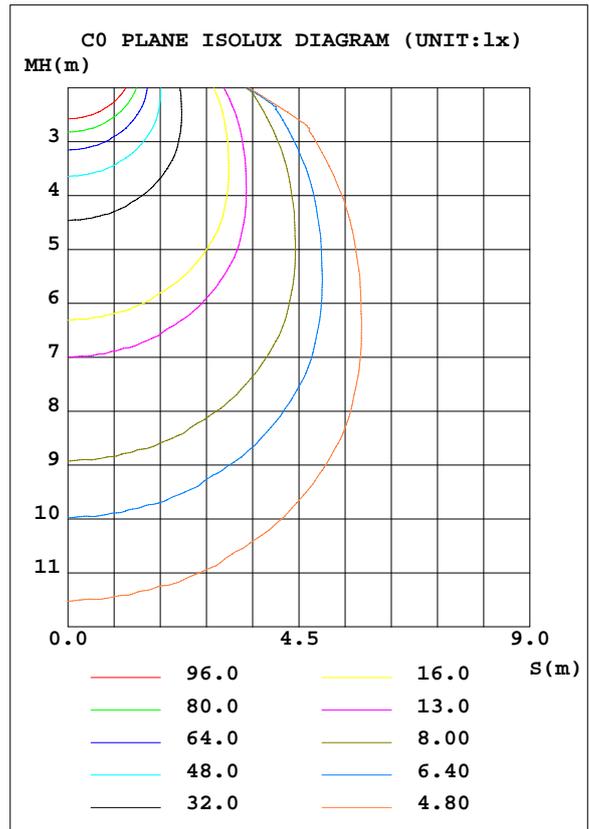
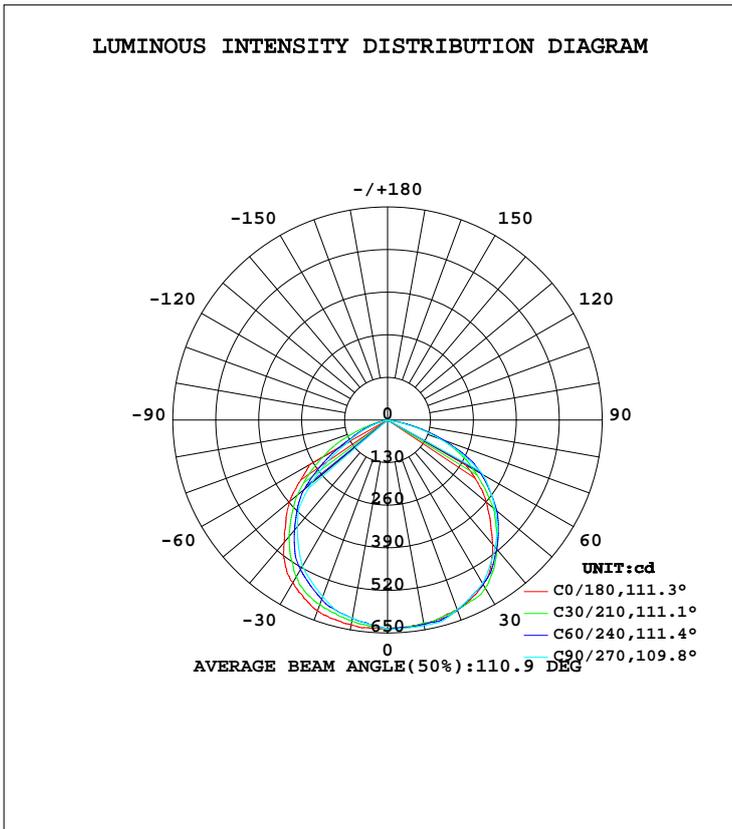


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.: BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	6500K	Imax(cd)	638.9	S/MH(C0/180)	1.34
NOMINAL POWER(W)	19.6	LOR(%)	100.0	S/MH(C90/270)	1.33
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	1654.6	η UP, DN(C0-180)	0.0, 55.2
NOMINAL FLUX(lm)	1654.62	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 44.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	232.2	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:2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [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	633.5	635.5	637.3	635.9	636.5	627.4	626.0	628.3	0- 5	15.15	15.15	0.92,0.92
10	632.9	632.7	636.8	635.3	634.9	619.1	614.3	615.9	5- 10	45.02	60.16	3.64,3.64
15	627.6	628.1	636.4	628.6	628.7	606.7	602.6	606.0	10- 15	73.89	134.1	8.1,8.1
20	615.6	618.0	616.3	622.5	619.3	594.7	573.6	593.4	15- 20	100.9	234.9	14.2,14.2
25	600.9	601.5	596.2	607.0	599.3	568.2	544.7	563.6	20- 25	124.7	359.6	21.7,21.7
30	579.1	581.0	576.1	583.2	572.8	536.5	515.8	531.6	25- 30	144.8	504.4	30.5,30.5
35	545.1	558.6	541.3	556.0	540.7	498.5	470.2	495.7	30- 35	160.0	664.3	40.1,40.1
40	494.9	527.8	506.5	523.9	487.5	455.5	424.6	452.0	35- 40	168.0	832.4	50.3,50.3
45	440.5	475.6	471.7	473.3	435.2	399.1	378.9	392.9	40- 45	169.1	1001	60.5,60.5
50	390.7	423.6	425.8	420.7	387.3	336.1	300.9	335.9	45- 50	163.7	1165	70.4,70.4
55	334.5	370.1	380.0	366.2	322.1	272.7	223.0	279.2	50- 55	150.6	1316	79.5,79.5
60	271.9	312.7	334.2	307.6	272.3	201.1	145.0	201.8	55- 60	131.4	1447	87.5,87.5
65	0	255.7	252.0	249.3	0	131.4	98.61	128.8	60- 65	95.56	1543	93.2,93.2
70	0	188.5	169.8	184.7	0	77.12	52.26	73.74	65- 70	61.62	1604	97,97
75	0	109.0	87.63	110.4	0	37.36	5.908	36.52	70- 75	35.77	1640	99.1,99.1
80	0	33.89	0	38.40	0	3.355	0	4.492	75- 80	13.34	1653	99.9,99.9
85	0	0	0	0	0	0	0	0	80- 85	1.137	1655	100,100
90	0	0	0	0	0	0	0	0	85- 90	0	1655	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			

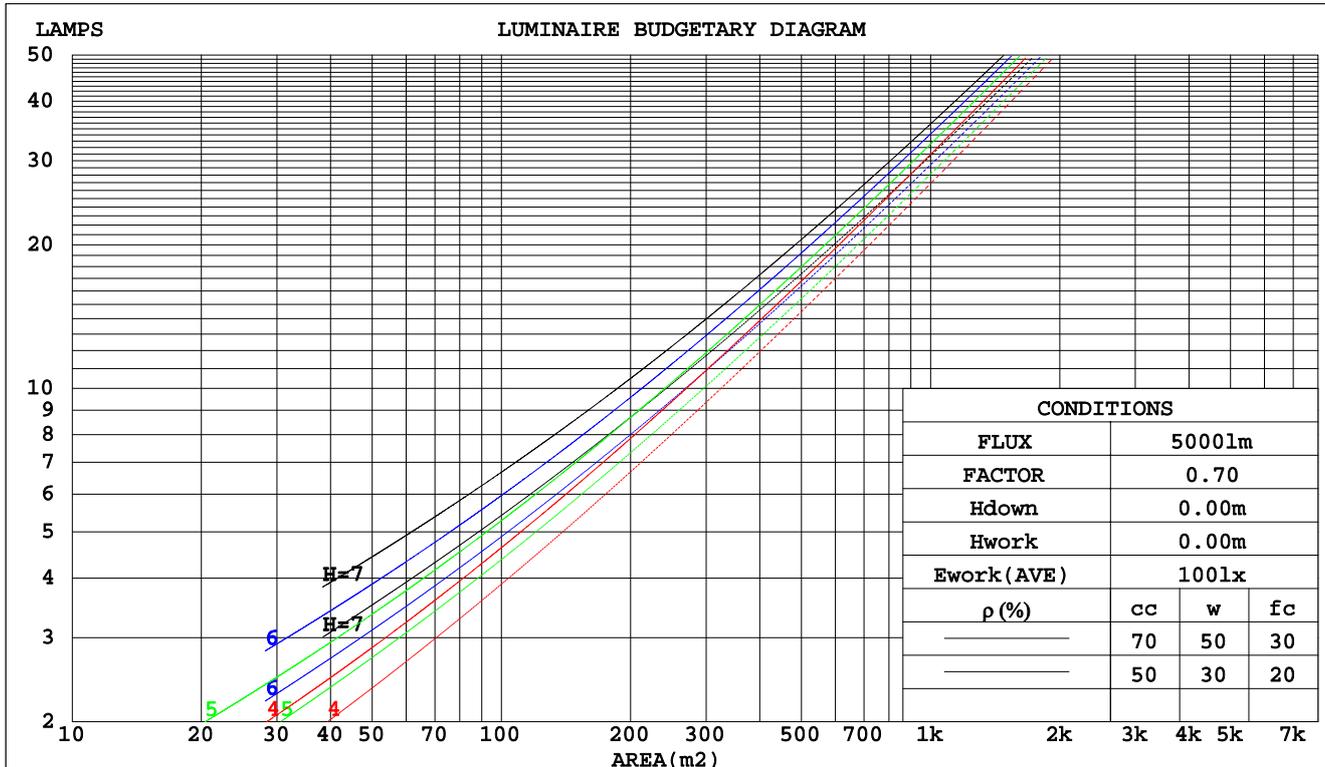
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.:BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	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	1.06	1.03	.99	1.04	1.01	.98	.90	.97	.95	.96	.94	.92	.92	.91	.89	.87
2.0	.94	.88	.83	.92	.86	.82	.89	.84	.80	.85	.81	.78	.82	.79	.76	.74
3.0	.83	.76	.70	.82	.75	.69	.79	.73	.68	.76	.71	.67	.73	.69	.66	.64
4.0	.74	.66	.60	.73	.65	.59	.70	.64	.58	.68	.62	.58	.66	.61	.57	.55
5.0	.66	.58	.52	.65	.57	.51	.63	.56	.51	.61	.55	.50	.59	.54	.50	.48
6.0	.60	.51	.45	.59	.51	.45	.57	.50	.45	.55	.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	.32	.30
10.0	.42	.34	.29	.41	.34	.29	.40	.34	.29	.40	.33	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO. : BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	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	.264	.150	.048	.257	.147	.047	.244	.140	.045	.232	.134	.043	.221	.128	.041	
2.0	.259	.142	.044	.253	.139	.043	.241	.134	.042	.231	.130	.041	.221	.125	.039	
3.0	.246	.131	.039	.241	.129	.039	.230	.125	.038	.221	.121	.037	.213	.118	.036	
4.0	.231	.120	.035	.226	.118	.035	.217	.115	.034	.209	.112	.034	.201	.109	.033	
5.0	.217	.110	.032	.212	.109	.032	.204	.106	.031	.197	.104	.031	.190	.102	.031	
6.0	.203	.102	.029	.199	.101	.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	.083	.024	.160	.082	.024	
9.0	.168	.081	.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	.143	.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	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.098	.067	.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:25.3DEG
 Operators:
 Test Date:2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: 20W SMD LED FLOODLIGHT					TYPE:FLOODLED-PL					WEIGHT:				
MODEL NO.:BT61-02002;BT61-02032;BT61-02052;BT61-02092					SPEC.:					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	19.3	20.7	19.6	20.9	21.1	20.3	21.7	20.5	21.9	22.1
3H	19.2	20.6	19.5	20.8	21.0	21.5	22.9	21.8	23.1	23.3
4H	19.1	20.4	19.4	20.6	20.9	21.8	23.1	22.1	23.3	23.6
6H	19.0	20.2	19.4	20.5	20.7	21.8	23.0	22.1	23.2	23.5
8H	19.0	20.1	19.3	20.4	20.7	21.7	22.9	22.1	23.1	23.4
12H	18.9	20.0	19.3	20.3	20.6	21.7	22.8	22.0	23.1	23.4
4H 2H	20.1	21.4	20.4	21.6	21.9	20.9	22.1	21.2	22.3	22.6
3H	20.6	21.7	21.0	22.0	22.3	22.3	23.4	22.6	23.7	24.0
4H	20.6	21.6	21.0	21.9	22.2	22.6	23.6	23.0	23.9	24.3
6H	20.5	21.4	20.9	21.7	22.1	22.6	23.5	23.0	23.8	24.2
8H	20.5	21.2	20.9	21.6	22.0	22.6	23.4	23.0	23.8	24.1
12H	20.4	21.1	20.8	21.5	21.9	22.6	23.3	23.0	23.7	24.1
8H 4H	21.0	21.7	21.4	22.1	22.5	22.8	23.6	23.2	23.9	24.3
6H	20.9	21.6	21.4	22.0	22.4	22.8	23.4	23.2	23.8	24.3
8H	20.9	21.5	21.3	21.9	22.3	22.8	23.3	23.2	23.8	24.2
12H	20.8	21.3	21.3	21.8	22.2	22.7	23.2	23.2	23.7	24.1
12H 4H	20.9	21.6	21.3	22.0	22.4	22.7	23.5	23.2	23.8	24.2
6H	20.9	21.5	21.4	21.9	22.3	22.8	23.3	23.2	23.8	24.2
8H	20.9	21.3	21.3	21.8	22.3	22.7	23.2	23.2	23.7	24.1

Variations with the observer position at spacings:		
S = 1.0H	+ 0.6 / - 0.7	+ 0.3 / - 0.3
1.5H	+ 0.6 / - 0.6	+ 0.2 / - 0.4
2.0H	+ 0.4 / - 1.4	+ 0.3 / - 0.6

CIE Pub.117 Corrected 1655 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.7)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.: BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

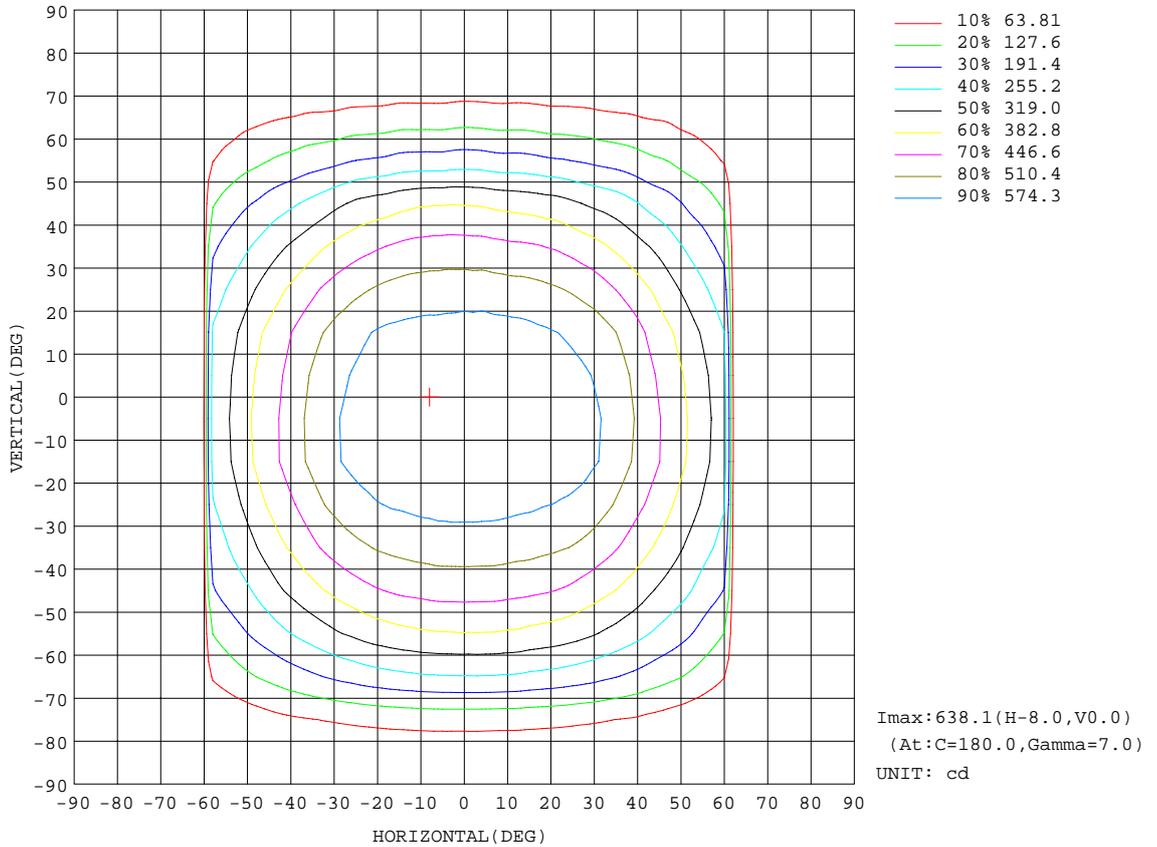
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	60	49	42	59	49	42	58	48	42	36
0.80	71	60	53	70	59	53	68	59	52	46
1.00	80	69	63	79	69	62	76	70	62	55
1.25	87	77	71	85	77	70	83	75	70	63
1.50	92	83	77	90	82	76	87	80	75	68
2.00	98	91	85	97	90	84	93	87	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	103	97	93	99	94	91	83
4.00	108	103	99	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:25.3DEG
 Operators:
 Test Date:2017-08-03

γ Range: 0 - 90DEG
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 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.110m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.: BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



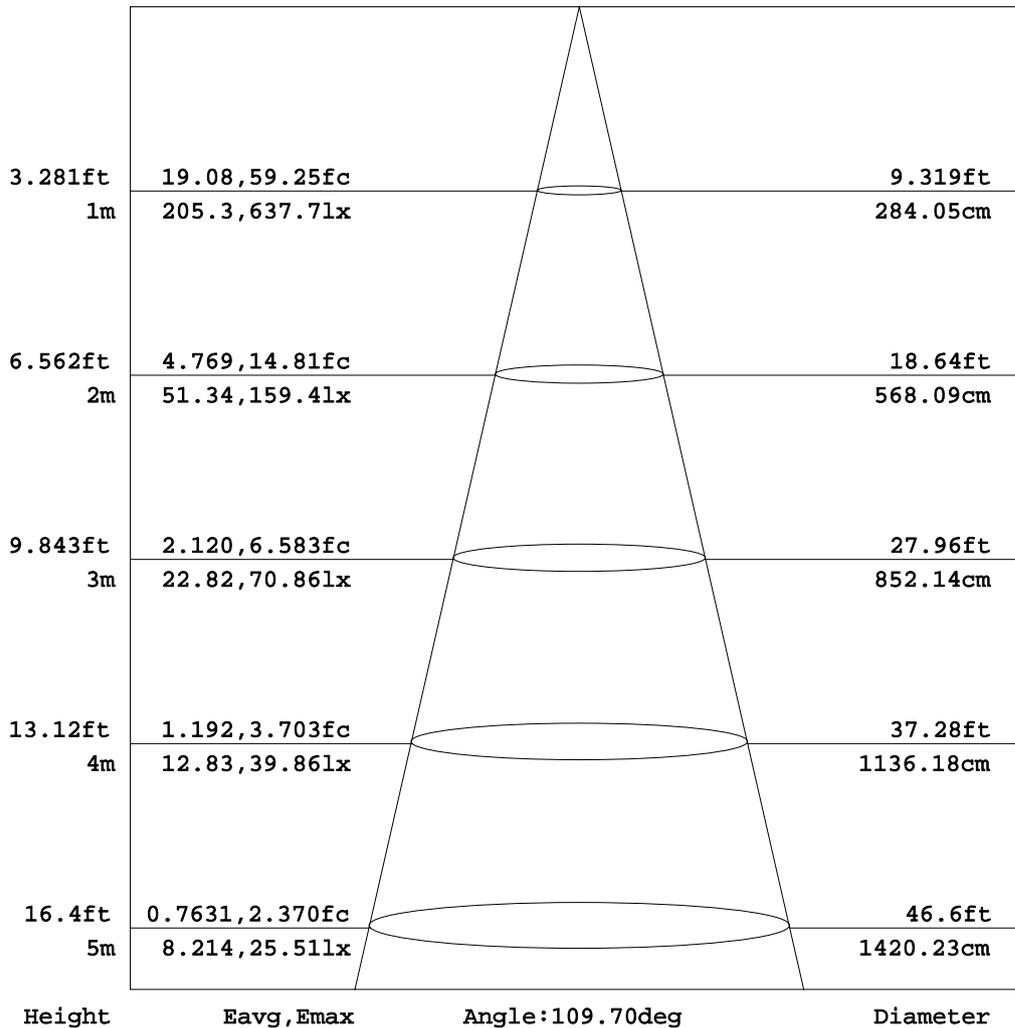
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity: 65.0%
 Test Distance: 10.110m [K=1.0000]
 Remarks:

AAI Figure

NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.: BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Flux out:1316 lm



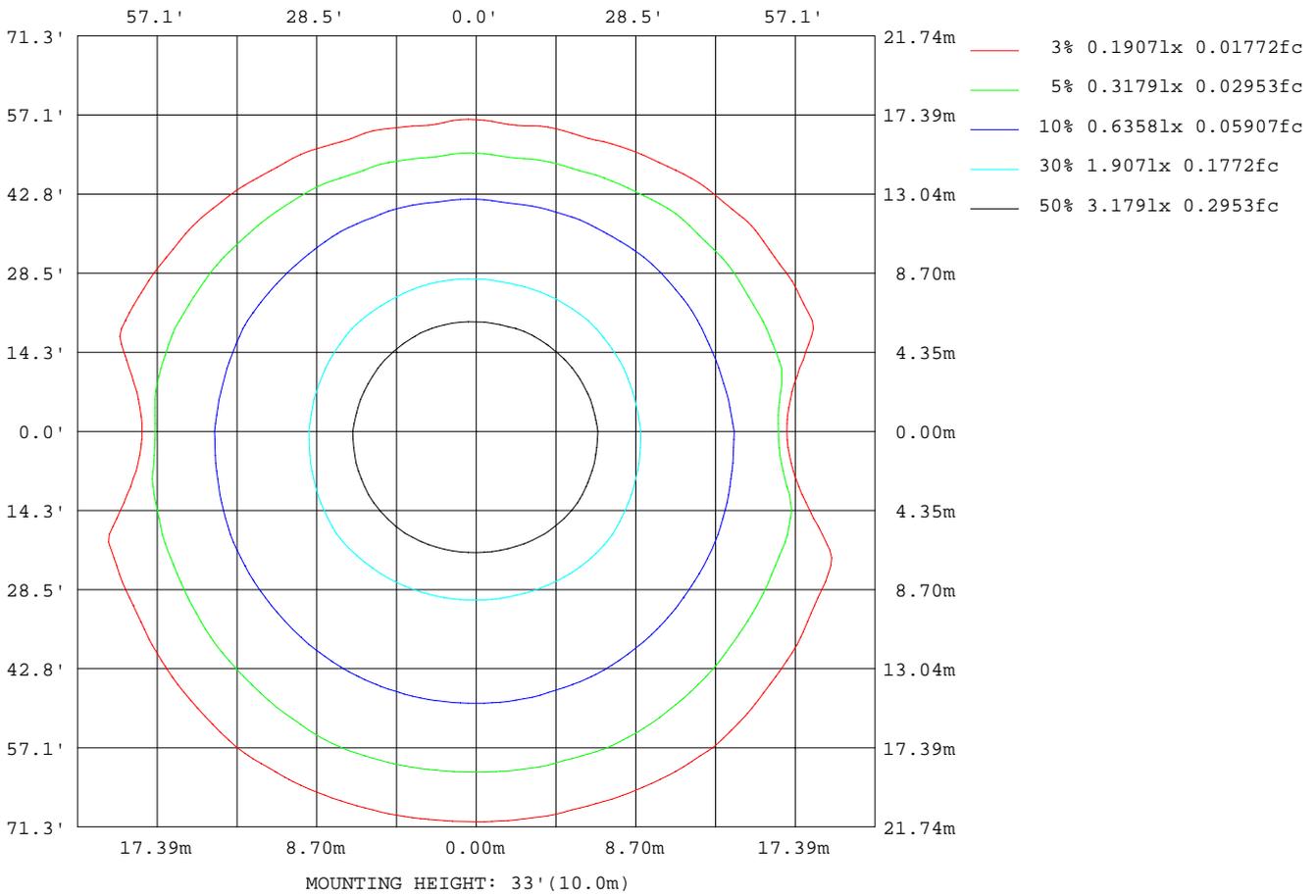
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity: 65.0%
 Test Distance: 10.110m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

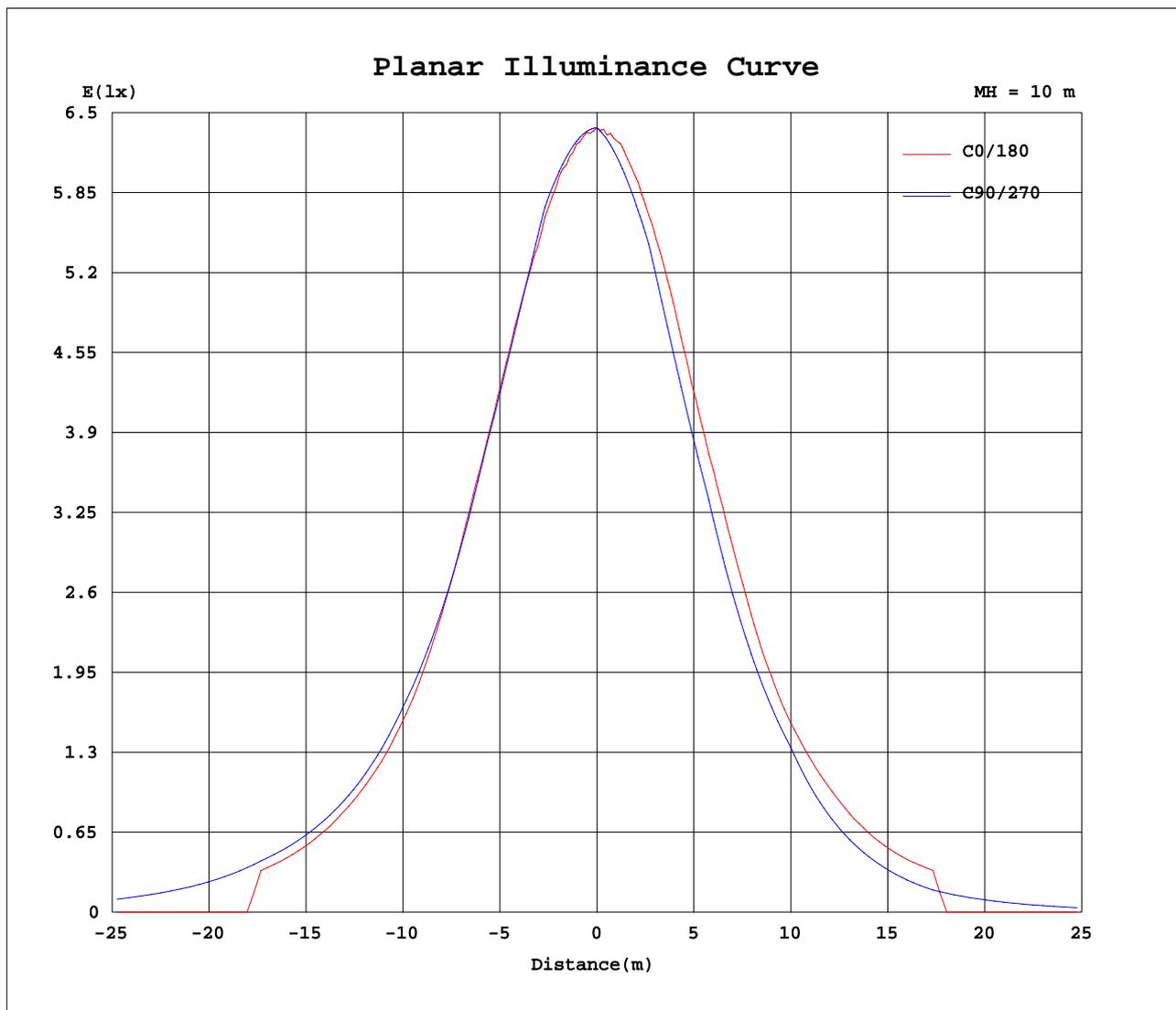
NAME: 20W SMD LED FLOODLIGHT	TYPE:FLOODLED-PL	WEIGHT:
MODEL NO.: BT61-02002;BT61-02032;BT61-02052;BT61-02092	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
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 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.266
 Humidity: 65.0%
 Test Distance: 10.110m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.266
Humidity: 65.0%
Test Distance: 10.110m [K=1.0000]
Remarks: