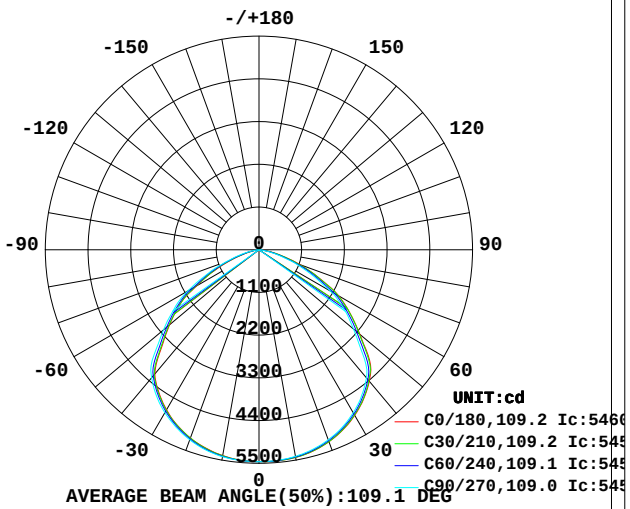
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.67V I:0.4784A P:103.32W PF:0.9831 Freq:49.89Hz Lamp Flux:14703.9x1 lm		
NAME: KSeaLion	TYPE:	WEIGHT:
SPEC.:Ex-KSL100H6V6CH-E	DIM.:	SERIAL No.:
MFR.: KHJ		Shielding Angle:

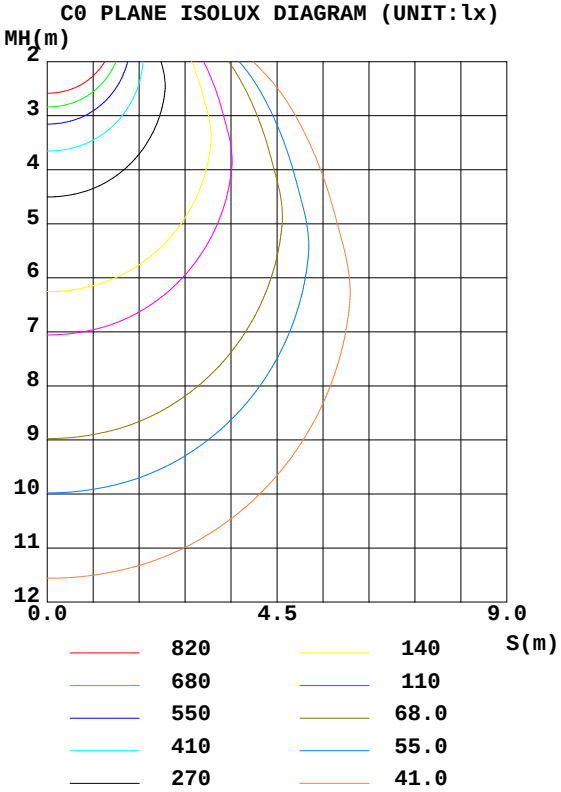
DATA OF LAMP		PHOTOMETRIC DATA Eff: 142.31 lm/W			
MODEL		Imax(cd)	5460	S/MH(C0/180)	1.30
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	1.32
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	14704	η UP,DN(C0-180)	0.3,50.0
NOMINAL FLUX(lm)	14703.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,49.2
LAMPS INSIDE	1	η up(%)	0.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120.0	η down(%)	99.3	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):109.1 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [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	5431	5423	5402	5387	5383	5394	5411	5424	0- 10	518.6	518.6	3.53,3.53
20	5263	5244	5209	5170	5160	5173	5211	5249	10- 20	1506	2024	13.8,13.8
30	4926	4899	4849	4781	4760	4790	4845	4909	20- 30	2328	4352	29.6,29.6
40	4417	4380	4304	4213	4173	4219	4301	4389	30- 40	2875	7228	49.2,49.2
50	3388	3328	3181	3056	3008	3066	3211	3349	40- 50	2914	10141	69,69
60	2367	2295	2115	1916	1844	1924	2118	2322	50- 60	2392	12534	85.2,85.2
70	1127	1040	958.4	766.3	734.9	792.3	881.9	1070	60- 70	1468	14002	95.2,95.2
80	260.7	240.1	173.5	121.6	99.24	122.1	176.3	242.9	70- 80	531.1	14533	98.8,98.8
90	5.018	3.017	1.874	2.047	3.237	3.049	2.800	3.546	80- 90	62.66	14596	99.3,99.3
100	4.356	4.308	4.659	5.178	7.078	6.770	6.164	5.623	90-100	4.123	14600	99.3,99.3
110	8.928	8.762	9.213	9.928	12.49	12.09	11.32	10.59	100-110	8.260	14608	99.4,99.4
120	14.57	14.24	14.75	15.35	18.23	17.79	17.19	16.37	110-120	13.07	14621	99.4,99.4
130	20.06	19.83	20.43	20.70	23.52	23.23	22.91	22.00	120-130	16.83	14638	99.6,99.6
140	25.18	25.17	25.79	25.67	28.10	27.78	27.78	26.84	130-140	18.54	14657	99.7,99.7
150	30.10	30.17	30.62	30.18	32.44	31.31	31.40	30.78	140-150	17.99	14675	99.8,99.8
160	34.85	34.85	34.65	34.48	36.35	34.77	34.83	34.66	150-160	15.14	14690	99.9,99.9
170	38.24	37.79	36.85	36.97	39.55	37.69	37.38	37.44	160-170	10.25	14700	100,100
180	40.41	39.32	38.50	38.39	40.72	38.83	38.47	38.43	170-180	3.656	14704	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

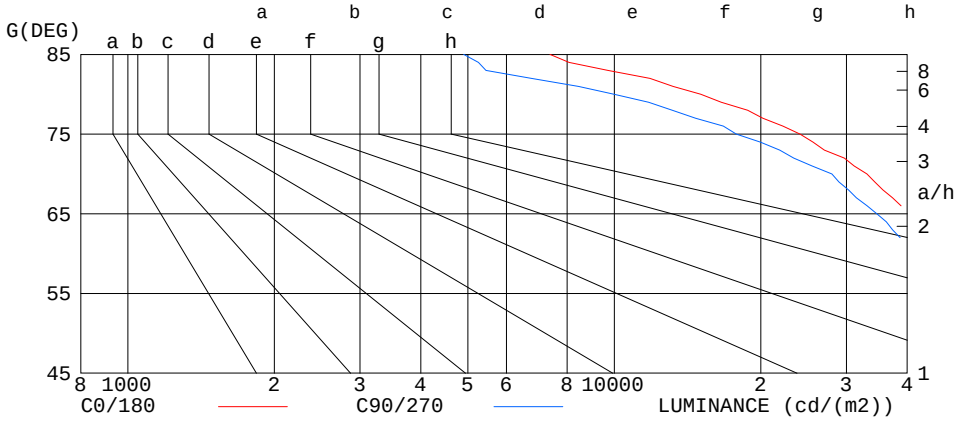
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7375	4900
80	15061	9986
75	24089	17814
70	33055	27997
65	40090	34653
60	47493	42257
55	50150	46677
50	52883	49445
45	57131	53254

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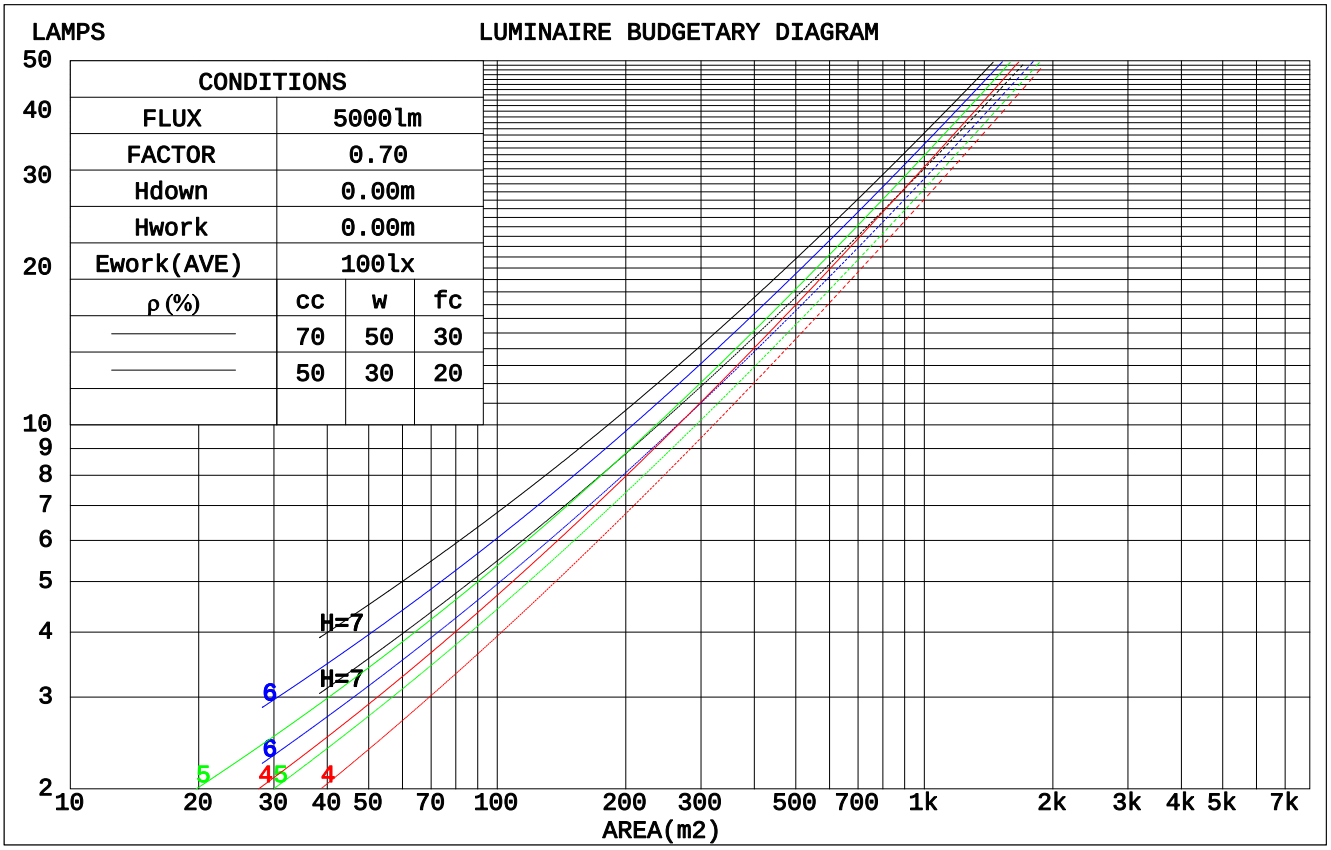
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			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	1.01	1.01	1.01	.99
1.0	1.06	1.02	.98	1.03	.00	.97	.99	.96	.94	.95	.93	.91	.91	.90	.88	.86
2.0	.93	.87	.82	.91	.85	.81	.88	.83	.79	.84	.80	.77	.81	.78	.75	.73
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.72	.68	.64	.62
4.0	.73	.65	.59	.72	.64	.58	.69	.63	.57	.67	.61	.56	.65	.60	.56	.54
5.0	.66	.57	.51	.64	.56	.50	.62	.55	.50	.60	.54	.49	.58	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.48	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.34	.44	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.29	.41	.33	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
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Operators:DAMIN
Test Date:2021-04-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [K=1.0000]
Remarks:

WEC AND CCEC

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 Coeffcients(WEC)									
0.0																
1.0	.272	.155	.049	.265	.151	.048	.251	.144	.046	.239	.138	.044	.227	.132	.043	
2.0	.264	.145	.044	.258	.142	.044	.246	.137	.043	.235	.132	.041	.225	.127	.040	
3.0	.250	.133	.040	.244	.131	.039	.234	.127	.038	.224	.123	.038	.215	.119	.037	
4.0	.234	.122	.036	.229	.120	.035	.220	.116	.035	.211	.113	.034	.203	.110	.034	
5.0	.219	.111	.032	.214	.110	.032	.206	.107	.032	.198	.105	.031	.191	.102	.031	
6.0	.204	.102	.029	.200	.101	.029	.193	.099	.029	.186	.097	.028	.180	.095	.028	
7.0	.191	.095	.027	.188	.094	.027	.181	.092	.026	.175	.090	.026	.169	.088	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.085	.024	.165	.084	.024	.160	.082	.024	
9.0	.169	.082	.023	.166	.081	.023	.161	.080	.023	.156	.078	.022	.151	.077	.022	
10.0	.160	.077	.021	.157	.076	.021	.152	.075	.021	.148	.073	.021	.143	.072	.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	.196	.196	.196	.168	.168	.168	.114	.114	.114	.066	.066	.066	.021	.021	.021	
1.0	.183	.162	.143	.157	.139	.123	.107	.096	.085	.062	.055	.049	.020	.018	.016	
2.0	.174	.138	.107	.149	.119	.092	.102	.082	.065	.059	.048	.038	.019	.015	.012	
3.0	.166	.120	.083	.143	.103	.072	.098	.072	.050	.057	.042	.030	.018	.014	.010	
4.0	.159	.106	.066	.136	.092	.058	.094	.064	.041	.054	.038	.024	.017	.012	.008	
5.0	.152	.096	.055	.130	.083	.048	.090	.058	.034	.052	.034	.020	.017	.011	.007	
6.0	.145	.087	.046	.125	.076	.040	.086	.053	.028	.050	.031	.017	.016	.010	.006	
7.0	.138	.081	.040	.119	.070	.035	.082	.049	.025	.048	.029	.015	.015	.009	.005	
8.0	.132	.075	.035	.114	.065	.031	.079	.046	.022	.046	.027	.013	.015	.009	.004	
9.0	.127	.070	.032	.109	.061	.028	.076	.043	.020	.044	.025	.012	.014	.008	.004	
10.0	.121	.066	.029	.104	.057	.025	.072	.040	.018	.042	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [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	26.7	28.1	26.9	28.3	28.5	26.3	27.7	26.6	27.9	28.2
	3H	27.6	29.0	27.9	29.2	29.4	27.1	28.4	27.4	28.7	28.9
	4H	27.9	29.1	28.2	29.4	29.6	27.3	28.5	27.6	28.8	29.0
	6H	27.9	29.1	28.3	29.4	29.7	27.3	28.4	27.6	28.7	29.0
	8H	27.9	29.0	28.2	29.3	29.6	27.2	28.4	27.6	28.6	28.9
	12H	27.9	28.9	28.2	29.3	29.6	27.2	28.3	27.5	28.6	28.9
4H	2H	27.1	28.3	27.4	28.6	28.9	26.8	28.0	27.1	28.3	28.5
	3H	28.2	29.3	28.5	29.6	29.9	27.7	28.8	28.1	29.1	29.4
	4H	28.5	29.5	28.9	29.8	30.1	27.9	28.9	28.3	29.2	29.6
	6H	28.6	29.5	29.0	29.8	30.2	28.0	28.8	28.4	29.2	29.6
	8H	28.6	29.4	29.0	29.8	30.2	28.0	28.8	28.4	29.1	29.5
	12H	28.6	29.3	29.0	29.7	30.1	27.9	28.7	28.4	29.1	29.5
8H	4H	28.5	29.3	28.9	29.7	30.1	28.0	28.8	28.4	29.2	29.6
	6H	28.7	29.4	29.1	29.8	30.2	28.1	28.8	28.6	29.2	29.6
	8H	28.7	29.3	29.2	29.7	30.2	28.1	28.7	28.6	29.1	29.6
	12H	28.7	29.2	29.2	29.7	30.2	28.1	28.6	28.6	29.0	29.5
12H	4H	28.5	29.2	28.9	29.6	30.0	28.0	28.7	28.4	29.1	29.5
	6H	28.7	29.3	29.1	29.7	30.2	28.1	28.7	28.6	29.1	29.6
	8H	28.7	29.2	29.2	29.7	30.1	28.1	28.6	28.6	29.0	29.5
Variations with the observer position at spacings:											
S = 1.0H		+ 0.3 / - 0.4					+ 0.4 / - 0.4				
1.5H		+ 0.2 / - 0.5					+ 0.3 / - 0.6				
2.0H		+ 0.4 / - 0.6					+ 0.5 / - 0.6				

CIE Pub.117, 14704 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 9.3)

C Range: 0 - 360DEG
C Interval: 30.0DEG
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Temperature:25.3DEG
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [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) x RCR = 5									
k = 0.60	60	48	42	59	48	42	58	48	41	35
0.80	70	59	52	69	59	52	67	58	51	45
1.00	79	69	62	78	68	61	75	69	61	54
1.25	86	76	70	85	76	69	82	74	68	62
1.50	91	82	75	89	81	75	86	79	74	67
2.00	97	90	84	96	89	83	92	86	82	74
2.50	101	94	89	99	93	88	95	90	86	78
3.00	104	98	93	102	96	92	98	93	90	81
4.00	108	103	99	105	101	97	101	97	94	86
5.00	110	106	102	107	104	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

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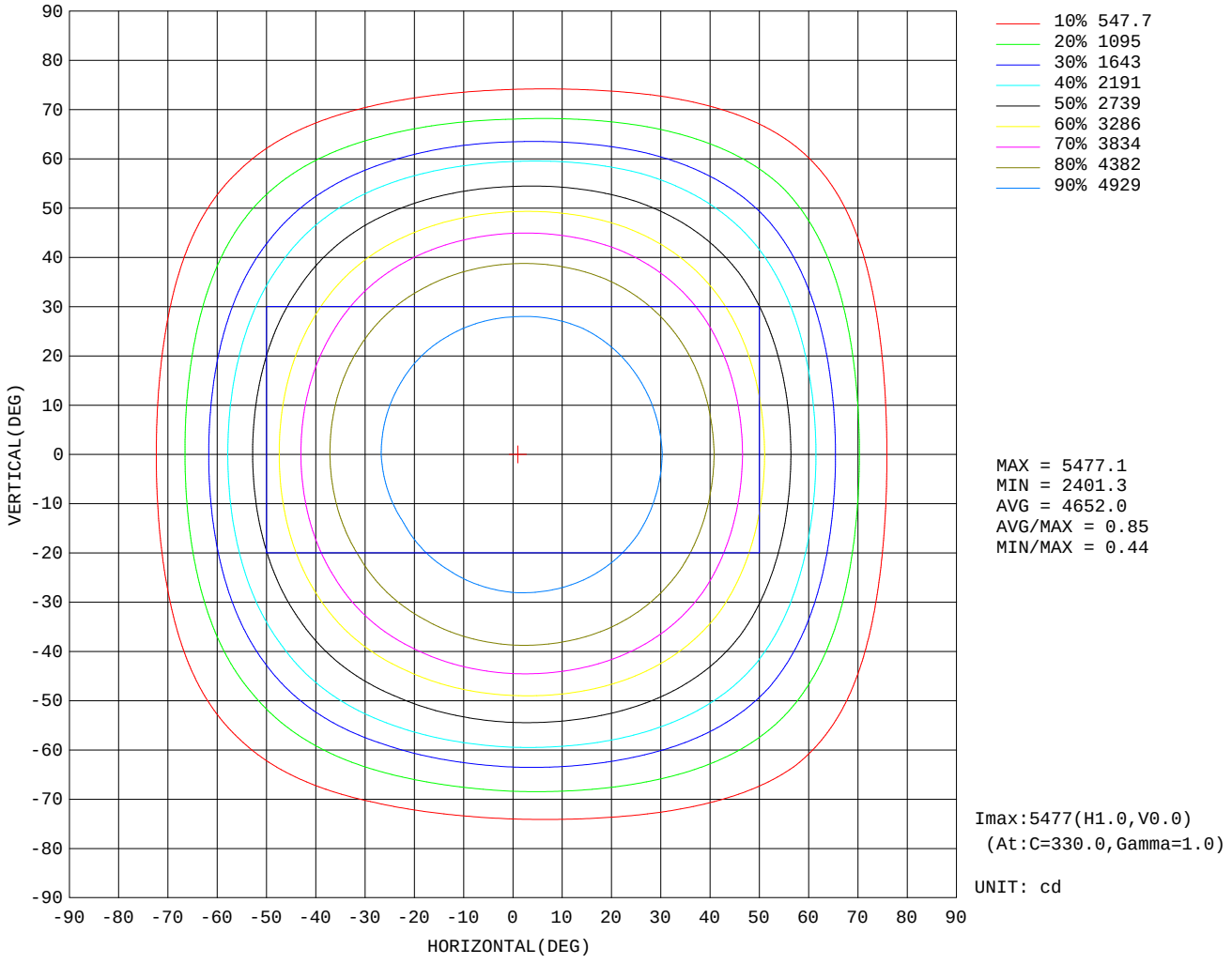
ISOCANDELA DIAGRAM



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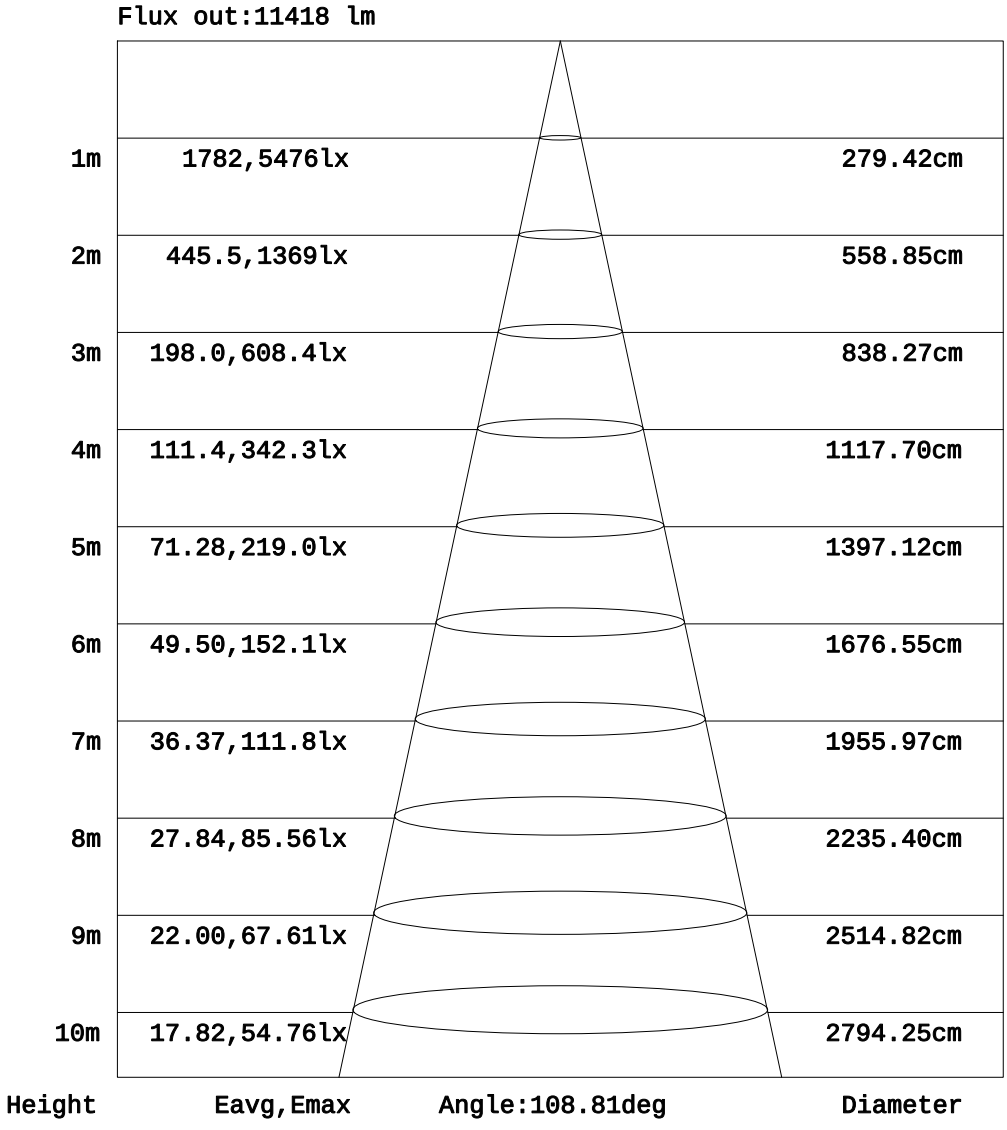
AAI Figure



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

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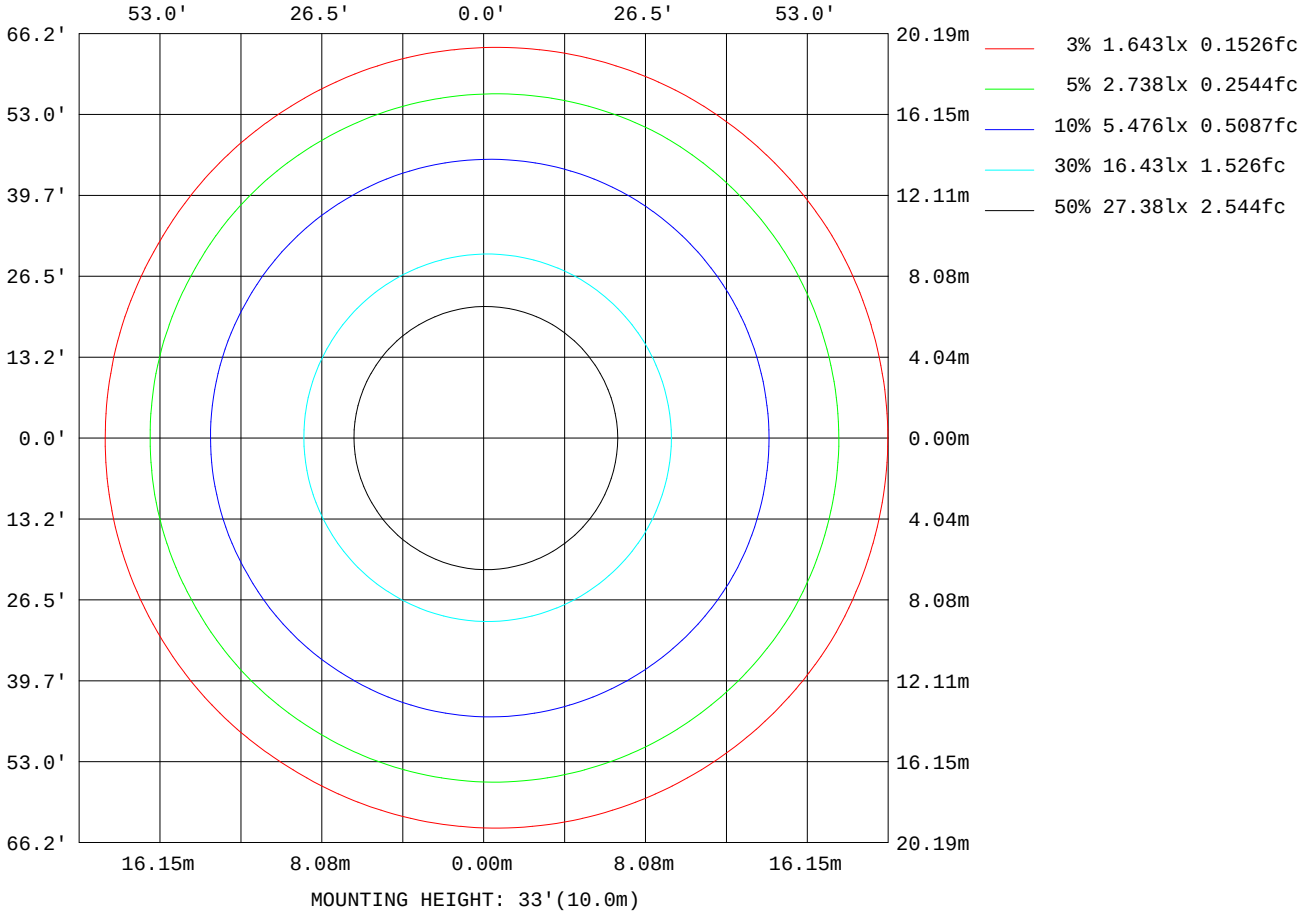
ISOLUX DIAGRAM



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LED Avg.L Report

Test:U:219.67V I:0.4784A P:103.32W PF:0.9831 Freq:49.89Hz Lamp Flux:14703.9x1 lm		
NAME: KSeaLion	TYPE:	WEIGHT:
SPEC.:Ex-KSL100H6V6CH-E	DIM.:	SERIAL No.:
MFR.: KHJ		Shielding Angle:

AvgL	cd/m2
L_0~180(65)av	34819
L_0~180(75)av	18946
L_0~180(85)av	4807
L_90~270(65)av	34549
L_90~270(75)av	18069
L_90~270(85)av	4878
L_45(65)av	34931
L_45(75)av	18785
L_45(85)av	4920

Standard: GB/T 29293-2012

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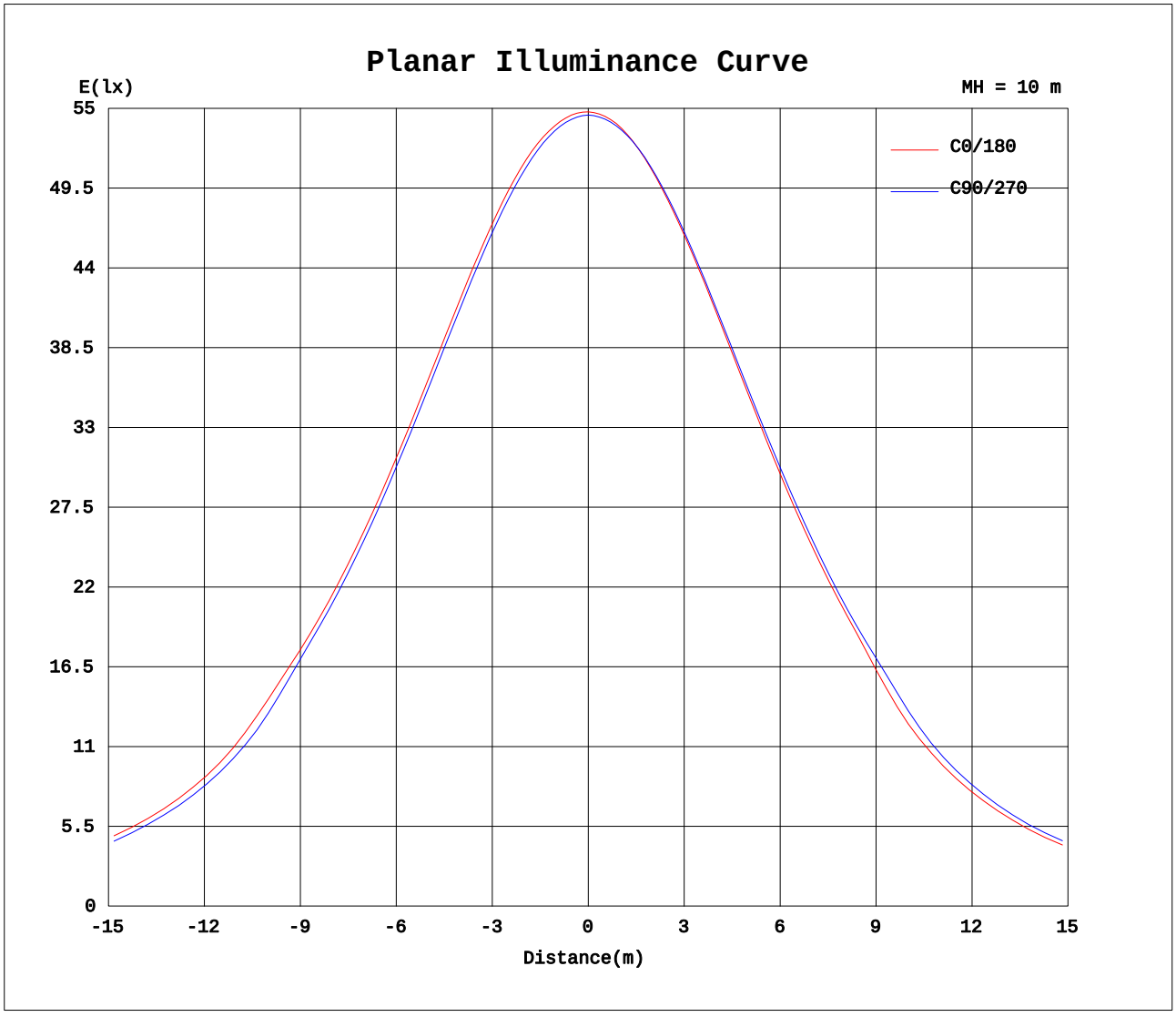
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
Humidity:65.0%
Test Distance:11.370m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	5458	5458	5458	5458	5458	5458	5458	5458	5458	5458	5458	5458							
5	5455	5453	5449	5444	5439	5438	5440	5440	5443	5446	5449	5452							
10	5431	5430	5417	5402	5390	5384	5383	5387	5401	5411	5420	5428							
15	5369	5364	5346	5324	5303	5295	5289	5296	5317	5332	5351	5365							
20	5263	5258	5231	5209	5178	5162	5160	5161	5186	5211	5239	5259							
25	5117	5108	5079	5053	5006	4982	4984	4989	5015	5046	5091	5112							
30	4926	4913	4885	4849	4793	4768	4760	4776	4804	4845	4894	4923							
35	4696	4684	4646	4602	4535	4503	4495	4511	4545	4602	4652	4687							
40	4417	4401	4359	4304	4234	4191	4173	4200	4238	4301	4367	4410							
45	4027	3997	3894	3769	3634	3570	3547	3586	3680	3819	3950	4024							
50	3388	3375	3282	3181	3078	3033	3008	3031	3101	3211	3319	3378							
55	2867	2860	2770	2679	2573	2510	2504	2528	2586	2680	2794	2856							
60	2367	2350	2240	2115	1959	1872	1844	1886	1962	2118	2290	2353							
65	1689	1675	1567	1466	1342	1278	1254	1280	1380	1454	1596	1683							
70	1127	1077	1003	958	795	738	735	765	819	882	1018	1122							
75	621	621	548	461	399	381	359	366	404	474	553	612							
80	261	264	216	174	134	110	99.2	106	138	176	222	264							
85	64.1	62.1	54.8	42.7	29.9	21.0	19.7	21.4	31.5	42.3	56.5	65.2							
90	5.02	4.02	2.02	1.87	1.93	2.17	3.24	3.12	2.98	2.80	2.79	4.30							
95	2.71	2.73	2.67	2.97	3.21	3.51	4.95	4.81	4.57	4.19	3.88	3.63							
100	4.36	4.34	4.27	4.66	5.00	5.35	7.08	6.94	6.60	6.16	5.78	5.47							
105	6.47	6.42	6.29	6.75	7.17	7.57	9.63	9.44	9.06	8.53	8.05	7.70							
110	8.93	8.83	8.70	9.21	9.72	10.1	12.5	12.3	11.9	11.3	10.8	10.4							
115	11.7	11.6	11.4	12.0	12.5	12.9	15.4	15.2	14.8	14.3	13.7	13.3							
120	14.6	14.4	14.1	14.8	15.2	15.5	18.2	17.9	17.6	17.2	16.6	16.1							
125	17.3	17.1	16.9	17.6	17.9	18.2	21.0	20.7	20.5	20.2	19.5	19.0							
130	20.1	19.9	19.7	20.4	20.6	20.8	23.5	23.3	23.2	22.9	22.3	21.7							
135	22.6	22.6	22.4	23.1	23.2	23.2	25.8	25.5	25.5	25.4	24.8	24.1							
140	25.2	25.2	25.1	25.8	25.7	25.6	28.1	27.7	27.8	27.8	27.2	26.5							
145	27.7	27.8	27.7	28.4	28.1	28.0	30.4	29.6	29.8	29.8	29.4	28.6							
150	30.1	30.3	30.1	30.6	30.3	30.1	32.4	31.2	31.4	31.4	31.2	30.4							
155	32.4	32.6	32.3	32.7	32.4	32.3	34.5	33.0	33.1	33.2	33.0	32.4							
160	34.9	35.1	34.6	34.6	34.4	34.5	36.3	34.7	34.8	34.8	34.8	34.5							
165	36.8	37.0	36.1	35.9	35.7	36.1	38.0	36.2	36.2	36.1	36.1	36.1							
170	38.2	38.4	37.2	36.8	36.7	37.2	39.5	37.7	37.6	37.4	37.3	37.6							
175	39.7	39.4	38.1	37.9	37.7	38.2	40.7	38.9	38.7	38.4	38.0	38.4							
180	40.4	40.0	38.7	38.5	38.1	38.7	40.7	38.9	38.8	38.5	38.2	38.7							

C Range: 0 - 360DEG
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γ Range: 0 - 180DEG
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Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.402
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