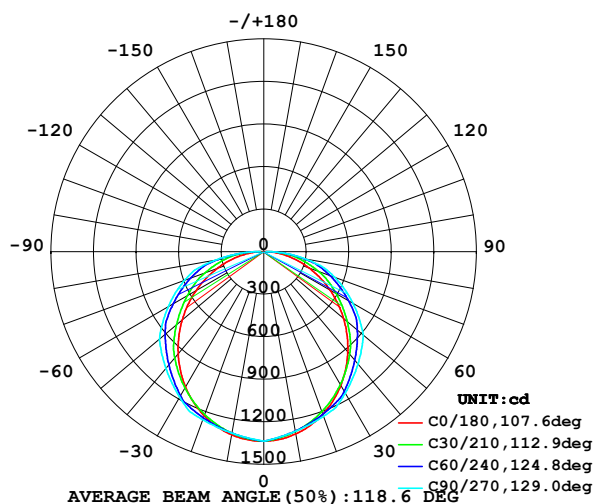


LUMINAIRE PHOTOMETRIC TEST REPORT

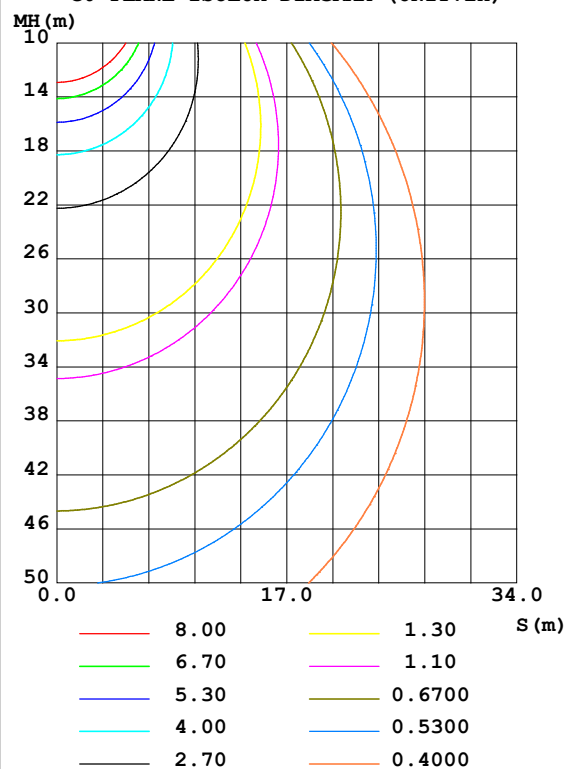
Test:U:120.1V I:0.2401A P:28.78W PF:0.9985 Lamp Flux:4164.07x1 lm		
NAME: LOC-14TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*95	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.67 lm/W			
MODEL		Imax(cd)	1337	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)	4164.1	η UP,DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	4164.07	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.1
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:

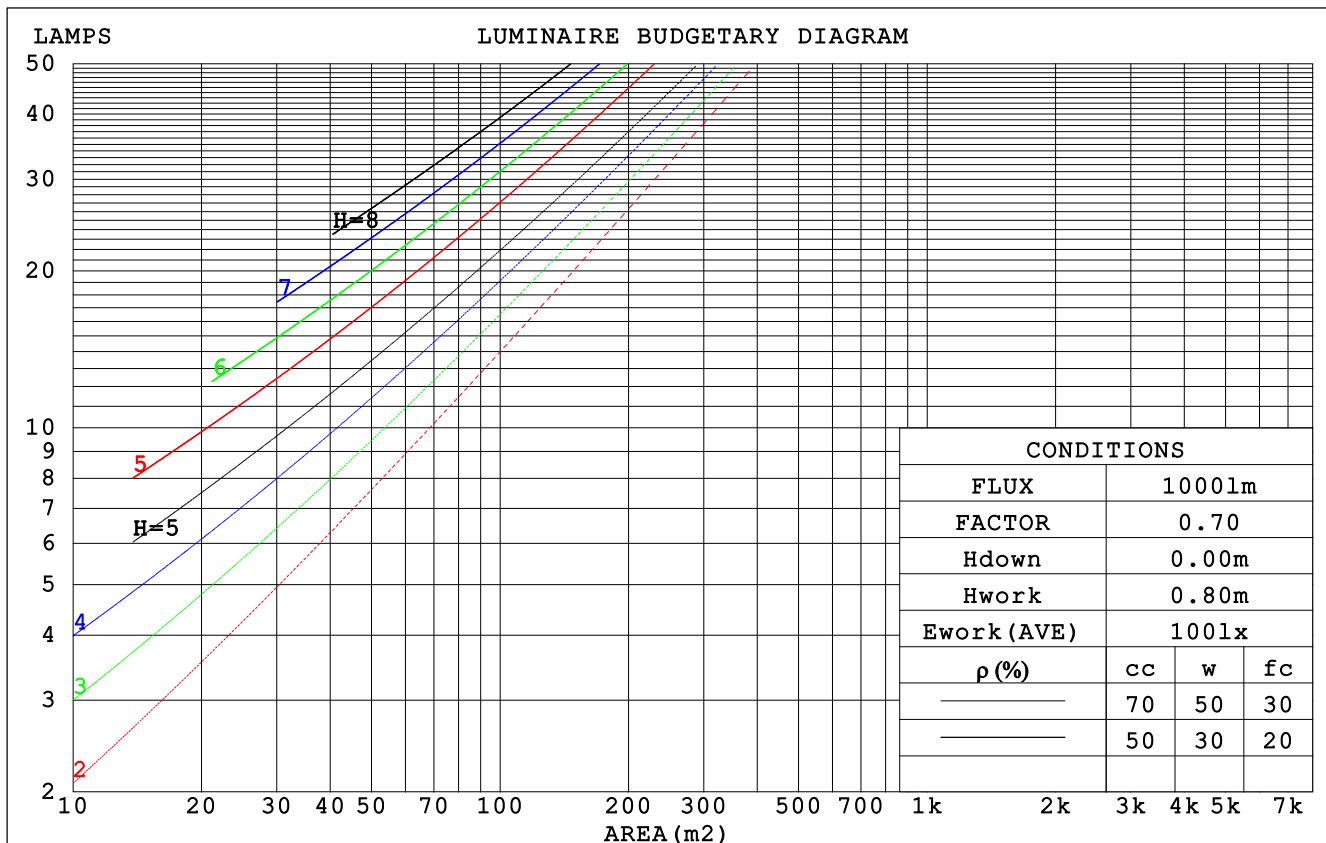
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	1328	1314	1311	1316	1331	1321	1318	1319	0- 5	31.70	31.70	0.76,0.76
10	1305	1285	1286	1289	1311	1298	1299	1294	5- 10	93.44	125.1	3.01,3.01
15	1269	1249	1261	1254	1278	1269	1280	1262	10- 15	151.7	276.8	6.65,6.65
20	1220	1208	1235	1214	1231	1233	1261	1225	15- 20	205.1	481.9	11.6,11.6
25	1159	1162	1210	1168	1173	1192	1243	1183	20- 25	252.5	734.4	17.6,17.6
30	1088	1112	1151	1118	1103	1147	1186	1136	25- 30	292.3	1027	24.7,24.7
35	1009	1051	1093	1057	1025	1089	1130	1077	30- 35	321.7	1348	32.4,32.4
40	922.7	970.9	1034	977.6	939.7	1011	1074	998.1	35- 40	341.3	1690	40.6,40.6
45	830.9	890.9	975.6	897.5	847.9	931.5	1018	918.4	40- 45	351.5	2041	49,49
50	735.2	811.5	917.0	817.8	751.8	852.7	961.6	839.5	45- 50	352.7	2394	57.5,57.5
55	637.3	733.8	821.1	739.6	652.7	775.3	870.1	762.1	50- 55	344.3	2738	65.8,65.8
60	538.0	654.6	725.1	659.6	552.1	696.3	778.6	683.5	55- 60	324.3	3063	73.5,73.5
65	439.3	554.6	629.1	556.1	451.5	595.7	687.0	585.3	60- 65	295.6	3358	80.6,80.6
70	342.0	458.8	533.2	456.6	352.1	499.1	595.5	491.4	65- 70	260.0	3618	86.9,86.9
75	247.7	367.3	437.2	361.0	256.0	406.6	504.0	401.9	70- 75	219.4	3837	92.2,92.2
80	158.3	273.3	297.2	264.2	163.5	309.5	344.7	307.6	75- 80	171.4	4009	96.3,96.3
85	75.12	144.2	157.2	139.6	79.40	164.5	185.5	164.6	80- 85	110.9	4120	98.9,98.9
90	11.52	16.90	17.25	17.01	17.60	21.72	26.31	23.65	85- 90	44.30	4164	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

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	.89	.91	.89	.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	.61	.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	.34	.48	.40	.33	.47	.39	.33	.45	.38	.33	.44	.37	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.34	.29	.27
9.0	.41	.32	.27	.40	.32	.27	.39	.32	.27	.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	.344	.196	.062	.337	.192	.061	.324	.186	.059	.311	.180	.058	.300	.174	.056	
2.0	.315	.173	.053	.308	.170	.052	.297	.165	.051	.286	.160	.050	.275	.156	.049	
3.0	.287	.153	.046	.281	.150	.045	.270	.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	.105	.031	.197	.103	.031	
7.0	.205	.101	.029	.201	.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	.085	.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	20.5	22.0	20.7	22.2	22.5	21.9	23.5	22.1	23.7	23.9
3H	22.0	23.5	22.3	23.7	23.9	23.9	25.4	24.2	25.6	25.9
4H	22.6	24.0	22.9	24.3	24.5	24.9	26.3	25.3	26.6	26.9
6H	23.1	24.4	23.5	24.7	25.0	25.8	27.1	26.1	27.4	27.7
8H	23.3	24.6	23.6	24.9	25.2	26.1	27.4	26.5	27.7	28.0
12H	23.4	24.7	23.8	25.0	25.3	26.4	27.6	26.7	27.9	28.2
4H 2H	21.4	22.8	21.7	23.1	23.3	22.4	23.9	22.8	24.1	24.4
3H	23.2	24.4	23.5	24.7	25.0	24.7	26.0	25.1	26.3	26.6
4H	24.0	25.1	24.3	25.4	25.8	25.9	27.1	26.3	27.4	27.7
6H	24.6	25.6	25.0	26.0	26.3	27.0	28.0	27.4	28.3	28.7
8H	24.8	25.8	25.3	26.2	26.6	27.4	28.3	27.8	28.7	29.1
12H	25.0	25.9	25.5	26.3	26.7	27.7	28.6	28.1	29.0	29.4
8H 4H	24.6	25.5	25.0	25.9	26.3	26.3	27.2	26.7	27.6	28.0
6H	25.5	26.3	26.0	26.7	27.1	27.5	28.3	27.9	28.7	29.1
8H	25.9	26.6	26.4	27.0	27.5	28.0	28.8	28.5	29.2	29.6
12H	26.2	26.8	26.7	27.3	27.8	28.5	29.1	29.0	29.6	30.1
12H 4H	24.7	25.6	25.1	26.0	26.4	26.3	27.2	26.7	27.5	28.0
6H	25.7	26.4	26.2	26.9	27.3	27.6	28.3	28.1	28.7	29.2
8H	26.2	26.8	26.7	27.3	27.8	28.2	28.8	28.7	29.3	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 4164 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	68	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	84	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:

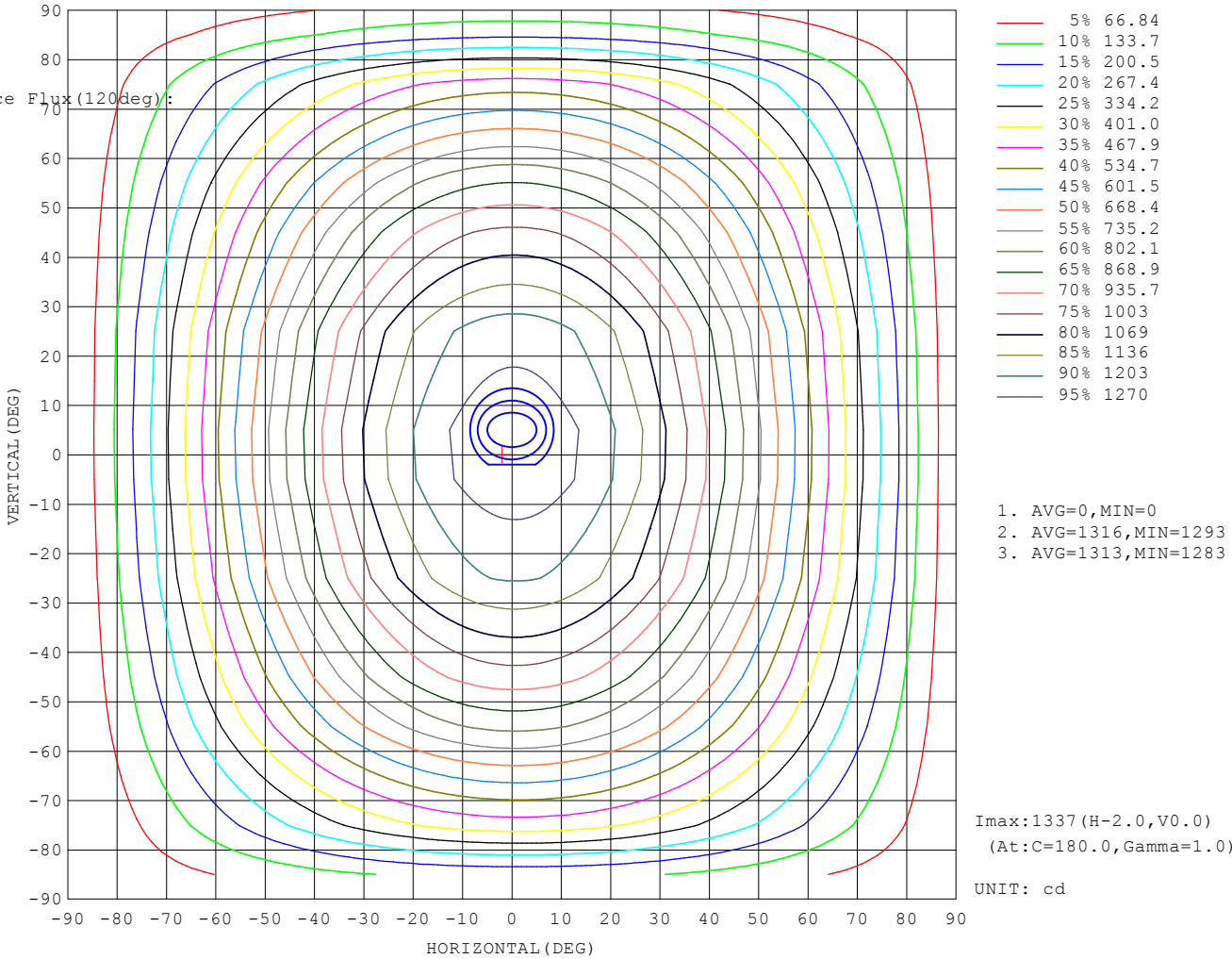
ISOCANDELA DIAGRAM

Conical surface Flux(90deg):

2041.2 lm
%lum = 49.0%
%lamp = 49.0%

Conical surface Flux(120deg):

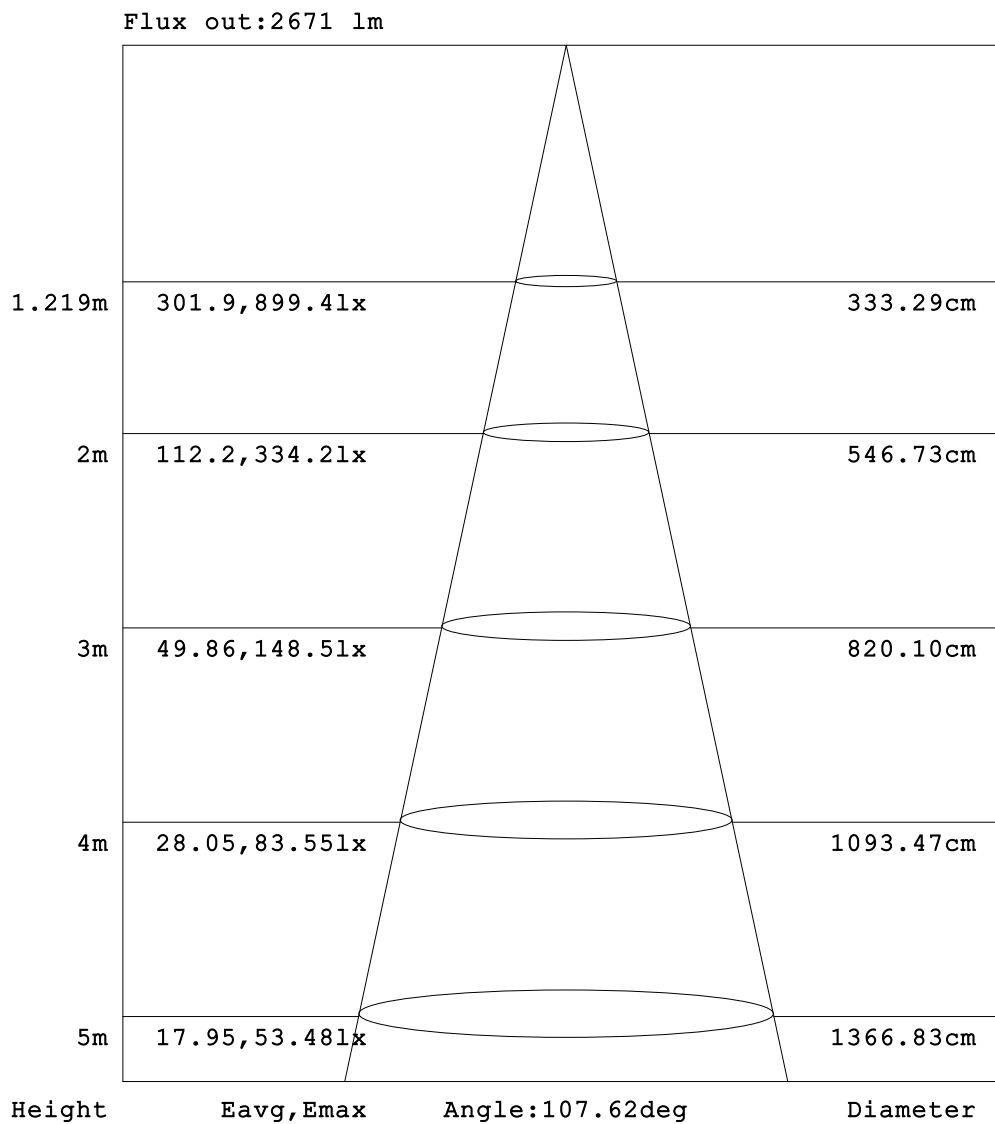
3062.6 lm
%lum = 73.5%
%lamp = 73.5%



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

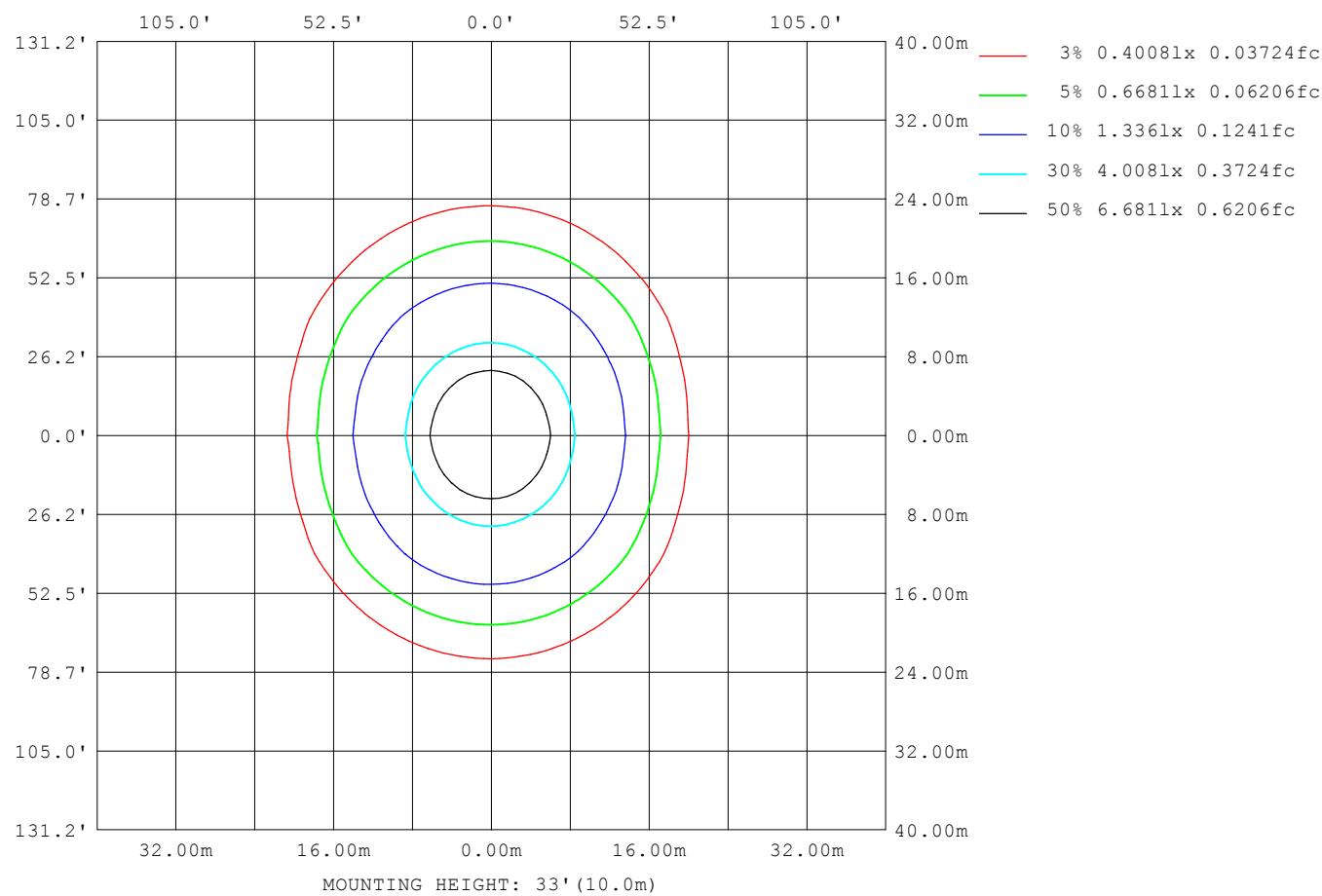


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2401A P:28.78W PF:0.9985 Lamp Flux:4164.07x1 lm		
NAME: LOC-14TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*95	PROTECTION ANGLE:

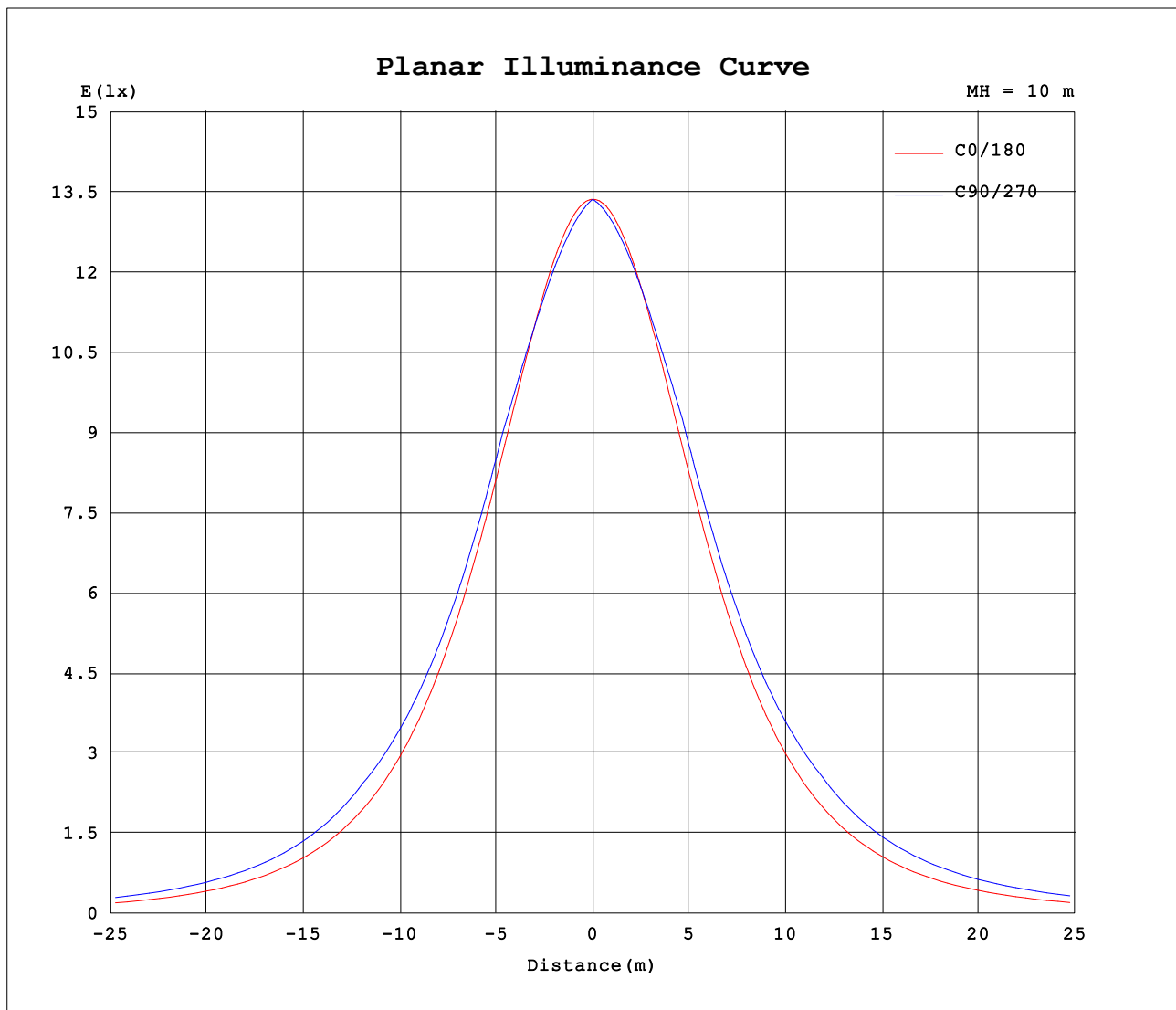
AvgL	cd/m2
L_0~180 (65) av	9354
L_0~180 (75) av	8637
L_0~180 (85) av	7868
L_90~270 (65) av	13821
L_90~270 (75) av	16138
L_90~270 (85) av	17453
L_45 (65) av	12032
L_45 (75) av	13176
L_45 (85) av	15604

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:

```