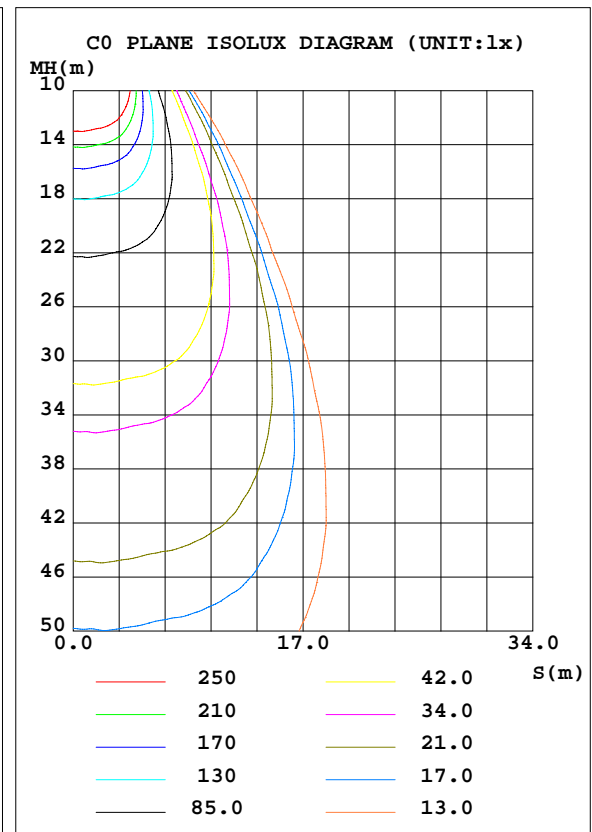
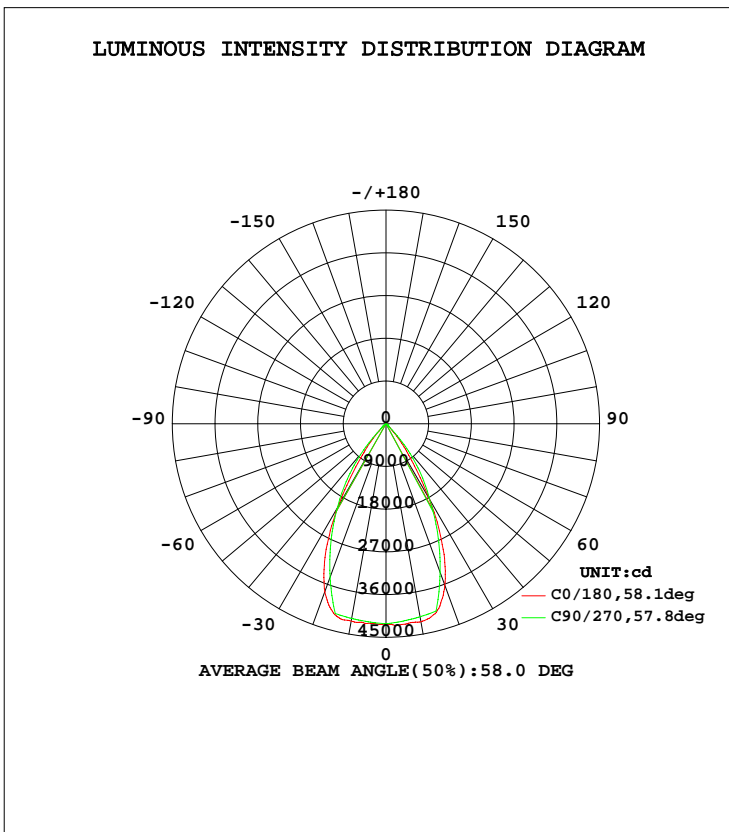


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 119.24 lm/W			
MODEL	CREE LED	Imax(cd)	44569	S/MH(C0/180)	0.87
NOMINAL POWER(W)	400	LOR(%)	100.0	S/MH(C90/270)	0.90
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	47148	η UP, DN(C0-180)	0.0, 49.0
NOMINAL FLUX(lm)	47147.5	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 51.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	220.2	η down(%)	100.0	CIBSE SHR MAX	0.90



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
5	4242	4209	4172	4183	4220	4202	4190	4219	0- 5	1007	1007	2.74,2.74
10	4235	4110	4129	4111	4221	4163	4165	4127	5- 10	2989	3997	10.9,10.9
15	4110	3934	4086	3958	4164	4051	4139	3972	10- 15	4864	8861	24.1,24.1
20	3623	3573	3337	3639	3765	3798	3445	3648	15- 20	6269	15130	41.2,41.2
25	2807	2716	2589	2805	3021	2966	2750	2805	20- 25	6598	21727	59.2,59.2
30	1829	1789	1840	1901	2040	2044	2056	1881	25- 30	5841	27569	75.1,75.1
35	951.5	992.7	1266	1083	1112	1185	1420	1066	30- 35	4321	31890	86.9,86.9
40	437.5	434.2	691.2	481.0	535.4	545.8	784.9	475.8	35- 40	2723	34613	94.3,94.3
45	120.1	211.5	116.7	240.6	174.3	277.5	149.6	237.4	40- 45	1351	35965	98,98
50	30.66	81.78	81.67	92.48	33.60	105.6	103.6	88.25	45- 50	408.2	36373	99.1,99.1
55	17.53	17.80	46.61	19.69	19.03	20.09	57.70	19.25	50- 55	158.7	36531	99.5,99.5
60	9.929	11.45	11.54	12.59	10.59	12.87	11.75	12.33	55- 60	84.84	36616	99.8,99.8
65	5.564	6.443	8.298	6.982	6.051	7.147	8.419	6.907	60- 65	43.26	36660	99.9,99.9
70	3.058	3.399	5.056	3.626	3.348	3.681	5.090	3.586	65- 70	26.38	36686	99.9,99.9
75	1.438	1.928	1.814	2.104	1.647	2.041	1.760	1.954	70- 75	14.73	36701	100,100
80	0.5246	0.6335	0	0.7316	0.6426	0.6015	0	0.5457	75- 80	5.789	36706	100,100
85	0.1315	0	0	0	0.1955	0	0	0	80- 85	1.068	36708	100,100
90	0.0693	0	0	0	0.0822	0	0	0	85- 90	0.1204	36708	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: $\times 10cd$									UNIT:lm		

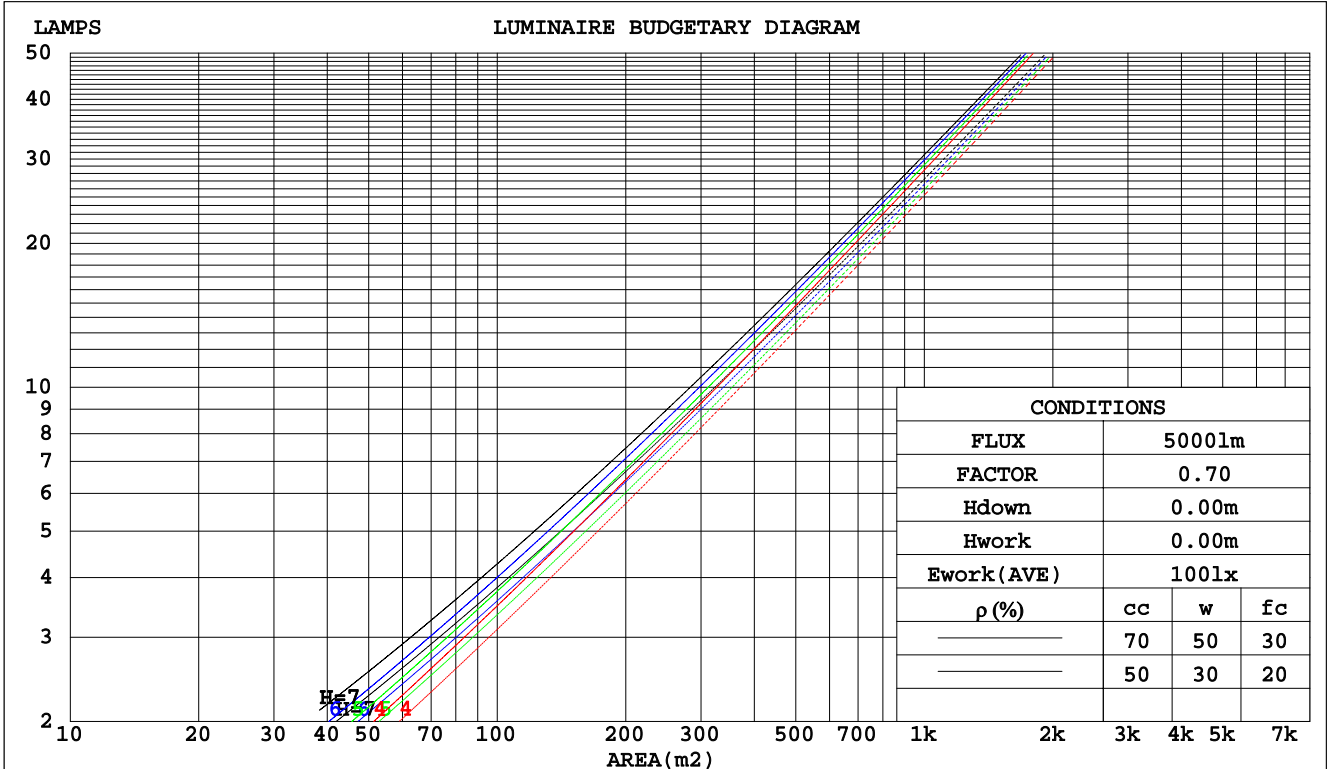
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	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	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	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.85	.88	.86	.83	.82
4.0	.91	.85	.81	.90	.85	.81	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
5.0	.85	.79	.75	.84	.79	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.69	.76	.72	.69	.75	.71	.68	.67
7.0	.75	.70	.66	.75	.69	.65	.74	.69	.65	.72	.68	.65	.71	.67	.64	.63
8.0	.71	.65	.61	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.59
9.0	.67	.62	.58	.67	.61	.58	.66	.61	.57	.65	.61	.57	.64	.60	.57	.56
10.0	.64	.58	.54	.63	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.53



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	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	.173	.099	.031	.167	.095	.030	.154	.088	.028	.143	.082	.026	.132	.076	.025	
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.079	.025	.131	.074	.023	
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.075	.023	.128	.071	.022	
4.0	.151	.078	.023	.147	.077	.023	.139	.074	.022	.132	.071	.021	.125	.068	.021	
5.0	.144	.073	.021	.140	.072	.021	.134	.070	.020	.127	.067	.020	.121	.065	.019	
6.0	.138	.069	.020	.134	.068	.020	.129	.066	.019	.123	.064	.019	.118	.062	.018	
7.0	.132	.065	.018	.129	.064	.018	.124	.063	.018	.119	.061	.018	.114	.059	.017	
8.0	.126	.062	.017	.124	.061	.017	.119	.059	.017	.115	.058	.017	.110	.057	.017	
9.0	.121	.059	.016	.119	.058	.016	.115	.057	.016	.111	.055	.016	.107	.054	.016	
10.0	.116	.056	.015	.114	.055	.015	.111	.054	.015	.107	.053	.015	.104	.052	.015	

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.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	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.056	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.031	.086	.051	.027	.059	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm										
NAME:LED High Bay Light					TYPE:室内			WEIGHT:5		
SPEC.:CR-HBL 400W					DIM.:			SERIAL No.:		
MFR.:					SUR.:			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	26.8	27.8	27.1	27.9	28.1	28.5	29.5	28.7	29.6	29.8
3H	26.7	27.5	26.9	27.7	27.9	28.4	29.2	28.6	29.4	29.6
4H	26.6	27.4	26.9	27.6	27.8	28.3	29.1	28.6	29.3	29.5
6H	26.5	27.3	26.8	27.5	27.7	28.2	28.9	28.5	29.2	29.4
8H	26.5	27.2	26.8	27.4	27.7	28.1	28.9	28.4	29.1	29.4
12H	26.4	27.1	26.7	27.4	27.7	28.1	28.8	28.4	29.1	29.3
4H 2H	26.6	27.4	26.9	27.6	27.8	28.3	29.1	28.5	29.3	29.5
3H	26.4	27.1	26.7	27.4	27.7	28.1	28.8	28.4	29.1	29.3
4H	26.3	27.0	26.7	27.3	27.6	28.0	28.6	28.4	28.9	29.2
6H	26.2	26.8	26.6	27.1	27.5	27.9	28.5	28.3	28.8	29.1
8H	26.2	26.7	26.6	27.0	27.4	27.9	28.4	28.3	28.7	29.1
12H	26.1	26.6	26.5	27.0	27.4	27.8	28.3	28.2	28.6	29.0
8H 4H	26.2	26.7	26.6	27.0	27.4	27.9	28.4	28.3	28.7	29.1
6H	26.1	26.5	26.5	26.9	27.3	27.8	28.2	28.2	28.6	29.0
8H	26.0	26.4	26.5	26.8	27.3	27.7	28.1	28.2	28.5	28.9
12H	26.0	26.3	26.4	26.7	27.2	27.6	28.0	28.1	28.4	28.9
12H 4H	26.1	26.6	26.5	27.0	27.4	27.8	28.3	28.2	28.6	29.0
6H	26.0	26.4	26.5	26.8	27.3	27.7	28.1	28.2	28.5	28.9
8H	26.0	26.3	26.4	26.7	27.2	27.6	28.0	28.1	28.4	28.9
Variations with the observer position at spacings:										
S = 1.0H	+ 3.7 / -14.9					+ 3.6 / -14.7				
1.5H	+ 6.3 / -12.4					+ 6.3 / -13.5				
2.0H	+ 7.6 / - 6.3					+ 6.0 / - 7.3				

CIE Pub.117 Corrected 36708 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.5)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	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) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	87	82	78	87	81	78	74
0.80	95	90	86	95	89	86	94	89	86	82
1.00	100	94	91	99	94	91	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

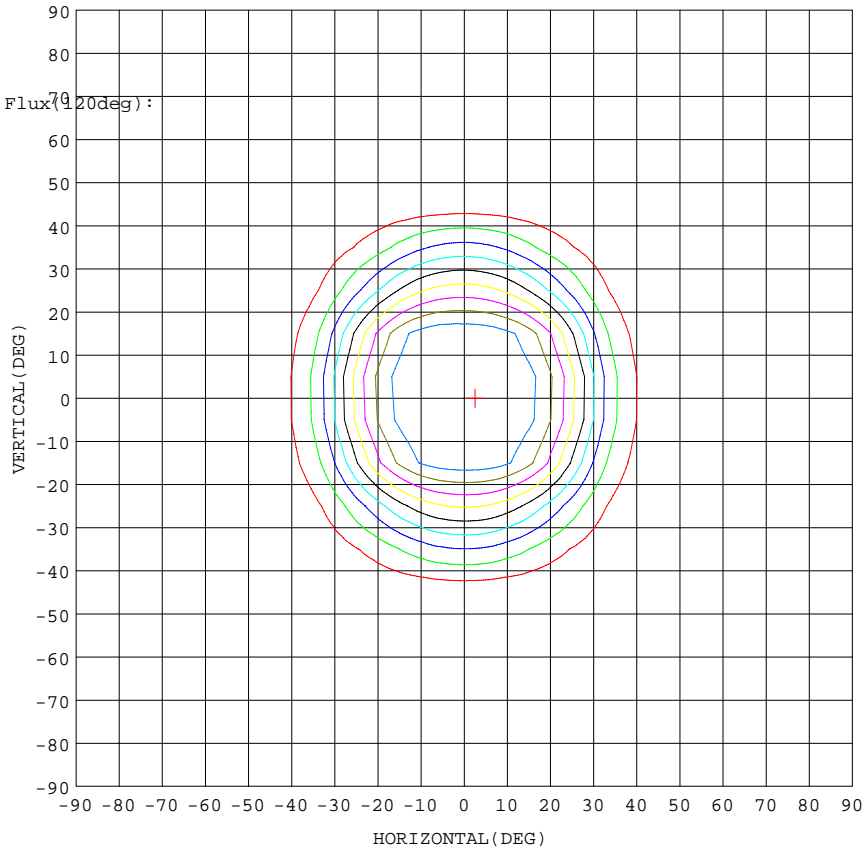
Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

35965 lm
 %lum = 98.0%
 %lamp = 98.0%

Conical surface Flux(70deg):

36616 lm
 %lum = 99.8%
 %lamp = 99.8%



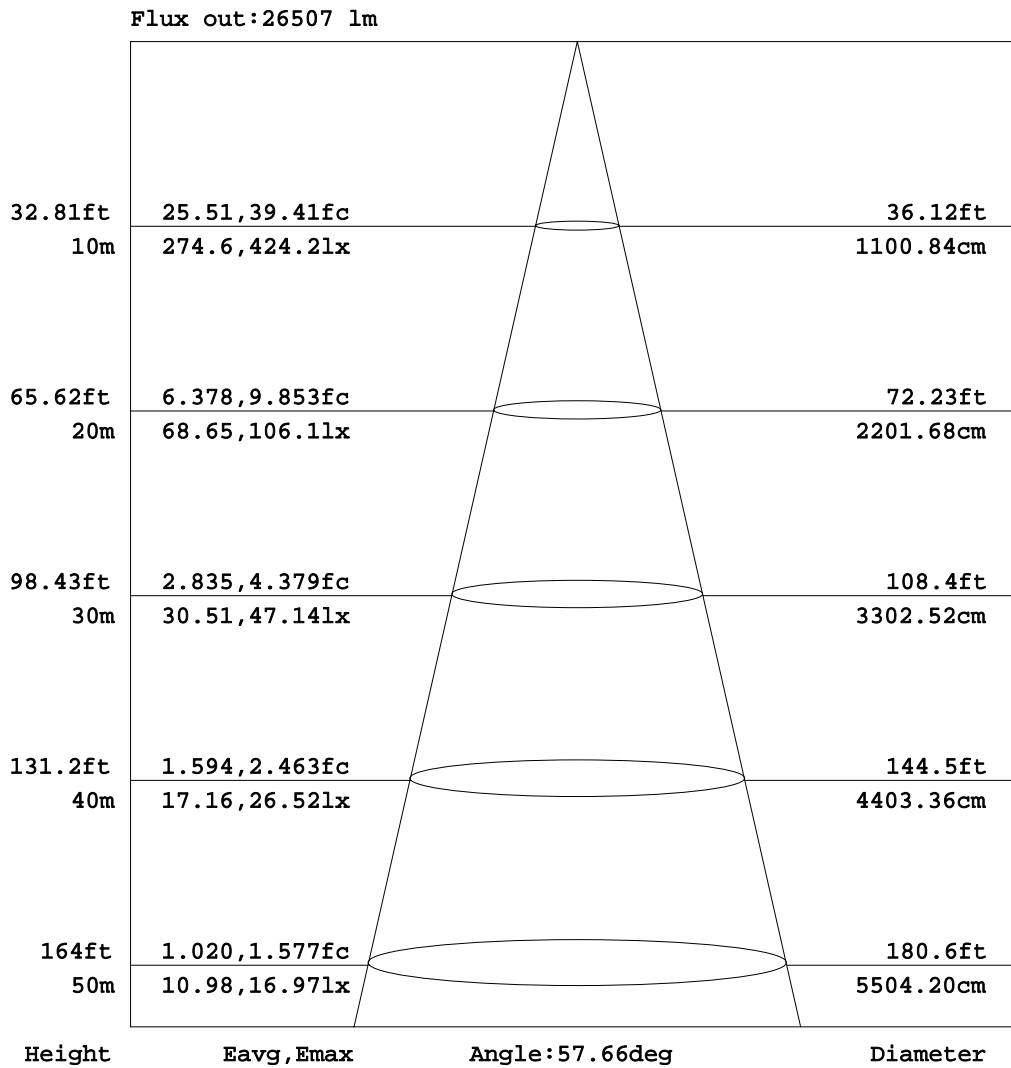
Imax: 42569 (H2.5, V0.0)
 (At: C=0.0, Gamma=3.0)
 UNIT: cd

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity: 65.0%
 Test Distance: 8.000m [K=1.0000]
 Remarks:

AAI Figure

Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



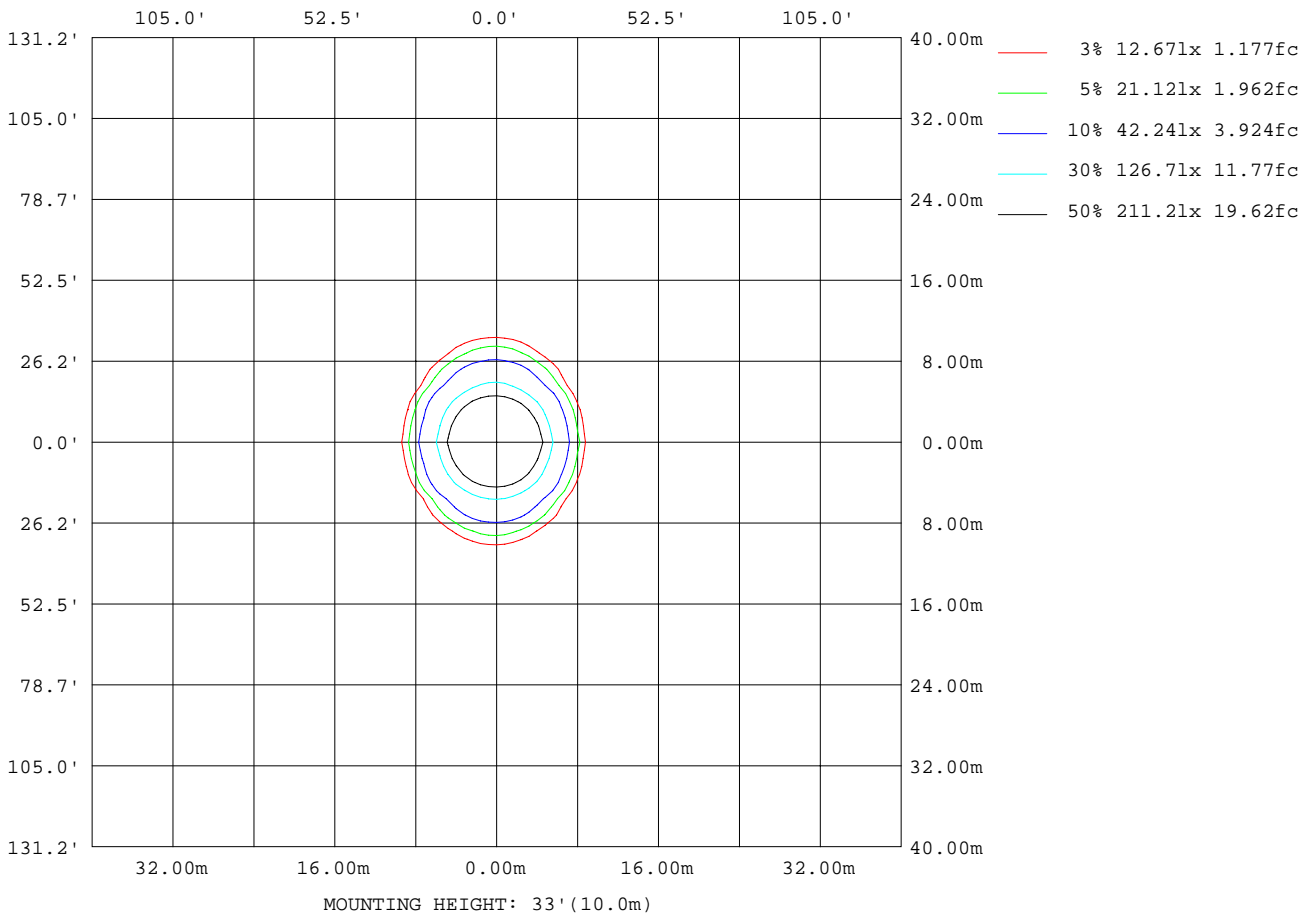
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

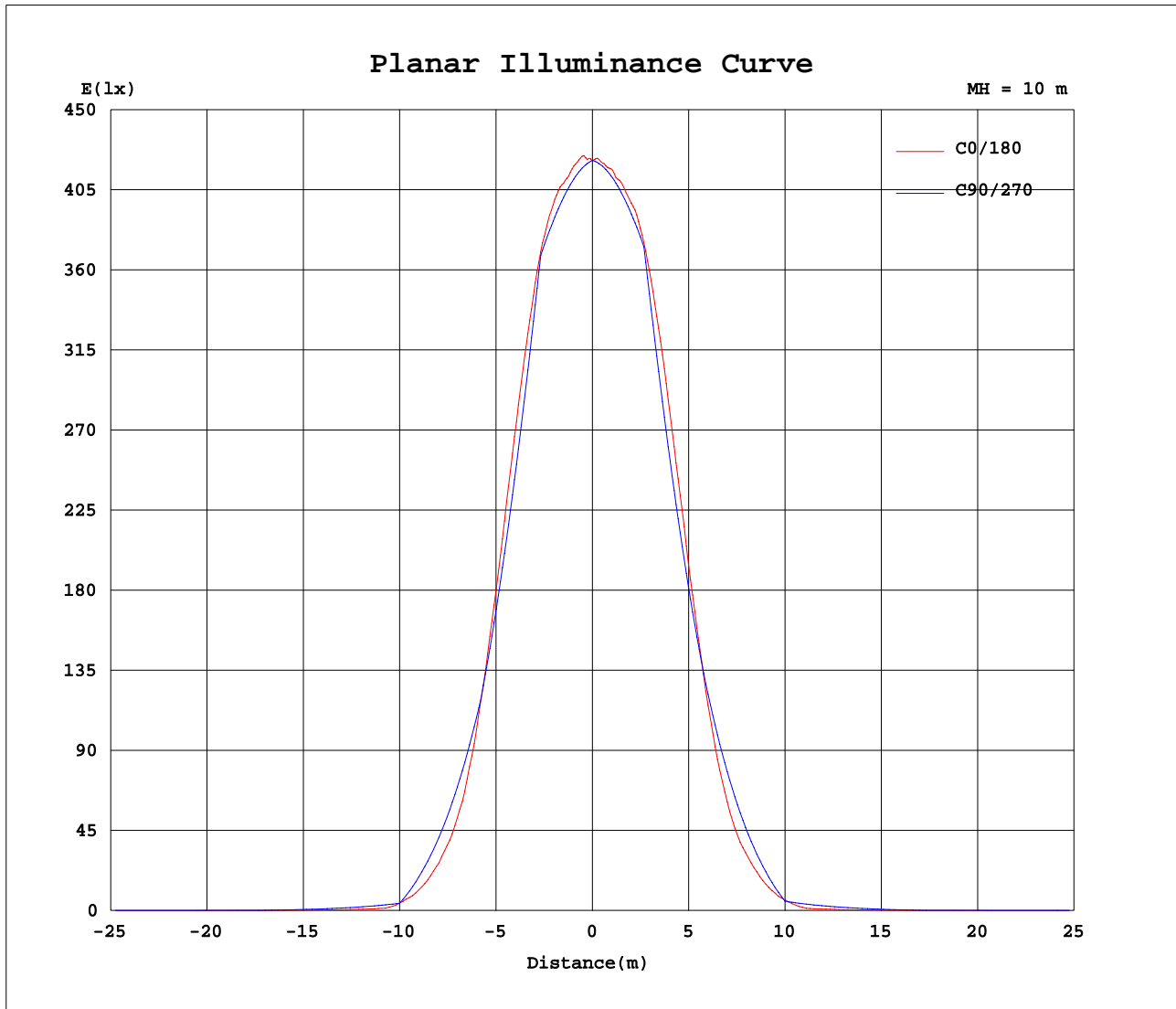
Test:U:220.1V I:1.835A P:395.4W PF:0.9780 Lamp Flux:47147.5x1 lm		
NAME:LED High Bay Light	TYPE:室内	WEIGHT:5
SPEC.:CR-HBL 400W	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.287
 Humidity:65.0%
 Test Distance:8.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2016-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.287
Humidity: 65.0%
Test Distance: 8.000m [K=1.0000]
Remarks:

