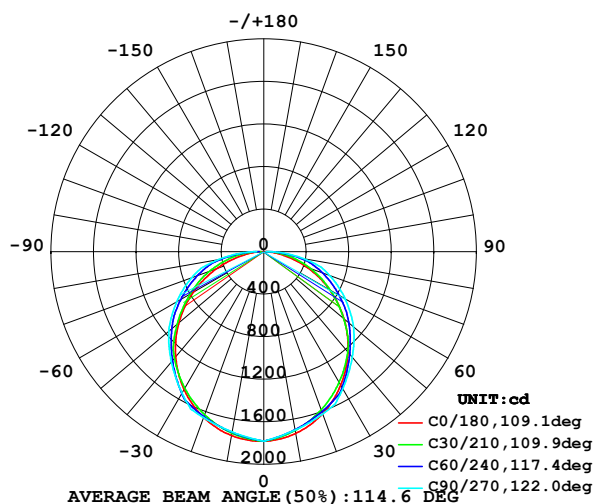


LUMINAIRE PHOTOMETRIC TEST REPORT

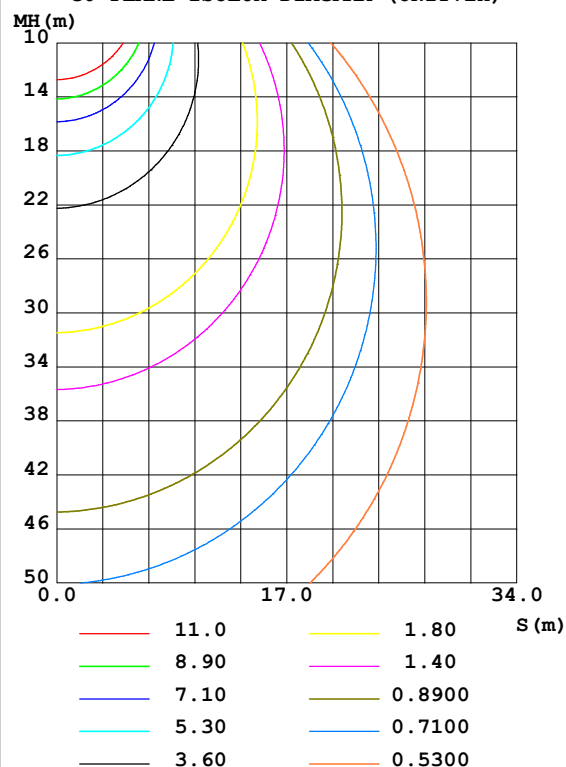
Test:U:120.1V I:0.3244A P:38.73W PF:0.9940 Lamp Flux:2661.21x2 lm		
NAME: LOC-24TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*145	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.41 lm/W			
MODEL		Imax(cd)	1783	S/MH(C0/180)	1.25
NOMINAL POWER(W)	39	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	5322.4	η UP,DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	2661.21	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.1
LAMPS INSIDE	2	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: 2020-05-23

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:

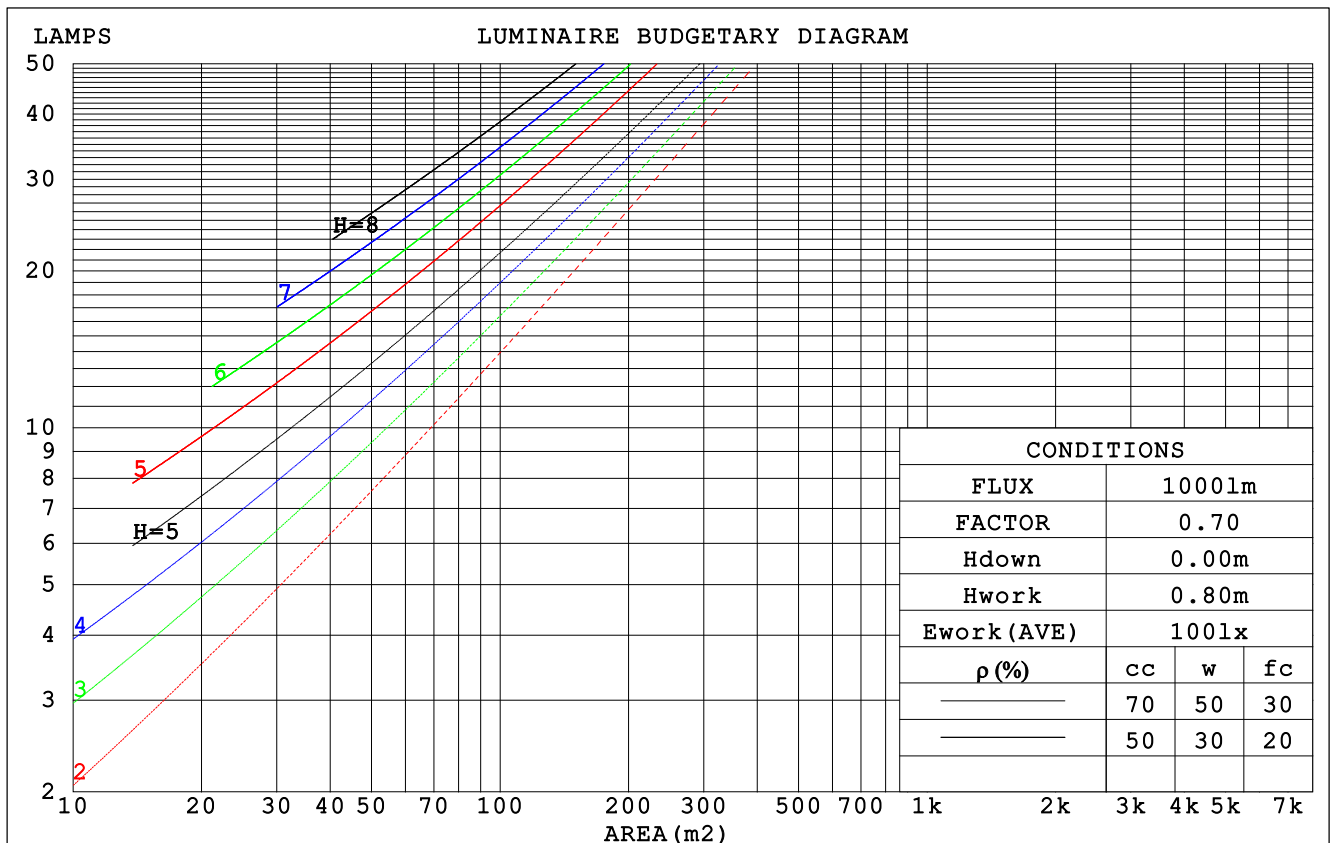
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
5	1768	1746	1743	1753	1778	1759	1752	1752	0- 5	42.20	42.20	0.79,0.79
10	1735	1701	1703	1715	1756	1727	1721	1714	5- 10	124.2	166.4	3.13,3.13
15	1686	1648	1663	1669	1716	1687	1691	1668	10- 15	201.3	367.7	6.91,6.91
20	1621	1588	1624	1614	1658	1638	1660	1615	15- 20	271.7	639.3	12,12
25	1541	1521	1584	1553	1585	1582	1630	1556	20- 25	334.1	973.5	18.3,18.3
30	1449	1450	1488	1486	1499	1520	1537	1491	25- 30	385.7	1359	25.5,25.5
35	1346	1361	1391	1401	1400	1438	1445	1409	30- 35	422.5	1782	33.5,33.5
40	1233	1242	1295	1285	1290	1323	1353	1292	35- 40	445.3	2227	41.8,41.8
45	1112	1122	1199	1167	1170	1206	1260	1175	40- 45	454.6	2682	50.4,50.4
50	985.6	1004	1103	1049	1043	1090	1168	1059	45- 50	451.1	3133	58.9,58.9
55	852.4	887.0	992.4	932.0	907.6	974.6	1057	945.3	50- 55	435.1	3568	67,67
60	714.8	771.4	882.2	815.9	766.6	859.3	945.5	832.6	55- 60	406.5	3974	74.7,74.7
65	574.3	648.2	772.0	692.3	621.1	730.3	834.2	710.4	60- 65	367.6	4342	81.6,81.6
70	432.9	529.4	661.8	572.6	473.4	605.0	723.0	593.1	65- 70	320.4	4662	87.6,87.6
75	295.0	415.1	551.6	457.2	327.9	484.0	611.7	480.6	70- 75	267.2	4929	92.6,92.6
80	169.3	300.2	375.4	338.4	191.9	359.5	430.3	365.4	75- 80	205.7	5135	96.5,96.5
85	69.12	159.7	199.2	178.9	84.24	194.3	249.0	211.5	80- 85	131.6	5267	99,99
90	14.79	22.24	22.91	22.16	23.31	32.05	67.63	60.51	85- 90	55.54	5322	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:2020-05-23

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	.00
1.0	1.02	.98	.93	1.00	.96	.92	.96	.92	.89	.92	.89	.86	.88	.86	.84	.81
2.0	.89	.81	.75	.87	.80	.74	.83	.77	.72	.80	.75	.71	.77	.73	.69	.67
3.0	.77	.69	.62	.76	.68	.61	.73	.66	.60	.70	.64	.59	.67	.62	.58	.56
4.0	.68	.59	.52	.67	.58	.52	.64	.57	.51	.62	.56	.50	.60	.54	.50	.47
5.0	.61	.52	.45	.60	.51	.44	.58	.50	.44	.56	.49	.43	.54	.48	.43	.41
6.0	.55	.46	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.49	.42	.38	.36
7.0	.50	.41	.34	.49	.40	.34	.47	.39	.34	.46	.39	.34	.44	.38	.33	.31
8.0	.45	.37	.31	.45	.36	.30	.43	.36	.30	.42	.35	.30	.41	.34	.30	.28
9.0	.41	.33	.27	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.25
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.24	.23



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2020-05-23

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	.338	.192	.061	.331	.189	.060	.317	.182	.058	.305	.176	.056	.294	.170	.055		
2.0	.310	.170	.052	.303	.167	.051	.292	.162	.050	.281	.157	.049	.271	.153	.048		
3.0	.283	.150	.045	.277	.148	.045	.267	.144	.044	.257	.141	.043	.248	.137	.042		
4.0	.258	.134	.039	.254	.133	.039	.244	.130	.039	.236	.127	.038	.228	.124	.038		
5.0	.237	.121	.035	.233	.120	.035	.225	.117	.034	.217	.115	.034	.210	.112	.034		
6.0	.219	.110	.031	.215	.109	.031	.208	.107	.031	.201	.104	.031	.195	.102	.030		
7.0	.203	.100	.028	.200	.100	.028	.193	.098	.028	.187	.096	.028	.181	.094	.028		
8.0	.189	.092	.026	.186	.092	.026	.180	.090	.026	.175	.089	.026	.170	.087	.025		
9.0	.177	.086	.024	.174	.085	.024	.169	.084	.024	.164	.082	.024	.159	.081	.023		
10.0	.166	.080	.022	.164	.079	.022	.159	.078	.022	.154	.077	.022	.150	.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	.182	.156	.132	.156	.134	.114	.107	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.175	.132	.096	.150	.113	.083	.103	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.167	.114	.073	.143	.099	.063	.098	.069	.044	.057	.040	.026	.018	.013	.009	
4.0	.159	.101	.057	.137	.087	.049	.094	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.151	.091	.046	.130	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.144	.083	.038	.124	.071	.033	.085	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.033	.118	.066	.028	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.028	.112	.061	.025	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.118	.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:2020-05-23

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	19.9	21.4	20.1	21.6	21.8	20.9	22.4	21.1	22.6	22.8
3H	21.3	22.7	21.6	23.0	23.2	22.9	24.4	23.2	24.6	24.9
4H	21.8	23.2	22.1	23.5	23.7	24.0	25.4	24.3	25.6	25.9
6H	22.2	23.5	22.5	23.8	24.0	24.9	26.2	25.2	26.5	26.8
8H	22.3	23.5	22.6	23.8	24.1	25.2	26.5	25.6	26.8	27.1
12H	22.3	23.5	22.7	23.8	24.2	25.5	26.7	25.9	27.0	27.3
4H 2H	20.6	22.0	20.9	22.3	22.5	21.4	22.8	21.7	23.1	23.3
3H	22.3	23.5	22.6	23.8	24.1	23.7	24.9	24.1	25.2	25.5
4H	22.9	24.1	23.3	24.4	24.7	24.9	26.1	25.3	26.4	26.7
6H	23.4	24.4	23.8	24.8	25.1	26.0	27.0	26.4	27.4	27.7
8H	23.6	24.5	24.0	24.9	25.3	26.4	27.4	26.9	27.7	28.1
12H	23.7	24.5	24.1	24.9	25.3	26.8	27.7	27.2	28.0	28.5
8H 4H	23.5	24.4	23.9	24.8	25.2	25.2	26.2	25.6	26.5	26.9
6H	24.2	25.0	24.6	25.4	25.8	26.5	27.3	26.9	27.7	28.1
8H	24.4	25.1	24.9	25.6	26.0	27.1	27.8	27.5	28.2	28.6
12H	24.6	25.2	25.1	25.7	26.2	27.5	28.2	28.0	28.6	29.1
12H 4H	23.6	24.5	24.0	24.9	25.3	25.2	26.1	25.7	26.5	26.9
6H	24.4	25.1	24.9	25.5	26.0	26.6	27.3	27.0	27.7	28.1
8H	24.7	25.4	25.2	25.8	26.3	27.2	27.8	27.7	28.2	28.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
2.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 5322 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.8)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2020-05-23

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	44	37	30
0.80	66	54	46	65	54	46	63	53	46	39
1.00	74	63	55	73	62	55	71	64	54	47
1.25	81	70	63	80	69	62	77	68	62	54
1.50	86	76	68	85	75	68	81	73	67	59
2.00	93	84	77	91	83	76	88	81	75	67
2.50	97	89	83	95	88	82	91	85	80	71
3.00	101	93	87	99	92	86	94	89	84	75
4.00	105	99	94	103	97	92	98	94	90	81
5.00	108	102	98	105	100	96	100	97	93	84
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: 2020-05-23

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):

2681.6 lm

%lum = 50.4%

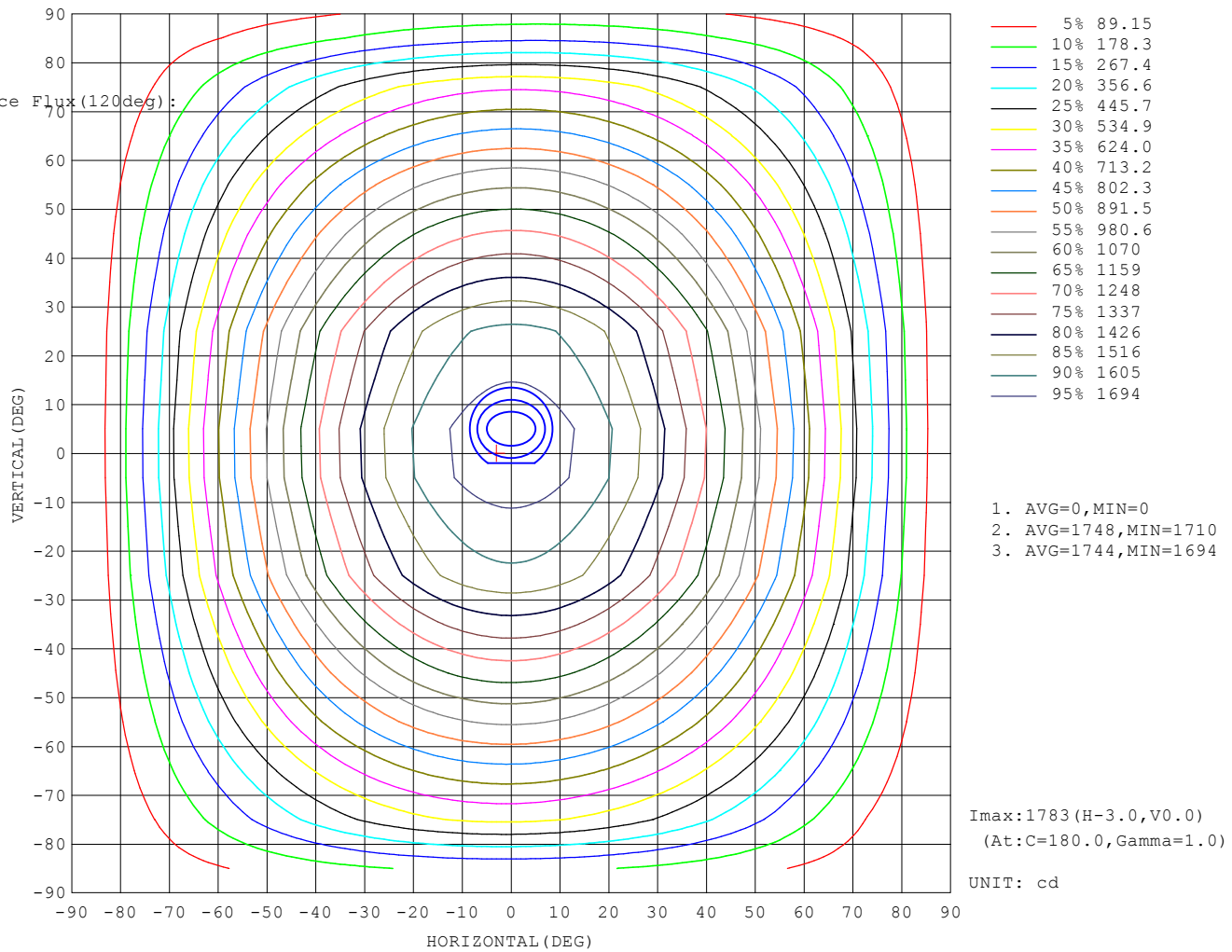
%lamp = 50.4%

Conical surface Flux(120deg):

3974.3 lm

%lum = 74.7%

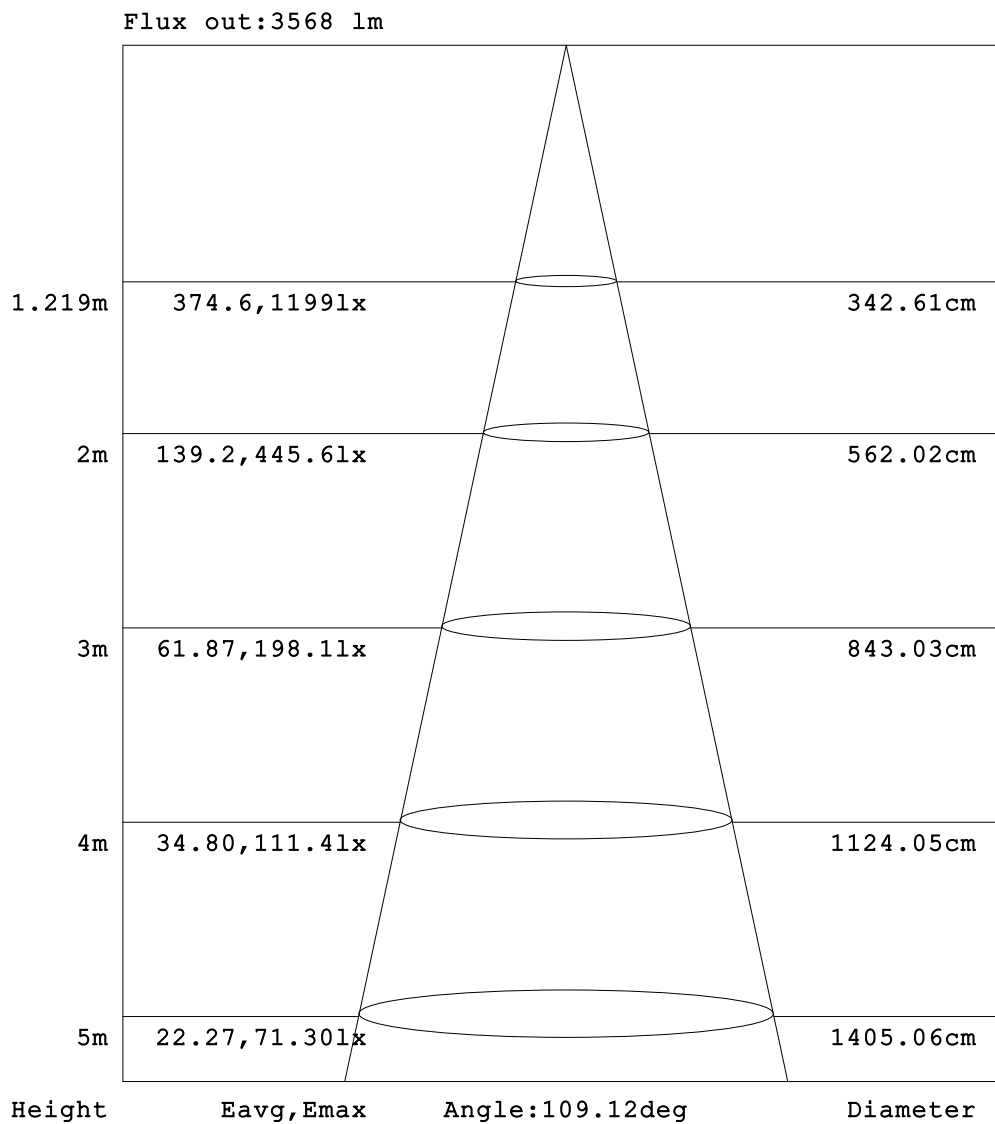
%lamp = 74.7%



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2020-05-23

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

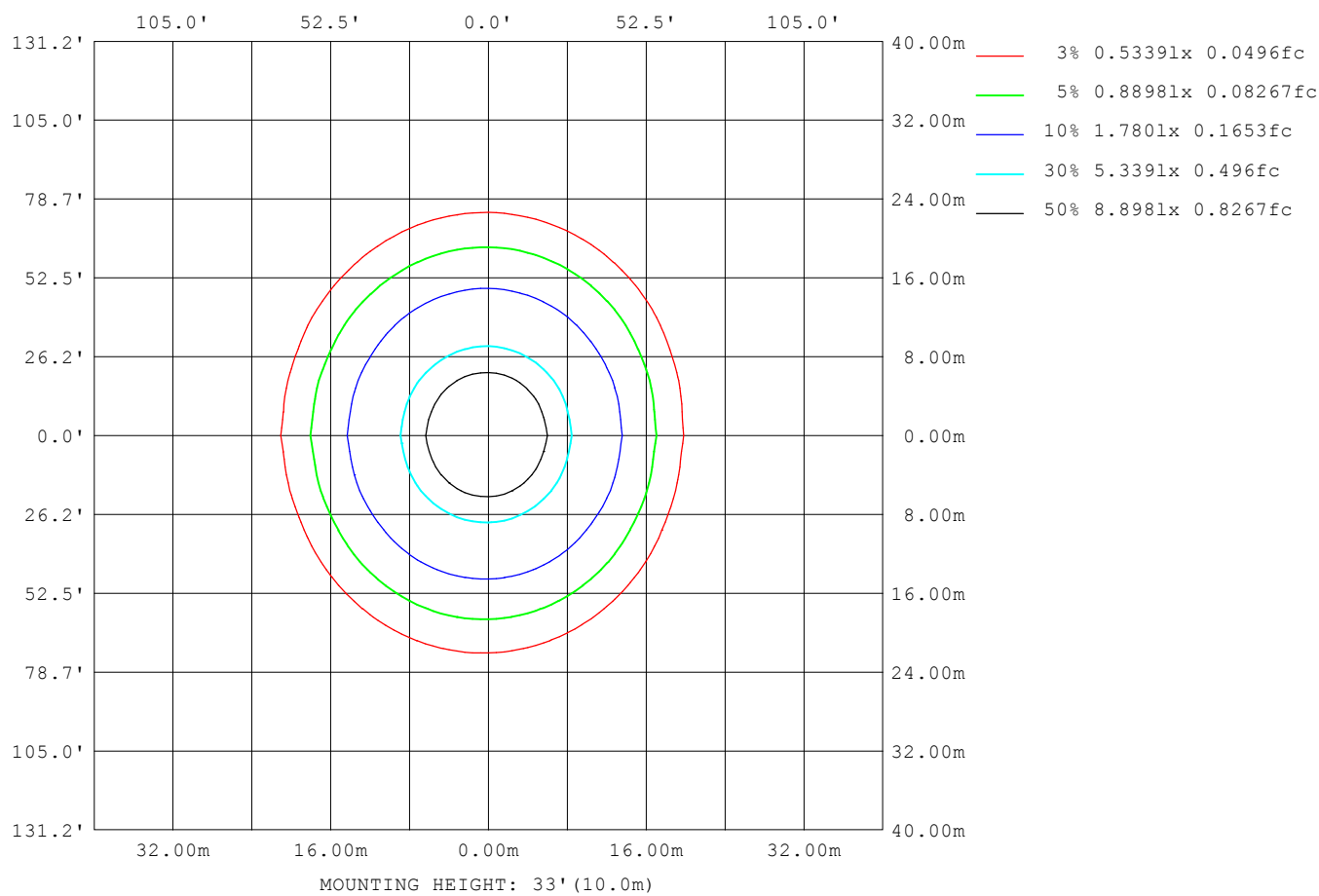


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2020-05-23

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:2020-05-23	Remarks:

LED Avg.L Report

Test:U:120.1V I:0.3244A P:38.73W PF:0.9940 Lamp Flux:2661.21x2 lm		
NAME: LOC-24TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*145	PROTECTION ANGLE:

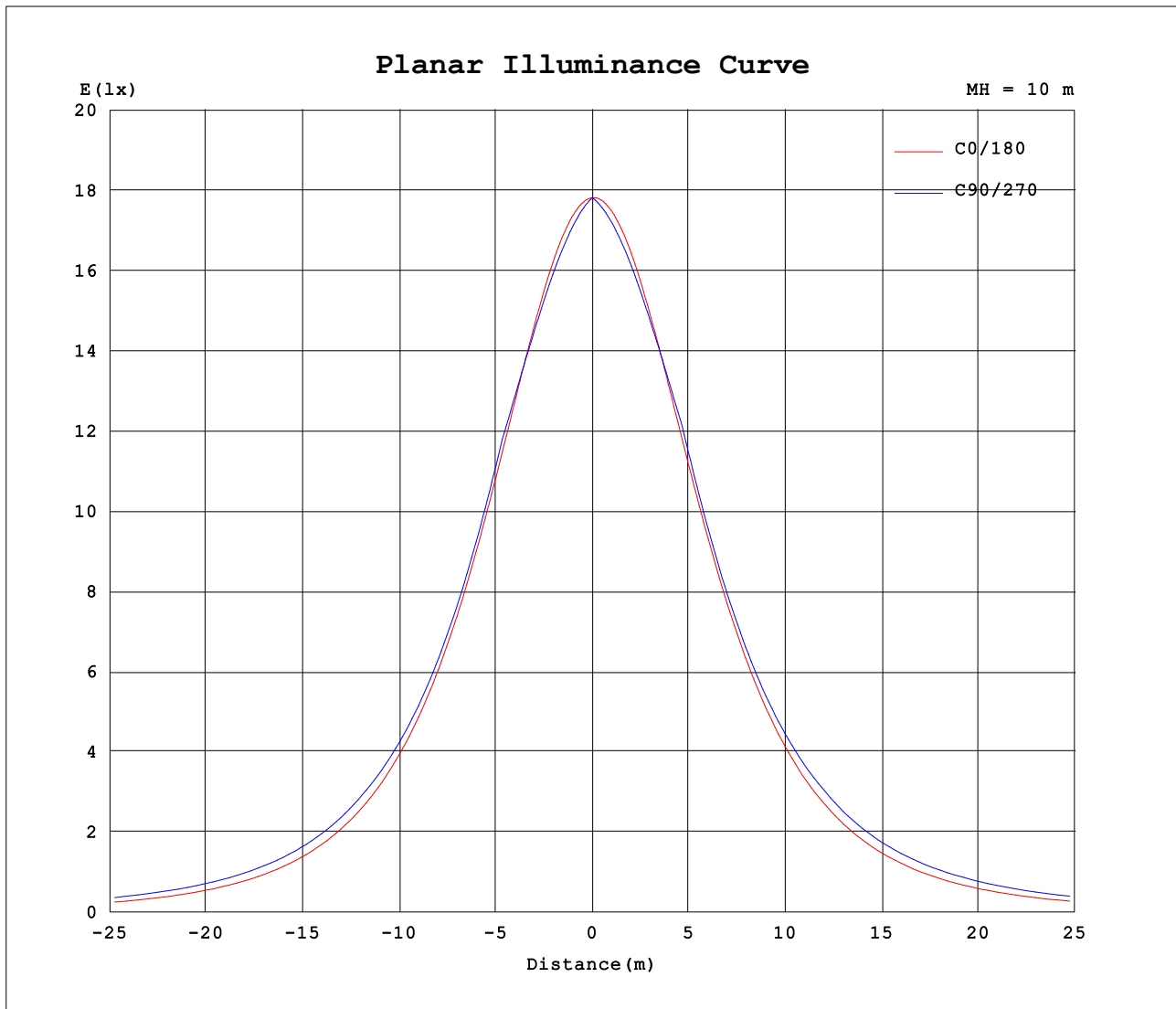
AvgL	cd/m2
L_0~180 (65) av	8223
L_0~180 (75) av	6997
L_0~180 (85) av	5115
L_90~270 (65) av	11049
L_90~270 (75) av	13066
L_90~270 (85) av	14947
L_45 (65) av	9565
L_45 (75) av	10316
L_45 (85) av	12414

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2020-05-23

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: 2020-05-23

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: 2020-05-23

```

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: 2020-05-23

```

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: 2020-05-23

```

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: 2020-05-23

```

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:

```