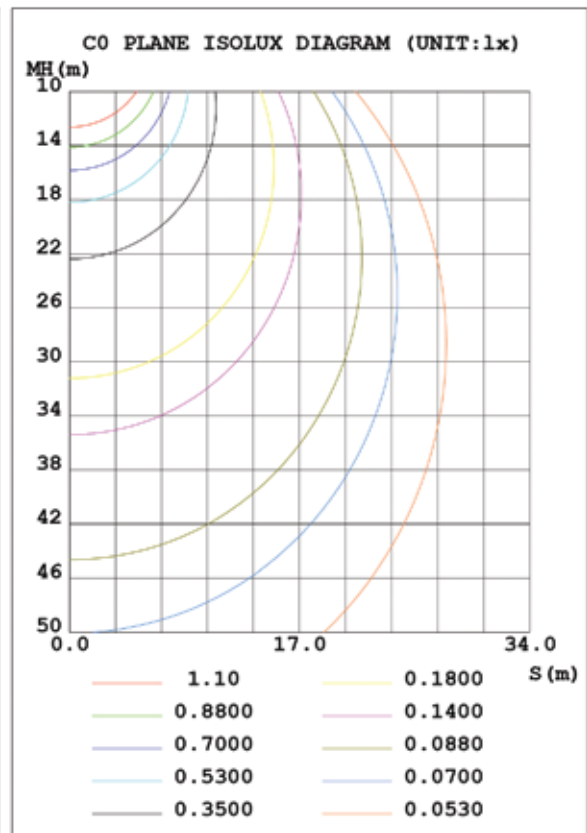
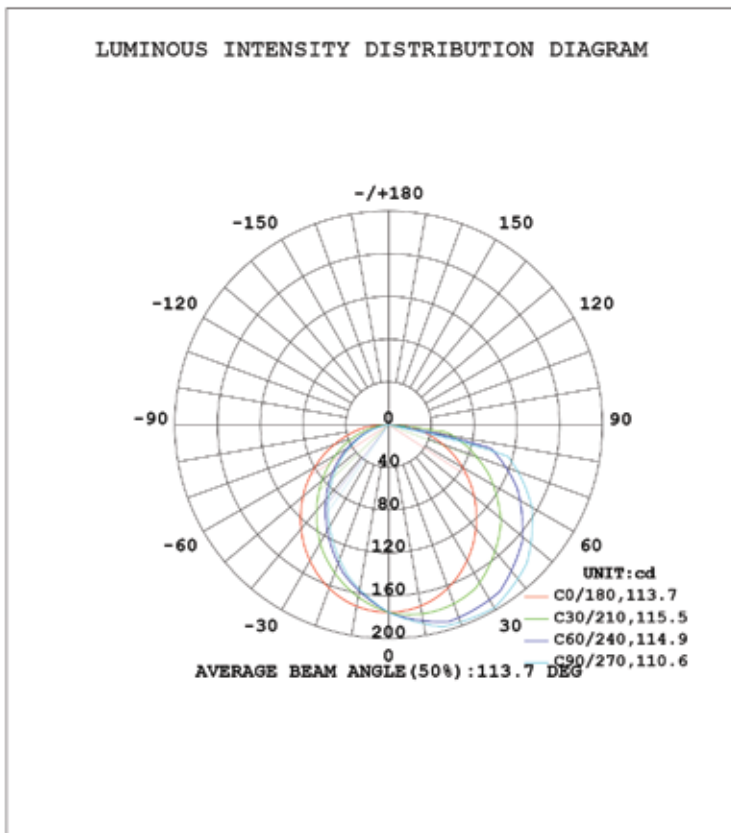


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: LED Ceiling Light	TYPE: Ceiling Light	WEIGHT:
SPEC.: 230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	YBE12W3K-WH	Imax (cd)	197.8	S/MH (C0/180)	1.25
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	0.97
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	547.80	η UP, DN (C0-180)	0.0, 64.9
NOMINAL FLUX (lm)	547.803	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 35.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.35



H(β) Range: -90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZZQ
Test Date: 26 January 2018

V(B) Range: -75 - 75DEG
V(B) Interval: 5.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 8.791m [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	172.2	183.1	188.9	183.4	172.4	160.4	156.1	160.2	0- 10	16.55	16.55	3.02,3.02
20	162.4	186.9	196.4	187.5	162.7	142.7	134.4	142.2	10- 20	47.67	64.23	11.7,11.7
30	146.8	179.8	197.8	180.3	147.2	120.2	110.4	119.7	20- 30	72.65	136.9	25,25
40	127.1	169.5	188.0	169.8	127.4	96.97	86.86	96.70	30- 40	88.77	225.6	41.2,41.2
50	104.4	150.6	173.6	151.4	104.6	73.66	63.76	73.10	40- 50	94.64	320.3	58.5,58.5
60	79.76	128.6	154.7	129.6	79.85	50.48	41.11	49.87	50- 60	90.20	410.5	74.9,74.9
70	53.89	104.0	128.7	104.7	53.88	28.07	20.97	27.66	60- 70	76.66	487.1	88.9,88.9
80	29.26	62.96	0	63.96	29.21	7.823	0	7.444	70- 80	52.59	539.7	98.5,98.5
90	0.2036	0	0	0	0.1703	0	0	0	80- 90	8.066	547.8	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 272.87 lm

%lum = 49.8%
%lamp = 49.8%

Conical surface Flux(120deg): 410.49 lm

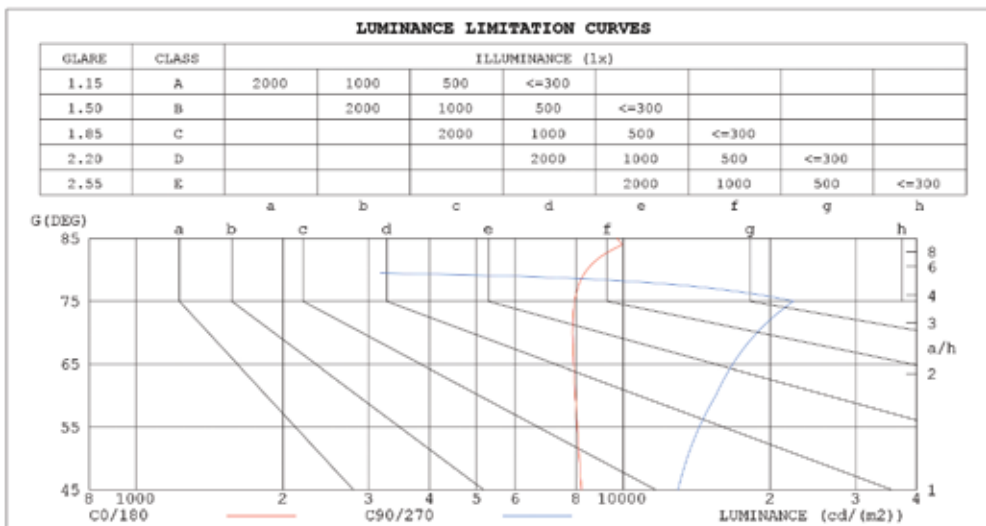
%lum = 74.9%
%lamp = 74.9%

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: LED Ceiling Light	TYPE: Ceiling Light	WEIGHT:
SPEC.: 230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	9721	0
80	8424	0
75	7944	22337
70	7878	18809
65	7913	16764
60	7976	15473
55	8045	14311
50	8125	13504
45	8205	12943

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: LED Ceiling Light	TYPE: Ceiling Light	WEIGHT:
SPEC.: 230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	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	.324	.184	.058	.317	.181	.057	.303	.174	.056	.291	.168	.054	.280	.162	.052	
2.0	.305	.167	.051	.299	.165	.051	.287	.160	.050	.276	.155	.049	.266	.151	.047	
3.0	.281	.150	.045	.276	.148	.044	.265	.144	.044	.256	.140	.043	.247	.137	.042	
4.0	.258	.134	.039	.253	.133	.039	.244	.129	.039	.235	.126	.038	.227	.124	.038	
5.0	.238	.121	.035	.233	.120	.035	.225	.117	.035	.217	.115	.034	.210	.112	.034	
6.0	.220	.110	.032	.216	.109	.031	.208	.107	.031	.202	.105	.031	.195	.103	.031	
7.0	.204	.101	.029	.200	.100	.028	.194	.098	.028	.188	.096	.028	.182	.094	.028	
8.0	.190	.093	.026	.187	.092	.026	.181	.090	.026	.175	.089	.026	.170	.087	.025	
9.0	.178	.086	.024	.175	.085	.024	.169	.084	.024	.165	.082	.024	.160	.081	.023	
10.0	.167	.080	.022	.164	.079	.022	.159	.078	.022	.155	.077	.022	.151	.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	.181	.156	.133	.155	.134	.115	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.174	.132	.096	.149	.113	.083	.102	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.167	.114	.073	.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	.072	.033	.086	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.033	.118	.066	.028	.082	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.131	.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	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: LED Ceiling Light		TYPE:Ceiling Light					WEIGHT:				
SPEC.:230		DIM.: 230MM					SERIAL No.:				
MFR.:		SUR.:					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	23.4	25.0	23.7	25.2	25.4	25.9	27.5	26.2	27.7	27.9	
3H	25.1	26.6	25.4	26.8	27.0	28.5	30.0	28.8	30.2	30.4	
4H	25.9	27.2	26.2	27.5	27.8	29.9	31.2	30.2	31.5	31.8	
6H	26.5	27.8	26.8	28.1	28.4	30.1	31.4	30.4	31.7	32.0	
8H	26.8	28.0	27.1	28.3	28.6	30.0	31.3	30.4	31.6	31.9	
12H	27.0	28.3	27.4	28.6	28.9	30.0	31.2	30.3	31.5	31.8	
4H 2H	24.8	26.2	25.1	26.4	26.7	26.6	27.9	26.9	28.2	28.5	
3H	26.8	28.0	27.1	28.3	28.6	29.4	30.6	29.7	30.9	31.2	
4H	27.7	28.8	28.1	29.1	29.5	30.9	32.1	31.3	32.4	32.7	
6H	28.5	29.5	28.9	29.9	30.3	31.2	32.2	31.6	32.6	33.0	
8H	28.9	29.8	29.3	30.2	30.6	31.2	32.1	31.6	32.5	32.9	
12H	29.2	30.1	29.7	30.5	30.9	31.2	32.0	31.6	32.4	32.8	
8H 4H	28.8	29.7	29.2	30.1	30.5	31.3	32.3	31.8	32.6	33.0	
6H	30.0	30.7	30.4	31.1	31.6	31.7	32.5	32.2	32.9	33.3	
8H	30.5	31.2	31.0	31.6	32.1	31.7	32.4	32.1	32.8	33.2	
12H	31.1	31.6	31.5	32.1	32.6	31.6	32.2	32.1	32.7	33.2	
12H 4H	28.8	29.7	29.2	30.0	30.5	31.4	32.2	31.8	32.6	33.0	
6H	30.0	30.7	30.5	31.2	31.6	31.8	32.5	32.2	32.9	33.3	
8H	30.7	31.2	31.1	31.7	32.2	31.7	32.3	32.2	32.8	33.3	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.3					
2.0H	+ 0.2 / - 0.5					+ 0.5 / - 0.7					

CIE Pub.117, 547.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.1)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: LED Ceiling Light	TYPE: Ceiling Light	WEIGHT:
SPEC.: 230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

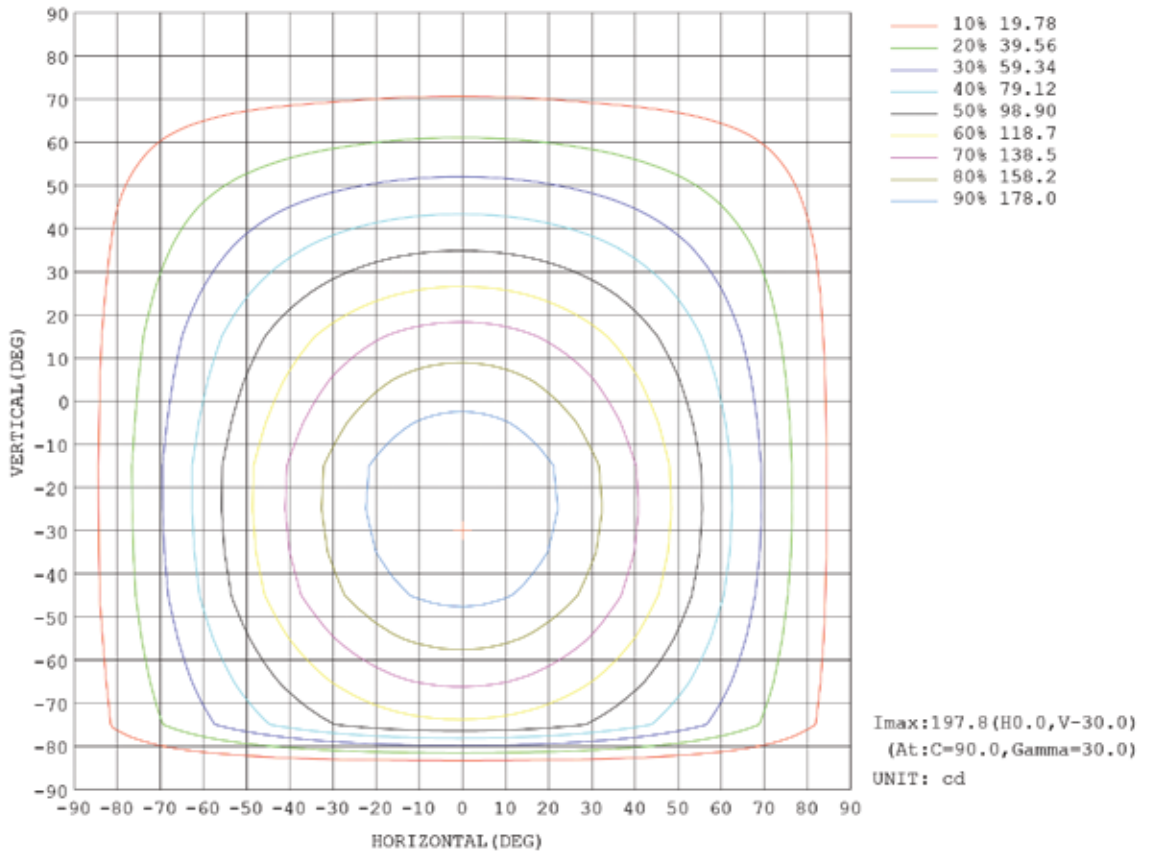
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	36	30
0.80	66	54	46	65	53	46	63	52	45	38
1.00	74	62	55	73	62	54	70	63	54	47
1.25	81	70	63	80	69	62	77	68	61	54
1.50	86	76	69	85	75	68	81	73	67	59
2.00	93	84	78	92	83	77	88	81	75	67
2.50	98	89	83	96	88	82	92	85	80	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	106	100	95	103	98	93	99	94	91	82
5.00	108	103	99	106	101	97	101	97	94	85
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZZQ
Test Date: 26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity: 65.0%
Test Distance: 8.791m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



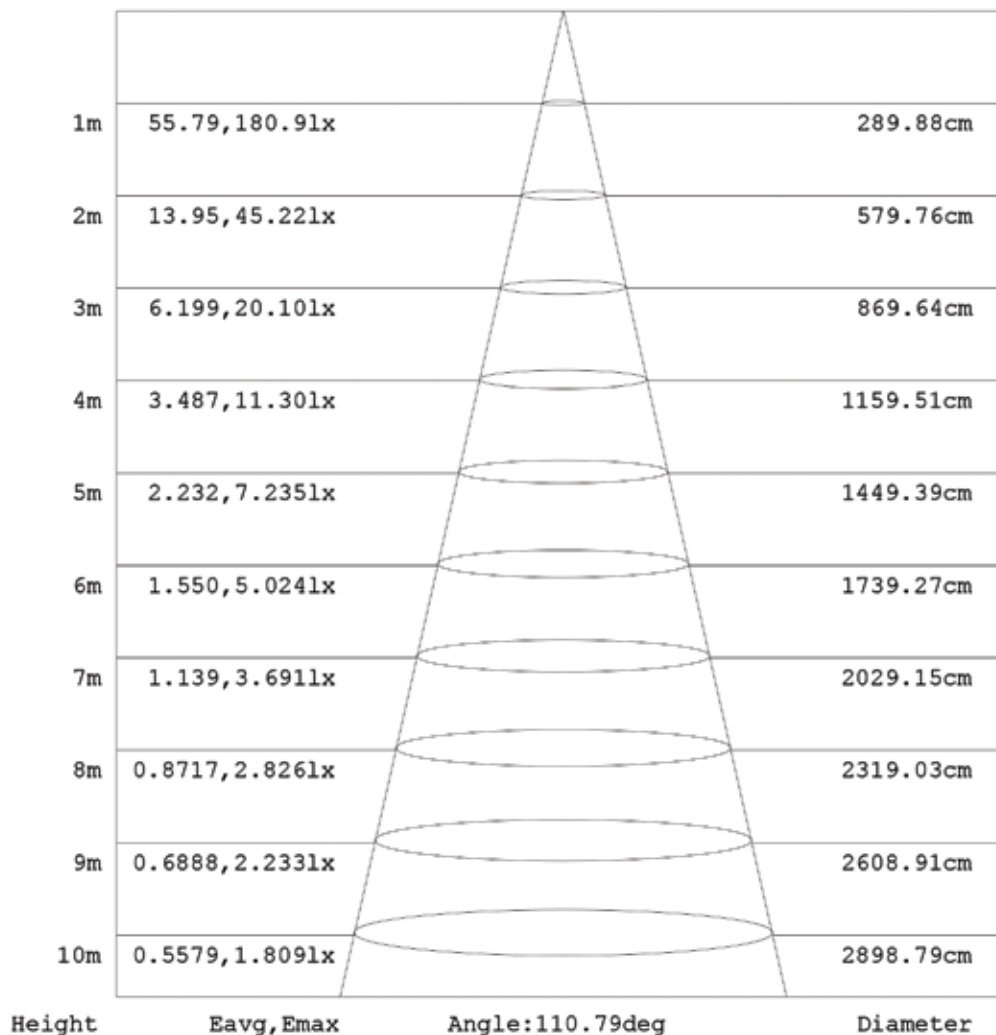
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

AAI Figure

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:371.1 lm

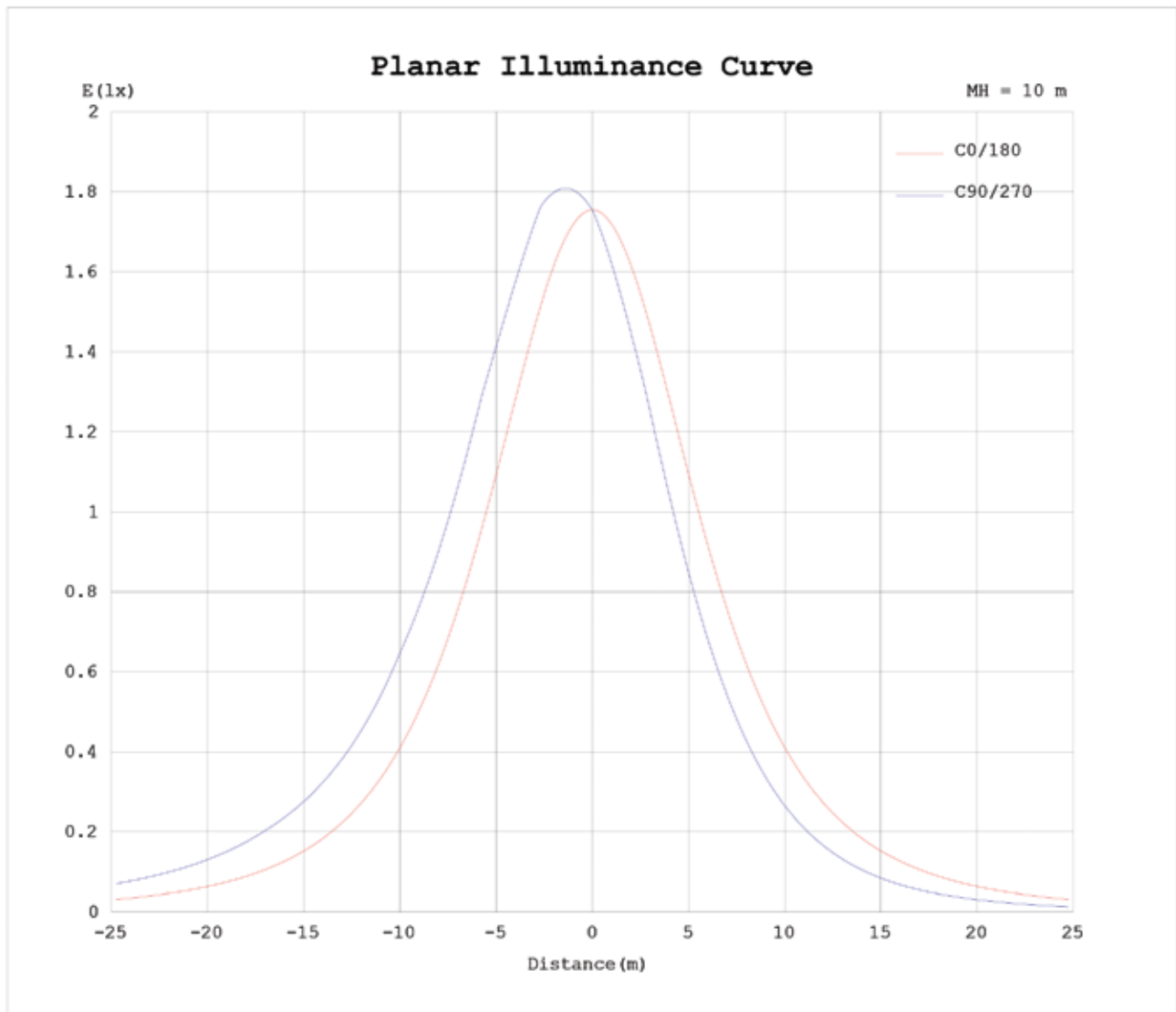


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C (DEG) Y (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
5	182	182	182	182	181	181	181	180	180	179	179	178	178	177	176	176	175	175	174
10	189	189	188	188	187	186	185	184	183	182	181	180	179	177	176	175	174	172	171
15	196	195	194	194	192	191	189	188	186	184	182	180	178	176	174	172	170	168	166
20	196	196	195	194	193	192	191	190	187	185	182	179	176	173	170	167	165	163	160
25	197	196	195	194	193	191	189	187	185	182	180	176	172	168	165	161	158	156	152
30	198	197	195	194	192	189	186	183	180	177	174	171	167	163	158	154	150	147	143
35	193	192	191	190	188	186	183	180	176	171	167	164	160	156	150	146	141	138	133
40	188	187	186	184	182	179	176	173	170	165	160	155	151	147	142	136	131	127	123
45	183	182	180	178	175	172	168	165	160	157	153	147	141	137	132	126	121	116	111
50	173	172	171	169	167	164	161	156	151	146	142	137	131	125	121	115	109	105	99.7
55	164	163	161	159	157	153	150	146	142	137	131	125	120	114	109	104	97.3	92.5	87.7
60	154	153	152	149	146	142	138	134	130	125	120	114	108	103	96.1	91.0	84.8	79.8	75.2
65	141	140	139	137	134	131	127	122	117	112	107	102	95.8	89.3	83.8	77.6	72.1	67.0	62.7
70	128	128	126	124	121	117	114	109	105	99.8	94.0	88.1	82.6	76.8	70.3	64.4	59.3	53.9	50.2
75	115	115	113	111	108	104	100	95.9	91.1	85.9	80.6	75.2	69.3	63.2	57.7	51.3	46.1	41.1	37.7
80	0.86	3.44	7.71	13.6	21.0	29.9	40.0	51.4	64.0	73.1	67.8	62.1	56.4	50.6	44.6	39.3	33.7	29.2	26.3
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.1	34.4	33.5	27.9	23.2	15.6	13.7
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--3

UNIT: cd

C (DEG) Y (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
5	173	172	171	171	170	169	169	168	168	167	167	167	166	166	166	166	166	166	166
10	169	168	166	165	164	162	161	160	159	159	158	157	157	157	156	156	156	156	156
15	164	162	160	158	156	154	153	152	151	150	149	148	148	147	147	147	146	146	147
20	157	154	152	150	148	146	144	143	141	140	138	137	136	135	135	135	134	135	135
25	149	146	143	140	138	136	134	132	130	128	127	125	124	123	123	123	122	123	123
30	139	136	133	131	128	125	123	120	118	116	115	113	112	112	111	111	110	111	111
35	129	126	123	120	117	114	111	109	106	105	103	102	101	99.7	99.1	98.8	98.6	98.7	99.1
40	119	115	112	108	105	102	99.4	97.0	94.8	92.9	91.3	90.0	88.9	88.0	87.4	87.0	86.9	86.9	87.3
45	108	104	100	96.5	93.3	90.4	87.7	85.3	83.2	81.3	79.6	78.3	77.2	76.3	75.7	75.3	75.1	75.2	75.5
50	95.9	92.2	88.1	84.6	81.5	78.6	76.0	73.7	71.6	69.7	68.0	66.7	65.7	64.8	64.3	63.9	63.8	63.8	64.1
55	84.2	79.9	76.0	72.8	69.6	66.9	64.4	62.1	60.0	58.1	56.5	55.2	54.2	53.4	52.9	52.6	52.4	52.5	52.8
60	71.7	67.4	64.0	60.8	57.9	55.4	52.8	50.5	48.4	46.5	45.0	43.7	42.8	42.0	41.5	41.2	41.1	41.2	41.4
65	58.8	55.2	51.9	49.1	46.4	43.7	41.2	38.9	36.8	35.1	33.9	33.0	32.3	31.7	31.3	31.1	31.0	31.1	31.3
70	46.3	43.1	40.3	37.5	34.8	32.2	29.8	28.1	26.4	25.0	23.8	22.9	22.2	21.7	21.3	21.1	21.0	21.0	21.2
75	34.4	31.8	29.1	26.3	23.9	22.0	20.0	18.2	16.4	14.9	13.6	12.8	12.1	11.6	11.2	11.0	10.9	10.9	11.1
80	23.9	21.3	18.9	16.8	14.7	12.5	10.4	7.82	5.73	4.13	2.93	2.03	1.30	0.73	0.33	0.08	0.00	0.08	0.32
85	15.0	13.0	9.60	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:26 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

