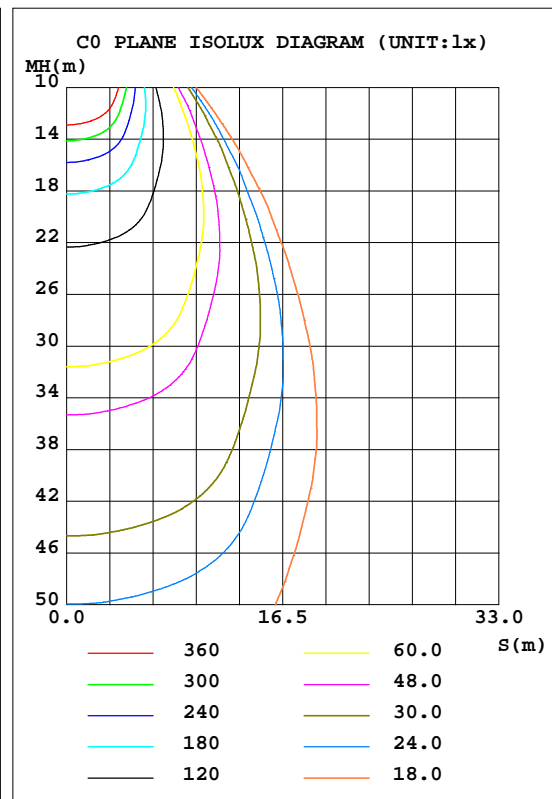
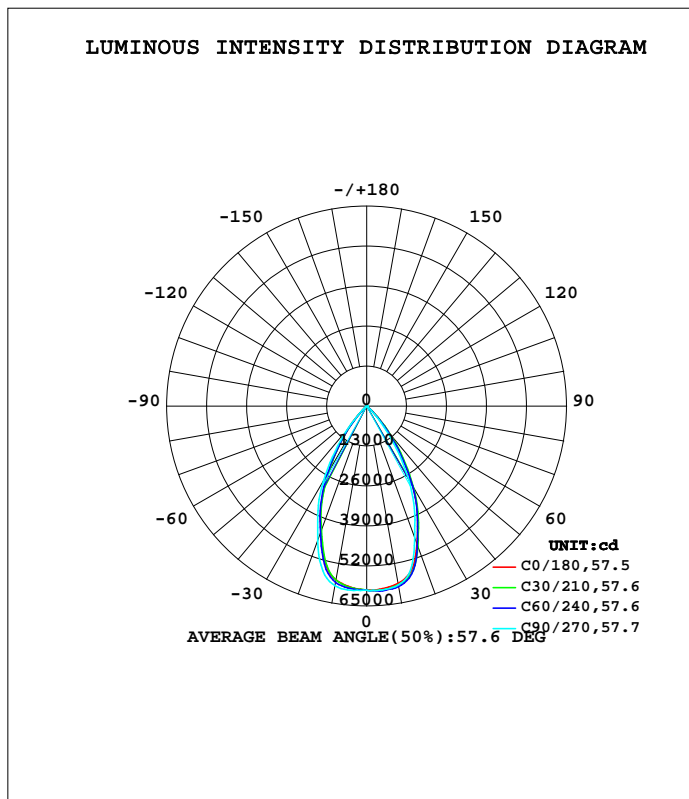


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.91 lm/W			
MODEL	QH-HBZSL-400W	I <sub>max</sub> (cd)	60290	S/MH(C0/180)	0.84
NOMINAL POWER(W)	400	LOR(%)	100.0	S/MH(C90/270)	0.88
RATED VOLTAGE(V)		TOTAL FLUX(lm)	51960	η UP, DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	51960.2	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	0.90



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	5855	5944	5910	5763	5740	5773	5933	5938	0- 10	5664	5664	10.9,10.9
20	4780	4907	4580	4294	4361	4319	4664	4900	10- 20	15033	20697	39.8,39.8
30	2985	3054	2712	2427	2503	2484	2821	3092	20- 30	16870	37567	72.3,72.3
40	1157	1184	871.5	742.7	852.3	772.1	926.8	1197	30- 40	11152	48719	93.8,93.8
50	53.39	71.67	36.27	26.26	27.87	29.39	40.89	57.66	40- 50	2914	51633	99.4,99.4
60	14.92	15.05	14.03	13.80	14.27	14.18	14.03	14.50	50- 60	190.4	51823	99.7,99.7
70	5.684	6.628	4.999	3.666	3.961	3.816	4.917	6.288	60- 70	103.2	51927	99.9,99.9
80	1.399	1.511	1.242	1.010	1.052	1.035	1.275	1.453	70- 80	27.25	51954	100,100
90	0.1378	0.1535	0.0973	0.1256	0.0756	0.0750	0.0658	0.1125	80- 90	6.417	51960	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: $\times 10\text{cd}$									UNIT:lm		

Conical surface Flux(90deg): 51028 lm

%lum = 98.2%  
%lamp = 98.2%

Conical surface Flux(120deg): 51823 lm

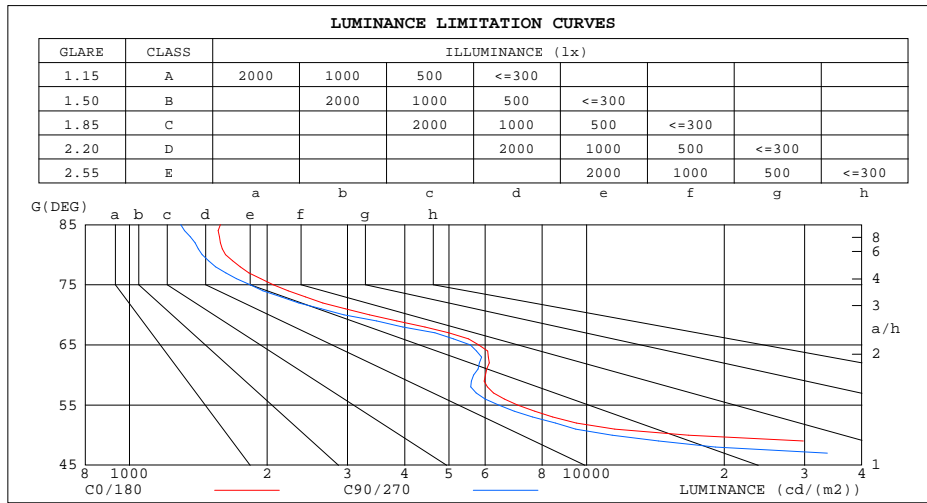
%lum = 99.7%  
%lamp = 99.7%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:17DEG  
Operators:HUA  
Test Date:2017-12-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
Humidity:31%  
Test Distance:12.218m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:



LUMINANCE cd/(m2)		
G( DEG)	C0/180	C90/270
85	1581	1294
80	1623	1442
75	2063	1836
70	3350	2946
65	5806	5574
60	6014	5657
55	7068	6429
50	16741	11374
45	135377	75414

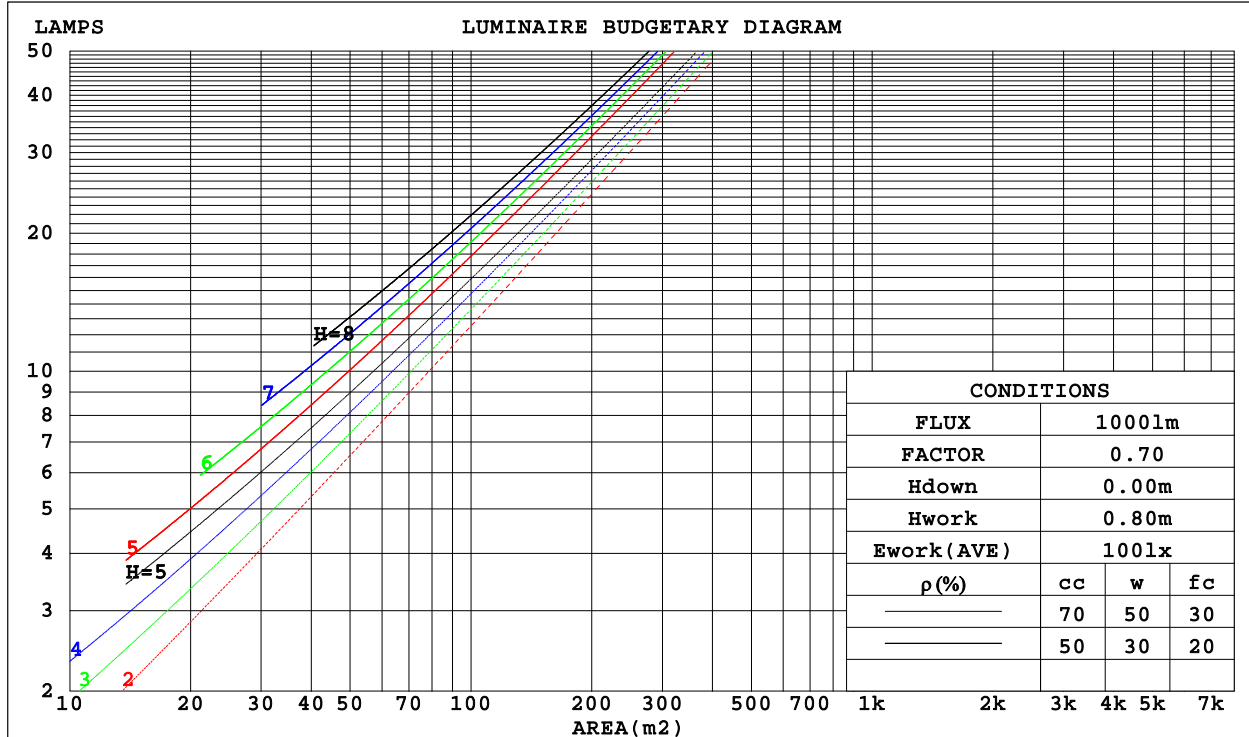
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.00
1.0	1.11	1.08	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.98	.98	.98	.97	.96	.94
2.0	1.03	.99	.96	1.02	.98	.95	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.84	.88	.85	.83	.81
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.81	.78	.83	.80	.77	.76
5.0	.85	.79	.75	.84	.78	.74	.82	.77	.74	.80	.76	.73	.79	.75	.72	.71
6.0	.80	.74	.69	.79	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.66
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.64	.72	.67	.64	.71	.67	.64	.62
8.0	.71	.65	.61	.70	.64	.61	.69	.64	.60	.68	.63	.60	.67	.63	.60	.58
9.0	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.64	.59	.56	.55
10.0	.63	.57	.54	.63	.57	.54	.62	.57	.53	.61	.56	.53	.60	.56	.53	.52



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	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	.175	.100	.032	.168	.096	.031	.156	.089	.029	.144	.083	.027	.134	.077	.025	
2.0	.168	.092	.028	.162	.089	.028	.152	.084	.026	.142	.080	.025	.133	.075	.024	
3.0	.160	.085	.026	.155	.083	.025	.146	.079	.024	.138	.076	.023	.130	.072	.022	
4.0	.153	.079	.023	.149	.078	.023	.141	.075	.022	.134	.072	.022	.127	.069	.021	
5.0	.146	.074	.022	.142	.073	.021	.135	.070	.021	.129	.068	.020	.123	.066	.020	
6.0	.139	.070	.020	.136	.069	.020	.130	.067	.019	.125	.065	.019	.119	.063	.019	
7.0	.133	.066	.019	.131	.065	.019	.125	.063	.018	.120	.062	.018	.116	.060	.018	
8.0	.128	.062	.018	.125	.062	.017	.121	.060	.017	.116	.059	.017	.112	.057	.017	
9.0	.123	.059	.017	.120	.059	.016	.116	.057	.016	.112	.056	.016	.108	.055	.016	
10.0	.118	.056	.016	.116	.056	.016	.112	.055	.015	.108	.054	.015	.105	.053	.015	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.079	.060	.044	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.107	.075	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.101	.067	.043	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.090	.056	.031	.063	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.096	.055	.027	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm										
NAME: HIGH BAY LIGHT					TYPE:			WEIGHT:		
SPEC.:PHILIPS LUMILEDS					DIM.:			SERIAL No.:BLD20171221P01		
MFR.: Qinhan Lighting					SUR.:0.125*0.125*3.14			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	26.0	27.0	26.2	27.1	27.3	25.2	26.1	25.4	26.3	26.5
3H	25.8	26.7	26.1	26.9	27.1	25.0	25.9	25.3	26.1	26.3
4H	25.8	26.6	26.0	26.8	27.0	24.9	25.7	25.2	26.0	26.2
6H	25.7	26.4	26.0	26.7	26.9	24.8	25.6	25.1	25.8	26.1
8H	25.6	26.4	25.9	26.6	26.9	24.8	25.5	25.1	25.8	26.0
12H	25.6	26.3	25.9	26.5	26.8	24.7	25.4	25.1	25.7	26.0
4H 2H	25.8	26.6	26.0	26.8	27.0	24.9	25.7	25.2	26.0	26.2
3H	25.6	26.3	25.9	26.6	26.8	24.8	25.5	25.1	25.7	26.0
4H	25.5	26.1	25.8	26.4	26.7	24.7	25.3	25.0	25.6	25.9
6H	25.4	25.9	25.8	26.3	26.6	24.6	25.1	24.9	25.5	25.8
8H	25.3	25.9	25.7	26.2	26.6	24.5	25.0	24.9	25.4	25.7
12H	25.3	25.8	25.7	26.1	26.5	24.5	24.9	24.9	25.3	25.7
8H 4H	25.3	25.9	25.7	26.2	26.6	24.5	25.0	24.9	25.4	25.7
6H	25.2	25.7	25.7	26.1	26.5	24.4	24.8	24.8	25.2	25.6
8H	25.2	25.6	25.6	26.0	26.4	24.4	24.7	24.8	25.1	25.6
12H	25.1	25.5	25.6	25.9	26.4	24.3	24.6	24.8	25.1	25.5
12H 4H	25.3	25.8	25.7	26.1	26.5	24.5	24.9	24.9	25.3	25.7
6H	25.2	25.6	25.6	26.0	26.4	24.4	24.7	24.8	25.1	25.6
8H	25.1	25.5	25.6	25.9	26.4	24.3	24.6	24.8	25.1	25.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / -18.2					+ 2.7 / -17.6				
1.5H	+ 5.2 / -17.5					+ 5.1 / -16.3				
2.0H	+ 8.1 / -10.9					+ 7.5 / - 7.9				

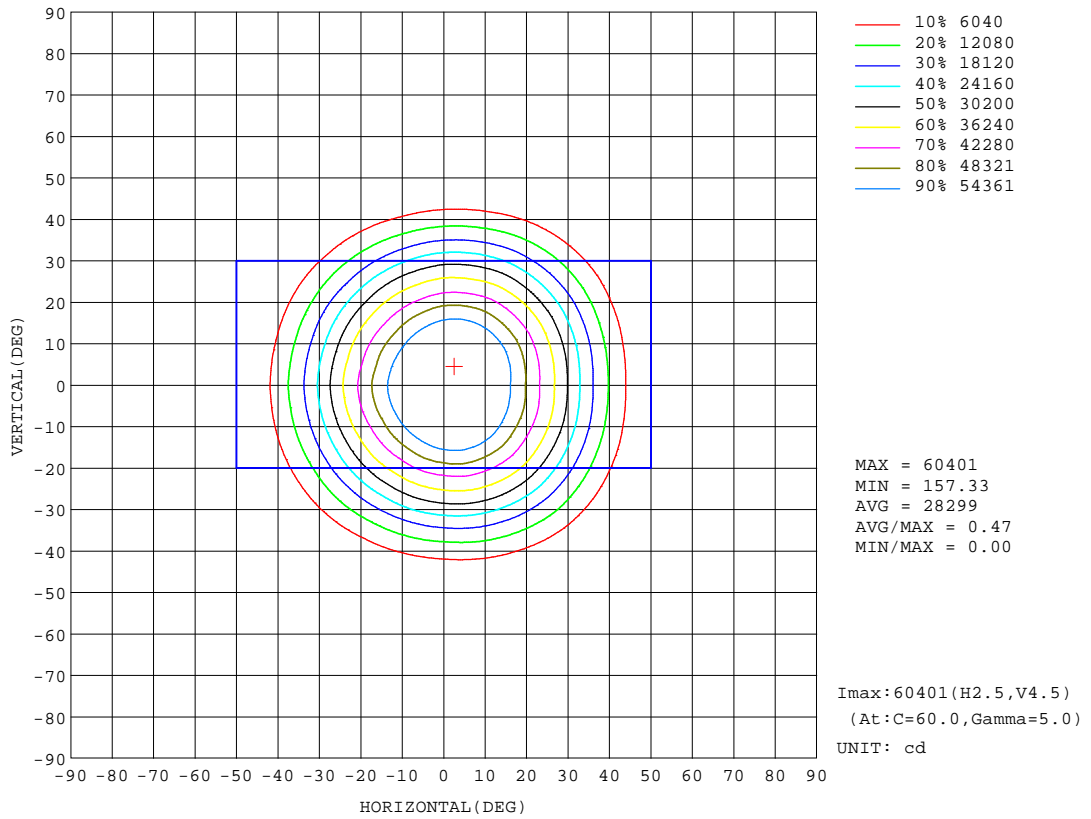
CIE Pub.117 Corrected 51960 lm Total Lamp Luminous Flux.(8log(F/F0) = 13.7)

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:



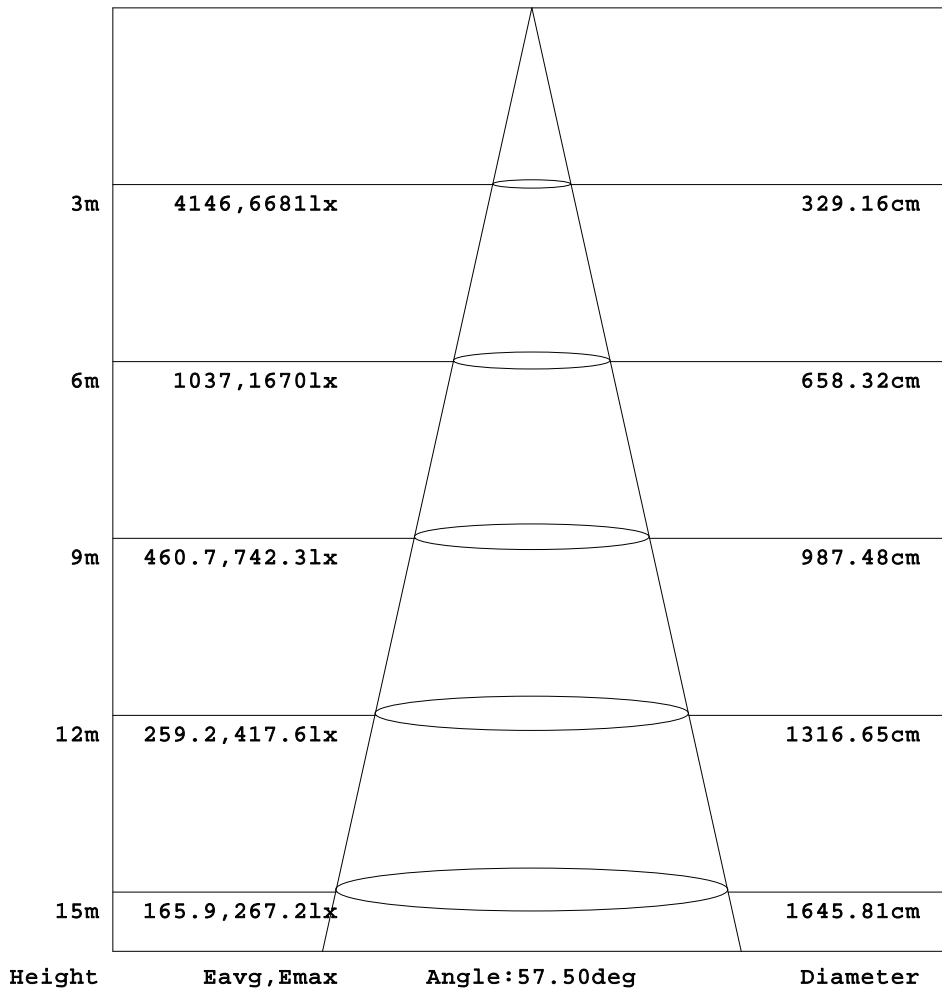
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:

