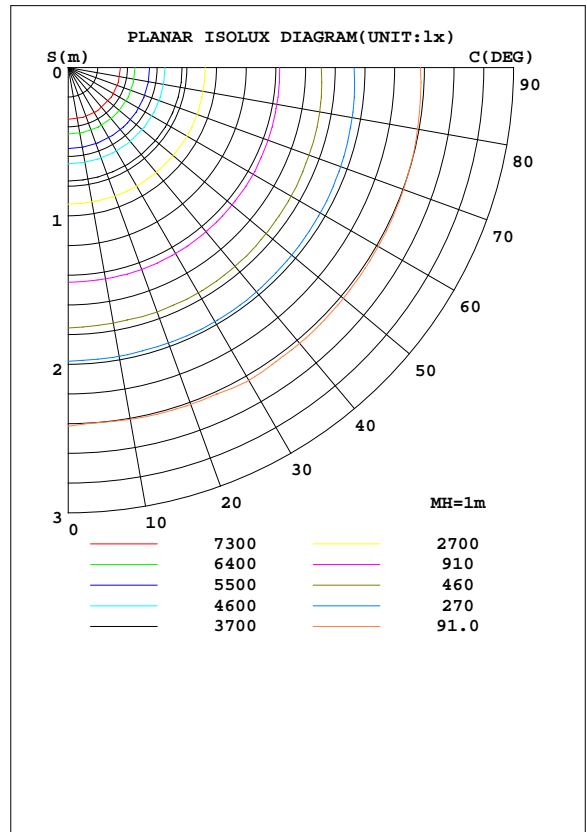
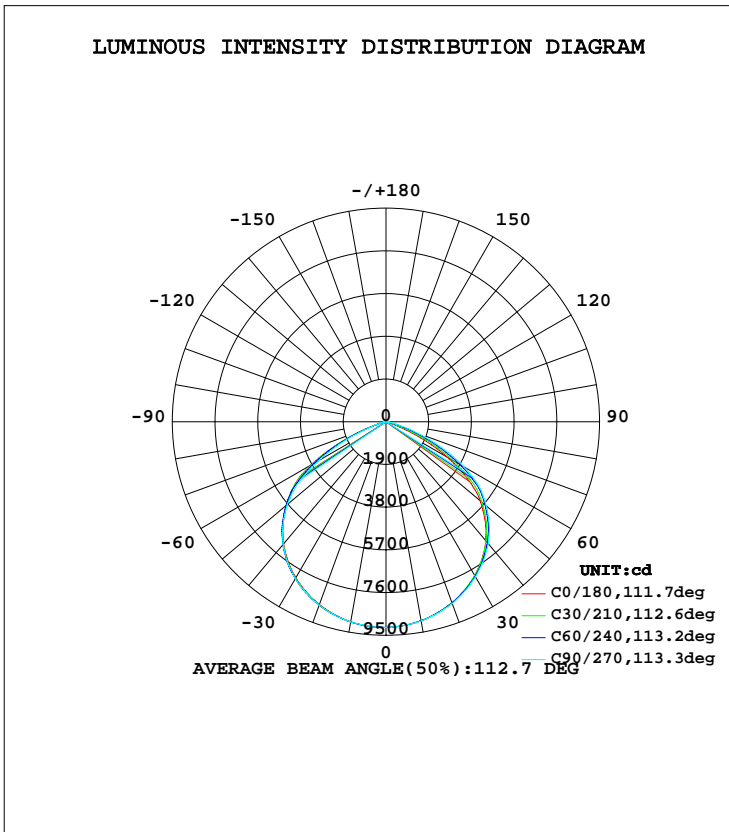


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.50 lm/W			
MODEL	NF2W757GRT-V1 220PCS	Imax(cd)	9149	S/MH(C0/180)	1.28
NOMINAL POWER(W)	180	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	222	TOTAL FLUX(lm)	23919	η UP, DN(C0-180)	0.0, 49.3
NOMINAL FLUX(lm)	23918.7	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	221.1	η down(%)	100.0	CIBSE SHR MAX	1.35



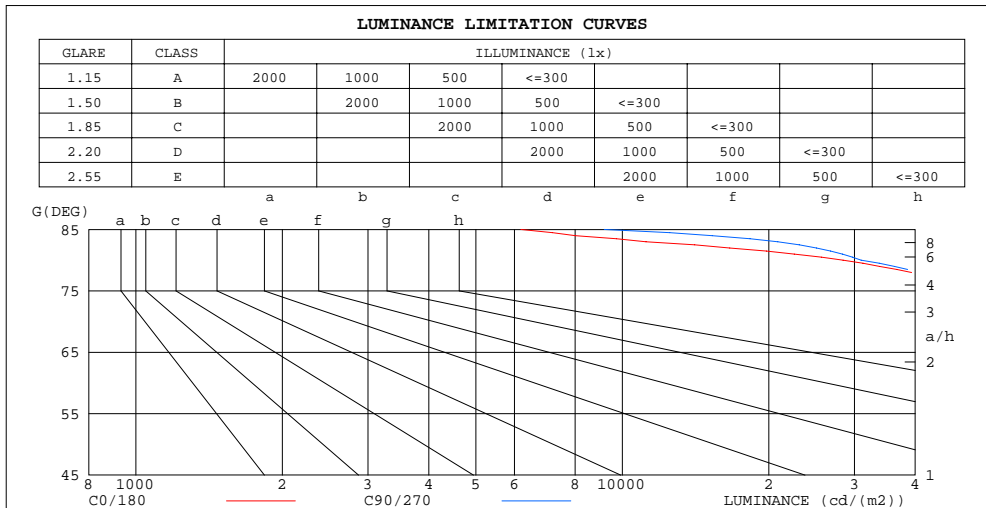
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
5	9127	9127	9122	9114	9100	9094	9099	9107	0- 5	218.2	218.2	0.91,0.91
10	9031	9039	9043	9018	8989	8983	8998	9008	5- 10	648.3	866.5	3.62,3.62
15	8871	8895	8894	8861	8817	8811	8821	8849	10- 15	1060	1926	8.05,8.05
20	8654	8674	8687	8635	8580	8569	8607	8622	15- 20	1440	3366	14.1,14.1
25	8368	8397	8398	8342	8272	8269	8307	8338	20- 25	1779	5146	21.5,21.5
30	8017	8050	8064	7982	7901	7911	7962	7993	25- 30	2065	7211	30.1,30.1
35	7587	7628	7631	7549	7448	7481	7549	7578	30- 35	2289	9500	39.7,39.7
40	7078	7128	7122	7023	6897	6972	7079	7098	35- 40	2436	11936	49.9,49.9
45	6469	6509	6477	6388	6240	6370	6496	6513	40- 45	2497	14433	60.3,60.3
50	5752	5815	5732	5653	5468	5678	5824	5856	45- 50	2455	16888	70.6,70.6
55	4990	4976	4765	4624	4418	4839	5062	5098	50- 55	2306	19194	80.2,80.2
60	3867	3797	3440	3139	3131	3622	4017	4051	55- 60	1971	21164	88.5,88.5
65	2359	2339	2093	1676	1720	2311	2736	2802	60- 65	1438	22602	94.5,94.5
70	955.7	1038	818.0	682.5	441.9	1099	1506	1532	65- 70	821.4	23424	97.9,97.9
75	288.6	316.0	302.0	238.3	206.0	364.1	612.0	534.6	70- 75	327.0	23751	99.3,99.3
80	98.75	115.1	107.5	83.24	61.73	159.1	232.5	208.6	75- 80	123.4	23874	99.8,99.8
85	10.78	18.14	16.00	12.85	5.654	38.31	57.06	65.53	80- 85	41.33	23916	100,100
90	0.8803	0	0	0	4.058	0	0	0	85- 90	3.190	23919	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	6185	9178
80	28433	30967
75	55745	58342
70	139709	119577
65	279047	247607
60	386652	343994
55	434997	415393
50	447447	445839
45	457444	457969

