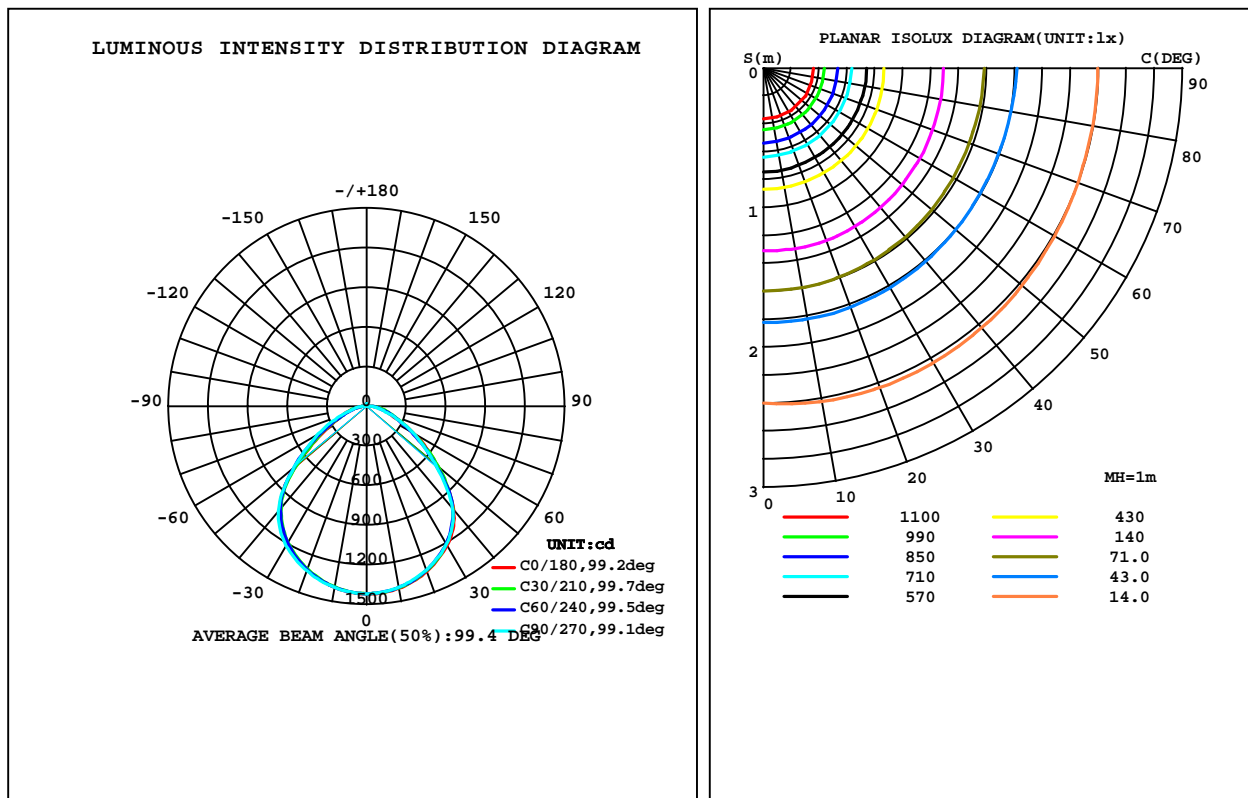


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 107.70 lm/W			
MODEL		I _{max} (cd)	1422	S/MH(C0/180)	1.27
NOMINAL POWER(W)	32	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	3497.7	h UP,DN(C0-180)	0.9,48.9
NOMINAL FLUX(lm)	3497.73	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,49.4
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.2	h down(%)	98.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	1400	1396	1392	1387	1393	1391	1395	1397	0- 10	134.2	134.2	3.84,3.84
20	1331	1325	1320	1310	1318	1315	1327	1329	10- 20	384.7	518.9	14.8,14.8
30	1218	1206	1209	1185	1205	1194	1220	1214	20- 30	584.6	1103	31.5,31.5
40	1025	1017	1013	996.9	1031	1012	1041	1034	30- 40	700.8	1804	51.6,51.6
50	701.6	696.4	677.0	683.4	691.2	706.5	714.2	720.7	40- 50	670.1	2474	70.7,70.7
60	416.2	400.1	407.9	368.1	354.2	383.4	424.8	410.9	50- 60	480.4	2955	84.5,84.5
70	202.1	215.5	196.1	171.8	192.9	179.0	205.4	216.9	60- 70	281.9	3237	92.5,92.5
80	110.8	108.6	81.82	85.51	76.15	84.03	83.07	106.7	70- 80	149.0	3386	96.8,96.8
90	7.887	7.164	3.750	3.283	3.235	4.146	6.710	13.85	80- 90	52.87	3439	98.3,98.3
100	3.546	3.749	3.948	3.937	3.754	3.751	3.429	3.412	90-100	3.598	3442	98.4,98.4
110	5.689	5.843	6.023	6.152	5.882	5.904	5.599	5.529	100-110	4.978	3447	98.6,98.6
120	8.324	8.494	8.784	8.909	8.401	8.506	8.157	8.110	110-120	7.054	3454	98.8,98.8
130	11.10	11.26	11.58	11.68	11.20	11.29	10.95	10.86	120-130	8.848	3463	99,99
140	13.51	13.76	14.08	14.15	13.77	13.76	13.52	13.42	130-140	9.660	3473	99.3,99.3
150	16.11	16.40	16.63	16.64	16.31	16.20	16.03	15.98	140-150	9.401	3482	99.6,99.6
160	18.55	18.72	18.88	18.82	18.66	18.50	18.40	18.39	150-160	8.069	3490	99.8,99.8
170	20.08	20.21	20.29	20.24	20.21	20.17	20.04	20.07	160-170	5.494	3496	99.9,99.9
180	20.52	20.50	20.43	20.47	20.48	20.49	20.39	20.43	170-180	1.941	3498	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

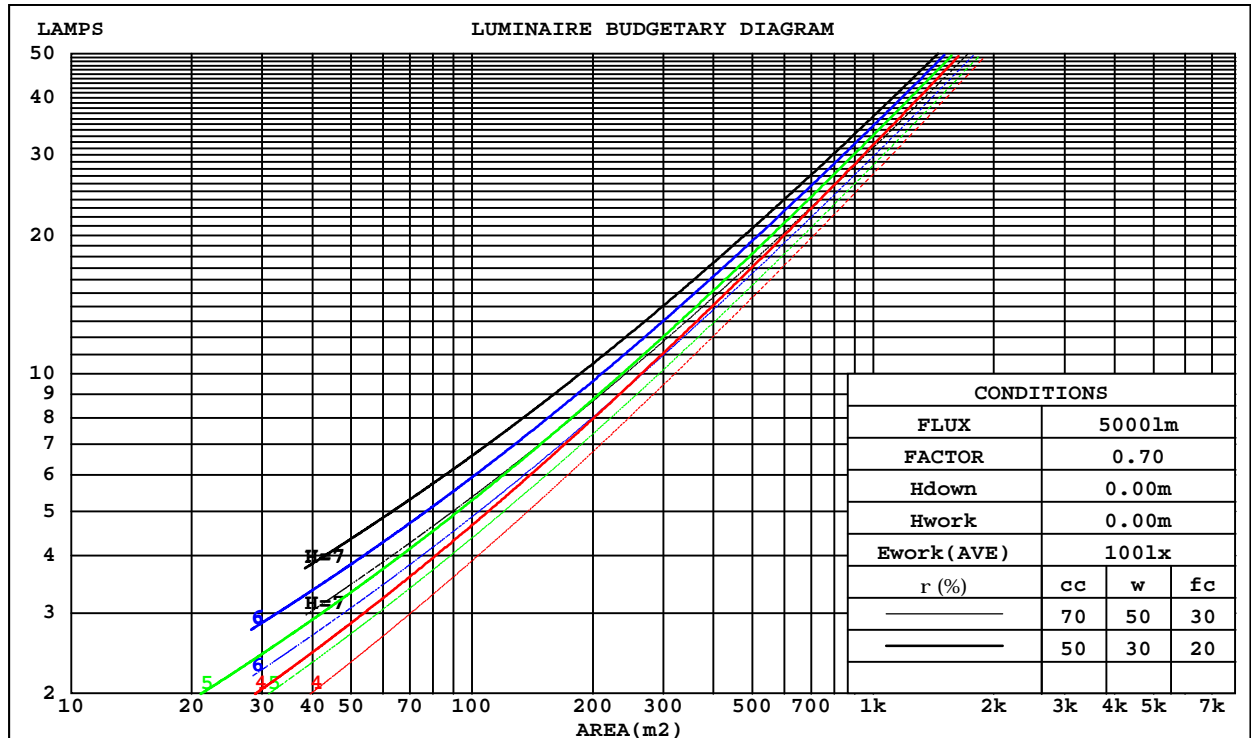
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-08-24

g Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:60.0%
 Test Distance:12.200m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

rcc	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	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.05	1.01	.98	1.03	.99	.96	.98	.95	.93	.94	.92	.90	.90	.88	.87	.85
2.0	.93	.87	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.77	.74	.72
3.0	.83	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.72	.68	.64	.62
4.0	.74	.66	.59	.72	.65	.59	.70	.63	.58	.67	.62	.57	.65	.60	.56	.54
5.0	.66	.58	.52	.65	.57	.51	.63	.56	.51	.61	.55	.50	.59	.54	.49	.47
6.0	.60	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.54	.48	.44	.42
7.0	.55	.46	.41	.54	.46	.40	.52	.45	.40	.51	.44	.40	.49	.43	.39	.37
8.0	.50	.42	.36	.49	.42	.36	.48	.41	.36	.47	.40	.36	.45	.40	.35	.33
9.0	.46	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.42	.36	.32	.30
10.0	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.29	.39	.33	.29	.27



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 03
 Test Date: 2019-08-24

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 60.0%
 Test Distance: 12.200m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	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	.278	.158	.050	.271	.154	.049	.257	.147	.047	.244	.141	.045	.232	.134	.043	
2.0	.264	.145	.044	.257	.142	.044	.245	.136	.042	.234	.131	.041	.223	.126	.040	
3.0	.247	.131	.039	.241	.129	.039	.230	.125	.038	.220	.121	.037	.211	.117	.036	
4.0	.230	.120	.035	.225	.118	.035	.215	.114	.034	.206	.111	.033	.198	.108	.033	
5.0	.215	.109	.032	.210	.108	.031	.201	.105	.031	.193	.102	.030	.186	.099	.030	
6.0	.201	.101	.029	.197	.099	.029	.189	.097	.028	.182	.094	.028	.175	.092	.027	
7.0	.188	.093	.026	.184	.092	.026	.177	.090	.026	.171	.088	.025	.165	.086	.025	
8.0	.177	.086	.024	.173	.085	.024	.167	.083	.024	.161	.082	.024	.156	.080	.023	
9.0	.166	.080	.022	.163	.080	.022	.158	.078	.022	.152	.076	.022	.147	.075	.022	
10.0	.157	.075	.021	.154	.075	.021	.149	.073	.021	.144	.072	.020	.140	.070	.020	

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	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.191	.169	.150	.164	.145	.129	.112	.100	.089	.064	.058	.052	.021	.019	.017	
2.0	.182	.145	.114	.156	.125	.099	.107	.086	.069	.061	.050	.040	.020	.016	.013	
3.0	.173	.127	.091	.148	.110	.079	.102	.076	.055	.059	.045	.033	.019	.014	.011	
4.0	.165	.114	.074	.142	.098	.065	.098	.068	.045	.056	.040	.027	.018	.013	.009	
5.0	.158	.103	.063	.136	.089	.055	.093	.062	.039	.054	.037	.023	.017	.012	.008	
6.0	.151	.095	.054	.130	.082	.047	.090	.057	.033	.052	.034	.020	.017	.011	.007	
7.0	.145	.088	.048	.124	.076	.042	.086	.053	.030	.050	.031	.018	.016	.010	.006	
8.0	.139	.082	.043	.119	.071	.038	.083	.050	.027	.048	.029	.016	.016	.010	.005	
9.0	.133	.077	.039	.114	.067	.034	.079	.047	.024	.046	.028	.015	.015	.009	.005	
10.0	.127	.073	.037	.110	.063	.032	.076	.045	.023	.044	.026	.014	.014	.009	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm										
NAME: R250 (33W 4000K)					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
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	16.5	17.9	16.7	18.1	18.3	16.3	17.7	16.6	17.9	18.1
3H	17.3	18.6	17.6	18.8	19.1	17.1	18.4	17.4	18.6	18.9
4H	17.7	18.9	18.0	19.1	19.4	17.4	18.6	17.7	18.9	19.2
6H	18.1	19.2	18.4	19.5	19.8	17.6	18.8	18.0	19.1	19.4
8H	18.2	19.3	18.6	19.6	20.0	17.7	18.8	18.1	19.1	19.4
12H	18.4	19.4	18.8	19.8	20.1	17.8	18.8	18.1	19.1	19.5
4H 2H	16.8	18.0	17.1	18.3	18.6	16.6	17.8	17.0	18.1	18.4
3H	17.8	18.9	18.2	19.2	19.5	17.6	18.7	18.0	19.0	19.4
4H	18.4	19.3	18.7	19.7	20.0	18.1	19.0	18.5	19.4	19.8
6H	18.9	19.8	19.3	20.2	20.6	18.5	19.3	18.9	19.7	20.1
8H	19.2	20.0	19.6	20.4	20.8	18.6	19.4	19.0	19.8	20.2
12H	19.4	20.2	19.9	20.6	21.0	18.7	19.4	19.2	19.9	20.3
8H 4H	18.5	19.3	19.0	19.7	20.2	18.3	19.1	18.7	19.5	19.9
6H	19.3	20.0	19.8	20.4	20.9	18.8	19.5	19.3	19.9	20.4
8H	19.7	20.3	20.2	20.8	21.2	19.1	19.7	19.6	20.1	20.6
12H	20.1	20.6	20.6	21.1	21.6	19.3	19.8	19.8	20.3	20.8
12H 4H	18.6	19.3	19.0	19.7	20.1	18.3	19.1	18.8	19.5	19.9
6H	19.4	20.0	19.9	20.4	20.9	18.9	19.5	19.4	20.0	20.5
8H	19.9	20.4	20.4	20.8	21.3	19.3	19.7	19.8	20.2	20.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.3					+ 0.4 / - 0.4				
1.5H	+ 0.1 / - 0.3					+ 0.1 / - 0.2				
2.0H	+ 0.5 / - 0.4					+ 0.6 / - 0.5				

CIE Pub.117 Corrected 3498 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.4)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

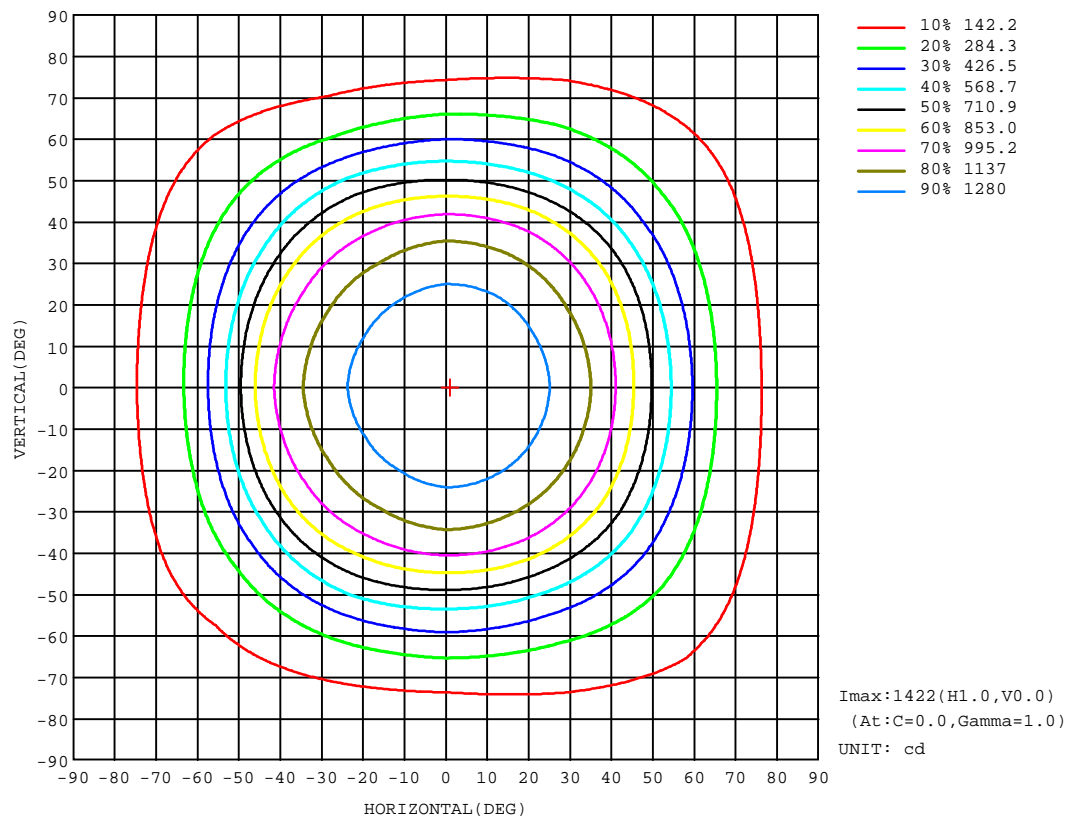
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	61	50	44	61	50	44	59	50	44	38
0.80	71	61	54	70	60	54	69	59	53	47
1.00	80	70	63	79	69	63	76	70	62	55
1.25	87	77	71	85	76	70	82	75	69	62
1.50	91	82	76	90	81	76	87	80	74	67
2.00	97	90	84	96	89	83	92	86	82	74
2.50	101	94	88	99	92	87	95	90	85	77
3.00	104	98	93	102	96	92	97	93	89	81
4.00	107	102	98	105	100	96	100	97	94	85
5.00	109	105	101	107	103	100	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

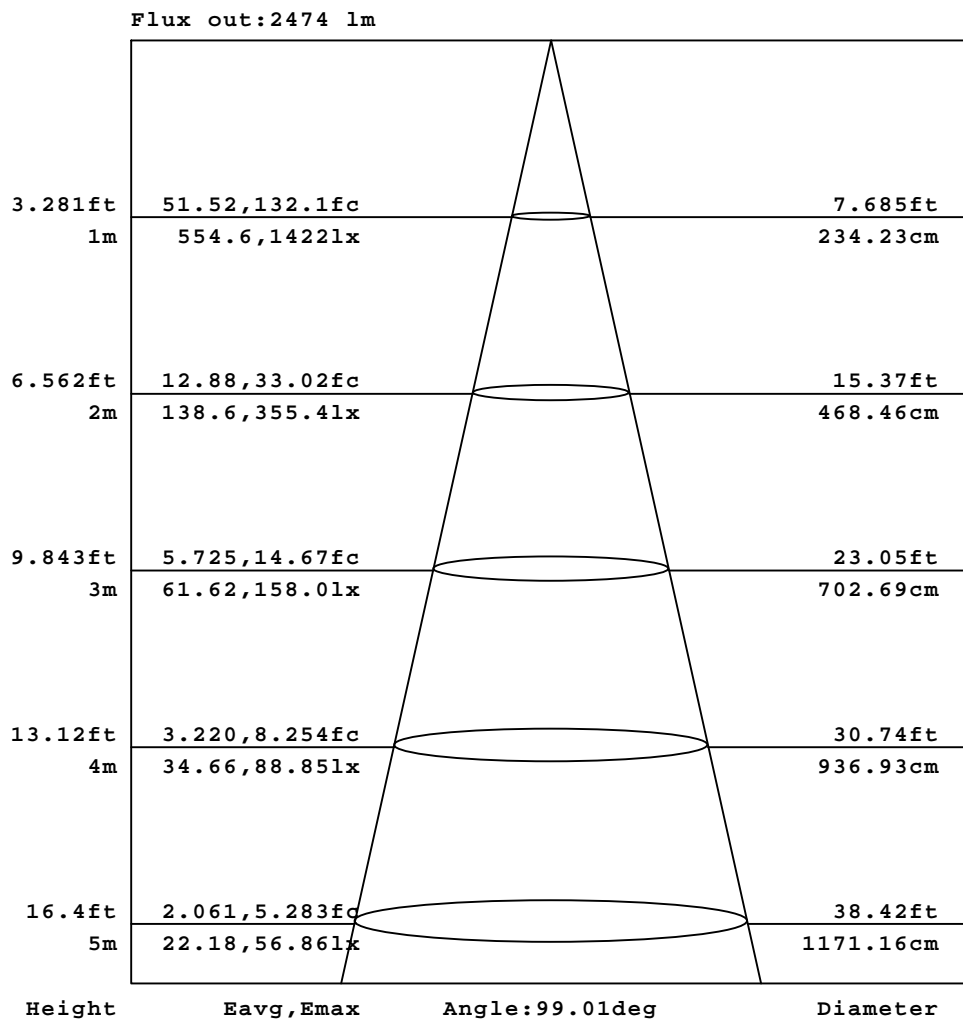


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



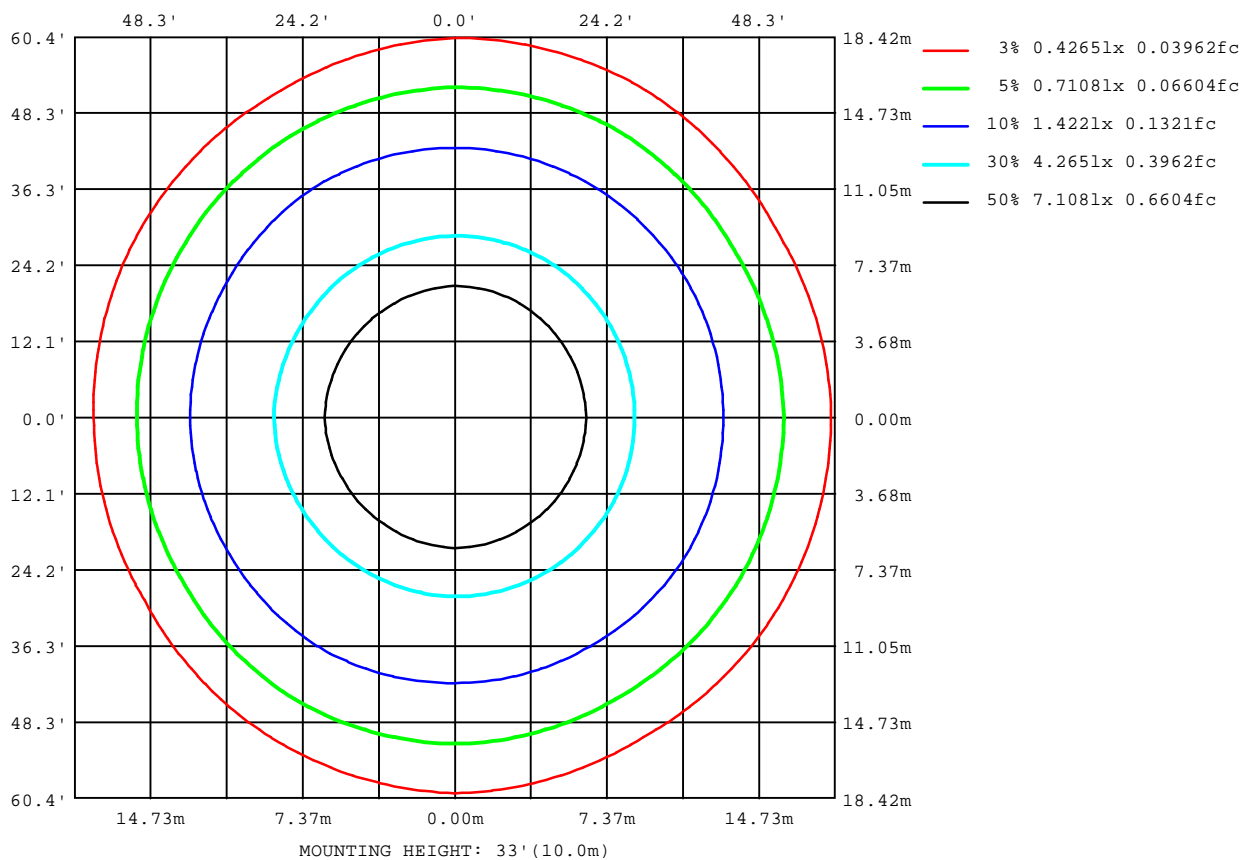
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 03
Test Date: 2019-08-24

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 60.0%
Test Distance: 12.200m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

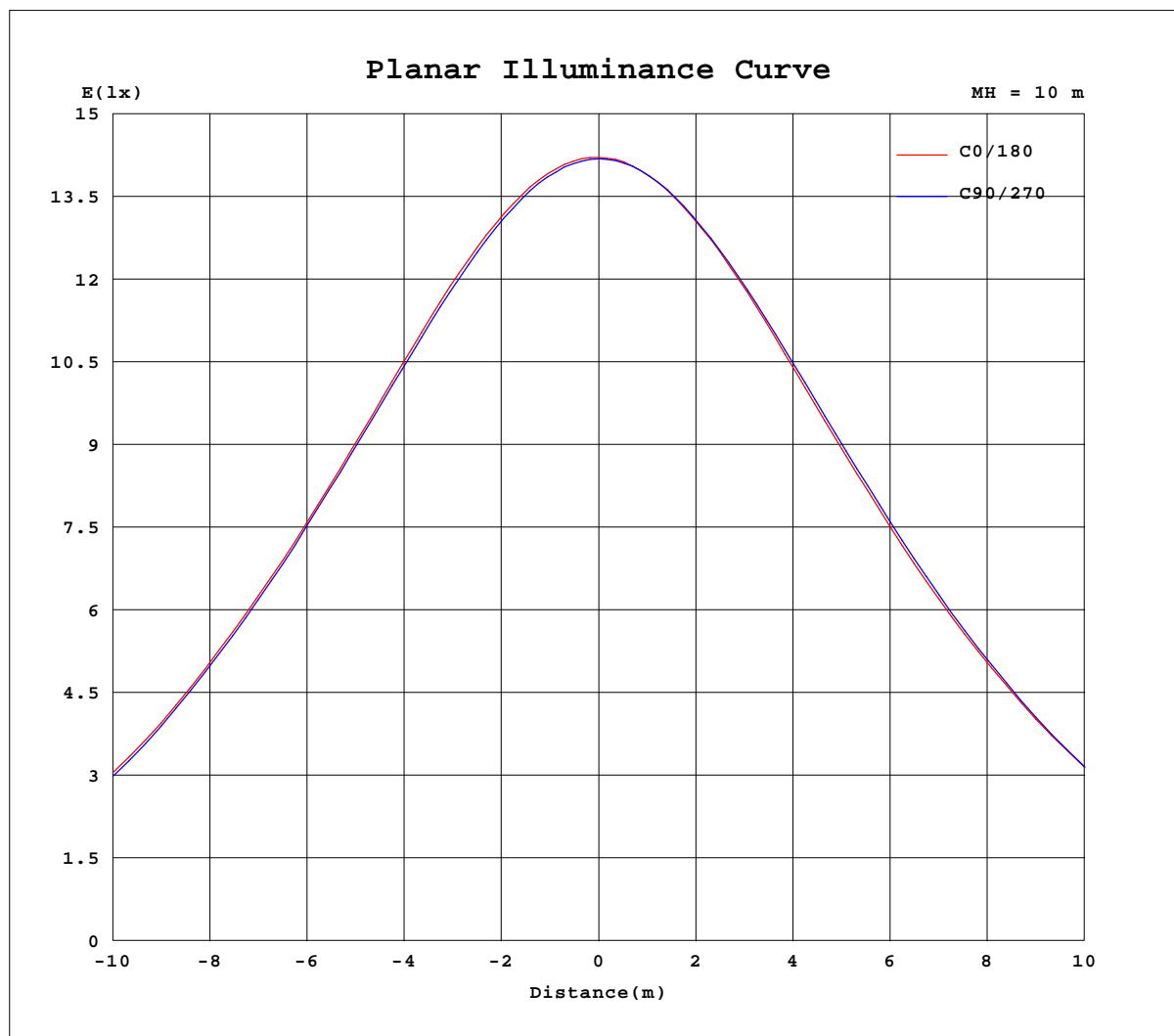
Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 03
Test Date: 2019-08-24

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 60.0%
Test Distance: 12.200m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: 03
Test Date: 2019-08-24

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 60.0%
Test Distance: 12.200m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.2V I:0.1420A P:32.48W PF:0.9520 Lamp Flux:3497.73x1 lm		
NAME: R250 (33W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(°) g (°)	0	30	60	90	120	150	180	210	240	270	300	330						
0	1422	1418	1419	1419	1418	1417	1422	1418	1419	1419	1418	1417						
5	1417	1414	1413	1412	1409	1409	1414	1410	1412	1413	1414	1414						
10	1400	1397	1395	1392	1387	1388	1393	1390	1391	1395	1397	1397						
15	1371	1367	1365	1361	1354	1354	1361	1357	1360	1366	1369	1368						
20	1331	1326	1323	1320	1310	1309	1318	1312	1317	1327	1330	1327						
25	1281	1274	1270	1271	1255	1253	1266	1257	1263	1279	1281	1275						
30	1218	1208	1204	1209	1186	1184	1205	1191	1196	1220	1218	1210						
35	1139	1125	1121	1127	1101	1101	1129	1110	1115	1144	1140	1129						
40	1025	1018	1016	1013	993	1000	1031	1009	1016	1041	1041	1027						
45	865	873	863	845	846	868	892	879	888	894	904	892						
50	702	711	681	677	689	678	691	694	720	714	720	722						
55	553	549	529	529	532	497	502	511	548	557	554	544						
60	416	409	391	408	386	351	354	375	392	425	424	398						
65	294	301	288	293	269	232	255	259	263	307	312	289						
70	202	221	210	196	181	162	193	182	176	205	225	209						
75	152	162	151	127	123	124	138	136	119	132	157	151						
80	111	119	98.5	81.8	78.0	93.0	76.1	92.6	75.4	83.1	98.2	115						
85	59.8	69.3	53.7	36.3	37.6	42.5	33.1	42.0	38.9	42.4	56.2	71.1						
90	7.89	8.55	5.78	3.75	3.31	3.25	3.23	3.46	4.83	6.71	13.3	14.4						
95	2.75	2.93	2.92	3.08	3.02	3.15	2.96	2.91	2.96	2.65	2.70	2.58						
100	3.55	3.72	3.77	3.95	3.89	3.98	3.75	3.74	3.76	3.43	3.44	3.38						
105	4.52	4.74	4.72	4.83	4.90	5.05	4.73	4.75	4.76	4.46	4.44	4.32						
110	5.69	5.89	5.80	6.02	6.13	6.18	5.88	5.91	5.89	5.60	5.55	5.51						
115	6.98	7.14	7.13	7.35	7.48	7.48	7.08	7.17	7.15	6.82	6.76	6.77						
120	8.32	8.45	8.54	8.78	8.93	8.89	8.40	8.52	8.50	8.16	8.10	8.12						
125	9.77	9.89	9.96	10.2	10.4	10.3	9.85	9.94	9.94	9.58	9.51	9.54						
130	11.1	11.2	11.3	11.6	11.7	11.7	11.2	11.3	11.3	11.0	10.9	10.9						
135	12.3	12.4	12.6	12.8	12.9	12.9	12.5	12.5	12.5	12.3	12.2	12.1						
140	13.5	13.7	13.8	14.1	14.2	14.1	13.8	13.8	13.7	13.5	13.5	13.4						
145	14.8	15.0	15.2	15.4	15.4	15.4	15.0	15.0	14.9	14.8	14.7	14.6						
150	16.1	16.3	16.5	16.6	16.6	16.6	16.3	16.2	16.2	16.0	16.0	15.9						
155	17.4	17.6	17.7	17.9	17.8	17.8	17.6	17.5	17.4	17.3	17.3	17.2						
160	18.5	18.7	18.8	18.9	18.8	18.9	18.7	18.5	18.5	18.4	18.5	18.3						
165	19.4	19.5	19.6	19.7	19.6	19.7	19.6	19.4	19.4	19.3	19.4	19.3						
170	20.1	20.2	20.2	20.3	20.2	20.3	20.2	20.1	20.2	20.0	20.2	20.0						
175	20.4	20.5	20.5	20.5	20.5	20.6	20.3	20.3	20.3	20.2	20.3	20.2						
180	20.5	20.5	20.5	20.4	20.5	20.5	20.5	20.5	20.5	20.4	20.4	20.4						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:03
Test Date:2019-08-24

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:60.0%
Test Distance:12.200m [K=1.0000]
Remarks: