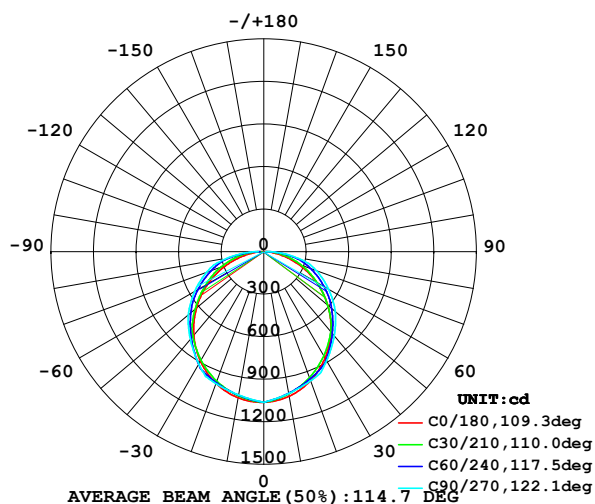


LUMINAIRE PHOTOMETRIC TEST REPORT

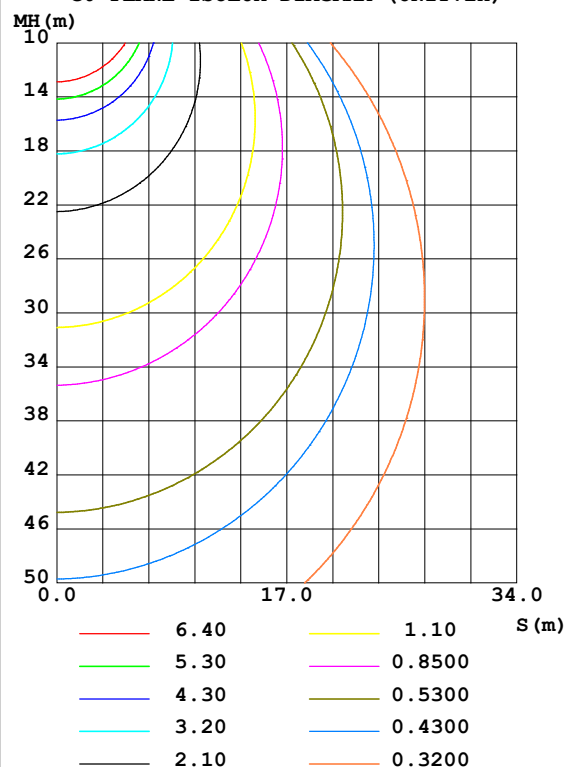
Test:U:120.2V I:0.1852A P:22.03W PF:0.9899 Lamp Flux:1588.22x2 lm		
NAME: LOC-24TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*145	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.21 lm/W			
MODEL		I _{max} (cd)	1063	S/MH (C0/180)	1.25
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH (C90/270)	1.28
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	3176.4	η UP,DN(C0-180)	0.0,48.9
NOMINAL FLUX(lm)	1588.22	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:

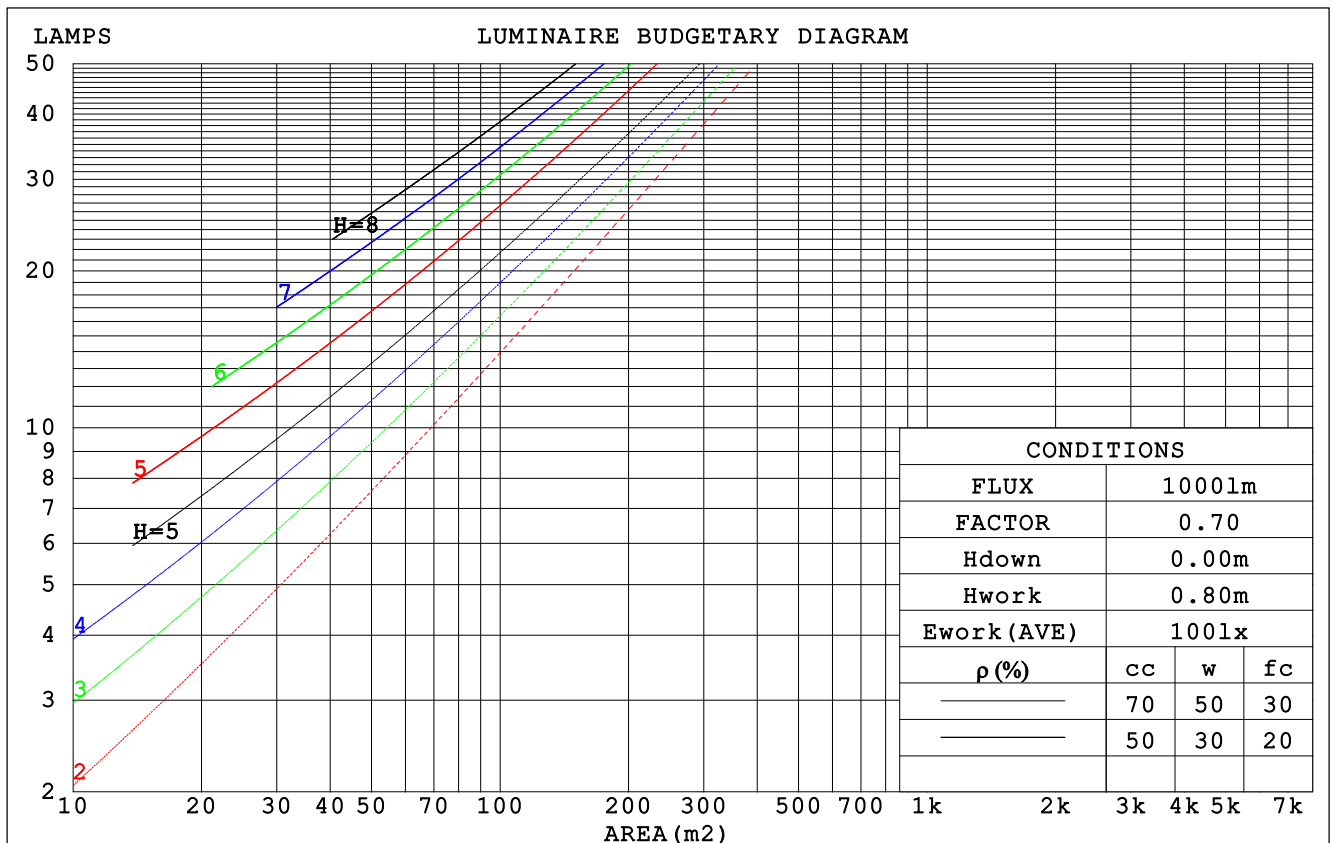
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	1054	1041	1039	1045	1060	1049	1044	1045	0- 5	25.16	25.16	0.79,0.79
10	1035	1015	1016	1022	1047	1029	1026	1023	5- 10	74.07	99.23	3.12,3.12
15	1006	983.7	992.5	995.0	1022	1005	1008	995.2	10- 15	120.0	219.3	6.9,6.9
20	967.8	948.1	969.1	962.6	988.2	976.1	989.8	963.7	15- 20	162.1	381.3	12,12
25	920.3	908.9	945.7	926.4	944.9	942.5	971.6	928.4	20- 25	199.3	580.6	18.3,18.3
30	865.5	866.7	888.4	886.6	893.2	905.4	916.5	890.0	25- 30	230.1	810.8	25.5,25.5
35	804.4	813.9	831.0	835.8	834.0	856.9	861.4	840.6	30- 35	252.1	1063	33.5,33.5
40	737.5	743.5	773.7	766.0	768.4	787.9	806.3	771.4	35- 40	265.8	1329	41.8,41.8
45	666.0	672.1	716.3	695.8	697.2	718.4	751.3	702.0	40- 45	271.3	1600	50.4,50.4
50	589.9	601.3	659.0	625.5	620.7	648.7	696.2	632.9	45- 50	269.3	1869	58.8,58.8
55	510.7	531.7	593.2	555.8	540.4	580.0	629.8	565.0	50- 55	259.8	2129	67,67
60	428.6	462.6	527.5	486.5	456.1	511.2	563.4	497.7	55- 60	242.7	2372	74.7,74.7
65	344.5	388.7	461.7	412.7	369.7	434.1	497.1	424.9	60- 65	219.5	2591	81.6,81.6
70	259.9	317.3	395.9	341.4	281.6	359.6	430.7	355.0	65- 70	191.3	2783	87.6,87.6
75	177.4	248.6	330.2	272.4	193.6	287.5	364.3	287.3	70- 75	159.5	2942	92.6,92.6
80	101.3	179.5	224.7	201.5	113.7	213.3	256.1	217.9	75- 80	122.8	3065	96.5,96.5
85	41.91	95.50	119.2	106.5	49.69	115.1	147.9	126.0	80- 85	78.48	3143	99,99
90	8.832	13.28	13.68	13.22	13.91	18.72	39.75	36.14	85- 90	33.08	3176	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

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	.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	.052	.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	.259	.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	.072	.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	.152	.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		18.1	19.7	18.4	19.9	20.1	19.1	20.7	19.4	20.9	21.1
	3H	19.5	21.0	19.8	21.2	21.5	21.2	22.6	21.5	22.9	23.1
	4H	20.1	21.4	20.4	21.7	22.0	22.2	23.6	22.6	23.9	24.1
	6H	20.4	21.7	20.8	22.0	22.3	23.1	24.4	23.5	24.7	25.0
	8H	20.5	21.8	20.9	22.1	22.4	23.5	24.7	23.8	25.0	25.3
	12H	20.6	21.8	20.9	22.1	22.4	23.7	25.0	24.1	25.3	25.6
4H	2H	18.9	20.3	19.2	20.5	20.8	19.6	21.0	20.0	21.3	21.5
	3H	20.5	21.7	20.9	22.0	22.3	21.9	23.2	22.3	23.5	23.8
	4H	21.2	22.3	21.6	22.6	23.0	23.2	24.3	23.6	24.6	25.0
	6H	21.7	22.7	22.1	23.0	23.4	24.2	25.3	24.6	25.6	26.0
	8H	21.8	22.8	22.2	23.1	23.5	24.7	25.6	25.1	26.0	26.4
	12H	21.9	22.8	22.3	23.2	23.6	25.0	25.9	25.5	26.3	26.7
8H	4H	21.7	22.7	22.1	23.0	23.4	23.5	24.4	23.9	24.8	25.1
	6H	22.4	23.2	22.9	23.6	24.1	24.7	25.5	25.2	25.9	26.4
	8H	22.7	23.4	23.2	23.8	24.3	25.3	26.0	25.8	26.4	26.9
	12H	22.9	23.5	23.3	23.9	24.4	25.8	26.4	26.3	26.8	27.3
12H	4H	21.8	22.7	22.3	23.1	23.5	23.5	24.3	23.9	24.7	25.1
	6H	22.7	23.4	23.1	23.8	24.2	24.8	25.5	25.3	25.9	26.4
	8H	23.0	23.6	23.5	24.0	24.5	25.4	26.0	25.9	26.5	27.0
Variations with the observer position at spacings:											
S = 1.0H		+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H		+ 0.2 / - 0.2					+ 0.1 / - 0.2				
2.0H		+ 0.1 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 3176 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.0)

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	61	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):

1600 lm

%lum = 50.4%

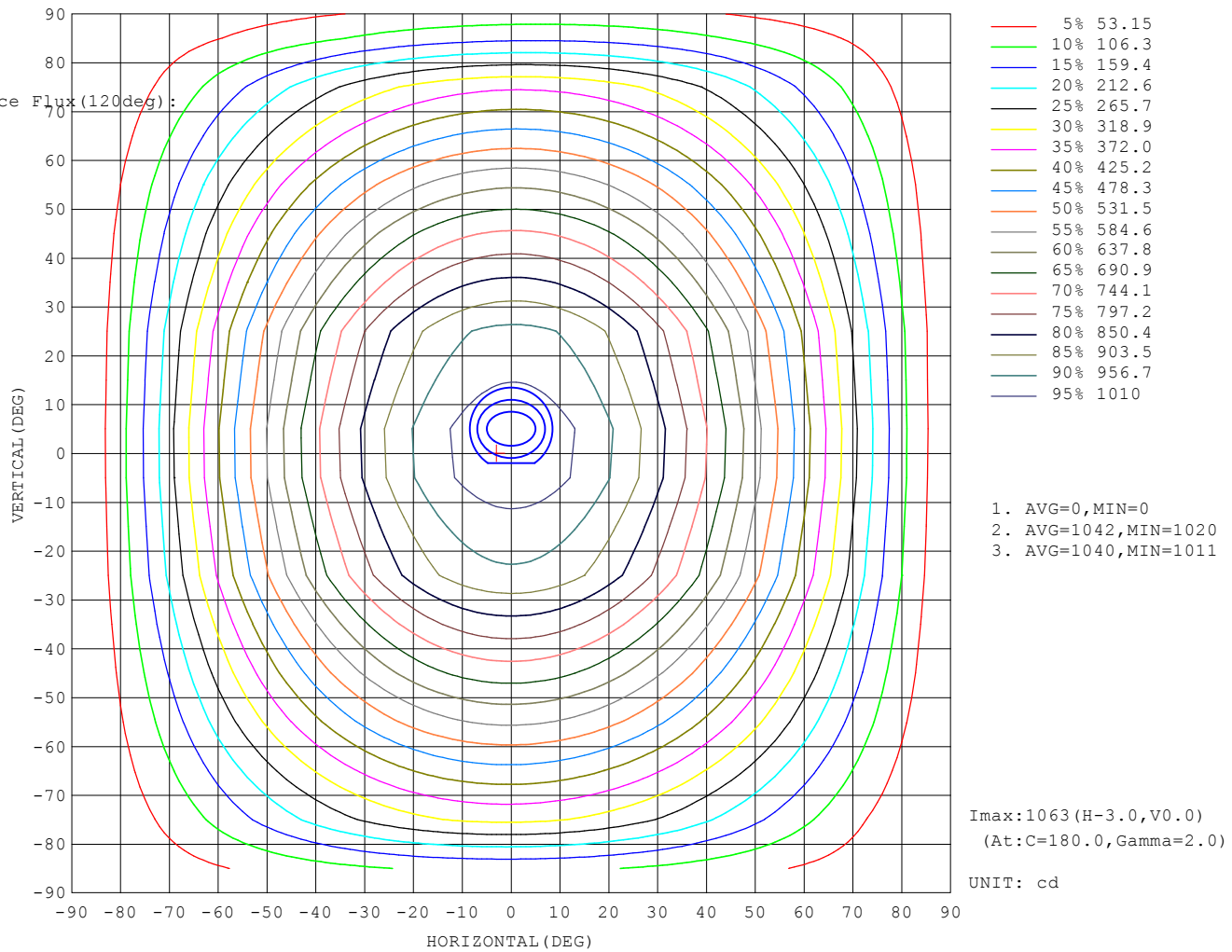
%lamp = 50.4%

Conical surface Flux(120deg):

2371.8 lm

%lum = 74.7%

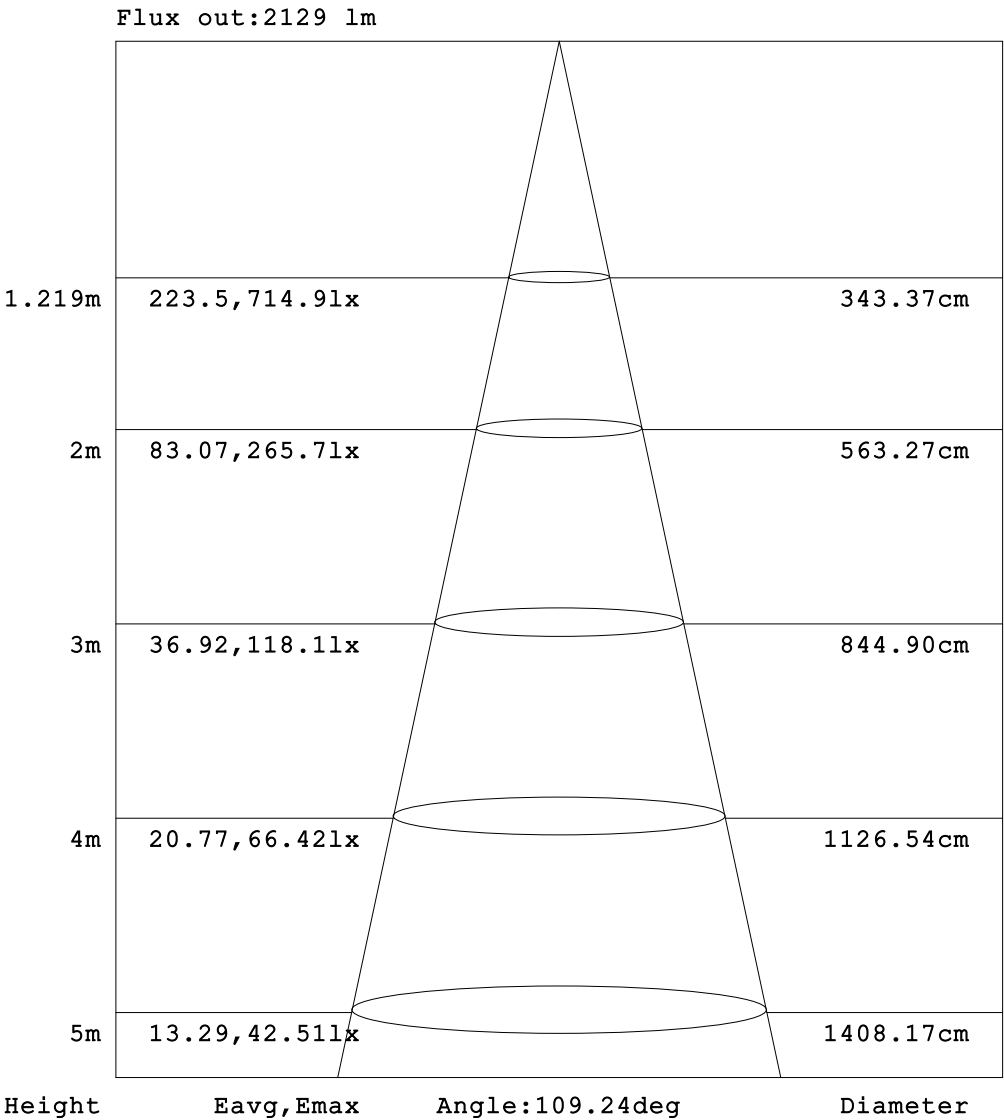
%lamp = 74.7%



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

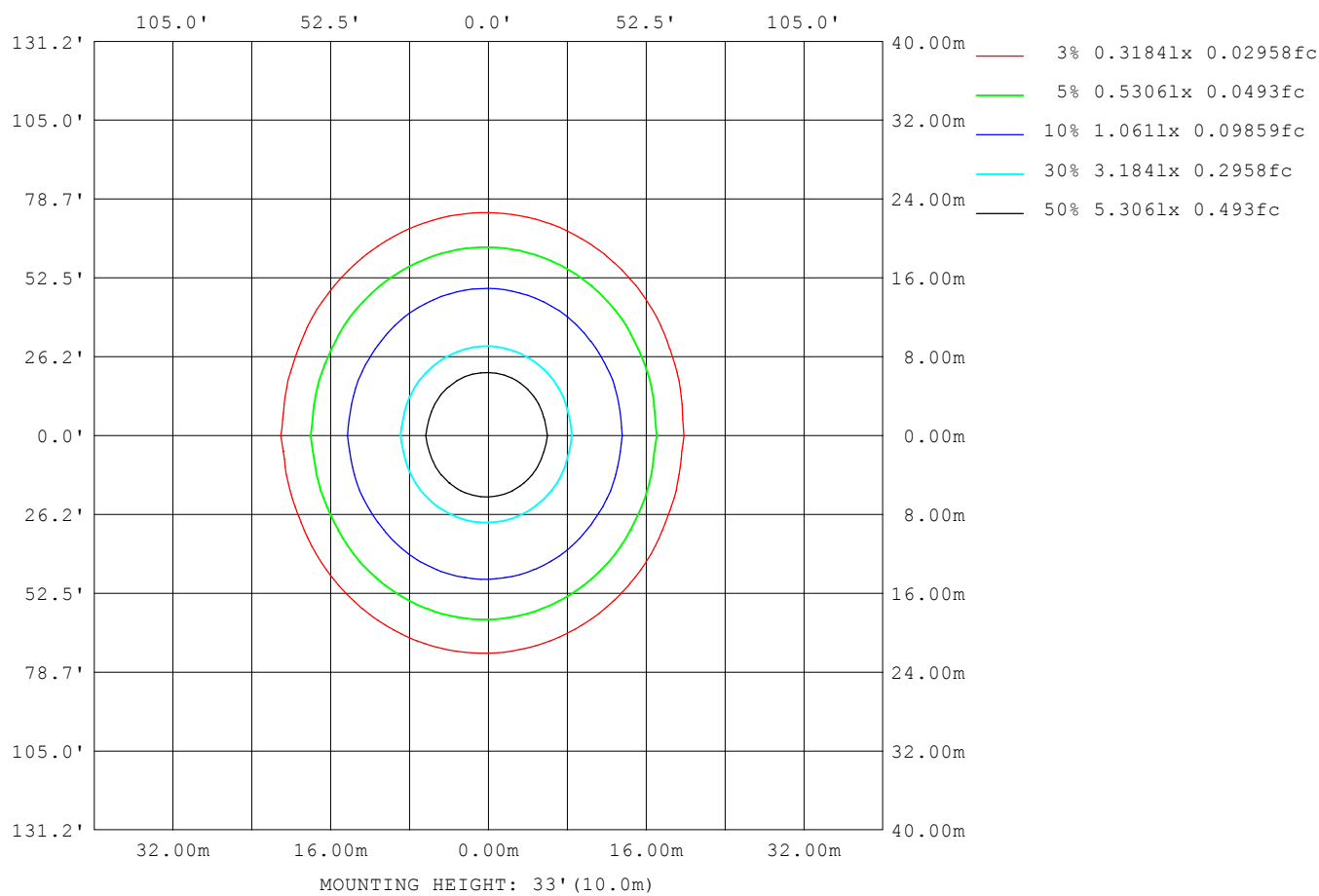
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:50%
Test Distance:8.600m [K=1.0000]
Remarks:

AAI Figure



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

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:120.2V I:0.1852A P:22.03W PF:0.9899 Lamp Flux:1588.22x2 lm		
NAME: LOC-24TROF-DMWMCCT	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:1186*145	PROTECTION ANGLE:

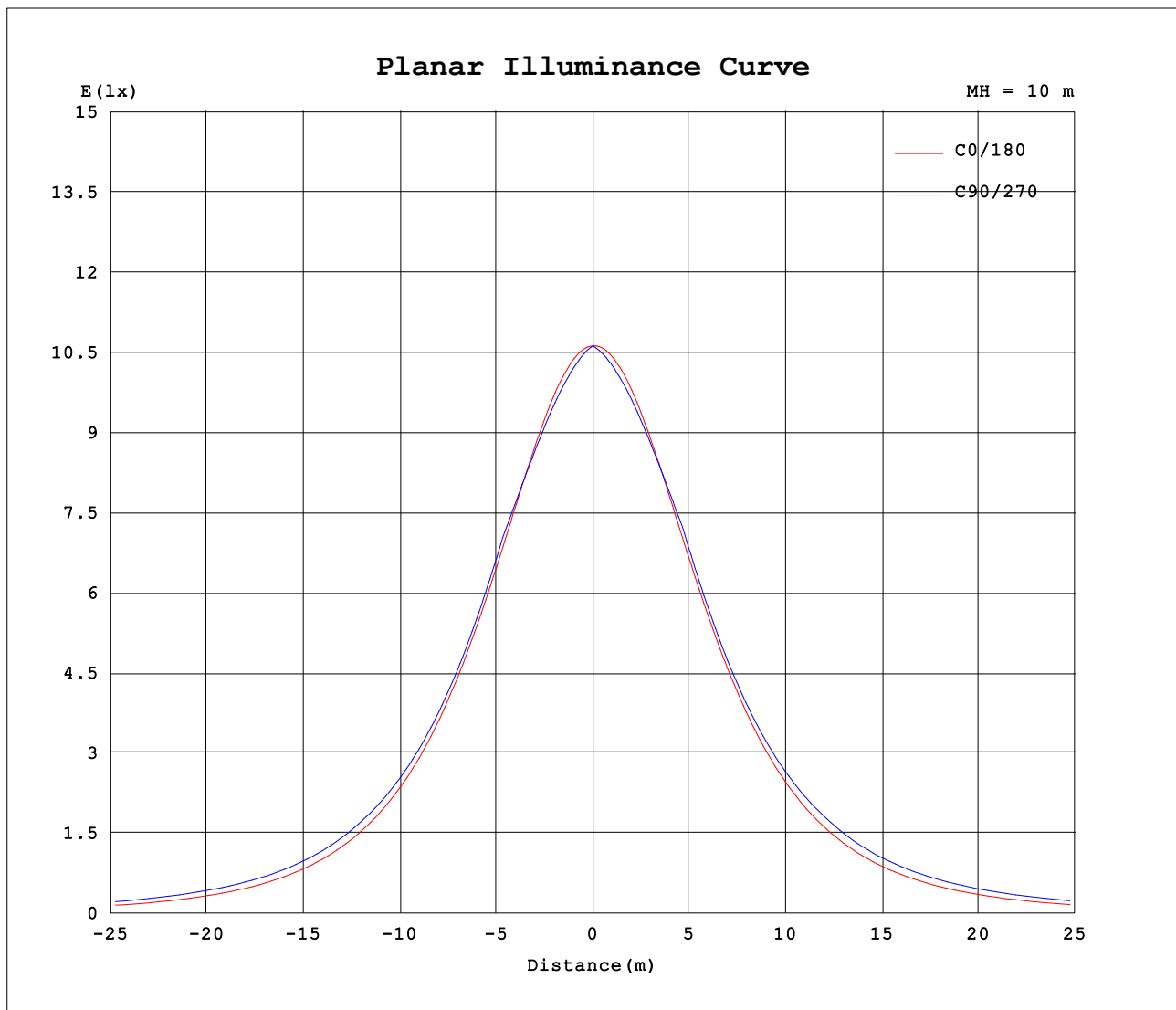
AvgL	cd/m2
L_0~180 (65) av	4912
L_0~180 (75) av	4167
L_0~180 (85) av	3055
L_90~270 (65) av	6595
L_90~270 (75) av	7800
L_90~270 (85) av	8909
L_45 (65) av	5711
L_45 (75) av	6154
L_45 (85) av	7390

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:

```