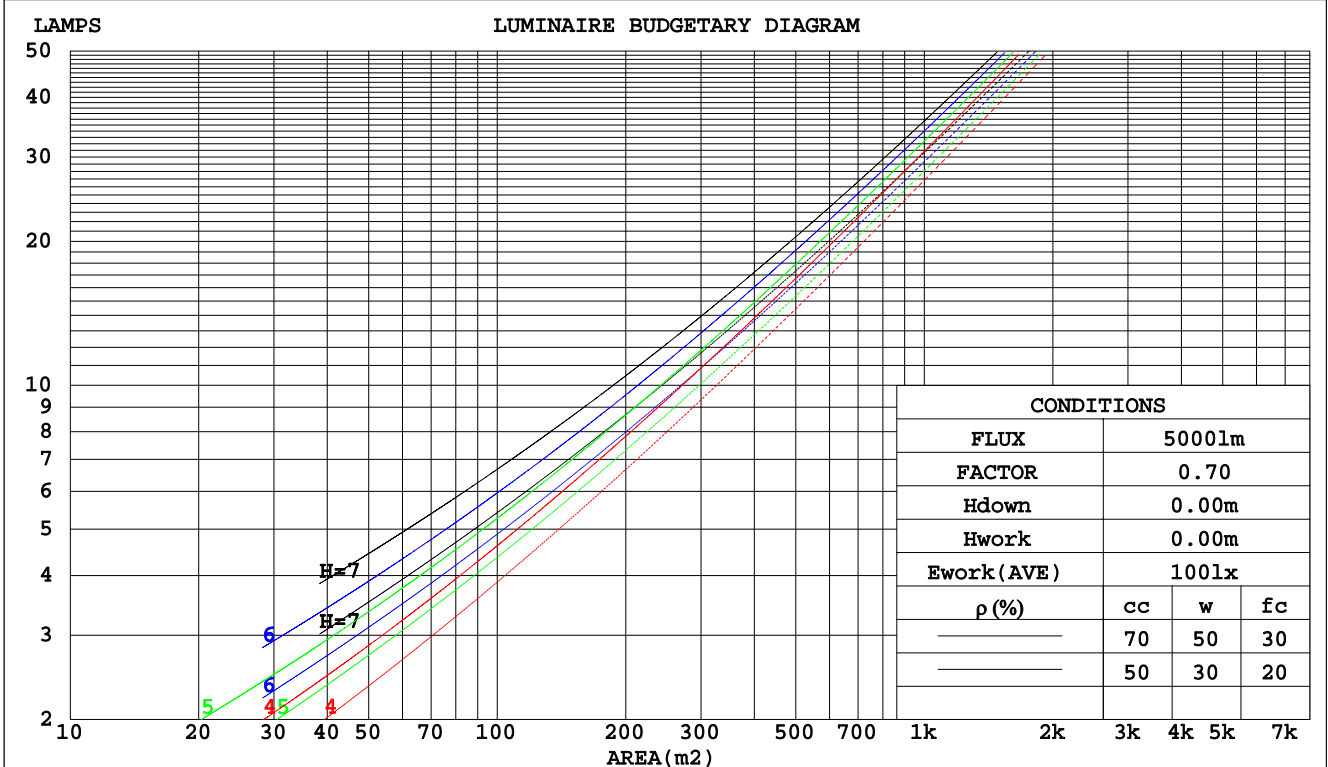
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:CHEN YU
Test Date:2016-12-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:9.410m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.06	1.03	.00	1.04	1.01	.98	1.00	.97	.95	.96	.94	.92	.93	.91	.89	.87
2.0	.94	.88	.83	.92	.87	.82	.89	.84	.80	.86	.82	.78	.83	.79	.77	.75
3.0	.83	.76	.70	.82	.75	.69	.79	.73	.68	.76	.71	.67	.74	.70	.66	.64
4.0	.74	.66	.60	.73	.65	.59	.70	.64	.59	.68	.62	.58	.66	.61	.57	.55
5.0	.66	.58	.52	.65	.57	.51	.63	.56	.51	.61	.55	.50	.60	.54	.50	.48
6.0	.60	.51	.45	.59	.51	.45	.57	.50	.45	.56	.49	.44	.54	.48	.44	.42
7.0	.54	.46	.40	.53	.45	.40	.52	.45	.40	.51	.44	.39	.49	.43	.39	.37
8.0	.50	.41	.36	.49	.41	.36	.48	.40	.35	.46	.40	.35	.45	.39	.35	.33
9.0	.45	.37	.32	.45	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.31	.30
10.0	.42	.34	.29	.41	.34	.29	.40	.34	.29	.39	.33	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	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	.261	.148	.047	.254	.145	.046	.241	.138	.044	.229	.132	.042	.218	.126	.041	
2.0	.256	.141	.043	.250	.138	.042	.239	.133	.041	.229	.128	.040	.219	.124	.039	
3.0	.244	.130	.039	.239	.128	.039	.229	.124	.038	.220	.120	.037	.211	.117	.036	
4.0	.230	.120	.035	.225	.118	.035	.217	.115	.034	.208	.112	.034	.201	.109	.033	
5.0	.216	.110	.032	.212	.109	.032	.204	.106	.031	.197	.104	.031	.190	.101	.030	
6.0	.203	.102	.029	.199	.100	.029	.192	.098	.029	.185	.096	.028	.179	.094	.028	
7.0	.190	.094	.027	.187	.093	.027	.181	.091	.026	.175	.090	.026	.169	.088	.026	
8.0	.179	.087	.025	.176	.087	.024	.170	.085	.024	.165	.084	.024	.160	.082	.024	
9.0	.169	.082	.023	.166	.081	.023	.161	.079	.023	.156	.078	.022	.151	.077	.022	
10.0	.159	.076	.021	.157	.076	.021	.152	.074	.021	.148	.073	.021	.144	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.138	.151	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.143	.114	.088	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.098	.068	.094	.068	.047	.054	.040	.028	.017	.013	.009	
4.0	.152	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.145	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.041	.119	.071	.035	.082	.049	.025	.048	.029	.015	.015	.010	.005	
7.0	.132	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.126	.069	.030	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.120	.064	.026	.104	.056	.023	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.036	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	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	34.1	35.5	34.3	35.7	35.9	33.9	35.3	34.1	35.5	35.7
3H	34.4	35.8	34.7	36.0	36.2	34.2	35.5	34.5	35.8	36.0
4H	34.4	35.6	34.7	35.9	36.1	34.2	35.4	34.5	35.7	35.9
6H	34.3	35.4	34.6	35.7	36.0	34.1	35.2	34.4	35.5	35.8
8H	34.2	35.4	34.6	35.6	35.9	34.0	35.2	34.4	35.4	35.7
12H	34.2	35.3	34.5	35.5	35.8	34.0	35.1	34.3	35.3	35.6
4H 2H	34.4	35.6	34.7	35.9	36.1	34.2	35.5	34.5	35.7	36.0
3H	34.8	35.9	35.1	36.2	36.5	34.6	35.7	35.0	36.0	36.3
4H	34.7	35.7	35.1	36.0	36.4	34.6	35.5	34.9	35.9	36.2
6H	34.7	35.5	35.1	35.9	36.2	34.5	35.4	34.9	35.7	36.1
8H	34.6	35.4	35.0	35.8	36.2	34.5	35.3	34.9	35.6	36.0
12H	34.6	35.3	35.0	35.7	36.1	34.4	35.1	34.8	35.5	35.9
8H 4H	34.7	35.4	35.1	35.8	36.2	34.5	35.3	34.9	35.6	36.0
6H	34.6	35.2	35.0	35.6	36.1	34.4	35.1	34.9	35.5	35.9
8H	34.6	35.1	35.0	35.6	36.0	34.4	35.0	34.9	35.4	35.8
12H	34.5	35.0	35.0	35.5	35.9	34.4	34.8	34.8	35.3	35.8
12H 4H	34.6	35.3	35.0	35.7	36.1	34.4	35.2	34.9	35.5	35.9
6H	34.6	35.1	35.0	35.6	36.0	34.4	35.0	34.9	35.4	35.8
8H	34.5	35.0	35.0	35.5	35.9	34.4	34.8	34.8	35.3	35.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.4 / - 0.5				
1.5H	+ 0.6 / - 0.8					+ 0.6 / - 0.9				
2.0H	+ 0.7 / - 0.9					+ 0.8 / - 1.0				

CIE Pub.117 Corrected 23919 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.0)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	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	60	48	42	59	48	42	58	48	41	35
0.80	71	60	53	70	59	52	68	58	52	45
1.00	80	69	63	79	69	62	76	70	62	55
1.25	87	77	71	86	77	71	83	75	70	63
1.50	92	83	77	90	82	76	87	80	75	68
2.00	98	91	85	97	90	85	93	88	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	103	98	93	99	95	91	83
4.00	108	104	100	106	102	98	102	98	95	87
5.00	110	106	103	108	104	101	104	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

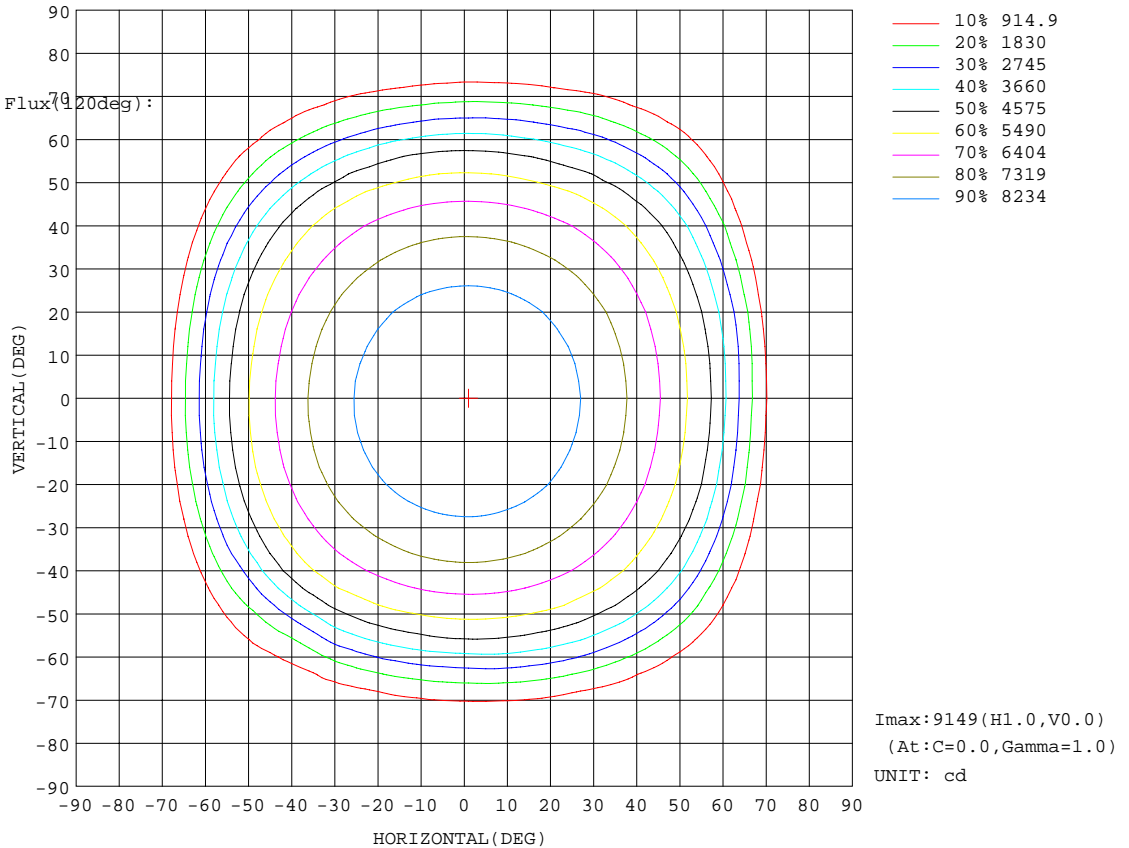
Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:

Conical surface Flux(90deg):

14433 lm
%lum = 60.3%
%lamp = 60.3%

Conical surface Flux(70deg):

21164 lm
%lum = 88.5%
%lamp = 88.5%



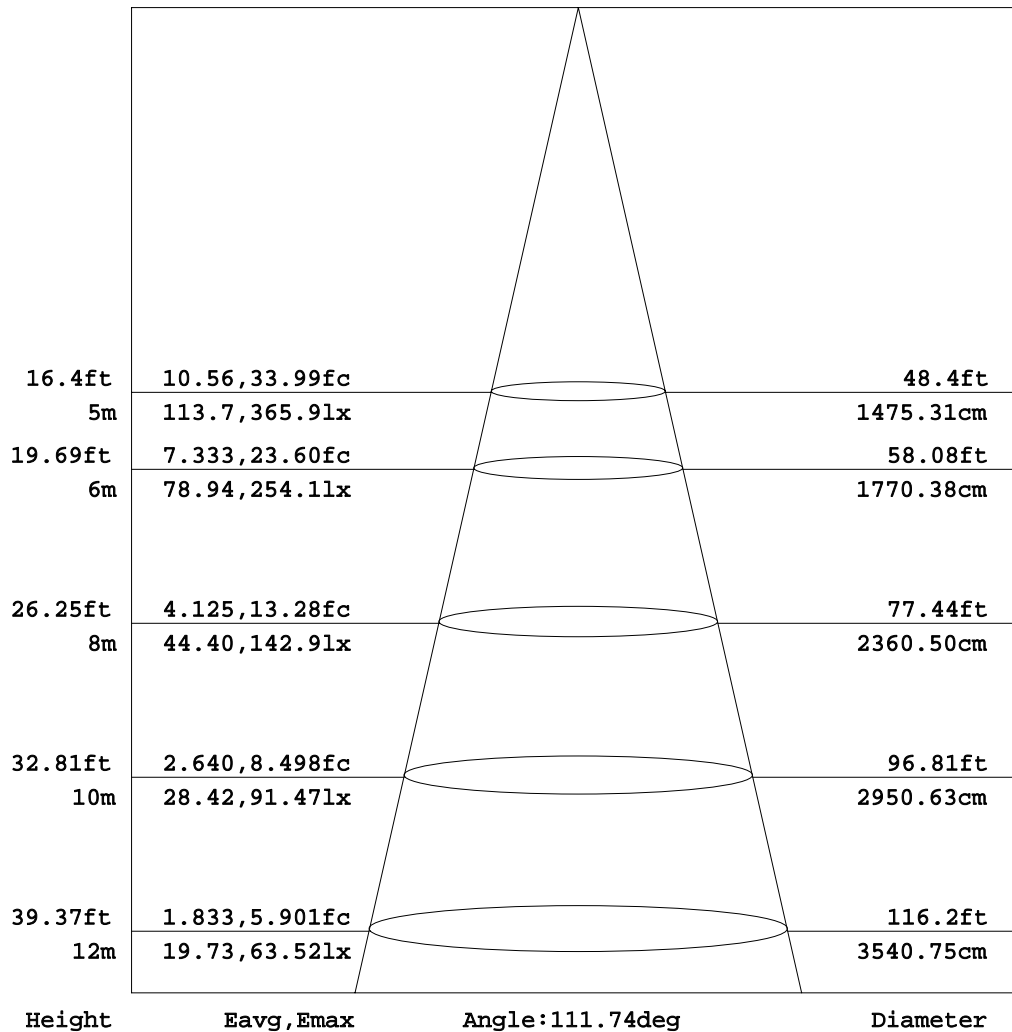
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:CHEN YU
Test Date:2016-12-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
Humidity:65.0%
Test Distance:9.410m [K=1.0000]
Remarks:

AAI Figure

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:

Flux out:19622 lm



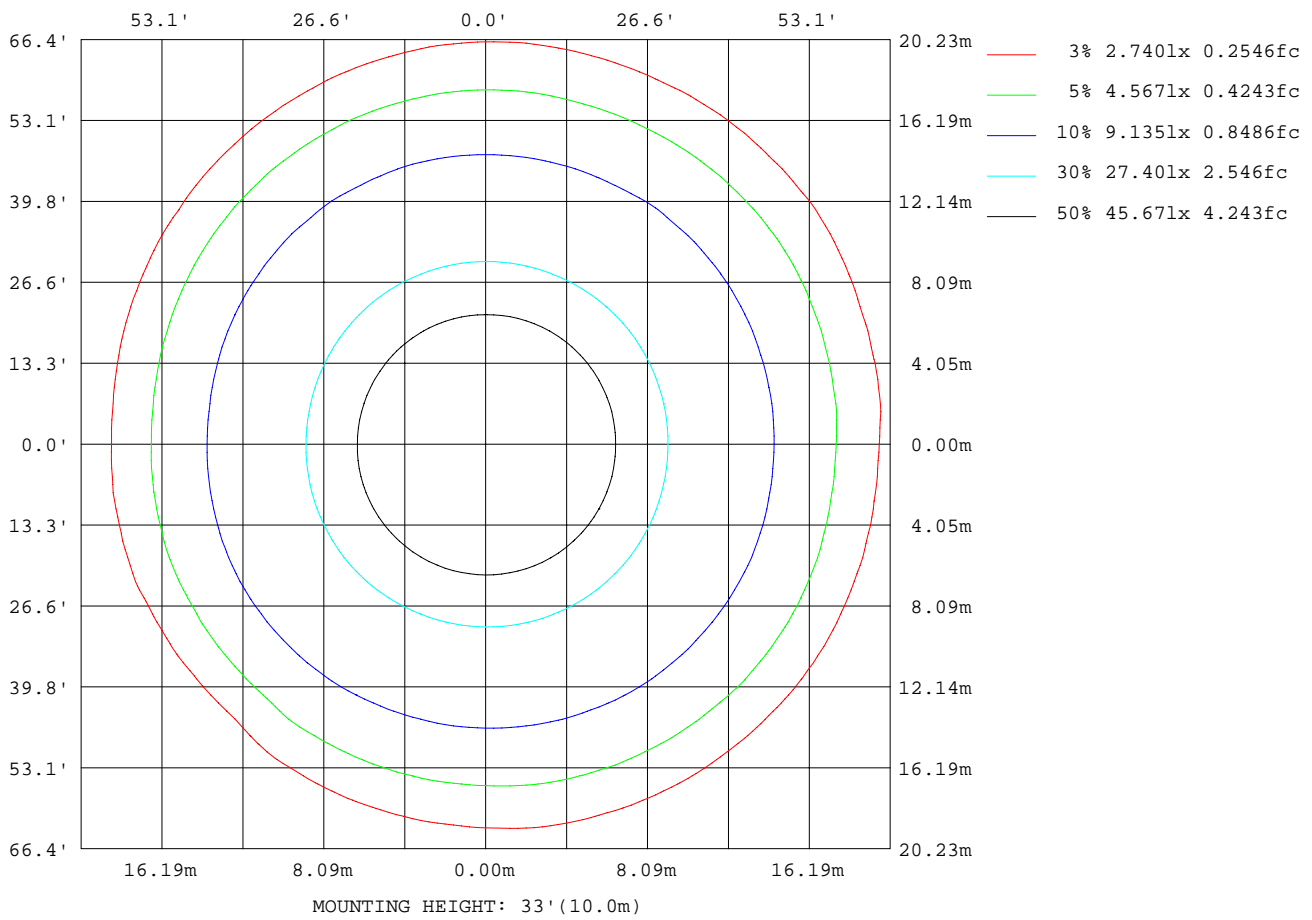
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

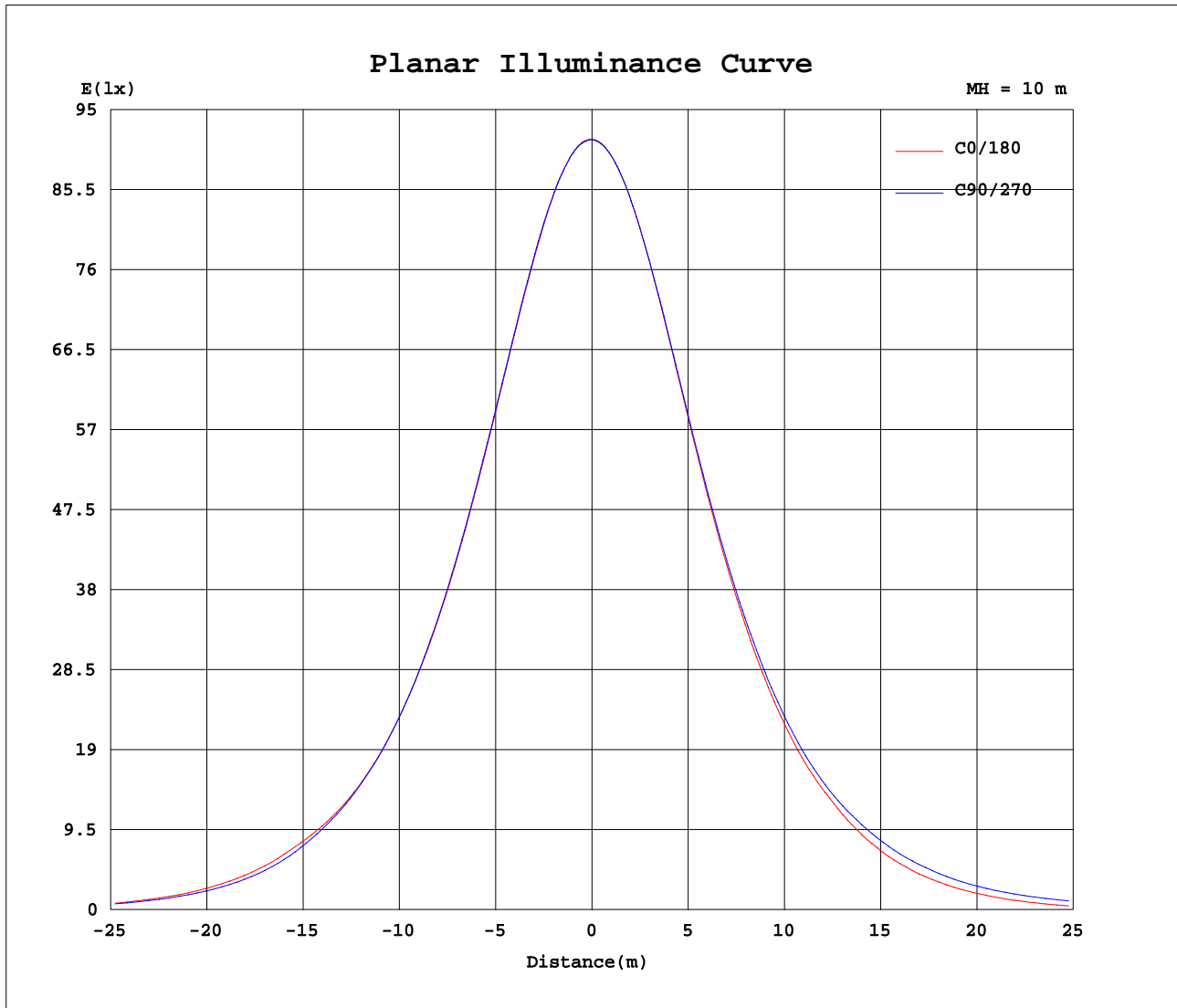
Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators: CHEN YU
 Test Date: 2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity: 65.0%
 Test Distance: 9.410m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:221.8V I:0.8526A P:181.9W PF:0.9620 Lamp Flux:23918.7x1 lm		
NAME: LED HIGH BAY LIGHTT	TYPE:YHL-ID-180-HB-VD	WEIGHT:
SPEC.:MEAN WELL	DIM.: 5000K	SERIAL No.:20161228
MFR.:	SUR.:70Ra	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146	9146
5	9127	9125	9124	9124	9123	9124	9124	9125	9126	9127	9128	9128	9126	9125	9124	9123	9122	9122	9122
10	9031	9029	9029	9031	9035	9038	9039	9040	9040	9039	9040	9042	9045	9046	9046	9045	9045	9044	9043
15	8871	8869	8871	8877	8878	8881	8883	8889	8896	8895	8893	8893	8894	8896	8898	8897	8897	8895	8894
20	8654	8649	8652	8656	8658	8665	8673	8670	8672	8674	8679	8681	8685	8686	8688	8689	8689	8689	8687
25	8368	8362	8366	8369	8377	8381	8383	8386	8393	8397	8409	8408	8406	8406	8409	8408	8405	8403	8398
30	8017	8007	8011	8017	8025	8029	8034	8042	8053	8050	8056	8059	8060	8062	8064	8066	8069	8068	8064
35	7587	7579	7583	7597	7593	7604	7619	7616	7620	7628	7634	7648	7643	7641	7640	7640	7639	7633	7631
40	7078	7067	7071	7075	7086	7101	7098	7107	7116	7128	7124	7129	7132	7130	7131	7132	7130	7129	7122
45	6469	6452	6467	6462	6479	6482	6488	6511	6503	6509	6514	6525	6523	6514	6509	6506	6498	6489	6477
50	5752	5733	5743	5752	5765	5774	5793	5791	5801	5815	5812	5809	5807	5803	5793	5780	5764	5748	5732
55	4990	4968	4974	5004	4999	5012	5000	5014	4979	4976	4941	4943	4927	4890	4845	4837	4809	4787	4765
60	3867	3810	3796	3812	3843	3840	3868	3840	3809	3797	3734	3714	3692	3647	3618	3599	3576	3515	3440
65	2359	2345	2338	2356	2346	2355	2393	2391	2363	2339	2324	2303	2297	2275	2240	2215	2181	2145	2093
70	956	902	887	934	980	1031	1042	1046	1035	1038	1022	1015	1014	984	957	917	868	845	818
75	289	284	289	294	295	293	295	311	308	316	291	292	324	330	327	323	315	308	302
80	98.7	94.3	97.9	102	105	105	107	112	113	115	119	121	121	120	118	115	113	110	108
85	10.8	9.98	11.1	11.3	11.0	11.2	8.72	11.5	13.8	18.1	19.9	20.2	20.3	20.1	19.5	18.7	17.5	16.5	16.0
90	0.88	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

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:CHEN YU
 Test Date:2016-12-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:9.410m [K=1.0000]
 Remarks:

