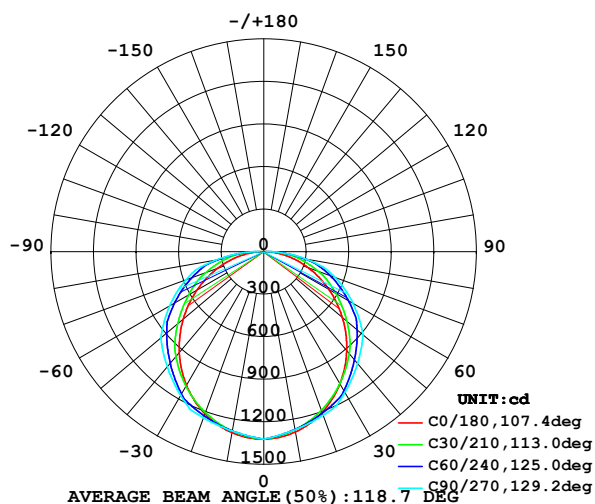


LUMINAIRE PHOTOMETRIC TEST REPORT

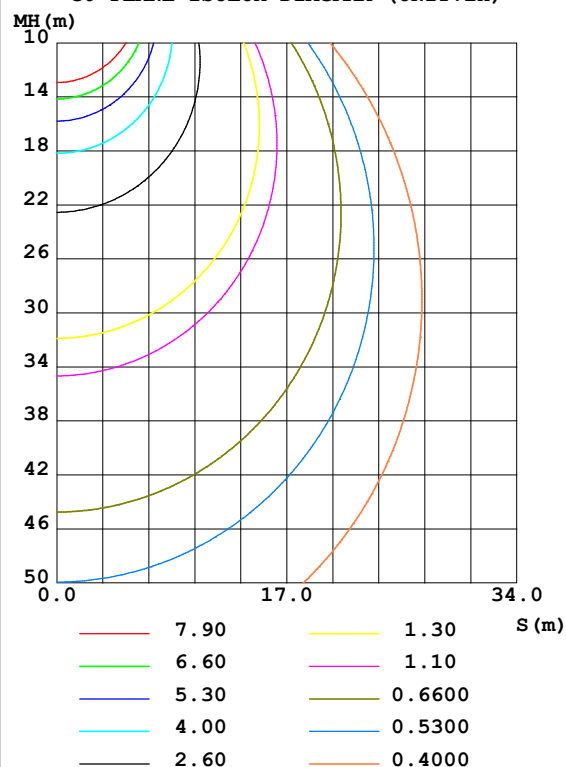
Test:U:120.1V I:0.2394A P:28.70W PF:0.9985 Lamp Flux:4125.87x1 lm		
NAME: LOC-14TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*95	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 143.78 lm/W			
MODEL		Imax(cd)	1322	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)	4125.9	η UP,DN(C0-180)	0.0,49.2
NOMINAL FLUX(lm)	4125.87	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:

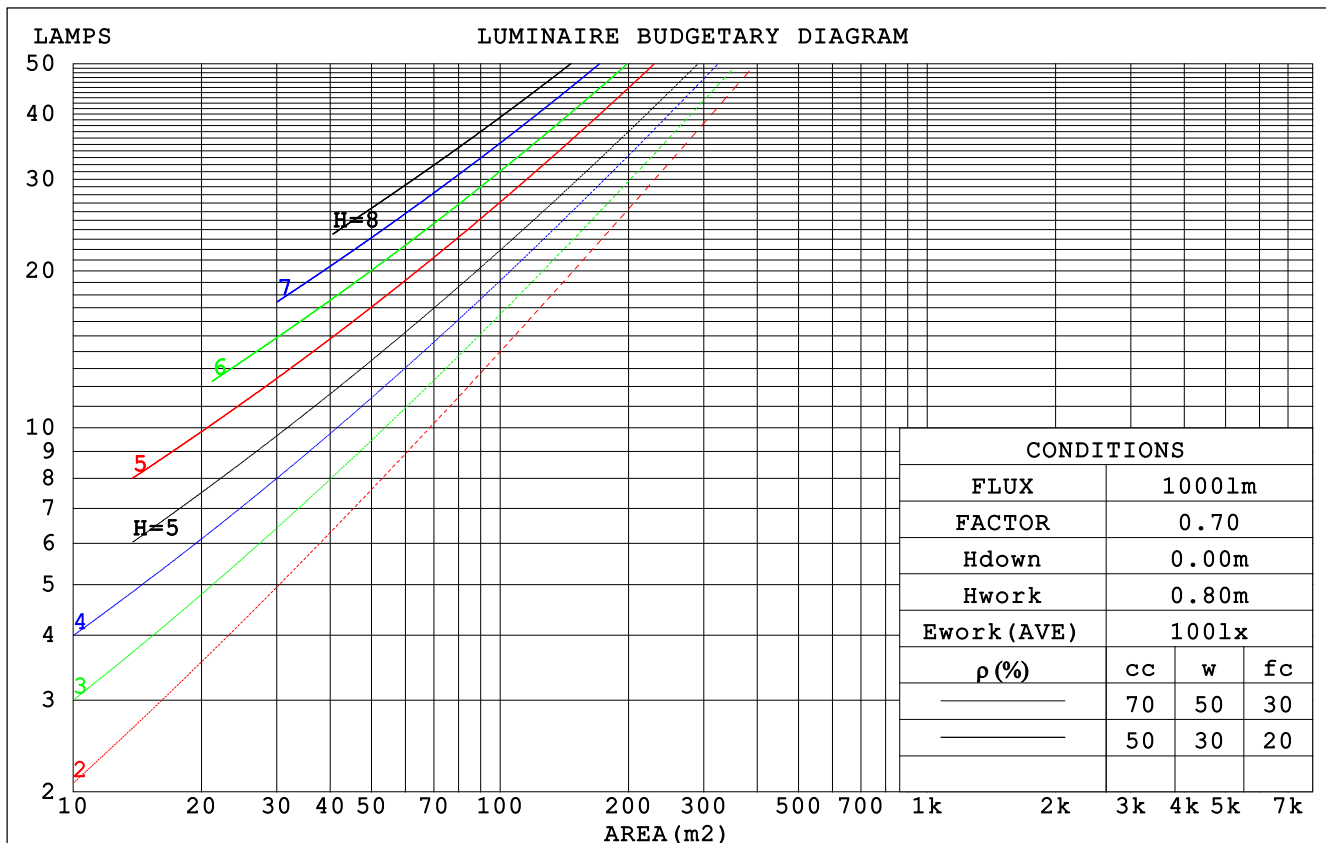
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	1313	1301	1298	1303	1316	1306	1303	1304	0- 5	31.35	31.35	0.76,0.76
10	1291	1273	1275	1276	1296	1283	1284	1279	5- 10	92.44	123.8	3,3
15	1254	1239	1251	1243	1263	1254	1266	1248	10- 15	150.1	273.9	6.64,6.64
20	1206	1199	1227	1204	1216	1218	1247	1211	15- 20	203.0	476.8	11.6,11.6
25	1145	1155	1204	1159	1158	1177	1228	1169	20- 25	250.0	726.9	17.6,17.6
30	1075	1106	1146	1110	1090	1132	1172	1122	25- 30	289.4	1016	24.6,24.6
35	996.1	1046	1088	1049	1012	1075	1116	1064	30- 35	318.6	1335	32.4,32.4
40	910.5	967.0	1030	970.6	927.6	997.0	1060	985.1	35- 40	338.0	1673	40.5,40.5
45	819.2	887.5	972.0	891.4	837.1	918.5	1004	905.7	40- 45	348.0	2021	49,49
50	724.2	808.5	914.0	812.8	742.3	840.5	947.6	827.0	45- 50	349.1	2370	57.4,57.4
55	627.2	731.2	819.8	735.7	644.6	763.9	857.1	750.0	50- 55	340.8	2711	65.7,65.7
60	528.8	652.6	725.6	656.9	545.5	685.9	766.6	672.1	55- 60	321.1	3032	73.5,73.5
65	430.9	553.6	631.4	555.3	446.5	587.0	676.1	574.8	60- 65	292.8	3325	80.6,80.6
70	334.8	459.1	537.2	457.6	348.9	492.1	585.5	481.7	65- 70	257.7	3582	86.8,86.8
75	241.8	368.8	443.0	364.0	254.3	401.3	495.0	393.3	70- 75	217.8	3800	92.1,92.1
80	153.6	275.6	301.1	268.4	163.2	306.1	340.7	300.4	75- 80	170.5	3970	96.2,96.2
85	72.04	145.4	159.1	141.6	80.09	165.1	186.3	162.5	80- 85	110.6	4081	98.9,98.9
90	11.29	16.96	17.18	16.82	17.35	26.20	31.91	26.69	85- 90	44.81	4126	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

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.02	.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

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:

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	20.4	22.0	20.7	22.2	22.4	21.9	23.5	22.2	23.7	23.9
3H	22.0	23.4	22.3	23.7	23.9	24.0	25.4	24.3	25.7	25.9
4H	22.6	24.0	22.9	24.3	24.5	25.0	26.4	25.3	26.7	26.9
6H	23.1	24.4	23.4	24.7	25.0	25.9	27.2	26.2	27.5	27.8
8H	23.3	24.5	23.6	24.8	25.1	26.2	27.5	26.5	27.8	28.1
12H	23.4	24.6	23.7	24.9	25.2	26.5	27.7	26.8	28.0	28.3
4H 2H	21.4	22.8	21.7	23.1	23.3	22.5	23.9	22.8	24.1	24.4
3H	23.1	24.4	23.5	24.7	25.0	24.8	26.0	25.1	26.3	26.6
4H	23.9	25.1	24.3	25.4	25.7	26.0	27.1	26.4	27.5	27.8
6H	24.6	25.6	25.0	26.0	26.3	27.0	28.1	27.4	28.4	28.8
8H	24.8	25.8	25.2	26.2	26.5	27.5	28.4	27.9	28.8	29.2
12H	25.0	25.9	25.4	26.3	26.7	27.8	28.7	28.2	29.1	29.5
8H 4H	24.6	25.5	25.0	25.9	26.3	26.3	27.3	26.7	27.6	28.0
6H	25.5	26.3	26.0	26.7	27.1	27.6	28.4	28.0	28.8	29.2
8H	25.9	26.6	26.4	27.0	27.5	28.1	28.8	28.6	29.3	29.7
12H	26.2	26.8	26.7	27.3	27.8	28.6	29.2	29.1	29.7	30.1
12H 4H	24.7	25.6	25.1	26.0	26.4	26.4	27.2	26.8	27.6	28.0
6H	25.7	26.5	26.2	26.9	27.3	27.7	28.4	28.1	28.8	29.3
8H	26.2	26.8	26.7	27.3	27.8	28.3	28.9	28.8	29.4	29.8
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 4126 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.9)

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):

2020.7 lm

%lum = 49.0%

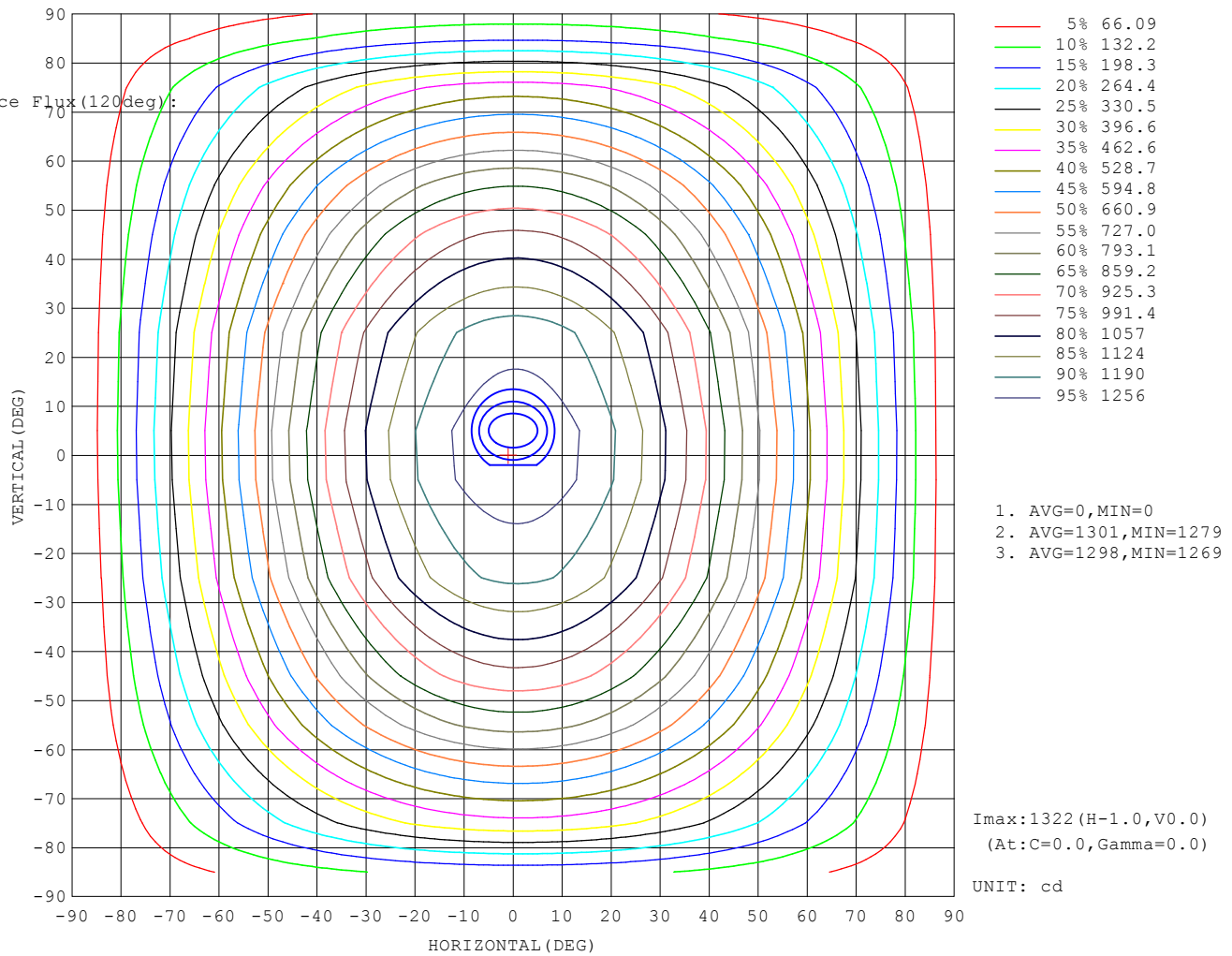
%lamp = 49.0%

Conical surface Flux(120deg):

3031.7 lm

%lum = 73.5%

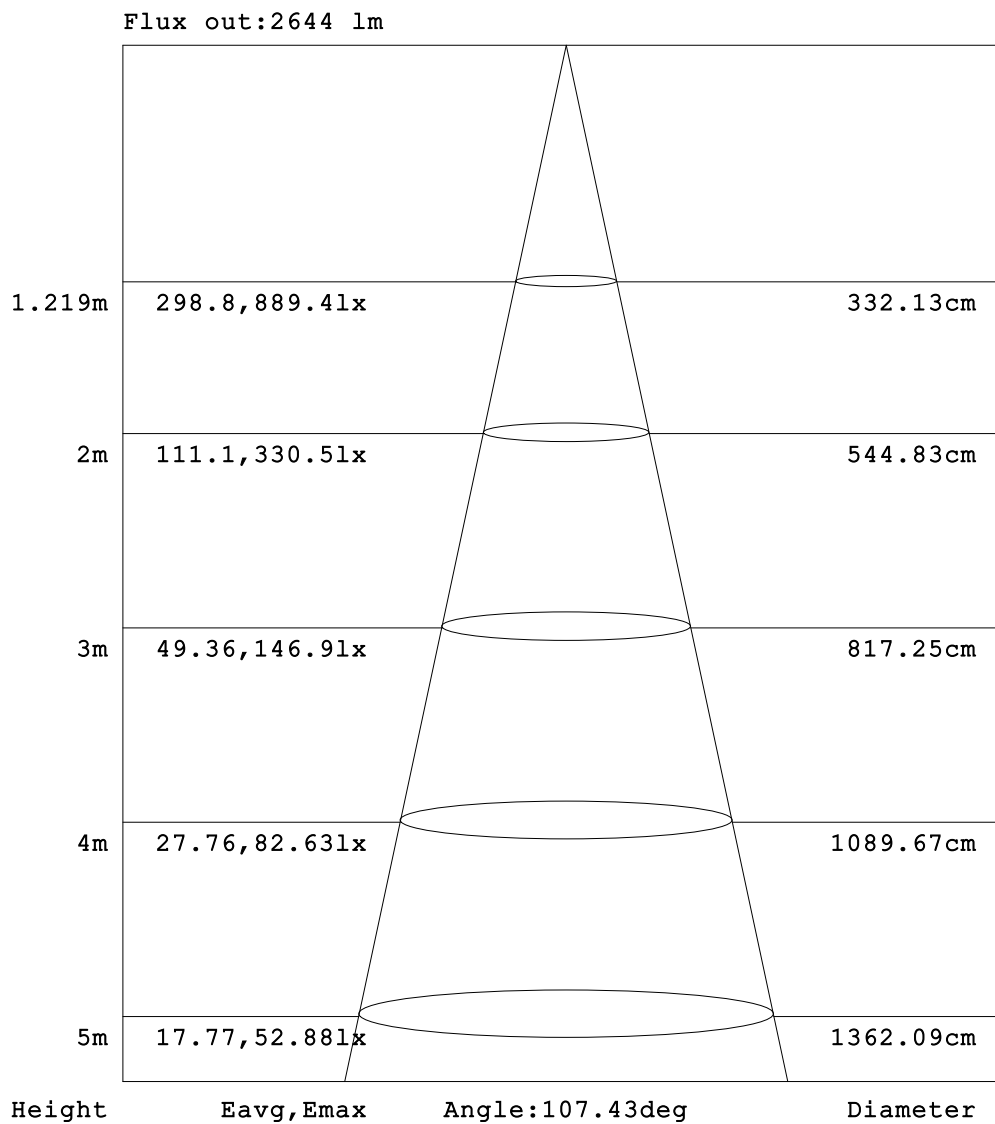
%lamp = 73.5%



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

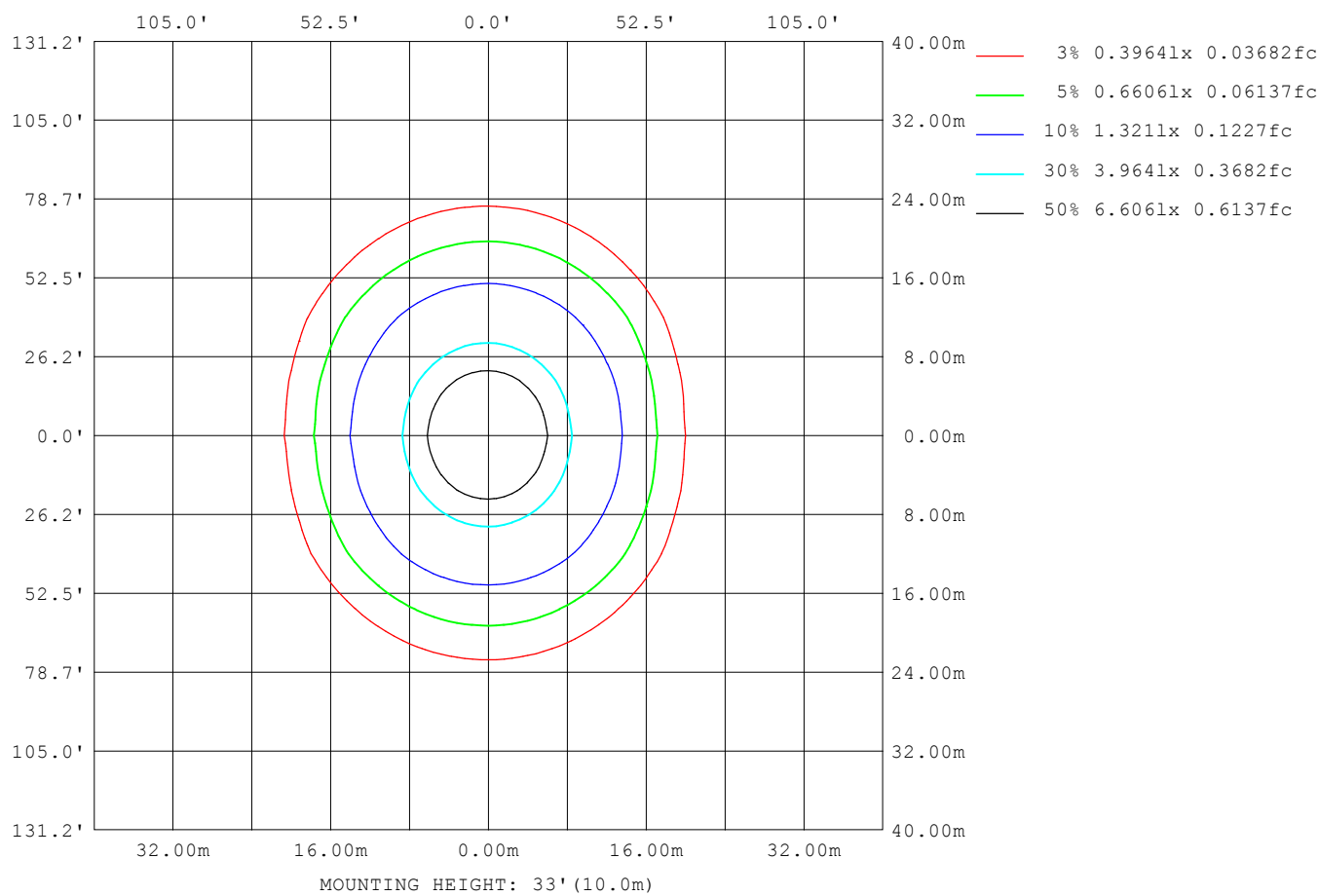


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2394A P:28.70W PF:0.9985 Lamp Flux:4125.87x1 lm		
NAME: LOC-14TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*95	PROTECTION ANGLE:

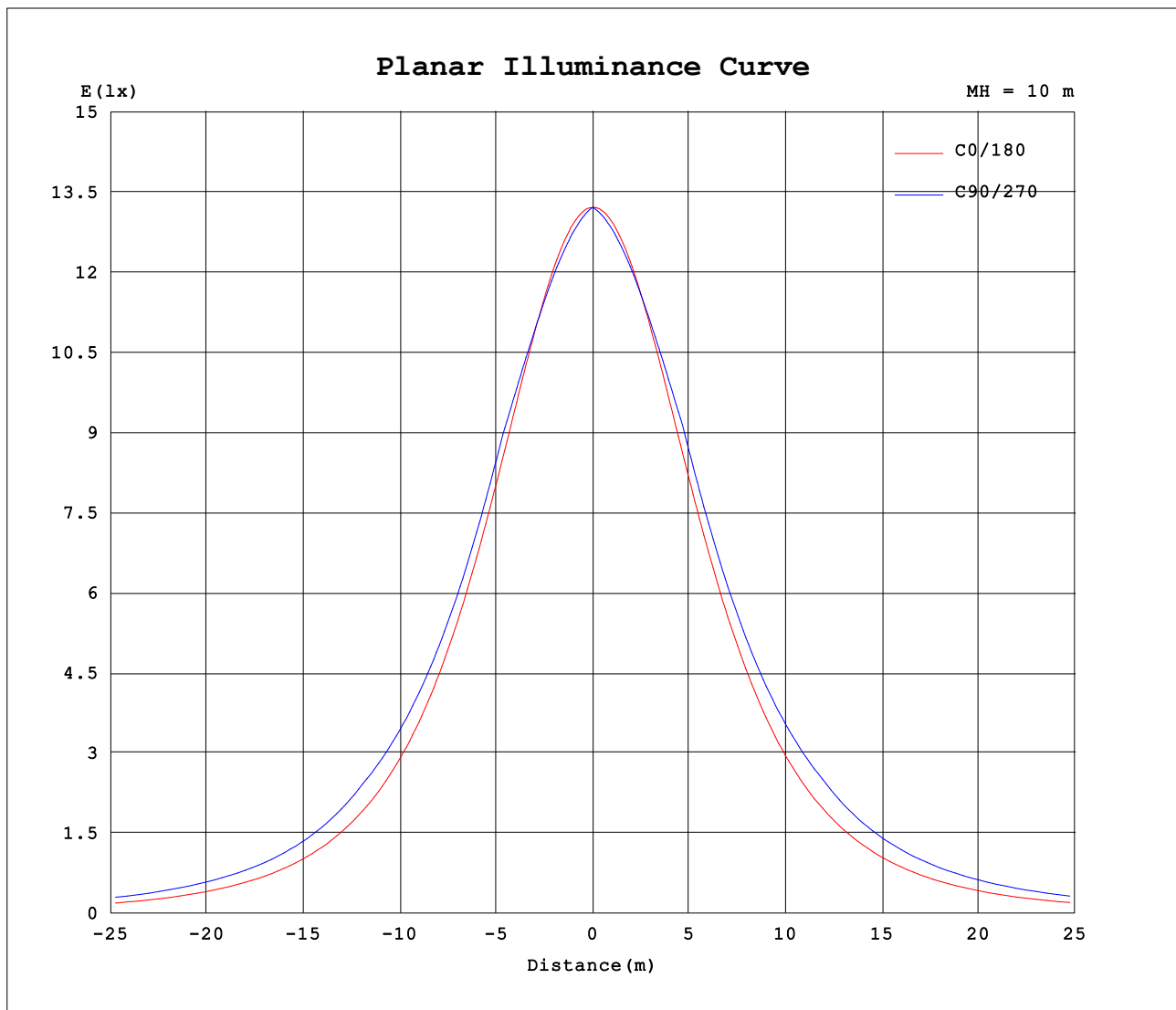
AvgL	cd/m2
L_0~180 (65) av	9214
L_0~180 (75) av	8505
L_0~180 (85) av	7746
L_90~270 (65) av	13729
L_90~270 (75) av	16084
L_90~270 (85) av	17588
L_45 (65) av	11921
L_45 (75) av	13094
L_45 (85) av	15647

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

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--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:

```