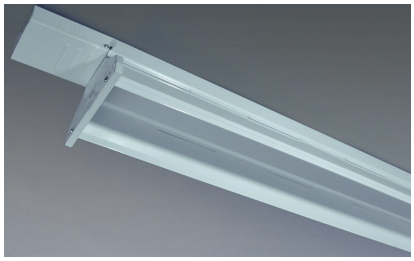
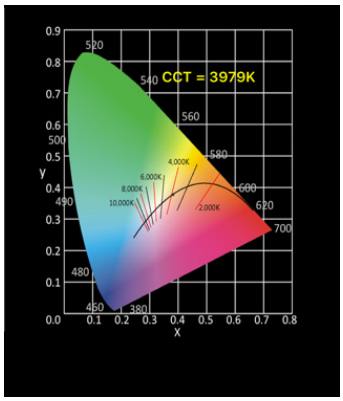
Tested by LightLab Photometrics Ltd.

Report of Photometry & Chromaticity for NVC Lighting Ltd.
NTM50/840(70DEG) - TEMPE 52W TRUNKING BATTEN POSITION 3



A. Product Description

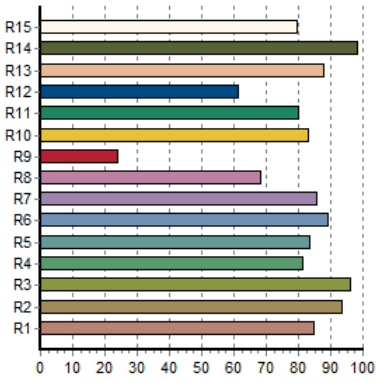
Product Name	TEMPE	Sample Number	NTM50/840(70DEG)
Date	31-05-2017		
Manufacturer	NVC Lighting Ltd.		
Tester	lightlab photometrics	Reviewer	KB
Temperature	25degC	Re. Humidity(%)	53
Spectrum Range : 380 ~ 780 nm.		Wavelength Step : 1 nm.	



CIE1931 Chromaticity Diagram

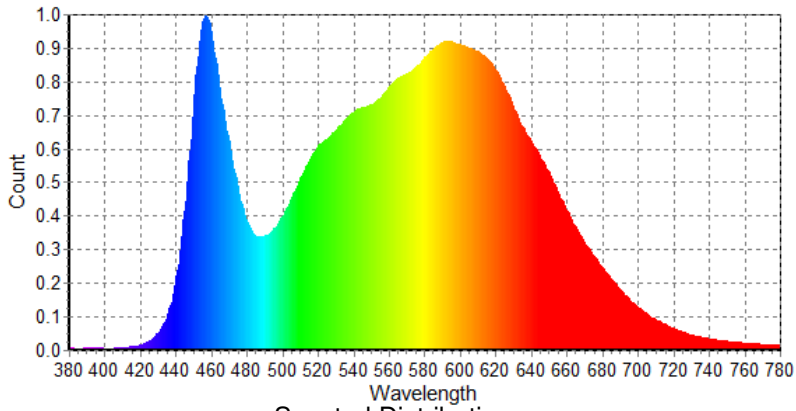
C. Photometry and Chromaticity

CIE_x	0.3814	Δ v	0.0001
CIE_y	0.3777	Ld(nm)	579.1
CIE_u'	0.2254	Purity(%)	28.0
CIE_v'	0.5021	FWHM(nm)	28.9
CCT(K)	3979	SP ratio	1.74
Luminaire lumens	6020	PPFD(umol/sec m^2)	
Lp(nm)	457.0		50.2
TLCI(Qa)	74.77	GAI	71.9

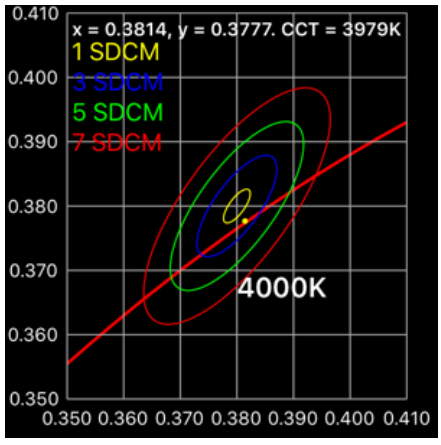


Histogram Diagram of CRI

CRI(Ra)	86			Re(thru R1~R15)	80
Qa	84				
R1	85.4	R6	89.7	R11	80.5
R2	93.9	R7	86.1	R12	61.5
R3	96.3	R8	68.7	R13	88.2
R4	81.8	R9	24.2	R14	98.7
R5	84.0	R10	83.3	R15	80.2

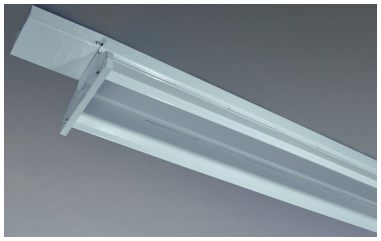


Spectral Distribution



IEC SDCM

filename	: NTM50-840(70DEG).LDT
meas. number	: 2283
luminaire number	: NTM50/840(70DEG)
date / operator	: 31-05-2017



default lamp type(s))

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	6020 lm	52.6 W

dimensions

luminaire			luminous area		
length	:	1035 mm	length	:	1015 mm
width	:	160 mm	width	:	156 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			

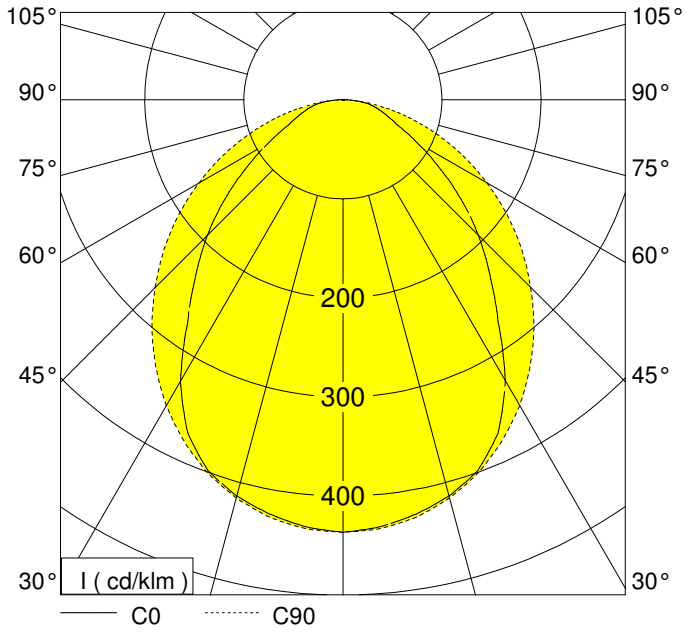
performance

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

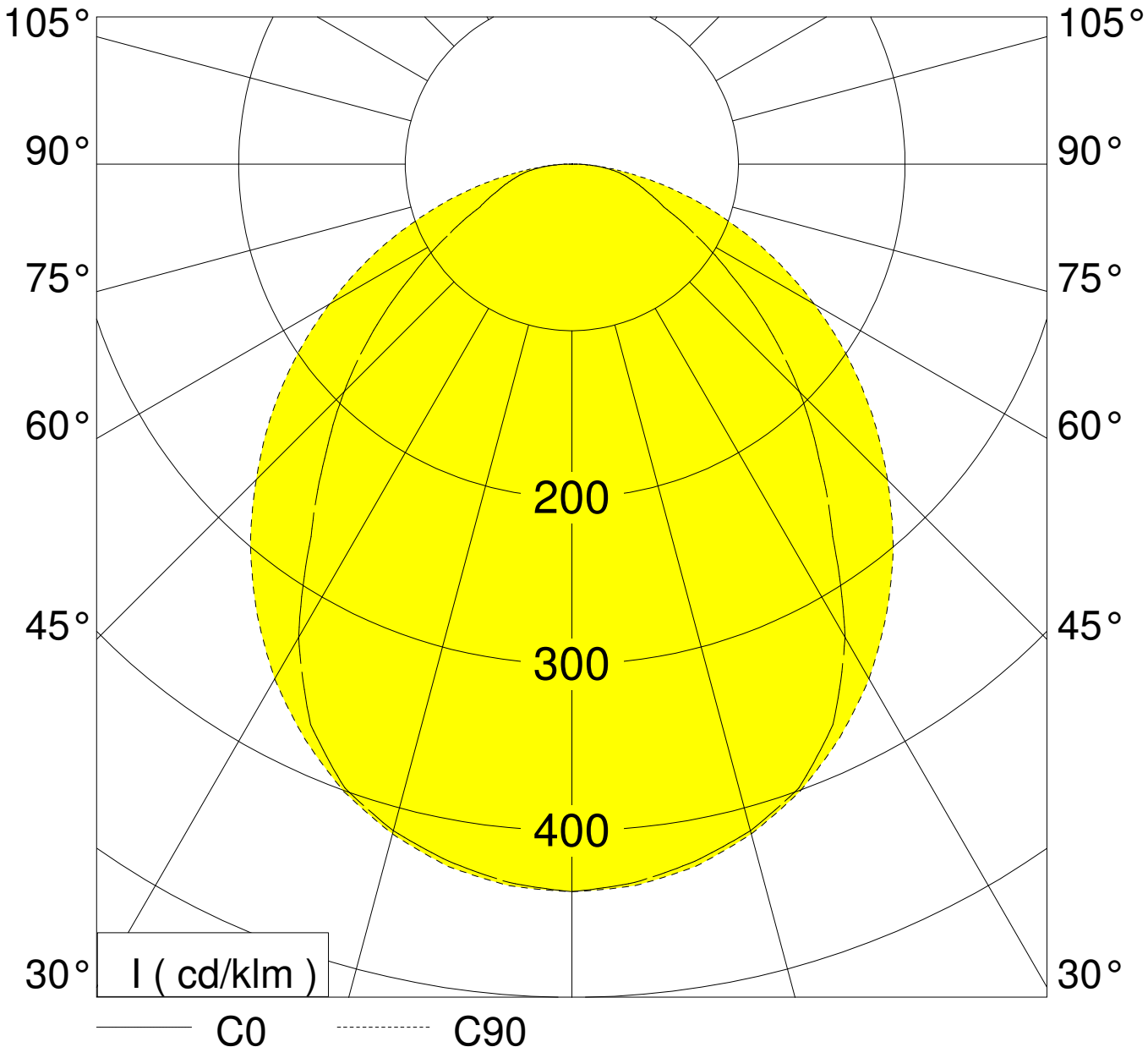
classification

LiTG / DIN	: A50
UTE	: 1.00D
CIE	: 55 84 97 100 100
BZ	: 3 3 3 4 4 4 4 4 4

Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 52.6W
Amps (running)	: 0.226A
V.A.	: 54.23VA
Power Factor	: 0.97
CCT	: 3979K (measured): 4000K (declared)
CRI (Ra)	: 86
Luminaire Lumens	: 6020 LLm
Luminaire Lm/circ.Watt	: 114 Lm/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.



	C 0.0	C 15.0	C 30.0	C 45.0	C 60.0	C 75.0	C 90.0
0.0°	436.60	436.60	436.60	436.60	436.60	436.60	436.60
5.0°	432.70	433.20	433.70	433.70	433.70	434.20	434.60
10.0°	424.80	425.30	425.80	426.30	426.80	427.40	427.90
15.0°	414.10	414.10	414.10	414.10	414.10	415.10	416.10
20.0°	398.40	398.90	399.40	398.90	398.50	399.50	400.50
25.0°	371.00	374.90	378.80	378.40	378.00	379.00	380.00
30.0°	328.00	337.20	346.60	351.00	355.50	356.10	356.70
35.0°	272.90	287.20	301.40	314.80	328.20	328.80	329.40
40.0°	230.80	240.80	250.60	273.70	296.90	298.50	300.10
45.0°	193.40	201.40	209.30	234.60	259.80	264.00	268.00
50.0°	155.30	163.40	171.50	195.00	218.40	227.20	235.90
55.0°	117.80	126.40	134.90	154.90	174.80	188.60	202.40
60.0°	86.40	93.10	99.90	118.50	137.20	152.50	167.90
65.0°	60.80	65.70	70.60	86.60	102.60	118.30	134.00
70.0°	47.80	48.30	48.80	60.10	71.40	85.70	100.10
75.0°	37.40	37.60	37.70	40.50	43.40	56.00	68.50
80.0°	28.20	27.90	27.60	27.00	26.30	32.70	39.00
85.0°	15.50	16.00	16.60	16.00	15.50	15.70	16.00
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	19.4	20.8	19.6	21.0	21.2	21.7	23.1	22.0	23.3	23.5
	3H	19.5	20.6	19.8	20.7	20.9	22.5	23.5	22.7	23.7	23.9
	4H	20.0	21.0	20.3	21.2	21.4	23.1	24.1	23.4	24.3	24.5
	6H	20.5	21.5	20.8	21.7	22.0	23.5	24.5	23.8	24.7	25.0
	8H	20.8	21.8	21.1	22.0	22.2	23.7	24.7	24.0	24.9	25.2
	12H	21.1	22.0	21.4	22.3	22.5	23.9	24.8	24.2	25.1	25.3
4H	2H	19.5	20.5	19.8	20.7	20.9	21.4	22.4	21.7	22.6	22.8
	3H	20.6	21.6	20.9	21.8	22.1	23.1	24.1	23.4	24.3	24.6
	4H	21.3	22.2	21.6	22.5	22.8	23.9	24.8	24.2	25.1	25.4
	6H	21.7	22.5	22.1	22.8	23.1	24.3	25.0	24.6	25.3	25.6
	8H	22.1	22.8	22.4	23.1	23.5	24.5	25.2	24.9	25.6	25.9
	12H	22.5	23.2	22.9	23.6	24.0	24.8	25.5	25.3	25.9	26.3
8H	4H	21.5	22.2	21.9	22.5	22.9	23.9	24.6	24.2	24.9	25.3
	6H	22.5	23.2	23.0	23.6	24.1	24.8	25.5	25.2	25.9	26.3
	8H	23.1	23.7	23.5	24.1	24.6	25.2	25.8	25.6	26.3	26.7
	12H	23.4	23.9	23.9	24.4	24.9	25.3	25.9	25.8	26.3	26.8
12H	4H	21.7	22.4	22.1	22.8	23.2	24.1	24.8	24.5	25.1	25.5
	6H	22.7	23.4	23.2	23.8	24.3	24.9	25.6	25.4	26.0	26.5
	8H	23.1	23.7	23.6	24.1	24.6	25.2	25.7	25.6	26.2	26.7
variation of observer position											
S =	1.0H			+0.2/	-0.3			+0.1/	-0.1		
	1.5H			+0.4/	-0.7			+0.2/	-0.3		
	2.0H			+0.7/	-1.1			+0.6/	-0.8		
standard-table				BK05				BK05			
correction for luminaire				5.2				7.7			
correct glare indices for a total flux of 6020lm											

class		glare rating for service value of illuminance (lx)								
A	A	1000	750	500	--	≤ 300				
1	B	2000	1500	1000	750	500	≤ 300			
2	D					2000	1000	500	≤ 300	
3	E						2000	1000	500	≤ 300

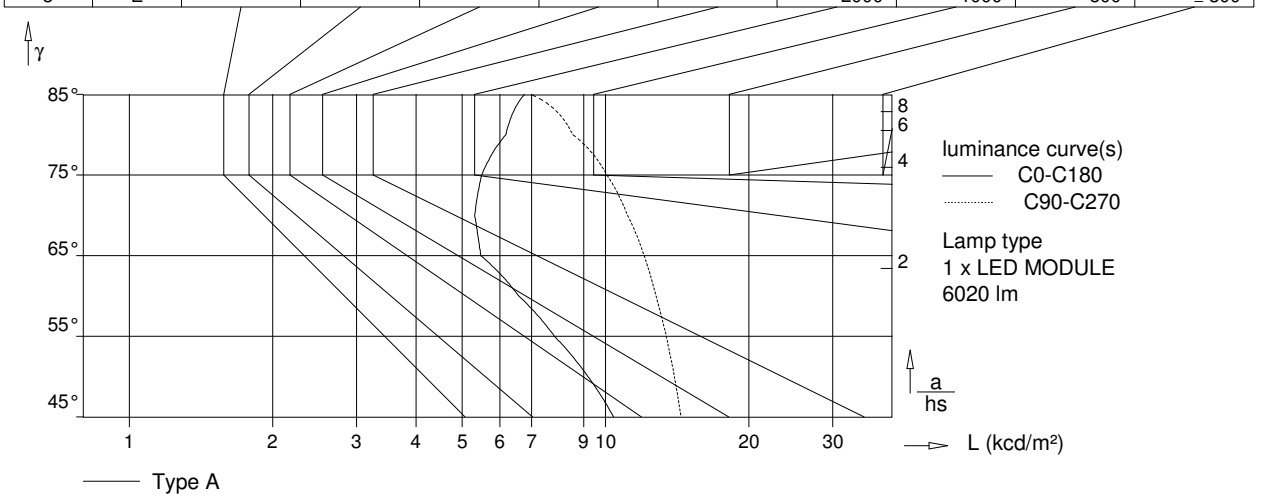


Table of intensities

gamma	C 0	C 90	C 180	C 270
45°	10398.7	14409.7	10398.7	14409.7
50°	9185.6	13953.0	9185.6	13953.0
55°	7808.4	13416.1	7808.4	13416.1
60°	6569.8	12766.9	6569.8	12766.9
65°	5469.7	12054.9	5469.7	12054.9
70°	5313.5	11127.3	5313.5	11127.3
75°	5493.9	10062.4	5493.9	10062.4
80°	6174.3	8538.9	6174.3	8538.9
85°	6761.5	6979.6	6761.5	6979.6

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	62	72	79	84	90	95	98	102	105
70	30	20	55	65	72	77	85	90	93	98	101
70	10	20	49	59	67	72	80	85	89	95	98
50	50	20	60	70	76	81	87	91	94	98	100
50	30	20	54	64	70	76	82	87	90	95	98
50	10	20	49	59	66	71	78	84	87	92	95
30	50	20	59	68	74	78	84	88	91	94	97
30	30	20	53	63	69	74	80	85	88	92	94
30	10	20	49	58	65	70	77	82	85	90	92
0	0	0	47	56	62	67	74	78	81	85	88
BZ-class			3	3	3	4	4	4	4	4	4

SHRnom : 1.25 SHRmax : 1.400

isolux diagram