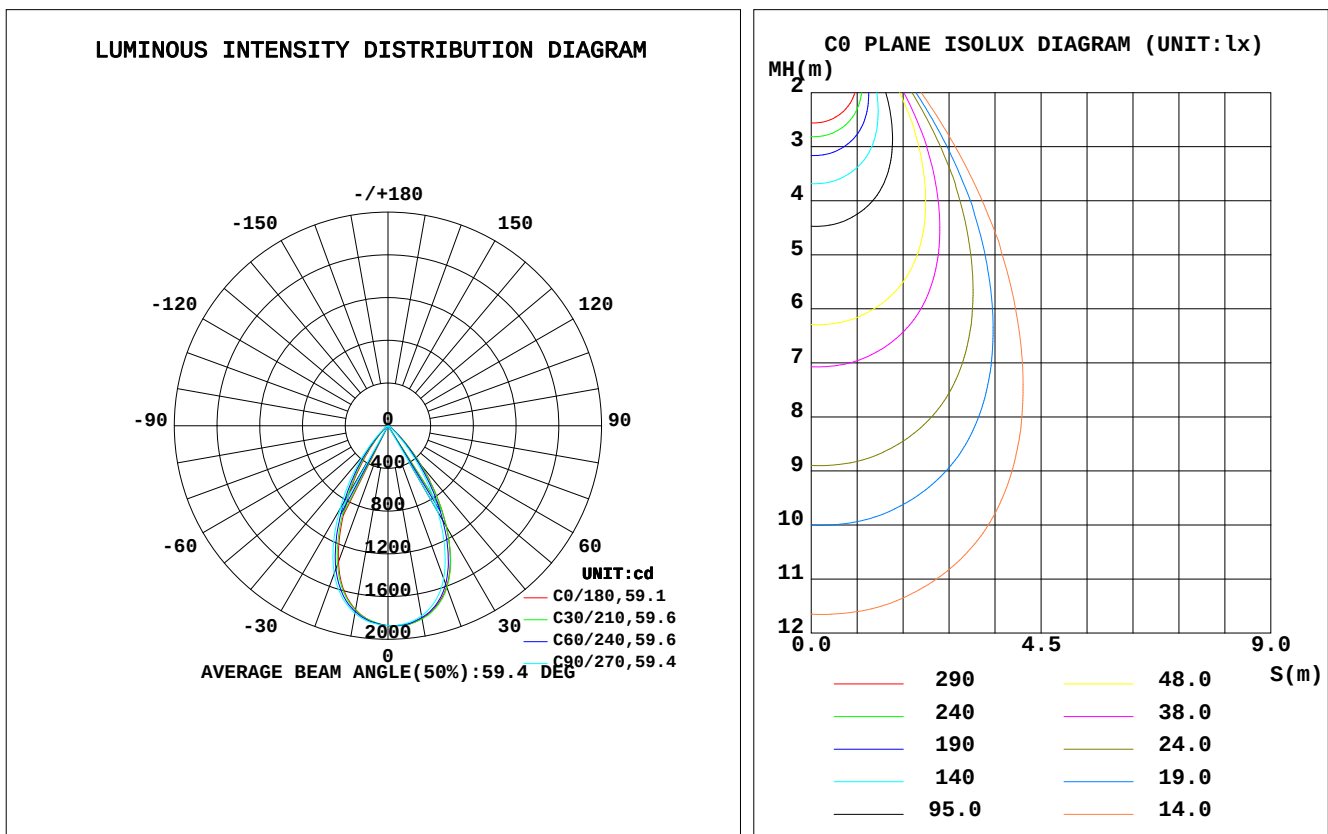


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: VN-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 74.87 lm/W
MODEL	CXA1820	Imax(cd)	1875	S/MH(C0/180)	0.82	
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	0.89	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1776.8	η UP, DN(C0-180)	0.0, 51.3	
NOMINAL FLUX(lm)	1776.81	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.7	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.95	



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-7-31

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:

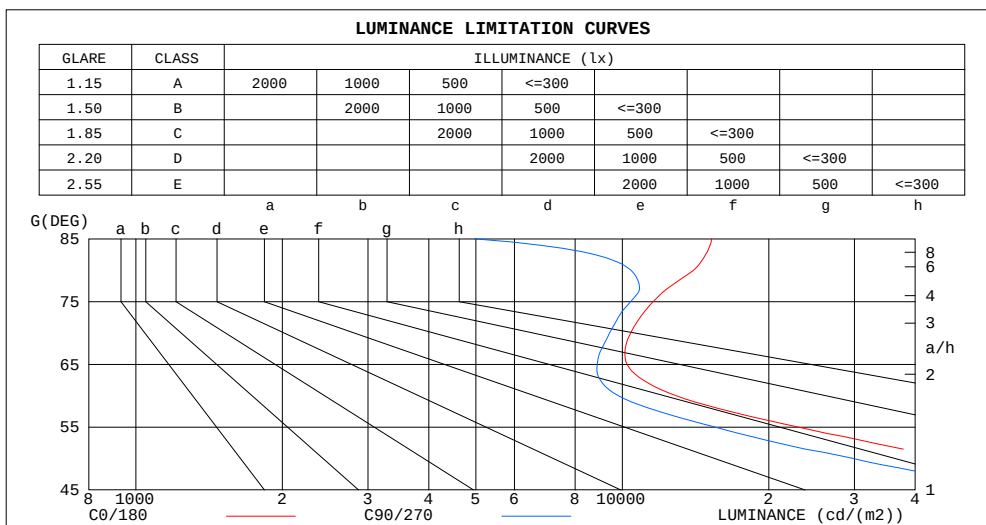
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1832	1833	1808	1774	1748	1756	1783	1804	0- 10	175.0	175.0	9.85,9.85
20	1604	1603	1523	1411	1357	1395	1472	1534	10- 20	467.3	642.2	36.1,36.1
30	1094	1079	940.2	793.7	719.0	773.5	898.0	1009	20- 30	553.8	1196	67.3,67.3
40	485.9	460.5	360.5	250.9	211.8	255.7	355.8	447.2	30- 40	382.8	1579	88.9,88.9
50	108.5	98.25	70.13	47.11	40.29	47.00	70.69	95.07	40- 50	138.9	1718	96.7,96.7
60	23.07	21.76	17.96	15.33	14.34	14.79	17.61	20.59	50- 60	32.64	1750	98.5,98.5
70	12.72	12.52	11.79	10.68	9.817	10.01	11.27	12.42	60- 70	13.82	1764	99.3,99.3
80	8.701	8.348	6.620	4.625	3.421	4.350	6.506	7.971	70- 80	9.742	1774	99.8,99.8
90	0.7486	0.6799	0.4232	0.4537	0.4505	0.4208	0.4054	0.6453	80- 90	2.887	1777	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: 15.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:XYJ
 Test Date:2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	15251	4968
80	14012	10415
75	11577	10406
70	10400	9415
65	10224	8878
60	12903	9814
55	22977	15508
50	47201	29806
45	97705	63684

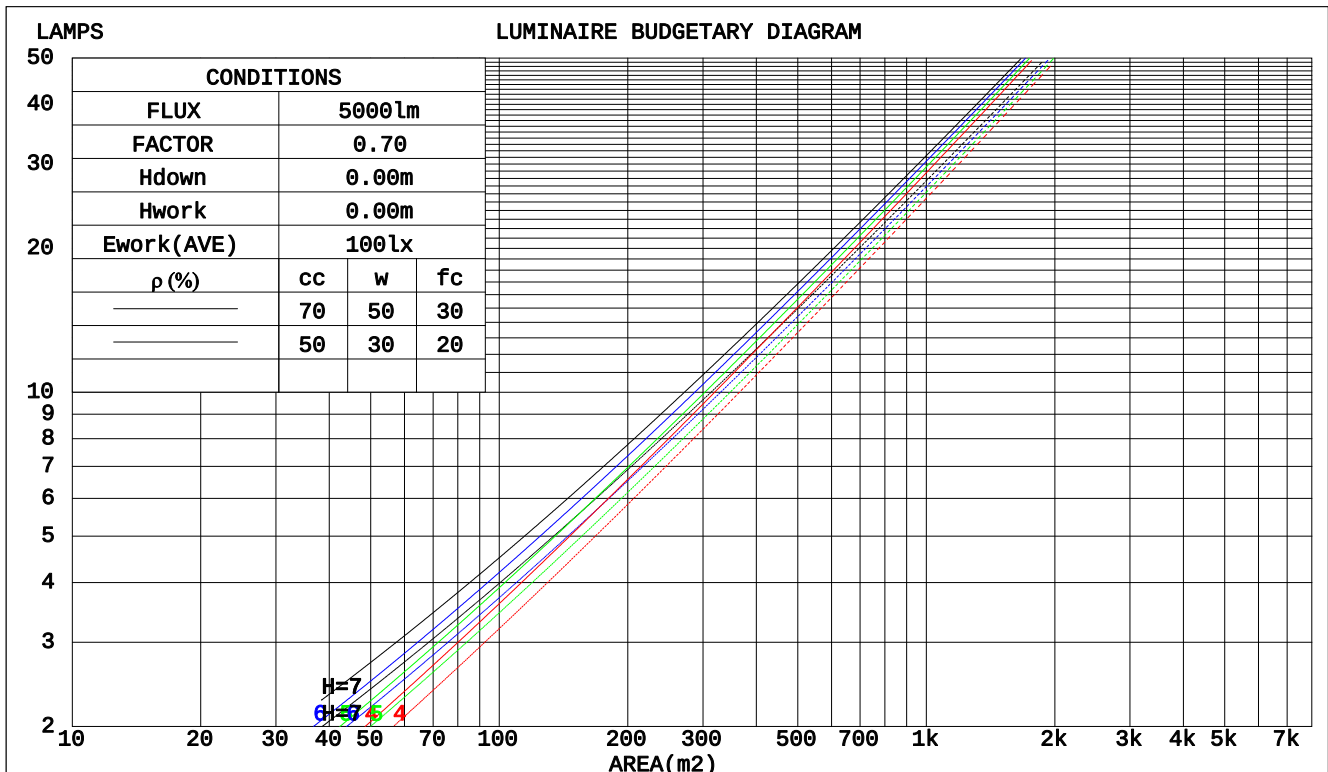
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	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	.00
1.0	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.88	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.88	.85	.82	.86	.83	.81	.79
4.0	.88	.83	.78	.87	.82	.78	.85	.80	.77	.83	.79	.76	.81	.78	.75	.74
5.0	.83	.76	.72	.82	.76	.72	.80	.75	.71	.78	.74	.70	.76	.73	.70	.68
6.0	.77	.71	.67	.76	.71	.66	.75	.70	.66	.73	.69	.65	.72	.68	.65	.64
7.0	.72	.66	.62	.72	.66	.62	.70	.65	.61	.69	.65	.61	.68	.64	.61	.59
8.0	.68	.62	.58	.67	.62	.58	.66	.61	.57	.65	.61	.57	.64	.60	.57	.55
9.0	.64	.58	.54	.64	.58	.54	.63	.57	.54	.62	.57	.53	.61	.56	.53	.52
10.0	.61	.55	.51	.60	.54	.51	.59	.54	.50	.58	.54	.50	.58	.53	.50	.49



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

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:

