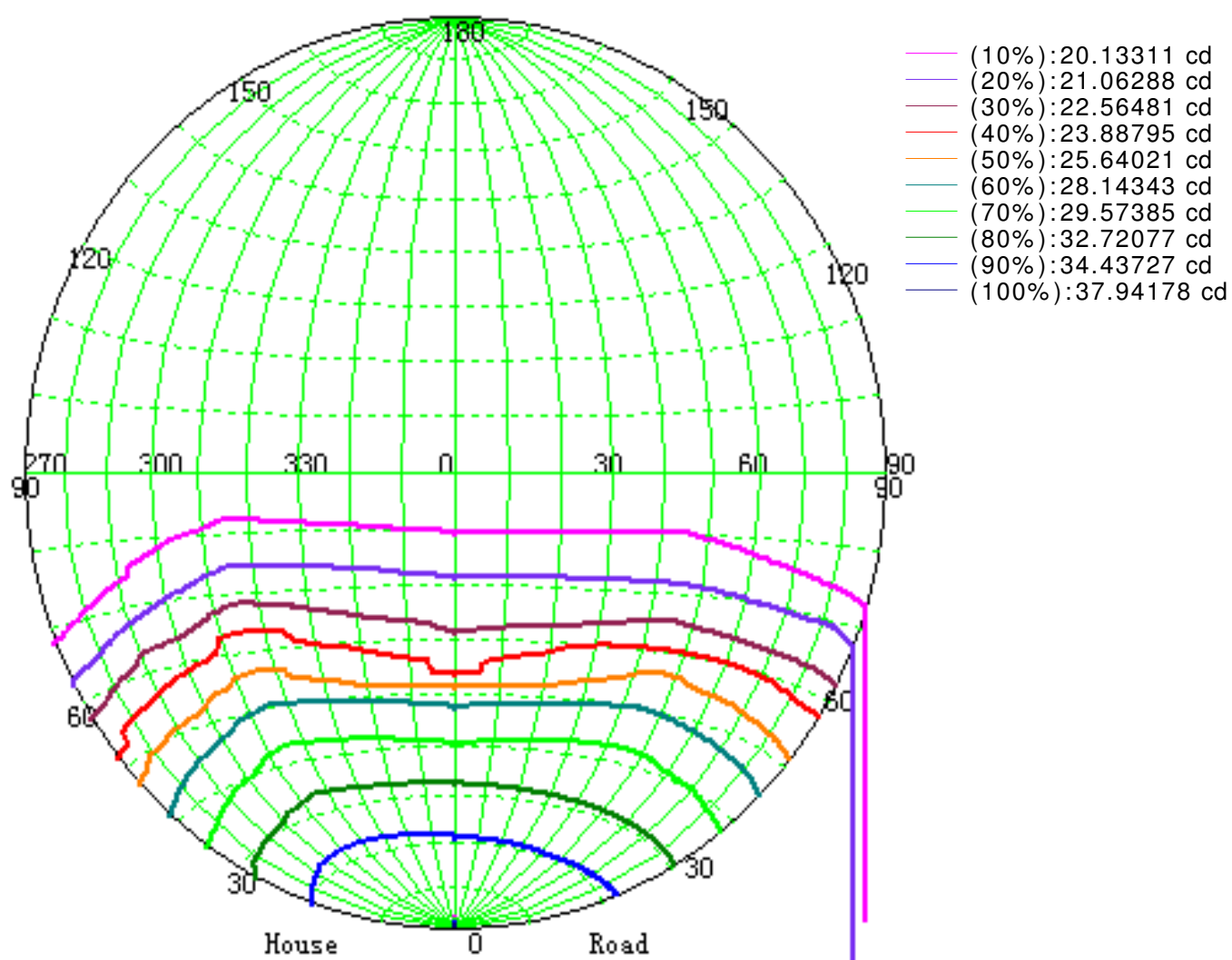
Zonal Luminous Flux Data

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
40.0-41.0	171.67	12.32	314.38	1.86	47.41
41.0-42.0	169.15	12.38	326.77	1.87	49.28
42.0-43.0	166.04	12.42	339.18	1.87	51.15
43.0-44.0	163.16	12.42	351.61	1.87	53.03
44.0-45.0	159.34	12.39	364.00	1.87	54.90
45.0-46.0	155.75	12.32	376.32	1.86	56.75
46.0-47.0	152.59	12.26	388.59	1.85	58.60
47.0-48.0	149.06	12.19	400.78	1.84	60.44
48.0-49.0	145.69	12.10	412.89	1.83	62.27
49.0-50.0	141.82	11.99	424.87	1.81	64.08
50.0-51.0	136.57	11.78	436.65	1.78	65.85
51.0-52.0	129.06	11.40	448.05	1.72	67.57
52.0-53.0	125.81	11.09	459.14	1.67	69.24
53.0-54.0	122.12	10.93	470.06	1.65	70.89
54.0-55.0	118.07	10.72	480.78	1.62	72.51
55.0-56.0	115.56	10.56	491.34	1.59	74.10
56.0-57.0	111.67	10.39	501.73	1.57	75.67
57.0-58.0	103.53	9.95	511.68	1.50	77.17
58.0-59.0	99.52	9.49	521.18	1.43	78.60
59.0-60.0	95.12	9.20	530.37	1.39	79.99
60.0-61.0	90.33	8.85	539.22	1.33	81.32
61.0-62.0	87.20	8.55	547.78	1.29	82.61
62.0-63.0	83.31	8.29	556.07	1.25	83.86
63.0-64.0	77.11	7.87	563.94	1.19	85.05
64.0-65.0	73.36	7.45	571.39	1.12	86.17
65.0-66.0	70.66	7.19	578.57	1.08	87.26
66.0-67.0	66.45	6.89	585.47	1.04	88.30
67.0-68.0	63.65	6.59	592.06	0.99	89.29
68.0-69.0	60.84	6.35	598.41	0.96	90.25
69.0-70.0	56.15	6.01	604.42	0.91	91.15
70.0-71.0	52.79	5.63	610.05	0.85	92.00
71.0-72.0	48.65	5.27	615.32	0.80	92.80
72.0-73.0	45.31	4.91	620.23	0.74	93.54
73.0-74.0	41.92	4.59	624.82	0.69	94.23
74.0-75.0	39.32	4.29	629.11	0.65	94.88
75.0-76.0	36.95	4.05	633.16	0.61	95.49
76.0-77.0	33.07	3.73	636.90	0.56	96.05
77.0-78.0	30.57	3.41	640.30	0.51	96.56
78.0-79.0	27.64	3.13	643.43	0.47	97.04
79.0-80.0	24.36	2.80	646.23	0.42	97.46
80.0-81.0	22.52	2.54	648.77	0.38	97.84

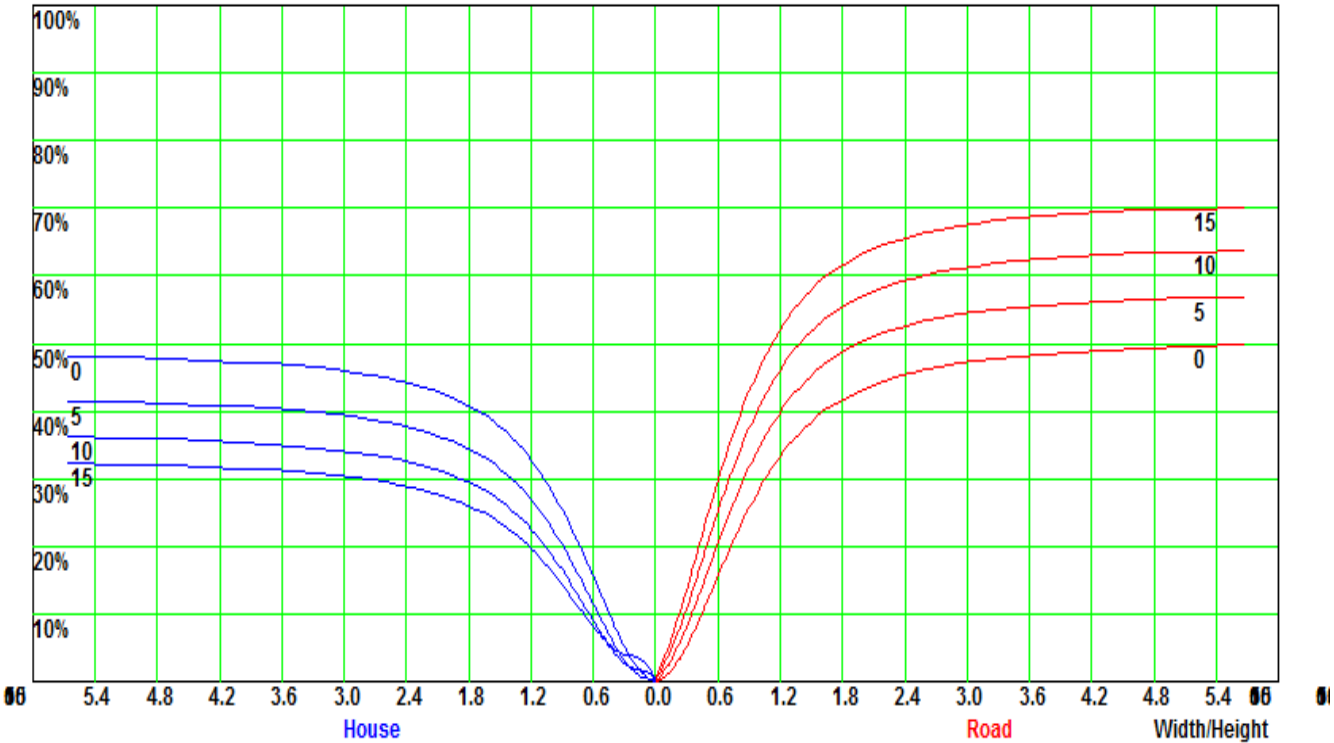
Zonal Luminous Flux Data

[illegible]

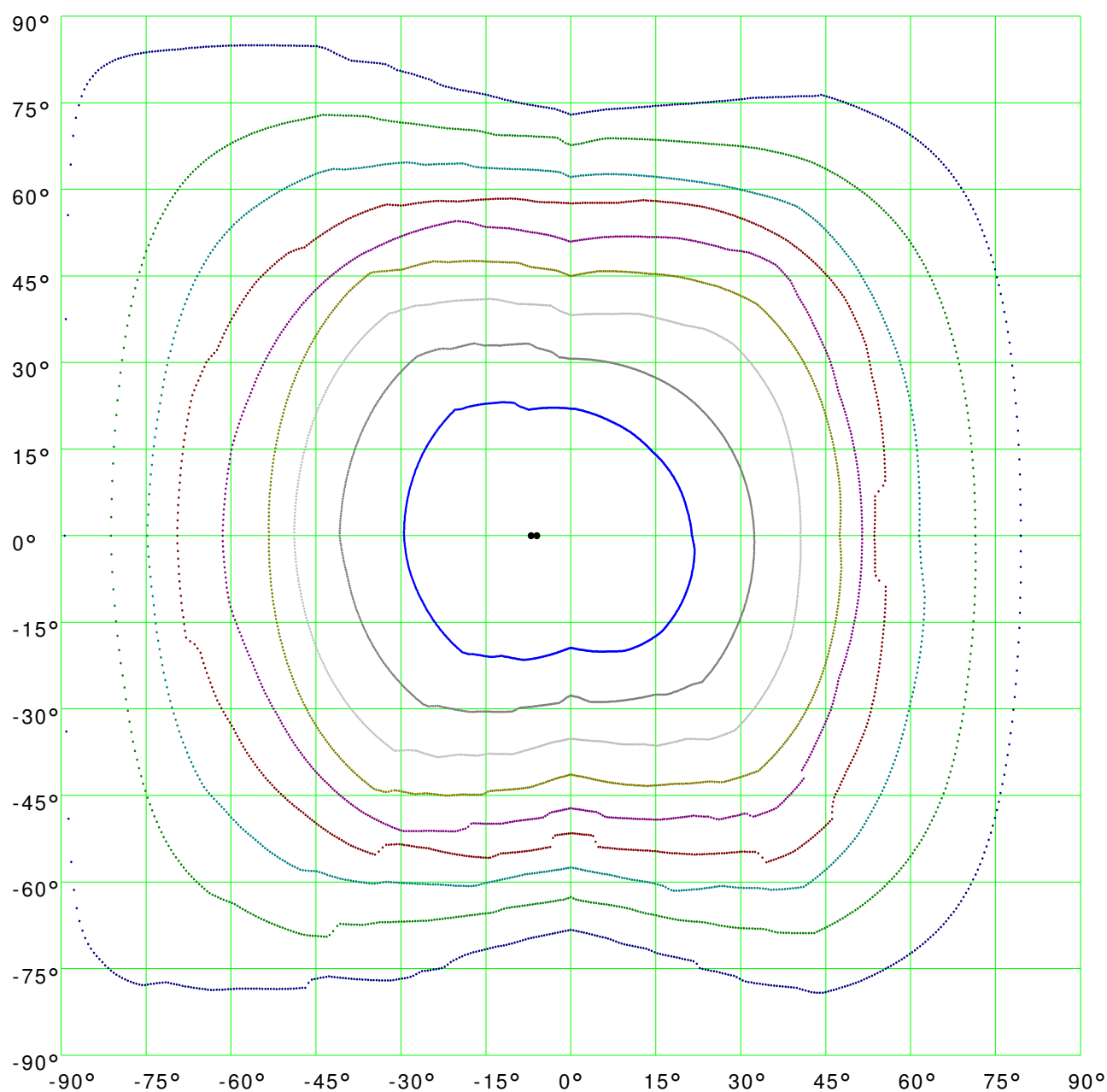
Iso-Candela [cd]



Coefficient Utilization Curve

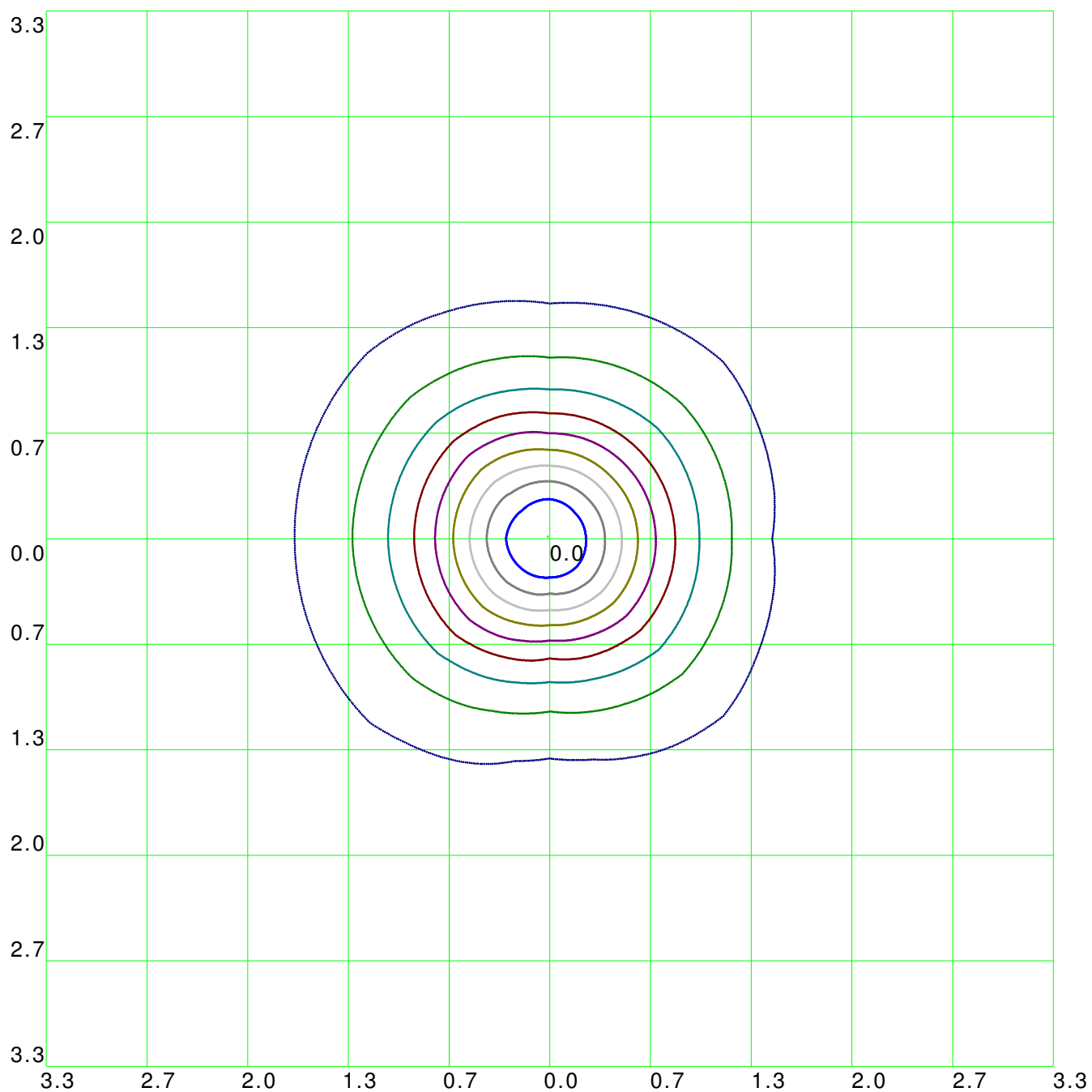


Isocandela(rectangle)



(10%): 23.8cd	(20%): 47.7cd	(30%): 71.5cd	(40%): 95.4cd
(50%): 119.2cd	(60%): 143.1cd	(70%): 166.9cd	(80%): 190.8cd
(90%): 214.6cd	(100%): 238.5cd		

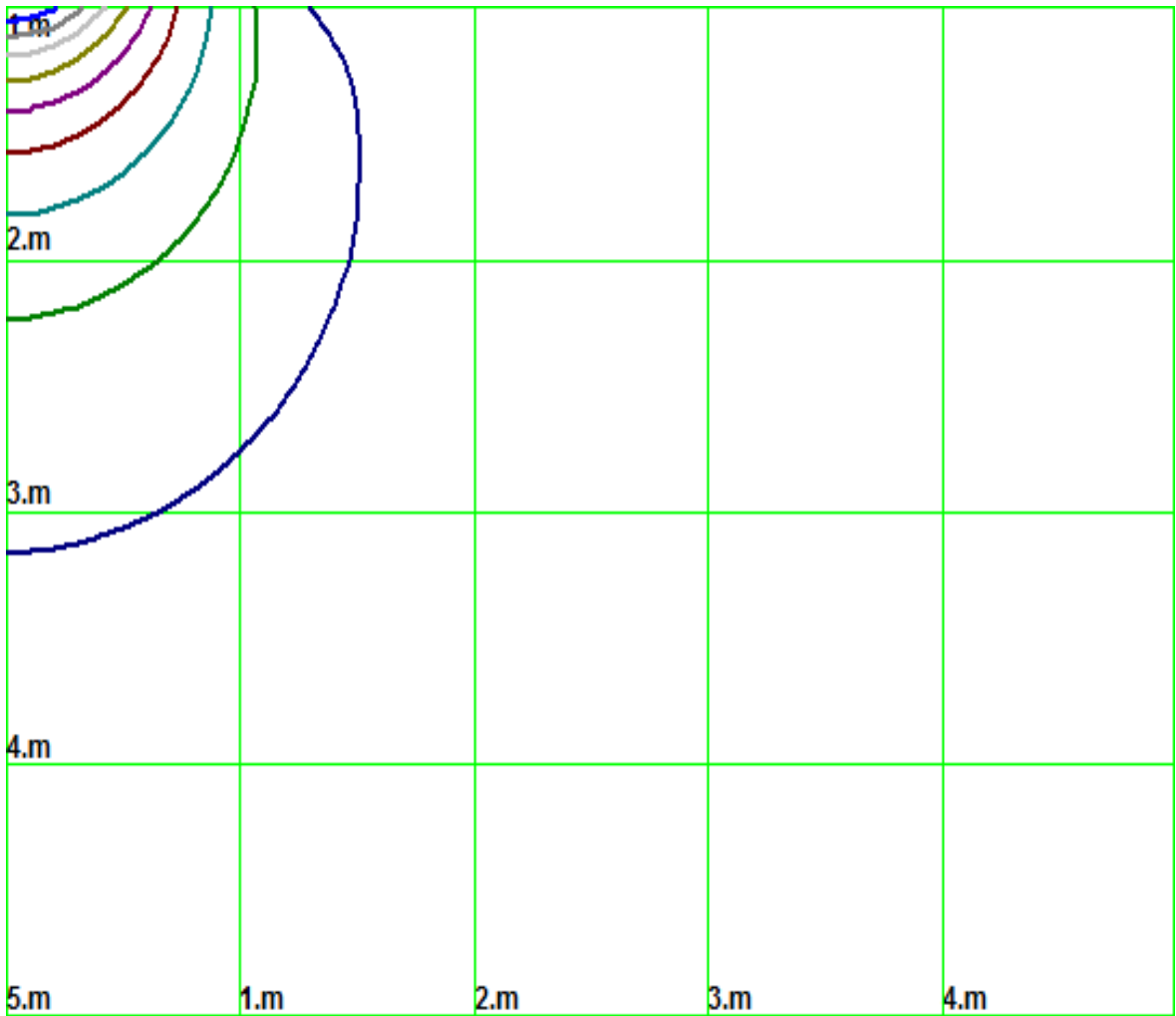
Isolx curve



Height: 1 m

(10%): 23.8lx	(20%): 47.7lx	(30%): 71.5lx	(40%): 95.4lx
(50%): 119.2lx	(60%): 143.1lx	(70%): 166.9lx	(80%): 190.8lx
(90%): 214.6lx	(100%): 238.2lx		

Space Isolx Curve



(10%): 23.8lx	(20%): 47.7lx	(30%): 71.5lx	(40%): 95.4lx
(50%): 119.2lx	(60%): 143.1lx	(70%): 166.9lx	(80%): 190.8lx
(90%): 214.6lx	(100%): 238.2lx		

Luminance Limiting Curve

Diameter: 0mm

Length: 0mm

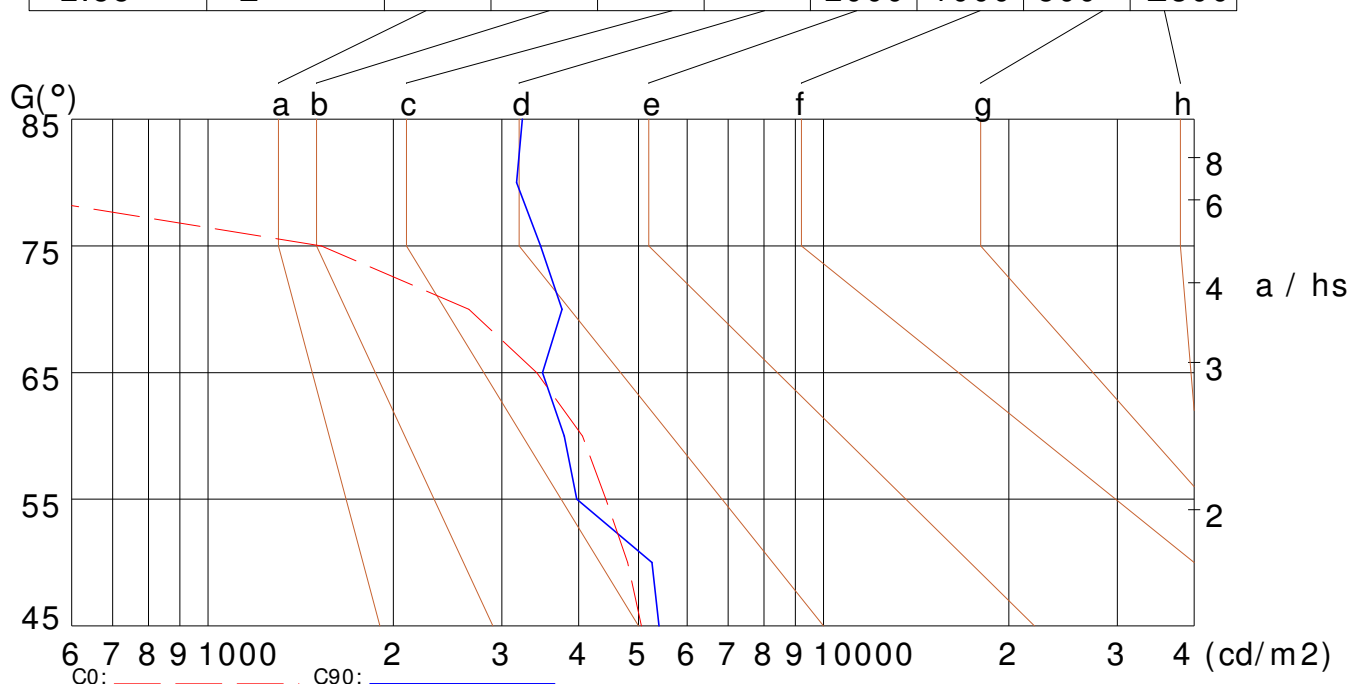
Width: 0mm

Height: 0mm

(cd/m²)

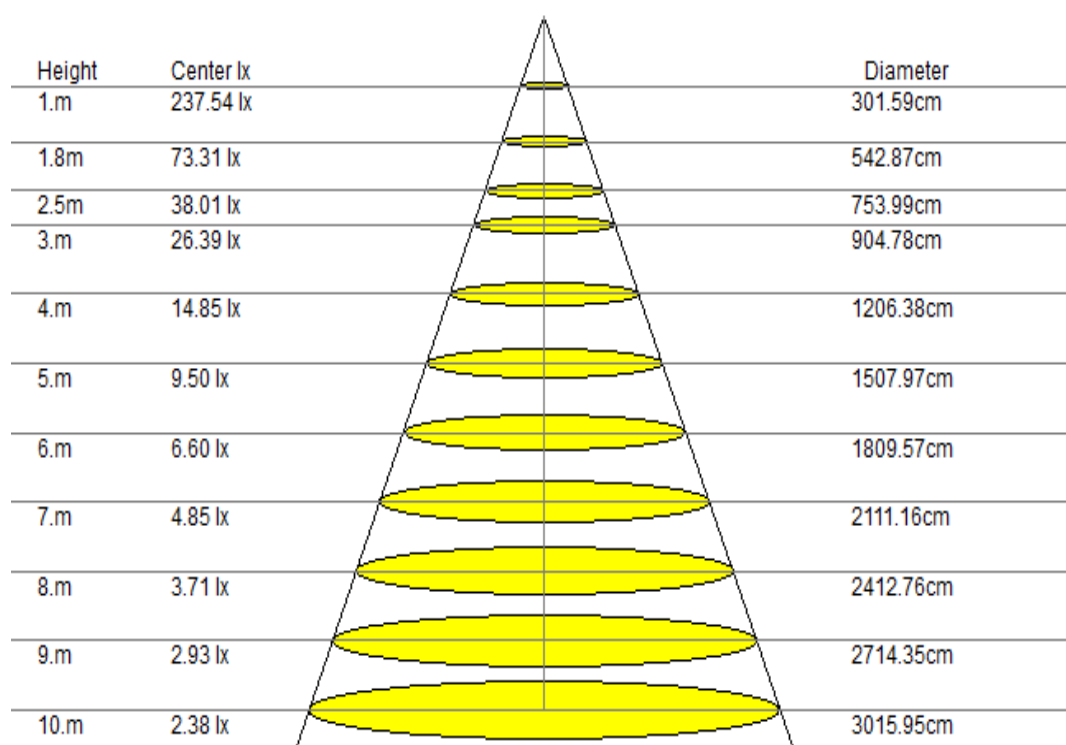
γ	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	5057	4805	4427	4055	3416	2653	1527	67	51
C90	5399	5259	3973	3789	3493	3756	3468	3171	3241

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

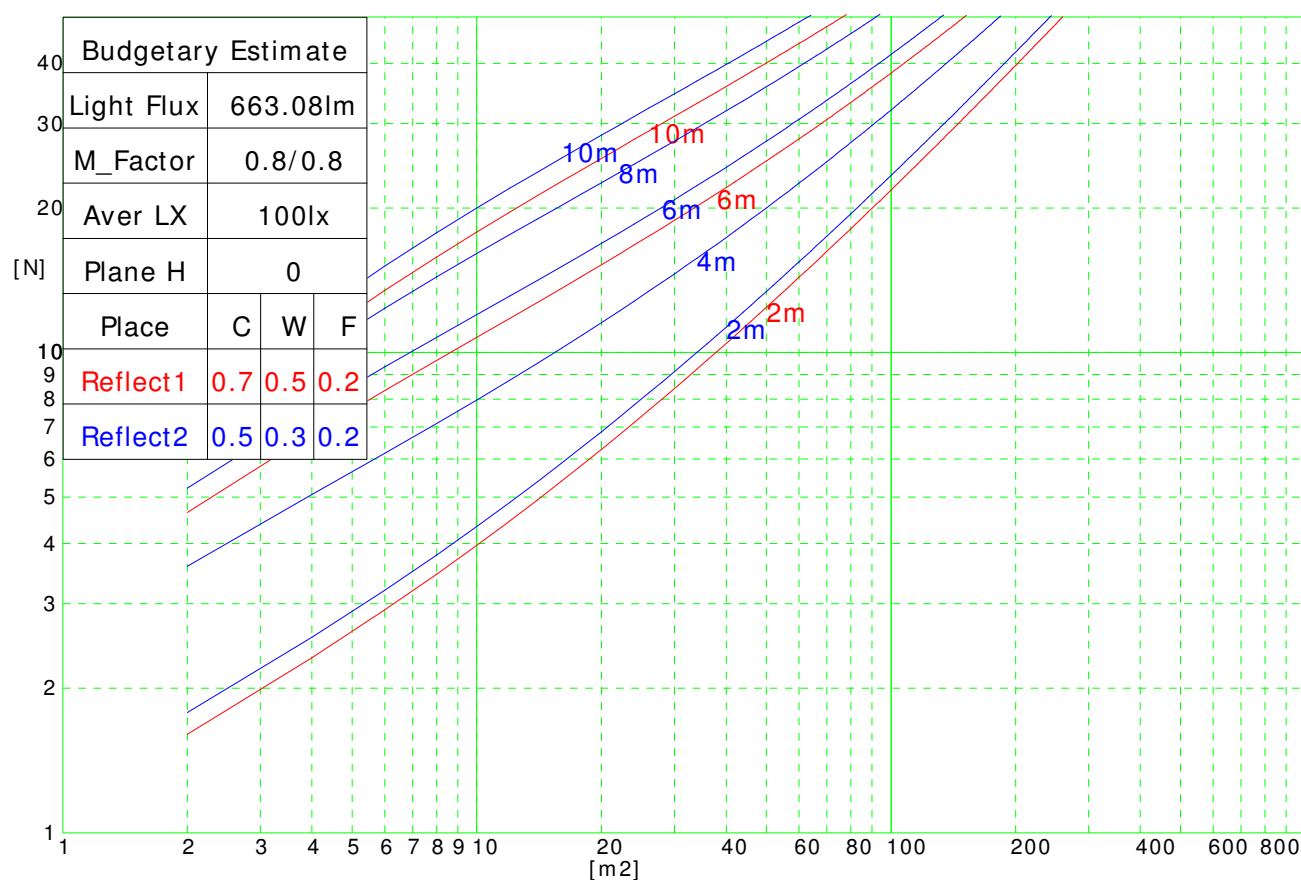


Beam Angle:112.90°(50%Imax)

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	0.82	0.79	0.75	0.78	0.74	0.70	0.65
3	0.76	0.73	0.71	0.76	0.72	0.70	0.75	0.70	0.67	0.73	0.68	0.64	0.69	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	0.64	0.59	0.55	0.62	0.56	0.51	0.47
5	0.57	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	0.51	0.48	0.45	0.52	0.47	0.44	0.52	0.46	0.42	0.51	0.45	0.39	0.36
7	0.45	0.42	0.41	0.46	0.42	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	0.36	0.41	0.38	0.36	0.43	0.38	0.34	0.43	0.37	0.33	0.43	0.37	0.31	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	0.25
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	14.8	16.0	14.9	16.0	16.5	14.7	15.8	14.9	15.9	16.4
	3H	16.3	17.5	16.5	17.8	18.0	16.2	17.4	16.6	17.9	18.0
	4H	17.1	18.0	17.3	18.7	18.7	16.8	17.9	17.2	18.5	18.8
	6H	17.6	18.6	18.0	18.8	19.1	17.5	18.5	17.9	19.0	19.1
	8H	17.9	18.8	18.1	18.9	19.3	17.8	18.9	17.9	18.9	19.2
4H	12H	17.9	18.8	18.1	19.2	19.6	17.7	18.6	18.0	19.3	19.5
	2H	15.8	16.7	15.8	16.8	17.0	15.7	16.5	15.7	16.9	17.1
	3H	17.4	18.3	17.7	18.5	18.8	17.4	18.2	17.6	18.5	18.8
	4H	18.2	19.0	18.5	19.2	19.5	18.0	18.9	18.3	19.1	19.4
	6H	18.7	19.6	19.3	19.7	20.2	18.7	19.4	19.0	19.7	20.1
8H	8H	19.2	19.7	19.5	19.9	20.2	18.9	19.5	19.2	19.9	20.4
	12H	19.3	19.8	19.6	20.1	20.5	19.2	19.8	19.4	20.1	20.6
	4H	18.6	19.2	19.0	19.5	19.8	18.4	19.0	18.7	19.5	19.8
	6H	19.3	19.9	19.8	20.2	20.5	19.3	19.8	19.7	20.3	20.5
	8H	19.7	20.1	20.1	20.6	21.0	19.6	20.1	19.9	20.5	21.0
12H	12H	19.9	20.5	20.3	20.8	21.1	19.8	20.3	20.3	20.8	21.2
	4H	18.6	19.1	18.9	19.5	19.9	18.5	19.1	18.9	19.4	19.8
	6H	19.5	20.0	19.9	20.2	20.6	19.4	19.9	19.8	20.3	20.7
	8H	20.0	20.4	20.4	20.7	21.0	19.7	20.3	20.1	20.6	21.0