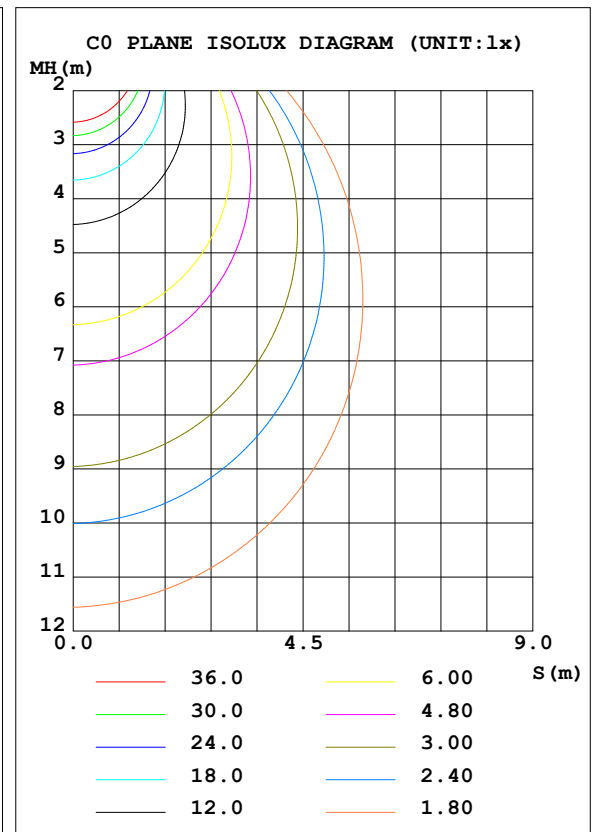
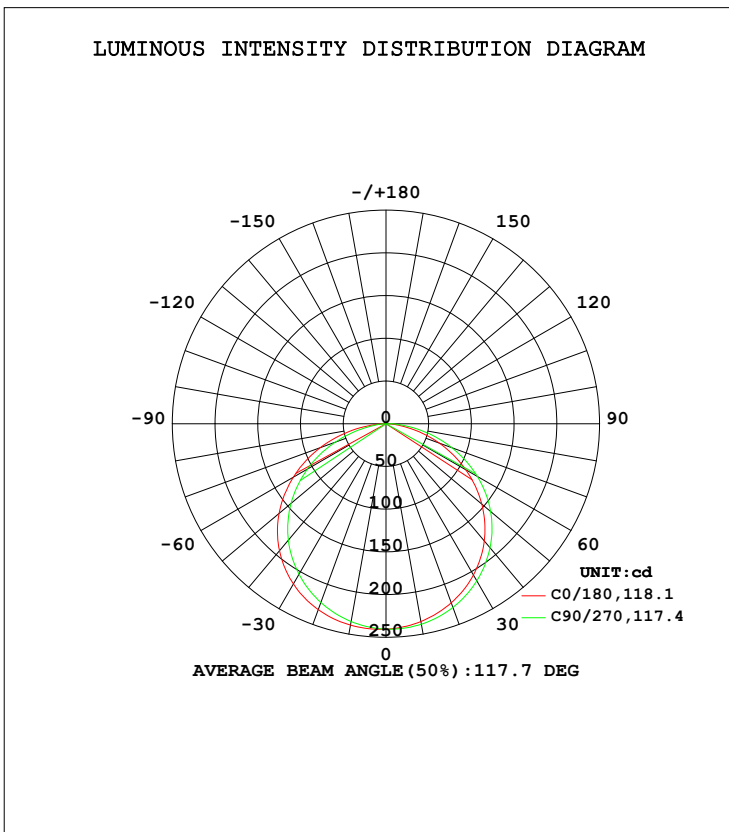


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

DATA OF LAMP		PHOTOMETRIC DATA Eff: 36.87 lm/W			
MODEL		I _{max} (cd)	240.8	S/MH (C0/180)	1.34
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)		TOTAL FLUX (lm)	732.62	η UP, DN (C0-180)	0.3, 49.9
NOMINAL FLUX (lm)	732.438	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.3, 49.6
LAMPS INSIDE	1	η up (%)	0.6	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)		η down (%)	99.4	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
ZONAL FLUX DIAGRAM:

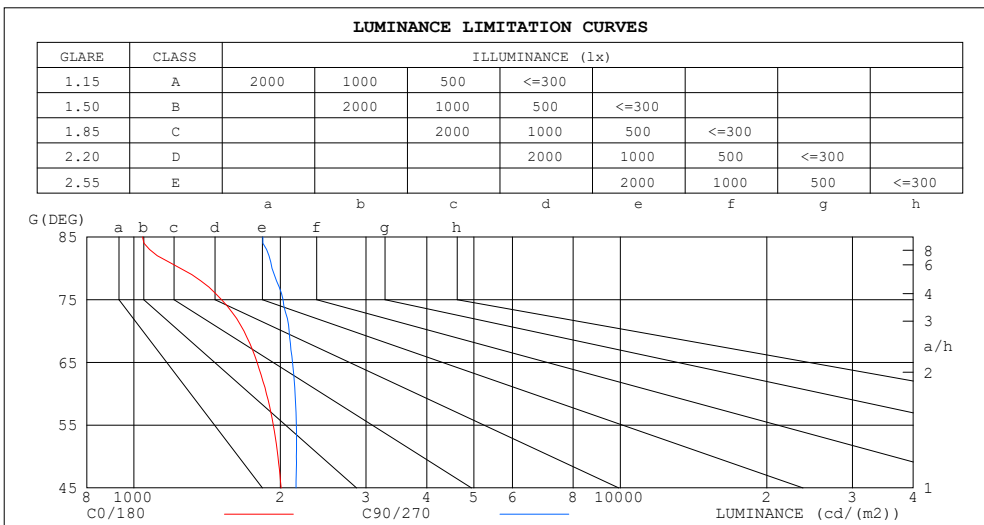
γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	235.1	238.3	239.3	235.1				0- 10	22.78	22.78	3.11,3.11
20	223.1	228.8	231.6	222.7				10- 20	65.69	88.47	12.1,12.1
30	204.5	212.5	216.6	203.5				20- 30	100.9	189.4	25.8,25.9
40	179.0	189.4	194.0	177.8				30- 40	123.9	313.3	42.8,42.8
50	146.4	159.8	163.5	145.1				40- 50	131.3	444.6	60.7,60.7
60	107.9	123.5	125.3	106.3				50- 60	121.0	565.5	77.2,77.2
70	66.37	82.19	81.52	63.22				60- 70	93.83	659.4	90,90
80	24.95	38.48	35.42	20.75				70- 80	54.23	713.6	97.4,97.4
90	2.268	5.488	1.602	0.2714				80- 90	14.83	728.4	99.4,99.4
100	0.3261	0.2957	0.3080	0.2664				90-100	0.7509	729.2	99.5,99.6
110	0.3570	0.4064	0.4651	0.3703				100-110	0.3641	729.5	99.6,99.6
120	0.5346	0.5544	0.6039	0.5479				110-120	0.4815	730.0	99.6,99.7
130	0.6894	0.7021	0.7639	0.7016				120-130	0.5639	730.6	99.7,99.7
140	0.8182	0.8499	0.8869	0.7882				130-140	0.6061	731.2	99.8,99.8
150	0.9360	0.9609	0.9925	0.9545				140-150	0.5708	731.7	99.9,99.9
160	0.9704	1.064	1.084	0.9953				150-160	0.4599	732.2	99.9,100
170	1.062	1.148	1.123	1.096				160-170	0.3022	732.5	100,100
180	1.145	1.158	1.133	1.145				170-180	0.1076	732.6	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1042	1842
80	1247	1924
75	1514	2027
70	1684	2086
65	1792	2119
60	1873	2145
55	1935	2157
50	1978	2158
45	2008	2155

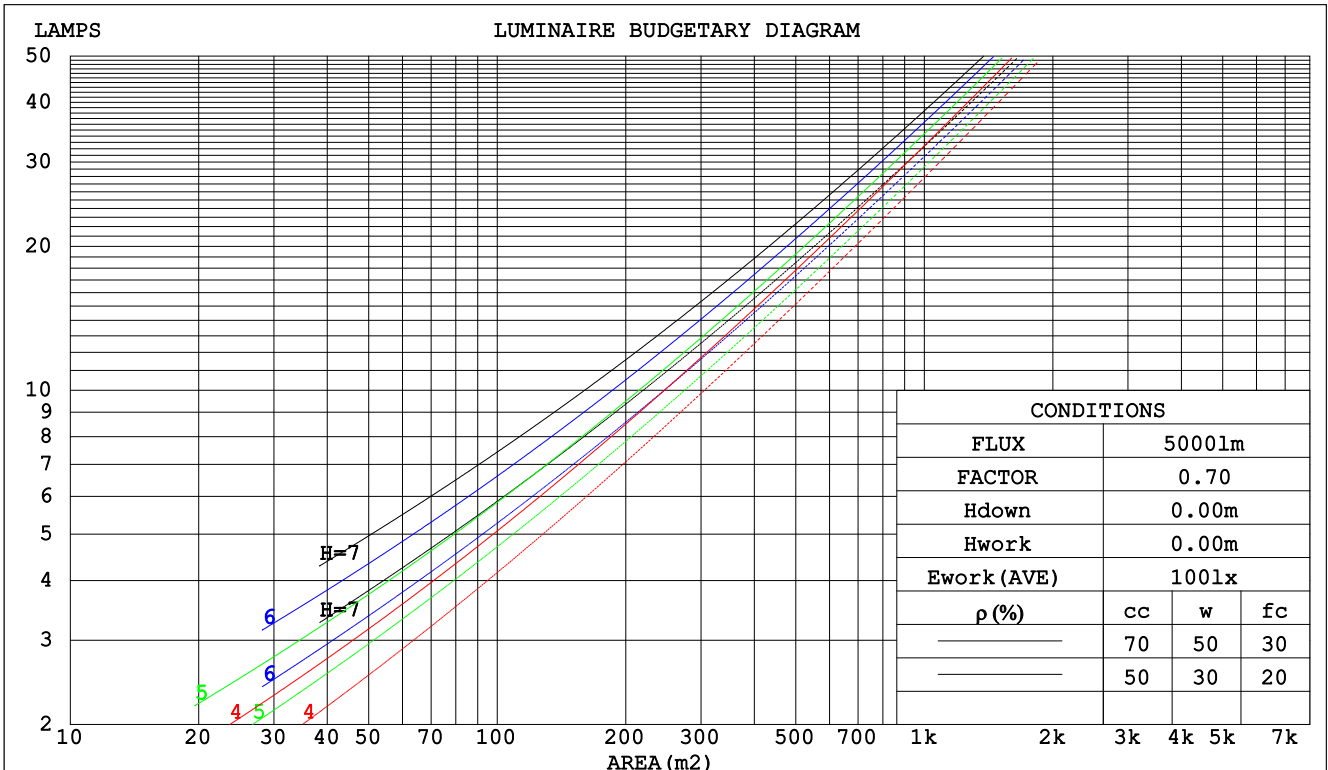
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

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															
	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	.99
1.0	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.61	.68	.64	.59	.57
4.0	.69	.60	.54	.68	.60	.53	.65	.58	.52	.63	.57	.52	.61	.55	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.56	.50	.45	.55	.49	.44	.42
6.0	.56	.46	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.39	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.35	.46	.40	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.30	.29
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.26
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm									
NAME: LST-RGB				TYPE: LED Sheet				WEIGHT:	
SPEC.: 60W				DIM.: 480*240 (MM)				SERIAL No.: 001	
MFR.: Flexfire LEDs, Inc.				SUR.: 0.24*0.48				Shielding Angle: 120	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.316	.180	.057	.309	.176	.056	.295	.169	.054	.282	.163	.052	.271	.157	.051	
2.0	.297	.163	.050	.290	.160	.049	.278	.155	.048	.267	.150	.047	.257	.145	.046	
3.0	.274	.146	.044	.268	.144	.043	.258	.140	.042	.248	.136	.042	.239	.132	.041	
4.0	.253	.131	.039	.248	.130	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037	
5.0	.233	.119	.034	.229	.117	.034	.220	.115	.034	.212	.112	.033	.205	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.205	.105	.031	.198	.103	.030	.191	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.184	.094	.027	.178	.093	.027	
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.173	.087	.025	.167	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.148	.075	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.195	.195	.195	.167	.167	.167	.114	.114	.114	.065	.065	.065	.021	.021	.021	
1.0	.185	.161	.138	.158	.138	.119	.108	.095	.082	.062	.055	.048	.020	.018	.015	
2.0	.177	.136	.102	.152	.117	.088	.104	.081	.061	.060	.047	.036	.019	.015	.012	
3.0	.170	.119	.078	.146	.103	.068	.100	.071	.048	.058	.042	.028	.019	.014	.009	
4.0	.162	.106	.062	.139	.091	.054	.096	.064	.038	.055	.037	.023	.018	.012	.007	
5.0	.155	.095	.051	.133	.082	.045	.092	.058	.031	.053	.034	.019	.017	.011	.006	
6.0	.148	.087	.043	.127	.075	.038	.088	.053	.027	.051	.031	.016	.016	.010	.005	
7.0	.141	.080	.037	.121	.069	.033	.084	.049	.023	.049	.029	.014	.016	.009	.005	
8.0	.134	.074	.033	.116	.064	.029	.080	.045	.020	.047	.027	.012	.015	.009	.004	
9.0	.128	.069	.030	.110	.060	.026	.076	.042	.018	.045	.025	.011	.014	.008	.004	
10.0	.122	.065	.027	.105	.056	.023	.073	.040	.017	.043	.023	.010	.014	.008	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm										
NAME: LST-RGB			TYPE: LED Sheet			WEIGHT:				
SPEC.: 60W			DIM.: 480*240 (MM)			SERIAL No.: 001				
MFR.: Flexfire LEDs, Inc.			SUR.: 0.24*0.48			Shielding Angle: 120				
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	16.3	17.8	16.5	18.0	18.2	16.7	18.3	17.0	18.5	18.7
3H	17.7	19.2	18.0	19.4	19.7	18.4	19.9	18.8	20.1	20.4
4H	18.3	19.7	18.6	19.9	20.2	19.2	20.5	19.5	20.8	21.1
6H	18.7	19.9	19.0	20.2	20.5	19.7	21.0	20.1	21.3	21.6
8H	18.7	20.0	19.1	20.3	20.6	19.9	21.2	20.3	21.5	21.8
12H	18.8	20.0	19.2	20.3	20.6	20.1	21.3	20.4	21.6	21.9
4H 2H	16.9	18.3	17.3	18.6	18.8	17.3	18.7	17.6	18.9	19.2
3H	18.6	19.8	19.0	20.1	20.4	19.2	20.4	19.6	20.7	21.0
4H	19.3	20.4	19.7	20.7	21.1	20.1	21.2	20.5	21.5	21.8
6H	19.8	20.8	20.2	21.1	21.5	20.8	21.7	21.2	22.1	22.5
8H	19.9	20.8	20.3	21.2	21.6	21.0	21.9	21.5	22.3	22.7
12H	20.0	20.8	20.4	21.2	21.6	21.2	22.1	21.7	22.4	22.9
8H 4H	19.6	20.5	20.1	20.9	21.3	20.3	21.2	20.7	21.6	22.0
6H	20.3	21.0	20.7	21.4	21.9	21.2	21.9	21.6	22.3	22.8
8H	20.5	21.1	21.0	21.6	22.0	21.5	22.2	22.0	22.6	23.1
12H	20.6	21.2	21.1	21.7	22.2	21.8	22.4	22.3	22.8	23.3
12H 4H	19.7	20.5	20.1	20.9	21.3	20.3	21.1	20.8	21.5	22.0
6H	20.4	21.0	20.8	21.5	21.9	21.2	21.9	21.7	22.3	22.8
8H	20.6	21.2	21.1	21.6	22.1	21.6	22.2	22.1	22.6	23.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				

CIE Pub.117, 732.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.1)
 Area: 0.1152 m2

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

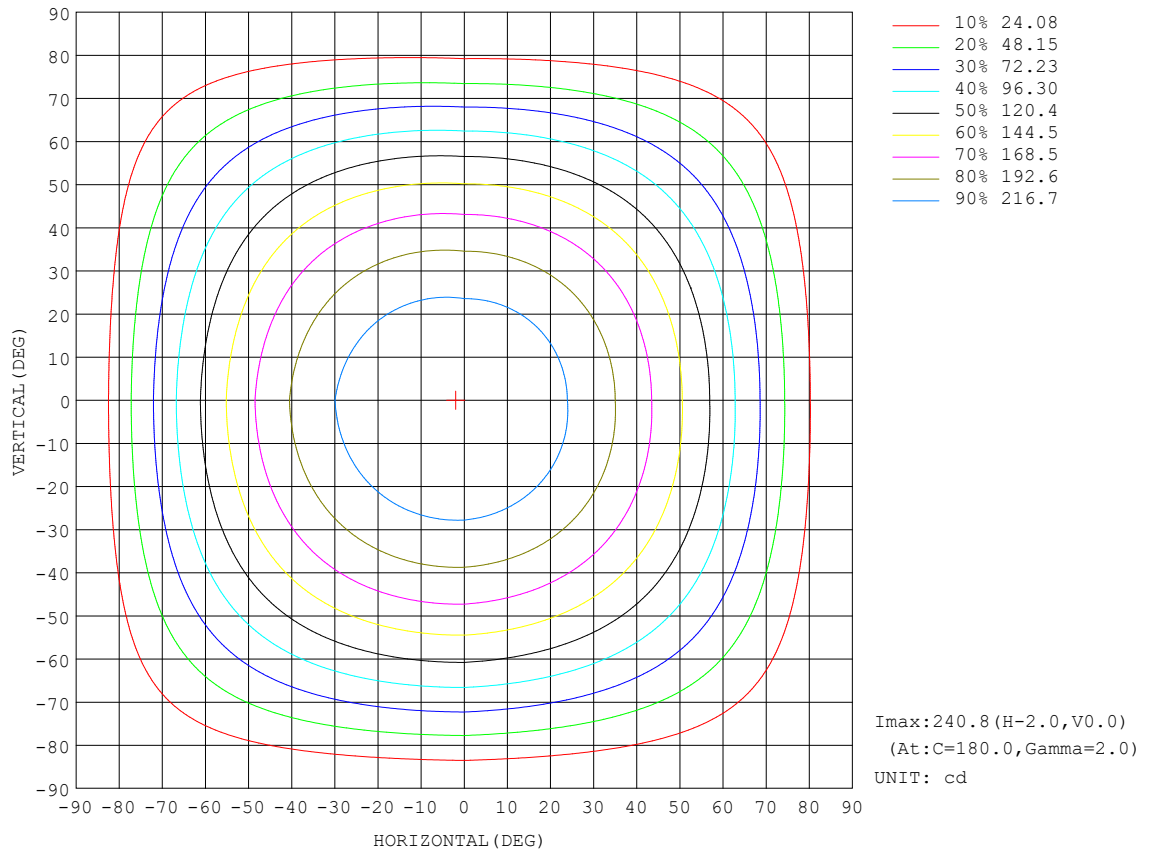
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	45	38	56	44	37	54	44	37	31
0.80	66	55	47	65	54	47	64	53	47	39
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	71	64	81	71	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	61
2.00	94	85	79	92	84	78	89	82	76	68
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

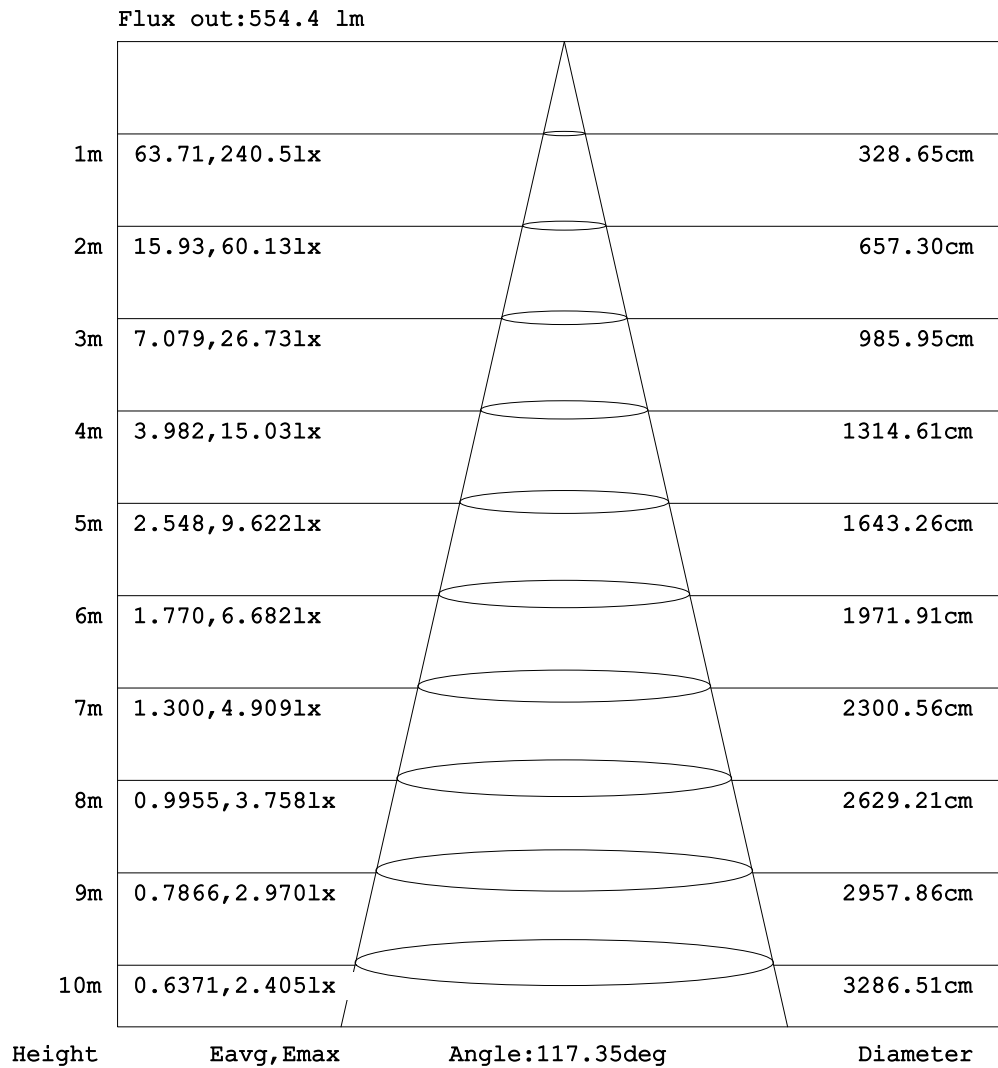


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

AAI Figure

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120



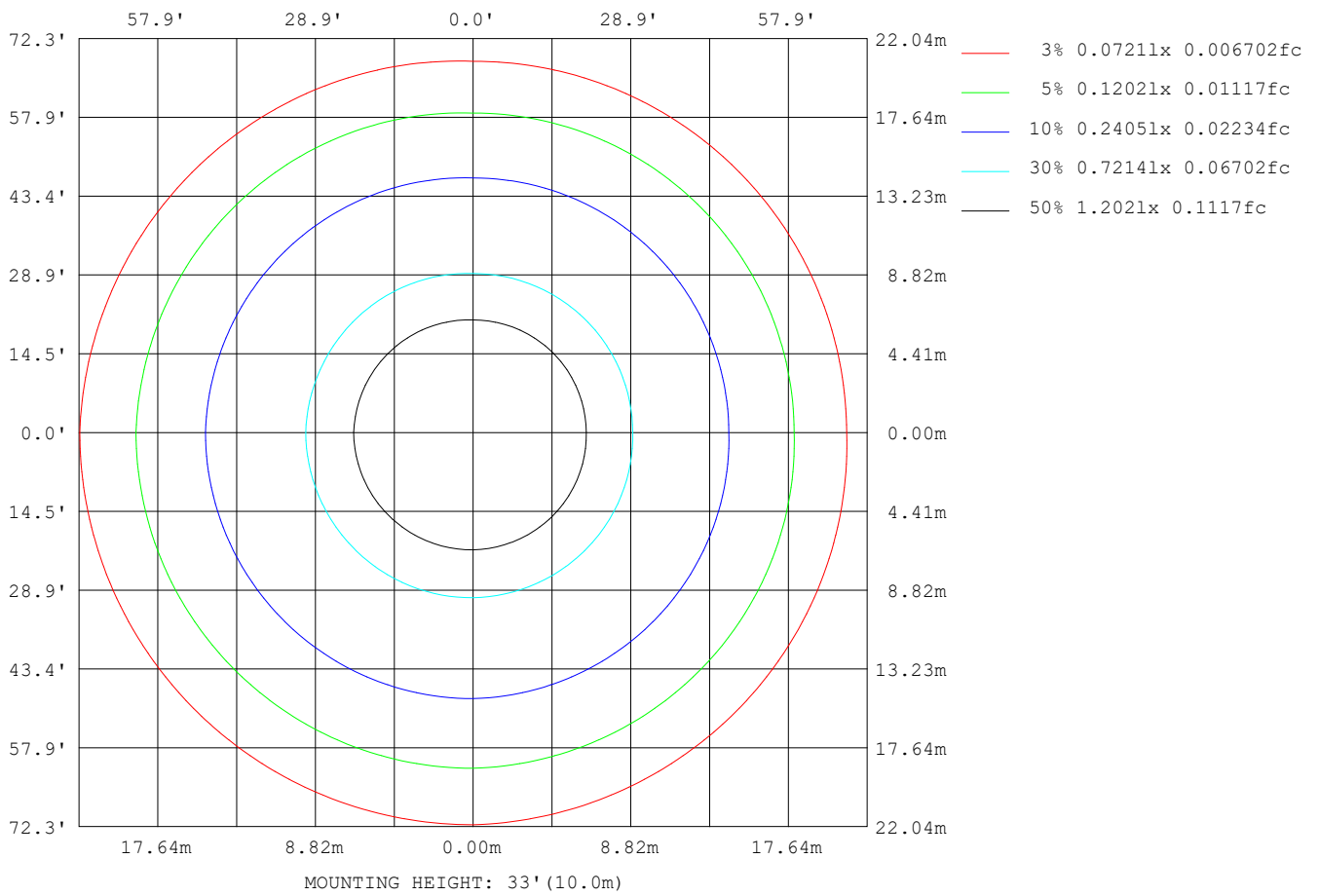
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

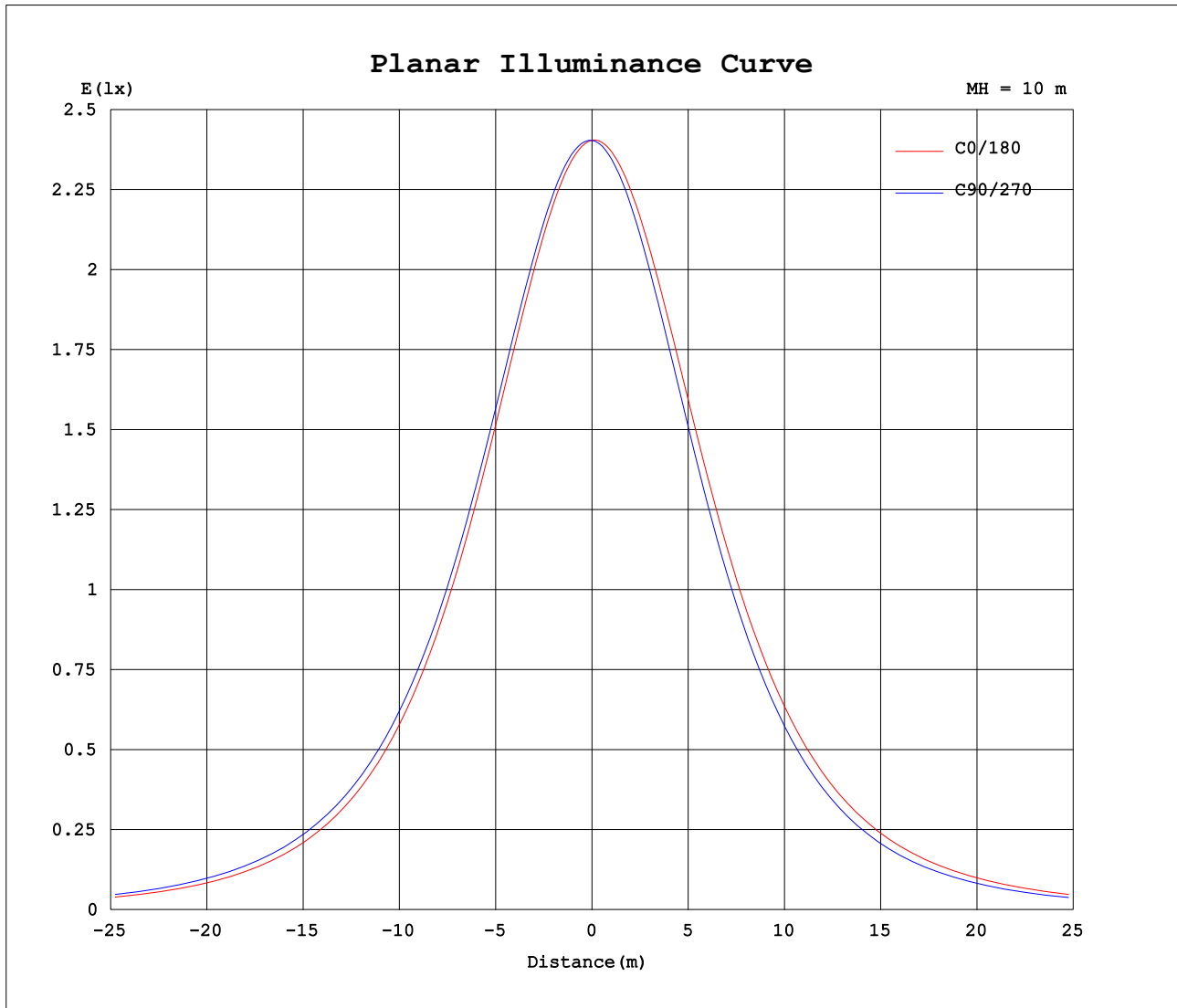
AvgL	cd/m2
L_0~180 (65) av	1966
L_0~180 (75) av	1736
L_0~180 (85) av	1201
L_90~270 (65) av	1935
L_90~270 (75) av	1707
L_90~270 (85) av	1251
L_45 (65) av	1957
L_45 (75) av	1731
L_45 (85) av	1242

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

Planar Illuminance Curve



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 C Interval: 90.0DEG
 Test Speed: HIGH
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 Test Date:2024-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.001V I:0.8280A P:19.873W PF:1.0000 Freq:0Hz Lamp Flux:732.438x1 lm		
NAME: LST-RGB	TYPE: LED Sheet	WEIGHT:
SPEC.: 60W	DIM.: 480*240 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.24*0.48	Shielding Angle: 120

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	240	240	240	240															
5	239	240	241	239															
10	235	238	239	235															
15	230	234	236	230															
20	223	229	232	223															
25	215	221	225	214															
30	205	212	217	203															
35	193	202	206	191															
40	179	189	194	178															
45	164	176	180	162															
50	146	160	163	145															
55	128	143	145	126															
60	108	124	125	106															
65	87.2	103	104	85.3															
70	66.4	82.2	81.5	63.2															
75	45.2	60.4	58.4	41.3															
80	24.9	38.5	35.4	20.7															
85	10.5	18.5	13.7	6.62															
90	2.27	5.49	1.60	0.27															
95	0.33	0.77	0.61	0.26															
100	0.33	0.30	0.31	0.27															
105	0.32	0.35	0.39	0.32															
110	0.36	0.41	0.47	0.37															
115	0.46	0.48	0.53	0.49															
120	0.53	0.55	0.60	0.55															
125	0.58	0.65	0.69	0.58															
130	0.69	0.70	0.76	0.70															
135	0.76	0.79	0.85	0.77															
140	0.82	0.85	0.89	0.79															
145	0.94	0.90	0.95	0.92															
150	0.94	0.96	0.99	0.95															
155	0.96	1.01	1.05	0.96															
160	0.97	1.06	1.08	1.00															
165	1.01	1.12	1.11	1.03															
170	1.06	1.15	1.12	1.10															
175	1.12	1.15	1.13	1.15															
180	1.15	1.16	1.13	1.15															

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