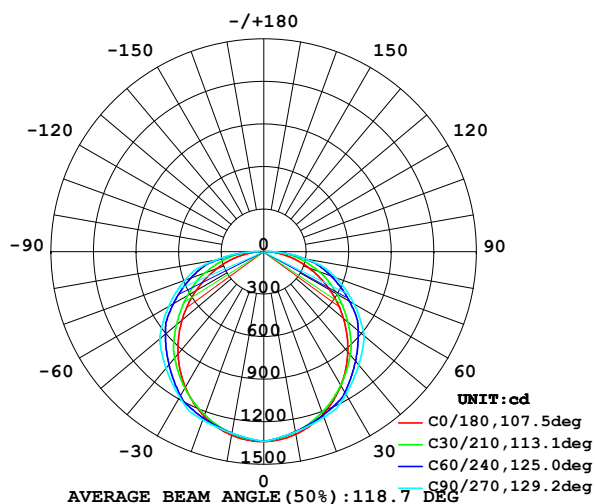


## LUMINAIRE PHOTOMETRIC TEST REPORT

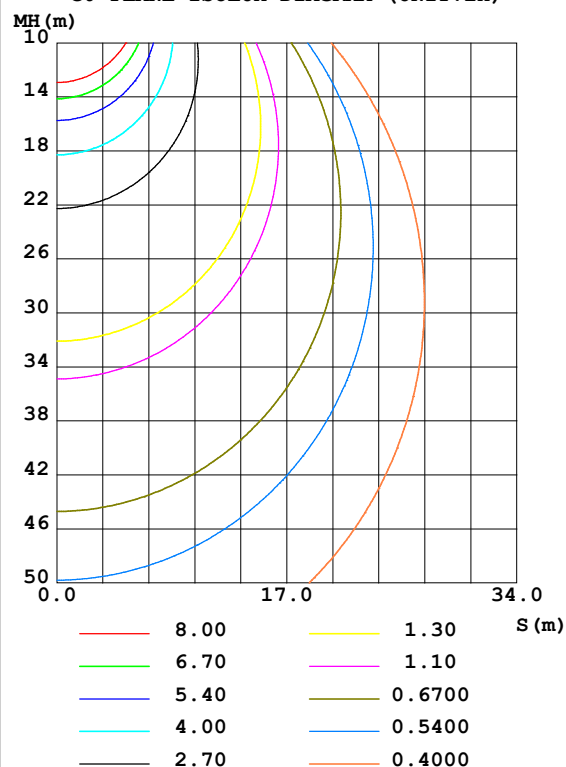
Test:U:120.1V I:0.2311A P:27.70W PF:0.9983 Lamp Flux:4178.67x1 lm		
NAME: LOC-14TRKT-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1155*95	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 150.84 lm/W			
MODEL		I <sub>max</sub> (cd)	1339	S/MH (C0/180)	1.23
NOMINAL POWER(W)	29	LOR(%)	100.0	S/MH (C90/270)	1.32
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	4178.7	η UP,DN(C0-180)	0.0,49.2
NOMINAL FLUX(lm)	4178.67	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2020-03-12

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity: 50%  
 Test Distance: 8.600m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

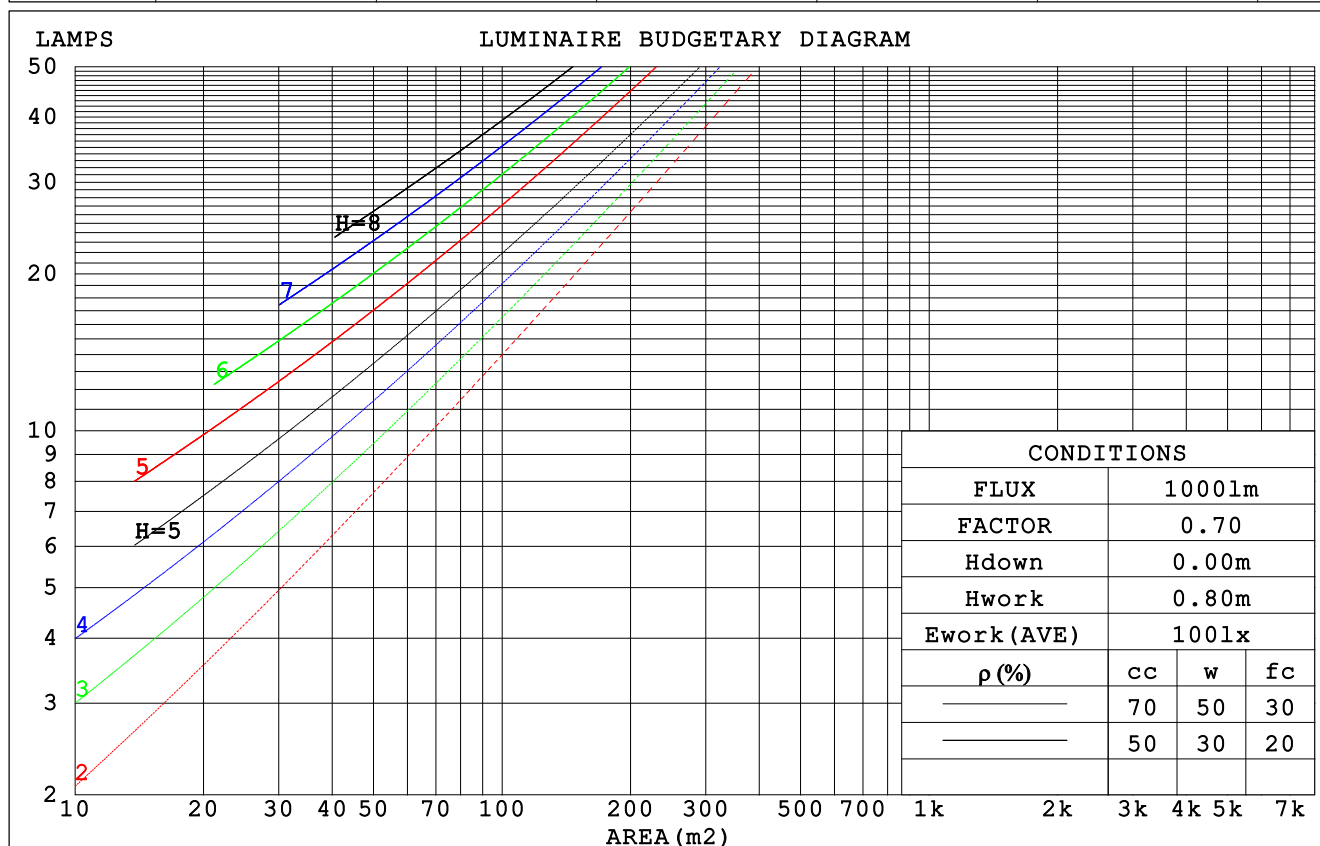
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
5	1330	1317	1315	1320	1334	1323	1320	1321	0- 5	31.76	31.76	0.76,0.76
10	1307	1289	1291	1293	1314	1300	1301	1295	5- 10	93.64	125.4	3,3
15	1270	1254	1267	1259	1280	1270	1281	1263	10- 15	152.0	277.4	6.64,6.64
20	1221	1214	1243	1220	1233	1234	1262	1226	15- 20	205.6	483.0	11.6,11.6
25	1160	1168	1219	1175	1175	1193	1243	1183	20- 25	253.2	736.2	17.6,17.6
30	1089	1119	1160	1125	1106	1147	1186	1136	25- 30	293.1	1029	24.6,24.6
35	1009	1058	1101	1064	1027	1089	1130	1076	30- 35	322.7	1352	32.4,32.4
40	922.5	978.4	1043	984.1	941.4	1011	1073	996.9	35- 40	342.3	1694	40.5,40.5
45	830.4	898.1	984.1	903.8	849.6	931.2	1016	916.8	40- 45	352.5	2047	49,49
50	734.4	818.2	925.4	823.9	753.5	852.1	959.4	837.3	45- 50	353.7	2400	57.4,57.4
55	636.3	740.2	829.8	745.7	654.0	774.3	867.7	759.6	50- 55	345.2	2746	65.7,65.7
60	536.8	660.7	734.2	665.6	553.3	695.3	776.1	680.9	55- 60	325.3	3071	73.5,73.5
65	437.9	560.6	638.6	562.2	452.8	594.7	684.4	582.3	60- 65	296.6	3368	80.6,80.6
70	340.6	464.8	543.0	462.9	353.4	498.2	592.8	488.3	65- 70	261.0	3629	86.8,86.8
75	246.3	373.3	447.4	367.6	257.3	406.0	501.1	398.7	70- 75	220.5	3849	92.1,92.1
80	157.1	278.9	304.1	270.4	164.6	309.2	344.7	304.8	75- 80	172.5	4022	96.2,96.2
85	74.18	147.1	160.7	142.7	80.34	166.5	188.2	164.8	80- 85	111.9	4133	98.9,98.9
90	11.51	17.15	17.39	17.08	17.64	25.83	31.72	26.91	85- 90	45.26	4179	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2020-03-12

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity:50%  
 Test Distance:8.600m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.02	.97	.93	.90	.95	.91	.95	.92	.88	.91	.88	.86	.88	.85	.83	.81
2.0	.88	.81	.74	.86	.79	.73	.82	.77	.72	.79	.74	.70	.76	.72	.68	.66
3.0	.77	.68	.61	.75	.67	.60	.72	.65	.59	.69	.63	.58	.67	.62	.57	.55
4.0	.68	.58	.51	.66	.58	.51	.64	.56	.50	.61	.55	.49	.59	.53	.49	.46
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.44	.38	.51	.43	.38	.50	.43	.37	.48	.42	.37	.35
7.0	.49	.40	.33	.48	.39	.33	.47	.39	.33	.45	.38	.33	.44	.37	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.29	.41	.34	.29	.40	.34	.29	.27
9.0	.41	.32	.27	.40	.32	.27	.39	.32	.26	.38	.31	.26	.37	.31	.26	.24
10.0	.38	.30	.24	.37	.29	.24	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
Humidity: 50%  
Test Distance: 8.600m [K=1.0000]  
Remarks:

## WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.345	.196	.062	.338	.193	.061	.324	.186	.059	.312	.180	.058	.300	.174	.056	
2.0	.315	.173	.053	.309	.170	.052	.297	.165	.051	.286	.160	.050	.276	.156	.049	
3.0	.287	.153	.046	.281	.151	.045	.271	.147	.045	.261	.143	.044	.252	.139	.043	
4.0	.262	.136	.040	.257	.134	.040	.247	.131	.039	.239	.128	.039	.231	.125	.038	
5.0	.240	.122	.035	.236	.121	.035	.227	.118	.035	.220	.116	.034	.212	.113	.034	
6.0	.221	.111	.032	.217	.110	.032	.210	.108	.031	.203	.106	.031	.197	.104	.031	
7.0	.205	.101	.029	.202	.100	.029	.195	.099	.028	.189	.097	.028	.183	.095	.028	
8.0	.191	.093	.026	.188	.092	.026	.182	.091	.026	.176	.089	.026	.171	.088	.026	
9.0	.178	.086	.024	.175	.086	.024	.170	.084	.024	.165	.083	.024	.160	.082	.024	
10.0	.167	.080	.022	.165	.080	.022	.160	.078	.022	.155	.077	.022	.151	.076	.022	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	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	.183	.156	.132	.156	.134	.113	.107	.092	.078	.062	.053	.046	.020	.017	.015	
2.0	.175	.132	.095	.150	.113	.082	.103	.078	.057	.059	.046	.034	.019	.015	.011	
3.0	.168	.114	.072	.144	.099	.062	.099	.069	.044	.057	.040	.026	.018	.013	.008	
4.0	.160	.101	.056	.137	.088	.049	.094	.061	.035	.055	.036	.020	.018	.012	.007	
5.0	.152	.091	.046	.131	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.005	
6.0	.145	.083	.038	.124	.072	.033	.086	.050	.023	.050	.029	.014	.016	.010	.005	
7.0	.138	.076	.032	.118	.066	.028	.082	.046	.020	.048	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.113	.061	.024	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.125	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2020-03-12

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity:50%  
 Test Distance:8.600m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

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	20.6	22.2	20.8	22.4	22.6	22.0	23.6	22.3	23.8	24.0
3H	22.1	23.6	22.4	23.8	24.1	24.1	25.6	24.4	25.8	26.1
4H	22.7	24.1	23.1	24.4	24.7	25.1	26.5	25.4	26.8	27.1
6H	23.2	24.6	23.6	24.8	25.1	26.0	27.3	26.3	27.6	27.9
8H	23.4	24.7	23.8	25.0	25.3	26.3	27.6	26.7	27.9	28.2
12H	23.5	24.8	23.9	25.1	25.4	26.6	27.8	26.9	28.1	28.4
4H 2H	21.5	22.9	21.9	23.2	23.5	22.6	24.0	22.9	24.3	24.5
3H	23.3	24.5	23.6	24.8	25.1	24.9	26.2	25.3	26.5	26.8
4H	24.1	25.2	24.5	25.5	25.9	26.1	27.3	26.5	27.6	27.9
6H	24.7	25.8	25.1	26.1	26.5	27.2	28.2	27.6	28.5	28.9
8H	25.0	25.9	25.4	26.3	26.7	27.6	28.5	28.0	28.9	29.3
12H	25.2	26.0	25.6	26.4	26.8	27.9	28.8	28.3	29.2	29.6
8H 4H	24.7	25.7	25.2	26.1	26.4	26.5	27.4	26.9	27.8	28.2
6H	25.7	26.5	26.1	26.9	27.3	27.7	28.5	28.2	28.9	29.3
8H	26.0	26.8	26.5	27.2	27.6	28.3	29.0	28.7	29.4	29.8
12H	26.4	27.0	26.8	27.4	27.9	28.7	29.3	29.2	29.8	30.3
12H 4H	24.9	25.7	25.3	26.1	26.5	26.5	27.4	26.9	27.7	28.2
6H	25.9	26.6	26.4	27.0	27.5	27.8	28.5	28.3	28.9	29.4
8H	26.4	27.0	26.9	27.4	27.9	28.4	29.0	28.9	29.5	30.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 4179 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.0)

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2020-03-12

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity: 50%  
 Test Distance: 8.600m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	36	55	43	36	53	43	36	29
0.80	65	53	45	64	53	45	62	52	45	38
1.00	73	62	54	72	61	54	70	63	53	46
1.25	81	69	62	79	69	61	76	67	61	53
1.50	86	75	67	84	74	67	81	72	66	58
2.00	93	83	76	91	82	76	87	80	74	66
2.50	97	88	82	95	87	81	91	84	79	70
3.00	100	93	87	98	91	86	94	88	83	75
4.00	105	98	93	102	97	92	98	93	89	80
5.00	107	102	97	105	100	96	100	96	93	83
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25DEG  
 Operators:  
 Test Date: 2020-03-12

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity: 50%  
 Test Distance: 8.600m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Conical surface Flux(90deg):

2046.8 lm

%lum = 49.0%

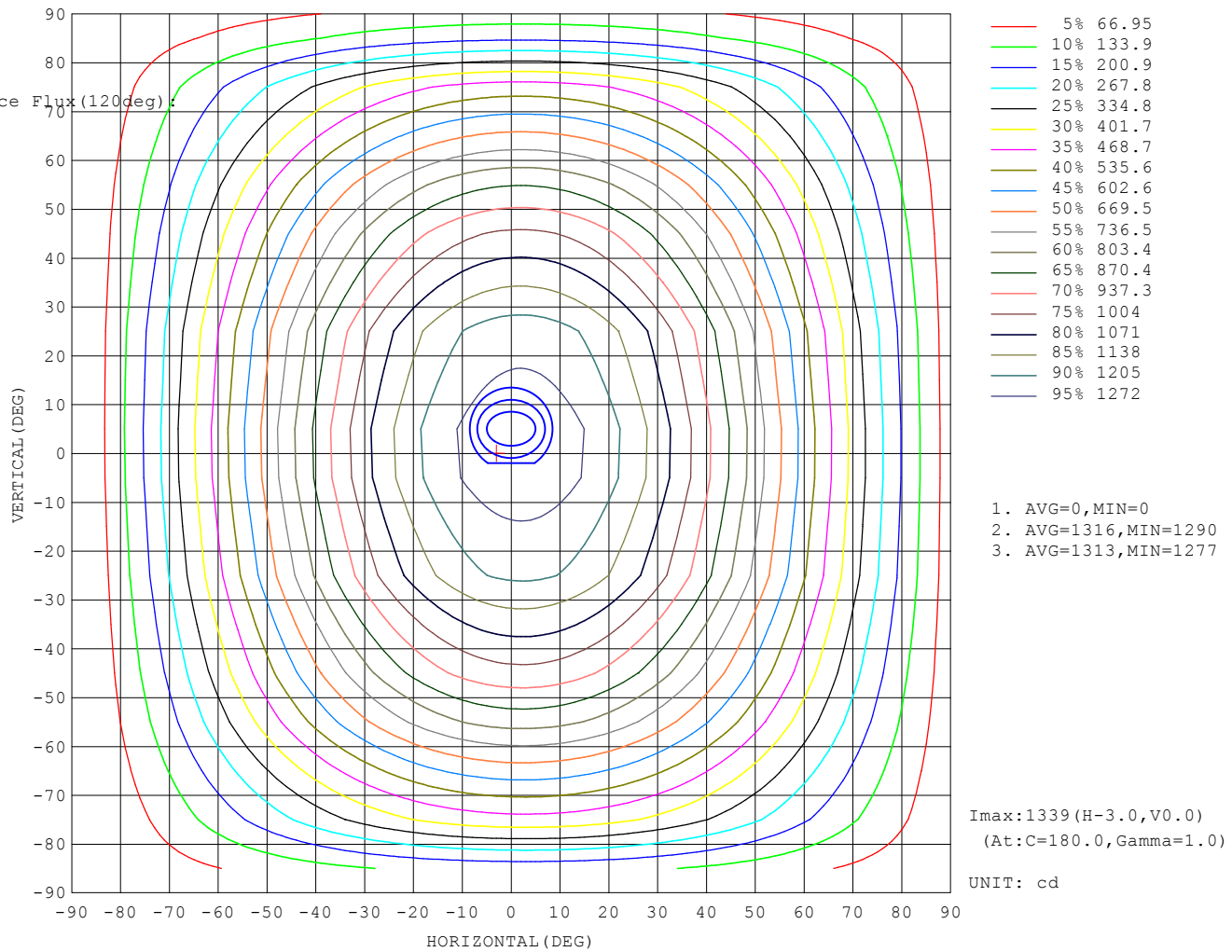
%lamp = 49.0%

Conical surface Flux(120deg):

3071 lm

%lum = 73.5%

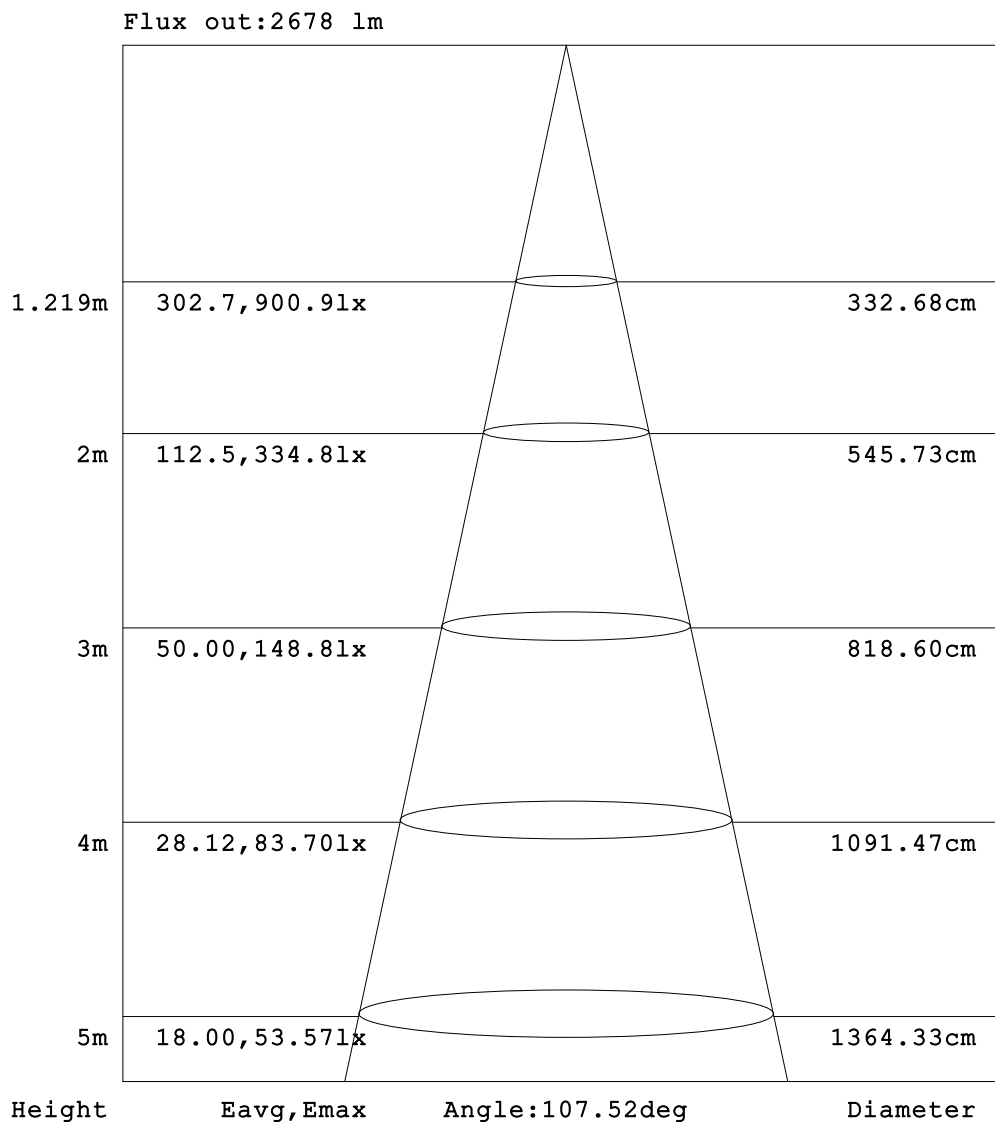
%lamp = 73.5%



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2020-03-12

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
Humidity:50%  
Test Distance:8.600m [K=1.0000]  
Remarks:

## AAI Figure



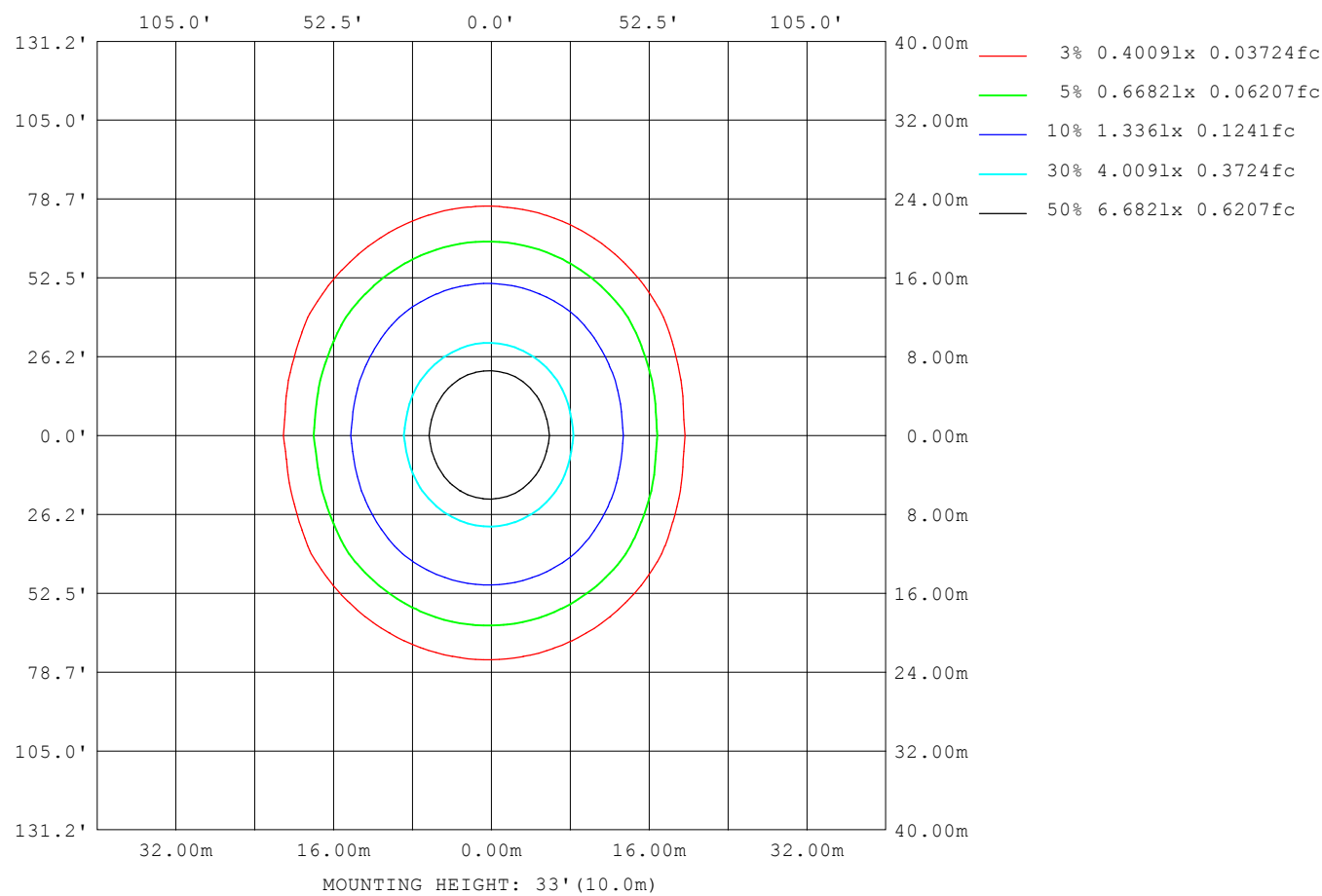
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2020-03-12

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
Humidity:50%  
Test Distance:8.600m [K=1.0000]  
Remarks:



ISOLUX DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 5.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Temperature:25DEG	Humidity:50%
Operators:	Test Distance:8.600m [K=1.0000]
Test Date:2020-03-12	Remarks:

## LED Avg.L Report

Test:U:120.1V I:0.2311A P:27.70W PF:0.9983 Lamp Flux:4178.67x1 lm		
NAME: LOC-14TRKT-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1155*95	PROTECTION ANGLE:

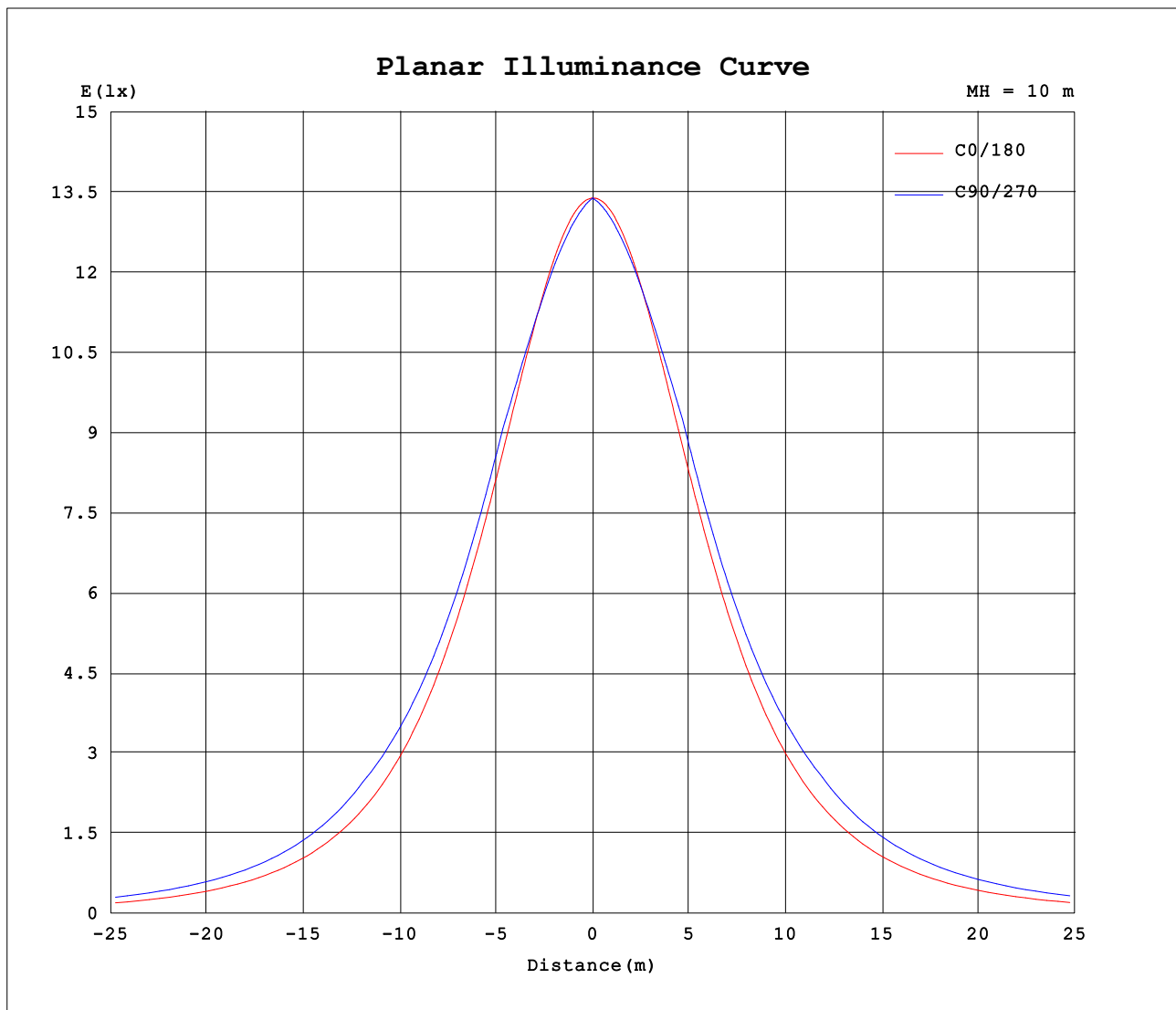
AvgL	cd/m2
L_0~180 (65) av	9606
L_0~180 (75) av	8868
L_0~180 (85) av	8080
L_90~270 (65) av	14269
L_90~270 (75) av	16704
L_90~270 (85) av	18247
L_45 (65) av	12401
L_45 (75) av	13609
L_45 (85) av	16242

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2020-03-12

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
 Humidity:50%  
 Test Distance:8.600m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.290  
Humidity: 50%  
Test Distance: 8.600m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--3

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--4

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25DEG  
Operators:  
Test Date: 2020-03-12

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

```