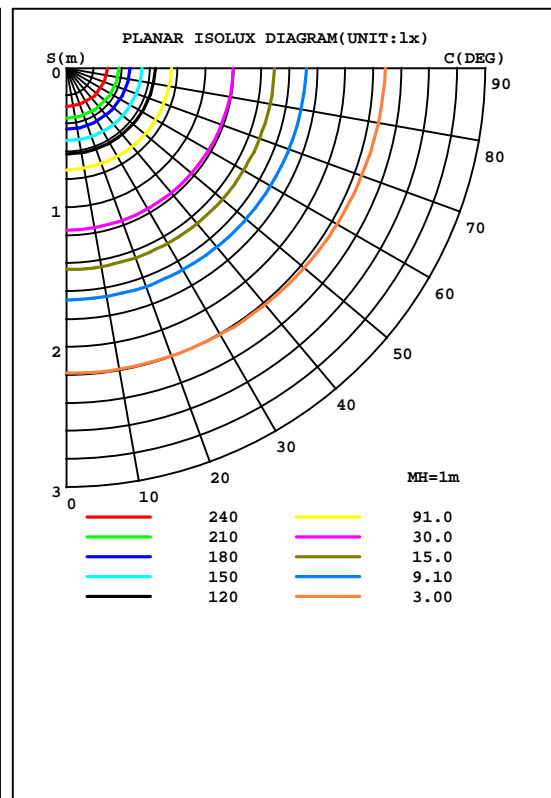
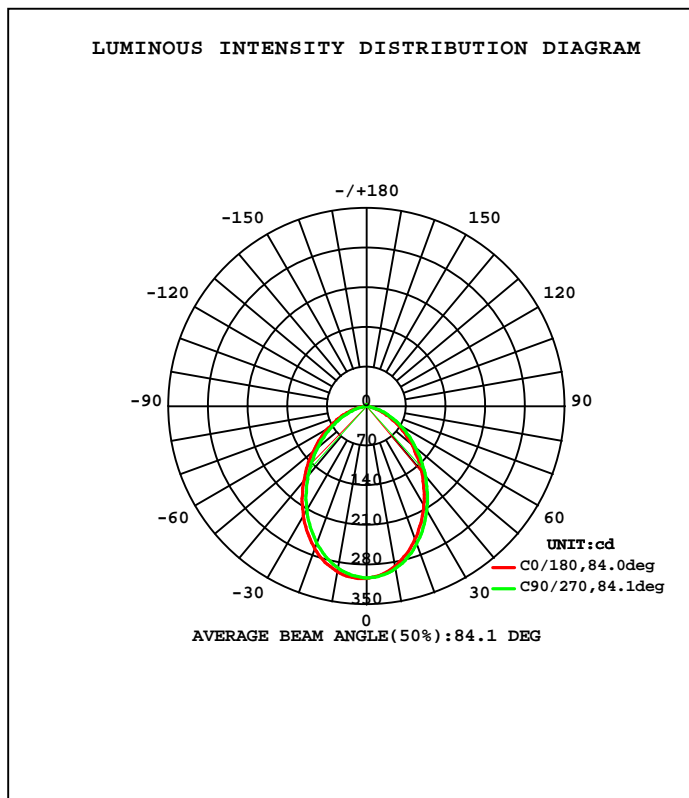


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 71.75 lm/W			
MODEL		I _{max} (cd)	304.4	S/MH(C0/180)	1.03
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	1.08
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	598.66	h UP, DN(C0-180)	0.8, 48.4
NOMINAL FLUX(lm)	598.661	CIE CLASS	DIRECT	h UP, DN(C180-360)	0.8, 50.0
LAMPS INSIDE	1	h up(%)	1.6	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	240.4	h down(%)	98.4	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 03
 Test Date: 2019-11-09

Angle 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	287.2	288.8	291.9	295.3	297.1	294.6	290.6	286.2	0- 10	28.38	28.38	4.74,4.74
20	250.4	253.1	259.0	265.9	268.2	264.6	257.8	250.2	10- 20	77.89	106.3	17.7,17.7
30	202.5	205.5	212.7	221.6	224.1	220.1	212.0	202.8	20- 30	108.8	215.0	35.9,35.9
40	151.5	154.6	161.9	171.0	173.3	169.6	161.6	152.1	30- 40	117.0	332.1	55.5,55.5
50	103.5	106.6	113.4	121.8	123.5	120.3	113.0	104.3	40- 50	105.8	437.8	73.1,73.1
60	61.33	64.32	70.38	77.50	78.75	75.80	69.50	62.08	50- 60	81.36	519.2	86.7,86.7
70	26.16	28.81	32.93	39.53	40.49	37.83	32.62	26.68	60- 70	50.37	569.6	95.1,95.1
80	1.961	1.621	1.473	5.371	10.75	7.172	2.716	2.094	70- 80	18.39	588.0	98.2,98.2
90	0.2221	0.2709	0.1643	0.1936	0.2029	0.1643	0.2127	0.1932	80- 90	0.9158	588.9	98.4,98.4
100	0.5023	0.5610	0.4346	0.4445	0.4161	0.3374	0.4836	0.4535	90-100	0.3400	589.2	98.4,98.4
110	0.9368	0.9676	0.8208	0.8213	0.7735	0.7327	0.8418	0.8681	100-110	0.6779	589.9	98.5,98.5
120	1.458	1.459	1.332	1.276	1.228	1.197	1.324	1.361	110-120	1.068	591.0	98.7,98.7
130	2.038	2.000	1.893	1.798	1.749	1.748	1.847	1.911	120-130	1.426	592.4	99,99
140	2.618	2.580	2.491	2.387	2.321	2.338	2.436	2.511	130-140	1.673	594.1	99.2,99.2
150	3.148	3.093	3.043	2.928	2.879	2.907	2.986	3.053	140-150	1.713	595.8	99.5,99.5
160	3.565	3.527	3.497	3.411	3.363	3.390	3.450	3.488	150-160	1.494	597.3	99.8,99.8
170	3.874	3.865	3.836	3.807	3.768	3.777	3.807	3.816	160-170	1.030	598.3	99.9,99.9
180	3.981	4.000	3.961	3.981	3.981	3.990	3.971	3.981	170-180	0.3720	598.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

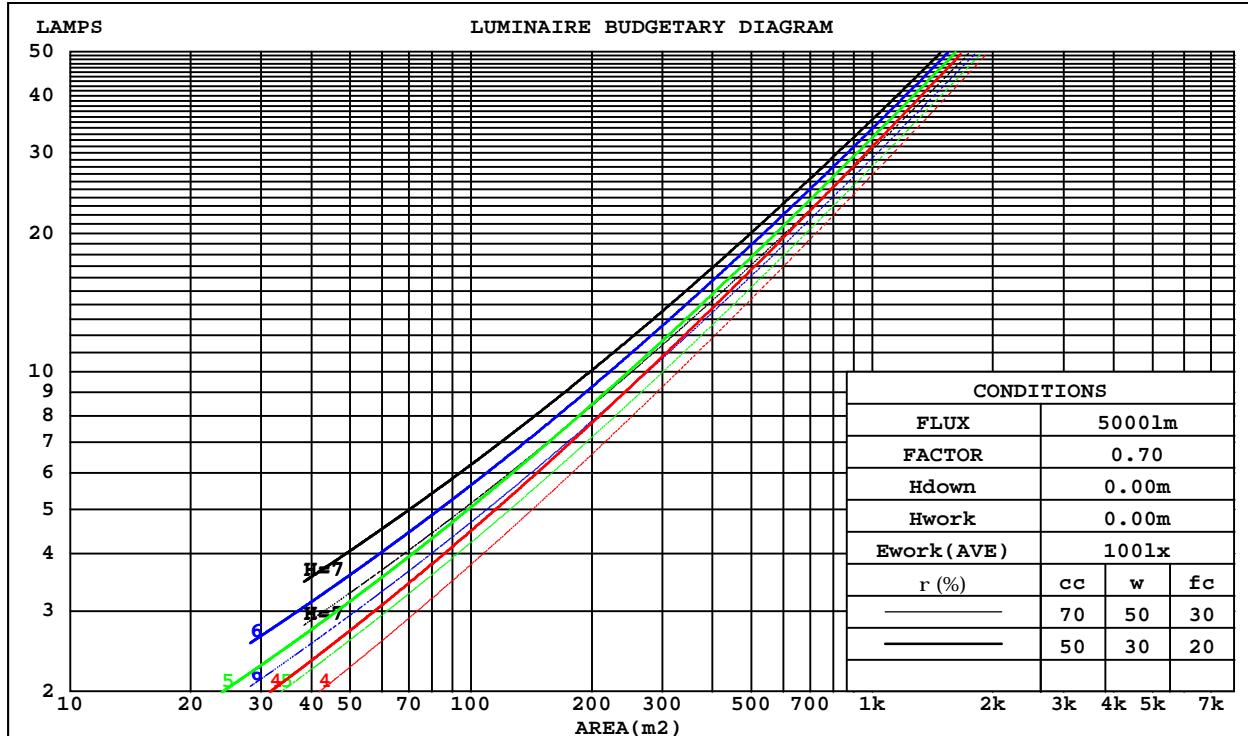
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	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	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.98
1.0	1.06	1.03	.90	1.04	1.01	.98	.99	.97	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.95	.89	.84	.93	.87	.83	.89	.84	.81	.85	.82	.79	.82	.79	.77	.75
3.0	.84	.77	.72	.83	.76	.71	.80	.74	.69	.77	.72	.68	.74	.70	.67	.65
4.0	.76	.68	.62	.74	.67	.61	.72	.65	.60	.69	.64	.60	.67	.62	.59	.57
5.0	.68	.60	.54	.67	.60	.54	.65	.58	.53	.63	.57	.53	.61	.56	.52	.50
6.0	.62	.54	.48	.61	.54	.48	.59	.52	.47	.58	.52	.47	.56	.51	.46	.44
7.0	.57	.49	.43	.56	.48	.43	.54	.48	.43	.53	.47	.42	.51	.46	.42	.40
8.0	.52	.44	.39	.52	.44	.39	.50	.43	.38	.49	.43	.38	.48	.42	.38	.36
9.0	.48	.41	.35	.48	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33
10.0	.45	.37	.32	.44	.37	.32	.43	.37	.32	.42	.36	.32	.41	.36	.32	.30



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	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	.255	.145	.046	.248	.141	.045	.234	.134	.043	.221	.127	.041	.209	.121	.039	
2.0	.248	.136	.042	.242	.133	.041	.230	.128	.040	.218	.123	.038	.208	.118	.037	
3.0	.235	.125	.037	.229	.123	.037	.219	.118	.036	.209	.114	.035	.199	.110	.034	
4.0	.221	.115	.034	.216	.113	.033	.206	.109	.033	.197	.106	.032	.189	.103	.031	
5.0	.207	.105	.031	.202	.104	.030	.194	.101	.030	.186	.098	.029	.179	.095	.029	
6.0	.194	.097	.028	.190	.096	.028	.182	.093	.027	.175	.091	.027	.169	.089	.026	
7.0	.182	.090	.026	.178	.089	.025	.172	.087	.025	.165	.085	.025	.159	.083	.024	
8.0	.171	.084	.024	.168	.083	.023	.162	.081	.023	.156	.079	.023	.151	.077	.023	
9.0	.162	.078	.022	.159	.077	.022	.153	.076	.021	.148	.074	.021	.143	.073	.021	
10.0	.153	.073	.020	.150	.073	.020	.145	.071	.020	.140	.070	.020	.136	.068	.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	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.189	.169	.151	.162	.145	.130	.111	.100	.090	.064	.058	.052	.020	.019	.017	
2.0	.179	.145	.116	.153	.125	.100	.105	.086	.070	.061	.050	.041	.019	.016	.013	
3.0	.170	.127	.092	.146	.109	.080	.100	.076	.056	.058	.044	.033	.019	.014	.011	
4.0	.163	.113	.075	.140	.098	.065	.096	.068	.046	.055	.040	.027	.018	.013	.009	
5.0	.155	.102	.064	.133	.089	.055	.092	.062	.039	.053	.036	.023	.017	.012	.008	
6.0	.148	.094	.055	.128	.081	.048	.088	.057	.034	.051	.033	.020	.016	.011	.007	
7.0	.142	.087	.048	.122	.075	.042	.084	.053	.030	.049	.031	.018	.016	.010	.006	
8.0	.136	.081	.043	.117	.070	.038	.081	.049	.027	.047	.029	.016	.015	.010	.005	
9.0	.130	.076	.040	.112	.066	.035	.078	.046	.025	.045	.027	.015	.015	.009	.005	
10.0	.125	.072	.037	.108	.062	.032	.075	.044	.023	.044	.026	.014	.014	.009	.004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:

Uncorrected UGR Table

Test:U:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm										
NAME: R770BC-8.5W-4000K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.: AXG					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	26.3	27.6	26.6	27.9	28.1	26.7	28.1	27.0	28.3	28.5
3H	27.0	28.2	27.3	28.4	28.7	27.6	28.8	27.9	29.0	29.3
4H	27.0	28.2	27.4	28.5	28.8	27.7	28.8	28.0	29.1	29.4
6H	27.0	28.1	27.3	28.4	28.7	27.6	28.7	27.9	29.0	29.3
8H	26.9	28.0	27.3	28.3	28.6	27.6	28.6	27.9	28.9	29.2
12H	26.9	27.9	27.2	28.2	28.5	27.5	28.5	27.9	28.8	29.2
4H 2H	26.7	27.8	27.0	28.1	28.4	27.0	28.2	27.4	28.5	28.7
3H	27.4	28.5	27.8	28.8	29.1	28.0	29.0	28.3	29.3	29.6
4H	27.6	28.5	28.0	28.8	29.2	28.1	29.0	28.5	29.4	29.7
6H	27.5	28.3	27.9	28.7	29.1	28.1	28.9	28.5	29.2	29.6
8H	27.5	28.2	27.9	28.6	29.0	28.0	28.8	28.5	29.2	29.6
12H	27.4	28.1	27.9	28.5	29.0	28.0	28.7	28.4	29.1	29.5
8H 4H	27.6	28.3	28.0	28.7	29.1	28.1	28.8	28.5	29.2	29.6
6H	27.5	28.1	28.0	28.6	29.0	28.0	28.7	28.5	29.1	29.5
8H	27.5	28.0	28.0	28.5	28.9	28.0	28.5	28.5	29.0	29.5
12H	27.4	27.9	27.9	28.4	28.9	28.0	28.4	28.5	28.9	29.4
12H 4H	27.5	28.2	28.0	28.6	29.0	28.0	28.7	28.5	29.1	29.6
6H	27.5	28.0	28.0	28.5	29.0	28.0	28.5	28.5	29.0	29.5
8H	27.4	27.9	27.9	28.4	28.9	28.0	28.4	28.5	28.9	29.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.5				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.8 / - 0.8					+ 0.8 / - 0.9				

CIE Pub.117 Corrected 598.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.8)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:

UTILIZATION FACTORS TABLE

Test:U:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:

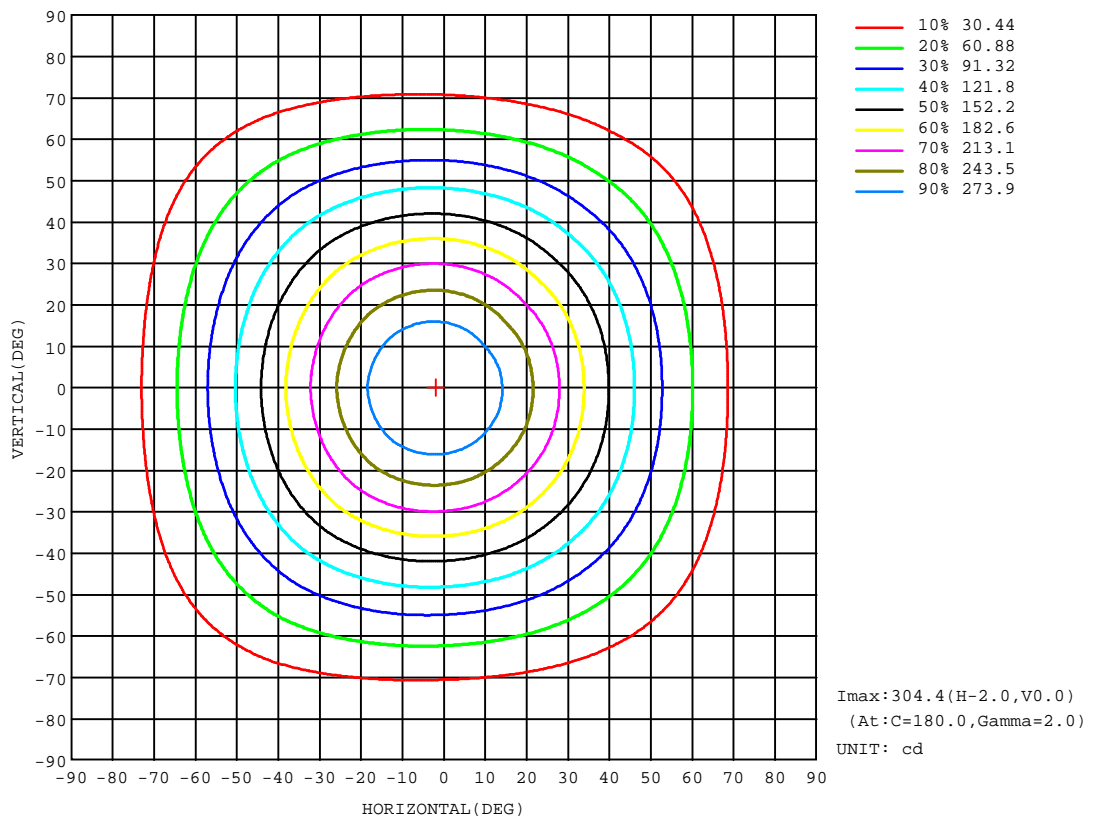
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	53	47	63	53	47	62	52	47	41
0.80	74	63	57	73	63	57	71	62	56	50
1.00	82	72	66	81	71	65	78	72	65	58
1.25	88	79	73	87	79	73	84	77	72	65
1.50	93	85	79	91	84	78	88	82	77	70
2.00	99	92	86	97	91	86	94	88	84	77
2.50	102	96	91	100	94	90	96	92	88	80
3.00	105	99	95	103	98	94	99	95	91	83
4.00	108	104	100	106	102	98	102	98	96	87
5.00	110	106	103	108	104	101	103	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: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:



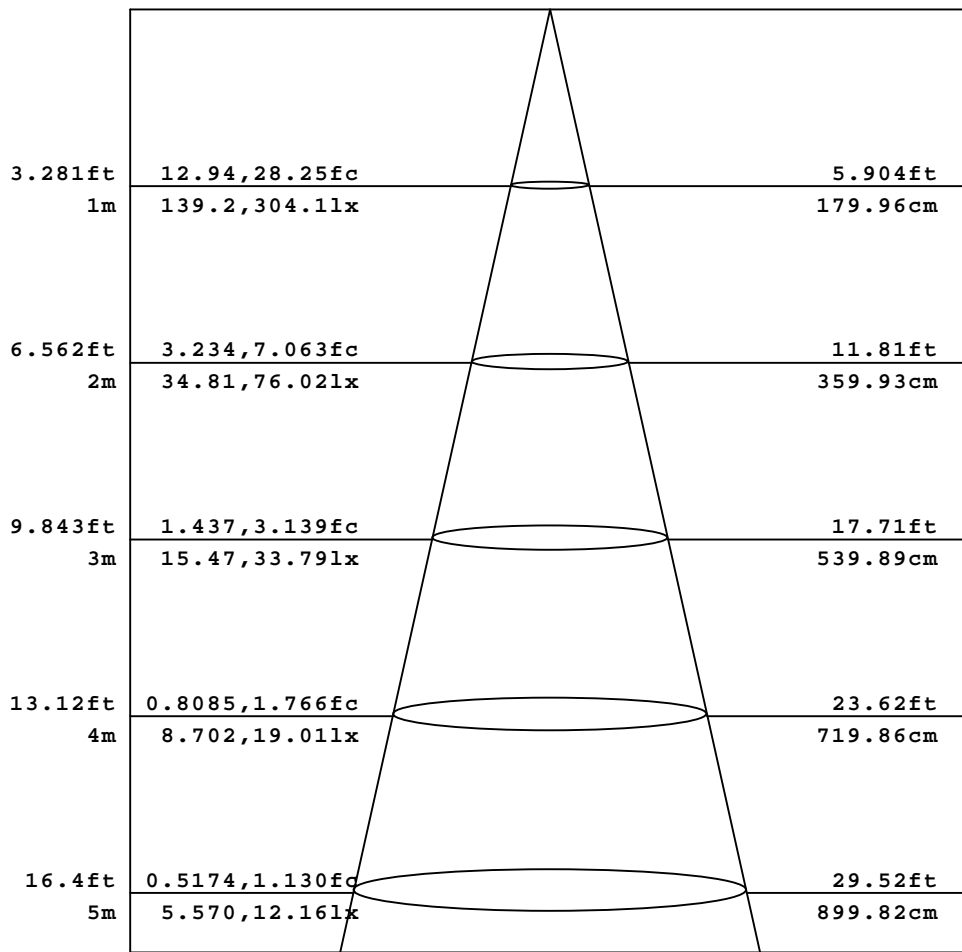
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:

Flux out:354.6 lm



Height Eavg, Emax Angle:83.96deg Diameter

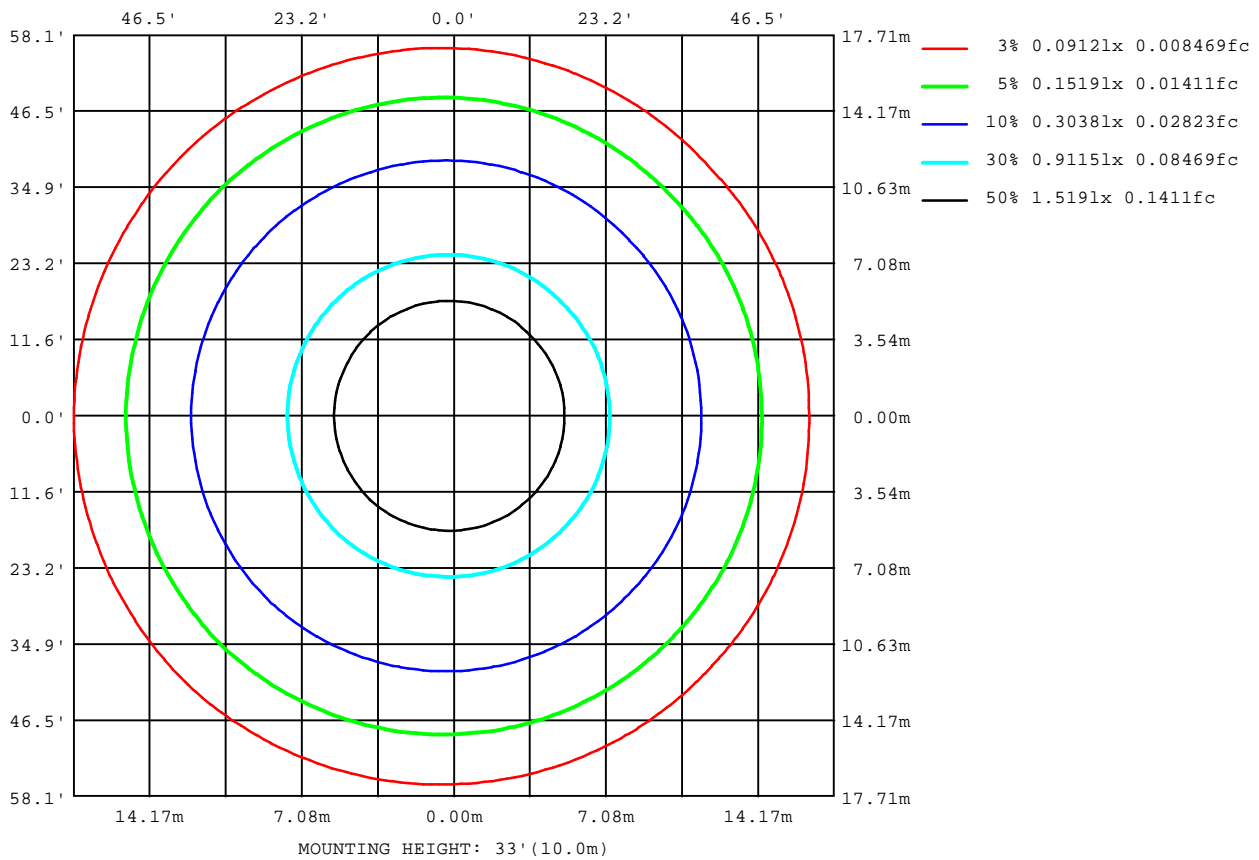
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

log 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

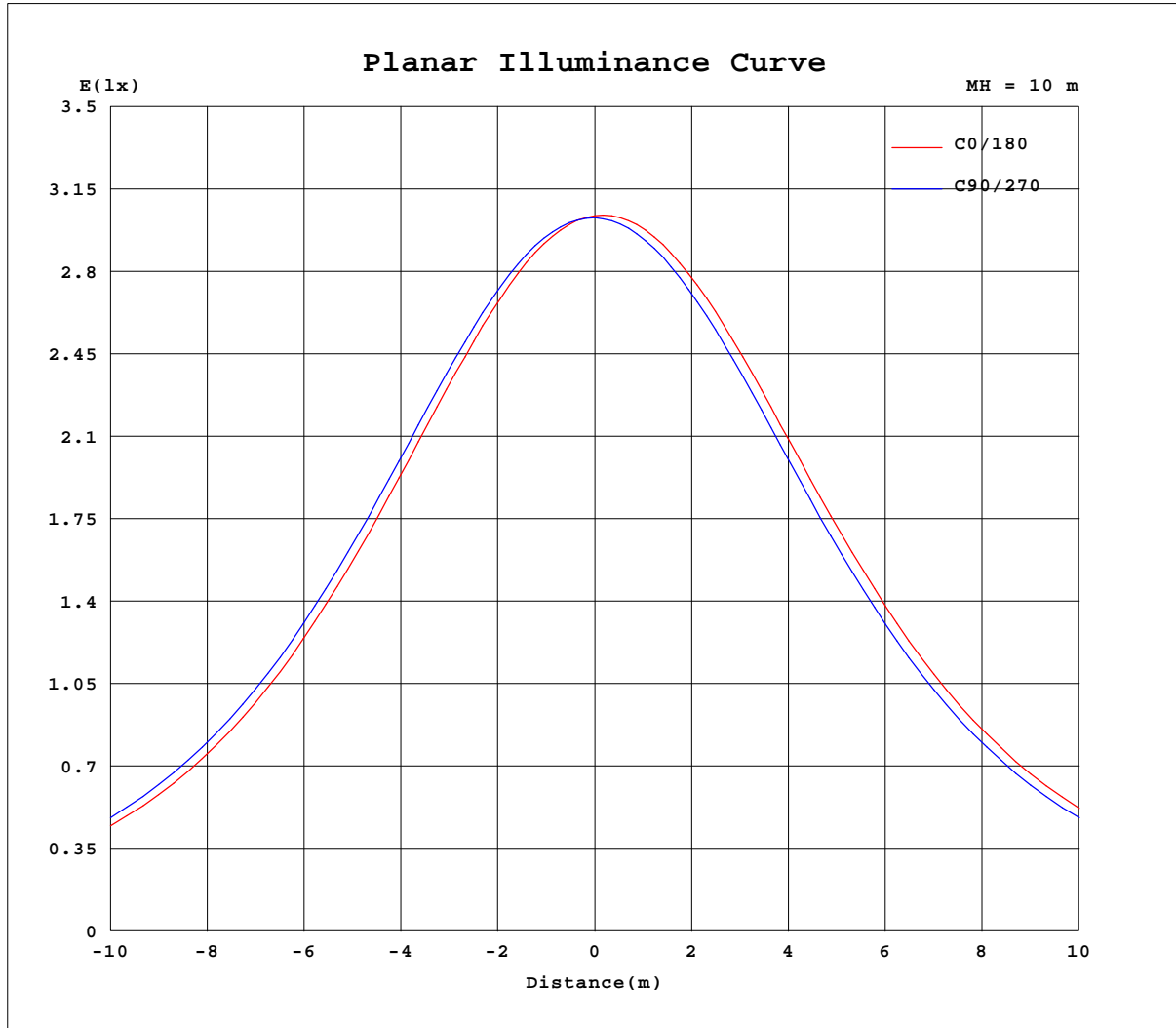
Test:U:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

Log 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: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: 03
 Test Date: 2019-11-09

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:240.4V I:0.0372A P:8.343W PF:0.9337 Lamp Flux:598.661x1 lm		
NAME: R770BC-8.5W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: AXG	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	304	303	303	302	304	303	303	302										
5	298	299	300	302	303	302	300	297										
10	287	289	292	295	297	295	291	286										
15	271	273	278	283	285	282	276	270										
20	250	253	259	266	268	265	258	250										
25	227	230	237	245	247	244	236	227										
30	202	206	213	222	224	220	212	203										
35	177	180	187	197	199	195	187	177										
40	151	155	162	171	173	170	162	152										
45	127	130	137	146	148	145	137	128										
50	103	107	113	122	124	120	113	104										
55	81.6	84.7	91.1	98.8	100	97.3	90.5	82.4										
60	61.3	64.3	70.4	77.5	78.8	75.8	69.5	62.1										
65	42.7	45.6	51.2	57.7	58.7	55.9	50.2	43.4										
70	26.2	28.8	32.9	39.5	40.5	37.8	32.6	26.7										
75	12.1	12.9	14.2	21.1	24.3	21.8	16.7	12.5										
80	1.96	1.62	1.47	5.37	10.7	7.17	2.72	2.09										
85	0.23	0.18	0.17	0.14	1.30	0.21	0.20	0.19										
90	0.22	0.27	0.16	0.19	0.20	0.16	0.21	0.19										
95	0.33	0.40	0.28	0.31	0.29	0.20	0.33	0.31										
100	0.50	0.56	0.43	0.44	0.42	0.34	0.48	0.45										
105	0.72	0.75	0.61	0.61	0.58	0.52	0.66	0.65										
110	0.94	0.97	0.82	0.82	0.77	0.73	0.84	0.87										
115	1.20	1.20	1.06	1.03	0.99	0.95	1.07	1.10										
120	1.46	1.46	1.33	1.28	1.23	1.20	1.32	1.36										
125	1.73	1.71	1.60	1.53	1.48	1.46	1.58	1.63										
130	2.04	2.00	1.89	1.80	1.75	1.75	1.85	1.91										
135	2.34	2.30	2.19	2.11	2.03	2.03	2.13	2.22										
140	2.62	2.58	2.49	2.39	2.32	2.34	2.44	2.51										
145	2.89	2.84	2.79	2.67	2.60	2.63	2.71	2.80										
150	3.15	3.09	3.04	2.93	2.88	2.91	2.99	3.05										
155	3.36	3.33	3.28	3.18	3.14	3.16	3.24	3.28										
160	3.56	3.53	3.50	3.41	3.36	3.39	3.45	3.49										
165	3.75	3.71	3.68	3.62	3.59	3.58	3.65	3.67										
170	3.87	3.87	3.84	3.81	3.77	3.78	3.81	3.82										
175	3.97	3.97	3.93	3.94	3.92	3.92	3.92	3.95										
180	3.98	4.00	3.96	3.98	3.98	3.99	3.97	3.98										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:03
 Test Date:2019-11-09

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: