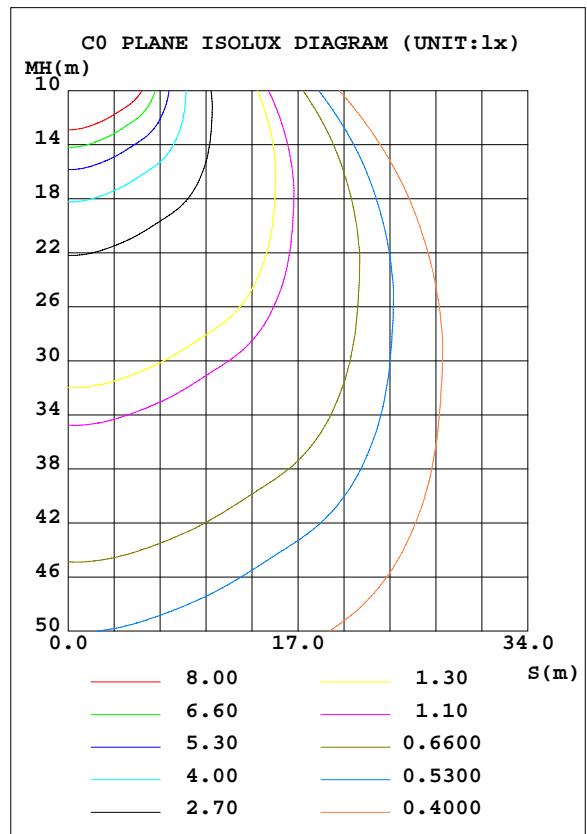
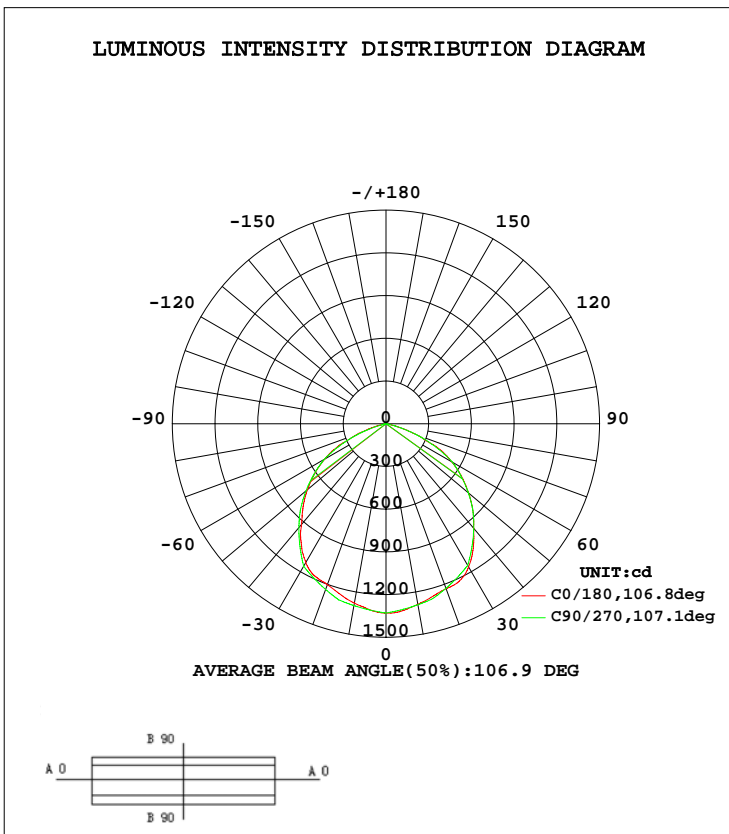


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.1V I:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.71 lm/W			
MODEL	QH-FLTG-30W	I _{max} (cd)	1331	S/MH(C0/180)	1.25
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3424.2	η UP, DN(C0-180)	0.0, 50.5
NOMINAL FLUX(lm)	3424.22	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.2	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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	1318	1312	1310	1306	1311	1309	1313	1314	0- 5	31.53	31.53	0.92,0.92
10	1288	1279	1291	1272	1279	1276	1297	1284	5- 10	92.68	124.2	3.63,3.63
15	1257	1245	1271	1237	1241	1244	1281	1253	10- 15	150.2	274.5	8.02,8.02
20	1234	1213	1230	1198	1203	1208	1239	1222	15- 20	203.2	477.6	13.9,13.9
25	1219	1172	1189	1154	1181	1162	1197	1185	20- 25	251.1	728.8	21.3,21.3
30	1161	1139	1148	1111	1126	1119	1156	1150	25- 30	293.7	1023	29.9,29.9
35	1068	1098	1054	1068	1036	1074	1054	1109	30- 35	325.6	1348	39.4,39.4
40	959.4	1035	958.8	1003	923.7	1007	951.4	1040	35- 40	340.9	1689	49.3,49.3
45	863.5	916.1	864.1	886.1	823.4	881.2	849.3	909.0	40- 45	341.7	2031	59.3,59.3
50	757.2	795.3	755.1	767.0	720.3	752.8	733.3	779.2	45- 50	330.2	2361	68.9,68.9
55	649.5	677.6	646.0	649.7	611.0	627.6	617.3	653.4	50- 55	305.5	2666	77.9,77.9
60	533.2	552.6	537.0	523.4	496.5	490.3	501.2	517.1	55- 60	269.6	2936	85.7,85.7
65	401.6	428.6	384.5	400.3	367.9	357.8	344.9	383.2	60- 65	221.4	3157	92.2,92.2
70	235.1	294.8	232.0	270.9	210.7	223.1	188.6	251.5	65- 70	155.9	3313	96.8,96.8
75	89.46	149.0	79.54	136.9	77.98	102.0	32.21	116.1	70- 75	84.22	3398	99.2,99.2
80	2.245	22.44	0	21.03	2.395	3.880	0	7.248	75- 80	24.98	3423	100,100
85	0.6886	0	0	0	0.7474	0	0	0	80- 85	1.584	3424	100,100
90	0.2732	0	0	0	0.5561	0	0	0	85- 90	0.0524	3424	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			

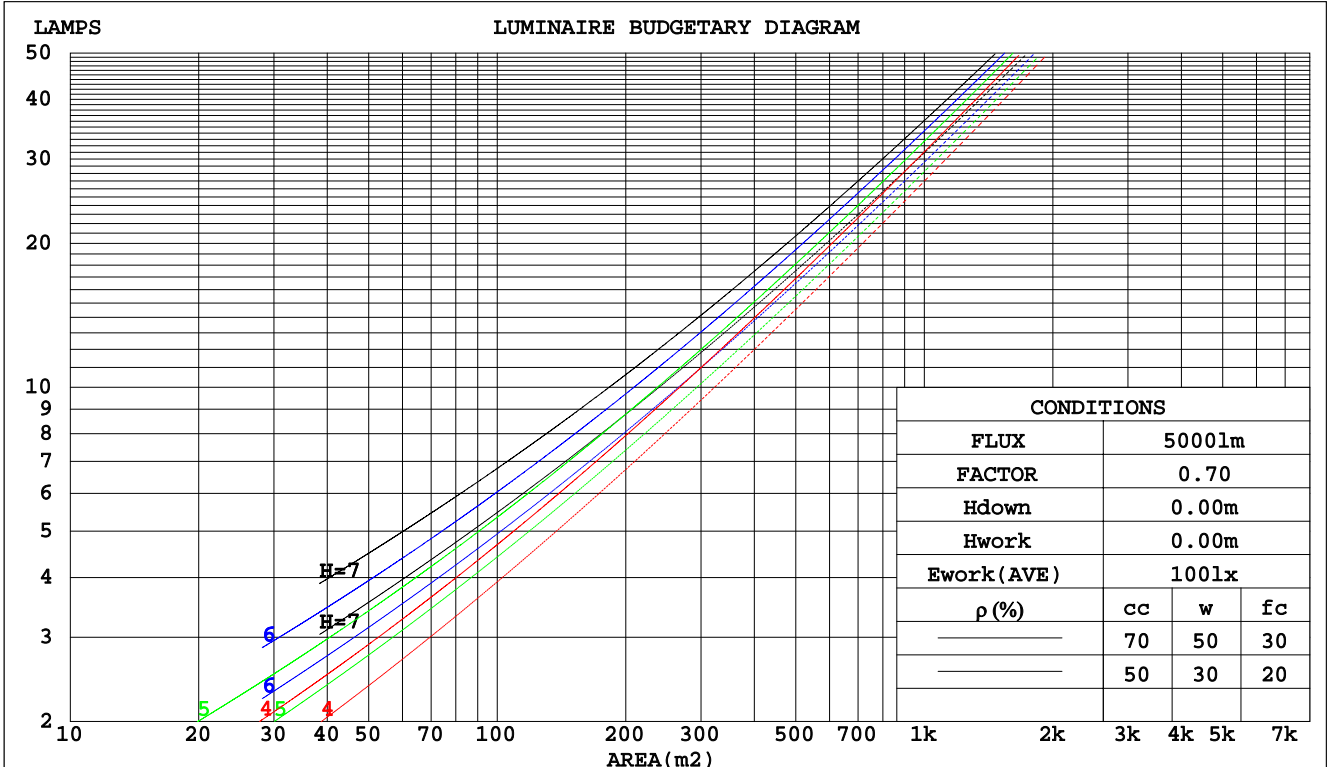
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	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	1.06	1.02	.99	1.04	1.00	.97	.90	.97	.94	.96	.94	.91	.92	.90	.89	.87
2.0	.93	.87	.82	.92	.86	.81	.88	.83	.79	.85	.81	.77	.82	.79	.76	.74
3.0	.83	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.69	.65	.63
4.0	.73	.65	.59	.72	.64	.58	.70	.63	.58	.67	.62	.57	.65	.60	.56	.54
5.0	.66	.57	.51	.65	.57	.51	.63	.55	.50	.61	.54	.49	.59	.53	.49	.47
6.0	.59	.51	.44	.58	.50	.44	.57	.49	.44	.55	.48	.43	.53	.48	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.32
9.0	.45	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	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	.268	.153	.048	.261	.149	.047	.248	.142	.045	.236	.136	.044	.225	.131	.042	
2.0	.263	.144	.044	.257	.142	.044	.246	.137	.042	.235	.132	.041	.225	.127	.040	
3.0	.249	.133	.040	.244	.131	.039	.234	.127	.039	.225	.123	.038	.216	.120	.037	
4.0	.234	.122	.036	.229	.120	.035	.220	.117	.035	.212	.114	.034	.204	.111	.034	
5.0	.219	.112	.032	.215	.110	.032	.207	.108	.032	.199	.105	.031	.192	.103	.031	
6.0	.205	.103	.029	.201	.102	.029	.194	.099	.029	.187	.097	.029	.181	.095	.028	
7.0	.192	.095	.027	.188	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026	
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.169	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.022	.152	.077	.022	
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.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	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.094	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003	
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm										
NAME: LED FLOOD LIGHT					TYPE:IP65			WEIGHT:1.5		
SPEC.:PHILIPS 3030					DIM.:			SERIAL No.:		
MFR.: QINHAN LIGHTING					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	21.6	23.0	21.8	23.2	23.4	21.5	23.0	21.8	23.2	23.4
3H	22.5	23.8	22.8	24.0	24.3	22.4	23.8	22.7	24.0	24.2
4H	22.5	23.8	22.9	24.1	24.3	22.5	23.8	22.8	24.0	24.3
6H	22.5	23.7	22.8	23.9	24.2	22.4	23.6	22.8	23.9	24.2
8H	22.4	23.6	22.8	23.8	24.1	22.4	23.5	22.7	23.8	24.1
12H	22.4	23.5	22.7	23.8	24.1	22.3	23.4	22.7	23.7	24.0
4H 2H	22.1	23.4	22.4	23.6	23.9	22.1	23.4	22.4	23.6	23.9
3H	23.2	24.3	23.5	24.5	24.8	23.1	24.2	23.5	24.5	24.8
4H	23.3	24.3	23.7	24.6	24.9	23.3	24.2	23.6	24.6	24.9
6H	23.2	24.1	23.6	24.5	24.8	23.2	24.1	23.6	24.4	24.8
8H	23.2	24.0	23.6	24.4	24.8	23.1	24.0	23.6	24.3	24.7
12H	23.2	23.9	23.6	24.3	24.7	23.1	23.8	23.5	24.2	24.6
8H 4H	23.4	24.2	23.8	24.5	24.9	23.3	24.1	23.7	24.5	24.9
6H	23.3	24.0	23.8	24.4	24.8	23.3	23.9	23.7	24.3	24.8
8H	23.3	23.9	23.8	24.3	24.8	23.2	23.8	23.7	24.2	24.7
12H	23.3	23.8	23.7	24.2	24.7	23.2	23.7	23.7	24.1	24.6
12H 4H	23.3	24.1	23.7	24.4	24.8	23.3	24.0	23.7	24.4	24.8
6H	23.3	23.9	23.8	24.3	24.8	23.2	23.8	23.7	24.2	24.7
8H	23.3	23.8	23.7	24.2	24.7	23.2	23.7	23.7	24.1	24.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				
1.5H	+ 0.3 / - 0.5					+ 0.3 / - 0.6				
2.0H	+ 0.4 / - 0.5					+ 0.4 / - 0.5				

CIE Pub.117 Corrected 3424 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.3)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	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	60	49	42	59	48	42	58	48	42	35
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	69	62	78	68	62	76	69	61	54
1.25	86	77	70	85	76	70	82	74	69	62
1.50	91	82	76	90	81	75	87	80	74	67
2.00	98	90	84	96	89	84	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	94	102	97	93	99	94	90	82
4.00	108	103	99	106	101	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:25.3DEG
 Operators:
 Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

2030.7 lm

%lum = 59.3%

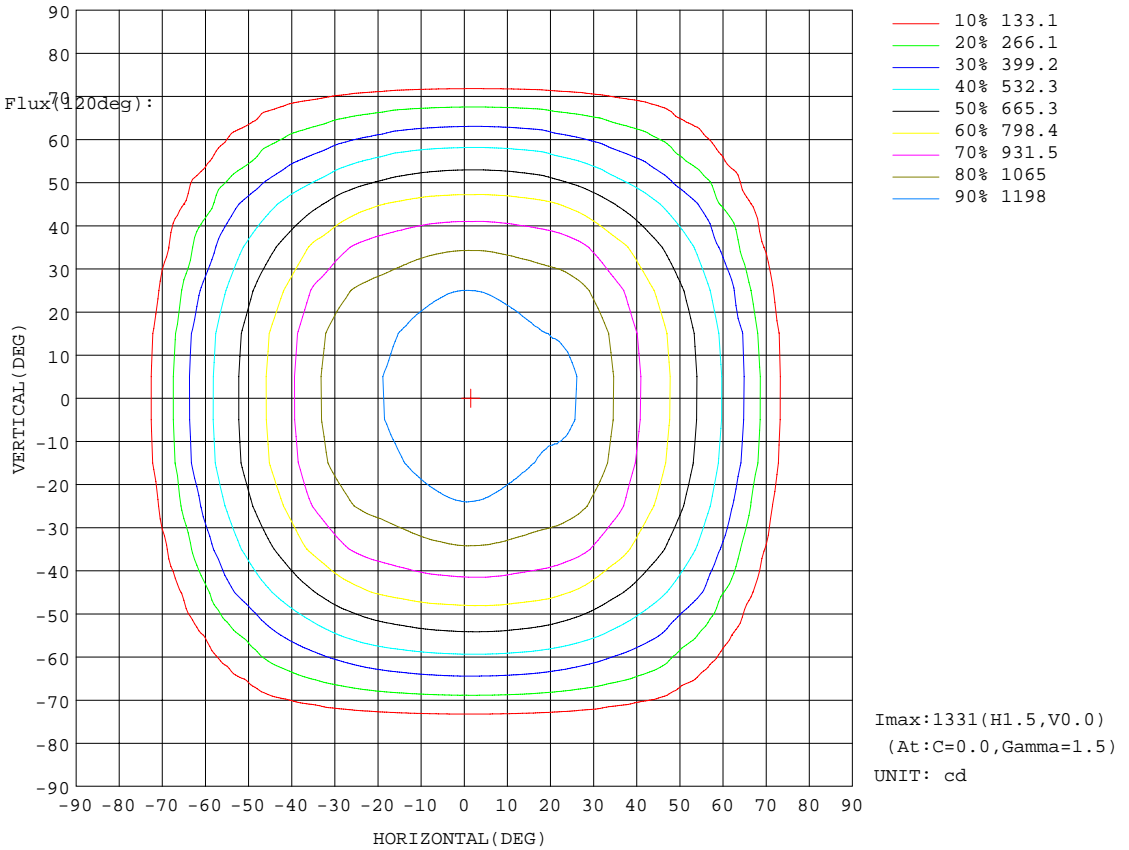
%lamp = 59.3%

Conical surface Flux(70deg):

2936.1 lm

%lum = 85.7%

%lamp = 85.7%

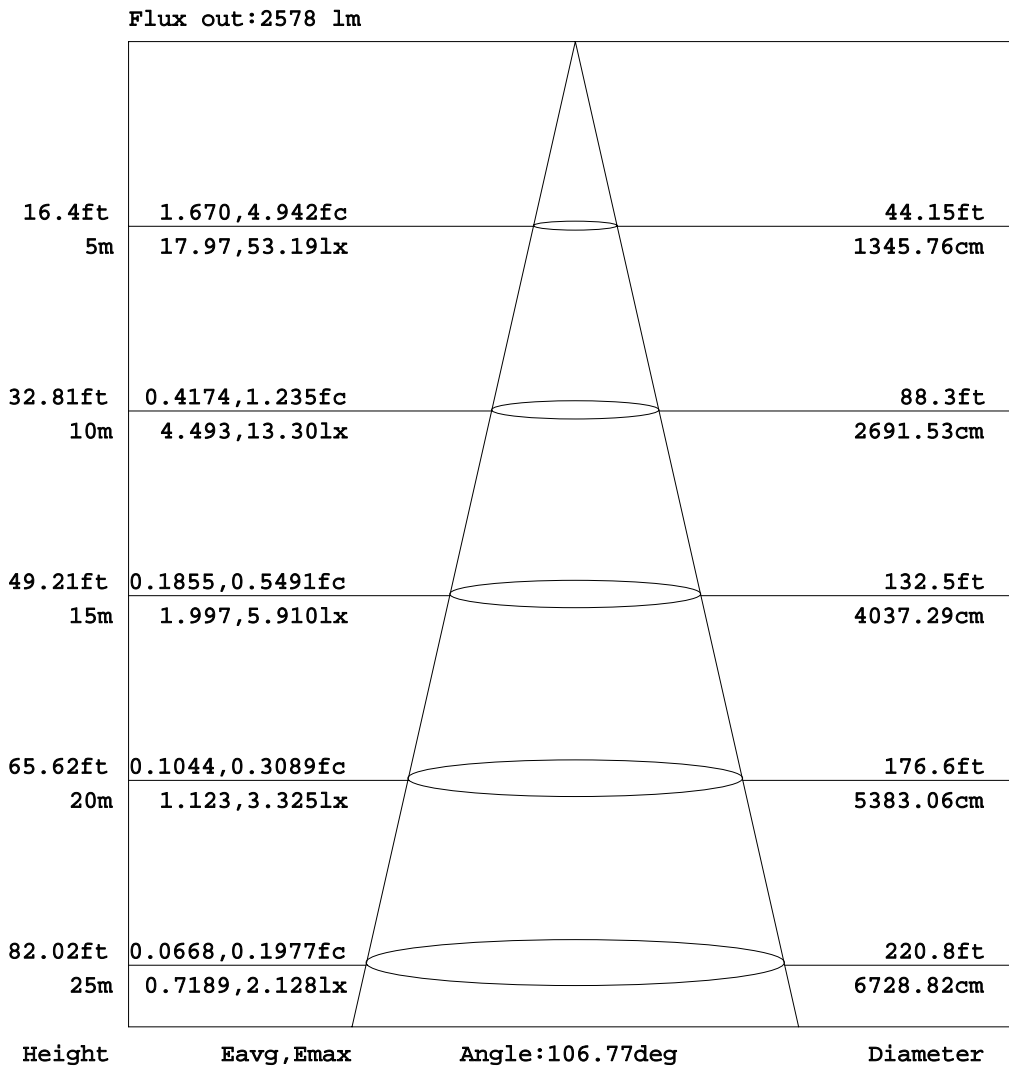


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2016-01-29

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:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



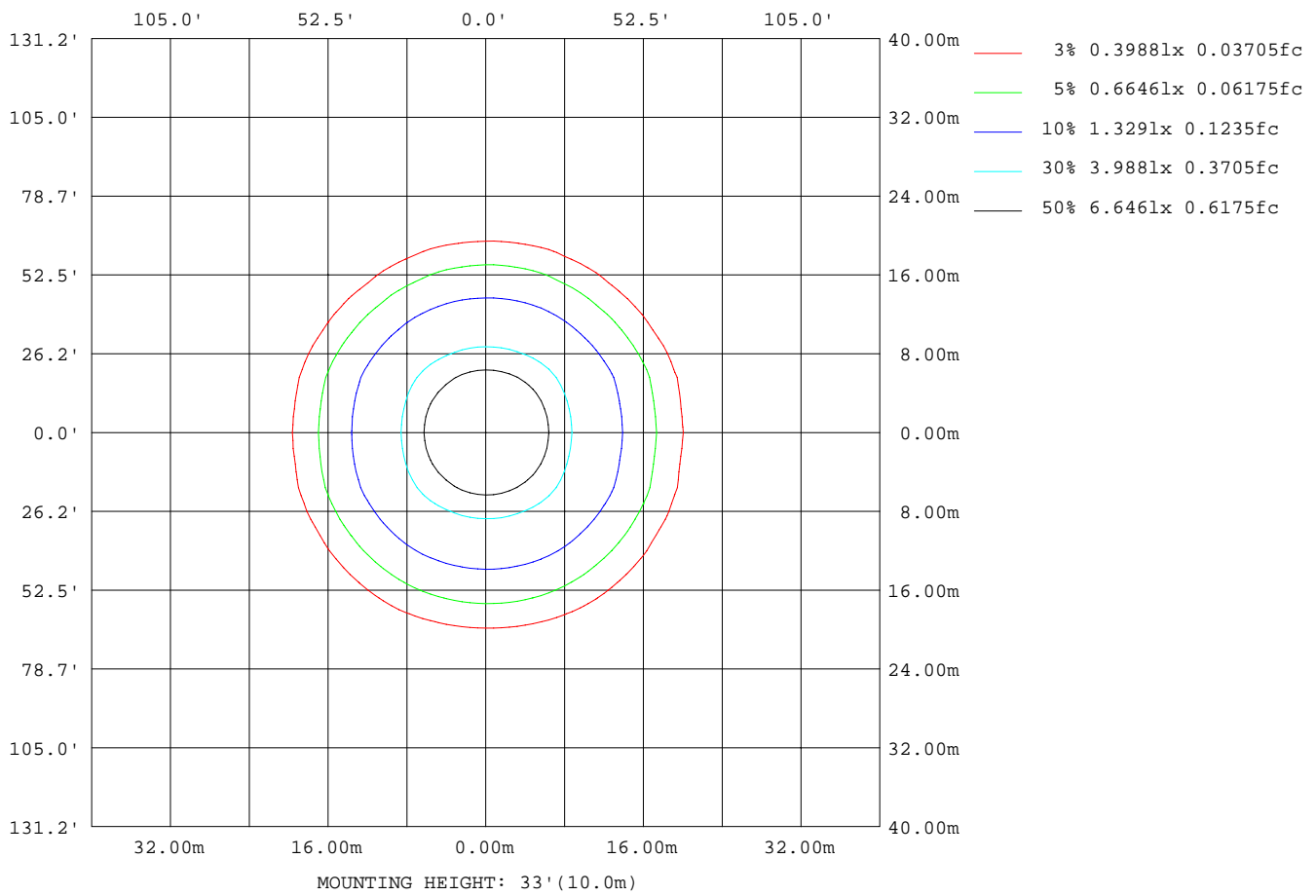
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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

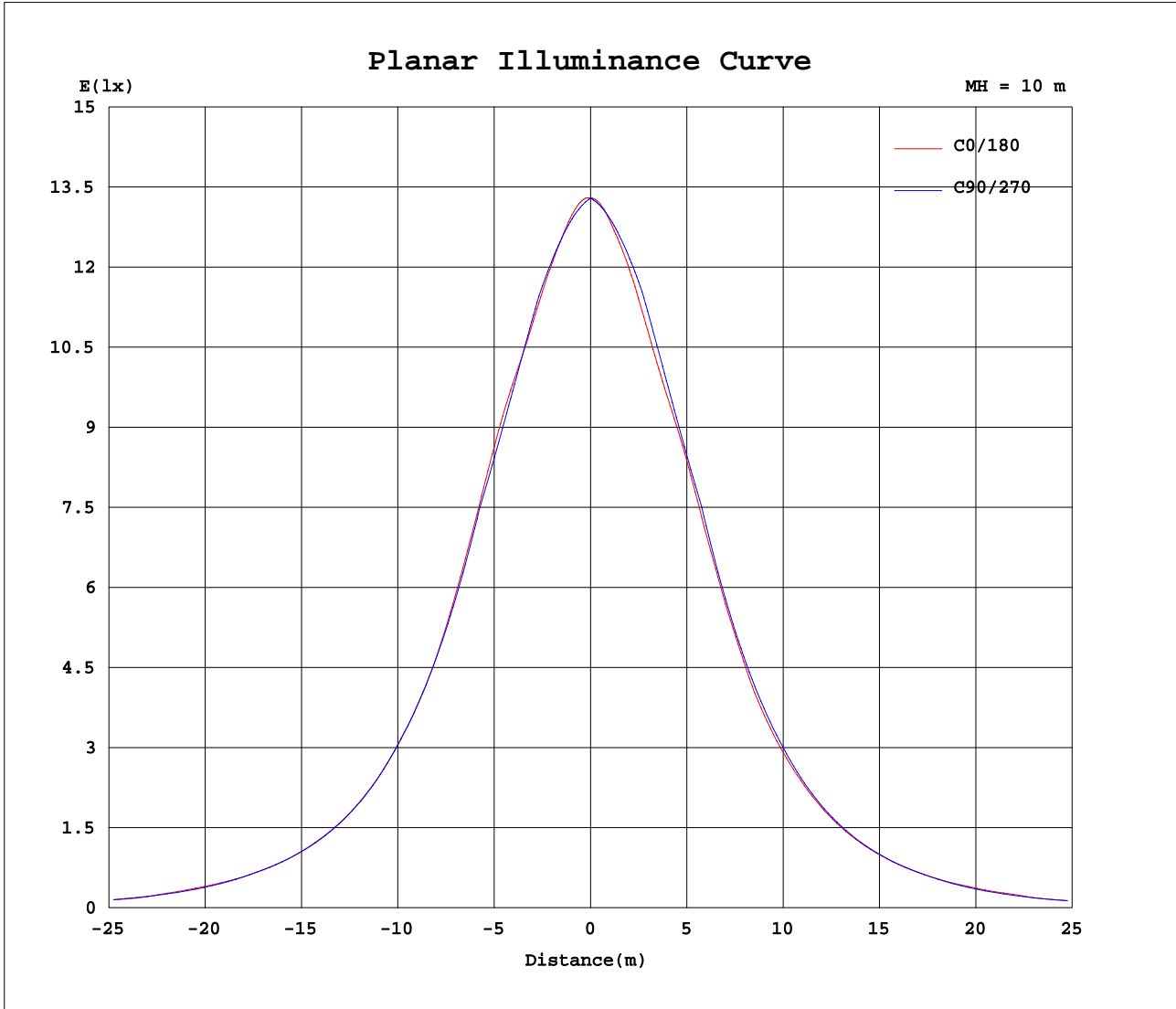
Test:U:220.1V I:0.1510A P:31.50W PF:0.9480 Lamp Flux:3424.22x1 lm		
NAME: LED FLOOD LIGHT	TYPE:IP65	WEIGHT:1.5
SPEC.:PHILIPS 3030	DIM.:	SERIAL No.:
MFR.: QINHAN LIGHTING	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2016-01-29

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: 2016-01-29

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:

