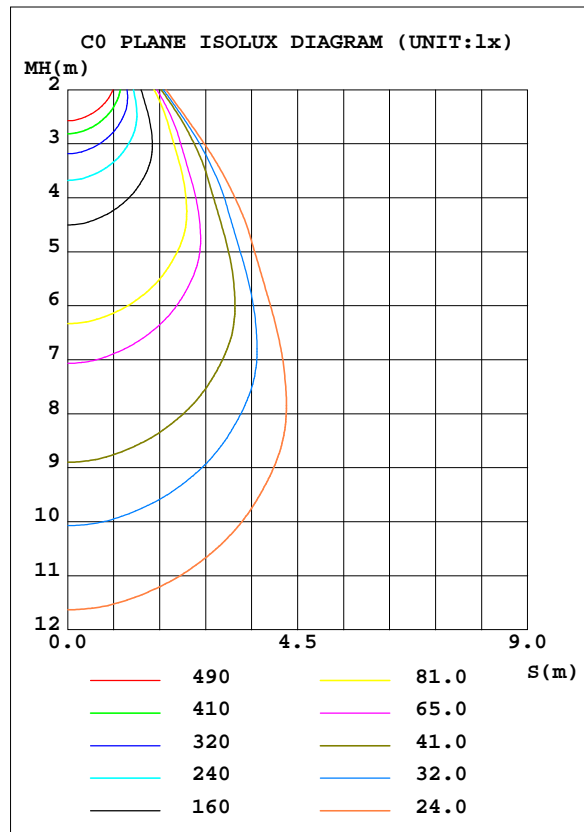
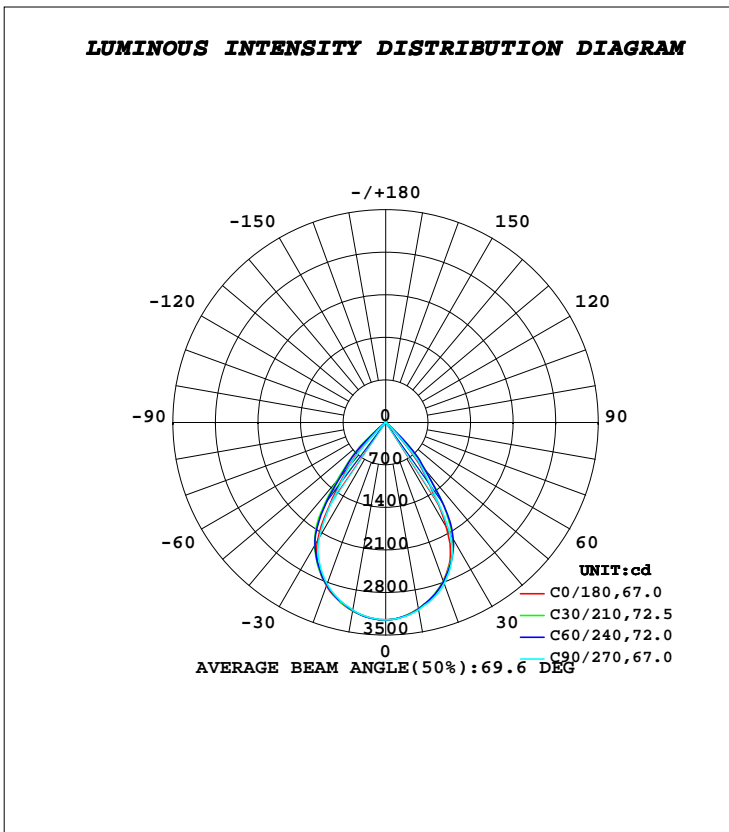


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.67 lm/W			
MODEL		I <sub>max</sub> (cd)	3249	S/MH(C0/180)	0.95
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.96
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3874.9	η UP, DN(C0-180)	1.3, 47.6
NOMINAL FLUX(lm)	3874.92	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.4, 49.6
LAMPS INSIDE	1	η up(%)	2.7	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	220	η down(%)	97.3	CIBSE SHR MAX	1.10



**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

**ZONAL FLUX DIAGRAM**

**ZONAL FLUX DIAGRAM:**

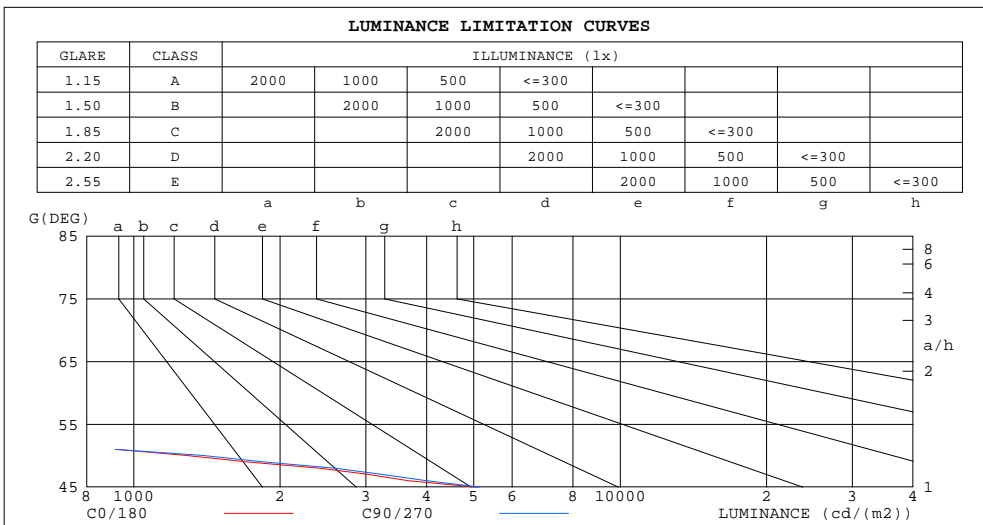
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	3111	3114	3127	3141	3152	3141	3132	3115	0- 10	304.2	304.2	7.85,7.85
20	2777	2782	2818	2840	2861	2845	2826	2789	10- 20	842.4	1147	29.6,29.6
30	2006	2217	2123	2319	2249	2336	2183	2233	20- 30	1176	2323	59.9,59.9
40	749.3	995.7	830.7	1158	966.9	1198	921.5	1054	30- 40	1016	3338	86.1,86.1
50	43.68	74.11	47.30	144.4	89.28	176.9	75.10	104.3	40- 50	387.9	3726	96.2,96.2
60	6.330	5.663	6.375	6.622	11.73	11.77	11.28	10.64	50- 60	27.60	3754	96.9,96.9
70	2.748	2.448	2.661	2.721	6.647	6.701	6.566	6.374	60- 70	6.175	3760	97,97
80	1.918	1.800	1.874	1.761	5.722	5.665	5.776	5.720	70- 80	4.125	3764	97.1,97.1
90	3.204	3.185	3.024	2.914	6.879	6.958	7.000	7.137	80- 90	4.691	3769	97.3,97.3
100	6.188	6.183	5.887	5.712	9.015	9.155	9.221	9.480	90-100	6.802	3775	97.4,97.4
110	10.45	10.58	10.09	9.921	12.17	12.38	12.41	12.88	100-110	9.926	3785	97.7,97.7
120	16.07	16.13	15.60	15.35	16.57	16.83	16.98	17.49	110-120	13.68	3799	98,98
130	21.88	21.50	21.45	20.86	21.48	21.38	21.93	21.90	120-130	17.03	3816	98.5,98.5
140	25.65	25.06	25.43	24.71	24.81	24.48	25.16	24.79	130-140	18.05	3834	98.9,98.9
150	27.53	27.23	27.52	27.13	26.60	26.37	26.88	26.62	140-150	16.31	3850	99.4,99.4
160	29.50	29.44	29.66	29.45	28.33	28.37	28.60	28.64	150-160	12.89	3863	99.7,99.7
170	31.58	31.66	31.84	31.71	30.61	30.70	30.89	30.95	160-170	8.510	3872	99.9,99.9
180	32.28	32.28	32.58	32.44	32.27	32.28	32.59	32.44	170-180	3.034	3875	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2019-10-18**

**$\gamma$  Range: 0 - 180DEG**  
 **$\gamma$  Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=0.7063]**  
**Remarks:**

**LUMINANCE LIMITATION CURVES**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	504	481
80	208	204
75	135	132
70	152	147
65	182	179
60	239	241
55	419	388
50	1282	1388
45	5085	5155

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**



**WEC AND CCEC**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
<b>RCR</b>	<b>RCR:Room Cavity Ratio</b>						<b>Wall Exitance Coefficients(WEC)</b>									
0.0																
1.0	.190	.108	.034	.182	.104	.033	.168	.096	.031	.155	.089	.029	.143	.083	.027	
2.0	.182	.100	.031	.176	.097	.030	.164	.091	.028	.153	.086	.027	.142	.080	.025	
3.0	.174	.093	.028	.169	.090	.027	.158	.086	.026	.148	.081	.025	.139	.077	.024	
4.0	.166	.086	.025	.162	.085	.025	.152	.081	.024	.144	.077	.023	.136	.074	.022	
5.0	.159	.081	.023	.155	.079	.023	.146	.076	.022	.139	.073	.022	.132	.070	.021	
6.0	.152	.076	.022	.148	.075	.022	.141	.072	.021	.134	.070	.020	.128	.067	.020	
7.0	.145	.072	.020	.142	.071	.020	.135	.068	.020	.129	.066	.019	.123	.064	.019	
8.0	.139	.068	.019	.136	.067	.019	.130	.065	.019	.124	.063	.018	.119	.061	.018	
9.0	.133	.064	.018	.130	.063	.018	.125	.062	.017	.120	.060	.017	.115	.058	.017	
10.0	.127	.061	.017	.125	.060	.017	.120	.059	.017	.115	.057	.016	.111	.056	.016	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
<b>RCR</b>	<b>RCR:Room Cavity Ratio</b>						<b>Ceiling Cavity Exitance Coefficients(CCEC)</b>									
0.0	.211	.211	.211	.181	.181	.181	.123	.123	.123	.071	.071	.071	.023	.023	.023	
1.0	.193	.178	.165	.165	.153	.142	.113	.105	.098	.065	.061	.057	.021	.020	.018	
2.0	.179	.154	.132	.153	.132	.115	.105	.091	.080	.061	.053	.047	.019	.017	.015	
3.0	.167	.135	.109	.143	.116	.095	.099	.081	.066	.057	.047	.039	.018	.015	.013	
4.0	.158	.121	.092	.135	.104	.080	.093	.073	.056	.054	.043	.033	.017	.014	.011	
5.0	.150	.109	.079	.129	.095	.069	.089	.066	.049	.051	.039	.029	.017	.013	.010	
6.0	.143	.100	.070	.123	.087	.061	.085	.061	.043	.049	.036	.025	.016	.012	.008	
7.0	.137	.093	.062	.118	.081	.054	.081	.056	.038	.047	.033	.023	.015	.011	.008	
8.0	.131	.087	.056	.113	.075	.049	.078	.053	.035	.045	.031	.021	.015	.010	.007	
9.0	.126	.082	.052	.109	.071	.045	.075	.050	.032	.044	.029	.019	.014	.010	.006	
10.0	.122	.078	.048	.105	.067	.042	.073	.047	.030	.043	.028	.018	.014	.009	.006	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7063]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

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				
<b>x = 2H y = 2H</b>	16.8	17.8	17.1	18.0	18.2	16.9	17.9	17.2	18.1	18.4
3H	16.6	17.5	16.9	17.8	18.0	16.7	17.6	17.0	17.9	18.2
4H	16.5	17.4	16.8	17.6	17.9	16.6	17.5	17.0	17.8	18.0
6H	16.4	17.2	16.8	17.5	17.8	16.5	17.3	16.9	17.6	17.9
8H	16.4	17.1	16.7	17.4	17.8	16.5	17.3	16.8	17.6	17.9
12H	16.3	17.1	16.7	17.4	17.7	16.4	17.2	16.8	17.5	17.8
<b>4H 2H</b>	16.5	17.4	16.8	17.6	17.9	16.6	17.5	17.0	17.8	18.0
3H	16.3	17.1	16.7	17.4	17.7	16.4	17.2	16.8	17.5	17.8
4H	16.2	16.9	16.6	17.2	17.6	16.3	17.0	16.7	17.4	17.7
6H	16.1	16.7	16.5	17.1	17.5	16.2	16.8	16.7	17.2	17.6
8H	16.1	16.6	16.5	17.0	17.4	16.2	16.7	16.6	17.1	17.5
12H	16.0	16.5	16.5	16.9	17.4	16.1	16.6	16.6	17.0	17.5
<b>8H 4H</b>	16.1	16.6	16.5	17.0	17.4	16.2	16.7	16.6	17.1	17.5
6H	16.0	16.4	16.4	16.8	17.3	16.1	16.5	16.5	17.0	17.4
8H	15.9	16.3	16.4	16.8	17.3	16.0	16.4	16.5	16.9	17.4
12H	15.9	16.2	16.4	16.7	17.2	16.0	16.3	16.5	16.8	17.3
<b>12H 4H</b>	16.0	16.5	16.5	16.9	17.4	16.1	16.6	16.6	17.0	17.5
6H	15.9	16.3	16.4	16.8	17.3	16.0	16.4	16.5	16.9	17.4
8H	15.8	16.2	16.4	16.7	17.2	16.0	16.3	16.5	16.8	17.3
<b>Variations with the observer position at spacings:</b>										
<b>S = 1.0H</b>	+ 2.8 / -19.5					+ 2.7 / -19.8				
1.5H	+ 4.8 / -18.2					+ 4.9 / -18.6				
2.0H	+ 8.0 / -11.3					+ 8.0 / -11.0				

CIE Pub.117, 3875 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 4.7)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11  
 Humidity:65.0%  
 Test Distance:8.000m [K=0.7063]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 Lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

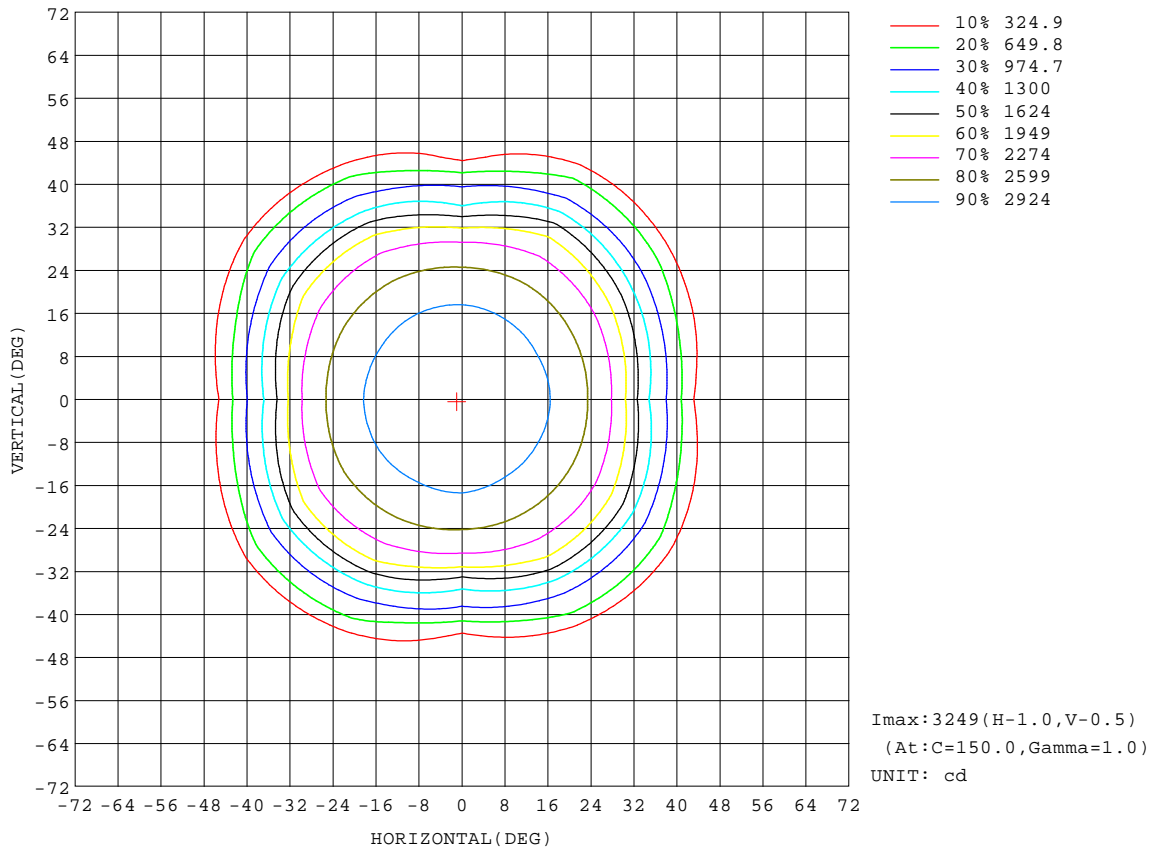
REFLECTANCE										
<b>Ceiling</b>	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
<b>Walls</b>	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
<b>Working plane</b>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
<b>ROOM INDEX</b>	<b>UTILIZATION FACTORS(PERCENT) <math>k(RI) \times RCR = 5</math></b>									
<b>k = 0.60</b>	83	76	72	82	76	72	81	75	71	67
<b>0.80</b>	91	84	80	90	84	80	89	83	80	75
<b>1.00</b>	96	90	86	95	89	86	93	89	85	80
<b>1.25</b>	101	95	91	99	94	91	97	93	90	85
<b>1.50</b>	104	98	95	102	97	94	100	96	93	88
<b>2.00</b>	107	102	99	105	101	98	102	99	96	90
<b>2.50</b>	109	104	101	107	103	100	103	100	98	91
<b>3.00</b>	110	107	104	108	105	102	104	102	100	92
<b>4.00</b>	112	109	107	110	107	105	106	104	102	94
<b>5.00</b>	114	111	109	111	109	107	107	105	104	95
<b>ROOM INDEX</b>	<b>UF(total)</b>									<b>Direct</b>
<b>According to DIN EN 13032-2 2004</b>			<b>Suspended</b>				<b>SHRNOM = 1.25</b>			

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=0.7063]**  
**Remarks:**

**ISOCANDELA DIAGRAM**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	



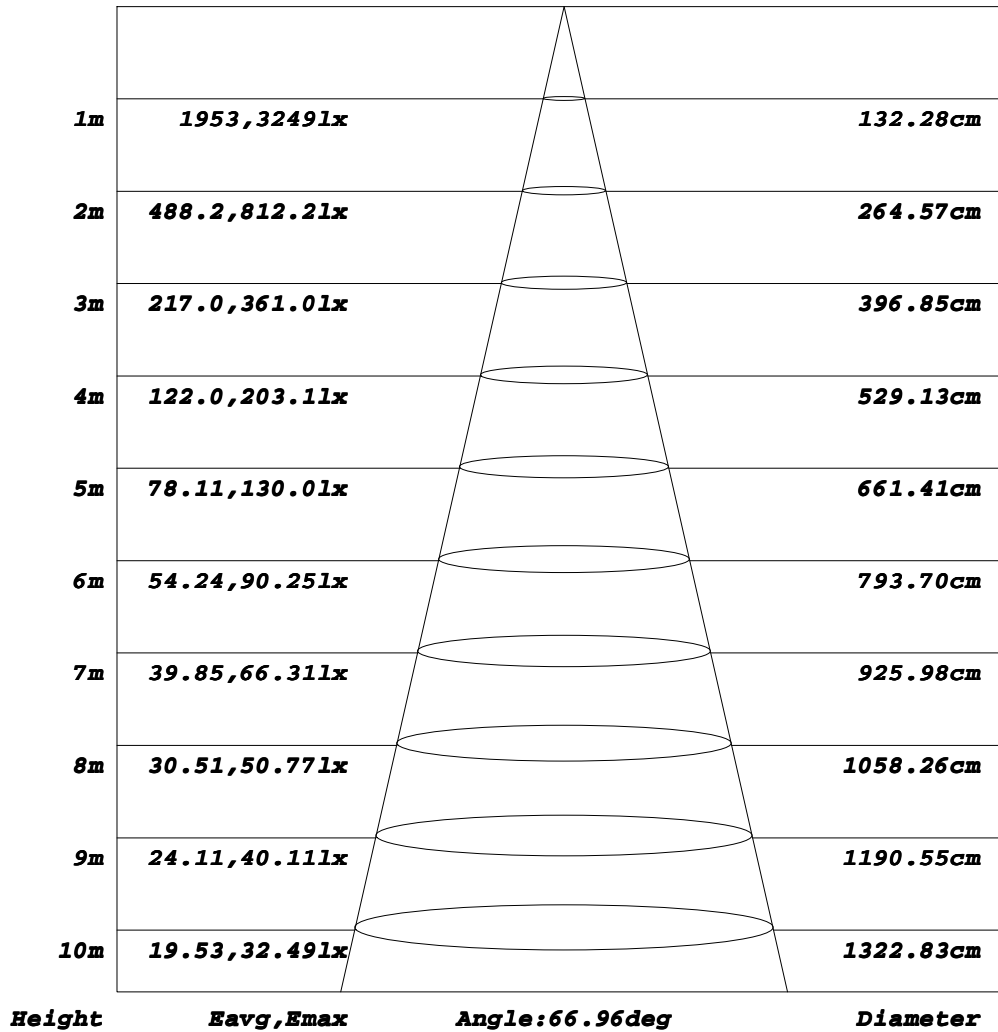
**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

**AAI Figure**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

**Flux out:2791 lm**



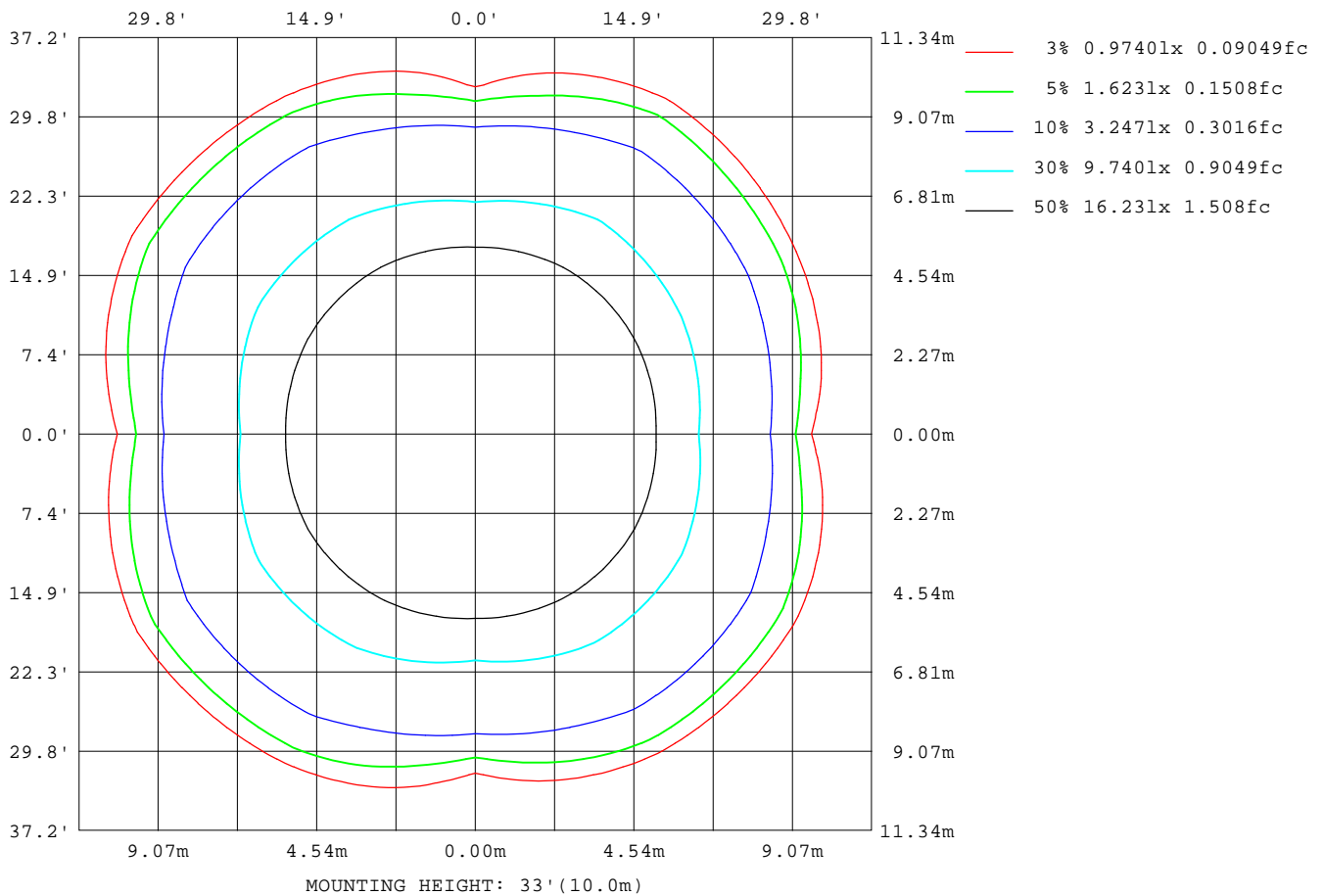
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature:25.3DEG**  
**Operators:DAMIN**  
**Test Date:2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity:65.0%**  
**Test Distance:8.000m [K=0.7063]**  
**Remarks:**

**ISOLUX DIAGRAM**

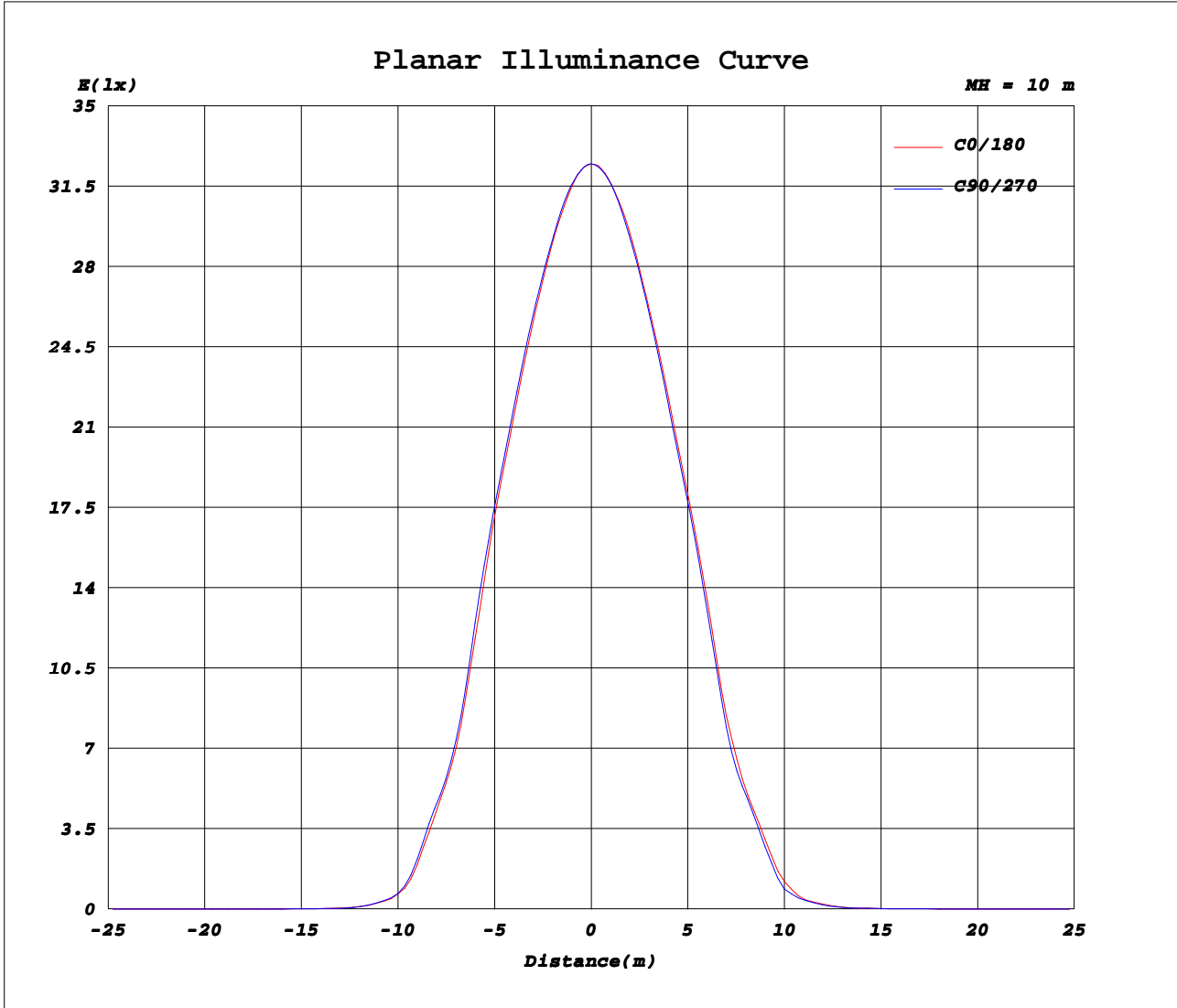
Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	



**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

**Planar Illuminance Curve**



**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:223.90V I:0.1220A P:26.600W PF:0.9680 Freq:50.00Hz Lamp Flux:3874.92x1 lm		
NAME: 174-270_4000K	TYPE:LED	
MFR.:	DIM.: 595*595mm	
	SUR.: (115*115) mm*4	

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	3247	3248	3248	3248	3249	3249	3247	3248	3248	3248	3249	3249							
5	3209	3211	3211	3215	3219	3222	3222	3220	3224	3218	3217	3207							
10	3111	3111	3116	3127	3135	3148	3152	3143	3139	3132	3124	3106							
15	2972	2968	2972	3001	3001	3024	3027	3018	3014	3008	2985	2965							
20	2777	2777	2787	2818	2832	2849	2861	2845	2845	2826	2801	2777							
25	2504	2529	2545	2555	2599	2627	2616	2628	2613	2573	2563	2531							
30	2006	2207	2226	2123	2291	2347	2249	2343	2329	2183	2273	2192							
35	1276	1656	1671	1339	1784	1908	1532	1919	1855	1440	1821	1610							
40	749	1003	988	831	1090	1226	967	1248	1148	921	1125	982							
45	191	514	497	193	626	726	342	758	705	249	668	492							
50	43.7	76.5	71.7	47.3	108	181	89.3	209	145	75.1	126	82.5							
55	12.7	13.9	12.7	11.8	18.0	25.0	20.6	32.4	30.5	20.5	24.7	21.8							
60	6.33	5.73	5.60	6.37	6.24	7.01	11.7	11.7	11.8	11.3	10.9	10.4							
65	4.07	3.62	3.58	4.01	3.88	4.16	8.55	8.43	8.31	8.28	7.95	7.77							
70	2.75	2.47	2.43	2.66	2.62	2.82	6.65	6.76	6.64	6.57	6.45	6.30							
75	1.85	1.81	1.77	1.81	1.89	1.96	5.60	5.76	5.70	5.59	5.64	5.57							
80	1.92	1.80	1.80	1.87	1.77	1.75	5.72	5.68	5.65	5.78	5.70	5.74							
85	2.33	2.28	2.29	2.22	2.17	2.11	6.21	6.22	6.19	6.28	6.29	6.36							
90	3.20	3.17	3.20	3.02	2.95	2.88	6.88	6.97	6.95	7.00	7.10	7.18							
95	4.54	4.47	4.55	4.29	4.17	4.10	7.86	7.95	7.94	8.01	8.14	8.26							
100	6.19	6.14	6.22	5.89	5.74	5.68	9.02	9.17	9.14	9.22	9.40	9.56							
105	8.17	8.17	8.26	7.83	7.70	7.61	10.5	10.6	10.6	10.7	10.9	11.1							
110	10.4	10.6	10.6	10.1	10.0	9.84	12.2	12.4	12.4	12.4	12.8	13.0							
115	13.1	13.3	13.2	12.7	12.6	12.4	14.2	14.5	14.5	14.5	14.9	15.3							
120	16.1	16.2	16.1	15.6	15.6	15.1	16.6	16.8	16.8	17.0	17.3	17.7							
125	19.0	19.1	18.9	18.6	18.5	18.0	19.1	19.2	19.2	19.5	19.7	20.0							
130	21.9	21.6	21.4	21.4	21.1	20.6	21.5	21.3	21.4	21.9	21.7	22.1							
135	24.0	23.7	23.4	23.7	23.2	22.8	23.3	23.1	23.2	23.8	23.4	23.7							
140	25.7	25.1	25.0	25.4	24.9	24.6	24.8	24.4	24.5	25.2	24.7	24.9							
145	26.7	26.3	26.2	26.6	26.1	26.0	25.8	25.5	25.5	26.2	25.7	25.8							
150	27.5	27.2	27.3	27.5	27.1	27.1	26.6	26.3	26.4	26.9	26.6	26.6							
155	28.4	28.2	28.3	28.4	28.3	28.2	27.4	27.2	27.3	27.6	27.5	27.6							
160	29.5	29.4	29.5	29.7	29.5	29.4	28.3	28.2	28.5	28.6	28.5	28.7							
165	30.6	30.6	30.7	30.8	30.7	30.6	29.4	29.4	29.7	29.7	29.7	29.9							
170	31.6	31.5	31.8	31.8	31.7	31.7	30.6	30.7	30.7	30.9	30.9	31.0							
175	32.3	32.2	32.5	32.6	32.4	32.5	31.6	31.5	31.7	31.9	31.8	31.9							
180	32.3	32.1	32.4	32.6	32.4	32.5	32.3	32.2	32.4	32.6	32.4	32.5							

**C Range: 0 - 360DEG**  
**C Interval: 30.0DEG**  
**Test Speed: HIGH**  
**Temperature: 25.3DEG**  
**Operators: DAMIN**  
**Test Date: 2019-10-18**

**γ Range: 0 - 180DEG**  
**γ Interval: 1.0DEG**  
**Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.406.11**  
**Humidity: 65.0%**  
**Test Distance: 8.000m [K=0.7063]**  
**Remarks:**