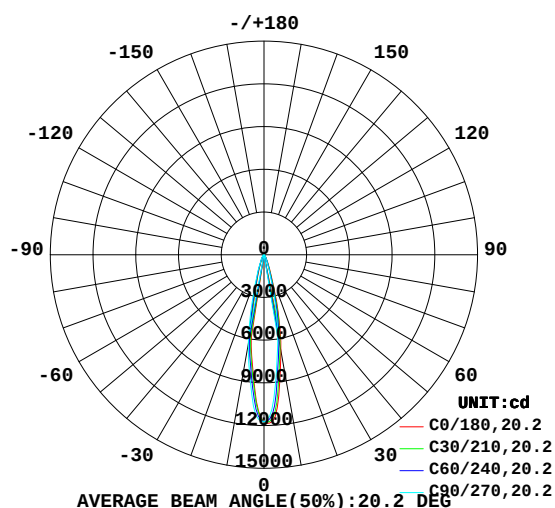


LUMINAIRE PHOTOMETRIC TEST REPORT

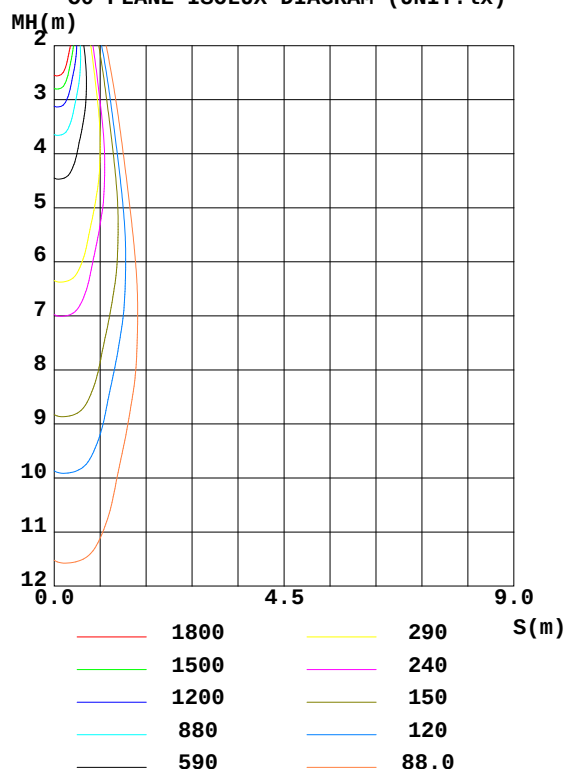
NAME: VN-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 90.42 lm/W
MODEL	CXA1820	Imax(cd)	11846	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)	2201.4	η UP, DN(C0-180)	0.0, 48.6	
NOMINAL FLUX(lm)	2201.4	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.4	
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: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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:

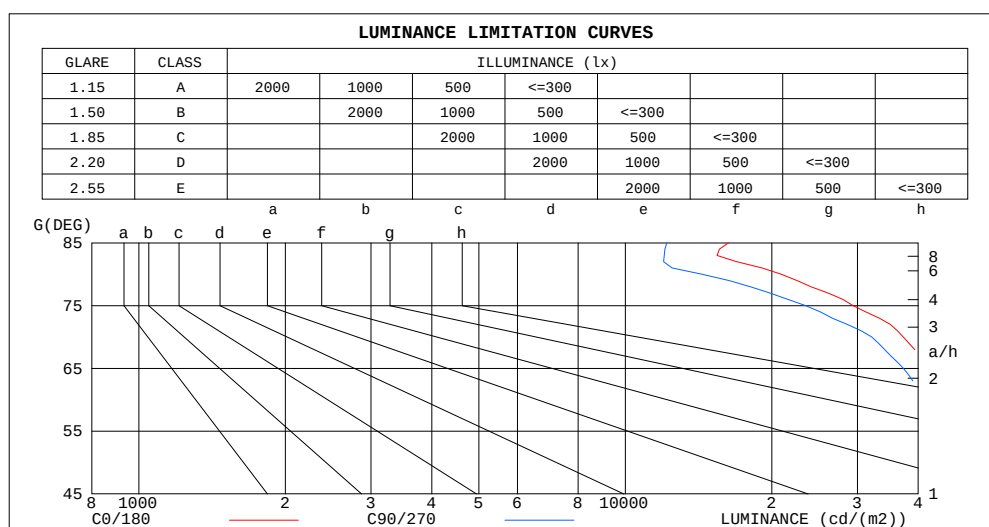
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	683.3	636.1	556.0	519.8	515.4	552.8	634.3	684.6	0- 10	793.7	793.7	36.1, 36.1
20	133.4	114.2	94.57	88.40	93.63	105.8	128.4	135.2	10- 20	774.3	1568	71.2, 71.2
30	35.46	31.52	27.57	27.16	29.28	32.75	36.17	36.03	20- 30	270.1	1838	83.5, 83.5
40	16.16	15.04	13.60	13.54	14.28	15.41	15.89	16.03	30- 40	134.7	1973	89.6, 89.6
50	9.725	9.237	8.720	8.641	8.793	9.298	9.633	9.692	40- 50	90.12	2063	93.7, 93.7
60	6.473	6.211	5.894	5.740	5.887	6.237	6.499	6.469	50- 60	67.81	2131	96.8, 96.8
70	3.617	3.390	3.106	2.959	2.950	3.172	3.504	3.582	60- 70	46.66	2177	98.9, 98.9
80	1.030	0.8934	0.7057	0.6112	0.5758	0.6750	0.8960	1.003	70- 80	20.20	2198	99.8, 99.8
90	0.1260	0.0891	0.0774	0.0787	0.0792	0.0742	0.0769	0.1087	80- 90	3.813	2201	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:×10cd									UNIT: lm		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: cjl
 Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	16307	12171
80	20910	14371
75	29381	23461
70	37266	32108
65	42453	37305
60	45625	41683
55	48570	44496
50	53321	47968
45	61077	53430

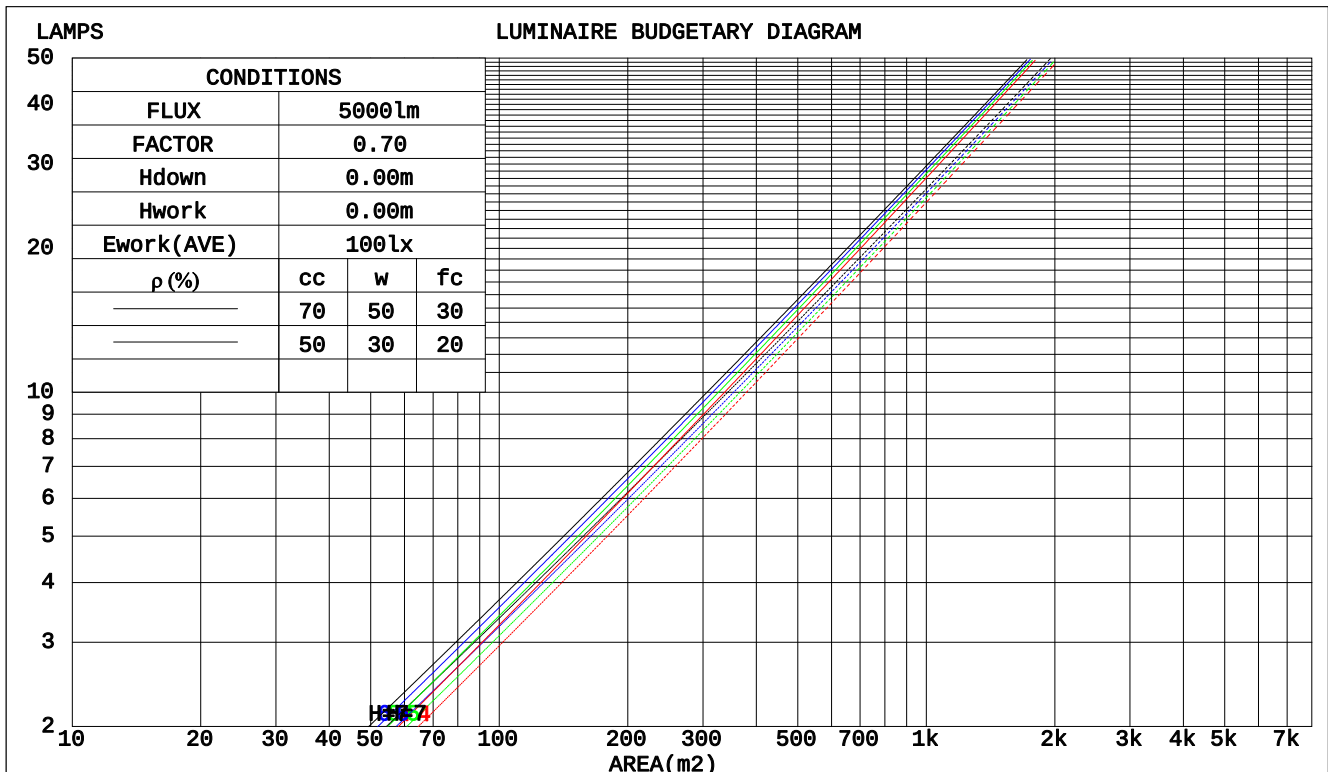
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: cjy
 Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.93	.92	.90
3.0	.00	.96	.92	.99	.95	.92	.96	.93	.90	.94	.91	.89	.92	.89	.87	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.89	.86	.90	.87	.85	.88	.86	.84	.82
5.0	.91	.86	.83	.90	.86	.83	.89	.85	.82	.87	.84	.81	.86	.83	.81	.79
6.0	.88	.83	.79	.87	.82	.79	.86	.82	.79	.84	.81	.78	.83	.80	.78	.76
7.0	.84	.80	.76	.84	.79	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
8.0	.82	.77	.74	.81	.77	.74	.80	.76	.73	.79	.76	.73	.78	.75	.73	.72
9.0	.79	.74	.71	.79	.74	.71	.78	.74	.71	.77	.73	.71	.76	.73	.71	.70
10.0	.77	.72	.69	.76	.72	.69	.76	.72	.69	.75	.71	.69	.74	.71	.69	.68



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	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	.159	.090	.029	.152	.087	.028	.140	.080	.026	.128	.074	.024	.117	.068	.022		
2.0	.148	.081	.025	.143	.079	.024	.132	.074	.023	.123	.069	.022	.114	.064	.020		
3.0	.138	.074	.022	.133	.071	.022	.125	.068	.021	.117	.064	.020	.109	.060	.019		
4.0	.129	.067	.020	.125	.065	.019	.117	.062	.019	.111	.059	.018	.104	.057	.017		
5.0	.121	.061	.018	.117	.060	.018	.111	.058	.017	.105	.055	.016	.099	.053	.016		
6.0	.113	.057	.016	.110	.056	.016	.105	.054	.016	.100	.052	.015	.095	.050	.015		
7.0	.107	.053	.015	.104	.052	.015	.100	.050	.014	.095	.049	.014	.091	.047	.014		
8.0	.101	.049	.014	.099	.049	.014	.095	.047	.014	.091	.046	.013	.087	.045	.013		
9.0	.096	.046	.013	.094	.046	.013	.090	.045	.013	.087	.043	.012	.083	.042	.012		
10.0	.091	.044	.012	.090	.043	.012	.086	.042	.012	.083	.041	.012	.080	.040	.012		

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.063	.101	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.108	.076	.054	.093	.066	.047	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.068	.046	.087	.059	.040	.060	.042	.028	.035	.024	.017	.011	.008	.006	
8.0	.094	.062	.039	.081	.054	.034	.056	.038	.024	.033	.022	.015	.011	.007	.005	
9.0	.088	.056	.034	.076	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.083	.051	.030	.072	.045	.026	.050	.031	.019	.029	.019	.011	.009	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	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	18.5	19.3	18.8	19.4	19.6	18.1	18.8	18.3	19.0	19.1
3H	19.7	20.4	19.9	20.6	20.8	19.1	19.8	19.4	20.0	20.2
4H	20.0	20.7	20.3	20.9	21.1	19.4	20.1	19.7	20.3	20.5
6H	20.2	20.8	20.5	21.1	21.3	19.5	20.1	19.8	20.3	20.6
8H	20.2	20.8	20.5	21.1	21.3	19.5	20.1	19.8	20.3	20.6
12H	20.2	20.8	20.5	21.1	21.3	19.5	20.0	19.8	20.3	20.6
4H 2H	19.0	19.7	19.3	19.9	20.1	18.6	19.3	18.9	19.5	19.7
3H	20.3	20.9	20.6	21.1	21.4	19.8	20.4	20.1	20.7	20.9
4H	20.7	21.3	21.0	21.5	21.8	20.1	20.7	20.5	21.0	21.3
6H	20.9	21.4	21.3	21.7	22.1	20.3	20.7	20.6	21.1	21.4
8H	20.9	21.4	21.3	21.7	22.1	20.3	20.7	20.7	21.1	21.4
12H	20.9	21.4	21.4	21.7	22.1	20.3	20.7	20.7	21.0	21.4
8H 4H	20.8	21.2	21.2	21.6	21.9	20.2	20.7	20.6	21.0	21.4
6H	21.0	21.4	21.5	21.8	22.2	20.4	20.8	20.8	21.2	21.6
8H	21.1	21.4	21.5	21.8	22.3	20.4	20.8	20.9	21.2	21.6
12H	21.1	21.4	21.6	21.8	22.3	20.5	20.7	20.9	21.2	21.6
12H 4H	20.7	21.2	21.1	21.5	21.9	20.2	20.6	20.6	21.0	21.4
6H	21.0	21.3	21.5	21.8	22.2	20.4	20.7	20.8	21.2	21.6
8H	21.1	21.4	21.5	21.8	22.3	20.4	20.7	20.9	21.2	21.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.5					+ 0.4 / - 0.5				
1.5H	+ 0.4 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.5 / - 0.4					+ 0.3 / - 0.5				

CIE Pub.117, 2201 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.7$)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

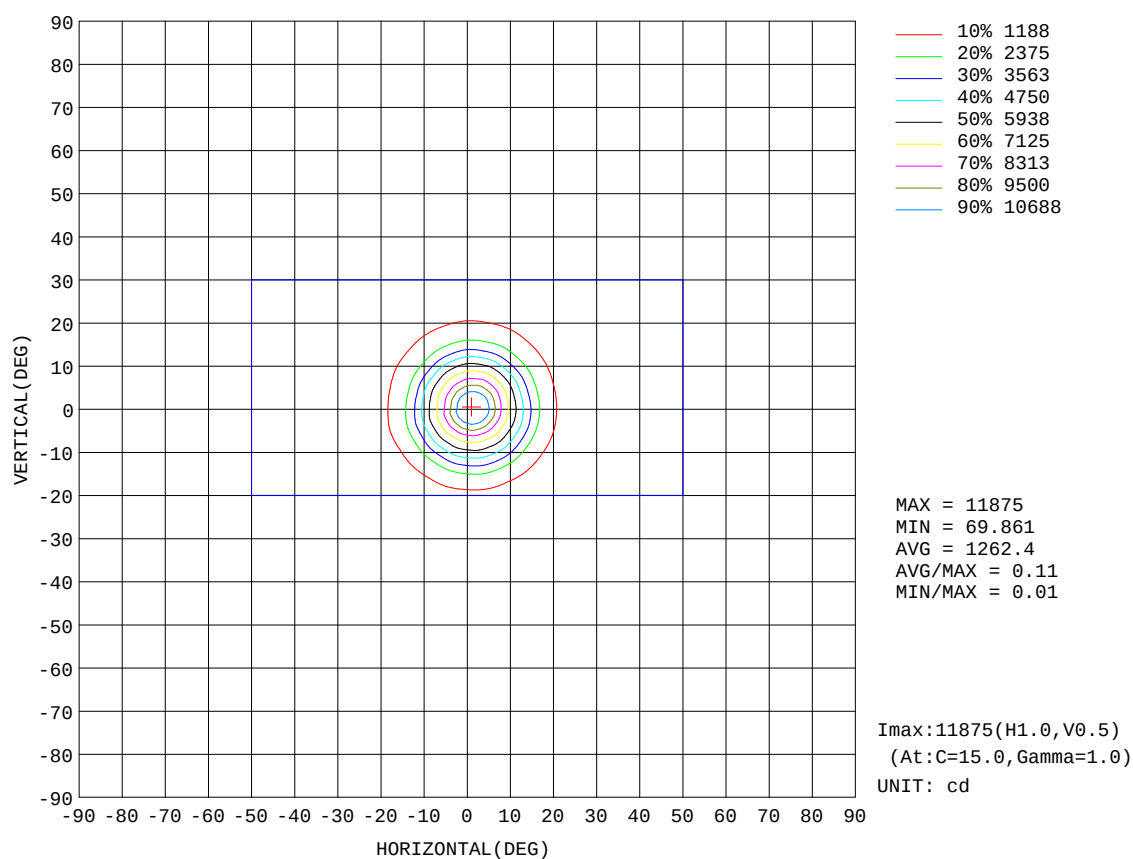
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	78	74	85	78	74	84	78	74	70
0.80	93	86	82	92	86	82	91	85	82	78
1.00	97	91	87	96	91	87	95	91	87	82
1.25	102	96	92	100	95	92	98	94	91	87
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	99	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	109	106	107	105	104	97
5.00	115	112	110	112	110	109	108	107	105	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: cjy
 Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

