

filename : 24V-RD-TS-V2-7.LDT
 meas. number : 3139
 luminaire number : 24V-RD-TS-V2-7
 date / operator : 23-03-2020



default lamp type(s)

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	1026 lm	13.5 W

dimensions

luminaire		luminous area	
length	: 520 mm	length	: 460 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		

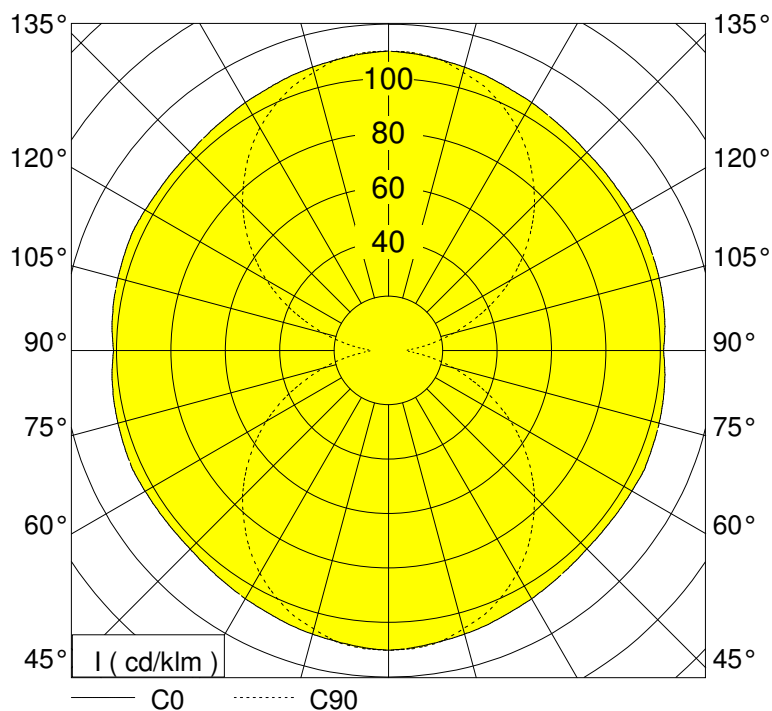
performance

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

classification

LiTG / DIN	: C22
UTE	: 0.50H+0.50T
CIE	: 31 58 80 50 100
BZ	: 1 6 6 6 6 6 7 7 7

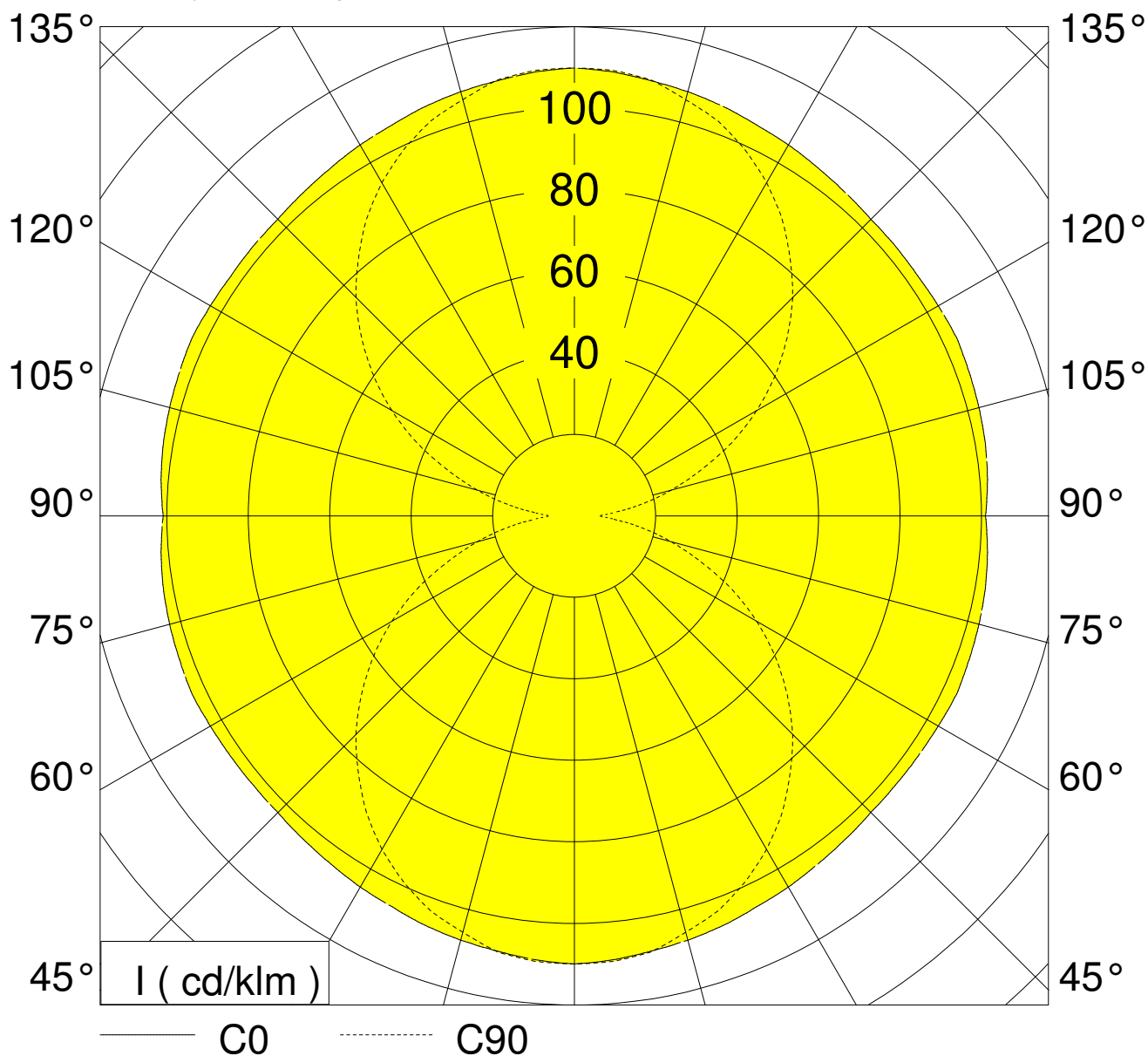
Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 13.5W
Amps (running)	: 0.061A
V.A.	: 14.67VA
Power Factor	: 0.92
CCT	: 4172K (measured): 4200K (declared)
CRI (Ra)	: 92
S/P Ratio	: 1.9
Luminaire Lumens	: 1026LLm
Output Current DC	: 450mA
Output Voltage DC	: 23.5V
Output Power	: 10.58W
Luminaire Lm/circ.Watt	: 76 LLm/circ.Watt
Driver Efficiency	: 78%
Driver Details	: HELVER LL1X30-E-CV240



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°	109.90	109.90	109.90	109.90	109.90	109.90	109.90
5.0°	109.30	109.20	109.10	109.10	109.10	109.40	109.70
10.0°	108.40	108.30	108.20	108.00	107.70	108.10	108.60
15.0°	107.70	107.20	106.80	106.10	105.50	105.60	105.70
20.0°	106.90	105.90	105.00	103.80	102.60	102.90	103.10
25.0°	105.80	104.50	103.10	101.20	99.20	99.20	99.10
30.0°	105.10	102.90	100.80	98.00	95.20	94.80	94.40
35.0°	104.20	101.70	99.10	95.00	90.90	89.90	88.90
40.0°	103.50	100.20	97.00	91.50	86.00	84.20	82.40
45.0°	102.90	98.90	95.00	87.80	80.60	78.20	75.80
50.0°	102.80	97.80	92.80	84.10	75.30	71.80	68.20
55.0°	102.90	97.10	91.30	80.50	69.70	65.00	60.20
60.0°	103.10	96.70	90.20	77.00	63.80	57.70	51.70
65.0°	103.50	96.40	89.30	76.30	63.20	53.00	42.70
70.0°	103.10	95.70	88.20	71.10	54.00	43.60	33.10
75.0°	102.80	94.90	87.00	68.70	50.40	37.60	24.70
80.0°	102.40	94.20	86.10	66.40	46.80	31.80	16.70
85.0°	101.80	93.50	85.20	64.60	44.10	27.00	9.80
90.0°	100.90	92.40	83.90	63.20	42.50	24.00	5.60
95.0°	101.80	93.50	85.20	64.60	44.10	27.00	9.80
100.0°	102.40	94.20	86.10	66.40	46.80	31.80	16.70
105.0°	102.80	94.90	87.00	68.70	50.40	37.60	24.70
110.0°	103.10	95.70	88.20	71.10	54.00	43.60	33.10
115.0°	103.50	96.40	89.30	76.30	63.20	53.00	42.70
120.0°	103.10	96.70	90.20	77.00	63.80	57.70	51.70
125.0°	102.80	97.00	91.30	80.50	69.70	65.00	60.20
130.0°	102.90	97.90	92.80	84.10	75.30	71.80	68.20
135.0°	102.90	98.90	95.00	87.80	80.60	78.20	75.80
140.0°	103.50	100.20	97.00	91.50	86.00	84.20	82.40
145.0°	104.20	101.70	99.10	95.00	90.90	89.90	88.90
150.0°	105.10	102.90	100.80	98.00	95.20	94.80	94.40
155.0°	105.80	104.50	103.10	101.20	99.20	99.20	99.10
160.0°	106.90	105.90	105.00	103.80	102.60	102.90	103.10
165.0°	107.70	107.20	106.80	106.10	105.50	105.60	105.70
170.0°	108.40	108.30	108.20	108.00	107.70	108.10	108.60
175.0°	109.30	109.20	109.10	109.10	109.10	109.40	109.70
180.0°	109.90	109.90	109.90	109.90	109.90	109.90	109.90
	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	15.8	16.9	16.7	17.8	18.9	14.7	15.7	15.5	16.6	17.7
	3H	18.1	19.0	18.9	19.8	20.8	16.1	16.9	16.9	17.7	18.7
	4H	19.4	20.2	20.3	21.1	22.1	16.8	17.6	17.6	18.4	19.4
	6H	20.7	21.5	21.6	22.3	23.4	17.3	18.0	18.1	18.9	19.9
	8H	21.4	22.2	22.3	23.0	24.1	17.5	18.3	18.4	19.1	20.2
	12H	22.1	22.9	23.0	23.7	24.8	17.8	18.5	18.6	19.3	20.4
4H	2H	16.1	16.9	16.9	17.7	18.7	15.2	16.0	16.0	16.8	17.9
	3H	18.9	19.6	19.7	20.4	21.5	17.1	17.8	17.9	18.6	19.7
	4H	20.4	21.1	21.3	22.0	23.1	18.0	18.7	18.9	19.5	20.7
	6H	21.8	22.4	22.7	23.3	24.4	18.6	19.2	19.5	20.1	21.2
	8H	22.6	23.1	23.5	24.0	25.1	18.9	19.4	19.8	20.3	21.5
	12H	23.3	23.8	24.3	24.8	25.9	19.2	19.7	20.1	20.6	21.8
8H	4H	20.5	21.1	21.4	22.0	23.1	18.5	19.1	19.4	20.0	21.1
	6H	22.4	22.9	23.3	23.8	25.0	19.6	20.1	20.6	21.0	22.2
	8H	23.4	23.8	24.3	24.8	26.0	20.1	20.6	21.1	21.5	22.8
	12H	24.3	24.6	25.2	25.6	26.8	20.5	20.8	21.5	21.8	23.0
12H	4H	20.5	21.0	21.5	22.0	23.2	18.7	19.2	19.7	20.2	21.3
	6H	22.5	23.0	23.5	23.9	25.1	20.0	20.4	21.0	21.4	22.6
	8H	23.5	23.8	24.4	24.8	26.0	20.5	20.9	21.5	21.8	23.1
variation of observer position											
S =	1.0H	+0.1/		-0.1		+0.1/		-0.1			
	1.5H	+0.2/		-0.2		+0.1/		-0.2			
	2.0H	+0.2/		-0.2		+0.2/		-0.4			
standard-table	BK12					BK08					
correction for luminaire	9.4					4.8					
correct glare indices for a total flux of 1026lm											

utilization factors / DIN									
ρ -ceiling		80	80	80	70	50	50	30	0
ρ -walls		80	50	30	50	50	30	30	0
ρ -workplane		30	30	10	20	10	10	10	0
k	0.6	50	25	18	24	22	16	15	9
	0.8	60	33	24	31	28	22	20	13
	1.0	67	40	30	37	33	26	24	16
	1.25	75	48	36	44	38	31	28	19
	1.5	80	54	42	49	42	36	32	22
	2.0	87	63	49	57	48	42	37	25
	2.5	92	70	56	62	52	46	41	28
	3.0	96	76	61	67	56	50	44	31
	4.0	101	83	67	72	60	55	48	33
	5.0	104	88	71	76	63	58	50	36
luminaires suspended									

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	60	67	72	75	80	83
70	30	20	N/A	42	48	53	60	66	69	75	78
70	10	20	N/A	36	43	48	55	60	64	70	75
50	50	20	N/A	42	47	51	56	60	63	67	69
50	30	20	N/A	36	41	45	51	55	59	63	66
50	10	20	N/A	32	37	41	47	51	55	60	63
30	50	20	N/A	35	39	42	46	49	52	55	57
30	30	20	N/A	30	35	38	43	46	48	52	55
30	10	20	N/A	27	31	34	39	43	46	50	52
0	0	0	N/A	19	22	24	27	30	32	35	37
BZ-class			1	6	6	6	6	6	7	7	7
SHRnom : 1.75						SHRmax : 1.841					