WEC AND CCEC

NAME: VN-TL0025-03	TYPE:TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K L	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	.187	.106	.034	.180	.103	.033	.167	.096	.031	.156	.090	.029	.145	.084	.027		
2.0	.179	.098	.030	.173	.095	.029	.162	.090	.028	.153	.086	.027	.143	.081	.026		
3.0	.170	.091	.027	.165	.089	.027	.156	.085	.026	.148	.081	.025	.140	.077	.024		
4.0	.162	.084	.025	.158	.082	.024	.150	.079	.024	.142	.076	.023	.136	.074	.022		
5.0	.154	.078	.023	.150	.077	.022	.143	.075	.022	.137	.072	.022	.131	.070	.021		
6.0	.147	.074	.021	.144	.073	.021	.137	.070	.021	.132	.068	.020	.126	.067	.020		
7.0	.140	.069	.020	.137	.068	.019	.132	.067	.019	.127	.065	.019	.122	.063	.019		
8.0	.134	.065	.018	.131	.065	.018	.127	.063	.018	.122	.062	.018	.118	.060	.018		
9.0	.128	.062	.017	.126	.061	.017	.122	.060	.017	.117	.059	.017	.114	.058	.017		
10.0	.123	.059	.016	.121	.058	.016	.117	.057	.016	.113	.056	.016	.110	.055	.016		

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			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.097	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.145	.114	.088	.125	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.135	.099	.071	.116	.086	.062	.080	.060	.044	.046	.035	.026	.015	.011	.008	
5.0	.127	.088	.059	.109	.076	.051	.075	.053	.036	.043	.031	.021	.014	.010	.007	
6.0	.120	.078	.049	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006	
7.0	.113	.071	.041	.097	.061	.036	.067	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.103	.060	.031	.088	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004	
10.0	.098	.055	.027	.084	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:XYJ
 Test Date:2019-7-31

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-TL0025-03						TYPE: TRACK LIGHT			WEIGHT:		
SPEC.:CRI90 3000K L						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		22.8	23.8	23.0	24.0	24.1	21.7	22.7	21.9	22.9	23.0
3H		22.7	23.6	22.9	23.8	24.0	21.6	22.5	21.8	22.7	22.9
4H		22.6	23.5	22.9	23.7	23.9	21.6	22.4	21.8	22.6	22.9
6H		22.6	23.4	22.9	23.7	23.9	21.5	22.3	21.8	22.6	22.8
8H		22.6	23.4	22.9	23.6	23.9	21.5	22.3	21.8	22.5	22.8
12H		22.6	23.3	22.9	23.6	23.9	21.5	22.2	21.8	22.5	22.8
4H	2H	22.6	23.4	22.8	23.6	23.9	21.5	22.3	21.8	22.6	22.8
	3H	22.5	23.2	22.8	23.5	23.8	21.4	22.1	21.7	22.4	22.7
	4H	22.5	23.1	22.8	23.4	23.7	21.4	22.1	21.8	22.4	22.7
	6H	22.5	23.1	22.9	23.4	23.8	21.4	22.0	21.8	22.4	22.7
	8H	22.5	23.1	22.9	23.4	23.8	21.4	22.0	21.8	22.3	22.7
	12H	22.5	23.0	22.9	23.4	23.8	21.4	21.9	21.8	22.3	22.7
8H	4H	22.4	22.9	22.8	23.3	23.6	21.3	21.9	21.7	22.2	22.6
	6H	22.4	22.9	22.9	23.3	23.7	21.4	21.9	21.8	22.3	22.7
	8H	22.5	22.9	22.9	23.3	23.8	21.4	21.8	21.9	22.2	22.7
	12H	22.6	22.9	23.0	23.3	23.8	21.4	21.8	21.9	22.2	22.7
12H	4H	22.3	22.8	22.7	23.2	23.6	21.3	21.8	21.7	22.2	22.6
	6H	22.4	22.8	22.9	23.2	23.7	21.4	21.8	21.8	22.2	22.6
	8H	22.5	22.8	23.0	23.3	23.7	21.4	21.8	21.9	22.2	22.7
Variations with the observer position at spacings:											
S = 1.0H		+ 2.5 / - 5.7					+ 2.3 / - 5.6				
1.5H		+ 4.2 / - 5.5					+ 3.9 / - 5.0				
2.0H		+ 5.3 / - 3.3					+ 4.4 / - 2.8				

CIE Pub.117, 1777 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.0$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

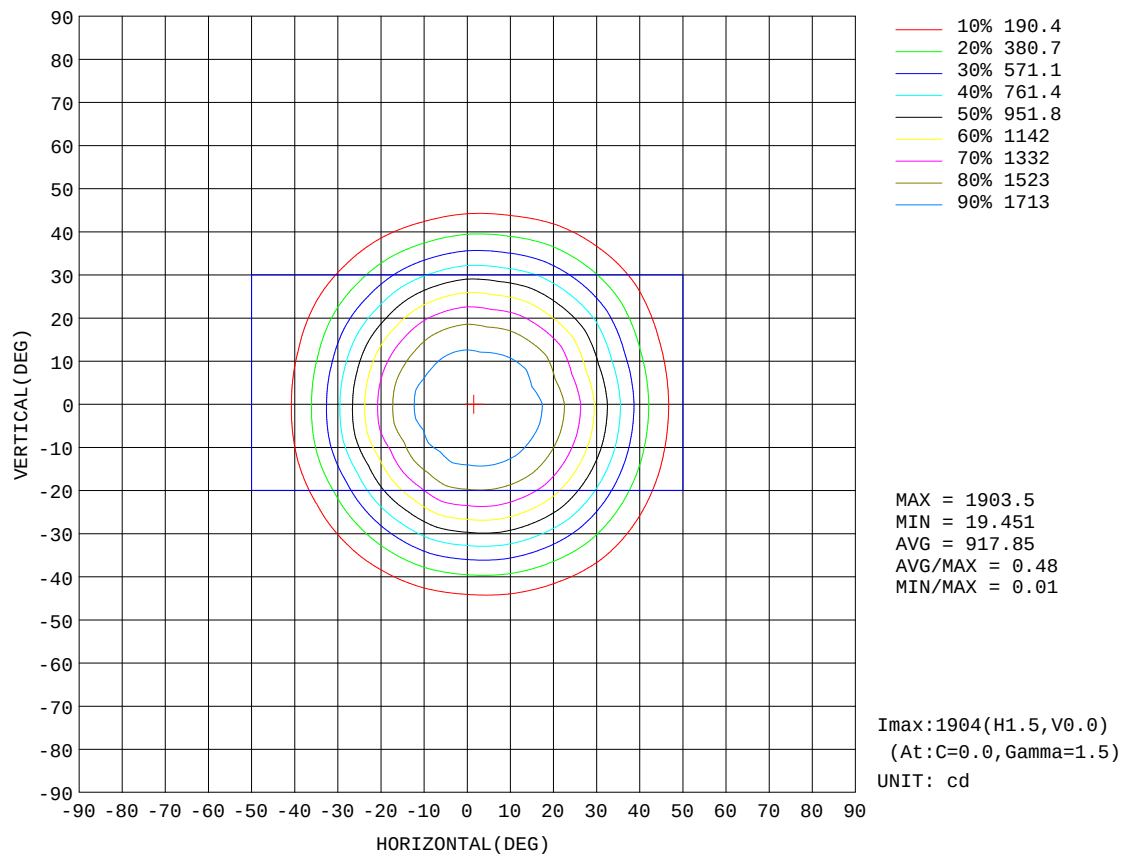
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) × RCR = 5									
k = 0.60	85	78	74	84	78	74	83	77	73	70
0.80	92	86	82	92	86	82	90	85	81	78
1.00	97	91	87	97	91	87	95	91	87	82
1.25	102	96	92	101	96	92	99	94	91	87
1.50	105	100	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	98	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	108	105	104	97
5.00	115	112	110	112	110	108	108	107	105	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNM = 1.25										

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

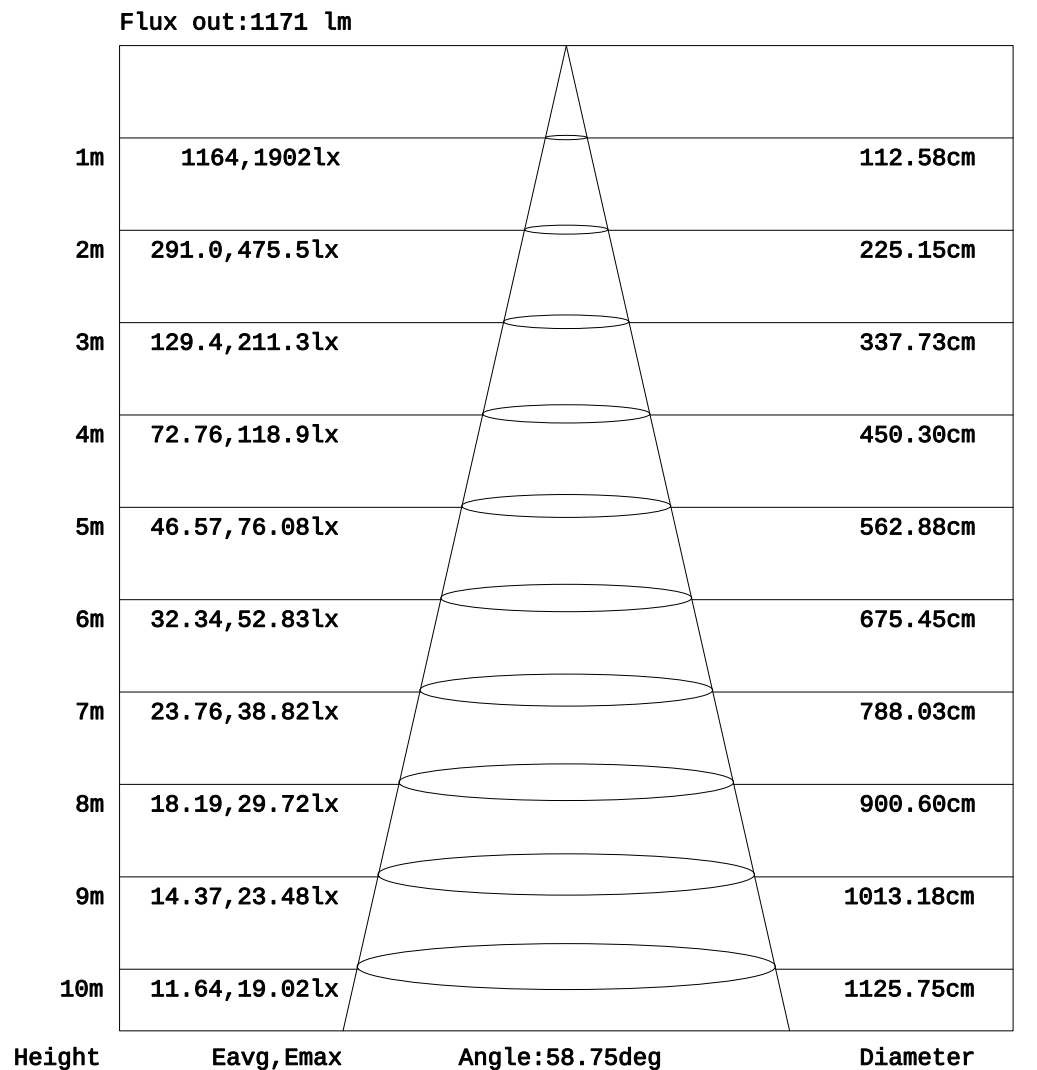


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



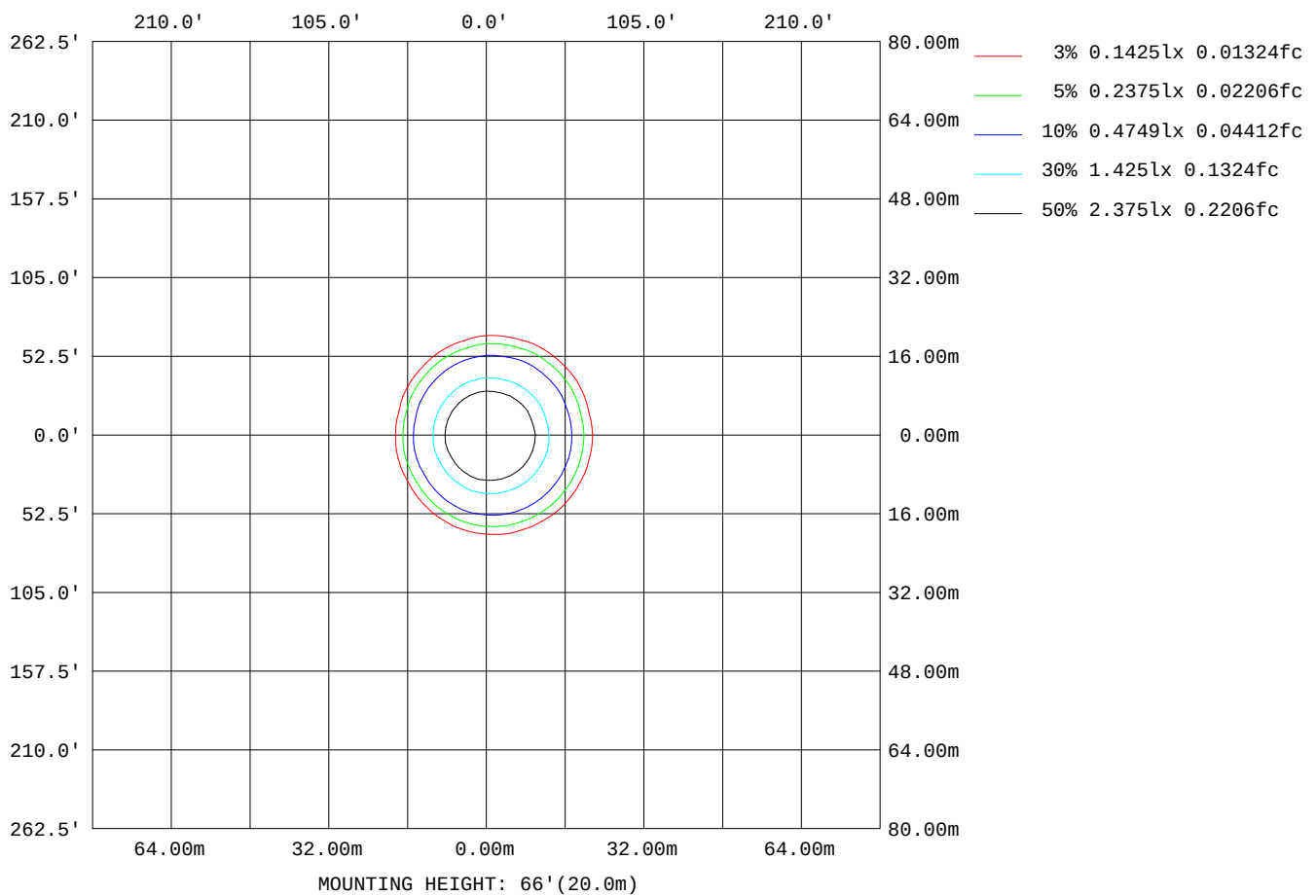
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-7-31

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-TL0025-03	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

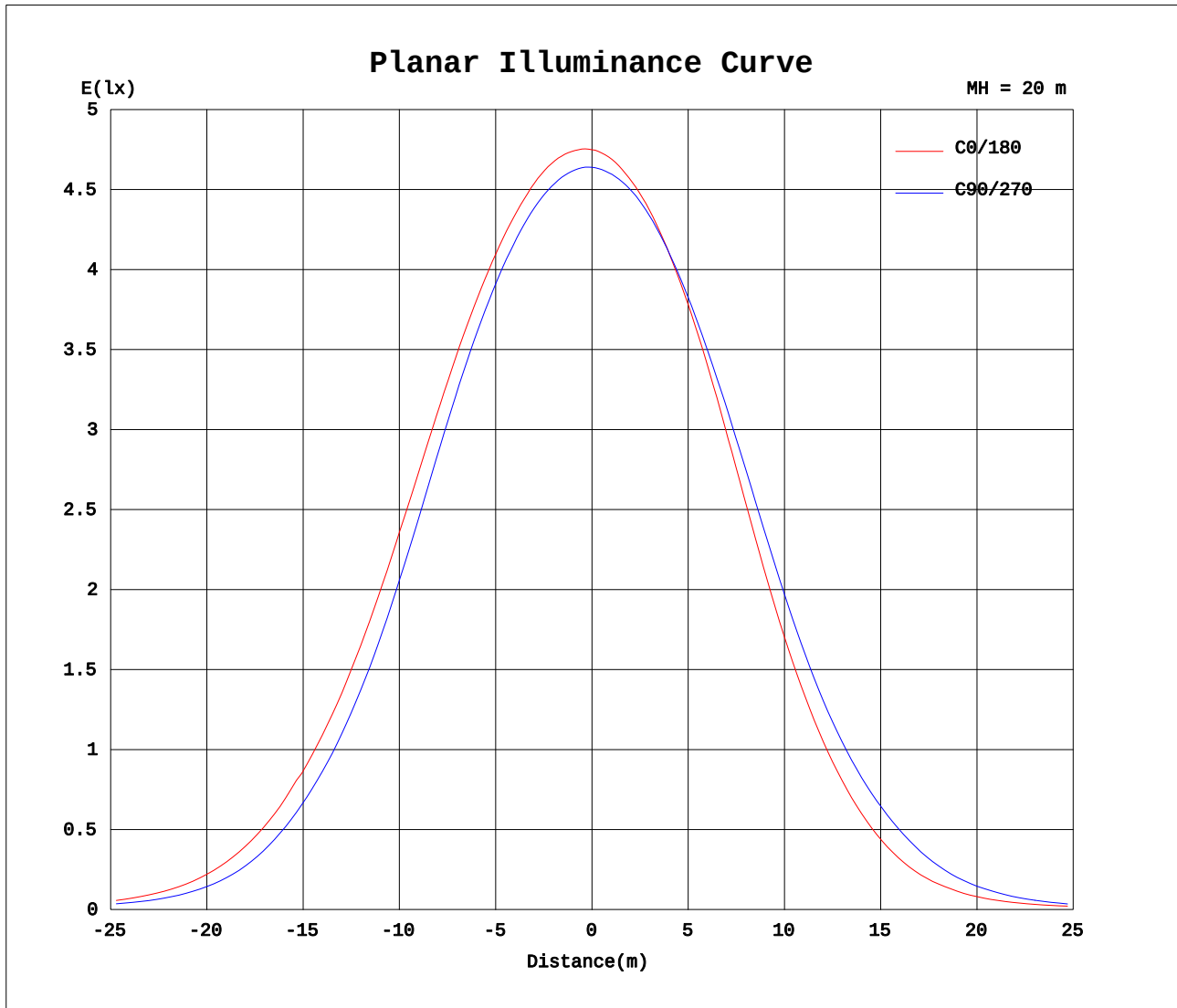
AvgL	cd/m2
L_0~180(65)av	8871
L_0~180(75)av	9742
L_0~180(85)av	8613
L_90~270(65)av	8810
L_90~270(75)av	10266
L_90~270(85)av	5402
L_45(65)av	8830
L_45(75)av	9991
L_45(85)av	7270

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: XYJ
 Test Date: 2019-7-31

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: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

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-TL0025-03	TYPE:TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

Table - -1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

```

Range: 0 - 90DEG
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-TL0025-03	TYPE:TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K L	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

Table - -2

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: XYJ
Test Date: 2019-7-31

```

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

```