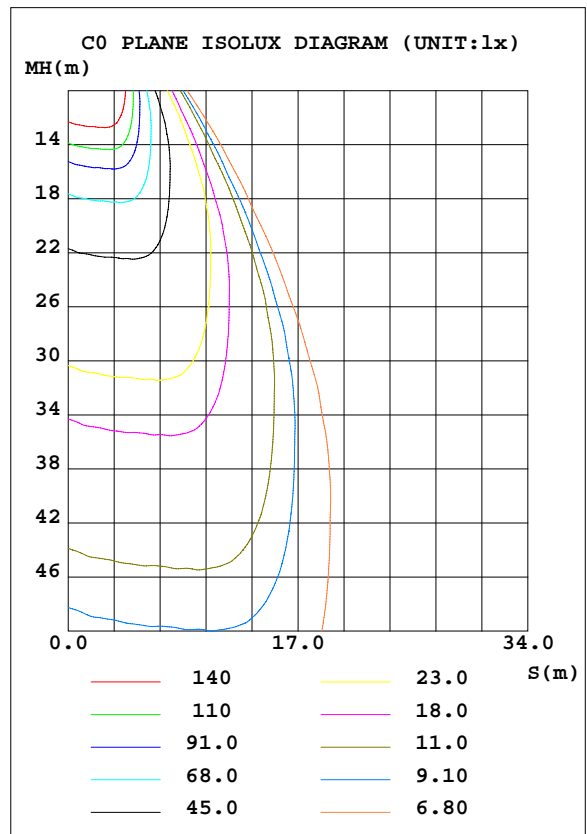
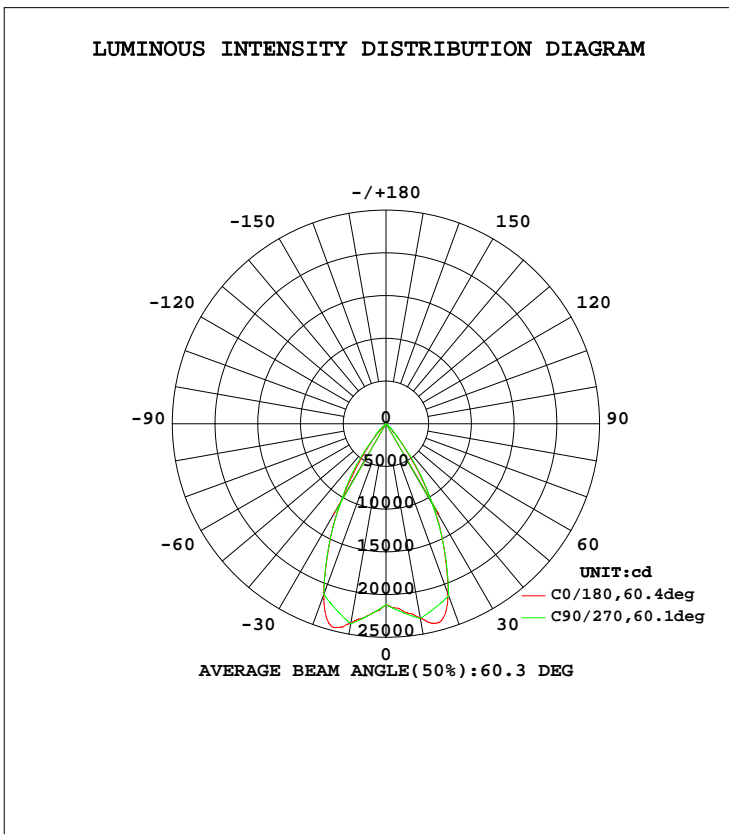


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 101.46 lm/W			
MODEL	QH-HBZSL-200W	Imax(cd)	25094	S/MH(C0/180)	0.88
NOMINAL POWER(W)	202	LOR(%)	100.0	S/MH(C90/270)	0.89
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	20343	η UP, DN(C0-180)	0.0, 50.0
NOMINAL FLUX(lm)	20342.6	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)	219.6	η down(%)	100.0	CIBSE SHR MAX	0.85



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [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	2247	2282	2248	2239	2197	2223	2216	2250	0- 5	526.7	526.7	2.59
10	2373	2425	2379	2348	2310	2341	2315	2357	5- 10	1650	2177	10.7
15	2458	2456	2253	2371	2408	2390	2229	2382	10- 15	2810	4987	24.5
20	2131	2078	2126	2029	2124	2058	2144	2051	15- 20	3668	8655	42.5
25	1578	1575	1587	1577	1610	1607	1612	1581	20- 25	3841	12495	61.4
30	1069	1048	1048	1082	1100	1087	1081	1065	25- 30	3326	15822	77.8
35	550.6	569.2	638.4	603.7	586.6	585.3	643.0	580.2	30- 35	2380	18202	89.5
40	221.9	235.3	228.5	255.5	242.3	231.6	204.8	225.1	35- 40	1334	19536	96
45	41.37	87.16	121.3	95.31	48.33	82.57	109.7	80.78	40- 45	521.9	20058	98.6
50	14.63	13.84	14.06	15.11	14.72	14.47	14.49	15.48	45- 50	156.8	20215	99.4
55	8.192	8.427	9.305	9.214	8.288	8.853	9.633	9.542	50- 55	52.61	20267	99.6
60	4.769	4.634	4.552	5.092	4.886	4.870	4.778	5.293	55- 60	31.07	20298	99.8
65	2.821	2.904	3.134	3.178	2.970	3.074	3.266	3.297	60- 65	18.89	20317	99.9
70	1.705	1.728	1.717	1.901	1.808	1.832	1.754	1.930	65- 70	12.07	20329	99.9
75	0.9731	0.9759	1.147	1.068	1.024	1.006	1.098	1.029	70- 75	7.285	20337	100
80	0.4665	0.5568	0.5762	0.6296	0.4875	0.5169	0.4408	0.5203	75- 80	4.097	20341	100
85	0.1720	0.1408	0	0.1699	0.1753	0.1102	0	0.1077	80- 85	1.682	20342	100
90	0.0420	0	0	0	0.0344	0	0	0	85- 90	0.1733	20343	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			

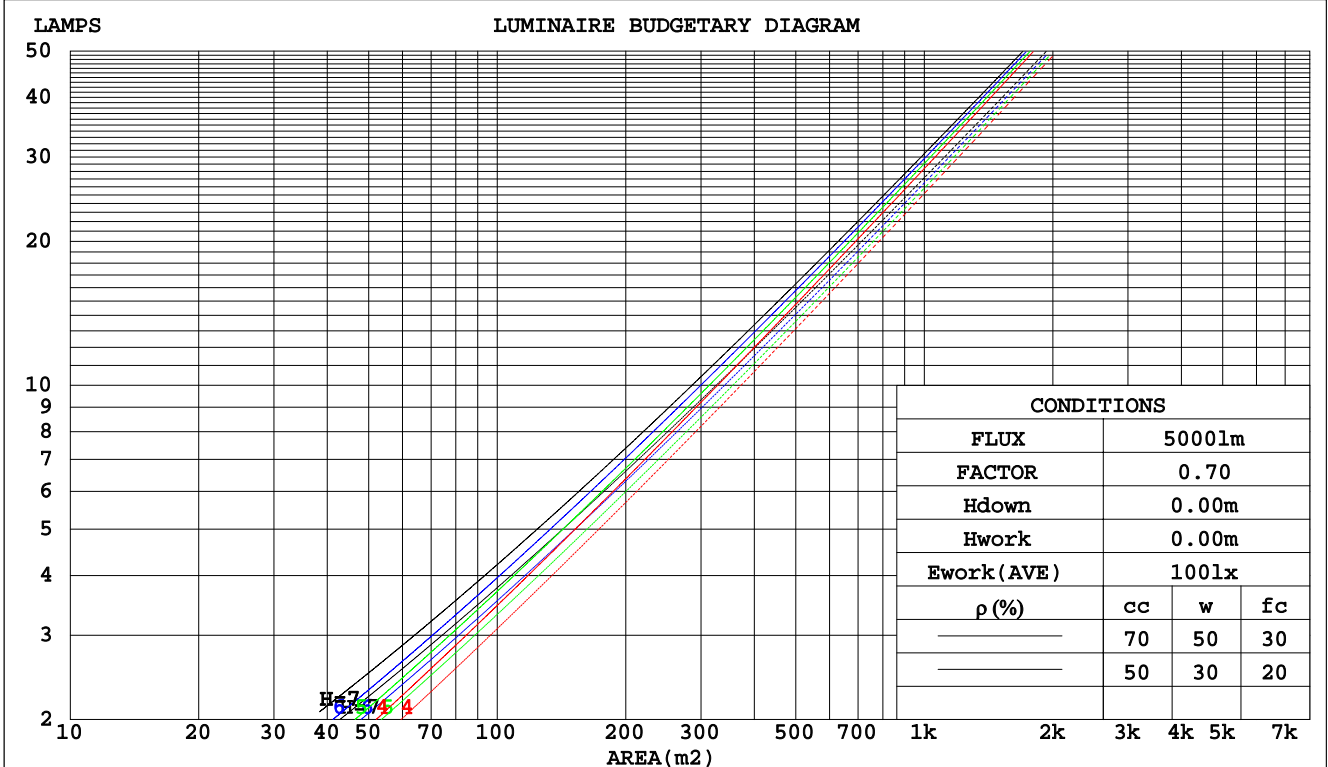
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
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	.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.91	.90	.88
3.0	.97	.92	.89	.96	.91	.88	.93	.90	.87	.91	.88	.85	.89	.86	.84	.82
4.0	.91	.86	.82	.90	.85	.81	.88	.84	.80	.86	.82	.80	.84	.81	.79	.77
5.0	.86	.80	.76	.85	.80	.76	.83	.79	.75	.81	.78	.74	.80	.77	.74	.72
6.0	.81	.75	.71	.80	.75	.71	.79	.74	.70	.77	.73	.70	.76	.72	.69	.68
7.0	.76	.70	.66	.76	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.64
8.0	.72	.66	.62	.71	.66	.62	.70	.66	.62	.69	.65	.62	.68	.64	.61	.60
9.0	.68	.63	.59	.68	.62	.59	.67	.62	.58	.66	.61	.58	.65	.61	.58	.57
10.0	.65	.59	.55	.64	.59	.55	.63	.59	.55	.63	.58	.55	.62	.58	.55	.54

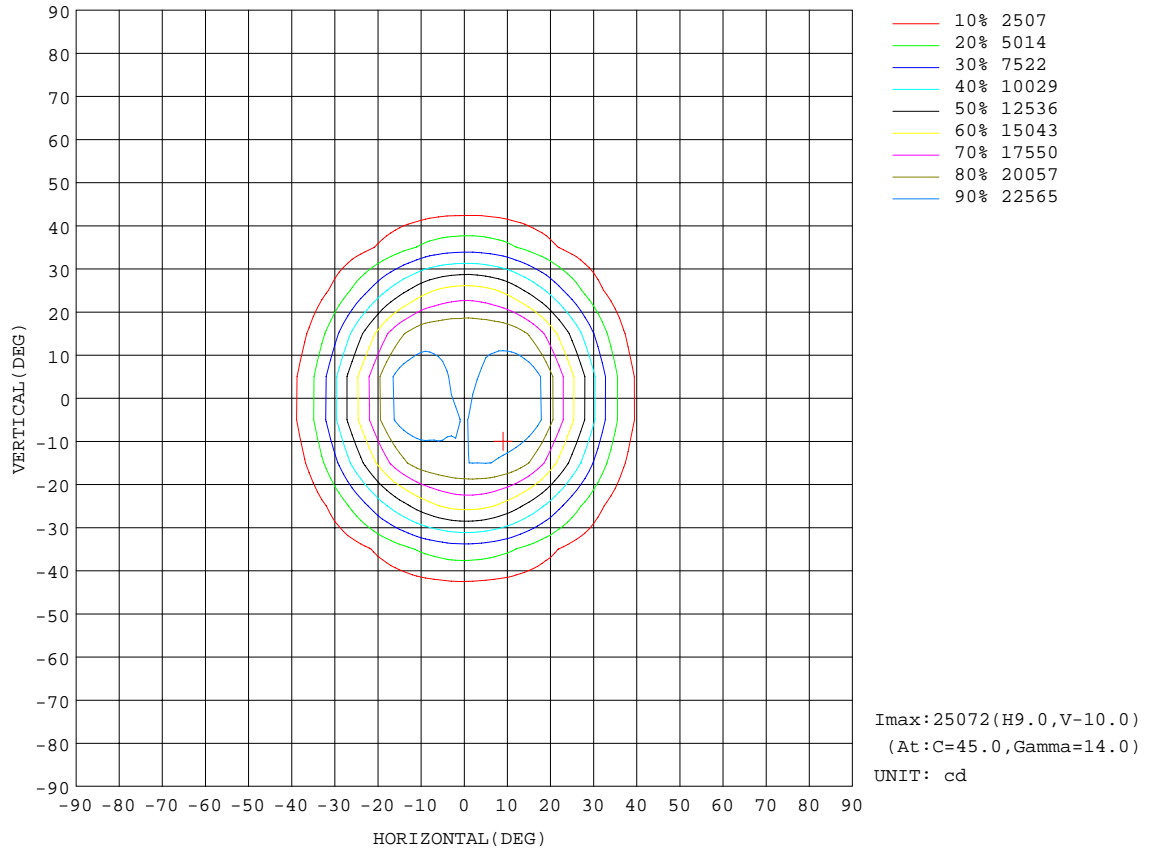


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:

ISOCANDELA DIAGRAM

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

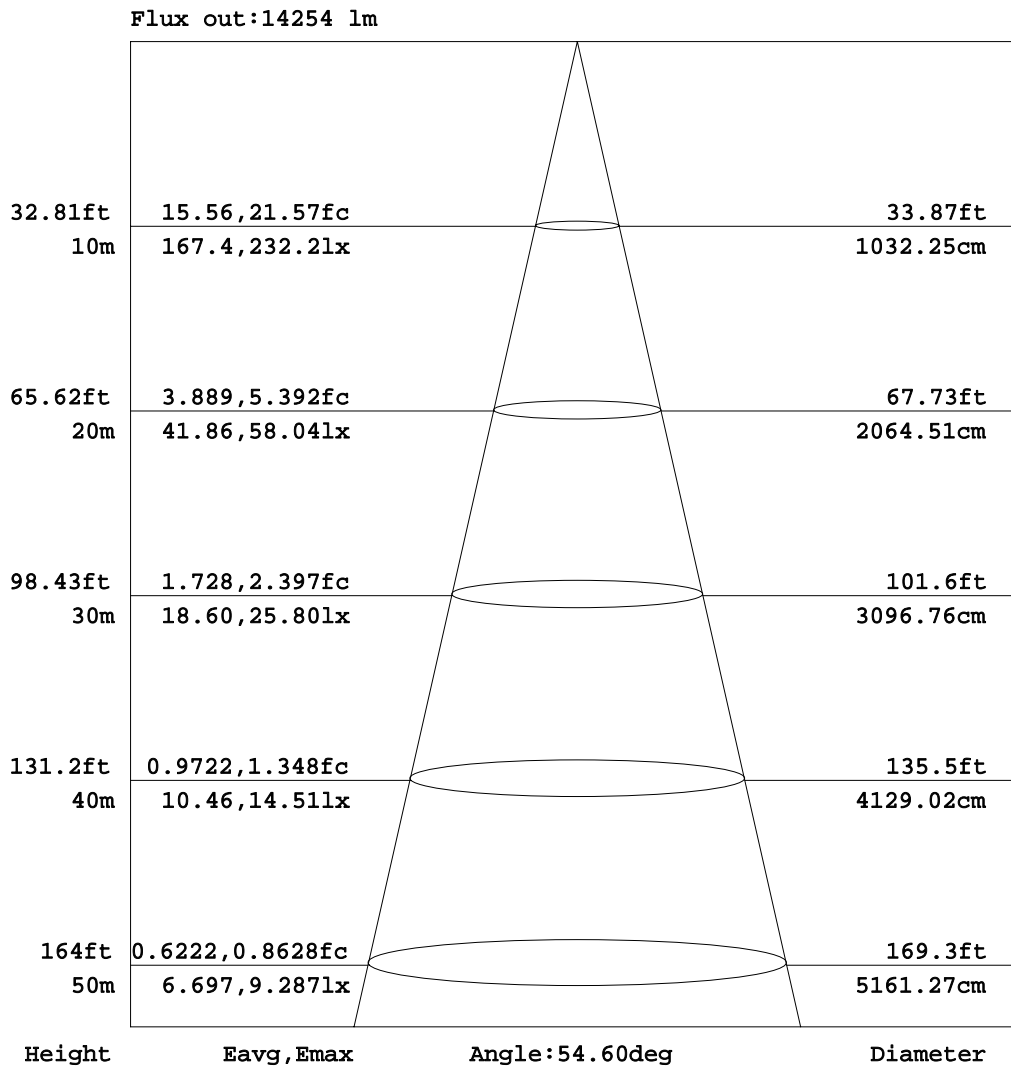


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:

AAI Figure

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



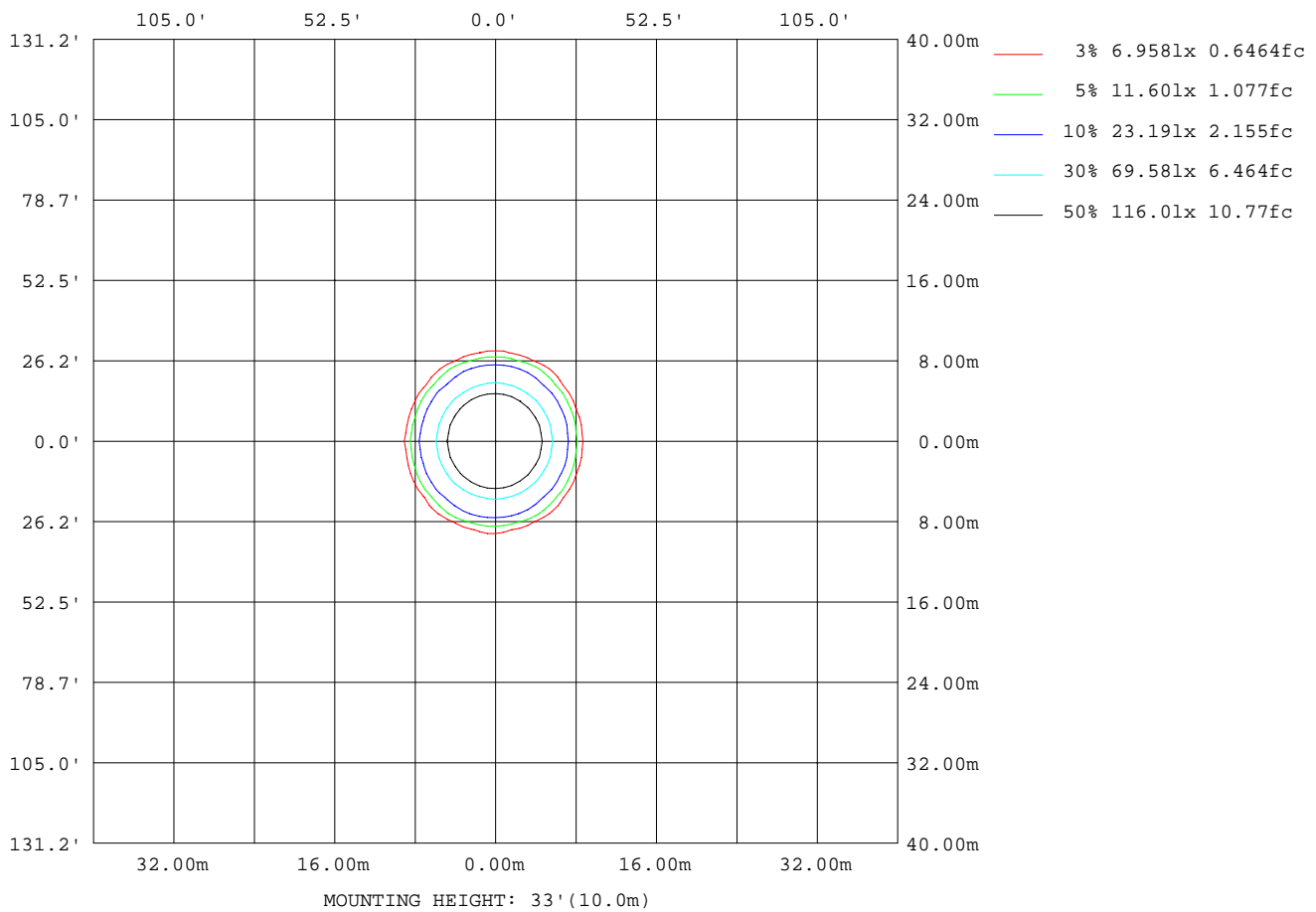
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:

ISOLUX DIAGRAM

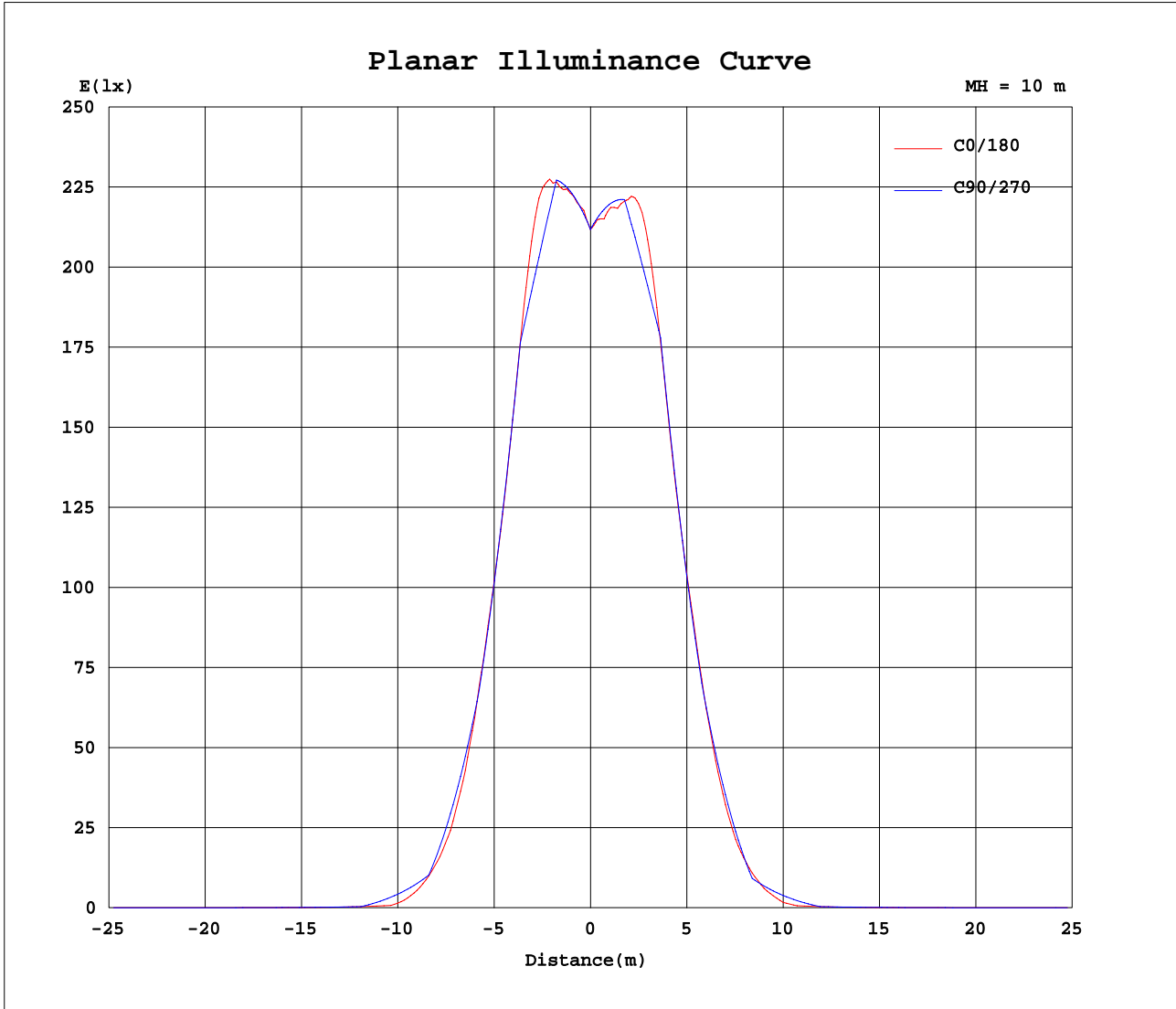
Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity: 65.0%  
 Test Distance: 8.000m [K=1.0000]  
 Remarks: LED:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
SPEC.:CREE XTE	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: x10cd

C( DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117
5	2247	2255	2262	2268	2273	2277	2279	2281	2282	2282	2281	2281	2282	2282	2278	2271	2264	2257	2248
10	2373	2383	2392	2399	2404	2408	2414	2419	2423	2425	2428	2429	2424	2413	2400	2395	2396	2390	2379
15	2458	2443	2432	2426	2430	2436	2451	2472	2491	2456	2410	2368	2334	2312	2294	2277	2264	2261	2253
20	2131	2096	2078	2077	2092	2122	2155	2123	2096	2078	2055	2044	2042	2051	2071	2092	2113	2122	2126
25	1578	1549	1540	1548	1578	1579	1560	1560	1573	1575	1578	1578	1575	1578	1581	1586	1589	1588	1587
30	1069	1033	1022	1041	1057	1027	1022	1024	1049	1048	1052	1038	1038	1038	1044	1042	1044	1047	1048
35	551	531	535	558	546	542	542	562	566	569	560	549	570	597	616	625	631	634	638
40	222	214	217	221	221	222	234	237	237	235	249	260	271	271	260	252	233	225	228
45	41.4	41.0	43.3	46.7	40.9	55.9	59.2	45.9	69.0	87.2	78.3	53.0	55.8	79.7	96.5	107	112	117	121
50	14.6	14.4	14.6	14.3	14.3	14.4	14.3	14.6	17.6	13.8	14.6	14.9	23.3	30.5	30.9	26.8	20.9	15.9	14.1
55	8.19	8.13	8.10	7.99	8.02	7.95	8.16	7.82	8.12	8.43	8.40	7.93	8.03	8.36	8.65	8.91	9.05	9.20	9.30
60	4.77	4.75	4.65	4.64	4.65	4.63	4.57	4.74	4.68	4.63	4.82	4.94	5.02	5.00	4.88	4.78	4.64	4.55	4.55
65	2.82	2.84	2.79	2.77	2.78	2.76	2.79	2.77	2.85	2.90	2.88	2.77	2.85	2.90	2.94	3.01	3.06	3.10	3.13
70	1.71	1.70	1.68	1.66	1.65	1.65	1.69	1.69	1.66	1.73	1.78	1.80	1.80	1.78	1.76	1.74	1.72	1.71	1.72
75	0.97	0.95	0.94	0.92	0.93	0.94	0.95	0.98	0.98	0.98	0.99	1.02	1.05	1.07	1.09	1.11	1.12	1.13	1.15
80	0.47	0.46	0.45	0.46	0.48	0.49	0.49	0.52	0.54	0.56	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.58
85	0.17	0.15	0.18	0.23	0.21	0.22	0.24	0.20	0.17	0.14	0.11	0.09	0.07	0.05	0.03	0.02	0.01	0.00	0.00
90	0.04	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:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED:







LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:219.6V I:0.9380A P:200.5W PF:0.9730 Lamp Flux:20342.6x1 lm		
NAME: LED HIGH BAY LIGHT	TYPE:	WEIGHT:6
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	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117	2117				
5	2234	2240	2244	2245	2245	2247	2250	2251	2253	2255	2257	2257	2256	2254	2251				
10	2313	2316	2326	2339	2341	2347	2357	2361	2365	2368	2370	2373	2375	2376	2375				
15	2227	2239	2246	2271	2301	2337	2382	2421	2413	2403	2398	2401	2407	2420	2438				
20	2093	2066	2046	2033	2029	2032	2051	2073	2095	2124	2104	2083	2073	2076	2095				
25	1603	1605	1600	1588	1588	1591	1581	1580	1566	1567	1581	1581	1551	1542	1550				
30	1075	1079	1061	1058	1056	1069	1065	1068	1049	1041	1040	1071	1052	1029	1036				
35	644	628	613	586	563	568	580	581	563	556	550	551	562	537	531				
40	238	255	263	272	260	249	225	231	231	228	218	211	218	216	213				
45	95.6	86.6	67.5	47.5	47.0	77.0	80.8	66.0	42.7	58.1	51.4	39.8	48.4	44.0	41.3				
50	26.2	29.0	27.8	20.7	16.7	16.3	15.5	18.3	16.0	15.6	15.4	15.2	14.9	15.0	14.6				
55	9.72	9.64	9.47	9.08	9.05	9.52	9.54	9.22	8.85	9.04	8.74	8.61	8.43	8.37	8.27				
60	5.21	5.45	5.64	5.72	5.68	5.53	5.29	5.31	5.33	5.13	5.08	5.03	4.90	4.83	4.84				
65	3.27	3.26	3.22	3.19	3.12	3.24	3.30	3.22	3.12	3.10	3.04	2.99	2.93	2.89	2.89				
70	1.86	1.91	1.94	1.97	1.98	1.95	1.93	1.86	1.87	1.87	1.83	1.80	1.78	1.75	1.74				
75	1.11	1.11	1.10	1.09	1.06	1.03	1.03	1.04	1.04	1.02	1.00	1.01	0.99	0.99	0.98				
80	0.46	0.48	0.49	0.50	0.51	0.52	0.52	0.50	0.49	0.47	0.48	0.47	0.48	0.47	0.47				
85	0.01	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16	0.14	0.15	0.16	0.16	0.16				
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				

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2014-03-01

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.279  
 Humidity:65.0%  
 Test Distance:8.000m [K=1.0000]  
 Remarks: LED: