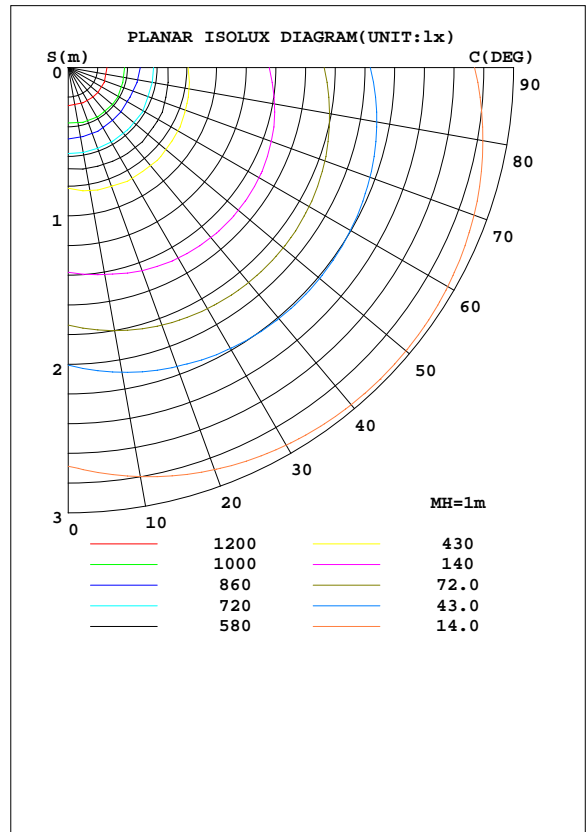
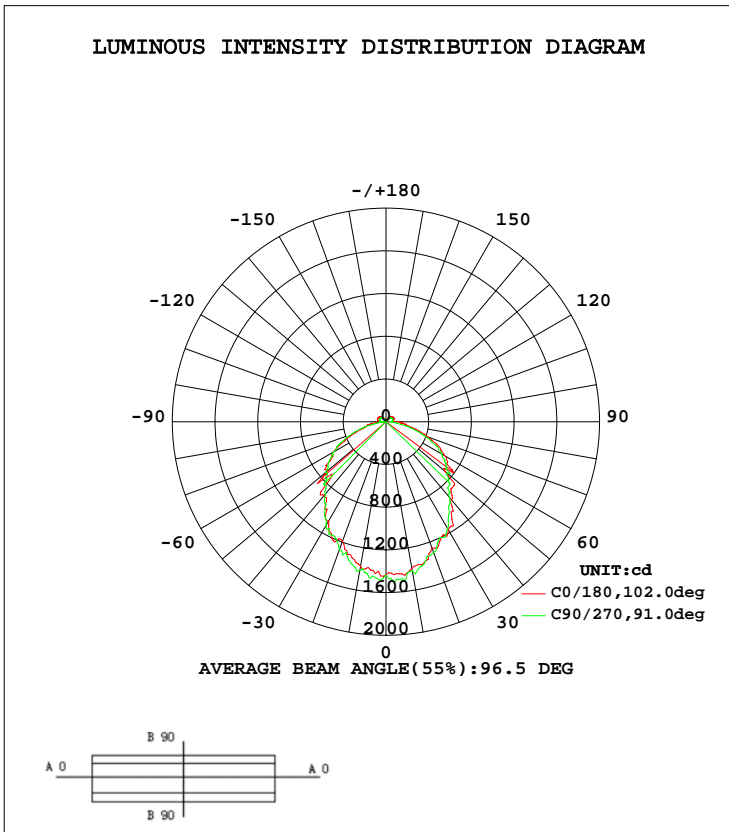


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 116.07 lm/W			
MODEL	KLCPSM040	Imax(cd)	1505	S/MH(C0/180)	1.13
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.17
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	4580.9	$\eta$ UP, DN(C0-180)	4.7, 44.2
NOMINAL FLUX(lm)	4580.89	CIE CLASS	DIRECT	$\eta$ UP, DN(C180-360)	4.7, 46.5
LAMPS INSIDE	1	$\eta$ up(%)	9.3	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	120.3	$\eta$ down(%)	90.7	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [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	1373	1364	1414	1441	1394	1480	1418	1396	0- 10	137.0	137.0	2.99,2.99
20	1192	1260	1282	1294	1256	1334	1300	1279	10- 20	377.6	514.6	11.2,11.2
30	1073	1114	1124	1130	1166	1154	1154	1142	20- 30	553.3	1068	23.3,23.3
40	899.7	1005	878.3	1041	955.7	1050	924.1	1021	30- 40	658.7	1727	37.7,37.7
50	712.3	929.7	741.1	934.9	720.7	943.7	747.0	927.5	40- 50	697.8	2424	52.9,52.9
60	575.4	739.0	567.0	823.2	633.8	833.6	595.7	744.3	50- 60	684.8	3109	67.9,67.9
70	311.3	468.4	345.9	591.2	413.4	597.0	377.2	487.6	60- 70	572.5	3682	80.4,80.4
80	176.7	176.2	97.97	258.5	195.1	268.4	133.5	181.7	70- 80	329.2	4011	87.6,87.6
90	65.37	106.3	24.26	115.8	91.40	119.2	36.38	107.2	80- 90	142.2	4153	90.7,90.7
100	78.78	114.4	60.77	108.1	68.41	109.6	64.51	114.7	90-100	92.03	4245	92.7,92.7
110	83.25	112.7	65.76	109.7	80.82	110.9	69.12	113.3	100-110	97.89	4343	94.8,94.8
120	81.27	101.7	63.65	99.57	79.14	100.9	66.25	102.7	110-120	89.60	4433	96.8,96.8
130	72.81	80.62	57.71	84.95	74.66	80.60	58.97	80.25	120-130	73.22	4506	98.4,98.4
140	49.84	46.13	41.55	52.68	55.98	51.81	23.83	44.07	130-140	47.04	4553	99.4,99.4
150	25.41	9.866	23.73	19.80	33.16	20.56	19.25	10.09	140-150	20.86	4574	99.8,99.8
160	3.921	4.226	4.879	4.241	10.86	3.945	5.235	3.993	150-160	5.390	4579	100,100
170	4.492	4.683	4.626	4.660	4.677	4.428	4.618	4.437	160-170	1.276	4580	100,100
180	4.878	4.903	4.857	4.865	4.920	4.818	4.874	4.831	170-180	0.4500	4581	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

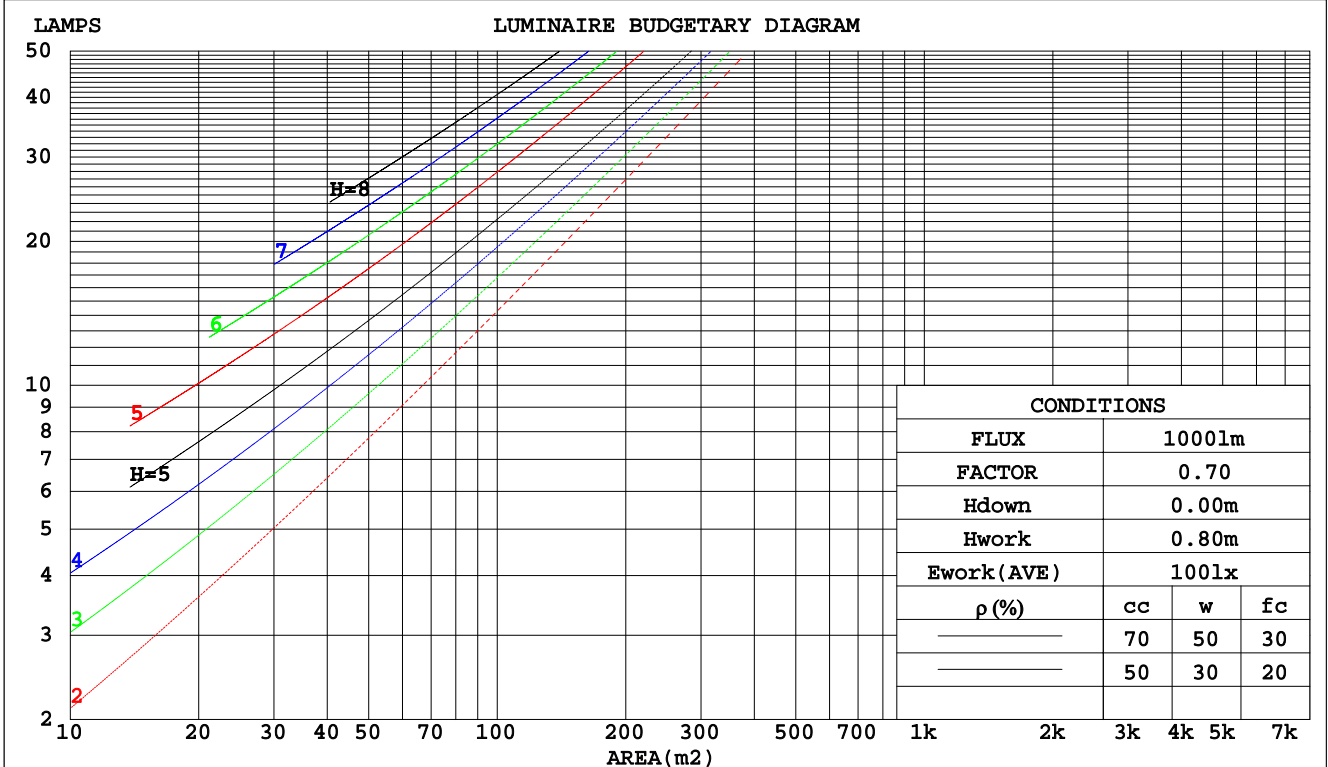
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION 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						Coefficients of Utilization(CU)									
0.0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.99	.99	.99	.93	.93	.93	.91
1.0	1.01	.96	.92	.98	.93	.90	.92	.88	.85	.86	.83	.81	.81	.79	.77	.74
2.0	.87	.80	.74	.85	.78	.73	.79	.74	.69	.75	.70	.66	.70	.67	.64	.61
3.0	.76	.68	.61	.74	.66	.60	.70	.63	.58	.66	.60	.56	.62	.57	.53	.51
4.0	.67	.58	.51	.65	.57	.51	.62	.54	.49	.58	.52	.47	.55	.50	.46	.43
5.0	.60	.51	.44	.58	.50	.43	.55	.48	.42	.52	.46	.41	.49	.44	.39	.37
6.0	.54	.45	.38	.52	.44	.38	.50	.42	.37	.47	.41	.36	.45	.39	.35	.32
7.0	.49	.40	.34	.47	.39	.33	.45	.38	.32	.43	.36	.31	.41	.35	.31	.28
8.0	.44	.36	.30	.43	.35	.30	.41	.34	.29	.39	.33	.28	.37	.32	.27	.25
9.0	.41	.32	.27	.40	.32	.27	.38	.31	.26	.36	.30	.25	.34	.29	.25	.23
10.0	.37	.30	.24	.37	.29	.24	.35	.28	.23	.33	.27	.23	.32	.26	.22	.21



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 31DEG  
 Operators: 01  
 Test Date: 2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: %  
 Test Distance: 9.190m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:

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	.327	.186	.059	.317	.181	.057	.299	.171	.055	.281	.162	.052	.266	.154	.050	
2.0	.301	.165	.051	.292	.161	.050	.276	.153	.048	.260	.146	.046	.246	.139	.044	
3.0	.276	.147	.044	.268	.143	.043	.253	.137	.042	.239	.131	.040	.226	.125	.039	
4.0	.253	.131	.039	.246	.129	.038	.232	.123	.037	.220	.118	.036	.208	.113	.034	
5.0	.232	.118	.034	.226	.116	.034	.214	.111	.033	.203	.107	.032	.192	.103	.031	
6.0	.215	.108	.031	.209	.106	.030	.198	.101	.030	.188	.098	.029	.178	.094	.028	
7.0	.199	.099	.028	.194	.097	.028	.184	.093	.027	.175	.090	.026	.166	.086	.025	
8.0	.186	.091	.026	.181	.089	.025	.172	.086	.025	.163	.083	.024	.155	.080	.023	
9.0	.174	.084	.023	.169	.083	.023	.161	.080	.023	.153	.077	.022	.146	.074	.021	
10.0	.163	.078	.022	.159	.077	.021	.151	.074	.021	.144	.072	.020	.137	.069	.020	

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	.262	.262	.262	.224	.224	.224	.153	.153	.153	.088	.088	.088	.028	.028	.028	
1.0	.253	.228	.205	.217	.195	.176	.148	.134	.122	.085	.078	.071	.027	.025	.023	
2.0	.246	.204	.169	.210	.176	.146	.144	.122	.102	.083	.071	.060	.027	.023	.019	
3.0	.238	.187	.146	.204	.161	.127	.140	.112	.089	.081	.065	.052	.026	.021	.017	
4.0	.231	.174	.131	.198	.150	.114	.136	.105	.080	.079	.061	.047	.025	.020	.016	
5.0	.223	.164	.120	.192	.142	.104	.132	.099	.074	.077	.058	.044	.025	.019	.014	
6.0	.216	.156	.112	.186	.135	.098	.128	.094	.069	.074	.056	.041	.024	.018	.014	
7.0	.209	.149	.107	.180	.129	.093	.124	.091	.066	.072	.053	.039	.023	.017	.013	
8.0	.203	.143	.102	.175	.124	.089	.121	.087	.063	.070	.051	.038	.023	.017	.012	
9.0	.197	.138	.099	.169	.120	.086	.117	.084	.061	.068	.050	.037	.022	.016	.012	
10.0	.191	.134	.096	.165	.117	.084	.114	.082	.060	.067	.048	.036	.022	.016	.012	

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:

Uncorrected UGR Table

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm										
NAME: LED Canopy Light					TYPE:			WEIGHT:		
DIM.:					SPEC.:			SERIAL No.:		
MFR.: KiLi-LED Lighting Limited					SUR.:			PROTECTION 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	37.1	38.5	37.5	38.9	39.3	37.1	38.5	37.5	38.8	39.2
3H	38.4	39.7	38.9	40.1	40.6	38.5	39.8	39.0	40.2	40.7
4H	38.8	40.1	39.3	40.5	40.9	39.0	40.3	39.5	40.7	41.1
6H	39.2	40.4	39.7	40.8	41.3	39.2	40.4	39.7	40.8	41.3
8H	39.4	40.6	39.9	41.0	41.5	39.3	40.4	39.7	40.8	41.3
12H	39.7	40.8	40.2	41.2	41.7	39.2	40.3	39.7	40.8	41.3
4H 2H	38.0	39.2	38.4	39.6	40.1	37.9	39.2	38.4	39.6	40.0
3H	39.5	40.6	40.0	41.0	41.5	39.6	40.7	40.1	41.1	41.6
4H	40.0	41.0	40.5	41.5	42.0	40.2	41.2	40.7	41.6	42.2
6H	40.5	41.3	41.0	41.9	42.4	40.4	41.3	41.0	41.8	42.4
8H	40.8	41.6	41.3	42.1	42.7	40.5	41.3	41.1	41.9	42.5
12H	41.1	41.8	41.6	42.4	43.0	40.5	41.3	41.1	41.8	42.4
8H 4H	40.3	41.1	40.9	41.7	42.2	40.4	41.3	41.0	41.8	42.4
6H	41.0	41.6	41.5	42.2	42.8	40.9	41.6	41.5	42.1	42.8
8H	41.4	42.0	42.0	42.6	43.3	41.1	41.7	41.7	42.3	42.9
12H	41.9	42.4	42.5	43.0	43.7	41.2	41.7	41.8	42.3	43.0
12H 4H	40.3	41.1	40.9	41.6	42.2	40.5	41.2	41.0	41.7	42.3
6H	41.0	41.7	41.6	42.2	42.9	41.0	41.6	41.6	42.2	42.8
8H	41.6	42.1	42.2	42.7	43.4	41.3	41.8	41.9	42.4	43.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
2.0H	+ 0.4 / - 1.0					+ 0.4 / - 0.7				

CIE Pub.117 Corrected 4581 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.3)

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:

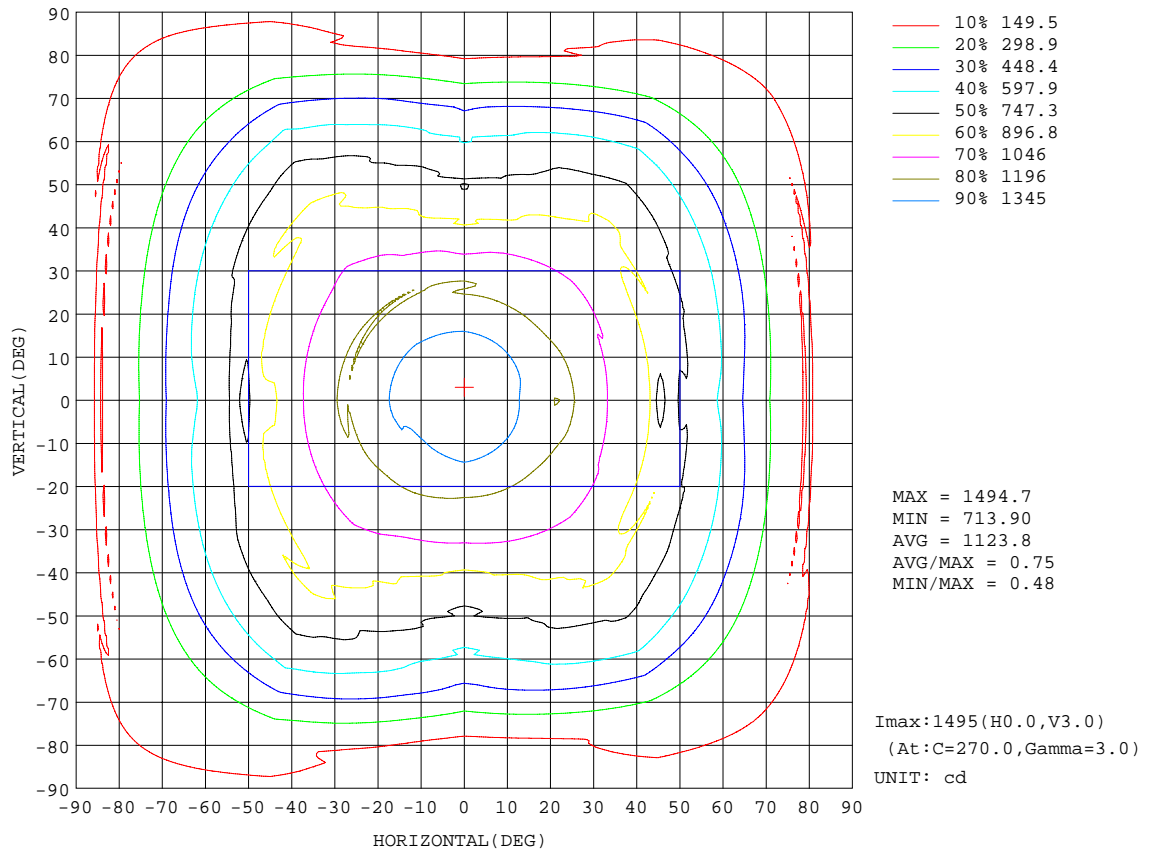
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	41	34	52	41	34	51	40	34	27
0.80	63	51	43	62	50	43	59	49	42	35
1.00	71	59	52	70	58	51	67	59	50	42
1.25	78	67	59	76	66	59	73	64	57	49
1.50	83	73	65	81	71	64	77	69	62	54
2.00	90	81	74	88	79	73	83	76	70	61
2.50	95	86	79	92	84	78	87	80	75	65
3.00	98	90	84	95	88	83	90	84	79	69
4.00	102	96	91	99	94	89	94	89	85	73
5.00	105	100	95	102	97	93	96	92	88	76
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:

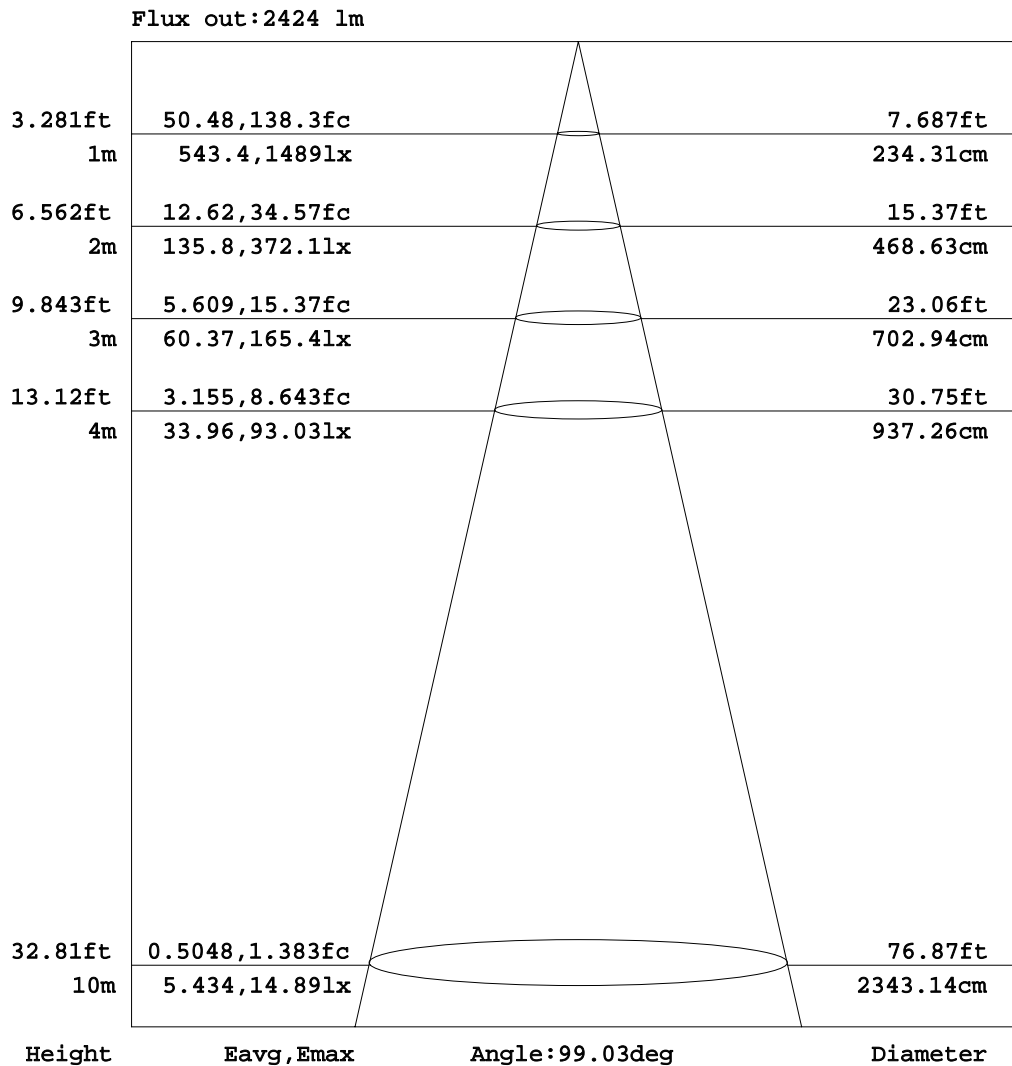


C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:



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

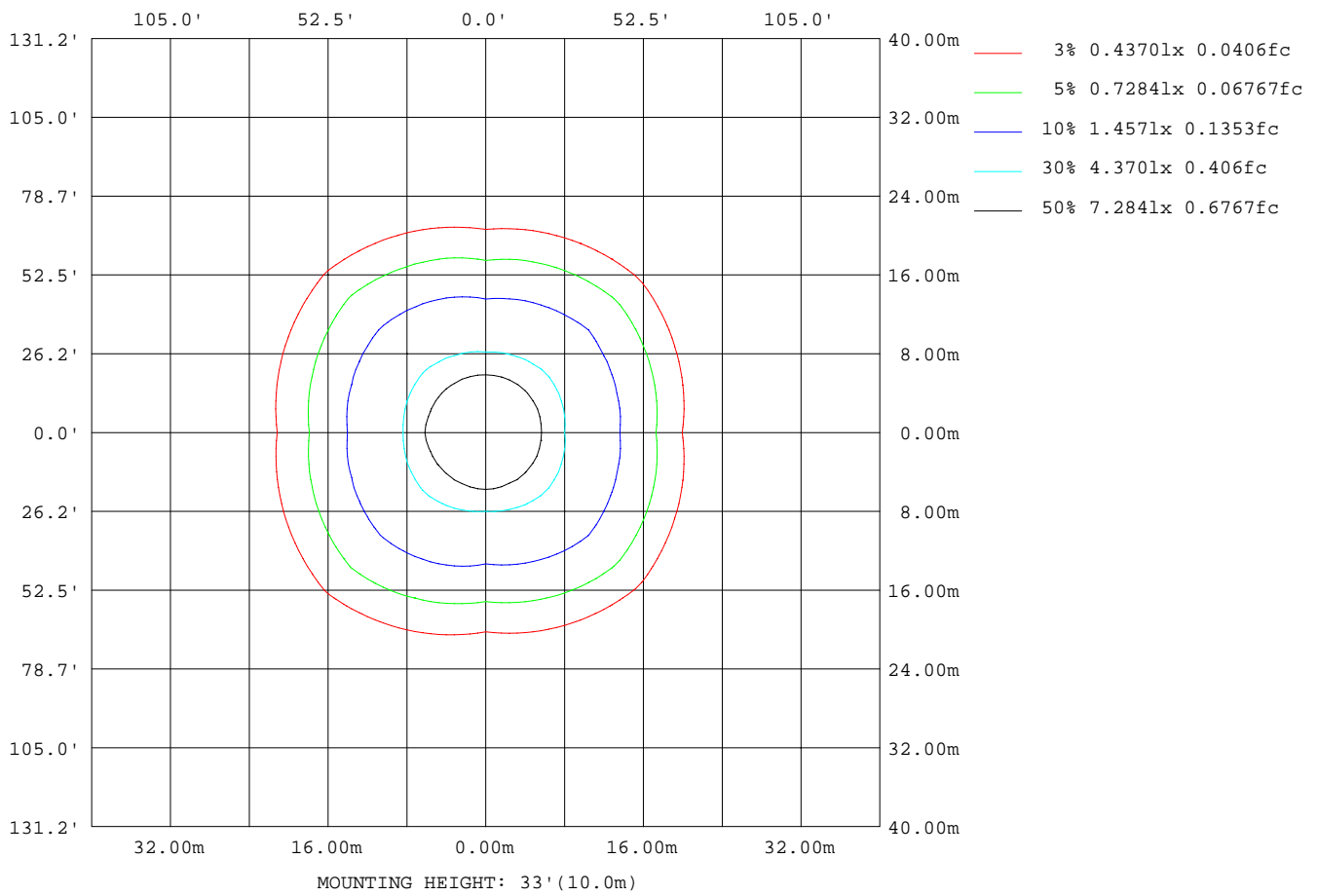
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks:



**ISOLUX DIAGRAM**

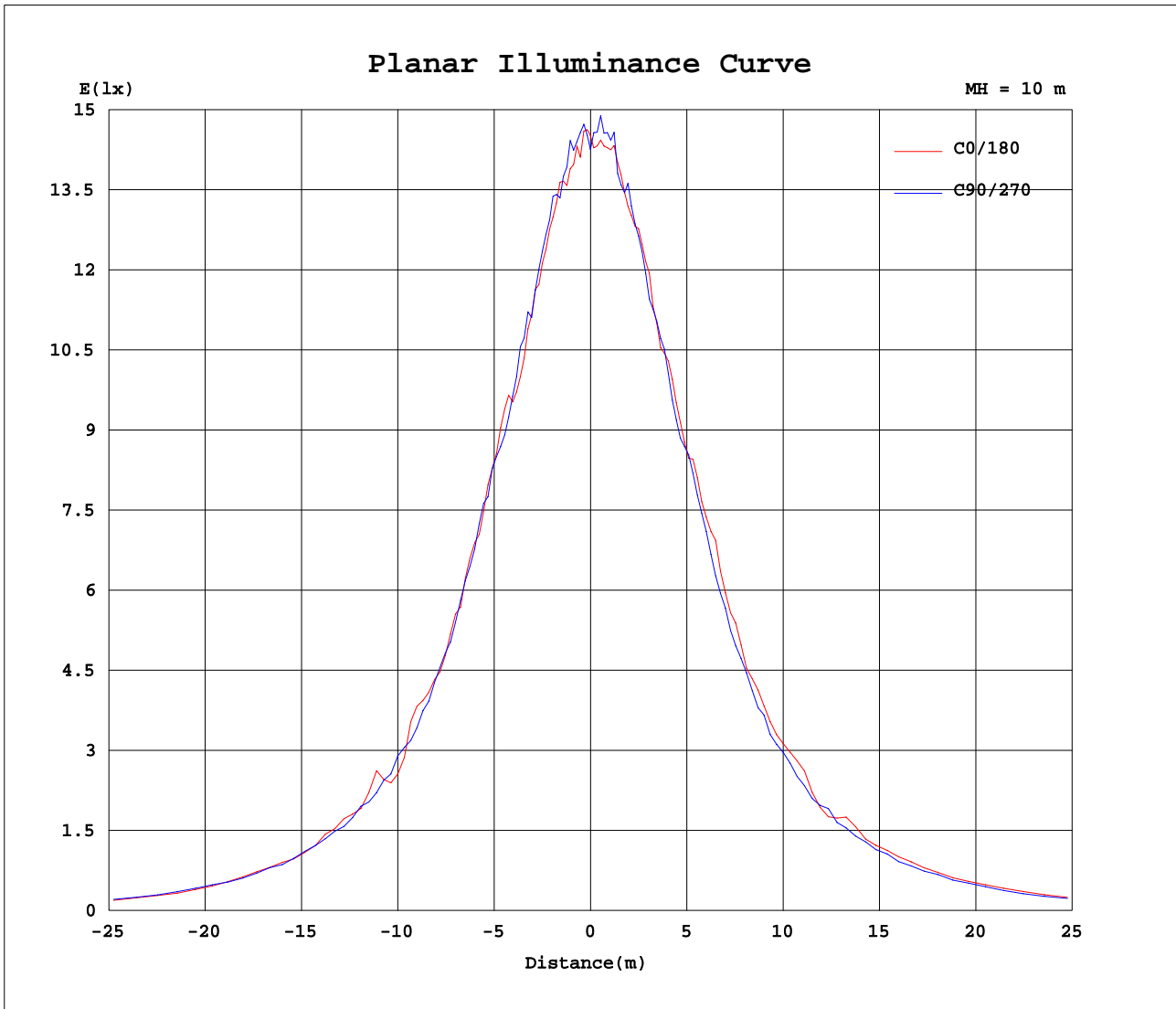
Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 31DEG  
 Operators: 01  
 Test Date: 2017-06-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: %  
 Test Distance: 9.190m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 31DEG  
 Operators: 01  
 Test Date: 2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: %  
 Test Distance: 9.190m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.3V I:0.3309A P:39.47W PF:0.9914 Lamp Flux:4580.89x1 lm		
NAME: LED Canopy Light	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: KiLi-LED Lighting Limited	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\γ (DEG)	0	45	90	135	180	225	270	315											
0	1436	1436	1436	1436	1436	1436	1436	1436											
5	1398	1454	1451	1463	1429	1474	1484	1448											
10	1373	1364	1414	1441	1394	1480	1418	1396											
15	1287	1300	1343	1315	1370	1369	1379	1346											
20	1192	1260	1282	1294	1256	1334	1300	1279											
25	1201	1158	1176	1200	1215	1233	1197	1183											
30	1073	1114	1124	1130	1166	1154	1154	1142											
35	1000	1070	991	1088	1071	1109	1038	1096											
40	900	1005	878	1041	956	1050	924	1021											
45	716	947	825	980	875	1007	844	968											
50	712	930	741	935	721	944	747	927											
55	638	836	650	889	701	911	686	821											
60	575	739	567	823	634	834	596	744											
65	427	631	472	725	546	733	504	642											
70	311	468	346	591	413	597	377	488											
75	201	308	230	417	301	433	258	324											
80	177	176	98.0	259	195	268	133	182											
85	92.2	149	29.6	198	164	196	75.6	161											
90	65.4	106	24.3	116	91.4	119	36.4	107											
95	71.5	111	54.1	105	65.0	106	54.7	110											
100	78.8	114	60.8	108	68.4	110	64.5	115											
105	83.5	114	63.5	110	75.7	112	68.0	116											
110	83.2	113	65.8	110	80.8	111	69.1	113											
115	83.1	108	64.2	105	80.4	106	66.8	108											
120	81.3	102	63.7	99.6	79.1	101	66.3	103											
125	78.2	93.6	61.4	93.6	77.9	93.6	63.3	94.1											
130	72.8	80.6	57.7	84.9	74.7	80.6	59.0	80.3											
135	61.9	62.8	50.3	69.1	66.3	65.3	45.6	63.2											
140	49.8	46.1	41.5	52.7	56.0	51.8	23.8	44.1											
145	37.7	28.2	32.5	36.6	44.7	37.1	17.8	26.1											
150	25.4	9.87	23.7	19.8	33.2	20.6	19.2	10.1											
155	12.5	4.01	14.5	5.77	22.3	6.25	13.5	3.80											
160	3.92	4.23	4.88	4.24	10.9	3.95	5.24	3.99											
165	4.20	4.45	4.42	4.46	4.40	4.21	4.38	4.22											
170	4.49	4.68	4.63	4.66	4.68	4.43	4.62	4.44											
175	4.75	4.86	4.82	4.84	4.86	4.67	4.81	4.70											
180	4.88	4.90	4.86	4.87	4.92	4.82	4.87	4.83											

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:31DEG  
 Operators:01  
 Test Date:2017-06-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:%  
 Test Distance:9.190m [K=1.0000]  
 Remarks: