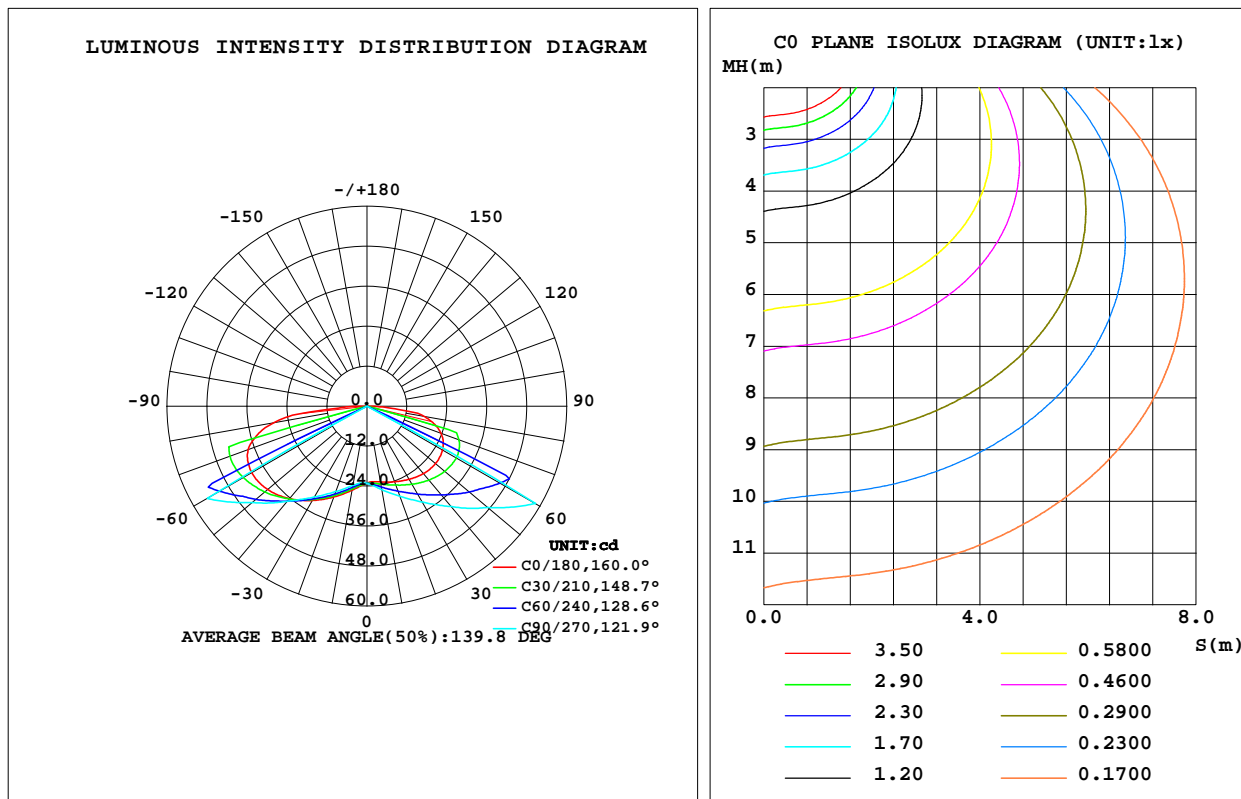


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 12.01 lm/W			
MODEL		I _{max} (cd)	58.47	S/MH(C0/180)	1.72
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	2.49
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	146.77	h UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	146.768	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	219.2	h down(%)	100.0	CIBSE SHR MAX	1.75



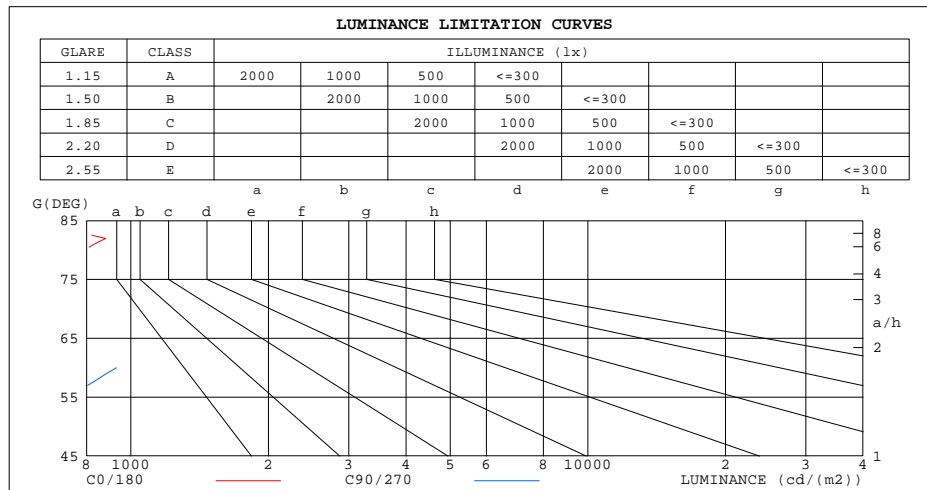
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
5	22.76	23.44	24.06	24.32	24.14	23.74	23.18	22.78	0- 5	0.5590	0.5590	0.38,0.38
10	23.10	24.19	25.42	25.83	25.60	24.98	24.14	23.33	5- 10	1.724	2.283	1.56,1.56
15	23.61	25.09	26.97	27.54	27.24	26.54	25.59	24.13	10- 15	2.995	5.278	3.6,3.6
20	24.17	26.15	28.75	29.31	28.99	28.28	27.28	25.13	15- 20	4.381	9.659	6.58,6.58
25	24.76	27.35	30.83	31.28	30.83	30.24	29.21	26.25	20- 25	5.888	15.55	10.6,10.6
30	25.36	28.68	33.25	33.35	32.68	32.28	31.44	27.51	25- 30	7.521	23.07	15.7,15.7
35	25.94	30.12	36.09	35.49	34.53	34.42	34.13	28.90	30- 35	9.285	32.35	22,22
40	26.42	31.63	39.35	37.77	36.22	36.74	37.24	30.39	35- 40	11.17	43.52	29.7,29.7
45	26.75	33.16	43.34	39.99	37.75	39.04	41.11	31.91	40- 45	13.17	56.70	38.6,38.6
50	26.85	34.67	47.33	42.22	38.94	41.48	44.97	33.40	45- 50	15.25	71.95	49,49
55	26.70	36.12	52.88	44.51	39.72	44.01	50.19	34.86	50- 55	17.37	89.31	60.9,60.9
60	26.21	37.23	58.42	46.52	39.95	46.33	55.40	36.05	55- 60	19.53	108.8	74.2,74.2
65	25.28	38.17	0	48.64	39.46	48.88	0	37.15	60- 65	16.01	124.9	85.1,85.1
70	23.63	0	0	0	37.94	0	0	0	65- 70	9.928	134.8	91.8,91.8
75	21.04	0	0	0	34.32	0	0	0	70- 75	6.508	141.3	96.3,96.3
80	17.27	0	0	0	28.36	0	0	0	75- 80	3.760	145.1	98.8,98.8
85	7.717	0	0	0	11.88	0	0	0	80- 85	1.503	146.6	99.9,99.9
90	0.1432	0	0	0	0.5664	0	0	0	85- 90	0.2139	146.8	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		



LUMINANCE cd/(m²)		
G(°)	C0/180	C90/270
85	705	0
80	792	0
75	647	0
70	550	0
65	476	0
60	417	930
55	370	734
50	332	586
45	301	488

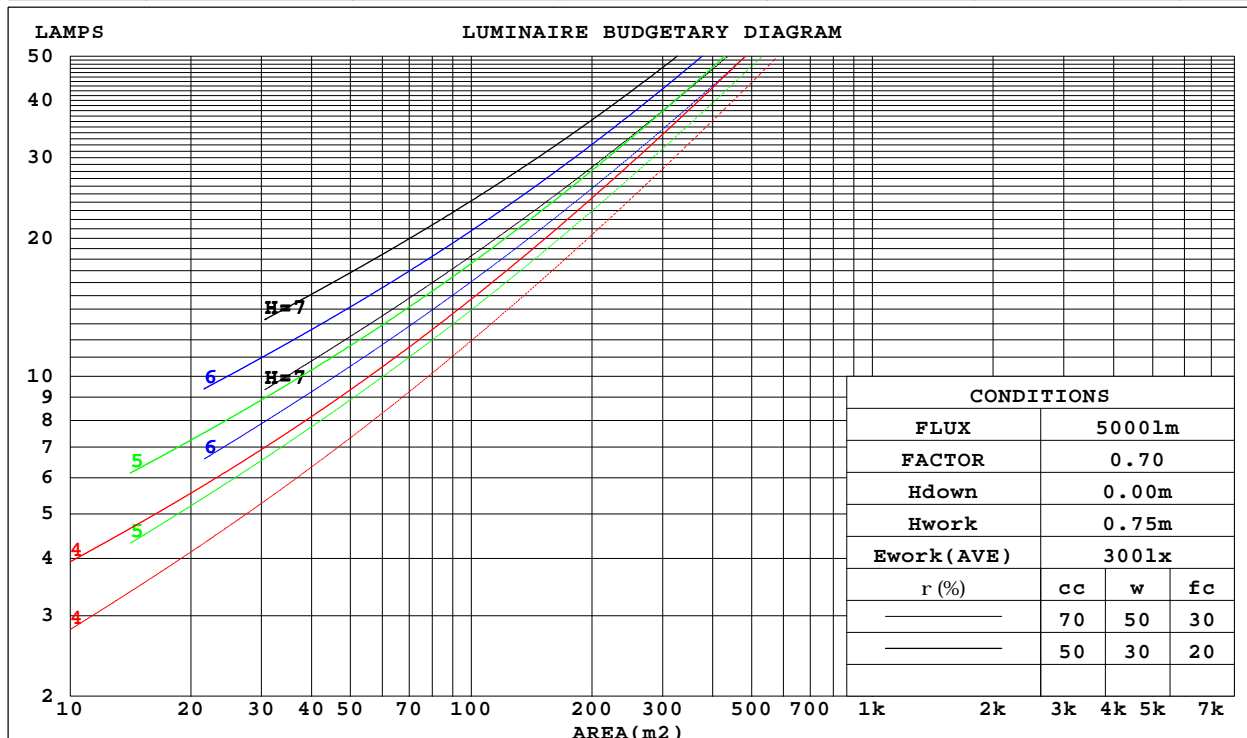
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZENGQG
 Test Date:2019-11-07

g Range: 0 - 90DEG
 g Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:9.650m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	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	1.03	.98	.94	1.00	.96	.92	.96	.93	.89	.92	.89	.87	.89	.86	.84	.82
2.0	.88	.80	.74	.86	.79	.73	.82	.76	.71	.79	.74	.69	.76	.71	.68	.66
3.0	.75	.66	.59	.73	.65	.58	.70	.63	.57	.67	.61	.56	.65	.60	.55	.53
4.0	.65	.55	.48	.64	.54	.47	.61	.53	.47	.58	.52	.46	.56	.50	.45	.43
5.0	.57	.47	.39	.56	.46	.39	.53	.45	.39	.51	.44	.38	.49	.43	.38	.35
6.0	.50	.40	.33	.49	.40	.33	.47	.39	.33	.45	.38	.32	.44	.37	.32	.30
7.0	.45	.35	.28	.44	.35	.28	.42	.34	.28	.41	.33	.28	.39	.32	.27	.25
8.0	.40	.31	.24	.39	.30	.24	.38	.30	.24	.37	.29	.24	.35	.29	.24	.22
9.0	.36	.27	.21	.36	.27	.21	.34	.27	.21	.33	.26	.21	.32	.26	.21	.19
10.0	.33	.24	.19	.32	.24	.19	.31	.24	.19	.30	.23	.18	.29	.23	.18	.16



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.332	.189	.060	.325	.185	.059	.312	.179	.057	.299	.173	.055	.288	.167	.054	
2.0	.319	.175	.054	.313	.172	.053	.301	.167	.052	.290	.163	.051	.280	.158	.050	
3.0	.298	.158	.047	.292	.156	.047	.281	.152	.046	.271	.149	.046	.262	.145	.045	
4.0	.275	.143	.042	.270	.141	.042	.260	.138	.041	.252	.135	.041	.243	.132	.040	
5.0	.254	.129	.037	.249	.128	.037	.241	.125	.037	.233	.123	.037	.225	.120	.036	
6.0	.234	.118	.034	.230	.116	.033	.223	.114	.033	.216	.112	.033	.209	.110	.033	
7.0	.217	.107	.030	.214	.106	.030	.207	.105	.030	.200	.103	.030	.194	.101	.030	
8.0	.202	.099	.028	.199	.098	.028	.193	.096	.027	.187	.095	.027	.181	.093	.027	
9.0	.188	.091	.025	.185	.090	.025	.180	.089	.025	.175	.088	.025	.170	.086	.025	
10.0	.176	.085	.023	.174	.084	.023	.169	.083	.023	.164	.081	.023	.160	.080	.023	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	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	.182	.156	.133	.156	.134	.114	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.176	.132	.095	.151	.113	.082	.103	.078	.057	.060	.046	.033	.019	.015	.011	
3.0	.170	.114	.070	.146	.099	.061	.100	.069	.043	.058	.040	.025	.019	.013	.008	
4.0	.163	.102	.054	.140	.088	.047	.096	.061	.033	.056	.036	.020	.018	.012	.006	
5.0	.156	.092	.044	.134	.079	.038	.092	.055	.027	.054	.032	.016	.017	.011	.005	
6.0	.149	.083	.036	.128	.072	.031	.089	.051	.022	.051	.030	.013	.017	.010	.004	
7.0	.142	.077	.031	.122	.066	.027	.085	.047	.019	.049	.027	.011	.016	.009	.004	
8.0	.136	.071	.027	.117	.062	.023	.081	.043	.016	.047	.026	.010	.015	.008	.003	
9.0	.129	.066	.024	.111	.057	.021	.077	.040	.015	.045	.024	.009	.015	.008	.003	
10.0	.123	.062	.021	.106	.054	.018	.074	.038	.013	.043	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

Uncorrected UGR Table

NAME: PW030052					TYPE:LED			WEIGHT:1.136(Kg)			
DIM.: D400*45					SPEC.:			SERIAL No.:			
MFR.:					SUR.:D400			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		10.3	12.0	10.6	12.2	12.4	12.5	14.2	12.8	14.4	14.7
	3H	13.0	14.6	13.3	14.8	15.1	12.3	13.8	12.6	14.1	14.3
	4H	14.4	15.9	14.7	16.2	16.4	12.2	13.7	12.5	13.9	14.2
	6H	15.6	17.0	15.9	17.3	17.5	12.1	13.5	12.4	13.7	14.0
	8H	16.0	17.3	16.3	17.6	17.9	12.0	13.3	12.3	13.6	13.9
	12H	16.2	17.5	16.6	17.8	18.2	11.9	13.2	12.3	13.5	13.9
4H	2H	11.8	13.3	12.2	13.6	13.9	13.2	14.6	13.5	14.9	15.2
	3H	14.5	15.8	14.9	16.2	16.5	12.9	14.2	13.3	14.5	14.8
	4H	15.9	17.1	16.3	17.4	17.8	12.8	14.0	13.2	14.3	14.7
	6H	17.1	18.2	17.5	18.5	18.9	12.7	13.8	13.1	14.1	14.5
	8H	17.5	18.5	17.9	18.9	19.3	12.7	13.7	13.1	14.0	14.4
	12H	17.8	18.7	18.2	19.1	19.5	12.6	13.5	13.1	13.9	14.3
8H	4H	15.8	16.8	16.2	17.1	17.5	13.0	13.9	13.4	14.3	14.7
	6H	17.0	17.8	17.4	18.2	18.6	12.9	13.7	13.3	14.1	14.5
	8H	17.4	18.1	17.9	18.6	19.0	12.9	13.6	13.3	14.0	14.4
	12H	17.7	18.3	18.2	18.8	19.2	12.8	13.4	13.3	13.9	14.4
12H	4H	15.7	16.6	16.2	17.0	17.4	13.0	13.8	13.4	14.2	14.6
	6H	17.0	17.7	17.4	18.1	18.5	12.9	13.6	13.3	14.0	14.5
	8H	17.4	18.0	17.9	18.4	18.9	12.9	13.5	13.3	13.9	14.4
Variations with the observer position at spacings:											
S = 1.0H		+ 0.5 / - 0.6					+ 0.4 / - 0.5				
1.5H		+ 0.9 / - 0.4					+ 2.2 / - 4.2				
2.0H		+ 0.6 / - 1.9					+ 1.6 / - 3.7				

CIE Pub.117 Corrected 146.8 lm Total Lamp Luminous Flux.(8log(F/F0) = -6.7)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:

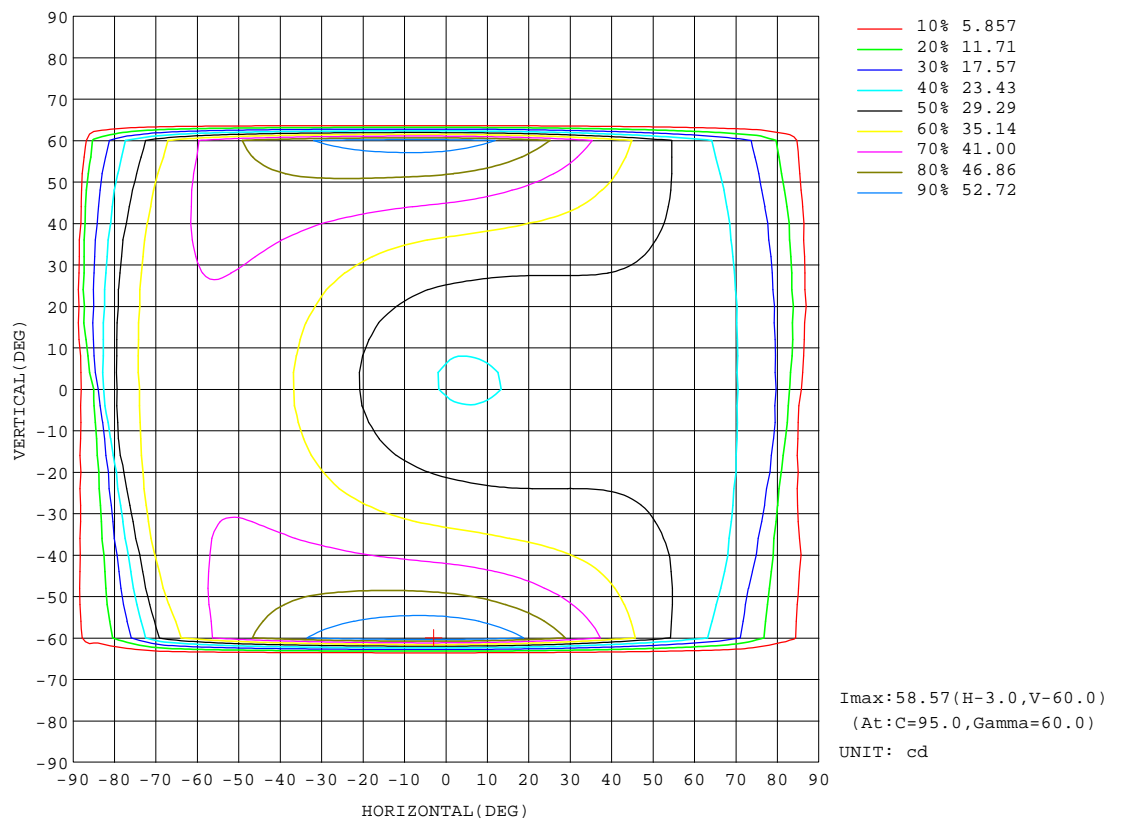
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	35	27	47	34	26	46	34	26	19
0.80	59	46	37	58	45	37	56	44	36	28
1.00	69	56	48	68	55	47	65	57	47	39
1.25	77	65	57	76	64	56	73	63	56	47
1.50	83	72	64	81	71	63	78	69	62	54
2.00	91	82	74	89	80	74	86	78	72	63
2.50	96	87	80	94	86	80	90	83	78	69
3.00	100	92	86	98	91	85	94	88	83	74
4.00	105	98	93	102	97	92	98	93	89	80
5.00	107	102	98	105	100	96	100	96	93	83
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:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
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Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:

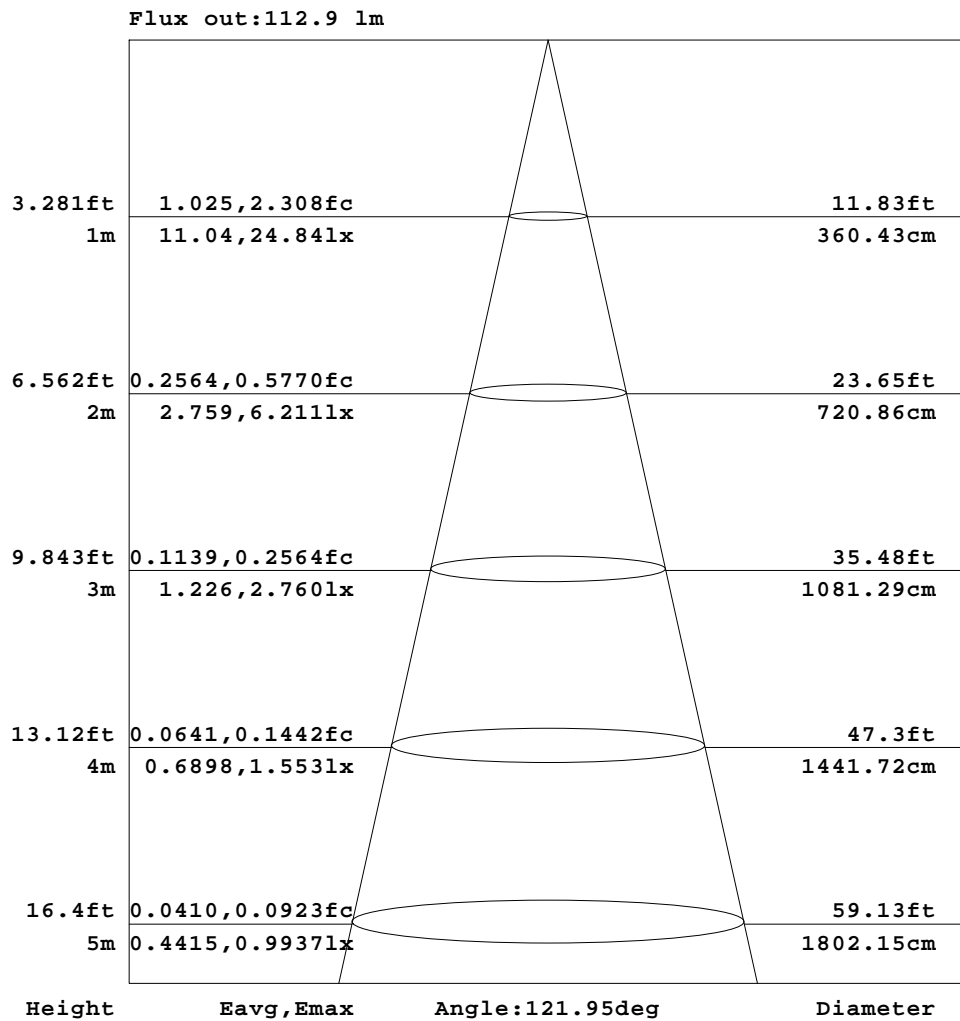


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

AAI Figure

NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:



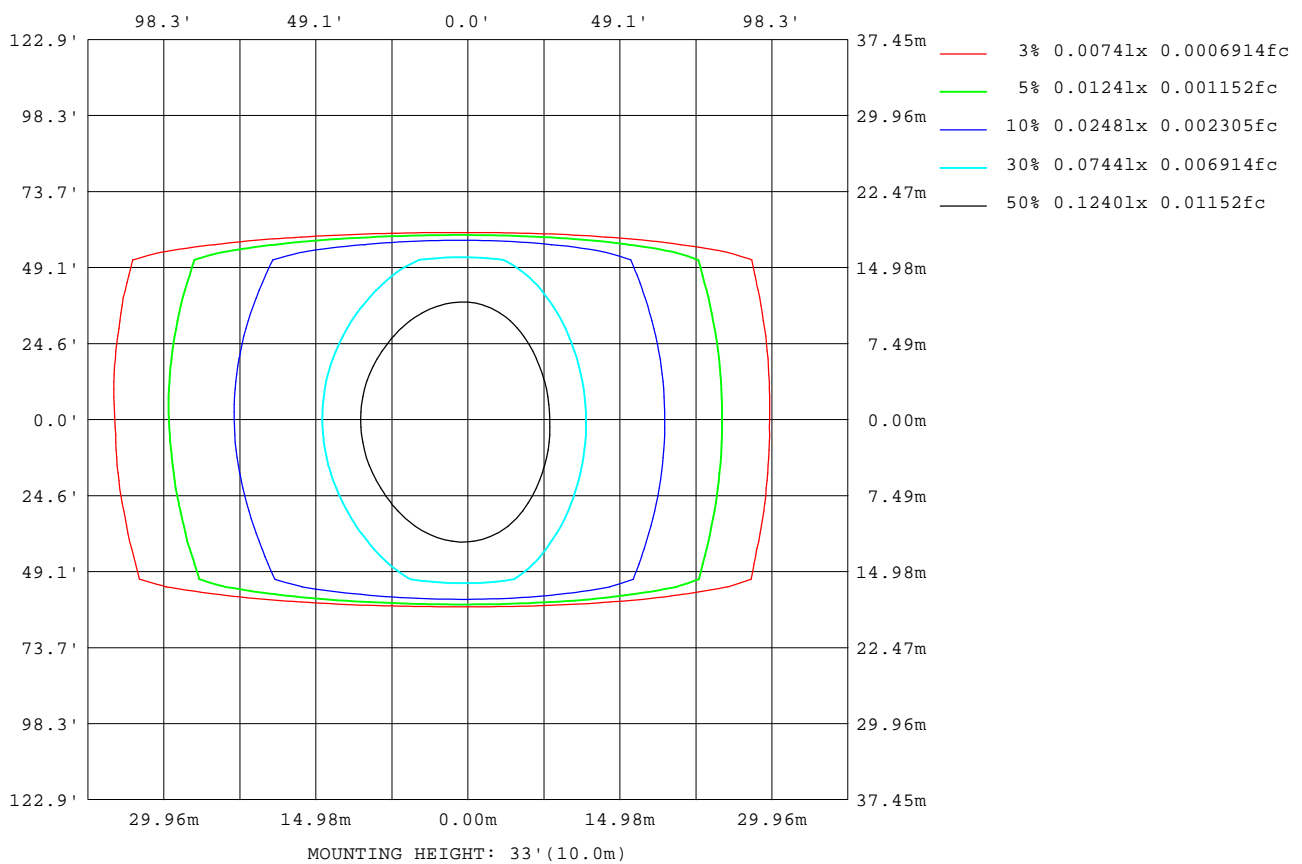
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZENGQG
Test Date:2019-11-07

g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

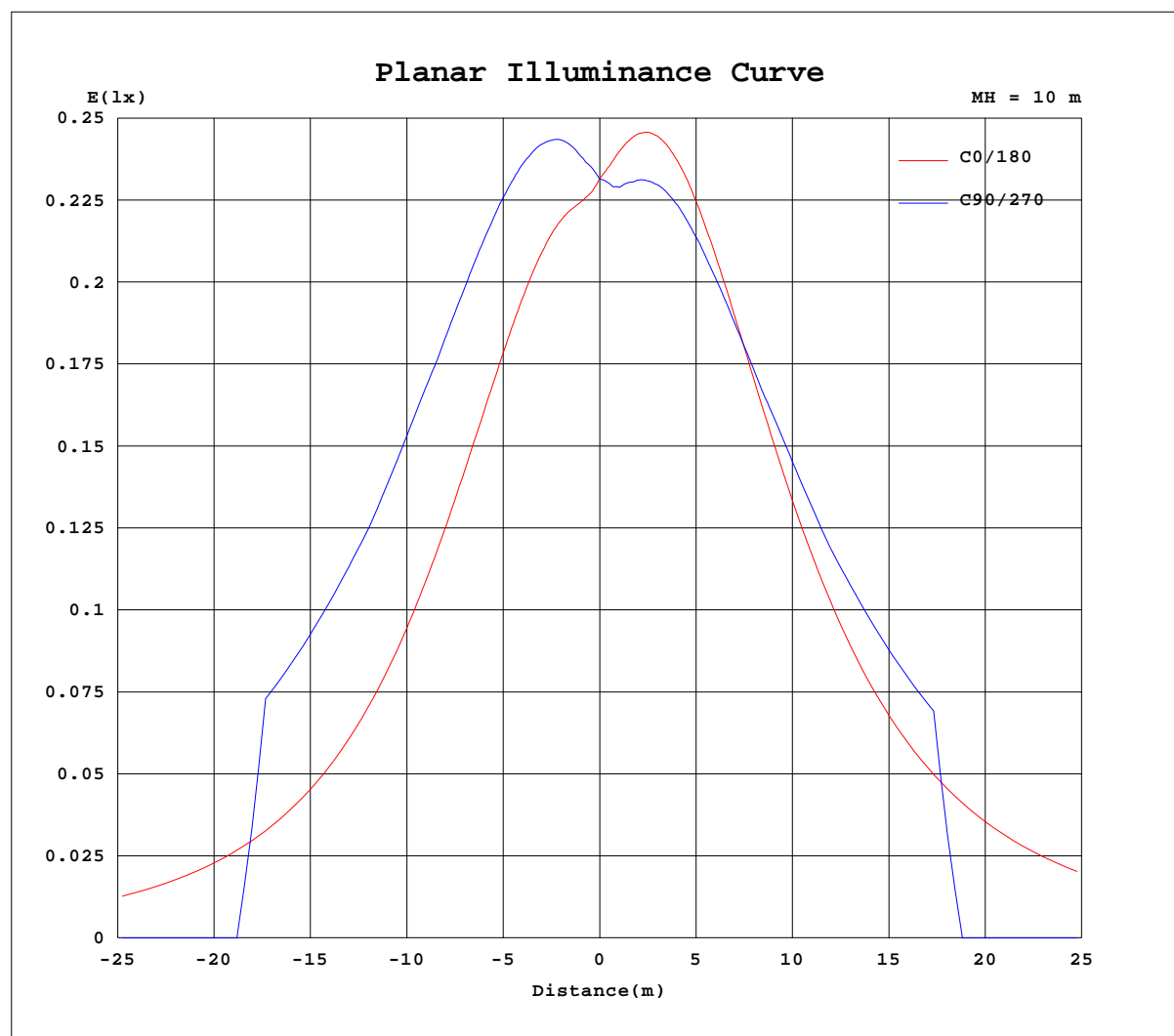
NAME: PW030052	TYPE:LED	WEIGHT:1.136(Kg)
DIM.: D400*45	SPEC.:	SERIAL No.:
MFR.:	SUR.:D400	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 5.0DEG
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g Range: 0 - 90DEG
g Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:9.650m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: ZENGQG
Test Date: 2019-11-07

g Range: 0 - 90DEG
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Humidity: 65.0%
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Remarks: