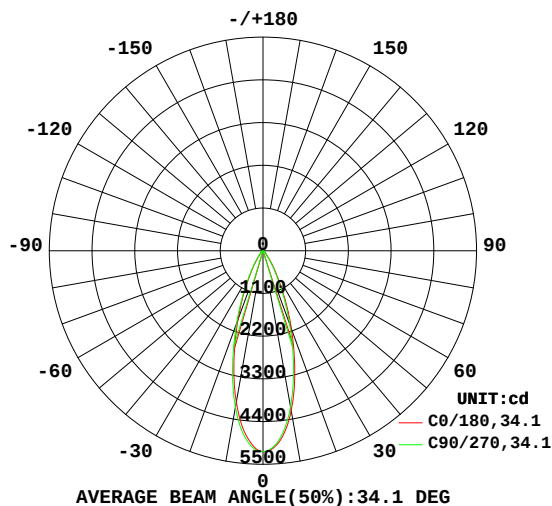


LUMINAIRE PHOTOMETRIC TEST REPORT

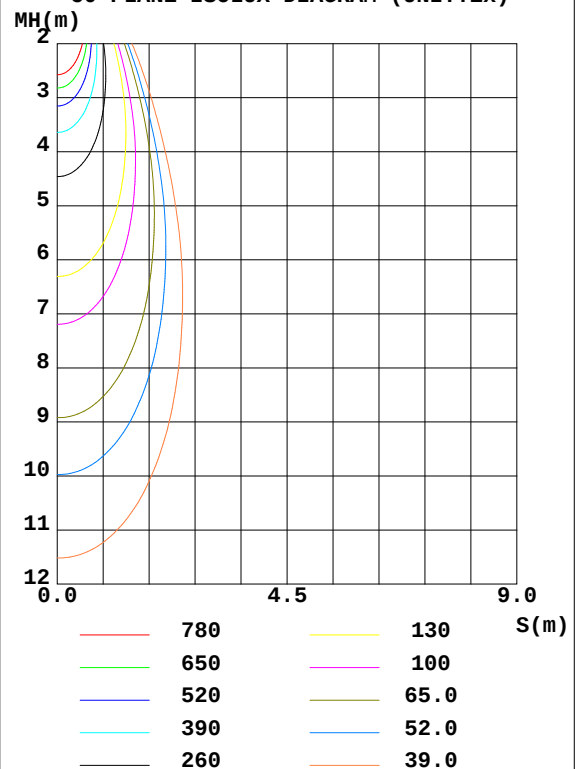
NAME: vN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 98.48 lm/W
MODEL	CXM-14-AC30	Imax(cd)	5172	S/MH(C0/180)	0.54	
NOMINAL POWER(W)	25	LOR(%)	99.5	S/MH(C90/270)	0.56	
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	2215.7	η UP, DN(C0-180)	0.0, 50.6	
NOMINAL FLUX(lm)	2226.54	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 48.9	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	230	η down(%)	99.5	CIBSE SHR MAX	0.60	

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:

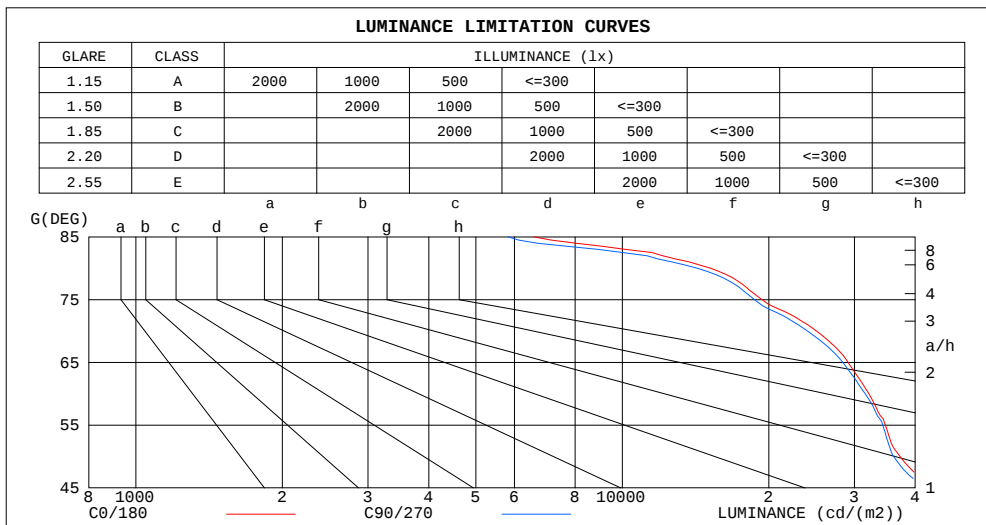
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4185	4150	4082	3997	3962	3994	4095	4143	0- 10	439.3	439.3	19.8, 19.7
20	2140	2087	2010	1930	1889	1928	1995	2066	10- 20	826.7	1266	57.1, 56.9
30	688.2	685.9	622.0	586.2	572.6	607.9	611.3	646.2	20- 30	549.7	1816	82, 81.6
40	178.2	177.7	159.9	145.5	145.2	156.1	159.9	161.6	30- 40	209.3	2025	91.4, 91
50	76.87	79.73	74.61	71.93	70.30	72.75	70.48	73.12	40- 50	78.58	2104	94.9, 94.5
60	51.63	51.65	50.74	49.25	48.39	48.41	48.97	49.97	50- 60	55.33	2159	97.4, 97
70	27.54	27.55	26.41	25.19	24.42	24.61	25.46	26.34	60- 70	37.44	2196	99.1, 98.6
80	8.475	8.624	7.956	7.110	6.259	6.518	7.053	7.656	70- 80	16.52	2213	99.9, 99.4
90	0.7047	0.6915	0.6826	0.6781	0.6649	0.6584	0.6472	0.6362	80- 90	2.723	2216	100, 99.5
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
 γ 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 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6574	5824
80	15180	14251
75	19362	18686
70	25048	24017
65	29105	28398
60	32118	31563
55	34728	34304
50	37195	36102
45	45357	42605

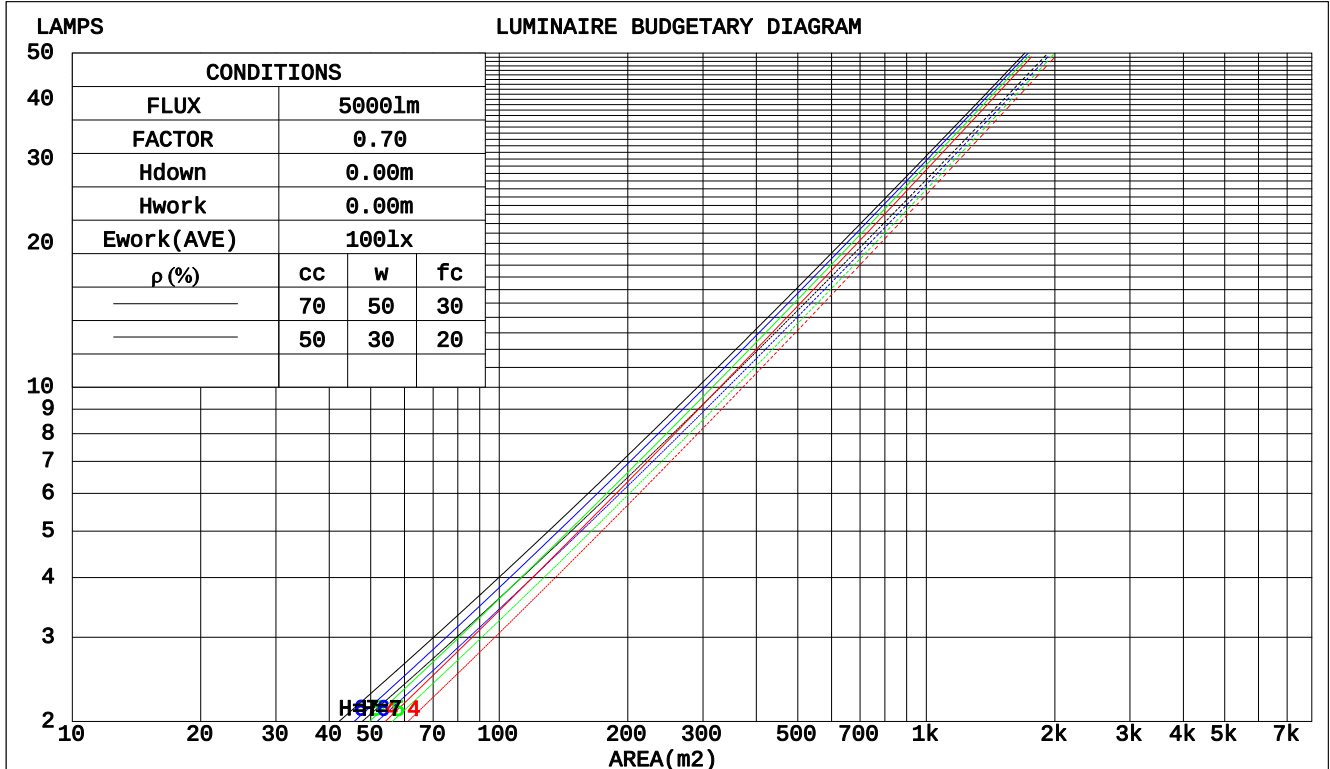
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:XYJ
 Test Date:2019-12-4

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 38D	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	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2.0	1.04	.90	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.93	.89	.96	.92	.89	.94	.90	.87	.91	.88	.86	.89	.87	.84	.83
4.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.84	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.78	.85	.80	.77	.83	.79	.76	.82	.78	.76	.74
6.0	.83	.78	.74	.82	.77	.74	.81	.76	.73	.79	.76	.73	.78	.75	.72	.71
7.0	.79	.74	.70	.78	.73	.70	.77	.73	.69	.76	.72	.69	.75	.71	.69	.67
8.0	.76	.70	.67	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.66	.64
9.0	.72	.67	.64	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.66	.63	.62
10.0	.69	.64	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.67	.63	.60	.59



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 38D	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	.169	.096	.030	.162	.093	.029	.150	.086	.027	.138	.080	.026	.128	.074	.024		
2.0	.160	.087	.027	.154	.085	.026	.144	.080	.025	.134	.075	.024	.125	.071	.022		
3.0	.150	.080	.024	.145	.078	.023	.137	.074	.022	.128	.070	.022	.121	.067	.021		
4.0	.141	.073	.022	.137	.072	.021	.130	.069	.021	.123	.066	.020	.116	.063	.019		
5.0	.134	.068	.020	.130	.067	.019	.124	.064	.019	.117	.062	.018	.112	.060	.018		
6.0	.127	.063	.018	.123	.062	.018	.118	.060	.018	.112	.058	.017	.107	.057	.017		
7.0	.120	.059	.017	.118	.059	.017	.112	.057	.016	.108	.055	.016	.103	.054	.016		
8.0	.114	.056	.016	.112	.055	.016	.108	.054	.015	.103	.052	.015	.099	.051	.015		
9.0	.109	.053	.015	.107	.052	.015	.103	.051	.014	.099	.050	.014	.096	.049	.014		
10.0	.105	.050	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014	.093	.047	.013		

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	.162	.162	.162	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.157	.145	.145	.134	.125	.099	.092	.086	.057	.054	.050	.018	.017	.016	
2.0	.154	.132	.113	.132	.114	.098	.090	.079	.068	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.091	.121	.097	.079	.083	.068	.055	.048	.040	.033	.015	.013	.011	
4.0	.130	.098	.074	.111	.085	.064	.077	.059	.045	.044	.035	.027	.014	.011	.009	
5.0	.120	.086	.061	.103	.075	.053	.071	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.112	.077	.051	.097	.067	.045	.067	.047	.032	.039	.027	.019	.012	.009	.006	
7.0	.105	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.099	.063	.038	.086	.054	.033	.059	.038	.023	.034	.023	.014	.011	.007	.005	
9.0	.094	.057	.033	.081	.050	.028	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.089	.053	.029	.077	.046	.025	.053	.032	.018	.031	.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 38D						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		18.1	18.9	18.3	19.1	19.3	17.8	18.6	18.0	18.8	19.0
3H		18.8	19.6	19.0	19.7	19.9	18.5	19.3	18.7	19.5	19.7
4H		19.0	19.7	19.2	19.9	20.1	18.7	19.4	19.0	19.7	19.9
6H		19.1	19.8	19.4	20.0	20.3	18.8	19.5	19.1	19.7	20.0
8H		19.1	19.8	19.4	20.0	20.3	18.8	19.5	19.1	19.7	20.0
12H		19.0	19.7	19.4	20.0	20.2	18.8	19.4	19.1	19.7	20.0
4H 2H		18.3	19.1	18.6	19.3	19.5	18.1	18.8	18.3	19.0	19.3
3H		19.2	19.8	19.5	20.1	20.4	18.9	19.6	19.2	19.9	20.1
4H		19.4	20.0	19.8	20.3	20.6	19.2	19.8	19.6	20.1	20.4
6H		19.6	20.1	20.0	20.5	20.8	19.4	19.9	19.8	20.3	20.6
8H		19.6	20.1	20.0	20.5	20.8	19.4	19.9	19.8	20.2	20.6
12H		19.6	20.1	20.0	20.4	20.8	19.4	19.8	19.8	20.2	20.6
8H 4H		19.5	20.0	19.9	20.3	20.7	19.3	19.8	19.7	20.1	20.5
6H		19.7	20.1	20.2	20.5	21.0	19.5	19.9	20.0	20.3	20.7
8H		19.8	20.1	20.2	20.6	21.0	19.6	19.9	20.0	20.3	20.8
12H		19.8	20.1	20.2	20.5	21.0	19.5	19.8	20.0	20.3	20.8
12H 4H		19.5	19.9	19.9	20.3	20.7	19.3	19.7	19.7	20.1	20.5
6H		19.7	20.1	20.2	20.5	20.9	19.5	19.9	20.0	20.3	20.7
8H		19.8	20.1	20.2	20.5	21.0	19.6	19.9	20.0	20.3	20.8
Variations with the observer position at spacings:											
S = 1.0H		+ 0.8 / - 0.9					+ 0.7 / - 0.9				
1.5H		+ 1.7 / - 0.8					+ 1.4 / - 0.7				
2.0H		+ 0.5 / - 0.5					+ 0.4 / - 0.5				

CIE Pub.117, 2227 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.8$)

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 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

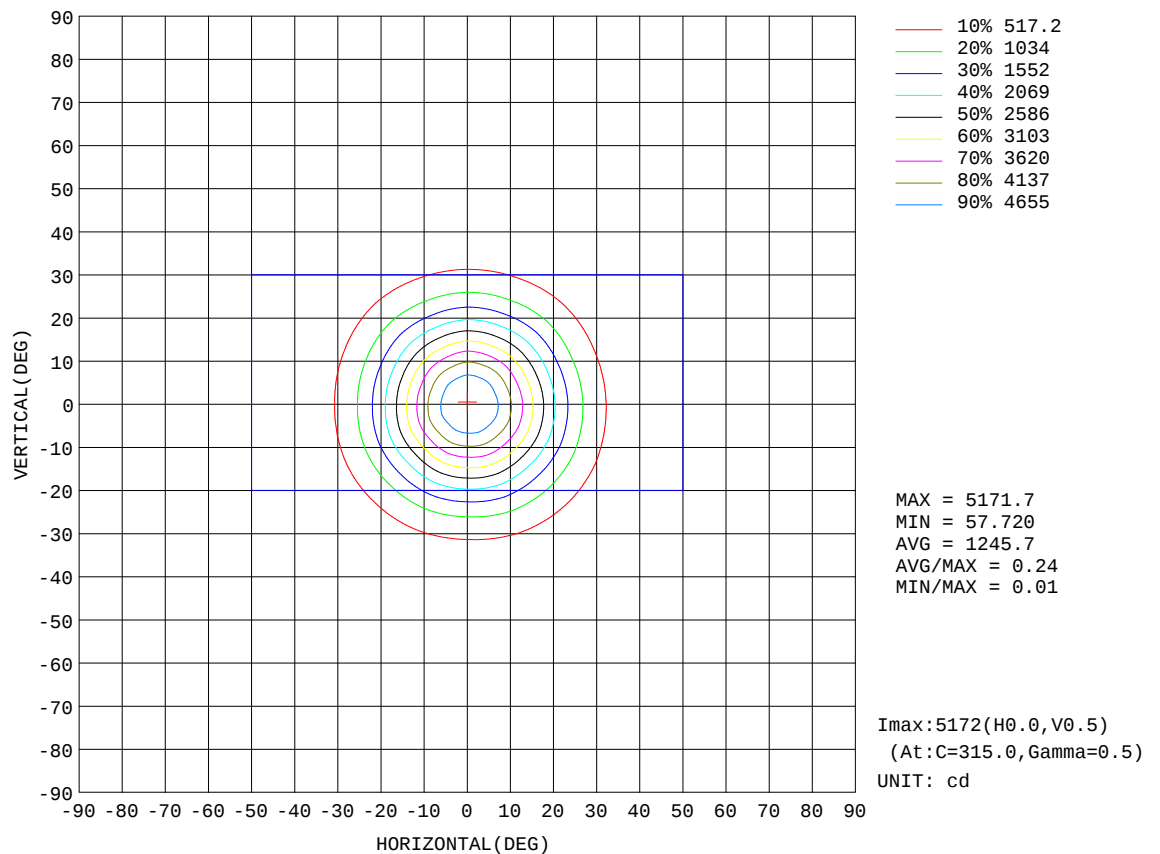
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	86	79	75	85	79	75	85	79	75	72
0.80	93	87	83	93	87	83	91	86	83	79
1.00	98	92	88	97	91	88	95	91	87	83
1.25	102	96	93	101	96	92	99	95	92	87
1.50	105	100	96	103	99	96	101	97	95	90
2.00	107	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	104	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	108	106	107	105	104	97
5.00	114	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: 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 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

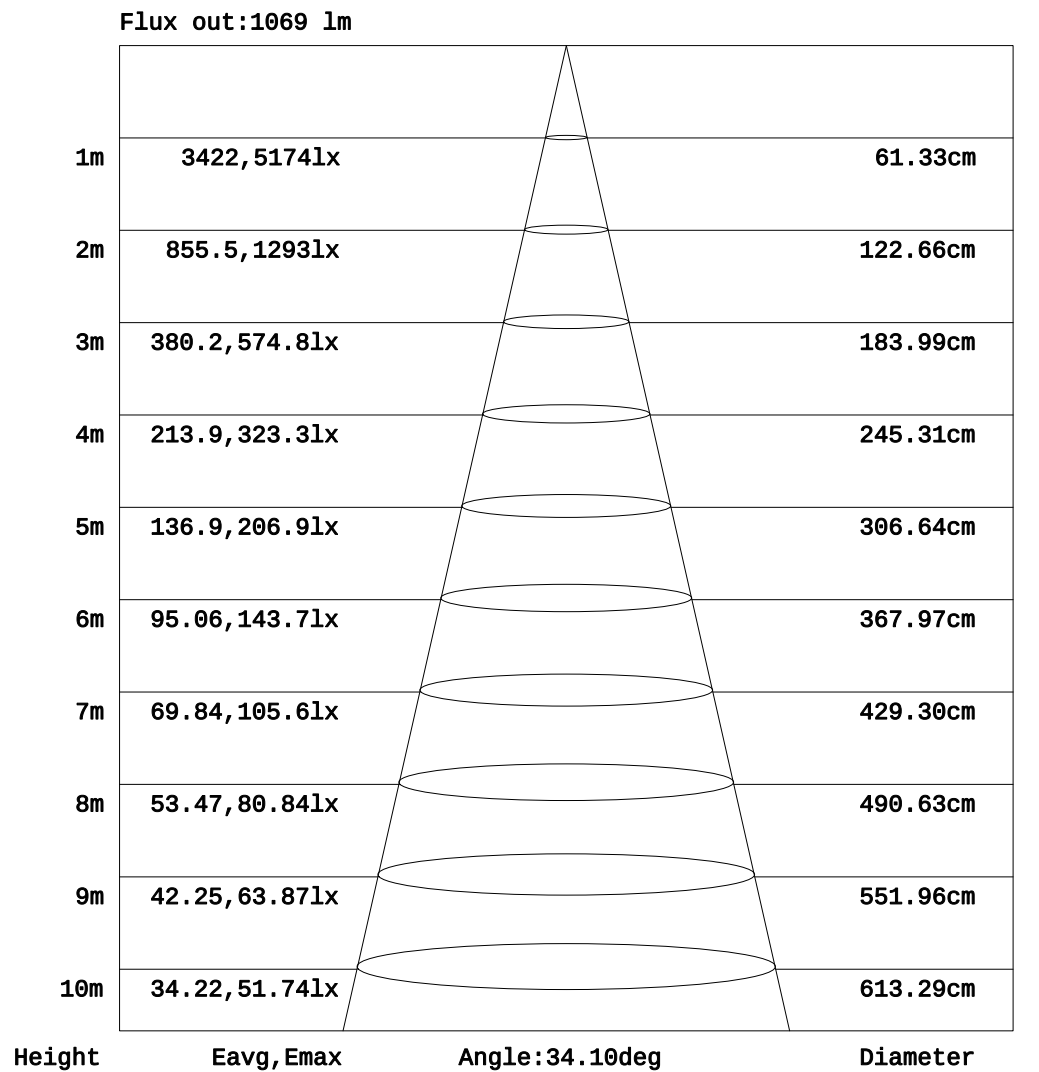


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:XYJ
Test Date:2019-12-4

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 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



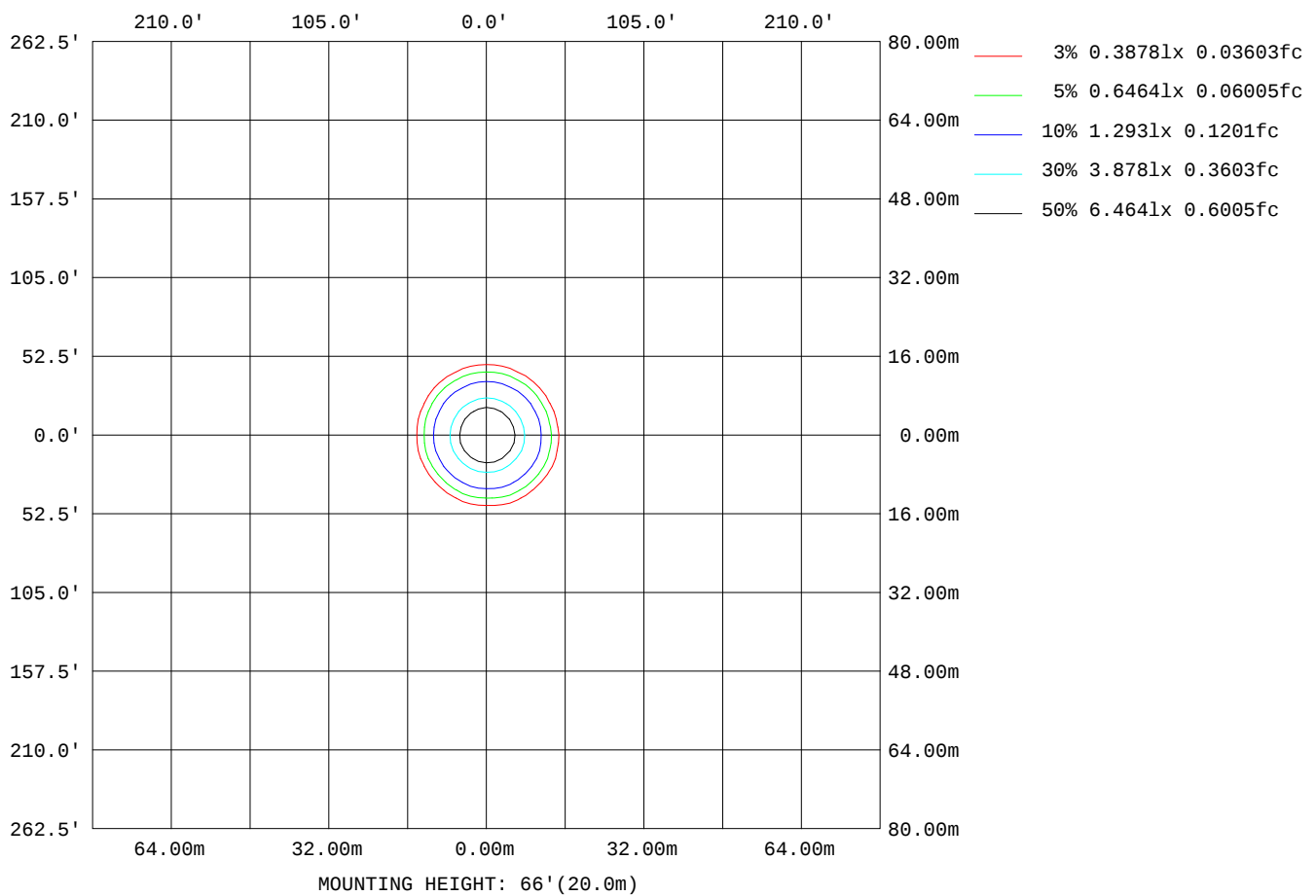
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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 38D	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 38D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

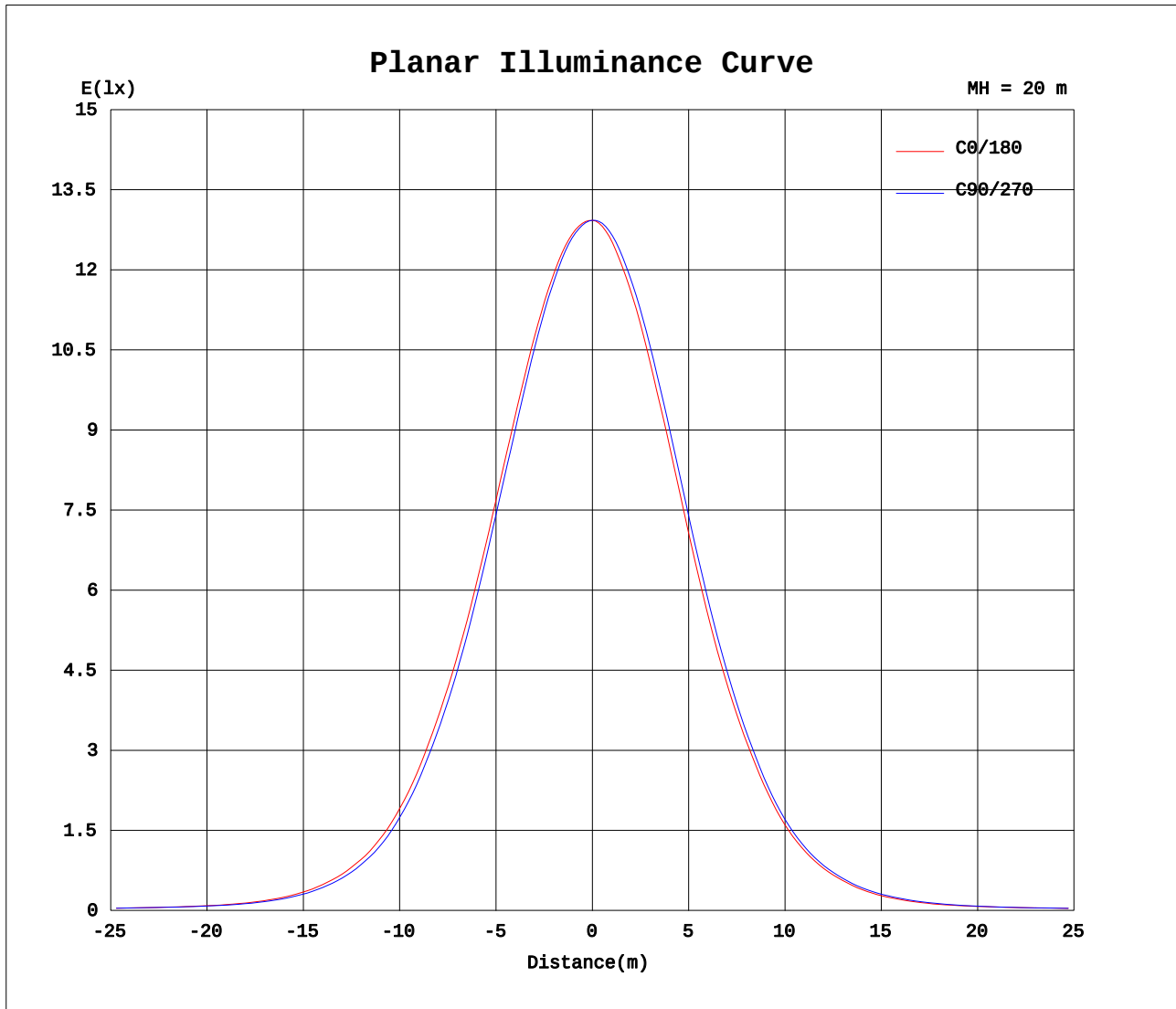
AvgL	cd/m2
L_0~180(65)av	27969
L_0~180(75)av	18058
L_0~180(85)av	5551
L_90~270(65)av	27940
L_90~270(75)av	18172
L_90~270(85)av	5470
L_45(65)av	27784
L_45(75)av	18045
L_45(85)av	5474

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 38D	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 G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

```