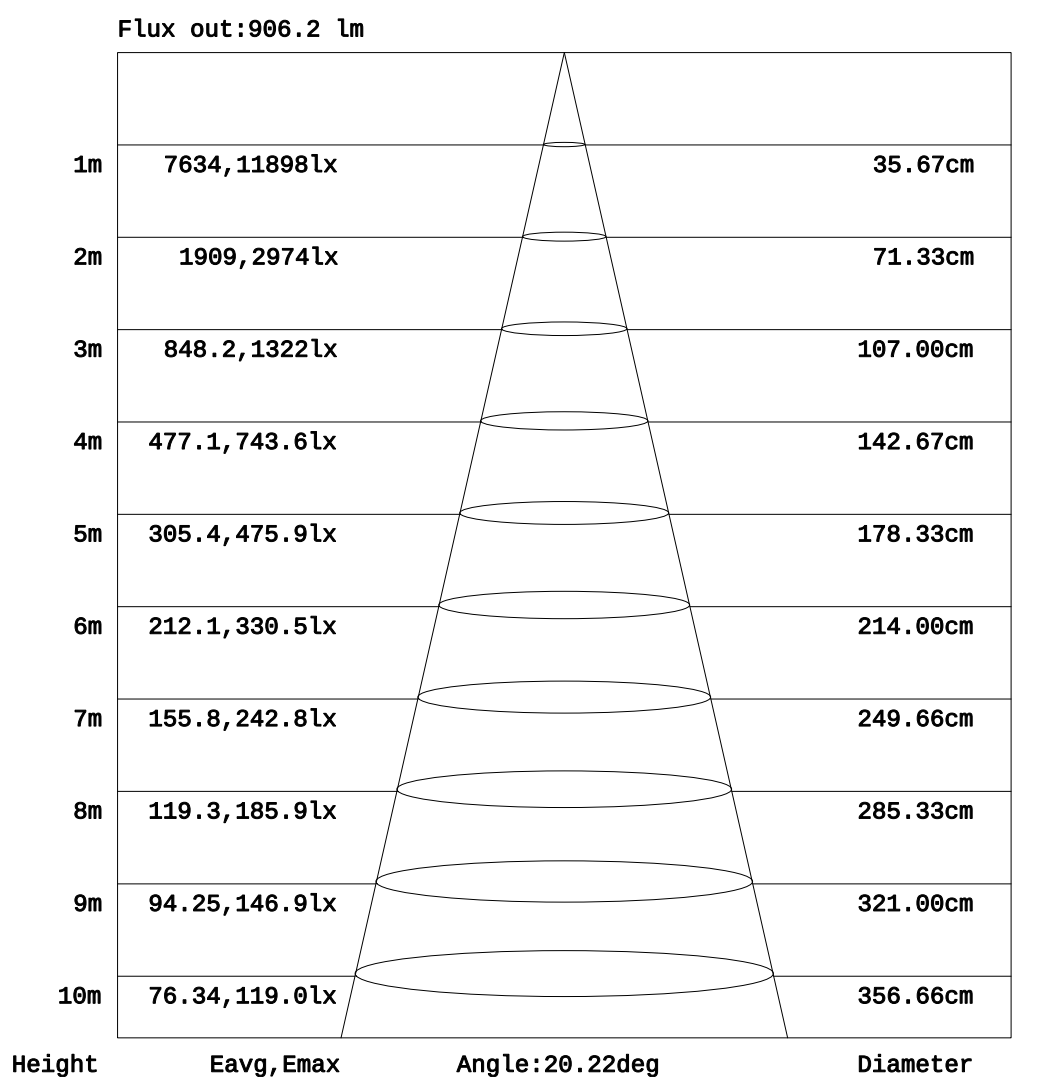


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjoy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



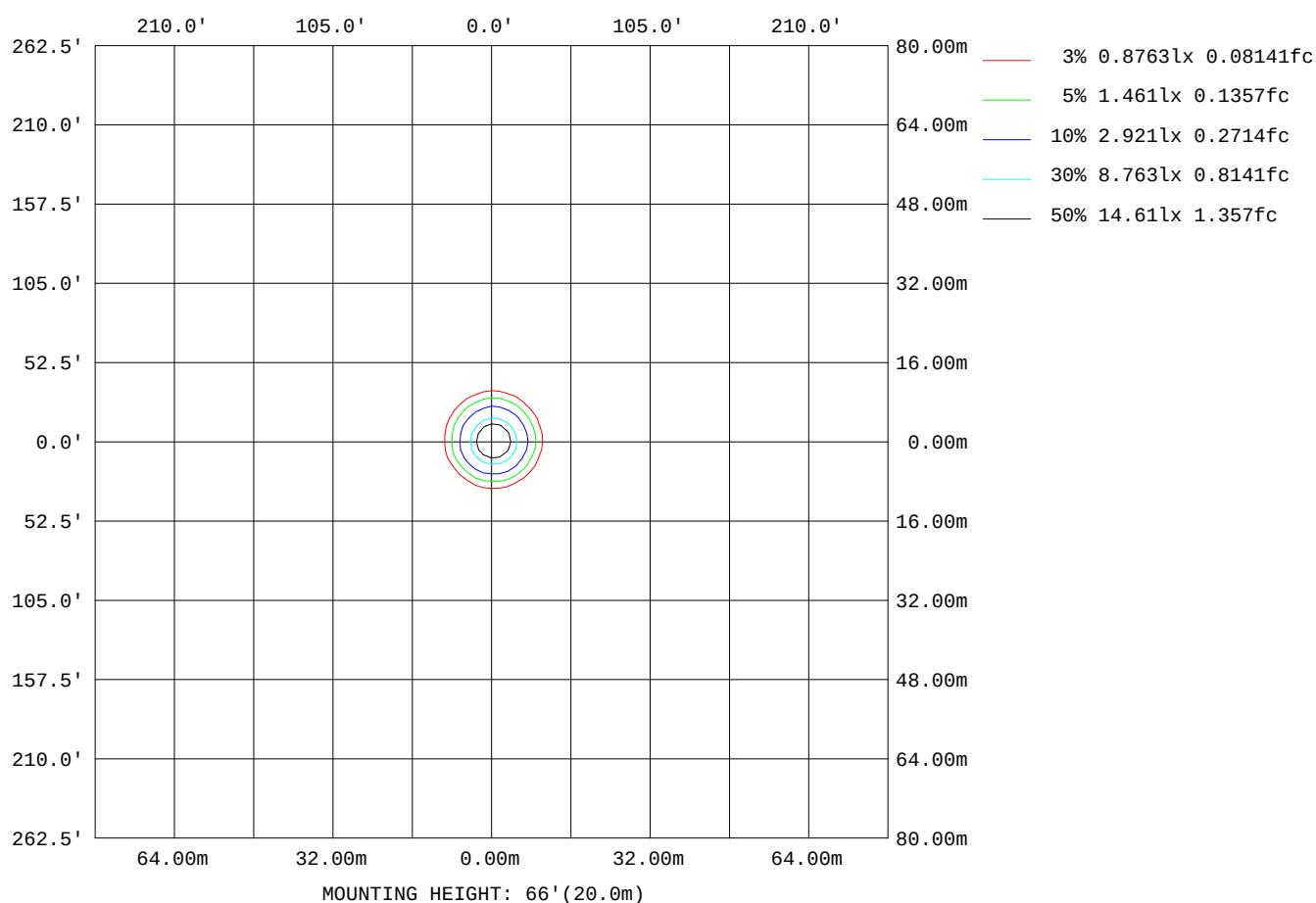
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjy
Test Date: 2019-7-24

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

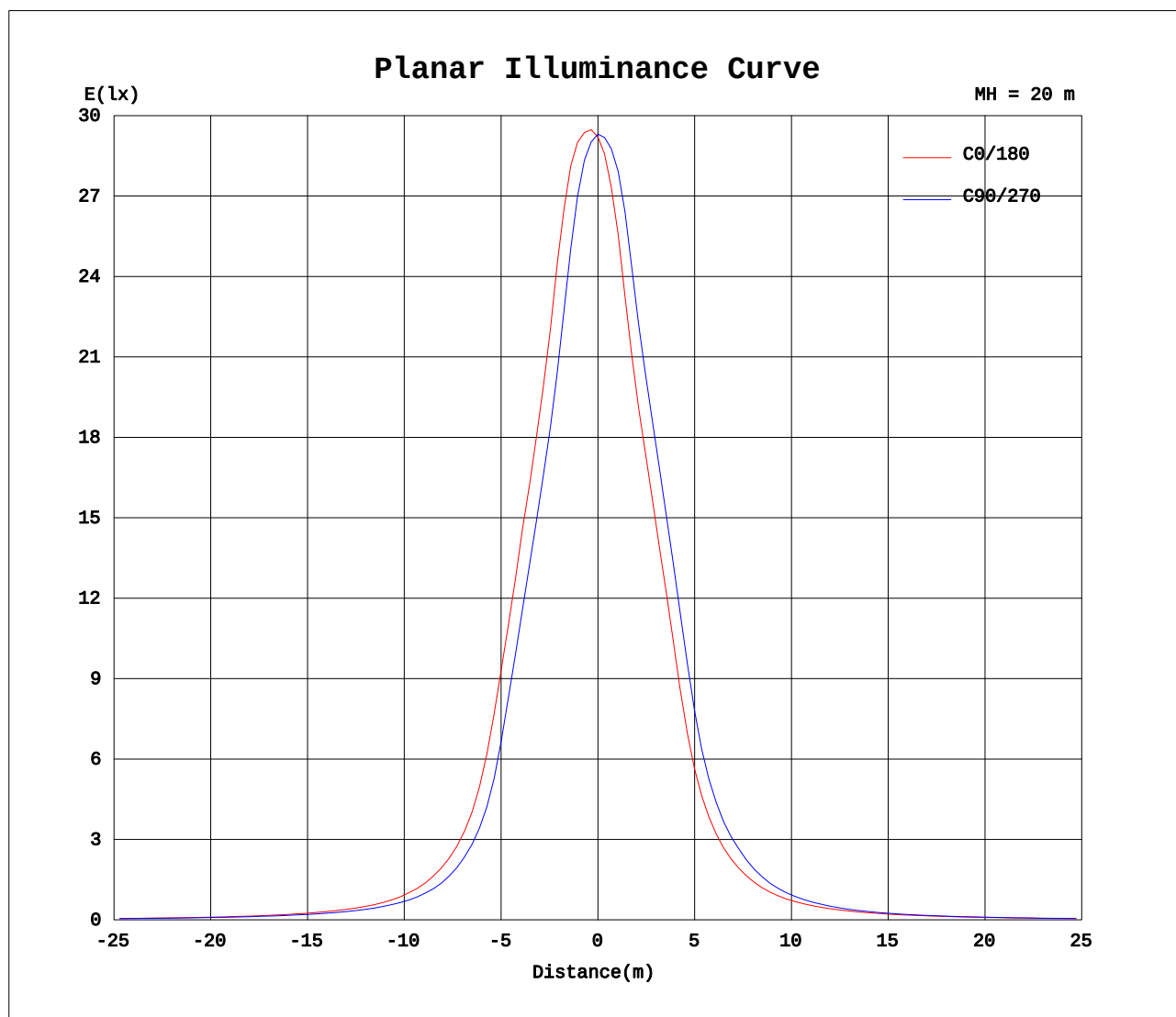
AvgL	cd/m2
L_0~180(65)av	39559
L_0~180(75)av	25285
L_0~180(85)av	13248
L_90~270(65)av	39724
L_90~270(75)av	25435
L_90~270(85)av	13098
L_45(65)av	39391
L_45(75)av	25227
L_45(85)av	13059

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: cjl
 Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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: HIGH
 Temperature: 25.3DEG
 Operators: cjy
 Test Date: 2019-7-24

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

Table - -1

UNIT: $\times 10 \text{cd}$ [illegible]

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: cjl
Test Date: 2019-7-24

```

Range: 0 - 90DEG
Interval: 1.0DEG
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-TL0025-11	TYPE: TRACK LIGHT	WEIGHT:
SPEC.: CRI80 3000K 24D	DIM.:	SERIAL No.:
MFR.: 1	SUR.:	Shielding Angle:

Table - -2

UNIT: $\times 10 \text{cd}$ [illegible]

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:cjy
Test Date:2019-7-24

```

Range: 0 - 90DEG
Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.401
Humidity:65.0%
Test Distance:5.190m [K=1.0000]
Remarks:

```