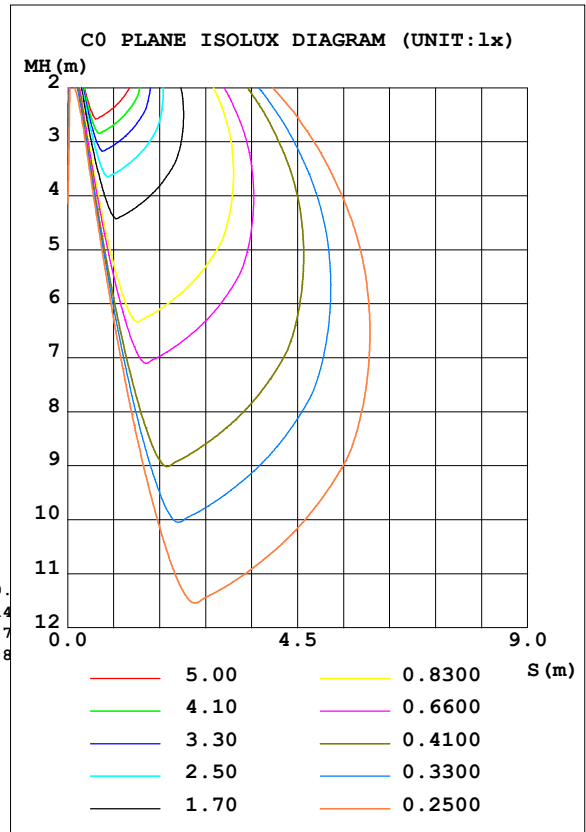
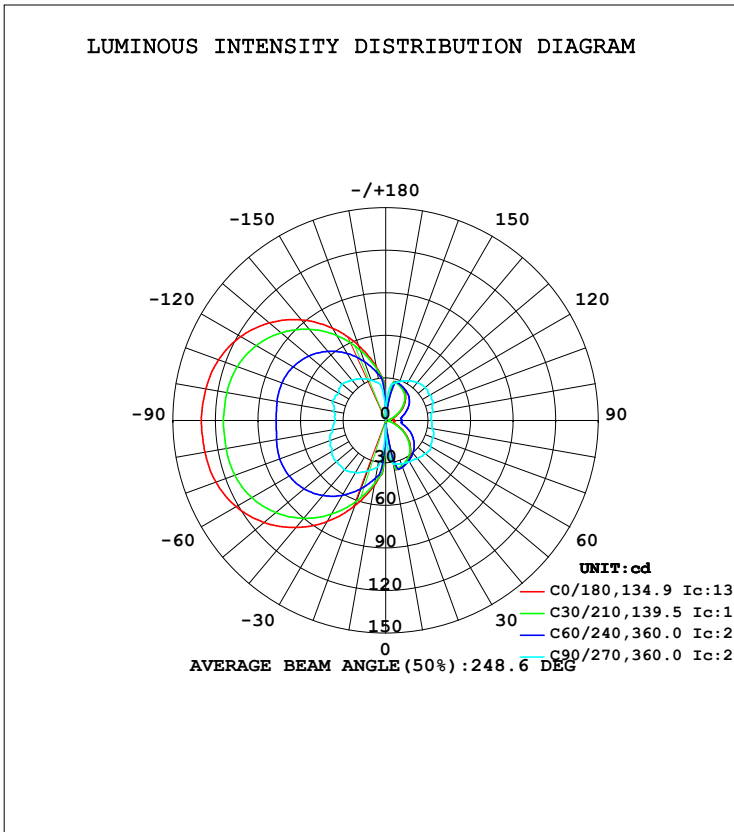


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 30.95 lm/W			
MODEL	STCW071228LAJD2TG	I _{max} (cd)	130.1	S/MH (C0/180)	6.89
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	5.28
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	625.34	η UP, DN (C0-180)	19.9, 21.3
NOMINAL FLUX (lm)	625.342	CIE CLASS	DIFFUSE	η UP, DN (C180-360)	28.5, 30.3
LAMPS INSIDE	1	η up (%)	48.4	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120.3	η down (%)	51.6	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Leo
 Test Date: 2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.400m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

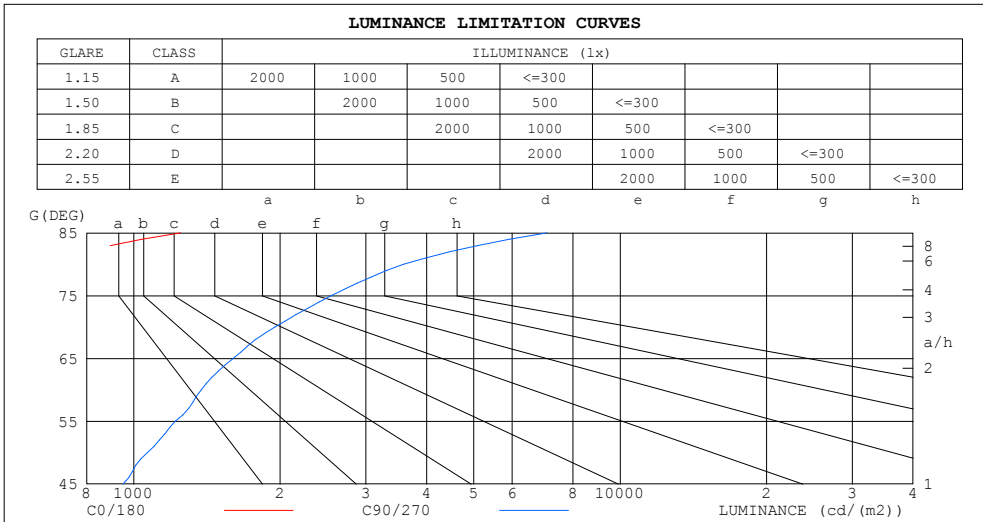
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	26.46	24.24	31.01	42.66	46.34	43.07	33.39	22.69	0- 10	2.301	2.301	0.37,0.37
20	34.45	34.47	32.61	54.92	64.02	55.92	38.12	34.30	10- 20	11.63	13.93	2.23,2.23
30	32.29	31.98	33.64	67.15	82.24	68.63	42.46	31.83	20- 30	21.67	35.60	5.69,5.69
40	27.47	28.45	35.19	77.73	98.60	79.64	45.39	28.28	30- 40	32.21	67.81	10.8,10.8
50	21.19	23.32	36.66	85.84	112.0	88.15	44.92	23.16	40- 50	41.76	109.6	17.5,17.5
60	13.84	17.21	36.73	91.15	121.7	93.81	43.72	17.18	50- 60	49.20	158.8	25.4,25.4
70	7.083	10.77	35.62	93.42	127.4	96.38	42.00	10.85	60- 70	53.40	212.2	33.9,33.9
80	5.858	7.022	33.24	92.97	129.4	96.22	38.35	7.422	70- 80	54.97	267.1	42.7,42.7
90	5.603	6.935	32.39	92.35	130.1	95.94	35.95	7.388	80- 90	55.56	322.7	51.6,51.6
100	5.270	6.848	33.35	92.06	128.8	95.78	37.38	6.901	90-100	55.24	377.9	60.4,60.4
110	5.959	9.398	35.63	91.03	125.4	94.60	40.01	9.689	100-110	53.84	431.8	69,69
120	11.31	14.30	36.13	87.31	118.2	90.57	38.57	14.72	110-120	51.17	482.9	77.2,77.2
130	16.99	18.99	36.39	80.72	107.1	83.56	40.27	18.99	120-130	45.81	528.8	84.6,84.6
140	22.02	22.91	34.99	71.54	92.57	73.87	37.23	21.77	130-140	38.01	566.8	90.6,90.6
150	25.60	25.42	32.46	60.16	75.23	61.93	34.18	25.66	140-150	28.46	595.2	95.2,95.2
160	27.33	27.33	29.34	47.37	56.37	48.57	30.33	27.46	150-160	18.59	613.8	98.2,98.2
170	21.02	19.12	26.12	34.80	38.32	35.35	26.52	19.12	160-170	9.644	623.5	99.7,99.7
180	2.272	1.401	2.257	4.488	2.298	1.406	2.240	4.478	170-180	1.884	625.3	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Leo
Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.400m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1247	7070
80	632	3587
75	421	2548
70	388	1951
65	454	1603
60	518	1376
55	571	1218
50	618	1068
45	648	951

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

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	.402	.228	.072	.380	.217	.069	.339	.194	.062	.301	.173	.056	.266	.154	.050	
2.0	.338	.185	.057	.318	.175	.054	.280	.156	.048	.246	.138	.043	.214	.121	.038	
3.0	.296	.158	.047	.278	.149	.045	.243	.132	.040	.212	.116	.036	.182	.101	.031	
4.0	.264	.137	.040	.248	.130	.038	.216	.115	.034	.187	.100	.030	.160	.087	.026	
5.0	.239	.122	.035	.224	.115	.033	.195	.101	.030	.168	.088	.026	.142	.076	.023	
6.0	.218	.109	.031	.204	.103	.030	.177	.091	.026	.152	.079	.023	.129	.068	.020	
7.0	.201	.099	.028	.187	.093	.027	.163	.082	.024	.140	.072	.021	.118	.061	.018	
8.0	.186	.091	.025	.173	.085	.024	.150	.075	.021	.129	.065	.019	.109	.056	.016	
9.0	.173	.083	.023	.161	.079	.022	.140	.069	.020	.120	.060	.017	.101	.051	.015	
10.0	.161	.077	.021	.151	.073	.020	.131	.064	.018	.112	.056	.016	.094	.047	.014	

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	.559	.559	.559	.478	.478	.478	.326	.326	.326	.187	.187	.187	.060	.060	.060	
1.0	.558	.527	.499	.478	.452	.429	.327	.311	.297	.188	.180	.173	.060	.058	.056	
2.0	.553	.506	.467	.473	.436	.403	.324	.301	.281	.187	.175	.165	.060	.057	.054	
3.0	.546	.491	.447	.468	.423	.387	.321	.294	.272	.186	.172	.160	.060	.056	.052	
4.0	.539	.479	.434	.462	.414	.377	.318	.289	.266	.184	.169	.157	.059	.055	.052	
5.0	.531	.470	.425	.456	.407	.370	.314	.284	.261	.182	.167	.155	.059	.054	.051	
6.0	.524	.463	.419	.451	.401	.365	.311	.281	.258	.180	.165	.153	.058	.054	.051	
7.0	.517	.457	.414	.445	.396	.361	.307	.278	.256	.179	.164	.152	.058	.054	.050	
8.0	.511	.452	.411	.440	.392	.358	.304	.275	.254	.177	.162	.151	.057	.053	.050	
9.0	.505	.447	.408	.435	.388	.356	.301	.273	.253	.176	.161	.151	.057	.053	.050	
10.0	.499	.443	.406	.430	.385	.354	.299	.271	.252	.174	.160	.150	.056	.053	.050	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm										
NAME:					TYPE:2835			WEIGHT:		
SPEC.:3000K 4000K					DIM.:			SERIAL No.:2020120702		
MFR.: Lightart					SUR.:0.305*0.175			Shielding Angle:		
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	5.0	6.1	5.9	7.0	8.1	9.2	10.2	10.0	11.1	12.2
3H	5.8	6.8	6.6	7.7	8.8	12.3	13.3	13.2	14.2	15.4
4H	6.1	7.0	7.0	8.0	9.1	14.2	15.1	15.1	16.1	17.2
6H	6.8	7.7	7.7	8.6	9.8	16.3	17.1	17.2	18.1	19.3
8H	7.4	8.3	8.3	9.2	10.4	17.4	18.3	18.3	19.2	20.4
12H	8.2	9.0	9.1	10.0	11.2	18.8	19.6	19.7	20.6	21.8
4H 2H	5.8	6.7	6.7	7.6	8.8	9.1	10.1	10.0	11.0	12.1
3H	6.5	7.3	7.4	8.2	9.4	12.4	13.2	13.3	14.2	15.4
4H	6.8	7.5	7.7	8.5	9.7	14.4	15.2	15.3	16.1	17.3
6H	7.5	8.2	8.5	9.2	10.4	16.7	17.4	17.7	18.4	19.6
8H	8.2	8.8	9.2	9.8	11.1	18.1	18.7	19.1	19.7	21.0
12H	9.2	9.8	10.1	10.7	12.0	19.7	20.3	20.7	21.3	22.6
8H 4H	7.6	8.2	8.5	9.2	10.4	14.3	14.9	15.2	15.9	17.1
6H	8.3	8.8	9.3	9.8	11.1	16.7	17.3	17.7	18.2	19.6
8H	8.9	9.4	9.9	10.4	11.7	18.3	18.8	19.3	19.8	21.1
12H	10.0	10.4	11.0	11.4	12.8	20.2	20.6	21.2	21.7	23.0
12H 4H	8.0	8.6	9.0	9.6	10.9	14.2	14.8	15.1	15.7	17.0
6H	8.9	9.3	9.9	10.4	11.7	16.7	17.1	17.7	18.2	19.5
8H	9.5	9.9	10.5	11.0	12.3	18.3	18.7	19.3	19.7	21.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.2					+ 0.3 / - 0.3				
2.0H	+ 0.3 / - 0.3					+ 0.6 / - 0.5				

CIE Pub.117, 625.3 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

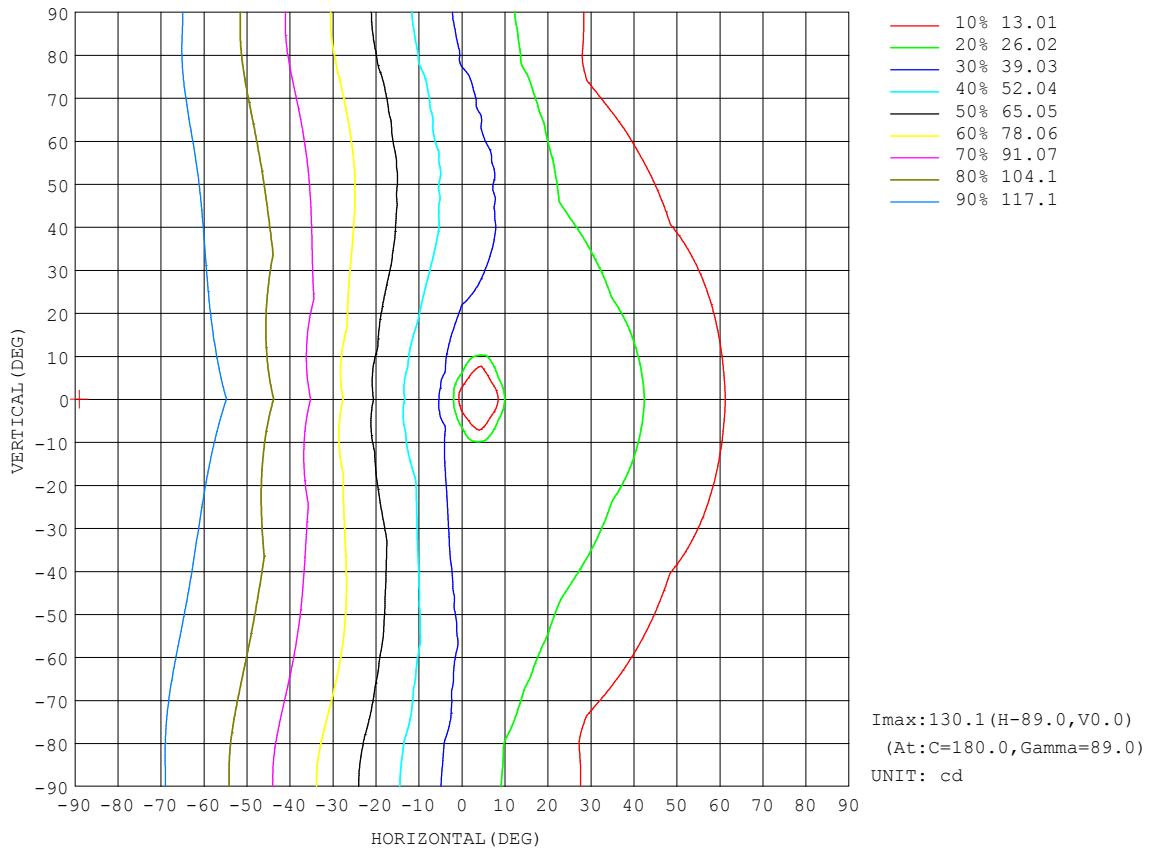
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	37	24	17	35	23	16	31	21	15	8
0.80	45	32	23	42	30	22	37	27	20	11
1.00	53	39	30	49	36	28	43	34	25	14
1.25	59	46	36	55	43	34	48	38	31	17
1.50	65	51	42	60	48	39	52	42	35	20
2.00	73	60	51	67	56	48	57	49	42	24
2.50	78	66	57	72	61	53	61	53	46	27
3.00	82	71	62	75	66	58	64	57	51	29
4.00	87	78	70	80	72	65	68	62	56	33
5.00	90	82	75	83	76	70	70	65	60	35
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

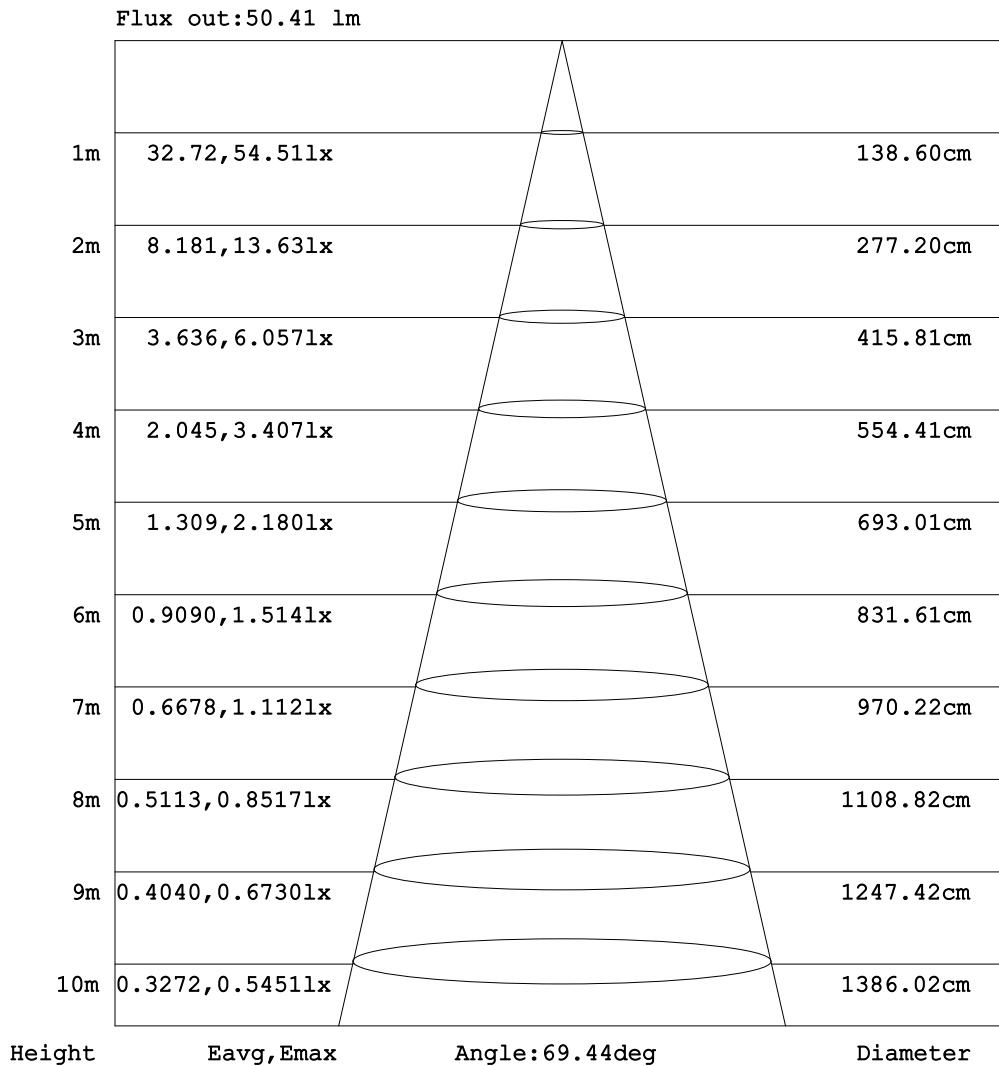


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

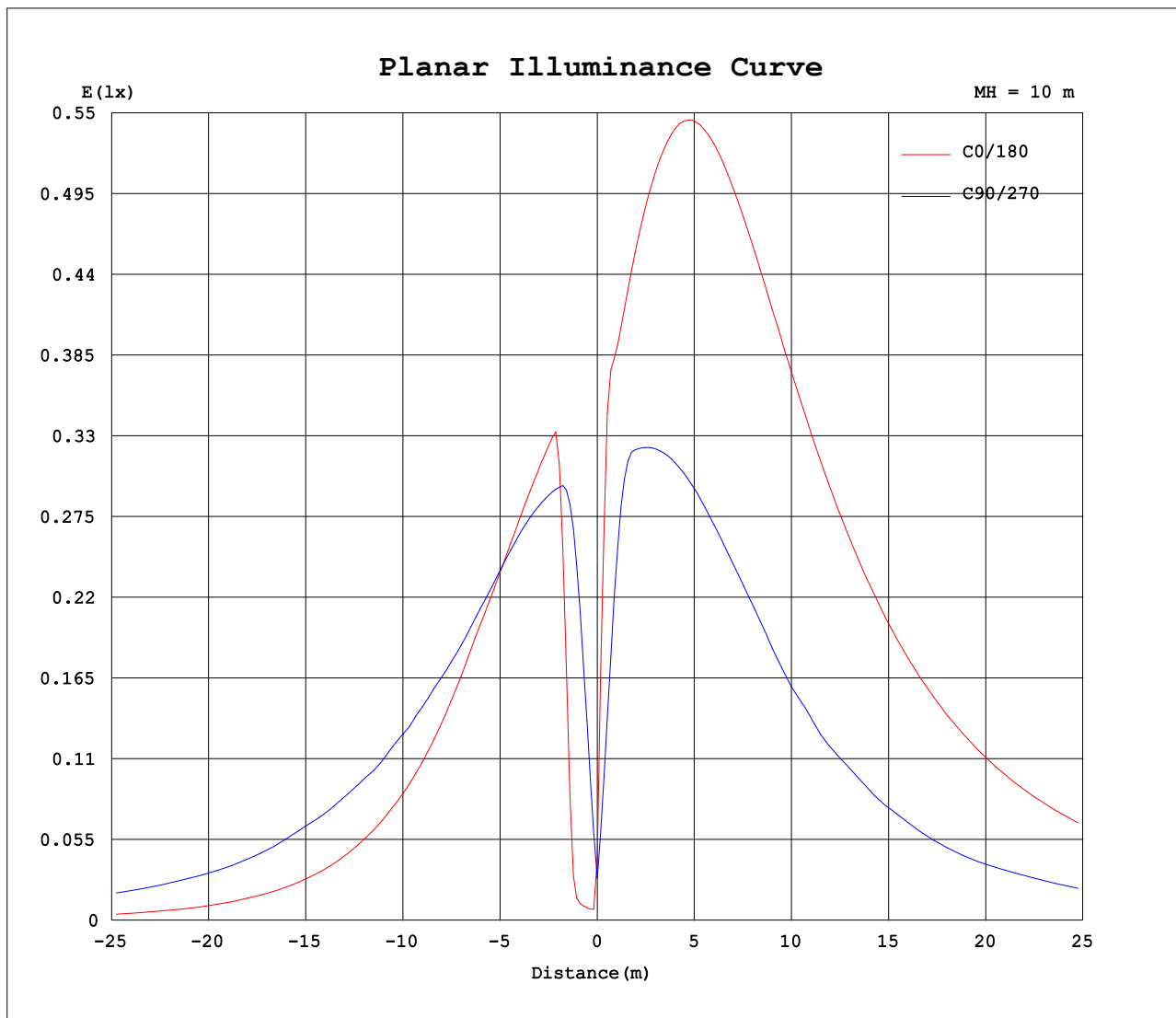


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Leo
 Test Date: 2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.400m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.3V I:0.1705A P:20.20W PF:0.9852 Freq:59.98Hz Lamp Flux:625.342x1 lm		
NAME:	TYPE:2835	WEIGHT:
SPEC.:3000K 4000K	DIM.:	SERIAL No.:2020120702
MFR.: Lightart	SUR.:0.305*0.175	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	4.28	5.07	2.75	2.87	4.18	4.02	4.28	5.07	2.75	2.87	4.18	4.02							
5	1.17	3.15	5.64	21.2	34.7	38.1	38.7	38.4	34.0	22.2	5.15	3.03							
10	26.5	27.9	20.6	31.0	41.1	44.2	46.3	44.9	41.2	33.4	17.9	27.5							
15	35.3	35.0	35.7	31.9	45.6	51.8	55.0	52.7	46.1	35.7	35.0	34.8							
20	34.5	33.9	35.0	32.6	50.4	59.5	64.0	60.6	51.2	38.1	34.8	33.8							
25	33.5	32.6	34.0	33.2	55.1	67.2	73.2	68.6	56.2	40.5	33.8	32.5							
30	32.3	31.2	32.8	33.6	59.6	74.7	82.2	76.3	61.0	42.5	32.6	31.1							
35	30.3	29.4	31.6	34.1	63.7	81.8	90.8	83.5	65.3	44.2	31.4	29.4							
40	27.5	26.8	30.1	35.2	67.2	88.2	98.6	90.1	69.2	45.4	29.8	26.8							
45	24.5	23.7	28.3	35.9	70.2	94.0	106	96.0	72.4	45.0	28.0	23.6							
50	21.2	20.3	26.4	36.7	72.7	99.0	112	101	75.1	44.9	26.1	20.3							
55	17.5	16.6	24.1	37.3	74.5	103	117	106	77.2	45.1	23.9	16.6							
60	13.8	12.7	21.7	36.7	75.7	107	122	109	78.6	43.7	21.5	12.9							
65	10.2	8.83	19.2	36.2	76.2	109	125	112	79.4	43.1	19.1	8.93							
70	7.08	5.27	16.3	35.6	76.1	111	127	113	79.5	42.0	16.2	5.49							
75	5.81	2.79	13.4	35.2	75.5	111	129	114	79.0	40.7	13.5	3.22							
80	5.86	2.59	11.5	33.2	74.4	111	129	114	78.2	38.4	11.7	3.17							
85	5.80	2.66	11.3	32.9	73.4	111	130	114	77.4	37.1	11.6	3.19							
90	5.60	2.56	11.3	32.4	73.2	112	130	115	77.4	36.0	11.6	3.14							
95	5.41	2.52	11.2	32.6	73.1	111	130	114	77.4	36.3	11.4	3.04							
100	5.27	2.48	11.2	33.4	73.4	111	129	114	77.8	37.4	10.9	2.95							
105	5.11	2.49	12.5	33.9	73.7	110	128	113	78.1	37.7	12.5	2.97							
110	5.96	4.33	14.5	35.6	73.6	108	125	111	77.9	40.0	14.4	4.98							
115	8.46	7.11	16.4	35.8	72.9	106	122	109	77.0	39.6	16.6	7.83							
120	11.3	10.1	18.5	36.1	71.7	103	118	106	75.6	38.6	18.6	10.8							
125	14.2	13.1	20.3	36.3	69.8	98.9	113	101	73.5	39.8	18.3	13.8							
130	17.0	16.0	22.0	36.4	67.3	94.1	107	96.3	70.8	40.3	21.3	16.7							
135	19.6	18.8	23.3	35.9	64.3	88.5	100	90.5	67.5	38.8	23.4	19.3							
140	22.0	21.3	24.5	35.0	60.8	82.3	92.6	84.0	63.7	37.2	24.8	18.8							
145	24.2	23.3	25.4	33.8	56.8	75.4	84.2	76.9	59.4	35.6	25.2	23.4							
150	25.6	24.7	26.1	32.5	52.4	67.9	75.2	69.2	54.6	34.2	26.3	25.0							
155	26.5	25.9	26.9	31.0	47.6	60.1	65.9	61.1	49.6	32.3	27.1	26.1							
160	27.3	26.9	27.8	29.3	42.7	52.1	56.4	52.9	44.2	30.3	27.9	27.0							
165	28.0	27.7	28.4	27.7	37.7	44.2	47.1	44.8	38.9	28.4	28.5	27.8							
170	21.0	22.9	15.4	26.1	33.1	36.5	38.3	36.9	33.8	26.5	15.7	22.5							
175	1.12	2.91	4.88	18.0	27.5	30.2	30.6	30.4	27.9	18.4	5.19	2.99							
180	2.27	1.39	1.41	2.26	3.58	5.39	2.30	1.40	1.41	2.24	3.56	5.39							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Leo
 Test Date:2020-12-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.400m [K=1.0000]
 Remarks: