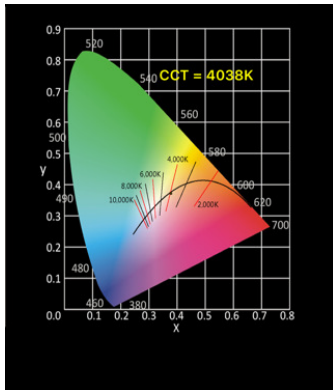
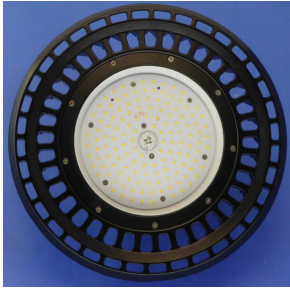
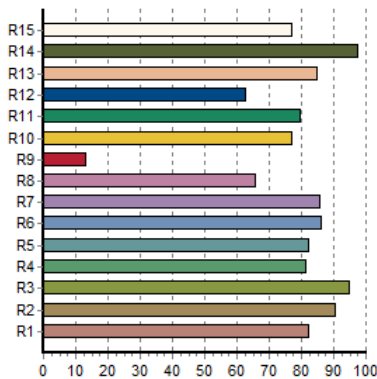


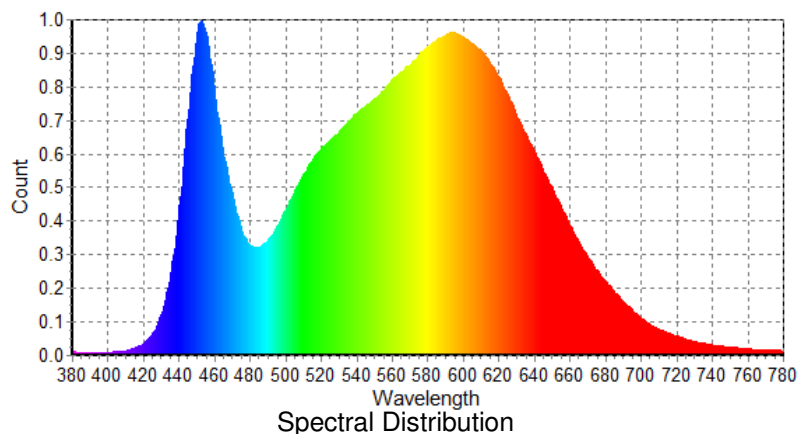
Report of Photometry & Chromaticity for NVC Lighting Ltd. NAC100/840 - AZTEC 100W LED Highbay Luminaire



CIE1931 Chromaticity Diagram



Histogram Diagram of CRI



Spectral Distribution

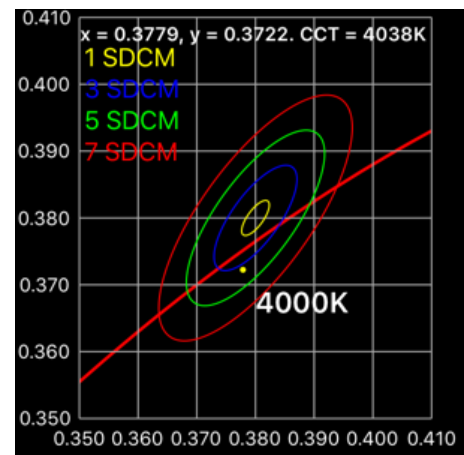
A. Product Description

Product Name	AZTEC 100W LED HIGHBAY	NAC100/840
Date	23-11-2016	
Manufacturer	NVC Lighting Ltd	
Tester	lightlab photometrics	Reviewer KB
Temperature	25degC	Re. Humidity(%) 53
Spectrum Range	380 ~ 780 nm.	Wavelength Step : 1 nm.

C. Photometry and Chromaticity

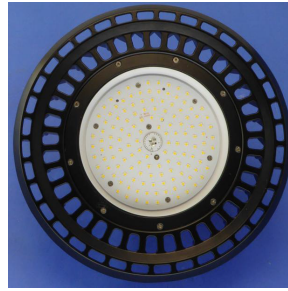
CIE_x	0.3779	D v	-0.0014
CIE_y	0.3722	Ld(nm)	579.7
CIE_u'	0.2252	Purity(%)	25.0
CIE_v'	0.4992	FWHM(nm)	29.0
CCT(K)	4038	SP ratio	1.72
Luminaire lumens	12860	PPFD(umol/sec m^2)	
Lp(nm)	453.0		109.6
TLCl(Qa)	68.69	GAI	74.9

CRI(Ra)		84	Re(thru R1~R15)		78
Qa		82			
 R1	82.8	 R6	86.5	 R11	80.2
 R2	91.0	 R7	85.9	 R12	63.1
 R3	95.3	 R8	65.9	 R13	85.1
 R4	81.8	 R9	13.7	 R14	97.7
 R5	82.5	 R10	77.5	 R15	77.4



IEC SDCM

filename : NAC100-840.LDT
 meas. number : 2104
 luminaire number : NAC100/840
 date / operator : 21-11-2016

**default lamp type(s)**

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	12860 lm	96.6 W

dimensions

luminaire		luminous area	
diameter	: 280 mm	diameter	: 150 mm
height	: 110 mm	height	: 0 mm

coordinate system

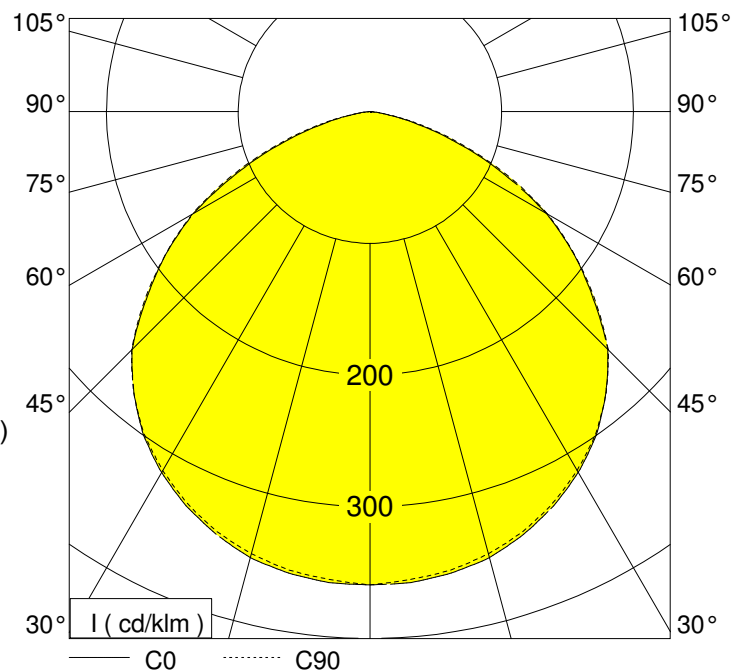
no of planes	: 7	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 90.0 °	last gamma-angle	: 180.0 °
symmetrics	: symmetry to C0 / C90		

performance

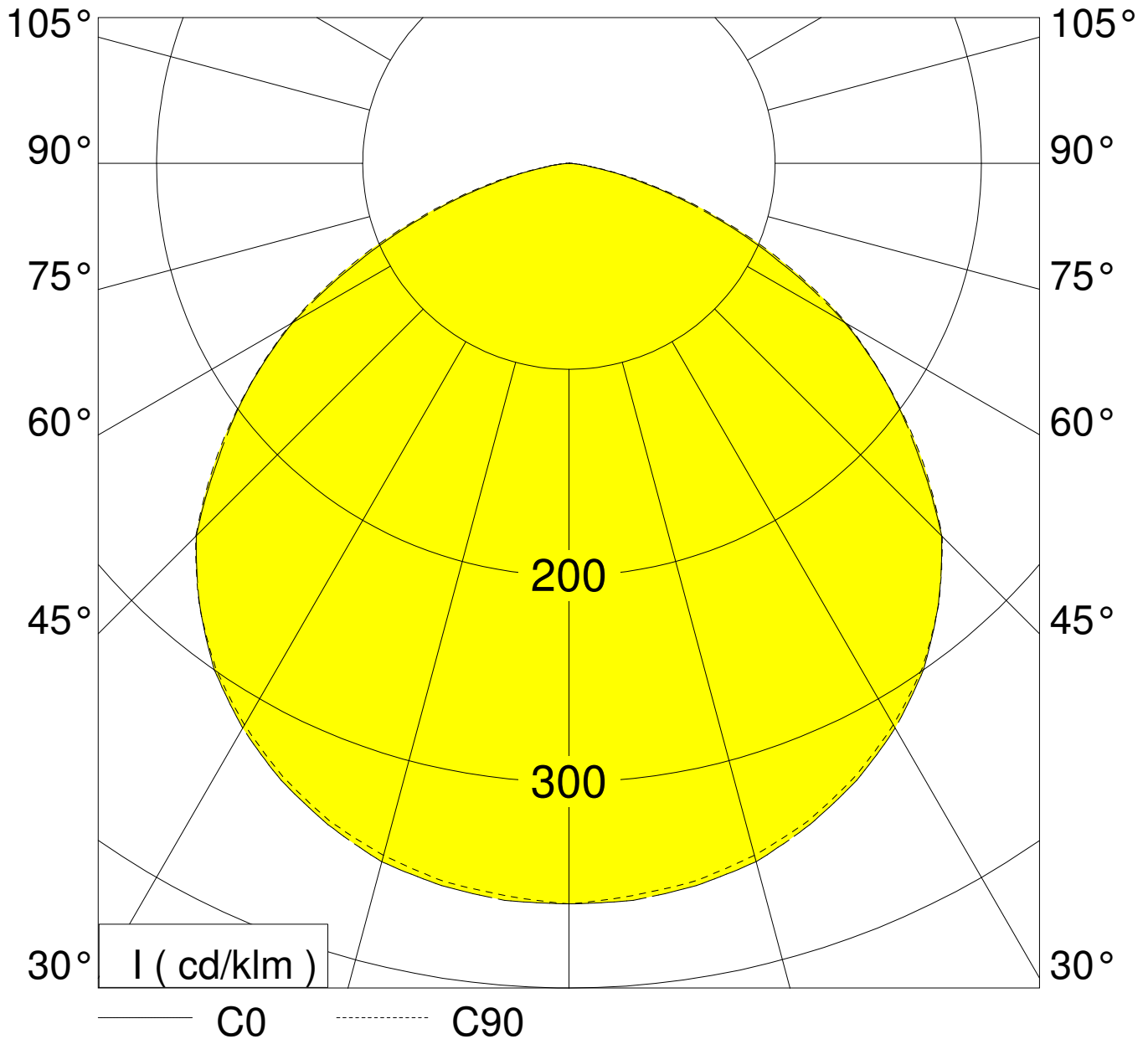
light output ratio	: 100.0 %
DFF	: 100.0 %
UFF	: 0.0 %

classification

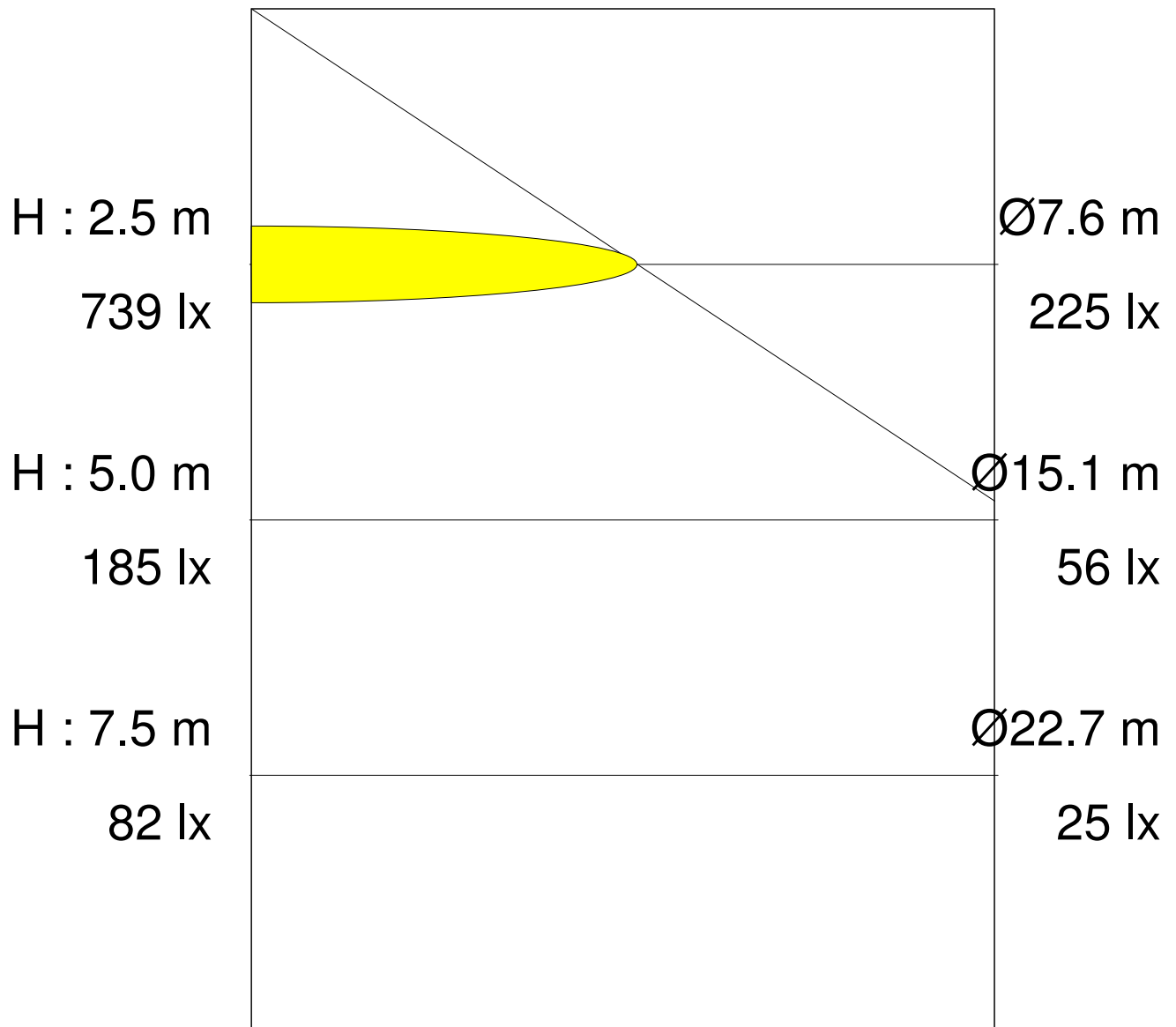
LiTG / DIN	: A40
UTE	: 1.00D1.00E
CIE	: 50 84 98 100 100
BZ	: 3 4 4 4 4 4 3 3 3
Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 96.6W
Amps (running)	: 0.411A
V.A.	: 98.57VA
Power Factor	: 0.98
CCT	: 4038K (measured): 4000K (declared)
CRI (Ra)	: 84
Luminaire Lumens	: 12860 LLm circ.Watt



Measurements made are in absolute units. The luminaire is treated as if it was a lamp as it is not possible to measure each LED separately - hence an LOR of 100%
 The Light output ratio in real terms would be less than 100%. If it was possible to compare real LED lumens with the total output from the luminaire we could obtain an actual LOR
 This also means that the total lumens emitted from the LED's would be greater than the Luminaire Lumens measured. In reality the LED lumens would approximate to this value divided by the actual Light Output.



Half peak divergence : 113.0°



	C 0.0	C 15.0	C 30.0	C 45.0	C 60.0	C 75.0	C 90.0
0.0°	359.10	359.10	359.10	359.10	359.10	359.10	359.10
5.0°	358.70	358.50	358.20	358.00	357.80	357.10	356.40
10.0°	355.60	355.30	355.10	354.90	354.60	354.00	353.30
15.0°	350.60	350.20	349.70	349.30	348.80	348.10	347.40
20.0°	341.30	341.00	340.80	340.50	340.30	339.80	339.30
25.0°	330.10	330.10	330.10	329.60	329.10	328.60	328.10
30.0°	316.30	316.00	315.80	315.70	315.60	315.10	314.50
35.0°	299.70	299.40	299.10	299.00	298.90	298.80	298.70
40.0°	278.70	279.10	279.50	279.30	279.20	279.00	278.90
45.0°	255.50	255.80	256.20	256.30	256.30	256.10	255.90
50.0°	221.50	222.60	223.60	223.80	224.00	223.70	223.50
55.0°	189.40	189.10	188.70	190.20	191.70	190.70	189.70
60.0°	154.60	155.10	155.70	156.40	157.10	156.50	155.90
65.0°	112.20	113.30	114.30	115.10	115.90	116.00	116.20
70.0°	72.90	73.80	74.60	75.60	76.60	76.40	76.20
75.0°	38.20	38.80	39.50	40.50	41.50	41.60	41.80
80.0°	13.00	13.50	13.90	14.40	14.90	14.90	14.90
85.0°	1.80	1.90	2.10	2.20	2.30	2.40	2.40
90.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	cd / klm						

glare rating according to UGR											
ρ -ceiling		70	70	50	50	30	70	70	50	50	30
ρ -walls		50	30	50	30	30	50	30	50	30	30
ρ -workplane		20	20	20	20	20	20	20	20	20	20
room dimensions X Y		viewed crosswise					viewed endwise				
2H	2H	32.0	33.5	32.3	33.7	33.9	32.1	33.5	32.3	33.7	33.9
	3H	32.4	33.4	32.6	33.6	33.8	32.5	33.5	32.7	33.7	33.9
	4H	32.7	33.7	32.9	33.9	34.1	32.8	33.9	33.1	34.1	34.2
	6H	32.8	33.7	33.0	34.0	34.2	32.9	33.9	33.2	34.1	34.4
	8H	32.8	33.8	33.1	34.0	34.3	33.0	33.9	33.3	34.2	34.4
	12H	32.8	33.8	33.1	34.1	34.3	33.0	34.0	33.3	34.2	34.5
4H	2H	32.0	33.0	32.2	33.2	33.4	32.0	33.0	32.3	33.2	33.4
	3H	33.3	34.2	33.6	34.5	34.7	33.4	34.3	33.7	34.6	34.8
	4H	33.7	34.7	34.1	34.9	35.2	33.9	34.8	34.2	35.1	35.4
	6H	33.7	34.4	34.0	34.7	35.0	33.8	34.6	34.2	34.9	35.2
	8H	33.7	34.4	34.1	34.8	35.1	33.9	34.6	34.2	34.9	35.3
	12H	33.9	34.6	34.3	35.0	35.4	34.0	34.7	34.5	35.1	35.5
8H	4H	33.7	34.4	34.1	34.8	35.1	33.8	34.6	34.2	34.9	35.2
	6H	34.1	34.8	34.6	35.2	35.7	34.3	35.0	34.7	35.4	35.8
	8H	34.3	34.9	34.8	35.4	35.8	34.4	35.1	34.9	35.5	36.0
	12H	34.2	34.7	34.7	35.2	35.7	34.4	34.9	34.9	35.4	35.8
12H	4H	33.9	34.6	34.3	35.0	35.4	34.0	34.7	34.4	35.1	35.5
	6H	34.3	34.9	34.7	35.4	35.8	34.4	35.1	34.9	35.5	36.0
	8H	34.2	34.7	34.7	35.2	35.7	34.4	34.9	34.9	35.4	35.9
variation of observer position											
S =	1.0H	+0.2/ -0.2				+0.2/ -0.2					
	1.5H	+0.4/ -0.7				+0.4/ -0.6					
	2.0H	+0.8/ -1.3				+0.8/ -1.2					
standard-table		BK03					BK03				
correction for luminaire		16.4					16.5				
correct glare indices for a total flux of 12860lm											

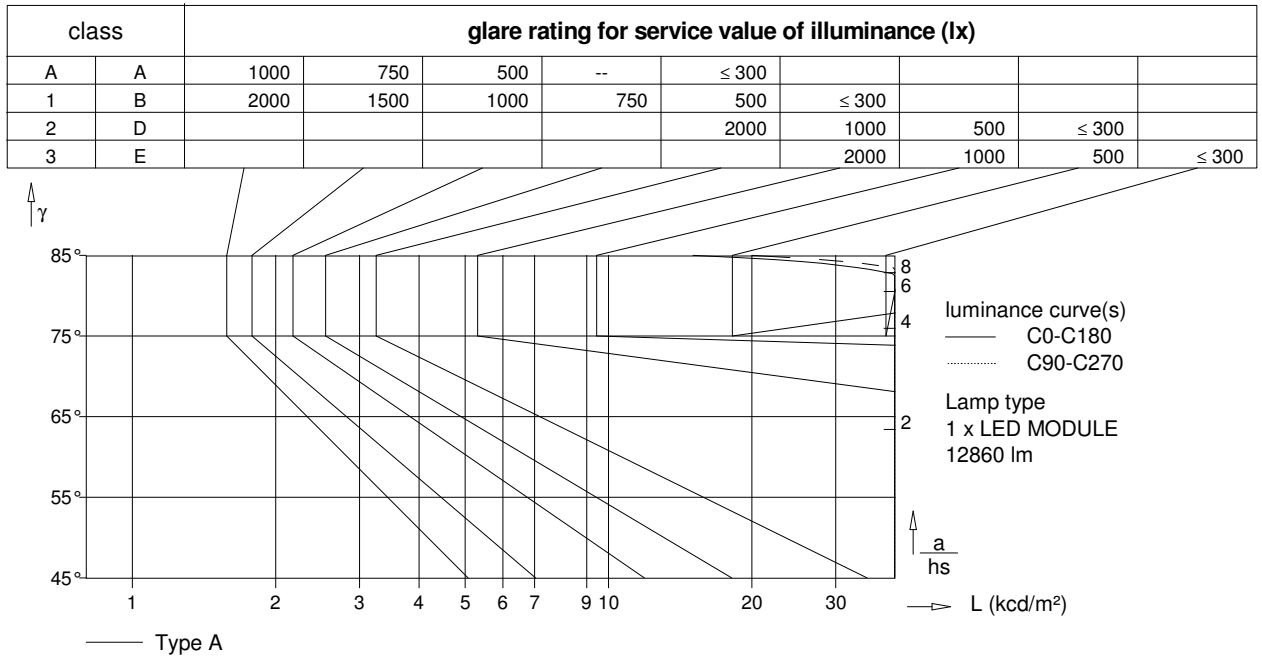


Tabelle der berechneten Leuchtdichten

gamma	C 0	C 90	C 180	C 270
45°	262950.8	263362.4	262950.8	263362.4
50°	250769.5	253033.8	250769.5	253033.8
55°	240301.9	240682.5	240301.9	240682.5
60°	225013.2	226905.3	225013.2	226905.3
65°	193202.7	200090.5	193202.7	200090.5
70°	155111.6	162133.1	155111.6	162133.1
75°	107407.8	117530.0	107407.8	117530.0
80°	54480.6	62443.1	54480.6	62443.1
85°	15029.5	20039.4	15029.5	20039.4

alle Werte in cd/m²

utilization factors / TM5											
reflection			room index								
C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
70	50	20	62	71	78	83	90	95	98	102	105
70	30	20	55	63	71	77	85	90	94	99	102
70	10	20	50	58	66	72	80	86	90	96	99
50	50	20	60	69	76	81	87	92	95	99	101
50	30	20	54	62	70	75	83	88	91	95	98
50	10	20	49	57	65	71	79	84	88	93	96
30	50	20	59	67	74	78	85	89	91	95	97
30	30	20	53	61	69	74	81	85	88	92	95
30	10	20	49	57	65	70	77	82	86	90	93
0	0	0	47	55	62	67	74	78	82	86	89
BZ-class			3	4	4	4	4	4	3	3	3
SHRnom : 1.50						SHRmax : 1.653					

