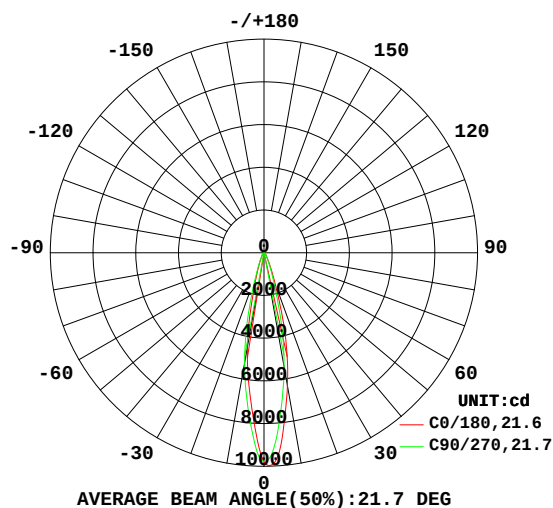


LUMINAIRE PHOTOMETRIC TEST REPORT

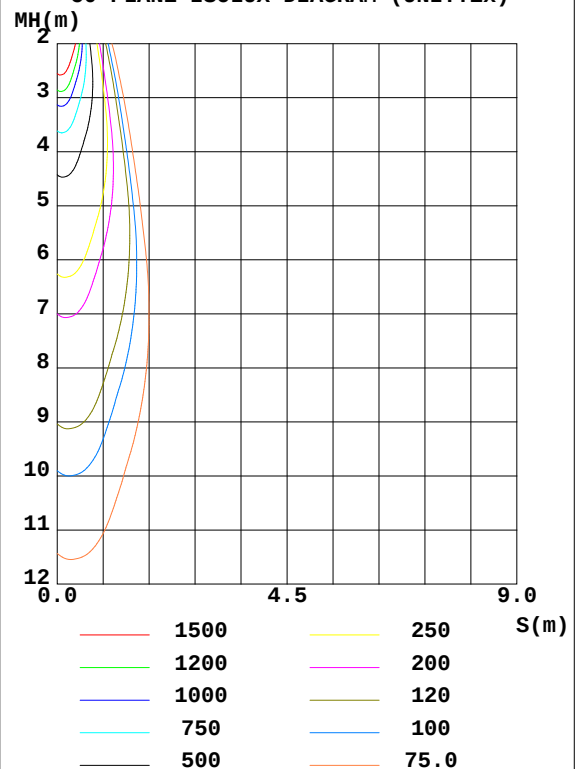
NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 92.05 lm/W
MODEL	CXM-14-AC30	Imax(cd)	9996	S/MH(C0/180)	0.31	
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	0.36	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	2072.6	η UP, DN(C0-180)	0.0, 52.4	
NOMINAL FLUX(lm)	2072.55	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 47.6	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

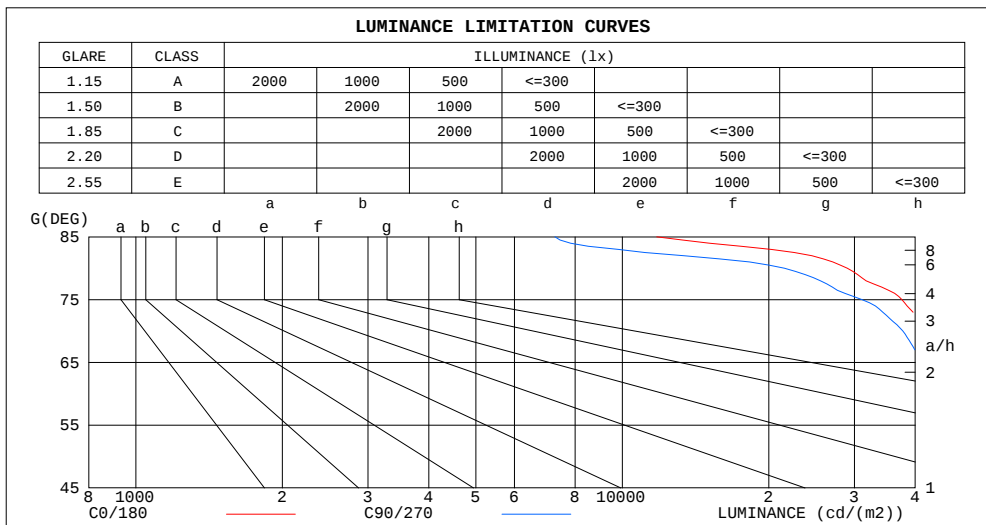
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	6332	6090	5433	4784	4499	4690	5239	5856	0- 10	675.4	675.4	32.6, 32.6
20	1516	1359	1153	947.3	862.9	861.3	1050	1294	10- 20	765.7	1441	69.5, 69.5
30	347.8	317.1	296.9	262.5	239.6	235.1	270.2	324.8	20- 30	262.6	1704	82.2, 82.2
40	155.0	150.8	144.5	134.3	130.1	132.5	140.6	149.4	30- 40	120.8	1824	88, 88
50	102.2	100.1	98.28	92.74	92.52	92.43	97.19	98.78	40- 50	89.69	1914	92.4, 92.4
60	74.16	72.97	70.32	66.09	64.31	65.37	69.22	71.45	50- 60	73.84	1988	95.9, 95.9
70	45.99	44.81	41.53	36.74	34.61	35.64	39.83	43.26	60- 70	54.30	2042	98.5, 98.5
80	16.13	15.06	12.04	7.951	5.530	6.608	10.65	13.98	70- 80	26.56	2069	99.8, 99.8
90	0.9795	0.9016	0.7944	0.8064	0.8430	0.8110	0.7811	0.7755	80- 90	3.668	2073	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	11768	7267
80	28988	21526
75	37557	31062
70	41969	37709
65	44851	41207
60	46300	43672
55	48037	46061
50	49606	47478
45	54643	51008

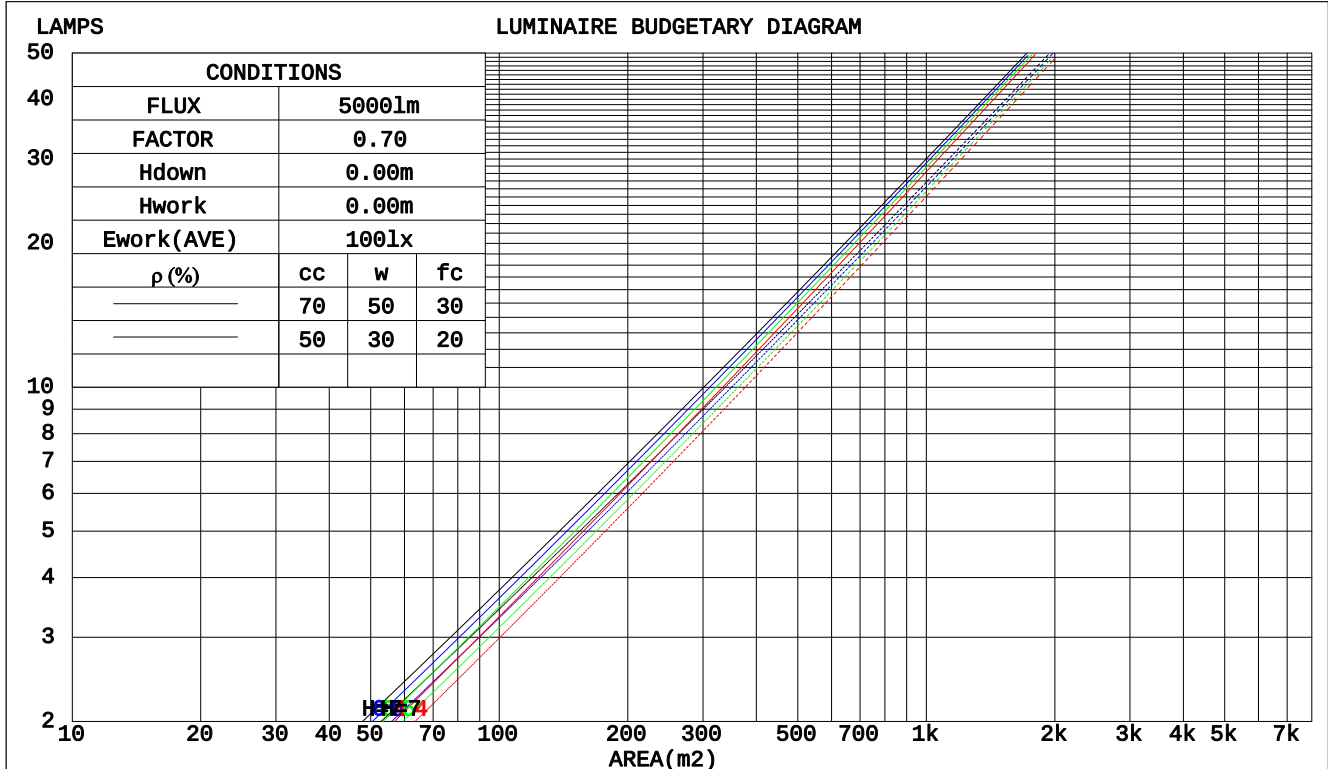
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:XYJ
 Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: VN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.94
2.0	1.05	1.01	.98	1.03	.99	.97	.99	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.95	.91	.98	.94	.90	.95	.92	.89	.93	.90	.88	.91	.88	.86	.85
4.0	.94	.89	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5.0	.90	.85	.81	.89	.84	.81	.87	.83	.80	.86	.82	.80	.84	.81	.79	.78
6.0	.86	.81	.78	.85	.81	.77	.84	.80	.77	.83	.79	.76	.82	.78	.76	.75
7.0	.83	.78	.75	.82	.78	.74	.81	.77	.74	.80	.76	.74	.79	.76	.73	.72
8.0	.80	.75	.72	.79	.75	.72	.78	.74	.71	.78	.74	.71	.77	.73	.71	.70
9.0	.77	.73	.69	.77	.72	.69	.76	.72	.69	.75	.72	.69	.74	.71	.69	.68
10.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.67	.72	.69	.67	.66



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: VN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.165	.094	.030	.159	.090	.029	.146	.084	.027	.135	.078	.025	.124	.072	.023		
2.0	.155	.085	.026	.149	.082	.025	.139	.077	.024	.129	.072	.023	.120	.068	.021		
3.0	.144	.077	.023	.139	.075	.022	.131	.071	.021	.122	.067	.021	.115	.064	.020		
4.0	.134	.070	.021	.130	.068	.020	.123	.065	.019	.116	.062	.019	.109	.059	.018		
5.0	.126	.064	.019	.122	.063	.018	.116	.060	.018	.110	.058	.017	.104	.056	.017		
6.0	.118	.059	.017	.115	.058	.017	.109	.056	.016	.104	.054	.016	.099	.052	.016		
7.0	.111	.055	.016	.109	.054	.015	.104	.052	.015	.099	.051	.015	.095	.049	.014		
8.0	.105	.051	.014	.103	.051	.014	.099	.049	.014	.094	.048	.014	.091	.047	.014		
9.0	.100	.048	.013	.098	.048	.013	.094	.046	.013	.090	.045	.013	.087	.044	.013		
10.0	.095	.045	.013	.093	.045	.013	.090	.044	.012	.086	.043	.012	.083	.042	.012		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.157	.146	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006	
7.0	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005	
8.0	.096	.062	.039	.082	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.090	.057	.034	.077	.049	.030	.054	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.085	.052	.030	.073	.045	.026	.051	.032	.019	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: vN-TL0025-21						TYPE:LED TRACK LIGHT			WEIGHT:		
SPEC.:CRI90 3000K 15D						DIM.:			SERIAL No.:		
MFR.: 1						SUR.:			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H		19.2	20.0	19.4	20.1	20.3	18.9	19.7	19.1	19.9	20.0
3H		20.6	21.4	20.9	21.6	21.8	20.3	21.0	20.5	21.2	21.4
4H		21.2	21.9	21.5	22.1	22.3	20.7	21.4	21.0	21.6	21.9
6H		21.5	22.2	21.8	22.4	22.7	20.9	21.6	21.2	21.8	22.1
8H		21.6	22.2	21.9	22.5	22.7	20.9	21.6	21.2	21.8	22.1
12H		21.6	22.2	21.9	22.4	22.7	20.9	21.5	21.2	21.8	22.1
4H 2H		19.8	20.5	20.1	20.7	20.9	19.6	20.3	19.8	20.5	20.7
3H		21.4	22.0	21.7	22.3	22.6	21.1	21.7	21.4	22.0	22.2
4H		22.1	22.6	22.4	22.9	23.2	21.6	22.2	22.0	22.5	22.8
6H		22.5	23.0	22.8	23.3	23.6	21.9	22.4	22.3	22.8	23.1
8H		22.5	23.0	22.9	23.4	23.7	21.9	22.4	22.3	22.8	23.1
12H		22.5	23.0	22.9	23.3	23.7	21.9	22.3	22.3	22.7	23.1
8H 4H		22.2	22.7	22.6	23.1	23.4	21.9	22.3	22.2	22.7	23.0
6H		22.7	23.1	23.1	23.5	23.9	22.2	22.6	22.7	23.0	23.4
8H		22.8	23.2	23.3	23.6	24.0	22.3	22.6	22.7	23.0	23.5
12H		22.8	23.1	23.3	23.6	24.1	22.2	22.5	22.7	23.0	23.4
12H 4H		22.2	22.7	22.6	23.0	23.4	21.8	22.3	22.3	22.6	23.0
6H		22.7	23.1	23.2	23.5	23.9	22.2	22.6	22.7	23.0	23.4
8H		22.8	23.1	23.3	23.6	24.1	22.3	22.6	22.7	23.0	23.5
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H		+ 0.1 / - 0.2					+ 0.1 / - 0.2				
2.0H		+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 2073 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.5$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 γ Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

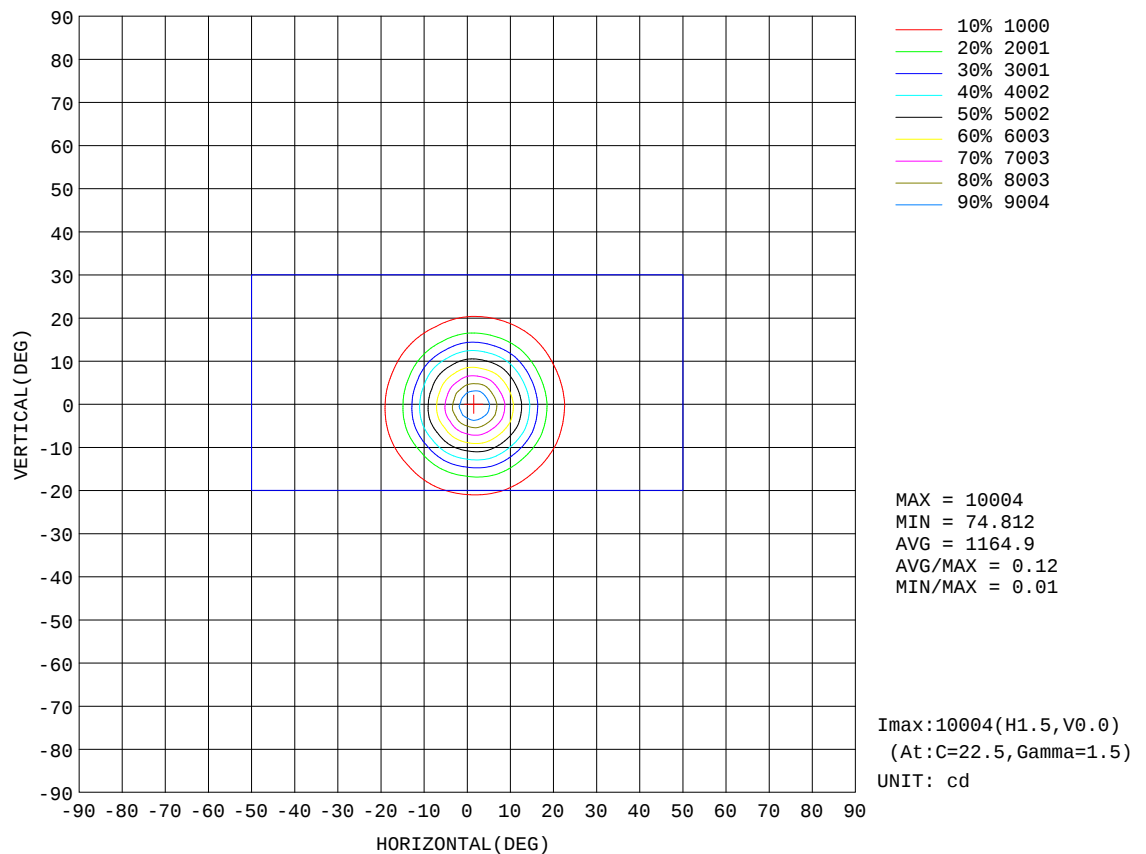
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	84	77	73	84	77	73	83	77	73	69
0.80	92	85	81	91	85	81	90	84	81	77
1.00	97	90	86	96	90	86	94	90	85	81
1.25	101	95	91	100	94	91	98	93	90	85
1.50	104	98	95	103	98	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	101	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:XYJ
 Test Date:2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

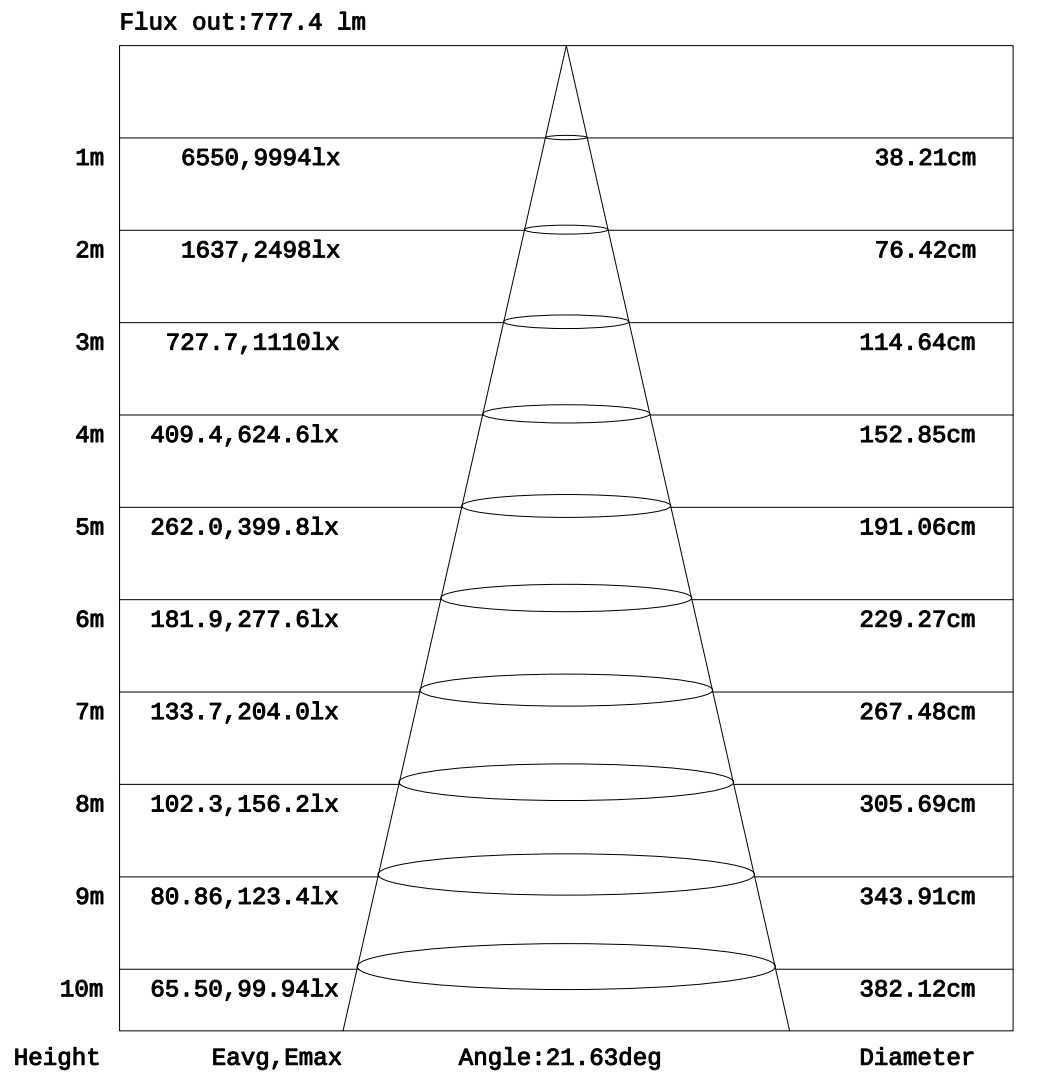


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

AAI Figure

NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



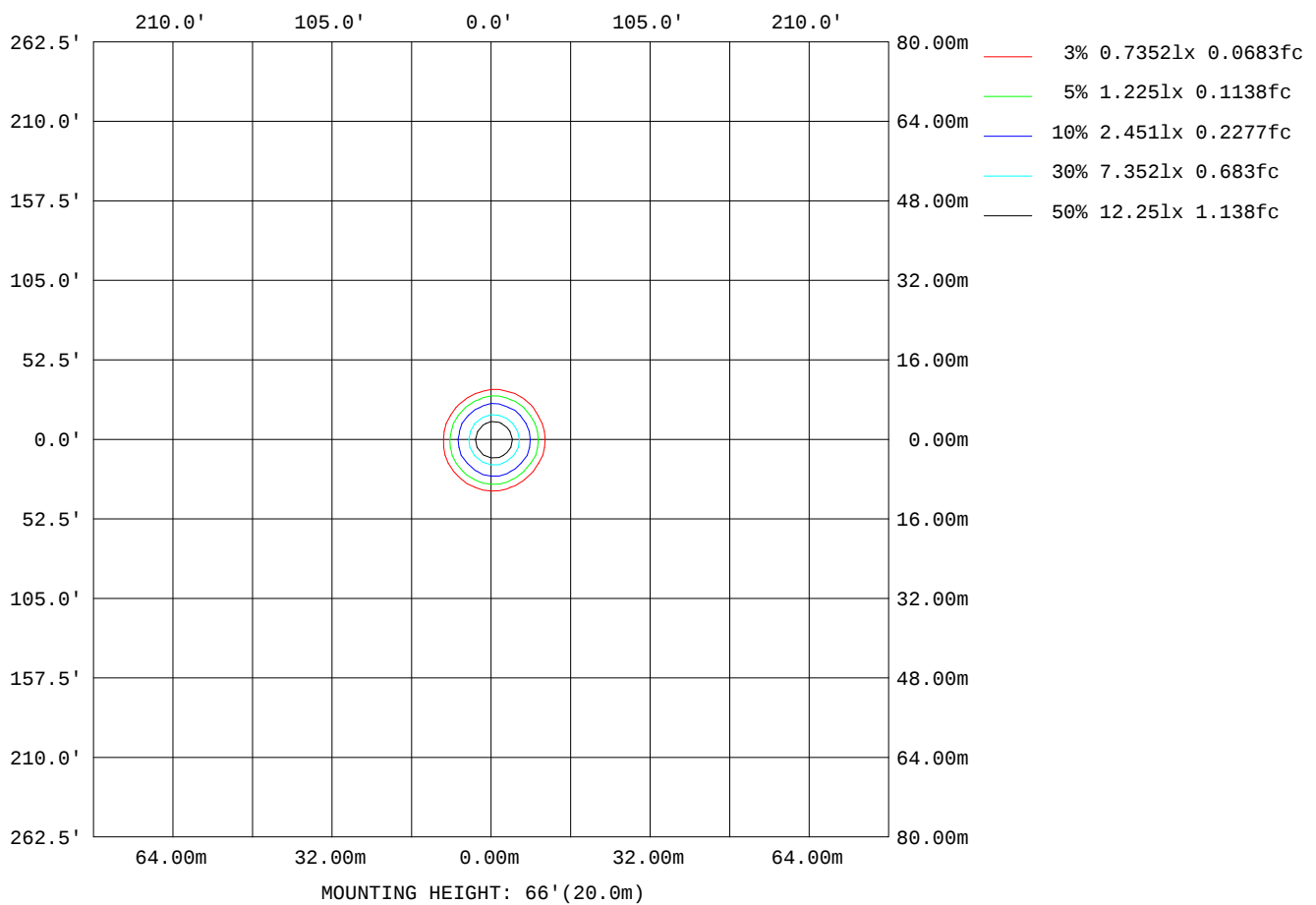
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

NAME: VN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

LED Avg.L Report

NAME: VN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

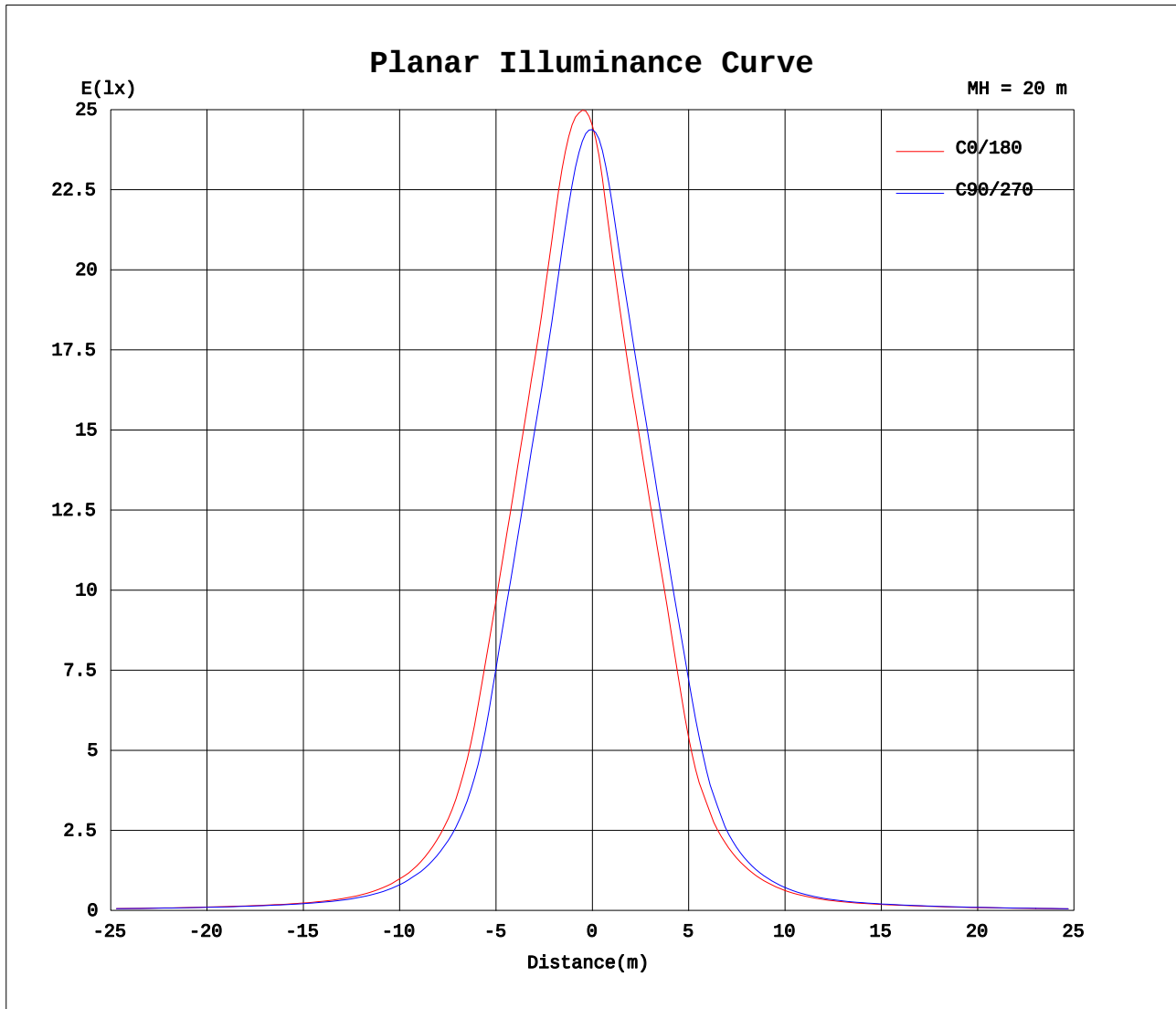
AvgL	cd/m2
L_0~180(65)av	40599
L_0~180(75)av	30196
L_0~180(85)av	8029
L_90~270(65)av	40712
L_90~270(75)av	30073
L_90~270(85)av	6727
L_45(65)av	40343
L_45(75)av	29874
L_45(85)av	7128

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-12-4

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: VN-TL0025-21	TYPE: LED TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K 15D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

Table - -1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-12-4

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

```