Flux out:36022 lm



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

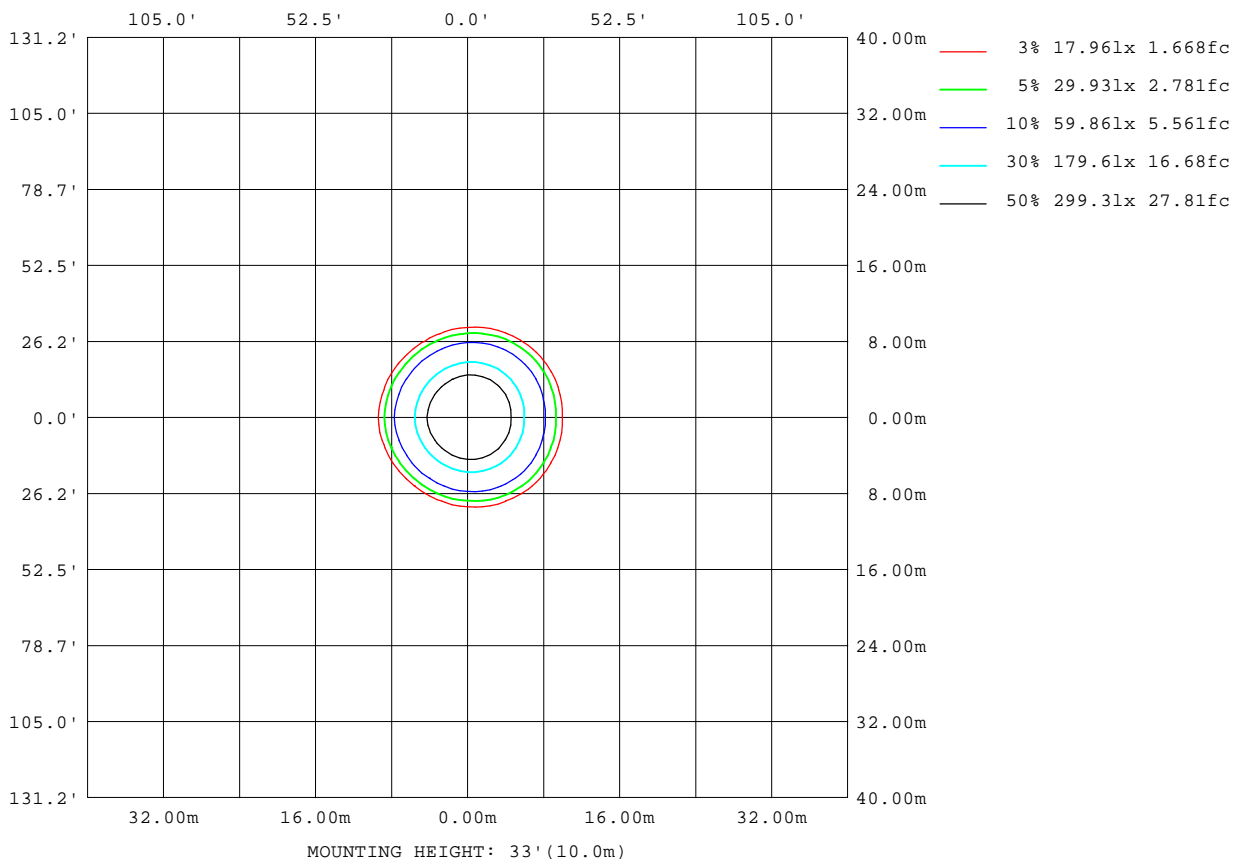
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:



