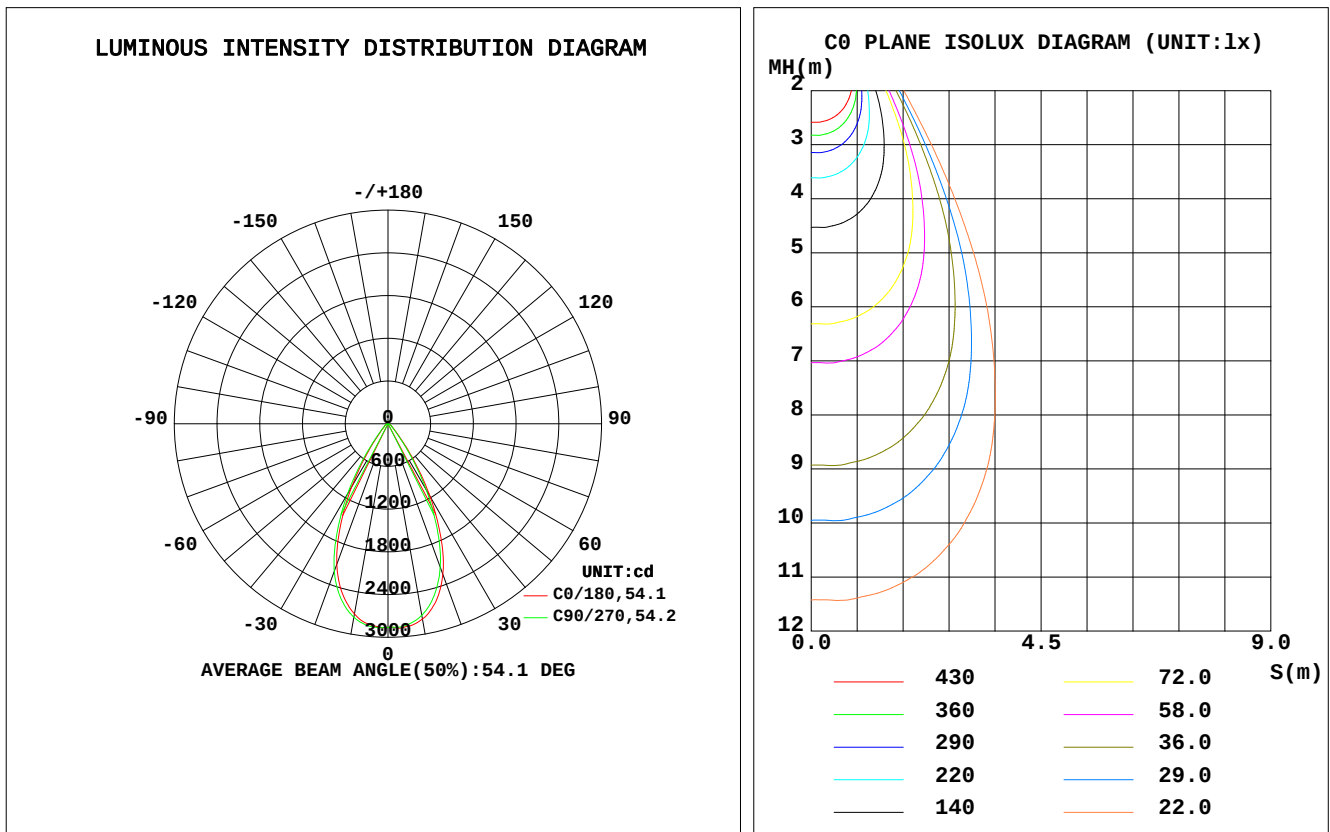


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: VN-TL0025-21	TYPE: LED TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 97.45 lm/W			
MODEL	CXM-14	Imax(cd)	2875	S/MH(C0/180)	0.80
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	0.83
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	2329.2	η UP, DN(C0-180)	0.0, 50.1
NOMINAL FLUX(lm)	2329.15	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.85



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: HTJ
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:

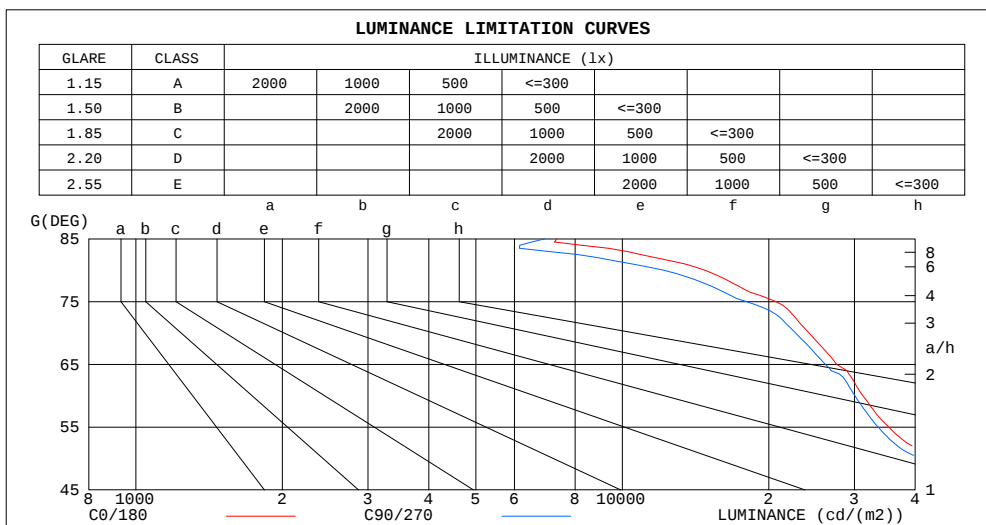
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2786	2766	2732	2717	2714	2730	2759	2769	0- 10	268.8	268.8	11.5,11.5
20	2253	2214	2145	2097	2104	2157	2206	2230	10- 20	701.5	970.3	41.7,41.7
30	1189	1140	1085	1027	1017	1077	1134	1161	20- 30	752.5	1723	74,74
40	299.0	286.4	258.8	246.3	227.1	232.8	274.1	290.8	30- 40	379.1	2102	90.2,90.2
50	94.45	95.02	85.34	84.88	78.69	76.28	87.85	90.97	40- 50	115.1	2217	95.2,95.2
60	49.96	49.21	48.36	47.03	47.20	47.95	49.07	49.38	50- 60	56.98	2274	97.6,97.6
70	26.50	25.59	24.98	23.89	23.44	24.43	25.28	26.26	60- 70	35.87	2310	99.2,99.2
80	8.211	7.663	6.795	6.162	5.924	6.427	7.136	7.782	70- 80	16.40	2326	99.9,99.9
90	0.7874	0.6772	0.6830	0.6890	0.6577	0.6375	0.6609	0.7112	80- 90	2.860	2329	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:HTJ
 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 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7339	6920
80	14771	12164
75	20674	17983
70	24202	22703
65	27566	26141
60	31211	30063
55	35280	33558
50	45900	41270
45	68836	60060

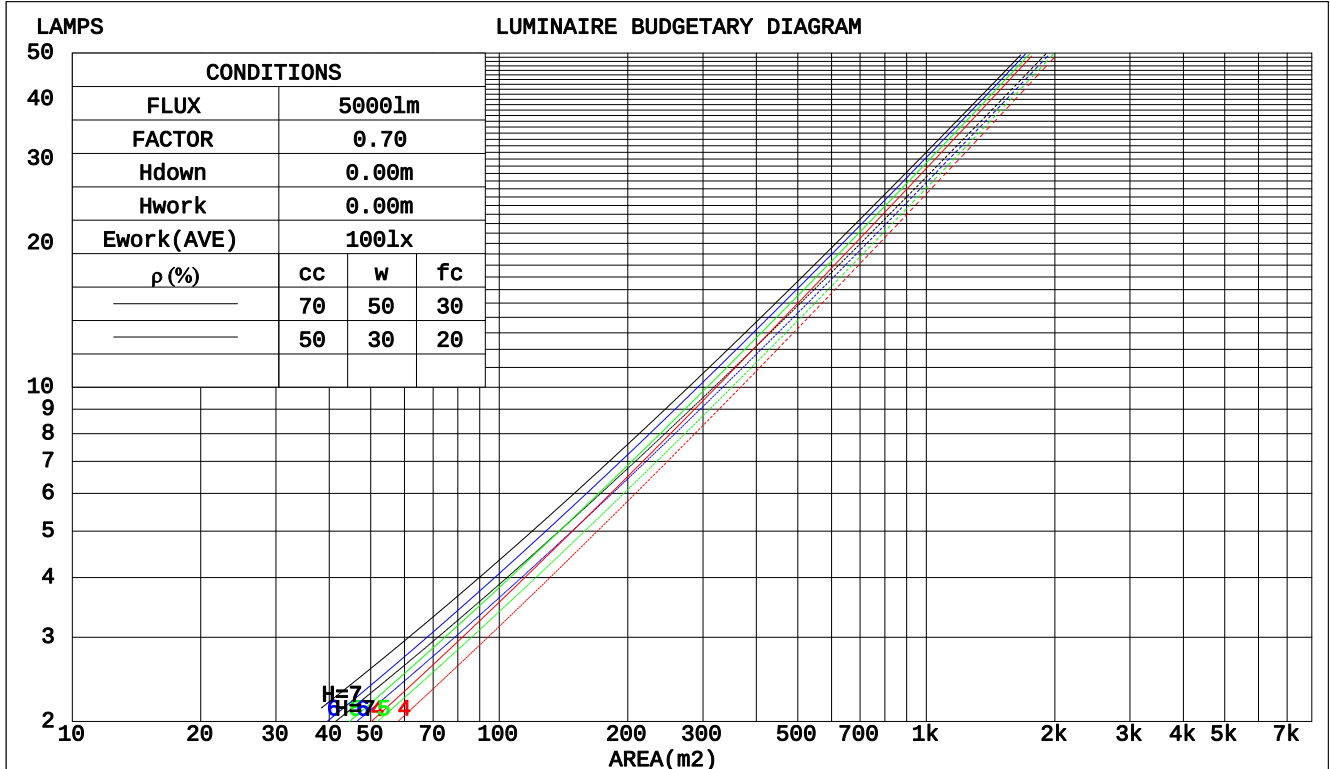
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:HTJ
Test Date:2019-12-4

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 60D	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)															
RCR:Room Cavity Ratio																
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	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.86
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.80	.88	.83	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.84	.78	.74	.83	.78	.73	.81	.76	.73	.80	.75	.72	.78	.74	.71	.70
6.0	.79	.73	.69	.78	.73	.68	.77	.72	.68	.75	.71	.67	.74	.70	.67	.66
7.0	.74	.68	.64	.74	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.62
8.0	.70	.64	.60	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.62	.59	.58
9.0	.67	.61	.57	.66	.60	.57	.65	.60	.56	.64	.60	.56	.63	.59	.56	.55
10.0	.63	.57	.54	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.52



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:HTJ
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 60D	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	.183	.104	.033	.176	.100	.032	.163	.094	.030	.152	.088	.028	.141	.082	.026		
2.0	.174	.096	.029	.169	.093	.029	.158	.088	.027	.148	.083	.026	.139	.079	.025		
3.0	.165	.088	.026	.160	.086	.026	.151	.082	.025	.143	.078	.024	.135	.075	.023		
4.0	.157	.081	.024	.153	.080	.024	.145	.077	.023	.137	.074	.022	.131	.071	.022		
5.0	.149	.076	.022	.145	.074	.022	.138	.072	.021	.132	.070	.021	.126	.067	.020		
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.127	.066	.019	.121	.064	.019		
7.0	.135	.067	.019	.132	.066	.019	.127	.064	.018	.122	.062	.018	.117	.061	.018		
8.0	.129	.063	.018	.126	.062	.018	.121	.061	.017	.117	.059	.017	.113	.058	.017		
9.0	.123	.059	.017	.121	.059	.017	.117	.058	.016	.113	.056	.016	.109	.055	.016		
10.0	.118	.056	.016	.116	.056	.016	.112	.055	.015	.108	.054	.015	.105	.053	.015		

