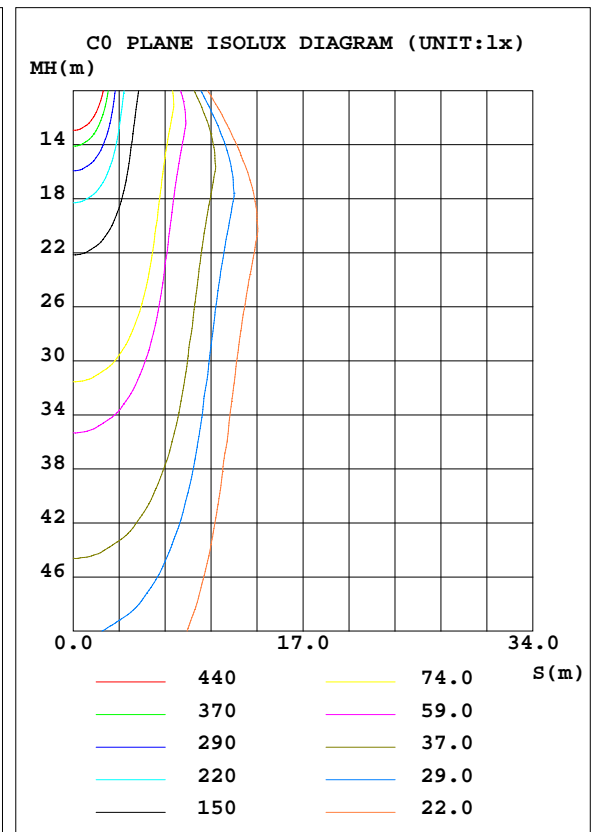
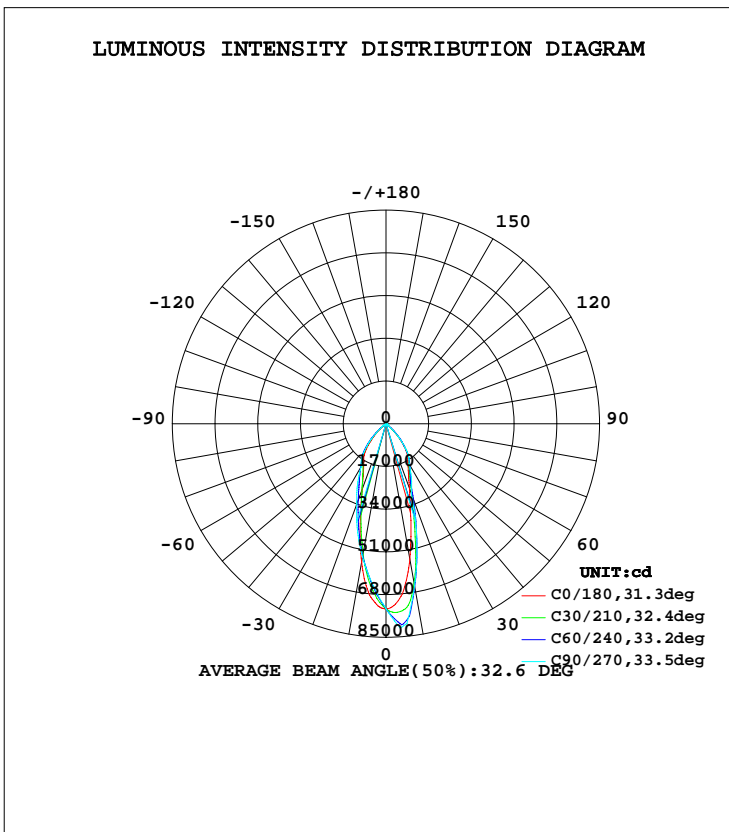


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.71 lm/W			
MODEL	QH-HBZSL-500W	Imax(cd)	81547	S/MH(C0/180)	0.52
NOMINAL POWER(W)	502	LOR(%)	100.0	S/MH(C90/270)	0.58
RATED VOLTAGE(V)	218	TOTAL FLUX(lm)	44593	η UP, DN(C0-180)	0.0, 49.7
NOMINAL FLUX(lm)	44593.1	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	217.3	η down(%)	100.0	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators:
 Test Date: 2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 90.0%
 Test Distance: 7.860m [K=1.0000]
 Remarks: LED:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum
5	6933	6456	6371	6445	6888	7787	8072	7803	0- 5	1731	1731	3.88
10	5587	5281	5381	5213	5468	6571	6552	6681	5- 10	4637	6368	14.3
15	3950	4038	4391	3948	3804	4605	4753	4720	10- 15	5955	12323	27.6
20	2788	3015	3401	2969	2738	3134	2955	3204	15- 20	5943	18266	41
25	2134	2365	2693	2340	2116	2272	2396	2285	20- 25	5519	23784	53.3
30	1777	1949	1985	1945	1754	1838	1837	1842	25- 30	5272	29056	65.2
35	1509	1632	1686	1615	1477	1503	1554	1520	30- 35	5074	34131	76.5
40	1071	1276	1224	1246	1037	1098	1087	1108	35- 40	4567	38698	86.8
45	600.5	746.9	741.4	733.8	558.3	585.5	596.7	601.1	40- 45	3324	42022	94.2
50	166.5	387.3	258.8	379.8	134.7	281.8	106.7	289.7	45- 50	1771	43793	98.2
55	17.57	140.6	135.8	138.7	17.90	94.28	58.45	100.2	50- 55	512.1	44305	99.4
60	10.80	11.85	12.81	13.20	11.11	10.09	10.22	10.75	55- 60	130.3	44435	99.6
65	7.231	8.118	10.31	9.046	7.382	6.941	8.314	7.290	60- 65	47.93	44483	99.8
70	5.061	6.011	7.809	6.801	5.225	5.206	6.407	5.234	65- 70	35.29	44519	99.8
75	3.884	5.421	5.426	6.383	4.675	4.669	4.543	4.408	70- 75	28.14	44547	99.9
80	3.862	4.741	3.998	5.801	4.645	3.984	3.034	3.452	75- 80	24.15	44571	100
85	0.4113	2.847	2.688	3.504	0.5278	2.030	1.570	1.756	80- 85	15.86	44587	100
90	0.0797	0.9876	1.378	1.251	0.0751	0.0960	0.1049	0.0948	85- 90	6.400	44593	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:×10cd								UNIT:lm			

