



Luminaire Property

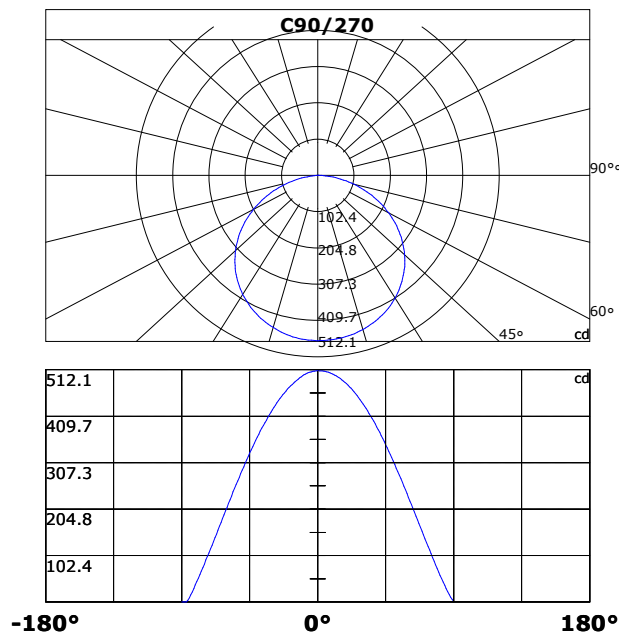
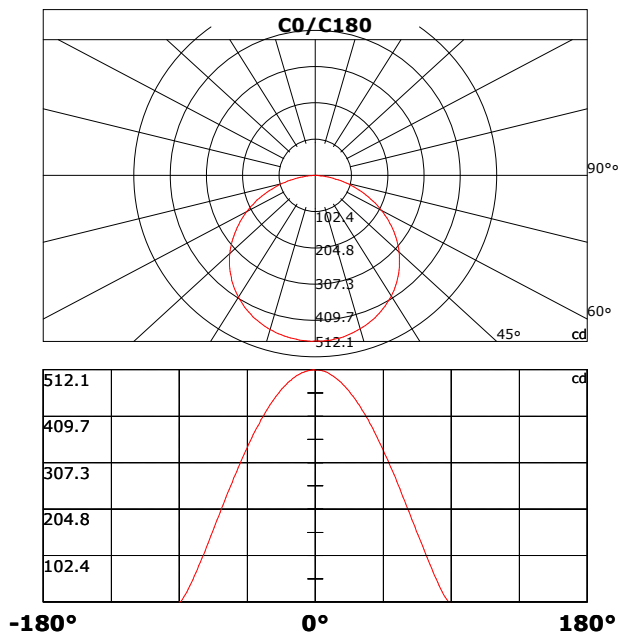
Luminaire Description: B1087-BF
Luminaire Category: DOWNLIGHT 18W
Lamp Category: DOWNLIGHT 18W
Lamp Description: BLANCO FRIO 6000K
Number of Lamp: 1
Lamp Lumens(lm): 1443.3
Luminous Length(m): 0.22
Luminous Width(m): 0.22
Luminous Height(m): 0.03

Voltage: 230.2 V
Current: 0.145 A
Power: 19.03 W
Power Factor: 0.569
Test Lab: BLED
Photometric Type: Type C
Manufacture: BLED

Photometric Results

CIE Class: Direct
Luminaire Lumens: 1443.30 lm
Efficiency: 75.8434 lm/W
Central Intensity: 510.633cd
Max. Intensity: 512.074cd
Field Angle(10%Imax): NA

Max.Intensity Angle: C:180.0 G:1.0
Beam Angle(50%Imax): L: -55.0 R:56.1
Luminaire Efficacy Rating(LER) : 96.22%
Upward Ratio: NA
Downward Ratio: NA
Beamwidth(50%Imax): H=114.79V=114.74





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	510.6	512.0	511.7	511.2	510.5	509.8	508.9	507.8	506.3	504.3
C45.0	510.6	509.2	509.4	509.3	509.1	508.8	508.3	507.6	506.5	505.6
C90.0	510.6	509.9	509.7	509.4	509.0	508.3	507.5	506.5	505.4	504.0
C135.0	510.6	510.9	510.7	510.2	509.4	508.7	507.7	506.7	505.1	503.7
C180.0	510.6	512.1	511.8	511.4	510.8	509.8	508.9	507.9	506.4	505.0
C225.0	510.6	508.3	507.6	506.8	505.9	504.6	503.3	501.6	500.0	498.0
C270.0	510.6	509.7	509.4	508.5	507.9	506.9	505.9	504.6	502.9	501.1
C315.0	510.6	510.9	510.8	510.4	509.7	509.0	508.0	506.8	505.7	504.3
C360.0	510.6	512.0	511.7	511.2	510.5	509.8	508.9	507.8	506.3	504.3
C\G	G10.0	G11.0	G12.0	G13.0	G14.0	G15.0	G16.0	G17.0	G18.0	G19.0
C0.0	502.3	500.0	497.8	495.3	492.6	489.9	487.0	484.1	480.7	477.3
C45.0	504.4	503.0	501.4	499.6	497.7	495.7	493.6	490.8	488.3	485.7
C90.0	502.6	500.7	499.1	496.9	494.8	492.5	489.8	487.3	484.2	481.3
C135.0	502.0	500.4	498.1	495.9	493.6	491.1	488.6	485.3	482.3	479.3
C180.0	503.2	501.4	499.6	497.3	494.8	492.4	489.6	487.0	483.8	480.4
C225.0	495.9	493.6	491.1	488.7	486.1	482.9	479.9	476.6	473.3	469.8
C270.0	499.0	496.6	494.1	491.4	488.8	486.0	483.0	479.5	476.3	473.0
C315.0	502.6	500.7	498.7	496.6	494.4	491.9	489.1	486.3	483.4	480.3
C360.0	502.3	500.0	497.8	495.3	492.6	489.9	487.0	484.1	480.7	477.3
C\G	G20.0	G21.0	G22.0	G23.0	G24.0	G25.0	G26.0	G27.0	G28.0	G29.0
C0.0	473.8	470.1	466.2	461.9	457.8	453.5	449.3	444.1	439.4	434.8
C45.0	482.6	480.0	476.3	473.0	469.4	465.8	461.5	457.4	453.3	448.9
C90.0	477.8	474.4	471.3	467.4	463.6	459.3	455.2	451.0	446.4	441.3
C135.0	475.7	472.3	468.5	464.8	460.7	456.7	451.9	447.6	442.9	438.0
C180.0	477.1	473.6	470.2	465.8	461.9	457.7	453.5	449.2	443.9	439.1
C225.0	465.7	461.8	457.8	453.9	448.9	444.6	439.9	434.8	430.1	424.5
C270.0	469.5	465.1	461.2	457.3	453.0	448.7	443.9	439.0	434.1	429.6
C315.0	476.7	473.3	469.6	466.0	461.6	457.7	453.4	448.8	444.3	439.4
C360.0	473.8	470.1	466.2	461.9	457.8	453.5	449.3	444.1	439.4	434.8
C\G	G30.0	G31.0	G32.0	G33.0	G34.0	G35.0	G36.0	G37.0	G38.0	G39.0
C0.0	429.5	423.7	418.5	412.9	406.8	401.5	394.7	388.8	382.6	376.2
C45.0	444.1	439.5	434.7	429.7	424.6	419.1	413.5	408.1	402.2	395.8
C90.0	436.7	431.8	426.8	421.6	415.9	410.2	405.0	398.7	392.6	386.5
C135.0	432.8	427.6	422.6	417.0	411.5	405.7	399.5	393.9	387.5	380.6
C180.0	434.3	429.2	423.6	418.0	412.7	406.8	401.5	394.3	388.2	382.6
C225.0	419.2	413.8	407.9	402.2	395.7	390.0	384.0	377.0	369.4	362.4
C270.0	423.7	418.4	413.0	407.4	400.8	395.3	389.1	383.0	376.9	369.8
C315.0	434.4	429.5	424.0	418.6	412.6	407.4	401.5	395.2	388.3	381.7
C360.0	429.5	423.7	418.5	412.9	406.8	401.5	394.7	388.8	382.6	376.2



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	369.1	362.5	355.8	348.9	342.1	334.3	327.2	319.8	312.7	305.2
C45.0	390.1	384.0	377.5	371.6	364.0	358.1	350.8	344.3	336.2	329.7
C90.0	380.1	374.3	367.2	360.4	353.7	346.6	340.2	332.0	324.9	318.1
C135.0	374.5	367.9	361.3	354.2	346.8	340.5	333.0	326.2	317.7	310.7
C180.0	375.7	369.0	362.1	355.1	348.6	341.3	334.0	326.3	318.8	312.0
C225.0	355.2	348.0	339.9	332.5	324.9	317.0	308.9	299.9	291.3	283.8
C270.0	363.3	356.7	349.9	342.2	335.3	328.3	321.1	313.7	305.7	298.2
C315.0	375.5	368.8	362.0	354.3	347.0	339.6	331.9	323.2	314.7	306.2
C360.0	369.1	362.5	355.8	348.9	342.1	334.3	327.2	319.8	312.7	305.2
C\G	G50.0	G51.0	G52.0	G53.0	G54.0	G55.0	G56.0	G57.0	G58.0	G59.0
C0.0	297.1	289.5	281.8	274.0	265.5	257.1	249.5	241.1	232.0	223.9
C45.0	322.1	315.2	307.1	299.4	292.4	284.3	276.9	268.2	260.2	253.0
C90.0	310.4	303.3	294.8	287.3	280.0	272.2	263.5	255.7	247.9	239.7
C135.0	303.0	296.6	288.0	279.3	271.9	263.6	256.1	247.1	238.8	231.3
C180.0	303.4	296.2	288.2	280.3	273.2	264.1	256.2	248.1	240.0	230.9
C225.0	276.6	268.5	260.4	251.6	243.6	235.7	226.3	218.2	209.6	201.4
C270.0	290.9	283.3	274.8	266.9	259.2	250.8	243.1	233.9	225.6	217.5
C315.0	298.5	292.1	284.4	277.1	269.1	260.5	250.2	242.1	234.3	225.7
C360.0	297.1	289.5	281.8	274.0	265.5	257.1	249.5	241.1	232.0	223.9
C\G	G60.0	G61.0	G62.0	G63.0	G64.0	G65.0	G66.0	G67.0	G68.0	G69.0
C0.0	215.8	207.3	199.5	190.3	181.8	173.6	165.2	156.2	148.2	140.0
C45.0	244.4	236.8	227.6	219.5	211.9	203.2	194.5	185.8	178.0	169.1
C90.0	231.2	222.5	214.9	206.7	198.4	189.7	181.0	173.1	164.6	155.8
C135.0	222.6	214.9	205.5	197.4	189.5	180.7	172.0	163.1	155.3	146.3
C180.0	223.0	214.3	206.6	197.5	188.9	181.1	172.0	164.2	154.9	146.5
C225.0	192.4	183.9	176.3	168.0	159.0	150.3	141.8	133.8	125.7	116.9
C270.0	209.5	201.1	192.2	183.9	175.6	167.4	158.2	149.9	142.1	133.2
C315.0	217.3	209.0	200.7	192.7	184.1	175.3	166.8	158.8	150.5	141.9
C360.0	215.8	207.3	199.5	190.3	181.8	173.6	165.2	156.2	148.2	140.0
C\G	G70.0	G71.0	G72.0	G73.0	G74.0	G75.0	G76.0	G77.0	G78.0	G79.0
C0.0	131.5	122.9	115.0	106.3	98.1	90.3	82.1	74.5	66.5	58.4
C45.0	161.2	152.8	143.6	135.8	127.3	119.0	110.9	102.2	94.9	86.6
C90.0	148.3	139.2	130.8	122.8	114.5	106.4	97.9	90.1	82.1	74.1
C135.0	138.5	130.0	121.1	113.2	104.9	96.7	88.7	80.2	73.0	65.0
C180.0	138.5	129.0	121.4	112.6	104.3	97.0	87.9	80.6	72.4	64.9
C225.0	108.3	100.2	92.4	84.7	76.9	68.4	61.3	53.3	46.2	38.5
C270.0	125.4	117.0	108.3	100.4	92.3	83.7	75.7	68.2	60.7	52.6
C315.0	133.3	125.5	117.0	109.0	101.0	92.2	84.8	76.6	69.2	61.0
C360.0	131.5	122.9	115.0	106.3	98.1	90.3	82.1	74.5	66.5	58.4



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	51.1	43.7	36.0	29.4	22.4	16.4	10.9	5.7	1.3	0.0
C45.0	78.6	70.7	63.5	55.7	48.6	40.9	33.6	26.7	20.2	14.4
C90.0	66.4	59.0	51.5	43.9	36.8	29.8	22.9	16.8	11.1	5.8
C135.0	57.2	49.6	42.6	35.2	28.2	21.5	15.3	9.7	4.4	0.0
C180.0	57.3	49.7	42.8	35.4	28.6	22.0	16.3	10.7	5.6	0.6
C225.0	31.6	24.5	18.1	11.9	6.4	2.0	0.0	0.0	0.0	0.0
C270.0	45.4	37.4	30.0	22.5	15.7	9.1	3.8	0.0	0.0	0.0
C315.0	53.8	46.0	38.6	31.1	24.2	17.8	11.5	5.8	1.5	0.0
C360.0	51.1	43.7	36.0	29.4	22.4	16.4	10.9	5.7	1.3	0.0
C\G	G90.0									
C0.0	0.0									
C45.0	9.0									
C90.0	1.1									
C135.0	0.0									
C180.0	0.0									
C225.0	0.0									
C270.0	0.0									
C315.0	0.0									
C360.0	0.0									



Zonal Luminous Flux Data

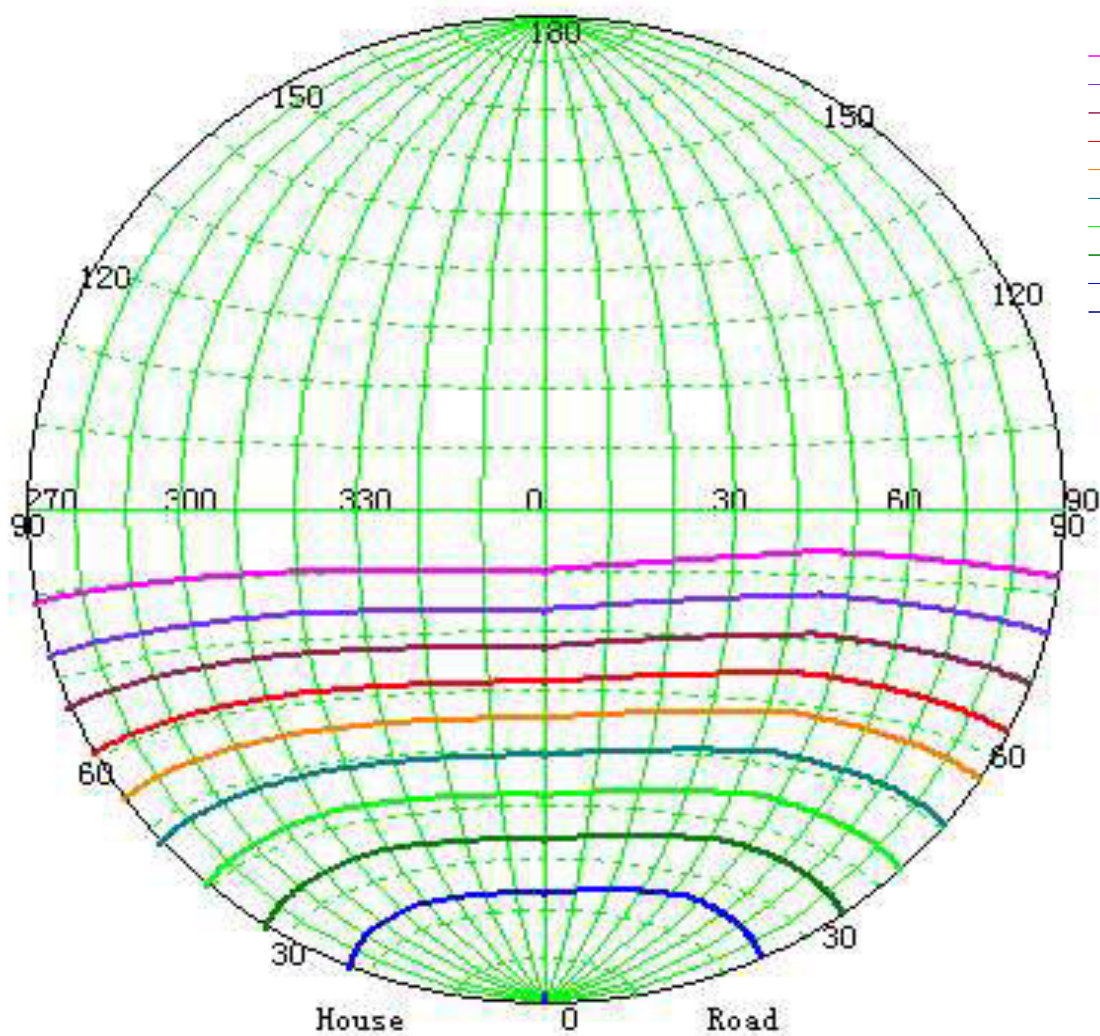
Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
0.0	510.63	0.00	0.00	0.00	0.00
0.0-1.0	510.37	0.49	0.49	0.03	0.03
1.0-2.0	510.13	1.46	1.95	0.10	0.13
2.0-3.0	509.65	2.44	4.39	0.16	0.29
3.0-4.0	509.03	3.41	7.80	0.23	0.52
4.0-5.0	508.23	4.38	12.18	0.29	0.81
5.0-6.0	507.32	5.34	17.52	0.36	1.17
6.0-7.0	506.17	6.29	23.81	0.42	1.59
7.0-8.0	504.77	7.24	31.04	0.48	2.07
8.0-9.0	503.26	8.17	39.21	0.54	2.61
9.0-10.0	501.50	9.09	48.30	0.61	3.22
10.0-11.0	499.55	10.00	58.31	0.67	3.89
11.0-12.0	497.49	10.90	69.21	0.73	4.61
12.0-13.0	495.21	11.78	80.99	0.79	5.40
13.0-14.0	492.85	12.65	93.63	0.84	6.24
14.0-15.0	490.29	13.50	107.13	0.90	7.14
15.0-16.0	487.58	14.33	121.46	0.96	8.10
16.0-17.0	484.62	15.14	136.60	1.01	9.11
17.0-18.0	481.55	15.93	152.53	1.06	10.17
18.0-19.0	478.39	16.70	169.23	1.11	11.28
19.0-20.0	474.88	17.45	186.68	1.16	12.45
20.0-21.0	471.33	18.17	204.85	1.21	13.66
21.0-22.0	467.62	18.87	223.71	1.26	14.91
22.0-23.0	463.78	19.54	243.26	1.30	16.22
23.0-24.0	459.62	20.19	263.45	1.35	17.56
24.0-25.0	455.49	20.81	284.25	1.39	18.95
25.0-26.0	451.07	21.40	305.65	1.43	20.38
26.0-27.0	446.50	21.96	327.61	1.46	21.84
27.0-28.0	441.79	22.49	350.10	1.50	23.34
28.0-29.0	436.96	22.99	373.09	1.53	24.87
29.0-30.0	431.83	23.46	396.55	1.56	26.44
30.0-31.0	426.67	23.89	420.44	1.59	28.03
31.0-32.0	421.38	24.30	444.74	1.62	29.65
32.0-33.0	415.92	24.67	469.40	1.64	31.29
33.0-34.0	410.07	25.00	494.40	1.67	32.96
34.0-35.0	404.52	25.30	519.70	1.69	34.65
35.0-36.0	398.59	25.57	545.27	1.70	36.35
36.0-37.0	392.37	25.80	571.07	1.72	38.07
37.0-38.0	385.95	25.98	597.05	1.73	39.80
38.0-39.0	379.46	26.13	623.17	1.74	41.54
39.0-40.0	372.94	26.24	649.41	1.75	43.29



Zonal Luminous Flux Data

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Flux [lm]	Zonal Flux [%]	Sum Flux [%]
40.0-41.0	366.40	26.33	675.74	1.76	45.05
41.0-42.0	359.47	26.37	702.11	1.76	46.81
42.0-43.0	352.39	26.37	728.48	1.76	48.57
43.0-44.0	345.31	26.33	754.81	1.76	50.32
44.0-45.0	338.21	26.27	781.08	1.75	52.07
45.0-46.0	330.87	26.17	807.25	1.74	53.82
46.0-47.0	323.16	26.01	833.26	1.73	55.55
47.0-48.0	315.26	25.81	859.07	1.72	57.27
48.0-49.0	307.97	25.59	884.66	1.71	58.98
49.0-50.0	300.26	25.36	910.02	1.69	60.67
50.0-51.0	293.08	25.10	935.12	1.67	62.34
51.0-52.0	284.93	24.80	959.93	1.65	64.00
52.0-53.0	276.98	24.44	984.37	1.63	65.62
53.0-54.0	269.35	24.08	1008.45	1.61	67.23
54.0-55.0	261.04	23.68	1032.13	1.58	68.81
55.0-56.0	252.72	23.22	1055.34	1.55	70.36
56.0-57.0	244.29	22.72	1078.07	1.51	71.87
57.0-58.0	236.05	22.21	1100.28	1.48	73.35
58.0-59.0	227.91	21.69	1121.97	1.45	74.80
59.0-60.0	219.53	21.14	1143.11	1.41	76.21
60.0-61.0	211.22	20.56	1163.67	1.37	77.58
61.0-62.0	202.89	19.95	1183.62	1.33	78.91
62.0-63.0	194.52	19.33	1202.95	1.29	80.20
63.0-64.0	186.15	18.68	1221.63	1.25	81.44
64.0-65.0	177.66	18.00	1239.63	1.20	82.64
65.0-66.0	168.93	17.29	1256.92	1.15	83.79
66.0-67.0	160.61	16.57	1273.49	1.10	84.90
67.0-68.0	152.41	15.86	1289.35	1.06	85.96
68.0-69.0	143.71	15.11	1304.46	1.01	86.96
69.0-70.0	135.62	14.35	1318.80	0.96	87.92
70.0-71.0	127.08	13.58	1332.38	0.91	88.83
71.0-72.0	118.69	12.78	1345.16	0.85	89.68
72.0-73.0	110.61	11.99	1357.15	0.80	90.48
73.0-74.0	102.40	11.20	1368.35	0.75	91.22
74.0-75.0	94.22	10.39	1378.74	0.69	91.92
75.0-76.0	86.16	9.58	1388.31	0.64	92.55
76.0-77.0	78.22	8.76	1397.08	0.58	93.14
77.0-78.0	70.63	7.97	1405.05	0.53	93.67
78.0-79.0	62.64	7.16	1412.21	0.48	94.15
79.0-80.0	55.17	6.35	1418.56	0.42	94.57
80.0-81.0	47.58	5.56	1424.11	0.37	94.94

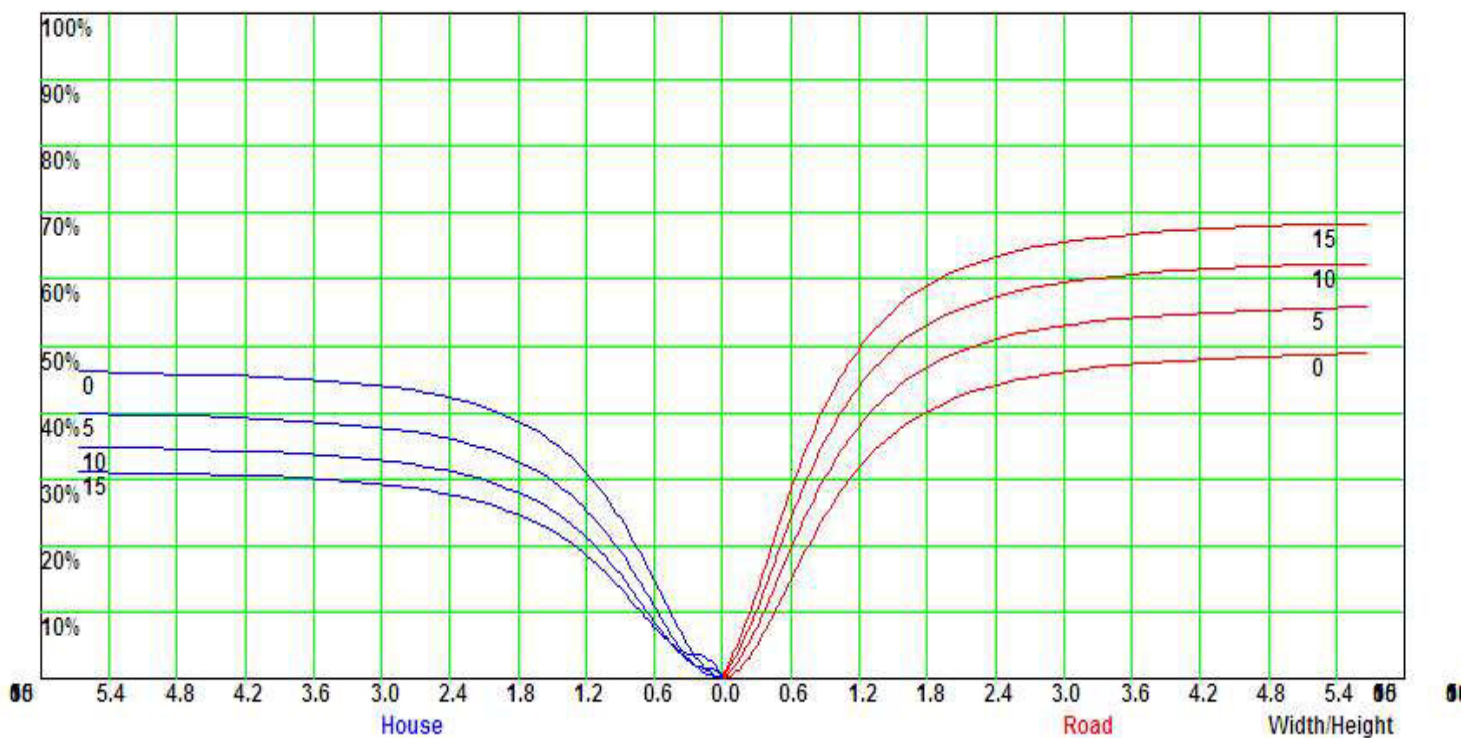
Iso-Candela [cd]



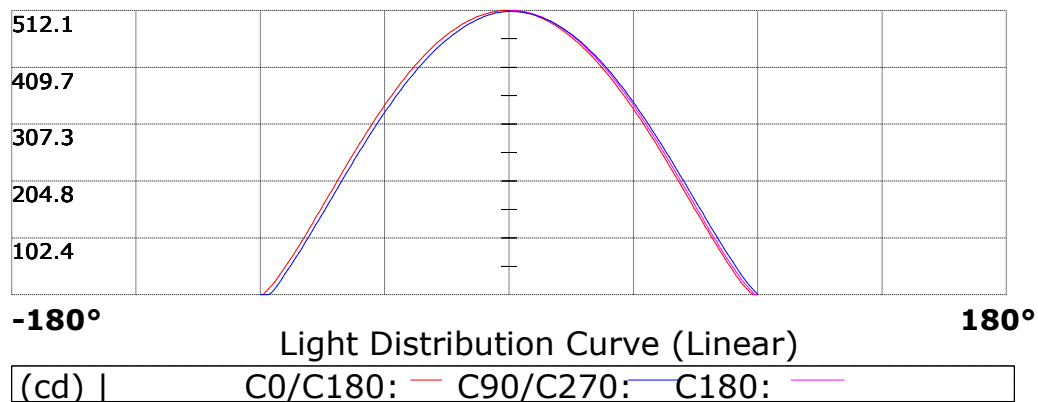
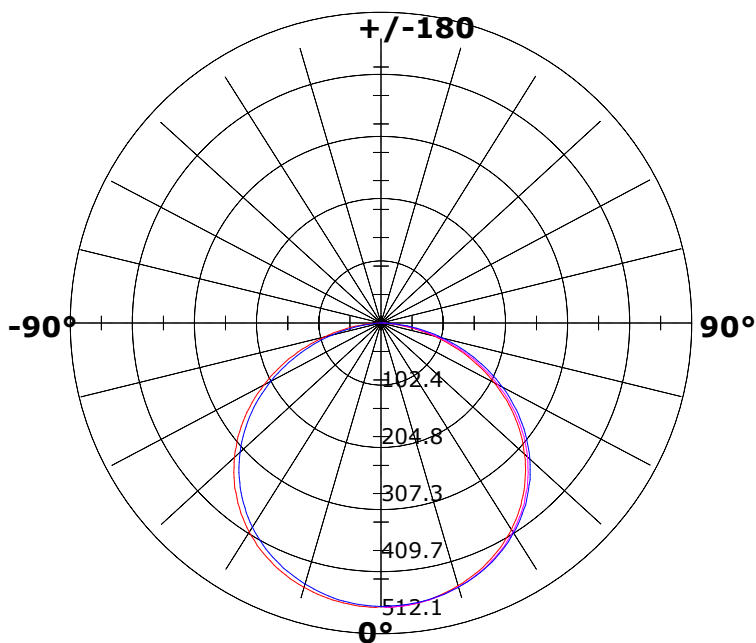
- (10%):-1.809581 cd
- (20%):0 cd
- (30%):0 cd
- (40%):0 cd
- (50%):0 cd
- (60%):0 cd
- (70%):.4900948 cd
- (80%):5.61724 cd
- (90%):10.40509 cd
- (100%):16.17313 cd

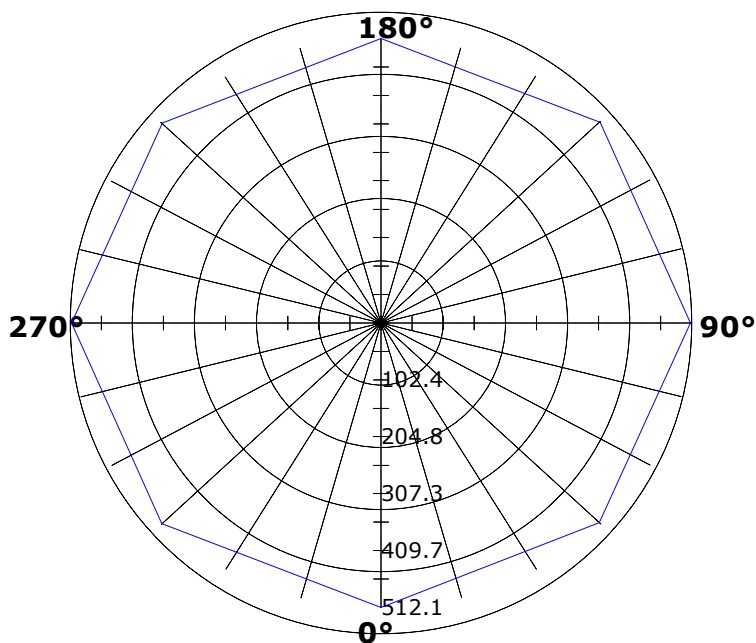


Coefficient Utilization Curve



Light Distribution Curve [Unit: cd]



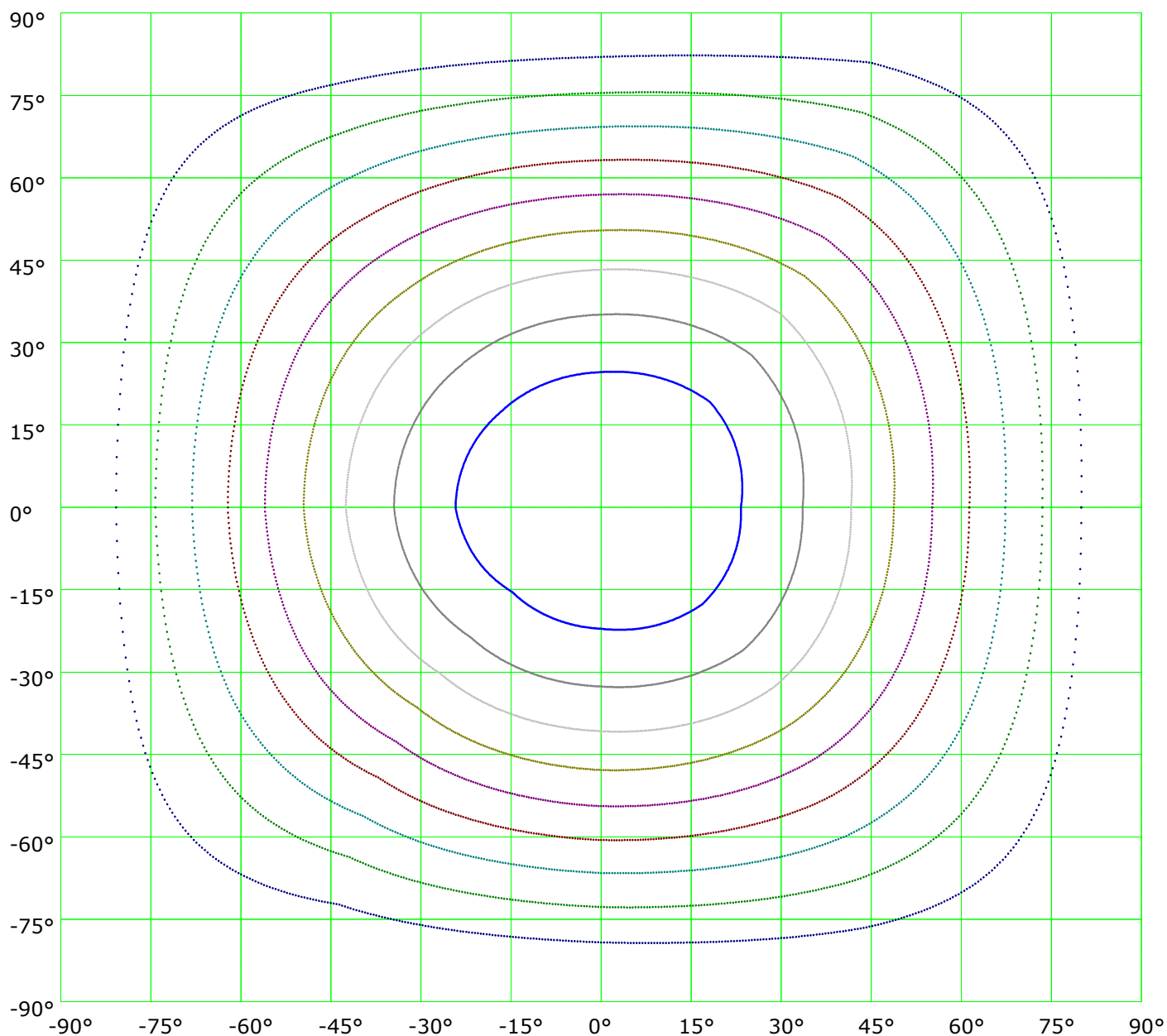


512.1							
409.7							
307.3							
204.8							
102.4							

-180° Light Distribution Curve (Linear) **180°**
 (cd) | ?1: —



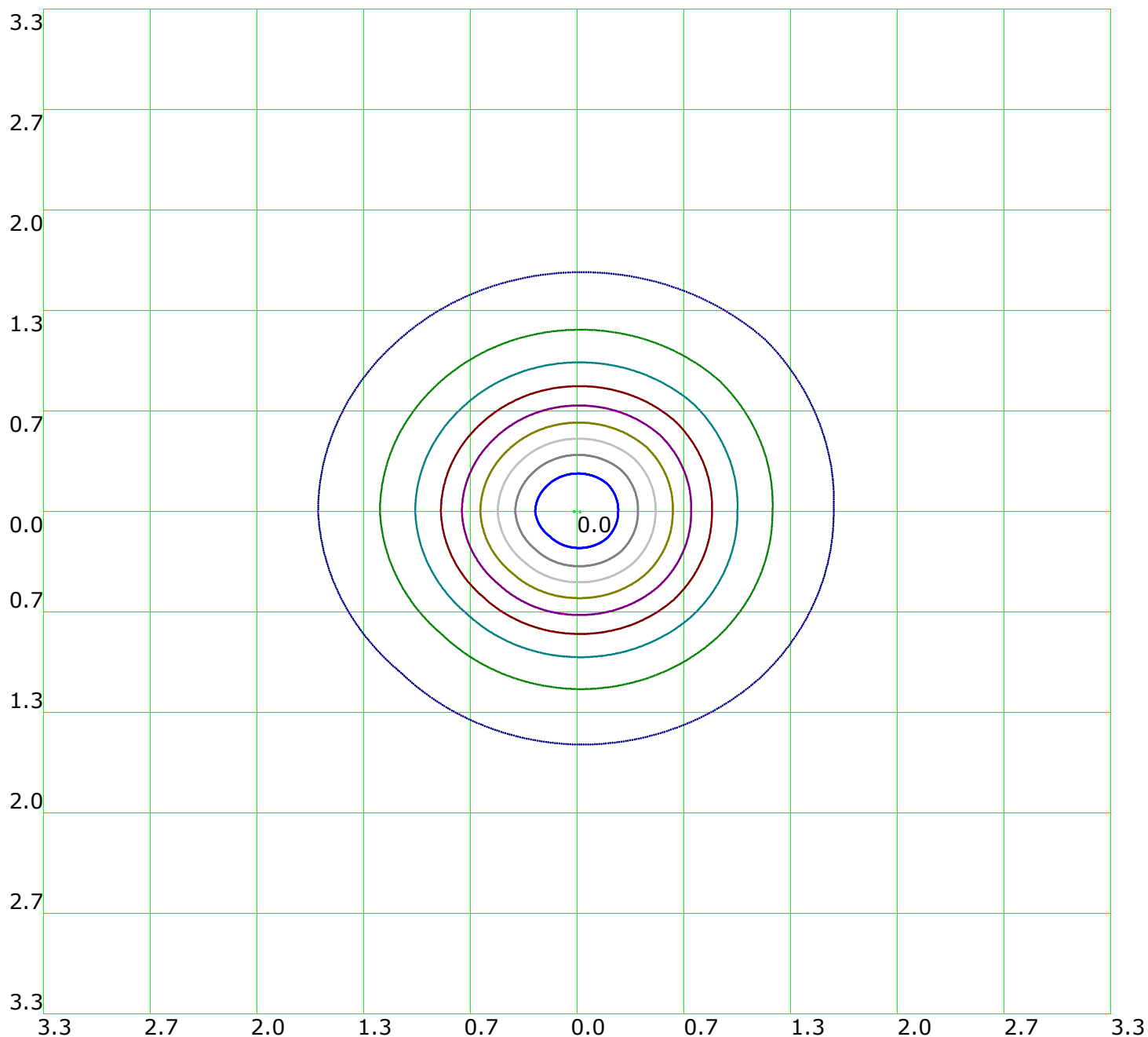
Isocandela(rectangle)



— (10%): 51.2cd	— (20%): 102.4cd	— (30%): 153.6cd	— (40%): 204.8cd
— (50%): 256.cd	— (60%): 307.2cd	— (70%): 358.5cd	— (80%): 409.7cd
— (90%): 460.9cd	— (100%): 512.1cd		



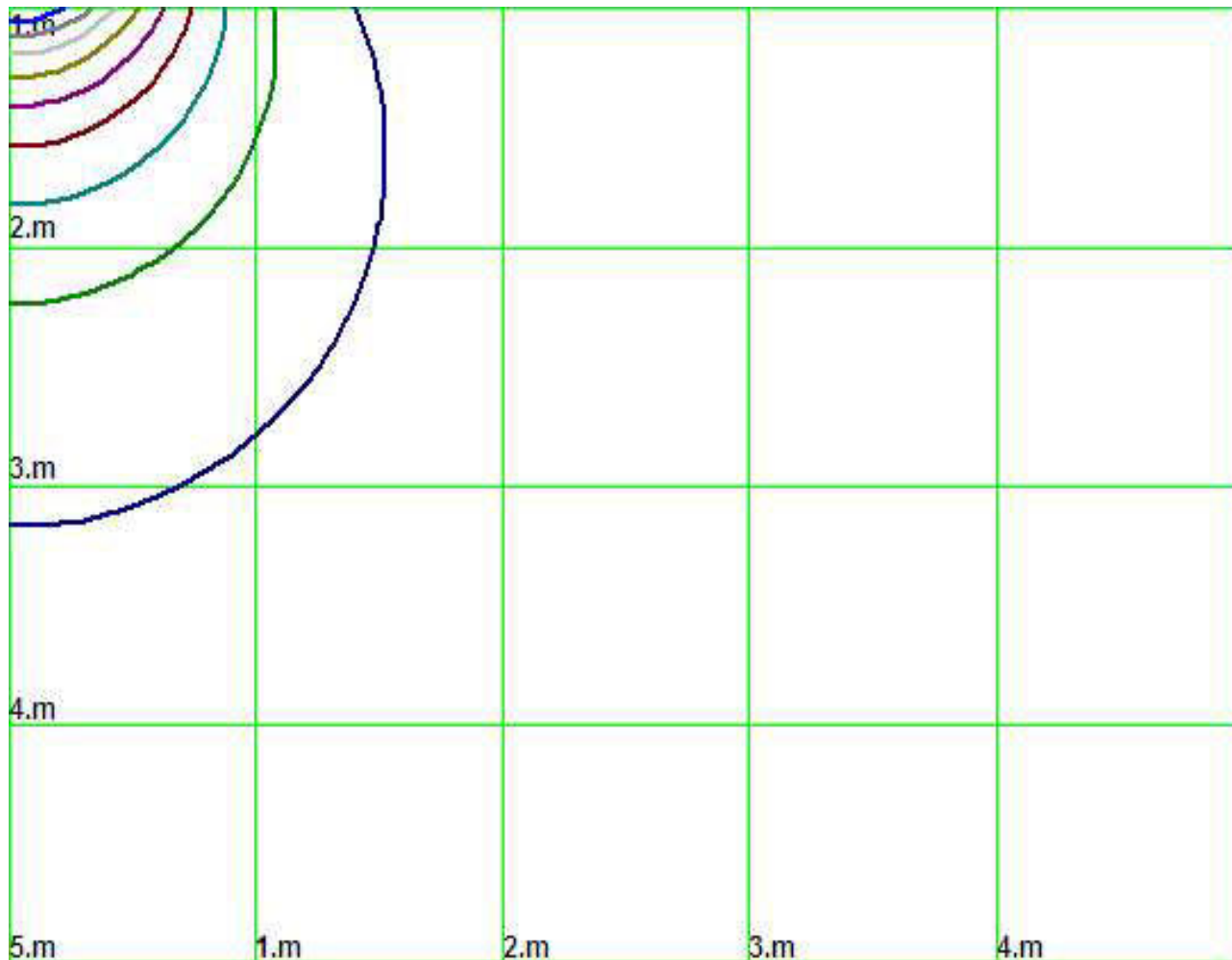
Isolx curve



Height: 1 m

- | | | | |
|------------------|-------------------|------------------|------------------|
| — (10%): 51.2lx | — (20%): 102.4lx | — (30%): 153.6lx | — (40%): 204.8lx |
| — (50%): 256lx | — (60%): 307.2lx | — (70%): 358.5lx | — (80%): 409.7lx |
| — (90%): 460.9lx | — (100%): 511.6lx | | |

Space Isolx Curve



— (10%): 51.2lx	— (20%): 102.4lx	— (30%): 153.6lx	— (40%): 204.8lx
— (50%): 256.lx	— (60%): 307.2lx	— (70%): 358.5lx	— (80%): 409.7lx
— (90%): 460.9lx	— (100%): 511.6lx		



Luminance Limiting Curve

Diameter: 220mm

Length: 220mm

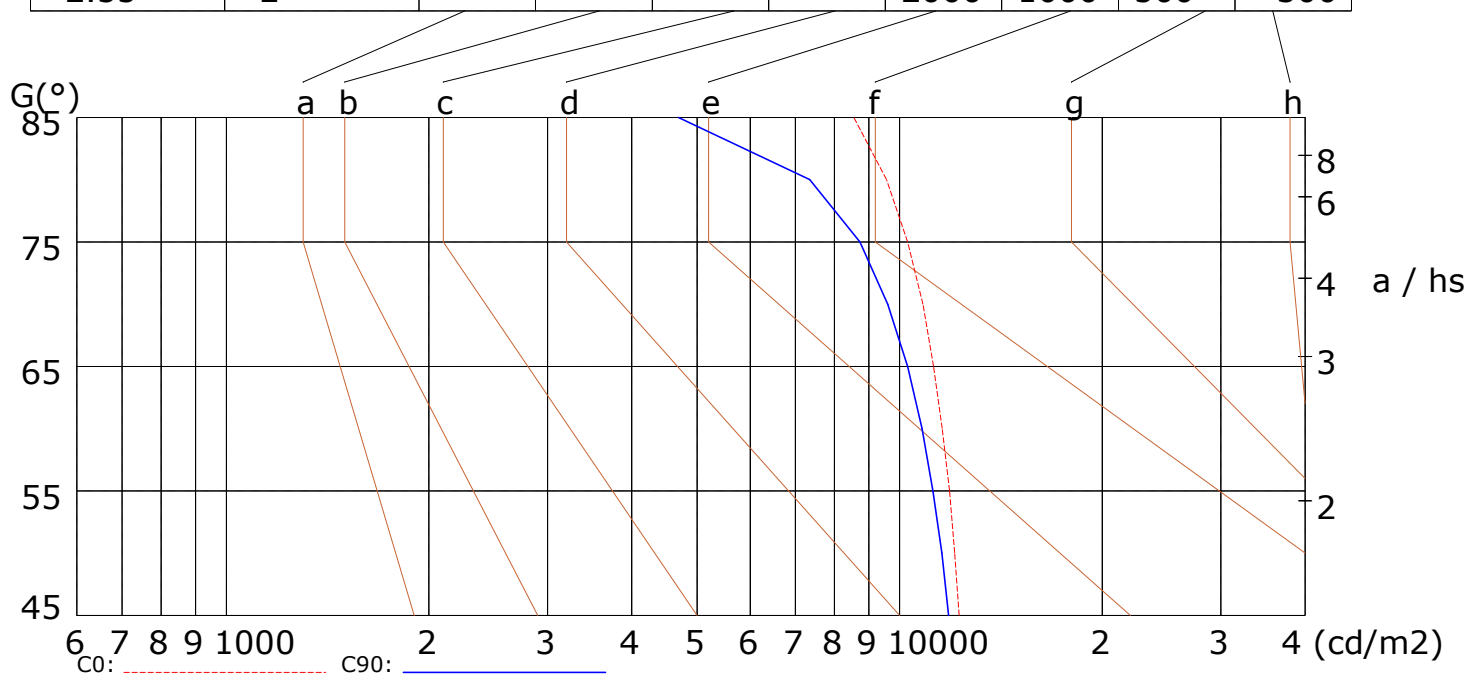
Width: 220mm

Height: 30mm

(cd/m²)

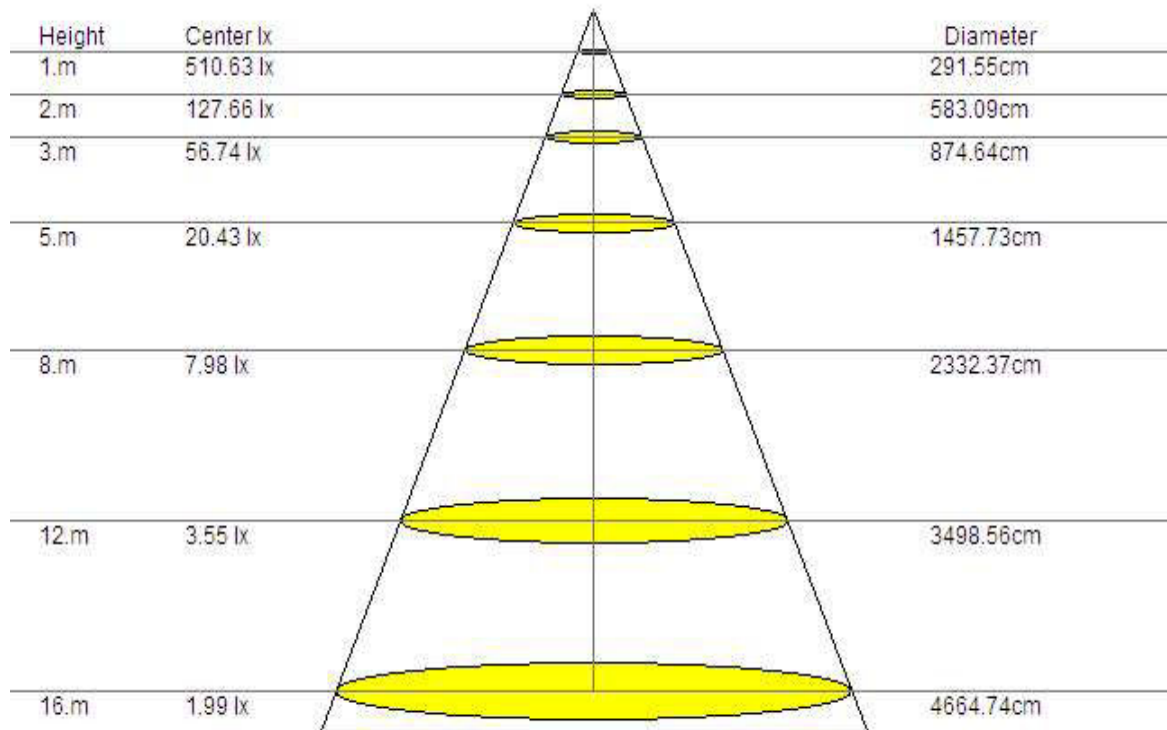
?	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	12256	12073	11862	11559	11222	10838	10280	9558	8554
C90	11819	11554	11207	10792	10272	9609	8725	7354	4693

Glare	Quality	Service Values Illuminance (lx)							
		2000	1000	500	=300				
1.15	A								
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: 111.10°(50%Imax)

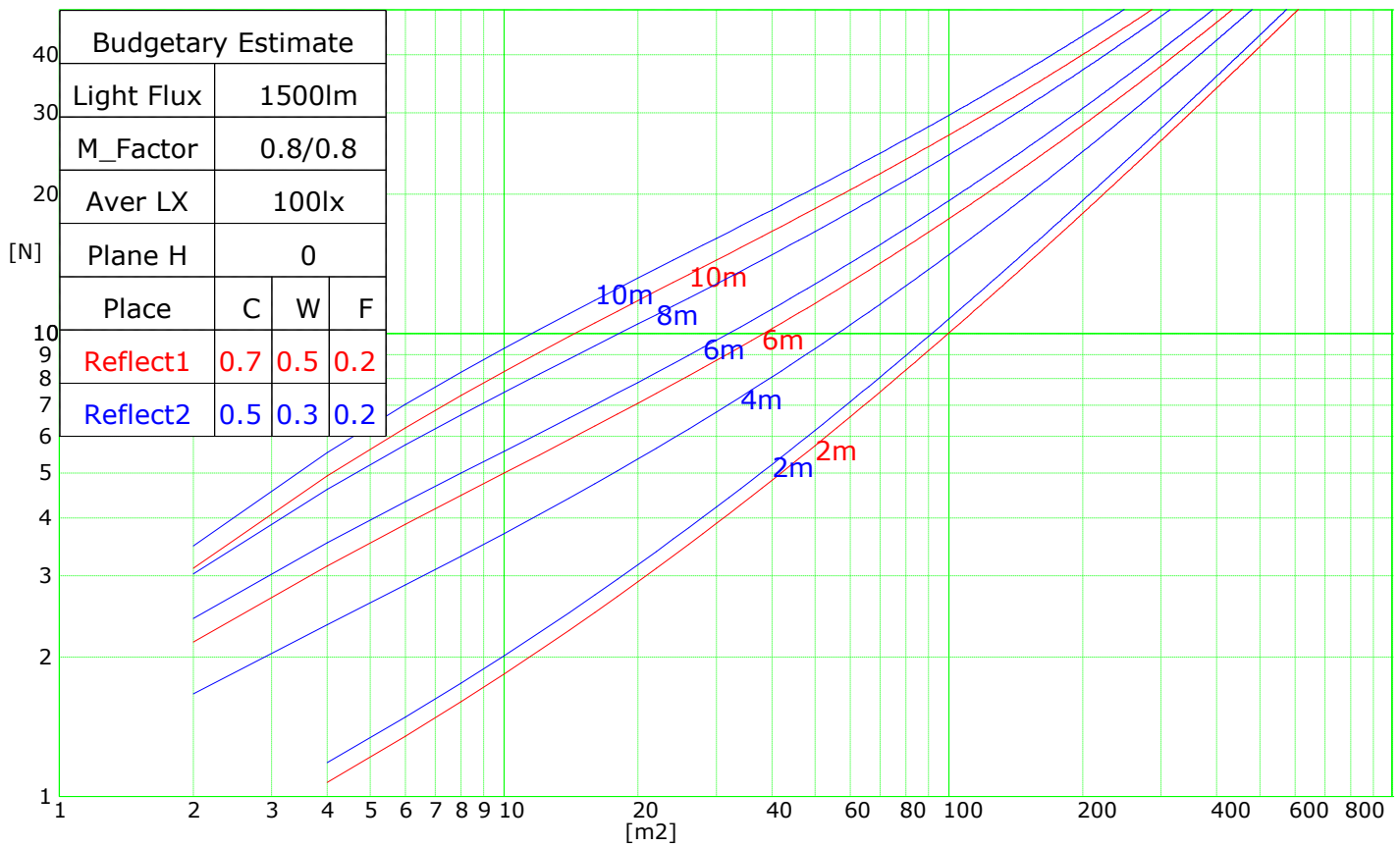


Coefficients of Utilization

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	1.15	1.15	1.15	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.00	0.99	0.97	0.99	0.97	0.96	0.96	0.94	0.92	0.91	0.89	0.87	0.85	0.83	0.81	0.76
2	0.85	0.83	0.81	0.85	0.82	0.79	0.83	0.79	0.76	0.79	0.76	0.72	0.75	0.71	0.67	0.63
3	0.73	0.70	0.68	0.73	0.69	0.67	0.72	0.67	0.64	0.70	0.65	0.61	0.67	0.62	0.57	0.53
4	0.63	0.60	0.58	0.63	0.60	0.57	0.63	0.58	0.55	0.62	0.56	0.52	0.60	0.54	0.49	0.45
5	0.55	0.52	0.50	0.55	0.52	0.49	0.56	0.51	0.47	0.55	0.50	0.45	0.54	0.48	0.43	0.39
6	0.48	0.46	0.44	0.49	0.46	0.43	0.50	0.45	0.41	0.50	0.44	0.40	0.49	0.43	0.38	0.34
7	0.43	0.40	0.39	0.44	0.40	0.38	0.45	0.40	0.37	0.45	0.39	0.35	0.45	0.38	0.33	0.30
8	0.39	0.36	0.35	0.40	0.36	0.34	0.41	0.36	0.33	0.41	0.36	0.31	0.41	0.35	0.30	0.27
9	0.35	0.33	0.31	0.36	0.33	0.31	0.37	0.33	0.29	0.38	0.32	0.28	0.38	0.32	0.27	0.24
10	0.32	0.30	0.28	0.33	0.30	0.28	0.34	0.30	0.27	0.35	0.30	0.26	0.36	0.29	0.25	0.22



Indoor Budgetary Estimate Chart





UGR Glare Index

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 X Y	Weft to light axis direction of observation					Direction of light axis parallel observation					
2H	2H	14.7	16.0	14.9	16.0	16.4	14.6	15.9	14.8	16.1	16.5
	3H	16.3	17.5	16.7	17.8	18.0	16.2	17.4	16.5	17.8	17.9
	4H	17.0	18.0	17.3	18.6	18.8	16.9	17.9	17.2	18.6	18.8
	6H	17.5	18.6	18.0	18.8	19.0	17.4	18.4	17.9	18.9	19.0
	8H	17.9	18.9	18.0	18.9	19.3	17.7	18.7	18.1	19.0	19.3
4H	12H	17.9	18.8	18.2	19.2	19.4	17.8	18.6	18.0	19.2	19.6
	2H	15.8	16.7	15.7	16.9	17.1	15.5	16.5	15.7	16.9	17.1
	3H	17.4	18.3	17.7	18.4	18.9	17.3	18.3	17.7	18.4	18.9
	4H	18.1	19.0	18.5	19.2	19.5	18.1	18.8	18.4	19.2	19.5
	6H	18.8	19.6	19.2	19.8	20.1	18.7	19.5	19.0	19.8	20.1
8H	8H	19.1	19.7	19.5	20.0	20.3	18.9	19.5	19.4	19.9	20.3
	12H	19.2	19.9	19.7	20.0	20.4	19.2	19.7	19.6	20.1	20.4
	4H	18.6	19.1	18.9	19.3	19.9	18.3	19.0	18.7	19.3	19.8
	6H	19.3	19.9	19.8	20.3	20.7	19.2	19.7	19.7	20.2	20.5
	8H	19.7	20.1	20.2	20.5	21.0	19.6	20.0	20.1	20.5	21.0
12H	12H	20.0	20.4	20.5	20.7	21.1	19.8	20.2	20.2	20.8	21.2
	4H	18.6	19.2	18.9	19.5	19.9	18.6	19.0	18.8	19.6	19.8
	6H	19.5	20.1	19.9	20.2	20.7	19.3	19.8	19.7	20.2	20.6
	8H	19.9	20.4	20.4	20.6	21.1	19.7	20.2	20.2	20.7	21.1