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	.100	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.108	.076	.052	.074	.053	.036	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.041	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.096	.055	.027	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:HTJ
 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 60D						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	20.2	21.2	20.5	21.4	21.5	19.9	20.8	20.1	21.0	21.2	
3H	20.5	21.3	20.7	21.5	21.7	20.1	21.0	20.3	21.2	21.4	
4H	20.5	21.4	20.8	21.6	21.8	20.2	21.0	20.4	21.2	21.4	
6H	20.6	21.3	20.9	21.6	21.8	20.2	20.9	20.5	21.2	21.4	
8H	20.5	21.3	20.8	21.5	21.8	20.1	20.9	20.4	21.1	21.4	
12H	20.5	21.2	20.8	21.5	21.8	20.1	20.8	20.4	21.1	21.4	
4H 2H	20.2	21.0	20.5	21.3	21.5	19.8	20.7	20.1	20.9	21.1	
3H	20.5	21.3	20.9	21.5	21.8	20.2	20.9	20.5	21.2	21.5	
4H	20.7	21.3	21.0	21.6	21.9	20.3	21.0	20.7	21.3	21.6	
6H	20.7	21.3	21.1	21.7	22.0	20.4	20.9	20.7	21.3	21.6	
8H	20.7	21.3	21.1	21.6	22.0	20.3	20.9	20.7	21.2	21.6	
12H	20.7	21.2	21.1	21.6	22.0	20.3	20.8	20.7	21.2	21.6	
8H 4H	20.7	21.2	21.0	21.5	21.9	20.3	20.8	20.7	21.2	21.6	
6H	20.8	21.2	21.2	21.6	22.0	20.4	20.8	20.8	21.2	21.6	
8H	20.8	21.1	21.2	21.6	22.0	20.4	20.8	20.8	21.2	21.6	
12H	20.7	21.1	21.2	21.5	22.0	20.3	20.7	20.8	21.1	21.6	
12H 4H	20.6	21.1	21.0	21.5	21.9	20.3	20.8	20.7	21.1	21.5	
6H	20.7	21.1	21.2	21.5	22.0	20.4	20.7	20.8	21.2	21.6	
8H	20.7	21.1	21.2	21.5	22.0	20.4	20.7	20.8	21.1	21.6	
Variations with the observer position at spacings:											
S = 1.0H	+ 2.0 / - 2.2					+ 1.7 / - 2.1					
1.5H	+ 3.6 / - 1.9					+ 3.2 / - 1.9					
2.0H	+ 2.0 / - 0.9					+ 1.8 / - 1.0					

CIE Pub.117, 2329 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.9$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:HTJ
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:

UTILIZATION FACTORS TABLE

NAME: VN-TL0025-21	TYPE: LED TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

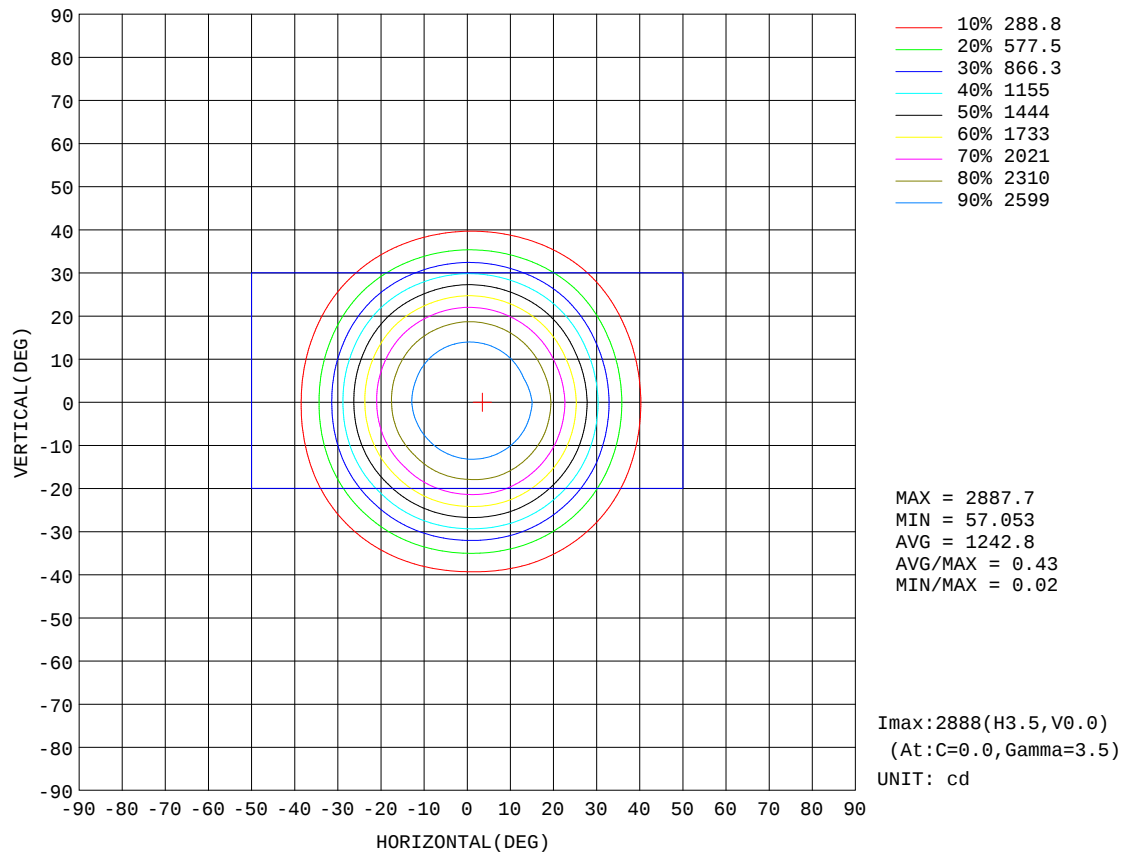
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	79	75	85	79	75	84	78	75	71
0.80	93	87	83	92	87	83	91	86	82	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	104	99	96	101	97	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	105	102	108	104	101	105	102	100	93
3.00	111	108	105	109	106	104	106	103	101	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: HTJ
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γ Range: 0 - 90DEG
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 Test Distance: 5.190m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: VN-TL0025-21	TYPE:LED TRACK LIGHT	WEIGHT:
SPEC.:CRI90 3000K 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

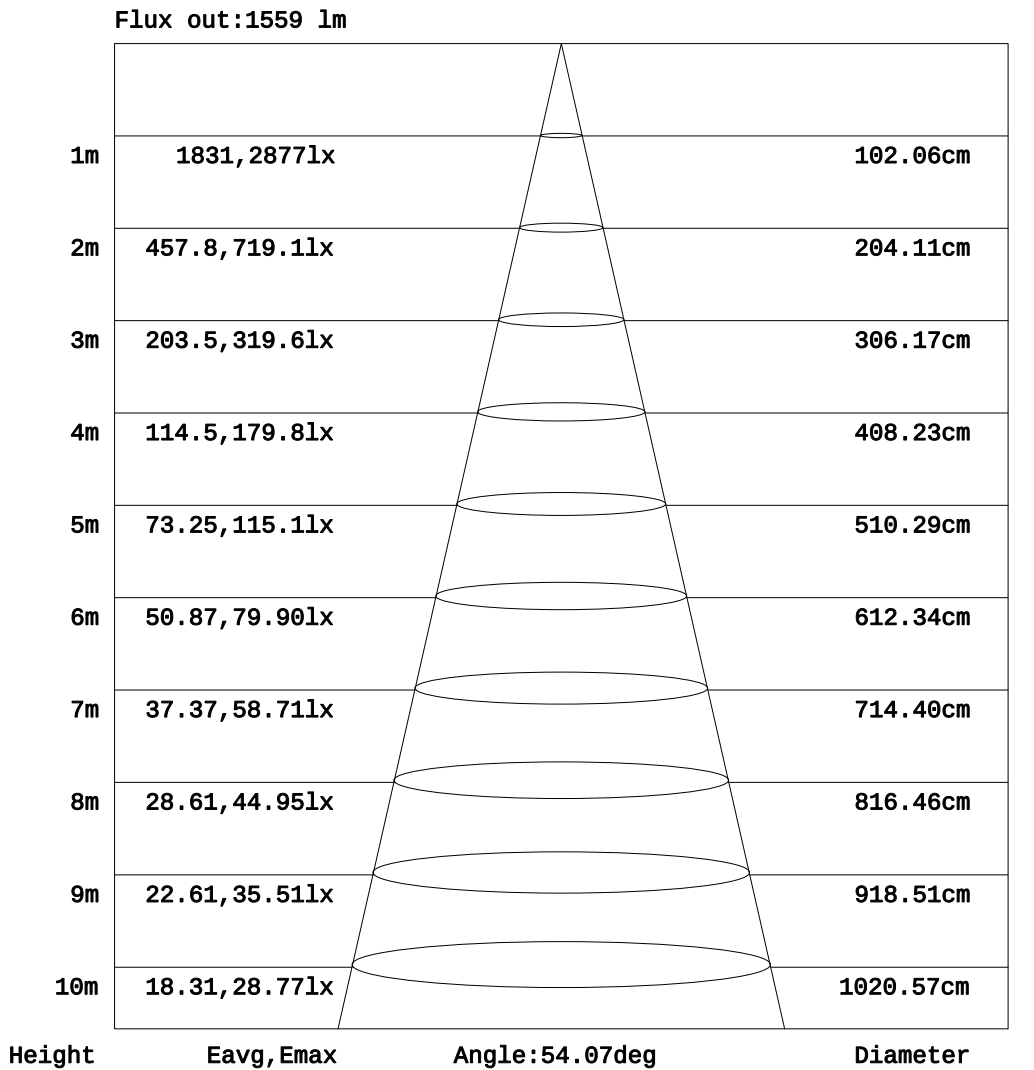


C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
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Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

AAI Figure

NAME: VN-TL0025-21	TYPE: LED TRACK LIGHT	WEIGHT:
SPEC.: CRI90 3000K 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



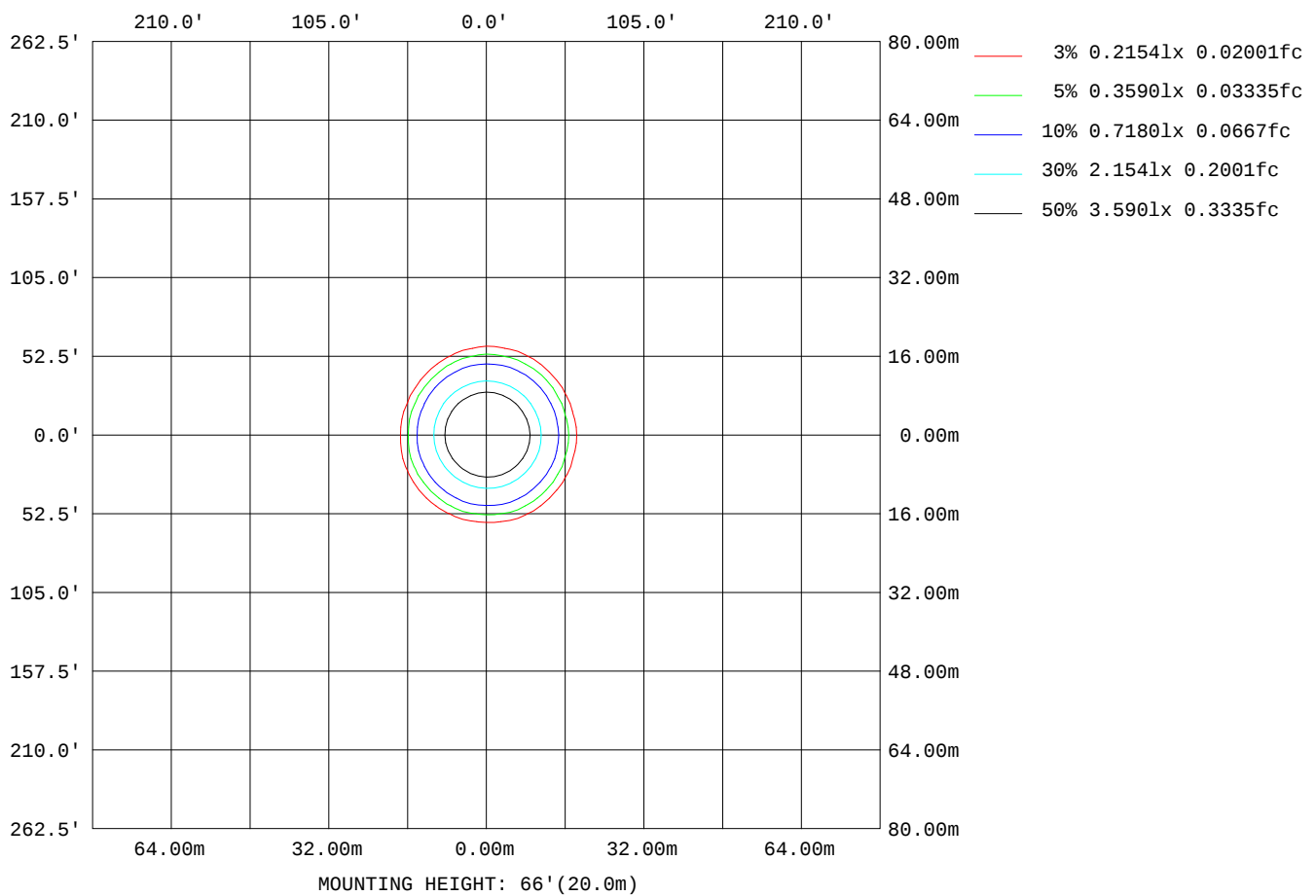
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: HTJ
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 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
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Test Speed: MEDIUM
Temperature: 25.3DEG
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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 60D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

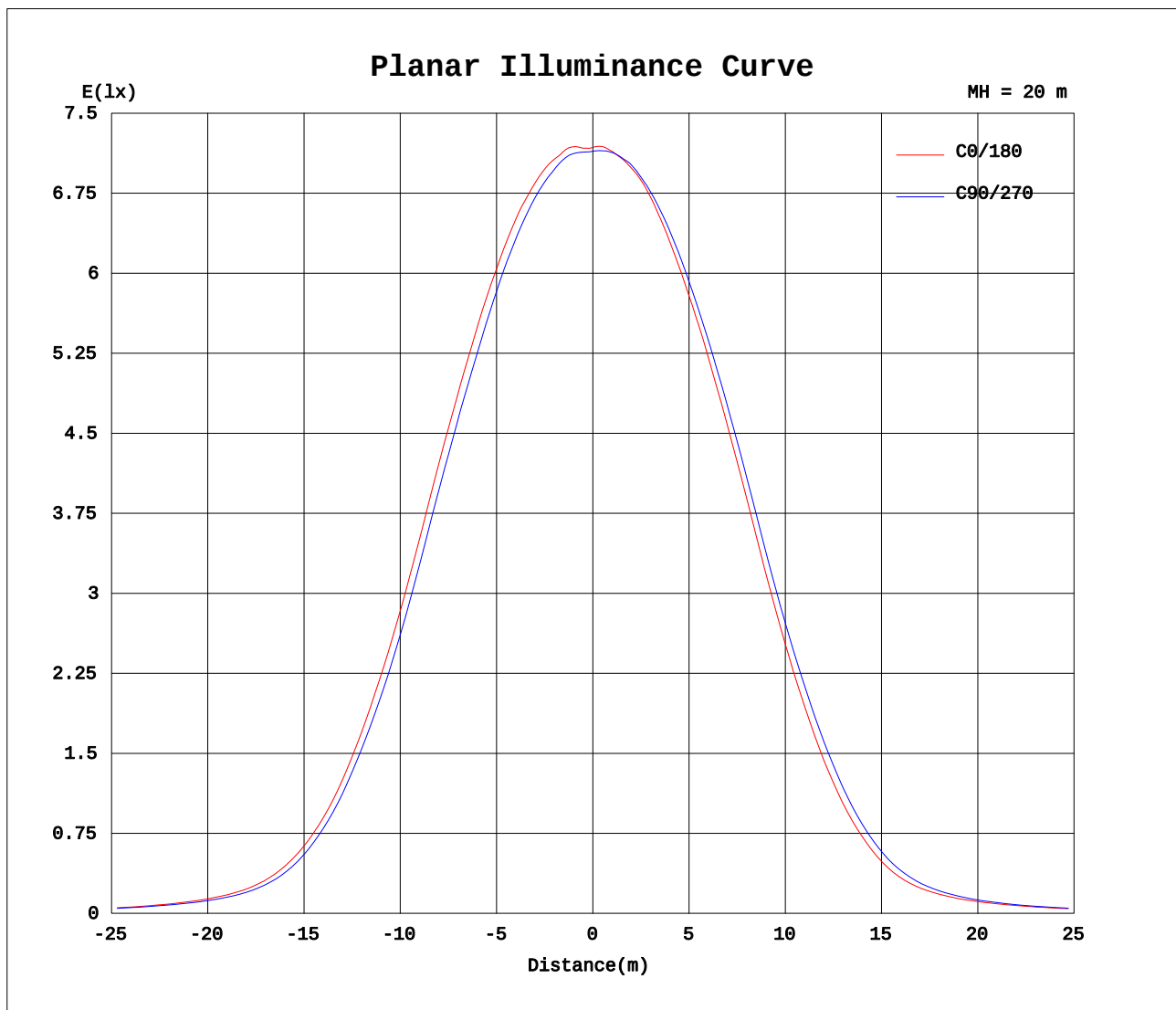
AvgL	cd/m2
L_0~180(65)av	26274
L_0~180(75)av	18420
L_0~180(85)av	6997
L_90~270(65)av	26314
L_90~270(75)av	18313
L_90~270(85)av	7048
L_45(65)av	26330
L_45(75)av	18362
L_45(85)av	6992

Standard: GB/T 29293-2012

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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



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