ISOLUX DIAGRAM

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

LED Avg.L Report

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:

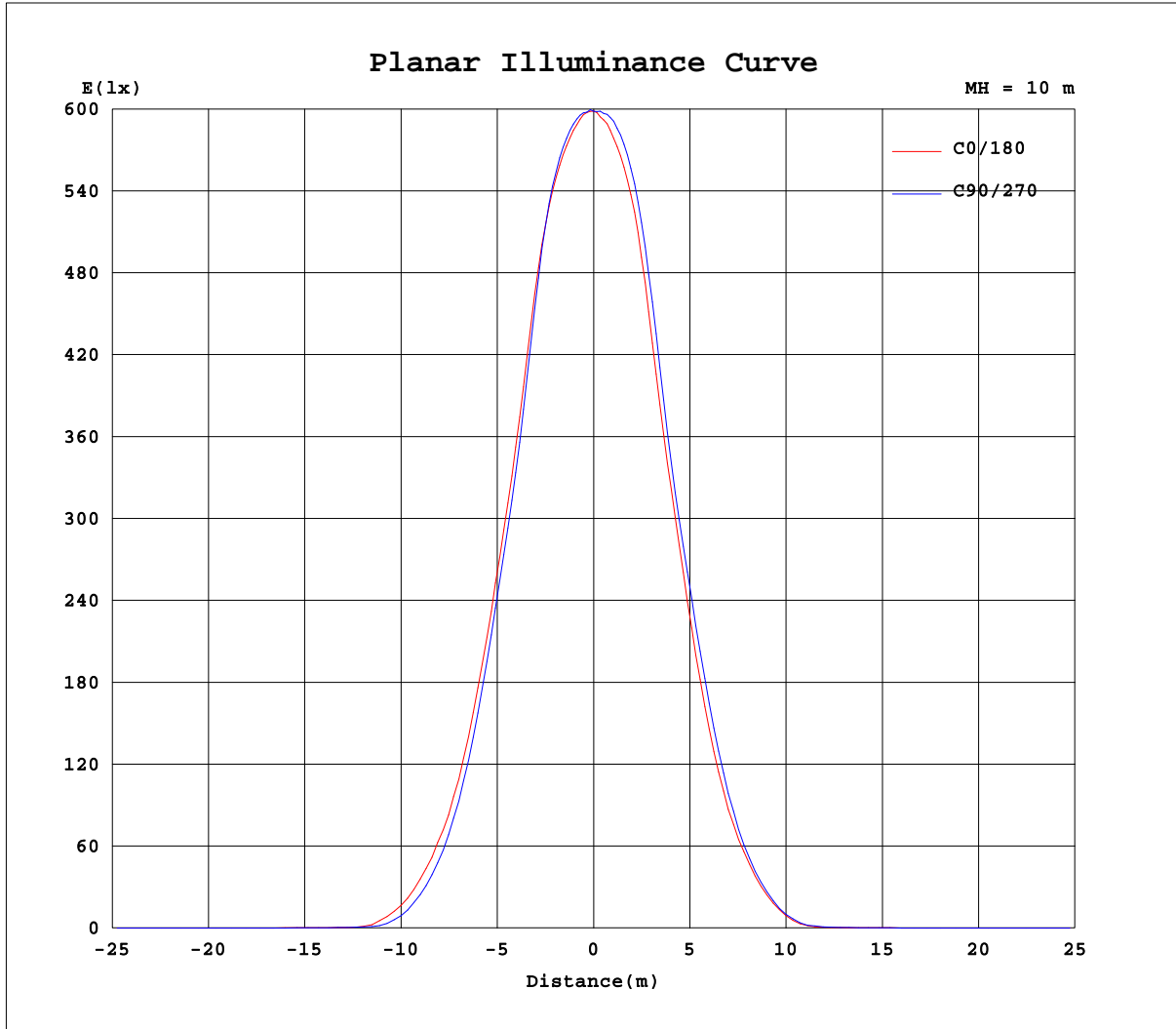
AvgL	cd/m2
L_0~180(65)av	5165
L_0~180(75)av	1784
L_0~180(85)av	1267
L_90~270(65)av	5497
L_90~270(75)av	1832
L_90~270(85)av	1296
L_45(65)av	5213
L_45(75)av	1835
L_45(85)av	1295

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 17DEG  
 Operators: HUA  
 Test Date: 2017-12-21

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity: 31%  
 Test Distance: 12.218m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.6V I:1.835A P:393.9W PF:0.9774 Lamp Flux:51960.2x1 lm		
NAME: HIGH BAY LIGHT	TYPE:	WEIGHT:
SPEC.:PHILIPS LUMILEDS	DIM.:	SERIAL No.:BLD20171221P01
MFR.: Qinhan Lighting	SUR.:0.125*0.125*3.14	Shielding Angle:

Table--1

UNIT: x10cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988	5988
5	5957	5973	5995	6019	6029	6017	5998	5971	5945	5924	5916	5913	5913	5913	5924	5942	5957	5979	6008
10	5855	5879	5900	5944	5965	5957	5910	5867	5796	5763	5734	5722	5740	5732	5748	5773	5820	5872	5933
15	5559	5602	5634	5669	5663	5617	5523	5407	5289	5239	5173	5206	5250	5194	5218	5229	5313	5422	5542
20	4780	4862	4869	4907	4827	4742	4580	4468	4329	4294	4258	4310	4361	4294	4310	4319	4407	4501	4664
25	3924	3982	3981	3988	3905	3808	3679	3575	3458	3424	3387	3437	3503	3438	3450	3465	3552	3631	3760
30	2985	3049	3055	3054	2979	2868	2712	2583	2464	2427	2401	2441	2503	2456	2468	2484	2569	2664	2821
35	1988	2050	2075	2051	1957	1849	1697	1606	1518	1498	1495	1548	1585	1555	1547	1544	1594	1675	1795
40	1157	1191	1195	1184	1087	990	872	803	743	743	746	802	852	805	784	772	804	846	927
45	475	515	504	468	399	339	265	218	193	192	210	229	264	242	220	210	208	241	290
50	53.4	80.2	60.6	71.7	49.7	44.4	36.3	31.6	28.9	26.3	26.3	26.2	27.9	28.8	28.2	29.4	31.9	35.5	40.9
55	20.1	20.9	21.3	21.7	21.1	19.9	18.3	17.0	16.1	15.8	15.8	16.0	16.6	16.6	16.9	17.3	17.8	18.5	19.4
60	14.9	15.0	15.1	15.0	14.8	14.4	14.0	13.9	13.9	13.8	13.8	14.0	14.3	14.2	14.1	14.2	14.2	14.2	14.0
65	12.2	12.7	12.8	12.9	12.6	12.4	11.7	10.8	9.77	9.20	8.89	9.09	9.48	9.18	9.22	9.42	9.97	10.6	11.4
70	5.68	6.21	6.48	6.63	6.36	5.73	5.00	4.44	3.91	3.67	3.57	3.69	3.96	3.76	3.74	3.82	4.16	4.53	4.92
75	2.65	2.78	2.86	2.90	2.82	2.65	2.36	2.10	1.93	1.84	1.80	1.84	1.93	1.89	1.90	1.95	2.06	2.18	2.35
80	1.40	1.47	1.49	1.51	1.46	1.38	1.24	1.14	1.05	1.01	0.98	1.01	1.05	1.01	1.02	1.03	1.12	1.20	1.28
85	0.68	0.72	0.74	0.74	0.70	0.64	0.56	0.49	0.42	0.39	0.38	0.40	0.41	0.39	0.38	0.39	0.43	0.49	0.56
90	0.14	0.15	0.16	0.15	0.13	0.10	0.10	0.10	0.11	0.13	0.13	0.13	0.08	0.07	0.07	0.07	0.07	0.07	0.07

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:17DEG  
 Operators:HUA  
 Test Date:2017-12-21

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.350  
 Humidity:31%  
 Test Distance:12.218m [K=1.0000]  
 Remarks:

