

filename : 24V-RD-TS-V2-21.LDT
 meas. number : 3141
 luminaire number : 24V-RD-TS-V2-21
 date / operator : 27-03-2020



default lamp type(s)

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	3350 lm	35.2 W

dimensions

luminaire		luminous area	
length	: 1520 mm	length	: 1460 mm
width	: 35 mm	width	: 30 mm
height	: 35 mm	height	: 30 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		

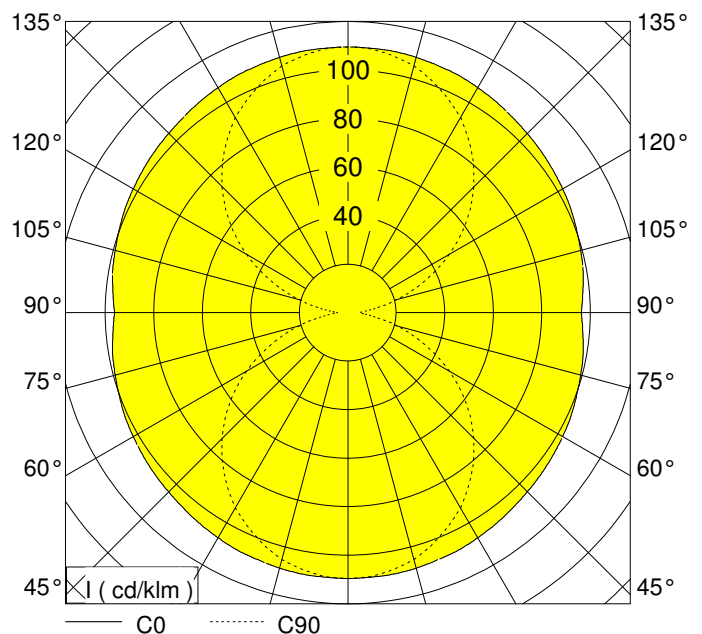
performance

light output ratio	: 100.0 %
DFF	: 50.0 %
UFF	: 50.0 %

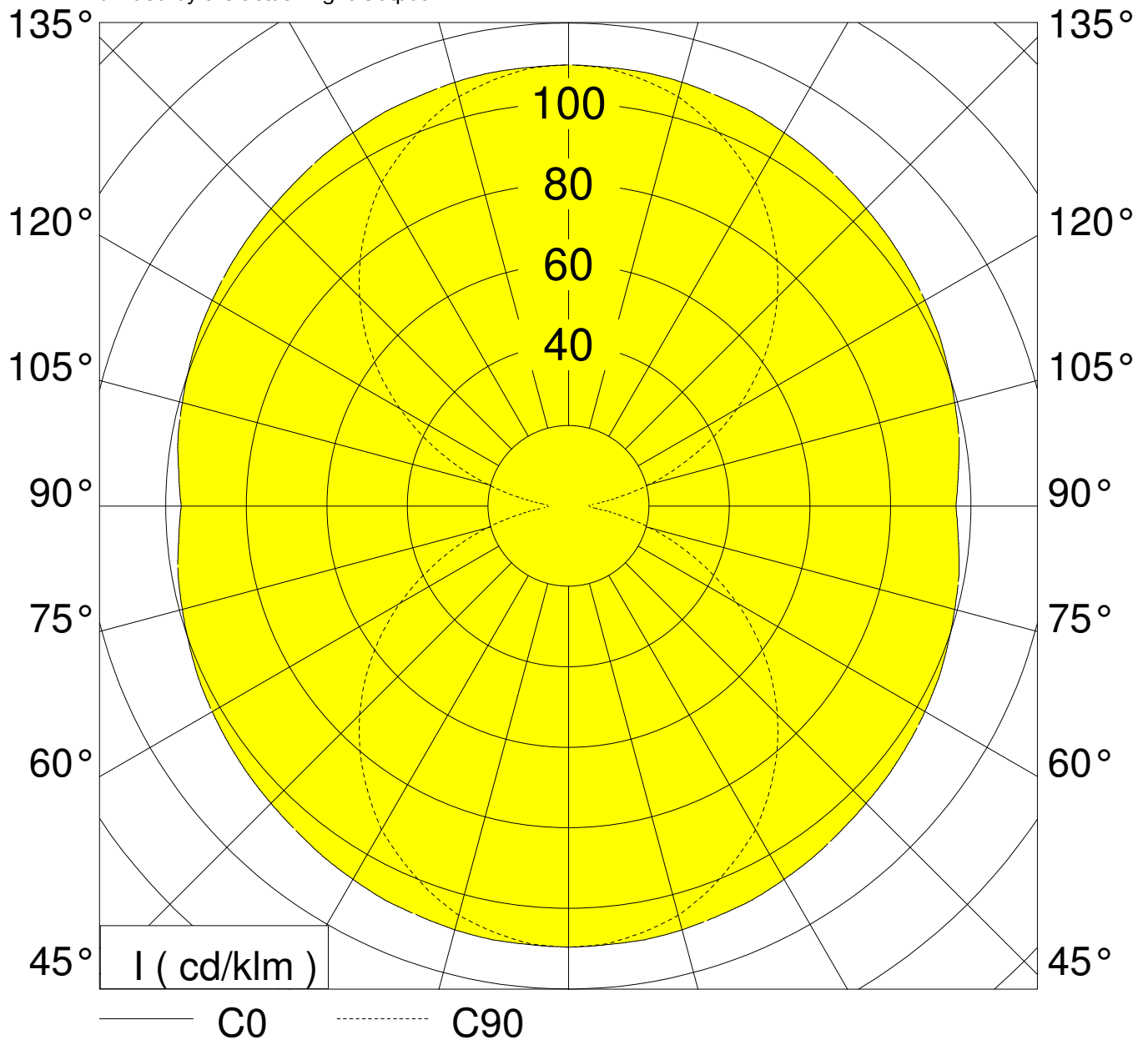
classification

LiTG / DIN	: C22
UTE	: 0.50H+0.50T
CIE	: 32 58 81 50 100
BZ	: 1 6 6 6 6 6 6 6 6

Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 35.2W
Amps (running)	: 0.150A
V.A.	: 35.92VA
Power Factor	: 0.98
CCT	: 4134K (measured); 4100K (declared)
CRI (Ra)	: 92
S/P Ratio	: 1.9
Luminaire Lumens	: 3350 LLm
Output Current DC	: 1340mA
Output Voltage DC	: 23V
Output Power	: 30.82W
Luminaire Lm/circ.Watt	: 95 LLm/circ.Watt
Driver Efficiency	: 88%
Driver Details	: HELVAR LL1X30-E-CV24o



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.



	C 0.0	C 15.0	C 30.0	C 45.0	C 60.0	C 75.0	C 90.0
0.0°	109.50	109.50	109.50	109.50	109.50	109.50	109.50
5.0°	109.30	109.40	109.50	109.30	109.10	109.10	109.10
10.0°	109.30	109.30	109.30	108.80	108.30	107.90	107.40
15.0°	108.90	108.70	108.50	107.50	106.40	105.80	105.20
20.0°	108.30	107.90	107.50	105.80	104.20	102.90	101.60
25.0°	107.90	107.00	106.20	103.60	100.90	99.10	97.30
30.0°	107.00	105.80	104.60	100.70	96.80	94.80	92.80
35.0°	106.20	104.40	102.50	97.60	92.80	89.80	86.80
40.0°	105.20	102.80	100.50	94.20	88.10	84.30	80.40
45.0°	104.40	101.30	98.20	90.80	83.20	78.20	73.30
50.0°	103.70	99.80	96.00	86.90	77.70	71.70	65.60
55.0°	102.90	98.30	93.80	83.00	72.30	64.70	57.20
60.0°	102.10	96.90	91.70	79.10	66.50	57.50	48.30
65.0°	101.30	94.30	87.40	74.40	61.20	50.10	38.90
70.0°	100.20	93.10	85.80	71.10	56.40	42.90	29.60
75.0°	99.20	91.80	84.30	68.10	51.90	36.30	20.80
80.0°	98.40	90.70	82.90	65.60	48.20	30.40	12.50
85.0°	97.10	90.10	82.90	64.20	45.50	26.00	6.60
90.0°	96.10	88.90	81.70	62.70	43.70	24.10	4.30
95.0°	97.10	90.10	82.90	64.20	45.50	26.00	6.60
100.0°	98.40	90.70	82.90	65.60	48.20	30.40	12.50
105.0°	99.20	91.80	84.30	68.10	51.90	36.30	20.80
110.0°	100.20	93.10	85.80	71.10	56.40	42.90	29.60
115.0°	101.30	94.30	87.40	74.40	61.20	50.10	38.90
120.0°	102.10	96.90	91.70	79.10	66.50	57.50	48.30
125.0°	102.90	98.30	93.80	83.00	72.30	64.70	57.20
130.0°	103.70	99.80	96.00	86.90	77.70	71.70	65.60
135.0°	104.40	101.30	98.20	90.80	83.20	78.20	73.30
140.0°	105.20	102.80	100.50	94.20	88.10	84.30	80.40
145.0°	106.20	104.40	102.50	97.60	92.80	89.80	86.80
150.0°	107.00	105.80	104.60	100.70	96.80	94.80	92.80
155.0°	107.90	107.00	106.20	103.60	100.90	99.10	97.30
160.0°	108.30	107.90	107.50	105.80	104.20	102.90	101.60
165.0°	108.90	108.70	108.50	107.50	106.40	105.80	105.20
170.0°	109.30	109.30	109.30	108.80	108.30	107.90	107.40
175.0°	109.30	109.40	109.50	109.30	109.10	109.10	109.10
180.0°	109.50	109.50	109.50	109.50	109.50	109.50	109.50
	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	16.0	17.1	16.9	17.9	19.0	14.9	15.9	15.8	16.8	17.9
	3H	19.1	20.2	20.2	21.5	23.2	17.1	18.3	18.2	19.5	21.3
	4H	20.4	21.5	21.6	22.8	24.7	17.8	18.9	19.0	20.2	22.1
	6H	21.7	22.8	23.0	24.1	26.2	18.3	19.4	19.6	20.7	22.8
	8H	22.4	23.5	23.7	24.9	27.0	18.6	19.6	19.8	21.0	23.2
	12H	23.2	24.2	24.4	25.6	27.8	18.8	19.8	20.1	21.2	23.5
4H	2H	17.2	18.3	18.4	19.6	21.6	16.4	17.5	17.5	18.8	20.7
	3H	20.0	21.1	21.3	22.5	24.7	18.4	19.4	19.6	20.8	23.0
	4H	21.6	22.6	23.0	24.1	26.6	19.3	20.3	20.7	21.8	24.3
	6H	23.0	23.8	24.3	25.3	27.7	19.9	20.8	21.3	22.2	24.6
	8H	23.8	24.5	25.2	26.1	28.6	20.2	21.0	21.6	22.6	25.1
	12H	24.6	25.4	26.1	27.0	30.0	20.6	21.3	22.1	23.0	26.0
8H	4H	21.8	22.6	23.2	24.1	26.7	20.0	20.7	21.4	22.3	24.8
	6H	23.8	24.5	25.4	26.2	29.4	21.2	21.9	22.8	23.7	26.8
	8H	24.8	25.5	26.5	27.3	30.8	21.8	22.5	23.4	24.3	27.8
	12H	25.7	26.3	27.4	28.1	31.5	22.1	22.7	23.8	24.5	27.9
12H	4H	22.0	22.7	23.5	24.4	27.3	20.3	21.0	21.8	22.7	25.6
	6H	24.0	24.7	25.6	26.5	30.0	21.7	22.4	23.3	24.2	27.7
	8H	25.0	25.5	26.6	27.3	30.7	22.2	22.8	23.8	24.6	28.0
variation of observer position											
S =	1.0H	+0.1/ -0.1				+0.1/ -0.1					
	1.5H	+0.2/ -0.2				+0.2/ -0.2					
	2.0H	+0.2/ -0.2				+0.2/ -0.4					
standard-table		BK11					BK08				
correction for luminaire		9.0					4.8				
correct glare indices for a total flux of 3350lm											

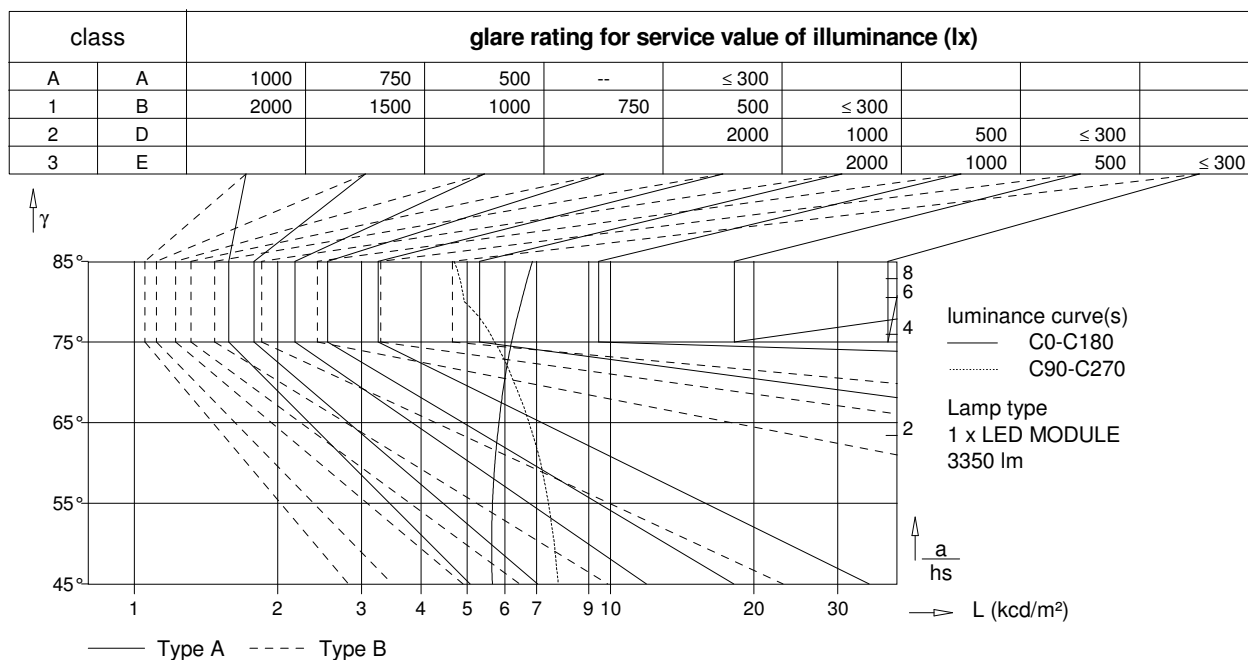


Table of intensities

gamma	C 0	C 90	C 180	C 270
45°	5646.2	7768.8	5646.2	7768.8
50°	5629.8	7619.0	5629.8	7619.0
55°	5650.9	7409.9	5650.9	7409.9
60°	5716.6	7134.4	5716.6	7134.4
65°	5830.1	6742.9	5830.1	6742.9
70°	5979.3	6265.6	5979.3	6265.6
75°	6194.9	5708.9	6194.9	5708.9
80°	6496.6	4931.0	6496.6	4931.0
85°	6855.2	4690.3	6855.2	4690.3

all values 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	N/A	50	56	61	67	72	75	80	83
70	30	20	N/A	42	49	53	61	66	70	75	78
70	10	20	N/A	37	43	48	55	61	65	71	75
50	50	20	N/A	42	47	51	57	60	63	67	69
50	30	20	N/A	36	42	46	52	56	59	63	66
50	10	20	N/A	32	37	41	47	52	55	60	63
30	50	20	N/A	35	39	42	47	50	52	55	57
30	30	20	N/A	31	35	38	43	46	49	52	55
30	10	20	N/A	27	31	35	40	43	46	50	53
0	0	0	N/A	19	22	24	28	30	32	35	37
BZ-class			1	6	6	6	6	6	6	6	6
SHRnom : 1.75						SHRmax : 1.863					