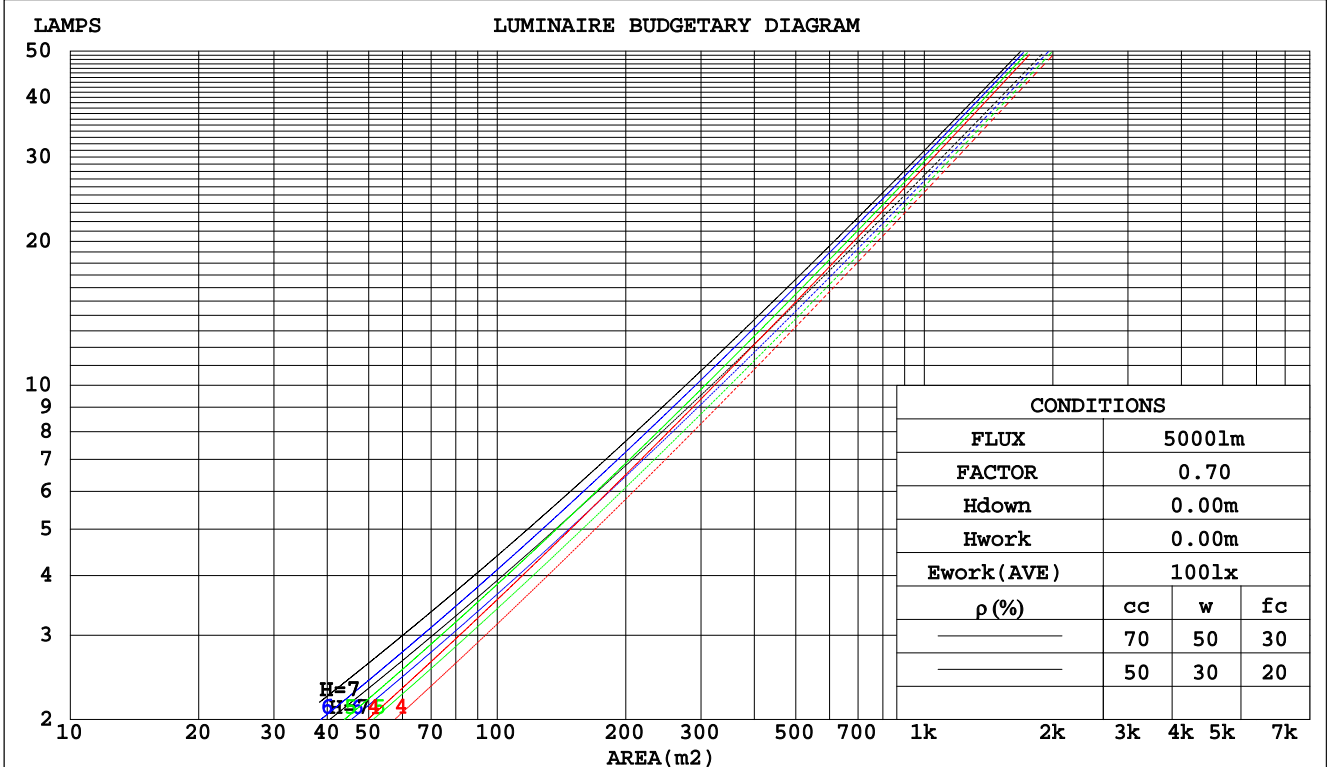
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	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	1.19	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	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.80	.88	.83	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.84	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.72	.78	.74	.71	.70
6.0	.78	.72	.68	.78	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65
7.0	.74	.68	.63	.73	.67	.63	.72	.67	.63	.71	.66	.63	.69	.65	.62	.61
8.0	.70	.64	.59	.69	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.58	.57
9.0	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.55	.63	.58	.55	.54
10.0	.62	.56	.53	.62	.56	.53	.61	.56	.52	.60	.56	.52	.59	.55	.52	.51

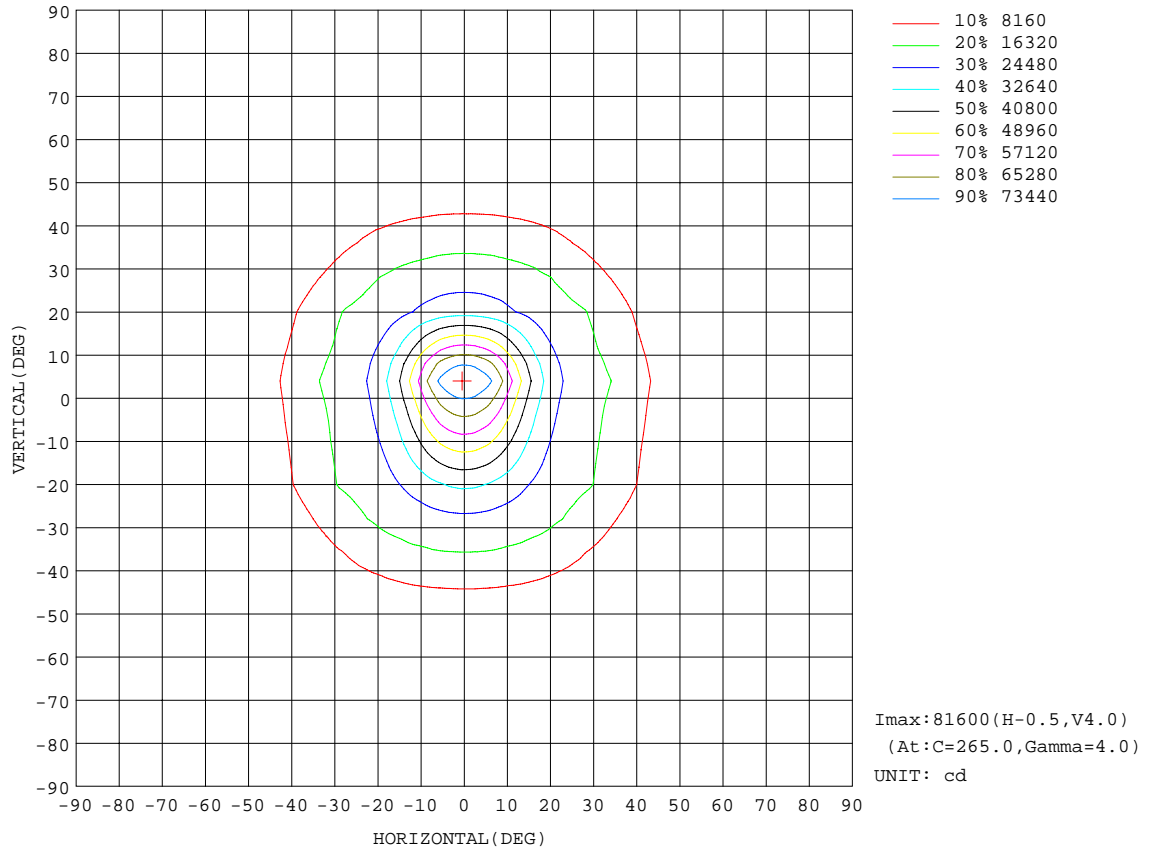


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED:

ISOCANDELA DIAGRAM

Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

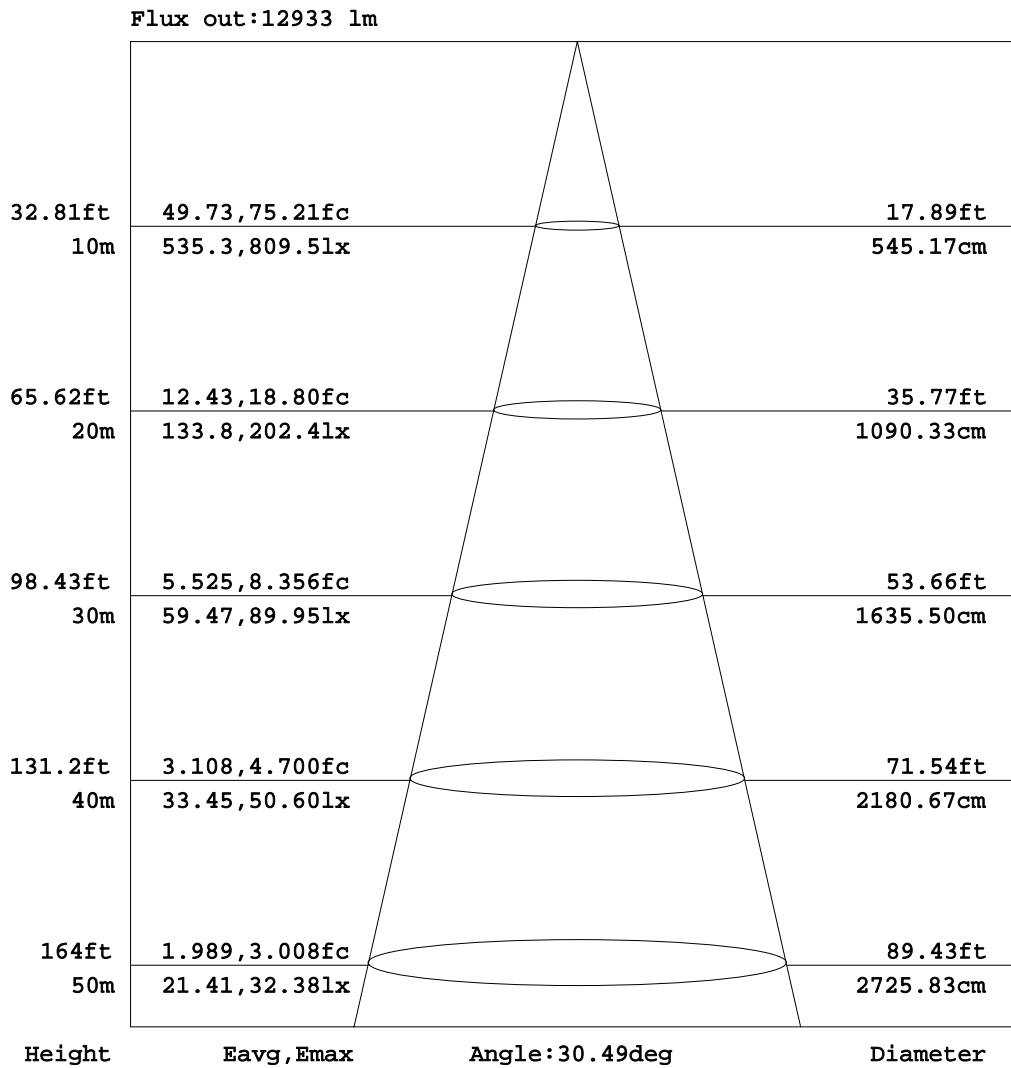


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED:

AAI Figure

Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



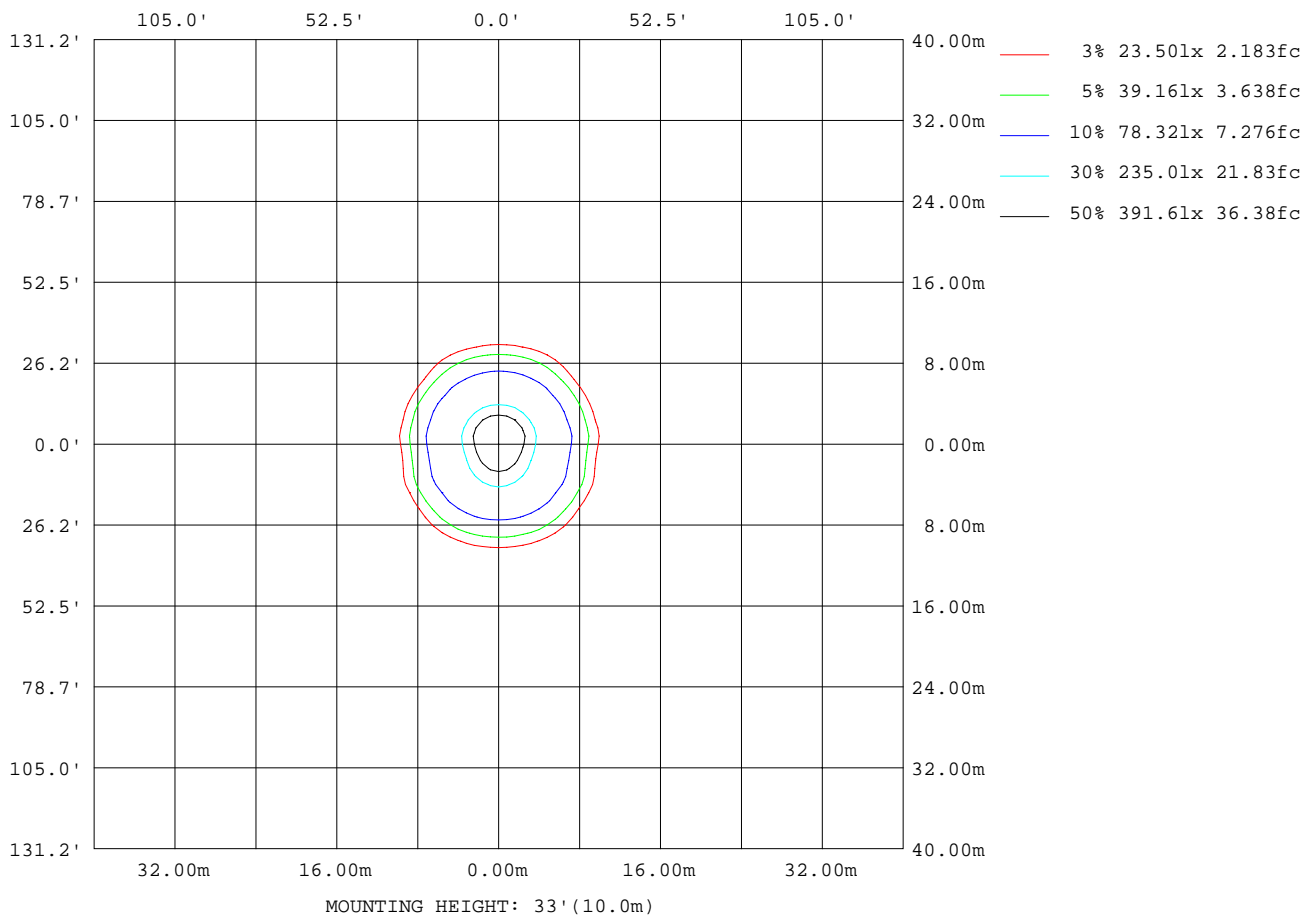
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED:

ISOLUX DIAGRAM

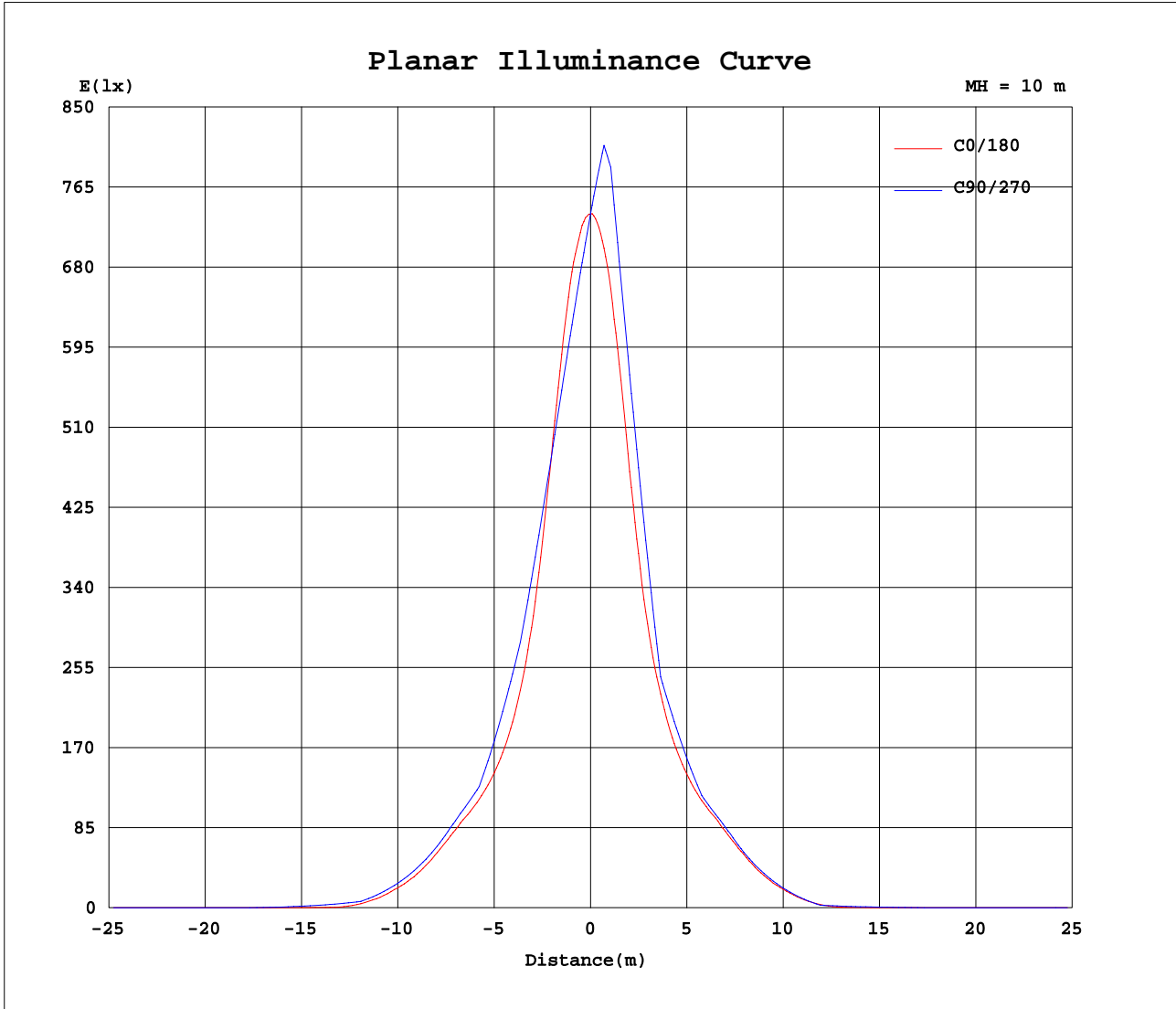
Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators:
 Test Date: 2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity: 90.0%
 Test Distance: 7.860m [K=1.0000]
 Remarks: LED:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:216.6V I:2.360A P:502.7W PF:0.9840 Lamp Flux:44593.1x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:3
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

Table--4

UNIT: x10cd

C(DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361	7361				
5	8061	8048	8029	8017	7978	7904	7803	7697	7593	7493	7393	7293	7196	7104	7016				
10	6578	6574	6591	6628	6649	6654	6681	6710	6692	6569	6469	6283	6067	5879	5720				
15	4775	4801	4803	4805	4789	4750	4720	4672	4643	4622	4609	4528	4425	4226	4069				
20	3061	3119	3189	3214	3228	3228	3204	3170	3118	3090	3074	3061	3045	2976	2866				
25	2376	2366	2327	2295	2272	2258	2285	2286	2277	2262	2254	2247	2254	2238	2181				
30	1877	1893	1902	1909	1894	1863	1842	1840	1850	1846	1838	1824	1815	1826	1806				
35	1555	1548	1547	1566	1585	1547	1520	1522	1556	1569	1513	1499	1521	1560	1562				
40	1104	1120	1123	1116	1103	1100	1108	1099	1089	1098	1123	1092	1090	1118	1139				
45	624	645	667	680	669	645	601	587	598	597	599	605	601	621	660				
50	145	189	241	290	322	325	290	217	151	158	175	198	177	188	207				
55	33.2	22.6	19.2	17.8	40.8	91.8	100	61.2	20.0	18.3	18.1	19.3	18.4	18.6	18.6				
60	13.0	12.0	11.9	11.7	11.5	11.1	10.8	12.2	11.6	11.3	10.9	11.1	11.1	11.0	11.1				
65	8.31	8.17	7.93	7.58	7.14	7.22	7.29	7.23	7.08	7.28	7.33	7.25	7.32	7.38	7.33				
70	6.52	6.52	6.49	6.30	6.05	5.71	5.23	4.83	4.92	4.98	4.91	5.04	5.03	5.07	5.08				
75	4.75	4.96	5.12	5.14	5.12	4.89	4.41	3.98	3.61	3.71	4.27	4.00	4.19	3.90	3.90				
80	3.19	3.37	3.55	3.67	3.82	3.76	3.45	3.10	2.50	2.31	2.73	3.49	3.58	3.66	3.86				
85	1.65	1.74	1.82	1.89	1.96	1.91	1.76	1.56	1.29	0.95	0.58	0.27	0.61	0.44	0.39				
90	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09				

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:
 Test Date:2013-05-21

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.279
 Humidity:90.0%
 Test Distance:7.860m [K=1.0000]
 Remarks: LED: